

TRANSACTIONS
OF THE
ROYAL SOCIETY
OF
EDINBURGH.

VOL. XIX. PART I.
CONTAINING THE
MAKERSTOUN MAGNETICAL AND METEOROLOGICAL
OBSERVATIONS

FOR
1845 AND 1846.

EDINBURGH :
PUBLISHED BY ROBERT GRANT & SON, 82 PRINCES STREET ; AND
T. CADELL, STRAND, LONDON.

MDCCXLIX.



OBSERVATIONS
IN
MAGNETISM AND METEOROLOGY,

MAKERSTOUN IN SCOTLAND,

IN THE OBSERVATORY OF

GENERAL SIR THOMAS MAKDOUGALL BRISBANE, BART.,

G.C.B., G.C.H., D.C.L., LL.D., F.R.S., F.R.A.S., H.M.R.I.A., PRESIDENT OF THE ROYAL SOCIETY OF EDINBURGH,
AND CORRESPONDING MEMBER OF THE INSTITUTE OF FRANCE,

IN 1845 AND 1846.

FORMING VOL. XIX. PART I. OF THE TRANSACTIONS OF THE ROYAL SOCIETY OF EDINBURGH.

EDITED BY
JOHN ALLAN BROUN, Esq.,
DIRECTOR OF THE OBSERVATORY.

EDINBURGH:
PRINTED BY NEILL AND COMPANY.

MDCCCXLIX.

CONTENTS.

	PAGE
INTRODUCTION—	
<i>Position and Description of the Observatory,.....</i>	ix
<i>System of Observation, and Staff of Observers,.....</i>	xi
Declinometer—	
Description of the Declinometer,	xii
Values of the Scale Divisions,	xiii
Scale Readings for the Magnetic Axis,	xiv
Corrections,.....	xiv
Removal of Torsion, &c.,	xv
Time of Vibration,.....	xvi
Method of Observation,.....	xvi
Absolute Magnetic Declination,	xvi
<i>Unifilar Magnetometer and Observations of the Absolute Horizontal Intensity of the Earth's Magnetism—</i>	
Position and Description of the Instrument,	xix
Formula of Reduction, methods of Observing, &c.,	xx
Results of Observations (see <i>Addendum</i>).	
<i>Bifilar or Horizontal Force Magnetometer—</i>	
Description of the Instrument,.....	xxv
Usual formula of Reduction,	xxvii
New formula of Reduction,	xxviii
Determinations of the Coefficient of Reduction,.....	xxviii
Coefficients applicable to the observations since 1841,	xxxi
Constants for Reduction after turning the Arms of the Torsion Circle,.....	xxxi
Time of Vibration of the Bifilar Magnet,	xxxiii
Mode of Observation,.....	xxxiii
<i>Balance or Vertical Force Magnetometer—</i>	
Description of the Instrument,.....	xxxiii
Usual formula of Reduction,.....	xxxiv
Times of Vibration,.....	xxxv
Conclusions from the observations of the Time of Vibration,	xxxvi
Observations to discover the causes of the anomalies in the Time of Vibration,	xxxvii
Insufficiency of the usual formula,	xxxix
Observations for a statical determination of the Balance Coefficient,	xl
Adjustment of the Balance, and connection of the Observations,	xlii
Method of Observation,	xliii
<i>The Temperature Coefficients of the Deflecting, Balance, and Bifilar Magnets—</i>	
Temperature Coefficient of the Deflection Magnet,	xliii
Coefficient Constant for High and Low Temperatures,	xliii
Temperature Coefficient of the Bifilar Magnet by hot-water experiments,	xliv
Coefficient Constant for High and Low Temperatures,.....	xliv

	PAGE
Method of determining the Coefficient by the comparisons of the usual observations, Conclusion that the Variations of the Horizontal Component are independent of the temperature of the soil and atmosphere,	xliv
Determinations of the Coefficient,	xlv
Error of the determinations by hot and cold water experiments,.....	xlvii
Temperature Coefficient of the Balance Magnet by hot-water experiments,.....	xlvii
Coefficient Constant for High and Low Temperatures,.....	xlvii
Conclusion that the Variations of the Vertical Component are independent of the temperature of the soil and atmosphere,.....	xlviii
Determinations of the Coefficient by comparisons of the usual observations,.....	xlviii
<i>Inclinometer</i> —	
Description of the Instrument,.....	l
Observations for the determination of Instrumental Errors,	li
Method of determining the Absolute Vertical Component and Inclination (<i>footnote</i>)	li
<i>Barometer</i> —	
Description of the Instrument,.....	lii
Indirect Comparisons with the Standard of the Royal Society of London,	lii
Corrections applied to the Observations,.....	liii
<i>Thermometers</i> —	
Description and Position of the Dry and Wet Bulb Thermometers,	liii
Scale Errors,.....	lv
Maximum and Minimum Thermometers,	lvi
<i>Actinometer</i> —	
Description of the Instrument,.....	lvi
Method of Observation,	lvii
Effect of Plate-Glass Cover,.....	lvii
<i>Rain-Gauges</i> —	
Description and Positions of the Gauges,	lviii
<i>Vanes and Anemometer</i> —	
Position of the Vanes,	lviii
Description of the Anemometer,	lix
Mode of Observation,	lx
<i>State of the Sky</i> —	
Mode of estimating the Extent of Sky Clouded, and the Motions of Clouds,	lx
Symbols used for the amount of Sunshine and Rain,	lxii
<i>Clock, &c.</i> —	
State of the Clock in the Magnetic Observatory, &c.,	lxii
<i>Description of the Tables of the Observations</i> ,	lxii
<i>Reference to the Abstracts of Results</i> ,.....	lxiv
<i>Account of the Curves projected by the Anastatic Process</i> ,.....	lxiv
<i>ADDENDUM</i> —	
Results of Observations for the Absolute Horizontal Intensity, made with large bars,	lxv
Observations for Induction and Temperature Coefficients of small bars,	lxvi
Results of Observations for the Absolute Horizontal Intensity, made with small bars,	lxix

CONTENTS.

vii

	PAGE
MAGNETICAL OBSERVATIONS, 1845—	
Hourly Observations of Magnetometers,	1
Term-Day Observations of Magnetometers,.....	69
Extra Observations of Magnetometers,	89
Notes on the Aurora Boreales seen at Makerstoun,.....	118
Observations of Magnetic Dip and Absolute Horizontal Intensity,.....	129
METEOROLOGICAL OBSERVATIONS, 1845—	
Hourly Meteorological Observations,	135
Daily and Extra Meteorological Observations,	273
Maximum and Minimum Temperatures, and Amount of Rain,.....	274
Temperature of Water in Pump-Wells,	276
Observations of the Actinometer,.....	277
Additional Meteorological Notes, Flowering of Plants, &c.,	282
MAGNETICAL OBSERVATIONS, 1846—	
Daily Observations of Magnetometers,	287
Extra Observations of Magnetometers,	325
Notes on the Aurora Boreales seen at Makerstoun,.....	342
Observations of Magnetic Dip, and for the Absolute Horizontal Intensity	348
Observations for the Absolute Horizontal Intensity with Small Magnets and Circle Magnetometers,	349
METEOROLOGICAL OBSERVATIONS 1846—	
Daily Meteorological Observations,.....	353
Daily and Extra Meteorological Observations,	411
Maximum and Minimum Temperatures, and Amount of Rain,.....	412
Observations of the Actinometer,	414
Dates of Flowering of Plants, Temperature of Water in Wells, &c.,	420

CORRIGENDA IN THIS VOLUME OF OBSERVATIONS FOR 1845 AND 1846.

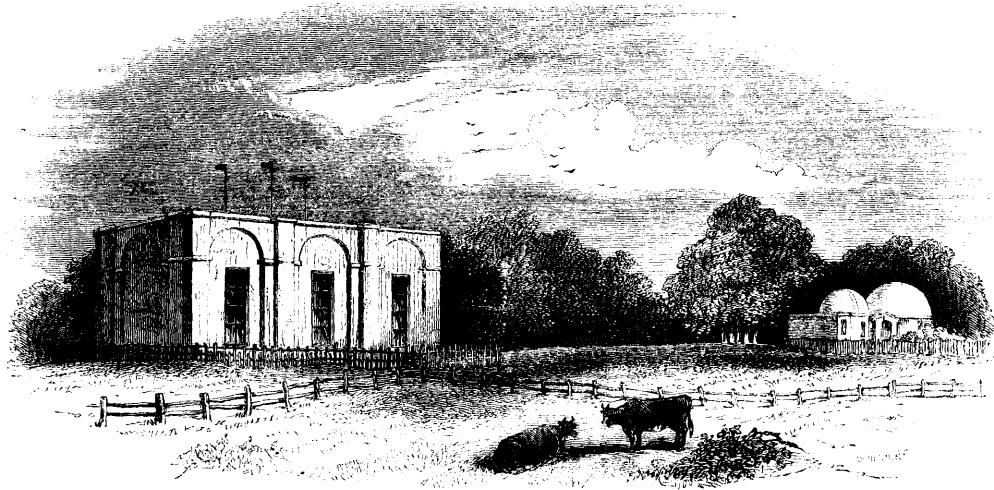
- Introduction, page xx., lines 9 and 10, substitute P for p and Q for q
- xxii., line 5 from foot, *for termination*, *read* termination,
 - xxii., line 3 from foot, *for seconds*, *read* seconds :
 - xxii., line 6, make the correction given below for 1844, Introd., p. xxii., line 11
 - xxvii., line 4 from foot, and p. xxviii., lines 2, 7, and 16, substitute P for p and Q for q
 - xli., heading of page, *for Bifilar or Horizontal read Balance or Vertical*
- Page 25, 9^d 1^h, column "Balance Corrected," *for* 416·3 *read* 516·3
- 39, 24^d 18^h, column "Bifilar Corrected," *for* 552·8 *read* 512·8
 - 51, 24^d 10^h, column "Balance Corrected," *for* 457·8 *read* 437·8
 - 58, 5^d 8^h, column "Balance Corrected," *for* 478·6 *read* 578·6
 - 59, 11^d 22^h, column "Declination," *for* 18·93 *read* 08·93
 - 148, 1^d 23^h, column "Gött. M. T." *for* 1^d 23^h *read* 1^d 23^h
 - 182, line 6 from foot, column "Gött. M. T.," *for* 5^d 0^h *read* 6^d 0^h
 - 312, line 1, 2d column, "Gött. Mean Time," *for* 2^d 2^h 0^m *read* 5^h 2^h 0^m
 - 312, " " " Balance Corrected," *for* 387·7 *read* 479·7
 - 316, 22^d 10^h, column "Balance Corrected," *for* 372·1 *read* 266·1
 - 320, 26^d 10^h, column "Balance Corrected," *for* 131·0 *read* 231·0
 - 322, 23^d 10^h, column "Balance Corrected," *for* 272·1 *read* 143·3

CORRIGENDA IN THE VOLUME OF OBSERVATIONS FOR 1844.

- Introduction, page xiv., line 13, *for* Φn *read* $(1 + \Phi) n$
- xx., lines 9, 10, and 13, substitute P for p and Q for q
 - xxii., line 11, *for* $\{1 + k(b_0 - b_1) - q(t_0 - t_1)\}$ *read* $\{1 - k(b_0 - b_1) + q(t_0 - t_1)\}^{\frac{1}{2}}$
(This accidental error does not extend to the reductions which were performed by the latter form.)
 - xxix, lines 10, 15, 20, and 29, substitute P for p and Q for q
 - xli., heading of page, *for Bifilar or Horizontal read Balance or Vertical*
- Page 202, 20^d 10^h, column "Wind. Force in 10^m," *for* 6·0 *read* 0·0
- 235, 18^d 22^h, column "Wind. Force in 10^m," *for* 2·2 *read* 0·2

CORRIGENDUM IN THE VOLUME FOR 1843.

- Introduction, page xlii., line 21, *for* $X \tan(u - \delta)$ *read* $C X \tan(u - \delta)$; C being a constant



INTRODUCTION.

POSITION AND DESCRIPTION OF THE OBSERVATORY.

1. The Magnetical and Meteorological Observatory at Makerstoun, in Roxburghshire, was erected by General Sir THOMAS MAKDOUGALL BRISBANE, Bart., in the year 1841. The geographical co-ordinates are as follow :—

Latitude, $55^{\circ} 34' 45''$ N.*
Longitude, $0^{\text{h}} 10^{\text{m}} 3.5^{\text{s}}$ W. of Greenwich.†

Height of the barometer cistern above mean water at Berwick, 213 feet.‡

2. The Magnetical Observatory is situate nearly on the summit of a ridge, which occupies the left or northern bank of the Tweed, being 540 feet distant from, and 80 feet above, that river. The Astronomical Observatory is upon the highest part of the ridge, 140 feet due west of the Magnetic Observatory. A fair horizon is seen from the Observatory hill, being bounded about 10 miles to the east by a slightly-swelling ground, which, to the east-south-east, seems to join the Cheviot Hills. The view is bounded about a mile to south and south-west by a ridge, forming the right bank of the Tweed; about 500 feet to the south-west and north-west by masses of trees in the Makerstoun grounds;§ and from 1 to 3 miles to north-west, north, and

* Ast. Nach., vol. x., p. 214.

† Deduced from the longitude of the Astronomical Observatory, Mem. Roy. Ast. Soc., vol. xi., p. 171.

‡ Obtained from levels for a railway, and from barometric comparisons.—See Makerstoun Observations for 1843, Introduction, p. ix.

§ The above view, taken from a point about fifty yards to the NE. of the Magnetic Observatory, shews the trees in the grounds at their most unfavourable elevation.

north-east, by an elevated ridge, which forms, to some extent, the northern boundary of the valley of the Tweed. From north, by the east, to the south, the elevation of the horizon, with a slight exception, is under 2° ; from the north to the north-west, increasing from 2° to 4° ; from the north-west to the south-west, the tops of the trees are elevated from 5° to 8° ; and from the south-west to the south the elevation is under 4° . The highest point of the Cheviots, which is 2656 feet above the level of the sea, is about 18 miles to the east-south-east; it is occasionally referred to in the meteorological remarks on clouds.

3. The Observatory hill, it is believed, is composed of felspathic trap. The Tweed, immediately to the south, and for a mile to the east and west, flows more or less through this rock, which does not appear upon any part of the hill. The opening for a foundation to the Observatory shewed only masses of rolled pebbles, and boulders of greywacke and trap.

4. The Observatory is rectangular in its plan, 40 feet by 20 feet internally. It is formed of wood; copper nails were used; and iron carefully excluded from every part of the structure. The pillars for the magnetometers and telescopes are of stone, from 22 inches to 19 inches in diameter, and are placed upon excellent stone foundations, completely unconnected with the floor, and every part of the building. By a reference to the plan and elevation, the following details will be understood. (Plate I.)

There are two windows to the south, with the door between; and three to the north, which open like folding doors. The dimensions of the principal apartment are, 40 feet long, 12 feet broad, and 12 feet high. The two ante-rooms are each 15 feet long, $7\frac{1}{2}$ feet broad, and 12 feet high. The instruments are indicated in the plan as follow:—

- D, The Declinometer.
- t*, Its Reading Telescope.
- A, The Azimuth Circle and Transit.
- H, The Bifilar or Horizontal Force Magnetometer.
- t'*, Its Reading Telescope.
- P, A Pillar for a Collimator (not used).
- V, The Balance or Vertical Force Magnetometer.
- I, Pillar for the Inclinometer (not used here).
- B, The Standard Barometer.
- W, The Anemometer.
- W', The Wind-Vane Dial-Plate.
- T, The Thermometer Case.
- C, The Mean Time Clock.
- n s*, The Astronomical Meridian.
- D *t*, The Magnetical Meridian.

The vane farthest to the right in the elevation, Plate I., belongs to the anemometer ; the others give the direction of the wind.

SYSTEM OF OBSERVATION, AND STAFF OF OBSERVERS.

5. In the beginning of 1843, the number of daily observations was increased to nine, at two-hourly intervals, commencing with 18^h Göttingen mean time (5^h 10^m A.M. Makerstoun mean time) ; these, together with all the other daily observations, were made by Mr WELSH and myself. In the end of 1843, I recommended to Sir THOMAS BRISBANE to add Mr ALEXANDER HOGG, who had been previously employed in the term-day observations, to the establishment, for the purpose of obtaining a complete diurnal series of observations. Sir THOMAS, with his usual anxiety to render the Observatory in every respect useful to science, at once complied with my recommendation ; and, in the beginning of the year 1844, hourly observations were commenced, which were continued till the end of the year 1845. In 1846, the number of daily observations was diminished to nine at two-hourly intervals, as in 1843 ; three additional observations of the magnetical instruments were made daily, namely, at 23^h, 1^h, and 7^h Göttingen mean time. The other observations in the magnetical observatory, consisted of term-day observations once a-month (discontinued in 1846) ; extra magnetical observations during magnetic disturbances ; observations of magnetic dip ; observations of absolute horizontal intensity ; and extra observations of various meteorological phenomena. All the observations have been made by Mr JOHN WELSH, Mr ALEXANDER HOGG, and myself ; Mr DODS assisting in the term-day observations, and on a few occasions during disturbances. The more difficult observations for the magnetic dip, absolute horizontal intensity, and the determinations of constants were made by Mr WELSH and myself.

I beg again to express here how much I am indebted to Sir THOMAS BRISBANE, in every matter connected with the conduct of the Observatory. Without his willing co-operation, unceasing kindness, and the confidence which he has placed in my labours from the commencement, it would have been irksome for so small a staff to have performed conscientiously so large a mass of work. Science is not only indebted to Sir THOMAS BRISBANE for the foundation and support of the Observatory, but also for the manner in which his expenditure has been made fruitful.

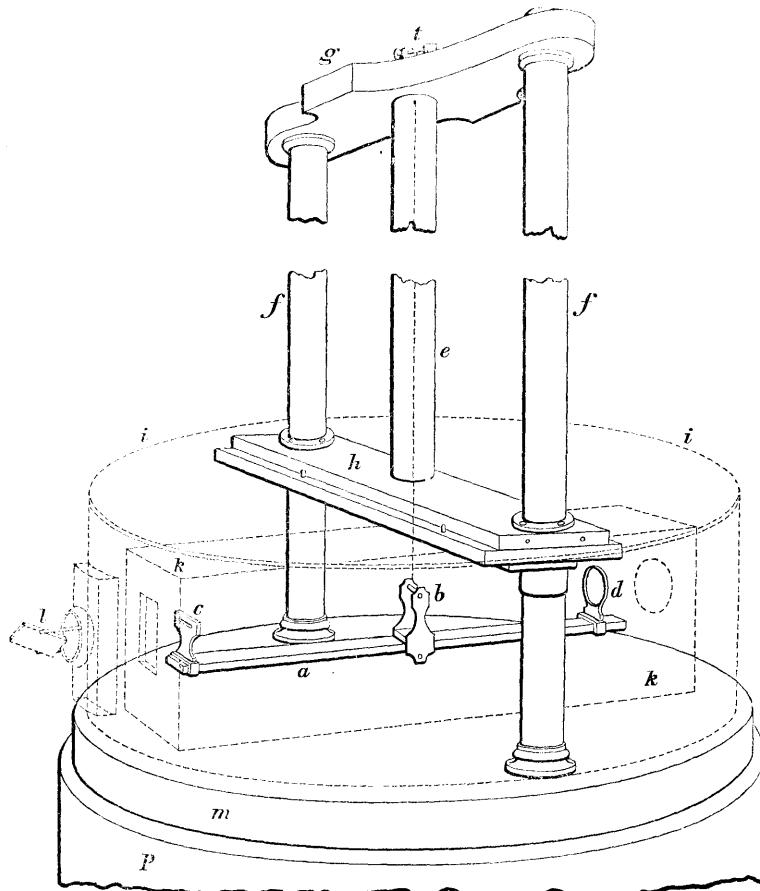
I owe my best thanks to my principal assistant Mr JOHN WELSH, for the care and assiduity with which he has assisted me on all occasions, whether connected with the making or reducing of the observations. Mr HOGG also has been of much use, especially in observing, and in many matters of handicraft, which his previous experience and inventive skill have rendered available to the purposes of the Observatory.

Every care was taken by the observers to examine the observations made by those immediately preceding them ; in this way it is believed that few errors have escaped detection. Accidental errors in the times of observation have always been

noted, and generally the director of the Observatory believes that he has an easy task in bearing the responsibility connected with the honest discharge of the duties of his assistants.

DECLINOMETER.

6. The declination magnetometer was obtained from GRUBB of Dublin. The magnet *a* is 15 inches long, $\frac{7}{8}$ inch broad, and $\frac{1}{4}$ inch thick ; it fits into a stirrup *b*,



whose two eyes receive an axle to which the suspension thread is attached ; near the north extremity it carries a scale divided on glass, *c* ; near the other, at a distance from the scale of about 12 inches, the focal length, it carries a lens of $1\frac{1}{4}$ inch diameter, *d*. A marble slab *m*, cemented to the top of the stone pillar *p*, carries two copper tubes *ff*, 35 inches long, which are connected at the top by a mahogany tie *g*, bearing the torsion-circle and suspension apparatus *t*, and, about 7 inches from the slab, by another wooden cross-piece *h*, which supports a glass tube *e* enclosing the suspension thread. The magnet is enclosed by a rectangular wooden box *k*, formed of two pieces fitting into each other in the middle by a groove and tongue, glazed at the extremities, and having only a small aperture in the centre for the

suspension thread : this box also enclosed a copper ring for checking the vibrations of the magnet ; it was removed October 15, 1844, and is not shewn in the figure : a cylindrical wooden drum *i*, together with two lids (not shewn in the figure), fitting by pegs upon the cross-piece *h*, enclose the box and magnet. There are two glazed apertures also in the wooden drum, opposite those in the rectangular box ; one to the north, where a small mirror *l* throws light upon the glass scale ; the other to the south, between the lens and reading telescope. All the joints of the boxes, including those in contact with the marble slab, are covered with velvet, and both boxes are pressed firmly against the marble slab by means of leaden weights, which were previously determined to have no effect upon the position of the magnet. In order to destroy any effect of radiation, both boxes were covered with gilt paper, externally and internally. The suspension apparatus is covered by a wooden cap (not shewn in the figure). In order to prevent the variation of humidity within the boxes as much as possible, the whole apparatus was covered, February 14, 1844, by a thick double cotton hood, tied round the stone pillar, and having only small openings at the glazed apertures of the boxes. The reading telescope is fixed to a stone pillar ; the object glass is 8 feet to the magnetic south of the magnet lens.

7. The pillar of the azimuth circle, used for determinations of the absolute declination, is between the pillars of the magnetometer and its reading telescope. This theodolite is by TROUGHTON ; the circle is 15 inches in diameter, is divided to 5 minutes, and is read to 5 seconds with three verniers. The lines of collimation of the theodolite and reading telescopes coincide when the middle wire of the former is seen, in either telescope, coinciding with the vertical wire of the latter. The circle is retained in the same position on its pillar, but the transit telescope is removed, excepting when required for observations of absolute declination.

8. The following are the data used in reducing the observations of the declinometer :—

Values of the declinometer scale divisions in angular measure.

The adopted mean value of one division of the long scale of 500 divisions = 0·6725*

During the observations of absolute horizontal intensity, the magnet with the long scale, usually in the declination box, was removed to the unifilar box in the intensity house, and a magnet with a short scale was substituted.

The adopted mean value of one division of the short scale of 300 divisions = 0·7500*

From the adopted values of the long and short scale divisions, the coefficient for reducing the divisions of the short scale to the same value as the divisions of the long scale = 1·115 ; the reciprocal = 0·897.

* For details, see Introduction to the Observations for 1843, pp. xiii. and xiv.

xiv INTRODUCTION TO THE MAKERSTOUN OBSERVATIONS, 1845 AND 1846.

The adopted zeros of the declinometer scales are as follow :—

Reading of the long scale at the magnetic axis,	257·14*
Correction for the effect of the bifilar and balance magnets,	+ 0·16
Adopted zero for the long scale in 1845 and 1846,	257·30
Reading of the short scale at the magnetic axis,	147·11*
Correction for the effect of the bifilar and balance magnets,	+ 0·14
Adopted zero for the long scale in 1845 and 1846,	147·25

9. The determinations for the effects of the different magnets upon each other are given in the previous volumes. The plate-glass in the declinometer boxes was found to have no effect upon the reading of the magnet. The determinations of the corrections are given in the volume for 1843.

10. Correction for the torsion force of the suspension thread.

The errors due to the torsion force of the suspension thread are produced, first, by the magnet moving out of the plane of detorsion ; secondly, by the variation of this plane (due generally to the varying humidity of the atmosphere). The error due to the former, even in the most marked cases, is less than the probable error of the observations, and it is altogether inappreciable, compared with the error due to the second.

If the plane of detorsion be that of the magnetic meridian, and the magnet be deflected through an arc u by turning the arms of the torsion circle w , the torsion is $w - u$, and the equation of equilibrium is

$$m \mathbf{X} u = (w - u) \mathbf{H}$$

where m is the magnetic moment of the bar, \mathbf{X} is the horizontal component of the earth's magnetic force, and \mathbf{H} is the torsion force for an arc equal to radius, whence, if $m \mathbf{X} = F$,

$$\frac{u}{w-u} = \frac{H}{F} = \Phi$$

is the quantity by which the deviations of the magnet from the plane of detorsion should be multiplied to obtain the decrements due to torsion. If n be the observed deviation, $(1 + \Phi)n$ = the true deviation. The following observation for the value of Φ for the suspension thread placed in the instrument, June 22, 1843, and for the long scale magnet will serve for the observations in 1845 and 1846 :—

$$\text{Dec. } 26^{\text{a}} 23^{\text{b}}, 1844. \quad \text{Arc}^{-1} w = \begin{cases} +90^\circ; & \text{arc}^{-1} u = \begin{cases} 7\cdot47 \\ 7\cdot59 \end{cases}; \text{ mean value of } \Phi = 0\cdot00140. \end{cases}$$

* For details, see Introduction to the Observations for 1843, pp. xv. and xvi.

This value has not been used for this correction; it has been employed in the observations of absolute horizontal intensity made in 1845 and 1846.

11. The second and most important error due to the torsion force is that produced by the variation of the plane of detorsion. Unless when the period and extent of change is known, this can only be corrected by removing it; this is done occasionally in the following manner:—The magnet, with its stirrup, being removed, a brass bar and stirrup of nearly the same weight and dimensions is suspended; the rectangular box being removed, the cylindrical box being completely closed, and the shutters removed from the glazed lid, the extremities of the arc of vibration are observed through the latter; the marble slab beneath having radii drawn for every 5° on each side of the magnetic meridian, the positions of rest at the extremities of the arcs are estimated to $\frac{1}{2}^\circ$; the deviation of the mean position from the magnetic meridian is known, and the arms of the torsion circle are turned through an equal angle in the opposite direction; the position of rest is then in the magnetic meridian. Much time and care were bestowed upon these observations, as the error due to this cause is by far the most serious that occurs in connection with the declinometer.

12. The following are all the observations for the elimination of torsion made in 1845 and 1846, together with all the occasions on which the magnet was touched or removed from its box. When the mean position of rest for the north end of the brass bar was found to the east of the magnetic north, the torsion existing is considered positive, and the effect of $+10^\circ$ of torsion = $-0'84$ (from the previous observation for the value of Φ .) In the first case below, the north end of the brass bar was found to rest $7\frac{1}{2}^\circ$ west of the magnetic north; and the brass bar was thereafter made to coincide with the magnetic meridian.

Feb. 5^d $3\frac{1}{2}^h$ 1845. Torsion removed, $-7\frac{1}{2}^\circ$. The torsion could not have been more than 3° at first, but the north end of the brass bar moved slowly westward as if affected by currents, or as if the suspension thread were affected by moisture.

March 23^d $23\frac{1}{2}^h$ 1845. Torsion removed, $-18\frac{1}{2}^\circ$.

April 2^a $2\frac{1}{2}^h$, 1845. Torsion removed, $-3\frac{1}{2}^\circ$. The line of detorsion of the suspension thread varied during the observation; at first it was about N. 3° E. and S. 3° W.; ultimately it was N. 5° E. and S. 5° W. The torsion circle was turned $3\frac{1}{2}^\circ$.

May 8^a $3\frac{1}{2}^h$, 1845. Torsion removed, $-\frac{1}{2}^\circ$. June 18^d $2\frac{1}{2}^h$, 1845. Torsion removed, $+1\frac{1}{2}^\circ$.

Sept. 21^d $22\frac{1}{2}^h$, 1845. Torsion removed, $+19^\circ$. This amount of torsion may possibly be due to the dampness arising from washing the floor of the Observatory. September 20^d, the brass bar was suspended, with some difficulty in the manipulation, but it is not conceived that much torsion could have been thus introduced.

Dec. 29^d $0\frac{1}{2}^h$, 1845. Torsion removed, 0° . The magnet with the short scale was placed in the declinometer box after this examination of torsion, the long scale magnet being removed to the intensity house for an observation of absolute hori-

zontal intensity. Dec. 29^d 19 $\frac{1}{2}$ ^h, 1845. Torsion removed, - 11°. Dec. 30^d 7 $\frac{1}{2}$ ^h 40^m, 1845. The deflecting bar was vibrated in the declinometer box after which the torsion was removed, + 7 $\frac{1}{2}$ °. Dec. 31^d 0^h. Torsion removed, 0°. The suspension thread found slightly stretched; it was wound up about $\frac{1}{4}$ inch, and torsion removed, + 12°. The readings of the declinometer before and after the removal of the torsion were compared with the readings of the unifilar in the intensity house; allowance being made for the torsion removed, both comparisons gave the same difference of readings.

Feb. 15^d 23 $\frac{1}{2}$ ^h, 1846. Torsion removed, - 9°. Feb. 16^d 0^h-2^h, magnet with short scale in declinometer box; 3^h-5^h deflecting bar vibrated in declinometer box.

Feb. 16^d 5 $\frac{1}{2}$ ^h, 1846. Torsion removed, + 5°.

April 13^d 22 $\frac{1}{2}$ ^h, 1846. Torsion removed, + 3°. At 23^h the magnet with short scale was placed in the declinometer box. April 14^d 7 $\frac{1}{2}$ ^h, the deflecting bar vibrated in the declinometer box; at 8 $\frac{1}{2}$ ^h, torsion removed, + 8 $\frac{1}{2}$ ^o.

April 14^a 20^h, 1846. Torsion removed, + 3 $\frac{1}{4}$ [°]. Comparisons of the unifilar and declinometer readings were made before and after removing the torsion, the differences of the readings agreed when allowance was made for the torsion removed: these comparisons shew that no torsion is introduced during the manipulations connected with the exchange of magnets, and the suspension of the brass bar.

The declination magnet remained untouched from April 14^a 20^h, 1846, till May 12^a 5^h, 1847, when the torsion removed was $-14\frac{1}{4}^{\circ}$.

13. The times of vibration of the declination magnets are as follow :—

The time of one vibration of the declination long scale magnet = $17\frac{8}{10}$ ^{s.}
..... short scale = $17\cdot 0$

14. The observations of the declinometer were made in the following manner:—
 The points of the scale which coincided with the vertical wire of the reading telescope were noted at the extremity of the magnet's vibration occurring between 27 seconds and 9 seconds before the minute of observation, and at the extremities of the two following vibrations: the scale readings at these periods being a , b , and c , the mean position is deduced by the formula $\frac{a+2b+c}{4}$. The arc of vibration is seldom above 3', and is generally less than 2'; during disturbances, however, the arc is often considerable, and frequently in these cases only two observations are made, the mean position being obtained at once from the mean of the two readings at the extremities of the vibration which occur between 18^s and 0^s before, and between 0^s and 18^s after, the minute of observation.

15. All the observations of declination in this volume are absolute. They are rendered so as follows :—

* See Introduction, 1843, p. xxi.

The middle wire of the theodolite telescope is brought to coincide with the vertical wire of the fixed reading telescope (7.) ; the three verniers of the horizontal circle are then read ; the theodolite telescope is turned (on the vertical axis of the circle) until its middle wire coincides with the vertical line on the north meridian mark of Sir THOMAS BRISBANE's (the western) transit in the Astronomical Observatory, and the verniers are again read. In order to obtain the reading of the horizontal circle for the astronomical meridian, the theodolite telescope was placed as nearly as possible in the meridian, and being accurately levelled, the time of the sun's transit was observed by the Magnetic Observatory clock. The sun's meridian passage was also observed by Sir THOMAS BRISBANE with his western transit in the Astronomical Observatory, and the clocks in the two observatories being immediately compared, the true time of transit by the clock in the Magnetic Observatory was obtained. The difference, if any, between the true and observed times, was due to error of azimuth ; the latter, being very small, was obtained from the former in multiplying by the factor,

$$\frac{\text{cosine sun's declination}}{\text{cosine sun's altitude}}.$$

16. If A' be the difference of the horizontal circle readings for the wire of the fixed telescope and for the north mark, Z be the azimuth of the north mark, and D be the angle at any instant contained by the line of collimation of the reading telescope and the adopted zero scale reading, the true westerly declination at that time will be

$$180^\circ - A' + Z \pm D.$$

The values of $180^\circ - A' = A$, obtained in 1844, 1845, and 1846, are given in the following Table :—

TABLE 1.—Determinations of the Value of Angle A.

Date.	Readings of Horizontal Circle												Angle A.	
	For Wire of Declination Telescope.						For North Mark.							
	Verniers			Mean.	Verniers			Mean.						
	A.	B.	C.		A.	B.	C.		A.	B.	C.	Mean.		
1844.	' "	' "	' "	° ' "	' "	' "	' "	° ' "	' "	' "	' "	° ' "	"	
Feb. 7	53 17.5	53 21.5	53 57.5	233 53 32.2	44 12.5	43 52.5	43 57.5	77 44 0.8	23 50 28.6					
May 11	52 2.5	51 52.5	52 8.7	53 52 1.2	42 2.5	42 22.5	42 42.5	257 42 22.5	23 50 21.3					
July 4	52 23.0	52 8.0	52 43.0	53 52 24.7	42 35.0	42 52.5	43 10.0	257 42 52.5	23 50 27.8					
July 22	52 10.0	52 0.0	52 25.0	53 52 11.7	42 27.5	42 51.2	43 2.5	257 42 47.1	23 50 35.4					
Aug. 14	52 40.0	52 18.7	52 46.2	53 52 35.0	42 40.0	43 0.0	43 20.0	257 43 0.0	23 50 25.0					
Aug. 14	52 35.0	52 7.5	52 47.5	53 52 30.0	42 40.0	43 1.2	43 25.0	257 43 2.1	23 50 32.1					
Aug. 14	53 15.0	52 57.5	53 20.0	53 53 10.8	43 23.7	43 52.5	44 5.0	257 43 47.1	23 50 36.3					
Aug. 14	52 55.0	52 51.2	53 37.5	233 53 7.9	43 15.0	43 2.5	43 10.0	77 43 9.2	23 50 1.3					
Aug. 14	53 5.0	52 54.0	53 17.5	53 53 5.5	43 22.5	43 51.0	44 2.5	257 43 45.3	23 50 39.8					
Oct. 14	52 25.0	52 28.7	53 15.0	233 52 42.9	43 10.0	42 47.5	43 5.0	77 43 0.8	23 50 17.9					
Oct. 14	52 27.5	52 28.7	53 12.5	233 52 42.9	43 7.5	42 40.0	42 57.5	77 42 55.0	23 50 12.1					
Oct. 14	52 38.7	52 17.5	53 0.0	53 52 38.7	42 37.5	42 57.5	43 25.0	257 43 0.0	23 50 21.3					
Oct. 14	52 46.2	52 22.5	52 58.8	53 52 42.5	42 43.7	43 0.0	43 25.0	257 43 2.9	23 50 20.4					
Oct. 19	52 11.2	52 13.7	52 58.8	233 52 27.9	42 57.5	42 36.2	42 55.0	77 42 49.6	23 50 21.7					
Oct. 19	52 32.5	52 7.5	52 43.6	53 52 27.9	42 52.5	42 56.2	43 16.3	257 53 1.7	23 50 23.8					
Oct. 19	52 45.0	52 16.2	52 52.5	53 52 37.9	42 40.0	42 57.5	43 25.0	257 43 0.8	23 50 22.9					
Oct. 19	52 41.2	52 35.0	53 20.0	233 52 52.1	43 25.0	42 57.5	43 10.0	77 43 10.8	23 50 18.7					
Dec. 31	52 43.7	52 22.5	52 52.5	53 52 39.6	42 52.5	43 13.7	43 35.0	257 43 13.7	23 50 34.1					
Dec. 31	52 17.5	52 20.0	53 5.0	233 52 34.2	43 12.5	42 47.5	43 3.7	77 43 1.2	23 50 27.0					
1845.														
Jan. 17	52 13.7	52 18.8	52 55.0	233 52 29.2	42 52.5	42 35.0	42 52.5	77 42 46.7	23 50 17.5					
Jan. 17	52 15.0	52 18.7	52 59.0	233 52 30.9	42 58.1	42 35.0	42 53.7	77 42 48.9	23 50 18.0					
Jan. 17	52 42.5	52 20.0	52 57.5	53 52 40.0	42 55.0	43 17.5	43 37.5	257 43 16.7	23 50 36.7					
Jan. 17	52 8.7	52 10.0	52 52.5	233 52 23.4	43 0.0	42 40.0	42 57.5	77 42 52.5	23 50 29.1					
Jan. 17	52 25.0	52 2.5	52 37.5	233 52 21.7	42 25.0	42 42.5	43 2.5	77 42 43.3	23 50 21.6					
Jan. 17	52 23.7	52 2.5	52 43.1	53 52 23.1	42 38.7	42 55.0	43 15.5	257 42 56.4	23 50 33.3					
May 8	52 7.5	52 5.0	52 57.5	233 52 23.3	43 7.5	42 42.5	43 10.0	77 43 0.0	23 50 36.7					
1846.														
Apr. 13	48 5.0	47 43.7	47 32.5	53 47 47.1	37 57.5	38 20.0	38 2.5	257 38 6.7	23 50 19.6					
Apr. 13	47 28.7	47 8.8	47 32.5	233 47 23.3	38 12.5	37 40.0	37 25.0	77 37 35.8	23 50 12.5					
May 7	48 5.0	47 33.7	47 27.5	53 47 42.1	38 2.5	38 22.5	38 5.0	257 38 10.0	23 50 27.9					
May 9	47 53.7	47 41.2	48 5.0	233 47 53.3	38 43.7	38 5.0	37 45.0	77 38 11.2	23 50 17.9					
May 9	48 17.5	47 20.0	47 20.0	53 47 39.2	37 55.0	38 10.0	37 57.5	257 38 0.8	23 50 21.6					

17. The mean value of angle A from all the observations } = 23° 50' 24".5
in 1844, 1845, and 1846,

The mean value of angle A from all the observations } = 23° 50' 23".9
in 1844,

The value of angle Z (Table 8, Introduction, 1841-2), = 1° 37' 38".8

Whence angle A + Z, = 25° 28' 2".7

The absolute westerly declination, therefore, corresponding to the zeros of the scales, No. 8, = 25° 28'.04. This value has also been employed for the observations in 1845 and 1846. For other scale readings differing from the zero by the angular quantity $\pm D$, the declination is obtained from the formula, declination = 25° 28'.04 $\pm D$.

**UNIFILAR MAGNETOMETER AND OBSERVATIONS OF THE ABSOLUTE HORIZONTAL
INTENSITY OF THE EARTH'S MAGNETISM.**

18. In the beginning of April 1843 two small wooden houses were erected about 19 yards to the north of the Magnetic Observatory ; the larger of the houses contains the unifilar magnetometer and the dip circle, and the smaller, which is 10 feet to SSE. of the larger, contains a reading telescope for the magnetometer.

The unifilar magnetometer rests on a strongly-braced wooden stand, which is fixed by copper battens and plaster of paris to a stone slab, resting on a stone foundation separated from the floor ; the top block of the stand, a solid piece of mahogany, carries a vertical box enclosing the suspension thread and supporting the torsion circle, this box is open on two opposite sides near the stand top ; a horizontal box slides on the vertical one, and when close to the stand top the magnet is completely enclosed ; an internal box was afterwards added, and all the precautions already indicated (6.) for the declinometer were taken. The magnet used when observations of absolute horizontal intensity were made was that usually in the declinometer, a spare magnet being fitted with a short scale (8.) was substituted for it ; the telescope (that intended for a collimator to the bifilar) was placed in the smaller wooden house, on a stand in all respects similar to that for the unifilar : the two houses were connected, during observations, in the line of collimation of the telescope and magnet by a wooden tube blackened within. A beam of straight well-seasoned fir, 11 feet long, $3\frac{3}{4}$ inches broad, and $1\frac{3}{4}$ inches thick, was placed on each side (outside) of the larger wooden house, in the line passing through the centre of the suspended magnet, and at right angles to the magnetic meridian ; each beam was let into the tops of two strongly-braced wooden trestles, 7 feet apart, which rested on wooden posts driven into the ground, and which were fixed to the latter by catch-pins, allowing a slight adjustment for the distance of the beams from the magnet ; the trestles and beams being removed after each observation. The beams were carefully divided with the aid of a brass standard yard made by Messrs TROUGHTON and SIMMS ; the graduations were adjusted to their distance from the suspended magnet in the following manner :—a well-seasoned fir rod, shod with brass at one extremity, and terminated at the other by a capstan-headed screw, by which the rod was accurately adjusted to a length of six feet, was passed through holes in the sides of the wooden house and unifilar box ; the middle of the rod coinciding with the suspension thread, the catch pins of the trestles were then loosened or forced in till the extremities of the six-feet rod coincided accurately with the division 3 feet on each beam. The deflecting magnet was adjusted to the graduations on the beams with the aid of a lens ; in 1844 the graduations were marked on brass pin-heads placed in the beams. The fixidity of the trestles was verified in general after each observation, and the accuracy of the graduations on the beams was verified usually before each observation.

19. The value of the absolute horizontal intensity is determined from the observations as follows :—If r be the distance from the centre of the suspended magnet, at which the centre of the deflecting bar is placed on the wooden beam, its axis being in the line at right angles to the magnetic meridian passing through the centre of the suspended magnet ; and if u be the resulting angle, through which the suspended magnet is deflected, then since, by GAUSS's theory, the ratio of the magnetic moment m of the deflecting bar to X , the horizontal component of the earth's magnetic force, is given by the following formula

$$\frac{m}{X} = \frac{1}{2} r^3 \tan u \cdot \frac{1}{1 + \frac{p}{r^2} + \frac{q}{r^4} + \text{&c.}}$$

where p and q are quantities depending on the mode of distribution of the magnetism in the magnetic bars, the value of the ratio may be determined from observations at three distances ; $\tan u$ is obtained from the formula

$$\tan u = \tan \left[\frac{a}{4} \left\{ (\widehat{u_1}_1 u - \widehat{u_0}_0 u) - f(\widehat{d_1}_1 d - \widehat{d_0}_0 d) \right\} (1 + \Phi) \right] \cdot \frac{1 + k(b_d - b_v)}{1 - q(t_d - t_v)}$$

where a is the angular value of one division of the long scale, f is the coefficient for reducing the divisions of the short scale to the value of divisions of the long scale ; u_1 and $_1 u$ are the observed mean scale readings of the unifilar magnetometer, the deflecting bar, with its north pole towards the east, being at a given distance to the east and west respectively of the suspended magnet ; similarly, u_0 and $_0 u$ are the mean scale readings when the deflecting bar, at the same distance, has its north pole towards the west : d_1 , $_1 d$, &c., are the simultaneous mean scale readings of the clinometer corresponding to u_1 , $_1 u$, &c. : $(1 + \Phi)$ is the torsion factor. [The quantity within brackets is given for each distance in the column of the observations, “Deflection corrected for Torsion.”] The last factor reduces the value of the tangent to the value of X and m at the time of vibration, k being the coefficient for reducing the scale divisions of the bifilar magnetometer to parts of horizontal force, b_d and b_v are the mean scale readings of the bifilar at the times of deflection and vibration respectively ; q is the temperature coefficient for the deflecting bar, t_d and t_v are the mean temperatures of the bar during deflection and vibration respectively.

The values of $\log \frac{1}{2} r^3 \tan u$ are given for each distance, pages 166 and 167.

20. The following are the values of the constants used in the previous formula :—

$$a = 40''35 \text{ (No. 8.)}$$

$$f = 1.115 \text{ (No. 8.)}$$

$$q = 0.000288.*$$

$$\text{In 1845, } k = 0.000140.$$

$$\text{In 1846, } k = 0.000135.$$

$$\text{For the thread in the unifilar box and long scale magnet,}$$

$$\Phi = 0.00212.$$

21. The comparative observations for u and d were rendered simultaneous thus :

* See Introduction, 1843, p. xlvi.

The times of vibration of the unifilar and declination magnets being nearly the same, the time at which the unifilar magnet attained one extremity of its arc of vibration was instantly indicated by me to Mr WELSH, who could observe my motions through one of the north windows of the Observatory. He immediately commenced counting the beats of the mean time clock, and at the end of the 18th second (the time of one vibration) both observers commenced making readings of the magnetometers; those by Mr WELSH being made at the end of the 18th, 36th, 54th, &c., seconds, and those by myself at the extremities of the arcs of vibration. From 7 to 12 consecutive readings were made thus at every position of the deflecting bar, and from these the mean readings are deduced. In order to render the arcs of vibration of the unifilar as small as possible, the deflecting bar was at first moved gradually up to its nearest distance (5 feet); in placing it at the next distance, it was moved rapidly *nearly* half way, and 18 seconds counted, when it was immediately shifted the other half. When the farthest distance was attained, it was placed vertically, and after 18 seconds, laid down in the reverse position; it was then moved as before, by half-shifts, to its next position, and so up to the nearest. After comparative readings for that position, the magnet was again placed vertically, and carried to the beam on the opposite side of the suspended magnet; at the end of 36 seconds it was laid down at the same distance, and with the north pole in the same direction as before. In general, the vibrations were small, seldom above 10'; when larger, the magnet was checked by slightly approaching or removing the deflecting bar at proper times, with reference to the directions in which the suspended magnet was moving. Mr WELSH observed the bifilar magnetometer before and after each comparison, and after each comparison I observed the temperature of the deflecting bar by means of a thermometer lying beside it.

22. The value of the product $m X$ is obtained from the formula

$$m X = \frac{K \pi^2}{T^2}$$

where π is the ratio of the circumference to the diameter, T is the *true* time of one vibration of the deflecting bar deduced from the *observed* time T' by the formula

$$T = T' \left(1 - \frac{\alpha \alpha'}{16} \right) (1 + \Phi)^{\frac{1}{2}} \left(1 - \frac{s}{86400} \right)$$

where α and α' are the semiarcs of vibration in parts of radius at commencement and termination. Φ is the ratio of the torsion force to the horizontal component of magnetic force for the clinometer thread with the deflecting bar suspended, s is the daily rate of the clock in seconds, K is the moment of inertia of the deflecting bar obtained from the formula

$$K = \frac{1}{2} (r_i^2 + r_e^2) M \cdot \frac{T_0^2}{T_0^2 - T_1^2}$$

where r_i and r_e are the internal and external radii of a regular metallic ring, M is the mass of the ring in grains, T_0 is the *true* time of one vibration without the ring (obtained by the above formula for T), T_1 is the *true* time of one vibration with the ring placed horizontally on the magnet, and is obtained from the observed time T_1' by the formula

$$T_1 = T_1' \left(1 - \frac{\alpha \alpha'}{16}\right) (1 + \Phi)^{\frac{1}{2}} \left(1 - \frac{s}{86400}\right) \left\{1 + k(b_0 - b_1) - q(t_0 - t_1)\right\}$$

where the symbols in the first four factors have the same meaning as given above for T , it being remembered that Φ is the ratio of the torsion force to the horizontal force for the declinometer thread when carrying *both* the deflecting bar and ring. The last factor contains the reduction of the time of vibration to the value of the horizontal component for which T_0 was the time of vibration without the ring; k , therefore, is the bifilar coefficient, given previously, b_0 and b_1 are the mean bifilar readings when the times of vibration T_0 and T_1 were observed, q is the temperature coefficient for the deflecting bar, given above, t_0 and t_1 are the mean temperatures of the bar corresponding to the observations T_0 and T_1 . As the observations for deflection are corrected for temperature to the temperature at the time of vibration, the value of m at the time of vibration is taken as the standard value for the series, as far as temperature is concerned, but it requires a correction for the inductive action of the earth, due to the position of the magnet during vibration in the plane of maximum magnetic force; during deflections the magnet is placed at right angles to the magnetic meridian, and is therefore unaffected by induction: the first equation, No. 22, therefore becomes

$$m X = \frac{K \pi^2}{T^2 \left(1 + \frac{\delta m}{m}\right)}$$

$\frac{\delta m}{m}$ is the induction coefficient, and is obtained from the formula

$$\frac{\delta m}{m} = \frac{n + s - 2b}{n - s}$$

where n and s are the mean scale readings of the bifilar magnetometer when the deflecting bar is placed in the magnetic meridian with its north end towards the north and south respectively, its centre being in the prolongation of the bifilar magnet, b is the bifilar reading with the deflecting bar away.

The deflecting bar was vibrated in the declinometer box after the observations of deflection; it was suspended in a stirrup of silk fibres of the same thickness as the suspension thread, and a small thread of paper being gummed to the extremity next the reading telescope, the times of transits of the paper at the wire of the reading telescope towards right and left were observed for every 5 vibrations each way

up to the 96th vibration. A moveable object-glass fits upon the object-glass of the reading telescope, in order to bring the paper slip into view without altering the adjustment of the telescope.

23. The following are the values of the constants used in the preceding formulæ. Φ for the declinometer thread, with the deflecting bar suspended, is obtained from the value when the long scale magnet is suspended by multiplying the latter by the ratio of the moments of the two magnets; thus, moment of long scale magnet is to moment of deflecting bar, as 1·000 is to 0·942, whence, from the values of Φ for the long scale magnet (No. 10), we have for the deflecting bar and declinometer thread,

$$\text{During 1845 and 1846, } \Phi = 0\cdot001482.$$

The rate of the Observatory clock was generally less than 2 seconds a-day. No correction for rate was therefore employed in the determination of T .

24. The following are the details for the determination of K .

The deflecting bar is 1·25 feet ($= a$) in length; 0·0719 feet ($= b$) in breadth; 6216·7 grains in weight ($= W$). The value of K had been previously determined from the formula $\frac{a^2 + b^2}{12} \times W$. In January 1848, it was thought desirable to determine it by the more accurate formula given previously; as it was doubtful whether the declinometer thread could sustain the deflecting bar and an additional weight, a stronger thread was substituted, for which Φ was determined.

The deflecting bar was vibrated in a stirrup of silk without any appendages, the results are :

Jan. 11^d 1848. Observations made by chronometer, DENT, No. 1665, rate - 5^s0.

Semiarcs of vibration, $\text{arc}^{-1} \alpha = 10\frac{1}{2}^\circ$ $\text{arc}^{-1} \alpha' = 6^\circ$. Temperature of bar $38^\circ 4$ Fahr.

Mean observed time of one vibration from 160 vibrations, $T_0' = 15\cdot9037$.

Bifilar magnetometer observed every 5^m during vibration, mean during vibration corrected for temperature = 553·9 sc. div.

Deflecting bar with scale and lens suspended in a stirrup of silk as during vibration, $\Phi = 0\cdot00200$.

Deflecting bar with scale and lens suspended in brass stirrup, $\Phi = 0\cdot00193$.

The true value of one vibration, $T_0 = 15\cdot9014$.

The deflecting bar having been placed in a stirrup of silk fibres, of the thickness of the suspension thread, it was vibrated with the vertical circle of the inclinometer balanced horizontally upon it; the results are :

Internal radius of ring = 0·39541 feet. External radius of ring = 0·43779 feet.

Weight of ring = 9628·6 grains.

Semiarcs of vibration, $\text{arc}^{-1} \alpha = 12^\circ$, $\text{arc}^{-1} \alpha' = 7\frac{3}{4}^\circ$, temperature of bar = $38^\circ 0$ Fahr.

Rate of chronometer, DENT, No. 1665, $s = - 5\cdot0$.

Mean observed time of one vibration from 120 vibrations, $T_1' = 27\cdot8006$.

Bifilar magnetometer, observed every 5^m during vibration ; mean during vibration corrected for temperature = 569·3 sc. div.

Deflecting bar with scale and lens suspended in brass stirrup, $\Phi = 0\cdot003966$.

As all the observations for the time of vibration of the deflecting bar had been made previously with the bar suspended in a stirrup of silk fibres, in order to employ the second formula for K, given above, depending on the dimensions and weight of the bar, it was necessary in the present case, to determine the value of K for the same mode of suspension. The two values of Φ given above for the bar suspended in a brass and in a silk fibre stirrup, *without* the ring, give Φ with brass stirrup suspension, to Φ with silk stirrup suspension, as, 193 : 200, whence, from the value of Φ above for brass stirrup suspension and magnet *with* the ring, = 0·003966, we find Φ for silk stirrup suspension and magnet with ring = 0·004109.

Since $b_0 - b_1 = - 15\cdot4$ sc. div., $k = 0\cdot000135$, $t_0 - t_1 = + 0\cdot4$, $q = 0\cdot000288$.

The true time of one vibration with the ring (reduced to the value of X for T_0) $T_1 = 27\text{s}\cdot8403$.

25. From the above, therefore, we find for the deflecting bar without appendages,

$$\text{Log } K_0 = 2\cdot9091359 \text{ at the temperature of } 38^\circ 4 \text{ Fahr.}$$

The value of K used in the reductions in the present volume has been obtained from K_0 by the formula

$$K = K_0 \{1 + e(t_v - 38)\}^2$$

where e is the dilatation of steel for 1° Fahr. = 0·0000068, and t_v is the temperature of the bar during vibration.

*

From the formula $K = \frac{a^2 + b^2}{12} W$, $\log K = 2\cdot9096331$.

26. The following are the observations for the value of the induction coefficient $\frac{\delta m}{m}$. Nov 15, 1847. A strong wooden beam having been fixed horizontally in the prolongation of the magnetic axis of the bifilar magnet which lies at right angles to the magnetic meridian, the deflecting bar was mounted in a wooden block having a groove cut to contain the bar ; when the deflecting bar was in its place, it was in the same horizontal plane with, its axis was at right angles to, and its centre was in the prolongation of, the axis of the bifilar magnet. The block was fixed to the wooden beam : the deflecting bar when removed and replaced, was carried with a thick cloth glove or silk handkerchief, to prevent variation of temperature in handling. In reversing the magnet, the same side was always kept next the bifilar magnet.*

* It will in general be preferable to place the deflecting bar to the east or west (as in the present observations), rather than to the north or south of the bifilar magnet, since I have found that the centre of figure may differ considerably from the centre of magnetism ; perhaps, for the same reason, when observations are made only on one side of the bifilar magnet, the deflecting bar should be inverted when it is reversed, since the magnetic axis may be nearer one side of the bar than the other.

TABLE 2.—Determination of the Induction Coefficient for the large Deflecting Bar.

Göttingen Mean Time,	Position of Deflector.	Bifilar Reading.	Interpolated Reading, Deflector Away.	Deflection.	Sum of Deflections.	Difference of Deflec- tions.	Value of $\frac{\delta m}{m}$
d. h. m.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
1847.							
Nov. 5	0 11	Away	157.12				
	15	N. Pole S.	265.35	156.05	109.30		
	19	N. Pole N.	42.57	154.97	112.40	221.70	3.10 0.0140
	23	Away	153.90				
	0 24	Away	154.22				
	27 $\frac{1}{2}$	N. Pole S.	263.60	154.95	108.65		
	30	N. Pole N.	43.47	155.47	112.00	220.65	3.35 0.0152
	33	Away	156.10				
	0 36	Away	156.75				
	40 $\frac{3}{4}$	N. Pole S.	266.90	157.32	109.58		
	44	N. Pole N.	46.75	157.72	110.97	220.55	1.39 0.0063
	48	Away	158.20				
Nov. 6	1 12	Away	150.50				
	15	N. Pole S.	259.12	150.42	108.70		
	18	N. Pole N.	39.57	150.35	110.78	219.48	2.08 0.0095
	21	Away	150.27				
	1 23	Away	150.75				
	26	N. Pole S.	259.46	150.97	108.49		
	29	N. Pole N.	39.67	151.18	111.51	220.00	3.02 0.0138
	33	Away	151.47				
	1 34	Away	151.27				
	37	N. Pole S.	261.10	151.44	109.66		
	40	N. Pole N.	40.60	151.60	111.00	220.66	1.34 0.0061
	43	Away	151.77				
	1 45	Away	152.17				
	48	N. Pole S.	260.97	151.98	108.99		
	50	N. Pole N.	39.97	151.85	111.88	220.87	2.89 0.0131
	54	Away	151.60				

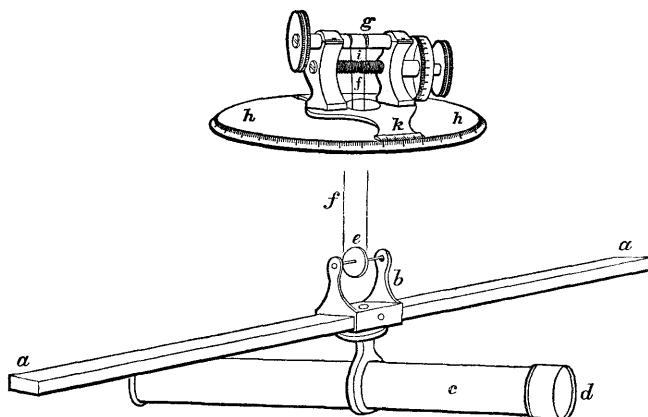
27. The adopted value of $\frac{\delta m}{m} = 0.0112$.

This value is very large, more than twice as great as that obtained for small 4-inch bars, and is evidently not to be neglected in the rudest mode of observation for the horizontal intensity. [For the final results, see the addendum to the Introduction.]

BIFILAR OR HORIZONTAL FORCE MAGNETOMETER.

28. This instrument was made by GRUBB of Dublin, and is similar in its general construction to the clinometer, having two boxes, gilt internally and externally as in the latter instrument. The magnet *a a*, whose dimensions are 15 inches, $\frac{7}{8}$ inch, and $\frac{1}{4}$ inch, is placed in a stirrup *b*, which carries below it a tube *c*, having a lens *d*

at the extremity next the reading telescope, and a glass scale at the other : the scale has 280 divisions, and the graduation at the 300th division ; increasing readings of



the scale indicate increasing magnetic force ; the axle of a grooved wheel *e* fits into the suspension eyes of the stirrup *b* ; the magnet, with these appendages, is borne by a silver wire *f*, passing round the grooved wheel, and having its two extremities pegged into a suspension roller *g* : the roller is supported by the torsion circle *h*, which also bears, beneath the roller, a micrometer-headed screw *i*, right-handed where it meets one extremity of the wire, left-handed where it meets the other. The screw serves to render the distance of the extremities of the wire equal to the diameter of the grooved wheel ; the screw and suspension roller turn with the verniers *k*. A copper ring encircles the magnet, in order to check the vibrations. A thermometer by ADIE and SON is enclosed by a glass tube passing through both boxes, the stem of the thermometer, with the graduations, being above the lid of the outer box ; the bulb of the thermometer rests in a cup, formed in a brass bar of the same dimensions as the bifilar magnet ; the brass bar is supported on a wooden stand, and lies parallel to the magnet ; the bulb of the thermometer is also covered loosely by a small brass cap. It was found from comparative observations (p. xxx., Introduction, 1843) that a thermometer, with its bulb free, would differ 1° from the thermometer resting in the brass bar in the course of a daily change of 10° of temperature. The whole instrument was covered with a double thick cotton cover Jan. 31^d 6^h 1844. The reading telescope is fixed to a stone pier, 8 feet south of the magnet.

29. In the adjustment of the instrument, the magnet is forced to a position at right angles to the magnetic meridian, by turning the arms of the torsion circle. As, in forcing the magnet from the meridian, the upper extremities of the wire will move through a greater angle than the lower extremities, the wires will be no longer vertical, and the magnet and appendages will be raised ; the forces producing equilibrium will, therefore, be the weight suspended endeavouring to attain the lowest point, and the horizontal component of the earth's magnetic intensity acting on the free magnetism of the bar.

30. If v be the excess of the angular motion of the arms of the torsion circle, or upper extremities of the wire, over u , that of the lower extremity or magnetic bar in moving the latter from the meridian, the equation of equilibrium will be

$$m X \sin u = W \frac{a^2}{l} \sin v$$

m , X , W , a , and l being respectively the magnetic moment of the bar, the horizontal component of the earth's magnetic force, the weight suspended, the interval, and the length of the wires. The differential of this equation ($u = 90^\circ$) divided by it, gives

$$\frac{\Delta X}{X} = n a \cot v + t (Q + 2e - e')$$

n being the number of scale divisions from the zero, or scale reading when $u=90^\circ$, a the arc value in parts of radius of one scale division, t the number of degrees Fahrenheit which the temperature of the magnet is above the adopted zero, Q the coefficient of the temperature correction for the varying magnetic moment of the bar or the value of $\frac{\Delta m}{m}$ for 1° Fahr., e and e' the coefficients of expansion for the brass of the grooved wheel and silver of the wires.

31. It is assumed, in the previous investigation, that the suspending wire does not act by any inherent elastic force; that the torsion force depends wholly on the length and interval of the two portions of the wire and the angle of twist: it seems extremely probable that this condition will not be rigorously sustained, and it is very possible that there may be considerable twist in the suspending wire or thread; for this reason, the following methods, which are independent of the angle of torsion, were employed to determine the coefficient:—

32. If the equation of equilibrium for the bifilar magnet at right angles to the magnetic meridian be

$$m X = F, \dots \dots \dots \dots \quad (1.)$$

and if a magnet whose magnetic moment is M be placed with its axis in the magnetic meridian passing through the centre of the bifilar bar, the centres of the two bars being at a distance r , and the resulting angle of deflection be n scale divisions $= \Delta v$, the equation of equilibrium will be

$$m \left\{ X + \frac{2M}{r^3} \left(1 + \frac{p}{r^2} + \frac{q}{r^4} \right) \right\} \cos \Delta v = F.$$

For a value of the earth's horizontal force $X + \Delta X$, which would alone have produced the deviation Δv , we have

$$m (X + \Delta X) \cos \Delta v = F;$$

whence

$$\frac{\Delta X}{X} = \frac{2 M}{X} \left(\frac{1}{r^3} + \frac{p}{r^5} + \frac{q}{r^7} \right) \dots \dots \dots \quad (2.)$$

If the deflecting bar be now employed to deflect a freely-suspended unifilar magnet, in order to determine the value of $\frac{M}{X}$, as in the ordinary observations for absolute horizontal intensity ; u being the angle of deflection for a distance r_1 we have

$$\frac{2 M}{X} = r_1^3 \tan u \frac{1}{1 + \frac{p_1}{r_1^2} + \frac{q_1}{r_1^4}}$$

If the bifilar and unifilar bars are of the same dimensions p and q , which are quantities depending upon the distribution of the magnetism in the bars, may be considered equal to p_1 and q_1 , and if the deflections for both bars be made at the same distances, or $r=r_1$ then

$$\frac{\Delta X}{X} = \tan u,$$

and

$$k = \frac{\tan u}{n} \dots \dots \dots \quad (3.)$$

If, however, the bifilar and unifilar magnets are of different dimensions, the value of $\frac{2 M}{X}$ should be obtained from the deflections of the unifilar at different distances, p_1 and q_1 being eliminated ; that value being substituted in equation (2.), and deflections of the bifilar being obtained for different values of r , p and q also may be eliminated.

33. Wooden beams having been placed in the prolongations of the bifilar magnet, and at right angles to these, lines were drawn upon them, passing through the centre of the magnet,—one in the magnetic meridian, the other at right angles to it ; several distances from the centre of the suspended magnet were marked off on each side with a beam compass ; a similar structure was erected for the declinometer. The following observations were then made :—

34. 1st, A cylindrical magnet, 3·65 inches long, was employed to deflect the bifilar and declinometer magnets ; these two magnets are of the same dimensions, 15 inches long, and were obtained at the same time from the same maker. The short deflecting bar was placed at different distances to the east, and at the same distances to the west, of the bifilar bar, and the deflections of the bifilar were observed in scale divisions. Observations of deflection of the declinometer magnet were then obtained with the same deflector—the deflector, however, being placed at the same distances, as in the other case, to the north and south of the declinometer magnet : in both cases, the prolongation of the suspended bar, in its normal position, passes through the centre of the deflector. The results are obtained in the 1st portion of Table 3.

2d, The same deflecting bar was placed to the north and south of the bifilar magnet, and to the east and west of the declinometer magnet, the prolongation of the axis of the deflector in both cases passing through the centre of the suspended bar. The results are given in the 2d portion of Table 3.

35. 3d, A large deflecting bar (15 inches long) was employed in the same manner as the small bar in the 1st instance.

4th, The large deflecting bar was employed in the same manner as the small bar in the 2d case.

36. In the 3d case, deflections of the bifilar could only be obtained to the E, and, in the 4th case, to the S of the bifilar magnet, owing to the proximity of the bifilar to the walls of the Observatory. It was easy, however, from the observations with the small bar to make the requisite corrections for the difference of deflection on the opposite sides: the correction is small. The results for the 3d and 4th cases are contained in the 3d and 4th portions of Table 3.

TABLE 3.—Observations of Deflection for the Determination of the Coefficient of the Bifilar Magnetometer.

No. of Series.	Deflections of Bifilar Magnet.					Deflections of Declination Magnet.					Resulting Value of k .	
	Date.	Distance.	Deflection.	Mean.	Therm.	Date.	Distance.	Deflection.	Mean.	Therm.		
1 {	1847.	Feet.	Sc. Div.	Sc. Div.	°	1847.	Feet.	Sc. Div.	"	"		
	May 11	2.2	{ E W	133.4 138.5	136.0	53.6	May 14	{ N S	94.30 92.25	62 43	62.6	0.0001345
	May 13	2.7	{ E W	64.4 66.4	65.4	61.9	May 14	{ N S	45.85 45.00	30 33	62.6	0.0001359
2 {	May 12	3.267	{ E W	34.3 35.4	34.9	58.5	May 14	{ N S	24.20 23.70	16 6	62.6	0.0001342
	May 11	2.5	{ N S	118.4 119.6	119.0	53.9	May 15	{ E W	81.60 82.40	55 9	60.0	0.0001350
	May 13	3.167	{ N S	60.9 60.7	60.8	60.9	May 15	{ E W	42.05 42.75	28 31	60.0	0.0001364
3 {	May 12	4.583	{ N S	21.0 21.0	21.0	56.4	May 15	{ E W	14.34 14.58	9 43	60.0	0.0001346
	May 15	6.917	{ N S 119.8	119.8	May 15	{ E W	82.56 82.84	55 37	61.5	0.0001351
	May 15	8.209	{ N S 71.4	71.4	May 15	{ E W	50.13 49.88	33 38	61.5	0.0001370
4 {	May 19	5.5	{ E W	125.1	126.0	55.2	May 15	{ N S	102.48 103.28	69 11	61.8	0.0001350
	May 19	7.792	{ E W	42.9	43.0	55.2	May 15	{ N S 44.23	29 45	61.8	0.0001357

37. 5th, In May and August 1847, a theodolite magnetometer by Mr JONES of London was converted into a unifilar horizontal force magnetometer, the suspended

xxx INTRODUCTION TO THE MAKERSTOUN OBSERVATIONS, 1845 AND 1846.

bar having been deflected through an angle ($u - \delta$) as in Dr LAMONT's method, the variations of horizontal force were deduced from the scale readings, reduced to angular measure by the formula

$$\frac{\Delta X}{X} = - \cot(u - \delta) (\Delta u - \Delta \delta) + q(t - t_0)$$

where u is the angle which the deflected magnet makes with the *astronomical* meridian (negative when to the east) and δ is the westerly declination, Δu being the arc value of the change of reading, and $\Delta \delta$ the arc value of the simultaneous change of declination obtained from the clinometer : q being the temperature coefficient of the deflecting bar (=0.00021), t_0 the standard temperature of the deflecting bar, and t the temperature of observation.

In May 1847, only three comparisons of the two instruments were obtained during a moderate magnetic disturbance ; the results are given as a specimen of the accuracy that may be expected from this method.

Date.	Bifilar Corrected. Sc. Div.	u	δ	$(\Delta u - \Delta \delta) \times \cot 39^\circ 40'$	t	$q(t - t_0)$	k
May 7 ^d 22 ^h 0 ^m	479.9	-14 42.88	25 16.82		48.4	-0.000063	0.0001328
23 30	533.0	-14 29.56	25 9.86	+0.007114	48.7	-0.000084	0.0001344
8 1 32	571.9	-14 20.28	25 4.00	+0.005331	49.1		

The mean of the two values of k = 0.0001336.

In August 1847, a series of comparative observations were made of the bifilar and a unifilar horizontal force magnetometer : these observations were made every hour for three days ; the results were grouped so as to obtain the greatest differences of readings for comparisons ; the mean angle of deflection of the unifilar ($u - \delta$) was equal to 65° . The final result of the whole groups was, that the changes of the unifilar scale readings were to those of the bifilar scale readings as 1 to 0.974, the value of k for the unifilar being 0.0001389, therefore that of k for the bifilar = 0.0001353. The changes of horizontal force from which this result was deduced were small.

38. The following, then, are the values of k , deduced by the five different processes above :—

Short deflector, E. and W. of bifilar magnet, and N. and S. of declination magnet,	$k=0.0001349$
..... N. and S.	E. and W. $k=0.0001353$
Large deflector, E.	N. and S. $k=0.0001360$
..... S.	E. and W. $k=0.0001353$
Comparisons of unifilar and bifilar horizontal force magnetometers,	$k=0.0001353$

The mean of all the results gives $k=0.0001354$

The adopted value of $k=0.000135$

39. The value of the coefficient deduced from the angle of torsion of the suspending wire is

$$1847. \quad k = a \cot v = 0.00032675 \times \cot 69^\circ 3' = 0.0001251.$$

The ratio of the true value of k to that determined by the angle of torsion = $\frac{135}{125} = 1.08$.

40. The true values of k from 1841, obtained from the formula $1.08 \times a \cot v$ are given below :—

July 11 ^d 20 ^h 1841—July 23 ^d 5 ^h 1841,	$k=0.000128$
Aug. 4 20 1841—Sept. 7 5 1841,	$k=0.000164$
Sept. 7 20 1841—Sept. 30 5 1841,	$k=0.000158$
Oct. 6 20 1841—Oct. 19 28 1841,	$k=0.000141$
Oct. 19 23 1841—April 27 4 1843,	$k=0.000135$
April 28 2 1843—Nov. 8 22 1843,	$k=0.000130$
Nov. 10 8 1843—Dec. 31 12 1845,	$k=0.000140$
Jan. 0 12 1846, and afterwards,	$k=0.000135$

In order to reduce the variations of the horizontal component given, pages 229 to 238, in the volume for 1843, to their true values in parts of the whole horizontal component, they must be multiplied by the factor 1.316.

41. The bifilar magnet was adjusted November 10^d 1843, when the angle v was found = $68^\circ 18'$, the bifilar scale reading 173. The angle v remained unaltered, excepting for short periods during disturbances, till January 1, 1846. (See No. 43.)

42. During considerable disturbances the collimator scale, which contains too small an angle, goes out of the field of the reading telescope, it was found necessary in these cases to turn the arms of the torsion circle until it reappeared; afterwards the arms of the torsion circle were turned to their original position: experiments were made in the end of 1842, during periods of slight change, which shewed, after turning the arms of the torsion circle a few degrees in either direction, that on recurring to the original value of v , the scale readings were unaltered. If β be the small angle through which the arms of the torsion circle are turned, n be the scale reading *minus* 170 (the adopted scale zero), then N , the number of scale divisions from the zero (corrected for temperature) for the same force when $\beta = 0$, is obtained from the formula,*

$$\begin{aligned} N &= \frac{2 \sin \frac{\beta}{2}}{a \cos v} \cos \left(v + \frac{\beta}{2} \right) + n \frac{\cos(v + \beta)}{\cos v} + t q' \\ &= \quad A \quad + n B \quad + t q' \end{aligned}$$

β is considered negative when v is diminished, n is negative when the reading is below the zero (170), t is the temperature of the magnet minus 26° , and q' is the temperature coefficient in scale divisions.

* Introduction, 1843, p. xxxiii.

43. The arms of the torsion circle were turned during disturbances,* as follows :

		Sc. Div.
1845. Apr. 13 ^d 15 ^h 0 ^m —	46 ^m $\beta = - 1^\circ 12'$	$A = - 65.8$ $B = 1.052$.
1845. Apr. 13 ^h 15 ^h 46 ^m —21 ^h 30 ^m	$\beta = - 0^\circ 9'.5$	$A = - 8.5$.

The arms of the torsion circle were turned to their original position at April 13^d 21^h 30^m.

		Sc. Div.
1845. Dec. 3 ^d 7 ^h 2 ^m —	49 ^m $\beta = + 3^\circ 13'.5$	$A = + 160.0$ $B = 0.857$.
1845. Dec. 3 ^d 7 ^h 49 ^m —4 ^d 2 ¹ ^h	$\beta = - 0^\circ 6'.5$	$A = - 5.5$.

The arms of the torsion circle were turned at Dec. 4^d 2¹^h, to within 1' of the original reading ; the observations from that time till January 1, 1846, have been corrected by - 1.0 sc. div. for this error of torsion circle reading.

1846, January 1^d 3¹^h. On account of the readings of the bifilar approaching too near the top of the scale, the arms of the torsion circle were turned from 110° 16'.5 to 109° 31', or through 45'.5, the angle v being changed from 68° 18' to 69° 3'.5. The constants for reducing the observations after January 1, 1846, to scale divisions of the same value as in 1844 and 1845, are

$$1846. \quad \beta = + 0^\circ 45'.5 \quad A = + 39.7 \text{ sc. div.} \quad B = 0.967.$$

These reductions have not been made, but the observations from January 0^d 13^h, 1846 to 1^d 3^h have been reduced by the quantities

$$A = - 39.7 \text{ sc. div.} \quad B = 1.033$$

to the same scale values as the other observations in 1846, and in the abstracts the observations for 1846 have been rendered comparable with those for 1845 by the following process :—The scale reading immediately before turning the arms of the torsion circle was 218.7, therefore $n = 48.7$ sc. div. ; and from the constants A and B and the previous formula, $N = 9.3$ sc. div., whence the readings after the adjustment, the horizontal force remaining constant, should have been 179.3, the temperature of the magnet being 40°.9, the tabular reading before adjustment (corrected for temperature + 300) = 547.0, and the reading after adjustment (corrected for temperature + 300) = 508.7 ; since these two readings are for the same value of the horizontal force and the zero for 1845 is taken in the abstracts of the results as 500, z the zero for 1846 will be obtained from the equation

$$(547.0 - 500.0) 0.000140 = (508.7 - z) 0.000135$$

whence $z = 460.0$.

* In 1847, it was found more convenient during disturbances, to bring the scale of the bifilar magnet into the field of the reading telescope, by means of a small deflecting magnet placed on a beam of wood at known distances from the centre of the bifilar magnet. The effect of the deflecting magnet was afterwards determined with the aid of a second deflecting bar.

300 sc. div. being added to all the readings for 1845, 340 has been added to all those for 1846, and the same zero, 500, is applicable to both.

44. The mean time of one vibration of the bifilar magnet, is between 26^s and 27^s: the natural arc of vibration is generally very small, and when considerable, the time of vibration was found less than from large artificial vibrations.* 25^s or 26^s has been used in the observations for 1845 and 1846.

45. The observations of the bifilar were made as follows: The point of the scale coinciding with the vertical wire of the fixed telescope is estimated to the tenth of a scale division at 25^s before the minute of observation, at the minute, and 25^s after it; the three readings being a , b , and c , the mean is deduced from the formula $\frac{a+2b+c}{4}$. The mean thus obtained is corrected to the temperature of

26° Fahr., a constant quantity has been added to all the corrected means. If N be the observed mean, and t be the observed temperature of the bifilar bar, the corrected means n , given in this volume, are obtained from the formulæ

$$\begin{aligned} 1845. \quad n &= N + 300 \cdot 0 + (t - 26^\circ) 1 \cdot 90 \\ 1846. \quad n &= N + 340 \cdot 0 + (t - 26^\circ) 1 \cdot 975 \end{aligned}$$

1·90 and 1·975 being the temperature coefficients in scale divisions in 1845 and 1846 respectively.

The means f in parts of the whole horizontal force given in the abstracts of results, are obtained by the formulæ

$$\begin{aligned} 1845. \quad f &= (n - 500) 0 \cdot 000140 \\ 1846. \quad f &= (n - 500) 0 \cdot 000135 \end{aligned}$$

0·000140 and 0·000135 being the values of k for 1845 and 1846 respectively.

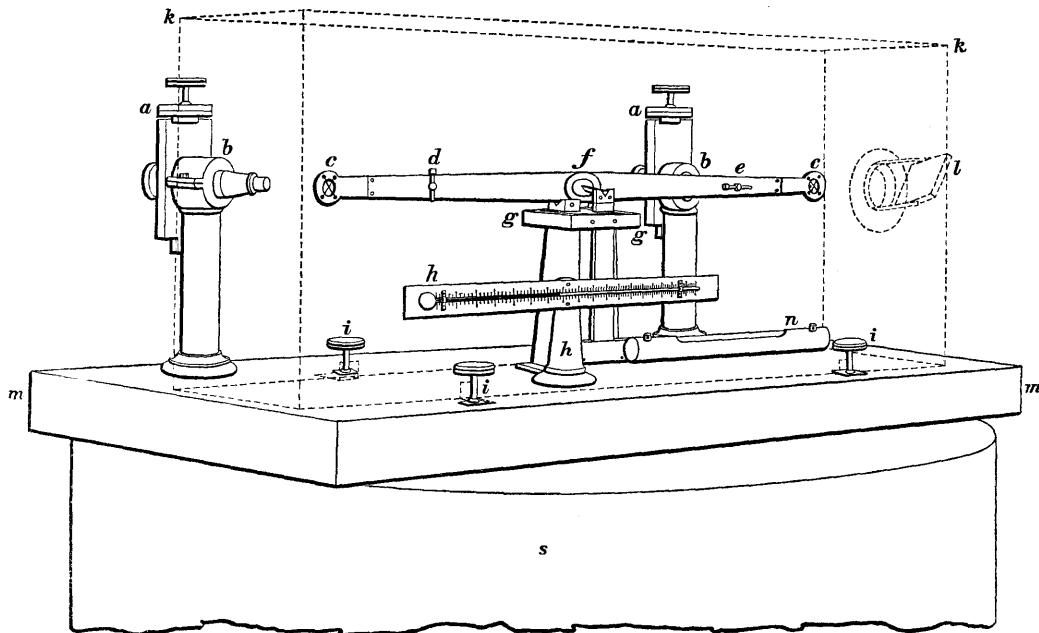
No correction has been applied for the effect of the balance magnet, which is constant.

BALANCE OR VERTICAL FORCE MAGNETOMETER.

46. The balance magnetometer was made by ROBINSON of London; it is composed of a magnetic needle cfc , 12 inches long, about $\frac{3}{4}$ inch broad, and about $\frac{1}{16}$ inch thick, with knife-edged axle f , which rests upon agate planes; brass rings $c c$ are attached to the extremities of the needle, each ring carrying a cross of spider threads. The needle is placed at right angles to the plane of the magnetic meridian, it is accurately adjusted to horizontality by a screw e which balances the needle, another screw d working vertically, regulates its sensibility. The apparatus, and a thermometer h which gives the temperature of the needle, is covered by a rectangular box k having glazed openings on both sides opposite the spider crosses; those on one side allowing light to be thrown on the crosses from two small mirrors, (one of which

* Introduction, 1841–2, pp. xxviii., xxix.

l is indicated in the figure); those on the other, for viewing them and determining their position, which is done accurately by the microscopes *b b* carrying micrometers; the micrometer heads *a a* are divided into 50 divisions. The supports *g* of the



needle are fixed to a marble slab *m*, cemented to the stone pillar *s*; the horizontality of the slab is indicated by a level *n*, the lower edge of the rectangular box is covered with velvet, and it is screwed hard to the slab by the screws *i i*. A four-fold cover of thick cotton cloth was placed over the rectangular box, July 18^d 12^h 1844, in order to keep the temperature as uniform as possible; the box itself is covered with gilt-paper internally and externally.

47. If *m* be the moment of free magnetism of the needle, *Y* the vertical component of the earth's magnetic force, *G* the weight of the needle into the distance of its centre of gravity from its centre of motion, and ϵ the angle contained by the line joining these two centres and the magnetic axis of the needle, the latter being horizontal, the equation of equilibrium is

$$m Y = G \cos \epsilon$$

differentiating this equation, dividing by it, and having regard to the sign of $\Delta \epsilon$

$$\frac{\Delta Y}{Y} = \tan \epsilon \Delta \epsilon - \frac{\Delta m}{m}$$

where

$$\tan \epsilon = \cot \theta \frac{T'^2}{T^2}$$

where θ is the magnetic dip, T' is the time of one vibration of the needle in a horizontal

plane, and T is the time of one vibration in a vertical plane.* $\Delta \epsilon$ is obtained from the observations in micrometer divisions, one division being = $0'1003$.†

The time of one vibration in the horizontal plane, $T' = 12^{\text{s}}.00$.‡

Time of vibration in the vertical plane.

The needle being in its usual position on the agate planes, the moveable wire of the left micrometer is made to bisect the spider-cross; the needle is then vibrated by means of a small piece of steel, through an angle of about 40 micrometer divisions or $4'$, and the periods of the cross passing the wire, are estimated to a tenth of a second (See Table 12, Introd. 1843, p. xxxix.) The arc of vibration at the commencement was measured by means of the right micrometer, it was usually taken very small on account of the difference in the times of vibration with difference of arc (afterwards noticed, 54), although it is now certain that large arcs of vibration give a time which satisfies better the previous equation and the true coefficient of the instrument.

The following Table contains the observations for the value of T made in 1845 and 1846.

The number of vibrations observed, is given in the column after that containing the arc of vibration at commencement.

TABLE 4.—Values of T , the Time of Vibration of the Balance Needle in a Vertical Plane, with the Temperature of the Needle, in 1845 and 1846.

Göttingen Mean Time.	Arc at Com- mence- ment.	Number of Vibra- tions.	Time of one Vibra- tion.	Tempe- rature of Needle.	Göttingen Mean Time.	Arc at Com- mence- ment.	Number of Vibra- tions.	Time of one Vibra- tion.	Tempe- rature of Needle.
d. h. 1845.	'		s.	°	d. h. 1845.	'		s.	°
Jan. 1 22	3.8	25	7.14	34.4	Mar. 13 22	3.2	8	7.08	31.9
Jan. 3 22	4.5	20	7.01	35.8	Mar. 16 22	3.8	15	6.82	31.1
Jan. 5 22	3.6	25	8.05	46.3	Mar. 23 23	3.9	15	8.07	45.6
Jan. 8 22	3.3	20	7.33	35.9	Apr. 1 11	4.7	15	8.10	48.8
Jan. 13 22	3.8	20	7.53	38.2	Apr. 7 0	4.3	15	7.90	47.8
Jan. 16 22	3.2	15	7.21	34.9	Apr. 13 22	4.3	25	7.30	42.7
Jan. 21 0	3.1	25	7.21	35.4	Apr. 21 8	5.1	20	8.84	58.8
Jan. 23 23	4.2	20	8.38	46.2	Apr. 21 23	3.5	25	8.04	50.6
Jan. 26 22	3.3	25	7.42	36.0	Apr. 29 0	4.1	25	7.89	52.7
Jan. 30 2	3.1	25	6.72	27.2	Apr. 30 23	4.0	15	8.02	54.5
Jan. 31 2	3.7	40	6.47	21.5	May 4 21	3.0	15	7.31	46.8
Feb. 4 22	3.7	15	7.64	38.7	May 7 23	4.0	15	7.06	44.7
Feb. 12 2	4.1	15	6.93	32.6	May 13 0	4.6	20	7.56	50.7
Feb. 16 23	3.7	20	7.49	38.8	May 15 8	4.0	15	8.34	58.5
Feb. 24 0	3.5	20	7.72	38.6	May 18 22	5.0	20	7.56	50.0
Mar. 2 22	3.9	20	7.40	39.5	May 19 21	5.0	20	7.37	48.3
Mar. 9 22	3.9	20	7.43	41.0	May 28 0	3.8	20	7.11	47.6
Mar. 12 23	3.6	20	6.87	31.6	June 2 22	4.0	25	7.91	56.3

* See Dr LLOYD'S Account of the Magnetical Observatory of Dublin, p. 38.

† Introduction, 1843, p. xxxviii. ‡ Introduction, 1841–2, Table 15, p. xxxv.

TABLE 4.—*continued.*

Göttingen Mean Time. d. h. 1845.	Arc at Com- mence- ment.	Number of Vibra- tions.	Time of one Vibra- tion.	Tempe- rature of Needle.	Göttingen Mean Time. d. h. 1846.	Arc at Com- mence- ment.	Number of Vibra- tions.	Time of one Vibra- tion.	Tempe- rature of Needle.
June 10 10	4.3	30	8.27	63.0	Feb. 4 23	4.3	18	6.63	41.7
June 12 8	3.7	25	9.17	74.3	Feb. 22 23	3.9	20	7.01	50.4
June 13 9	3.7	20	9.22	74.9	Mar. 18 22	3.7	25	6.00	30.9
June 17 1	4.2	20	7.90	64.0	Mar. 25 1	4.1	30	6.59	43.0
June 27 22	3.5	20	7.33	54.0	Apr. 26 22	3.5	25	6.37	42.2
July 7 17	3.6	20	8.05	64.3	May 1 23	4.6	20	6.91	54.2
July 11 23	2.9	15	7.48	57.4	May 18 22	4.2	25	6.74	51.9
July 14 21	3.8	20	7.35	55.2	May 21 9	4.5	25	7.39	60.5
July 20 22	3.6	20	7.17	56.0	May 25 8	4.1	20	7.58	63.5
July 29 22	3.6	20	7.36	56.3	May 26 22	4.0	15	6.94	54.8
Aug. 10 22	4.0	20	7.43	57.8	May 27 22	3.7	25	6.85	52.5
Aug. 19 19	4.3	25	7.20	53.7	May 29 9	3.7	20	7.65	65.4
Aug. 20 1	3.4	20	7.01	53.9	May 30 8	3.1	20	7.62	66.0
Aug. 28 22	4.4	20	7.96	61.9	June 17 20	3.1	20	8.10	72.0
Sept. 9 22	4.3	20	7.41	57.8	June 23 20	3.5	10	6.95	56.6
Sept. 19 23	4.0	10	7.01	50.3	June 23 23	4.0	10	6.95	56.5
Sept. 22 21	4.6	20	6.74	43.8	•				
Sept. 23 22	3.6	10	6.56	43.2	July 2 23	6.0	30	10.54	64.7
Oct. 1 23	4.2	15	6.89	51.5	July 3 22	5.2	30	10.43	63.3
Oct. 5 22	4.4	30	6.49	41.7	July 5 23	3.8	30	10.47	63.2
Oct. 13 21	3.5	15	6.98	54.5	July 8 22	4.6	25	10.16	56.1
Oct. 21 23	3.1	20	6.58	49.2	July 13 22	5.0	30	10.40	63.5
Oct. 30 22	3.9	20	6.76	47.5	July 19 23	4.5	30	10.15	60.7
Nov. 3 23	4.4	15	6.35	39.1	July 26 20		30	10.38	62.3
Nov. 17 22	4.5	20	6.43	42.5	Aug. 13 22	4.2	30	10.26	59.0
Nov. 23 22	3.6	15	6.06	36.2	Sept. 14 22	4.0	26	10.16	61.8
Nov. 26 22	4.0	20	6.71	49.7	Oct. 5 20	5.0	26	9.74	56.7
Dec. 11 23	3.6	18	6.32	40.2	Oct. 23 22	3.8	15	9.48	46.1
Dec. 12 23	4.1	20	6.03	33.5	Nov. 6 22	4.8	15	9.68	49.5
Dec. 14 22	4.1	20	6.36	42.5	Nov. 9 23	4.0	17	9.37	42.2
1846.					Dec. 1 23	3.6	15	9.14	33.3
Jan. 8 23	4.0	20	6.84	47.5	Dec. 2 22	4.4	10	8.95	27.5
Jan. 25 22	4.0	18	6.75	47.3					

48. 1st, It has been concluded from Table 5, Introduction 1844, that after the needle has been vibrated by any means through a large arc, its time of vibration has been increased ; this will be apparent from the observations of vibration before and after April 30^d 7^h, July 24^d 18^h, July 26^d 3^h, November 5^d, and November 8^d 21^h, 1844. On all these occasions the needle was vibrated through large arcs, either from the accidental approach of iron, or from the removal of the box for a short period.*

49. 2d, It is obvious, from the observations for 1844, 1845, and 1846, that the time of vibration depends upon the temperature of the needle, a change of +1° of temperature causing a change of from +0^s.05 to 0^s.10 in the time of one vibration.

* See Transactions of the Royal Society, Edinburgh, vol. xvi., p. 69, Table I.

The amount of change in the time of vibration, for 1° of temperature can only be determined from the changes within short periods, since,

50. 3d, The time of vibration diminishes with time. The balance needle was adjusted, Jan. 27^d 1844, the times of vibration after the adjustment were

Feb. 1 ^d — 6 ^d , 1844, Mean time of one vibration, 9 ^s .24	Temperature of needle, 33°.9
Feb. 19 ^d —27 ^d 8 ^s .65 32°.0	
Dec. 9 ^d —20 ^d 6 ^s .90 33°.7	
Dec. 12 ^d — 1845, 6 ^s .03 33°.5	

The temperature of the needle is nearly the same in these cases; it appears, therefore, that the time of vibration has diminished fully two seconds in the first ten months. This diminution is altogether independent of any variation in the magnetic moment of the needle, since the time of vibration in a horizontal plane remains nearly constant. From the beginning of 1844, to the end of 1845, the mean position of the needle had varied about 300 micrometer divisions. Since the position of the needle also varies with temperature, it does not at first appear improbable that the variation in the time of vibration is due to the varying position alone. Increasing temperature at the same time raises the north end of the needle and increases the time of vibration; from the beginning of 1844 till 1846, however, the north end of the needle has been rising, while the time of vibration has been diminishing. It is probable from this, and certain from other observations, that the time of vibration is nearly constant for any angle which the magnetic axis of the balance needle makes with the horizontal. During a considerable magnetic disturbance, April 17^d 1844, observations of vibration were obtained for positions of the balance needle varying 400 micrometer divisions, yet the observed time of vibration only varied four-tenths of a second, and that not directly with the inclination of the needle, but from errors of observation and variation of temperature. Such a variation of position, if due to temperature alone, would have required a change of 50° Fahr., which would have produced a change of about 3^s.8, in the time of vibration.*

51. In order to determine more distinctly whether change of inclination of the magnetic axis affected the time of vibration to any considerable extent, the following observations were made during an adjustment of the instrument.

January 18, 1848. The balance needle with its magnetic axis *in* the magnetic meridian, nearly horizontal, mean position + 160 mic. div.

Arc of vibration at commencement, 32'. Time of one vibration, 8^s.05.

After this observation, turned *out* the horizontal screw one revolution, which changed the reading from + 160 mic. div. to - 818 mic. div.

Arc of vibration at commencement, 32'. Time of one vibration, 8^s.12.

* Transactions of the Royal Society, Edinburgh, vol. xvi., p. 72, Table IV.

xxxviii INTRODUCTION TO THE MAKERSTOUN OBSERVATIONS, 1845 AND 1846.

The horizontal screw was now turned *in* two revolutions, or one revolution farther in than at first, when the reading was changed from - 818 mic. div. to + 1120 mic. div.

Arc of vibration at commencement, 21'. Time of one vibration, 8^s.00.

Finally, the horizontal screw was turned *out* one revolution, as at first, the mean reading becoming as at first + 160 mic. div., when

Arc of vibration at commencement, 32'. Time of one vibration, 8^s.12.

52. These results are very consistent, and speak much in favour of the excellence of the knife edges of the axle. It is quite certain, therefore, that the variations in the time of vibration observed in 1844, 1845, and 1846, were not due to the varying position of the needle, since all the observations from 1844 till 1846 were obtained from the needle when in positions varying less than 400 micrometer divisions.

53. As it was believed, that during considerable disturbances when the horizontal component of the earth's magnetism increased considerably, the north end of the needle might be drawn slightly out of its position at right angles to the magnetic meridian, the following observations were made to determine whether such a result would affect the time of vibration.

January 14^a 1848. The balance needle being placed on its agate planes with its magnetic axis at right angles to the magnetic meridian, the following observation was made ; position of needle, micrometer reading + 180.

Arc of vibration at commencement 8['].4. Time of one vibration 11^s.27.

Needle vibrated excessively by a pair of magnetic scissors.

Arc of vibration at commencement 4['].8. Time of one vibration 11^s.28.

Brought a 4-inch deflecting magnet close to the *side* of the balance box near the west extremity, in order to draw the needle out of the plane at right angles to the magnetic meridian ; after considerable vibration, always checked by changing the position of the deflector, the following observation was made :

Arc of vibration at commencement 3['].0. Time of one vibration 11^s.28.

Performed the same operation with the deflector, and again observed,

Arc of vibration at commencement 8['].0. Time of one vibration 11^s.12.

Now lifted the needle by the Ys, lowered it, and observed the time of vibration with a large arc.

Arc of vibration at commencement 100['].0. Time of one vibration 11^s.27.

Again vibrated the needle by means of the deflector placed at the side of the needle near its east extremity, so as to displace the needle from the plane at right angles to the magnetic meridian, and observed time of vibration,

Arc of vibration at commencement 90°. Time of one vibration 11^s.29.

None of these operations seemed to alter the time of vibration to any distinct amount ; the box was accordingly lifted off, and the needle was placed about 3° out of the plane at right angles to the magnetic meridian, the north pole (*i.e.* west extremity) being moved towards the north, the following observation was then made :

Arc of vibration at commencement 9°. Time of one vibration 10^s.58.

Although the time of vibration in this position differs somewhat from that in the normal position, the previous observations prove that any deviations due to natural changes of force, would be insufficient to cause the differences evident in the Tables for 1844, 1845, and 1846.

54. 4th, It was found in 1844 and 1845, that the time of vibration depended greatly upon the arc of vibration, the time being greatest for large arcs. (See Trans. Roy. Soc. Ed., vol. xvi., p. 70, Table II.)

55. It is difficult, if not impossible, to offer any explanation of the anomalies in the time of vibration noted above, the knife-edged axle is a fruitful resource in instruments of this class, for the explanation of all difficulties. In this case, the needle is by the best maker (ROBINSON) ; when examined by a lens, the knife edge appears perfect, and finally, the anomalies disappear at certain times without any apparent difference in the state of the instrument ; thus, in the observations already given, Jan. 14, 1848, the time of vibration for an arc of 3' is exactly the same as for an arc of 100' ; the observations also for the time of vibration with the needle differently inclined to the horizontal (Jan. 18, 1848), speak distinctly in favour of the excellence of the knife edges. It should also be remarked, that previously to the adjustment, Jan. 27, 1844, the curious effect of temperature upon the time of vibration was scarcely exhibited ; and it may be added, that in eight months since the needle has been adjusted with its axis *in* the magnetic meridian, the time of vibration appears to remain nearly constant and equally independent of temperature and arc of vibration.

56. It appears certain from these results, obtained from an instrument of the best character, treated with the greatest care, that the time of vibration in a vertical plane cannot be depended on as an element in the reduction of the observations of the balance magnetometer.

57. The question still remains, to what extent these anomalies in the time of vibration affect the observations for the varying vertical component of the magnetic force ? The following fact appears to render it certain that they have no effect whatever. In determining, by the method of comparisons (see pages xlviii. and xlix.) the effect of a change of 1° Fahr. upon the position of the needle, it has been found

xl INTRODUCTION TO THE MAKERSTOUN OBSERVATIONS, 1845 AND 1846.

that this effect is nearly constant, while the time of vibration in the vertical plane has varied from upwards of 11 seconds in 1843, to less than 6 seconds in 1846 (No. 77, 3d); the differences of the results for the temperature coefficient being in all probability due to considerable changes of vertical force in the periods selected for the determinations, and certainly having no relation whatever to the varying time of vibration. Since the temperature coefficient in micrometer divisions (q') has remained constant, it follows that the coefficient of reduction (k) must also be constant. This conclusion renders it the more desirable that the value of the angular motion of the needle in parts of the vertical component should be determined by another method which does not involve the time of vibration; the statical method already described for the bifilar magnetometer, has been employed for this purpose with some modification.

58. January 6, 1848. Wooden beams having been placed horizontally at right angles to the magnetic meridian, and a line having been drawn upon them, which was a projection of the prolongations of the balance needle, a small deflecting bar (3·65 inch long, and having a temperature coefficient = 0·000285), was placed vertically at different distances on the beam, and the angles of deflection of the needle were observed; the centre of the deflecting bar was in the prolongation of the axis of the balance needle when horizontal, and the distances were measured from the knife edges of the axle, which, however, was found not to be the centre of magnetism of the needle. The resulting deflections and values of k for each distance will be found Table 5.

January 10, 1848, the balance needle was taken out of its box, and attached to the brass detorsion bar of the declinometer; the brass bar was mounted with a glass scale and lens, and was suspended in the declinometer box; the balance needle was then deflected by the bar used for the previous deflections, which was placed to the north and south of the suspended needle, so that in both series of deflections the prolongation of the balance needle in its normal position passed through the centre of the deflecting bar. The deflections for three distances are given, Table 6.

TABLE 5.—Observations of Deflection of the Balance Magnet resting upon the Agate Planes, January 6, 1848.

Distance of Bar.	Order of Observation.	Bar E. N. end up. Balance.	Order of Observation.	Bar W. N. end up. Balance.	Order of Observation.	Bar E. N. end down. Balance.	Order of Observation.	Bar W. N. end down. Balance.	Deflec- tion at 37°.	Deflec- tion at 32°.	Log. tan. u.	Value of k .
Feet.		Mic. Div.		Mic. Div.		Mic. Div.		Mic. Div.				
Away	1	+ 36·7	14	+ 69·5			27	- 49·0				
2·6	2	+ 267·0	13	+ 383·5	15	- 201·5	26	- 382·2	308·5	309·0	7·94533	0·0000099
2·4	3	+ 333·5	12	+ 471·5	16	- 282·0	25	- 479·7	391·7	392·3	8·06003	.0000099
2·2	4	+ 444·1	11	+ 632·0	17	- 401·2	24	- 625·5	525·7	506·5	8·18828	.0000099
2·0	5	+ 612·2	10	+ 875·5	18	- 583·5	23	- 850·5	730·4	731·5	8·33067	.0000099
1·8	6	+ 907·5	9	+ 1238·2	19	- 890·0	22	- 1227·0	1065·7	1067·4	8·49577	.0000099
1·7	7	+ 1184·5	8	+ 1500·5	20	- 1125·0	21	- 1505·5	1328·9	1331·0	8·58925	.0000096
Away	6	- 66·5	11	+ 28·5	1	- 44·5						
2·6	7	+ 190·2	10	+ 338·0	2	- 280·7	5	- 349·5	289·6	290·1	7·94533	0·0000101
1·8	8	+ 899·0	9	+ 1172·0	3	- 912·5	4	- 1188·0	1045·4	1047·5	8·49577	.0000103

TABLE 6.—Observations of Deflection of the Balance Magnet suspended horizontally by the Declinometer Thread, January 10, 1848.

Distance of Defecting Bar.	Observed Deflection.	Mean Observed Deflection.	Value of $1 + \Phi$.	Deflection Corrected for Torsion.	Value of One Sc. Div.	Resulting Deflection.	Temp. of Defecting Bar.
Feet.	Sc. Div.	Sc. Div.		Sc. Div.	'	"	"
3.0 { S. N.	26.96 23.78	25.37	1.00851	25.59	0.746	19 5	32.0
2.4 { S. N.	56.83 48.09	52.46		52.91		39 28	
1.9 { S. N.	129.88 104.98	117.43		118.43		88 21	

From the deflections, Table 6, and the formula

$$\frac{M}{X} = r^3 \tan u \left(1 + \frac{p_1}{r^2} + \frac{q_1}{r^4}\right),$$

we find

$$\log \frac{M}{X} = 9.13614 \quad - \log p_1 = 9.88791 \quad - \log q_1 = 9.11654$$

From the previous equation,

$$\tan u = \frac{M}{X} \frac{1}{r^3 \left(1 + \frac{p_1}{r^2} + \frac{q_1}{r^4}\right)} ;$$

the values of $\frac{M}{X}$, p_1 , and q_1 , given above, and the values of r from the first column of Table 5, being substituted in this equation, the values of $\log \tan u$, column 12, have been obtained.

59. If Y , the vertical component, be substituted for X , in equation (2.), No. 34, we shall have, since $Y = X \tan \theta$

$$\frac{\Delta Y}{Y} = \frac{M}{r^3 X \tan \theta} \left(1 + \frac{p_1}{r^2} + \frac{q_1}{r^4}\right),$$

whence

$$k = \frac{\tan u}{n \tan \theta}$$

where k is the value of $\frac{\Delta Y}{Y}$ for one micrometer division, u and n are the corrected horizontal and vertical deflections for the same distance r ; the former in angular

measure, its logarithmic tangent being given, column 12, Table 5; and the latter in micrometer divisions, reduced to the temperature of the deflecting bar during horizontal deflections; θ is the magnetic dip, the adopted value being $71^\circ 20'$. The temperature coefficient of the deflecting bar = 0.000285.

The mean of all the values of k , 13th column, Table 5 = 0.00000994.

60. When the vertical deflections of the balance needle made July 1^d and 2^d 1846, are compared by the previous method, with the horizontal deflections of the same needle, given Table 6, allowance being made for the loss of magnetism of the deflecting bar between July 1846 and January 1848, k is found = 0.00001025.

The adopted value of k for the balance magnet = 0.0000100

This value of one micrometer division in parts of the whole vertical component may be considered applicable to all the observations of the balance magnet since 1841: it has been used in the abstracts of results for the present volume.

61. The balance needle was deflected July 1 and 2, 1846, for the purpose of determining the value of k , it was readjusted on July 2^d.

As the readings of the micrometer had become previously too much negative, the horizontal screw was turned in a little, the following comparisons of observations before and after the adjustment were made for the purpose of connecting the two series.

	Mic. Div.
Mean balance reading corrected for temperature, June 29 ^d and 30 ^d , . . .	= 383.0
..... July 3 ^d and 4 ^d , . . .	<u>957.0</u>
Difference of readings before and after adjustment,	= 574.0
Mean balance reading corrected for temperature, June 1 ^d —13 ^d ,	= 396.5
..... June 15 ^d —27 ^d ,	<u>396.0</u>
Mean change of reading for 14 days,	= - 0.5
Mean reading, therefore, before adjustment, corresponding to July 1 $\frac{1}{2}$ ^d ,	= 395.6
Mean balance reading corrected for temperature July 6 ^d —18 ^d ,	= 966.4
..... July 20 ^d —Aug. 1 ^d ,	<u>957.5</u>
Mean change of reading for 14 days,	= - 8.9
Mean reading, therefore, after adjustment, corresponding to July 1 $\frac{1}{2}$ ^d ,	= 973.1
The readings after adjustment are therefore greater than before adjustment, by	577.5

A comparison of the mean for the fortnight before adjustment, with that for the fortnight after adjustment, rejecting days of disturbance, and allowing for secular change, gave 577.

The readings after adjustment, are therefore considered greater than those before adjustment, by.....	Mic. Div. } 576.0.
--	-----------------------

The observations after July 2^d are reduced to those before that date by the above quantity.

62. The observations of the balance magnetometer are made in the following manner :—The moveable wire of the right micrometer is made to bisect the spider-cross half the time of vibration in the vertical plane before the minute of observation, and that of the left micrometer as long after the minute ; the mean of the two readings gives the position of the needle at the minute. The readings increase positively when the north pole of the needle moves below the horizontal. The tabular observations given, in this column, are obtained thus : n being the observed reading of the needle (generally negative), t that of the thermometer, giving the temperature of the needle, q' the temperature coefficient in micrometer divisions = 7·90, and R the quantity in the column, “ Balance Corrected”

$$\text{Jan. 1}^{\text{d}} \text{ 1845—July } 1^{\text{d}} \text{ 1846. } R = 700 + q'(t - 26) + n; \\ \text{July } 3^{\text{d}} \text{ 1846—Dec. } 31^{\text{d}} \text{ 1846. } R = 124 + q'(t - 26) + n;$$

increasing tabular values, therefore, indicate increasing vertical force.

THE TEMPERATURE COEFFICIENTS OF THE DEFLECTING, BALANCE, AND BIFILAR MAGNETS.

Deflecting Magnet.

63. The temperature coefficient of the large deflecting bar (15 inches long), used in the observations for the absolute horizontal intensity, was determined November 11, 1843, by hot and cold water experiments, see pages xlvi. and xlvi., Introduction 1843, for the details : the mean of all the observations gave

$$\text{The correction for } 1^{\circ} \text{ of Fahr., } q = 0\cdot000288$$

64. The observations from which this result was obtained were very good, considering that the whole angle of deflection was less than 3° , and it may therefore be worth examining the individual results for the highest and lowest temperature. The whole number of results was 15, the mean difference, from the final result given above, = 0·000025, and the probable error of a *single* result was therefore about 0·000021.

$$\begin{aligned} \text{The mean of 9 results for the mean temperature } 49^{\circ}7 \text{ gave } q &= 0\cdot000289 \\ \text{The mean of 6 } 68^{\circ}7 \text{ } q &= 0\cdot000286 \end{aligned}$$

so that the temperature coefficient for this bar is constant within the *ordinary* temperatures occurring during the observations in which it was employed.

Bifilar Magnet.

65. The temperature coefficient for this magnet was also determined by means of hot and cold water experiments, Nov. 9 and 10, 1843. See page xli., Introduction, 1841-2, for the details. The whole number of results was 30: the mean gave

$$\text{The correction for } 1^\circ \text{ Fahr.}, Q = 0\cdot000294.$$

66. If the 27th and 28th results (counting from the top of the last column of Table 19, p. xli., Introduction, 1841-2) be rejected, as it is believed that the great difference of both from the mean was probably due to one error in reading, we find the average difference of the 28 results from the mean = 0·000021, and the probable error of a single result was therefore about 0·000017. Combining the results from high temperatures together, and similarly for those from low temperatures, we find

The mean of 15 results for the mean temperature 48°·0	gave $Q = 0\cdot000292$
The mean of 13	68°·7
	$Q = 0\cdot000295$

so that for the bifilar magnet, also, the temperature coefficient is constant within the ordinary temperatures of 32° to 80° Fahr.

67. The correction for the expansion of the silver wires and brass grooved wheel, = 0·000010, being added to the value of Q above, we have

$$\text{The temperature correction for } 1^\circ \text{ Fahr., from hot and cold water experiments, } q = 0\cdot000304.$$

68. As the observations in connection with the balance needle had shewn that there might exist variations due to temperature, other than those due to the variation of the magnetic moment of the magnet, such as the varying elasticity of the suspending wire of the bifilar magnet, the temperature coefficient was determined in the following manner, which had at first been found to give consistent results for the balance needle.

69. A series of days being selected in which the magnetic irregularities are small, and in which the variations of temperature are as considerable as possible, if we compare the mean instrumental readings for any two days, and if ΔR be the difference in scale divisions, this difference is due to change of temperature of the magnet, and to change of the horizontal component of the earth's magnetism, let the portion of change of reading due to the former = A , and to the latter = ΔX , so that

$$\Delta R = A + \Delta X.$$

If the difference of the mean temperatures of the magnet for the same two days be Δt , then the correction for 1° of temperature in scale divisions

$$q' = \frac{A}{\Delta t}$$

whence

$$q' = \frac{\Delta R}{\Delta t} - \frac{\Delta X}{\Delta t}$$

Let a series of such values be obtained by comparing the mean scale reading, and mean temperature of the magnet for each day with those for each day following in the period selected : if we consider the differences Δt positive, when the succeeding day's mean temperature is less than that for the preceding day, and sum the whole number of differences for which Δt is positive,* then

$$q' = \frac{\Sigma \Delta R}{\Sigma \Delta t} - \frac{\Sigma \Delta X}{\Sigma \Delta t}$$

If we neglect the last member, the whole error of the determination of q' will depend on the sum of variations of the mean horizontal force $\Sigma \Delta X$; as in a sufficient number of determinations, it is probable that these variations will be as much positive as negative, and, therefore that the numerator will nearly vanish, the last member may be neglected in the determination of q' , and this with the more accuracy the larger the sum of the differences of temperature $\Sigma \Delta t$. Again, if the differences for which Δt is negative are summed, we shall have

$$q' = \frac{\Sigma \Delta R}{\Sigma \Delta t} + \frac{\Sigma \Delta X}{\Sigma \Delta t}.$$

The sign of the first member on the right remains as before, since ΔR also changes sign. Reasoning as in the previous case, $\Sigma \Delta X$ may be supposed nearly zero, and the last member of the equation negligible. If, however, the supposition that the sign of ΔX varies positively and negatively with reference to the sign of Δt be inaccurate, it must be supposed either that the horizontal component remains constant, and therefore, that $\Delta X = 0$, or that it varies in one direction only, increasing continuously, or diminishing continuously, throughout the period selected, and, therefore, that the sign of ΔX is the same for both equations. In the latter case, it is evident that by taking the mean of the values of q' from the two equations, the last members will nearly destroy each other. It has been supposed that the variations of X are altogether independent of the variations of the temperature, a supposition which is borne out by every method of examination of the results. The details of a series of comparisons are given, pages li., lii., and liii., Introduction, 1843, from these it appears :

70. 1st, That the value of q' is the same, when a sufficient number of compari-

* If the scale readings increase with increasing horizontal force, ΔR will generally be negative when Δt is positive, and *vice versa*. The sign of Δt is used as the argument, so that if ΔR be positive when Δt is positive, that value of ΔR will be subtracted from the sum of differences $\Sigma \Delta R$.

sons have been obtained, whether it has been obtained from comparisons of daily means, at 1, or 2, or 3, or 14 days' interval.

71. 2d. That the value of q' is the same, whether the differences of temperature have been due to natural or artificial causes, and when the differences of temperature of the magnet have had an opposite sign from those for the temperature of the external air.

72. From the second result, it follows, that the variations of the horizontal component of the earth's magnetism are wholly independent of the temperature of the air, and from both results it appears probable that they are independent of the temperature of the soil.*

73. The following Table contains the sums of differences of the daily mean temperature of the bifilar magnet, and the value of q' which has resulted from each series of comparisons. The series of comparisons for 1845 have been made since the publication of the series for 1844, for the purpose of verifying the constancy of the result.

TABLE 7.—Determinations of the Temperature Coefficient of the Bifilar Magnet.

Period.	Sum of Diff. Temp.	Value of q' .	Period.	Sum of Diff. Temp.	Value of q' .
1844.	°	Sc. Div.	1845.	°	Sc. Div.
May 9—May 24	320.6	2.22	Jan. 13—Feb. 12	1809.0	1.81
May 29—June 28	1610.7	1.83	Feb. 26—Mar. 28	1608.1	2.06
July 17—July 30	270.0	1.77	June 2—July 2	1725.0	2.13
Sept. 2—Sept. 25	1164.4	1.96	Dec. 8—Dec. 31	757.7	1.65
Nov. 26—Dec. 13	833.3	1.99			

The series of observations for 1844, giving each result an equal weight, give $q' = 1.95$ sc. div.
..... 1845, $q' = 1.91$...
..... 1844, giving the results the weights $\Sigma \Delta t$, give $q' = 1.92$...
..... 1845, $q' = 1.95$

Whether the results for each year have equal weights, or have weights depending on the sums of differences of the daily mean temperatures ($\Sigma \Delta t$), we find

$$q' = 1.93 \text{ sc. div.}$$

The adopted value of the temperature coefficient of the bifilar magnet, $q' = 1.90$ sc. div.

The value of one scale division in parts of force for the period of comparisons (1844 and 1845), being $k = 0.000140$.

Whence, the correction for 1° Fahr., from comparisons of observations, is $q = 0.000266$.

* See foot-note, p. 395 of the volume for 1844.

74. The result from hot and cold water experiments is nearly $\frac{1}{7}$ more. It appears, therefore, that the determination of the temperature coefficient, by removing the magnet from its position in the instrument and varying its temperature by means of hot and cold water, cannot be depended on. It appears also, that when a sufficient number of observations is included, the method of comparison previously described gives, under very different conditions, consistent, and, therefore, it is probable, accurate results.*

Balance Magnet.

75. The temperature coefficient of the balance magnet was determined by means of hot and cold water experiments August 24, September 1 and 2, and November 13, 1843, and January 27, 1844. See pages xlii., xliii., and xliv., Introduction, 1841-2, for the details. The mean of the whole observations, properly weighted, gave

$$q = 0.000073.$$

76. The only good series was that obtained January 27, 1844, which included changes of temperature from 35° to 65° only; the other series are too inaccurate to be employed for the determination of the value of q for high and low temperatures; from series of comparisons of the usual observations of the balance it has been found, however, that the value of q' , the temperature correction for 1° Fahr. in micrometer divisions, is the same for high and low temperatures, thus—

Mic. Div.
From 7 series of comparisons in 1844 and 1845, about the mean temperature 40° , $q' = 8.33$
From 8 60° , $q' = 8.30$

As the first result is the mean of 7 values of q' , obtained from comparisons of the mean readings of the balance magnetometer for about 170 days, in the months of January, February, November, and December 1844 and 1845; and as the second result is the mean of 8 values of q' , obtained from comparisons of the mean readings of the balance magnetometer upon about 190 days in the months of May, June, July, August, and September 1844 and 1845; it is extremely probable that the temperature coefficient for the balance magnetometer is constant for the ordinary temperatures of observation.

77. As it was found impossible to determine k the value of one micrometer division in parts of the whole vertical component, by means of the vertical vibrations, the value of q obtained from hot and cold water experiments could not be employed, since the observations could not be reduced to parts of vertical force, nor could the value of q be reduced to micrometer divisions. In consequence of this

* It should be remarked, that these conclusions do not depend wholly upon the results for the Makerstoun instruments, their accuracy has been verified by an examination of the observations made in other places.

difficulty, the method already described for the bifilar magnetometer was first employed for the determination of q' the temperature coefficient in micrometer divisions : the details of several of these comparisons will be found, pages xlv., xlvi., xvii., xviii., and xlix., Introduction, 1843. It was found from these comparisons,

1st, That the value of q' , when a sufficient number of comparisons had been obtained, was independent of the interval between the days compared.

2d, That the value of q' remained the same after various adjustments of the needle ; the vertical screw for adjusting the sensibility never having been touched.

3d, That the value of q' has remained constant while the time of vibration in a vertical plane has varied from upwards of 11° to less than 6° ; from which result it has been concluded that the value of k also has been constant.

4th, That the value of q' is the same, whether the differences of temperature of the magnet have been due to natural or artificial causes, and whether the differences of temperature of the magnet have had the same sign or an opposite sign from those of the temperature of the air.

78. From the 1st and 4th conclusions, it follows that the variations of the vertical component of the earth's magnetism are independent of the temperature of the air and of the temperature of the soil.*

79. The mean of all the results in the volume for 1843, Introduction, pages xlvi. and xviii., gave

$$q' = 7.90 \text{ micrometer divisions} ;$$

and adopting the value of k , obtained from deflections, No. 59,

$$q = 0.000079.$$

Which result is only $\frac{1}{12}$ more than that obtained from the hot and cold water experiments : it appears in the case of the Makerstoun instrument that the errors of the usual methods are found chiefly in the determination of k ; this, however, is not always the case.

The observations for 1843, 1844, 1845, and 1846, in micrometer divisions, have been corrected by the value

$$q' = 7.90 \text{ micrometer divisions}.$$

80. Since this value was obtained, several other determinations have been made, by comparisons of observations in 1844, 1845, and 1846 ; all the results obtained are given in the Table below ; several of the results obtained more lately have been deduced from periods ill fitted to give a good value ; the whole, however, have been given in order to shew the amount of error that may be expected in using bad series. In one or two of these cases the amount of disturbance has not been very considerable, but the greatest variations of the daily mean vertical force have *happened* to

* See foot-note, p. 395 of the volume for 1844.

occur at the same time with the greatest variations of mean temperature; it is believed that it is to this cause chiefly that the differences of the results are to be attributed.

TABLE 8.—Determinations of the Temperature Coefficient of the Balance Magnet.

Period.	Sum of Diff. Temp.	Value of q' .	Period.	Sum of Diff. Temp.	Value of q' .
1843.	°	Mic. Div.	1844.	°	Mic. Div.
Jan. 16—Jan. 21	58.4	8.21	Nov. 4—Nov. 30	1066.2	6.92
Jan. 23—Jan. 28	90.9	6.99	Dec. 2—Dec. 28	939.0	7.20
Jan. 30—Feb. 4	64.0	7.21	1845.		
Feb. 6—Feb. 11	67.8	6.69	Jan. 6—Feb. 8	2086.3	7.57
June 1—June 30	1885.8	7.82	Feb. 26—Mar. 28	1830.1	8.00
Sept. 6—Sept. 16	120.4	8.04	Apr. 10—May 10	1279.1	9.08
1844.			June 2—June 30	1551.6	8.47
Jan. 1—Jan. 26	971.4	9.27	July 7—Aug. 6	1069.8	10.01
Feb. 5—Mar. 6	1392.5	9.30	Sept. 9—Oct. 13	1580.6	7.81
May 9—May 24	350.6	7.93	Dec. 11—Jan. 10	1585.2	10.17
May 29—June 29	1693.1	7.43	1846.		
July 4—Aug. 3	1360.9	7.74	Nov. 30—Dec. 26	1190.2	7.72
Aug. 4—Sept. 6	904.0	7.90			

Giving the differences for all the series equal values, and dividing the sums of differences of the daily means in micrometer divisions by the sums of differences of the daily mean temperatures of the needle, we have

$$q' = 8.23 \text{ mic. div.};$$

but if the results from the bad series for July 7—August 6, 1845, and December 10, 1845—January 10, 1846, be rejected, the value would be

$$q' = 7.99 \text{ mic. div.}$$

If the *whole* series were properly weighted, it is believed that the resulting value of q' would be less than 8.00 mic. div. The excellent series, November 30—December 26, 1846 (after an adjustment July 1846) gives

$$q' = 7.72 \text{ mic. div.}$$

The adopted value of the temperature coefficient for the balance magnet = 7.90 mic. div.

It is believed that this value, which has been used in correcting all the observations since the commencement of 1843, is within one-tenth of a division of the truth.

81. The following matters should be attended to in determining the temperature coefficient by the previous method.

1*st*, The period selected should be free from considerable magnetic irregularities.

2*d*, There should be a considerable change of daily mean temperature, the temperature at the beginning and end of the period being nearly the same.

3*d*, The smaller the duration of the period consistently with the 2*d* the better.

4*th*, It will be found best, in general, to correct the daily means at first by an approximate coefficient, and

1 INTRODUCTION TO THE MAKERSTOUN OBSERVATIONS, 1845 AND 1846.

5th, To eliminate the secular change approximately, if it be considerable.

Both the latter methods were employed in many of the determinations given in Table 9.

INCLINOMETER.

82. The dip instrument was made by the late Mr ROBINSON of London. The vertical circle is $9\frac{1}{2}$ inches in diameter; it is divided to 10', the graduations counting from 0° on the horizontal to 90° on the vertical; 1' is estimated with the aid of lenses attached to a glazed case; the vertical circle turns with a copper framework on a vertical axis, centred in a horizontal circle; the latter is 6 inches in diameter, is divided to 30' and is read to 1' by means of a vernier. A sliding framework carrying Y's moves within that bearing the agate planes on which the axle of the needle rests; the Y's serve to lift and lower the needle on the agates, but they have been found to act very irregularly, at times giving the needle a pitch in a certain direction. A level screwed to the basement plate indicates the horizontality of the agates; this was, however, also verified occasionally by means of a small level placed upon them; it was found that the level varied according as the door of the case inclosing the instrument was shut or open; it was, therefore, always tested with the door shut, as it is during observations. The reading of the horizontal circle, when the vertical circle is in the magnetic meridian, was obtained with the aid of a horizontal needle, carried on a pivot whose arms rest on the agate planes. There are two dipping needles, numbered 1 and 2, and one end of each needle is marked A, the other end is marked B; all the marks are on one face of each needle. The needle is observed in four positions with one end dipping, namely, with the marked face of the needle on the same side as, and opposite to, the graduated face of the circle, the latter being in the meridian, first to the east, and then to the west; as each extremity of the needle is observed, there are thus eight readings obtained. The poles being changed, and the other end dipping, other eight readings are similarly obtained. The means of the two readings for each position are given in this volume. In changing the poles, the needle was placed on a small wooden block having a hole to receive the axle; it then received eight strokes on each face (as in the method of double touch) from two magnets, each 9 inches long, $\frac{3}{4}$ inch broad.

The inclinometer occupied a strong wooden pillar in the intensity house unconnected with the floor.

83. Observations were made on April 18 and May 2, 1843, in different azimuths, in order to determine the correction due to the irregularity of the needle's axle, or perhaps to the presence of iron in the vertical circle; these observations have been already given (Table 21 and Table 22, Introduction, 1841-2.) The correction deduced was about - 11' for needle No. 1. A short series of similar observations was made, May 10, 1845, the details of which will be found among the other observations; the following values of the magnetic dip are deduced from the inclinations η and η' of needle No. 2, observed in two planes at right angles to each other, by the formula

$$\cot^2 \theta = \cot^2 \eta + \cot^2 \eta'$$

Azimuth, 0° $\eta = 71^\circ 26' 75$	Azimuth, 90° $\eta' = 89^\circ 57' 25$	$\theta = 71^\circ 26' 75$
..... 30° $\eta = 73^\circ 25' 50$ 120° $\eta' = 80^\circ 27' 56$	$\theta = 71^\circ 7' 73$
..... 60° $\eta = 80^\circ 22' 25$ 150° $\eta' = 73^\circ 30' 62$	$\theta = 71^\circ 9' 65$

The dip from the observations in the magnetic meridian differs considerably from the values of θ obtained from the observations in other planes; the latter agree pretty well with those deduced from needle No. 1, April 18, 1843 (Introduction, 1841-42, Table 22, first series.) This coincidence of the results from two needles seems to place the source of error in the metal of the instrument, rather than in the axles of the needles.

March 31, 1846. The vertical circle of the inclinometer was removed from the instrument and placed horizontally, the dip needle, No. 1, was suspended by a silk fibre within the circle, the needle and circle being in the same plane, the needle was then vibrated horizontally, the zero of the graduations being placed in different azimuths; taking the zero on the right of the horizontal diameter (the circle being in its usual vertical position) as the commencement of the graduations, and counting downwards and onwards to 360, the following are the means for different positions of about 80 vibrations (commencing with a semiarc of 18°, and ending with a semiarc of 6°):—

N. end of needle at graduation, 50°	Mean time of one vibration, corrected for arc,	6·257
..... 20°	6·282
..... 350°	6·275
..... 320°	6·278
..... 290°	6·278
..... 260°	6·278

The time of vibration varies little with the exception of that for the first position; the last two means are for positions occupied by the needle in the observations of inclination, given above.

84. The true dip, and the cause of the differences in different azimuths, is still a question. No correction has been applied to the observations in this volume. The difficulties noticed in connection with the lifter in the Introduction for 1843 were experienced more or less in 1845 and 1846, but considerably less than in 1844.*

* Observations were made in the following manner for the determination of the magnetic dip in February 1846. The dipping needle having been placed on its supports in the inclinometer, it was deflected by a magnet placed at known distances, in order to determine the ratio of the magnetic moment of the deflecting bar to the vertical component of the earth's magnetism; the moment of the bar was obtained from observations of deflection and vibration for the absolute horizontal intensity, whence the vertical component could be determined, and the dip from the ratio of the two components. The advantage of this method over others, consists in the capability of using a powerful deflecting bar whose moment can be determined with the accuracy of the observations for the horizontal intensity.

BAROMETER.

85. The barometer is by NEWMAN. The tube is 0·552 inch in diameter; the scale is attached to a brass rod, terminating in an ivory point, which at each observation is moved by means of an endless screw till it meets its image in the mercury of the cistern; the cistern is about 3 inches in diameter; the vernier professes to read to 0·002 inch, and that 0·001 inch may be estimated, but the graduation is so inexact as to give changes in error from 0·002 to 0·003 inch, when the reading is made alternately at the two extremities of the vernier.

86. In 1841, the barometer was compared indirectly with the standard barometers of the Royal Society of London, by means of one made by NEWMAN for the DUKE of ARGYLE. The comparisons of the DUKE of ARGYLE's barometer with the readings from the flint and crown glass tubes of the Royal Society (both tubes being connected with the same cistern) are given, Table 23, Introduction, 1841-2. They are not consistent. A consistent series of comparisons of the Makerstoun barometer with the DUKE of ARGYLE's is given, Table 24, Introduction, 1841-2. The results of these comparisons are

in.
DUKE of ARGYLE's barometer <i>minus</i> Royal Society's crown and flint glass, = + 0·009
Makerstoun barometer <i>minus</i> DUKE of ARGYLE'S, = + 0·003
Makerstoun barometer <i>minus</i> Royal Society's crown and flint glass, . . = ± 0·012

87. In July 1847, a series of comparisons was made by myself of a barometer by TROUGHTON, marked B, belonging to Sir THOMAS BRISBANE, with the flint-glass barometer of the Royal Society of London. The same barometer (TROUGHTON B) was a few days afterwards compared by myself with the Makerstoun standard barometer: these comparisons are given, Tables 10 and 11.

TABLE 9.—Comparisons of the Barometer TROUGHTON “B” with the Flint-Glass Standard Barometer of the Royal Society of London, July 2, 1847.

Royal Society's Flint-Glass Standard.		Troughton “B.”			Royal Society Standard <i>minus</i> Troughton “B.”
Height.	Tempera-ture.	Height.	Tempera-ture.	Corrected to Temp. of Royal Society Standard.	
in. 30.302	° 63.6	in. 30.262	° 66.0	in. 30.256	in. +0.046
.304	63.9	.267	66.4	.261	.043
.300	64.2	.266	66.8	.259	.041
.291	64.8	.254	65.8	.251	.040
.292	64.8	.255	66.2	.251	.041
.268	64.5	.232	65.7	.229	.039

TABLE 10.—Comparisons of the Makerstoun Standard Barometer with the Barometer TROUGHTON “B,” July 8^d—10^d, 1847.

Makerstoun Standard.		Troughton “B.”			Troughton “B” <i>minus</i> Makerstoun Standard.
Height.	Tempera- ture.	Height.	Tempera- ture.	Corrected to Temp. of Makerstoun Standard.	
in. 29.722	° 68.7	in. 29.682	° 73.0	in. 29.671	in. -0.051
29.717	66.4	29.667	66.8	29.666	.051
29.924	71.3	29.882	74.9	29.873	.051
30.061	61.5	30.020	65.2	30.010	.051
29.987	67.0	29.946	71.3	29.935	.052

From these comparisons we find

$$\begin{aligned}
 & \text{TROUGHTON B } \textit{minus} \text{ Royal Society's flint-glass}, \dots = -0.0417 \\
 & \text{Makerstoun standard } \textit{minus} \text{ Troughton B}, \dots = +0.0512 \\
 & \text{Makerstoun standard } \textit{minus} \text{ Royal Society's flint-glass}, \dots = +0.0095
 \end{aligned}$$

In the comparisons made in 1841, the mean of both the crown and flint glass tubes has been employed: making use of Tables 23 and 24, Introduction, 1841–2, we find

$$\begin{aligned}
 & \text{DUKE of ARGYLE's barometer } \textit{minus} \text{ Royal Society's flint-glass}, \dots = +0.0055 \\
 & \text{Makerstoun standard barometer } \textit{minus} \text{ DUKE of ARGYLE's}, \dots = +0.0029 \\
 & \text{Makerstoun standard barometer } \textit{minus} \text{ Royal Society's flint-glass}, \dots = +0.0084
 \end{aligned}$$

The comparisons in 1841 and 1847, therefore, differ only one-thousandth of an inch.

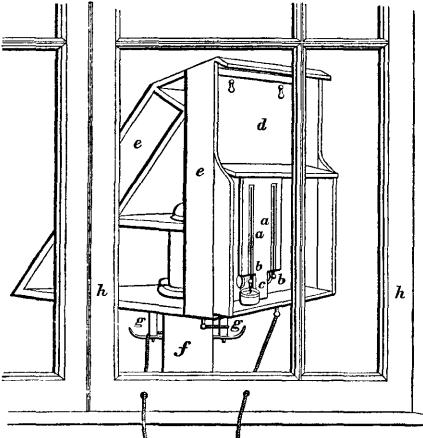
88. All the observations of the Makerstoun standard barometer are corrected by -0.012 inch to the mean of the Royal Society's flint and crown glass barometers; they are also corrected for temperature to 32° Fahr., by SCHUMACHER'S Tables, given in the Report of the Committee of Physics of the Royal Society of London. The cistern of the barometer is 213 feet above the mean level of the sea at Berwick-upon-Tweed.

THERMOMETERS.

89. The dry and wet bulb thermometers *a a* are by ADIE and SON. The bulbs *b b* are 0.3 inch in diameter, and tenths of a degree can be estimated with accuracy on the scales *a a*; the thermometers are attached to a wooden slab *c*, fixed to the

moveable front *d* of the wooden case, 4 feet above the soil ; the bulbs project below the wooden slab *c*, and as holes are cut in the wooden case behind them, they are

exposed to freely-circulating air. The wooden case, which has slightly-projecting top and sides at the front, and a double sloping back, revolves on a post *f*, and can be turned from within the Observatory by means of cords and pulleys *g g*. When an observation is made, the case is turned till the thermometers face the window *h*, being 9 inches distant from it ; after reading, which is done through the glass (thus avoiding any error due to proximity of the observer, or the light at night), the case is again turned with the back towards the window, or towards the wind if it rain. It was found early in the summer of 1843,



that in spite of the precaution of turning the back of the case towards the sun before 7^h A.M. and after 5^h P.M., if the sun shined brightly, the temperature indicated by the thermometer was visibly increased. In all such cases, therefore, the moveable front *d* was lifted off the case and suspended in the shade, at an equal height from the soil, on the west or east wall of the Observatory, being kept apart from it by projecting knobs. Observations at different times shewed, that, all other things being equal, the temperature was the same in all the three positions, but when the sun shined on the case, it might be one or two degrees less to the east or west than to the north. The observations made to the east or west are indicated in the column of differences by a cross, thus †, for the first observation after removal from the case, and by a cross, thus †, for the last observation before replacing the thermometers on the case.

90. It sometimes happens, when the air is very humid, during frost, and on clear nights, especially when the temperature is falling, that the dry bulb thermometer reads less than the wet bulb,* when such is the case, the *difference* of the readings of the two thermometers has not been given, and in the summations for

* This apparent anomaly in frosty nights, it is conceived, is due to the deposition of moisture on the silk cover of the wet bulb, which is frozen as it is deposited, till it becomes a thickish coat of silk and ice ; the dry bulb receives, at the same time, a thin coat of moisture, and becomes a more facile wet bulb. In clear, humid nights, without frost, nearly the same explanation will apply ; the dry bulb will radiate its heat into space with more facility than the wet bulb. It might be preferable, therefore, on these occasions, to make use of the readings of the wet bulb for the temperature of the air, and of the readings of the dry bulb for the temperature of evaporation during frosty nights ; where, however, the differences of the readings may be considered due chiefly to the different radiating powers of the two bulbs, the readings, perhaps, should be considered the same ; this has been done in all cases in the present volume.

the abstracts of results, the reading of the wet bulb has been considered the same as that of the dry bulb.

91. In January 1843, a series of comparisons of different thermometers, in water of different temperatures, was made with a standard thermometer by NEWMAN: the results are given in the Introduction for 1843, Table 23, p. lvii. The readings of the standard, and the dry and wet bulb thermometers, in a mixture of pounded ice and water, at the time of the comparisons in 1843, and in 1845 and 1846, are as follow :—

Jan. 7, 1843.	NEWMAN's standard,	32°00.	Dry bulb,	32°7.	Wet bulb,	32°6
Feb. 8, 1845.	32°05.	32°8.	32°65
Feb. 13, 1846.	32°12.	32°9.	32°7
Dec. 18, 1846.			32°9.	32°7

It appears, therefore, that the index errors of the dry bulb thermometer were about two-tenths of a degree greater in 1845 and 1846 than in 1843, and the index errors of the wet bulb, about one-tenth of a degree greater; making allowance for this change in Table 23, Introduction for 1843, we obtain

TABLE 11.—Corrections of the Dry and Wet Bulb Thermometers to the Temperature by NEWMAN's Standard, in 1845 and 1846.

Tempera-ture.	Corrections.		Tempera-ture.	Corrections.	
	Dry.	Wet.		Dry.	Wet.
°	°	°	°	°	°
32	-0.9	-0.7	60	-0.6	-0.4
36	-0.8	-0.6	63	-0.5	-0.3
40	-0.8	-0.6	67	-0.3	-0.1
45	-0.7	-0.5	70	-0.1	+0.2
50	-0.6	-0.4	76	0.0	+0.2
55	-0.6	-0.4	79	-0.1	+0.2

On December 18, 1846, the standard and dry and wet bulb thermometers were compared in water :—

Standard, 58°8.

Dry bulb, 59°3.

Wet bulb, 59°1.

Correcting the standard reading for its index error of 0°1, the corrections for the other thermometers near 60° are

Dry bulb - 0°6.

Wet bulb - 0°4.

The following corrections were obtained from comparisons with the standard in the external atmosphere :—

1845. Jan. 30. The correction for the dry bulb thermometer at a temperature of 1°5 = -0°3.

1846. June 3. The correction for the dry bulb thermometer at a temperature of 82°5 = -0°15.

The observations of the dry and wet bulb thermometers, given in this volume are *not* corrected for the errors of the thermometers; but the corrections have been applied to the abstracts of results.

92. The maximum and minimum self-registering thermometers, on RUTHERFORD's construction, were made by ADIE and SON; they were attached to a frame fixed to the north side of the Observatory, about three feet from the ground, and near the dry and wet bulb thermometers. A self-registering mercurial thermometer, with a black bulb, by R. ADIE, of Liverpool, was placed, in the end of May 1844, within the enclosed space occupied by the Observatory rain-gauge, exposed to the sun, for the purpose of obtaining the maximum amount of solar radiation; another self-registering alcohol thermometer, with black bulb, by the same maker, was placed near the other in September 1844, with its bulb in the focus of a parabolic metallic reflector, for the purpose of obtaining the minimum of terrestrial radiation. The observations of the self-registering thermometers have all been corrected for the scale errors of the thermometers. The observations of the minimum thermometer for the temperature in the shade are apparently in all cases from 1° to 2° less than the lowest temperature indicated by the dry bulb thermometer; the difference, it is believed, is due to the greater exposure of the minimum thermometer to radiation and deposition of dew.

93. Another thermometer was employed for the determination of the temperature of the water in two pump-wells, which are within about 200 yards of each other; the pumps are nearly on the same surface-level, the depth of the cottage-well being 10 feet,—that of the garden-well 21 feet. On one occasion, it was found that there was one foot of water in the cottage-well, and two feet of water in the garden-well. In obtaining the temperature, the water was pumped till the reading of the thermometer remained constant. All the observations have been corrected for the scale error of the thermometer used.

ACTINOMETER.

94. The actinometer was made by STEVENSON of Edinburgh; it consists of a hollow cylinder of glass filled with ammonio-sulphate of copper. One extremity of the cylinder is joined to a thermometer tube, terminating in a hollow bulb; the other extremity is cemented to a metallic cap, through which a screw, working in a collar of leather, passes into the cylinder; a scale of 100 divisions is attached to the thermometer tube; the cylinder and thermometer tube were inclosed in a mahogany box, open at one side; the compartment containing the cylinder filled with the blue liquid is lined with black velvet, and is covered by a slip of plate-glass. The dimensions were as follow:—Glass cylinder, $5\frac{1}{2}$ inches long; mean external diameter, about 1·05 inch; the mercury, filling four inches of the thermometer tube, weighed 16·7 grains; the length of 100 divisions of the scale are equal

to 5.51 inches. The cylinder of this instrument was destroyed in the winter of 1846-7, by the freezing of the liquid. The previous dimensions of the cylinder belonging to the actinometer, from June 1844 till February 1847, are considered to be very near the truth; they are, however, only given from the dimensions of the cylinder in the actinometer at present, which is of the same size. The actinometer was placed in a small revolving frame during observations after June 1844, by means of which the face of the actinometer was always presented to the perpendicular incidence of the sun's rays; at the end of the same table upon which the revolving frame was placed, a double wooden screen was hung by cords passing over pulleys; the instrument could be shaded or exposed to the sun by the observer instantaneously.

95. In making an observation, the cylinder was exposed to the sun's rays at a perpendicular incidence for 60 seconds, the scale readings of the fluid in the tube being observed at the beginning and end of the minute. A screen was then interposed for one minute, or for one minute and a half; if for one minute only, the last observation in the sun was also noted as the first in the shade; if for one minute and a half, the first reading in the shade was not made till the instrument was shaded half a minute. At the end of 60 seconds the scale reading was again observed, and the screen was removed, that reading being also noted as the first in the sun. When the liquid mounted near the top of the thermometer tube, the screw was withdrawn nearly half a revolution, when the liquid fell to near the bottom of the tube. The times were noted from a box-chronometer by DENT, No. 1665.

96. The following are the results of series of observations for the amount of heat stopped by the plate-glass, marked A, used in the instrument after June 1844:—

	Sc. Div.
1846. June 1 ^d 10 ^h 16 ^m A.M. Mean time. Glass plate A on; mean effect of sun in 60 ^s =	9.47
10 37 off	= 12.04
10 56 on	= 9.70
Mean effect of sun in 60 ^s , glass plate A on	= 9.58

Proportion of whole heat stopped by the glass plate A, = 0.204.

	Sc. Div.
1846. June 3 ^d 9 ^h 51 ^m A.M. Mean time. Glass plate A on; mean effect of sun in 60 ^s =	9.29
10 12 off	= 12.83
10 33 on	= 9.82
10 51 off	= 12.88
11 10 on	= 10.33
Mean effect of sun in 60 ^s , glass plate A off	= 12.85
Mean on	= 9.81

Proportion of whole heat stopped by glass plate A, = 0.237.

Giving the last result two values, we find, from both determinations,

Proportion of whole heat stopped by glass plate A, = 0.226.

97. Besides the breaking of the cylinders by the freezing of the liquid, the instrument has been rendered useless for good experiments several times by the deposition of a brownish oily sediment, which finds its way into the thermometer tube, and this though the liquid had been long prepared by the maker. When this deposition of sediment occurred, the instrument was sent to the maker to be cleaned; the observations, therefore, in this volume, are nearly unaffected by it.

RAIN-GAUGES.

98. The Observatory rain-gauge is placed in a space, enclosed by a palisade on the top of the Observatory hill, with a good exposure on all sides. The funnel-mouth is 6.1 inches in diameter, 8 inches above the soil, and 218 feet above the level of the sea. The quantity of rain is measured at noon by pouring it into a glass tube, graduated with reference to the aperture of the funnel.

99. The monthly results of two other gauges are given in the abstracts. One is placed on the top of the greenhouse roof, 680 feet NNE. of the Observatory gauge; the funnel-mouth is 6.7 inches in diameter, it is connected with a graduated tube within the greenhouse, it is 18 feet from the ground, and 192 feet above the level of the sea. This gauge is sheltered to the E. and NE. by trees, and its indications are therefore less trustworthy, especially during easterly winds; the amount of rain received in the funnel is also affected by the gusts of wind deflected from the sloping roof. The other gauge is in the middle of the Makerstoun garden, with a good exposure; the funnel-mouth is 6.7 inches in diameter, is $6\frac{1}{2}$ feet above the soil, 171 feet above the level of the sea, and about 620 feet N by E. of the Observatory gauge. The funnel is connected with a graduated tube. The greenhouse and garden gauges were observed by Mr MACGALL, the head gardener, the former daily, the latter monthly.

VANES AND ANEMOMETER.

100. The vane is placed on the north wall of the Observatory, and by means of a rod and gearing-wheels it indicates the direction of the wind on a dial-plate within the building; this vane (occupying the position W' in the plan, Plate I.) was found too heavy for light winds, and the directions of these were estimated for some time from a ribbon-vane. On November 13, 1844, a vane was formed of four large feathers from a turkey's tail, this vane was mounted on a long and light fir-rod, which passed through the roof of the Observatory, and had an index attached to its lower extremity, which indicated the direction of the wind on a compass fixed to the ceil-

ing of the Observatory. This vane indicated the direction of the lightest winds, and the direction of the wind was generally taken from it after November 13, 1844. On December 4, 1846, a light frame covered with oiled silk was substituted for the turkey feathers. The direction of the wind is indicated in this volume by the *number* of the point of the compass, reckoning N = 0, E = 8, S = 16, W = 24.

101. The anemometer, the invention of Mr R. ADIE, of Liverpool, was made by Messrs ADIE and SON, of Edinburgh; it occupies the north-east corner of the Observatory.

This instrument will be best understood by a reference to the annexed figure: *a* is a cistern containing water to the level *b*, *c* being a turn-cock for letting the water off to the exact level, and *d* a glass-gauge to shew when the water becomes too low, from evaporation or otherwise; an inverted vessel *e* is suspended in the water by a cord passing over the wheel *f*, whose axle rests on friction-rollers at *g* and *h*; *i* is a spiral, which has a cord wrapped on it carrying a weight *k*, which balances the vessel *e*; *l* is a dial, graduated on the face near the circumference; *m* an index, attached to the common axle of the wheel and spiral; *n* a loose index under the index *m*, which the latter carries forward by means of a projecting pin near the extremity; *o* a tube passing under the cistern *a*, which, entering the bottom, proceeds upwards within the vessel *e* till its open extremity is above the level of the water in a neck of the vessel *e*; the other end of the tube *o* is six feet above the outer wall of the Observatory, where it is capped by a vane *p*; at the top of the tube *o* three brass rods are joined, which carry a small tube in which a pin within the top piece *q* rests or turns; the tube *o* is double at the top, containing between the tubes a quantity of mercury to the level *r*, the continuation of the cylindrical body of

the vane enters the mercury, and a double portion *s* acts as an outer cover to the mercury cistern; *t* is an aperture, 2 inches square. When the wind blows, this aperture is presented to it, the wind then presses on the column of air within the tube *o* (being prevented from escaping under the vane by the mercury), and ultimately on the top

surface of the vessel e , forcing the latter up, turning the axle carrying the index m , which carries before it the index n , leaving it at its farthest excursion. The dial is graduated as follows :—The surface of the top of the vessel e on which the wind presses is 78 square inches, therefore a pressure of 1 lb. on this surface is equivalent to $\frac{144}{78}$ lb. on a square foot. Different weights are suspended on the wheel f , acting oppositely to the vessel e , and the position of the index for each weight shews the pressure on a square foot of surface equal to the weight suspended multiplied by the above ratio. The spiral, on which the weight k acts, is the involute of a circle whose radius $r = \frac{R}{2\pi}$ where R is the radius of the wheel f , and 2π is the circumference to radius of one, if the vessel e were homogeneous throughout its depth, the equal increments of motion in the index would correspond to equal increments of pressure.*

102. The instrument is observed in the following manner :—About 2^m before the observation hour the pressure shewn by the index n is registered as the maximum pressure ; this index is then put back to zero, and from 7^m to 10^m afterwards, the position to which it has again been carried by the index m is noted as the present pressure ; the index n is then set to zero, and a similar double observation made at the next observation hour. It is conceived that this instrument can be depended on for the purpose of determining the laws of variation of the pressure of wind ; for absolute results, an integrating instrument is essential.

STATE OF THE SKY.

103. The extent of sky clouded is estimated ; the whole sky covered with clouds being noted as 10, and the complete absence of clouds as zero. The motions of the clouds are determined as follows :—A well-marked portion of cloud which passes, or has passed, through the zenith, is watched till the direction is found in which it seems to run down, or parallel to, one corner of the Observatory ; the walls of the Observatory are in the meridian and prime vertical, and the points of the compass, reckoning from each corner as a centre, are marked upon the paling surrounding the Observatory ; the observer, therefore, sees at once the direction of motion of the cloud on the paling ; when a portion of cloud cannot be seen which has passed, or is

* The application of the involute of the circle as the spiral is due, I believe, to Professor FORBES. It is easily shewn that if the vessel e be homogeneous, w being the weight of a ring whose depth is one inch, P the pressure which the wind exerts on the top of e diminishing its weight, β the corresponding arc through which the circumference of the wheel f moves (or the length of cord wrapped on the wheel), W the weight of the counterpoise k , and σ the specific gravity of the material (zinc) of which e is formed, then

$$\frac{P}{\beta} = \frac{W}{2\pi} + \frac{w}{\sigma}$$

a constant ratio.

about to pass, through the zenith, it is generally easy to determine very nearly the vanishing point of the motion of any portion of cloud, by watching its progress for a short period ; there can be no hesitation in saying, that the motions of the upper currents of air thus observed, are better determined than the motion of the lower or surface current observed from the vane. The directions of motion of the clouds in three strata (scud, including cumuli; cirro-stratus, including cirro-cumuli; and cirri), are given in numbers of points of the compass, reckoning N = 0, E = 8, S = 16, W = 24. The nomenclature adopted is that of Mr HOWARD, with certain combinations, which are, in general, sufficiently descriptive.

104. Full sunshine is indicated in the column of meteorological remarks by the symbol ☀ ; when the sun shone through a cloud so as to project a distinct shadow, it is indicated by the symbol ☁ ; when the cloud was very thin, this is indicated occasionally by the symbol ☃ ; and when the sun's disc only was visible, the symbol ● is used ; similar symbols are used for the moon. The heaviness of the rain falling at the time of observation has been estimated, and is noted in the column of meteorological remarks, upon the supposition that the heaviest fall is 10 : thus, rain³, is rather heavy rain ; rain⁷, is the heaviest observed in 1844 ; rain^{0.1}, is just perceptible ; and rain^{0.5}, is a light, spitting, Scotch mist.

CLOCK, &c.

105. The mean time clock is by DENT of London ; it is kept at Göttingen mean time by comparisons with the transit clocks in the Astronomical Observatory, the errors of which are determined by Sir THOMAS BRISBANE, by myself, or by Mr WELSH. The rate of the clock is kept small.

106. A fire-place was formed in the space marked F (Plate I.), in October 1845, the east anteroom being employed afterwards as a computing room ; the chimney was formed of fire-brick tubing (which it was found could not appreciably affect the positions of the magnets), the grate and fire-irons were of copper.

DESCRIPTION OF THE TABLES OF OBSERVATIONS.

107. *Hourly and Daily Observations of Magnetometers, 1845 and 1846*, pages 1-68 and 288-323.

The first column contains the Göttingen mean solar time, astronomical reckoning, of the observations of the declination magnetometer. Göttingen time is 49^m 50^s in advance of Makerstoun time. The second column gives the absolute westerly declination in degrees, minutes, and decimals of a minute, deduced as described, No. 17.

The third column contains the observations of the bifilar magnetometer in scale divisions, corrected for temperature to 26° Fahr. (see Nos. 69 and 73) ; increasing numbers indicate increasing force. The bifilar is observed 2^m after the declination.

The fourth column contains the temperature of the bifilar magnet in degrees of Fahrenheit.

The fifth column gives the readings of the balance magnetometer in micrometer divisions, corrected for temperature to 26° Fahr. (see No. 79); increasing numbers indicate increasing force. The balance is observed 3^m after the declination.

The sixth column contains the temperature of the balance magnet in degrees of Fahrenheit.

The seventh column contains the observer's initial (see No. 5).

At the foot of each page the time is given during which the declination magnet has remained untouched, or the amount of torsion found in the suspension thread when that has been determined (see No. 12). The value, k , of one scale division of the bifilar magnetometer, the whole horizontal component being unity (see No. 40), and the value, k , of one micrometer division of the balance magnetometer, the whole vertical component being unity (see No. 60), are also given.

108. *Term-Day Observations of Magnetometers, 1845*, pages 72–87.

The first column contains the minute of Göttingen mean time of the declination observations, the hour being given in the middle of each triplet of columns. The first column of each triplet contains the absolute westerly declination; the second and third columns contain the bifilar and balance magnetometer readings, reduced to the temperature of 26° Fahr., as in the hourly observations. The temperatures of the magnets at the commencement of each hour will be found with the hourly observations, and the observer's initial for each hour are in the same place. The corrections for temperature are applied to the observations in the following manner:—The correction to the first observation of each hour being applied for the known temperature of each magnet, the temperature is supposed to change uniformly throughout the hour, and the corrections for the intermediate observations are interpolated between the initial corrections.

109. *Extra Observations of Magnetometers, 1845 and 1846*, pages 90–117 and 326–341.

These observations are made generally during magnetic disturbances. The same remarks apply with reference to temperature corrections, &c., as for the term-day observations, excepting that the Göttingen day and hour are given in the first column, and the minute is given for the observations of each instrument. Notes upon the Auroræ boreales observed are given, with the times of the phenomena in Göttingen mean time, pages 118–127 and 342–343.

110. *Observations of Magnetic Dip, and for the Absolute Horizontal Intensity*. See Nos. 19, &c., 82, and *Addendum to Introduction*.

111. *Hourly and Daily Meteorological Observations, 1845 and 1846*, pages 136–272 and 354–409.

The first column contains the day and hour, Göttingen mean time, of the observations, all of which are made within a few minutes of the hour, and generally in

the order noted below. When the observation has been made more than 4^m too late, the minute of observation is noted at the foot of the page; when less than 4^m too late, the true minute (for the declination observation) will be found in the first column of the hourly and daily magnetical observations. The Göttingen mean time is 49^m 50^s in advance of the Makerstoun time. The second column gives the height of the barometer, corrected to 32° Fahr. (see No. 88). The barometer is generally observed between the observations of the declination and bifilar magnetometers, that is, about 70^s after the hour.

The third and fourth columns give the *observed* readings of the dry and wet bulb thermometers in degrees of Fahrenheit, *uncorrected* for scale errors (see No. 91), and the fifth column gives the difference of the observed readings of the two thermometers. The dry and wet bulb thermometers are generally read about 1½^m before the hour. The sixth column contains the maximum pressure of wind on a square foot of surface which has occurred since the previous observation (see No. 102); this maximum is generally noted, and the index set back 2^m or 1^m before the hour.

The seventh column contains the maximum pressure of wind on a square foot of surface within from 8^m to 10^m at the time of observation, namely, from 2^m or 1^m before the hour till 6^m or 9^m after the hour.

The eighth column contains the direction of the wind read from the dial-plate of the vane, and given in numbers of points of the compass, reckoning N = 0, E = 8, S = 16, W = 24.

The ninth column gives the directions of motion of three strata of clouds in numbers of points of the compass, namely, of scud, cirro-stratus, and cirrus; thus, June 13^d 20^h 1845, the surface wind, by the vane, blowing from 8 (E.), the scud was moving from 4 (NE.), the cirro-cumulo-stratus was moving from 20 (SW.), and the cirri were moving from 21 (SW by W.) (see No. 103).

The tenth column contains the estimated extent of sky clouded, the whole hemisphere covered being 10.

The eleventh column contains the species of clouds observed, with other meteorological notes (see Nos. 103 and 104).

The observer's initial will be found at the corresponding hour of hourly magnetical observations.

112. *Daily Meteorological Observations*, 1845 and 1846, pages 274–276 and 412–413.

The first column contains the civil day of observation, and the first column of each division of columns thereafter contains the minimum temperature noted from the self-registering thermometer about 10^h A.M.; the second column contains the maximum temperature noted from the self-registering thermometer at 5^h P.M., the third and fourth columns contain the minimum and maximum of radiation (see No. 92); and the fifth column contains the amount of rain found at noon in the Observatory

rain-gauge. In pages 276 and 420, the temperature of water in two pump-wells is given (see No. 93.)

113. *Extra Meteorological Observations*, 1845 and 1846, pages 277-286 and 414-420.

The first column of observations of the actinometer contains the Makerstoun mean time of the first reading given in the third column, the reading in the fourth column being made 60 seconds after; the second column tells whether both of these observations have been made with the actinometer in the sun or in the shade; the fifth column gives the change of reading in 60^s; the sixth column contains the effect of the sun in changing the reading; the seventh column contains the mean effect for a group; and the eighth column contains the sun's altitude for the mean time corresponding to the middle of each group.

The readings of the barometer (corrected to 32° Fahr.) and of the dry and wet bulb thermometers, together with meteorological remarks, are given in the foot-notes; other observations will be found in their proper places among the hourly observations.

114. Additional meteorological notes are given after the observations of the actinometer; these consist of observations of shooting stars, thunder-storms, dates of flowering of plants, times of the commencement of the morning-song of birds, &c.

115. *The Abstracts of Results*, will be found in the next volume forming Part II. of Vol. XIX. of the *Edinburgh Transactions*.

These Tables have appended or prefixed to them all requisite explanations, together with remarks on the conclusions deduced. In all cases where any of the ordinary hourly or daily observations had been omitted, the mean of the previous and succeeding observations has been substituted in the summations.

116. *Curves of Term-Day Observations.*

The term-day observations, as corrected, pages 72-89, having been projected and drawn with the greatest accuracy by Mr WELSH on lithographed curve paper, they have been transferred by the anastatic process, in 12 Plates, given at the end of the volume.

A D D E N D U M.

117. The process of making and reducing the observations for the absolute horizontal intensity made according to the method of GAUSS with a 15-inch deflecting bar, has been already described (Introduction, *Unifilar Magnetometer*), and the observations of deflection and vibration will be found, p. 133-4, 347-8. The results are as follows :—

TABLE 12.—Results of the Observations for the Absolute Horizontal Intensity, made with the 15-inch deflecting bar, in 1845 and 1846.

Date.	Pairs of Distances.	$\text{Log. } \frac{m}{X}$	$\text{Log. } m X.$	X.	Mean of Group.	Bifilar Reading.	X Reduced to mean Bifilar for 1845.
1845.							
Dec. 29	Feet. Feet. 5.083 and 9.7083	0.454510	1.515975	3.3942		Sc. div.	
	5.250 ... 9.83	0.454094		3.3958	3.3921	548.9	3.3869
	5.5 ... 10.25	0.456497		3.3864			
Dec. 30	5.0 ... 6.5	0.455291	1.513839	3.3828			
	5.0 ... 7.0	0.455826		3.3807			
	5.5 ... 7.0	0.455640		3.3815	3.3812	539.1	3.3807
	5.5 ... 7.5	0.455766		3.3809			
	6.0 ... 7.5	0.456009		3.3800			
1846.							
Feb. 16	5.0 ... 6.5	0.455309	1.516163	3.3918			
	5.0 ... 7.0	0.454785		3.3938			
	5.5 ... 7.0	0.454664		3.3943	3.3929	553.2	3.3866
	5.5 ... 7.5	0.455078		3.3927			
	6.0 ... 8.0	0.455281		3.3919			
April 14	5.0 ... 6.5	0.453826	1.514334	3.3904			
	5.0 ... 6.0	0.453431		3.3920	3.3904	562.3	3.3800
	5.5 ... 6.5	0.454274		3.3887			

118. The value of $m X$, for December 30, is deduced from the 2d series of vibrations made upon that day, as there was obviously some error involved in the 1st series; for a similar reason, the deflection at the distance of 8 feet has not been employed.

The mean value of X from the previous Table reduced to the mean bifilar reading for 1845, = 3.38355

The mean value of X from the observations for 1844, reduced to the mean bifilar reading for 1844, = 3.38005

Whence the secular change from 1844 to 1845 in parts of X, = 0.00104

From the readings of the bifilar magnetometer the secular change 1844 to 1845, = 0.00142

The observations, therefore, for the absolute value of X in 1844 and 1845-6, shew rather less secular change than is indicated by the bifilar magnetometer. See *Introduction for 1844*, p. xxvii.

119. In addition to these observations, others were made in 1846 and 1847, according to Dr LAMONT's modification, with small magnets and instruments constructed by Mr JONES of London. The observations of deflections will be found, p. 349-351; and the results for the observations of vibration, p. 352.

120. The determinations of the torsion, induction, and temperature coefficients, were performed in a similar manner to those for the large bar. As the observations for the induction and temperature coefficients may have some value independently of their direct application, they will be given somewhat at length.

121. Observations of deflection were made June 23, 1846 and January 2, 1847, with a six-inch circle magnetometer (belonging to Professor FORBES), and May 31, June 15, September 11, and September 13, 1847, with a nine-inch circle magnetometer belonging to Sir THOMAS BRISBANE. The observations for the induction coefficients were made with the nine-inch circle, fitted with a bifilar torsion circle and magnet with mirror parallel to its axis (lent by Mr JONES), and in a manner precisely similar to those for the large bar described, Introduction, No. 26. The following table contains a specimen of the results:—

TABLE 13.—Fifth series of Observations for the Induction Coefficient at Makerstoun, of the Makerstoun Collimator Deflection Magnet, September 15, 1847.

Position of Deflector.	Bifilar Reading.	Interpolated Reading, Deflector Away.	Deflection.	Sum of Deflections.	Difference of Deflections.	Value of $\frac{\delta m}{m}$
Away.	Sc. Div. 188.35	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
N. Pole N.	10.67	188.11	177.44			
N. Pole S.	363.65	187.87	175.78	353.22	1.66	0.00470
Away.	187.62					
N. Pole N.	10.32	187.43	177.11			
N. Pole S.	362.90	187.24	175.66	352.77	1.45	0.00411
Away.	187.05					
N. Pole N.	9.80	187.02	177.22			
N. Pole S.	362.57	186.99	175.58	352.80	1.64	0.00465
Away.	186.95					
N. Pole N.	9.65	186.80	177.15			
N. Pole S.	362.42	186.65	175.77	352.92	1.38	0.00391
Away.	186.50					
N. Pole N.	9.25	186.43	177.18			
N. Pole S.	361.90	186.36	175.54	352.72	1.64	0.00465
Away.	186.30					
N. Pole N.	9.25	186.33	177.08			
N. Pole S.	362.00	186.36	175.64	352.72	1.44	0.00408
Away.	186.40					

The angle of torsion of the bifilar was, $v = 53^\circ 45'$.

The arc value of one scale division, = $1'025$.

122. The following are the final results for all the bars operated on* :—

Makerstoun 3·65-inch collimator named M, unmarked, 1st series, 6 determinations,	0·00390
..... 2d series, 4	0·00465
..... 3d series, 4	0·00403
..... 4th series, 4	0·00397
..... 5th series, 6	0·00435
..... Mean of all determinations,	0·00417
Prof. BACHE'S 3·65-inch collimator, named B, marked 4, series of 4 determinations,	0·00627
Prof. FORBES's 3·65-inch solid bar, named F, unmarked,	0·00569

123. In the observations for the temperature coefficients, the water was contained in a small wooden vessel fixed upon the deflecting rod of the Makerstoun theodolite (unifilar, or nine-inch circle) magnetometer ; the temperature was obtained from two thermometers with bulbs of different dimensions, one placed at each end of the immersed magnet, the mean of both indications being employed. The following table contains the results for 5 bars :—

TABLE 14.—Observations for the Temperature Coefficients of different Magnets,
September 8, 1847.

Gött. Mean Time.	Magnet.	THERMOMETERS.		Unifilar Scale Reading.	Declination Scale Reading.	Bifilar Corrected.	Unifilar Circle Reading Reduced.	Temperature Coefficient.
		Jones.	Ross.					
h. m.	°	°	Sc. Div.	Sc. Div.	Sc. Div.	°
0 1	Away.	182·42	6·30	236 54·79
1 25		89·6	89·9	200·20	1·95	557·7	192 54·47	0·000088
1 33		64·1	64·2	193·65	1·55	560·1	48·03	·000088
1 39		39·6	37·4	185·52	2·22	557·2	39·25	·000089
1 46		63·1	63·3	192·47	2·55	556·4	46·15
2 3		89·0	89·0	204·85	2·60	558·6	58·80	·000098
2 8		67·7	67·4	198·20	2·67	558·8	51·93	·000090
2 14		39·0	36·6	190·10	3·02	559·7	43·40	·000087
2 19		61·1	60·4	196·95	3·00	560·6	50·43	·000098
2 25		92·2	92·2	207·05	3·25	560·9	60·63
5 6	B. —	90·9	90·7	227·87	9·52	567·8	193 17·75	0·000094
5 11		67·0	67·3	221·00	9·77	568·0	10·53	·000080
5 18		40·6	39·4	214·05	10·02	567·6	3·25	·000083
5 24		62·0	61·4	220·25	9·97	568·6	9·63	·000100
5 28		88·7	88·9	229·30	10·05	569·3	18·86	·000095
5 35		67·6	67·3	222·97	10·22	569·4	12·25	·000088
5 42		40·5	38·7	215·00	10·45	568·8	3·93
6 0	M.	40·5	39·9	296·00	10·77	569·7	194 26·73	0·000098
6 5		65·1	64·6	304·15	11·22	570·8	34·79	·000110
6 10		89·6	89·6	311·55	11·12	568·8	42·45	·000103
6 16		65·1	63·9	304·00	11·20	569·4	34·65	·000094
6 22		38·4	37·2	297·50	11·67	571·4	27·67
6 34	F.	40·2	38·8	171·47	12·17	570·8	192 18·15	0·000295
6 39		64·9	64·7	195·75	12·25	570·5	42·99	·000316
6 44		88·0	88·5	220·40	12·20	571·6	68·29
7 6	I. 23.	94·0	94·3	336·00	11·87	571·2	194 66·99	0·000200
7 11		67·9	67·8	320·05	11·67	571·4	50·78	·000184
7 16		39·7	38·0	303·90	11·62	571·4	34·26

* Each determination, it will be seen from Table 13, commences with the deflecting bar having the same end to the north ; this should have been avoided, since, in the event of increase of tempe-

lxviii INTRODUCTION TO THE MAKERSTOUN OBSERVATIONS, 1845 AND 1846.

124. From these we find for

Professor BACHE's bar, named	$\left. \begin{array}{l} 63^{\circ}9 \text{ to } 90^{\circ}3 \\ \text{B, marked 4,} \end{array} \right\} 38^{\circ}1 \text{ to } 63^{\circ}9$	$q = 0.000095$	Variation of q for 25° Fahr. = $\frac{q}{14}$
Professor BACHE's bar, named	$\left. \begin{array}{l} 65^{\circ}4 \text{ to } 89^{\circ}8 \\ \text{B—, unmarked,} \end{array} \right\} 39^{\circ}8 \text{ to } 65^{\circ}4$	$q = 0.000096$	$= \frac{q}{8}$
Sir THOMAS BRISBANE's bar,	$\left. \begin{array}{l} 64^{\circ}7 \text{ to } 89^{\circ}6 \\ \text{named M, unmarked,} \end{array} \right\} 39^{\circ}8 \text{ to } 64^{\circ}7$	$q = 0.000106$	$= \frac{q}{10}$
Professor FORBES's bar, named	$\left. \begin{array}{l} 64^{\circ}8 \text{ to } 88^{\circ}2 \\ \text{F, unmarked,} \end{array} \right\} 39^{\circ}5 \text{ to } 64^{\circ}8$	$q = 0.000295$	$= \frac{q}{14}$
Sir THOMAS BRISBANE's bar,	$\left. \begin{array}{l} 67^{\circ}8 \text{ to } 94^{\circ}1 \\ \text{marked I. 23,} \end{array} \right\} 38^{\circ}8 \text{ to } 67^{\circ}8$	$q = 0.000200$	$= \frac{q}{13}$
		$q = 0.000184$	

125. For these magnets, therefore, the temperature coefficient varies from $\frac{1}{8}$ to $\frac{1}{14}$ of its mean value from the mean temperature of 50° to that of 75° , the coefficient being greater at high temperatures than at low temperatures. A similar result was obtained by Mr CHRISTIE long ago,* and lately by Mr AIRY and Colonel SABINE. This difference has not been found to exist for the large variation magnets (see *Introduction*, p. xliv.).

126. The following are the results of series of observations for the temperature coefficients of different magnets.

TABLE 15.—Results of Observations for the Temperature Coefficients of different Magnets, the Temperature Rising and Falling, made 1843–7.

Date.	Description of Magnet.	Whole Number of Results.	Temperature		Difference Rising minus Falling.
			Falling.	Rising.	
Nov. 9, 1843	Bifilar Magnet (15-inch)	17	0.000290	0.000298	+0.000008
11, 1843	Deflection Magnet (15-inch).....	9	0.000278	0.000296	+0.000018
Jan. 27, 1844	Balance Magnet (12-inch, very thin)	16	0.000067	0.000079	+0.000012
June 30, 1846	3.65-inch Magnet, named F.	6	0.000280	0.000289	+0.000009
May 21, 1847	3.65-inch Magnet, unmarked	7	0.000311	0.000301	-0.000010
"	3-inch Magnet, marked S. 43	8	0.000408	0.000395	-0.000013
"	3-inch Magnet, marked S. 29	5	0.000747	0.000745	-0.000002
"	3-inch Magnet, hollow, marked B. 6.	6	0.000264	0.000278	+0.000014
"	5-inch Magnet, hollow, marked I. 23.	6	0.000210	0.000212	+0.000002
"	3.65-inch Magnet, named F.	2	0.000323	0.000333	+0.000010
May 28, 1847	3.65-inch Collimator, named M.	6	0.000100	0.000121	+0.000021
Sept. 8, 1847	3.65 Collimator Magnet, marked 4, named B.	4	0.000091	0.000091	0.000000
"	3.65 Collimator Magnet, unmarked, named B.—	3	0.000089	0.000092	+0.000003
"	3.65 Collimator Magnet, named M.	2	0.000098	0.000104	+0.000006

The observations in some instances are too few, and with too large probable errors to be sufficient for the determination of the difference of the coefficient, for rature in handling during the removal of the bar, an error would be introduced always of the same sign if the north end has always the same position at the beginning.

* Philosophical Transactions, 1825, p. 63.

ascending and for descending temperatures ; on the whole, however, they indicate that the coefficient deduced from such rapid changes is greater for the same mean temperature (about 65°), when the temperature is increasing than when it is diminishing. The greater part of the observations were made without any intermediate temperature, so that there are not sufficient data to determine whether the difference is greater at high mean temperatures than at low mean temperatures.

Mr S. H. CHRISTIE found that the temperature coefficient increases with the temperature, the increase becoming more rapid for temperatures above 80° ; and that beyond 100°, a portion of the magnetism is permanently lost.* The previous results seem to indicate that (in such experiments at least), a portion of the magnetism is lost even at the lower temperatures for certain kinds of steel.†

The observations of deflection with the circle magnetometers have been reduced by the formula (see *Introduction*, p. xx.)

$$\frac{m}{X} = \frac{1}{2} r^3 \sin u \frac{1}{1 + \frac{P}{r^2} + \frac{Q}{r^4}}$$

where

$$\sin u = \frac{\sin u_0}{1 - \frac{\delta m}{m} \sin u_0} \frac{1 + k(b_d - b_v)}{1 - q(t_d - t)}$$

u_0 being the observed deflection corrected for declination change (see column 9, Deflection, p. 349-351).

The observations of June 23, 1846, and of January 2, 1847, were made with Professor FORBES' 6-inch circle magnetometer ; the remaining observations were made with Sir THOMAS BRISBANE'S instrument, the dimensions of the magnets employed will be found, p. 351 : the values of one scale division for the suspended magnets are as follow :—

June 23, 1846.	Jan. 2, 1847.	May 31 and June 15, 1847.	Sept. 11 and 13, 1847.
0·995	0·995	1·025	2·017

The solid bars are about 0·3 inch diameter, and the collimator bars about 0·4 inch diameter.

All the observations, excepting those of September 11 and 13, were reduced by the method of least squares, the equations of condition having the form

$$1 + \frac{1}{r^2} P + \frac{1}{r^4} Q - \frac{1}{2} r^3 \sin u \frac{X}{m} = 0$$

* *Philosophical Transactions*, 1825, p. 63.

† The previous results seem to indicate that while it will always be necessary to determine the temperature coefficient for the magnetometers from the observations with the magnet in its box, yet it will be desirable to determine it also by the usual method of hot and cold water experiments.

lxx INTRODUCTION TO THE MAKERSTOUN OBSERVATIONS, 1845 AND 1846.

The observations of September 11 and 13, made at three distances only, were reduced by the formula

$$\frac{m}{X} = \frac{A_1 \alpha + A_2 \beta + A_3 \gamma}{\alpha + \beta + \gamma}$$

where

$$\alpha = \frac{\xi_2^2 - \xi_3^2}{\xi_1^2}, \quad \beta = \frac{\xi_3^2 - \xi_1^2}{\xi_2^2}, \quad \gamma = \frac{\xi_1^2 - \xi_2^2}{\xi_3^2}; \quad \xi_1 = \frac{1}{r_1}, \quad \xi_2 = \frac{1}{r_2}, \quad \xi_3 = \frac{1}{r_3}$$

$$A_1 = \frac{1}{2} r_1^3 \sin u_1, \quad A_2 = \frac{1}{2} r_2^3 \sin u_2, \quad A_3 = \frac{1}{2} r_3^3 \sin u_3$$

The observations of vibration were made in the usual manner, the following is a specimen of the details :—

Table 16. Observations for the Time of Vibration of the Collimating Deflector M, June 15, 1847.

North End of Magnet moving East.					North End of Magnet moving West.				
No. of Vib.	Time of Transit.	No. of Vib.	Time of Transit.	Time of 300 Vibrations.	No. of Vib.	Time of Transit.	No. of Vib.	Time of Transit.	Time of 300 Vibrations.
0	6 21 41.5	300	6 47 6.2	25 24.7	3	6 21 56.8	303	6 47 21.7	25 24.9
6	22 12.0	306	47 36.8	24.8	9	22 27.3	309	47 52.0	24.7
12	22 42.4	312	48 7.1	24.7	15	22 57.8	315	48 22.5	24.7
18	23 13.1	318	48 37.7	24.6	21	23 28.3	321	48 53.0	24.7
24	23 43.5	324	49 8.2	24.7	27	23 58.8	327	49 23.3	24.5
30	24 14.0	330	49 38.7	24.7	33	24 29.3	333	49 54.0	24.7
36	24 44.5	336	50 9.1	24.6	39	24 59.6	339	50 24.4	24.8
42	25 15.0	342	50 39.6	24.6	45	25 30.3	345	50 55.0	24.7
48	25 45.5	348	51 10.1	24.6	51	26 0.7	351	51 25.5	24.8
54	26 16.1	354	51 40.6	24.5	57	26 31.4	357	51 56.0	24.6

The observations of vibration were reduced by the formula already given (*Introduction*, p. xxi). The formula for the time of vibration with the ring (*Introduction*, p. xxii*), having the more convenient form

$$T_1^2 = T_1'^2 \left(1 - \frac{\alpha \alpha'}{16} - \frac{s}{86400} \right)^2 \left(1 - k/b_0 - b_1 + q/t_0 - t_1 + \Phi \right)$$

The values of K the moment of inertia have been deduced by the formulæ already given, pages xxi and xxiv. The times of vibration and the dimensions of the rings are given, page 352.

The following are the results of the observations with the circle magnetometers :—

* See Corrigenda.

Table 17. Results of Observations for the Absolute Horizontal Intensity made with Circle Magnetometers in 1846 and 1847.

Date.	Magnet-ometer.	Magnet		Log $\frac{m}{X}$	P.	Q.	Log $m X.$	Result.		X at the Mean Bifilar for 1845.
		Sus-pended.	Deflect-ing.					X.	Bifilar Reading.	
1846. June 23 1847.	6-in. Circle.	1	F	9.1603750	+ 0.016708	- 0.003344	0.2146240	3.3661	568.7	3.3528
Jan. 2	6-in. Circle.	2	F	9.1564802	- 0.005080	+ 0.002391	0.2107538	3.3662	560.9	3.3564
May 31	9-in. Circle.	3	M	9.1810278	+ 0.000655	- 0.000600	0.2420858	3.3926	574.8	3.3764
June 15	9-in. Circle.	3	M	9.1731457	+ 0.000172	- 0.000526	0.2344397	3.3935	576.7	3.3765
Sept. 11	9-in. Circle.	4	M	9.1732756	+ 0.000899	- 0.000729	0.2310949	3.3799	545.0	3.3774
Sept. 13	9-in. Circle.	4	B	9.0952645	- 0.002388	+ 0.000387	0.1518040	3.3750	524.9	3.3816

The resulting values of X, by Professor FORBES' instrument, differ considerably from those by Sir THOMAS BRISBANE'S, while the latter agree much better with the results obtained with the 15-inch bars, see Table 12.

MAKERSTOUN, March 1849.



H O U R L Y O B S E R V A T I O N S

OF

M A G N E T O M E T E R S.

M A K E R S T O U N O B S E R V A T O R Y ,

1845.

HOURLY OBSERVATIONS OF MAGNETOMETERS, JANUARY 0—6, 1845.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
0 13 0	25 11.51	528.6	37.9	616.3	38.0	B	2 21 0	25 13.05	539.9	34.1	607.7	34.5	B
14 0	12.93	529.9	37.7	616.9	37.7	B	22 0	14.23	538.7	34.1	605.2	34.5	H
15 0	11.17	532.8	37.4	615.3	37.3	B	23 0	14.80	538.0	34.1	606.0	34.4	H
16 0†	08.05	526.3	37.1	603.4	37.1	B	3 0 0	16.73	534.7	34.1	605.8	34.5	H
17 0	11.91	533.1	36.9	610.4	36.8	B	1 0	16.86	535.6	34.2	604.1	34.7	H
18 0	12.40	533.6	36.7	613.8	35.6	B	2 0	16.12	538.1	34.3	607.7	34.8	H
19 0	13.36	533.1	36.3	617.0	36.2	W	3 0	15.31	536.1	34.4	609.4	34.9	H
20 0	12.76	533.2	36.0	615.9	35.8	W	4 0	15.05	536.2	34.6	610.9	35.1	H
21 0	12.48	535.0	35.7	617.5	35.3	H	5 0	14.13	537.8	34.8	613.0	35.4	H
22 0	13.36	533.5	35.4	614.0	34.9	W	6 0	14.03	539.1	35.0	610.9	35.7	W
23 0	14.06	531.4	35.1	612.7	34.7	W	7 0	13.59	539.9	35.2	611.4	36.0	W
1 0 0	14.91	529.8	34.9	611.7	34.4	W	8 0	13.76	538.8	35.4	611.2	36.1	W
1 0	16.10	526.9	34.7	612.1	34.4	H	9 0	13.72	537.9	35.6	612.2	36.3	W
2 0	17.76	528.6	34.6	621.1	34.4	W	10 0	13.25	538.1	35.7	611.9	36.4	W
3 0	16.97	526.2	34.5	633.1	34.4	W	11 0	13.17	536.0	35.8	611.7	36.4	B
4 0	12.08	528.7	34.4	643.2	34.3	W	12 0	13.12	536.7	35.8	609.2	36.4	B
5 0	12.20	537.1	34.3	640.3	34.3	W							
6 0	14.44	533.7	34.3	633.8	34.5	B	13 0	25 12.82	534.9	35.9	607.7	36.4	B
7 0†	12.67	531.9	34.3	631.9	34.5	H	14 0	11.69	535.2	35.9	605.8	36.4	B
8 0	11.34	536.2	34.3	626.5	34.6	H	15 0	11.37	539.9	35.9	593.5	36.3	B
9 0	12.96	536.2	34.3	621.2	34.7	H	16 0	12.02	535.6	35.8	598.8	36.3	B
10 0	08.19	537.4	34.3	620.7	34.7	B	17 0	12.69	537.2	35.8	598.5	36.2	B
11 0	11.61	532.9	34.3	619.1	34.7	H	18 0	13.12	537.6	35.8	599.1	36.2	B
12 0	11.39	531.2	34.3	614.6	34.7	H	19 0	13.03	537.3	35.7	600.0	36.1	W
							20 0	13.74	536.5	35.7	600.4	36.0	W
13 0	25 14.41	529.7	34.3	614.5	34.7	H	21 0	13.27	537.9	35.6	598.1	35.9	H
14 0	13.59	531.2	34.3	611.1	34.6	H	22 0	13.02	538.2	35.5	596.4	35.8	W
15 0	12.92	530.9	34.3	610.8	34.6	H	23 0	13.64	538.7	35.5	594.0	35.8	W
16 0	15.07	533.0	34.3	611.8	34.7	H	4 0 0	14.37	539.3	35.5	594.2	35.9	W
17 0	17.33	532.3	34.3	610.6	34.7	H	1 0	15.11	539.1	35.5	592.5	35.9	H
18 0	14.30	535.3	34.3	609.2	34.7	H	2 0	14.57	538.9	35.6	599.0	36.0	W
19 0	13.74	539.8	34.3	608.5	34.7	B	3 0	13.72	536.5	35.7	600.2	36.2	W
20 0	13.14	537.9	34.2	610.4	34.6	B	4 0	14.35	537.2	35.8	606.3	36.4	W
21 5	14.26	532.4	34.1	612.2	34.5	W	5 0	14.06	537.3	35.9	604.7	36.6	W
22 0	12.42	537.6	34.1	610.8	34.4	B	6 0	14.06	538.0	36.1	605.4	36.8	B
23 0	13.91	536.1	34.0	610.4	34.3	W	7 0	13.99	539.6	36.3	605.1	37.0	B
2 0 0	15.20	533.0	34.0	609.2	34.3	W	8 0	14.20	540.1	36.6	605.5	37.2	B
1 0	16.21	531.8	34.0	608.2	34.4	W	9 0	13.47	539.0	36.8	605.8	37.5	B
2 0	16.60	532.6	34.0	612.8	34.4	W	10 0	13.23	540.1	37.0	606.1	37.8	B
3 0	15.86	539.1	34.1	617.5	34.5	W	11 0	13.97	537.5	37.3	607.5	38.1	H
4 0	14.71	532.8	34.3	620.4	34.7	W	12 0	13.66	538.2	37.7	609.0	38.5	H
5 0	13.17	531.1	34.4	621.9	34.9	B							
6 0	10.43	535.4	34.5	620.4	35.0	H	5 13 0	25 14.17	537.7	44.8	609.2	45.4	B
7 0	13.49	540.4	34.6	619.6	35.1	H	14 0	14.03	539.1	44.9	604.4	45.5	B
8 0	13.94	538.7	34.7	617.3	35.2	H	15 0	14.33	539.6	44.9	601.7	45.6	B
9 0	13.16	535.7	34.7	620.5	35.2	H	16 0	14.17	539.9	45.0	598.7	45.7	B
10 0	06.68	529.6	34.7	632.5	35.2	H	17 0	13.86	540.1	45.1	596.7	45.8	B
11 0	13.05	536.0	34.7	621.5	35.1	W	18 0	13.37	540.9	45.3	594.9	45.9	B
12 0	13.09	535.8	34.7	617.6	35.1	W	19 0	13.12	539.7	45.4	594.4	46.0	H
							20 0	13.32	539.2	45.6	595.3	46.2	H
13 0	25 15.76	534.5	34.7	610.2	35.0	W	21 0	13.77	538.3	45.7	595.4	46.3	W
14 0	14.58	534.1	34.6	607.4	35.0	W	22 0	14.38	540.6	45.8	590.7	46.3	H
15 0	13.27	534.3	34.6	608.0	34.9	W	23 0	15.38	541.5	45.8	590.7	46.3	H
16 0	13.43	536.1	34.5	607.0	34.8	W	6 0 0	15.74	541.7	45.8	592.5	46.3	H
17 0	13.19	536.1	34.4	607.0	34.7	W	1 0	15.44	543.7	45.8	595.7	46.3	H
18 0	13.49	537.3	34.3	606.9	34.6	W	2 0	13.93	541.9	45.8	599.3	46.2	H
19 0	13.16	537.8	34.2	607.9	34.6	H	3 0	13.99	540.8	45.8	600.4	46.2	H
20 0	13.10	536.9	34.1	610.5	34.5	H	4 0	14.57	539.1	45.7	600.7	46.1	H

DECLINATION. Magnet untouched, Dec. 30th 1844—Feb. 5th 1845.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ,	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ,	Sc. Div.	°	Mic. Div.	°		
6 5 0	25 14:73	539.4	45.6	599.1	46.0	H	8 13 0	25 09:77	535.0	38.6	600.3	38.5	B	
6 0	14:46	540.7	45.5	597.2	45.7	B	14 0	11:66	536.7	38.3	596.2	38.1	B	
7 0	14:46	541.2	45.3	595.1	45.4	B	15 0	11:71	538.7	38.0	596.7	37.8	B	
8 0	14:55	538.4	45.0	598.0	45.0	B	16 0	12:75	541.5	37.7	592.3	37.5	B	
9 0	14:53	536.9	44.8	602.2	44.6	B	17 0	12:45	545.7	37.4	584.4	37.2	B	
10 0	13:84	538.3	44.4	602.0	44.0	B	18 0	11:93	542.3	37.1	583.8	36.8	B	
11 0	13:93	538.2	44.0	602.3	43.5	W	19 0	13:81	541.7	36.9	581.9	36.6	H	
12 0	14:30	538.6	43.6	602.7	43.0	W	20 0	14:41	542.0	36.7	584.1	36.5	H	
							21 0	14:77	539.5	36.5	588.0	36.3	W	
13 0	25 13:34	537.9	43.2	603.1	42.5	W	22 0	15:67	540.3	36.3	587.8	35.9	H	
14 0	13:88	537.0	42.7	598.1	42.0	W	23 0	17:98	538.7	36.1	590.3	35.8	H	
15 0	13:43	536.9	42.3	595.3	41.5	W	9 0	16:46	538.1	35.9	599.3	35.7	H	
16 0	12:16	540.2	41.9	589.1	41.1	W	1 0	19:89	546.9	35.9	598.8	36.0	H	
17 0	11:66	539.6	41.5	590.0	40.7	W	2 0	22:37	533.0	36.1	607.0	36.5	H	
18 0	12:78	539.7	41.0	589.1	40.4	W	3 0	21:90	532.7	36.5	614.6	37.2	H	
19 0	13:14	540.3	40.7	589.4	40.0	B	4 0	20:42	534.5	37.2	626.0	37.8	H	
20 0	13:46	539.8	40.5	590.9	39.8	B	5 0	15:47	536.9	37.7	647.9	38.3	H	
21 0	13:83	539.7	40.2	588.7	39.5	H	6 0	16:43	537.6	38.0	653.4	38.8	B	
22 0	14:92	542.3	39.9	586.7	39.2	H	7 0	12:93	535.4	38.3	663.0	39.6	B	
23 0	15:79	544.9	39.7	592.3	39.1	H	8 0	06:59	525.0	38.3	688.4	39.2	B	
7 0 0	16:15	546.2	39.4	595.7	39.1	H	9 0	00:27	558.8	38.3	766.6	38.9	B	
1 0	15:51	547.6	39.3	595.0	39.0	H	10 0	25 04:14	499.7	38.1	682.3	38.7	B	
2 0	14:33	546.1	39.2	597.7	39.0	B	11 0	24 56:61	443.0	38.0	375.6	38.5	B	
3 0	14:87	546.1	39.2	598.9	39.1	H	12 0	24 44:54	438.3	37.8	335.3	38.4	B	
4 0	15:41	543.9	39.1	599.8	39.2	H								
5 0	16:65	544.1	39.2	600.7	39.4	H	13 0	0	25 06:70	543.6	37.7	594.3	38.3	W
6 0	16:10	541.0	39.3	599.1	39.4	W	14 0	0	24 45:27	479.2	37.5	570.4	38.0	W
7 0	14:44	537.3	39.3	602.6	39.2	W	15 0	0	25 04:95	445.4	37.3	603.5	37.8	W
8 0	13:19	532.0	39.2	608.8	39.0	W	16 0	0	24 55:47	500.3	37.2	631.1	37.7	W
9 0	14:15	531.6	39.0	614.6	38.8	W	17 0	0	25 06:09	524.1	37.0	647.1	37.6	W
10 0	13:96	531.5	38.9	615.7	38.7	W	18 0	0	10:90	522.9	37.0	629.4	37.5	W
11 0	08:92	541.2	38.7	607.5	38.5	H	19 0	0	12:48	531.5	36.9	614.0	37.5	B
12 0	13:96	540.9	38.5	596.9	38.4	H	20 0	0	14:46	529.7	36.9	611.3	37.5	B
							21 0	0	14:50	532.7	36.8	604.5	37.4	H
13 0	25 14:50	538.9	38.4	599.7	38.3	H	22 0	0	15:85	535.1	36.8	595.0	37.3	H
14 0	14:62	538.5	38.2	604.4	38.2	H	23 0	0	16:08	534.5	36.8	592.9	37.4	H
15 0	14:77	539.8	38.0	602.4	38.1	H	10 0	0	15:92	534.1	37.0	595.4	37.6	H
16 0	14:85	541.0	38.0	600.5	38.0	H	1 0	0	16:41	538.5	37.3	594.8	38.0	H
17 0	14:48	542.4	37.9	598.1	38.0	H	2 0	0	15:45	538.8	37.7	602.6	38.4	B
18 0	14:17	542.1	37.9	597.4	37.9	H	3 0	0	13:59	534.8	37.9	603.3	38.6	H
19 0	13:66	543.3	37.8	596.6	37.9	W	4 0	0	14:67	535.8	38.0	604.6	38.8	H
20 0	14:33	542.4	37.8	596.5	37.9	W	5 0	0	14:46	536.2	38.2	605.4	39.2	H
21 0	17:60	540.0	37.8	597.2	37.9	B	6 0	0	14:94	535.7	38.5	603.1	39.4	W
22 0	17:54	541.8	37.7	593.1	37.8	W	7 0	0	16:06	537.2	38.7	602.0	39.6	W
23 0	17:61	540.6	37.7	598.6	38.0	W	8 0	0	10:92	518.7	38.9	648.5	39.9	W
8 0 0	15:12	539.2	37.9	604.2	38.3	W	9 0	0	09:74	537.3	39.2	604.6	40.2	W
1 0	14:71	541.1	38.1	603.2	38.7	B	10 0	0	13:61	527.6	39.5	601.1	40.6	W
2 0	14:68	543.2	38.5	605.9	39.2	W	11 0	0	13:66	531.4	39.8	605.3	41.0	H
3 0	13:66	540.3	38.9	607.8	39.6	W	12 0	0	12:73	532.8	40.0	599.2	41.3	H
4 0	14:50	540.4	39.2	607.2	40.0	W								
5 0	15:09	539.6	39.5	605.5	40.2	W	13 0	0	25 15:71	537.9	40.3	581.2	41.6	H
6 0	14:46	541.2	39.7	603.1	40.3	H	14 0	0	12:69	527.6	40.7	589.6	41.9	H
7 0	14:40	539.3	39.7	601.1	40.3	H	15 0	0	12:01	528.3	41.0	597.5	42.2	H
8 0	14:44	539.6	39.7	599.0	40.2	H	16 0	0	14:33	532.7	41.2	597.6	42.5	H
9 0	13:86	540.8	39.6	596.2	40.0	H	17 0	0	14:46	535.7	41.6	591.3	42.7	H
10 0	13:79	540.3	39.4	593.7	39.7	H	18 0	0	15:85	535.8	41.9	597.1	43.1	H
11 0	14:06	539.0	39.0	593.9	39.1	B	19 0	0	15:29	539.0	42.1	603.8	43.3	W
12 0	12:72	537.0	38.8	596.1	38.8	B	20 0	0	15:79	539.7	42.3	598.9	43.4	W

DECLINATION. Magnet untouched, Dec. 30^d 1844—Feb. 5^d 1845.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

HOURLY OBSERVATIONS OF MAGNETOMETERS, JANUARY 10—16, 1845.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Sc. Div.	°	Mic. Div.	°	Sc. Div.	°	
10 21 0	25 15.14	538.2	42.6	599.8	43.5	B	14 5 0	25 15.49	534.4	38.8	601.8	39.5	W	
	22 0	536.6	42.7	599.2	43.5		6 0	14.84	534.1	38.9	607.3	39.7	H	
	23 0	536.7	42.7	599.0	43.5	W	7 0	14.75	539.3	39.0	605.7	39.9	H	
11 0 0	16.66	534.9	42.7	601.3	43.5	W	8 0	14.38	539.7	39.1	602.5	40.0	H	
1 0	16.60	534.1	42.8	601.2	43.7	W	9 0	12.72	540.3	39.2	601.8	40.1	H	
2 0	16.13	538.2	43.0	605.9	44.0	W	10 0	12.75	540.6	39.2	598.1	40.1	H	
3 0	14.78	535.3	43.4	614.8	44.5	W	11 0†	11.17	544.9	39.3	576.4	40.1	B	
4 0	14.73	536.5	43.7	617.0	44.7	W	12 0†	09.76	534.5	39.3	572.1	40.1	B	
5 0	13.86	534.6	43.8	621.9	44.7	W								
6 0	14.78	535.2	43.8	620.2	44.7	H	13 0	25 16.48	537.2	39.3	570.3	40.1	B	
7 0†	07.24	538.4	43.7	619.3	44.4	H	14 0	12.98	533.5	39.4	577.7	40.1	B	
8 0	14.53	531.7	43.6	613.2	44.2	H	15 0	12.18	534.5	39.4	582.2	40.0	B	
9 0	14.17	538.0	43.3	603.0	43.8	H	16 0	11.72	536.0	39.4	586.9	40.0	B	
10 0	14.35	536.7	43.1	600.3	43.4	H	17 0	12.65	542.5	39.3	583.9	39.9	B	
11 0	14.11	535.9	42.8	601.2	43.0	B	18 0	13.07	541.3	39.3	583.1	39.8	B	
12 0	13.56	534.4	42.6	603.3	42.5	B	19 0	14.24	539.9	39.2	587.0	39.7	H	
							20 0	14.64	542.4	39.1	585.3	39.7	H	
12 13 0	25 17.20	535.4	37.9	577.5	37.5	W	21 0	14.80	539.5	39.0	588.2	39.5	W	
14 0	14.80	531.3	37.7	591.5	37.2	W	22 0	14.57	534.2	39.0	590.8	39.4	H	
15 0	13.05	530.8	37.3	595.9	36.8	W	23 0	14.94	527.9	39.0	595.1	39.3	H	
16 0	15.61	528.8	36.9	600.2	36.4	W	15 0 0	16.39	534.1	38.9	593.0	39.4	H	
17 0†	21.91	522.3	36.6	595.8	36.1	W	1 0	17.42	534.6	39.0	588.4	39.5	W	
18 0	17.26	533.9	36.3	580.4	35.9	W	2 0	17.19	536.7	39.2	588.8	39.9	H	
19 0	14.71	536.3	36.1	595.1	35.7	B	3 0	16.06	539.2	39.5	589.1	40.2	H	
20 0	15.61	538.0	35.9	598.5	35.4	B	4 0	14.57	539.4	39.9	591.4	40.7	B	
21 0	16.05	536.6	35.7	601.6	35.2	H	5 0	14.64	540.4	40.1	589.7	40.9	H	
22 0	16.92	534.3	35.4	603.0	34.8	H	6 0	13.90	540.3	40.2	593.0	41.0	B	
23 0	16.68	528.5	35.2	608.0	34.8	H	7 0	14.17	540.1	40.3	593.1	41.1	B	
13 0 0	17.53	530.1	35.1	606.0	34.8	H	8 0	12.09	540.8	40.2	592.0	40.9	B	
1 0	18.13	532.0	35.0	608.3	35.0	B	9 0	13.91	539.2	40.2	593.2	40.7	B	
2 0	17.15	535.9	35.0	610.9	35.0	H	10 0	14.20	539.7	40.0	591.0	40.3	B	
3 0	15.24	530.6	35.0	618.2	35.2	B	11 0†	02.77	546.4	39.8	582.8	40.0	W	
4 0	15.61	538.5	35.1	611.0	35.3	H	12 0†	12.62	533.4	39.6	576.2	39.6	W	
5 0	14.77	538.7	35.2	611.1	35.7	B								
6 0	13.83	538.6	35.4	609.7	35.9	W	13 0	25 14.64	535.4	39.3	566.6	39.3	W	
7 0	13.96	538.1	35.6	608.9	36.2	W	14 0	14.60	534.0	39.0	574.2	38.9	W	
8 0	12.95	535.6	35.8	609.2	36.4	W	15 0	14.55	535.1	38.7	580.5	38.4	W	
9 0	14.24	535.7	35.9	604.9	36.5	W	16 0	14.11	535.7	38.3	583.1	37.9	W	
10 0	13.36	538.4	36.1	600.7	36.6	W	17 0	14.20	539.2	37.9	583.3	37.3	W	
11 0	12.53	537.9	36.2	599.4	36.8	H	18 0	14.53	540.3	37.5	584.5	36.8	W	
12 0	13.52	538.5	36.3	596.8	37.1	H	19 0	14.87	539.0	37.0	587.1	36.5	B	
							20 0	14.10	539.8	36.7	588.4	36.2	B	
13 0	25 14.15	538.1	36.5	596.4	37.2	H	21 0	13.47	536.8	36.3	592.7	35.8	H	
14 0	14.06	537.5	36.7	597.1	37.4	H	22 0	13.49	537.5	36.2	596.1	35.6	H	
15 0	14.33	538.7	36.8	595.5	37.4	H	23 0	15.01	535.5	35.8	595.6	35.4	H	
16 0	14.24	539.5	36.8	595.4	37.5	H	16 0 0	17.20	536.5	35.7	592.6	35.3	B	
17 0	15.17	539.1	36.9	594.4	37.6	H	1 0	16.68	531.3	35.5	593.5	35.3	H	
18 0	14.24	540.5	37.0	593.9	37.7	H	2 0	19.17	535.2	35.4	593.6	35.3	H	
19 0	13.79	541.7	37.1	593.1	37.8	W	3 0	17.67	535.4	35.4	598.5	35.3	B	
20 0	14.28	539.8	37.2	593.6	37.9	W	4 0	17.33	535.9	35.3	596.8	35.2	H	
21 0	14.50	537.8	37.4	596.7	38.1	B	5 0	15.81	538.0	35.2	597.4	35.2	H	
22 0	15.62	532.1	37.6	599.2	38.2	W	6 0	14.60	539.4	35.1	597.5	35.0	W	
23 0	18.43	527.1	37.7	598.8	38.3	W	7 0	13.83	539.9	35.0	597.3	34.8	W	
14 0 0	18.45	535.0	37.8	598.1	38.5	W	8 0	13.49	539.5	34.8	597.6	34.6	W	
1 0	19.58	533.7	38.0	597.1	38.7	W	9 0	13.37	539.8	34.6	596.2	34.3	W	
2 0	18.03	539.9	38.2	593.2	38.9	W	10 0	13.39	538.2	34.3	596.1	34.0	W	
3 0	15.17	539.4	38.4	593.3	39.0	W	11 0	13.47	534.1	34.0	598.8	33.7	H	
4 0	14.58	542.4	38.6	596.3	39.2	W	12 0	13.46	534.2	33.8	600.1	33.7	H	

DECLINATION. Magnet untouched, Dec. 30^d 1844—Feb. 5^d 1845.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.					
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			d.	h.	m.	°	'	Sc. Div.	°	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	°	Sc. Div.	°	Mic. Div.	°										Mic. Div.	°			
16 13 0	25 13-36	529.7	33.7	603.5	33.7	H	19	21	3	25	15-83	531.5	34.8	504.1	34.3	B			
14 0		13.83	534.6	33.5	589.1	33.7	H		22	0	17.49	530.2	34.6	522.4	34.0	W			
15 0		13.36	536.2	33.4	594.7	33.7	H		23	0	20.00	522.7	34.2	542.0	33.8	W			
16 0		13.94	541.1	33.4	593.6	33.7	H	20	0	0	22.25	529.1	34.0	555.2	33.7	W			
17 0		14.10	541.6	33.4	594.2	33.8	H		1	0	22.25	530.0	33.9	564.6	33.9	W			
18 0		13.39	544.0	33.5	593.6	34.0	H		2	0†	24.99	535.4	34.0	585.9	34.4	W			
19 0†		18.30	540.8	33.7	596.5	34.2	W		3	0†	23.65	531.4	34.5	621.3	35.1	W			
20 0		15.31	544.2	33.8	583.1	34.5	W		4	0†	18.52	530.8	35.0	675.7	35.8	W			
21 0		14.71	541.2	34.0	592.5	34.8	B		5	0	16.68	531.6	35.4	642.7	36.2	W			
22 0		15.41	540.9	34.3	593.2	34.9	W		6	0	17.70	530.8	35.6	624.2	36.4	H			
23 0		16.05	537.2	34.5	596.1	35.1	W		7	0	16.01	535.6	35.7	606.1	36.1	H			
17 0 0		16.55	535.6	34.7	596.3	35.3	W		8	0	11.19	522.5	35.7	621.1	36.4	H			
1 0		17.17	535.4	34.9	599.3	35.6	B		9	0	13.12	521.7	35.7	607.0	36.3	H			
2 0		16.99	537.3	35.2	599.3	36.0	W		10	0	09.12	532.4	35.7	586.6	36.2	H			
3 0		16.25	540.7	35.7	598.8	36.6	W		11	0	12.06	531.9	35.6	584.8	36.1	B			
4 0		15.25	537.7	36.2	597.9	37.2	W		12	0	13.83	537.8	35.6	575.8	36.0	B			
5 0		15.39	543.2	36.7	592.1	37.6	W												
6 0		14.85	543.1	37.1	590.6	38.0	H		13	0	25	15-44	536.7	35.6	574.6	36.0	B		
7 0		14.91	540.8	37.3	592.0	38.2	H		14	0	15.01	535.9	35.6	579.6	36.0	B			
8 0		12.02	530.5	37.6	605.1	38.6	H		15	0	14.13	536.3	35.5	581.3	36.0	B			
9 0		11.54	530.8	37.7	608.2	38.6	H		16	0	14.78	537.4	35.5	580.0	35.9	B			
10 0		12.38	537.1	37.8	601.1	38.6	H		17	0	14.53	539.0	35.4	576.6	35.8	B			
11 0		13.49	540.8	37.9	593.4	38.7	B		18	0†	19.69	539.3	35.3	569.3	35.7	B			
12 12		13.17	538.4	38.0	588.3	38.7	B		19	0	13.67	538.6	35.3	555.1	35.7	H			
									20	0	14.53	538.8	35.3	567.7	35.7	H			
13 0	25	13.79	537.3	38.0	587.4	38.7	B		21	0	15.52	537.1	35.3	571.4	35.7	W			
14 0		14.06	537.7	38.0	585.1	38.7	B		22	0	16.65	541.3	35.2	572.8	35.5	H			
15 0		16.55	536.9	38.0	584.8	38.7	B		23	0	16.38	539.2	35.1	579.3	35.4	H			
16 0		14.33	534.1	38.0	580.4	38.7	B	21	0	0	16.10	536.1	35.1	587.9	35.4	H			
17 0		15.78	537.8	38.0	578.1	38.6	B		1	0	18.20	540.7	35.2	588.0	35.6	H			
18 0		14.46	542.2	38.0	578.2	38.6	B		2	0	18.52	535.4	35.3	588.1	35.7	H			
19 0		14.10	536.4	38.0	583.0	38.6	H		3	0	15.15	535.1	35.4	596.3	36.1	H			
20 0		14.57	540.9	38.0	582.0	38.6	H		4	0	15.78	535.4	35.7	591.6	36.3	H			
21 0		13.67	543.3	38.0	582.1	38.6	W		5	0	15.20	536.9	36.0	593.0	36.6	H			
22 0		15.11	532.9	38.0	583.3	38.6	H		6	0	13.96	538.9	36.1	590.0	36.9	B			
23 0		17.06	532.3	38.0	588.3	38.6	H		7	0	14.26	535.4	36.2	590.6	36.9	B			
18 0 0		20.35	532.3	38.1	584.8	38.6	H		8	0†	03.34	533.7	36.3	602.2	36.9	B			
1 0		18.50	533.5	38.2	584.4	38.8	W		9	0	13.67	534.8	36.4	589.6	37.1	B			
2 0		18.88	527.7	38.4	585.3	39.0	H		10	0	14.11	534.1	36.5	588.4	37.2	B			
3 0		17.34	537.1	38.7	589.6	39.6	H		11	0	09.39	537.2	36.6	580.4	37.1	W			
4 0		16.15	536.5	39.0	591.6	40.0	H		12	0	11.93	537.9	36.7	563.3	37.3	W			
5 0		15.11	538.1	39.3	592.6	40.3	H												
6 0		14.33	539.5	39.6	591.9	40.5	B		13	0	25	12-70	531.4	36.8	572.9	37.4	W		
7 0		14.11	540.2	39.8	590.7	40.6	B		14	0	14.78	535.1	36.9	574.5	37.6	W			
8 0		13.64	541.0	39.8	588.4	40.6	B		15	0	10.87	534.2	37.0	572.9	37.7	W			
9 0		13.63	540.4	39.9	585.5	40.5	B		16	0	13.83	535.7	37.0	571.7	37.8	W			
10 0		13.43	539.3	39.9	586.7	40.5	B		17	0	11.24	538.1	37.1	572.1	37.9	W			
11 0		13.70	539.4	39.8	586.1	40.4	W		18	0	13.90	539.2	37.3	571.3	38.0	W			
12 0	25	13.69	539.9	39.7	584.4	40.3	W		19	0	14.50	539.6	37.5	574.0	38.2	B			
									20	0	14.43	543.0	37.7	573.7	38.4	B			
19 13 0†	24	44.83	493.5	36.7	399.8	36.3	H		21	0	14.13	522.4	37.8	571.5	38.5	H			
14 0†	24	54.79	512.4	36.4	363.2	36.3	H		22	0	16.30	523.0	38.0	574.5	38.6	H			
15 0†	25	03.50	423.4	36.2	198.8	36.3	H		23	0	16.95	522.9	38.2	579.7	38.7	H			
16 0†		04.31	537.8	36.1	305.3	36.2	H	22	0	0	16.86	538.3	38.4	585.4	39.0	B			
17 0		06.88	539.8	35.8	330.0	35.8	H		1	0	16.63	542.3	38.7	583.7	39.6	B			
18 0		13.72	543.6	35.7	385.3	35.4	H		2	0	17.07	544.5	39.1	580.7	40.2	B			
19 0		17.22	545.9	35.3	436.4	34.9	W		3	0	16.01	535.1	39.8	592.9	40.9	H			
20 0		19.59	535.7	35.0	476.1	34.6	W		4	0	15.85	537.8	40.5	596.1	41.8	B			

DECLINATION. Magnet untouched, Dec. 30^d 1844—Feb. 5^d 1845.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

HOURLY OBSERVATIONS OF MAGNETOMETERS, JANUARY 22—27, 1845.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.		
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Mic. Div.	°			
d. h. m.	°	'	Sc. Div.	°	Mic. Div.		d. h. m.	°	'	Sc. Div.	°	Mic. Div.	°			
22	5	0	25	16.72	540.3	41.1	24	13	0†	25	07.49	519.9	43.0	600.7	42.8	
	6	0		16.16	541.2	41.3		14	0†		15.34	529.1	42.7	572.5	42.5	
	7	0		16.86	539.4	41.6		15	0†		04.29	530.4	42.5	549.6	42.2	
	8	0		15.67	541.4	41.7		16	0		13.59	531.9	42.1	583.6	41.9	
	9	0		11.44	540.8	41.7		17	0		12.36	532.3	41.8	593.6	41.5	
	10	0		14.77	536.0	41.7		18	0		13.02	536.7	41.6	591.9	41.0	
	11	0		13.84	539.3	41.8		19	0		12.89	538.8	41.2	587.6	40.8	
	12	0		14.18	558.4	41.9		20	0		18.03	538.5	40.9	584.7	40.7	
								21	0		17.09	538.1	40.8	581.1	40.6	
	13	0	25	12.29	532.6	42.0	22	0		18.90	542.7	40.6	578.0	40.5		
	14	0		12.90	535.6	42.2		23	0		17.09	532.5	40.6	590.6	40.5	
	15	0		11.03	532.8	42.3		25	0		18.27	540.8	40.7	597.4	41.0	
	16	0		11.69	533.6	42.5		1	0†		20.27	521.7	40.8	609.3	41.4	
	17	0		11.37	537.5	42.6		2	0†		19.29	542.4	41.3	628.4	42.0	
	18	0		12.72	539.7	42.8		3	0		22.13	537.9	41.8	626.2	42.5	
	19	0		15.04	540.5	43.0		4	0		13.86	536.4	42.2	648.8	42.9	
	20	0		13.32	543.9	43.2		5	0†		21.06	533.4	42.6	646.7	43.5	
	21	0		14.68	546.4	43.7		6	0†		13.16	542.5	43.0	641.7	44.0	
	22	0		16.68	542.7	44.0		7	0†		12.16	534.2	43.5	642.4	44.6	
	23	0		19.37	536.0	44.3		8	0		14.03	536.2	43.9	620.9	45.1	
23	0	0	21.81	541.8	44.7	582.6	45.8	9	0†	09.05	529.1	44.4	610.7	45.6		
	1	0	16.60	540.6	44.9	579.5	46.0	W	10	0†	10.16	530.0	44.9	589.3	46.0	
	2	0	19.75	538.4	45.1	591.9	46.2	B	11	0†	11.37	534.7	45.3	586.2	46.6	
	3	0	17.12	525.2	45.4	616.6	46.4	B	12	0†	10.20	546.9	45.8	577.2	47.0	
	4	0	18.68	538.2	45.6	611.1	46.6	W								
	5	0	17.20	531.0	45.8	620.4	46.8	W	26	13	0†	25	14.18	530.0	39.5	
	6	0	16.18	539.3	45.9	605.4	47.0	D	14	0†	12.49	537.3	39.0	558.2	38.2	
	7	0	14.50	540.4	46.2	594.1	47.3	D	15	0†	07.11	520.8	38.6	558.4	37.9	
	8	0	14.77	535.8	46.4	593.9	47.7	D	16	0†	05.00	526.8	38.2	569.0	37.5	
	9	0	10.74	522.5	46.6	619.2	48.2	H	17	0	08.48	529.7	37.8	583.8	37.2	
	10	0†	11.99	527.2	46.8	594.2	48.3	H	18	0†	07.62	533.1	37.5	580.0	36.8	
	11	0†	12.92	529.0	46.9	588.9	48.2	B	19	0†	12.85	536.2	37.2	579.9	36.7	
	12	0†	01.83	529.6	46.9	574.4	48.0	B	20	0	12.69	539.6	36.9	587.5	36.5	
								21	0	15.94	538.3	36.7	582.4	36.3		
	13	0	25	10.20	528.1	46.9	589.6	48.0	B	22	0	16.77	533.6	36.5	580.6	36.0
	14	0†	09.89	529.2	46.9	586.0	47.8	B	23	0	18.88	531.1	36.3	583.1	35.8	
	15	0†	12.36	522.1	46.9	520.5	47.7	B	27	0	15.92	527.0	36.1	597.0	35.7	
	16	0†	02.86	536.4	46.8	480.0	47.7	B	1	0	17.51	537.8	36.0	601.4	35.8	
	17	0†	11.81	530.0	46.8	506.0	47.6	B	2	3	19.75	531.4	36.1	605.0	36.0	
	18	0	11.68	532.2	46.7	531.2	47.4	B	3	0	15.56	546.2	36.2	616.3	36.2	
	19	0	13.02	534.7	46.7	551.7	47.2	H	4	0	17.96	534.7	36.2	617.0	36.5	
	20	0	15.58	539.9	46.5	555.0	47.0	H	5	0	14.87	539.6	36.3	612.1	36.6	
	21	0	19.51	531.2	46.3	561.2	46.8	W	6	0	15.27	537.5	36.3	606.4	36.4	
	22	0	14.91	537.4	46.2	559.4	46.5	H	7	0	14.04	540.4	36.2	597.8	36.4	
	23	0	18.34	536.1	46.0	564.0	46.2	H	8	0	14.23	539.8	36.1	595.9	36.2	
24	0	0	17.22	526.6	45.7	579.7	45.8	H	9	0	12.55	535.6	36.0	600.2	36.0	
	1	0	20.42	533.7	45.4	580.9	45.5	H	10	0†	01.41	555.0	35.9	578.5	35.9	
	2	0	16.43	537.0	45.1	579.8	45.2	H	11	0†	15.05	543.4	35.8	567.3	35.9	
	3	0	16.10	535.2	45.0	585.2	45.3	H	12	0	10.97	538.8	35.7	563.6	36.0	
	4	0	16.15	537.7	44.9	591.6	45.0	H								
	5	0	17.39	541.7	44.8	601.9	45.0	H	13	0	25	12.11	534.6	35.7	572.0	36.0
	6	0†	11.74	519.6	44.8	644.6	45.0	B	14	0	14.75	536.5	35.6	575.5	35.9	
	7	0†	16.80	524.6	44.7	653.2	44.9	B	15	0	12.75	534.8	35.6	577.3	35.8	
	8	0†	15.34	547.3	44.5	629.4	44.6	B	16	0	13.86	535.0	35.5	580.3	35.7	
	9	0†	15.47	539.0	44.3	618.9	44.3	B	17	0	13.50	537.5	35.4	580.9	35.5	
	10	0†	14.20	534.8	44.0	612.4	43.8	B	18	0	13.47	539.6	35.3	580.8	35.4	
	11	0†	14.15	545.3	43.7	571.8	43.4	W	19	0	13.86	538.7	35.1	582.5	35.3	
	12	0†	09.42	515.0	43.3	562.6	43.2	W	20	0	14.06	540.0	35.0	580.0	35.1	

DECLINATION. Magnet untouched, Dec. 30^d 1844—Feb. 5^d 1845.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.† Extra Observations made.
Jan. 22d 10^h—23d 10^h. Term-Day Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°	
27 21 0	25 14-38	538-1	34-9	572-1	34-9	H	30 5 0	25 16-62	529-6	28-3	591-6	29-0	H
22 0	15-47	537-2	34-8	570-8	34-6	H	6 0	14-53	538-9	28-6	598-9	29-2	B
23 0	16-23	535-5	34-7	572-5	34-6	H	7 0	16-68	536-1	28-8	600-9	29-4	B
28 0 0	16-86	538-6	34-6	572-9	34-6	H	8 0†	02-89	523-7	28-8	608-3	29-1	B
1 0	15-01	532-6	34-6	572-0	34-7	H	9 0†	07-74	535-1	28-7	583-1	28-9	B
2 0	15-71	546-5	34-6	567-2	34-9	H	10 0†	12-01	529-9	28-5	582-2	28-5	B
3 0	18-20	548-9	34-8	578-1	35-3	H	11 0	14-03	535-9	28-2	570-6	27-8	W
4 0	19-34	540-1	35-0	603-0	35-5	H	12 0	13-84	535-1	27-8	564-7	27-0	W
5 0†	15-38	524-9	35-1	623-1	35-6	H							
6 0†	13-05	528-1	35-1	638-6	35-7	W	13 0	25 13-32	534-5	27-3	562-2	26-3	W
7 0	16-26	528-0	35-1	633-4	35-7	W	14 0	12-96	533-4	26-7	559-9	25-4	W
8 0†	09-10	540-4	35-1	641-4	35-7	W	15 0	14-03	533-6	26-2	560-0	24-6	W
9 0†	12-15	531-0	35-1	632-5	35-7	W	16 0	13-79	533-7	25-6	559-3	23-9	W
10 0†	13-12	524-3	35-1	632-3	35-7	W	17 0	13-37	533-1	25-0	557-6	23-1	W
11 0†	25 06-19	523-1	35-1	600-5	35-7	H	18 0	13-56	533-9	24-3	556-3	22-3	W
12 0†	24 59-66	548-8	35-0	542-8	35-7	H	19 0	13-59	534-0	23-7	555-8	21-5	B
							20 0	12-58	536-9	23-0	555-8	21-0	B
13 0	25 13-25	528-3	35-0	550-9	35-7	H	21 0	13-93	534-4	22-4	557-3	20-3	H
14 0	21-56	533-7	35-0	541-0	35-7	H	22 0	15-74	526-6	21-8	557-2	19-5	H
15 0	12-92	529-8	34-9	537-7	35-4	H	23 0	16-72	521-3	21-4	558-3	19-0	B
16 0	14-15	533-8	34-8	560-0	35-2	H	31 0 0	18-43	522-5	21-1	570-3	19-0	B
17 0	11-44	534-3	34-6	566-4	34-7	H	1 0	16-89	526-6	20-8	575-6	19-5	B
18 0	13-16	536-3	34-3	567-3	34-3	H	2 0	18-54	531-3	20-9	586-6	21-4	B
19 0†	23-45	534-8	34-0	558-6	34-0	W	3 0	17-09	532-4	21-3	585-4	22-3	B
20 0†	25-11	539-6	33-7	534-5	33-6	W	4 0	15-91	533-6	22-0	589-2	23-3	B
21 5†	24-84	536-5	33-4	529-2	33-3	B	5 0	15-32	537-8	22-9	598-4	24-3	B
22 0	21-73	539-0	33-1	524-8	32-8	W	6 0	15-41	535-5	23-6	587-9	24-6	W
23 0	16-03	539-6	32-7	541-2	32-4	W	7 0	15-07	535-8	24-0	583-9	24-7	W
29 0 0	14-75	541-4	32-6	563-9	32-4	W	8 0	15-01	535-2	24-2	580-6	24-5	W
1 0	17-09	539-4	32-5	565-1	32-4	H	9 0	14-65	535-5	24-1	580-2	24-3	W
2 0	18-87	541-4	32-4	567-8	32-5	W	10 0	13-43	532-6	24-0	578-1	24-0	W
3 0	17-46	535-2	32-5	572-2	32-7	W	11 0	13-25	533-3	23-8	574-6	24-0	H
4 0	18-03	534-9	32-6	578-0	32-8	W	12 0	13-43	533-7	23-7	575-5	24-2	H
5 0	25 17-80	540-9	32-7	581-0	32-9	W							
6 0†	24 59-63	532-5	32-7	622-2	32-7	H	13 0	25 14-15	535-7	23-7	570-5	24-2	H
7 0†	25 05-29	524-7	32-6	645-0	32-7	H	14 0	19-55	535-3	23-7	567-5	24-3	H
8 0†	16-68	531-2	32-4	656-3	32-6	H	15 0	13-72	529-0	23-9	564-6	24-5	H
9 0†	14-43	527-0	32-1	616-8	32-2	H	16 0	14-15	532-5	24-1	569-1	24-8	H
10 0†	03-60	584-2	31-8	544-8	31-5	H	17 0	14-77	535-1	24-4	572-6	25-2	H
11 0†	12-80	533-3	31-4	516-0	30-9	B	18 0	13-76	535-4	24-5	572-6	25-3	H
12 0†	09-69	526-2	31-0	529-5	30-5	B	19 0	14-62	533-8	24-7	574-9	25-4	W
							20 0	13-17	535-2	24-9	574-0	25-5	W
13 0†	25 12-73	521-9	30-6	547-4	30-1	B	21 0	12-87	534-9	25-1	576-8	25-8	B
14 0	14-87	528-9	30-1	564-1	29-7	B	22 0	13-77	533-4	25-3	574-2	25-9	W
15 0	16-26	528-0	29-7	570-3	29-2	B	23 0	15-72	534-0	25-5	575-0	26-3	W
16 0	12-01	532-2	29-3	567-7	28-7	B	1 0 0	17-26	532-3	25-9	574-3	26-8	W
17 0	12-29	530-4	28-9	575-5	28-3	B	1 0	17-46	529-4	26-4	576-9	27-8	W
18 0	12-01	533-9	28-6	576-9	28-0	B	2 0	16-92	532-9	27-1	574-4	28-6	W
19 0	15-91	533-3	28-3	576-1	27-3	H	3 0	18-18	535-8	27-9	574-6	29-7	W
20 0	13-83	522-5	27-9	574-4	26-8	H	4 0	17-26	534-1	28-8	583-2	30-7	W
21 0	13-96	533-2	27-6	564-2	26-4	W	5 0	15-67	536-4	29-6	587-7	31-4	W
22 0	15-81	534-1	27-3	564-1	26-2	H	6 0	16-18	536-1	30-3	586-9	32-0	H
23 0	16-89	533-0	27-0	565-8	26-0	H	7 0	15-04	534-9	30-7	584-6	32-1	H
30 0 0	17-70	535-0	26-8	570-4	26-2	H	8 0	13-81	538-9	30-9	582-8	32-2	H
1 0	17-89	533-3	26-8	569-1	26-6	H	9 0	13-59	538-4	31-0	580-9	32-1	H
2 0	17-65	535-0	27-0	578-3	27-2	H	10 0	13-72	535-9	31-0	581-1	32-0	H
3 0	16-48	537-9	27-3	582-6	28-1	H	11 0	13-46	535-5	30-9	579-3	31-7	B
4 0	18-48	541-7	27-8	591-3	28-5	H	12 0†	14-06	543-5	30-8	565-2	31-5	B

DECLINATION. Magnet untouched, Dec. 30^d 1844—Feb. 5^d 1845.BIFILAR. Observed 2^m after the Declination, $k=0\cdot000140$. BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

† Extra Observations made.

HOURLY OBSERVATIONS OF MAGNETOMETERS, FEBRUARY 2—7, 1845.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.		
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			
		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	
2	25 14.33	537.3	31.1	572.3	32.0	W	4 21 0	25 13.07	538.4	38.7	565.9	38.9	W	
	14 0	536.5	31.4	574.1	32.4	W	22 0	13.96	536.1	38.6	566.5	38.7	H	
	15 0	536.9	31.7	572.9	32.6	W	23 0	15.98	534.6	38.4	568.1	38.7	H	
	16 0	537.3	31.9	571.6	32.8	W	5 0 0	17.65	535.6	38.4	573.5	38.7	H	
	17 0	535.6	32.1	572.0	33.1	W	1 0	18.72	538.7	38.5	579.7	39.2	H	
	18 0	537.4	32.3	571.3	33.3	W	2 0	19.26	543.1	38.9	578.8	39.8	H	
	19 0	540.1	32.5	571.4	33.5	B	3 0	19.05	538.3	39.4	582.6	40.4	W	
	20 0	540.6	32.7	573.1	33.7	B	4 0	21.50	546.9	39.9	597.1	40.8	W	
	21 0	537.7	32.8	577.6	33.8	H	5 0 †	27.42	535.5	40.2	640.1	41.2	W	
	22 0	535.2	32.9	576.2	33.8	H	6 0 †	24.77	530.8	40.6	746.0	41.4	B	
	23 0	533.3	33.2	580.6	34.2	H	7 0 †	15.22	528.9	40.7	717.3	41.5	B	
	3 0 0	527.5	33.6	585.0	35.0	B	8 0	16.10	532.7	40.8	645.3	41.5	B	
	1 0	532.1	34.2	585.6	36.2	H	9 0	15.24	536.9	40.7	630.5	41.3	B	
	2 0	535.1	35.0	586.0	37.3	B	10 0	12.89	534.4	40.4	626.5	40.8	B	
	3 0	537.2	36.0	582.1	38.0	H	11 0	13.16	535.9	40.1	612.7	40.4	W	
	4 0	537.6	37.2	579.4	39.0	H	12 0 †	11.88	533.6	39.8	609.4	40.0	W	
	5 0	538.4	38.2	580.9	39.8	H	20 0	13.77	534.7	37.0	570.8	36.5	B	
	6 0	540.4	38.8	580.8	40.2	W	13 0 †	25 09.46	528.6	39.6	599.0	39.7	W	
	7 0	540.0	39.0	578.9	40.3	W	14 0 †	08.88	531.8	39.3	585.1	39.4	W	
	8 0	539.1	39.2	578.0	40.3	W	15 0	11.77	530.7	39.0	592.3	39.0	W	
	9 0	538.4	39.2	576.9	40.0	W	16 0	13.47	531.0	38.6	590.0	38.4	W	
	10 0	537.0	39.0	576.4	39.7	W	17 0	12.60	537.3	38.2	587.3	37.9	W	
	11 0	536.5	38.8	577.3	39.4	H	18 0	12.73	537.3	37.8	584.2	37.4	W	
	12 0	534.1	38.6	577.5	39.1	H	19 0	18.63	530.0	37.4	583.8	36.9	B	
4	25 11.89	541.4	38.3	565.5	38.8	H	21 0	15.34	531.1	36.7	566.1	36.0	H	
	14 0	529.7	38.0	570.7	38.4	H	22 0	19.21	510.9	36.3	579.9	35.6	H	
	15 0	535.3	37.7	558.6	38.0	H	23 0	23.72	520.2	35.9	583.7	35.3	B	
	16 0	535.5	37.4	562.1	37.5	H	6 0 0	22.01	528.3	35.6	585.3	35.3	H	
	17 0	537.6	37.1	562.6	37.0	H	1 0	20.02	532.3	35.5	583.8	35.3	H	
	18 0	537.7	36.8	567.8	36.5	H	2 0	17.40	533.3	35.5	587.8	35.4	B	
	19 0	538.6	36.4	569.4	36.1	W	3 0	15.98	533.6	35.4	586.3	35.5	H	
	20 0	538.9	36.0	567.6	35.6	W	4 0	15.15	533.3	35.4	589.2	35.6	H	
	21 0	538.4	35.6	564.3	35.1	B	5 0	13.86	533.1	35.5	587.5	35.7	H	
	22 0	537.2	35.2	557.7	34.7	W	6 0	13.66	532.4	35.6	583.6	35.7	W	
	23 0	533.6	34.9	561.7	34.5	W	7 0	13.29	533.7	35.5	580.3	35.5	W	
	4 0 0	535.3	34.7	561.5	34.7	W	8 0	12.83	534.5	35.3	573.0	35.0	W	
	1 0	535.5	34.8	574.5	35.3	W	9 0	12.58	532.5	35.0	573.5	34.6	W	
	2 0	537.7	35.3	580.9	36.1	W	10 0	12.69	533.7	34.7	574.9	34.3	W	
	3 0	536.0	36.1	584.7	37.2	W	11 0	12.51	533.5	34.4	575.8	33.9	H	
	4 0	535.7	36.9	585.2	38.0	W	12 0	11.98	533.8	34.0	573.2	33.5	H	
	5 0	535.5	37.7	581.4	38.7	W	20 0	13.03	540.1	31.6	559.6	31.1	W	
	6 0	537.0	38.2	575.6	39.2	H	13 0	25 13.12	532.6	33.6	574.4	33.1	H	
	7 0	537.7	38.5	572.6	39.4	H	14 0	13.52	532.9	33.2	574.0	32.7	H	
	8 0	531.0	38.7	575.4	39.6	H	15 0	13.86	533.1	32.9	574.3	32.3	H	
	9 0	537.1	38.8	580.2	39.7	H	16 0	14.57	535.0	32.6	571.8	32.1	H	
	10 0	536.9	39.0	577.0	39.8	H	17 0	13.74	535.1	32.3	569.3	31.9	H	
	11 0	536.5	39.1	577.8	39.9	B	18 0	13.00	537.8	32.1	564.9	31.6	H	
	12 0	537.8	39.2	574.7	40.0	B	19 0	11.74	540.2	31.9	561.4	31.3	W	
	13 0	25 13.59	536.3	39.3	572.9	40.0	B	21 0	13.69	536.9	31.4	562.0	30.9	B
	14 0	538.8	39.3	571.8	40.1	B	22 0	13.81	535.6	31.2	561.5	30.7	W	
	15 0	537.9	39.3	569.8	40.0	B	23 0	15.98	534.4	31.1	563.6	30.7	W	
	16 0	539.4	39.3	567.4	39.9	B	7 0 0	18.13	534.2	31.0	561.5	30.7	W	
	17 0	539.6	39.3	567.5	39.8	B	1 0	18.40	536.7	31.0	564.6	31.0	W	
	18 0	539.8	39.1	566.8	39.6	B	2 0	17.56	540.2	31.2	568.5	31.4	W	
	19 0	539.5	39.0	563.9	39.4	H	3 0	16.79	535.7	31.5	575.1	31.9	W	
	20 0	538.5	38.8	564.2	39.2	H	4 0	16.89	536.4	31.7	583.4	32.3	W	

DECLINATION. Torsion removed.—Feb. 5^d 3½^h—7½°.* Effect of + 10° of torsion = - 0°.84.BIFILAR. Observed 2^m after the declination, $k=0.000140$.BALANCE. Observed 3^m after the declination, $k=0.000010$.

† Extra Observations made.

* Feb. 5^d 3½^h. The torsion could not have been more than 3° at first, but the north end of the brass bar moved slowly towards the west, as if affected by currents, or as if the torsion of the thread were affected by moisture.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.			
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			d.	h.	m.	°	'	Cor- rected.	Thermo- meter.			
		d.	h.	m.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.		
7 5 0	25 15.89	533.7	31.9	582.3	32.4	W	10	13	0	25	12.43	535.5	35.3	562.7	35.5	B	
6 0	14.70	537.9	32.0	576.3	32.5	H		14	0		14.11	535.1	35.1	556.3	35.3	B	
7 0	14.43	538.6	32.1	574.1	32.6	H		15	0		16.55	539.8	34.9	556.2	35.0	B	
8 0	13.46	537.6	32.0	573.4	32.6	H		16	0		13.69	531.4	34.7	559.0	34.7	B	
9 0	13.49	535.5	32.0	576.2	32.5	H		17	0		12.85	535.4	34.5	560.2	34.4	B	
10 0†	05.29	527.2	32.0	587.8	32.5	H		18	0		12.92	537.2	34.3	562.2	34.2	B	
11 0	11.57	531.6	32.0	575.4	32.5	B		19	0		12.95	537.7	34.0	560.2	34.0	H	
12 0	13.47	535.5	31.9	574.6	32.5	B		20	0		13.20	536.9	33.8	560.1	33.7	H	
								21	0		13.17	536.9	33.6	562.9	33.4	W	
13 0	25 12.80	534.8	31.9	571.6	32.3	B		22	0		13.49	534.1	33.4	568.2	33.2	H	
14 0	13.47	536.3	31.8	570.9	32.2	B		23	0		14.50	532.8	33.2	567.1	33.0	H	
15 0	13.07	535.8	31.7	570.5	32.0	B	11	0	0		15.51	531.8	33.2	564.4	32.9	H	
16 0	14.95	538.0	31.6	566.6	31.7	B		1	0		16.48	532.5	33.1	562.7	32.8	H	
17 0	12.15	535.2	31.4	568.3	31.4	B		2	0		17.61	536.6	33.0	567.2	33.0	H	
18 0	12.11	534.2	31.2	568.4	31.2	B		3	2		15.71	535.5	33.1	573.3	33.2	H	
19 0	12.22	535.6	31.0	568.0	30.9	H		4	0		14.70	540.5	33.1	577.6	33.3	H	
20 0	12.18	538.8	30.8	565.3	30.6	H		5	0		14.33	541.5	33.1	575.8	33.4	H	
21 0	11.82	532.9	30.7	563.0	30.3	W		6	0		13.94	540.2	33.1	579.0	33.4	B	
22 0	13.39	536.4	30.5	561.7	30.2	H		7	0		12.26	531.3	33.1	582.1	33.4	B	
23 0	15.24	530.0	30.4	565.9	30.2	H		8	0		12.13	538.2	33.0	577.5	33.3	B	
8 0 0	17.19	529.2	30.2	562.5	30.2	H		9	0		12.45	536.1	33.0	577.7	33.3	B	
1 0	17.51	533.3	30.3	568.3	30.3	H		10	0		11.46	536.2	33.0	577.6	33.3	B	
2 0	17.29	537.5	30.5	572.9	30.5	H		11	0		10.85	537.4	33.0	570.7	33.2	W	
3 0	15.98	536.4	30.8	577.8	31.3	H		12	0		13.79	541.3	32.9	563.7	33.2	W	
4 0	14.98	538.6	31.3	582.4	32.0	H											
5 0	14.20	537.4	31.9	583.1	32.7	H		13	0		25	12.80	537.5	32.9	559.4	33.1	W
6 0	13.69	538.4	32.4	580.5	33.3	B		14	0		13.22	537.1	32.8	563.1	33.0	W	
7 0	13.12	536.5	32.7	577.8	33.4	B		15	0		13.16	537.6	32.8	566.0	33.0	W	
8 0	13.27	535.7	32.8	576.8	33.4	B		16	0		13.05	539.4	32.7	566.0	32.9	W	
9 0	12.62	535.0	32.8	573.3	33.3	B		17	0		13.02	540.8	32.7	566.0	32.8	W	
10 0	12.35	536.3	32.8	571.8	33.2	B		18	0		13.19	539.5	32.6	565.1	32.7	W	
11 0	11.98	535.8	32.7	569.8	33.1	W		19	0		13.02	540.7	32.5	563.1	32.6	B	
12 0	12.98	536.7	32.6	562.1	32.9	W		20	0		13.25	539.3	32.4	563.8	32.5	B	
								21	0		13.59	540.3	32.3	562.4	32.4	H	
9 13 0	25 09.42	539.5	31.8	561.1	32.4	H		22	0		14.68	536.8	32.2	565.8	32.3	H	
14 0†	04.68	532.3	32.0	556.5	32.5	H		23	0		15.18	534.4	32.1	566.0	32.3	H	
15 0	08.56	535.3	32.2	545.7	32.7	H	12	0	0		17.20	533.6	32.0	569.8	32.3	B	
16 0	13.17	533.9	32.3	547.5	32.9	H		1	0		17.86	523.6	32.0	578.8	32.5	B	
17 0	12.04	539.0	32.4	550.9	33.1	H		2	0		17.60	527.7	32.1	576.8	32.6	B	
18 0	15.49	527.7	32.5	556.5	33.2	H		3	0		17.33	535.9	32.1	576.3	32.6	H	
19 0	14.70	536.8	32.6	548.2	33.2	W		4	0		15.67	535.6	32.2	582.2	32.7	H	
20 0	12.29	541.4	32.7	557.0	33.4	W		5	0		14.33	538.0	32.2	580.6	32.7	H	
21 3	14.46	541.8	32.9	558.0	33.4	B		6	0		13.61	538.3	32.2	578.7	32.7	W	
22 0	15.67	536.3	32.9	562.0	33.5	W		7	0		13.03	538.6	32.2	575.3	32.7	H	
23 0	16.10	527.6	33.0	571.8	33.7	W		8	0		12.98	538.8	32.2	573.6	32.7	W	
10 0 0	17.15	526.0	33.3	568.1	33.9	W		9	0		12.08	537.9	32.2	572.4	32.7	W	
1 0	17.73	533.6	33.7	564.4	34.3	W		10	0		12.80	538.5	32.2	569.9	32.7	W	
2 0	18.01	533.0	34.1	567.5	34.8	W		11	0		12.65	539.0	32.2	568.0	32.7	H	
3 0	16.95	537.2	34.6	575.9	35.3	W		12	0		11.81	538.8	32.3	566.4	32.7	H	
4 0	14.80	537.5	34.9	579.3	35.7	W											
5 0	13.10	537.5	35.2	579.6	36.0	W		13	0		25	09.26	538.2	32.4	559.3	32.8	H
6 0	13.19	538.7	35.5	576.8	36.3	H		14	0	†	14.43	554.6	32.4	536.2	32.9	H	
7 0	12.98	539.2	35.7	574.2	36.6	H		15	0		11.44	534.4	32.6	521.7	33.2	H	
8 0	13.25	538.4	35.7	571.6	36.5	H		16	0		10.21	537.3	32.8	536.7	33.5	H	
9 0	11.03	534.6	35.8	571.0	36.5	H		17	0		10.83	534.9	33.1	548.4	33.8	H	
10 0	11.32	536.7	35.7	568.9	36.3	H		18	0		11.44	541.2	33.4	551.8	34.1	H	
11 0	11.77	536.9	35.6	566.7	36.1	B		19	0		11.69	542.4	33.7	552.5	34.4	W	
12 0	12.48	537.1	35.5	564.7	35.8	B		20	0		12.48	542.6	33.9	553.3	34.7	W	

DECLINATION. Magnet untouched, Feb. 5^d—March 23^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 2^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
12 21 0	25 13.94	539.5	34.1	558.1	34.9	B	15 5 0	25 13.69	535.1	36.2	566.3	36.8	H
22 0	13.96	535.3	34.4	559.3	35.2	W	6 0	13.54	538.5	36.4	564.5	37.0	W
23 0	14.18	532.4	34.7	558.6	35.4	W	7 0	13.93	539.0	36.6	564.7	37.3	W
13 0 0	16.05	532.8	35.0	558.7	35.7	W	8 0	13.59	539.5	36.8	561.8	37.5	W
1 0	17.33	533.1	35.3	560.5	36.1	W	9 0	12.90	539.5	36.9	561.6	37.6	W
2 0	17.33	531.4	35.7	561.7	36.5	W	10 0	13.46	540.5	37.0	560.1	37.6	W
3 0	16.36	540.3	36.2	563.8	37.2	W	11 0	12.45	542.6	37.1	558.9	37.7	H
4 0	15.39	541.2	36.8	570.7	37.8	W	12 0	13.02	540.1	37.2	557.0	37.7	H
5 0	13.29	536.3	37.3	570.4	38.2	W							
6 0	13.86	540.0	37.6	571.0	38.6	H	16 13 0	25 12.72	539.4	39.2	560.2	39.7	B
7 0	13.63	539.3	37.9	565.5	38.9	H	14 0	11.39	542.1	39.1	554.0	39.6	B
8 0	13.44	538.9	38.2	567.4	39.2	H	15 0	11.61	540.2	39.0	554.7	39.6	B
9 0	13.12	538.5	38.5	569.3	39.5	H	16 0	12.11	538.8	39.0	555.0	39.5	B
10 0	13.19	539.0	38.6	568.9	39.6	H	17 0	12.09	540.7	38.9	554.5	39.4	B
11 0	12.04	538.3	38.7	566.6	39.6	B	18 0	12.08	541.6	38.9	554.2	39.3	B
12 0	12.56	538.1	38.8	565.6	39.5	B	19 0	13.90	540.5	38.8	552.4	39.2	H
							20 0	12.95	541.0	38.7	551.2	39.1	H
13 0	25 12.87	538.2	38.7	560.9	39.3	B	21 0	12.85	540.1	38.7	552.7	39.0	W
14 0	16.50	541.9	38.6	553.1	39.1	B	22 0	12.73	537.1	38.6	555.1	38.9	H
15 0	13.90	537.9	38.4	551.1	38.8	B	23 0	12.69	535.9	38.6	554.3	38.8	H
16 0	12.35	536.7	38.2	554.5	38.6	B	17 0 0	13.86	536.5	38.7	550.1	39.0	H
17 0	12.06	539.0	38.0	555.8	38.3	B	1 0	16.26	539.2	38.7	548.9	39.3	H
18 0	12.22	539.6	37.8	555.8	38.0	B	2 0	16.32	538.1	38.9	548.2	39.5	H
19 0	12.58	540.7	37.6	554.5	37.7	H	3 0	17.19	539.3	39.1	549.9	39.7	H
20 0	13.00	540.0	37.4	557.7	37.5	H	4 0	16.99	538.8	39.3	558.3	39.9	H
21 0	14.84	536.9	37.2	558.7	37.3	W	5 0	15.58	535.6	39.5	570.5	40.1	H
22 0	15.54	537.0	37.1	556.3	37.2	H	6 0†	09.33	526.8	39.7	584.3	40.3	B
23 0	15.61	535.0	36.9	556.8	37.1	H	7 0	16.06	533.2	39.8	583.5	40.5	B
14 0 0	15.72	532.8	36.8	562.1	37.1	H	8 0	14.21	536.8	39.8	573.8	40.6	B
1 0	17.06	535.3	36.9	557.3	37.3	H	9 0	13.34	540.9	39.9	565.7	40.5	B
2 0	16.32	534.9	37.0	555.2	37.5	H	10 0	12.67	541.3	39.9	561.3	40.4	B
3 0	16.05	536.8	37.0	560.9	37.6	H	11 0	12.85	539.3	39.8	560.0	40.3	W
4 0	15.14	538.0	37.2	565.9	37.7	H	12 0	12.80	539.5	39.7	557.0	40.0	W
5 0	13.67	538.9	37.4	567.6	37.8	H							
6 0	13.69	538.5	37.6	566.3	38.0	B	13 0	25 12.70	539.0	39.5	555.1	39.7	W
7 0	13.76	539.1	37.6	563.5	38.0	B	14 0	12.78	538.6	39.3	553.2	39.4	W
8 0	13.29	539.8	37.5	563.1	37.9	B	15 0	12.82	538.5	39.0	551.6	38.9	W
9 0	12.98	538.2	37.4	562.1	37.7	B	16 0	12.75	539.3	38.7	550.9	38.6	W
10 0	12.25	539.4	37.3	561.3	37.5	B	17 0	12.65	539.9	38.4	550.2	38.2	W
11 0	12.78	538.7	37.1	556.0	37.2	W	18 0	12.48	540.6	38.1	550.4	37.8	W
12 0	12.85	537.7	36.9	555.2	37.0	W	19 0	12.72	539.2	37.8	552.9	37.5	B
							20 0	13.36	538.1	37.6	553.9	37.3	B
13 0	25 12.93	538.0	36.7	554.6	36.7	W	21 0	12.69	540.3	37.4	551.3	37.1	H
14 0	13.12	537.7	36.5	555.4	36.4	W	22 0	12.75	535.2	37.2	554.1	37.0	H
15 0	12.92	537.4	36.2	556.1	36.1	W	23 0	14.06	533.7	37.1	553.4	37.0	H
16 0	12.89	537.3	35.9	555.8	35.7	W	18 0 0	15.81	533.0	37.0	551.7	37.0	H
17 0	13.02	538.2	35.6	555.2	35.4	W	1 0	17.02	533.6	36.9	555.1	37.0	H
18 0	12.76	537.6	35.3	556.6	35.1	W	2 0	16.97	536.7	36.9	554.5	37.2	B
19 0	12.72	538.3	35.1	558.9	35.0	B	3 0	16.25	539.2	37.1	557.6	37.5	B
20 0	12.82	538.6	34.9	559.1	34.9	B	4 0	14.64	539.4	37.3	557.8	38.0	H
21 0	13.05	537.9	34.8	559.7	34.8	H	5 0	13.72	538.7	37.8	560.7	38.5	H
22 0	12.95	536.7	34.7	559.1	34.7	H	6 0	13.66	539.4	38.2	557.7	38.9	W
23 0	14.37	535.1	34.7	559.7	34.7	H	7 0	13.49	540.6	38.6	556.7	39.1	W
15 0 0	15.14	536.0	34.8	561.7	34.9	B	8 0	13.09	540.4	38.8	555.5	39.1	W
1 0	15.34	535.1	34.8	554.9	35.2	H	9 0	12.87	541.4	38.7	554.1	38.9	W
2 0	15.71	538.1	35.1	555.6	35.6	H	10 0	12.73	539.6	38.5	554.9	38.5	W
3 0	15.61	539.1	35.5	560.5	36.1	B	11 0	12.72	538.4	38.2	553.4	38.2	H
4 0	13.83	535.7	35.8	564.6	36.5	H	12 0	11.48	536.8	38.0	555.0	37.8	H

DECLINATION. Magnet untouched, Feb. 5^d—March 23^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 2^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
18 13 0	25 11-08	Sc. Div.	°	Mic. Div.	°	H	d. h. m.	20 21 0	25 19-44	Sc. Div.	°	Mic. Div.	°	B
		536-2	37-7	555-8	37-5				535-2	38-9	527-7	39-2		
14 0	12-55	536-9	37-3	556-0	37-1	H		22 0	16-72	534-6	38-8	532-9	39-0	W
15 0	12-85	537-9	37-0	555-0	36-6	H		23 0	18-01	528-1	38-7	542-4	38-9	W
16 0	12-25	536-9	36-6	555-0	36-2	H	21	0 0	20-60	520-6	38-6	552-4	39-0	W
17 0	13-02	537-3	36-2	552-8	35-7	H		1 0†	22-15	526-7	38-7	554-3	39-1	W
18 0	12-89	537-8	35-8	548-0	35-2	H		2 0†	20-63	534-8	38-7	554-8	39-3	W
19 0	12-65	536-9	35-4	546-9	34-7	W		3 0	17-70	530-2	38-8	578-2	39-4	W
20 0	12-01	537-1	35-0	546-6	34-3	W		4 0	17-00	541-6	38-9	576-5	39-5	W
21 0	12-42	536-5	34-6	548-3	33-8	B		5 0	15-34	540-4	39-0	578-4	39-7	W
22 0	12-80	534-3	34-2	547-3	33-4	W		6 0†	25 11-37	529-7	39-1	596-6	39-9	H
23 0	14-10	534-1	33-9	542-9	33-2	W		7 0	24 59-41	526-5	39-2	610-0	40-0	H
19 0 0	16-06	535-4	33-7	542-5	33-3	W		8 0	25 14-68	539-1	39-3	588-5	40-0	H
1 0	16-62	537-7	33-6	539-4	33-4	W		9 0	03-23	546-3	39-4	577-7	39-9	H
2 0	16-75	541-8	33-7	540-6	33-8	W		10 0	14-53	537-0	39-3	554-1	39-7	W
3 0	15-83	540-9	34-1	542-1	34-5	W		11 0	08-11	540-6	39-1	548-9	39-6	W
4 0	15-12	542-5	34-7	548-9	35-4	W		12 0	08-82	527-3	39-0	540-5	39-5	W
5 0	14-20	543-0	35-3	549-6	36-1	W								
6 0	13-90	543-1	36-0	546-2	36-6	H		13 0	25 16-79	531-4	38-8	509-4	39-3	D
7 0	13-64	542-0	36-3	547-6	36-9	H		14 0	13-81	534-6	38-7	508-7	39-0	D
8 0	14-08	540-5	36-5	546-1	36-9	H		15 0	12-28	533-3	38-5	533-4	38-8	D
9 0	13-86	540-7	36-6	547-7	37-0	H		16 0	10-68	533-7	38-2	540-4	38-6	D
10 0	13-59	546-0	36-7	544-4	37-1	H		17 0	11-93	527-2	37-9	540-5	38-4	D
11 0	11-21	539-8	36-6	549-0	37-0	W		18 0	13-22	533-9	37-7	543-6	38-2	B
12 0	12-75	540-1	36-6	548-6	36-9	W		19 0	13-47	535-1	37-6	540-8	38-0	B
								20 0	12-62	537-6	37-4	537-9	37-7	B
13 0	25 12-33	547-6	36-5	528-5	36-8	W		21 0	13-52	524-4	37-2	537-0	37-4	H
14 0	11-22	541-3	36-4	529-4	36-8	W		22 0	16-59	518-4	36-9	548-2	37-0	H
15 0	11-59	538-8	36-4	534-2	36-8	W		23 0	16-35	529-5	36-7	549-4	37-0	H
16 0	11-93	537-8	36-3	539-9	36-7	W	22	0 0	18-60	527-3	36-7	552-2	37-0	H
17 0	10-83	539-7	36-2	538-6	36-5	W		1 0	17-20	532-2	36-8	556-6	37-4	W
18 0	11-19	542-8	36-1	536-3	36-4	W		2 0	21-44	533-3	37-0	564-9	37-8	W
19 0	11-35	546-2	36-0	534-3	36-3	B		3 0	19-19	532-5	37-3	573-6	38-2	W
20 0	12-35	543-3	35-9	536-2	36-2	B		4 0	19-29	536-9	37-7	586-3	38-5	W
21 0	12-75	540-5	35-8	534-8	36-0	H		5 0	09-98	527-5	37-9	617-0	38-8	D
22 0	13-49	541-2	35-7	533-3	35-9	H		6 0	16-25	533-7	38-1	605-8	39-0	D
23 0	15-04	542-0	35-6	527-2	35-9	H		7 0	15-92	538-8	38-2	581-8	39-0	H
20 0 0	17-49	541-4	35-7	525-0	36-0	H		8 0	14-33	541-8	38-2	573-0	39-0	H
1 0	21-91	555-1	35-8	525-4	36-5	H		9 0	12-09	541-8	38-2	575-9	39-0	H
2 0	19-39	538-4	36-5	541-8	37-4	B		10 0	06-63	545-4	38-1	576-2	38-9	B
3 0	22-03	544-1	37-2	547-1	38-4	H		11 0	10-36	533-0	38-0	571-5	38-6	B
4 0	16-21	537-8	38-0	555-7	39-3	H		12 0	25 13-63	536-1	37-9	567-4	38-3	B
5 0	15-67	542-1	38-7	563-0	40-0	H								
6 0	15-17	542-0	39-1	560-1	40-3	W	23	13 0†	24 52-87	528-1	38-7	505-4	38-8	W
7 0	14-85	544-8	39-4	555-4	40-4	W		14 0†	25 09-30	528-0	38-6	525-1	38-8	W
8 0	14-24	542-5	39-6	558-7	40-5	W		15 0†	15-72	519-0	38-5	518-6	38-8	W
9 0	14-67	543-9	39-7	560-0	40-5	W		16 0†	17-36	513-4	38-4	476-7	38-7	W
10 0†	12-31	550-0	39-7	565-1	40-4	W		17 0†	18-61	529-7	38-3	458-2	38-6	W
11 0†	07-92	528-3	39-7	578-5	40-5	H		18 0†	11-71	528-7	38-3	484-7	38-6	W
12 0	06-77	540-6	39-7	571-0	40-5	H		19 0†	14-57	533-8	38-1	498-0	38-6	B
								20 0	14-04	529-3	38-0	507-5	38-4	B
13 0	25 08-85	542-9	39-6	564-6	40-4	H		21 0	15-41	532-6	37-9	518-6	38-2	H
14 0	09-42	533-7	39-4	572-3	40-3	H		22 0	15-81	524-5	37-9	526-7	38-1	H
15 0	09-82	536-0	39-3	564-2	40-1	H		23 0	13-88	531-1	37-9	540-7	38-3	H
16 0†	14-40	525-6	39-2	555-8	39-9	H	24	0 0	19-31	528-7	38-0	548-7	38-6	B
17 0†	18-13	534-7	39-1	511-3	39-8	H		1 0	21-93	538-0	38-3	557-5	39-1	H
18 0	08-34	534-5	39-1	514-0	39-8	H		2 0	17-56	539-1	38-7	569-0	39-4	B
19 0	09-84	533-4	39-1	524-8	39-8	W		3 0	18-14	537-4	38-8	576-5	39-4	B
20 0†	18-75	529-2	39-0	527-9	39-5	W		4 0†	06-06	547-1	38-8	617-0	39-4	B

DECLINATION. Magnet untouched, Feb. 5^d—March 23^d.BIFILAR. Observed 2^m after the Declination, $k=0\cdot000140$. BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.† Extra Observations made.
Feb. 21^d 10^h—22^d 10^h. Term-Day Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.			
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				
		d. h. m.	° '	Sc. Div.	° '	Mic. Div.	° '	d. h. m.	° '	Sc. Div.	° '	Mic. Div.	° '	Observer's Initial.			
24	5 0	25	13.46	542.1	38.9	595.3	39.5	H	26	13 0	25 12.72	533.2	38.7	512.8	39.3	W	
	6 0	25	14.15	538.1	39.1	581.6	39.6	W		14 0		11.42	529.4	38.7	533.1	39.3	W
	7 0†	24	48.81	558.2	39.3	587.9	39.7	W		15 0†		18.47	530.2	38.7	506.8	39.1	W
	8 0†	24	50.73	534.3	39.3	575.9	39.6	W		16 0		12.62	534.5	38.6	522.3	38.9	W
	9 0†	25	09.33	515.5	39.1	553.6	39.3	W		17 0		12.38	535.5	38.4	539.0	38.6	W
	10 0†		19.66	521.2	38.9	480.9	39.0	W		18 0		12.28	534.5	38.1	542.6	38.2	W
	11 0†		05.79	516.8	38.6	492.8	38.5	H		19 0		12.72	536.6	37.8	547.6	37.9	B
	12 0†		08.73	524.5	38.2	471.1	37.9	H		20 0		12.38	535.9	37.6	549.3	37.6	B
										21 0		11.52	531.4	37.4	554.7	37.4	H
	13 0†	25	11.66	520.9	37.8	444.6	37.5	H		22 0		15.07	523.5	37.2	553.7	37.2	H
	14 0†		04.61	529.2	37.3	465.8	36.9	H		23 0		15.14	527.1	37.1	551.9	37.4	H
	15 0†		10.20	520.3	36.8	478.8	36.3	H	27	0 0		18.82	533.9	37.3	552.2	38.0	H
	16 0		12.35	533.1	36.3	487.6	35.6	H		1 0		19.71	537.5	37.8	550.5	38.9	H
	17 0		09.03	518.4	35.8	513.7	34.8	H		2 0		22.03	541.2	38.7	560.8	39.8	B
	18 0		16.28	527.9	35.2	471.3	34.1	H		3 0		17.81	535.0	39.4	567.2	40.6	B
	19 2		10.31	532.3	34.6	474.8	33.4	W		4 0		17.02	538.1	40.0	572.3	41.2	B
	20 0		14.18	523.0	34.0	511.1	32.7	W		5 2		14.80	537.1	40.6	574.2	41.6	B
	21 0		17.89	528.7	33.4	518.3	32.1	B		6 0		14.80	539.1	40.9	580.4	41.8	W
	22 0		15.05	521.0	32.8	531.1	31.5	W		7 0		13.49	537.9	41.0	576.6	41.8	W
	23 0		14.99	526.0	32.4	543.4	31.2	W		8 0†		25 01.59	549.2	41.0	575.1	41.5	W
25	0 0		15.05	527.2	32.2	548.8	31.3	W		9 0†		24 52.40	544.3	40.9	574.4	41.4	W
	1 0		20.25	535.8	32.2	555.1	31.9	W		10 0†		25 04.32	526.5	40.7	565.6	41.3	W
	2 0		22.45	534.1	32.5	581.2	32.9	W		11 0		10.25	531.4	40.5	560.8	41.2	H
	3 0†		15.72	547.4	33.1	616.6	33.9	W		12 0		08.95	531.5	40.3	550.3	40.8	H
	4 0†		21.10	532.3	34.1	616.0	35.1	W									
	5 0†		15.64	544.9	35.0	607.9	36.0	B		13 0		25 14.13	529.0	40.0	543.8	40.6	H
	6 0†		05.05	543.5	35.6	609.0	36.5	H		14 0		19.48	524.1	39.8	502.4	40.3	H
	7 0†		06.97	528.3	36.0	613.8	37.0	H		15 0		11.41	534.8	39.6	518.0	40.0	H
	8 0		07.31	538.1	36.4	603.8	37.3	H		16 0		15.18	528.2	39.4	543.8	39.7	H
	9 0		13.02	540.4	36.7	593.3	37.4	H		17 0		13.32	535.3	39.2	543.6	39.5	H
	10 0		12.69	539.9	36.7	566.0	37.4	H		18 0		12.65	535.2	39.0	551.6	39.2	H
	11 0†		13.22	530.4	36.7	527.0	37.2	B		19 0		12.15	540.2	38.8	554.7	38.9	W
	12 0†		14.84	544.6	36.7	450.5	37.3	B		20 0		13.83	537.3	38.7	558.5	38.7	W
										21 0		12.11	535.0	38.6	560.7	38.5	B
	13 0†	25	06.97	528.3	36.8	467.9	37.5	B		22 0		12.09	529.7	38.4	564.3	38.3	W
	14 0†		09.82	520.0	36.9	479.3	37.7	B	28	0 0		13.91	527.3	38.3	558.3	38.3	W
	15 0		14.94	522.7	36.9	483.6	37.7	B		1 0		19.66	533.1	38.3	551.5	38.3	W
	16 0		14.51	528.8	36.9	500.5	37.7	B		2 0		20.92	523.8	38.3	554.6	38.5	W
	17 0		11.07	534.0	36.9	523.9	37.7	B		3 0		23.01	530.6	38.5	561.5	38.8	W
	18 0		08.72	524.8	36.9	527.5	37.6	B		4 0		19.84	530.6	38.7	563.9	39.2	W
	19 0		17.93	534.5	37.0	509.7	37.7	H		5 0		19.35	538.1	39.0	567.6	39.6	W
	20 0		13.19	537.9	37.0	507.0	37.7	H		6 0		16.72	532.9	39.4	585.6	39.9	W
	21 0		12.42	533.6	37.1	525.6	37.8	W		7 0		07.47	539.6	39.4	596.4	40.0	H
	22 0		16.73	539.6	37.2	541.6	38.0	H		8 0		12.95	542.4	39.4	582.0	39.6	H
	23 0		15.81	525.2	37.4	542.9	38.2	H		9 0		13.19	534.8	39.2	580.8	39.1	H
26	0 0		20.56	533.8	37.6	539.1	38.4	H		10 0		12.11	536.5	38.8	567.1	38.5	H
	1 0†		17.46	511.6	37.8	563.8	38.6	H		11 0†		01.95	543.0	38.5	568.9	38.1	H
	2 0		22.89	523.0	38.0	582.3	38.9	H		12 0		09.40	531.2	38.1	566.5	37.7	B
	3 0†		23.54	541.8	38.2	591.3	39.2	H		13 0		11.99	534.4	37.8	565.3	37.3	B
	4 0†		03.34	546.6	38.3	668.4	39.2	H		14 0†		25 10.94	529.4	37.4	561.8	36.8	B
	5 0		17.33	539.9	38.5	618.6	39.3	H		15 0		05.60	533.0	37.0	504.2	36.4	B
	6 0		14.71	536.1	38.7	603.5	39.3	B		16 0		08.82	528.0	36.7	527.2	36.0	B
	7 0		13.58	535.3	38.7	591.1	39.4	B		17 0		11.08	528.8	36.3	542.0	35.5	B
	8 0		14.80	535.6	38.8	578.7	39.4	B		18 0		11.30	530.8	35.9	551.2	35.1	B
	9 0		11.52	537.5	38.7	571.9	39.4	B		19 0		13.07	532.2	35.6	558.1	34.8	B
	10 0		11.64	541.8	38.7	550.8	39.3	B		20 0		13.05	534.7	35.3	558.6	34.4	H
	11 0		09.19	533.3	38.7	554.3	39.2	W				12.98	533.3	35.0	562.9	34.1	H
	12 0†		12.89	525.4	38.7	538.6	39.3	W									

DECLINATION. Magnet untouched, Feb. 5^d—March 23^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			d. h. m.	Se. Div. °	d. h. m.	Se. Div. °	Cor- rected.	Thermo- meter.	
28 21 0	25 13.05	531.8	34.7	566.8	33.9	W	4	5 0	25 14.48	539.5	36.5	555.8	37.0	H
22 0	12.65	528.5	34.4	567.5	33.8	H		6 20	13.99	540.2	36.6	555.9	36.9	B
23 0	13.66	528.1	34.2	561.2	33.8	H		7 0	14.40	542.1	36.6	554.3	36.8	B
1 0 0	16.92	528.1	34.2	558.1	34.0	H		8 0	13.72	541.9	36.5	553.7	36.6	B
1 0	17.80	531.1	34.2	558.8	34.1	H		9 0	13.84	541.8	36.2	554.7	36.3	B
2 0	19.68	534.9	34.2	558.5	34.3	H		10 0	10.83	541.3	35.9	550.3	35.9	B
3 0	19.24	538.0	34.3	562.2	34.5	H		11 0	13.37	540.9	35.6	550.0	35.5	W
4 0	17.15	538.3	34.5	571.0	34.7	H		12 0	11.24	540.6	35.3	540.3	35.1	W
5 0	14.73	537.7	34.7	575.7	35.0	H								
6 0	14.51	538.4	34.8	576.6	35.0	B		13 0	25 12.48	540.8	35.0	534.6	34.8	W
7 0	14.01	538.3	34.8	573.5	35.0	B		14 0	11.66	536.2	34.8	545.1	34.5	W
8 0	12.16	540.4	34.8	572.5	35.0	B		15 0	12.78	537.4	34.6	549.8	34.3	W
9 0	13.32	537.0	34.8	570.9	35.0	B		16 0	12.35	537.9	34.3	551.7	34.0	W
10 0	12.43	538.8	34.7	568.9	35.0	B		17 0	12.51	537.2	34.0	551.4	33.7	W
11 0	12.80	537.3	34.7	568.1	34.9	W		18 0	12.04	538.9	33.7	552.5	33.4	W
12 0	12.63	538.4	34.7	565.6	35.0	W		19 0	11.86	538.1	33.5	555.4	33.2	B
								20 0	11.42	537.0	33.3	559.2	32.9	B
2 13 0	25 12.82	537.3	39.2	560.0	40.0	H		21 0	10.61	535.1	33.0	557.2	32.7	H
14 0	12.28	537.9	39.2	557.6	40.0	H		22 0	11.27	533.5	32.9	555.0	32.7	H
15 0	12.28	537.1	39.2	558.4	40.0	H		23 0	13.12	531.1	32.8	558.7	33.1	B
16 0	12.80	537.6	39.2	552.8	40.0	H	5	0 0	15.54	534.8	33.0	555.9	33.5	H
17 0	10.54	539.2	39.2	547.9	40.0	H		1 0	17.15	536.5	33.5	555.0	34.3	H
18 0	09.59	536.8	39.2	552.0	39.8	H		2 0	17.19	537.7	34.2	555.0	35.2	H
19 0	11.77	537.7	39.1	548.6	39.7	W		3 0	16.63	539.8	34.9	554.7	35.8	B
20 0	12.22	540.2	39.0	548.2	39.7	W		4 0	15.36	538.8	35.6	558.4	36.4	W
21 3	11.46	534.9	39.0	557.0	39.6	B		5 0	14.13	539.1	36.2	560.0	36.9	B
22 0	11.75	531.9	39.0	558.3	39.5	W		6 0	13.69	539.1	36.6	555.7	37.1	W
23 0	13.64	525.9	39.0	557.3	39.4	W		7 0	13.91	539.6	36.7	551.8	37.1	W
3 0 0	15.83	528.3	39.0	550.9	39.3	W		8 0	13.59	540.2	36.7	550.4	36.8	W
1 0	17.19	532.8	38.9	547.0	39.3	W		9 0	13.30	540.6	36.4	549.5	36.4	W
2 0	18.88	537.8	38.9	548.3	39.3	W		10 1	10.70	543.4	36.0	545.8	36.0	W
3 0	17.42	538.6	38.9	553.3	39.3	W		11 0	12.23	541.1	35.7	546.1	35.6	H
4 0	15.69	538.0	38.9	556.3	39.2	W		12 0	13.32	539.1	35.3	548.0	35.2	H
5 0	14.26	541.6	38.8	557.5	39.1	W								
6 0	14.18	536.0	38.8	561.3	39.0	H		13 0	25 13.19	539.7	35.0	548.9	34.8	H
7 0	12.78	539.8	38.7	561.9	38.8	H		14 0	12.82	538.4	34.7	550.4	34.5	H
8 0	14.85	540.2	38.5	560.5	38.7	H		15 0	12.62	538.6	34.4	550.4	34.1	H
9 0	09.35	540.1	38.4	571.7	38.5	H		16 0	12.51	538.3	34.0	548.3	33.8	H
10 0	12.33	536.1	38.2	562.5	38.5	H		17 0	12.38	537.9	33.7	549.4	33.5	H
11 0	12.98	537.9	38.1	558.7	38.3	B		18 0	12.13	537.7	33.4	549.2	33.2	H
12 0	13.27	540.4	37.9	555.1	38.0	B		19 0	11.84	537.7	33.2	549.0	32.9	W
								20 0	11.62	537.8	33.0	547.6	32.7	W
13 0	25 12.90	540.6	37.7	551.2	37.7	B		21 0	10.56	536.1	32.8	553.2	32.6	B
14 0	12.36	538.1	37.5	549.2	37.5	B		22 0	11.30	531.0	32.7	554.0	32.5	W
15 0	11.44	536.3	37.3	550.1	37.2	B		23 0	11.77	529.3	32.7	554.1	32.6	W
16 0	11.15	535.3	37.1	551.7	36.9	B	6	0 0	13.83	530.3	32.7	549.8	33.0	W
17 0	11.71	536.9	36.8	552.8	36.7	B		1 0	16.18	533.2	33.0	547.2	33.5	W
18 0	12.08	537.9	36.6	554.0	36.5	B		2 0	17.42	536.1	33.5	540.6	34.1	W
19 0	12.04	537.8	36.4	555.2	36.3	H		3 0	17.96	536.9	34.0	542.2	34.7	W
20 0	13.39	538.5	36.2	555.0	36.1	H		4 0	16.79	539.7	34.6	546.1	35.3	W
21 0	13.79	534.1	36.0	558.5	35.9	W		5 0	15.11	540.1	34.8	546.8	35.4	W
22 0	12.82	535.0	35.9	558.1	35.9	H		6 0	14.23	540.4	35.0	548.3	35.5	H
23 0	13.99	534.1	35.9	558.6	36.0	H		7 0	14.33	540.8	35.0	544.3	35.5	H
4 0 0	15.51	532.4	35.9	550.7	36.2	H		8 0	13.51	542.1	35.0	545.3	35.5	H
1 0	18.07	537.7	36.0	549.9	36.5	H		9 0	13.19	543.1	34.9	544.6	35.4	H
2 0	16.38	537.1	36.2	548.3	36.7	H		10 0	13.12	543.0	34.8	545.4	35.3	H
3 0	15.89	538.6	36.3	550.3	36.8	H		11 0	13.16	542.3	34.8	546.9	35.2	B
4 0	15.04	538.8	36.5	552.5	37.0	H		12 0	12.92	542.6	34.7	546.4	35.1	B

DECLINATION. Magnet untouched, Feb. 5th—March 23rd.BIFILAR. Observed 2nd after the Declination, $k=0.000140$. BALANCE. Observed 3rd after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		
6 13 0	25 13.07	542.0	34.6	546.8	35.0	B	9 21 0	25 11.46	536.0	40.7	549.3	41.0	W	
14 0	12.92	541.4	34.6	546.8	34.9	B	22 0	12.78	527.3	40.6	551.5	41.0	H	
15 0	12.87	542.2	34.5	546.5	34.9	B	23 2	15.39	524.6	40.5	551.8	41.0	H	
16 0	12.85	541.3	34.5	545.8	34.9	B	10 0 0	17.47	521.0	40.6	552.6	41.2	H	
17 0	12.80	541.4	34.5	545.1	34.9	B	1 0	18.63	527.6	40.8	551.8	41.5	H	
18 0	12.28	541.7	34.5	545.2	34.9	B	2 0	19.37	530.0	41.0	557.6	41.9	H	
19 0	12.01	542.0	34.5	543.3	34.9	H	3 0	17.67	537.4	41.3	563.6	42.2	H	
20 0	11.48	540.4	34.5	545.1	34.9	H	4 0	16.53	540.5	41.7	568.1	42.5	H	
21 0	10.16	536.6	34.6	551.7	34.9	W	5 0	15.34	543.5	42.0	569.1	42.8	W	
22 0	09.96	529.8	34.7	550.1	35.2	H	6 0	14.04	538.7	42.3	567.3	43.0	B	
23 0	12.18	529.5	34.8	546.0	35.5	H	7 0	13.12	540.4	42.4	564.6	43.1	B	
7 0 0	16.32	529.1	35.0	539.3	35.8	H	8 0	09.69	538.9	42.5	565.2	43.2	B	
1 0	20.85	534.4	35.3	529.4	36.2	H	9 0	11.98	539.3	42.5	561.4	43.0	B	
2 0	20.00	531.8	35.9	535.5	36.7	H	10 0	09.87	538.8	42.4	557.0	42.7	B	
3 0	20.58	540.0	36.4	539.3	37.3	H	11 0	12.06	539.6	42.1	553.6	42.3	W	
4 0	16.73	544.5	36.9	544.0	37.7	H	12 0	10.97	542.6	41.8	548.5	41.8	W	
5 0	15.54	545.3	37.3	548.5	38.1	H								
6 0	15.41	545.0	37.6	547.5	38.3	B	13 0	25 11.96	537.7	41.5	552.2	41.3	W	
7 0	14.84	544.3	37.7	551.5	38.5	B	14 0	13.05	536.8	41.1	552.6	40.8	W	
8 0	13.64	545.0	37.8	560.3	38.5	B	15 0	13.12	536.4	40.7	555.0	40.3	W	
9 0	12.11	538.7	37.8	570.5	38.5	B	16 0	14.06	537.8	40.3	549.5	39.6	W	
10 0+	09.49	540.6	37.8	571.5	38.5	B	17 0	12.09	538.0	39.8	551.4	39.0	W	
11 0	10.30	539.6	37.8	560.4	38.4	W	18 0	11.77	536.2	39.3	554.4	38.4	W	
12 0	13.61	540.2	37.8	558.4	38.4	W	19 0	11.42	536.2	38.7	555.0	37.8	B	
							20 0	11.27	534.9	38.2	553.1	37.3	B	
13 0	25 14.35	543.7	37.8	552.2	38.4	W	21 0	10.70	531.1	37.8	554.6	37.0	H	
14 0	13.37	538.9	37.7	553.5	38.3	W	22 0	11.77	528.7	37.4	558.9	36.8	H	
15 0	12.85	538.3	37.7	552.3	38.2	W	23 0	13.07	526.1	37.3	557.7	36.8	H	
16 0	12.38	539.3	37.6	550.8	38.1	W	11 0 0	15.52	528.6	37.4	560.4	37.3	B	
17 0	11.37	541.0	37.6	547.7	38.0	W	1 0	18.35	534.3	37.5	553.2	37.7	H	
18 0	11.86	539.6	37.5	547.1	38.0	W	2 0	19.21	537.3	37.7	554.1	38.1	B	
19 0	12.36	538.7	37.5	546.3	38.0	B	3 0	19.41	534.6	38.0	552.0	38.6	H	
20 0	12.38	538.8	37.5	545.6	38.0	B	4 0	18.14	540.0	38.5	559.5	39.1	B	
21 0	11.10	535.5	37.5	543.5	38.0	H	5 0	15.05	537.1	38.9	569.1	39.5	H	
22 0	12.95	532.0	37.5	546.2	38.2	H	6 0	13.86	538.7	39.2	567.6	39.7	W	
23 0	13.86	525.2	37.7	547.7	38.4	H	7 0+	07.57	536.2	39.3	573.9	39.6	W	
8 0 5	17.91	524.5	38.0	545.5	38.7	H	8 0	11.21	541.4	39.3	565.8	39.5	W	
1 0	19.88	529.5	38.4	542.1	39.3	H	9 0	12.60	538.7	39.0	559.1	39.1	W	
2 0	20.16	532.0	38.9	546.1	39.9	B	10 0+	06.07	535.7	38.7	556.1	38.6	W	
3 0	18.48	538.6	39.4	555.1	40.5	H	11 0	11.10	536.4	38.3	551.9	38.3	H	
4 0	16.97	540.8	40.0	564.8	41.0	H	12 0	12.53	539.0	38.0	548.6	37.8	H	
5 0	13.39	538.1	40.4	573.5	41.5	H								
6 0	13.19	540.3	40.8	566.9	41.7	W	13 0	25 13.91	537.7	37.7	547.1	37.3	H	
7 0	13.74	540.7	41.0	558.3	41.8	W	14 0	14.41	538.7	37.3	543.4	36.9	H	
8 0	12.93	542.5	41.0	557.2	41.8	W	15 0	12.92	536.3	36.9	551.2	36.6	H	
9 0	12.76	539.2	41.0	558.5	41.7	W	16 0	12.75	537.2	36.6	556.7	36.2	H	
10 0	13.37	542.3	41.0	554.2	41.6	W	17 0	12.78	537.8	36.3	557.8	35.9	H	
11 0	13.52	543.2	41.0	551.9	41.5	H	18 0	12.55	539.4	35.9	557.5	35.5	H	
12 0	13.22	542.4	40.9	553.8	41.6	H	19 0	12.11	538.9	35.6	555.4	35.1	W	
							20 0	11.69	538.6	35.3	557.7	34.6	W	
9 13 0	25 12.25	539.9	41.1	550.5	41.4	B	21 0	10.77	536.0	35.0	562.6	34.4	B	
14 0+	14.75	536.6	40.9	552.6	41.3	B	22 0	11.17	532.2	34.7	558.4	34.3	W	
15 0+	12.55	533.6	40.9	540.2	41.4	B	23 0	12.11	530.0	34.7	555.5	34.5	W	
16 0+	14.53	538.3	40.9	513.6	41.5	B	12 0 0	13.66	532.4	34.8	551.7	35.0	W	
17 0	08.99	534.8	40.9	538.0	41.5	B	1 0	16.68	533.2	35.2	552.0	35.8	W	
18 0	09.47	539.5	40.8	542.0	41.3	B	2 0	17.98	534.8	35.8	551.8	36.8	W	
19 0	11.27	538.1	40.8	545.1	41.2	H	3 0	18.25	539.6	36.7	558.4	37.7	W	
20 0	11.74	535.4	40.7	545.8	41.0	H	4 0	17.15	542.1	37.5	564.1	38.4	W	

DECLINATION. Magnet untouched, Feb. 5^d—March 23^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declination Obs.				BIFLAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declination Obs.		BIFLAR.		BALANCE.							
d.	h.	m.	°	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		d.	h.	m.	°	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				
12	5	0	25	15.11	541.5	38.3	563.2	39.0	W	14	13	0	25	11.49	535.2	32.8	531.6	32.5	H	
	6	0		13.81	539.9	38.7	560.4	39.4	H		14	0		10.16	530.4	32.4	537.5	32.1	II	
	7	0		13.69	541.2	38.9	554.5	39.3	H		15	0		13.76	530.6	32.1	542.0	31.7	H	
	8	0		13.39	542.3	38.8	550.6	39.1	H		16	0		16.68	532.4	31.7	529.6	31.2	H	
	9	0		13.22	541.0	38.4	548.4	38.6	H		17	0		10.97	532.4	31.4	527.7	30.8	II	
	10	0		12.85	540.5	38.0	544.0	38.0	H		18	0		13.22	532.7	31.1	528.1	30.5	II	
	11	0		12.46	541.2	37.6	542.3	37.2	H		19	0		12.02	533.5	30.7	535.1	30.2	W	
	12	0		12.38	540.2	37.1	542.2	36.5	B		20	0		11.44	533.4	30.4	536.3	29.9		
											21	6		11.12	527.3	30.2	541.5	29.7	B	
	13	0	25	12.06	539.8	36.5	541.9	35.8	B		22	0		14.06	523.3	30.0	540.8	29.6	W	
	14	0		12.11	537.7	35.9	544.2	35.1	B		23	0		14.57	527.4	29.9	540.0	29.8	W	
	15	0		11.21	540.4	35.4	538.6	34.4	B	15	0	0		18.16	527.3	30.1	536.9	30.6	W	
	16	0		11.44	538.6	34.8	543.0	33.8	B		1	0		20.40	533.5	30.9	535.5	31.8	W	
	17	0		12.09	540.3	34.3	542.2	33.2	B		2	0		19.81	531.0	31.9	537.0	33.0	W	
	18	0		11.86	540.8	33.7	543.6	32.7	B		3	2		19.62	541.7	32.9	542.2	34.0	W	
	19	0		12.15	538.9	33.2	546.4	32.3	H		4	0		17.34	543.0	33.8	545.6	34.7	W	
	20	0		12.65	535.9	32.8	554.4	31.9	H		5	0		16.90	546.8	34.8	553.9	35.8	W	
	21	0		15.04	528.1	32.5	558.3	31.6	W		6	0		05.02	540.4	35.6	577.9	36.3	H	
	22	0		15.52	530.1	32.2	551.5	31.5	H		7	0		10.81	540.3	35.9	592.8	36.5		
	23	0		16.48	526.2	32.1	547.2	31.6	H		8	0		12.04	542.9	35.9	583.1	36.4	H	
13	0			19.71	526.1	32.1	552.8	32.1	H		9	0		12.80	531.6	35.7	581.2	35.9	H	
	1	0		22.74	526.7	32.4	551.3	32.8	W		10	0		12.46	544.8	35.4	562.8	35.4	H	
	2	0		23.45	531.1	33.0	552.2	33.7	H		11	0		15.07	548.4	34.9	525.6	34.9	B	
	3	0		21.98	534.7	33.8	554.0	35.0	H		12	0		11.91	539.5	34.3	527.6	34.3	H	
	4	0		18.85	538.5	34.8	569.8	36.1	H											
	5	0		15.79	540.5	35.8	573.7	37.0	H	16	13	0	25	04.71	527.7	32.7	482.0	32.7	H	
	6	0		13.36	543.5	36.7	574.7	37.7	B		14	0		12.93	531.7	32.6	487.7	32.6	H	
	7	0		13.81	539.6	37.4	568.2	38.0	B		15	0		16.05	534.2	32.4	503.3	32.5	H	
	8	0		13.23	542.8	37.6	560.7	38.0	B		16	0		08.21	525.3	32.2	515.3	32.3	H	
	9	0		11.68	539.3	37.5	557.9	37.7	B		17	0		15.88	524.4	32.0	513.1	32.0	H	
	10	0		12.63	542.3	37.3	550.7	37.3	B		18	0		14.50	532.5	31.8	508.5	31.7	H	
	11	0		13.32	542.0	36.8	546.9	36.8	W		19	0		11.12	533.1	31.6	527.7	31.4	W	
	12	0		12.92	541.1	36.4	543.9	36.3	W		20	0		11.91	533.1	31.3	536.6	31.1	W	
											21	0		13.05	530.4	31.1	544.7	31.1	B	
	13	0	25	12.60	541.5	35.9	543.4	35.7	W		22	0		14.08	523.9	31.0	546.5	31.1	W	
	14	0		12.11	541.6	35.5	542.6	35.2	W		23	0		14.92	528.5	31.2	543.5	31.7	W	
	15	0		11.19	541.4	35.0	540.6	34.7	W	17	0	0		17.46	526.0	31.7	510.0	32.4	W	
	16	0		13.25	545.2	34.6	536.9	34.3	W		1	0		20.30	530.9	32.3	541.2	33.3	W	
	17	0		08.45	543.6	34.3	535.3	33.8	W		2	0		19.51	533.1	33.0	541.5	33.9	B	
	18	0		11.14	543.6	33.9	536.6	33.4	W		3	0		18.20	537.8	33.7	549.7	34.8	W	
	19	0		09.93	539.2	33.6	541.5	33.0	B		4	0		15.52	535.5	34.6	558.8	35.7	W	
	20	0	†	11.21	530.0	33.2	545.4	32.5	B		5	0		12.78	544.8	35.2	569.6	36.2	W	
	21	0	†	19.31	520.5	32.8	543.4	32.1	H		6	0		13.12	542.2	35.7	563.8	36.7	H	
	22	5	†	20.94	532.9	32.4	532.8	31.9	B		7	0		13.34	540.7	36.0	563.9	36.9	H	
	23	0	†	13.52	526.3	32.2	538.5	31.8	H		8	0		12.72	541.7	36.1	559.4	36.9	H	
	14	0	0	18.38	527.6	32.0	534.3	31.8	H		9	0		10.90	547.0	36.0	551.7	36.8	H	
	1	0		18.60	532.7	32.0	535.5	32.2	H		10	0		13.36	539.0	36.0	545.1	36.7	H	
	2	0		21.19	535.1	32.3	541.1	32.8	H		11	0		07.13	543.7	35.9	539.4	36.6	B	
	3	0		21.79	535.7	32.9	552.3	33.6	H		12	0		11.79	541.3	35.8	521.9	36.4	B	
	4	0		20.18	543.1	33.4	558.2	34.4	H											
	5	0		15.81	539.2	34.0	568.2	35.0	H		13	0		25	12.31	534.2	35.6	525.8	36.1	B
	6	0		15.72	541.3	34.6	571.7	35.1	W		14	0			13.69	536.0	35.4	533.3	35.8	B
	7	0		04.55	528.8	34.6	604.3	34.9	W		15	0			12.72	535.2	35.2	538.3	35.5	B
	8	0		09.93	534.0	34.4	593.1	34.7	W		16	0			12.15	535.1	35.0	538.6	35.2	B
	9	0		07.04	532.3	34.1	581.5	34.3	W		17	0			12.18	535.5	34.8	540.3	35.0	B
	10	0		02.08	542.8	33.8	556.7	33.8	W		18	0			12.25	536.2	34.6	541.0	34.8	B
	11	0		10.67	539.8	33.5	544.5	33.4	H		19	0			11.95	533.1	34.4	546.2	34.6	H
	12	0		06.66	533.1	33.2	539.2	33.0	H		20	0			10.47	536.8	34.2	546.5	34.4	H

DECLINATION. Magnet untouched. Feb. 5^d—March 23^d.

DECLINATION. Magne

BALANCE. Observed 3^m after the declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
17 21 0	25 11-49	532.1	34.0	550.8	34.3	W	20 5 0	25 17-78	562.6	36.5	575.6	37.7	W
22 0	12-56	530.2	34.0	550.9	34.2	H	6 0	06-46	545.5	37.4	783.5	38.5	D
23 0	15-25	526.3	34.2	548.3	34.5	H	7 0	15-51	533.7	38.2	699.0	39.3	D
18 0 0	16-99	530.7	34.4	543.0	35.2	H	8 0	14-55	535.1	38.7	616.2	39.6	D
1 0	19-10	530.6	35.0	536.4	35.8	H	9 0	13-14	536.7	38.8	586.7	39.9	H
2 0	19-62	535.2	35.6	536.9	36.6	H	10 0	13-72	536.6	38.8	569.7	39.6	H
3 0	19-10	538.9	36.4	542.5	37.7	H	11 0	13-29	536.2	38.5	566.6	39.1	B
4 0	17-33	538.8	37.5	551.4	38.8	H	12 0	12-53	536.8	38.1	564.9	38.5	B
5 0	12-31	534.2	38.7	580.4	40.2	H							
6 0	12-80	538.4	39.8	587.8	41.1	B	13 0	25 10-43	535.5	37.7	562.8	37.9	B
7 0	13-39	543.0	40.6	572.7	41.6	B	14 0	10-56	535.3	37.2	556.2	37.2	B
8 0	14-06	538.6	41.0	574.3	41.9	B	15 0†	18-37	532.2	36.7	538.3	36.6	B
9 0	11-71	542.7	41.2	570.7	41.9	B	16 0†	14-68	536.9	36.2	471.2	36.0	B
10 0†	03-37	558.2	41.1	534.3	41.7	B	17 0†	09-24	533.3	35.8	517.5	35.5	B
11 0	06-19	541.9	40.9	518.4	41.4	W	18 0	10-67	532.8	35.4	539.2	34.9	B
12 0	13-23	534.6	40.7	529.1	41.2	W	19 0	11-71	536.3	34.9	546.3	34.3	H
							20 0	10-68	533.9	34.4	552.3	33.8	H
13 0	25 13-76	538.0	40.3	535.5	40.7	W	21 0	10-90	528.2	34.1	560.0	33.7	W
14 0	13-03	537.7	39.9	537.6	40.0	W	22 0	11-08	526.8	33.9	557.8	33.7	H
15 0	11-48	535.2	39.4	541.2	39.3	W	23 0	14-08	520.0	33.8	563.7	33.9	H
16 0	13-99	536.5	38.9	534.9	38.6	W	21 0 0	16-03	527.4	34.0	552.4	34.4	H
17 0	11-08	536.7	38.4	536.9	38.0	W	1 0	19-08	534.1	34.3	546.1	34.9	H
18 0	10-21	535.7	37.9	540.2	37.5	W	2 0	19-68	534.2	34.6	550.2	35.4	H
19 0	10-65	534.0	37.5	542.2	36.8	B	3 0	18-41	538.3	35.0	553.3	35.8	H
20 0	10-56	536.9	37.0	543.7	36.3	B	4 0	16-53	537.9	35.4	557.7	36.2	H
21 0	10-23	528.0	36.6	550.5	36.0	H	5 0	14-67	539.3	35.7	559.8	36.5	H
22 0	11-10	527.6	36.3	552.4	35.9	H	6 0	13-12	538.8	36.0	559.1	36.7	B
23 0	13-91	524.7	36.1	546.4	36.0	H	7 0	12-87	540.5	36.3	553.9	36.9	H
19 0 0	16-59	528.0	36.1	545.9	36.3	B	8 0	12-76	547.0	36.6	556.0	37.3	H
1 0	18-88	530.8	36.2	544.8	36.5	H	9 0†	09-26	532.2	36.9	565.6	37.7	H
2 0	19-44	533.7	36.2	551.9	36.7	H	10 0†	13-96	547.8	37.2	505.9	38.4	H
3 0	18-81	542.0	36.4	554.0	37.0	H	11 0	08-36	530.7	37.7	482.5	38.9	W
4 0	16-57	542.7	36.8	555.5	37.4	W	12 0	10-78	531.6	38.3	495.9	39.4	W
5 0	15-54	548.4	37.1	561.9	37.6	H							
6 0	12-23	537.6	37.3	581.3	37.6	W	13 0†	25 12-29	537.0	38.7	500.3	39.8	W
7 0	03-41	530.0	37.1	609.2	37.3	W	14 0	15-49	533.8	39.1	494.2	40.4	W
8 0	09-79	526.5	36.9	607.8	37.0	W	15 0	09-42	529.8	39.5	505.4	40.7	W
9 0†	16-28	528.1	36.7	542.8	36.7	W	16 0†	10-92	519.5	39.9	497.1	41.0	W
10 0	06-51	527.7	36.4	570.1	36.5	B	17 0	06-90	536.4	40.2	492.5	41.3	W
11 0	21-46	536.4	36.2	533.2	36.3	B	18 0	07-27	541.4	40.6	506.4	41.6	W
12 0	09-69	530.0	35.9	506.3	36.0	B	19 0	12-45	534.9	40.9	518.6	41.9	B
							20 0	14-03	533.1	41.2	525.4	42.2	B
13 0	25 10-60	527.6	35.6	481.1	35.6	D	21 0	11-07	532.2	41.4	532.5	42.4	H
14 0	03-21	535.5	35.3	467.5	35.2	D	22 0	12-62	528.4	41.7	537.8	42.6	H
15 0	13-77	515.0	34.9	468.7	34.8	D	23 0	13-49	523.0	41.9	540.7	43.0	H
16 0	07-34	535.5	34.6	447.4	34.5	D	22 0 0	17-13	526.8	42.4	529.5	43.5	B
17 0	04-95	534.4	34.2	469.1	34.0	D	1 0	19-17	525.9	42.8	526.9	44.0	H
18 0	06-91	529.4	33.8	474.9	33.6	H	2 0	21-39	532.1	43.3	529.7	44.7	H
19 0	12-26	537.4	33.4	485.6	33.0	H	3 0	19-71	533.6	44.0	547.5	45.4	B
20 0	09-46	533.9	33.1	503.1	32.5	H	4 0	16-77	537.7	44.8	560.0	46.1	H
21 0	09-39	532.0	32.7	519.9	32.1	W	5 0	14-35	541.3	45.4	568.3	46.6	B
22 0	11-84	526.4	32.4	523.4	32.1	W	6 0	12-38	539.1	45.8	562.1	46.9	W
23 0	15-47	514.9	32.3	534.4	32.3	W	7 0	11-66	538.4	46.2	557.4	47.2	W
20 0 0	17-94	524.6	32.3	538.1	32.8	W	8 0	12-01	539.8	46.4	551.1	47.3	W
1 0	21-23	525.9	32.8	532.6	33.6	H	9 0	12-08	539.7	46.6	550.0	47.3	W
2 0	22-33	535.3	33.5	531.4	34.7	B	10 0	10-92	541.2	46.6	549.2	47.4	W
3 0	20-36	545.0	34.4	531.4	35.7	B	11 0	11-35	538.8	46.7	545.3	47.4	H
4 0	18-41	547.5	35.4	545.9	36.7	W	12 0	12-56	539.5	46.8	544.7	47.5	H

DECLINATION. Magnet untouched, Feb. 5^d—March 23^d.BIIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.† Extra Observations made.
March 19^d 10^h—20^d 10^h. Term-Day Observations made.

Göttingen Mean Time of Declina- tion Obs.		DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.				
Cor- rected.	Thermo- meter.		Cor- rected.	Thermo- meter.	Sc. Div.	°	Mic. Div.	°	d.	h.	m.	Sc. Div.	°	Mic. Div.	°			
23	13	0†	25	08-06	538-8	50.1	507-0	49.8	B	25	21	0	25	11-14	526-6	42-3	B	
14	0†			17-53	535-3	49.7	406-5	49.4	B		22	0	10-94	526-8	42-1	555-2	42-0	
15	0†			04-37	532-2	49.3	407-0	49.0	B		23	0	11-57	519-3	42-1	557-6	42-2	
16	0†			04-01	529-6	48.8	461-9	48.5	B	26	0	0	16-93	530-8	42-3	548-3	42-7	
17	0†			05-65	508-6	48.4	461-8	47.9	B		1	0	20-30	534-6	42-6	540-2	43-4	
18	0†			13-39	537-3	47.9	475-6	47.3	B		2	0	23-78	532-5	43-3	554-6	44-3	
19	0			09-30	537-2	47.4	521-8	47.7	H		3	0	21-41	539-7	44-0	570-1	45-2	
20	0			09-91	539-0	47.0	523-3	46.1	H		4	0	21-84	538-3	44-9	582-8	46-0	
21	0			11-08	526-1	46.6	540-4	45.7	W		5	0†	12-67	542-1	45-7	594-4	46-7	
22	0			13-10	521-7	46.2	544-2	45.5	H		6	0†	08-11	536-7	46-2	626-0	46-8	
23	0			16-62	519-5	45.9	540-3	45.6	H		7	0	05-06	544-9	46-3	618-5	46-9	
24	0	0		18-30	525-6	45.8	533-0	46.0	H		8	0†	04-19	553-2	46-2	549-8	46-8	
1	0			22-57	525-7	46.2	536-1	46-6	W		9	0	12-02	534-9	46-2	568-5	46-8	
2	0			23-54	540-7	46.6	541-4	47-3	H		10	0†	16-93	527-9	46-0	539-2	46-7	
3	0			24-69	548-5	47.0	558-7	48-0	H		11	0†	08-82	540-7	46-0	496-8	46-7	
4	0			24-32	538-8	47.6	589-0	48-5	H		12	0†	09-06	544-1	46-0	502-0	46-7	
5	2			23-01	544-9	48-1	616-3	49-0	H									
6	0†			15-51	540-4	48-6	644-8	49-3	B		13	0†	25	09-84	535-1	45-9	499-3	46-6
7	0†			08-58	548-1	48-9	631-3	49-4	B		14	0†	11-64	516-3	45-9	507-4	46-4	
8	0†			07-17	532-6	49-0	611-2	49-5	B		15	0†	20-87	513-0	45-8	447-7	46-3	
9	0			07-54	532-5	49-0	602-6	49-4	B		16	0†	09-22	537-5	45-7	477-8	46-2	
10	0			10-83	533-5	48-8	582-0	49-0	B		17	0†	08-01	530-0	45-6	513-0	46-0	
11	2†			09-33	535-8	48-4	558-4	48-3	W		18	0	14-92	524-1	45-4	532-9	45-7	
12	0†			16-25	536-7	48-0	544-2	47-7	W		19	0	11-62	536-3	45-1	534-3	45-4	
											20	0	09-91	535-7	45-0	545-6	45-3	
13	0†	25	05-96	543-5	47-6	439-8	47-1	W		21	0	08-72	533-6	44-9	550-2	45-2		
14	0†	24	53-72	512-6	47-1	430-0	46-5	W		22	0	08-55	528-6	44-8	553-2	45-3		
15	0†	25	04-14	505-8	46-6	418-2	45-9	W		23	0	11-21	528-5	45-1	556-8	45-7		
16	0†		00-71	533-8	46-0	352-7	45-3	W	27	0	0	14-15	529-4	45-4	550-0	46-3		
17	0†		05-11	511-3	45-4	421-2	44-7	W		1	0	18-81	532-3	45-9	544-9	47-0		
18	0		10-03	532-2	44-9	483-7	44-0	W		2	0	19-91	522-5	46-7	548-2	47-7		
19	0		09-98	529-4	44-3	521-9	43-2	B		3	0	17-34	539-1	47-3	558-9	48-5		
20	0		10-53	517-2	43-6	543-9	42-4	B		4	0	17-54	547-8	47-8	562-9	48-7		
21	0		10-90	520-9	43-0	555-4	41-9	H		5	0†	15-18	518-8	48-0	600-4	49-0		
22	0		12-04	518-4	42-6	553-7	41-7	H		6	0	13-05	539-6	48-3	605-5	49-0		
23	0		15-04	511-0	42-2	550-7	41-7	H		7	0	12-58	542-3	48-4	611-5	49-0		
25	0	0	16-45	517-4	42-2	548-6	42-2	H		8	0†	06-03	540-3	48-4	603-5	49-0		
1	0		19-51	530-8	42-4	548-6	42-7	H		9	0†	09-29	527-4	48-5	531-1	49-3		
2	0		20-35	533-6	42-7	560-1	43-3	H		10	0	08-79	533-3	48-7	546-6	49-5		
3	0		18-16	542-3	43-2	573-4	44-0	H		11	0	09-67	530-8	48-7	537-1	49-5		
4	0		17-40	540-8	43-8	577-1	44-5	H		12	0	09-13	534-7	48-7	532-7	49-4		
5	0		15-12	533-1	44-2	601-9	45-0	H										
6	0†		10-30	542-1	44-6	615-6	45-2	W		13	0	25	12-28	534-7	48-7	537-7	49-3	
7	0		13-66	541-5	44-8	583-5	45-3	W		14	0	14-80	534-2	48-7	532-5	49-1		
8	0		12-55	539-1	44-8	570-0	45-3	W		15	0	12-69	528-0	48-6	535-9	49-0		
9	0		11-77	540-3	44-8	565-3	45-2	W		16	0	12-56	538-7	48-5	531-4	48-9		
10	0		10-43	541-2	44-7	561-5	45-0	W		17	0	10-20	537-2	48-4	537-9	48-7		
11	0		09-80	536-3	44-6	556-5	45-0	H		18	0	10-75	538-6	48-2	535-9	48-4		
12	0		11-30	543-0	44-4	543-7	44-8	H		19	0	10-47	537-2	48-0	539-3	48-0		
										20	0	09-30	535-2	47-8	544-5	47-8		
13	0†	25	04-89	550-9	44-3	498-9	44-7	H		21	0	09-37	532-9	47-6	541-9	47-6		
14	0†		04-86	532-4	44-1	508-1	44-5	H		22	0	09-89	528-8	47-5	539-4	47-6		
15	0		11-91	527-1	44-0	504-6	44-2	H		23	0	11-00	525-1	47-4	532-9	47-7		
16	0		08-29	531-2	43-7	517-6	44-0	H	28	0	0	15-99	530-6	47-7	524-8	48-0		
17	0		10-58	532-0	43-5	534-9	43-6	H		1	0	18-52	533-1	47-8	523-0	48-5		
18	0		12-29	534-6	43-2	539-9	43-2	H		2	0	18-16	536-4	48-1	535-8	49-0		
19	0		08-83	528-6	42-9	548-9	42-7	W		3	0	17-60	535-6	48-4	543-7	49-4		
20	0		10-67	527-7	42-6	557-4	42-3	W		4	0	16-05	540-0	48-9	550-2	49-7		

DECLINATION. Torsion removed, March 23^d 23^h, $-18\frac{1}{2}^{\circ}$. Effect of $+10^{\circ}$ of torsion $= -0'84$.

BIFILAR. Observed 2^m after the Declination, $k=0\cdot000140$. **BALANCE.** Observed 3^m after the Declination, $k=0\cdot000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	
28 5 0	25 14-20	544-7	49-4	558-9	50-0	B	31 13 0	25 10-13	540-2	48-3	535-2	48-3	H
6 0	12-51	542-3	49-7	565-0	50-2	W	14 0	09-98	539-0	47-8	540-0	47-7	H
7 0	12-11	542-2	49-8	562-2	50-2	W	15 0	09-24	537-4	47-3	542-1	47-1	H
8 0	12-11	540-9	49-8	556-7	50-0	W	16 0	07-74	535-2	46-8	545-6	46-5	H
9 1†	25 08-68	540-4	49-6	551-4	49-5	W	17 0	08-82	535-6	46-3	544-5	45-8	H
10 0†	24 56-27	541-6	49-2	547-5	49-1	W	18 0	08-63	535-4	45-8	546-2	45-2	H
11 0†	25 04-91	525-6	48-8	545-4	48-7	H	19 0	10-43	533-9	45-3	546-7	44-6	W
12 0	10-13	533-7	48-4	539-7	48-5	H	20 0	08-39	532-4	44-8	547-0	44-1	W
							21 4	07-67	529-3	44-4	553-7	43-7	B
13 0	25 11-71	535-7	48-0	542-9	47-9	H	22 0	08-53	524-4	44-0	554-3	43-6	W
14 0	11-21	533-9	47-7	547-4	47-3	H	23 0	11-07	522-6	44-0	556-1	44-0	W
15 0	11-64	533-9	47-3	548-9	46-7	H	1 0	14-04	522-3	44-1	548-1	44-5	W
16 0	10-16	534-6	46-9	549-3	46-2	H	1 0	17-26	526-8	44-6	544-5	45-1	W
17 0	09-96	532-2	46-4	551-9	45-7	H	2 0	17-98	530-9	45-1	545-1	45-9	W
18 0	10-53	533-9	46-0	549-1	45-3	H	3 0	17-29	533-4	45-8	550-2	46-6	W
19 0	09-12	532-9	45-7	547-4	45-0	W	4 0	15-61	538-5	46-5	546-7	47-3	W
20 0	10-94	533-1	45-3	547-0	44-6	W	5 0	13-90	542-0	47-1	549-1	47-9	W
21 0	13-14	526-3	45-0	550-1	44-4	W	6 0	12-42	545-5	47-7	550-2	48-6	H
22 0	14-71	522-9	44-8	552-9	44-5	W	7 0	12-02	543-4	48-3	550-0	49-1	H
23 0	15-98	521-4	44-8	555-0	44-8	W	8 0	11-98	546-3	48-7	549-3	49-2	H
29 0 0	13-36	528-3	44-9	548-0	45-3	W	9 0	07-64	541-6	48-7	551-0	49-2	H
1 0	18-23	537-9	45-4	535-3	46-0	W	10 0	10-50	543-3	48-7	544-0	49-1	H
2 0	21-41	533-9	46-0	536-6	46-7	W	11 0	12-18	542-1	48-6	540-5	48-8	B
3 3	21-14	542-8	46-7	548-7	47-4	W	12 0	12-08	540-8	48-4	542-7	48-5	B
4 0	18-60	535-9	47-4	565-5	48-2	W							
5 0	16-79	543-8	48-0	567-9	48-8	W	13 0	25 11-41	540-7	48-1	539-3	48-0	B
6 0	12-89	541-1	48-6	575-9	49-2	W	14 0	10-87	540-0	47-7	535-3	47-6	B
7 0	07-37	548-8	49-0	582-7	49-4	H	15 0	09-56	536-2	47-3	538-7	47-1	B
8 0	10-33	541-9	49-1	577-4	49-5	H	16 0	11-91	539-7	46-9	528-6	46-5	B
9 0	09-30	543-9	49-0	575-2	49-3	H	17 0	10-01	536-8	46-4	528-9	45-9	B
10 0†	05-69	539-3	48-9	541-1	49-0	H	18 0	08-32	537-9	45-9	532-9	45-3	B
11 0†	03-90	530-7	48-6	518-7	48-7	B	19 0	08-52	536-6	45-4	538-3	44-7	H
12 0	07-85	533-7	48-3	506-8	48-4	B	20 0	08-56	536-7	44-9	543-5	44-2	H
							21 0	08-01	532-6	44-5	547-9	43-8	W
30 13 0	25 11-35	538-9	43-0	539-9	43-2	W	22 0	08-41	528-4	44-1	545-8	43-6	H
14 0	10-95	536-9	42-9	547-6	43-1	W	23 0	11-98	526-0	43-9	540-0	43-7	H
15 0	11-12	537-1	42-8	550-8	43-0	W	2 0	15-29	525-2	43-8	535-4	44-0	H
16 0	09-74	536-1	42-7	554-3	42-8	W	1 0	18-55	527-6	44-1	522-0	44-6	H
17 0	09-82	534-7	42-6	554-8	42-5	W	2 0	20-99	531-4	44-8	529-1	45-7	H
18 0	10-01	536-6	42-4	554-1	42-2	W	3 0	21-00	537-0	45-9	539-4	47-2	H
19 0	09-66	534-8	42-1	558-5	41-9	B	4 0	18-03	539-3	47-3	542-5	48-7	H
20 0	09-02	533-1	41-9	560-8	41-8	B	5 0	15-34	541-5	48-6	544-2	50-0	H
21 0	09-44	531-0	41-8	560-1	41-7	H	6 0	13-49	544-2	49-8	540-8	50-9	B
22 0	10-00	527-0	41-8	562-6	42-0	H	7 0	12-15	545-5	50-6	551-5	51-5	B
23 0	11-95	524-2	41-9	561-0	42-5	H	8 0	08-18	545-9	50-9	555-8	51-5	B
31 0 0	14-60	525-3	42-4	545-5	43-4	H	9 0	09-35	543-9	50-8	556-3	51-3	B
1 0	17-93	528-7	43-2	541-9	44-4	H	10 0	11-00	545-8	50-7	549-6	51-0	B
2 0	19-04	532-7	44-2	538-1	45-5	H	11 0	11-07	545-7	50-4	541-7	50-5	W
3 0	18-84	537-0	45-4	542-3	46-7	B	12 0	09-74	545-1	50-0	536-1	49-9	W
4 0	16-48	539-0	46-6	546-9	48-2	H							
5 0	13-70	539-6	47-9	551-4	49-4	B	13 0	25 09-76	541-8	49-5	532-9	49-3	W
6 0	12-46	542-8	49-1	554-7	50-2	W	14 0	10-36	542-3	48-8	535-7	48-5	W
7 0	12-28	543-5	49-8	553-5	50-7	W	15 0	09-79	540-2	48-2	540-2	47-7	W
8 0	12-35	545-1	50-0	549-6	50-7	W	16 0	09-51	539-4	47-6	541-5	46-8	W
9 0	12-09	545-9	50-0	546-8	50-4	W	17 0	08-79	539-4	46-9	542-2	46-0	W
10 0	12-15	545-1	49-7	544-1	50-0	W	18 0	08-14	539-4	46-3	535-4	45-3	W
11 0	11-61	542-5	49-3	545-2	49-5	H	19 0	06-76	539-3	45-6	540-9	44-6	B
12 0	12-35	546-4	48-8	541-1	49-0	H	20 0	06-41	535-3	45-0	547-4	43-9	B

DECLINATION. Torsion removed, April 2^d 2^h, -3^h.* Effect of + 10° of torsion = -0'84.BIFILAR. Observed 2^m after the Declination, $k=0\cdot000140$.BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

* April 2^d 2^h. The line of detorsion of the suspension thread varied during the observation; at first it was about N. 3° E. to S. 3° W.; it was ultimately N. 5° E. to S. 5° W.
 † Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.		
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			d.	h.	m.	°	'	Se. Div.	°	Mic. Div.	°
		d.	h.	m.	Sc. Div.	°	Mic. Div.	°	H	5	5	0	25	14-20	541-6	46-9
2 21 0	25 07-13	530-2	44-4	550-7	43-5	H	5	5	0	25	14-20	541-6	46-9	544-4	48-2	H
22 0	07-67	524-3	43-9	554-3	43-2	H	6	0		12-20	544-0	48-1	544-7	49-1	B	
23 0	13-17	515-9	43-7	553-4	43-1	H	7	4		11-37	546-5	48-9	539-1	49-5	B	
3 0 0	16-75	521-3	43-5	541-9	43-0	B	8	0		10-48	545-4	49-3	541-6	49-5	B	
1 0	21-71	530-3	43-4	535-7	43-4	H	9	0		10-38	543-9	49-3	543-0	49-5	B	
2 0	23-27	529-5	43-6	536-0	43-9	W	10	0		10-65	541-7	48-9	540-1	49-0	B	
3 0	19-22	531-0	44-1	548-9	45-0	H	11	0		10-85	542-7	48-5	538-6	48-4	W	
4 0	16-90	542-4	45-2	554-2	46-2	B	12	0		09-54	540-5	48-0	539-2	47-8	W	
5 0	14-64	540-6	46-4	554-6	47-6	H										
6 0	13-43	546-3	47-8	565-5	49-0	W	6	13	0	25	09-86	540-6	49-7	537-0	49-5	H
7 0	14-13	545-8	49-0	586-8	49-8	W	14	0		10-75	538-8	49-2	537-2	49-0	H	
8 0	08-59	546-2	49-7	602-1	50-2	W	15	0		10-61	538-2	48-8	540-9	48-6	H	
9 0†	06-59	539-0	49-9	570-2	50-2	W	16	0		10-47	538-8	48-3	540-5	48-2	H	
10 0†	06-43	538-3	49-9	568-4	50-0	W	17	0		12-15	537-5	48-0	541-3	47-8	H	
11 0	09-93	537-7	49-7	557-0	49-7	H	18	0		10-80	538-8	47-7	539-4	47-4	H	
12 0	13-49	540-8	49-2	545-8	49-2	H	19	0		09-69	535-9	47-4	542-8	47-1	W	
							20	0		07-51	533-7	47-1	547-8	46-8	W	
13 0	25 12-18	539-8	48-7	540-6	48-5	H	21	0		08-46	527-9	47-0	550-5	46-8	B	
14 0	11-49	538-6	48-2	541-5	47-8	H	22	0		09-74	522-5	46-9	553-0	46-8	W	
15 0	10-23	538-4	47-7	542-0	47-2	H	23	0		12-63	515-2	47-0	553-0	47-3	W	
16 0	10-06	541-0	47-2	542-4	46-6	H	7	0	0	15-45	526-4	47-3	541-8	47-8	W	
17 0	12-62	541-0	46-7	541-4	46-1	H	1	0		16-21	529-4	47-7	536-1	48-4	W	
18 0	12-31	544-7	46-2	537-6	45-6	H	2	0		20-65	534-3	48-4	540-5	49-3	W	
19 0	10-40	543-1	45-8	539-3	45-1	W	3	0		20-25	542-6	49-2	544-5	50-0	W	
20 0	09-93	538-1	45-4	549-2	44-7	W	4	0		15-69	543-7	50-0	554-8	51-0	W	
21 0	06-26	532-9	45-0	548-3	44-3	B	5	0		14-77	544-5	50-8	560-3	51-8	W	
22 0	08-01	529-6	44-7	551-6	44-0	W	6	0		12-72	547-7	51-4	558-0	52-2	H	
23 0	11-15	521-8	44-4	553-3	43-8	W	7	0		10-78	547-2	51-8	560-6	52-5	H	
4 0 0	15-96	515-5	44-1	548-1	43-8	W	8	0		06-76	549-0	51-7	561-3	52-5	H	
1 0	19-91	514-9	44-0	540-9	43-8	W	9	0		12-11	542-3	51-6	546-8	52-0	H	
2 0	20-49	520-4	44-0	542-2	43-9	W	10	0		11-61	541-3	51-3	541-9	51-5	H	
3 0	18-81	535-4	44-0	546-1	44-0	W	11	0		11-54	542-2	51-0	538-0	50-9	B	
4 0	16-28	538-0	44-0	552-8	44-2	W	12	0		10-92	541-3	50-6	536-3	50-3	B	
5 0	13-74	538-1	44-1	559-8	44-3	W										
6 0	11-57	539-4	44-2	561-4	44-5	H	13	0		25	11-62	546-1	50-1	529-5	49-7	B
7 0	10-09	542-1	44-1	561-6	44-5	H	14	0		11-69	544-1	49-6	512-7	49-2	B	
8 7	09-76	541-0	44-0	561-3	44-5	H	15	0		10-87	536-7	49-1	526-9	48-6	B	
9 0	09-94	542-1	44-0	559-6	44-3	H	16	0		10-47	537-5	48-7	535-9	48-0	B	
10 0	10-20	539-6	44-0	559-9	44-1	H	17	0		10-47	537-5	48-2	541-0	47-5	B	
11 0	10-77	541-7	43-9	557-3	44-0	B	18	0		10-60	538-6	47-8	543-1	47-1	B	
12 0	09-82	544-2	43-8	542-8	43-9	B	19	0		09-64	537-9	47-4	549-6	46-9	H	
							20	0		07-40	535-3	47-1	555-2	46-6	H	
13 0	25 09-96	538-8	43-7	540-8	43-7	B	21	0		06-63	530-2	47-0	548-9	46-5	W	
14 0	11-17	538-1	43-6	546-9	43-5	B	22	0		08-01	524-5	46-8	544-5	46-6	H	
15 0	10-70	539-0	43-4	551-0	43-4	B	23	0		10-60	518-5	46-9	548-9	46-7	H	
16 0	11-17	540-7	43-3	552-1	43-2	B	8	0	0	12-95	521-5	47-0	537-5	47-2	H	
17 0	09-69	536-8	43-1	553-8	43-0	B	1	0		17-15	524-0	47-0	523-6	47-3	H	
18 0	09-06	538-2	42-9	555-0	42-9	B	2	0		19-02	529-6	47-3	525-9	47-5	H	
19 0	07-94	536-8	42-8	556-6	42-7	H	3	0		17-93	535-4	47-3	533-5	47-7	H	
20 0	05-82	535-3	42-7	562-0	42-5	H	4	0		19-81	539-0	47-7	542-7	48-0	H	
21 0	06-41	528-0	42-5	565-9	42-4	W	5	0		14-13	538-0	47-9	554-5	48-3	H	
22 0	07-10	522-4	42-3	563-3	42-4	H	6	0		12-26	541-8	48-1	557-1	48-4	B	
23 0	10-47	519-2	42-4	559-6	42-5	H	7	0		11-32	543-1	48-2	555-6	48-3	B	
5 0 0	14-33	515-7	42-4	545-2	42-7	H	8	0		11-12	543-0	48-1	548-6	48-1	B	
1 0	19-53	524-8	42-8	532-8	43-4	H	9	0		10-94	542-6	47-9	544-0	47-7	B	
2 0	19-76	529-8	43-4	533-5	44-5	H	10	0		11-12	543-1	47-6	542-2	47-3	B	
3 0	18-08	535-6	44-4	541-0	45-7	H	11	0		07-69	540-6	47-3	542-8	46-8	W	
4 0	15-56	537-6	45-7	549-4	47-0	H	12	0		08-92	539-9	46-9	544-1	46-3	W	

DECLINATION. Magnet untouched, April 2d—May 8d.

BIFILAR. Observed 2m after the Declination, $k=0-000140$.BALANCE. Observed 3m after the Declination, $k=0-000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
8 13 0	25 11.00	537.7	46.4	546.3	45.7	W	10 21 0	25 04.86	531.1	41.3	557.9	41.0	W
14 0	10.94	538.5	45.9	549.2	45.2	W	22 0	06.07	524.9	41.2	554.0	41.1	H
15 0	10.70	538.5	45.4	552.9	44.6	W	23 0	09.79	521.9	41.2	553.2	41.4	H
16 0	10.70	539.4	44.9	554.2	44.0	W	11 0 0	14.15	522.1	41.4	540.9	41.7	H
17 0	10.27	539.4	44.3	556.0	43.3	W	1 0	18.10	525.8	41.7	533.8	42.1	H
18 0	10.00	540.4	43.7	559.4	42.7	W	2 0	19.81	532.6	42.0	536.0	42.5	H
19 0	08.65	538.6	43.1	564.0	42.0	B	3 0	19.08	534.2	42.4	542.6	42.9	H
20 0	06.83	536.4	42.7	568.6	41.6	B	4 0	17.09	536.3	42.8	547.0	43.3	H
21 0	05.67	528.6	42.3	570.7	41.4	H	5 0	14.46	543.1	43.0	552.0	43.6	H
22 0	07.58	521.0	42.0	566.9	41.4	H	6 0	12.62	541.6	43.2	557.1	43.7	B
23 0	10.97	518.9	42.0	562.1	41.9	H	7 0	11.37	546.5	43.3	551.4	43.7	B
9 0 0	14.71	522.7	42.3	558.1	42.9	B	8 0	11.17	545.3	43.3	549.4	43.7	B
1 0	17.98	529.0	43.0	548.8	44.2	H	9 0	12.08	544.8	43.2	550.1	43.5	B
2 0	19.64	537.5	44.3	549.5	45.5	B	10 0	07.13	545.6	43.0	549.6	43.2	B
3 0	17.76	541.7	45.4	552.8	46.7	H	11 0	09.27	541.3	42.7	547.7	42.8	W
4 0	15.64	541.7	46.4	543.6	47.4	B	12 0	10.09	542.3	42.4	543.5	42.3	W
5 0	13.96	548.3	47.1	555.7	48.3	H							
6 0	11.27	545.1	47.8	562.3	48.7	W	13 0	25 11.03	541.6	42.0	542.4	41.8	W
7 0	08.95	544.8	48.3	564.8	48.9	W	14 0	11.00	541.6	41.6	544.2	41.3	W
8 0	08.01	548.8	48.5	552.6	48.9	W	15 0	10.87	540.1	41.2	546.8	40.8	W
9 0	10.21	543.7	48.4	546.8	48.5	W	16 0	10.20	540.4	40.8	547.1	40.3	W
10 0	10.21	543.7	48.1	540.8	48.1	H	17 0	09.79	540.2	40.4	549.6	39.8	W
11 0	10.40	544.2	47.8	537.7	47.7	H	18 0	09.08	541.8	40.0	551.2	39.3	W
12 0	11.14	552.6	47.4	516.5	47.3	H	19 0	08.14	541.3	39.6	555.6	38.8	B
							20 0	05.77	538.7	39.3	558.2	38.5	B
13 0	25 10.43	542.4	47.0	516.6	47.0	H	21 0	05.32	532.1	39.0	561.1	38.5	H
14 0	10.16	540.1	46.7	525.0	46.6	H	22 0	06.86	526.0	38.8	559.6	38.5	H
15 0	10.23	539.7	46.4	533.3	46.2	H	23 0	10.67	523.3	38.8	557.0	38.7	H
16 0	10.07	540.4	46.0	532.1	45.8	H	12 0 0	14.35	543.2	39.0	555.3	39.5	B
17 0	10.16	540.6	45.7	540.9	45.4	H	1 0	18.45	529.0	39.4	548.3	40.3	H
18 0	09.62	541.5	45.4	543.1	45.0	H	2 0	20.67	535.9	40.1	544.2	40.8	B
19 0	08.79	539.1	45.0	544.9	44.5	W	3 0	18.77	536.9	40.7	549.6	41.5	H
20 0	08.06	536.7	44.7	549.0	44.1	W	4 0	16.53	539.9	41.2	552.0	42.2	H
21 0	06.88	532.5	44.4	549.4	43.8	B	5 0	14.20	544.2	42.1	556.9	43.1	H
22 0	07.65	526.7	44.1	545.4	43.7	W	6 0	12.15	542.8	42.7	561.3	43.5	W
23 0	10.68	523.4	44.0	534.1	43.8	W	7 0	10.68	545.2	43.0	560.0	43.8	W
10 0 0	14.55	526.8	43.9	526.4	43.9	W	8 0	10.70	545.2	43.3	559.2	44.0	W
1 0	18.25	530.8	43.9	521.1	43.9	W	9 0	09.27	548.1	43.4	552.2	44.0	W
2 0	19.22	535.9	43.9	522.7	44.0	W	10 0	10.36	543.0	43.4	552.0	44.0	W
3 0	18.01	543.3	44.0	528.9	44.1	W	11 0	10.90	542.2	43.3	547.9	44.0	H
4 0	15.69	543.0	44.0	536.1	44.2	W	12 0	10.88	541.3	43.2	543.9	43.7	H
5 0	14.68	540.9	44.0	545.2	44.2	W							
6 0	12.31	543.2	44.0	550.2	44.2	H	13 13 3+	24 52.40	453.0	43.2	180.2	43.3	B
7 0	11.81	544.1	44.0	547.0	44.0	H	14 0+	24 59.59	427.5	42.9	216.0	43.0	B
8 0	11.68	545.3	43.9	543.6	43.7	H	15 0+	24 13.32	291.?	42.6	-4.5	42.9	B
9 0	11.52	543.6	43.7	544.0	43.5	H	16 0+	24 47.20	528.0	42.4	288.6	42.8	B
10 0	11.34	543.2	43.5	543.9	43.3	H	17 0+	25 06.46	524.5	42.3	448.2	42.7	B
11 0	11.57	543.9	43.3	542.0	43.1	B	18 0+	03.00	537.0	42.2	499.9	42.6	B
12 0	10.77	544.3	43.1	542.9	42.9	B	19 0	07.38	531.0	42.1	518.5	42.5	H
							20 0	03.23	539.8	42.1	509.6	42.5	H
13 0	25 11.17	542.5	42.9	541.9	42.7	B	21 0	06.59	522.7	42.0	523.7	42.4	W
14 0	11.03	541.1	42.7	543.9	42.5	B	22 0	08.14	526.2	42.1	530.8	42.7	H
15 0	10.88	540.8	42.5	545.0	42.2	B	23 0	10.74	531.2	42.3	525.0	42.9	H
16 0	10.70	540.6	42.3	546.8	42.0	B	14 0 0	15.78	517.8	42.5	531.8	43.2	H
17 0	10.09	539.9	42.1	548.4	41.7	B	1 0	20.42	525.2	42.7	532.9	43.3	H
18 0	09.44	540.3	41.9	551.4	41.5	B	2 0	20.69	517.6	42.9	560.8	43.5	H
19 0	08.16	539.8	41.7	553.5	41.3	H	3 0	20.50	533.1	43.0	569.1	43.6	H
20 0	06.37	537.2	41.5	557.9	41.1	H	4 0 0+	14.50	538.6	43.2	650.6	43.7	H

DECLINATION. Magnet untouched, April 2^d—May 8^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Mic. Div.	°		
14 5 0	25 16-87	541-8	43-4	603-5	44-0	H	16 13 0	25 11-12	538-1	51-5	537-1	51-0	B		
6 0	11-59	543-5	43-6	619-8	44-2	B	14 0	11-10	536-7	51-0	523-2	50-4	B		
7 0	00-57	543-8	43-7	633-7	44-3	B	15 0	10-18	535-2	50-5	529-7	49-8	B		
8 0	06-74	536-7	43-8	593-3	44-2	B	16 0	09-19	533-3	50-0	537-8	49-3	B		
9 0	11-64	531-7	43-6	570-8	44-0	B	17 0	09-44	533-3	49-5	544-2	48-9	B		
10 5	11-98	541-0	43-4	550-4	43-7	B	18 0	08-95	533-4	49-0	549-3	48-4	B		
11 0	12-36	530-3	43-2	512-1	43-5	W	19 0	08-48	531-4	48-7	553-4	48-0	H		
12 0	16-43	531-1	43-0	470-5	43-4	W	20 0	07-55	527-8	48-3	558-6	47-8	H		
							21 0	06-56	525-6	48-1	559-1	47-6	W		
13 0	25 12-55	535-2	42-9	483-5	43-3	W	22 0	08-38	522-6	48-0	555-1	47-6	H		
14 0	09-67	527-7	42-8	499-4	43-2	W	23 0	11-41	521-1	47-9	545-8	47-6	H		
15 0	11-37	529-9	42-7	504-6	43-0	W	17 0	0	13-69	522-8	48-0	538-6	48-2		
16 0	10-30	530-3	42-6	521-5	42-9	W	1 0	14-85	522-0	48-2	535-3	48-8	H		
17 0	11-54	533-3	42-5	524-6	42-8	W	2 0	16-66	530-3	48-8	540-1	49-7	H		
18 0	11-15	525-7	42-4	528-3	42-7	W	3 0	15-47	536-0	49-8	540-2	50-7	H		
19 0	10-75	533-1	42-4	531-6	42-6	B	4 0	14-01	537-3	50-7	540-8	51-7	H		
20 0	07-87	532-0	42-4	541-4	42-7	B	5 0	13-74	540-6	51-6	541-5	52-7	H		
21 0	07-29	527-7	42-4	545-0	42-9	H	6 0	12-16	542-9	52-5	541-3	53-6	W		
22 0	09-19	524-4	42-6	550-9	43-2	H	7 0	11-66	544-2	53-1	540-5	54-2	H		
23 0	11-34	525-7	42-9	530-4	43-6	H	8 0	10-70	542-0	53-7	546-1	54-5	H		
15 0	15-01	521-5	43-5	528-8	44-3	H	9 0	07-87	546-2	53-9	547-4	54-6	H		
1 0	15-74	522-4	44-1	520-6	45-0	H	10 0	10-14	540-4	54-0	546-4	54-5	H		
2 0	18-10	530-2	44-7	531-7	45-5	H	11 0	09-96	538-5	53-9	543-9	54-3	W		
3 0	17-94	526-1	45-4	543-7	46-2	H	12 0	10-74	538-5	53-7	537-9	54-1	W		
4 0	14-91	535-9	46-2	555-7	46-7	H									
5 0	12-92	546-3	46-8	561-0	47-2	H	13 0	25 10-53	538-4	53-4	537-3	53-8	W		
6 0	11-49	545-8	47-2	560-7	47-4	W	14 0	10-54	537-7	53-1	536-5	53-4	W		
7 0	12-72	547-4	47-4	546-3	47-5	W	15 0	10-33	537-2	52-9	536-5	53-0	W		
8 0	09-67	543-5	47-4	545-9	47-4	W	16 0	09-40	537-3	52-6	537-2	52-7	W		
9 0	02-99	549-9	47-3	540-2	47-2	W	17 0	08-79	536-4	52-4	537-0	52-4	W		
10 0	07-57	539-9	47-0	532-9	46-9	W	18 0	08-08	535-0	52-2	540-0	52-2	W		
11 0	10-97	535-4	46-6	529-3	46-5	H	19 0	06-73	533-3	52-0	540-6	52-0	H		
12 0	10-13	538-9	46-2	521-6	46-1	H	20 0	06-06	531-8	51-8	539-9	51-7	H		
							21 0	06-53	529-2	51-7	538-3	51-7	H		
13 0	25 10-98	539-3	45-8	514-6	45-7	H	22 0	08-92	525-4	51-6	537-4	51-7	H		
14 0	10-90	537-9	45-4	512-9	45-3	H	23 0	11-07	523-6	51-6	537-5	51-9	H		
15 0	08-63	532-6	45-0	517-3	44-9	H	18 0	0	15-11	526-1	51-8	531-2	52-2	H	
16 0	11-07	525-6	44-6	524-4	44-5	H	1 0	16-68	531-1	52-0	520-9	52-5	H		
17 0	10-36	532-9	44-2	525-6	44-1	H	2 0	18-07	538-0	52-3	524-2	52-8	B		
18 0	09-02	535-1	43-8	528-2	43-7	H	3 0	19-89	551-5	52-7	529-2	53-3	H		
19 0	07-72	533-5	43-4	536-2	43-2	W	4 0	18-47	541-1	53-0	552-3	53-7	H		
20 0	07-92	531-6	43-0	541-0	42-8	W	5 0	17-96	536-6	53-3	570-0	54-0	B		
21 0	07-38	530-4	42-7	544-1	42-6	B	6 0	16-33	553-1	53-5	564-6	54-2	W		
22 0	07-87	527-0	42-7	545-7	42-8	W	7 0	13-23	550-6	53-7	579-5	54-3	W		
23 0	10-48	523-7	42-7	548-0	43-4	W	8 0	08-32	543-9	53-6	593-6	54-1	W		
16 0	0 0	13-91	525-5	43-6	542-9	44-5	W	9 0	0 0	03-50	531-7	53-5	574-2	54-0	W
1 0	16-45	523-3	44-8	539-6	45-7	H	10 0	0	01-59	533-1	53-3	546-6	53-7	W	
2 0	17-15	531-8	46-3	537-4	47-1	W	11 0	08-80	538-0	53-0	550-6	53-2	H		
3 0	16-23	535-4	47-7	537-3	48-5	W	12 0	10-20	538-3	52-8	544-7	52-7	H		
4 0	15-67	W									
5 0	15-18	538-4	50-7	537-6	51-2	W	13 0	25 10-16	539-7	52-4	539-1	52-2	H		
6 0	13-22	541-6	52-0	549-6	52-2	H	14 0	0	07-89	536-2	52-0	477-7	51-7	H	
7 0	10-67	544-5	52-8	557-7	52-8	H	15 0	0	00-94	525-1	51-7	482-0	51-4	H	
8 0	09-29	543-9	53-3	561-2	53-0	W	16 0	0	08-41	521-3	51-4	500-7	51-0	H	
9 0	09-12	539-9	53-2	557-2	53-0	H	17 0	0	08-05	536-5	51-0	485-3	50-6	H	
10 0	10-61	539-9	52-9	548-3	52-7	H	18 0	0	05-60	534-1	50-7	507-9	50-2	H	
11 0	10-53	538-4	52-5	544-4	52-3	B	19 0	0	04-04	535-0	50-3	521-8	49-7	W	
12 0	10-95	538-6	52-0	540-6	51-7	B	20 0	0	04-48	530-0	50-0	526-2	49-3	W	

DECLINATION. Magnet untouched, April 2^d—May 8^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000100$.

† Extra Observations made.

April 16^d 9¹₂^h. The cotton cover of the bifilar magnetometer was replaced, having been removed at 13^d 15^h.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
18 21 0	25 06.98	527.4	49.8	533.1	49.2	B	22 5 0	25 13.69	540.3	55.7	543.8	56.8	W
22 0	09.29	526.1	49.7	531.0	49.2	W	6 0	12.42	545.9	56.7	539.5	57.4	H
23 3	11.46	524.3	49.6	534.4	49.5	W	7 0	11.08	544.0	57.2	541.9	57.9	H
19 0 0	14.23	525.8	49.7	527.1	49.8	W	8 0	09.51	544.6	57.4	541.7	58.0	H
1 0	17.56	529.6	50.1	513.8	50.4	W	9 0	10.33	540.2	57.4	539.0	57.7	H
2 0	18.50	536.1	50.6	515.3	51.1	W	10 0	09.82	538.8	57.2	534.9	57.3	H
3 0	17.27	541.2	51.2	523.9	51.9	W	11 0	11.21	542.4	56.8	526.5	56.7	B
4 0	15.98	546.9	51.9	527.9	52.7	W	12 0	08.53	535.6	56.3	517.5	56.0	B
5 0†	16.28	570.1	52.6	539.1	53.2	W							
6 0	12.72	547.6	53.1	541.2	53.7	H	13 0	25 09.32	538.0	55.7	521.3	55.3	B
7 0	11.51	549.0	53.4	555.7	54.0	H	14 0	09.96	535.8	55.0	529.7	54.4	B
8 0	11.37	549.4	53.7	557.4	54.0	H	15 0	09.51	534.9	54.3	534.5	53.4	B
9 0†	01.11	538.4	53.6	534.2	53.5	H	16 0	09.32	534.6	53.6	537.5	52.4	B
10 0	07.82	534.5	53.3	540.2	53.0	H	17 0	10.54	534.1	52.8	535.3	51.5	B
11 0	06.77	525.9	52.9	543.4	52.5	B	18 0	07.74	533.3	52.1	534.5	50.5	B
12 0	03.54	530.2	52.4	529.9	51.8	B	19 0	06.56	532.7	51.4	531.2	49.7	H
							20 0	05.62	530.6	50.8	531.6	49.2	H
20 13 0†	25 15.17	519.6	54.2	434.0	54.1	W	21 0	05.20	525.6	50.4	533.2	49.0	W
14 0†	04.32	530.5	53.6	467.2	53.5	W	22 0	08.08	523.7	50.1	534.1	49.0	H
15 0	08.75	530.5	53.1	514.8	52.7	W	23 0	11.44	521.2	49.9	536.4	49.4	H
16 0	08.26	533.7	52.5	524.9	51.9	W	23 0	17.15	524.7	50.1	534.9	50.2	H
17 0	09.56	530.0	51.9	525.4	51.0	W	1 0	19.28	527.0	50.7	532.5	51.4	H
18 0	13.54	524.4	51.3	522.6	50.2	W	2 0	20.67	536.2	51.6	533.5	52.6	H
19 8	08.05	530.2	50.7	529.1	49.4	B	3 0	19.93	536.5	52.6	537.1	54.0	H
20 0	06.19	525.3	50.2	547.1	49.1	B	4 0	18.23	539.4	53.6	537.2	55.0	H
21 0	04.41	518.9	49.8	552.7	49.0	H	5 0	16.41	543.1	54.5	537.5	55.7	H
22 0	07.64	509.8	49.4	558.2	49.0	H	6 0	14.64	547.4	55.3	543.2	56.2	B
23 0	09.87	511.6	49.6	557.1	49.4	H	7 0	12.49	550.4	55.8	551.4	56.5	B
21 0 0	13.44	512.5	49.8	550.3	50.2	B	8 0	11.84	550.3	56.0	549.1	56.5	B
1 3	16.19	524.1	50.5	538.8	51.7	H	9 0	09.73	549.3	55.9	541.8	56.0	B
2 0	17.76	526.7	51.7	542.0	53.2	H	10 0	09.47	544.5	55.4	540.8	55.6	H
3 0	16.57	537.4	53.0	546.3	54.7	H	11 0	10.13	546.5	54.9	533.5	55.0	H
4 0	15.24	540.2	54.5	540.3	56.0	B	12 0	10.97	544.4	54.5	528.9	54.6	H
5 0	14.51	548.4	55.7	534.5	57.2	H							
6 0	13.97	547.6	56.8	534.1	58.2	H	13 0	25 10.56	540.5	54.1	531.9	54.2	D
7 0	12.49	545.3	57.7	544.0	58.7	W	14 0	10.50	542.6	53.7	523.5	53.7	D
8 0	10.43	545.5	58.1	552.0	58.9	W	15 0	08.88	542.4	53.3	523.5	53.2	D
9 3	07.52	537.8	58.4	552.5	58.8	W	16 0	09.02	540.3	52.9	521.4	52.6	D
10 0	10.09	536.6	58.1	549.2*	58.5	W	17 0	07.40	536.0	52.5	526.7	52.1	D
11 0	10.56	540.5	57.8	540.7	58.2	H	18 0	07.13	536.5	52.1	534.3	51.5	W
12 0	14.33	535.5	57.3	533.5	57.3	H	19 0	08.56	535.6	51.6	537.0	50.8	W
							20 0	07.81	534.1	51.0	539.6	50.2	W
13 0	25 12.62	538.1	56.7	512.5	56.5	H	21 0	09.69	530.6	50.6	540.0	49.7	W
14 0	10.01	534.7	55.9	523.8	55.6	H	22 0	08.95	522.7	50.1	542.8	49.3	B
15 0	09.69	534.0	55.2	533.4	54.7	H	23 0	11.34	523.4	49.8	537.1	49.2	H
16 0	11.49	527.4	54.5	540.4	53.6	H	24 0 0	14.91	523.7	49.7	530.6	49.3	B
17 0	12.82	529.9	53.7	531.5	52.5	H	1 0	18.30	525.1	49.7	525.9	49.6	B
18 0	10.21	534.1	53.0	533.3	51.7	H	2 0	22.24	537.4	50.1	521.5	50.5	H
19 0	08.38	529.4	52.4	537.9	50.8	W	3 0	21.19	528.4	50.8	537.2	51.7	H
20 2	05.96	525.6	51.8	551.3	50.2	W	4 0	22.11	565.5	51.5	535.1	52.6	H
21 0	05.40	517.5	51.2	559.2	49.9	B	5 0	19.31	547.1	52.5	556.2	53.5	B
22 0	06.88	516.2	50.9	554.0	50.0	W	6 0	18.85	560.7	53.2	571.1	54.1	D
23 0	10.36	517.8	50.8	546.2	50.4	W	7 0	15.85	545.6	53.7	593.5	54.4	D
22 0 0	14.82	519.2	51.0	539.2	51.3	W	8 0	14.50	544.5	54.0	572.9	54.6	D
1 0	17.54	523.4	51.6	535.6	52.4	B	9 0	12.65	543.4	54.0	555.4	54.5	W
2 0	18.03	529.5	52.5	540.2	53.5	W	10 0	11.34	542.0	53.8	545.6	54.2	W
3 0	17.09	537.0	53.5	547.7	54.7	H	11 0	10.90	540.1	53.4	538.9	53.5	H
4 0	15.51	537.3	54.6	549.7	55.9	H	12 0	10.09	538.6	53.0	534.4	52.9	H

DECLINATION. Magnet untouched, April 2^d—May 8^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.† Extra Observations made.
April 23^d 10^h—24^d 10^h. Term-Day Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°	
24 13 0	25 09-82	540.9	52.6	529.9	52.4	H	27 21 0	25 04-79	520.4	51.4	513.1	51.2	
14 0	09-05	536.6	52.2	532.7	51.8	H	22 0	09-93	510.7	51.3	514.4	51.3	
15 0	10-06	535.9	51.8	535.6	51.2	H	23 0	13-88	509.1	51.4	518.5	51.5	
16 0	10-31	535.8	51.3	538.8	50.6	H	28 0	0	16-39	516.6	51.6	518.9	51.9
17 0	10-43	534.4	50.9	540.6	50.2	H	1 6	19-71	518.0	51.9	533.8	52.3	
18 0	09-46	531.3	50.4	543.0	49.7	H	2 0	19-46	530.1	52.2	557.9	52.7	
19 0	10-53	531.9	50.0	539.8	49.3	W	3 0	17-10	542.2	52.6	572.3	53.2	
20 0	12-25	534.1	49.7	513.1	48.8	W	4 4	13-99	548.2	53.0	591.5	53.8	
21 0	06-46	534.4	49.3	516.2	48.5	B	5 0	13-23	550.1	53.5	581.6	54.3	
22 0	07-54	525.7	49.0	514.2	48.4	W	6 0	12-58	548.8	53.8	567.6	54.5	
23 0	13-22	518.0	48.9	523.2	48.5	W	7 0	08-79	541.0	54.0	559.4	54.6	
25 0 0	15-34	508.9	48.9	531.8	48.8	W	8 0	08-01	544.4	54.0	555.3	54.6	
1 0	19-37	526.3	49.1	554.9	49.3	W	9 0	06-98	540.8	53.9	545.5	54.5	
2 0	24-12	524.8	49.7	566.5	50.2	W	10 0	11-89	536.9	53.8	532.5	54.3	
3 0	24-80	536.6	50.5	567.3	51.5	W	11 0	11-52	538.5	53.6	525.3	54.0	
4 0	21-86	535.8	51.6	573.7	52.7	W	12 0	10-20	538.8	53.4	519.2	53.6	
5 0	19-62	547.1	52.4	585.7	53.6	W							
6 0	08-85	546.5	53.0	605.4	54.2	H	13 0	25 11-41	543.5	53.2	497.9	53.2	
7 0	08-92	548.0	53.4	592.2	54.7	H	14 0	06-97	536.0	52.9	492.8	52.9	
8 0	09-42	543.3	53.8	571.5	55.0	H	15 0	09-10	532.4	52.6	495.1	52.5	
9 0	10-50	540.2	53.9	570.4	55.0	H	16 0	08-61	529.8	52.3	498.7	52.2	
10 0	06-93	544.3	54.0	545.7	55.0	H	17 0	08-48	530.7	52.0	502.1	51.8	
11 0	10-16	553.1	54.0	517.7	55.0	B	18 0	06-66	528.7	51.8	513.7	51.4	
12 0	09-62	536.4	54.0	498.0	55.0	B	19 0	06-73	525.0	51.7	522.9	51.3	
							20 0	05-45	526.6	51.6	521.9	51.2	
13 0	25 10-38	537.3	54.0	504.1	55.0	B	21 0	05-97	522.6	51.6	515.4	51.3	
14 0	11-41	533.9	54.0	513.5	54.9	B	22 0	09-17	519.4	51.5	508.7	51.7	
15 0	14-04	535.1	54.0	509.2	54.7	B	23 0	12-25	522.8	51.7	506.4	52.2	
16 0	10-80	535.0	53.9	516.4	54.6	B	29 0	0	15-89	526.0	52.2	496.8	52.7
17 0	09-77	535.9	53.8	521.5	54.5	B	1 0	19-32	526.8	52.7	500.8	53.7	
18 0	08-01	535.6	53.7	527.8	54.3	B	2 0	19-84	525.4	53.4	504.3	54.7	
19 0	08-97	531.9	53.5	529.4	54.2	H	3 0	17-91	524.1	54.1	509.1	55.3	
20 0	07-07	529.8	53.5	530.7	54.2	H	4 0	15-65	526.6	54.8	514.4	56.0	
21 0	07-60	525.6	53.5	534.1	54.1	W	5 0	13-54	534.5	55.4	516.7	56.5	
22 0	09-42	517.4	53.5	529.1	54.1	H	6 0	12-78	540.6	55.8	521.7	56.6	
23 0	12-51	513.8	53.5	525.8	54.2	H	7 0	11-30	546.8	55.9	534.0	56.6	
26 0 0	16-57	519.0	53.6	526.7	54.4	H	8 4	09-26	541.9	55.8	544.0	56.5	
1 0	21-34	521.1	53.9	523.7	54.7	H	9 0	10-25	540.4	55.7	539.8	56.2	
2 0	21-97	531.0	54.2	516.3	55.0	H	10 0	11-57	538.7	55.5	532.5	55.9	
3 0	20-18	540.1	54.5	519.6	55.5	H	11 0	11-52	537.3	55.2	526.4	55.5	
4 0	17-34	547.8	55.0	522.3	56.0	H	12 0	11-10	536.6	54.9	525.7	55.2	
5 0	15-52	550.0	55.5	531.2	56.4	H							
6 0	13-66	545.1	56.0	538.3	56.7	B	13 0	25 10-95	537.0	54.6	525.7	54.8	
7 0	11-79	552.3	56.4	535.1	56.9	B	14 0	10-90	536.1	54.3	525.4	54.4	
8 0	10-28	554.6	56.6	533.4	56.9	B	15 0	10-60	534.8	54.0	527.9	54.1	
9 0	10-58	547.4	56.5	537.1	56.5	B	16 0	10-47	534.7	53.8	529.9	53.8	
10 0	10-04	546.4	56.1	531.7	56.0	B	17 0	10-18	534.8	53.6	530.9	53.5	
11 0	10-54	541.0	55.7	524.0	55.5	W	18 0	09-49	534.0	53.3	533.9	53.2	
12 0	25 10-56	539.3	55.3	523.7	55.2	W	19 0	08-21	535.7	53.1	536.6	52.9	
							20 0	06-76	531.9	52.9	539.4	52.7	
27 13 0†	24 59-73	529.5	52.3	265.5	52.2	H	21 0	07-79	526.2	52.8	534.6	52.7	
14 0†	24 59-37	545.4	52.2	426.3	52.2	H	22 0	10-50	519.7	52.8	528.7	53.0	
15 0†	25 01-01	535.4	52.1	483.4	52.1	H	23 0	13-39	519.4	53.0	523.6	53.5	
16 0†	24 57-53	529.0	52.0	465.8	52.0	H	30 0	15-01	521.5	53.2	516.5	53.7	
17 0†	25 21-32	487.6	51.9	231.3	51.9	H	1 0	17-70	523.7	53.4	511.5	54.0	
18 0†	05-49	524.8	51.7	359.2	51.7	H	2 0	17-22	532.2	53.7	508.5	54.4	
19 0	02-50	523.6	51.6	476.3	51.5	W	3 0	16-89	529.9	54.0	522.9	54.7	
20 0	04-19	528.1	51.5	504.2	51.3	W	4 0	14-17	532.1	54.3	529.5	55.0	

DECLINATION. Magnet untouched, April 24—May 8^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		
30 5 0	25 12-31	536.7	54.7	531.7	55.4	B	2 13 0	25 10-63	536.6	53.3	525.9	52.8	W	
6 0	11-62	541.7	55.0	536.8	55.7	W	14 0	10-70	536.9	52.8	527.3	52.3	W	
7 0	11-01	552.2	55.2	534.6	55.8	W	15 0	10-36	533.9	52.4	529.4	51.8	W	
8 0	13-50	551.5	55.3	529.8	55.8	W	16 0	09-87	535.4	52.0	529.5	51.3	W	
9 0	11-75	553.7	55.3	528.7	55.8	W	17 0	08-70	534.6	51.7	530.9	50.8	W	
10 0	10-45	550.6	55.2	529.4	55.7	W	18 0	06-74	531.9	51.3	536.8	50.4	W	
11 5	03-54	552.8	55.1	483.7	55.4	H	19 0	05-05	531.3	50.9	541.3	50.1	B	
12 0†	25 07-76	538.1	55.0	483.0	55.5	H	20 0	03-50	528.2	50.7	537.1	50.0	B	
							21 0	04-75	527.6	50.5	524.8	49.9	H	
13 0†	24 57-35	518.1	54.8	409.1	55.4	H	22 0	07-47	526.5	50.4	522.2	50.0	H	
14 0†	24 56-90	533.2	54.7	255.5	55.2	H	23 0	10-78	523.7	50.4	520.1	50.2	H	
15 0†	25 09-08	507.9	54.5	256.1	55.0	H	3 0	13-37	520.3	50.5	521.0	50.4	B	
16 0†	08-52	516.1	54.4	153.6	54.8	H	1 0	15-01	524.5	50.8	518.9	50.8	H	
17 0	07-47	534.8	54.2	367.4	54.6	H	2 0	15-67	530.1	51.1	527.0	51.4	B	
18 0	14-37	524.9	54.0	442.5	54.3	H	3 0	13-90	532.2	51.5	526.3	52.0	H	
19 0	09-00	529.8	53.9	447.0	54.1	W	4 0	11-91	536.5	51.9	528.2	52.5	H	
20 0	09-17	532.4	53.8	475.6	54.0	W	5 0	10-18	541.0	52.3	527.5	53.0	H	
21 0	15-29	522.1	53.8	483.3	53.9	B	6 0	10-43	544.4	52.8	532.3	53.5	W	
22 0	13-83	522.2	53.8	491.5	54.2	W	7 0	10-30	545.9	53.3	532.8	54.0	W	
23 0	16-90	526.8	53.9	500.6	54.5	W	8 0	10-54	545.6	53.7	529.3	54.2	W	
1 0 0	18-00	530.0	54.3	504.8	54.8	W	9 0	10-77	541.6	53.7	525.3	54.0	W	
1 13	17-63	529.9	54.6	519.6	55.2	W	10 0	11-08	543.3	53.6	523.1	53.7	W	
2 0	18-11	537.1	54.7	534.7	55.3	W	11 0	11-25	541.7	53.2	521.7	53.1	H	
3 0	16-92	534.5	54.8	549.3	55.4	W	12 0	11-08	543.1	52.8	520.2	52.5	H	
4 0	12-55	534.2	55.1	567.5	55.9	W								
5 0	11-10	542.2	55.4	571.3	56.3	W	4 13 0	25 11-10	539.8	50.5	530.4	49.9	B	
6 0	10-60	546.7	55.7	561.5	56.4	H	14 0	10-74	540.7	50.1	532.4	49.5	B	
7 0	09-05	550.9	55.9	558.5	56.5	H	15 0	10-63	540.0	49.7	534.2	49.0	B	
8 0	10-61	543.0	56.0	548.9	56.5	H	16 0	10-90	540.0	49.2	535.7	48.5	B	
9 0	11-17	538.6	55.8	537.4	56.1	H	17 0	08-18	537.3	48.8	538.5	48.0	B	
10 0	11-34	538.4	55.4	530.9	55.5	H	18 10	07-54	535.3	48.3	545.1	47.4	B	
11 0	11-77	537.7	55.0	527.5	54.9	B	19 0	06-14	531.3	47.9	548.4	47.2	H	
12 0	11-84	536.3	54.6	526.6	54.3	B	20 0	05-96	527.5	47.7	548.7	47.0	H	
							21 0	06-57	523.5	47.5	543.3	46.8	W	
13 0	25 11-71	533.9	54.1	527.6	53.7	B	22 0	10-06	521.0	47.4	544.7	47.0	H	
14 0	11-14	533.2	53.7	529.4	53.2	B	23 0	11-81	521.6	47.4	545.2	47.2	H	
15 0	10-74	533.0	53.3	530.9	52.7	B	5 0	14-30	524.4	47.5	541.9	47.5	H	
16 0	09-86	533.0	52.9	533.3	52.2	B	1 0	15-89	528.4	47.7	534.3	48.0	H	
17 0	09-03	533.2	52.5	536.0	51.8	B	2 0	15-76	535.0	48.1	533.6	48.6	H	
18 0	07-54	531.8	52.2	537.7	51.3	B	3 0	14-77	536.8	48.5	535.7	49.2	H	
19 0	06-63	532.7	52.0	536.9	51.2	H	4 0	13-46	541.7	48.9	539.4	49.6	H	
20 0	05-52	531.3	51.8	540.1	51.2	H	5 0	12-13	543.6	49.3	546.2	50.0	H	
21 0	07-20	529.9	51.7	538.0	51.2	W	6 0	10-28	548.4	49.9	555.5	50.3	B	
22 0	09-24	528.3	51.6	537.1	51.4	H	7 0	09-76	550.2	50.2	558.6	50.4	B	
23 0	10-85	526.2	51.6	529.6	51.6	H	8 0	09-80	547.5	50.4	556.0	50.5	B	
2 0 0	12-83	525.8	51.8	521.5	52.0	H	9 0	09-80	543.8	50.5	553.9	50.5	B	
1 0	14-57	526.7	52.1	521.1	52.5	H	10 0	11-71	542.1	50.3	543.1	50.1	B	
2 0	15-05	530.1	52.5	526.1	53.2	H	11 0	12-22	540.9	50.0	538.2	49.7	W	
3 0	14-50	534.1	53.0	529.2	54.0	H	12 0	12-08	539.2	49.6	537.5	49.3	W	
4 0	13-22	540.3	53.5	530.4	54.6	H								
5 0	12-01	541.4	54.0	533.4	55.0	H	13 0	25 12-25	539.1	49.3	538.0	48.9	W	
6 0	10-94	543.8	54.5	533.6	55.2	B	14 0	11-46	537.6	49.0	540.0	48.5	W	
7 0	10-01	542.7	54.8	532.5	55.4	B	15 0	11-27	536.6	48.7	542.0	48.2	W	
8 0	09-86	543.1	54.9	529.7	55.3	B	16 0	10-51	536.7	48.4	544.6	47.9	W	
9 0	11-03	539.9	54.8	525.6	55.0	B	17 0	08-97	535.9	48.1	548.7	47.6	W	
10 0	11-03	539.1	54.5	522.8	54.5	B	18 0	06-19	532.1	47.9	554.7	47.4	W	
11 0	10-63	537.7	54.1	522.7	54.0	W	19 0	04-55	529.7	47.7	552.5	47.2	B	
12 0	10-56	536.3	53.7	526.5	53.4	W	20 0	04-51	527.7	47.6	548.7	47.2	B	

DECLINATION. Magnet untouched, April 2^d—May 8^d.BIFILAR. Observed 2^m after the Declination. $k=0\cdot000140$. BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
5 21 0	25 06.50	525.1	47.5	539.1	47.3	H	8 5 0	25 14.33	549.6	47.4	554.0	48.2	H
22 0	10.36	522.9	47.5	546.7	47.4	B	6 0	12.82	549.9	47.9	558.6	48.7	B
23 0	13.72	519.5	47.6	541.9	47.7	H	7 0	10.81	551.2	48.4	556.0	49.0	B
6 0 0	16.72	521.1	47.8	538.5	48.0	B	8 0	10.56	550.8	48.7	547.4	49.0	B
1 0	17.70	528.5	48.0	531.2	48.5	H	9 0	11.77	547.3	48.6	541.5	48.8	B
2 0	15.52	537.4	48.6	538.2	49.0	B	10 0	11.51	547.7	48.4	534.0	48.5	B
3 0	13.59	542.6	49.0	538.6	49.5	H	11 0	10.98	544.6	48.1	531.9	48.2	W
4 0	11.79	545.0	49.5	544.8	49.9	B	12 0	11.05	543.1	47.8	529.6	47.7	W
5 0	10.50	544.1	49.9	548.3	50.3	B							
6 0	10.45	545.5	50.1	547.2	50.5	W	13 0	25 10.18	544.8	47.5	526.6	47.2	W
7 0	11.42	548.1	50.3	542.9	50.5	W	14 0	10.01	543.1	47.1	531.3	46.8	W
8 0	10.67	544.4	50.2	542.7	50.3	W	15 0	09.69	542.5	46.7	535.4	46.4	W
9 0	10.47	546.0	50.0	540.1	50.0	W	16 0	09.46	542.1	46.4	536.8	46.0	W
10 0	08.97	544.4	49.9	536.0	49.8	W	17 0	08.85	539.8	46.1	540.6	45.6	W
11 0	10.07	541.2	49.7	529.1	49.5	H	18 0	07.76	535.8	45.8	540.6	45.3	W
12 0	11.21	540.3	49.3	531.0	49.2	H	19 0	05.09	532.8	45.6	539.5	45.0	B
							20 0	04.78	519.1	45.3	539.1	44.9	H
13 0	25 11.55	540.1	49.0	532.1	49.0	H	21 0	06.88	525.2	45.0	534.4	44.8	H
14 0	10.56	538.5	48.8	536.7	48.7	H	22 0	10.78	523.2	44.8	526.2	44.7	H
15 0	11.03	539.7	48.5	536.8	48.2	H	23 0	14.30	526.5	44.8	514.5	44.7	H
16 0	10.95	539.2	48.2	538.6	47.7	H	9 0 0	17.70	528.0	44.8	514.6	45.0	H
17 0	10.63	539.9	47.9	542.4	47.4	H	1 0	19.21	533.0	45.0	416.3	45.4	H
18 0	08.21	535.8	47.7	543.6	47.1	H	2 0	19.34	538.6	45.3	521.1	45.8	H
19 0	06.50	533.0	47.5	549.4	46.9	W	3 0	16.60	537.3	45.8	536.4	46.8	H
20 0	04.68	528.7	47.3	549.1	46.7	W	4 0	15.14	543.6	46.6	539.7	47.2	H
21 0	06.83	520.7	47.1	541.6	46.7	B	5 0	13.10	549.2	47.1	540.9	47.7	H
22 0	10.01	519.4	47.1	538.5	46.8	W	6 0	11.34	549.8	47.6	543.7	48.0	W
23 0	13.59	520.4	47.1	531.4	47.0	W	7 0	10.70	551.0	47.8	543.1	48.2	W
7 0 0	17.02	520.0	47.2	531.2	47.2	W	8 0	10.13	549.9	47.9	540.4	48.2	W
1 0	18.82	528.9	47.3	533.7	47.5	W	9 0	10.51	547.6	47.9	537.9	48.2	W
2 0	18.70	533.3	47.6	536.6	47.7	W	10 0	11.07	545.1	47.7	532.6	48.0	W
3 0	15.85	537.8	47.7	545.2	47.8	W	11 0	10.94	543.0	47.5	530.8	47.7	H
4 0	14.03	551.4	47.7	549.8	47.8	W	12 0	10.77	546.4	47.3	526.2	47.5	H
5 0	11.98	541.4	47.7	561.0	47.7	W							
6 0	10.54	549.2	47.5	553.6	47.3	W	13 0	25 10.43	541.1	47.1	527.3	47.3	H
7 0	10.67	544.1	47.3	554.2	47.0	W	14 0	11.10	542.1	47.0	524.0	47.1	H
8 0	10.83	545.9	47.1	549.6	46.7	W	15 0	08.72	539.5	46.9	528.2	47.0	H
9 0	11.37	546.3	46.8	543.8	46.3	H	16 0	09.02	539.8	46.7	530.7	46.8	H
10 0	11.55	545.5	46.5	544.5	46.0	H	17 0	09.05	538.4	46.5	534.0	46.5	H
11 0	10.74	543.4	46.3	546.2	45.7	B	18 0	06.98	539.1	46.4	534.4	46.2	H
12 0	11.00	541.0	46.0	547.8	45.5	B	19 0	05.56	538.8	46.3	534.9	46.2	W
							20 0	05.55	536.0	46.2	531.8	46.2	W
13 0	25 11.17	540.6	45.8	550.0	45.3	B	21 0	06.36	531.9	46.2	521.5	46.3	W
14 0	10.74	539.9	45.6	551.0	45.0	B	22 0	09.12	528.2	46.4	519.1	46.6	W
15 0	10.90	539.6	45.3	551.6	44.7	B	23 0	12.78	524.8	46.7	520.9	47.1	W
16 0	10.27	539.2	45.0	554.6	44.5	B	10 0 0	16.19	523.7	47.0	517.3	47.5	W
17 0	09.42	538.6	44.8	557.4	44.2	B	1 0	16.72	526.6	47.5	519.8	48.0	W
18 0	07.00	535.4	44.6	561.2	43.9	B	2 0	16.57	531.4	47.9	522.2	48.5	W
19 0	05.83	533.1	44.4	560.6	43.7	H	3 0	15.32	535.4	48.3	526.2	48.9	W
20 0	05.22	528.8	44.2	561.5	43.7	H	4 0	13.67	544.6	48.7	547.1	49.3	W
21 0	06.37	524.5	44.1	557.9	44.0	H	5 0	12.96	548.8	48.9	531.2	49.5	W
22 0	09.29	521.8	44.2	546.1	44.3	W	6 0	11.77	550.1	49.1	536.6	49.7	H
23 0	13.25	522.5	44.6	539.5	44.7	W	7 0	11.46	552.6	49.2	533.2	49.8	H
8 0 0	16.38	525.8	44.8	530.5	45.3	W	8 0	11.21	547.5	49.4	531.1	49.9	H
1 0	17.56	531.3	45.4	526.0	45.8	W	9 0	11.64	545.2	49.6	528.9	50.0	H
2 0	17.58	538.2	45.8	528.5	46.3	W	10 0	10.90	544.6	49.6	521.6	49.8	H
3 0	17.10	543.7	46.3	531.5	46.8	W	11 0	11.12	541.2	49.4	524.0	49.6	W
4 0	16.36	543.6	46.8	548.1	47.5	W	12 0	10.70	540.6	49.2	522.8	49.3	W

DECLINATION. Torsion removed.—May 8^d 3^h 1^m. Effect of + 10° of torsion = - 0' 84.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

HOURLY OBSERVATIONS OF MAGNETOMETERS, MAY 11—16, 1845.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Mic. Div.	°	
11 13 0	25 04.31	533.7	52.3	482.9	52.5	W	13 21 0	25 06.84	526.3	48.9	518.7	48.4	W	
14 0	06.59	535.6	52.0	495.1	52.3	W	22 0	10.33	523.8	48.8	512.6	48.7	H	
15 0	08.75	538.9	51.7	497.4	51.9	W	23 0	14.38	524.9	49.0	506.2	49.5	H	
16 0	09.08	538.2	51.5	499.6	51.5	W	14 0	18.23	523.6	49.6	503.8	50.3	H	
17 0	07.40	535.9	51.2	505.2	51.0	W	1 0	20.62	529.5	50.1	504.1	51.0	H	
18 0	08.18	534.4	50.9	500.9	50.6	W	2 0	19.95	536.6	50.7	503.9	51.5	H	
19 0	06.19	535.2	50.8	522.5	50.5	H	3 0	19.51	557.1	51.2	505.9	52.0	H	
20 0	05.45	535.6	50.7	508.9	50.5	H	4 0	17.96	549.5	51.5	521.0	52.5	H	
21 0	06.86	531.1	50.7	497.6	50.5	H	5 0	16.75	548.5	51.8	527.8	52.6	H	
22 0	08.82	530.4	50.6	477.4	50.7	H	6 0	10.77	553.5	51.9	549.8	52.5	B	
23 0	14.81	531.6	50.7	483.9	51.2	H	7 0	11.27	547.4	51.9	545.8	52.5	B	
12 0 0	17.22	530.1	51.0	482.7	51.8	H	8 0	12.02	551.3	51.9	529.0	52.4	B	
1 0	18.72	531.8	51.5	483.0	52.4	H	9 0	12.11	545.4	51.9	521.1	52.3	B	
2 0	18.16	538.8	52.2	493.0	53.0	H	10 0	11.88	550.2	51.8	514.4	52.2	B	
3 0	17.51	537.0	52.7	498.6	53.7	H	11 0	13.41	550.2	51.7	511.1	52.2	W	
4 0	15.24	541.2	53.0	509.0	54.0	H	12 0	11.71	550.4	51.6	492.9	52.0	W	
5 0	14.46	549.0	53.3	518.4	54.2	H								
6 0	13.43	554.2	53.5	516.2	54.3	W	13 0	0†	25 13.16	549.7	51.5	461.1	51.9	W
7 0	12.08	554.3	53.7	510.3	54.5	W	14 0	0	09.20	539.9	51.3	465.0	51.7	W
8 0	12.40	552.8	53.7	508.1	54.4	W	15 0	0	09.20	536.5	51.2	483.1	51.4	W
9 0	12.29	553.8	53.7	505.5	54.1	W	16 0	0	07.58	537.7	51.0	495.6	51.1	W
10 0	11.66	550.3	53.4	503.6	53.8	W	17 0	0	06.46	538.3	50.8	505.1	50.8	W
11 0	11.48	545.2	53.1	503.5	53.4	H	18 0	0	04.24	536.9	50.7	510.8	50.5	W
12 0	10.94	542.7	52.8	500.0	53.0	H	19 0	0	05.97	535.6	50.5	507.6	50.3	B
							20 0	0	06.90	535.4	50.4	500.3	50.3	B
13 0	25 10.77	542.2	52.5	501.8	52.6	H	21 0	0	10.77	531.0	50.3	497.6	50.4	H
14 0	10.48	541.2	52.3	503.1	52.2	H	22 0	0	11.03	528.4	50.3	491.4	50.6	H
15 0	10.18	540.6	52.0	503.6	51.7	H	23 0	0	14.18	519.5	50.7	489.7	51.3	H
16 0	10.03	541.3	51.5	504.8	51.0	H	15 0	0	18.63	519.9	51.3	490.5	52.2	B
17 0	08.80	540.0	51.0	511.6	50.5	H	1 0	0	21.50	526.1	52.0	492.6	53.2	H
18 0	07.85	540.4	50.7	514.0	50.0	H	2 0	0	20.96	529.3	52.9	502.5	54.2	B
19 0	07.34	537.4	50.4	516.6	49.7	W	3 0	0	19.51	541.7	53.8	501.2	55.2	H
20 0	07.18	532.9	50.2	518.4	49.6	W	4 0	0	17.76	546.9	54.8	519.7	56.2	H
21 0	08.29	525.8	50.1	517.6	49.7	W	5 0	0	15.51	554.7	55.7	538.1	57.1	B
22 0	10.11	527.7	50.0	508.2	49.9	W	6 0	0	12.22	558.3	56.4	563.8	58.0	W
23 0	12.48	524.3	50.2	494.6	50.3	W	7 0	0	09.96	553.7	57.1	584.8	58.5	W
13 0 0	15.39	528.5	50.4	484.7	50.7	W	8 0	0	09.49	553.8	57.6	570.8	58.5	W
1 0	18.67	543.1	50.8	475.4	51.2	W	9 0	0	07.54	544.3	57.6	556.5	58.5	W
2 0	19.89	541.9	51.2	485.6	51.7	W	10 0	0	05.82	540.5	57.5	526.3	58.3	W
3 0	19.39	540.7	51.6	498.0	52.2	W	11 0	0	07.55	538.7	57.3	516.2	58.0	H
4 0	16.21	542.9	52.0	507.7	52.7	W	12 0	0	10.30	539.1	57.1	514.8	57.8	H
5 0	14.82	547.6	52.4	509.6	53.2	W								
6 0	10.92	553.6	52.8	516.2	53.8	H	13 0	0	25 10.13	540.9	57.0	513.0	57.6	H
7 0	12.11	554.8	53.2	518.5	54.2	H	14 0	0	11.27	539.7	56.9	511.0	57.4	H
8 0	12.65	551.4	53.6	516.0	54.5	H	15 0	0	10.11	537.0	56.7	509.6	57.2	H
9 0	12.62	550.3	53.7	511.8	54.3	H	16 0	0	09.89	538.3	56.4	510.4	56.8	H
10 0	08.66	540.9	53.7	511.2	54.0	H	17 0	0	08.48	537.0	56.2	519.3	56.4	H
11 0	08.85	539.9	53.3	506.0	53.4	D	18 0	0	07.64	538.0	56.0	524.4	56.2	H
12 0	07.24	534.9	52.8	502.1	52.8	D	19 0	0	04.59	540.1	56.0	526.4	56.1	W
							20 0	0	05.35	539.1	55.9	520.4	56.0	W
13 0	25 09.30	535.2	52.4	499.2	52.4	D	21 0	0	05.82	534.0	55.9	510.7	56.2	B
14 0	07.71	533.3	52.0	491.6	51.9	D	22 0	0	06.30	521.3	56.0	503.5	56.4	W
15 0	11.10	539.7	51.5	449.8	51.1	D	23 0	0	13.86	522.3	56.2	499.5	56.8	W
16 0	06.73	548.6	50.9	450.2	50.2	D	16 0	0	15.20	530.9	56.6	495.3	57.6	W
17 0	07.15	536.2	50.5	474.5	49.3	D	1 0	0	17.06	528.7	57.4	497.9	58.5	W
18 0	06.48	529.6	50.0	500.1	48.8	D	2 0	0	20.65	538.8	58.2	492.9	59.5	W
19 0	06.66	532.2	49.5	516.4	48.5	H	3 0	0	21.51	531.7	59.0	494.3	60.3	W
20 0	07.35	528.8	49.0	515.5	48.3	H	4 0	0	16.97	535.3	59.8	501.8	61.1	W

DECLINATION. Magnet untouched, May 8^d—June 18^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
		d. h. m.	° ,	Sc. Div.	°	Mic. Div.	°	d. h. m.	° ,	Sc. Div.	°	Mic. Div.	°
16 5 0†	25 22.03	578.4	60.7	495.7	62.0	W	19 13 0	25 11.27	539.3	49.8	529.6	49.5	B
6 0	15.47	528.6	61.2	565.9	62.5	B	14 0	11.30	537.6	49.6	530.5	49.2	B
7 0	13.49	543.3	61.5	567.5	62.7	H	15 0	13.02	538.5	49.4	527.3	49.0	B
8 0	11.84	548.2	61.7	545.6	62.7	H	16 0	10.65	538.1	49.2	523.5	48.8	B
9 0	11.79	548.5	61.7	529.7	62.4	H	17 0	08.29	537.7	49.0	532.2	48.5	B
10 0	10.41	545.9	61.3	518.5	61.7	H	18 0	07.00	535.0	48.8	537.7	48.4	B
11 0	11.39	543.9	60.9	512.5	61.0	B	19 0	05.69	531.7	48.7	543.4	48.4	H
12 0	11.41	541.2	60.5	512.5	60.4	B	20 0	05.63	526.2	48.6	547.7	48.3	H
							21 0	06.64	521.3	48.5	550.9	48.3	W
13 0	25 11.00	541.4	60.0	511.9	59.8	B	22 0	08.66	520.4	48.4	539.5	48.4	H
14 0	10.80	539.1	59.5	516.8	59.3	B	23 0	12.82	525.4	48.5	527.3	48.7	H
15 0	10.87	536.8	59.1	520.6	58.8	B	20 0	16.48	529.2	48.7	520.6	49.0	H
16 0	10.60	537.2	58.7	522.2	58.3	B		19.35	536.1	49.0	518.9	49.4	H
17 0	09.73	535.1	58.3	530.0	57.9	B	2 0	21.29	542.3	49.4	526.4	49.7	H
18 0	08.92	533.9	57.9	532.8	57.5	B	3 0	21.39	543.7	49.8	532.5	50.3	H
19 0	08.70	530.5	57.6	536.4	57.1	H	4 0	17.67	545.7	50.2	536.6	50.8	H
20 0	08.18	526.3	57.3	535.3	56.8	H	5 0	15.12	545.6	50.7	541.8	51.5	H
21 0	08.99	522.4	57.1	529.0	56.5	W	6 0	12.98	552.0	51.1	544.5	51.9	B
22 0	09.82	521.6	56.9	520.4	56.5	H	7 0	11.81	554.3	51.5	536.4	52.1	B
23 0	11.24	523.0	56.9	503.7	56.7	H	8 0	11.35	551.0	51.7	529.6	52.1	B
17 0 0	13.93	525.8	56.9	491.8	57.0	H	9 0	11.68	552.5	51.6	527.4	52.0	B
1 0	16.39	533.7	57.0	495.3	57.3	H	10 0	11.66	552.4	51.4	519.6	51.6	B
2 0	16.97	541.8	57.3	501.8	57.7	H	11 0	10.87	545.3	51.2	523.7	51.3	W
3 0	16.75	548.4	57.7	507.3	58.2	H	12 0	10.68	549.8	50.9	516.3	50.9	W
4 0	15.58	565.1	57.9	505.0	58.5	H							
5 0	13.19	552.7	58.1	517.8	58.7	H	13 0	25 07.67	535.7	50.6	495.6	50.6	W
6 0	12.46	553.1	58.3	525.5	58.7	B	14 0	07.67	534.4	50.4	482.3	50.3	W
7 0	11.93	552.5	58.4	526.8	58.7	B	15 0	05.32	536.8	50.1	490.4	50.0	W
8 0	12.33	551.8	58.4	524.7	58.7	H	16 0	06.46	538.1	49.9	500.9	49.6	W
9 0	09.08	546.5	58.4	529.2	58.3	B	17 0	08.26	524.1	49.6	516.5	49.3	W
10 0	10.50	541.8	58.0	527.2	57.8	B	18 0	09.69	530.2	49.4	511.5	49.1	W
11 0	11.17	540.2	57.6	524.0	57.1	W	19 0	05.97	535.8	49.2	512.5	48.9	B
12 0	05.77	533.5	57.1	532.1	56.5	W	20 0	06.29	528.6	49.0	524.3	48.7	B
							21 0	06.83	522.2	48.8	522.8	48.7	H
18 13 0†	25 02.70	540.9	52.3	445.1	52.0	H	22 0	09.37	521.1	48.8	517.1	48.7	H
14 0†	03.60	522.7	52.1	372.8	51.7	H	23 0	12.98	526.4	48.8	516.1	49.0	H
15 0†	09.32	533.4	51.9	403.5	51.5	H	21 0	16.12	529.5	49.0	519.0	49.4	B
16 0†	20.62	508.3	51.6	363.7	51.2	H		1.0	18.23	529.5	49.5	527.5	50.0
17 0†	10.11	526.7	51.3	379.0	50.7	H	2 0	17.73	536.0	50.1	533.8	50.8	B
18 0†	08.14	527.7	51.0	451.1	50.4	H	3 0	17.29	542.7	50.8	535.4	51.7	H
19 8	08.39	522.6	50.8	495.7	50.1	W	4 0	16.35	545.6	51.5	542.3	52.4	B
20 0	08.19	525.6	50.7	505.1	50.0	W	5 0	13.86	552.6	52.1	545.1	53.1	B
21 0	11.37	529.7	50.6	505.7	50.0	B	6 0	12.18	550.8	52.7	547.4	53.8	W
22 0	11.69	530.7	50.5	497.9	50.0	W	7 0	10.09	551.9	53.1	548.2	54.1	W
23 0	15.22	521.8	50.4	496.7	50.1	W	8 0	10.75	550.5	53.3	539.4	54.1	W
19 0 0	21.01	524.2	50.4	498.4	50.4	W	9 0	11.25	546.6	53.2	530.6	53.9	W
1 0	20.99	522.5	50.5	506.4	50.4	W	10 0	08.85	548.5	53.0	518.1	53.5	W
2 0	19.81	534.7	50.5	518.2	50.5	W	11 0	09.96	541.4	52.7	509.5	53.1	H
3 0	17.46	541.0	50.6	517.0	50.7	W	12 0	08.12	540.1	52.5	499.0	52.7	H
4 0	17.56	547.3	50.8	528.7	50.9	W							
5 0	15.47	544.4	51.0	536.5	51.2	W	13 0	25 09.76	536.0	52.2	488.4	52.3	H
6 0	14.30	547.5	51.0	537.3	51.3	H	14 0	06.73	530.6	51.9	486.4	51.9	H
7 0	13.02	549.0	51.0	537.6	51.2	H	15 0	10.30	536.6	51.6	484.7	51.5	H
8 0	11.74	551.1	51.0	537.2	50.9	H	16 0	07.37	537.2	51.3	497.5	51.1	H
9 0	11.51	543.5	50.8	537.2	50.6	H	17 0	06.56	535.6	51.0	513.6	50.6	H
10 0	10.09	541.9	50.5	537.6	50.3	H	18 0	04.55	534.9	50.7	519.6	50.2	H
11 0	12.11	541.4	50.3	533.1	50.0	B	19 0	03.57	534.8	50.4	522.8	49.9	W
12 0	12.38	542.4	50.0	531.2	49.7	B	20 0	02.62	524.5	50.1	523.7	49.6	W

DECLINATION. Magnet untouched, May 8^d—June 18^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

May 16^d 19^h. The reading of the Balance is doubtful, to the extent of 5 mic. div., owing to an error in reading one of the micrometers.

HOURLY OBSERVATIONS OF MAGNETOMETERS, MAY 21—27, 1845.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Sc. Div.	°	Mic. Div.	°	
21 21 5	25 05.06	528.7	49.9	521.6	49.5	B	24 5 0	25 14.26	543.7	49.7	527.0	49.9	B
22 0	08.36	524.8	49.9	521.9	49.6	W	6 0	12.25	549.2	49.8	527.7	50.0	H
23 0	13.16	522.8	49.9	513.9	49.9	W	7 0	11.05	552.2	49.7	525.6	49.9	W
22 0 0	15.71	527.8	50.0	505.0	50.2	W	8 0	09.66	545.1	49.6	530.1	49.7	W
1 0	18.75	528.8	50.2	507.1	50.4	W	9 0	10.16	543.7	49.5	529.5	49.5	W
2 0	20.69	527.8	50.4	516.0	50.6	W	10 0	11.48	539.3	49.3	525.0	49.3	W
3 0	20.02	542.3	50.7	516.0	51.0	W	11 0	11.88	539.7	49.1	521.1	49.2	H
4 0	17.86	555.3	51.0	527.4	51.5	W	12 0	11.77	538.6	49.0	520.0	49.0	H
5 0	16.13	557.6	51.5	548.8	52.1	W							
6 0	12.25	558.0	51.9	572.5	52.5	W	25 13 0	25 10.67	541.7	48.6	522.1	48.5	B
7 0	11.49	556.5	52.2	571.4	52.7	H	14 0	10.28	541.6	48.4	522.0	48.2	B
8 0	10.98	554.8	52.2	561.5	52.7	H	15 0	10.01	540.8	48.2	523.1	48.0	B
9 0	09.96	549.8	52.1	549.3	52.5	H	16 0	09.73	541.5	48.0	527.2	47.8	B
10 0	02.99	538.6	52.0	534.8	52.1	H	17 0	08.82	540.8	47.8	532.5	47.6	B
11 0	10.43	540.0	51.8	522.0	51.7	B	18 0	07.81	539.4	47.7	532.3	47.3	B
12 0	10.97	542.7	51.5	518.7	51.3	B	19 0	07.76	538.7	47.5	531.5	47.2	H
							20 0	07.57	535.4	47.4	534.2	47.2	H
13 0	25 11.24	541.5	51.2	521.0	50.9	B	21 0	07.22	529.8	47.4	526.9	47.3	W
14 0	11.59	541.0	50.9	523.9	50.5	B	22 0	07.67	524.3	47.4	518.9	47.4	W
15 0	10.81	539.6	50.6	523.2	50.1	B	23 0	10.23	524.8	47.4	516.6	47.4	H
16 0	10.78	537.0	50.3	523.9	49.8	B	26 0 0	14.73	528.4	47.4	514.8	47.4	H
17 0	09.56	538.1	50.0	520.2	49.5	B	1 0	15.14	532.7	47.4	513.8	47.4	H
18 10	06.53	532.6	49.7	521.7	49.2	H	2 0	15.41	536.9	47.4	517.9	47.5	H
19 0	07.27	531.2	49.4	518.6	49.0	H	3 0	15.07	539.6	47.5	521.9	47.6	H
20 0	05.52	530.0	49.2	515.6	48.8	W	4 0	14.26	543.4	47.5	517.5	47.6	H
21 0	05.70	525.6	49.1	517.3	48.7	H	5 0	12.95	543.6	47.5	531.6	47.6	H
22 0	10.07	523.6	49.0	506.8	48.7	H	6 0	12.28	546.1	47.6	532.8	47.6	B
23 0	14.13	528.2	49.0	497.3	49.1	H	7 0	11.93	546.4	47.5	533.7	47.5	B
23 0 0	17.76	531.9	49.2	494.7	49.6	H	8 0	11.79	546.6	47.4	533.1	47.4	B
1 0	17.96	537.1	49.6	489.0	50.0	H	9 0	11.41	545.6	47.3	531.7	47.3	B
2 0	17.76	541.0	50.0	498.9	50.5	H	10 0	10.74	544.3	47.2	530.0	47.2	B
3 4	16.89	545.8	50.5	512.3	51.1	H	11 0	10.48	542.8	47.1	528.4	47.1	W
4 0	15.38	544.2	51.9	523.0	51.5	H	12 0	10.30	542.5	47.0	526.8	47.0	W
5 0	12.45	549.9	51.1	530.0	51.7	B							
6 0	11.41	549.8	51.3	534.4	51.7	B	13 0	25 10.48	543.4	47.0	527.5	47.0	W
7 0	10.74	551.2	51.3	531.0	51.6	B	14 0	10.60	542.8	46.9	527.2	46.9	W
8 0	10.60	548.5	51.2	516.9	51.4	B	15 0	10.54	543.1	46.9	528.6	46.9	W
9 0	10.47	547.8	51.1	523.3	51.2	B	16 0	09.96	542.2	46.8	529.8	46.8	W
10 0	11.07	548.8	50.9	517.4	50.9	W	17 0	09.32	541.8	46.8	531.5	46.8	W
11 0	10.00	547.1	50.7	513.6	50.6	W	18 0	08.26	541.6	46.7	534.6	46.7	W
12 0	11.41	543.3	50.5	513.9	50.3	W	19 0	07.72	541.3	46.7	534.9	46.7	B
							20 0	07.31	537.6	46.7	533.8	46.7	B
13 0	25 11.34	542.3	50.3	515.4	50.0	W	21 0	07.82	532.3	46.7	528.5	46.7	H
14 0	10.92	539.5	50.0	519.5	49.7	W	22 0	08.38	529.2	46.7	529.6	46.9	H
15 0	10.74	538.5	49.8	522.5	49.5	W	23 0	11.49	526.6	46.9	524.5	47.2	H
16 0	09.89	538.8	49.6	526.1	49.3	W	27 0 0	13.69	530.6	47.1	512.5	47.5	B
17 0	08.53	539.2	49.3	528.4	49.0	W	1 0	14.84	533.1	47.3	503.9	47.7	H
18 0	07.64	537.1	49.1	529.9	48.8	W	2 0	15.94	536.3	47.6	512.8	48.0	B
19 0	06.03	533.4	48.9	528.9	48.5	B	3 0	16.32	540.7	47.8	520.1	48.3	H
20 0	04.02	520.8	48.7	536.0	48.4	B	4 0	15.45	543.1	48.0	531.2	48.5	H
21 0	11.30	511.3	48.6	532.0	48.4	H	5 0	14.50	545.0	48.1	531.7	48.5	B
22 0	14.46	514.8	48.5	528.0	48.4	H	6 0	12.72	549.7	48.3	531.5	48.6	W
23 0	14.96	522.4	48.5	521.6	48.4	B	7 0	11.28	550.7	48.3	535.1	48.7	W
24 0 0	17.17	530.1	48.6	505.5	48.6	H	8 0	10.70	549.6	48.3	537.2	48.6	W
1 0	18.40	532.1	48.8	498.5	48.9	H	9 0	10.67	547.5	48.2	532.2	48.4	W
2 0	17.74	538.3	48.9	498.2	49.2	H	10 0	11.05	544.8	48.0	528.3	48.2	W
3 0	16.15	534.6	49.0	507.6	49.5	H	11 0	10.85	543.7	47.9	526.2	48.0	H
4 0	15.41	537.4	49.4	525.1	49.8	B	12 0	10.56	542.9	47.8	523.9	47.8	H

DECLINATION. Magnet untouched, May 8^a—June 18^a.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.									
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			d.	h.	m.	°	'	Sc. Div.	°									
d.	h.	m.	°	'	Sc. Div.	°	Mic. Div.	°	'	Sc. Div.	°	Mic. Div.	°										
27	13	0	25	10-16	541-6	47-6	524-0	47-6	H	29	21	0	25	08-18	531-5	49-0	507-5	48-9	H				
					10-58	542-8	47-4	523-8	H						525-0	49-0	504-8	49-2	H				
	14	0			09-89	542-1	47-2	525-4	H						523-4	49-2	497-9	49-7	H				
	15	0			09-47	542-8	47-0	526-6	H						529-4	49-8	500-6	50-5	H				
	16	0			08-52	542-9	46-9	530-3	H						537-4	50-4	499-4	51-3	H				
	17	0			07-40	542-4	46-7	528-4	H						542-9	51-2	496-2	52-2	H				
	18	0			06-98	542-8	46-6	527-4	W						540-6	52-0	496-8	53-0	H				
	19	0			06-91	537-6	46-5	531-5	W						542-3	52-7	502-3	54-0	H				
	20	0			07-31	534-6	46-5	529-2	B						541-8	53-3	509-8	54-5	H				
	21	0			08-68	530-1	46-6	525-9	W						554-1	53-7	511-3	54-8	W				
	22	0			11-71	528-9	46-8	518-4	W						565-2	53-9	513-1	54-8	W				
28	0	0	13-77	529-6	47-2	506-2	47-6	W						07-60	557-2	54-0	537-7	54-8	W				
	1	0	14-98	536-6	47-7	504-5	48-3	W						07-62	547-6	54-0	540-2	54-6	W				
	2	0	15-29	539-0	48-3	513-7	49-0	W						10	0	10-36	542-0	53-8	530-4	54-2	W		
	3	0	15-09	541-8	48-9	516-2	49-7	W						11	0	07-13	534-3	53-5	522-4	54-0	B		
	4	0	14-06	545-4	49-6	522-2	50-3	W						12	0	03-70	530-8	53-3	508-4	53-7	B		
	5	0	12-51	548-3	50-2	524-2	51-0	W															
	6	0	10-53	551-8	50-8	527-4	51-6	H						13	0	25	05-27	533-0	53-0	490-2	53-5	D	
	7	0	09-35	551-7	51-2	528-6	51-7	H						14	0		05-45	536-6	52-8	461-6	53-3	D	
	8	0	10-09	551-5	51-3	525-6	51-7	H						15	0		02-82	535-7	52-6	444-4	53-0	D	
	9	0	10-54	551-2	51-2	521-9	51-5	H						16	0		03-81	534-2	52-4	455-0	52-6	D	
	10	0	10-53	548-3	51-0	517-9	51-1	H						17	0		10-53	530-3	52-2	472-8	52-3	D	
	11	0	11-17	546-9	50-7	514-0	50-6	B						18	0		03-87	540-8	52-0	458-0	52-0	H	
	12	0	11-46	546-5	50-4	509-5	50-2	B						19	0		04-14	540-9	51-9	479-9	52-0	H	
														20	0		04-91	524-6	51-8	488-5	52-0	H	
	13	0	25	10-63	544-4	50-0	508-4	49-8	B					21	0		13-57	516-5	51-8	491-1	52-2	H	
	14	0		10-54	542-8	49-7	509-7	49-4	B					22	0		14-98	523-6	51-9	476-8	52-4	W	
	15	0		10-20	541-5	49-4	511-7	49-0	B					23	0		18-14	527-7	52-2	471-6	52-9	W	
	16	0		09-67	541-6	49-1	514-8	48-6	B					31	0	0	20-09	517-7	52-7	481-1	53-6	W	
	17	0		07-94	542-1	48-8	519-6	48-3	B					1	0		24-55	523-7	53-2	486-3	54-5	H	
	18	0		07-49	542-7	48-5	519-8	48-0	B					2	0		29-93	531-5	54-0	500-6	55-5	H	
	19	0		07-32	542-0	48-2	518-4	47-7	H					3	0		31-52	534-6	55-0	520-8	56-6	H	
	20	0		07-07	538-4	48-0	518-5	47-5	H					4	0		24-73	539-1	56-1	546-1	57-7	B	
	21	0		07-24	532-8	47-9	516-7	47-5	W					5	0		17-06	545-7	57-0	548-4	58-5	B	
	22	0		08-45	529-7	47-8	507-0	47-5	H					6	0		14-40	544-2	57-7	544-0	59-0	D	
	23	0		10-25	532-8	47-8	497-7	47-7	H					7	0		11-96	539-6	58-3	543-2	59-5	D	
29	0	0	13-52	531-5	47-9	492-6	48-0	H						8	0		11-39	544-4	58-6	524-7	59-7	W	
	1	0	16-12	533-4	48-2	490-0	48-5	H						9	0		09-66	546-3	58-8	525-5	59-8	B	
	2	0	17-94	536-1	48-6	492-4	49-1	H						10	0		10-92	544-8	58-7	524-9	59-7	W	
	3	0	17-39	541-5	49-1	499-9	49-7	H						11	0		11-44	547-0	58-3	511-9	59-0	B	
	4	0	15-12	545-4	49-8	515-1	50-5	H						12	0		10-25	537-4	57-9	480-6	58-3	B	
	5	0	13-25	549-5	50-3	523-3	51-0	H															
	6	0	11-17	551-2	50-8	526-5	51-5	B						1	13	0	25	11-64	541-6	58-0	505-7	58-3	W
	7	0	10-16	551-4	51-1	522-8	51-8	B						14	0		11-14	540-4	57-8	505-8	58-0	W	
	8	0	10-83	552-1	51-3	517-2	51-8	B						15	0		10-09	538-8	57-6	507-6	57-8	W	
	9	0	11-24	550-1	51-3	514-9	51-6	B						16	0		10-23	536-9	57-4	509-7	57-6	W	
	10	0	10-21	550-5	51-1	511-3	51-3	B						17	0		08-79	537-2	57-2	515-2	57-3	W	
	11	0	11-14	544-4	50-9	511-5	51-0	W						18	0		08-66	538-1	57-0	506-7	57-1	W	
	12	0	10-98	543-9	50-7	507-4	50-6	W						19	0		09-96	537-6	56-9	508-9	57-0	B	
														20	0		06-06	536-9	56-8	506-8	56-8		
	13	0	25	13-56	544-8	50-4	497-3	50-3	W					21	0		07-81	534-3	56-7	506-7	56-9	H	
	14	0	09-89	544-5	50-1	491-8	50-0	W						22	0		09-67	531-5	56-8	505-8	57-3	H	
	15	0	05-89	535-9	49-9	487-2	49-7	W						23	0		11-64	530-6	57-2	505-0	57-7	H	
	16	0	04-34	538-4	49-7	497-2	49-4	W						2	0	0	14-94	537-4	57-7	498-0	58-3	H	
	17	0	04-35	540-6	49-4	506-6	49-1	W						1	0		16-82	543-3	58-2	488-6	59-0	H	
	18	0	03-87	540-0	49-2	509-7	49-0	W						2	0		16-18	543-6	58-7	494-0	59-4	B	
	19	0	04-19	539-9	49-1	510-0	48-9	B						3	0		15-47	543-0	59-1	500-3	59-9	B	
	20	0	05-82	537-0	49-0	523-7	48-8	B						4	0		14-20	547-9	59-5	503-3	60-4	H	

DECLINATION. Magnet untouched, May 8^d—June 18^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.May 30^d 10^h—31^d 10^h. Term-Day Observations made.

HOURLY OBSERVATIONS OF MAGNETOMETERS, JUNE 2—6, 1845.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	
2 5 0	25 13-03	541-7	59.9	515-3	60-6	B	4 13 0	25 11-49	538-7	55-2	484-9	55-1	W
6 0	11-77	541-8	60-0	517-8	60-8	W	14 0	08-53	536-2	54-9	492-7	54-7	W
7 0	10-54	546-6	60-1	519-9	60-8	W	15 0	10-16	535-4	54-6	505-9	54-2	W
8 0	10-83	545-3	60-2	518-0	60-9	W	16 0	11-84	538-2	54-2	512-5	53-8	W
9 0	10-65	543-3	60-2	518-6	61-0	W	17 0	07-82	538-0	53-9	525-0	53-5	W
10 0	10-58	542-0	60-1	516-4	60-6	W	18 0	04-71	537-4	53-7	535-0	53-2	W
11 0	10-03	543-8	59-8	508-1	60-0	H	19 0	05-70	535-8	53-4	536-2	52-8	B
12 0	11-03	541-5	59-4	514-1	59-5	H	20 0	06-61	533-4	53-1	536-6	52-7	B
							21 0	05-92	521-4	52-9	527-4	52-7	H
13 0	25 10-03	540-7	58-9	506-6	58-9	H	22 0	12-33	524-0	52-8	520-4	52-7	H
14 0	10-50	537-7	58-4	509-1	58-3	H	23 0	13-32	528-9	52-8	514-3	52-9	H
15 0	11-19	537-9	58-0	510-4	57-7	H	5 0 0	15-34	534-0	53-0	506-0	53-2	H
16 0	09-98	536-6	57-6	513-2	57-1	H	1 0	17-93	539-6	53-3	507-8	53-7	B
17 0	09-35	536-3	57-2	518-6	56-5	H	2 0	17-12	545-3	53-7	511-4	54-5	H
18 0	08-31	535-5	56-8	521-5	56-2	H	3 0	17-49	547-0	54-4	512-0	55-5	H
19 0	06-48	536-5	56-5	525-0	56-0	W	4 0	16-35	544-1	55-2	516-8	56-2	H
20 0	07-07	532-4	56-3	523-9	55-8	W	5 0	14-46	552-7	55-8	522-9	56-6	H
21 5	08-45	530-1	56-1	520-4	55-9	B	6 0	13-70	550-6	56-3	531-0	57-0	W
22 0	09-84	529-9	56-1	510-3	56-3	W	7 0	12-01	545-6	56-6	528-7	57-4	W
23 0	11-00	525-6	56-3	492-0	56-7	W	8 0	11-68	546-7	56-8	522-3	57-7	W
3 0 0	14-01	528-4	56-7	485-5	57-2	W	9 0	10-67	546-6	57-0	514-0	57-9	W
1 0	17-24	536-7	57-2	491-3	57-8	W	10 0	10-18	549-7	57-2	508-1	58-0	W
2 2	16-95	545-2	57-7	499-1	58-3	W	11 0	09-22	544-6	57-2	510-3	58-0	H
3 0	15-98	550-7	58-2	507-0	58-8	W	12 0	09-76	544-9	57-3	510-8	58-1	H
4 0	14-71	547-4	58-7	521-4	59-3	W							
5 0	12-73	544-2	59-0	526-2	59-7	W	13 0	25 09-73	546-6	57-3	500-8	58-0	H
6 0	10-83	543-3	59-2	519-2	59-8	H	14 0	09-86	546-3	57-2	503-0	57-6	H
7 0	10-45	543-8	59-3	513-7	59-8	H	15 0	09-19	543-9	57-0	492-4	57-2	H
8 0	10-90	543-1	59-2	504-2	59-7	H	16 0	07-74	534-1	56-7	502-0	56-7	H
9 0	10-83	543-5	59-0	502-2	59-5	H	17 0	05-65	541-8	56-4	501-4	56-3	H
10 0	11-10	545-1	58-7	497-2	58-9	H	18 0	05-45	539-7	56-1	507-8	56-0	H
11 0	11-22	544-0	58-4	497-9	58-3	B	19 0	05-43	539-3	56-0	514-2	55-9	W
12 0	11-03	543-3	58-0	500-0	57-7	B	20 0	05-35	535-3	56-0	519-3	56-1	W
							21 0	05-60	527-6	56-0	523-4	56-4	B
13 0	25 10-74	542-1	57-6	502-9	57-1	B	22 0	07-07	525-3	56-2	517-9	56-7	W
14 0	11-10	540-7	57-1	506-1	56-5	B	23 0	10-67	526-0	56-5	512-2	57-0	W
15 0	10-95	540-8	56-6	507-2	55-8	B	6 0 0	15-20	528-3	56-8	501-1	57-4	W
16 0	11-03	540-0	56-1	512-2	55-2	B	1 0	17-51	530-1	57-1	492-3	57-8	W
17 0	12-51	536-7	55-6	512-2	54-6	B	2 0	18-01	535-7	57-4	493-6	58-0	W
18 0	10-98	537-6	55-2	506-4	54-3	B	3 0	18-74	539-3	57-6	495-4	58-2	W
19 30	04-61	537-9	54-9	515-2	54-2	H	4 0	17-60	548-3	57-8	495-1	58-4	W
20 0	04-71	537-9	54-8	517-6	54-2	H	5 0	15-32	546-2	58-0	507-9	58-6	W
21 0	06-06	534-8	54-7	526-9	54-2	W	6 0	12-65	552-2	58-2	513-8	58-8	H
22 0	09-06	534-1	54-7	525-9	54-4	H	7 0	11-27	550-3	58-2	515-7	58-7	H
23 0	15-25	535-7	54-7	512-4	54-7	H	8 0	10-83	552-7	58-1	514-4	58-5	H
4 0 0	20-15	534-7	54-8	501-3	55-2	H	9 0	10-27	548-6	58-0	513-5	58-4	H
1 0	22-15	550-3	55-0	497-4	55-7	H	10 0	10-28	551-1	57-8	505-6	58-2	H
2 0	15-12	535-4	55-4	511-1	56-2	H	11 0	10-80	545-9	57-6	503-8	57-8	B
3 0	19-24	558-3	55-8	520-8	56-5	H	12 0	10-45	550-8	57-4	499-7	57-4	B
4 0 †	19-51	533-7	56-0	553-1	56-6	H							
5 0 †	17-12	547-9	56-2	571-8	56-7	H	13 0	25 09-02	548-6	57-1	500-5	57-0	B
6 0	15-31	554-4	56-2	580-0	56-7	B	14 0	08-46	545-9	56-9	504-3	56-7	B
7 0	12-35	543-5	56-3	578-1	56-7	B	15 0	08-03	545-0	56-6	506-1	56-4	B
8 0	12-26	546-3	56-4	565-6	56-8	B	16 0	06-83	544-4	56-3	511-0	56-0	B
9 0	12-11	547-8	56-4	549-5	56-8	B	17 0	06-39	543-2	56-0	515-6	55-7	B
10 0	08-32	541-6	56-2	538-2	56-4	B	18 0	04-42	539-3	55-8	519-4	55-5	B
11 0	09-46	547-0	56-0	516-6	56-0	W	19 0	04-37	533-8	55-6	525-1	55-4	H
12 0	08-99	533-6	55-6	500-7	55-5	W	20 0	04-41	530-9	55-4	529-9	55-3	H

DECLINATION. Magnet untouched, May 8^d—June 18^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Mic. Div.	°	Mic. Div.	°	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	W	d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		
6 21 0	25 05.42	525.9	55.4	524.5	55.5		10 5 0	25 15.58	552.3	60.8	481.0	61.9	H	
22 0	08.72	523.6	55.5	515.3	55.8	H	6 0	13.63	553.6	61.4	496.3	62.5	B	
23 0	14.24	523.5	55.7	505.9	56.2	H	7 0	12.01	565.4	61.9	506.7	62.8	B	
7 0 0	17.54	528.1	56.2	491.6	56.8	H	8 0†	07.05	560.1	62.2	536.6	63.0	B	
1 0	19.95	537.1	56.8	483.0	57.7	H	9 0	11.34	547.9	62.3	536.8	63.0	B	
2 0	20.83	540.9	57.6	486.4	58.7	H	10 0	11.61	549.8	62.3	522.0	63.0	B	
3 2	20.33	547.3	58.4	485.3	59.7	H	11 0	11.48	549.7	62.3	508.2	62.9	W	
4 0	18.13	548.7	59.2	491.0	60.5	H	12 0	09.73	546.0	62.2	504.1	62.7	W	
5 0	15.98	548.7	59.8	498.2	61.0	H								
6 0	13.74	551.2	60.2	502.7	61.2	B	13 0	25 10.36	542.1	62.0	501.6	62.4	W	
7 0	12.26	554.0	60.6	510.1	61.4	B	14 0	10.25	541.2	61.7	505.6	62.0	W	
8 0	11.37	553.9	60.7	510.2	61.4	B	15 0	09.79	540.3	61.5	502.8	61.7	W	
9 0	10.92	550.9	60.7	511.2	61.3	B	16 0	08.21	541.3	61.2	504.3	61.4	W	
10 0	11.82	546.0	60.6	504.1	61.0	B	17 0	07.42	543.2	61.0	509.8	61.1	W	
11 0	08.88	543.3	60.4	502.1	60.8	W	18 4	07.89	539.7	60.7	513.1	60.8	W	
12 0	09.46	541.6	60.1	501.1	60.5	W	19 0	08.48	538.0	60.7	515.2	60.7	B	
							20 5	09.54	532.1	60.7	513.0	60.9	B	
8 13 0†	25 07.78	539.9	57.2	479.5	56.8	H	21 0	12.15	529.3	60.8	508.3	61.2	H	
14 0	05.22	531.0	56.8	475.6	56.3	H	22 0	16.43	527.7	61.0	504.9	61.5	H	
15 0	05.89	537.4	56.3	482.8	55.8	H	23 0	13.29	526.8	61.5	502.3	62.2	H	
16 0	05.25	538.5	55.9	480.7	55.3	H	11 0 0	16.16	528.4	62.0	484.3	62.8	B	
17 0	03.65	538.4	55.6	490.1	55.1	H	1 0	15.94	533.7	62.6	473.1	63.5	H	
18 0	02.66	537.2	55.4	494.6	55.0	H	2 0	17.53	538.5	63.3	481.2	64.3	B	
19 0	03.16	536.9	55.4	498.0	55.0	W	3 0	18.58	541.4	64.0	487.5	65.2	B	
20 0	04.10	537.2	55.3	495.8	55.0	W	4 0	17.29	554.3	64.9	497.6	66.2	B	
21 0	07.05	530.3	55.4	487.2	55.2	B	5 0	18.10	544.2	65.8	525.5	67.0	B	
22 0	08.92	523.9	55.4	486.9	55.5	W	6 0	15.94	542.0	66.6	534.3	67.7	W	
23 0	13.52	522.5	55.6	487.4	55.8	W	7 0	12.48	549.2	67.0	533.5	67.9	W	
9 0 0	16.21	528.7	55.8	486.1	56.2	W	8 0	11.82	548.7	67.6	527.2	68.3	W	
1 0	20.22	533.0	56.0	484.6	56.5	W	9 3	10.80	546.8	68.1	521.8	69.5	W	
2 0	21.97	538.1	56.4	486.5	56.8	W	10 0	10.74	543.9	68.4	516.6	69.5	W	
3 0	19.86	543.3	56.7	493.7	57.1	W	11 0	11.10	543.0	68.4	499.6	68.7	H	
4 0	16.97	544.4	56.8	511.0	57.2	W	12 0	11.08	541.8	68.2	496.0	68.2	H	
5 0	16.15	553.7	56.9	531.2	57.2	W								
6 0	13.83	558.6	56.9	539.9	57.2	H	13 0	25 10.61	539.9	67.8	494.6	67.9	H	
7 0	14.06	560.1	56.8	535.3	57.2	H	14 0	11.64	540.5	67.2	493.7	67.5	H	
8 0	12.72	554.6	56.8	535.5	57.2	H	15 0	11.51	538.4	66.7	494.9	66.7	H	
9 0	12.63	552.6	56.8	534.5	57.1	H	16 0	08.50	536.1	66.1	504.8	66.0	H	
10 0	12.18	546.6	56.7	525.7	57.0	H	17 0	06.23	534.5	65.7	514.7	65.2	H	
11 0	11.30	545.0	56.7	519.1	56.9	B	18 0	05.42	532.7	65.2	520.7	64.7	H	
12 0	08.85	545.1	56.6	503.8	56.8	B	19 0	04.81	530.9	64.9	523.1	64.3	W	
							20 0	04.86	529.3	64.6	522.6	64.0	W	
13 0	25 08.39	541.9	56.5	505.6	56.7	B	21 5	05.50	529.0	64.3	514.7	63.8	B	
14 0	08.68	546.1	56.4	504.8	56.5	B	22 0	08.06	527.3	64.3	499.5	64.0	W	
15 0	09.44	547.2	56.3	504.2	56.4	B	23 0	12.67	517.7	64.3	497.4	64.5	W	
16 0	07.64	545.8	56.2	508.9	56.3	B	12 0 0	18.47	516.7	64.7	495.2	65.3	W	
17 0	07.84	547.3	56.1	509.6	56.2	B	1 0	18.84	527.2	65.5	487.9	66.6	W	
18 0	05.76	543.0	56.0	509.6	56.2	B	2 0	17.80	530.8	66.6	483.5	67.9	W	
19 0	03.95	540.3	56.0	509.5	56.3	H	3 0	16.79	543.1	67.8	479.8	69.3	W	
20 0	05.29	536.2	56.1	507.7	56.5	H	4 0	17.37	546.0	69.0	483.6	70.5	W	
21 0	05.69	534.0	56.4	505.6	56.9	W	5 0	14.91	539.2	70.2	483.7	71.6	W	
22 0	07.64	528.7	56.7	502.1	57.3	H	6 0	13.05	543.3	71.1	484.6	72.3	H	
23 0	12.06	530.4	57.1	493.5	57.8	H	7 0	11.52	548.2	71.8	485.0	73.0	H	
10 0 0	15.27	532.4	57.6	490.0	58.3	H	8 0	11.44	547.8	72.3	496.3	73.5	H	
1 0	18.03	537.1	58.1	485.6	59.0	H	9 0	10.83	549.1	73.0	501.4	74.4	H	
2 0	19.71	537.4	58.8	470.7	59.7	H	10 0	10.98	544.4	73.0	500.5	74.0	H	
3 0	19.31	544.4	59.5	458.8	60.5	H	11 0	10.97	542.2	72.8	494.8	73.4	B	
4 0	17.06	545.7	60.2	467.7	61.2	H	12 0	10.54	540.1	72.4	495.3	72.7	B	

DECLINATION. Magnet untouched, May 8^d—June 18^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		
12	25 10:68	538.7	71.8	491.6	71.8	B	15 21 10	25 06:03	529.1	63.4	528.8	63.0	W		
	14 0	538.2	71.1	479.2	70.9	B	22 0	08:01	529.7	63.2	520.2	63.0	H		
	15 0	531.7	70.5	489.8	70.0	B	23 0	12:49	528.5	63.3	513.5	63.3	H		
	16 0	533.1	69.9	501.0	69.1	B	16 0 0	15:52	533.9	63.4	509.8	63.5	H		
	17 0	533.9	69.3	512.4	68.5	B	1 0	17:53	537.2	63.5	491.3	63.7	H		
	18 0	534.3	68.8	522.4	68.0	B	2 0	17:51	537.9	63.7	496.5	64.0	H		
	19 0	533.1	68.6	525.4	67.8	H	3 0	17:54	540.2	64.0	507.0	64.2	H		
	20 0	530.4	68.4	529.7	67.7	H	4 0	14:67	542.0	64.2	512.4	64.5	H		
	21 0	528.2	68.2	538.3	67.7	W	5 0	13:36	543.8	64.3	521.4	64.7	H		
	22 0	524.5	68.0	530.1	67.9	H	6 0	11:64	546.5	64.6	526.6	65.0	B		
	23 0	522.1	68.2	521.4	68.7	H	7 0	10:53	548.8	64.7	519.4	65.0	B		
	0 0	522.0	68.6	493.0	69.2	H	8 0	11:10	548.2	64.7	519.4	65.0	B		
	1 0	528.7	69.0	484.3	69.8	H	9 0	11:17	548.6	64.7	519.0	64.9	B		
	2 0	532.5	69.7	490.8	70.8	H	10 0	11:71	551.1	64.6	516.5	64.7	B		
	3 0	534.7	70.5	487.1	71.7	H	11 0	11:37	547.3	64.4	515.4	64.5	W		
	4 0	538.7	71.4	485.4	72.6	H	12 0	12:16	546.4	64.2	514.0	64.3	W		
	5 0	542.1	72.2	487.9	73.2	H									
	6 0	546.3	72.9	491.0	73.6	H	13 0	25 10:40	544.5	64.0	512.1	64.0	W		
	7 0	545.5	73.4	493.9	73.9	B	14 0	11:25	544.9	63.8	505.3	63.7	W		
	8 0	546.1	73.7	491.7	74.2	B	15 0	08:18	539.1	63.6	511.6	63.4	W		
	9 0	544.8	74.0	487.6	75.0	B	16 0	08:77	538.3	63.4	518.4	63.1	W		
	10 0	543.4	73.9	487.6	74.4	B	17 0	07:24	537.4	63.1	523.2	62.8	W		
	11 0	542.5	73.7	486.1	74.0	W	18 0	07:27	536.1	62.8	525.2	62.5	W		
	12 5	541.5	73.2	483.5	73.2	W	19 0	07:81	533.3	62.6	527.1	62.2	B		
							20 0	08:05	527.9	62.4	526.2	62.0	B		
13	25 10:88	539.6	72.6	485.1	72.5	W	21 0	08:92	527.2	62.3	525.2	62.2	H		
	14 0	537.6	72.0	489.1	71.5	W	22 0	09:46	523.2	62.3	519.4	62.5	H		
	15 0	536.4	71.3	495.5	70.6	W	23 0	12:92	528.7	62.7	517.1	63.1	H		
	16 0	535.5	70.7	502.7	69.7	W	17 0 0	15:54	534.4	63.0	505.6	63.6	H		
	17 0	534.3	70.0	510.2	69.0	W		1 0	16:48	538.7	63.5	502.6	64.0	H	
	18 0	532.6	69.4	518.7	68.2	W		2 0	16:48	539.8	63.9	509.9	64.5	B	
	19 0	531.3	68.8	517.9	67.4	B		3 0	15:14	540.5	64.0	504.0	64.6	H	
	20 0	529.5	68.4	518.5	67.4	B		4 0	13:79	541.0	64.2	509.3	64.7	H	
	21 0	528.3	68.1	511.2	67.5	H		5 0	12:20	545.0	64.3	517.1	64.7	H	
	22 0	527.1	68.0	509.9	67.7	H		6 0	10:80	543.8	64.5	526.6	65.0	W	
	23 0	526.4	68.2	495.2	68.2	H		7 0	10:13	546.1	64.6	528.7	65.0	W	
14	19:17	533.8	68.4	474.1	68.6	H	8 0	09:76	549.9	64.6	532.3	65.0	W		
	1 0	538.5	68.8	479.5	69.2	H	9 0	11:00	548.6	64.6	530.0	64.8	W		
	2 0	545.7	69.3	487.6	69.8	H	10 0	10:41	545.3	64.4	527.2	64.7	W		
	3 0	543.5	69.9	494.0	70.5	H	11 0	11:51	541.6	64.2	523.5	64.5	H		
	4 0	545.1	70.5	489.4	71.2	H	12 0	11:19	540.0	64.0	520.1	64.0	H		
	5 0	544.0	71.1	488.8	71.6	H									
	6 0	546.3	71.5	488.5	71.8	W	13 0	25 10:83	539.4	63.7	519.7	63.6	H		
	7 0	548.5	71.7	488.9	72.0	W	14 0	10:60	538.5	63.4	520.0	63.2	H		
	8 0	552.6	71.8	487.1	71.9	W	15 0	09:94	538.4	63.1	520.7	62.8	H		
	9 0	552.2	71.7	492.4	71.4	W	16 0	08:45	535.4	62.8	527.4	62.5	H		
	10 0	546.7	71.3	497.2	70.8	W	17 0	08:06	536.0	62.4	528.7	62.0	H		
	11 0	539.7	70.8	491.7	70.2	H	18 0	05:45	533.4	62.0	534.2	61.5	H		
	12 0	538.8	70.4	484.4	69.6	H	19 0	04:31	531.5	61.8	536.9	61.2	W		
							20 0	04:48	528.8	61.6	542.7	61.0	W		
15	13 0	25 10:75	540.4	65.7	510.8	65.3	D	21 0	04:78	525.4	61.3	542.0	60.7	B	
	14 0	540.1	65.4	510.5	65.0	D	22 0	07:54	521.1	61.0	536.4	60.5	W		
	15 0	539.0	65.1	517.7	64.7	D	23 0	10:31	522.8	60.8	524.6	60.3	W		
	16 0	538.7	64.7	521.9	64.4	D	18 0 0	13:86	525.9	60.7	517.5	60.3	W		
	17 0	537.8	64.4	524.4	64.0	D		1 0	15:31	534.7	60.6	513.3	60.3	W	
	18 0	537.2	64.1	528.2	63.6	D		2 0	15:45	540.5	60.6	501.0	60.5	W	
	19 0	533.8	63.8	533.7	63.2	H		3 0	15:31	540.8	60.7	505.7	61.0	W	
	20 0	531.4	63.6	532.4	63.0	H		4 0	13:44	542.9	61.2	515.5	61.7	W	

DECLINATION. Torsion removed, June 18^d 2¹^h, +1²^o. Effect of +10° of torsion = -0'84.BIFILAR. Observed 2^m after the Declination, k=0.000140.BALANCE. Observed 3^m after the Declination, k=0.000010.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.	
		• Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
		d. h. m.	° '	Sc. Div.	° '	Mic. Div.	° '	d. h. m.	° '	Sc. Div.	° '	Mic. Div.	° '	Observer's Initial.	
18	5 0	25	11.74	543.1	61.7	527.3	62.2	W	20 13 0	25 09.80	543.3	65.8	472.8	65.8	H
	6 0	11.21	546.6	62.0	527.0	62.7	H	14 0	09.62	541.7	65.3	475.0	65.2	H	
	7 0	11.05	549.2	62.3	524.4	63.0	H	15 0	11.22	540.8	64.9	476.8	64.5	H	
	8 0	10.92	550.7	62.3	520.2	63.0	H	16 0	07.27	540.9	64.4	481.6	64.0	H	
	9 0	10.63	549.4	62.5	520.0	63.0	H	17 0	05.32	539.1	63.9	488.5	63.5	H	
	10 0	10.63	547.9	62.6	502.4	62.9	W	18 0	03.65	538.9	63.5	490.9	63.0	H	
	11 0	10.14	546.9	62.6	499.1	62.9	W	19 0	02.84	536.7	63.2	491.1	62.8	W	
	12 0	10.11	546.1	62.5	497.6	62.9	W	20 0	04.22	530.8	63.0	490.7	62.7	W	
								21 0	04.76	523.8	62.9	486.7	62.7	W	
	13 0	25	10.23	545.3	62.3	495.2	62.7	D	22 0	08.72	521.8	62.9	481.6	62.7	W
	14 0	10.16	546.0	62.2	490.3	62.5	D	23 0	16.38	524.8	62.8	469.9	62.7	W	
19	0 0	09.87	543.6	62.1	489.5	62.4	D	21 0 0	19.84	529.2	62.8	462.7	62.8	W	
	1 0	09.49	544.0	61.8	489.0	62.0	D	1 0	21.26	535.8	62.9	470.0	63.0	W	
	2 0	08.14	543.1	61.5	492.0	61.7	H	2 0	20.62	539.7	63.1	469.5	63.5	W	
	3 0	05.89	537.9	61.2	494.9	61.2	H	3 0	20.58	546.8	63.6	475.6	64.2	W	
	4 0	04.89	536.2	61.0	497.0	60.9	H	4 0	19.10	549.2	64.3	485.1	65.0	W	
	5 0	05.32	533.7	60.8	495.4	60.7	H	5 0	16.06	547.1	65.0	493.1	65.8	W	
	6 0	06.37	528.0	60.6	491.9	60.5	H	6 0	14.08	553.5	65.7	492.8	66.5	H	
	7 0	08.79	526.0	60.6	488.8	60.7	W	7 0	09.60	552.8	66.3	492.9	67.0	H	
	8 0	12.33	524.1	60.6	486.5	61.0	W	8 0	12.11	552.9	66.8	491.9	67.5	H	
	9 0	16.75	529.7	60.8	478.7	61.5	W	9 0	11.61	549.3	67.2	486.1	67.7	H	
	1 0	17.61	537.8	61.0	471.6	61.8	H	10 0	12.04	547.1	67.2	480.3	67.5	H	
	2 0	19.05	543.0	61.3	468.6	62.3	H	11 0	09.77	544.1	67.0	475.1	67.0	W	
20	3 0	18.52	543.0	61.8	473.7	62.8	H	12 0	08.92	540.6	66.6	477.2	66.5	W	
	4 0	16.33	544.5	62.3	483.3	63.4	C								
	5 0	14.55	547.8	62.8	492.6	63.9	C	22 13 0	25 09.42	540.4	62.9	487.0	62.2	W	
	6 0	11.35	548.5	63.0	493.2	64.0	C	14 0	10.47	539.8	62.3	491.5	61.4	W	
	7 0	10.65	549.5	63.1	501.0	64.1	C	15 0	09.05	538.5	61.7	495.7	60.6	W	
	8 0	11.17	549.0	63.3	489.9	63.9	D	16 0	08.95	539.0	61.0	502.2	59.8	W	
	9 0	10.63	546.9	63.3	494.1	64.6	C	17 4	07.14	539.3	60.3	509.7	59.0	W	
	10 0	10.47	545.8	63.3	488.1	64.3	H	18 0	05.53	536.2	59.8	518.0	58.5	W	
	11 0	10.33	545.7	63.3	485.1	63.8	W	19 0	04.98	532.8	59.5	525.1	58.3	H	
	12 0	10.25	545.7	62.9	483.7	63.3	W	20 0	05.89	529.2	59.2	515.2	58.2	H	
								21 0	07.24	526.3	59.0	518.7	58.3	H	
13	0 0	25 09.91	546.4	62.5	483.5	62.6	W	22 0	10.11	523.3	58.9	510.1	58.5	H	
	1 0	09.89	543.9	62.0	486.8	61.8	W	23 0	11.22	524.1	59.0	492.9	59.0	H	
	2 0	12.43	544.9	61.5	487.8	61.0	W	23 0 0	15.64	529.2	59.2	488.1	59.5	H	
	3 0	08.61	543.1	61.0	487.7	60.5	W	1 0	18.01	539.0	59.7	495.0	60.3	H	
	4 0	07.38	541.0	60.5	488.3	60.0	W	2 0	18.37	542.0	60.3	489.5	61.2	H	
	5 0	03.94	540.1	60.1	486.9	59.5	W	3 0	18.03	550.5	61.0	502.6	62.2	H	
	6 0	02.97	533.9	59.8	493.1	59.3	H	4 0	16.52	554.6	61.8	502.2	62.8	H	
	7 0	06.32	531.4	59.6	492.6	59.2	H	5 0	15.58	553.9	62.4	508.1	63.5	H	
	8 0	06.61	530.7	59.5	500.7	59.2	H	6 0	14.21	550.8	62.9	513.2	63.8	W	
	9 0	10.14	523.6	59.5	498.0	59.7	H	7 0	12.72	546.0	63.2	523.2	64.0	W	
	10 0	12.58	521.3	59.8	491.4	60.2	H	8 0	12.58	551.1	63.4	520.9	64.1	W	
20	0 0	15.20	524.0	60.3	484.4	61.0	H	9 0	11.91	550.2	63.5	517.7	64.3	W	
	1 0	18.13	532.7	61.0	491.4	62.0	H	10 0	11.62	547.8	63.4	508.2	64.0	W	
	2 0	18.18	542.1	61.8	492.4	63.0	H	11 0	11.77	548.5	63.2	498.6	63.5	H	
	3 0	15.58	545.4	62.8	497.9	64.2	H	12 0	07.10	547.8	62.8	488.5	63.0	H	
	4 0	13.41	552.3	64.3	502.7	65.5	H								
	5 0	11.81	551.9	65.0	502.6	66.2	H	13 0	25 08.99	540.9	62.4	485.2	62.5	H	
	6 0	10.87	552.0	65.6	498.7	66.8	W	14 0	08.23	540.0	62.0	490.6	62.0	H	
	7 0	10.97	555.1	66.2	488.0	67.2	W	15 0	08.39	539.9	61.5	479.9	61.3	H	
	8 0	10.95	552.2	66.6	486.1	67.7	W	16 0	09.39	539.3	61.0	481.7	60.7	H	
	9 0	11.44	552.5	67.0	481.8	68.0	W	17 0	09.32	541.5	60.6	482.7	60.0	H	
	10 0	11.66	548.4	67.2	479.8	67.8	W	18 0	05.18	539.6	60.2	489.3	59.7	H	
	11 0	11.95	549.2	66.8	476.9	67.2	H	19 0	04.24	537.3	59.9	491.9	59.4	W	
	12 0	11.37	545.4	66.3	467.9	66.5	H	20 0	04.10	533.2	59.7	503.0	59.2	W	

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.June 18^d 10^h—19^d 10^h. Term-Day Observations made.
Observer C. Mr CRISHOLM.

HOURLY OBSERVATIONS OF MAGNETOMETERS, JUNE 23—28, 1845.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ' ″	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ' ″	Sc. Div.	°	Mic. Div.	°	
23 21 0	25 05.63	530.6	59.5	503.3	59.2	W	26 5 0	25 14.82	549.9	58.7	498.0	59.5	H
22 0	08.25	527.7	59.4	501.6	59.2	W	6 0	11.54	547.7	59.0	501.1	59.8	W
23 0	10.13	525.0	59.4	501.8	59.4	W	7 0	10.80	551.6	59.3	501.3	59.8	W
24 0 0	12.28	527.9	59.5	485.0	59.5	W	8 0	10.70	552.2	59.3	497.0	59.7	W
1 0	14.99	532.4	59.5	483.8	59.7	W	9 0	10.40	549.4	59.2	494.2	59.5	W
2 0	16.92	538.8	59.6	496.8	59.8	W	10 0	10.30	548.2	58.9	489.7	59.0	W
3 0	17.98	515.3	59.8	500.8	60.0	W	11 0	10.67	545.1	58.6	488.3	58.6	H
4 0	16.38	550.5	59.9	503.7	60.3	W	12 0	10.65	545.0	58.3	487.7	58.4	H
5 0	14.23	554.3	60.0	512.4	60.4	W							
6 0	12.62	555.8	60.1	518.3	60.5	H	13 0	25 10.09	544.0	58.0	486.3	57.9	H
7 0	12.04	552.8	60.1	519.2	60.2	H	14 0	09.53	543.3	57.7	492.1	57.3	H
8 0	11.66	551.6	60.0	515.5	60.0	H	15 0	09.02	541.8	57.3	491.5	56.8	H
9 0	12.15	551.1	59.8	511.1	59.5	H	16 0	08.55	540.7	56.8	496.6	56.3	H
10 0	11.51	544.6	59.4	508.6	59.0	H	17 0	06.84	539.4	56.3	501.8	55.7	H
11 0	11.37	543.0	59.0	504.7	58.5	D	18 0	05.49	537.8	55.9	506.9	55.2	H
12 0	11.08	544.2	58.7	500.3	58.3	D	19 0	05.69	537.0	55.7	509.9	55.0	W
							20 0	05.15	536.5	55.4	512.0	54.9	W
13 0	25 08.82	543.0	58.5	492.8	58.0	D	21 0	05.55	536.4	55.3	517.9	55.0	W
14 0	09.69	539.8	58.2	499.4	57.7	D	22 0	08.16	532.8	55.3	509.6	55.4	W
15 0	09.42	540.6	57.8	503.0	57.3	D	23 0	12.82	530.7	55.6	497.5	56.0	W
16 0	12.78	540.5	57.4	508.1	56.9	D	27 0 0	15.22	534.3	56.0	484.7	56.6	W
17 0	07.69	540.5	57.1	515.4	56.5	D	1 0	17.36	536.9	56.5	483.7	57.2	W
18 0	06.98	539.1	56.9	520.1	56.3	D	2 0	19.01	541.8	57.0	479.6	57.8	W
19 9	07.40	537.2	56.7	522.4	56.2	H	3 0	18.43	541.9	57.4	482.3	58.1	W
20 0	07.13	536.2	56.5	521.6	56.2	H	4 0	16.72	544.2	57.7	488.4	58.3	W
21 0	07.52	536.7	56.5	513.7	56.3	W	5 0	14.11	545.6	57.9	499.4	58.5	W
22 0	08.29	534.5	56.5	506.8	56.5	H	6 0	11.98	548.2	58.0	501.9	58.5	W
23 0	10.40	533.3	56.7	504.5	57.0	H	7 0	12.15	553.3	57.8	507.9	58.2	W
25 0 0	13.72	535.4	57.0	501.0	57.5	H	8 0	11.77	555.6	57.6	507.0	57.8	W
1 0	16.35	538.8	57.4	497.5	58.4	H	9 0	11.34	554.1	57.3	505.2	57.3	H
2 0	16.21	542.2	58.2	503.5	59.5	H	10 0	11.00	554.5	57.0	504.4	56.7	H
3 0	17.15	543.9	59.1	507.9	60.5	W	11 0	11.57	549.5	56.6	504.5	56.4	D
4 0	16.59	548.5	60.1	504.8	61.5	H	12 0	09.05	545.9	56.3	495.0	56.1	D
5 0	14.33	547.6	60.8	504.2	62.0	H							
6 0	12.04	552.3	61.3	502.0	62.3	W	13 0	25 08.80	542.6	56.0	493.3	55.8	D
7 0	11.82	550.2	61.4	505.0	62.5	H	14 0	07.64	542.3	55.7	493.8	55.5	D
8 0	11.44	548.8	61.4	508.5	62.2	H	15 0	07.62	541.4	55.4	497.2	55.2	D
9 0	10.70	546.3	61.3	503.8	61.8	H	16 0	08.72	547.8	55.1	498.8	54.8	D
10 0	10.70	544.8	61.0	500.4	61.5	H	17 0	04.39	544.5	54.8	502.9	54.5	D
11 0	11.66	546.4	60.7	493.0	61.0	W	18 0	07.49	544.6	54.6	503.4	54.3	D
12 0	11.91	545.8	60.3	491.5	60.5	W	19 0	06.06	539.9	54.3	506.9	54.1	H
							20 0	08.65	538.0	54.2	508.8	54.0	H
13 0	25 11.42	543.5	60.0	492.3	59.9	W	21 0	07.87	531.4	54.1	506.6	54.0	W
14 0	10.36	540.1	59.6	494.8	59.3	W	22 0	07.78	527.5	54.0	494.6	54.0	H
15 0	09.17	539.7	59.2	498.7	58.8	W	23 0	11.86	517.0	53.8	482.9	53.5	H
16 0	09.33	538.9	58.7	504.2	58.3	W	28 0 0	22.67	519.7	53.7	476.9	53.2	H
17 0	06.77	539.1	58.2	510.0	57.8	W	1 0	18.11	525.2	53.3	470.1	52.8	H
18 0	06.19	536.1	57.8	517.0	57.3	W	2 0	22.40	544.8	53.1	490.3	52.7	W
19 0	05.30	534.5	57.6	516.4	57.0	H	3 0	19.04	539.6	53.0	502.6	52.5	W
20 0	05.90	532.0	57.4	516.0	57.0	H	4 0	12.90	550.3	52.9	514.3	52.6	W
21 0	06.14	527.0	57.2	519.7	57.0	H	5 3	11.62	548.1	52.9	528.4	52.8	H
22 0	08.05	523.7	57.1	513.4	57.0	H	6 0	11.66	550.1	53.0	526.2	53.0	H
23 0	11.10	521.6	57.0	498.7	57.2	H	7 0	11.30	550.8	53.0	530.3	53.0	H
26 0 0	16.05	525.5	57.2	485.5	57.4	H	8 0	12.16	546.7	52.9	521.8	53.0	H
1 0	16.62	529.6	57.3	479.8	57.7	H	9 0	12.42	547.1	52.8	520.4	52.8	H
2 0	17.09	533.9	57.7	487.2	58.2	H	10 0	10.80	547.8	52.8	517.9	52.6	H
3 0	16.75	529.1	58.0	490.2	58.7	H	11 0	11.55	545.5	52.6	511.8	52.5	W
4 0	17.22	542.5	58.3	496.8	59.1	H	12 0	10.65	545.3	52.4	512.5	52.1	W

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k = 0.000140$. BALANCE. Observed 3^m after the Declination, $k = 0.000010$.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Mic. Div.	°	
29 13 0	25 12-45	542.7	55.5	486.8	56.0	H	1 21 0	25 08-34	530.9	55.6	488.0	55.7	H	
14 0	13-02	537.4	55.2	478.1	55.7	H	22 0	08-41	525.4	55.7	488.1	56.0	H	
15 0	10-23	537.9	55.0	478.3	55.5	H	23 0	10-53	523.2	55.8	487.5	56.4	H	
16 0	07-18	542.2	55.0	479.9	55.5	H	2 0 0	09-00	531.4	56.2	483.2	56.8	H	
17 0	04-81	543.8	54.8	487.9	55.3	H	1 0	12-65	536.1	56.7	482.2	57.7	H	
18 0	04-15	538.0	54.8	493.3	55.4	H	2 0	13-16	549.2	57.3	490.5	58.6	H	
19 0	06-16	537.5	55.3	497.7	55.7	W	3 0	12-85	547.8	58.2	497.8	59.5	H	
20 0	09-47	532.0	55.5	496.6	55.9	W	4 0	13-66	556.9	59.1	498.4	60.5	H	
21 0	13-29	524.1	55.6	498.5	56.1	W	5 0	13-86	553.3	60.0	514.2	61.5	H	
22 0	13-59	529.9	55.9	488.7	56.5	W	6 0	14-73	546.3	60.8	516.8	62.2	W	
23 0	13-72	530.5	56.4	489.0	57.1	W	7 30	12-60	550.6	61.7	502.0	62.8	W	
30 0 0	14-94	532.2	56.9	472.6	57.9	W	8 0	12-45	547.5	61.9	499.9	62.8	W	
1 0	14-53	540.4	57.5	458.8	58.6	W	9 0	11-68	546.1	62.1	489.8	63.0	W	
2 0	15-12	545.2	58.2	460.9	59.4	W	10 0	11-41	545.4	62.1	482.1	62.8	W	
3 0	15-44	550.4	59.0	472.0	60.3	W	11 0	10-77	531.8	62.0	477.6	62.5	H	
4 0	15-25	550.4	59.8	481.2	61.1	W	12 0	10-77	541.6	61.6	476.3	62.0	H	
5 0	13-02	553.8	60.4	490.2	61.5	W								
6 0	10-53	553.6	60.8	507.5	61.7	H	13 0	25 09-71	540.4	61.3	475.2	61.5	H	
7 0	12-75	551.1	60.8	507.2	61.7	H	14 0	10-50	539.7	60.9	474.8	61.0	H	
8 0	13-39	559.1	60.7	491.2	61.5	H	15 0	08-14	538.3	60.4	476.0	60.5	H	
9 0	12-04	548.5	60.5	491.3	61.5	H	16 0	09-46	541.2	60.0	475.2	60.0	H	
10 0	11-44	548.5	60.3	486.0	61.0	H	17 0	08-08	539.4	59.7	481.5	59.5	H	
11 0	09-54	550.0	60.1	470.0	60.4	D	18 0	06-06	533.3	59.3	481.0	59.0	H	
12 0	09-73	534.4	59.8	444.1	60.2	D	19 0	10-28	535.8	59.0	477.0	58.7	W	
							20 0	07-17	535.0	58.7	461.0	58.4	W	
13 0	25 01-41	533.8	59.6	415.0	59.9	D	21 0	08-63	528.5	58.4	462.5	58.2	W	
14 0	05-55	535.7	59.4	409.2	59.6	D	22 0	11-14	527.7	58.3	468.8	58.0	W	
15 0	06-93	537.6	59.2	392.8	59.3	D	23 0	12-28	528.6	58.0	478.9	57.8	W	
16 0	15-27	521.5	58.9	403.4	58.9	D	3 0 0	15-17	529.9	57.9	461.2	57.8	W	
17 0	06-59	537.4	58.7	383.6	58.5	D	1 0	15-78	537.7	57.8	463.6	57.8	W	
18 0	07-51	539.4	58.4	422.3	58.3	D	2 0	15-59	539.2	57.8	467.3	57.8	W	
19 0	08-26	531.0	58.0	446.5	58.0	H	3 0	15-69	542.4	57.8	481.8	57.8	W	
20 0	06-77	530.4	57.7	461.0	57.7	H	4 0	16-93	547.4	57.8	492.2	57.8	W	
21 0	07-54	523.8	57.6	472.6	57.5	W	5 0	15-14	546.6	57.8	498.4	58.0	W	
22 0	09-19	526.8	57.4	473.2	57.2	H	6 0	14-64	551.1	57.8	501.7	58.2	H	
23 0	11-34	530.1	57.2	471.0	57.2	H	7 0	12-82	553.0	58.0	504.0	58.3	H	
1 0 0	14-06	537.0	57.1	463.5	57.1	H	8 0	12-95	548.6	58.0	500.1	58.4	H	
1 0	15-44	545.2	57.1	453.4	57.3	H	9 0	12-75	547.9	58.0	495.5	58.4	H	
2 0	14-99	532.6	57.2	468.0	58.0	H	10 0	11-64	545.3	58.1	494.4	58.4	H	
3 0	15-41	552.5	57.7	470.0	58.3	H	11 0	10-97	543.2	58.2	489.6	58.4	D	
4 0	15-04	550.6	57.9	477.7	58.4	H								
5 0	13-93	549.8	58.0	480.8	58.4	H	12 0	25 10-65	541.0	58.2	488.6	58.3	D	
6 0	13-00	552.6	57.9	484.5	58.2	W	13 0	11-48	543.7	58.1	485.7	58.3	D	
7 0	12-63	550.5	57.7	486.1	57.9	W	14 0	08-50	542.1	58.1	485.2	58.3	D	
8 0	13-22	548.4	57.5	486.2	57.5	H	15 0	07-38	540.0	58.0	486.7	58.2	D	
9 0	11-62	548.5	57.2	484.6	57.2	H	16 0	07-34	538.5	57.9	487.2	58.1	D	
10 0	11-48	546.4	57.0	491.1	56.8	H	17 0	07-31	540.5	57.7	487.7	57.7	D	
11 0	09-87	541.4	56.8	490.3	56.5	W	18 0	05-72	538.7	57.4	485.5	57.4	D	
12 0	09-64	540.5	56.5	488.0	56.3	W	19 0	05-32	536.0	57.4	488.8	57.4	H	
							20 0	05-56	534.0	57.4	491.3	57.3	H	
13 0	25 09-86	539.8	56.3	485.2	56.0	W	21 0	07-35	531.6	57.4	493.5	57.3	W	
14 0	08-97	539.3	56.0	486.7	55.8	W	22 0	10-23	529.6	57.4	491.0	57.3	H	
15 0	09-35	539.9	55.8	488.0	55.5	W	23 0	13-02	528.7	57.4	491.3	57.3	H	
16 0	11-19	540.7	55.6	484.8	55.3	W	4 0 0	16-19	530.9	57.6	493.8	58.2	H	
17 0	06-61	542.5	55.4	485.2	55.1	W	1 0	19-34	536.0	57.9	491.2	58.7	H	
18 3	06-21	536.4	55.3	493.6	55.1	W	2 0	19-41	543.8	58.7	482.1	59.5	H	
19 0	06-03	533.1	55.4	497.2	55.3	H	3 0	18-07	546.7	59.2	481.2	60.2	H	
20 0	08-01	531.4	55.4	492.7	55.5	H	4 0	16-86	552.7	59.8	488.4	61.0	H	

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.		
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°			
4 5 0	25 15.74	549.3	60.5	498.7	61.5	H	7 13 0†	25 18.50	540.0	66.5	412.8	66.7	W		
6 0	13.72	555.0	61.1	502.4	62.0	W	14 0	08.66	539.4	66.1	419.7	66.2	W		
7 3	12.49	552.0	61.2	489.9	61.6	H	15 0	09.15	538.0	65.7	442.2	65.5	W		
8 0	12.63	550.4	61.3	491.3	61.7	H	16 0	07.89	537.8	65.2	459.8	64.9	W		
9 0	11.54	549.2	61.5	493.6	62.7	H	17 0	07.08	536.9	64.7	468.4	64.3	W		
10 0	12.22	549.8	61.7	482.6	62.5	H	18 0	06.03	534.5	64.4	472.0	63.7	W		
11 0	09.86	543.7	61.3	479.4	61.7	W	19 0	05.32	536.6	64.0	475.1	63.5	H		
12 0†	04.82	548.0	60.9	471.1	61.0	W	20 0	05.72	535.1	63.8	478.1	63.5	H		
							21 0	07.37	528.6	63.7	473.6	63.5	B		
13 0	25 09.46	541.1	60.5	469.7	60.3	W	22 0	10.87	524.7	63.7	467.9	63.6	H		
14 0	09.30	541.6	60.0	472.7	59.6	W	23 0	0	13.41	522.6	63.8	466.2	64.0	H	
15 0	08.70	539.8	59.4	479.2	58.9	W	8 0	0	16.59	527.6	63.9	465.2	64.3	H	
16 0	08.29	539.7	58.9	484.6	58.2	W	1 0	18.58	531.0	64.3	459.6	64.6	B		
17 0	09.44	538.4	58.4	487.9	57.6	W	2 0	20.08	544.5	64.6	461.3	64.9	B		
18 0	07.91	538.6	57.9	484.5	57.3	W	3 0	19.82	546.7	64.8	468.0	65.3	B		
19 0	06.29	537.3	57.9	494.2	57.2	H	4 0	18.90	551.3	65.2	475.1	65.7	H		
20 0	06.97	534.3	57.8	490.2	57.2	H	5 0	16.23	548.2	65.6	488.5	66.1	B		
21 0	07.20	532.6	57.7	490.9	57.3	D	6 0	14.23	551.6	65.9	486.8	66.4	W		
22 0	10.53	532.4	57.7	482.0	57.7	H	7 0	12.82	564.2	66.1	480.6	66.4	W		
23 0	11.03	536.3	57.8	480.8	58.3	H	8 0†	11.46	552.8	66.1	496.2	66.2	W		
5 0 0	15.85	542.0	58.2	471.4	59.0	H	9 0	0	09.51	552.3	66.0	500.1	66.0	W	
1 0	16.16	532.4	58.9	457.0	60.2	H	10 0	0	08.88	543.4	65.7	492.5	65.5	W	
2 0	15.71	533.5	60.0	464.6	61.2	H	11 0	0	09.66	543.4	65.3	485.0	65.1	H	
3 0	14.84	539.5	61.0	474.3	62.5	H	12 0	0	10.36	542.1	65.0	470.7	64.5	H	
4 0	14.37	543.4	62.0	471.3	63.4	H									
5 0	13.91	545.3	62.9	475.0	64.2	H	13 0	0	25 11.00	542.5	64.7	467.0	64.1	H	
6 0	13.34	551.4	63.9	471.4	65.1	W	14 0	0	10.09	539.5	64.2	464.9	63.7	H	
7 0	11.41	555.5	64.6	466.8	65.3	W	15 0	0	09.82	537.6	63.9	471.9	63.3	H	
8 0	10.90	554.1	65.0	466.9	65.7	W	16 0	0	08.92	539.6	63.6	471.6	62.8	H	
9 0	10.61	553.1	65.4	467.0	66.7	W	17 0†	0	16.82	526.3	63.2	472.1	62.5	H	
10 0	11.07	551.4	65.6	457.2	66.5	W	18 0	0	15.34	536.7	62.7	418.3	62.0	H	
11 0	10.16	546.3	65.3	457.2	66.0	H	19 0	0	05.99	539.5	62.5	436.1	61.7	W	
12 0	10.33	548.0	65.0	452.2	65.3	H	20 0	0	06.74	533.9	62.3	448.5	61.5	W	
							21 0	0	07.34	529.4	62.1	460.1	61.5	B	
6 13 0	25 10.94	546.5	63.3	455.8	62.9	D	22 0	0	08.95	525.2	62.0	467.6	61.7	W	
14 0	08.95	548.0	63.1	448.4	62.7	D	23 0	0	09.00	525.1	62.0	466.5	61.9	W	
15 0	04.98	542.1	62.8	434.3	62.4	D	9 0	0	0	11.98	526.9	62.2	456.9	62.3	W
16 0	11.82	535.1	62.5	429.7	62.1	D	1 0	0	14.15	528.0	62.6	456.8	62.9	W	
17 0	05.33	541.6	62.2	429.0	61.7	D	2 0	0	15.85	531.1	62.9	458.9	63.3	W	
18 0	02.82	539.8	61.9	457.7	61.5	D	3 0	0	16.38	536.6	63.3	462.5	63.9	W	
19 0	02.77	546.8	61.8	471.2	61.2	H	4 0	0	15.01	542.5	63.6	468.8	64.1	W	
20 0	03.85	533.1	61.5	477.6	60.9	H	5 0	0	13.56	544.0	63.8	481.9	64.3	W	
21 0	07.69	531.5	61.4	480.2	61.0	W	6 0	0	11.54	548.0	64.0	483.3	64.4	H	
22 0	11.91	532.0	61.2	468.2	61.2	H	7 0	0	09.87	549.0	64.0	484.7	64.2	H	
23 0	13.07	529.7	61.3	463.4	61.5	H	8 0	0	09.10	551.4	63.8	484.7	64.0	H	
7 0 0	13.66	532.2	61.7	468.4	62.2	H	9 0	0	09.69	548.2	63.5	482.4	63.5	H	
1 0	17.70	538.4	62.3	466.0	63.0	H	10 0	0	10.16	544.0	63.2	479.3	63.0	H	
2 0	17.56	544.2	63.0	467.8	63.8	H	11 0	0	09.67	541.8	62.9	475.3	62.5	B	
3 0	17.83	542.9	63.8	476.0	64.6	H	12 0	0	09.57	545.1	62.5	468.6	62.0	B	
4 0	17.36	548.9	64.3	487.7	65.4	H									
5 0	16.01	544.1	65.1	504.6	66.0	H	13 0	0	25 07.72	542.6	62.1	455.0	61.5	B	
6 0	13.14	545.0	65.7	507.1	66.7	W	14 0	0	08.93	537.4	61.7	460.2	61.0	B	
7 0	11.32	548.7	66.3	499.8	67.0	W	15 0	0	10.74	538.8	61.3	449.5	60.6	B	
8 0	10.20	547.5	66.7	489.6	67.4	H	16 0	0	09.64	538.1	60.9	437.7	60.2	B	
9 0	09.93	547.9	67.1	480.3	68.3	H	17 0	0	07.11	536.8	60.6	464.6	59.8	B	
10 0	09.08	543.3	67.3	466.0	68.0	H	18 0	0	04.88	536.5	60.3	481.8	59.5	B	
11 0	10.36	543.1	67.3	460.0	67.7	W	19 0	0	03.65	534.7	60.0	490.9	59.5	H	
12 0†	11.14	546.0	66.9	454.5	67.2	W	20 0	0	04.22	533.6	59.9	497.0	59.5	H	

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.† Extra Observations made.
July 5^a 9^b. The sun shining on the case of the balance magnetometer.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.		
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			
		d.	h.	m.	Sc. Div.	°	Mic. Div.	°	d.	h.	m.	Sc. Div.	°	Mic. Div.	°
9 21 0	25 04-73	528.4	59.9	498.5	59.8	W	12 5 0	25 14-94	546.0	60.7	514.8	61.5	B		
	04-68	524.4	60.0	498.6	60.2	H		6 0	557.3	61.1	516.2	61.7	H		
	09-60	522.1	60.4	496.5	61.0	H		7 0	555.7	61.1	520.9	61.7	H		
	13-93	524.1	61.2	484.2	62.2	H		8 0	512.6	61.1	512.2	61.7	H		
	16-05	531.9	62.2	478.5	63.4	H		9 0	541.7	61.1	502.1	61.4	H		
	18-34	537.9	63.7	473.5	64.9	H		10 0	543.0	60.7	501.0	60.8	H		
	17-51	540.6	64.2	465.5	65.6	H		11 0	543.6	60.4	494.0	60.4	B		
	17-06	548.5	65.2	462.7	66.6	H		12 0	542.6	60.0	489.3	60.0	B		
	16-41	550.9	66.0	467.8	67.2	H									
	14-94	549.5	66.6	483.2	67.8	B	13 13 0	25 10-54	541.5	57.3	494.9	57.3	W		
	13-63	552.2	67.0	480.2	68.0	B		14 0	541.9	57.1	494.3	57.1	W		
	12-45	549.2	67.2	480.4	68.0	B		15 0	540.8	56.9	493.7	56.9	W		
	10-70	547.5	67.2	480.3	68.0	B		16 0	541.0	56.7	495.7	56.7	W		
	11-64	543.8	67.0	470.5	67.6	B		17 0	541.1	56.6	499.5	56.5	W		
	10-21	544.2	66.8	464.2	67.3	W		18 0	538.0	56.4	503.1	56.3	W		
	11-57	545.2	66.5	460.8	66.8	W		19 0	536.3	56.2	504.3	56.1	B		
								20 0	531.1	56.0	504.3	56.0	B		
	25 10-53	543.5	66.0	457.7	66.2	W		21 0	526.5	55.9	500.7	55.9	H		
	10-36	543.0	65.5	459.8	65.6	W		22 0	524.6	55.9	491.6	56.0	H		
	09-37	539.5	65.1	463.8	65.0	W		23 0	525.7	56.0	493.9	56.2	H		
	12-01	537.1	64.6	470.0	64.3	W	14 0 0	14-06	530.7	56.1	484.7	56.5	B		
	08-34	535.8	64.0	471.3	63.4	W		1 0	531.5	56.5	479.6	57.2	H		
	05-02	537.6	63.4	475.0	62.7	W		2 0	535.2	57.1	477.4	58.0	B		
	03-90	535.4	62.9	479.9	62.0	B		3 0	539.1	57.7	477.4	58.7	H		
	03-99	531.1	62.4	479.2	61.5	B		4 0	546.8	58.4	481.5	59.3	H		
	04-37	524.4	62.0	479.9	61.2	H		5 0	551.2	59.0	485.7	59.8	B		
	07-98	520.0	61.7	478.3	61.2	H		6 0	558.7	59.4	489.9	60.3	W		
	11-08	521.2	61.7	474.5	61.5	H		7 0	553.2	59.7	487.6	60.5	W		
	14-03	525.7	61.7	469.7	61.5	B		8 0	556.5	60.0	484.8	60.6	W		
	15-20	533.7	61.8	465.0	61.5	H		9 0	552.9	60.1	482.6	60.5	W		
	17-76	533.4	61.8	469.5	61.7	H		10 0	552.6	60.0	480.6	60.2	W		
	17-49	545.5	61.9	473.2	62.0	H		11 0	550.5	59.7	482.8	59.8	H		
	17-53	546.8	62.0	482.6	62.5	H		12 0	545.3	59.4	482.7	59.4	H		
	15-24	547.2	62.4	492.4	62.7	H									
	12-75	548.3	62.5	493.6	62.7	W	13 0 0	25 09-19	544.9	59.0	477.6	59.0	H		
	11-24	547.4	62.5	492.5	62.6	W		14 0	543.5	58.6	480.0	58.5	H		
	11-10	552.2	62.4	489.7	62.4	W		15 0	540.1	58.2	483.4	57.9	H		
	11-72	549.1	62.2	485.9	62.1	W		16 0	540.8	57.8	483.0	57.2	H		
	11-66	545.8	61.9	481.4	61.7	W		17 0	539.3	57.2	488.4	56.5	H		
	11-51	545.7	61.6	477.8	61.2	H		18 0	536.0	56.8	491.9	55.9	H		
	10-74	542.7	61.2	476.5	60.7	H		19 0	534.7	56.4	492.9	55.6	W		
								20 0	531.3	56.0	492.0	55.3	W		
	25 11-84	543.3	60.9	477.6	60.4	H		21 0	529.7	55.7	495.2	55.2	B		
	10-20	541.9	60.6	475.1	60.0	H		22 0	531.0	55.5	484.8	55.2	W		
	10-18	541.2	60.2	479.9	59.5	H		23 0	533.2	55.5	492.3	55.4	W		
	09-19	541.2	59.8	487.2	59.0	H	15 0 0	13-56	533.0	55.6	485.8	55.7	W		
	08-66	541.1	59.4	496.7	58.5	H		1 0	535.1	55.7	483.5	56.0	W		
	09-47	536.6	59.0	492.0	58.0	H		2 0	535.9	56.1	484.3	56.6	W		
	07-64	535.3	58.6	485.9	57.6	W		3 0	541.8	56.7	485.4	57.3	W		
	08-59	535.5	58.2	486.7	57.3	W		4 0	548.0	57.4	491.9	58.2	W		
	09-98	534.6	57.9	486.9	57.0	B		5 0	554.1	58.0	491.7	58.8	W		
	10-90	531.1	57.7	486.8	57.1	W		6 0	555.2	58.6	497.2	59.5	H		
	12-87	528.9	57.7	491.9	57.4	W		7 0	554.3	59.2	501.8	60.0	H		
	15-96	536.2	57.8	485.5	58.0	W		8 0	555.5	59.7	501.1	60.5	H		
	16-93	529.1	58.2	481.9	58.5	W		9 0	552.7	60.1	498.8	61.1	H		
	16-16	541.8	58.7	481.9	59.3	W		10 0	547.2	60.3	491.5	61.0	H		
	17-02	540.9	59.4	494.6	60.1	W		11 0	546.3	60.1	485.6	60.4	B		
	15-31	549.2	60.0	504.5	60.9	W		12 0	544.3	59.8	480.6	59.9	B		

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial:	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial:
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. b. m.	° ,	Sc. Div.	°	Mic. Div.	°		d. b. m.	° ,	Sc. Div.	°	Mic. Div.	°	
15 13 0	25 10-83	544.5	59.4	478.7	59.5	B	17 21 0	25 07-45	527.6	57.5	467.7	57.6	B
14 0	09-98	542.7	59.0	477.8	59.0	B	22 0	06-76	524.3	57.5	463.7	57.7	W
15 0	09-87	541.0	58.7	478.2	58.5	B	23 0	09-19	524.3	57.6	460.6	57.9	W
16 0	09-47	540.4	58.3	479.3	58.0	B	18 0	13-36	524.7	57.7	465.0	58.1	W
17 0	06-73	537.2	57.9	484.0	57.5	B	1 0	17-84	536.4	57.9	453.0	58.5	W
18 0	05-02	533.5	57.6	485.5	57.0	B	2 0	19-61	539.9	58.4	456.5	59.2	W
19 0	05-56	532.8	57.5	487.7	57.0	H	3 0	18-77	539.4	59.0	454.4	60.0	W
20 0	04-64	531.6	57.4	494.4	57.0	H	4 0	17-54	539.6	59.5	457.3	60.6	W
21 0	07-65	531.2	57.4	498.4	57.1	W	5 0	15-51	547.6	60.0	457.7	61.0	B
22 0	09-96	529.5	57.3	485.8	57.3	H	6 0	13-52	548.4	60.5	463.1	61.5	H
23 0	12-02	532.5	57.4	476.6	57.9	H	7 0	11-55	548.9	61.0	466.6	62.0	H
16 0 0	14-73	538.6	58.0	473.4	58.8	H	8 0	11-57	543.7	61.4	457.1	62.5	H
1 0	16-55	537.4	58.6	472.9	59.7	H	9 0	10-47	548.7	61.7	463.9	62.6	H
2 0	16-79	542.3	59.3	467.8	60.6	H	10 0	10-74	550.3	61.7	463.4	62.5	H
3 0	15-38	544.1	60.4	478.9	61.9	H	11 0	10-14	546.2	61.7	464.1	62.2	B
4 0	15-22	544.4	61.5	469.5	63.0	H	12 0	10-80	545.7	61.4	462.0	61.8	B
5 0	14-20	546.0	62.4	463.3	63.7	H							
6 0	13-19	544.5	63.0	457.8	64.0	B	13 0	25 08-38	543.2	61.1	439.2	61.4	B
7 0	11-98	547.0	63.3	459.3	64.0	B	14 0	07-38	537.5	60.8	452.3	61.0	B
8 0	11-77	550.8	63.3	461.5	63.8	B	15 0	06-36	539.9	60.5	445.8	60.5	B
9 0	11-55	551.7	63.2	462.8	63.6	B	16 0	07-58	539.9	60.1	453.0	60.0	B
10 0	10-63	548.3	62.9	462.7	63.1	B	17 0	07-98	541.6	59.8	459.8	59.6	B
11 0	10-50	547.0	62.5	459.0	62.6	W	18 0	05-85	540.4	59.5	463.3	59.2	B
12 0	09-76	544.7	62.0	459.4	62.0	W	19 0	07-38	538.9	59.1	462.3	58.9	H
							20 0	04-61	533.8	58.8	464.1	58.7	H
13 0	25 09-24	543.3	61.5	460.0	61.2	W	21 3	12-04	529.2	58.7	470.5	58.5	W
14 0	09-56	542.9	60.9	459.3	60.3	W	22 0	11-03	529.4	58.7	457.1	58.7	H
15 0	08-92	541.4	60.3	462.0	59.5	W	23 0	12-42	530.1	58.7	460.3	58.9	H
16 0	08-58	539.6	59.7	468.6	58.8	W	19 0 0	15-39	537.1	58.8	450.5	59.2	H
17 0	08-06	539.6	59.1	473.5	58.2	W	1 0	18-90	540.7	59.1	450.5	59.7	H
18 0	06-09	536.8	58.6	478.6	57.7	W	2 0	20-76	542.8	59.5	457.0	60.2	H
19 0	07-32	533.7	58.2	480.6	57.2	B	3 0	19-14	541.7	59.9	461.5	60.6	H
20 5	07-20	534.5	57.8	476.7	56.8	B	4 0	17-89	540.0	60.4	466.3	61.0	H
21 0	07-24	533.5	57.4	474.3	56.6	H	5 0	16-08	544.0	60.7	470.0	61.4	H
22 0	07-72	529.3	57.2	461.1	56.6	H	6 0	13-36	547.8	61.0	477.4	61.8	B
23 0	09-35	528.0	57.1	467.7	56.9	H	7 3	11-07	556.1	61.2	476.1	61.7	B
17 0 0	14-82	527.8	57.3	470.2	57.3	B	8 0	10-09	553.9	61.2	477.0	61.5	B
1 0	18-79	532.6	57.4	467.8	57.5	H	9 0	10-00	554.5	61.0	471.7	61.3	B
2 0	21-23	540.6	57.7	467.2	58.0	H	10 0	08-48	550.0	60.8	472.3	61.0	W
3 0	20-89	543.0	57.8	467.7	58.2	H	11 0	08-99	546.1	60.6	465.7	60.8	W
4 0	17-49	544.0	58.0	473.9	58.5	H	12 0	09-66	544.8	60.4	465.1	60.5	W
5 0	13-90	548.7	58.4	481.8	59.0	B							
6 0	11-54	549.1	58.8	482.2	59.3	W	20 13 0	25 10-40	543.6	57.3	466.8	57.0	H
7 0	10-58	554.7	59.0	482.5	59.5	W	14 0	10-40	539.8	57.0	467.7	56.9	H
8 0	11-12	554.2	59.1	484.2	59.7	W	15 0	08-79	539.0	56.9	469.5	56.7	H
9 0	08-80	553.7	59.3	486.2	59.7	W	16 0	12-25	536.7	56.7	476.2	56.6	H
10 0	10-13	547.6	59.3	482.4	59.7	W	17 0	10-23	539.5	56.6	475.0	56.5	H
11 0	10-14	546.1	59.2	478.6	59.5	H	18 0	06-91	540.1	56.5	477.4	56.3	H
12 0	07-00	544.5	59.0	469.0	59.5	H	19 30	08-61	535.3	56.3	478.5	56.1	W
							20 0	08-09	536.7	56.3	476.8	56.1	W
13 0	25 08-32	542.7	58.9	469.8	59.2	H	21 0	08-16	529.4	56.2	478.2	56.0	B
14 0	08-59	541.7	58.8	470.6	59.0	H	22 0	09-19	522.5	56.1	466.8	56.0	W
15 0	08-21	542.6	58.5	469.9	58.7	H	23 0	10-06	517.6	56.0	465.1	56.0	W
16 0	08-79	543.4	58.3	470.6	58.5	H	21 0 0	11-99	526.1	56.0	463.2	56.1	W
17 0	07-51	541.5	58.2	475.0	58.2	H	1 0	16-01	525.0	56.1	467.8	56.3	W
18 0	05-62	537.8	58.0	477.8	57.9	H	2 0	17-56	525.0	56.3	466.5	56.5	W
19 0	08-14	536.3	57.7	472.3	57.6	W	3 0	17-46	541.2	56.4	475.5	56.7	W
20 0	07-05	532.5	57.6	472.3	57.6	W	4 0	17-94	552.8	56.6	479.9	56.8	W

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k = 0.000140$. BALANCE. Observed 3^m after the Declination, $k = 0.000010$.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°			
21	5 0	25	15.79	547.3	56.7	W	23	13 0	25	08.18	547.1	54.9	477.0	55.5	D
	6 0		13.05	548.7	56.8	H		14 0		09.59	542.8	55.0	481.1	55.6	D
	7 0		12.18	548.2	56.9	W		15 0		10.58	545.0	55.0	481.2	55.6	D
	8 0		11.10	548.7	56.9	W		16 0		11.91	541.8	55.0	478.6	55.6	D
	9 0		09.86	548.6	56.8	H		17 0		09.69	545.0	55.0	467.1	55.6	D
	10 0		09.87	544.3	56.7	H		18 0		11.48	536.6	55.0	468.4	55.5	H
	11 0		09.77	542.4	56.6	B		19 0		10.47	539.8	54.8	461.7	55.3	H
	12 0		09.22	542.6	56.4	B		20 0		05.18	540.1	54.7	473.4	55.1	H
								21 0		04.51	537.0	54.6	476.0	55.0	H
	13 0	25	09.53	540.9	56.2	B		22 0		06.39	532.7	54.6	476.5	55.0	W
	14 0		09.42	540.3	56.0	B		23 0		08.61	529.0	54.7	466.0	55.3	W
	15 0		10.27	539.3	55.9	B	24	0 0		10.43	529.0	54.8	470.4	55.5	W
	16 0		09.74	540.7	55.7	B		1 0		13.32	530.8	55.0	473.9	55.8	B
	17 0		07.84	541.0	55.6	B		2 0		14.40	526.9	55.4	488.7	56.2	H
	18 0		06.23	538.8	55.4	B		3 0		16.53	542.5	55.8	488.4	56.6	B
	19 0		07.22	536.7	55.2	H		4 0		15.76	557.4	56.3	501.3	57.1	B
	20 0		06.36	533.3	55.0	H		5 0		15.67	561.1	56.7	530.0	57.6	W
	21 0		07.35	528.7	54.9	W		6 0		13.91	555.2	57.1	552.9	58.0	D
	22 0		09.06	523.8	54.8	H		7 0		11.55	559.1	57.4	556.8	58.3	D
	23 0		12.31	521.0	54.8	H		8 0		11.00	548.9	57.5	547.1	58.5	H
22	0 0		14.10	525.0	54.7	H		9 0		06.68	543.5	57.6	532.3	58.6	H
	1 0		17.61	530.4	54.8	H		10 0		05.55	542.3	57.7	498.4	58.6	H
	2 0		19.28	537.5	54.8	H		11 0		08.93	534.5	57.8	481.1	58.5	B
	3 0		17.93	545.7	54.9	H		12 0		07.55	538.1	57.7	476.0	58.4	B
	4 0		16.01	546.2	55.0	H									
	5 0		14.46	546.3	55.0	H									
	6 0		13.23	551.4	55.1	H									
	7 0		12.06	552.0	55.1	H									
	8 0		10.74	551.3	55.1	H									
	9 0		10.74	547.7	55.0	H									
	10 0		10.50	542.3	54.9	H									
	11 0		10.21	542.2	54.7	H									
	12 0		09.47	540.8	54.5	H									
	13 0	25	09.44	541.4	54.3	W		22 0	+	20.33	536.0	57.7	459.4	58.2	B
	14 0		09.33	540.3	54.1	W		23 0	+	18.60	500.4	57.2	437.3	58.0	H
	15 0		08.95	540.3	54.0	W	25	0 0		18.81	505.7	57.6	451.2	58.4	H
	16 0		08.56	540.2	53.8	W		1 0		17.65	529.8	58.0	466.8	59.0	H
	17 0		07.08	540.7	53.6	W		2 0		17.19	538.2	58.5	482.9	59.6	H
	18 0		05.92	538.2	53.4	W		3 2		16.57	540.0	59.1	487.0	60.4	H
	19 0		03.54	537.2	53.3	W		4 0		15.02	538.9	60.0	496.3	61.3	H
	20 0		03.65	542.3	53.1	W		5 0		14.17	546.2	60.8	499.1	62.2	H
	21 0		03.02	541.2	53.0	W		6 0		13.27	558.5	61.6	497.7	62.8	B
	22 0		03.70	527.8	53.0	W		7 0		11.28	546.3	62.2	512.5	63.4	B
	23 0	0 0	09.64	526.3	53.0	W		8 0		10.30	546.2	62.5	511.3	63.5	H
	1 0		14.13	529.0	53.0	W		9 0		08.72	555.4	62.7	488.7	63.5	B
	2 0		17.80	532.0	53.3	W		10 0	+	03.13	539.6	62.7	453.0	63.2	B
	3 0		18.50	536.4	53.6	W		11 0		08.58	534.7	62.5	446.1	63.0	W
	4 0		18.11	549.2	53.9	W		12 0		06.51	535.2	62.1	453.7	62.4	W
	5 0		17.29	541.6	54.2	W									
	6 0		15.02	549.5	54.5	W									
	7 0		13.07	545.7	54.8	W									
	8 0		12.50	554.6	55.0	W									
	9 0		11.57	559.3	55.0	W									
	10 0		11.33	557.0	55.0	W									
	11 0		10.54	549.6	55.0	W									
	12 0		09.76	550.8	54.9	W									
	12 0		09.84	549.0	54.9	W									

DECLINATION. Magnet untouched. June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.† Extra Observations made.
July 23^d 10^h—24^d 10^h. Term-Day Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	
25 21 0	25 10-03	528.5	58.4	468.8	58.2	H	29 5 0	25 11-75	546.5	59.4	484.7	60.5	H
22 0	10-09	525.8	58.3	469.6	58.2	H	6 0	09-26	546.6	60.0	473.2	61.0	W
23 0	09-89	527.8	58.2	470.8	58.3	H	7 0	09-71	547.8	60.5	477.6	61.3	W
26 0 0	11-24	529.3	58.3	466.8	58.5	H	8 0	10-77	545.9	60.8	474.3	61.4	W
1 0	14-77	535.5	58.5	469.5	58.9	H	9 0	10-60	545.2	60.8	473.3	61.3	W
2 0	17-36	539.8	58.9	471.0	59.5	H	10 0	11-14	543.7	60.8	471.3	61.2	W
3 0	16-30	532.5	59.3	466.6	60.0	H	11 0	11-00	543.2	60.5	467.2	61.0	H
4 0	15-47	538.5	59.8	474.2	60.4	H	12 0	09-57	542.7	60.2	465.1	60.5	H
5 0	14-77	541.9	60.1	471.5	60.7	H							
6 0	14-20	545.7	60.5	483.3	61.1	W	13 0	25 09-94	542.6	59.9	462.9	60.0	H
7 0	12-38	550.4	60.7	484.9	61.3	W	14 0	09-79	541.5	59.5	459.6	59.5	H
8 0	11-59	547.1	60.8	483.2	61.3	W	15 0	08-41	538.7	59.0	462.1	59.0	H
9 0	11-41	545.1	60.8	477.7	61.2	W	16 0	08-63	538.0	58.5	465.5	58.4	H
10 0	10-92	545.6	60.6	472.3	61.0	W	17 0	07-74	537.4	58.0	471.4	57.7	H
11 0	08-34	539.4	60.4	471.8	60.7	H	18 0	06-73	537.8	57.5	469.3	56.9	H
12 0	08-61	538.2	60.3	459.8	60.5	H	19 0	07-07	536.2	57.3	473.2	56.5	W
							20 0	07-37	535.1	57.0	473.6	56.2	W
27 13 0	25 09-15	536.9	61.2	441.8	60.5	B	21 0	07-81	531.0	56.7	472.4	56.1	B
14 0	10-41	536.5	60.6	447.3	59.7	B	22 0	08-28	529.6	56.5	475.3	56.3	W
15 0	09-86	534.4	59.9	457.5	58.9	B	23 0	11-41	529.8	56.7	471.9	56.9	W
16 0	09-32	535.4	59.3	460.1	58.2	B	30 0	0 13-94	533.0	57.0	465.9	57.7	W
17 0	08-85	535.3	58.7	463.3	57.5	B	1 0	16-75	533.5	57.7	464.7	58.6	W
18 0	10-33	532.6	58.0	467.7	56.8	B	2 0	17-96	542.0	58.4	460.3	59.5	W
19 0	06-79	532.1	57.7	465.2	56.5	H	3 0	15-99	547.7	59.2	452.1	60.3	W
20 0	06-41	530.4	57.4	470.1	56.4	H	4 0	13-79	545.8	59.9	464.5	61.0	W
21 0	08-28	525.5	57.3	475.0	56.4	W	5 0	12-92	547.8	60.5	470.2	61.6	W
22 0	09-94	526.2	57.1	473.9	56.5	H	6 0	12-42	538.3	60.8	477.3	61.8	H
23 0	13-02	523.9	57.1	469.6	56.8	H	7 0	10-06	553.1	61.0	490.4	61.8	H
28 0 0	14-46	528.2	57.2	466.3	57.5	H	8 0	08-77	548.8	61.0	496.1	61.5	H
1 0	15-27	530.5	57.8	463.7	58.5	H	9 0	08-80	543.9	60.7	495.1	61.2	H
2 0	15-47	537.5	58.4	476.9	59.5	H	10 0	07-81	542.6	60.5	483.0	61.0	H
3 0	15-41	541.1	59.2	483.5	60.2	H	11 0	09-29	541.1	60.3	474.2	60.5	B
4 0	13-32	541.7	59.9	487.7	61.1	H	12 0	09-02	544.9	60.0	467.7	60.3	B
5 0	11-52	549.2	60.5	483.5	61.5	H							
6 0	10-67	548.7	61.1	486.2	62.2	B	13 0	25 08-88	544.0	59.8	465.8	60.0	B
7 0	11-37	551.7	61.5	482.4	62.2	B	14 0	08-03	540.7	59.5	465.4	59.6	B
8 0	10-28	547.7	61.7	491.5	62.2	B	15 0	07-57	540.4	59.2	462.5	59.3	B
9 0	10-54	544.7	61.9	488.9	62.2	B	16 0	09-10	543.8	58.9	456.2	59.0	B
10 0	11-10	543.3	61.8	477.7	62.0	B	17 0	03-60	538.3	58.6	465.4	58.6	B
11 0	11-25	541.6	61.5	470.9	61.5	W	18 0	06-27	536.5	58.3	473.8	58.2	B
12 0	11-24	540.0	61.1	465.8	60.9	W	19 0	05-92	533.0	58.2	481.4	58.0	H
							20 0	07-00	530.4	58.0	478.0	58.0	H
13 0	25 10-60	538.4	60.6	464.5	60.3	W	21 0	08-08	521.1	58.0	477.5	58.0	W
14 0	10-54	538.9	60.0	463.6	59.5	W	22 0	10-43	523.9	58.0	468.7	58.2	H
15 0	10-23	537.1	59.4	464.2	58.6	W	23 0	12-69	532.1	58.1	457.3	58.7	H
16 0	09-37	535.8	58.7	467.4	57.8	W	31 0	15-41	538.1	58.7	439.0	59.5	H
17 0	08-59	534.4	58.0	477.2	57.0	W	1 0	16-68	541.0	59.2	435.5	60.3	H
18 0	06-44	536.1	57.4	479.9	56.2	W	2 0	17-15	544.9	59.9	445.4	61.0	H
19 0	06-74	533.2	56.7	487.9	55.4	B	3 0	15-89	547.1	60.2	448.5	61.0	H
20 0	06-66	528.8	56.1	488.4	54.9	B	4 0	14-30	546.1	60.3	462.0	61.0	H
21 0	07-10	524.4	55.7	492.2	54.8	H	5 0	12-62	547.3	60.3	466.5	61.0	H
22 0	09-57	523.7	55.5	490.5	55.0	H	6 0	12-09	548.3	60.2	472.2	60.8	B
23 0	13-39	524.8	55.4	485.8	55.4	H	7 0	07-99	551.0	60.1	473.6	60.5	B
29 0 0	15-49	527.5	55.8	481.8	56.0	B	8 0	10-68	546.9	60.0	471.4	60.2	B
1 0	17-34	529.1	56.2	476.9	56.9	H	9 0	10-70	547.3	59.7	465.1	59.8	B
2 0	17-12	535.2	57.0	475.9	58.0	B	10 0	10-25	545.6	59.4	464.6	59.5	B
3 0	16-12	539.0	57.9	480.4	58.8	B	11 0	09-96	543.9	59.1	464.3	59.0	W
4 0	14-11	543.5	58.7	482.1	59.7	W	12 0	09-39	542.5	58.9	465.7	58.8	W

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.							
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.								
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°								
31	13	0	25	09-73	540-7	58-6	466-6	58-4	W	3	21	0	25	12-11	509-8	57-8	459-6	57-9	H	
	14	0		09-15	540-4	58-3	468-1	58-1	W		22	0		13-69	507-2	57-9	461-4	58-2	H	
	15	0		08-99	539-8	58-0	468-6	57-8	W		23	0		18-13	505-3	58-2	463-8	58-7	H	
	16	0		08-95	539-4	57-7	469-2	57-4	W	4	0	0		18-37	511-9	58-7	467-9	59-3	H	
	17	0		07-98	540-6	57-5	469-2	57-1	W		1	0		21-29	527-5	59-2	462-3	60-0	H	
	18	0		06-23	538-0	57-2	470-3	56-8	W		2	0		20-77	531-8	59-9	473-8	60-7	B	
	19	0		05-32	534-4	57-0	476-3	56-6	B		3	0		15-17	558-5	60-4	506-7	61-4	W	
	20	0		04-84	530-3	56-8	480-3	56-4	B		4	0		16-25	538-7	61-0	517-9	62-0	W	
	21	0		04-81	528-7	56-7	480-3	56-5	H		5	0		14-96	556-9	61-7	517-1	62-6	B	
	22	0		06-97	529-7	56-7	471-5	56-7	H		6	0		12-51	547-0	61-9	519-4	62-8	W	
	23	0		09-26	533-8	56-7	458-6	56-8	H		7	0		12-76	552-7	62-0	497-3	62-7	W	
1	0	0		13-57	540-4	56-9	451-0	57-2	B		8	0		12-90	547-1	61-9	482-5	62-5	W	
	1	0		17-76	551-6	57-3	447-5	58-0	H		9	0		10-97	548-1	61-7	475-5	62-2	W	
	2	0†		23-88	558-7	57-9	458-7	58-7	B		10	0		10-81	543-7	61-6	472-3	62-0	W	
	3	0†		22-99	539-8	58-7	468-6	59-5	B		11	0		08-41	546-0	61-3	460-2	61-5	H	
	4	0†		20-55	555-5	59-3	488-1	60-4	H		12	0		07-64	544-0	61-0	447-4	61-2	H	
	5	0†		19-91	546-9	59-9	560-7	60-8	B											
	6	0†		19-41	552-5	60-4	569-4	61-3	W		13	0		25	09-76	540-9	60-7	440-8	60-8	H
	7	0		13-25	549-1	60-7	537-2	61-3	W		14	0		05-83	537-7	60-3	435-3	60-3	H	
	8	0		10-88	554-3	60-7	506-9	61-1	W		15	0		06-12	535-3	59-8	444-9	59-7	H	
	9	0		11-27	549-2	60-6	489-0	61-0	W		16	0		16-08	531-9	59-4	432-7	59-0	H	
	10	0		25	12-02	547-4	60-4	481-6	60-7	W		17	0		13-36	534-8	59-0	425-9	58-5	H
	11	5†		24	54-01	551-8	60-0	408-9	60-3	H		18	0		07-91	527-3	58-7	436-7	58-1	H
	12	0†		25	06-16	535-3	59-8	404-4	60-1	H		19	0		04-88	525-3	58-3	461-8	57-8	W
											20	0		05-56	529-4	58-0	469-8	57-6	W	
	13	0†		25	02-28	534-5	59-7	417-8	60-0	H		21	0		07-82	530-3	57-9	479-7	57-7	B
	14	0†		18-35	535-6	59-5	419-5	59-8	H		22	0		08-28	523-9	57-9	467-6	58-0	W	
	15	0†		10-00	531-0	59-2	375-6	59-5	H		23	0		10-51	521-3	58-1	473-0	58-7	W	
	16	0†		03-77	541-5	59-0	374-0	59-0	H		5	0	0	14-48	523-2	58-7	482-4	59-7	W	
	17	0		08-05	541-6	58-7	374-0	58-6	H		1	0		15-85	531-0	59-7	476-6	61-0	W	
	18	0		03-23	539-6	58-3	370-0	58-2	H		2	0		13-81	537-9	60-9	488-3	62-5	W	
	19	0		08-12	533-9	58-1	388-6	57-9	W		3	0		15-20	546-5	62-2	490-2	63-7	W	
	20	0		10-65	529-8	57-8	404-7	57-6	W		4	0		14-50	553-3	63-3	483-7	64-8	W	
	21	0		10-68	524-3	57-8	411-6	57-7	B		5	0		12-11	547-4	64-0	475-5	65-3	W	
	22	0		12-70	522-8	57-7	423-8	57-8	W		6	0		11-10	547-0	64-3	472-6	65-4	H	
	23	0		13-69	529-9	57-8	435-2	58-2	W		7	0		10-01	541-5	64-5	467-8	65-5	H	
2	0	0		19-10	531-3	58-0	448-8	58-6	W		8	0		10-04	545-6	64-4	466-4	65-4	H	
	1	0		21-81	539-5	58-7	460-8	59-4	W		9	0		09-69	545-5	64-3	463-5	65-1	H	
	2	0		22-15	530-8	59-4	469-5	60-3	W		10	0		10-01	541-2	64-0	463-4	64-7	H	
	3	0		17-53	540-6	60-1	464-9	61-0	W		11	0		07-78	537-8	63-7	465-8	64-2	B	
	4	0		14-64	541-5	60-6	492-3	61-5	W		12	0		09-86	539-5	63-4	459-6	63-7	B	
	5	0		13-44	545-0	61-0	473-6	61-9	W											
	6	0		11-37	548-9	61-4	483-5	62-2	W		13	0		25	09-84	539-2	63-1	459-0	63-1	B
	7	0		11-77	550-4	61-6	478-8	62-5	H		14	0		09-39	537-5	62-7	462-9	62-5	B	
	8	0		10-50	550-2	61-8	476-1	62-7	H		15	0		08-11	535-9	62-2	466-4	61-9	B	
	9	0		10-45	543-5	62-0	478-2	62-7	H		16	0		10-41	534-6	61-7	465-5	61-3	B	
	10	0		09-86	546-3	61-9	476-0	62-4	H		17	0		09-22	533-7	61-2	466-2	60-7	B	
	11	0†		06-26	534-6	61-8	462-2	62-1	B		18	0		06-46	530-4	60-8	465-9	60-2	B	
	12	0		05-92	540-9	61-5	426-4	61-8	B		19	0		07-10	527-4	60-4	465-9	59-9	H	
											20	0		06-14	527-3	60-0	467-5	59-6	H	
3	13	0	25	(11-00)	(540-0)	(423-7)			21	0		08-19	527-7	59-8	466-9	59-4	W	
	14	0†	11-52	530-3	59-0	423-7	58-5	W		22	0		11-35	523-7	59-7	466-0	59-5	H		
	15	0†	14-82	544-2	58-7	410-3	58-4	W		23	0		14-10	522-0	59-7	467-6	59-7	H		
	16	0	07-49	540-6	58-5	438-3	58-2	W		6	0	0	17-20	520-9	59-8	460-9	60-4	H		
	17	0	04-41	537-2	58-2	458-5	57-9	W			1	0		19-17	530-9	60-3	450-2	61-5	H	
	18	0	05-60	534-6	57-9	469-4	57-6	W			2	0		19-12	538-7	61-2	458-8	62-6	H	
	19	0	04-71	532-6	57-8	481-5	57-5	B			3	0		17-36	535-1	62-3	470-0	63-7	H	
	20	0	09-57	517-2	57-8	472-1	57-5	B			4	0		13-97	532-4	63-2	463-9	64-5	H	

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0\cdot000140$. BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

† Extra Observations made.

Aug. 3^d 13^h. The quantities in parentheses are approximate, and have been used in summations.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.					
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			d.	h.	m.	Sc. Div.	°	d.	h.	m.	Sc. Div.	°	Mic. Div.	°
6 5 0	25 12-85	543-7	63-8	486-5	65-3	H	6	8	13	0	25	15-44	544-0	64-6	440-2	64-5	B		
6 0	12-01	552-7	64-5	484-5	65-9	B	6				10-45	540-4	64-2	424-5	64-1	B			
7 0	10-47	548-9	64-8	477-8	66-0	B	7				10-21	535-0	63-8	429-9	63-6	B			
8 0	10-25	551-8	64-9	469-8	65-6	B	8				17-33	533-6	63-4	409-8	63-1	B			
9 7	10-77	548-2	64-7	466-0	65-4	B	9				07-11	535-3	63-0	434-0	62-6	B			
10 0	11-00	545-9	64-5	461-1	65-2	B	10				04-64	536-4	62-7	458-5	62-2	B			
11 0	09-02	542-5	64-3	458-7	65-0	W	11				(06-00)	(533-4)	(466-5)				
12 0	09-19	546-7	64-0	434-1	64-5	W	12				07-51	530-4	61-9	474-5	61-7	H			
											21	0	10-36	528-9	61-6	471-7	61-0	W	
13 0	25 08-88	542-4	63-7	443-0	64-0	W	13				11-10	526-4	61-3	481-5	61-0	H			
14 0	08-01	539-7	63-4	453-6	63-7	W	14				14-06	523-0	61-2	471-4	61-0	H			
15 0	09-57	541-7	63-1	455-5	63-3	W	15	9	0	0	16-15	525-5	61-0	459-3	61-0	H			
16 0	09-98	538-3	62-8	461-8	62-9	W	16				18-90	527-0	61-0	445-5	61-0	H			
17 0	07-84	542-5	62-5	460-0	62-5	W	17				19-48	542-8	61-0	447-8	61-0	H			
18 0	06-88	540-6	62-2	465-7	62-1	W	18				18-63	537-6	60-9	467-8	60-8	H			
19 0	07-74	534-0	61-9	466-6	61-6	B	19				16-50	543-3	60-8	474-8	60-7	H			
20 0	13-32	524-5	61-7	470-3	61-4	B	20				15-36	553-5	60-7	488-6	60-4	H			
21 0	11-64	533-7	61-4	462-1	61-3	H	21				12-72	544-2	60-5	506-5	60-0	B			
22 0	08-65	523-0	61-3	465-9	61-3	H	22				10-03	541-5	60-2	516-9	59-7	B			
23 0	10-67	524-7	61-3	461-3	61-6	H	23				09-69	546-6	59-9	504-5	59-3	B			
7 0 0	14-33	525-3	61-6	452-2	62-2	B	24				10-50	543-4	59-6	492-4	59-0	B			
1 0	18-30	530-1	62-0	459-5	62-9	H	25				10-53	542-2	59-3	484-2	58-7	B			
2 0	15-14	536-3	62-6	466-4	63-2	H	26				10-21	543-7	59-0	479-8	58-5	W			
3 0	14-68	539-2	63-0	486-1	64-0	B	27				00-69	550-6	58-8	438-1	58-3	W			
4 0	16-18	546-5	63-5	490-4	64-4	B	28				21	0	07-00	531-4	57-4	495-8	57-5	B	
5 0	11-17	543-0	63-9	492-9	64-6	B	29				25	09-10	542-3	58-1	468-1	58-1	H		
6 0	10-80	545-8	64-0	489-1	64-8	W	30				07-40	538-0	58-0	458-2	58-0	H			
7 0	09-82	545-0	64-0	479-3	64-7	H	31				09-12	537-2	57-8	466-5	57-8	H			
8 0	10-43	547-2	64-0	467-3	64-7	H	32				16	0	08-82	538-0	57-7	476-6	57-7	H	
9 0	10-53	547-3	64-0	464-5	64-5	H	33				17	0	07-54	540-3	57-6	480-8	57-5	H	
10 0	08-79	545-4	63-9	463-6	64-3	W	34				18	0	06-26	539-6	57-5	485-4	57-4	H	
11 0	07-84	542-5	63-6	460-0	63-9	H	35				19	0	05-23	538-0	57-4	490-4	57-3	W	
12 0	10-04	544-0	63-3	451-9	63-5	H	36				20	0	05-42	531-0	57-4	499-9	57-3	W	
							37				21	0	07-00	531-4	57-4	495-8	57-5	B	
13 0	25 12-83	542-3	63-0	444-3	63-1	H	38				08-11	528-4	57-4	496-8	57-8	W			
14 0	04-56	529-8	62-6	407-9	62-6	H	39				23	0	09-93	525-3	57-7	481-4	58-2	W	
15 0	26-16	532-9	62-3	390-8	62-2	H	40	11	0	0	11-99	522-7	58-1	475-5	58-7	W			
16 0	07-20	540-6	62-0	402-8	61-8	H	41	1	0	0	14-99	531-2	58-5	471-9	59-2	W			
17 0	06-26	537-5	61-6	432-4	61-2	H	42	2	0	0	16-86	535-9	59-0	480-0	59-7	W			
18 0	06-53	531-8	61-2	455-3	60-5	H	43	3	0	0	16-72	537-9	59-5	483-0	60-3	W			
19 0	05-56	530-5	60-9	465-0	60-3	W	44	4	0	0	15-83	542-1	60-0	483-4	60-8	W			
20 0	06-34	525-8	60-6	470-4	60-0	W	45	5	0	0	13-23	543-2	60-5	492-7	61-3	W			
21 0	14-94	516-1	60-3	471-5	59-9	B	46	6	0	0	10-53	545-0	60-9	495-9	61-7	H			
22 0	14-89	517-7	60-3	464-1	60-0	W	47	7	0	0	08-21	549-1	61-1	495-0	61-7	H			
23 0	16-38	517-5	60-3	464-1	60-3	W	48	8	0	0	08-52	547-6	61-0	483-8	61-5	H			
8 0 0	18-74	524-0	60-5	456-0	61-0	W	49	9	0	0	09-42	545-0	60-7	477-8	61-0	H			
1 0	20-79	525-2	61-0	451-8	61-9	W	50	10	0	0	09-91	544-6	60-4	473-2	60-6	H			
2 0	20-32	532-5	61-7	455-5	62-8	W	51	11	0	0	10-03	542-3	60-1	470-2	60-2	B			
3 0	19-02	537-7	62-6	461-2	63-8	W	52	12	0	0	09-66	541-4	59-9	467-0	59-8	B			
4 0	17-06	549-4	63-5	464-1	64-7	W	53				13	0	25	09-64	540-4	59-6	467-2	59-4	B
5 0	14-13	552-4	64-4	467-7	65-5	W	54				09-02	538-3	59-3	470-1	59-0	B			
6 0	11-68	547-9	65-1	479-7	66-7	H	55				15	0	09-39	538-7	59-0	471-2	58-7	B	
7 0	10-09	548-0	65-5	476-1	66-5	H	56				16	0	08-95	538-6	58-8	471-9	58-5	B	
8 0	10-43	547-2	65-8	463-3	66-5	H	57				17	0	07-69	537-9	58-5	477-3	58-2	B	
9 0	10-13	545-3	65-8	463-2	66-5	H	58				18	0	06-23	537-6	58-2	483-6	58-0	B	
10 0	11-28	550-0	65-7	457-6	66-2	H	59				19	0	05-05	535-8	58-0	487-0	57-7	H	
11 0	06-93	547-6	65-2	451-4	65-5	B	60				20	0	03-99	532-9	57-8	486-0	57-5	H	

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.
 Aug. 8^d 19^h. The quantities in parentheses are approximate, and have been used in summations.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.		
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			
		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	
11 21 0	25 04-42	529.4	57.7	480.5	57.4	W	14	5 0	25 10-23	551.8	58.5	472.8	59.1	W
22 0	06-50	525.8	57.7	472.4	57.3	H		6 0	09-35	548.9	58.7	473.4	59.2	H
23 0	09-15	526.5	57.6	473.1	57.5	H		7 0	08-82	547.0	58.6	471.8	59.2	H
12 0 0	13-19	526.5	57.7	472.4	57.7	H		8 0	10-13	549.6	58.5	470.5	59.0	H
1 0	15-44	525.1	57.7	468.0	58.0	H		9 0	09-05	551.7	58.4	468.7	58.7	H
2 0	15-41	532.1	57.7	466.9	58.0	H		10 0	07-17	553.8	58.3	468.5	58.5	H
3 0	14-13	537.8	57.8	468.1	58.0	H		11 0	08-53	549.0	58.1	469.6	58.3	B
4 0	12-58	541.6	57.8	475.0	58.2	H		12 0	09-20	548.4	57.9	467.0	58.0	B
5 0	10-33	541.2	57.9	481.0	58.2	H								
6 0	09-30	544.4	57.9	484.7	58.1	B		13 0	25 08-82	551.2	57.7	466.3	57.8	B
7 0	08-99	549.4	57.9	481.7	58.0	B		14 0	07-78	548.7	57.5	462.1	57.5	B
8 0	09-35	550.3	57.8	475.5	57.9	B		15 0	06-86	546.0	57.3	467.8	57.2	B
9 0	09-87	547.9	57.7	481.2	57.8	B		16 0	07-58	545.1	57.1	466.6	56.9	B
10 0	10-09	546.9	57.6	477.6	57.6	B		17 0	06-76	536.9	56.8	477.1	56.5	B
11 0	10-21	545.4	57.4	476.3	57.3	W		18 0	06-79	541.4	56.5	474.3	56.0	B
12 0	10-06	545.2	57.2	474.9	57.0	W		19 0	04-37	540.3	56.1	471.9	55.7	H
								20 0	05-99	534.5	55.8	476.5	55.5	H
13 0	25 09-82	543.9	56.9	475.9	56.7	W		21 0	05-58	528.6	55.6	473.3	55.3	W
14 0	08-97	544.9	56.6	472.2	56.3	W		22 0	14-67	525.5	55.4	464.9	55.3	H
15 0	07-71	542.8	56.3	472.4	55.9	W		23 0	11-96	525.0	55.4	458.0	55.4	H
16 4	08-63	539.7	55.9	475.7	55.5	W	15	0 0	17-06	530.4	55.4	445.5	55.5	H
17 0	08-66	541.3	55.5	482.8	55.0	W		1 0	18-77	532.3	55.6	443.9	55.9	H
18 0	07-02	541.3	55.2	482.6	54.6	W		2 0	24-12	549.5	55.9	453.6	56.5	H
19 0	06-23	539.8	54.9	493.0	54.3	B		3 0†	22-80	513.7	56.2	483.3	56.9	H
20 0	05-77	536.2	54.6	500.0	54.2	B		4 0†	19-86	563.6	56.7	502.3	57.3	H
21 0	04-14	533.8	54.4	496.6	54.2	H		5 0	15-94	550.8	57.1	537.8	58.0	H
22 0	06-76	527.8	54.3	494.0	54.4	H		6 0	10-75	543.0	57.5	548.1	58.1	B
23 0	11-41	532.3	54.7	490.8	55.2	H		7 0	07-24	546.2	57.7	535.6	58.2	B
13 0 0	13-96	535.0	55.1	475.2	56.0	B		8 0	09-42	549.1	57.7	501.7	58.0	B
1 0	16-41	540.6	55.9	461.7	56.9	H		9 0	10-47	542.1	57.6	485.7	57.8	B
2 0	17-17	544.1	56.9	472.1	58.0	B		10 0	10-48	545.7	57.3	476.2	57.3	B
3 7	16-41	549.2	57.9	475.5	59.2	B		11 0	10-16	543.5	57.0	474.0	57.0	W
4 0	13-74	549.3	58.8	481.6	60.2	H		12 0	10-13	541.6	56.7	473.0	56.6	W
5 0	11-86	545.7	59.6	485.3	60.7	B								
6 0	09-96	547.4	60.0	489.8	61.1	W		13 0	25 10-67	544.1	56.4	470.7	56.2	W
7 0	09-60	551.4	60.3	485.1	61.2	W		14 0	08-96	542.4	56.1	470.7	55.8	W
8 0	10-07	554.5	60.3	475.3	61.0	W		15 0	09-42	540.3	55.8	471.9	55.5	W
9 0	11-00	551.4	60.2	469.8	60.8	W		16 0	08-25	538.8	55.4	474.9	55.1	W
10 0	11-00	550.9	60.0	467.9	60.7	W		17 0	07-79	538.0	55.1	481.5	54.7	W
11 0	10-13	546.5	59.9	468.6	60.5	H		18 0	05-96	535.5	54.8	485.7	54.3	W
12 0	08-11	549.6	59.6	460.0	60.0	H		19 0	04-76	531.9	54.5	489.7	54.0	B
								20 0	05-38	525.7	54.2	494.9	53.8	B
13 0	25 07-94	546.5	59.3	460.8	59.6	H		21 0	06-01	520.3	54.0	497.4	53.7	H
14 0	08-18	544.7	59.0	460.6	59.2	H		22 0	08-08	518.7	53.9	502.8	53.9	H
15 0	07-45	541.2	58.7	462.9	58.8	H		23 0	11-81	521.4	53.9	492.7	54.1	B
16 0	07-67	540.8	58.4	465.2	58.4	H	16	0 0	15-78	529.4	54.0	487.8	54.5	B
17 0	07-32	541.1	58.1	473.0	58.0	H		1 0	18-94	539.6	54.3	488.0	55.0	H
18 0	06-01	538.2	57.8	478.6	57.7	H		2 0	20-25	545.4	54.8	496.8	55.4	B
19 0	05-90	535.2	57.6	478.5	57.3	W		3 0	17-83	547.0	55.2	501.3	56.0	H
20 0	05-97	532.6	57.3	480.5	57.0	W		4 0	12-55	555.9	55.7	515.2	56.5	H
21 0	06-57	527.8	57.0	479.7	57.0	B		5 0	10-00	544.4	56.0	514.0	56.9	H
22 0	07-72	525.8	56.9	477.3	56.9	W		6 0	08-83	542.0	56.4	501.7	57.2	W
23 0	10-30	527.2	56.9	472.0	56.9	W		7 0	09-53	543.7	56.7	488.1	57.3	W
14 0 0	12-45	531.6	56.9	461.9	57.2	W		8 0	10-03	545.6	56.8	485.5	57.3	W
1 0	14-17	538.1	57.1	454.8	57.6	W		9 0	10-80	542.2	56.7	484.2	57.2	W
2 0	15-27	542.3	57.5	454.7	58.2	W		10 0	10-20	544.6	56.6	478.9	57.0	W
3 0	14-13	546.6	57.9	463.2	58.7	W		11 0	10-41	543.7	56.4	477.7	56.8	H
4 0	11-57	549.1	58.3	463.9	59.0	W		12 0	10-04	543.4	56.3	477.4	56.6	H

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
17 13 0	25 01.34	531.8	56.2	421.8	56.4	B	19 21 0	25 05.67	528.7	53.7	472.5	53.5	B
14 0	04.91	537.8	56.0	434.0	56.2	B	22 0	09.29	520.1	53.6	474.9	53.5	W
15 0†	16.15	529.5	55.9	423.3	56.1	B	23 0	14.41	516.0	53.6	477.6	53.5	W
16 0†	08.25	548.2	55.8	366.3	56.0	B	20 0	16.75	521.6	53.6	476.0	53.7	W
17 0†	01.95	538.4	55.7	404.0	55.9	B	1 0	17.67	527.4	53.7	474.9	53.9	B
18 0	11.10	525.6	55.6	425.2	55.8	B	2 0	18.32	535.2	53.7	475.1	54.2	W
19 0	10.33	527.9	55.4	428.6	55.7	H	3 0	17.13	541.4	53.9	479.4	54.4	W
20 0	13.22	530.4	55.3	440.7	55.6	H	4 0	14.80	550.3	54.0	482.2	54.6	W
21 0	11.69	528.7	55.4	444.7	55.8	W	5 0	11.96	553.1	54.3	488.9	54.8	W
22 0	11.79	518.1	55.4	449.4	56.0	H	6 0	10.09	553.0	54.4	489.2	55.0	H
23 0	13.17	518.5	55.8	438.8	56.4	H	7 0	08.46	547.5	54.5	486.4	55.2	H
18 0 0	16.15	516.4	56.3	446.8	57.2	H	8 0	08.83	545.8	54.5	480.1	55.2	H
1 0	19.86	523.6	57.0	471.8	58.2	H	9 0	08.79	550.5	54.5	474.7	55.0	H
2 0	19.51	535.7	57.8	489.6	59.2	H	10 0	09.56	546.1	54.4	475.1	55.0	H
3 0	19.61	542.7	58.5	494.0	59.7	H	11 0	09.35	545.0	54.3	472.0	54.7	B
4 0	18.13	548.0	59.0	497.6	60.2	H	12 0	09.13	543.4	54.1	472.2	54.5	B
5 0	12.55	539.5	59.4	496.6	60.7	H							
6 0	08.90	544.2	59.9	492.4	60.8	B	13 0	25 08.82	543.0	54.0	472.0	54.2	B
7 0	07.98	543.4	60.0	488.5	60.9	B	14 0	08.68	543.4	53.8	472.4	54.0	B
8 0	08.99	542.5	60.1	477.1	60.9	B	15 0	09.30	545.0	53.7	472.4	53.7	B
9 0	09.39	546.4	60.2	466.9	60.7	B	16 0	07.64	544.3	53.5	472.6	53.5	B
10 0	09.42	545.0	60.0	464.3	60.5	B	17 0	06.79	542.8	53.3	478.3	53.3	B
11 0	09.27	543.5	59.8	462.7	60.2	W	18 0	05.15	539.8	53.1	482.4	53.0	B
12 2	09.60	539.8	59.5	463.4	59.8	W	19 0	04.37	536.2	53.0	482.7	52.9	H
							20 0	03.99	530.0	52.8	485.6	52.9	H
13 0	25 09.69	538.4	59.3	464.1	59.5	W	21 0	04.55	520.6	52.8	485.6	52.9	W
14 0	09.49	539.1	59.0	465.5	59.1	W	22 0	07.37	513.9	52.8	483.2	53.2	H
15 0	09.56	539.9	58.7	466.0	58.7	W	23 0	11.44	514.4	53.0	474.5	53.4	H
16 0	09.02	538.9	58.4	467.3	58.4	W	21 0	15.91	520.8	53.3	466.3	54.3	H
17 0	08.45	538.4	58.1	471.1	58.0	W	1 0	18.70	529.8	53.9	464.4	55.0	H
18 0	07.37	537.6	57.8	476.3	57.7	W	2 0	18.77	539.4	54.3	459.8	55.5	H
19 25	05.92	531.8	57.5	482.9	57.2	B	3 0	16.68	543.0	54.8	466.3	55.8	H
20 0	06.53	529.3	57.3	484.8	57.1	B	4 0	14.28	546.0	55.0	476.4	56.2	H
21 0	05.92	521.4	57.1	480.5	57.0	H	5 0	11.51	547.1	55.5	480.3	56.5	H
22 0	09.79	517.4	57.0	478.3	57.0	H	6 0	09.96	546.2	55.9	481.2	56.7	B
23 0	14.13	516.1	57.0	474.7	57.2	H	7 0	09.86	547.8	56.1	476.8	57.0	B
19 0 0	16.06	533.4	57.0	460.8	57.3	B	8 0	10.41	547.5	56.3	470.5	57.0	B
1 0	17.70	536.4	57.1	458.9	57.3	B	9 0	10.23	547.7	56.3	468.9	57.0	B
2 0	18.43	535.6	57.1	462.5	57.3	B	10 0	10.00	545.6	56.2	467.0	56.7	B
3 0	19.28	542.8	57.1	469.4	57.3	B	11 0	10.20	543.8	56.0	466.2	56.5	W
4 0	17.02	540.2	57.0	483.5	57.2	B	12 0	09.19	543.2	55.7	463.6	56.0	W
5 0	14.33	552.0	57.0	476.1	57.1	H							
6 0	10.94	549.2	56.9	476.2	56.9	W	13 0	25 08.82	542.9	55.4	464.4	55.6	W
7 0	09.59	547.2	56.8	478.9	56.7	W	14 0	07.87	548.0	55.1	463.3	55.1	W
8 0	10.04	550.9	56.6	474.6	56.4	W	15 0	08.14	547.2	54.7	464.7	54.5	W
9 0	09.71	549.2	56.4	472.2	56.2	W	16 0	07.37	544.7	54.2	467.5	53.8	W
10 0	09.73	547.3	56.1	470.2	55.9	W	17 0	06.90	543.8	53.7	470.0	53.1	W
11 0	09.35	546.6	55.8	470.6	55.7	H	18 0	05.36	539.0	53.2	476.8	52.5	W
12 0	09.08	545.0	55.6	471.6	55.4	H	19 0	05.52	537.2	52.8	482.3	52.0	B
							20 0	04.37	533.6	52.5	484.3	51.8	B
13 0	25 08.45	544.5	55.3	470.7	55.2	H	21 0	05.80	527.1	52.2	483.4	51.7	H
14 0	09.02	543.5	55.1	471.7	55.0	H	22 0	09.79	522.8	52.2	485.9	52.1	H
15 0	09.76	543.0	54.9	468.9	54.6	H	23 0	13.77	522.9	52.3	474.8	52.7	H
16 0	09.19	541.6	54.7	467.0	54.3	H	22 0	17.70	529.9	52.8	475.7	53.6	B
17 0	09.02	542.1	54.4	464.8	54.0	H	1 0	18.84	534.8	53.5	477.1	54.8	H
18 0	06.77	537.6	54.2	470.4	53.8	H	2 0	20.08	544.1	54.6	471.6	55.8	B
19 0	06.88	534.4	54.0	473.4	53.7	W	3 0	18.77	541.6	55.6	479.3	57.0	B
20 0	05.72	534.0	53.8	476.7	53.5	W	4 0	17.15	544.0	56.6	483.8	58.0	H

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Aug. 19^d 19^h—22^h. Workmen engaged with scythes outside the Observatory; the iron removed to a distance during observations.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°
22 5 0	25 14.35	551.5	57.4	490.2	58.6	B	25 13 0	25 09.05	542.2	58.8	451.1	59.0
6 0	11.88	548.1	57.9	491.0	59.0	W	14 0	09.47	542.5	58.4	451.1	58.5
7 0	11.00	548.6	58.3	486.5	59.1	W	15 0	09.05	541.8	58.0	451.3	58.0
8 0	05.82	550.8	58.3	483.3	59.1	W	16 0	07.74	542.9	57.7	452.8	57.5
9 0	09.89	550.0	58.3	472.5	58.8	W	17 0	07.47	542.7	57.4	455.6	57.2
10 0	09.74	547.9	58.1	468.3	58.7	W	18 0	05.72	544.4	57.1	461.4	56.9
11 0	08.97	545.8	57.9	464.4	58.5	H	19 0	02.66	540.2	56.9	465.3	56.5
12 0	08.21	549.1	57.7	458.1	58.3	H	20 0	02.35	534.0	56.7	467.4	56.3
							21 0	03.06	530.3	56.5	464.2	56.3
13 0	25 07.20	549.9	57.6	450.9	58.2	H	22 0	05.25	532.4	56.4	455.5	56.3
14 0+	02.01	538.1	57.4	447.5	58.1	H	23 0	09.73	532.1	56.4	449.8	56.5
15 0	04.98	536.4	57.3	455.2	58.0	H	26 0	0	15.34	532.3	56.6	446.3
16 0	05.80	537.2	57.2	459.7	57.9	H	1 0	17.84	535.1	57.1	438.5	57.9
17 0	08.61	535.0	57.2	463.4	57.7	H	2 0	19.12	547.8	57.7	434.7	58.7
18 0	08.16	541.9	57.1	449.8	57.5	H	3 0	19.07	560.6	58.4	437.2	59.4
19 0	09.06	542.6	57.1	449.5	57.5	W	4 0	16.62	562.0	59.0	466.1	60.0
20 0	07.55	535.4	57.0	447.3	57.5	W	5 0	17.76	552.1	59.6	503.4	60.7
21 0	10.50	536.1	57.0	440.5	57.5	B	6 0	11.74	550.6	60.2	528.4	61.2
22 0	11.24	529.6	57.1	445.3	57.7	W	7 0	10.72	545.6	60.7	526.7	61.6
23 0	13.07	527.2	57.4	442.3	58.0	W	8 0	09.59	543.2	61.0	501.5	61.7
23 0 0	15.94	528.0	57.6	448.3	58.3	W	9 0	09.15	547.0	61.0	474.1	61.5
1 0	19.78	534.2	58.0	452.0	58.8	B	10 0	06.76	538.2	60.7	459.3	61.0
2 0	20.50	535.0	58.5	456.0	59.5	W	11 0	07.71	541.2	60.3	456.4	60.6
3 0	19.53	539.6	59.0	455.7	60.0	W	12 0	07.67	538.4	60.1	453.0	60.2
4 0	17.98	541.7	59.6	464.1	60.8	W						D
5 0	12.98	539.3	60.3	483.0	61.3	W	13 0	25 07.07	534.5	59.8	454.2	59.8
6 0	10.90	546.1	60.7	479.5	61.5	H	14 0	08.50	535.2	59.3	456.7	59.0
7 0	10.27	547.6	60.8	473.1	61.5	H	15 0	09.66	532.9	59.1	459.8	58.8
8 0	10.03	551.3	60.8	464.9	61.5	H	16 0	07.60	534.3	58.7	456.9	58.4
9 0	09.59	548.4	60.6	461.7	61.0	H	17 0	07.99	536.5	58.4	464.8	58.2
10 0	06.29	541.3	60.3	465.4	60.7	H	18 0	07.13	534.3	58.1	465.6	57.8
11 0	06.44	538.4	60.0	455.2	60.2	B	19 0	06.09	532.0	57.8	469.7	57.6
12 0	07.37	545.3	59.7	450.0	59.7	B	20 0	07.24	524.9	57.7	476.1	57.5
							21 0	06.83	525.9	57.5	474.8	57.3
24 13 0	25 07.42	543.3	58.9	431.6	58.9	W	22 0	08.82	524.5	57.3	475.4	57.3
14 0	05.16	540.2	58.6	429.0	58.5	W	23 0	09.94	524.7	57.3	477.2	57.6
15 0	07.42	542.1	58.3	435.8	58.3	W	27 0	0	14.80	528.2	57.5	467.6
16 0+	14.21	539.4	58.0	430.7	58.0	W	1 0	17.02	531.7	57.8	468.7	58.3
17 0	03.40	543.5	57.7	418.1	57.7	W	2 0	18.00	534.1	58.0	470.4	58.7
18 0	04.42	542.7	57.5	428.8	57.3	W	3 0	16.75	533.8	58.4	471.8	59.2
19 0	05.38	543.8	57.3	439.5	57.0	B	4 0	14.73	535.5	59.0	471.2	59.7
20 0	05.38	540.8	57.1	449.0	56.8	B	5 0	14.26	537.7	59.4	470.6	60.2
21 0	06.79	530.4	56.9	452.8	56.7	H	6 0	10.50	542.7	59.9	471.6	60.5
22 0	10.18	524.5	56.7	450.6	56.6	H	7 0	09.76	545.4	60.2	466.9	60.8
23 0	13.61	524.5	56.7	454.3	56.7	H	8 0	09.69	546.5	60.5	466.0	61.0
25 0 0	16.99	528.8	56.7	446.0	56.8	H	9 0	10.11	546.3	60.6	462.5	60.7
1 0	18.37	538.0	56.7	444.9	57.0	H	10 0	10.40	539.8	60.3	458.8	60.5
2 0	19.55	536.9	56.9	446.3	57.2	B	11 0	08.70	541.9	60.1	458.6	60.0
3 0	17.89	536.7	57.2	463.8	57.8	H	12 0	07.81	543.9	59.8	452.5	59.7
4 0	16.26	537.8	57.8	472.8	58.6	B						
5 0	12.22	548.0	58.4	477.2	59.2	B	13 0	25 09.05	544.0	59.5	448.7	59.3
6 0	10.20	547.5	58.8	476.9	59.5	W	14 0	08.06	538.0	59.2	451.2	59.0
7 0	09.59	548.5	59.0	468.8	59.8	W	15 0	07.82	537.4	58.9	455.2	58.5
8 0	09.22	547.4	59.3	468.6	59.8	W	16 0	07.74	538.3	58.5	457.5	58.0
9 0	09.32	545.0	59.3	470.0	59.8	W	17 0	07.74	537.5	58.0	460.0	57.5
10 0	07.60	550.1	59.3	462.1	59.8	W	18 0	07.24	536.5	57.6	463.9	57.0
11 0	09.22	546.5	59.2	453.4	59.5	H	19 0	06.10	535.1	57.2	467.2	56.5
12 0	09.49	545.6	59.0	448.7	59.2	H	20 0	06.16	533.8	56.9	468.9	56.2

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Mic. Div.	°	
27 21 0	25 07.57	528.4	56.6	469.3	56.0	H	30 5 0	25 11.84	540.3	67.7	469.5	69.1	H	
22 0	08.95	526.7	56.3	459.9	56.2	H	6 0	25 10.09	548.4	68.6	456.9	69.6	C	
23 0	11.39	526.8	56.5	469.1	56.6	H	7 0	24 55.33	544.0	69.0	482.6	69.9	D	
28 0 0	14.28	531.0	56.9	459.9	57.6	H	8 0	25 04.88	543.8	69.1	485.8	69.8	C	
1 0	16.25	536.9	57.8	449.9	58.9	H	9 0	07.47	534.1	69.0	479.2	69.9	B	
2 0	16.15	538.0	58.9	449.1	60.4	B	10 0	04.24	540.6	68.9	464.2	69.7	B	
3 0	14.40	539.1	60.4	447.9	62.0	B	11 0	09.15	537.8	68.7	460.1	69.3	W	
4 0	12.78	538.6	61.9	440.2	63.5	B	12 0	12.35	531.4	68.4	402.9	68.5	W	
5 0	12.06	543.2	63.3	436.4	65.0	B								
6 0	10.65	544.8	64.7	435.4	66.2	W	31 13 0	25 08.58	535.4	65.8	430.9	65.5	H	
7 0	09.13	548.0	65.7	453.6	66.8	W	14 0	08.48	532.8	65.4	429.8	65.0	H	
8 0	09.35	553.4	66.3	455.7	67.1	W	15 0†	17.12	525.4	65.0	418.1	64.5	H	
9 0	08.95	541.8	66.6	467.3	67.3	W	16 0	08.92	533.4	64.7	385.3	64.2	H	
10 0	09.89	544.9	66.6	461.2	67.3	W	17 0	10.00	535.3	64.4	424.2	63.9	H	
11 0	07.87	543.8	66.4	458.2	67.0	H	18 0	06.73	531.8	64.0	448.0	63.5	H	
12 0†	03.84	540.2	66.0	446.0	66.5	H	19 0	06.95	532.3	63.8	469.5	63.2	W	
							20 0	06.23	526.6	63.5	471.1	62.9	W	
13 0	25 05.72	542.9	65.7	432.3	65.7	H	21 0	06.70	521.4	63.2	473.8	62.8	B	
14 0	06.73	539.8	65.0	426.0	65.1	H	22 0	09.12	525.4	63.1	469.4	62.9	W	
15 0	04.71	536.9	64.5	435.8	64.5	H	23 0	13.36	516.0	63.2	466.5	63.3	W	
16 0	07.13	538.2	64.0	439.8	63.9	H	1 0 0	14.78	529.4	63.6	450.1	63.9	W	
17 0	06.76	539.3	63.5	444.1	63.2	H	1 0	16.99	534.5	64.0	448.1	64.7	B	
18 0	08.34	540.6	63.0	450.6	62.7	H	2 0	17.29	542.5	64.7	446.4	65.7	W	
19 0	06.74	540.6	62.7	456.3	62.3	W	3 0	17.10	548.2	65.6	453.2	66.7	W	
20 0	09.20	537.0	62.4	457.1	62.0	W	4 0	14.38	549.4	66.6	466.9	67.7	W	
21 0	17.73	521.6	62.1	454.4	61.7	B	5 0	09.94	537.3	67.7	479.8	68.8	W	
22 0	16.65	536.7	62.0	445.1	61.9	W	6 0	09.46	541.3	68.7	466.4	69.5	H	
23 0	15.47	539.0	62.2	447.2	62.8	W	7 0	08.01	550.0	69.0	459.7	70.0	H	
29 0 0	16.12	538.3	62.7	447.3	63.4	W	8 0†	01.85	550.0	69.2	472.6	69.7	H	
1 0	18.13	536.2	63.3	450.6	64.3	W	9 0	05.11	542.8	69.0	445.9	69.5	H	
2 0	21.95	557.7	64.0	452.5	65.1	W	10 0	07.84	539.1	68.8	455.5	69.0	H	
3 0†	22.98	560.9	64.9	462.5	66.0	W	11 10	04.28	539.3	68.3	419.4	68.3	B	
4 0	14.87	553.3	65.6	477.4	66.8	W	12 0	06.16	536.9	67.9	423.2	67.8	B	
5 0	12.95	560.2	66.5	466.4	67.6	B								
6 0	25 11.51	563.5	67.2	460.5	68.3	H	13 0	25 06.56	536.1	67.5	417.5	67.2	B	
7 0†	24 51.17	549.9	68.0	493.4	68.7	H	14 0	05.45	532.9	67.1	415.6	66.8	B	
8 0†	25 01.78	548.1	68.2	490.6	68.8	H	15 0†	17.06	525.3	66.7	410.4	66.3	B	
9 0†	25 04.08	531.9	68.4	461.0	69.0	H	16 0	09.66	540.3	66.3	376.6	65.9	B	
10 0	24 45.87	508.5	68.4	224.5	68.8	H	17 0†	12.18	528.8	65.9	387.0	65.5	B	
11 0	25 00.99	538.7	68.2	348.7	68.5	W	18 0	16.41	533.3	65.5	370.4	65.0	B	
12 0	09.96	541.7	67.9	258.3	68.1	W	19 0	12.58	532.6	65.0	395.2	64.5	H	
							20 0	10.43	526.8	64.8	417.8	64.2	H	
13 0	25 02.08	531.1	67.5	224.0	67.6	W	21 0	13.22	520.3	64.5	428.4	63.8	W	
14 0	24 57.75	529.5	67.0	272.6	67.1	D	22 0	14.55	513.3	64.0	433.3	63.4	H	
15 0	25 08.45	511.0	66.5	328.2	66.5	D	23 0	15.67	509.8	63.8	445.3	63.2	H	
16 0	10.58	520.5	66.0	342.5	65.9	D	2 0 0	17.06	515.6	63.5	457.5	63.0	H	
17 0	04.10	534.1	65.5	353.5	65.2	D	1 0	20.22	529.6	63.3	456.6	62.7	H	
18 0	08.28	535.5	64.9	379.1	64.5	B	2 0	20.47	529.5	63.0	476.6	62.6	H	
19 0	11.71	526.5	64.3	414.3	63.7	B	3 0	19.02	524.9	63.0	520.6	62.6	H	
20 0	15.11	509.9	63.8	417.2	63.0	B	4 0	16.32	542.0	62.9	537.5	62.6	H	
21 0	15.94	506.4	63.4	443.5	62.6	H	5 0†	08.82	537.1	62.9	553.9	62.7	H	
22 0	13.43	521.4	63.0	452.0	62.6	H	6 0	10.60	535.5	62.9	520.7	62.5	B	
23 0	12.38	528.9	63.0	466.9	63.0	H	7 0	08.19	544.6	62.7	512.3	62.3	B	
30 0 0	16.65	523.4	63.2	469.1	63.7	H	8 0	05.06	538.0	62.5	518.8	62.0	B	
1 0	16.41	527.1	63.8	471.5	64.7	H	9 0†	00.47	536.1	62.3	486.9	61.7	B	
2 0	16.93	536.6	64.6	479.8	65.8	W	10 0†	04.17	541.6	62.0	421.8	61.4	B	
3 0	17.33	525.9	65.7	493.9	66.9	W	11 0	05.43	532.4	61.7	451.8	60.9	W	
4 0	09.89	539.7	66.7	497.7	68.0	H	12 0	09.46	551.8	61.3	400.7	60.2	W	

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Aug. 29^d 10^h—30^d 10^h. Term-Day Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
		d. h. m.	° ,	Sc. Div.	°			Mic. Div.	°	d. h. m.	° ,	Sc. Div.	°	
2 13 0	25 07.20	534.0	60.7	405.7	59.5	W	4 21 0	25 08.03	521.8	55.3	490.1	55.3	W	
14 0	04.07	533.4	60.0	411.6	58.7	W	22 0	10.74	518.6	55.3	484.1	55.6	H	
15 0	11.72	534.3	59.3	433.1	57.9	W	23 0	13.67	519.3	55.5	472.9	56.0	H	
16 0	04.32	529.7	58.6	443.8	57.0	W	5 0 0	16.82	533.4	55.8	469.0	56.4	H	
17 0	06.06	536.1	57.8	461.6	56.1	W	1 0	18.54	534.2	56.1	474.1	56.8	H	
18 0	05.23	537.2	57.2	473.3	55.4	W	2 0	17.80	541.2	56.6	482.5	57.4	H	
19 0	05.32	531.2	56.5	490.0	54.8	B	3 0	14.62	543.9	57.2	490.6	58.0	H	
20 0	08.05	527.9	55.8	491.6	54.2	B	4 0	12.15	547.7	57.8	494.7	58.6	H	
21 0	07.38	521.0	55.2	497.1	54.0	H	5 0	07.81	541.7	58.3	500.4	59.2	H	
22 0	09.29	519.3	55.0	488.9	53.8	H	6 0	06.32	543.0	58.8	502.1	59.5	B	
23 0	15.24	515.8	54.8	492.4	54.2	H	7 0	09.19	543.9	59.0	485.5	59.7	H	
3 0 0	15.91	523.0	54.9	496.4	54.8	H	8 0	08.48	543.2	59.2	484.4	59.5	H	
1 0	19.84	530.8	55.2	502.6	55.5	H	9 0	07.78	543.7	59.0	466.6	59.3	H	
2 0	20.11	538.1	55.9	512.4	56.4	B	10 0	07.76	537.3	58.8	471.7	59.0	H	
3 0	21.19	550.6	56.7	530.7	57.4	B	11 0	07.67	542.6	58.6	460.4	58.4	W	
4 0 †	10.47	542.2	57.6	584.0	58.4	B	12 0	02.20	534.3	58.2	460.5	57.9	W	
5 0	14.98	549.7	58.4	573.7	59.2	B								
6 0	12.49	540.9	59.0	544.5	59.8	W	13 0	25 07.78	535.0	57.7	462.3	57.3	W	
7 0	12.31	546.9	59.4	503.7	60.0	W	14 0	08.82	535.8	57.1	464.0	56.5	W	
8 0	10.72	539.9	59.6	502.0	59.9	W	15 0	09.26	536.0	56.5	471.8	55.8	W	
9 0 †	01.45	534.0	59.5	503.3	59.8	W	16 0	09.02	534.8	55.9	473.8	55.0	W	
10 0 †	04.51	541.3	59.4	485.2	59.7	W	17 0	08.06	533.9	55.3	478.1	54.3	W	
11 0	08.43	539.3	59.1	474.3	59.3	H	18 0	07.22	532.7	54.7	482.4	53.7	W	
12 0	09.66	539.3	58.8	469.9	58.9	H	19 0	06.23	529.6	54.1	489.6	53.0	B	
							20 0	07.11	524.7	53.7	491.7	52.5	B	
13 0	25 08.86	538.7	58.4	467.1	58.5	H	21 0	07.57	524.1	53.2	484.6	52.2	H	
14 0	07.40	538.8	58.0	454.3	58.2	H	22 0	10.65	520.3	52.9	484.5	52.2	H	
15 0	09.57	537.0	57.8	463.4	57.8	H	23 0	14.20	518.3	52.7	480.7	52.2	H	
16 0	08.95	536.0	57.5	469.6	57.5	H	6 0 0	17.71	526.8	52.7	479.3	52.5	B	
17 0	07.47	532.3	57.3	474.3	57.1	H	1 0	18.40	528.8	52.8	477.2	53.0	H	
18 0	10.67	526.2	57.0	476.5	56.8	H	2 0	19.14	543.0	53.2	485.1	53.7	B	
19 0	12.31	528.1	56.8	468.8	56.5	W	3 0	15.51	541.6	53.8	500.7	54.5	B	
20 0	11.49	526.6	56.5	469.1	56.2	W	4 0	12.42	540.0	54.6	505.8	55.4	B	
21 0	09.49	524.0	56.3	467.5	56.0	B	5 0	10.45	546.7	55.3	504.0	56.2	B	
22 0	12.53	512.2	56.2	470.1	56.2	W	6 0	09.62	548.0	55.9	501.3	56.8	W	
23 0	16.41	500.9	56.3	484.1	56.4	W	7 0	05.49	543.9	56.4	500.0	57.0	W	
4 0 0	18.67	520.6	56.4	483.3	56.8	W	8 0	07.10	544.7	56.6	495.7	57.2	W	
1 0	18.50	530.6	56.7	483.1	57.3	W	9 0	09.96	542.8	56.6	486.7	57.1	W	
2 0	17.26	539.0	57.0	496.6	57.6	W	10 0	09.46	541.1	56.6	480.0	57.0	W	
3 0	14.78	543.3	57.3	513.5	57.9	W	11 0	09.39	542.9	56.3	473.5	56.6	H	
4 0	06.93	564.4	57.5	529.3	58.1	W	12 0	09.22	542.4	56.0	470.0	56.2	H	
5 0	11.55	535.7	57.7	539.0	58.3	W								
6 0	09.44	536.8	57.9	526.9	58.4	H	7 13 0 †	25 22.00	526.6	54.9	456.3	54.7	B	
7 0	11.03	540.8	58.0	502.9	58.4	H	14 0	11.64	533.8	54.5	396.7	54.5	B	
8 0	10.72	541.4	57.8	488.1	58.2	H	15 0	07.47	530.4	54.1	400.7	54.0	B	
9 0	10.11	543.2	57.7	483.0	58.0	H	16 0	02.28	529.7	53.7	412.4	53.5	B	
10 0	07.99	540.5	57.6	481.7	57.8	H	17 0	03.61	530.6	53.3	415.5	53.5	B	
11 0	03.47	542.2	57.4	472.2	57.5	B	18 0	01.31	539.0	52.9	441.3	52.5	B	
12 0	04.78	536.4	57.2	456.2	57.2	B	19 0	04.86	534.9	52.6	459.8	52.1	H	
							20 0	05.02	527.1	52.3	471.8	51.7	H	
13 0	25 13.39	536.8	57.0	424.6	57.0	B	21 0	11.57	510.8	52.1	485.8	51.7	W	
14 0	07.71	538.2	56.8	441.0	56.7	B	22 0	14.92	517.4	52.0	480.8	51.7	H	
15 0	06.32	542.5	56.6	456.6	56.5	B	23 0	15.64	518.4	52.0	479.6	52.2	H	
16 0	11.71	539.4	56.3	454.1	56.2	B	8 0 0	17.89	521.5	52.3	473.1	53.0	H	
17 0	08.12	534.7	56.1	466.9	56.0	B	1 0	18.87	522.9	52.9	483.0	54.0	H	
18 0	06.71	534.3	55.9	481.0	55.7	B	2 0	17.04	531.7	53.7	496.8	55.0	H	
19 0	06.86	534.3	55.7	482.7	55.5	H	3 0	17.33	537.9	54.5	502.7	55.8	H	
20 0	07.07	527.4	55.5	489.0	55.4	H	4 0	16.35	535.8	55.5	504.4	56.7	H	

DECLINATION. Magnet untouched, June 18^a—Sept. 21^b.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

HOURLY OBSERVATIONS OF MAGNETOMETERS, SEPTEMBER 8—12, 1845.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	
8 5 0	25 12.98	546.8	56.4	501.9	57.7	H	10 13 0	25 09.15	543.1	56.6	457.8	56.0	B
6 0	12.06	542.9	57.4	506.6	58.5	W	14 0	09.08	546.1	56.3	448.7	55.7	B
7 0	10.77	549.4	58.0	493.0	59.0	H	15 0	08.12	539.6	55.9	458.3	55.4	B
8 0	10.45	545.6	58.4	481.9	59.1	B	16 0	06.37	540.6	55.6	452.6	55.1	B
9 0	09.15	545.9	58.5	476.1	59.1	B	17 0	09.96	536.1	55.3	457.1	54.8	B
10 0	10.20	544.6	58.4	469.8	59.0	B	18 0	07.52	540.5	55.0	454.2	54.5	B
11 0	08.82	543.9	58.2	463.5	58.6	W	19 0	07.87	541.3	54.8	456.0	54.2	H
12 0	07.71	544.9	58.0	461.1	58.4	W	20 0	06.56	534.3	54.5	458.1	54.0	H
							21 0	07.67	531.1	54.3	459.3	54.0	W
13 0	25 07.31	541.7	57.8	459.9	58.2	W	22 0	08.99	526.5	54.1	462.5	54.0	H
14 0	08.36	543.1	57.6	411.9	58.0	W	23 0	11.44	524.7	54.1	460.9	54.0	H
15 0	05.52	539.5	57.4	429.2	57.8	W	11 0 0	15.11	524.1	54.0	455.0	54.0	H
16 0	05.09	539.3	57.3	440.3	57.6	W		1 0	19.44	530.5	54.1	452.2	54.4
17 0	07.31	541.0	57.1	448.7	57.4	W	2 0	17.39	531.2	54.4	452.6	54.8	H
18 0	07.02	540.8	57.0	454.2	57.2	W	3 0	16.53	535.3	54.8	476.2	55.4	H
19 0	06.73	541.8	56.9	459.5	57.0	B	4 0	11.51	537.8	55.3	492.9	56.0	H
20 0	07.00	535.8	56.8	462.2	57.0	B	5 0	10.70	539.7	55.8	490.3	56.5	H
21 0	09.03	530.2	56.8	460.1	57.2	H	6 0	08.82	543.9	56.4	476.3	56.8	B
22 0	10.38	520.3	56.9	460.8	57.3	H	7 0	08.90	547.5	56.8	466.0	57.0	B
23 0	11.35	521.8	57.0	460.1	57.5	B	8 0	08.36	548.9	56.9	468.4	57.0	B
9 0 0	15.18	513.5	57.3	461.2	58.0	H	9 0	03.02	544.6	56.8	474.4	56.8	B
1 0	15.34	521.3	57.8	465.8	58.5	B	10 0	08.32	543.2	56.7	465.8	56.6	B
2 0	13.93	527.6	58.3	470.4	59.0	B	11 0	07.81	546.1	56.5	456.6	56.4	W
3 0	12.78	534.7	58.8	472.1	59.5	B	12 0	08.65	544.1	56.3	447.8	56.2	W
4 0	11.14	539.9	59.1	473.0	60.0	B							
5 0	09.87	543.8	59.6	470.3	60.4	W	13 0	25 09.29	541.5	56.1	446.0	56.0	W
6 0	09.30	546.9	59.8	468.2	60.6	W	14 0	09.00	543.0	55.9	447.4	55.8	W
7 0	07.91	540.7	60.0	474.8	60.7	W	15 0	08.80	543.3	55.7	445.5	55.5	W
8 0	04.28	541.6	60.1	476.1	60.8	W	16 0	08.95	545.1	55.4	437.2	55.3	W
9 0	07.58	541.6	60.2	466.5	60.8	W	17 0	09.46	547.1	55.2	418.1	55.0	W
10 0	09.49	544.5	60.3	456.6	60.8	W	18 0	07.24	547.4	55.0	406.3	54.8	W
11 0	11.17	545.3	60.2	447.1	60.7	H	19 0	08.05	534.5	54.8	418.7	54.7	B
12 0	09.13	542.2	60.1	446.4	60.5	H	20 0	08.66	535.5	54.7	434.2	54.5	B
							21 0	07.34	531.6	54.5	432.1	54.4	H
13 0	25 15.81	543.2	60.0	438.5	60.3	H	22 0	11.66	525.5	54.5	453.7	54.7	H
14 0	10.07	546.0	59.8	412.3	60.1	H	23 0	14.43	518.9	54.7	458.5	55.1	H
15 0	08.82	537.1	59.7	425.6	59.8	H	12 0 0	19.26	524.5	55.0	460.0	55.7	H
16 0	07.24	540.3	59.5	431.3	59.5	H		1 0	19.19	531.7	55.6	445.3	56.3
17 0	06.46	541.5	59.2	438.9	59.4	H	2 0	19.28	541.3	56.2	458.9	57.2	B
18 0	05.92	540.4	59.0	444.1	59.1	H	3 0	17.20	542.0	57.2	472.0	58.4	H
19 0	05.99	541.0	58.8	450.3	58.8	W	4 0	12.16	533.3	58.4	484.4	59.7	H
20 0	05.76	533.7	58.6	455.0	58.3	W	5 0	11.27	544.8	59.5	499.9	60.8	H
21 0	06.56	524.2	58.3	460.8	58.0	B	6 0	11.27	536.7	60.4	498.6	61.5	W
22 0	08.65	523.4	58.0	460.3	57.8	W	7 0	07.96	543.8	60.9	487.9	61.5	W
23 0	11.17	527.3	57.9	455.7	57.6	W	8 0	05.92	542.8	60.8	489.0	61.3	W
10 0 0	13.86	527.4	57.8	455.2	57.6	W	9 0	09.05	539.2	60.7	476.6	61.1	W
1 0	15.62	534.5	57.7	452.8	57.6	W	10 0	07.71	540.3	60.5	469.1	60.8	W
2 0	15.09	540.1	57.6	456.7	57.6	W	11 0	08.65	541.2	60.0	463.7	60.3	H
3 0	13.86	545.8	57.6	460.6	57.6	W	12 0	08.97	541.5	59.7	455.6	59.7	H
4 0	11.08	537.5	57.7	461.9	57.8	W							
5 0	10.13	541.8	57.8	462.5	58.0	W	13 0	25 09.66	552.8	59.2	435.7	59.1	H
6 0	10.16	543.6	57.9	458.5	58.2	H	14 0	06.09	543.2	58.7	419.2	58.5	H
7 0	10.36	544.0	58.0	458.6	58.2	H	15 0	06.06	534.5	58.2	429.5	58.0	H
8 0	10.01	544.8	57.9	453.2	58.0	H	16 0	06.41	535.5	57.7	439.6	57.3	H
9 0	09.96	544.1	57.7	448.1	57.5	H	17 0	05.99	537.6	57.2	441.2	56.7	H
10 0	09.76	543.6	57.4	452.8	57.0	H	18 0	06.32	538.8	56.8	445.9	56.2	W
11 0	09.46	542.1	57.2	457.4	56.7	B	19 0	08.26	536.0	56.4	452.0	55.8	W
12 0	09.12	542.1	56.9	457.6	56.4	B	20 0	06.86	528.5	56.0	456.1	55.3	W

DECLINATION. Magnet untouched, June 18^d—Sept. 21^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

HOURLY OBSERVATIONS OF MAGNETOMETERS, SEPTEMBER 12—18, 1845. 49

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
		d. h. m.	° '	Sc. Div.	° '	Mic. Div.	° '	d. h. m.	° '	Sc. Div.	° '	Mic. Div.	° '	
12 21 3	25 12-78	523-7	55-7	461-6	55-0	B	16	5 0	25 10-38	539-7	55-9	466-0	57-0	W
22 0	09-77	526-4	55-4	458-1	54-8	W		6 0	09-10	545-0	56-4	459-2	57-5	H
23 0	12-95	526-5	55-1	454-7	54-8	W		7 0	09-49	547-0	56-7	456-6	57-5	H
13 0 0	15-98	526-8	55-0	453-3	55-0	W		8 0	09-08	549-4	56-8	449-6	57-5	H
1 0	18-47	534-2	55-2	454-2	55-4	W		9 0	08-46	547-5	56-8	451-5	57-5	H
2 0	17-26	533-5	55-5	461-8	55-8	W		10 0	04-12	538-8	56-6	460-5	57-2	H
3 0	13-52	541-1	55-7	469-0	56-2	W		11 0	08-08	541-5	56-4	452-3	56-8	B
4 0	11-14	544-7	56-1	467-0	56-5	W		12 0	07-71	541-7	56-1	447-6	56-5	B
5 0	09-49	549-7	56-4	468-6	56-9	W								
6 0	08-80	537-8	56-7	471-2	57-2	W		13 0	25 07-07	541-1	55-8	444-7	56-1	B
7 0	09-73	545-7	57-0	460-8	57-3	H		14 0	07-55	538-0	55-6	448-0	55-8	B
8 0	09-05	553-9	57-0	462-4	57-8	H		15 0	06-24	539-1	55-3	447-0	55-5	B
9 0	03-57	531-8	57-0	465-1	57-5	H		16 0	06-41	539-0	55-0	446-5	55-1	B
10 0	08-88	540-3	57-1	458-1	57-5	H		17 0	09-39	540-1	54-8	447-5	54-8	B
11 8	08-93	540-2	57-1	460-0	57-5	B		18 0	07-42	542-4	54-5	446-1	54-5	B
12 0	09-02	539-9	57-0	458-6	57-3	B		19 0	07-67	540-3	54-2	451-4	54-3	H
								20 0	07-51	535-0	54-0	453-9	54-1	H
14 13 0	25 09-89	535-2	57-0	450-5	56-2	W		21 0	09-00	529-2	53-9	457-3	54-0	W
14 0	08-85	535-9	56-4	444-3	55-5	W		22 0	11-91	523-5	53-8	453-7	54-0	H
15 0	08-03	536-3	55-7	450-6	54-8	W		23 0	13-49	523-6	53-8	452-1	54-2	H
16 0	07-94	535-2	55-0	455-5	54-0	W	17	0 0	16-93	529-3	53-8	439-8	54-5	H
17 0	07-94	535-3	54-3	455-1	53-0	W		1 0	19-10	531-5	54-0	446-3	54-7	H
18 0	07-64	536-4	53-6	455-0	52-2	W		2 0	18-34	534-0	54-2	454-9	55-0	H
19 0	07-31	536-0	52-9	461-0	51-3	B		3 0	15-99	540-8	54-3	459-7	55-2	H
20 0	07-65	532-8	52-2	468-6	50-5	B		4 0	13-05	545-2	54-7	470-7	55-5	H
21 0	08-14	529-8	51-7	474-8	50-2	H		5 0	10-31	543-0	55-0	479-4	55-7	H
22 0	09-82	526-0	51-2	476-2	50-2	H		6 0	10-09	543-8	55-3	480-8	56-0	B
23 0	11-89	522-9	51-0	468-5	50-4	B		7 0	10-14	545-8	55-6	473-8	56-3	B
15 0 0	13-05	529-8	51-2	469-6	51-3	B		8 0	11-17	545-7	55-9	473-7	56-5	B
1 0	14-89	535-4	51-8	474-1	52-5	H		9 0	10-13	543-4	56-0	472-3	56-7	B
2 0	14-20	539-0	52-6	478-8	53-5	H		10 0	10-80	555-3	56-2	456-6	56-8	B
3 0	12-04	539-9	53-3	481-6	54-4	B		11 0	25 01-45	535-0	56-4	447-2	56-8	W
4 0	10-06	541-0	54-0	480-6	55-2	H		12 0	24 49-10	530-4	56-5	410-8	57-0	W
5 0	09-06	542-7	54-7	474-4	55-7	H								
6 0	09-12	543-6	55-3	467-7	56-2	W		13 0	24 56-16	506-5	56-6	339-6	57-3	W
7 0	09-56	545-7	55-7	463-5	56-4	W		14 0	25 00-40	525-0	56-8	239-0	57-5	W
8 0	09-57	544-6	55-8	459-6	56-4	W		15 0	08-95	533-2	57-0	316-1	57-6	W
9 0	09-42	542-5	55-7	457-3	56-2	W		16 0	06-50	538-7	57-0	400-0	57-5	W
10 0	09-22	542-4	55-6	455-9	56-0	W		17 0	06-81	538-9	56-8	424-3	57-2	W
11 0	09-00	542-9	55-3	454-5	55-7	H		18 0	04-28	545-4	56-6	427-9	57-0	W
12 0	08-58	543-3	55-0	453-8	55-4	H		19 0	06-70	540-6	56-4	424-3	56-7	B
								20 0	13-79	517-8	56-2	425-9	56-4	B
13 0	25 08-43	542-2	54-7	453-0	55-0	H		21 0	23-38	523-0	56-1	402-8	56-4	H
14 0	08-31	542-2	54-4	452-8	54-6	H		22 0	17-31	524-0	56-0	407-9	56-5	H
15 0	09-66	540-2	54-0	457-0	54-2	H		23 0	13-16	530-2	56-1	416-9	56-7	H
16 0	07-27	542-1	53-7	451-0	53-6	H	18	0 0	14-13	529-7	56-3	422-0	57-2	H
17 0	08-01	537-9	53-3	453-2	53-0	H		1 0	17-96	539-2	56-8	426-4	57-5	B
18 0	08-82	540-4	53-0	452-1	52-5	H		2 0	15-51	536-1	57-0	434-5	57-7	H
19 0	07-99	538-4	52-6	458-1	52-1	W		3 0	15-20	528-0	57-2	449-7	58-0	B
20 0	08-23	534-6	52-3	462-7	51-7	W		4 0	12-78	531-6	57-5	454-9	58-3	H
21 0	09-26	530-3	52-0	465-9	51-5	B		5 0	10-75	538-3	57-8	460-5	58-5	B
22 0	11-34	526-6	51-8	467-0	51-4	W		6 0	09-62	541-9	58-0	460-9	58-7	W
23 0	13-34	528-7	51-7	461-1	51-9	W		7 0	08-97	542-3	58-1	456-2	58-7	W
16 0 0	15-96	532-4	52-1	455-1	52-8	W		8 0	09-62	543-0	58-1	450-0	58-6	W
1 0	18-01	537-9	52-7	450-3	53-7	W		9 0	09-53	542-0	58-0	445-7	58-5	W
2 0	16-38	541-6	53-4	457-8	54-6	W		10 0	08-73	540-4	57-9	445-3	58-3	W
3 0	14-26	540-6	54-3	468-8	55-5	W		11 0	07-67	540-8	57-7	442-4	58-0	H
4 0	12-28	536-2	55-2	469-9	56-4	W		12 0	05-72	540-0	57-4	431-2	57-7	H

 DECLINATION. Magnet untouched, June 18th—Sept. 21st.

 BIFILAR. Observed 2nd after the Declination, $k=0.000140$. BALANCE. Observed 3rd after the Declination, $k=0.000010$.

† Extra Observations made.
Sept. 14th 18th. A very minute insect seen on the north cross-plate of the balance magnet.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°	
18 13 0	25 05.99	534.6	57.2	428.0	57.5	H	21 21 0	25 08.31	527.8	51.8	456.6	50.7	B
14 0	09.51	529.0	57.0	430.7	57.2	H	22 0	09.05	527.5	51.4	450.4	50.5	W
15 0	10.38	534.6	56.8	406.3	56.8	H	23 0	11.91	523.7	51.2	452.0	50.5	W
16 0	09.73	539.5	56.5	397.0	56.5	H	22 0	14.46	528.0	51.2	450.6	50.7	W
17 0	09.33	528.2	56.3	385.2	56.2	H	1 0	17.61	532.4	51.2	444.1	51.0	W
18 0	06.56	545.4	56.0	386.8	55.8	H	2 0	17.17	537.1	51.3	451.1	51.2	W
19 0	11.68	532.0	55.8	400.0	55.5	W	3 0	15.24	541.6	51.4	457.7	51.5	W
20 0	12.80	526.2	55.5	415.5	55.2	W	4 0	13.44	542.2	51.6	458.9	51.7	W
21 0	10.97	534.1	55.1	405.4	54.8	B	5 0	11.86	543.3	51.7	459.3	51.8	W
22 0	12.75	525.2	54.8	419.2	54.5	W	6 0	10.87	544.0	51.7	456.7	51.8	H
23 0	14.48	522.2	54.7	421.4	54.4	W	7 0	11.24	544.7	51.7	453.6	51.6	H
19 0 0	17.09	525.1	54.6	426.5	54.7	W	8 0	10.87	545.7	51.5	448.6	51.3	H
1 0	16.46	530.4	54.7	432.7	55.1	W	9 0	10.74	544.4	51.3	448.3	51.0	H
2 0	17.93	537.8	55.0	443.2	55.6	W	10 0	08.99	542.6	50.9	447.9	50.5	H
3 0	16.39	534.4	55.6	463.5	56.3	W	11 0	09.96	541.8	50.5	449.5	49.8	B
4 0	13.83	538.5	56.1	480.5	56.7	W	12 0	10.14	541.7	50.0	449.5	49.2	B
5 0	12.83	541.1	56.6	486.9	57.3	W							
6 0	10.16	545.1	57.0	475.5	57.6	H	13 0	25 10.06	532.1	49.5	451.2	48.5	B
7 0	09.93	545.5	57.2	473.5	57.3	H	14 0	09.60	540.6	48.9	453.5	47.8	B
8 0	09.74	540.0	57.1	480.2	57.2	H	15 0	09.42	540.3	48.4	455.8	47.2	B
9 0†	25 07.44	528.4	57.0	475.0	57.0	H	16 0	09.32	540.6	47.9	456.2	46.5	B
10 0†	24 59.09	538.3	56.8	429.6	56.8	H	17 0	09.53	541.6	47.3	457.8	45.9	B
11 0	25 05.77	525.3	56.6	433.8	56.5	B	18 0	09.22	542.3	46.7	459.0	45.2	B
12 0	07.67	535.4	56.3	431.6	56.0	B	19 0	08.82	540.9	46.1	465.8	44.7	H
							20 0	07.87	536.8	45.5	475.4	44.2	H
13 0	25 09.17	536.1	55.9	440.3	55.5	B	21 0	07.47	531.1	45.0	475.8	43.8	W
14 0	09.08	535.8	55.4	446.3	54.8	B	22 0	07.76	526.0	44.7	470.2	44.0	H
15 0	09.13	535.1	54.8	450.6	54.0	B	23 0	09.77	525.9	44.7	464.7	44.2	H
16 0	08.25	536.5	54.1	450.3	53.2	B	23 0	12.67	528.7	44.8	458.0	44.8	H
17 0	06.46	534.6	53.5	451.8	52.3	B	1 0	15.44	532.6	45.0	455.0	45.4	H
18 0	07.27	540.1	52.9	450.3	51.5	B	2 0	16.55	537.5	45.5	456.6	46.2	H
19 0	11.27	539.7	52.2	451.7	50.8	H	3 0	15.24	540.4	46.1	462.2	47.0	H
20 0	08.79	524.6	51.7	461.5	50.3	H	4 0	13.84	543.1	46.9	464.5	47.5	H
21 0	11.59	521.5	51.3	463.7	50.0	W	5 0	12.45	546.0	47.6	464.0	48.3	H
22 0	08.99	523.9	50.9	465.9	50.0	H	6 0	11.39	547.2	48.2	460.7	48.9	B
23 0	10.40	521.2	50.9	469.0	50.3	W	7 0	11.17	549.7	48.7	458.7	49.1	B
20 0 0	13.52	521.3	51.0	463.9	51.4	H	8 0	10.74	548.4	48.9	455.8	49.2	B
1 0	14.91	524.4	51.6	437.7	52.2	H	9 0	10.53	548.7	48.8	452.1	49.0	B
2 0	15.07	530.2	52.2	446.2	52.8	H	10 0	10.87	546.9	48.5	447.2	48.6	B
3 0	14.67	534.5	52.7	455.8	53.7	H	11 0	10.65	546.3	48.2	444.8	48.2	W
4 0	13.25	535.1	53.3	469.2	54.5	H	12 0	08.95	551.9	47.8	436.1	47.6	W
5 0	10.70	536.9	53.7	476.4	54.7	H							
6 0	10.47	542.3	53.9	463.4	54.8	B	13 0	25 09.19	550.2	47.4	439.6	47.1	W
7 0	10.04	545.2	54.0	451.8	54.7	B	14 0	08.83	549.6	47.0	440.3	46.5	W
8 0	09.82	543.4	53.9	449.5	54.5	B	15 0	08.26	546.0	46.5	443.0	45.9	W
9 0	09.13	545.1	53.9	451.6	54.5	B	16 0	06.59	543.0	46.0	443.1	45.3	W
10 0†	04.22	540.0	53.9	457.9	54.6	B	17 0	09.02	546.6	45.5	437.5	44.7	W
11 0	01.78	527.8	53.9	443.3	54.7	W	18 0	05.13	546.9	45.0	417.0	44.2	W
12 0	09.39	533.8	54.0	436.1	54.7	W	19 0	05.23	546.8	44.5	421.7	43.5	B
							20 0	06.27	541.4	44.0	427.9	43.0	B
21 13 0	25 08.66	539.1	55.0	431.5	55.2	H	21 0	07.47	541.6	43.7	440.2	42.9	H
14 0	11.71	537.9	54.7	433.6	54.7	H	22 0	09.05	526.1	43.5	447.4	43.2	H
15 0	08.56	539.6	54.2	431.4	54.0	H	23 0	12.01	522.3	43.6	446.0	43.8	B
16 0	07.40	539.6	53.8	433.1	53.2	H	24 0	18.84	535.7	44.0	440.9	44.7	H
17 0	07.71	539.2	53.3	437.0	52.6	H	1 0	18.84	533.3	44.9	451.9	45.8	H
18 0	08.14	539.0	52.9	440.8	52.1	H	2 0	18.67	546.3	45.8	442.8	46.8	B
19 5	07.17	539.3	52.5	445.4	51.6	W	3 0	15.85	541.8	46.8	450.4	48.0	H
20 0	06.90	536.0	52.1	449.4	51.1	W	4 0	14.01	543.4	47.6	455.3	48.7	H

DECLINATION. Torsion removed, Sept. 21^d 22^h + 19°*. Effect of + 10° of torsion = - 0°.84.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.Sept. 20^d 2^h—6^h. The floor of the Observatory washed: doors open throughout the day.* Sept. 21^d 22^h. This change of torsion may possibly be due to the dampness arising from washing the floor on Sept. 20: the brass bar was suspended with some difficulty, but it is not conceived that much torsion could have been thus introduced.

† Extra Observations made.

HOURLY OBSERVATIONS OF MAGNETOMETERS, SEPTEMBER 24—29, 1845.

51

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. b. m.	°	Sr. Div.	°	Mic. Div.	°		d. h. m.	°	Sr. Div.	°	Mic. Div.	°	
24 5 0	25 12.75	546.5	48.1	452.5	49.1	B	26 13 0	25 11.57	542.1	52.0	428.0	51.8	W
6 0	11.57	542.3	48.6	453.9	49.4	W	14 0	11.08	542.1	51.7	421.5	51.3	W
7 0	11.25	545.7	48.7	449.3	49.5	W	15 0	07.04	534.9	51.3	425.3	50.9	W
8 0	11.10	557.7	48.8	441.3	49.5	W	16 0	05.40	532.5	51.0	426.8	50.5	W
9 0	10.95	557.7	48.9	437.4	49.6	W	17 0	09.24	537.4	50.7	431.7	50.3	W
10 0	10.80	555.2	48.9	457.8	49.5	B	18 0	09.47	539.2	50.5	435.7	50.1	W
11 0	10.13	549.4	48.9	442.7	49.5	B	19 0	09.67	541.5	50.3	437.8	50.0	B
12 0	10.77	551.8	48.9	442.4	49.5	B	20 0	09.77	535.0	50.2	443.6	50.0	B
							21 0	11.41	531.4	50.0	445.0	50.0	H
13 0	25 01.01	539.9	48.8	435.6	49.5	D	22 0	14.20	522.2	50.1	452.1	50.2	H
14 0	24 59.09	541.9	48.8	400.4	49.5	D	23 0	17.69	526.0	50.2	449.9	50.5	H
15 0	24 57.51	528.9	48.8	351.6	49.5	D	27 0 0	17.63	523.8	50.6	450.0	51.0	B
16 0	24 53.38	530.4	48.8	278.0	49.5	D		1 0	16.99	528.8	51.0	451.1	51.7
17 0	25 01.61	543.7	48.8	261.1	49.6	D	2 0	15.64	535.6	51.7	449.2	52.5	H
18 0	11.74	520.2	48.8	256.7	49.7	H	3 0	14.85	534.6	52.4	456.2	53.3	H
19 0	17.84	517.8	48.8	297.0	49.6	H	4 0	16.77	541.4	53.0	462.6	54.1	H
20 0	12.82	506.6	48.8	352.9	49.5	H	5 0	07.79	526.2	53.8	490.5	54.8	W
21 0	19.04	508.8	48.7	382.4	49.4	W	6 0	25 11.37	540.3	54.4	504.7	55.2	W
22 0	16.15	528.7	48.7	392.5	49.3	W	7 0		24 43.06	555.0	54.8	487.1	55.5
23 0	17.42	521.5	48.7	416.4	49.5	W	8 0	24 57.56	528.9	54.8	485.2	55.5	H
25 0 0	16.08	525.1	48.9	430.7	49.7	W	9 0	25 01.21	514.2	54.8	476.6	55.3	W
1 0	21.83	524.9	49.3	448.3	50.2	W	10 0	07.29	536.0	54.6	452.0	55.0	H
2 0	23.34	542.1	49.9	551.5	51.0	B	11 0	16.93	519.6	54.4	338.8	54.7	W
3 0	19.24	528.0	50.8	579.2	52.1	B	12 0	09.57	537.1	54.0	342.8	54.5	H
4 0	21.59	525.8	51.7	519.3	53.0	D							
5 0	17.63	568.9	52.6	486.4	54.1	D	28 13 0	25 07.92	533.1	52.2	420.7	51.7	B
6 0	07.99	564.0	53.3	706.6	54.8	W	14 0	08.08	536.7	51.9	414.9	51.3	B
7 0	07.15	540.0	53.8	554.2	55.2	W	15 0	07.52	532.1	51.5	421.9	50.9	B
8 0	12.26	538.7	54.1	485.6	55.3	W	16 0	10.68	534.9	51.1	424.1	50.5	B
9 0	25 09.26	533.7	54.2	476.5	55.5	H	17 0	09.08	535.1	50.8	424.0	50.0	B
10 0	24 56.40	544.0	54.2	453.0	55.4	H	18 0	11.57	535.3	50.4	424.2	49.6	B
11 3	25 07.81	547.7	54.0	409.0	55.0	B	19 0	12.56	538.7	50.0	419.9	49.3	H
12 0	07.71	534.9	53.8	396.5	54.5	B	20 0	11.71	534.2	49.8	431.8	49.0	H
							21 0	13.50	530.6	49.5	433.1	48.9	W
13 0	25 09.84	534.8	53.5	385.9	54.0	B	22 0	13.93	528.2	49.4	431.8	49.0	H
14 0	08.08	535.5	53.2	388.4	53.5	B	23 0	15.01	525.3	49.4	435.8	49.2	H
15 0	05.79	525.6	52.8	397.7	53.0	B	29 0 0	15.61	534.7	49.6	440.0	49.8	H
16 0	14.13	518.6	52.5	382.4	52.5	B		1 0	15.83	535.4	50.0	441.1	50.5
17 0	12.76	529.8	52.1	388.0	52.0	B	2 0	14.58	535.8	50.5	449.1	51.2	H
18 0	09.42	536.1	51.8	413.9	51.5	B	3 0	14.17	539.1	51.2	454.7	52.0	H
19 0	15.07	523.1	51.4	420.4	51.0	H	4 0	12.23	541.6	51.9	458.1	52.6	H
20 0	11.14	529.7	51.0	431.3	50.5	H	5 0	08.99	531.6	52.3	462.3	53.0	H
21 0	12.58	530.2	50.7	437.1	50.2	W	6 0	08.75	541.8	52.6	472.6	53.2	B
22 0	11.54	530.5	50.4	435.8	50.0	H	7 0	08.58	544.3	52.7	465.4	53.1	B
23 0	12.85	525.5	50.4	445.4	50.3	H	8 0	06.73	538.0	52.6	451.5	52.8	B
26 0 0	17.53	526.7	50.4	442.3	50.5	H	9 0	06.39	536.6	52.3	446.0	52.5	B
1 0	16.79	532.7	50.7	442.6	51.2	H	10 0	04.71	533.2	52.0	442.5	52.2	B
2 0	15.58	533.0	51.0	446.9	52.0	H	11 0	06.71	535.2	51.8	431.9	52.0	W
3 0	14.48	531.0	51.7	449.7	52.5	H	12 0	05.85	529.3	51.6	415.9	51.7	W
4 0	14.77	532.4	52.2	465.9	53.0	H							
5 0	09.57	531.6	52.7	472.8	53.5	H	13 0	25 07.85	524.1	51.4	406.3	51.4	W
6 0	11.48	539.5	53.1	464.0	53.9	B	14 0	06.76	531.0	51.2	391.9	51.1	W
7 0	10.60	544.9	53.4	455.3	54.0	B	15 0	01.88	535.3	51.0	392.2	50.9	W
8 0	09.93	541.1	53.4	453.5	53.8	B	16 0	04.69	538.2	50.8	396.9	50.7	W
9 0	08.16	535.1	53.2	457.1	53.5	B	17 0	09.06	537.6	50.6	410.0	50.5	W
10 0	10.09	536.4	52.9	451.9	53.0	B	18 0	08.59	539.6	50.4	416.6	50.3	W
11 0	10.53	539.0	52.6	445.0	52.6	W	19 0	10.56	538.4	50.2	424.7	50.0	B
12 0	11.07	538.1	52.3	442.6	52.2	W	20 0	11.42	537.8	50.0	432.0	49.8	B

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.
 BI-FILAR. Observed 2^m after the Declination, $k=0.000140$.
 BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.
 Sept 24^d 10^h—25^d 10^h. Term-Day Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°	
29 21 0	25 10.92	533.6	49.9	434.2	49.7	H	2 5 0	25 11.71	533.9	53.2	456.9	54.1	H
22 0	10.74	526.4	49.8	440.2	49.8	H	6 0	11.12	541.2	53.4	449.8	54.2	B
23 0	10.70	531.9	50.0	438.6	50.0	H	7 0	11.15	544.1	53.5	442.4	54.2	B
30 0 0	13.81	534.6	50.4	441.5	51.0	B	8 0	10.13	544.2	53.5	440.0	54.1	B
1 7	16.48	535.8	51.1	446.8	52.0	B	9 0	09.96	543.1	53.4	438.0	53.9	B
2 0	16.25	537.6	51.6	449.7	52.3	B	10 0	10.00	542.5	53.2	437.2	53.7	B
3 0	14.43	539.0	52.0	452.9	53.0	H	11 0	10.09	542.7	53.1	435.1	53.4	W
4 0	13.09	540.5	52.7	454.0	53.5	H	12 0	10.04	543.3	52.9	434.6	53.1	W
5 0	10.83	538.9	53.0	453.9	54.0	H							
6 0	09.00	542.4	53.1	450.6	53.9	W	13 0	25 10.56	541.1	52.7	436.6	52.8	W
7 0	09.64	541.0	53.1	445.8	53.5	W	14 0	10.51	541.7	52.5	436.3	52.5	W
8 0	10.00	541.7	52.8	443.3	53.1	W	15 0	10.21	542.5	52.3	436.2	52.1	W
9 0	10.07	541.4	52.5	439.3	52.6	W	16 0	10.23	542.4	52.0	437.1	51.8	W
10 0	10.36	540.6	52.1	439.4	52.0	W	17 0	10.45	541.8	51.7	437.8	51.4	W
11 0	10.13	541.3	51.7	436.9	51.4	H	18 0	10.23	542.1	51.4	436.7	51.0	W
12 0	08.79	539.9	51.2	434.2	50.8	H	19 0	09.62	542.2	51.1	438.5	50.6	B
							20 0	09.08	538.8	50.9	442.7	50.3	B
13 0	25 09.42	539.1	50.8	434.8	50.3	H	21 0	07.57	533.8	50.6	448.5	50.2	H
14 0	09.66	538.1	50.4	438.6	50.0	H	22 0	09.13	526.2	50.3	449.0	50.0	H
15 0	10.53	537.9	50.0	438.3	49.7	H	23 0	11.61	527.0	50.2	439.9	49.8	H
16 0	12.11	540.9	49.8	431.7	49.5	H	3 0 0	16.36	525.4	50.0	433.2	49.7	H
17 0	10.30	539.9	49.6	434.3	49.2	H	1 0	18.77	528.5	50.0	430.5	49.7	H
18 0	11.08	540.3	49.4	437.0	49.0	H	2 0	20.15	529.5	49.9	439.3	49.7	B
19 0	10.03	542.8	49.2	439.4	48.8	W	3 0	18.57	529.4	49.8	447.6	49.6	B
20 0	11.64	538.0	49.0	442.8	48.7	W	4 0	15.91	537.2	49.8	452.0	49.5	B
21 0	08.83	536.4	48.9	445.5	48.7	B	5 0 †	07.04	534.1	49.7	475.7	49.4	B
22 0	09.46	526.6	48.9	449.5	48.9	W	6 0	11.75	535.9	49.6	482.6	49.5	W
23 0	14.21	527.9	49.0	448.7	49.3	W	7 0	11.24	537.5	49.5	472.7	49.5	W
1 0 0	16.77	522.7	49.5	451.1	50.0	W	8 0	11.01	540.2	49.5	467.2	49.5	W
1 0	19.28	530.4	50.1	447.6	50.8	W	9 0	10.48	542.0	49.4	459.7	49.5	W
2 0	18.00	532.0	50.8	453.5	51.8	W	10 0	10.48	543.0	49.4	453.3	49.4	W
3 0	16.63	538.1	51.6	455.5	52.5	W	11 0	09.08	540.6	49.3	452.7	49.5	H
4 0	12.82	541.1	52.2	472.8	53.1	W	12 0 †	04.37	547.5	49.3	433.1	49.4	H
5 0	12.70	537.6	52.7	475.2	53.5	W							
6 0	10.60	540.5	52.8	470.2	53.6	W	13 0	25 08.41	540.3	49.3	432.3	49.4	H
7 0	10.30	538.0	52.9	472.3	53.7	W	14 0 †	18.77	550.1	49.2	407.0	49.4	H
8 0	10.01	537.7	53.0	465.0	53.6	H	15 0	08.16	540.8	49.2	414.0	49.4	H
9 0	08.41	540.5	52.9	455.7	53.5	H	16 0	08.46	542.1	49.2	424.1	49.2	H
10 0	05.76	536.9	52.8	441.8	53.3	H	17 0	08.97	543.9	49.1	427.9	49.1	H
11 0	08.45	540.7	52.7	443.9	53.2	B	18 0	08.48	542.0	49.0	432.9	49.0	H
12 0	09.64	541.8	52.6	438.7	53.0	B	19 0	10.11	542.5	48.8	434.8	48.7	W
							20 0	08.75	542.2	48.7	438.4	48.5	W
13 0	25 08.41	534.2	52.4	433.2	52.8	B	21 0	08.21	536.3	48.6	445.5	48.3	B
14 0	08.45	537.3	52.3	409.8	52.7	B	22 0	08.85	532.2	48.5	446.8	48.3	W
15 0	08.48	539.0	52.2	410.0	52.5	B	23 0	12.16	529.8	48.4	439.7	48.3	W
16 0	13.90	551.1	52.1	396.1	52.4	B	4 0 0	14.82	529.2	48.4	436.3	48.5	W
17 0	11.37	540.2	52.0	408.7	52.2	B	1 0	16.19	526.1	48.6	433.5	48.7	W
18 0	10.72	544.1	51.9	419.3	52.0	B	2 0	16.55	532.0	48.7	435.1	48.9	W
19 0	10.07	541.6	51.7	428.5	51.8	H	3 0	16.10	538.6	48.8	441.4	49.0	W
20 0	08.09	540.4	51.5	435.9	51.5	H	4 0	13.83	539.9	48.8	445.9	48.9	W
21 0	09.08	534.2	51.4	439.4	51.3	W	5 0	12.09	541.5	48.7	478.5	48.7	W
22 0	11.17	528.0	51.2	439.1	51.3	H	6 0	11.10	542.0	48.5	446.6	48.6	H
23 0	11.37	527.7	51.2	439.2	51.5	H	7 0	11.01	543.6	48.3	441.7	48.3	H
2 0 0	16.45	537.7	51.4	426.9	51.7	H	8 0	10.41	543.0	48.1	441.2	48.0	H
1 0	16.48	531.6	51.7	431.4	52.2	H	9 0	10.14	543.0	48.0	440.7	47.7	H
2 0	16.59	534.1	52.0	435.0	52.6	H	10 0	09.84	542.2	47.8	441.4	47.5	H
3 0	15.34	536.4	52.4	443.6	53.2	H	11 0	10.03	541.9	47.7	443.4	47.3	B
4 0	13.63	537.6	52.8	452.4	53.7	H	12 0	10.03	541.4	47.5	444.3	47.0	B

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°	
5 13 0	25 09.54	545.1	47.0	436.1	46.5	W	7 21 0	25 07.65	534.0	46.6	439.0	46.4	W
14 0	09.29	543.8	46.5	437.5	45.9	W	22 0	08.25	531.4	46.4	439.7	46.3	H
15 0	09.86	541.7	46.0	439.5	45.3	W	23 0	10.90	529.1	46.3	439.7	46.3	H
16 0	10.33	541.7	45.5	441.3	44.7	W	8 0 0	13.67	531.1	46.3	435.2	46.5	H
17 0	09.51	542.6	44.9	442.2	44.0	W	1 0	15.39	532.1	46.5	436.8	47.0	H
18 0	09.60	542.0	44.4	442.9	43.4	W	2 0	16.08	536.3	47.0	442.2	47.6	H
19 0	09.59	539.4	43.9	444.0	42.8	B	3 0	15.31	539.6	47.6	447.2	48.4	H
20 0	09.00	533.8	43.3	446.2	42.2	B	4 0	12.58	542.6	48.2	451.9	49.2	H
21 0	09.08	536.7	42.8	445.6	41.8	H	5 0	11.75	544.2	48.9	449.9	49.7	H
22 0	07.87	530.5	42.5	447.6	41.7	H	6 0	10.75	545.2	49.4	449.4	50.0	B
23 0	11.27	526.4	42.3	440.7	42.0	H	7 0	11.10	544.9	49.7	447.2	50.2	B
6 0 0	14.73	522.3	42.3	440.5	42.5	B	8 0	10.70	544.4	49.8	446.6	50.1	B
1 0	18.30	536.9	42.7	440.3	43.5	H	9 0	11.15	544.3	49.7	444.0	50.0	B
2 0	19.28	549.3	43.7	448.8	45.0	B	10 0	10.77	546.8	49.6	437.5	49.8	B
3 0	19.34	546.8	44.9	461.9	46.7	H	11 0	06.95	551.7	49.4	429.7	49.7	W
4 0	16.53	542.2	45.9	466.6	47.2	B	12 0	07.52	548.5	49.3	422.6	49.6	W
5 0	10.70	541.2	46.8	477.2	47.8	H							
6 0	10.06	536.0	47.3	484.9	48.1	W	13 0	25 07.82	542.0	49.3	424.4	49.6	W
7 0	10.50	541.5	47.4	481.7	48.2	W	14 0	08.79	540.7	49.3	427.1	49.6	W
8 0	07.72	536.8	47.6	481.6	48.3	W	15 0	07.37	543.9	49.3	426.7	49.6	W
9 0	08.93	540.8	47.6	470.9	48.3	W	16 0	07.11	543.9	49.2	425.8	49.5	W
10 0	10.72	545.5	47.5	455.5	48.1	W	17 0	06.68	543.3	49.2	427.6	49.5	W
11 0	10.51	544.7	47.4	449.7	48.0	H	18 0	08.28	540.9	49.1	428.2	49.5	W
12 0	11.61	554.1	47.2	431.6	47.8	H	19 0	08.25	541.9	49.0	427.6	49.3	B
							20 0	09.35	541.6	48.9	434.9	49.1	B
13 0	25 06.73	544.5	47.1	429.6	47.6	H	21 0	07.13	539.3	48.8	436.4	49.0	H
14 0	10.16	544.0	47.0	428.1	47.5	H	22 0	08.31	534.5	48.7	441.7	48.8	H
15 0	08.29	541.0	46.9	433.8	47.3	H	23 0	10.27	530.2	48.7	429.6	49.0	H
16 0	08.66	541.4	46.9	437.2	47.2	H	9 0 0	12.80	532.3	48.7	437.0	49.7	B
17 0	10.09	548.1	46.8	455.6	47.1	H	1 0	14.60	535.5	49.0	435.1	50.3	H
18 0	07.78	544.3	46.7	438.0	47.0	H	2 0	14.53	540.1	49.7	435.7	50.9	H
19 0	08.03	542.7	46.6	437.5	46.9	W	3 0	14.18	544.6	50.5	437.1	51.6	H
20 0	07.60	538.5	46.5	441.6	46.9	W	4 0	12.95	546.1	51.2	436.2	52.2	H
21 0	07.79	535.6	46.5	442.5	46.8	B	5 0	12.45	545.8	51.9	439.8	52.7	B
22 0	08.66	529.2	46.5	442.6	46.9	W	6 0	11.51	541.9	52.2	436.3	52.8	W
23 0	11.44	525.8	46.6	444.6	47.2	W	7 0	12.26	547.1	52.3	443.7	52.8	W
7 0 0	14.82	528.0	46.8	440.9	47.5	W	8 0	13.17	551.0	52.3	445.0	52.5	W
1 0	16.63	532.1	47.2	440.3	47.8	W	9 0	11.82	549.4	52.0	449.0	52.2	W
2 0	16.65	536.1	47.5	447.7	48.3	W	10 0	25 04.82	536.4	51.7	446.5	51.7	W
3 0	16.13	542.8	47.8	445.3	48.7	W	11 0	24 43.72	512.3	51.3	420.3	51.2	H
4 3	13.29	546.2	48.2	446.7	48.9	W	12 0	24 53.32	499.1	51.0	236.8	50.8	H
5 0	11.12	544.2	48.3	452.8	49.0	W							
6 0	09.12	539.5	48.4	456.4	49.0	H	13 0	24 54.01	496.7	50.7	298.3	50.6	H
7 0	11.95	543.5	48.4	452.4	49.0	H	14 0	25 01.65	526.6	50.4	323.4	50.3	H
8 0	10.70	545.4	48.4	450.9	49.1	H	15 0	00.06	533.1	50.1	319.5	50.0	H
9 0	10.16	545.9	48.4	446.7	49.0	H	16 0	06.73	535.2	49.9	372.6	49.7	H
10 0	09.74	540.5	48.3	444.8	48.9	H	17 0	10.50	536.4	49.7	398.6	49.4	H
11 0	09.03	543.7	48.2	440.5	48.7	B	18 0	10.00	542.4	49.4	419.2	49.1	H
12 0	06.06	540.1	48.1	433.3	48.5	B	19 0	10.03	534.3	49.1	435.5	48.8	W
							20 0	10.51	537.5	48.8	438.0	48.5	W
13 0	25 07.13	541.9	48.0	409.0	48.2	B	21 4	12.92	510.5	48.6	444.7	48.2	B
14 0	06.59	539.6	47.9	414.4	48.0	B	22 0	20.77	521.1	48.3	436.7	48.0	W
15 0	06.84	542.0	47.7	422.1	47.8	B	23 3	16.92	528.5	48.2	437.6	47.9	W
16 0	08.05	542.1	47.5	426.6	47.5	B	10 0 0	18.72	531.0	48.2	442.2	48.3	W
17 0	07.84	541.5	47.3	430.7	47.3	B	1 0	18.94	520.3	48.4	460.0	48.8	W
18 0	08.66	541.4	47.1	433.5	47.1	B	2 2	18.61	531.9	48.8	478.5	49.3	W
19 0	08.41	541.9	47.0	435.8	46.9	H	3 13	17.19	530.5	49.3	470.3	49.8	W
20 0	07.71	540.6	46.8	436.4	46.7	H	4 0	15.39	534.9	49.5	465.0	49.9	W

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Oct. 7^d—15^h. A small insect seen on the north cross-plate of the balance magnet.Oct. 9^d—12^h. Workmen engaged erecting a fireplace in the east anteroom.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	
10 5 0	25 11.51	531.8	49.6	474.9	49.9	B	13 13 0	25 10.03	543.6	52.9	430.9	53.9	B
6 0	09.27	540.0	49.7	476.6	50.0	H	14 0	09.59	543.3	53.0	429.5	54.0	B
7 0	10.75	546.2	49.7	465.7	50.0	H	15 0	09.91	543.4	53.1	427.5	54.1	B
8 0	10.16	537.7	49.6	468.9	49.8	H	16 0	09.93	544.0	53.3	423.8	54.2	B
9 0	09.08	541.3	49.5	462.6	49.7	H	17 0	09.08	545.0	53.4	422.2	54.3	B
10 0	07.20	539.7	49.4	452.5	49.5	H	18 0	11.74	542.0	53.6	420.6	54.5	B
11 0	08.92	539.3	49.2	444.2	49.2	B	19 0	10.54	536.9	53.7	412.2	54.5	H
12 0	09.24	535.2	49.0	427.7	48.9	B	20 0	09.05	543.9	53.7	413.7	54.5	H
							21 0	07.45	538.3	53.7	419.3	54.5	W
13 0	25 10.97	537.8	48.8	432.0	48.5	B	22 0	08.52	533.6	53.8	417.6	54.7	H
14 0	09.29	538.1	48.5	434.9	48.2	B	23 0	11.71	531.0	54.0	412.4	54.8	H
15 0	10.36	539.3	48.2	435.8	48.0	B	14 0	0	14.03	533.4	54.0	412.1	55.0
16 0	08.34	537.4	48.0	437.1	47.8	B	1 0	13.72	534.7	54.3	416.9	55.3	H
17 0	08.75	538.7	47.8	437.2	47.6	B	2 0	12.35	537.7	54.7	417.4	55.7	H
18 0	13.30	533.5	47.7	439.4	47.5	B	3 0	11.57	539.0	55.0	418.0	56.0	H
19 0	13.32	544.9	47.5	429.1	47.5	H	4 0	10.38	539.7	55.3	418.2	56.3	H
20 0	10.06	539.8	47.4	435.4	47.4	H	5 0	09.69	539.5	55.8	413.5	56.6	H
21 0	11.37	536.7	47.4	440.9	47.3	W	6 0	10.09	542.5	56.0	408.1	57.0	B
22 0	09.82	529.4	47.3	448.9	47.2	H	7 0	10.09	543.5	56.2	404.8	57.0	B
23 0	12.82	534.7	47.3	450.0	47.3	H	8 0	09.56	542.1	56.3	405.5	57.0	B
11 0 0	13.79	522.9	47.4	452.3	47.5	H	9 0	09.64	542.0	56.4	408.4	57.0	B
1 0	16.52	525.1	47.5	456.3	47.9	H	10 0	09.08	545.8	56.4	406.2	57.0	B
2 0	14.37	531.8	47.8	448.8	48.2	W	11 0	09.35	542.0	56.4	407.2	56.9	W
3 0	14.92	535.1	48.0	456.5	48.5	H	12 0	08.16	543.8	56.3	405.4	56.8	W
4 0	10.00	530.7	48.4	467.1	49.0	H							
5 0	09.06	543.8	48.8	481.5	49.4	H	13 0	25 09.29	541.6	56.2	404.6	56.6	W
6 0	09.77	538.1	49.1	468.0	49.6	B	14 0	10.56	541.8	56.1	404.4	56.4	W
7 0	10.77	542.6	49.4	456.3	49.8	W	15 0	12.56	540.8	55.9	404.1	56.2	W
8 0	10.63	542.7	49.6	452.7	50.0	B	16 0	09.89	543.2	55.7	403.0	56.0	W
9 0	09.89	540.9	49.6	450.9	49.8	B	17 0	10.03	544.1	55.6	403.2	55.8	W
10 0	07.31	541.5	49.5	449.0	49.6	B	18 0	09.54	543.8	55.4	403.9	55.7	B
11 0	09.87	543.7	49.3	443.1	49.3	W	19 0	0	09.10	542.8	55.3	404.9	55.7
12 0	09.71	540.9	48.9	443.1	48.9	W	20 0	08.28	540.7	55.3	409.3	55.7	B
							21 0	07.37	536.3	55.2	410.4	55.7	H
12 13 0	25 09.69	540.4	49.0	437.8	49.1	H	22 0	07.91	531.6	55.2	410.5	55.7	H
14 0	10.36	541.3	48.8	437.6	48.8	H	23 0	11.21	531.3	55.2	406.1	55.7	B
15 0	09.44	542.5	48.7	435.3	48.5	H	15 0	0	14.53	534.0	55.2	403.4	55.7
16 0	10.48	541.1	48.5	435.2	48.3	H	1 0	14.87	540.5	55.2	405.7	55.7	H
17 0	10.47	541.9	48.2	432.2	48.2	H	2 0	14.73	542.2	55.3	414.1	55.9	B
18 0	09.27	544.8	48.0	427.3	48.0	H	3 0	14.46	541.9	55.6	420.9	56.2	B
19 0	08.68	545.6	48.0	431.0	48.0	W	4 0	14.06	543.4	55.9	427.4	56.5	B
20 0	08.31	543.2	47.9	434.7	47.9	W	5 0	15.09	538.6	56.0	433.5	56.7	B
21 0	08.09	534.7	47.9	440.3	48.0	B	6 0	0	13.00	535.8	56.2	433.1	56.8
22 0	09.12	530.4	47.9	437.9	48.2	W	7 0	10.00	539.5	56.3	430.5	56.7	W
23 0	11.42	530.0	48.0	437.4	48.5	W	8 0	10.27	546.2	56.2	421.6	56.5	W
13 0 0	13.93	533.4	48.4	438.4	49.0	W	9 0	08.79	541.4	56.0	418.1	56.3	W
1 0	14.40	536.6	48.8	442.4	49.8	W	10 0	0	06.73	540.6	55.8	414.9	55.9
2 0	13.79	538.8	49.5	443.6	50.3	W	11 0	0	05.20	537.0	55.5	413.9	55.5
3 0	12.55	540.3	49.9	445.0	50.8	W	12 0	0	09.24	540.5	55.1	412.0	55.2
4 0	11.27	542.6	50.4	450.0	51.3	W							
5 0	09.77	540.7	50.7	447.8	51.7	W	13 0	25 09.84	541.9	54.8	413.0	54.8	H
6 0	10.06	542.3	51.0	443.9	52.0	H	14 0	09.39	539.3	54.5	415.1	54.5	H
7 0	10.50	543.3	51.4	439.4	52.3	H	15 0	0	09.76	539.7	54.2	415.4	54.1
8 0	10.47	543.8	51.7	436.9	52.7	H	16 0	10.27	541.2	53.9	415.7	53.8	H
9 0	10.53	542.7	52.0	435.7	52.9	H	17 0	0	09.54	540.9	53.6	417.3	53.5
10 0	09.64	548.9	52.2	431.1	53.2	H	18 0	0	09.35	541.4	53.3	415.4	53.1
11 10	09.44	543.2	52.5	431.4	53.5	B	19 0	0	09.54	538.6	53.1	417.9	52.8
12 0	10.27	543.8	52.7	430.7	53.7	B	20 0	0	07.84	538.3	52.9	424.1	52.6

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

HOURLY OBSERVATIONS OF MAGNETOMETERS, OCTOBER 15—21, 1845.

55

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Mic. Div.	°	
15 21 0	25 07-60	533.0	52.7	430.1	52.3	B	18 5 0	25 12-45	544.0	56.4	427.5	57.0	H
22 0	09-35	525.9	52.5	429.1	52.2	W	6 0	12-85	548.0	56.6	423.4	57.0	W
23 0	13-52	521.8	52.3	426.9	52.3	W	7 0	12-31	549.7	56.5	420.5	56.7	W
16 0 0	15-41	524.8	52.4	429.8	52.5	W	8 0	11-44	544.4	56.2	422.8	56.4	W
1 0	16-82	530.2	52.6	433.1	53.0	W	9 0	11-14	545.3	55.9	419.2	56.0	W
2 0	16-05	533.4	52.9	436.2	53.7	W	10 0	08-43	552.5	55.6	416.7	55.6	W
3 0	13-97	535.5	53.4	443.6	54.3	W	11 0	06-39	540.5	55.2	419.3	55.2	H
4 0	12-58	539.8	53.8	445.6	54.6	W	12 0	09-42	543.1	54.9	416.9	54.7	H
5 0	11-10	539.0	54.1	439.5	54.7	W							
6 0	11-24	542.4	54.1	432.0	54.7	H	19 13 0	25 07-74	550.3	53.7	406.2	54.3	B
7 0	10-51	544.0	54.0	428.4	54.5	H	14 0	02-82	540.5	53.8	405.3	54.4	B
8 0	10-56	539.2	53.9	429.4	54.2	H	15 0	05-96	542.9	53.9	406.1	54.5	B
9 0	09-15	541.2	53.7	430.1	54.0	H	16 0	06-19	541.1	53.9	408.3	54.5	B
10 0	10-09	542.2	53.4	426.7	53.6	H	17 0	07-00	544.7	53.9	410.1	54.3	B
11 8	08-88	543.7	53.2	423.7	53.3	B	18 0	09-08	544.0	53.8	411.4	54.0	B
12 0	08-68	543.6	53.0	421.7	53.0	B	19 0	10-09	541.1	53.4	411.2	53.5	H
							20 0	09-06	540.4	53.1	416.7	53.0	H
13 0	25 08-52	542.9	52.9	420.7	52.9	B	21 0	08-08	539.1	52.8	419.5	52.6	W
14 0	08-28	543.9	52.7	422.7	52.8	B	22 0	07-20	540.3	52.5	408.5	52.2	H
15 0	06-86	542.8	52.6	422.9	52.7	B	23 0	12-65	535.0	52.2	398.0	52.2	H
16 0	12-01	544.7	52.4	420.6	52.6	B	20 0 0	16-87	535.8	52.2	395.5	52.2	H
17 0	08-14	551.7	52.3	404.9	52.5	B	1 0	18-00	539.9	52.1	401.3	52.3	H
18 0	09-40	550.0	52.2	406.0	52.4	B	2 0	21-54	552.7	52.1	417.4	52.3	H
19 0	14-57	547.9	52.1	401.7	52.3	H	3 0†	25-43	542.7	52.2	445.5	52.5	H
20 0	13-05	540.5	52.0	405.3	52.2	H	4 0†	20-05	536.2	52.3	461.3	52.7	H
21 0	12-09	537.9	52.0	404.8	52.0	W	5 0	13-07	542.2	52.4	450.7	52.5	H
22 0	08-48	529.5	51.9	411.0	52.0	H	6 0	11-91	542.8	52.3	440.0	52.3	W
23 0	11-46	526.3	51.8	416.2	52.0	H	7 0	11-64	541.8	52.1	431.6	51.9	B
17 0 0	14-15	530.4	51.9	422.6	52.2	H	8 0	11-74	541.6	51.8	429.0	51.4	B
1 0	15-99	525.9	52.0	421.2	52.5	H	9 0	11-28	541.4	51.4	428.4	50.9	B
2 0	16-57	537.4	52.2	425.6	52.7	H	10 0	10-77	539.2	51.0	432.0	50.4	B
3 0	20-46	538.9	52.4	439.1	53.0	H	11 0†	08-95	533.0	50.6	438.3	49.9	W
4 0	19-55	538.2	52.5	453.6	53.0	H	12 0	25 05-79	539.1	50.3	441.2	49.6	W
5 0	15-67	538.1	52.7	463.2	53.2	H							
6 0	14-01	539.5	52.8	467.6	53.3	B	13 0†	24 58-33	539.2	50.0	400.5	49.3	W
7 0	11-91	541.2	52.9	465.2	53.5	B	14 0	25 01-85	535.9	49.6	404.2	49.0	W
8 0	11-84	544.6	53.0	453.9	53.8	B	15 0	00-38	540.5	49.3	395.6	48.6	W
9 0	10-09	542.8	53.2	447.6	54.0	B	16 0	06-06	538.2	48.9	397.2	48.2	W
10 0	09-96	539.6	53.4	444.8	54.2	B	17 0†	12-01	538.8	48.6	388.0	47.8	W
11 0†	25 12-48	552.9	53.6	425.4	54.5	W	18 0†	17-54	521.6	48.2	364.9	47.5	W
12 0	24 59-76	540.3	53.9	423.7	54.8	W	19 0†	19-91	518.4	47.9	396.3	47.2	B
							20 0	17-89	539.3	47.6	399.8	47.0	B
13 0	25 04-41	534.7	54.1	431.1	55.0	W	21 0	10-34	531.8	47.4	420.2	46.9	H
14 0	02-75	534.4	54.4	424.6	55.2	W	22 0	13-36	527.7	47.2	419.8	46.7	H
15 0	06-36	535.9	54.6	426.6	55.4	W	23 0	16-68	526.4	47.1	411.5	46.8	B
16 0	06-41	540.7	54.7	421.7	55.5	W	21 0 0	19-28	513.0	47.0	428.5	47.1	H
17 0	08-65	539.6	54.7	425.0	55.5	W	1 0	20-65	530.1	47.2	452.6	47.4	B
18 0	10-65	540.6	54.7	424.4	55.5	W	2 4	23-16	524.9	47.3	455.1	47.7	H
19 0	09-73	543.0	54.8	423.1	55.5	B	3 0	14-80	533.9	47.6	484.5	48.0	B
20 0	08-79	539.3	54.8	426.7	55.4	B	4 0	16-01	534.4	47.9	475.7	48.3	B
21 0	08-25	537.5	54.8	430.0	55.4	H	5 0	12-45	537.3	48.1	463.3	48.6	B
22 0	09-98	529.1	54.8	431.4	55.4	H	6 0	11-48	539.3	48.3	458.0	48.9	W
23 0	12-29	530.9	54.8	425.9	55.5	H	7 0	11-51	540.3	48.5	453.6	49.2	W
18 0 0	14-94	535.7	55.0	423.8	55.7	B	8 0	10-95	541.9	48.7	450.7	49.3	W
1 0	15-36	538.7	55.2	419.4	56.0	H	9 0†	25 08-12	532.0	48.8	453.3	49.5	W
2 0	15-91	545.1	55.6	415.5	56.3	B	10 0†	24 46-59	534.3	49.0	466.1	49.8	W
3 0	14-87	545.6	55.9	423.8	56.7	B	11 0†	25 07-13	536.3	49.2	445.8	50.0	H
4 0	13-25	545.3	56.1	428.5	56.9	B	12 0	01-07	530.5	49.4	403.3	50.0	H

DECLINATION. Magnet untouched, Sept. 21^d. — Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k = 0.000140$. BALANCE. Observed 3^m after the Declination, $k = 0.000010$.

† Extra Observations made.

HOURLY OBSERVATIONS OF MAGNETOMETERS, OCTOBER 21—27, 1845.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	d. h. m.	° '	Sc. Div.	°	Mic. Div.	°
21 13 0	25 04-75	517-0	49-4	369-1	50-0	H	23 21 0	25 11-48	536-0	50-2	433-9	50-3	H
14 0†	08-95	532-7	49-4	318-6	50-0	H	22 0	12-85	527-5	50-0	435-9	50-2	H
15 0†	06-06	510-9	49-3	306-7	49-8	H	23 0	15-94	527-2	50-0	435-2	50-2	H
16 0†	17-46	528-6	49-3	306-2	49-8	H	24 0	16-86	530-6	50-0	436-8	50-4	H
17 0	11-10	535-8	49-3	346-1	49-8	H	1 0	17-36	532-3	50-1	440-3	50-5	B
18 0	07-52	535-7	49-2	389-7	49-7	H	2 0	19-41	542-9	50-3	442-6	50-8	B
19 0	08-82	536-9	49-1	409-1	49-5	W	3 0	14-68	527-8	50-5	446-8	51-0	H
20 0	08-90	539-4	49-0	426-6	49-4	W	4 0	14-13	540-8	50-7	461-4	51-2	B
21 0	08-48	533-0	48-9	428-4	49-2	B	5 0	13-46	540-4	50-8	468-6	51-5	H
22 0	09-96	527-9	48-8	440-0	49-2	W	6 0	12-26	536-4	50-9	470-8	51-5	W
23 0	12-87	528-8	48-8	428-3	49-2	W	7 0	08-92	537-5	50-9	468-2	51-5	W
22 0 0	14-17	533-4	48-9	428-4	49-5	W	8 0	09-02	537-7	51-0	461-5	51-5	W
1 0	16-35	530-2	49-2	434-1	49-8	W	9 0	10-90	537-2	51-0	454-9	51-5	W
2 0	16-43	534-7	49-6	430-5	50-3	W	10 0	08-19	543-7	51-0	446-0	51-5	W
3 0	14-31	538-4	49-9	437-7	50-8	W	11 0	07-72	540-2	51-0	442-0	51-5	H
4 0	11-86	538-6	50-4	438-9	51-3	W	12 0	08-72	543-4	51-0	434-5	51-5	H
5 0	11-44	541-0	50-8	460-2	51-7	W							
6 0	01-58	540-3	51-0	467-3	51-8	H	13 0	25 08-68	543-0	50-9	430-3	51-5	H
7 0	12-18	540-0	51-1	454-3	51-9	H	14 0	08-59	542-7	50-9	426-0	51-5	H
8 0	09-93	542-3	51-0	435-5	51-7	H	15 0	09-46	540-9	50-9	417-3	51-5	H
9 0	10-80	543-4	51-0	444-1	51-7	H	16 0	07-47	541-5	50-9	408-6	51-5	H
10 0	10-40	542-2	51-0	440-0	51-7	W	17 0	11-44	543-7	50-8	395-8	51-2	H
11 0	09-59	541-4	51-1	431-8	51-8	W	18 0	11-52	546-9	50-7	380-0	50-7	H
12 0	09-56	538-9	51-2	436-2	52-0	W	19 0	10-95	544-9	50-4	385-4	50-3	W
							20 0	11-49	535-5	50-1	398-9	49-9	W
13 0	25 10-90	540-9	51-4	415-5	52-2	D	21 0	15-64	526-8	49-8	413-5	49-4	B
14 0	11-00	537-9	51-4	421-0	52-4	D	22 0	15-47	525-2	49-4	416-2	49-1	W
15 0	10-00	538-2	51-4	430-1	52-4	D	23 0	16-35	523-0	49-1	418-2	49-0	W
16 0	10-94	539-8	51-5	431-0	52-5	D	25 0 0	18-37	527-9	49-0	425-0	49-0	W
17 0	10-31	542-3	51-6	418-4	52-6	D	1 0	17-67	526-7	48-9	438-0	49-3	W
18 0	09-47	543-3	51-7	421-0	52-6	B	2 0	16-55	536-7	49-3	447-7	49-8	W
19 0	10-06	541-3	51-6	430-0	52-5	B	3 0	13-81	539-8	49-7	455-2	50-4	W
20 0	09-54	537-6	51-5	435-8	52-3	B	4 0	12-31	542-5	50-1	462-1	50-9	W
21 0	08-99	534-2	51-3	431-3	52-0	H	5 0	10-54	540-0	50-7	465-1	51-5	W
22 0	10-09	529-6	51-2	434-0	52-0	H	6 0	10-51	539-5	51-0	462-9	51-7	H
23 0 0	12-46	528-1	51-0	431-0	51-9	H	7 0	09-86	537-9	51-0	456-6	51-4	H
1 0	13-94	529-9	51-1	431-3	52-0	H	8 0	10-60	540-9	50-8	451-5	51-0	H
2 0	14-99	532-7	51-2	433-6	52-2	W	9 0	07-78	538-8	50-5	426-8	50-5	H
3 0	14-41	535-7	51-4	433-3	52-3	W	10 0	07-04	532-6	50-0	444-2	50-0	H
4 0	12-98	538-7	51-6	437-1	52-4	W	11 0	06-09	532-7	49-6	440-8	49-4	B
5 0	11-27	539-9	51-6	438-0	52-5	H	12 0	05-11	531-7	49-2	431-8	48-9	B
6 0	10-40	541-0	51-7	436-7	52-5	H							
7 0	10-94	542-7	51-8	431-6	52-6	D	26 13 0	25 07-81	540-7	47-6	438-8	48-0	W
8 0	10-48	543-2	51-9	433-4	52-8	D	14 0	08-59	539-5	47-7	438-6	48-1	W
9 0	10-33	542-9	52-1	431-3	53-2	B	15 0	10-13	541-4	47-8	439-2	48-3	W
10 0	10-50	542-5	52-2	429-9	53-3	B	16 0	10-06	542-7	47-9	440-9	48-4	W
11 0	10-56	542-2	52-2	429-6	53-3	B	17 0	09-53	544-3	47-9	440-7	48-5	W
12 0	10-67	541-8	52-3	427-9	53-0	W	18 0	09-53	544-2	48-0	440-4	48-6	W
	10-65	541-5	52-0	425-6	52-6	W	19 0	09-15	544-6	48-2	441-0	48-8	B
							20 0	09-49	542-9	48-3	441-5	48-9	B
13 0	25 10-21	543-0	51-8	424-0	52-3	W	21 0	08-45	541-0	48-4	439-9	49-0	H
14 0	09-47	542-9	51-6	424-7	52-0	W	22 0	09-27	537-0	48-6	439-2	49-2	H
15 0	09-96	542-3	51-4	426-5	51-7	W	23 0	11-68	533-3	48-8	435-7	49-4	B
16 0	10-00	543-5	51-1	425-4	51-4	W	27 0 0	(13-72)	(534-6)	(434-2)	
17 0	10-23	543-0	50-9	425-8	51-1	W	1 0	15-67	536-0	49-2	432-8	49-8	B
18 0	09-59	543-7	50-7	426-4	50-8	W	2 0	16-01	536-8	49-4	436-8	50-2	H
19 0	09-69	543-8	50-5	427-8	50-6	B	3 0	15-20	537-7	49-7	447-6	50-4	B
20 0	10-53	541-1	50-3	433-0	50-4	B	4 0	15-20	541-9	50-0	453-2	50-6	H

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k=0-000140$.BALANCE. Observed 3^m after the Declination, $k=0-000010$.

† Extra Observations made.

Oct. 22^d 10^h—23^d 10^h. Term-Day Observations made.Oct. 27^d 0^h. The quantities given in parentheses are approximate, and have been used in summations.

HOURLY OBSERVATIONS OF MAGNETOMETERS, OCTOBER 27—31, 1845.

57

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.						
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.							
		d. h. m.	°	Sc. Div.	°	Mic. Div.	°	d. h. m.	°	Sc. Div.	°	Mic. Div.	°					
27	25	15.11	536.2	50.0	454.9	50.7	B	29	13	0	25	08.58	52.6					
	6	0	12.75	540.1	50.1	452.0	50.8	W	14	0	08.08	540.1	52.6					
	7	0	10.56	544.3	50.2	445.7	50.9	W	15	0	10.11	543.3	52.5					
	8	0	10.09	543.9	50.3	442.8	51.0	W	16	0	09.24	545.4	52.5					
	9	0	10.00	543.7	50.4	441.3	51.1	W	17	0	09.39	546.6	52.5					
	10	0	10.03	543.2	50.5	441.1	51.2	W	18	0	08.41	545.9	52.6					
	11	0	08.52	542.5	50.6	437.8	51.5	H	19	0	09.00	545.5	52.7					
	12	0	10.54	544.1	50.8	436.0	51.7	H	20	0	08.95	543.8	52.8					
									21	0	08.61	541.2	52.8					
										22	0	08.31	536.3	52.9				
										23	0	09.86	534.6	53.0				
28	25	10.38	544.1	51.0	437.1	52.0	H			30	0	0	12.45	536.8	53.2			
	14	0	10.36	543.7	51.2	434.3	52.0	H			1	0	15.42	542.0	53.4			
	15	0	10.36	544.0	51.4	432.4	52.2	H			2	0	15.78	541.4	53.7			
	16	0	10.41	544.6	51.7	431.7	52.4	H			3	0	14.26	542.6	53.9			
	17	0	10.16	544.3	51.8	429.5	52.5	H			4	0	12.89	546.8	54.2			
	18	0	11.01	544.5	51.9	428.2	52.7	H			5	0	11.30	547.6	54.6			
	19	0	09.64	544.8	52.1	425.8	52.8	W			6	0	11.12	546.3	54.7			
	20	0	09.08	543.5	52.2	425.3	52.9	W			7	0	10.25	546.4	54.6			
	21	0	08.45	540.8	52.2	426.7	52.9	B			8	0	10.16	546.8	54.4			
	22	0	09.35	541.5	52.4	422.8	53.0	W			9	0	09.10	546.0	54.0			
	23	0	11.44	538.1	52.5	422.3	53.2	W			10	0	09.42	546.0	53.6			
29	0	0	12.89	538.9	52.7	424.8	53.6	W			11	0	09.24	544.0	53.1			
	1	0	14.67	537.6	52.9	423.1	53.8	W			12	0	08.80	541.0	52.6			
	2	0	13.63	540.4	53.0	423.6	54.0	W										
	3	0	12.82	544.7	53.2	422.2	54.2	W										
	4	0	11.89	545.3	53.4	421.1	54.3	W										
	5	0	10.94	545.6	53.5	419.3	54.3	W			13	0	25	09.42	542.6	52.2		
	6	0	11.14	545.3	53.5	416.9	54.3	H			14	0	09.73	543.7	51.8	413.0	51.0	
	7	0	10.45	547.4	53.5	415.7	54.2	H			15	0	10.03	543.3	51.3	414.8	50.5	
	8	0	10.47	545.4	53.5	417.3	54.2	H			16	0	09.42	545.0	50.8	413.5	50.0	
	9	0	10.09	545.0	53.5	418.1	54.2	H			17	0	09.47	547.0	50.3	413.3	49.5	
	10	0	09.96	545.2	53.4	417.8	54.1	H			18	0	08.06	546.3	49.8	417.3	49.0	
	11	0	08.38	545.0	53.3	417.5	54.0	B			19	0	07.94	545.6	49.4	419.5	48.5	
	12	0	03.40	537.9	53.3	413.5	54.0	B			20	0	07.87	544.1	49.0	423.6	48.0	
31	25	07.27	548.6	53.2	393.9	53.9	B			21	5	07.58	538.5	48.6	432.3	47.5		
	14	0	08.48	542.5	53.2	399.6	53.8	B			22	0	07.76	532.8	48.3	438.7	47.5	
	15	0	09.02	540.9	53.1	404.3	53.7	B			23	0	09.40	530.8	48.0	437.3	47.7	
	16	0	07.05	543.4	53.0	408.4	53.6	B			1	0	11.57	532.0	48.1	439.6	48.0	
	17	0	07.79	544.0	53.0	407.6	53.5	B			2	0	12.62	534.6	48.3	443.1	48.5	
	18	0	10.85	544.3	53.0	403.0	53.5	B			3	0	12.65	544.0	48.7	440.2	49.2	
	19	0	09.69	543.5	53.0	406.0	53.5	H			4	0	11.64	547.1	49.0	437.9	49.5	
	20	0	08.55	541.1	53.0	411.5	53.5	H			5	0	11.25	547.3	49.4	431.8	49.9	
	21	0	07.78	537.3	53.0	421.5	53.5	W			6	0	11.07	546.9	49.7	427.9	50.2	
	22	0	08.31	532.8	53.0	421.7	53.5	H			7	0	10.54	547.7	50.0	426.4	50.5	
	23	0	11.71	532.7	53.0	419.3	53.5	H			8	0	09.24	548.0	50.0	426.4	50.8	
29	0	0	13.09	528.2	53.0	423.6	53.7	H			9	0	09.42	545.9	50.0	425.7	50.7	
	1	0	14.51	533.3	53.0	424.7	53.8	H			10	0	25	09.12	549.1	50.1	425.6	50.7
	2	0	15.20	538.8	53.2	427.5	53.9	H			11	0	24	59.27	532.9	50.2	435.4	50.7
	3	0	13.79	537.2	53.2	431.1	54.0	H			12	0	25	01.75	541.1	50.3	429.7	50.8
	4	0	12.65	539.7	53.3	428.6	54.0	H										
	5	0	12.11	542.9	53.3	426.5	54.0	H			13	0	25	03.54	531.1	50.4	416.9	50.8
	6	0	10.18	544.8	53.3	423.6	53.9	B			14	0	06.68	542.8	50.4	403.9	50.8	
	7	0	10.06	539.4	53.2	426.1	53.7	B			15	0	07.49	544.3	50.3	383.1	50.7	
	8	0	10.58	543.9	53.1	422.7	53.5	B			16	0	09.00	542.1	50.2	402.3	50.5	
	9	0	09.06	543.2	53.0	423.3	53.4	B			17	0	08.75	545.2	50.1	411.6	50.3	
	10	0	08.26	544.2	52.9	423.5	53.2	B			18	0	08.82	546.4	49.9	413.1	50.0	
	11	0	06.97	546.1	52.8	419.7	53.1	W			19	0	08.83	549.9	49.7	409.9	49.9	
	12	0	09.05	543.5	52.7	420.4	53.0	W			20	0	08.65	553.5	49.6	409.2	49.7	

DECLINATION. Magnet untouched. Sept. 21^d—Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	d. h. m.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.								
			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.									
			Sc. Div.	°	Mic. Div.	°	d.	h.	m.	Sc. Div.	°	Mic. Div.	°	Observer's Initial.							
31	21	0	25	07.45	547.4	49.4	412.0	49.3	W	4	5	0	25	12.80	542.8	42.0	477.0	43.2	H		
	22	0		17.36	535.6	49.1	414.4	49.2	H		6	0		11.68	545.5	42.7	466.6	43.5	B		
	23	0		12.60	537.0	49.1	411.3	49.2	H		7	0		10.78	545.2	43.0	461.5	43.7	B		
1	0	0		13.25	526.6	48.9	427.4	49.2	H		8	0		09.86	542.3	43.0	457.4	43.5	B		
	1	0		13.52	530.6	49.0	433.3	49.5	H		9	0†		05.99	535.4	42.8	464.7	43.3	B		
	2	0		15.58	531.9	49.0	434.1	49.7	H		10	0†		03.45	529.7	42.6	449.8	43.0	B		
	3	0		14.64	533.7	49.2	437.3	50.0	H		11	0		02.50	531.5	42.3	446.2	42.6	W		
	4	0		14.87	534.6	49.4	457.0	50.0	H		12	0†		05.33	545.2	41.9	424.5	42.1	W		
	5	0†		02.82	532.6	49.6	474.3	50.2	H												
	6	0†		10.23	537.2	49.7	481.5	50.3	B		13	0		25	08.14	535.8	41.7	406.4	41.9	W	
	7	0		11.71	534.9	49.8	469.4	50.5	B		14	0			07.37	540.2	41.5	418.8	41.7	W	
	8	0		05.60	523.8	49.9	467.1	50.5	B		15	0			09.29	541.1	41.3	430.7	41.4	W	
	9	0†		25	02.39	526.0	49.9	467.2	50.3	B		16	0			07.87	540.7	41.0	435.2	41.1	W
	10	0		24	59.19	515.4	49.9	449.8	50.4	B		17	0			12.80	542.3	40.7	434.2	40.8	W
	11	0		25	01.73	529.6	49.9	446.2	50.3	W		18	0			07.87	548.5	40.5	431.5	40.5	W
	12	0		09.73	535.5	49.8	433.9	50.2	W		19	0			10.30	551.2	40.2	430.3	40.2	B	
											20	0			10.45	543.6	39.9	436.4	39.8	B	
2	13	0	25	08.41	540.8	46.7	433.1	46.7	H	21	0			09.24	539.9	39.7	438.6	39.5	H		
	14	0		10.28	541.2	46.5	434.3	46.5	H	22	0			10.67	528.3	39.4	444.3	39.4	H		
	15	0†		17.83	544.7	46.3	400.5	46.5	H	23	0			10.97	532.9	39.3	442.6	39.4	H		
	16	0†		06.46	544.3	46.2	398.5	46.4	H	5	0	0		12.38	533.8	39.4	445.9	40.0	B		
	17	0		08.59	545.9	46.1	406.2	46.3	H		1	0			14.94	537.9	39.8	444.1	40.7	H	
	18	0		08.88	543.2	46.0	413.1	46.2	H		2	0			15.62	538.6	40.5	451.6	41.7	H	
	19	0†		12.55	545.0	45.9	414.5	46.0	W		3	0†			20.77	530.4	41.4	476.8	42.9	B	
	20	0		14.84	530.6	45.8	422.1	45.9	W		4	0†			22.47	543.4	42.4	518.0	43.9	B	
	21	0		16.35	527.3	45.8	437.8	45.8	B		5	0†			20.97	543.1	43.2	573.1	44.7	H	
	22	0		13.41	530.9	45.7	433.3	45.6	W		6	0†			21.50	538.1	43.9	600.6	45.2	W	
	23	0		13.29	530.6	45.6	435.7	45.7	W		7	0†			25	12.25	532.3	44.4	618.8	45.5	W
3	0	0		14.10	530.5	45.6	435.7	45.7	W		8	0†			24	58.49	526.7	44.6	478.6	45.7	W
	1	0		15.49	533.5	45.6	441.7	46.0	W		9	0†			25	05.32	532.5	44.7	536.8	45.8	W
	2	0		15.54	537.3	45.8	447.4	46.3	W		10	0			09.91	538.2	44.7	505.5	45.7	W	
	3	0		12.82	535.1	46.0	458.7	46.7	W		11	0			09.59	539.5	44.7	477.6	45.5	H	
	4	0		11.71	543.2	46.5	459.6	47.2	W		12	0			10.09	540.6	44.5	462.9	45.5	H	
	5	0		11.00	542.7	46.8	453.6	47.3	W												
	6	0		10.31	542.8	46.9	449.0	47.4	W		13	0			25	10.95	540.5	44.5	458.1	45.5	H
	7	0		10.03	542.6	46.8	444.7	47.2	H		14	0			11.07	539.7	44.5	458.3	45.5	H	
	8	0		09.39	543.4	46.7	440.6	46.7	H		15	0			10.83	541.2	44.5	458.2	45.5	H	
	9	0		07.29	542.7	46.3	437.6	46.2	H		16	0			11.05	543.4	44.7	458.9	45.7	H	
	10	0		05.27	538.0	45.9	439.2	45.7	H		17	0			10.77	544.2	44.8	460.1	46.0	H	
	11	0		06.61	539.0	45.5	426.4	45.2	B		18	0			10.47	544.7	45.0	459.0	46.2	H	
	12	0		05.87	539.9	45.1	428.2	44.6	B		19	0			09.82	545.7	45.4	458.1	46.6	W	
											20	0			09.62	545.9	45.8	458.8	47.0	W	
13	0	25	07.47	540.4	44.6	432.1	44.0	B		21	0			09.22	540.1	46.2	461.6	47.4	B		
	14	0		10.23	538.8	44.1	437.7	43.4	B		22	0			09.69	535.0	46.6	458.6	47.7	W	
	15	0		09.15	538.3	43.5	441.6	42.8	B		23	0			11.46	532.6	46.9	453.6	48.2	W	
	16	0		10.01	539.3	43.0	446.1	42.2	B	6	0	0		12.95	531.6	47.4	449.6	48.8	W		
	17	0		09.39	540.4	42.4	446.3	41.6	B		1	0			13.77	532.9	48.1	449.6	49.6	W	
	18	0		09.42	540.3	41.9	448.8	41.0	B		2	0			13.56	537.5	48.9	445.4	50.4	W	
	19	0		09.03	542.5	41.4	449.5	40.6	H		3	0			12.58	542.4	49.7	444.0	51.3	W	
	20	0		09.13	538.3	40.9	452.9	40.2	H		4	0			11.39	544.8	50.4	438.4	51.9	W	
	21	0		08.39	535.0	40.5	454.1	39.6	W		5	0			10.92	545.1	50.8	432.4	52.2	W	
	22	0		08.03	531.5	40.1	461.2	39.3	H		6	0			10.30	545.5	51.0	426.2	52.5	H	
	23	0		11.54	530.2	39.8	454.0	39.1	H		7	0			10.13	544.7	51.2	424.6	52.5	H	
4	0	0		13.41	531.6	39.7	449.1	39.3	H		8	0			10.00	545.0	51.4	423.0	52.6	H	
	1	0		15.29	536.7	39.6	452.8	39.7	H		9	0			09.69	542.9	51.6	421.6	52.6	H	
	2	0		15.41	540.6	39.8	464.8	40.5	H		10	0			08.90	544.8	51.6	419.2	52.3	B	
	3	0		14.26	542.0	40.4	471.5	41.3	H		11	0			09.42	545.2	51.6	415.2	52.6	B	
	4	0		12.02	543.4	41.2	474.1	42.3	H		12	0			10.03	543.8	51.7	415.1	52.7	B	

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.BIIFLAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.		
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			
		d. h. m.	° ,	Sc. Div.	°	Mic. Div.	°	d. h. m.	° ,	Sc. Div.	°	Mic. Div.	°	
6	25 10-09	542.0	51.7	413.9	52.6	B	9 21 0	25 09-73	541.2	44.9	435.1	44.7	W	
	14 0	542.9	51.6	412.7	52.5	B	22 0	12-04	538.8	44.8	433.8	44.7	H	
	15 0	542.8	51.6	413.2	52.4	B	23 0	12-42	539.4	44.7	432.5	44.7	H	
	16 0	543.9	51.5	409.2	52.3	B	1 0	14-46	542.5	44.7	434.3	45.0	H	
	17 0	546.8	51.5	393.6	52.3	B	2 0	14-67	541.0	44.7	438.2	45.2	H	
	18 0	545.9	51.4	399.6	52.2	B	3 0	13-83	542.9	44.9	441.0	45.5	H	
	19 0	548.4	51.3	400.9	52.2	H	4 0	13-12	545.0	45.1	438.9	45.7	H	
	20 0	553.9	51.3	407.8	52.2	H	5 0	11-68	545.8	45.4	441.6	46.2	H	
	21 0	535.1	51.4	417.0	52.2	W	6 0	10-03	547.9	45.8	443.9	46.5	H	
	22 0	528.3	51.4	419.3	52.1	H	7 0	10-90	543.9	46.1	444.9	46.8	B	
7	17-04	532.2	51.4	416.6	52.0	H	8 0	07-10	541.9	46.3	447.3	47.0	B	
	0 0	531.9	51.5	420.4	52.3	H	9 0	11-00	543.2	46.5	447.2	47.2	B	
	1 0	532.7	51.7	425.1	52.5	H	10 0	08-75	543.4	46.7	447.3	47.4	B	
	2 0	535.6	51.9	426.9	52.7	H	11 0	08-09	541.3	46.8	443.7	47.5	B	
	3 0	539.0	52.3	435.5	53.3	H	12 0	00-72	541.3	46.9	434.4	47.5	W	
	4 0	539.4	52.5	438.4	53.5	H	13 0	06-39	542.6	47.0	430.5	47.7	W	
	5 0	535.2	52.7	451.3	53.6	H	14 0	25 12-89	544.8	47.0	417.1	47.7	W	
	6 0	530.3	52.8	468.1	53.4	B	15 0	08-29	550.1	47.1	389.9	47.8	W	
	7 0	531.2	52.7	472.6	53.2	B	16 0	05-90	539.5	47.2	388.8	47.8	W	
	8 0	538.7	52.6	459.3	53.0	B	17 0	07-27	546.4	47.2	385.7	47.7	W	
10	08-48	536.5	52.4	450.3	52.9	B	18 0	05-52	543.3	47.1	394.9	47.7	W	
	07-82	539.5	52.3	439.8	52.9	B	19 0	07-55	546.0	47.1	405.0	47.6	W	
	03-04	541.3	52.3	423.3	52.8	W	20 0	08-06	545.7	46.9	410.5	47.2	B	
	04-71	532.8	52.3	419.4	52.8	W	21 0	08-88	540.7	46.7	412.3	46.9	H	
	13 0	25 10-07	542.0	52.2	407.5	52.7	W	22 0	09-64	537.5	46.5	415.6	46.7	H
	14 0	540.0	52.1	410.1	52.6	W	23 0	11-54	535.1	46.3	416.0	46.6	H	
	15 0	541.2	52.0	410.8	52.5	W	11 0	13-56	536.5	46.2	419.4	46.6	B	
	16 0	543.8	52.0	411.5	52.4	W	12 0	14-70	538.2	46.4	427.4	47.0	H	
	17 0	540.2	51.9	411.1	52.3	W	13 0	13-77	542.5	46.7	433.9	47.5	H	
	18 0	543.9	51.8	395.1	52.3	W	14 0	13-79	544.3	47.0	441.8	48.0	B	
8	09-29	544.3	51.8	403.1	52.3	B	15 0	11-77	542.5	47.3	444.0	48.5	H	
	08-38	540.4	51.8	408.4	52.3	B	16 0	12-22	541.5	47.7	442.9	48.5	H	
	08-23	537.3	51.8	414.0	52.3	H	17 0	06-14	542.5	47.8	444.4	48.5	W	
	09-35	536.4	51.8	415.5	52.3	H	18 0	09-39	544.8	47.8	435.4	48.5	W	
	12-29	534.3	51.8	414.4	52.3	B	19 0	09-27	543.9	47.8	433.7	48.5	W	
	0 0	535.1	51.9	414.9	52.5	H	20 0	08-82	544.4	47.7	431.5	48.3	W	
	1 0	538.4	52.0	416.3	52.7	H	21 0	06-73	545.7	47.6	427.8	48.0	W	
	2 0	540.0	52.1	418.6	52.8	H	22 0	08-58	544.4	47.3	421.3	47.6	H	
	3 0	541.5	52.2	426.9	53.0	H	23 0	09-49	543.9	47.0	420.3	47.2	H	
	4 0	545.0	52.3	427.6	53.0	B	24 0	25 09-22	543.1	46.7	426.5	46.8	H	
9	11-19	543.9	52.4	424.3	53.0	W	13 0	09-49	543.8	46.3	425.2	46.4	H	
	10-51	543.8	52.5	422.8	53.0	W	14 0	09-73	544.0	46.0	425.6	46.0	H	
	10-11	542.1	52.4	422.0	52.9	W	15 0	10-67	542.3	45.7	427.0	45.6	H	
	10-21	543.2	52.3	420.2	52.7	W	16 0	11-07	541.3	45.4	425.1	45.2	H	
	09-56	544.2	52.2	419.1	52.5	W	17 0	09-62	544.2	45.0	423.0	44.8	H	
	09-67	544.4	52.0	417.4	52.3	W	18 0	08-80	543.8	44.7	427.5	44.5	W	
	09-22	543.1	51.8	415.5	52.0	H	19 0	20 0	08-43	542.6	44.4	430.6	44.2	W
	09-73	542.6	51.6	414.0	51.7	H	21 0	08-11	539.4	44.1	434.3	43.9	B	
	08-65	544.6	45.6	430.0	45.0	B	22 0	18-93	536.8	43.8	435.4	43.6	W	
	08-82	543.6	45.3	432.4	45.0	H	23 0	11-10	535.7	43.6	438.3	43.5	W	
13	09-47	545.0	45.0	432.4	44.8	H	12 0	12-96	538.8	43.6	442.4	43.7	W	
	09-69	542.6	47.5	425.7	46.9	B	1 0	13-46	541.7	43.7	443.9	44.1	W	
14	10-09	542.0	47.1	426.2	46.5	B	2 0	13-81	543.6	43.9	445.4	44.6	B	
	09-56	542.4	46.7	425.8	46.1	B	3 0	12-45	545.8	44.3	447.1	45.1	W	
15	10-90	541.9	46.3	428.4	45.7	B	4 0	11-89	546.2	44.7	445.4	45.4	W	
	09-76	543.7	45.9	426.9	45.3	B	5 0							
16	08-65	544.6	45.6	430.0	45.0	B	6 0							
	08-82	543.6	45.3	432.4	45.0	H	7 0							
17	09-47	545.0	45.0	432.4	44.8	H	8 0							
	09-69	542.6	47.5	425.7	46.9	B	9 0							

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Mic. Div.	°	
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		
12 5 0	25 10-36	547.9	44.9	444.5	45.6	W	14 13 0	25 10-36	545.0	41.9	434.6	42.4	H	
6 0	10-70	544.7	45.0	443.9	45.7	H	14 0	08-29	543.2	41.7	433.8	42.1	H	
7 0	10-87	545.9	45.0	440.9	45.7	H	15 0	10-09	545.0	41.5	432.5	41.8	H	
8 0	10-01	546.6	45.0	439.2	45.5	H	16 0	10-21	546.4	41.2	431.8	41.4	H	
9 0	09-76	546.6	44.8	436.6	45.2	H	17 0	09-56	546.1	40.9	431.7	41.0	H	
10 0	06-70	540.6	44.7	442.4	45.0	H	18 0	09-32	546.1	40.7	432.1	40.7	H	
11 0	09-39	543.2	44.4	436.9	44.5	B	19 0	09-02	545.7	40.4	433.6	40.3	W	
12 0	09-26	542.4	44.1	436.9	44.2	B	20 0	09-06	543.6	40.1	435.3	40.0	W	
							21 0	09-15	540.5	39.8	439.1	39.7	B	
13 0	25 09-69	541.9	43.8	436.2	43.8	B	22 0	09-93	538.7	39.5	438.7	39.5	W	
14 0	09-76	542.5	43.5	436.9	43.5	B	23 0	11-66	537.9	39.4	433.9	39.4	W	
15 0	10-03	542.6	43.2	436.5	43.1	B	15 0 0	12-89	539.1	39.3	437.4	39.5	W	
16 0	09-22	544.1	42.9	436.8	42.8	B	1 0	12-92	542.5	39.4	443.4	39.9	W	
17 0	08-85	545.3	42.6	436.5	42.5	B	2 0	11-86	544.6	39.6	446.2	40.3	W	
18 0	08-48	546.0	42.3	435.7	42.2	B	3 0	10-72	546.3	39.8	448.4	40.8	W	
19 0	08-77	544.9	42.0	435.2	42.1	H	4 0	10-45	547.7	40.2	447.6	41.3	W	
20 0	09-05	544.0	41.8	435.8	42.0	H	5 0	10-58	548.7	40.6	444.3	41.7	W	
21 0	09-02	541.4	41.7	439.9	41.7	W	6 0	10-27	548.8	41.0	442.7	42.2	H	
22 0	09-40	537.7	41.5	440.8	41.5	H	7 0	10-00	549.4	41.5	440.3	42.7	H	
23 0	10-41	537.5	41.4	441.5	41.5	H	8 0	09-53	548.8	41.8	437.8	43.0	H	
13 0 0	12-26	538.4	41.3	443.6	41.6	H	9 0	09-42	546.5	42.1	438.9	43.5	H	
1 0	10-80	541.1	41.3	447.6	41.9	H	10 0	09-12	547.0	42.4	437.1	43.7	H	
2 0	12-63	543.8	41.6	451.1	42.4	H	11 0	08-92	546.3	42.8	437.9	44.0	B	
3 0	11-98	545.7	42.0	453.4	43.0	H	12 0	08-41	548.0	43.1	435.9	44.3	B	
4 0	11-30	547.0	42.3	451.4	43.4	H								
5 0	11-14	546.6	42.6	452.0	43.7	H	16 13 0	25 08-28	545.2	46.2	423.3	46.8	W	
6 0	10-06	548.4	42.9	448.4	43.9	B	14 0	09-20	544.4	46.1	424.1	46.7	W	
7 0	09-67	547.5	43.1	445.1	44.0	B	15 0	09-84	542.3	46.0	420.1	46.5	W	
8 0	09-15	547.3	43.2	443.9	44.1	B	16 0	10-18	549.9	45.9	413.9	46.3	W	
9 0	08-95	547.5	43.3	443.0	44.2	B	17 0	08-50	551.7	45.7	414.3	46.1	W	
10 0	08-95	547.1	43.4	441.5	44.2	B	18 0	07-74	554.5	45.6	412.7	45.9	W	
11 0	08-88	546.9	43.4	440.8	44.2	W	19 0	09-22	557.6	45.4	410.0	45.8	B	
12 0	09-29	545.3	43.3	442.4	44.2	W	20 0	09-62	555.2	45.3	409.0	45.7	B	
							21 0	10-36	544.4	45.1	410.0	45.5	H	
13 0	25 09-53	545.6	43.3	441.0	44.1	W	22 0	16-79	510.9	45.1	422.9	45.5	H	
14 0	09-79	545.4	43.3	439.1	44.0	W	23 0	24-12	528.1	45.0	411.3	45.5	B	
15 0	10-06	545.5	43.2	437.9	43.9	W	17 0 0	19-14	526.5	45.0	422.5	45.5	B	
16 0	09-74	544.8	43.1	435.5	43.6	W	1 0	21-97	524.5	45.1	433.4	45.7	B	
17 0	08-92	544.7	42.9	435.2	43.3	W	2 0	19-02	537.5	45.2	442.3	45.7	H	
18 0	09-62	546.6	42.6	433.9	42.9	W	3 0	19-75	548.5	45.2	460.9	45.8	H	
19 0	09-00	545.3	42.3	434.2	42.5	B	4 0	10-27	540.6	45.3	489.5	45.8	H	
20 0	08-99	543.7	42.0	433.9	42.0	B	5 0	15-64	538.7	45.3	467.1	46.0	H	
21 0	09-08	541.6	41.7	435.8	41.6	H	6 0	11-28	542.7	45.4	461.0	45.9	W	
22 0	09-66	538.6	41.4	437.5	41.4	H	7 0	25 09-57	536.1	45.3	512.9	45.8	W	
23 0	11-48	538.9	41.2	436.8	41.3	H	8 0	24 58-82	526.1	45.3	516.8	45.8	W	
14 0 0	13-27	539.5	41.0	441.0	41.4	H	9 0	25 07-32	522.3	45.3	502.9	45.8	W	
1 0	13-79	542.6	41.1	448.0	41.6	B	10 0	05-82	538.5	45.3	455.1	45.7	W	
2 0	12-51	543.9	41.2	449.8	42.0	H	11 0	06-12	535.9	45.0	432.2	45.5	H	
3 0	11-17	543.6	41.5	452.4	42.4	B	12 0	07-94	533.8	44.8	402.7	45.2	H	
4 0	10-33	544.0	41.8	451.2	42.8	B								
5 0	11-03	546.7	42.1	450.0	43.2	H	13 0	25 07-69	537.1	44.6	402.4	44.9	H	
6 0	10-72	549.6	42.4	441.6	43.4	W	14 0	08-75	533.9	44.4	416.2	44.5	H	
7 0	10-40	547.8	42.5	439.1	43.4	W	15 0	09-82	536.0	44.1	421.7	44.2	H	
8 0	08-73	547.5	42.5	437.7	43.3	W	16 0	10-13	536.5	43.8	428.6	43.8	H	
9 0	09-27	546.5	42.5	437.1	43.2	W	17 0	09-03	538.5	43.6	432.3	43.5	H	
10 0	09-06	546.2	42.4	436.1	43.0	W	18 0	09-05	538.9	43.3	431.8	43.2	H	
11 0	09-46	544.8	42.2	436.4	42.9	H	19 0	09-08	538.8	43.0	435.1	43.0	W	
12 0	09-06	546.1	42.0	435.0	42.6	H	20 0	09-66	538.4	42.8	438.0	42.8	W	

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k = 0\cdot000140$.BALANCE. Observed 3^m after the Declination, $k = 0\cdot000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
		d. h. m.	° ,	Sc. Div.	°	Mic. Div.	°	d. h. m.	° ,	Sc. Div.	°	Mic. Div.	°	
17 21 0	25 09.76	538.0	42.6	436.9	42.6	B	20	5 0	25 08.88	543.5	46.5	431.5	47.0	B
22 0	09.20	534.9	42.5	434.4	42.5	W		6 0	08.12	545.9	46.5	429.2	46.8	W
23 0	11.54	535.4	42.4	428.8	42.5	W		7 0	08.36	544.5	46.3	428.3	46.5	W
18 0 0	11.28	535.0	42.3	429.6	42.5	W		8 0	08.00	542.2	46.1	429.6	46.3	W
1 0	12.73	536.3	42.3	436.3	42.7	W		9 0	07.64	543.2	45.8	430.3	46.0	W
2 0	15.34	540.0	42.4	444.7	42.8	W		10 0	07.54	543.7	45.6	427.0	45.7	W
3 0	12.85	532.9	42.5	451.1	43.1	W		11 0	08.01	541.8	45.4	425.8	45.5	H
4 0	10.74	539.0	42.7	461.0	43.4	W		12 0	07.51	541.5	45.1	426.2	45.2	H
5 0	25 11.79	535.9	42.9	470.4	43.8	W								
6 0†	24 54.32	532.3	43.1	472.2	44.2	H		13 0	25 07.52	540.2	44.9	426.7	45.0	H
7 0	25 03.43	539.8	43.5	464.7	44.5	H		14 0	08.03	540.8	44.7	426.0	44.7	H
8 0	09.62	545.2	43.7	450.5	44.7	H		15 0	08.01	541.8	44.4	427.1	44.5	H
9 0	08.18	544.2	43.9	445.0	45.0	H		16 0	08.28	542.3	44.2	428.4	44.2	H
10 0	25 07.37	538.2	44.1	446.0	45.1	H		17 0	07.87	541.5	44.0	431.2	44.0	H
11 4†	24 54.57	549.8	44.3	434.1	45.2	B		18 0	08.52	541.7	43.7	431.0	43.7	H
12 0†	25 03.43	535.0	44.5	429.4	45.4	B		19 0	07.42	542.7	43.5	431.1	43.4	W
								20 0	07.37	542.3	43.2	430.3	43.1	W
13 0	25 06.06	541.2	44.7	414.2	45.6	B		21 5	07.47	541.3	42.9	431.3	42.8	B
14 0	05.38	539.2	44.9	417.2	45.8	B		22 0	08.29	540.7	42.7	432.5	42.6	W
15 0	13.39	542.3	45.0	403.7	46.0	B		23 0	08.73	538.1	42.6	433.2	42.5	W
16 0	06.19	544.6	45.2	403.6	46.1	B	21	0 0	10.00	534.1	42.4	433.6	42.5	W
17 0	08.61	540.9	45.4	416.9	46.3	B		1 0	10.97	539.7	42.4	434.0	42.5	W
18 0	08.82	543.2	45.6	422.4	46.5	B		2 0	10.51	541.8	42.4	434.0	42.7	W
19 0	10.25	544.7	45.8	420.3	46.8	H		3 0	09.35	541.1	42.6	439.6	43.0	W
20 0	11.14	538.8	46.0	423.8	47.2	H		4 0	07.04	539.3	42.8	445.0	43.4	W
21 0	12.35	532.3	46.3	428.0	47.4	W		5 0	07.82	547.5	43.0	439.4	43.6	W
22 0	13.27	531.9	46.6	426.3	47.5	H		6 0	08.08	546.8	43.0	439.5	43.7	H
23 0	08.53	535.7	46.8	430.3	47.7	H		7 0	07.91	545.2	43.0	437.3	43.5	H
19 0 0	10.47	540.2	47.1	435.8	47.9	H		8 0	04.64	544.8	42.8	434.6	43.3	H
1 0	11.84	538.8	47.2	435.5	48.2	H		9 0	07.54	546.9	42.7	431.0	43.0	H
2 0	11.21	542.9	47.4	436.2	48.5	H		10 0	07.81	545.0	42.5	428.0	42.6	H
3 0	11.61	540.9	47.7	443.8	48.7	H		11 0	07.67	544.1	42.2	428.3	42.2	B
4 0	10.90	534.3	47.9	446.5	48.9	H		12 0	07.54	543.9	41.9	428.7	41.8	B
5 0†	08.46	530.7	47.9	443.5	48.7	H								
6 0	06.26	541.3	47.9	441.3	48.7	B		13 0	25 08.03	543.7	41.6	429.2	41.4	B
7 0	07.87	543.0	47.9	434.1	48.6	B		14 0	07.98	543.2	41.2	429.9	41.0	B
8 0	08.45	543.7	47.8	429.3	48.5	B		15 0	09.37	544.5	40.9	429.5	40.6	B
9 0	04.76	542.2	47.7	428.7	48.4	B		16 0	08.05	544.3	40.5	431.1	40.2	B
10 0	08.21	541.2	47.7	426.3	48.3	B		17 0	07.67	545.4	40.2	431.6	39.8	B
11 0	04.69	537.5	47.6	424.3	48.2	W		18 0	08.56	544.1	39.8	433.7	39.5	B
12 0	07.11	538.9	47.5	422.2	48.1	W		19 0	08.14	547.0	39.5	431.9	39.2	H
								20 0	07.44	544.6	39.2	432.5	38.8	H
13 0	25 08.11	540.0	47.4	420.8	48.0	W		21 0	08.03	541.0	39.0	436.4	38.6	W
14 0	08.77	546.1	47.4	412.6	47.8	W		22 0	09.08	540.1	38.7	436.6	38.4	H
15 0	05.63	545.5	47.3	403.6	47.7	W	22	0 0	11.10	538.9	38.5	438.1	38.3	H
16 0	06.26	541.3	47.2	407.8	47.6	W		1 0	11.77	526.6	38.5	444.2	38.5	H
17 0	06.95	545.5	47.1	408.8	47.5	W		2 0	12.33	540.7	38.7	449.8	39.2	H
18 0	08.25	544.9	47.0	410.7	47.4	W		3 0	11.44	544.2	39.1	452.7	40.0	H
19 0	11.00	541.1	46.9	410.8	47.2	B		4 0	11.34	545.2	39.7	455.4	40.7	H
20 0	10.00	545.6	46.8	409.2	47.1	B		5 0	09.86	544.2	40.3	457.3	41.5	H
21 0	10.77	543.6	46.7	411.7	47.0	H		6 0	08.31	542.3	40.9	454.9	42.0	H
22 0	11.01	539.4	46.5	415.7	46.8	H		7 0	08.80	546.9	41.2	449.4	42.1	B
23 0	12.04	536.0	46.4	416.0	46.6	H		8 0†	08.48	547.2	41.3	445.8	42.1	B
20 0 0	12.45	536.3	46.3	417.0	46.6	H		9 0	02.59	545.3	41.3	443.7	42.0	B
1 0	11.24	538.4	46.3	420.9	46.6	B		10 0	06.50	543.6	41.2	444.1	41.9	B
2 0	11.10	537.0	46.3	425.7	46.8	B		11 0	07.55	540.8	41.1	443.1	41.7	B
3 0	10.92	541.5	46.4	429.2	46.9	H		12 0	06.81	542.4	41.0	440.7	41.6	W
4 0	09.69	542.5	46.4	431.2	47.0	H			07.60	542.0	40.9	438.5	41.5	W

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	d. h. m.	° '	Sc. Div.	°	Mic. Div.
23	25 08-01	543-3	37-9	443-6	38-2	H	25 08-05	545-5	46-8	413-4	48-2	H
	14 08-36	543-4	37-8	444-8	38-2	H	22 09-05	545-8	47-2	410-4	48-5	H
	15 08-41	544-2	37-7	440-8	38-0	H	23 08-75	544-8	47-7	411-4	48-9	H
	16 08-41	545-3	37-6	439-7	37-9	H	26 09-64	545-4	48-0	409-7	49-3	H
	17 07-96	546-9	37-5	438-8	37-7	H	1 09-84	546-4	48-4	405-7	49-7	H
	18 08-31	547-0	37-4	437-0	37-4	H	2 09-76	549-3	48-8	400-9	49-9	B
	19 07-54	548-1	37-2	435-4	37-1	W	3 09-32	548-3	49-1	402-1	50-2	H
	20 07-07	546-7	37-0	436-9	36-8	W	4 08-75	548-5	49-4	401-1	50-5	H
	21 07-13	543-6	36-7	438-4	36-5	B	5 09-42	550-1	49-6	399-5	50-5	B
	22 08-41	541-7	36-5	438-5	36-2	W	6 08-73	548-7	49-7	400-2	50-6	W
	23 10-88	538-9	36-2	436-1	36-0	W	7 08-63	547-5	49-8	399-4	50-7	W
	24 0 12-48	537-4	36-0	440-5	36-0	W	8 07-72	548-9	49-9	399-1	50-7	W
	1 12-08	539-5	36-0	444-7	36-3	W	9 07-20	547-4	49-9	400-0	50-8	W
	2 12-23	543-7	36-2	445-2	36-7	W	10 07-27	545-6	50-0	400-7	50-8	W
	3 11-59	545-7	36-6	452-1	37-3	W	11 03-57	550-6	50-0	394-4	50-8	H
	4 12-15	543-6	37-0	460-1	37-8	W	12 02-86	543-5	50-1	388-1	51-0	H
	5 09-46	542-6	37-4	462-5	38-1	W						
	6 08-68	543-2	37-5	458-3	38-3	H	13 0 25 08-34	547-1	50-2	389-1	51-1	H
	7 08-75	543-3	37-7	454-4	38-2	H	14 0 08-23	548-1	50-2	387-1	51-0	H
	8 05-11	537-2	37-7	455-6	38-2	H	15 0 08-26	550-8	50-1	385-0	50-8	H
	9 02-01	540-7	37-6	445-5	38-2	H	16 0 07-65	550-5	50-0	382-9	50-6	H
	10 04-51	538-0	37-6	444-1	38-2	H	17 0 08-26	548-4	50-0	385-4	50-5	H
	11 07-17	540-2	37-6	446-8	38-2	B	18 0 07-58	548-1	49-8	383-9	50-3	H
	12 07-94	542-7	37-6	446-4	38-2	B	19 0 07-50	550-3	49-7	383-7	50-2	W
							20 0 07-32	548-7	49-6	384-4	50-0	W
	13 0 25 08-61	544-8	37-6	443-4	38-2	B	21 0 06-83	546-9	49-5	387-5	49-8	B
	14 0 09-39	545-1	37-6	442-3	38-3	B	22 0 06-97	544-2	49-4	389-9	49-7	W
	15 0 08-11	542-5	37-7	442-1	38-4	B	23 0 08-66	541-6	49-4	388-7	49-7	W
	16 0 12-11	541-9	37-8	437-9	38-6	B	27 0 0 09-86	541-9	49-4	391-6	49-8	W
	17 0 04-89	550-6	37-9	431-0	38-8	B	1 0 12-11	544-6	49-5	393-5	50-0	W
	18 0 06-70	549-3	38-2	437-9	39-2	B	2 0 11-15	546-5	49-6	394-3	50-0	W
	19 0 06-76	549-8	38-6	439-0	39-7	H	3 0 10-06	547-5	49-6	395-3	50-0	W
	20 0 07-60	549-9	39-0	438-2	40-3	H	4 0 09-02	547-6	49-6	394-6	50-0	W
	21 0 07-71	548-6	39-4	439-4	40-7	W	5 0 08-48	548-8	49-6	393-7	50-0	W
	22 0 08-12	544-5	39-8	437-6	40-9	H	6 0 08-16	549-4	49-6	391-5	50-0	H
	23 0 09-77	544-3	40-1	436-6	41-2	H	7 0 07-89	550-0	49-6	391-3	50-0	H
	25 0 11-14	544-1	40-4	438-1	41-6	H	8 0 07-74	549-5	49-6	391-3	50-0	H
	1 10-83	546-1	40-8	438-6	42-0	H	9 0 07-71	549-8	49-6	391-2	50-0	H
	2 10-00	546-5	41-1	437-5	42-4	H	10 0 06-73	545-5	49-7	394-3	50-1	H
	3 09-47	547-5	41-5	436-3	42-7	H	11 0 02-20	541-0	49-7	403-7	50-1	B
	4 08-59	546-1	41-8	437-2	43-0	H	12 0 05-92	540-9	49-7	401-6	50-2	B
	5 08-52	546-3	42-0	436-4	43-2	H						
	6 09-15	550-6	42-2	434-6	43-5	B	13 0 25 06-03	546-1	49-8	394-2	50-2	B
	7 09-08	546-2	42-4	436-5	43-7	B	14 0 05-96	545-8	49-8	395-2	50-2	B
	8 08-28	547-4	42-7	437-7	44-0	B	15 0 05-15	542-9	49-8	395-7	50-1	B
	9 06-59	547-4	42-9	437-7	44-2	B	16 0 07-49	549-5	49-8	392-4	50-1	B
	10 03-67	556-9	43-1	428-0	44-4	B	17 0 08-01	551-4	49-8	389-5	50-0	B
	11 07-51	543-8	43-4	432-6	44-7	W	18 0 06-98	549-9	49-7	388-5	50-0	B
	12 06-64	543-9	43-7	432-4	45-0	W	19 0 15-34	548-1	49-7	372-2	50-0	H
							20 0 09-08	554-7	49-7	372-1	49-9	H
	13 0 25 07-31	543-9	44-0	430-2	45-2	W	21 0 10-21	535-5	49-6	382-7	49-8	W
	14 0 08-31	547-3	44-3	425-5	45-5	W	22 0 10-23	527-3	49-5	375-5	49-7	H
	15 0 08-28	548-0	44-6	422-4	45-8	W	23 0 14-46	518-4	49-4	393-5	49-6	H
	16 0 08-16	548-3	45-0	420-9	46-2	W	28 0 12-55	522-8	49-3	404-6	49-5	H
	17 0 07-64	549-6	45-3	417-2	46-5	W	1 0 11-51	538-7	49-2	417-8	49-5	H
	18 0 07-65	549-7	45-7	416-1	46-9	W	2 0 12-96	542-8	49-2	418-1	49-5	H
	19 0 07-71	547-5	46-1	415-4	47-3	B	3 0 11-10	542-8	49-1	413-0	49-5	H
	20 0 07-94	546-3	46-4	414-6	47-7	B	4 0 09-76	543-3	49-1	409-8	49-5	H

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
		d. h. m.	° ,	Sc. Div.	°	Mic. Div.	°	d. h. m.	° ,	Sc. Div.	°	Mic. Div.	°	
28	25 08.88	542.7	49.1	405.2	49.6	H	1 13 0	25 03.88	541.2	41.6	416.4	42.0	W	
	6 0	543.9	49.2	403.3	49.6	B	14 0	07.45	542.6	41.5	417.4	41.8	W	
	7 0	542.5	49.2	400.2	49.6	H	15 0	07.65	545.8	41.3	416.5	41.6	W	
	8 0	541.2	49.1	403.2	49.5	B	16 0	06.93	546.7	41.1	416.8	41.4	W	
	9 0	540.8	49.1	405.6	49.5	B	17 0	07.44	548.1	41.0	418.3	41.2	W	
	10 0	541.1	49.1	405.9	49.5	H	18 0	07.10	550.5	40.8	417.5	41.0	W	
	11 0	541.3	49.2	407.0	49.7	H	19 0	07.07	551.5	40.7	418.4	40.8	B	
	12 0	542.5	49.4	405.9	50.0	H	20 0	08.80	551.0	40.6	416.1	40.7	B	
							21 0	11.28	547.1	40.4	417.6	40.7	H	
	13 0	541.1	49.7	404.8	50.3	D	22 0	11.48	541.0	40.3	421.5	40.7	H	
	14 0	539.1	49.8	401.4	50.4	D	23 0	12.31	537.9	40.2	423.2	40.7	H	
29	11.37	538.4	49.9	376.9	50.5	D	2 0 0	13.32	535.8	40.3	431.8	40.8	B	
	16 0	542.0	49.8	375.4	50.4	D	1 0	14.65	533.7	40.4	435.2	41.1	H	
	17 0	543.0	49.7	380.5	50.3	D	2 0	16.01	538.6	40.7	441.3	41.4	B	
	18 0	543.3	49.6	381.0	50.1	W	3 0	14.50	542.5	40.9	445.2	41.7	H	
	19 0	543.6	49.5	381.9	49.9	W	4 0	11.64	542.7	41.1	452.3	42.0	H	
	20 0	540.8	49.3	386.0	49.8	W	5 0	08.79	544.8	41.1	446.8	42.0	H	
	21 0	541.4	49.2	387.1	49.7	W	6 0	08.16	545.6	41.2	442.5	41.9	W	
	22 0	534.8	49.0	392.8	49.4	B	7 0	08.12	544.9	41.1	439.0	41.8	W	
	23 0	539.0	48.8	388.1	49.1	B	8 0	07.87	544.1	41.0	437.4	41.7	W	
	0 0	537.4	48.6	394.5	49.0	B	9 0	04.91	538.7	41.0	438.4	41.6	W	
	1 0	535.2	48.6	401.1	49.1	H	10 0	06.27	539.1	40.9	437.4	41.5	W	
30	11.55	529.7	48.6	407.9	49.2	H	11 0	07.67	541.8	40.8	430.1	41.3	H	
	3 0	535.9	48.7	411.3	49.4	H	12 0	05.05	541.1	40.7	429.8	41.3	H	
	4 0	541.7	48.7	409.2	49.2	B	13 0	25 06.86	542.5	40.6	429.7	41.2	H	
	5 0	522.2	48.6	424.7	49.0	B	14 0	08.31	543.5	40.5	428.5	41.0	H	
	6 0	538.4	48.5	422.7	49.0	D	15 0	08.55	544.0	40.4	428.9	40.9	H	
	7 0	540.9	48.4	409.8	48.9	D	16 0	09.08	545.0	40.3	428.9	40.7	H	
	8 0	544.3	48.3	404.5	48.9	W	17 0†	15.14	553.4	40.1	423.7	40.5	H	
	9 0	543.9	48.1	402.0	48.6	W	18 0†	07.17	556.6	40.0	413.1	40.5	H	
	10 0	543.4	47.9	395.8	48.2	W	19 0	10.13	557.4	39.9	413.8	40.4	W	
	11 0	537.8	47.5	394.1	47.7	H	20 0	11.41	548.2	39.7	415.5	40.0	W	
	12 0	545.3	47.0	388.3	47.0	H	21 10	13.05	535.8	39.5	422.4	39.6	B	
31	0 0	544.6	42.2	431.2	42.8	B	22 0	12.42	536.6	39.3	426.1	39.3	W	
	13 0	544.8	42.5	438.2	43.2	B	23 0	14.68	531.9	39.1	425.6	39.2	W	
	14 0	545.0	42.8	420.4	43.5	B	3 0 0	19.19	528.6	39.0	427.6	39.3	W	
	15 0	545.8	43.1	421.3	43.8	B	1 0	15.71	529.3	39.1	446.7	39.7	W	
	16 0	546.0	43.3	423.6	44.0	B	2 0	15.04	545.0	39.2	451.7	40.0	W	
	17 0	546.0	43.4	420.4	44.1	B	3 0	17.09	539.4	39.6	473.0	40.4	W	
	18 0	545.8	43.4	426.2	44.0	H	4 0†	20.43	544.6	39.8	670.9	40.7	W	
	19 0	547.5	43.4	426.2	44.0	H	5 0†	04.41	553.3	40.0	723.2	41.1	B	
	20 0	544.3	43.3	416.5	43.8	H	6 0†	00.48	565.0	40.5	847.0	41.7	W	
	21 0	542.2	43.1	424.9	43.5	W	7 0†	26.03	(730.0)	40.7	853.2	42.1	H	
	22 0	539.0	42.9	424.5	43.2	H	8 0†	02.96	621.0	41.0	816.5	42.5	B	
	23 0	536.9	42.7	424.1	43.0	H	9 0†	08.88	477.3	41.1	551.0	42.6	W	
1	0 0	537.0	42.5	423.1	43.0	H	10 0†	25 08.45	484.8	41.0	560.7	42.5	H	
	1 0	537.9	42.5	426.6	43.0	H	11 0†	24 57.34	493.7	40.9	529.5	42.2	B	
	2 0	540.3	42.5	428.3	43.1	H	12 0†	(24 54.20)	(497.0)	40.7	(519.0)	41.8	D	
	3 0	542.5	42.6	430.8	43.2	H								
	4 0	543.7	42.7	431.8	43.2	H	13 0†	24 50.93	457.7	40.6	489.4	41.5	B	
	5 0	543.5	42.7	434.1	43.3	H	14 0†	24 53.88	464.7	40.3	401.4	41.3	B	
	6 0	545.3	42.7	430.1	43.2	H	15 0†	25 02.42	485.7	40.1	430.8	41.0	B	
	7 0	545.1	42.6	427.0	43.0	H	16 0†	00.20	511.0	39.9	383.1	40.6	B	
	8 0	544.5	42.4	426.4	42.8	B	17 0	05.79	519.7	39.5	444.0	40.1	B	
	9 0	541.8	42.2	427.9	42.6	B	18 0	08.14	523.9	39.1	484.4	39.5	B	
	10 0	542.8	42.1	426.4	42.5	B	19 0	09.59	528.2	38.7	480.3	38.8	H	
	11 0	541.6	42.0	428.5	42.3	W	20 0	09.79	528.0	38.2	478.9	38.4	H	
	12 0	546.7	41.8	421.7	42.2	W	21 0	07.96	529.6	37.8	480.4	38.1	W	

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Nov. 28^d 10^h—29^d 10^h. Term-day Observations made.Dec. 3^d 7^h 2^m. Bifilar scale out of sight, reading estimated.Dec. 3^d 12^h. Observations accidentally omitted; the quantities in parentheses are the means of observations made 5^m before and 5^m after the times of hourly observation. See Extra Observations.

HOURLY OBSERVATIONS OF MAGNETOMETERS, DECEMBER 3—9, 1845.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°			d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°
3 22 0	25 08-08	530-4	37-5	477-2	37-7	H	6 7 0	25 10-04	538-5	40-8	463-2	41-5	H
23 0	08-61	532-8	37-2	484-9	37-7	H	8 0	08-41	539-7	40-8	462-9	41-5	H
4 0 0	10-43	533-5	37-1	478-5	37-7	H	9 0	08-90	538-0	40-8	463-0	41-5	H
1 0 0	09-76	531-6	37-1	474-8	37-8	H	10 0	07-67	538-1	40-8	460-3	41-5	H
2 0 0	09-82	537-1	37-3	478-2	38-2	H	11 0	02-62	544-0	40-8	456-1	41-3	B
3 0 0	09-89	537-3	37-6	480-2	38-5	H	12 0	04-78	537-6	40-6	455-0	41-0	B
4 0 0	08-45	534-9	37-9	480-0	38-6	H							
5 0 0	08-68	542-9	38-0	478-6	38-7	H	7 13 0	25 08-08	537-1	36-7	451-1	36-4	W
6 0 0	10-97	535-3	38-2	481-9	39-0	B	14 0	08-05	536-6	36-4	446-3	36-0	W
7 0 0	11-10	540-2	38-4	478-6	39-1	B	15 0	08-45	536-8	36-0	446-8	35-7	W
8 0 0	08-92	540-5	38-5	477-8	39-2	B	16 0	08-58	537-7	35-7	447-3	35-4	W
9 0 0	08-06	538-0	38-6	475-5	39-3	B	17 0	07-76	539-9	35-4	447-7	35-3	W
10 0 0	07-79	537-9	38-7	475-5	39-4	B	18 0	07-60	541-9	35-2	447-9	35-1	W
11 0 0	07-57	535-8	38-9	473-4	39-6	W	19 0	07-67	541-7	35-0	450-4	35-0	B
12 0 0	07-74	534-9	39-0	472-1	39-8	W	20 0	07-67	540-5	34-9	452-2	35-0	B
13 0 0	25 07-67	532-5	39-2	472-5	40-0	W	21 0	10-68	541-9	34-8	451-2	34-9	H
14 0 0	08-72	535-5	39-4	470-4	40-2	W	22 0	07-60	538-9	34-7	451-8	34-9	H
15 0 0	09-40	539-8	39-6	466-6	40-5	W	23 0	09-66	533-6	34-7	455-4	35-1	H
16 0 0	07-92	537-5	39-8	465-6	40-7	W	8 0 0	09-59	535-9	34-8	454-3	35-2	B
17 0 0	10-04	541-4	40-0	462-6	40-9	W	1 0	12-82	540-1	34-9	454-8	35-4	B
18 0 0	05-23	545-1	40-2	459-0	41-0	W	2 0	11-77	539-7	35-2	456-1	35-9	B
19 0 0	07-25	543-0	40-4	458-5	41-1	B	3 0	11-44	541-0	35-6	460-2	36-4	H
20 0 0	09-35	541-5	40-5	456-4	41-2	B	4 0	10-74	539-9	36-0	462-4	36-8	H
21 0 0	09-10	536-9	40-5	455-2	41-2	H	5 0	09-35	541-0	36-6	460-5	37-4	H
22 0 0	11-99	526-4	40-5	459-7	41-2	H	6 0	08-88	541-5	37-1	458-8	37-8	W
23 0 0	12-16	529-8	40-6	456-1	41-2	H	7 0	05-96	539-7	37-5	460-9	38-2	W
5 0 0	12-67	531-0	40-7	461-3	41-4	B	8 0	07-98	543-7	38-0	457-1	38-6	W
1 0 0	14-73	528-0	40-8	464-1	41-6	H	9 0	07-55	543-6	38-4	454-5	39-0	W
2 0 0	14-91	527-4	41-0	466-0	41-8	H	10 0	07-47	544-0	38-7	452-9	39-3	W
3 0 0	13-02	531-5	41-3	480-2	42-0	H	11 0	07-00	541-8	38-9	453-1	39-7	H
4 0 0	13-90	533-9	41-5	494-0	42-2	H	12 0	07-57	542-0	39-1	451-2	40-0	H
5 0 0	15-74	528-8	41-5	504-8	42-2	H	13 0	25 07-69	542-8	39-5	448-2	40-3	H
6 0 0	12-85	531-6	41-5	504-8	42-2	W	14 0	07-78	542-2	39-8	446-9	40-5	H
7 0 0	08-83	537-0	41-6	493-7	42-2	W	15 0	08-05	543-1	40-0	443-9	40-7	H
8 0 0	08-46	538-3	41-5	478-9	42-0	W	16 0	08-72	542-8	40-1	441-4	40-7	H
9 0 0	07-94	536-3	41-3	471-5	41-8	W	17 0	08-80	544-7	40-2	440-6	41-0	H
10 0 0	07-57	536-7	41-1	466-1	41-6	W	18 0	08-59	544-4	40-3	440-4	41-1	H
11 0 0	07-71	536-3	40-9	462-0	41-5	H	19 0	07-79	547-1	40-4	439-3	41-1	W
12 0 0	07-65	536-0	40-8	458-4	41-2	H	20 0	07-92	545-0	40-4	439-0	41-0	W
13 0 0	25 06-63	537-5	40-7	456-6	41-2	H	21 0	07-40	544-4	40-3	439-6	40-9	B
14 0 0	06-59	537-3	40-6	451-3	41-1	H	22 0	06-68	541-3	40-3	442-6	40-9	W
15 0 0	05-43	536-6	40-4	449-1	40-9	H	23 0	08-01	538-3	40-3	442-8	40-9	W
16 0 0	08-58	528-2	40-3	452-2	40-8	H	9 0 0	09-27	538-8	40-5	443-8	41-2	W
17 0 0	08-38	540-2	40-2	446-8	40-6	H	1 0	09-94	540-3	40-7	443-2	41-5	W
18 0 0	07-37	539-9	40-0	450-8	40-5	H	2 0	10-47	540-9	41-0	445-1	41-8	W
19 0 0	07-99	543-0	39-9	450-7	40-4	W	3 0	09-77	543-7	41-4	444-7	42-1	W
20 0 0	08-41	541-9	39-8	451-0	40-3	W	4 0	08-01	542-2	41-7	445-6	42-3	W
21 0 0	08-52	536-1	39-7	453-8	40-2	B	5 0	07-52	546-0	41-8	442-5	42-4	W
22 0 0	09-20	534-2	39-7	454-5	40-1	W	6 0	08-05	544-5	41-7	440-8	42-4	H
23 0 0	09-76	532-8	39-6	454-1	40-0	W	7 0	07-71	543-8	41-7	442-0	42-3	H
6 0 0	11-32	534-6	39-6	456-2	40-2	W	8 0	08-39	542-9	41-6	440-7	42-2	H
1 0 0	11-07	535-9	39-8	458-0	40-5	W	9 0	07-81	543-6	41-5	439-1	42-0	H
2 0 0	11-42	537-8	40-1	460-8	40-9	W	10 0	07-34	542-1	41-3	438-1	41-8	H
3 0 0	11-30	538-9	40-4	466-8	41-2	W	11 0	07-71	543-2	41-2	439-0	41-7	B
4 0 0	11-03	536-9	40-7	473-2	41-5	W	12 0	07-87	543-9	41-1	436-5	41-5	B
5 0 0	10-60	539-3	40-8	468-9	41-5	W	13 0	25 08-14	542-6	40-9	435-5	41-3	B
6 0 0	08-34	536-9	40-8	468-4	41-5	H	14 0	08-38	543-3	40-8	434-6	41-2	B

DECLINATION. Magnet untouched, Sept. 21st—Dec. 29th.BIFILAR. Observed 2nd after the Declination, $k=0.000140$.BALANCE. Observed 3rd after the Declination, $k=0.000010$.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			d.	h.	m.	°	'	Se. Div.	°
9 15 0	25 08.72	544.8	40.7	433.5	41.1	B	12 0 0	25	09.15	534.9	39.9	430.5	40.2	W
16 0	08.72	545.4	40.6	432.0	41.0	B	1 0		13.41	542.2	39.9	434.0	40.2	W
17 0	08.82	545.6	40.4	430.8	40.8	B	2 0		13.46	543.8	39.9	434.1	40.3	W
18 0	08.25	545.7	40.3	430.3	40.6	B	3 0		13.34	545.9	39.9	437.7	40.4	W
19 0	08.08	546.7	40.0	429.1	40.4	H	4 0		10.63	547.0	40.0	437.2	40.5	W
20 0	08.39	548.2	39.9	427.8	40.2	H	5 0		09.29	547.2	40.0	436.0	40.5	W
21 0	08.19	546.1	39.8	429.6	40.0	W	6 0		09.93	544.4	40.0	435.5	40.3	H
22 0	08.97	543.1	39.6	431.4	39.8	H	7 0		09.10	541.4	39.8	437.0	40.1	H
23 0	09.22	542.5	39.4	431.7	39.7	H	8 0		10.61	533.7	39.6	451.0	39.8	H
10 0 0	10.80	537.5	39.3	434.1	39.8	H	9 0		06.86	510.9	39.4	445.2	39.4	H
1 0	13.99	540.8	39.4	436.1	40.1	H	10 0		07.24	513.0	39.0	440.7	39.0	H
2 0	13.43	538.1	39.7	438.0	40.5	H	11 0		07.04	541.4	38.7	436.3	38.6	B
3 0	10.83	538.5	39.9	441.1	40.7	H	12 0		06.79	510.5	38.3	436.3	38.2	B
4 0	12.15	541.9	40.2	447.0	41.0	H	13 0	25	06.97	538.7	37.9	435.4	37.7	B
5 0	08.61	544.9	40.2	446.4	41.1	H	14 0		05.42	537.5	37.5	429.5	37.2	B
6 0	07.81	546.9	40.4	443.4	41.2	B	15 0		07.44	537.7	37.0	431.3	36.8	B
7 0	07.65	546.4	40.5	440.2	41.2	B	16 0		08.08	538.0	36.6	431.4	36.3	B
8 0	07.47	545.8	40.6	439.3	41.2	B	17 0		07.34	538.5	36.1	432.8	35.8	B
9 0	07.17	545.5	40.7	440.0	41.3	B	18 0		07.60	539.7	35.6	433.1	35.3	B
10 0	07.04	543.6	40.8	441.4	41.5	B	19 0		06.86	542.5	35.1	431.3	34.9	H
11 0	07.47	544.8	40.8	440.8	41.7	H	20 0		07.34	542.6	34.7	430.6	34.4	H
12 0	07.45	543.4	41.1	440.9	41.9	W	21 0		06.59	543.7	34.4	430.0	34.1	W
13 0	25 06.90	542.5	41.4	441.8	42.3	W	22 0		06.77	544.0	34.1	428.8	33.7	H
14 0	07.84	545.1	41.8	439.8	42.7	W	23 0		08.99	533.7	33.7	431.2	33.5	H
15 0	08.14	545.6	42.2	436.9	43.1	W	13 0 0		14.98	523.1	33.6	437.1	33.5	H
16 0	08.61	546.2	42.6	434.2	43.5	W	1 0		20.53	523.9	33.6	444.5	33.9	H
17 0	08.41	545.8	43.0	433.4	43.9	W	2 0		21.32	534.3	33.7	456.1	34.3	H
18 0	07.94	546.3	43.4	430.4	44.2	W	3 0		18.60	538.4	33.9	464.0	34.7	H
19 0	07.67	545.8	43.6	427.8	44.2	B	4 0		14.23	542.1	34.2	485.1	35.1	H
20 0	07.54	545.0	43.7	427.4	44.2	B	5 0		11.98	534.2	34.6	492.8	35.5	H
21 0	07.40	544.0	43.7	429.1	44.2	H	6 5	25	06.32	540.0	35.1	494.6	35.9	B
22 0	06.97	540.9	43.5	427.5	44.0	H	7 0	24	48.45	542.9	35.5	504.1	36.2	B
23 0	08.38	539.3	43.4	424.6	43.7	H	8 0	25	05.85	532.2	35.7	482.7	36.4	B
11 0 0	09.76	540.1	43.4	425.5	43.8	H	9 0	25	05.85	529.4	35.8	476.8	36.3	B
1 0	10.88	542.6	43.4	427.4	44.0	H	10 0	24	50.78	525.5	35.7	470.9	36.2	B
2 0	10.97	545.0	43.5	430.2	44.2	H	11 0	24	59.84	520.0	35.6	444.0	36.2	W
3 0	10.28	547.3	43.6	431.5	44.1	B	12 0	25	03.65	528.7	35.4	416.0	35.9	W
4 0	09.59	545.8	43.7	431.8	44.1	H	14 13 0	25	07.81	542.4	40.6	438.6	41.2	H
5 0	08.19	548.4	43.7	428.4	44.0	H	14 0		07.72	543.7	41.0	436.2	41.7	H
6 0	07.51	546.1	43.5	427.0	43.8	W	15 0		08.09	543.3	41.4	434.8	42.2	H
7 0	07.84	546.9	43.3	424.4	43.6	W	16 0		08.11	544.0	41.8	432.0	42.5	H
8 0	07.54	545.1	43.1	425.2	43.4	W	17 0		11.03	543.4	42.1	427.8	42.7	H
9 0	07.07	544.5	42.9	424.0	43.2	W	18 0		08.18	547.6	42.3	416.1	42.9	H
10 0	07.37	543.2	42.7	425.0	43.0	W	19 0		11.10	544.4	42.4	415.7	42.9	W
11 0	07.31	541.1	42.5	426.5	42.8	H	20 0		05.97	546.0	42.4	417.2	42.9	W
12 0	05.69	539.1	42.2	427.3	42.6	H	21 0		07.00	546.1	42.3	416.8	42.7	B
13 0	25 08.55	538.2	42.0	424.5	42.3	H	22 0		05.85	544.3	42.2	419.4	42.5	W
14 0	07.92	539.4	41.8	423.9	42.0	H	23 0		07.81	537.2	42.0	419.1	42.4	W
15 0	07.91	541.5	41.6	424.8	41.7	H	15 0 0		13.77	519.8	41.9	427.4	42.3	W
16 0	08.19	542.3	41.4	423.4	41.5	H	1 0		12.38	528.3	41.9	424.9	42.5	B
17 0	08.25	544.9	41.1	421.0	41.2	H	2 0		12.98	535.1	42.0	431.7	42.7	W
18 0	07.96	545.0	40.8	422.9	41.0	H	3 0		11.05	530.6	42.3	445.0	42.9	W
19 0	06.79	546.7	40.6	421.5	40.7	W	4 0		10.60	543.5	42.4	442.8	43.0	W
20 0	07.64	546.0	40.4	421.1	40.5	W	5 0		08.41	544.2	42.4	437.8	43.0	W
21 0	07.20	544.4	40.3	425.3	40.4	B	6 0	25	08.80	541.0	42.3	437.8	43.0	H
22 0	07.25	538.5	40.1	428.7	40.3	W	7 0	24	49.22	519.6	42.2	459.3	42.8	H
23 0	09.08	530.7	40.0	432.1	40.2	B	8 0	25	06.39	534.5	42.0	450.1	42.7	H

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

HOURLY OBSERVATIONS OF MAGNETOMETERS, DECEMBER 15—20, 1845.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
		d. h. m.	° '	Sc. Div.	° '	Mic. Div.	° '	d. h. m.	° '	Sc. Div.	° '	Mic. Div.	° '
15 9 0+	24 46.21	527.7	42.0	442.0	42.7	H	17 17 0	25 07.64	541.8	35.7	424.0	36.2	H
10 0	25 05.62	537.6	42.0	430.6	42.8	H	18 0	08.68	539.0	35.6	426.5	36.2	H
11 0	05.63	541.7	42.1	428.2	42.8	B	19 0	08.08	543.2	35.6	424.7	36.2	W
12 0	07.31	543.8	42.1	425.6	42.7		20 0	08.06	539.4	35.6	426.5	36.1	W
							21 0	08.06	542.3	35.6	426.5	36.1	B
13 0	25 09.93	539.6	42.0	409.6	42.6	B	22 0	08.48	540.8	35.7	427.1	36.2	W
14 0	06.98	539.1	42.0	411.6	42.6	B	23 0	10.20	535.7	35.7	428.7	36.3	W
15 0	09.89	538.4	42.0	405.1	42.6	B	18 0	10.87	528.8	35.8	437.0	36.4	W
16 0	08.68	543.5	42.0	391.2	42.7	B	1 0	13.76	532.7	36.0	438.1	36.7	B
17 0	11.86	542.3	42.0	390.8	42.7	B	2 0	15.32	531.6	36.3	440.6	36.9	W
18 0	09.29	542.1	42.1	397.8	42.8	B	3 0	14.60	535.0	36.6	451.8	37.3	W
19 0	09.15	543.3	42.1	403.7	42.8	H	4 0	10.97	534.8	36.9	455.5	37.6	W
20 0	08.50	539.1	42.2	417.6	42.9	H	5 0	15.78	541.1	37.2	455.8	37.8	W
21 0	08.36	542.7	42.3	424.1	42.9	W	6 0	00.98	550.2	37.2	451.3	37.8	H
22 0	08.39	541.0	42.2	421.6	42.8	H	7 0	25 08.77	542.4	37.2	444.6	37.8	H
23 0	09.05	538.2	42.1	425.5	42.7	H	8 0	24 59.83	546.5	37.1	440.4	37.8	H
16 0 0	10.14	536.8	42.0	425.6	42.7	H	9 0	25 06.95	538.7	37.0	439.3	37.7	H
1 0	11.88	532.8	42.0	426.0	42.7	H	10 0	07.04	539.8	36.8	433.8	37.3	H
2 0	13.46	540.4	42.0	433.2	42.7	H	11 0	04.98	541.0	36.6	429.6	36.9	B
3 0	10.36	538.7	42.1	435.8	42.7	H	12 0	06.36	537.8	36.3	427.7	36.5	B
4 0	09.26	540.1	42.0	441.6	42.6	W	13 0	25 08.28	540.6	36.0	425.6	36.2	B
5 0	08.68	538.3	41.9	441.5	42.5	H	14 0	07.76	540.4	35.7	425.8	35.9	B
6 0	07.02	537.2	41.9	441.3	42.3	B	15 0	07.76	541.0	35.5	427.9	35.7	B
7 0+	00.67	537.3	41.8	438.0	42.2	B	16 0	08.06	542.0	35.3	428.5	35.5	B
8 0	02.93	543.0	41.7	432.2	42.1	B	17 0	08.34	541.6	35.1	429.5	35.4	B
9 0	07.25	539.1	41.5	429.5	41.9	B	18 0	08.90	541.9	35.0	428.7	35.3	B
10 0	05.32	539.0	41.3	428.3	41.7	B	19 0	08.16	542.1	34.9	428.1	35.3	H
11 0	04.02	539.4	41.2	424.8	41.4	W	20 0	08.12	542.2	34.9	429.9	35.5	H
12 0	01.19	536.7	41.0	411.0	41.1	W	21 0	08.08	542.1	34.9	434.0	35.7	W
13 0	25 06.50	538.7	40.7	410.5	40.8	W	22 0	07.20	540.3	35.1	433.4	35.9	H
14 0	04.91	536.2	40.4	414.1	40.5	W	23 0	07.34	540.4	35.3	432.8	36.2	H
15 0	10.61	540.7	40.1	413.2	40.2	W	19 0	09.02	540.1	35.7	434.2	36.5	H
16 0	10.38	536.8	39.8	411.5	39.8	W	1 0	10.23	538.8	36.1	440.2	36.9	H
17 0	08.83	541.9	39.5	407.4	39.5	W	2 0	10.70	540.1	36.5	436.9	37.3	H
18 0	08.72	542.3	39.2	407.9	39.0	W	3 0	10.60	542.9	37.1	439.2	37.7	H
19 10	10.63	545.6	38.8	409.9	38.6	B	4 0	09.19	544.7	37.6	440.6	38.3	H
20 0	12.42	540.5	38.5	412.8	38.3	B	5 0	08.61	544.9	38.0	439.6	38.7	H
21 0	10.90	535.5	38.1	417.6	38.1	H	6 0	07.92	546.0	38.3	436.6	38.7	B
22 0	09.67	530.1	37.8	418.8	37.8	H	7 0	08.05	544.5	38.3	433.9	38.7	B
23 0	11.88	530.2	37.6	418.4	37.6	H	8 0	07.94	544.2	38.3	437.3	38.7	B
17 0 0	08.99	534.1	37.4	420.4	37.5	H	9 0	07.31	544.2	38.2	429.2	38.5	B
1 0	11.37	529.2	37.3	428.5	37.5	H	10 0	07.34	544.2	38.1	424.1	38.5	B
2 0	10.67	536.0	37.2	434.0	37.5	H	11 0	07.32	543.7	38.0	431.5	38.5	W
3 0	12.45	539.9	37.2	441.4	37.7	H	12 0	07.37	542.7	37.9	425.7	38.5	W
4 0	03.84	539.4	37.3	454.1	38.0	H	13 0	25 07.74	542.3	37.9	423.8	38.4	W
5 0	09.02	540.8	37.5	448.0	38.0	B	14 0	07.72	544.5	37.8	421.1	38.3	W
6 0	07.32	542.8	37.6	443.6	37.9	W	15 0	06.84	545.9	37.7	416.1	38.2	W
7 0	07.24	544.5	37.5	437.9	37.8	W	16 0	08.38	542.4	37.6	415.5	38.1	W
8 0	06.70	540.0	37.4	435.3	37.6	W	17 0	08.48	544.7	37.5	417.2	37.9	W
9 0	04.44	544.2	37.2	431.6	37.3	W	18 0	07.87	546.4	37.4	417.2	37.8	W
10 0	06.59	541.2	37.0	426.9	37.0	W	19 0	07.34	547.5	37.3	426.1	37.8	B
11 0	06.59	540.6	36.7	425.9	36.7	H	20 0	07.94	546.3	37.2	421.5	37.7	B
12 0	04.42	540.5	36.4	423.9	36.6	H	21 0	07.69	545.8	37.1	417.8	37.7	H
13 0	25 06.39	535.3	36.2	416.7	36.5	H	22 0	07.13	544.5	37.1	426.8	37.7	H
14 0	06.01	538.3	36.0	411.6	36.4	H	23 0	06.71	540.4	37.1	426.0	37.7	H
15 0	07.07	538.8	35.9	418.6	36.2	H	20 0	07.84	539.3	37.2	424.8	37.8	B
16 0	07.37	541.1	35.8	422.7	36.2	H	1 0	10.16	540.2	37.2	429.2	37.8	H

DECLINATION. Magnet untouched, Sept. 21st—Dec. 29th.BIFILAR. Observed 2nd after the Declination, $k=0.000140$.BALANCE. Observed 3rd after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
		d. h. m.	° '	Sc. Div.	° '	Mic. Div.	° '	d. h. m.	° '	Sc. Div.	° '	Mic. Div.	° '		
20	2 0	25	10.77	542.7	37.3	426.9	38.0	H	23 11 0	25 07.98	547.4	39.8	416.9	40.5	H
	3 0		10.85	545.9	37.4	429.6	38.0	B	12 0	08.06	548.0	39.8	414.5	40.3	H
	4 0		09.62	545.0	37.6	430.6	38.2	H							
	5 0		08.61	545.1	37.7	428.2	38.3	H	13 0	25 08.12	547.7	39.6	412.1	40.2	H
	6 0		08.05	546.4	37.8	429.0	38.4	W	14 0	08.11	545.3	39.4	411.5	40.0	H
	7 0		08.19	546.5	37.9	429.8	38.5	W	15 0	08.72	546.8	39.1	409.8	39.8	H
	8 0		07.99	545.7	37.9	429.6	38.5	W	16 0	07.89	544.3	38.9	409.0	39.5	H
	9 0		02.64	542.7	37.9	433.2	38.5	W	17 0	07.20	544.0	38.8	409.3	39.2	H
	10 0		02.96	542.3	38.0	430.1	38.5	W	18 0	07.60	545.0	38.6	408.1	38.8	H
	11 0		03.43	541.2	38.0	433.3	38.7	H	19 0	07.17	545.8	38.4	408.7	38.5	W
	12 0		05.72	540.4	38.0	429.9	38.8	H	20 0	07.32	544.5	38.1	409.9	38.1	W
21	13 0	25	06.98	542.3	34.4	422.4	34.6	B	21 0	07.37	545.0	37.8	408.5	37.7	B
	14 0		07.64	541.9	34.3	423.9	34.6	B	22 0	07.52	544.0	37.4	408.8	37.4	W
	15 0		06.39	540.8	34.3	423.5	34.6	B	23 0	09.12	540.8	37.2	408.8	37.2	W
	16 0		07.52	541.9	34.3	423.4	34.7	B	24 0	11.69	538.3	36.9	409.1	37.0	W
	17 0		06.90	544.2	34.3	424.4	34.7	B	1 0	12.75	540.8	36.8	409.7	37.0	W
	18 0		06.50	551.0	34.3	422.3	34.8	B	2 0	12.83	543.4	36.7	410.0	37.1	W
	19 0		09.29	549.5	34.4	423.3	35.0	H	3 0	11.22	542.2	36.7	417.0	37.2	W
	20 0		07.71	548.4	34.7	424.6	35.3	H	4 0	10.77	539.3	36.8	423.6	37.4	W
	21 0		07.54	547.1	35.0	427.3	35.7	W	5 0	06.98	545.8	36.9	424.7	37.5	W
	22 0		08.03	547.2	35.4	421.4	35.9	H	6 0	08.41	545.1	37.0	423.4	37.7	H
	23 0		08.31	543.6	35.7	422.5	36.2	H	7 0	08.99	544.1	37.2	424.0	38.0	H
22	0 0		11.46	542.4	36.1	422.8	36.8	H	8 0	08.65	547.0	37.4	424.6	38.3	H
	1 0		10.94	543.2	36.7	424.1	37.5	H	9 0	08.65	540.5	37.7	429.2	38.6	H
	2 0		10.70	547.7	37.3	423.0	38.2	H	10 0	06.66	544.2	38.2	429.0	39.0	W
	3 0		09.59	547.3	38.0	425.1	38.6	H	11 0	06.63	546.5	38.7	424.2	39.7	W
	4 0		09.15	547.6	38.5	425.2	39.0	H	12 0	07.84	546.6	39.4	418.9	40.4	W
	5 0		09.06	547.3	38.7	427.0	39.4	H	13 0	25 07.62	546.3	40.3	415.5	41.4	D
	6 0		09.02	546.4	38.9	426.9	39.4	B	14 0	07.25	545.9	41.1	414.1	42.2	D
	7 0		08.08	548.1	39.0	425.1	39.4	B	15 0	07.45	544.5	41.9	410.0	42.9	D
	8 0		05.97	542.9	38.9	425.6	39.3	B	16 0	07.98	545.2	42.7	407.5	43.7	D
	9 0		07.78	546.1	38.8	422.8	39.1	B	17 0	07.74	546.1	43.3	405.4	44.5	D
	10 0		07.64	545.4	38.7	421.4	39.0	B	18 0	07.40	547.8	44.0	402.7	45.0	B
23	11 0		06.53	542.4	38.6	423.2	38.9	W	19 0	07.34	547.0	44.4	400.1	45.4	B
	12 0		07.57	543.4	38.4	421.4	38.7	W	20 0	07.13	546.7	44.7	398.5	45.6	B
	13 0	25	08.36	543.8	38.3	418.1	38.6	W	21 0	07.04	545.4	44.9	397.9	45.8	B
	14 0		04.41	544.2	38.1	411.9	38.4	W	22 0	07.38	544.0	45.1	396.6	45.7	H
	15 0		06.51	541.8	38.0	414.7	38.3	W	23 0	08.63	543.2	45.1	398.2	45.7	H
	16 0		07.47	542.6	37.9	414.5	38.2	W	25 0	0 0	09.26	542.5	45.1	400.1	45.7
	17 0		06.86	544.1	37.8	414.8	38.2	W	1 0	10.75	543.3	45.1	400.2	45.9	W
	18 0		07.54	545.7	37.8	416.3	38.3	W	2 0	10.45	545.1	45.3	399.5	46.3	W
	19 0		07.37	545.1	37.8	418.0	38.3	B	3 0	10.47	546.5	45.6	399.7	46.7	W
	20 0		08.14	544.4	37.8	418.5	38.3	B	4 0	09.00	547.0	46.0	395.6	47.0	W
	21 0		07.98	543.7	37.8	418.8	38.4	H	5 0	08.18	546.8	46.1	392.2	47.1	H
	22 0		08.52	545.3	37.8	419.2	38.5	H	6 0	08.11	547.4	46.2	389.4	47.2	H
	23 0		08.55	543.7	37.9	418.5	38.5	H	7 0	07.87	547.3	46.4	385.4	47.3	D
23	0 2		09.69	543.5	38.2	418.2	38.8	H	8 0	07.84	546.8	46.4	384.8	47.7	C
	1 0		11.14	546.4	38.5	418.0	39.2	H	9 0	07.78	546.3	46.4	386.4	47.7	H
	2 0		10.50	547.4	38.8	418.0	39.6	H	10 0	07.15	543.4	46.3	385.6	47.5	H
	3 0		10.74	547.9	39.2	419.5	40.0	H	11 3	06.95	544.9	46.1	385.0	46.8	W
	4 0		10.09	548.1	39.5	422.1	40.2	H	12 0	06.53	537.6	45.8	387.1	46.3	W
	5 0		09.19	548.9	39.7	422.3	40.4	H	13 0	25 05.24	541.2	45.4	387.9	45.8	W
	6 0		10.67	546.2	39.8	421.7	40.5	W	14 0	05.89	541.0	45.1	387.7	45.4	W
	7 0		05.79	538.0	39.9	432.9	40.6	W	15 0	07.32	543.4	44.7	385.0	45.1	W
	8 0		09.62	548.5	39.9	423.3	40.6	W	16 0	06.26	543.0	44.4	383.1	44.8	W
	9 0		07.87	548.3	40.0	419.7	40.5	W	17 0	07.25	542.9	44.2	384.3	44.5	W
	10 0		07.74	548.4	39.9	418.1	40.5	W	18 0	06.74	546.7	44.0	384.9	44.3	W

DECLINATION. Magnet untouched, Sept. 21^d—Dec. 29^d.BIFILAR. Observed 2^m after the Declination, $k=0.000140$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.Dec. 24^d 10^h—25^d 10^h. Term-Day Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
a. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
25 19 0	25 06-29	546-8	43-8	386-7	44-1	B	29 4 0	25 05-77	543-8	36-8	428-1	37-7	H
20 0	06-93	547-6	43-6	386-6	43-9	B	5 0	04-95	545-6	37-3	424-5	38-4	H
21 0	07-64	549-3	43-4	386-0	43-8	H	6 0	04-68	547-3	38-0	418-7	39-1	B
22 0	07-94	545-6	43-4	391-2	44-0	H	7 0	05-82	547-1	38-6	414-7	39-8	W
23 0	08-80	542-9	43-4	394-3	44-2	H	8 0	05-74	546-8	39-2	411-5	40-3	W
26 0 0	09-69	540-8	43-6	396-5	44-5	H	9 0	05-73	546-2	39-7	409-4	40-9	W
1 0	10-77	543-3	43-8	399-2	44-8	H	10 0	05-51	545-3	40-3	409-7	41-7	W
2 0	10-90	546-8	44-1	402-3	45-2	H	11 0	05-13	546-2	40-9	408-4	42-5	H
3 0	10-77	548-2	44-4	403-5	45-6	H	12 0	05-50	547-4	41-6	406-0	43-3	H
4 0	09-69	548-2	44-7	401-2	45-6	H	13 0	25 05-73	547-0	42-3	404-0	44-0	H
5 0	09-10	548-1	44-9	399-4	45-8	H	14 0	05-74	548-5	43-0	401-6	44-7	H
6 0	08-66	547-5	45-0	396-6	45-8	W	15 0	06-26	548-2	43-6	396-7	45-2	H
7 0	08-31	548-1	45-0	394-9	45-8	W	16 0	06-18	550-2	44-0	391-3	45-6	H
8 0	07-84	548-5	45-0	391-4	45-5	W	17 0	13-68	546-2	44-7	384-1	46-1	H
9 0	07-76	548-9	44-8	391-3	45-2	W	18 0	06-52	556-3	45-0	363-5	46-5	H
10 0	07-24	546-8	44-6	382-0	44-9	W	19 0	07-51	556-4	45-5	361-0	46-8	W
11 0	06-90	544-6	44-3	394-5	44-7	H	20 0	07-35	540-0	45-9	365-4	47-2	W
12 0	06-36	544-5	43-9	395-5	44-2	H	21 0	08-41	544-7	46-3	371-0	47-5	B
13 0	25 07-20	544-5	43-6	393-5	43-8	H	22 0	06-86	541-6	46-5	371-5	47-5	W
14 0	07-15	544-4	43-3	394-3	43-4	H	23 0	09-31	539-6	46-6	378-8	47-5	W
15 0	07-04	545-3	43-0	392-4	43-1	H	30 0 0	10-77	533-9	46-6	382-8	47-6	W
16 0	07-35	544-8	42-7	392-3	42-7	H		1 0	10-89	530-0	46-7	395-3	47-6
17 0	07-34	548-5	42-4	389-4	42-3	H	2 0	15-56	533-3	46-8	407-1	47-7	W
18 0	07-98	546-0	42-2	391-5	42-0	H	3 0	01-84	542-7	46-9	441-7	47-8	W
19 0	07-76	545-2	41-9	393-4	41-7	W	4 0	16-82	540-4	47-0	430-1	47-9	W
20 0	07-10	545-4	41-6	394-0	41-4	W	5 0	06-00	539-8	47-1	428-6	48-0	H
21 0	08-58	546-0	41-3	394-6	41-0	B	6 0	04-60	534-7	47-2	430-8	47-8	H
22 0	08-08	542-4	41-0	396-9	40-8	W	7 0	07-29	534-5	46-9	438-9	47-4	H
23 0	09-00	543-1	40-8	395-0	40-6	W	8 0	07-07	532-0	46-6	425-7	47-0	H
27 0 0	10-50	542-4	40-6	398-9	40-5	W	9 0	25 08-08	537-3	46-3	398-2	46-5	H
1 0	11-84	542-5	40-4	402-4	40-5	W	10 0	24 59-83	540-0	45-9	396-5	46-0	H
2 0	11-74	540-8	40-3	403-9	40-5	W	11 0	25 08-55	534-6	45-5	389-3	45-4	B
3 0	11-24	532-1	40-3	412-0	40-5	W	12 0	06-12	535-1	45-0	385-5	44-8	B
4 0	10-00	537-4	40-2	422-0	40-6	W	13 0	25 05-56	533-7	44-5	382-7	44-1	B
5 0	11-12	541-6	40-1	413-1	40-5	W	14 0	09-12	538-1	43-9	381-6	43-4	B
6 0	09-02	546-0	40-0	412-5	40-6	H	15 0	09-24	537-3	43-3	382-2	42-8	B
7 0	08-99	542-9	40-0	413-5	40-7	H	16 0	10-90	538-1	42-8	386-6	42-2	B
8 0	07-84	542-8	40-0	412-7	40-8	H	17 0	09-24	537-9	42-3	391-3	41-8	B
9 0	07-42	542-5	40-1	413-6	41-0	H	18 0	10-40	539-2	41-9	393-8	41-5	B
10 0	05-45	542-4	40-3	413-8	41-3	H	19 0	12-51	540-4	41-6	392-1	41-3	H
11 0	06-63	545-1	40-7	413-1	41-7	B	20 0	10-33	544-3	41-3	394-6	41-1	H
12 0	06-93	547-1	41-2	409-7	42-3	B	21 0	12-02	541-3	41-0	396-4	40-8	W
28 13 0	25 07-40	540-7	38-1	407-3	37-4	W	22 0	11-62	537-5	40-7	396-2	40-7	H
14 0	07-51	540-5	37-7	409-4	37-1	W	23 0	12-89	535-2	40-7	399-3	40-7	H
15 0	07-60	541-7	37-4	409-9	36-7	W	31 0 0	12-08	534-7	40-5	405-2	40-7	H
16 0	08-18	542-7	37-0	410-1	36-4	W		1 0	12-16	535-0	40-5	409-2	40-7
17 0	07-34	543-4	36-7	407-3	36-0	W	2 0	10-72	535-4	40-6	418-8	40-9	H
18 0	07-22	544-1	36-4	406-8	35-7	W	3 0	10-70	544-0	40-7	423-2	41-2	H
19 0	07-07	544-3	36-1	409-7	35-5	B	4 0	10-09	541-3	40-8	425-7	41-5	H
20 0	07-11	543-6	35-8	410-0	35-3	B	5 0	09-49	543-4	40-9	424-3	41-6	H
21 0	06-83	542-9	35-6	410-6	35-3	H	6 0	08-99	543-9	41-0	420-0	41-7	B
22 0	06-98	542-8	35-4	406-0	35-2	H	7 0	08-99	542-6	41-0	417-0	41-7	B
23 0	07-87	541-8	35-4	404-1	35-3	H	8 0	07-72	541-5	41-1	416-9	41-7	B
29 0 0	08-75	541-3	35-4	410-9	35-5	H	9 0	00-53	536-9	41-1	418-6	41-8	B
1 0	06-42	542-8	35-5	415-4	36-0	H	10 0	07-31	541-0	41-2	416-7	42-0	B
2 0	07-05	535-1	35-8	419-4	36-5	H	11 0	12-35	537-8	41-4	413-2	42-1	W
3 0	06-27	542-9	36-3	425-9	37-1	H	12 0	06-04	538-4	41-5	410-4	42-3	W

DECLINATION. Torsion removed,—Dec. 29d 0 $\frac{1}{2}$ h, 0°; 29d 19 $\frac{1}{2}$ h, -11°; 30d 9h, +7 $\frac{1}{2}$ *; 31d 0h, 0°, +12°*. Effect of + 10° of torsion = - 0'84.

BIFILAR. Observed 2^m after the Declination, $k=0\cdot000140$.

BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

Dec. 29d 1h—30d 7h. Magnet with short scale used in the declinometer. The declination at 29d 5h—6h, and 30d 8h—9h, has been deduced from observations of the unifilar.

* Dec. 30d 8h. The deflecting magnet vibrated in the declinometer box.

Dec. 30d 10h—11h. The declination magnet seems to have a tendency to vibrate through large arcs even after the arc has been made very small by checking.

* Dec. 31d 0h. Suspension thread wound up about $\frac{1}{2}$ of an inch; torsion again removed. The declination at 31d 0h deduced from an observation of the unifilar.

TERM-DAY OBSERVATIONS

OF

MAGNETOMETERS.

MAKERSTOUN OBSERVATORY,

1845.

Göttingen Mean Time of Declination Observation.	JANUARY 22, 23.											
	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.									
Min.	°	/	Sc. Div.	Mie. Div.	°	/	Sc. Div.	Mie. Div.	°	/	Sc. Div.	Mie. Div.
			10 ^h .			14 ^h .			18 ^h .			22 ^h .
0	25	14.77	536.0	604.9	25	12.90	535.6	580.3	25	12.72	539.7	578.2
5		14.67	533.9	607.3		11.98	536.5	579.3		12.13	540.9	578.0
10		14.71	536.5	604.9		11.54	536.6	,		12.45	540.4	577.8
15		13.88	538.4	604.2		11.64	536.1	579.8		12.40	541.3	576.2
20		13.79	538.5	604.5		11.00	534.8	,		12.58	540.9	576.4
25		14.10	539.6	604.2		10.81	535.6	581.2		12.56	539.5	576.3
30		14.37	540.0	603.9		11.39	535.3	581.3		12.72	539.1	576.6
35		14.37	537.5	605.1		10.92	535.1	582.3		12.63	538.0	575.7
40		14.44	536.0	604.8		10.33	533.9	582.1		12.46	538.7	575.8
45		14.50	535.0	605.8		10.03	532.8	582.8		13.07	538.7	575.7
50		13.86	536.4	604.6		10.51	532.8	582.1		14.03	538.6	,
55		13.52	538.6	603.6		10.85	531.8	,		14.75	539.5	575.9
			11 ^h .			15 ^h .			19 ^h .			23 ^h .
0	25	13.84	539.3	602.9	25	11.03	532.8	583.3	25	15.04	540.5	575.8
5		14.21	539.0	603.1		10.78	532.8	,		15.20	541.2	,
10		14.10	541.3	600.5		10.72	533.1	583.2		15.04	542.2	573.4
15		15.02	541.4	601.4		10.65	533.8	584.0		15.17	542.3	573.2
20		15.22	540.9	601.8		11.03	534.3	,		15.04	542.0	571.2
25		15.74	540.6	598.4		11.19	533.9	583.8		14.46	542.0	,
30		07.65	548.5	590.0		11.21	534.0	,		14.20	542.1	570.2
35		01.07	564.3	582.3		11.61	533.3	584.3		13.72	543.1	,
40		01.07	572.9	578.9		10.87	532.6	584.5		13.61	543.4	570.0
45		03.57	574.6	577.3		10.94	532.5	,		13.47	543.1	,
50		06.09	577.0	574.3		11.30	531.6	586.4		13.16	543.9	570.0
55		10.81	571.1	573.7		11.68	532.0	,		13.61	544.1	,
			12 ^h .			16 ^h .			20 ^h .			0 ^h .
0	25	14.18	558.4	573.8	25	11.69	533.6	586.0	25	13.32	543.9	571.1
5		14.80	554.2	571.8		12.11	534.1	585.1		13.56	544.3	574.5
10		17.98	546.4	573.0		11.37	535.1	,		13.29	545.6	576.9
15		20.72	534.6	576.3		11.55	535.4	584.4		13.10	544.7	578.5
20		22.03	524.9	578.6		11.61	533.9	584.7		13.84	544.5	578.0
25		21.46	518.5	580.8		10.94	534.7	583.9		14.21	546.0	576.5
30		17.73	519.3	580.0		11.27	535.8	,		14.46	546.2	574.6
35		14.44	524.8	578.8		11.48	533.9	584.2		14.46	545.3	573.1
40		12.46	530.0	578.2		11.10	535.3	583.1		14.53	546.4	571.0
45		11.64	533.2	578.4		10.94	536.3	,		14.70	546.3	570.4
50		12.16	535.4	578.5		10.63	535.4	581.8		14.89	544.8	569.4
55		12.70	533.4	580.5		10.30	536.7	581.5		13.79	548.6	568.7
			13 ^h .			17 ^h .			21 ^h .			1 ^h .
0	25	12.29	532.6	579.9	25	11.37	537.5	583.3	25	14.68	546.4	569.0
5		11.35	533.5	579.8		11.84	537.7	585.6		14.53	544.8	,
10		11.05	535.4	580.1		12.28	537.7	585.8		14.65	544.5	570.6
15		11.30	536.5	579.4		12.43	538.2	585.5		14.30	544.7	570.6
20		11.88	536.7	579.5		12.62	539.9	584.3		15.01	546.8	569.8
25		12.45	537.3	580.6		13.14	539.1	584.2		15.24	548.7	567.9
30		13.25	537.9	580.5		12.75	538.0	583.3		16.05	550.1	566.9
35		13.61	537.9	579.5		12.35	539.0	583.1		16.82	549.1	567.2
40		13.76	537.6	579.5		12.75	539.6	581.6		16.82	548.2	566.9
45		13.91	537.6	580.2		13.00	539.6	581.4		17.06	545.8	567.3
50		13.69	538.6	578.9		12.72	539.8	580.9		17.09	545.3	568.0
55		13.70	536.6	578.9		540.9	579.5		16.70	543.5	569.1

BIFILAR. Observed 2^m after the Declination, $k=0.000140$.

BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

When double commas (,,) occur in the column for the balance magnetometer, the needle was examined, and no change from the previous position being appreciable, the micrometers were not altered.

Jan 22d 1^h 25m. Declination magnet commenced moving eastwards. 11^h 39m. Bifilar reading, 569.0. 11^h 44m. Bifilar reading, 574.0.

Göttingen Mean Time of Declination Observation.	JANUARY 22, 23.						FEBRUARY 21, 22.																						
	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.																										
	Min.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.	Mic. Div.																
0	25	19.75	538.4	591.9	25	16.18	539.3	605.4	25	14.53	537.0	554.1	25	13.81	534.6	508.7													
5	19.31	537.2	594.1	16.23	539.7	604.1	13.36	536.5	553.0	13.34	533.6	510.2	10	20.27	536.5	596.3	15.94	541.0	604.1	12.13	535.4	552.6	12.83	534.2	515.5				
10	20.99	539.0	598.4	15.88	541.0	601.0	11.42	534.3	553.1	12.35	533.5	516.8	15	20.77	534.4	601.1	15.29	540.1	600.1	10.58	532.2	552.4	12.23	534.2	518.8				
20	20.52	535.0	603.7	15.76	539.8	599.2	09.39	533.1	552.1	11.95	534.7	519.9	25	20.27	537.6	605.5	15.74	538.9	599.3	08.45	532.3	552.8	11.81	534.9	522.5				
30	19.82	532.5	608.5	15.59	539.2	598.0	07.94	533.5	552.8	12.01	534.3	525.4	35	17.40	532.5	608.6	15.38	539.0	596.2	07.37	534.4	552.5	12.40	532.8	527.1				
40	17.33	534.3	610.4	15.09	539.3	595.7	06.97	535.4	551.9	12.02	533.6	528.4	45	17.04	529.2	614.0	14.78	539.7	595.7	06.76	536.8	550.5	12.28	534.2	531.4				
50	17.10	525.4	616.8	14.60	540.2	599.2	07.31	538.6	549.3	12.89	533.4	531.4	55	17.10	525.4	616.8	14.60	540.2	599.2	07.31	538.6	549.3	12.89	533.4	531.4				
0	25	17.12	525.2	616.6	25	14.50	540.4	594.1	25	08.11	540.6	548.9	25	12.28	533.3	533.4	5	18.07	526.8	615.3	14.28	540.2	594.1	09.05	537.2	547.8	11.91	533.9	535.9
10	18.90	527.5	615.1	14.10	540.1	592.6	08.61	538.6	546.5	11.69	534.2	537.4	15	19.78	524.8	615.7	13.96	540.6	591.1	09.19	540.1	544.1	11.41	534.7	537.4				
20	20.85	525.3	614.5	13.79	540.4	590.2	09.19	540.9	542.8	11.07	535.5	536.8	25	21.57	525.2	614.3	14.01	539.6	590.2	10.03	537.2	542.4	11.54	535.3	538.4				
30	21.07	526.6	608.8	13.83	538.4	599.6	09.12	537.6	541.4	11.52	533.9	539.8	35	20.77	528.6	608.2	13.99	539.7	590.6	09.60	534.9	541.6	11.03	534.2	540.8				
40	19.61	532.4	609.4	13.93	540.0	589.7	09.76	532.8	541.2	10.81	534.1	540.6	45	19.04	535.1	611.9	14.10	542.2	599.7	09.89	531.9	540.9	10.28	534.5	540.6				
50	18.84	534.8	610.4	14.67	538.7	592.8	09.80	533.0	540.7	10.50	534.3	540.5	55	18.63	537.1	610.6	14.67	537.6	593.7	10.14	531.0	540.9	10.74	534.0	540.5				
0	25	18.68	538.2	611.1	25	14.77	535.8	593.9	25	08.82	527.3	540.5	25	10.68	533.7	533.7	5	18.60	541.9	613.4	14.58	535.1	597.1	07.60	527.1	541.1	11.00	532.8	541.7
10	19.10	541.5	615.6	14.57	534.8	599.6	07.74	525.4	541.8	11.41	534.6	540.0	15	19.51	541.4	617.0	14.73	533.8	599.6	09.05	528.0	540.7	11.64	533.3	541.1				
20	19.26	542.7	617.8	14.80	532.9	599.9	10.67	529.4	550.3	11.64	531.9	540.3	25	19.28	542.4	619.7	14.23	533.1	599.9	11.61	531.5	534.2	11.84	531.7	540.9				
30	19.78	540.9	622.4	14.33	533.1	603.3	13.83	531.0	532.1	12.16	530.9	541.4	35	19.14	536.9	623.7	13.76	532.8	603.3	15.79	533.0	528.5	11.93	530.1	542.8				
40	18.99	535.2	623.2	13.84	532.2	606.6	18.21	531.0	523.6	12.42	528.6	541.4	45	19.07	534.0	622.0	13.76	530.8	606.6	18.40	528.5	519.7	12.42	527.2	539.8				
50	19.14	532.9	620.0	12.87	529.1	610.1	18.81	528.2	516.9	12.18	527.1	540.3	55	18.45	536.2	618.2	12.08	525.1	597.1	17.51	530.4	512.7	12.02	526.8	542.1				
0	25	17.20	531.0	620.4	25	10.74	522.5	619.2	25	16.79	531.4	509.4	25	11.93	527.2	540.5	5	18.21	530.1	618.8	09.53	521.0	625.8	15.83	531.6	503.2	12.29	526.5	540.2
10	17.93	530.1	617.1	09.08	520.5	630.9	14.94	533.0	502.9	12.70	525.2	542.5	15	17.49	532.6	616.7	08.36	521.6	633.4	14.91	534.7	501.3	12.46	526.7	541.8				
20	16.89	530.3	615.6	08.55	532.4	623.7	15.69	536.3	500.1	12.63	528.0	540.7	25	16.28	532.9	615.1	05.32	555.7	616.3	15.49	536.5	498.6	12.83	528.7	541.0				
30	16.75	534.1	613.6	13.02	553.7	611.7	15.85	536.8	506.5	13.03	529.7	540.7	35	16.38	535.7	611.7	17.83	545.2	608.8	15.38	537.8	499.6	13.41	530.6	539.6				
40	16.35	538.4	609.0	19.05	536.3	607.1	15.20	538.7	500.0	13.34	531.0	545.2	45	16.28	542.9	606.5	18.00	531.1	603.7	15.27	537.5	504.0	13.34	531.8	544.9				
50	15.86	542.4	606.1	13.79	534.6	598.5	15.38	535.1	504.0	12.98	533.3	544.9	55	15.99	540.0	606.0	13.12	534.1	597.1	14.60	534.3	506.5	12.92	534.4	543.6				

BIFILAR. Observed 2^m after the Declination. $k=0.000140$.

BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

When double commas (,,) occur in the column for the balance magnetometer, the needle was examined, and no change from the previous position being appreciable, the micrometers were not altered.

position being appreciable, the micrometers
Jan 23^d 10^h. Extra Observations made.

TERM-DAY OBSERVATIONS OF MAGNETOMETERS, 1845.

Göttingen Mean Time of Declination Observation.	FEBRUARY 21, 22.											
	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.									
Min.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.	Mic. Div.
18 ^{h.}												
0	25	13.22	533.9	543.6	25	16.59	518.4	548.2	25	21.44	533.3	564.9
5		12.65	536.2	542.8		15.14	519.5	"	20.65	533.0	564.9	16.80
10		13.32	535.0	"		15.24	520.9	548.4	20.30	535.3	564.8	16.95
15		13.19	533.6	544.4		15.61	521.4	"	20.79	536.8	565.6	16.80
20		12.62	535.4	543.4		15.51	525.8	549.0	20.11	535.1	566.8	16.45
25		12.72	535.8	541.7		16.41	525.7	"	19.41	536.2	566.7	16.48
30		12.04	537.2	541.6		15.85	527.0	548.9	19.37	536.0	566.5	16.32
35		11.98	536.9	541.5		16.35	529.1	"	19.37	538.5	566.6	16.59
40		12.82	536.2	542.0		16.15	527.3	"	19.14	538.7	567.4	16.41
45		13.29	533.9	541.7		15.17	528.1	548.8	19.49	540.0	568.5	15.71
50		13.66	536.1	540.7		15.59	526.9	"	20.43	540.6	571.0	15.32
55		14.13	534.0	540.4		16.57	528.1	"	19.76	535.6	573.3	15.47
19 ^{h.}												
0	25	13.47	535.1	540.8	25	16.35	529.5	549.4	25	19.19	532.5	573.6
5		14.03	535.1	539.3		16.55	530.0	"	18.32	531.6	574.2	16.12
10		14.26	535.8	538.1		16.06	530.4	"	18.41	533.1	574.9	15.94
15		14.87	533.7	538.3		16.62	531.9	549.7	19.28	537.7	575.7	15.88
20		14.40	534.7	537.7		17.00	529.3	"	20.13	539.4	577.2	15.44
25		14.03	535.3	536.7		15.94	527.3	"	20.50	538.1	579.8	15.09
30		13.23	536.5	536.1		14.53	526.6	549.9	20.09	535.2	580.7	15.12
35		12.83	535.8	536.6		15.88	532.6	"	19.59	535.4	580.4	14.98
40		12.25	537.1	536.0		17.06	527.9	"	19.51	535.2	581.2	14.53
45		12.65	534.5	538.1		16.68	533.0	"	19.10	536.1	582.9	14.30
50		12.42	535.8	538.3		18.03	533.1	551.4	18.94	537.7	583.1	14.17
55		12.45	537.8	537.5		18.70	531.5	"	19.62	541.4	583.4	14.20
20 ^{h.}												
0	25	12.62	537.6	537.9	25	18.60	527.3	552.2	25	19.29	536.9	586.3
5		11.72	537.0	537.6		18.00	530.6	"	19.93	540.3	586.7	13.99
10		11.51	537.9	537.5		17.42	529.1	551.8	20.67	540.5	589.9	13.91
15		11.77	538.0	538.2		16.38	529.8	"	21.56	536.6	592.9	14.03
20		12.06	533.4	539.5		16.35	528.1	"	20.40	527.7	597.8	14.43
25		11.25	533.7	540.0		16.18	530.8	553.7	19.91	526.4	600.2	13.86
30		11.41	536.6	539.3		16.68	531.2	"	19.37	523.9	602.0	13.56
35		12.67	535.6	540.2		16.93	531.5	"	17.74	527.2	"	14.01
40		12.11	534.6	540.1		16.87	531.1	554.6	16.82	519.1	606.7	13.94
45		11.95	537.1	539.2		17.22	532.8	555.9	16.65	513.8	608.4	13.63
50		13.07	536.4	539.0		17.34	534.1	"	14.67	514.0	613.7	13.43
55		13.16	534.5	539.1		17.83	533.2	"	11.61	520.4	614.1	13.02
21 ^{h.}												
0	25	13.52	524.4	537.0	25	17.20	532.2	556.6	25	09.98	527.5	617.0
5		13.76	533.4	536.3		17.44	528.5	557.6	08.41	529.3	619.5	12.72
10		14.77	530.0	537.4		16.93	531.7	558.6	08.58	535.3	621.0	12.02
15		14.64	527.9	539.3		18.60	529.7	559.5	09.26	541.2	623.5	12.40
20		11.44	526.9	540.6		17.87	529.0	559.3	10.47	540.4	625.8	09.35
25		15.85	525.2	541.2		17.83	529.9	559.5	11.07	543.9	622.6	06.54
30		15.62	524.9	541.5		17.91	530.1	559.7	11.81	540.8	624.3	05.79
35		14.91	525.7	540.3		18.34	533.2	559.5	12.46	540.4	622.3	02.99
40		14.91	525.2	"		19.59	536.6	560.4	14.18	540.9	619.2	02.15
45		15.05	523.3	543.9		20.79	538.2	561.9	15.91	538.3	616.4	03.75
50		16.32	521.0	544.4		22.15	538.1	562.8	16.33	535.6	611.0	04.64
55		16.35	518.7	"		22.11	537.4	563.8	15.88	533.7	610.3	05.52

BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

When double commas (,,) occur in the column for the balance magnetometer, the needle was examined, and no change from the previous position being appreciable, the micrometers were not altered.

Göttingen Mean Time of Declination Observation.	MARCH 19, 20.											
	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.									
	Min.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.
10 ^h .												
0	25	06.51	527.7	570.1	25	03.21	535.5	467.5	25	06.91	529.4	474.9
5		08.56	521.5	573.1		01.93	532.8	"		08.26	528.0	476.6
10		08.50	522.0	573.0		00.85	529.9	464.8		07.60	530.2	477.0
15		09.10	530.7	570.6		00.77	524.9	465.6		07.85	530.1	480.5
20		10.56	534.4	567.1		25	00.31	522.4		08.92	531.7	482.1
25		11.05	535.1	565.2		24	59.44	519.9		08.32	535.2	482.9
30		11.71	535.1	563.9		25	00.20	518.5		10.63	534.9	484.5
35		12.78	537.8	560.2		01.54	517.6	467.0		10.36	536.8	482.6
40		14.40	541.4	553.1		04.39	516.2	470.3		09.93	538.3	482.6
45		15.59	538.6	546.8		07.34	513.4	"		10.67	538.3	484.6
50		15.86	538.9	541.7		09.35	510.5	469.8		11.51	537.4	485.5
55		17.71	540.8	537.9		11.99	511.1	"		11.62	536.4	486.5
11 ^h .												
0	25	21.46	536.4	533.2	25	13.77	515.0	468.7	25	12.26	537.4	485.6
5		21.27	533.6	527.0		14.24	515.0	465.3		11.42	540.1	"
10		19.96	528.6	520.1		14.51	519.6	459.1		10.09	540.2	484.9
15		16.41	529.6	515.8		14.30	525.3	458.5		10.01	538.4	486.2
20		13.86	532.6	514.1		14.33	528.3	457.1		09.19	537.3	489.5
25		13.32	534.2	513.3		13.91	532.4	456.0		09.08	537.4	491.0
30		12.55	535.6	513.6		13.97	534.0	453.4		09.89	536.2	493.6
35		11.17	537.4	511.5		14.06	535.6	449.6		10.23	535.7	496.0
40		10.72	538.6	510.1		13.46	535.7	"		10.18	535.7	496.7
45		10.33	542.8	509.0		11.91	535.8	447.6		10.34	534.8	499.2
50		11.37	538.2	508.9		10.23	537.5	446.1		10.74	533.0	502.3
55		11.15	533.0	506.9		08.73	536.7	"		09.89	533.3	502.5
12 ^h .												
0	25	09.69	530.0	506.3	25	07.34	535.5	447.4	25	09.46	533.9	503.1
5		08.11	531.3	505.7		06.76	536.5	451.5		09.20	534.1	506.4
10		07.32	534.1	504.5		06.64	535.1	454.0		08.82	533.5	507.6
15		06.81	538.9	504.1		05.76	536.2	458.1		08.43	533.4	508.2
20		08.77	537.8	502.6		05.38	537.5	"		08.55	534.2	510.7
25		09.96	535.5	498.5		05.25	538.8	458.9		08.85	532.5	512.8
30		10.27	532.2	496.9		05.27	538.0	"		08.92	531.4	513.8
35		10.06	529.1	491.4		04.84	537.1	461.0		08.68	531.8	516.7
40		09.12	527.5	489.3		04.61	537.0	463.0		08.82	531.0	517.5
45		09.73	524.5	487.4		04.15	537.0	"		08.46	531.2	519.0
50		10.06	523.1	484.7		04.24	536.8	464.8		08.92	533.6	"
55		11.10	524.9	484.1		04.19	536.8	466.6		09.49	531.6	520.2
13 ^h .												
0	25	10.60	527.6	481.1	25	04.95	534.4	469.1	25	09.39	532.0	519.9
5		09.79	528.4	478.4		05.08	533.2	467.2		09.49	531.7	520.5
10		09.86	529.5	477.0		05.49	532.3	471.5		10.01	530.9	521.2
15		09.54	532.4	476.8		06.61	531.6	472.6		10.09	531.1	521.4
20		09.29	538.3	"		07.78	530.9	475.8		10.27	527.7	521.7
25		10.20	537.1	476.0		08.72	531.6	475.9		09.10	529.0	521.7
30		09.33	539.6	475.2		09.32	532.4	476.4		08.88	528.4	521.7
35		08.26	542.0	475.2		09.54	533.6	475.9		08.85	530.6	"
40		07.20	543.3	472.9		10.09	530.8	"		09.79	530.8	522.5
45		05.63	540.4	"		09.77	530.4	473.8		10.98	531.1	523.1
50		04.79	540.1	470.7		08.92	526.6	472.9		12.46	528.1	524.1
55		03.58	538.3	"		07.31	528.8	"		11.66	526.1	523.5
17 ^h .												
0	25	21.23	525.9	519.9	25	17.94	524.6	503.1	25	17.94	524.6	538.1
5		18.37	528.2	506.4		18.70	527.7	507.6		18.70	527.7	536.8
10		19.37	528.4	513.8		19.44	526.9	512.8		19.44	526.9	536.3
15		20.02	531.7	513.8		19.78	529.2	512.8		19.78	529.2	534.5
20		21.23	531.5	513.8		20.91	527.2	513.8		20.91	527.2	534.3
25		21.43	531.2	513.0		21.41	531.4	519.0		21.41	531.4	533.8
30		22.10	531.1	513.6		22.44	528.1	520.2		22.44	528.1	532.4
35		21.66	528.1	520.2		21.66	528.1	520.2		21.66	528.1	532.4
21 ^h .												
0	25	21.23	525.9	519.9	25	21.23	525.9	519.9	25	21.23	525.9	532.6
5		21.10	527.1	520.5		21.10	527.1	520.5		21.10	527.1	531.8
10		20.85	526.8	521.2		20.85	526.8	521.2		20.85	526.8	533.4
15		21.17	526.1	521.4		21.17	526.1	521.4		21.17	526.1	534.6
20		20.72	527.2	521.7		20.72	527.2	521.7		20.72	527.2	533.9
25		22.91	546.5	521.7		22.91	546.5	521.7		22.91	546.5	530.5
30		22.64	539.5	530.6		22.64	539.5	530.6		22.64	539.5	531.4
35		22.92	539.8	522.5		22.92	539.8	522.5		22.92	539.8	530.9
40		22.67	534.9	523.1		22.67	534.9	523.1		22.67	534.9	531.8
45		22.27	532.9	524.1		22.27	532.9	524.1		22.27	532.9	531.6
50		22.24	534.1	523.5		22.24	534.1	523.5		22.24	534.1	531.8
1 ^h .												
0	25	21.23	525.9	519.9	25	21.23	525.9	519.9	25	21.23	525.9	532.6
5		21.10	527.1	520.5		21.10	527.1	520.5		21.10	527.1	531.8
10		20.85	526.8	521.2		20.85	526.8	521.2		20.85	526.8	533.4
15		21.17	526.1	521.4		21.17	526.1	521.4		21.17	526.1	534.6
20		20.72	527.2	521.7		20.72	527.2	521.7		20.72	527.2	533.9
25		22.91	546.5	521.7		22.91	546.5	521.7		22.91	546.5	530.5
30		22.64	539.5	530.6		22.64	539.5	530.6		22.64	539.5	531.4
35		22.92	539.8	522.5		22.92	539.8	522.5		22.92	539.8	530.9
40		22.67	534.9	523.1		22.67	534.9	523.1		22.67	534.9	531.8
45		22.27	532.9	524.1		22.27	532.9	524.1		22.27	532.9	531.6
50		22.24	534.1	523.5		22.24	534.1	523.5		22.24	534.1	531.8

BIFILAR. Observed 2^m after the Declination, $k=0.000140$.
 The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

BALANCE. Observed 3^m after the Declination, $k=0.000010$.

When double commas (,,) occur in the column for the balance magnetometer, the needle was examined, and no change from the previous position being appreciable, the micrometers were not altered.
 Mar. 19^d 9^h—10^h. Extra Observations made.

TERM-DAY OBSERVATIONS OF MAGNETOMETERS, 1845.

Göttingen Mean Time of Declination Observation.	MARCH 19, 20.						APRIL 23, 24.					
	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.									
Min.	°	/	Sc. Div.	Mic. Div.	°	/	Sc. Div.	Mic. Div.	°	/	Sc. Div.	Mic. Div.
			2 ^h .			6 ^h .			10 ^h .			14 ^h .
0	25	22.33	535.3	531.4	25	06.46	545.5	783.5	25	09.47	544.5	540.8
5		22.13	537.1	530.6		04.69	554.9	818.1		09.42	543.2	541.3
10		21.90	538.7	529.9		06.84	539.6	828.0		09.35	543.5	541.2
15		21.97	537.0	532.0		10.53	530.7	824.6		09.73	549.6	538.5
20		21.48	536.4	532.6		10.48	528.9	808.4		10.56	551.5	535.1
25		21.26	538.6	533.0		10.36	526.3	789.6		09.89	550.2	532.2
30		21.32	538.9	532.1		10.23	528.8	766.7		08.12	543.3	"
35		21.09	539.8	533.0		13.47	533.5	748.4		07.00	539.2	534.9
40		20.89	542.4	531.8		17.06	528.9	740.0		06.98	539.1	537.1
45		20.89	543.2	532.1		17.06	525.2	730.5		07.55	538.9	538.6
50		20.56	541.5	532.3		17.12	527.0	723.3		08.26	542.6	"
55		20.02	543.7	531.9		15.99	530.9	710.1		09.13	547.2	534.0
			3 ^h .			7 ^h .			11 ^h .			15 ^h .
0	25	20.36	545.0	531.4	25	15.51	533.7	699.0	25	10.13	546.5	533.5
5		20.00	546.0	530.8		15.31	530.4	699.2		09.82	542.7	"
10		20.11	547.2	530.9		14.46	534.5	679.2		09.87	541.5	535.9
15		19.79	545.7	532.1		15.12	532.7	669.1		09.33	542.7	"
20		19.64	543.1	534.0		15.58	531.9	658.9		09.47	543.4	533.8
25		19.08	545.4	533.5		15.49	532.4	648.9		09.29	542.8	"
30		19.91	546.5	535.5		15.25	536.7	639.7		09.76	541.2	534.1
35		19.39	550.4	537.6		14.91	541.9	630.5		10.30	537.4	536.5
40		19.66	537.8	542.8		15.45	541.6	625.6		10.23	537.6	"
45		18.10	543.2	541.8		14.98	538.3	623.4		10.31	542.4	533.2
50		19.07	551.4	542.3		14.30	539.1	620.1		11.10	541.4	531.9
55		18.60	552.5	545.0		14.43	535.2	619.3		10.47	541.8	529.6
			4 ^h .			8 ^h .			12 ^h .			16 ^h .
0	25	18.41	547.5	545.9	25	14.55	535.1	616.2	25	10.97	544.4	528.9
5		18.03	537.4	550.0		14.73	532.4	616.4		10.43	542.3	"
10		17.63	529.4	550.5		15.01	530.6	615.0		10.33	541.9	"
15		17.20	538.1	548.3		13.86	534.1	619.2		10.13	541.7	528.9
20		17.29	554.2	545.9		13.77	534.6	607.6		10.09	540.5	"
25		18.03	567.1	547.6		13.69	535.0	603.3		10.16	540.4	"
30		17.63	562.4	553.0		13.36	535.2	601.0		09.93	540.1	530.3
35		17.26	555.9	557.0		13.50	536.1	599.3		09.15	538.4	"
40		16.86	557.3	559.5		13.77	536.0	596.4		10.04	539.6	532.1
45		16.99	559.7	562.1		13.72	537.1	592.5		10.36	541.3	"
50		16.59	560.6	566.1		13.72	537.1	590.7		10.60	542.4	"
55		17.22	557.6	571.8		13.29	536.7	589.3		10.90	542.6	531.0
			5 ^h .			9 ^h .			13 ^h .			17 ^h .
0	25	17.78	562.6	575.6	25	13.14	536.7	586.7	25	10.56	540.5	531.9
5		18.87	564.5	583.6		12.98	535.7	584.4		10.88	540.9	531.8
10		20.20	554.7	595.2		12.92	535.7	583.6		10.77	539.7	"
15		20.20	543.8	610.3		13.25	536.3	582.0		10.45	539.4	531.3
20		20.85	549.1	627.8		13.39	535.8	580.7		10.83	539.5	532.5
25		18.55	548.1	648.9		13.43	535.8	578.8		10.88	540.9	"
30		16.59	535.9	670.1		13.52	535.4	578.0		11.17	539.8	532.6
35		13.34	532.1	674.9		13.47	535.8	577.4		11.32	540.8	532.4
40		12.45	544.9	646.7		13.52	536.3	575.9		11.17	541.8	530.2
45		12.42	546.0	652.1		13.52	536.0	573.7		11.25	543.7	527.4
50		11.91	542.0	674.9		13.52	535.6	572.8		11.74	545.4	526.7
55		10.63	541.0	717.7		13.66	536.0	572.2		11.19	544.8	"

BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

When double commas (,,) occur in the column for the balance magnetometer, the needle was examined, and no change from the previous position being appreciable, the micrometers were not altered.

March 20^d 15^h. Extra Observations made.

Göttingen Mean Time of Declination Observation.	APRIL 23, 24.											
	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.									
Min.	°	/	Sc. Div.	Mic. Div.	°	/	Sc. Div.	Mic. Div.	°	/	Sc. Div.	Mic. Div.
18 ^{h.}												
0	25	07-13	536-5	534-3	25	08-95	522-7	542-8	25	22-24	537-4	521-5
5		07-11	536-1	534-5		09-00	521-4	543-1		22-47	538-2	522-0
10		07-29	536-5	534-3		08-66	522-7	542-1		22-78	543-2	521-9
15		07-81	536-4	534-8		08-59	523-4	541-4		23-14	540-7	522-9
20		07-81	535-8	535-0		08-79	523-2	541-9		23-38	541-6	524-6
25		07-72	535-1	535-6		08-90	523-3	541-5		22-91	538-4	526-1
30		08-05	534-3	"		09-26	522-1	541-9		23-54	539-9	527-9
35		08-18	534-4	536-4		09-26	521-1	542-1		23-48	535-7	530-4
40		08-48	535-6	536-7		09-08	521-4	541-0		22-75	529-4	532-6
45		08-32	535-1	536-2		09-47	523-3	539-5		22-40	534-6	532-6
50		08-38	535-6	536-0		10-27	524-2	536-7		22-85	535-0	533-0
55		08-65	536-0	"		10-70	524-2	536-6		23-27	526-7	536-8
19 ^{h.}												
0	25	08-56	535-6	537-0	25	11-34	523-4	537-1	25	21-19	528-4	537-2
5		08-26	535-5	538-0		11-64	523-2	536-9		21-53	538-3	535-0
10		08-28	535-7	537-6		11-88	522-2	536-5		22-44	543-1	532-4
15		07-71	535-6	537-7		12-33	521-5	536-4		22-00	546-0	532-2
20		08-16	535-5	538-8		12-38	520-8	536-2		22-37	549-4	531-9
25		08-18	536-0	538-5		12-65	521-8	535-7		21-93	548-3	531-6
30		08-72	535-6	540-1		12-93	522-1	534-7		22-27	555-7	530-8
35		08-55	535-0	540-0		13-39	522-3	534-7		23-19	558-2	530-8
40		08-18	535-4	539-9		13-59	522-6	533-3		22-33	563-1	530-3
45		08-28	534-9	539-9		13-88	523-1	532-7		22-40	571-5	529-8
50		08-14	535-1	"		14-17	524-4	531-7		23-31	578-6	529-3
55		08-14	533-9	539-6		14-65	524-8	530-9		22-50	568-6	532-2
20 ^{h.}												
0	25	07-81	534-1	539-6	25	14-91	523-7	530-6	25	22-11	565-5	535-1
5		07-49	533-3	539-3		14-98	523-6	"		22-18	563-9	537-5
10		06-97	533-0	"		15-54	523-3	530-7		21-91	562-1	540-3
15		06-93	530-6	541-1		15-83	522-8	531-1		21-51	563-7	540-9
20		07-34	529-5	541-8		16-05	522-7	531-0		21-95	563-0	542-0
25		07-82	530-6	541-2		16-25	522-9	530-6		21-68	556-8	546-4
30		08-34	530-9	541-9		16-75	522-5	530-5		20-79	553-3	548-9
35		08-61	530-2	542-6		16-86	522-4	529-7		21-04	552-2	550-2
40		09-32	529-7	"		17-26	522-5	528-2		20-76	553-6	550-2
45		09-35	530-2	541-3		17-46	522-6	528-3		20-82	552-7	551-7
50		09-46	530-3	541-0		17-71	523-7	526-8		20-38	549-7	553-9
55		09-60	530-4	539-9		18-00	524-8	526-0		19-69	545-6	555-4
21 ^{h.}												
0	25	09-69	530-6	540-0	25	18-30	525-1	525-9	25	19-31	547-1	556-2
5		10-16	529-9	540-0		18-70	523-8	526-5		18-77	545-2	556-9
10		09-76	529-1	539-9		18-70	525-2	525-8		19-61	551-2	555-5
15		09-66	528-0	540-1		19-02	528-1	525-3		10-82	552-4	557-0
20		09-56	527-3	540-4		19-51	529-2	524-6		20-03	555-9	556-2
25		09-35	527-7	540-7		19-96	532-9	522-4		19-98	561-9	555-1
30		09-33	525-7	541-5		20-56	535-6	521-6		20-25	563-3	556-6
35		08-82	526-4	540-3		20-97	535-5	521-4		19-64	562-0	559-3
40		09-00	526-1	541-0		21-44	536-5	520-3		19-64	566-1	562-0
45		08-93	525-1	540-7		21-70	536-7	520-4		19-51	561-9	564-5
50		08-86	523-9	541-8		22-20	538-6	520-6		19-21	561-7	567-9
55		08-88	523-3	542-2		22-13	537-8	521-1		19-24	561-5	570-7
1 ^{h.}												
0												
5 ^{h.}												
0	25	14-50	544-5	572-9								
5												
10												
15												
20												
25												
30												
35												
40												
45												
50												
55												
9 ^{h.}												
0	25	12-65	543-4	555-4								
5												
10												
15												
20												
25												
30												
35												
40												
45												
50												
55												

BIFILAR. Observed 2^m after the Declination, $k=0\cdot000140$.BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

When double commas (,,) occur in the column for the balance magnetometer, the needle was examined, and no change from the previous position being appreciable, the micrometers were not altered.

Göttingen Mean Time of Declination Observation.	MAY 30, 31.												
	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.										
Min.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.	Mic. Div.	
10 ^{h.}													
0	25	10-36	542-0	530-4	25	05-45	536-6	461-6	25	03-87	540-8	458-0	
5		09-82	540-8	530-3		04-59	538-7	"		03-65	542-6	458-9	
10		09-57	542-3	528-2		03-25	540-6	455-3		03-63	543-8	459-3	
15		09-22	541-5	527-7		01-45	541-8	452-3		03-50	544-1	460-8	
20		08-45	540-5	527-8		00-60	541-5	451-0		03-16	545-2	462-9	
25		08-25	538-2	529-2		00-33	539-9	"		03-47	544-6	464-4	
30		07-74	536-6	530-3		00-20	538-0	450-2		03-09	542-8	466-5	
35		07-81	535-6	529-8		00-42	534-9	"		02-87	542-8	470-6	
40		07-82	536-4	528-9		00-17	533-7	449-6		03-20	544-0	472-8	
45		08-06	536-1	527-7		00-77	533-7	449-7		03-50	543-2	475-5	
50		08-18	537-0	525-3		02-01	534-6	"		03-77	542-9	476-9	
55		07-99	535-0	523-6		02-60	534-8	"		04-10	542-1	478-5	
11 ^{h.}													
0	25	07-13	534-3	522-4	25	02-82	535-7	444-4	25	04-14	540-9	479-9	
5		06-64	533-8	522-0		03-09	535-6	442-8		04-31	540-4	479-6	
10		05-94	531-5	521-0		02-86	535-4	"		04-21	540-1	480-8	
15		05-33	532-6	518-9		02-82	534-4	441-5		04-64	539-6	482-4	
20		04-34	535-9	516-9		02-96	533-3	442-4		04-76	538-1	483-1	
25		02-42	532-7	514-5		03-27	533-0	445-0		04-78	536-3	484-2	
30		01-36	531-7	514-3		03-23	533-4	446-2		04-91	535-1	484-9	
35		01-11	532-7	513-0		03-37	534-2	445-6		04-53	533-2	485-6	
40		01-19	534-2	511-6		03-27	533-6	449-1		04-78	533-1	485-9	
45		01-61	535-0	510-9		03-43	533-7	451-9		04-91	529-1	486-8	
50		02-25	534-3	509-3		03-23	533-9	453-2		04-39	528-9	486-8	
55		02-91	533-9	508-5		03-37	534-1	455-3		04-59	526-3	487-7	
12 ^{h.}													
		16 ^{h.}											
0	25	03-70	530-8	508-4	25	03-81	534-2	455-0	25	04-91	524-6	488-5	
5		04-44	530-8	507-0		04-07	534-2	458-4		05-29	522-9	489-2	
10		05-09	532-0	504-7		04-37	535-2	459-1		05-45	521-8	490-4	
15		05-67	532-5	501-9		05-02	535-8	460-4		07-37	522-6	491-2	
20		05-76	531-4	499-8		05-49	535-9	461-5		07-07	518-2	491-6	
25		05-76	530-5	498-2		06-06	536-8	468-6		06-86	515-5	492-1	
30		05-32	530-4	496-7		06-16	537-3	464-8		06-79	514-3	492-6	
35		05-05	531-3	494-6		07-07	535-0	466-6		06-79	513-4	491-9	
40		04-71	533-4	493-5		07-13	534-5	468-7		08-06	513-4	491-3	
45		05-00	534-1	492-4		07-47	533-9	468-9		08-99	514-6	491-6	
50		05-18	533-3	491-7		09-27	531-5	469-9		10-20	514-9	491-1	
55		05-45	532-7	491-6		10-13	530-3	472-9		11-74	515-8	491-6	
13 ^{h.}													
		17 ^{h.}											
0	25	05-27	533-0	490-2	25	10-53	530-3	472-8	25	13-57	516-5	491-1	
5		05-29	533-3	488-8		10-95	532-3	472-1		14-65	516-6	489-5	
10		05-52	533-9	486-1		11-69	533-7	470-8		14-46	516-4	486-7	
15		05-50	533-1	483-0		11-44	535-5	467-5		14-92	518-7	484-2	
20		05-99	532-6	"		11-21	536-8	465-1		14-57	518-3	482-4	
25		06-93	532-9	482-4		10-80	538-2	461-8		14-85	523-0	479-2	
30		07-49	532-3	479-1		09-89	540-4	457-9		15-67	525-0	477-6	
35		07-91	532-8	477-0		08-79	540-8	455-0		14-31	521-3	477-4	
40		07-25	532-5	474-0		07-38	542-0	453-3		13-88	521-9	476-5	
45		531-6	469-5		06-59	540-9	453-0		14-13	525-2	475-5	
50		06-50	531-9	467-9		05-25	541-4	454-5		14-26	526-5	475-4	
55		06-26	534-1	466-1		04-34	511-2	"		15-32	525-3	476-6	
21 ^{h.}													
		0 ^{h.}											

BIFILAR. Observed 2^m after the Declination, $k=0\cdot000140$.BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

When double commas (,,) occur in the column for the balance magnetometer, the needle was examined, and no change from the previous position being appreciable, the micrometers were not altered.

TERM-DAY OBSERVATIONS OF MAGNETOMETERS, 1845.

77

BIEBLAR. Observed 2^m after the Declination, $k=0.000140$.

BALANCE. Observed 3^m after the Declination, $k=0\ 000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

When double commas (,,) occur in the column for the balance magnetometer, the needle was examined, and no change from the previous position being appreciable, the micrometers were not altered.

Göttingen Mean time of Declination Observation.		JUNE 18, 19.														
		DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.												
Min.	Sec. Div.	Mic. Div.	Sec. Div.	Mic. Div.	Sec. Div.	Mic. Div.	Sec. Div.	Mic. Div.	Sec. Div.	Mic. Div.	Sec. Div.	Mic. Div.	Sec. Div.	Mic. Div.		
			18 ^{h.}			22 ^{h.}			2 ^{h.}			6 ^{h.}				
0	25	05-89	537-9	494-9	25	08-79	526-0	488-8	25	19-05	543-0	468-6	25	11-35	548-5	493-2
5		06-41	537-5	494-2		09-03	525-5	488-0		19-07	543-2	468-7		11-03	548-9	492-8
10		04-91	537-8	495-6		09-49	524-2	488-1		19-24	541-1	469-3		10-95	549-1	492-2
15		05-42	537-8	495-8		09-54	523-3	487-2		18-95	538-4	471-4		10-83	549-2	492-3
20		05-11	537-8	496-5		10-20	522-7	486-5		18-87	541-1	472-0		10-72	550-6	492-5
25		05-45	537-1	496-5		10-23	522-9	485-6		19-07	545-8	471-2		10-56	549-2	492-5
30		05-76	538-0	496-7		10-30	523-1	485-6		19-08	546-5	471-3		10-41	549-5	492-1
35		05-72	536-8	497-0		10-67	523-1	485-1		19-04	545-8	472-2		10-43	548-7	492-9
40		05-87	536-8	496-6		11-10	523-0	485-5		19-07	545-9	472-0		10-38	548-6	493-6
45		05-92	536-9	499-6		11-32	522-5	484-9		18-94	545-9	472-5		10-45	548-3	493-6
50		05-58	536-5	500-1		11-72	521-9	485-5		18-75	546-1	472-5		10-45	548-8	494-7
55		05-35	537-1	498-7		11-93	523-1	485-5		18-68	545-6	473-3		10-56	549-7	495-2
			19 ^{h.}			23 ^{h.}			3 ^{h.}			7 ^{h.}				
0	25	04-89	536-2	497-0	25	12-33	524-1	486-5	25	18-52	543-0	473-7	25	10-65	549-5	501-0
5		04-24	534-7	496-2		12-67	525-1	487-1		18-21	542-3	473-9		10-25	546-8	498-2
10		04-08	535-4	495-6		12-96	526-1	486-7		17-93	543-4	474-6		10-41	547-0	494-6
15		04-41	536-4	496-2		13-64	525-9	486-9		17-70	542-5	475-3		10-30	547-7	491-6
20		04-44	536-4	495-0		14-03	525-2	487-5		17-42	537-9	476-5		10-54	547-7	488-0
25		05-30	535-7	495-4		14-57	524-9	486-9		17-17	541-4	477-1		10-65	548-4	484-7
30		05-08	534-3	495-1		14-55	526-4	485-3		17-15	538-9	478-3		10-77	549-0	489-5
35		04-78	533-9	495-3		15-01	527-2	484-0		17-04	544-3	480-1		11-00	549-7	"
40		04-10	534-3	495-2		15-44	527-3	483-1		16-82	542-4	481-7		11-10	549-4	491-3
45		05-05	535-2	494-3		15-64	528-2	482-2		16-70	542-0	482-0		11-10	549-9	488-6
50		05-18	534-3	494-7		15-99	528-4	480-8		16-55	543-0	482-4		11-30	550-1	488-9
55		04-81	534-2	494-7		16-46	529-1	479-9		16-55	544-2	482-8		11-30	550-7	489-2
			20 ^{h.}			0 ^{h.}			4 ^{h.}			8 ^{h.}				
0	25	05-32	533-7	495-4	25	16-75	529-7	478-7	25	16-33	544-5	483-3	25	11-17	549-0	489-6
5		05-55	532-9	495-6		17-06	530-5	478-2		16-19	545-0	484-3		11-30	550-8	"
10		05-70	531-4	494-9		17-29	531-0	477-9		15-96	546-6	484-9		11-00	550-4	488-3
15		04-68	531-9	495-1		17-39	531-6	477-3		15-89	546-9	485-9		11-03	549-5	489-8
20		05-53	532-9	494-2		17-61	532-8	476-4		15-74	546-6	486-4		10-97	549-3	"
25		05-69	532-5	494-6		17-49	534-5	475-0		15-76	547-2	487-2		10-75	549-4	490-3
30		05-62	531-7	495-0		17-46	535-6	474-1		15-71	546-9	488-3		10-75	548-6	494-5
35		06-81	530-0	494-9		17-40	535-8	472-9		15-49	547-0	489-4		10-60	547-2	496-1
40		06-21	530-2	494-8		17-37	536-5	473-0		15-36	547-4	490-3		10-67	546-8	496-6
45		06-63	529-9	494-8		17-47	536-4	472-0		15-22	546-4	490-9		10-77	547-3	496-6
50		06-46	529-0	494-9		17-44	537-7	471-8		14-80	546-2	491-5		10-70	547-0	496-3
55		07-08	528-3	493-7		17-56	538-3	471-4		14-55	546-5	492-4		10-80	546-5	495-6
			21 ^{h.}			1 ^{h.}			5 ^{h.}			9 ^{h.}				
0	25	06-37	528-0	491-9	25	17-61	537-8	471-6	25	14-55	547-8	492-6	25	10-63	546-9	494-1
5		06-70	529-5	491-5		17-56	539-9	471-1		14-17	547-9	493-1		10-90	547-5	492-9
10		07-20	529-0	491-1		18-03	540-2	471-4		13-90	547-6	493-6		10-68	547-1	492-1
15		05-62	529-7	489-0		18-00	539-2	472-3		13-63	547-4	493-6		10-63	547-1	490-9
20		07-27	527-1	493-1		18-01	539-1	472-5		13-36	548-1	493-7		10-75	547-1	489-3
25		07-45	526-0	494-2		18-10	541-4	472-4		13-20	549-2	493-6		10-60	546-9	489-0
30		07-87	525-3	494-6		18-25	542-1	472-2		13-05	548-9	493-7		10-43	546-4	488-8
35		06-77	526-0	493-2		18-47	543-1	471-6		12-60	546-7	493-7		10-61	546-1	488-8
40		06-59	525-5	491-5		18-79	541-5	471-3		12-33	546-7	493-8		10-40	545-9	488-6
45		07-25	525-5	"		18-77	542-2	469-8		11-99	547-1	494-6		10-47	545-8	488-3
50		07-29	526-8	489-2		18-81	541-2	469-5		11-74	547-2	493-6		10-74	545-9	488-5
55		08-11	526-4	489-1		18-90	541-4	468-7		11-51	546-8	493-4		10-54	545-7	487-8

BIFILAR. Observed 2^m after the Declination, $k=0.000140$.

BALANCE. Observed 3^m after the Declination, $k=0.000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

When double commas (,,) occur in the column for the balance magnetometer, the needle was examined, and no change from the previous position being appreciable, the micrometers were not altered.

Göttingen Mean Time of Declination Observation,	JULY 23, 24.											
	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.									
Min.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.	Mic. Div.
10 ^{h.}												
0	25	10.54	549.6	499.3	25	09.59	542.8	481.1	25	11.48	536.6	468.4
5		10.33	548.2	499.1		08.92	543.0	481.1		11.41	536.4	467.3
10		09.96	549.0	498.5		08.70	545.7	480.6		11.37	536.5	464.8
15		10.63	549.5	498.5		09.69	543.1	481.7		11.27	537.2	464.3
20		09.66	550.0	498.0		09.37	542.9	481.5		12.38	537.6	464.2
25		09.54	549.7	498.4		09.15	543.9	481.2		12.31	539.1	463.7
30		09.47	549.6	497.8		09.19	543.3	481.5		12.89	539.2	462.7
35		09.46	548.9	497.7		09.47	542.6	481.5		12.98	539.3	461.7
40		09.54	549.5	497.8		09.39	542.4	481.5		12.51	539.8	461.1
45		09.60	549.2	497.2		09.39	543.0	481.5		11.71	541.7	460.3
50		09.64	549.5	496.2		10.74	542.6	481.5		10.87	543.0	460.0
55		09.87	549.6	495.7		10.94	543.9	480.1		11.00	540.9	460.1
11 ^{h.}												
0	25	09.76	550.8	493.7	25	10.58	545.0	481.2	25	10.47	539.8	461.7
5		09.91	550.9	492.3		10.47	544.0	481.0		09.64	538.4	462.5
10		10.00	549.9	492.1		09.84	544.3	481.0		08.63	538.1	463.5
15		10.18	548.9	491.4		10.03	543.7	481.3		08.11	535.9	465.0
20		09.79	547.6	490.8		09.73	546.1	479.5		07.27	537.7	466.4
25		09.42	547.8	490.1		09.80	546.3	481.3		06.36	539.6	466.3
30		09.51	549.0	489.0		09.96	545.9	482.8		06.77	539.8	470.4
35		09.15	549.5	488.1		10.01	546.5	482.7		07.44	538.2	470.7
40		09.37	549.4	487.5		10.16	546.5	482.8		06.44	538.7	471.4
45		09.53	549.6	486.5		09.59	547.5	481.0		06.12	539.8	471.0
50		09.46	548.7	485.3		09.89	546.5	481.0		05.92	541.7	472.0
55		09.49	549.0	485.0		10.54	545.6	480.9		07.08	538.2	474.2
12 ^{h.}												
0	25	09.84	549.0	485.0	25	11.91	541.8	478.6	25	05.18	540.1	473.4
5		10.04	548.5	484.5		12.27	540.2	477.8		05.38	540.4	474.2
10		09.80	547.9	483.6		12.04	540.6	476.7		05.62	540.3	475.0
15		10.40	548.1	483.2		12.75	543.1	474.6		05.62	539.6	475.3
20		10.53	548.3	481.6		13.47	543.4	472.0		05.72	538.4	476.1
25		10.50	549.8	479.6		12.35	545.1	468.6		05.38	538.2	475.8
30		09.93	549.3	477.6		10.98	546.9	468.5		05.15	537.9	476.3
35		09.53	548.7	477.3		10.97	546.1	464.8		05.05	537.3	475.8
40		08.85	548.1	476.5		09.59	547.2	464.6		04.97	538.4	476.1
45		08.41	548.2	476.2		09.17	545.2	464.4		05.52	535.3	476.5
50		08.06	547.5	476.7		08.01	545.2	464.1		04.59	536.1	476.3
55		07.82	547.9	476.6		08.14	544.7	465.8		04.37	537.0	476.1
13 ^{h.}												
0	25	08.18	547.1	477.0	25	09.69	545.0	467.1	25	04.51	537.0	476.0
5		08.18	546.6	479.2		10.63	542.0	469.5		04.64	536.5	477.4
10		08.18	546.3	478.2		09.82	541.2	471.8		04.78	535.5	477.3
15		08.65	546.2	478.6		10.70	541.0	473.1		04.73	534.4	477.7
20		09.32	544.9	478.7		11.77	538.4	474.2		04.28	536.3	477.1
25		09.15	544.7	479.6		12.02	535.6	474.3		04.75	536.0	477.5
30		09.42	545.2	479.7		11.57	535.1	474.4		05.20	536.2	478.6
35		09.62	545.3	481.1		10.83	535.0	474.0		05.43	533.8	478.6
40		09.60	543.9	480.8		10.97	535.7	474.0		05.50	534.5	478.6
45		09.33	544.4	480.2		11.25	536.1	473.8		05.83	534.1	479.1
50		09.71	545.8	480.8		11.27	536.3	471.9		06.14	533.0	478.8
55		09.76	544.5	480.8		11.17	537.0	470.2		06.10	533.1	477.9
14 ^{h.}												
0	25	13.32	530.8	473.9					25	13.32	530.8	473.9
5										13.50	528.5	476.5
10										13.84	528.5	477.4
15										14.03	531.2	478.2
20										14.17	533.5	478.7
25										14.20	535.4	480.0
30										14.73	535.8	480.5
35										14.71	535.6	482.3
40										14.77	532.9	484.0
45										14.46	530.3	486.2
50										14.41	528.5	487.8
55										14.30	526.8	488.3

BIFILAR. Observed 2^m after the Declination, $k = 0.000140$.BALANCE. Observed 3^m after the Declination, $k = 0.000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

TERM-DAY OBSERVATIONS OF MAGNETOMETERS, 1845.

Göttingen Mean Time of Declination Observation.	JULY 23, 24.						AUGUST 29, 30.									
	DECLINA- TION.		BIFILAR Corrected.	BALANCE Corrected.	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.			
	Min.	°	Sc. Div.	Mic. Div.	°	Sc. Div.	Mic. Div.	°	Sc. Div.	Mic. Div.	°	Sc. Div.	Mic. Div.			
		2 ^h .			6 ^h .			10 ^h .			14 ^h .					
0	25	14.40	526.9	488.7	25	13.91	555.2	552.9	24	45.87	508.5	224.5	24	57.75	529.5	272.6
5		15.01	525.7	489.8		13.23	554.7	553.4		33.34	526.4	235.6		57.41	531.7	276.1
10		15.38	523.9	491.2		13.56	558.0	554.9		30.07	566.3	235.4		57.68	531.4	278.9
15		15.54	524.5	492.1		13.77	560.3	554.0		46.28	560.6	242.9		57.01	525.0	289.0
20		15.74	529.2	490.7		13.90	561.9	552.7		58.70	551.3	264.2		54.93	522.8	298.0
25		16.21	530.7	490.6		14.33	561.4	554.8		04.34	538.5	305.1		54.38	522.6	304.5
30		16.43	532.6	489.8		14.57	559.7	555.1		02.45	531.0	326.0		54.55	523.2	313.6
35		17.02	535.1	489.1		14.04	562.7	555.5		59.24	531.4	334.2		56.38	520.1	314.2
40		16.43	536.1	487.7		13.66	560.3	555.6		55.94	541.3	344.4		56.82	517.5	321.2
45		16.55	539.5	487.5		13.46	562.7	554.1		56.07	549.8	345.9		57.08	520.0	321.7
50		16.32	539.9	488.0		13.10	558.8	556.7		59.01	546.7	347.4		59.51	515.1	328.4
55		16.50	540.3	488.5		12.15	558.4	555.8		03.11	535.0	350.5		02.12	513.4	334.8
		3 ^h .			7 ^h .			11 ^h .			15 ^h .					
0	25	16.53	542.5	488.4	25	11.55	559.1	556.8	25	00.99	538.7	348.7	25	08.45	511.0	328.2
5		16.53	543.7	488.5		12.01	556.1	557.2		00.51	535.4	346.5		05.90	515.0	322.5
10		16.52	542.2	490.2		11.91	557.6	554.8		08.87	536.6	342.2		05.47	517.8	319.5
15		16.08	542.9	490.7		12.35	560.8	553.3		01.54	539.4	341.1		04.64	515.6	321.0
20		16.87	544.7	492.2		13.67	558.4	553.2		02.73	537.2	341.0		04.71	514.4	322.8
25		16.66	542.3	494.3		13.76	554.5	553.7		04.07	537.2	336.8		04.59	515.1	332.5
30		16.25	543.2	495.0		11.68	555.1	551.9		04.21	537.2	334.1		05.00	518.0	336.7
35		15.85	545.9	496.2		10.83	553.5	550.5		04.49	538.8	330.0		05.80	522.1	343.5
40		16.03	549.5	497.2		10.58	554.7	548.0		07.52	535.4	322.9		07.45	524.1	346.3
45		16.21	551.2	498.8		11.41	553.3	547.7		08.34	544.1	306.4		08.77	524.5	347.2
50		16.26	554.6	499.0		12.04	550.9	547.8		09.64	554.0	290.6		10.06	525.0	343.0
55		15.98	555.3	499.9		11.84	549.4	547.3		10.43	553.4	272.9		10.03	524.7	342.8
		4 ^h .			8 ^h .			12 ^h .			16 ^h .					
0	25	15.76	557.4	501.3	25	11.00	548.9	547.1	25	09.96	541.7	258.3	25	10.58	520.5	342.5
5		15.86	556.0	502.7		10.77	547.1	548.8		08.19	540.0	251.6		10.04	517.8	343.3
10		16.18	560.8	505.4		07.64	546.0	548.5		08.75	538.7	249.6		09.57	520.3	339.2
15		16.19	559.2	507.4		08.52	546.1	546.0		10.30	534.4	247.2		09.66	521.7	334.4
20		15.24	559.2	510.6		07.64	548.4	544.5		11.34	534.4	242.7		09.22	525.8	330.5
25		15.67	561.6	512.4		07.47	548.1	542.4		12.80	524.3	235.1		09.29	533.7	326.5
30		16.05	558.7	516.0		08.08	546.0	542.2		12.38	514.5	237.9		09.71	533.7	328.5
35		15.86	552.2	521.0		08.68	546.1	539.9		08.31	511.3	239.3		09.71	532.7	333.7
40		14.40	550.1	524.6		08.97	543.9	540.2		02.12	529.1	242.9		10.14	534.1	334.3
45		12.58	552.3	525.7		07.54	543.8	537.9		00.20	534.8	233.6		09.66	530.6	338.6
50		14.06	559.2	526.1		05.72	544.0	535.2		00.60	538.8	227.3		06.68	531.2	342.2
55		14.53	563.3	526.9		05.65	543.8	533.9		01.61	536.9	224.9		05.03	533.5	347.6
		5 ^h .			9 ^h .			13 ^h .			17 ^h .					
0	25	15.67	561.1	530.0	25	06.68	543.5	532.3	25	02.08	531.1	224.0	25	04.10	534.1	353.5
5		15.69	560.1	532.1		06.97	541.1	530.1		01.02	535.4	220.9		02.89	533.5	359.8
10		15.71	554.8	535.9		06.03	538.7	527.8		01.72	531.5	222.0		02.10	535.3	363.3
15		14.06	552.6	538.9		04.17	538.5	525.0		02.91	528.4	221.7		03.52	535.2	368.3
20		13.64	555.3	540.9		02.69	539.0	524.4		04.39	518.4	219.9		04.08	533.5	370.6
25		12.95	558.7	541.7		01.85	543.2	521.5		03.82	510.6	222.7		03.97	534.5	370.2
30		13.52	557.3	544.3		03.95	541.8	519.4		02.08	509.8	225.9		04.07	535.4	371.4
35		13.96	553.4	547.3		05.55	537.7	518.0		24.59.77	516.8	234.1		04.76	534.0	374.9
40		13.79	552.5	548.6		06.79	532.1	514.1		24.57.79	524.1	239.7		03.81	533.6	377.3
45		14.46	553.1	551.0		06.36	533.4	506.4		25.00.77	528.1	247.4		04.58	534.0	377.9
50		14.92	552.8	552.3		06.23	536.5	506.3		24.58.92	528.8	253.1		05.50	535.1	378.9
55		14.37	554.4	553.3		05.99	540.4	500.9		24.58.62	527.5	272.1		06.32	536.9	377.6

BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

July 24th 11^h. Extra Observations made.Aug. 29th 10^h. For observations before the commencement of the Term-Day Observations, see the Extra Observations of Magnetometers. See also the Notes, after the Extra Observations, upon the Aurora Borealis, seen before and after 10^h.

BIELLAR Observed 2^m after the Declination, $k=0.000140$.

BALANCE. Observed 3^m after the Declination, $k=0.000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

Aug. 30^d 9^h 32^m. Bifilar magnet vibrating 12 sc. div.

TERM-DAY OBSERVATIONS OF MAGNETOMETERS, 1845.

Göttingen Mean Time of Declination Observation.	SEPTEMBER 24, 25.											
	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.									
Min.	°	/	Sc. Div.	Mic. Div.	°	/	Sc. Div.	Mic. Div.	°	/	Sc. Div.	Mic. Div.
			10 ^h .			14 ^h .			18 ^h .		22 ^h .	
0	25	10.80	555.2	437.8	24	59.09	541.9	400.4	25	11.74	520.2	256.7
5		10.58	554.1	438.5		58.49	539.3	388.8		07.44	515.3	264.8
10		10.47	555.0	438.4		57.31	539.1	384.4		06.56	513.2	274.4
15		10.25	557.1	437.6		56.20	536.7	379.0		10.53	528.7	274.5
20		10.50	557.3	438.7		53.67	533.8	373.7		10.04	543.5	273.3
25		10.34	554.1	439.6		53.00	528.0	370.5		10.50	543.1	272.3
30		10.36	556.3	439.0		51.99	524.1	365.6		10.33	537.3	273.1
35		10.77	549.4	441.6		52.64	516.9	363.0		11.00	530.3	280.8
40		08.82	544.5	444.3		52.70	516.6	360.6		11.03	521.1	287.6
45		09.35	542.4	446.1		53.52	520.8	361.8		14.23	513.6	294.4
50		09.35	546.4	445.3		54.92	525.1	361.9		17.07	512.5	296.5
55		10.07	548.4	444.5		56.58	526.9	358.9		18.58	514.5	296.8
			11 ^h .			15 ^h .			19 ^h .		23 ^h .	
0	25	10.13	549.4	442.7	24	57.51	528.9	351.6	25	17.84	517.8	297.0
5		10.23	549.5	442.8		57.51	526.9	346.6		17.70	517.6	298.2
10		10.50	548.5	445.3	24	59.04	525.5	338.0		18.47	515.7	302.2
15		10.70	546.8	445.0	25	00.40	525.8	327.8		18.79	511.6	301.8
20		10.53	548.7	444.6	24	59.21	530.2	322.6		18.27	509.0	301.6
25		10.68	551.5	443.2		59.56	529.6	318.6		16.21	509.7	303.0
30		10.74	552.5	442.1		59.77	531.3	314.0		12.95	514.1	308.4
35		10.75	549.7	442.5		58.27	534.0	306.8		13.37	516.3	314.0
40		10.40	548.2	443.4		55.84	533.4	301.1		14.10	512.1	320.4
45		10.41	547.5	443.4		53.88	528.7	297.5		13.02	508.1	331.1
50		10.09	544.9	445.1		52.46	528.0	294.8		12.82	504.1	342.0
55		10.47	548.7	444.2		53.27	527.4	287.6		12.29	506.6	350.0
			12 ^h .			16 ^h .			20 ^h .		0 ^h .	
0	25	10.77	551.8	442.4	24	53.38	530.4	278.0	25	12.82	506.6	352.9
5		10.56	550.9	441.7		52.80	533.4	274.3		13.86	505.1	360.4
10		10.13	549.3	442.1		52.50	535.3	271.2		13.52	510.3	363.8
15		09.24	550.1	440.8		53.31	538.3	269.5		16.68	504.3	370.1
20		07.81	552.5	438.5		54.82	542.1	266.8		11.17	516.2	369.6
25		06.79	556.1	434.3		55.44	544.7	269.8		19.31	506.3	370.0
30	25	03.23	554.3	430.9		55.73	547.2	266.5		18.77	510.3	370.6
35	24	59.76	552.0	430.0		57.49	549.5	267.9		19.07	504.4	370.5
40		57.31	547.5	431.0	24	58.80	551.6	267.2		17.76	509.6	370.1
45		55.89	543.5	433.7	25	00.27	554.3	265.7		18.34	511.7	369.9
50		57.44	538.2	435.9		01.36	550.0	265.2		20.25	507.8	373.4
55	24	58.38	539.1	436.6		01.79	548.3	262.7		20.32	504.0	379.0
			13 ^h .			17 ^h .			21 ^h .		1 ^h .	
0	25	01.01	539.9	435.6	25	01.61	543.7	261.1	25	19.04	508.8	382.4
5		01.90	542.9	433.4		02.33	536.8	257.4		19.28	509.8	384.8
10		01.73	542.4	430.9		03.47	544.2	256.0		19.68	507.7	389.7
15		02.45	544.7	428.3		05.99	545.1	254.6		18.67	515.3	392.6
20		03.61	544.9	425.7		08.45	537.9	251.4		19.93	517.1	392.8
25		03.43	546.3	421.3		07.62	535.9	248.5		21.70	516.7	394.1
30		01.95	547.4	418.1		06.73	536.8	248.3		21.39	513.5	392.1
35		02.50	547.2	414.0		07.27	535.8	247.7		19.53	514.0	390.4
40		01.51	545.3	412.6		07.27	535.5	248.5		18.50	520.2	389.3
45		00.92	546.1	409.0		08.36	533.4	249.8		17.81	525.7	389.3
50	25	00.75	544.6	404.7	10.13	530.3	255.0		18.01	527.7	389.4	20.38
55	24	59.97	543.5	399.7	12.04	527.4	255.2		17.40	526.8	390.2	20.45

BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

BI-FILAR. Observed 2^m after the Declination, $k=0.000140$.

BALANCE. Observed 3^m after the Declination, $k=0.000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

Göttingen Mean Time of Declination Observation.		OCTOBER 22, 23.															
		DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.													
Min.	°	/	Sc. Div.	Mic. Div.	°	/	Sc. Div.	Mic. Div.	°	/	Sc. Div.	Mic. Div.	°	/	Sc. Div.	Mic. Div.	
					18 ^{h.}				22 ^{h.}					2 ^{h.}			6 ^{h.}
0	25	09.47	543.3	421.0	25	10.09	529.6	434.0	25	14.41	535.7	433.3	25	10.94	542.7	431.6	
5		09.89	542.2	423.4		09.86	529.9	433.1		14.44	536.6	434.4		10.80	542.4	431.8	
10		09.46	542.7	426.3		09.94	529.6	432.3		14.24	537.0	434.1		10.90	542.8	433.1	
15		09.60	542.5	427.5		10.23	530.3	431.7		14.40	536.8	435.0		10.83	542.9	432.5	
20		09.57	541.4	426.6		10.47	530.9	430.7		14.03	535.9	435.2		10.80	542.7	432.5	
25		09.62	541.5	429.4		11.10	530.0	431.6		13.91	537.9		10.60	542.3	432.6	
30		09.40	542.3	432.5		11.12	529.6	431.0		13.96	538.4	435.2		10.67	542.5	431.6	
35		09.62	542.1	429.8		11.07	529.9	430.3		13.96	537.0	436.3		10.60	542.7	432.4	
40		09.77	541.5	426.7		11.57	530.8	430.2		13.59	538.1	436.0		10.67	543.2	433.8	
45		09.54	541.5	428.9		12.15	528.3	430.8		13.69	539.0	436.4		10.63	543.4	432.7	
50		09.86	541.6	432.5		11.41	526.6	430.7		13.39	538.0	436.9		10.63	543.4	433.2	
55		09.80	540.7	433.4		11.21	528.6	430.3		13.16	538.4	436.9		10.51	543.4	433.3	
					19 ^{h.}				23 ^{h.}					3 ^{h.}		7 ^{h.}	
0	25	10.06	541.3	430.0	25	12.46	528.1	431.0	25	12.98	538.7	437.1	25	10.48	543.2	433.4	
5		09.79	540.7	428.2		11.91	527.1	431.6		12.83	538.8	437.5		10.56	543.2	432.4	
10		09.77	541.2	429.5		11.74	525.7	431.7		12.75	539.6	447.2		10.56	543.5	432.4	
15		09.76	541.5	430.8		12.01	526.4	431.9		12.69	540.0	437.6		10.51	543.6	432.9	
20		09.79	540.8	427.8		12.18	526.5	432.3		12.46	539.3	437.6		10.45	543.6	432.2	
25		09.76	540.3	426.7		12.09	527.6	432.1		12.22	539.3	437.5		10.48	543.4	434.4	
30		09.74	540.0	428.2		12.36	528.4	432.2		12.11	539.1	437.7		10.38	542.7	433.6	
35		09.74	539.4	428.2		13.05	528.4	432.0		11.98	540.4	438.5		10.36	542.8	434.2	
40		09.82	539.3	430.8		13.05	528.5	432.1		11.77	539.2	438.2		10.40	543.2	432.2	
45		09.87	539.1	432.9		13.14	528.8	431.4		11.66	539.7	438.1		10.33	543.1	432.6	
50		09.79	538.6	435.1		13.16	530.0	431.1		11.62	539.7	438.6		10.41	543.1	432.1	
55		09.60	538.0	434.2		13.56	529.3	431.8		11.41	539.2	438.1		10.40	543.0	432.1	
					20 ^{h.}				0 ^{h.}					4 ^{h.}		8 ^{h.}	
0	25	09.54	537.6	435.8	25	13.94	529.9	431.3	25	11.27	539.9	438.0	25	10.33	542.9	431.3	
5		09.15	537.0	436.9		14.10	529.8	431.2		11.27	540.1	438.0		10.40	542.8	430.3	
10		09.00	538.0	435.6		14.01	529.9	430.8		11.22	539.5	437.4		10.50	542.7	431.3	
15		09.08	538.3	433.1		14.26	530.5	430.8		10.83	538.9	438.3		10.43	542.6	431.2	
20		09.45	536.3	434.4		14.33	530.7	430.3		10.90	538.7	438.1		10.51	542.5	431.1	
25		09.06	533.5	436.7		14.23	532.0	429.9		10.50	538.5	437.8		10.41	542.5	431.2	
30		08.99	534.8	438.2		14.68	533.6	430.0		10.54	539.5	438.0		10.36	542.4	431.6	
35		09.35	535.5	437.5		14.67	533.1	430.1		10.87	539.9	437.3		10.43	542.4	430.9	
40		09.49	536.2	435.8		15.20	532.6	431.3		10.53	540.2	437.4		10.43	542.4	430.9	
45		09.60	535.4	433.7		15.05	529.0	432.3		10.48	541.0	437.6		10.47	542.4	430.6	
50		09.30	534.4	430.6		14.91	530.0	432.6		10.41	540.7	437.2		10.50	542.5	430.7	
55		09.08	534.2	430.1		14.84	531.4	432.2		10.47	540.2	437.2		10.56	542.5	430.3	
					21 ^{h.}				1 ^{h.}					5 ^{h.}		9 ^{h.}	
0	25	08.99	534.2	431.3	25	14.99	532.7	433.6	25	10.40	541.0	436.7	25	10.50	542.5	429.9	
5		09.29	532.4	432.0		14.85	533.7	433.2		10.41	541.6	436.4		10.50	542.4	429.6	
10		08.72	532.2	433.1		15.17	533.7	433.4		10.43	539.2	436.2		10.50	542.2	429.5	
15		08.68	532.2	435.0		15.22	532.2	433.7		10.43	542.1	436.0		10.50	542.1	429.5	
20		08.25	533.2	435.4		15.05	533.1	433.7		10.43	542.7	436.0		10.50	542.2	429.8	
25		08.66	532.9	435.1		14.99	535.1	433.1		10.43	541.9	436.0		10.50	542.2	429.9	
30		08.38	532.1	434.9		15.27	533.9	433.0		10.43	540.9	436.0		10.50	542.3	429.6	
35		08.88	532.1	435.1		14.75	534.0	433.5		10.36	542.9	435.8		10.50	542.4	429.3	
40		09.05	532.2	435.7		14.94	532.7	433.7		10.43	540.8	435.5		10.51	542.6	430.0	
45		09.35	531.8	434.6		14.57	534.1	433.9		10.56	541.5	435.6		10.50	542.5	429.6	
50		09.53	531.3	434.3		14.40	534.8	433.9		10.60	542.1	434.4		10.50	542.4	429.6	
55		09.60	531.4	434.2		14.35	535.5	433.4		10.67	542.3	433.4		10.50	542.5	429.7	

BIFILAR. Observed 2^m after the Declination, $k=0.000140$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

RIELLAPE Observed 2^m after the Declination, $k=0.000140$.

BALANCE. Observed 3^m after the Declination, $k=0.000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

Göttingen Mean Time of Declination Observation.	NOVEMBER 28, 29.						DECEMBER 24, 25.						
	DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.										
	Min.	°	'	Sec. Div.	Mic. Div.	°	'	Sec. Div.	Mic. Div.	°	'	Sec. Div.	Mic. Div.
				2 ^h .			6 ^h .			10 ^h .			14 ^h .
0	25 11-55	529-7	407-9	25 02-93	538-4	422-7	25 06-66	545-2	429-0	25 07-25	546-9	414-4	
5		11-32	528-7	408-7	04-55	537-8	421-9	05-92	545-0	428-3	07-07	547-1	414-0
10		11-01	527-0	410-1	05-18	536-3	421-3	05-47	544-5	428-5	07-04	546-8	413-0
15		10-77	527-7	411-1	06-34	536-8	421-0	05-49	544-9	427-5	07-10	546-5	413-7
20		10-21	528-1	412-4	07-82	532-9	420-9	05-42	543-2	428-4	07-00	546-4	413-3
25		09-56	528-5	413-7	06-39	538-2	417-8	05-29	543-7	428-1	06-93	546-6	411-8
30		09-05	529-7	415-4	07-13	540-2	416-6	05-43	545-1	428-2	07-08	546-5	412-4
35		10-00	533-1	416-4	07-15	542-9	414-3	05-76	546-0	425-6	07-10	546-2	410-8
40		09-79	535-8	415-2	07-31	544-5	412-6	06-06	545-4	426-8	07-17	545-7	411-5
45		11-34	537-1	414-9	08-21	545-5	411-7	06-07	544-2	426-9	07-17	545-5	411-3
50		11-81	537-0	413-8	09-02	544-3	410-4	06-46	545-3	426-7	07-35	545-5	
55		11-41	536-0	412-6	09-05	543-1	408-9	06-59	546-3	425-6	07-40	545-7	411-1
				3 ^h .			7 ^h .			11 ^h .			15 ^h .
0	25 11-00	535-9	411-3	25 08-19	540-9	409-8	25 06-63	547-5	424-2	25 07-45	545-5	410-0	
5		09-73	537-2	410-2	08-38	542-5	409-8	06-71	547-2	423-4	07-44	545-0	409-7
10		10-16	539-4	409-5	08-95	541-5	408-8	06-53	547-1	422-7	07-57	544-9	
15		10-33	540-1	408-8	08-82	542-6	409-1	06-86	546-1	422-4	07-31	545-4	409-9
20		10-06	540-3	408-6	08-95	541-5	409-3	06-79	545-8	422-7	08-01	545-4	407-7
25		09-89	540-0	408-0	08-58	542-5	408-3	06-84	546-8	422-0	08-25	545-3	408-4
30		09-89	541-1	408-0	08-43	543-0	408-8	07-24	547-6	421-8	07-78	545-8	408-4
35		10-09	542-3	407-8	08-50	543-4	407-4	07-27	547-3	420-3	07-71	545-9	
40		10-13	542-2	408-1	09-19	544-4	407-4	07-54	546-4	420-7	07-74	545-8	408-2
45		10-11	542-0	408-1	08-41	544-9	405-7	07-54	547-8	420-2	07-91	545-9	407-0
50		10-06	545-0	408-6	08-08	544-7	405-0	07-72	547-7	419-4	07-98	546-2	406-1
55		08-86	543-0	407-2	08-21	544-6	405-0	07-65	547-5	418-8	07-98	546-3	406-3
				4 ^h .			8 ^h .			12 ^h .			16 ^h .
0	25 09-89	541-7	409-2	25 08-03	544-3	404-5	25 07-84	547-6	418-9	25 07-98	546-2	407-5	
5		10-16	542-7	409-7	07-92	544-5	405-4	07-82	548-1	418-1	08-03	546-5	406-3
10		10-06	544-8	408-8	07-74	544-1	405-3	07-82	547-5	418-2	08-08	546-6	407-0
15		09-62	545-4	409-4	07-60	543-9	405-4	07-78	546-9	418-0	08-09	546-4	
20		09-96	544-9	409-4	07-55	543-4	404-6	07-84	546-6	418-7	07-89	546-5	406-9
25		10-16	544-3	409-8	07-78	543-1	403-5	07-72	546-6	418-5	07-71	546-5	406-0
30		10-16	543-9	410-7	07-67	543-3	404-6	07-84	547-0	418-2	07-65	546-5	405-4
35		10-51	541-2	411-8	07-60	543-1	403-9	07-79	547-4	417-7	07-74	547-0	405-6
40		11-24	537-2	413-9	07-47	543-3	403-1	07-82	547-2	417-9	07-76	546-8	406-2
45		11-68	528-6	416-9	07-25	543-9	403-1	07-74	546-7	418-2	07-78	546-9	405-2
50		09-44	517-7	421-4	07-13	543-3	402-9	07-78	546-8	417-3	07-78	546-8	405-3
55		05-25	518-0	423-7	07-13	543-9	402-7	07-72	547-0	418-2	07-72	547-0	405-2
				5 ^h .			9 ^h .			13 ^h .			17 ^h .
0	25 00-40	522-2	424-7	25 06-97	543-9	402-0	25 07-62	547-3	415-5	25 07-74	547-1	405-4	
5	25 01-54	523-1	427-0	06-98	544-0	400-9	07-69	547-5	416-1	07-81	547-1	405-5	
10	24 57-28	524-5	430-1	06-93	544-0	398-5	07-81	547-3	415-9	07-79	547-0	406-5	
15		56-63	525-7	431-2	06-74	544-5	400-1	07-69	546-8	415-8	07-74	547-1	405-8
20		56-34	529-7	430-2	06-74	545-0	397-4	07-57	546-7	415-3	07-67	547-1	406-5
25		56-94	532-4	428-6	06-76	543-4	397-2	07-62	547-2	"	07-67	546-9	406-0
30		58-22	534-1	427-9	06-39	543-9	396-6	07-57	547-2	415-8	07-65	546-7	405-5
35		57-07	538-7	425-7	06-27	543-6	396-6	07-67	547-4	415-0	07-58	546-3	405-5
40		58-09	540-3	425-7	06-56	542-9	396-6	07-51	547-2	414-9	07-54	546-9	404-8
45	24 59-09	539-6	424-6	06-51	541-7	396-9	07-51	547-3	414-6	07-51	547-7	404-0	
50	25 00-11	539-7	423-8	05-12	541-3	396-5	07-60	547-4	414-3	07-51	548-0	403-8	
55	25 01-51	539-8	423-6	05-65	542-0	396-2	07-60	547-0	"	07-78	547-7	403-6	

BELLAB. Observed 2^m after the Declination. $k=0.000140$.

BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

When double commas (,,) occur in the column for the balance magnetometer, the needle was examined, and no change from the previous position being appreciable, the micrometers were not altered.

DECEMBER 24, 25.

Göttingen Mean Time of Declination Observation.		DECLINA- TION.	BIFILAR Corrected.	BALANCE Corrected.												
Min.		°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.	Mic. Div.	°	'	Sc. Div.	Mic. Div.			
18 ^{h.}																
0	25	07-40	548-8	402-7	25	07-38	545-0	396-6	25	10-45	546-1	399-5	25	08-11	548-4	389-4
5		07-25	548-6	402-4		07-40	545-1	397-0		10-38	545-8	399-6		08-29	547-9	388-6
10		07-20	548-4	401-8		07-81	545-4	397-3		10-51	546-4	399-4		08-38	547-5	388-6
15		07-05	548-5	400-4		07-87	545-1	397-0		10-75	546-6	399-5		08-38	547-0	"
20		07-05	548-7	401-4		07-47	544-9	396-9		10-81	546-3	399-3		08-56	547-4	388-3
25		07-10	548-6	401-3		07-81	544-5	396-8		10-78	547-8	399-4		08-21	548-0	387-8
30		07-10	548-6	400-9		08-08	545-2	396-9		11-14	547-6	399-7		08-29	547-9	385-4
35		07-18	549-0	400-7		07-87	544-9	396-9		10-80	546-6	399-8		08-38	547-7	386-0
40		07-34	549-0	400-6		08-08	545-3	396-8		10-63	546-9	399-5		08-28	547-6	386-2
45		07-44	548-5	400-5		08-31	544-6	397-2		10-70	547-1	399-2		08-08	547-7	387-1
50		07-47	548-1	400-1		08-11	544-6	397-5		10-54	547-4	399-1		08-14	547-9	386-5
55		07-34	548-3	399-9		08-52	544-1	397-8		10-43	547-4	399-4		07-94	548-0	385-9
19 ^{h.}																
0	25	07-34	548-0	400-1	25	08-63	544-2	398-2	25	10-47	547-5	399-7	25	07-87	548-3	385-4
5		07-20	548-0	400-1		08-65	543-7	398-5		10-23	547-7	399-1		07-84	548-2	385-5
10		07-17	548-5	400-0		08-70	543-3	399-0		10-14	547-7	399-1		07-85	548-2	384-2
15		07-20	548-0	399-6		08-52	543-2	399-2		10-06	548-3	398-9		07-85	548-2	384-9
20		07-07	548-0	399-3		08-41	543-2	399-5		10-07	548-5	398-7		07-87	548-5	385-9
25		07-07	547-9	399-8		08-80	543-1	400-2		09-89	548-2	398-0		07-84	548-5	385-7
30		07-01	548-6	399-3		08-82	542-4	400-7		09-86	548-6	397-9		08-03	548-6	383-7
35		07-13	548-6	399-2		09-05	542-6	400-6		09-77	548-0	397-3		07-92	548-1	384-4
40		07-07	547-7	399-3		09-19	543-0	400-0		09-56	547-7	396-9		07-87	548-1	384-4
45		07-08	548-0	399-3		09-19	543-2	400-4		09-42	548-1	395-9		08-01	548-2	384-2
50		07-15	547-6	398-9		08-72	543-3	400-0		09-35	547-7	395-9		07-51	548-2	384-4
55		07-17	547-6	398-9		09-35	543-3	399-9		09-19	547-8	395-6		07-74	548-2	384-6
20 ^{h.}																
0	25	07-13	547-7	398-5	25	09-26	543-5	400-1	25	09-00	548-0	395-6	25	07-84	547-8	384-8
5		07-27	547-7	398-7		09-62	543-7	399-4		08-99	548-0	395-2		07-78	547-8	384-8
10		07-18	547-1	398-5		09-79	543-8	399-6		08-85	547-4	394-9		07-71	547-8	385-8
15		07-20	546-8	399-1		09-59	543-1	399-8		08-79	547-4	395-0		07-60	548-1	385-8
20		07-29	546-5	399-1		10-27	543-3	399-9		08-72	547-4	394-5		07-60	548-1	387-1
25		07-07	546-5	399-0		10-16	543-0	399-9		08-65	547-4	394-7		07-67	547-7	387-2
30		07-05	546-8	398-9		10-33	542-6	400-1		08-55	547-5	394-2		07-78	547-8	386-6
35		07-05	546-6	398-6		10-30	544-5	400-4		08-53	548-1	392-9		07-76	548-2	386-7
40		07-13	546-3	398-6		10-30	543-3	400-3		08-34	548-4	392-3		07-71	547-8	386-5
45		07-31	546-5	398-7		10-30	543-8	400-2		08-21	548-4	392-3		07-91	547-1	386-5
50		07-17	546-7	398-5		10-54	544-3	400-1		08-21	548-4	392-7		07-81	547-4	386-6
55		07-10	546-1	398-4		10-83	544-2	399-8		08-34	548-1	392-8		07-81	547-5	386-6
21 ^{h.}																
0	25	07-04	546-4	397-9	25	10-75	544-3	400-2	25	08-18	547-8	392-2	25	07-78	547-3	386-4
5		07-10	546-9	397-9		10-65	544-6	399-9		08-18	547-6	392-0		07-78	546-8	386-2
10		07-20	546-2	397-6		10-70	544-7	400-2		08-21	547-7	392-4		07-76	546-2	387-0
15		07-10	546-6	397-9		10-70	544-9	400-6		08-31	548-3	391-7		07-74	546-6	386-9
20		07-40	546-5	397-6		10-34	545-0	400-1		08-28	548-5	391-3		07-67	546-0	387-4
25		07-10	546-7	397-5		10-53	544-8	399-6		08-23	548-5	391-3		07-67	545-9	387-3
30		07-07	546-0	397-7		10-30	544-4	399-7		08-31	549-3	389-8		07-54	546-4	387-8
35		07-24	545-9	397-6		10-20	545-4	399-4		08-34	548-9	390-3		07-57	545-8	387-7
40		07-24	545-9	397-6		10-30	545-4	399-3		08-34	548-3	390-2		07-84	545-1	386-5
45		07-32	545-7	397-2		10-18	545-6	399-8		08-41	548-2	390-5		07-60	545-2	385-2
50		07-27	545-5	396-8		10-47	546-0	399-8		08-31	548-6	390-1*		07-47	544-8	385-6
55		06-83	545-2	396-0		10-51	546-3	399-3		08-28	548-5	389-7		07-52	544-1	384-9

BIFILAR. Observed 2nd after the Declination, $k=0\cdot000140$.BALANCE. Observed 3rd after the Declination, $k=0\cdot000010$.

The temperature of the bifilar and balance magnets, and the observers' initials, will be found at the corresponding hours in the Hourly Observations of Magnetometers.

When double commas (,,) occur in the column for the balance magnetometer, the needle was examined, and no change from the previous position being appreciable, the micrometers were not altered.

EXTRA OBSERVATIONS

OF

MAGNETOMETERS.

MAKERSTOUN OBSERVATORY.

1845.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.					
	d.	h.	Min.	°	'	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	
d. h. 0 15*	0	25	11.17	2	532.8	3	615.3	9	7	15	25	11.01	17	534.1	18	665.1	9	10	0	24	56.61	
	10		12.92	12	540.9	13	611.9			25		09.96	27	537.3	28	663.5	9	11*				
	15		13.81	17	541.3	18	611.5			30		09.08	32	530.4	33	667.6			1		55.39	
	30		15.98	32	534.0	33	605.9			35		09.26	37	531.5	38	668.8						
	45		11.08	47	532.1	48	599.6	9	8*	0		06.59	2	525.0	3	688.4						
	55		08.68	57	527.9	58	601.6			5		06.43	7	524.1	8	695.0						
	0	08.05	2	526.3	3	603.4			20		07.78	22	530.5	23	726.3			5		46.82		
	5	08.14	7	526.8	8	606.0			25		07.51	27	536.5	28	731.1							
	15	09.96	17	528.9	18	609.1			35		09.08	37	536.2	38	726.9			7		44.73		
	20	10.98	22	529.4	23	611.2			50		09.49	52	522.9	53	728.4			9		46.21		
0 17	25	11.39	27	530.0	28	610.1			55		05.45	57	528.2	58	733.6			10		46.70		
	0	11.91	2	533.1	3	610.4			9	9*	0	25	00.27	2	558.8	3	766.6					
1 4	0	25	12.08	2	528.7	3	643.2			5	24	59.12	7	580.0	8	832.4			12		48.87	
	10		10.77	12	537.6	13	641.0			10		59.23	12	554.4	13	869.7						
	15		11.44	17	537.5					15		58.42	17	542.1	18	848.6						
	0	12.20	2	537.1	3	640.3			20		57.34	22	528.7	23	820.1			15		24.54.72		
	0	12.67	2	531.9	3	631.9			25		58.94	27	516.5	28	806.9							
	10	04.44	12	535.6	13	630.1			30	24	59.43	32	504.4	33	789.0							
	15	04.24	17	539.7	18	629.3			35	25	00.60	37	503.4	38	767.9							
	20	01.65	22	547.5	23	627.4			40	24	56.13	42	520.9	43	738.1			19		25.00.20		
	25	03.43	27	549.2	28	"			45	24	58.36	47	515.4	48	733.0			20		25.00.01		
	30	06.63	32	544.7	33	628.4			50	24	59.06	52	511.1	53	729.9			22		24.59.26		
1 8	40	11.44	42	538.4					55	25	00.18	57	504.3	58	704.9							
	0	11.34	2	536.2	3	626.5	9	10*	0		04.14	2	499.7	3	682.3							
	30	13.93	32	534.7	33	624.6			5		04.31	7	543.8	8	694.5			25		58.87		
	0	12.96	2	536.2	3	621.2			10		07.13	12	503.6	13	640.9							
	0	08.19	2	537.4	3	620.7			15	25	04.66	17	511.5	18	605.4			27		49.95		
	10	08.82	12	537.4	13	620.6			20	24	51.86	22	599.2	23	633.4							
	0	11.61	2	532.9	3	619.1			24		26.43	24	587.7					29		41.00		
									25		19.63	26	561.2					30		39.34		
	2 10	0	25	06.68	2	529.6	3	632.5			26		18.89	27	543.7	27	580.0			32		41.27
	10		07.34	12	530.3	13	632.6					28		534.4								
2 11	0	13.05	2	536.0	3	621.5			29		22.32	29	529.0					35		41.11		
									30		31.07	30	517.0	31	517.6							
3 15	0	25	11.37	2	539.9	3	593.5			32		32.89	32	515.2					37		41.16	
	10		10.56	12	538.3	13	595.2					33		515.4	34	557.9			40		41.70	
3 16	0	12.02	2	535.6	3	598.8			35		31.74	35	514.7									
												34.00	36	509.9								
7 7*	0	25	14.44	2	537.3	3	602.6			36		37	506.1	37	502.3							
	15		13.46									38		501.8					45		47.73	
	32		15.51	33	535.0	34	610.0					39		501.2	39	499.8						
	0	13.19	2	532.0	3	608.8			40		33.87	42	493.9						47		47.17	
7 21	0	25	17.60	2	540.0	3	597.2			42		41.70	43	490.1	43	487.0						
	15		18.07	17	542.0							44		485.2								
7 22	0	17.54	2	541.8	3	593.1			45		40.63	45	481.3					50		39.07		
												46		479.4								
9 2	0	25	22.37	2	533.0	3	607.0					47		475.9					55		39.01	
	10		24.22	12	531.0	13	611.3					48		473.6	48	471.4						
	20		24.59	22	528.7	23	614.2					49		474.6								
	30		23.11	32	530.2	33	614.2			50		37.29	50	477.0								
	40		22.87	42	534.1	43	612.0					51		483.2								
	9 3	0	21.90	2	532.7	3	614.6			52		40.15	52	481.2								
	9 5	0	15.47	2	536.9	3	647.9					53		480.1	53	410.9						
	15		19.73	17	533.1	18	658.2					54		479.7					9 12*	0	44.54	
	20		20.29	22	532.0	23	658.5			55		48.27	55	478.9								
	30		20.65	32	532.7	33	658.2					56		473.5								
9 6	0	16.43	2	537.6	3	653.4					57		471.0									
	9 7*	0	12.93	2	535.4	3	663.0					58		466.5	58	368.1			5		50.87	
9 10	12.22	12	532.5	13	665.3																	

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

Jan. 9th 10th 23^m. Bifilar reading probably highest (615) at this time.Jan. 9th 11th 22^m. Bifilar vibrating 20 sc. div.

BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.	BALANCE Corrected.
Min. Sc. Div.	Min. Mic. Div.	d. h. 9 12	Min. ° '	Min. Sc. Div.	Min. Mic. Div.	d. h. 9 14	Min. ° '	Min. 45	54 54·84	Min. Sc. Div.	Min. Mic. Div.		
59 458·4			6 477·3	7 470·8	7 381·9			47 445·4	445·4	47 445·4	445·4		
0 455·4			9 24 48·67	9 ₁ 461·2	8 385·2			49 423·7	423·7	49 423·7	423·7		
1 446·0			10 47·96	10 464·5				50 25 00·37	50 00·37	51 429·3	429·3		
2 443·0				11 470·5	11 388·0					53 431·3	431·3		
3 445·1	3 375·6		12 47·35	12 469·9				55 04·31	04·31	54 429·8	429·8		
4 447·4				13 474·5	13 386·2					57 426·8	426·8		
5 454·9				15 476·5		9 15	0 04·95	0 04·95		59 451·1	451·1		
6 455·6				16 480·6	16 408·8					2 445·4	445·4		
7 463·3				18 497·2	18 425·6			5 08·29	08·29	4 430·7	430·7		
8 467·1	8 367·4		17 46·72							7 426·9	426·9		
9 466·7			20 47·35	20 495·9				10 14·91	14·91	9 436·5	436·5		
10 462·2				21 494·0						12 422·6	422·6		
11 459·0	11 353·8		22 49·17	23 490·2	23 456·0			14 424·6	424·6				
12 462·3				24 482·0				15 26·65	26·65	16 413·1	413·1		
13 470·2	13 339·8		25 49·74	25 477·3						17 407·7	407·7		
14 474·7				27 474·4						18 408·7	408·7		
15 474·2				28 479·6	28 454·6			20 29·77	29·77	19 409·8	409·8		
16 472·3	16 314·9		30 49·51	31 480·4				21 27·68	27·68	22 427·5	427·5		
17 470·8				32 481·0	33 477·1			24 23·96	23·96	25 461·6	461·6		
18 463·3	18 300·1			34 495·9				27 21·63	21·63	28 486·2	486·2		
19 460·5				36 507·3	36 506·0			30 18·45	18·45	31 494·9	494·9		
20 458·7	21 299·3		35 24 53·27	36 513·6	37 517·8					33 495·6	495·6		
22 474·2				41 525·1						35 497·2	497·2		
23 470·2	23 313·2		40 25 00·40	42 523·3	43 544·4			36 25 05·69	25 05·69	38 499·8	499·8		
24 460·1				45 05·42	46 511·1	48 539·4		40 24 57·89	24 57·89	42 507·3	507·3		
25 449·3				49 529·5				45 56·57	56·57	47 503·3	503·3		
26 449·2	26 323·1		50 11·22	51 549·6				50 58·82	58·82	52 499·8	499·8		
27 450·0				52 552·1		9 16	0 55·47	0 55·47	2 500·3	500·3	53 642·5	642·5	
28 458·9	28 359·9			53 547·7	54 557·5			5 24 57·68	24 57·68	7 506·7	506·7		
29 471·5				56 567·5				20 25 00·03	25 00·03	21 526·0	526·0		
30 479·1			55 10·50	57 573·5	57 571·5			36 09·05	09·05	37 502·6	502·6		
31 473·9	31 368·3			58 567·0				51 05·52	05·52	52 512·3	512·3		
32 470·4				59 558·3		9 17	0 06·09	0 06·09	2 524·1	524·1	3 647·1	647·1	
33 465·9	33 360·7		9 13*	0 06·70	2 543·6	3 594·3		10 08·36	08·36	12 510·8	510·8		
35 459·0			5 08·68	7 534·8	8 631·6			30 09·82	09·82	32 510·3	510·3		
36 460·4	36 349·2		10 25 07·05	12 502·8	13 618·3			51 10·33	10·33	52 521·7	521·7		
37 459·6				14 497·9				9 18	0 10·90	2 522·9	522·9		
38 459·0	38 342·1		15 24 55·47	17 498·3	18 575·2			15 13·49	13·49	16 525·5	525·5		
40 453·9			20 54·92	22 476·1	23 528·4	9 19		0 12·48	12·48	2 531·5	531·5		
41 450·3	41 333·1			24 474·7				10 13·03	13·03	12 529·8	529·8		
42 446·1				27 488·8	28 545·2			20 13·57	13·57	22 530·9	530·9		
43 445·4	43 335·1		25 59·43	27 496·2		9 20	0 14·46	14·46	2 529·7	529·7	3 614·0	614·0	
45 446·5				30 54·10	32 514·7	33 578·3							
46 441·8	46 345·7		35 47·76	37 505·6	38 561·2	10 8	0 25 10·92	25 10·92	2 518·7	518·7	3 648·5	648·5	
47 443·0	48 363·2		36 47·84	39 502·6			10 11·98	11·98	12 519·4	519·4	13 652·7	652·7	
48 447·1			40 48·33	42 495·4	43 546·7			30 13·72	13·72	32 525·9	525·9	33 643·9	643·9
49 446·9			45 52·70	47 498·7	48 562·5			50 04·58	04·58	52 552·3	552·3	53 612·5	612·5
50 447·6			50 51·49	52 486·6	53 571·9			55 06·46	06·46	57 554·2	554·2	58 604·0	604·0
52 444·9			55 46·70	57 476·8	58 555·7	10 9	0 09·74	09·74	2 537·3	537·3	3 604·6	604·6	
53 439·9	53 362·5		0 45·27	2 479·2	3 570·4			5 06·63	06·63	7 534·0	534·0	8 600·7	600·7
54 436·5			5 44·32	7 475·2	8 576·9			10 04·37	04·37	12 543·2	543·2	13 595·0	595·0
55 430·5			10 44·76	11 448·2	12 552·6			15 06·27	06·27	16 543·5	543·5	17 593·3	593·3
56 429·4				13 441·2				25 10·67	10·67	27 540·9	540·9	28 589·5	589·5
57 423·9				17 458·5	16 551·4			30 14·13	14·13	32 537·1	537·1	33 590·8	590·8
58 414·7	58 329·5		15 49·98	17 472·7	18 568·5			35 14·89	14·89	37 527·8	527·8	38 594·8	594·8
59 411·9			20 53·07	22 479·0	23 593·9			41 13·81	13·81	42 526·9	526·9	43 597·0	597·0
1 422·6			25 51·19	27 478·1	28 605·4	10 10	0 13·61	13·61	2 527·6	527·6	3 601·1	601·1	
2 438·3			30 51·43	32 472·1	33 605·5	10 13	0 15·71	15·71	2 537·9	537·9	3 581·2	581·2	
3 450·7	3 335·3		35 52·15	37 460·4	38 609·5			10 14·85	14·85	12 537·5	537·5	13 579·1	579·1
4 463·8			40 53·20	42 464·1	43 640·7	10 14	0 12·69	12·69	2 527·6	527·6	3 589·6	589·6	

BIFILAR. $k=0\cdot000140$.BALANCE. $k=0\cdot000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.
 Jan. 9^d 15^h 4^m. Bifilar vibrating 20 div.
 Jan. 9^d 15^h 5^m. Bifilar vibrating 12½ div.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			
	d.	h.	Min.	°	'	Min.	Sc. Div.		d.	h.	Min.	Sc. Div.	d.	h.	Min.	Sc. Div.	d.	h.	Min.	°
10 14	15	25	11.91	527.9	i7	18	590.1	16	19	40	25	18.23	42	549.2	43	581.4	20	5	25	24.39
10 15	0		12.01	528.3	2	3	597.5			55		15.67	57	547.4	58	581.9		10		21.39
11 7	0	25	07.24	538.4	3	619.3		16	20	0		15.31	2	544.2	3	583.1		15		19.05
	10		08.25	535.9	12	13	619.2	16	21	0		14.40	17	541.9	18	587.2		20		15.61
	20		08.38	541.4	22	23	616.4					14.71	2	541.2	3	592.5		25		15.67
11 8	30		10.36	540.5	32			19	13*	0	24	44.83	2	493.5	3	399.8		40		16.26
	0	14.53	2	531.7	3	613.2				5		43.63	7	492.8	8	396.7		46		21.68
12 13	0	25	17.20	535.4	2	3	577.5			10		44.30	12	493.3	13	395.0		50		23.58
	30		14.91	541.3	32	33	583.6			15		44.88	17	501.7	18	399.3		55		19.44
12 14	0		14.80	531.3	2	3	591.5			20		47.37	22	509.5	23	395.6	20	4	0	18.52
12 16	0	15.61	2	528.8	3	600.2			25		48.36	27	516.3	28	390.4		10		16.60	
	30		15.34	532.5	32	33	593.2			30		48.77	32	520.0	33	384.1		20		16.12
12 17	0	21.91	2	522.3	3	595.8			35		48.80	37	540.7	38	379.2		44		16.95	
	11	22.74	12	520.2	13	592.8			40		47.64	42	516.5	43	372.2	20	5	0	16.68	
	15	21.93	16	520.4	17	590.2			45		46.41	47	511.4	48	364.9		37		16.65	
	27	19.04	28	529.3	29	582.6			50		47.46	52	512.6	53	364.5	20	6	0	17.70	
	40	18.82	41	531.8	42	579.8	19	14	55		51.05	57	513.0	58	364.9	20	7	0	16.01	
	55	17.65	57	532.4	58	580.8			10	24	54.79	2	512.4	3	363.2	20	8	0	11.19	
12 18	0	17.26	2	533.9	3	580.4			20		03.63	22	515.0	23	361.4		30		05.72	
	30		15.61	535.6	33	588.2			30		04.81	32	498.6	33	349.6	20	9	0	13.12	
12 19	0		14.71	536.3	3	595.1			35		04.89	37	496.0	38	340.3		30		14.30	
									40		05.38	42	488.4	43	329.4	20	10	0	09.12	
14 11	0	25	11.17	544.9	2	3	576.4			45		03.70	47	468.2	48	308.8	20	11*	0	12.06
	10	09.93	12	545.9	13	573.7			50		02.96	52	449.6	53	275.5		15		13.39	
	15	09.33	17	545.5	18	572.4					54		437.7				25		14.55	
	35	09.17	37	538.0	38	570.7			55		01.95	56	434.3			20	12	0	13.83	
	40	09.02	42	536.3	43	570.1	19	15			57		432.4	58	236.3		10		12.95	
14 12	0	09.76	2	534.5	3	572.1			0		03.50	2	423.4	3	198.8	20	13	0	15.44	
	10	11.71	12	529.2	13	574.5			5		05.29	7	440.4	8	199.7				25	19.69
	15	11.81	17	529.5	18	575.4			10		08.52	12	465.5	13	216.8	20	18	0	24.82	
	35	13.90	37	533.3	38	574.7			15		10.70	17	478.6	18	230.1		10		24.84	
14 13	0	16.48	2	537.2	3	570.3			20		12.18	22	496.9	23	239.6		20		23.63	
	10	16.65	12	537.7	13	569.2			25		13.14	27	509.8	28	247.4		25		22.17	
	38	13.22	39	537.9	40	569.2			30		13.44	32	516.7	33	259.0		30		21.84	
14 14	0	12.98	2	533.5	3	577.7			35		15.11	37	522.5	38	271.1		35		20.13	
									40		15.31	42	528.2	43	275.2				40	18.32
15 11	0	25	02.77	546.4	3	582.8	19	16	50		07.78	52	533.0	53	287.1		20		13.67	
	10	03.47	12	552.4	13	580.6			0		04.31	2	537.8	3	305.3	20	19	0	25	03.34
	15	01.14	17	557.4	18	576.4			10		06.97	12	538.5	13	309.7		5		05.97	
	20	05.02	22	559.7	23	573.5			30		03.94	32	542.4	33	298.5		10		07.47	
	25	05.87	27	560.0	28	570.8			45		05.02	47	543.6	48	308.1		20		09.35	
	30	07.10	32	555.2	33	570.4	19	17	0		06.88	2	539.8	3	330.0		30		12.20	
	40	08.29	42	542.1	43	571.5			30		10.20	32	534.5	33	357.4		40		13.16	
	50	08.66	52	534.8	53	574.6	19	18	0		13.72	2	543.6	3	385.3		10		09.39	
15 12	0	12.62	2	533.4	3	576.2	19	19	0		17.22	2	545.9	3	436.4		21		13.67	
	15	15.88	17	542.9	18	569.0			30		19.28	32	340.7	33	457.9	21	9	0	10.28	
	30	15.58	31	542.3	32	562.0	19	20	0		19.59	2	535.7	3	476.1	21	11	0	09.39	
	45	14.06	46	534.9	47	564.0			15		20.09	16	535.5	17	483.0		10		12.08	
15 13	0	14.64	2	535.4	3	566.6	19	21	3		15.83	4	531.5	5	504.1		33		11.93	
	45	13.22	47	535.9	48	571.3			15		15.85	17	529.9	18	510.2	21	12	0	08.21	
15 14	0	14.60	2	534.0	3	574.2			20		15.64	21	530.3	22	511.8		31		08.45	
							19	22*	0		17.49	2	530.2	3	522.4	21	12	35	11.61	
16 19	0	25	18.30	540.8	3	596.5	20	2	0	25	24.99	2	535.4	3	585.9	21	13	0	12.70	
	10	22.20	12	537.7	13	596.5			20		20.18	22	534.0	23	594.8		20		12.16	
	15	23.07	17	538.4	18	594.9			30		21.63	32	537.5	33	600.5	21	14	0	14.78	
	20	22.50							45		24.69	47	532.7	48	609.5	21	15	0	10.87	
	25	21.61	27	543.1	28	588.0			51		25.63	52	533.9	53	612.0	29	11.77		13.83	
	30	20.40	32	546.3	33	585.5			20	3	0	23.65	2	531.4	3	621.3	21	16	0	

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.
 Jan. 20^d 2^h 51^m. Clock put right; error previously +4°.6.

EXTRA OBSERVATIONS OF MAGNETOMETERS, JANUARY 20—24, 1845.

93

BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.					
Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	Min.	Sc. Div.	d.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.		
7	526-3	8	629-4	22	9	0	25	11.44	2	540-8	3	604-8	24	6	20	25	14.10	22	524-8	23	647-1
12	529-4	13	636-2			16		14.06	17	540-7	18	602-9			30		13.20	32	524-5	33	650-3
17	524-5	18	643-8			38		16.75	39	535-2	40	604-6	24	7	0		16.80	2	524-6	3	653-2
22	533-6	23	649-4			45		16.41	46	535-7	47	603-2			36		07.84	37	518-0	38	659-1
27	537-5	28	654-5	22	10	0		14.77	2	536-0	3	604-9			40		03.77	42	534-8	43	648-8
37	534-5	38	663-3												45		10.47	47	533-0	48	647-9
42	538-6	43	665-0	23	10	0	25	11.99	2	527-2	3	594-2			* 50		12.15	52	530-7	53	642-5
47	538-6	48	667-7			15		02.01	17	536-1	18	587-8			55		08.14	57	550-5	58	629-0
52	520-5	53	674-6			20		01.41	22	537-6	23	588-7						59	556-5		
57	528-2	58	677-6			25		02.96	27	537-5	28	594-1	24	8	0		15.34	2	547-3	3	629-4
2	530-8	3	675-7			30		05.82	32	536-8		588.9			5		19.53	7	532-5	8	631-4
12	534-4	13	670-1	23	11	0		12.92	2	529-0	3	587.0			10		20.74	12	527-7	13	632-3
22	535-6	23	665-1			20		09.35	22	531-8	23	582-6			15		18.50	17	531-2	18	628-0
45	538-0	46	651-2			40		06.77	42	531-7	43	582-6			20		18.30	22	532-6	23	627-5
2	531-6	3	642-7			50		04.41	52	530-9	53	578-2			30		16.08	32	534-9	33	624-6
38	531-6	38	631-5			55		03.23	57	529-6	58	576-0			40		15.07	42	536-8	43	623-0
2	530-8	3	624-2	23	12	0		01.83	2	529-6	3	574-4			50		13.41	52	544-7	53	616-6
2	535-6	3	606-1			10		01.45	12	527-2	13	575-9	24	9	0		15.47	2	539-0	3	618-9
2	522-5	3	621-1			20		03.02	22	534-9	23	579-2			10		15.74	12	535-7	13	619-3
17	523-0	18	621-4			35		05.40	37	533-3	38	581-9	24	10	0		14.20	2	534-8	3	612-4
32	523-1	33	618-0			50		08.83	52	529-2	53	587-6			10		10.27	12	538-7	13	612-1
2	521-7	3	607-0	23	13	0		10.20	2	528-1	3	589-5			20		25.03.81	22	543-0	23	608-5
32	524-6	33	603-0	23	14	0		09.89	2	529-2	3	586-0						24	553-6		
2	532-4	3	586-6			10		14.33	12	532-5	13	579-4			25		24.59.50	26	561-9		
2	531-9	3	584-8			15		14.46	17	533-9	18	570-3						27	562-5	28	599-4
17	535-3	18	581-7			20		13.02	22	533-4	23	563-2						29	563-3		
27	534-2	28	581-2			25		10.77	27	533-6	28	558-4			30		25.03.06	32	562-7	33	595-5
2	537-8	3	575-8			30		07.67	32	537-7	33	554-3			35		05.15	37	562-3	38	592-2
12	538-1	13	574-2			35		07.00	37	536-1	38	553-0			40		09.66	42	556-9	43	589-6
2	536-7	3	574-6			40		06.70	42	534-3	43	550-5			45		13.19	47	546-6	48	588-3
2	539-3	3	569-3			45		07.65	47	534-5	48	547-9			50		14.91	52	538-9	53	585-1
12	539-3	13	567-6			50		08.70	52	536-5	53	542-3			55		12.62	57	543-4	58	577-5
17	539-5	18	564-0	23	15	0		11.91	57	529-9	58	533-9	24	11	0		14.15	2	545-3	3	571-8
22	540-6	22	560-1			5		11.37	7	516-0	8	506-4			5		15.81	7	543-3	8	567-0
27	542-8	28	556-7			10		09.79	12	511-7	13	496-1			10		16.63	12	540-8	13	562-7
32	540-1	33	555-4			15		08.11	17	505-2	18	486-9			15		17.67	17	536-3	18	559-1
37	540-8	38	552-8			20		04.71	22	506-5	23	483-2			20		17.76	22	530-5	23	557-0
2	538-6	3	555-1	*		25	25	00.45	27	519-4	28	484-7			25		16.12	27	523-4	28	555-9
2	538-6	3	555-1	*		30	24	59.36	32	527-8	33	486-1			30		12.48	32	520-7	33	554-4
2	533-7	3	602-2			35	25	00.44	37	531-6	38	486-5			35		09.76	37	521-4	38	553-6
7	533-9	8	602-2			40		01.38	42	534-6	43	486-3			40		07.67	42	521-5	43	553-6
12	535-6	13	599-9			45		02.22	47	536-8	48	484-0			45		05.52	47	522-5	48	552-4
22	539-3	23	595-3			50		02.96	52	535-3	53	483-3	24	12	0		04.98	52	523-8	53	541-4
32	536-6	33	592-9	23	16	0		02.75	57	536-2	58	481-7			50		09.42	2	515-0	3	562-6
42	534-6	43	591-0			5		02.86	2	536-4	3	480-0			55		07.08	7	514-0	8	566-5
2	534-8	3	589-6			30		03.50	7	535-7	8	478-1			10		06.68	12	512-9	13	570-2
2	537-2	3	580-4			35		06.12	37	521-8	38	489-4			15		05.45	17	515-5	18	573-7
12	536-4	13	579-9			55		10.18	57	528-6	58	503-7			20		04.55	22	514-2	23	575-8
34	536-2	35	578-3	23	17	0		11.81	2	530-0	3	506-0			35		04.46	37	514-7	38	584-0
2	537-9	3	563-3			10		13.16	12	530-4	13	508-4			40		04.24	42	512-3	43	586-9
32	526-6	33	569-7			20		12.48	22	533-7	23	510-0			45		04.58	47	512-4	48	592-0
36	528-4	37	571-4			30		11.84	32	533-3	33	513-4			50		05.13	52	513-7	53	594-8
51	529-5	52	573-9	23	18	0		11.68	2	532-2	3	531-2			55		06.46	57	518-1	58	598-7
2	531-4	3	572-9	23	21	0		19.51	2	531-2	3	561-2	24	13	0		07.49	2	519-9	3	600-7
22	532-8	23	572-7			15		19.48	17	535-2	18	560-7			5		07.45	7	521-3	8	600-7
2	535-1	3	574-5	23	22	0		14.91	2	537-4	3	559-4			10		07.62	12	521-3	13	599-3
2	534-2	3	572-9			2									20		05.76	22	524-1	23	600-1
30	531-7	31	572-1	24	6	0	25	11.74	2	519-6	3	644-6			31		09.32	32	525-1	33	601-8
2	535-7	3	571-7			10		12.76	12	522-6	13	646-6			35		10.13	37	525-8	38	598-5

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.	BALANCE Corrected.			Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.	BALANCE Corrected.			Gött. Mean Time.	DECLINATION.						
d.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	
24 13	45	25	12.26	47	527.8	48	588.5	25	6	25	12.96	27	525.5	28	657.0	26 14	41	25	13.39				
	50		14.38	52	525.1	53	583.9			30	11.05	32	525.7	33	656.6		45		11.22				
24 14	0	15.34	2	529.1	3	572.5			35	06.79	37	529.8	38	653.4		50		09.56					
	10	13.12	12	536.0	13	562.0			40	05.49	42	543.9	43	647.6		55		08.52					
	15	16.73	17	538.4	18	561.3			45	11.52	47	535.5	48	650.4	26 15	0		07.11					
	20	21.41	22	533.4	23	556.3			50	11.01	52	534.3	53	646.9		5		05.32					
	25	22.03	27	535.5	28	553.8			55	13.29	57	536.0	58	644.6		10		05.15					
	30	20.80	32	529.7	33	547.7	25	7	0	12.16	2	534.2	3	642.4		15		04.48					
	35	15.59	37	529.5	38	541.1			10	13.46	12	532.1	13	639.1		20		04.32					
	40	11.21	42	532.3	43	537.8			20	11.15	22	531.9	23	636.4		25		03.87					
	45	08.05	47	532.9	48	536.0			30	11.37	31	537.6	32	633.4		30		03.48					
24 15	50	06.59	52	531.2	53	538.1			45	14.13	46	534.1	47	628.6		35		04.86					
	0	04.29	2	530.4	3	549.6	25	8	0	14.03	2	536.2	3	620.9		46		05.65					
	10	07.78	12	527.4	13	560.3			30	12.18	31	535.6	32	616.3		50		05.74					
	15	09.35	16	526.5	17	562.7			50	12.78						55		05.53					
	30	12.95	32	525.4	33	573.5	25	9	0	09.05	2	529.1	3	610.7	26 16	0		05.00					
	45	12.35	46	529.6	47	578.1			5	25.00.20	7	538.1	8	601.7		10		05.49					
24 16	0	13.59	2	531.9	3	583.6			10	24.52.50	12	565.9	13	590.4		15		06.59					
	31	12.58	32	532.5	33	590.5					14	569.8				25		07.72					
24 17	0	12.36	2	532.3	3	593.6			15	24.58.65	16	569.0				35		08.38					
	34	13.46	35	535.0	36	593.7					17	567.7	18	589.1		40		08.55					
24 18	0	13.02	2	536.7	3	591.9					19	566.2				45		07.79					
24 19	0	12.89	2	538.8	3	587.6			20	25.03.47	22	560.3	23	588.9		50		07.64					
	20	14.40	22	536.4	23	588.2			25	02.93	27	555.1	28	585.7	26 17	0		08.48					
	30	14.33	32	536.5	33	"			30	02.59	32	555.2	33	582.5		20		07.35					
24 20	0	18.03	2	538.5	3	584.7			35	04.91	37	549.5	38	582.9	26 18	0		07.62					
24 23	0	17.09	2	532.5	3	590.6			40	06.66	42	541.7	43	584.5		15		08.08					
	30	16.41	32	534.4	33	601.2			45	07.18	47	534.5	48	586.5		25		10.80					
	43	16.35	44	539.1	45	598.3			50	07.87	52	533.5	53	586.5		30		11.41					
25 0	0	18.27	2	540.8	3	597.4			55	08.65	57	533.4	58	587.1		35		13.19					
	12	20.13	13	540.5	14	598.1	25	10	0	10.16	2	530.0	3	589.3		40		11.48					
25 1	0	20.27	2	521.7	3	609.3			10	11.57	12	535.1	13	588.8		45		12.92					
	30	21.66	31	533.6	32	621.2			20	14.43	22	535.1	23	585.8		50		11.27					
	37	524.5	38	623.4			25	11	0	12.87	32	539.1	33	581.2		55		12.01					
	40	19.64	42	526.7			45	12.95	47	533.0	48	583.4	26 19	0		12.85					5	11.44	
		53	538.8	54	625.4			10	11.93	12	536.1	13	587.0		10		12.04						
25 2	0	19.29	2	542.4	3	628.4			20	11.51	22	537.6	23	585.7		15		12.69					
	10	21.06	12	540.9	13	628.2			30	12.96	32	534.0	33	587.6		25		11.74					
	50	22.20	52	538.9	53	628.0			40	13.02	42	533.1				30		12.35					
25 3	0	22.13	2	537.9	3	626.2					52	536.7	53	583.7		45		12.55					
	40	22.64	42	518.4	43	640.6	25	12	0	10.20	2	546.9	3	577.2	26 20	0		12.69					
25 4	0	13.86	2	536.4	3	648.8			10	11.86	12	564.3	13	565.8		30		15.04					
	10	13.29	12	542.8	13	652.8			15	15.94	17	558.4	18	563.8	26 21	0		15.94					
	25	15.04	27	543.2	28	653.9			26	18.84	27	540.2	28	562.0									
	35	18.34	37	544.0	38	653.7			30	18.07	32	536.0	33	561.8	27 3	0	25	15.56					
	45	20.05	47	543.1	48	652.6			40	14.82	42	532.6	43	557.5		30		18.07					
	55	21.90	57	535.5	58	650.2									27	4	0	17.96					
25 5	0	21.06	2	533.4	3	646.7	26	13	0	25.14.18	2	530.0	3	524.7	27 6	0		15.27					
	10	18.94	12	527.3	13	642.9			10	11.95	12	532.0	13	529.0		15		15.09					
	20	17.56	22	531.1	23	642.3			15	11.14	17	534.7	18	531.1	27 7	0		14.04					
	25	17.06	27	529.9	28	644.4			20	11.59	22	530.4	23	535.3									
	30	17.10	32	527.4	33	647.5			30	09.39	32	527.9	33	539.4	27 10	0	25	01.41					
	35	14.64	37	528.5	38	643.2			35	08.66	37	531.3	38	542.0		5		01.48					
	40	10.97	42	540.1	43	640.8			40	09.02	42	533.9	43	545.5		10		02.55					
	45	11.14	47	545.3	48	640.3			55	10.70	57	536.9	58	554.8		20		04.55					
	50	11.10	52	544.2	53	641.5	26	14	0	12.49	2	537.3	3	558.2		30		05.65					
25 6	0	13.16	2	542.5	3	641.7			15	18.94	17	532.2	18	558.1		40		08.01					
	10	15.07	12	536.6	13	644.1			20	18.32	22	532.9				50		10.83					
	15	16.48	17	528.0	18	649.5			25	18.67	27	532.4				27 11	0	15.05					
	20	16.62	22	524.5	23	655.5			30	16.46	32	532.3				10		15.94					

BIFILAR. $k=0.000140$. BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

EXTRA OBSERVATIONS OF MAGNETOMETERS, JANUARY 26—29, 1845.

95

BIIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.		DECLINATION.			BIIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.		DECLINATION.			BIIFILAR Corrected.		BALANCE Corrected.	
Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.		
42	527.7	43	553.0	27	11	35	25	10.63	37	538.4	38	560.6	28	11	40	25	12.69	42	510.4	43	529.0
47	523.3	48	553.9			40		10.43	42	538.4	43	561.0			45	25	03.70	47	522.2	48	539.5
52	520.5	53	555.9	27	12	0		10.97	2	538.8	3	563.6			50	24	55.84	52	539.7	53	545.5
57	521.7	58	557.5			10		10.67	12	535.9	13	566.4			55	24	55.80	57	545.9	58	545.4
2	520.8	3	558.4			45		12.22	47	534.5	48	570.0	28	12	0	24	59.66	2	548.8	3	542.8
7	520.8	8	559.7	27	13	0		12.11	2	534.6	3	572.0			5	25	04.41	7	543.5	8	542.3
12	522.1														10		08.34	12	540.4		
17	523.8	18	562.7	28	4	0	25	19.34	2	540.1	3	603.0			15		11.62	17	528.3	18	544.6
22	525.6	23	563.2			15		17.06	17	543.1	18	614.4			20		10.43	22	523.6		
32	526.7	33	566.1	28	5	0		15.38	2	524.9	3	623.1			30		10.40	32	525.0	33	547.4
47	529.5	48	567.8			25		09.56	27	520.7	28	638.2	28	13	0		12.04	42	521.3	43	549.3
57	527.4	58	568.4			35		07.07	37	526.9	38	640.7			30		13.25	2	528.3	3	550.9
2	526.8	3	569.0			40		08.01	42	529.1	43	639.9	28	14	0		16.82	32	531.1	33	549.4
12	524.6	13	574.5			50		08.73	47	533.4	48	639.3			10		21.56	2	533.7	3	541.0
17	524.1	18	576.4	28	6	0	12.75	52	527.3	53	640.6			20		24.25	12	522.9	13	537.4	
27	520.2	28	578.2			10		12.95	57	527.6	58	640.8			40		23.12	22	520.8	23	534.7
37	521.7					20		14.30	22	531.3	23	635.0	28	16	0		14.15	2	533.8	3	560.0
						35		15.12	37	530.1	38	630.2	28	19	0		23.45	2	534.8	3	558.6
						28	7	0							5		23.54	7	536.1	8	556.1
54	529.8	55	580.6			20		16.26	2	528.0	3	633.4			10		23.49	12	536.4	13	552.6
2	529.7	3	583.8	*	35		10.41	37	536.8	38	636.1			15		24.35	17	537.1	18	549.0	
22	531.7	23	583.4			40		11.30	42	537.3	43	636.4			20		24.08				
2	533.1	3	580.0	28	8	0	09.10	2	540.4	3	641.4			30		24.32	32	541.3	33	541.2	
17	536.6	18	581.0			12		09.87	13	534.6	14	643.2			35		24.32	37	540.8	38	539.3
27	536.3	28	582.2			28		06.32	29	539.4			40		24.08	42	539.3	43	537.7		
32	539.0	33	582.3	*	30		12.04	32	530.9	33	645.0			50		24.22	52	541.9	53	535.1	
37	534.5					35		01.51	37	546.1	38	622.2	28	20	0		25.11	2	539.6	3	534.5
42	542.4	43	580.8			40		09.73	42	536.4	43	621.7			15		26.18	17	535.7	18	528.1
47	539.2	48	581.2			45		12.45	47	527.1	48	633.6			20		25.76				
52	542.9					51		07.74	52	533.1	53	622.1			26		25.24	27	536.6	28	525.6
57	542.6	58	579.2			55		10.14	57	534.7	58	623.7			30		26.13	32	534.4	33	525.7
2	536.2	3	579.9	28	9	0	12.15	2	531.0	3	632.5			35		24.86	37	532.5	38	525.2	
7	539.0	8	580.9			5		12.35	7	526.1	8	641.8			40		23.32	42	534.8	43	524.3
12	541.5					10		10.92	12	531.7	13	648.3			47		23.11				
17	540.9	18	580.5			15		10.97	17	527.3	18	652.5	28	21	5		24.84	7	536.5	8	529.2
27	541.8	28	580.8			21		08.03	22	531.4	23	654.7			20		25.67	22	539.6	23	525.7
32	539.4					25		06.76	27	527.3	28	654.4			30		23.85	32	541.3	33	522.7
47	541.3	48	583.7			30		03.92	32	528.9	33	650.3			35		22.58	37	541.3	38	521.6
2	539.6	3	587.5			35		03.67	37	530.3	38	646.6			39		546.0				
32	542.0	33	586.7			45		08.12	47	535.8	48	638.4			40		22.67	42	542.6	43	522.9
2	538.3	3	582.4			50		09.13	52	531.3	53	635.5			45		20.94	46	540.0		
						28	10	0	13.12	2	524.3	3	632.3			47		541.3	48	523.5	
2	546.2	3	616.3			10		12.40	12	513.1	13	625.1			50		20.92	51	543.3		
32	539.7	33	615.2			15		10.38	17	512.2	18	620.1	28	22	0		21.73	2	539.0	3	524.8
2	534.7	3	617.0			20		08.75	22	509.2	23	615.3			15		22.92	17	540.9	18	528.6
2	537.5	3	606.4			25		07.64	27	509.4	28	613.3			35		21.86	37	533.9	38	538.1
17	538.7	18	600.1			30		06.26	32	511.4	33	613.5			50		17.60	52	540.7	53	538.0
2	540.4	3	597.8			35		04.04	37	513.8	38	611.9	28	23	0	25	16.03	2	539.6	3	541.2
2	555.0	3	578.5			40		02.80	42	514.1	43	608.1			40		24.59.63	2	532.5	3	622.2
7	553.6	8	578.3			45		04.24	47	518.6	48	605.5	29	6	0		24.58.05	7	537.7	8	623.8
12	552.0	13	578.4			50		05.11	52	520.5	53	605.1			5		24.58.99	12	539.4		
22	542.6	23	580.3	28	11	0	06.19	2	523.1	3	603.1			10		24.58.99	17	538.7	18	623.3	
32	539.0	33	578.8			10		09.86	12	523.8	13	594.9			20		25.00.71	22	543.4	23	619.8
42	532.6	43	579.6			20		16.13	22	556.6	23	549.2			25		25.00.48	27	542.9		
52	533.0	53	580.4			25		18.68	27	549.0	28	524.9			30		24.59.97	32	540.2	33	620.2
2	543.4	3	567.3			30		22.50	32	537.7	33	519.4			40		25.02.12	42	535.5	43	633.3
12	540.4	13	563.4			35		19.73	37	521.4	38	520.1			45		24.56.23	47	546.7	48	628.8

BIIFILAR. $k=0.000140.$ BALANCE. $k=0.000010.$

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			
	d.	h.	m.	Min.	Sc. Div.	Min.	Mic. Div.		d.	h.	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	
29 6	50	25	03.81	52	545.3	53	632.9	30	5	40	25	14.13	42	536.8	43	594.0	5	30	25	21.86
	55	11.21	57	521.2	58	645.8	30	6	0		14.53	2	538.9	3	598.9		35		22.33	
	0	05.29	2	524.7	3	645.0			30		17.56	32	534.7	33	599.6		40		22.20	
	5	06.30	7	527.4	8	647.7	30	7	0		16.68	2	536.1	3	600.9		45		21.09	
	15	13.69	17	531.4	18	679.2	30	8	0	25	02.89	2	523.7	3	608.3		50		21.23	
	20	12.22	22	521.3	23	702.6			5	24	56.54	7	532.4	8	606.4		55		23.65	
	25	04.75	27	527.5	28	685.5			10		53.81	12	544.2	13	603.7	5	6	0	24.77	
	30	07.55	32	527.4	33	674.1			15		55.33	17	547.7	18	602.5		5		24.93	
	35	08.99	37	533.6	38	662.2			20		55.20	22	550.1	23	600.8		10		23.22	
	40	12.18	42	536.4	43	659.4	30	8	25		56.13	27	556.8	28	595.8		15		22.98	
29 8	50	18.30	52	529.6	53	659.7			30		57.10	32	558.4	33	592.2		20		23.12	
	0	16.68	2	531.2	3	656.3			35	24	58.45	37	559.9	38	589.3		25		21.03	
	10	14.67	12	529.3	13	654.2			40	25	01.78	42	556.6	43	586.5		30		20.32	
	30	17.37	32	534.1	33	633.2			45		03.92	47	551.2	48	584.6		35		18.18	
	0	14.43	2	527.0	3	616.8			50		05.56	52	545.9	53	583.3		40		17.60	
29 9	10	02.05	12	535.6	13	600.3			55		07.60	57	539.6	58	583.0		50		14.58	
	15	05.00	17	541.8	18	596.5	30	9	0		07.74	2	535.1	3	583.1	5	7	0	15.22	
	25	08.55	27	541.6	28	586.5			10		07.13	12	524.3	13	584.5		10		15.61	
	40	12.28	42	522.3	43	588.2			15		05.99	17	528.7	18	582.9		20		16.12	
	50	25.05-15	52	543.1	53	578.8			20		05.99	22	531.0				30		16.12	
29 10	55	24.57-24	57	577.9	58	560.2			41		10.70	42	529.8	43	584.5		40		16.32	
	0	25.03-60	2	584.2	3	544.8			45		11.71	47	528.7	48	584.2		50		16.28	
	5	10.14	7	569.3	8	539.4			55		12.08	57	527.8	58	583.5	5	8	0	16.10	
	10	14.46	12	552.1	13	531.6	30	10*	0		12.01	2	529.9	3	582.2	*	30		14.94	
	15	14.80	17	543.6	18	524.8			10		13.20	12	532.7	13	579.9	5	9	0	15.24	
29 11	20	16.82	22	537.0			20			13.61	22	531.8	23	579.0	*	30		11.68		
	30	17.49	32	523.0	33	526.6			30		13.63	32	532.4	33	576.9	5	10	0	12.89	
	45	15.47	47	526.2	48	522.7	30	11	0		14.03	2	535.9	3	570.6	*	10		13.12	
	0	12.80	2	533.3	3	516.0										5	11	0	13.16	
	10	16.89	12	521.2	13	509.5	31	2	0	25	18.54	2	531.3	3	586.6	*	10		12.38	
29 12	15	15.15	17	513.2	18	513.0			30		16.05	32	529.9	33	538.2		46		12.69	
	20	09.96	22	514.9	23	516.6	31	3	0		17.09	2	532.4	3	585.4	5	12	0	11.88	
	25	05.32	27	518.5	28	519.7										*	10		11.81	
	30	01.34	32	528.2	33	521.6	1	11	0	25	13.46	2	535.5	3	579.3		25		12.63	
	35	01.51	37	547.1	38	521.9			15		10.00	17	545.3	18	571.9		35		12.25	
29 13	40	04.95	42	539.2	43	523.0			30		11.71	32	536.2	33	573.8		40		11.37	
	45	08.46	47	536.2	48	519.7			50		12.95	52	544.9	53	568.3		45		11.07	
	50	09.86	52	532.0					55		13.86	57	545.1	58	566.7		50		10.36	
	0	09.69	2	526.2	3	529.5	1	12	0		14.06	2	543.5	3	565.2		55		09.84	
	5	08.65	7	525.9	8	532.0			12		12.46	13	539.7	14	563.5	5	13	0	09.46	
29 14	10	07.44	12	528.8	13	532.5			30		11.14	31	536.8	32	565.2	*	5		10.09	
	20	09.86	22	529.7	23	536.1			47		11.54	48	533.3	49	567.0		10		06.88	
	25	10.43	27	529.9	28	536.8											15		08.06	
	30	11.46	32	530.9	33	537.7	3	15	0	25	07.94	2	535.3	3	558.6		20		06.09	
	40	12.93	42	530.3	43	540.0			30		11.24	32	535.7	33	563.3		25		04.14	
29 15	50	14.43	52	528.5	53	543.2	3	16	0		12.11	2	535.5	3	562.1		30		04.58	
	0	12.73	2	521.9	3	547.4											35		06.34	
	10	09.10	12	525.8	13	549.9	4	8	0	25	13.23	2	531.0	3	575.4		40		06.32	
	20	11.10	22	527.3	23	556.1			15		10.94	17	531.8	18	579.1		45		06.59	
	30	13.09	32	526.2	33	559.7	4	9	0		13.14	2	537.1	3	580.2		50		06.39	
29 16	0	14.87	2	528.9	3	564.1										5	14	0	08.88	
	10	15.07	12	529.2	13	566.9	5	4	0	25	21.50	2	546.9	3	597.1		10		08.79	
	0	16.26	2	528.0	3	570.3			6		23.88	7	543.7	8	600.0		30		09.19	
	10	17.09	12	529.4	13	570.3			10		23.88	12	541.1	13	601.7	5	15	0	11.77	
	15	17.51							20		23.54	22	543.7	23	603.0	5	19	0	18.63	
29 17	0	12.01	2	532.2	3	567.7	5	5	0		27.42	2	535.5	3	640.1		10		19.12	
	15	12.82	16	530.1	17	571.9			5		24.89	7	535.8	8	643.9		20		18.40	
	0	12.29	2	530.4	3	575.5			10		25.09	12	542.1	13	655.7		30		16.57	
	15	12.29	2	530.4	3	575.5			15		26.23	17	535.6	18	668.5		40		15.01	
	30 5	0	25	16.62	2	529.6	3	591.6			20		25.49	22	531.0	23	682.2	5	20	0
			32	534.6	33	597.5			25		23.27	27	527.9	28	687.0	5	22	0	19.21	

BIFILAR. $k=0.000140$. BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

BIFILAR Corrected.	BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.						
Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	'	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	'	Min.	Sc. Div.	Min.	Mic. Div.			
32	526.8	33	689.4	5	22		30	25	25.83	32	509.3	33	580.4	12	15	10	25	11.71	12	534.9	13	523.8	
37	529.6	38	690.8				46	23.95		47	514.1	48	581.0			30		11.77	32	536.1	33	530.0	
42	531.2	43	695.8	5	23		0	23.72		2	520.2	3	583.7	12	16	0	10.21		2	537.3	3	536.7	
47	534.0	48	698.3				20	20.38		22	527.2	23	579.1										
52	537.8	53	705.8				34	20.18		35	533.4	36	579.0	13	14	0	25	16.50	2	541.9	3	553.1	
57	533.1	58	721.6	6	0		0	22.01		2	528.3	3	585.3			30		12.28	32	536.5	33	551.8	
2	530.8	3	746.0											13	15	0		13.90	2	537.9	3	551.1	
7	524.4	8	754.4	7	10		0	25	05.29	2	527.2	3	587.8										
12	526.5	13	763.2				10	06.76		12	526.1	13	589.6	17	6	0	25	09.33	2	526.8	3	584.3	
17	529.0	18	769.5				20	06.63		22	527.1	23	594.1			5		06.74	7	530.8	8	585.7	
22	526.4	23	778.0				30	10.83		32	533.5	33	592.4			10		06.46	12	535.4	13	586.9	
27	529.7	28	784.5				40	13.84		42	540.4	43	582.9			15		06.79	17	537.5	18	586.6	
32	526.8	33	787.7	7	11		0	11.57		2	531.6	3	575.4			31		12.78	32	537.9	33	585.9	
37	526.8	38	777.9				10	09.35		12	533.7	13	574.4			35		13.83	37	534.6	38	585.4	
42	525.8	43	769.6				15	09.47		17	533.3	18	575.3			45		15.24	47	532.8	48	584.8	
52	524.5	53	739.3	7	12*		0	13.47		2	535.5	3	574.6			55		16.28	57	532.6	58	584.4	
2	528.9	3	717.3	7	15		0	13.07		2	535.8	3	570.5	17	7	0		16.06	2	533.2	3	583.5	
12	530.9	13	701.3		*		10	14.11		12	534.7	13	571.6										
22	531.3	23	688.7				15	14.40		17	535.2			19	13	0	25	12.33	2	547.6	3	528.5	
32	539.1	33	664.9	7	16		0	14.98		2	538.0	3	566.6			11		12.11	12	545.8	13	527.5	
42	537.1	43	655.7		*		9	13.52		10	538.9	11	564.6			20		11.57	22	542.6	23	527.0	
52	534.4	53	649.0	7	17		0	12.15		2	535.2	3	568.3			40		11.54	41	540.9	42	528.5	
2	532.7	3	645.3											19	14	0		11.22	2	541.3	3	529.4	
32	534.8	33	637.0	9	13		0	25	09.42	2	539.5	3	561.1										
2	536.9	3	630.5				15	10.77		17	538.4	18	561.0	20	1	0	25	21.91	2	555.1	3	525.4	
32	537.7	33	622.6	9	14		0	04.68		2	532.3	3	556.5			10		21.90	12	545.1	13	530.9	
2	534.4	3	626.5				10	06.57		12	529.6	13	554.6			26		24.05	27	549.0	28	533.0	
12	534.7	13	626.5				20	10.58		22	527.8	23	562.2			45		18.21	47	529.7	48	539.7	
2	535.9	3	612.7				30	14.11		32	534.6	33	558.8	20	2	0		19.39	2	538.4	3	541.8	
12	534.9	13	613.4				45	12.70		47	537.5	48	549.1			30		23.34	32	553.1	33	543.9	
47	531.5	48	615.1	9	15		0	08.56		2	535.3	3	545.7	20	3	0		22.03	2	544.1	3	547.1	
2	533.6	3	609.4				15	11.54		17	534.0	18	544.3										
12	528.1	13	613.1				30	11.84		32	530.1	33	547.8	20	10	0	25	12.31	2	549.9	3	565.1	
27	531.0	28	610.7	9	16		0	13.17		2	533.9	3	547.5			5		05.42	7	553.1	8	565.9	
37	532.4	38	605.6	9	18		0	15.49		2	527.7	3	556.5			10		25.01.81	12	557.8	13	564.8	
42	529.7	43	603.5				10	16.82		12	525.9	13	554.2			15		24.58.20	17	552.0	18	565.0	
47	526.8	48	602.8	9	19		0	14.70		2	536.8	3	548.2			20		56.10	22	543.7	23	567.9	
52	525.5	53	601.2				15	12.72		16	539.7	17	548.8			25		53.41	27	537.2	28	570.9	
57	526.0	58	600.2				38	12.18		39	541.2	40	552.7			30		52.53	32	533.6	33	574.4	
2	528.6	3	599.0	9	20		0	12.29		2	541.4	3	557.0			35		53.51	37	533.8	38	577.2	
7	528.1	8	598.0											40				56.47	42	534.3	43	578.8	
12	538.4	13	589.4	10	13		0	25	12.43	2	535.5	3	562.7			45		24.59.77	47	532.5	48	580.1	
17	536.0	18	583.6				5	12.85		7	544.3	8	559.8			50		25.02.66	52	530.6	53	580.4	
22	535.7	23	582.3				10	14.30		12	544.9	13	558.2	20	11	0		07.92	2	528.3	3	578.5	
27	535.0	38	580.5				30	07.46		32	539.0	33	555.8			10		10.50	12	528.6	13	575.7	
32	534.4	33	581.6	10	14		0	14.11		2	535.1	3	556.3			20		10.60	22	531.1	23	572.2	
37	533.4	38	584.2	10	15		0	16.55		2	539.8	3	556.2			30		10.09	32	535.1	33	569.8	
42	530.8	43	584.9				9	17.12		10	540.7	11	553.9	20	12	0		06.77	2	540.6	3	571.0	
47	532.4	48	584.3	10	16		0	13.69		2	531.4	3	559.0			15		09.32	17	532.4	18	572.4	
52	535.5	53	583.1											20				08.85	2	542.9	3	564.6	
2	531.8	3	585.1	11	11		0	25	10.85	2	537.4	3	570.7			30		07.84	32	530.7	33	572.8	
12	528.5	13	585.0	15					11.59		16	539.3	17	569.9	20	14	0		09.42	2	533.7	3	572.3
31	527.0	32	588.6	11	12		0	13.79		2	541.3	3	563.7	20	16	0		14.40	2	525.6	3	555.8	
2	530.7	3	592.3											10				16.18	12	528.2	13	553.0	
2	530.0	3	583.8	12	13		0	25	09.26	2	538.2	3	559.3			20		18.47	22	532.2	23	546.9	
12	530.9	13	581.4				20	08.97		22	535.3	23	556.7			25		21.12	27	527.0	28	543.6	
22	532.4	23	576.5	12	14		0	14.43		2	554.6	3	536.2			30		22.67	32	524.1	33	541.3	
32	535.4	33	572.0				10	15.74		12	549.7	13	530.4			35		22.57	37	523.5	38	539.2	
42	537.1	43	565.5				20	16.19		22	546.3	23	525.1			40		23.66	42	524.2	43	530.7	
2	534.7	3	570.8				30	15.20		32	539.8	33	522.0			45		23.14	47	526.3	48	528.2	
2	510.9	3	579.9	12	15		0	11.44		2	534.4	3	521.7			50		22.57	52	526.7	53	521.0	

BIFILAR. $k=0.000140$. BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			
d. h. m.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h. m.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h. m.	Min.	°	'	
20 16	55	25	20.11	57	530.9	58	515.1	23 12	58	24	51.66	2	528.1	3	505.4	23 19	30	25	16.53	
20 17	0	18.13	2	534.7	3	511.3		23 13	0	52.87		7	533.7	8	511.3		35		17.06	
	10	15.11	12	533.5	13	506.9			5	55.44		12	531.9	13	518.4	23 20	50		14.82	
	20	12.04	22	534.8	23	507.9			10	24	58.47	17	533.0	18	523.3		20		14.04	
	30	11.96	32	532.0	33	509.5			15	25	01.98	22	529.4	23	527.1	23 21	0		14.73	
20 18	0	08.34	2	534.5	3	514.0			20	04.41		27	525.2	28	525.7				15.41	
	10	07.38	12	539.0	13	517.8			25	05.53		32	526.8	33	523.5	24 4	0	25	06.06	
	20	08.08	22	539.6	23	520.3			30	05.63		37	528.6	38	521.2		5		08.79	
20 19	0	09.84	2	533.4	3	524.8			35	05.60		43	527.8	44	521.3		10		09.35	
	36	15.27	37	527.1	38	529.9			41	07.17		47	526.0	48	521.4		15		10.27	
	40	15.61	42	529.2	43	529.5			45	08.50		52	526.0	53	521.3		30		12.31	
20 20	0	17.93	54	534.4	55	526.0			50	08.70		57	526.1	58	522.7		35		12.62	
	12	18.75	2	529.2	3	527.9			55	09.76		0	09.30	2	528.0	3	525.1	47	14.26	
	27	17.96	28	531.1	29	528.9			10	09.12		12	529.3	13	526.9	24 5	0		13.46	
	40	19.91	41	535.3	42	527.2			35	10.80		37	518.0	38	528.1		31		13.39	
20 21	0	19.44	2	535.2	3	527.7			40	09.46		42	516.9	43	527.6	24 6	0	25	14.15	
	15	20.97	17	540.2	18	526.6			45	09.10		47	518.8	48	529.2		58	24	47.33	
	20	19.58	22	538.6	23	526.2			50	10.18		52	524.6	53	527.7	24 7	0		48.81	
20 22	0	16.72	2	534.6	3	532.9			55	13.69		57	521.4	58	524.6		5		53.95	
	38	13.25	39	529.2	40	541.0			0	15.72		2	519.0	3	518.6		10		56.67	
20 23	0	18.01	2	528.1	3	542.4			5	17.83		7	519.5	8	510.7		15		59.50	
21 1	0	22.15	2	526.7	3	554.3			10	18.82		12	521.0	13	499.5		20		59.43	
	20	22.67	22	541.7	23	551.2			15	18.63		17	519.1	18	489.6		25	24	59.93	
	30	21.37	29	525.1	32	535.8			20	17.68		22	517.9	23	482.4		30	25	01.07	
				32	535.8	33	554.1			25	16.97		27	517.1	28	479.3		35	25	00.77
				34	536.5				30	15.54		32	520.6	33	482.6		50	24	54.21	
				35	21.88	37	541.2			35	16.41		37	523.8	38	485.8		55		52.17
				40	23.01	42	545.5			40	16.46		42	525.0	43	482.8	24 8	0		50.73
				45	24.08	47	542.9			45	17.13		47	521.3	48	478.9		* 5		52.21
				55	21.86	57	534.9			50	18.10		52	516.4	53	477.9		10		53.00
21 2	0	20.63	2	531.8	3	554.8			55	18.00		57	514.3	58	478.1		15		52.55	
	10	18.84	12	534.4	13	555.7			0	17.36		2	513.4	3	476.7		20		49.54	
	20	19.28	22	545.2	23	557.9			5	15.99		7	509.4	8	474.1		25		46.83	
	30	23.04	32	544.1	33	564.8			10	14.44		12	508.3	13	471.6		30	24	55.31	
	41	22.71	42	538.3	43	569.4			15	12.63		17	513.9	18	471.8		35	25	01.14	
	45	21.70	47	536.0	48	572.0			20	12.33		22	512.8	23	472.5		40		08.61	
21 3	0	17.70	2	530.2	3	578.2			25	13.19		27	513.4	28	474.7		45		10.13	
	30	15.27	31	542.3	32	583.1			30	15.14		32	512.6	33	475.9		50		21.93	
21 4	0	17.00	2	541.6	3	576.5			35	15.88		37	516.3	38	474.4		55		12.55	
21 6	0	11.37	2	529.7	3	596.6			40	16.23		42	522.3	43	473.1		0		09.33	
	10	25.07	12	528.7	13	598.2			45	16.65		47	527.2	48	472.8	24 9	*		16.19	
	30	24.59	32	534.1	33	599.2			50	17.29		52	530.5	53	468.5		10		04.55	
	35	58.42	37	534.9					55	18.45		57	528.3	58	463.2		18		03.30	
	45	57.24	47	527.7	48	606.3			0	18.61		2	529.7	3	458.2		20		02.26	
	50	57.41	52	529.0					10	17.10		12	536.8	13	458.8		25		02.67	
21 7	0	24.59	41	2	526.5	3	610.0			15	16.12		17	538.8	18	458.5		32	25	03.02
	10	25.02	45	12	529.8	13	609.6			20	14.58		22	535.6	23	462.0		35	24	59.93
	30	08.75	32	534.3	33	603.4			30	14.01		32	528.7	33	465.7		40	24	51.02	
21 8	0	14.68	2	539.1	3	588.5			46	08.08		47	534.9	48	476.2		45	24	58.25	
21 9	0	03.23	2	546.3	3	577.7			50	08.95		52	533.6	53	481.2		50	25	09.87	
	10	06.06	12	543.8	13	575.2			55	09.69		57	533.6	58	482.4		55		13.94	
	35	06.29	37	544.6	38	564.9			0	11.71		2	528.7	3	484.7		0		19.66	
21 10	0	14.53	2	537.0	3	554.1			5	09.44		7	535.0	8	483.0	24 10	*		17.89	
									10	10.56		12	531.8	13	482.7		5			
									20	08.03		22	538.0	23	487.0		10		13.44	
22 10	0	25	06.63	2	545.4	3	576.2			25	08.95		27	533.0	28	491.3		15		09.82
	10	09.53	12	538.7	13	576.1			30	09.40		32	531.3	33	493.5		20		08.34	
	20	09.89	22	535.9	23	573.9			0	14.57		2	533.8	3	498.0		25		10.28	
	40	10.75	42	535.8	43	570.8			10	14.53		12	532.1	13	498.5		30		10.70	
22 11	0	10.36	2	533.0	3	571.5			26	15.32		27	531.4	28	502.0		35		09.56	

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.
 Feb. 23^d 18^h 20^m. The declination and bifilar magnets have been moving backwards and forwards through a few divisions.
 Feb. 24^d 4^h 5^m. The instruments have evidently been slightly disturbed throughout the day.
 Feb. 24^d 8^h 40^m. Bifilar vibrating 13 sc. div.

BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.				BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.				BIFILAR Corrected.		BALANCE Corrected.	
Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	Min.	Sc. Div.	Min.	Mic. Div.		
32	530.9	33	502.6	24	10	45	25	05.36	47	522.8	48	487.2	25	10	25	17.44	12	541.5	13	616.0	
37	527.7	38	504.3	24	11	0	05.79	2	516.8	3	492.8			15	17.29	17	548.5	18	616.5		
52	527.4	53	504.8			*	10	03.07	12	526.0	13	494.2			20	17.36	22	551.0	23	616.6	
2	529.3	3	507.5				15	03.20	17	530.0	18	492.1			25	17.70	27	546.3	28	616.2	
21	531.0	22	511.7				20	06.46	22	534.9	23	490.4			30	18.10	32	539.3	33	616.3	
2	532.6	3	518.6				25	09.03	27	533.5	28	490.3	25	5	0	15.64	2	544.9	3	607.9	
							30	09.35	32	532.3	33	487.9			17	16.43	18	542.1	19	601.8	
2	547.1	3	617.0				35	08.23	37	532.2	38	485.7			20	16.08	22	544.1	23	600.0	
7	551.0	8	615.2	24	12	0	08.73	2	524.5	3	471.1					32	527.5				
12	544.5	13	614.0			*	10	13.22	12	525.3	13	474.2			35	13.66	36	530.8	37	601.7	
17	544.5	18	611.2				20	15.61	22	533.9	23	458.4					47	546.2	48	605.5	
32	544.8	33	606.1				25	14.98	27	541.6	28	447.6					49	545.6			
37	546.1	38	604.3				30	14.11	32	545.0	33	438.1									
48	545.4	49	600.3				35	14.57	37	541.5	38	433.4			50	08.79	52	542.7	53	607.8	
2	542.1	3	595.3				40	14.37	42	537.4	43	433.2			55	06.12	56	544.1	57	607.4	
32	541.0	33	589.5				45	13.76	47	533.9	48	433.6	25	6	0	25	05.05	2	543.5	3	609.0
2	538.1	3	581.6				50	13.63	52	530.1	53	436.8			10	24	58.32	12	553.0	13	609.3
59	554.1			24	13	*	0	11.66	2	520.9	3	444.6			15	24	58.82	17	551.8	18	609.4
2	558.2	3	587.9			*	10	14.50	12	531.0	13	451.4			20	25	02.82	22	542.6	23	612.7
7	559.1	8	586.0				20	03.99	22	537.0	23	454.2			25	03.84	27	537.6	28	603.5	
12	561.9	13	582.1				25	00.84	27	538.2					30	04.15	32	538.7	33	614.0	
17	559.1	18	576.6				30	02.75	32	539.9	33	454.1			40	05.58	42	533.1			
22	561.4	23	571.5				40	04.08	42	536.8	43	457.6			50	04.61	52	530.0	53	614.7	
27	557.0	28	569.4				55	04.48	57	530.7	58	463.7	25	7	0	06.97	2	528.3	3	613.8	
32	551.0	33	569.1	24	14	0	04.61	2	529.2	3	465.8			22	02.50	23	528.1	24	611.1		
37	548.3	38	567.8			*	10	04.84	12	526.4	13	467.3			30	00.53	32	535.5	33	611.4	
52	526.5	53	578.0			*	20	04.31	22	522.3	23	471.5			45	04.95	47	533.3	48	609.4	
57	529.9	58	576.7				30	04.58	32	516.3	33	472.5	25	8	0	06.63	2	538.1	3	603.8	
2	534.3	3	575.9				40	08.01	42	510.5	43	477.2			30	11.37	32	530.9	33	604.4	
7	537.8	8	574.8				45	08.34	47	513.9	48	480.5	25	9	0	13.02	2	540.4	3	593.3	
12	531.7	13	573.8				50	08.85	52	516.2	53	478.4	25	11	0	13.22	2	530.4	3	527.0	
17	526.5	18	576.1	24	15	0	10.20	2	520.3	3	478.8			10	12.38	12	534.5	13	522.0		
22	528.5	23	572.1				10	12.04	12	525.3	13	487.8			15	14.50	17	542.4	18	515.8	
27	548.7	28	564.5				22	14.80	23	530.3	24	491.2			20	16.15	22	548.4	23	506.7	
32	548.4	33	561.7				30	18.43	32	524.1	33	493.2			25	16.57	27	553.7	28	495.2	
37	546.3	38	559.0				35	18.82	37	521.0	38	489.4			30	16.15	32	556.4	33	484.7	
42	546.2	43	552.8				40	17.53	42	520.9	43	485.0			35	15.83	37	559.0	38	477.6	
47	551.6	48	539.9	24	16	0	12.35	2	533.1	3	487.6			40	15.79	42	559.7	43	470.2		
52	517.2	53	551.1				30	11.03	32	530.1	33	510.2			45	16.52	47	559.2	48	462.9	
54	509.6			24	17	0	09.03	2	518.4	3	513.7			50	16.15	52	554.3	53	457.2		
57	513.1	58	550.7				20	15.18	22	511.0	23	503.1			55	15.67	57	550.4	58	453.5	
2	515.5	3	553.6				35	16.38	37	517.2	38	485.7	25	12	0	14.84	2	544.6	3	450.5	
7	516.2	8	556.4	24	18	0	16.28	2	527.9	3	471.3			5	15.04	7	537.6	8	449.4		
12	518.6	13	557.2	24	19	2 ¹ ₂	10.31	4	532.3	5	474.8			10	15.58	12	527.4	13	453.7		
19	518.9					15	10.09	16	528.8	17	482.8			22	10.50	23	502.2	24	466.4		
22	523.3	23	556.9				36	12.15	37	528.8	38	494.8			25	05.87	27	509.1	28	468.8	
27	532.4	28	550.5	24	20	0	14.18	2	523.0	3	511.1			30	25.00.84	32	519.0	33	468.3		
33	521.7					15	12.02	16	529.2	17	511.1			35	24.59.95	37	524.0	38	466.4		
37	520.2	38	538.7	24	21	0	17.89	2	528.7	3	518.3			40	25.01.66	42	525.4	43	469.1		
42	554.4	43	518.0				10	18.03	12	522.6	13	520.4			45	05.45	47	524.3	48	471.5	
47	564.4	48	499.5				20	16.95	21	523.5	22	521.1			50	07.40	52	523.3	53	472.9	
52	535.5	53	493.1	24	22	0	15.05	2	521.0	3	531.1			55	08.21	57	521.6	58	471.9		
57	540.2	58	488.3										25	13	0	06.97	2	528.3	3	467.9	
2	521.2	3	480.9	25	3	0	25	15.72	2	547.4	3	616.6			5	04.98	7	534.6	8	464.9	
7	516.3	8	477.8				18	17.49	19	542.2	20	615.6			10	04.10	12	538.4	13	465.2	
12	515.6	13	468.9				21	17.19	22	536.4	23	614.4			15	05.32	17	535.9	18	465.6	
17	520.5	18	477.9				25	19.48	27	536.3	28	614.0			20	06.71	22	529.5	23	466.5	
22	523.6	23	474.0				30	17.98	32	535.7	33	609.4			51	10.83	52	511.6	53	480.9	
27	516.7	28	474.5				49	21.03	50	546.3	51	607.7			55	10.41	57	513.0	58	478.4	
32	513.0	33	480.2				52	21.26	53	546.9	54	608.7	25	14	0	09.82	2	520.0	3	479.3	
37	511.4	38	483.2	25	4	0	21.10	2	532.3	3	616.0			10	11.42	12	521.5	13	482.1		

BIFILAR. $k=0.000140$. BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

Feb. 25^d 3^h 20^m. Bifilar vibrating 15 sc. div.Feb. 25^d 11^h 12^m. Bifilar vibrating 10 sc. div.Feb. 25^d 11^h 17^m. Bifilar vibrating 10 sc. div.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.			BALANCE Corrected.			Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.			BALANCE Corrected.			Gött. Mean Time.	DECLINATION.		
d. h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	Min.	Sc. Div.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	Min.	Sc. Div.	Min.	°	'		
25 14	15	25	11.51	17	525.1	18	483.5	26	15	40	25	14.40	42	533.9	43	510.5	28	14	25	25	06.19		
25 15	0	14.94	2	522.7	3	483.6	26	16	0	12.62	2	534.5	3	522.3			35		05.69				
	10	16.19	12	519.4	13	487.5			31	11.98	32	532.0	33	533.5			46		06.53				
	15	15.67	17	520.6	18	490.0	26	17	0	12.38	2	535.5	3	539.0			55		08.45				
25 16	0	14.51	2	528.8	3	500.5			25	22.03	2	541.2	3	560.8	28	15	0	08.82					
25 18	0	08.72	2	524.8	3	527.5	27	2	0	25	22.03	13	18.27	14	530.2	15	562.1	3	9	0	25 09.35		
	10	10.48	12	522.0	13	530.7			27	3	0	17.81	2	535.0	3	567.2			5		04.81		
	15	11.84	17	521.8	18	529.6	27	8	0	25	01.59	2	549.2	3	575.1			10		06.81			
25 19	0	17.93	2	534.5	3	509.7			10	24.59.79	12	546.2	13	573.8			15		09.42				
	15	15.81	17	541.1	18	502.0	27	9	15	24.59.70	17	541.9	18	574.8			25		06.58				
	30	14.71	32	540.0	33	505.1			20	25.01.22	22	536.8	23	578.7			35		10.30				
25 20	0	13.19	2	537.9	3	507.0			30	24.58.76	32	530.7	33	580.5	3	10	0	12.33					
26 1	0	25 17.46	2	511.6	3	563.8			35	56.10	37	533.1	38	578.5									
	15	14.46	17	524.5	18	573.9			40	54.59	42	535.1	43	578.5	4	10	0	25 10.83					
	20	21.46	22	523.7	23	577.1			45	52.82	47	534.5	48	577.8			10		12.28				
	30	21.71	32	529.0	33	581.0			50	50.90	52	537.2	53	575.2			15		12.36				
26 2	0	22.89	2	523.0	3	582.3			55	49.91	57	543.1	58	574.4	4	11	0	13.37					
26 3	0	23.54	2	541.8	3	591.3	27	9	0	52.40	2	544.3	3	574.4			10		11.81				
	10	23.48	12	522.9	13	594.9			5	55.77	7	541.7	8	574.2			20		11.00				
	30	25.06	32	532.0	33	616.2			10	24.57.37	12	539.9	13	573.5	4	12	0	11.24					
	35	21.53	37	522.0	38	628.2			22	25.01.46	23	535.1	24	570.0			5	10	1	25 10.70			
	40	11.24	42	527.8	43	637.3			30	03.94	32	532.6	33	567.2			10		12.11				
	45	08.31	47	532.9	48	651.8			55	04.42	56	523.2	57	565.7			15		12.55				
	50	06.97	52	532.4	53	660.9	27	10	0	04.32	2	526.5	3	565.6	5	11	0	12.23					
26 4	0	03.34	2	546.6	3	668.4			10	06.12	12	533.0	13	563.8									
	10	06.06	12	549.2	13	668.8	27	11	0	10.25	2	531.4	3	560.8	7	10	0	25 09.49					
	25	13.49	27	541.8	28	651.7	27	12	0	08.95	2	534.5	3	550.3			10		10.40				
	30	14.06	32	542.4	33	644.2			33	13.52	34	529.7	35	551.3			15		10.34				
	40	16.59	42	545.7	43	632.7	27	13	0	14.13	2	529.0	3	543.8			20		10.87				
	50	17.67	52	540.2	53	623.4	27	14	0	19.48	2	524.1	3	502.4			25		11.77				
26 5	0	17.33	2	539.9	3	618.6			10	16.45	12	526.6	13	494.6			30		12.04				
	25	16.15	27	537.0	28	611.9			20	14.73	22	530.3	23	495.0	7	11*	0	10.30					
26 6	0	14.71	2	536.1	3	603.5			30	13.52	32	529.9	33	499.3									
	27	15	0	11.41	2	534.8	3	518.0	9	14	0	25 14.75											
26 10	0	25 11.64	2	541.8	3	550.8			28	6	0	25 07.47	2	539.6	3	596.4			10		17.26		
	10	10.23	12	542.5	13	548.8			10	09.15	12	536.6	13	595.9			15		17.22				
	15	10.48	17	543.2	18	548.7			30	12.11	32	526.6	33	591.3			20		15.85				
26 11	0	09.19	2	533.3	3	554.3			0	12.95	2	542.4	3	582.0			25		13.93				
	40	07.99	41	538.1	42	554.9	28	7	0	25 01.95	2	543.0	3	568.9			30		12.45				
	52	13.39	53	536.0	54	544.2			5	01.01	7	542.6	8	568.1			35		11.81				
	55	13.56	57	530.1	58	541.6	28	10	0	02.89	17	534.1	18	566.4	9	15	0	11.75					
26 12	0	12.89	2	525.4	3	538.6			20	02.23	22	529.3	23	566.5			10		12.55				
	10	10.70	12	522.1	13	538.9			25	01.92	27	527.3					15		12.69				
	15	11.51	17	531.2	18	539.2			30	02.37	32	526.5	33	567.5			20		15.88				
	20	14.94	22	535.6	23	536.0			35	03.58	37	529.2	38	567.7			25		20.22				
	25	16.92	27	536.5	28	530.3			40	05.70							30		20.79				
	30	17.36	32	538.7	33	523.1			10	10.88	12	533.7	13	565.9			35		21.19				
	35	17.83	37	537.6	38	517.1			31	11.55	32	529.9	33	568.2			40		20.29				
	40	17.29	42	536.9	43	512.6	28	11	0	09.40	2	531.2	3	566.5			45		19.51				
	51	13.86	52	533.1	53	509.9			10	10.88	12	533.7	13	565.9			50		17.49				
26 13	0	12.72	2	533.2	3	512.8			31	11.99	2	534.4	3	565.3			50		14.53				
	20	09.93	22	536.3	23	520.5	28	12	0	10.94	2	529.4	3	561.8	9	16	0	14.53					
26 14	0	11.42	2	529.4	3	533.1	28	13	0	14.10	12	526.6	13	559.7			10		11.74				
26 15	0	18.47	2	530.2	3	506.8			10	05.60	2	533.0	3	504.2			15		10.63				
	6	16.93	7	531.7	8	499.8	28	14	0	05.05	7	530.8	8	503.0			20		09.62				
	15	16.53	17	538.2	18	499.7			5	05.05	17	527.5	18	504.9			25		09.46				
	20	17.39	22	536.2	23	500.9			10	05.05	12	528.5	13	504.9			30		09.29				
	30	15.22	32	533.6	33	504.0			15	05.11	17	527.5											

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

Feb. 25th 18^h 10^m. The magnets evidently disturbed throughout the night, but within small limits.March 4^d 10^h 15^m. Instruments slightly disturbed.

BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.	BALANCE Corrected.								
Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.						
27	522-5	28	512-4	9	16	35	25 09-44	37	534-9	38	527-7	14	7	0	25 04-55	2	528-8	3	604-3		
37	524-5	38	516-6			40	09-35	42	534-5	43	530-6			10	00-87	12	536-9	13	601-0		
47	526-1	48	522-0	9	17	0	08-99	2	534-8	3	538-0			15	00-80	17	538-7	18	600-7		
57	526-5	58	525-2			10	1	0	25 18-63	2	527-6	3	551-8	14	8	0	09-93	2	534-0	3	593-1
2	528-0	3	527-2					18	20-92	19	532-8	20	554-6	14	9	0	07-04	2	532-3	3	581-5
2	540-1	3	571-7			40	20-50	42	530-9	43	557-4			10	06-86	11	532-4	12	581-7		
7	552-5	8	562-4	10	2	0	19-37	2	530-0	3	557-6	14	10	0	02-08	2	542-8	3	556-7		
12	558-1	13	559-2									12		04-07	14	546-0	15	555-0			
17	551-8	18	559-3	10	8	0	25 09-69	2	538-9	3	565-2			20	05-58	22	540-8	23	553-6		
27	549-2	28	555-5			10	10-09	12	540-5	13	564-9			30	07-17	32	537-9	33	552-5		
37	546-8	38	554-7	10	9	0	11-98	2	539-3	3	561-4	14	11	0	10-67	2	539-8	3	544-5		
52	537-7	53	559-5											10	08-65	12	537-2	13	543-1		
2	536-1	3	562-5	11	7	0	25 07-57	2	536-2	3	573-9			20	07-17	22	538-1	23	541-0		
2	541-3	3	550-3			10	09-15	12	537-6	13	574-7			30	07-04	32	538-4				
12	546-6	13	551-7			20	09-69	22	540-9	23	570-6	14	12	0	06-66	2	533-1	3	539-2		
17	543-7	18	552-1			25	09-96	27	541-5	28	569-4			15	10-47	17	532-4	18	540-1		
2	540-9	3	550-0			30	09-98	32	542-9	33	567-8	14	13	0	11-49	2	535-2	3	531-6		
12	541-4	13	547-1	11	8	0	11-21	2	541-4	3	565-8	14	14	0	10-16	2	530-4	3	537-5		
22	539-9	23	546-4	11	10	0	06-07	2	535-7	3	556-1			40	11-48	42	528-6	43	542-9		
2	540-6	3	540-3			5	05-11	7	540-4	8	554-6	14	15	0	13-76	2	530-6	3	542-0		
2	543-4	3	545-8			10	06-01	12	540-6	13	554-8			10	15-41	12	534-7	13	527-8		
12	539-5	13	548-5			15	06-32	17	540-9	18	554-8			20	14-92	22	534-5	23	522-4		
17	539-1	18	549-4	11	11	0	07-98	27	540-1	28	555-3	14	17	0	10-97	2	532-4	3	527-7		
2	541-1	3	546-1					2	536-4	3	551-9										
2	540-6	3	571-5	13	16	0	25 13-25	2	545-2	3	536-9			15	6	0	25 05-02	2	540-4	3	577-9
12	539-6	13	570-3			38	08-99	39	540-3	40	534-8			10	02-79	12	544-1	13	579-2		
17	536-9	18	571-4	13	17	0	08-45	2	543-6	3	535-3			20	03-70	22	547-5	23	582-7		
22	535-3	23	572-3			26	11-24	27	544-3	28	536-2			35	06-32	37	545-6	38	588-3		
27	535-8	28	571-7	13	18	0	11-14	2	543-6	3	536-6	15	7	0	10-81	2	540-3	3	592-8		
32	536-5	33	571-5	13	20	0	11-21	2	530-0	3	545-4			15	12-58	17	544-0	18	588-2		
2	539-6	3	560-4			10	12-58	12	524-0	13	547-5			50	12-53	52	536-7	53	586-7		
2	536-6	3	552-6			18	15-11	19	527-1	23	546-9	15	8	0	12-04	2	542-9	3	583-1		
2	539-3	13	549-7			20	12-93	22	523-2	23	546-9										
17	541-4	18	545-7			25	13-76	27	521-7	28	546-3	16	13	0	25 04-71	2	527-7	3	482-0		
22	542-1	23	540-3			30	15-36	32	520-6	33	546-2			10	03-34	12	526-6	13	477-4		
27	541-5	28	537-3			35	15-81	37	516-0	38	546-8			20	05-29	22	522-7	23	477-6		
32	540-4	33	535-5			40	16-21	42	511-7	43	546-3			30	08-11	32	522-4	33	479-5		
37	539-5	38	535-4	13	21	0	19-31	2	520-5	3	543-4			40	10-65	42	524-2	43	486-4		
42	537-7	43	536-8			10	19-91	12	523-0	13	542-1	16	14	0	12-93	2	531-7	3	487-7		
47	536-2	48	537-7			15	20-92	17	525-2	18	539-3			15	15-39	17	529-4	18	485-2		
2	533-6	3	540-2			20	20-70	22	528-4	23	538-2			30	15-29	32	530-1	33	487-5		
12	538-3	13	539-9			30	20-89	32	529-0	33	535-3	16	15	0	16-05	2	534-2	3	503-3		
17	544-3	18	539-4	13	22	5	20-94	6	532-9	7	532-8			30	11-68	32	530-0	33	507-1		
22	552-5	23	534-7			15	21-66	17	535-2	18	533-0	16	16	0	08-21	2	525-3	3	515-3		
27	555-9	28	529-4			25	19-14	27	537-5	28	532-3			10	09-42	12	522-6	13	518-9		
32	557-1	33	523-8			35	17-86	37	524-9	38	535-5			20	11-03	22	521-6	23	522-0		
37	553-4	38	519-7			45	15-24	47	526-7	48	537-0			30	13-22	32	520-7	33	523-0		
42	549-1	43	517-6			55	13-83	57	524-3	58	538-9			40	14-84	42	519-3	43	522-8		
47	544-8	48	514-9	13	23	0	13-52	2	526-3	3	538-5			50	14-80	52	522-7	53	517-6		
52	542-2					10	13-29	12	528-8	13	537-5	16	17	0	15-88	2	524-4	3	513-1		
2	538-3	3	513-6			20	14-10	22	528-5	23	537-7			30	13-07	32	511-0	33	506-6		
12	534-0	13	516-3			32	16-35	34	529-3	35	537-8	16	18	0	14-50	2	532-5	3	508-5		
17	533-3	18	518-4	14	0	0	18-38	2	527-6	3	534-3										
22	534-6	23	520-9	14	1	0	18-60	2	532-7	3	535-5	17	9	0	25 10-90	2	547-0	3	551-7		
27	535-2	28	522-3			20	18-54	21	524-6	22	541-9			15	11-52	17	550-3	18	547-1		
32	535-8	33	524-8	14	2	0	21-19	2	535-1	3	541-1			30	12-65	32	543-7	33	541-1		

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

March 13^d 1^h and afterwards. Declination reading higher than its mean value; the magnet was watched, but no change of importance took place.
 March 15^d 11^h. Instruments slightly disturbed.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.			BALANCE Corrected.			Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.			BALANCE Corrected.			Gött. Mean Time.	DECLINATION.		
	d.	h.	Min.	°	'	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'		
17 10	0	25	13.36	2	539.0	3	545.1			21	9	0	25	09.26	2	532.2	3	565.6	23	15	0	25	04.37
17 11	0	07.13	2	543.7	3	539.4					10	15.72	12	533.2	13	536.3				5	05.85		
	10	08.21	12	549.6	13	535.2					15	15.67	17	547.0	18	537.1				15	07.40		
	15	09.19	17	552.9	18	532.9					20	11.77	22	561.5	23	530.2	23	16	0	04.01			
	20	10.27	22	552.1	23	531.1					25	18.38	28	555.7	29	522.1				10	02.22		
	35	09.79	36	545.5	37	527.2					30	22.27	32	536.0	33	521.0				15	04.04		
17 12	0	11.79	2	541.3	3	521.9					35	18.20	37	528.5	38	522.9				20	03.20		
											40	09.56	42	541.2	43	516.8				25	02.75		
18 7	0	25	13.39	2	543.0	3	572.7				45	07.51	47	549.4	48	514.0				30	01.95		
	30	15.11	32	542.9	33	571.3					50	09.69	42	549.7	53	511.9				35	01.81		
18 8	0	14.06	2	538.6	3	574.3					55	11.77	57	545.2	58	508.3				40	01.59		
18 9	0	11.71	2	542.7	3	570.7			21	10	0	13.96	2	547.8	3	505.9				51	02.15		
18 10	0	03.37	2	558.2	3	534.4					15	11.48	17	531.5	18	506.5	23	17	0	05.65			
*	5	05.15	7	555.6	8	532.4					25	07.57	27	537.8	28	498.4				10	09.24		
*	10	06.70	12	548.9	13	533.2			21	11	0	08.36	2	530.7	3	482.5				20	10.47		
	20	05.53	22	538.6	23	531.4					30	07.67	32	534.7	33	493.0				36	12.82		
	25	02.96	27	546.7	28	528.3					15	07.34	17	528.2	18	484.4				45	13.72		
	30	03.90	32	548.3	33	526.4					45	07.40	46	532.3	47	496.1	23	18	0	13.39			
	35	04.64	37	548.3	38	523.4			21	12	0	10.78	2	531.6	3	495.9				10	10.70		
	45	06.04	47	540.4	48	521.2			21	13	0	12.29	2	537.0	3	500.3				20	10.43		
	50	06.06	52	539.5	53	521.2					10	15.31	12	536.6	13	498.0	23	19	0	09.30			
18 11	0	06.19	2	541.9	3	518.4					20	16.63	22	535.3	23	495.1				15	25.15.51		
	15	05.47	17	540.2	18	518.7					30	17.63	32	534.5	33	493.2	24	6	0	25.15.51			
18 12	0	08.80	32	538.0	33	522.4					40	16.15	42	534.5	43	490.8				15	25.15.38		
	0	13.23	2	534.6	3	529.1	21	14	0		15.49	2	533.8	3	494.2				20	25.07.74			
							21	16	0		10.92	2	519.5	3	497.1				15	25.15.38			
19 6	0	25	12.23	2	537.6	3	581.3				11	10.63	12	524.1	13	488.7				25	24.55.44		
	25	08.83	27	530.5	28	597.9					15	10.50	17	527.4	18	485.6				30	24.53.54		
	45	04.24	47	527.6	48	606.1					35	09.19	37	531.3	38	484.4				35	24.59.57		
19 7	0	03.41	2	530.0	3	609.2	21	17	0		06.90	2	536.4	3	492.5				40	25.05.55			
19 8	0	09.79	2	526.5	3	607.8					20	06.59	22	542.5	23	495.9				45	05.83		
19 9	0	16.28	2	528.1	3	542.8	21	18	0		07.27	2	541.4	3	506.4				50	03.54			
	5	06.84	7	518.8	8	546.1	21	19	0		12.45	2	534.9	3	518.6				55	05.58			
	10	10.36	12	524.0	13	551.1					15	12.78	17	533.0	18	520.8	24	7	0	08.58			
	15	06.06	17	532.9	18	551.5					25	12.78	26	533.6	27	522.9				10	05.58		
	20	05.96	22	529.3	23	554.6	21	20	0		14.03	2	533.1	3	525.4				15	03.23			
	25	05.58	27	528.1	28	554.9													20	02.48			
	30	04.68	32	530.2	33	556.3	23	13	0		25	08.06	2	538.8	3	507.0				45	08.31		
*	45	02.96	47	528.0	48	563.4					15	06.74	16	524.6	17	502.3				50	07.67		
*	50	03.06	52	527.4	53	565.6						18	520.4							55	07.27		
19 10	0	06.51	2	527.7	3	570.1					19	07.60	22	513.8	23	500.0	24	8	0	07.17			
											24	507.3							10	10.34			
20 15	0	25	18.37	2	532.2	3	538.3				25	08.48	27	504.5	28	496.9				20	10.90		
	5	21.63	7	536.8	8	531.4					30	08.72	32	506.0	33	487.4				30	07.17		
	10	22.50	12	541.0	13	522.3					35	08.28	37	515.1	38	480.6				45	06.86		
	15	24.72	17	540.8	18	510.3					40	08.05	42	528.3	43	472.7				55	06.43		
	20	24.99	22	538.3	23	498.9					45	09.76	47	539.3	48	459.4	24	9	0	07.54			
	25	24.28	27	538.6	28	486.8					50	13.25	52	541.4	53	440.2				32	10.36		
	30	22.27	32	536.3	33	476.2					55	16.01	57	538.1	58	421.9	24	10	0	10.83			
	35	19.93	37	535.9	38	469.9					0	17.53	2	535.3	3	406.5	24	11	0	09.33			
	40	17.56	42	535.3	43	466.4					5	18.21	7	530.9	8	391.1				20	01.98		
	45	15.61	47	537.2	48	465.1					10	17.73	12	528.3	13	381.7				25	01.04		
	50	13.96	52	539.7	53	467.2					15	17.37	17	523.9	18	375.1				31	01.93		
	55	15.01	57	540.5	58	469.3					20	16.21	22	521.9	23	373.6	24	12	0	16.25			
20 16	0	14.68	2	536.9	3	471.2					25	14.77	27	522.6	28	373.5				7	19.01		
	21	11.21	22	533.1	23	492.7					30	12.92	32	523.5	33	371.7				10	18.10		
	30	11.55	32	534.6	33	497.4					35	13.82	37	522.3	38	370.9				15	14.13		
20 17	0	09.24	2	533.3	3	517.5					40	10.80	42	523.1	43	376.9				20	11.57		
	10	10.33	12	533.5	13	522.0					45	09.15	47	525.1	48	381.7				25	11.78		
	35	09.15	36	534.6	37	528.6					50	06.81	52	528.3	53	387.2				30	12.16		
20 18	0	10.67	2	532.8	3	539.2					55	05.52	57	529.7	58	397.0				35	11.52		

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.		DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.		DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.			
Min.	Sec. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	Min.	Sec. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	Min.	Sec. Div.	Min.	Mic. Div.
2	532-2	3	407-0	24	12	40	25	08-53	42	538-3	43	449-6	25	13	30	25	08-45	32	536-5	33	508-3
7	531-8	8	419-3			45	05-83		47	541-2	48	449-0			40	09-12		42	532-4		
17	532-1	18	433-3			50	04-68		52	546-0	53	446-1			50	07-29		52	532-4	53	508-5
2	529-6	3	461-9			55	05-18		57	546-5	58	442-0	25	14	0	04-86		2	532-4	3	508-1
12	528-2	13	465-9	24	13	0	05-96		2	543-5	3	439-8			10	03-30		12	533-7	13	506-9
17	525-1	18	466-3			15	09-87		17	525-5	18	439-8			20	04-48		22	530-6	23	506-6
						26	08-73		27	510-5	28	438-0			30	06-77		32	528-8		
27	527-4	28	459-7				29	506-5					25	15	0	11-91		2	527-1	3	504-6
32	524-7	33	456-7			30	07-62		31	501-9					10	13-66		12	528-9	13	504-7
37	519-8	38	456-3				32	499-3		33	437-1				20	13-47		22	534-7	23	504-6
42	516-7	43	453-9				34	496-3					25	16	0	08-29		2	531-2	3	517-6
52	519-1	53	457-1			35	25 02-64		36	496-8	37	435-9			30	07-87		32	530-4	33	526-1
2	508-6	3	461-8				38	499-3					25	17	0	10-58		2	532-0	3	534-9
12	506-5	13	466-2			40	24 56-94		41	502-3	42	433-0									
22	514-0	23	463-3				44	514-3					26	5	0	25 12-67		2	542-1	3	594-4
37	522-5	38	465-4			45	52-94		47	516-6	48	431-6			10	07-47		12	545-1	13	599-1
47	532-5	48	468-8			50	54-16		52	516-5	53	430-5			15	06-84		17	553-0	18	602-9
2	537-3	3	475-6			55	54-35		57	511-0	58	427-6			20	08-16		22	554-5	23	606-3
12	540-8	13	480-8	24	14	0	53-72		2	512-6	3	430-0			40	10-70		41	542-2	42	620-4
22	538-8	23	489-8			6	53-20		7	508-7	8	427-2	26	6	0	08-11		2	536-7	3	626-0
2	537-2	3	521-8			10	52-60		12	509-0	13	426-7			10	01-72		12	543-2	13	627-7
						20	52-60		22	504-8	33	429-6			15	00-40		17	553-4	18	625-7
2	540-4	3	644-8			25	52-84		26	506-6	27	431-1			20	02-69		22	556-0	23	624-9
14	551-9	13	679-2			35	54-08		37	503-3	38	431-2			25	06-76		27	558-2	28	623-0
17	544-9	18	699-8			45	24 56-75		47	507-5	48	429-6			30	08-48		32	551-5	33	620-9
22	545-4	23	713-7			56	25 00-33		57	510-2	58	425-8	26	7	0	25 05-06		2	544-9	3	618-5
27	554-5	28	692-3	24	15	0	04-14		2	505-8	3	418-2			50	24 58-15		52	543-1	53	560-4
32	570-3	33	668-0			5	07-32		7	503-7	8	407-5			55	24 59-01		57	549-4	58	554-1
37	574-0	38	654-1	*		10	08-08		12	508-7	13	396-1	26	8	0	25 04-19		2	553-2	3	549-8
42	557-5	43	653-5			15	08-68		17	511-7	18	390-0			5	08-93		7	545-8	8	548-7
47	548-2	48	648-1			20	09-39		22	514-3	23	386-2			10	13-52		12	536-2		
52	551-1	53	638-8			30	11-10		32	515-7	33	379-9			15	15-94		17	520-7	18	552-9
57	552-3	58	632-7			45	07-87		46	525-1	47	373-4			20	13-66		22	518-0	23	554-7
2	548-1	3	631-3	24	16	0	25 00-71		2	533-8	3	352-7			25	09-12		27	529-9		
12	524-3	13	636-9			6	24 59-36		7	544-2	8	358-8			30	10-41		32	531-4	33	557-5
17	526-1	18	638-1			11	25 01-41		12	543-5	13	360-6			40	10-51		42	535-3	43	563-0
22	528-5	23	636-0			15	02-84		17	536-6	18	360-8			50	10-95		52	534-2	53	567-7
17	536-2	48	615-9			25	04-73		27	524-7	28	358-8	26	9	0	12-02		2	534-9	3	568-5
52	535-5	53	612-5			30	03-30		32	527-2	33	362-6			45	11-88		47	540-4	48	554-0
57	534-0	58	611-5				47	513-5		48	392-4	26	10	0	16-93		2	527-9	3	539-2	
2	532-6	3	611-2	24	17	0	05-11		2	511-3	3	421-2			10	15-58		12	543-1	13	511-5
12	535-3	13	606-4			25	09-39		27	527-2	28	457-2			20	16-77		22	530-7	23	497-5
22	536-9	23	598-0			45	09-22		47	530-5	48	471-9			30	11-24		32	527-0	33	492-0
32	534-7	33	594-5	24	18	0	10-03		2	532-2	3	483-7			35	06-90		37	536-0	38	492-1
47	529-2	48	600-8	24	19	0	09-98		2	529-4	3	521-9			40	05-27		42	541-0	43	492-3
57	530-6	58	602-6			25	11-57		27	523-1	28	533-7			45	05-36		47	542-7	48	490-2
2	532-5	3	602-6	24	20	0	10-53		2	517-2	3	543-9			50	05-94		52	544-3	53	491-0
33	534-4	34	591-7										26	11	0	08-82		2	540-7	3	496-8
2	533-5	3	582-0	25	5	0	25 15-12		2	533-1	3	601-9			15	07-74		17	524-6	18	495-0
2	535-8	3	558-4			36	04-51		37	543-0	38	621-6			25	04-48		27	531-9	28	494-0
22	535-5	23	557-1			40	06-19		42	545-4	43	622-0			35	05-38		37	530-8	38	499-9
27	534-4	28	559-0			45	07-49		47	545-2	48	620-4			45	06-50		47	536-1	48	504-4
32	530-4	33	561-8			50	07-79		52	547-4	53	618-7			55	08-38		57	540-7	58	503-4
2	536-7	3	544-2										26	12	0	09-06		2	544-1	3	502-0
8	537-8	9	524-7	25	6	0	10-30		2	542-1	3	615-6			10	09-35		12	542-3	13	501-0
12	541-6	13	506-8			22	12-25		23	539-3	24	603-6			20	09-12		22	540-8	23	501-2
17	545-9	18	482-4	25	7	0	13-66		2	541-5	3	583-5			30	09-82		32	539-8	33	504-1
22	553-9	23	466-4			20	06-79		22	542-3	23	504-5	26	14	0	09-84		2	535-1	3	499-3
27	554-1	28	458-5	25	13	0	25 04-89		2	550-9	3	498-9			10	08-31		12	530-3	13	501-6
32	544-2	33	452-8			10	04-89		12	548-1	13	499-2			30	10-09		32	527-2	33	510-4
37	539-8	38	451-1			20	06-79		22	542-3	23	504-5	26	14	0	11-64		2	516-3	3	507-4

BIFILAR. $k=0.000140$. BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

Gött. Mean Time.	DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			
	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.		d.	h.	Min.	Sc. Div.	Min.	Mic. Div.		d.	h.	Min.	°
26 14*	10	25	10-87	12	516-8	13	502-5	28	9	1½	25	08-68	3	540-4	4	551-4	30	24 31-67
	30		13-84	32	524-5	33	488-8			10		05-82	12	540-8	13	552-4	31	31-14
	35		16-41	37	521-2	38	483-5			15		05-35	17	544-2	18	552-3	35	38-27
	40		18-05	42	519-0	43	474-6			31	25	04-41	32	541-0	33	552-1	36	39-19
	45		20-05	47	517-0	48	468-1			57	24	57-51						
	50		21-59	52	513-8	53	461-3		10			56-27	2	541-6	3	547-5	40	41-90
	55		22-20	57	510-5	58	453-3		15			54-28	7	543-1	8	546-5	41	41-37
	0		20-87	2	513-0	3	447-7		20			54-55	12	543-4	13	548-1	45	45-49
	10		18-87	12	518-2	13	440-5		25			55-78	17	540-9	18	548-0	46	47-02
	15		19-28	17	520-3	18	441-2		30			57-02	22	538-8			50	50-31
26 15	20		18-67	22	526-9	23	445-8	28	11	40	25	57-68	32	536-2	33	546-9	51	50-85
	25		18-48	27	531-4	28	450-0			50	04-12	52	521-4	53	549-8			
	30		16-95	32	534-3	33	453-7			45	04-91	2	525-6	3	545-4			
	45		12-82	47	535-5	48	465-8			0	06-97	12	528-2	13	543-3			
	0	09-22	2	537-5	3	477-8		10		08-14	22	527-3	23	542-5	55	50-42		
	10	08-25	12	536-5	13	481-8		20		07-81	32	532-0	33	542-1	56	49-57		
	30	04-44	32	538-1	33	490-4		30		11-51	47	531-9	48	541-3				
	35	04-44							45	10-13	2	533-7	3	539-7	13 14	0 24 59-59		
	0	08-01	2	530-0	3	513-0		0							*	1 25 00-13		
	15	07-22	17	529-1	18	515-0		0	25	05-69	2	539-3	3	541-1				
26 18	55	14-77	57	526-4	58	531-8	29	10	10		03-37	12	536-7	13	538-4	10	56-16	
	0	14-92	2	524-1	3	532-9			20		00-47	22	541-5	23	532-7			
26 19	10	13-59	12	522-8	13	565-1			30		00-74	32	538-0	33	529-9	15	52-46	
	0	11-62	2	536-3	3	534-3			40		01-16	42	537-5	43	523-5	16	51-76	
27 5	0	25	15-18	2	518-8	3	600-4			50	03-04	52	533-2	53	520-2	20	48-23	
	10	10-27	12	532-6	13	603-1	29	11	0		03-90	2	530-7	3	518-7	21	50-65	
	21	11-41	22	538-4	23	609-1			15		08-82	17	531-2	18	506-9			
	30	10-77	32	546-1	33	602-2			25		08-52	27	529-8	28	501-0	25	48-61	
	40	13-00	42	551-3	43	597-0			35		06-39	37	537-6	38	504-3	30	39-75	
	50	14-03	52	548-9	53	597-6			50		06-50	52	536-5	53	505-3	31	37-83	
27 6	0	13-05	2	539-6	3	605-5	29	12	0		07-85	2	533-7	3	506-8			
27 7	0	12-58	2	542-3	3	611-5												
	42	09-53	43	523-6	44	616-4	3	9	0	25	06-59	2	539-0	3	570-2	35	32-08	
	45	05-79	47	529-4	48	613-9			15		10-20	17	529-8	18	571-5	36	31-99	
	50	04-71	52	538-9	53	610-7			25		07-51	27	537-1	28	571-9			
	55	07-05	57	540-9	58	607-2			30		08-31	32	537-9	33	571-5	40	31-67	
27 8	0	06-03	2	540-3	3	603-5			45		08-08	47	536-0	48	571-3	41	29-47	
	5	04-98	7	536-9	8	603-7	3	10	0		06-43	2	538-3	3	568-4			
	10	25 00-57	12	536-6	13	599-0			10		06-03	12	538-4	13	567-2	45	24-65	
	15	24 58-47	17	539-2	18	596-7	3	11	0		09-93	2	537-7	3	557-0	46	23-54	
	20	24 55-53	22	555-3	23	584-5												
	24	561-4					12	0	0	25	14-35	2	543-2	3	555-3	50	22-39	
	25	24 59-36							10		15-74	12	544-6	13	553-8	51	21-83	
	26	25 01-75	27	569-2	28	574-2	12	1	0		18-45	2	529-0	3	548-3	55	22-61	
	29	574-1																
	30	03-57	32	577-2	33	560-4	13	11	25	24	53-88	26	541-6	27	424-7	56	22-70	
	35	09-29	37	569-7	38	552-6			30		48-56	31	545-8	32	427-5			
	40	14-33	42	547-3	43	547-3			45		43-52	47	579-6	48	423-8	13 15	0 13-32	
	44	539-0							51	24	45-74	52	588-3	53	432-8	5	32-68	
	45	13-37	47	534-0	48	542-4	13	12	0	25	01-54	2	563-6	3	404-5			
	50	10-50	52	534-4	53	536-8	13	13	3	24	52-40	4	453-0	5	180-2			
	56	09-32	57	531-7	58	532-0			10		43-42	12	482-5	13	154-8	10	43-97	
27 9	0	09-29	2	527-4	3	531-1			15		34-74	17	464-7	18	110-2	11	42-98	
	10	02-73	12	528-0	13	532-0			16		33-29	18	438-9			15	54-45	
	15	00-74	17	538-0	18	530-5			19		32-55	22	396-4	23	60-8	16	24 57-15	
	20	03-37							20		32-86	24	371-9			20	25 04-78	
	47	08-05	48	535-0	49	541-8												
27 10	0	08-79	2	533-3	3	546-6			25		29-56							
	10	08-05	12	533-2	13	548-7			26			24						
27 11	0	09-67	2	530-8	3	537-1			27		346-7	28	66-6			25	00-13	

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis after the Extra Observations of Magnetometers.

BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.	BALANCE Corrected.								
Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.						
29	363·4	33	83·0		13 15	30	24 53·17	32	559·3	33	267·6	14	6	20	25 11·68	22	549·3	23	621·1		
32	405·8	33	83·0	*		35	48·36	37	519·9	38	251·9			30	09·79	32	550·0	33	622·7		
34	391·7					39	525·0					14	7	0	25 00·57	2	543·8	3	633·7		
37	419·7	38	155·7			40	45·04	41	45·20	42	525·7	43	266·0			10	24 57·04	12	555·9	13	624·3
39	430·9					44	45·20	44	516·4					15	24 59·36	17	564·6	18	618·8		
42	397·0	43	213·6			45	43·89	47 $\frac{1}{2}$	505·9	48 $\frac{1}{2}$	280·8			25	25 03·48	27	556·0	28	612·5		
44	400·2					50	44·19	52	508·9	53	299·0	14	8	0	07·81	52	536·8	53	599·1		
47	414·4	48	224·5			54	515·4	57	521·5	58	317·4	14	9	0	35	10·06	37	533·4	38	576·9	
49	422·2					59	525·2					14	11	0	11·64	2	531·7	3	570·8		
52	432·0	53	224·8	13	16	0	47·19	2	528·0	3	288·6			30	12·78	32	529·0	33	501·7		
54	414·5			*		5	49·57	7	526·1	8	369·5	14	12	0	16·43	2	531·1	3	470·5		
57	406·9	58	185·5			10	50·18	12	519·8	13	392·7			11	15·56	12	531·2	13	469·8		
59	426·6					15	24 57·24	17	517·6	18	403·9			20	14·40	22	530·2	23	471·0		
2	427·5					20	25 00·20	22	519·6	23	412·6			30	12·38	32	530·9	33	475·1		
3	437·9	3	216·0			30	02·32	32	518·2	33	434·2	14	13	0	12·55	2	535·2	3	483·5		
7	453·2	8	239·5			40	02·66	42	526·1	43	443·0										
12	482·8	13	220·8			45	08·36	47	514·9	48	441·9	15	9	0	25 02·99	2	549·9	3	540·2		
14	487·3			13	17	50	07·78	52	509·2	53	441·4			25	06·66	27	543·6	28	535·3		
17	478·3	18	184·0			0	25 06·46	2	524·5	3	448·2	15	10	0	07·57	2	539·9	3	532·9		
19	475·2					10	24 58·42	12	525·3	13	455·0										
22	475·5	23	181·5			14	530·8					18	8	0	25 08·32	2	543·9	3	593·6		
24	484·0					15	25 00·80	17	525·3	18	457·7			16	04·68	17	536·3	18	608·0		
27	484·6	28	162·5			22	534·2	23	459·1			20	03·84	22	535·6	23	611·2				
29	476·6					25	24 59·01	27	538·8	28	464·4			25	05·15	27	540·4	28	610·9		
32	469·3	33	113·4	13	18	0	02·99	2	537·0	3	499·9			45	08·95	47	539·1	48	579·6		
34	460·1					10	05·09	12	536·8	13	506·5			55	05·63	57	530·6	58	577·3		
37	455·4	38	83·0	13	19	0	07·38	2	531·0	3	518·5			5	01·93	7	532·2	8	570·7		
39	455·6					15	05·00	17	530·0	18	517·1			10	25 00·38	12	535·4	13	567·0		
42	445·0	43	64·4			13	03·23	2	539·8	3	509·6			15	24 59·32	17	537·5	18	563·1		
44	453·2					20	09·35	12	532·0	13	514·6			20	25 00·10	22	537·4	23	559·0		
47	433·9	48	- 0·8			13	21	0	08·31	22	533·5	23	519·4			35	01·68	37	531·0	38	549·6
49	445·9					0	06·59	2	522·7	3	523·7			40	02·35	42	529·5	43	549·6		
52	434·3	53	- 27·4	14	2	0	25 20·69	2	517·6	3	560·8			45	02·25	47	529·2	48	549·4		
54	408·7				30		20·29	32	529·0	33	561·9	18	10	0	01·68	57	533·1	58	548·1		
57	382·2	58	- 2·4	14	3	0	20·50	2	533·1	3	569·1			15	01·59	2	533·1	3	546·6		
59	310·?				14	4	0	14·50	2	538·6	3	650·6	18	11	0	03·90	17	530·8	18	550·3	
2	291·5	3	- 4·5			10	08·99	12	556·3	13	667·2	18	13	0	08·80	2	538·0	3	550·6		
6	318·8					15	03·20	17	571·5	18	669·8			10	18·38	12	542·7	13	527·8		
7	346·8	8	- 20·5			20	05·79	22	581·2	23	667·7			15	15·98	17	546·5	18	511·7		
9	386·9					25	10·83	27	569·4	28	665·6			21	12·29	22	550·4	23	497·6		
12	367·7	13	19·4			30	15·71	32	546·6	33	654·7			25	10·11	27	552·1	28	489·8		
14	369·2			14	5	0	17·71	42	539·6	43	633·5			30	08·79	32	553·0	33	482·5		
17	363·5	18	33·7			40	17·80	47	537·5	48	625·4			35	09·03	37	549·1	38	478·5		
19	393·6					45	18·23	42	562·8	43	587·3			40	08·92	42	544·2	43	476·4		
22	458·8	23	146·2			50	18·20	52	556·2	53	598·6	18	14	0	07·89	2	536·2	3	477·7		
24	469·2					55	14·91	57	546·1	58	610·0			50	07·15	52	536·4	53	475·6		
27	586·0	28	255·7			0	11·59	2	543·5	3	619·8			10	00·94	2	525·1	3	482·0		
						10	11·30	12	555·9	13	618·6			20	01·61	22	522·4	23	492·9		
						10								30	02·05	32	524·1	33	496·8		

BIFILAR. $k=0\cdot000140$.BALANCE. $k=0\cdot000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

April 13th 14^h 57^m 30^s. The horizontal component diminished rapidly, and the bifilar scale went out of the field of the reading telescope.April 13th 15^h 0^m. The arms of the bifilar torsion circle were turned through 1° 12'; they were turned at 15^h 46^m to within 9·5' of their original position, and at 21^h 30^m to their original position: all the observations made between 15^h 0^m and 21^h 30^m have been corrected to the normal reading of the torsion circle. See Introduction, p. xxxii.

Gött. Mean Time.	DECLINATION.		BIFILAR Corrected.		Gött. Mean Time.	DECLINATION.		BIFILAR Corrected.		Gött. Mean Time.	DECLINATION.										
			d.	h.	Min.	°	,	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	,					
18 16	0	25	08-41	2	521-3	3	500-7	27	14	30	24	59-19	32	536-8	33	459-4	30	14	25	24	49-95
18 17	0		08-05	2	536-5	3	485-3			45	25	01-07	47	543-5	48	474-9			30		52-13
	30		05-32	32	534-3	33	493-2	27	15	0	25	01-01	2	535-4	3	483-4			35		54-38
18 18	0		05-60	2	534-1	3	507-9			30	25	02-55	32	527-2	33	488-9			40		55-56
								27	16	0	24	57-53	2	529-0	3	465-8			45	24	57-76
19 5	0	25	16-28	2	570-1	3	539-1			10	25	02-42	12	526-8	13	473-5			50	25	01-85
				7	573-4	8	541-4			20		00-58	22	523-1	23	469-0			55		05-49
	25		15-54	27	554-2	28	566-7			30	01-88	32	508-9	33	443-1	30	15	0		09-08	
	30		15-51	32	547-1	33	572-5			40	03-87	42	484-4	43	416-3			15		18-34	
	45		15-32	47	540-7	48	584-8			45	17-76	47	461-5	48	346-0			20		19-59	
19 6	0	12-72	2	547-6	3	541-2			50	23-41	52	509-4	53	327-0			25		23-65		
	30	09-42	32	551-0	33	608-9			55	25-09	57	507-2	58	292-5			30	16	30-15		
19 7	0	11-51	2	549-0	3	555-7	27	17	0	21-32	2	487-6	3	231-3			35		32-15		
19 9	0	01-11	2	538-4	3	534-2			5	19-24	7	504-5	8	215-7			40		31-18		
	10	09-35	12	524-5	13	541-3			10	16-21	12	500-5	13	214-6			45		23-31		
	15	08-97	17	528-7	18	540-3			15	13-39	17	502-0	18	232-1			50		18-34		
	25	09-76	27	534-0	28	539-4			20	13-16	22	517-4	23	238-4			55		13-19		
	30	10-60	32	534-0	33	539-3			25	10-40	27	522-2	28	238-7	30	16	0		08-52		
19 10	0	07-82	2	534-5	3	540-2			30	09-37	32	524-6	33	243-9			5		06-76		
									35	07-34	37	529-7	38	254-0			10		06-56		
20 13	0	25	15-17	2	519-6	3	434-0			40	08-92	42	521-6	43	279-1			25		04-41	
	5	13-70	7	523-7	8	432-6			45	07-02	47	523-3	48	302-2			40		07-67		
	10	12-38	12	522-7	13	427-6			50	06-61	52	524-6	53	328-7	30	17	0		07-47		
	15	09-79	17	529-6	18	428-8			55	05-06	57	526-3	58	347-5							
	25	07-54	27	536-4	28	439-9	27	18	0	05-49	2	524-8	3	359-2	*14	12	0	25	11-71		
	30	07-13	32	537-0	33	444-5			10	03-87	12	525-7	13	387-8			20		14-78		
	52	05-29	53	533-6	54	461-3			35	03-88	37	526-2	38	443-1			40		14-67		
20 14	0	04-32	2	530-5	3	467-2	27	19	0	02-50	2	523-6	3	476-3	14	13	0		13-16		
	35	05-86	37	527-9	38	498-5	27	20	0	04-19	2	528-1	3	504-2							
20 15	0	08-75	2	530-5	3	514-8			10	04-51	12	522-2	13	509-9	16	5	0	25	22-03		
20 18	0	13-54	2	524-4	3	522-6	27	21	0	04-79	2	520-4	3	513-1			10		21-54		
	16	14-13	17	529-3	18	517-1	27	22	0	09-93	2	510-7	3	514-4			15		20-70		
20 19	8	08-05	9	530-2	10	529-1			10	12-62	12	509-5	13	517-3			20		20-30		
							27	23	0	13-88	2	509-1	3	518-5			25		18-97		
25 2	0	25	24-12	2	524-8	3	566-5										30		18-77		
	42	23-54	43	532-8	44	568-2	30	11	5	25	03-54	6	552-8	7	483-7			40		18-34	
25 3	0	24-80	2	536-6	3	567-3			15	07-31	17	544-6	18	482-8	16	6	0	15-47			
									30	10-09	32	537-2	33	483-6			15		14-91		
25 11	0	25	10-16	2	553-1	3	517-7	30	12	0	07-76	2	538-1	3	483-0			35		13-49	
	15	11-77	17	548-8	18	509-0			25	01-81	27	534-8	28	467-5	16	7	0	13-49			
	35	11-07	37	543-5	38	498-0			30	00-80	32	534-6	33	460-1							
25 12	0	09-62	2	536-4	3	498-0			40	01-01	42	527-9	43	449-1	17	4	0	25	15-58		
									50	25	00-10	52	522-4	53	430-0						
27 13	0	24	59-73	2	529-5	3	265-5	30	13	0	24	57-35	2	518-1	3	409-1	17	5	0	13-19	
	10	25	03-16	12	534-7	13	278-7			5	56-00	7	518-2	8	399-8						
	15	04-21	17	524-6	18	288-9			10	56-30	12	514-0	13	384-8	18	13	0	25	02-70		
	20	03-70	22	528-0	23	300-6			15	24	57-34	17	512-7	18	370-7			10		07-71	
	25	05-09	27	527-9	28	321-7			20	25	02-99	22	520-2	23	365-8			15		11-00	
	30	04-82	32	534-0	33	329-8			25	07-37	27	520-1	28	330-6			20		14-98		
	35	04-21	37	534-4	38	340-1			30	07-25	32	516-0	33	335-5			25		14-51		
	40	02-40	42	534-6	43	352-5			35	06-16	37	520-0	38	303-9			30		08-90		
	45	25	00-87	47	536-9	48	378-0			40	03-75	42	524-5	43	294-8			35		05-89	
	50	24	59-53	52	537-6	53	397-5			45	25	01-76	47	528-2	48	282-9			40		07-37
	55	25	00-00	57	535-1	58	414-0			50	24	59-03	52	528-1	53	261-8			45		07-51
27 14	0	24	59-37	2	545-4	3	426-3			55	58-63	57	534-5	58	255-4			50		07-04	
	5	25	01-68	7	544-0	8	437-4	30	14	0	56-90	2	533-2	3	255-5			55		03-77	
	10	04-81	12	538-9	13	436-9			5	56-70	7	536-6	8	255-9	18	14	0		03-60		
	15	00-64	17	541-7	18	440-8			10	55-65	12	527-2	13	258-8			10		00-45		
	20	01-68	22	540-5	23	446-6			15	53-92	17	522-0	18	271-3			15		01-88		
	25	00-00	27	534-7	28	453-0			20	51-27	22	517-1	23	286-7			20		04-76		

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.* May 14^d 12^h.April 25^d. Instruments evidently slightly disturbed throughout the evening.May 16^d 5^m 25^m. Clock put right; error previously -28^s.

BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.	BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.	BIFILAR Corrected.	BALANCE Corrected.							
Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.	
27	513.0	28	292.9	18	14	35	25 03.67	37	530.0	38	385.9	4	12	10	25 06.73	
32	508.7	33	295.2			45	03.02	47	531.9	48	398.0			20	08.28	
37	509.8	38	291.6	18	15	0	09.32	2	533.4	3	403.5			40	10.20	
42	508.3	43	288.5			15	17.60	17	537.9	18	395.5	4	13	0	09.46	
47	507.2	48	280.9			25	17.94	27	542.1	28	378.3					
52	506.3	53	275.6			35	17.60	37	546.9	38	367.9	7	12	0	25 11.14	
57	505.2	58	266.6			45	17.02	47	538.6	48	364.2			10	13.32	
2	507.9	3	256.1	18	16	0	20.62	2	508.3	3	363.7			20	12.78	
12	503.6	13	228.8			10	25.06	12	502.6	13	351.2			35	14.06	
17	498.2	18	215.9			20	27.75	22	506.0	23	319.6			40	14.85	
22	491.8	23	194.5			25	23.19	27	513.7	28	303.8			45	15.78	
27	492.8	28	185.3			30	18.61	32	514.1	33	287.9			50	16.41	
32	498.5	33	167.4			35	13.27	37	520.4	38	287.6			55	17.53	
37	517.7	38	175.4			40	10.60	42	521.3	43	284.7	7	13	0	18.50	
42	523.4	43	148.6			45	09.82	47	520.8	48	291.1			5	16.92	
47	511.6	48	132.3	18	17	0	10.11	2	526.7	3	379.0			10	16.01	
52	510.9	53	127.2			15	08.19	17	524.1	18	369.0			20	13.12	
57	513.4	58	134.4			45	07.69	47	528.3	48	432.3			46	08.48	
2	516.1	3	153.6	18	18	0	08.14	2	527.7	3	451.1	7	14	0	08.66	
7	522.3	8	172.4				27	523.0	28	477.2						
12	537.8	13	202.5	18	19	8	08.39	9	522.6	10	495.7	8	8	0	25 11.46	
27	539.8	28	249.2			20	08.11	22	523.0	23	497.9			10	12.65	
42	533.7	43	309.9	18	20	0	08.19	2	525.6	3	505.1			15	12.69	
2	534.8	3	367.4											25	09.62	
				20	13	0	25 07.67	2	535.7	3	495.6			30	09.02	
2	550.4	3	492.9			31	06.66	32	535.2	33	490.3			40	08.85	
22	549.7	23	480.8	20	14	0	07.67	2	534.4	3	482.3	8	9	0	09.51	
42	544.6	43	472.8											2	552.3	
2	549.7	3	461.1	22	10	0	25 02.99	2	538.6	3	534.8	8	17	0	25 16.82	
				10		10	03.60	12	542.3	13	529.6			10	18.87	
2	578.4	3	495.7			20	05.99	22	540.9	23	527.9			15	20.35	
12	572.4	13	502.1	22	11	0	10.43	2	540.0	3	522.0			20	20.52	
17	563.0	18	509.4											30	19.84	
22	563.5	23	513.1	29	13	0	25 13.56	2	544.8	3	497.3			40	18.34	
27	560.1	28	520.1			35	10.18	37	545.2	38	492.9	8	18	0	15.34	
32	563.7	33	524.8	29	14	0	09.89	2	544.5	3	491.8			32	10.23	
42	562.1	43	534.3											8	19	
2	528.6	3	565.9	*	1	0	25 22.15	2	550.3	3	497.4					
17	533.4	18	575.1			30	22.27	32	551.9	33	500.3	17	2	0	25 21.23	
37	539.4	38	573.2	4	2	0	15.12	2	535.4	3	511.1			40	21.26	
2	543.3	3	567.5	4	4	0	19.51	2	533.7	3	553.1	17	3	0	20.89	
						15	20.58	17	551.1	18	548.5			2	543.0	
2	565.1	3	505.0			25	19.01	27	562.1	28	547.1	17	8	0	25 11.12	
22	551.8	23	512.6			35	18.13	37	562.7	38	550.9			31	07.87	
2	552.7	3	517.8			45	17.83	47	557.7	48	559.7	17	9	0	08.80	
				4	5	0	19.12	2	547.9	3	571.8			2	553.7	
2	540.9	3	445.1			30	15.11	32	551.9	33	577.2	17	12	0	25 07.00	
12	536.1	13	416.4			45	14.64	47	552.1	48	577.8			30	08.14	
17	523.8	18	403.7	4	6	0	15.31	2	554.4	3	580.0	17	13	0	08.32	
22	505.3	23	390.7											2	542.7	
27	487.9	28	371.9	8	13	0	25 07.79	2	539.9	3	479.5	18	13	0	25 08.38	
32	498.8	33	361.7			20	04.98	22	539.8	23	473.6			15	06.06	
37	516.0	38	367.0			30	04.76	32	538.9	33	472.1			20	05.42	
42	518.3	43	372.6	8	14	0	05.22	2	531.0	3	475.6	18	14	0	07.38	
47	514.8	48	377.0											2	537.5	
52	511.6	53	375.9	10	8	0	25 07.05	2	560.1	3	536.6	18	21	3	25 12.04	
57	517.9	58	371.0			15	09.20	17	557.6	18	540.3			15	13.52	
2	522.7	3	372.8			30	10.20	32	551.7	33	540.8			32	12.87	
12	534.9	13	374.0	10	9	0	11.34	2	547.9	3	536.8	18	22	0	11.03	
17	535.1	18	373.4											2	529.4	
22	533.8	23	377.8	†	4	12	0	25 04.82	2	548.0	3	471.1	24	11	0	25 08.93
														2	534.5	
														3	481.1	

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.* June 4^d 1^h.† July 4^d 12^h.July 17^d 8^m. The declination and bifilar magnets vibrating slightly and irregularly; the declination changing its mean position to a small extent; it has gradually gone eastward till 30^m; the bifilar has been nearly stationary.

Gött. Mean Time.	DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.					
	d.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'
24 11	20	25	09-10	22	538-1	23	479-5	24	20	0	25	16-82	2	518-9	3	350-9	1 11	10	24	53-64
24 12	0	25	07-55	2	538-1	3	476-0			10	18-40	12	517-8	13	355-0			15	54-48	
24 13	0	25	03-30	2	536-0	3	459-4			20	19-04	22	520-3	23	360-5			20	24 57-41	
	15	25	03-23	17	531-2	18	450-5			30	17-53	32	525-7	33	361-4			25	25 00-25	
24 14	0	24	54-26	2	523-5	3	405-0			40	19-49	42	518-2	43	368-0			30	03-20	
	10	24	58-58	12	520-3	13	394-9			50	14-50	52	511-7	53	375-4			40	10-47	
	15	25	00-84	17	521-9	18	386-0	24	21	0	16-53	2	514-3	3	382-2			50	10-50	
	20	02-17	22	529-9	23	377-9			15	14-13	17	512-8	18	388-1	1 12	0	06-16			
	25	02-57	27	533-5	28	367-4			32	17-36	33	513-0	34	396-2			10	06-26		
	30	02-48	32	530-0	33	359-8	24	22	0	20-33	2	516-9	3	398-8			20	07-60		
	35	01-38	37	524-0	38	352-1			20	17-46	22	503-9	23	412-2			30	07-04		
	40	25	00-67	42	521-3	43	343-5			25	17-96	27	505-9	28	414-6			40	05-13	
	45	24	58-62	47	518-7	48	337-7			40	18-43	42	503-3	43	428-5			50	03-02	
	50	56-50	52	514-4	53	333-3	24	23	0	18-60	2	500-4	3	437-3	1 13	0	02-28			
24 15	55	51-95	57	520-7	58	331-3			15	19-17	17	497-9	18	442-3			10	05-29		
	0	55-78	2	527-2	3	328-1			30	22-84	32	499-5	33	451-1			25	09-42		
	5	56-63	7	529-0	8	322-8	25	0	0	18-81	2	505-7	3	451-2			35	10-43		
	10	24	57-61	12	531-7	13	318-5			32	510-5	33	457-9			50	15-24			
	15	25	00-27	17	536-2	18	314-4			35	18-67					1 14	0	18-35		
	20	03-35	22	538-2	23	312-0	25	1	0	17-65	2	529-8	3	466-8			10	19-48		
	25	09-39	27	546-0	28	306-5			30	16-32	32	535-3	33	481-9			20	16-90		
	30	13-05	32	554-2	33	295-3	25	2	0	17-19	2	538-2	3	482-9			30	13-81		
	35	11-81	37	554-1	38	281-8											40	12-82		
	40	07-57	42	548-4	43	275-5	25	10	0	25	03-13	2	539-6	3	453-0			50	10-56	
24 16	45	07-40	47	550-6	48	273-4			10	02-99	12	543-6	13	448-3	1 15	0	10-00			
	50	05-94	52	551-9	53	276-8			20	05-89	22	541-9	23	447-6			20	12-90		
	55	08-03	57	547-3	58	279-6	25	11	0	08-58	2	534-7	3	446-1			45	08-41		
	0	08-90	2	516-4	3	280-6										1 16	0	03-77		
	15	12-58	17	529-1	18	290-0	1	2	0	25	23-88	2	558-7	3	458-7			10	02-22	
	20	14-24	22	520-7	23	295-2			10	25-09	12	538-7	13	465-9			20	03-06		
	25	15-51	27	519-0	28	296-3			25	26-74	27	521-8	28	471-4			40	07-13		
	30	16-55	32	517-5	33	293-8			30	28-04	32	526-0	33	470-0	1 17	0	08-05			
	35	16-41	37	515-4	38	288-4			40	26-50	42	538-1	43	464-1			2 11	0	25 06-26	
	40	16-26	42	510-0	43	284-3			50	23-95	52	534-9	53	468-1			10	05-38		
24 17	45	17-73	47	506-5	48	285-2	1	3	0	22-99	2	539-8	3	468-6			30	10-09		
	50	19-07	52	510-3	53	291-5			10	21-64	12	503-4	13	481-4			2 12	0	05-92	
	55	20-16	57	513-6	58	300-3			16	23-14	17	515-4	18	480-4						
	0	21-56	2	512-3	3	304-2			20	22-67	22	528-2	23	476-5						
	5	24-33	7	512-1	8	302-1			25	21-97	27	540-9	28	474-2	3 14	0	25 11-52			
	10	27-15	12	514-3	13	298-2			30	21-16	32	550-4	33	473-7			15	17-09		
	15	29-90	17	525-3	18	291-1			35	21-24	37	554-3	38	473-8			20	19-51		
	20	29-26	22	535-6	23	283-8			40	21-12	42	559-8	43	475-3			25	20-58		
	25	26-81	27	527-7	28	278-2			45	21-68	47	558-0	48	479-7			30	21-16		
	30	24-19	32	526-0	33	274-4			50	21-24	52	560-8	53	481-4			35	21-36		
24 18	35	23-34	37	525-2	38	274-7			55	21-50	57	557-2	58	484-2			40	21-03		
	40	22-77	42	520-2	43	277-2	1	4	0	20-55	2	555-5	3	488-1			45	20-22		
	45	24-52	47	522-9	48	278-2				17	566-6	18	493-7			50	18-50			
	50	25-54	52	523-3	53	280-0			35	22-80	37	585-0	38	502-5			55	16-45		
	55	24-82	57	516-0	58	281-6				47	564-5	48	525-6	3 15	0			14-82		
	0	22-87	2	512-8	3	285-7	1	5	0	19-91	2	546-9	3	560-7			31	09-46		
	5	22-28	7	514-0	8	288-5			10	18-77	12	534-4	13	575-9	3 16	0	07-19			
	15	20-89	17	513-4	18	289-3			20	19-37	22	543-8	23	575-3	3 20	0	09-57			
	40	18-30	42	516-2	43	315-4			30	18-50	32	549-8	33	569-8			38	12-78		
24 19	0	19-07	2	518-1	3	320-2			40	21-06	42	567-2	43	562-3	3 21	0	12-11			
	10	19-04	12	514-9	13	322-7			50	20-20	52	553-9	53	565-6						
	15	18-20	17	512-4	18	327-5	1	6	0	19-41	2	552-5	3	569-4	4 3	0	25 15-17			
	25	19-61	27	514-0	28	328-4			15	16-68	17	535-2	18	576-9			37	16-62		
	30	19-81	32	510-2	33	334-7			30	14-53	32	538-6	33	566-9	4 4	0	16-25			
	40	18-77	42	515-5	43	341-1	1	7	0	25 13-25	2	549-1	3	537-2			4 14	0	25 05-83	
	50	17-22	52	508-1	53	349-0				6	551-8	7	408-9			30	05-62			
	55	17-00	57	515-0	58	349-2	1	11	5	24 54-01										

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

July 24th 14^h 15^m. A very small insect climbing along one of the balance spider crosses; length of the insect about 7 micrometer divisions, or rather more than a thousandth of an inch.

July 25th. The instruments slightly disturbed throughout the evening.

BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.			Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.			
Min.	Sec. Div.	Min.	Mic. Div.		d.	h.	Min.	°	'	Min.	Sec. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	Min.	Sec. Div.	Min.	Mic. Div.
Min. 12	551.0	13	406.9	4 15	0	25	06.12	2	535.3	3	444.9	17	16	20	25	01.61	22	542.5	23	375.6		
17	548.6	18	407.5	4 16	0	16.08	2	531.9	3	432.7			30	00.87	32	535.6	33	388.5				
22	545.4	23	408.8		15	15.44	17	530.9	18	430.8			45	02.42	47	535.1	48	399.1				
27	544.8	28	408.4		30	14.53	32	532.1	33	429.7	17	17	0	01.95	2	538.4	3	404.0				
32	544.6	33	408.7	4 17	0	13.36	2	534.8	3	425.9			35	06.79	37	519.3	38	421.1				
42	537.0	43	408.5								17	18	0	11.10	2	525.6	3	425.2				
52	532.9	53	404.7	5 20	0	25	06.14	2	527.3	3	467.5											
2	535.3	3	404.4		16	15.07	17	527.1	18	451.9	22	14	0	25	02.01	2	538.1	3	447.5			
12	534.2	13	409.0	5 21	0	08.19	2	527.7	3	466.9			10	01.41	12	536.1	13	448.5				
22	536.5	23	410.0								20	01.95	22	536.8	23	449.6						
32	536.2	33	409.6	7 13	0	25	12.83	2	542.3	3	444.3			30	02.64	32	534.9	33	452.0			
42	538.3	43	403.6		15	09.76	17	541.1	18	389.9	22	15	0	04.98	2	536.4	3	455.2				
52	534.3	53	405.8		30	08.18	32	542.0	33	393.6												
2	534.5	3	417.8	45	05.42	47	540.5	48	398.1	24	16	0	25	14.21	2	539.4	3	430.7				
12	537.1	13	428.3	7 14	0	04.56	2	529.8	3	407.9			10	13.79	12	546.3	13	420.7				
27	535.0	28	427.0		10	06.63	12	532.6	13	411.1			30	07.10	32	547.5	33	411.5				
37	534.8	38	424.6		20	10.33	22	535.2	23	411.6	24	17	0	03.40	2	543.5	3	418.1				
52	536.2	53	428.2		30	12.42	32	534.6	33	408.9												
2	535.6	3	419.5	45	17.83	47	537.8	48	402.4	26	4	0	25	16.62	2	562.0	3	466.1				
12	533.6	13	408.5		51	21.90	53	534.9	54	400.0			37	18.84	38	545.5	39	491.5				
22	543.1	23	394.8		55	24.79	57	533.3	58	397.8			40	19.12	42	550.9	43	491.2				
32	547.4	33	392.2	7 15	0	26.16	2	532.9	3	390.8	26	5	0	17.76	2	552.1	3	503.4				
42	541.6	43	380.7		5	25.02	7	531.9	8	382.8												
52	535.2	53	379.0		10	22.64	12	533.2	13	377.7	28	12	0	25	03.84	2	540.2	3	446.0			
2	531.0	3	375.6		15	18.70	17	535.2	18	372.3			15	06.64	17	544.2	18	444.0				
22	540.1	23	380.6		20	15.22	22	538.0	23	371.7			35	04.61	37	541.8	38	440.4				
47	544.3	48	374.2		25	12.98	27	539.5	28	373.7	28	13	0	05.72	2	542.9	3	432.3				
2	541.5	3	374.0		30	11.64	32	539.6	33	379.9												
12	534.7	13	378.0		35	11.64	37	538.8	38	385.1	29	3	0	25	22.98	2	560.9	3	462.5			
22	531.5	23	384.0	7 16	0	07.20	2	540.6	3	402.8			10	23.12	12	552.0	13	465.3				
42	533.4	43	383.3		30	06.39	32	540.3	33	418.9			20	21.36	22	534.1	23	471.2				
2	541.6	3	374.0	7 17	0	06.26	2	537.5	3	432.4			25	20.80	27	529.6	28	472.2				
2	534.6	3	462.2	9 12	0	25	00.69	2	550.6	3	438.1	29	4	0	25	14.87	2	553.3	3	477.4		
12	545.9	13	452.6		5	00.96	7	546.8	8	438.7	29	7	0	24	51.16	2	549.9	3	493.4			
32	551.1	33	427.1		10	00.51	12	544.3	13	441.2			5	48.58	7	560.1	8	494.4				
2	540.9	3	426.4								10	46.41	12	568.7	13	493.8						
2	530.3	3	423.7	15 3	0	25	22.80	2	513.7	3	483.3			15	46.11	17	578.1	18	489.6			
17	527.1	18	430.7		25	21.86	27	555.8	28	482.0			20	50.25	22	574.9	23	489.3				
22	527.1	23	429.9		35	21.23	37	565.6	38	482.6			25	52.91	27	569.7	28	489.8				
27	529.2	28	427.0		45	20.52	47	568.1	48	487.4			30	45.56	32	559.1	33	493.2				
32	532.4	33	422.6	15 4	0	19.86	2	563.6	3	502.3			50	24.57.84	52	545.1	53	494.0				
37	535.4	38	419.4		15	19.28	17	542.3	18	521.6	29	8	0	25	01.78	2	548.1	3	490.6			
42	539.1	43	415.2		25	18.25	27	537.6	28	529.6			20	01.41	22	542.1	23	484.6				
47	539.6	48	412.4		35	17.42	37	541.3	38	533.3			40	05.32	42	534.4	43	477.7				
52	541.8	53	410.8		45	16.75	47	546.1	48	544.9	29	9	0	04.08	2	531.9	3	461.0				
57	542.6	58	410.3	15 5	0	15.94	2	550.8	3	537.8			15	03.74	17	515.7	18	440.0				
2	544.2	3	410.3								20	25.01.21	22	511.8	23	418.5						
32	542.0	33	422.8	17 13	0	25	01.34	2	531.8	3	421.8			25	24.59.57	27	530.2	28	386.5			
2	540.6	3	438.3		10	00.67	12	526.8	13	422.8			30	57.31	32	512.3	33	349.5				
2	517.2	3	472.1	17 14	0	04.91	2	537.8	3	434.0			35	53.11	37	511.9	38	327.3				
39	513.7	40	463.1	17 15	0	16.15	2	529.5	3	423.3			40	43.65	42	515.1	43	285.0				
2	509.8	3	459.6		15	20.11	17	550.8	18	414.3			45	46.73	47	521.7	48	244.1				
					20	23.21	22	557.5	23	406.5			50	52.20	52	519.7	53	206.1				
2	558.5	3	506.7		25	23.27	27	555.8	28	393.2			* 55	46.41	57	496.3						
38	535.1	39	518.3		30	20.99	32	552.0	33	379.5	29	10	0	24	45.87	2	508.5	3	224.5			
2	538.7	3	517.9		35	18.16	37	549.3	38	372.0												
2	537.7	3	435.1	17 16	0	08.25	2	548.2	3	366.3			10	17.49	12	528.6	13	406.1				
32	535.7	33	437.4		10	04.84	12	547.7	13	369.1			30	13.91	32	531.8	33	383.2				

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.
Aug. 8d 11^h—19^h. The magnets moving irregularly at intervals.

Gött. Mean Time.	DECLINATION.		BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.		BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.																																																																																																																																																																																
	d. 31	h. 16	Min. 0	° 25	' 08.92	Min. 1	Sc. Div. 533.4	Min. 2	Mic. Div. 385.3	d. 3	h. 9	Min. 20	° 24	' 58.45	Min. 22	Sc. Div. 541.2	Min. 23	Mic. Div. 498.4	d. 17	h. 10	Min. 0	° 25	' 10.80																																																																																																																																																																				
1 8	0	25 01.85	2	550.0	3	472.6				51	25 03.16	52	544.0	53	488.3	17 11	0	10	07.74	20	05.85	30	01.45	25 01.21																																																																																																																																																																			
	15	02.93	17	550.4	18	467.4				55	04.81	57	539.5	58	487.8																																																																																																																																																																												
	30	08.45	32	555.6	33	453.9	3	10		0	04.51	2	541.3	3	485.2																																																																																																																																																																												
	45	07.60	47	538.6	48	449.5				10	06.32	12	542.5	13	480.6																																																																																																																																																																												
1 9	0	05.11	2	542.8	3	445.9	3	11		0	08.43	2	539.3	3	474.3																																																																																																																																																																												
1 15	0	25 17.06	2	525.3	3	410.4	4	4	0	25	06.93	2	564.4	3	529.3																																																																																																																																																																												
	10	18.77	12	531.0	13	400.5				10	05.56	12	557.7	13	537.1																																																																																																																																																																												
	20	17.60	22	535.1	23	390.4	4	5	0		11.55	2	535.7	3	539.0																																																																																																																																																																												
	40	15.31	42	539.2	43	376.8				15	10.70	17	534.1	18	538.2	17 12	0																																																																																																																																																																										
1 16	0	09.66	2	540.3	3	376.6	4	6	0		09.44	2	536.8	3	526.9																																																																																																																																																																												
1 17	0	12.18	2	528.8	3	387.0																																																																																																																																																																																					
	25	16.79	27	520.7	28	395.8	4	13	0	25	13.39	2	536.8	3	424.6																																																																																																																																																																												
	35	19.17	37	522.0	38	393.5				15	12.31	17	537.6	18	424.6																																																																																																																																																																												
	45	21.59	47	529.2	48	385.3	4	14	0		07.71	2	538.2	3	441.1																																																																																																																																																																												
1 18	0	16.41	2	533.3	3	370.4																																																																																																																																																																																					
	10	13.52	12	530.7	13	374.7	7	13	0	25	22.00	2	526.6	3	456.3	17 13	0	50	54.48																																																																																																																																																																								
1 19	0	12.58	2	532.6	3	395.2				10	22.06	12	531.2	13	441.4	17 13	0	24	56.16	25	00.67																																																																																																																																																																						
										20	20.55	22	538.0	23	419.2																																																																																																																																																																												
2 5	0	25 08.82	2	537.1	3	553.9				25	18.23	27	536.8	28	412.0																																																																																																																																																																												
	10	03.37	12	546.0	13	552.5				40	12.42	42	540.0	43	404.9																																																																																																																																																																												
	20	04.17	22	554.6	23	551.1	7	14	0		11.64	2	533.8	3	396.7																																																																																																																																																																												
	30	08.38	32	546.9	33	546.2	7	16	0		02.28	2	529.7	3	412.4																																																																																																																																																																												
	55	10.83	57	534.9	58	521.2				10	03.02	12	529.6	13	415.1																																																																																																																																																																												
2 6	0	10.60	2	535.5	3	520.7	7	17	0		03.61	2	530.6	3	415.5																																																																																																																																																																												
2 9	0	25 00.47	2	536.1	3	486.9				10	02.01	12	531.0	13	419.3																																																																																																																																																																												
	10	24 57.17	12	551.7	13	464.3	7	18	0		01.31	2	539.0	3	441.3																																																																																																																																																																												
	15	25 02.75	17	547.2	18	458.9				10	02.69	12	538.9	13	445.7																																																																																																																																																																												
	20	24 55.13	22	556.2	23	447.4	7	19	0		04.86	2	534.9	3	459.8																																																																																																																																																																												
	25	24 56.54	27	564.3	28	437.2																																																																																																																																																																																					
	30	25 00.40	32	547.3	33	431.4	8	14	0	25	08.36	2	543.1	3	411.9	17 14	0	00.40	04.91	55	14.44																																																																																																																																																																						
	35	02.82	37	555.7	38	425.0				15	08.73	17	541.7	18	414.4																																																																																																																																																																												
	40	06.86	42	550.2	43	420.5	8	15	0		05.52	2	539.5	3	429.2																																																																																																																																																																												
	50	12.73	52	516.3	53	422.5																																																																																																																																																																																					
	55	04.81	57	530.4	58	423.4	9	13	0	25	15.81	2	543.2	3	438.5																																																																																																																																																																												
2 10	0	04.17	2	541.6	3	421.8				15	14.80	17	548.5	18	427.9	17 15	0	08.95	25 06.70	20 09.53	25 10.87	25 21.29	25 21.97	25 22.00	25 22.12	25 22.38	25 22.50	25 22.67	25 22.84	25 23.01	25 23.18	25 23.35	25 23.52	25 23.69	25 23.86	25 24.03	25 24.20	25 24.37	25 24.54	25 24.71	25 24.88	25 25.05	25 25.22	25 25.39	25 25.56	25 25.73	25 25.90	25 26.07	25 26.24	25 26.41	25 26.58	25 26.75	25 26.92	25 27.09	25 27.26	25 27.43	25 27.60	25 27.77	25 27.94	25 28.11	25 28.28	25 28.45	25 28.62	25 28.79	25 28.96	25 29.13	25 29.30	25 29.47	25 29.64	25 29.81	25 29.98	25 30.15	25 30.32	25 30.49	25 30.66	25 30.83	25 30.90	25 31.07	25 31.24	25 31.41	25 31.58	25 31.75	25 31.92	25 32.09	25 32.26	25 32.43	25 32.60	25 32.77	25 32.94	25 33.11	25 33.28	25 33.45	25 33.62	25 33.79	25 33.96	25 34.13	25 34.30	25 34.47	25 34.64	25 34.81	25 34.98	25 35.15	25 35.32	25 35.49	25 35.66	25 35.83	25 35.90	25 36.07	25 36.24	25 36.41	25 36.58	25 36.75	25 36.92	25 37.09	25 37.26	25 37.43	25 37.60	25 37.77	25 37.94	25 38.11	25 38.28	25 38.45	25 38.62	25 38.79	25 38.96	25 39.13	25 39.30	25 39.47	25 39.64	25 39.81	25 39.98	25 40.15	25 40.32	25 40.49	25 40.66	25 40.83	25 40.90	25 41.07	25 41.24	25 41.41	25 41.58	25 41.75	25 41.92	25 42.09	25 42.26	25 42.43	25 42.60	25 42.77	25 42.94	25 43.11	25 43.28	25 43.45	25 43.62	25 43.79	25 43.96	25 44.13	25 44.30	25 44.47	25 44.64	25 44.81	25 44.98	25 45.15	25 45.32	25 45.49	25 45.66	25 45.83	25 45.90	25 46.07	25 46.24	25 46.41	25 46.58	25 46.75	25 46.92	25 47.09	25 47.26	25 47.43	25 47.60	25 47.77	25 47.94	25 48.11	25 48.28	25 48.45	25 48.62	25 48.79	25 48.96	25 49.13	25 49.30

BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.				
Min.	Sc. Div.	Min.	Mic. Div.	d. h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.			
2	555.3	3	456.6	19 10	30	24	57.21	32	524.3	33	431.0	3	15	0	25	08.16	2	540.8	3	414.0		
12	543.0	13	458.8		40	24	59.70	42	524.4	43	430.2						2	554.1	3	431.6		
22	546.1	23	456.7	19 11	0	25	05.77	2	525.3	3	433.8	6	12	0	25	11.61	17	548.2	18	428.3		
2	535.0	3	447.2									6	13	0	25	06.73	2	544.5	3	429.6		
22	539.0	23	423.3	20 10	0	25	04.22	2	540.0	3	457.9											
32	524.2	33	422.5		10	24	57.10	12	533.6	13	447.9						2	512.3	3	420.3		
37	525.2	38	426.1			15	54.68	17	559.9	18	443.4	9	11	0	24	43.72	7	522.2	8	403.4		
43	532.1	44	428.1			20	54.92	22	560.1	23	440.2						12	524.5	13	393.6		
47	536.6	48	424.1			30	24	56.97	32	544.5	33	439.3					17	518.1	18	377.5		
52	539.4	53	416.0	20 11	0	25	01.78	2	527.8	3	443.3						22	499.7	23	357.5		
57	538.5	58	412.2			21	05.89	22	533.1	23	443.4						27	476.9	28	328.3		
2	530.4	3	410.8	20 12	0	09.39	2	533.8	3	436.1							32	457.2	33	296.0		
7	524.5	8	408.8														37	472.1	38	305.9		
12	516.5	13	404.3	24 8	0	25	11.10	2	557.7	3	441.3						42	433.1	43	263.8		
22	511.7	23	398.6		20	10.98	22	551.7	23	442.4							47	450.7	48	245.4		
27	509.9	28	394.5	24 9	0	10.95	2	557.7	3	437.4							52	482.2	53	239.8		
32	512.9	33	389.5		30	11.21	32	557.2	33	436.8							57	493.7	58	233.8		
42	506.6	43	373.4	24 10	0	10.80	2	555.2	3	437.8												
52	505.3	53	362.1									9	12	0	53.32	2	499.1	3	236.8			
2	506.5	3	339.6	25 10	0	24	56.40	2	544.0	3	453.0						7	491.5	8	243.1		
17	468.8	18	266.8		10	24	56.57	12	542.5	13	449.1						12	498.1	13	244.8		
19	466.2			25 11	3	25	07.81	4	547.7	5	409.0						17	495.4	18	248.9		
21	461.1				20	09.86	22	541.6	23	406.1							27	503.4	28	262.5		
22	461.0	23	238.1	25 12	0	07.71	2	534.9	3	396.5							32	504.0	33	266.8		
24	462.7				25 16	0	25	14.13	2	518.6	3	382.4					42	501.6	43	272.8		
26	468.3					31	17.26	32	521.5	33	377.6	9	13	0	24	54.01	2	496.7	3	298.3		
32	481.9	33	216.2	25 17	0	12.76	2	529.8	3	388.0						17	510.0	18	344.1			
37	501.3	38	216.3														33	518.7	34	360.0		
42	515.6	43	215.7	27 7	0	24	43.06	2	555.0	3	487.1	9	14	0	25	01.65	2	526.6	3	323.4		
47	529.6	48	215.7		5	46.18	7	559.7	8	482.3						15	24	55.76	17	526.8	18	309.5
52	533.6	53	224.1		10	52.04	12	553.2	13	482.6						30	24	52.94	32	519.5	33	307.3
57	532.3	58	229.7		15	55.37	17	542.0	18	484.1						45	24	57.78	47	517.7	48	314.1
2	525.0	3	239.0		20	57.08	22	533.1	23	485.5	9	15	0	25	00.06	2	533.1	3	319.5			
12	524.3	13	261.2	27 8	0	24	57.56	2	528.9	3	485.2						17	539.4	18	318.5		
22	519.6	23	277.6														40	01.61	42	538.8	43	350.2
42	523.8	43	292.0	27 11	0	25	16.93	2	519.6	3	338.8	9	16	0	25	06.73	2	535.2	3	372.6		
47	526.4	48	292.9		10	05.35	12	535.3	13	319.3							2	521.1	3	436.7		
2	533.2	3	316.1			15	00.80	17	561.9	18	324.0	9	22	0	25	20.77	37	533.2	38	429.5		
2	540.6	3	424.3	27 12	0	09.57	2	537.1	3	342.8	9	23	3	16.92		4	528.5	5	437.6			
22	543.4	23	420.1																			
42	535.6	43	418.9	1 16	0	25	13.90	2	551.1	3	396.1	15	10	0	25	06.73	2	540.6	3	414.9		
2	517.8	3	425.9		10	10.65	12	550.3	13	397.4						6	04.24	7	544.2	8	412.9	
22	517.4	23	425.2	1 5	0	11.37	2	540.2	3	408.7						20	00.48	21	544.8	22	410.2	
2	523.0	3	402.8													15	11	0	537.0	3	413.9	
12	523.9	13	402.7	3 5	0	25	07.04	2	534.1	3	475.7											
27	529.8	28	404.6		20	04.56	22	546.6	23	483.4	17	11	0	25	12.48	2	552.9	3	425.4			
43	526.1	44	408.1		25	07.07	27	541.4	28	484.8						45	06.29	27	540.6	28	418.0	
2	524.0	3	407.9		30	07.47	32	541.3	33	485.2						45	25.03.27	47	530.6	48	421.6	
2	540.0	3	431.2	3 6	0	11.75	2	535.9	3	482.6	17	12	0	24	59.76	2	540.3	3	423.7			
32	536.8	33	425.8	3 12	0	25	04.37	2	547.5	3	433.1	17	13	0	25	02.72	34	534.3	35	430.4		
2	534.6	3	428.0		10	03.70	12	545.3	13	433.3						30	04.41	2	534.7	3	431.1	
2	528.4	3	475.0	3 13	0	08.41	2	540.3	3	432.3						30	04.91	32	541.7	33	407.5	
17	539.2	18	465.9	3 14	0	18.77	2	550.1	3	407.0	19	15	0	25	05.96	2	542.9	3	406.1			
32	540.1	33	447.9		10	14.70	12	546.9	13	399.9												
2	538.3	3	429.6		20	10.40	22	545.3	23	399.1	20	3	0	25	25.43	2	542.7	3	445.5			
12	517.7	13	427.5		30	08.93	32	544.0	33	401.8						15	24.75	17	537.3	18	452.1	
22	515.3	23	432.5		40	08.61	42	542.2	43	406.4						25	22.10	27	527.3	28	455.7	

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.Sept. 20^d 16^h. Instruments slightly disturbed throughout the night.Sept. 28^d 13^h—18^h. Idem.Sept. 29^d 13^h—18^h. Idem.

Gött. Mean Time.	DECLINATION.				Gött. Mean Time.	DECLINATION.				Gött. Mean Time.	DECLINATION.				Gött. Mean Time.	DECLINATION.				
	BIFILAR Corrected.		BALANCE Corrected.			BIFILAR Corrected.		BALANCE Corrected.			BIFILAR Corrected.		BALANCE Corrected.				BIFILAR Corrected.		BALANCE Corrected.	
d. h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h.	Min.	°	'	
20 3	30	25	22.37	32	528.6	33	457.4	21 14	30	25	08.14	32	546.4	33	286.9	4 9	0	25	05.99	
	40		22.91	42	522.0	43	459.6		45		05.49	47	527.1	48	301.9		20		09.67	
	50		21.97	52	534.1	53	459.1		50		06.73	52	520.5	53	306.8		30		05.79	
	0	20.05	2	536.2	3	461.3	55		08.26	57	512.7	58	307.0		40		04.78			
20 4	15		17.86	17	531.2	18	463.5	21 15	0		06.06	2	510.9	3	306.7		50		04.34	
	25		16.21	27	535.1	28	461.2		10		08.28	12	514.7	13	306.8	4 10	0		03.45	
	40		13.99	42	537.5	43	456.7		15		11.51	17	513.0	18	304.0		10		02.35	
	0	13.07	2	542.2	3	450.7	20		15.24	22	509.6	23	300.0		20		02.89			
20 11	0	25	08.95	2	533.0	3	438.3		30		19.98	32	514.5	33	295.0		20		01.95	
	15		03.02	17	531.2	18	441.8		35		20.38	37	518.4	38	293.0	4 12	0		05.33	
	37		05.18	38	529.5	39	448.7		40		19.34	42	521.4	43	291.1	*	10		08.11	
	0	25	05.79	2	539.1	3	441.2		45		18.23	47	524.5	48	291.9		15		08.50	
20 13	0	24	58.33	2	539.2	3	400.5	21 16	0		17.46	2	528.6	3	306.2		25		08.21	
	6		58.15	7	534.3	8	397.9		30		13.29	32	537.5	33	316.4		45		08.29	
	10		57.78	12	529.4	13	397.7		0		11.10	2	535.8	3	346.1	4 13	0		08.14	
	20		58.43	22	526.8	23	402.0		0		25 01.58	2	540.3	3	467.3	4 17	0	25	12.80	
20 14	30	24	57.37	32	529.5	33	404.4	22 6	0		15	17.23	17	534.7	18	468.8		15		11.98
	47	25	00.38	48	538.7	49	404.1		40		11.54	42	540.6	43	459.6	4 18	0		07.87	
	0	01.85	2	535.9	3	404.2	0		12.18	2	540.0	3	454.3		5 3	0	25	20.77		
	42	03.02	43	537.0	44	401.3	0													
20 15	0	00.38	2	540.5	3	395.6														
20 17	0	12.01	2	538.8	3	388.0	28 12	0		25 03.40	2	537.9	3	413.5		10		22.47		
	20		14.55	22	532.0	23	387.8	10		05.23	12	536.9	13	413.2		25		18.43		
	30		18.95	32	532.1	33	384.6	0		07.27	2	548.6	3	393.9		40		17.83		
	35		21.27	37	534.6	38	378.4	0										50	17.26	
20 18	40	20.99	42	535.6	43	371.1	31 11	0		24 59.27	2	532.9	3	435.4		55		19.15		
	45	20.16	47	532.6	48	366.9		10		24 58.79	12	524.7	13	442.4	5 4	0		22.47		
	50	19.24	52	529.1	53	364.1		20		25 00.24	22	524.3	23	446.4		10		21.73		
	0	17.54	2	521.6	3	364.9		40		00.13	42	538.9	43	439.5	5 5	0		20.97		
20 19	10	16.15	12	520.4	13	371.4	31 12	0		01.75	2	541.1	3	429.7		10		24.86		
	20	19.91	2	518.4	3	396.3		0											15	23.85
	40	16.15	22	533.2	23	392.2		1 5	0	25 02.82	2	532.6	3	474.3		20		17.70		
	40	17.89	42	537.2	43	397.6		10		04.17	12	526.9	13	482.4		25		19.28		
20 20	0	17.89	2	539.3	3	399.8			20		03.70	22	522.5	23	489.6		30		21.93	
	0								30		02.69	32	526.6	33	491.4		35		24.03	
	0								42		03.97	43	523.0	44	492.2		40		25.96	
	0								0		10.23	2	537.2	3	481.5		45		23.09	
21 9	5	25 05.13	7	519.0	8	459.2	1 6	0		12.92	12	530.0	13	479.1		50		23.72		
	10	24 59.32	12	510.9	13	462.4		10		12.55	22	536.9	23	474.9	5 6	0		21.50		
	15	54.46	17	518.5	18	466.9		20		13.93	32	533.3	33	473.0		5		20.85		
	20	58.67	22	520.5	23	476.9		30		13.05	42	533.9	43	469.6		15		19.01		
21 10	25	55.71	27	526.2	28	490.7			40		11.71	2	534.9	3	469.4		25		19.44	
	30	43.72	32	528.7	33	506.4	1 7	0		25 02.39	2	526.0	3	467.2		35		19.64		
	35	32.63	37	552.1		38	502.9	1 9	0		24 59.86	12	526.9	13	463.7	*	45		17.47	
	36	30.82						10			20	58.15	22	522.4	23	460.8		55		12.87
21 11	39	32.10						45			45	57.44	47	513.4	48	455.8	5 7	0		12.25
	40	33.15	41	561.6	43	482.9	1 10	0		45	59.19	2	515.4	3	449.8		5		12.01	
	45	40.89	47	548.4	48	477.9		0										16		12.92
	50	44.03	52	538.6	53	473.6		2 15	0	25 17.83	2	544.7	3	400.5		35		10.97		
21 12	55	43.85	57	537.3	58	469.0		10		13.59	12	546.7	13	391.7		45		06.86		
	0	46.59	2	534.4	3	466.1		15		12.38	17	545.2	18	388.9		50		03.87		
	10	51.16	12	524.8	13	467.4		30		09.33	32	545.1	33	388.7		55		25 00.47		
	20	24 55.93	22	523.0	23	467.1		45		06.32	47	545.1	48	392.0	5 8	0		24 58.49		
21 13	0	25 07.13	2	536.3	3	445.8	2 16	0		06.46	2	544.3	3	398.5		5		56.55		
	30	07.00	32	539.7	33	415.7		30		09.03	32	544.2	33	403.3		10		54.25		
	0	01.07	2	530.5	3	403.3		2 17	0	08.59	2	545.9	3	406.2		15		54.01		
	30	05.05	32	524.3	33	389.9		2 19	0	12.55	2	545.0	3	414.5		20		51.57		
21 14	0	04.75	2	517.0	3	369.1			25		15.01	27	536.9	28	418.2		25		52.01	
	0	08.95	2	532.7	3	318.6			48		15.20	49	533.3	50	421.6		30		24 53.98	
	22	11.10	23	544.7	24	283.0	2 20	0		14.84	2	530.6	3	422.1		45		25 00.17		

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.
 Nov. 5^d 7^b 55^m. Clock put back 8^s; error afterwards 0^s.

BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.		DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.		DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.					
Min.	Sec. Div.	Min.	Sec. Div.	d.	h.	Min.	°	'	Min.	Sec. Div.	Min.	Sec. Div.	d.	h.	Min.	°	'	Min.	Sec. Div.	Min.	Sec. Div.		
2	535·4	3	464·7	5	9	0	25	05·32	2	532·5	3	536·8	17	10	0	25	05·82	2	538·5	3	455·1		
22	547·4	23	450·9			21	07·67		22	535·9	23	528·6			16	06·21	17	540·8	18	443·8			
32	541·0	33	448·3	5	10	0	09·91		2	538·2	3	505·5	17	11	0	06·12	2	535·9	3	432·2			
42	542·0	43	446·3												30	08·88	32	546·9	33	419·3			
52	534·0	53	448·0	7	11	0	25	03·04	2	541·3	3	423·3	17	12	0	07·94	2	533·8	3	402·7			
2	529·7	3	449·8			40	02·86		42	532·0	43	420·8			30	05·85	32	540·9	33	404·2			
12	530·3	13	450·4	7	12	0	04·71		2	532·8	3	419·4	17	13	0	07·69	2	537·1	3	402·4			
22	530·9	23	451·9																				
2	531·5	3	446·2	7	17	0	25	12·08	2	540·2	3	411·1	18	6	0	24	54·32	2	532·3	3	472·2		
22	529·7	23	444·5			32	15·07		33	544·3	34	402·5			10	24	57·37	12	515·7				
2	545·2	3	424·5			50	14·08		51	545·8	52	397·0			20	25	00·84	22	542·4	23	471·4		
12	543·4	13	414·2	7	18	0	11·98		2	543·9	3	395·1			30	04·10	32	536·5	33	470·4			
17	541·9	18	412·1												18	7	0	03·43	2	539·8	3	464·7	
27	539·0	28	410·5	10	11	0	25	00·72	2	541·3	3	434·4			30	08·11	32	542·3	33	457·2			
47	535·3	48	411·0			10	24	57·22	12	538·5	13	435·0	18	8	0	25	09·62	2	545·2	3	450·5		
2	535·8	3	406·4			15	24	56·43	17	536·0	18	436·7	18	11	4	24	54·57	5	549·8	6	434·1		
2	542·3	3	431·2			20	24	57·49	22	535·4	23	437·4			10	53·98	12	557·2	13	429·2			
17	543·0	18	432·8	10	12	0	06·39		2	542·6	3	430·5			20	53·49	22	555·0	23	425·2			
2	548·5	3	431·5	10	13	0	12·89		2	544·8	3	417·1			25	54·35	27	549·7	28	425·8			
2	530·4	3	476·8			15	15·39		17	546·9	18	409·6			30	55·42	32	543·9	33	426·1			
12	521·4			10	14	0	10·50		37	545·3	38	401·1			35	55·49	37	541·5	38	426·3			
27	530·0	28	497·8			35	08·29		2	550·1	3	389·9			50	24	59·59	52	533·0	53	429·2		
42	541·3	43	504·1	16	22	0	25	16·79	2	510·9	3	422·9			18	12	0	25	03·43	2	535·0	3	429·4
52	545·6	53	509·4			15	20·58		17	509·7	18	422·6			15	10·36	17	539·1	18	424·6			
57	549·9	58	511·2			30	25·22		32	508·2	33	417·9	18	13	0	10·43	32	543·6	33	417·0			
2	543·4	3	518·0			45	25·94		47	533·9	48	411·6			30	06·06	2	541·2	3	414·2			
12	548·6	13	523·8			51	25·09		52	535·4	53	408·7	19	5	0	25	08·46	2	530·7	3	443·5		
2	543·1	3	573·1	16	23	0	24·12		2	528·1	3	411·3			20	01·09	22	545·0	23	443·6			
12	539·2	13	574·3			10	21·50		12	529·5	13	410·4			30	02·45	32	543·2	33	444·0			
17	535·3	18	585·3	17	0	0	19·14		2	526·5	3	422·5	19	6	0	06·26	2	541·3	3	441·3			
22	547·5	23	586·4																				
27	549·5	28	582·9	17	6	0	25	11·28	2	542·7	3	461·0	22	8	0	25	02·59	2	545·3	3	443·7		
32	550·1	33	583·4			42	13·16		43	534·8	44	480·5			10	24	59·39	12	552·9	13	443·0		
37	550·8	38	585·9	17	7	0	09·57		2	536·1	3	512·9			20	25	01·01	22	549·1	23	445·0		
42	544·5	43	594·3			6	25	07·10	7	525·3	8	535·6	22	9	0	06·50	2	543·6	3	444·1			
47	546·9	48	593·5			10	24	58·55	12	533·3	13	528·0											
52	545·7	53	594·9			15	25	02·40	17	535·8	18	527·9	24	8	0	25	05·11	2	537·2	3	455·6		
2	538·1	3	600·6			20	25	04·86							10	24	59·12	12	551·0	13	451·9		
7	540·3	8	600·6			25	25	05·00	27	536·8	28	571·9			15	24	57·34	17	563·3	18	448·1		
17	537·8	18	607·5			30	24	59·73	32	530·5	33	554·6			20	24	58·92	22	564·4	23	446·8		
27	537·7	28	606·9			35	24	59·17	37	536·0	38	532·7			25	25	00·53	27	561·4	28	445·5		
37	533·1	38	616·4			40	25	01·11	42	533·9	43	519·1			30	02·55	32	559·4	33	444·9			
57	533·2	58	620·3			45	25	01·07	47	527·4	48	516·2			40	04·17	42	543·3	43	444·6			
2	532·3	3	618·8			50	25	00·18	52	524·4	53	515·3	24	9	0	02·01	2	540·7	3	444·4			
7	533·9	8	616·2	17	8	0	24	58·82	2	526·1	3	516·8	24	10	0	04·51	2	538·0	3	444·1			
17	534·2	18	607·3			5	24	57·56	7	528·2	8	515·4											
37	533·7	38	591·0			15	24	55·33	17	526·8	18	518·3	26	11	0	25	03·57	2	550·6	3	394·4		
47	550·7	48	576·1			30	25	02·25	32	521·7	33	509·7			15	04·41	17	552·4	18	393·4			
52	538·0	53	578·4			50	07·07		52	521·7	53	503·0			30	02·48	32	566·1	33	384·2			
57	536·1	58	572·3			56	08·55		57	524·3	58	501·7			40	03·87	42	558·9	43	384·0			
2	526·7	3	578·6	17	9	0	07·32		2	522·3	3	502·9	26	12	0	02·86	2	543·5	3	388·1			
7	526·1	8	583·2			6	02·12		7	531·5	8	499·4			30	07·78	32	543·9	33	391·1			
12	531·4	13	579·3			11	04·21		12	538·4	13	484·9	26	13	0	08·34	2	547·1	3	389·1			
17	534·1	18	572·6			15	07·87		17	535·7	18	471·0											
22	528·8	23	566·2			20	04·39		22	531·7	23	464·7	27	11	0	25	02·20	2	541·0	3	403·7		
27	528·6	28	561·9			25	09·47		27	530·7	28	461·2			10	03·16	12	541·7	13	403·3			
32	531·4	33	559·9			35	09·49		37	528·6	38	458·8			25	04·17	27	543·7	28	402·2			
47	533·5	48	546·6			50	06·57		52	536·7	53	459·2	27	12	0	05·92	2	540·9	3	401·6			

BIFILAR. $k=0\cdot000140$. BALANCE. $k=0\cdot000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.						
	d.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'
d.	h.	Min.	25	15-34	2	548-1	3	372-2	3	5	16	24	56-67	17	635-8	17	768-0	3	6	17	25	11-84	
27	19	0	10	12-04	12	559-2	13	368-7			17	24	55-67	18	641-3	17	768-0			18	25	11-84	
		20	08-90	22	557-0	23	368-0							18	644-6					19	25	12-38	
		40	08-25	42	555-3	43	370-9							19	653-6	19	757-3			20	25	12-22	
27	20	0	09-08	2	554-7	3	372-1					20	25	02-55	20	660-+	20	760-4			21	25	10-43
														(out of field)			21	763-4			22	25	08-65
2	12	0	25	05-05	2	541-1	3	429-8			22		14-26			22	763-5			23	25	08-25	
		30	06-66	32	542-0	33	428-9					23			23	647-			24	25	10-80		
2	13	0	06-86	2	542-5	3	429-7					24		32-39	24	611-1	24	730-1			25	25	10-70
2	17	0	25	15-14	2	553-4	3	423-7			25		32-26	25	588-1	26	711-6			27	25	20-29	
		10	16-35	12	555-1	13	421-2					27		23-54	27	571-8			28	25	26-81		
		20	13-46	22	558-6	23	415-2					28		19-58	28	573-3	28	739-8			29	25	35-58
		30	10-16	32	561-7	33	413-5					29		13-16	29	564-1	29	746-7			30	25	40-06
		40	09-56	42	559-9	43	411-3					30		07-64	30	569-7	30	745-2			31	25	36-66
		50	07-31	52	559-5	53	412-0					31			31	744-5			*	25	32-56		
2	18	0	07-17	2	556-6	3	413-1					32		07-44	32	590-3					33	25	32-19
		15	08-08	17	554-3	18	415-1					33		06-23	33	597-5	33	736-1			34	25	29-66
2	19	0	10-13	2	557-4	3	413-8					34		09-02	34	616-4	34	721-3			35	25	25-96
3	4	0	25	20-43	2	544-6	3	670-9			35		16-48	35	632-9	35	703-9			36	25	21-46	
		10	13-70	11	539-3	12	674-6					36		30-94	36	633-4	36	683-8			37	25	24-89
		15	12-11	17	543-3	18	657-8					37		25-50-83	37	616-4	37	660-0			38	25	26-13
		20	16-43	22	541-5	23	676-5					38		26-03-88	38	589-2	38	637-2			39	25	34-34
		25	16-65	27	545-6	28	738-1					39		26-13-31	39	551-3	39	624-6			40	25	41-57
			29	551-4								40		26-15-39	40	532-2	40	629-2			41	25	41-87
		30	02-93	31	563-5							41		26-11-76	41	523-6	41	690-5			42	25	40-15
			32	582-9	33	729-3						42		26-02-37	42	509-8	42	718-2			43	25	41-74
			34	578-2								43		25-36-49	43	562-7	43	762-5			44	25	35-04
		35	18-40									44		24-86	44	642-7	44	802-4			45	25	33-20
			36	573-7	35	708-3						45		21-90	(out of field)		45	845-2			46	25	33-13
			37	571-9	38	721-5						46		18-08			46	877-1			47	25	38-04
			39	565-5								47		11-57			47	914-9			48	25	44-83
		40	15-74									48		09-08			48	941-4			49	25	51-92
		41	13-43	41	558-0							49		09-15			49	954-4			50	25	56-08
		42	11-52	42	556-1	43	762-9					50		08-95	50	642-	50	954-5			51	25	58-34
			44	549-9								51		10-00	51	630-8			52	25	58-94		
		45	13-22									52		07-27	52	620-8	52	944-2			53	25	59-08
		46	16-68	46	540-2	45	754-2					53		04-53	53	622-4	53	935-3			54	25	57-16
		47	17-15	47	530-6	48	765-6					54		05-58	54	621-9	54	928-4			55	25	25-02
			49	530-1								55		07-72	55	613-6	55	914-2			56	25	26-02
		50	07-64									56		10-09	56	599-4	56	901-7			57	25	25-56
		51	05-99	51	531-2	50	767-6					57		07-74	57	587-0	57	891-6			58	25	49-03
		52	04-58	52	530-9	53	759-0					58		06-27	58	575-9	58	883-7			59	25	35-58
			54	538-0								59		02-39	59	571-9	59	876-8	3	7	0	25	26-03
			55	04-44								0		25-00-48	0	565-1	0	871-0	1		23-21		
			56	537-5	55	756-1						1		24-57-07	1	559-8	1	866-3	2		24-28		
		57	04-21	57	537-5	58	749-2					2		55-19	2	565-2	2	859-5	3		30-65		
			59	542-7								3		54-68	3	568-8	3	847-1	4		29-06		
3	5	0	04-41									4		55-24	4	575-8	4	827-7	5		19-51		
			1	551-7								5		24-58-99	5	586-7	5	814-2	6		14-89		
			2	553-3	3	723-2						6		25-03-84	6	592-5	6	802-4	7		10-63		
			4	560-0								7		08-68	7	595-3	7	798-4	8		09-96		
			5	14-44	6	559-2	5	712-4				8		13-36	8	592-2	8	798-0	9		11-44		
			7	558-0	8	718-5						9		16-48	9	579-6	9	798-0	10		12-11		
			8	13-81	9	584-0						10		15-17	10	576-0	10	803-4	11		11-44		
			10	16-32	10	583-8	11	736-5				11		09-93	11	579-9	11	821-4	12		02-35		
			12	12-04	14	592-5	13	753-2				12		02-15	12	594-1			13		08-95		
			14	25	06-73	15	603-5					13		00-84	13	603-9	13	826-0	14		11-10		
			15	24	58-25	15	619-8					14		02-45	14	604-6	14	820-7	15		13-44		
			16									15		06-59	15	606-6	15	813-9	16		13-49		
			16									16		10-23	16	607-1	16	808-8	17		14-70		

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

Dec. 3d 7^h 2^m. Arms of the bifilar torsion circle turned from 110° 16' 5 to 107° 3'. The observations of the bifilar, between 7^h 2^m and 48^m have been corrected to the original torsion circle reading. See Introduction, p. xxxii.

BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.	BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.	BIFILAR Corrected.	BALANCE Corrected.									
Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.			
				3	7	18	25	18	829.5	3	8	19	24	19	551.4	19	833.5	
17	603.6	17	807.8			18	12.11	18	559.5			19	50.85	19	551.4	19	833.5	
18	603.9	18	807.0			19	12.16	19	570.9	19	835.4	20	45.54	20	531.8	20	828.7	
19	603.8	19	808.3			20	07.71	20	580.1	20	845.7	21	42.78	21	520.2	21	818.2	
20	605.9	20	812.3			21	02.42	21	604.4	21	859.4	22	38.06	22	516.9	22	808.8	
21	615.7	21	814.7			22	02.52	22	620.0	22	861.5	23	36.11	23	513.1	23	800.5	
22	616.9	22	818.3			23	05.22	23	627.3	23	857.3	24	31.39	24	509.4	24	786.7	
23	621.4	23	822.1	*		24	10.27	24	629.0	24	842.1	25	28.87	25	554.1	25	783.2	
24	627.2	24	824.6	*		25	16.48	25	628.9	25	822.9	26	608.1	26	792.2			
25	628.4	25	824.3			26	25.06	26	639.8	26	811.0	27	28.72	27	615.3	27	793.2	
26	641.7	26	823.1			27	26.23	27	606.6	27	804.0	28	29.54	28	597.4	28	785.5	
27	639.2	27	820.8			28	15.98			28	791.6	29	24.03	29	595.7	29	785.3	
28	630.3	28	820.4			29	10.72	29	657.1	29	789.1	30	19.10	30	615.1	30	793.2	
29	606.0	29	815.9			30	32.96	30	615.2	30	768.6	31	19.94	31	619.8	31	778.3	
30	579.8	30	811.0			31	26.10	31	642.8	31		32	37.53	32	633.1	32	750.1	
31	568.6	31	811.9			32	25.945	32	637.8	32	720.5	33	51.93	33	652.3	33	782.3	
32	586.5	32	815.2			33	26.10.62	33	576.2	33	669.6	34	44.79	34	624.6	34	816.0	
33	602.4	33	817.3			34	26.24.71	34	534.7			35	33.29	35	602.3	35	832.8	
34	619.8	34	823.4			35	26.22.59	35	486.6	35	706.8	36	24.20.83	36	602.1	36	809.3	
35	647.5	35	837.4			36	25.47.35	36	534.7	36	834.0			37	623.8	37	736.5	
36	660.	36	856.8			37	30.11	37	597.5	37	882.8	38	25.01.88	38	650.6	38	702.3	
(out of field)	37	863.5				38	23.27	38	640.3	38	885.8	39	05.69	39	628.3	39	760.0	
	38	863.7				39	24.35	39	634.8	39	881.5	40	09.73	40	607.4	40	758.5	
	39	847.4				40	20.38	40	644.3	40	854.2	41	09.02	41	573.4	41	782.8	
40	613.3	40	810.8			41	28.79	41	656.1	41	828.0	42	25.01.78	42	536.5	42	790.0	
41	550.8	41	764.4			42	23.21	42	652.5	42	817.2	43	24.49.41	43	528.4	43	785.8	
42	533.9	42	736.1			43	37.33	43	627.7	43	843.3	44	50.98	44	521.4	44	780.6	
43	534.1	43	715.7			44	27.31	44	602.3	44	858.6	45	42.51	45	503.4	45	784.0	
44	544.6	44	710.7			45	27.10	45	591.8	45	855.4	46	37.83	46	489.7	46	761.2	
45	575.1	45	722.7			46	27.91	46	503.7	46	834.2			47	482.3	47	727.7	
46	601.4	46	733.2			47	25.93	(out of field)	47	796.5			48	39.18	48	500.0	48	722.1
47	611.3	47	734.9			48	20.99			48	771.4	49	37.12	49	507.8	49	720.2	
48	604.0	48	730.4			49	18.81			49	769.2	50	41.57	50	505.6	50	682.5	
49	591.8	49	721.9			50	16.48	50	410.6	50	774.1	51	43.92	51	492.4	51	659.4	
50	574.4	50	721.0			51	12.82	51	420.9	51	781.3			52	481.6	52	632.5	
51	577.2	51	728.6			52	08.95	52	436.2	52	795.2	53	47.08	53	482.4	53	615.6	
52	598.0	52	741.5			53	05.72	53	462.3	53	797.3	54	47.42	54	483.6	54	600.0	
53	614.6	53	759.2			54	04.98	54	499.2	54	796.7	55	51.56	55	487.3	55	565.6	
54	646.7	54	786.2			55	04.91	55	524.9	55	795.3	56	24.59.56	56	484.8	56	556.1	
(out of field)	55	811.8				56	03.43	56	543.8	56	797.0			57	479.6	57	551.8	
	56	841.8				57	02.55	57	561.7	57	798.2	58	25.05.38	58	482.7	58	536.6	
	58	890.3				58	03.77	58	571.0	58	800.6	59	10.33	59	490.4	59	537.0	
	59	936.4				59	03.50	59	586.7			59	08.88	0	488.3	0	552.2	
	59	944.6	3	8	0	02.96	0	597.1	0	808.8			1	483.4	1	564.6		
	0	917.0	*		1	01.27	1	613.2	1	790.2			2	477.3	2	559.9		
	1	878.5			2	00.94	2	621.0	2	814.1			3	471.2	3	551.0		
	2	853.6			3		3	623.2	3	816.5			4	470.5	4	552.5		
	3	853.2			4	01.34	4	625.0	4	816.5			5	472.1	5	562.0		
	5	713.7	5	911.8	5	00.40	6	649.5	6	817.8			6	476.7				
	6	700.3	6	916.1	7	01.34	(out of field)	7	810.9			7	02.59	7	483.1	7	567.1	
	7	704.6	7	916.1	8	05.22		8	798.2			8		8	488.3	8	563.5	
	8	685.0	8	901.5	9	05.82	9	647.0	9	792.0			9	04.64	9	493.8		
	9	672.3	9	893.0	10	02.62	10	645.7	10	797.7			10	06.16				
	10	657.3	10	880.1	11	25.02.69	11	631.5	11	802.9			11	09.26				
	11	634.9	11	887.1	12	24.57.31	12	611.9	12	815.5			12	05.69	17	489.0	18	568.3
	12	605.2	12	887.0	13	57.31	13	599.7	13	827.7			13	24.56.74	22	490.9	23	547.2
	13	578.1	13	877.2	14	53.54	14	587.5	14	839.9			14	56.74	27	488.0	28	534.1
	14	557.2	14	854.7			15	588.7	15	844.1			15	30.93.2	32	494.6	33	536.8
	15	549.0	15	837.8			16	576.5	16	837.1			16	24.57.98	37	488.2	38	531.3
	16	547.0	16	828.8	17	51.25	17	569.7	17	836.7			17	25.01.21	42	514.4	43	531.2
	17	548.3	17	829.4	18	49.61	18	564.0	18	836.7			18	13.05	47	518.3	48	571.0

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

Dec. 3^d 7^h 30^m. The bifilar magnet moving backwards and forwards with great rapidity.Dec. 3^d 7^h 48^m. Arms of the bifilar torsion circle turned back from 107° 3' to 110° 23' 0". The observations of the bifilar from 7^h 48^m till 16^h 47^m have been corrected (by - 5.5 sc. div.) to the original reading of the torsion circle. See Introduction, p. xxxii.Dec. 3^d 8^h 37^m. The declination magnet moved westwards from 36^m to 37^m.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			
d. 3	h. 9	Min. 50	° 25	02.62	52	507.7	53	567.3	d. 3	h. 13	° 10	24	52.40	11	491.9	d. 3	h. 14	° 55	24	57.88
		55	06.59	57	521.6	58	580.2							9	492.1				0	25 02.42
3 10	0	08.45	2	484.8	3	560.7			10	24	52.40	11	491.9	12	490.1	13	487.6	3 15	5	25 01.21
	5	12.95	7	467.6	8	554.8						15	50.04	17	501.6	18	487.4	*	10	24 59.86
	10	09.12	12	476.9	13	566.8						20	45.98	22	502.1	23	474.5		20	25 02.48
	15	25 04.14	17	481.8	18	586.9						25	49.17	27	514.4	28	467.3		25	03.30
	20	24 54.65	22	511.9	23	600.0						30	52.70	32	500.0	33	448.0		30	02.62
	25	52.20	27	502.0	28	600.0								34	488.7				35	05.38
	30	50.22	32	507.3	33	583.8						35	53.27	37	477.8	39	421.5		40	08.65
	35	49.74	37	527.0	38	572.5						40	51.45	42	481.9	43	414.8		45	06.12
	40	24 57.37	42	533.7	43	568.5						45	53.88	47	485.9	48	411.1		50	03.31
	45	25 03.81	47	520.4	48	571.9						50	54.18	52	485.3	53	406.7		55	03.27
	50	25 01.34	52	489.8	53	561.3						55	55.80	57	474.8	58	402.7		0	00.20
	55	24 57.78	57	485.7	58	539.6												*	5	01.01
3 11	0	57.34	2	493.7	3	529.5	3 14	0				5	53.20	7	459.6	8	399.6	*	10	03.43
*	5	52.33	7	486.7	8	526.2		*				10	50.92	12	472.0	13	399.8		15	02.89
	10	53.38	12	500.6	13	530.9						15	49.51	17	477.2	18	397.5		20	03.50
	15	53.88	17	504.8	18	536.1						20	49.37	22	473.4	23	384.9		25	03.37
	20	57.28	22	498.5	23	540.9								24	482.6				30	07.40
	25	24 58.82	27	495.9	28	537.5						25	24 56.30	27	471.2	28	375.2		45	07.10
	30	25 00.40	32	506.7	33	„						25	25 03.20	32	483.3	33	379.5	3 17	0	05.79
	35	25 01.72	37	496.4	38	537.9								29	474.8				13 4	25 14.23
	40	25 57.51	42	468.1	43	486.6						30	25 05.32	37	470.0	38	380.4		10	19.98
	45	25 02.08	47	438.4	48	452.7													21	09.59
	50	25 02.69	52	454.3	53	457.3													25	07.40
	55	25 04.95	57	460.9	58	520.4													30	07.00
3 12	5	24 43.52	7	533.2	8	517.7						40	25 01.41	41	448.1				35	08.11
	10	24 44.50	12	541.8	13	505.5								42	451.8	43	382.7		40	08.41
	25	24 57.07	27	516.2										44	456.9					
	40	25 03.97	42	461.9	43	509.7								46	463.0					
	50	24 54.59	52	477.0	53	514.6								47	471.0	48	392.2			
3 13	0	50.93	2	457.7	3	489.4						50	25 00.00	51	488.8					
*	5	50.95	6	476.4																

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.

* See notes on the Aurora Borealis, after the Extra Observations of Magnetometers.

BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.	BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.	BIFILAR Corrected.	BALANCE Corrected.												
Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	Sc. Div.	Min.	Mic. Div.						
52	479.4	53	414.4	13	4	50	25	12.04	52	514.4	53	492.3	15	9	0	24	46.21	2	528.7	3	442.0
54	478.7			13	5	0		11.98	2	535.2	3	492.8			5		43.15	7	535.6	8	441.1
57	480.9	58	421.7			15		14.26	17	538.2	18	492.6			10		43.29	12	551.9	13	438.2
2	485.7	3	430.8			25		13.66	27	540.4	28	491.0			15		49.54	17	555.6	18	437.0
7	473.6	8	419.8	13	6	5		06.32	6	541.0	7	494.6			20	24	59.53	22	545.0	23	439.5
12	479.7	13	402.2			30		07.40	32	520.7	33	506.8			25	25	04.17	27	532.8	28	439.7
22	477.8	23	384.9			35	25	01.54	37	508.9	38	517.1			30		04.04	32	528.5	33	439.5
27	489.6	28	370.9			40	24	48.36							40		02.32	42	540.1	43	434.7
32	492.3	33	363.2			41		47.69	42	533.1	43	511.6	15	10	0		05.62	2	538.6	3	430.6
37	497.6	38	361.3						44	535.5			15	11	0		05.63	2	542.7	3	428.2
42	497.0	43	363.6			45		47.69	47	535.2	48	508.6			20		01.88	22	535.6	23	429.8
17	487.0	48	364.2			50		48.50	52	534.7	53	509.5	15	12	0		07.31	2	544.8	3	425.6
52	494.2	53	362.9			55		48.90	57	534.9	58	509.1									
57	501.9	58	370.1	13	7	0		48.45	2	543.9	3	504.1	16	7	0		25 00.67	2	538.3	3	438.0
2	511.0	3	383.1			5		52.94	7	545.6	8	510.6			10	24	54.82	12	558.4	13	432.4
7	515.0	8	393.1			10		24 57.04							15	24	57.71	17	558.7	18	433.8
12	516.6	13	401.9			20	25	00.74	22	527.2	23	495.6			20	25	01.81	22	552.6	23	434.7
17	512.2	18	418.2			45		06.90	47	527.3	48	488.1			35		04.95	37	546.0	38	432.5
22	511.4	23	428.8	13	8	0	25	05.85	2	533.2	3	482.7	16	8	0		02.93	2	544.0	3	432.2
27	515.3	28	432.1	13	10	0	24	50.78	2	526.5	3	470.9									
32	512.4	33	431.8			5		48.77	7	529.8	8	468.5	18	6	0		25 00.98	2	551.2	3	451.3
47	515.1	48	422.5			15		51.05	17	528.1	18	466.5			10	24	59.73	12	550.5	13	448.7
2	519.7	3	444.0			30		54.82	32	517.6	33	462.9	18	7	0		25 08.77	2	543.4	3	444.6
						50		58.49	52	519.5	53	452.1	18	8	0		24 59.83	2	547.5	3	440.4
2	543.1	3	485.1	13	11	0	24	59.84	2	521.0	3	444.0			10	25	03.81	12	539.0	13	439.9
12	529.7	13	495.9												35		05.32	37	542.0	38	438.6
17	519.3	18	502.3	15	7	0	24	49.22	2	520.6	3	459.3	18	9	0		06.95	2	541.7	3	439.3
22	524.2	23	499.3			5		49.15	7	520.3	8	461.1									
27	532.0	28	497.7			10		49.88	12	519.3	13	463.9	31	9	0		25 00.53	2	537.9	3	418.6
32	535.9	33	494.7			20		54.75	22	523.4	23	465.4			10		00.13	12	541.3	13	419.2
37	537.4	38	492.2			30	24	59.46	32	529.6	33	463.7			30		03.50	32	534.4	33	422.9
42	538.3	43	492.1	15	8	0	25	06.39	2	535.5	3	450.1	31	10	0		07.31	2	542.0	3	416.7

BIFILAR. $k=0.000140$.BALANCE. $k=0.000010$.Dec. 13^d 6^h 20^m. The instruments read nearly as at 6^h 0^m.Dec 13^d 10^h 15^m—30^m. Magnets moving very little and steadily in one direction.Dec. 25^d 11^h 20^m. Declination magnet moved eastwards slowly and regularly from 0^m. The magnets, especially the declination magnet, were unsteady throughout the night.

NOTES ON THE AURORÆ BOREALES SEEN AT MAKERSTOUN.

- | | d. | h. | m. | |
|------|----|--------|---|---|
| Jan. | 0 | 15 | 10. | The sky looks more milky to N. than in any other quarter. Aurora? |
| Jan. | 16 | 5. | Aurora to W.; faint and diffuse. Fog commencing; dense fog at 20 ^m . | |
| Jan. | 7 | | Aurora seen in Orkney. | |
| | 9 | 7 | 10. | Faint auroral band 8° high. 20 ^m . Slight pulsations in the aurora. |
| | | 8 | 5. | Fine auroral arch, about 10° altitude at the vertex. |
| | | 8 | 15. | Measured and found the summit of the arch 15° 5 altitude, the one extremity meets the horizon at N. 45° E., the other about W. 13° N., but this extremity is so diffuse that the measure is but rough. |
| | | 8 | 35. | The arch nearly meets the horizon at NE.; faint and diffuse to W. 55 ^m . Triple arch; the middle one has its greatest altitude 29°; brushes below the arches to NNE. |
| | | 9 | 5. | The aurora in a series of four arches, stretches across the sky from WSW. to ENE., crossing near the zenith; diffuse broad arches with dark strips of sky between. The E. extremity rises in brushes a few degrees above the horizon. |
| | | 9 | 19. | Aurora in two arches, one passing 5° or 6° N. of zenith, the other 20° high; 40° of sky between the arches. 24 ^m . The upper arch passes through the zenith; faint brush to NNE. below the lower arch. 29 ^m . Faint portion of upper arch with the W. extremity visible; lower arch breaking in the middle, the two portions making a sharp angle with each other; pencils below to N by E. 34 ^m . The western extremity of the upper arch has two branches, one passing 10° to S., the other 10° to N. of zenith; pencils to N by E. |
| | | 9 | 42. | Aurora bright to W., passing 25° S. of zenith, terminating in a bright patch to E.; middle of W. extremity of arch W. 22° S., of E. extremity of arch E. 18° N. Altitude of lower arch 23°. |
| | | 45. | | W. portion of upper arch 60° in length, split into two; lower arch bright to NE. 49 ^m . Pencil risen from W. 28° S. 51 ^m . Three pencils from the same point; patch of aurora, altitude of centre 76° above E. 14° N.; disappeared at 52 ^m . 54 ^m . The upper extremity of the W. pencils attains the altitude 29° above S. 24° W. 55 ^m . Lower arch very steady and complete azimuths of the extremities W. 3° N., and N. 48° E. |
| | | 56. | | Brushes to W. brighter, varying in intensity. Lower arch, altitude 24°, breadth about 4°. (The measures of altitude of the summit of arches are always made in the magnetic meridian, and the highest portion of the belt is taken). |
| | | 9 | 58. | Western portion of the upper arch nearly extinct. |
| | 10 | 4. | | The lower arch has broken into a series of pencils, very beautiful and of a bright light-green; a portion of a lower arch visible at the E. extremity; the whole of the arches consists of series of pencils or brushes. 6 ^m . A very luminous pencil to NNW., very bright to N. 7 ^m . Bright to NW. The pencils start up everywhere, moving both vertically and sideways; generally they are of a beautiful light-green, but some of the most vivid are tinged with red. The pencils rarely if ever exceed 10° in length; no long streamers seen. 8 ^m . A patch to SW.; the pencils below the arch are now less distinct. |
| | | 12. | | Auroral arch below quite diffuse; mass of streamers, not distinct. 13 ^m . Faint patches cross near the zenith like a portion of the upper arch again. |
| | | 13½. | | Meteor with reddish, sparky tail, from 37° to 27° of altitude above E. 35° S., shot nearly vertically down. |
| | | 15. | | The lower arch now an amorphous mass of patches. 15½ ^m . Arch forming, altitude 65°, disappearing immediately; pencils to NE. |
| | | 16-17. | | Patch to ENE., 25° altitude. This patch, which has reappeared frequently, seems to belong to the highest arch. 18½ ^m . Portion of an arch nearly across the zenith, another to S. of zenith from W., as at first. 19 ^m . Bright patches to NE. |
| | | 20. | | Bright arch passes 10° SSE. of zenith, altitude of summit of lower edge 61° above SSE. 21 ^m . Summit of lower edge 56° above SSE. The lower arch to N. in one diffuse mass. |
| | | 22½. | | The arch passing to S. of the zenith, has split into two portions; the azimuths of the extremities of the lower portion are W. 33° S., and E. 13° N. 24 ^m . Streamer due W., bright to W., streamer to N. |
| | | 25. | | The lowest edge of the arch to S. has the altitude of 37° above SSE. There has been a belt of cirrus clouds from W. to N. throughout these observations. |
| | 10 | 30. | | Auroral arch to S., about 30° altitude; bright to SW. |
| | | 32. | | Still bright to SW., but the arch is nearly away. 36 ^m . Bright patch on SW. horizon; aurora faint to N.; cirro-strati rising. |
| | | 40. | | Patches to SSW., 20° altitude, faint; aurora faint to N., with faint streamers below; faint on SW. horizon; cirro-strati rising to N. |
| | | 55. | | Rapid pulsations and streamers. |
| | 11 | 3. | | Pulsations to an altitude of 50°. |

NOTES ON THE AURORÆ BOREALES SEEN AT MAKERSTOUN.

- Jan. d. h. m. 7. Streamers and pulsations from an amorphous mass to N. 8^m. Rapid pulsations; aurora in patches forming broken arches; altitude of highest about 32°. 12^m. Bright patch, with rapid pulsations, to NNE., since last observation. 13^m. Rows of streamers to N. 15^m. Mass of faintish streamers, with pulsations to NNE. A mass of cirro-stratus due N., altitude 10°, apparently stationary. 17^m. Large amorphous masses pulsating, especially to NE. 23^m. Nearly as at 17^m, but not bright, occasionally brushes near horizon. 24^m. Pencils to NNE. and NE.
27. Large mass, about 60° in length from NE., pointing to 10° S. of zenith; pencils occasionally to NE. 32^m. Aurora diffuse, faint pulsations nearly to zenith. 35^m. Pulsations like waves revolving from NNE. 38^m. A digitate mass to NE. 41^m. The mass of cirro-stratus to N., like a black island lying in a sea of light, seems nearly stationary, its middle is about due N., and has an altitude of 10°; thin cirri to NW.
52. Aurora rather diffuse, stretching from NNE. to W.; a faint, variable belt from W. to NE., altitude 50°, with lateral pulsations; few pulsations in the body of the aurora.
- 12 0. Aurora on the whole brighter; patches to NE.; the mass of cirro-stratus still exists, but is more spread out towards the NW.
9. A belt of nebulous patches stretches from W. to NE. through Polaris; many patches in NW. quarter of the sky, to altitude 55°; the principal part of the aurora is to N., very bright; one streamer seen in the brightest portion of it; bright patches to NE.
11. Obscured to NNW. by cirro-stratus; pulsations among the patches of aurora.
17. Patches appearing and disappearing with great rapidity all over the N. portion of the sky as high as the zenith; they seem to spread from the NNE., where there are still many bright patches.
22. Aurora fainter; many bands stretching from NE. to W by S., appearing and disappearing in a second or two, also many patches; the bands seem to have their origin in the NE., they seldom attain nearer than 30° of the W. point of the horizon.
26. As before, the bands rather more persistent.
30. Much as before; lateral pulsations to NE. among bright patches; brushes.
39. A series of broken bands from NE. to altitude of 70°—90° above N.; not many pulsations.
44. A faint belt can be traced from WSW. to NE., altitude 60° above NNW.; aurora generally fainter.
- 13 4. An arch of very faint light stretching from NE by N. to W by S., altitude 75°: streamers and bright patches to N. near the horizon; most of the aurora is now obscured by the cirro-stratus.
10. Cirro-stratus and cirri over the aurora, and in no other part of the sky.
15. No pulsations can be perceived; aurora fainter.
26. Bands from NE by N. through 10° SSE. of zenith to SSW., composed principally of patches. 31^m. The same; some of the streaks seen to 60° above SSE. The aurora seen through clouds to N.
40. Faint streaks and patches over N. sky, and to 15° S. of zenith.
- 14 9. Scarcely any of the aurora can now be seen for clouds; no patches are seen near the zenith.
21. Patches and bands of light; a thin haze seems spreading over the sky, which probably diminishes the intensity of the auroral light; the clouds to N. obscure the aurora there.
- Jan. 19 12 0. Sky nearly covered with woolly cirri or cirrous haze; an indistinct lunar halo seen; conceived there was an auroral light to N., but was not certain, on account of the moonlight (B.) When the observer (H.) went to the Observatory at 13^h, he found the magnets considerably disturbed.
- 22 10. Cirri rising in tufts from NNW., and radiating from that point, with the purls of the tufts on all sides turned towards the magnetic meridian; very dense on the horizon, like a mass of auroral light, and in single tufts higher.
- Jan. 20 11 10. Large corona when the moon is covered by thin watery cloud, and small bluish corona in the apparently pure sky. Auroral light to N.; doubtful, from moonlight. Aurora seen in Orkney. (See Meteorological Notes on growing cloud.)
- Jan. 21 8 10. Large lunar corona. Auroral light to N.; doubtful, from moonlight.
- Jan. 23 15 34. A break in the clouds, to N., shews auroral light.
- Jan. 24 7 46. Cannot detect any appearance of aurora, probably on account of the bright moonlight.
- 11 10. Cirri in thin bands, much like those described previously (Observations for 1844, Nov. 23, page 325), as apparently connected with aurora.
- 13 10. There is a great similarity in the appearance of the filmy cirri with that of aurora; the cirri shoot up from about NW by N., (a few degrees from the magnetic north;) bands of nearly stationary black clouds are lying on the NNW. horizon in a white light, just as in appearances of auroræ. There seems little doubt that the light on the NNW. horizon is a combination of this cirrus cloud and the aurora. The bands, which reach as far as the zenith, move very slowly; at some times it was imagined that they were pulsating; this, however, was doubtful, a slight change of the direction of vision being sufficient, with the moonlight, to give an unsteady appearance to the filmy bands.

NOTES ON THE AURORÆ BOREALES SEEN AT MAKERSTOUN.

- | | d. | h. | m. | |
|------|-----|-----|-----|--|
| Jan. | 26 | 13 | 10. | Very thin cirri radiating in bands, as on the 24th, from NW by N. and SE by S., forming a very irregular halo round the moon; the cirri seem to spring in tufts from the border of the halo, in the direction of the radiations, namely, from SE by S. |
| | 25. | | | The halo rather better defined, although still irregular. The colours of the interior corona are also more distinct. There may be auroral light to N., but if so, it is completely masked by the cirri and moonlight. |
| | 14 | 10. | | Cirri much as before, very like a bank of auroral light from NW by N., eastward. There is something decidedly peculiar about these cirri. At 14 ^h 10 ^m observed towards SW., altitude 45°, a series of parallel narrow bands of cirri, some nearly 30' broad; watched them very attentively, in order to see if any pulsations occurred; could not see that they moved excepting longitudinally; at 14 ^m they had arrived at the moon and broken the halo into bands; they had thus moved bodily about 40° in less than 4 ^m . It is conceived that the length of the bands are increased as well as their number. It is to be remarked, that these bands did not lie in the same direction as the other cirrous streaks, the latter lie nearly in the magnetic meridian, the bands lie nearly east and west. The bands from NW by N. span the sky in complete arches. Were the cirri not seen plainly near the moon, and the connection traced to the N., the appearance on the N. horizon would be noted <i>unhesitatingly</i> as the common homogeneous bank of auroral light. |
| | 15 | 10. | | Halo gone at present, but cirrous bands nearly as before. A black patch of cirro-stratus near the NW. horizon; this was also noticed at 13 ^h . 15 ^m . It has been noticed throughout, that the declination magnet moves irregularly, by fits or jerks, the vibration often ceasing, or nearly so, suddenly. 30 ^m . W. portion of halo visible; many patches of cirro-stratus or scud risen on NW., N. and SW. horizon. 45 ^m . A rather thicker cirrus coming up to the meridian, moving slowly, with patches of cirro-stratus. The clouds continued moving up more quickly, becoming more and more dense till 16 ^h 10 ^m , when the moon was totally obscured, though thin cirri were still seen to E. |
| Jan. | 28 | 7 | 35. | Light seen through the clouds to N. |
| | 8 | 30. | | Auroral light seen through the clouds to N. |
| | | 50. | | As far as the aurora can be seen it appears to be quite amorphous; no pulsations or streamers. |
| Jan. | 29 | 7 | 5. | Auroral light to N. 30 ^m . Auroral light becoming fainter. |
| Jan. | 30 | 10 | 10. | There seems a faint auroral light among the haze to N., but it is doubtful. |
| Feb. | 1 | 12 | 4. | The magnets having exhibited some slight irregularities in their motions, the observer looked to see if he could detect any appearance of aurora, the sky being perfectly clear, but he could not; having again entered the Observatory for a minute, he returned at 9 ^m , and found the sky suddenly (in a minute or so) turned milky, with the exception of a streak of blue, reaching from SW. towards NE., another streak meeting it near the zenith (from NE.?) at the same time it became much lighter to N. and especially to NE. There was now without doubt aurora, with faint pulsations. |
| | 12 | 20. | | A most strange aurora; one portion extends in a bank along the horizon from SW. to NE. to an altitude of 45° above WNW., another similar portion to E.; pulsations all round, especially to SE.; just now streaks with the bluish sky to E., altitude 45°. |
| | 25. | | | The western bank brightest on the whole; there is a sort of radiation from SW. and NE.; six-tenths of the sky covered by aurora, and as much to S. as to N.; at times no pulsations visible, but the aurora seems to extend like a thin haze over the deeper blue of the sky; the general position of the great boundaries are pretty permanent for some time. |
| | 36. | | | Very bright pulsation; meteor shot rapidly <i>towards</i> the zenith from 60° altitude above NE.; streaks to E. still bright; patch to SSW. with pulsations; all the stars distinctly visible through the aurora. |
| | 45. | | | Much as before; the Pleiades are immediately <i>out of</i> the W. bank, as they have been throughout the whole time. |
| | 50. | | | Sky nearly covered with the milky aurora; bank of cirro-stratus during the whole period to SE.; no other clouds visible; streaks of blue sky to NW.; dark space throughout the observations in N. horizon. The edge of the cirro-stratus in E. and S. horizon, seems to be rather brighter than the rest, just like the clouds in the N. horizon during aurora. |
| | | | | The observer watched the appearance of this aurora till 13 ^h 10 ^m . In its general features it continued much as before; a rather wide streak of sky to NW. noticed at 50 ^m (which, it is believed existed before that minute), passing immediately below the Pleiades seems very permanent in its form and relation to the bank of aurora. The W. bank was on the whole brightest, although very variable in its brightness throughout. The luminosity of each mass was rather uniform, excepting a patch to SSW. which was much brighter than the surrounding aurora. The dark space on the N. horizon mentioned at 50 ^m , was something like that under the usual auroral arch, but ill formed, and not easily separated in some places from the aurora. |

NOTES ON THE AURORÆ BOREALES SEEN AT MAKERSTOUN.

d. h. m.

The appearance, as noted at 9^m, was much the same as if sheets of the *very thinnest* vapoury haze had been *suddenly* illuminated by a rising moon. The stars were as well defined in the aurora as in the dark spaces unoccupied by it, the only difference consisting in the *ground* on which they were seen. The moon did not rise for several hours after this, but there was not the slightest doubt as to the auroral character of the phenomenon. (B.)

[All the remarks on aurora are given almost *verbatim* as they were noted during the phenomena. The above is a description of a phenomenon which I have named milky aurora, interesting for its peculiar character. It was observed on this occasion for the first time, but has been several times observed since, and always during very minute magnetic irregularities; in several instances it covered the sky uniformly, giving an unusual degree of luminosity to a starlight night. One distinctive difference between this appearance and that of thin cirrus haze, is the clear definition of the stars; stars within the ordinary phenomenon of auroral sheets are seen exactly as if observed through a telescope with an illuminated field; this is the case during milky aurora; in haze, however, the stars become blurred even when the haze is thinnest. October 1848. B.]

- Feb. 5 8 5. Bank of auroral light to NNW. like strong twilight.
 30. Aurora brighter, and extending rather higher.
 9 10. Auroral light in form of a segment of a circle, summit of the arch in the *astronomical* meridian.
 30. As before.
 10 10. Aurora quite steady, not so bright as last hour.
 11 10. Faint auroral light behind the clouds to N.
 12 10. Faint aurora in form of an arch, altitude 5°, crown in the magnetic meridian.
 20. Arch measured, azimuths of extremities N. 27½° E. and N. 67° W., centre of arch N. 20° W., altitude of summit 8°.
 38. Streamers shooting out from the arch all along. 44^m. Streamers fainter and fewer; one rather bright to NNE.
 45—50. A low auroral arch, quite black below, with bright persistent streamers to (WNW.?) The sky decidedly blacker immediately *without* the arch than at a distance from it.
 49. One very vivid pencil to NW. moving eastward, disappeared before 51^m.
 54. A bundle of pencils to NW. moving E., no other pencils along the arch. 57^m. Arch faint, several streamers breaking out in all parts of it.
 13 4. Aurora altogether much fainter, one or two very faint streamers. 11^m. Aurora brighter; patches close on horizon, like the tops of streamers from a lower arch; arch broken up into pencils to NW., a black streak of cirro-stratus there. 14^m. Arch quite broken; a number of bundles of pencils; streak of cirro-stratus still to NW.; shooting star to N., altitude 30°, moving towards N. horizon. 19^m. The streak of cloud has disappeared; aurora quite amorphous, and much diminished in altitude; masses of streamers interspersed, none of them bright. 24^m. Aurora fainter, a great number of very faint streamers. 29^m. Much as before, several small patches of cloud near N. horizon; after this the aurora gradually became fainter, and at 50^m could scarcely be distinguished. The greatest altitude of the arch did not exceed 12°. The previous observations after 10^h 10^m were made by Mr Welsh at the Observatory; the following were made by myself at my own residence, about 300 yards from the Observatory.
 13 10—15. Arch as before, altitude not above 6° or 7°, no streamer at 10^m, black within the arch, afterwards streamers from the same point as before, and, within the black, others rise all along the horizon; they shew what I could not observe before, several small black patches of (cirro-stratus?) within the black to (NW.?) the blackish sky without the arch extends to 45° altitude, and is blackest in one point. This cannot be a deception due to the effect of the adjacent light on the eye, since, when the aurora is shut out from view, the blackness still subsists as before. The stars seem duller, as if covered by a thin cloud in the black. The darkness seems however greater and more extended when the brightness of the streamers is greatest. The form of the external blackness is much that of the arch, but, as mentioned, extends farthest beside the bright streamers. I do not remember to have observed this blackness so decided on any previous occasion. A shooting star was seen about 12^h 46^m, and another about 13^h 12^m, both moving rapidly (B.) See notes on rosy beams seen at sunrise lying nearly in the magnetic meridian. Meteorological Notes, Feb. 5^d 20^h.
 Feb. 7 14 5. Cirrous clouds like cirrus haze cover the greater part of the sky, rendering the stars dim, especially to S.
 10. On a more careful examination the sky seems covered with the milky aurora, as seen on February 1st, thick cirrus haze obscures the stars to altitude of 45° from S.; they become more and more distinct to zenith, where the appearance is milky. Faint Pulsations?

NOTES ON THE AURORÆ BOREALES SEEN AT MAKERSTOUN.

- | | d. | h. | m. | |
|--------|--------|----|-------|--|
| Feb. | 7 | 14 | 15. | Pulsations without doubt, the wedge of pure sky pointing nearly NNE. as on February 1st; frequent pulsations to NE., and especially on the edges of the loose cirro-stratus to NE. |
| | 30. | | | Very fine <i>milky</i> aurora; nearly as distinct as on February 1st, bright to W., with pulsations; parallel bars of dark and light sky, altitude about 45° from W., pointing nearly NNE.; pulsations all round; stars getting brighter to S. |
| | 40. | | | Aurora much off; stars very clear and distinct; very faint aurora now; very faint pulsations? neither would have been detected unless carefully watched. |
| | 50. | | | Much as at 40^{m} ; most distinct about NNE., where the point of the wedge of sky is still well seen. |
| 15 | 0. | | | Very faint; as before. |
| | 5. | | | Bright again with pulsations; nearly the whole sky covered. An amorphous mass of cirrus cloud on SSW. horizon, which seems to pulsate (or merely reflects the pulsations of the rest of the sky?); it is dense on one side, and extends into thin cirri on the other (W.) side. |
| | 20. | | | Faint again, with pulsations around. |
| | 30. | | | The cloud to SSW. has extended into long strips of cirrus; radiating from that point, it completely obscures the stars, excepting at the extremities, where the stars are seen dimly. The strips have a slight curvature, the concavity to E., are blackish, and quite different from the milky aurora. They reach now to zenith; pulsations to E. |
| | 35. | | | Idem. |
| 16 | 0. | | | Overcast; pulsations to NNE.? |
| | 10. | | | Loose, chequered cirro-cumuli to S. (B.) |
| Feb. | 24 | 8 | 5. | A very faint auroral bank, 5° altitude. 25^{m} . Aurora as before; very faint, sky quite clear, and no moonlight. |
| | 35. | | | The auroral light can with difficulty be detected. |
| | 44. | | | The aurora, which has been very faint, was now broken into bundles of streamers some of them reaching to an altitude of 20° . |
| | 49. | | | A low indistinct arch, crown about N by W., altitude 5° ; a few faint streamers to NNW., reaching to an altitude of 25° . |
| | 56. | | | Arch from NE by N., to NW by W., a few pencils at the eastern extremity. |
| 9 | 1. | | | Flat arch about 7° altitude. |
| | 15. | | | Measurements of arch; extremities N. 27° E. and N. 70° W., altitude of summit 8° , centre of arch N. 20° W.; a few patches within the arch. 20^{m} . The arch has much diminished and is very faint, a few patches on the horizon. |
| | 25. | | | Two arches, the upper one very faint, the lower broken and about $2\frac{1}{2}^{\circ}$ altitude; a dark space, not cloud, among the aurora to N. 28^{m} . Aurora much fainter. 30^{m} . Growing brighter, chiefly composed of broad patches which commence on the horizon and spread upwards. |
| | 38—40. | | | An irregular mass of light from about N. $\frac{1}{2}^{\circ}$ W. to N., where it breaks abruptly; the mass moves slowly eastward; at the termination of the light there is a dark space, and a little farther eastward a few streamers; the light breaks up into patches, filling up the dark space; it then swells out into a dense mass of light, and moves westwards, apparently pushing an intensely black patch before it. |
| | 45. | | | All broken up, a few bright patches. 51^{m} . The moon rose about this time, and obscured the aurora, some streamers were seen occasionally afterwards. (W.) |
| 10 | 0. | | | Faint streamers seen to NNW. |
| Feb. | 28 | 11 | 0—30. | The sky seems milky all over, with a slight appearance of radiation from N by E.; it seems probable that this is milky aurora. There is rather more light to N. than elsewhere. Cannot be sure that there are any pulsations. There are dark-looking patches (of cloud?) to NW., through whose edges at least stars are visible. |
| | 12 | 0. | | Evidently auroral light to N., but very faint; in fact only a little lighter than the rest of the sky, which is much as before; the black patches to N. are away, at least from their previous position; if clouds they were very thin. |
| | 13 | 4. | | Cirri radiating from S by W., sky milky as before; some cirrous haze. |
| | 14 | 4. | | Cirri with cirrous haze, cirri radiating from about S. and N. Faint auroral light to N. It may be remarked that the <i>character</i> of the disturbances on the nights of milky aurora has been the same. |
| March. | 7 | 14 | 10. | Clouds cleared off from zenith, and to an altitude of 45° above NE., where the sky seems milky and lighter than nearer the zenith; cirro-cumulous clouds to NW. are very black, and seem lying in a milky sky. Speck of light near horizon at NNW. At the edges of the clouds the sky seems milkier than elsewhere, or if milky in no other place, it seems milky there; this has been frequently noticed before, is it merely an optical deception? (B.) |

NOTES ON THE AURORÆ BOREALES SEEN AT MAKERSTOUN.

- March 18 d. h. m. 10 15. There is little doubt there is an aurora ; along with it, however, there is the phenomenon of auroral-like cirrus streaks. A series of arches of cirrus streaks extend from WSW. to NE., altitude of the highest 45° above NNW., breadth of streaks about 8° , then a belt of sky, and from 25° or so above the horizon the whole is aurora or cirri, or both, with dark streaks amidst ; the moonlight renders all doubtful.
 29. Cirrus streaks within 10° of zenith.
 49. The cirrus arches in strips now cover nearly the whole sky, rising from SW by W. and NE. ? A lunar halo is formed in the streaks. Afterwards the cirri moved off towards SE.
- March 19 10 10. Auroral light to N. ; rendered faint by the moonlight. $11^{\text{h}} 10^{\text{m}}$ and $12^{\text{h}} 10^{\text{m}}$. Auroral light. $13^{\text{h}} 10^{\text{m}}$. Faint auroral light.
- March 23 13 10. Aurora. Streamers ? near horizon. Linear cirri radiate from SSW., a lunar halo is formed in them, which is barred by the strips of cirri ; cirro-stratus on N. horizon.
 14 10. Aurora not well marked on account of the bright moonlight.
- March 24 15 5. Clear to N. ; sky very milky near horizon.
- March 26 11 10. The sky seems rather light, especially to NNW. and SSE., the former probably due to faint aurora, the latter to a rising moon ? the banks of clouds on both these points render it difficult to determine. Two or three flashes of lightning seen about 10^{h} .
 13 10. Auroral light to N. ? seen above cirro-stratus cloud ; doubtful, however, from moonlight.
 14 10. Sky milky ; the moon projects the shadow of the clouds in the air. Faint aurora ? Stormy about 12^{h} .
- March 29 11 15. Faint auroral light to NNW. ; sky milky.
 35. Aurora rather brighter, brightest near N. ; pulsations ?
 45. Less bright ; cirri radiate from NNW. ; sky milky, whiter in some places than others ; like thin haze to W. and S. and NW. ; stars seen dimly through it ; a bank or arch like a crepuscular arch to E.
- April 13 11 10. An auroral arch about 15° altitude, brightest towards the E., the W. end probably being rendered fainter by the light of the moon ; very little change till about 18^{m} , when it suddenly broke entirely up into patches and bundles of streamers, some of the streamers reaching to about 50° altitude ; some of the patches very bright, they moved about considerably, but in no particular direction : after a little the aurora grew fainter.
 12 0. Aurora faint.
 13 10. Vivid aurora, with, large, broad and persistent streamers. 26^{m} . Auroral arch about 35° altitude, with pencils inside the arch, very vivid. 33^{m} . Arch irregular, continuous and rapid pulsations, streamers, &c. 38^{m} . Arch broken and diffuse, with slight variation, few streamers. $42^{\text{m}}\text{---}43^{\text{m}}$. Arch flat, 15° (?) altitude ; aurora homogeneous, slight change. $47^{\text{m}}\text{---}48^{\text{m}}$. Arch higher and brighter, much of it covered by cirro-cumulus and cirro-stratus. $52^{\text{m}}\text{---}53^{\text{m}}$. Nearly as before, bright to NE. $57^{\text{m}}\text{---}58^{\text{m}}$. Arch higher, much as before in brightness, but becoming more and more covered with clouds.
 14 6. Clouds 9.5. Aurora brightest to NE.
 23. Aurora apparently much fainter, seen through the openings of the clouds. 34^{m} . Aurora much brighter. 48^{m} . Vivid patches seen between the clouds.
 53—54. Vivid streamers.
 15 29. Aurora vivid. 35^{m} . Aurora extends to an altitude of 50° , nearly homogeneous, with pulsations. 50^{m} . Aurora evidently fainter ; wind rising.
- 16 4. Auroral patches in zenith ? Aurora to S. ? ; light to S. 9^{m} . Sky milky ? or aurora ; not very bright to N., but clouds there. 25^{m} . Sky overcast with hazy cloud ; rain commencing.
- 18 5—15. A long strip of light above the sun (E by N.), like the sun reflected from much rippled water, cirri radiating from NNW. (magnetic north.)
- April 19 11 5. Milky-like to NNW. Aurora ?
- April 30 11 15. Faint auroral light to N.
 13 10. Idem.
- Aug. 29 9 55. A bright and very complete belt of auroral light stretching entirely across the sky from ENE. to WSW., the part nearest the zenith having an altitude of 80° from the SSE. ; at both extremities of the belt there was a slight turn towards the N. ; the breadth at the broadest part was about 2° or $2\frac{1}{2}^{\circ}$, becoming less near the horizon ; a diffuse auroral light to northward.
 10 7. The belt has now gradually disappeared, except a small portion to WSW., which still remains in the form of a narrow streamer ; a few faint streamers to NNW.
 15. A portion of an arch to westward, composed of wisps of auroral light placed *en échelon*, about 2° or 3° apart, and their length from 5° to 10° each, varying in width, and more or less irregular ; a belt of light to eastward ; the highest wisps point to NW., the lowest to WSW., the directions varying gradually between these.

NOTES ON THE AURORÆ BOREALES SEEN AT MAKERSTOUN.

- d. h. m.
- Aug. 29 10 20. The belt portion of the arch does not join directly with the wisp portion, but has a twist a few degrees to S. of the zenith, the direction of the belt near the junction is at right angles to the direction of the wisps.
 20. A falling star to E., altitude 20° , moving towards E by S., first magnitude.
 24. The belt has shifted slowly to 10° S. of the zenith; the portion to westward is now of a homogeneous character; patches or wisps still in the zenith; fading to E.
 The light has always been very persistent; no corruscations or pulsations being discernible.
 35. The band has the appearance of a rope of two strands teased out at the ends, extending from W. to a little past zenith.
 45. The band still subsists to W., a few small patches to SSE., altitude 70° . A shooting star to SSW., altitude 30° , moving S. The aurora has been always faint to NNW.
 55. The band has all disappeared except a small portion to WSW., which has assumed the form of three short streamers.
 11 0. Almost every trace of aurora has now disappeared; there is still a very faint light to NNW.
 50. Aurora becoming rather brighter, still quite diffuse; patches of cirro-stratus and cirrus interspersed.
 55. A small shooting-star to S., moving to SSW.
 12 35. Streamers breaking out to N by W.; the aurora considerably obscured by clouds.
 45. Faint streamers thrown up throughout the aurora.
 13 25. Diffuse patches of auroral light.
- Sept. 2 10 5. Faint auroral light and faint streamers, 20° altitude, to NW.
 11 50. Occasionally very vivid streamers close to the NW by N. horizon, length about 5° (B.)
 12 0–30. A band of very faint light, stretching from ESE. point of horizon to S., altitude 30° , the breadth perhaps 10° . The light however was so very faint as to create a suspicion of its being an optical illusion; it was certainly not the milky way; no traces of it could be seen at 13^{h} (W.)
- Oct. 20 13 5. Faint auroral light, with patches and small streamers, altitude 5° . Moon shining.
- Nov. 4 12 5. Diffuse auroral light, to altitude 6° , interspersed with streamers, some of which rise to 15° or 20° altitude.
 20. Aurora nearly imperceptible.
- Nov. 5 6 50. Faint auroral arch; azimuths of extremities N. 42° E. and N. 72° W., greatest altitude of upper edge 12° . At this time M. HANSTEEN observed an aurora at Christiania, consisting of an arch of 10° altitude, with its summit at the NW., visible from $5\frac{1}{2}^{\text{h}}$ till 8^{h} , when the sky became overcast. So that $4\frac{1}{2}^{\circ}$ farther north the aurora has had no greater altitude than at Makerstoun.—*Mem. Acad. Roy. de Belgique*, tome xx.
- Nov. 17 6 40. Faint auroral arch, about 7° altitude. 55^{m} . Auroral arch, altitude 13° .
 7 5. Arch has become diffuse and broken, extends from N. 38° E. to N. 82° W., altitude $12\frac{1}{2}^{\circ}$. 15^{m} . The arch has now a depression at the middle, about 3° east of the magnetic meridian; a faint patch to N by E., altitude 26° .
 20–25. A portion of another arch, altitude 27° , also some appearance of a third arch close to the horizon; streamers throughout the aurora from the horizon; the whole seen as through a fog.
 30. The upper arch gone; a bright patch due W. moving a little to S.; streamers to NNE.
 35. Auroral arch to N., in the form of a segment of a circle, altitude $11\frac{1}{2}^{\circ}$; the western extremity of an arch has formed, which, if completed, would have been about 30° altitude; this had disappeared at 39^{m} ; the aurora altogether diminished.
 42. Very faint; moon rising.
 45. Arch becoming rather more vivid, dark space below it, with small streaks of cloud to N. and N by W.; strips of cirro-stratus to NNE. 50^{m} . Nearly as before. 55^{m} . A faint streamer to NW. within the arch. There have been patches of cirro-stratus among the aurora almost the whole time.
 7 57–59. The auroral light, which had sprung up towards NE., rolled gradually westward in the dark space under the arch (like fire sweeping along a heath in a dark night), breaking at one time into two opposing combs, the teeth vertical. At 59^{m} a bright meteor, first magnitude, fell vertically from an altitude of about 25° above NNW., (*i. e.*, in the magnetic meridian); it moved with considerable slowness, occupying perhaps two or three seconds, till it met the auroral arch, where it was suddenly and completely extinguished.
- 8 50. Double arch, the upper one 12° altitude, and the lower 4° altitude; the lower arch is the most vivid; a brush to NW.; at 46^{m} and again at 52^{m} irregular streaks of cirri to S. 55^{m} . Bright masses of light forming to N by E., proceeding westwards and forming a portion of an arch 8° altitude. 58^{m} . Bright brush to N by E.; bright horizontal band to N., altitude 3° . 59^{m} . Brushes and patches scattered throughout the aurora.

NOTES ON THE AURORÆ BOREALES SEEN AT MAKERSTOUN.

- Nov. 17 9 d. h. m.
 5. Bright patches and bands, forming combs, brushes, and streamers.
 7. Bright brushes and streamers to NNW. 10^m. Faint streamers to N by W., occasionally bright.
 15^m. Faint streamers throughout.
 20. Altogether faint.
 55—59. Patches and brushes breaking out.
 10 16. No aurora visible.
- Dec. 3 5 50. Auroral arch about 35° altitude, vivid pencils and brushes *within* the arch.
 56. Very bright to NNW.
 58. Double arch, bright to NW.
 59. Like rows of spears, bright to NW.
 6 0. Vivid broken pencils or double brushes.
 1. Bright beams to NNW. from the lower arch, and within the upper arch the latter has an altitude of 25°.
 4. Vivid brushes from a low arch to NW by N.
 7. Arch of short brushes about a degree in breadth.
 8. Inferior side of arch of brushes 5° altitude.
 9—10. Vivid green brushes to NNE., which break up the arch.
 10. The arch of brushes like a reaping-hook, the apex of the circular portion in the magnetic meridian.
 11. Brushes and patches detached, of much breadth.
 13. The arch of brushes now forms two, like the arches of a bridge, the junction of the two being in the magnetic meridian; a patch of black cloud in the upper auroral arch to NE.
 14. Brush arch quite flat.
 15. Vivid green spears to NNE.
 16. Undulated arch of brushes.
 18. Vivid pencils and brushes, the most vivid to NNW; the pencils are penetrating the upper arch.
 21. Black cloud still stationary in auroral arch to NE.; bright to NNE.
 23. Upper arch rather higher, 27° altitude.
 24. Brushes close to horizon.
 25. Double row of brushes, bright in some places.
 26. Portion of an arch close to horizon to N., rising.
 27. Cloud to NE. becoming smaller, but still in the same position.
 28. Like a lake of flame to N.
 31. Cloud to NE. disappeared; streamers vivid to NE.
 32. Low arch of brushes 4° inferior altitude, vivid pencils to NNE.
 35. Upper or permanent arch faint; three rows of brushes, vivid to NNE. and NNW.
 36. Beautiful, undulating, and travelling masses of green brushes.
 37. Again the curve somewhat like a reaping-hook.
 39. Three piles of brushes (one above the other), bright to NW.
 40. Brushes chiefly to NW.
 41. Much fainter.
 42. Amorphous mass of light to NE., arch disappearing or falling in.
 44. Streamers above the upper arch and also close to horizon.
 45. The permanent arch still visible.
 50. Aurora faint till now, vivid streamers to W., arch about 30° altitude, but faint; black cloud to NW. in the aurora.
 52. Faint. The previous observations were made within the Observatory from one of the north windows.
 53. Upper arch disappearing. As the disturbance was still considerable the observer went out of the Observatory to see the phenomena more completely, when he found—
 54. A broad arch through zenith, very diffuse to W., and bent from ENE. to the S. with a great bay.
 56. An arch springing from ENE., about 10° broad, taking a large bend towards the S., and crossing at about 10° to the S. of the zenith; the southern edge passes within 2° of Aldebaran, touches the Pleiades, the belt then stretches straight across the sky, passing through Cygnus, the northern edge touching α Cygni.
 59. The arch moving off towards the S., altitude 50°; streamers springing from the eastern extremity.
 7 0. Arch going still farther towards the south.
 8. Auroral arch through zenith, faint; bright pencils to E., *en echelon*.
 18. Vivid pencils as before to N., with black cloud to NW.
 20. A series of broken arches to N., under 60° altitude; the arch to the S. has disappeared.
 21. Three broken arches with the altitude of 60°. Amorphous brushes to NE.
 24. Brushes to NE., inclined irregularly to different points.

NOTES ON THE AURORÆ BOREALES SEEN AT MAKERSTOUN.

- Dec. d. h. m.
- 3 7 27. Serried rows of brushes moving and undulating in three rows or arches coloured green, with occasional red.
 - 28. Faint arch 25° altitude ; clouds to NW.
 - 30. Irregular brushes to NNE.
 - 31. At this time commenced the most beautiful phenomenon of the evening which it is impossible to describe completely. A vertical scroll or sheet of beams, with one extremity nearly fixed to NE by N. or NNE., altitude 10° at the bottom, commenced unwinding itself, assuming the forms of a succession of scrolls, which undulated with a worm-like motion; meanwhile the beams of green rolled backwards and forwards ; the foremost or advancing portion of the scroll was generally reddish, and moved towards the NW. The whole period of unfolding the scroll could not be above 1^{m} .
 - 33. Another scroll-like mass of pencils to NE.
 - 36. Low arch of brushes ; black band below them for some time.
 - 38. Irregular mass of brushes.
 - 42. A sheet unfolding to W., and rolling along ; gorgeous.
 - 46. Most magnificent lights to W., with beautiful green and red.
 - 49. Aurora faint, pencils above the arch.
 - 51. Pencils rising from WSW., and broken arches passing nearly through the zenith.
 - 59.— $8^{\text{h}}. 5^{\text{m}}$. Like a large pair of wings pulsating near zenith, appearing and disappearing.
 - 8 0. A wavy sheet of auroral light, passing about 10° to S. of the zenith, principally composed of patches, each patch having the appearance of a pair of half-expanded wings, the front of them being towards the E. ; very rapid pulsations proceeding along the belt from eastward, several times in a second ; the patches become faint or nearly disappear, in the intervals between the pulsations.
 - 4. Sheets unfolding and rolling along to N.
 - 5. An arch to N. about 45° broad, altitude of the lower edge 40° ; the lower edge is formed upon unfolding sheets. The belt through the zenith has disappeared.
 - 11. Vivid extremity of an arch to NE.
 - 14. The arch brightest to NE.
 - 16. A patch of scud to SW., and a black patch below the arch to NNE. ; diffuse homogeneous light over the whole of the north portion of the sky.
 - 21. Bright auroral arch, with patches of black cloud.
 - 26. E. extremity of arch a sea of flame, with black, island-like clouds in the midst.
 - 30. An arch, with a very brilliant border.
 - 32. Pencils on the arch at considerable distances from each other ; a bright speck on NNW. horizon.
 - 34. Brushes below the arch to N by W., arch cycloidal at the terminations.
 - 36. Arch like a portion of an ellipse.
 - 38. A portion of a bright arch, formed under the former arch.
 - 40. The arch is rather breaking up, altitude 10° .
 - 41. A beam immediately above the moon, which is setting, to WSW.
 - 55. The eastern portion of an arch to SE. altitude 35° ; homogeneous light to N.
 - 58. Pencils to NE.
 - 9 5. There is still a portion of a faint arch to S. altitude 25° .
 - 9. Arch to S. very faint, 20° altitude ; amorphous light to N.
 - 35. Circular segment of auroral light to altitude 15° . An arch 45° altitude composed of patches of nebulous light, pulsations throughout the aurora.
 - 45. Faint bands and patches all over the NW. portion of sky to altitude of 70° .
 - 11 0. Flash of lightning on SSW. horizon ; auroral arch still bright.
 - 15. Auroral arch stretching from W by S. to NE., altitude of inner edge 15° , 10° to 15° broad ; occasional bands and patches, to an altitude of 45° ; very little change has occurred for an hour.
 - 13 15. Auroral arch falling in the middle, with brushes below.
 - 25. Arch about 10° broad in bands with brushes.
 - 32. Arch somewhat elliptical on the inner edge, and circular on the outer edge, altitude of inner edge about 10° , of outer edge 20° .
 - 39. The eastern side of the inner edge of the arch slopes off like the outer edge, the western side remaining more vertical, as at 32^{m} .
 - 50. Arch formed of irregular bands, total altitude 40° , altitude of inner edge, rather fallen in in the middle, 10° .
 - 14 5. Arch again complete. 12^{m} . Brushes within the arch to NNE. ; a second arch forms occasionally by frequent pulsations at an altitude of 35° .
 - 14. Bright pencils to NE. ; second arch of short pencils.

NOTES ON THE AURORÆ BOREALES SEEN AT MAKERSTOUN.

- | Dec. | d. | h. | m. |
|------|----|----|-----|
| | 3 | 14 | 22. |
- Pulsating arch about 35° altitude. 23^{m} . The lower arch falling into bright brushes ; rapid pulsations between the upper and lower arches.
26. Rapid pulsations ; row of brushes below the lower arch, altitude 5° .
28. Continuous pulsations ; bright brush on NNW. horizon, pencils from it ; rows of brushes below the lowest arch.
31. Pulsations upwards from the arch, brushes all below, pulsating arch gone ?
35. Bright pencils and pulsations, the former within, the latter without, the low arch. 41^{m} . Arch fainter.
44. Arch formed of rapidly pulsating bands, with streamers here and there.
50. A continuation of the rapid flashes from the arches.
- 15 10. Pulsations chiefly about 20° altitude, sometimes vivid. The arch getting lower wholly within about 12° altitude.
- 27—28. Streamer to NNE., brushes, continuous pulsations.
30. Pulsating brushes low.
39. W. extremity of an arch visible ; the original arch now composed of pulsating brushes. Streaks of cirro-stratus to WNW. and NNW. all apparently radiating from about NNW. Rapid pulsations.
- 16 4. Masses of cirro-stratus increased, middle of the masses about NNW : as if branching from that point (magnetic north) ; rapid pulsations ; no complete arch.
15. Clouds separating ; aurora rather increasing ; homogeneous segment with pulsations above. The clouds do not seem to move away, but simply to increase or diminish in bulk, disappearing altogether at times. (This growth and disappearance of cloud has been frequently observed during exhibitions of aurora, and will be found noticed in future notes. B.)
24. The eastern portion of clouds remaining, the rest gone, excepting a few specks to NNW.
29. Nearly homogeneous circular segment of light, pulsations faint. 32^{m} . Clouds gone.
46. Auroral light within 10° altitude at NNW. ; faint, with faint pulsations.

The same time is employed in these Notes as in the *Extra Observations of Magnetometers*, namely, Göttingen mean time, astronomical reckoning.

OBSERVATIONS OF MAGNETIC DIP,
AND FOR THE
ABSOLUTE HORIZONTAL INTENSITY.

MAKERSTOUN OBSERVATORY,

1845.

Göttingen Mean Time, Middle of Observation.	Duration.	NEEDLE.			FACE OF CIRCLE E.		FACE OF CIRCLE W.		Mean.	Observed Dip.	Observer's Initial.
		Num- ber.	Tem- pera- ture.	End dip- ping.	E.	W.	E.	W.			
Jan. 7 0 30	m.	2	°	B	72 22.5	71 29.0	71 35.0	70 57.5	71 36.00*		B
Jan. 7 4 10	20	2	36	B	72 22.0	71 28.5	71 42.0	70 55.0	71 36.87*	71 29.72	B
Jan. 7 4 45	20	2	36	A	71 22.0	72 15.0	70 41.0	71 14.0	71 23.00*		W
Jan. 7 23 30	38	2	43	A	71 18.5	72 6.5†	70 38.0†	71 18.5	71 20.37		W
Jan. 8 0 15	20	2	45	A	71 19.0	72 5.5	70 39.5	71 17.0	71 20.25	71 29.28	W
Jan. 8 0 40	20	2	46	B	72 39.0	71 21.5	71 51.5	70 39.0	71 37.75		W
Jan. 8 1 45	20	2	46	B	72 38.0	71 19.0	71 54.0	70 44.0	71 38.75		W
Jan. 16 22 40	25	2	37	B	72 37.5	71 25.0	71 49.5	70 44.0	71 39.00		W
Jan. 17 0 0	25	2	39	B	72 44.0	71 24.5	71 55.0	70 42.0	71 41.37	71 30.90	B
Jan. 17 0 30	25	2	42	A	71 1.0	72 29.5	70 20.0	71 30.0	71 20.12		W
Jan. 17 1 35	20	2	43	A	71 6.0	72 30.5	70 17.0	71 39.0	71 23.12		W
Jan. 20 22 50	17	2	35	A	71 1.0	72 28.5	70 14.0	71 28.5	71 18.00		W
Jan. 21 4 40	20	2	38	A	71 2.5	72 25.5	70 19.5	71 32.0	71 19.87	71 28.68	W
Jan. 24 0 0	32	2	40	B	72 30.0	71 22.0	71 53.0†	70 48.5	71 38.37		W
Jan. 24 4 40	16	2	41	B	72 28.5	71 22.5	71 55.0†	70 48.0	71 38.50		W
Feb. 3 22 45	21	2	37	A	71 7.0	72 19.0	70 27.5	71 22.0	71 18.87		W
Feb. 4 4 45	20	2	45	A	71 5.5	72 11.0	70 32.5	71 26.5	71 18.87	71 27.31	W
Feb. 7 0 0	20	2	34	B	72 28.5	71 19.0	71 48.0	70 41.5	71 34.25		W
Feb. 7 4 50	20	2	32	B	72 32.0	71 19.5	71 53.0	70 44.5	71 37.25		W
Feb. 10 22 30	20	2	32	A	71 3.0	72 26.0	70 11.5	71 25.0	71 16.37		W
Feb. 11 4 35	20	2	33	A	71 2.0	72 27.5	70 18.5	71 24.5	71 18.12		W
Feb. 13 22 30	19	2	36	B	72 51.0	71 13.0	72 1.5	70 35.0	71 40.12		B
Feb. 17 23 50	20	2	36	B	72 58.0	71 16.5	72 8.5	70 34.5	71 44.37		B
Feb. 18 4 55	20	2	51	B	72 51.5	71 16.0	72 9.0	70 44.5	71 45.25	71 32.06	W
Feb. 20 22 50	18	2	37	A	71 4.0	72 11.0	70 31.0	71 27.5	71 18.37*		W
Feb. 21 4 50	25	2	41	A	71 4.5	72 11.5	70 34.5	71 30.5	71 20.25*		W
Feb. 24 23 30	26	2	36	B	72 37.5	71 20.0	71 55.0	70 42.0	71 38.62		W
Feb. 25 5 0	27	2	44	B	72 27.0	71 18.5	71 58.0	70 48.5	71 38.00	71 28.53	W
Feb. 27 23 30	25	2	38	A	71 1.5	72 19.0	70 25.5	71 29.0	71 18.75		W
Feb. 28 4 45	21	2	42	A	70 53.5	72 9.0	70 34.5	71 38.0	71 18.75		W
Mar. 3 22 45	25	2	38	B	72 43.5	71 17.0	72 2.0	70 41.0	71 40.87		W
Mar. 4 4 45	25	2	36	B	72 41.5	71 17.5	72 1.5	70 41.5	71 40.50	71 29.43	W
Mar. 6 22 30	30	2	37	A	70 54.0	72 30.5	70 15.5	71 35.5	71 18.87		B
Mar. 10 22 35	20	2	44	A	70 58.0	72 31.5	70 13.5	71 35.0	71 19.50*		B
Mar. 11 4 50	...	2	44	A	70 56.5	72 16.5	70 22.5	71 45.5	71 20.25		B
Mar. 12 5 0	15	2	49	A	70 50.0	72 24.0	70 21.5	71 41.0	71 19.12	71 26.52	B
Mar. 17 22 20	30	2	37	B	72 10.0	71 26.5	71 44.0	70 58.0	71 34.62		W
Mar. 18 4 50	...	2	59	B	72 4.0	71 23.5	71 44.0	70 57.0	71 32.12		W
Mar. 20 22 40	25	2	36	B	72 9.5	71 28.5	71 43.0	70 51.5	71 33.12		W
Mar. 22 4 50	20	2	54	B	72 3.5	71 26.0	71 42.0	70 58.0	71 32.37	71 27.40	B
Mar. 24 22 50	20	2	56	A	71 2.0	72 27.0	70 22.0	71 32.5	71 20.87		B
Mar. 25 5 0	20	2	50	A	71 5.0	72 23.5	70 28.5	71 36.0	71 23.25		W
Apr. 3 22 50	35	2	40	A	70 56.0	72 15.0	70 24.0	71 28.5	71 15.87	71 28.43	W
Apr. 4 4 50	26	2	46	A	70 56.0	72 12.0	70 29.5	71 30.0	71 16.87		W
Apr. 7 23 10	23	2	50	B	72 26.0	71 21.0	72 3.0	70 53.0	71 40.75		W
Apr. 8 5 0	20	2	53	B	72 29.5	71 20.5	72 2.0	70 49.0	71 40.25		W
Apr. 11 0 0	25	2	45	A	71 1.5	72 16.0	70 23.0	71 34.5	71 18.75		W
Apr. 11 5 0	23	2	46	A	70 59.5	72 16.0	70 23.5	71 34.0	71 18.25	71 27.59	W
Apr. 24 22 50	22	2	50	B	72 20.0	71 29.5	71 48.0	70 53.0	71 37.62		W
Apr. 25 4 50	20	2	65	B	72 14.5	71 25.5	71 48.0	70 55.0	71 35.75		W
Apr. 28 23 25	25	2	62	A	71 1.0	72 19.0	70 22.5	71 37.0	71 19.87		W
Apr. 29 4 50	15	2	65	A	71 2.0	72 19.5	70 18.5	71 36.0	71 19.00	71 27.96	W
May 1 23 50	20	2	61	B	72 28.0	71 18.5	71 55.0	70 45.0	71 36.62		W
May 2 4 50	20	2	62	B	72 25.0	71 17.0	71 57.5	70 46.0	71 36.37		W
May 9 23	...	2	53	A	70 48.5	72 10.0	70 32.0	71 43.5	71 18.50	71 26.75	W
Azimuth 30°	...	2	53	A	73 2.0	73 48.5	72 39.0	73 28.5	73 14.50		W
Azimuth 60°	...	2	53	A	79 47.5	80 49.0	79 34.0	80 45.5	80 14.00		W
Azimuth 90°	...	2	53	A	89 27.0	90 45.0	89 14.5	90 23.0	89 57.37		W
Azimuth 120°	...	2	53	A	80 51.5	79 35.0	81 1.5	80 4.0	80 23.00		W

* Observations considered good.

† Observations considered bad or unsatisfactory.

Jan. 7d 23h 30m. The two readings †† were doubtful, as the needle when lifted always vibrated through 5° or 6°; this did not happen in observations immediately after at 8° or 15°.

Jan. 24d 0h and 24d 4h. The readings †† were unsatisfactory for the same reason as above.

April 3d 22h. Horizontal level rather out. April 4d 4h. Instrument levelled before this observation.

May 9d. Observations made in different azimuths, for the results, see the Introduction, article Inclinometer. The dip given opposite, May 9d 23h, is deduced from the observation at that time, A dipping, and from the observation, May 10d 24h, B dipping, both observations having been made in the magnetic meridian.

Göttingen Mean Time, Middle of Observation.	Dur- ation.	NEEDLE.			FACE OF CIRCLE E.		FACE OF CIRCLE W.		Mean.	Observed Dip.	Observer's Initial.
		Num- ber.	Tem- pera- ture.	End dip- ping.	Mark on Needle		Mark on Needle				
d. h. m.	m.		°		E.	W.	E.	W.	°	°	
Azimuth 150°	... 2 40	2	53	A	73 39.0	72 41.0	73 51.0	73 16.0	73 21.75	° °	W
May 10 2 40	... 2	2	53	B	72 4.5	71 26.5	71 43.5	71 5.5	71 35.00		W
Azimuth 30°	... 2	2	53	B	74 3.5	73 27.0	73 39.0	73 16.5	73 36.50		W
Azimuth 60°	... 2	2	53	B	81 9.5	80 16.0	80 39.5	79 57.0	80 30.50		W
Azimuth 90°	... 2	2	53	B	90 39.0	89 45.5	90 7.5	89 16.5	89 57.12		W
Azimuth 120°	... 2	2	53	B	80 1.5	80 39.5	80 21.0	81 6.5	80 32.12		W
Azimuth 150°	... 2	2	53	B	73 16.5	73 43.5	73 26.5	74 11.5	73 39.50		W
May 12 23 20	20	2	59	B	72 6.5	71 26.5	71 46.0	71 1.5	71 35.12		W
May 13 4 25	19	2	64	B	72 4.5	71 23.5	71 43.0	71 2.0	71 33.25	71 26.55	W
May 15 22 50	...	2	70	A	71 8.5	72 4.0	70 37.5	71 29.0	71 19.75		W
May 16 4 50	20	2	72	A	71 6.5	72 2.0	70 35.5	71 28.5	71 18.12		W
May 19 22 30	25	2	50	B	72 17.5	71 23.5	71 50.0	70 58.5	71 37.37		W
May 20 4 50	20	2	...	B	72 11.5	71 27.0	71 48.5	70 59.0	71 36.50	71 27.62	W
May 22 22 20	26	2	51	A	71 2.0	72 23.0	70 17.0	71 31.5	71 18.37		W
May 23 4 50	20	2	55	A	71 0.0	72 22.0	70 17.0	71 34.0	71 18.25		W
May 27 23 0	20	2	53	B	72 18.0	71 20.5	71 53.5	70 52.0	71 36.00		B
May 28 4 50	18	2	65	B	72 22.0	71 30.0	71 42.0	70 49.5	71 35.87	71 28.77	B
June 2 23 0	25	2	67	A	71 17.0	72 9.5	70 38.0	71 29.0	71 23.37†		B
June 3 5 0	20	2	66	A	71 14.0	72 10.0	70 31.5	71 24.0	71 19.87		B
June 5 23 10	25	2	64	B	72 8.0	71 30.0	71 45.0	70 54.0	71 34.25		B
June 6 5 20	15	2	63	B	72 8.0	71 32.5	71 41.0	70 51.5	71 33.25	71 26.69	B
June 9 23 30	25	2	64	A	71 15.0	71 59.0	70 39.5	71 25.5	71 19.75		W
June 10 4 50	20	2	65	A	71 15.0	71 58.5	70 42.5	71 22.0	71 19.50		W
June 20 22 20	16	2	64	B	72 25.5	71 19.0	71 55.5	70 56.0	71 39.00		W
June 21 4 45	20	2	78	B	72 19.5	71 20.0	71 55.0	70 55.5	71 37.50	71 28.75	W
June 23 22 30	20	2	62	A	71 12.0	72 22.5	70 16.0	71 28.0	71 19.62		W
June 24 4 40	15	2	62	A	71 10.0	72 21.0	70 14.5	71 30.0	71 18.87		W
July 6 23 45	20	2	73	B	72 23.5	71 20.5	71 58.0	70 51.5	71 38.37		W
July 7 4 50	...	2	79	B	72 20.0	71 18.5	71 52.0	70 52.0	71 35.62	71 27.50	W
July 11 22 40	22	2	64	A	71 2.0	72 40.0	70 1.5	71 31.5	71 18.75		W
July 12 4 50	...	2	70	A	71 4.0	72 30.0	70 2.0	71 33.0	71 17.25		W
July 14 23 25	20	2	60	B	72 33.0	71 23.0	71 58.0	70 48.0	71 40.50		W
July 15 5 0	20	2	74	B	72 29.0	71 19.0	71 56.5	70 49.5	71 38.50	71 29.59	W
July 17 22 45	20	2	62	A	71 15.0	72 11.5	70 31.5	71 20.0	71 19.50		W
July 18 5 0	...	2	68	A	71 14.5	72 8.0	70 34.5	71 22.5	71 19.87		W
July 21 23 40	18	2	53	B	72 30.0	71 24.5	71 47.0	70 52.0	71 38.37		W
July 22 5 0	...	2	56	B	72 22.0	71 24.0	71 46.0	70 50.0	71 35.50	71 29.34	W
July 24 23 0	25	2	62	A	71 13.0	72 22.0	70 26.5	71 29.0	71 22.62		W
July 25 4 50	20	2	74	A	71 9.0	72 13.5	70 30.0	71 31.0	71 20.87		W
July 28 22 50	15	2	72	B	72 29.0	71 24.0	71 49.5	70 50.5	71 38.25		B
July 29 5 0	15	2	73	B	72 21.0	71 17.0	71 50.0	70 51.5	71 34.87	71 28.68	B
Aug. 1 22 45	30	2	65	A	71 21.5	72 7.5	70 37.5	71 17.0	71 20.87		B
Aug. 2 4 50	25	2	66	A	71 16.5	72 9.0	70 34.5	71 23.0	71 20.75		B
Aug. 5 23 0	20	2	81	B	72 9.0	71 20.0	71 46.0	70 58.5	71 33.37		W
Aug. 6 5 0	22	2	74	B	72 11.5	71 18.5	71 45.0	70 55.0	71 32.50	71 26.59	W
Aug. 8 22 40	30	2	59	A	71 2.5	72 27.0	70 22.0	71 35.0	71 21.62		W
Aug. 9 5 0	20	2	55	A	71 3.0	72 26.0	70 14.5	71 32.0	71 18.87		W
Aug. 11 22 30	25	2	57	B	72 31.0	71 24.5	71 49.0	70 50.0	71 38.62		W
Aug. 12 4 50	15	2	59	B	72 27.0	71 24.0	71 48.0	70 49.0	71 37.00	71 28.03	W
Aug. 14 22 25	30	2	57	A	71 11.5	72 35.5	70 1.5	71 24.5	71 18.25		W
Aug. 18 23 40	25	2	59	A	71 5.0	72 31.5	70 9.5	71 29.0	71 18.75		B
Aug. 19 5 0	20	2	53	A	71 6.0	72 33.5	70 1.5	71 20.0	71 15.25	71 24.90	B
Aug. 22 23 0	...	2	64	B	72 13.0	71 26.5	71 37.5	70 56.0	71 33.25		B
Aug. 23 5 0	20	2	67	B	72 9.0	71 25.0	71 37.5	70 58.0	71 32.37		W
Aug. 26 22 40	23	2	62	A	71 18.5	72 8.5	70 32.5	71 20.0	71 19.87		W
Aug. 27 5 0	20	2	71	A	71 15.5	72 5.5	70 39.0	71 23.0	71 20.75	71 28.96	W
Aug. 28 23 30	25	2	82	B	72 29.0	71 13.0	72 1.5	70 48.0	71 37.87		W
Aug. 29 4 50	20	2	86	B	72 28.0	71 14.0	72 2.5	70 45.0	71 37.37		W

† Observation considered bad.

Göttingen Mean Time, Middle of Observation.	Dur- ation.	NEEDLE.			FACE OF CIRCLE E.		FACE OF CIRCLE W.		Mean.	Observed Dip.	Observer's Initial.			
		Num- ber.	Tem- pera- ture.	End dip- ping.	Mark on Needle		Mark on Needle							
					E.	W.	E.	W.						
d. h. m.	m.				°	'	°	'	°	'				
Sept. 1 22 40	20	2	57	A	71 8.5	72 19.5	70 23.0	71 27.0	71 19.50		W			
Sept. 2 4 50	20	2	64	A	71 10.0	72 19.5	70 24.0	71 28.0	71 20.37	71 28.87	W			
Sept. 4 22 40	25	2	65	B	72 32.5	71 16.0	71 57.0	70 47.0	71 38.12		W			
Sept. 5 4 50	15	2	68	B	72 30.5	71 14.0	71 57.5	70 48.0	71 37.50		W			
Sept. 9 0 0	20	2	63	A	71 11.5	72 26.0	70 18.0	71 15.0	71 17.62		B			
Sept. 9 5 0	20	2	64	A	71 5.0	72 22.5	70 19.5	71 25.0	71 18.00	71 25.12	B			
Sept. 11 23 0	20	2	64	B	72 16.0	71 22.0	71 44.0	70 54.0	71 34.00		B			
Sept. 12 5 0	20	2	76	B	72 9.0	71 19.5	71 42.0	70 53.0	71 30.87		B			
Sept. 16 22 50	20	2	57	A	71 17.0	72 9.0	70 34.5	71 26.0	71 21.62		W			
Sept. 17 5 0	20	2	60	A	71 12.0	72 6.5	70 34.5	71 25.0	71 19.50	71 31.68	W			
Sept. 18 22 45	20	2	54	B	72 49.0	71 36.0	71 57.5	70 39.5	71 45.50		W			
Sept. 19 6 20	25	2	64	B	72 46.5	71 17.0	72 1.0	70 36.0	71 40.12		W			
Sept. 22 23 0	20	2	59	A	71 4.5	72 27.0	69 58.5	71 33.0	71 15.75		W			
Sept. 23 4 50	20	2	64	A	71 2.0	72 25.5	70 12.0	71 24.0	71 15.87	71 26.87	W			
Sept. 25 23 0	25	2	57	B	72 32.5	71 20.0	71 55.0	70 49.5	71 39.25		W			
Sept. 26 5 0	...	2	60	B	72 28.0	71 24.0	71 47.5	70 47.0	71 36.62		W			
Sept. 29 23 15	20	2	62	A	71 11.0	72 19.5	70 40.5	71 34.0	71 26.25		B			
Sept. 30 4 50	15	2	54	A	71 7.0	72 16.5	70 39.5	71 28.0	71 22.75	71 27.28	B			
Oct. 5 23 15	20	2	58	B	72 5.0	71 23.5	71 39.0	70 52.0	71 29.87		B			
Oct. 7 4 40	15	2	49	B	72 12.5	71 24.5	71 34.0	70 50.0	71 30.25		B			
Oct. 9 22 50	20	2	47	A	71 10.5	72 19.5	70 22.0	71 23.0	71 18.75		W			
Oct. 10 4 50	...	2	50	A	71 13.0	72 16.5	70 27.0	71 22.5	71 19.75		W			
Oct. 13 22 40	25	2	56	B	72 50.0	71 15.0	72 5.0	70 38.0	71 42.00	71 29.90	W			
Oct. 14 5 0	...	2	64	B	72 42.0	71 13.0	72 2.0	70 41.5	71 39.62		W			
Oct. 16 23 25	30	2	55	A	71 10.0	72 21.5	70 16.0	71 26.5	71 18.50		W			
Oct. 17 5 0	20	2	53	A	71 6.5	72 22.0	70 17.0	71 30.5	71 19.00		W			
Oct. 21 23 20	20	2	50	B	72 28.0	71 23.0	71 45.0	70 48.0	71 36.00		B			
Oct. 22 5 0	25	2	54	B	72 24.0	71 24.0	71 48.5	70 52.0	71 37.12	71 28.06	B			
Oct. 24 0 15	20	2	52	A	71 16.0	72 11.5	70 30.0	71 19.0	71 19.12		B			
Oct. 24 4 50	15	2	52	A	71 16.0	72 12.0	70 30.0	71 22.0	71 20.00		B			
Oct. 28 22 50	20	2	52	B	72 19.5	71 19.5	71 47.0	70 50.0	71 34.00		W			
Oct. 29 5 0	...	2	51	B	72 19.0	71 19.5	71 46.0	70 50.0	71 33.62	71 26.09	W			
Oct. 31 22 50	25	2	46	A	71 2.0	72 44.5	69 58.0	71 26.5	71 17.75		W			
Nov. 1 5 0	25	2	49	A	71 6.0	72 41.5	70 0.0	71 28.5	71 19.00		W			
Nov. 3 22 50	25	2	35	B	72 42.0	71 20.5	71 48.0	70 31.5	71 35.50		W			
Nov. 4 4 40	20	2	52	B	72 41.5	71 20.0	71 58.0	70 36.0	71 38.87	71 28.87	W			
Nov. 6 22 20	25	2	50	A	71 19.5	72 21.0	70 21.5	71 25.0	71 21.75		W			
Nov. 7 4 30	...	2	51	A	71 9.5	72 18.5	70 24.5	71 25.0	71 19.37		W			
Nov. 10 23 0	20	2	46	B	72 29.0	71 18.0	71 50.0	70 42.0	71 34.75		B			
Nov. 11 4 50	20	2	47	B	72 27.5	71 16.5	71 51.0	70 43.0	71 34.50	71 27.87	B			
Nov. 14 0 0	20	2	42	A	71 23.0	72 13.0	70 30.0	71 19.0	71 21.25		B			
Nov. 14 4 45	20	2	42	A	71 21.0	72 12.0	70 32.0	71 19.0	71 21.00		B			
Nov. 18 23 40	20	2	49	B	72 26.5	71 22.0	71 56.0	70 44.5	71 37.25		W			
Nov. 19 4 45	20	2	46	B	72 26.0	71 22.5	71 46.5	70 50.0	71 36.25	71 27.65	W			
Nov. 20 22 30	20	2	39	A	70 57.5	72 27.0	70 21.5	71 38.5	71 21.12		W			
Nov. 21 7 20	25	2	33	A	70 51.5	72 27.0	70 5.0	71 40.5	71 16.00†		W			
Nov. 21 22 30	25	2	35	A	70 53.5	72 21.0	70 24.0	71 37.5	71 19.00		W			
Nov. 22 4 40	25	2	39	A	70 57.0	72 20.5	70 15.5	71 35.0	71 17.00	71 26.28	W			
Nov. 24 23 25	20	2	44	B	72 40.0	71 12.0	71 56.0	70 31.0	71 34.75		W			
Nov. 25 4 25	20	2	44	B	72 36.5	71 13.0	71 52.0	70 36.0	71 34.37		W			
Nov. 27 23 0	25	2	46	A	70 58.0	72 20.0	70 14.5	71 33.5	71 16.50		W			
Nov. 28 4 30	22	2	48	A	70 53.5	72 19.0	70 17.5	71 38.0	71 17.00	71 26.18	W			
Dec. 1 23 25	50	2	40	B	72 48.0	71 10.0	71 51.5	70 33.0	71 35.62		B			

† Observation not satisfactory.

Oct. 22^d 5^b. Instrument rather out of level.Oct. 24^d 0^b. Levelled the instrument.Dec. 1^d 23^b. Observation unsatisfactory, lifter getting unsteady.

OBSERVATIONS OF DEFLECTIONS FOR THE ABSOLUTE HORIZONTAL INTENSITY, 1845. 133

Göttingen Mean Time of Observation.	DEFLECTING BAR.			DECLINOMETER.		Unifilar Reading.	Deflection corrected for Torsion.	BIFILAR.		Log. $\frac{1}{2} r^3 \tan u$.
	Distance = r .	N. End.	Tempe- rature.	Observed Reading.	Reduced to Unifilar.			Reading Cor- rected.	Thermome- ter.	
Dec. 29	d. h. m. 2 27	Feet.		°	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	°	
	3 16	5.083	E {	E 40.7	6.04	6.73	479.24	545.5	36.0	
	4 25		W }	W 39.3	6.16	6.87	37.34	544.6	36.4	
	3 23		E {	E 40.5	7.12	7.93	478.09	547.6	37.0	0.4520220
	2 33		W }	W 39.6	6.36	7.09	39.75	544.6	36.4	
	3 12	5.250	E {	E 40.0	6.04	6.73	459.23	546.0	36.0	
	4 19		W }	W 39.4	6.30	7.02	57.61	544.4	36.4	0.4524765
	3 26		E {	E 40.7	7.10	7.91	458.04	547.7	37.0	
	2 36		W }	W 39.7	6.34	7.06	59.75	544.4	36.5	
	3 8	5.500	E {	E 40.0	5.87	6.54	433.02	545.9	36.0	
	4 10		W }	W 39.3	6.53	7.28	84.00	544.7	36.3	0.4527822
	3 29		E {	E 40.9	7.21	8.04	432.66	546.4	36.9	
	2 40		W }	W 39.7	6.28	7.00	85.55	544.2	36.5	
	3 0	9.7083	E {	E 39.9	6.00	6.69	290.19	546.0	36.1	
	3 59		W }	W 39.3	6.37	7.10	226.99	544.9	36.3	0.4538295
	3 36		E {	E 40.4	7.18	8.00	291.21	546.0	36.9	
	2 44		W }	W 39.7	6.35	7.08	227.02	543.9	36.5	
	2 57	9.833	E {	E 39.7	6.17	6.88	289.21	545.3	36.1	
	3 54		W }	W 39.3	6.56	7.32	228.42	544.6	36.2	0.4543491
	3 39		E {	E 40.3	7.05	7.86	290.01	545.1	36.8	
	2 48		W }	W 39.7	6.47	7.21	228.33	543.8	36.6	
	2 52	10.250	E {	E 39.7	6.36	7.09	285.91	544.6	36.1	
	3 51		W }	W 40.0	6.41	7.14	231.66	544.6	36.2	
	3 42		E {	E 40.0	6.95	7.75	286.37	544.6	36.7	0.4554307
			W }	W 39.7	6.61	7.37	232.07	543.5	36.7	
							(Diff.) Sc. Div.			
	2 10		Magnet away	{	5.44	6.06	257.52	251.46		
	4 32			}	7.25	8.09	259.65	251.56		
Dec. 30	2 43		E {	E 48.0	23.11	25.76	496.39	539.4	46.9	
	4 35	5.000	W }	W 40.4	9.67	10.78	20.59	540.4	47.1	
	2 55		E {	E 47.8	23.30	25.97	496.79	538.9	46.9	0.4509181
	4 45		W }	W 40.5	13.27	14.79	23.93	537.0	47.1	
	3 41		E {	E 48.6	4.39	4.89	418.22	551.8	47.0	
	4 31	5.500	W }	W 40.6	8.68	9.68	76.53	541.0	47.1	
	3 0		E {	E 47.8	22.53	25.11	439.21	544.1	46.9	0.4518898
	3 35		W }	W 48.2	8.51	9.48	76.53	554.6	47.0	
	3 49		E {	E 48.7	4.21	4.69	378.54	544.6	47.0	
	4 27	6.000	W }	W 41.0	8.48	9.45	115.91	541.4	47.1	
	3 4		E {	E 47.9	21.13	23.55	397.89	546.5	46.9	0.4523740
	3 31		W }	W 48.0	9.41	10.49	117.22	550.6	47.0	
	3 53		E {	E 48.8	4.12	4.59	350.00	546.3	47.0	
	4 23	6.500	W }	W 41.0	7.26	8.10	143.02	541.5	47.1	0.4527087
	3 7		E {	E 48.0	19.42	21.64	367.49	546.7	46.9	
	3 28		W }	W 47.9	10.39	11.58	146.77	549.8	47.0	
	3 56		E {	E 48.7	3.32	3.70	328.22	546.9	47.0	
	4 19	7.000	W }	W 42.3	6.52	7.27	163.12	541.4	47.1	0.4533288
	3 11		E {	E 48.0	17.38	19.37	344.41	547.9	46.9	
	3 25		W }	W 47.8	11.70	13.04	169.09	548.2	46.9	
	4 0		E {	E 48.4	2.36	2.63	311.43	543.2	47.0	
	4 13	7.500	W }	W 46.0	5.75	6.41	177.90	541.5	47.0	0.4536859
	3 14		E {	E 48.0	15.92	17.74	326.94	547.5	46.9	
	3 22		W }	W 47.8	12.65	14.10	185.86	548.0	46.9	
	4 4		E {	E 48.5	2.99	3.33	300.43	540.5	47.0	
	4 9	8.000	W }	W 46.2	4.57	5.10	188.76	540.1	47.0	0.4546369
	3 17		E {	E 48.0	14.73	16.41	313.59	546.5	46.9	
	3 20		W }	W 47.9	13.87	15.46	199.16	547.1	46.9	
			Magnet away	{	4.18	4.66	245.34	240.68		
	2 20			}	16.59	18.49	258.87	240.38		

Date.	N. END OF MAGNET MOVING E.					N. END OF MAGNET MOVING W.					BIFILAR.		
	No. of Vib.	Time of Transit.	No. of Vib.	Time of Transit.	Time of one Vib.	No. of Vib.	Time of Transit.	No. of Vib.	Time of Transit.	Time of one Vib.	Time of Obs.	Read- ing Cor.	Thermome- ter.
Dec. 29	0	h. m. s. 5 15 53.4	70	h. m. s. 5 34 0.9	s. 15.536	1	m. s. 16 8.2	71	m. s. 34 15.3	s. 15.530	h. m. 5 21	Sc. Div. 549.2	37.7
	6	17 26.5	76	35 34.1	537	5	17 10.4	75	35 17.3	527	33	548.9	
	10	18 28.7	80	36 36.2	536	11	18 43.6	81	36 50.4	526	38	548.3	
	16	20 2.2	86	38 9.4	531	15	19 45.7	85	37 52.4	524	47	549.1	
	20	21 4.3	90	39 11.6	533	21	21 18.8	91	39 25.6	526	52	548.9	
	26	22 37.4	96	40 44.8	534	25	22 21.2	95	40 27.7	521			
	30	23 39.6	100	41 46.9	533	31	23 54.3	101	42 0.8	521	Mean	548.9	
	36	25 12.8	106	43 20.0	531	35	24 56.4	105	43 2.7	519			
	40	26 14.8	110	44 22.1	533	41	26 29.6	111	44 35.9	519			
	46	27 48.3	116	45 55.5	531	45	27 31.7	115	45 38.0	519			
	50	28 50.3	120	46 57.6	533	51	29 4.8	121	47 11.0	517			
	56	30 23.6	126	48 30.7	530	55	30 6.7	125	48 13.1	520			
	60	31 25.7	130	49 32.9	531	61	31 39.9	131	49 46.2	519			
	66	32 58.9	136	51 6.0	530	65	32 42.0	135	50 48.4	520			

Mean observed time of one vibration = 15^s.5274. Semi-arc of vibration, commencing 6°, ending 2°. Temperature of magnet, 40°.0.

Dec. 30	0	7 43 27.4	50	7 56 28.6	15.624	1	43 41.6	51	56 41.8	15.604	7 45	543.6	46.6
	6	45 1.3	56	58 2.3	620	5	44 44.1	55	57 44.3	604	50	546.3	
	10	46 3.7	60	59 4.8	622	11	46 17.8	61	59 17.7	598	55	541.1	
	16	47 37.4	66	8 0 38.4	620	15	47 20.3	65	0 20.0	594	8 2	534.0	
	20	48 39.9	70	1 40.9	620	21	48 53.8	71	1 53.4	592	5	533.1	
	26	50 13.7	76	3 14.7	620	25	49 56.4	75	2 55.7	586			
	30	51 16.2	80	4 17.1	618	31	51 30.0	81	4 29.0	580	Mean	539.6	
	36	52 49.8	86	5 50.8	620	35	52 32.3	85	5 31.4	582			
	40	53 52.4	90	6 53.3	618	41	54 5.9	91	7 4.6	574			
	46	55 26.0	96	8 27.0	620	45	55 8.4	95	8 6.7	566			

Mean observed time of one vibration = 15^s.6041. Semi-arc of vibration, commencing 6°, ending 14°. Temperature of magnet, 48°.4.

Dec. 30	0	8 52 4.7	60	9 7 38.6	15.565	1	52 20.6	61	7 54.3	15.562	8 55	538.8	46.3
	6	53 38.3	66	9 12.0	562	5	53 22.7	65	8 56.6	565	9 2	539.3	
	10	54 40.6	70	10 14.3	562	11	54 56.2	71	10 30.0	563	5	539.0	
	16	56 13.8	76	11 47.6	563	15	55 58.4	75	11 32.3	565	11	538.8	
	20	57 16.2	80	12 50.0	563	21	57 31.8	81	13 5.7	565	15	538.4	
	26	58 49.6	86	14 23.4	563	25	58 34.2	85	14 8.1	565	20	537.8	
	30	59 51.8	90	15 25.7	565	31	0 7.5	91	15 41.5	567			
	36	9 1 25.2	96	16 59.1	565	35	1 9.7	95	16 43.8	568	Mean	538.7	
	40	2 27.4	100	18 1.4	567	41	2 43.1	101	18 17.3	570			
	46	4 0.8	106	19 34.8	567	45	3 45.4	105	19 19.6	570			
	50	5 3.0	110	20 37.0	567	51	5 18.7	111	20 52.9	570			
	56	6 36.4	116	22 10.4	567	55	6 21.0	115	21 55.4	573			

Mean observed time of one vibration = 15^s.5658, Semi-arc of vibration, commencing 5½°, ending 1½°. Temperature of magnet, 47°.6.

HOURLY METEOROLOGICAL
OBSERVATIONS.

MAKERSTOUN OBSERVATORY,

1845.

Gott. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From 10 ^{m.}	lbs.	lbs.	pt.	
d. h.	in.	°	°	°						
0 13	29.999	30.9	30.7	0.2	0.1	0.0	18		0—10.	Cirro-cumulo-strati.
14	30.004	31.2	31.0	0.2	0.0	0.0	20		2.5	Id.
15	013	29.3	29.5	—	0.0	0.0	20		8.2	Id.; faint aurora to N?
16	013	28.2	28.4	—	0.0	0.0	20		1.0	Misty scud; cirro-cumulo-strati; aurora to N?
17	010	29.4	29.2	0.2	0.0	0.0	17	20 : — : —	1.0	Cirro-cumulo-strati; fog just gone.
18	009	28.8	28.8	—	0.0	0.0	20	— : 8 : —	6.0	Id.; lunar corona.
19	008	28.0	28.0	—	0.0	0.0	24	— : 8 : —	5.0	Id.; id.
20	017	27.3	27.3	—	0.0	0.0	22		3.0	Cirro-cumulus scud.
21	038	26.8	26.7	0.1	0.0	0.0	22	— : 4 : —	3.5	Id.
22	050	28.2	28.0	0.2	0.0	0.0	24	— : 7 : —	6.0	Id.
23	052	29.2	28.7	0.5	0.0	0.0	22	— : 6 : —	7.0	Id.
1 0	051	31.0	30.2	0.8	0.0	0.0	20	— : 6 : —	9.0	Cirro-cumulus scud.
1 1	044	31.9	31.4	0.5	0.0	0.0	22	— : 12 : —	7.0	Cirro-cumulus scud; woolly cirri.
2 2	041	32.6	31.9	0.7	0.1	0.0	26	— : 10 : —	8.0	Cirro-cumulus scud; cirro-cumuli.
3 3	038	33.3	32.4	0.9	0.0	0.0	23	— : 10 : —	9.0	Id.; id.
4 4	040	33.3	32.6	0.7	0.0	0.0	18	10 : 10 : —	9.8	Scud; cirro-cumulus scud; drops of rain.
5 5	041	32.9	32.6	0.3	0.0	0.0	22	10 : 10 : —	9.8	Id.; id.
6 6	039	32.9	32.6	0.3	0.0	0.0	20		10.0	Id.; id.
7 7	036	33.1	32.6	0.5	0.0	0.0	20		10.0	Id.; dark.
8 8	042	33.4	32.8	0.6	0.0	0.0	18		10.0	Id.; id.
9 9	042	33.2	32.8	0.4	0.0	0.0			10.0	Id.; id.
10 10	042	33.7	33.1	0.6	0.1		17		10.0	Id.
11 11	035	33.8	33.2	0.6	0.0	0.0	18		10.0	Id.
12 12	037	34.2	33.5	0.7	0.1	0.0	30		10.0	Id.
13 13	30.021	33.6	33.1	0.5	0.0	0.0	20		10.0	Id.; rain ^{0.2} .
14 14	014	34.7	34.2	0.5	0.0	0.0	18		10.0	Id.
15 15	010	33.2	32.9	0.3	0.0	0.0	17		10.0	Id.
16 16	30.004	33.0	32.7	0.3	0.0	0.0	17		10.0	Id.
17 17	29.981	33.0	32.7	0.3	0.0	0.0	20		10.0	Id.
18 18	969	32.6	32.3	0.3	0.0	0.0	18		9.9	Id.
19 19	962	33.0	32.7	0.3	0.0	0.0	17		10.0	Id.
20 20	957	32.0	32.0	—	0.0	0.0		— : 8 : —	9.8	Cirro-cumulus scud: stratus.
21 21	954	30.4	—	—	0.0	0.0	4	— : 7 : —	2.5	Id.; id.
22 22	956	30.7	30.9	—	0.0	0.0	6	— : 8 : —	9.8	Cirro-stratus scud: id.; objects invisible at 1 mile.
23 23	941	33.0	32.3	0.7	0.0	0.0	24	— : 7 : —	9.9	Id.
2 0	923	34.2	33.6	0.6	0.0	0.0	20	— : 6 : —	9.9	Id.; very thin fog.
1 1	903	35.9	35.1	0.8	0.0	0.0	20		8.0	Scud; cirro-cumulus scud; drops of rain.
2 2	876	36.7	35.9	0.8	0.0	0.0	20		9.8	Id.; id.; slight fog.
3 3	857	36.0	35.1	0.9	0.0	0.0	12	4 : — : —	9.6	Id.; id.; drops of rain.
4 4	838	34.6	34.1	0.5	0.0	0.0	12	4 : — : —	9.7	Scud; slight fog.
5 5	819	33.3	33.1	0.2	0.1	0.1	17	— : 4 : —	9.9	Cirro-stratus scud; fog denser.
6 6	799	33.4	33.2	0.2	0.0	0.1	26		10.0	Id.
7 7	781	33.8	33.4	0.4	0.0	0.0	20		10.0	Id.
8 8	771	33.0	32.8	0.2	0.0	0.0	21		9.9	Id.; stars dim.
9 9	760	33.1	32.9	0.2	0.0	0.0	16		10.0	Id.
10 10	745	33.4	33.0	0.4	0.0	0.0	18		10.0	Id.
11 11	727	33.8	33.1	0.7	0.0	0.0	24		10.0	Id. Kelso bells heard (4 miles distant.)
12 12	708	34.0	33.1	0.9	0.0	0.0	20		10.0	Id.
13 13	29.676	32.5	31.7	0.8	0.0	0.0	22		2.0	Scud to E. and N.
14 14	667	31.5	30.8	0.7	0.0	0.0	18		10.0	Scud.
15 15	664	31.9	30.6	1.3	0.0	0.0	20		10.0	Id.
16 16	649	32.9	31.1	1.8	0.1	0.1	21		10.0	Id.
17 17	625	33.2	31.7	1.5	0.1	0.0	20		10.0	Id.
18 18	610	33.2	31.9	1.3	0.0	0.0	20		10.0	Id.
19 19	590	33.4	32.1	1.3	0.1	0.0	18		10.0	Id.
20 20	592	34.2	32.7	1.5	0.2	0.1	20		10.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Jan. 0^d 16^h 4^m. Patches of misty scud moving very quickly from SW. (20): 16^h 8^m, fog rapidly covering the sky, forming a lunar corona; a lunar fog-bow opposite the moon of 40° span, and less than 20° altitude. Fog moved off about 17^h 0^m.

Jan. 1^d 21^h. Observation made at 21^h 5^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h.	10 m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
2 21	29.589	34.7	33.3	1.4	0.2	0.1	18	20 : — : —	10.0	Nearly homogeneous scud.
22	589	35.2	33.7	1.5	0.1	0.1	21	21 : — : —	10.0	Id.
23	579	36.0	34.8	1.2	0.4	0.4	21	21 : — : —	10.0	Id.; drops of rain.
3 0	572	36.9	35.9	1.0	0.7	0.4	22	21 : — : —	10.0	Id.; slight shower of sleet since last observation.
1	561	37.6	36.4	1.2	0.4	0.7	21	21 : — : —	10.0	Id.
2	545	38.0	37.0	1.0	0.6	0.7	20	20 : — : —	10.0	Id.
3	554	39.0	38.0	1.0	1.2	0.8	20	22 : — : —	10.0	Scud; cirrus mass.
4	563	39.2	38.1	1.1	1.0	0.2	20	20 : — : —	9.5	Id.; cirro-cumuli; cirrus mass.
5	577	39.4	38.1	1.3	0.4	0.3	22	22 : — : —	9.9	Id.; cirro-strati.
6	586	38.9	38.2	0.7	0.6	0.1	21	21 : — : —	9.0	Id.; id.
7	606	38.0	37.3	0.7	0.2	0.1	20	20 : — : —	6.0	Scud, cirro-strati; stars dim.
8	623	36.7	36.1	0.6	0.1	0.0	20	20 : — : —	9.0 v.	The same.
9	650	38.6	37.7	0.9	0.1	0.0	22	22 : — : —	7.0 v.	Id.
10	669	38.3	37.5	0.8	0.0	0.0	18	18 : — : —	9.5	Id.
11	691	36.3	35.7	0.6	0.1	0.0	14	14 : — : —	0.8	Cirri.
12	707	36.5	36.0	0.5	0.1	0.0	20	20 : — : —	0.8	Id.
13	29.730	37.4	36.2	1.2	0.1	0.1	20	20 : — : —	0.2	Thin cirri on E. horizon.
14	741	37.2	35.9	1.3	0.2	0.3	21	21 : — : —	0.0	
15	758	36.9	35.5	1.4	0.3	0.4	21	21 : — : —	0.0	
16	773	38.5	36.7	1.8	0.6	0.3	21	21 : — : —	0.2	Thin cirri on W. horizon.
17	791	37.5	36.0	1.5	0.3	0.3	22	22 : — : —	0.0	
18	800	38.8	36.4	2.4	0.6	0.5	24	24 : — : —	0.2	Thin cirri on N. and S. horizon.
19	816	35.0	33.8	1.2	0.3	0.0	16	16 : — : —	0.1	Faint lunar corona.
20	833	34.6	33.3	1.3	0.1	0.0	20	20 : — : —	0.3	Id.; thin cirri, scud on Cheviot.
21	843	34.5	33.2	1.3	0.1	0.0	20	20 : — : —	4.0	Patches of scud; cirrus haze.
22	850	35.6	34.3	1.3	0.1	0.0	22	22 : — : —	3.0	Light cirri and cirrus haze.
23	842	37.1	35.7	1.4	0.4	0.2	20	20 : — : —	9.0	Cir. and cir. haze over the sky; traces of a halo.
4 0	836	38.0	36.6	1.4	0.2	0.1	22	22 : — : —	10.0	Cirrus clouds, becoming very dense.
1	813	38.6	37.0	1.6	0.3	0.3	17	17 : 22 : —	10.0	Dense cirro-strati.
2	789	39.5	37.9	1.6	1.2	0.4	20	22 : 22 : —	10.0	Scud: dense cirro-strati.
3	768	39.8	38.2	1.6	1.7	0.9	19	22 : — : —	10.0	Id.; id.
4	742	41.0	39.3	1.7	1.0	0.8	20	21 : — : —	10.0	Scud; dense homogeneous mass.
5	726	41.6	39.7	1.9	3.5	1.3	19	21 : — : —	10.0	As before.
6	708	41.1	39.3	1.8	2.0	0.8	20	20 : — : —	10.0	Id.
7	681	42.3	40.4	1.9	2.3	1.7	20	20 : — : —	10.0	Id.
8	661	43.2	41.1	2.1	2.7	1.8	20	20 : — : —	10.0	Id.
9	624	43.4	41.4	2.0	3.2	3.8	20	20 : — : —	10.0	Id.; very dark.
10	602	43.7	41.8	1.9	3.4	2.5	20	20 : — : —	10.0	Id.; id.
11	543	44.4	42.7	1.7	3.5	2.0	20	20 : — : —	10.0	Id.; light band on N. and S. horizon.
12	518	44.3	42.8	1.5	3.7	3.6	20	20 : — : —	10.0	Id.; clouds broken.
23	29.561	50.4	48.3	2.1	3.5	1.8	22	23 : — : —	10.0	Scud; dense cirro-strati.
5 13	29.445	48.3	46.6	1.7	5.2	2.6	20	20 : — : —	10.0	Scud; rain 0.2.
14	441	47.9	46.7	1.2	3.6	2.9	20	20 : — : —	10.0	Id.; drops of rain.
15	445	47.9	46.7	1.2	3.0	2.4	19	19 : — : —	10.0	Id.; id.
16	431	47.6	46.3	1.3	3.8	2.2	19	19 : — : —	10.0	Id.; id.; very dark.
17	427	48.9	47.4	1.5	3.2	2.3	20	20 : — : —	10.0	As before.
18	441	49.0	47.5	1.5	2.6	1.9	20	20 : — : —	10.0	Id.
19	480	50.0	47.0	3.0	2.1	1.4	21	21 : — : —	4.0	Scud; cirro-strati.
20	528	50.2	46.5	3.7	1.9	1.6	24	24 : — : —	9.0	Id.; id.
21	587	47.6	43.4	4.2	1.9	1.6	23	24 : 22 : —	6.0	Scud; cirro-strati; cirri.
22	638	45.8	42.0	3.8	1.7	1.0	22	24 : — : 22	8.0	Scud; woolly cirri and cirro-strati.
23	681	45.8	42.0	3.8	1.1	0.5	23	24 : — : 21	9.0	Id.; id., lying WSW. to ENE.
6 0	703	45.0	40.7	4.3	1.4	0.7	23	23 : — : 22	8.0	Id.; id., id.
1	725	44.2	40.2	4.0	1.0	1.1	22	22 : — : 22	8.5	Id.; id., id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motion of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. 6 2	in. 29.771	° 44.7	40.0	4.7	lbs. 0.4	lbs. 0.2	pt. 22	pt. 26 : — : 22	0—10. 9.0	Scud; woolly cir. and cir.-str., lying WSW. to ENE. ☐
3	790	44.7	40.0	4.7	0.3	0.3	22	26 : — : 22	9.0	Patches of scud; woolly cirri; cirro-strati. ☐
4	815	42.2	38.8	3.4	0.3	0.2	23	— : — : 22	9.5	Woolly cirri; cirro-strati; haze.
5	838	41.0	37.9	3.1	0.2	0.2	18		7.0	Id.; id.; id.
6	862	36.8	35.2	1.6	0.1	0.0	22		8.0	Id.; id.; id.
7	884	37.0	35.3	1.7	0.1	0.0	20		7.0	As before.
8	899	35.3	34.0	1.3	0.1	0.1	21		5.0	Id.
9	928	34.8	33.7	1.1	0.2	0.1	10		4.0	Id.
10	938	32.5	31.8	0.7	0.1	0.0	17		4.0?	Id.; stars dim.
11	948	31.4	30.9	0.5	0.0	0.0	16		2.0	Cirri and cirrous haze.
12	951	31.2	30.8	0.4	0.0	0.0	16		4.0	Id.
13	29.953	31.2	30.9	0.3	0.1	0.0	20		7.0	Cirri and cirrous haze.
14	958	32.3	31.8	0.5	0.0	0.0	20		8.0	Id.
15	959	32.9	32.1	0.8	0.0	0.0	22		4.0	Id.
16	958	32.8	32.2	0.6	0.0	0.0	20		10.0	Id.
17	955	33.6	32.9	0.7	0.0	0.0	24		10.0	Id.; drops of rain.
18	952	33.7	33.1	0.6	0.0	0.0	24		10.0	Rain ^{0.5} .
19	958	34.0	33.6	0.4	0.0	0.0	20		10.0	Cirri, &c.; Rain ^{0.2} ; a few stars very dim.
20	966	34.3	33.8	0.5	0.0	0.0	21		10.0	Id. id.
21	967	34.2	33.7	0.5	0.1	0.0	20	— : 23 : —	10.0	Cirro-stratus scud; cirro-strati.
22	973	34.8	34.3	0.5	0.1	0.0	20		9.9	Mass of cirro-stratus.
23	983	35.6	35.0	0.6	0.1	0.0	20		9.8	Thick mass of wavy cirro-stratus.
7 0	987	37.2	36.3	0.9	0.1	0.2	24		9.8	Cirro-stratus scud; cirro-strati; cirri.
1	972	38.0	37.2	0.8	0.1	0.0	27	— : 22 : —	9.0	Cirro-cumuli; cirro-strati; cirrous haze. ☐
2	947	38.3	37.4	0.9	0.1	0.0	16	— : 22 : —	3.0	Wo. cir-cum; stratus to E.; cir.-str. scud; cir. haze. ☐
3	966	38.3	37.3	1.0	0.1	0.0	27		1.5	Linear cirri; stratus to E. and S. ☐
4	968	35.5	35.0	0.5	0.1	0.0	20		1.5	Id.; id.; cirro-strati. ☐
5	959	33.3	33.0	0.3	0.0	0.0			2.5	Woolly cirri; id.; id.
6	957	30.9	30.7	0.2	0.0	0.0	22		2.0	Cirro-strati and cirri on horizon.
7	962	31.1	30.9	0.2	0.0	0.0	24		6.5	Cirrous clouds.
8	969	32.6	32.2	0.4	0.0	0.0			10.0	Id.
9	965	33.0	32.6	0.4	0.0	0.0	24		10.0	Dark.
10	968	34.1	33.9	0.2	0.0	0.0	22		10.0	Id.; fine particles of rain.
11	963	34.5	34.2	0.3	0.0	0.0			10.0	Dense fog.
12	964	34.9	34.5	0.4	0.0	0.0	22		10.0	Id.
13	29.960	35.0	34.7	0.3	0.0	0.0			10.0	Fog clearing away.
14	950	35.2	34.8	0.4	0.0	0.0			10.0	
15	946	35.2	34.8	0.4	0.0	0.0	24		10.0	
16	926	35.7	35.2	0.5	0.0	0.0			10.0	
17	914	36.2	35.8	0.4	0.0	0.0	20		10.0	
18	908	36.5	36.1	0.4	0.0	0.0			10.0	
19	909	37.0	36.6	0.4	0.0	0.0	22		10.0	
20	909	37.3	36.9	0.4	0.0	0.0	28	— : 20 : —	9.9	Cirro-stratus scud; cirro-strati.
21	917	39.6	39.2	0.4	0.0	0.0	16	— : 17 : —	9.9	Id.
22	912	41.9	41.0	0.9	0.0	0.0	16	16 : 16 : —	3.0	Masses of scud and cirro-strati. ☐
23	911	41.7	40.7	1.0	0.1	0.0	20	16 : — : 12	2.0	Scud; loose cumuli; cirri; cirro-strati. ☐
8 0	899	43.3	42.1	1.2	0.0	0.0	18	16 : — : —	2.0	Scud; loose cumuli.
1	879	42.0	40.8	1.2	0.5	0.3	14	17 : — : 14	5.5	Id.; id.; woolly cirri; cirrous haze. ☐
2	874	43.3	41.6	1.7	0.4	0.2	15	17 : — : 15	6.0	Id.; id.; cirro-strati; cirri; cirrus haze.
3	865	40.7	39.4	1.3	0.2	0.2	16	— : 16 : —	9.7	Dense cirrous clouds and haze.
4	865	40.6	39.1	1.5	0.5	0.1	16	18 : — : —	9.8	Scud; woolly cirrus clouds, very low; much haze.
5	864	40.3	38.6	1.7	0.3	0.0	4	17 : — : —	8.0	As before.
6	873	35.3	34.7	0.6	0.1	0.0	18		3.0	Cirro-strati; haze.
7	864	32.7	32.3	0.4	0.1	0.0	16		0.2	Patches of light clouds to W.
8	870	32.8	32.2	0.6	0.0	0.0	20		0.5	Haze round horizon.
9	870	32.3	31.7	0.6	0.1	0.0	23		0.5	Id.; patch of scud to E.

Jan. 6^a 8^b. It was found that the balancing weight of the anemometer acted at about two inches from the extremity of the spiral when the index was at 0; the indications for some time must consequently have been rather too small: the suspending cord of the inner vessel was now shortened, so as to allow the weight to act correctly.

Jan. 7^a 22^b. Masses of loose cirro-stratus evaporating very rapidly, whilst scud is forming as quickly; both currents moving from the same point.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h. 8 10	in. 29.866	33.1	32.0	1.1	0.1	0.0	24	pt. pt. pt.	0—10. 0.5	Cirri and haze on horizon.
11	857	32.7	31.8	0.9	0.2	0.0	24		3.0	Cirri radiating from SW. and NE.
12	857	31.0	30.4	0.6	0.0	0.0			5.0	Id.
13	29.851	30.9	30.5	0.4	0.0	0.0	0		7.0	Cirri; stars dim.
14	843	30.3	29.9	0.4	0.0	0.0			6.0	Id.; id.
15	842	29.8	29.5	0.3	0.0	0.0	4		8.0?	Thin cirri; stars dim.
16	824	30.3	29.9	0.4	0.0	0.0	28		8.0	Cirri thicker; id.
17	818	33.1	32.7	0.4	0.0	0.0	16		7.0	Id.
18	815	32.1	31.7	0.4	0.0	0.0	15		4.0	Cirri radiating from SW. and NE.
19	814	32.0	31.6	0.4	0.1	0.0	22		4.0	Scud; cirro-strati.
20	815	32.2	31.8	0.4	0.0	0.0	28		7.0	Id.; id.
21	809	33.4	32.8	0.6	0.0	0.0	18		7.0	Cirro-cumuli; cirro-strati; cirri; red to SE.
22	816	34.0	32.9	1.1	0.3	0.1	18	— : 20 : —	7.0	Id.; id.; id.
23	804	36.9	35.4	1.5	0.2	0.0	0	— : — : 20	8.0	Woolly cirri; cirro-strati; haze.
9 0	782	38.4	36.7	1.7	0.1	0.1	14	— : — : 20	8.0	Id.; id.; id.
1	761	42.4	39.3	3.1	0.2	0.1	28	— : — : 21	8.5	Id.; id.; id.
2	734	43.3	39.3	4.0	0.1	0.1	1	— : — : 21	8.0	Sky nearly covered with woolly cirri.
3	734	42.3	38.7	3.6	0.1	0.1	17	— : — : 21	8.0	Id.
4	735	39.3	36.3	3.0	0.2	0.1	17	— : 20 : —	9.0	Id.; cirro-strati.
5	729	35.5	33.8	1.7	0.2	0.1	28		4.0	Cirro-strati; cirri lying NE. to SW. since 8 ^d 18 ^h .
6	711	33.1	31.9	1.2	0.2	0.0	17		1.5	Thin cirri.
7	708	30.8	29.8	1.0	0.0	0.0			0.5	Band of thin cirrus; faint aurora to N.
8	706	30.7	31.2	...	0.0	0.0	2		0.2	Id.; fine auroral arch.
9	684	28.7	28.6	...	0.1	0.0			0.2	Id.; bright aurora.
10	655	29.0	28.7	0.3	0.0	0.0			0.2?	Id.; id.
11	632	29.9	29.0	0.9	0.0	0.0			0.5	Cirro-strati to N.; id.
12	616	30.3	29.4	0.9	0.4	0.4	16		0.2	Id. to NW.
13	29.601	29.1	28.6	0.5	0.1	0.0	16		1.0	Cirro-strati to N.
14	568	28.8	28.6	0.2	0.0	0.0			2.0	Id. to N.; aurora obscured.
15	551	34.9	32.7	2.2	0.5	0.8	16		8.0	Cirro-strati, cirri, and haze.
16	543	35.4	33.9	1.5	0.5	0.1	17		10.0	Cirro-strati and cirrous haze.
17	520	36.3	34.7	1.6	0.6	0.3	18		9.9	Id.
18	505	38.0	36.0	2.0	1.0	0.8	18		10.0	Id.
19	491	38.4	36.4	2.0	0.6	0.3	20		10.0	Id.; cirri radiating from SW.
20	486	38.8	36.8	2.0	0.6	0.3	22	— : 20 : —	9.9	Cirro-stratus scud? reddish to SE.
21	466	38.9	37.0	1.9	0.8	0.7	18	20 : — : —	8.0	Scud; cirro-cumuli; cirro-strati; cirri; red to SE.
22	458	39.7	37.8	1.9	1.1	1.0	17	— : 20 : —	9.0	Cirro-cumulous scud; loose scud; cirro-strati; cirri.
23	457	41.2	39.0	2.2	1.2	0.4	17	— : 20 : —	9.0	As before; scud on Cheviot.
10 0	436	41.7	39.4	2.3	2.3	1.9	17	20 : — : —	9.5	Scud; cirro-strati; cirri.
1	398	43.0	40.7	2.3	3.4	2.3	17	19 : — : 22	9.5	Id.; woolly cirri; cirro-strati.
2	374	42.8	40.5	2.3	2.4	1.0	17	17 : — : —	9.9	Id.; cirro-strati; cirri.
3	340	43.2	40.9	2.3	2.0	1.6	17	17 : — : —	10.0	Id.; id.
4	311	43.2	40.9	2.3	1.5	1.1	16	18 : — : —	10.0	Id.; id.; cirrous mass.
5	289	43.2	40.9	2.3	2.0	0.7	17	18 : — : —	10.0	Id.; id.; id.
6	254	43.6	41.0	2.6	1.2	0.5	16		9.0	Id.; id.; cirrous haze.
7	223	44.0	41.2	2.8	1.4	2.1	16		9.5	Scud and cirro-strati.
8	201	43.9	41.2	2.7	1.7	1.2	16		10.0	Id.
9	160	45.3	42.2	3.1	2.5	2.1	15		10.0	Id.; rain ^{0.5}
10	116	45.4	43.2	2.2	2.8	1.5	16		10.0	Id.; rain ^{0.2}
11	079	47.0	44.3	2.7	5.2	4.2	16		9.5	Id.; id.
12	060	46.7	44.5	2.2	5.2	3.8	17		9.9	Id.; clouds broken.
13	29.049	47.0	44.8	2.2	3.8	2.5	16		10.0	Scud and cirro-strati; rain ^{0.2}
14	044	46.9	45.0	1.9	3.8	2.0	17		10.0	Id.; id.
15	045	46.9	45.1	1.8	2.3	1.8	16		8.0	Id.; stars dim.
16	044	47.7	46.0	1.7	2.5	2.4	17		10.0	Id.; rain ^{1.5}

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
10 17	29.031	47.2	46.1	1.1	3.0	2.0	17		10.0	Scud and cirro-strati; rain ^{2.0} .
18	050	46.0	45.0	1.0	2.1	0.4	18		10.0	Id.; rain ^{1.0} .
19	072	45.1	44.0	1.1	0.8	0.7	18		10.0	Id.
20	113	43.8	42.4	1.4	0.7	0.7	19	20 : — : —	6.5	Scud.
21	161	42.2	40.6	1.6	1.3	0.5	19	20 : — : —	1.5	Loose scud; cirro-stratus scud.
22	179	42.4	40.8	1.6	1.1	0.7	20	21 : 18 : —	6.5	Scud: cirro-strati; woolly cirri.
23	210	42.9	41.1	1.8	1.5	1.2	18	21 : — : 19	2.5	Scud: woolly cirri; loose, ragged cumuli to SE. ☺
11 0	243	44.0	41.5	2.5	0.8	0.5	18	21 : — : —	1.5	Scud; loose cumuli; cirri; cirro-strati. ☺
1	274	44.2	41.3	2.9	1.3	0.9	19		1.0	Id.; Id. ☺
2	277	44.0	41.0	3.0	1.7	1.0	18		1.0	Cumuli to SE.; cir. and cir.-str. to SW. and E. ☺
3	300	43.0	40.0	3.0	1.2	0.4	20	21 : — : 18	7.0	Scud: mottled and woolly cir.; rad. from S by W.
4	325	42.2	39.7	2.5	0.4	0.4	18	21 : — : 18	7.5	Scud: woolly cirri; cirro-strati.
5	351	40.8	38.7	2.1	0.7	0.6	16	20 : — : —	8.0	Scud and loose cumuli; dappled grey cir., cirrous haze.
6	374	38.4	37.1	1.3	0.7	0.3	16		5.0	Id.; to S. woolly cirri. ☺
7	383	37.9	36.5	1.4	0.5	0.2	18		1.0	Scud cirrous haze; lunar corona. ☺
8	391	37.0	35.3	1.7	0.2	0.1	19		0.5	Cirri and haze on horizon; lunar corona. ☺
9	396	36.9	35.3	1.6	0.4	0.3	18		0.5	Id.; id. ☺
10	391	36.2	34.9	1.3	0.3	0.3	18		0.5	Id.; id. to E.
11	401	36.3	34.9	1.4	0.4	0.2	24		0.8	Cirri and cirro-strati to NE.
12	408	34.7	33.7	1.0	0.1	0.0	25		0.8	Id.
12 0	29.590	40.3	39.1	1.2	0.5	0.4	18	20 : — : 20		Sunday. Scud and cirri.
12 13	29.581	27.2	0.4	0.0	20		2.0?	Rather dense fog.
14	567	26.6	27.3	...	0.0	0.0			7.0?	Id.
15	551	27.6	27.8	...	0.0	0.0			10.0	Id.
16	535	28.0	28.0	...	0.0	0.0	18		10.0	Id.
17	520	27.4	27.7	...	0.0	0.0	6		10.0	Id.
18	500	28.5	28.3	0.2	0.0	0.0	18		10.0	Id.; clearing off at 18 ^h 30 ^m .
19	492	28.0	27.8	0.2	0.0	0.0	16		10.0	Stratus in the hollows?
20	475	28.0	27.8	0.2	0.0	0.0	17	10 : — : —	10.0	Scud.
21	456	32.3	32.0	0.3	0.1	0.1	7	5 : — : —	10.0	Id.; a few drops of rain at 20 ^h 50 ^m .
22	436	36.6	36.0	0.6	0.1	0.1	9	7 : — : —	10.0	Id.; Scotch mist.
23	413	37.7	37.0	0.7	0.2	0.2	10	9 : — : —	10.0	Id.; fog to N.
13 0	386	37.3	36.9	0.4	0.2	0.2	10	10 : — : —	10.0	Id.; id.
1	364	39.3	38.0	1.3	0.4	0.4	11	12 : — : —	10.0	Id.
2	338	39.8	38.2	1.6	0.6	0.3	9	12 : — : —	10.0	Id.
3	321	40.7	38.7	2.0	0.4	0.3	8	12 : — : —	10.0	Id.; clouds breaking to S.
4	299	40.7	38.5	2.2	0.4	0.3	7	11 : — : —	8.0	Id.; woolly cirri.
5	291	40.0	38.9	1.1	0.5	0.3	7	12 : — : —	9.9	Id.
6	287	40.0	38.4	1.6	0.3	0.5	11		10.0	Thick scud; drops of rain.
7	280	39.0	37.7	1.3	0.6	0.3	11		10.0	Id.; id.
8	278	39.0	38.0	1.0	0.4	0.1	8		10.0	Thick scud or cirro-strati; rain ^{0.2} .
9	284	40.1	39.3	0.8	0.1	0.1	12		10.0	Id.; id.
10	290	41.3	40.0	1.3	0.5	0.4	12		10.0	Id.
11	290	40.9	39.6	1.3	0.4	0.2	12		9.8	Id.
12	306	39.5	38.3	1.2	0.3	0.3	13		5.0	Scud.
13	29.325	36.9	35.9	1.0	0.5	0.1	12		1.0	Clouds to E.
14	325	36.6	36.1	0.5	0.3	0.1	4		5.0	Scud.
15	340	39.2	37.8	1.4	0.1	0.1	8		10.0	Id.
16	353	40.3	39.4	0.9	0.4	0.5	10		10.0	Id.; rain ^{2.0} .
17	369	41.3	39.8	1.5	0.8	0.4	13		10.0	Id.
18	399	41.4	39.8	1.6	0.7	0.6	12		10.0	Id.
19	428	41.1	39.6	1.5	0.7	0.5	12		10.0	Id.
20	460	40.7	39.4	1.3	0.7	0.3	12		9.5	Id.
21	507	40.8	39.6	1.2	0.4	0.3	13	13 : — : —	10.0	Id.
22	546	41.0	39.6	1.4	0.5	0.2	13	13 : — : —	10.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	lbs.	From	pt.	pt.	pt.
d. h.	in.	°	°	°				— : 13 : —	0—10.	
13 23	29.559	41.6	39.8	1.8	0.2	0.1	14	— : 13 : —	9.8	Cirro-stratus scud.
14 0	566	42.2	40.2	2.0	0.3	0.0	13	12 : — : —	10.0	Scud.
1	573	42.0	40.2	1.8	0.1	0.0	12		9.9	Id. ; cirro-strati.
2	575	43.1	41.1	2.0	0.1	0.1	16	13 : 13 : —	10.0	Id. ; id.
3	581	43.3	41.3	2.0	0.1	0.0	14		10.0	Id. ; id.
4	588	42.3	40.9	1.4	0.1	0.0	10	— : 13 : —	10.0	Cirro-stratus scud.
5	602	42.0	40.0	2.0	0.1	0.0	12	— : 14 : —	10.0	Id.
6	609	41.3	39.7	1.6	0.2	0.2	10		10.0	Id.
7	607	40.5	39.4	1.1	0.1	0.0			10.0	Id.
8	596	38.5	38.0	0.5	0.1	0.0	8	— : 12 : —	1.0	Scud or cirro-strati to E., patches to W. ☽
9	589	38.5	38.0	0.5	0.1	0.2	8		10.0	Scud.
10	561	40.0	39.0	1.0	0.0	0.0	6	12 : — : —	9.8	Scud ; cirro-stratus scud. ☽
11	561	40.6	39.1	1.5	0.3	0.3	13	12 : — : —	9.0	Id. ; id.
12	553	40.0	37.9	2.1	0.4	0.3	14		9.9	Cirro-stratus scud ; cirro-cumulous scud.
13	29.526	38.8	37.4	1.4	0.2	0.0	13		10.0	Clouds much denser.
14	502	38.5	37.2	1.3	0.1	0.0			10.0	As before.
15	494	38.6	37.3	1.3	0.1	0.0			10.0	Id.
16	480	38.0	37.0	1.0	0.0	0.0	8		10.0	Id.
17	460	38.6	37.3	1.3	0.0	0.1	12		9.8	Clouds broken ; stars dim.
18	448	37.6	36.4	1.2	0.1	0.0	12		9.8	Id.
19	438	37.8	36.4	1.4	0.1	0.1	10		9.0	Id.
20	434	37.5	36.5	1.0	0.1	0.1	25		9.9	Id.
21	427	36.8	35.9	0.9	0.1	0.0	18	— : 16 : —	9.8	Broken cirro-stratus scud.
22	442	36.7	35.8	0.9	0.2	0.2	12	15 : — : —	8.0	Scud ; broken cirro-stratus scud. ☠
23	448	37.2	35.8	1.4	0.6	0.2	12		2.0	Cirro-strati ; cirro-stratus scud round horizon. ☺
15 0	441	37.5	36.3	1.2	0.4	0.4	15		2.0	Bank of dense cirro-strati round horizon. ☺
1	442	39.6	37.8	1.8	0.5	0.1	16	13 : 13 : —	8.5	Scud : cirro-cumuli ; cirro-strati.
2	439	42.4	40.2	2.2	0.3	0.1	14	10 : — : —	6.5	Id. ; id. ; id. ☠
3	439	41.4	39.2	2.2	0.1	0.1	30	11 : — : —	9.5	Id. ; id. ; id.
4	452	40.4	38.6	1.8	0.0	0.0	27	12 : — : 28	7.5	Id. ; finely mottled cir. to W., lying NW. and WSW.
5	470	37.0	36.2	0.8	0.2	0.1	17		10.0	Id.
6	484	38.0	36.8	1.2	0.1	0.0			10.0	Id.
7	504	35.8	35.3	0.5	0.0	0.0	8		9.0	Watery cirro-cumuli ; irregular lunar corona. ☽
8	519	33.3	33.0	0.3	0.0	0.0		— : 26? : —	6.5	Id. ; id. ☽
9	543	30.0	29.7	0.3	0.1	0.0	20		0.5	Thin cirri ; sky milky ; lunar corona and halo. ☽
10	559	28.5	28.0	0.5	0.1	0.0	18		0.0	As before ; sky very milky.
11	579	28.0	0.0	0.0			0.3	Band of cirri to S., very thin haze. ☽
12	597	28.0	28.4	...	0.0	0.0	18		0.2	Cirri and cirrus haze.
13	29.609	28.1	28.6	...	0.0	0.0	18		0.5	Cirri and cirrus haze.
14	625	27.6	28.0	...	0.0	0.0			0.3	Cir.-cum. to W., streaks of cir. and cir. haze to N. ☽
15	649	27.0	27.2	...	0.0	0.0	20		0.0	Hazy on horizon.
16	666	25.8	26.0	...	0.0	0.0	18		0.0	Id.
17	675	25.7	25.8	...	0.0	0.0			0.0	Hazy, stars dim.
18	695	28.4	28.1	0.3	0.0	0.0	18		5.0?	Cirrus haze over the sky.
19	719	29.1	28.8	0.3	0.1	0.0	20		10.0	Dense cirrus mass?
20	728	30.5	30.2	0.3	0.1	0.0	18 v.		10.0	Id.
21	744	30.8	30.3	0.5	0.0	0.1	21		10.0	Id.
22	760	31.5	31.2	0.3	0.1	0.0	20		10.0	Id. ; fog, objects invisible at $\frac{1}{2}$ mile.
23	768	31.9	31.7	0.2	0.2	0.2	24		10.0	Id. ; dense fog, objects invisible at $\frac{1}{4}$ mile.
16 0	772	32.2	31.9	0.3	0.1	0.1	17		10.0	Id.
1	762	31.6	31.6	...	0.2	0.1	17		10.0	Id.
2	740	31.0	31.2	...	0.2	0.1	21		10.0	Id. $\frac{1}{8}$ mile.
3	741	30.4	30.3	...	0.1	0.1	0		5.0?	Id. id.
4	755	29.8	29.8	...	0.2	0.0	22	— : 22 : —	7.0	Cirro-cumulous scud ; cirri ; fog clearing off.
5	758	28.1	28.0	...	0.1	0.0	16		2.5	Stratus ; cirro-strati ; cirri. ☽
6	749	26.2	26.0	0.2	0.1	0.0	20		2.0	Id. ; id. ; id. ; lunar corona. ☽

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
16 7	29.747	26.5	26.2	0.3	0.0	0.0	18	20 : — : —	3.0	Loose misty scud ; fog gone off ; faint halo. ☺
8	746	28.0	27.7	0.3	0.0	0.0	20	22 : — : —	1.0	Id. ☺
9	751	27.8	27.7	...	0.0	0.0	20	22 : — : —	6.0	Scud. ☺
10	741	29.2	29.1	...	0.0	0.0	24	21 : — : —	4.0 v.	Id. ; thin haze. ☺
11	749	28.2	28.0	0.2	0.2	0.1	17	— : 20 : —	9.5	Cirro-cumulus scud. ☺
12	741	34.2	32.4	1.8	0.1	0.4	16		10.0	Thick scud.
13	29.729	36.2	35.2	1.0	0.4	0.3	18		10.0	Thick scud.
14	720	35.8	34.9	0.9	0.2	0.1	16		9.5	Scud ; cirro-strati.
15	717	37.2	36.0	1.2	0.4	0.3	17		9.5	Id. ; id.
16	708	37.2	35.7	1.5	0.5	0.3	18		10.0	Id. ; id.
17	685	37.5	36.0	1.5	0.3	0.2	18		10.0	Id. ; id.
18	688	37.8	36.2	1.6	0.3	0.3	18		10.0	Id. ; id.
19	679	38.6	36.7	1.9	0.5	0.1	17		10.0	Id. ; id.
20	682	38.3	36.6	1.7	0.2	0.1	18		10.0	Id. ; id.
21	683	37.9	36.3	1.6	0.3	0.1	18	— : 20 : —	10.0	Loose cir-cum. ; cir-str. ; cirrous haze ; clouds red.
22	689	38.3	36.6	1.7	0.2	0.1	18	— : 20 : —	10.0	Id. ; id. ; id.
23	686	39.0	37.0	2.0	0.2	0.1	14	— : 18 : —	9.9	Id. ; id. ; id. ☺
17 0	679	40.3	38.1	2.2	0.4	0.5	17	— : 20 : —	9.9	Id. ; id. ; id.
1	667	42.2	39.7	2.5	0.8	0.5	17	— : 20 : 18	9.8	Watery cirri ; masses of cirro-strati ; cirrous haze.
2	639	44.7	41.5	3.2	1.3	1.7	16	19 : 19 : —	9.6	Patches of scud ; cirro-str. ; loose cir-cum. ; woolly cir. ☺
3	632	43.4	40.6	2.8	1.7	0.9	17	20 : — : —	9.9	Nearly as before.
4	632	41.6	39.3	2.3	1.3	0.6	16		9.9	Id.
5	626	41.4	39.3	2.1	0.8	0.5	16	20 : — : —	10.0	Id.
6	619	41.4	39.4	2.0	0.5	0.2	16		10.0	Scud ; cirro-strati.
7	619	40.0	38.0	2.0	0.6	0.3	16		10.0	Id. ; id.
8	601	39.8	37.4	2.4	1.7	1.2	18		9.5	Id. ; id.
9	607	40.4	37.9	2.5	1.3	0.5	17		10.0	Id. ; id.
10	602	39.2	37.2	2.0	1.2	0.5	16	— : 20 : —	9.9	Cirro-cumulus scud. ☺
11	593	38.7	36.7	2.0	0.7	0.6	16	— : 19 : —	9.2	Watery cir-cum. ; cirri ; cirrous haze ; lunar corona. ☺
12	573	38.8	36.6	2.2	1.6	1.2	16		8.0	Id. ; id.
13	29.562	39.0	36.6	2.4	1.6	0.7	16		8.5	Watery cirro-cumuli, denser.
14	548	38.6	36.6	2.0	0.7	0.3	16		9.2	As at last hour ; sky to E.
15	529	39.4	37.1	2.3	0.8	0.4	16		10.0	Id.
16	511	39.4	36.9	2.5	0.9	0.7	16		9.0	Cirro-strati ; thin cirri.
17	485	39.7	37.1	2.6	1.6	0.3	16		9.8	Id. ; id.
18	447	38.7	36.3	2.4	0.9	0.6	15		9.8	Id. ; id., or cirrous haze.
19	417	39.6	37.0	2.6	0.8	0.7	15		10.0	Id.
20	393	38.2	36.8	1.4	1.2	0.6	14		10.0	Scud ; cirro-strati.
21	362	38.6	37.1	1.5	0.8	1.0	15	18 : — : —	10.0	Id. ; dense homogeneous cirro-strati ; rain ^{0.5}
22	343	38.5	37.2	1.3	1.9	1.6	16	19 : — : —	9.9	Id. ; cirro-strati breaking up.
23	336	40.2	38.3	1.9	1.8	1.5	14	20 : — : —	10.0	Id. ; id.
18 0	323	40.7	39.1	1.6	1.2	1.1	15	18 : — : —	9.9	Id. ; cirro-strati ; cirri.
1	305	41.2	39.6	1.6	1.1	1.2	16	18 : 18 : —	4.0	Id. ; loose ragged cumuli ; cirro-cumulus scud.
2	280	43.3	40.7	2.6	1.3	0.8	16	18 : — : —	2.0	Id. ; cumuli to E. ; cirro-strati ; cirri. ☺
3	255	43.2	40.0	3.2	1.3	1.0	16	18 : — : —	9.0	As before.
4	245	42.5	39.4	3.1	1.8	0.3	16	18 : — : —	9.9	Scud ; cirro-strati ; cirri.
5	219	42.2	39.7	2.5	1.2	0.1	17	18 : 18 : —	10.0	Id. ; id. ; drops of rain.
6	203	41.6	39.4	2.2	1.7	0.9	16	— : 18 : —	8.2	Watery cirro-cumuli ; sky milky ; lunar corona.
7	199	40.8	38.8	2.0	1.7	1.6	17		1.5	Id.
8	199	39.6	37.7	1.9	1.4	0.8	16		1.5	Id.
9	202	40.4	38.4	2.0	1.0	0.6	16		9.5	Cirro-stratus scud ; cirri.
10	188	38.8	37.0	1.8	1.1	0.8	17		9.0?	Cirri ; cirrus haze ; faint lunar corona and halo. ☺
11	177	36.7	35.3	1.4	0.7	0.3	17		8.0	Cirrus haze over the sky ; lunar halo. ☺
12	171	35.6	34.4	1.2	0.5	0.1	16		9.0	Id. ; halo disappeared. ☺
23	29.120	34.5	33.3	1.2	1.7	0.2	18	— : 19 : —	{ Sunday—variable. A.M. Cirro-cumulo-strati. ; cirri, ☺ snow. P.M. Dense, cirrus mass ; snow and sleet.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Jan. 17^d 12^h. Observation made at 12^h 12^m.

Gott. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.		
		Dry.	Wet.	Diff.	Maximum force in 1 h.	From	lbs.	lbs.	pt.	pt.	pt.
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	pt.	pt.
19 13	29.047	29.5	29.3	0.2	1.1	0.1	30	9.0	Cirro-cumulo-strati; cirro-strati.	↗	
14	063	28.9	28.7	0.2	0.0	0.1	24	9.0	Id.; id.; cirri.	↗	
15	086	27.5	27.5	...	0.0	0.1	20	9.5	Id.; id.; id.	↗	
16	116	27.3	27.3	...	0.1	0.0	20	7.0	Id.; id.; id.	↗	
17	149	25.7	25.7	...	0.0	0.1	17	5.0	Id.; id.	↗	
18	175	25.8	25.7	...	0.1	0.0	16	4.0	Id.; id.	↗	
19	211	26.0	26.0	...	0.0	0.0	24	0.4	Cirro-strati near horizon.*		
20	248	28.7	28.3	0.4	0.1	0.0	24	1.0	Woolly cirri; cirro-strati; cir. haze; loose cum. to SE.		
21	298	26.9	26.6	0.3	0.1	0.0	16	0.8	Woolly cir. and cirro-strati; scud on the flank of Cheviot.		
22	331	26.4	26.2	0.2	0.1	0.0	18	2.0	Woolly cirri; cirro-strati.*	⊙	
23	347	31.0	29.7	1.3	0.2	0.0	18	1.5	Loose woolly cirri, as before.	⊙	
20 0	356	32.0	30.8	1.2	0.1	0.0	23	0.0	Haze on horizon.	⊙	
1	383	35.0	32.8	2.2	0.3	0.2	20	0.2	Cirro-strati to NE.	⊙	
2	406	38.2	35.9	2.3	0.5	0.4	23	5.0	Loose cirro-strati, 2 ^h 30 ^m Rainbow.	⊙	
3	423	39.3	36.1	3.2	0.5	0.5	26	3.0	Id.; loose nimbi and shower to N.	⊙	
4	464	34.7	33.5	1.2	3.2	0.4	29	2.0	Loose cumuli and cirro-strati.	⊙	
5	493	34.6	32.4	2.2	0.4	0.1	26	1.5	Cirro-strati and thick cirrus haze on horizon.	⊙	
6	526	32.5	32.2	0.3	0.2	0.1	22	1.5	Id. on N. horizon.	↗	
7	545	34.2	31.7	2.5	0.2	0.1	23	9.5	Scud: cirro-strati.	↗	
8	573	32.7	31.3	1.4	0.2	0.2	26	0.2	Cirro-strati on SE. horizon.	↗	
9	612	33.5	31.2	2.3	0.4	0.2	26	0.2	Id. SE. and N. horizon.	↗	
10	636	36.8	34.0	2.8	0.9	0.9	27	1.5	Id. to E.	↗	
11	671	37.4	34.0	3.4	0.9	0.7	28	2.5	Watery, loose cirro-cumuli; lunar corona.*	↗	
12	718	38.4	35.2	3.2	0.8	0.4	29	9.8	Cirro-cumulo-strati.	↗	
13	29.755	38.3	35.3	3.0	0.5	0.3	28	6.5	Cirro-cumulo-strati; sky in zenith.	↗	
14	764	36.8	34.3	2.5	0.3	0.4	24 v.	3.0	Id.; cirri; faint lunar corona.*	↗	
15	786	33.3	31.8	1.5	0.1	0.1	28	1.0	Id.; id.	↗	
16	818	34.3	32.7	1.6	0.2	0.1	29	9.8	Id.; denser.		
17	839	35.0	33.5	1.5	0.1	0.1	18	9.9	Id.; id.		
18	850	34.5	33.3	1.2	0.0	0.0	18	9.9	Id.		
19	867	34.0	32.8	1.2	0.1	0.1	20	9.5	Scud: clouds broken.		
20	887	33.2	31.9	1.3	0.1	0.1	20	8.5	Id.; cirro-cumulo-strati; cirro-strati.		
21	911	30.7	30.3	0.4	0.1	0.0	20	3.0	Loose cirro-cumuli; cirro-strati.		
22	925	30.5	29.9	0.6	0.1	0.2	20	3.0	Fleecy, woolly cirri; cirro-cumuli; cirro-strati.	⊙	
23	924	32.0	31.0	1.0	0.2	0.1	25	6.5	Id.		
21 0	922	35.0	32.8	2.2	0.1	0.1	21	9.6	Cirro-cumulo-strati; cirro-strati; cirri.		
1	925	36.2	34.3	1.9	0.1	0.0	20	9.9	As before.		
2	905	37.7	35.5	2.2	0.2	0.1	22	9.9	Cirro-stratus scud; wavy cirro-strati; cirri.	●	
3	887	38.3	36.1	2.2	0.2	0.1	20	9.5	Id.; id.		
4	872	38.0	36.0	2.0	0.3	0.1	18	8.0	Id.; id.		
5	874	38.2	36.0	2.2	0.3	0.3	17	6.0	Scud: cirro-stratus scud; red tinged cirri to W.	↗	
6	858	34.3	33.0	1.3	0.2	0.0	16	8.0	Misty scud: thin cirro-strati and cirri.	↗	
7	853	36.7	34.7	2.0	0.6	0.3	18	10.0	Chiefly smoky scud.	↗	
8	851	36.6	34.8	1.8	0.5	0.3	18	9.5	Id.; cirro-strati; lunar corona.	↗	
9	843	37.8	36.2	1.6	0.5	0.2	18	10.0	Dense, nearly homogeneous mass of scud.		
10	832	38.6	37.3	1.3	0.7	0.7	18	10.0	Nearly as before, but varying.		
11	817	38.7	37.3	1.4	0.6	0.8	18	10.0	Nearly homogeneous.		
12	806	39.8	38.5	1.3	2.0	1.4	19	10.0	Id.		
13	29.784	39.0	37.7	1.3	1.0	0.5	18	9.2	Loose scud: cirro-cumulo-strati; coloured lunar cor.	↗	
14	765	40.2	39.2	1.0	1.2	0.9	19	8.0	Id.; cirro-strati; thin haze, causing a col. cor.	↗	
15	778	40.1	39.2	0.9	1.1	0.4	20	10.0	Homogeneous; drops of rain.		
16	777	41.1	40.5	0.6	0.6	0.1	20	10.0	Id.; id.		
17	778	41.3	40.8	0.5	0.2	0.0	14	10.0	Thick scud and cirro-strati.		
18	774	43.0	42.5	0.5	0.5	0.4	20	10.0	Id.		
19	789	43.4	42.7	0.7	0.8	0.2	20	3.0	Smoky scud; cirri.		
20	803	43.5	42.8	0.7	0.2	0.0	22	10.0	Id.		

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motion of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Jan. 20^d 3^h 40^m. Heavy showers of snow and sleet with strong wind.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gott. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
21 21	29.821	43.1	42.3	0.8	0.1	0.2	24	20 : — : —	10.0	Smoky scud ; cirrous mass.
22	825	42.3	41.8	0.5	0.3	0.1	20	21 : — : 22	9.0	Id. ; wo. cir, lying from NE. to SW. ; halo.
23	834	41.4	41.1	0.3	0.2	0.1	22	— : — : 23	8.0	Woolly, mottled, and linear cirri ; solar halo.
22 0	846	45.3	43.7	1.6	0.2	0.1	20	23 : — : —	9.0	Smoky scud, various cirri radiating from SW.
1	846	46.0	43.8	2.2	0.4	0.2	19	22 : — : —	7.0	Id. ; cirro-strati ; cirri.
2	823	46.4	44.3	2.1	0.8	1.0	19	22 : — : —	8.0	Id. ; id. ; id. ; cirrus haze ; halo.
3	815	45.9	43.7	2.2	0.6	0.6	19	21 : — : 20	8.0	Scud ; woolly cirri lying SW. to NE. ; cirro-strati.
4	824	44.6	42.2	2.4	1.1	0.5	19	21 : — : 23	6.0	Id. ; id. lying S by E. to N by W. id.
5	795	41.7	40.2	1.5	0.8	1.1	18		5.0	Id. ; id.
6	786	41.0	39.9	1.1	1.6	0.9	19		2.5	Scud ; cirri.
7	788	41.8	40.5	1.3	1.2	0.6	17		1.5	Cir. str. ; cir. and cir. haze ; faint lunar halo and cor.
8	780	42.6	41.3	1.3	0.8	0.1	20	21 : — : —	2.0	Scud ; cirri ; cirrous haze ; halo and corona.
9	791	43.1	41.7	1.4	0.9	0.8	18		10.0	Thick scud.
10	790	43.0	41.7	1.3	1.6	0.6	18		10.0	Id.
11	781	42.2	41.2	1.0	0.8	0.2	18		10.0	Id.
12	767	42.8	41.6	1.2	0.5	0.2	15		10.0	Scud ; cirro-strati ; cirri.
13	29.737	41.4	40.2	1.2	0.9	1.6	17	20 : — : 24	10.0	Scud. ; mass of cirri ; lunar halo.
14	701	39.5	38.7	0.8	0.5	0.1			4.0	Thin, watery cirri.
15	660	42.1	40.8	1.3	0.0	0.0			10.0	Thick scud ; cirro-strati.
16	593	44.7	43.6	1.1	0.7	0.6	17		10.0	Id. ; rain ³ .
17	556	46.1	45.1	1.0	1.5	1.1	20		10.0	Id. ; rain ^{0.5} .
18	529	46.3	45.9	0.4	1.6	1.1	18		10.0	Id. ; rain ^{0.5} .
19	498	48.6	48.0	0.6	1.2	0.7	20		10.0	Id. ; rain ^{0.2} ; wind in gusts.
20	478	48.8	47.8	1.0	2.9	2.6	18	20 : — : —	10.0	Id.
21	460	49.2	47.9	1.3	2.3	1.4	19	20 : — : —	10.0	Id.
22	439	49.7	47.5	2.2	2.9	2.3	20	20 : 20 : —	9.9	Scud ; cirro-strati.
23	418	50.0	47.1	2.9	4.1	5.0	19	20 : 21 : —	9.9	Id. ; id. ; cirri.
23 0	404	51.1	46.9	4.2	6.3	4.2	18	20 : 20 : —	9.7	Id. ; id. ; id.
1	387	50.0	46.6	3.4	6.3	3.4	19	20 : — : —	10.0	Id.
2	360	50.0	46.7	3.3	4.3	4.2	18	20 : — : —	10.0	Id. ; rain to E. ?
3	318	49.8	46.8	3.0	4.6	3.7	18		10.0	Id.
4	297	49.3	46.4	2.9	4.5	5.2	18	20 : — : —	10.0	Id. ; rain to SE.
5	286	48.9	46.4	2.5	5.2	3.5	19	20 : — : —	10.0	Thick scud.
6	274	47.8	45.8	2.0	3.6	2.8	18		8.5	Scud ; cirro-strati ; cirri ; drops of rain.
7	279	48.1	46.0	2.1	2.7	2.7	20		9.0	Id. ; id.
8	260	47.6	45.8	1.8	3.2	2.5	17		10.0	Id. ; id. ; rain ^{0.2} .
9	251	46.5	45.8	0.7	2.2	0.8	18		10.0	Id. ; id. ; rain ^{0.5} .
10	233	46.0	44.7	1.3	1.3	1.3	18	20 : — : —	10.0	Id. ; id. ; rain ^{0.2} .
11	224	45.7	44.3	1.4	0.8	0.4	18	20 : — : —	10.0	Id. ; watery cirrus haze ; no halo visible.
12	210	45.5	44.0	1.5	0.5	0.5	18		10.0	Cirro-strati ; watery haze ; faint halo.
13	29.195	45.3	44.0	1.3	0.2	0.2	17		10.0	Cirro-strati; gradually becoming denser; broken to S.
14	168	44.8	43.7	1.1	0.3	0.0	17		10.0	Cirro-strati or cirro-stratus scud.
15	160	44.1	43.3	0.8	0.0	0.0	17		10.0	As at 13 ^h ; particles of rain.
16	154	44.1	43.7	0.4	0.1	0.0	15		10.0	Id. ; rain ^{0.2} .
17	146	43.8	43.4	0.4	0.0	0.0	14	18 : — : —	10.0	Scud ; cirro-strati.
18	142	43.7	43.3	0.4	0.0	0.0	0		10.0	Id. ; id. ; drops of rain.
19	147	44.0	43.2	0.8	0.0	0.1	21		10.0	Id. ; id. ; rain ¹ .
20	186	43.3	42.4	0.9	0.1	0.1	24		10.0	Id. ; id. ; rain ² .
21	242	38.7	38.0	0.7	1.8	1.5	30	31 : — : —	10.0	Id. ; id. ; rain ³ .
22	290	37.4	36.2	1.2	1.5	0.6	31	31 : — : —	10.0	Id. ; cirrus mass ; rain ² .
23	340	37.7	36.7	1.0	0.9	0.7	28		10.0	Id. ; id.
24 0	380	39.0	37.8	1.2	0.9	0.9	28		10.0	Scud on S. horizon ; dense cirrus mass.
1	414	41.0	39.2	1.8	1.1	1.7	28		10.0	Smoky scud round horizon ; cirro-strati.
2	439	42.3	40.0	2.3	1.3	1.3	28	— : 28 : —	8.5	Cirro-strati ; cirri ; snow on Cheviot.
3	477	42.9	40.0	2.9	1.0	0.7	29		6.0	Patches of scud ; cirro-strati ; woolly cirri.
4	516	43.2	39.7	3.5	1.2	0.7	28		2.0	Cumulo-strati ; cirro-strati ; cirri.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Jan. 22^d 3^h. The smoky scud seems to have a sort of internal motion.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.; Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^h .	From 10 ^m .	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
24 5	29.542	40.9	38.2	2.7	0.6	0.1	23		1.5	Cumulo-strati; cirro-strati; cirri; clouds tinged red.
6	570	37.6	36.7	0.9	0.1	0.0	24		0.8	Cirro-strati; haze on E. horizon.
7	592	35.7	34.4	1.3	0.3	0.3	18		0.0	Moon risen very orange-coloured.
8	615	36.5	34.5	2.0	0.3	0.3	20		0.1	Streaks of cirri to N.
9	635	33.4	32.5	0.9	0.3	0.1	18		0.1	Cirri to E.
10	648	32.9	32.1	0.8	0.3	0.3	20		0.2	Cirri to SW.; scud on Cheviot.
11	661	37.1	35.0	2.1	0.7	0.1	18	— : — : 28	2.0	Bands of cirri lying NW by N. to SW by S.; patches of scud.
12	669	33.4	32.3	1.1	0.4	0.0	17		1.0	Bands of cirri: portion of a halo.
13	29.662	32.7	31.8	0.9	0.2	0.0	10		0.5	Cirri; cirro-strati.
14	663	35.0	33.6	1.4	0.6	0.6	20		1.0	Cirri and cir.-str. on hor.; patches of scud to NW.
15	654	33.8	32.9	0.9	0.5	0.1	20	— : — : 26	1.5	Sheets of thin cirro-strati and cirri.
16	629	33.6	33.0	0.6	0.4	0.3	18		7.0	Cir-cum.; sheets of cir.-str.; cir. haze; lunar halo and corona.
17	609	35.9	35.0	0.9	0.5	0.6	19	20 : 28 : —	10.0	Scud; cirro-cumuli; cirro-strati.
18	575	38.6	37.0	1.6	0.8	0.4	19		10.0	Thick scud and cirro-strati.
19	539	40.2	38.4	1.8	1.7	1.1	19	22 : 28 : —	10.0	Scud; watery cirrus haze and cirro-strati.
20	512	40.8	38.8	2.0	3.7	3.8	18		10.0	Cirro-cumulous scud; id.; tinged red on SE.
21	494	41.2	39.2	2.0	2.8	1.3	18	— : 20 : —	10.0	Id.
22	435	44.0	42.4	1.6	3.4	4.0	19	19 : 23 : —	10.0	Loose, watery scud; cirro-stratus scud; cirrus mass.
23	416	46.0	44.0	2.0	4.4	3.0	20	19 : 24 : —	10.0	Id.; cirro-strati; cirro-cumuli; wild sky.
25 0	386	48.4	46.0	2.4	4.5	4.3	20	20 : 24 : —	9.5	Id.; id.; id.
1	362	49.2	47.0	2.2	3.5	2.8	18	20 : 24 : —	9.8	Id.
2	345	49.3	47.5	1.8	2.8	3.1	20	20 : — : —	10.0	Id.
3	301	48.4	47.2	1.2	3.3	1.7	20	20 : — : —	10.0	Id.; id.; id.
4	269	48.8	47.5	1.3	2.8	2.0	20	20 : — : —	10.0	Id.; id.; id.
5	250	49.8	47.8	2.0	4.6	3.3	19	20 : — : —	10.0	Id.; id.
6	202	49.7	48.0	1.7	3.3	3.1	19	20 : — : —	10.0	Loose scud; dense homogeneous cirro-strati.
7	156	50.1	48.9	1.2	3.5	3.0	18		10.0	Occasional rain 0^{5-1} since 6 ^h .
8	109	50.4	49.0	1.4	4.2	3.2	18		10.0	Rain 0^{5-} .
9	29.050	50.6	49.2	1.4	3.0	3.5	19		10.0	Id.
10	28.983	50.1	49.0	1.1	3.1	4.3	18		10.0	Id.
11	933	50.3	48.7	1.6	4.4	4.4	18		10.0	Rain 1^{5-} .
12	944	47.0	43.2	3.8	4.3	3.2	20	22 : — : —	4.0	Misty scud; cirro-strati; cirri
12 ⁴	28.918	45.7	42.7	3.0			9.0	Rain 0^{2-} .
23 ¹	29.026	40.2	35.5	4.7	8.7	2.3	25	27 : — : 26		Patches of scud; woolly cirri; cirro-strati slowly.
26 5	306				Cloudy throughout the day, occasional ☽ and flakes of snow, P.M.
13	29.302	29.9	27.4	2.5	5.5	0.3	20		4.0	Very thin cirri; lunar halo and corona.
14	287	28.6	26.6	2.0	0.4	0.2	20		4.0	Auroral cirri; id.; id.
15	240	27.8	26.0	1.8	0.3	0.1	21		5.0	Id.; id.
16	175	28.6	26.9	1.7	0.4	0.1	20	— : 24 : —	9.8	Cirrous mass, gradually growing denser.
17	120	30.5	28.6	1.9	0.5	0.0	24		10.0	Id., less dense; cirro-strati below.
18	062	30.1	28.6	1.5	0.0	...	28		10.0	Homogeneous mass of cirri.
19	29.006	29.7	29.1	0.6	0.1	0.2	7		10.0	Id., snow ¹ ; snow began at 18 ^h 30 ^m .
20	28.970	29.2	28.9	0.3	0.0	0.1	7		10.0	Id., snow ²⁵ ; 1½ inch deep.
21	944	29.7	29.4	0.3	0.1	0.1	2		10.0	Snow ² ;
22	920	29.2	28.8	0.4	0.2	0.0	4		2 ¾	Flakes of snow;
23	888	31.2	30.6	0.6	0.2	0.0	4		3	Snow ²
27 0	880	32.6	32.0	0.6	0.0	0.1	30		10.0	Flakes of snow.
1	868	33.7	32.2	1.5	0.2	0.3	25		10.0	Cirrus mass; mean depth of snow 2.9 inches.
2	857	33.3	32.1	1.2	0.2	0.1	28	— : 26 : —	10.0	Cirro-strati; cirrus mass.
3	838	33.2	32.4	0.8	0.5	0.5	26	— : 28 : —	9.9	Scud; dense cirro-strati.
4	830	32.1	31.8	0.3	0.7	0.6	28	— : 28 : —	7.5	Cirrus scud; cirro-strati; woolly cirri.
5	825	31.2	30.8	0.4	0.6	0.6	28	30 : — : —	9.0	Scud, cirro-strati, cirri; clouds tinged red.
6	821	31.5	31.0	0.5	0.6	0.6	29		10.0	Homogeneous mass; breaks to SW. and W.
7	821	31.4	31.2	0.2	0.6	0.5	28		10.0	Snow ¹ , (since 6 ^h 15 ^m).
8	823	31.6	31.0	0.6	0.5	0.4	29		10.0	Snow ¹ , fine particles.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Jan. 24^h 5^m. Sky purplish on E. horizon; at 6^h, dark red on SW. horizon, and slightly orange above.

Jan. 24^h 11^m and 13^h, and 26^h 13^m. See Notes on the Aurora Borealis.

HOURLY METEOROLOGICAL OBSERVATIONS, JANUARY 27—29, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt pt.	0-10.	
27 9	28.832	32.0	31.5	0.5	0.3	0.3	30		10.0	Snow ^{0.5} ; fine particles.
10	839	32.0	31.7	0.3	0.2	0.1	31		10.0	Id.
11	839	32.0	31.6	0.4	0.0	0.0	1		10.0	Snow ¹
12	839	31.6	31.2	0.4	0.0	0.0	2		10.0	Id.
13	28.834	31.2	30.9	0.3	...	0.0	3		10.0	Clouds not so homogeneous.
14	831	31.3	30.9	0.4	...	0.0	2		10.0	Homogeneous.
15	829	31.4	31.0	0.4	...	0.0			10.0	Id.
16	823	31.3	31.0	0.3	...	0.0	2		10.0	Scud; cirro-strati; clouds broken.
17	814	31.0	30.6	0.4	...	0.0	2	6 : — : —	10.0	Id.; id.; id.
18	809	30.6	30.1	0.5	...	0.0	4		9.9	Id.; id.
19	812	29.8	29.5	0.3	...	0.1	4	6 : — : —	9.8	Thin scud; cirro-strati?
20	813	27.1	27.0	0.1	4	6 : — : —	9.0	Cirrus scud; cirro-strati; cirri; stratus to E?
21	825	26.9	26.7	0.2	...	0.1	4	4 : — : —	9.0	Id.; id.; id.; id.
22	838	26.8	26.6	0.2	...	0.1	26		10.0	Scud; snow ¹ ; stratus to E.
23	845	29.0	28.3	0.7	...	0.1	17		9.5	Cirro-strati to W.; cirrus mass; solar halo.
28 0	863	30.5	29.8	0.7	0.1	0.1	23	4 : — : —	10.0	Scud; cirrus mass; solar halo.
1	873	31.7	30.8	0.9	0.1	0.1	23		10.0	Id.; snow ³ ; snow 6½ inches deep.
2	871	32.7	32.2	0.5	0.2	0.1	25	4 : — : —	10.0	Id.; dense cirro-strati and haze.
3	870	32.4	31.4	1.0	0.3	0.2	1	4 : — : —	10.0	Id.; id.
4	881	32.7	32.2	0.5	0.9	0.4	1		10.0	Dense cirrus mass; snow ⁷ since 3 ^{h.}
5	903	32.3	32.2	0.1	0.6	0.6	6		10.0	Id.; snow ⁷
6	911	31.0	30.7	0.3	0.3	0.0	0		10.0	Scud; dense cirro-strati; slate-blue to NW. and NE.
7	922	31.0	30.2	0.8	...	0.0	0		7.0	Cirro-strati; haze; stars dim.
8	937	31.1	29.5	1.6	...	0.5	3		6.0	Id.; id.; id.
9	951	31.9	29.5	2.4	0.9	1.1	3		4.0	As before; faint aurora.
10	978	31.9	29.5	2.4	0.8	0.6	3		6.0	Id.
11	28.993	32.8	30.0	2.8	1.3	0.8	3		4.0	Scud; cirro-strati on horizon; faint aurora.
12	29.007	33.3	31.5	1.8	1.5	1.2	5		9.0	Id.; id.; id.
13	29.033	31.7	30.8	0.9	0.7	0.3	4		4.0	Bank of cirro-strati to S.; haze.
14	048	26.9	26.0	0.9	0.4	0.2	4		3.0	Cirro-strati; cirri; lunar corona.
15	069	23.8	23.3	0.5	0.1	0.1	20		5.0	Id.; id.; lunar halo.
16	078	25.3	24.4	0.9	0.2	0.1	9		5.0	Id.; id.; id.
17	089	22.8	22.3	0.5	0.2	0.1	25		4.0	Id.; id.; id.
18	110	18.8	18.8	...	0.2	0.1	23		4.0	Id.; id.; id.
19	117	20.2	20.0	0.2	0.1	0.0	18		3.0	Scud; thin haze; faint lunar halo.
20	126	15.0	15.5	...	0.0	0.0	20		2.5	Id.; cirri; cirro-strati; lunar corona.
21	145	14.3	14.7	...	0.0	0.0	12	— : 10 : 17	6.0	Cirro-stratus scud; diffuse cirri; loose cum. on hor.
22	151	14.8	15.0	...	0.0	0.0		— : — : 20	6.0	Woolly cirri; masses of scud on horizon.
23	158	19.3	19.0	0.3	0.0	0.0	22	12 : — : 20	9.0	Scud; woolly cirri and cirrus haze.
29 0	154	22.0	21.1	0.9	0.2	0.0	22		9.0	Woolly cir. and cir. haze; cum. in haze to NE.; solar halo.
1	154	23.7	22.7	1.0	0.1	0.1	25		9.0	Id.; solar halo.
2	139	23.7	22.9	0.8	0.0	0.0	20	— : — : 18	9.0	Id.; id.
3	126	22.3	22.0	0.3	0.0	0.0	20	— : — : 20	8.0	Id.; id.
4	115	20.9	20.5	0.4	0.0	0.0	20	— : — : 20	8.0	Id.; id.
5	106	19.0	18.8	0.2	0.0	0.0	20	— : — : 18	8.0	Cirri; atmospheric haze.
6	097	13.6	14.0	...	0.1	0.1	20		9.0	Cirro-strati; cirri; dense cirri to E.
7	091	11.8	12.8	...	0.1	0.1	18		1.5	Cirro-strati and haze round horizon.
8	079	10.2	10.5	...	0.1	0.1	18		1.5	Id.; faint auroral light.
9	075	9.8	10.0	...	0.1	0.1	18		1.0	Id.; id.
10	066	8.4	8.8	...	0.1	0.1	18		1.0	Id.
11	055	9.8	10.0	...	0.2	0.0	17		6.0	Cirri; faint aurora?
12	053	13.5	13.3	0.2	0.0	0.0	20		10.0	Id.? snow ^{0.5} for a little.
13	29.025	16.7	16.4	0.3	0.0	0.0	18		9.8	Cirri?
14	28.996	17.4	17.0	0.4	0.0	0.0	20		10.0	Id.
15	28.995	17.4	17.2	0.2	0.0	0.0	19		10.0	Id. denser.

Jan. 27^a 11^b—23^b. Anemometer vane frozen up.Jan. 28^a 8^b. The vane of the anemometer being frozen up it was released: the wind commenced blowing about 7^b 40^m.Jan. 28^a 20^b. There is scarcely any moisture deposited on the stems, &c. of the external thermometers, a very unusual circumstance at so low a temperature.Jan. 29^a 8^b 30^m. Dry thermometer reading 7°.7.

HOURLY METEOROLOGICAL OBSERVATIONS, JANUARY 29—31, 1845.

147

Gott. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
29 16	28.985	15.3	15.4	...	0.0	0.0	18		8.0	Thin cirri; stars dim; halo.
17	976	17.4	17.2	0.2	0.0	0.0	21	— : 22 : —	4.0	Cirro-cumulous scud; thin cirri; fine halo.
18	980	15.8	16.0	...	0.0	0.0	20		2.0	Thin cirri; faint halo.
19	981	18.4	18.0	0.4	0.0	0.1	20		1.5	Cirro-strati; cirri.
20	28.979	22.0	21.3	0.7	0.2	0.2	20		1.5	Bank of cirro-strati on E. horizon; cirri.
21	29.000	20.0	19.9	0.1	0.0	0.0	26	20 : — : 22	3.0	Patches of scud: cirri; cirro-strati; cirrous haze.
22	006	17.0	16.7	0.3	0.0	0.0	20	— : — : 22	4.0	Id.; id.
23	013	18.8	18.3	0.5	0.1	0.0	18		3.0	Cirro-strati; cirri all round horizon.
30 0	021	21.3	20.9	0.4	0.0	0.0	18		5.0	Id.; id.
1	023	23.6	22.7	0.9	0.0	0.0	20	— : — : 20	3.5	Woolly cir. and loose woolly cir.-str.; faint solar halo.
2	011	24.0	23.2	0.8	0.1	0.0	20		3.0	Id.; id.
3	014	25.9	24.3	1.6	0.1	0.0	18	— : — : 20	5.0	Id.; id.
4	033	23.6	22.6	1.0	0.1	0.0	17	— : — : 20	8.0	Woolly cirri and cirro-strati.
5	046	21.0	20.6	0.4	0.0	0.0		— : — : 20	9.0	Id.
6	072	17.1	17.1	...	0.0	0.0			8.0	
7	080	12.4	12.8	...	0.0	0.0			4.0	
8	093	9.8	10.0	...	0.0	0.0			0.5	Haze on horizon.
9	110	8.4	8.6	0.0			0.5	Haze to N.; faint aurora?
10	126	6.4	6.6	0.1	20		0.0	Haze on horizon; faint aurora.
11	136	5.4	5.2	0.0			0.2	Id.
12	153	4.3	4.5	0.0	18		0.2	Id.
13	29.173	4.0	4.0	0.0	18		0.2	Haze on horizon.
14	195	2.3	2.8	0.0	18		0.0	Id.
15	206	0.5	1.1	0.0			0.2	Id.; cirro-strati to SE.
16	225	2.0	2.0	0.0	18		0.1	Id.; id.
17	253	1.3	1.5	0.0	18		0.0	Clear.
18	278	-1.1	-0.4	0.0	16		0.1	Cirro-strati to SE.; haze to E.
19	309	-0.2	0.1	18		0.4	Cirro-strati to E.
20	333	1.7	1.9	0.1	16		0.8	Id.; and cirri to E. and S.
21	365	1.0	1.2	0.0	20		1.0	Id.; cirri; haze.
22	402	2.4	2.8	0.0	20		1.0	Id.; id.; id.; cumuli.
23	428	6.4	6.4	0.0			0.8	Cumuli; cumulo-strati; haze on horizon.
31 0	451	10.0	9.8	0.2	...	0.1	2		0.5	Id.; id.
1	472	14.7	14.3	0.4	...	0.1	12		0.5	Id.; id.
2	475	22.8	21.0	1.8	...	0.0			0.5	Cumulo-strati to E.; cirri to S.
3	493	24.4	21.8	2.6	...	0.0	28		0.1	Id.
4	500	23.2	20.7	2.5	...	0.0			0.1?	Cirri; cirrous haze.
5	515	15.4	14.8	0.6	...	0.1	18		0.8	Cirri; cirro-strati, and cirrous haze.
6	529	10.4	10.2	0.2	...	0.0	20		0.7	Cirro-strati to N.; cirrous haze on horizon.
7	546	8.6	8.5	0.1	...	0.0	20	— : 2 : —	0.4	Cirro-strati; cirrous haze.
8	553	8.3	8.2	0.1	...	0.0	0		1.0	Cirro-strati to N.
9	562	13.3	12.7	0.6	...	0.0	12		9.0	Cirro-strati moved up from northwards; sky to N.
10	576	16.7	15.8	0.9	...	0.1	18		7.0	Cirro-strati; cirri and haze.
11	578	26.7	25.0	1.7	...	0.2	28		3.0	Cirro-strati to E. and N.
12	587	27.8	26.3	1.5	...	0.8	28		4.0	Id.
13	29.597	28.3	26.9	1.4	...	0.8	28		1.5	Cirro-strati to E. and N.
14	596	29.0	27.3	1.7	...	0.8	28		1.5	Id. to E.; thin cirrous clouds to N.
15	608	29.2	28.0	1.2	...	0.5	31		1.0	Id.
16	613	29.2	27.2	2.0	...	0.8	30		0.5	Id.
17	628	30.0	28.4	1.6	...	0.8	28		0.5	Id.; to SE.
18	648	28.7	0.5	28		1.5	Cirro-cumulo-strati to SE.
19	655	28.4	0.5	29		1.0	Cirro-strati to E.
20	668	30.5	28.1	2.4	...	0.8	29	0 : — : —	1.5	Scud and cirro-strati to E. and SE.
21	700	28.8	26.7	2.1	...	0.7	30	— : 2 : —	2.0	Cir.-str. scud; cirro-strati; cirri; cumulo-strati to NE.
22	712	30.6	28.3	2.3	...	0.5	29	— : 2 : —	9.0	Cir.-cum. scud; woolly cirri; cumulo-strati to NE.
23	722	32.6	30.1	2.5	...	0.2	29	— : — : 1	7.0	Woolly cirri; cirro-strati and cumulo-strati to E.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motion of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Jan. 29^d 17^h. The anemometer has been partially frozen, its indications are therefore not trustworthy: the pressure of the wind has not been more than 0.2 lb. during the night.

Gott. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From			
d. h. 1 0	in. 29.737	° 33.6	° 31.2	° 2.4	lbs. ... 0.0	lbs. pt. 14	pt. pt. pt. — : — : 0	0—10. 9.0	As before.
1	743	35.1	32.2	2.9	... 0.0	20	— : — : 1	9.5	Woolly cir.; cir. haze; cir.-str.; faint solar halo Θ
2	749	34.8	32.5	2.3	... 0.2	28	— : — : 1	8.0	Woolly, curled, and mottled cirri; cirro-strati. Θ
3	751	36.7	34.0	2.7	... 0.2	31	4 : 1 : —	8.0	Scud; cirro-cumuli; cirro-strati; cirri.
4	768	34.9	32.4	2.5	... 0.2	28	4 : 0 : —	4.0	Scud; cirro-cumuli in bands, lying N. and S.; slight snow since 3 ^h .
5	781	32.8	31.2	1.6	... 0.1	29	2 : 0 : —	3.0	Cir.-str. scud; cir.-cum. as before; cum.-str. to E.
6	798	31.8	30.2	1.6	... 0.1	5		6.0	Id.; cirri radiating from S by W. and N by E.
7	805	27.7	27.2	0.5	... 0.0	7		2.0	Id.; cirri round horizon.
8	821	28.5	27.9	0.6	... 0.1	22		2.0	Id.; id.
9	832	26.2 0.0	18		2.0	Id.; id.
10	838	23.8	23.7 0.0	18		1.5	Id.; cirri to E. and S.
11	845	24.6	23.8	0.8	... 0.1	22		0.8	Cirri to SE.
12	844	20.0	20.2 0.1	22		0.8	Id.;
23 ₄	29.801	34.0	32.4	1.6	... 0.2	22		10.0	Sunday—overcast; cirrous mass; cirro-strati. A.M., shower of snow.
2 13	29.660	38.2	37.5	0.7	... 0.3	20		10.0	Dense mass of cirro-strati; drops of rain.
14	656	37.4	36.8	0.6	... 0.1	18		9.2	Scud and cirro-strati; sky to N.; drops of rain.
15	654	37.6	37.0	0.6	... 0.2	17		10.0	Id.
16	651	36.6	36.3	0.3	... 0.0	17		3.0	Id.; stars dim.
17	652	38.2	37.8	0.4	... 0.1	18		7.0	Id.
18	659	37.4	37.1	0.3	... 0.0	17		2.0	Id. on horizon; stars bright.
19	673	36.4	36.0	0.4	... 0.2	19		0.5	Cirro-strati; cirri on E. and S. horizon. \nearrow
20	681	35.4	35.0	0.4	... 0.1	19		0.2	Strati; scud on Cheviot; cirro-strati to S. \Downarrow
21	710	35.0	34.8	0.2	... 0.1	18		0.2	Strati; scud on Cheviot; cirro-strati to E.; clouds tinged red. Θ
22	720	35.2	35.1	0.1	... 0.1	17		0.2	Cirro-strati on S. and E. horizon; mist in valleys. \odot
23	741	36.4	36.3	0.1	... 0.1			0.2	As before.
3 0	760	38.0	37.9	0.1	... 0.1	26	— : 31 : —	3.0	Cirro-stratus scud; slight fog in valleys. \odot
1	791	40.9	40.2	0.7	... 0.1	23	— : 31 : —	4.0	Id.; bank of cirro-strati to E.; stratus. \odot
2	793	43.6	40.7	2.9	... 0.1	28	— : 1 : —	1.0	Id.; atmospheric haze. \odot
3	809	43.5	40.7	2.8	... 0.1	30		2.5	Bank of cirro-strati; cumulo-strati to E. \odot
4	852	41.3	39.3	2.0	0.2	0.2	2 1 : — : —	9.0	Scud; cirro-strati; cirri; drops of rain.
5	874	39.8	38.2	1.6	0.2	0.2	3 1 : 0 : —	9.5	Id.; cirro-stratus scud; cirro-strati.
6	893	38.7	37.1	1.6	0.2	0.0	0	1.5	Scud.
7	901	38.7	37.0	1.7	0.6	0.5	2 2 : — : —	1.0	Id.
8	914	37.6	35.8	1.8	0.8	0.6	2	2.5	Id.
9	952	37.1	34.6	2.5	1.1	0.1	3	0.7	Scud and cirro-strati on horizon.
10	956	36.6	34.0	2.6	0.7	0.4	1	0.5	Id. on E. horizon.
11	967	34.8	33.2	1.6	0.9	0.2	31	0.2	Id. id.
12	984	32.3	31.3	1.0	0.1	0.1	21	0.2	Id. id.
13	30.004	30.4	29.8	0.6	0.1	0.0	19	0.5	Scud and cirro-strati on E. horizon.
14	29.995	30.8	30.0	0.8	0.1	0.0	31	0.2	Id. id.
15	30.006	29.7	29.2	0.5	0.1	0.1	18	0.5	Id. round horizon.
16	30.010	29.0	31.3	...	0.1	0.1	22	0.2	Id. on E. horizon.
17	29.992	27.5	28.0	...	0.1	0.1	26	0.0	Clear.
18	989	26.6	26.8	...	0.1	0.0	19	0.0	Id.
19	975	28.0	28.0	...	0.1	0.1	19	0.1	Cirro-strati on horizon. \Downarrow
20	974	28.0	28.0	...	0.2	0.1	20	0.5	Cirro-strati and patches of cirri over the sky. \Downarrow
21	978	27.6	27.5	...	0.2	0.1	19	0.8	Linear and woolly cirri.
22	978	30.8	30.1	0.7	0.1	0.1	21	0.4	Patches of cirro-strati and cirri.
23	975	34.7	33.0	1.7	0.4	0.4	18	0.4	cirro-cumuli; cirro-strati and cirri.
4 0	969	36.6	35.3	1.3	0.6	0.2	18	0.4	Masses of cirro-strati on horizon.
1	928	39.6	37.6	2.0	0.9	1.0	20	0.8	Cirro-strati; cirro-cumuli; woolly cirri. \odot
2	904	40.6	38.5	2.1	1.0	0.9	19	2.5	Id.; id. \odot
3	896	42.0	39.2	2.8	2.0	1.6	20	7.0	Cirro-cumulo-strati; cirro-strati.
4	871	40.8	38.6	2.2	1.7	1.7	21	7.5	Cirr.-cum.-str.; cirr.-str.; loose cum. to SE. and patches of scud to N.
5	867	40.3	37.9	2.4	1.3	1.7	20	8.0	Scud; cirro-cumuli and dense cirro-strati to NE.; thin woolly cirri.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Feb. 2^d 20^h. The sky on SSE. horizon is yellowish, becoming slightly orange to SE.; to E. it is orange, becoming reddish; to EN \bar{E} , red; to NE, purple: patches of growing scud on E. horizon, lying in a horizontal line, and at about equal intervals.

Feb. 3^d 20^h. Masses of stratus in the hollows of Cheviot, afterwards rising above the hill.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	23	24 : — : —	0—10.	
4 6	29.853	39.7	37.4	2.3	1.6	0.6	20			9.9	Scud; cirro-cumuli and dense cirro-strati to NE.; thin woolly cirri.
7	849	42.0	39.2	2.8	3.2	2.0	20			9.9	Id.
8	843	42.0	39.4	2.6	2.1	0.6	20			10.0	Id.; dark.
9	839	42.2	39.6	2.6	0.4	0.3	20			10.0	Id.; id.
10	830	41.2	39.2	2.0	0.5	0.2	20			10.0	Id.; clouds broken.
11	811	42.7	40.2	2.5	0.8	0.8	20			10.0	Id.; cirri above.
12	793	42.8	40.4	2.4	1.4	0.4	20			10.0	Id.; id.
13	29.770	41.9	39.4	2.5	0.4	0.4	20			9.8	Scud; clearing to W.
14	768	41.4	38.4	3.0	1.0	1.0	24			0.8	Cirro-stratus scud?
15	766	39.4	36.7	2.7	0.7	0.4	24			3.0	Cirro-strati?
16	739	38.7	36.2	2.5	0.8	0.6	23			3.0	Id.; cirri; stars dim.
17	734	38.7	35.8	2.9	0.8	0.6	26			0.5	Id.?
18	723	38.6	35.8	2.8	1.3	1.2	27			0.2	Cirri on S. horizon?
19	734	37.8	35.0	2.8	1.7	1.3	28			0.5	Cirro-strati; cirri on S. horizon.
20	719	37.3	34.5	2.8	1.5	1.6	25			0.2	Patches of scud and cirri on E. and S. horizon.
21	719	37.3	34.0	3.3	1.5	1.3	26			0.6	Cirro-strati on horizon; mass of loose cumuli to SE. ☽
22	716	38.3	35.0	3.3	1.9	1.8	28			0.5	Bank of cirro-strati on E. hor.; loose cumuli to S. ☺
23	712	39.7	36.2	3.5	2.2	1.7	28			0.8	Scud and cirro-strati on horizon; id.
5 0	705	41.2	36.6	4.6	1.8	1.6	28			0.2	Cirro-strati and cirri on E. horizon; loose cumuli. ☺
1	671	41.8	38.0	3.8	2.0	1.6	25	28 : — : —		0.8	Scud; cirri; loose cumuli. ☺
2	642	42.1	38.0	4.1	2.1	2.3	26	27 : — : —		7.0	Scud and loose cumuli; cirri. ☺
3	596	42.6	38.5	4.1	2.6	1.8	25	26 : — : —		7.0	Loose, ragged cum.; drops of rain; cirro-strati to E. ☺
4	572	42.9	38.6	4.3	3.3	3.6	25	26 : — : —		4.0	Id.
5	551	42.3	38.3	4.0	6.5	3.0	29	26 : — : —		9.0	Scud; dense black mass to NE., falling in rain or snow. 5h 15m, rain ²
6	583	38.0	36.4	1.6	4.2	1.8	29	29 : — : —		10.0	Id.; cirrous mass; cumulo-strati to E.; rain ¹
7	597	35.7	34.1	1.6	3.6	2.3	30			4.0	Id.; cirro-stratus scud; 6h 10m, sleet and hail ²
8	623	36.3	33.9	2.4	2.2	1.0	30			3.0	Id.; id; auroral light.
9	641	35.0	32.9	2.1	1.0	0.8	29			1.0	Cirro-strati to SE. and to NNW. among aurora.
10	649	34.1	32.4	1.7	1.4	0.4	29			3.0	Id. to W. and N.; auroral bank.
11	654	34.0	32.0	2.0	0.8	0.7	28			3.0	Scud and cirro-strati; faint auroral light.
12	657	33.5	30.7	2.8	0.9	0.9	29			2.0	Cirrus clouds; id.
13	29.667	33.6	30.2	3.4	2.3	1.6	29			0.0	Clear; faint aurora.
14	665	32.5	29.5	3.0	2.1	1.3	30			0.1	Id.; small patches of cloud to N.
15	661	32.1	28.6	3.5	3.9	2.2	31			0.1	Id.; cirro-strati on N. horizon.
16	656	31.7	28.7	3.0	4.1	3.5	30			0.0	Id.
17	668	31.0	27.7	3.3	3.4	2.4	30			0.0	Very clear.
18	680	30.4	27.4	3.0	2.8	2.1	30			0.0	Id.
19	696	30.7	27.7	3.0	4.2	3.0	30			0.5	Cirro-stratus scud on E. horizon.
20	719	29.4	27.4	2.0	2.4	2.4	30			0.5	Id.*
21	723	29.4	27.5	1.9	2.3	2.0	30			0.5	Id.; tinged red.
22	738	30.6	28.1	2.5	3.0	4.7	29			0.8	Scud and cirro-strati on E. horizon. ☺
23	768	32.5	29.5	3.0	5.8	4.3	30	— : 31 : —		1.5	Cirro-stratus scud. ☺
6 0	792	33.2	29.4	3.8	4.5	3.3	30	0 : — : —		9.5	Scud and loose cumuli; flakes of snow.
1	808	32.7	29.0	3.7	3.8	3.8	30	0 : — : —		6.0	Id.
2	831	33.8	29.8	4.0	4.4	2.6	31	0 : — : —		8.0	Id.
3	834	31.9	28.8	3.1	3.9	3.4	31			2.0	Id. round horizon.
4	859	31.2	27.3	3.9	4.8	2.2	31			2.5	Id.; cirro-strati on horizon. ☺
5	868	29.8	26.6	3.2	2.5	0.7	0			1.0	Id.; id. on E. horizon. ☺
6	868	28.7	25.6	3.1	1.7	1.4	30			1.5	Loose cumuli; cirro-strati to SW., tinged with red.
7	870	28.3	25.0	3.3	1.8	1.4	0			0.7	Scud and loose cumuli.
8	878	27.4	24.9	2.5	1.6	0.6	30			0.2	Clouds on horizon.
9	876	27.3	24.8	2.5	1.5	1.3	31			1.0	Scud.
10	873	27.1	24.7	2.4	1.9	0.9	30			0.5	Id.
11	896	27.0	24.3	2.7	1.7	0.6	31			1.0	Id. on E. horizon.
12	888	26.2	23.8	2.4	2.0	0.6	30			0.5	Id. id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motion of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Feb. 5^d 2^h. The snow has nearly all disappeared; there are still a few patches in the valleys. Several mole-hills thrown up near the Observatory.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

HOURLY METEOROLOGICAL OBSERVATIONS, FEBRUARY 6—9, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C-s.: Ci, moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	
d. h.	in.	°	°	°	1 ^{h.}	10 ^{m.}				
6 13	29.891	26.7	24.6	2.1	1.0	0.9	30		0—10.	Scud.
14	885	26.4	24.8	1.6	1.2	0.6	30		3.0	Id.
15	870	27.7	25.9	1.8	0.6	0.5	30		10.0	Id.
16	851	27.4	25.8	1.6	0.8	0.7	30		9.9	Id.; flakes of snow.
17	845	27.5	25.8	1.7	1.0	1.0	30		5.0	Id.; snow ¹ .
18	851	27.4	25.9	1.5	0.7	0.5	30		9.0	Id.
19	843	27.3	25.7	1.6	1.1	0.9	30		7.0	Scud and cirro-strati.
20	860	27.0	25.3	1.7	0.9	0.6	31	3 : — : —	9.5	Id.; a few flakes of snow.
21	883	26.9	25.8	1.1	0.8	0.4	29		9.9	Cirro-stratus scud, falling in snow ² .
22	874	27.0	26.1	0.9	0.7	0.6	29	— : 2 : —	9.0	Id.
23	877	29.4	27.3	2.1	0.7	0.5	1	3 : — : —	2.5	Scud; flakes of snow; fine linear cir.; faint solar halo. ☉
7 0	881	31.0	28.1	2.9	0.8	0.8	0	3 : — : —	3.0	Loose cumuli; thin cirri and haze. ☀
1	870	31.4	27.7	3.7	1.3	0.7	2		3.0	Id.; id. ☀
2	864	32.0	28.9	3.1	0.6	0.2	1	2 : — : —	9.5	Scud and loose cumuli; woolly cirri.
3	865	31.7	28.9	2.8	0.6	0.4	0	— : 3 : —	9.5	Cirro-stratus scud; loose cum.; particles of fine snow.
4	860	31.6	28.8	2.8	0.4	0.2	0	— : 2 : —	9.5	Id.; cirro-strati; cirri; flakes of snow.
5	863	30.9	28.4	2.5	0.3	0.1	1	4 : 4 : —	10.0	Scud; cirro-strati; nimbi to NE.; flakes of snow.
6	874	30.3	28.0	2.3	0.2	0.2	31		10.0	Id.; id.
7	885	29.7	27.7	2.0	0.2	0.1	31		10.0	Id.
8	888	30.0	28.0	2.0	0.2	0.1	26		10.0	Id.; dark; flakes of snow.
9	891	29.8	27.8	2.0	0.2	0.1	29		10.0	Id.; id.
10	891	29.8	27.8	2.0	0.2	0.2	28		10.0	Id.; id.
11	890	29.0	27.4	1.6	0.1	0.1	28		5.0	Id.? cirro-strati?
12	894	28.2	27.2	1.0	0.0	0.0	17		10.0	Id.? id.
13	29.892	27.9	26.7	1.2	0.0	0.0	20		9.8	Nearly as before.
14	894	26.5	25.6	0.9	0.0	0.0			4.0	Cirro-strati; cirri; stars dim.
15	894	25.0	24.1	0.9	0.0	0.0	20		1.0	Id.; id.; milky aurora over the sky.
16	891	25.9	24.6	1.3	0.0	0.0	20		9.8	Cirrus clouds; chequered to S.
17	893	25.5	24.5	1.0	0.0	0.0	20		10.0	Cirro-strati; cirrus haze; stars seen dimly.
18	893	25.6	24.7	0.9	...	0.1	20		10.0	Id.; id.; id.
19	897	25.2	24.3	0.9	...	0.1			9.5	Id.; id.; id.
20	898	25.3	24.5	0.8	...	0.1	24		10.0	Id.; cirrous mass.
21	898	25.4	24.7	0.7	...	0.0	22		10.0	Dense homogeneous cirrous mass; cum. on E. horizon.
22	908	27.0	25.9	1.1	...	0.0	24		10.0	Id.; faint halo.
23	904	28.8	27.6	1.2	...	0.0	22		10.0	Id.; cumuli on horizon; faint halo.
8 0	907	30.3	28.8	1.5	...	0.1	26		10.0	Woolly cirri; cirrous mass; faint halo. ●
1	899	32.7	30.7	2.0	...	0.1	17		9.5	Id. ☀
2	896	32.8	30.4	2.4	...	0.1	17	18 : — : —	9.0	Scud and loose cumuli; woolly cirri.
3	875	34.4	31.6	2.8	...	0.1	16	18 : — : —	9.5	Id.; id.
4	874	34.0	31.0	3.0	...	0.1	19	18 : — : —	8.5	Id.; id.; cirro-strati. ☀
5	867	31.0	29.0	2.0	...	0.0	19	— : 27 : —	9.8	Cirro-cumulo-strati; cirri; cirrus haze. ☀
6	868	28.0	26.7	1.3	...	0.1	17	— : 28 : —	6.0	Loose cirro-cumuli; id.; id.
7	869	26.5	26.0	0.5	...	0.1	17		7.0	Id.; id.; id.*
8	862	28.4	26.8	1.6	...	0.1	17		10.0	Cirrous mass? dark.
9	855	28.9	27.1	1.8	...	0.1	18		10.0	Id.; id.
10	855	29.2	27.2	2.0	...	0.1	18		10.0	Id.; id.
11	843	29.7	27.6	2.1	...	0.1	18		10.0	Overcast with dense clouds.
12	835	29.6	27.5	2.1	...	0.1	17		10.0	Id.
9 0 ³	29.634	32.2	31.2	1.0	0.6	0.2	16			Sunday. Overcast; snow from 8 ^d 23 ^h till 9 ^d 5 ^h .
13	29.457	33.3	32.5	0.8	0.5	0.0			10.0	Dense cirrous mass; snow ¹
14	452	33.2	32.4	0.8	0.2	0.1	18		10.0	Id.
15	450	33.7	32.6	1.1	0.1	0.0	18		10.0	Id.; snow ^{0.5} .
16	438	33.8	32.7	1.1	0.1	0.0			10.0	Id.
17	431	34.3	33.3	1.0	0.1	0.1	20		10.0	Id.
18	421	34.4	33.4	1.0	0.1	0.0	22		10.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Feb. 8^d 5^h. Cirro-cumulo-strati radiating from NNW. and SSE. 4^h. New silk put on wet bulb.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From			
1 ^{h.}	10 ^{m.}								
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
9 19	29.414	34.0	33.3	0.7	0.0	0.0	20	— : 24 : —	10.0 Dense cirrus mass.
20	412	34.7	33.6	1.1	0.3	0.1	20	— : 22 : —	10.0 Scud and cirro-strati.
21	414	35.0	34.0	1.0	0.1	0.1	19	— : 24 : —	10.0 Cirrus clouds; cirro-stratus scud.
22	411	36.0	34.7	1.3	0.0	0.0	18	— : 22 : —	9.9 Cirro-stratus scud; cirro-strati.
23	407	37.9	36.0	1.9	0.2	0.0	20	— : 24 : —	9.9 Id.; id.
10 0	401	37.9	36.0	1.9	0.1	0.0	24	20 : 20 : —	10.0 Thin misty scud; cirro-strati.
1	392	39.6	37.5	2.1	0.0	0.0	22	20 : — : —	9.7 Loose scud; cirro-strati; cirro-cumuli.
2	379	39.0	37.6	1.4	0.0	0.0	28	20 : — : —	10.0 Scud; cirro-strati; cirrus clouds.
3	377	39.4	37.7	1.7	0.1	0.0	2	19 : — : —	10.0 Id.; id.
4	375	38.6	37.2	1.4	0.0	0.0	16	— : 24 : —	10.0 Id.; id.; thin fog or haze to E.
5	373	37.5	36.4	1.1	0.0	0.0	6	19 : — : 22	9.9 Id.; woolly cirri and cirro-strati; thin fog.
6	389	35.2	34.4	0.8	0.0	0.0	14	18 : — : —	9.9 Id.; cirro-strati.
7	402	34.0	32.7	1.3	0.2	0.1	16	— : 24 : —	9.0 Id.; id.; stars dim.
8	419	33.0	31.8	1.2	0.1	0.2	16	— : 24 : —	9.9 Id.; id.
9	428	31.8	32.2	—	0.4	0.2	18	— : 24 : —	9.0 Id.; id.; clouds broken.
10	453	31.3	30.0	1.3	0.2	0.3	17	— : 24 : —	9.0 Id.; id.
11	485	31.2	29.8	1.4	0.4	0.4	16	— : 24 : —	9.0 Id.; id.; cirrus haze; stars dim.
12	520	30.6	29.2	1.4	1.0	0.4	16	— : 24 : —	10.0 Id.; id.? id.?
13	29.548	30.4	28.8	1.6	0.5	0.7	15	— : 24 : —	10.0 Nearly as before; very dark.
14	581	29.9	28.5	1.4	0.5	0.3	15	— : 24 : —	10.0 Id.; id.
15	610	29.7	28.2	1.5	1.2	0.7	15	— : 24 : —	10.0 Id.
16	630	30.0	27.9	2.1	0.7	0.6	15	— : 24 : —	10.0 Id.
17	651	29.7	27.3	2.4	1.5	0.8	15	— : 24 : —	10.0 Id.
18	687	29.8	27.8	2.0	1.1	1.2	15	— : 24 : —	10.0 Id.
19	709	29.8	27.4	2.4	1.6	1.5	16	— : 24 : —	10.0 Id.
20	751	29.8	27.7	2.1	1.3	0.8	16	— : 24 : —	10.0 Dense cirrus mass.
21	779	30.0	27.8	2.2	1.6	1.4	16	— : 24 : —	10.0 Id.
22	807	30.6	28.2	2.4	1.8	1.8	16	— : 24 : —	10.0 Cirro-stratus scud; cirro-strati; cum. on E. and S. hor.
23	832	31.2	28.3	2.9	1.8	1.8	16	— : 24 : —	10.0 Id.; id.; flakes of snow.
11 0	840	31.0	29.4	1.6	1.2	0.6	16	— : 24 : —	10.0 Id.; snow ² .
1	861	32.2	30.2	2.0	0.7	0.2	15	18 : — : —	10.0 Scud; cirro-strati.
2	880	32.9	30.3	2.6	0.4	0.1	22	— : 24 : —	10.0 Id.; cum. on E. hor.; cirro-strati; cirrus mass.
3	892	32.0	30.2	1.8	0.3	0.1	23	— : 24 : —	10.0 Loose scud to E.; id.; id.
4	911	32.3	30.3	2.0	0.1	0.1	22	— : 24 : —	10.0 Dense cirrus mass.
5	939	32.2	30.0	2.2	0.1	0.1	20	— : 24 : —	10.0 Thick, wavy cirro-stratus.
6	959	31.6	29.9	1.7	0.2	0.0	20	— : 24 : —	10.0 Id.
7	971	31.4	29.4	2.0	0.2	0.1	18	— : 24 : —	10.0 Dense mass.
8	974	31.6	30.0	1.6	0.3	0.3	19	— : 24 : —	10.0 Id.
9	29.985	31.7	30.2	1.5	0.3	0.2	20	— : 24 : —	10.0 Id.
10	30.001	31.9	29.8	2.1	0.4	0.3	19	— : 24 : —	10.0 Id.
11	013	31.9	29.7	2.2	0.5	0.2	22	— : 24 : —	10.0 Id.
12	020	31.8	29.7	2.1	0.5	0.3	20	— : 24 : —	10.0 Id.
13	30.030	31.8	29.6	2.2	0.7	0.3	20	— : 24 : —	10.0 Dense mass.
14	040	31.4	29.4	2.0	0.5	0.1	23	— : 24 : —	10.0 Id.
15	045	30.7	28.6	2.1	0.5	0.6	22	— : 24 : —	7.0 Cirro-strati and cirrus haze?
16	040	29.9	27.7	2.2	0.5	0.4	21	— : 24 : —	8.0 Id.
17	047	30.1	27.9	2.2	0.5	0.4	21	— : 24 : —	10.0 Id.
18	056	30.0	27.8	2.2	0.4	0.2	19	— : 24 : —	10.0 Id.
19	062	29.4	27.2	2.2	0.3	0.2	18	— : 24 : —	10.0 Id.
20	059	29.4	27.3	2.1	0.2	0.2	18	— : 24 : —	10.0 Id., breaking; fog at a distance; red to SE.
21	074	29.5	27.2	2.3	0.4	0.4	20	— : 24 : —	10.0 Id.; tinged red to E.; id.
22	077	29.4	27.2	2.2	0.5	0.2	20	— : 24 : —	7.0 Id.; woolly cirri; fog getting nearer. ☉
23	066	31.5	28.7	2.8	0.2	0.1	19	— : 24 : —	10.0 Cirro-strati; cirrus haze.
12 0	057	32.8	30.0	2.8	0.3	0.3	19	— : 24 : —	10.0 Undulated cirro-strati; atmosphere hazy.
1	043	33.4	30.0	3.4	0.4	0.2	22	— : 24 : —	10.0 Id.; cirrus mass; atmosphere hazy.
2	030	33.1	30.0	3.1	0.8	0.5	21	— : 24 : —	10.0 Id.; id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Feb. 10th 14^h. The vane of the anemometer frozen up with the opening towards SW.; the indications have been too small during the night; the vane was released at 14^h 15^m.

HOURLY METEOROLOGICAL OBSERVATIONS, FEBRUARY 12—14, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
12 3	30.028	32.4	30.8	1.6	0.8	0.6	18		10.0
4	30.004	31.9	30.0	1.9	0.7	0.5	18		10.0
5	29.988	32.0	30.2	1.8	0.7	0.6	19		10.0
6	976	32.1	30.4	1.7	0.6	0.3	20		10.0
7	972	31.3	30.4	0.9	0.4	0.2	19		10.0
8	946	32.4	31.6	0.8	0.5	0.8	18		10.0
9	909	32.7	31.6	1.1	1.1	0.6	18		10.0
10	879	33.7	32.5	1.2	3.7	3.0	17		10.0
11	873	33.8	32.4	1.4	2.9	1.4	18		10.0
12	855	33.4	32.0	1.4	1.7	1.2	18		10.0
13	29.828	33.7	32.3	1.4	2.3	2.3	17		10.0
14	785	35.5	33.0	2.5	2.2	2.2	18		10.0
15	756	37.8	36.4	1.4	3.8	3.2	20		10.0
16	713	38.8	37.0	1.8	4.6	6.2	21		10.0
17	685	38.0	36.5	1.5	5.0	3.8	20		10.0
18	652	38.2	36.5	1.7	5.0	3.6	20		10.0
19	623	38.7	36.7	2.0	4.0	3.8	20		10.0
20	590	38.9	36.9	2.0	3.9	2.4	20	20 : — : —	10.0
21	567	39.9	37.8	2.1	6.1	3.4	19	19 : 23 : —	10.0
22	536	40.4	38.7	1.7	4.6	3.1	20	20 : 24 : —	10.0
23	506	40.7	39.4	1.3	3.3	2.5	19	20 : — : —	10.0
13 0	493	40.2	38.9	1.3	2.7	1.7	18	20 : — : —	10.0
1	458	42.4	41.0	1.4	2.2	0.8	19		10.0
2	426	44.0	42.1	1.9	1.8	1.7	18	20 : 23 : —	9.0
3	388	43.7	42.0	1.7	2.9	1.9	20	21 : 23 : —	10.0
4	374	43.8	42.7	1.1	1.8	1.0	18		10.0
5	372	45.0	43.2	1.8	1.6	0.7	21	24 : 22 : 22	6.5
6	377	44.5	40.8	3.7	3.3	0.1	20	24 : 24 : —	8.0
7	377	43.7	40.3	3.4	1.2	3.5	25	25 : — : —	2.0
8	407	42.7	40.0	2.7	3.1	1.5	23		9.5
9	415	41.7	38.8	2.9	0.9	0.6	20		9.0
10	406	40.0	37.4	2.6	1.3	0.8	20		4.0
11	395	39.4	36.4	3.0	1.0	1.2	20	24 : — : —	1.8
12	399	37.5	34.7	2.8	1.1	0.6	20		0.0
13	29.404	37.1	34.4	2.7	0.6	0.6	21		0.0
14	393	36.3	33.6	2.7	0.6	0.5	20		0.2
15	402	36.3	34.1	2.2	1.0	0.5	21		0.0
16	414	34.8	32.8	2.0	0.6	0.1	20		0.5
17	407	35.2	32.8	2.4	0.5	0.7	20		0.0
18	398	34.4	32.2	2.2	0.8	0.7	22		0.1
19	399	34.4	32.2	2.2	1.0	0.6	24		0.1
20	402	34.8	32.2	2.6	0.5	0.4	22	30 : — : —	8.0
21	415	35.5	33.0	2.5	0.7	0.7	26	— : 28 : —	9.8
22	430	35.6	33.0	2.6	0.7	0.7	26	— : 30 : —	9.0
23	456	37.7	34.4	3.3	1.1	0.4	26	— : 31 : —	9.0
14 0	481	37.3	35.0	2.3	1.1	0.5	30	28 : — : 30	9.0
1	491	38.2	35.2	3.0	0.6	0.5	29	31 : 30 : —	9.0
2	520	37.9	35.0	2.9	0.7	0.3	31	31 : — : —	10.0
3	535	37.1	34.5	2.6	0.4	0.2	31	31 : — : —	9.5
4	549	38.3	35.2	3.1	0.2	0.3	30	30 : — : —	9.5
5	560	36.7	34.2	2.5	0.5	0.2	28	30 : — : —	9.8
6	587	35.3	32.9	2.4	0.1	0.0	31	30 : — : —	10.0
7	612	33.5	32.5	1.0	0.4	0.1	30	— : 30 : —	4.0
8	633	32.5	31.5	1.0	0.2	0.1	26	— : 30 : —	2.0
9	662	34.2	31.7	2.5	0.3	0.6	30		10.0
10	683	33.8	31.7	2.1	0.8	0.4	29		1.8

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Feb. 12^d 21^h. Clouds bluish to E.; the scud is lower than the top of Cheviot.

Feb. 13^d 7^h 30^m. Large masses of loose cumuli and scud, which, when thin, produce an indistinct corona while passing over the moon. The sky is unusually clear beyond. 13^d 18^h 5^m. Twilight beginning to break. Sky milky to altitude 30° from E.

HOURLY METEOROLOGICAL OBSERVATIONS, FEBRUARY 14—17, 1845.

153

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	lbs.	lbs.	pt.	
d. h.	in.	°	°	°				pt. pt. pt.	0—10.	
14 11	29.701	32.7	29.5	3.2	1.1	0.5	29	30 : — : —	2.5	Scud; cirro-strati on horizon; small lunar corona.)
12	718	32.4	29.1	3.3	0.8	0.4	29		3.0	Id.; id.)
13	29.725	31.1	28.6	2.5	0.4	0.2	28		3.5	Cirro-cumulous scud, causing a lunar corona.)
14	737	31.2	28.0	3.2	0.5	0.3	28		0.3	Clouds near horizon.)
15	741	30.0	27.3	2.7	0.3	0.1	23		4.0	Cirro-cumulous scud; cirro-strati.
16	742	31.0	28.4	2.6	0.2	0.1	23		10.0	Overcast.
17	734	32.5	29.2	3.3	0.4	0.2	18		10.0	Id.
18	734	33.6	33.3	3.3	0.2	0.4	24		10.0	Id.
19	741	34.7	31.6	3.1	0.5	0.4	24		10.0	Scud.
20	737	35.0	32.3	2.7	0.6	0.2	22	— : 31 : —	10.0	Cirro-cumulous scud; red to E.
21	747	36.0	32.4	3.6	0.4	0.3	25	— : 30 : —	10.0	Id.; cirro-strati.
22	737	37.1	34.0	3.1	0.4	0.3	23	— : 30 : —	10.0	Cirro-stratus scud; id.
23	735	38.5	35.4	3.1	0.6	0.3	22	— : 30 : —	9.9	Id.; id.; sky greenish to N.
15 0	734	39.6	36.5	3.1	0.7	0.5	23	— : 31 : —	9.8	Id.; woolly cirro-cumuli; cirro-strati.
1	730	40.8	37.4	3.4	0.9	0.4	20	— : 31 : —	9.8	Cirro-cumulous scud; id.; id.
2	717	41.6	38.2	3.4	1.2	0.6	26	— : 31 : —	9.8	Id.; id.; id.
3	713	41.3	38.0	3.3	0.5	0.3	26	— : 31 : —	10.0	Id.; id.; id.
4	696	40.7	37.6	3.1	0.5	0.4	25	— : 31 : —	10.0	Cirro-strati; cirrous mass.
5	687	40.6	37.5	3.1	0.6	0.4	25	— : 31 : —	10.0	Cirro-stratus scud; undulated cirro-strati.
6	688	40.1	37.3	2.8	0.5	0.3	24		10.0	Dense cirro-strati.
7	687	40.0	37.0	3.0	0.5	0.2	25		10.0	Id.
8	691	40.6	37.3	3.3	0.4	0.3	25		9.9	Id., breaking to N.
9	687	40.3	37.4	2.9	0.4	0.2	27		10.0	Id.
10	686	39.9	37.2	2.7	0.5	0.7	27		10.0	Id., becoming looser.
11	680	40.0	37.4	2.6	0.7	0.3	30		10.0	Id.
12	697	39.4	37.0	2.4	0.4	0.2	2		10.0	Id.
16 0	29.708	38.9	37.3	1.6	0.2	0.0			Sunday—Cloudy, with gleams of ☽; cirro-stratus scud; woolly cirro-cumuli. P.M. Wind WNW.? Dense scud.
13	29.651	38.4	36.7	1.7	0.5	0.4	16		10.0	
14	650	38.0	36.4	1.6	0.4	0.2	17		10.0	Id.
15	645	37.7	36.0	1.7	0.2	0.2	17		10.0	Id.
16	636	37.5	35.9	1.6	0.3	0.1	17		10.0	Id.
17	635	37.7	36.0	1.7	0.3	0.1	17		10.0	Id.
18	638	37.1	36.5	1.6	0.2	0.3	17		10.0	Id.
19	636	36.7	35.1	1.6	0.3	0.2	18		10.0	Id.
20	636	36.4	34.8	1.6	0.4	0.5	18	22 : — : —	10.0	Id.
21	646	37.0	35.4	1.6	0.4	0.2	18	23 : — : —	10.0	Id.; hazy.
22	655	38.8	36.8	2.0	0.3	0.3	23		9.8	Id.; id. to N.
23	662	39.7	37.8	1.9	0.5	0.3	17	22 : — : —	8.5	Id.; cirro-strati; cirro-cumuli. Θ
17 0	668	41.3	39.2	2.1	0.6	0.3	17	22 : — : —	9.5	Scud and cirro-strati.
1	671	42.2	39.8	2.4	0.6	0.2	17	— : 20 : —	9.9	Cirro-stratus scud; cirro-strati; cumuli on NE. hor.
2	668	43.6	40.7	2.9	0.3	0.4	18	— : 22 : —	10.0	Id.; id.
3	663	42.7	39.7	3.0	0.3	0.5	20	— : 22 : —	10.0	Id.; id.
4	671	42.3	39.3	3.0	0.7	0.6	18	— : 20 : —	10.0	Id.; very hazy. [blue.]
5	670	42.0	38.7	3.3	0.3	0.3	20	— : 20 : —	10.0	Id.; id.; id.; clouds orange and
6	681	40.7	38.0	2.7	0.4	0.3	18	— : 20 : —	10.0	hazy atmosphere.
7	680	39.6	37.4	2.2	0.2	0.2	18	— : 20 : —	10.0	Id.
8	691	39.5	37.4	2.1	0.1	0.1	18	— : 20 : —	9.9	Id.
9	700	37.3	35.9	1.4	0.1	0.0	18	— : 20 : —	9.8	Watery cirro-cumuli. Θ
10	708	35.4	34.5	0.9	0.0	0.0	17	— : 20 : —	9.8	Id.
11	717	34.4	33.7	0.7	0.0	0.0	18	— : 21 : —	9.8	Id.; hazy; coloured lunar corona. Θ
12	726	32.3	31.8	0.5	0.0	0.0	18		3.0	Id.; id.; id.
13	29.736	29.3	29.2	0.1	0.0	0.0	16		0.2	Thin cirri; haze.)
14	739	30.7	30.5	0.2	0.0	0.0	20		0.4	Id.; id.; lunar corona.)
15	746	29.2	29.3	...	0.0	0.0			3.0	Loose cirro-cumuli. Θ
16	743	30.9	30.8	0.1	0.0	0.0			9.9	Cirro-cumulous scud. Θ

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motion of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in lb.	From 10m.	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
17 17	29.751	31.9	31.8	0.1	0.0	0.0	22	10.0	Dark.	
18	754	32.7	32.3	0.4	0.0	0.0	22	10.0	Id.	
19	763	34.4	33.6	0.8	0.0	0.0	26	21 : — : —	Scud ?	
20	775	34.7	33.7	1.0	0.0	0.0	24	— : 21 : —	Loose cirro-cumulous scud ; cirri ; atmosphere hazy.	
21	779	32.8	32.2	0.6	0.1	0.2	19	— : 22 : —	Id. ; bank to S. ; id. to E.	
22	795	36.2	34.8	1.4	0.2	0.0	24	10.0	Cirro-stratus scud ; cirrus mass ; hazy.	
23	806	36.9	35.2	1.7	0.2	0.2	22	10.0	Id. ; id. ; id.	
18 0	820	37.8	36.0	1.8	0.2	0.2	24	10.0	Cirro-strati ; cirrus mass ; hazy.	
1	813	40.8	38.4	2.4	0.1	0.0	24	— : 24 : —	Cirro-stratus scud ; cirro-strati ; haze on horizon.	
2	813	40.7	37.8	2.9	0.0	0.2	28	22 : — : —	Loose cumuli ; cirro-stratus scud ; streaks of cirri.	
3	812	41.5	37.8	3.7	0.1	0.0	26	22 : — : —	Id. ; id. ; id.	
4	812	43.9	40.0	3.9	0.1	0.1	22	22 : — : —	Id. ; id. ; haze.	
5	812	40.6	37.2	3.4	0.1	0.0	23	22 : — : —	Id. ; id. ; id.	
6	817	38.3	35.8	2.5	0.2	0.1	25	3.0	Id. ; id. ; streaks of cirri.	
7	825	33.8	32.7	1.1	0.3	0.0	16	0.2	Streaks of cirri ; haze on horizon.	
8	844	29.0	28.6	0.4	0.0	0.0		0.1	Id. ; id.	
9	857	27.6	27.9	...	0.0	0.0	20	— : — : 18	Id. ; id.	
10	863	26.2	26.9	...	0.0	0.0	16	2.0	Thin cirri over the sky ; haze.	
11	882	29.7	29.6	...	0.0	0.0	20	— : 18 : —	Large cirro-cumuli.	
12	878	29.9	29.5	0.4	0.0	0.0	20	— : 18 : —	Id.	
13	29.882	28.0	28.0	...	0.2	0.1	20	0.2	Clouds and haze on E. horizon.	
14	887	25.8	26.0	...	0.2	0.0	17	0.2	Id.	
15	893	24.6	25.0	...	0.0	0.0		0.5	Id.	
16	891	25.8	25.8	...	0.0	0.0	16	0.5	Id.	
17	898	26.0	26.0	...	0.1	0.0	20	0.5	Id.	
18	907	25.2	25.1	...	0.0	0.0		0.5	Id.	
19	910	24.9	24.7	0.2	0.0	0.0	22	0.2	Haze on horizon ; very thick to E.	
20	910	24.8	24.6	0.2	0.0	0.0	24	0.5	Very hazy round horizon ; a patch of cloud to E.	
21	926	25.6	25.3	0.3	0.1	0.1	20	0.5	Haze brown to E., bluish to W ; loose cirri to SW.	
22	923	28.0	27.6	0.4	0.2	0.1	24	18 : — : —	Loose misty scud ; general haze.	
23	927	29.3	28.9	0.4	0.1	0.1	25	0.5?	Hazy ; very thick on horizon ; no clouds visible.	
19 0	927	31.6	30.8	0.8	0.0	0.0	26	0.0	As before.	
1	918	33.5	32.1	1.4	0.2	0.0		0.0	Id.	
2	907	36.3	35.0	1.3	0.2	0.0	12	0.0	Id.	
3	891	37.2	35.4	1.8	0.0	0.0	6	1.5	Cirro-strati and cirri in haze near horizon.	
4	884	37.7	36.0	1.7	0.0	0.0	— : 19 : —	5.0	Cirro-cumulus scud ; very hazy.	
5	885	36.6	35.0	1.6	0.2	0.2	16	3.0	Loose cirro-strati ; id.	
6	888	33.2	32.3	0.9	0.2	0.2	16	7.0	Cirro-strati ; id.	
7	892	35.0	33.5	1.5	0.2	0.1	21	10.0	Cirro-cumulus scud ; id.	
8	885	35.0	33.5	1.5	0.2	0.1	24	10.0	Id. ; id.	
9	888	34.9	33.4	1.5	0.2	0.2	18	10.0	Id. ; id.	
10	889	34.3	33.3	1.0	0.2	0.2	18	10.0	Id.	
11	887	34.6	33.3	1.3	0.1	0.0		10.0	Scud ? id.	
12	886	34.8	33.5	1.3	0.0	0.0	20	10.0	Id.	
13	29.882	34.5	33.2	1.3	0.0	0.0	18	10.0	Scud ?	
14	868	34.0	33.0	1.0	0.0	0.0	18	10.0	Id., cirrous clouds above.	
15	860	34.0	32.6	1.4	0.4	0.1	20	10.0	Id.	
16	851	33.9	32.6	1.3	0.3	0.1	18	10.0	Id.	
17	838	33.9	32.6	1.3	0.2	0.1	16	10.0	Homogeneous.	
18	820	32.2	31.9	0.3	0.5	0.2	17	7.0	Cirrous clouds and haze.	
19	818	32.0	32.0	...	0.7	0.1	18	9.0	Cirr.-cum.-str. ; cir.-str. ; hazy to E. ; fiery red to SE.	
20	821	33.0	32.0	1.0	0.3	0.3	18	9.0	Id. ; id. ; id.	
21	824	34.0	32.3	1.7	0.1	0.3	20	9.5	Id. ; id. ; id.	
22	818	35.7	34.0	1.7	0.3	0.3	17	9.8	Id. ; id. ; id.	
23	801	36.4	34.1	2.3	0.5	0.9	21	2.0	Id. ; id. ; id.	
20 0	799	39.4	36.2	3.2	0.7	1.0	18	24 : 30 : —	2.2 Cirro-cum. scud ; loose cirro-str. ; cirri ; cir. haze.	

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Feb. 19^d 5^h. There has been a very dense haze in the atmosphere throughout the day ; objects being invisible at a distance of three miles.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
20 1	29.783	41.3	37.0	4.3	0.9	1.0	18	24 : — : —	3.0
2	768	44.5	40.0	4.5	1.3	1.4	18	24 : 28 : —	9.2
3	761	43.3	39.7	3.6	1.0	0.5	18	— : 28 : —	9.8
4	754	42.8	39.7	3.1	0.9	0.9	18	24 : 28 : —	9.8
5	754	41.5	38.7	2.8	0.7	0.3	18	24 : — : —	9.9
6	748	40.7	38.3	2.4	0.3	0.1	16		10.0
7	746	40.2	38.0	2.2	0.1	0.0	18		9.9
8	741	37.8	36.0	1.8	0.7	0.4	21	28 : 28 : —	2.5
9	733	37.1	35.7	1.4	0.4	0.1	20		7.5
10	723	37.2	35.7	1.5	0.4	0.4	20		9.8
11	719	36.0	34.9	1.1	0.4	0.2	20	28 : — : —	6.5
12	710	36.0	35.0	1.0	0.3	0.3	18	— : 28 : —	9.9
13	29.703	37.3	36.1	1.2	0.4	0.3	20		10.0
14	692	37.8	36.4	1.4	0.5	0.3	16	28 : 28 : —	8.5
15	684	37.0	35.8	1.2	0.2	0.1	18		10.0
16	662	37.0	36.0	1.0	0.3	0.3	20	28 : — : —	9.9
17	660	37.3	36.0	1.3	0.4	0.2	20	26 : — : —	9.9
18	642	35.8	34.8	1.0	0.2	0.2	18		7.0
19	624	35.4	34.4	1.0	0.5	0.5	20		3.0
20	621	34.4	33.7	0.7	0.5	0.2	20	25 : — : 30	3.0
21	625	36.1	35.0	1.1	0.4	0.3	20	22 : 26 : —	9.5
22	622	37.6	36.2	1.4	0.5	0.1	20	25 : 26 : —	9.9
23	615	39.3	37.4	1.9	0.4	0.4	21	24 : 26 : —	10.0
21 0	600	40.6	38.6	2.0	0.5	0.4	18	25 : — : —	10.0
1	581	41.1	39.2	1.9	0.5	0.3	20		10.0
2	563	40.2	39.0	1.2	0.6	0.4	18	26 : — : —	10.0
3	544	39.7	38.6	1.1	0.4	0.3	19	25 : — : —	9.8
4	525	41.5	39.7	1.8	0.4	0.1	19	25 : — : —	9.9
5	508	41.8	39.3	2.5	0.4	0.1	20	24 : — : —	9.8
6	502	40.2	38.0	2.2	0.4	0.1	20	24 : — : —	9.5
7	498	38.4	36.8	1.6	0.2	0.2	19	24 : — : —	7.0
8	492	33.0	32.3	0.7	0.2	0.1	20		2.0
9	475	30.9	30.4	0.5	0.1	0.0	19	— : 23 : —	1.5
10	452	32.3	31.9	0.4	0.4	0.0	18		7.0
11	438	31.0	30.6	0.4	0.0	0.0	28		0.3
12	415	28.0	28.0	...	0.1	0.0	28		0.3
13	29.401	27.0	27.4	...	0.0	0.0	22		0.4
14	391	28.7	28.7	...	0.0	0.0	— : 18 : —		1.0
15	364	27.8	28.2	...	0.1	0.0			3.0
16	329	27.7	28.3	...	0.1	0.0			10.0
17	313	30.0	30.0	...	0.0	0.0	15		10.0
18	298	30.0	30.0	...	0.0	0.0	8		10.0
19	288	28.9	29.0	...	0.0	0.0	6		10.0
20	279	27.7	28.0	...	0.0	0.0	— : 20 : —		9.5
21	276	28.9	29.0	...	0.0	0.0	16	— : 21 : —	9.5
22	272	32.6	31.8	0.8	0.1	0.0	10	— : 22 : —	9.8
23	269	33.5	30.0	3.5	0.5	0.3	17	— : 22 : —	7.5
22 0	270	34.0	30.0	4.0	0.6	0.5	14	— : 20 : —	4.0
1	268	32.7	29.2	3.5	0.5	0.4	10	— : 14 : 23	9.0
2	255	37.2	32.5	4.7	0.4	0.3	14	— : 26 : —	9.8
3	253	37.0	32.8	4.2	0.3	0.4	12		10.0
4	250	36.7	32.6	4.1	0.5	0.2	11	16 : — : —	10.0
5	252	35.0	31.3	3.7	0.4	0.2	10	— : 24 : —	10.0
6	251	33.7	30.7	3.0	0.2	0.2	12		10.0
7	262	33.0	30.2	2.8	0.2	0.2	14		10.0
8	262	32.4	30.4	2.0	0.4	0.1	16		10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
22 9	29.263	32.5	31.0	1.5	0.2	0.2	15	10.0	10.0	Dark; 9 ^h 15 ^m , particles of snow.
10	261	32.0	30.2	1.8	0.2	0.0	6		10.0	Cirro-strati, more broken than at 9 ^h .
11	264	32.6	30.5	2.1	0.0	0.0	16		10.0	Id.
12	261	32.0	30.3	1.7	0.1	0.0	16	— : 20 : —	10.0	Id.
23 ¹	29.218	32.1	28.5	3.6	0.2	0.0		— : — : 29	{Sunday—A.M., clear; a few woolly cirri. P.M.—Overcast with cirro-stratus scud; air very dry all day.
23 13	29.266	33.6	32.5	1.1	0.5	0.0	22		10.0	Thick scud and cirro-strati.
14	271	33.4	32.5	0.9	0.0	0.0	20		10.0	Id.
15	276	33.8	32.6	1.2	0.0	0.0	22		9.9	Cirro-stratus scud.
16	278	34.0	32.5	1.5	0.0	0.0	16		10.0	Id.; drops of rain or snow.
17	277	34.7	32.6	2.1	0.3	0.3	22		10.0	Id.
18	301	36.0	33.0	3.0	0.4	0.2	25		10.0	Id.
19	326	36.8	33.8	3.0	0.5	0.3	28	— : 28 : —	10.0	Id. [white to E.]
20	365	36.3	33.8	2.5	0.5	0.2	28	29 : — : —	10.0	Loose scud; cirro-stratus scud, orange-coloured; ground
21	389	35.4	33.4	2.0	0.2	0.4	29	29 : 30 : —	8.5	Id.; cirro-cumulo-strati; cirro-strati.
22	429	37.2	33.2	4.0	0.6	0.6	29	— : 0 : —	2.0	Cirro-stratus scud; cum. and cum.-strati on horizon. ☉
23	458	39.2	33.9	5.3	1.5	1.2	29	0 : — : —	2.0	Loose cumuli; id. ☉
24 0	513	34.4	32.8	1.6	2.2	0.8	6	4 : 0 : 31	5.0	Loose scud; loose cumuli; cirro-stratus scud; hail showers around.
1	564	34.8	32.6	2.2	1.0	0.8	6	4 : 2 : —	9.8	Id.; id.; id.; id.
2	605	34.4	31.9	2.5	1.3	0.6	6	6 : — : —	10.0	Id.; particles of hail and snow; id.
3	645	34.4	32.0	2.4	0.8	0.4	8	8 : 4 : —	9.2	Id.; cirro-stratus scud; cumuli to E.
4	665	33.5	30.3	3.2	0.4	0.1	14		0.8	Id.; id. on horizon. ☉
5	689	33.1	29.4	3.7	0.2	0.0	5		0.8	Id.; id. id.
6	713	32.2	28.8	3.4	0.1	0.1	4		0.5	Loose cumuli to E.; slight cirrus haze on horizon.
7	740	27.7	26.6	1.1	0.0	0.0	28		0.4	Patches of cirro-stratus scud to N.; cir. haze to SW.
8	764	24.7	25.0	...	0.0	0.0	12		0.0	Very clear; very faint aurora.
9	781	24.4	24.7	...	0.0	0.0	18		0.0	Id.; auroral arch 8° altitude.
10	804	25.2	25.3	...	0.1	0.0	20		0.1	Streak of cloud to NE. ☉
11	823	23.4	23.8	...	0.0	0.0	24		0.0	...
12	834	23.7	23.3	0.4	0.1	0.0			0.0	...
13	29.859	23.4	22.9	0.5	0.1	0.1	14		0.2	Linear cirri to S.; auroral light to N. ☉
14	873	21.3	21.3	...	0.1	0.0	20		0.1	Id. ☉
15	878	21.3	21.3	...	0.1	0.1			0.1	Id. ☉
16	876	20.3	20.3	...	0.1	0.1	20		0.2	Cirro-strati; cirri to S. ☉
17	881	19.2	19.2	...	0.1	0.1	22		0.2	Id.; id. to SW. ☉
18	878	19.2	19.2	...	0.2	0.2	21		0.8	Cirro-strati and cirri to SW.
19	874	18.1	18.1	...	0.0	0.0	18		0.3	Thin cir. and cir. haze near hor., cum. low on E. hor. ☉
20	889	16.9	17.0	...	0.0	0.0	20		0.5	Cirro-strati and cirri. ☉
21	896	19.8	19.6	0.2	0.2	0.1	22		0.5	Id. to SW. ☉
22	882	23.0	22.3	0.7	0.2	0.0	22		0.2	Clear; a few patches and streaks of cirri. ☉
23	876	25.7	24.5	1.2	0.0	0.0	30		0.2	Slight cirrus haze on horizon; cirro-strati to SW. ☉
25 0	864	29.8	28.0	1.8	0.1	0.1	6		0.2	Patches of cirri and cirro-strati to W. and SW.; thick haze to E. ☉
1	840	33.7	31.6	2.1	0.2	0.2	10		0.3	Id.; id. ☉
2	802	39.1	33.7	5.4	0.6	0.5	15	— : — : 28	0.8	Striated and vertebrated cirri; haze on horizon. ☉
3	763	40.8	35.3	5.5	0.6	0.5	14		1.0	Masses of cirro-strati and cirrus haze to W. ☉
4	727	40.1	35.3	4.8	0.7	0.5	16	— : 19 : 26	7.5	Cir-cum. scud and loose cir.-str.; cirri; cirrus haze; faint halo. ☐
5	701	38.2	34.7	3.5	0.5	0.3	14	— : 16 : 28	9.5	Loose cir.-str.; mass of cir. lying NW by N.; cir. haze. ☀
6	666	37.0	33.8	3.2	0.5	0.6	14		10.0	Cirro-strati and cirrus mass.
7	631	36.2	33.4	2.8	0.8	0.6	16		10.0	Cirrus mass.
8	599	36.2	33.6	2.6	0.7	0.8	16		10.0	Id.; dark.
9	549	35.9	33.9	2.0	0.9	0.2	14		10.0	Id.; id.; snow ^{0.2}
10	499	36.2	34.4	1.8	1.2	0.4	15		10.0	Id.; id.; rain ^{0.2}
11	440	35.8	34.6	1.2	0.9	0.8	16		10.0	Id.; id.; rain ^{0.5}
12	373	36.4	35.0	1.4	0.8	0.5	15		10.0	Id.;? rain ¹
13	29.319	37.0	35.8	1.2	1.2	0.4	16		10.0	Id.;? rain ²
14	283	36.7	35.9	0.8	0.5	0.5	18		10.0	Id.; rain ²

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Feb. 23^d 20^h. Hexahedral particles of snow or hail, plano-convex; snow outside, with an icy crystal within.

Feb. 24^d 8^h. Zodiacial light to W. 25^d 1^h. Many spots on the sun to-day, and for the last three days.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From 10 ^{m.}	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0-10.
25 15	29.245	36.8	36.0	0.8	0.6	0.1	20	24:	— : —	10.0
16	225	37.7	37.1	0.6	0.2	0.1	24	24:	— : —	10.0
17	213	39.1	38.1	1.0	0.4	0.3	24	24:	— : —	10.0
18	215	40.4	38.4	2.0	1.2	1.0	25	24: 26:	— : —	4.0
19	220	39.9	37.9	2.0	1.3	1.2	25			9.8
20	241	41.0	38.7	2.3	2.2	1.6	27	28:	— : —	10.0
21	265	41.1	39.0	2.1	2.2	1.7	26	26:	— : —	10.0
22	295	41.3	39.2	2.1	3.1	1.6	28			10.0
23	312	42.5	39.8	2.7	2.2	1.8	30	29:	— : —	10.0
26 0	375	41.0	39.3	1.7	1.8	1.0	0	29:	— : —	10.0
1	408	39.7	38.2	1.5	0.7	0.6	31	0:	— : —	10.0
2	443	39.4	37.6	1.8	0.9	0.6	31	0:	— : —	10.0
3	472	39.2	37.3	1.9	0.5	0.3	31	0:	— : —	10.0
4	500	38.8	37.7	1.1	0.3	0.2	0	1:	— : —	10.0
5	512	39.4	38.0	1.4	0.3	0.2	1	2:	— : —	10.0
6	541	38.7	37.6	1.1	0.3	0.1	12	4: 30:	— : —	10.0
7	562	37.6	36.7	0.9	0.1	0.0				10.0
8	580	37.2	36.4	0.8	0.0	0.0				10.0
9	595	36.8	36.3	0.5	0.0	0.0				10.0
10	610	36.6	36.2	0.4	0.0	0.0	2			10.0
11	628	36.6	36.0	0.6	0.0	0.0				10.0
12	654	36.3	35.8	0.5	0.0	0.0	2			10.0
13	29.661	34.7	34.3	0.4	0.0	0.0	20			7.0
14	677	33.4	33.1	0.3	0.0	0.0	30			6.5
15	690	32.2	32.1	0.1	0.0	0.0	0			3.0
16	701	31.9	31.7	0.2	0.0	0.0	4	6:	— : —	8.5
17	711	30.4	30.3	0.1	0.0	0.0	22			3.0
18	724	32.1	32.0	0.1	0.0	0.0	24			10.0
19	743	32.5	32.3	0.2	0.0	0.0		2:	— : —	10.0
20	756	32.7	32.5	0.2	0.1	0.0	18	3:	— : —	9.5
21	771	34.8	34.7	0.1	0.1	0.1	18	5:	— : —	8.0
22	781	35.8	35.0	0.8	0.2	0.1	4			0.5
23	786	37.6	36.2	1.4	0.2	0.2	4	4:	— : —	2.0
27 0	790	41.2	39.1	2.1	0.1	0.2	11	3:	— : —	6.5
1	789	41.3	36.8	4.5	0.4	0.2	2	4:	— : —	9.5
2	776	41.5	37.6	3.9	0.3	0.3	5	6:	— : —	9.5
3	769	42.8	38.4	4.4	0.3	0.5	5	9:	— : —	9.0
4	770	39.3	35.4	3.9	0.4	0.2	7	— : 10:	28	6.5
5	766	39.7	35.6	4.1	0.6	0.5	6	— : 9:	28	7.0
6	774	38.6	34.9	3.7	0.6	0.3	6			3.5
7	779	33.6	32.6	1.0	0.3	0.1	8			2.0
8	776	33.9	32.8	1.1	0.0	0.0	6			4.0
9	780	33.4	32.6	0.8	0.0	0.0	6			10.0
10	790	34.3	33.4	0.9	0.3	0.1	8			10.0
11	786	35.6	34.0	1.6	0.3	0.3	8			10.0
12	794	35.8	33.8	2.0	0.2	0.1	7			10.0
13	29.795	35.2	33.2	2.0	0.2	0.1	7			10.0
14	790	35.0	32.6	2.4	0.2	0.0	8			10.0
15	775	35.0	32.7	2.3	0.1	0.0	10			10.0
16	766	35.3	33.3	2.0	0.1	0.0	8			10.0
17	768	34.8	33.7	1.1	0.3	0.1	12			10.0
18	769	35.3	33.7	1.6	0.2	0.2	12			10.0
19	764	35.1	33.4	1.7	0.4	0.5	13	12:	— : —	10.0
20	773	35.3	33.2	2.1	0.6	0.5	14	12:	— : —	9.8
21	791	35.7	33.1	2.6	0.8	1.0	14	13: 14:	— : —	9.5
22	787	36.6	34.1	2.5	1.1	0.6	14	13: 13:	— : —	9.5

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	pt.	pt.	pt.	
d. h. 27 23	in. 29.789	° 37.7	° 34.7	° 3.0	lbs. 1·2	lbs. 1·2	14	13 : — : —	9.9	Scud ; loose cumuli ; cirro-stratus scud.
28 0	794	38.1	35.1	3.0	1·7	1·3	13	13 : — : —	9.5	Id.; id. ○
1	786	39.4	35.3	4.1	2·3	1·3	15	14 : — : —	9.0	Id.; id. ○
2	775	38.8	34.3	4.5	2·3	1·8	15	14 : 16 : —	5.0	Id.; id.; loose cirro-strati. ○
3	771	38.4	34.4	4.0	2·2	1·8	15	14 : 16 : —	6.0	Id.; id.; id.; patches of cir. ○
4	767	36.7	33.0	3.7	2·2	2·2	15	— : — : 30	3.0	Id.; id.; id.; thin cirri. ○
5	770	34.3	31.0	3.3	1·8	1·4	15	— : — : 30	2.0	Woolly cir. ; masses of scud ; cir.-str. ; part of a halo. ○
6	779	31.3	29.0	2.3	0·7	0·6	15	— : — : 30	5.0	Masses of scud ; cirro-strati.
7	779	30.7	28.7	2.0	1·2	0·9	14	— : — : 30	4.0	Scud ; cirro-strati ; woolly cirri.
8	775	30.7	28.4	2.3	1·1	1·0	14	— : — : 30	2.0	Id.; id.
9	776	31.0	28.4	2.6	1·6	1·1	14	— : — : 30	6.0	Chiefly thin clouds ; lightish to W.
10	776	30.4	28.0	2.4	1·4	1·1	14	— : — : 30	3.0	Clouds to E.
11	776	29.7	27.6	2.1	1·8	1·2	15	— : — : 30	1.0	Cirro-strati? to E. ; sky milky ; hazy on horizon.*
12	771	28.8	26.9	1.9	1·5	1·2	15	— : — : 30	0.8	Id.; id.; id.
13	29.769	28.4	26.9	1.5	1·4	1·0	15	— : — : 30	3.0	Cirri ; cirrous haze ; sky milky ; hazy on horizon.*
14	757	28.8	27.0	1.8	1·4	0·9	15	— : — : 30	6.0	Id.; id.; id.; faint aurora?
15	742	28.3	26.7	1.6	1·4	1·2	15	— : — : 30	3.0	Cir.-str. ; cir. ; cir. haze ; id.; id.
16	736	29.0	27.3	1.7	1·4	0·9	15	— : — : 30	9.5	Id.; cirrous haze.
17	727	29.6	27.8	1·8	1·2	1·0	15	— : — : 30	10.0	Id.; id.
18	728	29.8	27.9	1·9	1·3	0·6	16	— : — : 30	10.0	Id.; id.; much thicker.
19	730	29.8	27.8	2·0	0·9	0·5	16	— : — : 30	10.0	Scud and cirro-strati ; reddish to E.
20	732	30.0	28.0	2·0	1·1	0·4	16	— : — : 30	10.0	Cirro-strati ; cirrous mass.
21	731	30.7	29.0	1·7	0·4	0·2	16	— : — : 30	10.0	Dense cirro-strati ; fine mealy snow ^{0·5}
22	726	32.6	31.0	1·6	0·2	0·2	15	— : — : 30	10.0	Id.; id.
23	721	34.0	32.0	2·0	0·3	0·2	14	— : — : 30	10.0	Id.; flakes of snow.
1 0	715	35.0	32.6	2·4	0·2	0·1	20	18 : — : —	10.0	Scud? dense cir.-strati ; id.
1	700	35.3	32.8	2·5	0·3	0·3	16	— : — : 30	10.0	Id.; id.
2	688	35.7	33·8	1·9	0·3	0·3	20	18 : — : —	10.0	Id.; id.; snow ^{0·2}
3	678	35.3	33·8	1·5	0·3	0·2	20	— : — : 30	10.0	Id.; id.; snow ¹
4	667	34·8	34·0	0·8	0·3	0·2	17	— : — : 30	10.0	Id.; id.; snow ^{0·5}
5	664	34·2	33·4	0·8	0·2	0·1	20	— : — : 30	10.0	Id.; id.; snow ²
6	665	33·7	33·0	0·7	0·2	0·1	19	— : — : 30	10.0	Homogeneous mass of cirro-strati? snow ²
7	663	33·3	32·7	0·6	0·1	0·0	19	— : — : 30	10.0	As before; snow ^{0·5}
8	656	33·3	32·6	0·7	0·2	0·1	19	— : — : 30	10.0	Id.; snow ^{0·2}
9	653	33·3	32·6	0·7	0·1	0·0	19	— : — : 30	10.0	Id.; snow ^{0·2}
10	650	33·3	32·6	0·7	0·0	0·0	19	— : — : 30	10.0	Id.; snow ^{0·2}
11	644	33·4	32·7	0·7	0·2	0·0	21	— : — : 30	10.0	Id.
12	639	33·3	32·6	0·7	0·0	0·0	20	— : — : 30	10.0	Id.; sky clouded = 9·8 at 11 ^h 30 ^m .
23 ¹	29.691	40.7	37·5	3·2	0·8	0·5	28	— : 30 : —	Sunday. A.M. Generally clear; loose woolly cirro-str. ; P.M. Overcast with dense cirro-strati.
2 13	29.487	41.2	40·0	1·2	0·5	0·2	20	— : — : 30	7.0	Scud; stars dim; sky milky to N.
14	467	40·8	39·8	1·0	0·2	0·1	22	— : — : 30	8.0	Id.; id.
15	457	38·9	38·2	0·7	0·1	0·0	27	— : — : 30	9.9	Id.
16	460	40·7	39·0	1·7	0·7	0·6	31	— : — : 30	10.0	Id.; dark.
17	482	37·0	36·2	0·8	1·2	0·3	31	— : — : 30	9.5	Id.; rain ^{0·2}
18	485	38·6	37·9	0·7	0·8	0·6	30	— : — : 30	10.0	Id.
19	505	38·2	37·9	0·3	1·1	0·4	2	3 : — : —	10.0	Misty scud; rain ^{0·5}
20	541	36·9	36·4	0·5	0·6	0·5	3	4 : — : —	10.0	Id.; rain ^{0·2} ; clouds yellow to E.
21	589	36·9	35·9	1·0	0·5	0·2	4	10 : — : —	10.0	Scud.
22	626	36·6	35·4	1·2	0·6	0·3	9	10 : — : —	10.0	Id.
23	646	36·1	35·0	1·1	0·5	0·1	10	10 : — : —	10.0	Id.
3 0	676	35·8	34·8	1·0	0·2	0·1	12	11 : — : —	10.0	Id.
1	685	37·3	35·7	1·6	0·2	0·1	10	10 : — : —	10.0	Id.
2	693	37·6	35·0	2·6	0·2	0·1	8	9 : — : —	10.0	Id.; moving very slowly.
3	705	36·6	34·2	2·4	0·3	0·2	12	10 : — : —	10.0	Id.; dense mass of cirro-strati.
4	720	36·3	34·0	2·3	0·4	0·2	12	10 : — : —	10.0	Id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Feb. 28^d 9^h. The water in the wet bulb cistern is not freezing.

Feb. 28^d 12^h. The water seems to be freezing at the bottom but not at the top of the wet bulb cistern.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
3 5	29.729	35.5	33.3	2.2	0.1	0.1	16		10.0	Scud; dense mass of cir.-str.; a few fine particles of snow.
6	756	34.3	32.0	2.3	0.2	0.1	14		10.0	Id.; id.; snow ^{0.2}
7	764	33.5	31.8	1.7	0.2	0.1	16		10.0	Id.; id.; id.
8	772	33.2	31.5	1.7	0.2	0.1	18		10.0	Id.; id.
9	791	32.8	31.3	1.5	0.2	0.1	18		10.0	Id.; id.; dark.
10	791	32.5	31.0	1.5	0.1	0.1			10.0	Id.; id.; id.
11	791	31.6	30.3	1.3	0.1	0.1	14		7.0	Cirro-strati; cirri; cirrous haze; sky milky.
12	795	31.6	30.3	1.3	0.2	0.0	20		10.0	Id.?
13	29.795	31.7	30.5	1.2	0.1	0.1	18		10.0	Cirro-strati?
14	793	31.1	30.3	0.8	0.1	0.0	18		10.0	Id.?
15	779	30.8	30.2	0.6	0.1	0.0	24		10.0	Id.; cirri; cirrous haze; stars seen.
16	775	30.7	30.2	0.5	0.0	0.0	14		10.0	Id.; id.; id.
17	769	30.9	30.2	0.7	0.1	0.0	20		10.0	Id.; id.; id.
18	769	31.7	30.1	1.6	0.1	0.1	16		10.0	Id.; broken to E.
19	773	31.5	30.2	1.3	0.1	0.1	14		10.0	Id.; id.; flakes of snow.
20	775	32.0	30.4	1.6	0.1	0.1	12		9.9	Id.; dense cirrous mass; sky to S.; haze to N.
21	771	34.7	32.0	2.7	0.1	0.1	14		9.9	Cirro-strati and dense cirrous haze. ☐
22	780	35.2	32.2	3.0	0.4	0.3	14		9.9	Patches of scud; cirro-strati and dense cirrous haze. ●
23	784	34.6	32.3	2.3	0.2	0.1	28	20 : — : —	10.0	Loose scud; cir.-str.; cir. mass; haze; flakes of snow. ●
4 0	788	33.8	32.4	1.4	0.2	0.2	28		10.0	Cirro-strati; dense cirri; haze; snow ¹
1	789	34.7	33.1	1.6	0.1	0.1	23	— : 12 : —	10.0	Id.; id.; id.; snow ^{0.5}
2	786	34.5	32.7	1.8	0.1	0.1	28		10.0	Id.; id.
3	778	34.0	32.3	1.7	0.2	0.0	4		10.0	Id.; id.; snow ¹
4	771	34.4	32.4	2.0	0.1	0.1	18	12 : — : —	9.8	Scud; cumuli; cumulo-strati; cirro-strati; snow ^{0.5}
5	779	33.5	31.8	1.7	0.2	0.1	8	10 : 4 : —	9.8	Id.; cirro-stratus scud; cumulo-strati to E.
6	793	32.0	30.0	2.0	0.4	0.3	7	— : 6 : —	7.5	Cirro-cumulous scud.
7	795	30.7	28.4	2.3	0.3	0.1	6		1.5	Id., radiating from NNW.
8	806	29.7	28.3	1.4	0.2	0.2	7		0.5	Cirro-stratus scud on E. horizon.
9	813	27.3	26.4	0.9	0.0	0.0	5		0.8	id.; zodiacal light visible.
10	821	25.5	25.9	...	0.0	0.0			5.0	Cirro-cumulous scud.
11	819	27.3	27.2	0.1	0.0	0.0			9.0	Loose scud; cirro-strati; flakes of snow.
12	826	29.9	29.3	0.6	0.0	0.0	2		9.8	Id.; id.
13	29.829	29.7	29.1	0.6	0.0	0.0			10.0	Snow ^{0.5}
14	829	29.1	28.9	0.2	0.0	0.0	2		10.0	Id.
15	830	26.5	26.5	...	0.0	0.0	0		6.5	Stars dim.
16	833	22.8	23.0	...	0.0	0.0	26		4.0	Clouds near horizon.
17	839	23.0	23.0	...	0.0	0.0	16		9.8	Snow ^{0.5}
18	857	24.9	24.7	0.2	0.0	0.0	30		10.0	Snow ¹
19	884	26.3	26.1	0.2	0.0	0.0			10.0	Snow ³
20	901	27.7	27.4	0.3	0.0	0.0	6		10.0	Cirro-cumuli; snow ^{0.5}
21	917	28.2	27.8	0.4	0.0	0.1	4	4 : — : —	9.5	Scud and cirro-cumuli.
22	934	30.3	29.8	0.5	0.0	0.1	6	4 : — : —	3.0	Scud; cumuli; cirro-strati on horizon; snow ^{0.5} ☐
23	952	30.0	28.4	1.6	0.2	0.2	5	— : 6 : —	4.0	Cirro-cumulous scud; snow ^{0.2} ☐
5 0	969	31.8	30.2	1.6	0.2	0.2	7	— : 7 : —	9.0	Id.; cirrus haze. ☐
1	979	32.4	29.3	3.1	0.9	0.2	8	— : 7 : —	9.0	Scud; cirro-cumuli; fine cumuli to SW. and NE.
2	980	33.2	30.7	2.5	0.5	0.4	6	6 : — : —	7.0	Id. and loose cumuli; id. on horizon. ●
3	985	32.7	29.4	3.3	1.0	0.6	10	4 : — : —	4.5	Loose cumuli and nimbi; snowing around. ☐
4	29.995	33.4	29.7	3.7	0.5	0.5	9	6 : — : —	4.0	Scud; cumuli and nimbi; flakes of snow. ☐
5	30.008	32.9	29.3	3.6	0.6	0.4	7		3.5	Id.; id.; snowing around. ☐
6	017	30.8	26.8	4.0	0.4	0.4	5	4 : — : —	2.5	Id.; id.
7	033	27.1	25.3	1.8	0.4	0.1	8		0.5	Cumulo-strati and haze on horizon.
8	054	26.4	24.6	1.8	0.1	0.0	4		0.5	Clouds near horizon.
9	066	24.0	23.3	0.7	0.0	0.0	0		2.0	Thin clouds.
10	078	27.6	25.9	1.7	0.0	0.0	2		10.0	Snow ^{0.5}
11	091	27.6	26.7	0.9	0.1	0.1	8		9.9	Snow ²
12	097	23.7	23.7	...	0.1	0.0	12		2.0	Clouds to E.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motion of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

March 4^a 3^h. The snow has melted on reaching the ground, throughout the day.

March 4^d 6^h. Observation made at 6^h 20^m.

HOURLY METEOROLOGICAL OBSERVATIONS, MARCH 5—7, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From			
lbs.	lbs.	pt.	pt.	pt.	pt.	pt.	pt.	pt.	pt.
d. h.	in.	°	°	°					
5 13	30-109	25.0	24.9	...	0.0	0.0			
14	117	22.5	22.1	0.4	0.0	0.0	28		3.0
15	118	27.0	26.6	0.4	0.1	0.1	0		10.0
16	121	26.9	26.7	0.2	0.1	0.1	8		9.5
17	130	27.2	26.8	0.4	0.1	0.0	2		10.0
18	143	26.2	25.9	0.3	0.1	0.0			10.0
19	144	26.8	26.5	0.3	0.1	0.0	24		10.0
20	151	27.8	27.5	0.3	0.0	0.0	16	— : 4 : —	Cirro-stratus scud ; cirro-strati ; flakes of snow.
21	170	30.2	29.4	0.8	0.1	0.0	16	— : 4 : —	Id. ; snow ^{0.2}
22	177	32.0	31.0	1.0	0.1	0.0	8		Id. ; id.
23	179	35.1	32.3	2.8	0.1	0.0	4		Id.
6 0	188	34.4	32.3	2.1	0.2	0.2	4		Id. ; snow ^{0.5}
1	186	36.2	33.3	2.9	0.5	0.4	2	— : 6 : —	10.0
2	183	35.3	32.3	3.0	1.0	0.8	0	— : 7 : —	9.9
3	182	35.1	32.0	3.1	1.1	1.1	1		10.0
4	183	34.0	31.6	2.4	1.2	0.4	0	— : 6 : —	10.0
5	181	33.6	30.3	3.3	0.5	0.5	31	— : 6 : —	10.0
6	186	33.2	30.8	2.4	0.7	0.3	31	— : 6 : —	10.0
7	187	33.2	30.4	2.8	0.3	0.2	0		9.9
8	193	34.0	30.7	3.3	0.6	0.6	31		8.5
9	189	33.5	31.0	2.5	0.8	0.9	30		Clouds broken ; stars dim.
10	187	34.0	30.6	3.4	1.6	1.0	31		10.0
11	194	34.3	31.1	3.2	1.2	1.0	31		10.0
12	196	34.1	31.4	2.7	1.1	0.6	31		7.5
13	30-189	34.7	32.2	2.5	1.5	0.7	31		Cirro-stratus scud ; ? sky on zenith.
14	187	35.5	32.9	2.6	1.4	0.9	0		Id. ?
15	190	35.6	33.8	1.8	1.1	0.8	0		Id. ?
16	189	35.2	34.0	1.2	0.7	0.8	0		Id. ; ? drops of rain.
17	183	36.4	34.6	1.8	0.6	0.6	1		Id. ?
18	189	35.7	34.4	1.3	0.8	0.3	1		9.5
19	187	36.6	35.2	1.4	0.4	0.2	2	4 : — : —	Cirro-cumulo-strati ; day-break.
20	192	36.9	35.5	1.4	0.5	0.5	2	4 : — : —	Scud and cirro-cumulo-strati ; loose cumuli.
21	206	35.7	35.0	0.7	0.4	0.1	4	3 : — : —	Scud ; dense cirro-stratus scud and cirro-strati.
22	203	38.2	36.7	1.5	0.3	0.4	2	4 : — : —	Id. ; cirro-stratus scud.
23	215	36.3	35.0	1.3	1.7	0.6	2	4 : — : —	Id. ; id. ; rain ^{0.2}
7 0	217	40.3	37.8	2.5	1.3	0.2	2	— : 5 : —	Cirro-cumulo-strati ; cirro-strati.
1	215	41.3	38.3	3.0	0.4	0.5	4	4 : — : —	Scud. ; cirro-strati.
2	200	40.3	37.3	3.0	0.7	0.4	4	4 : — : —	Id. ; id. ; a few hail-stones.
3	192	40.3	37.8	2.5	0.4	0.2	1	4 : — : —	10.0
4	183	39.8	37.2	2.6	0.7	0.5	2	4 : — : —	[cirro-strati.
5	177	39.2	37.2	2.0	0.5	0.3	0	4 : — : —	Low detached masses of scud ; ragged cumuli on N. hor. ; Smoky scud ; cirro-stratus scud.
6	165	38.6	36.7	1.9	0.5	0.4	1	4 : — : —	Scud ; id.
7	163	37.5	35.8	1.7	0.5	0.4	0	4 : — : —	Id. ; id.
8	161	37.3	35.7	1.6	0.5	0.4	2		Id. ; id.
9	163	37.3	35.7	1.6	0.5	0.0	2		Id. ; id.
10	161	36.9	35.6	1.3	0.1	0.1	1		Id. ; id.
11	156	37.0	35.8	1.2	0.2	0.1	0		9.8
12	149	37.4	36.0	1.4	0.2	0.0	1		Id. ; dark.
13	30-140	36.9	35.9	1.0	0.1	0.0	0		9.8
14	137	37.4	35.9	1.5	0.1	0.1	31		Id. ; id.
15	131	37.7	36.4	1.3	0.1	0.1	5		Id. ; id.
16	118	38.1	36.7	1.4	0.9	0.7	7		Id. ; id.
17	117	38.6	37.1	1.5	0.7	0.5	7		Id. ; id.
18	115	39.1	37.6	1.5	0.6	0.6	0	4 : — : —	Id.
19	117	39.4	37.9	1.5	0.6	0.4	2	4 : — : —	10.0
20	121	40.0	38.4	1.6	0.6	0.5	3	4 : 6 : —	Loose scud ; cirro-cumulo-strati ?

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

March 6th 20^h. White smoky scud rising, as if from a fire, on N. horizon. Shower of hail since 19^h.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.; Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h. 7 21	in. 30.131	° 40.0	° 38.6	° 1.4	lbs. 0.6	lbs. 0.6	pt. 2	4 : — : —	0—10. 10·0	Loose scud ; cirro-cumulo-strati? cirro-strati.
22	144	41·0	39·0	2·0	0·8	0·6	2	4 : — : —	9·9	Id.; id.; id.
23	153	42·3	40·0	2·3	0·9	0·5	3	4 : 5 : —	9·9	Id.; id.; cumuli to N.
8 0	165	41·6	39·8	1·8	0·8	0·9	2	4 : 5 : —	9·9	Id.; cirro-cumuli; woolly cirro-cumuli.
1	168	43·3	40·2	3·1	1·0	0·8	2	4 : 5 : —	9·9	Id.; id.; id.
2	167	44·0	40·7	3·3	1·2	1·0	3	4 : 6 : —	9·5	Scud; cumuli; cirro-cumulo-strati.
3	162	43·7	40·8	2·9	1·2	1·2	3	4 : — : —	9·0	Id.; woolly cirro-cumuli.
4	162	44·8	41·0	3·8	1·5	0·5	2	2 : 4 : 6	9·9	Id.; cir.-str. scud; cir.-str.; 4 ^h 8 ^m , hail-shower.
5	165	42·3	40·3	2·0	1·2	1·7	4	3 : 5 : —	10·0	Id.; id.; showers of rain since 4 ^h .
6	172	40·6	39·2	1·4	1·5	1·2	3	3 : — : —	10·0	Dense scud; rain ¹⁻²
7	173	40·3	39·3	1·0	0·9	0·8	2		10·0	Id.; id.
8	190	40·4	39·6	0·8	1·1	0·7	2		10·0	Id.; rain ^{0·2}
9	196	40·6	39·7	0·9	0·7	0·6	3		10·0	Id.; rain occasionally.
10	210	40·8	39·7	1·1	0·8	0·5	3		10·0	Very dark.
11	222	40·2	39·2	1·0	0·6	0·4	3		10·0	Id.
12	234	40·2	39·2	1·0	0·5	0·4	3		10·0	Id.
23 ¹ ₂	30.244	42·3	39·6	2·7	0·6	0·1	0	— : 4 : —	Sunday—Overcast; cirro-cumulo-strati; scud.
9 13	30.156	40·6	38·3	2·3	0·9	0·6	0		10·0	Scud.
14	147	39·4	37·7	1·7	0·6	0·1	0		9·5	Id., &c.; slight shower lately.
15	131	38·8	37·3	1·5	0·3	0·1	0		9·8	Id.; cirro-cumulo-strati? sky milky.
16	123	39·7	37·6	2·1	0·4	0·1	0		10·0	Id.; id.; aurora seen to N.
17	112	39·9	37·6	2·3	0·4	0·4	0		10·0	Id.; id.; drops of rain.
18	101	38·9	37·4	1·5	0·7	0·6	29		10·0	Id.; id.; 18 ^h 10 ^m , shower ^{0·5}
19	083	38·9	37·5	1·4	0·5	0·6	30	2 : — : —	10·0	Loose scud and cirro-stratus scud.
20	089	39·2	38·0	1·2	0·4	0·2	20v.	4 : — : —	9·9	Id.
21	082	41·0	39·6	1·4	0·4	0·3	29		10·0	Dense mass of cirro-strati; nearly homogeneous.
22	077	40·4	39·7	0·7	0·3	0·2	29		10·0	Id.; foggy; 21 ^h 50 ^m , Scotch mist.
23	060	43·7	41·7	2·0	0·3	0·4	30	— : 1 : —	10·0	Id.
10 0	046	45·2	42·2	3·0	0·7	0·7	1	— : 1 : —	9·9	Cirro-stratus scud; cirrus mass.
1	036	46·0	42·5	3·5	0·8	0·7	31	2 : — : —	10·0	Scud; cirrus mass.
2	018	45·8	42·2	3·6	0·7	0·4	0	2 : — : —	10·0	Id.; cirro-stratus scud.
3	30.001	46·3	42·4	3·9	0·4	0·3	30	0 : — : —	10·0	Id.; id.
4	29.972	46·5	42·1	4·4	0·4	0·3	30	— : 30 : —	9·9	Id.; id.; cumuli on E. horizon.
5	948	46·1	41·5	4·6	0·5	0·2	30	— : 29 : —	9·7	Cirro-stratus scud; loose cumuli and scud.
6	937	44·7	40·8	3·9	0·4	0·2	29	30 : 31 : —	9·5	Scud; cirro-stratus scud; clouds coloured.
7	928	43·5	40·6	2·9	0·2	0·2	29	30 : — : —	10·0	Heavy electric-looking masses of scud.*
8	958	37·5	36·4	1·1	2·5	1·7	2		10·0	Scud; rain ^{0·5}
9	966	36·8	34·9	1·9	3·0	1·0	1		9·8	Id.; sky to NNE.
10	960	36·4	33·5	2·9	2·5	3·0	1		10·0	Id.; shower of fine-grained snow ¹
11	953	35·2	32·1	3·1	3·7	2·7	0		6·0	Id.
12	961	33·0	30·0	3·0	2·2	0·5	0		2·5	Id.
13	29.957	33·2	29·8	3·4	2·9	1·7	0		9·8	Scud; shower of snow ^{0·2}
14	941	32·2	28·9	3·3	1·8	1·7	0		1·0	Id.
15	928	31·0	28·1	2·9	1·8	1·3	31		1·0	Id.
16	900	30·7	27·7	3·0	1·4	1·9	31		0·8	Id.
17	890	30·7	27·3	3·4	2·3	0·8	29		1·0	Id.
18	881	29·4	27·0	2·4	1·4	0·5	29		0·7	Id.
19	873	30·6	26·9	3·7	1·0	1·1	29	1 : — : —	6·0	Thin scud.
20	859	31·2	29·5	1·7	2·1	1·6	29	— : 1 : —	5·0	Cir.-cum. scud; snowshowers at intervals; snowing around.
21	871	32·8	31·6	1·2	1·2	1·5	29	— : 1 : —	8·5	Id.; snow ²
22	853	33·8	31·4	2·4	1·4	1·3	31	1 : — : —	1·5	Thin scud; cumuli and cirro-strati on horizon.
23	873	35·7	32·4	3·3	3·0	2·5	31	31 : 0 : —	9·0	Id.; cir.-cum.-str.; cir.-str.; cum. to S.; nimbi.
11 0	869	34·3	31·3	3·0	2·5	1·6	31	0 : — : —	1·0	Scud; loose cumuli; haze on horizon.
1	858	35·8	32·3	3·5	2·3	2·3	30	0 : — : —	2·5	Id.; id.; cumuli and cirro-strati.
2	831	37·1	32·4	4·7	3·6	2·3	31	31 : — : —	2·5	Id.; id.; id.

March 8^h 0^m. Observation made at 0^h 5^m.March 10^h 19^m. The ice removed from about the vane of the anemometer; some of the last indications of the anemometer are too small, as the vane was fixed, with the opening towards N by E.* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From	lbs.	lbs.	pt.	
d. h.	in.	°	°	°						
11 3	29.826	36.0	32.0	4.0	3.7	2.7	31	0 : — : —	0-10.	Scud ; cirro-strati ; nimbi. ○
4	804	36.1	31.6	4.5	3.8	3.8	31	0 : — : —	5.0	Id. ; loose cumuli ; id. ○
5	803	35.4	31.5	3.9	3.7	2.2	0		1-2	Id. ; id. ; id. ○
6	802	33.3	30.1	3.2	2.4	1.1	30		1.5	Cumulo-strati ; nimbi and cirro-strati on horizon. ○
7	797	32.5	29.6	2.9	1.4	0.8	30	0 : — : —	1.5	Scud ; cumulo-strati ; nimbi ; cirro-strati. ○
8	793	32.0	29.5	2.5	1.8	0.9	31		3.0	Cumulo-strati, &c., on horizon. ○
9	788	31.6	29.0	2.6	1.5	1.1	29		1.0	Clouds on horizon. ○
10	789	31.0	28.7	2.3	1.4	1.0	31		0.5	Clouds on horizon. ○
11	789	31.0	28.8	2.2	1.2	1.1	31		0.2	Id. ○
12	781	30.4	28.4	2.0	1.2	1.2	31		0.2	Id. ○
13	29.777	30.3	28.2	2.1	0.8	0.7	30		2.0	Clouds on horizon, principally to E. ○
14	770	30.2	28.1	2.1	0.9	0.6	30		4.0	Id., id. ○
15	762	29.9	29.2	0.7	0.6	0.4	30		10.0	Scud ; snow ¹ ○
16	752	29.9	28.7	1.2	0.5	0.5	0		10.0	Id. ; snow ² ○
17	753	27.5	27.0	0.5	0.6	0.2	30		2.0	Clouds to E. ○
18	747	25.2	24.7	0.5	0.3	0.2	29		2.0	Id. ○
19	752	26.4	25.8	0.6	0.5	0.1	31		10.0	Snow ²⁻³ ○
20	753	28.1	27.6	0.5	0.0	0.0	22	3 : — : —	9.7	Scud; loose woolly cir.-cum.; snow-showers since last obs. ○
21	754	29.1	28.2	0.9	0.1	0.1	22	4 : 2 : 0	9.5	Id. ; loose cum. ; woolly cir.-cum. ; snow at intervals. ○
22	745	30.5	28.7	1.8	0.1	0.3	30	— : 0 : —	3.0	Woolly cir.-cum. ; cum.-str. on E. and N. horizon. ○
23	736	32.8	28.9	3.9	0.5	0.5	0		2.0	Cumuli and cum.-str. to E. and N.; cir.-str.; patches of cirri. ○
12 0	725	33.3	27.8	5.5	1.0	1.1	1		2.0	Loose cum. to E. and N.; nimbi to NW. patches of cir. ○
1	718	34.5	29.5	5.0	1.5	0.7	2		4.0	Camuli and scud, both white. ○
2	707	33.7	29.2	4.5	1.7	1.3	2	2 : — : —	3.5	Id. [snow. ○
3	700	33.7	28.9	4.8	1.6	0.7	3	4 : — : —	3.5	Id. ; thick watery cloud to E., falling in
4	698	34.0	29.2	4.8	0.8	0.4	3	3 : — : —	6.0	Seud and cum. ; sheets of watery cloud. ○
5	698	31.7	29.0	2.7	1.3	0.6	3		3.0	Loose cumuli and cumulo-strati.
6	695	31.0	27.2	3.8	0.7	0.3	5	3 : — : —	4.0	Id. ; cumulo-strati ; cirro-strati.
7	701	27.5	26.4	1.1	0.6	0.1	4		0.2	Cumulo-strati; cirro-strati and haze on horizon. ○
8	706	24.7	24.5	0.2	0.2	0.0	6		0.1	Clouds and haze on horizon. ○
9	702	21.2	21.3	...	0.1	0.0			0.1	Id. on E. horizon. ○
10	702	19.8	19.8	...	0.0	0.0			0.1	Id. ○
11	694	23.2	22.8	0.4	0.0	0.0			2.5	Cirrous clouds to E. ○
12	685	21.7	21.2	0.5	0.1	0.1	18		0.8	Cirro-strati to E. ○
13	29.678	20.4	19.8	0.6	0.1	0.1	23		0.8	Cirro-strati to E.; very clear.
14	674	18.8	18.7	...	0.1	0.0	20		5.0	Id.; clouding over very quickly. ○
15	655	21.3	20.7	0.6	0.1	0.2	20		6.5	Cirro-strati? ○
16	647	23.0	22.2	0.8	0.2	0.2	20		7.0	Cirrous clouds ; snow ⁰⁻⁵ ○
17	646	23.5	22.7	0.8	0.2	0.1	19		9.8	Id.; id. ○
18	652	24.2	23.1	1.1	0.2	0.2	18		9.8	Id. ○
19	664	24.4	23.2	1.2	0.3	0.3	16	— : 20 : —	9.5	Id. ○
20	678	23.6	22.5	1.1	0.3	0.2	14	— : 12 : —	5.0	Cirro-cumuli and cirro-stratus scud; cirro-strati. ○
21	689	24.8	23.4	1.4	0.1	0.1	17		0.5	Cirro-cumulo-strati to SE. ○
22	680	25.4	23.7	1.7	0.3	0.2	17		0.1	Id. and haze on E. horizon. ○
23	690	27.3	25.3	2.0	0.2	0.1	17		0.2	Patches of scud and haze. ○
13 0	677	29.2	25.7	3.5	0.2	0.2	19		0.2	Id. ○
1	656	30.6	26.7	3.9	0.4	0.3			0.5	Patches of scud and cirro-strati. ○
2	634	32.9	27.9	5.0	0.4	0.2	19		0.5	Patches of cirri to N. ○
3	605	34.2	28.7	5.5	0.5	0.2	26	27 : — : —	2.0	Id. ○
4	583	34.9	29.2	5.7	0.5	0.5	28	27 : — : —	1.0	Patches of cumuli; cirro-strati. ○
5	556	34.8	28.9	5.9	0.5	0.4	24		1.0	Cumuli and cirro-strati on horizon. ○
6	538	33.5	28.9	4.6	0.5	0.3	22	— : 30 : —	3.0	Loose cirro-strati and cirro-cumuli; cum.-str. to NE. ○
7	526	30.7	27.0	3.7	0.3	0.2	20	— : 30 : —	6.0?	Id. and cirrus haze. ○
8	522	29.2	26.1	3.1	0.3	0.3	20		3.5	Cirro-strati; thin cirri; lunar corona. ○
9	511	28.0	25.0	3.0	0.5	0.4	20		0.8	Cirri. ○
10	500	27.1	24.6	2.5	0.5	0.3	20		0.0	Hazy on E. horizon? ○

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

March 12^d 19^h. Ice removed from the vane of the anemometer.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	
d. h. 13 11	in. 29.488	° 26.5	° 24.0	° 2.5	0.2	0.2	24		0—10.	Sheets of thin filmy cirri, chiefly to N.
12	482	26.5	24.3	2.2	0.5	0.2	24		0.5	Patches and sheets of thin cirri.
13	29.488	25.6	23.9	1.7	0.2	0.1	20		2.0	Thin cirri and haze over the sky.
14	485	26.3	24.9	1.4	...	0.4	26		2.5	Thick clouds to E.; haze; stars dim.
15	480	26.7	25.2	1.5	0.8	0.7	31		2.0	Cirro-strati and cirrus clouds.
16	481	27.0	25.3	1.7	1.4	0.6	31		0.5	Cirro-strati near horizon.
17	496	26.0	24.2	1.8	0.8	0.3	30		0.2	Cirro-strati to E.
18	500	24.0	22.6	1.4	0.5	0.2	28		0.8	Cirro-strati and cumulo-strati to E.
19	500	22.8	21.6	1.2	0.4	0.3	29	— : 31 : —	0.8	Cirro-strati; coloured to ESE.; purplish to WNW.
20	491	25.3	23.1	2.2	0.5	0.4	28	— : 31 : —	1.0	Id.
21	479	26.4	24.2	2.2	0.5	0.5	25	— : 28 : —	2.0	Id.; cirro-strati.
22	475	28.8	25.8	3.0	0.6	0.5	24	— : 25 : —	10.0	Wavy cirro-strati and cirro-strati scud; cumulus on SE. horizon.
23	484	28.9	26.4	2.5	0.4	0.3	18	— : 8 : —	10.0	Cirro-stratus scud; particles of fine hail.
14 0	489	31.5	28.9	2.6	0.4	0.2	12	— : 9 : —	2.5	Id.; cirro-strati; nimbi.
1	511	35.2	32.2	3.0	0.2	0.2	10	— : 10 : —	8.5	Id.; id.; loose scud; cirro-mass.
2	511	30.9	28.9	2.0	0.4	0.3	4	11 : — : 6	7.0	Scud; woolly cirri; mass of cirri; cirro-strati; cumulo-strati.
3	518	34.3	31.0	3.3	0.4	0.5	10	11 : 9 : —	9.0	Id.; cirro-stratus scud; flakes of snow.
4	526	32.7	29.8	2.9	1.2	1.2	8	11 : — : —	9.9	Id.; cirro-cumuli; cirrus-mass; stormy-looking.
5	547	29.2	28.2	1.0	1.9	1.6	8	9 : — : —	10.0	Id.; cirrus clouds; snow ¹
6	579	28.3	26.7	1.6	2.2	2.0	8	9 : — : —	10.0	Id.; id.; id.
7	617	27.7	25.3	2.4	2.9	1.8	7		10.0	Nearly homogeneous.
8	638	27.2	24.6	2.6	2.0	1.2	7		9.7	Cirro-stratus scud.
9	656	26.0	23.6	2.4	2.1	0.6	5		0.1	Clear; one or two patches of cirri.
10	664	25.3	22.3	3.0	1.3	0.6	4	6 : — : —	1.0	Scud.
11	663	25.5	22.7	2.8	0.5	0.3	2	4 : — : —	4.0	Scud; sky milky to N. and E.
12	675	23.8	21.3	2.5	0.5	0.3	2		5.0	Cirro-cumulo-strati; bank to W.
13	29.679	24.0	21.8	2.2	0.6	0.5	2		8.0	Cirro-cumulo-strati.
14	685	23.8	22.8	1.0	0.6	0.3	4		9.5	Scud; shower of snow since last observation.
15	682	23.0	22.7	0.3	0.7	0.2	2		9.5	Id.
16	693	23.0	22.8	0.2	0.2	0.1	2		10.0	Id.; snow ₅
17	699	19.6	19.0	0.6	0.1	0.3	6		3.5	Id.
18	715	22.0	21.8	0.2	0.3	0.2	4		10.0	Id.; snow ³
19	723	23.0	22.4	0.6	0.3	0.3	6	6 : — : —	9.8	Id.; cirrus haze; snow ceasing.
20	735	21.6	21.1	0.5	0.2	0.0	30	6 : — : —	3.0	Id.; cirro-stratus scud.
21	755	18.8	18.5	0.3	0.1	0.0	0	— : — : 6	9.0	Cirrus-like scud; loose cirro-cumuli; snow ¹
22	758	25.0	24.3	0.7	0.6	0.1	4	7 : — : —	9.8	Scud; loose ragged cumuli; haze; snow occasionally.
23	763	25.6	24.6	1.0	0.1	0.1	3		3.0	Loose cumulo-strati around; fine blue sky.
15 0	769	31.6	29.8	1.8	0.6	0.4	1	6 : — : —	7.0	Scud and loose cumuli; passing showers of snow.
1	763	30.6	28.9	1.7	0.6	0.5	1		7.0	Id.
2	756	28.6	27.6	1.0	0.5	0.2	2		10.0	Shower of snow ⁴
3	759	28.7	27.0	1.7	0.1	0.1	8	9 : — : —	3.0	Scud; cumulo-strati and nimbi.
4	764	30.7	28.3	2.4	0.1	0.4	6	10 : — : —	3.0	Thin fleecy scud, rather high; nimbi; shower of snow ¹
5	770	25.9	24.4	1.5	0.6	0.2	7	10 : — : —	4.0	As before; shower to E.
6	789	25.3	24.7	0.6	0.2	0.3	8	10 : — : —	8.0	Id.; nimbi.
7	802	22.8	22.2	0.6	0.2	0.1	2	10 : — : —	5.0	Id.; id.; haze.
8	821	21.3	20.6	0.7	0.2	0.1	4		8.0	Scud.
9	821	21.8	20.8	1.0	0.1	0.1	6		1.5	Id.
10	826	21.4	20.2	1.2	0.2	0.0		— : 6 : —	1.0	Cirro-cumulus scud.
11	837	18.6	17.9	0.7	0.0	0.0			2.5	Id.
12	831	17.2	17.0	0.2	0.0	0.0	10		9.5	Id.
16 0	29.726	30.7	28.6	2.1	0.9	0.3	4		Sunday—Overcast; light showers of snow occasionally.
13	29.604	26.0	25.4	0.6	0.8	0.2	4		10.0	Scud; flakes of snow.
14	597	26.2	25.0	1.2	0.2	0.2	28		10.0	Id.
15	583	26.6	25.7	0.9	0.5	0.5	28		10.0	Id.; id.
16	572	26.2	25.1	1.1	0.8	0.5	29		10.0	Id.

March 13^d 15^h. The vane of the anemometer found frozen up, with the opening towards SW., ice removed; the wind commenced to blow [about 14^h 20^m.]

March 13^d 22^h. Observation made at 22^h 5^m.

March 14^d. Flocks of lapwings, plovers, and herring-gulls, moving westward: particles of snow at 2^h.

March 14^d 21^h. Observation made at 21^h 6^m.

March 14^d 23^h. Snow 4 inches deep.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From		
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
16 17	29.551	25.9	25.0	0.9	0.7	0.7	29	10.0	Scud.
18	549	25.4	24.4	1.0	0.7	0.5	28	9.9	Streak of sky on NE. horizon.
19	541	26.0	25.0	1.0	0.8	0.8	26	10.0	Dense homogeneous cirro-strati.
20	550	27.0	24.3	2.7	0.4	0.2	22	10.0	Id.
21	550	29.7	26.4	3.3	0.4	0.2	24	10.0	Cirrus mass; Cirro-strati on horizon; solar halo. Θ
22	552	32.7	29.0	3.7	0.2	0.1	24	10.0	Dense irregular cirro-strati; bluish to N.
23	547	35.0	30.3	4.7	0.4	0.4	22	10.0	Id.
17 0	544	37.2	31.6	5.6	0.6	0.4	20	9.8	Nearly homogeneous mass of cirro-strati; sky to N.
1	543	37.1	31.7	5.4	0.3	0.3	22	9.5	Id.; id.
2	533	38.1	32.1	6.0	0.3	0.1	22	9.8	Cirro-strati, breaking in zenith.
3	523	39.1	33.0	6.1	0.2	0.1	26	9.8	Id.
4	516	37.9	32.4	5.5	0.4	0.4	27	9.9	Id.
5	517	35.4	32.1	3.3	0.4	0.2	26	9.7	Id.
6	517	36.8	32.2	4.6	0.3	0.2	24	9.9	Cirro-strati; cirrus mass.
7	520	34.2	30.4	3.8	0.1	0.2	26	9.5	Id.; id.; sky to NW. ⚡
8	527	32.0	29.4	2.6	0.2	0.1	26	9.0	Cirro-stratus scud; cirro-strati. ⚡
9	530	31.2	29.6	1.6	0.1	0.1	23	9.0	Cirro-cumulo-strati; lunar corona. ⚡
10	533	30.8	28.2	2.6	0.1	0.1	18	10.0	Cirro-strati.
11	536	29.7	27.6	2.1	0.1	0.1	19	10.0	Id.?
12	537	30.5	28.5	2.0	0.0	0.0	20	10.0	Id.
13	29.537	29.9	28.6	1.3	0.0	0.0	18	10.0	Cirro-strati.
14	537	29.7	28.7	1.0	0.0	0.0	18	10.0	Id.
15	529	29.8	28.5	1.3	0.0	0.0	17	10.0	Mass of cirro-stratus.
16	523	29.9	28.7	1.2	0.0	0.0	18	10.0	As before.
17	516	30.4	28.7	1.7	0.0	0.0	22	10.0	Darker.
18	510	30.3	28.7	1.6	0.0	0.0	18	10.0	Nearly homogeneous mass of cirro-stratus.
19	508	29.4	28.5	0.9	0.0	0.0	20	10.0	Id.
20	514	31.2	29.7	1.5	0.1	0.0	20	10.0	Cirro-strati and cirrus mass.
21	515	33.6	31.3	2.3	0.1	0.1	18	10.0	Dense cirro-strati; rather hazy.
22	518	36.3	32.8	3.5	0.1	0.1	25	10.0	Id.
23	516	40.0	35.4	4.6	0.1	0.1	22	10.0	Id.
18 0	511	41.2	36.2	5.0	0.2	0.1	22	9.0	Cirro-cumulo-strati; cirro-strati; haze.
1	502	39.7	33.6	6.1	0.2	0.2	— : 1 : —	2.0	Id. to S.
2	493	40.2	33.0	7.2	0.3	0.2	25	0.5	Id.; cirro-strati; haze. ○
3	477	40.5	33.2	7.3	0.2	0.2	25	0.5	Id.; id. on horizon. ○
4	463	41.7	34.2	7.5	0.2	0.2	23	3.0	Woolly cirro-cumuli; haze. ○
5	448	42.3	35.2	7.1	0.2	0.2	22	2.5	Cirro-stratus scud; woolly cirri; cirro-strati. ○
6	446	40.2	35.4	4.8	0.2	0.1	26	7.5	Loose cirro-cumulo-strati; very hazy atmosphere. ○
7	442	37.7	34.1	3.6	0.1	0.0	20	9.5	Scud; cirro-stratus scud; showers to N.?
8	459	37.0	34.7	2.3	1.3	0.1	28	9.5	Id.; id.; rain ⁰⁻² ; sky to NW. ○
9	478	35.1	33.6	1.5	0.1	0.0	— : 30 : —	4.5	Cirro-cumulous scud. ○
10	487	31.7	30.6	1.1	0.0	0.0	30	2.0	Id.; aurora? ○
11	495	31.2	30.0	1.2	0.0	0.0	1	2.0	Scud or cir.-str. to S.; bands of cir. to N.; faint halo. ○
12	500	31.0	29.0	2.0	0.0	0.0	28	0.5	Linear cirri scattered over the sky; halo. ○
13	29.500	28.5	27.6	0.9	0.0	0.0	26	0.5	Cirri to SE. ○
14	498	29.4	28.0	1.4	0.3	0.3	28	0.3	Clouds to NW. and SE.; clear. ○
15	497	29.6	28.4	1.2	0.4	0.1	28	4.5 v.	Cirro-cumulo-strati. ○
16	495	30.7	28.8	1.9	0.3	0.3	28	6.5	Scud. ○
17	505	29.6	27.9	1.7	0.4	0.3	28	0.7	Clouds on E. horizon.
18	516	27.9	26.6	1.3	0.4	0.1	28	0.3	Scud, &c., on E. horizon.
19	532	28.3	26.7	1.6	0.5	0.3	29	1.0	Thin cir.-cum.-str.; cum. and cir.-str. scud on horizon.
20	542	29.0	27.3	1.7	0.5	0.7	30	1.0	Cirro-stratus scud; thin cirro-cumuli. ○
21	562	32.0	29.8	2.2	1.2	1.2	31	5.0	Thin cirro-cumuli; cirro-strati. ○
22	576	33.4	30.9	2.5	1.3	1.3	0	9.8	Scud and cirro-cumulo-strati; flakes of snow.
23	592	34.0	31.3	2.7	1.8	1.5	2	9.9	Id.
19 0	612	33.5	30.4	3.1	2.0	1.3	1	9.2	Scud; loose cumuli; cirro-cumulo-strati.

March 17^d 5^h. The observation of the barometer was omitted, the reading given is a mean of the preceding and succeeding observations.

March 17^d 19^h. Kelso town bell (4 miles distant) heard very distinctly.

March 18^d 6^h. Brownish atmospheric haze, very dense and even electric-looking from NW. to E.: the sun projects a strong shadow of the clouds in the haze. 7^h. Scud, forming in ragged strings below the cirro-stratus scud, and falling in showers? to N.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	pt.	pt.
19	d. h.	in.	°	°	°					0—10.	Scud ; loose cumuli ; cirro-cumulo-strati.
	1	29.619	33.2	29.0	4.2	1.8	1.7	0	0 : 26 : —	5.0	○
	2	635	33.2	29.0	4.2	2.5	1.7	31	0 : — : —	6.5	Id. ; id. ; cirro-strati. ○
	3	645	33.3	29.0	4.3	2.3	0.7	1	0 : 29 : —	9.0	Id. ; id. ; cirro-cumulo-strati.
	4	653	33.4	29.1	4.3	1.3	0.9	0	30 : — : —	8.0	Id. ; id. ; id.
	5	671	30.9	27.5	3.4	1.1	0.8	31	31 : — : —	5.0	Id. ; cirro-cumulo-strati.
	6	682	31.7	27.6	4.1	1.2	1.1	31	31 : — : —	6.5	Id. ; id.
	7	711	30.7	27.4	3.3	0.9	0.5	31		9.0	Id. ; id.
	8	728	28.3	25.5	2.8	0.5	0.2	30		1.5	Id.)
	9	744	27.9	25.4	2.5	0.3	0.1	29	30 : — : —	9.8	Id. ; cirro-cumulo-strati, causing a lun. cor. at 9 ^h 30 ^m .
	10	753	27.6	25.3	2.3	0.7	0.6	29		2.0	Id. ; id. ; sky very clear.)
20	11	765	25.8	23.9	1.9	0.8	0.3	28		0.5	Cirro-stratus scud to E. ; auroral light.)
	12	773	25.8	23.8	2.0	0.3	0.3	29		0.5	Id. ; id.)
	13	29.783	25.5	23.0	2.5	0.3	0.3	29		0.5	Cirro-stratus scud to E. ; faint auroral light.)
	14	790	24.9	22.9	2.0	0.4	0.3	25		0.5)
	15	793	25.0	22.9	2.1	0.5	0.4	25		0.0)
	16	808	23.6	21.7	1.9	0.3	0.2	24		0.0)
	17	824	24.9	22.6	2.3	0.4	0.2	25		0.0)
	18	846	25.0	22.5	2.5	0.5	0.4	25		0.1	Clouds on E. horizon.
	19	865	25.0	22.5	2.5	0.9	0.5	28		0.1	Id.
	20	878	26.0	23.4	2.6	0.7	0.7	29		0.1	Cirro-strati on E. horizon.)
	21	896	29.0	26.0	3.0	1.0	0.9	29		0.1	Id.)
21	22	924	31.1	27.1	4.0	1.3	1.2	29		0.2	Cirro-strati to E.)
	23	942	32.7	28.0	4.7	1.2	0.5	29		0.3	Cirro-strati on E. horizon.)
	0	958	34.0	28.7	5.3	0.7	0.4	28		0.2	Id. on NE. horizon.)
	1	968	36.0	29.8	6.2	0.5	0.5	27		0.2	Cirro-strati and haze on E. horizon.)
	2	972	37.0	30.3	6.7	0.5	0.4	28		0.1	Cirri to S. ; haze or stratus on horizon.)
	3	971	37.2	30.8	6.4	0.4	0.3	0		0.2	Id. ; id.)
	4	969	37.5	31.0	6.5	0.2	0.0	4		0.1	Id. ; id.)
	5	29.987	37.9	32.2	5.7	0.2	0.2	7		0.0	Hazy on horizon.
	6	30.004	35.2	32.2	3.0	0.2	0.2	7		0.1	Cirro-cumulo-strati to W. ; haze.)
	7	025	30.6	28.1	2.5	0.1	0.0			0.8	Cirri ; cirro-strati ; much haze on horizon.)
	8	064	29.1	26.9	2.2	0.1	0.0	16		3.0	Thin cirri and cirrous haze over the sky.)
22	9	076	28.0	26.6	1.4	0.0	0.0	20		1.0	Sky very hazy.)
	10	078	28.5	27.0	1.5	0.1	0.0	20		4.0	Woolly and linear cirri and cirrous haze.)
	11	082	26.0	24.7	1.3	0.1	0.0	21	— : 29 : —	5.0	Thin and loose cirro-cumuli ; cirri in belts.*)
	12	084	27.6	25.9	1.7	0.2	0.2	20	— : 29 : —	9.0	Cirro-cumuli ; cirri.)
	13	30.084	27.2	25.6	1.6	0.2	0.1	21		0.8	Cirro-cumuli ; cirri.)
	14	096	25.4	24.2	1.2	0.1	0.1	22		0.0	Sky milky ; faint aurora.)
	15	082	22.8	22.3	0.5	0.1	0.0	20		1.0	Cirri ; faint aurora.)
	16	069	23.4	22.3	1.1	0.0	0.0	18		1.0	Bands of thin cirri to W. ; milky cirri.)
	17	056	23.0	22.3	0.7	0.2	0.2	19		2.0	Id. ; id.*)
	18	064	24.1	23.3	0.8	0.1	0.1	14	— : — : 30	4.0	Woolly cirri ; cirro-strati ; red vapours to E.)
	19	057	28.0	26.8	1.2	0.2	0.1	16	22 : — : —	8.5	Scud ; linear and woolly cirri, tinged red.)
23	20	060	32.0	30.7	1.3	0.1	0.2	24	22 : — : —	8.5	Id. ; id. ; parhelia seen at 20 ¹ / ₂ ^h . ○
	21	058	35.1	32.4	2.7	1.2	0.6	18	20 : — : —	10.0	Id. ; dense cirro-strati.)
	22	050	36.7	34.4	2.3	1.8	1.4	18	20 : — : —	10.0	Id. ; id.)
	23	045	39.2	36.3	2.9	1.7	1.3	18	20 : — : —	10.0	Id. ; id.)
	0	039	39.8	36.5	3.3	1.3	0.7	18	20 : — : —	10.0	Id. ; id.)
	1	033	40.1	36.4	3.7	1.8	1.3	20	20 : — : —	10.0	Id. ; dense homogeneous mass of cirro-strati and haze.)
	2	017	40.2	36.4	3.8	2.7	2.3	18	20 : — : —	10.0	Id. ; id.)
	3	30.005	39.7	36.4	3.3	4.0	1.5	19	20 : — : —	10.0	Id. ; id.)
24	4	29.971	39.8	37.2	2.6	2.5	2.1	18	20 : — : —	10.0	Id. ; id.)
	5	973	39.0	36.7	2.3	2.3	0.8	18	20 : — : —	10.0	Id. ; id.)
	6	942	39.7	37.8	1.9	2.6	1.6	18	19 : — : —	10.0	Id.)
	7	910	40.4	38.3	2.1	2.6	2.2	18	19 : — : —	10.0	Id.)
	8	907	41.3	39.5	1.8	3.3	3.7	18		10.0	Id.)

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motion of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0-10.	
21 9	29.864	42.7	40.3	1.4	5.3	4.0	18			10.0	Loose scud; woolly cirri; cirro-strati. ☰
10	847	43.4	41.2	2.2	5.3	4.6	18			10.0	Id.; id.
11	810	43.6	41.4	2.2	4.7	3.9	19	20 : 22 : —		9.9	Id.; cirro-strati; cirro-cumuli; cirrous haze.
12	802	44.4	42.2	2.2	5.0	3.4	20			9.8	As before; traces of a halo at 11 ^h .
13	29.779	45.2	43.1	2.1	4.8	4.1	19			9.9	Scud; loose cirro-strati; shower at 12 ^h 30 ^m .
14	797	44.6	42.7	1.9	6.2	4.6	20			10.0	Scud and cirro-strati; drops of rain.
15	822	44.1	42.9	1.2	4.2	0.6	19			10.0	Id.; rain ^{0.5}
16	798	45.7	44.4	1.3	2.6	1.5	19			10.0	Id.; id.
17	797	45.6	44.0	1.6	2.2	2.2	19			10.0	Id.
18	806	45.1	43.7	1.4	2.2	1.2	19			10.0	Id.
19	812	44.8	43.9	0.9	2.4	1.2	19	20 : 24 : —		9.8	Smoky scud; loose cirro-strati; cirro-cumulo-strati; cirri.
20	847	45.5	44.3	1.2	1.0	0.4	19	20 : — : —		10.0	Homogeneous scud; streaks to E.
21	852	45.9	44.8	1.1	0.8	0.4	21			10.0	Id.
22	846	47.7	46.4	1.3	0.5	0.3	18	— : 20 : —		10.0	Cirro-stratus scud; cirro-strati; cirrous mass.
23	835	48.2	46.7	1.5	0.9	0.7	18			10.0	Nearly homogeneous mass of scud.
22 0	811	49.9	48.1	1.8	1.3	2.0	18	20 : — : —		10.0	Scud; cirro-strati; drops of rain.
1	792	51.7	49.2	2.5	2.4	1.8	18	19 : — : —		10.0	Id.; id.
2	766	53.4	50.3	3.1	2.0	2.0	20	20 : — : —		10.0	Id.; id.; drops of rain.
3	743	51.8	49.4	2.4	3.6	3.1	20	20 : — : —		10.0	Id.; id.; id.
4	715	52.0	49.2	2.8	2.8	2.5	20	20 : — : —		10.0	Smoky scud; cirro-strati; cirrous mass. ☺
5	692	50.8	48.7	2.1	4.1	2.5	21	20 : — : —		10.0	Id.; id.; id.
6	695	49.6	47.3	2.3	3.1	2.4	21	20 : — : —		10.0	Loose scud; homogeneous cirro-strati.
7	719	47.8	46.3	1.5	3.7	2.0	19	20 : — : —		10.0	Id.; id.
8	705	48.4	46.6	1.8	1.7	1.2	19			10.0	Id.; id.
9	697	49.6	47.9	1.7	1.8	1.4	18			9.0	Id.; cirri and cirro-strati.
10	692	48.9	47.6	1.3	2.1	1.4	18			9.5	Id.; id.
11	711	48.7	47.4	1.3	1.3	1.0	18	21 : 20 : —		9.9	Id., very low and quickly; woolly cirri; cirro-strati. ☰
12	731	49.2	47.8	1.4	0.8	1.0	17	21 : — : —		9.9	Id.; id.
23 1	29.755	53.7	46.0	7.7	2.9	1.1	22	— : 24 : —		{Sunday—A.M. Clear; with a few cumuli. P.M. Overcast with cirri and cumuli.
13	29.768	38.7	36.7	2.0	3.5	0.2	27	— : — : 25		6.0	Woolly cirri; linear cirri; aurora; halo. ☰
14	763	38.1	36.0	2.1	0.6	0.2	26	— : — : 25		3.0	Id.; cirri; cirro-strati on horizon; aurora. ☰
15	776	37.6	35.7	1.9	0.2	0.0	25	— : 26 : —		8.5	Cirro-cumulo-strati; cirro-strati; cirri; aurora? ☰
16	783	37.7	36.0	1.7	0.3	0.1	20	— : 26 : —		5.0	Id.
17	795	35.3	34.0	1.3	0.1	0.0	16	— : 26 : —		8.5	Id.
18	804	36.0	34.5	1.5	0.2	0.0	16	— : 26 : —		7.0	Id.
19	813	35.3	34.0	1.3	0.1	0.2	17			3.0	Scud; cirro-cumulo-strati to E.
20	833	36.7	35.0	1.7	0.1	0.2	22			0.5	Cirro-strati on E. horizon. ☺
21	847	41.9	38.4	3.5	0.3	0.1	23			0.3	Cirro-cumulo-strati to SE. ☺
22	858	43.8	39.7	4.1	0.3	0.2	23			0.2	Id.
23	869	46.4	39.8	6.6	0.7	0.6	28	29 : — : —		1.5	Loose cumuli; cumulo-strati. ☺
24 0	877	46.5	40.0	6.5	0.6	0.5	29	29 : — : —		5.0	Id.; id.
1	875	48.3	40.1	8.2	0.6	0.2				4.0	Id.
2	874	50.0	41.7	8.3	0.6	0.4	28	28 : — : —		6.5	Scud and loose cumuli.
3	852	48.2	41.2	7.0	0.5	0.5	28	26 : — : —		5.0	Cumuli.
4	848	49.7	42.7	7.0	0.9	0.3	28	26 : — : —		5.5	Id.; cirro-strati.
5	835	48.2	41.8	6.4	0.5	0.2	26	26 : — : —		6.5	Id.; cumulo-strati; cirro-strati.
6	838	47.8	41.7	6.1	0.5	0.5	22	— : 27 : —		2.5	Loose cirro-strati; cumulo-strati.
7	838	44.0	39.7	4.3	0.3	0.4	22			1.0	As before; cirri; red haze on horizon.
8	843	40.8	37.7	3.1	0.2	0.1	20	— : 24 : —		0.8	Patches of cirro-strati; hazy on horizon.
9	850	39.3	36.6	2.7	0.1	0.0	22			0.8	Id.
10	843	34.4	33.0	1.4	0.0	0.0				0.5	Cirri; sky greenish near the moon.
11	838	32.7	31.7	1.0	0.0	0.0				0.8	Id., radiating from SE. towards NW.
12	832	31.7	31.0	0.7	0.1	0.0	18			1.0	Id., scattered over the sky, chiefly to S. and SW. ☰
13	29.820	31.9	31.3	0.6	0.0	0.0	20			2.0	As before; portion of a lunar halo. ☰
14	812	28.9	28.6	0.3	0.0	0.0	17			4.0	Id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	Woolly cir. and cir.-str., chiefly to S.; lunar halo. ↗
24	15	29.796	30.3	30.0	0.3	0.0	0.0	18	4.0	Woolly and curled cir. over the sky; part of a halo. ↗
	16	767	28.6	28.7	...	0.0	0.0	18	7.0	Id. ↗
	17	758	27.1	27.9	...	0.0	0.0	20	4.0	Id. ; lying NNW. to SSE.; corona. ↗
	18	744	26.9	27.1	...	0.0	0.0	20	2.5	Id. ; lying NW. to SE.; pectinated cir. ↗
	19	722	26.7	27.2	...	0.0	0.0	20	4.5	Id. ; cir.-str.; part of a halo. ⊖
	20	714	31.0	30.6	0.4	0.0	0.0	— : — : 24	8.5	Woolly and linear cirri; cirro-strati; haze. ⊖
	21	690	33.9	32.2	1.7	0.0	0.1	20	— : — : 22	Loose cirro-strati; cirri; haze. ⊖
	22	669	38.6	36.6	2.0	0.2	0.0	30	— : 18 : 22	Id. ; cirro-cumulo-strati; haze. ⊖
	23	647	44.8	40.8	4.0	0.4	0.3	18	18 : 22 : —	Id. ; cirro-cumulo-strati; haze. ⊖
25	0	627	47.7	43.2	4.5	2.5	1.7	18	18 : 21 : —	Id.; id.; id.
	1	612	47.8	44.2	3.6	1.5	1.1	18	10.0	Scud; cirro-strati; cirri.
	2	579	48.3	45.4	2.9	2.1	1.3	20	9.5	Id.; cirro-cumulo-strati; cirri. ●
	3	565	48.5	45.2	3.3	2.0	1.3	19	10.0	Id.; cumuli; cirro-strati.
	4	571	46.0	45.0	1.0	1.5	0.5	20	10.0	Id.; Scotch mist.
	5	562	45.5	43.4	2.1	1.1	0.6	22	10.0	Id.; cirrus mass.
	6	560	44.2	42.9	1.3	0.6	0.4	19	9.9	Id.; dense cirro-strati; patch of sky to N.
	7	548	43.7	42.1	1.6	0.9	0.3	18	9.7	Cir.-str. scud; cir.-cum.-str.; red to E.; cum.-str. to N.
	8	540	42.9	41.0	1.9	0.5	0.1	20	9.7	Cirro-stratus scud; cirro-strati; cirri.
	9	544	41.7	39.7	2.0	0.4	0.1	20	9.8	Sky to NW.; lightish there.
	10	536	41.2	40.0	1.2	0.2	0.2	21	10.0	Overcast.
	11	532	41.2	40.1	1.1	0.5	0.1	22	10.0	Id.
	12	523	39.9	38.9	1.0	0.3	0.3	21	9.0	Id.; stars dim; lunar halo. ↗
	13	29.512	38.3	37.7	0.6	0.4	0.1	23	9.0	Clouds broken; stars dim; lunar halo. ↗
	14	503	37.3	36.0	1.3	0.2	0.1	26	3.0	Loose cirro-strati. ↗
	15	496	36.4	36.0	0.4	0.1	0.1	23	9.9	Id.
	16	486	35.3	34.9	0.4	0.1	0.0	18	9.9	Id.
	17	476	34.7	34.2	0.5	0.1	0.1	28	10.0	Scud. ↗
	18	461	34.0	33.4	0.6	0.1	0.1	22	1.5	Cirro-cumulo-strati; cirro-strati to E.
	19	458	34.9	34.1	0.8	0.6	0.4	22	1.5	Scud; cirro-strati and cirrus haze to E. ⊖
	20	458	35.7	35.0	0.7	0.3	0.1	23	3.5	Id.; a few cirro-strati to E. ⊖
	21	458	41.0	39.3	1.7	0.6	0.7	19	8.0	Cirro-stratus scud.
	22	460	42.4	40.0	2.4	0.8	0.6	19	5.0	Scud; loose cumuli. ⊖
	23	456	45.4	40.2	5.2	1.5	1.8	21	6.0	Detached cumuli. ⊖
26	0	455	46.0	39.6	6.4	1.8	1.3	20	1.5	Id. ⊖
	1	450	47.6	41.0	6.6	2.0	2.7	21	9.0	Scud and loose cumuli.
	2	444	49.2	41.7	7.5	1.9	1.4	22	3.5	Id. ⊖
	3	433	50.3	42.0	8.3	2.3	1.7	22	3.0	Id.; thick woo. cir., spreading out from NW. ⊖
	4	417	49.2	41.5	7.7	3.3	1.6	21	9.0	Id.; cirri and sheets of cirro-strati.
	5	390	46.2	42.1	4.1	2.4	2.6	19	9.8	Scud; thick cirrus haze; cirro-strati; halo.
	6	348	45.0	41.0	4.0	3.6	2.2	18	10.0	Id.; id.
	7	300	43.1	40.4	2.7	3.6	1.8	18	10.0	Id.; id.
	8	246	43.0	41.0	2.0	2.4	3.1	19	10.0	Id.; rain ^{1.5}
	9	169	42.8	41.2	1.6	4.0	4.3	18	10.0	Id.; dark; rain ¹
	10	103	44.5	42.8	1.7	5.2	4.6	19	4.0	Loose scud.
	11	091	43.7	42.5	1.2	4.8	1.6	21	0.5	Cirro-stratus scud (?) on N. and SE. horizon.*
	12	080	45.7	42.5	3.2	1.8	1.7	21	10.0	Scud; rain ^{0.5}
	13	29.084	44.7	42.1	2.6	6.3	1.4	22	5.0	Id.; cirro-stratus scud to N; aurora.?*
	14	105	44.4	40.4	4.0	3.3	3.6	24	1.0	Id.; sky milky; id.?
	15	119	43.4	40.4	3.0	2.9	2.4	24	0.8	Id. to S.; sky milky. ↗
	16	135	43.2	39.6	3.6	5.2	3.6	24	0.5	Id.; id.
	17	159	44.0	39.7	4.3	3.7	3.5	24	0.5	Id.
	18	175	44.0	40.0	4.0	4.3	3.0	25	0.8	Id.; streaks of cirri to E. ↗
	19	210	44.4	40.0	4.4	4.2	2.6	24	2.0	Id.; woolly cirri. ⊖
	20	234	45.2	40.8	4.4	3.1	2.3	24	2.0	Id.; id.; haze. ⊖
	21	259	46.9	41.8	5.1	4.7	3.2	25	4.0	Id.; mottled and woolly cirri. ⊖
	22	293	47.8	43.0	4.8	4.6	3.9	26	5.0	Id.; id. ⊖

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

HOURLY METEOROLOGICAL OBSERVATIONS, MARCH 26—29, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.			
d. h. 26 23	in. 29.341	49.2	43.4	5.8	4.1	3.1	26	pt. pt. pt.	0—10. Scud and loose cumuli; cirri.
27 0	346	50.9	44.2	6.7	2.9	2.8	24	26 : — : —	7.0 Id.; id.; cirro-strati.
1	366	52.9	45.4	7.5	3.1	2.0	22	24 : — : 26	7.0 Id.; woolly cirri; cirro-strati.
2	365	52.2	46.0	6.2	1.8	1.2	20	24 : — : —	9.9 Id.
3	351	51.7	46.2	5.5	1.8	1.5	20	24 : — : —	10.0 Id.; cirrous mass.
4	335	49.1	45.7	3.4	1.2	0.6	20	21 : — : —	10.0 Id.; id.; drops of rain.
5	299	48.0	46.0	2.0	0.8	0.7	22	23 : — : —	10.0 Scud; cirrous mass; solar halo.
6	262	48.5	46.4	2.1	2.8	1.7	18	24 : — : —	10.0 Id.; mass of cirro-strati.
7	231	48.8	47.5	1.3	2.1	1.3	19	24 : — : —	10.0 Electric-like scud; cirro-strati; showers.
8	199	50.5	48.1	2.4	2.8	3.2	19		10.0 Scud; cirrous mass.
9	184	49.7	47.3	2.4	3.3	2.6	20		10.0 Id.; id.; drops of rain.
10	134	49.3	47.2	2.1	3.8	3.9	19		10.0 Id.; id.; id.
11	078	49.0	46.7	2.3	4.3	4.2	19		9.5 Id.; id.; lightest drizzle.
12	032	48.1	46.1	2.0	5.5	4.7	20		10.0 Id.; id.; id.
13	29.010	47.5	46.0	1.5	4.7	2.2	19		10.0 Scud; cirrous mass; lightest drizzle.
14	28.958	47.7	46.1	1.6	3.6	3.6	19		9.9 Id.; id.; a shower at 13 ^h 30 ^m .
15	938	49.6	44.5	5.1	5.1	5.3	21	22 : — : —	7.0 Id.; cirro-cumulo-strati; shower ³ at 14 ^h 30 ^m .
16	923	47.9	42.1	5.8	5.7	4.2	22		9.8 Id.; id.
17	900	47.3	41.7	5.6	8.0	6.6	21	24 : — : —	9.7 Scud and loose cumuli.
18	873	45.7	41.7	4.0	6.3	5.4	21	24 : — : —	8.0 Thick scud and loose cumuli; sky slightly milky. ☈
19	842	45.9	40.9	5.0	7.6	7.1	21	24 : 25 : —	3.0 Scud; loose cum.; sky slightly milky; showers after 19 ^h .
20	841	45.0	41.2	3.8	9.6	5.5	22	23 : 25 : —	3.0 Id.; woolly cirro-strati; sky slightly milky. ☀
21	839	46.2	42.0	4.2	8.0	9.1	22	24 : — : —	4.0 Id.; id.; id.
22	855	45.7	41.7	4.0	13.3	7.2	23	24 : — : —	7.0 Id.; part of a rainbow.
23	885	48.4	41.9	6.5	9.8	9.7	23	24 : 25 : —	8.0 Id.; loose cumuli.
28 0	920	49.0	42.7	6.3	8.8	8.8	25 ^v	25 : — : —	6.0 Id.; cirrous haze to E.
1	28.967	48.2	42.4	5.8	9.2	6.2	24	25 : — : —	7.0 Id.; cirro-strati; drops of rain.
2	29.013	48.0	42.7	5.3	7.7	5.6	24	25 : — : —	4.5 Scud and loose cumuli; cirro-strati.
3	074	48.4	43.2	5.2	7.2	3.2	25	26 : 28 : —	6.0 Scud; loose cumuli; cirro-strati.
4	120	48.0	42.7	5.3	4.9	4.3	27	25 : 26 : —	4.0 Id.; id.; id.
5	166	46.3	42.4	3.9	2.9	1.6		27 : — : —	4.0 Id.; id.; nimbi; cirro-strati to N.
6	208	45.9	41.1	4.8	3.1	1.7	26	26 : 26 : —	2.0 Id.; id.; sheets of cirro-strati.
7	238	43.5	39.6	3.9	2.1	2.2	25		2.0 Masses of scud; cirro-strati and cirrus haze to N.
8	273	42.8	39.0	3.8	3.7	1.8	26		1.0 Cirro-strati to N., and patches scattered about.
9	296	41.9	38.8	3.1	2.4	1.6	26		0.8 Id.
10	331	41.8	38.3	3.5	2.6	0.8	25		0.7 Id.; faint auroral light.
11	353	41.2	38.2	3.0	1.6	1.6	28		1.0 Id.; id.
12	398	41.2	38.2	3.0	2.1	2.0	26		1.5 Cirro-strati on N. and E. horizon.
13	29.424	40.6	38.0	2.6	2.0	1.2	25		2.0 Clouds to E. and N.
14	455	40.0	37.6	2.4	1.8	1.5	27		0.5 Id. on E. horizon.
15	481	39.8	37.2	2.6	1.6	0.8	25		0.1 Thin clouds on E. horizon.
16	501	40.0	37.2	2.8	1.2	0.8	25		0.1 Id.
17	540	40.2	37.2	3.0	1.1	0.8	26		0.1 Cirro-strati on E. horizon.
18	585	39.7	36.4	3.3	0.5	1.1	26		0.2 Bank of cirro-strati on E. horizon.
19	625	40.5	37.3	3.2	1.1	0.7	27		0.3 Scud above Cheviot; patches of cir.-str. on E. hor.
20	661	42.1	38.7	3.4	0.7	0.7	24		0.2 Nearly as before.
21	699	45.1	40.7	4.4	1.3	2.1	27		0.3 Id.; thin streaks of cirri to E.
22	731	47.5	42.5	5.0	2.2	1.2	28	30 : — : —	0.5 Patches of scud and loose cum.; streaks of cir. to E.
23	773	48.4	40.5	7.9	3.3	3.3	28	29 : — : —	2.0 Detached cumuli.
29 0	808	50.5	42.6	7.9	3.6	2.1	30	28 : — : —	6.0 Cumuli; milky-looking near the sun.*
1	851	49.3	40.6	8.7	2.5	1.8	30		3.0 Id.
2	878	51.4	42.4	9.0	2.2	1.0	29	29 : — : —	3.5 Id.
3	888	51.9	42.1	9.8	2.2	1.8	29	29 : — : —	4.0 Id.
4	894	51.5	41.9	9.6	1.7	1.2	30	29 : — : —	2.0 Id.
5	924	51.7	42.3	9.4	1.4	0.9	30	29 : — : —	2.5 Id.
6	951	50.1	40.7	9.4	1.2	0.6	29		2.0 Id.; becoming slightly cirro-cumulous in some places.

March 27^d 10^h. The pressure of the wind would have been estimated at upwards of 7 lbs., in some cases; the anemometer has not shewn 4 lbs.; the index is frequently tugged back 2 lbs. in strong gusts, and the gust is over before it can mark. This is evidently due to the aperture in the vane being presented obliquely to the wind, which creates a vacuum in the tube.

March 28^d 0^h. The clouds seen blown into thin vapour or rain.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
29 7	29.972	45.3	39.4	5.9	0.3	0.2	29	— : 29 : —	2.0	Cirro-stratus scud.
8	29.988	41.8	37.8	4.0	0.1	0.1	30		2.0	Id.; cumuli to N.
9	30.025	42.0	38.3	3.7	0.1	0.0			6.0	Id.
10	032	41.2	38.0	3.2	0.0	0.0			2.0	Id.
11	036	36.4	35.2	1.2	0.0	0.0	17		0.5	Streaks of cirri with aurora to N.; sky milky.
12	30.042	35.0	33.8	1.2	0.1	0.0	17		1.0	Cirri radiating from NW by N.; faint aurora; sky hazy and milky.
30 0 ₁	29.823	42.8	40.8	2.0	0.5	0.2	13	16 : — : —	10.0	Sunday—Scud and mass of cirro-strati; rain throughout the day.
4 ₂	521				
13	29.540	40.8	38.2	2.6	4.1	3.0	28		2.5	Cirro-strati.
14	608	39.6	37.0	2.6	2.4	1.1	27		0.2	Id. on E. horizon.
15	653	39.4	36.6	2.8	1.8	0.2	27		0.1	Stars dim.
16	678	39.5	36.7	2.8	0.9	0.6	28		0.2	Cirro-strati to E.
17	719	39.7	36.7	3.0	1.8	0.7	28		0.2	Id.
18	762	39.0	36.5	2.5	0.9	0.5	24		0.7	Id.; scud to SE. and S.; thin cirri to E.
19	810	39.4	37.4	2.0	0.4	0.2	23	— : 28 : —	0.2	Cirro-stratus scud on Cheviot.
20	854	41.4	38.6	2.8	0.6	0.3	22	— : 28 : —	0.5	Id.; thin cirri to N.
21	883	43.5	39.4	4.1	0.6	0.6	22		0.2	Cirro-strati and cirri on E. horizon.
22	919	45.5	40.5	5.0	1.1	0.4	26	28 : — : —	0.5	Scud and haze.
23	940	47.7	41.3	6.4	1.1	0.4	23	29 : — : —	0.5	Scud; cirro-strati; haze.
31 0	938	50.0	43.0	7.0	0.6	0.6	28		0.5	Id.; id.; id.
1	938	51.7	43.2	8.5	0.4	0.2	31	29 : — : —	0.7	Id.; cirro-strati with mottled edges; haze.
2	945	51.8	43.8	8.0	0.2	0.1	31	— : — : 25	6.0	Woolly cirri; cirro-strati; patch of scud.
3	953	54.3	45.2	9.1	0.2	0.2	18	— : 25 : 24	5.0	Wo. and mot. cir.; lin. and curl. cir.; cum.-str.*
4	957	56.4	47.0	9.4	0.4	0.3	18	— : — : 26	8.0	Id.; id.
5	962	53.6	47.4	6.2	1.0	1.3	19	18 : 25 : —	5.0	Scud; loose cumuli; cumulo-strati; cir.-str.; cirri*.
6	967	50.2	45.3	4.9	1.3	0.8	18	— : 25 : —	7.0	Woolly cirri; cirro-cumuli; cirro-strati; cumuli to E.
7	972	46.6	43.3	3.3	0.9	0.2	19	— : 25 : —	7.0	Id.; id.; id.
8	975	42.6	40.4	2.2	0.5	0.2	18		5.0	Id.; cirro-strati and cirrus haze.
9	977	40.3	38.4	1.9	0.5	0.2	16		2.0	Cirro-strati and cirri.
10	978	38.4	36.6	1.8	0.7	0.1	17		0.5	Id.; stars dim.
11	982	35.2	34.0	1.2	0.2	0.1	20		1.5	Id. round horizon.
12	983	35.3	34.3	1.0	0.0	0.1	22		1.5	Id. id.
13	29.983	35.0	34.0	1.0	0.1	0.0			2.0	Cirro-strati and cirri round horizon.
14	977	33.5	33.0	0.5	0.0	0.0			3.0	Id., principally to E.
15	958	34.3	33.5	0.8	0.0	0.0			4.0	Id.; stars dim.
16	951	33.5	32.5	1.0	0.0	0.0			4.0	Id.; id.
17	943	32.8	32.2	0.6	0.0	0.0			4.5	Id.
18	933	31.8	31.4	0.4	0.1	0.0	20	— : 22 : —	9.0	Cirro-cumulo-strati; cirri; cirro-strati.
19	937	34.7	33.7	1.0	0.2	0.1	22	— : 22 : —	9.8	Woolly cirri; cir.-str.; cir.-cum.; cir.-haze; parhelia.*
20	939	37.6	36.3	1.3	0.1	0.0		— : 22 : —	9.7	Woolly cirri; cir.-str.; cir.-cum.; cir. haze; thick linear cirri to E.
21	946	39.5	38.4	1.1	0.1	0.0	16	— : 22 : —	6.0	Id.; id.; id.
22	943	48.0	44.0	4.0	0.6	0.6	18	— : 22 : —	4.0	Cir.-str. in sheets, woolly, mot., and lin.; patches of cir.-str. scud.
23	935	51.0	44.6	6.4	1.4	1.1	18	— : 22 : —	8.0	Cirro-cumuli; cirro-strati; woolly and linear cirri.
1 0	944	52.9	46.2	6.7	1.5	0.5	18	— : 22 : —	8.5	Cirro-cumulo-strati; cirro-strati; cirri.
1	926	53.7	45.0	8.7	1.4	1.5	18		8.5	Id.; id.; id.
2	932	54.7	45.4	9.3	1.7	0.8	20	— : 20 : —	9.0	Id.; id.; id.
3	926	53.7	45.8	7.9	1.3	0.7	20		9.0	Dense cirro-strati, becoming rather homogeneous.
4	907	54.6	47.1	7.5	1.1	1.4	18	— : 18 : —	9.7	Cirro-strati; cirro-cumulo-strati and cirri.
5	912	54.6	47.2	7.4	1.4	0.6	18	— : 20 : —	6.0	Id.; id. id.
6	911	51.9	45.2	6.7	1.3	0.6	18	— : 22 : —	4.5	Id.; id. id.
7	924	50.2	44.0	6.2	0.4	0.1	23	— : 22 : —	3.0	Id.; id.
8	929	45.0	41.4	3.6	0.2	0.0	25		2.5	Id.; id.
9	928	43.7	40.7	3.0	0.2	0.1	18		2.5	Id.
10	929	41.5	39.2	2.3	0.2	0.2	2		2.0	Id.; clouds broken.
11	935	40.8	38.8	2.0	0.2	0.0	12		7.0	Cirrus clouds.
12	936	39.6	38.3	1.3	0.0	0.0	24		7.0	Id.

March 29^d 12^h 25^m. Barometer 30.043.March 31^d 3^h—4^h. Portion of a halo.April 1^a. Swallows said to have been seen at Kelso.* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

HOURLY METEOROLOGICAL OBSERVATIONS, APRIL 1—3, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h.	10 m.			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
1 13	29.924	38.4	37.4	1.0	0.0	0.0			2.0
14	918	34.4	34.0	0.4	0.0	0.0			0.0
15	909	33.0	32.6	0.4	0.1	0.0	18		1.0
16	901	31.9	31.2	0.7	0.0	0.0	16		1.0
17	899	29.5	29.3	0.2	0.0	0.0	18		1.5
18	891	29.4	29.4	...	0.1	0.0	18		7.0
19	897	34.2	32.5	1.7	0.1	0.0			7.5
20	899	35.0	33.0	2.0	0.0	0.0	7		10.0
21	900	36.0	35.6	0.4	0.0	0.0	4		10.0
22	907	39.5	39.0	0.5	0.0	0.1	7		10.0
23	903	42.5	41.4	1.1	0.1	0.1	7	— : — : 24	6.0
2 0	892	47.9	44.9	3.0	0.2	0.1	4		6.0
1	893	53.1	45.7	7.4	0.2	0.2	1		8.0
2	880	56.7	49.3	7.4	0.1	0.0	15		8.0
3	864	61.0	51.0	10.0	0.7	0.6	16	— : — : 20	8.0
4	862	61.5	50.2	11.3	0.8	0.7	14	— : — : 22	7.5
5	857	60.3	49.3	11.0	0.6	0.3	13	— : — : 22	8.5
6	860	55.6	47.4	8.2	0.7	0.4	16	— : — : 24	8.0
7	862	50.2	44.3	5.9	0.8	0.5	13	— : — : 25	8.5
8	869	45.9	41.9	4.0	0.3	0.1	8		8.0
9	887	41.8	40.4	1.4	0.1	0.0	6		2.0
10	886	40.0	38.8	1.2	0.1	0.0	3		1.0
11	887	35.6	35.1	0.5	0.0	0.0	8		0.0
12	890	33.7	33.6	0.1	0.0	0.0			0.0
13	29.884	31.1	31.0	0.1	0.0	0.0	16		0.0
14	875	29.6	29.4	0.2	0.0	0.0			0.0
15	863	28.4	28.4	...	0.0	0.0			0.0
16	853	28.4	...	0.0	0.0	0.0	18		0.0?
17	854	28.3	28.6	...	0.0	0.0	26		0.0?
18	857	30.2	30.1	0.1	0.0	0.0			10.0
19	854	31.9	31.5	0.4	0.1	0.0	4		10.0
20	854	31.6	31.3	0.3	0.1	0.0	4		10.0
21	832	33.0	32.3	0.7	0.1	0.0	8		10.0
22	830	34.5	34.3	0.2	0.1	0.1	23		10.0
23	824	38.2	37.5	0.7	0.0	0.0	24		10.0
3 0	812	40.7	39.3	1.4	0.1	0.1	12	27 : — : —	5.0
1	791	43.4	41.4	2.0	0.1	0.0	7		1.0
2	758	49.9	45.7	4.2	0.0	0.0	4		0.5
3	742	55.3	48.3	7.0	0.1	0.1	7		0.5
4	720	59.2	49.5	9.7	0.1	0.0	4		0.5
5	709	60.3	49.8	10.5	0.2	0.2	8		0.5
6	703	57.4	50.1	7.3	0.5	0.5	4		2.0
7	709	48.4	45.3	3.1	0.5	0.2	6		2.5
8	720	43.5	41.9	1.6	0.2	0.1	4		2.5
9	726	40.0	39.5	0.5	0.0	0.0	4		1.0
10	728	35.7	35.6	0.1	0.1	0.0	12		1.0
11	739	33.2	33.0	0.2	0.0	0.0			1.0
12	755	34.0	33.8	0.2	0.1	0.0	4		10.0
13	29.760	34.4	34.6	0.1	0.0	0.0			10.0
14	784	33.6	33.3	0.3	0.5	0.4	4		10.0
15	790	34.9	34.7	0.2	0.4	0.3	6		10.0
16	793	35.2	35.0	0.2	0.3	0.1	2		10.0
17	795	36.2	36.0	0.2	0.1	0.1	4		10.0
18	799	35.2	34.8	0.4	0.2	0.1	4		10.0
19	811	35.6	35.1	0.5	0.1	0.2	0		10.0
20	833	36.1	35.8	0.3	0.5	0.1	31		10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h.	10 m.	From			
d. h. 3 21	in. 29.839	38.0	37.4	0.6	0.1	0.0	20	pt. pt. pt.	0—10.	Misty scud ; slight mist (indistinct at 3 miles.)
22	852	40.0	39.2	0.8	0.0	0.0	6	4 : — : —	10.0	Id.; id.
23	860	40.8	39.6	1.2	0.3	0.1	6		10.0	Id.; id.
4 0	865	42.8	40.6	2.2	0.2	0.1	6	5 : — : —	10.0	Id.; rather homogeneous ; fog on horizon.
1	872	42.5	40.5	2.0	0.2	0.1	6		10.0	Id.; id.; id.
2	876	42.6	41.1	1.5	0.4	0.2	4		10.0	Id.; id.; id.
3	872	43.1	41.3	1.8	0.3	0.2	4		10.0	Id.; id.; id.
4	871	43.6	42.0	1.6	0.2	0.1	5		10.0	Id.; id.; id.
5	877	43.3	41.6	1.7	0.3	0.1	2	6 : — : —	10.0	Id.; id.; id.
6	889	42.3	40.5	1.8	0.2	0.1	5		10.0	Id.; id.; id.
7	895	41.4	39.8	1.6	0.3	0.2	9		10.0	Id.; haze on horizon.
8	909	40.8	39.4	1.4	0.2	0.2	7		10.0	Id.
9	922	40.2	39.1	1.1	0.2	0.1	7		10.0	Id.
10	933	40.0	38.9	1.1	0.1	0.1	4		10.0	Dark.
11	934	39.8	38.9	0.9	0.1	0.0	9		10.0	Id.
12	937	39.1	38.4	0.7	0.1	0.1	4		10.0	Id.
13	29.934	39.0	38.2	0.8	0.0	0.0	6		10.0	Dark.
14	938	38.7	38.0	0.7	0.2	0.1	16		10.0	Id.
15	924	38.4	37.7	0.7	0.0	0.0	16		10.0	Id.; lightest rain.
16	923	38.0	37.2	0.8	0.0	0.0	16		10.0	Id.
17	921	38.0	37.0	1.0	0.1	0.0	10		10.0	Lighter.
18	919	37.9	36.9	1.0	0.0	0.0	13	14 : — : —	10.0	Nearly homogeneous scud.
19	922	37.6	36.6	1.0	0.0	0.1	13		10.0	Id.
20	924	38.1	37.0	1.1	0.1	0.0	14		10.0	Id.
21	923	38.0	36.9	1.1	0.1	0.0	4		10.0	Id.
22	924	37.9	36.6	1.3	0.1	0.0	4		10.0	Id.
23	924	40.9	39.0	1.9	0.2	0.1	12		10.0	Id.
5 0	918	41.6	39.0	2.6	0.2	0.2	6	— : 14 : —	6.0	Cirro-stratus scud ; cirro-strati ; cirrous haze.
1	912	45.7	42.3	3.4	0.2	0.1	28	— : 12 : —	4.0	Cirro-cumulous scud ; woolly cirri ; haze.
2	902	47.8	43.7	4.1	0.1	0.0	12		3.0	Woolly cirri ; cirro-strati ; haze.
3	883	50.5	45.2	5.3	0.1	0.0	6		7.0	Loose cirri ; cirro-strati ; mottled cirri ; small cirro-cumulus.
4	874	51.6	45.6	6.0	0.5	0.5	7		7.5	As before ; cirro-cumulus larger ; linear cirri radiating from NW.
5	868	50.7	45.0	5.7	0.4	0.2	2		3.0	Id.
6	875	48.0	42.9	5.1	0.4	0.3	2	— : — : 0	2.5	Woolly and linear cirri ; hazy on horizon.
7	878	44.0	40.7	3.3	0.4	0.3	2		2.0	Mottled, linear, and tuft cirri ; id.*
8	889	41.1	38.9	2.2	0.3	0.0	3		1.5	Cirri and haze ; purple to W.
9	902	36.9	36.0	0.9	0.1	0.0	3		0.5	Haze on horizon.
10	900	33.0	32.7	0.3	0.1	0.0	20		0.0	Clear.
11	902	31.5	31.1	0.4	0.1	0.0	20		0.0	Id.
12	905	30.3	30.2	0.1	0.0	0.0			0.0	Id.
6 0 ₂ 2 ₃ ₄	29.810 ... 57.3	51.0 44.5 12.8	42.2	8.8 ...	0.2 ...	0.0 ...			0.0	Sunday—Beautiful day ; cloudless. Light wind sprung up about 5 ^h .
13	29.792	39.4	39.1	0.3	0.7	0.1	1		10.0	Dark ; lightest rain.
14	787	39.8	39.4	0.4	0.0	0.0			10.0	Id.; id.
15	781	40.3	39.9	0.4	0.0	0.0			10.0	Id.; id.
16	761	40.7	40.2	0.5	0.1	0.0			10.0	Id.; id.
17	754	41.0	40.4	0.6	0.0	0.0	17		10.0	Id.
18	747	40.9	40.4	0.5	0.0	0.0	20	— : 6 : —	10.0	Cirro-stratus scud ; cirrus mass.
19	743	41.6	40.7	0.9	0.1	0.0	22		10.0	Dense mass of thick scud and cirro-strati.
20	733	43.6	42.4	1.2	0.0	0.0	24	— : 4 : —	9.9	Cirro-stratus scud.
21	727	46.0	44.1	1.9	0.2	0.1	18	16 : 9 : —	9.0	Hazy scud ; loose cirri-cumuli ; very hazy.
22	719	49.7	46.6	3.1	0.1	0.0	14	10 : — : —	9.8	Scud ; loose woolly cirro-cumulo-strati.
23	705	51.2	47.2	4.0	0.1	0.0	20		10.0	Hazy scud and loose cirro-strati.
7 0	685	54.1	49.3	4.8	0.1	0.0	16	— : 16 : —	9.8	Cirro-stratus scud and cirro-cumulo-strati.
1	658	51.9	46.8	5.1	0.3	0.1	6	16 : — : —	3.0	Loose scud ; slight haze.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

April 5^d 6^h. Three swallows seen near the Observatory.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
7 2	29.626	53.0	47.4	5.6	0.2	0.1	4	20 : — : —	4.0
3	590	53.6	48.4	5.2	0.4	0.3	6	18 : — : —	3.5
4	553	53.7	48.3	5.4	0.5	0.5	4	19 : — : —	7.0
5	523	54.1	48.4	5.7	1.0	1.1	14	21 : — : —	4.0
6	508	52.0	47.3	4.7	1.3	1.3	15	20 : — : —	4.0
7	493	48.2	45.2	3.0	0.7	0.3	15		3.0
8	476	45.0	42.7	2.3	0.3	0.4	17		2.0
9	465	42.6	41.0	1.6	0.5	0.4	17		2.0
10	443	40.5	39.4	1.1	0.5	0.1	17		0.0
11	413	39.4	38.3	1.1	0.1	0.1	17		0.0
12	392	38.8	37.6	1.2	0.2	0.0			3.0
13	29.359	40.3	38.4	1.9	0.4	0.3	18		3.0
14	324	39.0	37.0	2.0	0.2	0.0			9.5
15	288	40.1	37.6	2.5	0.8	0.4	15		7.0
16	270	40.6	37.9	2.7	0.3	0.2	18		10.0
17	236	41.6	38.9	2.7	0.6	0.3	18		10.0
18	220	41.7	39.5	2.2	0.5	0.2	18	— : 20 : —	10.0
19	202	42.0	40.4	1.6	0.6	0.4	17	19 : — : 18	9.9
20	175	46.3	44.0	2.3	0.5	0.6	17	20 : 21 : —	9.9
21	163	47.1	44.7	2.4	1.0	0.5	18	20 : 16 : —	9.7
22	144	48.7	45.2	3.5	0.9	0.6	18	20 : — : —	9.9
23	129	47.3	43.3	4.0	1.1	0.7	21	23 : — : —	9.9
8 0	122	47.8	43.0	4.8	0.8	0.4	20	— : 23 : —	10.0
1	107	47.2	43.6	3.6	0.7	0.4	24	22 : — : —	10.0
2	077	48.7	45.4	3.3	0.7	0.7	20	23 : — : —	9.9
3	062	50.0	46.7	3.3	1.2	0.3	18	24 : — : —	9.5
4	043	49.0	45.0	4.0	1.1	1.2	18	23 : — : —	8.5
5	031	46.3	43.0	3.3	2.9	1.8	21	23 : — : —	8.0
6	041	44.8	41.7	3.1	2.2	1.6	19	— : 23 : —	7.5
7	033	42.8	40.0	2.8	1.0	0.5	21	— : 23 : —	1.8
8	027	40.3	38.1	2.2	0.5	0.3	20		0.8
9	028	38.4	37.0	1.4	0.9	0.4	18		0.5
10	019	35.9	34.6	1.3	0.3	0.0			0.1
11	009	35.2	34.1	1.1	0.0	0.0	22		0.2
12	005	35.0	34.2	0.8	0.4	0.1	21		0.2
13	29.000	32.8	32.1	0.7	0.3	0.0	10		0.0
14	28.984	32.0	31.6	0.4	0.2	0.0	28		0.2
15	964	32.4	31.8	0.6	0.2	0.1	18		0.0
16	944	32.1	31.3	0.8	0.1	0.1	20		0.1
17	929	29.8	29.4	0.4	0.0	0.0	20		0.4
18	927	28.6	28.5	0.1	0.1	0.0	16		0.5
19	927	31.6	31.2	0.4	0.2	0.0	8		0.2
20	924	34.5	34.0	0.5	0.0	0.0	4		0.5
21	918	38.0	36.7	1.3	0.0	0.0	16		0.8
22	906	40.8	39.2	1.6	0.1	0.1	17	— : 22 : —	3.0
23	900	44.7	41.7	3.0	0.1	0.1	15	8 : — : —	2.5
9 0	897	46.6	40.9	5.7	0.1	0.1	2	17 : — : —	3.5
1	889	47.7	41.3	6.4	0.1	0.1	10	10 : — : 21	4.0
2	877	48.4	42.0	6.4	0.2	0.2	6	16 : — : —	7.5
3	861	49.2	43.2	6.0	0.1	0.3	8	4 : — : —	7.5
4	860	48.3	42.0	6.3	0.8	0.3	7	4 : — : —	3.0
5	861	46.8	40.6	6.2	0.6	0.7			1.5
6	868	45.3	39.7	5.6	0.5	0.2	7		1.5
7	879	43.7	38.4	5.3	0.4	0.2	6		1.0
8	894	40.6	38.0	2.6	0.4	0.2	4		1.5
9	901	39.0	36.9	2.1	0.2	0.0	2		9.9

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

April 7^d 3^h. The clouds seem to be acted on by various currents.

April 8^d 18^h 8^{1/2}^m. The sun just above the horizon.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
9 10	28.904	41.0	38.6	2.4	0.3	0.3	4			10-0
11	906	40.1	38.1	2.0	0.3	0.4	3			10-0
12	912	39.2	37.3	1.9	0.4	0.4	1			10-0
13	28.911	38.9	37.2	1.7	0.7	0.4	31			10-0
14	908	39.0	37.6	1.4	0.7	0.8	31			10-0
15	906	38.0	36.6	1.4	1.2	0.4	0			10-0
16	907	38.2	36.0	2.2	0.8	0.5	0			10-0
17	908	37.8	36.0	1.8	0.9	0.5	0			10-0
18	910	38.0	36.0	2.0	0.5	1.3	0	2 : — : —		10-0
19	915	38.2	36.3	1.9	1.4	1.6	31	1 : — : —		10-0
20	919	38.0	36.8	1.2	1.5	1.1	31	1 : — : —		10-0
21	935	38.4	37.2	1.2	1.5	1.1	31	0 : — : —		10-0
22	943	42.0	39.7	2.3	1.0	0.9	2	4 : — : —		10-0
23	968	42.4	39.3	3.1	1.6	1.4	3	4 : — : —		9.5
10 0	28.997	40.3	39.3	1.0	2.2	2.0	3	4 : — : —		10-0
1	29.020	40.9	39.5	1.4	2.5	2.3	3	4 : — : —		10-0
2	041	42.0	39.6	2.4	3.0	2.2	4			10-0
3	057	42.7	39.3	3.4	4.0	2.9	3	4 : — : —		9.8
4	086	40.9	37.7	3.2	3.4	2.9	2	3 : — : —		9.8
5	105	40.9	37.5	3.4	3.5	3.4	2	3 : — : —		9.8
6	119	40.4	37.4	3.0	3.8	3.3	2	3 : — : —		10.0
7	140	40.3	37.8	2.5	4.1	3.0	1	3 : — : —		10.0
8	165	38.9	37.8	1.1	3.3	2.8	1	3 : — : —		10.0
9	192	39.8	37.7	2.1	2.2	2.2	2			10.0
10	203	40.1	37.8	2.3	2.1	2.0	1			10.0
11	225	39.8	36.8	3.0	3.2	2.5	0			9.0
12	236	39.8	37.3	2.5	2.6	1.9	1			10.0
13	29.256	39.6	37.3	2.3	2.6	1.4	1			As before.
14	266	39.3	36.5	2.8	3.2	2.4	1			Id.
15	281	38.6	35.3	3.3	2.9	1.7	1			Id.; sky in zenith.
16	289	39.0	35.6	3.4	3.1	1.9	2			Id.
17	310	38.0	35.7	2.3	2.3	1.5	1	3 : — : —		9.5
18	326	37.8	36.0	1.8	1.6	0.7	1	3 : — : —		10.0
19	350	38.0	36.3	1.7	2.0	1.2	1	3 : — : —		10.0
20	366	38.0	37.0	1.0	2.0	1.2	1	3 : — : —		9.5
21	368	40.0	38.3	1.7	1.1	1.7	2	2 : — : —		9.5
22	390	38.4	37.3	1.1	3.1	2.3	2	2 : 3 : —		8.0
23	410	42.1	39.0	3.1	3.0	1.8	1	2 : — : —		9.9
11 0	416	42.4	39.0	3.4	3.3	2.9	2	2 : — : —		9.5
1	425	43.2	39.0	4.2	3.7	1.5	1	2 : — : —		9.9
2	438	43.7	38.8	4.9	3.1	2.0	2	2 : — : —		9.9
3	435	43.6	39.3	4.3	3.2	2.0	1	2 : — : —		9.9
4	432	43.3	38.4	4.9	2.1	1.4	2	2 : — : —		9.8
5	460	42.8	38.7	4.1	1.8	0.9	2	2 : — : —		9.9
6	484	42.2	38.2	4.0	2.3	0.7	4	2 : 1 : —		9.5
7	492	41.3	37.3	4.0	0.5	0.3	3	— : 1 : —		8.0
8	508	39.4	36.3	3.1	0.5	0.2	1	— : 1 : —		2.5
9	509	36.0	34.2	1.8	0.2	0.1	2			0.5
10	515	34.0	32.9	1.1	0.1	0.1	24			0.2
11	512	33.1	32.1	1.0	0.0	0.0				0.0
12	513	31.4	30.9	0.5	0.1	0.0	22			0.0
13	29.509	31.4	30.8	0.6	0.1	0.0	22			0.1
14	506	29.0	28.6	0.4	0.1	0.0				0.3
15	508	30.7	30.0	0.7	0.2	0.0	20			7.5
16	502	30.0	29.5	0.5	0.0	0.0				3.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motion of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

HOURLY METEOROLOGICAL OBSERVATIONS, APRIL 11—14, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	pt.	pt.
d. h. 11 17	in. 29.493	30.7	30.0	0.7	0.0	0.0	22	— : 26 : —	9.0	Cirro-stratus scud.	
18	486	30.7	30.0	0.7	0.0	0.0	16	— : 27 : —	9.5	Id.; Cheviot covered with snow.	
19	495	32.0	31.3	0.7	0.1	0.0	24	—	10.0	Id.	
20	492	34.3	33.1	1.2	0.0	0.0	22	— : 26 : —	10.0	Id.	
21	481	38.7	36.5	2.2	0.2	0.2	22	— : 26 : —	10.0	Id.	
22	476	42.4	39.8	2.6	0.3	0.3	18	— : 26 : —	9.5	Id.	
23	468	45.0	41.5	3.5	0.7	0.6	20	— : 26 : —	9.5	Id.	Θ
12 0	461	46.8	41.6	5.2	0.7	0.8	20	24 : — : —	10.0	Scud; cirro-stratus scud.	
1	451	47.7	42.8	4.9	1.0	1.6	19	24 : — : —	10.0	Id.; id.	
2	437	49.1	43.5	5.6	1.0	0.5	21	25 : — : —	9.5	Id.; id.	
3	422	50.1	43.8	6.3	0.7	0.6	21	25 : — : 12	6.0	Id.; fine woolly cirri; cirro-strati; cumuli; haze.	
4	418	49.6	44.3	5.3	0.8	0.4	20	25 : — : —	9.9	Id.; cirro-strati; cumulo-strati; haze.	
5	424	47.7	42.4	5.3	0.8	0.6	21	—	9.9	Cirro-stratus scud; cirrus mass.	
6	433	45.7	42.5	3.2	1.1	0.5	19	23 : — : —	10.0	Scud; dense mass of cirro-strati; rain ^{0.5}	
7	436	44.1	42.5	1.6	0.7	0.1	19	22 : — : —	10.0	Id.; id.	
8	441	43.0	41.2	1.8	0.4	0.0	20	—	10.0	Id.; id.; clouds very red at sunset.	
9	446	41.2	39.9	1.3	0.1	0.0	20	—	8.0	Scud; cir-str.; cir. haze; coloured lunar corona.	▷
10	445	39.4	38.2	1.2	0.1	0.0	20	—	0.5	Thin cirri and cirrus haze.	▷
11	445	38.0	36.7	1.3	0.2	0.3	22	—	0.5	Id.	▷
12	443	37.2	36.0	1.2	0.3	0.2	22	—	0.5	Id.; lunar corona.	▷
13 0	29.134	46.4	44.5	1.9	2.6	1.0	21	—	10.0	Sunday. Showers throughout the day.	
8	28.924	—	—	—	—	
11	884	—	—	—	—	
13	28.914	34.4	33.8	0.6	1.1	0.4	29	—	5.0	Cirro-stratus scud; cirro-strati; cirri; vivid aurora.	▷
14	920	37.4	36.3	1.1	0.6	0.5	29	—	9.5	Cirro-str. scud? &c., radiating from SSW.; id.	
15	946	38.9	36.9	2.0	1.3	1.5	29	—	10.0	Id.; aurora.	
16	962	40.0	37.5	2.5	1.3	1.0	28	—	6.0	Scud and cirrus clouds; drops of rain; aurora.	
17	28.976	40.4	38.6	1.8	1.7	0.8	28	—	10.0	Id.; rain ^{0.5} ; rain ³ since 16 ^h 30 ^m .	
18	29.000	41.0	38.6	2.4	1.5	1.4	29	30 : — : 0	9.0	Scud; cirri; cirro-strati; cirrus haze.*	
19	017	42.3	39.3	3.0	2.2	3.0	29	31 : — : —	9.9	Id.	
20	037	44.0	40.5	3.5	3.1	2.9	29	31 : — : —	9.9	Id.; cirro-strati; cirrus mass.	
21	056	45.4	41.3	4.1	3.8	3.7	29	29 : — : —	10.0	Id.; dense mass of cirro-strati; rain ^{0.5}	
22	079	44.7	41.3	3.4	6.7	3.4	29	30 : — : —	10.0	Id.; id.; rain ^{0.5}	
23	123	43.5	41.2	2.3	5.1	4.7	31	30 : — : —	10.0	Id.; id.; rain ³	
14 0	171	40.6	39.7	0.9	3.0	2.4	31	30 : — : —	10.0	Id.; id.; rain ^{0.5}	
1	208	42.4	40.9	1.5	2.2	2.0	31	31 : — : —	10.0	Id.; rain ^{0.2}	
2	238	43.4	41.3	2.1	2.7	2.2	31	31 : — : —	10.0	Id.; —	
3	268	42.0	40.5	1.5	2.7	2.0	31	31 : — : —	9.8	Id.; cirro-strati; woolly cirri.	
4	304	43.5	40.4	3.1	2.6	1.8	0	0 : — : —	9.8	Id.; id.; id.; cumuli.	
5	339	43.9	40.4	3.5	4.5	3.7	0	0 : — : —	9.0	Id.; id.; id.; loose cumuli.	Θ
6	372	43.3	39.0	4.3	4.2	4.4	0	0 : — : —	9.0	Id.; cirro-str. scud; cirri; cirrus haze to NNW.	
7	416	43.2	39.5	3.7	5.2	4.0	0	0 : — : —	8.5	Id.; id.; woolly and mot. cir.; cir. haze.*	
8	467	40.9	37.7	3.2	3.7	1.5	0	0 : — : —	6.0?	Id.; cirro-strati; cirri.*	▷
9	498	41.3	37.7	3.6	2.4	2.1	31	—	8.0	Id.; id.; woolly cirro-cumuli.	
10	528	41.8	38.2	3.6	3.7	2.1	0	—	10.0	Id.; id.	
11	558	40.6	38.6	2.0	4.7	3.7	0	—	10.0	Id.; id.; rain ^{0.5}	
12	598	39.9	38.7	1.2	5.1	3.5	0	—	10.0	Id.; id.; rain ^{0.5}	
13	29.624	40.6	39.0	1.6	4.6	3.3	31	—	10.0	Scud; cirro-strati; rain ^{0.2}	
14	548	41.9	39.6	2.3	3.7	3.7	0	—	10.0	Id.; id.	
15	695	42.3	39.6	2.7	4.6	3.3	0	—	10.0	Id.; id.	
16	734	42.2	39.5	2.7	5.4	4.6	1	—	10.0	Id.; id.	
17	785	42.7	39.8	2.9	5.2	4.6	0	—	10.0	Id.; id.	
18	833	42.3	39.5	2.8	4.7	3.5	0	2 : — : —	10.0	Id.; id.	
19	870	42.6	40.0	2.6	4.1	5.2	1	2 : — : —	9.5	Id.; cirro-cumulo-strati; cirro-strati.	
20	904	43.4	40.4	3.0	4.4	3.2	2	2 : — : —	7.0	Id.; id.; id.	

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

April 13^d 0^h. Observation made at 23^h 50^m. 8^h. Observation made at 7^h 45^m. 11^h. Observation made at 11^h 10^m.

April 14^d 10^h. Observation made at 10^h 5^m.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

HOURLY METEOROLOGICAL OBSERVATIONS, APRIL 14—17, 1845.

175

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From 10 ^m	lbs.	lbs.	pt.	pt.
d. h.	in.	°	°	°						
14 21	29.947	44.2	41.2	3.0	4.5	3.1	1	2 : — : —	6.0	Scud ; cirro-cumulo-strati ; cirro-strati ; cirri. ☽
22	969	45.2	41.2	4.0	5.2	3.8	1	2 : — : —	6.5	Id. ; id. ; id. ☽
23	29.995	46.2	41.8	4.4	5.0	4.4	1	2 : — : —	8.5	Id. ; id. ☽
15 0	30.004	46.4	41.9	4.5	6.5	4.5	1	2 : — : —	6.0	Scud and loose cumuli. ☽
1	037	47.0	41.2	5.8	5.0	4.0	1	2 : — : —	5.0	Id. ☽
2	043	47.4	42.0	5.4	5.1	3.8	1	2 : — : —	5.5	Id. ☽
3	066	46.5	41.3	5.2	5.1	3.3	2	2 : — : —	7.0	Id. ☽
4	078	46.3	40.7	5.6	4.2	3.3	2	2 : — : —	3.0	Id. ☽
5	102	46.2	41.2	5.0	2.6	2.6	2	2 : — : —	2.0	Id. ☽
6	123	45.1	40.5	4.6	2.2	1.8	2	2 : — : —	2.5	Id. ☽
7	141	43.8	39.9	3.9	2.0	0.5	2		0.5	Id. ; cirro-strati and haze on hor. ☽
8	154	41.6	38.6	3.0	1.0	0.0	3		0.3	Cirro-strati and haze on horizon. ☽
9	188	39.3	37.6	1.7	0.4	0.0	31		0.2	Cirro-strati on horizon ; clear. ☽
10	201	39.7	38.3	1.4	0.1	0.1	31	2 : — : —	7.5	Scud. ☪
11	216	38.4	37.3	1.1	0.1	0.1	31	— : 2 : —	8.0	Large cirro-cumulo-strati ; milky to N. ☪
12	218	37.8	36.8	1.0	0.1	0.0	30	— : 2 : —	8.5	Id. ☪
13	30.216	35.4	34.9	0.5	0.0	0.0			2.0	Cirro-cumuli and cirro-strati on horizon. ☽
14	234	37.2	36.2	1.0	0.0	0.0			9.8	Scud.
15	231	37.2	35.7	1.5	0.1	0.1	30		2.0	Cirro-strati on horizon ; thin cirrous clouds to W.
16	247	35.9	34.8	1.1	0.0	0.1	30		3.0	Id. ; clouds to E. and SE.
17	244	33.1	32.6	0.5	0.1	0.1	22		0.2	Woolly and linear cirri radiating from NNE ; cir.-str.
18	254	33.4	33.0	0.4	0.1	0.1	20		0.5	As before ; cirri tinged red. [on horizon.
19	263	37.1	35.4	1.7	0.0	0.0	20	— : — : 2	2.0	Mottled and woolly cirri ; cirro-strati on horizon. ☽
20	270	38.3	36.8	1.5	0.1	0.0	22	— : — : 2	6.0	Woolly cirri ; cirro-strati.
21	270	40.9	39.0	1.9	0.1	0.0	4	2 : — : —	3.0	Patches of scud ; linear, woolly, and tufted cirri. ☽
22	271	42.9	40.7	2.2	0.2	0.0	4		2.5	Small patches of scud ; linear cirri ; cir.-str. ; cir. haze. ☽
23	269	45.3	41.2	4.1	0.2	0.0	0	— : — : 2	5.0	Cirri, chiefly tufted ; cirro-strati ; cirrous haze.
16 0	259	51.9	46.1	5.8	0.1	0.0	18		8.0	Woolly cirri and cirrous haze ; solar halo. ☽
1	267	52.1	46.3	5.8	0.2	0.1	11		8.0	Id.
2	264	52.7	46.3	6.4	0.2	0.1	11		2.5	Cirri ; cirro-strati ; patches of scud to N. ☽
3	250	53.5	47.0	6.5	0.2	0.1	8		0.5	Id. ; loose cumuli to N. ☽
4	245	54.3	46.9	7.4	0.2	0.1	6		0.5	Cirro-strati and patches of scud on horizon. ☽
5	238	55.0	48.0	7.0	0.3	0.2	4		0.8	Cirro-strati ; haze, and patches of scud on horizon. ☽
6	232	53.0	46.5	6.5	0.3	0.3	4		1.5	Id. ; id. ☽
7	233	51.0	45.8	5.2	0.3	0.1	4		7.5	Woolly cirri ; cirro-strati. ☽
8	255	47.2	43.6	3.6	0.2	0.0	4		5.0	Woolly cirri and cirrous haze ; cirro-strati. ☽
9	271	45.0	42.2	2.8	0.1	0.1	4		5.0	Id. ; lunar corona. ☽
10	271	43.4	41.4	2.0	0.2	0.1	5	— : 3 : —	8.5	Cirro-cumulo-strati ; cirrous haze ; cirro-strati. ☪
11	285	41.0	39.5	1.5	0.0	0.0		— : — : 4	8.0	Cirri ; halo-circle of light and corona.* ☪
12	283	37.4	36.9	0.5	0.0	0.0	17	— : — : 4	8.5	Woolly cirri and cirro-cumuli ; corona. ☪
13	30.284	38.5	37.9	0.6	0.0	0.0	17	— : — : 4	9.2	Woolly cirri and cirro-cumuli, getting thicker. ☪
14	284	36.8	36.3	0.5	0.1	0.0	17		2.0	Cirro-strati ; cirri.
15	285	39.4	38.7	0.7	0.0	0.0	20		10.0	Id. ; id.
16	279	40.5	39.6	0.9	0.0	0.0	19		10.0	Id. ; id.
17	272	40.9	39.5	1.4	0.1	0.1	20	— : 4 : —	10.0	Cirro-stratus scud.
18	275	41.3	39.9	1.4	0.1	0.0	24	— : 2 : —	10.0	Id.
19	276	42.3	41.0	1.3	0.1	0.0	25	— : 2 : —	10.0	Id.
20	289	44.3	42.3	2.0	0.1	0.0			10.0	Id. ; cirro-strati.
21	286	48.4	45.0	3.4	0.0	0.0	22	— : 2 : —	10.0	Thick cirro-strati.
22	285	48.2	44.0	4.2	0.2	0.1	26		10.0	Id.
23	273	51.3	46.6	4.7	0.1	0.1	17		10.0	Id.
17 0	264	57.0	51.5	5.5	0.1	0.1	14	— : 0 : —	10.0	Cirro-stratus scud ; cirro-strati ; cumuli.
1	244	59.8	53.0	6.8	0.1	0.1	7	— : 30 : —	10.0	Id. ; id. ●
2	233	58.0	51.4	6.6	0.2	0.1	7	— : 30 : —	9.5	Cirro-cumulo-strati ; cumuli ; haze. ☽
3	218	57.9	50.9	7.0	0.2	0.2	6	— : 30 : —	6.0	Id. ; id.
4	202	58.2	51.8	6.4	0.2	0.3	6	— : 30 : —	9.5	Id. ; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motion of the three strata of clouds, Sc. (scud), C.s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.		
17	d. h. 17 5	in. 30.187	58.2	51.5	6.7	0.3	0.3	5	— : 29 : —	6.0	Cirro-cumulo-strati; cirro-strati; haze. ☺
	6	172	56.8	50.1	6.7	0.3	0.1	7		0.5	Cirri; cirro-strati and haze on horizon. ☺
	7	167	56.0	50.4	5.6	0.2	0.1	5		1.0	Bank of cirro-strati to E.; cirri. ☺
	8	172	53.8	49.2	4.6	0.1	0.1	6	— : 1 : —	10.0	Cirro-stratus scud.
	9	167	51.7	48.2	3.5	0.2	0.1	4	— : 2 : —	9.0	Id.
	10	167	49.3	46.0	3.3	0.1	0.0	4	— : 2 : —	9.0	Cirro-cumulo-strati; lunar corona. ☰
	11	166	48.4	45.9	2.5	0.1	0.0	4	— : 2 : —	10.0	Cirro-strati; cirro-cumulo-strati. ☰
	12	164	48.4	46.3	2.1	0.0	0.0			10.0	Id.; id.
	13	30.155	47.6	45.3	2.3	0.0	0.0	4		10.0	Cirro-strati; cirro-cumulo-strati.
	14	143	47.8	45.7	2.1	0.0	0.0	0		10.0	Cirro-cumulo-str.; cirro-strati lying in ridges N. to S.
	15	138	48.0	46.0	2.0	0.0	0.0			10.0	Homogeneous.
18	16	126	47.2	45.9	1.3	0.0	0.0			9.8	Scud and cirro-strati broken up.
	17	120	47.5	45.8	1.7	0.0	0.0	2		10.0	Thick cirro-strati.
	18	121	47.7	46.1	1.6	0.0	0.0		— : 2 : —	10.0	Thick rippled cirro-strati.
	19	124	48.3	46.8	1.5	0.0	0.0	2		10.0	Id.
	20	122	50.2	48.1	2.1	0.1	0.0	4		10.0	Id.
	21	118	51.9	49.7	2.2	0.0	0.0	8		10.0	Cirro-strati; cirrous mass.
	22	119	52.4	49.8	2.6	0.1	0.1	6	— : 2 : —	10.0	Id.; id.
	23	122	52.3	49.3	3.0	0.2	0.3	5	— : 3 : —	10.0	
	0	120	54.2	51.2	3.0	0.3	0.2	7	— : 4 : —	10.0	Cirro-stratus scud.
	1	119	53.5	51.2	2.3	0.3	0.3	7	— : 5 : —	10.0	Id.
	2	111	54.3	51.4	2.9	0.6	0.5	5	5 : — : —	10.0	Scud.
19	3	107	54.0	51.0	3.0	0.6	0.4	5	5 : — : —	10.0	Id.
	4	093	53.6	51.0	2.6	0.4	0.3	7	5 : — : —	10.0	Id.
	5	089	53.6	51.4	2.2	0.4	0.3	4	5 : — : —	9.8	Misty scud breaking.
	6	083	51.3	49.9	1.4	0.3	0.2	6	5 : — : —	10.0	Scud; cirro-strati.
	7	090	48.3	47.4	0.9	0.8	0.4	4		10.0	Id.; id.; mist at 3 miles.
	8	105	44.6	44.2	0.4	0.6	0.2	4		10.0	Scotch mist at 1 mile.
	9	115	44.0	43.6	0.4	0.4	0.4	5		10.0	Id.; light drizzle.
	10	118	43.0	42.6	0.4	0.3	0.2	3		10.0	Scud; light drizzle.
	11	115	42.7	41.9	0.8	0.1	0.0	4		10.0	Id.
	12	111	42.4	41.0	1.4	0.1	0.1	3		10.0	Id.
	13	30.103	42.3	40.9	1.4	0.1	0.1	2		10.0	Scud.
	14	095	42.2	40.8	1.4	0.1	0.0	8		10.0	Id.
	15	084	41.9	40.6	1.3	0.1	0.0	4		10.0	Id.
20	16	075	41.4	40.3	1.1	0.2	0.0	0		10.0	Id.
	17	074	41.4	40.2	1.2	0.0	0.0	30		10.0	Cirro-stratus scud; cirro-strati; cirri.
	18	071	40.4	39.4	1.0	0.0	0.0	4	— : 2 : —	8.5	Cirro-cumuli; cirro-strati; woolly cirri; cirrous haze.
	19	077	41.3	40.0	1.3	0.1	0.0			10.0	Thick cirro-stratus scud and cirro-strati.
	20	080	44.1	42.6	1.5	0.0	0.0			10.0	Homogeneous mass of cirro-strati?; patches of scud.
	21	072	46.7	44.3	2.4	0.2	0.4	2	4 : — : —	9.0	Misty scud; cirro-stratus scud; slightly foggy. ☺
	22	071	48.3	45.1	3.2	0.4	0.2	5	4 : — : —	10.0	Thick scud.
	23	061	50.2	46.7	3.5	0.5	0.5	3	4 : — : —	9.0	Scud; loose cumuli. ☺
	0	054	52.0	47.9	4.1	0.6	0.5	4	4 : — : —	4.0	Id.; id.
	1	048	51.3	46.7	4.6	0.7	0.7	5		1.5	Id.; id.
	2	045	52.1	47.7	4.4	1.0	0.6	7		0.5	Patches of scud.
21	3	031	51.2	46.6	4.6	1.2	0.7	11		0.2	Id.
	4	023	51.4	47.0	4.4	1.0	0.6	7		0.1	Id.
	5	022	50.1	45.7	4.4	0.7	0.6	6		0.1	Cirro-strati and haze on horizon.
	6	020	48.8	45.0	3.8	0.9	0.4	4		0.1	Id.
	7	016	47.8	44.5	3.3	0.4	0.4	3		0.1	Id.
	8	021	45.0	43.0	2.0	0.4	0.2	2		0.1	Haze round horizon.
	9	025	42.0	40.8	1.2	0.3	0.2	3		0.1	Id.
	10	031	40.7	39.8	0.9	0.2	0.1	3		0.5	Cirro-strati and haze.
	11	035	39.8	39.3	0.5	0.3	0.1	4	5 : — : —	4.5	Misty scud moving rapidly; corona; milky to N. ☰
	12	039	40.5	39.9	0.6	0.1	0.0	3		10.0	Id., or fog at $\frac{1}{4}$ mile.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

HOURLY METEOROLOGICAL OBSERVATIONS, APRIL 20—22, 1845.

177

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C-s., Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h. 20 0 ₁ ₂	in. 30.039	53.2	49.6	3.6	0.3	0.2	6	pt. pt. pt.	0—10.	Sunday—Very clear all day; very faint streaks of cirrus seen near hor.
13	30.039	37.6	36.9	0.7	0.6	0.0			0.0	Very clear; heavy dew.
14	034	36.6	36.3	0.3	0.0	0.0	18		0.0	Id.; id.
15	028	36.6	36.4	0.2	0.0	0.0	18		0.1	Very thin cirri to SW.; corona.
16	025	34.2	33.9	0.3	0.0	0.0			0.2	Thin cirri to SW.; cirrous haze on E. horizon.
17	020	34.8	34.6	0.2	0.1	0.0			0.4	Cirri to E. and S.
18	020	35.5	35.0	0.5	0.0	0.0	20		0.4	Id.
19	024	39.2	37.6	1.6	0.1	0.1	20		0.5?	Thinnest cirrous streaks near horizon.
20	017	41.4	39.4	2.0	0.1	0.0	22		0.5?	Id.
21	008	46.5	43.2	3.3	0.1	0.0	24		0.1	Id.
22	30.004	52.3	47.2	5.1	0.1	0.0	30		0.2	Id.
23	29.999	57.2	49.8	7.4	0.1	0.0	14		0.2	Thinnest patches of scud to S.
21 0	982	60.0	51.0	9.0	0.1	0.1	8	6 : — : —	0.5	Patches of scud and cumuli to S.; cirrous streaks.
1	969	62.2	53.0	9.2	0.2	0.4	4		0.5	Id.; id.
2	955	64.3	55.0	9.3	0.4	0.5	6		0.2	Id.; haze on horizon.
3	931	64.2	53.0	11.2	0.6	0.6	7		0.5	Id.; id.
4	927	63.9	52.4	11.5	0.8	0.7	7		0.2	Streaks of haze.
5	920	63.3	51.9	11.4	0.5	0.3	9		0.2	Id.
6	915	62.9	50.7	12.2	0.4	0.5	7		0.5	Id.
7	911†	59.5	48.7	10.8	0.4	0.0	8		0.5	Vertebrated cirri.
8	920	53.7	46.7	7.0	0.1	0.0	12	— : — : 4	1.0	Woolly cirri; hazy on horizon.
9	921†	49.8	45.7	4.1	0.0	0.0			0.5	Id.; id.
10	919	44.0	41.6	2.4	0.0	0.0	14		0.0	Clear.
11	915	40.8	39.6	1.2	0.1	0.0	17		0.0	Id.
12	916	39.3	38.4	0.9	0.0	0.0	17		0.0	Id.
13	29.905	37.8	37.4	0.4	0.1	0.0	16		0.1	Thin cirrous clouds to SW.
14	897	36.3	36.1	0.2	0.0	0.0	17		0.1	Id.
15	898	34.4	34.1	0.3	0.0	0.0	18		0.1	Id.
16	897	33.9	33.8	0.1	0.1	0.0	18		0.2	Linear cirri on NE. horizon.
17	889	31.1	31.0	0.1	0.1	0.1	22		0.5	Id.; hazy.
18	894	35.8	34.6†	1.2	0.0	0.0	22		0.5	Id.; id.
19	893	36.3	35.9	0.4	0.2	0.0	22		0.0	Clear; slightly milky to E.
20	892	42.6	40.6	2.0	0.0	0.0	6		0.0	Id.
21	893	46.8	43.7†	3.1	0.1	0.0	6		0.2	Cirri and haze on horizon.
22	884	53.4	47.0	6.4	0.2	0.3	6		0.1	Cirro-strati on NE. horizon.
23	875	55.9	48.3	7.6	0.5	0.5	2		0.0	Clear.
22 0	861	59.4	50.2	9.2	0.8	0.4	6		0.0	Milky streaks.
1	850	60.8	50.4	10.4	0.8	0.7	7		0.0	Id. near horizon.
2	841	61.9	50.4	11.5	1.3	0.8	12		0.0	Clear.
3	828	62.0	50.7	11.3	1.2	1.0	10		0.0	Thin streaks of cirri to S.
4	809	61.3	49.9	11.4	0.2	0.8	8		0.0	Clear.
5	809	58.8	50.3	8.5	1.0	1.0	6		0.0	Id.
6	807	56.9	49.4†	7.5	1.0	0.8	6		0.0	Id.
7	806	55.7	47.6	8.1	0.6	0.4	6		0.1	Thin streaks of cirri to E.
8	811	51.0	46.7†	4.3	0.3	0.1	5		0.1	Id.
9	813	48.1	43.9	4.2	0.1	0.1	4		0.0	Haze round horizon.
10	811	45.3	42.4	2.9	0.1	0.1	6		0.0	Id.
11	815	40.4	39.4	1.0	0.0	0.0	24		0.0	Clear; greenish corona, 3° diameter.
12	812	37.0	36.5	0.5	0.0	0.0	24		0.0	Id.
13	29.804	35.4	35.0	0.4	0.0	0.0	24		0.0	Clear; faint corona.
14	797	34.2	33.9	0.3	0.0	0.0	20		0.0	Id.
15	796	34.0	33.8	0.2	0.2	0.0	22		0.0	Id.
16	778	33.8	33.6	0.2	0.1	0.0	20		0.2	Reddish vapours.
17	768	31.7	31.6	0.1	0.0	0.0	18		0.2	Id.*
18	768	33.6	33.3†	0.3	0.0	0.0	20		0.2	Haze.

April 20^d 17^h. α Lyrae was visible till 17^h 26^m; the sun's upper limb was above the horizon at 17^h 31^m.April 20^d 19^h. Observation made at 19^h 8^m.April 21^d 18^h. † Thermometers removed to the western side of the Observatory before 18^h. 21^d 21^h. † Returned after 21^h. 22^d 6^h. † Thermometers removed to the eastern side of the Observatory before 6^h. 22^d 8^h. † Returned after 8^h. See Introduction, p. liv.

* See additional Meteorological Notes after the Hourly Meteorological Observations.

HOURLY METEOROLOGICAL OBSERVATIONS, APRIL 22—25, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From	pt.	pt.	pt.	
d. h.	in.	°	°	°	Ibs.	Ibs.	pt.	pt.	pt.	pt.	0—10.
22 19	29.761	36.1	35.1	1.0	0.1	0.0	20				0.2
20	754	40.2	38.1	2.1	0.1	0.0					0.1
21	746	45.2	42.4	2.8					0.2
22	739	50.7	45.0	5.7	0.1	0.1	8				1.5
23	724	55.3	47.8	7.5	0.3	0.2	7				2.0
23 0	704	57.7	49.8	7.9	0.5	0.4	7				2.5
1	693	59.2	51.4	7.8	0.6	0.5	7	8 : — : 14			3.0
2	678	59.0	50.6	8.4	0.7	0.7	6	— : — : 14			2.5
3	663	57.8	49.2	8.6	1.0	0.7	7	— : — : 14			3.0
4	647	56.8	49.2	7.6	1.2	0.7	7	— : — : 14			5.0
5	628	57.2	49.2	8.0	0.7	0.5	5	— : — : 16			6.0
6	625	53.7	47.6	6.1	0.6	0.4	7	— : — : 14			8.0
7	624	51.3	46.6	4.7†	0.4	0.2	6	— : — : 14			7.0
8	624	45.4	42.7	2.7	0.4	0.2	7	— : — : 14			7.0
9	652	42.2	40.7	1.5	0.2	0.1	4				8.0
10	620	39.8	39.2	0.6	0.1	0.1	7				7.0
11	619	38.3	38.2	0.1	0.1	0.0					10.0
12	625	38.2	38.1	0.1	0.1	0.0					10.0
13	29.614	37.2	37.0	0.2	0.0	0.0					10.0
14	606	36.8	36.7	0.1	0.0	0.0					10.0
15	598	35.9	35.7	0.2	0.0	0.0					10.0
16	596	35.6	35.3	0.3	0.0	0.0					10.0
17	587	34.0	33.8	0.2	0.0	0.0	22				10.0
18	587	33.4	33.2	0.2	0.0	0.0	20				10.0
19	592	35.0	34.8	0.2	0.0	0.0					10.0
20	597	36.2	36.0	0.2	0.0	0.0	8				10.0
21	601	37.2	37.0	0.2	0.1	0.1	10				10.0
22	601	40.5	39.8	0.7	0.2	0.1	7				10.0
23	594	44.3	42.9	1.4	0.1	0.1	5	4 : 9 : —			9.9
24 0	584	46.0	43.8	2.2	0.3	0.2	4				3.0
1	566	50.6	46.2	4.4	0.3	0.3	4	— : — : 10			5.0
2	559	54.0	47.7	6.3	0.5	0.5	4				5.0
3	548	52.7	47.7	5.0	0.7	0.7	3				4.0
4	537	52.6	47.8	4.8	0.7	0.7	5				4.0
5	537	51.0	46.7	4.3	0.8	0.5	3				2.0
6	531	50.3	46.6	3.7	0.5	0.3	3				1.5
7	519	48.3	45.3	3.0	0.5	0.4	3				0.8
8	541	44.7	43.3	1.4	0.3	0.1	2				0.0
9	542	41.7	41.1	0.6	0.2	0.0	4				0.0
10	541	39.7	39.6	0.1	0.2	0.0	6				10.0
11	546	39.7	39.6	0.1	0.1	0.1	7				10.0
12	548	39.6	39.5	0.1	0.1	0.0					10.0
13	29.545	39.3	39.2	0.1	0.0	0.0					10.0
14	541	39.3	39.2	0.1	0.0	0.0					10.0
15	537	38.8	38.6	0.2	0.0	0.0	8				10.0
16	527	38.2	38.0	0.2	0.0	0.0	15				10.0
17	529	37.9	37.7	0.2	0.0	0.0					10.0
18	530	37.7	37.5	0.2	0.0	0.0	18				10.0
19	528	38.0	37.8	0.2	0.0	0.0	28				10.0
20	535	38.4	38.2	0.2	0.0	0.0	26				10.0
21	530	40.5	40.3	0.2	0.0	0.0	4				10.0
22	525	43.4	42.7	0.7	0.1	0.1	8				10.0
23	501	45.1	44.0	1.1	0.2	0.1	4	6 : — : —			9.9
25 0	474	50.7	47.8	2.9	0.3	0.2	4	12 : — : 24			2.0
1	448	58.6	53.2	5.4	0.5	0.5	4	14 : — : 24			3.5
2	434	65.6	55.3	10.3	1.5	2.0	15	16 : — : —			8.5

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

April 24th 0^h 40^m. It was found on trial that when the feather-vane was pointing from the north, its index pointed to NNE.; the index was set right; this error could have existed for a short period only.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h. 25	in. 29.410	63.4	54.7	8.7	1.7	1.1	14	16 : — : —	0-10. 9.5	As before; solar halo.
4	385	62.8	53.9	8.9	2.0	1.7	13		10.0	Nearly homogeneous cir. haze; patches of cum. to SW. ⊖
5	367	60.9	53.7	7.2	1.9	1.3	14		10.0	Thick cirrus haze.
6	362	58.3	52.4	5.9	1.5	0.5	14		10.0	Id.
7	330	57.2	51.3	5.9	0.7	0.3	13		10.0	Id.
8	307	56.8	50.6	6.2	0.9	0.5	12	— : 16 : —	10.0	Cirro-stratus scud; cirro-strati; cirrus mass.
9	286	56.7	50.3	6.4	1.2	1.2	14		10.0	Id.; id.; id.
10	259	55.7	49.8	5.9	1.3	1.5	14		10.0	Scud and cirro-strati.
11	225	55.6	49.6	6.0	2.0	1.5	14		10.0	Id.; light, as from a fire on S. horizon.*
12	203	54.4	49.6	4.8	2.1	0.6	14		10.0	Id.
13	29.154	53.3	49.4	3.9	1.8	1.8	14		10.0	Scud and cirro-strati; drops of rain.
14	100	52.7	49.7	3.0	3.3	4.3	15		10.0	Id.; rain ¹ ; light on hor. to N by E.*
15	062	52.7	50.8	1.9	3.7	3.0	14		10.0	Id.; rain ²
16	29.030	51.6	50.2	1.4	3.4	1.5	14		10.0	Id.; rain ¹
17	28.999	51.8	50.2	1.6	2.4	2.7	15	14 : — : —	10.0	Scud; scud and cirro-strati; rain ^{0.5}
18	985	51.5	50.2	1.3	1.7	1.5	14	14 : — : —	10.0	Id.; id.; id.
19	968	51.6	50.3	1.3	1.5	1.6	15	14 : — : —	10.0	Id.; id.; rain ^{1.5}
20	948	53.2	52.0	1.2	2.0	1.3	16	15 : — : —	10.0	Id.; id.; id.
21	929	54.4	53.0	1.4	1.2	0.4	15	16 : — : —	10.0	Id.; dense mass of cirro-strati; drops of rain.
22	941	55.0	53.0	2.0	0.8	0.3	16		10.0	Id.; id.; rain ^{1.5} [thick].
23	934	56.0	54.4	1.6	0.8	0.6	17	17 : — : —	10.0	Id.; id.; clouds dark and
26 0	971	54.0	51.8	2.2	1.4	1.4	20	20 : — : —	9.9	Id.; cirro-strati; cirrus mass; sky to SW.
1	28.984	55.8	51.7	4.1	2.4	1.6	18	20 : — : —	9.5	Id.; loose cumuli; cirro-strati; woolly cirri.
2	29.008	55.9	50.4	5.5	2.2	1.6	22	20 : — : —	4.0	Loose cumuli; id.; id.
3	002	56.0	49.8	6.2	2.3	1.7	20	20 : — : —	2.5	Id.; id.; id.
4	003	57.2	50.8	6.4	1.7	1.3	18	19 : — : —	3.0	Id.; cumuli; cirro-strati.
5	008	57.4	48.4	9.0	1.8	0.6	20	18 : — : —	1.5	Id.
6	003	56.2	48.3	7.9	0.7	0.2	16	16 : — : —	3.5	Id.; cirro-stratus seud; cirri.
7	012	50.1	46.9	3.2	2.5	0.4	16	14 : — : —	9.5	Scud; cumuli; nimbi; cumulo-strati; cirri; showers.
8	020	49.6	45.6	4.0	0.5	0.4	15	— : 14 : —	9.0	Cirro-stratus seud; rain ^{0.5}
9	017	47.3	44.4	2.9	0.4	0.2	14	— : 14 : —	7.0	Id.
10	017	48.0	45.3	2.7	1.4	1.0	16		10.0	Id.
11	023	47.2	45.3	1.9	1.0	0.3	17		9.8	Id.
12	29.033	47.9	45.7	2.2	1.0	0.5	18		10.0	Rain ^{0.2}
23 1	28.976	55.0	50.7	4.3	4.2	2.6	16	16 : 18 : —	10.0	{ Sunday—Scud; cirro-cumulo-strati; showers throughout the day.
27 13	29.117	48.9	46.7	2.2	4.2	1.3	20		5.0	Scud.
14	144	48.4	46.4	2.0	2.0	1.1	20		4.0	Id.
15	158	47.8	46.2	1.6	2.2	1.6	20		7.0	Id.
16	177	47.9	46.7	1.2	1.6	1.1	18	20 : — : —	9.5	Id.; rain ^{0.2}
17	191	47.8	46.2	1.6	1.8	1.1	20		7.0	Id.; woolly cirri, lying WSW. and ENE.
18	206	47.2	45.4	1.8	1.2	1.0	20	21 : — : 21	7.0	Id.; id., lying SW by W. and NE by E.
19	233	48.6	46.5	2.1	1.5	0.5	18	21 : — : —	7.0	Id.; loose cumuli; cirro-cumulo-strati.
20	251	50.6	47.9	2.7	1.4	0.7	20	20 : — : —	9.9	Id.; dense cirro-strati and cirro-cumulo-strati.
21	277	51.2	48.1	3.1	1.0	0.8	20	20 : 21 : —	10.0	Id.; id.
22	288	51.9	48.4	3.5	1.2	1.0	19	20 : 21 : 21	9.5	Id.; woolly cirri; cirro-cumulo-strati; shower ^{0.2}
23	300	53.7	50.2	3.5	1.6	1.1	19	20 : 21 : —	9.8	Id.; cirro-strati; drops of rain.
28 0	311	54.7	50.2	4.5	1.3	1.4	20		9.9	Id.; id.
1	326	55.9	51.7	4.2	1.4	1.3	19	20 : — : —	9.8	Id.; id.
2	336	56.7	51.3	5.4	1.7	0.9	20	20 : — : —	9.8	Id.; id.
3	339	57.9	51.6	6.3	1.0	1.2	21	20 : 22 : 22	9.8	Id.; loose cumuli; woolly cirri; cirro-strati.
4	345	57.0	51.2	5.8	1.2	0.9	20	20 : 21 : —	10.0	Id.; id.; cirro-cumulo-strati; cirro-strati.
5	351	56.1	50.3	5.8	0.7	0.3	19		10.0	Thick cirro-strati and cirro-cumulo-strati.
6	366	54.8	48.8	6.0	0.2	0.1	21		10.0	Scud; cirro-strati; cirrus mass.
7	369	52.8	48.3	4.5	0.2	0.2	18	20 : — : —	10.0	Id.; id.; id.; drops of rain.
8	389	50.6	47.5	3.1	0.7	0.1	18		10.0	Thick cirro-strati.

April 26^a 6^h 40^m. Heavy shower, with gusts of wind.April 26^a 23^h. Observation made at 23^h 20^m.April 28^a 1^h. Observation made at 1^h 6^m.* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

HOURLY METEOROLOGICAL OBSERVATIONS, APRIL 28—30, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h.	10 m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0-10.
28 9	29.396	48.8	46.2	2.6	0.1	0.1	20			10.0 Thick cirro-strati; rain ^{1.5}
10	408	47.1	45.7	1.4	0.0	0.0				Id.; rain ¹
11	431	46.7	45.8	0.9	0.0	0.1	19			Id.;? rain ¹
12	426	46.4	45.4	1.0	0.1	0.0	20			9.8 Scud and cirro-strati; sky to W.
13	433	46.1	45.0	1.1	0.1	0.0	22			7.0 Scud and cirro-strati.
14	440	45.2	44.3	0.9	0.1	0.0	19			Id.
15	455	42.4	42.0	0.4	0.1	0.1	20			Cirro-stratus scud.)
16	463	46.3	45.0	1.3	0.8	0.6	20			8.5 Id.;
17	479	44.7	43.9	0.8	0.4	0.1	24	21 : 23 :		2.5 Smoky scud; cirro-strati; cirro-cumuli.)
18	490	46.0	44.7†	1.3	0.0	0.0	22	21 : 23 :		1.0 Id.; id.; cirri.)
19	508	47.8	46.4	1.4	0.2	0.1	18	— : 21 :		1.5 Cirro-cumulo-strati; bank of cirro-strati round hor.)
20	522	50.4	47.7	2.7	0.8	0.6	18	— : 21 :		5.0 Id.
21	535	53.5	49.3	4.2	0.7	0.7	18	20 : — : —		5.0 Loose cumuli; cirro-strati to E.)
22	558	54.9	50.4†	4.5	1.2	0.6	18	20 : — : —		9.0 Id.; id.; cumuli.)
23	566	55.2	50.0	5.2	1.2	0.7	21	20 : — : —		8.5 Id.; cumuli; cum.-str.; cir.-str.; cirri.)
29 0	570	57.0	51.4	5.6	1.5	1.2	21	20 : — : —		9.5 Scud and loose cum.; cum.; cir.; portion of faint halo.)
1	573	57.5	51.3	6.2	1.1	1.0	20	20 : — : —		9.9 Id.; cirrous mass.)
2	588	58.0	52.0	6.0	1.3	0.7	20	20 : — : —		9.9 Id.; id.; faint halo.)
3	589	58.2	51.2	7.0	1.9	1.2	21	20 : — : —		9.9 Id.; id.; id.)
4	601	57.0	49.6	7.4	1.3	1.0	20			9.5 Id.; id.; id.)
5	609	55.8	49.5	6.3	1.5	0.8	18	20 : — : —		10.0 Id.; id.; id.)
6	617	53.2	49.3	3.9	1.3	0.6	21	20 : — : —		10.0 Scud; nearly homogeneous cirrus mass, thicker.)
7	627	51.6	48.3	3.3	0.7	0.2	20	20 : — : —		10.0 Id.; id.)
8	637	49.2	46.7	2.5	0.6	0.3	20			10.0 Homogeneous cirrus mass; rain ^{0.5})
9	649	48.3	47.3	1.0	0.5	0.3	19			10.0 Scud; homogeneous cirrus mass; rain ^{0.5})
10	639	47.4	46.7	0.7	0.2	0.0	16			10.0 Id.; id.; rain ^{0.2})
11	629	46.9	45.7	1.2	0.1	0.0	16			10.0 Rain ^{0.2})
12	623	46.6	45.3	1.3	0.1	0.0	16			10.0 Id.)
13	29.620	47.6	46.0	1.6	0.2	0.1	17			9.8 Scud and cirro-strati.
14	612	47.8	46.3	1.5	0.4	0.2	16			10.0 Id.
15	603	48.1	46.6	1.5	0.2	0.1	18			10.0 Id.; drops of rain.
16	584	48.4	46.9	1.5	0.4	0.5	16	20 : — : —		9.0 Scud; loose cirro-cumulo-strati.
17	583	48.4	47.0	1.4	0.8	0.1	16	18 : — : —		10.0 Loose scud; thick cirro-strati.
18	598	49.8	48.1	1.7	0.1	0.1	15	18 : — : —		10.0 Id.; cirri to W.
19	610	50.7	49.2	1.5	0.3	0.5	17	19 : — : —		10.0 Id.
20	601	52.1	50.1	2.0	1.4	0.8	16	19 : — : —		10.0 Id.
21	604	53.2	50.5	2.7	1.0	0.6	18	20 : 21 : —		9.0 Id.; cirro-strati; cirri.)
22	604	54.4	51.3	3.1	1.0	0.4	21	20 : — : —		9.9 Id.; id.)
23	608	56.2	52.2	4.0	0.8	1.8	18	19 : — : —		9.9 Id.; id.)
30 0	596	53.8	50.5	3.3	1.2	0.6	20	19 : — : —		10.0 Id.; id.)
1	567	56.6	52.2	4.4	1.2	1.0	18	18 : 20 : 22		10.0 Smoky scud; scud; cirro-strati; cirrus mass.)
2	533	57.4	52.6	4.8	1.6	1.0	17	— : 22 : —		10.0 Mottled cirro-strati; scud; cumulo-strati.)
3	502	57.9	51.7	6.2	2.8	2.4	17	18 : — : —		9.8 Scud; cirro-strati.
4	469	62.6	55.1	7.5	3.4	2.2	17	18 : — : —		9.8 Id.; cirro-stratus scud; masses of cirro-strati.)
5	446	57.7	52.3	5.4	3.0	2.1	19	18 : — : —		9.9 Id.; id.; id.)
6	414	56.8	52.9	3.9	3.8	3.7	18	18 : 20 : 20		7.0 Id.; woolly cirri and cirro-strati.)
7	382	55.0	51.4	3.6	3.0	2.8	18	18 : — : —		9.5 Id.; cirro-strati; drops of rain.)
8	348	52.5	51.5	1.0	3.2	2.0	19	19 : 20 : 20		8.0 Id.; woolly cirri; cirro-strati; shower ¹)
9	341	52.7	51.3	1.4	4.6	3.6	18	19 : — : —		10.0 Id.)
10	332	52.0	50.6	1.4	4.4	2.6	18	20 : — : —		8.5 Id.)
11	325	51.3	49.8	1.5	3.0	2.0	20			7.0 Id.; auroral light to N.; rain ²)
12	309	51.0	49.4	1.6	3.7	2.8	20			6.0 Id.; clouds broken.)
13	29.291	50.5	48.6	1.9	3.9	2.3	20			4.0 Scud; faint auroral light to N.
14	268	50.8	48.4	2.4	5.1	5.0	21			3.0 Id.; id.)
15	261	50.8	48.2	2.6	3.5	4.0	20			9.0 Id.)

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

April 30^d 1^h—2^h. Clouds wild and stormy-like.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
30 16	29.258	50.5	48.0	2.5	4.2	5.2	20	20 : — : —	9.0	Smoky scud ; cirro-strati.
17	251	50.3	47.8	2.5	5.0	4.2	20	21 : — : —	5.0	Id. ; id.
18	270	51.0	48.2†	2.8	4.1	3.8	18	21 : — : —	5.0	Id. ; id.
19	259	50.4	48.0	2.4	4.2	4.0	20	21 : — : —	3.5	Scud ; loose cumuli.
20	271	52.6	49.3†	3.3	4.7	3.1	20	20 : — : 22	7.0	Loose scud ; linear cirri ; cirro-strati.
21	277	53.6	49.5	4.1	4.8	4.5	20	21 : 22 : —	8.0	Id. ; loose cirro-strati ; cirri ; cirrous haze.
22	276	54.1	49.7	4.4	5.7	2.7	19	21 : — : 22	5.0	Id. ; woolly cirri ; cirrous haze ; clear to N.
23	269	56.6	51.4	5.2	4.8	3.8	20	21 : 22 : —	8.0	Id. ; cirro-strati.
1 0	266	53.6	50.6	3.0	3.3	2.2	19	21 : — : 22	6.0	Scud ; loose cumuli ; linear cirri ; cirro-strati.
1	260	51.3	49.0	2.3	3.4	2.2	20	22 : — : —	10.0	Id. ; nimbi ; cirro-strati ; shower ¹
2	245	54.2	51.0	3.2	3.7	2.0	22	22 : — : —	4.0	Id. ; cumuli ; nimbi.
3	250	52.3	50.6	1.7	6.2	4.0	20	22 : — : —	8.0	Id. ; nimbi ; cirro-strati ; passing showers.
4	249	52.2	51.0	1.2	5.0	2.0	20	22 : — : —	3.0	Id. ; id. ; id. ; double rainbow.
5	233	54.4	50.6	3.8	3.3	2.6	18		3.0	Id. ; cumuli ; nimbi ; cirro-strati ; very fine double rainbow.*
6	225	54.1	49.7	4.4	2.8	2.7	21	22 : — : —	7.0	Id. ; id. ; id. ; id.
7	228	51.5	50.0	1.5	3.2	1.5	19	22 : — : —	3.5	Id. ; id. ; id. ; id. ; showers.
8	233	48.5	46.7	1.8	1.8	1.1	19	22 : — : —	5.0	Id. ; id. ; cirro-strati.
9	258	45.0	43.9	1.1	3.7	1.6	18	22 : — : —	6.5	Id. ; id.
10	244	45.5	43.8	1.7	1.1	1.0	18		1.0	Scud and cirro-strati on horizon.
11	256	46.6	44.2	2.4	1.7	1.1	18		1.0	Scud ; cirro-stratus scud ; light to NNW.
12	264	46.3	44.6	1.7	1.1	0.9	20		2.0	Id. ; id. ; sky rather milky.
13	29.261	45.6	43.8	1.8	1.4	1.1	19		1.0	Scud ; cirro-stratus scud ; sky rather milky.
14	259	46.6	44.7	1.9	1.7	1.6	20		3.5	Id. ; id. ; rain ^{0.5}
15	259	46.0	44.4	1.6	1.5	0.9	21		1.5	Id. ; cirri.
16	263	44.7	43.2	1.5	1.0	0.6	21	23 : — : —	7.0	Id. ; cirro-strati ; cirri.
17	265	45.7	44.0	1.7	1.1	1.0	20	23 : — : —	7.0	Id. ; id. ; id.
18	284	47.0	43.8†	3.2	1.4	1.4	20	23 : — : —	1.0	Id. ; id. ; id. ; sky milky.
19	310	48.7	44.7	4.0	1.2	0.9	20	24 : — : —	5.0	Id. ; id. ; id.
20	320	49.8	45.0†	4.8	1.7	1.2	21	24 : — : —	7.0	Id. ; id. ; id.
21	331	50.8	46.3	4.5	2.7	1.9	21	25 : — : —	9.8	Id. ; loose cumuli.
22	353	51.7	46.8	4.9	2.3	1.0	22	25 : — : —	9.5	Id. ; id. ; cumuli ; cirri.
23	363	52.3	46.8	5.5	1.1	0.7	21	25 : — : —	8.0	Id. ; id. ; id. ; id.
2 0	373	53.8	47.7	6.1	2.9	1.2	24	25 : — : —	9.5	Id. ; cumuli ; nimbi ; cirri ; 0 ^h 10 ^m , rain ^{1.5}
1	381	54.7	46.0	8.7	2.1	1.7	21	25 : — : 24	8.0	Id. ; loose cumuli ; cumuli ; woolly cirri.
2	403	53.6	46.0	7.6	3.0	1.5	25	— : — : —	8.5	Id. ; id. ; woolly cirri.
3	407	55.0	47.8	7.2	2.0	1.3	26	24 : — : —	8.5	Id. ; id. ; id.
4	419	55.2	46.6	8.6	2.6	1.9	26	24 : — : —	7.5	Id. ; id. ; cumuli ; cumulo-strati ; cirri.
5	439	52.0	46.2†	5.8	2.1	1.2	26	24 : — : —	5.0	Id. ; id. ; id. ; id. ; id. ; id.
6	450	51.7	45.9	5.8	2.7	0.8	23	25 : — : —	3.0	Loose cumuli ; nimbi.
7	466	47.9	43.6	4.3	3.1	1.0	22	— : — : 26	3.0	Masses of woolly cirri, like fir branches ; scud.
8	496	45.7	42.9†	2.8	1.8	0.6	24	— : — : 27	8.5	Id. ; much denser ; passing showers ; scud, &c.
9	511	46.0	42.3	3.7	0.7	0.6	22		10.0	Masses of cirri and cirro-strati.
10	522	44.6	41.6	3.0	0.7	0.2	20		10.0	Id.
11	523	45.1	41.9	3.2	0.3	0.2	22		10.0	Dense clouds.
12	524	44.7	41.9	2.8	0.4	0.5	21		8.0	Cirrus clouds.
13	29.520	43.7	41.0	2.7	1.3	0.8	21		5.0	Cirrus clouds and haze.
14	513	43.9	41.1	2.8	1.2	0.6	20		9.0	Cirro-strati.
15	504	44.6	42.0	2.6	0.9	0.6	20		9.5	Id.
16	492	44.7	41.9	2.8	1.6	1.1	21		9.5	Id.
17	469	44.3	42.3	2.0	1.2	1.0	20	24 : — : —	9.5	Scud ; cirri and cirrous haze.
18	468	45.2	43.1	2.1	1.5	1.2	22	24 : — : —	10.0	Id. ; thick cirro-strati and haze.
19	468	46.6	44.2	2.4	1.4	1.4	21	24 : 25 : —	10.0	Id. ; nearly homogeneous cirro-strati and cirri.
20	453	47.9	45.5	2.4	1.4	1.3	21	23 : 25 : —	10.0	Id. ; id.
21	448	48.5	45.2	3.3	1.3	0.7	21	23 : — : —	10.0	Id. ; id.
22	445	49.7	45.8	3.9	1.1	0.9	22	23 : — : —	10.0	Id. ; cirrous mass.
23	429	50.7	46.2	4.5	1.9	1.5	20	23 : — : —	10.0	Id. ; id. ; cirro-strati.

April 30^d 21^h 30^m. Portion of a solar halo.May 1^d. Thunder and lightning at Wolflee, about 13 miles SSW. of Makerstoun.May 1^d 1^h. Observations made at 1^h 13^m.* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

HOURLY METEOROLOGICAL OBSERVATIONS, MAY 3—5, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From				
1h.	in.				lbs.	lbs.	pt.	pt.	pt.	pt.
d. h.										
3 0	29.426	52.6	47.8	4.8	2.5	0.8	22	24 : — : —	0—10.	Scud.
1	418	53.6	48.2	5.4	1.3	0.6	23	24 : — : —	10.0	Id.
2	417	53.1	48.1	5.0	1.2	1.3	24	24 : — : —	9.9	Id.; cirro-strati; cirri. ●
3	422	53.2	48.2	5.0	1.3	1.1	25	25 : — : 26	9.0	Id.; woolly cirri; cumuli; cirro-strati. ⊖
4	425	53.2	47.6	5.6	1.7	2.1	26	25 : — : —	9.0	Id.; cumuli; cumulo-strati; cirro-strati; cirri.
5	430	54.8	48.7	6.1	1.4	1.2	28	26 : — : 28	7.5	Id.; woolly cirri; cumuli, &c., as before. ⊖
6	445	55.0	47.0	8.0	2.0	2.2	28	27 : — : —	7.0	Cumuli; cumulo-strati; nimbi; rainbow. ⊖
7	471	51.2	44.6†	6.6	2.3	1.7	28	27 : — : 28	3.0	Id.; id.; woolly cirri; cirro-strati. ○
8	491	48.0	43.6	4.4	1.5	1.2	27		2.0	Id.; id. and cirro-strati on horizon. ○
9	508	46.2	42.1†	4.1	1.2	0.7	26		1.0	Id.; id. id.
10	521	44.4	40.4	4.0	1.2	0.3	27		0.5	Id.; id. id.
11	537	43.3	39.8	3.5	0.7	0.3	22		4.0	Id.; cirro-strati.
12	540	43.3	40.8	2.5	0.2	0.1	22		9.0	Scud; id.
23 1/4	29.541	50.1	44.2	5.9	3.3	2.0	30	30 : — : —	Sunday—Cumuli; nimbi; and passing showers of hail and rain.
4 13	29.685	38.6	37.5	1.1	4.5	0.0	26		1.0	Cirro-strati; sky rather milky.
14	684	38.5	37.2	1.3	0.1	0.3	28		0.5	Id., (?) on E. horizon.
15	676	39.7	37.5	2.2	0.6	0.4	29	— : 30 : —	4.0	Cirro-strati.
16	666	40.0	37.0	3.0	0.4	0.3	28	— : 30 : —	7.0	Cirro-cumuli; cirro-strati.
17	662	40.6	37.6	3.0	0.5	0.1	26	— : 31 : —	9.5	Cirro-stratus scud; woolly cirro-strati; cir-eum.
18	659	42.0	38.7	3.3	0.3	0.1	25	— : 30 : —	9.5	Id.
19	658	43.0	39.7	3.3	0.2	0.2	28	— : 30 : —	9.0	Cirro-cumuli; cirro-strati.
20	652	43.3	40.0	3.3	1.1	0.6	29	— : 30 : —	7.5	Id.; id.
21	638	45.9	41.0	4.9	1.2	1.5	31	0 : — : —	6.0	Cumuli; cirro-strati.
22	656	43.8	41.8	2.0	3.5	1.7	0	— : 31 : —	9.9	Cirro-stratus scud; cirro-strati.
23	664	45.8	42.4	3.4	2.5	2.1	1	1 : — : —	8.5	Scud and loose cumuli.
5 0	681	46.5	41.2	5.3	2.9	1.3	1	1 : — : —	8.0	Id. ○
1	683	48.2	42.0	6.2	1.8	0.9	2	1 : — : —	8.0	Id.
2	686	47.7	41.4	6.3	1.7	1.1	3	2 : — : —	8.5	Id. ○
3	690	47.5	40.7	6.8	1.2	0.6	2	2 : — : —	5.5	Id. ○
4	695	48.3	41.8	6.5	1.1	0.6	2	2 : — : —	4.5	Id. ○
5	695	47.3	41.7	5.6	1.2	0.9	5	2 : — : —	4.0	Id. ○
6	700	46.0	40.8†	5.2	0.7	0.6	3	4 : — : —	3.0	Loose cumuli. ○
7	703	45.4	40.4	5.0	0.5	0.3	3	4 : — : —	1.0	Id. ○
8	708	42.9	38.8†	4.1	0.3	0.1	3	4 : — : —	1.0	Id. ○
9	707	40.4	37.7	2.7	0.2	0.1	2	— : 4 : —	0.8	Cirro-str. scud; streaks of cirri radiating from NW.
10	710	38.3	36.9	1.4	0.1	0.0		— : 4 : —	8.5	Id.; id. id.
11	711	40.3	38.7	1.6	0.0	0.0	1		10.0	Overcast.
12	702	41.3	39.7	1.6	0.0	0.0			10.0	Id.
13	29.695	41.7	40.5	1.2	0.0	0.0			10.0	Overcast.
14	685	42.5	41.4	1.1	0.0	0.0	2		10.0	Id.
15	670	42.3	41.3	1.0	0.0	0.0			10.0	Id.
16	654	42.1	41.2	0.9	0.0	0.0		6 : — : —	10.0	Thick scud.
17	647	42.3	41.2	1.1	0.0	0.0		7 : — : —	10.0	Id.
18	640	42.8	41.6	1.2	0.0	0.0	4	7 : — : —	10.0	Loose scud; cirro-stratus scud; rain ^{0.2}
19	636	43.7	42.0	1.7	0.1	0.0	2	4 : 6 : —	10.0	Smoky scud; cirro-stratus scud; cirri.
20	634	45.3	43.5	1.8	0.2	0.3	2	4 : 6 : —	10.0	Smoky and cumulous scud; cirro-stratus scud; rain ¹
21	622	45.7	43.2	2.5	0.3	0.2	4	4 : — : —	10.0	Id.; id.
22	608	47.0	43.9	3.1	0.4	0.4	7	5 : 7 : —	9.8	Id.; woolly cirro-cumuli.
23	601	47.6	43.8	3.8	0.5	0.6	8	5 : 7 : —	10.0	Id.; cir-str. scud; cir-eum. ⊖
5 0	599	48.3	44.7	3.6	0.8	0.6	8	7 : 8 : —	10.0	Cumulous scud; cirro-stratus scud.
1	596	48.4	44.2	4.2	1.0	0.6	7	7 : 8 : —	9.5	Id.; id.
2	601	48.2	43.9	4.3	0.8	0.7	7	7 : 8 : —	9.5	Scud and loose cumuli.
3	604	49.2	43.4	5.8	1.0	0.9	7	8 : — : —	9.5	Cumulous scud; cumuli. ○
4	605	48.8	44.3	4.5	1.5	0.6	4	8 : — : —	5.5	Cumulous scud; cumuli.
5	619	47.4	43.9	3.5	1.2	0.6	7	6 : 7 : —	9.2	Id.; cirro-stratus scud. ○

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

May 4^d 18^h. Observations made at 18^h 10^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0-10.	Cumulous scud ; cirro-stratus scud.
6 6	29.621	46.4	43.2	3.2	1.4	1.0	6	6 : 6 : —	9.9	Scud.
7	636	45.4	42.5	2.9	1.0	0.9	4	5 : — : —	10.0	Id.
8	645	44.7	42.4	2.3	1.2	0.5	3	5 : — : —	10.0	Id.
9	659	44.6	42.9	1.7	0.8	0.5	4	4 : — : —	10.0	Id.
10	672	42.9	42.1	0.8	1.8	0.7	5		10.0	Id.; rain ^{0.5}
11	681	40.7	40.2	0.5	1.6	0.7	4		10.0	Id.; rain ²
12	692	41.2	40.5	0.7	0.9	1.5	4		10.0	Id.; id.; dark.
13	29.696	41.3	40.5	0.8	1.7	0.6	4		10.0	Scud; rain ² ; dark.
14	701	42.0	40.9	1.1	1.5	0.6	3		10.0	Id.; id.; id.
15	703	42.2	40.9	1.3	1.1	1.2	4		10.0	Id.; id.; id.
16	692	42.3	41.0	1.3	1.1	0.9	3	4 : — : —	10.0	Id.; cirro-stratus scud; cirrus mass.
17	685	43.0	41.3	1.7	0.8	0.7	2	3 : — : —	10.0	Id.; id.; id.
18	668	43.4	41.4	2.0	1.8	2.3	0	— : 3 : —	10.0	Cirro-stratus scud; wavy cirro-stratus; cirrus mass.
19	657	43.7	41.3	2.4	2.5	1.8	0	2 : 3 : —	10.0	Loose scud to E.; dense cirro-strati over the sky.
20	645	44.7	42.3	2.4	2.9	2.7	0	1 : 3 : —	9.9	Loose scud in patches; cirro-stratus scud.
21	630	46.0	43.2	2.8	3.8	3.2	0	1 : 3 : —	10.0	Id.; id.
22	617	45.9	43.0	2.9	3.5	3.9	1	1 : — : —	10.0	Scud; cirro-strati and cirrus haze.
23	609	46.9	43.4	3.5	4.0	3.3	2	2 : — : —	10.0	Thick scud.
7 0	597	47.3	44.3	3.0	3.6	3.0	2	2 : — : —	10.0	Id.
1	586	46.8	43.6	3.2	4.0	2.9	2		10.0	Id.; rain ^{0.5}
2	573	44.4	42.0	2.4	3.6	2.7	1	2 : — : —	10.0	Id.; shower ^{0.5-2}
3	554	44.0	42.0	2.0	3.1	2.9	3		10.0	Id.; rain ¹⁻³
4	545	41.4	40.1	1.3	3.0	1.6	4	2 : — : —	10.0	Id.; rain ²
5	533	40.6	39.3	1.3	1.7	0.8	3	2 : — : —	10.0	Id.; dense mass of cirro-strati above? rain ^{0.5}
6	502	41.7	39.6	2.1	1.7	2.2	1	2 : — : —	10.0	Id.; dense cirro-strati and haze; rain ^{0.2}
7	492	41.3	39.1	2.2	3.1	3.0	2		10.0	Rain ^{0.5}
8	493	40.3	39.3	1.0	2.5	1.6	2		10.0	Rain ¹
9	486	40.3	39.4	0.9	2.2	1.7	2	2 : — : —	10.0	Scud; rain ^{0.5}
10	467	40.3	39.5	0.8	2.2	2.0	2		10.0	Id.; id.
11	454	40.6	39.8	0.8	2.1	1.4	2		10.0	Very dark; rain ²
12	446	40.3	39.6	0.7	1.8	1.2	4		10.0	Id.; id.
13	29.433	40.2	39.0	1.2	1.7	1.0	3		10.0	Very dark; rain ^{0.5}
14	415	39.6	38.3	1.3	1.7	1.3	4		9.9	Scud; showers ¹⁻³
15	414	39.4	38.4	1.0	0.8	0.1	2		10.0	Id.; showers ¹⁻²
16	405	38.9	38.0	0.9	0.5	0.3	4	4 : — : —	10.0	Id.
17	391	38.8	37.7	1.1	0.6	0.5	2	6 : 4 : —	9.0	Id.; cirro-stratus scud; linear cirri.
18	386	39.0	38.1	0.9	0.4	0.2	3	6 : — : —	9.5	Id.; id.; mottled and linear cirri.
19	375	40.0	39.0	1.0	0.3	0.4	3	— : 4 : —	10.0	Cirro-stratus scud; scud near horizon; rain ^{0.5}
20	366	41.6	40.2	1.4	0.4	0.2	4	— : 3 : —	8.0	Id.; id. id.
21	359	44.2	41.5	2.7	0.4	0.5	6	4 : — : —	9.5	Scud; cirro-stratus scud.
22	351	45.0	41.9	3.1	0.7	0.6	6	4 : — : —	9.7	Id.; loose cumuli; cirri and cirro-strati.
23	342	45.6	42.7	2.9	0.7	0.6	3	4 : — : —	9.9	Id.; id.
8 0	332	46.0	42.4	3.6	0.6	0.5	4	4 : — : —	10.0	Id.; id.; cirro-strati; cirrus haze.
1	322	44.9	40.4	4.5	0.6	0.6	3	4 : — : —	10.0	Id.; id.; id.; id.
2	312	48.0	43.9	4.1	0.4	0.3	6		10.0	Id.; id.; id.; id.
3	298	47.1	42.9	4.2	0.5	0.3	7	4 : — : —	9.8	Id.; id.; haze breaking; solar halo.
4	290	45.8	41.8	4.0	0.4	0.4			9.7	Id.; id.; cirro-strati; woolly cirri.
5	281	46.0	42.0	4.0	0.4	0.3	7	4 : — : —	9.0	Id.; woolly cirri.
6	282	45.4	41.7	3.7	0.4	0.4	6	6 : — : —	9.5	Id.; loose cumuli; woolly cirri.
7	282	43.3	40.4	2.9	0.5	0.3	4	6 : — : 0	9.0	Id.; cirro-stratus scud; woolly and linear cirri.
8	294	42.5	40.1	2.4	0.4	0.1	4		10.0	Cirro-stratus scud; woolly and linear cirri.
9	301	41.0	38.9	2.1	0.3	0.1	4	— : 8 : —	9.5	Id.; scud on horizon; masses of cirri.
10	309	39.7	38.6	1.1	0.1	0.1	4		9.8	Id.; masses of cirri.
11	310	38.0	37.4	0.6	0.0	0.0			2.0	Scud and cirro-strati, near horizon radiating from N.
12	313	36.7	36.3	0.4	0.0	0.0	4		2.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	Pt.	
d. h.	in.	°	°	°					pt. pt. pt.	0—10.
8 13	29.317	37.0	36.7	0.3	0.0	0.0				7.0
14	317	38.4	37.9	0.5	0.0	0.0				10.0
15	318	39.0	38.5	0.5	0.0	0.0				9.8
16	321	39.6	39.0	0.6	0.1	0.0	4			9.5
17	321	39.1	38.3	0.8	0.1	0.0	4	10 : 10 : —		8.0
18	329	38.7	38.0	0.7	0.0	0.0	4	5 : 10 : —		3.0
19	332	39.5	38.9	0.6	0.0	0.0	3	5 : — : —		10.0
20	331	41.7	41.3	0.4	0.1	0.1	4	5 : — : —		10.0
21	329	39.2	38.7	0.5	0.8	0.2	2	6 : — : —		10.0
22	320	42.2	41.0	1.2	0.3	0.2	2	4 : — : —		10.0
23	316	44.9	44.7	0.2	0.6	0.1	12	10 : 9 : —		9.5
9 0	314	47.5	44.4	3.1	0.4	1.3	8	9 : — : —		9.8
1	319	47.0	43.4	3.6	1.1	1.1	10	9 : 10 : —		9.8
2	317	49.2	45.0	4.2	1.4	1.1	9	10 : 11 : —		9.0
3	312	49.2	45.8	3.4	1.1	1.1	7	10 : 11 : —		8.5
4	310	50.4	46.0	4.4	1.0	0.9	9	10 : — : —		9.0
5	308	47.2	44.2	3.0	1.2	0.5	8	10 : — : —		9.9
6	327	46.1	44.0	2.1	1.0	0.5	8	9 : — : —		10.0
7	328	45.6	43.5	2.1	0.6	0.6	8	9 : — : —		9.8
8	331	45.1	42.9	2.2	0.7	0.2	7	— : 10 : —		7.0
9	329	42.1	40.7	1.4	0.3	0.0	2	7 : — : —		7.0
10	334	42.7	41.9	0.8	0.2	0.0	2			10.0
11	331	42.7	42.1	0.6	0.1	0.0				10.0
12	324	42.9	43.3	0.6	0.0	0.0				10.0
13	29.323	42.9	42.4	0.5	0.1	0.0	4			9.9
14	326	42.7	42.2	0.5	0.1	0.0				10.0
15	324	41.3	41.0	0.3	0.1	0.0	8			9.5
16	327	41.7	41.2	0.5	0.0	0.0	7			10.0
17	332	41.8	41.3	0.5	0.1	0.0	7	— : 4 : —		9.9
18	342	41.6	41.0	0.6	0.1	0.0	3	4 : 1 : —		9.8
19	352	44.0	42.8	1.2	0.1	0.0	4	— : 6 : —		9.9
20	363	44.6	42.9	1.7	0.2	0.0	4	— : 4 : —		9.5
21	369	46.1	43.2	2.9	0.2	0.1	7	6 : 8 : —		6.5
22	375	48.6	44.8	3.8	0.3	0.2	6	7 : — : —		9.8
23	386	48.3	44.3	4.0	0.4	0.4	4			10.0
10 0	399	48.7	44.7	4.0	0.5	0.5	7	6 : — : —		10.0
1	405	47.6	43.7	3.9	0.6	0.6	5	6 : — : —		10.0
2	415	47.4	43.8	3.6	0.7	0.3	5	4 : — : —		10.0
3	420	49.0	44.6	4.4	0.6	0.3	6			10.0
4	427	47.7	44.0	3.7	0.5	0.3	4	4 : — : —		9.5
5	434	47.0	43.5	3.5	0.4	0.3	5	4 : — : —		9.5
6	440	48.0	44.3	3.7	0.3	0.3	4	4 : — : —		8.5
7	462	47.3	43.7	3.6	0.2	0.2	3	2 : — : —		7.0
8	483	46.8	43.3	3.5	0.2	0.1	3			1.5
9	500	43.0	41.3	1.7	0.1	0.1	2			1.0
10	527	41.8	40.2	1.6	0.1	0.1	2			9.8
11	533	42.4	40.8	1.6	0.3	0.1	3			9.9
12	538	42.3	40.7	1.6	0.1	0.0	30			10.0
11 1½	29.529	57.3	48.7	8.6	0.5	0.1	20	— : 24 : —		{Sunday—A.M. Cumuli and cumulo-strati; cirri and thick cirro-strati at 7 ^{h.}
13	29.410	45.9	45.0	0.9	1.9	0.8	21			1.5
14	409	47.3	45.9	1.4	0.7	0.1	23			8.0
15	411	45.2	43.0	2.2	0.6	0.2	21			2.0
16	415	42.2	40.5	1.7	0.4	0.2	22			2.0
17	420	42.3	40.3	2.0	0.5	0.2	22			2.0
18	435	44.9	42.0	2.9	0.5	0.5	24			0.8
										Masses of cirro-strati and scud; cumulo-strati to NE. ◎

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motion of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From				
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	
11 19	29.450	45.9	42.6 [†]	3.3	0.6	0.3	24	— : — : 20	0.8	Woolly cirri; cirro-strati; cumulo-strati. ☺
20	444	48.0	43.6	4.4	0.8	0.7	26	28 : — : 20	4.0	Patches of scud; cirri; cirro-strati; cumulo-strati. ☺
21	448	50.0	44.3 [‡]	5.7	1.0	1.0	28	30 : — : —	5.0	Id.; id.; id.; id. ☺
22	455	52.0	45.3	6.7	1.3	1.7	30	30 : — : —	6.0	Scud and loose cumuli; cirri; cirro-strati; cum.-str. ☺
23	480	52.2	46.0	6.2	1.3	0.6	30	30 : — : —	8.5	As before. ☺
12 0	493	53.4	46.0	7.4	1.7	0.8	30	30 : — : —	7.5	Id. ☺
1	495	54.4	47.0	7.4	1.3	1.1	30	29 : — : —	5.5	Id. ☺
2	506	56.0	48.0	8.0	1.7	0.8	31	29 : — : —	9.0	Id.; cumulo-strati to S.; electric-looking. ☺
3	554	47.2	45.9	1.3	2.6	0.7	0	30 : — : —	9.0	Scud; cum.; cumi.-str.; cir.-str.; cirrrous mass; showers.*
4	568	50.2	46.4	3.8	2.2	3.1	0	30 : — : —	9.8	Id.; cumulo-strati; cirro-strati; rain ⁴
5	574	50.7	46.6	4.1	2.1	0.2	30	30 : — : —	6.0	Id.; id.; id. ☺
6	586	54.3	49.6	4.7	0.2	0.1	30		5.5	Id.; watery cirro-strati; cumulo-strati; drops of rain. ☺
7	612	46.1	45.7 [†]	0.4	1.3	0.1	0	31 : — : —	6.5	Scud and nimbi to S.; cumi.-str. to N. and E.; cir.-str.*
8	643	48.0	46.0 [†]	2.0	0.2	0.2	29	31 : — : —	8.5	Thick scud and cirro-strati; rain ⁰⁻²
9	659	47.6	44.4	3.2	0.5	0.5	31	— : 29 : —	9.5	Cirro-stratus scud.
10	689	46.8	44.8	2.0	0.7	0.6	0		9.8	Id.
11	707	45.4	43.5	1.9	0.5	0.2	30		9.8	Id.
12	719	45.2	43.8	1.4	0.1	0.1	28		9.0	Id. ☺
13	29.736	42.9	41.4	1.5	0.1	0.2	28		1.5	Cirro-stratus scud.
14	766	43.0	41.2	1.8	0.4	0.2	30		1.5	Id.
15	783	42.3	40.0	2.3	0.4	0.4	29		1.5	Scud; cirro-strati.
16	796	40.9	38.9	2.0	0.4	0.2	27		2.0	Id.; id.
17	812	41.7	39.2 [†]	2.5	0.4	0.3	30	— : — : 28	4.0	Woolly cirri, radiating from NW. and SE.; cirro-strati.
18	829	44.0	41.0	3.0	0.4	0.7	28	— : — : 28	8.0	Id.; id. ☺
19	845	46.4	42.4	4.0	0.9	0.5	29	— : 28 : 28	7.0	Loose woolly cirro-strati and cirri.
20	865	48.9	44.0	4.9	1.3	0.5	29	— : — : 28	6.5	Woolly cirri and cirro-strati; patches of cumuli. ☺
21	890	49.8	44.7 [†]	5.1	1.9	0.8	30	30 : — : —	5.0	Loose cumuli; cirro-strati to S. ☺
22	903	51.1	45.5	5.6	1.7	1.0	0	30 : — : —	8.0	Id.
23	923	52.9	46.4	6.5	2.0	1.4	0	30 : — : —	9.0	Id.
13 0	942	52.6	45.6	7.0	2.0	0.7	0	30 : — : —	9.7	Id.; thick cirro-stratus scud.
1	959	52.9	47.1	5.8	1.6	0.6	3	31 : — : —	9.9	Id.; id.
2	975	52.5	47.5	5.0	1.3	0.6	3	0 : — : 28	9.9	Id.; cirro-cumulo-strati. ☺
3	29.986	53.7	48.3	5.4	0.7	0.8	3	0 : — : —	9.0	Id.; id.
4	30.002	54.1	48.9	5.2	1.0	0.8	3	0 : — : —	8.5	Id.; id. ☺
5	014	53.3	47.7	5.6	1.2	0.8	3	2 : 0 : —	5.0	Id.; id.
6	028	51.8	46.5 [†]	5.3	0.8	0.7	3	3 : — : —	2.5	Id.; cirro-strati; cirri. ☺
7	055	50.0	44.9	5.1	0.6	0.4	2		2.0	Loose scud; cumuli on horizon; woolly cirri. ☺
8	078	47.8	43.8	4.0	0.3	0.1	2		2.0	Patches of scud; cirro-strati; id. ☺
9	100	44.0	42.3 [‡]	1.7	0.1	0.1	3		2.0	Cumuli; cirro-strati; woolly and linear cirri. ☺
10	111	40.8	40.0	0.8	0.1	0.1	1		2.0	Cirro-strati; cirri; cirrrous haze; small lunar corona. ☺
11	119	41.2	39.7	1.5	0.1	0.0	30		1.0	Cirri and cirro-strati. ☺
12	131	36.8	36.7	0.1	0.0	0.0			0.2	Id.
13	30.137	35.3	35.3	0.0	0.2	0.0	16		0.2	Cirri and cirro-strati.
14	141	33.1	33.1	0.0	0.0	0.0			0.5	Id.
15	148	33.3	33.3	0.0	0.0	0.0			2.0	Id.
16	154	33.1	33.1	0.0	0.0	0.0			3.0	Id.
17	150	35.3	34.7	0.6	0.2	0.0			3.5	Id.
18	160	36.6	36.2	0.4	0.1	0.0	20		1.5	Id. [parhelia. ☺]
19	161	42.3	40.3	2.0	0.0	0.0		— : — : 31	7.5	Woolly cirri; cirro-strati; cirrrous mass; solar halo and
20	161	46.8	44.6	2.2	0.1	0.0	16	— : — : 31	8.5	Id.; id. ☺
21	152	52.3	48.2	4.1	0.0	0.0			10.0	Milky cirrrous haze over the sky; cirro-strati; halo. ☺
22	142	57.2	50.3	6.9	0.1	0.0			10.0	Cirro-stratus scud; cumuli; cumi.-str.; cirrrous mass. ☺
23	136	53.9	48.2	5.7	0.2	0.3	26	24 : — : —	10.0	Scud; cumuli; cumulo-strati; cirrrous mass.
14 0	132	56.0	50.0	6.0	0.4	0.3	24	24 : — : —	10.0	Id.; cumulo-strati; cirrrous mass.
1	134	50.8	47.4	3.4	0.4	0.5	25		10.0	Id.; dense cirrrous mass; rain ¹
2	138	50.3	47.4	2.9	0.4	0.3	24		10.0	Id.; id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

May 12^a 3^h. Two claps of thunder heard. 6^h 45^m. Shower³, with bright double rainbow. 6^h 50^m—7^h 0^m. Two peals of thunder to SW.

7^h. Loose nimbi, spreading out in some places into masses of watery cirro-stratus; slate-blue homogeneous clouds to SSW.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

HOURLY METEOROLOGICAL OBSERVATIONS, MAY 14—16, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h.	From 10 m.			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.
14 3	30.126	51.6	49.2	2.4	0.3	0.1	24	24 : — : —	10.0
4	117	51.3	48.7	2.6	0.7	0.2	24	24 : — : —	10.0
5	098	51.0	48.7	2.3	0.3	0.2	20	24 : — : —	10.0
6	085	51.0	49.6	1.4	0.3	0.3	19	24 : — : —	10.0
7	081	50.8	48.8	2.0	0.3	0.3	22	24 : — : —	10.0
8	082	50.2	48.3	1.9	0.7	0.2	23	25 : — : —	10.0
9	083	49.6	48.3	1.3	0.4	0.1	20	25 : — : —	10.0
10	082	49.2	48.2	1.0	0.1	0.0	20	25 : 31 : —	9.9
11	079	46.9	46.4	0.5	0.0	0.0	20	27 : — : —	3.5
12	077	45.7	45.4	0.3	0.0	0.0	24		0.5
13	30.078	46.0	45.6	0.4	0.1	0.0	24		Cirro-stratus scud.
14	081	46.9	46.4	0.5	0.1	0.0	24		Id.
15	079	46.8	46.4	0.4	0.0	0.0	6		Scud; loose cum.; cirro-strati; cirri; cirrus haze.
16	074	44.6	44.4	0.2	0.0	0.0	16	29 : — : —	Id.; cirri; cirro-strati.
17	082	43.0	43.0	0.0	0.0	0.0	20	30 : 0 : 0	Id. to E.; woolly cir.; cir-cum.; cir.-str.; mist on the ground.
18	089	45.8	45.6	0.2	0.0	0.0	24	— : 31 : —	Cirro-stratus scud; loose scud to E.
19	092	49.1	48.3	0.8	0.0	0.0	16	— : 0 : —	Cir-cum. scud; undulated cir.-str. and cirro-cumuli.
20	094	52.4	51.0	1.4	0.0	0.0		— : 0 : —	Sheets of cirro-stratus.
21	099	56.8	54.0	2.8	0.1	0.0	15		Id.
22	097	58.0	55.2	2.8	0.1	0.2	2		Loose scud; cirro-strati; cirrus mass.
23	082	62.0	57.3	4.7	0.3	0.3	27	— : 31 : —	Cirro-stratus scud; cirro-strati; cirrus mass.
15 0	081	62.6	56.8	5.8	0.6	0.7	29	31 : — : —	Patches of scud; sheets of cirro-stratus.
1	082	63.0	57.3	5.7	0.8	0.7	30	31 : — : —	Loose cum.; cum.-str.; cir-cum.-str.; cirri.
2	078	65.3	58.3	7.0	0.9	1.1	30	31 : — : —	Id.; id.; woolly and mottled cirri.
3	074	65.4	58.4	7.0	0.9	0.5	31	31 : — : —	Id.; id.; id.
4	066	67.2	59.7	7.5	0.5	0.6	2	30 : — : —	Id.; id.
5	067	64.4	58.1	6.3	0.6	0.5	4	29 : 31 : —	Id.; id.; cirro-stratus scud; cirri.
6	084	58.0	54.7†	3.3	0.9	0.4	5	— : 30 : —	Cirro-stratus scud; cirro-cumulo-strati.
7	102	55.0	52.7	2.3	0.5	0.3	6	4 : 30 : —	Scud; cirro-stratus scud.
8	109	53.7	52.0	1.7	0.3	0.2	4	4 : 30 : —	Id.; id.
9	111	52.7	51.3†	1.4	0.2	0.1		4 : 31 : —	Id.; cirro-stratus scud; cir-cum.-str.; cirri.
10	111	52.5	51.3	1.2	0.1	0.0			Cirro-stratus scud, nearly homogeneous.
11	113	52.3	51.2	1.1	0.0	0.0			As before.
12	112	52.1	51.1	1.0	0.0	0.0	20		Id.
13	30.112	52.0	51.2	0.8	0.0	0.0			As before.
14	107	52.0	50.9	1.1	0.0	0.0	20		Id. nearly homogeneous.
15	102	50.7	49.2	1.5	0.2	0.1	21		Scud; cirro-stratus scud; cirro-strati.
16	102	48.9	47.9	1.0	0.2	0.1	22		Id.; cirro-strati; id.; cirri.
17	098	48.3	47.0	1.3	0.2	0.2	23		Cum.-str. to W.; bank of cirro-stratus to S.; cirri. ☺
18	102	48.8	47.4†	1.4	0.3	0.2	23	— : — : 0	Woolly cir.; cirro-strati; cumuli; cumulo-strati. ☺
19	103	51.3	48.7	2.6	0.3	0.3	24	— : 31 : —	Varieties of cirro-strati; cum.-str. to NW.; loose cum. to SE. ☺
20	098	52.1	49.0	3.1	0.5	0.4	24	— : 30 : 30	Woolly cir. and cir-str.; cir-cum.; small cum.-str.; cum. to SW. ☺
21	105	55.9	51.8†	4.1	0.3	0.3	26	— : 30 : —	Loose cir.-str. or cir-cum-str., mixed with cum.; cir. haze. ☺
22	084	57.3	52.8	4.5	0.3	0.4	26	28 : 30 : 30	Patches of cum.; woolly cirri; cir.-str.; cir-cumuli. ☺
23	081	60.1	55.1	5.0	0.4	0.3	26	25 : 28 : —	Id.; cirro-cumulo-strati; cirro-strati. ☺
16 0	057	62.6	56.0	6.6	0.7	0.5	26	26 : — : —	Loose cumuli; cirro-stratus scud; cirro-strati. ☺
1	044	64.0	56.5	7.5	0.6	0.5	28	26 : 29 : —	Id.; cirro-strati. ☺
2	025	65.0	58.0	7.0	1.2	0.4	26	26 : 29 : —	Id.; becoming more homogeneous.
3	014	64.8	57.7	7.1	1.2	1.4	28	29 : 29 : —	Id.; id.; cir-cum.-str.; woolly cir. ☺
4	30.005	64.9	57.8	7.1	1.0	0.5	29	28 : — : —	Id.; id.; cirri; cirrus haze. ☺
5	29.995	63.2	55.8	7.4	1.1	0.8	27	28 : — : —	Id.; cumulo-strati; cirrus haze; halo. ☺
6	993	60.3	54.1†	6.2	1.1	0.7	26	27 : — : —	Id.; id.; cirro-strati; woolly cir. ☺
7	992	56.0	51.9	4.1	0.7	1.3	28	— : 30 : —	Cirro-stratus scud; cirro-strati; woolly cirri. ☺
8	989	53.8	50.3	3.5	1.0	0.7	28	— : 0 : —	Cirro-cumulo-strati; id.; id.
9	997	52.0	47.8†	4.2	0.7	0.1	24		Cirro-stratus scud and cirrus mass; small corona. ☺
10	980	50.8	47.6	3.2	0.6	0.3	24		Cirro-strati; woolly cirri; cirrus haze; lunar cor. ☺

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h.	lbs. 10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.			
16 11	29.978	51.3	48.0	3.3	0.4	0.4	27			Cirro-stratus scud; cirro-strati; cirrous haze.
12	966	51.0	48.1	2.9	0.6	0.4	22			Id.; id.; id.
13	29.961	51.0	48.7	2.3	0.5	0.5	21			Id.; id.
14	947	51.2	49.1	2.1	0.6	0.3	22			Id.; id.
15	924	51.6	49.3	2.3	1.5	0.6	23			Id.; id.; drops of rain lately.
16	923	51.5	49.3	2.2	1.0	0.4	26	— : 28 : —		Id.; id.
17	921	51.7	49.4	2.3	0.4	0.1	27	— : 29 : —		Id.; id.
18	922	51.8	49.8	2.0	0.6	0.4	29	29 : 30 : —		Scud; cirro-stratus scud; dense cirro-strati; slight shower
19	937	46.7	46.5	0.2	0.3	0.2	0			Id.; id.; rain [lately].
20	958	47.5	47.0	0.5	0.3	0.4	2	1 : — : —		Id.; cirrous mass.
21	957	50.6	47.6	3.0	0.9	1.1	2	2 : 29 : —		Loose cumulous scud; fleecy cirro-cumuli; cirri. ☽
22	968	51.4	46.8	4.6	1.2	1.2	2	31 : 29 : —		Id.; id.; id.
23	965	53.4	47.4	6.0	1.7	1.1	2	30 : 30 : —		Woolly cirro-cumulo-strati; cirro-strati; id. ☽
17 0	978	53.8	47.7	6.1	1.5	0.8	3	29 : 30 : —		Loose cumulous scud; cirro-cumulo-strati; id. ☽
1	958	54.0	47.7	6.3	1.5	1.1	3	29 : 30 : —		Id.; id.; id.
2	969	54.8	49.2	5.6	0.9	0.5	31	30 : 30 : —		Id.; id.; cum.; id. ☽
3	961	54.8	48.0	6.8	0.9	0.8	1	30 : 30 : —		Id.; id.; id.; id. ☽
4	958	53.8	46.7	7.1	1.1	0.6	1	30 : — : —		Id.; cirro-strati; cirri. ☽
5	956	53.8	47.2	6.6	0.8	0.5	2	30 : — : —		Loose cumuli; id.; id. ☽
6	959	52.5	46.0	6.5	0.5	0.4	2	— : 29 : —		Cirro-stratus scud; cirri. ☽
7	963	51.8	45.0	6.8	0.9	0.6	1	— : 30 : —		Cirro-cumulo-strati; cirri, radiating from NW. ☽
8	973	49.0	43.8	5.2	0.6	0.2	2	— : 30 : —		Id.
9	982	47.7	43.3	4.4	0.4	0.1	2	— : 30 : —		Id.; cirri; cirrous haze. ☽
10	982	45.7	42.3	3.4	0.1	0.0	4	— : 30 : —		Id.; id.; id.
11	982	43.7	40.6	3.1	0.1	0.1	0			0.5
12	971	42.8	39.4	3.4	0.1	0.0	0			0.2
23 1	29.813	52.0	48.4	3.6	0.8	0.6	30		{ Sunday—Thick scud; a continued succession of light showers throughout the day.
18 13	29.693	46.5	43.6	2.9	2.4	1.3	2	30 : — : —		Scud; cirro-strati. ☽
14	681	44.5	42.3	2.2	1.0	0.7	3	30 : — : —		Id.; id. ☽
15	682	43.8	41.8	2.0	0.6	0.6	2	30 : — : —		Id.; id.
16	680	44.2	41.5	2.7	1.0	0.5	4	0 : — : —		Id. and cirro-cumulo-strati.
17	691	43.2	42.2	1.0	0.2	0.2	2	1 : — : —		Id.; cirro-strati; drops of rain.
18	684	44.0	42.0	2.0	0.6	0.4	2	— : 31 : 30		Cirro-cumulo-strati; wool.cir.radiating from NNW.; cirro-strati. ☽
19	688	45.6	42.5	3.1	1.2	1.5	1	0 : — : —		Scud; cirro-stratus scud; cirro-strati and cirri.
20	688	47.0	43.5	3.5	1.6	0.8	1	0 : — : —		Id.; loose cumuli; cirri to N.
21	695	46.8	42.4	4.4	2.6	1.8	3	0 : — : —		Id.; id.; cirro-cumulo-strati; cirri; cir. haze.
22	692	47.0	42.6	4.4	1.8	1.9	2	0 : — : —		Id.; id.; cirro-strati; thick cirro-cumulo-strati.
23	689	48.2	44.0	4.2	2.4	2.1	0	0 : — : —		Id.; id.; id.; id.
19 0	689	48.0	44.0	4.0	2.2	1.5	1	0 : — : —		10.0
1	690	45.6	43.5	2.1	1.7	0.5	0			Id.; id.; cirro-strati. ☽
2	689	48.3	43.8	4.5	1.7	1.3	2	1 : — : —		Id.; id.; id.
3	692	48.6	44.7	3.9	2.0	2.1	2	1 : — : —		Id.; id.; cirro-cumulo-strati. ☽
4	700	47.9	42.6	5.3	2.0	1.4	2	1 : — : —		Loose cumuli; cirro-cumulo-strati. ☽
5	708	48.4	43.6	4.8	2.1	1.5	4	1 : — : —		Id.; thick cirro-strati.
6	719	46.7	43.2	3.5	2.0	1.5	4	2 : — : —		Scud; id.
7	722	45.8	43.3	2.5	1.6	0.8	2	2 : — : —		Id.; id.
8	731	45.3	42.7	2.6	1.6	1.2	2	2 : — : —		Id.; id.
9	745	44.0	42.6	1.4	1.5	0.4	31	2 : — : —		10.0
10	751	44.0	42.8	1.2	0.7	0.2	1			Id.; id.; id.; rain ^{0.5} .
11	761	44.4	43.1	1.3	0.3	0.2	3			10.0
12	760	44.4	43.0	1.4	0.3	0.3	2			10.0
13	29.757	44.1	43.0	1.1	0.4	0.1	3			Seud and loose cumuli.
14	762	43.7	42.6	1.1	0.3	0.1	3			Seud and cirro-stratus scud?
15	763	43.3	42.3	1.0	0.1	0.1	2			Id.
16	765	43.4	41.8	1.6	0.1	0.1	2	3 : — : —		Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

May 18^d 19^h. Observation made at 19^h 8^m.

May 18^d 21^h. Observation made at 21^h 5^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
19 17	29.769	42.2	41.0	1.2	0.1	0.0	—	— : 3 : —	—	Cirro-stratus scud.
18	778	44.1	42.6	1.5	0.1	0.0	31	2 : 1 : —	9.5	Id.; cirro-cumulo-strati.
19	790	45.2	43.3	1.9	0.1	0.3	0	— : 2 : —	10.0	Id.
20	778	46.2	43.8	2.4	0.2	0.1	1	— : 2 : —	10.0	Id.
21	786	46.5	43.8	2.7	0.3	0.2	2	2 : — : —	10.0	Thick scud; drops of rain.
22	783	48.7	45.2	3.5	0.7	0.7	2	2 : — : —	10.0	Id.
23	770	49.2	46.4	2.8	0.5	0.2	0	— : 1 : —	10.0	Cirro-stratus scud; cirrus mass.
20 0	761	48.7	45.0	3.7	0.5	0.3	2	— : 0 : —	9.9	Id.; id.
1	747	50.7	46.2	4.5	0.7	0.4	2	0 : 1 : —	9.9	Id.; cirro-cumulo-strati.
2	738	51.0	46.4	4.6	0.9	0.7	1	0 : 1 : —	9.9	Id.; id.
3	732	51.0	47.2	3.8	1.1	0.6	1	0 : 2 : —	9.0	Loose cumuli; cirro-cumulo-strati; cirri.
4	723	52.2	47.3	4.9	1.0	0.6	5	31 : 30 : —	9.0	Id.; id.; id.
5	713	51.9	47.2	4.7	1.2	1.0	5	0 : 30 : —	8.5	Scud; loose cumuli; cirri.
6	713	49.4	45.1	4.3	1.0	0.9	2	2 : 31 : —	9.8	Id.; loose cumuli; cirr.-str. scud; cirr.-str.; cir.
7	715	47.8	45.4	2.4	0.7	0.5	2	2 : 31 : —	9.5	Id.; id.; id.; id.
8	708	46.6	43.8	2.8	1.4	0.4	2	3 : 30 : —	5.0	Id.; cirro-cumulo-strati; mottled cirri.
9	718	46.3	44.2	2.1	0.7	0.3	3	3 : 31 : —	9.8	Id.; id.; cirro-strati; cirri.
10	717	44.7	43.0	1.7	0.3	0.2	1	3 : — : —	2.5	Id.
11	710	44.6	43.0	1.6	0.1	0.1	2		10.0	Thick scud.
12	707	45.0	43.2	1.8	0.6	0.5	2		10.0	Id.
13	29.699	44.7	42.8	1.9	0.7	0.5	2		10.0	Thick scud.
14	700	44.7	42.4	2.3	1.0	0.4	3		10.0	Id.
15	698	44.2	42.3	1.9	0.9	0.3	3		10.0	Id.
16	695	43.9	42.3	1.6	1.0	0.6	3	2 : — : —	10.0	Id.
17	695	43.5	41.8	1.7	1.0	0.5	3	3 : — : —	10.0	Id.
18	703	43.7	42.1	1.6	1.1	1.0	4	2 : — : —	10.0	Id.
19	714	44.9	43.2	1.7	0.8	0.7	4	3 : — : —	10.0	Id.
20	716	45.0	43.1	1.9	0.7	0.4	3	2 : — : —	10.0	Id.
21	726	45.7	44.0	1.7	0.6	0.6	4		10.0	Id.
22	726	46.4	44.5	1.9	0.6	0.9	3	3 : — : —	10.0	Id.
23	708	49.6	46.7	2.9	0.8	0.8	2	2 : — : —	8.5	Scud and loose cumuli; cirri.
21 0	706	51.0	47.7	3.3	1.1	1.1	2	2 : — : —	9.0	Id.; tufts of cirri.
1	695	52.3	48.3	4.0	1.3	0.9	2	2 : — : —	9.0	Id.; cirri.
2	691	53.0	48.7	4.3	1.0	0.8	3	2 : 0 : —	9.9	Scud, in two currents.
3	683	51.5	47.5	4.0	1.1	0.9	4	2 : 0 : —	9.5	Id.
4	667	54.0	49.1	4.9	1.0	1.0	3	2 : — : —	9.5	Scud; cirrus haze; solar halo.
5	659	52.9	48.4	4.5	1.4	1.3	2	2 : — : —	9.9	Id.; id., thicker; halo disappearing.
6	661	50.8	47.7	3.1	1.7	1.5	3	1 : — : —	9.8	Id.; thick cirri; cirro-strati and cirrus haze.
7	663	49.6	47.0	2.6	1.4	0.6	2	2 : — : 8	9.9	Id.; woolly cirri; cirro-strati; cirrus haze.
8	670	48.1	46.0	2.1	1.3	1.2	3	2 : — : —	10.0	Id.; cirri and cirrus haze.
9	675	46.7	44.6	2.1	2.1	1.2	3	2 : — : —	10.0	Id.
10	683	46.0	44.2	1.8	1.2	1.2	2		10.0	Id.
11	695	45.5	44.0	1.5	2.0	1.3	4		10.0	Id.; cirro-strati.
12	694	45.0	43.8	1.2	1.3	0.6	4		10.0	Id.; id.
13	29.690	44.9	43.2	1.7	1.2	0.9	2		10.0	Scud; cirro-strati.
14	688	44.4	43.2	1.2	1.2	0.4	2		10.0	Id.; id.; drops of rain.
15	682	44.3	42.7	1.6	1.7	1.6	2		10.0	Id.; id.; id.
16	683	44.2	42.6	1.6	2.0	1.4	2	2 : — : —	10.0	Id.; id.
17	697	44.2	42.4	1.8	1.2	0.6	2	2 : — : —	10.0	Id.; id.
18	697	44.5	42.4	2.1	1.2	0.8	3	2 : — : —	10.0	Id.; id.
19	700	44.3	42.9	1.4	1.5	0.5	3	2 : — : —	10.0	Thick scud and cirro-strati.
20	704	45.4	43.3	2.1	1.2	0.7	3	3 : — : —	10.0	Id.
21	714	46.3	44.4	1.9	1.3	1.2	3	4 : — : —	9.9	Smoky scud; cirro-cumulo-strati.
22	714	46.7	45.6	1.1	1.7	1.2	4	4 : 3 : —	9.8	Id.; id.; drizzle lately.
23	717	48.3	45.1	3.2	1.5	1.3	4		10.0	Thick scud.
22 0	724	48.7	45.7	3.0	1.5	1.3	3	3 : — : —	10.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From					
lbs.	lbs.	pt.	pt.	pt.	0—10.						
d. 22	in.	°	°	°	1.3	0.7	3	3 : — : —	10.0	Thick scud.	
1	29.727	47.7	45.0	2.7	0.8	0.5	4	2 : 4 : —	9.8	Id.	
2	727	49.3	46.3	3.0	1.4	0.8	4	3 : — : —	9.8	Seud; cir-cum-str.; cir-str. seud; clouds broken. ☽	
3	723	51.3	47.8	3.5	1.2	0.7	4	4 : — : —	9.8	Id.; cirro-stratus seud. ☽	
4	721	50.0	46.6	3.4	1.5	0.7	6	4 : — : —	9.8	Id.; id. ☽	
5	719	49.6	46.2	3.4	1.1	0.6	4	3 : — : —	9.5	Id.; id.	
6	721	48.9	46.0	2.9	0.7	0.6	4	2 : — : —	10.0	Id.; id.	
7	723	47.0	44.4	2.6	0.6	0.3	3	2 : — : —	10.0	Id.; id.	
8	730	45.6	43.5	2.1	0.4	0.4	3	2 : — : —	10.0	Id.; id.	
9	741	44.3	42.8	1.5	0.4	0.4	3	2 : — : —	10.0	Id.; id.	
10	752	43.4	42.3	1.1	0.4	0.2	4	2 : — : —	10.0	Id.; id.	
11	755	43.3	42.5	0.8	0.4	0.4	3	2 : — : —	10.0	Id.	
12	761	43.4	42.5	0.9	0.4	0.5	3	2 : — : —	10.0	Id.; slight spit of rain.	
13	29.755	43.2	42.3	0.9	0.5	0.3	3	2 : — : —	10.0	Seud.	
14	750	42.9	42.3	0.6	0.4	0.3	3	2 : — : —	10.0	Id.; fine rain ^{0.2}	
15	746	42.7	42.2	0.5	0.4	0.2	3	2 : — : —	10.0	Id.; id.	
16	742	43.3	42.6	0.7	0.3	0.2	3	2 : — : —	10.0	Id.; fine rain ^{0.1}	
17	743	43.7	42.4	1.3	0.5	0.4	3	2 : — : —	10.0	Id.; id.	
18	746	43.8	42.6	1.2	0.5	0.3	3	2 : — : —	10.0	Id.	
19	748	43.7	42.8	0.9	0.4	0.3	3	2 : — : —	10.0	Id.; fine rain ^{0.1}	
20	753	44.8	43.0	1.8	0.4	0.4	3	2 : — : —	10.0	Id.; id.	
21	750	46.9	44.7	2.2	0.5	0.4	3	3 : — : —	10.0	Id.; dense cirro-strati.	
22	752	48.7	45.8	2.9	0.4	0.4	3	2 : — : —	10.0	Id.; id.	
23	746	50.2	46.7	3.5	0.4	0.1	4	2 : — : —	10.0	Id.; id.	
0	742	52.2	48.8	3.4	0.4	0.3	4	2 : — : —	10.0	Id.; id.	
1	739	51.3	48.2	3.1	0.4	0.6	2	2 : — : —	10.0	Id.; id.	
2	738	51.0	47.5	3.5	0.4	0.4	2	2 : — : —	10.0	Id.; id.	
3	741	50.0	47.2	2.8	0.5	0.3	5	2 : — : —	10.0	Id.; id.	
4	730	49.2	47.4	1.8	0.4	0.4	4	2 : — : —	10.0	Id.	
5	731	47.8	45.0	2.8	0.5	0.4	4	3 : — : —	10.0	Id.	
6	728	48.0	45.7	2.3	0.5	0.2	3	3 : — : —	10.0	Id.	
7	731	46.9	44.4	2.5	0.4	0.4	4	3 : — : —	10.0	Id.	
8	735	46.1	44.1	2.0	0.4	0.3	3	3 : — : —	10.0	Id.	
9	745	45.6	43.6	2.0	0.5	0.4	3	2 : — : —	10.0	Id.	
10	749	44.4	43.0	1.4	0.5	0.2	1	2 : — : —	10.0	Id.	
11	754	44.0	43.2	0.8	0.6	0.3	4	2 : — : —	10.0	Id.; light drizzle.	
12	751	44.2	43.3	0.9	0.4	0.3	3	2 : — : —	10.0	Id.; id.	
13	29.760	44.2	43.2	1.0	0.4	0.3	4	2 : — : —	10.0	Seud.	
14	757	44.2	42.8	1.4	0.3	0.2	3	2 : — : —	10.0	Id.	
15	772	44.2	42.6	1.6	0.4	0.1	4	2 : — : —	10.0	Id.	
16	770	44.0	42.4	1.6	0.2	0.2	2	2 : — : —	10.0	Id.	
17	779	43.8	42.4	1.4	0.2	0.1	0	2 : — : —	10.0	Id.; cirro-stratus seud.	
18	779	43.9	42.5	1.4	0.4	0.4	4	3 : — : —	10.0	Thick cirro-stratus seud.	
19	799	44.3	43.2	1.1	0.4	0.5	3	4 : — : —	10.0	Nearly uniform mass of seud.	
20	810	44.2	43.0	1.2	0.4	0.4	3	4 : — : —	10.0	Id.	
21	813	44.3	43.3	1.0	0.5	0.3	4	4 : — : —	10.0	Id.	
22	800	46.0	44.3	1.7	0.6	0.5	4	4 : — : —	10.0	Id.	
23	803	46.3	44.4	1.9	0.8	0.6	3	4 : — : —	10.0	Id.	
24	0	791	47.5	45.7	1.8	0.7	0.7	4	4 : — : —	10.0	Id.
1	784	48.0	46.2	1.8	0.7	0.7	3	4 : — : —	10.0	Id.	
2	780	48.3	46.4	1.9	0.9	0.7	4	2 : — : —	10.0	Id.	
3	778	48.4	46.3	2.1	0.9	0.8	4	3 : — : —	10.0	Id.	
4	775	46.3	44.9	1.4	0.9	0.9	4	2 : — : —	10.0	Id.	
5	771	46.2	45.1	1.1	1.0	0.7	6	2 : — : —	10.0	Id.	
6	774	45.4	44.0	1.4	0.8	0.4	4	2 : — : —	10.0	Id.	
7	766	45.3	44.0	1.3	0.7	0.4	3	2 : — : —	10.0	Id.	
8	765	44.3	43.1	1.2	0.6	0.4	3	2 : — : —	10.0	Id.	

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

May 22^d 18^h. Observations made at 18^h 10^m.

HOURLY METEOROLOGICAL OBSERVATIONS, MAY 24—27, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci, moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
24 9	29.769	44.0	43.0	1.0	0.8	0.4	3			10.0
10	764	43.6	42.5	1.1	0.5	0.2	3			10.0
11	764	43.3	42.4	0.9	0.4	0.2	2			10.0
12	759	43.0	42.4	0.6	0.4	0.2	3			10.0
23 ₁	29.703	47.0	44.6	2.4	0.5	0.3	6	4 : — : —	10.0	Sunday—Nearly uniform mass of scud.
25 13	29.656	43.4	43.0	0.4	0.5	0.3	2			10.0
14	655	43.3	41.7	1.6	0.3	0.2	4			10.0
15	630	43.0	41.8	1.2	0.4	0.2	2			10.0
16	628	42.8	42.1	0.7	0.2	0.1	2			10.0
17	616	43.3	42.5	0.8	0.2	0.1	2	3 : — : —	10.0	Misty scud; fine rain ^{0.2}
18	597	43.6	43.0	0.6	0.4	0.6	2	3 : — : —	10.0	Id.; cirro-stratus scud; clouds breaking.
19	600	44.6	43.3	1.3	0.7	0.6	3	3 : — : —	10.0	Id.; id.
20	590	45.2	43.8	1.4	1.2	1.7	4	3 : — : —	10.0	
21	596	44.9	43.9	1.0	1.8	1.1	3	3 : — : —	10.0	Dense clouds, chiefly misty scud; light drizzle.
22	602	45.3	44.0	1.3	1.1	0.6	3	3 : — : —	10.0	Id.
23	592	44.8	44.2	0.6	1.2	0.8	2	3 : — : —	10.0	Id.; rain ^{0.5}
26 0	572	45.4	44.2	1.2	1.9	1.6	3			10.0
1	565	44.8	44.0	0.8	2.5	1.2	4	3 : — : —	10.0	Id.; rain ^{1.5}
2	547	45.2	44.3	0.9	1.7	0.7	3			10.0
3	541	45.0	44.1	0.9	2.3	1.8	2	3 : — : —	10.0	Id.; rain ³
4	541	44.7	44.4	0.3	1.7	1.3	2	3 : — : —	10.0	Id.; rain ¹
5	537	44.6	44.2	0.4	2.8	1.3	3			10.0
6	531	44.0	43.8	0.2	1.8	1.1	3			10.0
7	533	43.6	43.6	0.0	2.0	1.7	3			10.0
8	532	43.9	43.7	0.2	2.0	1.2	3			10.0
9	536	44.3	44.1	0.2	1.4	1.1	3			10.0
10	551	44.8	44.6	0.2	1.6	0.9	4			10.0
11	562	45.5	45.4	0.1	1.4	0.7	4			10.0
12	584	45.6	45.4	0.2	0.8	0.6	4			10.0
13	29.592	45.5	45.3	0.2	0.7	0.3	4			10.0
14	598	45.3	45.0	0.3	0.6	0.7	3			10.0
15	622	45.0	44.7	0.3	0.8	0.5	6			10.0
16	635	44.7	44.3	0.4	0.6	0.1	5			10.0
17	648	45.0	44.6	0.4	0.4	0.4	7	7 : — : —	10.0	Misty scud; dense mass of clouds.
18	667	44.6	44.2	0.4	0.7	0.3	6	6 : — : —	10.0	As before; rain ^{0.2}
19	690	45.0	44.5	0.5	0.5	0.5	4	5 : — : —	10.0	Id.; id.
20	709	46.1	45.4	0.7	0.7	0.5	5	5 : — : —	10.0	Id.; rain ^{0.5}
21	727	46.7	45.9	0.8	0.7	0.7	4	5 : — : —	10.0	Id.; rain ^{0.2}
22	752	46.7	45.9	0.8	0.8	0.6	4	5 : — : —	10.0	Misty scud; Scotch mist.
23	766	47.0	46.0	1.0	1.2	1.1	5	5 : — : —	10.0	Id.; id.; rain ^{0.5}
27 0	788	46.8	45.9	0.9	1.1	0.5	4	5 : — : —	10.0	Id.; clouds breaking.
1	800	46.8	45.9	0.9	0.7	0.7	4	5 : — : —	10.0	Id.; id.
2	819	47.7	46.3	1.4	0.9	0.6	4	4 : — : —	10.0	Scud; id.
3	828	47.2	45.6	1.6	0.7	0.6	4	4 : — : —	10.0	Id.; id.
4	834	47.3	45.3	2.0	0.9	0.9	4	4 : — : —	10.0	Id.; id.
5	847	46.7	44.5	2.2	1.3	1.0	4	4 : — : —	10.0	Id.
6	852	46.4	44.2	2.2	0.9	0.5	4	5 : — : —	10.0	Id.; clouds breaking.
7	865	45.6	43.5	2.1	1.0	0.5	4	4 : — : —	10.0	Id.
8	879	45.0	42.9	2.1	0.6	0.5	6	4 : — : —	10.0	Id.
9	887	44.0	42.4	1.6	0.7	0.7	4			10.0
10	896	44.2	42.4	1.8	0.4	0.2	4	3 : — : —	10.0	Id.
11	913	43.9	42.2	1.7	0.4	0.3	4			10.0
12	915	43.5	41.4	2.1	0.4	0.3	4			10.0
13	29.922	43.2	41.7	1.5	0.3	0.2	3			Scud.
14	925	43.1	41.2	1.9	0.4	0.3	3			10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	lbs. 10m	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0-10.	
27 15	29.926	42.9	40.7	2.2	0.6	0.5	3		10-0	Scud.
16	928	42.8	40.7	2.1	0.4	0.3	3		10-0	Id.
17	933	42.8	40.7	2.1	0.7	0.4	4		10-0	Id. ; cirro-strati.
18	935	43.4	41.0	2.4	0.7	0.5	4		10-0	Mass of cirro-stratus.
19	940	44.0	41.6	2.4	0.6	0.3	3	4 : — : —	10-0	Scud ; dense mass of cirro-stratus.
20	946	45.3	42.3	3.0	0.9	0.7	5	— : 4 : —	10-0	Cirro-stratus scud, breaking.
21	948	46.4	43.4	3.0	1.2	0.8	2	4 : — : —	10-0	Scud, with other clouds above.
22	947	48.7	45.0	3.7	1.0	1.1	4	5 : — : —	9.8	Id., id.
23	941	48.4	44.9	3.5	1.2	1.0	4		10-0	Id., id.
28 0	945	49.4	45.6	3.8	1.4	1.1	4		9.9	Id. ; cirro-strati.
1	937	48.9	45.4	3.5	1.4	0.9	5	— : 5 : —	8-0	Cirro-stratus scud ; patches of cirro-strati.
2	927	51.6	48.1	3.5	1.0	0.4	5	— : 4 : —	9-0	Scud ; patches of cirro-strati and cirri.
3	920	48.7	45.1	3.6	1.3	1.0	6	— : 5 : —	4-0	Id. ; cirri to SE.
4	908	49.8	46.1	3.7	1.4	1.2	4	— : 5 : —	7-0	Id. ; id.
5	898	48.8	45.0	3.8	1.2	0.9	6	— : 4 : —	6-5	Id. ; woolly cirri.
6	888	47.7	44.3†	3.4	1.1	0.9	5	— : 5 : —	8-0	Id. ; id.
7	891	46.0	43.7	2.3	1.0	0.7	4	— : 5 : —	10-0	Id. ; cirro-strati.
8	886	45.6	42.8	2.8	1.2	0.7	4		9.9	Id. ; id.
9	891	43.4	41.7†	1.7	1.2	1.3	3		10-0	Dense mass of scud and cirro-stratus.
10	887	44.2	41.8	2.4	1.3	0.2	4		10-0	Id.
11	886	44.0	41.6	2.4	1.1	0.5	4		10-0	Scud ?
12	880	43.9	41.1	2.8	1.1	1.0	4		10-0	Id.
13	29.873	43.5	41.0	2.5	0.8	0.4	3		10-0	Scud ?
14	858	43.3	40.9	2.4	0.7	0.9	2		10-0	Id.
15	854	42.9	40.3	2.6	1.0	0.7	3		10-0	Id.
16	841	43.0	41.0	2.0	1.1	0.6	2		10-0	Id.
17	837	43.0	41.0	2.0	1.0	0.4	2	3 : — : —	10-0	Id. ; cirro-stratus scud.
18	823	43.4	41.4	2.0	0.6	0.5	2	3 : — : —	10-0	Id. ; id.
19	818	43.7	41.0	2.7	0.7	0.5	3	4 : — : —	10-0	Id. ; id.
20	812	44.2	41.3	2.9	1.2	0.7	3	4 : — : —	10-0	Id. ; id.
21	807	45.0	42.0	3.0	1.3	1.0	4	5 : — : —	10-0	Id. ; id.
22	799	46.2	43.2	3.0	1.4	0.7	3	5 : — : —	10-0	Id. ; id.
23	795	47.2	44.0	3.2	1.5	1.0	3	5 : — : —	10-0	Id. ; id.
29 0	788	49.1	45.4	3.7	1.3	1.8	3	5 : — : —	9-9	Id. ; id.
1	785	50.0	46.2	3.8	1.3	1.1	4	5 : — : —	9-9	Id. ; id.
2	777	51.9	47.7	4.2	1.1	0.9	2	5 : — : —	9-9	Id. ; id.
3	763	52.0	48.0	4.0	1.0	0.8	5	4 : — : —	9-0	Id. ; loose cumuli.
4	750	51.0	46.9	4.1	0.7	0.4	2	4 : — : —	9-5	Id. ; cirro-strati ; loose cumuli.
5	750	50.8	47.0	3.8	0.9	0.6	3	4 : — : —	9-5	Id. ; id. ; id.
6	750	49.6	46.1†	3.5	0.9	0.4	3	3 : 6 : —	6-0	Cirro-stratus scud ; cirro-strati ; cirro-cumuli.
7	750	47.8	45.2	2.6	0.7	0.6	4	— : 3 : —	10-0	Dense mass of cirro-stratus scud.
8	762	46.0	44.2	1.8	0.8	0.5	4	— : 4 : —	9-8	Cirro-stratus scud.
9	773	45.4	44.0	1.4	0.6	0.3	4	4 : — : —	9-5	Loose cirro-stratus scud.
10	782	43.7	42.7	1.0	0.3	0.1	3	4 : — : —	8-0	Id.
11	773	44.1	43.2	0.9	0.1	0.1	3	4 : — : —	9-5	Id.
12	781	45.4	44.4	1.0	0.4	0.2	3		9-8	Id.
13	29.784	45.3	44.6	0.7	0.3	0.2	3		9-9	Loose cirro-stratus scud. [N. and NE. hor.
14	784	43.8	43.3	0.5	0.1	0.0	3		3-0	Scud to S. ; clouds moving off; cirro-strati and haze on
15	785	39.5	39.3	0.2	0.0	0.0	30		1-0	Id. SE. ; cir.-str. to NE. ; haze on NE. horizon. ☽
16	786	36.1	36.1	0.0	0.0	0.0	20		0-8	Nearly as before ; stratus on the ground, red to NE.
17	788	38.0	38.0†	0.0	0.0	0.0	20		0-5	Scud on SE. horizon ; cirro-strati to N. ☽
18	792	40.7	40.4	0.3	0.0	0.0	20	5 : — : —	3-5	Loose misty scud ; id.
19	803	46.0	44.8†	1.2	0.0	0.0	10	4 : 4 : —	9-5	Id. ; cirro-stratus scud.
20	817	48.8	46.8	2.0	0.3	0.2	3	3 : 4 : —	9-8	Id. ; id.
21	839	50.2	47.7	2.5	0.5	0.5	2	3 : 4 : —	9-0	Id. ; id.
22	824	52.5	49.0	3.5	0.7	0.6	4	3 : 4 : 5	9-0	Scud ; loose-cumuli ; woolly cirri.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

May 29th 6^h. Cirro-stratus scud becoming cirro-stratus, some portions of it slightly cymoid : cirro-cumuli and cirro-cumulo-strati.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
29 23	29.843	52.3	48.3	4.0	0.8	0.6	4	3 : 4 : —	9.0	Scud; loose cumuli.
30 0	847	53.7	49.2	4.5	0.9	0.6	6	3 : 4 : —	9.5	Id.; id.; cumuli; cirro-strati. ☽
1	871	53.3	48.5	4.8	1.2	0.6	4	3 : 4 : —	9.5	Id.; id.; id.; id.
2	873	54.2	49.7	4.5	1.0	0.5	4	3 : — : —	9.8	Loose cirro-stratus scud; cumuli; cirri. ☽
3	878	53.0	48.0	5.0	1.1	0.5	4	2 : — : —	6.0	Id.; id.; id.; id.; cirro-strati. ☽
4	874	52.7	46.2	6.5	1.0	0.7	4	0 : — : —	7.0	Id.; id.; id.; id.
5	881	50.3	44.5	5.8	0.8	0.6	4	2 : — : —	9.0	Id.; cirro-strati; cum.-str.; cir.
6	884	50.5	45.0	5.5	0.5	0.4	3	— : 30 : —	7.5	Cir-cum.-str.; patches of scud below, and of cir. above. ☽
7	896	49.5	44.3	5.2	0.4	0.2	4	— : 30 : —	7.0	Id.
8	899	48.3	43.0	5.3	0.2	0.0	6	— : 30 : —	3.0	Cirro-cumulous scud; cirro-cumulo-strati.
9	912	45.4	41.7	3.7	0.0	0.0	4		3.0	Id.; id.
10	919	44.8	41.7	3.1	0.1	0.0	4		9.9	Cirro-stratus scud; cirro-cumulo-strati.
11	924	44.9	42.6	2.3	0.1	0.0	8		9.2	Id.; id.
12	927	42.6	41.3	1.3	0.0	0.0	23		7.5	Id.; id.
13	29.932	43.4	42.4	1.0	0.1	0.0	20		10.0	Cirro-stratus scud; cirro-cumulo-strati.
14	929	43.0	42.2	0.8	0.0	0.0			10.0	Id.; id.
15	925	42.8	42.1	0.7	0.0	0.0			9.5	Id.; id.
16	917	39.4	39.4	0.0	0.0	0.0			3.5	Id.; id.
17	929	41.6	41.0	0.6	0.1	0.0	23	2 : 0 : —	9.0	Scud; loose cumuli; cumuli; cirro-strati; cirri.
18	932	43.4	41.7	1.7	0.0	0.0	24	— : 24 : —	9.0	Cirri and cirrus haze; fine cumuli on N. horizon.
19	937	46.7	44.3	2.4	0.0	0.0	20	— : 23 : —	8.5	Cirro-cumulo-strati; cum.; cum.-str.; cir.-str.; cir. ☽
20	917	50.2	47.0	3.2	0.1	0.1	28	31 : — : —	8.0	Scud and loose cumuli; cumuli, &c.; as before.
21	940	53.7	49.0	4.7	0.1	0.0	12	30 : — : —	9.5	As before; rather electric-looking.
22	944	54.0	49.3	4.7	0.1	0.0	8	31 : — : —	9.8	Loose cumuli; woolly cirri and cirro-strati.
23	942	56.1	50.1	6.0	0.1	0.0	14	28 : — : —	8.5	Id.; cirro-stratus scud; cirri; cirro-strati. ☽
31 0	938	57.3	51.0	6.3	0.2	0.2	12	30 : — : —	3.5	Cumuli; loose cirro-strati. ☽
1	928	57.0	50.5	6.5	0.3	0.2	6	29 : — : —	5.0	Id.; id.
2	922	58.4	51.6	6.8	0.5	0.2	5	28 : — : —	8.5	Id.; id.
3	917	57.8	51.2	6.6	0.3	0.3	6	28 : — : —	8.0	Id.; id.
4	913	61.0	53.7	7.3	0.2	0.1	8	19 : 27 : —	8.8	Scud; cumuli; cirro-cumulo-strati.
5	915	56.8	52.8	4.0	0.5	0.2	18		7.5	Id.; id.; id.
6	903	56.4	52.4	4.0	0.4	0.2			5.0	Id.; id.; id.
7	898	55.5	50.6	4.9	0.2	0.1	20	— : 22 : —	5.0	Cirro-cumulo-strati; cumuli and cumulo-strati on hor.
8	894	53.0	49.7	3.3	0.2	0.1	18	— : 24 : —	4.0	Id.; cumulo-strati to N. ☽
9	899	51.4	48.6	2.8	0.3	0.3	17		1.5	Cirro-stratus scud; cirro-strati; cirri.
10	889	47.9	46.0	1.9	0.6	0.1	17		2.0	Cirro-strati and haze near horizon.
11	897	46.4	44.7	1.7	0.2	0.1	18		1.5	Cirro-stratus scud and haze near horizon. [from WSW.
12	897	45.3	43.7	1.6	0.1	0.0	19		2.0	Cirro-strati and haze to N; faint milky streaks of cirri radiating
1 1	29.767	58.3	54.9	3.4	1.5	0.7	19	20 : — : —	9.2	{Sunday—Scud, cum., and cir-cum.-str.; cloudy, with occasional sunshine and showers; electric-looking.
13	29.656	53.0	52.2	0.8	1.5	0.8	20		10.0	Overcast; scud?
14	648	53.2	52.2	1.0	0.5	0.2	20		10.0	Id.; id.
15	637	53.1	52.0	1.1	0.2	0.0	22		10.0	Id.; id.
16	622	52.9	52.0	0.9	0.4	0.1	20		10.0	Nearly homogeneous.
17	617	52.6	51.7	0.9	0.4	0.5	22	21 : — : —	10.0	Loose scud; densely clouded.
18	616	52.7	51.9	0.8	0.7	0.3	20		10.0	Id.; id.
19	613	54.4	53.0	1.4	0.5	0.3	20	21 : — : —	10.0	Id.; id.
20	613	55.6	53.5	2.1	0.6	0.8	19	21 : 22 : —	10.0	Id.; cirro-cumulo-strati.
21	604	58.3	55.4	2.9	1.0	0.9	20	21 : 22 : —	9.5	Id.; id.
22	584	59.5	55.2	4.3	1.3	0.8	19	22 : 23 : —	9.5	Id.; id.; cirri.
23	575	60.8	55.2	5.6	2.4	1.2	18	22 : 23 : —	9.8	Id.; id.; id.
2 0	564	60.8	55.6	5.2	2.0	1.6	18	22 : 23 : —	9.8	Id.; id.; wo. and curled cir. ☽
1	565	60.9	55.5	5.4	2.4	1.2	19	22 : 23 : —	9.9	Id.; id.; id.
2	553	60.2	54.3	5.9	2.6	1.7	21	22 : 23 : —	9.5	Scud; cir-cum.-str.; tufts of cir. and cir. haze; sky stormy-like.
3	542	60.8	55.6	5.2	2.2	1.2	19	22 : 23 : —	9.8	Id.; id.; id.; solar halo. ☽
4	526	59.8	54.2	5.6	1.6	1.2	20	22 : — : —	9.9	Id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
2 5	29.521	59.4	54.4	5.0	1.8	1.1	20	22 : — : —	9.9	Scud ; tufts of cirri and cirrous haze.
6	509	57.6	53.2	4.4	1.7	1.3	22	22 : — : —	9.8	Id. ; various kinds of cirro-strati ; cirri.
7	498	57.0	52.6	4.4	1.4	1.6	20	23 : — : —	9.5	Id. ; cir-str. ; cirri and cirrous haze ; imperfect halo. ⊖
8	486	55.2	51.6	3.6	1.7	1.4	19		9.5	Sky covered with cirri ; cir-str. and cir-haze ; halo and parhelion. ⊖
9	482	52.9	50.1	2.8	1.2	0.6	20	— : — : 12	9.0	As before ; halo just disappearing.
10	471	51.3	49.2	2.1	0.6	0.6	18		7.0	Id. ; cirri thinner.
11	465	49.1	48.0	1.1	0.7	0.4	19		7.0	Cirro-strati, cirri, and haze.
12	458	48.3	47.0	1.3	0.2	0.1	20		3.0	Id.
13	29.439	45.7	45.3	0.4	0.2	0.0	20		3.0	Cirro-strati, cirri, and haze round horizon.
14	419	46.4	45.7	0.7	0.1	0.0	22		4.0	Id.
15	396	45.7	45.3	0.4	0.1	0.0	18	20 : — : —	10.0	Smoky scud ; cirro-strati ; cirrous mass.
16	371	49.4	48.3	1.1	0.5	0.3	18	20 : — : —	10.0	Scud ; dense cirrous mass.
17	353	50.2	48.4	1.8	0.4	0.2	17		10.0	Id. ; id.
18	340	51.2	49.3	1.9	0.2	0.2	17		10.0	Dense cirrous mass.
19	324	53.1	51.1	2.0	0.3	0.6	19	20 : — : —	10.0	Scud and dense cirro-stratus.
20	298	56.4	53.6	2.8	1.8	1.0	18	20 : — : —	3.0	Scud ; woolly cirri and sheets of white cirro-strati.
21	270	59.7	55.5	4.2	2.1	0.9	18	19 : 17 : —	8.0	Cumulous scud ; id.
22	242	59.1	54.8	4.3	1.0	1.0	19	19 : — : —	9.5	Scud and loose cumuli ; cirri and cirro-strati.
23	221	60.6	55.1	5.5	1.3	1.3	18	18 : — : —	9.4	Scud ; cumuli ; cirro-strati.
3 0	201	60.0	54.6	5.4	2.9	1.8	18	19 : — : —	9.7	Id. ; id. ; id.
1	160	61.0	54.1	6.9	3.4	2.3	18	20 : — : —	9.7	Id. ; id.
2	124	62.5	54.1	8.4	3.1	2.2	19	18 : — : —	6.5	Cumuli ; white cirro-stratus to W.
3	074	62.2	55.0	7.2	3.5	1.8	19	18 : — : —	7.5	Loose cumuli ; woolly cirri and cirro-strati.
4	037	61.4	53.6	7.8	3.0	2.1	18	18 : — : —	9.3	Id. ; dense cirro-stratus and haze.*
5	29.003	59.9	52.6	7.3	2.9	1.7	18	18 : — : —	9.5	Scud ; loose cumuli ; id.
6	28.967	59.7	53.3	6.4	2.0	0.8	18	18 : — : —	10.0	Id. ; dense cirro-stratus and haze.
7	954	55.0	51.2	3.8	1.4	1.1	20	18 : — : —	10.0	Id. ; id. ; rain ^{0.5}
8	921	50.8	49.4	1.4	1.5	0.7	18	18 : — : —	10.0	Id. ; rain ¹
9	909	49.8	47.7	2.1	2.6	0.7	20		10.0	Nearly homogeneous ; rain ^{0.5}
10	889	48.0	46.8	1.2	0.6	0.3	21		10.0	Scud ; cirro-strati ; cirrous mass.
11	874	47.7	46.4	1.3	0.7	0.6	19		9.5	Id. ; cirri.
12	876	47.7	45.5	2.2	1.5	0.9	20		10.0	Id.
13	28.899	45.7	42.9	2.8	1.9	0.9	22		10.0	Scud.
14	909	45.8	43.3	2.5	1.2	0.7	22		10.0	Id. ; cirro-strati ; cirri.
15	929	44.9	42.3	2.6	1.2	0.6	22	— : 24 : —	4.5	Cirro-stratus scud ; woolly cirro-strati.
16	949	43.3	41.2	2.1	1.1	0.2	22	— : 24 : —	2.0	Id. ; id.
17	957	43.6	41.7	1.9	0.6	0.8	20	24 : — : 25	4.5	Scud ; cir-str. scud ; mottled, woolly, and linear cirri. ⊖
18	973	45.4	43.3	2.1	1.3	0.6	21	— : 24 : 25	2.0	Cirro-stratus scud ; cirri ; cirro-strati.
19	28.996	49.3	46.2	3.1	1.5	1.5	21	22 : — : —	5.0	Scud ; cirro-strati ; cumulo-strati ; cumuli ; cirri.
20	29.001	50.4	46.8	3.6	1.7	1.2	20	23 : — : —	6.0	Scud and loose cumuli ; cirro-strati, &c., as before.
21	002	53.5	48.7	4.8	2.0	1.8	20	21 : — : —	4.0	Loose cumuli ; loose cirro-cumulo-strati.
22	015	54.7	49.5	5.2	2.5	2.1	21	22 : — : —	5.0	Id. ; cumuli ; cumulo-strati ; cirro-strati.
23	016	56.3	49.5	6.8	2.6	2.4	19	22 : — : —	6.0	Id. ; id. ; id. ; id. ; nimbi.
4 0	026	55.4	48.3	7.1	3.3	2.7	20	22 : — : —	6.0	Id. ; id. ; id. ; id. ; nimbi.
1	047	54.8	49.8	5.0	4.3	1.7	21	22 : — : —	9.0	Scud ; id. ; id. ; id. ; id. ; rain ^{0.5}
2	057	53.4	48.7	4.7	2.8	2.3	20	22 : — : —	9.8	Id. ; id. ; id. ; id. ; id. ; rain ^{1.5}
3	085	51.3	48.2	3.1	3.7	3.2	18	22 : — : —	9.5	Id. ; id. ; id. ; id. ; id. ; rain ²
4	096	49.8	48.0	1.8	2.6	1.5	20	22 : — : —	9.8	Scud and loose cumuli ; cumuli ; cirro-strati.
5	100	52.2	49.4	2.8	1.6	1.2	19	23 : — : —	4.5	Id. ; id. ; id. ; id. ; rainbows.
6	116	53.5	51.0	2.5	1.7	0.8	22	23 : — : —	7.5	Scud ; cumuli ; cumo-str. ; nimbus ; cir-str. ; rainbows and showers.*
7	129	51.8	49.3	2.5	1.2	0.9	20	22 : — : —	3.5	As before.
8	146	50.2	48.1	2.1	1.3	0.6	19	22 : — : —	9.0	Scud ; cirro-stratus scud ; cumulo-strati ; nimbi ; cirri.
9	170	49.1	47.0	2.1	0.8	0.2	19	22 : — : —	8.0	As before.
10	178	48.6	46.7	1.9	0.6	0.2	19	— : 22 : —	4.5	Cirro-stratus scud.
11	186	45.0	44.0	1.0	0.1	0.0	18		7.5	Id.
12	188	47.1	46.0	1.1	0.2	0.4	18		8.0	Id. ; drops of rain.

June 2^d 21^h. Observations made at 21^h 5^m.June 3^d 5^h. Greenish sky to E. ; cirro-strati of a slate-blue colour to NW.June 3^d 19^h. Observations made at 19^h 30^m.June 4^d 6^h, 7^h, and 8^h. Passing showers. The lowest stratum of clouds just touches the top of Cheviot.* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

HOURLY METEOROLOGICAL OBSERVATIONS, JUNE 4—6, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
4 13	29.196	46.2	45.4	0.8	0.5	0.1	17		6.5	Cirro-stratus scud.
14	196	45.5	44.9	0.6	0.3	0.1	17		5.0	Scud; cirri and cirro-strati.
15	187	48.7	47.5	1.2	0.2	0.1	16		10.0	Thick scud.
16	172	48.6	46.6	2.0	0.4	0.2	17	— : 22 : —	9.5	[rippled; tinged with yellowish red. Cir.-str. and haze; scud to N. and on Cheviot; cirro-strati slightly]
17	179	48.1	46.3	1.8	0.4	0.1	19		10.0	Dense cirro-stratus and haze.
18	187	47.9	46.4	1.5	0.3	0.1	14		10.0	Id.; showers ^{0.5}
19	175	48.2	47.0	1.2	0.3	0.2	14		10.0	Id.; rain ¹
20	159	49.5	47.7	1.8	0.3	0.3	15		10.0	Ragged scud below mass of cirro-stratus; rain ^{0.5} *
21	150	51.2	49.5	1.7	0.5	0.7	15		10.0	Id.
22	137	56.6	53.0	3.6	0.7	0.8	16		10.0	Scud; id.
23	115	57.7	54.8	2.9	1.6	1.7	16		10.0	Id.; id.
5 0	122	56.4	54.2	2.2	1.1	0.8	17		10.0	Loose scud; scud.
1	113	59.8	56.4	3.4	1.1	1.3	21		10.0	Id.; id.
2	113	62.3	58.4	3.9	2.3	2.4	20		9.0	Id.; id.
3	117	61.8	57.8	4.0	2.8	0.7	21		9.9	Scud; cirro-strati; cirri.
4	121	58.2	56.0	2.2	0.5	0.2	19		10.0	Id.; id.
5	095	61.4	57.4	4.0	1.2	0.4	18		10.0	Id.; id.
6	069	60.8	56.6	4.2	1.6	0.4	16		10.0	Id.; loose cum.; cir.-str., gloomy and electric-looking.
7	047	61.5	57.0	4.5	0.6	0.5	16		9.6	Id.; cirro-strati and cirrus haze.
8	29.017	60.9	56.4	4.5	1.3	0.7	15		10.0	Id.; id.; cirro-cumuli and cirrus haze.
9	28.987	60.0	55.8	4.2	2.9	3.0	16		9.8	Id.; id.; id.
10	960	59.2	55.4	3.8	2.5	2.4	16		9.0	Id.; id. and cirrus haze.
11	954	59.2	55.2	4.0	4.1	3.8	15		9.9	Id.; id.
12	951	57.7	54.4	3.3	3.7	3.3	20		9.8	Thick scud; rain ²
13	28.961	50.9	48.9	2.0	1.6	1.0	20		1.5	Bank on E. horizon.
14	944	49.8	47.2	2.6	1.4	1.1	18		1.5	Id.
15	925	51.4	48.3	3.1	2.7	1.3	18		1.5	Scud and cirro-strati round horizon.
16	922	51.5	48.4	3.1	1.6	0.8	17		4.0	Scud; cirro-strati; cirri.
17	893	53.0	49.2†	3.8	1.8	1.9	17		5.0	Id.; woolly cirri; dense bank of cirro-strati to E.
18	901	55.2	51.3	3.9	3.3	1.8	16		8.0	Smoky scud; cirri; id. to E and N.
19	899	56.0	52.3‡	3.7	3.1	2.7	16		7.0	Scud in two currents; sheets of cir. & cir.-str.; rainbow.
20	903	57.4	54.0	3.4	3.7	3.3	16		9.8	Id.; cirro-strati; a few drops of rain.
21	935	55.9	53.0	2.9	2.8	1.4	19		10.0	Id.; shower ^{0.5}
22	936	60.9	55.0	5.9	3.1	4.1	18		9.8	Scud and loose cumuli; cirro-strati.
23	955	59.7	53.4	6.3	5.5	3.4	19		9.7	Id.; id.
6 0	963	60.7	54.0	6.7	6.4	4.6	18		9.9	Thick scud and loose cumuli.
1	968	56.7	52.7	4.0	6.6	3.5	18		10.0	Id.; drops of rain.
2	28.988	58.2	54.4	3.8	6.4	3.8	19		10.0	Id.; id.
3	29.025	57.1	54.0	3.1	6.1	2.6	19		10.0	Id.; id.
4	052	58.9	54.7	4.2	4.8	3.9	18		7.0	Scud; sheets of cirro-strati and woolly cirri.
5	101	58.0	53.4	4.6	5.8	3.3	19		9.8	Thick scud; cirro-strati.
6	137	56.7	52.3	4.4	4.2	2.4	19		9.9	Id.
7	183	56.4	51.8	4.6	3.7	2.2	19		9.0	Thin scud; cirro-cumulo-strati; woolly cirri.
8	194	54.3	50.8	3.5	3.7	1.6	19		4.0	Id.; id.; id.
9	254	53.8	50.4	3.4	2.0	0.6	19		8.5	Id.; id.; id.; cirro-strati.
10	260	52.4	49.5	2.9	1.5	1.4	18		9.0	Thick scud; cirro-strati; cirrus mass.
11	296	52.2	49.4	2.8	2.0	0.9	21		9.5	Scud; cirro-stratus scud; cirro-cumulo-strati.
12	327	51.6	48.8	2.8	1.5	0.5	21		9.8	Id.; clouds denser than before.
13	29.340	51.6	48.9	2.7	1.3	0.7	19		9.5	Scud and cirrus clouds; sky in zenith.
14	357	50.6	47.9	2.7	0.8	0.8	18		9.0	Id. in patches; cir.-cum.-str. radiating from S by E.
15	370	50.6	47.7	2.9	1.1	1.4	19		9.0	Id.; id.
16	390	49.7	47.4	2.3	0.9	0.7	19		8.0	Id.; id. rad. from S by E.
17	414	50.0	47.1	2.9	1.1	1.2	19		5.5	Scud in patches and on hor.; detached cir.-str.; wool. and curl. cirri.
18	432	50.4	47.8	2.6	0.7	1.3	21		6.0	Nearly as before, with net-like cirri.
19	459	53.2	50.2	3.0	1.6	1.0	19		7.0	Scud and loose cum.; woolly cirri; cum.; cirro-stratus. ⊖
20	474	55.0	50.2	4.8	1.7	1.2	19		7.0	Id.; id.; id. ⊖

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

June 4th 20^h. The scud below cirro-stratus just touches the top of Cheviot.

June 6th 12^h. The anemometer index rests at -0.2; set right before this observation, and the observation of maximum pressure corrected.

* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	SKY clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	pt.	pt.	pt.	
4. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0-10.
6 21	29.489	56.7	51.0	5.7	1.8	1.6	18	20 : — : —	4.0	Scud and loose cum.; sheets of cir.-str. and woolly cir. ☺
22	508	59.8	53.0	6.8	2.3	2.0	18	20 : — : —	6.5	Id.; id.
23	510	60.8	53.2	7.6	2.0	1.2	19	20 : — : —	6.0	Id.; cum.-str. and cirro-strati to E. ☺
7 0	518	60.5	53.2	7.3	1.7	1.7	19	20 : — : —	7.0	Id.; cumuli; cirro-strati. ☺
1	511	60.7	52.6	8.1	2.1	1.2	18	19 : — : —	6.0	Id.; id.; cirri. ☺
2	540	63.8	55.8	8.0	1.8	0.9	18	19 : — : 17	9.0	Id.; woolly cir.; cum.; cir.-str.; haze. ☺
3	528	62.8	54.2	8.6	1.1	0.6	19		9.8	Patches of scud; sky nearly covered with cirro-strati
4	513	60.0	52.7	7.3	1.2	0.2	21		9.9	[and cirrrous haze.] ☺
5	507	60.5	53.5	7.0	0.2	0.0	24	16 : — : —	10.0	Cirro-stratus scud; cumuli; cirro-stratus.
6	489	61.6	53.4†	8.2	0.2	0.2	8	17 : — : —	9.2	Loose scud forming below cir. haze; piles of cauliflower cum.-str.
7	490	56.6	52.7	3.9	0.6	0.1	8	12 : 12 : —	9.9	Scud; cirro-str.; cir. haze; passing showers; electric-like to SE.
8	477	55.3	52.4	2.9	0.2	0.1	5	— : 13 : —	10.0	Hazy cir.-str. scud and cirro-str.; piles of loose cum. on hor.
9	468	54.7	52.3	2.4	0.3	0.1	9		10.0	Nearly as before; rain ^{0.5}
10	453	53.1	51.9	1.2	0.1	0.1	3		10.0	Id.; id.
11	439	52.3	51.7	0.6	0.2	0.1	4		10.0	Scud and cirro-strati; rain ¹
12	413	51.6	51.0	0.6	0.3	0.2	3		10.0	Id.; id.
23 ₁	29.402	59.6	53.1	6.5	1.2	0.3	6	1 : 30 : —	{ Sunday—Overcast, with cumuli; occasional showers and sunshine.
8 13	29.845	48.5	45.2	3.3	2.1	0.5	21		2.5	Cirro-strati.
14	861	47.5	44.6	2.9	0.7	0.8	21		1.5	Patches of scud; cirro-strati.
15	877	47.0	44.3	2.7	0.9	0.4	18	— : 25 : —	3.5	Cirro-stratus scud; id.
16	892	47.2	44.8	2.4	0.4	0.6	19	25 : — : —	5.0	Scud; cirro-strati; woolly cirri.
17	919	49.7	45.3†	4.4	0.8	0.6	20	25 : — : —	8.0	Id.; id.; id.
18	930	49.2	45.8	3.4	0.6	0.6	20	— : — : 28	6.0	Mottled cir. and cirro-str.; cymoid cir.-str. scud on E. horizon. ☺
19	943	51.6	47.5	4.1	0.6	0.5	17		7.0	Cirro-str. to E., thick cir. haze and woolly cir. to W. and NW.; masses of cum. to NW. ☺
20	963	54.0	48.1	5.9	1.2	1.2	22	23 : — : —	9.5	Masses of loose cum.; woolly cir. and cir. haze; cir.-str.; portion of a solar halo. ☺
21	972	55.9	50.7†	5.2	2.1	1.3	20	23 : — : —	9.0	All as last hour, with drops of rain. ☺
22	967	55.9	50.0	5.9	1.7	1.7	20	21 : — : —	10.0	Masses of loose cum.; dense cir. haze, becoming cirro-str.; drops of rain. ☺
23	970	55.9	50.1	5.8	2.3	0.7	18	22 : — : —	10.0	Id.; id. [rain.]
9 0	958	57.7	52.3	5.4	1.6	2.5	20	22 : — : —	10.0	Masses of scud; cirro-strati and cirrrous haze.
1	956	58.1	52.5	5.6	3.2	2.0	18	21 : — : —	10.0	Id.; id.
2	972	57.3	51.7	5.6	3.9	1.5	20	22 : — : —	10.0	Scud; dense cirro-stratus and haze.
3	972	55.0	51.4	3.6	4.0	2.7	20	21 : — : —	10.0	Id.; id.
4	967	54.6	51.6	3.0	2.7	2.4	20	20 : — : —	10.0	Id.; id.
5	980	54.3	51.3	3.0	3.0	2.3	19	20 : — : —	10.0	Id.; id.
6	974	54.8	52.2	2.6	2.8	1.7	19	20 : — : —	10.0	Id.; id.
7	29.987	55.2	52.7	2.5	2.0	1.2	18	20 : — : —	10.0	Id.; id.
8	30.005	54.7	52.8	1.9	1.6	1.6	21	20 : — : —	10.0	Id.; id.; drops of rain.
9	013	55.0	53.0	2.0	1.7	0.6	21	20 : — : —	9.9	Id.; cirro-strati.
10	015	54.5	52.8	1.7	1.0	1.7	21	20 : — : —	10.0	Id.; mass of cirro-stratus.
11	020	53.9	52.7	1.2	1.0	0.8	21	21 : — : —	9.5	Smoky scud; cirro-strati; cirrrous haze.
12	022	53.5	52.3	1.2	1.2	0.6	21		5.5	Id.; id.; id.
13	30.016	53.7	52.5	1.2	0.7	0.6	20		3.0	Cirri radiating from SW by W. and NE by E.; patches of cir.-str.
14	017	54.6	53.4	1.2	0.8	0.7	22		6.5	Scud; cirro-strati; cirri radiating from SW by W.
15	028	55.0	53.6	1.4	0.7	0.2	22		10.0	Cirro-stratus scud.
16	021	54.7	53.8	0.9	0.7	0.7	20	20 : — : —	10.0	Misty scud, very low and moving quickly.
17	026	54.6	54.0	0.6	1.1	0.7	20	20 : 23 : —	9.8	Id.; cirro-str.; cir.-cum.-strati and cir. seen through
18	044	56.8	55.8	1.0	0.8	0.5	18		10.0	As before. [the scud.]
19	041	57.4	56.0	1.4	0.9	0.8	18	21 : — : —	10.0	Scud; cirro-strati and a cirrrous mass.
20	064	58.7	56.7	2.0	1.2	0.7	20	20 : — : —	10.0	Id.; id.
21	071	58.8	56.7	2.1	0.9	0.9	19	20 : — : —	10.0	Thick scud.
22	072	62.5	59.2	3.3	0.8	0.9	21		9.9	Id.; cirro-strati.
23	072	62.2	58.3	3.9	1.1	0.3	20	20 : — : —	9.8	Scud; cirro-cumulo-strati; cirro-strati; cirri.
10 0	068	62.9	59.2	3.7	0.7	0.7	21	21 : — : —	9.8	Id.; id.; id.; id.
1	071	65.0	60.5	4.5	0.9	0.5	21	21 : — : —	9.9	Id.; id.; id.; id.
2	072	63.5	59.3	4.2	0.8	0.7	21	21 : — : —	9.9	Id.; id.; id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

June 7^d 6^h. Atmosphere close, and appearances electrical, in about 15^m; portion of a solar halo and fine drops of rain.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
10 3	30.064	66.0	60.7	5.3	1.0	0.6	21	21 : — : —	9.5
4	049	64.8	60.2	4.6	0.9	0.7	20	22 : — : —	8.5
5	042	62.7	58.7	4.0	0.8	0.7	20	22 : — : —	7.5
6	043	62.7	59.0†	3.7	0.6	0.6	20	22 : — : —	9.0
7	044	61.4	58.0	3.4	0.7	0.3	21	22 : — : —	6.5
8	045	60.8	57.7	3.1	0.5	0.3	19	21 : 22 : 23	8.0
9	043	58.9	56.8†	2.1	0.4	0.4	21		9.9
10	039	58.0	56.3	1.7	0.3	0.1	19	21 : — : —	9.9
11	037	57.7	56.2	1.5	0.4	0.2	20		9.9
12	038	57.4	55.8	1.6	0.3	0.1	23		9.9
13	30.037	56.4	55.1	1.3	0.3	0.1	22		9.8
14	026	56.6	55.1	1.5	0.1	0.1	22		9.9
15	024	56.7	55.1	1.6	0.7	0.3	20	21 : — : —	10.0
16	013	55.4	54.2	1.2	0.3	0.1	23	21 : 22 : —	9.8
17	015	56.0	54.7	1.3	0.3	0.1	20	22 : — : —	7.0
18	018	57.7	56.0	1.7	0.1	0.0	22	22 : — : —	9.9
19	012	60.9	58.4†	2.5	0.4	0.2	20	21 : 23 : —	9.9
20	017	61.1	58.0	3.1	0.5	0.3	20		9.9
21	020	61.4	58.0†	3.4	0.8	0.6	19		10.0
22	017	66.0	61.0	5.0	0.8	0.5	19	— : 23 : —	9.0
23	020	68.5	62.2	6.3	1.2	1.2	20	— : 21 : —	7.0
11 0	017	67.3	61.2	6.1	1.1	0.8	20	22 : — : —	7.0
1	012	68.0	61.4	6.6	1.3	1.1	20	22 : — : —	7.0
2	016	69.0	61.5	7.5	0.8	1.5	20	22 : — : —	7.0
3	30.005	70.0	62.2	7.8	1.2	1.2	21	21 : — : —	7.0
4	29.996	71.7	63.4	8.3	1.1	0.5	21	21 : — : —	5.0
5	992	70.6	62.7	7.9	0.9	0.5	20	21 : — : —	3.0
6	976	69.0	61.9†	7.1	0.9	0.3	18		2.0
7	976	68.3	61.6	6.7	0.4	0.2	22	— : — : 20	2.5
8	977	66.5	60.4	6.1	0.2	0.1	22		1.0
9	29.993	63.1	59.6†	3.5	0.0	0.0	20		2.0
10	30.001	60.0	57.7	2.3	0.1	0.0	20	— : 20 : —	2.0
11	005	57.0	55.8	1.2	0.1	0.0	17		2.0
12	003	54.2	53.5	0.7	0.0	0.0	20		1.5
13	30.007	53.2	53.0	0.2	0.0	0.0	20		8.5
14	29.999	53.7	53.2	0.5	0.0	0.0	20		2.0
15	29.994	52.8	52.2	0.6	0.1	0.1	22		3.0
16	30.001	51.7	51.3	0.4	0.1	0.0	18	— : 20 : —	8.0
17	30.001	52.2	51.9	0.3	0.1	0.0	— : 20 : —		5.0
18	30.000	53.7	52.7†	1.0	0.0	0.0	20	— : 20 : —	6.0
19	29.990	56.1	54.9	1.2	0.1	0.0	20	— : 19 : —	10.0
20	993	59.3	56.9†	2.4	0.1	0.0	20	— : 20 : —	10.0
21	988	64.5	61.1	3.4	0.1	0.0	24	20 : — : 24	4.0?
22	976	68.5	63.9	4.6	0.0	0.0	20		9.0
23	969	71.1	65.7	5.4	0.1	0.0	16	— : — : 24	7.0
12 0	967	74.6	67.6	7.0	0.4	0.3	18	20 : — : —	5.0
1	962	77.4	69.0	8.4	0.6	0.4	18	20 : — : —	4.0
2	958	77.0	68.0	9.0	0.6	0.3	18		2.5
3	946	78.1	68.0	10.1	0.7	0.6	20	17 : — : —	2.5
4	938	78.2	68.0	10.2	0.6	0.6	20	16 : — : —	2.0
5	939	75.7	66.7†	9.0	1.1	0.6	20		1.5
6	934	74.8	65.4	9.4	0.9	0.6	20		2.0
7	931	72.8	64.2	8.6	0.6	0.4	20		2.5
8	942	69.2	62.9	6.3	0.4	0.1	20		2.0
9	955	65.8	61.3	4.5	0.2	0.0	18		2.5
10	954	62.4	59.5†	2.9	0.2	0.1	18		2.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

June 10^d 20^h. Observations made at 20^h 5^m.

June 11^d 21^h. Observations made at 21^h 5^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.; Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1h.	lbs. 10m.	From	pt.	pt.	pt.	0—10.
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.	
12 11	29.958	58.7	56.8	1.9	0.1	0.0	16			0.8	Cirro-strati; cirri to north.)
12	967	57.6	56.1	1.5	0.0	0.0	18			0.8	Id.; id.
13	29.977	56.0	55.0	1.0	0.1	0.0	18			0.5	Cirro-strati; cirri, coloured red to NNE.
14	979	55.6	54.7	0.9	0.0	0.0	18			0.5	Id.; id.
15	978	53.3	51.9	1.4	0.1	0.0	18			0.5	Id.; id. [the ground.
16	979	54.3	53.9	0.4	0.1	0.0	18			0.8	Id.; cirri, coloured crimson to NE.; mist on
17	981	53.6	53.3†	0.3	0.0	0.0	18			0.8	Strips of woolly cirri to NW., radiating from SW. and NE.; hazy. ⊖
18	980	56.6	55.7	0.9	0.0	0.0	23	— : — : 20		0.8	Id.; very hazy. ⊖
19	985	60.0	58.5	1.5	0.0	0.0	18			1.0	Id.; id.
20	986	62.8	59.5	3.3	0.1	0.1	20			1.5	Patches of scud and woolly cirri round horizon. ⊖
21	29.992	66.0	61.4	4.9	0.2	0.2	28			2.5	Patches of cumuli; woolly cirri and loose cirro-strati. ⊖
22	30.004	68.6	62.3	6.3	0.1	0.1	26	22 : — : 20		2.5	Id.; band of woolly cirrus lying from NE. to SW. ⊖
23	30.002	68.6	62.0	6.6	0.2	0.1	26			4.5	Id.; woolly cirri and cirro-strati. ⊖
13 0	30.002	69.9	62.2	7.7	0.1	0.1	28	— : 19 : 19		2.5	Woolly cirri and cirro-strati; patch of scud to W. ⊖
1	29.993	73.5	63.4	10.1	0.3	0.3	28			2.0	Id.
2	991	75.0	64.5	10.5	0.3	0.1	26			1.5	Id.; patches of scud to S. ⊖
3	985	75.0	64.0	11.0	0.4	0.2	30			1.0	Id.; id.
4	981	75.0	64.2	10.8	0.4	0.2	28			0.5	Id.; id.
5	973	74.0	64.0†	10.0	0.3	0.3	26			0.5	Patches of cumuli to SE.; diffuse cirri to N. ⊖
6	973	72.1	62.2	9.9	0.4	0.3	28			0.5	Id.; id.
7	979	70.8	62.7	8.1	0.2	0.2	27			0.5	Id.; haze on E. hor. ⊖
8	29.997	68.0	60.7	7.3	0.2	0.1	28			0.5	Id.; id.
9	30.008	63.3	58.7†	4.6	0.1	0.0	28			0.5	Cirri and haze. ⊖
10	016	60.9	57.3	3.6	0.1	0.0	23			0.5	Id.
11	002	56.6	55.0	1.6	0.0	0.0	24			0.1	Cirrous haze on horizon; faint lunar corona.)
12	014	54.0	53.3	0.7	0.0	0.0				0.2	Cirro-strati to N.; cirri to SW.)
13	30.016	55.0	54.0	1.0	0.0	0.0				0.4	Cirro-strati to N.; streaks of cirri forming.
14	30.007	53.4	52.7	0.7	0.0	0.0	20			7.0	Cirro-cumulo-strati.
15	29.998	54.0	53.2	0.8	0.0	0.0	22			8.0	Id.
16	991	54.6	53.4	1.2	0.0	0.0	22	— : 19 : —		7.0	Id.; cirri.
17	992	54.1	53.0	1.1	0.0	0.0	22	— : 19 : —		5.0	Id.; id.
18	993	56.7	55.0	1.7	0.0	0.0	20	— : 20 : —		9.0	Id.; lying in ridges, in some places.
19	994	60.2	58.2	2.0	0.1	0.0	14	— : 20 : 21		9.0	Id.; tufts of curled and woolly cirri. ⊖
20	995	61.5	59.0†	2.5	0.1	0.1	8	4 : 20 : 21		8.0	Scud; patches of cir-cum-str.; sheets of woolly and linear cirri,
21	993	65.3	61.3	4.0	0.1	0.1	6	4 : — : —		10.0	Id.; cirro-strati; cirrus mass. [rad. from SW. ⊖
22	992	68.5	63.4	5.1	0.1	0.1	9	4 : — : —		9.9	Id.; id.; cirro-cumulo-strati.
23	992	66.7	61.2†	5.5	0.1	0.2	6	4 : 24 : —		9.9	Id.; cirro-cumulo-strati; cumuli; woolly cirri.
14 0	979	66.5	61.0	5.5	0.2	0.1	6	4 : — : —		6.0	Scud and loose cumuli; cirro-strati; woolly cirri; haze.
1	967	67.5	61.4	6.1	0.1	0.2	4	4 : — : —		7.5	Id.; id.; id.; id. ⊖
2	953	69.3	62.8	6.5	0.2	0.2	12	4 : — : 25		7.5	Id.; woolly cirri; cirrous haze; solar halo. ⊖
3	935	68.5	61.0	7.5	0.1	0.2	9	— : 25 : —		8.0	Cirro-cumulo-strati; cirrous haze; woolly cirri; halo. ⊖
4	929	69.2	62.0	7.2	0.2	0.1	7	2 : 23 : —		6.0	Loose cumuli, moving in two currents; woolly cirri. ⊖
5	920	67.8	61.3	6.5	0.2	0.2	6	— : — : 22		6.0	Woolly cirri; patches of scud and cumuli.
6	912	66.3	60.3†	6.0	0.4	0.2	8			2.0	Cumulo-strati to S.; cirri.
7	905	64.4	59.2	5.2	0.4	0.1	4	— : — : 24		7.0	Woolly cirri; cumulo-strati; faint solar halo. ⊖
8	897	62.4	58.3	4.1	0.1	0.0	8	— : — : 24		8.0	Id.; cir-str.; a slight tendency to a parhelion. ⊖
9	903	59.4	57.0†	2.4	0.2	0.1	4	— : 24 : —		8.0	Cirro-cumulous scud; woolly cirri.
10	896	57.5	55.0	2.5	0.1	0.0	4	— : 24 : —		7.0	Id.; cirro-cumuli, cirri, and cir. haze.)
11	910	55.2	53.5	1.7	0.1	0.0	4			8.0	Id.; id., id.
12	900	54.7	53.4	1.3	0.1	0.0	4			9.0	Id.; id.
15 0	29.751	69.0	64.2	4.8	0.2	0.2	20			Sunday—Overcast, with thick scud and cirro-stratus.
13	29.637	55.7	53.9	1.8	0.1	0.0				9.0	Cirro-strati.
14	631	55.0	54.0	1.0	0.0	0.0				10.0	Id.
15	608	55.0	53.9	1.1	0.1	0.0				10.0	Id.
16	602	54.9	53.9	1.0	0.0	0.0				10.0	Id.

June 12^d 13^h (1^h 10^m A.M. Mak. M. T.) Strong twilight, the smallest type read with ease.June 12^d 16^h 20^m. The mist on the ground has a purplish tinge at some places.June 13^d 12^h. Observation made at 12^h 5^m.June 14^d 0^h. Observation made at 0^h 5^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
15 17	29.599	55.3	54.0	1.3	0.0	0.0				10.0
18	594	56.2	55.1	1.1	0.0	0.0				10.0
19	581	58.2	56.8	1.4	0.0	0.0				10.0
20	575	58.0	56.5	1.5	0.0	0.0				10.0
21	564	59.8	56.8	3.0	0.0	0.0	6	20 : — : —		10.0
22	559	62.8	59.2	3.6	0.0	0.0				10.0
23	556	60.0	57.6	2.4	0.1	0.1	9	19 : — : —		10.0
16 0	547	60.5	58.7	1.8	0.1	0.1	10	18 : — : —		10.0
1	542	62.6	60.9	1.7	0.1	0.1	16	18 : — : —		10.0
2	536	66.5	63.2	3.3	0.1	0.1	17	18 : — : —		10.0
3	534	62.5	60.0	2.5	0.1	0.1	20	18 : — : —		10.0
4	535	62.7	60.7	2.0	0.2	0.1	19	18 : — : —		10.0
5	532	63.0	60.4	2.6	0.1	0.2	20	18 : — : —		10.0
6	532	63.1	60.2	2.9	0.2	0.1	20	18 : — : —	9.9	
7	531	61.1	58.7	2.4	0.1	0.0	20	18 : — : —		10.0
8	543	60.3	58.2	2.1	0.0	0.0	20			10.0
9	554	59.1	57.5	1.6	0.1	0.0	22			10.0
10	562	58.5	57.4	1.1	0.1	0.0	20			10.0
11	563	58.0	57.0	1.0	0.0	0.0				10.0
12	574	56.5	55.6	0.9	0.0	0.0	20			10.0
13	29.577	55.5	55.0	0.5	0.0	0.0	22			10.0
14	580	55.0	54.5	0.5	0.0	0.0	20			10.0
15	584	55.0	54.4	0.6	0.0	0.0	22			10.0
16	578	54.6	54.0	0.6	0.0	0.0	20	18 : — : —		10.0
17	590	54.5	54.2	0.3	0.0	0.0	20	24 : 17 : —		10.0
18	602	56.2	55.4	0.8	0.0	0.0	24			10.0
19	612	57.6	56.4	1.2	0.0	0.0	23	25 : 17 : —		10.0
20	622	60.7	58.3	2.4	0.1	0.0				10.0
21	626	62.6	59.2	3.4	0.0	0.0	17	18 : — : —		10.0
22	632	65.1	60.9	4.2	0.0	0.0				10.0
23	631	64.3	60.7	3.6	0.1	0.1	8	12 : — : —		10.0
17 0	632	61.3	58.7	2.6	0.1	0.1	6			10.0
1	624	62.8	59.5	3.3	0.2	0.1	4	10 : — : —		10.0
2	616	59.4	59.1	0.3	0.2	0.1	10			10.0
3	615	60.3	59.5	0.8	0.2	0.1	4			10.0
4	616	58.3	58.2	0.1	0.1	0.1	6			10.0
5	606	62.0	60.7	1.3	0.1	0.1	8	12 : — : —		10.0
6	613	60.7	59.3	1.4	0.1	0.0	4	16 : — : —		10.0
7	611	60.3	59.3	1.0	0.2	0.1	6	17 : — : —		10.0
8	617	59.3	58.4	0.9	0.1	0.0		16 : — : —		10.0
9	618	58.4	57.5	0.9	0.0	0.0	24	17 : — : —		10.0
10	619	56.0	54.9	1.1	0.0	0.0				10.0
11	620	55.6	54.2	1.4	0.0	0.0	17			10.0
12	602	53.9	51.9	2.0	0.0	0.0				10.0
13	29.604	53.8	52.5	1.3	0.0	0.0	16			10.0
14	600	53.8	52.8	1.0	0.0	0.0	18			10.0
15	598	53.3	52.3	1.0	0.1	0.1	20	16 : — : —		10.0
16	600	52.7	51.7	1.0	0.1	0.0	20	16 : — : —		10.0
17	601	53.5	51.8	1.7	0.1	0.0	20			10.0
18	592	53.5	51.0	2.5	0.1	0.0		— : 15 : —		10.0
19	588	54.6	52.0	2.6	0.0	0.0		— : 16 : —		10.0
20	590	54.4	52.0	2.4	0.0	0.0	18			10.0
21	584	55.0	52.7	2.3	0.1	0.0	18			10.0
22	587	54.0	52.0	2.0	0.0	0.0	22			10.0
23	576	55.1	53.6	1.5	0.1	0.0	16	— : 18 : —		10.0
18 0	577	58.5	56.1	2.4	0.0	0.0	20			10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

June 15^d 21^h. Observation made at 21^h 10^m.

June 18^d. New turkey feather vane erected to-day.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1b.	10m.	From		
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
18 1	29.564	60.3	57.8	2.5	0.0	0.0	16	— : 16 : —	10.0
2	554	62.1	56.6	5.5	0.0	0.0	26	14 : —	10.0
3	552	67.0	60.7	6.3	0.0	0.0	20	26 : 16 : —	10.0
4	533	64.7	58.6	6.1	0.0	0.0	2	27 : — : —	10.0
5	516	62.6	56.7	5.9	0.0	0.0			10.0
6	515	63.3	57.2	6.1	0.1	0.1	4		10.0
7	511	61.3	55.8	5.5	0.1	0.1	28		10.0
8	511	60.3	56.0	4.3	0.1	0.1	20	30 : — : —	10.0
9	511	58.5	55.5	3.0	0.1	0.1	31	31 : — : —	10.0
10	494	58.4	54.4	4.0	0.3	0.3	30		10.0
11	492	56.6	53.6	3.0	0.5	0.3	29		10.0
12	493	55.7	53.3	2.4	0.5	0.5	28		10.0
13	29.503	54.8	54.0	0.8	0.8	0.1	30		Rain ²
14	505	53.4	52.4	1.0	0.2	0.2	20		Scud and cirro-strati.
15	515	52.6	51.3	1.3	0.2	0.1	20		Id.; rain ¹
16	526	51.2	49.9	1.3	0.3	0.3	20		Id.
17	556	51.0	49.0	2.0	0.3	0.3	24	28 : 24 : —	9.0
18	574	50.6	49.0	1.6	0.2	0.5	22	27 : — : —	7.5
19	590	54.3	51.0	3.3	0.6	0.8	26	— : 24 : —	6.0
20	613	56.0	52.2	3.8	0.7	0.6	25	— : 24 : —	3.0
21	632	58.2	53.0	5.2	0.7	0.7	22	27 : — : —	8.0
22	654	60.1	54.2	5.9	0.8	0.3	26	27 : — : —	9.7
23	670	61.2	55.0	6.2	0.7	0.4	26	27 : — : —	9.8
19 0	682	60.4	53.4	7.0	0.6	0.5	24	26 : — : —	9.9
1	702	60.6	54.6	6.0	0.8	0.5	26	26 : — : —	10.0
2	712	63.2	56.2	7.0	0.5	0.5	26	24 : — : —	9.0
3	735	62.1	55.9	6.2	0.7	0.4	24	— : 25 : —	9.9
4	752	61.9	55.4	6.5	0.7	0.3	23	— : 25 : —	9.9
5	766	60.6	54.4	6.2	0.4	0.2	20		Id.
6	773	61.1	56.0	5.1	0.4	0.1	22	— : 26 : —	9.5
7	789	60.5	55.5	5.0	0.5	0.1	19	— : 27 : —	8.0
8	794	61.0	55.7	5.3	0.3	0.2	21		Id.
9	816	57.0	53.3	3.7	0.4	0.0	24		1.5
10	836	53.3	51.0	2.3	0.1	0.0	20	— : 24 : —	4.0
11	848	50.0	48.6	1.4	0.1	0.0	18		Cirro-cumulo-strati; cirro-strati.
12	855	47.8	46.6	1.2	0.0	0.0	18		Cirro-strati.
13	29.863	47.8	46.8	1.0	0.0	0.0	18		Cirro-cumulo-strati to N.
14	874	48.0	47.2	0.8	0.0	0.0	20		Id.
15	880	50.0	48.9	1.1	0.0	0.0	19		Thick scud.
16	892	49.0	48.0	1.0	0.0	0.0	22	0 : — : —	9.8
17	902	50.3	49.6	0.7	0.0	0.0	22	1 : — : —	10.0
18	914	53.1	51.5	1.6	0.0	0.0	6	2 : — : —	9.8
19	917	54.2	52.2	2.0	0.0	0.0	6	6 : — : —	10.0
20	932	56.7	53.8	2.9	0.1	0.1	6	6 : — : —	10.0
21	926	60.0	55.6	4.4	0.1	0.1	8	8 : — : —	9.8
22	931	60.4	55.2	5.2	0.1	0.1	12	8 : — : —	10.0
23	935	62.5	56.2	6.3	0.1	0.1	4	8 : — : —	7.0
20 0	930	65.7	59.0	6.7	0.1	0.1	28	16 : — : —	6.0
1	923	63.4	57.2	6.2	0.1	0.1	18	24 : — : —	3.0
2	908	65.0	57.6	7.4	0.1	0.1	18	24 : — : —	7.0
3	899	67.6	58.2	9.4	0.1	0.2	21	24 : — : —	9.0
4	890	67.2	59.0	8.2	0.2	0.1	20	20 : — : —	9.5
5	883	67.3	59.0	8.3	0.1	0.1	20	20 : — : —	9.0
6	875	67.7	59.4†	8.3	0.2	0.2	24	20 : — : —	3.5
7	876	63.0	55.4	7.6	0.7	0.5	24		Loose cum. and cum.-str.; cirro-strati to NW.
8	880	59.9	53.9	6.0	0.4	0.2	25	— : — : 28	3.0
								4.0	Cumulo-strati; cirri and cirro-strati.
									Cirri and thin cirro-strati; scud and loose cumuli.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.
20 9	29.887	56.4	52.2	4.2	0.3	0.0	24	0—10.	7.0
10	886	54.3	50.4	3.9	0.1	0.0	20	6.0	
11	886	53.0	48.7	4.3	0.1	0.0	24	9.0	
12	880	53.9	50.7	3.2	0.2	0.1	20	8.5	
13	29.869	54.3	50.6	3.7	0.1	0.0	23		9.0
14	855	53.0	50.3	2.7	0.2	0.1	20		9.5
15	850	54.0	50.7	3.3	0.2	0.2	21		9.9
16	833	54.9	51.0	3.9	0.5	0.3	20		9.9
17	833	54.9	51.3	3.6	0.4	0.3	22	25 : 25 :	9.5
18	829	56.4	52.8	3.6	0.4	0.3	20	— : 25 :	8.0
19	829	56.9	53.2	3.7	0.7	0.8	22	25 : 26 :	9.8
20	821	58.0	54.3	3.7	0.9	0.9	22	26 : 26 :	10.0
21	830	60.1	56.0	4.1	0.7	0.2	23	25 : 26 :	10.0
22	839	60.6	56.8	3.8	0.5	0.1	20	24 : — :	10.0
23	839	61.6	58.1	3.5	0.4	0.1	24	24 : — :	10.0
21 0	830	64.1	58.7	5.4	0.4	0.1	26	23 : — :	8.0
1	813	65.6	57.9	7.7	0.7	0.8	28	23 : — :	5.0
2	809	66.7	57.8	8.9	0.9	0.6	26	24 : — :	2.0
3	810	65.1	57.0	8.1	0.9	0.7	24		1.0
4	814	65.0	56.5	8.5	1.1	0.3	24	26 : — :	2.0
5	808	64.3	55.6	8.7	0.8	0.6	26	26 : — :	0.7
6	811	62.5	55.2	7.3	0.5	0.3	26		1.0
7	804	62.4	56.4	6.0	0.3	0.2	30	— : 2 : 26	6.0
8	814	61.2	56.8	4.4	0.4	0.3	24	— : 2 : —	8.5
9	830	57.8	52.6	5.2	0.3	0.1	10	— : 2 : —	7.5
10	837	56.2	51.0	5.2	0.2	0.3	30	25 : — :	7.5
11	837	54.3	50.3	4.0	0.1	0.0	28	28 : — :	7.5
12	846	51.8	48.9	2.9	0.1	0.0	26		5.0
22 1 ³	29.785	60.4	53.8	6.6	0.7	0.2	22	Sunday—The mean quantity of clouds about 6; sunshine.
13	29.822	46.0	45.0	1.0	2.4	0.1	20		2.0
14	829	45.6	44.2	1.4	0.1	0.0	22		1.5
15	831	45.2	43.7	1.5	0.1	0.0	23		2.0
16	840	44.7	43.0	1.7	0.2	0.2	23		3.0
17	850	45.1	43.7	1.4	0.5	0.0	22		2.0
18	859	47.0	44.8	2.2	0.3	0.4	24	— : 28 : —	2.0
19	860	50.6	46.7	3.9	0.5	0.4	24	— : 28 : —	3.5
20	872	52.7	47.8	4.9	0.4	0.3	22	— : 28 : —	3.5
21	872	55.6	50.3	5.3	0.3	0.1	22	— : 28 : —	8.0
22	869	56.0	50.2	5.8	0.4	0.4	23	— : 28 : —	8.0
23	871	56.7	50.0	6.7	0.4	0.6	22	24 : 29 : 27	8.5
23 0	863	60.7	53.2	7.5	0.4	0.4	24	24 : 28 : —	8.0
1	859	60.4	52.8	7.6	0.5	0.4	25	29 : — : —	8.0
2	851	60.9	51.0	9.9	0.5	0.5	29	29 : — : —	8.5
3	843	61.7	53.0	8.7	0.4	0.2	30	26 : — : —	9.0
4	827	63.0	55.3	7.7	0.4	0.3	26	26 : — : —	9.5
5	828	62.2	55.2	7.0	0.4	0.3	24	— : 28 : —	9.8
6	823	60.6	54.6	6.0	0.4	0.3	23	— : 28 : —	9.9
7	824	60.0	54.3	5.7	0.4	0.3	25	— : 26 : —	10.0
8	823	59.3	54.6	4.7	0.3	0.1	24	— : 26 : —	10.0
9	820	57.3	53.7	3.6	0.5	0.2	22	— : — : 26	4.0
10	818	54.0	51.9	2.1	0.2	0.0	25		3.0
11	817	51.9	50.5	1.4	0.1	0.1	20		2.0
12	807	49.3	48.3	1.0	0.1	0.1	15		2.0
13	29.800	49.4	48.3	1.1	0.3	0.2	21		3.0
14	791	48.3	47.7	0.6	0.2	0.1	18		2.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	lbs.	lbs.	pt.	
d. h. 23 15	in. 29.770	49.0	47.8	1.2	0.3	0.1	26	— : 29 : —	3.0	Cirro-cumulo-strati ; cirro-strati ; cirri ; lunar corona. ☺
16	748	49.0	47.3	1.7	0.1	0.1	22	— : 28 : —	6.0	Id. ; id. ; id. ; id. ☺
17	724	48.5	47.5†	1.0	0.1	0.0	20	— : 26 : —	7.0	Id. ; id. ; id. ; id. ☺
18	708	50.7	48.8	1.9	0.1	0.1	23	— : 24 : —	8.5	Id. ; id. ; id. ; cumo.-str. to E. ☺
19	682	53.7	50.7†	3.0	0.2	0.1	18		10.0	Cirr.-cumo.-str. ; dappled cir.-str., like small cirr.-cum. ; cirr.-str. and cirr.-haze. ☺
20	668	55.6	52.4	3.2	0.5	0.4	22	21 : 20 : —	10.0	Patches of loose scud ; dense cirro-stratus and cirrus haze. ☺
21	659	56.9	53.6	3.3	0.6	0.1	21	20 : — : —	10.0	Masses of scud ; dense cirro-stratus and cirrus haze.
22	638	58.6	54.5	4.1	0.5	0.1	22	20 : — : —	10.0	Scud ; dense cirro-stratus and cirrus haze.
23	605	56.8	54.5	2.3	0.1	0.1	24	20 : — : —	10.0	Id. ; id. ; rain ^{0.2}
24 0	577	57.0	55.0	2.0	0.1	0.0	16		10.0	Scud and dense cirro-stratus ; continuous rain ¹⁻²
1	544	57.4	55.0	2.4	0.0	0.0	16	15 : — : —	10.0	Scud ; dense mass above ; id.
2	506	58.2	56.0	2.2	0.2	0.0	12	15 : — : —	10.0	Id. ; id. ; id.
3	474	59.5	55.7	3.8	0.1	0.0	12	16 : — : —	10.0	Loose and cumulous scud ; cirro-strati ; rain ^{0.5}
4	445	58.2	53.7	4.5	0.1	0.0	0		10.0	Heavy masses of cum. scud ; cirr.-str. scud and cirr.-str.
5	430	54.3	52.3	2.0	0.2	0.1	0	31 : — : —	10.0	Thick scud ; rain ¹⁻²
6	430	53.8	51.4	2.4	0.3	0.3	29	27 : — : —	10.0	Id. ; cirro-strati and a cirrus mass.
7	432	51.8	49.5	2.3	0.7	1.0	31	27 : — : —	10.0	Id. ; id. ; rain ¹
8	434	51.0	49.0	2.0	0.6	0.2	30	— : 28 : —	10.0	Cirro-stratus scud ; cirro-strati.
9	432	51.2	49.0	2.2	0.3	0.3	30	— : 28 : —	10.0	Id. ; id.
10	432	50.9	49.2	1.7	0.2	0.1	26		10.0	Id. ; id.
11	427	50.8	49.2	1.6	0.1	0.1			10.0	Id. ; id.
12	425	50.7	48.4	2.3	0.2	0.1	22		9.8	Id. ; id.
13	29.419	49.9	48.4	1.5	0.2	0.1	22		10.0	Cirro-strati on N. horizon ; rain ^{0.5}
14	420	49.3	47.7	1.6	0.2	0.1	24		6.0	Id.
15	417	46.9	45.8	1.1	0.2	0.1	22		3.0	Id.
16	419	46.7	45.4	1.3	0.2	0.2	22		6.0	Id.
17	420	47.1	45.8	1.3	0.3	0.2	28		0.7	Patches of scud.
18	425	48.6	46.7	1.9	0.2	0.2	24		2.0	Id.
19	437	53.6	50.7	2.9	0.2	0.3	25	— : 28 : —	7.0	Cirro-cumulo-strati and cirro-strati. ☺
20	440	54.3	50.5	3.8	0.7	0.4	30	28 : — : —	9.0	Cirro-stratus scud ; id.
21	438	56.5	52.0	4.5	0.5	0.2		28 : — : —	9.8	Loose cumuli ; cirro-strati.
22	445	55.6	51.7	3.9	0.7	0.5	28	29 : 24 : —	9.0	Id. ; cirro-cumulo-strati ; cirro-strati.
23	450	59.2	52.8	6.4	0.9	0.4	28	28 : 25 : —	8.0	Id. ; id. ; id. ; cumuli.
24 0	451	61.7	53.7	8.0	0.5	0.2	26	28 : 26 : —	6.0	Id. ; id. ; id. ; id. ; cumi.-str.
1	445	63.7	55.2	8.5	1.0	0.5	26	27 : — : —	6.0	Seud and loose cumuli ; cumuli ; id. ; id. ☺
2	441	61.3	54.0	7.3	0.7	0.6	22	27 : — : —	4.0	Id. ; id. ; id. ; id. ☺
3	437	63.4	54.5	8.9	0.7	0.7	22	28 : 28 : —	6.0	Cumuli : patches of cirro-strati ; dark to NW., clouds slate-blue. ☺
4	442	62.2	55.2	7.0	1.0	0.2	29	27 : — : —	9.0	Id. ; cirr.-str. ; fantastic columns of cum. to N. ; cirrus-crowned cum.
5	460	54.0	51.2	3.8	1.0	0.2	25	28 : — : —	9.5	As before, but clearer to W. ; rain ²⁻³ since last. [str. to NNW. ☺
6	457	57.0	52.7	4.3	0.4	0.3	24	26 : — : —	8.0	Cirro-stratus scud ; cumulo-strati round the horizon.
7	474	55.0	51.0	4.0	0.5	0.4	26	26 : — : —	9.0	Seud ; cumulo-strati ; cirri ; rain ¹⁻⁵
8	477	53.2	50.5	2.7	0.3	0.1	22	28 : — : —	9.5	Id. ; id. ; rain ¹
9	489	52.3	51.3	1.0	0.2	0.1	20	28 : — : —	9.8	Id. ; id. ; cirri to N. ; clouds slate-blue to SE.
10	500	51.8	49.2	2.6	0.1	0.0	24	28 : — : —	6.0	Id. ; cirr.-cum.-str. ; linear cir. rad. from WNW., clouds tinged red.
11	502	48.7	46.9	1.8	0.1	0.0	20		8.0	Id. ; cum. ; cum.-str. on hor. ; lin. cir. and cirr.-str. ; slightly red to NW.
12	502	47.9	46.4	1.5	0.1	0.0	20		7.5	Id. ; cumuli ; cumulo-strati.
13	29.511	47.0	45.3	1.7	0.0	0.0	16		9.0	Seud and loose cumuli.
14	514	48.3	45.3	3.0	0.1	0.0	28		9.8	Id.
15	518	47.0	44.8	2.2	0.0	0.0	22		9.5	Thick cirro-stratus scud.
16	526	46.0	43.5	2.5	0.1	0.0	22	26 : — : —	9.0	Seud ; cirro-stratus scud ; cirr.-str. tinged with red.
17	534	46.0	43.3	2.7	0.1	0.1	18	20 : — : 25	8.0	Id. ; id. ; thick sheets of cirri.
18	533	46.0	43.5	2.5	0.0	0.0	18	20 : — : —	3.0	Seud ; cirro-stratus scud ; patches of cirri. ☺
19	537	47.3	44.9†	2.4	0.2	0.1	24	— : 24 : —	3.0	Cirro-cumuli ; woolly cirri ; cirro-strati. ☺
20	537	47.8	45.4	2.4	0.2	0.4	24	— : 24 : —	3.0	Id. ; id. ; id. ; patches of scud ; cum. ☺
21	541	51.6	46.7†	4.9	0.4	0.6	25	26 : — : —	2.5	Loose cumuli ; cirro-strati ; cirri. ☺
22	544	54.4	48.2	6.2	0.7	0.4	22	— : 29 : —	8.5	Cirro-stratus scud ; cumulo-strati ; cirro-strati. ☺

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (seud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

June 24th 19^h. Observation made at 19^h 9^m.

June 25th 12^h 6^m. A shooting star to NW., altitude 20°, moving towards SW., inclined to the horizon about 30°.

June 25th 17^h. Some of the cirro-stratus seud spreading out like branches ; dark and undulated to E.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
25 23	29.550	53.8	48.2	5.6	0.5	0.3	20	— : 28 : —	9.9	Cirro-stratus scud ; cumulo-strati ; cirro-strati ; cum. ⊖
26 0	550	56.3	50.2	6.1	0.2	0.2	26	28 : — : —	9.9	Scud ; cirro-strati ; cumuli.
1	554	58.2	51.1	7.1	0.3	0.3	26	28 : — : —	9.8	Scud and loose cumuli ; cirro-strati. [horizon. ⊖
2	552	59.3	52.4	6.9	0.4	0.2	26	29 : — : —	9.8	Id. ; id. ; sky greenish on NE.
3	549	57.0	51.8	5.2	0.3	0.3	28	28 : — : —	9.3	Id. ; id. ; id.
4	548	59.3	51.8	7.5	0.7	0.3	28	28 : — : —	9.5	Id. ; id.
5	548	57.7	51.3	6.4	0.6	0.4	28	27 : — : —	9.9	Thick semifluid scud ; cum. ; cir.-str. and cir.-cum.-str.
6	554	59.2	51.2	8.0	0.6	0.5	30	28 : — : —	9.5	Thick scud ; cumo-strati ; cir.-str. ; a shower since last.
7	561	55.6	49.2	6.4	1.0	0.3	30	26 : — : —	9.0	Cirro-stratus scud ; cirro-strati.
8	571	53.0	48.7	4.3	0.4	0.1	0	26 : — : —	9.0	Thick scud ; cirro-strati ; a slight shower commencing.
9	576	51.8	48.4	3.4	0.1	0.1	0	25 : — : —	7.0	Cirro-stratus scud ; loose cumulo-strati on horizon.
10	588	50.4	48.4	2.0	0.0	0.0	26	25 : — : —	9.5	Id.
11	593	47.8	46.8	1.0	0.1	0.0			6.5	Id. ; id.
12	581	44.0	43.8	0.2	0.1	0.0	17		3.5	Id. ; cirro-strati.
13	29.578	44.6	44.2	0.4	0.1	0.0	21		2.5	Cirro-stratus scud ; cirro-strati.
14	573	44.1	43.5	0.6	0.0	0.0	18		6.0	Id. ; cirro-cumulo-strati.
15	563	43.6	42.8	0.8	0.1	0.0	18		7.0	Id. ; cumuli ; woolly and linear cirri. ♫
16	546	40.4	40.2	0.2	0.1	0.0	20		7.0	Id. ; id. ; clouds red.
17	549	42.5	42.0	0.5	0.0	0.0	16		6.5	Cir-cum.-str. ; dense cir.-str. to E. ; cum.-str. to S. , various cirri.
18	534	43.2	42.3	0.9	0.1	0.0	8	— : 24 : —	7.0	Woolly cir.-cum. ; various cirri ; cir.-str. scud ; cirro-strati ; cum. ⊖
19	529	45.4	44.2†	1.2	0.0	0.0	20	— : 24 : —	4.0	Cirro-cumulo-strati ; loose cumulo-strati to N. and E. ⊖
20	518	52.8	50.5+	2.3	0.0	0.0	2	12 : 22 : —	9.7	Masses of scud and loose cumuli ; cirro-cumulo-strati.
21	504	54.0	51.3	2.7	0.1	0.0	4	9 : 24 : —	6.0	Scud and cumuli ; cirro-cumulo-strati. ⊖
22	490	59.1	52.7	6.4	0.0	0.0	12	10 : — : —	9.8	Id. ; id. ⊖
23	469	59.9	53.2	6.7	0.2	0.1	14	10 : — : —	10.0	Id. ; id.
27 0	451	59.3	53.0	6.3	0.3	0.1	16	10 : — : —	10.0	Id. ; cirro-stratus. [horizon..
1	429	59.2	53.3	5.9	0.6	0.4	12	— : 16 : —	10.0	Thick cir.-str. clouds ; scud and loose cum. ; clouds electric-like near
2	419	56.9	52.1	4.8	0.7	0.7	6	14 : 14 : —	10.0	Scud ; cumuli and cirro-stratus clouds.
3	397	57.4	52.2	5.2	0.9	0.9	8	12 : — : —	10.0	Masses of loose cumuli ; dense cirro-stratus and haze.
4	374	56.0	51.3	4.7	1.3	1.5	9	12 : — : —	10.0	Id. ; id.
5	364	53.2	50.0	3.2	1.2	0.8	10	10 : — : —	10.0	Id. ; drops of rain.
6	355	50.8	49.7	1.1	1.2	0.5	8	9 : — : —	10.0	Scud ; rain ²
7	323	50.8	49.7	1.1	0.7	0.9	7	7 : — : —	10.0	Id. ; id.
8	302	49.6	48.5	1.1	0.8	0.5	8	8 : — : —	10.0	Id. ; dense cirro-stratus ; rain ¹⁻²
9	277	49.5	48.5	1.0	0.8	0.4	6	8 : — : —	10.0	Id. ; id. ; rain ¹⁻⁵
10	264	49.0	48.0	1.0	0.5	0.5	4		10.0	Id. ; rain ²
11	214	48.0	47.3	0.7	1.3	0.8	4		10.0	Id. ; rain ²⁻⁴
12	195	48.2	47.6	0.6	1.8	1.3	5		10.0	Id. ; rain ¹⁻⁵
13	29.163	48.8	48.2	0.6	1.1	0.8	4		10.0	Scud ; rain ¹
14	130	48.7	48.2	0.5	2.0	1.6	4		10.0	Id. ; rain ¹
15	105	49.2	48.8	0.4	1.7	1.0	4		10.0	Id. ; rain ³
16	086	49.3	48.9	0.4	1.8	0.8	4		10.0	Id. ; rain ¹⁻⁵
17	078	49.6	49.3	0.3	0.8	0.7	4		10.0	Id. ; rain ²
18	064	50.2	49.6	0.6	1.5	0.5	4		10.0	Id. ; rain ³
19	060	50.8	49.8	1.0	0.7	2.0	2	2 : — : —	10.0	Id. ; rain ²
20	055	50.3	49.2	1.1	2.6	2.8	1	2 : — : —	10.0	Id. ; rain ²
21	068	49.0	47.6	1.4	6.1	3.7	1	1 : — : —	10.0	Id. ; rain ⁰⁻²
22	087	47.7	46.8	0.9	7.0	4.8	0	0 : — : —	10.0	Id. ; rain ⁰⁻³
23	110	47.4	45.9	1.5	5.3	4.2	0	0 : — : —	10.0	Id. ; rain ⁰⁻⁵
28 0	139	48.0	46.0	2.0	5.5	3.8	1	0 : — : —	10.0	Id. ; rain ²⁻⁴
1	168	47.7	46.0	1.7	4.3	3.0	0	0 : — : —	10.0	Id.
2	188	48.2	45.7	2.5	3.7	2.3	0	31 : — : —	10.0	Id.
3	225	48.1	45.8	2.3	3.1	0.8	31	30 : — : —	10.0	Id.
4	253	50.2	46.7	3.5	2.4	2.0	0	31 : — : —	10.0	Id.
5	274	50.7	46.7	4.0	2.4	1.2	0	31 : — : —	9.9	Id. ; cirro-strati ; cirrous mass.
6	301	50.0	46.3	3.7	1.4	0.5	31	30 : — : —	9.5	Id. ; id. ; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
28 7	29.325	49.8	46.3	3.5	0.9	0.3	0	30 : — : —	9.9	Scud ; cirro-strati ; cirrous mass.
8	347	51.7	47.7	4.0	0.3	0.3	31	30 : — : —	9.5	Cirro-stratus scud ; cumuli to S. ; cirro-strati.
9	363	49.7	45.6	4.1	0.2	0.2	30	30 : — : —	8.5	Scud and loose cumuli ; cirro-cumuli ; cirro-strati.
10	381	44.2	42.5	1.7	0.1	0.1	28		1.0	Patches of scud and cirro-strati round horizon.
11	394	44.0	41.9	2.1	0.1	0.1	28		0.7	Masses of scud and cirro-strati on horizon.
12	408	43.7	41.7	2.0	0.2	0.1	26		0.5	Cirro-strati near horizon ; sky very clear.
29 13	29.531	59.2	52.0	7.2	2.2	0.2	20	22 : — : —	{ Sunday—Loose cumuli ; cirro-strati ; slight showers about 2 ^h .
13	29.461	50.7	48.8	1.9	1.5	0.1	12		10.0	Scud and cir. str. ; rain ²
14	436	50.9	49.9	1.0	0.3	0.5	16	19 : — : —	10.0	Id.
15	426	49.5	48.8	0.7	0.5	0.1	18	19 : — : —	3.0	Id. ; cumuli to W. and S. ; cir. str. ; woolly
16	427	50.4	49.4	1.0	0.2	0.2	20	21 : — : —	8.5	Id. ; id. ; id. [cirri.
17	427	50.5	49.3†	1.2	0.8	0.4	20	— : 21 : —	5.0	Cirro-cumulo-strati ; cirro-strati. ☽
18	434	51.8	50.2	1.6	0.8	0.5	20	— : 22 : —	3.0	Id. ; id. ; cum. str. ; nimbi to S. ☽
19	434	53.2	50.3	2.9	0.7	0.7	17	22 : — : —	2.5	Cum. and cum. str. on hor. ; patches of scud, loose cum.,
20	442	54.9	50.9+	4.0	0.8	0.6	20	22 : — : —	2.0	As before. ☽ [and cirro-strati. ☽
21	444	60.2	54.7	5.5	0.8	0.7	18	22 : — : —	6.0	Loose cumuli ; patches of cirro-stratus. ☽
22	448	58.6	52.9	5.7	1.4	0.7	20	21 : — : —	7.0	Id. ; cir-cum-str. ; hazy cirri to S. ☽
23	443	62.1	56.2	5.9	1.4	1.3	20	21 : — : —	3.0	Id. ; cirro-strati to S. ☽
30 0	442	60.4	55.0	5.4	1.8	2.0	21	22 : — : —	2.0	Id. ; cum. str. ; masses of cirro-strati. ☽
1	446	62.7	55.9	6.8	2.5	1.8	20	21 : — : 24	7.0	Id. ; id. ; cir. str. ; woolly cirri. ☽
2	445	63.0	55.4	7.6	1.5	1.5	22	20 : 22 : —	7.5	Id. ; id. ; id. ; id.
3	443	60.1	55.3	4.8	1.8	1.2	18	21 : — : —	9.7	Id. ; id. ; id. ; shower ¹⁻³ at 2 ^h 30 ^m . ☽
4	437	61.0	54.8	6.2	1.9	1.4	21	21 : — : —	9.8	Id. ; id. ; woolly cirri ; shower ¹
5	437	59.3	54.0	5.3	1.7	0.8	20	20 : — : —	9.5	Id. ; id. ; id. ; thick scud ; raining to N.
6	452	57.6	52.8	4.8	1.4	0.7	22	22 : — : —	9.8	Thick scud ; cumuli and cumulo-strati to S. ; rain ¹
7	457	52.7	52.0	0.7	0.7	0.7	20	22 : — : —	9.8	Id. ; id.
8	449	56.2	54.0	2.2	1.0	0.6	20	— : 22 : —	6.0	Cirro-cumulo-strati ; loose scud ; cirro-strati. ☽
9	455	54.7	52.3	2.4	1.0	0.2	24	19 : 22 : —	8.0	Scud ; cirro-cumulo-strati ; id.
10	454	54.0	52.2	1.8	0.6	0.2	20	19 : 22 : —	9.0	Id. ; id. ; id.
11	472	53.8	52.0	1.8	0.4	0.2	19		10.0	Id.
12	459	53.2	52.1	1.1	0.2	0.4	20		10.0	Id. ; rain ^{0.5}
13	29.433	53.2	51.8	1.4	0.6	0.4	20		10.0	Scud.
14	412	53.0	51.4	1.6	0.4	0.3	20		10.0	Id.
15	387	50.9	48.9	2.0	0.3	0.2	16		10.0	Id.
16	368	49.7	48.8	0.9	0.1	0.1	19		9.7	Id.
17	344	50.9	49.7	1.2	0.2	0.0	8		10.0	Id. ; rain ¹
18	316	51.3	50.3	1.0	0.0	0.0	8		10.0	Id. ; rain ^{0.5}
19	284	51.8	50.3	1.5	0.1	0.1	8	17 : — : —	10.0	Id. ; cirro-strati ; cirrous mass ; scud on Cheviot.
20	219	51.6	50.4	1.2	0.2	0.0	8	16 : — : —	10.0	Cirro-stratus scud ; id. ; rain ^{0.5}
21	163	52.1	50.7	1.4	0.1	0.1	12	12 : — : —	10.0	Scud ; dense cirro-stratus ; rain ^{0.5}
22	097	52.7	51.7	1.0	0.9	0.8	14		10.0	Scud on horizon ; id. ; rain ³
23	29.040	54.5	53.2	1.3	0.5	0.5	14	14 : — : —	10.0	Patches of scud ; id. ; rain ²⁻³
1 0	28.963	56.2	54.0	2.2	2.1	1.5	15	14 : — : —	9.9	Scud ; cirro-strati ; loose cumuli to SE.
1	926	57.7	55.2	2.5	2.5	2.0	18	18 : 18 : —	8.0	Id. ; loose cum. ; cir. str. ; cumuli ; nimbi. ●
2	880	59.3	55.0	4.3	4.0	1.8	16	17 : — : —	9.8	Id. ; id. ; id. ; id. ; showers occasionally. ●
3	842	54.8	53.7	1.1	3.5	1.0	20	18 : — : —	10.0	Id. ; id. ; id. ; id. ; id.
4	794	54.2	52.2	2.0	3.8	1.8	20	18 : — : —	10.0	Id. ; rain ²
5	727	52.7	51.4	1.3	3.9	5.2	19	19 : — : —	10.0	Id. ; id.
6	729	52.7	51.1	1.6	6.0	5.3	19	20 : — : —	10.0	Id. ; drops of rain.
7	792	53.0	50.9	2.1	4.6	1.6	21	23 : — : —	10.0	Id. ; id.
8	846	52.9	50.8	2.1	2.8	1.7	22	23 : — : —	10.0	Id. ; rain ^{0.5}
9	887	52.0	50.2	1.8	2.3	0.9	22	23 : — : —	9.8	Id. ; dense mass of cirro-strati ; sky to W.
10	921	52.5	49.5	3.0	3.7	1.1	20	24 : — : —	9.9	Id. ; id.
11	954	52.8	49.4	3.4	1.6	1.1	22	24 : — : —	9.8	Id. ; cirro-strati.
12	991	52.6	49.3	3.3	1.4	0.8	22		9.8	Seud and cirro-stratus.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

HOURLY METEOROLOGICAL OBSERVATIONS, JULY 1—3, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	lbs.	lbs.	pt.	
d. h.	in.	°	°	°						
1 13	29.036	52.7	49.9	2.8	0.6	0.4	22	pt.	pt.	0—10.
14	073	52.0	49.2	2.8	1.0	0.9	23			9.5
15	111	52.0	49.0	3.0	1.1	0.5	24	28 : 28 : —		7.0
16	149	50.7	48.3	2.4	0.7	0.3	22	— : 28 : —		6.5
17	197	51.2	48.4†	2.8	0.7	0.7	23	— : 26 : —		3.0
18	237	52.6	49.4	3.2	1.8	0.8	24			2.5
19	285	54.0	50.0	4.0	1.6	1.3	26	24 : 28 : —		2.0
20	332	55.3	50.8	4.5	1.5	1.3	22	— : 24 : —		1.0
21	374	55.4	50.5†	4.9	1.1	1.2	22	— : 24 : —		2.0
22	395	56.7	51.0	5.7	1.5	1.2	24	— : 25 : —		1.5
23	441	58.0	51.0	7.0	1.3	0.4	20			1.5
2 0	473	59.0	51.7	7.3	1.5	0.4	23	23 : — : —		1.0
1	493	60.6	52.4	8.2	0.7	0.3	26	23 : — : —		1.0
2	515	60.5	51.7	8.8	0.7	0.7	26	23 : — : —		1.5
3	525	60.4	51.9	8.5	0.5	0.3	30	23 : — : —		2.5
4	538	62.3	52.6	9.7	0.6	0.4	28	23 : — : 22		2.0
5	547	62.5	52.7	9.8	0.6	0.4	26	— : — : 21		5.0
6	560	61.3	53.7†	7.6	0.2	0.0	22	22 : — : 20		7.0
7	571	58.3	52.9	5.4	0.0	0.0	22	— : 20 : —		7.0
8	583	56.8	52.4†	4.4	0.0	0.0	20			10.0
9	590	53.9	50.9	3.0	0.0	0.0	18	— : 19 : —		10.0
10	604	51.8	49.8	2.0	0.0	0.0	18	16 : — : —		9.0
11	617	50.3	48.5	1.8	0.0	0.0	24			8.0
12	613	49.7	48.6	1.1	0.0	0.0	17			10.0
13	29.613	49.6	48.3	1.3	0.0	0.0	28			Scud ; cirrous haze.
14	600	49.6	48.3	1.3	0.0	0.0	4			Id. ; id. ; cirro-strati.
15	576	50.8	49.0	1.8	0.0	0.0	4			Cirro-stratus scud ; mass of cirro-strati.
16	575	50.4	49.4	1.0	0.0	0.0	4			Id. ; id. ; drops of rain.
17	577	50.4	50.0	0.4	0.0	0.0	4	— : 12 : —		Id. ; id. ; rain ^{1.5}
18	572	51.0	50.5	0.5	0.1	0.1	3			Id. ; id. ; rain ¹
19	556	52.0	51.3	0.7	0.1	0.2	4	4 : 9 : —		Misty scud ; cirro-stratus scud and cirro-strati ; rain ^{0.5}
20	544	52.0	50.4	0.2	0.2	0.2	4	4 : — : —		Id. ; rain ^{0.5}
21	533	53.0	52.5	0.5	0.5	0.5	2	4 : — : —		Id. ; rain ^{0.5}
22	518	53.9	53.4	0.5	0.4	0.3	6	6 : — : —		Id. ; Scotch mist ; rain ^{0.5}
23	509	54.2	53.6	0.6	0.6	0.5	6	6 : — : —		Id. ; id. ; rain ^{0.2}
3 0	484	53.6	53.2	0.4	0.6	0.7	5	4 : — : —		Id. ; id. ; rain ^{0.2}
1	477	54.9	54.3	0.6	0.7	0.3	3			Thick Scotch mist ; objects invisible at half a mile.
2	466	55.3	55.0	0.3	0.4	0.2	3			Mist ; objects invisible at $\frac{2}{3}$ of a mile.
3	458	55.0	54.5	0.5	0.4	0.3	2			Nearly as before.
4	416	55.6	55.0	0.6	0.4	0.2	3			Mist at a mile ; clouds homogeneous.
5	391	56.6	56.3	0.3	0.5	0.2	4			Mist ; objects invisible at $\frac{1}{3}$ of a mile.
6	374	57.6	56.9	0.7	0.4	0.2	4			Mist clearing off ; homogeneous mass.
7	363	58.8	57.9	0.9	0.3	0.1	3	15 : 16 : —		Cirro-stratus scud ; cirro-cumulo-strati.
8	350	57.6	57.4	0.2	0.2	0.2	3	4, 12 : 16 : —		Misty scud ; scud ; loose cumuli ; shower ^{1.5} since last.
9	342	56.5	56.4	0.1	0.3	0.1	4			Scotch mist ; objects invisible at $\frac{3}{4}$ of a mile.
10	314	56.4	56.4	0.0	0.2	0.1	3			Dense fog ; objects invisible at $\frac{1}{4}$ of a mile.
11	313	56.2	56.0	0.2	0.1	0.0	16			Scud and haze round horizon.
12	315	57.1	54.7	2.4	1.9	2.0	16			Small patches of scud and cumuli on horizon.
13	29.320	56.0	53.3	2.7	2.4	0.8	16			Scud to W.
14	333	54.4	52.1	2.3	1.7	1.2	16			Scud and cirro-strati.
15	325	54.7	50.9	3.8	1.3	0.5	16			Scud.
16	316	54.0	50.7	3.3	2.9	1.7	16			Id.
17	321	55.0	50.1	4.9	3.3	4.9	16			Id.
18	325	53.0	49.6	3.4	4.5	5.7	16			Id.
19	391	52.4	50.8	1.6	4.9	2.7	18	21 : 20 : —		Id. ; cirro-cumulo-strati.
20	452	54.3	51.2	3.1	3.4	2.0	20	21 : 20 : —		Id. ; id. ; drops of rain.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

July 2^d 7^h. Observations made at 7^h 30^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From 10 ^{m.}	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
3 21	29.471	56.0	51.4	4.6	3.8	5.9	20	22 : — : —	4.0	Scud and loose cumuli. ☒
22	519	57.3	52.1	5.2	4.0	3.2	21	23 : — : —	4.5	Id. ☐
23	578	57.9	52.0	5.9	2.4	2.0	22	22 : — : —	3.0	Id.; cirro-strati. ☐
4 0	613	60.5	54.2	6.3	3.5	3.8	19	22 : — : —	6.0	Id.
1	639	61.2	54.2	7.0	3.2	3.3	20	23 : — : —	3.5	Id.; cirro-strati on E. horizon. ☐
2	665	61.0	53.3	7.7	4.0	3.8	19	23 : — : —	3.0	range of cumuli to N. ☐
3	689	61.0	53.6	7.4	3.7	3.7	18	23 : — : —	2.5	Id.; id. ☐
4	710	61.0	53.8	7.2	3.1	1.7	18	22 : — : —	2.5	Id.; id. ☐
5	738	61.6	54.8	6.8	2.7	2.0	21	22 : — : —	2.0	Id.; cumuli; cirro-strati. ☐
6	760	58.5	52.0	6.5	2.2	1.6	18	20 : 21 : —	2.5	Masses of cumuli; cirro-cumulo-strati and cirro-strati. ☐
7	784	56.8	51.4	5.4	1.2	1.0	18		0.5	Id.; cirro-strati. ☐
8	800	55.3	50.7	4.6	1.7	1.6	20		0.2	Piles of cumuli and cumulo-strati on N. horizon. ☐
9	820	52.7	49.2	3.5	1.2	0.4	19		0.2	Patches of cumulo-strati on N. horizon. ☐
10	834	49.2	47.0	2.2	0.3	0.2	18		0.1	Id.
11	845	46.9	45.6	1.3	0.4	0.0	20		0.1	Patches of cirro-stratus to N.; very clear.
12	856	44.7	43.9	0.8	0.0	0.0	22		0.2	Patches of cirro-stratus on horizon.
13	29.873	43.6	43.0	0.6	0.0	0.0	26		7.0	Scud and cirro-stratus.
14	871	44.4	43.7	0.7	0.0	0.0	28		6.5	Id.
15	873	43.5	43.0	0.5	0.0	0.0	2		2.0	Cirri and cirro-strati to SE.
16	889	43.4	42.8	0.6	0.0	0.0	23		1.5	Id. to E.
17	895	46.7	45.3	1.4	0.1	0.1	24		1.0	Cir. and cir.-str. near hor.; a mass of cum.-cir.-str. to S. ☐
18	906	48.6	46.6	2.0	0.1	0.1	20		0.7	Id.; cumulo-strati to SSW. ☐
19	915	51.6	49.4	2.2	0.4	0.2	18		0.5	A few cumuli on N. and S. horizon; cir.-str. near hor. ☐
20	930	56.1	52.3	3.8	0.6	0.2	21		3.0	Scud and loose cumuli. ☐
21	949	57.3	52.9	4.4	0.9	0.7	20		2.5	Id.; cumuli. ☐
22	948	59.3	54.7	4.6	0.7	0.3	20		3.0	Id.; id. ☐
23	960	62.2	56.3	5.9	0.6	0.4	21		3.0	Id.; id. ☐
5 0	965	63.5	55.2	8.3	0.5	0.5	20		2.5	Id.; id. ☐
1	974	65.4	56.2	9.2	0.8	0.6	17		2.5	Id.; id.; woolly cirri. ☐
2	977	66.0	56.4	9.6	0.7	0.4	18		5.0	Id.; id.; id. ☐
3	981	63.8	54.7	9.1	1.0	0.3	19		4.0	Id.; woolly cirri; cumuli.
4	982	65.0	54.8	10.2	0.4	0.3	28		4.0	Woolly cirri; cumuli and cumulo-strati. ☐
5	982	66.3	55.0	11.3	0.3	0.3	24		5.0	Sheets of cirri; patches of scud; cumuli; cir-str. ☐
6	981	63.4	55.3	8.1	0.6	0.1	25		2.0	Cumulo-strati to E. and N.; cirro-strati on horizon. ☐
7	983	62.5	53.9	8.6	0.3	0.1	21		3.0	Sheets of cirr.-str. and woolly cirri; cum.-str. to E. ☐
8	982	59.6	53.9	5.7	0.1	0.1	23		3.0	Cirro-cumuli; woolly cirri and cirro-strati. ☐
9	29.987	57.0	52.4	4.6	0.0	0.0	22		4.0	Cirro-cumulous scud; woolly cirri and cirro-strati. ☐
10	30.003	54.8	52.4	2.4	0.1	0.0	16		6.0	Id.; cirro-strati and cirrus haze.
11	30.001	53.0	51.0	2.0	0.1	0.0	24		6.0	Id.; cirro-strati.
12	30.000	52.5	50.8	1.7	0.0	0.0	24		10.0	Scud; cirro-strati and cirrus haze.
6 1 ³	29.918	66.5	57.2	9.3	1.2	0.7	12	12 : 16 : —	Sunday—A.M. Masses of cirr.-str., cir. haze, and solar halo. P.M. Scud and cirr.-str.; slight showers about 5 ^{h.}
13	29.781	55.0	54.5	0.5	1.4	0.2	4		10.0	Scud; rain ^{1,5}
14	745	54.6	54.5	0.1	0.3	0.3	3		10.0	Id.; rain ²
15	730	55.2	54.8	0.4	0.4	0.4	5		10.0	Id.
16	711	54.5	54.4	0.1	0.5	0.2	5		10.0	Id.; dense fog.
17	678	54.2	54.1	0.1	0.4	0.3	4		10.0	Id.; id.
18	687	54.0	53.9	0.1	0.2	0.1	4		10.0	Id.; id.
19	674	54.7	54.6	0.1	0.0	0.0	4		10.0	Id.; id.; objects invisible at $\frac{1}{4}$ of a mile.
20	669	56.5	56.3	0.2	0.0	0.0	4		10.0	Dense fog; objects invisible at $\frac{1}{4}$ of a mile.
21	662	60.1	58.9	1.2	0.0	0.0	22		10.0	Homogeneous clouds; the sun beginning to break through; mist
22	663	62.3	60.3	2.0	0.0	0.0	24	20 : — : —	10.0	Scud; cirrus mass; mist clearing off. [at 1 $\frac{1}{2}$ mile.]
23	656	66.0	62.0	4.0	0.3	0.1	23	20 : — : —	10.0	Id.; cumuli to N.; cirro-strati; cirri and haze.
7 0	673	67.0	61.2	5.8	0.7	0.3	21	19 : — : —	10.0	Id.; id.; id.; id.
1	685	65.5	60.0	5.5	0.7	0.7	22	— : 18 : —	9.9	Cirro-cumulo-strati; id.; cirri.
2	682	65.7	60.0	5.7	0.8	0.9	20	19 : 18 : —	9.5	Scud; cirro-cumulo-strati; cirro-strati; cirri. ☐

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From				
		in.	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
d. h.										
7 3	29.675	68.2	61.3	6.9	0.7	0.5	21	19 : 18 : —	9.2	Scud; cir.-cum.-str.; cir.-str.; sheets of cir.; solar halo. ⊖
4	677	68.0	60.0	8.0	0.9	0.8	21	20 : — : —	9.0	Scud and loose cumuli; cirro-strati; cirri; id. ⊖
5	678	70.0	61.8	8.2	1.0	1.0	20	18 : — : —	8.0	Loose cumuli; woolly cirri to SE. ⊖
6	677	67.2	60.4†	6.8	0.8	0.5	20	16 : — : 18	3.0	Id.; woolly cirri. ⊖
7	676	63.7	58.4	5.3	0.5	0.3	22		3.0	Id.; id. ⊖
8	684	62.8	57.7	5.1	0.4	0.2	22	— : — : 18	4.0	Woolly cirri; loose cumuli; cirro-strati. ⊖
9	688	59.0	55.7	3.3	0.2	0.1	19	— : — : 18	4.0	Id.; cumulo-strati; cumuli; cirro-strati. ⊖
10	688	57.0	54.7†	2.3	0.1	0.1	23		4.0	Id.; id.; id. id.
11	685	55.2	53.6	1.6	0.0	0.0	22		6.0	Scud and cirro-strati.
12	687	53.0	52.2	0.8	0.0	0.0	18		7.5	Scud, cirro-strati, and cirri.
13	29.673	52.3	51.7	0.6	0.0	0.0			8.5	Scud, cirro-strati, and cirri.
14	655	52.0	51.4	0.6	0.0	0.0	22		7.0	Cirro-strati, cirrous haze, and patches of scud.
15	645	52.0	51.6	0.4	0.0	0.0	24	— : 18 : —	9.5	Cirro-stratus, cumulo-strati, and cirrous haze to NE.
16	641	51.4	51.0	0.4	0.0	0.0		— : 18 : —	10.0	Cir.-str. and cir. haze; clouds tinged with red to NE.
17	636	52.0	51.3	0.7	0.0	0.0	28	— : 18 : —	10.0	Id.; drops of rain.
18	628	53.6	52.7	0.9	0.0	0.0	24	— : 18 : —	8.5	Cirro-stratus scud; cirro-strati.
19	613	57.0	55.0†	2.0	0.1	0.0	22	— : 18 : —	8.5	Id.; id.
20	606	60.2	57.5	2.7	0.2	0.1	20	— : 18 : —	9.8	Id.; id.
21	608	60.9	57.8	3.1	0.0	0.1	19	18 : — : —	10.0	Scud; cumuli; cirro-strati; rain ^{0.5}
22	601	61.7	59.0	2.7	0.2	0.2	19	17 : — : —	9.5	Id.; cumulo-strati; cirro-strati.
23	579	65.2	59.8	5.4	0.4	0.4	19	18 : — : —	9.8	Id.; id.; id.
8 0	562	66.7	60.0	6.7	0.5	0.3	19	20 : 18 : —	9.8	Id.; cirro-cumulo-strati; cirro-strati. ⊖
1	574	57.6	56.2	1.4	1.2	0.4	18		10.0	Nearly homogeneous cirro-str. scud and cir.-str.; rain ¹
2	553	65.0	61.3	3.7	0.3	0.7	18	20 : — : —	9.5	Scud; cumuli; cirro-strati; cirri.
3	534	64.1	58.6	5.5	1.3	1.3	19	19 : — : —	4.5	Id.; id.
4	526	64.6	57.6	7.0	2.1	1.4	21	19 : — : —	2.5	Id.; id.; id.; id.; nimbi.
5	520	64.3	57.3	7.0	1.8	1.3	19		1.8	Id.; id.; id.
6	513	63.3	57.8†	5.5	1.7	1.0	20	19 : — : —	2.5	Loose cumuli; id.; id.
7	517	59.9	55.8	4.1	1.0	0.7	21	— : 18 : —	8.7	Cirro-stratus scud; masses of scud and loose cumuli.
8	510	58.7	55.7†	3.0	0.7	0.5	20	19 : 19 : —	7.5	Thick scud; sheets of cir.-str.; cum.-str. on NE. hor.; drops of rain.
9	501	56.4	53.7	2.7	0.7	0.2	18		2.5	Scud to W.; cirro-strati; nimbi and cum.-str. to SE.
10	482	53.9	52.4	1.5	0.6	0.1	18		9.0	Cirro-strati, cirri, and cir. haze; masses of loose cum.
11	476	53.4	52.3	1.1	0.2	0.1	20		8.5	Scud; cirro-strati; rain ^{1.5}
12	463	55.4	54.3	1.1	0.2	0.1	19		10.0	Id.; id.
13	29.450	55.3	54.1	1.2	0.5	0.1	19		4.0	Scud; cirro-strati.
14	459	53.8	52.4	1.4	0.2	0.1	23		8.0	Id.; id.
15	451	53.0	52.0	1.0	0.1	0.0	24	22 : — : —	8.0	Scud; cirro-cumulo-strati; cirro-strati.
16	452	54.0	52.6	1.4	0.4	0.4	22	— : 22 : —	9.8	Cirro-str. scud; cirro-strati; clouds tinged red to E.
17	462	54.3	52.3	2.0	0.6	0.5	22	— : 23 : —	8.5	Id.; id.; woolly cirri.
18	466	54.0	52.3	1.7	0.3	0.1	21	22 : 23 : —	3.5	Smoky scud; cirro-cumulo-str.; id.; cirro-strati. ⊖
19	466	56.0	53.4†	2.6	0.4	0.6	22	22 : — : —	9.9	Thick scud; cirro-strati.
20	469	57.7	54.7†	3.0	1.2	0.7	21	22 : — : —	9.0	Scud; loose cumuli; cirro-strati.
21	490	59.6	55.3	4.3	1.0	1.0	21	23 : — : —	9.8	Id.; id.; id. [cirri to W.] ⊖
22	493	60.8	55.5	5.3	1.6	1.8	21	23 : 22 : —	8.7	Id.; id.; id.; cirro-cumulo-str.; mottled
23	506	63.0	57.4	5.6	1.3	0.7	20	22 : — : —	9.9	Id.; id.; id. [rain.] ⊖
9 0	509	62.6	56.9	5.7	1.1	2.0	20	23 : — : —	9.5	Id.; id.; woolly cirri and cirro-str.; drops of
1	514	66.7	60.3	6.4	1.8	1.0	19	22 : — : —	9.0	Id.; id.; cirro-strati. ⊖
2	525	62.1	56.1	6.0	2.2	1.8	20	23 : — : —	7.0	Id.; id.; id.
3	526	60.0	56.3	3.7	2.6	1.7	20	23 : — : —	9.8	Id.; id.; id.; slight passing shower.
4	523	58.0	54.8	3.2	2.6	1.6	21	22 : — : —	9.9	Id.; id.; id.; occasional slight showers.
5	520	60.3	55.5	4.8	3.8	1.8	22	21 : 23 : —	10.0	Id.; id.; id.; id.
6	522	58.6	53.9	4.7	3.0	2.5	22	21 : 23 : —	9.5	Id.; cirro-cumulo-strati; cirro-strati. ⊖
7	526	55.9	52.7	3.2	2.1	0.7	21	23 : — : —	10.0	Id.; id.; id.
8	518	55.4	52.3	3.1	1.3	0.5	22	23 : — : —	9.0	Id.; id.; id.
9	516	53.7	51.8	1.9	1.4	0.5	22	— : 22 : —	9.0	Cirro-cumulo-str.; cirro-str. scud; cirro-strati; cirri. ⊖
10	512	53.2	51.4	1.8	0.8	0.4	22	— : 22 : —	8.0	Id.; id.; id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

July 7^d 15^h. Loose muddy cirro-stratus moved up and covering nearly all the sky except to NE., where the front of it is nearly a straight line lying NNW. to SSE.

Gött. Mean Time.	BARO- METRIC at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^m	From			
4. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
9 11	29.516	52.0	50.6	1.4	0.9	0.2	22	22	— : —	8.0 Smoky scud; cirro-stratus scud; cirro-cumulo-strati.
12	499	52.6	51.7	0.9	0.4	0.2	18			9.5 Nearly as before.
13	29.484	52.6	51.6	1.0	0.3	0.2	18			9.5 Seud; cirro-stratus scud; cirro-strati; cirri.
14	469	52.7	51.6	1.1	0.2	0.0				9.9 Sheet of cirro-strati; sky on N. horizon.
15	461	52.3	51.6	0.7	0.0	0.0	18			9.5 Cirro-stratus scud; cirro-strati radiating from SSE.
16	448	52.7	52.0	0.7	0.1	0.1	18	— : 22 : —		9.5 Id.; id.
17	444	53.3	52.3	1.0	0.2	0.0		— : 21 : —		9.5 Id.; id.
18	439	54.6	53.4	1.2	0.0	0.0	18	22 : — : —		9.8 Smoky and cirro-stratus scud; cirro-cumulo-strati.
19	430	57.7	55.8	1.9	0.0	0.0		22 : — : —		9.8 Scud; cirro-strati.
20	426	58.9	55.8	3.1	0.0	0.0	28	22 : — : —		9.5 Id.; id.
21	424	60.1	55.0	5.1	0.0	0.0	0	25 : 22 : —		3.0 Loose cumuli; cirro-strati and cirro-cumulo-strati. ○
22	421	62.5	56.2	6.3	0.0	0.0		25 : 22 : —		8.5 Id.; id.
23	418	65.5	58.5	7.0	0.1	0.1	28	24 : 21 : —		9.5 Id.; id.
10 0	414	68.0	60.0	8.0	0.1	0.2	29	21 : — : —		9.0 Id.; id.
1	406	67.3	58.5	7.8	0.1	0.0	28			9.8 Id.; id.; woolly cirri. ⊖
2	406	65.8	57.2	8.6	0.3	0.2	28	20 : — : —		9.5 Id.; cirro-strati; woolly cirri. ●
3	400	67.3	58.9	8.4	0.2	0.2	31	24 : 22 : —		9.8 Id.; cirro-strati; woolly cirri. ⊖
4	394	66.4	57.4	9.0	0.4	0.3	25	21 : — : —		8.0 Id.; woolly cirri; cirro-strati. ⊖
5	383	66.3	57.3	9.0	0.4	0.1	28	— : 21 : —		9.0 Cirro-cumulo-strati; cirro-strati; cirri; cumuli. ⊖
6	379	66.3	57.4	8.9	0.3	0.3	24	25 : 22 : —		9.0 Cumo-str.; cirro-cumulo-str.; clouds hazy and electric-like
7	385	64.0	57.4	6.6	0.3	0.1	30	25 : 22 : —		8.5 As before; very black to E.; rain there? [on hor. ⊖
8	383	61.3	56.1	5.2	0.2	0.1	28	25 : 22 : —		8.2 Cumo-str.; cirro-cumulo-str.; hazy on horizon. ○
9	385	55.9	53.0	2.9	0.1	0.1	22	— : 22 : 19		7.0 Cirro-cumulo-str.; curled cirri; piles of cumo-str. to ESE. ⚡
10	391	55.1	52.2	2.9	0.0	0.0	21	— : 25 : —		9.0 Id.; cirri and cirrus haze. ↗
11	390	53.5	52.2	1.3	0.0	0.0	18			8.5 Cirro-strati; scud; cirro-strati and cumuli on horizon.
12	389	53.6	52.0	1.6	0.0	0.0	20			9.0 Id.
13	29.387	51.5	50.4	1.1	0.0	0.0	0			5.0 Id.
14	386	50.8	49.6	1.2	0.0	0.0	24			8.5 Cirro-cumulo-strati and cirro-strati.
15	386	49.6	48.4	1.2	0.0	0.0	16			5.0 Scud; cirro-cumulo-strati; [tinged red to NE.
16	388	45.8	45.3	0.5	0.0	0.0	22			2.5 Id.; id.; id.; cir. haze on hor.; upper clouds
17	398	46.8	46.0	0.8	0.0	0.0	18	0 : 28 : —		Thin scud; cirro-cumulo-strati.
18	401	50.3	49.3	1.0	0.0	0.0	22	1 : — : —		10.0 Id.; cirro-strati.
19	412	52.8	51.3	1.5	0.0	0.0	26	2 : — : —		10.0 Id.; id.
20	418	55.8	53.0	2.8	0.0	0.3	2	3 : 0 : —		9.9 Id.; cirro-cumulo-strati.
21	423	55.6	52.8	2.8	0.4	0.6	0	2 : 1 : —		9.9 Id.; id.
22	436	54.0	52.9	1.1	0.6	0.6	8	3 : 31 : —		9.0 Id.; id.; cumo-str.; shower lately.
23	448	56.4	53.2	3.2	0.8	0.8	3	4 : — : —		10.0 Scud and cirro-stratus scud. ●
11 0	461	53.3	51.2	2.1	1.3	0.6	2	3 : — : —		10.0 Scud; drops of rain.
1	460	55.7	52.0	3.7	0.9	0.6	4	3 : 28 : —		9.0 Id.; cirro-cumulo-strati; cirro-strati.
2	460	56.7	52.2	4.5	0.8	0.6	4	4 : 28 : —		9.5 Id.; id.
3	464	57.4	53.0	4.4	0.6	0.3		4 : 28 : —		9.0 Id.; id.; loose cumo.; cirro-strati. ⊖
4	476	57.5	53.3	4.2	0.6	0.4	4	3 : 28 : —		9.8 Id.; id.
5	487	56.0	51.8	4.2	0.5	0.3	3	4 : — : —		10.0 Id.; mass of cirro-strati.
6	500	54.1	51.1	3.0	0.3	0.1	4	0 : — : —		9.7 Scud and dense cirro-strati; sky to E.; drops of rain.
7	503	54.0	51.2	2.8	0.1	0.1	3	0 : 28 : —		10.0 Scud; dense cirro-stratus; drops of rain.
8	514	53.7	51.0	2.7	0.0	0.0	8	2 : 28 : —		9.8 Id.; cirro-strati; sky on E. hor.; breaking to W.
9	527	52.1	49.9	2.2	0.0	0.0	4	28 : 28 : —		10.0 Thick scud and cirro-strati; very thick and dark to W.
10	543	50.8	49.2	1.6	0.0	0.0	6	27 : 25 : —		9.0 Scud; cirro-strati; drops of rain.
11	552	50.2	49.1	1.1	0.0	0.0	7			10.0 Id.
12	562	50.2	49.6	0.6	0.1	0.0	20			10.0 Id.
13	29.571	49.8	49.1	0.7	0.0	0.0	30			10.0 Scud; rain ³
14	578	48.2	47.5	0.7	0.0	0.0	0			10.0 Id.; rain ¹
15	580	47.8	47.5	0.3	0.1	0.0	9			10.0 Id.; cirro-strati; sky to W.
16	596	45.9	45.7	0.2	0.0	0.0				5.0 Cirro-cumulo-strati; cirro-strati.
17	608	45.4	45.2	0.2	0.0	0.0		— : 28 : —		8.0 Cirro-stratus scud; cumuli; woolly cirri.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

July 10^d 2^h. Observation made at 2^h 20^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	lbs.	lbs.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
11 18	29.619	47.0	46.0	1.0	0.0	0.0	25	6 : 27 : —	9.5	Smoky scud ; cir-cum-str. ; cir-str. ; cir. ; clouds very troubled like.
19	634	48.0	47.2	0.8	0.0	0.0	2	— : — : —	10.0	Loose scud ; dense cirro-strati. [slowly. Θ
20	646	51.4	49.1	2.3	0.1	0.0	6	6, 2 : 28 : —	9.8	Loose ragged scud ; loose cum. scud ; cir-str. moving
21	665	50.6	48.5	2.1	0.0	0.0	0	0 : 28 : —	10.0	Id.; sheets of cir-cum-str. and cir-str.
22	666	51.9	49.2	2.7	0.1	0.0	0	28 : 28 : —	9.7	Scud ; loose cumuli ; cirro-strati.
23	664	55.8	53.6	2.2	0.1	0.1	26	28 : — : —	3.0	Loose cumuli ; cirro-strati to SE. ☺
12 0	659	56.3	52.2	4.1	0.3	0.0	30	28 : — : —	3.5	Id.; nimbus to W. ☺
1	655	58.0	53.2	4.8	0.3	0.1	24	29 : — : —	5.0	Id.; cumulo-strati to S. ☺
2	659	59.7	53.0	6.7	0.5	0.4	24		7.5	Id.; id. ☺
3	651	60.5	52.0	8.5	0.4	0.5	26	26, 29 : — : —	5.0	Loose cum., acted on by different currents ; cirro-strati to W. ☺
4	683	60.9	53.3	7.6	0.6	0.6	28	28 : — : —	9.0	Loose cumuli ; cumulo-strati ; linear cirri ; cirro-strati.
5	683	53.0	50.3	2.7	0.7	1.3	6	25 : — : —	9.8	Thick dark scud and cum. ; cumo-str. ; cir-str. ; shower ³ 10m ago.
6	684	52.3	50.4	1.9	0.2	0.1	6	25 : — : —	9.0	Scud and loose cumuli ; cirro-strati ; cirri.
7	692	55.1	52.0	3.1	0.1	0.1	18	25 : — : 28	8.5	Thick scud ; woolly cir. moving rather quickly ; cir-str.
8	700	54.4	50.0	4.4	0.3	0.2	0	27 : — : 27	9.9	Scud ; thick woolly cirri ; cirro-strati.
9	708	50.4	49.3	1.1	0.1	0.1	25	— : 27 : —	9.0	Cirro-cumulo-strati ; cirro-strati ; cirri.
10	712	49.0	48.2	0.8	0.1	0.1	18	27 : — : —	10.0	Scud ; id. ; id.
11	712	48.6	46.3	2.3	0.1	0.0	18	— : 28 : —	8.8	Cirro-strati ; cirro-cumuli ; cirri.
12	709	46.2	45.3	0.9	0.0	0.0	20		9.8	Cirro-cumulo-stratus ; cirro-strati.
13 1	29.622	59.8	55.0	4.8	0.3	0.1	18		Sunday—Dense cirro-stratus and scud ; rain occasionally after 2 ^h .
13	29.526	52.3	50.8	1.5	0.5	0.3	20		9.7	Cirro-stratus and cirro-stratus scud ; sky to N.
14	528	51.7	50.1	1.6	0.3	0.2	20		9.7	Id.; id.
15	528	52.4	50.7	1.7	0.4	0.3	21		9.7	Thick scud ; cirro-strati.
16	531	52.9	50.8	2.1	0.4	0.4	21	— : 27 : —	9.8	Cirro-stratus scud ; cirro-strati.
17	544	52.8	51.0	1.8	0.2	0.1	24	— : 27 : —	10.0	Id.; id.
18	570	51.4	50.0	1.4	0.5	0.4	0	1 : — : —	10.0	Thick misty scud ; drops of rain.
19	607	49.3	48.6	0.7	0.7	0.3	2	1 : — : —	10.0	Id.; rain ¹ in fine drops.
20	638	49.7	48.3	1.4	0.5	0.4	2	2 : 0 : 28	9.8	Misty scud ; cirro-stratus scud ; cirro-strati ; rain ²
21	660	51.2	48.3	2.9	0.6	0.6	1	— : 31 : —	9.8	Cirro-stratus scud ; cumuli to N. id.
22	677	55.1	49.9	5.2	0.7	0.7	1	31 : 29 : —	9.5	Cir-str. scud ; cir-cum-str. ; cum. on Cheviot ; woolly cir.
23	692	56.3	51.5	4.8	0.5	0.3	1	30 : — : —	8.0	Scud and loose cumuli ; cirro-strati.
14 0	707	56.8	51.8	5.0	0.7	0.5	30	29 : — : —	7.0	Loose cumuli ; cumulo-strati and nimbi? ☺
1	717	58.6	52.8	5.8	0.9	0.7	28	29 : — : —	9.0	Id.; id. ☺
2	714	60.1	54.0	6.1	1.1	0.7	30	29 : — : —	8.5	Id.; id. ☺
3	735	58.8	54.3	4.5	1.7	0.3	30	29 : — : —	8.0	Id.; id.; rain falling to N. ☺
4	748	56.3	52.1	4.2	1.1	0.2	29	— : 29 : —	6.5	Cir-cum-str. ; woolly cir. ; cum. and nimbi round hor. ☺
5	762	52.7	52.5	0.2	1.5	0.3	30	— : 29 : —	7.0	As before ; passing showers. [rainbow to E. ☺
6	783	54.4	50.4	4.0	2.7	1.2	3	30 : — : —	8.5	Thick scud and cumuli, falling in rain to SE., cumo-str. ; cir-str.;
7	797	56.0	51.6†	4.4	0.5	0.3	4	0, 30 : 28 : —	9.5	Scud and loose cumuli ; cirro-strati.
8	811	53.1	50.5†	2.6	0.6	0.1	30	31 : 31 : —	9.7	Scud and cirro-strati.
9	833	50.9	49.5	1.4	0.2	0.0	22	0 : 0 : —	9.0	Id.
10	847	50.3	48.6	1.7	0.1	0.0	26	30 : 30 : —	9.8	Id.
11	859	49.0	47.5	1.5	0.2	0.1	25		8.5	Id.
12	870	47.9	45.9	2.0	0.5	0.1	26		3.0	Id. ☺
13	29.877	47.0	45.7	1.3	0.2	0.1	26		2.5	Scud and cirro-strati.
14	877	46.0	44.4	1.6	0.1	0.0	25		1.5	Id.
15	873	44.2	42.7	1.5	0.1	0.1	26	30 : — : —	1.5	Id.
16	877	44.8	42.7	2.1	0.1	0.0	30	30 : — : —	6.0	Id.
17	877	47.0	44.5	2.5	0.2	0.1	28	31 : 31 : —	9.0	Scud ; cirro-cumulo-strati ; cirro-strati.
18	885	48.7	45.5	3.2	0.1	0.2	27	— : 30 : —	9.8	Dense mass of cirro-stratus scud and cirro-strati.
19	889	50.4	46.8	3.6	0.2	0.2	29	— : 0 : —	9.9	Cirro-stratus scud.
20	893	51.1	47.2	3.9	0.3	0.1	30	— : 0 : —	10.0	Id.
21	904	52.0	47.3	4.7	0.4	0.6	30	— : 31 : —	10.0	Id.; very dense.
22	898	54.6	48.9	5.7	0.5	0.3	31	31 : — : —	9.9	Scud ; loose cumuli ; cirro-strati.
23	896	56.0	49.0	7.0	0.9	0.7	30	0 : — : —	9.8	Id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

July 12^d 4^h. The reading of the barometer is somewhat doubtful.

July 14^d 6^h. The wet bulb found partially dry; the difference previously to wetting it was 2°.7. 7^h. A new piece of silk put on the wet bulb.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
15 0	29.889	56.0	48.7	7.3	1.0	0.4	0	0 : — : —	8.5
1	868	59.9	51.3	8.6	0.7	0.8	0		7.0
2	860	59.7	50.9	8.8	1.5	0.7	31	30 : — : —	7.0
3	848	61.1	52.0	9.1	0.5	0.7	4	29 : — : —	7.0
4	838	59.7	52.2	7.5	1.3	0.3	2	30 : — : —	6.5
5	829	59.0	51.7†	7.3	0.4	0.2	2		2.0
6	833	56.9	50.3	6.6	0.7	0.4	2	29 : — : —	2.0
7	832	57.4	50.7	6.7	0.5	0.3	3	— : 31 : —	8.0
8	836	54.0	48.7	5.3	0.5	0.2	6	— : 31 : —	3.0
9	845	51.3	48.0†	3.3	0.3	0.1	4	— : 31 : —	4.0
10	850	49.8	47.6	2.2	0.1	0.0	4	2 : 30, 31 : —	3.0
11	854	47.7	46.2	1.5	0.1	0.0	20	0 : 28 : —	9.0
12	853	48.3	46.9	1.4	0.0	0.1	22	0 : — : —	10.0
13	29.845	48.2	46.8	1.4	0.1	0.0	20		10.0
14	835	47.8	46.7	1.1	0.0	0.0	22		9.5
15	829	47.5	45.1	2.4	0.0	0.0	30	— : 30 : —	8.0
16	826	44.8	44.0	0.8	0.0	0.0	24	— : 29 : —	9.0
17	824	44.0	43.1	0.9	0.0	0.0	20	30 : 31 : —	5.0
18	825	46.7	45.0	1.7	0.2	0.1	25	30 : — : —	8.0
19	820	48.7	46.4	2.3	0.2	0.1	31	29 : — : —	3.0
20	814	50.4	46.9	3.5	0.1	0.0	26	30 : — : —	6.0
21	804	53.1	48.2	4.9	0.0	0.0	28	29 : — : —	6.0
22	802	54.2	47.5	6.7	0.1	0.1	28	29 : — : —	6.0
23	786	56.4	50.4	6.0	0.2	0.1	18	29 : — : —	8.5
16 0	779	60.7	53.4	7.3	0.2	0.2	12	29 : — : —	8.0
1	770	59.1	52.5	6.6	0.1	0.1	14	24 : 26 : —	6.0
2	754	59.8	51.6	8.2	0.2	0.1	8	— : 25 : —	6.0
3	738	63.4	55.0	8.4	0.1	0.1	14	24 : — : —	7.0
4	726	59.6	53.8	5.8	0.4	0.4	3	24 : — : 30	5.5
5	726	57.3	51.7	5.6	0.6	0.9	6	— : — : 28	5.5
6	716	54.9	50.0†	4.9	0.8	0.6	4	23 : — : 28	7.0
7	722	55.2	50.2	5.0	0.8	0.3	4	21 : 23 : 28	6.5
8	715	52.9	49.4†	3.5	0.4	0.1	4	22 : 24 : 27	7.5
9	710	50.1	48.3	1.8	0.1	0.0		— : 24 : 27	7.0
10	711	48.6	47.6	1.0	0.0	0.0	20	22 : — : 27	5.0
11	708	47.0	46.5	0.5	0.0	0.0	16		6.0
12	705	45.7	45.4	0.3	0.0	0.0	24		7.0
13	29.701	44.2	44.0	0.2	0.0	0.0	18		4.0
14	689	42.0	41.8	0.2	0.0	0.0	7		4.0
15	676	42.5	42.3	0.2	0.0	0.0	9	— : 26 : 26	8.0
16	672	44.2	44.0	0.2	0.0	0.0	20		9.7
17	672	46.4	46.0†	0.4	0.0	0.0	2	6, 14 : — : —	9.7
18	668	47.9	47.0	0.9	0.0	0.0	26	— : 20 : —	9.8
19	671	49.3	48.3	1.0	0.1	0.0	0		10.0
20	670	51.7	50.2	1.5	0.0	0.0	4		10.0
21	668	53.2	51.7†	1.5	0.1	0.0	3	10 : — : —	10.0
22	667	54.7	52.5	2.2	0.1	0.0	4		10.0
23	661	56.5	53.7	2.8	0.1	0.1	4	12 : — : —	10.0
17 0	662	58.1	55.3	2.8	0.0	0.0	18	16 : — : —	10.0
1	664	57.7	56.3	1.4	0.2	0.1	14	15 : — : —	10.0
2	661	58.8	57.0	1.8	0.1	0.0	17		10.0
3	660	60.0	57.8	2.2	0.1	0.0		17 : — : —	10.0
4	661	59.8	57.7	2.1	0.1	0.0	4	20 : — : —	10.0
5	662	60.8	58.4	2.4	0.1	0.0	4	22 : — : —	10.0
6	667	60.0	58.1	1.9	0.3	0.5	22	22 : — : —	9.9
7	683	58.4	57.3	1.1	0.3	0.0	22	23 : — : —	10.0

July 15^d 10^h 9^m. A shooting-star of the first magnitude to S by W., moved from altitude 35° to near horizon.

July 16^d 6^h. The simple lines of cirri lie at right angles to the strips. The surface current is from NE., the scud current, which is about 2500 feet high, is from SW by W., the loose cumuli, perhaps about 3500 feet high, are from W by S., and the cirri, probably many thousand feet high, are from NW.

July 16^d 20^h. Observation made at 20^h 5^m. July 17^d 5^h 15^m. A thunder-shower^{4—6}, the drops being large; clouds thick and black to W.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From 10 ^{m.}	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
17 8	29.691	56.1	55.1	1.0	0.4	0.3	22	22 : — : —	10.0	Scud and cirro-stratus.
9	693	55.2	54.4	0.8	0.3	0.1	22	24 : 22 : —	9.8	Id.
10	702	54.7	53.6	1.1	0.2	0.2	22	24 : 22 : —	10.0	Scud; cirro-strati.
11	710	54.7	53.4	1.3	0.2	0.1	22		9.8	Id.; cirro-cumulo-strati.
12	721	53.8	52.4	1.4	0.2	0.1	22		10.0	Id.; cirro-strati; drops of rain.
13	29.730	53.2	52.0	1.2	0.1	0.0	20		10.0	Scud; cirro-strati.
14	738	52.3	50.9	1.4	0.2	0.1	20		10.0	Id.; id.; cirro-cumulo-strati.
15	740	51.4	50.7	0.7	0.1	0.0	23		9.8	Id.; id.; id.
16	742	51.0	49.5	1.5	0.2	0.1	22	25 : — : —	9.5	Id.; id.; id.
17	752	50.4	49.5	0.9	0.2	0.1	20	24 : — : 25	9.5	Thin scud; woolly cirri; cirro-cumulo-strati; cir.-str.
18	761	52.0	50.6	1.4	0.2	0.3	20	— : 26 : —	9.8	Cirro-stratus scud; id.; id.
19	770	55.5	53.0	2.5	0.3	0.4	22	26 : 28 : —	9.9	Scud; cirro-cumulo-strati; cirro-strati; cirri. Θ
20	784	55.4	52.4	3.0	0.8	0.2	23	26 : — : —	10.0	Patches of scud; a uniform mass of cirro-stratus.
21	801	56.5	53.6	2.9	0.3	0.3	23	28 : 26 : —	10.0	Id.; id.
22	810	58.9	54.7	4.2	0.3	0.2	23	— : 26 : —	9.9	Dense cirro-stratus; patches of scud to S.
23	819	60.4	56.3	4.1	0.2	0.1	23	27 : — : —	10.0	Thick scud; dense cirro-stratus.
18 0	834	61.2	56.0	5.2	0.3	0.1	0	26 : — : —	10.0	Loose cumuli, and cirro-stratus scud.
1	846	64.2	58.3	5.9	0.3	0.3	0		9.9	Loose cumuli and cirro-strati.
2	844	65.4	58.6	6.8	0.3	0.1	28	28 : — : —	9.9	Masses of thick scud and cumuli; cirro-strati.
3	855	63.6	57.7	5.9	0.3	0.0	31	28 : — : —	10.0	A mass of black electric-looking scud to N.; cum.; cum.-str.; cir.-str.
4	861	62.0	57.0	5.0	0.1	0.0	6	27 : — : —	9.9	Scud; loose cumuli; cirro-stratus scud.
5	868	65.0	59.8	5.2	0.2	0.1	22	— : 30 : —	9.9	Cirro-cumulo-stratus; cumulo-strati.
6	870	64.5	58.3	6.2	0.2	0.1	23	— : 30 : —	9.8	Id.; id.
7	881	64.3	59.0	5.3	0.1	0.1	22	— : 30 : —	9.8	Id.; cirro-strati.
8	896	59.6	56.4	3.2	0.2	0.1	4	— : 31 : —	9.5	Id.; id.; cumulo-strati.
9	902	57.7	55.3	2.4	0.2	0.1	3	— : 0 : —	9.5	Id.; id.; id.
10	908	55.0	53.5	1.5	0.2	0.1	4		2.0	Id.; id.
11	920	53.1	51.8	1.3	0.1	0.0	2		1.2	Id.
12	931	50.4	49.8	0.6	0.0	0.0	4	— : 31 : —	0.8	Cir.-cum.; cir.-str. near horizon; mist on the ground.)
13	29.936	48.3	48.0	0.3	0.0	0.0	16		8.0	Cirro-cum.-str.; cir.-str. near hor.; mist on the ground.)
14	939	49.7	49.2	0.5	0.0	0.0	4		10.0	Dense mass of scud? and cirro-cumulo-stratus.
15	937	51.0	50.5	0.5	0.0	0.0	4	— : 0 : —	9.5	Cirro-cumulo-stratus.
16	936	51.0	50.5	0.5	0.0	0.0	4	2 : 0 : —	10.0	Misty scud; cirro-cumulo-stratus.
17	940	51.0	50.5	0.5	0.0	0.0	24		10.0	Homogeneous mass of misty scud.
18	944	52.9	51.9	1.0	0.0	0.0	25		10.0	Id.
19	939	53.7	52.5	1.2	0.0	0.0	24		10.0	Id.; Scotch mist.
20	939	55.7	54.3	1.4	0.1	0.0	25		10.0	Id.; id.
21	950	56.7	55.4	1.3	0.1	0.1	3	4 : — : —	10.0	Misty scud; a dense mass of clouds.
22	948	57.9	55.6	2.3	0.3	0.2	4	4 : — : —	10.0	Id.; id.
23	952	58.2	55.3	2.9	0.3	0.4	6	4 : — : —	10.0	Id.; id.
19 0	956	60.0	56.4	3.6	0.4	0.4	6	4 : — : —	10.0	Scud; dense cirrus mass.
1	955	58.3	55.0	3.3	0.5	0.3	4	4 : — : —	10.0	Id.; id.
2	955	58.0	54.2	3.8	0.5	0.2	5	5 : — : —	10.0	Id.; id.
3	955	59.2	55.0	4.2	0.4	0.4	6	7 : — : —	10.0	Id.; id.
4	956	59.6	55.0	4.6	0.5	0.3	6	6 : — : —	10.0	Id.; id.
5	952	58.7	54.0	4.7	0.4	0.5	7	6 : — : —	10.0	Id.; id.
6	957	56.3	53.2	3.1	0.5	0.3	6	6 : — : —	10.0	Id.; dense mass of cirro-stratus.
7	961	55.6	52.5	3.1	0.4	0.2	7	5 : — : —	10.0	Id.; id.
8	966	55.1	52.4	2.7	0.2	0.2	4	5 : — : —	10.0	Id.; cir.-cum.-str. radiating from N., clouds breaking.
9	968	54.2	52.0	2.2	0.1	0.1	4	5 : — : —	10.0	Id.; id.
10	970	53.4	51.0	2.4	0.0	0.0	6		10.0	Cirro-stratus scud.
11	972	53.1	50.9	2.2	0.0	0.0	6		10.0	Id.
12	971	51.8	49.0	2.8	0.2	0.1	4	4 : — : —	9.5	Scud, breaking.
23 ¹	29.979	55.4	53.2	2.2	0.7	0.7	3	3 : — : —	Sunday—Thick scud; a slight drizzle throughout most of the day.
20 13	29.975	52.2	51.8	0.4	1.3	0.6	4		10.0	Homogeneous mass.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

July 19th 23^h. Observation made at 23^h 20^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{b.}	From 10 ^{m.}			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0-10.
20 14	29.969	51.8	51.4	0.4	0.7	0.3	3		Homogeneous mass.
15	966	51.9	51.4	0.5	0.3	0.3	3		Id.
16	958	52.0	51.5	0.5	0.3	0.2	4		Id.
17	959	52.4	51.4	1.0	0.3	0.2	4		Id.
18	968	52.0	51.0	1.0	0.3	0.4	3		Id.; showers ³⁻⁵ since last.
19	971	52.0	51.4	0.6	1.2	0.5	3		Thick, nearly homogeneous, misty scud.
20	974	52.5	51.9	0.6	0.7	0.6	4		Id.; mist at 2 miles.
21	984	52.6	51.9	0.7	1.4	0.8	4		Id.; mist at 5 miles.
22	989	52.6	51.9	0.7	1.0	0.7	2		Scotch mist; light drizzle; objects invisible at 3 miles.
23	991	53.0	52.1	0.9	0.9	0.7	3		Id.; id.; id.
21 0	991	54.1	52.7	1.4	0.9	0.7	3	2 : — : —	Nearly homogeneous scud; mist cleared off.
1	992	55.2	53.6	1.6	0.7	0.5	4		Id.
2	992	55.0	53.3	1.7	0.7	0.7	2		Id.
3	988	54.7	53.3	1.4	0.8	0.6	3		Id.; slight drizzle commencing.
4	977	55.1	53.0	2.1	0.8	0.6	2		Id.
5	976	54.6	53.0	1.6	0.7	0.4	1		Id.; slight drizzle.
6	967	53.7	52.5	1.2	0.5	0.5	3		Id.
7	965	52.9	51.8	1.1	0.6	0.6	3		Id.
8	966	52.1	51.5	0.6	0.5	0.5	2		Id.; slight mist.
9	974	51.8	51.3	0.5	0.5	0.5	2		Id.; id.
10	976	51.2	50.9	0.3	0.5	0.4	5		Id.; id.
11	980	51.2	50.7	0.5	0.6	0.3	2		Scotch mist.
12	978	51.0	50.5	0.5	0.4	0.4	2		Id.; id.
13	29.973	51.0	50.4	0.6	0.5	0.4	4		Scotch mist.
14	963	50.9	50.4	0.5	0.3	0.2	4		slight drizzle.
15	955	50.8	50.1	0.7	0.5	0.4	3		Id.
16	946	50.0	49.4	0.6	0.6	0.5	3		Id.
17	944	50.0	49.3	0.7	1.1	0.8	3	4 : — : —	[miles.] Id.; Scotch mist; objects invisible at 5
18	940	50.0	49.4	0.6	0.7	0.3	3		Id.; id.; id.
19	935	50.9	50.2	0.7	0.5	0.2	3	3 : — : —	Scud; Scotch mist; objects invisible at 2 miles.
20	941	50.0	49.4	0.6	0.9	0.6	4		Id.; id.; id.
21	946	50.6	49.6	1.0	1.0	0.8	4	4 : — : —	Thick misty scud; Scotch mist and light drizzle.
22	949	51.1	50.0	1.1	0.9	0.5	4	4 : — : —	Id.; id.
23	947	51.7	50.0	1.7	1.5	0.8	4	4 : — : —	Id.; id.
22 0	942	53.0	50.5	2.5	0.7	1.2	4	4 : — : —	Id.
1	937	53.0	50.4	2.6	0.9	0.6	4	4 : — : —	Seud.
2	933	54.0	51.0	3.0	1.1	0.7	4	4 : — : —	Id.
3	930	52.7	50.7	2.0	0.9	0.6	3	4 : — : —	Id.
4	919	54.0	50.7	3.3	1.6	0.9	4	4 : — : —	Id.
5	917	52.8	50.5	2.3	1.3	0.6	4	3 : — : —	Id.
6	914	52.5	49.6	2.9	1.0	0.6	4	4 : — : —	Id.
7	914	52.0	49.4	2.6	0.9	0.6	4		Id.; nearly homogeneous.
8	917	51.0	48.8	2.2	0.9	0.5	4	4 : — : —	Misty scud, in blue and yellowish bands to W.; slight drizzle.
9	918	50.6	48.3	2.3	0.9	0.5	3		Nearly as before.
10	919	50.3	48.0	2.3	0.6	0.6	4		Id.
11	920	50.3	48.0	2.3	1.1	0.4	4		Id.; drops of rain.
12	917	49.5	48.3	1.2	0.5	0.2	3		A few drops of fine rain.
13	29.907	49.5	48.6	0.9	0.3	0.2	3		Slight drizzle.
14	892	49.5	48.2	1.3	0.5	0.1	3		Seud.
15	879	49.6	48.3	1.3	0.2	0.1	3		Id.
16	877	50.0	48.0	2.0	0.6	0.3	2	4 : — : —	Id.
17	875	49.7	47.7	2.0	0.6	0.3	3		Id.
18	870	50.2	48.1	2.1	0.3	0.2	1	2 : — : —	Id.
19	872	50.2	49.1	1.1	0.4	0.3	2		Homogeneous scud; slight drizzle.
20	876	50.8	49.4	1.4	0.8	0.3	2		Id.; id.
21	870	52.0	50.7	1.3	0.6	0.4	3		Id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

July 20^d 19^b. Observation made at 19^h 30^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From 10 ^{m.}	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
22 22	29.868	52.4	50.9	1.5	0.6	0.4	3	4 : — : —	10.0	Scud ; misty.
23	867	52.4	51.0	1.4	0.8	0.4	4	4 : — : —	10.0	Id.; slight drizzle.
23 0	859	53.0	51.4	1.6	0.6	0.6	3	4 : — : —	10.0	Id.; id.
1	852	55.4	52.4	3.0	1.0	1.3	2	2 : — : —	10.0	Scud breaking; cirrus mass above.
2	849	55.0	52.1	2.9	1.2	0.6	2	2 : — : —	10.0	Scud; occasional showers.
3	846	54.7	52.2	2.5	1.2	0.9	3	2 : — : —	10.0	Id.; drops of rain.
4	842	55.7	52.3	3.4	1.1	0.9	4	3 : — : —	10.0	Id.
5	838	54.7	51.9	2.8	0.9	0.9	3		10.0	Id.; occasional showers.
6	836	54.3	52.3	2.0	0.9	0.7	2	3 : — : —	10.0	Id.
7	839	52.4	51.0	1.4	1.3	0.5	3	3 : — : —	10.0	Id.
8	836	52.4	50.7	1.7	0.5	0.3	2	2 : — : —	10.0	Id.; the upper clouds seem to be breaking.
9	829	51.9	50.6	1.3	0.6	0.2	4	3 : — : —	10.0	Scud.
10	830	51.7	50.3	1.4	0.4	0.2	2		10.0	Id.
11	827	51.4	50.3	1.1	0.3	0.1	2		10.0	Id.; drops of rain.
12	827	51.2	50.0	1.2	0.1	0.1	2		10.0	Id.
13	29.825	51.4	49.0	2.4	0.2	0.2	2		10.0	Scud.
14	821	51.2	48.8	2.4	0.4	0.4	2		10.0	Id.
15	813	51.0	48.7	2.3	0.6	0.4	3		10.0	Id.
16	808	50.3	48.8	1.5	0.2	0.1	3	3 : — : —	10.0	Id.
17	816	49.9	48.0	1.9	0.2	0.1	2	3 : — : —	10.0	Cirro-stratus scud.
18	792	50.3	49.4	0.9	0.1	0.1	3	2 : — : —	10.0	Misty scud; slight drizzle.
19	792	50.2	49.8	0.4	0.1	0.1	2	2 : — : —	10.0	Id.; rain ¹
20	801	51.4	50.9	0.5	0.5	0.4	3	3 : — : —	10.0	Scud breaking; slight drizzle.
21	807	52.4	51.0	1.4	0.4	0.3	3	3 : — : —	10.0	Scud.
22	808	54.0	52.0	2.0	0.5	0.2	4	3 : — : —	10.0	Id.; rain ^{0.5} in a few minutes.
23	811	54.1	51.3	2.8	0.4	0.3	3	3 : — : —	10.0	Id.; dense cirro-stratus.
24 0	811	55.4	52.1	3.3	0.3	0.3	4	3 : — : —	10.0	Id.; a tendency to break to S.
1	810	56.3	52.9	3.4	0.3	0.2	4	3 : — : —	10.0	Id.; id.
2	806	56.3	52.1	4.2	0.1	0.2	5		10.0	Id.
3	805	59.2	53.7	5.5	0.2	0.2	5	4 : — : —	10.0	Id.
4	785	58.3	54.0	4.3	0.2	0.2	5		10.0	Id. and cirro-stratus.
5	774	57.6	53.6	4.0	0.1	0.0	7		10.0	Id. id.
6	769	56.5	52.7	3.8	0.1	0.0	7	10 : — : —	10.0	Id. id.
7	768	55.6	52.5	3.1	0.0	0.0	8		10.0	Id. id.
8	764	54.7	52.2	2.5	0.0	0.0	1		10.0	Id. id.
9	762	54.0	51.5	2.5	0.0	0.0	4		10.0	Id. id.
10	756	53.4	51.8	1.6	0.0	0.0	4		10.0	Id. id.
11	755	53.3	52.1	1.2	0.1	0.0	4		10.0	Id. id.
12	742	53.3	51.8	1.5	0.0	0.0	16		10.0	Id. id.?
13	728	53.2	52.0	1.2	0.0	0.0	20		10.0	Id. id. very still. [drops of rain.
14	717	53.2	52.0	1.2	0.0	0.0	18		10.0	Clouds, in strips, radiating from SSW. and NNE.;
15	705	53.3	51.9	1.4	0.0	0.0	22		10.0	Cirro-strati; drops of rain.
16	698	53.9	51.9	2.0	0.0	0.2	20	27 : 24 : —	10.0	Scud; cirro-strati.
17	694	54.1	52.5	1.6	0.2	0.0	18		10.0	Nearly homogeneous scud; cirro-strati.
18	695	54.6	53.1	1.5	0.1	0.0	20	25 : — : —	10.0	Id. id.
19	699	55.3	52.3	3.0	0.2	0.2	25		9.9	Cirro-stratus scud; cirro-strati; cirro-cumulo-strati.
20	701	55.8	52.8	3.0	0.3	0.1	23	— : 24 : —	10.0	Id. id.
21	701	57.4	54.0	3.4	0.1	0.0	25	— : 20 : —	10.0	Id. id.
22	698	57.7	53.4	4.3	0.2	0.3	24	— : 21 : —	10.0	Id. id.
23	692	58.4	53.8	4.6	0.2	0.3	25		10.0	Id. id.
25 0	692	60.0	54.4	5.6	0.2	0.2	28	— : 21 : —	10.0	Id. id.
1	687	62.0	56.0	6.0	0.3	0.2	25	— : 21 : —	10.0	Id. id.
2	674	63.0	56.4	6.6	0.5	0.2	22	— : 23 : —	9.8	Cirro-cumulo-strati.
3	673	66.6	58.2	8.4	0.2	0.2	24	— : 23 : —	9.5	Id.
4	661	65.8	58.2	7.6	0.6	0.4	20	— : 26 : —	9.0	Id.; loose cumuli.
5	651	65.8	57.4	8.4	0.3	0.1	22	23 : — : —	8.0	Loose cumuli.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Θ

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.; Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	pt.	pt.	pt.	
d. h. 25 6	in. 29.646	° 65.7	° 58.6†	° 7.1	lbs. 0.4	lbs. 0.3	24	— : 22 : 2	7-5	Cir.-cum.-str.; linear cirri rad. from NNE., with tufts As before. Θ [of cirri. Θ
7	648	62.3	56.0	6.3	0.3	0.3	27	— : 21 : 0	7-5	Woolly cirri, diverging from NE. and SW.; cir.-str. Θ
8	657	57.3	53.7	3.6	0.2	0.2	22	— : — : 0	8-0	Woolly and linear cirri becoming cir.-str., rad. from SW by S. and
9	662	54.0	51.2†	2.8	0.2	0.1	22	— : — : 0	9-0	Nearly as before. [NW by N.; scud on Cheviot.
10	663	51.7	49.3	2.4	0.2	0.1	22		8-0	Cirro-strati and woolly cirri.
11	661	48.9	47.6	1.3	0.1	0.0	21		3-5	Cirro-cumuli and cirro-strati. ♫
12	660	49.0	47.6	1.4	0.1	0.1	24		7-0	Cirro-cumuli and cirro-strati.
13	29.652	48.6	47.3	1.3	0.1	0.1	22		9-5	Cirro-cumuli and cirro-strati. ♫
14	650	50.4	48.1	2.3	0.1	0.0	24		9-8	Id.
15	636	50.2	48.4	1.8	0.1	0.1	24		9-8	Cirro-strati.
16	626	50.7	48.6	2.1	0.2	0.1	22		9-8	Id.
17	622	50.8	49.1	1.7	0.1	0.1	18	— : 28 : —	9-8	Thick cirro-stratus; scud on Cheviot.
18	623	51.8	49.9	1.9	0.3	0.3	23	25 : 28 : —	9-8	Patches of scud to N.; thick cir.-str.; scud on Cheviot.
19	627	52.9	50.7	2.2	0.5	0.3	19	24 : 23 : —	10-0	Id.; id.; id.
20	626	54.3	52.0	2.3	0.3	0.4	20	24 : 23 : —	10-0	Id.; id.; id.
21	623	55.3	52.5	2.8	0.6	1.1	21	— : 23 : —	10-0	Cirro-stratus scud; id.; id.
22	612	57.5	54.0	3.5	1.1	0.5	20	— : 23 : —	10-0	Id.; id.; patches of scud.
23	605	57.7	54.0	3.7	0.9	0.9	22	23 : 22 : —	9-9	Id.; scud; mass of cir.-str.; scud to S.
26 0	603	59.2	54.8	4.4	0.9	0.6	20	23 : — : —	9-9	Scud; cirro-strati; cirrous mass; rain ^{0.2}
1	597	62.3	56.2	6.1	1.4	1.0	20	22 : 21 : —	9-9	Id.; id.; id.
2	581	63.2	57.0	6.2	1.6	1.2	20	22 : — : —	10-0	Id.; id.; id.
3	575	61.2	56.2	5.0	1.6	0.6	21	22 : — : —	10-0	Id.; id.; id.
4	555	61.7	56.7	5.0	0.8	0.8	20	22 : 24 : —	9-5	Id.; cirro-cumulo-strati; cirro-strati; woolly cirri.
5	550	63.0	57.8	5.2	2.0	1.2	20	22 : — : —	10-0	Id.; id.; id.
6	546	59.8	55.4	4.4	1.1	0.8	18	22 : — : —	9-8	Scud, loose cumuli, and thick cirro-stratus.
7	541	60.2	54.9	5.3	1.1	0.6	20	22 : — : —	9-8	Id.; cirro-strati; cirro-cumulo-strati; cirri.
8	533	57.1	53.4	3.7	1.4	0.7	18	21 : — : —	9-5	Id.; id.; id.; id.
9	519	56.8	53.9	2.9	0.7	0.5	20	21 : — : —	9-5	Id.; id.; id.; id.
10	505	56.1	53.7	2.4	1.2	0.5	22		8-5	Id.; id.
11	495	56.2	54.0	2.2	0.7	0.8	20		10-0	Id.; id.
12	476	56.8	54.3	2.5	0.6	0.6	20		10-0	Scud and cirro-strati.
23 1/2	29.318	63.9	59.9	4.0	2.2	0.9	19	23 : — : —	Sunday—Sunshine and showers; clouds, loose cumuli and nimbi.
27 13	29.427	46.0	44.4	1.6	2.8	0.1	20	— : 28 : —	3-5	Cirro-cumulo-stratus? radiating from NW. ♫
14	431	43.0	42.3	0.7	0.2	0.0	20		0-2	Patches of cloud on the horizon. ♫
15	425	43.6	42.4	1.2	0.4	0.3	21		0-2	Patches of cirrus on horizon; scud on Cheviot. ♫
16	429	42.4	41.6	0.8	0.4	0.0	30		0-8	Id.; id.
17	428	43.6	42.6	1.0	0.1	0.1	22		0-8	Patches of cirri and cirro-strati; id.
18	432	45.2	43.8†	1.4	0.3	0.0	20	21 : 22 : 22	2-0	Patches of scud; cirri and cirro-strati over the sky. ☽
19	435	49.4	47.7	1.7	0.1	0.1	14	20 : — : —	6-0	Scud; cirri.
20	435	51.5	48.3	3.2	0.3	0.4	20	— : — : 22	6-0	Woolly cirri and cirro-strati; scud round horizon. ☽
21	427	55.3	50.1†	5.2	0.6	0.9	18	21 : — : —	3-5	Loose cumuli; cirri and cirro-strati
22	426	57.2	51.0	6.2	0.9	0.9	20	21 : — : —	5-0	Id.; id.
23	423	58.0	51.0	7.0	0.8	0.9	18	21 : — : —	4-0	Id.; id.
28 0	422	60.0	53.4	6.6	0.7	0.7	20	21 : 23 : —	8-0	Scud; loose cumuli; cumuli; cirro-strati; cirri. ☽
1	420	63.7	55.8	7.9	0.7	1.2	16	— : 22 : —	9-0	Cirro-stratus scud; id.; id.; id.
2	413	63.4	54.7	8.7	0.6	0.2	15	22 : — : —	8-0	Loose cumuli; id.; id.; id.
3	415	58.7	52.0	6.7	0.4	0.2	31	20 : — : —	8-5	Scud and loose cumuli; cirro-strati, &c., as before. ☽
4	411	60.7	52.4	8.3	0.6	0.2		— : 20 : —	8-5?	Cir-cum.-str.; cum.-str.; sheets of cir.-str.; woolly cirri; nimbi;
5	411	62.7	53.3	9.4	0.4	0.4	18	— : 20 : —	9-0	Nearly as before. ☽ [rain to E.
6	410	58.8	52.6†	6.2	0.5	0.4	10	17 : 18 : —	8-0	Scud; cirro-cumulo-strati; nimbi; cirro-strati; cirri. ☽
7	413	58.8	50.4	8.4	0.4	0.1	17	17 : — : —	7-0	Id.; id.; id.; id.
8	421	55.6	49.9	5.7	0.3	0.2	14	17 : 18 : —	5-0	Nearly as before; stormy appearance moved up to ENE. ☽
9	438	51.4	48.5†	2.9	0.1	0.0	20		7-0	Cir-cum.-str.; cum. and nimbi on NW. and SE. hor.; cir.-str. and cirri.
10	440	47.4	46.0	1.4	0.0	0.0	18		7-0	Cir-cum.-str.; woolly cirri. [rad. from SSW.; cirri red.
11	443	43.9	43.3	0.6	0.0	0.0	0		3-0	Thin cirri and cirrus haze; cirro-strati on horizon.
12	444	42.7	42.2	0.5	0.0	0.0	18		4-0	Id. id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

July 28^a 7^h. Very dark and stormy-like to ESE.; vertex of a solar halo.

HOURLY METEOROLOGICAL OBSERVATIONS, JULY 28—30, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
28 13	29.446	42.5	42.1	0.4	0.0	0.0	24			2.5
14	442	42.5	42.1	0.4	0.0	0.0	24			2.0
15	439	41.4	41.0	0.4	0.1	0.0	22			2.5
16	444	37.3	37.0	0.3	0.0	0.0	24			5.0
17	443	38.2	38.0	0.2	0.0	0.0	16	— : 12 : —		3.5
18	456	40.0	39.6	0.4	0.0	0.0	18	4 : — : —		10.0
19	472	43.9	42.9	1.0	0.0	0.1	22			10.0
20	479	48.5	47.3	1.2	0.1	0.0	20	3 : — : —		10.0
21	482	55.0	52.5	2.5	0.1	0.1	22	— : 3 : —		9.5
22	476	55.4	51.2	4.2	0.1	0.2	4	3 : — : —		7.0
23	473	58.0	52.0	6.0	0.2	0.1	0	2 : — : —		4.5
29 0	465	60.7	52.9	7.8	0.3	0.3	4	1, 29 : — : —		8.5
1	462	58.2	52.4	5.8	0.2	0.2	4	29 : — : —		9.0
2	472	59.0	52.2	6.8	0.3	0.3	6	31 : 28 : —		9.0
3	470	60.3	51.6	8.7	0.4	0.3	5	31 : 28 : —		9.0
4	467	60.7	53.3	7.4	0.3	0.1	5	29 : — : —		6.0
5	472	59.8	52.2	7.6	0.2	0.1	3	29 : — : —		9.0
6	469	59.7	54.0†	5.7	0.1	0.0	20	28 : 16 : —		6.5
7	470	58.3	54.3	4.0	0.1	0.1	18	26 : — : —		8.5
8	464	55.8	51.7†	4.1	0.1	0.1	21	27 : — : —		9.5
9	460	55.0	51.0	4.0	0.1	0.1	20	28 : — : —		9.0
10	468	52.3	50.0	2.3	0.1	0.0	24			7.0
11	467	48.7	46.4	2.3	0.1	0.1	23			5.0
12	476	48.2	46.4	1.8	0.1	0.0	20			5.0
13	29.472	46.2	44.8	1.4	0.1	0.0	16			2.0
14	465	43.5	42.3	1.2	0.1	0.1	20			0.2
15	450	41.3	40.4	0.9	0.2	0.1	20			0.2
16	441	43.0	41.6	1.4	0.3	0.2	22			0.2
17	428	41.0	40.0†	1.0	0.3	0.2	24			0.2
18	433	40.9	40.3	0.6	0.2	0.1	0			0.5
19	425	46.7	45.0	1.7	0.1	0.1	20	— : — : 20		0.5
20	411	49.8	47.8†	2.0	0.1	0.1	16			0.8
21	402	55.2	51.2	4.0	0.2	0.1	14	22 : — : —		0.8
22	388	57.7	52.4	5.3	0.2	0.1	8	21 : — : —		3.5
23	384	59.9	52.4	7.5	0.5	0.4	20	20 : — : —		7.0
30 0	373	59.4	52.5	6.9	0.6	0.2	26	21 : — : —		8.0
1	349	64.0	55.9	8.1	0.2	0.1	16	20 : — : —		7.0
2	346	58.7	55.4	3.3	0.3	0.1	22			9.0
3	315	63.0	56.4	6.6	0.1	0.1	14	16 : — : —		9.5
4	294	62.0	53.4	8.6	0.7	0.8	17			9.5
5	271	60.5	55.3	5.2	0.9	0.3	12	13 : — : —		9.7
6	255	57.7	53.7	4.0	1.3	0.3	13	14 : — : —		9.5
7	244	56.5	52.7	3.8	0.6	0.5	12	— : 13 : —		9.9
8	231	55.6	52.0	3.6	0.7	0.5	12			10.0
9	220	54.7	51.7	3.0	0.6	0.3	14	13 : — : —		10.0
10	213	53.7	51.7	2.0	0.4	0.3	12			10.0
11	210	52.5	51.5	1.0	0.3	0.1	6			10.0
12	197	52.5	51.5	1.0	0.2	0.1	4			10.0
13	29.183	52.3	51.5	0.8	0.2	0.0	12			10.0
14	170	51.9	51.3	0.6	0.0	0.0	16			10.0
15	175	50.0	49.6	0.4	0.0	0.0		8 : — : —		5.0
16	174	47.9	47.5	0.4	0.1	0.1	16			1.5
17	185	46.3	46.0	0.3	0.1	0.0	14	— : 13 : —		1.5
18	188	46.3	45.9†	0.4	0.0	0.0	14	— : 13 : —		1.8
19	193	49.7	48.4	1.3	0.0	0.1	30			1.0
20	193	53.3	51.0	2.3	0.5	0.3	16	16 : 14 : —		2.5

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	0-10.
30 21	29.203	55.6	51.3	4.3	0.8	0.8	14	15 : 12 : —	7.5
22	205	59.1	53.8	5.3	0.7	0.3	15	14 : 12 : —	6.0
23	200	61.4	54.8	6.6	0.6	0.5	14	13 : — : —	8.0
31 0	206	62.8	56.5	6.3	0.7	0.3	14	14 : — : —	7.0
1	198	63.0	54.8	8.2	0.6	0.3	14	14 : — : —	7.5
2	216	57.0	51.0	6.0	0.9	1.3	16v.	14 : — : —	9.0
3	228	53.3	51.7	1.6	0.8	0.2	14	14 : — : —	10.0
4	222	52.8	51.7	1.1	0.2	0.2	2	14 : — : —	10.0
5	215	55.8	52.0	3.8	0.3	0.0	6	11 : — : —	9.9
6	218	53.4	50.3	3.1	0.9	0.3	6	14 : — : —	9.9
7	220	53.8	51.0	2.8	0.5	0.4	6	13 : — : —	9.9
8	216	53.2	50.4	2.8	0.5	0.5	6	12 : — : —	9.0
9	226	53.4	50.3	3.1	0.5	0.3	12		Nearly as before. [showers around.
10	234	52.2	50.3	1.9	0.3	0.1	6		9.8
11	234	52.0	50.3	1.7	0.1	0.0	2		9.8
12	237	52.3	50.2	2.1	0.2	0.0	12		9.9
13	29.237	51.6	50.2	1.4	0.2	0.1	4		10.0
14	232	51.6	49.9	1.7	0.3	0.1	4		9.9
15	236	51.7	50.1	1.6	0.1	0.1	14		9.8
16	231	50.7	50.0	0.7	0.2	0.1	6		9.8
17	235	51.1	49.7	1.4	0.1	0.0	10	12 : — : —	9.9
18	237	50.9	50.0	0.9	0.1	0.0	4	10 : 12 : —	9.7
19	251	52.1	50.6	1.5	0.0	0.0	8	10 : 12 : —	9.9
20	250	53.8	51.8	2.0	0.1	0.1	8	10 : 12 : —	9.8
21	250	57.9	53.9	4.0	0.1	0.1	8	13 : — : —	10.0
22	252	57.0	53.2	3.8	0.1	0.2	14	12 : — : —	10.0
23	248	57.3	53.4	3.9	0.1	0.1	10	13 : 12 : —	9.0
1 0	248	59.1	53.5	5.6	0.2	0.1	4	14 : 16 : —	9.0
1	254	63.7	59.2	4.5	0.3	0.2	14	14 : 16 : —	8.5
2	257	59.0	55.7	3.3	1.1	0.1	22	14 : 16 : 16	9.5
3	252	63.7	57.9	5.8	0.2	0.1	20	— : 17 : —	8.0
4	248	61.7	55.4	6.3	0.1	0.5	22	— : 20 : —	9.9
5	253	57.6	53.8	3.8	0.3	0.2	30	20 : — : —	7.5
6	268	56.7	53.4	3.3	0.5	0.4	16	17 : — : —	9.9
7	271	53.6	52.3	1.3	0.2	0.1	20	18 : — : —	9.5
8	278	52.9	52.0	0.9	0.1	0.1	22	— : — : 20	6.5
9	283	51.4	50.7	0.7	0.1	0.0	24	20 : 20 : —	8.0
10	291	51.1	50.4	0.7	0.0	0.0	8		8.0
11	292	50.2	49.7	0.5	0.1	0.0			9.8
12	292	49.8	49.2	0.6	0.1	0.0			9.5
13	29.293	49.9	49.5	0.4	0.1	0.0			10.0
14	288	50.0	49.5	0.5	0.0	0.0			9.9
15	282	49.3	49.0	0.3	0.0	0.0			8.0
16	271	49.7	49.1	0.6	0.0	0.0	23	16 : — : —	9.0
17	276	49.7	49.0	0.7	0.1	0.1	7	— : 16 : —	9.8
18	276	51.7	50.5	1.2	0.1	0.1	10	— : 16 : —	9.9
19	274	53.5	52.2	1.3	0.0	0.0	6	16 : — : —	10.0
20	274	55.7	53.6	2.1	0.0	0.0	6	— : 16 : —	9.8
21	273	58.1	54.9	3.2	0.1	0.1	7	12 : 16 : —	9.9
22	261	58.5	55.3	3.2	0.2	0.1	21	16 : 16 : —	9.9
23	249	65.3	59.7	5.6	0.1	0.1	13	14 : 16 : —	9.8
2 0	239	64.6	58.6	6.0	0.6	0.6	16	14 : — : —	9.7
1	222	67.4	59.7	7.7	0.6	0.2	12	14 : — : —	8.5
2	216	63.7	57.6	6.1	0.8	0.3	14	15 : — : —	9.7
3	204	63.1	57.1	6.0	0.4	0.1	6	13 : — : —	9.7
4	202	60.0	55.2	4.8	0.4	0.4	25	13 : 14 : —	9.5

Aug. 1^d 5h. Distant thunder in NE.; very dark to NE. and SSW. 5h 10m—15m. Two flashes of lightning seen to NE.; no thunder heard.Aug. 1^d 11h. Observation made at 11^h 5m.Aug. 1^d 2h. Thunder in W. at 2^h 5m; at 7m, a flash of lightning, with thunder in 1^h; 12m, thunder in 4^h after the lightning; 12m—22m, about 4 or 5 peals heard to NW.; 22m, thunder in 16^h after lightning, the peal lasting 30s; 28m, thunder to NW., interval 19^h, peal lasting 38s; 30m, a long streak of lightning to NW., from altitude 15° to horizon, thunder in 5^h, lasting 47s. From 2^h 4m—10m, rain^{0.5}; no thunder was heard after 2^h 35m; about 15 peals were heard.* See additional Meteorological Notes after the *Hourly Meteorological Observations*.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
2 5	29.199	61.0	57.2	3.8	0.3	0.0	25	13 : — : —	8.0	Scud and cumuli ; cirro-strati and cirri.
6	195	61.3	57.9	3.4	0.1	0.0	23	12 : — : —	9.5	Id. ; id.
7	188	60.0	57.3	2.7	0.1	0.0	22	13 : — : —	8.0	Id. ; id. ; cum.-str. ☒
8	178	58.4	56.0	2.4	0.1	0.1	21	13 : 13 : —	5.0	Scud and cir-cum.-str. ; range of cum. on E. horizon ; cir-str. ; cum.-str. ; rain 0.2. ☐
9	172	53.8	52.0	1.8	0.1	0.0	20	— : 13 : —	5.0	Cir-str.-scud ; cum.-str. ; cir-str. ; fog rising from the ground.
10	169	51.3	49.8	1.5	0.1	0.0	1	— : 14 : —	7.0	Id. ; id., denser.
11	161	52.0	51.8	0.2	0.1	0.0	2		10.0	Fog ; objects invisible at 150 yards.
12	148	52.0	51.8	0.2	0.0	0.0			10.0	Id. ; id.
23 ¹ / ₄	29.107	62.6	57.0	5.6	2.2	1.0	20		{ Sunday—Overcast, chiefly loose ragged cumuli ; occasional showers.
3 13	
14	29.212	51.6	50.4	1.2	4.0	0.5	21		2.0	Cirro-strati round horizon ; cirrous haze to S.
15	224	52.4	50.9	1.5	0.7	0.5	19		7.0	Scud and cirro-strati.
16	233	52.7	51.3	1.4	0.4	0.3	18		9.8	Id.
17	243	52.9	51.4	1.5	0.4	0.5	20	20 : — : —	9.8	Id.
18	261	53.0	51.6	1.4	0.6	0.5	21	21 : — : —	9.7	Scud ; cirro-strati and cirro-cumulo-strati.
19	280	55.1	52.9	2.2	0.9	0.4	19	22 : 23 : —	9.8	Misty scud very low ; cirro-cumulo-strati ; cirro-strati.
20	290	59.8	56.2	3.6	0.5	0.5	19	23 : 24 : —	9.0	Id. ; id. ; id. ☐
21	299	60.0	56.3	3.7	0.5	0.2	19	22 : 23 : —	9.9	Scud ; id. ; id.
22	312	61.2	57.7	3.5	0.6	0.3	16	22 : — : —	10.0	Id. ; cirro-strati ; cirrous mass.
23	320	61.6	58.2	3.4	0.6	0.7	18	21 : — : —	9.0	Scud and loose cumuli ; cirrous mass. ☐
4 0	319	64.7	59.0	5.7	0.9	0.6	18	22 : — : —	8.7	Id.
1	335	56.0	55.3	0.7	1.2	0.9	19		9.8	Id. ; shower ³⁻⁷
2	345	61.0	56.9	4.1	1.5	0.8	19	21 : 22 : —	9.5	Scud ; cum.-str. ; cir-cum.-str. ; cir. ; drops of rain. ☐
3	346	62.5	57.5	5.0	1.1	0.5	20	21 : — : —	9.5	Loose cumuli ; cirro-strati. [to NE.
4	359	61.0	56.4	4.6	1.0	0.6	19	21 : — : —	9.9	Scud ; loose cum. ; cir-str. ; dense black mass of clouds
5	367	62.4	56.5	5.9	0.9	0.7	20	— : 22 : —	9.5	Cir-cum.-str. ; cir-str. ; scud and cumuli on horizon.
6	373	58.4	54.9	3.5	0.8	0.4	20	— : 22 : —	9.5	Cirro-strati ; masses of scud and cum.-str. on horizon.
7	381	58.1	55.2	2.9	0.4	0.2	22	22 : — : —	9.5	Scud and cirro-stratus ; cumulo-strati on horizon.
8	395	57.5	54.0	3.5	0.5	0.2	23	22 : 22 : —	9.5	Id. ; thick dark clouds to NW.
9	402	56.2	53.0	3.2	0.3	0.1	26	21 : — : —	8.5	Id. ; cirro-cumulo-strati.
10	416	53.6	51.6	2.0	0.1	0.0	24		4.0	Id. ; cirri.
11	424	49.8	48.9	0.9	0.1	0.1	18		1.5	Id.
12	426	50.0	49.0	1.0	0.1	0.0	18		5.0	Id.
13	29.431	48.3	47.9	0.4	0.1	0.0	22		6.0	Scud and cirro-stratus.
14	437	48.3	47.7	0.6	0.0	0.0			4.0	Id.
15	449	46.7	45.3	1.4	0.0	0.0	23		4.0	Id.
16	452	47.2	46.9	0.3	0.0	0.0	25		6.0	Id. ; woolly cirri.
17	463	47.0	46.8	0.2	0.0	0.0	26		10.0	Homogeneous mass ; fog, objects invisible at 2 miles.
18	473	49.2	48.8	0.4	0.2	0.1	25		10.0	Id. ; objects invisible at 1 mile.
19	481	52.0	50.0+	2.0	0.1	0.0	24	20 : — : 22	7.0	Misty scud to S. ; linear cirri ; traces of a solar halo. ☐
20	487	54.9	52.9	2.0	0.0	0.0	24	— : — : 19	8.0	Woolly cirri ; loose scud to S. ; partial solar halo. ☐
21	490	56.7	53.3+	3.4	0.2	0.1	26	— : — : 19	9.2	Diffuse cirri ; scud and loose cum. on hor. ; solar halo. ☐
22	491	60.7	55.7	5.0	0.1	0.0	16		9.5	Id. ; cir. haze ; loose cum. round horizon ; solar halo. ☐
23	494	65.0	58.0	7.0	0.1	0.1	30	20 : — : 20	9.0	Detached cum. ; cir. and cir. haze ; towering cum. to S. ; solar halo. ☐
5 0	495	64.2	56.4	7.8	0.1	0.1	6		8.0	Id. ; id. ☐
1	496	67.7	58.7	9.0	0.2	0.1	18		9.0	Id. ; id. ; solar halo. ☐
2	499	67.1	58.2	8.9	0.2	0.1	8	— : 18 : —	9.9	Cirro-cumulo-strati ; loose cumuli ; cirrous haze. ☐
3	496	68.5	59.6	8.9	0.1	0.2	8	20 : 18 : —	10.0	Loose cum. ; cir-cum.-str. ; cir.str. and cir. haze ; portion of a solar halo.
4	500	63.4	57.0	6.4	0.3	0.3	5	20 : — : —	10.0	Loose cum. moving very slowly ; dense cir.-str. and cir. haze. [halo. ☐
5	507	61.6	57.4	4.2	0.3	0.1	12		10.0	Dense mass of cir.-str. and haze ; masses of scud and loose cumuli
6	516	60.7	57.4	3.3	0.2	0.1	14	4 : — : —	10.0	Scud ; mass of cirro-stratus. ; rain ² [below ; drops of rain.
7	528	59.0	56.8	2.2	0.1	0.0	20	4 : — : —	10.0	Id. ; id. ; slight drizzle.
8	538	57.7	56.4	1.3	0.1	0.0	16		9.9	Cirro-stratus scud ; wavy cirro-strati ; cir.-cum.-str.
9	535	55.7	54.0	1.7	0.1	0.0	18		9.8	Cir-str. ; wavy cir.-str. radiating from NNE. and SSW. ;
10	541	54.3	53.2	1.1	0.1	0.0	26		9.8	Cirro-cumulo-strati ; cirro-strati. [sky to N.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	
4. h. 5 11	in. 29.546	° 51.3	° 51.0	° 0.3	0.1	0.0	pt.	pt.	pt.	0—10. 2·0
12	548	49.0	48.6	0.4	0.0	0.0	18			3·5
13	29.546	47.6	47.2	0.4	0.0	0.0	20			4·0
14	543	48.8	48.6	0.2	0.0	0.0				9·0?
15	545	49.3	49.1	0.2	0.0	0.0	20			10·0
16	541	49.0	48.8	0.2	0.0	0.0	24			10·0
17	543	48.3	48.1	0.2	0.0	0.0	18			10·0
18	542	47.9	47.6	0.3	0.0	0.0	20	20 : — : 17		9·5
19	537	48.7	48.0 ⁺	0.7	0.1	0.1	23	— : 17 : —		9·8
20	541	50.6	49.5	1·1	0·1	0·1	24	— : 16 : —		9·5
21	536	52.9	51.4 ⁺	1·5	0·0	0·0	24			6·5
22	527	58.0	53.4	4·6	0·1	0·0	28	— : — : 16		5·0
23	521	61·8	56·0	5·8	0·1	0·1	18	— : — : 16		4·0
6 0	514	65·0	60·4	4·6	0·1	0·1	24	21 : — : —		5·0
1	504	65·9	57·4	8·5	0·2	0·2	20	21 : — : —		4·5
2	498	66·4	57·7	8·7	0·4	0·3	18	20 : 21 : —		4·0
3	492	63·9	57·5	6·4	0·6	0·6	18	20 : — : —		9·9
4	486	64·6	59·0	5·6	0·6	0·4	19	— : 18 : —		9·9
5	475	65·0	58·7	6·3	0·5	0·3	21	20 : — : —		9·5
6	465	63·5	58·4	5·1	0·3	0·2	22	19 : — : —		9·5
7	465	61·9	57·4	4·5	0·2	0·2	22	19 : — : —		9·8
8	470	59·7	56·3	3·4	0·2	0·0	20	20 : — : —		9·9
9	464	57·0	56·6	0·4	0·3	0·2	20	20 : — : —		10·0
10	464	56·0	54·4	1·6	0·3	0·1	20			10·0
11	461	54·7	53·6	1·1	0·2	0·0	20			10·0
12	457	54·3	53·5	0·8	0·0	0·0	24			10·0
13	29.446	54·7	53·9	0·8	0·1	0·1	20			10·0
14	445	54·0	53·4	0·6	0·1	0·0	20			10·0
15	441	53·6	52·9	0·7	0·0	0·0	20			10·0
16	440	53·0	52·4	0·6	0·0	0·0	20			10·0
17	436	52·7	52·1	0·6	0·0	0·0	20			10·0
18	438	52·8	52·0	0·8	0·0	0·0	24	26 : — : —		9·0
19	445	54·0	52·1	1·9	0·3	0·3	23	— : 27 : —		8·2
20	450	55·7	52·8	2·9	0·3	0·4	20	26 : 26 : —		6·0
21	454	56·6	53·0	3·6	0·3	0·3	26			5·5
22	449	58·8	53·9	4·9	0·6	0·3	22	27 : — : —		5·5
23	450	62·2	56·9	5·3	0·6	0·3	26	27 : — : —		8·0
7 0	451	63·0	56·5	6·5	0·6	0·4	27	24 : — : —		8·5
1	451	62·8	55·9	6·9	0·7	0·3	28	27 : 25 : —		8·5
2	458	63·3	56·7	6·6	0·6	0·3	26	28 : 25 : —		9·0
3	458	63·0	57·0	6·0	0·2	0·4	28	28 : 25 : —		8·0
4	466	63·5	56·4	7·1	0·3	0·3	30	27 : 26 : —		8·0
5	476	61·4	56·2	5·2	0·3	0·3	30	27 : 26 : —		9·9
6	475	62·9	58·3 ⁺	4·6	0·4	0·1	28			9·7
7	482	60·7	57·0	3·7	0·2	0·2	27	— : 28 : —		9·9
8	490	59·3	56·0	3·3	0·2	0·1	10	30 : 28 : —		9·0
9	493	55·3	54·0 ⁺	1·3	0·1	0·1	30			8·5
10	505	51·7	51·1	0·6	0·1	0·0	20			3·0
11	510	51·6	51·2	0·4	0·1	0·0				2·0
12	510	49·7	49·2	0·5	0·0	0·0				9·0
13	29.505	51·0	50·6	0·4	0·0	0·0	14			Seud.
14	503	51·6	51·0	0·6	0·0	0·0				3·0
15	505	50·9	50·2	0·7	0·0	0·0	20			0·2
16	502	48·7	48·3	0·4	0·2	0·1	17	— : 28 : —		1·5
17	506	49·7	49·3	0·4	0·1	0·1	22	— : 27 : —		1·0

Aug. 5^d 13^h 5^m. A meteor from altitude 80° to W by S., fell vertically 30°.Aug. 6 9^h. Observation made at 9^h 7^m.Aug. 7^d 3^h. Clouds looking electric throughout the day; showers around.Aug. 7^d 11^h 7^m—36^m. Five shooting-stars seen.Aug. 7^d 14^h 40^m—44^m. Two shooting-stars seen.

HOURLY METEOROLOGICAL OBSERVATIONS, AUGUST 7—10, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	lbs. pt.	lbs. pt.	pt.	
d. h.	in.	°	°	°	lbs. 0·2	lbs. 0·2	23	— : 27 : —	0—10.	
7 18	29.498	50·7	49·7†	1·0	0·2	0·2	23	— : 27 : —	1·5	Cirro-stratus scud ; cirro-strati.
19	503	53·3	51·3	2·0	0·4	0·3	24		1·5	Scud and loose cumuli to S. ; cirro-strati to E.
20	504	54·6	51·3	3·3	0·6	0·4	18		1·5	Masses of scud and loose cum. on hor. ; cirro-strati to E. and N.
21	501	56·9	52·7†	4·2	0·6	0·4	24	26 : — : —	1·2	As before ; cirro-strati and sheets of thin cir. to N.
22	494	58·4	53·3	5·1	0·5	0·5	24	27 : — : —	3·0	Masses of scud and loose cum. ; cir.-str. to E. and N.
23	497	60·4	54·7	5·7	0·8	0·5	22	27 : — : —	7·0	Scud and loose cumuli ; cirro-strati.
8 0	492	63·0	56·6	6·4	0·7	0·5	24	26 : — : —	6·5	Id. ; id.
1	487	63·5	56·9	6·6	0·6	0·8	26		7·0	Id.
2	481	64·7	57·2	7·5	0·9	0·6	25	26 : — : —	6·0	Id.
3	475	65·6	58·0	7·6	0·7	0·3	23	26 : — : —	9·7	Id. ; id.
4	466	65·8	58·0	7·8	0·6	0·5	22	26 : — : —	4·0	Loose cumuli ; cirro-cumulo-strati.
5	456	65·0	57·6	7·4	0·5	0·3	22	29 : — : —	9·6	Id. ; id.
6	456	64·4	57·8	6·6	0·6	0·6	23	28 : — : —	9·5	Id. ; id.
7	463	61·6	55·8†	5·8	0·8	0·7	21	— : 27 : —	8·0	Cirro-cumulo-strati and loose cirro-strati.
8	465	58·0	53·0	5·0	0·7	0·3	23	— : 27 : —	8·5	Cirro-stratus scud ; masses of cirro-strati ; cirri.
9	454	57·5	53·8†	3·7	0·4	0·3	22	— : 26 : —	9·8	Id. ; id.
10	440	56·4	53·2	3·2	0·4	0·4	23		9·9	Id.
11	438	55·5	53·1	2·4	0·5	0·1	20		10·0	Id. ?
12	431	54·4	52·5	1·9	0·3	0·3	20		10·0	Id. ?
13	29·414	54·4	52·6	1·8	0·3	0·1	18		9·8	Cirro-stratus scud.
14	401	52·2	51·3	0·9	0·1	0·2	22		3·5	Id. ; cirrous haze.
15	389	52·3	51·3	1·0	0·2	0·0			9·8	Cirro-cumulo-stratus ?
16	370	52·6	51·6	1·0	0·0	0·0	16		10·0	Id.
17	351	52·3	51·4	0·9	0·0	0·0	0	12 : 12 : —	10·0	Id.
18	338	52·4	51·7	0·7	0·1	0·0	0	12 : 12 : —	10·0	Scud ; cirro-stratus scud.
19	(324) (52·9)	(52·1)	(0·8)	(0·0)	(0·0)	(0·0)			(10·0)	
20	311	53·5	52·6	0·9	0·1	0·1	2	12 : 12 : —	10·0	Scud.
21	298	54·6	53·3	1·3	0·1	0·1	2	4 : 10 : —	10·0	Loose scud ; thick scud and cirro-stratus.
22	289	56·7	54·7	2·0	0·1	0·2	3	2 : — : —	10·0	Id. ; id. ; rain ^{0·2}
23	282	56·0	55·2	0·8	0·3	0·2	4	4 : — : —	10·0	Scud ; id. ; rain ¹
9 0	268	56·0	54·4	1·6	0·3	0·2	4	5 : — : —	10·0	Id. ; id. ; rain ^{1·5}
1	258	55·8	54·8	1·0	0·3	0·5	4	5 : — : —	10·0	Id. ; rain ²
2	256	53·4	52·2	1·2	0·6	0·3	3	5 : — : —	10·0	Id. ; id. ; rain ^{2·3}
3	236	54·8	53·2	1·6	0·6	0·4	1	5 : — : —	10·0	Id. ; id.
4	214	53·3	52·2	1·1	0·6	0·7	2	4 : — : —	10·0	Id. ; id. ; rain ^{0·2}
5	209	53·4	52·2	1·2	1·6	1·2	2	3 : — : —	10·0	Id. ; rain ¹
6	202	53·3	52·1	1·2	2·0	1·9	0	3 : — : —	10·0	Id. ; id. ; rain ^{0·5}
7	205	53·0	52·0	1·0	2·0	0·9	0	3 : — : —	10·0	Id. ; id. ; Scotch mist ; rain ¹
8	207	53·0	52·0	1·0	1·7	1·3	0	0 : 3 : —	10·0	Id. ; id. ; clouds more broken ; rain ^{0·5}
9	209	53·6	52·5	1·1	1·2	0·8	0	3 : — : —	10·0	Id. ; id.
10	205	53·3	52·2	1·1	1·8	1·5	31		10·0	Id.
11	199	53·7	52·4	1·3	1·5	1·1	0		10·0	Id. ; slight drizzle.
12	173	53·7	52·7	1·0	1·5	1·6	0		10·0	Id. ; rain ¹
23 1	29·253	56·0	55·6	0·4	3·1	1·9	0	3 : 1 : —	{Sunday—A.M. Nearly continuous rain. P.M. The clouds partially cleared off.
10 13	29·388	54·2	52·8	1·4	2·6	0·5	2		10·0	Scud.
14	387	54·3	53·4	0·9	1·1	0·7	3		10·0	Id. ; drops of rain.
15	387	54·3	53·2	1·1	0·9	0·5	2		10·0	Id.
16	398	54·0	53·0	1·0	0·6	0·4	1		10·0	Id.
17	400	53·9	53·5	0·4	0·4	0·2	0	2 : — : —	9·9	Id. ; mass of cirro-strati.
18	418	54·8	53·4	1·4	0·3	0·1	1	2 : — : —	10·0	Id. ; id.
19	425	55·2	53·7	1·5	0·3	0·2	0	2 : — : —	10·0	Id. ; cirro-stratus scud.
20	437	56·5	54·3	2·2	0·4	0·2	0	2 : — : —	9·6	Id. ; loose cumuli ; cirro-cumulo-strati.
21	449	57·4	54·4	3·0	0·9	0·7	3	2 : 1 : —	9·8	Id. ; cirro-cumulo-strati ; cirri.
22	461	58·2	54·4	3·8	0·8	0·6	3	2 : — : —	9·9	Id. ; cumulous scud.
23	479	58·6	54·1	4·5	1·0	0·6	4	2 : — : —	9·9	Id. ; loose cumuli.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
11 0	29.495	58.2	53.7	4.5	0.7	0.6	4	2 : — : —	9.9	Scud ; loose cumuli.
1	506	60.4	55.5	4.9	0.7	0.5	3	3 : — : —	9.5	Id. ; id.
2	514	60.1	55.1	5.0	0.7	0.6	3	3 : — : —	9.9	Id. ; id.
3	527	60.3	55.0	5.3	1.0	0.7	3	2 : — : —	9.0	Id. ; id.
4	540	59.9	55.7	4.2	1.2	0.4	3	2 : — : —	9.5	Id. ; id.
5	544	59.9	55.3	4.6	0.7	1.2	3	2 : — : 8	9.9	Id. ; id. ; woolly cirri and cir. haze ; part of a ⊙
6	560	55.4	54.0	1.4	1.4	1.0	3	2 : — : —	10.0	Id. ; cirrus mass ; slight drizzle. [solar halo. ⊖
7	573	55.2	53.2	2.0	0.9	0.9	2	2 : — : —	10.0	Id. ; id. ; cirro-strati.
8	590	53.3	52.4	0.9	1.1	0.5	1	2 : — : —	10.0	Id. ; id. ; id. ; rain ¹
9	597	53.6	52.0	1.6	1.0	0.6	2	1 : — : —	10.0	Id. ; id. ; id.
10	614	53.3	52.5	0.8	0.8	0.6	1		10.0	Id. ; cirro-strati.
11	625	53.5	51.5	2.0	1.2	0.3	0		10.0	Id. ; id.
12	624	53.4	51.8	1.6	0.6	0.4	1		10.0	Id.
13	29.627	53.9	50.9	3.0	1.2	0.9	1		10.0	Scud.
14	627	53.8	50.8	3.0	1.1	0.7	3		10.0	Id.
15	635	53.7	50.5	3.2	0.9	0.4	0		10.0	Id., radiating from N by E. ; clouds breaking.
16	635	53.3	50.6	2.7	0.6	0.2	1		10.0	Id. ; id.
17	637	53.1	50.4	2.7	0.3	0.2	1	0 : — : —	9.5	Id. ; cirro-strati.
18	652	52.7	50.7	2.0	0.3	0.3	30	0 : — : —	9.5	Id. ; id.
19	663	52.7	49.8	2.9	0.3	0.2	2	0 : — : —	9.2	Id. ; id.
20	671	53.2	50.2	3.0	0.3	0.2	0	0 : — : —	10.0	Id. ; id.
21	681	53.7	49.6	4.1	1.0	0.6	0	1 : — : —	9.9	Dense cirro-stratus scud ; scud below to E.
22	686	54.9	50.7	4.2	0.7	0.6	0	1 : — : —	10.0	Id. ; scud below to N. and E.
23	691	56.7	51.4	5.3	0.8	0.8	1	1 : — : —	10.0	Id. ; id.
12 0	706	55.5	51.0	4.5	0.9	0.5	1	0 : — : —	10.0	Scud ; cirro-stratus scud ; cirrus mass.
1	715	54.0	51.4	2.6	1.1	0.2	31	0 : — : —	10.0	Id. ; slight drizzle.
2	724	54.4	52.2	2.2	0.4	0.3	30	31 : — : —	10.0	Id.
3	728	55.3	51.2	4.1	0.6	0.7	1	0 : — : —	9.9	Id., clouds breaking ; sky greenish on E. horizon.
4	740	55.4	50.8	4.6	0.6	0.4	2	0 : — : —	9.9	Id. ; id. ; id.
5	741	55.2	49.8	5.4	0.8	0.4	0	— : 31 : —	9.9	Cir.-str. ; thick wavy cirro-strati ; id.
6	749	54.8	50.3	4.5	0.4	0.3	0	31 : — : —	9.8	Patches of scud ; cirro-stratus ; sky on E. horizon.
7	760	54.0	50.7	3.3	0.2	0.1	30	31 : 30 : —	9.9	Scud ; cirro-cumulo-stratus ; clouds breaking.
8	771	52.6	50.4	2.2	0.2	0.1	1	1 : — : —	10.0	Id. ; rain ^{0.2}
9	785	51.0	50.0	1.0	0.1	0.1	4	30 : — : —	10.0	Id. ; loose scud on horizon ; occasional showers.
10	788	51.0	49.0	2.0	0.1	0.1	1		10.0	Id.
11	792	50.0	48.4	1.6	0.0	0.0	28		9.8	Id. ; cirro-stratus and cirrus haze.
12	800	48.9	46.3	2.6	0.1	0.1	0		9.0	Id. ; id.
13	29.799	47.5	45.7	1.9	0.1	0.1	28		9.0	Scud ; cirro-stratus and cirrus haze.
14	798	45.6	44.5	1.1	0.0	0.0	26		3.0	Clouds round horizon ; sky hazy.
15	798	45.8	44.9	0.9	0.0	0.0	26		9.8	Cirro-strati.
16	786	45.8	44.9	0.9	0.1	0.1	22		9.9	Id.
17	790	46.3	45.2	1.1	0.2	0.1	24		9.5	Cirro-cumulo-strati.
18	798	46.1	45.3	0.8	0.1	0.1	24	— : 28 : —	9.8	Id.
19	789	48.8	47.2	1.6	0.1	0.0	24	— : 28 : —	9.2	Id.
20	802	51.2	48.9	2.3	0.1	0.1	24	— : 28 : 28	7.0	Cir.-cum.-str. ; sheets of cirri ; patches of scud to SE. ⊖
21	792	53.1	48.9	4.2	0.2	2.0	22	— : — : 31	4.0	Woolly cirri ; cir.-cum.-str. to W. ; scud on NW. & N. hor. ; cir.-str. ⊖
22	787	57.3	51.3	6.0	0.2	0.3	28	26 : — : 29	6.0	Loose cumuli ; woolly cirri ; cirro-strati ; cumuli. ⊖
23	782	59.6	53.2	6.4	0.3	0.2	25	26 : 29 : 31	8.0	Scud & loose cum. ; cir.-str. ; long lines of cirri radiating from N. by E.
13 0	781	61.4	52.4	9.0	0.2	0.2	29	26 : — : 31	9.5	Scud and loose cum. ; cirri and cir. haze ; solar halo. ⊖
1	777	61.0	51.5	9.5	0.3	0.3	28	26 : — : —	9.5	As before. ⊖
2	774	62.6	53.4	9.2	0.4	0.3	28	28 : 30 : —	9.2	Scud and loose cum. ; cir.-cum.-str. ; cirri ; cir. haze. ⊖
3	776	62.1	52.3	9.8	0.3	0.2	30	28 : 31 : —	9.2	Id. ; id. ; id. ; id. ; id. ⊖
4	776	60.4	52.8	7.6	0.2	0.1	29	— : 28 : —	9.8	Cirro-stratus scud ; cirri ; cirro-strati.
5	774	60.0	52.8	7.2	0.2	0.1	29		9.9	Scud ; cir.-str. scud ; nearly homogeneous mass of cir.-str.
6	772	58.4	53.1	5.3	0.1	0.1	0	28 : — : —	10.0	Scud ; dense cirro-stratus and haze.
7	782	56.5	52.7	3.8	0.0	0.0	3	— : 28 : —	10.0	Thick cirro-stratus scud ; dense cir.-str. and haze.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Aug. 13^d 3^h. Observation made at 3^h 7^m.

Aug. 13^d 6^h 20^m—40^m. A long line of loose scud to ESE. lying close to the ground, and creeping along the lower Cheviot hills ; some of the masses have spiculae pointing upwards ; green sky above Cheviot.

HOURLY METEOROLOGICAL OBSERVATIONS, AUGUST 13—15, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
13 8	29.785	54.3	52.2	2.1	0.1	0.0	6			10.0
9	791	53.4	51.9	1.5	0.1	0.0	20			10.0
10	793	52.5	51.4	1.1	0.0	0.0	26			10.0
11	799	51.0	50.3	0.7	0.0	0.0	26			7.0
12	798	49.2	48.3	0.9	0.0	0.0	25			3.0
13	29.778	49.9	48.9	1.0	0.0	0.1	20			5.0
14	761	48.9	48.0	0.9	0.1	0.0	18			6.0
15	754	49.2	48.3	0.9	0.1	0.0	18			10.0
16	732	50.0	48.2	1.8	0.1	0.0	20			10.0
17	716	51.2	48.8	2.4	0.1	0.1	20	26 : 26 :	—	10.0
18	707	51.7	49.0	2.7	0.3	0.3	25	— : 28 :	—	10.0
19	698	52.1	49.3	2.8	0.2	0.1	24			10.0
20	693	53.3	50.1	3.2	0.2	0.1	26			10.0
21	694	55.5	51.4	4.1	0.6	0.5	26	28 : 30 :	—	10.0
22	691	54.4	51.3	3.1	0.5	0.4	30	28 : — :	—	10.0
23	684	56.0	52.2	3.8	0.5	0.7	29			10.0
14 0	674	59.0	53.9	5.1	1.1	0.5	28	30 : — :	—	10.0
1	661	59.6	53.3	6.3	0.8	0.7	30	30 : — :	—	10.0
2	651	60.7	54.3	6.4	1.0	0.3	31	29 : — :	—	10.0
3	642	59.9	53.6	6.3	0.6	0.2	31	29 : — :	—	10.0
4	624	57.8	53.4	4.4	0.6	0.4	28	29 : — :	—	10.0
5	614	56.4	52.7	3.7	0.3	0.1	22	— : 26 :	—	10.0
6	599	55.9	52.3	3.6	0.4	0.3	28	— : 28 :	—	10.0
7	598	54.8	52.2	2.6	0.4	0.2	25			10.0
8	599	53.2	50.8	2.4	0.4	0.2	28	— : 30 :	—	10.0
9	593	52.9	50.4	2.5	0.4	0.2	30			10.0
10	589	52.2	50.2	2.0	0.1	0.1	31			10.0
11	582	51.7	49.8	1.9	0.1	0.1	26			10.0
12	574	52.2	49.6	2.6	0.1	0.1	27			10.0
13	29.566	51.9	49.5	2.4	0.1	0.0	26			10.0
14	577	56.3	49.4	0.9	0.9	0.2	0			10.0
15	578	50.2	48.6	1.6	0.2	0.3	2			9.5
16	578	48.7	46.5	2.2	1.6	0.3	0			9.5
17	577	47.0	45.0	2.0	0.3	0.0	28	— : 0 :	—	3.8
18	587	47.7	45.3	2.4	0.2	0.1	31	0 : 0 :	—	9.9
19	588	49.3	46.2	3.1	0.4	0.3	30	— : 0 :	—	9.9
20	592	51.2	47.2	4.0	0.5	0.3	1	— : 1 :	—	9.5
21	596	52.3	47.9	4.4	1.0	1.0	31	0 : — :	—	7.0
22	602	53.0	48.2	4.8	1.5	1.1	31	1 : — :	—	9.8
23	597	52.5	48.8	3.7	1.1	0.9	0	1 : — :	—	7.0
15 0	594	54.8	47.8	6.5	2.7	2.0	30	0 : — :	—	4.5
1	600	57.4	50.6	6.8	2.7	2.4	2	1 : — :	—	9.0
2	612	56.3	49.8	6.5	2.6	2.2	1	1 : — :	—	7.0
3	622	57.5?	49.0	8.5?	2.3	1.7	30	0 : — :	—	7.5
4	618	56.3	49.2	7.1	0.9	0.7	2	31 : — :	—	9.8
5	617	56.7	49.8	6.9	1.8	3.1	0	0 : — :	—	9.2
6	622	54.8	47.7	7.1	2.3	1.3	0	0 : — :	—	7.0
7	632	53.4	47.8	5.6	1.9	1.1	0	0 : 30 :	—	4.0
8	649	52.6	47.3	5.3	1.5	0.8	0	— : 0 :	—	9.0
9	656	49.7	45.8	3.9	0.5	0.4	31	— : 0 :	—	9.5
10	674	50.6	46.4	4.2	0.7	0.5	31	— : 0 :	—	9.0
11	672	49.8	45.7	4.1	0.4	0.8	0			10.0
12	669	50.3	45.4	4.9	1.1	0.5	31			10.0
13	29.670	49.9	45.1	4.8	0.8	0.4	30			10.0
14	668	49.4	44.8	4.6	0.9	0.4	31			9.5

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.			
d. h. 15 15	in. 29.668	48.8	44.7	4.1	lbs. 0.7	lbs. 0.2	pt. 30	0—10. 9.8	Cirro-strati and cirro-cumulo-strati.
16	672	47.7	44.6	3.1	0.3	0.1	30	9.5	Scud; cirro-stratus.
17	670	47.9	44.6	3.3	0.4	0.1	26	10.0	Id.; id.
18	678	47.2	44.3	2.9	0.1	0.1	30	9.9	Id.; cirro-stratus scud.
19	684	48.4	45.4	3.0	0.5	0.2	30	9.8	Cirro-cumulo-stratus; scud to E.
20	697	50.2	46.4	3.8	0.4	0.1	30	9.8	Id.; id. [scud to W.]
21	701	51.3	46.2	5.1	0.4	0.3	1	9.2	Id.; masses of cirro-strati; patches of
22	704	53.6	46.3	7.3	1.8	1.2	0	8.5	Id.; id. ☉
23	713	53.1	46.0	7.1	0.9	0.8	0	9.5	Id.; patches of scud to W.
16 0	712	54.1	47.5	6.6	1.0	0.3	1	10.0	Id.
1	710	54.3	48.2	6.1	0.4	0.4	2	9.8	Id.
2	703	55.3	48.3	7.0	0.3	0.2	31	9.5	Id. ☉
3	694	57.8	50.4	7.4	0.2	0.2	0	9.8	Id.
4	690	57.0	49.0	8.0	0.3	0.2	0	9.9	Id.
5	686	56.8	49.0	7.8	0.2	0.4	31	9.9	Id.
6	675	54.7	49.6	5.1	0.1	0.0	8	9.9	Id.
7	675	53.1	49.1	4.0	0.1	0.0	4	9.9	Scud and cirro-stratus.
8	677	51.5	48.6	2.9	0.1	0.0	12	9.9	Id.
9	678	50.4	47.8	2.6	0.1	0.0	4	10.0	Id.
10	683	49.7	47.4	2.3	0.0	0.0	4	10.0	Id.
11	681	48.9	47.3	1.6	0.1	0.1	7	10.0	Id.
12	677	48.3	47.0	1.3	0.0	0.0	23	9.9	Cirro-cumulo-strati and cirro-strati.
23 1	29.581	60.0	52.7	7.3	0.5	0.5	20	Sunday—A.M. Scud and cir.-str. P.M. Scud and showers.
17 13	29.422	51.0	50.7	0.3	0.8	0.0	22	10.0	Scud; cirro-cumulo-strati? rain ^{0.5}
14	418	52.0	51.5	0.5	0.1	0.1	22	9.9	Id.; id.
15	416	51.4	50.7	0.7	0.1	0.0	22	9.2	Id.; id. ☉
16	405	49.5	49.2	0.3	0.1	0.0	22	9.2	Id.; id.
17	399	49.4	49.1	0.3	0.0	0.0	22	9.5	Cirro-stratus scud; cirro-strati; cirri.
18	404	50.4	49.9	0.5	0.0	0.0	22	9.5	Id.; cirro-cumulo-strati; cirri.
19	403	51.6	51.0	0.6	0.1	0.0	24	9.0	Id.; woolly cirri; cir.-str.; cum. to N.
20	405	55.4	54.0	1.4	0.0	0.0	23	9.5	Thin scud; woolly and mottled cirri; cumuli to N. ●
21	404	58.4	55.9	2.5	0.0	0.0	23	9.9	Loose ragged scud and loose cumuli; cirro-strati.
22	408	58.2	53.9	4.3	0.0	0.0	23	9.5	Scud and loose cumuli; cumulo-strati; cirro-strati.
23	400	59.4	55.0	4.4	0.1	0.1	9	5.0	Loose cumuli; cumuli; id.; id. ☉
18 0	395	61.2	56.6	4.6	0.2	0.1	16	9.5	Id.; id.; id.; id.
1	386	64.7	59.8	4.9	0.2	0.3	20	8.5	Scud and loose cumuli; id.; id.
2	378	63.2	57.8	5.4	0.3	0.2	19	9.8	Id.; id.; id.
3	383	55.2	54.0	1.2	1.1	0.1	18	10.0	Scud; cumuli; rain ²
4	381	59.0	55.4	3.6	0.1	0.1	6	9.5	Thin scud; scud and loose cumuli; cirro-strati.
5	381	57.0	54.5	2.5	0.2	0.1	7	9.5	As before; cumulo-strati on E. horizon.
6	387	57.4	54.7	2.7	0.1	0.1	4	8.0	Loose scud; cum. and cir-cum-str.; piles of cum.-str. on ESE. hor. ☉
7	378	54.7	53.0	1.7	0.1	0.0	3	3.5	Cir.-str. scud; loose cir.-cum.; piles of cum.-str. and nimbi on hor.
8	384	53.4	52.4	1.0	0.1	0.0	20	9.2	Nearly as before.
9	379	51.7	51.0	0.7	0.1	0.1	24	9.2	Id.
10	378	51.3	50.8	0.5	0.1	0.0	24	9.8	Cirro-cumulo-strati.
11	371	50.4	50.0	0.4	0.0	0.0	24	9.9	Id.
12	369	50.6	50.1	0.5	0.0	0.0		10.0	Rain ^{0.5}
13	29.362	50.6	50.0	0.6	0.0	0.0		10.0	Scud and cirro-stratus.
14	348	50.5	49.8	0.7	0.0	0.0	24	9.9	Cirro-stratus scud, causing a diffuse lunar corona. ☉
15	339	50.0	49.3	0.7	0.0	0.0		9.8	Cirro-cumulo-strati.
16	336	48.5	48.3	0.2	0.0	0.0	28	10.0	Misty scud and cirro-stratus.
17	320	49.5	48.7	0.8	0.0	0.0	4 : — : —	10.0	Id.
18	319	49.7	49.2	0.5	0.0	0.0	20	9.8	Misty scud; cirro-stratus; gathering of swallows.
19	312	52.6	51.6	1.0	0.0	0.0	12	9.8	Id.; id. ●
20	308	53.6	52.3	1.3	0.0	0.0	12	9.5	Id.; woolly cir-eum.; piles of cum.-str. on N. hor.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Aug. 18th 19th. Observation made at 19^h 25^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h. 18 21	in. 29.300	° 55.8	° 53.3	° 2.5	lbs. 0.0	lbs. 0.0	pt. 10	pt. pt. pt. 4 : — : —	0—10. 9.8	Misty scud ; cirro-strati.
22	290	55.7	53.7	2.0	0.1	0.2	6	5 : — : —	10.0	Id. ; cirrous mass.
23	283	55.0	53.4	1.6	0.5	0.5	5	5 : — : —	10.0	Id. ; id. ; rain ^{1.5}
19 0	263	54.1	53.0	1.1	0.9	0.9	3	4 : — : —	10.0	Id. ; fine rain ^{0.8}
1	256	53.8	52.9	0.9	0.8	0.9	3	3 : — : —	10.0	Id. ; fine rain ^{0.8}
2	244	52.6	51.6	1.0	1.5	0.9	2	3 : — : —	10.0	Id. ; fine rain ¹
3	228	53.0	52.6	0.4	1.3	1.0	2	3 : — : —	10.0	Id. ; fine rain ¹
4	215	52.4	51.1	1.3	1.5	1.0	2	3 : — : —	10.0	Id. ; fine rain ¹
5	195	52.3	51.0	1.3	1.3	0.7	2	3 : — : —	10.0	Id. ; fine rain ¹
6	181	51.8	50.6	1.2	1.0	0.4	0	2 : — : —	10.0	Masses of loose scud ; dense mass of cirro-str. ; rain ^{0.5}
7	168	50.7	49.9	0.8	0.8	0.4	2	2 : — : —	10.0	As before ; rain ^{0.5} [yellow to NW. ; rain ^{0.5}
8	157	50.4	48.7	1.7	0.9	0.9	1		10.0	Patches of loose scud ; dense cirro-str. ; clouds tinged
9	145	50.4	49.2	1.2	0.9	0.7	1		10.0	Scud and cirro-stratus ; continuous rain ^{1—2}
10	115	51.0	49.1	1.9	1.7	1.4	31		10.0	Rain ¹
11	097	50.2	48.2	2.0	2.3	1.7	0		10.0	Scud ; rain ^{0.2}
12	079	50.0	48.0	2.0	2.5	1.4	31		10.0	Id. ; rain ^{0.5}
13	29.064	49.7	48.7	1.0	1.7	0.7	30		10.0	Scud ; rain ¹
14	045	49.7	48.8	0.9	1.1	1.2	30		10.0	Id. ; rain ^{1.5}
15	028	49.8	48.8	1.0	1.5	1.2	30		10.0	Id. ; rain ²
16	021	49.8	48.8	1.0	1.7	1.3	30		10.0	Id. ; rain ^{1.5}
17	015	49.9	48.9	1.0	1.4	0.5	30	30 : — : —	10.0	Id. ; rain ¹
18	012	49.9	48.9	1.0	1.5	0.9	29	30 : — : —	10.0	Id. ; rain ¹
19	009	50.3	48.9	1.4	1.9	1.4	29	30 : — : —	10.0	Loose scud ; dense cirro-stratus ; rain ^{1—2}
20	008	51.0	49.6	1.4	1.9	1.7	29	31 : — : —	10.0	Id. ; rain ^{0.5}
21	027	52.2	50.0	2.2	2.4	1.8	29	30 : — : —	10.0	Id. ; rain ^{0.8}
22	040	52.5	50.3	2.2	1.9	1.3	30	30 : — : —	10.0	Id. ; rain ^{0.8}
23	042	53.3	51.1	2.2	3.3	1.8	28	30 : — : —	10.0	Id. ; rain ^{0.8}
20 0	062	53.4	51.0	2.4	2.7	1.9	28	29 : — : —	10.0	Id. ; rain ¹
1	086	54.9	52.2	2.7	2.3	1.7	28	29 : — : —	10.0	Id. ; rain ¹
2	116	54.3	52.4	1.9	5.0	1.1	28	30 : — : —	10.0	Id. ; rain ^{0.5}
3	138	55.1	52.4	2.7	1.3	1.0	28	30 : — : —	10.0	Id. ; rain ¹ [nearly visible.
4	160	55.6	53.1	2.5	1.8	0.7	29	30 : — : —	10.0	Id. ; dense cirro-str. ; drops of rain ; sun's disc
5	177	56.4	53.6	2.8	1.9	1.4	28	28 : — : —	10.0	Masses of scud ; homogeneous cirro-stratus ; rain ^{0.5}
6	202	55.2	52.7	2.5	1.5	1.1	29		10.0	Patches of scud ; id. [stratus ; rain ^{0.2}
7	231	54.0	51.8	2.2	1.2	0.9	28		10.0	Masses of scud and cirro-str. to S. ; homogeneous cirro-
8	261	53.0	50.7	2.3	2.3	1.0	30		10.0	Id. id.
9	285	52.4	50.0	2.4	1.1	0.8	29		10.0	Scud ; rain ^{0.2}
10	306	52.0	49.4	2.6	1.2	0.6	30		10.0	Id.
11	329	50.9	48.8	2.1	0.8	0.1	26		10.0	Mass of cirro-stratus.
12	350	51.2	48.4	2.8	0.3	0.2	29		10.0	Id. ; lower cirro-str. radiating from NW.
13	29.362	49.8	48.3	1.5	0.2	0.0	20		10.0	Mass of cirro-str. ; lower cirro-str. radiating from NW.)
14	386	50.4	48.2	2.2	0.1	0.1	22		10.0	Id., thinner ; id.
15	407	50.0	47.4	2.6	0.2	0.1	22		10.0	Id., much thinner ; patches of scud. ↗
16	424	49.3	47.4	1.9	0.1	0.0	22		10.0	Loose cirro-strati ; cirro-cumulo-str. ; clouds broken. ↗
17	428	49.4	47.3	2.1	0.3	0.3	24	— : 28 : —	10.0	As before. ↗ [eum. ; sky rather wild-looking.
18	449	48.6	46.3	2.3	0.3	0.2	24	— : 26 : —	9.0	Loose cir-cum.-str. ; dense cirro-str. ; woolly cir. ; cirro-
19	468	49.3	46.7	2.6	0.4	0.3	23	— : 28 : —	8.5	Cirro-cumulo-strati ; cirro-strati ; woolly cirri. ○
20	490	49.6	46.4	3.2	0.4	0.5	23	— : — : 30	8.5	Woolly cirri ; id. ; seud.
21	522	52.7	48.6	4.1	0.2	0.1	27	— : 27 : 26	7.0	Cirro-cumulo-strati ; woolly cirri.
22	541	55.8	49.8	6.0	1.2	0.6	29	— : 27 : —	7.5	Id. ; id. ; cirro-strati. ○
23	555	55.8	49.0	6.8	1.5	1.2	30	27 : — : —	7.5	Seud and loose cumuli ; cirro-strati ; woolly cirri. ○
21 0	573	56.8	50.0	6.8	0.9	0.2	30	26 : — : —	9.5	Id. ; id. ○
1	592	56.3	50.0	6.3	0.3	0.2	24	— : 26 : —	9.9	Cirro-stratus seud ; wavy cirro-strati ; cirri.
2	610	56.7	50.3	6.4	0.4	0.2	23	— : 28 : —	10.0	Thick cirro-stratus seud.
3	623	58.0	51.0	7.0	0.4	0.2	27	28 : — : —	9.9	Seud ; cir-cum.-str. ; cumo.-str. on E. hor. ; cirro-strati. ●
4	634	57.2	51.0	6.2	0.4	0.3	21	28 : — : —	9.8	As before.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^m	From			
21	5	29.642	57.7	52.0	5.7	0.1	0.1	26	pt. pt. pt.	0—10. 9.8
	6	659	57.3	51.1	6.2	0.3	0.1	23	— : 29 : —	As before. [rather electric looking.
	7	676	55.9	50.6	5.3	0.2	0.2	22	29 : — : —	Inky detached scud; cir.-cum.-str.; cum.-str. on hor.; Cirro-cumulo-strati; cirro-strati.
	8	696	53.6	49.7	3.9	0.4	0.1	22	— : 29 : —	Id.; id.
	9	717	50.7	47.8	2.9	0.2	0.1	20		Id.; id.
	10	737	50.0	47.4	2.6	0.3	0.3	22		Id.; id.
	11	747	47.9	45.8	2.1	0.3	0.2	22		Id.; id.
	12	759	45.6	44.4	1.2	0.1	0.1	22		Id.
	13	29.771	45.4	43.9	1.5	0.1	0.1	22		Cirro-stratus on E. horizon.
	14	785	42.7	42.0	0.7	0.1	0.1	21		Light cirrus to N.; cirro-stratus or scud to SE.
	15	799	38.7	38.4	0.3	0.1	0.0			Cirri and cirro-strati on horizon.
	16	814	38.5	38.2	0.3	0.0	0.0	14		Cirro-strati, &c., to E.
	17	818	40.7	40.2	0.5	0.0	0.0	18		Cirri and cirro-strati.
	18	835	43.7	42.5†	1.2	0.1	0.1	20	— : 28 : —	Cirro-cumuli; cirrus haze. ☺ [cap of scud. ☺
	19	846	45.7	44.0	1.7	0.2	0.1	21	— : 25 : 27	Loose cir.-cum.-str.; small cir.-str.; lin. & tufted cir.; Cheviot has a
	20	846	50.0	47.4	2.6	0.2	0.4	22	— : 27 : —	Cir.-cum. in patches; cir.-str.; scud on Cheviot & N. hor.; cir.; cir.
	21	848	53.7	49.7†	4.0	0.3	0.4	20	— : 27 : —	Cir.-cum.; cir.-str.; scud on horizon. ☺ [haze. ☺
	22	855	57.0	52.7	4.3	0.6	0.5	20	22 : 26 : —	Loose cum.; cir.-cum.-str.; cir.-str.; loose scud on hor. ☺
	23	851	58.0	51.0	7.0	1.3	1.2	20	21 : 24 : —	As before. ☺
22	0	841	61.2	54.4	6.8	1.1	1.0	20	21 : 25 : 27	Loose cum.; cir.-cum.; tufted cirri; portion of a halo. ☺
	1	834	60.7	53.4	7.3	1.7	1.3	21	21 : 24 : —	Id.; id.; cir.-str.; cir. mass; halo. ●
	2	828	63.7	56.2	7.5	1.6	0.9	20	20 : 24 : —	Id.; id.; id.
	3	820	61.2	54.6	6.6	2.4	1.3	20	20 : 23 : 26	Id.; many whale-like cir.-str. on hor.; mot. cirri & thickening leir. haze. ☺
	4	820	60.9	53.7	6.2	1.5	0.8	20	20 : 22 : —	Nearly as before. ☺
	5	809	59.5	52.6	6.9	1.9	1.6	21	20 : 22 : —	Id.; cir. haze less dense & portion of a halo
	6	797	57.2	52.4	4.8	1.7	1.1	20	21 : 20 : —	Scud; cir.-str.; cir.-cum. and cir. haze. [visible. ☺
	7	774	56.4	53.1	3.3	1.0	1.2	20	20 : — : —	Scud; cirro-stratus and haze.
	8	763	56.0	52.6	3.4	1.9	0.8	20	20 : — : —	Id.; id.
	9	756	55.7	52.5	3.2	2.3	1.2	19	20 : — : —	Id.; cirro-stratus.
	10	752	55.7	52.5	3.2	1.7	1.1	19		Id.
	11	734	55.4	52.3	3.1	1.7	1.2	19		Id.
	12	712	55.4	52.8	2.6	1.4	1.2	19		Id.; streak of light on E. horizon.
	13	29.695	54.0	52.8	1.2	1.6	0.6	18		Scud; rain ^{0.5}
	14	670	55.7	53.4	2.3	1.8	2.0	20		Id.; drops of rain
	15	654	55.8	54.0	1.8	2.6	2.4	18		Id.
	16	636	55.2	53.6	1.6	1.8	0.7	17		Id.; rain ^{0.2}
	17	620	56.4	54.8	1.6	1.6	2.0	18	20 : — : —	Scud moving rapidly; cirrous mass above.
	18	613	55.4	55.0	0.4	2.2	0.5	18	21 : — : —	Scud; drifting rain ²
	19	606	55.3	54.0	1.3	1.4	1.3	20	20 : — : —	Id.; rain ¹⁻³ ; sky to NW.
	20	601	56.4	54.9	1.5	1.5	0.4	18	20 : — : —	Id.; cirro-strati.
	21	600	58.1	56.4	1.7	0.8	0.4	18	20 : 22 : —	Loose scud; loose cumuli and cirro-cumuli. ☺
	22	598	61.4	57.2	4.2	0.9	0.8	18	20 : — : —	Scud and loose cumuli. ☺
	23	591	59.1	55.0	4.1	1.8	1.5	19	21 : — : —	Id.; cirro-strati on E. horizon. ☺
23	0	594	59.3	54.9	4.4	2.1	1.3	20	20 : — : —	Id.; slight showers occasionally. ☺
	1	602	61.3	56.6	4.7	2.1	1.6	19	21 : — : —	Id.
	2	584	61.4	55.6	5.8	2.5	1.1	18	21 : — : —	Id.
	3	570	63.0	56.6	6.4	2.3	1.5	19	21 : — : —	Id.
	4	565	62.0	55.6	6.4	2.7	2.1	19	21 : — : —	Id.; cirro-cumulo-strati. ☺
	5	568	58.4	55.4	3.0	2.3	1.6	21	21 : — : —	Id.; slight shower.
	6	556	57.3	55.2	2.1	2.5	1.8	19	22 : 21 : —	Scud; cir.-cum.-str.; cum.-str.; cir.-str.; rainbow; rain ¹⁻⁵ ☺
	7	555	56.3	54.6	1.7	1.5	0.5	19	22 : 21 : —	As before; nimbi; sky wild-like; passing showers.
	8	560	54.0	53.0	1.0	0.6	0.2	17	20 : 21 : —	Scud; very thick dark scud; cirro-strati; showers ³⁻⁶
	9	569	52.8	52.0	0.8	0.2	0.0	17	20 : — : —	Thick scud. [since 7 ^h .
	10	562	51.9	51.0	0.9	0.5	0.3	18		Scud and cirro-strati.
	11	578	49.9	49.1	0.8	0.3	0.1	20		Id.
	12	584	48.9	48.4	0.5	0.2	0.1	20		Cirro-cumulo-strati. ☺

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Aug. 22^d 5^h 45^m. A parhelion and solar halo were seen.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h. 23 23 ¹ ₄	in. 29.641	61.3	55.8	5.5	lbs. 0.8	lbs. 0.4	pt. 24	pt. pt. pt. 24 : — : —	0—10.	Sunday—Scud and loose cum. ; showers in the forenoon.
24 13	29.668	51.3	49.6	1.7	1.5	0.1	18		9.0	Cirro-cumulo-strati.
14	654	49.7	48.2	1.5	0.1	0.1	20		9.0	Id.
15	646	50.1	48.4	1.7	0.2	0.1	20		9.0	Id.
16	625	50.9	49.4	1.5	0.1	0.1	19		9.7	Scud and cirro-stratus.
17	606	51.8	50.1	1.7	0.2	0.2	18	21 : — : —	10.0	Thick scud ; cirro-stratus.
18	587	52.2	50.7	1.5	0.2	0.2	16		10.0	Thick cirro-stratus and scud ; rain ^{0.5}
19	588	52.8	51.5	1.3	0.4	0.2	18	19 : 23 : —	10.0	Loose scud ; mass of cirro-strati.
20	575	53.4	52.0	1.4	0.3	0.3	17		10.0	Scud ; id. ; rain ²
21	563	53.0	52.0	1.0	0.2	0.2	18	19 : — : —	10.0	Id. ; id. ; rain ¹
22	555	54.6	53.3	1.3	0.3	0.2	17	19 : — : —	10.0	Id. ; id.
23	538	57.7	55.3	2.4	0.7	0.6	17	18 : — : —	10.0	Id. ; id.
25 0	522	56.5	55.1	1.4	0.6	0.2	18	18 : — : —	10.0	Id. ; id.
1	497	59.0	56.7	2.3	0.8	0.4	17	18 : — : —	10.0	Id. ; id. ; clouds breaking.
2	475	61.2	58.6	2.6	0.9	1.2	18	18 : — : —	10.0	Scud and loose cumuli ; cumulo-strati ; cirro-strati.
3	453	64.7	60.3	4.4	1.7	1.3	18	18 : 18 : —	9.8	Id. ; id. ; rain ¹
4	443	61.3	59.0	2.3	1.4	0.8	17	18 : — : —	10.0	Id. ; id. ; id.
5	419	61.3	58.8	2.5	1.2	0.9	18	18 : — : —	9.9	Scud ; cirro-stratus ; rain ^{1—2}
6	399	58.9	57.6	1.3	1.0	0.5	19	19 : — : —	10.0	Id. ; id.
7	382	59.2	57.7	1.5	1.2	0.7	19	18 : — : —	10.0	Drizzling rain ^{1—2}
8	372	58.1	57.1	1.0	1.2	0.9	18		10.0	Scud and cirro-stratus.
9	379	56.2	55.4	0.8	0.8	0.3	28		10.0	Id., clearing off from westward.
10	389	53.4	52.6	0.8	0.1	0.1	20		7.0	Scud and cirro-strati.
11	393	50.6	50.0	0.6	0.2	0.1	18		6.0	Id.
12	389	50.9	50.0	0.9	0.2	0.1	20		4.0	Scud and cirro-strati.
13	29.387	50.0	49.0	1.0	0.2	0.1	24		3.0	Cirro-cumulo-strati.
14	383	48.7	48.0	0.7	0.2	0.1	24		3.0	Id. ; cirrous haze.
15	400	50.4	49.7	0.7	0.2	0.1	23		9.0	Scud and cirro-strati.
16	406	50.7	50.0	0.7	0.1	0.1	22		9.9	Id.
17	409	50.9	49.6	1.3	0.2	0.2	19		8.5	Cirro-stratus scud.
18	424	49.7	48.8	0.9	0.2	0.2	21	— : 22 : —	8.5	Id. ; mass of cirro-strati.
19	430	51.4	49.7	1.7	0.2	0.1	22	— : 24 : —	8.5	Cirro-strati.
20	446	52.5	50.3	2.2	0.2	0.1	22	23 : 22 : —	6.0	Patches of loose scud ; cirro-strati and cir.-cum.-str.
21	461	55.6	52.0	3.6	0.7	0.5	22	24 : 23 : —	9.5	Id. ; id.
22	475	57.4	53.2	4.2	0.7	0.7	23	24 : 24 : —	8.5	Id. ; id.
23	485	59.3	53.1	6.2	1.1	0.8	23	24 : 27 : —	8.5	Scud and loose cumuli ; cirro-strati and woolly cirri.
26 0	504	62.2	55.0	7.2	1.4	1.5	26	25 : — : —	9.5	Id. ; cirro-stratus and woolly cirri.
1	514	61.7	54.9	6.8	1.7	0.7	25	25 : — : —	10.0	Id. ; thick cirrus haze and cir.-str.
2	519	62.3	54.9	7.4	1.8	1.2	26	25 : — : —	9.9	Id. ; id.
3	531	62.4	54.8	7.6	1.8	1.4	24	26 : — : —	9.7	Id. ; id.
4	541	62.6	55.1	7.5	2.2	1.2	26	25 : 26 : —	9.5	Masses of scud and loose cumuli ; cirro-strati.
5	556	62.1	55.3	6.8	2.8	1.8	24	26 : 26 : —	9.5	Scud ; loose cum., cir.-str., and cir.-cum.-str.
6	559	61.4	54.8	6.6	1.9	1.8	26	— : 28 : 28	8.5	Woolly cirri and cirro-strati ; scud and cum. near hor.
7	581	59.0	53.4	5.6	2.3	1.3	22	— : 28 : 28	2.0	Id. ; id.
8	600	56.2	52.2	4.0	1.5	1.2	26		1.5	Scud and cirro-stratus.
9	618	55.1	51.7	3.4	1.0	2.2	26	28 : — : —	2.5	Id.
10	637	54.7	51.4	3.3	1.9	1.2	22		0.5	Id.
11	660	54.0	51.8	2.2	1.3	1.0	24		0.7	Id.
12	680	52.1	49.3	2.8	1.6	0.4	24		0.0	Id.
13	29.705	50.8	48.6	2.2	0.4	0.4	20		1.0	Scud and cirro-stratus.
14	722	50.8	48.7	2.1	1.1	0.3	26		4.5	Id.
15	733	51.8	49.2	2.6	0.3	0.2	24		9.5	Id.
16	746	52.2	49.4	2.8	0.6	0.2	28		9.7	Id.
17	767	54.3	50.1	4.2	0.5	0.7	28		10.0	Id.
18	802	54.2	50.1	4.1	0.5	0.9	28		10.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
26 19	29.822	54.3	50.2	4.1	1.0	0.5	30	— : 30 : —	10.0	Sky covered with cirro-strati.
20	851	54.8	50.8	4.0	0.8	0.4	29	— : 30 : —	6.0	Cirro-cumulo-strati; cir.-str.; patches of scud to N. ☒
21	866	56.6	52.0	4.6	1.2	0.5	28	— : 0 : —	2.5	Sheets of cirro-strati; patches of scud to S. ☒
22	893	58.1	53.2	4.9	1.6	1.2	0	0 : — : —	8.0	Loose cumuli; cirro-strati; patches of scud to S. ●
23	915	60.0	54.3	5.7	1.1	0.8	0	0 : — : —	9.9	Id.; id.
27 0	934	59.7	54.2	5.5	0.8	0.2	0	0 : — : —	9.0	Id.; id.
1	955	58.7	54.7	4.0	0.5	0.4	2	0 : — : —	9.9	Id.; id.
2	968	60.2	54.8	5.4	0.4	0.3	3	0 : — : —	9.0	Id.; id.
3	977	59.6	54.8	4.8	0.3	0.2	4	— : 30 : —	8.5	Cirro-cumulo-strati; cirro-strati. ☐
4	987	60.3	55.0	5.3	0.3	0.2	1	— : 30 : —	8.0	Cumulo-strati; cirro-strati; woolly cirri. ☒
5	29.999	59.7	54.4	5.3	0.3	0.2	6		1.5	Cirro-strati; woolly cirri. ☒
6	30.005	59.4	53.7	5.7	0.3	0.1	4	28 : — : —	1.0	Scud; cirro-strati and light cirri. ☒
7	017	59.0	54.7	4.3	0.2	0.1	4	— : 29 : —	7.0	Detached cir.-str., rad. from NNW.; cirri; ragged scud on Cheviot. ☒
8	042	53.3	52.0	1.3	0.2	0.1	4	— : 29 : —	6.0	Cirro-strati; woolly cirri and haze.
9	052	49.0	47.4	1.6	0.0	0.0	30		5.0	Bands of woolly cir.-str., rad. from NNE. and SSW.; cirrous haze.
10	068	49.3	48.8	0.5	0.1	0.0			9.0	Cirro-strati and haze.
11	079	50.2	49.4	0.8	0.1	0.0	18		10.0	Overcast.
12	083	50.3	49.6	0.7	0.0	0.0	20		10.0	Id.
13	30.078	48.3	47.8	0.5	0.0	0.0	20		1.0	Clouds on horizon.
14	086	45.9	45.4	0.5	0.0	0.0	26		1.0	Cirro-strati; stratus on the ground. ☐
15	095	43.5	43.4	0.1	0.0	0.0	22		0.5	Cirro-cumuli; id. ☐
16	084	46.0	45.8	0.2	0.0	0.0	16		9.5	Cirro-strati. ☐
17	086	46.3	45.9	0.4	0.0	0.0	22	— : 1 : —	9.5	Cirro-cumulo-strati; clouds tinged with red to E.
18	095	46.9	46.3	0.6	0.0	0.0	24	— : 1 : —	9.2	Id.; cirro-strati.
19	113	48.0	47.3	0.7	0.0	0.0	20	2 : 1 : —	5.0	Loose cirro-strati; cirro-cumuli.
20	122	49.7	48.8	0.9	0.0	0.0	24	16 : 2 : 1	0.8	Patches of loose scud; loose cir.-str.; cir.-cum.; all to E. ☒
21	106	53.3	52.0	1.3	0.1	0.0	17		0.3	Cirro-strati on S. horizon. ☐
22	119	58.5	55.3	3.2	0.1	0.0	15		0.2	Id.
23	115	60.3	55.3	5.0	0.1	0.1	26		0.1	Scud and cirro-strati on SE. horizon. ☐
28 0	111	62.7	56.8	5.9	0.1	0.1	20		0.2	Scud, cirro-strati, and haze, on SE. horizon. ☐
1	107	65.8	59.2	6.6	0.1	0.1	22		0.2	Id., id., id. round horizon. ☐
2	106	67.9	59.8	8.1	0.1	0.1	20	16 : — : —	0.5	Small cumuli; cirro-stratus bank; cirrous haze to E. ☒
3	106	68.3	59.3	9.0	0.1	0.0	2		0.3	As before.
4	098	70.2	59.5	10.7	0.0	0.0			0.5	Small cumuli, cirri, and cirro-strati. ☐
5	093	70.2	59.1	11.1	0.1	0.1	2		0.5	Id., id., id. ☐
6	088	69.0	60.3†	8.7	0.1	0.0	19		0.3	Id., id., id. ☐
7	088	66.3	60.3†	6.0	0.1	0.1	21		0.2	Cirri. ☐
8	101	63.2	59.0	4.2	0.1	0.1	24		1.0	Woolly cirri; cirrous haze.
9	114	59.2	56.0	3.2	0.1	0.0	0		0.3	Id.; id.
10	117	55.9	54.3	1.6	0.1	0.0	18		0.1	Clear; one or two patches of cirrus.
11	115	53.0	52.0	1.0	0.1	0.0			0.0	Id.
12	116	51.3	51.0	0.3	0.0	0.0			0.0	Id.
13	30.122	49.7	49.4	0.3	0.1	0.0	18		0.0	Clear.
14	122	48.6	48.5	0.1	0.0	0.0	20		0.1	Id.; haze on NE. horizon.
15	117	48.6	48.6	0.0	0.0	0.0	16		0.2	Cirro-strati and haze on E. hor.; mist in the valleys. ☐
16	112	52.6	52.4	0.2	0.1	0.1	24		9.0?	Dense fog; a star visible in zenith.
17	114	53.9	53.7	0.2	0.2	0.1	24		10.0?	Id.; objects invisible at $\frac{3}{4}$ of a mile.
18	128	53.0	52.8	0.2	0.1	0.1	22		2.0	Misty scud and cir.-str. round hor.; fog clearing off. ☐
19	140	52.7	52.4†	0.3	0.1	0.0	24		1.0	Scud to S.; cirro-strati and cirri near horizon. ☐
20	128	57.6	56.4†	1.2	0.1	0.1	19	28 : — : —	0.8	Patches of scud; cirri to NW. ☐
21	130	60.8	58.6	2.2	0.2	0.1	18	25 : — : —	0.8	Id.; streaks of cirri rad. from N by E. ☐
22	132	65.1	61.4	3.7	0.1	0.1	21	26 : — : 28	4.0	Loose scud; cirri. ☐
23	129	67.0	62.3	4.7	0.2	0.1	18	27 : — : —	9.5	Scud and loose cumuli; cirri.
29 0	136	69.6	64.6	5.0	0.1	0.1	20	27 : — : —	9.7	Id.; id. ☐
1	134	69.0	63.0	6.0	0.1	0.1	30	26 : — : —	9.5	Id.; id.
2	124	70.5	63.0	7.5	0.3	0.2	28	26 : — : —	9.5	Id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1p.	From	lbs.	lbs.	pt.	
29	30.116	71.4	64.1	7.3	0.3	0.1	22	26	— : —	8.5
		70.2	63.2	7.0	0.3	0.2	26	24	— : 22	3.0
		70.0	62.5	7.5	0.3	0.1	25	—	— : 28	2.5
		68.6	61.8†	6.8	0.2	0.1	22	28	— : —	2.0
		64.8	61.7	3.1	0.1	0.0	24			1.5
		62.2	58.7†	3.5	0.2	0.1	24			1.5
		57.8	56.0	1.8	0.2	0.1	22			1.0
		55.8	54.5	1.3	0.1	0.1	22			0.2
		52.6	52.1	0.5	0.1	0.0	18			0.3
		51.8	51.7	0.1	0.0	0.0	20			0.3
		50.5	50.2	0.3	0.0	0.0	19			0.3
		50.2	50.0	0.2	0.0	0.0	24			0.4
30	30.136	48.9	48.8	0.1	0.0	0.0				0.5
		47.8	47.7	0.1	0.0	0.0				0.5
		46.9	46.7	0.2	0.1	0.0	20	—	: 28 : —	4.0
		47.6	47.6	0.4	0.1	0.0	18	—	: 30	9.0
		49.0	48.6	0.4	0.0	0.0	20	—	: 30	9.2
		54.1	53.5	0.6	0.1	0.1		—	: 29	8.0
		60.0	58.8	1.2	0.1	0.2	24	24	— : 30	8.0
		63.7	60.8	2.9	0.3	0.3	24	28	— : 25	8.0
		67.2	61.8	5.4	0.3	0.3	24	29	— : —	8.5
		69.2	62.7	6.5	0.4	0.4	25	28	— : 30	9.5
		71.0	63.7	7.3	0.4	0.2	22	—	— : 30	9.5
		71.6	64.5	7.1	0.4	0.2	21	—	— : 31	9.5
0	30.175	72.6	64.6	8.0	0.6	0.3	24			9.5
		70.7	63.1	7.6	0.5	0.4	28	—	— : 31	9.9
		69.3	63.4†	5.9	0.4	0.2	27	—	— : 31	10.0
		67.9	61.7	6.2	0.3	0.1	28			8.5
		64.8	60.7†	4.1	0.3	0.3	27			6.0
		62.5	58.9	3.6	0.3	0.1	22			6.0
		61.5	57.9	3.6	0.7	0.3	22			4.0
		58.9	56.6	2.3	0.3	0.1	23			1.5
		57.9	56.0	1.9	0.1	0.1	24			1.0
		55.7	54.6	1.1	0.1	0.1	16			1.0
		65.4	59.6	5.8	0.1	0.1	4		
		53.1	52.4	0.7	0.6	0.0				10.0
1	30.162	54.0	53.4	0.6	0.0	0.0				10.0
		54.8	54.0	0.8	0.0	0.0				10.0
		55.0	54.1	0.9	0.0	0.0				10.0
		55.0	54.0	1.0	0.0	0.0	24			10.0
		55.0	54.1	0.9	0.0	0.0	20	—	— : 24 : —	10.0
		56.1	55.1	1.0	0.0	0.0	22	—	— : 24 : —	9.9
		58.5	57.0	1.5	0.1	0.0	22	—	— : 24 : —	9.9
		63.0	60.0	3.0	0.1	0.0	18	—	— : 24 : —	9.8
		65.9	61.2	4.7	0.0	0.0	20	—	— : 24 : —	9.8
		68.5	62.7	5.8	0.1	0.1	24	24	— : —	9.0
		68.2	62.1	6.1	0.1	0.1	0	24	— : —	9.5
		69.4	63.6	5.8	0.1	0.1	18	24	— : —	5.0
2	094	70.0	62.6	7.4	0.1	0.1	30	22	— : —	8.0
		70.6	62.0	8.6	0.1	0.1	28	24	— : —	5.0
		72.9	63.8	9.1	0.2	0.3	28	26	— : —	6.0
		67.7	62.4	5.3	0.4	0.4	4	24	— : —	9.8
		65.0	60.5	4.5	0.3	0.2	6	—	— : 24 : —	9.9
		60.9	58.7	3.3	0.4	0.3	4			10.0
		58.2	56.3	1.9	0.6	0.5	3			10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Aug. 30^d 11^h 56^m. A shooting-star to E., magnitude 2, passing, towards the N., over 20° in 2 or 3 seconds; the course inclined 10° to the horizon.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1h.	From	lbs.	lbs.	pt.	pt.	pt.
d. h.	in.	°	°	°							
1 9	30.070	57.2	55.7	1.5	0.4	0.3	4			0—10.	Cirro-stratus scud.
10	068	56.6	55.2	1.4	0.2	0.2	4			10.0	Id.
11	068	56.1	55.1	1.0	0.1	0.0	2			9.9	Id.
12	062	56.0	54.8	1.2	0.0	0.0	4			10.0	Id.
13	30.057	55.9	54.5	1.4	0.0	0.0	0			10.0	Cirro-stratus scud.
14	051	55.5	54.3	1.2	0.0	0.0	2			9.8	Id.
15	045	55.3	54.0	1.3	0.0	0.0	2			10.0	Id.
16	043	55.2	54.0	1.2	0.0	0.1				10.0	Id.
17	042	54.8	53.8	1.0	0.0	0.0	24	— : 0 : —		10.0	Id.
18	049	54.4	53.6	0.8	0.0	0.0	16	— : 0 : —		10.0	Id.
19	049	55.2	54.8	0.4	0.1	0.0	16	— : 30 : —		10.0	Id.
20	068	56.3	54.8	1.5	0.1	0.2	4	5 : — : —		10.0	Misty scud ; cirro-stratus scud.
21	062	54.9	53.4	1.5	0.3	0.2	4			10.0	Dense homogeneous mass of cirro-stratus.
22	076	52.8	51.8	1.0	0.5	0.4	4			10.0	Id. ; fine rain ^{0.5}
23	078	53.4	52.0	1.4	0.4	0.5	4	4 : — : —		10.0	Misty scud.
2 0	083	52.4	50.8	1.6	0.4	0.5	4	4 : — : —		10.0	Id. ; rain ^{0.2}
1	084	52.8	51.4	1.4	0.2	0.1	6	4 : — : —		10.0	Id. ; id.
2	074	57.3	54.0	3.3	0.2	0.1	8	— : 6 : —		10.0	Cirro-stratus scud ; cirrus mass.
3	070	56.7	52.2	4.5	0.2	0.1	4	— : 6 : —		10.0	Id.
4	062	57.8	51.6	6.2	0.2	0.3	6	2 : 30 : —		9.8	Scud ; cirro-cumulo-strati.
5	066	56.0	50.8	5.2	0.2	0.2	8			9.9	Cirro-strati.
6	066	55.3	51.4	3.9	0.1	0.1	4			9.9	Scud on horizon ; cirro-stratus scud.
7	068	54.2	50.3	3.9	0.1	0.0		0 : 30 : —		9.8	Cirro-stratus scud ; cirro-cumulo-stratus.
8	071	52.9	50.7	2.2	0.1	0.1	8	0 : 30 : —		9.8	Id. ; id.
9	082	50.8	49.2	1.6	0.1	0.0				8.0	Cirro-cumulo-stratus.
10	080	47.4	47.0	0.4	0.0	0.0				0.5	Faint auroral light with faint streamers to NW.
11	082	42.6	42.3	0.3	0.0	0.0	26			0.0	Very clear ; a faint light, low on N. horizon.
12	084	42.4	42.4	0.0	0.0	0.0				0.1	Cirro-stratus on N. horizon.
13	30.082	38.4	38.2	0.2	0.0	0.0				0.2	Cirro-stratus on N. horizon.
14	083	37.4	37.0	0.4	0.0	0.0				0.5	Id. ; stratus on the ground.
15	086	37.3	37.2	0.1	0.0	0.0	22			1.0	Cirro-stratus to N.
16	079	39.9	39.7	0.2	0.0	0.0	24			9.9	Scud.
17	080	41.4	41.2	0.2	0.0	0.0	24			9.8	Id.
18	079	41.5	41.2	0.3	0.0	0.0	22	1 : — : —		9.5	Id. ; cirrus haze to W., tinged with red.
19	085	40.7	40.3	0.4	0.0	0.0	22	— : 0 : —		7.0	Cirr.-cum.-str. ; id. ; fog bank to E.
20	090	42.9	42.6	0.3	0.1	0.0	20	— : 0 : —		7.5	Id. ; sheet of cirrus haze to S.
21	088	49.7	48.3	1.4	0.1	0.0	20	— : 31 : —		9.8	Id.
22	089	54.0	51.3	2.7	0.1	0.0	12	— : 30 : —		9.5	Id. ; patches of scud on horizon.
23	081	55.8	50.4	5.4	0.1	0.0	2	0 : — : —		9.9	Scud ; cirro-cumulo-strati.
3 0	074	57.8	51.6	6.2	0.1	0.1	4	0 : 31 : —		6.0	Id. ; id. ; cirro-strati.
1	065	58.0	51.0	7.0	0.1	0.1	8	30 : — : —		7.5	Loose cumuli ; woolly cirri.
2	047	60.2	53.0	7.2	0.1	0.1		28 : — : —		9.0	Id. ; cirro-cumulo-strati.
3	032	61.2	53.9	7.3	0.1	0.0	8	28 : — : —		9.2	Id. ; id.
4	021	59.3	52.3	7.0	0.1	0.0	5	28 : — : —		9.0	Id. ; id. ; cirrus haze to S.
5	011	59.8	53.0	6.8	0.1	0.0	6	28 : — : —		9.0	Id. ; id. ; id.
6	008	58.0	52.4	5.6	0.1	0.0	4	— : 28 : —		9.5	Cirro-cumulo-strati ; cirrus haze.
7	006	54.1	51.0	3.1	0.1	0.1	2	— : 28 : —		9.8	Id. ; reticulated cirri ; cirrus haze.
8	016	51.9	48.4	3.5	0.1	0.1	3	29 : — : —		10.0	Thick scud.
9	028	51.1	47.4	3.7	0.4	0.4	3			10.0	Id. ; dark.
10	032	51.1	47.0	4.1	0.4	0.3	5			10.0	Very dark.
11	043	51.4	47.2	4.2	0.2	0.1	0			10.0	Id.
12	052	51.2	47.4	3.8	0.0	0.0				10.0	Id.
13	30.049	50.4	47.9	2.5	0.0	0.0				10.0	Very dark.
14	052	49.8	48.0	1.8	0.0	0.0				10.0	Id.
15	047	48.3	47.4	0.9	0.0	0.0	21			10.0	Scud.

Sept. 1^d 11^h. Observation made at 11^h 10^m.Sept. 2^d 12^h 5^m—25^m. Five shooting-stars seen to SE., all at about 30° altitude, moving generally towards S., but the directions varying 45°.Sept. 2^d 14^h 5^m. Shooting-star to SE., altitude 25°, moving eastward, magnitude 2.Sept. 2^d 15^h 5^m. Shooting-star to E., altitude 5°, moving towards ESE., magnitude 1; at 6^m, another to S. moving southward.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
3 16	30.045	48.5	47.6	0.9	0.0	0.0	20		10.0	Seud.
17	045	48.8	47.8	1.0	0.0	0.0	20	— : 28 : —	10.0	Cirro-stratus seud.
18	046	48.5	47.2	1.3	0.0	0.0	20	— : 28 : —	10.0	Id.; cirro-strati.
19	055	49.4	48.3	1.1	0.0	0.0	22	— : 28 : —	9.7	Cirro-cumulo-strati.
20	067	51.6	49.7	1.9	0.1	0.0	22	— : 28 : —	9.9	Id.
21	073	53.5	49.9	3.6	0.1	0.0	6	2 : 30 : —	10.0	Scud, chiefly on horizon; cirro-cumulo-strati.
22	072	55.0	50.6	4.4	0.1	0.0	6	2 : 28 : —	9.9	Masses of loose cumuli; cirro-cumulo-strati.
23	069	57.6	52.4	5.2	0.0	0.0	8	2 : 28 : —	10.0	Id.; id.
4 0	072	56.6	51.0	5.6	0.1	0.1	6	6 : 28 : —	9.5	Id.; id.
1	077	55.1	50.4	4.7	0.1	0.1	4	4 : — : —	10.0	Thick scud and loose cumuli.
2	074	55.8	50.8	5.0	0.1	0.1	4		10.0	Thick cirro-stratus scud.
3	068	54.9	50.7	4.2	0.1	0.1	6		10.0	Id.
4	065	55.4	50.6	4.8	0.1	0.1	10	28 : — : —	10.0	Id.
5	060	55.0	50.5	4.5	0.1	0.1	8	28 : — : —	10.0	Id.
6	059	53.7	50.3	3.4	0.2	0.1	4	28 : — : —	10.0	Id.
7	058	52.7	50.2	2.5	0.1	0.1	8	28 : — : —	10.0	Id.
8	061	51.9	49.7	2.2	0.1	0.0	7	26 : — : —	10.0	Id.
9	064	50.5	49.0	1.5	0.1	0.1	31		10.0	Id.
10	070	50.0	48.7	1.3	0.1	0.0			10.0	Id.
11	070	49.5	48.7	0.8	0.0	0.0	28		10.0	Id.
12	066	49.1	48.6	0.5	0.0	0.0	25		10.0	Id.
13	30.057	48.9	48.3	0.6	0.0	0.0	25		10.0	Thick cirro-stratus scud.
14	053	48.9	48.2	0.7	0.0	0.0			10.0	Scud and cirro-cumulo-stratus?
15	046	49.2	48.4	0.8	0.0	0.0	25		10.0	Id.
16	041	48.7	48.0	0.7	0.1	0.0	25		10.0	Id.
17	035	48.2	47.5	0.7	0.0	0.0	24		9.8	Id.; sky to NE.
18	034	47.2	46.5	0.7	0.0	0.0	20	4 : — : —	9.5	Loose ragged scud and cirro-cumulo-stratus.
19	036	47.7	47.0	0.7	0.1	0.0	12	— : 3 : —	7.0	Cirro-cumulo-strati; cirro-strati; loose scud.
20	037	51.7	50.3	1.4	0.1	0.0	8	— : 2 : —	7.0	Id.; id.; id.
21	042	53.4	51.0	2.4	0.1	0.0	6	4 : 2 : —	9.0	Seud and loose cum.; large loose cirro-cumulo-stratus.
22	045	53.7	49.7	4.0	0.1	0.1	4	2 : — : —	8.0	Id.; cumuli; cirro-strati.
23	046	54.8	50.3	4.5	0.2	0.1	6	2 : — : —	9.0	Id.; id.; id.; pat. of seud.
5 0	046	55.3	49.7	5.6	0.3	0.3	7	2 : — : —	9.8	Seud and loose cumuli; cirro-strati; haze.
1	049	54.0	48.8	5.2	0.3	0.2	6	— : 2 : —	6.0	Cirro-cumulo-strati; id.; id.
2	046	55.0	49.0	6.0	0.3	0.2	4	6 : — : —	8.0	Seud and loose cumuli; id.; id.
3	036	56.0	49.4	6.6	0.3	0.2	4	8 : — : —	9.8	Id.; id.; id.
4	022	55.7	49.3	6.4	0.3	0.1	12	8 : — : —	7.5	Id.; id.
5	027	54.7	49.2	5.5	0.2	0.1	10	— : 8 : —	5.0	Masses of cirro-strati; id.; id.
6	030	53.5	48.1	5.4	0.2	0.1	7	— : 6 : —	2.0	Cirro-stratus scud; cirri to N.
7	037	50.8	47.4	3.4	0.1	0.1	20	— : 11 : —	4.0	Cirro-cumulo-strati; id.
8	047	49.0	46.9	2.1	0.1	0.1	23		9.9	Cirro-stratus scud.
9	058	48.0	46.4	1.6	0.1	0.0	20		8.0	Id.
10	057	44.8	44.2	0.6	0.1	0.0	8		0.2	Clouds on E. horizon.
11	062	41.8	41.1	0.7	0.1	0.0	20		0.0	Clear.
12	066	38.9	38.5	0.4	0.0	0.0	20		0.0	Id.
13	30.072	38.7	38.3	0.4	0.1	0.0	24		0.0	Clear.
14	072	38.3	38.0	0.3	0.0	0.0	18		1.0	Cirro-stratus to N.
15	077	37.8	37.4	0.4	0.0	0.0	18		9.5	Seud and cirro-stratus.
16	080	40.4	40.0	0.4	0.0	0.0	20		9.5	Id.
17	082	39.5	39.1	0.4	0.0	0.0	22		8.0	Seud; cirro-cumulo-strati.
18	090	40.0	39.4	0.6	0.1	0.1	24	14 : — : —	9.0	Cirro-stratus scud.
19	097	41.7	40.7	1.0	0.1	0.0	15	14 : — : —	9.8	Id.; cirri.
20	093	44.7	43.2	1.5	0.0	0.0	24	16 : — : —	9.9	Id.; id.
21	098	47.0	45.2	1.8	0.0	0.0	20	16 : — : —	10.0	Id.
22	097	50.8	48.4	2.4	0.1	0.0	24	16 : — : —	10.0	Id.
23	105	53.4	50.2	3.2	0.0	0.0	28	16 : — : —	10.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h.	From 10 m.	pt.	pt.	pt.	
d. h. 6 0	in. 30-101	° 56.7	51.6	5.1	0.1	0.1	16	16 : — : —	0-10.	Cirro-stratus scud.
1	101	58.0	52.8	5.2	0.1	0.1	23	14 : — : —	10.0	Id.
2	092	58.3	52.7	5.6	0.1	0.0	14	13 : 13 : —	9.8	Scud and cirro-cumulo-strati; atmosphere very hazy. ⊖
3	085	59.3	53.4	5.9	0.1	0.1	12	13 : 13 : —	9.0	Id.; id.
4	077	58.0	51.6	6.4	0.1	0.1	12	12 : 12 : —	9.8	Loose cumuli and cirro-cumulo-strati; id. ●
5	074	56.8	51.0	5.8	0.1	0.1	6	4 : 12 : —	9.8	Scud; cumulo-strati; hazy atmosphere. ●
6	072	54.6	50.6	4.0	0.1	0.1	7	— : 12 : —	8.0	Cirro-cumulo-strati; cumuli on horizon.
7	075	54.0	51.2	2.8	0.1	0.1	10	— : 12 : —	8.0	Id.; atmosphere hazy.
8	088	50.0	48.3	1.7	0.1	0.0	0		7.5	Id.; id.
9	100	49.0	47.8	1.2	0.0	0.0	6		8.0	Id.
10	105	46.8	46.0	0.8	0.0	0.0	24		5.0	Thin sheets of cirro-cumulo-strati scattered over the sky.
11	108	43.9	43.6	0.3	0.0	0.0			4.0	Cirro-strati.
12	111	42.8	42.4	0.4	0.0	0.0	20		4.0	Id.
23 ₄	30.091	51.4	49.8	1.6	0.1	0.0			
7 13	29.991	43.5	43.0	0.5	0.5	0.0			9.8	Cirro-cumulo-strati.
14	980	42.3	41.9	0.4	0.0	0.0			7.0	Id.
15	957	41.2	40.9	0.3	0.0	0.0	22		5.0	Id.
16	935	41.1	40.9	0.2	0.0	0.0	16		8.0	Id.; cirri?
17	943	43.3	43.0	0.3	0.1	0.1	24		9.5	Id.; denser; sky red to E.
18	926	44.3	43.9	0.4	0.0	0.0	18	— : 20 : —	9.9	Cir.-str. scud; cir.-cum.-str.; very red to E.; fog in the
19	933	45.3	45.0	0.3	0.0	0.0	22		10.0	Cirro-cumulo-strati; cirro-strati. [hollows.]
20	913	46.8	46.2	0.6	0.0	0.0	23		10.0	Cirro-stratus scud; cirrus mass.
21	924	52.2	50.6	1.6	0.0	0.0	22	22 : — : —	10.0	Scud; thick cirrus haze and cirro-stratus.
22	912	56.0	53.1	2.9	0.3	0.3	20	22 : — : —	10.0	Id.; id.
23	900	58.2	53.5	4.7	0.5	0.5	20	22 : — : —	10.0	Id.; id.; solar halo. ⊖
8 0	907	60.0	55.8	4.2	0.5	0.5	18	19 : — : —	9.8	Id.; thick cirrus haze. ⊖
1	897	59.7	54.8	4.9	0.7	0.5	18	— : 19 : —	9.9	Thick woolly cirri; cirro-stratus. ●
2	878	61.7	56.0	5.7	0.6	0.5	20		9.9	Id.; id. [patches of scud. ⊖]
3	868	61.8	56.8	5.0	0.6	0.5	19	— : 24 : —	4.5	Woolly cir.-cum.; cir.-str. with mottled edges; cir. haze;
4	864	62.7	57.0	5.7	0.5	0.4	20	— : 26 : —	4.5	Woolly cirri; sheets of cirro-strati; cumuli. ⊖
5	874	61.8	56.6	5.2	0.5	0.2	18	— : 27 : —	7.5	Sheets of woolly cirri; cirro-cumuli and cirro-strati. ⊖
6	857	60.7	55.4	5.3	0.5	0.3	19	— : 26 : —	9.0	Id.; id.
7	859	57.3	53.3	4.0	0.4	0.3	22		7.0	Id.; id.
8	856	53.6	51.2	2.4	0.3	0.1	22		8.0	Id.; id.
9	862	53.3	50.8	2.5	0.3	0.3	20		5.0	Id.; id. in zenith.
10	857	52.9	50.5	2.4	0.3	0.1	16		7.0	Cirro-strati; cirri.
11	840	51.6	49.4	2.2	0.1	0.0	21		8.0	Id.
12	833	51.7	49.6	2.1	0.1	0.0	20		9.8	Id.
13	29.816	52.9	51.0	1.9	0.4	0.1	18		9.9	Cirro-strati.
14	801	53.5	51.2	2.3	0.3	0.3	22		9.9	Scud and cirro-stratus.
15	787	54.1	51.7	2.4	0.6	0.5	19		9.7	Scud; cirro-strati.
16	770	53.5	51.6	1.9	0.4	0.3	20		9.0	Id.; id.
17	755	54.1	51.9	2.2	1.1	0.1	18		9.9	Id.; id.
18	743	54.4	52.1	2.3	0.7	0.0	12	20 : 22 : —	9.7	Loose scud; cirro-strati. [cir.-str. and cir.-cum.]
19	752	56.3	54.0	2.3	0.6	0.2	24	21 : 23 : —	9.0	Id. seems to form at an altitude of 15°—20°;
20	735	58.0	55.1	2.9	0.6	0.5	20	21 : 24 : —	9.5	Occasionally thin patches of scud; loose and dense masses
21	725	58.7	55.6	3.1	1.1	0.7	20	21 : 24 : —	9.9	As before. [of cirro-strati.]
22	726	60.2	56.8	3.4	1.2	1.2	20	21 : 24 : —	9.9	Id.
23	720	61.5	57.7	3.8	1.4	1.5	21	21 : 22 : —	9.9	Patches of scud; dense masses of cirro-strati.
9 0	706	61.3	57.8	3.5	2.0	1.7	22	20 : 20 : —	9.9	Id.; id. [rain.]
1	704	61.4	58.2	3.2	1.2	1.1	21	20 : 20 : —	9.9	Masses of scud and cirro-strati; occasionally drops of
2	701	61.3	58.1	3.2	1.1	1.0	22	21 : — : —	9.9	Id.
3	683	62.1	59.0	3.1	1.2	1.2	20	21 : 21 : —	9.5	Id.; sky in patches.
4	673	62.1	59.0	3.1	1.7	1.7	21		10.0	Id.
5	675	59.7	58.0	1.7	1.6	0.5	20	21 : — : —	10.0	Loose misty scud, moving rapidly.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

HOURLY METEOROLOGICAL OBSERVATIONS, SEPTEMBER 9—11, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	lbs.	lbs.	pt.	
d. h.	in.	°	°	°	1bs.	1bs.	pt.	pt.	pt.	0—10.
9 6	29.675	60.9	58.4	2.5	1.7	0.6	19	20 : — : —	3.0	Loose misty scud, moving rapidly; cirro-cumulo-strati. ☰
7	694	59.0	57.4	1.6	0.4	0.1	20	21 : — : —	10.0	Id.; id.
8	699	58.4	57.3	1.1	0.3	0.1	19	24 : — : —	9.5	Scud.
9	716	59.7	57.4	2.3	0.7	0.1	24		9.9	Id.; cirro-cumulo-strati.
10	726	58.4	56.1	2.3	0.3	0.3	24		9.0	Id.
11	741	55.3	54.3	1.0	0.3	0.1	9		4.5	Id.; cirro-strati.
12	764	54.2	53.5	0.7	0.1	0.0			10.0	Id.; id.
13	29.780	55.0	54.2	0.8	0.1	0.0	20		5.0	Scud; cirro-strati.
14	805	51.6	51.3	0.3	0.0	0.0	20		1.5	Id.; id.; mist in the hollows.
15	825	53.4	52.9	0.5	0.0	0.0	22		10.0	Id.; id.
16	858	55.9	54.8	1.1	0.3	1.1	2		10.0	Id.; rain ^{0.2}
17	891	53.3	52.5	0.8	0.9	0.5	1	2 : — : —	10.0	Id.
18	922	52.7	51.7	1.0	0.5	0.3	3	3 : — : —	10.0	Id.
19	958	51.9	51.0	0.9	0.4	0.2	2	3 : — : —	10.0	Loose misty scud; drizzling rain ^{0.2}
20	974	52.0	50.6	1.4	0.5	0.1	3	4 : — : —	10.0	Id.; id.
21	29.997	52.6	50.8	1.8	0.3	0.2	4	3 : — : —	10.0	Id.; id.
22	30.004	53.7	50.9	2.8	0.7	0.8	3	4 : — : —	10.0	Scud.
23	019	53.7	50.3	3.4	0.8	0.9	3	4 : — : —	10.0	Id.
10 0	018	54.6	51.6	3.0	0.6	0.4	3	4 : — : —	10.0	Id.
1	021	54.0	51.0	3.0	0.7	0.3	4	3 : — : —	10.0	Id.; cirro-stratus scud.
2	020	54.3	50.7	3.6	0.3	0.2	7	3 : — : —	10.0	Id.; id.
3	015	54.9	50.4	4.5	0.4	0.2	5	4 : — : —	10.0	Id.; id.
4	024	54.6	50.3	4.3	0.5	0.3	8	5 : — : —	9.5	Id.; id.; clouds breaking.
5	017	54.0	50.2	3.8	0.3	0.1	4	5 : — : —	4.0	Id.
6	019	52.0	49.0	3.0	0.2	0.1	7	5 : — : —	9.0	Cirro-stratus scud.
7	019	50.8	47.8	3.0	0.3	0.1	4	4 : — : —	7.5	Scud and cirro-stratus scud.
8	021	49.3	47.0	2.3	0.2	0.1	5		10.0	Id.
9	022	48.7	46.0	2.7	0.2	0.1	4		10.0	Id.
10	023	49.0	46.8	2.2	0.1	0.1	4		10.0	Id.
11	020	49.2	46.5	2.7	0.0	0.2	4		10.0	Id.
12	019	48.6	46.5	2.1	0.2	0.0	4		10.0	Id.
13	30.009	48.7	46.6	2.1	0.1	0.1	10		10.0	Scud and cirro-stratus scud.
14	29.997	48.6	46.9	1.7	0.1	0.0	10		10.0	Id.
15	985	48.6	47.2	1.4	0.0	0.0	8		10.0	Id.
16	981	48.5	47.3	1.2	0.1	0.0	8		10.0	Id.
17	978	48.6	47.1	1.5	0.1	0.0	6		10.0	Id.
18	975	48.5	47.3	1.2	0.0	0.0	6	8 : — : —	10.0	Id.; slightest drizzle of rain.
19	967	48.7	47.1	1.6	0.1	0.1	7	8 : — : —	10.0	Id.
20	966	49.4	47.7	1.7	0.1	0.1	9	8 : — : —	10.0	Id.; id.
21	959	49.9	48.3	1.6	0.1	0.1	6	6 : — : —	10.0	Dense cirro-stratus and scud.
22	956	51.3	49.4	1.9	0.1	0.1	7		10.0	Id.
23	946	52.2	50.0	2.2	0.1	0.1	7	— : 7 : —	10.0	Id.
11 0	937	54.3	51.4	2.9	0.2	0.1	6		10.0	Id.
1	928	54.8	51.7	3.1	0.1	0.1	8		10.0	Id.
2	918	52.5	51.2	1.3	0.3	0.2	4		9.9	Id.
3	903	56.9	53.0	3.9	0.2	0.2	4	— : 14 : —	8.0	Cirro-cumulo-strati; cirro-strati.
4	885	54.8	51.0	3.8	0.3	0.3	7	— : 13 : —	2.5	Id.; id.; woolly cirri.
5	880	54.4	51.0	3.4	0.4	0.2	4	— : 16 : —	8.0	Θ
6	883	53.2	50.2	3.0	0.2	0.2	4	14 : — : —	9.8	Scud; cirro-stratus scud.
7	881	51.8	49.4	2.4	0.2	0.1	3	14 : — : —	10.0	Id.; id.
8	886	51.0	48.9	2.1	0.2	0.1	6		10.0	Id.; id.
9	888	50.6	48.7	1.9	0.1	0.1	7		10.0	Id.; id.
10	887	50.3	48.4	1.9	0.1	0.0	10		10.0	Id.; id.
11	879	50.1	48.5	1.6	0.0	0.0	12		10.0	Id.; id.
12	881	49.7	47.8	1.9	0.0	0.0	18		10.0	Id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h.	From 10 m.	pt.	pt.	pt.	
d. h. 11 13	in. 29.875	49.4	47.7	1.7	0.0	0.0	20	0—10.	10·0	Scud ; cirro-stratus scud,
14	870	49.4	47.9	1.5	0.0	0.0	16	10·0	Dark ; very slight drizzle.	
15	867	49.0	47.6	1.4	0.0	0.0	22	10·0	Id.	
16	857	49.0	47.9	1.1	0.0	0.0		10·0	Id. ; very slight drizzle.	
17	848	48.9	47.8	1.1	0.0	0.0	22	10·0	Thick scud and cirro-stratus.	
18	849	49.0	48.0	1·0	0.0	0.0		10·0	Id.	
19	858	49.2	48.2	1·0	0.0	0.0	8	16 : — : —	10·0	Dense scud and cirro-stratus scud.
20	854	51·3	49·1	2·2	0·0	0·0	30	— : 17 : —	9·9	Cirro-cumulo-stratus.
21	858	54·7	51·3	3·4	0·1	0·1	2	— : 17 : —	8·0	Id. ; scud to W.
22	862	56·2	52·2	4·0	0·1	0·0	14	— : 17 : —	9·9	Cirro-cumulo-strati and cirro-strati.
23	854	58·2	53·5	4·7	0·1	0·1	14	— : 18 : —	9·9	Cirro-cumulo-strati.
12 0	847	61·4	56·2	5·2	0·2	0·1	15	18 : — : —	8·5	Loose cumuli ; cirro-strati.
1	843	60·6	55·0	5·6	0·2	0·1	18	17 : — : —	4·0	Id.
2	830	62·2	55·4	6·8	0·3	0·1	20	16 : — : —	6·0	Id., with a peristaltic motion.
3	819	64·4	57·0	7·4	0·2	0·1	23	16 : — : —	2·5	Id. ; very hazy on E. and S. horizon.
4	803	63·7	56·4	7·3	0·1	0·1	18	20 : — : —	3·5	Id. ; id.
5	792	61·5	56·5	5·0	0·1	0·0	20		3·0	Id. ; id.
6	788	58·9	55·4	3·5	0·0	0·0	16		2·5	Patches of scud and cir.-cum.-str. ; much atmospheric
7	791	55·3	53·0	2·3	0·2	0·2	18	22 : — : —	4·0	Scud ; haze. [haze.
8	791	51·2	49·8	1·4	0·3	0·1	16		1·0	Id. ; id.
9	794	50·9	49·6	1·3	0·0	0·0	24		0·3	Haze on horizon.
10	796	48·8	48·0	0·8	0·0	0·0	24	— : 18 : —	2·0	Cirro-cumulo-strati to S. ; haze on horizon.
11	785	46·0	45·7	0·3	0·1	0·0	18		0·5	Haze on horizon.
12	783	42·9	42·5	0·4	0·1	0·0	18		2·5	Cirro-cumulo-strati to S. ; haze on horizon.
13	29.775	43·2	42·9	0·3	0·0	0·0	17		6·5	Cir.-cum.-str., rad. from SW by W.; haze on hor.; mist on the ground;
14	768	43·5	43·3	0·2	0·0	0·0	22		9·0	As before. [very hazy. ♂
15	761	45·4	45·1	0·3	0·0	0·0	20		7·5	Id.
16	741	44·0	43·8	0·2	0·0	0·0	22		2·0	Clouds and haze round horizon.
17	717	44·3	44·1	0·2	0·0	0·0	22		9·8	Cirro-cumulo-strati and cirro-strati.
18	707	44·7	44·3	0·4	0·1	0·0	22	— : 18 : —	10·0	Cirro-cumulo-strati.
19	707	46·0	45·6	0·4	0·0	0·0	24	— : 19 : —	9·9	Id., or cirro-stratus scud ; slight fog on horizon.
20	700	47·8	47·1	0·7	0·0	0·0		— : 18 : —	10·0	Cirro-stratus scud ; slight fog towards horizon.
21	685	49·6	48·6	1·0	0·1	0·0	24	— : 18 : —	10·0	Id. ; id.
22	672	52·7	51·1	1·6	0·0	0·0	28	— : 18 : —	10·0	Id. ; id.
23	660	56·4	54·1	2·3	0·0	0·0			10·0	Id.
13 0	640	59·1	56·1	3·0	0·0	0·0	0	18 : — : —	10·0	Scud and loose cum. ; dense cir.-str. scud and cir.-str.
1	620	60·1	56·8	3·3	0·0	0·0	16	18 : — : —	10·0	Patches of scud; dense mass of cir.-str. ; loose cum.-str.
2	600	61·3	56·7	4·6	0·1	0·1	22		10·0	As before. [to SE.
3	575	61·3	57·2	4·1	0·1	0·1	18	— : 18 : —	10·0	Dense cirro-stratus and cirro-stratus scud.
4	549	61·0	56·8	4·2	0·1	0·0	16	— : 17 : —	9·9	Dense cir.-str. ; cum.-str. to SE. ; sky in patches to NW.
5	524	60·0	56·6	3·4	0·1	0·0	20		10·0	As before.
6	506	58·5	55·7	2·8	0·0	0·0	20	— : 17 : —	10·0	Id. ; sky in patches to NW.
7	492	56·7	55·0	1·7	0·1	0·0	24		10·0	Id. ; id.
8	474	55·3	54·2	1·1	0·1	0·0	20		10·0	Cirro-cumulo-strati, with scud below.
9	460	54·7	53·3	1·4	0·1	0·0	24		10·0	Id.
10	428	53·4	51·9	1·5	0·1	...	31		9·8	Dense cirro-cumulo-strati and cirro-strati.
11	404	53·8	51·3	2·5	0·1	0·1	18		10·0	Id.
12	378	54·6	52·1	2·5	0·5	0·2	15		10·0	Cirro-strati and scud ? radiating from SW.
14 0 ₁	29.203	61·2	55·9	5·3	0·8	0·1	18	20 : 14 : —	{ Sunday—Loose cumuli ; cirro-cumulo-strati and woolly cirri ; slight showers occasionally.
13	29.191	37·0	36·7	0·3	1·1	0·0			0·8	Masses of scud to SE.
14	185	37·2	36·9	0·3	0·0	0·0	22		0·2	Clouds to E.
15	182	35·4	35·2	0·2	0·0	0·0	20		0·0	Very clear.
16	176	34·7	34·5	0·2	0·0	0·0	22		0·0	Id.
17	187	33·4	33·2	0·2	0·0	0·0	22		0·2	Cirro-stratus and haze on E. horizon.
18	198	34·2	34·0	0·2	0·0	0·0	22		0·5	Cir.-str. and cirri; hoar frost; mist rising from the river.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.
Sept. 13th 11^h. Observation made at 11^h 8^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1b.	From	pt.	pt.	pt.	
d. h. 14 19	in. 29.205	35.5	35.3	0.2	0.1	0.0	20	— : — : 20	0—10. 0.8	Linear and woolly cirri.
20	211	38.9	38.7	0.2	0.1	0.1	20	— : — : 20	1·0	Id. ○ [WSW.; haze. ○
21	219	44.3	43.7	0.6	0.1	0.0	25	— : — : 22	4·0	Id. ; radiating from ENE. and
22	222	50.2	48.2	2.0	0.1	0.1	22	— : — : 22	4·0	As before, with patches of scud to N. and cum. to S. ○
23	235	55.8	51.6	4.2	0.1	0.1	20	24 : — : 22	4·0	Loose cum. ; linear, curled, and woolly cir. ; portion of a
15 0	233	57.6	51.6	6.0	0.3	0.1	23	22 : — : —	7·0	Loose cumuli ; cirri as before. Θ [solar halo. ○
1	229	58.7	52.4	6.3	0.3	0.1	20	22 : — : —	7·0	Id. ; cumuli ; cirro-strati ; woolly cirri.
2	227	59.2	51.6	7.6	0.2	0.1	30	22 : — : —	6·5	Id. ; id. ; id. ; id.
3	227	58.6	51.6	7.0	0.1	0.3	21	21 : — : —	8·2	Id. ; id. ; cirri.
4	230	58.7	51.8	6.9	0.7	0.3	21	20 : — : —	8·5	Id. ; id. ; id. ; cirro-strati.
5	238	54.8	50.4	4.4	0.5	0.1	24	20 : 23 : —	9·0	Scud ; loose cirro-strati ; cum.-str., showers to N. ●
6	243	53.8	50.1	3.7	0.1	0.0	20	21 : — : —	7·0	Id. ; id. ; great piles of cumulo-strati. Θ
7	254	50.5	48.3	2.2	0.0	0.0	20	20 : — : —	4·0	Scud ; cirro-strati.
8	264	47.5	45.9	1.6	0.1	0.0	2	— : — : —	7·0	Cirro-cumulo-strati.
9	265	48.6	46.9	1·7	0.0	0.0	16	— : — : —	8·0	Id.
10	272	47.3	46.2	1·1	0.0	0.0	4	— : — : —	9·0	Id.
11	280	46.8	46.0	0·8	0·1	0·0	17	— : 20 : —	8·5	Id. ; cirro-strati.
12	286	48·3	47·4	0·9	0·1	0·0	23	— : 20 : —	6·5	Id. ; id.)
13	29.291	45.7	45.1	0·6	0·1	0·0	17	— : — : —	1·5	Cirro-cumulo-strati ; cirro-strati.
14	293	42.5	42.3	0·2	0·1	0·0	17	— : — : —	1·0	Id. to S.
15	294	41.3	41.1	0·2	0·1	0·0	18	— : — : —	0·2	Thin cirri ; cirro-strati to W. ; mist on the ground.)
16	290	42.5	42.0	0·5	0·1	0·0	22	— : — : —	0·0	Very clear.)
17	303	42.8	42.3	0·5	0·2	0·1	24	— : — : —	0·2	Streak of cirri on E. horizon.) [Cheviot.)
18	307	42.0	41.4	0·6	0·2	0·1	26	— : — : —	0·5	Id. ; cirro-strati ; scud on
19	319	42.0	41.0	1·0	0·0	0·0	20	20 : — : 26	1·0	Scud to W. ; woolly and mottled cirri. ○
20	328	44.9	44.1	0·8	0·2	0·1	18	20 : — : —	2·5	Loose scud to S. ; patches of cirrus. ○ [quickly. ○
21	335	48.9	47.4	1·5	0·3	0·3	20	19 : — : 26	1·2	Loose scud on hor. ; flame-like cir. ; both strata moving
22	340	51.3	49.0	2·3	0·3	0·3	24	20 : — : —	2·0	Masses of scud and loose cum. ; cir.-str. near hor. ○
23	330	54.3	51.0	3·3	0·5	0·5	18	20 : — : —	7·0	As before. ○
16 0	315	55.8	50.8	5·0	0·6	0·3	18	21 : — : 25	5·0	Scud and loose cumuli ; cirri and cirrous haze. Θ
1	308	58.0	51.8	6·2	0·5	0·4	20	21 : — : —	8·0	As before ; traces of a solar halo. Θ
2	294	58.5	52.2	6·3	0·9	0·4	20	21 : — : —	9·0	Id. Θ
3	278	60.0	53.0	7·0	0·5	0·2	21	20 : 26 : —	9·0	Id. ; cirro-cumulo-strati. ○
4	264	57.6	50.2	7·4	0·6	0·2	20	18 : 24 : —	9·8	Id. ; id.
5	250	58.0	51·3	6·7	0·3	0·1	18	— : 24 : —	9·7	Cirro-cumulo-strati ; loose cumuli to S.
6	242	56·3	50·4	5·9	0·1	0·0	—	— : 24 : —	9·0	Id. ; woolly cir-cum. ; cir.-str. ; haze.
7	246	52·0	48·7	3·3	0·0	0·0	15	19 : — : —	9·8	Cirro-stratus scud ; mass of cirro-stratus.
8	232	49·0	47·3	1·7	0·1	0·0	31	— : 24 : —	9·8	Cirro-cumulo-strati ; id.
9	222	48·6	47·0	1·6	0·0	0·0	31	— : 24 : —	9·8	Id. ; id.
10	217	46·7	45·7	1·0	0·0	0·0	24	— : 24 : —	9·9	Id.)
11	203	45·9	45·2	0·7	0·1	0·0	16	— : 23 : —	9·8	Id.)
12	194	46·6	45·7	0·9	0·0	0·0	23	— : — : —	10·0	Cirro-stratus scud and cirro-cumulo-strati.)
13	29.184	46·9	46·1	0·8	0·1	0·0	20	— : — : —	10·0	As before ; shower ^{0·5} since 12 ^h .)
14	176	47·2	46·4	0·8	0·0	0·0	18	— : — : —	10·0	Clouds denser.
15	162	47·8	46·9	0·9	0·0	0·0	18	— : — : —	10·0	Thick mass of cirro-stratus scud ?
16	148	48·3	47·7	0·6	0·0	0·0	4	— : — : —	10·0	Id. ; slight drizzle.
17	126	48·4	47·9	0·5	0·0	0·0	3	— : — : —	10·0	Id. ; id.
18	113	48·8	48·3	0·5	0·0	0·0	8	14 : — : —	10·0	Id.
19	116	49·3	48·0	0·4	0·1	0·0	6	15 : — : —	10·0	Id.
20	092	50·7	50·2	0·5	0·1	0·0	4	— : 19 : —	9·9	Cirro-cumulo-strati and cirro-strati.
21	071	52·0	51·1	0·9	0·1	0·0	6	— : — : —	9·8	Id.
22	040	54·0	52·8	1·2	0·1	0·0	2	— : 20 : —	9·8	Id.
23	29.009	54·7	53·2	1·5	0·1	0·1	3	— : 20 : —	9·9	Id. ; patches of scud.
17 0	28.983	54·4	53·8	0·6	0·1	0·0	3	16 : — : —	10·0	Scud ; dense cirro-strati ; rain ²
1	933	55·4	54·7	0·7	0·1	0·1	6	6 : — : —	10·0	Id. ; id. ; rain ¹
2	898	54·4	54·2	0·2	0·1	0·2	3	4 : — : —	10·0	Loose scud ; dense mass of cirro-stratus ; rain ^{1—3}

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h. 10 m.	From				
d. h. 17 3	in. 28.873	55.7	55.2	0.5	lbs. 0.2	lbs. 0.2	pt. 3	pt. 6 : 20 : —	0—10. 10.0	Loose misty scud; thick cirro-stratus; both currents
4	852	56.6	55.8	0.8	0.1	0.2	12	6 : 20 : —	10.0	Patches of loose scud; thick scud. [moving rapidly.]
5	841	60.5	58.6	1.9	1.2	0.8	18	20 : 21 : —	9.0	Loose misty scud; cirro-cumulo-stratus and cirro-stratus.
6	846	59.3	56.9	2.4	1.1	0.6	20	20 : 21 : 18	9.2	Id.; cirro-cumulo-stratus; wo. cirrus; showers around.
7	848	57.7	55.5	2.2	0.8	0.3	20	20 : — : —	9.2	Id.; id.; id.; id.
8	838	56.1	54.6	1.5	0.5	0.3	19		5.0	Id.; id.; id.
9	844	56.9	56.0	0.9	0.7	0.2	19		9.5	Id.; id.; showers ^{0.5}
10	836	56.7	56.2	0.5	0.3	0.1	19		10.0	Scud; rain ^{0.8}
11	833	56.6	56.1	0.5	0.3	0.1	20		10.0	Id.; cirro-stratus; cirro-cumulo-stratus.
12	826	57.0	56.0	1.0	0.5	0.8	19		10.0	Id.; id.; id.; drops of rain.
13	28.821	56.3	55.1	1.2	1.3	1.0	20		10.0	Scud; cirro-stratus; cirro-cumulo-stratus; drops of rain.
14	830	55.1	53.7	1.4	1.9	0.4	20	20 : — : —	5.0	As before; drops of rain from a thin hazy cloud.)
15	838	53.8	52.4	1.4	1.2	0.7	19	20 : — : —	8.0	Scud.
16	849	53.6	51.8	1.8	1.1	1.8	18		1.0	Scud and loose cumuli.
17	836	51.6	50.3	1.3	0.9	0.3	18		2.0	Id.) [rain.]
18	837	52.2	50.7	1.5	0.5	0.2	19	20 : — : —	9.9	As before, with cirro-stratus and cirro-haze on horizon; drops of
19	850	51.5	50.2	1.3	0.7	0.1	19	— : 20 : —	6.0	Cirro-stratus scud; piles of nimbi on horizon; very black to SE.
20	847	52.6	50.8	1.8	0.6	0.1	18	19 : 20 : —	9.5	Scud; cirro-stratus scud; cirri; cumuli on horizon.
21	841	56.7	53.7	3.0	0.3	0.2	16	18 : 22 : —	9.5	Id.; cirro-cumulo-stratus; cirro-stratus. ☺
22	830	57.0	53.4	3.6	0.6	0.2	16	18 : — : —	9.9	Id.; id.; id.
23	818	60.0	55.8	4.2	0.4	0.3	18	19 : — : —	9.9	Cirro-stratus scud; loose scud on horizon; cirro-stratus.
18 0	796	58.9	55.7	3.2	0.3	0.3	14 v.	19 : — : —	10.0	Id.; loose scud; thick cirro-stratus.
1	785	56.0	54.4	1.6	0.3	0.1		19 : — : —	10.0	Scud; cirro-stratus scud.
2	781	58.0	55.7	2.3	0.1	0.1	6	19 : — : —	10.0	Cirro-stratus scud; loose scud; thick cirro-stratus.
3	784	60.4	56.9	3.5	0.1	0.1	26	22 : 22 : —	9.8	Scud; cirro-cumulo-stratus; showers occasionally.
4	790	58.4	55.7	2.7	0.1	0.1	24	22 : — : —	10.0	Id.; cirro-stratus scud; cumulo-stratus to N.
5	796	56.3	55.2	1.1	0.1	0.1	20	22 : — : —	9.9	Id.; id.; id.; rain ^{0.5}
6	828	56.4	54.4	2.0	0.1	0.1	19	22 : 22 : —	10.0	Thick cirro-stratus and scud.
7	854	54.8	53.4	1.4	0.0	0.0	20	23 : 23 : —	9.9	Id.
8	876	53.4	52.1	1.3	0.3	0.1	22		10.0	Id.
9	894	52.8	51.2	1.6	0.3	0.2	20		9.9	Id.
10	910	52.4	50.8	1.6	0.3	0.1	22		10.0	Id.
11	923	52.3	50.3	2.0	0.2	0.2	20		10.0	Scud and cirro-stratus.)
12	930	51.0	49.2	1.8	0.3	0.3	20	22 : — : —	10.0	Id.; cumulo-stratus.)
13	28.931	50.5	48.7	1.8	0.2	0.2	18	22 : — : —	9.0	Scud; cirro-cumulo-stratus.)
14	928	50.7	48.8	1.9	0.2	0.2	20		10.0	Id.
15	924	50.2	48.6	1.6	0.1	0.0	9		10.0	Id.
16	935	49.8	48.8	1.0	0.1	0.0	2		10.0	Id.; rain ²
17	28.967	48.8	48.3	0.5	0.5	1.7	0		10.0	Id.; rain ²⁻⁴
18	29.035	47.7	46.7	1.0	1.7	0.9	29	30 : — : —	10.0	Id.
19	098	46.5	45.1	1.4	2.0	1.3	29	30 : — : —	10.0	Loose scud; dense homogeneous cirro-stratus.
20	151	47.0	45.4	1.6	1.6	0.6	29	29 : — : —	9.9	Id.; id.; sky to N.
21	200	49.2	46.1	3.1	1.4	0.7	28	— : 29 : —	9.5	Mass of cirro-stratus and cirri; scud on horizon.
22	249	50.3	46.6	3.7	1.8	1.1	29	29 : 28 : —	9.8	Masses of scud; cirro-stratus; cirro-cumulo-stratus.
23	277	53.1	47.6	5.5	1.8	1.5	28	29 : 28 : —	8.5	Masses of scud and loose cumulus; cirro-stratus; woolly cirri, As before. ☺ [and cirrus haze. ☺]
19 0	317	54.4	48.0	6.4	1.5	0.5	29	29 : — : —	7.0	Id. ☺ [a solar halo. ☺]
1	353	54.5	47.6	6.9	1.5	0.2	28	29 : — : —	7.0	Masses of scud and loose cumulus; linear cirri; portion of
2	382	57.1	49.0	8.1	0.7	0.8	29	29 : — : —	5.0	Loose cumuli; patches of cirri.
3	414	56.1	48.4	7.7	0.7	0.4	28	29 : — : —	4.0	Id.; id.
4	445	56.5	48.0	8.5	0.4	0.3	28	29 : — : —	4.0	Id.
5	437	56.3	48.4	7.9	0.4	0.4	30	28 : — : —	7.0	Id.
6	499	53.4	47.5	5.9	0.1	0.1	28	28 : — : —	2.0	Id.; cumulo-stratus to S.; haze. ☺
7	534	49.3	46.0	3.3	0.1	0.0	28	28 : 27 : —	9.0	Id.; id.; cirro-stratus.
8	568	50.0	47.0	3.0	0.1	0.1	0		9.2	Scud and cirro-stratus.
9	594	49.0	45.4	3.6	0.1	0.1	20		5.0	Id.; very dark clouds to E.
10	612	46.8	43.8	3.0	0.1	0.1	23		3.0	Scud and cirro-cumulo-stratus.)

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

HOURLY METEOROLOGICAL OBSERVATIONS, SEPTEMBER 19—22, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From 10 ^{m.}	lbs.	lbs.	pt.	pt.	pt.
d. h. 19 11	in. 29.638	° 41.3	° 40.4	° 0.9	0.0	0.0	0.1	0.1	26	7.5	Thin cirro-cumulo-stratus.
12	645	42.3	40.8	1.5	0.1	0.0	0.1	0.0	17	7.0	Thick cirro-cumulo-stratus.
13	29.659	38.8	38.3	0.5	0.0	0.0	0.0	0.0	12	0.5	Thick cirro-cumulo-stratus on hor. ; faint lunar cor.)
14	671	37.7	37.3	0.4	0.0	0.0	0.0	0.0	20	0.3	Id. ; id.)
15	674	35.2	34.8	0.4	0.1	0.0	0.1	0.0	20	0.2	Id. ; id.)
16	670	34.2	34.0	0.2	0.0	0.0	0.0	0.0	6	0.8	Id. to SW., and on E. hor.)
17	662	33.6	33.1	0.5	0.0	0.0	0.0	0.0	20	3.0	Thin cir.-cum.-str. and cir. rad. from WNW. ; lun. cor.)
18	664	36.8	36.4	0.4	0.1	0.1	0.1	0.1	21	9.0	Cir-cum.-str., thick to SW. ; bright window of sky to E.)
19	672	38.6	38.0	0.6	0.1	0.1	0.1	0.1	28	9.0	Scud ; cir.-str. ; cir. to S. ; cum. to E. ; rainbow 18 ^h 42 ^{m.}
20	667	42.0	41.3	0.7	0.1	0.0	0.0	0.0	18	8.5	Loose scud ; woolly cirri ; cumulo-strati to NE.)
21	662	45.3	44.3	1.0	0.0	0.0	0.0	0.0	30	7.0	Woolly cirri, cirro-strati, and cirrus haze.)
22	657	49.4	47.6	1.8	0.1	0.0	0.0	0.0	10	10.0	Mass of cir.-str. ; cir. haze ; patches of scud to S. ; faint solar halo.)
23	641	54.0	50.6	3.4	0.0	0.0	0.0	0.0	30	9.0	Loose cumuli ; woolly cirri and cirrus haze.)
20 0	623	56.8	51.0	5.8	0.4	0.4	0.4	0.4	16	9.0	Scud and loose cum. ; cir.-str. ; cir. haze ; woolly cir.)
1	600	56.3	50.0	6.3	1.2	0.8	1.2	0.8	14	9.8	Scud ; cirro-cumulo-strati ; cumuli.)
2	581	57.7	51.5	6.2	0.2	0.5	0.2	0.5	16	10.0	Id. ; thick mass of cirro-stratus.)
3	555	57.7	51.4	6.3	0.8	0.2	0.8	0.2	18	10.0	Id. ; id.)
4	535	56.0	51.0	5.0	0.5	0.4	0.5	0.4	17	10.0	Id. ; id.)
5	515	55.4	51.0	4.4	0.4	0.1	0.4	0.1	14	9.9	Cirro-stratus scud ; cirro-strati ; cirrus haze.)
6	504	53.6	49.6	4.0	0.6	0.4	0.4	0.4	14	9.9	Id. ; id.)
7	482	52.6	48.9	3.7	0.4	0.3	0.4	0.3	14	10.0	Id. ; id.)
8	470	52.6	49.3	3.3	0.8	0.3	0.8	0.3	14	10.0	Id. ; id. drops of rain.)
9	440	52.6	49.6	3.0	0.7	0.4	0.7	0.4	14	10.0	Dark masses of scud and cirro-stratus ; id.)
10	412	52.0	49.6	2.4	0.4	0.4	0.4	0.4	15	10.0	Id.)
11	379	52.8	50.4	2.4	0.8	0.9	0.8	0.9	15	10.0	Id.)
12	353	52.7	50.9	1.8	1.2	0.7	1.2	0.7	14	10.0	Scud and cirro-stratus ; a slight shower since 11 ^h .)
23 1/4	29.240	57.4	55.0	2.4	1.2	0.1	2.4	0.1	22	Sunday—Overcast with loose cum. scud and cir.-cum.-str. ; showers ; continuous rain in the evening.)
21 13	29.222	46.9	45.2	1.7	3.3	2.3	3.3	2.3	30	10.0	Dense mass of scud and cirro-stratus.)
14	238	45.0	43.4	1.6	3.2	3.3	3.2	3.3	0	10.0	Id. ; rain ¹)
15	262	44.4	42.2	2.2	3.6	2.0	3.6	2.0	0	10.0	Id. ; rain ^{0.5})
16	279	44.2	42.0	2.2	2.7	1.5	2.2	1.5	0	10.0	Id.)
17	308	44.2	42.0	2.2	1.9	0.5	2.2	0.5	0	10.0	Id. ; passing showers.)
18	329	44.4	42.1	2.3	1.4	1.0	1.4	1.0	31	10.0	Loose scud ; dense cirrous mass ; rain ^{0.5})
19	360	44.5	42.2	2.3	1.4	0.3	1.4	0.3	30	10.0	Scud ; drops of rain.)
20	380	44.3	42.1	2.2	0.7	0.3	0.7	0.3	30	10.0	Id. ; rain ^{0.2})
21	420	45.3	42.9	2.4	0.6	0.3	0.6	0.3	30	10.0	Id. ; mass of cirro-stratus ; drops of fine rain.)
22	436	47.0	44.3	2.7	0.5	0.8	0.5	0.8	30	9.9	Loose scud ; cirro-cumulo-strati.)
23	466	49.0	45.5	3.5	1.5	0.4	1.5	0.4	28	9.9	Id. ; id.)
22 0	487	48.7	44.0	4.7	1.6	1.2	4.7	1.2	27	10.0	Id. ; id.)
1	517	50.0	43.9	6.1	1.6	1.4	6.1	1.4	28	9.0	Id. ; id.)
2	521	51.4	44.2	7.2	2.8	2.6	7.2	2.8	29	7.0	Thick scud and cum. ; nimbus to N. ; cir.-cum.-str.)
3	565	48.9	43.1	5.8	1.2	0.6	5.8	1.2	28	8.0	Loose cumuli and cumulo-strati ; cirro-cumulo-strati.)
4	594	48.1	44.2	3.9	0.8	0.1	3.9	0.8	28	9.0	Id. ; id.)
5	625	47.6	43.2	4.4	0.6	0.1	4.4	0.6	30	8.0	Id. ; id.)
6	661	45.3	41.7	3.6	0.6	0.4	3.6	0.6	30	6.0	Scud ; loose cum. and cum.-str. ; nimbi to E. and S., falling in rain.)
7	686	43.0	40.0	3.0	0.2	0.0	3.0	0.2	28	7.0	Cumulo-strati ; cirro-strati ; cumuli.)
8	700	40.6	38.0	2.6	0.1	0.1	2.6	0.1	26	2.5	Scud and cirro-strati on horizon.)
9	733	37.5	35.8	1.7	0.1	0.1	1.7	0.1	24	0.2	Very clear; haze on S. horizon.)
10	754	34.8	33.0	1.8	0.1	0.1	1.8	0.1	20	0.2	Id. ; id.)
11	777	36.5	34.8	1.7	0.1	0.1	1.7	0.1	22	0.1	A few patches of cirrus clouds on horizon.)
12	790	36.5	34.6	1.9	0.1	0.1	1.9	0.1	20	0.0	Very clear.)
13	29.803	33.7	32.4	1.3	0.1	0.0	1.3	0.1	22	0.0	Very clear.)
14	822	35.0	33.1	1.9	0.1	0.0	1.9	0.1	22	0.0	Id.)
15	841	33.7	32.3	1.4	0.1	0.0	1.4	0.1	21	0.0	Id. ; hoar-frost.)
16	854	32.9	31.6	1.3	0.1	0.0	1.3	0.1	20	0.0	Id. ; id.)

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Sept. 19^d 16^h. The clouds somewhat cymoid, and moving rather quickly.

Sept. 21^d 19^h. Observation made at 19^d 5^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
22 17	29.868	34.1	32.6	1.5	0.2	0.1	21	— : 30 : —	— : — : —	0.2
18	888	31.7	30.8	0.9	0.1	0.1	20	— : — : —	— : — : —	0.5
19	907	33.7	32.2	1.5	0.1	0.1	21	— : — : —	— : — : —	2.0
20	934	36.0	34.3	1.7	0.1	0.1	24	— : — : —	— : — : —	0.2
21	951	41.4	38.4	3.0	0.3	0.1	20	— : — : —	— : — : —	3.0
22	960	44.3	40.2	4.1	0.2	0.1	21	— : — : —	— : — : —	0.7
23	968	46.2	40.0	6.2	0.8	0.3	30	30 : — : —	30 : — : —	3.0
0	986	48.5	42.8	5.7	0.6	0.6	28	30 : — : —	30 : — : —	6.0
1	29.997	50.3	43.2	7.1	0.9	0.6	28	30 : — : —	30 : — : —	5.0
2	30.003	51.0	43.2	7.8	0.6	0.4	24	29 : — : —	29 : — : —	6.5
3	29.996	51.2	43.2	8.0	0.5	0.5	0	29 : — : —	29 : — : —	5.0
4	29.998	51.6	43.3	8.3	0.3	0.2	0	29 : — : —	29 : — : —	3.5
5	30.026	50.3	43.0	7.3	0.3	0.1	30	29 : — : —	29 : — : —	3.0
6	047	47.1	42.1	5.0	0.1	0.0	24	29 : — : 1	29 : — : 1	1.5
7	056	41.6	38.9	2.7	0.1	0.0	22	— : — : —	— : — : —	0.8
8	078	41.0	38.3	2.7	0.1	0.1	22	— : — : —	— : — : —	2.5
9	077	39.3	36.9	2.4	0.1	0.1	18	— : — : —	— : — : —	0.2
10	072	35.3	34.3	1.0	0.0	0.0	18	— : — : —	— : — : —	0.0
11	074	34.1	33.2	0.9	0.0	0.0	—	— : — : —	— : — : —	0.0
12	069	32.2	31.6	0.6	0.0	0.0	—	— : — : —	— : — : —	0.0
13	30.060	31.9	31.3	0.6	0.0	0.0	18	— : — : —	— : — : —	0.0
14	052	30.4	30.0	0.4	0.0	0.0	28	— : — : —	— : — : —	0.0
15	049	30.4	30.0	0.4	0.0	0.0	18	— : — : —	— : — : —	0.0
16	033	30.7	30.4	0.3	0.0	0.0	—	— : — : —	— : — : —	0.1
17	021	29.6	31.8	...	0.0	0.0	16	— : — : —	— : — : —	0.0
18	021	29.9	30.3	...	0.0	0.0	0	— : — : —	— : — : —	0.5
19	020	31.6	31.1	0.5	0.0	0.0	—	— : — : —	— : — : —	3.0
20	016	36.9	36.6	0.3	0.0	0.0	20	— : — : 0	— : — : 0	6.0
21	010	44.4	43.2	1.2	0.1	0.2	19	— : — : —	— : — : —	5.0
22	30.004	48.6	45.3	3.3	0.6	0.3	21	23 : — : —	23 : — : —	4.5
23	29.984	51.8	48.3	3.5	0.4	0.4	19	21 : — : 0	21 : — : 0	8.0
24 0	955	54.5	48.8	5.7	1.0	0.6	21	21 : — : —	21 : — : —	9.0
1	933	52.8	48.4	4.4	1.1	0.2	21	21 : — : —	21 : — : —	9.8
2	899	53.6	48.7	4.9	0.8	0.2	22	20 : — : —	20 : — : —	9.0
3	876	53.7	48.0	5.7	1.1	0.4	21	20 : — : —	20 : — : —	9.9
4	865	52.5	47.6	4.9	0.9	0.5	20	20 : — : —	20 : — : —	10.0
5	844	50.3	46.5	3.8	0.4	0.3	18	— : — : —	— : — : —	10.0
6	821	48.6	45.0	3.6	0.4	0.5	20	20 : — : —	20 : — : —	10.0
7	799	46.7	43.6	3.1	0.3	0.1	16	— : — : —	— : — : —	10.0
8	780	46.1	43.0	3.1	0.3	0.3	16	— : — : —	— : — : —	10.0
9	758	45.2	41.9	3.3	0.4	0.1	18	— : — : —	— : — : —	10.0
10	727	44.7	41.4	3.3	0.3	0.3	19	— : — : —	— : — : —	10.0
11	691	44.7	41.7	3.0	0.4	0.2	18	— : — : —	— : — : —	10.0
12	663	45.7	42.3	3.4	0.4	0.4	18	— : — : —	— : — : —	10.0
13	29.637	45.0	42.2	2.8	0.4	0.2	18	— : — : —	— : — : —	10.0
14	611	45.8	43.1	2.7	0.9	0.3	16	— : — : —	— : — : —	10.0
15	537	46.1	43.3	2.8	1.0	0.6	16	— : — : —	— : — : —	10.0
16	518	45.4	42.9	2.5	0.7	0.2	20	— : — : —	— : — : —	10.0
17	444	46.2	43.5	2.7	0.6	0.7	19	— : — : —	— : — : —	10.0
18	446	46.4	43.5	2.9	1.2	0.9	18	22 : — : —	22 : — : —	10.0
19	430	47.0	43.5	3.5	1.1	0.8	18	19 : — : —	19 : — : —	10.0
20	397	47.0	44.0	3.0	0.6	0.2	18	19 : — : —	19 : — : —	9.8
21	375	49.7	46.0	3.7	1.5	0.9	19	19 : — : —	19 : — : —	10.0
22	361	51.4	47.8	3.6	1.2	1.4	17	19 : — : —	19 : — : —	9.9
23	350	50.5	47.9	2.6	1.5	1.0	18	19 : — : —	19 : — : —	9.9
25 0	327	52.3	49.3	3.0	2.6	1.1	18	— : — : —	— : — : —	9.5

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
25 1	29.320	56.0	52.0	4.0	1.8	1.6	19	19 : — : —	7.0	Scud and loose cumuli; cirro-strati.
2	316	58.6	51.9	6.7	1.0	1.0	20	22 : — : —	5.0	Id.; id.
3	315	57.9	50.3	7.6	1.2	0.6	21	22 : — : —	5.5	Id.
4	310	57.7	50.2	7.5	1.1	0.4	21	23 : — : —	4.0	Id.
5	320	56.9	50.0	6.9	1.1	0.6			2.0	Id.
6	343	52.7	47.3	5.4	0.6	0.2	18	— : 23 : —	7.0	Cirro-cumulo-strati; loose cumuli.
7	349	49.8	46.6	3.2	0.4	0.4	20	22 : — : —	7.0	Scud; cirro-strati.
8	350	48.0	45.2	2.8	0.5	0.4	18		2.0	Scud and cirro-strati.
9	351	47.2	45.0	2.2	0.2	0.2	18		1.5	Id.
10	366	44.7	43.4	1.3	0.2	0.2	17		3.0	Id.
11	363	48.2	46.6	1.6	0.3	0.1	20		8.8	Id.
12	361	48.4	46.5	1.9	0.7	0.3	21		9.0	Scud; rain ¹
13	29.354	45.7	44.6	1.1	0.3	0.1	20		0.5	Patches of cloud near horizon.
14	353	42.0	41.3	0.7	0.1	0.1	18		0.5	Cirro-cumulo-stratus to E.
15	341	43.4	42.5	0.9	0.4	0.3	19		0.5	Id.
16	329	44.1	43.0	1.1	0.4	0.5	18		0.8	Id.; faint aurora to N.
17	348	40.7	40.2	0.5	0.4	0.1	18		0.8	Id.
18	356	38.8	38.6	0.2	0.1	0.0	18		0.8	Id.
19	380	40.4	40.2	0.2	0.1	0.2	18		2.0	Id.; cirro-strati.
20	384	45.2	44.0	1.2	0.2	0.1	19	— : 20 : —	8.5	Cir.-cum.-str.; cir.-str.; woolly cir.; patches of scud.
21	395	47.6	46.0	1.6	0.2	0.1	20	22 : — : —	9.7	Patches of scud; cirro-stratus and cirrous haze.
22	409	50.0	47.4	2.6	0.2	0.3	18	24 : 22 : —	9.5	Scud; id.
23	408	53.2	49.0	4.2	0.3	0.3	22	23 : — : —	9.0	Scud and loose cumuli; cirro-strati; cirri.
26 0	414	52.5	49.4	3.1	0.8	0.2	20	— : 23 : —	6.0	Cirro-cumulo-strati; cumuli; cirro-strati; cirri.
1	422	55.4	49.7	5.7	0.4	0.5	22	22 : — : —	9.0	Scud and loose cumuli; cirro-strati; cirri.
2	422	55.5	49.7	5.8	0.9	0.3	26	— : 26 : —	9.8	Cirro-cumulo-strati; cumulo-strati; cirro-strati.
3	433	55.8	50.0	5.8	1.0	1.3	26	26 : — : —	4.0	Loose cumuli; cumulo-strati on horizon.
4	456	53.6	48.0	5.6	1.3	0.5	26	25 : — : —	4.5	Id.; id.
5	470	53.2	47.4	5.8	0.9	0.6	21	25 : — : —	2.0	Id.; id.
6	505	50.9	46.7	4.2	0.6	0.1	21	— : 27 : —	0.5	Loose cirro-strati and cirri; hazy near horizon.
7	528	47.4	44.4	3.0	0.1	0.1	21		0.8	Patches of cirro-strati and linear cirri; hazy near hor.
8	544	46.7	43.7	3.0	0.3	0.4	21		0.8	Id.
9	552	45.8	43.4	2.4	0.3	0.3	21		0.2	Patches of cirro-strati.
10	557	43.8	42.2	1.6	0.3	0.3	21		0.2	Cirrous haze on W. horizon.
11	553	44.2	42.3	1.9	0.4	0.2	20		0.5	Thin cirrus haze over the sky.
12	547	44.3	42.6	1.7	0.2	0.1	20		9.0	Cirrus haze and cirro-strati.
13	29.531	41.9	41.0	0.9	0.1	0.0	14		9.9	Cirrous haze and cirro-strati.
14	497	42.8	41.9	0.9	0.1	0.1	19		10.0	Id.
15	477	46.0	44.6	1.4	0.2	0.1	18		9.9	Id.
16	451	46.8	45.2	1.6	0.1	0.1	18		10.0	Dense cirro-stratus.
17	418	48.4	46.5	1.9	0.8	0.3	19		10.0	Id.
18	388	49.3	46.6	2.7	0.9	0.7	19		10.0	Id.
19	365	49.4	46.9	2.5	1.1	1.1	19	20 : 26 : —	10.0	Loose ragged scud; mass of cirro-strati.
20	322	49.9	48.0	1.9	1.5	1.1	19	19 : — : —	10.0	Id.; id.
21	278	51.1	49.1	2.0	1.8	1.5	19	19 : — : —	10.0	Id.; id.
22	245	53.7	52.2	1.5	1.4	1.2	20	19 : — : —	10.0	Id.; id.; rain ¹
23	197	55.8	54.0	1.8	1.5	1.0	21	20 : — : —	10.0	Id.; id.
27 0	168	58.0	55.2	2.8	2.8	3.5	20	21 : — : —	10.0	Id.; id.
1	170	58.8	56.3	2.5	2.3	1.0	18	22 : — : —	9.8	Thin scud; cirro-strati and cirri.
2	163	59.2	56.3	2.9	1.9	1.0	20	23 : — : —	9.5	Scud; id.; passing showers.
3	166	60.6	52.0	8.6	2.5	2.3	24		2.0	Loose cumuli; cumuli; cirro-strati; cirri.
4	185	59.2	52.6	6.6	3.2	3.4	21	23 : — : —	2.0	Id.; id.; id.; id.; haze.
5	209	57.1	50.6	6.5	4.3	2.2	21	24 : — : —	1.0	Scud and loose cumuli.
6	237	54.6	49.0	5.6	2.2	1.6	22	23 : — : —	7.0	Id.
7	271	52.4	49.0	3.4	1.4	0.7	21		8.0	Scud; shower ^{0.5}
8	282	49.2	46.3	2.9	0.4	0.2	20		3.5	Id.; and cirro-strati.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h.	From			
d. h. 27 9	in. 29.293	49.7	46.7	3.0	0.5	0.1	18	0—10. 0.2	Faint auroral arch, altitude 7°.
10	315	49.8	46.8	3.0	0.5	0.4	19	9.7	Scud; auroral light to N. seen through the clouds.
11	300	48.6	46.7	1.9	1.2	1.0	19	9.5	Id.
12	297	48.7	46.0	2.7	1.7	0.7	20	1.5	Id.
23 ¹	29.364	52.8	47.3	5.5	2.3	2.2	20	23 : — : —
28 13	29.468	44.6	42.5	2.1	3.2	0.8	20	1.5	Cirrous scud?
14	474	43.3	41.8	1.5	1.2	0.3	18	1.0	Id.
15	474	43.0	41.9	1.1	0.7	0.3	19	1.5	Id.; 15 ^b 30 ^m , shower ^{0.5}
16	475	42.4	41.6	0.8	0.8	0.3	20	1.0	Id.
17	479	42.1	40.9	1.2	0.3	0.3	19	0.5	Id.
18	480	42.2	41.1	1.1	0.3	0.3	20	5.0	Smoky and cirro-stratus scud; cirro-cumuli.
19	491	42.4	41.3	1.1	0.3	0.2	22	8.0	Id.; id. [bow. Θ]
20	485	45.2	43.9	1.3	0.3	0.3	22	8.0	Id.; id.; cirro-strati; rain-
21	488	47.3	45.8	1.5	0.9	0.3	26	9.5	Scud; cirro-cumulo-strati; cirro-strati; passing showers. Θ
22	476	47.7	45.8	1.9	1.4	0.3	22	8.0	Id.; id.; id. Θ
23	464	51.4	48.0	3.4	1.2	1.5	18	7.0	Id.; id.; id. ○
29 0	454	52.4	48.8	3.6	1.7	0.7	20	7.5	Loose cumuli; cumulo-strati; cirro-strati. ○
1	440	53.2	47.7	5.5	2.2	1.1	19	5.0	Scud and loose cum.; cumo-str.; cirro-str.; cirri. ○
2	420	55.0	49.2	5.8	1.7	1.2	22	6.5	Id.; id.; id.; nimbi to S. ○
3	414	54.2	47.9	6.3	1.9	0.8	20	7.0	Id.; id.; id. ○
4	400	53.5	47.8	5.7	1.0	0.4	20	8.0	Loose scud; cirro-cumulo-strati; cumulo-strati. Θ
5	388	49.0	46.0	3.0	1.1	0.5	20	9.5	Cirro-stratus scud; dense mass of cirro-stratus.
6	376	47.4	45.0	2.4	0.7	0.4	20	4.5	Cirro-cumuli; ribbed cirri; cirro-strati; cumulo-strati.
7	366	45.0	43.5	1.5	0.7	0.3	20	1.5	Cirrus and cirro-stratus scud, and nimbi on hor.; cirro-
8	351	45.6	44.1	1.5	0.4	0.2	20	8.8	Scud and cirro-strati. [strati.
9	340	47.3	45.4	1.9	0.7	0.8	20	9.5	Id.; very dark to W.
10	322	46.9	45.3	1.6	0.7	0.4	19	9.9	Id.
11	304	46.8	45.2	1.6	0.5	0.7	20	9.9	Scud; slight showers.
12	284	45.8	45.0	0.8	0.4	0.3	19	2.5	Id.; clouds cleared off rapidly; occasional showers.
13	29.271	46.1	45.0	1.1	0.5	0.5	20	9.5	Scud.
14	277	47.6	45.8	1.8	0.8	0.1	20	10.0	Id.; shower ¹⁻³
15	260	47.6	46.4	1.2	0.3	0.3	21	9.8	Id.
16	246	46.8	45.7	1.1	0.7	0.3	20	1.5	Id.
17	246	45.8	44.5	1.3	0.9	0.4	20	2.0	Id.; drops of rain.
18	249	45.0	43.9	1.1	0.5	0.3	19	2.5	[horizon. ○]
19	266	43.2	42.5	0.7	0.4	0.1	20	3.0	Loose cir.-cum. and cirro-str.; scud on Cheviot and N.
20	262	45.9	44.3	1.6	0.3	0.3	20	1.5	Loose cumuli and nimbi; woolly cirri. ○
21	258	48.1	46.0	2.1	0.9	0.6	19	1.5	Scud to N.; cumuli; woolly cirri to S. ○
22	247	51.7	48.3	3.4	1.0	1.2	21	5.0	Scud and loose cum.; cirro-cumulo-strati; cirro-strati; wo. cir. ○
23	241	53.3	48.3	5.0	1.8	1.6	22	9.0	Thin scud; cirro-cumulo-strati; cirro-strati; cumuli; nimbi to S. Θ
30 0	244	52.8	49.0	3.8	2.7	1.2	21	9.5	Scud; woolly and ribbed cirri; passing showers. Θ
1	227	48.2	46.2	2.0	1.8	0.8	21	5.0	Id.; loose nimbi, heavy showers around; id.
2	224	53.3	48.6	4.7	1.3	1.3	22	2.0	Loose cumuli; cumulo-strati to E. ○
3	213	53.4	47.6	5.8	2.3	0.7	21	2.5	Id.; id.; nimbi to W. ○
4	215	49.9	46.7	3.2	1.7	0.4	24	9.0	Scud; cumulo-strati to E.; rain falling to W.
5	227	46.8	44.4	2.4	1.6	1.6	22	9.0	Scud hanging in bags, with cirrus pendants; shower ²
6	227	46.2	43.3	2.9	0.8	0.4	24	5.0	Scud; nimbi and cumulo-strati on E. horizon.
7	237	44.0	41.5	2.5	1.5	1.2	19	1.5	Scud and nimbi.
8	257	42.8	41.2	1.6	0.8	0.1	18	2.0	Scud.
9	279	44.6	42.2	2.4	0.9	1.5	20	10.0	Id.; shower ¹⁻³
10	289	41.1	40.0	1.1	2.5	0.3	20	1.0	Id.
11	296	40.4	39.4	1.0	0.3	0.4	20	0.2	Scud and cirro-strati on horizon.
12	296	42.4	41.0	1.4	0.4	1.3	20	1.0	Id.
13	29.309	43.8	42.5	1.3	0.6	0.2	19	8.0	Scud and cirro-strati on horizon.
14	330	46.0	44.0	2.0	0.3	0.3	20	9.0	Id.; rain ^{0.5}

Sept. 27^a 10^b. A few minutes after 10^b, bright streamers seen rising from NNW. and N. horizon.Sept. 29^d 6^b. Sheets of cirro-strati lying E. and W.; scud on Cheviot: small cumulo-strati to E.Sept. 30^d 1^b. Observation made at 1^b 7^m.Sept. 30^d 5^b. Beautiful and complete double rainbow, with supplementary bows.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^m	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	Scud and cirro-strati on horizon.
30 15	29.336	46.0	43.7	2.3	0.9	0.4	19		3.0	Id.
16	353	45.2	42.8	2.4	0.5	1.1	20		4.5	Id.
17	367	44.6	43.2	1.4	1.6	0.2	20		9.5	Id.
18	375	46.6	44.0	2.6	0.8	0.5	20	24 : — : —	7.5	Smoky scud ; cirro-strati.
19	391	46.5	44.0	2.5	1.3	1.1	21		2.0	Scud ; loose cumuli, and cirro-strati on horizon.
20	418	46.7	45.0	1.7	0.8	0.1	20		2.0	Id. ; id. ; id. ; id.
21	442	49.9	47.4	2.5	0.8	0.9	19	23 : 24 : —	8.5	Id. ; watery cirro-cumuli.
22	456	52.0	48.7	3.3	1.0	1.0	20	23 : — : —	7.0	Id. ; cirro-strati ; thin cirro-cumuli.
23	470	52.0	48.0	4.0	1.7	1.5	22	23 : — : —	3.5	Id. ; loose cumuli ; patches of cirri.
1 0	456	54.0	49.6	4.4	3.3	1.9	20	23 : — : 24	3.5	Id. ; id. ; woolly cirri.
1	444	54.4	48.3	6.1	2.6	2.2	20	22 : — : 24	7.0	Id. ; id. ; id. ; cirrous haze.
2	445	54.3	48.6	5.7	3.5	2.0	20	22 : — : —	9.0	Id. ; id. ; id. ; id.
3	429	54.7	49.4	5.3	3.2	3.0	21	22 : — : —	9.5	Id. ; id. ; id. ; id.
4	430	54.0	49.2	4.8	2.4	2.3	21	22 : — : —	9.9	Id. ; id. ; id. ; id.
5	431	52.8	49.1	3.7	3.0	0.9	21	21 : — : —	10.0	Thick scud and loose cumuli ; cirrous haze.
6	432	52.3	48.6	3.7	1.7	0.9	20	21 : — : —	10.0	Thick scud ; cirro-strati.
7	419	52.0	48.6	3.4	1.2	0.6	21	21 : — : —	10.0	Id.
8	413	51.5	48.4	3.1	1.6	1.2	21		5.0	Id. ; id. ; stars dim.
9	411	51.0	48.0	3.0	1.6	1.1	20		3.0	Scud ; id. ; haze ; stars dim.
10	397	50.8	47.8	3.0	1.8	1.4	20		2.0	Id. ; id. ; id. ; id.
11	389	51.0	48.3	2.7	2.3	1.8	20		1.5	Id. ; cirrous haze ? id.
12	388	50.0	47.8	2.2	1.8	0.9	21		1.0	Id. ; id. ; id.
13	29.400	49.8	47.7	2.1	1.8	1.2	21		4.0	Dark mass of cirrous scud (?) to W.
14	405	50.8	48.4	2.4	1.2	0.6	21		10.0	Id.
15	408	50.0	47.0	3.0	1.3	0.7	22		9.9	Scud ? breaking to W. ; shower lately.
16	413	48.0	45.2	2.8	0.5	0.2	21		6.0	Id. ? sky to N., rather milky.
17	413	46.8	44.7	2.1	0.2	0.1	20		9.0	Id. ? sky in zenith.
18	405	46.0	44.3	1.7	0.1	0.0	16	— : 22 : —	9.0	Cirro-cumulo-strati ; cirrous haze ?
19	414	46.8	44.8	2.0	0.1	0.1	22	— : 22 : —	10.0	Cirro-strati radiating from ENE. and WSW.
20	424	47.4	45.3	2.1	0.1	0.0	23		10.0	Id.
21	434	49.0	46.9	2.1	0.1	0.1	24		9.9	Cirro-strati ; cirro-cumulo-strati.
22	446	52.2	49.4	2.8	0.1	0.1	20		10.0	Id. ; id. ; patches of scud. ●
23	453	54.2	50.2	4.0	0.1	0.0	22	25 : — : —	10.0	Loose scud ; dense mass of cirro-strati. ● [cir.-str. ⊖
2 0	461	53.2	48.0	5.2	0.1	0.0	24	— : — : 21	9.5	Woolly cir. rad. from WSW. ; loose scud to N. ; cum. ;
1	458	53.4	48.7	4.7	0.1	0.1	24	— : — : 22	8.5	As before ; flocks of swallows flying about. ⊖
2	454	55.8	50.2	5.6	0.2	0.1	22	26 : — : —	9.9	Scud and loose cumuli ; dense mass of cirro-stratus.
3	440	55.4	50.0	5.4	0.2	0.0	20	— : 21 : —	9.9	Cirro-cumulo-strati and cirro-strati ; cumuli.
4	446	54.3	49.7	4.6	0.1	0.0	18	26 : — : —	10.0	Scud ; sky covered with cirrous haze.
5	450	52.8	49.4	3.4	0.1	0.1	17		10.0	As before. and moving slightly in various directions.
6	457	50.4	48.1	2.3	0.0	0.0	16		10.0	Blotched mass of cirro-stratus with patches of scud forming below.
7	456	48.8	46.7	2.1	0.0	0.0			10.0	As before ; flock of lapwings moving north at 6 ^h .
8	450	49.0	46.4	2.6	0.1	0.0	4		10.0	Id. ? very dark.
9	457	48.1	46.2	1.9	0.1	0.0	3		10.0	Id. ; rain in a few minutes.
10	493	47.0	46.4	0.6	0.1	0.0			10.0	Id. ; rain ¹
11	460	46.3	45.8	0.5	0.0	0.0	8		10.0	Rain ¹
12	446	45.4	44.8	0.6	0.1	0.1	6		10.0	Id.
13	29.426	45.0	44.2	0.8	0.1	0.0	6		10.0	Rain ¹
14	437	45.3	44.3	1.0	0.3	0.1	4		10.0	Rain ²
15	431	44.7	43.9	0.8	0.5	0.4	3		10.0	Id.
16	430	44.8	44.1	0.7	1.7	0.4	3		10.0	Rain ¹⁻⁻²
17	394	44.0	43.5	0.5	1.1	0.9	6		10.0	Id.
18	370	44.9	44.5	0.4	1.6	1.2	4		10.0	Id.
19	396	45.5	44.9	0.6	1.4	0.6	5	6 : — : —	10.0	Scud ; rain ¹⁻⁻²
20	400	45.7	45.0	0.7	1.1	0.8	5	6 : — : —	10.0	Id. ; continuous rain ¹⁻⁵
21	414	46.0	45.3	0.7	1.4	0.6	3	6 : — : —	10.0	Id. ; rain ²
22	386	46.3	45.7	0.6	1.6	1.1	4	5 : — : —	10.0	Id. ; rain ⁰⁻²

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10m.	From			
d. h. 2 23	in. 29.366	46.5	45.8	0.7	1.7	2.7	4	5 : — : —	10.0	Scud ; drifting rain ¹
3 0	372	46.9	46.3	0.6	2.2	1.4	3	5 : — : —	10.0	Id. ; rain ²
1	334	46.8	46.4	0.4	1.6	2.8	6	5 : — : —	10.0	Id. ; id.
2	312	46.9	46.3	0.6	2.4	1.8	5	5 : — : —	10.0	Id. ; rain (Scotch mist) ^{0.5}
3	291	47.0	46.4	0.6	2.3	1.0	5	5 : — : —	10.0	Id. ; rain ¹
4	287	47.2	46.7	0.5	1.5	0.7	5	5 : — : —	10.0	Id. ; rain ²
5	209	48.0	47.3	0.7	2.7	2.3	5	6 : — : —	10.0	Id. ; rain (Scotch mist) ^{0.5}
6	218	47.8	47.3	0.5	3.1	0.8	4	6 : — : —	10.0	Id. ; rain ²⁻³
7	208	47.7	47.4	0.3	0.9	0.6	3	5 : — : —	10.0	Id. ; rain ¹⁻³
8	201	48.0	47.7	0.3	0.9	0.7	2	5 : — : —	10.0	Rain ^{0.2}
9	200	48.2	47.7	0.5	0.9	0.5	2	5 : — : —	10.0	Id.
10	202	48.4	47.7	0.7	0.8	0.8	2	5 : — : —	10.0	Id.
11	218	48.3	47.4	0.9	1.0	0.6	2	5 : — : —	10.0	Scud.
12	234	47.8	47.3	0.5	1.0	0.5	3	5 : — : —	10.0	Id. ; rain ^{0.5}
13	29.248	46.6	46.0	0.6	1.6	1.1	3	5 : — : —	10.0	Scud ; rain ^{0.2}
14	256	46.0	45.2	0.8	1.3	0.8	2	5 : — : —	10.0	Id.
15	261	45.4	44.7	0.7	1.0	0.5	2	5 : — : —	10.0	Id.
16	269	45.6	44.6	1.0	0.6	0.3	2	5 : — : —	9.0	Id.
17	281	45.4	44.3	1.1	0.4	0.4	2	5 : — : —	8.0	Id. ; stars dim ; slight drizzle.
18	279	45.3	44.2	1.1	0.4	0.8	2	5 : — : —	8.0	Smoky scud ; cirro-cumulo-strati.
19	292	45.3	44.2	1.1	0.6	0.1	3	5 : — : —	10.0	Loose scud.
20	304	45.9	44.6	1.3	0.2	0.1	3	5 : — : —	10.0	Id. ; rain ^{0.2} commencing.
21	320	46.0	44.8	1.2	0.2	0.1	2	5 : — : —	10.0	Id. ; mass of cirro-stratus ; mist around.
22	323	44.9	44.4	0.5	0.8	0.3	1	5 : — : —	10.0	Id. ; drizzling rain ^{0.5}
23	323	47.1	46.3	0.8	0.5	0.3	2	5 : — : —	10.0	Id. ; dense homogeneous cir.-str. ; drops of rain.
4 0	321	48.2	46.2	2.0	0.5	0.5	3	5 : — : —	10.0	Id. ; id. ; id.
1	322	47.6	45.7	1.9	0.9	0.4	2	5 : — : —	10.0	Id. ; id. ; id.
2	315	47.2	44.7	2.5	1.2	0.8	1	5 : — : —	10.0	Id. ; id.
3	315	45.7	44.0	1.7	1.0	0.5	2	5 : — : —	10.0	Id. ; id. ; rain ¹⁻²
4	316	45.0	43.5	1.5	0.7	0.3	2	5 : — : —	10.0	Id. ; id. ; id.
5	328	43.9	42.9	1.0	0.5	0.3	2	5 : — : —	10.0	Id. ; id. ; id.
6	336	43.7	43.0	0.7	0.2	0.1	2	5 : — : —	10.0	Scud ; homogeneous mass ; rain ²
7	344	43.0	42.0	1.0	0.3	0.2	0	5 : — : —	10.0	Id. ; id. ; id.
8	359	42.3	41.0	1.3	0.8	0.2	2	5 : — : —	10.0	Id. ; id.
9	374	42.0	41.2	0.8	0.1	0.1	28	5 : — : —	10.0	Id. ; id.
10	382	42.5	41.0	1.5	0.1	0.2	30	5 : — : —	8.5	Id. ; clouds broken.
11	401	42.0	39.7	2.3	0.3	0.2	31	5 : — : —	9.0	Thin cirro-strati.
12	422	41.3	39.0	2.3	0.2	0.1	30	5 : — : —	8.5	Id.
23 ¹	29.663	44.0	39.9	4.1	0.4	0.2	20	5 : — : —	Sunday—generally clear ; a few loose cumuli.
5 13	29.726	32.3	32.2	0.1	0.3	0.0	24	5 : — : —	0.3	Patches of thin clouds.
14	718	32.1	32.1	...	0.0	0.0	22	5 : — : —	0.3	Id. ; stars rather dim.
15	706	31.0	31.4	...	0.0	0.0	22	5 : — : —	0.3	A few clouds near the horizon.
16	704	29.0	29.4	...	0.0	0.0	22	5 : — : —	0.5	Id.
17	698	29.3	29.6	...	0.0	0.0	16	5 : — : —	0.3	Id.
18	690	28.3	28.5	...	0.0	0.0	20	5 : — : —	0.8	Masses of scud to SW. [the valleys.
19	698	28.7	28.5	0.2	0.0	0.0	22	5 : — : —	3.0	Stripes of woolly cirri, lying E. & W. ; cirro-strati on S. & N. hor. ; fog in
20	702	30.8	30.5	0.3	0.0	0.0	20	5 : — : —	5.0	Nearly as before.
21	700	33.0	31.7	1.3	0.1	0.1	20	5 : — : —	4.0	Woolly cirri ; cirro-strati and patches of scud to N. ☀
22	688	37.3	36.7	0.6	0.1	0.1	0	5 : — : —	2.0	Id. ☀
23	676	43.7	42.0	1.7	0.1	0.1	6	5 : — : —	1.0	Id. and haze round horizon. ☀
6 0	665	49.3	45.4	3.9	0.3	0.3	15	16 : — : 20	2.0	Patches of cumuli ; woolly cirri. ☀
1	645	51.8	46.7	5.1	0.3	0.2	15	15 : — : —	4.0	Loose cumuli ; id. ☀
2	631	53.6	47.8	5.8	0.4	0.3	15	15 : — : —	4.5	Id. ; id. ☀
3	606	52.4	46.6	5.8	0.5	0.3	— : — : 18	5.5	Woolly cirri ; loose cumuli. ☀	
4	596	49.7	44.5	5.2	0.3	0.3	15	15 : 18 : 18	8.0	Cum. ; cir-cum. ; woolly cir. thickening into cir.-str. ☀

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Oct. 4th 6^h. Swallows seen to-day in considerable numbers, for the last time.

Oct. 6th 4^h. Portion of a halo lately ; parhelion at 4^h 30^m.

HOURLY METEOROLOGICAL OBSERVATIONS, OCTOBER 6—8, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	
d. h.	in.	°	°	°						
6 5	29.587	48.5	44.4	4.1	0.2	0.1	14	— : 18 : 18	9.5	Thick woolly cirri ; cirro-strati and cirrus haze.
6	592	46.7	43.4	3.3	0.2	0.1	12	14 : — : —	10.0	Scud ; dense cirro-stratus and haze.
7	587	46.0	42.7	3.3	0.1	0.1	8		10.0	Dense cirro-stratus and scud.
8	579	44.4	42.1	2.3	0.1	0.0	11		10.0	Id.
9	565	44.0	42.0	2.0	0.1	0.1	4		10.0	Id.
10	550	44.6	42.5	2.1	0.1	0.0	2		10.0	Id.
11	543	44.4	42.8	1.6	0.0	0.0			10.0	Id.
12	527	44.5	43.0	1.5	0.1	0.0	6		10.0	Id. ; rain ¹
13	29.506	44.0	43.4	0.6	0.1	0.0	2		10.0	Dense cirro-stratus and scud ; rain ^{0.5}
14	472	44.1	43.5	0.6	0.1	0.1	2		10.0	Id. ; rain ^{0.2}
15	445	44.0	43.4	0.6	0.2	0.1	2		10.0	Id. ; rain ^{0.5}
16	406	44.3	43.4	0.9	0.2	0.2	4		10.0	Id. ; rain ¹
17	383	44.1	43.7	0.4	0.2	0.2	2		10.0	Scud ; slight drizzle.
18	355	45.0	44.3	0.7	0.2	0.3	2		10.0	Id. ; id.
19	324	45.4	44.7	0.7	0.4	0.3	2		10.0	Id. ; drops of rain.
20	311	45.9	45.0	0.9	0.4	0.2	2	4 : — : —	10.0	Loose scud ; drizzling rain ^{0.5}
21	291	46.0	45.0	1.0	0.5	0.3	2	3 : — : —	10.0	Id.
22	260	46.8	45.5	1.3	0.9	0.4	2	4 : — : —	10.0	Id. ; dense mass of cirro-stratus.
23	238	49.1	47.1	2.0	0.5	0.1	1	3 : — : —	10.0	Id. ; id.
7 0	213	49.0	47.5	1.5	0.8	0.5	0	1 : — : —	10.0	Id. ; id.
1	183	51.0	48.7	2.3	0.8	0.7	31	0 : 14 : —	10.0	Scud ; cirro-strati ; cirro-cumulo-strati.
2	160	49.2	47.4	1.8	1.0	0.6	31	31 : — : —	10.0	Id. ; drizzling rain ^{0.2}
3	146	48.1	46.3	1.8	0.8	0.3	31		10.0	Id.
4	135	47.7	45.9	1.8	0.5	0.3	28	27 : — : —	10.0	Id.
5	125	47.4	45.2	2.2	0.4	0.2	26	27 : — : —	10.0	Id.
6	109	47.1	44.4	2.7	0.7	0.2	22	27 : — : —	9.8	Id. ; cirro-strati.
7	112	47.2	44.0	3.2	0.4	0.5	21		9.9	Id. ; id.
8	099	46.7	43.8	2.9	0.3	0.2	20		10.0	Id. ; id.
9	097	46.2	43.7	2.5	0.2	0.2	19		10.0	Id. ; id.
10	100	45.4	42.7	2.7	0.3	0.2	18		7.0?	Id. ; id. ; stars dim.
11	103	44.4	42.4	2.0	0.4	0.1	20		9.8	Thin cirro-strati, the stars seen dimly in some places.
12	107	44.7	42.9	1.8	0.3	0.7	19		10.0	Cirro-strati ?
13	29.110	44.7	42.8	1.9	0.4	0.4	19		10.0	Cirro-strati ?
14	112	44.0	42.3	1.7	0.4	0.4	19		10.0	Id.
15	116	42.9	41.5	1.4	0.3	0.4	19		7.5	Id.
16	126	42.6	41.0	1.6	0.4	0.1	20		7.0?	Id. ; cirrus haze ; stars dim.
17	135	41.9	40.6	1.3	0.3	0.1	20		9.0	Id. ; id. ; id.
18	146	41.2	40.0	1.2	0.2	0.0	24		9.0	Id. ; id. ; id.
19	157	39.7	39.0	0.7	0.1	0.1	24		4.0	Id. ; id.
20	158	39.7	39.3	0.4	0.1	0.0	16		8.5	Id. ; woolly cirri ; cirro-cumulo-strati. Θ
21	161	42.3	41.5	0.8	0.0	0.0	12	— : 18 : —	10.0	Thick cirro-stratus ; small cumulo-strati and haze to N.
22	164	45.8	44.3	1.5	0.0	0.0	10	— : 18 : —	9.9	Cirro-cumulo-strati ; cirro-strati.
23	158	47.4	45.4	2.0	0.0	0.1	4	— : 18 : —	9.9	Id.
8 0	149	50.0	47.3	2.7	0.1	0.0	8	— : 18 : —	8.0	Id.
1	127	52.4	48.3	4.1	0.1	0.2	14	14 : — : 13	5.0	Loose cum. ; woolly and mottled cirri ; cirr.-str. ; cum. ⊖
2	113	53.8	48.6	5.2	0.5	0.3	13	14 : — : —	4.0	Loose cum. ; woolly and mottled cirr. ; cirr.-str. ; cum. ; cum-str. ; dense haze on hor. ⊖
3	103	52.2	47.8	4.4	0.3	0.2	12	18 : — : —	4.5	Scud and loose cum. ; cum.-str. and haze round hor. ⊖
4	084	53.3	48.3	5.0	0.7	0.2	12		2.5	Woolly and linear cirri ; id.
5	077	51.3	47.2	4.1	0.7	0.2	12	— : — : 17	3.0	Woolly and linear cirr. ; cum.-str. and haze round hor. ; pat. of scud. ⊖
6	069	48.0	45.4	2.6	0.4	0.2	10	— : 14 : —	7.5	Cirr.-str. ; cirr.-cum. ; cirr. ; cirr. haze ; scud on horizon ;
7	061	45.3	43.9	1.4	0.1	0.0	8		2.5	Cirro-strati ; cirri. ⊖ [atmospheric haze. ⊖]
8	048	47.0	45.0	2.0	0.8	0.7	10		5.0	Id. ; id. ⊖
9	044	46.9	44.6	2.3	0.4	0.3	12		9.0	Id. ; id.
10	29.009	47.8	45.0	2.8	0.6	0.9	11		8.0	Id. ; id.
11	28.984	49.6	46.8	2.8	1.1	0.5	11	12 : — : —	9.9	Scud ; cirro-stratus and haze.
12	28.966	50.6	48.0	2.6	1.4	1.1	11		10.0	Id. ; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10. 10.0
8 13	28.962	49.7	48.0	1.7	0.8	0.3	12		Dark; a slight shower lately.
14	952	49.4	47.6	1.8	0.4	0.2	12		Id.
15	950	48.2	46.6	1.6	0.7	0.2	14		Id.; rain ^{0.5—1.0}
16	946	48.1	46.3	1.8	0.7	0.7	14		Id.
17	974	46.9	45.7	1.2	1.3	0.1	19		Seud and cirro-stratus.
18	28.994	43.3	42.6	0.7	0.1	0.0	12		Seud, cirro-strati, and cirrous haze.
19	29.008	43.0	42.0	1.0	0.1	0.0	26	20 : 12 : —	Seud on S. horizon; cirro-strati; cirrous haze.
20	019	43.6	42.3	1.3	0.1	0.0	20	20 : 12 : —	Id.; cir-cum.str.; cirro-stratus rad. from SE.; [cir. haze; sky to SSW.]
21	038	43.2	42.6	0.6	0.1	0.0			9.5
22	053	46.4	44.0	2.4	0.1	0.0	1		As before. Id. [haze; solar halo. ⊖]
23	059	49.6	47.0	2.6	0.1	0.1	15	20 : 12 : 12	Scud and loose cum. on S. hor.; thin cir-str., woolly cirri, and cir.
9 0	058	51.3	47.9	3.4	0.0	0.0		20 : 11 : 11	As before; sky to S. ⊙
1	061	52.0	48.2	3.8	0.1	0.1	20	20 : — : —	Loose cumuli; cumuli; cirro-strati; cirri. ⊙
2	069	54.8	48.3	6.5	0.1	0.1	19	20 : — : —	Id.; id.; id. ⊙
3	071	53.8	47.8	6.0	0.1	0.1	21	20 : — : —	Id.; id.; id. ⊙
4	075	52.8	47.8	5.0	0.2	0.1	18	20 : — : —	Id.; id. ⊙
5	086	49.6	45.7	3.9	0.1	0.0	18	— : 17 : 14	Cirro-cumulo-strati; woolly cirri. ⊙
6	091	44.0	42.3	1.7	0.0	0.0	20		Woolly cirri and cirrous haze.
7	105	40.0	39.0	1.0	0.0	0.0	22		Cirro-strati; woolly cirri; cirrous haze. ♫
8	123	39.9	39.1	0.8	0.0	0.0	18		Cirro-cumuli. ♫
9	133	39.7	39.1	0.6	0.0	0.0	28		Cirro-cumulo-strati.
10	130	37.5	37.0	0.5	0.0	0.0	20		Patches of cirro-cumulo-strati; woolly cirri. ♫
11	143	40.0	39.7	0.3	0.1	0.1	18		Seud and cirrous mass.
12	139	39.9	39.6	0.3	0.0	0.0			Id.
13	29.154	41.3	40.7	0.6	0.0	0.0			Seud and cirrous mass; rain ¹
14	152	42.0	41.7	0.3	0.0	0.0			Seud; rain ¹
15	139	42.8	42.4	0.4	0.0	0.0			Id.; id.
16	135	42.9	42.7	0.2	0.0	0.0	4		Id.; rain ^{0.5}
17	114	42.5	42.1	0.4	0.0	0.0	26		Id.; rain ¹
18	105	42.0	41.6	0.4	0.0	0.0	6		Id.; id.
19	092	42.2	41.6	0.6	0.0	0.0	26		Dense mass of cirro-stratus; rain ^{1.0}
20	087	42.2	41.7	0.5	0.0	0.0	20		Continuous rain ^{1—2}
21	090	42.3	41.9	0.4	0.1	0.1	20		Seud; cirro-stratus mass; sky to SSW; rain ²
22	091	44.3	43.8	0.5	0.1	0.0	22	22 : — : —	Loose seud; cirro-strati; cirro-cumulo-strati.
23	088	48.0	46.4	1.6	0.0	0.0	2	20 : — : —	Patches of seud; woolly cir-str., moving very slowly. ⊙
10 0	084	48.7	46.7	2.0	0.1	0.0	20	18 : — : —	Scud and loose cumuli; woolly cirri. ⊙
1	084	53.0	49.9	3.1	0.0	0.0	16	17 : — : —	Id.
2	090	52.0	47.8	4.2	0.4	0.5	16	17 : — : —	Id.
3	101	51.7	47.0	4.7	0.6	0.1	15	16 : — : —	Id.; cirro-strati.
4	121	48.0	46.0	2.0	0.5	0.1	16	— : 14 : —	Thick seud and cirro-stratus; slight rain lately.
5	120	48.0	46.3	1.7	0.2	0.1	13	— : 14 : —	Id.; id.
6	128	47.8	46.0	1.8	0.2	0.2	14	— : 14 : —	Id.
7	137	47.0	45.2	1.8	0.4	0.2	15		Id.
8	147	46.3	44.7	1.6	0.2	0.2	15		Seud and cirro-strati.
9	152	43.5	42.4	1.1	0.2	0.1	14		Cirro-cumulo-strati and cirro-strati; cirri. ♫
10	167	42.8	41.8	1.0	0.1	0.1	16		Id.; id. ♫
11	174	41.6	40.6	1.0	0.1	0.1	15		Sheets of woolly cirri and cirro-strati. ♫
12	169	41.9	40.8	1.1	0.1	0.0	4		Mass of cirro-stratus.
13	29.159	41.4	40.4	1.0	0.1	0.0	2		Mass of cirro-stratus; a few stars dimly visible.
14	154	43.3	42.0	1.3	0.3	0.1	8		Id.
15	148	44.7	43.3	1.4	0.1	0.1	12		Id.
16	141	46.0	44.0	2.0	0.1	0.1	10		Id.
17	149	46.8	55.0	1.8	0.3	0.3	15		Id.; rain ^{1.0} commenced.
18	152	45.6	44.6	1.0	0.7	0.3	12		Id.; continuous rain ^{1—2}
19	159	44.9	43.9	1.0	0.4	0.3	12		Id.
20	180	45.3	43.7	1.6	0.3	0.1	18	— : 20 : —	Cirro-stratus scud; mass of cirro-stratus.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.
Oct. 10th 3^h. Observation made at 3^h 13^m.

HOURLY METEOROLOGICAL OBSERVATIONS, OCTOBER 10—14, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h.	10 m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
10 21	29.202	45.2	43.7	1.5	0.8	0.2	14	— : 18 : —	9.9	Dense cirro-stratus.
22	221	47.0	44.8	2.2	0.4	0.3	14	— : 16 : —	10.0	Id.
23	241	48.8	46.2	2.6	0.2	0.2	14	— : 16 : —	9.8	Id.
11 0	260	50.9	47.8	3.1	0.2	0.2	14	18 : 16 : —	8.0	Loose scud; cirro-cumulo-strati.
1	273	51.2	47.8	3.4	0.4	0.3	17	18 : — : —	9.9	Smoky scud; id.
2	288	51.0	48.1	2.9	0.3	0.0	16	— : 20 : —	9.5	Cirro-stratus scud; cirro-strati; loose cumuli.
3	307	53.3	49.8	3.5	0.1	0.1	16	— : 21 : —	8.8	Id.; id.; id.
4	326	52.2	48.0	4.2	0.2	0.1	18	23 : — : —	9.0	Scud; cirro-cumulo-strati; cirro-strati.
5	352	51.0	47.2	3.8	0.1	0.1	20		2.5	Id.; id.; id. round horizon.
6	389	49.5	45.5	4.0	0.1	0.1	21	23 : 24 : —	9.5	Id.; id.; id.
7	409	46.8	44.7	2.1	0.2	0.0	4		9.0	Cirro-cumulo-strati.
8	432	45.0	43.6	1.4	0.1	0.1	28		0.5	Id. on horizon.
9	454	40.2	39.8	0.4	0.1	0.1	20		0.2	Id.
10	469	39.9	39.7	0.2	0.1	0.1	20		0.5	Id.
11	490	38.5	38.2	0.3	0.1	0.0	20		7.0	Id.; cirro-strati.
12	514	40.2	40.0	0.2	0.0	0.0	18		9.9	Scud and cirro-stratus.
12 0 $\frac{1}{2}$	29.775	55.5	49.5	6.0	0.4	0.2	23		{ Sunday—Scud, loose cumuli, and cirro-str.; thick cir. haze and lunar halo in the evening.
13	29.898	42.3	41.0	1.3	0.7	0.1	8		10.0	Dense cirrus mass.
14	892	45.8	43.2	2.6	0.2	0.2	16		10.0	Id.
15	896	46.2	43.7	2.5	0.2	0.1	24		10.0	Id.; rain ^{0.3}
16	893	46.4	44.0	2.4	0.1	0.1	9		10.0	Id.; id.
17	887	45.6	44.4	1.2	0.1	0.0			10.0	Id.; rain ^{0.5}
18	883	46.5	45.2	1.3	0.2	0.1	17		10.0	Id.; rain ^{0.2}
19	874	47.0	46.0	1.0	0.4	0.1	16		10.0	Thick cirro-stratus and scud; rain ^{0.5}
20	878	47.8	46.8	1.0	0.7	0.3	17	— : 20 : —	10.0	Id.; id.
21	886	49.1	48.1	1.0	0.4	0.3	17	17 : 19 : —	10.0	Loose scud; cirro-stratus scud; cirro-strati; rain ¹
22	884	50.5	49.4	1.1	0.8	0.2	17	18 : — : —	10.0	Scud; dense cirro-stratus.
23	879	52.6	50.9	1.7	1.1	0.8	16	16 : 19 : —	10.0	Id.; id.
13 0	878	55.4	53.0	2.4	1.0	1.3	18	18 : — : —	10.0	Id.; id.
1	880	56.2	53.3	2.9	2.8	1.0	17	18 : — : —	10.0	Id.; id.
2	901	56.5	53.8	2.7	1.8	0.5	18	18 : — : —	10.0	Id.; id.
3	895	56.7	54.2	2.5	0.5	0.4	18	19 : — : —	10.0	Id.; id.
4	878	57.9	54.9	3.0	0.7	0.7	20	19 : — : —	10.0	Id.; id.
5	889	57.7	54.8	2.9	0.9	0.7	18	19 : 23 : —	9.9	Id.; cirro-cumulo-strati; cirro-strati.
6	902	57.7	54.4	3.3	1.1	1.0	18	19 : — : —	9.9	Id.; id.; clouds tinged red.
7	913	57.3	53.8	3.5	1.5	0.7	18		9.8	Id.; id.; id.
8	941	57.4	53.9	3.5	0.8	0.5	20		10.0	Id.; id.
9	960	56.8	53.8	3.0	0.3	0.2	18		10.0	Dense mass of cirro-stratus.
10	964	56.1	53.4	2.7	0.2	0.1	19		10.0	Id.
11	972	56.4	53.4	3.0	0.4	0.4	18		10.0	Id.
12	983	56.3	53.3	3.0	1.1	0.5	18		10.0	Id.
13	29.987	55.5	53.2	2.3	0.7	0.8	18		10.0	Dense mass of cirro-stratus; a few drops of very fine
14	30.001	54.6	53.4	1.2	1.1	0.6	18		10.0	Scud; id.? rain ^{0.3}
15	004	54.7	53.6	1.1	0.7	0.4	19		10.0	Scud and cirro-strati; clouds rather broken; rain ^{0.3}
16	000	56.8	54.4	2.4	0.7	0.4	18		10.0	Id.; id.
17	013	56.2	53.7	2.5	0.7	0.3	19		10.0	Scud; cirro-strati; cirro-cumulo-strati.
18	012	54.3	52.0	2.3	0.5	0.8	18		9.2	Id.; id.; id.
19	017	53.8	51.2	2.6	0.5	0.4	19	— : 19 : 21	9.0	Cir.-str. scud; thick woolly cirri and cir.-str.; scud on
20	032	54.7	52.0	2.7	0.2	0.1	20	— : 19 : —	9.5	As before. [Cheviot.
21	043	55.3	51.4	3.9	-0.2	0.1	20	20 : — : —	9.5	Loose scud; loose cir.-cum.-str.; sheets of cir. and cir.-str.
22	040	54.6	51.3	3.3	0.3	0.1	16	— : 20 : 21	7.5	Cirro-stratus and woolly cirro-cumulo-strati.
23	038	56.0	51.8	4.2	0.1	0.1	20	— : 21 : 21	8.5	Thick woolly cirri and cirro-stratus.
14 0	017	59.2	54.5	4.7	0.1	0.1	18	— : 21 : —	9.0	Woolly cirro-cumuli; woolly cirri and cirro-strati.
1	30.005	60.3	55.0	5.3	0.2	0.1	16	— : 21 : —	8.5	Id.; id.
2	29.975	61.4	54.3	7.1	0.3	0.8	19	— : 21 : —	9.0	Id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Oct. 13^d 11^h. Observation made at 11^h 10^m.

Oct. 13^d 22^h. Sheets of thin cirro-stratus having an arborescent structure, and having the appearance of very thin mottled scud when passing over the zenith, moving rather quickly.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
4. h. 14	in. 29.976	61.4	53.8	7.6	0.2	0.1	19	— : 21 : —	9.0	Woolly cir.-cum.; woolly cir. & cir.-str.; loose scud to N. ⊖
4	958	62.5	55.0	7.5	1.1	0.4	17	20 : — : —	9.5	Loose ragged cir.-str. scud; cir.-cum.-str; cir.-str. and
5	927	61.3	54.0	7.3	1.6	0.5	18	20 : — : —	9.8	Nearly as before. [cirri. ⊖
6	939	59.2	52.9	6.3	0.6	0.3	18	20 : — : —	9.9	Id.
7	920	58.0	52.3	5.7	0.5	0.3	18		10.0	Id.
8	907	58.5	50.7	7.8	0.6	0.5	18		10.0	Id.
9	896	58.4	51.4	7.0	0.9	0.4	18		10.0	Cirro-stratus-scud and cirro-strati.
10	888	56.6	50.2	6.4	0.6	0.7	17		10.0	Id.
11	879	56.9	49.3	7.6	0.5	0.5	18		10.0	Id.
12	858	57.9	49.3	8.6	0.9	0.8	19		10.0	Thick cirro-strati and cirro-cumulo-strati.
13	29.838	57.1	48.5	8.6	1.6	1.0	19		9.8	Thick cirro-strati and cirro-cumulo-strati.
14	803	55.7	48.0	7.7	1.4	0.7	20		9.9	Masses of cirro-stratus scud; cirro-strati and haze. ♫
15	795	55.2	47.8	7.4	1.1	0.8	19		9.8	Cir.-cum.-str.; cir.-str. & cir. haze; portion of a lunar
16	784	54.7	47.7	7.0	1.6	0.9	19		9.9	As before. [halo. ♫
17	797	55.0	49.3	5.7	1.0	0.2	18		10.0	Dense cirro-stratus.
18	798	56.7	51.6	5.1	2.0	1.2	20		10.0	Id.
19	779	56.3	51.8	4.5	1.6	1.2	19	— : 20 : —	10.0	Cirro-stratus scud; clouds red to ESE.
20	785	55.0	52.0	3.0	1.0	0.5	19		10.0	Id.
21	782	55.0	52.7	2.3	0.7	0.6	18	— : 19 : —	10.0	Id.
22	781	52.3	51.4	0.9	0.4	0.2	18	— : 19 : —	10.0	Id.; slight drizzle.
23	777	53.0	52.6	0.4	0.7	0.3	18	— : 20 : —	10.0	Id.; id.
15. 0	763	54.7	53.7	1.0	0.4	0.2	18	— : 20 : —	10.0	Id.
1	753	55.8	54.9	0.9	0.2	0.2	20		10.0	Id.
2	741	58.2	56.4	1.8	0.5	0.6	21	21 : 20 : —	10.0	Ragged scud; mass of cirro-stratus; deep blue to E. ●
3	727	58.0	55.6	2.4	0.6	0.4	21	21 : 19 : —	9.9	Scud on horizon; cirro-cumulo-strati; cirro-strati.
4	730	58.2	55.8	2.4	0.6	0.3	20	23 : 19 : —	9.5	Loose scud; id.; id. ●
5	723	55.7	53.3	2.4	0.7	0.3	20	23 : — : —	9.5	Id.; sheets of thin cirro-strati.
6	725	54.2	51.4	2.8	0.4	0.3	20	23 : 19 : —	9.0	Id.; cirro-cumuli; cirro-strati.
7	732	52.1	50.4	1.7	0.2	0.1	16		9.0	Scud; cirro-strati.
8	735	49.8	48.5	1.3	0.3	0.2	20		0.5	Cirri and cirro-strati to E. ♫
9	713	46.6	45.9	0.7	0.4	0.4	20		0.3	Cirro-strati to SE. ♫
10	717	46.3	45.3	1.0	0.4	0.6	20		0.3	Id. ♫
11	696	47.7	46.9	0.8	0.6	0.3	20	22 : — : —	9.8	Scud moving rapidly.)
12	700	48.3	47.2	1.1	0.4	0.2	19	22 : — : —	9.0	Scud; cirro-cumulo-strati.)
13	29.677	49.7	47.6	2.1	0.9	0.4	19		1.5	Scud; cirro-cumulo-strati.)
14	653	48.4	46.7	1.7	0.9	0.5	20		0.5	Id. on E. and S. horizon.)
15	642	47.0	45.6	1.4	0.6	0.7	20		0.3	Id.)
16	633	48.4	46.4	2.0	1.0	0.1	21	— : 22 : —	3.5	Cirro-cumulo-strati; cirro-strati. ♫
17	630	50.0	47.9	2.1	0.4	1.2	20		9.5	Seud; drops of rain.
18	650	48.3	46.1	2.2	1.3	0.3	21		9.8	Id.; shower ² since last. [cir. haze to E. ♫
19	665	46.3	43.6	2.7	1.7	0.8	22		0.5	Scud on Cheviot & in patches round hor.; thin cir. and
20	676	46.0	43.1	2.9	0.7	0.4	22		0.3	Cirro-strati and cirrus haze on horizon. ○
21	702	48.1	44.5	3.6	1.0	0.5	22	24 : — : —	0.8	Seud; cirro-strati; cirri. ○ [woolly cirri. ○
22	725	50.3	45.6	4.7	1.6	1.5	22	24 : 23 : —	1.5	Masses of scud and loose cum.; patches of cir.-str. and
23	726	52.0	46.6	5.4	1.8	1.8	22	24 : — : —	3.0	Id.; sheets of curled cir.-str. to SE. ○
16. 0	720	53.1	47.0	6.1	2.7	1.6	23	24 : — : —	2.0	Id. ○
1	718	54.4	47.8	6.6	2.0	1.6	22	24 : — : —	4.0	Id. ○
2	707	53.9	47.6	6.3	2.7	2.0	22	24 : — : —	2.0	Seud and loose cumuli. ○
3	712	52.5	46.7	5.8	2.7	2.2	22	24 : — : —	3.0	Id. ○
4	715	52.6	46.6	6.0	2.6	0.9	21	24 : — : —	7.0	Id. ○
5	717	51.6	46.3	5.3	2.0	1.7	21	24 : — : —	2.5	Id. ○
6	707	50.0	46.2	3.8	3.1	0.6	18	23 : — : —	9.5	Thick scud.
7	684	49.8	46.6	3.2	2.2	1.5	18	23 : — : —	8.0	Id.
8	690	49.6	46.0	3.6	1.7	1.0	17		9.5	Id.; cirro-cumulo-strati.)
9	676	48.7	45.3	3.4	2.5	1.5	20	24 : — : —	8.5	Seud; id.; cirro-strati; cirri. ♫
10	673	49.0	45.7	3.3	2.7	1.2	20		10.0	Id.; cirrus mass; lunar halo. ♫

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
16 11	29.657	50.0	46.4	3.6	1.2	0.8	19	23 : — : —	10.0	Scud.
12	632	50.1	46.9	3.2	1.4	1.1	19		10.0	Id.
13	29.622	50.4	47.3	3.1	2.7	1.1	19		10.0	[a few drops of rain.]
14	590	49.7	47.3	2.4	2.6	1.7	19		10.0	Scud on hor.; sky covered with cir. haze; lunar halo;
15	579	50.1	47.6	2.5	3.2	3.4	19	24 : — : —	10.0	As before, haze rather denser.
16	580	49.8	47.6	2.2	3.1	1.6	19		10.0	Id.
17	564	49.7	47.6	2.1	1.8	1.9	19	24 : — : —	10.0	Scud; thickening cirrous haze; rain ^{0.3}
18	553	50.0	47.6	2.4	2.0	2.2	19		10.0	Patches of scud; thickening cir. haze; drops of rain.)
19	569	49.6	47.7	1.9	2.7	1.6	20	23 : — : —	10.0	Id.; id.; id.
20	577	48.4	46.6	1.8	1.6	0.8	21	23 : — : —	10.0	Id.; id.
21	570	49.3	47.8	1.5	0.7	0.5	19	23 : — : —	10.0	Thick scud; rain ^{0.5}
22	550	50.5	48.7	1.8	1.3	0.7	18	23 : — : —	10.0	Id.; flock of gulls moving westward.
23	535	52.3	49.3	3.0	1.8	1.0	20	23 : — : —	10.0	Scud; cirro-cumulo-strati; cirro-strati.
17 0	538	53.0	50.3	2.7	1.3	1.1	20	23 : — : —	10.0	Id.; mass of cirro-stratus and cirrus haze.
1	512	53.7	50.8	2.9	1.7	0.1	19	23 : — : —	9.9	Id.; id.
2	496	53.5	50.7	2.8	1.2	1.1	20	23 : — : —	10.0	Id.; id.
3	473	54.9	51.3	3.6	1.1	0.7	19	22 : — : —	10.0	Id.; rain ^{0.3}
4	449	52.4	51.7	0.7	0.5	0.4	18	23 : — : —	10.0	Id.; Scotch mist; rain ^{0.3}
5	436	53.2	52.7	0.5	0.6	0.5	20	24 : — : —	10.0	Id.; id.; rain ^{0.5}
6	443	54.8	53.8	1.0	0.5	0.3	22	24 : — : —	10.0	Id.; id.; rain ^{0.3}
7	452	55.6	54.0	1.6	0.5	0.4	22		10.0	Id.; id.; id.
8	453	57.0	54.3	2.7	1.7	0.8	21		10.0	Id.
9	465	56.8	54.3	2.5	1.4	0.6	21		10.0	Id.; drops of rain.
10	477	57.0	54.5	2.5	1.4	0.9	21		10.0	Id.; id.
11	470	58.0	54.7	3.3	2.1	1.5	20		10.0	Id.
12	498	57.9	54.6	3.3	2.6	2.5	21		10.0	Id.
13	29.501	58.0	54.3	3.7	3.3	1.5	21		10.0	Scud.
14	508	56.2	53.9	2.3	3.8	2.2	21		10.0	Id.
15	517	56.0	53.2	2.8	2.6	1.7	20		10.0	Id.
16	543	55.7	52.2	3.5	3.7	3.4	21		10.0	Id.
17	556	55.3	51.7	3.6	3.8	2.0	21		10.0	Id.
18	551	54.9	51.1	3.8	4.5	3.7	20	24 : — : —	9.8	Id.
19	569	54.4	50.6	3.8	3.1	1.5	21	24 : — : —	9.2	Id.; cirro-cumulo-stratus. [cir. and cir-cum.]
20	564	55.4	50.6	4.8	2.9	1.9	20	24 : 26 : —	9.2	Loose scud resting on Cheviot; cir-str. scud; mottled
21	565	55.7	51.0	4.7	2.6	1.6	20	24 : — : —	9.0	Scud; cirro-cumulo-strati; cirri.
22	558	56.3	51.6	4.7	3.3	4.3	20	23 : — : —	9.8	Id.; cirro-strati.
23	547	56.7	53.2	3.5	3.2	2.3	21	23 : 25 : —	9.8	Id.; cirro-cumulo-strati.
18 0	532	57.3	53.3	4.0	3.3	2.7	22	24 : — : —	9.9	Id.; a few drops of rain.
1	538	58.0	54.2	3.8	3.0	2.7	20	24 : — : —	10.0	Id.; id. sionally.Θ
2	529	58.7	54.2	4.5	3.5	5.5	23	24 : — : —	6.0	Scud or loose cumuli; cirri to E.; drops of rain occa-
3	556	58.6	54.1	4.5	5.2	4.2	26	24 : — : —	2.2	Id.; id. ○
4	597	55.7	49.8	5.9	7.3	2.1	24	25 : — : —	1.5	Id.; id. ○
5	653	53.3	47.6	5.7	3.2	3.6	21	26 : — : —	3.5	Id.; woolly and mottled cirri. ○
6	676	52.1	47.4	4.7	2.7	1.3	24	26 : 25 : —	3.0	Scud; sheets of thin mottled cirro-stratus.
7	717	51.4	47.3	4.1	1.6	1.3	22		1.5	Scud and patches of cirri.
8	763	50.0	46.4	3.6	1.0	0.2	20		0.3	Patches of scud and streaks of cirri.)
9	786	49.3	45.9	3.4	0.5	0.7	21		0.2	Id.)
10	813	48.6	45.4	3.2	0.7	0.2	21		0.2	Cirri.)
11	830	46.7	44.0	2.7	0.4	0.4	21		2.0	Woolly cirri to S.)
12	870	46.0	43.8	2.2	0.2	0.1	18		8.5	Cirro-strati; cirro-cumulo-strati and cirri.)
23 ³ ₄	29.810	48.0	47.7	0.3	0.6	0.0			Sunday—Cloudy, with occasional sunshine and heavy showers; scud from W by S.
19 13	29.509	54.4	53.4	1.0	3.9	1.9	20		10.0	Scud; cirro-stratus; rain ¹
14	493	54.0	52.9	1.1	4.2	2.6	20	22 : — : —	9.5	Id.; loose cir-cum-str.; rain ^{0.5} ; lunar corona.)
15	470	53.9	52.7	1.2	3.4	1.7	20		10.0	Id.; id.; rain ¹)
16	507	49.7	47.2	2.5	3.1	1.6	20		10.0	Id.; id.; rain ¹)

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Oct. 16^d 11^h. Observation made at 11^h 8^m.

Oct. 17^d 5^h. Portion of the turkey-feather vane disappeared, so that the directions for a day or two have probably been taken a point too much south of west.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h. 19 17	in. 29.496	47.1	45.6	1.5	3.1	1.3	20	pt. pt. pt.	0—10. 10.0	Thick mass of scud and cirro-stratus? rain ¹ Id.; id.
18	482	47.4	45.0	2.4	2.4	1.4	20		10.0	Scud; scud lying on Cheviot; cirro-strati on horizon.
19	464	45.9	43.4	2.5	3.9	1.1	18	23 : — : —	5.0	Id.; cumuli and nimbi; cirro-strati. ⊖
20	455	45.5	42.0	3.5	5.1	1.8	20	24 : — : —	2.5	Scud and loose cumuli; wild-looking sky.
21	446	46.0	42.7	3.3	4.3	2.6	20	24 : — : —	7.0	Id.
22	449	46.7	44.0	2.7	4.5	2.6	20	24 : — : —	6.0	Id.
23	448	47.9	44.3	3.6	5.3	3.5	20	24 : — : —	8.0	Id.
20 0	436	51.2	45.4	5.8	6.8	7.0	24	25 : — : —	3.0	Id.
1	447	50.8	44.8	6.0	7.9	5.3	24	26 : — : —	1.5	Id.
2	473	50.6	44.4	6.2	8.9	3.7	25	26 : — : —	3.0	Id.
3	502	50.7	46.0	4.7	5.5	3.8	26	26 : — : —	0.8	Id.
4	507	49.4	42.9	6.5	6.3	5.2	28		0.2	Patches of scud and haze on horizon.
5	567	47.3	41.5	5.8	6.3	3.6	26		0.2	Id.
6	612	46.3	40.3	6.0	4.0	2.2	25	26 : — : —	0.3	Patches of scud and loose cumuli to S.; thin cirri.
7	640	44.7	40.6	4.1	3.7	2.0	21		0.0	Clear.
8	677	45.0	39.7	5.3	3.4	3.3	25		0.0	Id.
9	705	44.7	39.9	4.8	2.0	1.1	25		0.0	Id.
10	747	44.3	39.3	5.0	1.8	1.3	25		0.0	Id.
11	771	43.5	39.2	4.3	1.0	0.5	24		0.0	Id.
12	800	43.9	38.4	5.5	1.6	0.8	23		0.0	Id.
13	29.820	43.5	38.1	5.4	1.2	0.9	23		0.0	Clear; faint auroral light; altitude 5°.
14	848	41.6	37.9	3.7	0.9	0.7	24		0.0	Id.
15	871	42.2	38.6	3.6	0.9	0.4	24		0.3	Thin cirri, causing a coloured lunar corona.
16	891	41.6	37.9	3.7	0.6	0.3	20		0.0	A very thin cirrus haze seen near the moon.
17	899	40.6	37.4	3.2	0.3	0.3	21		5.0	Thin cirri over the sky; portion of a lunar halo.
18	903	41.8	38.7	3.1	0.5	0.4	21	— : 29 : —	7.0	Cirro-cumuli; cirrus haze.
19	941	42.6	39.8	2.8	0.6	0.3	20	— : 29 : —	6.0	Id.; cirro-strati; cirrus haze.
20	961	42.2	39.6	2.6	0.3	0.1	23	— : 30 : —	5.0	Fine mottled and ribbed cir-cum.; cir-str. in patches; cir. haze. ⊖
21	968	44.2	40.9	3.3	0.4	0.4	22	— : 29 : —	8.5	Cirro-cumulo-strati and cirro-strati; cirrus haze. ⊖
22	29.988	46.0	42.5	3.5	0.9	0.4	25	— : 29 : —	9.0	Thick woolly and mottled cirri; cir.-str.; cir. haze. ⊖
23	30.008	48.6	43.9	4.7	0.6	0.4	24	— : 30 : —	9.5	Sheets of cir.-str., rad. from N. and S.; cir-cum.; seud As before. [on Cheviot.
21 0	30.002	49.0	43.3	5.7	0.6	0.9	25	— : 30 : —	9.8	
1	30.006	50.3	45.5	4.8	1.2	0.4	24	— : 30 : —	9.2	Id.
2	29.995	50.8	46.2	4.6	1.7	1.7	24		9.8	Thick mass of cirro-strati.
3	30.001	50.3	46.9	3.4	2.2	0.6	23	— : 30 : —	10.0	Id.; bank of cir.-str. seud on hor.
4	004	51.3	47.9	3.4	1.1	0.5	23	25 : 30 : —	9.8	Scud; sheets of cir.-str., rad. from N. and S.; cir-cum. ⊖
5	002	51.7	47.7	4.0	1.6	0.7	23	26 : — : —	9.9	Id.; id.; id.
6	007	51.3	47.6	3.7	1.4	1.6	24	26 : 30 : —	10.0	Patches of scud; cir-cum.-str.; cir.-str. and cir. haze.
7	024	50.8	47.0	3.8	1.0	0.5	20		10.0	Dense mass of cirro-stratus.
8	036	49.6	46.4	3.2	0.6	0.1	20		10.0	Id.
9	043	49.2	46.5	2.7	0.5	0.1	22		10.0	Id.
10	038	49.3	46.3	3.0	0.7	0.7	24		10.0	Id.
11	043	48.3	46.0	2.3	0.6	0.1	20		8.5	Id.; stars dim.
12	049	47.7	45.2	2.5	0.3	0.1	20		6.0	Cirro-cumulo-strati, cirro-strati, and haze. ♫
13	29.045	46.7	44.3	2.4	0.3	0.1	22		1.0	Cirro-strati, cirri, and cirrus haze; lunar corona. ♫
14	058	45.9	43.7	2.2	0.1	0.0	17	— : 28 : —	3.0	Cirro-cumulo-strati; cirrus haze; id. ♫
15	071	48.3	45.3	3.0	0.3	0.1	20		3.5	Id.; faint auroral light to N. ♫
16	063	46.0	44.2	1.8	0.4	0.2	20		0.5	Cir-str. and woolly cirri; faint auroral light to N.; col. lun. cor. ♫
17	072	46.4	44.0	2.4	0.3	0.2	20		1.5	Id.; id.; id. ♫
18	072	45.0	43.0	2.0	0.3	0.1	22		1.5	Id.; coloured lunar corona. ♫
19	084	46.5	43.6	2.9	0.2	0.2	20		7.0	Woolly cirri; cirrus haze; cirro-strati; lunar cor. ♫
20	100	45.2	43.2	2.0	0.3	0.1	19	28 : 26 : —	9.5	Patches of scud; woolly cirri and cirro-strati. ⊖
21	101	46.2	43.7	2.5	0.2	0.1	20	— : 26 : 26	7.0	Woolly cirri and cirro-strati; cir-str. scud on hor. ⊖
22	119	50.0	45.8	4.2	0.7	0.4	21	27 : — : —	9.7	Scud; cirri and cirro-strati.
23	135	50.5	46.5	4.0	0.9	0.5	21	26 : — : —	7.0	Id.; id.
22 0	131	52.2	47.7	4.5	0.8	0.4	22	26 : — : —	6.5	Id.; sheets of woolly cirri and cirro-strati. ⊖

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	lbs.	lbs.	pt.	
d. h.	in.	°	°	°						
22 1	30-127	52.8	48.1	4.7	0.9	0.5	23	26 : — : —	9.7	Scud ; sheets of woolly cirri and cirro-strati. Θ
2	113	53.0	47.8	5.2	0.9	0.8	22	26 : — : —	8.7	Scud and loose cumuli ; woolly cirri and cirro-strati.
3	118	54.3	48.1	6.2	1.3	0.7	23	26 : — : —	7.0	Id. ;
4	114	52.7	48.1	4.6	0.9	0.2	20	25 : 28 : 28	9.5	Id. ; woolly cir. and cir.-str. thickening.
5	117	50.6	46.7	3.9	0.8	0.4	21	25 : 26 : 26	9.8	Scud and loose cumuli ; cirri and cirro-strati.
6	124	48.4	45.2	3.2	1.7	0.2	21	25 : — : —	8.5	Scud ; cirri and cirro-strati ; cloud tinged red.
7	143	48.0	45.3	2.7	0.6	0.3	22		1.5	Id. on S. horizon.
8	170	47.4	45.0	2.4	0.2	0.2	20		2.0	Id.
9	177	48.4	45.6	2.8	0.3	0.3	22		8.0	Id.
10	172	47.3	44.9	2.4	0.4	0.3	19		0.5	Scud near horizon.
11	173	45.4	43.6	1.8	0.1	0.3	22		0.2	Hazy near horizon.
12	176	46.0	44.1	1.9	0.3	0.0	12		0.3	Scud or cirro-stratus near horizon ; lunar corona. D
13	30-165	45.2	43.9	1.3	0.2	0.2	21		0.3	Scud or cirro-stratus near horizon ; lunar corona. D
14	157	46.5	45.3	1.2	0.4	0.2	19		9.5	Cirro-stratus scud ; cirro-cumulo-strati ; rain ^{0.2}
15	172	47.1	45.6	1.5	0.2	0.0			10.0	Id. ; id.
16	152	47.7	45.3	2.4	0.1	0.4	20		8.5	Id. ; id.
17	138	46.4	44.2	2.2	0.3	0.2	19	— : 24 : —	3.0	Id. ; id. ; lunar cor. D
18	153	43.6	41.9	1.7	0.3	0.1	21		5.0	Id. ; id. D
19	170	46.4	44.1	2.3	0.2	0.2	16		9.2	Id. ; id.
20	174	48.0	44.5	3.5	0.2	0.1	19	— : 24 : —	9.8	Id. ; patches of loose scud on Cheviot ;
21	167	48.4	45.8	2.6	0.4	0.3	21	— : 24 : —	9.8	Id. ; id. [cir.-str. ; cir.
22	158	49.6	46.3	3.3	0.7	0.8	20	— : 24 : —	9.0	Id. ; id. Θ
23	158	50.2	46.2	4.0	0.9	1.0	24	— : 25 : —	8.0	Loose cirro-stratus ; cirro-str. ; cirri ; patches of scud.
0	157	50.4	46.4	4.0	0.8	0.8	19	— : 24 : —	9.8	Cirro-stratus scud ; id. ; id.
1	147	51.0	46.9	4.1	0.7	1.1	20	24 : — : —	9.6	Scud ; cirro-stratus scud.
2	128	51.0	46.7	4.3	1.3	0.5	20	23 : — : —	9.8	Id. ; id.
3	121	51.2	47.0	4.2	0.9	0.3	20	23 : — : —	9.8	Id. ; id.
4	120	50.3	46.7	3.6	1.7	0.6	20	23 : — : —	9.7	Cirro-stratus scud ; cirro-cumulo-strati.
5	121	49.4	46.2	3.2	0.7	0.8	20	23 : 23 : —	9.8	Id. ; id.
6	122	49.0	46.0	3.0	0.7	0.3	21		10.0	Id.
7	126	48.8	46.0	2.8	0.8	0.4	19		10.0	Id.
8	126	48.5	45.6	2.9	0.9	0.6	20		10.0	Id.
9	127	48.3	45.4	2.9	0.9	0.8	19		9.9	Id.
10	115	48.3	45.1	3.2	0.9	0.8	18		9.9	Id.
11	093	48.2	44.6	3.6	1.1	0.9	19		8.0	Id.
12	080	47.7	44.3	3.4	1.3	1.2	20		6.0	Id. ; cirro-cumulo-strati.
13	30-077	47.9	44.6	3.3	2.1	1.0	20		7.5	Cirro-stratus scud ; cirro-cumulo-strati.
14	061	47.9	44.4	3.5	1.1	1.2	22		9.0	Id. ; id. D
15	048	47.0	43.4	3.6	1.2	0.8	20	— : 22 : —	7.0	Id. ; id.
16	042	47.6	43.6	4.0	1.3	0.4	18		9.8	Id. ; id.
17	032	47.6	43.5	4.1	0.8	0.6	18		9.8	Id. ; id. D
18	026	46.9	42.6	4.3	1.5	0.3	19	— : 22 : —	8.0	Id. ; id.
19	020	46.8	42.8	4.0	0.7	0.4	21	— : 22 : —	9.5	Id. ; id.
20	024	48.1	43.5	4.6	1.3	1.0	21	— : 22 : —	9.8	Id.
21	022	48.2	44.3	3.9	0.6	0.2	20	— : 22 : —	10.0	Id. ; dense mass of cirro-stratus.
22	005	49.2	45.3	3.9	0.4	0.6	21	— : 22 : —	10.0	Id. ; id.
23	30-001	51.3	47.4	3.9	1.3	0.5	19	— : 22 : —	9.5	Id. ; sheets of cirro-strati.
0	29-997	51.6	47.2	4.4	1.3	0.4	20	— : 22 : —	9.8	Id. ; id. Θ
1	969	52.3	47.7	4.6	1.7	0.6	19	21 : 20 : —	6.0	Scud ; cirro-cumulo-strati.
2	938	52.4	47.9	4.5	2.4	1.3	20	21 : — : —	9.5	Loose and cirro-stratus scud.
3	912	51.7	49.0	2.7	1.0	0.8	19	20 : 21 : —	10.0	Scud ; cirro-stratus scud.
4	888	51.5	48.2	3.3	1.6	1.2	18	20 : 21 : —	9.0	Id. ; cirro-cumulo-strati.
5	874	50.3	47.4	2.9	1.7	0.8	19	20 : — : —	10.0	Id. ; id.
6	854	49.7	47.0	2.7	0.9	0.7	19	20 : — : —	10.0	Id. ; id.
7	843	49.6	47.0	2.6	0.5	0.6	19		10.0	Id. ; id.
8	815	49.8	47.4	2.4	1.3	0.9	18		10.0	Id. ; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h. 24 9	in. 29.798	49.9	47.7	2.2	1.6	1.3	pt.	pt. pt. pt.	0-10. 10.0	Scud.
10	780	49.8	47.2	2.6	2.3	1.6	20		7.0	Scud and cirro-stratus.
11	768	50.6	47.5	3.1	1.9	0.6	20		7.0	Id.
12	752	51.0	48.0	3.0	2.3	1.2	20		9.9	Id.
13	29.752	50.9	48.2	2.7	1.6	1.0	20		7.0	Scud and cirro-stratus ; sky to S.
14	748	50.4	48.9	1.5	1.6	1.1	24		10.0	Id. ; very dark ; rain ²
15	792	47.0	44.0	3.0	1.7	0.3	24		10.0	Id. [large lunar corona.]
16	829	45.4	42.7	2.7	1.1	0.1	23		7.0	Cir.-cum.-str. and cir.-str., radiating from NE. and SW. ;
17	851	44.6	40.8	3.8	1.2	0.8	24		6.5	Thick woolly cirri and cirrus haze.
18	896	42.0	39.0	3.0	0.4	0.2	26		1.0	Bands of cirro-strati and woolly cirri to SE.
19	933	40.6	38.4	2.2	0.2	0.1	24		0.8	Cirro-strati to SE.
20	29.975	37.8	36.6	1.2	0.3	0.0	22		2.0	Cirro-strati, cirri, and cirrus haze on horizon.
21	30.000	39.4	37.5	1.9	0.1	0.1	20		0.5	Streaks of cirri and haze on horizon.
22	020	43.0	39.7	3.3	0.2	0.2	24		0.5	Id.
23	038	45.0	41.0	4.0	0.3	0.2	20		0.3	Id.
25 0	052	46.6	41.4	5.2	0.7	0.3	24		0.3	Patches of cumuli to N. ; cirrus haze on horizon.
1	062	47.4	41.7	5.7	0.7	0.4	26		0.3	A few patches of cumuli ; id.
2	058	48.5	41.7	6.8	0.5	0.3	24		0.5	Id. ; id.
3	061	48.0	41.6	6.4	0.5	0.4	24		0.5	Id. ; id.
4	067	46.3	41.7	4.6	0.4	0.4	24	26 : — : —	0.8	Masses of cumuli ; cirri and cirrus haze.
5	068	44.7	40.3	4.4	0.3	0.2	24	24 : — : —	7.0	Scud ; cirrus haze.
6	068	40.7	38.3	2.4	0.3	0.1	20		2.0	Id. ; id.
7	080	40.2	37.7	2.5	0.2	0.1	20		0.5	Haze on horizon.
8	081	40.0	37.9	2.1	0.1	0.0	24		0.2	Id.
9	067	40.2	37.6	2.6	0.2	0.2	20		0.5	Id.
10	050	40.8	38.0	2.8	0.6	0.4	20		0.2	Id.
11	037	39.8	37.5	2.3	0.5	0.6	20		0.5	Cirrus streaks.
12	30.018	38.7	36.8	1.9	0.8	0.5	20		0.8	Patches of cirro-strati and cirri.
23 1	29.821	47.5	44.6	2.9	3.3	1.1	20	22 : — : —	Sunday—Overcast ; scud and cirrus haze.
26 13	29.595	49.6	46.4	3.2	3.6	1.4	21		9.7	Scud and cirro-stratus ; drops of rain.
14	580	49.7	46.8	2.9	2.1	2.0	21		9.9	Id.
15	560	50.0	46.6	3.4	2.7	2.0	21		9.7	Id. ; drops of rain.
16	559	49.9	46.9	3.0	3.5	1.9	21		9.0	Id.
17	558	50.1	47.2	2.9	2.3	1.5	22		9.0	Id.
18	572	50.9	47.6	3.3	1.5	2.4	25		9.9	Id. ; very slight drizzle.
19	577	51.2	47.6	3.6	3.1	2.1	22	24 : — : —	10.0	Patches of scud ; thin cirro-stratus ; drizzling rain ^{0.2})
20	593	50.4	47.3	3.1	2.1	1.5	20	25 : — : —	10.0	Scud ; cirro-stratus.
21	610	50.0	47.8	2.2	1.5	0.4	22	25 : — : —	10.0	Id. ; id.
22	618	51.0	47.9	3.1	1.7	0.7	21	25 : — : —	10.0	Id. ; id.
23	622	51.7	48.3	3.4	0.9	0.4	21	25 : — : —	10.0	Id. ; id.
27 0	(624)	(51.5)	(48.5)	(3.0)		(10.0)		Id. ; id.
1	627	51.2	48.6	2.6	0.8	0.2	20	25 : — : —	10.0	Id. ; id.
2	617	52.7	48.7	4.0	0.5	0.4	20	25 : — : —	10.0	Id. ; id. ; drops of rain.
3	619	51.0	49.0	2.0	0.7	0.2	20	25 : — : —	10.0	Id. ; id. ; drizzling rain ^{0.2}
4	594	50.2	48.9	1.3	0.3	0.1	19	22 : — : —	10.0	Cirro-stratus scud ; cirro-stratus ; rain ^{0.2}
5	582	49.7	48.7	1.0	0.2	0.2	20	24 : 22 : —	10.0	Scud ; cirro-stratus scud ; cirro-strati ; rain ^{0.2}
6	570	50.0	49.3	0.7	0.6	0.3	20		10.0	Scud and cirro-stratus ; rain ^{0.5}
7	569	51.0	50.0	1.0	0.3	0.2	20		10.0	Id. ; id.
8	559	51.5	50.6	0.9	0.5	0.4	20		10.0	Dark ; rain ^{0.5}
9	564	52.3	51.4	0.9	0.6	0.1	20		10.0	Id. ; id.
10	561	53.4	52.0	1.4	0.4	0.2	21		10.0	Id. ; id.
11	567	53.8	52.2	1.6	0.3	0.3	21		10.0	Id.
12	567	54.2	52.3	1.9	0.9	0.6	22		10.0	Id.
13	29.570	54.2	52.1	2.1	0.6	0.4	20		10.0	Dark.
14	573	54.2	52.0	2.2	0.6	0.4	20		10.0	Scud and cirro-stratus.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
27 15	29.572	54.6	51.7	2.9	1.0	0.6	24			7.0
16	582	55.0	51.7	3.3	1.0	0.6	24			10.0
17	586	53.4	51.9	1.5	1.8	0.7	21			9.5
18	590	54.2	51.5	2.7	0.8	0.5	21			9.0
19	600	53.8	51.0	2.8	0.5	0.5	20	23 : — : —		10.0
20	614	52.8	50.6	2.2	0.2	0.3	18	23 : 26 : 26		6.0
21	625	53.2	51.2	2.0	0.6	0.7	19	23 : 24 : —		9.9
22	625	54.6	51.7	2.9	1.1	0.8	19	23 : 24 : —		10.0
23	629	56.0	51.7	4.3	1.3	0.6	20	23 : 25 : —		9.8
28 0	647	56.3	52.8	3.5	1.6	0.4	18	23 : — : —		10.0
1	644	54.9	52.6	2.3	0.9	0.4	18	23 : — : —		9.8
2	637	55.6	52.7	2.9	0.9	0.5	18	23 : — : —		9.9
3	643	54.4	51.9	2.5	1.4	0.8	19	22 : — : —		10.0
4	626	53.9	51.3	2.6	1.7	1.4	19	22 : — : —		9.9
5	639	52.5	51.3	1.2	1.4	1.1	19	22 : — : —		10.0
6	628	53.0	51.0	2.0	1.6	1.5	20			10.0
7	638	52.7	50.7	2.0	0.7	0.5	22			9.0
8	639	52.6	50.9	1.7	0.6	0.5	22			9.0
9	630	52.2	50.6	1.6	0.6	0.6	21			5.0
10	620	52.5	50.8	1.7	0.9	1.2	21			5.0
11	610	51.8	50.2	1.6	1.5	0.8	20			1.5
12	621	52.3	50.6	1.7	1.1	1.3	20			3.0
13	615	52.5	50.6	1.9	1.7	1.1	20			9.8
14	616	53.0	50.6	2.4	1.1	0.7	20			10.0
15	612	52.9	50.5	2.4	1.0	0.9	20			10.0
16	610	52.3	50.0	2.3	0.9	0.3	20			10.0
17	608	52.6	50.3	2.3	0.6	0.9	19			10.0
18	593	51.6	50.0	1.6	0.6	0.6	19			10.0
19	579	52.2	51.2	1.0	0.8	0.5	20			10.0
20	583	52.5	50.7	1.8	0.5	0.6	21	20 : 21 : —		10.0
21	576	52.6	50.8	1.8	0.5	0.6	20	21 : — : —		10.0
22	576	52.3	51.1	1.2	0.8	0.3	20	20 : — : —		10.0
23	589	52.6	51.4	1.2	0.6	0.2	20	20 : — : —		10.0
29 0	587	53.2	51.2	2.0	0.8	0.5	20	20 : — : —		10.0
1	575	52.8	51.0	1.8	0.4	0.2	22	20 : — : —		10.0
2	561	52.5	51.0	1.5	0.4	0.0	17	19 : — : —		10.0
3	551	52.2	50.3	1.9	0.2	0.1	16	19 : — : —		10.0
4	527	51.7	49.8	1.9	0.1	0.1	19	19 : — : —		10.0
5	516	50.4	49.0	1.4	0.1	0.1	20			10.0
6	511	49.8	48.7	1.1	0.2	0.2	19			10.0
7	498	49.5	48.4	1.1	0.2	0.1	18			10.0
8	481	49.4	48.4	1.0	0.1	0.0	18			10.0
9	463	49.6	48.7	0.9	0.0	0.0	20			10.0
10	444	49.7	48.9	0.8	0.1	0.0				10.0
11	429	49.8	49.1	0.7	0.0	0.0	20			10.0
12	407	49.7	49.2	0.5	0.0	0.0	22			10.0
13	29.385	51.7	50.9	0.8	0.3	0.1	18			Dark.
14	374	52.0	51.1	0.9	0.3	0.2	19			Id.
15	357	52.0	51.3	0.7	0.7	0.3	18			Very slight drizzle.
16	343	52.2	51.5	0.7	0.6	0.5	18			Id.; clouds broken at 15 ^h 40 ^m .
17	353	54.3	53.1	1.2	1.1	0.5	19			9.9
18	370	54.1	52.9	1.2	1.1	1.0	20			Seud.
19	398	53.8	52.3	1.5	1.2	0.2	20	23 : — : —		8.0
20	437	53.8	53.0	0.8	0.3	0.1	20	23 : — : —		9.0
21	470	53.0	51.0	2.0	0.8	0.4	20	23 : — : —		Id.; cirro-cumulo-strati; cirro-strati; cirri.
22	510	53.9	51.1	2.8	0.2	0.6	22	23 : — : —		Id.; cirro-strati.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	
d. h. 29 23	in. 29.540	52.2	48.0	4.2	1.9	1.3	23	23 : — : —	0—10.	Scud and loose cumuli; cumulo-strati; cirro-strati. ☺
30 0	567	53.4	47.2	6.2	1.8	1.8	24	24 : — : —	1.5	Loose cumuli; thin cirro-strati. ☺
1	610	53.3	46.8	6.5	1.8	0.7	21	25 : — : —	2.0	Id.; cirro-strati; cumuli. ☺
2	625	52.7	45.3	7.4	2.4	1.6	21		4.0	Cirro-stratus scud; streaks of cirri and cirrus haze. ☺
3	646	53.2	46.6	6.6	1.7	1.1	22	— : 25 : —	1.5	Id.; id.
4	678	51.6	46.1	5.5	1.3	0.1	20	— : 25 : —	2.5	Id.; cirro-strati; cirrus haze. ☺
5	707	48.7	44.7	4.0	0.6	0.7	22	— : 25 : —	2.0	Id.; cirri; cirrus haze.
6	720	46.1	43.1	3.0	0.6	0.1	20		0.8	Id.
7	741	45.0	42.0	3.0	0.2	0.1	16		0.5	Cirro-strati to S.
8	771	41.4	40.0	1.4	0.2	0.1	22		1.0	Clear.
9	790	42.9	41.1	1.8	0.1	0.1	18		0.2	Id.
10	808	43.0	41.4	1.6	0.1	0.0	23		0.0	Patches of cloud.
11	820	40.5	39.6	0.9	0.1	0.1	25		0.3	Streak of cloud to N.
12	832	40.7	39.8	0.9	0.1	0.0	17		0.2	Clear.
13	29.842	39.5	38.8	0.7	0.1	0.1	16		0.0	Clear.
14	845	39.3	38.4	0.9	0.2	0.1	16		0.2	Id.
15	845	38.8	38.0	0.8	0.2	0.1	24		0.2	Id.
16	844	38.8	38.0	0.8	0.2	0.1	18		0.2	Id.
17	839	40.7	39.0	1.7	0.2	0.4	22		1.0	Cirro-strati on S. and W. horizon.
18	838	38.8	37.8	1.0	0.3	0.1	24		0.5	Patches of clouds to E. [the sky.
19	832	42.2	40.0	2.2	0.5	0.4	20		0.8	Patches of cir.-str. on hor.; light cirri spreading over
20	848	39.0	38.0	1.0	0.4	0.0	16		3.0	Cirro-strati to N.; thin cirri over most of the sky.
21	859	44.3	41.9	2.4	0.2	0.3	20	— : 24 : —	2.5	Id.; thin cirri; patches of scud to N. ☺
22	857	46.6	44.0	2.6	0.7	0.7	18	— : — : 24	4.0	Woolly cirri, cirro-strati, and woolly cirro-cumuli. ☺
23	858	48.8	45.3	3.5	1.7	1.3	19	24 : — : 24	7.5	Masses of scud, woolly cirri, cirro-cumuli, and cir.-str. ☺
31 0	870	49.7	46.3	3.4	1.4	0.8	19	23 : — : 25	7.0	Scud; woolly cirri; cirro-strati. ☺
1	878	50.0	46.9	3.1	1.0	0.4	20	24 : — : —	9.3	Id.; id.; id.
2	867	52.0	48.3	3.7	0.9	0.6	19	24 : — : —	9.0	Id.; cirro-cumulo-strati; cirri; cirro-strati. ☺
3	871	52.0	48.6	3.4	1.0	0.3	18	— : 24 : —	10.0	Cirro-stratus scud.
4	863	53.6	50.1	3.5	1.0	0.3	19	— : 23 : —	9.5	Id.; cirri; cirro-strati. ☺
5	864	50.7	48.2	2.5	0.9	0.4	18	— : 24 : —	9.7	Id.; id.; id.
6	868	49.8	47.6	2.2	0.5	0.8	18		9.0	Id.; id.; id.; clouds tinged red.
7	874	49.7	47.4	2.3	0.6	0.2	18		9.8	Id.
8	881	50.4	48.0	2.4	0.7	0.5	20		10.0	Very dark.
9	877	50.0	48.0	2.0	0.8	0.3	24		10.0	Id.
10	890	49.5	47.7	1.8	0.7	0.1	17		9.8	Scud. [light to N.; aurora?
11	892	49.8	47.6	2.2	0.3	0.3	20		7.0?	Patches of scud; cir.-str.; thin cir. haze over sky; milky
12	899	50.4	46.2	4.2	0.4	0.6	21		3.5	Thin cir.-str. and cir. haze round hor.; milky to N.; clear in zenith.
13	29.915	48.8	45.4	3.4	0.3	0.2	22		7.0?	Cirro-strati; cirrus haze.
14	923	47.8	45.0	2.8	0.2	0.2	21		7.0?	Id.; id. [milky to N.
15	919	46.3	44.0	2.3	0.4	0.1	21		7.0?	As before; stars seen dimly over 7·0 of sky; rather
16	913	46.3	43.9	2.4	0.2	0.2	21		1.5	Cirro-strati and cirrus haze on horizon.
17	932	46.0	43.7	2.3	0.3	0.1	21		0.8	Cirrus haze on E. horizon.
18	932	43.6	42.2	1.4	0.2	0.1	21		0.5	Id.; sky milky to E by S.
19	931	42.8	41.4	1.4	0.1	0.1	22		1.5	Cirro-strati and cirri on horizon.
20	938	42.3	41.0	1.3	0.1	0.1	23	— : — : 26	5.0	Woolly and mottled cirri, rad. from E. and W.; cir.-str.
21	961	43.1	41.8	1.3	0.0	0.0	21	— : 28 : —	8.0	Cirro-cumulo-strati; cirri. ☺
22	973	46.3	44.3	2.0	0.1	0.0	23	— : 28 : —	9.0	Id.; id.
23	985	47.8	45.8	2.0	0.0	0.0	15	— : 27 : —	7.5	Id.; id.
1 0	979	50.8	46.2	4.6	0.0	0.0	23		9.5	Cirro-cumulo-strati and cirro-strati; cirri.
1	982	51.2	46.3	4.9	0.1	0.0	20		9.9	Cirro-stratus scud; cirro-strati.
2	980	50.2	46.0	4.2	0.1	0.0	23		10.0	Dense mass of cirro-stratus.
3	977	50.2	46.2	4.0	0.0	0.0	26		10.0	Id.
4	976	49.0	45.6	3.4	0.0	0.0	31		10.0	Id.
5	976	48.0	45.0	3.0	0.1	0.0	31		10.0	Id.
6	980	47.6	44.0	3.6	0.0	0.0	8		10.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.
Oct. 31^a 21^h. Observation made at 21^h 5^m.

HOURLY METEOROLOGICAL OBSERVATIONS, NOVEMBER 1—4, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From 10m.	lbs.	lbs.	pt.	pt.
d. h.	in.	°	°	°	0.0	0.0	28			0—10.
1 7	29.987	47.2	43.7	3.5	0.0	0.0	28			10.0
8	992	46.4	43.8	2.6	0.0	0.0	28			10.0
9	993	47.0	43.5	3.5	0.0	0.0				10.0
10	999	46.4	43.6	2.8	0.0	0.0				10.0
11	29.998	45.4	43.5	1.9	0.0	0.0				10.0
12	30.005	45.0	43.3	1.7	0.0	0.0	18			10.0
2 1½	30.116	48.0	44.0	4.0	0.1	0.1	8	— : 8 : —	10.0	Cirro-stratus scud.
13	30.138	42.2	40.0	2.2	0.3	0.1	17			10.0
14	128	42.8	39.7	3.1	0.2	0.1	16			10.0
15	124	42.3	39.3	3.0	0.4	0.1	17			10.0
16	109	42.5	39.0	3.5	0.2	0.2	18			10.0
17	103	41.8	39.3	2.5	0.1	0.1	18			10.0
18	099	41.5	38.9	2.6	0.1	0.1	18			10.0
19	098	41.6	38.9	2.7	0.2	0.1	16			9.9
20	108	40.8	38.7	2.1	0.1	0.0	18	— : 19 : —	10.0	Cirro-stratus scud.
21	120	41.4	39.4	2.0	0.0	0.0	18	— : 18 : —	9.8	Id. ; thick and flame-like cirri to SE.
22	125	42.7	40.0	2.7	0.1	0.0	18	— : 18 : —	9.9	Id. ; cirrus haze and cirro-strati.
23	125	43.5	40.6	2.9	0.2	0.1	16	— : 19 : —	9.8	Id. ; id.
3 0	124	44.6	41.4	3.2	0.1	0.1	18	— : 20 : —	7.0	Id. ; cirri and cirrus haze.
1	115	45.0	42.0	3.0	0.1	0.0	20	— : 21 : —	9.8	Id. ; id.
2	104	47.4	43.3	4.1	0.1	0.0	20	— : 20 : —	8.0	Id. ; id.
3	091	46.7	42.5	4.2	0.1	0.0	20	— : 21 : —	9.5	Id. ; id.
4	088	44.8	41.2	3.6	0.1	0.0	18	— : 20 : —	7.0	Id. ; id.
5	085	37.7	36.6	1.1	0.0	0.0	18			3.5
6	080	34.3	33.6	0.7	0.0	0.0	16			0.5
7	092	32.1	31.4	0.7	0.1	0.0	23			0.2
8	091	30.7	30.5	0.2	0.0	0.0				0.2
9	097	30.6	30.2	0.4	0.0	0.0				0.2
10	091	29.6	29.4	0.2	0.0	0.0				0.2
11	068	29.7	29.3	0.4	0.0	0.0				0.0
12	061	29.8	30.5	...	0.0	0.0				0.0
13	30.050	28.0	27.9	...	0.0	0.0				0.0
14	30.028	29.2	29.0	0.2	0.0	0.0				0.0
15	30.012	27.1	27.1	...	0.0	0.0				0.0
16	29.997	28.0	27.4	0.6	0.0	0.0				0.0
17	979	28.0	27.7	0.3	0.0	0.0	24			0.0
18	970	28.5	28.0	0.5	0.0	0.0	22			0.0
19	960	29.5	29.3	0.2	0.1	0.0	26			0.7
20	953	28.4	27.6	0.8	0.0	0.0	22			0.7
21	949	29.0	28.6	0.4	0.0	0.0	18			1.5
22	942	31.7	31.4	0.3	0.0	0.0	20	— : — : 20	3.0	Cirro-strati and cirri on E. horizon.
23	925	34.4	32.4	2.0	0.0	0.0	28	— : — : 20	4.0	Cirri and cirrus haze on E. horizon.
4 0	909	37.9	37.1	0.8	0.0	0.0	26	— : — : 20	4.0	Cirri and cirro-strati to SE.
1	886	39.8	38.7	1.1	0.0	0.0	22	— : — : 20	4.0	Woolly cirri and cirro-strati rad. from SW. and NE. ○
2	853	45.3	40.0	5.3	0.1	0.0	22	— : — : 20	4.0	Id. ; cirrus haze. ○
3	836	47.3	40.8	6.5	0.2	0.1	21			Id. ; id. ○
4	824	43.5	39.7	3.8	0.1	0.0	18			Id. ; id. ○
5	810	39.1	35.3	3.8	0.1	0.0	20			Id. ; cirrus haze. ○
6	796	37.2	32.9	4.3	0.1	0.0	18			Id. ; id. ○
7	792	32.6	30.0	2.6	0.0	0.0				0.0
8	772	31.0	28.6	2.4	0.0	0.0	17			0.0
9	761	29.0	27.0	2.0	0.0	0.0	16			0.0
10	741	31.9	28.7	3.2	0.1	0.0	14			0.0
11	708	35.8	31.4	4.4	0.4	0.4	17			Id. ; very faint auroral light to NNW.
12	680	38.0	32.9	5.1	1.2	1.0	17			Id. ; aurora.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1h.	From	lbs.	lbs.	pt.	pt.	pt.
d. h.	in.	°	°	°						0—10.	
4 13	29.666	36.4	33.2	3.2	0.9	0.3	18	0.0		0.0	Clear.
14	648	34.9	32.2	2.7	0.4	0.1	19			0.0	Id.
15	620	35.5	32.4	3.1	0.4	0.1	24			0.0	Id.
16	597	34.2	31.0	3.2	0.1	0.0	20			0.0	Id.
17	568	31.6	29.8	1.8	0.0	0.0	8			0.0	Id.
18	539	31.4	29.4	2.0	0.0	0.0				0.0	Id.
19	537	31.9	30.2	1.7	0.1	0.1	18			0.0	Id.; fine red on E. horizon.
20	544	35.5	32.7	2.8	0.6	0.5	16			0.0	Id.; reddish on W. horizon.
21	548	34.5	32.1	2.4	0.3	0.1	26			0.2	Id.; cloud on S. horizon.
22	540	37.6	34.4	3.2	0.2	0.0	0			0.2	Id.; thin cirri and haze on horizon. ☽
23	528	39.7	36.3	3.4	0.0	0.0	16			0.2	Id.; id. ☽
5 0	503	42.7	38.4	4.3	0.1	0.0	16			0.5	Streaks of cir. to E. and W., radiating from about N.; hazy on hor. ☽
1	485	45.5	41.3	4.2	0.2	0.1	12	— : 20 : —		0.7	Loose cirro-stratus; cirro-strati; cirrus haze. ☽
2	476	47.7	43.7	4.0	0.2	0.1	11	— : 18 : —		6.5	Cir-str. scud and loose cir-str.; cum.-str.; woolly cirri and haze. ☽
3	463	47.1	43.4	3.7	0.4	0.1	14			0.8	Patches of loose cir-str.; cir-cum-str.; cir.; brownish atmospheric
4	441	44.4	41.5	2.9	0.1	0.0	12	— : — : 19		1.5	Woolly and mottled cir.; cir-str. and haze. ☽ haze. ☽
5	447	42.6	40.3	2.3	0.1	0.0	12			5.0	Id.; id. ☽
6	447	38.5	37.5	1.0	0.0	0.0	30			1.0	Cirro-strati and cirri. ☽
7	435	36.8	36.1	0.7	0.0	0.0				0.5	Patches of cirri; cir. haze; coloured lunar corona. ☽
8	432	35.3	34.8	0.5	0.0	0.0				2.0	Cirro-str., cir-cum., and cirrus haze; lunar corona. ☽
9	416	36.6	35.9	0.7	0.0	0.0	16			10.0	Scud? the sky became overcast about 8 ^h 30 ^m .
10	394	41.4	40.5	0.9	0.5	0.0	6			9.0	Cirro-stratus and haze.
11	389	42.9	41.9	1.0	0.1	0.1	22			10.0	Id.
12	377	43.6	42.6	1.0	0.1	0.0				10.0	Id.
13	29.370	45.4	44.1	1.3	0.0	0.0				10.0	Very dark.
14	358	45.9	44.9	1.0	0.1	0.1	16			10.0	Id.
15	344	49.3	47.9	1.4	0.3	0.0				8.5	Clouds broken.
16	350	49.4	48.0	1.4	0.0	0.1	18			9.8	Scud.
17	351	51.7	49.7	2.0	0.6	0.2	16			10.0	Id.
18	343	51.8	50.0	1.8	0.4	0.2	16			10.0	Id.
19	340	50.5	48.7	1.8	0.5	0.2	16	18 : — : —		3.0	Id.; cirro-strati.
20	338	49.6	48.0	1.6	0.4	0.3	16	20 : — : —		2.5	Patches of scud; sheets of cir-cum-str.; cirri and haze.
21	338	50.3	48.5	1.8	0.5	0.5	15	— : 16 : —		5.0	Loose cir-cum-str.; scud; flame-like and linear cirri. ☽
22	338	51.4	49.5	1.9	0.5	0.3	16	16 : — : —		5.0	Cirro-cumuloso scud; sheets of cirro-strati and cirri ☽
23	332	52.0	49.8	2.2	0.9	0.7	16	17 : — : —		5.0	Scud; cirro-strati. ☽
6 0	311	56.0	52.4	3.6	0.8	1.0	16	18 : 16 : —		4.0	Id.; patches of cirro-strati and cirri. ☽
1	294	54.1	51.1	3.0	0.8	0.5	14			5.0	Scud near horizon; cir-cum-str. and woolly cirri. ☽
2	285	56.1	52.3	3.8	0.9	0.5	15	— : 16 : —		4.0	Cirro-cumulo-strati; woolly cirri. ☽
3	262	54.0	50.9	3.1	1.5	1.0	15	— : 15 : —		3.5	Sheets of cirro-strati and cirro-cumulo-strati.
4	244	52.2	50.0	2.2	1.7	0.9	14	14 : 15 : —		3.0	Loose scud near horizon; cirro-cumulo-strati.
5	223	52.0	49.8	2.2	2.2	1.2	14	14 : 15 : —		7.5	Patches of scud; cir-str.; cir-cum-str.; brown haze on
6	201	52.7	50.5	2.2	1.1	1.3	14	— : 14 : —		8.5	Cirro-cumulo-strati and cirro-strati. ☽ hor. ☽
7	194	53.0	50.7	2.3	1.3	1.5	15			9.8	Id.
8	175	52.8	50.3	2.5	1.3	0.4	13			10.0	Scud and cirro-strati.
9	164	53.3	50.2	3.1	1.2	1.2	12			9.9	Id.
10	136	52.4	49.8	2.6	1.9	1.8	14			10.0	Id.; cirrus mass.
11	109	51.2	48.7	2.5	0.9	1.1	12			10.0	Id.; id.
12	107	50.9	48.6	2.3	1.1	0.1	12			10.0	Very dark.
13	29.083	50.8	48.5	2.3	0.3	0.2	7			10.0	Very dark; a few drops of fine rain.
14	29.039	50.1	48.5	1.6	0.3	0.4	11			10.0	Id.; rain ^{0.2}
15	29.021	50.0	48.6	1.4	0.6	0.4	11			10.0	Id.; shower ¹ since last hour.
16	28.978	50.7	48.9	1.8	1.3	0.7	13			10.0	Cirro-strati; rather broken to E.
17	28.990	50.7	49.2	1.5	2.0	0.7	14			10.0	Id.; dark.
18	28.980	50.5	49.2	1.3	1.3	0.2	14			10.0	Scud and cirro-strati; clouds broken to S.
19	28.983	51.2	49.5	1.7	0.6	0.2	14			9.8	Id.
20	29.028	52.3	49.5	2.8	1.5	1.5	18	19 : 18 : —		8.5	Loose scud; dense mass of wavy cirro-strati.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Nov. 5^d 7^h. Auroral arch 12° altitude to NNW.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From 10 ^{m.}	lbs.	lbs.	pt.	
d. h.	in.	°	°	°	1bs.	1bs.	pt.	pt.	pt.	0—10.
6 21	29.047	49.0	46.0	3.0	2.0	1.7	18	19 : — : 14	4.0	Patches of scud ; woolly and linear cirri. ☐
22	095	49.2	45.0	4.2	2.3	0.9	18	— : — : 14	6.5	Woolly and linear cir.; scud and cirro-str. round hor. ☐
23	141	51.3	47.0	4.3	1.3	1.2	18	19 : — : —	7.5	Scud and loose cumuli ; cirro-strati ; cirri. ☐
7 0	161	52.1	47.3	4.8	1.3	0.9	16	19 : — : —	6.5	Id.; id.
1	170	51.5	46.6	4.9	1.3	1.3	16		0.7	Loose scud and cirro-strati round horizon. ☐
2	187	52.0	46.9	5.1	0.8	1.2	17		0.5	Id.
3	203	49.8	45.2	4.6	0.3	0.1	15	— : — : 16	3.0	Woolly cirri ; cirro-strati ; haze. ☐
4	191	49.8	45.1	4.7	0.3	0.2	14	16 : — : 16	9.0	Scud ; woolly cirri ; cirro-strati ; haze.
5	178	47.7	45.6	2.1	0.4	0.3	16	— : 16 : —	9.0	Cirro-stratus ; cirri and cirrus haze.
6	182	49.4	46.5	2.9	2.1	1.7	13		5.0	Cirro-cumulo-stratus ; cirro-strati ; cirrus haze. ☐
7	186	50.2	47.4	2.8	2.1	1.0	14		9.8	Thickening cirro-str. and cir. haze ; drops of rain. ☐
8	179	50.1	47.7	2.4	1.8	1.3	13		9.5	Cirro-cumulo-strati ; cirro-strati ; showers occasionally.
9	179	51.7	48.7	3.0	3.2	2.7	14		10.0	Patches of scud ; cirro-strati ; cirrus haze.)
10	205	51.1	49.2	1.9	3.7	2.3	16		10.0	Dark ; rain ²
11	194	48.9	47.4	1.5	0.9	0.5	16	17 : — : —	5.0	Scud ; cirrus haze.
12	175	49.3	47.7	1.6	2.2	1.0	15		3.0	Cirri and cirrus haze.
13	29.179	50.3	48.1	2.2	1.8	1.7	15		9.9	Scud and cirro-strati.
14	188	49.9	48.0	1.9	1.9	0.4	14		10.0	Id.
15	181	50.1	48.4	1.7	0.5	0.1	13		10.0	Id.
16	170	50.2	48.4	1.8	0.3	0.2	13		10.0	Id.
17	165	50.3	48.7	1.6	0.4	0.2	18		10.0	Drops of rain.
18	157	50.6	48.7	1.9	1.2	0.5	18		9.0	Scud and cirro-strati.
19	159	50.2	48.6	1.6	1.0	0.9	15		9.9	Id. [on horizon.]
20	169	51.0	49.1	1.9	1.4	0.7	16	— : 16 : —	10.0	Cirro-str. scud ; cirro-str. ; homogeneous cir. mass ; scud
21	179	51.7	49.8	1.9	0.8	0.7	15	16 : — : —	10.0	Scud ; cirro-strati, &c., as before.
22	204	52.6	50.4	2.2	1.1	0.6	15	16 : — : —	10.0	Id.; id.
23	205	53.4	51.3	2.1	0.6	0.2	15	16 : — : —	10.0	Id.; id.
8 0	206	53.8	51.8	2.0	0.3	0.1	15	16 : — : —	10.0	Id.; id.
1	206	54.9	51.9	3.0	0.2	0.2	15	17 : — : —	10.0	Id.; id.; drops of rain.
2	210	52.7	51.5	1.2	0.3	0.1	17	18 : — : —	10.0	Id.; id.; rain ⁰⁻²
3	213	52.3	51.3	1.0	0.0	0.0	15		10.0	Dense mass of undulated cirro-strati.
4	225	51.0	49.9	1.1	0.1	0.0	17	20 : — : —	10.0	Loose scud ; cirrus mass ; rain ⁰⁻²
5	241	49.9	49.3	0.6	0.0	0.0	16	19 : — : —	10.0	Scud ; dense cirro-stratus.
6	250	46.1	46.0	0.1	0.0	0.0			4.0	Scud and cirro-strati ; stratus on the ground.
7	277	44.9	44.7	0.2	0.0	0.0			9.5	Cirro-cumulo-strati ; two bats seen. ☐
8	286	45.0	44.9	0.1	0.0	0.0	16		9.9	Id.; cirro-strati.
9	303	44.8	44.5	0.3	0.0	0.0	2		9.8	Id.; id.
10	304	43.8	43.6	0.2	0.0	0.0	24		9.8	Id.; stratus on the ground. ☐
11	305	43.0	42.8	0.2	0.0	0.0	24		9.8	Id.; id.; mist on the ground.
12	302	44.0	43.8	0.2	0.0	0.0	4		3.0	Id.; woolly cirri; id.
23 ²	29.295	46.5	46.0	0.5	0.0	0.0		{ Sunday—Cirro-strati ; cirri ; occasional sunshine ; foggy throughout the day.	
9 13	29.314	35.3	35.0	0.3	0.0	0.0		— : 16 : —	8.0	Cirro-cumulo-strati ; fog on the ground.
14	306	34.6	34.3	0.3	0.0	0.0			6.5	Id.; id.
15	292	36.0	35.6	0.4	0.0	0.0	17		10.0	Id.; id.; drops of rain.
16	282	37.6	37.3	0.3	0.0	0.0			10.0	Dark ; clouds homogeneous.
17	266	38.9	38.6	0.3	0.0	0.0			10.0	Id.; id.
18	261	39.1	38.8	0.3	0.0	0.0			10.0	Id.; id.
19	249	39.9	39.6	0.3	0.0	0.0			10.0	Clouds homogeneous.
20	246	41.0	40.7	0.3	0.0	0.0	22	13 : — : —	10.0	Misty scud ; cirrus mass ; foggy.
21	235	42.2	41.9	0.3	0.0	0.0		13 : — : —	10.0	Scud ; slight fog.
22	225	43.4	43.2	0.2	0.0	0.0		13 : — : —	10.0	Id.; id.
23	208	45.3	45.0	0.3	0.0	0.0		14 : — : —	9.9	Scud ; cirro-strati ; slight fog.
10 0	181	47.2	46.7	0.5	0.0	0.0			9.9	Scud ; cirro-strati ; fog on horizon.
1	164	48.8	48.0	0.8	0.0	0.0	6		9.8	Id.; id.; id.
2	150	49.0	48.1	0.9	0.1	0.0	4	14 : — : —	9.8	Id.; id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

HOURLY METEOROLOGICAL OBSERVATIONS, NOVEMBER 10—12, 1845.

253

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h. 10 3	in. 29.147	49.1	48.2	0.9	lbs. 0.0	lbs. 0.0	pt. 2	pt. pt. pt. 5 : 14 : —	0—10. 9.8	Misty scud ; cirro-strati ; fog on horizon. ●
4	131	48.8	48.3	0.5	0.1	0.0	3	5 : — : —	9.6	Id. ; id. ; id.
5	126	48.3	47.8	0.5	0.1	0.1	4	— : 6 : —	9.5	Cirro-cumulo-strati ; cirro-strati.
6	126	47.4	47.1	0.3	0.1	0.0	4		10.0	Id. ? drops of rain.
7	121	47.3	46.9	0.4	0.1	0.0	4		10.0	Id.
8	124	47.4	47.1	0.3	0.1	0.0	6		10.0	Id. ; rain ¹
9	119	47.2	46.9	0.3	0.0	0.0			10.0	Id.
10	119	46.7	46.5	0.2	0.0	0.0	8	— : 15 : —	8.0	Thin cirro-cumulo-strati ; fog on the ground. ↗
11	116	45.0	44.7	0.3	0.0	0.0		— : 14 : —	9.5	Cirro-cumulo-strati ; stratus in the valleys. ↗
12	114	44.7	44.4	0.3	0.0	0.0	4		9.9	Scud ; cirro-cumulo-strati.
13	29.114	45.5	45.0	0.5	0.1	0.0	2		10.0	Scud ; cirro-cumulo-strati.
14	114	45.5	45.1	0.4	0.0	0.0			10.0	Id. ; id. ; nearly homogeneous.
15	116	45.6	45.3	0.3	0.0	0.0	4		9.9	Id. ; id.
16	122	44.8	44.3	0.5	0.0	0.0			9.7	Id. ; id.
17	136	42.7	42.1	0.6	0.0	0.0	12		8.0	Id. ; id.
18	152	41.9	41.0	0.9	0.1	0.0	14		0.5	Masses of scud.
19	170	38.3	37.8	0.5	0.2	0.1	14		0.5	Cirro-cumulo-strati on E. horizon.
20	189	38.4	38.0	0.4	0.1	0.0	28	14 : 10 : —	5.0	Loose misty scud ; cirro-cumulo-strati.
21	197	36.7	36.5	0.2	0.0	0.0	17		1.0	Cirro-strati on horizon. ○
22	215	39.0	38.6	0.4	0.0	0.0	4		1.0	Cirro-strati and cirrous haze. ○
23	215	42.1	40.7	1.4	0.1	0.0	3	— : — : 13	2.0	Thick woolly cirri ; cirro-strati ; stratus on horizon. ○
11 0	223	43.6	42.0	1.6	0.0	0.0	8	13 : 13 : —	1.0	Loose cumulo-stratus and cirro-cumulo-stratus ; haze or
1	218	45.3	43.3	2.0	0.0	0.0	2	13 : 13 : —	4.0	As before. ○ [stratus ? on hor. ⊖
2	212	46.2	43.9	2.3	0.0	0.0	31	12 : — : —	9.5	Scud ; cumulo-strati ; cirro-strati.
3	207	46.9	45.1	1.8	0.1	0.0	8	10, 12 : 13 : —	9.5	Misty scud on hor. ; cir.-str. scud ; cum.-str. ; cir.-cum.-str. ; foggy.
4	207	46.5	45.4	1.1	0.1	0.0	28	11 : — : —	10.0	Scud ; cirro-strati, &c., as before.
5	206	45.7	44.7	1.0	0.1	0.1	5	— : 12 : —	7.5	Cir.-cum.-str. ; cir.-str. ; cum.-str. ; cir.-str. ; cir. haze.
6	222	43.6	43.1	0.5	0.0	0.0	28		9.0	As before.
7	226	42.5	42.1	0.4	0.0	0.0			9.8	Cirro-stratus scud ; cirro-cumulo-strati.
8	233	40.4	40.1	0.3	0.0	0.0			0.5	Cirro-cumulo-strati ; slight fog on the ground. ↗
9	239	38.7	38.3	0.4	0.0	0.0	28		9.5	Id. ; id. ; col. lun. cor. ↗
10	244	36.4	36.1	0.3	0.0	0.0	17	— : 8 : —	1.0	Patches of cir.-str. ; rather thick fog, causing a colourless lun. cor. ↗
11	243	33.3	33.0	0.3	0.0	0.0	17	— : 8 : —	2.5	Cirro-cumulo-strati ; dense fog ; lunar corona. ↗
12	252	34.7	34.2	0.5	0.0	0.0	18	8 : — : —	10.0	Misty scud ; fog clearing off.
13	29.250	36.7	36.5	0.2	0.0	0.0	17		10.0	Thick mass. [lunar corona. ↗
14	254	36.8	36.5	0.3	0.0	0.0	8	— : 4 : —	6.0	Cir.-cum.-str. ; woolly cirri ; stratus on hor. ; mist on the ground;
15	255	34.9	34.7	0.2	0.0	0.0	2	4 : — : —	9.0	Misty scud ; dense fog. ↗
16	260	35.4	35.0	0.4	0.0	0.0	28	— : 3 : —	9.0	Cirro-cumulo-strati ; foggy. ↗
17	266	34.2	34.0	0.2	0.0	0.0	17		9.5	Scud ; dense mist.
18	271	35.7	35.3	0.4	0.0	0.0	2		3.0	Id. ; woolly cirri.
19	277	35.6	35.5	0.1	0.0	0.0	20		3.0	Id. ; bands of cirri stretching from N by E. to S by W.
20	288	36.4	36.2	0.2	0.0	0.0	16	4 : — : —	6.0	Id. ; cirri. [like cirri.
21	306	37.6	37.2	0.4	0.0	0.1	18	3 : — : 20	1.8	Loose scud and cum., with cum.-str. on hor. ; woolly, linear, and flame-
22	316	43.0	42.6	0.4	0.0	0.0	30	1 : — : —	9.7	Seud and loose cumuli ; cirro-strati and cirri. ⊖
23	329	46.0	44.9	1.1	0.0	0.0	0	1 : — : —	9.8	Id.
12 0	330	46.2	44.6	1.6	0.3	0.2	0	0 : — : —	2.5	Id. ; patches of cir.-cum.-str. ; cirri. ⊖
1	339	47.4	45.0	2.4	0.5	0.3	31	0 : — : —	2.5	Id. ; id.
2	350	47.1	44.3	2.8	0.4	0.3	30	0 : — : —	9.5	Loose cumuli ; cirro-stratus scud ; cirro-cum.-str. ○
3	359	46.7	44.2	2.5	0.2	0.2	30	0 : — : —	7.5	Id. ; id. ; patches of cirri.
4	378	44.5	42.5	2.0	0.2	0.0	28	31 : — : —	2.5	Id. ; id.
5	397	42.9	41.1	1.8	0.0	0.0	26	0 : — : —	5.0	Id. ; id.
6	414	40.2	39.4	0.8	0.0	0.0	26		0.2	Cirro-cumulo-strati and cirro-strati. ↗
7	430	38.2	37.8	0.4	0.1	0.0	20		0.2	Cirro-strati and haze. ↗
8	442	35.8	35.5	0.3	0.1	0.0	16		0.2	Id.
9	454	36.2	36.0	0.2	0.1	0.0	17		2.0	Cirro-cumulo-strati to SE. ; lunar corona. ↗
10	482	34.4	34.0	0.4	0.1	0.0	14	— : 2 : —	1.0	Id. ; haze on horizon. ↗

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	lbs. 10m	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
12 11	29.500	34.1	33.8	0.3	0.0	0.0	18		0.0	Sky milky ; faintly coloured lunar corona.)
12	508	32.7	32.6	0.1	0.1	0.0	16		0.1	Sky milky ; streaks of cir-str. to N. ; faintly coloured lunar cor.)
13	29.518	31.8	31.5	0.3	0.0	0.0	16	— : 0 : —	9.5	Thin cirro-cumulo-stratus ; lunar corona.)
14	526	33.7	33.3	0.4	0.0	0.0	18	— : 0 : —	4.5	Id. ; faint lunar corona.)
15	531	34.8	34.4	0.4	0.1	0.0	18	— : 0 : —	7.0	Id.)
16	546	34.8	34.4	0.4	0.0	0.0	18	— : 0 : —	9.2	Cirro-cumulo-stratus.
17	557	35.8	35.4	0.4	0.0	0.0	18	— : 0 : —	8.0	Id.)
18	571	37.4	36.7	0.7	0.0	0.0	18	— : 0 : —	9.0	Id.)
19	581	34.8	34.5	0.3	0.0	0.0	16		8.0	Id.)
20	601	34.4	34.0	0.4	0.0	0.0	18	— : 0 : —	2.0	Id. ; bank of cirro-strati to E.)
21	628	32.4	32.2	0.2	0.0	0.0	20	— : 0 : —	2.0	Id. ; wild ducks flying west. ○
22	646	34.9	34.7	0.2	0.0	0.0	16		1.5	Id. ○
23	656	37.0	36.7	0.3	0.0	0.0	28	— : 1 : —	4.0	Id. ; cirro-strati. ●
13 0	661	40.8	39.8	1.0	0.0	0.0	15	— : 2 : —	3.5	Cir.-cum.-str. ; scud and loose cum. to W. ; cir-str. ○
1	665	45.2	43.0	2.2	0.1	0.0	6	2 : — : —	9.5	Scud and loose cumuli ; cirro-strati ; haze on horizon. ●
2	663	46.0	43.4	2.6	0.2	0.2	30	2 : — : —	9.2	Id. ; id. ; id.)
3	665	45.4	42.8	2.6	0.2	0.1	0	2 : — : —	9.8	Scud ; dense mass of cirro-stratus.
4	680	44.7	42.3	2.4	0.1	0.1	31		9.8	Id. ; id.)
5	693	43.7	41.8	1.9	0.1	0.1	0		9.8	Id. ; cumulo-strati.)
6	711	42.6	40.8	1.8	0.0	0.0	0		9.8	Thick cirro-cumulo-strati.
7	723	42.2	39.9	2.3	0.0	0.0	1		9.9	Id.)
8	736	40.7	39.0	1.7	0.0	0.0	22	— : 0 : —	9.9	Id. ; a few drops of fine rain.)
9	746	41.3	39.2	2.1	0.0	0.0	18	— : 0 : —	9.9	Id.)
10	758	40.1	38.6	1.5	0.0	0.0	26		9.9	Id.)
11	763	39.0	38.1	0.9	0.0	0.0			10.0	Id.)
12	776	38.8	38.0	0.8	0.0	0.0	18		10.0	Id.)
13	29.777	38.2	37.4	0.8	0.0	0.0			9.5	Thick cirro-cumulo-strati ; moon eclipsed.)
	773	36.4	36.0	0.4	0.0	0.0	8		6.0	Loose cirro-cumulo-strati.)
	777	33.2	33.0	0.2	0.1	0.1	18		0.8	Cirro-cumulo-strati on horizon.)
	776	30.9	30.4	0.5	0.0	0.0	16		0.8	Id. ; patches of cirri.)
	778	28.6	28.4	0.2	0.0	0.0			0.8	Cirro-cumuli and cirro-strati.)
	783	29.8	29.7	0.1	0.0	0.0	28		7.0	Cirro-cumulo-strati.)
	798	31.0	30.8	0.2	0.0	0.0	14		9.0	Id.)
	800	31.3	30.6	0.7	0.0	0.0	24	— : 27 : —	7.0	Id.)
	809	31.8	31.3	0.5	0.0	0.0		— : 27 : 28	6.0	Id. ; woolly cirri. [cir. haze on hor. ○
	808	32.2	31.6	0.6	0.0	0.0	28		7.0	Woolly cir. rad. from NNW. ; cir-cum.-str. ; cir-str. ; cum-str. and
	815	35.4	35.0	0.4	0.1	0.0	24	— : 24 : —	7.0	Woolly cirri ; cirro-cum.-str. ; cir. haze ; solar halo. ○
14 0	804	37.2	36.7	0.5	0.1	0.0	17	— : 24 : —	8.5	Cirro-cumulo-strati ; woolly cirri ; cirrus haze. ●
1	789	39.6	38.6	1.0	0.0	0.0		— : 23 : —	9.5	Id. ; cir-cum. ; thin cir-strati ; cirri and cirrus haze. ●
2	769	41.3	40.2	1.1	0.0	0.0	28		9.2	As before. Θ [str. to E. ; cir-str. ; cirri.)
3	763	42.2	40.8	1.4	0.1	0.0	8	— : 23 : —	9.9	Cir-cum.-str., with ragged and mottled cir. scud forming beneath ;
4	758	41.3	39.9	1.4	0.0	0.0		— : 23 : —	10.0	Nearly as before ; clouds rather denser.
5	750	40.3	39.4	0.9	0.1	0.0	4	— : 23 : —	9.8	Id. ; foggy to E.)
6	743	39.3	38.5	0.8	0.0	0.0			7.0	Cirro-cumulo-strati ; cirro-strati.)
7	741	34.4	34.2	0.2	0.0	0.0			1.0	Loose cirro-cumulo-strati ; slight fog on the ground.)
8	737	35.0	34.8	0.2	0.0	0.0	6		8.0	Id. ; id.)
9	730	35.2	34.9	0.3	0.0	0.0			10.0	Cirro-cumulo-strati.)
10	716	36.3	35.9	0.4	0.0	0.0			9.7	Id. ; haze.)
11	706	35.2	34.8	0.4	0.0	0.0	16		9.9	Id. ; haze.)
12	700	34.0	33.8	0.2	0.0	0.0	23		0.0	Clear.)
13	29.689	32.5	32.2	0.3	0.0	0.0	18		0.0	Clear.)
14	671	31.8	31.6	0.2	0.0	0.0	18		0.0	Id.)
15	658	29.7	29.5	0.2	0.0	0.0	20		0.0	Id.)
16	631	28.7	28.8	...	0.0	0.0	18		0.2	Cirro-cumulo-strati to W.)
17	618	30.5	30.1	0.4	0.0	0.0	18	— : 19 : —	9.9	Id.)

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h. 14 18	in. 29.609	30.5	30.6	...	0.1	0.0	31	pt. : 19 : —	0—10. 5·0 9·7	Cirro-cumulo-strati to W.; cirro-strati and haze.)
19	593	31.2	30.7	0.5	0.0	0.0	4	— : 20 : —	9·7	Cirro-cumulo-strati; cirro-strati.
20	573	32.6	31.5	1·1	0.0	0.0	18	— : 20 : —	7·0	Id.; id.; slight fog.)
21	568	35.3	34.3	1·0	0.1	0.3	30	— : 20 : —	3·5	Id.; id.)
22	554	35.3	35.0	0·3	0·1	0·0	16	— : 18 : —	4·0	Id.; id.)
23	525	38.7	37.7	1·0	0·2	0·3	16	— : 18 : —	9·7	Id.; id.)
15 0	516	42.3	40.6	1·7	1·1	0·4	18	— : 18 : —	10·0	Scud; dense cirro-stratus and haze.
1	497	44.3	42.4	1·9	0·6	0·2	17	18 : — : —	10·0	Patches of scud; cirro-stratus.
2	471	45.8	43.4	2·4	0·7	0·7	18	18 : 20 : —	10·0	Scud; dense cirro-stratus.
3	438	46.7	44.0	2·7	1·6	0·7	18	18 : 19 : —	10·0	Loose scud; cirro-strati; rain ^{0·2}
4	414	46.0	44.0	2·0	0·9	0·8	17	19 : — : —	9·8	Thick scud; cirro-strati; rain ^{0·2}
5	408	45.6	44.0	1·6	0·6	0·2	16	17 : — : —	10·0	Id.
6	411	46·1	44·6	1·5	0·3	0·5	17	—	9·9	Id.; cirro-strati.)
7	390	46·4	44·6	1·8	0·9	0·9	18	—	9·0	Id.; id.)
8	391	47·2	45·4	1·8	1·8	0·9	17	—	9·8	Id.; id.)
9	391	46·7	45·2	1·5	0·9	0·8	18	—	9·9	Id.; id.)
10	395	47·2	46·5	0·7	0·9	0·8	18	—	10·0	Id.; id.; slight drizzle.)
11	392	46·9	45·9	1·0	0·4	0·1	18	—	10·0	Id.; id.; id.)
12	29.390	46·9	45·9	1·0	0·2	0·2	18	—	10·0	Id.; id.)
16 2 ₁	28.978	47·3	46·8	0·5	0·3	0·0	9	— : 16 : —	10·0	Scud; cir. mass; rain ¹ . Sunday—Overcast, nearly as at
5 ₂	803	50·3	48·7	1·6	2·9	1·5	10	15 : — : —	10·0	Scud; cirrus mass. [2 ^h throughout the day.)
13	28.768	43·9	42·2	1·7	3·1	0·4	17	—	10·0	Scud. [corona; cir.-cum. to S.)
14	751	42·4	40·8	1·6	1·2	1·3	17	18 : — : —	6·5	Loose scud, moving rapidly & producing a coloured lunar
15	753	41·7	40·1	1·6	1·3	0·5	18	21 : — : —	9·7	Loose cirro-stratus scud; coloured lunar corona.)
16	758	42·7	41·1	1·6	0·7	0·8	18	21 : — : —	8·0	Scud; cirro-strati.)
17	754	42·3	40·6	1·7	0·7	0·4	19	21 : — : —	9·8	Id.; id.; lunar corona.)
18	769	42·5	40·8	1·7	0·6	0·2	19	—	10·0	Id.; id.)
19	799	42·7	41·0	1·7	0·4	0·1	19	—	10·0	Id.; id. at 10 ^m ; rain ^{0·5}
20	829	42·4	40·9	1·5	0·2	0·1	20	26 : — : —	10·0	Loose scud; dense mass of cirro-stratus.
21	854	43·2	41·1	2·1	0·4	0·3	22	—	10·0	Dense mass of cirro-stratus.
22	884	43·7	41·2	2·5	0·5	0·4	22	26 : — : —	9·5	Scud; sheets of cirro-strati; sky looking wild.
23	921	45·0	41·8	3·2	0·4	1·0	26	28 : — : —	9·5	Patches of scud; cirro-stratus scud; cirro-strati.
17 0	933	45·3	41·5	3·8	0·8	0·4	27	28 : 29 : 28	5·0	Id.; woolly cirro-strati; sheets of cir.-str.
1	945	46·3	42·0	4·3	2·4	2·2	27	28 : 29 : —	8·5	Scud; id.; id.)
2	969	46·2	41·7	4·5	1·6	0·9	24	— : 28 : —	9·5	Cirro-stratus scud; sheets of cirro-strati.)
3	991	46·5	41·5	5·0	1·1	0·7	22	— : 28 : —	9·8	Id.; id.)
4	28.978	46·4	41·8	4·6	0·7	1·0	24	— : 29 : —	9·9	Id.; dense mass of wavy cirro-strati.)
5	29.028	44·8	40·4	4·4	1·9	0·7	23	—	2·0	Sheets of cirro-strati; thin cirri to W.)
6	050	43·7	39·6	4·1	1·6	1·2	23	—	0·5	Scud and cirro-strati on horizon.)
7	071	42·0	38·2	3·8	1·9	1·1	22	—	0·5	Cirro-strati on horizon; aurora.)
8	083	41·0	37·3	3·7	1·0	0·4	21	—	0·2	Patch of cir.-str. to NE.; auroral arch 12° altitude.)
9	094	38·4	35·5	2·9	0·5	0·2	20	—	0·5	Woolly cirri scattered over the sky; faint aurora.)
10	087	39·0	36·0	3·0	0·2	0·2	20	—	0·2	Streaks of cirtus; aurora occasionally.)
11	069	39·4	36·7	2·7	0·8	0·2	20	—	1·5	Band of woolly cirri lying from NW. to SE.; faint
12	047	38·7	36·8	1·9	0·7	0·2	18	—	1·0	Streaks of cirri.) [auroral light.)
13	29.044	38·0	36·3	1·7	0·3	0·4	17	—	2·0	Streaks of cirri lying from E. to W.)
14	29.022	37·0	35·8	1·2	0·4	0·2	26	—	7·0	Cirri and cirrus haze; lunar halo.)
15	28.996	34·3	33·8	0·5	0·0	0·0	28	—	9·5	Sky nearly covered with cir. haze; faint lunar halo; large lun. cor.)
16	955	35·0	34·3	0·7	0·0	0·0	12	—	10·0	Dense cirrus mas.)
17	915	35·3	34·7	0·6	0·0	0·0	10	—	10·0	Scud; slight drizzle.)
18	887	36·3	35·9	0·4	0·0	0·0	2	—	10·0	Id.; rain ^{1·5}
19	851	36·9	36·5	0·4	0·0	0·0	4	—	10·0	Rain ¹
20	822	37·3	36·9	0·4	0·0	0·0	2	—	10·0	Rain ² [visible two miles off to E.)
21	806	38·1	37·8	0·3	0·1	0·0	4	11 : — : —	10·0	Patches of scud; dense cir. mass; rain ^{0·5} ; objects in-
22	789	39·0	38·6	0·4	0·0	0·0	17	17 : — : —	10·0	Loose scud in patches; dense cirro-stratus.)

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Nov. 17⁴ 0^h. Woolly cirro-strati moving quickest, and as it approaches the sun, exhibiting a beautifully coloured corona of two pinkish bands, with a light blue between, somewhat like diffraction spectra.

HOURLY METEOROLOGICAL OBSERVATIONS, NOVEMBER 17—20, 1845.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1p.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
17 23	28.773	40.7	40.2	0.5	0.0	0.0	18		10.0	Dense, nearly homogeneous, mass of cir.-str.; Scotch mist.
18 0	763	41.7	41.1	0.6	0.0	0.0	18		10.0	As before.
1	755	44.0	43.2	0.8	0.0	0.0	18	20 : — : —	10.0	Scud; dense cirro-stratus.
2	756	45.5	44.2	1.3	0.9	0.5	18	24 : — : —	10.0	Thick scud.
3	772	47.5	46.0	1.5	2.0	0.6	19	24 : — : —	9.8	Scud; cirro-strati; portion of a rainbow.
4	797	47.6	45.4	2.2	1.8	1.3	22	24 : — : 22	4.0	Id.; woolly cirri.
5	823	47.6	44.8	2.8	1.6	1.0	20	24 : — : —	8.0	Id.; cirro-strati.
6	849	47.1	43.8	3.3	1.1	0.8	20		4.0	Id.; id.
7	852	45.7	44.0	1.7	1.0	0.9	19		2.0	Id.; id. round horizon.
8	858	47.0	45.2	1.8	1.2	1.2	19		10.0	Id.; dark.
9	857	47.2	45.6	1.6	1.7	1.3	20		2.0	Clouds on horizon.
10	859	45.8	43.9	1.9	2.3	1.2	20		1.5	Id.
11	878	45.7	44.1	1.6	1.9	0.3	18	— : 21 : —	1.0	Thin cirro-cumulo-stratus.
12	851	47.8	45.6	2.2	0.8	0.4	19		10.0	Scud and thin cirro-stratus.
13	28.817	48.0	46.3	1.7	0.9	0.1	18		10.0	Scud and dense cirro-stratus.
14	754	47.8	45.7	2.1	0.4	0.6	18		10.0	Id.
15	698	48.0	45.4	2.6	1.4	0.2	18		10.0	Id.; rain ^{0.5}
16	608	48.9	46.6	2.3	0.9	1.4	17		10.0	Scud; cirro-stratus; drops of fine rain.
17	533	48.6	47.0	1.6	1.8	2.1	17	18 : — : —	10.0	Id.; id.; id.
18	461	50.0	48.6	1.4	1.9	1.1	17	18 : — : —	10.0	Id.; id.; rain ¹
19	434	49.8	49.0	0.8	2.5	2.5	18		10.0	Id.; id.; rain ³⁻⁵
20	413	48.8	48.2	0.6	1.8	0.8	17		10.0	Nearly homogeneous; rain ¹
21	414	48.4	47.6	0.8	2.0	0.9	20	— : 21 : —	9.0	Cirro-stratus; masses of scud; sky to W.
22	425	47.9	46.2	1.7	1.2	1.2	20	21 : — : —	9.5	Scud and loose cumuli.
23	437	48.7	46.2	2.5	2.1	1.0	20	21 : — : —	4.5	Id.; cirro-strati.
19 0	436	48.2	45.8	2.4	2.5	2.0	18	20 : 22 : —	5.0	Loose scud; loose cumuli; cirro-strati; cirri.
1	403	50.0	46.1	3.9	3.5	2.0	18	20 : 21 : —	5.0	Id.; thick woolly cirro-stratus.
2	387	49.0	44.7	4.3	3.8	2.8	17	20 : 21 : —	6.5	As before, with nimbi; rain to S.; sky wild-like.
3	381	47.9	44.3	3.6	3.3	2.7	20	21 : — : —	2.0	Loose cumuli; cumuli; cirri-strati; woolly cirri.
4	384	46.9	43.4	3.5	4.2	3.1	18	21 : 21 : —	6.0	Scud; thick woolly cirr.-str.; woolly cirr.-cum.; nimbi.
5	381	46.7	43.7	3.0	3.6	1.0	18	21 : — : —	8.5	Scud; cirro-stratus; cirri; sky looking wild.
6	367	47.0	44.6	2.4	4.2	3.6	17		10.0	Id.; id.; rain ^{0.5-1}
7	350	46.6	44.0	2.6	3.8	1.2	18		9.5	Id.; id.; cirrous haze; stars dim.
8	340	46.4	44.6	1.8	3.7	1.3	18		10.0	Dark; rain ²
9	325	46.7	44.6	2.1	4.0	3.6	18		9.5	Id.; rain ²⁻³ at intervals.
10	308	46.4	44.7	1.7	4.1	2.0	18		9.5	Scud; cirrus haze? rain ¹ at intervals.
11	273	46.0	44.0	2.0	4.3	3.9	18		9.8	Loose scud; shower ²
12	253	45.9	44.3	1.6	3.1	1.5	19		9.8	Scud; cirro-strati.
13	28.239	46.1	44.0	2.1	2.2	1.4	19		3.5	Scud; cirro-strati.
14	244	46.2	44.6	1.6	1.9	0.7	20		9.0	Id.; id.; drops of rain.
15	287	45.7	43.2	2.5	3.3	0.7	19		9.8	Id.
16	331	45.7	43.6	2.1	2.1	1.9	20		9.8	Id.
17	354	45.3	43.0	2.3	2.6	1.3	18	22 : — : —	3.5	Id.
18	395	44.6	43.0	1.6	2.7	1.8	20		9.5	Scud; cirr. and cir. haze; drops of rain; lunar corona.
19	424	43.9	41.6	2.3	2.2	1.7	20		3.7	Id.; id.
20	451	42.9	40.3	2.6	2.2	1.5	20	23 : 24 : —	5.0	Dense masses of scud to S. and SE.; thin loose cirr.-str.
21	502	42.6	40.8	1.8	1.0	0.1	18	23 : — : —	9.5	Scud; cirro-strati. [cirri; faint lunar corona.]
22	534	43.8	41.7	2.1	0.4	0.3	18	— : 23 : —	8.5	Cirro-stratus scud; sheets of cirro-strati; woolly cirri.
23	566	46.3	43.8	2.5	0.9	1.5	21	— : 23 : —	9.5	Id.; cirro-strati; id.
20 0	595	45.7	42.2	3.5	1.5	0.7	20	23 : — : —	9.5	Scud and cirro-stratus scud; cirri.
1	611	47.6	43.3	4.3	2.3	1.0	20	24 : 23 : —	9.5	Id.; thin cirro-strati; cirri.
2	636	47.1	43.1	4.0	1.3	1.0	20	23 : — : —	9.5	As before. [from NNE. and SSW.]
3	652	45.3	42.6	2.7	1.6	1.6	20	23 : — : —	8.0	Thin scud; loose-edged cum. to S.; woolly cir. radiating
4	685	42.5	41.2	1.3	1.7	0.4	20	22 : — : —	8.0	Scud and dark cumuli; woolly cirri; cirro-strati.
5	713	41.9	39.4	2.5	1.3	0.6	20		1.2	Scud; cumuli; nimbi and cirro-strati on horizon.
6	729	40.9	38.8	2.1	0.5	0.8	20		1.0	Scud near horizon.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1b.	From 10m.	lbs.	lbs.	pt.	
d. h. 20 7	in. 28.763	39.9	37.9	2.0	0.7	0.3	21	pt.	0—10.	Scud near horizon.
8	777	40.7	38.3	2.4	0.8	0.6	20		0.5	Thin scud.
9	809	41.1	38.6	2.5	0.7	0.5	20		6.0	Id.; a vivid glare of lightning seen.
10	850	39.8	37.7	2.1	0.3	0.3	18		5.0	Id.
11	868	40.5	38.2	1.3	1.2	1.1	20		3.0	Cirro-strati on horizon.
12	897	40.0	37.8	2.2	1.8	1.0	20		2.0	Thin scud and cirro-strati.
									0.5	Id.
13	28.926	39.9	37.7	2.2	1.1	0.4	20		3.0	Thin scud and cirro-strati; lunar corona.
14	951	38.7	37.2	1.5	1.5	0.4	20		2.5	Cirro-strati and woolly cirri; id.
15	959	37.6	36.0	1.6	0.5	0.4	21	24 : — : —	3.0	Thin scud; thick woolly cirri; id.
16	963	39.0	37.3	1.7	1.2	0.8	21	24 : — : —	2.5	Id.; id.; coloured lunar corona. ♫
17	985	38.7	36.9	1.8	0.2	0.1	22		6.0	Thick woolly cirri; cirro-strati; lunar halo and cor. ♫
18	28.996	38.9	37.0	1.9	0.2	0.2	21		6.0	As before. ♫ [halo and corona. ♫
19	29.018	38.7	36.8	1.9	0.4	0.3	20		3.0	Cirro-str. on hor.: thin haze over the sky; faint lunar
20	054	37.0	35.7	1.3	0.6	0.1	19		4.0	Cirro-strati, cirri, and cir. haze; masses of scud; clouds red to SE. ♫
21	071	37.5	36.2	1.3	0.3	0.6	20	— : — : 16	9.5	Cirri and thin cirro-strati dispersed across the sky; scud on hor. ♫
22	083	39.4	37.8	1.6	0.6	0.8	20	— : 20 : —	9.8	Cirro-strati and haze becoming thicker; a few patches of scud.
23	108	40.7	38.4	2.3	0.4	0.2	19		10.0	Id.
21 0	125	41.3	39.3	2.0	0.5	0.2	20	— : 20 : —	9.8	Cirro-strati; cirrous haze; cirro-cumulo-strati.
1	125	42.6	40.1	2.5	0.4	0.2	20	24 : 20 : —	9.8	Masses of scud; cirro-strati; woolly cirri. ⊖
2	122	43.1	40.6	2.5	0.7	0.3	20		9.0	Id.; id.; id. ⊖
3	138	44.2	40.7	3.5	0.7	0.1	20	25 : — : —	2.5	Patches of scud; woolly cirri. ⊖
4	152	39.6	37.9	1.7	0.2	0.0	18	25 : — : —	1.0	Id.; id.; cirro-strati. ⊖
5	164	36.0	35.0	1.0	0.1	0.0	20		1.5	Scud and cirro-strati on horizon.
6	177	35.2	34.0	1.2	0.1	0.1	20		0.5	Id.
7	189	34.2	32.8	1.4	0.1	0.1	28		0.2	Id.
8	207	34.7	33.3	1.4	0.1	0.2	20		0.2	Clear; haze on horizon.
9	224	33.7	32.5	1.2	0.2	0.1	20		0.0	Id.
10	216	33.9	32.8	1.1	0.1	0.1	21		0.0	Id.
11	231	33.3	32.2	1.1	0.3	0.1	19		0.2	Streaks of cirro-stratus to N.
12	233	34.3	32.8	1.5	0.3	0.2	19		0.2	Id. ♫
13	29.238	31.9	30.9	1.0	0.3	0.0			0.2	Streaks of cirro-stratus to N.
14	239	29.6	29.0	0.6	0.1	0.1	28		0.2	Id. to NE and SE. ♫
15	237	32.0	31.0	1.0	0.2	0.3	19		0.8	Cirro-stratus; cirri.
16	245	30.6	30.0	0.6	0.3	0.0	18		0.8	Id.; id. ♫
17	251	32.8	31.8	1.0	0.2	0.1	20		0.8	Cirri to S.
18	252	31.2	30.5	0.7	0.1	0.1	19		0.5	Id.; very clear throughout the night. ♫
19	270	31.5	30.6	0.9	0.1	0.1	20		0.5	Thin scud, cirri, cirro-str., and patches of scud on hor. ♫
20	270	33.3	32.1	1.2	0.2	0.1	18		0.7	Cirri, cirro-strati, and patches of scud on hor. ♫
21	289	32.4	31.6	0.8	0.2	0.1	16		1.0	Id., id., id.
22	307	33.0	32.2	0.8	0.1	0.2	20		1.7	Id., id., id.
23	318	36.6	35.2	1.4	0.2	0.1	21		2.5	Id., id., id.; scud on Cheviot. ⊖
22 0	325	39.3	36.7	2.6	0.3	0.1	21		3.0	Id., id., id.
1	329	40.7	37.7	3.0	0.2	0.1	22		1.0	Thick woolly cirri; cirrous haze; scud on Cheviot. ⊖
2	344	41.3	38.3	3.0	0.3	0.1	22	— : — : 4	2.0	Id.; id.; cirro-str.; id. ⊖
3	346	41.4	38.0	3.4	0.2	0.2	21		3.0	Id.; id.; id.; id. ⊖
4	355	39.7	37.0	2.7	0.3	0.1	22		5.0	Id.; id.; id.; id.; cum.-str. ⊖
5	374	37.5	35.7	1.8	0.1	0.1	22		1.0	Cirro-strati, cirri, and cirrous haze on horizon.
6	397	35.0	33.6	1.4	0.1	0.0	24		1.5	Id., id., id.
7	417	36.2	34.3	1.9	0.1	0.0	26		9.5	Id., id., id.
8	435	37.9	35.7	2.2	0.2	0.2	29		10.0	Cirro-stratus?
9	456	38.5	36.2	2.3	0.2	0.1	28		10.0	Id.
10	473	38.0	35.9	2.1	0.1	0.1	28		10.0	Thin cirro-stratus; a few stars dimly visible.
11	492	36.8	35.0	1.8	0.1	0.1	27		4.0	Thin cirro-stratus and cirrus haze.
12	515	35.5	33.7	1.8	0.1	0.0	26		1.5	Cirro-strati.
23 1	29.662	34.6	32.0	2.6	0.4	0.0	22		1.0	Sheets of cirri and cirro-strati; a slight covering of snow on Cheviot.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Nov. 20^d 21^h. Observation made at 21^h 5^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	
d. h.	in.	°	°	°	10m.		pt.	pt.	pt.	0—10.
23 13	29.718	35.2	34.7	0.5	0.6	0.6	30			Scud; rain ^{0.5}
14	750	35.7	34.0	1.7	1.0	0.5	29			Id.
15	762	34.1	31.8	2.3	0.7	0.3	30			Bank of clouds on SE. horizon
16	765	34.2	31.4	2.8	1.0	0.3	31			Seud and cirro-strati.
17	780	32.0	30.0	2.0	0.1	0.1	31			Cirro-strati on E. horizon.
18	796	30.4	28.6	1.8	0.3	0.1	30			Id.
19	816	29.0	27.6	1.4	0.2	0.0	26			Id.
20	837	28.9	27.4	1.5	0.2	0.2	26			Cirri and cirro-strati.) [to E.; linear cirri. ⊖
21	860	27.4	26.0	1.4	0.2	0.0	22	— : — : 30		Homogeneous woolly cirri; loose cum.-str.; cir.-strati
22	875	30.1	28.0	2.1	0.1	0.1	27	— : — : 30		Woolly cirri; cirro-cumuli; cirro-strati. ⊖
23	874	30.6	28.9	1.7	0.1	0.1	17			Id.; cirrous haze; cumulo-strati on E. hor. ⊖
24 0	872	33.7	30.1	3.6	0.1	0.0	20			Id.; id.; id. id.
1	867	35.4	32.0	3.4	0.1	0.1	24			Cirri and cirro-str. near hor.; cum.-str. in haze to E. ⊖
2	864	35.5	31.6	3.9	0.1	0.1	21			As before. ⊖ [horizon. ⊖
3	851	34.8	32.2	2.6	0.1	0.0	20			Sheets of mottled cir. and cir.-str.; cum.-str. low on E.
4	845	32.3	30.0	2.3	0.1	0.0	17	— : — : 31		Mottled and woolly cirri and cirro-strati.
5	835	33.0	30.3	2.7	0.1	0.1	18			Cirro-stratus becoming thicker, radiating from NNW.
6	832	32.7	31.8	0.9	0.2	0.1	18			Cirro-stratus.
7	820	33.6	31.1	2.5	0.2	0.1	17			Id.; very dark.
8	793	34.7	31.3	3.4	0.1	0.1	18			Id.; id.
9	780	34.7	32.0	2.7	0.2	0.1	17			Id.; id.
10	736	34.8	32.0	2.8	0.1	0.0				Id.; id.
11	694	36.8	34.4	2.4	0.4	0.3	16			Id.; id.
12	668	37.3	35.0	2.3	0.6	0.2	18			Id.? id.
13	29.609	38.8	36.3	2.5	1.1	1.4	17			Cirro-stratus? very dark.
14	546	39.7	37.9	1.8	1.8	1.2	17			Id.? id.
15	510	40.8	39.3	1.5	3.0	1.5	17			Id.? id.
16	476	41.2	40.3	0.9	1.6	1.1	17			Id.? id.; rain ^{0.5}
17	447	43.0	42.3	0.7	1.3	0.6	17			Rain ^{0.5}
18	443	46.4	45.2	1.2	1.2	0.7	20			Seud and cirro-stratus; fine rain ^{0.5}
19	446	45.3	43.7	1.6	0.4	0.3	20			Seud and cirro-stratus.
20	471	42.7	41.2	1.5	0.3	0.1	21	24 : — : —		Loose seud; cirro-strati; cirri; seud on Cheviot. ⊖
21	480	41.1	39.7	1.4	0.2	0.3	20	25 : — : —		Seud; cirro-strati on E. horizon.
22	486	42.5	40.6	1.9	0.5	0.4	20	24 : — : —		Id.; cirro-strati; rainbow. ⊖
23	500	44.0	42.5	1.5	1.2	0.2	18	24 : — : —		Id.; id.; rain ^{0.2}
24 0	490	44.7	42.6	2.1	0.6	0.2	20	24 : — : —		Id.; id.; seud on Cheviot.
1	477	45.0	43.0	2.0	0.7	0.8	18	23 : — : 26		Id.; thick woolly cirri; cirro-str.; seud on Cheviot.
2	474	45.3	42.9	2.4	1.2	0.8	20	23 : — : —		Id.; cirro-strati; seud on Cheviot.
3	472	45.0	43.2	1.8	1.2	0.9	20	23 : — : —		Id.; id.; woolly cirri.
4	472	44.7	43.0	1.7	0.9	0.4	18	24 : 26 : —		Smoky seud; cirro-stratus seud; woolly cirri.
5	478	44.3	43.2	1.1	0.6	0.2	18	23 : — : —		Id.; id.; drops of rain.
6	463	45.3	43.6	1.7	1.1	0.8	17			Seud; cirrous mass; rain ^{0.2}
7	442	45.7	44.1	1.6	1.1	0.7	18			Id.; id.; id.
8	406	46.5	44.7	1.8	2.3	1.7	18			Id.; id.; Jupiter seen dimly.
9	369	47.1	45.2	1.9	2.6	2.4	19			Id.; id.; id.
10	339	47.9	45.8	2.1	3.2	3.1	19			Id.; id.
11	295	48.1	46.6	1.5	2.7	2.3	20			Id.; id.; very slight drizzle.
12	247	48.6	47.0	1.6	3.3	2.8	19			Id.; id.; id.
13	29.217	49.4	47.6	1.8	4.1	3.3	19			Seud; cirrous mass; very slight drizzle.
14	186	49.8	48.0	1.8	3.8	2.8	19			Id.; id.; id.
15	166	50.2	48.4	1.8	3.7	1.9	19			Dark; slight drizzle.
16	149	50.5	48.9	1.6	3.0	1.5	19			Rain ^{0.2}
17	114	51.3	49.2	2.1	2.4	0.9	19			Seud; cirro-stratus.
18	119	53.5	50.5	3.0	2.1	3.2	21	24 : — : —		9.7 Scud.
19	111	54.7	50.8	3.9	3.3	3.3	21	24 : — : —		8.0 Id.; cirri.
20	132	54.9	50.8	4.1	3.3	2.2	21	24 : — : —		9.8 Id.; cirro-cumulo-strati.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (seud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Nov. 23^d 20^h. Vane of anemometer found frozen up.

Nov. 24^d 4^h. The cirri and cirro-stratus, radiating from N by W. and S by E., and having transverse bars.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	
d. h. 25 21	in. 29.135	54.8	50.4	4.4	3.3	3.7	21	24 : — : —	9.9	Scud; cirro-strati.
22	150	54.7	50.8	3.9	2.7	1.4	23	24 : — : —	10.0	Id.; id.; drops of rain.
23	141	55.0	51.1	3.9	1.8	1.0	21	24 : — : —	10.0	Id.; cirrus mass.
26 0	150	52.0	49.4	2.6	1.3	0.4	25	23 : — : —	10.0	Id.; id.; rain ^{0.2}
1	139	54.6	51.2	3.4	1.1	2.2	20	24 : — : —	9.9	Id.; cirro-strati. [rain ^{0.5}
2	145	54.3	50.3	4.0	2.4	1.6	20	24 : 25 : —	10.0	Loose scud; nearly homogeneous mass of cir.-cum.-str.;
3	134	53.8	49.7	4.1	2.1	2.0	20	24 : — : —	10.0	As before.
4	146	52.0	49.0	3.0	1.3	2.1	20	24 : — : —	10.0	Loose scud; dense mass of cirro-stratus.
5	146	51.4	48.3	3.1	1.1	1.7	21		10.0	Id.; id.; rain ^{0.5}
6	128	51.4	48.4	3.0	1.5	1.3	20		9.7	Scud and cirro-stratus.
7	143	52.5	49.2	3.3	2.8	1.3	19		10.0	Id.
8	131	52.6	49.1	3.5	2.1	2.9	20		10.0	Id.
9	136	53.1	49.0	4.1	3.2	2.1	20		10.0	Id.
10	134	53.1	49.0	4.1	4.3	2.3	21		3.0	Scud.
11	150	51.3	46.9	4.4	4.6	2.2	22		2.0	Id.; 11 ^h 35 ^m , a flash of lightning on NE. horizon.
12	164	51.5	46.7	4.8	3.2	2.8	22		1.5	Scud on horizon.
13	29.208	51.1	46.0	5.1	6.2	2.8	21		1.0	Scud on horizon.
14	226	50.7	46.2	4.5	3.7	2.8	22		0.5	Scud.
15	253	49.2	44.9	4.3	2.8	1.5	21		0.5	Id.
16	261	49.3	45.1	4.2	2.0	3.0	21		3.0	Id.
17	282	48.3	44.7	3.6	2.5	0.7	21		2.5	Id.
18	321	48.4	44.2	4.2	1.7	1.3	22		9.0	Id.
19	339	48.5	44.5	4.0	1.0	0.0	20		10.0	Id.; a few drops of rain.
20	342	47.0	43.7	3.3	0.3	0.2	18	25 : — : —	9.7	Scud and cirro-stratus.
21	350	47.9	46.8	1.1	0.9	0.3	18	23 : — : —	9.8	Smoky scud; hazy cirro-stratus; cirro-cumuli.
22	357	48.7	46.3	2.4	0.8	1.3	19	24 : — : —	7.0	Scud. ☐
23	368	49.0	45.6	3.4	1.2	0.5	19	— : 23 : —	7.0	Cir.-cum.-str.; scud near hor.; portion of a rainbow. ☐
27 0	377	50.2	46.3	3.9	1.4	0.3	21	24 : 23 : —	8.5	Masses of scud; cir.-cum.-str. & loose cir.-str.; portion of a rainbow.
1	370	49.4	46.5	2.9	0.4	0.1	19	23 : 23 : —	9.8	Scud; dense cirro-stratus; drops of rain.
2	371	48.1	46.4	1.7	0.2	0.1	18	23 : — : —	10.0	Id.; id.; slight drizzle.
3	356	47.6	46.7	0.9	0.3	0.1	18	23 : — : —	10.0	Id.; id.; id.
4	354	47.4	46.5	0.9	0.2	0.0	20	22 : — : —	9.8	Loose scud; cirro-stratus; id.
5	330	47.4	46.6	0.8	0.2	0.2	21	21 : — : —	10.0	Scud; drizzling rain ^{0.2}
6	319	50.3	48.4	1.9	2.2	2.0	20		10.0	Id.
7	313	50.8	48.2	2.6	2.7	2.0	20		10.0	Id.
8	304	50.7	48.3	2.4	2.9	1.8	20		10.0	Id.
9	314	50.8	48.2	2.6	2.0	1.5	21		10.0	Id.
10	316	50.6	47.9	2.7	1.6	0.8	21		7.0	Id.; clouds broken.
11	313	50.2	47.7	2.5	1.1	0.9	21		10.0	Id.; cirrus clouds?
12	312	50.1	47.5	2.6	1.3	0.7	20		10.0	Id.; id.
13	29.312	49.7	47.3	2.4	1.3	0.6	21		9.8	Scud; cirrus clouds; clouds broken to S.
14	306	49.6	47.3	2.3	1.0	0.6	19		10.0	Id.; id.; id.
15	305	49.6	47.1	2.5	1.4	0.6	19		10.0	Id.; id.
16	300	49.2	46.4	2.8	1.0	0.4	19		9.5	Id.; id.
17	284	48.3	45.9	2.4	1.4	0.4	19		7.0	Id.; id.
18	274	47.0	45.2	1.8	0.3	0.3	18		9.8*	Cirro-strati; cirrus haze?
19	266	47.5	45.6	1.9	0.4	0.1	18		10.0	Scud and cirro-strati.
20	251	46.9	44.8	2.1	0.4	0.1	18		10.0	Id.; cirrus haze.
21	255	46.8	45.5	1.3	0.7	0.3	18	21 : — : —	10.0	Id.; dense homogeneous cirro-stratus; rain ^{0.2}
22	249	47.0	45.7	1.3	0.3	0.1	16	18 : — : —	10.0	Id.; id.
23	237	48.0	46.8	1.2	0.1	0.0	16	18 : — : —	10.0	Id.; id.
28 0	214	48.4	46.8	1.6	0.2	0.1	16	18 : — : —	10.0	Id.; id.; rain ^{0.2}
1	194	48.5	46.8	1.7	0.6	0.3	16	18 : — : —	10.0	Id.; id.; id.
2	168	49.3	47.1	2.2	0.5	0.3	16	18 : 17 : —	10.0	Loose scud; cir.-str. scud; sheets of cir.-str.; scud lying
3	149	49.4	46.9	2.5	0.8	0.4	17	18 : — : —	9.9	Scud; masses of cirro-stratus. [on Cheviot.
4	127	48.7	46.4	2.3	0.5	0.4	17	19 : — : —	9.9	Id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
28 5	29.115	48.7	46.5	2.2	0.4	0.1	17		10.0	Scud ; masses of cirro-stratus.
6	108	48.3	45.9	2.4	0.6	0.4	16		10.0	Id. ; id.
7	103	48.4	46.2	2.2	0.6	0.3	16		10.0	Id. ; id.
8	101	49.1	46.5	2.6	0.8	0.7	16		10.0	Id. ; id.
9	084	48.6	46.0	2.6	0.6	0.7	16		10.0	Id. ; id.
10	067	48.2	45.9	2.3	1.4	0.5	16		10.0	Id. ; id.
11	047	49.3	46.3	3.0	2.2	1.5	16		10.0	Id.
12	044	49.2	46.6	2.6	2.4	1.8	17		9.8	Id. ; passing showers.
13	29.056	46.3	43.2	3.1	2.2	0.6	18		2.5	Clear.
14	045	44.3	42.2	2.1	1.0	0.2	16		0.0	Id.
15	29.020	44.3	41.8	2.5	1.0	0.5	16		0.0	Id. [shower at 16 ^h 30 ^m .
16	28.977	44.4	41.6	2.8	2.0	2.2	16		0.0	Id. ; a few drops of rain ; no clouds visible ; a heavy Scud.
17	954	44.6	42.5	2.1	3.9	2.0	17		3.5	
18	937	45.0	42.3	2.7	7.6	5.7	17		8.0	Id.
19	960	44.1	41.3	2.8	8.3	2.0	19		2.5	Id.
20	28.986	43.9	41.4	2.5	2.1	1.4	18	20 : — : —	9.8	Id. ; drops of rain.
21	29.036	43.2	41.2	2.0	3.7	2.3	19	21 : — : —	9.5	Id. ; cirro-stratus.
22	097	45.0	42.2	2.8	3.9	2.4	19	23 : 24 : —	9.0	Id. ; woolly cirro-strati ; linear cirri.
23	185	46.3	41.9	4.4	3.8	3.5	20	24 : — : —	9.2	Id. ; id. ☉ option of a halo. ☉
29 0	266	47.0	41.8	5.2	2.5	1.7	21	24 : — : 21	8.0	Id. ; little flocks of wo. cir. ; linear cir. dispersed over the sky ; por-
1	286	46.3	42.1	4.2	2.1	0.9	21	23 : — : 21	7.0	Patches of scud ; woolly cirri ; haze. ☉
2	312	45.6	40.7	4.9	1.5	1.2	21	23 : — : 21	8.0	Cumulous scud ; cirri ; cirro-strati.
3	324	43.4	40.4	3.0	2.0	1.2	18	23 : — : 21	8.0	Scud ; woolly cirri ; cumuli ; cirro-strati. ☉
4	339	42.7	38.7	4.0	1.8	1.0	20	— : — : 21	6.5	Woolly cirri radiating from SW. and NE. ; sheet of
5	351	41.3	38.9	2.4	1.4	0.8	19	22 : — : —	1.5	Patches of scud ; woolly cirro-strati. [cir.-str. ☉
6	375	40.1	38.0	2.1	0.3	0.3	21		1.0	Id. ; id.
7	377	38.7	36.9	1.8	0.4	0.2	17		0.5	Clouds on E. horizon.
8	382	38.6	36.7	1.9	0.8	0.1	20		0.2	Clear ; a patch or two of cloud to E.
9	376	38.1	36.4	1.7	0.6	0.8	21		0.0	Id.
10	376	37.7	36.1	1.6	0.5	0.7	20		0.3	Masses of scud to S.
11	381	37.8	36.2	1.6	0.2	0.1	22		0.5	Clouds on E. horizon.
12	371	36.7	35.4	1.3	0.2	0.1	22		0.2	Id.
23½	29.481	38.6	37.4	1.2	1.0	0.2	20	— : 24 : —	Dense cirro-stratus ; patches of scud ; light rain in the morning. P.M., curled cirri and cirro-strati.
30 13	29.047	48.1	46.6	1.5	8.5	2.4	18		10.0	Scud and cirrus clouds ? rain ^{0.2}
14	012	48.5	47.3	1.2	3.7	1.9	19		10.0	Id. ; rain ^{0.5} [at intervals.
15	047	46.3	44.2	2.1	2.9	1.1	20		10.0	Id. ; very dark ; rain ^{0.8} , showers ²⁻³
16	058	44.7	42.3	2.4	1.1	1.6	20		2.0	Cirrus scud ?
17	098	41.5	38.9	2.6	3.4	1.7	20		0.8	Id.
18	135	38.6	37.2	1.4	1.9	0.3	20		9.2	Scud.
19	157	40.6	37.8	2.8	2.4	1.0	20		9.0	Id.
20	170	37.7	35.5	2.2	2.1	0.6	21		0.2	Scud lying on Cheviot ; streaks of cirri to E.
21	171	37.9	36.0	1.9	1.6	1.5	19	23 : — : —	1.5	Scud ; atmosphere hazy.
22	179	38.9	36.9	2.0	2.4	2.8	18	22 : — : —	6.0	Id. ☉
23	182	41.5	38.4	3.1	3.0	3.2	21	22 : — : 22	4.0	Id. ; woolly and mottled cirri. ☉
1 0	177	42.3	38.4	3.9	3.7	3.3	19	22 : — : —	9.0	Scud and loose cumuli ; cum. ; cir.-str. ; cirrus haze. ☉
1	178	42.0	38.3	3.7	3.7	2.2	20	22 : — : —	6.0	Scud ; cumuli ; cirro-strati. ☉ [showers. ☉
2	182	41.2	38.9	2.3	3.2	2.7	21	22 : — : 24	7.0	Scud ; thick woolly cirri ; cum. ; cirrus haze ; passing
3	198	43.0	39.2	3.8	5.0	2.8	20	22 : — : —	9.5	Id. ; rain falling to NE. and W. ; stormy-like.
4	215	40.5	38.2	2.3	3.0	1.8	19	— : 23 : —	2.5	Cirro-stratus ; smoky scud on S. horizon.
5	244	38.6	36.7	1.9	2.5	1.1	20	23 : — : —	6.0	Scud ; loose watery cirro-stratus ; drops of rain.
6	266	38.2	36.4	1.8	3.0	2.0	20		6.0	Cirro-stratus scud.
7	284	37.8	36.4	1.4	1.8	1.2	20		3.0	Id.
8	312	38.5	36.9	1.6	1.6	1.0	19		1.0	Id. ; drops of fine rain.
9	335	38.5	36.9	1.6	1.1	1.1	19		9.5	Id.
10	349	37.1	36.3	0.8	2.3	1.1	18		5.0	Id. ; heavy showers occasionally.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	0-10.
1 11	29.355	37.7	36.2	1.5	1.1	1.3	19		4.0
12	408	35.9	34.8	1.1	3.6	0.3	19		10.0
13	29.415	36.5	35.5	1.0	0.7	1.6	18		2.0
14	393	36.8	35.7	1.1	1.4	1.4	18		0.3
15	414	36.4	35.1	1.3	1.4	0.6	18		1.0
16	394	37.9	36.3	1.6	1.1	0.5	19		8.0
17	377	38.0	36.3	1.7	0.8	0.5	18		1.5
18	367	36.1	34.8	1.3	0.7	0.5	19		1.0
19	373	37.6	36.2	1.4	0.8	0.4	19		3.0
20	383	38.6	36.9	1.7	0.8	0.4	19	24 : — : —	9.2
21	405	37.5	35.4	2.1	0.4	0.1	19	23 : — : —	5.0
22	412	36.3	34.9	1.4	0.4	0.1	19	— : 22 : —	2.5
23	405	39.2	37.0	2.2	2.5	1.0	20	— : 22 : —	6.5
2 0	404	40.6	37.7	2.9	1.8	1.8	20	21 : — : 24	7.0
1	378	41.4	38.6	2.8	2.3	1.1	20	— : — : 23	9.5
2	342	41.5	38.6	2.9	1.4	0.8	18	— : — : 22	9.0
3	291	41.2	37.7	3.5	1.3	0.7	19		9.8
4	258	38.6	37.2	1.4	1.1	0.1	19		As before.
5	222	38.0	36.5	1.5	0.3	0.6	18	20 : — : —	10.0
6	193	37.7	36.3	1.4	0.6	0.2	18		Scud; masses of cirro-strati; cirrous mass.
7	152	36.5	35.5	1.0	0.3	0.3	17		Scud and cirro-stratus.
8	114	37.0	36.1	0.9	0.2	0.1	17		Scud.
9	094	38.4	37.2	1.2	0.3	0.1	18		Id.
10	076	37.0	36.2	0.8	0.3	0.0	18		Rain ^{0.5}
11	033	35.9	35.3	0.6	0.0	0.0	22		Scud and cirro-stratus.
12	29.011	36.4	35.6	0.8	0.0	0.0	18		Id.
13	28.999	36.5	35.7	0.8	0.1	0.3	18		Id.; haze.
14	29.001	36.7	35.4	1.3	0.5	0.3	20		Scud and cirro-stratus; rain ^{0.2}
15	28.990	35.2	34.2	1.0	1.1	0.3	20		Id.
16	983	35.2	34.3	0.9	0.4	1.1	19		Id.
17	963	34.6	33.1	1.5	0.8	0.5	20		rain ^{0.5}
18	970	34.0	32.2	1.8	0.7	0.4	22		Id.; drops of rain.
19	971	33.2	31.8	1.4	0.6	0.3	21		Id.; on horizon.
20	974	33.3	32.1	1.2	0.3	0.1	23		Masses of scud and thin cirro-stratus.
21	995	31.3	30.5	0.8	0.3	0.0	21	24 : — : —	7.0
22	982	34.0	32.8	1.2	0.3	0.1	16		Scud and cirro-strati. [strati and cirri.
23	983	35.2	33.8	1.4	0.3	0.4	18	— : 22 : 22	7.0
3 0	28.993	35.4	33.5	1.9	0.4	0.1	20	25 : — : —	3.5
1	29.000	36.5	34.3	2.2	0.3	0.0	20	24 : — : —	7.0
2	000	37.9	35.7	2.2	0.4	0.3	20	23 : 20 : —	8.0
3	003	36.6	34.6	2.0	0.6	0.2	20	24 : — : —	6.0
4	015	33.6	32.4	1.2	0.3	0.0	8		Id.; cumulo-strati to NE.; cirro-strati.
5	050	34.7	32.7	2.0	0.3	0.2	23	24 : — : —	8.0
6	069	34.1	32.1	2.0	0.2	0.1	23		Cirro-strati; cumulo-strati on NE. horizon.
7	091	32.7	31.0	1.7	0.5	0.2	22		Scud.
8	121	33.1	31.3	1.8	0.5	0.2	22		Cirro-stratus to S.; double auroral arch.)
9	149	34.0	31.4	2.6	0.6	1.2	22		Id.; aurora.)
10	177	32.0	30.3	1.7	0.2	0.1	22		Id.; black patch of cloud below auroral arch to NNE.
11	200	30.7	29.1	1.6	0.1	0.1	24		Clear; aurora. See notes to Extra Magnetical Obs. of this date.
12	216	31.6	29.6	2.0	0.2	1.1	22		0.0
13	29.235	31.6	29.6	2.0	0.6	0.3	23		Flash of lightning on SSW. horizon; auroral arch still bright.
14	250	30.3	28.6	1.7	0.2	0.1	23		Bright auroral arch about 10° altitude; streamers at 50° altitude.
15	268	29.9	28.4	1.5	0.2	0.1	21		Very clear; arch about 8° altitude internally, 8° broad.
16	286	28.6	27.4	1.2	0.3	0.1	21		Id.; rapidly pulsating arch.
17	298	29.3	27.9	1.4	0.3	0.1	20		Masses of cirro-strati to NNW., radiating from that point; aurora.
									Faint, nearly hom. aurora within 10° of hor.; rows of pulsating brushes.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Dec. 2d 21^h. Observation made at 21^h 10^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	lbs. 10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
3 18	29.312	30.4	28.9	1.5	0.3	0.2	21			0.0
19	326	30.4	29.1	1.3	0.2	0.1	20			0.1
20	341	30.6	29.6	1.0	0.2	0.2	19			0.2
21	352	33.0	31.7	1.3	0.2	0.2	19	— : 26 : —		7.0
22	371	34.4	33.1	1.3	0.4	0.2	20	— : 25 : —		5.0
23	371	33.4	32.7	0.7	0.4	0.8	19	— : 26 : —		2.0
4 0	369	36.2	34.4	1.8	0.8	0.4	20	— : 26 : —		9.8
1	353	37.1	35.2	1.9	0.4	0.7	19	— : 27 : —		9.0
2	342	38.4	35.9	2.5	1.3	0.9	19	— : 27 : —		9.8
3	323	38.3	36.0	2.3	0.8	0.4	20	— : 26 : —		9.8
4	301	38.8	36.6	2.2	0.5	0.5	19	— : 26 : —		10.0
5	287	39.4	37.4	2.0	1.2	0.5	20			10.0
6	261	39.3	37.7	1.6	0.4	0.1	19			10.0
7	215	37.1	36.2	0.9	0.0	0.0				10.0
8	162	39.6	38.1	1.5	0.5	0.4	18			9.5
9	112	39.7	38.4	1.3	0.7	0.5	18			8.8
10	29.030	40.1	38.5	1.6	1.3	0.6	18			10.0
11	28.989	40.9	39.3	1.6	0.5	0.2	18			10.0
12	925	41.0	39.6	1.4	0.5	0.4	18			7.5
13	28.865	41.1	40.0	1.1	0.7	0.6	18			9.9
14	823	43.9	43.1	0.8	1.4	0.9	19			10.0
15	815	44.1	41.9	2.2	1.1	0.5	20			0.5
16	809	43.4	39.6	3.8	2.5	1.8	21			10.0
17	784	41.4	38.4	3.0	2.9	1.4	19			8.0
18	811	42.0	38.6	3.4	2.4	1.4	21			9.9
19	812	41.8	38.4	3.4	5.0	2.8	22			0.5
20	812	41.6	37.7	3.9	3.4	1.8	20			5.0
21	820	41.6	37.8	3.8	4.2	3.1	22	24 : — : —		4.0
22	835	41.4	37.9	3.5	3.4	4.2	21			2.0
23	855	41.0	38.6	2.4	4.0	2.4	22	— : 24 : —		2.5
5 0	859	40.9	37.7	3.2	3.9	2.3	19	24 : 24 : —		1.0
1	860	39.4	37.2	2.2	2.8	0.8	20			1.5
2	876	40.4	37.3	3.1	2.5	2.2	22	24 : — : —		1.5
3	887	39.0	37.0	2.0	3.1	0.5	19			1.5
4	906	40.8	38.0	2.8	1.3	1.2	21	24 : — : —		7.5
5	914	40.5	37.2	3.3	1.2	1.2	20			5.0
6	932	38.6	36.3	2.3	1.3	0.5	19			5.0
7	929	38.9	36.9	2.0	0.7	0.4	20			9.8
8	929	37.4	35.8	1.6	0.7	0.3	19			0.8
9	931	37.3	35.4	1.9	0.6	0.3	20			1.0
10	937	37.9	36.1	1.8	0.6	0.9	19	25 : — : —		6.5
11	948	37.9	35.9	2.0	1.4	0.8	20			7.5
12	921	37.7	35.5	2.2	1.4	1.3	20			2.0
13	28.921	38.7	36.4	2.3	2.0	1.6	19			3.5
14	926	38.7	36.2	2.5	2.2	1.8	20			3.0
15	910	37.9	35.7	2.2	1.3	1.3	20			1.0
16	926	37.6	35.4	2.2	2.0	1.2	21			1.0
17	927	36.7	34.8	1.9	1.3	0.5	20			1.0
18	942	36.3	34.6	1.7	0.6	0.3	19			4.0
19	942	37.1	35.1	2.0	1.0	0.3	19			4.0
20	966	39.0	36.6	2.4	0.5	0.7	19	22 : — : —		9.5
21	986	36.6	34.9	1.7	0.5	0.1	19	22 : — : —		3.0
22	28.998	36.4	35.1	1.3	0.2	0.1	20	22 : — : —		2.5
23	29.012	40.1	38.6	1.5	0.1	0.0	18	22 : — : —		9.0
6 0	016	41.0	39.4	1.6	0.1	0.0	16	22 : — : —		9.0
1	012	44.1	41.3	2.8	0.3	0.2	18	22 : — : —		9.5

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	22 : 22 : —	9.5	As before.
6 2	29.017	41.0	39.2	1.8	0.2	0.0	19	22 : — : —	9.9	Id.; cumulo-strati on NE horizon.
3	026	39.9	38.2	1.7	0.3	0.1	17	22 : — : —	8.0	Id.; id.
4	048	38.9	37.6	1.3	0.1	0.0	16	22 : — : —	9.5	Cirro-stratus scud.
5	059	36.7	35.7	1.0	0.0	0.0	20	— : 21 : —	10.0	Id.
6	079	37.4	36.4	1.0	0.0	0.0	18		10.0	Id.; rain ^{0.2}
7	100	38.2	37.2	1.0	0.0	0.0	26		10.0	Id.
8	119	37.6	36.9	0.7	0.0	0.0	4		10.0	Cirro-cumulo-strati and cirro-stratus scud.
9	133	36.5	36.0	0.5	0.0	0.0	26	— : 28 : —	9.0	Id.
10	161	34.0	33.6	0.4	0.0	0.0	24		5.0	Cirro-stratus scud on S. horizon.
11	181	32.9	32.7	0.2	0.0	0.0			0.5	Clear.
12	209	30.6	30.0	0.6	0.0	0.0	20		0.0	Loose cirro-cumulo-strati; P.M. clear.
23 ¹	29.477	36.0	33.7	2.3	0.3	0.1	28	— : 28 : —	2.0	Cirr.-cum.-str. lying in bands from N by W. to S by E.
7 13	29.732	27.5	27.5	...	0.4	0.0			8.0	Cirro-cumulo-strati.
14	727	30.6	30.0	0.6	0.1	0.0	18		9.5	Id.
15	750	31.9	30.5	1.4	0.0	0.0	19		10.0	Cirro-strati.
16	750	33.1	31.6	1.5	0.1	0.0	22		8.5	Id.
17	738	32.6	31.5	1.1	0.1	0.0	24		2.0	Thin cirro-strati radiating from about SE.
18	726	32.4	31.4	1.0	0.0	0.0	6		6.0	Nearly homogeneous mass of cirro-stratus.
19	719	31.8	31.0	0.8	0.0	0.0	26		3.5	Cirro-stratus; undulated cirro-strati.
20	725	33.6	32.5	1.1	0.0	0.0	24		10.0	Nearly homogeneous mass of cirro-stratus.
21	715	33.4	32.5	0.9	0.0	0.0	26		10.0	Id.
22	712	34.0	32.6	1.4	0.0	0.0	31		10.0	[finest rain.]
23	709	35.9	35.0	0.9	0.0	0.0	6		10.0	Smoky scud; mottled cirri; cirro-strati.
8 0	673	39.3	38.2	1.1	0.3	0.2	19	20 : — : —	9.9	Cirro-stratus scud.
1	656	41.2	39.8	1.4	0.2	0.2	19	— : 20 : —	9.9	Misty and cirro-stratus scud.
2	639	40.8	39.3	1.5	0.3	0.3	18	21 : — : —	9.0	Misty and cirr.-str. scud; cirr.-cum.-str.; particles of the
3	622	41.3	39.8	1.5	0.3	0.1	19	21 : — : —	10.0	Id. [finest rain.]
4	624	40.6	39.8	0.8	0.2	0.1	20	24 : — : 28	7.0	Scud; cirro-cumulo-strati.
5	616	42.5	41.2	1.3	0.2	0.0	20	— : 25 : —	9.8	Id.; id.
6	595	42.1	40.9	1.2	0.1	0.0	20		9.7	Id.; cirro-strati.
7	578	43.1	41.4	1.7	0.6	0.4	18		9.8	Cirro-strati on horizon.
8	593	43.5	41.7	1.8	1.0	1.2	19	24 : — : —	4.0	Overcast.
9	541	40.8	39.6	1.2	0.9	0.4	19		0.3	Scud and cirro-cumulo-strati.
10	548	42.9	40.7	2.2	2.5	2.0	18		10.0	Scud; woolly cirri; cirrous haze; lunar corona.
11	556	43.0	41.5	1.5	1.7	1.5	21	24 : — : —	6.5	Id.
12	571	44.2	42.2	2.0	1.1	0.5	24	24 : — : —	7.5	[drops of rain.]
13	29.584	44.2	40.7	3.5	1.1	1.2	23	25 : — : —	7.0	Scud; woolly cirri; lunar corona..
14	587	43.9	40.0	3.9	1.6	1.5	22		3.0	Cirro-strati and woolly cirri; lunar corona.
15	608	44.0	40.4	3.6	2.1	1.0	25	— : 26 : —	4.0	Cirro-cumulo-strati; sky milky on horizon.
16	612	42.2	38.9	3.3	1.6	1.5	24		0.2	Clear; clouds on S. horizon.
17	626	42.2	39.0	3.2	1.7	0.8	24		0.2	Id.; id.
18	640	41.6	38.0	3.6	1.7	1.1	24		0.2	Id.; id.
19	653	41.2	37.6	3.6	1.6	0.8	22		0.3	Cirro-strati on horizon.
20	657	40.7	37.5	3.2	0.9	0.7	21		0.5	Scud and cirro-strati to S. [drops of rain.]
21	666	41.3	38.0	3.3	0.9	1.7	21	25 : — : 26	3.0	Smoky scud; woolly watery-like cirri, orange tinted;
22	656	42.4	39.0	3.4	2.1	2.3	23	26 : 26 : —	3.0	Scud; cirro-cumulo-strati.
23	669	43.4	39.3	4.1	1.9	2.0	25		0.5	Loose scud and cirro-strati on horizon.
9 0	670	43.9	40.3	3.6	3.9	1.7	26	26 : — : —	1.0	Loose scud and cumuli.
1	679	41.5	38.3	3.2	4.3	1.5	24v.		3.0	Cirr.-str. & scud near hor.; loose nimbus; slight shower. ⊖
2	670	42.7	39.2	3.5	2.5	2.1	23	26 : — : —	4.0	Scud; cirro-strati; slight passing shower.
3	675	42.2	38.0	4.2	2.1	1.0	25		2.0	Scud and cirro-strati towards horizon. ⊖
4	684	41.8	38.4	3.4	1.5	2.1	26	26 : — : —	3.0	Id.
5	703	40.9	37.3	3.6	1.9	1.8	25	— : 25 : —	3.0	Loose cirro-cumulo-strati.
6	713	39.9	36.8	3.1	2.3	1.8	25		0.1	Scud on Cheviot.
7	741	40.2	37.0	3.2	2.0	1.0	26		1.0	Cirro-strati to W. and SW.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1b.	From 10m.	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
9 8	29.752	40.4	37.3	3.1	1.5	1.2	25			0.5
9	779	40.1	37.0	3.1	1.9	1.6	26			0.7
10	810	38.8	36.8	2.0	1.7	0.7	26			1.0
11	843	40.1	36.9	3.2	1.4	0.8	26			1.5
12	871	40.2	36.8	3.4	1.3	0.8	27			4.0
13	29.888	39.6	36.6	3.0	0.8	0.5	26	— : — : 29		5.0
14	906	39.9	36.6	3.3	1.2	0.8	26			5.0
15	933	38.7	35.8	2.9	0.9	0.2	26			5.0
16	970	38.1	35.2	2.9	0.0	0.1	19			2.0
17	29.990	36.8	34.6	2.2	0.2	0.1	21			2.0
18	30.010	35.3	33.7	1.6	0.2	0.1	18			1.8
19	030	36.2	34.2	2.0	0.2	0.1	18			1.0
20	044	35.2	33.4	1.8	0.0	0.0	20			1.0
21	063	35.0	33.5	1.5	0.1	0.0	20	28 : — : —		2.0
22	078	35.2	33.8	1.4	0.1	0.0	28	— : — : 30		6.0
23	102	36.9	35.1	1.8	0.0	0.0	28	— : — : 30		9.0
10 0	100	39.2	37.0	2.2	0.0	0.0	26			10.0
1	090	39.5	37.4	2.1	0.0	0.0	8			10.0
2	071	40.7	38.2	2.5	0.1	0.0	20			10.0
3	059	40.0	37.8	2.2	0.0	0.0	16			10.0
4	045	39.8	37.6	2.2	0.0	0.0	18			10.0
5	30.005	38.4	36.8	1.6	0.1	0.1	17			10.0
6	29.986	40.3	38.5	1.8	0.3	0.1	20			10.0
7	959	40.0	38.3	1.7	0.2	0.2	18			10.0
8	903	40.2	39.0	1.2	0.2	0.1	18			10.0
9	839	42.6	41.3	1.3	1.0	0.9	18	— : 22 : —		10.0
10	793	44.0	42.5	1.5	1.7	1.1	18			10.0
11	725	45.5	44.0	1.5	1.5	2.3	19			10.0
12	656	46.3	44.8	1.5	1.6	1.4	19			10.0
13	29.607	47.4	45.6	1.8	2.1	1.3	19			10.0
14	555	47.7	46.4	1.3	2.2	1.6	18			10.0
15	524	49.2	47.1	2.1	1.3	0.5	19	24 : — : —		9.5
16	495	50.4	46.5	3.9	2.4	1.3	24	25 : — : —		7.0
17	500	47.2	42.0	5.2	4.9	3.2	29	25 : — : —		3.5
18	494	46.4	41.5	4.9	3.3	2.0	26			6.0
19	485	43.6	38.1	5.5	4.0	1.1	24			0.5
20	459	42.3	37.3	5.0	2.5	2.3	24			0.8
21	445	42.8	37.5	5.3	4.9	3.7	25			0.8
22	442	43.2	38.1	5.1	5.7	5.3	28			0.2
23	485	43.5	39.6	3.9	5.8	4.3	28			1.0
11 0	507	44.4	39.5	4.9	4.5	3.7	27	28 : — : —		6.0
1	523	44.0	38.4	5.6	4.9	5.3	29	29 : — : —		4.0
2	555	43.6	37.7	5.9	6.2	5.0	29	30 : — : —		2.5
3	601	42.7	37.4	5.3	7.7	5.1	29	30 : — : —		5.0
4	659	41.9	36.7	5.2	5.1	4.2	28	30 : — : —		4.0
5	712	40.7	36.4	4.3	5.7	3.6	30	30 : — : —		7.0
6	755	40.9	36.3	4.6	4.2	4.1	29			7.5
7	796	40.4	36.6	3.8	3.3	1.5	28			10.0
8	842	40.2	36.6	3.6	2.3	1.2	29	31 : — : —		9.8
9	878	40.1	36.4	3.7	2.6	1.1	30	31 : — : —		9.9
10	917	37.4	34.6	2.8	1.5	0.5	31			2.0
11	951	37.7	34.1	3.6	1.3	0.4	29			1.0
12	29.954	37.9	34.0	3.9	1.8	1.6	29			1.0
13	30.004	37.9	34.2	3.7	1.4	1.5	30			1.5
14	025	38.3	35.8	2.5	1.0	1.1	29	— : 1 : —		7.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	
d. h. 11 15	in. 30.058	37.0	35.0	2.0	0.1	0.6	29		0—10.	Cirro-strati, cirri, and cirrous haze; small lunar cor.)
16	081	37.2	34.2	3.0	0.5	0.4	29		2.0	As before; lunar halo.)
17	085	37.2	34.3	2.9	0.7	0.8	30		3.0	Id.; id.)
18	108	37.5	34.7	2.8	0.9	0.6	30		6.0	Thick cirrus haze; lunar halo.)
19	127	38.0	35.0	3.0	1.6	0.5	29		4.0	Cirro-strati; thin cirrus haze over the sky.
20	155	37.0	34.6	2.4	1.0	0.7	29		7.0	Cir.-str. and cir. haze, slightly tinged with red to SE.
21	174	36.3	34.2	2.1	0.6	0.3	30	4 : — : 30	5.0?	Scud on horizon; cirri and thin cirro-strati.
22	184	37.0	34.6	2.4	0.5	0.2	29	0 : — : 31	8.0	Id.; id.
23	203	38.0	35.6	2.4	0.5	0.5	29	1 : — : —	9.5	Scud; cirro-strati, cirri, and cirrous haze.
12 0	215	39.0	36.3	2.7	0.4	0.2	29	0 : 31 : —	9.8	As before; portion of a solar halo.
1	219	39.2	36.6	2.6	0.3	0.1	28	2 : — : —	9.5	Loose cum. and scud to E.; cirro-strati and cir. haze.
2	236	39.0	36.3	2.7	0.2	0.2	29	2 : 0 : 0	7.0	Id.; cirro-strati and cirri. ⊖
3	251	37.3	35.0	2.3	0.2	0.1	30		2.0	Cum.-str. and cir.-str. on E. and S. hor.; patches of cirri. ⊖
4	252	36.5	34.4	2.1	0.1	0.1	29		2.0	Large cumulo-strati on E. horizon; patches of cirri.
5	261	35.4	33.5	1.9	0.1	0.0	28		0.8	Id.; slight haze.)
6	270	33.3	32.0	1.3	0.1	0.1	26		1.0	Cirri and cirrous haze to E.)
7	272	31.7	30.7	1.0	0.1	0.1	22		0.2	Id.)
8	273	31.2	30.2	1.0	0.1	0.1	20		0.2	Id.)
9	275	31.5	30.2	1.3	0.1	0.1	12		0.1	Cirrous haze on horizon.)
10	278	27.6	27.0	0.6	0.0	0.1	16		0.1	Id.)
11	284	26.7	26.6	...	0.0	0.0	18		0.0	Rather hazy on E. horizon; faint corona.)
12	278	25.3	25.8	...	0.0	0.0	18		0.0	Id.; very faint corona.)
13	30.273	24.6	25.0	...	0.0	0.0	20		0.0	Rather hazy on E. horizon; very faint corona.)
14	261	25.5	25.5	...	0.0	0.0	20		0.2	Cirri? to E.; very faint corona.)
15	257	24.5	24.5	...	0.0	0.0	18		0.0	Very clear; thick hoar-frost; very faint corona.)
16	238	25.5	25.0	0.5	0.0	0.0	18		0.0	Id.; id.)
17	229	22.8	22.8	...	0.0	0.0	18		1.0	Sheet of thin cirrus to W.; id.)
18	229	24.3	23.6	0.7	0.0	0.0	18		1.0	Thin cirri, radiating from NW.; id.)
19	214	24.4	24.1	0.3	0.0	0.0	18		1.0	As before; part of a lunar halo.)
20	207	25.2	24.8	0.4	0.0	0.0	18		7.0	Cirro-cumulo-strati, cirro-strati, and cirri.)
21	210	25.0	24.7	0.3	0.0	0.0	16		4.0	Cirro-strati; cirri.)
22	213	29.9	29.3	0.6	0.0	0.0	18	— : 28 : —	9.5	Id.; id.)
23	208	33.4	32.0	1.4	0.0	0.0	20	— : 28 : —	9.5	Id.; id. ●
13 0	199	34.4	32.4	2.0	0.1	0.1	21	— : — : 30	7.0	Woolly and mottled cirri; cirro-strati. ○
1	184	36.0	34.5	1.5	0.0	0.0	6	— : 28 : —	9.0	Cirro-stratus scud; linear cirri.
2	173	35.3	34.2	1.1	0.0	0.0	20		3.0	Cirro-cumulo-strati, cirro-strati, and cirri. ⊖
3	161	36.4	34.7	1.7	0.1	0.1	20		1.0	Cirro-strati and cirri round horizon. ○
4	152	35.2	33.8	1.4	0.1	0.0	20		2.0	Cirro-strati; clouds tinged red.
5	160	33.3	32.3	1.0	0.0	0.0	18	— : 0 : —	9.5	Cirro-stratus scud; cirri and cirrous haze.
6	168	33.7	32.7	1.0	0.1	0.0			9.5	Id.; cirro-cumulo-stratus.)
7	146	32.1	32.6	...	0.0	0.0	— : 1 : —		4.0	Cirro-cumuli.)
8	155	31.0	30.6	0.4	0.0	0.0	22		0.8	Id.; cirrous streaks.)
9	141	28.1	28.3	...	0.0	0.0	22		0.2	Patches of cirri.)
10	142	26.9	26.6	0.3	0.0	0.0	22		0.0	Very clear; milky light (?) to N.)
11	128	26.9	26.7	0.2	0.0	0.0	22		0.0	Id.)
12	30.130	25.2	24.9	0.3	0.0	0.0	16		0.2	Id.; streaks of cloud to NW.)
14 0 ¹	29.809	40.9	40.0	0.9	0.6	0.6	22	21 : — : —	Loose scud; dense homogeneous cirro-stratus.
13	29.250	47.2	46.0	1.2	5.8	1.9	20		10.0	Scud and cirro-strati; rain ¹
14	223	48.2	46.7	1.5	1.5	0.6	19		10.0	Id.; rain ^{0.5}
15	234	48.0	45.0	3.0	2.3	1.1	24	26 : — : —	10.0	Scud; dense mass of cirro-stratus.)
16	252	46.4	43.0	3.4	1.6	1.6	23	26 : — : —	10.0	Id.; id.
17	263	44.7	41.0	3.7	2.1	1.6	25	27 : — : —	10.0	Id.; id.
18	280	42.7	39.0	3.7	3.0	1.0	24	27 : — : —	9.8	Id.; cirr.-cumulo-str. rad. from WNW.; cirro-strati; lun. cor.)
19	287	42.8	38.7	4.1	2.7	2.0	24		7.0	Cirro-cumulo-strati; cirro-strati.)
20	301	41.0	37.7	3.3	2.1	0.8	24		6.0	Woolly cirri; cirro-strati.)

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.
Dec. 13^d 6^h. Observation made at 6^h 5^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0-10.	
14 21	29-332	41.8	37.1	4.7	2.4	1.4	24	26 : — : —	2-0	Scud on hor.; woolly cir. lying from WNW. to ESE.,
22	345	40.9	36.9	4.0	2.0	1.4	24	26 : — : —	1-5	Loose scud; cirro-strati. Θ [barred across.]
23	357	41.2	37.8	3.4	1.9	1.3	22		1-0	
15 0	355	43.6	38.9	4.7	2.4	2.1	24	25 : — : —	2-5	Id.; id. Θ
1	350	43.6	38.8	4.8	3.4	2.2	24	25 : — : —	2-0	Patches of scud; id. ○
2	329	43.6	39.4	4.2	2.1	0.6	24	25 : — : —	2-5	Id.; id. ○
3	319	40.6	38.5	2.1	3.3	2.8	24	25 : — : 26	3-0	Scud; cirri as before; shower ^{0.5} at 2 ^h 30 ^m . Θ
4	332	41.3	39.0	2.3	2.5	3.8	27	25 : — : 26	6-5	Scud and loose nimbi; bands of cir. and cir.-str.; shower ²
5	333	41.0	38.2	2.8	2.1	1.7	24	25 : — : 27	3-5	As before; the cirri barred at right angles to the bands.
6	330	41.8	38.4	3.4	3.3	2.2	24		3-0	Scud and cirro-stratus; drops of rain.
7	329	41.8	39.0	2.8	3.7	3.0	24		5-0	Id.; rain ^{0.5} ; part of a lunar rainbow.)
8	320	42.3	39.0	3.3	2.2	1.8	23	27 : — : —	2-0	Loose cumuli.)
9	316	41.9	39.0	2.9	2.7	1.6	25	27 : — : —	3-0	Loose scud; cirro-strati and cirri.)
10	310	41.9	38.7	3.2	2.3	1.1	25		3-0	Id.; linear cir., rad. from SE.; coloured cor.)
11	306	42.7	39.0	3.7	2.7	3.2	23		9-5	Scud on hor.; woolly cirri, rad. from about SE.; lunar
12	303	43.3	39.6	3.7	2.0	1.7	24	26 : — : —	9-2	Scud; cirri nearly as before; lunar cor. ♫ [halo.]
13	29-287	43.2	39.5	3.7	2.2	1.9	23		9-5	Scud; cirri nearly as before; halo and corona. ♫
14	273	43.3	39.9	3.4	2.0	2.2	24		8-0	As before; halo indistinct; drops of rain occasionally. ♫
15	244	45.0	40.2	4.8	3.2	2.8	24		9-8	Id.; id. ♫
16	230	44.8	40.5	4.3	5.0	4.1	24		10-0	Id.; id. ♫
17	210	44.1	40.7	3.4	3.6	2.6	24		10-0	Scud; cirri becoming thicker; corona; drops of rain. ♫
18	202	43.3	39.8	3.5	3.7	2.7	24		10-0	Id.; id.; id. ; id. ♫
19	207	42.8	39.3	3.5	2.6	2.2	24		9-5	Thick woolly cirri. ♫ [scud; rain ^{0.2}
20	228	42.2	39.0	3.2	3.4	3.2	24		9-8	Id. and cir.-str., rad. from ESE.; loose
21	256	41.7	37.6	4.1	3.8	2.3	26		9-5	Thick ribbed and dappled cirro-stratus.
22	274	41.3	37.2	4.1	2.6	2.5	26	— : 27 : —	9-0	Id.; patches of scud.
23	298	41.6	37.0	4.6	1.8	2.5	25	— : 27 : —	9-0	Thick ribbed and dappled cir. str.; patches of scud; cum. on E. hor.
16 0	325	41.6	37.2	4.4	2.5	1.6	26	— : 26 : —	8-5	Cir-cum-str.; ribbed & dappled cir.-str.; rad. from WNW. & ESE. ●
1	337	41.6	36.8	4.8	2.3	1.1	24	— : — : 27	8-0	Reticulated, &c. cir., rad. from NW by W. and SE by E. cum-str. ●
2	336	41.6	37.0	4.6	2.2	1.3	24	— : — : 27	8-0	As before. ● on E. hor.; patches of scud. ●
3	338	40.7	36.7	4.0	2.1	1.4	24	— : — : 27	7-5	Id.; cirri more broken; dappled cirro-strati. ○
4	340	40.4	36.5	3.9	2.1	1.8	24	— : — : 27	7-0	Woolly cirri and cirro-strati; scud near horizon.
5	338	38.6	36.9	1.7	1.7	1.0	24	— : — : 27	8-0	Nearly as before.
6	354	39.5	36.4	3.1	2.4	0.8	24		3-0	Radiating cirri and cirro-strati.
7	358	39.5	35.7	3.8	2.2	1.0	24		0-5	Cirri to SE.
8	380	38.0	34.6	3.4	1.6	0.6	25		1-0	Woolly cir. lying NW by W. and SE by E. ♫ [halo.]
9	401	38.2	34.8	3.4	1.8	0.8	26		2-0	Patches of scud; thin cirri; lunar cor. and portion of a
10	414	37.0	34.2	2.8	0.9	1.2	25		1-0	Spotted woolly cirri, with corona; halo and paraselene. ♫
11	423	35.7	33.3	2.4	1.3	1.0	28		0-5	Cirri and cir. haze on hor.; very faint lunar corona.)
12	459	34.3	32.2	2.1	1.0	0.0	20	— : 29 : —	1-0	Sheets of cirro-stratus scud; very thin cirrus haze.)
13	29-477	33.3	30.7	2.6	0.1	0.3	19		0-5	Small tufts of cloud from NW. to SE.; streaks of cir.)
14	476	35.3	31.7	3.6	0.6	0.5	26		0-5	Bands of cirri lying from NW. to SE.)
15	502	34.4	30.8	3.6	0.5	0.3	25		0-3	Streaks of cirri.)
16	526	29.6	27.9	1.7	0.4	0.0	22		0-4	Cirri and cirro-strati to SW.)
17	536	28.3	26.7	1.6	0.0	0.0	18		3-0	Woolly and mottled cirri; a diffuse lunar corona. ♫
18	540	30.9	28.5	2.4	0.0	0.0	20	— : 28 : —	2-5	Cirro-cumulo-strati. ♫
19	536	27.8	26.8	1.0	0.0	0.0	20		8-0	Id.
20	545	28.8	27.7	1.1	0.0	0.0	18		9-0	Id.; thicker to W.; sky to E.
21	548	29.3	28.3	1.0	0.0	0.0	18	— : 27 : —	9-0	Id.; clouds tinged red to E.)
22	552	30.2	28.8	1.4	0.0	0.0	18		9-8	Cir.-str., rad. from NW by W. and SE by E.; cir. mass. Θ
23	548	31.3	29.9	1.4	0.1	0.0	23		9-8	Cirro-strati and cirrus haze; solar halo. Θ
17 0	536	32.2	30.7	1.5	0.0	0.0	7	— : 26 : —	9-5	Id.; id. ○
1	516	32.7	31.2	1.5	0.0	0.0	28	— : 26 : —	8-0	Woolly and mottled cirri; cir.-str., rad. from WNW. ○
2	505	35.6	33.0	2.6	0.0	0.0	28	— : 26 : —	8-0	As before. ○ and ENE. ○
3	483	34.7	32.7	2.0	0.0	0.0		— : 26 : —	8-0	Id.; stratus on horizon. ○
4	472	32.5	31.0	1.5	0.0	0.0	4	— : 26 : —	9-8	Id.; id. ○

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Dec. 16th 4^h. The cirri radiating from NW by W.; the cirri do not seem to extend far towards the NE., as they terminate abruptly to NE., at an altitude of about 20°; this has been the case all day.

Dec. 16th 19^h. Observation made at 19^h 10^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From 10 ^{m.}	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
17 5	29.457	30.9	29.6	1.3	0.0	0.0	2	10.0	Cirro-cumulo-strati; cirrus haze; foggy to E.	
6	448	29.8	28.6	1.2	0.0	0.0	2	7.0	Cirro-strati; cirrus haze over the sky.	
7	446	27.0	26.6	0.4	0.0	0.0	16	3.0	Cirrus haze.	
8	440	26.1	26.4	...	0.0	0.0		3.0	Id.	
9	419	28.3	27.9	0.4	0.0	0.0		10.0	Cirro-strati and cirrus haze.	
10	410	30.0	28.8	1.2	0.0	0.0	2	10.0	Scud and cirro-stratus.	
11	398	29.2	28.6	0.6	0.1	0.0	10	10.0	Id.; dense cirrus haze.	
12	388	28.9	28.2	0.7	0.0	0.0	12	10.0	Id.; id.	
13	29.383	30.5	29.6	0.9	0.0	0.0	6	10.0	Scud and cirro-stratus; fine flakes of snow.	
14	369	30.3	30.0	0.3	0.0	0.0	4	10.0	Id.; snow ¹	
15	371	32.0	31.8	0.2	0.0	0.0	4	10.0	Id.; id.	
16	359	33.0	32.5	0.5	0.0	0.0	2	10.0	Id.; id.	
17	351	33.7	33.4	0.3	0.3	0.4	2	10.0	Homogeneous mass; sleet.	
18	353	34.8	34.2	0.6	0.9	0.6	2	10.0	Id.; id.	
19	366	34.6	33.9	0.7	0.6	0.4	3	10.0	Sleet!	
20	371	34.3	33.6	0.7	0.4	0.2	2	10.0	Sleet ^{0.2}	
21	406	35.5	34.4	1.1	0.3	0.3	2	10.0	Homogeneous mass of scud; rain ^{0.2}	
22	406	35.5	34.4	1.1	0.5	0.4	0	10.0	Id.; id.	
23	416	35.8	34.7	1.1	0.8	0.6	0	9.8	Clouds broken up; scud; cirro-cumuli and cir.-str.	
18 0	424	36.0	34.9	1.1	0.6	0.1	2	10.0	Patches of scud; cir-cum-str., the motion scarcely perceptible.	
1	424	36.1	35.0	1.1	0.2	0.1	1	6.0	Cirro-stratus scud on horizon; id.	
2	412	36.1	34.9	1.2	0.2	0.1	0	2.5	Id.; cirro-cumuli.	
3	424	36.0	34.6	1.4	0.6	0.5	31	4.0	Scud and loose cumuli; cirro-strati.	
4	429	35.0	34.2	0.8	0.9	0.2	31	9.5	Scud; cirro-stratus scud; rain ^{0.2}	
5	443	34.8	33.1	1.7	0.5	0.4	0	9.7	Id.; id.	
6	427	31.8	30.2	1.6	0.2	0.1	2	1.0	Cloud and haze on horizon.	
7	416	28.8	28.4	0.4	0.1	0.1	17	1.0	Id.	
8	410	29.2	27.8	1.4	0.1	0.1	19	1.0	Id.	
9	390	26.2	26.0	0.2	0.1	0.1	20	2.0	Id.	
10	356	27.3	27.1	0.2	0.1	0.1	18	6.0	Cirro-stratus and haze.	
11	331	27.4	26.9	0.5	0.0	0.0	22	10.0	Mass of cir.-str. and cir. haze; a few stars dimly visible.)	
12	283	27.3	27.0	0.3	0.0	0.0	20	10.0	Id.; id.)	
13	29.227	28.3	27.6	0.7	0.0	0.0	18	10.0	Mass of cirro-stratus, denser; moon scarcely visible.)	
14	183	29.2	28.5	0.7	0.0	0.0	18	10.0	Id.; id. [about 15 ^h 15 ^m .]	
15	141	31.1	30.0	1.1	0.0	0.0	18	10.0	Id.; id.; commenced snowing	
16	29.058	31.8	31.0	0.8	0.2	0.3	16	10.0	Homogeneous mass of clouds.	
17	28.943	31.4	30.5	0.9	0.4	0.2	18	10.0	Cirro-stratus scud (?) moving rather quickly; cir.-str.;	
18	848	34.8	32.7	2.1	2.1	2.1	18	10.0	Homogeneous mass. [clouds broken.]	
19	787	34.7	33.7	1.0	2.0	1.6	17	10.0	Id.	
20	690	35.3	34.4	0.9	2.1	1.4	16	10.0	Scud; cirro-strati seen through break to S.)	
21	604	37.4	36.6	0.8	2.5	1.9	18	10.0	Id.; dense homogeneous cirro-stratus.	
22	563	38.5	37.9	0.6	1.7	0.6	18	9.9	Id.; id.	
23	550	40.7	39.2	1.5	1.7	0.4	21	9.7	Loose scud; cirro-stratus scud; cir.-str.; sky to NW.	
19 0	528	41.2	38.3	2.9	0.9	0.6	22	4.0	Loose cirro-strati; cirro-strati and cirrus haze. ☽	
1	539	40.3	37.3	3.0	0.6	0.5	21	4.0	Id.; id. ☽	
2	512	41.0	37.0	4.0	1.0	0.8	20	1.0	Cirro-strati; haze and patches of scud round hor. ☽	
3	497	39.7	36.7	3.0	0.3	0.4	20	2.0	Id. ☽ [cirrus haze.]	
4	473	38.2	35.9	2.3	1.1	0.8	20	3.5	Thick scud rising to W.; cir-cum-str.; woolly cirri;	
5	458	35.9	34.4	1.5	1.1	0.3	19	3.5	Loose cirro-strati and cirro-cumulo-strati; cirro-strati.	
6	433	35.4	33.9	1.5	0.7	0.4	19	0.5	Id.	
7	417	35.7	34.5	1.2	0.9	0.4	20	0.8	Id.	
8	398	35.7	34.5	1.2	0.5	0.7	19	5.0	Cirro-stratus scud? drops of rain.	
9	363	36.9	35.4	1.5	1.6	1.1	19	0.5	Id.?; shooting-star from γ to δ Ursæ Majoris.	
10	343	37.1	35.4	1.7	2.0	1.0	19	2.0	Id.; drops of rain.	
11	314	36.7	35.2	1.5	1.2	0.7	18	2.5	Scud and cirro-stratus.	
12	296	35.5	34.1	1.4	0.7	0.6	19	2.0	Id.	

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Dec. 18th 17^h 11. Wind commenced blowing 0.8 lb., barometer 28.925. 17^h 40^m. Wind blowing 2.0 lb., barometer 28.876. 19^h 30^m. Wind blowing 1.6 lb., barometer 28.735. 20^h 30^m. Wind blowing 2.5 lb., barometer 28.647. 21^h 30^m. Barometer 28.581.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
		lbs.	lbs.	pt.	pt.	pt.	pt.			
d. h.	in.	°	°	°	0.9	0.0	22		0—10.	Scud and cirro-stratus.
19 13	28.292	33.5	32.8	0.7	0.9	0.0	18		3.0	Id.
14	287	35.0	33.9	1.1	0.0	0.0	18		9.7	Id.
15	282	33.4	32.7	0.7	0.1	0.1	18		3.0	Id.
16	283	35.0	34.0	1.0	0.1	0.0	24		3.0	Scud ; cirro-cumulo-strati.
17	298	34.3	33.4	0.9	0.1	0.0	8		9.8	Id. ; id.
18	319	33.7	33.1	0.6	0.0	0.0	16		10.0	Id. ; id.
19	356	34.0	33.4	0.6	0.0	0.0	22		10.0	Id. ; id.
20	393	35.4	34.1	1.3	0.1	0.1	30		9.5	Id. ; id. ; faint corona.
21	400	36.0	34.4	1.6	0.3	0.3	31	0 : — : —	10.0	Id. ; cirro-strati.
22	469	35.9	33.9	2.0	0.5	0.3	28	0 : — : —	9.9	Cirro-stratus scud ; cirro-strati ; clouds broken.
23	502	35.2	34.6	0.6	0.7	0.6	28	1 : — : —	9.0	Id. ; id. ; woolly cirri to W.
20 0	531	36.6	34.4	2.2	0.6	0.3	28	0 : 2 : —	9.5	Id. ; woolly cirro-cumuli.
1	563	37.8	35.3	2.5	0.4	0.4	28	1 : — : —	9.9	Scud. ; cirro-strati.
2	586	38.4	35.8	2.6	1.1	1.1	31	— : 1 : —	7.5	Loose cirro-strati ; cirro-strati ; woolly cirri.
3	631	38.7	36.2	2.5	1.1	1.0	31	0 : 2 : 2	6.0	Loose and cirro-stratus scud ; woolly cirri.
4	681	39.2	36.3	2.9	2.0	0.3	30	1 : — : —	9.8	Id.
5	722	39.4	36.3	3.1	1.5	1.1	31	0 : — : —	8.0	Cirro-strati and cirro-cumulo-strati.
6	770	38.3	35.5	2.8	1.5	0.6	28		1.5	Scud and cirro-strati.
7	811	35.3	34.9	0.4	0.9	0.7	30		10.0	Rain.
8	854	36.2	35.3	0.9	1.1	0.8	29		10.0	Id.
9	899	39.1	37.1	2.0	2.8	2.9	31		10.0	Dark ; drops of rain.
10	28.951	39.3	36.7	2.6	3.8	4.3	30		10.0	Id.
11	29.010	38.2	35.7	2.5	4.2	4.0	31		10.0	Id.
12	072	38.8	36.4	2.4	4.2	2.2	30		10.0	Id.
23 $\frac{1}{2}$	29.514	33.7	8.6	0.8	30	1 : — : —	3.0	Masses of send and loose cum. ; a slight sprinkling of dry, powdery snow ; Cheviot is quite white.
21 3 $\frac{1}{2}$	565	32.7	29.3	3.4		Cirro-stratus ; stars dimly visible in zenith.
13	29.439	34.0	31.8	2.2	2.3	0.4	18		10.0	Id.
14	387	34.9	32.7	2.2	0.6	0.9	19		10.0	Id. ? slight fall of snow since last hour.
15	330	34.3	33.2	1.1	1.0	1.5	19		10.0	Id. ? drops of rain.
16	253	35.1	33.8	1.3	2.2	1.1	19		10.0	Id. ? rain ^{0.2}
17	147	35.5	34.3	1.2	2.3	2.8	20		10.0	Scud ; cirro-stratus ? rain ^{0.2}
18	29.028	36.5	35.0	1.5	4.8	3.8	20		10.0	Id. ; id. ; id.
19	28.936	37.5	36.0	1.5	5.2	3.3	18		10.0	Id.
20	898	38.3	37.1	1.2	3.8	1.7	19		10.0	Id.
21	832	39.2	38.1	1.1	2.4	0.6	21	25 : — : —	10.0	Id.
22	793	44.2	41.3	2.9	1.5	1.2	22	25 : — : —	9.5	Id. ; sheets of cirro-strati.
23	771	44.7	41.3	3.4	2.5	2.6	25	26 : — : —	9.5	Id. ; id. ; mass of cirro-stratus.
22 0	713	43.3	39.7	3.6	4.5	7.8	26	— : — : 28	3.0	Woolly cirri ; cirro-strati.
1	718	42.5	39.4	3.1	3.9	1.7	27		1.5	Cumulo-strati and cirro-strati round horizon.
2	719	42.7	39.2	3.5	2.8	2.7	25		1.5	Id.
3	685	41.8	38.2	3.6	2.6	2.3	23	25 : 28 : —	3.0	Scud moving rapidly ; loose cirro-strati.
4	668	40.7	37.4	3.3	2.3	0.6	26	— : 28 : —	6.5	Cirro-stratus scud.
5	655	38.5	35.6	2.9	2.8	1.3	23		1.0	Scud and cirro-strati on horizon.
6	637	38.3	35.2	3.1	1.8	1.5	24		0.8	Cirro-strati on horizon.
7	617	38.9	35.5	3.4	2.7	1.8	23		5.0	Thin cirro-stratus ; stars seen dimly through most of it.
8	610	37.1	34.3	2.8	2.0	0.9	24		0.0	Clear.
9	590	36.8	34.2	2.6	1.0	0.8	25		0.0	Id.
10	568	37.2	34.1	3.1	2.4	1.9	25		0.0	Id.
11	564	37.3	34.4	2.9	3.2	2.1	26		0.5	Scud on E. horizon.
12	570	37.2	34.3	2.9	3.1	1.6	26		0.3	Id.
13	28.601	37.3	34.1	3.2	2.8	2.9	27		2.0	Scud.
14	639	35.2	34.1	1.1	4.1	1.0	28		3.0	Thin scud ; slight showers lately.
15	661	35.8	34.4	1.4	1.8	1.1	27		10.0	Rain ^{0.5}
16	689	37.8	35.7	2.1	2.7	2.5	28		10.0	Scud.
17	754	39.3	36.3	3.0	4.1	2.6	28		9.9	Thick scud.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	pt.	pt.	pt.	
d. h. 22 18	in. 28.819	36.7	35.7	1.0	3.8	2.0	29	pt.	0—10. 10.0	Shower ^{1—2} of rain and hail.
19	885	38.0	35.4	2.6	4.3	2.1	29	pt.	0.5	Scud on horizon.)
20	28.971	38.3	35.5	2.8	3.3	2.4	29	pt.	1.5	Id.)
21	29.040	39.7	36.5	3.2	3.0	2.6	29	31 : — : —	5.0	Id.; cirro-strati.)
22	111	40.5	37.6	2.9	4.0	3.5	29	0 : — : —	6.0	Id.; id.)
23	172	41.6	38.2	3.4	4.2	2.7	29	— : 0 : —	7.0	Loose cirro-strati; loose scud and cirro-strati.)
0	239	42.7	39.2	3.5	3.0	2.0	31	0 : — : —	8.5	Scud and cirro-strati; cumulo-strati.)
1	292	42.7	39.6	3.1	2.8	2.5	31	0 : — : —	9.5	Id.
2	351	42.4	39.2	3.2	2.6	2.0	0	0 : — : —	9.5	Id.; passing showers.)
3	408	42.5	39.0	3.5	2.7	1.3	31	0 : — : —	9.8	Id.
4	457	41.0	38.3	2.7	2.0	0.6	29	31 : — : —	9.0	Id.
5	509	40.8	37.3	3.5	1.2	1.0	30	31 : — : —	9.0	Scud; cirro-stratus.
6	552	41.5	37.6	3.9	1.6	1.3	29	pt.	9.7	Id.; id.
7	596	40.7	37.2	3.5	1.6	0.6	29	pt.	9.0	Id.
8	630	39.6	36.5	3.1	0.6	0.4	30	pt.	4.0	Id.
9	663	40.0	36.5	3.5	1.6	0.5	31	pt.	5.0	Id.
10	698	38.9	35.7	3.2	0.9	0.3	29	pt.	3.0	Id.
11	725	37.6	34.8	2.8	0.5	0.4	29	pt.	1.5	Id. on horizon.
12	748	36.9	34.3	2.6	0.7	0.5	28	pt.	1.5	Id.
13	29.769	36.1	33.8	2.3	0.8	0.4	29	pt.	2.0	Scud.
14	792	35.8	33.5	2.3	0.8	0.3	28	pt.	1.5	Id.
15	827	35.3	34.0	1.3	0.8	0.2	28	pt.	1.5	Id.
16	862	34.0	32.0	2.0	0.3	0.2	22	pt.	0.5	Clouds on E. horizon.)
17	863	32.8	31.0	1.8	0.1	0.1	22	pt.	0.5	Id.)
18	867	30.5	29.4	1.1	0.0	0.0	20	pt.	0.0	Clear.)
19	883	28.3	27.4	0.9	0.0	0.0	pt.	pt.	0.0	Id.)
20	889	29.2	28.2	1.0	0.1	0.0	18	pt.	0.5	Thin cirri and cirrus haze; lunar corona.)
21	913	28.6	27.5	1.1	0.1	0.0	18	— : — : 2	3.0	Orange-coloured woolly and linear cir. radiating from NNE. and SSW.
22	914	31.0	29.4	1.6	0.0	0.0	22	— : — : 1	9.0	Woolly cir. and cir. haze radiating from N by E. and
23	920	32.7	30.9	1.8	0.2	0.0	20	— : — : 0	9.5	As before. Θ [S by W.
0	913	34.6	32.1	2.5	0.1	0.0	20	pt.	9.5	Cirro-strati and cirrus haze; traces of a solar halo. Θ
1	896	36.9	33.9	3.0	0.2	0.3	20	pt.	8.0	Id.; id. Θ
2	875	37.0	34.1	2.9	0.5	0.3	20	pt.	9.5	As before, clouds becoming thicker.
3	857	37.7	35.1	2.6	0.8	0.2	20	— : 30 : —	10.0	Cirro-strati; cirro-cumulo-strati and cirrus haze.
4	840	38.0	35.7	2.3	1.6	0.4	19	— : 27 : —	9.7	As before.
5	815	39.3	37.3	2.0	0.6	0.9	19	20 : 28 : —	10.0	Patches of scud to S.; cir.-str. in dense irregular masses.
6	819	40.8	38.8	2.0	2.0	0.6	19	pt.	9.8	Scud.
7	865	40.2	38.6	1.6	1.6	0.6	19	pt.	9.8	Id.; stars dim.
8	756	41.5	40.0	1.5	2.9	2.5	19	pt.	10.0	Id.; drops of rain.
9	740	42.6	41.2	1.4	2.1	1.6	19	pt.	10.0	Id.; very dark.
10	740	42.6	41.3	1.3	1.9	1.9	20	pt.	10.0	Very dark.
11	722	43.6	42.2	1.4	1.9	1.8	20	pt.	10.0	Id.
12	699	44.3	42.9	1.4	1.8	1.4	20	pt.	10.0	Id.
13	29.697	44.9	43.7	1.2	2.1	1.3	20	pt.	10.0	Very dark.
14	683	45.6	44.3	1.3	1.3	0.8	20	pt.	10.0	Id.
15	677	46.3	44.7	1.6	1.6	1.0	20	pt.	10.0	Id. rain ^{0.8}
16	678	46.2	44.8	1.4	1.5	1.1	20	pt.	10.0	Stars faintly visible here and there; rain ^{0.8}
17	680	46.2	45.1	1.1	1.0	0.5	19	pt.	10.0	Dark; rain ^{0.2}
18	691	45.6	45.2	0.4	0.4	0.4	18	pt.	10.0	Id.; drops of fine rain.
19	727	46.8	45.7	1.1	0.6	0.3	21	pt.	9.8	Scud; clouds broken; rain ^{0.2}
20	774	45.7	43.3	2.4	0.4	0.1	19	pt.	9.8	Cirro-stratous scud; cirro-strati; cirrus haze.)
21	801	42.5	40.0	2.5	0.2	0.1	20	— : 24 : —	9.5	Cir.-cum. radiating from WSW.; woolly and linear cirri from SW.;
22	826	42.2	39.6	2.6	0.3	0.1	20	— : — : 24	9.0	Various cirri; cirro-strati. ○ [scud on horizon.
23	882	43.0	40.5	2.5	0.4	0.3	20	pt.	8.5	Id.; id. ○
0	891	43.8	40.4	3.4	0.5	0.2	20	— : — : 24	8.0	Id.; id. ○
1	903	45.0	41.2	3.8	0.4	0.2	21	— : — : 24	8.0	Id.; cirrus haze. ○

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.
Dec. 23^d 21^h. Sky of a beautifully-green colour to SE.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
25 2	29.913	44.7	41.0	3.7	0.3	0.2	20	24 : — : —	3.0	Masses of loose cumuli ; thin cirri. ☰
3	918	44.3	40.6	3.7	0.4	0.4	20	25 : — : —	2.0	Id. ; id.
4	934	42.9	39.6	3.3	0.4	0.3	21	25 : — : 25	6.0	Patches of scud ; mottled cirri and small cirro-cumuli.
5	950	39.1	37.2	1.9	0.2	0.0	20	25 : — : 26	7.5	Id. ; beautifully-mottled and lin. cir., lying
6	974	41.4	38.6	2.8	0.2	0.2	21		3.0	Scud. [N. and S. ; cir-str.
7	973	37.9	36.4	1.5	0.2	0.1	20		1.5	Id. ; cirro-strati.
8	973	37.4	36.4	1.0	0.2	0.0	20		1.5	Thin cirrous clouds and cirro-strati.
9	969	36.8	36.0	0.8	0.2	0.1	25		5.0	Cirro-stratus and cirrous haze.
10	948	38.0	37.1	0.9	0.2	0.1	20		7.0	Id. ; sky very hazy.
11	926	38.5	37.5	1.0	0.3	0.0	19		5.0	Id.
12	895	37.0	36.3	0.7	0.1	0.0	19		8.0	Id.
13	29.860	38.0	37.3	0.7	0.1	0.0	16		10.0	Thick cirro-stratus.
14	812	40.0	39.0	1.0	0.2	0.1	16		10.0	Id.
15	766	40.5	38.8	1.7	0.9	1.0	17		9.0	Id.
16	718	40.1	38.4	1.7	2.4	0.8	18		4.0	Cirro-strati.
17	662	40.3	38.4	1.9	1.3	0.1	17		10.0	Dark.
18	601	41.7	39.5	2.2	2.0	1.3	18		10.0	Id. ; drops of rain.
19	561	40.5	39.7	0.8	0.5	0.0	18		10.0	Id. ; rain ^{0.2}
20	492	43.3	42.4	0.9	0.1	0.1	20	20 : — : —	10.0	Scud.
21	433	46.9	45.2	1.7	2.1	1.8	20	21 : — : —	10.0	Id.
22	407	46.3	44.7	1.6	3.7	1.9	18	21 : — : —	10.0	Id.
23	371	46.7	45.0	1.7	1.3	0.9	18	21 : — : —	10.0	Id.
26 0	317	46.8	45.4	1.4	4.8	1.7	18	21 : — : —	10.0	Id.
1	251	47.4	45.9	1.5	3.8	2.2	19	21 : — : —	10.0	Id. ; drifting rain ¹
2	200	47.6	46.0	1.6	4.2	2.2	20	20 : — : —	10.0	Id. ; id.
3	162	47.3	46.3	1.0	3.6	2.1	17	20 : 22 : —	9.9	Id. ; mass of cirro-stratus ; rain ^{0.2}
4	145	48.0	46.7	1.3	1.9	0.6	20	22 : — : —	10.0	Id. ; cirro-cumulo-strati ; cirro-strati.
5	168	45.7	41.8	3.9	3.7	1.2	20	24 : 21 : —	7.0	Id. ; id. ; rain ^{0.2}
6	162	44.5	41.0	3.5	2.3	2.8	21		1.0	Loose smoky scud ; cirro-strati ; sky looking wild.
7	170	41.6	38.0	3.6	3.8	2.2	20		4.0	Scud on horizon.
8	162	40.9	36.8	4.1	4.5	1.8	19		1.0	Id.
9	165	40.0	36.6	3.4	3.7	3.9	20		0.4	Id.
10	165	36.5	35.6	0.9	6.6	2.9	20		10.0	[off soon ; a flash of lightning to W.
11	172	36.2	35.0	1.2	4.3	2.0	21		2.0	Very dark ; shower lately, with heavy gusts of wind ; clouds cleared
12	212	36.8	34.8	2.0	2.6	1.6	20		3.0	Scud and cirro-strati.
13	29.228	37.6	35.3	2.3	1.1	0.2	22		7.5	Scud and cirro-strati.
14	262	38.2	35.3	2.9	1.3	0.8	21		3.0	Id.
15	294	36.8	35.0	1.8	3.0	0.2	24		7.5	Id.
16	324	36.0	34.8	1.2	2.7	0.5	22		2.5	Id. ; drops of rain.
17	348	37.0	35.2	1.8	1.3	1.5	22		3.0	Id. ; rain ^{0.2}
18	389	36.0	34.4	1.6	2.4	1.6	24		10.0	Scud ; rain ¹
19	434	33.6	33.2	0.4	2.3	2.3	22		10.0	Snow ¹
20	445	33.9	33.3	0.6	2.4	0.4	24		9.5	Scud and cirro-strati.
21	478	36.0	33.9	2.1	1.3	1.7	22		9.8	Id. ; snow ¹
22	512	36.0	33.8	2.2	2.2	1.3	23	25 : — : —	9.8	Loose scud ; cirro-strati ; snow ^{0.5}
23	515	35.2	34.0	1.2	0.8	0.4	24	26 : — : —	5.0	Loose nimbi and scud ; cir.-str. ; cirri ; passing showers
27 0	524	36.8	34.8	2.0	2.1	0.3	20		7.0	Thin cirro-strati and cirrous haze. ☰ [of snow.
1	516	38.6	36.0	2.6	0.6	0.3	20	24 : — : —	10.0	Masses of scud ; cirro-stratus and cirrous haze. ☰
2	489	37.7	36.0	1.7	0.8	0.1	20	24 : — : —	10.0	Id. ; becoming thicker.
3	449	37.9	36.1	1.8	1.1	0.6	19	23 : — : —	10.0	Id. ; id.
4	405	38.4	36.7	1.7	1.8	0.3	19	22 : — : —	10.0	Id. ; id.
5	296	39.6	37.8	1.8	1.2	1.0	17	19 : — : —	10.0	Thick scud ; rain ^{0.5}
6	184	40.7	39.4	1.3	1.8	2.2	18		10.0	Id. ; rain ^{2—3}
7	29.089	40.6	39.8	0.8	5.0	4.5	18		10.0	Id. ; rain ³ ; very stormy.
8	28.964	43.0	42.0	1.0	5.1	3.9	17		10.0	Scud ; rain ^{0.2} ; id.
9	889	46.0	45.2	0.8	4.2	2.6	20		10.0	Id. ; rain ¹

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}			
d. h. 27 10	in. 28.841	48.2	47.0	1.2	4.7	4.2	20	0—10. 10.0	Scud.
11	28.828	52.1	47.8	4.3	6.9	7.6	21	6.0	Id.; cirrous scud?
12	28.865	49.6	44.6	5.0	5.7	3.3	22	4.0	Thin scud? stars very dim.
23 ¹	29.268	35.7	33.6	2.1	4.6	0.0		10.0	{Sunday—A.M. Dense cirro-stratus, breaking up about 0 ^{h.} P.M. Sheets of woolly cirri.
28 13	29.577	30.8	29.6	1.2	0.3	0.1	19	0.0	Clear.
14	577	30.3	29.2	1.1	0.2	0.1	20	0.0	Id.
15	595	29.1	28.4	0.7	0.2	0.1	20	0.0	Id.
16	593	27.6	27.6	...	0.1	0.0	30	0.5	Cirro-strati and thin haze.
17	585	29.6	29.1	0.5	0.1	0.1	17	7.0	Id.
18	575	29.9	29.5	0.4	0.0	0.0	20	6.0	Cirro-strati and cirrous haze.
19	541	33.2	31.8	1.4	0.3	0.2	20	3.0	Cirri, radiating from SE.; cir.-str. and cirrous haze.
20	535	35.2	32.7	2.5	0.7	0.3	19	9.5	Id.; id.; clouds red to SE.
21	508	35.6	33.8	1.8	0.6	0.5	20	9.5	As before; patches of scud.
22	509	37.2	35.3	1.9	1.2	0.5	18	9.8	Scud; woolly cirri and cirro-strati; cirrous haze.
23	483	38.3	36.4	1.9	1.1	0.4	18	9.8	Id.; id.; cirro-cumulo-strati; id.
29 0	445	39.6	37.0	2.6	0.7	1.1	20	9.7	Id.; cir.-str.; mass of cir.-str.; sky looking wild.
1	392	41.0	38.1	2.9	2.2	1.1	20	9.0	Id.; thick woolly cirri and cir.-str.; sheets of cir.-str. ⊙
2	346	39.4	38.3	1.1	1.3	0.7	18	10.0	Id.; mass of cirro-stratus; rain ¹
3	275	40.4	39.2	1.2	1.6	1.5	18	10.0	Id.; id.
4	190	41.3	39.8	1.5	1.8	0.9	19	10.0	Id.; id.
5	143	41.4	40.4	1.0	2.2	2.1	18	10.0	Id.; id.
6	103	45.8	44.6	1.3	1.9	2.0	18	10.0	Id.
7	071	48.2	46.7	1.5	4.8	1.7	18	10.0	Id.
8	057	49.9	48.6	1.3	3.0	2.7	19	8.0	Stars indistinctly visible.
9	054	51.1	49.4	1.7	3.1	1.6	20	9.8	Scud and cirro-stratus; drops of rain.
10	045	50.4	49.0	1.4	3.2	2.1	18	8.5	Id.; id.
11	064	51.0	49.7	1.3	2.3	1.3	18	10.0	Id.; rain ^{0.2}
12	075	52.0	50.0	2.0	1.8	1.4	20	9.9	Id.
13	29.067	51.6	49.9	1.7	1.6	2.3	20	9.8	Scud and cirro-stratus; drops of rain.
14	057	51.3	49.8	1.5	3.5	2.0	19	10.0	Id.; rain ¹
15	053	52.3	51.2	1.1	3.6	2.2	18	4.0	Id.
16	025	51.3	49.7	1.6	6.0	3.0	18	5.0	Id.; stars dim.
17	29.006	51.9	49.8	2.1	3.5	2.8	19	8.5	Id.; id.; rain ^{0.5}
18	28.998	51.7	48.5	3.2	3.1	2.0	19	9.0	Id.
19	973	49.9	48.6	1.3	3.4	2.2	20	10.0	Rain ^{0.5} ; a few stars occasionally visible.
20	956	49.4	46.3	3.1	2.8	2.5	19	3.0	Scud and cirro-strati on horizon.
21	960	49.9	47.1	2.8	4.8	3.1	20	9.0	Cirro-stratos and loose scud; cirrous haze.
22	937	49.5	45.6	3.9	4.7	2.2	20	8.0	Scud; cirro-strati; rain ^{1—2}
23	904	49.0	46.1	2.9	3.9	3.4	19	3.0	Scud and nimbi.
30 0	900	47.2	45.3	1.9	4.2	1.9	19	8.0	Scud and loose nimbi; passing showers.
1	885	47.5	46.7	0.8	3.7	4.2	19	9.8	Scud; cirro-strati and loose nimbi; rain ^{0.5}
2	886	48.3	45.7	2.6	3.7	1.9	20	9.8	Id.; drops of rain.
3	893	47.6	45.5	2.1	1.4	0.4	19	10.0	Id.; id.
4	28.945	48.0	44.8	3.2	2.0	6.5	28	10.0	Thick scud; rain ¹
5	29.166	42.2	38.9	3.3	4.8	0.8	28	7.0	Scud; cirro-strati; cirro-cumulo-strati.
6	269	42.6	39.7	2.9	1.3	2.5	28	9.9	Id.; rain ¹
7	359	38.8	34.4	4.4	2.3	1.8	26	2.5	Id.
8	455	37.7	33.2	4.5	1.8	2.0	26	2.5	Id.
9	515	36.0	32.0	4.0	1.0	0.2	25	1.0	Scud on E. horizon.
10	569	35.6	31.4	4.2	0.3	0.2		0.5	Id.
11	617	33.4	30.3	3.1	0.2	0.1	19	0.0	Hazy on horizon.
12	630	34.3	30.7	3.6	0.5	0.5	21	0.0	Id.
13	29.643	32.7	30.2	2.5	0.5	0.1	21	0.0	Hazy on horizon.
14	645	33.0	30.7	2.3	0.3	0.4	18	2.0	Cirro-strati to E. and N.
15	618	35.8	32.7	3.1	1.3	0.9	18	2.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Dec. 27^a 12^h 16^m. Barometer 28.879.

Dec. 30^d 4^h. The wind commenced to blow violently at 4^h 0^m, and changed its direction about the same time; the barometer rising rapidly.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	pt.			
d. h. 30 16	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10. 1.2	Cirro-strati to E. and N. Id.
	29.605	35.9	34.0	1.9	1.3	0.4	18		1.0	Loose cirro-strati.
	612	37.2	35.2	2.0	1.0	0.8	20		3.0	Cloud radiating from SE.
	626	37.2	35.1	2.1	1.1	0.2	20		2.0	Scud and cirro-strati; cirrous haze; clouds tinged red.
	638	36.2	34.7	1.5	0.7	0.6	18		5.0	Cirro-strati, cirro-cumulo-strati, and cirrous haze.
	636	37.4	34.0	3.4	1.3	0.8	19		8.0	Loose scud; scud; cirro-strati; mass of cirro-stratus.
	617	38.3	36.5	1.8	0.6	0.6	20	20 : 25 : —	10.0	Scud; cirro-strati; mass of cirro-stratus.
	613	38.4	36.8	1.6	0.8	0.3	20	20 : — : —	10.0	Id.; cirro-cumulo-strati; cirro-strati.
	605	39.3	37.7	1.6	0.4	0.2	19	20 : 26 : —	9.9	Id.; cirro-strati; mass of cirro-stratus.
	546	41.9	39.7	2.2	0.2	0.5	20	20 : — : —	10.0	Id.; cirro-cumulo-strati; mass of cirro-stratus.
	480	43.3	40.5	2.8	0.7	0.8	20	20 : — : —	10.0	Id.; id.; id.
31 0	420	43.2	40.4	2.8	1.6	1.8	18	19 : — : —	10.0	Id.; id.; id.
	366	42.6	40.0	2.6	1.7	0.6	19	19 : — : —	10.0	Id.; id.; id.
	290	42.3	39.6	2.7	1.4	0.8	18	19 : — : —	10.0	Id.; id.; id.; id.; rain ^{0.5}
	213	40.7	39.3	1.4	1.8	1.7	18		10.0	Id.; id.; rain ¹
	136	40.1	38.6	1.5	0.5	0.4	18		10.0	Id.; id.
	071	41.2	39.4	1.8	0.5	0.4	19		10.0	Id.; id.
	29.025	41.7	40.5	1.2	0.2	0.2	20		10.0	Id.; id.
	28.971	43.7	42.3	1.4	0.8	0.5	19		9.5	Id.; id.; drops of rain.
	970	45.0	42.3	2.7	1.1	0.2	24		10.0	Id.; id.
	980	42.2	38.8	3.4	1.5	0.3	23		2.0	Id.
	982	41.5	38.0	3.5	1.1	1.1	23		2.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

DAILY AND EXTRA
METEOROLOGICAL OBSERVATIONS.

MAKERSTOUN OBSERVATORY,

1845.

Civil Day.	TEMPERATURE.		RADIATION.		Rain in Gauge at Noon.	TEMPERATURE.		RADIATION.		Rain in Gauge at Noon.	TEMPERATURE.		RADIATION.		Rain in Gauge at Noon.
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.	
	°	°	°	°	in.	°	°	°	°	in.	°	°	°	°	in.
JULY.															
1	48.0	62.6	45.7	76.2	0.355	48.9	75.1	45.0	113.5	0.000	38.9	51.6	33.0	58.7	0.000
2	48.7	63.3	44.8	105.2	.168	51.0	59.0	71.0	.000	33.5	48.5	28.8	54.3
3	47.8	59.1	41.8	62.5	.139	35.0	62.8	32.0	103.4	.000	39.5	47.3	38.1	76.3	.000
4	50.5	62.0	46.2	89.2	.021	46.3	59.7	44.4	76.7	.000	24.7	45.4	22.0	73.2	.002
5	40.7	66.6	33.4	108.4	.000	45.0	58.1	42.5	95.5	.000	26.0	50.8	17.8	75.2	.000
6	47.9	69.1	41.6	96.5	34.8	61.3	32.8	94.6	.000	33.2	55.8	29.5	80.7	.000
7	52.7	70.1	51.8	100.5	.076	36.4	61.5	34.3	100.0	46.9	51.6	44.0	74.8	.015
8	49.8	69.7	43.2	90.5	.047	38.2	63.2	35.2	90.5	.000	46.0	54.3	42.5	55.7	.087
9	51.2	66.3	47.2000	49.8	62.8	46.6	69.5	.000	39.0	51.5	35.2	62.3
10	49.8	71.6	44.4	117.7	.015	48.8	55.9	44.8	71.5	.002	32.3	48.8	30.2	52.2	.123
11	42.9	60.5	37.8	97.5	.011	46.9	58.8	41.6	89.0	.000	35.5	47.3	31.0	73.5	.056
12	43.8	62.4	36.9	107.3	.202	47.3	64.7	46.8	105.8	.000	31.0	48.2	28.8	72.3	.003
13	39.7	62.7	35.5	69.7	40.1	61.5	39.2	68.9	30.0	45.6	27.5000
14	47.5	62.0	47.5	110.0	.115	51.2	62.3	47.8	89.8	26.8	43.3	24.0	57.7	.006
15	42.3	62.1	36.0	110.2	.038	32.0	60.6	31.0	94.4	.063	26.7	46.6	24.6	52.2	.002
16	41.7	63.0	35.5	114.0	.002	37.6	60.6	35.4	89.8	.000	41.9	50.5	40.8	49.2
17	39.7	60.2	34.2	67.3	.020	43.7	59.3	40.2	65.5	.125	40.0	46.2	37.0	51.5
18	47.8	65.8	44.7	100.2	.149	49.0	61.1	40.0	70.2	.000	32.1	49.8	28.0	46.4	.430
19	45.9	62.3	38.8	80.0	.002	45.4	56.6	44.5	96.4	.610	43.4	50.1	39.0	57.7	.266
20	48.3	54.7	46.7	66.7	31.6	58.6	27.6	83.6	.020	39.8	47.0	36.9	53.6	.270
21	50.0	55.5	50.8	61.7	.030	47.2	61.0	46.5	82.6	35.0	43.5	31.1	50.0	.057
22	47.7	54.0	48.8	60.0	.033	41.7	51.0	41.0	90.0	.733	26.9	40.6	22.4	60.0	.005
23	46.9	55.9	47.2	70.8	.009	30.3	52.0	26.4	90.7	.000	28.0	39.9	20.5	61.0
24	47.6	59.4	47.9	72.0	.032	28.1	55.9	24.8	79.2	25.3	36.0?	19.6	55.7	.000
25	51.5	67.8	51.2	95.4	.003	43.3	59.3	41.7	87.7	.000	30.8	48.0	28.8	46.5	.065
26	46.1	64.5	42.8	79.5	36.0	55.6	32.5	89.0	.010	42.9	54.6	40.2	53.6	.035
27	54.0	67.0?	51.5	94.2	39.5	61.5	37.2	76.9	.030	45.1	50.4	42.5	62.6	.034
28	39.5	62.2	33.6	97.5	.021	43.5	53.8	39.4	80.5	45.0	48.6	41.5	48.8	.026
29	35.2	63.0	32.0	112.5	.002	39.1	55.8	35.0	82.6	.047	41.6	47.6	36.4	59.2	.040
30	38.5	66.0	33.5	101.5	.000	41.0	55.1	37.8	77.0	31.0	47.8	28.0	47.3
31	42.5	64.0	39.0	89.1	.228										
AUGUST.															
1	48.8	63.0	47.9	100.7	0.097	38.5	54.3	34.7	76.2	0.198	35.0	42.3	31.8	45.0	0.177
2	46.8	69.0	45.0	91.1	.080	44.2	56.6	40.5	85.5	0.000	34.0	41.0	30.2	43.3	.228
3	47.5	63.2	44.3	89.8	41.2	48.2	42.2	53.0	1.170	30.0	37.5	25.7	46.4	.046
4	48.8	65.3	46.0	93.0	.330	43.0	47.8	40.0	57.3	0.607	26.8	41.0	21.8	50.5	.000
5	44.1	70.7	40.2	108.7	.020	30.0	50.0	25.0	88.5	.311	34.0	44.0	32.4	45.6	.077
6	44.8	68.3	41.2	113.0	.020	26.0	53.4	23.7	85.0	.000	33.9	43.7	29.0	50.4	.004
7	51.1	64.8	50.8	99.9	.047	41.9	49.2	37.5	61.1	.146	27.4	36.8	23.8	47.5
8	46.5	67.2	43.5	110.7	.000	37.0	54.9	31.8	89.5	.005	23.7	44.8	19.0	46.5	.031
9	50.0	56.3	46.0	59.8	.125	40.6	55.7	35.4	99.3	.043	38.0	43.7	32.2	47.3	.000
10	50.3	60.0	51.2	82.1	.472	35.7	51.3	32.2	87.4	.606	31.4	46.0?	25.0	48.5	.000
11	51.9	61.3	48.3	94.5	.138	38.6	54.0	32.8	72.4	.095	38.0	50.0?	29.5	52.4	.000
12	50.7	57.1	50.5	69.2	.016	36.2	54.8	32.7	89.2	35.1	39.3	30.4	41.5	.000
13	42.8	63.6	38.6	103.0	.020	39.1	56.7	36.0	57.3	.190	20.4	35.5	17.6	46.5	.000
14	46.5	61.4	41.9	76.6	.006	52.2	62.7	49.3	67.6	.013	23.2	48.3	19.9	46.5
15	44.3	57.4	39.2	102.6	.035	50.8	58.3	51.0	59.5	.017	38.8	44.0	33.8	51.0	.050
16	45.3	58.8	40.2	91.2	.003	43.9	54.6	39.5	79.5	.050	38.0	41.2	34.4	41.0	.050
17	43.6	62.0	40.5	93.0	45.5	58.0?	43.6	58.5	.070	25.7	34.8	21.5	49.3	.000
18	47.1	65.6	45.2	103.7	.370	51.7	59.3	51.8	73.3	.036	24.8	35.7	21.1	45.0	.227
19	45.2	56.1	41.0	62.0	.170	43.5	57.5	38.5	59.3	24.3	40.2	20.2	47.5	.058
20	46.7	55.1	47.5	58.2	.511	43.6	51.4	39.7	67.4	.510	31.7	38.7	27.6	46.5	.004
21	46.3	58.6	44.6	95.0	.090	38.0	50.9	33.0	55.0	.000	30.1	33.4	26.7	44.5
22	35.7	63.9	31.8	90.3	.000	42.7	53.7	37.8	75.4	.002	30.0	44.2	25.8	46.5	.081
23	52.0	63.4	51.8	86.6	.170	41.7	51.1	35.5	57.2	.000	33.1	42.4	29.4	42.0	.054
24	42.7	63.1	40.0	99.0	.280	45.2	53.1	42.2	63.4	.000	25.9	37.5	21.0	38.2
25	47.5	66.8	43.8	82.6	.155	35.9	48.1	30.0	75.8	.000	35.9	46.0	55.7	.000
26	46.4	63.1	44.0	87.2	.098	36.9	51.2	28.3	34.9	47.3	29.6	46.7	.057
27	48.7	61.7	45.8	88.7	.002	54.9	43.7	58.5	.017	32.4	52.0	30.8	41.5	.293
28	41.1	70.3	38.8	113.7	.000	56.2	60.3	.115	33.1	36.0	27.6	56.2
29	45.5	73.6	43.4	102.5	.000	49.8	53.2	47.0	53.4	.057	26.3	51.5	21.0	50.6	.103
30	44.7	73.2	42.2	101.0	.000	47.7	53.4	46.8	75.8	.187	45.1	48.0	43.1	51.2	.379
31	48.0	67.1	44.6	110.6	36.0	53.3	31.7	66.4	.000	29.9	45.0	23.8	43.8	.053

NOTES TO THE OBSERVATIONS OF THE SELF-REGISTERING THERMOMETERS.

	d. h.	
Jan.	4	23. The temperature has risen during the night, so that no minimum could be obtained ; the maximum given for Jan. 4 ^d most probably occurred this morning (Jan. 5 ^d .)
Jan.	11	The maximum temperature given occurred between 10 ^d 19 ^h and 10 ^d 22 ^h .
Jan.	22	The minimum temperature seems somewhat uncertain.
Jan.	24	The maximum temperature seems somewhat uncertain.
Jan.	31	The minimum radiation thermometer and the standard thermometer immersed in snow, at a temperature of 32° and of 20°, when the former read 0°·1 less than the latter. A new coating of lamp-black varnish put over the minimum radiation bulb, which was afterwards roughened.
Feb.	3	About 1°·5 of alcohol found detached in the minimum radiation thermometer ; the thermometer was adjusted Feb. 8 ^h 4 ^h , and the observations previously were corrected for the induced index error, which has been done in all similar cases.
Mar.	15	5. The temperature has been varying much and irregularly to-day ; the reading given is quite accurate ; the maximum, therefore, probably occurred before 1 ^h .
Mar.	21	22. There has been no minimum during the night.
Mar.	23	20. About 0°·7 of alcohol found detached in the minimum radiator ; this must have again joined the column of alcohol, as it could not be seen on the 28th.
Apr.	11	The minimum temperature from the self-registering thermometer lost ; the quantity given is estimated from the observations of the dry-bulb thermometer.
Apr.	16	The bulb of the minimum radiator was covered anew with lamp-black, the last coating having been nearly washed off by the rain. The maximum radiator was placed about 3 inches above the surface of the soil, and a shade from the wind was placed round it : it has been 15 inches above the soil since November.
Apr.	30	20. About 0°·4 of alcohol found detached in the tube of the minimum radiator ; the bleb was near the top of the tube on May 5, and on May 6 ^d 5 ^h it had disappeared.
July	18	7. 2°·6 of mercury found detached from the column in the maximum thermometer.
July	27	22. The index of the maximum thermometer out of order ; the temperature at 27 ^d 2 ^h was 66°·4 by
Aug.	6	8. The speculum of the minimum radiator was resilvered. [the dry-bulb thermometer.]
Sept.	1	The bulb of the minimum radiator was reblackened.
Oct.	30	The mercury and index of the maximum thermometer adhere.
Nov.	10 and	13 ^d . The index of the maximum thermometer has probably been adhering to the mercury.
Dec.	25	The maximum radiating thermometer raised 18 inches above the soil, in order to allow the sun to shine more perfectly upon it.
Dec.	30	1. The minimum thermometer was set at 19 ¹ ₂ ^h . The maximum is that since Dec. 29 ^d 22 ^h .

TEMPERATURE OF WATER IN PUMP WELLS.

Göttingen Mean Time of Observations.	Temperature of Water.		Göttingen Mean Time of Observations.	Temperature of Water.		Göttingen Mean Time of Observations.	Temperature of Water.			
	Pump Wells.			Pump Wells.			Pump Wells.			
	Cottage.	Garden.		Cottage.	Garden.		Cottage.	Garden.		
Jan.	d. h.	°	May	d. h.	°	Sept.	d. h.	°		
	6	44·4		12	46·8		15	49·6		
	13	44·1		20	47·2		22	49·7		
	20	43·7		26	47·4		29	49·7		
Feb.	5	43·7	June	2	47·4	Oct.	5	50·0		
	3	43·6		9	47·6		6	49·6		
	10	43·1		16	47·6		13	49·8		
	17	42·6		23	48·0		14	49·4		
Mar.	5	42·6	July	5	48·0	Nov.	5	50·2		
	10	42·3		14	48·2		17	49·1		
	17	42·3		21	48·6		21	50·2		
	24	42·3		30	48·1		27	49·0		
April	5	42·1	Aug.	7	48·3	Dec.	5	50·0		
	10	42·0		14	48·4		10	48·3		
	17	41·6		21	48·4		17	49·4		
	24	41·6		28	48·7		24	47·2		
	2	41·9		4	48·8		1	48·9		
	7	42·2		11	48·8		8	47·0		
	14	42·5		18	49·1		15	46·2		
	21	42·6		26	49·2		22	48·5		
May	5	43·1		5	49·4		31	45·5		
	5	43·7		8	49·9		5	48·1		

ACTINOMETER.

Markerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.	Markerstoun Mean Time of First Reading.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.	
		Begun.	Ended.						Se. div.	Sc. div.					
		d. h. m. s.						d. h. m. s.							
MARCH, 11, 12.															
11 23 31 0	Sun	25.4	29.0	+3.6				12 2 9 30	Sun	19.4	22.1	+2.7	3.5		
32 30	Shade	29.0	28.2	-0.8	4.4			11 0	Shade	22.0	21.1	-0.9	3.6		
33 30	Sun	28.2	31.9	+3.7	4.6			12 30	Sun	20.9	23.5	+2.6	3.5		
35 0	Shade	31.8	30.8	-1.0				14 0	Shade	23.3	22.4	-0.9	3.4	3.47	25.8
11 23 38 30	Sun	28.7	32.3	+3.6				15 0	Sun	22.4	24.8	+2.4	3.2		
40 0	Shade	32.1	31.5	-0.6	4.1			16 30	Shade	24.7	23.9	-0.8	3.4		
41 0	Sun	31.5	35.0	+3.5	4.4			17 30	Sun	23.9	26.7	+2.8	3.7		
42 30	Shade	34.7	33.5	-1.2	4.6			19 0	Shade	26.6	25.7	-0.9			
44 0	Sun	32.9	36.2	+3.3	4.5										
45 35	Shade	35.7	34.6	-1.1	4.0										
46 35	Sun	34.6	37.1	+2.5	3.6										
48 0	Shade	36.7	35.5	-1.2	4.1										
49 0	Sun	35.5	38.8	+3.3											
12 0 43 0	Sun	13.9	16.8	+2.9											
44 30	Shade	16.7	15.9	-0.8	3.7										
45 30	Sun	15.9	18.9	+3.0	3.8										
47 0	Shade	18.7	17.9	-0.8	3.7										
48 0	Sun	17.9	20.6	+2.7	3.5										
49 30	Shade	20.3	19.4	-0.9	3.6										
50 30	Sun	19.4	22.1	+2.7	3.7										
52 0	Shade	21.8	20.7	-1.1	4.0										
53 0	Sun	20.7	23.7	+3.0	4.0										
54 30	Shade	23.3	22.4	-0.9	3.8										
55 30	Sun	22.4	25.3	+2.9	3.9										
57 0	Shade	24.9	23.8	-1.1											
12 1 21 0	Sun	10.2	12.7	+2.5											
22 30	Shade	12.6	11.7	-0.9	3.4										
23 30	Sun	11.7	14.3	+2.6	3.4										
25 0	Shade	14.1	13.4	-0.7	3.4										
26 0	Sun	13.4	16.2	+2.8	3.4										
27 30	Shade	16.1	15.6	-0.5	3.3										
28 30	Sun	15.6	18.4	+2.8	3.4										
30 0	Shade	18.3	17.6	-0.7	3.4										
31 0	Sun	17.6	20.1	+2.5	3.2										
32 30	Shade	20.0	19.2	-0.8	3.5										
33 30	Sun	19.2	22.0	+2.8	3.5										
35 10	Shade	21.8	21.2	-0.6											
12 1 44 0	Sun	23.7	26.3	+2.6											
45 30	Shade	26.0	25.1	-0.9	3.5										
12 1 59 0	Sun	13.0	15.6	+2.6											
12 2 0 30	Shade	15.3	14.4	-0.9	3.5										
1 30	Sun	14.4	17.0	+2.6	3.4										
3 0	Shade	16.9	16.1	-0.8	3.5										
4 0	Sun	16.1	18.9	+2.8	3.6										
5 30	Shade	18.8	18.1	-0.7	3.4										
7 0	Sun	17.7	20.3	+2.6	3.3										
8 30	Shade	20.1	19.4	-0.7	3.3										

March 11^a 23^b 31^m. Clear near the sun; scud to E. 34^m 30^s. Scud approaching the sun. 35^m 0^s. Scud on sun. 37^m. Clouds over the sun. 38^m. Clouds off the sun. 44^m—48^m. Clouds on or near the sun.

March 12^a 0^b 43^m. No clouds within 30° of the sun. 53^m. A very thin haze passing over the sun. 58^m. Clouds coming over the sun.

March 12^a 1^b 28^m. Loose scud within 4° of the sun, and over the sun for 5°. 33^m. A small patch of vapour near the sun.

March 12^a 2^b 4^m. A cloud over the sun for 10°. 7^m. Thin cloud over the sun. 19^m. Thin cirrus cloud coming near the sun, and overspreading the whole of the sky, so as to render further observations useless; snow at 24^m.

March 12^a 21^b 23^m. A patch of cirro-stratus 20° to eastward of the sun; no haze visible. Observations made at east end of Observatory. 27^m. The patch of cirro-stratus has disappeared. 45^m. The sky has been very favourable since about 27^m.

March 12^a 22^b 9^m. Patches of cloud on horizon to south, 25° distant from the sun.

March 12^a 22^b 15^m. The instrument was exposed to the sun a few seconds too long; the observation was taken at the proper time. 22^b 50^m. Dry thermometer, 28°7, wet thermometer, 25°7.

ACTINOMETER.

Makerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.	Makerstoun Mean Time of First Reading.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.	
		Begun.	Ended.						Sc. div.	Sc. div.					
		d. h. m. s.		Sc. div.	Sc. div.	Sc. div.	Sc. div.		Sc. div.	Sc. div.					
MARCH 12, 13.															
12 23 9 17	Sun	21.4	24.1	+ 2.7				13 1 2 12	Sun	20.3	22.7	+ 2.4			
10 42	Shade	23.8	22.7	- 1.1	3.6			3 42	Shade	22.5	21.7	- 0.8	3.2		
11 42	Sun	22.7	25.1	+ 2.4	3.5			4 42	Sun	21.7	24.1	+ 2.4	3.2		
13 12	Shade	24.7	23.6	- 1.1	3.5			6 12	Shade	24.0	23.2	- 0.8	3.2		
14 12	Sun	23.6	26.0	+ 2.4	3.6			7 12	Sun	23.2	25.7	+ 2.5	3.4		
15 42	Shade	25.7	24.4	- 1.3	3.8	3.69	30.5	8 42	Shade	25.6	24.7	- 0.9	3.3		
16 42	Sun	24.4	27.0	+ 2.6	3.8			9 42	Sun	24.7	27.1	+ 2.4	3.3	3.33	30.3
18 12	Shade	26.8	25.7	- 1.1	3.7			11 12	Shade	26.8	25.9	- 0.9	3.3		
19 12	Sun	25.7	28.3	+ 2.6	3.8			12 12	Sun	25.9	28.3	+ 2.4	3.3		
20 42	Shade	27.9	26.6	- 1.3	3.9			13 42	Shade	28.1	27.2	- 0.9	3.4		
21 42	Sun	26.6	29.2	+ 2.6	3.9			14 42	Sun	27.2	29.7	+ 2.5	3.4		
23 12	Shade	28.9	27.6	- 1.3	3.9			16 12	Shade	29.4	28.4	- 1.0	3.6		
24 12	Sun	27.6	30.3	+ 2.7	4.0			17 12	Sun	28.4	31.0	+ 2.6			
25 42	Shade	29.9	28.7	- 1.2	3.8										
26 42	Sun	28.7	31.3	+ 2.6	3.9	4.04	30.9	13 1 30 42	Sun	17.6	20.2	+ 2.6			
28 12	Shade	30.9	29.5	- 1.4	4.0			32 12	Shade	19.8	18.7	- 1.1	3.8		
29 12	Sun	29.5	32.1	+ 2.6	4.1			33 12	Sun	18.7	21.5	+ 2.8	3.8		
30 42	Shade	31.6	30.0	- 1.6	4.3			34 42	Shade	21.3	20.4	- 0.9	3.7		
31 42	Sun	30.0	32.9	+ 2.9	4.5			35 42	Sun	20.4	23.3	+ 2.9	3.9		
33 12	Shade	32.3	30.8	- 1.5				37 12	Shade	23.2	22.2	- 1.0	3.9	3.78	28.8
								38 12	Sun	22.2	25.2	+ 3.0	3.9		
								39 42	Shade	25.0	24.2	- 0.8	3.7		
								40 42	Sun	24.2	27.0	+ 2.8	3.6		
								42 12	Shade	26.8	26.0	- 0.8	3.7		
12 23 44 12	Sun	20.2	22.9	+ 2.7				43 12	Sun	26.0	29.0	+ 3.0			
45 42	Shade	22.6	21.1	- 1.5	4.1										
46 42	Sun	21.1	23.7	+ 2.6	4.1			13 1 50 12	Sun	19.4	22.6	+ 3.2			
48 12	Shade	23.3	21.9	- 1.4	3.9			51 42	Shade	22.3	21.2	- 1.1	4.3		
49 12	Sun	21.9	24.3	+ 2.4	3.9			52 42	Sun	21.2	24.5	+ 3.3	4.4		
50 42	Shade	23.8	22.2	- 1.6	4.0			54 12	Shade	24.3	23.3	- 1.0	4.3		
51 42	Sun	22.2	24.6	+ 2.4	4.0	3.96	31.5	55 12	Sun	23.3	26.6	+ 3.3	4.3	4.37	27.7
53 12	Shade	24.0	22.3	- 1.7	4.1			56 42	Shade	26.3	25.3	- 1.0	4.4		
54 12	Sun	22.3	24.7	+ 2.4	4.0			57 42	Sun	25.3	28.7	+ 3.4	4.4		
55 42	Shade	24.0	22.5	- 1.5	3.9			59 12	Shade	28.3	27.2	- 1.1	4.5		
56 42	Sun	22.5	24.9	+ 2.4	3.8										
58 12	Shade	24.3	22.9	- 1.4	3.8			13 2 0 12	Sun	27.2	30.5	+ 3.3	4.5		
59 12	Sun	22.9	25.3	+ 2.4				1 42	Shade	30.2	28.9	- 1.3	4.6		
								2 42	Sun	28.9	32.2	+ 3.3	4.5	4.53	27.1
								4 12	Shade	17.4	16.3	- 1.1	4.5		
								5 12	Sun	16.3	19.8	+ 3.5	4.6		
								6 42	Shade	19.4	18.3	- 1.1	4.5		
13 0 26 12	Sun	9.1	11.3	+ 2.2				7 42	Sun	18.3	21.7	+ 3.4	4.6		
27 42	Shade	11.1	10.0	- 1.1	3.3			9 12	Shade	21.3	20.0	- 1.3	4.7		
28 42	Sun	10.0	12.3	+ 2.3	3.4			10 12	Sun	20.0	23.4	+ 3.4	4.6	4.63	26.5
30 12	Shade	12.0	10.9	- 1.1	3.4	3.42	31.4	11 42	Shade	23.0	21.8	- 1.2	4.5		
31 12	Sun	10.9	13.2	+ 2.3	3.5			12 42	Sun	21.8	25.0	+ 3.2	4.6		
32 42	Shade	12.9	11.7	- 1.2	3.5			14 12	Shade	24.6	23.0	- 1.6	4.8		
33 42	Sun	11.7	14.0	+ 2.3				15 12	Sun	23.0	26.2	+ 3.2			

March 12^d 23^h 16^m. Small patches of cloud coming near the sun. 21^m. Patches of very thin cloud coming over the sun occasionally; they seem not to affect the indications of the instrument. 33^m. Quite clear since 25^m; dry thermometer 29°.8; wet thermometer 26°.1.

March 13^d 1^h 2^m. Observations made on the south side of the Observatory; no clouds near the sun. 5^m. A patch of cloud about 10° to eastward of the sun. 6^m. A patch of cloud passed near the sun; no others passed within 15° of the sun. 18^m. Dry thermometer 33°.1; wet thermometer 27°.7.

March 13^d 1^h 30^m. Observations made within the porch of the Observatory.

March 13^d 2^h 4^m 0^s. The screw of the actinometer withdrawn a little.

March 13^d 2^h 9^m. Very thin clouds about 25° to westward of the sun; they seem to disappear when within 20° of him. 15^m. Patches of cloud coming within 10° of the sun.

ACTINOMETER.

Makertown Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.	Makertown Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.		
		Begun.	Ended.							Sc. div.	Sc. div.						
		d. h. m. s.						d. h. m. s.									
MARCH 28.																	
28 18 27 30	Sun	17.0	17.9	+0.9				21 19 35 30	Sun	31.6	35.1	+3.5	3.8				
29 0	Shade	17.8	17.3	-0.5	1.3			37 0	Shade	16.7	16.4	-0.3	3.9				
30 0	Sun	17.3	18.1	+0.8	1.3			38 0	Sun	16.4	20.1	+3.7	4.1				
31 30	Shade	18.0	17.6	-0.4	1.2			39 30	Shade	20.1	19.7	-0.4	4.0				
32 30	Sun	17.6	18.4	+0.8	1.2	1.24	6.5	40 30	Sun	19.7	23.2	+3.5	3.9	3.92	24.3		
34 0	Shade	18.3	17.9	-0.4	1.2			42 0	Shade	23.1	22.7	-0.4	3.9				
35 0	Sun	17.9	18.7	+0.8	1.2			43 0	Sun	22.7	26.2	+3.5	3.9				
36 30	Shade	18.5	18.0	-0.5	1.3			44 30	Shade	26.1	25.7	-0.4	3.9				
37 30	Sun	18.0	18.8	+0.8	1.4			45 30	Sun	25.7	29.3	+3.6					
39 0	Shade	18.7	18.0	-0.7	1.7												
40 0	Sun	18.0	19.1	+1.1	1.7												
41 30	Shade	19.0	18.4	-0.6	1.7	1.57	7.6										
42 30	Sun	18.4	19.4	+1.0	1.5												
44 0	Shade	19.3	18.9	-0.4	1.4												
45 0	Sun	18.9	19.9	+1.0													
28 19 54 30	Sun	17.9	20.4	+2.5				29 30	Shade	22.4	22.5	+0.1	3.9	3.84	30.9		
56 0	Shade	20.5	20.5	0.0	2.5			30 30	Sun	22.5	26.7	+4.2	4.1				
57 0	Sun	20.5	23.1	+2.6	2.7			32 0	Shade	26.5	26.7	+0.2	4.0				
58 30	Shade	23.2	23.1	-0.1	2.7			33 0	Sun	26.7	30.9	+4.2	4.1				
59 30	Sun	23.1	25.8	+2.7	2.8			34 30	Shade	31.1	31.1	0.0	4.2				
28 20 1 0	Shade	26.0	25.9	-0.1	2.8	2.79	18.5			35 30	Sun	31.1	35.4	+4.3	4.3		
2 0	Sun	25.9	28.5	+2.6	2.7			37 0	Shade	35.7	35.7	0.0	4.3				
3 30	Shade	28.6	28.4	-0.2	2.9			38 0	Sun	35.7	40.1	+4.4	4.4				
4 30	Sun	28.4	31.2	+2.8	3.0			39 30	Shade	40.2	40.1	-0.1	4.6	4.65	32.2		
6 0	Shade	31.2	31.0	-0.2	3.0			40 30	Sun	40.1	44.7	+4.6	4.7				
7 0	Sun	31.0	33.8	+2.8				42 0	Shade	44.9	44.8	-0.1	4.8				
								43 0	Sun	44.8	49.5	+4.7	5.0				
APRIL 21, 22.																	
21 18 23 0	Sun	20.6	22.7	+2.1				44 30	Shade	49.7	49.2	-0.5	5.1				
24 30	Shade	22.5	22.0	-0.5	2.6			45 30	Sun	49.2	53.8	+4.6					
25 30	Sun	22.0	24.1	+2.1	2.6												
27 0	Shade	24.0	23.4	-0.6	2.8												
28 0	Sun	23.4	25.7	+2.3	2.9												
29 30	Shade	25.5	24.9	-0.6	2.8	2.78	14.5										
30 30	Sun	24.9	27.0	+2.1	2.7												
32 0	Shade	26.9	26.3	-0.6	2.8												
33 0	Sun	26.3	28.6	+2.3	2.9												
34 30	Shade	28.4	27.8	-0.6	2.9												
35 30	Sun	27.8	30.1	+2.3													
21 19 23 0	Sun	16.4	19.7	+3.3													
24 30	Shade	20.3	20.1	-0.2	3.4												
25 30	Sun	20.1	23.2	+3.1	3.3												
27 0	Shade	23.3	23.0	-0.3	3.5												
28 0	Sun	23.0	26.2	+3.2	3.5												
29 30	Shade	26.2	25.9	-0.3	3.4	3.52	22.9										
30 30	Sun	25.9	29.0	+3.1	3.4												
32 0	Shade	29.0	28.7	-0.3	3.6												
33 0	Sun	28.7	32.1	+3.4	3.7												
34 30	Shade	32.0	31.6	-0.4	3.9												

March 28^a 18^b 30^m. A few thin sheets of cirrus to east, about 10° above the sun.

April 21^d 18^b 25^m. A slight haze to East, like the remains of a fog; a very slight fog in the valleys.

April 21^d 19^b 23^m. Thin haze round the horizon. 19^b 24^m. The instrument was exposed to the sun's rays a few seconds too long; the reading was taken at the proper time. 36^m 40^s. The screw withdrawn.

April 21^d 20^b 38^m—46^m. A slight breeze.

April 21^d 21^b 23^m. Actinometer removed to west end of Observatory: puffs of wind.

EXTRA METEOROLOGICAL OBSERVATIONS, 1845.

ACTINOMETER.

Makerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.	Makerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.	
		Begin.	Ended.							Sc. div.	Sc. div.	Sc. div.				
		d.	h.	m.	s.			d.	h.	m.	s.					
APRIL 21, 22.																
21 22 21 0	Sun	16.3	21.9	+5.6				22	0	57	0	Sun	7.3	12.8	+5.5	
22 30	Shade	21.7	20.9	-0.8	6.5				58	30		Shade	11.7	9.3	-2.4	7.8
23 30	Sun	20.9	26.7	+5.8	6.5			22	1	0	0	Sun	11.8	17.2	+5.4	8.0
25 0	Shade	26.5	25.8	-0.7	6.5				1	30		Shade	16.0	13.2	-2.8	8.3
26 0	Sun	25.8	31.6	+5.8	6.5	6.49	43.0		3	0		Sun	15.7	21.2	+5.5	8.2
27 30	Shade	31.3	30.7	-0.6	6.4				4	30		Shade	20.1	17.5	-2.6	8.2
28 30	Sun	30.7	36.5	+5.8	6.5				6	10		Sun	20.8	26.5	+5.7	8.4
30 0	Shade	37.1	36.3	-0.8					7	30		Shade	25.8	23.0	-2.8	8.4
									9	0		Sun	25.5	31.0	+5.5	
APRIL 22.																
21 23 26 0	Sun	6.2	11.9	+5.7				22	1	25	0	Sun	13.7	19.5	+5.8	
27 30	Shade	11.6	10.3	-1.3	6.9				26	30		Shade	18.8	16.7	-2.1	8.0
28 30	Sun	10.3	15.9	+5.6	6.9				28	0		Sun	19.3	25.4	+6.1	8.2
30 0	Shade	15.4	14.1	-1.3	6.9				29	30		Shade	24.7	22.7	-2.0	8.1
31 0	Sun	14.1	19.7	+5.6	6.9				31	0		Sun	25.3	31.5	+6.2	8.21
32 30	Shade	19.1	17.8	-1.3	6.8	6.96	46.4		32	30		Shade	30.8	28.8	-2.0	8.4
33 30	Sun	17.8	23.2	+5.4	6.9				34	0		Sun	31.3	37.8	+6.5	
35 0	Shade	22.8	21.2	-1.6	7.0				35	30		Shade	18.7	16.9	-1.8	8.2
36 0	Sun	21.2	26.7	+5.5	7.2				37	0		Sun	19.7	26.1	+6.4	
37 30	Shade	26.1	24.4	-1.7	7.1				38	30		Shade	25.4	23.3	-2.1	8.2
38 30	Sun	24.4	29.8	+5.4	7.2				40	0		Sun	26.0	31.8	+5.8	8.2
40 0	Shade	29.1	27.3	-1.8	7.2				41	30		Shade	30.7	28.0	-2.7	8.4
41 0	Sun	27.3	32.7	+5.4	7.3				43	0		Sun	30.3	35.8	+5.5	8.1
42 30	Shade	31.9	30.0	-1.9	7.2				44	30		Shade	34.7	32.1	-2.6	8.3
43 30	Sun	30.0	35.2	+5.2	7.1	7.16	46.6		46	0		Sun	34.7	40.6	+5.9	
45 0	Shade	34.3	32.4	-1.9	7.1											
46 0	Sun	32.4	37.6	+5.2	7.1											
47 30	Shade	22.0	20.1	-1.9	7.1											
48 30	Sun	20.1	25.4	+5.3												
21 23 58 0	Sun	16.7	21.5	+4.8				22	1	55	0	Sun	18.3	23.6	+5.3	
59 30	Shade	20.7	18.5	-2.2	7.1				56	30		Shade	22.3	19.4	-2.9	8.2
22 0 0 30	Sun	18.5	23.5	+5.0	7.2				58	0		Sun	22.0	27.3	+5.3	8.1
2 0	Shade	22.6	20.3	-2.3	7.4				59	30		Shade	26.2	23.4	-2.8	8.2
3 0	Sun	20.3	25.5	+5.2	7.3	7.20	46.7		22	2	1	Sun	25.8	31.2	+5.4	8.4
4 30	Shade	24.8	22.9	-1.9	7.1				2	30		Shade	29.9	26.7	-3.2	8.4
5 30	Sun	22.9	28.1	+5.2	7.1				4	0		Sun	28.8	33.9	+5.1	8.3
7 0	Shade	27.4	25.5	-1.9	7.2				5	30		Shade	32.3	29.1	-3.2	8.6
8 0	Sun	25.5	30.8	+5.3					7	0		Sun	31.3	36.9	+5.6	8.46
22 0 37 0	Sun	9.6	15.1	+5.5					8	30		Shade	35.7	33.0	-2.7	8.4
38 30	Shade	14.2	12.0	-2.2	7.7				10	0		Sun	35.6	41.3	+5.7	
40 0	Sun	14.8	20.3	+5.5	7.6				11	30		Shade	40.3	37.4	-2.9	8.5
41 30	Shade	19.7	17.7	-2.0	7.7				13	0		Sun	40.1	45.7	+5.6	8.7
43 0	Sun	20.1	26.1	+6.0	8.1				14	30		Shade	44.3	41.1	-3.2	8.7
44 30	Shade	25.3	23.1	-2.2	8.0	7.86	45.7		16	0		Sun	22.1	27.6	+5.5	8.7
46 0	Sun	25.8	31.4	+5.6	7.9				17	30		Shade	26.3	23.1	-3.2	8.6
47 30	Shade	30.4	28.0	-2.4	7.8				19	0		Sun	25.3	30.6	+5.3	
49 0	Sun	30.6	35.8	+5.2	7.8				20	30		Shade	29.2	25.9	-3.3	8.9
50 30	Shade	34.7	31.9	-2.8	8.1				22	0		Sun	28.2	34.0	+5.8	8.8
52 0	Sun	34.1	39.5	+5.4					23	30		Shade	32.8	29.8	-3.0	8.8
									25	0		Sun	32.1	37.8	+5.7	8.8

April 21^d 22^h 21^m. Observations made in front of the Observatory. 29^m 30^s. The instrument was exposed 5^s too long; the reading has been corrected proportionally.

April 21^d 23^h 26^m. Observations made at west end of Observatory. 47^m 15^s. The screw withdrawn.

April 22^d 2^h 15^m 45^s. The screw withdrawn. 2^h 30^m. There has been a slight condensation of vapour inside the plate-glass cover for some time, probably caused by the currents of air sweeping over the instrument. 38^m 15^s. The screw withdrawn.

ACTINOMETER.

Markerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.	Markerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.		
		Begun.	Ended.							Sc. div.	Sc. div.						
		d. h. m. s.					°	d. h. m. s.						Sc. div.	Sc. div.	Sc. div.	
APRIL 22.																	
22 2 26 30	Shade	36.3	33.0	-3.3	8.9			22 4 21 0	Sun	21.3	24.7	+3.4					
28 0	Sun	35.3	40.8	+5.5	8.8			22 30	Shade	23.3	19.9	-3.4	6.7				
29 30	Shade	39.7	36.4	-3.3	8.7	8.80	37.6	24 0	Sun	21.3	24.6	+3.3	6.8				
31 0	Sun	38.8	44.0	+5.2	8.7			25 30	Shade	23.1	19.6	-3.5	6.7				
32 30	Shade	42.5	38.8	-3.7	8.9			27 0	Sun	20.8	24.0	+3.2	6.7	6.66	22.9		
34 0	Sun	40.9	46.1	+5.2	8.8			28 30	Shade	22.7	19.3	-3.4	6.6				
35 30	Shade	44.5	40.9	-3.6	8.8			30 0	Sun	20.6	23.8	+3.2	6.6				
37 0	Sun	22.8	28.0	+5.2	8.7	8.58	36.8	31 30	Shade	22.4	19.0	-3.4	6.5				
38 30	Shade	26.8	23.4	-3.4	8.4			33 0	Sun	20.0	23.1	+3.1					
40 0	Sun	25.6	30.4	+4.8	8.2												
41 30	Shade	29.1	25.7	-3.4	8.3												
43 0	Sun	27.8	32.9	+5.1	8.7												
44 30	Shade	31.4	27.7	-3.7	8.5	8.62	36.0										
46 0	Sun	29.7	34.3	+4.6	8.7												
47 30	Shade	32.3	27.8	-4.5	8.9												
49 0	Sun	29.7	33.9	+4.2	8.6												
50 30	Shade	32.0	27.7	-4.3	8.7												
52 0	Sun	29.4	33.9	+4.5	8.9	8.76	35.1										
53 30	Shade	31.9	27.4	-4.5	8.9												
55 0	Sun	29.2	33.6	+4.4	8.7												
56 30	Shade	31.9	27.9	-4.0	8.4												
58 0	Sun	29.8	34.3	+4.5	8.6												
59 30	Shade	32.6	28.4	-4.2	8.8	8.58	34.2	22 5 59 0	Sun	19.6	21.1	+1.5					
22 3 1 0	Sun	30.2	34.8	+4.6	8.6			22 6 0 30	Shade	20.2	18.1	-2.1	3.5				
2 30	Shade	33.1	29.2	-3.9	8.5			2 0	Sun	18.6	19.9	+1.3	3.4				
4 0	Sun	31.1	35.6	+4.5	8.6			3 30	Shade	19.0	16.9	-2.1	3.5				
5 30	Shade	33.7	29.3	-4.4	8.8			5 0	Sun	17.3	18.9	+1.6	3.8				
7 0	Sun	31.0	35.3	+4.3	8.6	8.74	33.3	6 30	Shade	18.2	16.0	-2.2	4.1	3.48	9.0		
8 30	Shade	33.5	29.3	-4.2	8.7			8 0	Sun	16.6	18.8	+2.2	4.0				
10 0	Sun	31.2	35.9	+4.7	9.0			9 30	Shade	18.4	17.0	-1.4	3.2				
11 30	Shade	34.0	29.7	-4.3	8.9			11 0	Sun	17.8	19.3	+1.5	2.9				
13 0	Sun	31.5	36.0	+4.5	8.7			12 30	Shade	19.1	17.7	-1.4	2.9				
14 30	Shade	34.2	30.0	-4.2	8.8	8.74	32.4	14 0	Sun	18.4	20.0	+1.6	3.0				
16 0	Sun	31.9	36.6	+4.7	8.8			15 30	Shade	19.4	18.0	-1.4	3.0				
17 30	Shade	34.8	30.9	-3.9	8.5			17 0	Sun	19.0	20.6	+1.6	3.3				
19 0	Sun	32.8	37.4	+4.6	8.7			18 30	Shade	20.1	18.2	-1.9	3.3				
20 30	Shade	35.7	31.5	-4.2	8.8			20 0	Sun	18.6	19.8	+1.2	2.9	3.10	7.2		
22 0	Sun	33.3	38.0	+4.7	8.7	8.56	31.5	21 30	Shade	19.3	17.7	-1.6	3.0				
23 30	Shade	36.3	32.6	-3.7	8.3			23 0	Sun	17.9	19.4	+1.5	3.2				
25 0	Sun	34.6	39.1	+4.5	8.3			24 30	Shade	19.0	17.1	-1.9	3.2				
26 30	Shade	37.6	33.7	-3.9	8.3			26 0	Sun	17.3	18.3	+1.0	3.0				
28 0	Sun	35.4	39.8	+4.4	8.4			27 30	Shade	17.4	15.2	-2.2	2.8				
29 30	Shade	38.1	34.0	-4.1	8.4	8.36	30.6	29 0	Sun	15.1	15.3	+0.2	2.5				
31 0	Sun	35.7	39.9	+4.2	8.3			30 30	Shade	14.3	11.9	-2.4	2.5				
32 30	Shade	38.3	34.2	-4.1	8.4			32 0	Sun	11.9	11.9	0.0	1.7				
34 0	Sun	35.9	40.3	+4.4				33 30	Shade	22.7	21.7	-1.0	0.5	1.77	5.4		
								35 0	Sun	21.4	20.4	-1.0	0.6				
								36 30	Shade	19.5	17.3	-2.2	1.7				
								38 0	Sun	17.0	16.9	-0.1	1.9				
								39 30	Shade	15.9	14.0	-1.9	1.7				
								41 0	Sun	13.8	13.5	-0.3					

April 22^d 3^h 20^m. The spot of moisture, which has been inside the plate-glass cover since about the commencement of this series (1^h 55^m), is in the middle of the plate of glass, oval shaped, about 1½ inch long and ¾ inch broad.

April 22^d 3^h 35^m. At the end of this series of observations it was found that there was a small globule of air in the bulb of the actinometer about one-tenth of an inch in diameter.

April 22^d 5^h 36^m. A slight milkiness in the sky to westward; the sun tolerably favourable.

April 22^d 5^h 59^m. The observations after this time were made on the roof of the Observatory, the actinometer being put into the shade by lowering it below the parapet wall.

April 22^d 6^h 33^m 15^s. The screw turned in a little. Trees intervened after 6^h 42^m, preventing further observations.

ADDITIONAL METEOROLOGICAL NOTES.

1845.

- | | d. | h. | m. |
|----------------|----|----|----|
| Jan. 19 19 19. | | | |
| Jan. 19 22 10. | | | |
| Jan. 20 11 10. | | | |
| Jan. 20 13 10. | | | |
| Jan. 20 14 5. | | | |
| Feb. 5 17 40. | | | |
| Feb. 5 20 5. | | | |
| Feb. 8 7 | | | |
| Feb. 14 7 | | | |
| Feb. 21 12 0. | | | |
| Feb. 27 3 | | | |
| Feb. 28 11 | | | |
| Mar. 10 7 | | | |
| Mar. 14 8 58. | | | |
| Mar. 20 11 3. | | | |
- A meteor considerably brighter than Venus burst at azimuth, N. 38° W., altitude 10° ; its course was towards SW., being inclined to the horizon at an angle of about 45° ; only a few degrees of its course were seen.
- Cirri rising in tufts from NNW. and radiating from that point, with the curls of the tufts, on all sides, turned towards the magnetic meridian; very dense on the horizon, like a mass of auroral light, and in single tufts higher.
- Large corona when the moon is covered by thin, watery cloud, and small bluish corona on the apparently pure sky. Auroral light to N.?
- When the watery cirro-cumulo-stratus is over the moon it produces a beautiful corona of a very fine light-green colour.
- Faint lunar corona. The sky seems very clear around the moon, yet the very faint light-green can be detected to a radius of about 4° ; inner circle of brownish light, about $10'$ broad. $14^{\text{h}} 10^{\text{m}}$. The cirro-cumulo-stratus exhibited the phenomenon previously described (see volume for 1844, p. 324, Sept. 26^d.) It moves rapidly, and seems always about to leave the moon, but does not; in fact, the cloud seems to grow at the prime vertical; all to the north of it is sky, and all to the south is cloud. $15^{\text{h}} 5^{\text{m}}$. Faint corona as before. Cirro-cumulo-stratus now on the east and west horizon.
- Shooting-star to WNW., altitude 40° , moving very rapidly towards NNW.
- Sky coloured on S. to E. horizon. A beam of reddish light 4° or 5° broad, extends from ESE. to an altitude of about 45° , inclined to E. horizon at an angle of nearly 75° : another, but narrower beam, having the same origin, is inclined 20° to the E. horizon. $20^{\text{h}} 12^{\text{m}}$. A bright beam, about the same dimensions as the first noted above, in fact like its opposite extremity, springs from about NW by W.; also a lower band, which forms the greater part of an arch, its apex having an altitude of 15° above the NNE.; all the bands are rather rose-coloured. $20^{\text{h}} 15^{\text{m}}\text{---}20^{\text{m}}$. There are now six bands springing from about NW. (or NW by W.?) point of horizon, like broad streamers, with equal or rather less spaces of sky between: all the bands are rose-coloured, and rise from about 4° above horizon; sky dark blue. The bands nearest the vertical (inclined about 75° to the horizon) rise perhaps 20° ; the lowest bands extend like arches. $20^{\text{h}} 30^{\text{m}}$. The whole now form a band of rosy light on N. horizon, brightest about NW. (?), like an auroral bank. The sun rose shortly after this about ESE.
- Sky rather milky; milky aurora? The new moon is shining; some of the milky spots are undoubtedly cirri, lighted by the moon. The cirro-cumuli now radiate from W.
- Beautifully-coloured lunar corona, nearly 8° diameter. The colours are very deep and distinct, much more so than usual. The cloud in which the corona occurs, the watery cirro-cumulus, grows about the zenith; at 11^{h} a very faint small corona, although the sky seems perfectly clear.
- The dry and wet bulb thermometers shewed the same temperature (28°.0); at $12^{\text{h}} 40^{\text{m}}$ the wet bulb read 31°.0 when the dry bulb thermometer read 27°.0 ; at 0^{m} the water in the cistern was not frozen; at 40^{m} it was beginning to freeze; the increase of temperature was therefore probably due to the emission of latent heat during freezing (this has been frequently observed.)
- Cirri lying NW and SE. The cirro-stratus scud and scud reaches from Cheviot to NW. in an unbroken mass, with sky on each side; Cheviot covered with snow. The upper current of cirrus appears to move rather quicker than the cirro-stratus scud.
- Sky milky (see *Notes to Extra Magnetic Observations*, p. 122). $17^{\text{m}}\text{---}25^{\text{m}}$. Three meteors seen, one moving nearly past zenith, the others moving NE. and NW., respectively, from about 60° altitude. 40^{m} . Another meteor from 50° altitude above N., moving N by E.
- Very wild-like black masses of scud with a light homogeneous background, perhaps scud falling in showers: the wind commenced suddenly at $7^{\text{h}} 10^{\text{m}}$ blowing $2\cdot5$ lb.; at 20^{m} , rain². The wind veered from NW by N. to N by E. at $7^{\text{h}} 10^{\text{m}}$.
- A fine meteor brighter than Venus to NNE., moving downward very slowly towards NNW., through about 30° , no sparks.
- Cirri radiating in belts from N. to S.; hazy near horizon; indistinct lunar corona. Cirro-cumuli growing in a few minutes; none seen at $10^{\text{h}} 58^{\text{m}}$.

ADDITIONAL METEOROLOGICAL NOTES.

1845.

- | d. | h. | m. |
|---------|----|----|
| | | |
| Mar. 20 | 16 | 4. |
- Milky-like cirri radiating from N.; if cirri, they are of the very thinnest kind, the sky only appearing milky here and there. 17^h 4^m. Cirri radiating from N by W.; sky milky. 17^h 20^m. Altitude of crepuscular arch 30°; reddish vapours to E. 18^h. Sky pinkish to ESE., blood-red to E., deep purple to ENE; cirri radiating from NNW. 19^h. Cirri radiating as before. 20^h 30^m. Parhelia seen. The western parhelion very bright.
- Mar. 26 10—11^h. Several flashes of lightning seen; wind blowing strongly at 12^h 10^m; at 12^h 15^m, wind blowing 6·0 lbs.; heavy rain. 14^h. Sky milky; the moon projects the shadow of the clouds in the air; traces of aurora. 17^h 4^m. Crepuscular arch about 8° altitude. 17^h 45^m. Beginning to colour on the E. horizon. 18^h 20^m. α Lyrae seen quite distinctly with the naked eye.
- Mar. 28 12 25. A shooting-star to WNW., altitude about 45°, moving from S. to N.
- 17 7. Crepuscular arch about 10° altitude. 35^m. Sky colouring to E.
- Mar. 29 0 The sky seems very milky near the sun; this has generally been observed when the difference of the dry and wet bulb thermometers was considerable, as to-day; the mixture of vapour with the air rendering it more transparent. At 11^h. Sky milky and hazy-like near horizon; faint aurora.
- Mar. 30 17 10. Crepuscular arch, 9° altitude.
- Mar. 31 3 Patches of cunulo-stratus to N.; woolly and mottled cirri from W by N.; linear and curled cirri from W.; cirri radiating from NW by W.; portion of a halo. 4^h. Fine mottled, linear, and cymoid cirri; cirro-strati radiating from NW by N. and SW by S.; halo brighter than before. 5^h. A long string of scud, loose cumuli, and cumulo-strati extends from Cheviot to N., moving from SSW.; masses of cirro-strati; mottled and woolly cirri and cirrus haze. The cirro-strati are in rounded cake-like pieces one above another; sky altogether stormy-like. 5^h 20^m. The cirro-strati to E. have regular serrated ridges. 6^h. Patches of a halo. 7^h. Clouds pinkish or slightly claret-coloured to W.
- Mar. 31 18 50—19 15. Parhelia seen; they were at no time very bright; the distance of each from the sun, from several measurements, was 22½°; they were sometimes elongated horizontally, and sometimes vertically. The parhelia were coloured red on the side nearest the sun, and greenish-yellow on the opposite side; the clouds in which they were produced were dense cirro-strati and cirrus haze. In the zenith woolly cirri, having a slightly cirro-cumulous disposition. 21^h 15^m. Top of a halo seen. 22^h. The cirro-stratus is composed of various kinds of cirri; patches of loose cumuli or cirro-stratous scud to N.
- Apr. 1 17 10. Bright crepuscular arch, altitude 11°; an arch of reddish vapour 5° altitude. 18^h 5^m. α Lyrae seen through cirri with the naked eye. Sky nearly covered with cirri, radiating from ESE. and WNW., coloured orange, red, and yellow; deep-red vapours to E.
- Apr. 2 6 Cirri dispersed irregularly over the sky, radiating to some extent from WNW.; hazy on horizon. 7^h. Flame-like cirri; atmosphere very hazy to E.; Cheviot invisible. 13^h 5^m. Shooting-star to E., altitude 30°, moving slowly towards E by S., magnitude 1 to 2.
- Apr. 5 7 Finely-mottled cirri to W., altitude 20°, which shew colours exactly like diffraction spectra from irregularly-striated bodies; deep purple vapours to W.; thick to E.; Cheviot invisible.
- Apr. 8 6 Passing showers; clouds falling in cirrus curtains as if bent by the wind; there must be snow in the upper strata, as the rainbow is seen at the extremities only, and the sun is shining on the whole. 8^h. Sky of a slate-blue to E. 10^h 15^m. Sky very clear; stars of the third magnitude seen within a degree of the horizon; a dark speck of cloud appears about 15° above NW., it rapidly increases, is very thin at first, gradually becomes denser, extending itself; in 5^m it covers two-tenths of the sky, extending from NW. to SE.; throughout it has been surrounded by sky; in about 10^m it becomes much thinner; stars of the second magnitude being visible through it in many places, and is again rapidly disappearing but without any motion. Streaks of cirro-strati to NNW., quite stationary. Zodiocal light very distinct.
- Apr. 13 16 25. Sky overcast with a thick hazy-like cloud; rain commenced. 18^h 5^m—15^m. A long strip of light to E by N. vertically above the sun, like the sun reflected from rippled water; the strip is slightly broken, like a series of not very regular repetitions of the sun's image; the cirri in which these images are formed radiate from NNW.
- Apr. 14 7 Cirri radiating from NNW. and SSE., but moving from N.; ill-defined portion of a solar halo. 8^h. Cirro-strati blood-red from NW by W. to W., seen in fiery patches through the gray scud; sky yellowish to N. 9^h. Clouds now radiating from N by E.

ADDITIONAL METEOROLOGICAL NOTES.

1845.
 d. h. m.
- Apr. 16 11 Cirri radiating from about NE by E., but they are formed of bars lying NW by N. and SE by S.; there is a circle of light round the moon of the usual dimensions of the halo, but the interior of the circle is as luminous as the circumference; the corona is not well coloured.
- Apr. 21 16 10. Crepuscular arch, 7° altitude; sun's upper limb visible at $17^{\text{h}} 20^{\text{m}}$.
- Apr. 22 16 7. Crepuscular arch; reddish vapour, 3° altitude; bright yellow, 6° altitude; white, 9° altitude.
- 17 27. α Lyrae watched till now, when $\frac{1}{2}$ of the sun's diameter is visible above the horizon; had the eye been a little better cared for at first, I have no doubt but it might have been seen when the sun was completely above the horizon; the eye was kept upon the star by placing the eye, the star, and a corner of the Observatory in the same vertical.
- Apr. 25 11 Light on horizon to S. $\frac{1}{2}$ W., like from a fire. $13^{\text{h}} 58^{\text{m}}$. Very bright to N by E., altitude 10° , as if the moon were shining through the clouds. $14^{\text{h}} 6^{\text{m}}$. Bright-red glare, covering a circular space of 10° ; the reflection (?) is only from the upper clouds (cirro-strati ?) and there is a black patch in the midst of the glare: this is perhaps the reflection of a fire as it occurs in exactly the opposite point of the horizon from the light seen at 11^{h} .
- May 1 5. Beautiful and vivid double rainbow, the extremities within 150 yards of the observer; four recurrences of the red could be observed in the supplementary bows, but the red or reddish colour only could be detected, forming narrow bows within the primary; the secondary bow very distinct.
- May 1 11. Strong twilight (?) to NNW. $11^{\text{h}} 6^{\text{m}}$. Meteor to E., altitude 45° , moving towards SE. Thunder-storms to-day 13 miles off to SSW.
- May 4 12 59. A meteor moved *up* from about 45° above SE., to 65° above E. Crepuscular light throughout the night.
- May 15 19. Many varieties of cirro-strati, chiefly in woolly sheets; a few sheets of mottled cirro-strati, lines of cirro-strati lying N. and S., like lines of very small cumulo-strati; zigzag lines to N.; cumulo-strati to NW.; loose cumuli on Cheviot.
- July 31 1 50. Clouds moving up from S. and SE., very thick and black, the clouds have a variety of motions *inter se.* $2^{\text{h}} 0^{\text{m}}$. Thunder to SE. 2^{m} . Rain³. 4^{m} . Another peal to SE. Very little rain after 20^{m} .
- 2 15—20. Occasional peals from SE.
22. A flash of lightning, thunder in 7^{s} .
25. A fine streak to E., altitude 45° ; thunder in $6\frac{1}{2}^{\text{s}}$.
26. A fine streak to E., from altitude 20° to horizon, having the appearance of waves in a rope shaken.
27. A double flash to E., forming an arch from E by S. to E by N., altitude 15° .
29. A very complex flash to E., altitude 6° , interval 12^{s} .
30. Streak to E., altitude 6° .
35. A large streak went parallel to the horizon to NE., and then bisected itself at right angles, stretching over about 30° of horizon, interval 12^{s} , altitude 10° .
38. A streak about 10° long inclined to the horizon at 80° to NE., interval 8^{s} , like an illuminated serpentine copper wire.
40. About 20 flashes have been seen since 20^{m} , the rolls have been almost uninterrupted.
40. Flash to NNE., interval 10^{s} .
41. Flash to NNE., interval $8^{\text{s}}—10^{\text{s}}$.
43. Two flashes, one to NE by E., and the other to N., interval 22^{s} .
44. Flash to NNE., interval 13^{s} , altitude 5° .
45. Three streaks perpendicular to the horizon to N by E., interval 30^{s} . Flash to N by E., interval 33^{s} . One to NE., altitude 15° , and another to N., interval 11^{s} from NE.; the thunder continued at intervals to NE. and N.
- 3 10. A flash to NE by N., altitude 10° , interval 14^{s} ; this is the only flash seen since $2^{\text{h}} 45^{\text{m}}$, although the lightning was looked for. All the flashes or streaks had the same character, viz., like the undulations of a slack rope. The thunder like the sound of a cart's wheels moving over very irregular pavement, with many variations of intensity. Thunder heard last about $3^{\text{h}} 35^{\text{m}}$.

DATES OF FLOWERING AND LEAFING OF PLANTS, &c.

1845.		1845.	
Feb.	22. Primula acaulis in flower. Crows coming to their nests.	April	27. <i>Fagus sylvatica</i> in leaf for 3 days ?
March	21—23. <i>Ranunculus Ficaria</i> , in flower. 23. <i>Corylus Avellana</i> , with catkins 2 inches long fully open, probably open a week or more ago. 23. A bat seen. 23. <i>Ribes Grossularia</i> , leaves open. 31. Humble bees, tortoise-shell butterfly and toads seen.		27. <i>Agrapnis nutans</i> in flower. 27. <i>Pyrus aucuparia</i> in leaf about 7 days. 27. <i>Glechoma hederacea</i> in flower about 3 days. 27. <i>Myosotis (arvensis) ?</i> in flower about 2 days. 27. <i>Tilia Europaea</i> in leaf. 27. <i>Erysimum Alliaria</i> in flower. 29. <i>Caltha palustris</i> in flower. 30. The cuckoo heard for the first time.
April	1. <i>Fragaria vesca</i> in flower. 1? <i>Viola canina</i> in flower. 2. <i>Tussilago Farfara</i> in flower. 3. <i>Petasites vulgaris</i> in flower. 5. <i>Æsculus Hippocastanum</i> in leaf. 5. <i>Ulmus montana</i> in leaf. 5. <i>Alnus glutinosa</i> in flower some days. 6. <i>Larix Europaea</i> in leaf. 6. <i>Corylus Avellana</i> in leaf. 6. <i>Mercurialis perennis</i> in flower. 6. <i>Pulmonaria officinalis</i> in flower. 19. <i>Erodium cicutarium</i> in flower ; must have flowered by the 12th. 21. <i>Cerasus Padus</i> in leaf. 27. <i>Lamium album</i> in flower. 27. <i>Prunus spinosa</i> in flower.	May	3. <i>Fraxinus excelsior</i> (young tree) in leaf about 3 days. 3. <i>Pyrus Malus</i> , in flower about 2 days. 9. <i>Æsculus Hippocastanum</i> in flower. 12. <i>Quercus Robur</i> in leaf.
		April	1. Swallows seen at Kelso. Thrush nest nearly finished. 5. Three swallows seen (<i>Hirundo rustica</i>). 13. Swifts seen (<i>Cypselus apus</i>).
		May	4. Young Redbreasts seen.
		Oct.	4 5 ^h . Swallows seen in considerable numbers for the last time this year. 13. <i>Fraxinus excelsior</i> , leaves off one tree. 20. <i>Fraxinus excelsior</i> , <i>Fagus sylvatica</i> , and <i>Platanus occidentalis</i> , have lost the greater part of their leaves.
		Nov.	8 7 ^h . Two bats seen.

d. h.
Feb. 13 1. P.M. (Mak. M. T.). Temperature of the interior of a large ash-tree, 31°·8 ; the temperature of the air in the shade being 44°·0. At 4^h the temperature of the ash-tree was 31°·9 ; when the temperature of the air was 45°·0. The bulb of the thermometer was inserted about 5 inches into the tree, and the aperture closed, leaving the stem of the thermometer outside the tree.

d.	h.	Feb. 14	4. P.M. (Mak. M. T.)	Temperature of the ash-tree, 32°·7, of the air, 36°·7.
		15	4. ...	32°·4, 40°·6.
		17 4 $\frac{1}{2}$	34°·6, 41°·4.
		19	4. ...	33°·7, 36°·6.
		22	4. ...	35°·0, 35°·0.
Mar. 20	3. ...			32°·0, 37°·2.
May 16	3. ...			51°·9, 64°·8.

MAKERSTOUN MEAN TIME OF THE COMMENCEMENT OF THE MORNING SONG
OF BIRDS.

1845.

	d.	h.	m.	
Feb.	14	7		A.M. Thrush.
	14	5		P.M. Blackbird.
	15	6		A.M. Blackbird or Thrush.
	17	6	50	... Thrush. 7 ^h 10 ^m A.M. Pigeon.
	17			... Thrush and Linnet throughout the
	19	6	25	... Blackbird, &c. [day.]
	20	5	10	... Thrush, &c.
	22	6	20	... Thrush.
	24	6	5	... Pigeon. 6 ^h 10 ^m A.M. Thrush. 6 ^h 40 ^m A.M. Blackbird, &c.
	25	6	10	... Birds.
Mar.	4	5	55	... Thrush.
	17	5	30	... Thrush and Linnet.
	19	5	15	... Birds.
	20	5	15	... Birds, the Redbreast first.
	23	4	40	... Blackbird, Thrush ? Partridge.
	25	4	40	... Blackbird, Thrush ? Partridge.
	26	4	35	... Blackbird, Thrush ? Partridge.
	27	4	55	... Blackbird, &c.
	29	4	27	... Lark. 30 ^m . Thrush.
	31	4	25	... Thrush.
April	1	4	27	... Thrush.
	2	4	20	... Thrush.
	3	4	22	... Thrush.
	5	4	15	... Pigeon. 25 ^m . Thrush.
	7	4	17	... Lark and Thrush.
	8	4	14	... Larks. 25 ^m . Thrush.
	9	3	58	... Lark.
	11	4	15	... Birds.
	12	4	0	... Lark and Thrush.
	14	4	10	... Lark and Thrush.
	16	3	55	... Lark and Thrush.
	17	3	50	... Lark and Thrush.
	18	3	45	... Lark and Thrush.
	19	3	32	... Lark. 35 ^m . Thrush.
	21	3	30	... Lark.
	23	3	14	... Thrush. 17 ^m . Lark.
	25	3	30	... Thrush.
	26	3	40	... Birds singing.
	28	3	27	... Thrush.
	29	3	45	... Lark (may have been earlier). Sandpiper throughout the night. 3 ^h 10 ^m . Thrush.

1845.

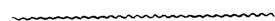
	d.	h.	m.	
April	30	3	5	A.M. Larks (probably sooner). 3 ^h 10 ^m . Thrush.
May	4	2	42	... Lark. 58 ^m . Thrush. Land- rails heard.
	6	2	50	... Larks. 3 ^h 0 ^m . Thrush.
	7	2	50	... Larks. 3 ^h 9 ^m . Thrush.
	9	2	40	... Larks. 2 ^h 50 ^m . Thrush.
	12	2	13	... Larks. 2 ^h 35 ^m . Thrush.
	13	2	20	... Lark.
	14	6	10	... Cuckoo.
	15	2	10	... Lark. 2 ^h 28 ^m . Thrush.
	16	2	1	... Lark. 2 ^h 25 ^m . Thrush.
	17	1	25	... Landrail. 2 ^h 15 ^m . Lark.
	19	2	0	... Lark. 2 ^h 24 ^m . Thrush.
	21	2	28	... Thrush.
	22	2	25	... Lark. 2 ^h 43 ^m . Thrush.
	26	2	0	... Lark. 2 ^h 25 ^m . Thrush.
	27	2	5	... Lark. 2 ^h 22 ^m . Thrush.
	28	2	14	... Lark. 2 ^h 22 ^m . Thrush.
	30	1	40	... Lark. 2 ^h 0 ^m . Thrush.
June	4	2	5	... Thrush.
	5	2	5	... Thrush.
	6	1	36	... Lark. 2 ^h 0 ^m . Thrush.
	7	1	22	... Lark. 2 ^h 5 ^m . Thrush.
	9	1	33	... Lark.
	10	1	10	... Lark. 1 ^h 43 ^m . Thrush.
	12	1	14	... Lark. 1 ^h 43 ^m . Thrush. 1 ^h 45 ^m . Cuckoo.
	13	1	20	... Lark. 1 ^h 45 ^m . Thrush.
	14	1	25	... Lark. 1 ^h 42 ^m . Thrush.
	17	1	38	... Lark. 2 ^h 0 ^m . Thrush.
	21	1	42	... Lark. 2 ^h 14 ^m . Thrush.
	26	1	40	... Lark. 2 ^h 1 ^m . Thrush.
	30	2	0	... Lark. 2 ^h 15 ^m . Thrush.
July	8	3	0	... Lark not heard early in the morn- ing after this date.
	9	1	57	... Swallow. 2 ^h 30 ^m . Thrush.
	10	1	40	... Swallow. 2 ^h 40 ^m . Thrush.
	15	2	17	... Swallow.
	28	2	40	... Swallow.

It has generally been doubtful whether the Thrush or Blackbird was heard at first, owing to the distance of the birds from the observer, but it is believed that the Thrush is generally before the Blackbird.

DAILY OBSERVATIONS

OF

MAGNETOMETERS.



MAKERSTOUN OBSERVATORY,

1846.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Mic. Div.	°	Sc. Div.	°
0 13 0	25 08-21	542-5	41-6	409-5	42-3	W	2 22 0	25 08-25	545-4	36-9	413-2	37-5	413-2	37-5	H
14 0	09-27	543-9	41-6	407-5	42-3	W	23 0	09-39	543-7	37-0	411-9	37-6	411-9	37-6	H
15 0	09-56	544-1	41-6	407-3	42-2	W	3 0 0	10-50	542-1	37-1	412-6	37-7	412-6	37-7	H
16 0	09-32	545-5	41-5	406-7	42-1	W	1 0	10-97	543-4	37-4	412-9	38-2	412-9	38-2	H
17 0	11-14	544-6	41-4	405-1	41-9	W	2 0	11-10	544-3	37-7	411-8	38-5	411-8	38-5	H
18 0	08-85	548-2	41-4	404-4	41-8	W	3 0	11-14	543-5	38-0	414-6	38-7	414-6	38-7	H
19 0	08-59	547-8	41-3	406-4	41-8	B	4 0	11-14	545-9	38-5	417-5	39-1	417-5	39-1	H
20 0	08-72	547-8	41-2	404-9	41-7	B	5 0	09-39	547-1	39-0	420-5	39-7	420-5	39-7	H
21 0	08-65	548-1	41-1	404-8	41-7	H	6 0	09-13	550-5	39-4	421-7	40-2	421-7	40-2	B
22 0	08-26	542-3	41-0	404-5	41-5	H	7 0	08-68	551-1	39-7	419-1	40-5	419-1	40-5	B
23 0	08-38	544-1	40-9	400-8	41-2	H	8 0	08-45	550-5	40-0	417-5	40-8	417-5	40-8	B
1 0 0	10-18	543-1	40-8	402-4	41-3	H	9 0	06-77	545-4	40-3	420-8	41-1	420-8	41-1	B
1 0	11-88	540-9	40-8	407-3	41-5	H	10 0	07-67	545-8	40-7	422-7	41-5	422-7	41-5	B
2 0	12-01	546-3	40-8	407-6	41-5	H	11 0	08-05	547-3	40-9	415-0	41-7	415-0	41-7	W
3 0	11-55	550-1	40-9	408-8	41-5	H	12 0	03-23	541-4	41-3	412-5	42-0	412-5	42-0	W
4 0	10-09	548-9	41-0	410-0	41-5	W	4 13 0	25 07-78	545-7	40-0	406-2	40-0	406-2	40-0	H
5 0	09-10	547-7	41-1	410-0	41-5	H	14 0	07-37	543-0	39-7	404-8	39-7	404-8	39-7	H
6 0	08-86	546-1	40-9	410-0	41-3	W	15 0	08-12	540-7	39-4	405-8	39-4	405-8	39-4	H
7 0	09-08	544-5	40-7	409-6	41-1	H	16 0	08-48	543-6	39-1	403-2	39-1	403-2	39-1	H
8 0	08-41	544-6	40-5	407-5	40-7	H	17 0	08-39	544-4	39-0	405-6	38-8	405-6	38-8	H
9 0	05-38	542-9	40-2	407-9	40-3	H	18 0	07-79	546-3	38-8	405-9	38-6	405-9	38-6	H
10 0	03-06	543-5	39-9	408-9	40-0	W	19 0	08-38	546-7	38-6	405-5	38-4	405-5	38-4	W
11 0	07-60	543-2	39-7	403-7	39-7	H	20 0	08-11	546-9	38-3	404-5	38-1	404-5	38-1	W
12 0	08-52	543-5	39-3	401-7	39-2	H	21 0	08-08	545-1	38-0	406-9	37-8	406-9	37-8	B
13 0	25 08-95	543-9	39-0	403-2	38-8	H	22 0	07-55	544-2	37-8	405-9	37-4	405-9	37-4	W
14 0	08-95	544-1	38-7	403-9	38-5	H	23 0	09-62	542-0	37-6	402-6	37-3	402-6	37-3	W
15 0	09-53	545-6	38-3	405-4	38-2	H	5 0 0	11-44	544-0	37-4	400-9	37-3	400-9	37-3	W
16 0	10-85	545-0	38-0	404-6	37-7	H	1 0	11-77	544-3	37-4	404-3	37-5	404-3	37-5	W
17 0	08-32	547-4	37-7	406-6	37-5	H	2 0	12-04	547-6	37-5	407-0	37-9	407-0	37-9	W
18 0	08-55	548-2	37-3	408-4	37-2	H	3 0	11-51	548-4	37-7	409-7	38-4	409-7	38-4	W
19 0	08-82	547-0	37-0	410-6	36-8	W	4 0	10-60	547-7	38-2	411-2	39-0	411-2	39-0	W
20 0	08-56	547-3	36-7	411-2	36-6	W	5 0	09-86	550-1	38-6	411-0	39-4	411-0	39-4	W
21 0	08-52	546-0	36-4	412-9	36-2	B	6 0	09-53	550-7	38-9	410-5	39-7	410-5	39-7	H
22 0	08-34	545-3	36-1	410-6	35-9	W	7 0	09-02	550-9	39-0	409-4	39-7	409-4	39-7	H
23 0	08-95	543-8	35-8	408-7	35-7	W	8 0	08-99	550-8	38-9	408-6	39-7	408-6	39-7	H
2 0 0	09-69	545-0	35-6	408-6	35-7	W	9 0	08-70	550-3	38-9	409-4	39-6	409-4	39-6	H
1 0	09-76	543-3	35-6	412-5	35-8	B	10 0	06-44	541-1	38-9	416-6	39-6	416-6	39-6	H
2 0	11-10	543-2	35-7	415-5	36-2	W	11 0	01-54	540-6	38-9	426-5	39-5	426-5	39-5	B
3 0	10-16	547-9	36-0	418-0	36-7	W	12 0	05-76	545-5	38-9	420-0	39-5	420-0	39-5	B
4 0	09-35	549-6	36-6	422-0	37-2	W	13 0	25 05-77	541-8	38-9	417-7	39-5	417-7	39-5	B
5 0	08-79	549-5	36-9	420-6	37-5	W	14 0	11-75	540-9	38-9	405-3	39-5	405-3	39-5	B
6 0	08-08	550-4	37-2	420-4	37-7	H	15 0	04-73	543-7	38-9	397-3	39-6	397-3	39-6	B
7 0	08-41	549-9	37-3	418-8	37-8	H	16 0	06-86	545-8	38-9	404-5	39-7	404-5	39-7	B
8 0	08-55	548-6	37-4	417-9	37-8	H	17 0	08-48	548-2	39-0	404-8	39-9	404-8	39-9	B
9 0	08-18	545-6	37-3	417-6	37-7	H	18 0	08-28	552-0	39-1	403-1	40-0	403-1	40-0	B
10 0	08-01	546-2	37-2	419-2	37-6	H	19 0	08-36	551-7	39-2	403-9	40-2	403-9	40-2	H
11 0	07-60	541-9	37-1	416-6	37-5	B	20 0	07-64	551-2	39-6	406-3	40-6	406-3	40-6	H
12 0	08-16	545-8	37-0	412-4	37-4	B	21 0	08-41	551-3	39-8	403-5	40-8	403-5	40-8	W
13 0	25 08-39	543-3	36-9	411-5	37-3	B	22 0	07-94	548-5	40-0	399-2	41-0	399-2	41-0	H
14 0	08-11	542-9	36-9	410-6	37-2	B	23 0	09-12	542-4	40-4	400-5	41-4	400-5	41-4	H
15 0	09-00	543-7	36-8	411-0	37-2	B	6 0 0	10-77	545-1	40-7	403-4	41-8	403-4	41-8	H
16 0	08-12	546-4	36-7	404-9	37-2	B	1 0	11-57	543-1	41-1	407-5	42-2	407-5	42-2	H
17 0	08-52	546-3	36-7	409-7	37-2	B	2 0	11-84	545-6	41-3	407-2	42-6	407-2	42-6	H
18 0	08-41	548-2	36-7	413-0	37-2	B	3 0	12-58	549-4	41-7	405-8	43-0	405-8	43-0	H
19 0	08-52	549-0	36-7	413-3	37-2	H	4 0	12-42	548-7	42-0	409-7	43-5	409-7	43-5	H
20 0	08-85	548-6	36-7	414-7	37-3	H	5 0	11-14	545-8	42-5	413-3	43-9	413-3	43-9	H
21 0	08-59	546-8	36-8	414-5	37-4	W	6 0	10-07	553-2	42-9	407-2	44-3	407-2	44-3	B

DECLINATION. Magnet untouched, Jan. 0^d—Feb. 15^d.BIFILAR. Observed 2^m after the Declination, $k=0\cdot000135$.BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

Jan. 1^d 3^h. The arms of the bifilar torsion circle were turned through 45'5: the observations from Jan. 0^d 13^h till Jan. 1^d 3^h have been made comparable with those after the latter date; and the observations in 1845 and 1846 have the same zero, though not the same scale unit. See *Introduction*, p. xxxii.

Göttingen Mean Time of Declination Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declination Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
6 7 0	25 09:00	553.3	43.3	403.2	44.7	B	8 15 0	25 08:77	546.4	48.5	373.7	48.9	D
8 0	08:32	552.2	43.7	401.4	45.0	B	16 0	08:52	546.3	48.4	373.9	48.8	D
9 0	07:74	551.5	44.1	400.3	45.4	B	17 0	08:21	547.6	48.3	371.2	48.5	D
10 0	07:57	549.5	44.5	398.5	45.7	B	18 0	08:05	546.5	48.1	370.0	48.3	D
11 0	07:35	549.3	44.8	396.0	45.9	W	19 0	08:66	548.9	47.9	370.6	48.2	H
12 0	09:59	548.6	45.0	392.7	46.0	W	20 0	08:79	548.8	47.8	371.7	48.1	H
13 0	25 05:49	550.9	45.2	385.4	46.2	W	21 0	08:14	548.1	47.7	373.0	47.9	W
14 0	07:04	539.2	45.3	382.9	46.3	W	22 0	07:76	545.1	47.6	374.8	47.7	H
15 0	08:61	547.1	45.4	384.3	46.4	W	23 0	08:72	540.4	47.4	373.3	47.5	H
16 0	07:96	544.5	45.6	388.7	46.5	W	9 0 0	10:43	539.8	47.3	375.5	47.5	H
17 0	07:51	547.6	45.6	387.2	46.5	W	1 0	11:46	540.2	47.2	377.2	47.5	H
18 0	06:09	547.4	45.7	386.0	46.6	W	2 0	13:05	544.8	47.2	392.9	47.5	H
19 0	08:93	540.2	45.8	387.6	46.7	B	3 0	11:24	543.7	47.2	396.6	47.5	H
20 0	07:40	548.1	45.9	387.6	46.8	B	4 0	10:36	548.9	47.2	399.3	47.5	H
21 0	07:18	550.3	45.9	388.7	46.8	H	5 0	09:69	547.9	47.2	397.9	47.5	H
22 0	10:56	550.6	46.0	386.9	46.9	H	6 15	09:33	548.0	47.2	395.2	47.5	B
23 0	10:33	541.8	46.0	386.9	46.9	H	7 0	08:23	548.4	47.1	394.3	47.4	B
7 0 0	11:12	539.0	46.2	384.5	47.0	B	8 0	07:44	546.7	47.0	396.2	47.2	B
1 0	12:62	547.1	46.4	383.0	47.2	H	9 0	08:05	549.6	46.9	396.3	47.1	B
2 0	12:36	549.6	46.5	383.0	47.3	H	10 0	07:47	546.8	46.8	399.5	47.0	B
3 0	12:42	549.2	46.7	384.2	47.5	H	11 0	08:79	544.6	46.6	397.1	46.7	W
4 0	11:88	547.4	46.8	389.9	47.6	B	12 0	08:95	547.3	46.5	396.2	46.6	W
5 0	07:98	552.3	46.9	389.6	47.7	H	13 0	25 08:48	546.5	46.4	396.9	46.5	W
6 0	00:28	532.4	47.0	405.4	47.8	W	14 0	08:97	545.5	46.3	396.9	46.3	W
7 0	01:18	539.5	47.2	416.9	48.0	W	15 0	08:80	545.6	46.1	397.0	46.2	W
8 0	07:64	551.5	47.4	398.8	48.3	W	16 0	08:46	546.7	46.0	396.5	46.2	W
9 0	04:96	544.5	47.5	403.5	48.3	W	17 0	08:34	547.5	45.9	395.2	46.1	W
10 0	06:93	549.5	47.5	395.1	48.2	W	18 0	08:61	549.1	45.9	392.6	46.0	W
11 0	08:12	546.1	47.4	390.0	48.2	H	19 0	08:41	549.3	45.8	392.4	46.0	B
12 0	07:71	543.6	47.4	386.4	48.1	H	20 0	07:72	540.4	45.7	392.1	46.0	B
13 0	25 09:67	541.4	47.3	370.9	48.0	H	21 0	07:67	549.8	45.7	393.8	46.0	H
14 0	03:65	545.2	47.3	361.3	48.0	H	22 0	07:20	547.9	45.7	395.2	46.0	H
15 0	04:81	536.6	47.3	365.2	48.0	H	23 0	07:27	546.7	45.7	393.8	46.0	H
16 0	10:67	541.3	47.3	365.1	48.0	H	10 0 0	09:15	547.5	45.7	392.8	46.1	H
17 0	10:23	543.0	47.3	369.8	48.0	H	1 0	10:38	547.2	45.8	394.2	46.2	H
18 0	07:07	551.5	47.3	371.2	48.0	H	2 0	11:00	549.8	46.0	396.3	46.5	H
19 0	08:18	548.9	47.4	374.3	48.0	W	3 0	11:41	551.5	46.2	398.6	46.9	H
20 0	09:39	543.6	47.4	379.3	48.0	W	4 0	11:05	548.1	46.4	403.6	47.2	H
21 0	12:75	539.8	47.4	380.2	48.0	B	5 0	09:56	545.6	46.7	404.1	47.3	H
22 0	12:96	540.6	47.4	381.5	48.0	W	6 0	09:24	553.1	46.8	399.8	47.4	W
23 0	11:98	536.1	47.5	387.3	48.0	W	7 0	09:62	552.7	46.9	396.2	47.5	W
8 0 0	14:38	539.0	47.6	385.4	48.1	W	8 0	09:46	550.8	47.0	396.1	47.6	W
1 0	11:51	530.7	47.6	393.3	48.3	W	9 0	08:52	547.9	47.1	398.0	47.7	W
2 0	13:41	539.9	47.7	390.9	48.4	W	10 0	07:29	549.0	47.1	398.3	47.7	W
3 0	15:20	542.6	47.9	390.6	48.5	W	11 0	06:16	551.1	47.1	396.4	47.7	H
4 0	14:60	547.4	48.0	395.7	48.8	W	12 0	05:72	548.6	47.1	394.6	47.7	H
5 0	06:77	551.1	48.2	397.7	49.0	W	11 19 0	25 11:48	556.6	43.3	387.1	43.7	H
6 0	09:30	549.7	48.4	387.7	49.2	H	20 0	07:04	555.1	43.3	385.8	43.7	H
7 0	09:49	549.0	48.5	383.8	49.2	H	22 0	10:33	547.1	43.2	386.4	43.4	W
8 0	08:09	546.0	48.7	385.0	49.4	H	23 0	12:25	546.0	43.1	387.6	43.3	H
9 0	04:41	547.9	48.7	385.6	49.5	H	12 0 0	13:69	541.4	43.0	399.7	43.3	W
10 0	06:59	543.0	48.7	384.4	49.3	H	1 0	15:74	535.9	43.0	403.2	43.3	H
11 0	07:51	546.4	48.7	382.9	49.3	W	2 0	17:94	549.0	43.0	433.7	43.4	W
12 0	08:34	546.8	48.7	382.1	49.3	D	4 0	12:45	541.4	43.1	431.0	43.5	H
13 0	25 07:08	546.1	48.7	380.1	49.2	D	6 0	10:14	546.5	43.0	416.9	43.4	W
14 0	07:92	543.9	48.6	376.4	49.1	D	8 0	07:17	538.3	42.7	418.7	42.7	W
							10 0	04:84	543.8	42.1	412.2	41.8	W

DECLINATION. Magnet untouched, Jan. 0^d—Feb. 15^d.BIFILAR. Observed 2^m after the Declination, $k=0.000135$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
12 18 0	25 09.05	545.7	39.3	411.0	38.8	H	17 2 0	25 12.36	550.7	37.4	410.7	38.2	W
20 0	08.41	545.5	38.8	411.9	38.4	H	4 0	25 11.19	538.9	38.0	427.9	38.8	H
22 0	07.71	543.0	38.3	413.8	37.9	W	6 0	25 12.92	547.2	38.7	428.8	39.7	W
23 0	09.12	542.1	38.1	418.2	37.7	H	7 0	24 55.65	545.8	39.1	442.6	40.1	W
13 0 0	09.59	539.7	37.9	424.5	37.5	B	8 0	25 03.82	542.3	39.3	433.2	40.4	W
1 0	10.23	539.9	37.7	424.8	37.5	H	10 0	24 59.06	544.8	39.9	424.4	40.8	W
2 0	12.38	542.3	37.6	418.7	37.5	B							
4 0	11.07	545.1	37.4	413.3	37.5	H	18 18 0	25 06.16	557.3	40.2	398.9	40.6	H
6 0	08.90	549.3	37.5	413.6	37.7	W	20 0	09.29	546.1	40.0	397.7	40.4	H
7 0	09.69	547.8	37.5	413.2	37.8	W	22 0	12.15	543.7	39.9	400.3	40.2	W
8 0	09.71	547.6	37.6	412.5	37.9	W	23 2	14.03	544.2	39.8	401.0	40.2	H
10 0	04.95	542.9	37.6	418.1	38.0	W	19 0 0	13.16	543.3	39.9	405.3	40.4	W
							1 0	12.58	549.3	40.1	405.3	40.6	H
18 0	25 15.71	546.1	37.9	358.6	38.7	H	2 0	11.17	549.9	40.1	409.5	40.7	W
20 0	07.76	555.0	37.9	386.8	38.5	H	4 0	09.15	548.2	40.3	408.9	41.0	H
22 0	08.34	542.9	37.9	392.2	38.3	W	6 0	10.43	547.0	40.7	410.7	41.4	W
23 0	10.61	542.0	37.9	395.8	38.3	W	7 4	06.09	538.6	40.8	416.3	41.5	W
14 0 0	12.90	532.2	37.8	405.4	38.4	H	8 0	09.86	548.5	41.0	412.5	41.7	W
1 0	11.17	534.2	38.0	416.4	38.7	H	10 0	09.00	547.7	41.2	407.7	42.0	W
2 0	12.31	544.5	38.3	416.6	39.1	W							
4 0	10.00	548.2	39.0	425.4	40.0	H	18 0	25 07.98	549.3	42.3	398.1	43.2	H
6 0	09.20	545.8	39.4	419.2	40.4	W	20 0	07.79	547.4	42.5	397.1	43.4	H
7 0	06.93	545.6	39.7	416.4	40.7	W	22 0	09.29	545.0	42.7	396.6	43.6	W
8 0	04.21	541.0	39.9	420.9	40.9	W	23 0	10.20	541.2	42.8	398.7	43.7	H
10 0	04.66	544.4	40.2	380.9	41.1	W	20 0 0	10.70	543.4	43.0	396.8	43.8	W
							1 0	11.74	544.2	43.1	394.0	43.9	H
18 0	25 09.73	550.2	40.8	394.3	41.7	H	2 0	10.87	547.1	43.1	392.5	43.9	B
20 0	09.42	548.5	40.8	393.6	41.7	H	4 0	09.02	546.6	43.3	393.7	44.0	H
22 0	13.37	545.9	40.9	392.7	41.6	W	6 0	09.02	548.6	43.4	398.6	44.0	W
23 0	12.18	547.3	40.9	395.7	41.6	H	7 0	08.88	548.5	43.4	397.8	44.0	W
15 0 0	11.30	547.8	40.9	396.0	41.5	W	8 0	08.46	550.2	43.4	395.7	44.0	W
1 0	09.42	544.9	41.0	396.6	41.7	H	10 0	08.16	548.3	43.4	397.8	44.1	W
2 0	12.65	545.6	41.1	403.2	42.0	W							
4 0	09.69	548.5	41.6	407.9	42.6	W	18 0	25 07.24	547.5	43.0	390.5	43.5	H
6 0	09.30	551.6	42.2	401.1	43.2	W	20 0	11.27	541.6	42.7	390.1	43.0	H
7 0	09.05	550.5	42.4	399.6	43.4	W	22 0	09.69	548.0	42.3	390.0	42.3	W
8 0	08.61	548.3	42.5	400.3	43.5	W	23 4	11.00	546.0	42.0	390.3	42.1	H
10 0	08.38	549.6	42.4	395.8	43.1	W	21 0 0	11.52	544.3	41.9	392.5	42.2	W
							1 0	11.91	547.4	42.0	394.3	42.5	H
18 0	25 08.05	546.6	40.7	392.2	40.7	H	2 0	13.19	551.9	42.1	393.5	42.8	H
20 0	09.12	547.0	40.1	392.2	40.1	H	4 0	10.94	551.2	42.7	399.7	43.5	H
22 0	08.95	548.3	39.7	394.0	39.5	W	6 0	09.84	549.9	43.0	400.3	43.9	W
23 0	09.82	547.8	39.4	392.5	39.3	H	7 0	08.82	551.1	43.2	402.8	44.0	W
16 0 0	12.53	545.0	39.2	397.3	39.0	W	8 0	09.29	551.4	43.3	399.7	44.0	W
1 5	13.86	551.8	39.1	397.2	39.0	H	10 0	08.97	558.5	43.2	399.5	43.8	W
2 0	14.68	552.3	39.0	399.9	39.0	W							
4 0	09.79	547.8	39.0	407.7	39.0	H	18 0	25 06.93	549.4	42.8	393.6	43.5	H
6 0	09.13	550.4	38.8	405.6	39.0	W	20 0	07.40	548.2	42.8	393.2	43.5	H
7 0	09.93	549.4	38.7	404.3	39.0	W	22 0	09.29	544.1	42.9	398.4	43.6	W
8 0	08.18	549.1	38.7	403.1	38.9	W	23 0	10.43	541.2	43.0	400.3	43.7	H
10 0	05.99	541.0	38.5	405.5	38.6	W	22 0 0	12.13	539.8	43.0	401.0	43.7	W
							1 0	10.00	542.0	43.1	399.4	43.8	H
18 0	25 10.70	555.8	37.3	394.7	37.7	H	2 0	13.59	546.9	43.2	397.3	43.9	W
20 0	14.94	540.3	37.0	381.4	37.3	H	4 0	10.23	549.5	43.5	399.0	44.4	H
22 0	10.92	541.8	37.0	387.2	37.2	W	6 0	09.32	550.2	43.7	394.8	44.5	W
23 0	11.30	540.8	37.0	396.9	37.2	H	7 0	08.92	552.6	43.9	393.6	44.7	W
17 0 0	13.14	543.5	37.0	406.0	37.5	W	8 0	09.19	552.4	44.0	395.6	44.8	W
1 0	12.18	545.0	37.1	406.1	37.7	H	10 0	08.41	553.6	44.1	392.0	44.8	W

DECLINATION. Magnet untouched, Jan. 0^d—Feb. 15^d.BIFILAR. Observed 2^m after the Declination, $k=0.000135$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°	
22 18 0	25 07-64	549-8	43-5	384-1	43-9	H	28 2 0	25 15-17	537-4	45-5	379-4	45-8	W
20 0	07-40	547-1	43-0	386-4	43-2	H	4 0	13-17	542-3	46-2	412-2	46-6	H
22 0	08-06	543-9	42-6	388-2	42-7	W	6 0	10-28	549-5	46-5	397-1	46-9	W
23 0	09-39	541-5	42-4	388-6	42-4	H	7 0	09-29	549-1	46-6	390-5	46-9	W
23 0 0	10-03	539-5	42-3	390-6	42-5	W	8 0	08-73	549-0	46-4	383-1	46-7	W
1 0	11-05	542-4	42-3	389-4	42-7	H	10 0	07-29	547-9	46-2	376-1	46-3	W
2 0	11-44	546-6	42-5	391-7	43-2	W							
4 0	09-64	547-2	43-2	395-7	44-2	H	18 0	25 02-40	546-7	45-0	333-3	45-3	H
6 0	09-08	552-5	43-7	390-4	44-5	W	20 0	07-40	543-3	44-9	368-5	45-2	H
7 0	08-61	553-1	44-0	389-9	44-7	W	22 0	06-97	538-6	44-9	376-9	45-1	W
8 0	08-38	553-7	44-0	389-0	44-8	W	23 0	09-29	536-5	44-8	376-7	45-2	H
10 0	06-84	559-1	44-2	385-1	44-9	W	29 0 0	11-19	539-7	44-9	373-0	45-3	W
							1 0	11-62	512-9	45-0	371-5	45-5	H
18 0	25 08-11	553-2	43-5	374-0	44-0	H	2 0	12-43	549-4	45-2	372-5	45-7	H
20 0	26-37	559-1	43-2	333-0	43-7	H	4 0	10-77	551-7	45-6	383-5	46-2	H
22 0	19-86	537-9	43-1	332-7	43-5	W	6 0	10-28	550-2	45-9	381-9	46-5	W
23 0	13-99	538-2	43-1	338-0	43-3	H	7 0	10-20	551-2	46-0	380-0	46-6	W
24 0 0	12-38	536-0	42-9	365-8	43-3	W	8 0	09-62	555-5	46-1	377-8	46-7	W
1 0	11-84	534-2	42-8	377-6	43-3	H	10 0	08-32	554-5	46-1	375-0	46-5	W
2 0	13-93	538-6	42-9	384-5	43-5	W							
4 0	13-12	538-6	43-7	400-2	44-6	H	18 0	25 08-41	553-8	45-7	367-9	46-0	H
6 0	25 09-08	548-2	44-6	400-6	45-2	W	20 0	08-28	546-4	45-6	372-3	45-8	H
7 1	24 49-54	512-8	44-7	400-0	45-3	W	22 0	08-29	543-1	45-4	372-8	45-6	W
8 0	24 53-15	559-9	44-7	403-4	45-3	W	23 0	10-20	543-7	45-3	371-9	45-5	H
10 0	25 02-12	533-7	44-7	390-7	45-2	W	30 0 0	10-92	548-1	45-3	373-6	45-5	W
							1 0	10-85	542-6	45-2	374-1	45-5	H
25 18 0	25 08-41	547-9	47-0	372-2	47-4	H	2 0	11-51	547-3	45-3	377-7	45-9	W
20 0	07-65	545-4	46-9	374-1	47-4	H	4 0	09-96	550-4	45-8	385-7	46-5	H
22 0	08-52	543-2	47-0	376-2	47-3	W	6 9	10-27	554-6	46-4	385-0	47-0	W
23 0	10-00	542-3	47-0	376-2	47-4	H	7 0	09-74	548-8	46-6	385-9	47-2	W
26 0 0	11-99	540-8	47-1	382-2	47-7	W	8 0	25 08-88	548-0	46-7	386-5	47-3	W
1 0	12-85	540-1	47-3	383-2	48-0	H	10 0	24 58-05	546-6	46-9	385-1	47-4	W
2 0	12-43	542-1	47-6	385-2	48-3	W							
4 0	09-86	546-2	48-2	381-0	49-0	H	18 0	25 05-06	549-7	46-7	367-3	47-0	H
6 0	08-92	547-7	48-6	374-0	49-3	W	20 0	08-88	553-3	46-8	366-7	47-3	H
7 0	08-72	547-7	48-7	371-6	49-3	W	22 0	09-33	543-2	47-0	371-4	47-5	W
8 0	08-41	547-3	48-6	370-0	49-1	W	23 0	10-43	539-0	47-2	375-9	47-7	H
10 0	08-21	547-0	48-5	371-0	48-9	W	31 0 0	11-08	538-3	47-4	375-9	47-8	W
							1 0	11-77	541-2	47-5	377-1	48-0	H
18 0	25 08-18	548-5	47-5	366-2	47-6	H	2 0	11-27	545-1	47-7	379-1	48-3	W
20 0	07-37	546-3	47-3	366-8	47-3	H	4 0	08-86	547-9	48-1	382-3	48-7	H
22 0	08-19	541-0	47-1	370-5	47-2	W	6 0	08-85	545-4	48-5	385-2	49-2	W
23 0	09-69	538-7	47-1	371-0	47-2	H	7 0	09-29	548-7	48-6	379-5	49-3	W
27 0 0	10-83	540-2	47-0	370-6	47-2	W	8 0	08-63	548-1	48-7	378-4	49-4	W
1 0	12-11	543-0	47-1	369-9	47-5	H	10 0	07-78	548-6	48-9	374-6	49-5	W
2 0	14-17	547-9	47-4	370-0	47-9	W							
4 0	11-68	545-6	47-8	375-3	48-5	H	1 18 0	25 11-77	546-8	43-1	375-2	42-9	H
6 0	06-64	548-2	48-2	378-3	48-7	W	20 0	07-52	544-9	42-7	384-1	42-3	H
7 0	08-21	550-5	48-2	372-3	48-7	W	22 0	10-65	543-0	42-3	388-2	41-8	W
8 0	07-74	549-7	48-2	370-5	48-6	W	23 0	12-31	539-0	42-1	387-9	41-7	H
10 0	02-69	549-8	48-0	371-6	48-2	W	2 0 0	14-28	538-7	42-0	389-2	41-9	W
							1 0	14-24	542-0	42-1	395-2	42-5	H
18 0	25 05-43	547-0	46-3	360-8	46-2	H	2 0	14-58	545-1	42-4	401-0	43-1	W
20 0	06-44	546-6	46-0	364-0	45-7	H	4 0	10-58	546-8	43-7	414-7	44-5	H
22 0	08-85	543-5	45-7	365-3	45-5	W	6 0	07-62	544-9	44-4	411-0	45-1	W
23 0	10-50	541-0	45-6	366-2	45-5	H	7 0	06-56	541-7	44-6	410-8	45-3	W
28 0 0	13-12	545-2	45-4	367-3	45-4	W	8 0	07-81	545-6	44-7	400-1	45-3	W
1 0	15-44	542-7	45-4	375-0	45-5	H	10 0	02-52	556-0	44-7	387-5	45-3	W

DECLINATION. Magnet untouched, Jan. 0^d—Feb. 15^d.BIFILAR. Observed 2^m after the Declination, $k=0.000135$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°	
2 18 0	25 06-43	549.8	44.2	375.5	44.7	H	7 2 0	25 13-59	544.0	42.7	389.1	43.6	W
20 0	08-16	549.4	44.4	377.6	45.0	H	4 0	13-46	550.2	43.4	412.9	44.5	H
22 0	09-76	542.1	44.6	382.7	45.2	W	6 0	11-66	543.9	43.8	428.5	44.6	W
23 0	11-84	541.9	44.7	382.1	45.3	H	7 0	08-95	543.8	43.8	423.3	44.6	W
3 0 0	11-21	538.2	44.9	387.0	45.5	W	8 0	08-52	547.8	43.7	412.3	44.4	W
1 0	11-86	540.0	45.1	382.4	45.8	H	10 0	08-75	548.8	43.4	400.0	43.8	W
2 0	12-08	544.0	45.4	381.7	46.2	W							
4 0	08-72	540.6	46.0	397.7	47.0	H	8 18 0	25 07-05	536.9	37.1	387.1	36.6	H
6 0	08-61	550.7	46.4	387.9	47.2	W	20 0	09-44	547.8	36.7	388.6	36.4	H
7 0	08-41	551.1	46.7	387.4	47.4	W	22 0	14-84	542.8	36.4	397.1	36.2	W
8 0	08-59	548.4	46.8	386.7	47.5	W	23 0†	08-85	556.8	36.4	395.1	36.2	H
10 0	08-19	547.6	46.8	384.1	47.3	W	9 0 0	11-22	552.0	36.3	400.4	36.3	W
							1 6	09-46	547.8	36.3	407.3	36.5	H
18 0	25 07-74	547.2	44.4	378.1	44.3	H	2 0	15-62	543.0	36.4	414.3	36.7	W
20 0	08-41	549.1	43.7	379.7	43.2	H	4 0	11-05	540.7	36.8	457.9	37.2	H
22 0	10-53	551.4	43.0	395.1	42.4	W	6 0	09-84	548.5	37.2	424.2	37.7	W
23 0	11-61	546.3	42.7	390.2	42.2	H	7 0	11-07	545.1	37.2	415.9	37.6	W
4 0 0	11-34	542.9	42.5	394.1	42.2	W	8 0	09-69	546.1	37.2	413.1	37.5	W
1 0	12-85	542.7	42.4	388.8	42.4	H	10 0	07-24	542.5	37.0	410.6	37.1	W
2 0	11-28	542.1	42.5	389.7	42.8	W							
4 0	09-15	541.0	42.9	400.6	43.5	H	18 9	25 08-18	540.9	34.7	402.4	34.4	W
6 0	08-18	540.2	43.2	394.7	43.8	W	20 0	08-14	542.4	34.3	401.0	33.9	W
7 0	04-22	543.3	43.3	400.1	43.8	W	22 0	09-27	543.1	33.8	400.5	33.6	H
8 0	07-99	548.6	43.2	398.8	43.7	W	23 0	09-44	544.2	33.7	385.7	33.6	W
10 0	06-86	548.9	43.0	390.6	43.5	W	10 0 0	08-11	546.1	33.7	389.0	34.0	H
							1 20	10-27	546.8	34.0	392.8	34.6	B
18 0	25 08-38	550.0	41.9	382.8	42.2	H	2 0	09-80	555.9	34.4	388.9	35.2	W
20 0	08-14	549.0	41.7	385.1	42.0	H	4 0	10-53	545.5	35.4	395.1	36.3	W
22 0	07-84	544.7	41.5	394.9	41.7	W	6 0	03-06	543.4	36.0	412.4	36.7	H
23 0	09-42	543.8	41.5	394.2	41.7	H	7 0	07-99	543.9	36.0	407.7	36.7	H
5 0 0	10-36	541.0	41.5	396.1	41.9	W	8 0	09-22	547.5	36.0	398.8	36.6	H
1 0	11-22	541.9	41.5	394.2	42.2	H	10 0	08-19	545.3	35.9	396.6	36.5	H
2 0	11-61	541.1	41.9	394.1	42.6	W							
4 0	10-30	545.9	42.6	391.1	43.1	H	18 0	25 08-25	548.6	35.5	386.8	36.0	W
6 0	08-66	549.4	43.0	392.7	43.8	W	20 0	08-80	550.1	35.6	384.1	36.1	W
7 0	06-63	547.4	43.0	392.0	43.7	H	22 0	08-88	549.7	35.6	385.0	36.2	H
8 0	08-45	548.2	43.0	390.7	43.5	H	23 0	10-03	549.8	35.9	385.3	36.6	W
10 0	07-24	550.5	42.7	385.0	42.9	W	11 0 0	10-38	545.0	36.2	389.3	37.0	H
							1 5	10-90	549.1	36.7	390.7	37.7	H
18 0	25 08-14	548.9	40.7	386.0	40.7	H	2 0	11-44	546.5	37.2	389.9	38.4	H
20 0	07-98	548.4	40.3	391.4	40.2	H	4 0	09-82	550.2	38.6	393.3	39.9	W
22 0	07-57	542.8	39.9	399.1	39.7	W	6 0	08-75	548.0	39.5	390.2	40.7	H
23 0	08-59	538.9	39.7	398.9	39.5	H	7 0	08-46	550.4	39.8	386.8	40.9	H
6 0 0	10-68	538.8	39.6	396.4	39.6	W	8 0	07-18	546.5	39.8	387.2	41.0	H
1 0	12-01	540.7	39.6	402.4	39.8	H	10 0	07-74	547.1	39.9	385.8	41.0	H
2 0	12-22	543.6	39.6	399.1	40.1	W							
4 0	10-03	546.7	40.0	402.1	40.5	H	18 0	25 07-47	549.2	39.5	374.8	39.9	W
6 0	07-85	548.8	40.3	402.9	40.9	W	20 0	08-46	548.4	39.0	373.0	39.3	W
7 0	08-45	549.6	40.4	402.9	41.3	W	22 0	09-35	547.6	38.7	369.0	38.7	H
8 0	08-43	550.7	40.6	400.0	41.5	W	23 0	11-89	544.7	38.6	368.4	38.7	W
10 0	08-80	550.3	41.2	398.3	42.2	W	12 0 0	15-01	539.5	38.5	369.5	38.5	H
							1 0	13-90	545.1	38.7	379.2	39.3	H
18 0	25 04-21	552.5	42.6	368.9	43.2	H	2 0	13-79	551.0	39.0	385.9	40.2	H
20 0	08-31	551.3	42.5	368.9	43.2	H	4 0	10-43	550.0	40.7	391.6	42.2	H
22 0	10-81	542.0	42.5	380.1	43.2	W	6 0	09-32	549.3	42.7	382.8	44.0	H
23 0	11-44	542.8	42.5	381.2	43.2	H	7 0	08-79	560.8	43.2	377.8	44.5	H
7 0 0	11-64	545.2	42.5	383.0	43.2	W	8 0	08-75	550.9	43.5	373.3	44.6	H
1 13	13-52	540.9	42.5	388.8	43.5	H	10 0	02-59	555.3	43.8	366.3	44.7	H

DECLINATION. Magnet untouched, Jan. 0^d—Feb. 15^d.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

DAILY OBSERVATIONS OF MAGNETOMETERS, FEBRUARY 12—23, 1846.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°	
12 18 0	25 07.32	547.8	42.0	365.9	42.1	W	18 2 0	25 12.82	541.6	44.0	372.7	44.7	H
20 0	07.54	546.2	41.4	367.1	41.1	W	4 0	25 12.48	543.7	44.8	385.7	45.7	W
22 0	08.31	542.5	40.9	371.7	40.8	H	6 0	24 59.64	555.7	45.7	389.6	46.2	H
23 0	09.53	542.2	40.7	371.2	40.8	W	7 0	25 04.51	546.6	45.8	385.6	46.5	H
13 0 0	11.01	544.7	40.7	373.1	41.2	H	8 0	25 04.91	544.8	46.0	385.5	46.6	H
1 0	11.25	544.5	40.9	379.7	41.7	B	10 0	24 59.70	546.5	46.5	355.9	46.5	H
2 0	10.83	546.8	41.4	380.4	42.5	H							
4 0	09.26	551.1	43.0	382.0	44.5	H	18 0	25 06.83	547.2	44.8	362.2	45.0	H
6 0	08.14	550.2	44.5	377.4	45.7	H	20 0	07.18	545.0	44.5	364.0	44.7	H
7 0	09.22	552.7	44.9	368.8	45.7	H	22 0	08.05	542.6	44.3	371.1	44.4	W
8 0	09.06	552.7	45.0	365.8	45.7	H	23 0	02.84	540.9	44.1	370.6	44.5	H
10 0	08.82	547.1	44.8	370.3	45.4	H	19 0 0	10.18	540.1	44.1	370.3	44.5	W
							1 0	10.94	542.4	44.1	371.8	44.7	H
18 6	25 04.71	549.7	42.9	356.6	43.0	W	2 0	10.94	544.4	44.3	374.6	44.8	W
20 0	07.37	552.5	42.6	359.3	42.8	W	4 0	08.72	548.5	44.5	377.9	45.2	H
22 0	10.88	542.5	42.3	358.7	42.6	H	6 0	08.09	550.1	44.7	374.7	45.3	W
23 0	12.51	544.5	42.3	355.0	42.6	W	7 0	07.17	550.5	44.7	371.5	45.3	W
14 0 0	13.79	550.7	42.3	358.8	42.7	H	8 0	08.72	551.4	44.7	369.6	45.3	W
1 0	13.76	551.5	42.4	364.7	43.0	H	10 0	07.89	551.6	44.6	365.1	45.1	W
2 0	14.96	550.6	42.6	368.0	43.4	H							
4 0	12.78	572.2	43.2	370.2	44.0	W	18 0	25 06.37	548.3	43.9	363.1	44.3	W
6 0	10.18	552.8	43.7	372.1	44.5	H	20 0	06.81	547.0	43.7	362.9	44.0	W
7 0	09.39	556.0	43.8	368.5	44.6	H	22 0	08.58	543.0	43.4	364.5	43.6	H
8 0	09.05	558.9	44.0	363.1	44.7	H	23 0	09.56	541.3	43.3	365.0	43.5	W
10 0	07.81	550.4	44.0	373.0	44.7	H	20 0 0	10.60	543.6	43.1	366.2	43.5	H
							1 0	10.83	546.5	43.1	365.9	43.5	H
15 18 0	25 07.47	547.7	44.8	425.9	45.0	W	2 0	10.63	550.2	43.2	369.1	43.7	W
20 0	16.65	555.0	44.7	430.8	45.0	W	4 0	08.63	549.8	43.4	371.7	44.0	W
22 0	10.74	539.8	44.6	400.3	45.0	H	6 0	07.24	552.7	43.6	371.3	44.3	H
23 0	14.50	528.5	44.7	413.0	45.2	W	7 0	07.78	553.6	43.7	370.9	44.5	H
16 0 0	13.61	530.2	44.8	421.4	45.5	H	8 0	08.38	553.9	43.7	370.6	44.5	H
1 0	11.89	532.0	45.0	420.5	45.7	H	10 0 †	00.84	552.6	43.8	370.9	44.5	H
2 0	10.65	537.3	45.5	383.3	46.3	B							
4 0	08.10	559.2	46.3	382.8	47.2	B	18 0	25 05.22	549.4	43.9	367.1	44.5	W
6 0	25 05.55	551.2	47.2	385.7	47.5	H	20 0	06.84	552.4	44.1	364.1	44.8	W
7 0†	24 49.48	533.8	47.2	382.4	47.7	H	22 0	07.38	548.9	44.4	363.1	45.3	H
8 0	24 53.88	561.0	47.2	363.8	48.0	H	23 0	08.82	544.3	44.9	365.2	45.8	W
10 0	24 57.62	535.0	47.3	354.5	47.7	H	21 0 0	09.76	547.3	45.3	367.3	46.4	H
							1 0	10.54	548.8	45.8	368.9	46.7	H
18 0	25 06.97	547.0	45.9	348.8	46.0	W	2 0	10.53	547.8	46.3	372.2	47.3	W
20 0	07.35	543.4	45.6	352.9	45.6	W	4 0	09.56	548.7	47.3	376.5	48.3	B
22 0	09.54	543.2	45.2	355.3	45.2	H	6 0	08.39	547.5	48.1	380.4	49.0	H
23 0	09.71	541.1	45.1	355.1	45.3	W	7 0	02.35	553.0	48.2	382.2	49.2	H
17 0 0	09.02	545.7	45.2	357.5	45.7	H	8 0	09.02	550.8	48.3	371.8	49.2	H
1 0	10.54	547.7	45.4	360.3	46.2	H	10 0	05.45	550.0	48.4	369.0	49.2	H
2 0	09.64	545.5	45.7	365.4	46.5	H							
4 0	10.98	554.2	46.1	366.5	46.8	W	22 18 0	25 05.18	551.7	49.8	343.3	50.1	W
6 0	05.79	551.5	46.3	373.6	47.0	H	20 0	05.58	551.8	49.9	342.1	50.2	W
7 0	07.13	548.3	46.4	369.7	47.0	H	22 0	06.90	551.6	50.0	347.0	50.3	H
8 0	08.56	550.5	46.4	367.1	47.0	H	23 0	07.78	548.6	50.0	349.9	50.4	W
10 0	00.44	542.9	46.4	347.8	46.7	H	23 0 0	08.79	547.0	50.1	348.5	50.5	H
							1 6	08.68	550.6	50.4	343.4	50.8	H
18 0	25 05.77	545.6	44.8	353.3	44.8	W	2 0	07.98	550.1	50.6	345.1	51.2	H
20 0	06.21	547.4	44.4	354.6	44.3	W	4 0	08.36	549.1	51.1	349.1	51.9	W
22 0	08.34	542.7	43.9	353.9	43.9	H	6 0	08.43	549.3	51.5	341.5	52.1	H
23 0	09.71	539.6	43.8	360.5	43.9	W	7 0	07.94	550.6	51.6	341.8	52.2	H
18 0 0	11.93	541.2	43.8	362.9	44.0	H	8 0	07.60	551.8	51.6	341.2	52.1	H
1 0	11.91	544.1	43.8	365.9	44.3	H	10 0	07.07	552.1	51.4	343.8	52.0	H

DECLINATION. Torsion removed, Feb. 15th 23^h, -9°; 16th 5^h, +5°. Effect of +10° of torsion = -0°.84.
 BIPIALAR. Observed 2^m after the Declination, k=0.000135. BALANCE. Observed 3^m after the Declination, k=0.000010.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
23 18 0	25 05.89	551.4	50.7	339.0	50.9	W	28 2 0	25 12.87	550.8	50.2	341.9	51.0	H
20 0	06.16	548.5	50.6	340.0	50.8	W	4 0	09.32	550.9	51.0	383.1	51.8	W
22 0	06.86	546.9	50.5	343.4	50.7	H	6 0	06.79	548.8	51.5	379.2	52.2	H
23 0	08.08	545.8	50.5	341.8	50.8	W	7 0	07.37	550.7	51.6	369.5	52.2	W
24 0 0	10.11	548.1	50.6	342.4	51.0	H	8 0	06.76	552.0	51.6	368.0	52.2	H
1 0	10.09	549.9	50.8	343.0	51.2	H	10 0	03.47	549.9	51.5	364.4	51.7	H
2 0	10.13	551.6	51.0	344.0	51.5	H							
4 0	08.36	551.3	51.6	345.9	52.4	W	1 18 0	25 05.94	547.1	48.4	375.4	48.6	W
6 0	07.91	550.0	52.2	332.6	52.2	H	20 0	05.49	545.0	48.3	375.2	48.5	W
7 0	07.74	551.9	52.3	337.9	52.7	H	22 0	04.89	537.8	48.2	371.5	48.5	H
8 0	07.18	552.9	52.3	338.8	52.7	H	23 0	07.78	540.1	48.2	367.6	48.7	H
10 0	06.66	550.1	52.1	341.6	52.5	H	2 0 0	09.98	534.2	48.4	366.1	49.0	H
							1 0	12.51	535.3	48.8	365.1	49.7	H
18 0	25 04.76	547.6	51.8	338.1	51.8	W	2 0	15.24	544.3	49.4	365.2	50.2	H
20 0	05.27	546.3	51.6	340.2	51.4	W	4 0	11.54	545.1	50.2	382.8	50.9	H
22 0	06.06	543.7	51.0	341.1	51.1	H	6 0	07.45	549.6	50.4	386.2	50.9	H
23 0	08.46	543.4	51.0	338.7	51.1	W	7 0	07.74	551.8	50.4	375.9	50.6	H
25 0 0	10.47	545.0	51.1	339.0	51.3	H	8 0	07.57	552.0	50.2	372.6	50.5	H
1 0	11.30	549.1	51.1	336.8	51.5	H	10 0	06.43	555.6	49.8	365.9	49.8	H
2 0	11.08	550.6	51.3	338.5	51.7	H							
4 0	08.43	556.2	51.7	350.7	52.1	W	18 0	25 05.76	547.1	47.8	372.3	47.7	H
6 0	11.55	559.0	51.7	358.5	52.1	H	20 0	04.48	544.4	47.4	378.5	47.2	H
7 0	14.33	551.1	51.6	361.9	52.0	H	22 0	05.35	538.1	47.2	375.7	47.1	W
8 0	11.77	545.9	51.6	368.2	51.7	H	23 0	07.98	535.8	47.2	372.1	47.2	H
10 0†	15.76	522.6	51.1	416.9	51.0	H	3 0 0	10.90	536.6	47.2	366.9	47.4	H
							1 0	13.14	541.7	47.4	362.9	47.8	W
18 0	25 05.29	544.2	48.3	375.9	47.7	W	2 10	13.59	547.5	47.7	369.0	48.4	W
20 0	06.68	540.2	47.7	379.0	47.1	W	4 0	10.74	552.9	48.4	383.4	49.2	W
22 0	09.32	540.0	47.2	376.6	46.8	H	6 0	04.81	548.7	49.0	391.4	49.6	W
23 0	09.29	542.2	47.1	373.1	46.8	H	7 0	07.65	553.5	49.2	382.5	49.8	W
26 0 0	10.56	548.9	47.1	369.5	47.1	W	8 0	07.42	552.3	49.3	377.6	49.8	W
1 0	10.90	549.0	47.3	365.8	47.5	B	10 0	06.23	553.1	49.4	371.0	49.9	W
2 0	11.64	546.4	47.6	371.9	48.2	W							
4 0	11.08	540.0	48.8	400.2	49.6	H	18 0	25 07.34	548.7	49.5	364.8	49.8	W
6 0	08.43	557.2	50.0	401.9	50.6	H	20 0	04.91	549.2	49.4	362.1	49.8	W
7 0†	07.37	546.4	50.2	418.0	51.0	H	22 0	05.38	540.0	49.5	361.4	49.8	H
8 0	06.86	545.2	50.4	418.3	51.0	H	23 0	08.28	536.6	49.6	362.0	49.9	W
10 0	02.35	541.4	50.5	382.4	51.0	H	4 0 0	11.67	539.7	49.6	357.0	50.0	H
							1 0	13.93	536.6	49.7	360.6	50.2	H
18 0	25 05.60	544.6	49.7	353.2	49.8	W	2 0	15.85	543.6	49.8	363.4	50.2	H
20 0	09.89	539.6	49.5	352.3	49.6	W	4 0	11.27	553.9	50.1	374.8	50.7	W
22 0	11.34	536.5	49.4	348.3	49.7	H	6 0	06.73	553.2	50.4	379.6	51.0	H
23 0	09.32	543.5	49.6	348.4	50.0	W	7 0	07.17	554.0	50.5	372.1	50.7	H
27 0 0	11.10	547.0	49.8	352.4	50.5	H	8 0	06.76	553.9	50.4	368.3	50.5	H
1 0	11.30	548.8	50.1	350.6	50.8	H	10 0	00.28	562.3	50.0	360.5	50.0	H
2 0	11.39	550.8	50.6	359.6	51.5	H							
4 0	08.68	547.9	51.5	373.8	52.3	W	18 0	25 05.77	550.3	47.8	357.5	47.3	W
6 0	06.86	548.2	52.0	370.1	52.6	H	20 0	05.50	547.5	47.1	366.1	46.5	W
7 0	25 05.32	550.6	52.1	365.4	52.6	H	22 0	07.91	540.6	46.6	372.7	46.2	H
8 0	24 56.63	551.4	52.0	366.7	52.7	B	23 0	09.86	542.6	46.4	371.9	46.2	W
10 0	25 04.86	545.0	52.0	361.7	52.5	B	5 0 0	12.83	542.4	46.4	373.3	46.6	H
							1 2	12.72	546.9	46.7	373.4	47.0	H
18 0	25 03.74	545.9	50.6	359.9	50.5	W	2 3	13.59	556.5	47.0	376.9	47.5	H
20 0	05.65	542.9	50.2	363.0	49.9	W	4 0	07.51	553.4	48.4	385.6	49.3	W
22 0	07.04	538.8	49.7	366.1	49.5	H	6 0	07.40	553.2	49.8	374.4	50.5	H
23 0	08.59	539.7	49.6	367.5	49.7	W	7 0	07.60	552.6	50.3	368.1	50.7	H
28 0 0	10.40	542.2	49.7	365.6	50.0	H	8 0	07.51	551.9	50.2	364.7	50.5	H
1 0	11.74	546.8	50.0	365.7	50.4	H	10 0	06.79	550.2	48.8	361.2	49.7	H

DECLINATION. Magnet untouched, Feb. 16^d—Apr. 13^d.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.		
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			d.	h.	m.	Sc. Div.	°	Mic. Div.	°		
5 18 0	25 05-13	539-8	45-9	366-7	45-1	W	11	2	0	25	11-51	552-9	48-0	364-3	49-0	W
20 0	05-02	550-0	44-9	373-4	44-0	W		4	0		09-57	558-9	49-2	370-3	50-2	H
22 0	07-54	542-4	44-0	378-4	43-2	H		6	0		08-56	555-3	50-4	366-5	51-1	W
23 0	08-75	540-5	43-7	376-7	43-2	W		7	0		10-09	559-4	50-7	359-3	51-3	W
6 0 0	12-23	544-5	43-5	370-8	43-2	H		8	0		07-45	556-1	50-7	362-1	51-0	W
1 3	11-96	542-2	43-5	376-1	43-5	H		10	0		02-45	549-1	50-3	366-0	50-3	W
2 0	11-69	547-3	43-6	378-9	44-0	H										
4 0	08-82	552-7	44-7	387-9	45-4	W		18	0		25 05-79	548-9	46-7	356-3	46-0	H
6 0	06-86	552-0	45-6	385-1	46-2	H		20	0		05-35	549-5	46-0	357-6	45-6	H
7 0	06-90	553-4	45-8	383-6	46-7	H		22	0		04-98	540-3	45-7	361-8	45-5	W
8 0	07-13	554-6	45-8	380-8	46-3	H		23	0		08-38	536-5	45-7	364-9	45-7	H
10 0	06-76	550-8	45-7	383-5	46-1	H	12	0	0		11-61	543-8	45-8	361-2	46-1	W
								1	0		13-64	547-4	46-1	357-3	46-7	H
18 0	25 05-79	551-5	44-2	376-4	44-2	W		2	0		12-92	554-4	46-7	354-6	47-3	W
20 0	05-35	550-0	43-7	372-8	43-6	W		4	0		09-66	555-0	48-1	371-9	49-0	H
22 0	05-82	544-9	43-3	376-9	43-5	H		6	0		07-07	550-8	49-1	375-2	49-8	W
23 0	07-94	544-4	43-3	366-2	43-5	W		7	0		25 06-56	548-4	49-5	370-7	50-0	W
7 0 0	10-43	546-6	43-3	364-1	44-0	H		8	0		24 58-55	549-8	49-6	370-8	49-9	W
1 0	11-96	549-7	43-8	370-2	44-8	H		10	0		25 03-82	553-8	49-5	364-5	49-8	W
2 0	12-33	552-2	44-4	375-0	45-5	H										
4 0	10-30	551-0	45-9	386-1	46-9	W		18	0		25 03-37	551-0	48-3	352-4	48-5	H
6 0	06-57	552-7	46-7	381-0	47-5	H		20	0		09-39	546-5	48-0	349-8	48-3	H
7 0	08-08	555-3	46-9	376-8	47-5	H		22	0		06-53	546-1	48-0	348-8	48-2	W
8 0	07-85	554-3	46-9	373-7	47-5	H		23	0		08-58	548-1	47-9	331-7	48-2	H
10 0	04-71	547-5	46-9	382-4	46-7	H	13	0	0		11-61	549-9	48-0	328-3	48-4	W
								1	0		17-54	534-0	48-2	341-0	48-9	H
8 18 0	25 05-63	548-8	42-6	373-6	42-0	H		2	0		22-96	541-4	48-7	363-2	49-4	W
20 0	05-06	546-7	41-7	375-9	40-8	H		4	0		26-18	559-8	49-8	437-1	50-7	H
22 0	05-49	540-5	40-8	381-5	40-2	W		6	0		15-24	561-8	50-7	575-5	51-5	W
23 0	07-00	538-4	40-7	383-4	40-5	H		7	0		09-02	540-9	50-8	472-1	51-5	W
9 0 0	09-73	540-0	40-7	383-1	40-8	W		8	0		05-43	540-9	50-8	454-9	51-5	W
1 0	11-74	542-9	40-8	380-2	41-2	H	10	0	0		10-11	522-6	50-4	396-5	50-6	W
2 0	11-88	545-2	41-1	383-4	41-8	W										
4 0	09-29	551-2	42-1	392-9	43-0	H		18	0		25 02-32	545-2	48-2	345-3	48-2	H
6 0	05-08	547-6	43-0	401-2	43-8	W		20	0		14-65	531-7	47-9	319-5	48-0	H
7 0	07-34	551-2	43-3	394-7	44-3	W		22	0		09-22	531-1	47-8	350-3	47-8	W
8 0	07-02	553-3	43-6	390-3	44-5	W		23	0		11-44	529-5	47-8	363-9	48-2	H
10 0	06-63	553-8	43-9	385-9	44-7	W	14	0	0		17-53	527-4	48-0	368-6	48-6	W
								1	0		15-32	528-1	48-5	381-5	49-2	H
18 0	25 05-99	552-2	43-2	377-7	44-0	H		2	0		17-56	531-9	49-0	417-8	49-8	W
20 0	05-79	552-5	43-2	376-2	43-8	H		4	0		10-50	561-1	49-9	496-3	50-5	H
22 0	06-19	549-6	43-4	376-2	44-0	W		6	0		25 08-25	548-3	50-4	471-4	51-0	W
23 0	08-58	548-5	43-6	376-0	44-5	H		7	0		24 55-96	548-5	50-6	448-3	51-0	H
10 0 0	11-55	549-6	44-0	370-5	45-0	W		8	0		24 56-03	543-4	50-5	391-2	51-0	H
1 0	12-76	549-1	44-6	367-7	45-7	H		10	0		25 08-88	543-4	50-3	319-8	50-4	W
2 0	13-12	552-2	45-4	372-0	46-7	W										
4 0	10-56	552-8	47-0	382-4	48-4	H	15	18	0		25 04-62	543-5	46-5	371-5	46-5	H
6 0	07-11	550-4	47-9	381-0	49-0	W		20	0		05-92	546-1	46-2	373-5	46-7	H
7 0	08-09	550-3	48-0	375-4	48-9	W		22	0		05-99	538-5	46-4	378-3	46-9	W
8 0	07-31	554-7	48-0	371-4	48-9	W		23	0		09-76	539-1	46-6	377-1	47-1	H
10 0	06-29	553-4	47-8	367-6	48-5	W	16	0	0		11-84	536-7	46-7	372-3	47-2	W
								1	0		15-47	539-9	46-9	370-1	47-4	B
18 0	25 05-79	552-6	47-0	360-9	47-5	H		2	0		19-55	552-8	47-1	368-8	47-7	W
20 0	05-13	550-1	46-8	363-1	47-2	H		4	0		12-48	546-1	47-3	381-4	48-0	H
22 0	06-23	544-1	46-7	365-9	47-1	W		6	0		08-66	549-5	47-6	396-1	47-8	W
23 0	08-14	546-5	46-8	367-1	47-3	H		7	0		25 03-00	553-2	47-3	411-3	47-3	W
11 0 0	10-51	546-4	47-0	366-6	47-7	W		8	0		24 59-04	549-0	47-0	407-0	47-1	W
1 0	11-37	550-3	47-4	362-8	48-2	H		10	0		25 10-30	552-8	46-3	264-4	46-5	W

DECLINATION. Magnet untouched, Feb. 16^d—Apr. 13^a.BIFILAR. Observed 2^m after the Declination, $k=0\cdot000135$.BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
16 18 0	25 06.19	542.3	43.3	335.8	42.5	H	21 2 0	25 14.37	539.8	35.1	371.9	35.7	W
20 0	04.64	544.0	42.2	353.6	41.2	H	4 0	11.00	547.7	35.4	388.5	36.0	H
22 0	05.85	536.8	41.3	367.3	40.4	W	6 0	09.37	552.7	36.0	399.4	36.8	W
23 0	10.23	534.7	41.0	368.1	40.4	H	7 4	07.84	558.4	36.3	397.8	37.1	W
17 0 0	13.32	529.2	40.8	379.1	40.4	W	8 0	04.55	552.0	36.5	403.0	37.2	W
1 0	16.92	524.2	40.7	401.8	40.4	H	10 10	06.06	548.1	36.6	397.1	37.2	W
2 0	22.25	537.4	40.6	422.1	40.4	W							
4 0	16.21	556.4	40.6	430.7	40.8	H	22 18 0	25 03.54	551.1	38.3	365.0	38.2	H
6 0	07.27	544.8	41.0	439.7	41.4	W	20 0	03.00	547.2	37.8	371.8	37.5	W
7 0	07.89	552.1	41.2	424.6	41.4	W	22 0	03.79	534.8	37.4	376.2	37.5	W
8 0†	05.94	543.6	41.3	423.4	41.3	W	23 0	06.66	533.7	37.5	370.1	37.8	H
10 0†	01.85	542.1	40.9	333.0	40.9	W	23 0 0	10.30	534.5	37.8	365.4	38.5	W
							1 0	12.45	538.3	38.4	365.6	39.5	H
18 0	25 07.57	549.4	38.8	352.8	38.5	H	2 0	13.39	542.8	39.0	371.3	40.3	W
20 0	07.72	533.0	38.4	379.8	38.2	H	4 0	10.83	550.7	40.2	380.3	41.5	H
22 0	04.89	536.3	38.1	390.7	37.8	W	6 0	08.21	562.0	41.2	377.7	42.4	W
23 2	06.73	528.9	38.0	381.3	38.0	H	7 0	07.20	559.9	41.6	375.6	42.6	W
18 0 0	12.04	517.8	38.2	388.3	38.5	W	8 0	07.55	557.7	41.7	376.1	42.8	W
1 0	14.64	542.0	38.7	385.8	39.2	H	10 0	06.50	553.4	41.8	373.9	42.6	W
2 0	17.09	539.9	39.1	389.9	40.0	W							
4 0	13.39	541.8	40.2	410.0	41.0	H	18 0	25 04.78	549.9	40.7	363.3	41.2	H
6 0	07.67	549.5	40.5	398.3	41.1	W	20 0	02.75	548.4	40.4	367.4	40.7	H
7 0	06.79	548.6	40.4	395.7	40.9	W	22 0	03.60	531.5	40.3	367.7	40.8	W
8 0	25 06.98	550.7	40.1	387.4	40.5	W	23 0	07.89	534.4	40.5	370.3	41.3	W
10 0	24 58.29	574.8	39.6	364.9	39.7	W	24 0 0	11.84	535.0	40.9	363.6	41.9	W
							1 0	14.73	538.9	41.6	364.3	42.7	B
18 0	25 05.27	543.9	35.3	376.8	34.0	H	2 0	15.47	544.8	42.3	363.5	43.6	W
20 0	04.61	540.4	33.7	380.7	32.2	H	4 0	15.41	561.0	44.0	370.1	45.5	H
22 0	05.58	533.2	32.4	377.5	30.9	W	6 0	07.67	557.9	45.5	378.4	46.6	W
23 0	08.85	530.0	32.0	375.5	31.0	H	7 0	07.02	548.7	45.8	384.3	46.8	W
19 0 0	10.40	531.1	31.9	377.3	31.4	W	8 0	05.72	554.9	46.1	385.0	47.0	W
1 0	12.28	534.3	32.0	381.8	32.3	H	10 0	06.32	554.5	46.0	370.9	46.7	W
2 0	14.15	543.9	32.6	387.4	33.4	W							
4 0	11.54	550.4	35.0	406.1	36.4	H	18 0	25 04.22	550.7	43.2	356.7	43.3	H
6 0	08.99	550.4	37.3	404.8	38.2	W	20 0	01.41	551.4	42.7	359.4	42.5	W
7 0	04.05	554.7	38.0	404.3	38.7	W	22 0	02.79	537.1	42.2	359.0	42.2	H
8 0	06.86	550.9	38.2	394.8	38.7	W	23 0	06.39	532.0	42.0	358.2	42.2	W
10 0	05.60	557.9	37.9	378.8	38.3	W	25 0 0	10.23	533.9	42.1	349.3	42.6	W
							1 0	13.43	537.4	42.3	345.3	43.0	B
18 0	25 05.15	548.6	35.3	373.8	35.1	H	2 0	14.01	547.0	42.7	350.8	43.7	W
20 0	04.17	548.1	34.6	379.1	34.2	H	4 0	09.46	555.7	44.0	362.9	45.2	H
22 0	03.52	534.1	34.2	377.7	34.0	W	6 0	06.44	557.6	45.7	368.6	46.8	W
23 0	07.05	529.2	34.2	376.9	34.4	H	7 0	05.06	560.9	46.4	363.4	47.3	W
20 0 0	11.82	527.8	34.3	374.9	34.8	W	8 0	06.41	560.2	46.8	356.5	47.5	W
1 6	16.75	534.3	34.8	375.2	35.6	H	10 0	06.76	560.4	46.9	353.3	47.3	W
2 0	15.89	539.6	35.4	379.7	36.6	W							
4 0	13.36	552.3	37.2	389.9	38.5	H	18 0	25 05.79	553.7	43.5	347.9	43.3	H
6 0	08.18	555.5	39.1	398.5	40.3	W	20 0	08.73	553.9	42.7	346.9	42.2	W
7 0	07.87	553.4	40.0	399.2	41.0	H	22 0	04.58	544.6	42.1	354.8	41.9	W
8 0	07.98	552.9	40.2	391.3	41.0	H	23 0	09.24	543.0	42.0	348.2	42.0	B
10 0	02.13	556.6	39.8	375.4	40.3	W	26 0 0†	16.36	524.2	42.0	353.7	42.3	B
							1 0	15.81	541.3	42.3	349.0	43.0	H
18 0	25 04.64	547.4	35.5	365.8	34.8	H	2 0†	22.10	565.9	42.8	354.6	43.6	W
20 0	02.30	545.9	34.8	375.1	34.5	H	4 0	09.66	556.2	44.0	395.1	45.6	H
22 0	04.01	538.7	34.7	371.9	34.4	W	6 0	05.69	555.0	45.3	379.6	46.2	W
23 0	03.77	539.2	34.6	368.4	34.6	W	7 0	06.24	551.2	45.6	375.8	46.4	W
21 0 0	09.39	540.8	34.7	365.4	35.0	W	8 0	04.28	553.0	45.6	374.8	46.5	W
1 6	13.09	540.6	34.9	369.7	35.5	B	10 5	00.65	553.8	45.6	353.7	46.1	W

DECLINATION. Magnet untouched, Feb. 16^d—April 13^d.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Gottingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
26 18 0	25 06.29	552.6	43.2	349.5	43.3	H	1 2 0	25 16.35	544.0	46.1	332.8	46.7	W
20 0	04.58	548.1	42.8	357.4	42.8		4 0		555.1	46.4	350.6	47.2	H
22 0	03.20	535.0	42.6	366.3	42.8		6 0	07.72	551.7	47.1	372.2	47.8	W
23 0	08.01	529.4	42.7	362.8	43.0		7 0		553.5	47.3	374.6	48.0	W
27 0 0	09.77	536.1	42.8	360.8	43.4	W	8 0	07.81	556.1	47.4	366.8	48.0	W
1 0	13.52	542.7	43.1	361.5	43.9	B	10 0		555.2	47.4	361.8	48.0	W
2 0	14.37	549.7	43.7	363.3	44.6								
4 0	09.39	550.6	45.0	389.5	46.0	B	18 0	25 09.53	562.1	46.2	332.2	46.4	H
6 0	25 06.01	561.8	46.2	382.1	47.1	W	20 0		552.3	45.8	342.0	46.0	H
7 0	24 59.16	543.0	46.7	388.9	47.4		22 0	04.78	536.6	45.9	354.4	46.3	W
8 0	25 03.48	554.8	46.9	378.2	47.5	W	23 3		534.0	46.3	349.8	46.9	W
10 0	06.90	554.0	46.8	361.6	47.2	W	2 0 0	10.21	536.1	46.8	340.2	47.7	W
							1 0		534.9	47.4	332.6	48.5	H
18 0	25 05.02	551.4	44.4	351.6	44.3	H	2 0	16.25	538.4	48.3	341.6	49.5	W
20 0	02.45	547.9	43.8	356.8	43.7	H	4 0	11.48	555.3	50.3	356.9	51.5	H
22 0	03.50	530.6	43.5	356.7	43.5	W	6 0	07.74	562.3	51.4	349.9	52.5	W
23 0	07.47	521.0	43.4	353.6	43.7	H	7 0	06.70	561.3	51.7	346.4	52.6	W
28 0 0	12.67	526.5	43.6	346.0	44.1	W	8 0		558.8	51.8	345.7	52.5	W
1 0	16.59	535.0	43.8	345.9	44.5	B	10 0	06.66	559.8	51.4	332.1	51.8	W
2 0	15.65	545.0	44.2	357.0	45.0	W							
4 0	12.31	548.3	45.0	381.6	46.0	H	18 0	25 04.14	554.4	49.0	347.5	48.9	H
6 0	07.13	556.2	45.7	389.6	46.3	W	20 0		553.2	48.5	349.7	48.3	H
7 0	07.34	557.9	45.9	372.6	46.3	W	22 0	07.34	543.7	48.0	331.6	47.7	W
8 0	07.20	556.2	45.9	368.2	46.2	W	23 0		535.5	47.9	331.3	47.5	B
10 0	05.52	553.5	45.4	361.9	45.4	W	3 0 0	13.46	537.7	47.7	318.7	47.4	W
							1 0		542.2	47.7	324.1	47.2	H
29 18 0	25 06.06	554.3	41.8	353.3	41.7	H	2 0	16.36	545.9	47.4	326.9	47.1	W
20 0	02.15	549.0	41.3	360.3	41.3	H	4 0	13.19	547.1	47.2	346.4	47.0	H
22 0	04.35	533.0	41.2	364.6	41.4	W	6 0	07.17	555.7	47.1	364.6	46.9	W
23 0	08.48	526.6	41.2	358.9	41.8	H	7 0	06.10	553.8	47.0	362.8	46.8	W
30 0 0	10.72	527.5	41.7	352.3	42.7	W	8 0		553.1	46.9	355.7	46.6	W
1 0	18.63	529.1	42.5	350.1	43.9	H	10 0	05.94	550.9	46.3	361.7	45.7	W
2 0	19.88	538.5	43.6	351.9	45.0	W							
4 0†	05.32	561.1	45.7	394.3	47.2	H	18 0	25 04.21	550.7	42.2	365.7	41.2	H
6 0	08.68	550.9	47.5	387.8	48.7	W	20 0		548.7	41.2	376.3	40.2	H
7 0	08.18	555.8	47.9	373.4	48.8	W	22 0	01.48	534.3	40.7	380.8	40.1	W
8 0	05.62	555.4	48.1	373.3	48.7	W	23 0		532.0	40.7	382.1	40.5	H
10 0	06.23	554.1	47.6	362.2	48.1	W	4 0 0	07.67	531.5	40.9	375.1	41.1	B
							1 0		539.8	41.3	358.2	41.8	B
18 0	25 05.52	552.4	44.8	357.1	44.7	H	2 0	17.39	546.7	41.8	355.4	42.4	B
20 0	01.95	549.3	44.1	364.3	43.5	H	4 0		557.0	42.3	371.5	43.0	H
22 0	02.05	536.1	43.4	363.8	43.2	W	6 0	06.59	552.6	42.6	397.8	43.0	W
23 0	05.85	532.4	43.2	360.9	43.3	H	7 0	04.07	549.2	42.5	412.6	42.8	W
31 0 0	09.76	530.2	43.3	350.8	43.7	W	8 0		554.7	42.3	397.2	42.5	W
1 0	13.64	533.6	43.7	350.1	44.5	H	10 0	02.77	554.2	41.9	389.4	42.0	W
2 0	16.75	539.0	44.3	351.3	45.2	W							
4 0	11.98	552.4	45.7	363.9	46.7	H	5 18 0	25 04.73	548.1	40.2	338.1	40.2	W
6 0	07.74	554.3	46.7	367.0	47.5	W	20 0		551.2	39.9	340.6	40.0	W
7 0	07.74	557.7	46.9	364.8	47.7	W	22 0	03.60	543.7	40.0	358.2	40.4	H
8 0	07.38	558.9	47.0	360.3	47.7	W	23 0		535.4	40.3	361.6	41.0	W
10 0	06.83	558.8	47.0	356.5	47.5	W	6 0 0	18.60	530.2	40.9	367.3	42.0	H
							1 0		536.3	41.5	368.0	42.4	B
18 0	25 04.14	555.5	45.7	348.4	46.0	H	2 0	16.33	554.7	42.0	402.4	43.1	W
20 0	03.25	549.8	45.4	349.1	45.7	H	4 0†	25 20.90	585.6	42.8	432.3	43.7	H
22 0	02.96	539.4	45.6	352.2	46.0	W	6 0†	24 56.37	582.4	43.2	524.4	44.1	H
23 0	03.40	556.5	45.7	352.9	46.2	H	7 0	25 11.98	566.0	43.3	507.2	44.1	H
1 0 0	11.79	525.6	45.9	339.7	46.4	W	8 0†	24 46.19	542.7	43.3	462.7	44.0	H
1 0	16.41	541.5	46.0	332.4	46.6	H	10 0†	25 15.31	431.3	43.3	84.0	44.3	H

DECLINATION. Magnet untouched, Feb. 16^a—April 13^d.BIFILAR. Observed 2^m after the Declination, $k=0.000135$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	
6 18 0	25 01.66	535.9	42.1	260.7	42.2	W	11 2 0	25 17.42	533.0	44.5	354.1	45.2	H
20 0	01.86	543.8	41.7	342.1	41.8	W	4 0	13.69	540.9	45.3	368.3	46.0	W
22 0†	15.39	516.8	41.4	366.9	41.7	H	6 0	09.87	568.7	46.0	367.4	46.7	H
23 0	10.31	538.1	41.6	361.3	41.6	W	7 0	02.99	555.1	46.3	389.4	47.0	H
7 0 0	12.80	538.0	41.7	366.1	41.7	H	8 0	05.15	561.2	46.4	380.3	47.2	H
1 0	13.25	544.4	42.0	374.4	43.0	H	10 0	07.78	555.8	46.6	361.0	47.2	H
2 0	13.16	541.2	42.4	376.4	43.3	H							
4 0	06.51	552.8	42.8	391.2	43.7	W	12 18 0	25 02.55	549.4	50.2	338.0	50.2	W
6 0	25 06.03	551.0	43.3	404.4	44.2	H	20 0	24 59.98	547.1	50.0	337.9	50.0	W
7 0†	24 53.17	561.7	43.4	419.0	44.3	H	22 0	25 03.35	532.2	50.0	336.9	50.0	H
8 0	25 02.19	549.6	43.5	409.4	44.5	H	23 0	05.69	533.4	50.0	332.3	50.3	W
10 0	03.50	540.6	43.4	384.3	44.2	H	13 0 0	13.30	522.5	50.1	331.6	50.5	H
							1 0	16.52	541.3	50.4	329.7	51.0	H
18 0	25 07.96	550.3	42.6	301.1	43.0	W	2 0	16.75	545.3	50.8	345.9	51.7	H
20 0	04.64	538.3	42.5	350.8	42.9	W	4 0	17.89	559.5	52.0	369.8	52.9	W
22 0	06.26	530.1	42.4	375.1	43.0	H	6 0	16.28	567.0	53.0	426.0	54.0	H
23 0	06.53	531.9	42.5	373.1	43.2	W	7 0†	13.72	555.9	53.4	470.8	54.5	H
8 0 0	10.27	533.0	42.7	370.9	43.5	H	8 0	02.80	553.9	53.4	452.7	54.7	H
1 0	13.32	528.6	43.0	376.1	43.9	H	10 0	10.06	553.3	53.2	266.9	54.0	H
2 0	15.44	537.0	43.3	379.8	44.5	H							
4 0	10.63	549.4	44.3	386.3	45.3	W	18 0	25 02.40	546.5	51.7	332.0	51.7	W
6 0	06.79	564.4	44.8	390.1	45.5	H	20 0	00.60	543.8	51.2	341.7	51.0	W
7 0	25 03.67	557.4	45.0	399.9	45.6	H	22 0	01.54	535.9	50.8	341.9	50.8	W
8 0	24 59.64	550.2	44.9	395.9	45.5	H	23 0	05.98	533.1	50.9	341.4	51.0	W
10 0	25 06.19	547.4	44.7	379.8	45.2	H	14 0 0	10.99	533.1	51.2	343.1	51.7	H
							1 0	16.32	531.0	51.5	344.6	52.3	H
18 0	25 04.48	544.3	42.9	354.1	42.7	W	2 0	16.91	536.8	51.8	348.8	52.7	H
20 0	00.96	545.4	42.3	365.2	42.3	W	4 0	14.51	561.3	52.8	358.8	54.0	H
22 0	02.08	529.3	41.8	364.7	41.9	H	6 0	07.35	551.6	54.0	360.5	55.0	H
23 0	05.35	526.0	41.9	367.8	42.3	W	7 0	06.07	559.5	54.2	353.9	55.2	H
9 0 0	08.83	526.1	42.2	370.2	43.2	H	8 0†	25 03.93	562.2	54.4	370.1	55.2	B
1 0	13.16	532.1	42.7	368.8	44.0	H	10 0†	24 48.27	554.6	54.6	342.6	55.4	H
2 0	14.15	540.3	43.7	370.7	45.0	H							
4 0	11.34	553.2	45.2	374.3	46.4	W	18 0	25 01.04	552.7	52.6	332.6	52.4	W
6 0	05.90	553.6	46.3	375.7	47.5	H	20 0	01.49	548.9	52.0	333.7	51.6	W
7 0	05.03	557.5	46.6	372.0	47.6	H	22 0	01.68	530.2	51.4	343.6	50.9	H
8 0	04.51	553.9	46.8	371.0	47.7	H	23 0	05.35	529.3	51.2	342.9	50.8	W
10 0	04.95	553.1	46.7	366.5	47.5	H	15 0 0	13.23	533.7	51.1	338.9	50.7	H
							1 0	15.88	530.3	51.8	339.7	50.5	H
18 0	25 05.12	548.7	44.3	355.5	44.0	W	2 0	17.83	546.3	50.7	342.7	50.4	H
20 0	02.59	547.4	43.7	363.9	43.4	W	4 0	16.15	540.0	50.4	370.8	50.1	W
22 0	02.13	535.2	43.4	370.0	43.7	H	6 0	09.08	554.8	50.1	373.3	49.7	H
23 0	05.53	531.1	43.5	367.1	44.2	W	7 0	06.06	561.4	50.0	378.2	49.7	H
10 0 0	08.65	533.8	44.0	363.8	45.2	H	8 0	25 00.87	551.4	49.7	384.3	49.5	H
1 0	11.12	537.8	44.8	358.7	46.2	H	10 0	24 59.90	544.0	49.5	374.6	49.3	H
2 0	13.22	546.1	45.7	354.2	47.2	H							
4 0	12.96	562.4	47.3	360.1	48.5	W	18 0	25 04.04	549.7	48.1	302.4	47.8	W
6 0	05.83	570.0	48.3	399.7	49.5	H	20 0	07.32	546.4	47.8	278.0	47.7	W
7 0	07.84	573.8	48.8	411.7	49.7	H	22 0	08.82	515.6	47.7	321.6	47.9	H
8 0†	02.37	548.8	49.0	443.8	50.0	H	23 0†	08.82	505.9	47.8	340.3	48.0	W
10 0	05.70	556.1	49.0	383.2	49.5	H	16 0 0	15.02	524.3	48.0	409.4	48.5	H
							1 0	19.10	529.4	48.4	394.0	49.0	H
18 0	25 06.64	536.8	45.6	261.0	45.3	W	2 0	19.51	548.6	48.7	412.5	49.5	H
20 0	03.25	548.1	44.9	291.1	44.5	W	4 0†	15.94	566.2	49.7	490.5	50.3	W
22 0	05.72	524.8	44.3	325.7	44.2	H	6 0†	25 10.80	560.2	50.6	501.2	51.5	H
23 5	08.28	523.0	44.2	328.8	44.3	W	7 0†	24 59.32	591.9	51.1	458.3	52.0	H
11 0 0	11.00	526.0	44.2	339.1	44.5	H	8 0†	25 00.53	557.6	51.3	427.1	52.0	H
1 0	14.37	527.1	44.3	347.6	44.8	H	10 0†	24 44.73	585.5	51.6	253.9	52.5	H

DECLINATION. Torsion removed; Apr. 13^d 22^h, + 3°; 14^d 8¹₂^h, + 8¹₂^h; 14^d 20^h, + 3¹₂^h. Effect of + 10° of Torsion, = -0°.84.BIIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.Apr. 13^d 23^h—14^d 7^h. Magnet with the short scale in the declinometer box; 14^d 7¹₂^h the deflecting bar vibrated in the declinometer box. See *Introduction*, p. xvi.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.			
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°				
16	18	0	25	03.09	550.1	50.7	288.4	50.8	W	22	2	0	25	15.27		
	20	0†	09.27	519.3	50.4	328.0	50.5	W		4	0		11.69	555.2		
	22	0	09.35	531.0	50.1	314.8	50.3	H		6	0		07.08	585.7		
	23	0	08.95	526.6	50.0	318.8	50.2	W		7	0		07.07	566.2		
17	0	0	11.41	524.1	50.0	325.2	50.2	H		8	0		03.60	558.5		
	1	0	14.50	531.4	50.0	328.6	50.2	H		10	0		06.32	554.6		
	2	0	16.80	539.1	50.0	336.8	50.5	H						47.3		
	4	0	09.76	555.9	50.0	378.9	50.4	W		18	0		25	02.70		
	6	0	07.40	566.3	50.0	380.1	50.3	H		20	0		01.04	541.1		
	7	0	00.91	560.6	50.0	382.5	50.2	H		22	0		02.62	531.4		
	8	0	06.03	556.3	49.9	371.9	50.2	H		23	0		05.32	532.4		
	10	0	02.01	547.2	49.7	333.4	50.0	H		23	0		08.95	539.1		
										1	0		11.95	540.4		
	18	0	25	04.64	544.1	48.6	346.9	48.5	W		2	0		14.84	541.3	
	20	0	00.84	543.8	48.3	356.4	48.1	W		4	0		09.82	552.1		
	22	0	04.44	528.0	48.1	358.4	48.2	H		6	0		07.40	559.9		
	23	0	05.27	528.9	48.0	356.2	48.3	W		7	0		06.17	558.7		
18	0	0	07.84	525.9	48.0	352.9	48.5	H		8	0		06.04	558.6		
	1	0	12.51	527.3	48.3	348.3	49.0	H		10	0		06.90	563.2		
	2	0	14.13	528.9	48.7	345.1	49.2	H						47.4		
	4	0	10.77	543.6	49.4	351.8	49.9	W		18	0		25	04.86		
	6	0	07.13	554.2	49.8	369.4	50.2	H		20	0		02.25	554.0		
	7	0	06.53	556.8	49.9	373.6	50.3	H		22	0		02.59	537.0		
	8	0	06.14	558.1	49.8	372.2	50.2	H		23	0		04.84	534.1		
	10	0	06.39	551.7	49.7	360.5	49.7	H		24	0		08.92	529.4		
										1	0		13.29	536.7		
	19	18	0	25	01.95	544.5	44.7	324.4	44.0	W		2	0		15.38	538.8
	20	0	01.61	549.0	44.1	330.7	43.8	W		4	0		11.54	534.9		
	22	0	03.55	535.7	44.1	350.1	44.5	H		6	0		07.47	571.4		
	23	0	05.52	532.2	44.3	351.5	44.7	W		7	0		06.43	573.9		
20	0	0	08.92	532.3	43.7	350.7	45.0	H		8	0		05.72	560.1		
	1	0	12.11	535.0	45.2	345.8	46.0	H		10	0		06.23	564.0		
	2	0	13.81	536.4	45.8	346.2	46.7	H						46.5		
	4	0	11.91	542.7	47.4	358.2	48.3	W		18	0		25	08.48		
	6	0	09.02	557.0	48.7	357.3	49.5	H		20	0		05.82	544.1		
	7	0	10.06	565.4	49.2	368.9	49.7	H		22	0		06.21	535.0		
	8	0	00.85	563.5	49.7	390.5	49.8	W		23	0		05.79	529.5		
	10	0	04.58	556.8	49.4	370.9	49.2	H		25	0		08.86	531.8		
										1	0		12.38	533.2		
	18	0	25	02.42	547.2	45.8	359.6	45.1	W		2	0		14.64	544.8	
	20	0	02.23	543.4	45.0	362.9	44.3	W		4	0		11.81	549.3		
	22	0	04.46	534.2	44.6	363.0	44.5	H		6	0		07.40	557.4		
	23	0	06.03	531.0	44.6	362.1	44.7	H		7	0		06.21	565.7		
21	0	0	09.62	533.2	44.8	364.2	46.5	H		8	0		04.51	566.2		
	1	0	12.31	540.1	45.5	343.7	46.2	B		10	0		04.42	556.0		
	2	0	14.15	542.3	46.2	344.1	47.2	H						51.5		
	4	0	11.21	550.5	47.5	357.9	48.3	W		26	18	0	25	03.09		
	6	0	07.98	541.1	48.2	357.3	48.8	H		20	0		03.06	548.1		
	7	0	05.22	555.1	48.2	365.1	49.0	H		22	0		05.13	539.4		
	8	0	06.01	557.9	48.2	363.0	48.8	H		23	0		07.89	532.5		
	10	0	06.79	555.3	47.9	359.5	48.3	H		27	0		10.31	528.0		
										1	0		11.88	537.6		
	18	0	25	02.39	543.8	45.0	344.9	44.4	W		2	0		15.14	552.4	
	20	0	04.49	552.1	44.3	342.9	43.8	W		4	0		07.34	550.1		
	22	0	04.41	538.1	44.0	359.8	44.0	H		6	0		06.86	547.9		
	23	4	06.53	532.4	44.0	362.6	44.3	W		7	0		06.27	562.8		
22	0	0	10.77	541.8	44.0	347.5	44.6	H		8	0		06.46	561.2		
	1	0	15.78	532.6	44.2	350.7	44.7	H		10	0		06.39	555.0		

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
		d. h. m.	° ,	Sc. Div.	°	Mic. Div.	°	d. h. m.	° ,	Sc. Div.	°	Mic. Div.	°	
27	25 04-59	547.6	43.1	361.3	43.0	W	2 2 0	25 11-86	540.6	54.8	312.9	55.9	H	
	04-04	540.8	42.7	369.6	42.5	W	4 0	10-61	557.4	56.4	340.9	57.5	W	
	04-17	532.7	42.7	376.8	43.0	H	6 0	08-08	561.1	57.4	366.6	57.7	H	
	06-73	526.1	42.9	377.0	43.6	W	7 0	25 06-90	568.6	57.4	377.3	58.2	H	
	08-38	526.9	43.4	373.0	44.4	H	8 0	24 59-83	563.9	57.3	388.5	58.0	H	
	11-01	534.2	44.0	366.7	45.2	H	10 0	25 05-23	559.0	56.8	376.4	57.2	H	
	12-90	543.5	44.7	362.5	45.7	H								
	09-35	551.7	45.8	371.1	46.7	W	3 18 0	25 07-00	522.4	53.3	300.9	52.5	H	
	06-81	558.1	46.7	376.1	47.5	H	20 0	24 59-74	545.0	52.7	297.5	51.7	H	
	05-96	561.5	46.9	377.8	47.7	H	22 0	25 05-32	531.7	52.0	322.9	51.0	W	
28	06-16	559.9	47.3	375.4	47.8	W	23 0	07-78	528.6	51.7	327.4	50.7	H	
	05-15	558.7	47.1	365.8	47.5	H	4 0 0	13-16	532.8	51.4	328.1	50.3	W	
							1 0	15-78	537.6	51.1	330.6	50.2	H	
	25 02-35	550.0	43.8	365.5	43.2	W	2 0	18-92	551.2	50.7	335.6	49.7	W	
	01-58	546.5	43.3	368.9	42.7	W	4 0	21-32	579.3	50.1	418.1	49.3	H	
	01-88	539.8	43.0	376.2	43.2	H	6 0	12-23	564.0	49.7	487.4	48.8	W	
	03-32	532.7	43.3	373.9	43.7	W	7 0	08-28	569.4	49.3	460.5	48.5	W	
	14-18	541.3	43.7	369.8	44.7	H	8 0	25 04-88	573.1	49.0	504.2	48.2	W	
	10-30	536.4	44.5	368.0	45.6	H	10 0	24 51-59	490.4	48.5	291.1	47.8	W	
	12-15	553.0	45.4	367.4	46.5	H								
29	12-08	554.3	47.3	360.0	48.3	W	18 0	25 03-06	529.1	47.2	234.7	46.8	H	
	09-60	557.4	48.7	373.0	49.7	H	20 0	02-84	543.5	47.0	293.3	46.9	H	
	08-21	560.1	49.3	374.1	50.4	H	22 0	05-72	535.7	47.4	323.2	47.7	W	
	08-01	563.8	50.2	360.6	50.7	H	23 0	07-27	533.6	48.0	332.0	48.7	H	
	06-59	559.7	50.2	355.1	50.7	H	5 0 0	10-41	535.8	48.7	327.0	49.5	W	
							1 0	13-16	536.7	49.4	327.8	50.2	H	
	25 00-89	553.1	47.5	341.9	47.0	W	2 5	15-25	540.5	50.4	338.6	51.5	W	
	01-68	552.1	46.9	346.1	46.5	W	4 0	13-57	557.2	52.2	356.9	53.5	H	
	03-63	550.2	46.7	354.4	46.6	H	6 0	09-17	564.9	53.9	419.1	55.0	W	
	05-80	541.0	46.7	357.2	46.8	H	7 0	07-37	578.4	54.4	427.8	55.2	H	
30	10-01	530.0	46.9	361.5	47.3	H	8 0	04-75	560.9	54.4	420.7	55.2	H	
	11-77	538.2	47.3	350.8	48.0	H	10 0	03-70	546.4	54.0	393.9	54.7	W	
	13-52	552.6	47.8	347.7	48.5	H								
	10-23	552.9	48.6	368.0	49.3	W	18 0	25 03-47	544.0	51.4	285.4	51.2	H	
	09-02	550.2	49.3	373.9	50.0	H	20 0	03-70	533.8	51.0	333.6	50.7	H	
	07-20	559.9	49.7	369.4	50.3	H	22 0	04-21	533.8	50.8	356.4	50.7	W	
	06-53	560.4	49.8	368.8	50.5	H	23 0	05-22	530.6	50.8	367.7	51.2	H	
	05-89	558.6	49.8	358.4	50.2	H	6 0 0	08-73	532.7	51.0	365.4	51.4	W	
							1 0	10-75	548.4	51.3	362.3	51.8	H	
	25 03-50	555.3	48.6	351.0	48.6	W	2 0	11-42	543.1	51.7	371.7	52.4	W	
1	04-56	552.3	48.3	355.2	48.4	W	4 0	09-35	552.0	52.8	389.5	53.8	H	
	05-06	541.9	48.4	353.9	48.8	H	6 0	07-67	566.6	54.0	401.1	55.1	W	
	07-31	533.8	48.7	353.3	49.4	W	7 0	07-00	555.9	54.7	400.8	55.5	W	
	09-53	529.8	49.4	349.3	49.8	H	8 0	02-64	570.5	54.9	392.3	55.7	W	
	12-45	533.6	49.8	339.8	50.7	H	10 0	03-84	548.7	55.0	388.4	55.5	W	
	13-36	542.4	50.4	336.5	51.3	H								
	10-81	552.6	51.6	350.0	52.6	W	18 0	24 59-57	544.3	52.2	363.5	51.7	H	
	06-03	559.2	52.5	358.4	53.5	H	20 0	25 00-57	538.1	51.7	370.5	51.0	H	
	06-06	560.0	52.7	357.7	53.7	H	22 0	04-66	541.6	51.4	369.6	51.2	W	
	06-23	559.7	52.8	353.7	53.8	H	23 0	06-76	537.6	51.5	366.5	51.7	W	
2	05-79	556.3	52.8	346.6	53.7	H	7 0 0	10-47	541.2	51.7	353.5	52.1	W	
							1 0	13-72	536.1	52.0	357.8	52.7	W	
	25 03-02	553.3	52.9	342.9	53.3	W	2 0	14-11	548.5	52.4	355.5	53.0	W	
	03-23	552.3	52.9	342.0	53.3	W	4 0	11-01	557.2	53.0	360.5	53.9	W	
	03-14	543.4	53.0	337.4	53.8	H	6 0	04-04	577.7	53.7	418.8	54.5	W	
	06-21	531.2	53.3	339.3	54.2	W	7 0	04-98	564.3	54.0	432.1	54.7	W	
	08-34	531.9	53.7	333.3	54.7	H	8 0	02-79	559.0	54.1	430.7	54.8	W	
	11-10	536.7	54.2	321.7	55.2	H	10 0	02-19	547.0	54.0	402.5	54.3	W	

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Sc. Div.	°	Mic. Div.	°	
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	H	d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	W
7 18 0	24 58.42	545.8	51.4	332.1	50.7	H	13 2 0	25 14.26	541.8	56.3	368.0	57.3	W
20 0	25 00.75	544.5	51.1	333.3	50.7	H	4 0	03.87	598.5	57.8	404.6	58.7	H
22 0	05.08	541.9	51.1	358.4	51.0	W	6 0	07.92	576.4	58.9	395.2	59.5	W
23 0	05.89	542.5	51.2	353.7	51.7	H	7 0	09.15	555.7	59.1	375.3	59.6	W
8 0 0	10.18	541.3	51.8	352.4	52.3	W	8 0	04.10	560.6	59.1	389.7	59.5	W
1 0	11.79	551.1	52.4	350.3	53.2	B	10 0	04.34	543.2	58.4	353.8	58.3	W
2 0	11.10	555.5	53.0	352.1	54.1	W							
4 0	09.35	566.2	54.7	364.8	55.7	H	18 0	25 01.24	546.5	54.4	310.1	53.5	H
6 0	07.64	566.3	56.1	393.4	57.0	W	20 0	00.28	530.9	53.7	360.6	53.0	H
7 0	07.60	563.3	56.7	414.5	57.5	W	22 0	01.98	524.5	53.5	364.4	53.2	W
8 0	07.57	560.2	57.0	404.1	57.7	W	23 0	05.35	521.3	53.6	362.5	53.5	H
10 0	25 01.05	556.5	56.8	391.0	57.0	W	14 0 0	07.71	531.6	53.8	362.7	54.0	W
							1 0	10.00	546.4	54.2	363.9	54.7	H
18 0	24 58.69	541.9	52.7	344.8	51.7	H	2 0	10.09	556.9	54.7	376.9	55.3	W
20 0	25 00.40	537.6	52.1	362.3	50.7	H	4 0	07.51	555.6	55.9	405.8	56.4	W
22 0	04.71	533.1	51.7	369.1	51.3	W	6 0	05.72	569.1	57.1	389.1	57.4	W
23 5	07.74	532.7	51.8	370.0	52.2	H	7 0	07.07	559.2	57.6	381.0	57.8	W
9 0 0	08.48	543.9	52.3	353.0	52.8	W	8 0	11.41	576.1	57.9	371.5	58.0	W
1 0	13.19	530.2	52.9	359.5	53.8	H	10 0	06.37	551.4	57.7	348.2	57.4	W
2 0	13.76	564.4	53.8	367.4	54.9	W							
4 0	13.20	557.8	55.7	410.9	56.7	H	18 0	25 01.34	543.3	53.5	309.3	52.5	H
6 0	07.54	562.6	57.0	457.5	57.9	W	20 0	00.99	535.9	52.8	340.1	52.0	H
7 0	06.97	565.8	57.3	415.8	58.0	W	22 0	05.49	519.8	52.5	348.9	52.0	W
8 0	25 06.39	564.1	57.4	413.9	58.1	W	23 0	08.09	522.5	52.5	347.0	52.2	H
10 0	24 57.56	541.1	57.3	372.6	58.0	W	15 0 6	11.64	526.0	52.7	345.7	53.0	W
							1 0	13.56	531.6	53.2	346.3	54.0	H
10 18 0	25 01.70	543.5	53.2	378.3	52.2	H	2 0	11.77	540.8	53.9	356.6	54.8	W
20 0	02.01	539.2	52.7	377.8	51.9	H	4 0	09.42	564.3	55.6	372.5	56.5	H
22 0	05.40	530.8	52.6	364.5	52.3	W	6 0	08.28	568.1	57.3	374.2	58.1	W
23 0	07.81	530.3	52.7	359.2	52.7	H	7 0	09.08	562.9	57.7	369.3	58.3	W
11 0 0	12.11	536.0	53.0	360.5	53.2	W	8 0	08.39	559.3	57.8	366.8	58.3	W
1 0	13.56	536.4	53.4	361.5	53.9	H	10 0	06.97	552.4	57.2	360.8	57.3	W
2 0	13.44	551.8	54.0	357.5	54.7	W							
4 0	10.83	555.4	55.4	357.8	56.0	H	18 0	25 03.45	546.4	52.8	372.2	51.7	H
6 0	07.58	566.4	56.6	368.3	57.1	W	20 0	00.77	535.1	52.2	386.6	51.2	H
7 0	04.49	567.0	57.0	388.3	57.3	W	22 0	00.50	527.9	51.9	379.6	51.5	W
8 0	06.73	570.0	57.2	382.1	57.4	W	23 0	03.94	525.6	52.0	373.9	52.0	H
10 0	25 03.55	557.8	56.8	375.4	56.7	W	16 0 0	07.37	528.7	52.3	362.8	52.7	W
							1 0	09.39	532.8	52.8	356.7	53.5	H
18 0†	24 51.10	529.2	52.8	235.7	52.0	H	2 0	11.10	541.1	53.4	353.6	54.4	W
20 0†	24 58.63	508.2	52.7	286.7	51.7	H	4 0	10.61	548.6	55.2	356.0	56.2	H
22 0	25 11.99	517.7	52.4	282.5	52.3	W	6 0	09.37	565.1	56.5	359.1	57.2	W
23 0†	10.43	492.4	52.6	315.8	52.9	W	7 0	07.67	563.8	56.7	362.9	57.3	W
12 0 0†	19.61	509.1	53.0	324.1	53.8	W	8 0	06.19	567.6	56.8	365.8	57.3	W
1 0†	16.41	522.8	53.8	335.3	54.8	H	10 0	25 04.79	557.7	56.4	369.0	56.4	W
2 0	15.45	534.5	54.8	339.9	55.8	W							
4 0	10.06	555.4	56.6	486.5	57.6	W	17 18 7	24 59.73	550.5	50.3	366.3	49.8	H
6 0†	06.61	643.9	57.6	483.3	58.4	W	20 0	25 00.04	546.3	50.2	371.1	49.8	H
7 0†	25 17.61	572.8	57.8	412.9	58.5	W	22 0	02.55	537.2	50.4	361.2	50.5	W
8 0†	24 56.18	577.8	57.8	375.6	58.6	W	23 0	04.86	536.5	50.7	360.0	51.0	H
10 0†	24 58.16	520.8	57.6	219.6	58.1	W	18 0 0	07.34	541.2	51.0	344.3	51.5	W
							1 0	09.53	546.6	51.4	339.3	52.0	H
18 0	25 02.39	531.3	55.0	319.8	54.7	H	2 0	11.34	552.3	51.7	336.4	52.2	W
20 0	03.82	535.2	54.4	347.4	54.2	H	4 0	11.12	562.5	51.9	346.2	52.2	H
22 0	06.06	522.3	54.3	342.0	54.5	W	6 0	11.00	574.0	52.0	363.8	52.3	W
23 0	10.87	515.2	54.5	353.2	55.0	W	7 0	08.48	572.8	52.0	380.1	52.3	W
13 0 0	12.13	530.4	54.8	354.6	55.5	W	8 0	08.55	570.4	51.9	375.5	52.3	W
1 0	16.06	534.1	55.4	352.4	56.3	H	10 0	06.14	565.8	51.8	365.5	52.0	W

DECLINATION. Magnet untouched, April 14^d 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Mic. Div.	°		
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		
18 18 0	25 12.67	546.1	51.0	296.2	51.2	H	23 2 0	25 17.94	555.5	55.6	362.4	56.0	W	
	20 0	02.05	573.0	50.8	317.9	51.2		4 0	15.14	583.8	56.8	396.4	57.5	H
	22 0	04.88	540.1	51.3	351.7	51.9	W	6 0	07.10	562.0	58.3	413.2	59.0	W
	23 0	07.00	535.0	51.7	357.8	52.5	W	7 0	08.77	554.9	59.0	413.9	59.7	W
19 0 0	09.29	535.6	52.2	358.8	53.0	W	8 0	07.49	557.4	59.5	390.9	60.1	W	
1 0	10.83	534.8	52.7	359.9	53.7	H	10 0	05.94	558.0	59.7	372.8	60.0	W	
2 0	14.99	557.7	53.2	349.7	54.3	W								
4 0	10.97	557.7	54.6	359.9	55.7	H	24 18 0	25 05.11	543.8	57.7	340.5	57.3	H	
6 0	07.15	584.3	55.8	374.9	56.7	W	20 0	01.12	535.1	57.5	354.3	57.5	H	
7 0	05.58	579.6	56.4	410.1	57.0	W	22 0	02.69	534.3	57.8	360.3	58.3	W	
8 0	03.74	566.1	56.5	425.4	57.0	W	23 0	06.64	530.4	58.2	362.4	58.7	H	
10 0	07.92	558.6	56.4	387.0	56.5	W	25 0 0	11.72	537.3	58.7	363.1	59.3	W	
							1 0	12.63	529.2	59.2	373.7	59.8	H	
18 0	25 08.41	529.2	53.8	334.7	53.5	H	2 0	09.42	565.3	59.7	398.4	60.3	W	
20 0	24 59.43	546.9	53.9	332.3	53.7	H	4 0	10.95	558.3	60.7	443.2	61.5	H	
22 0	25 02.48	524.1	54.0	350.5	54.2	W	6 0	09.06	573.1	62.0	397.0	62.7	W	
23 0	08.52	531.8	54.1	351.4	54.6	W	7 0	06.86	552.7	62.5	410.1	63.2	W	
20 0 0	10.56	529.5	54.5	354.8	55.0	W	8 0	06.48	564.9	63.0	401.7	63.5	W	
1 0	09.49	549.3	54.9	362.9	55.3	H	10 0	03.57	555.3	63.1	379.7	63.3	W	
2 0	10.77	547.8	55.3	381.2	56.0	W								
4 0	06.51	559.4	56.1	395.6	56.7	H	18 0	25 02.79	543.6	58.0	376.8	57.0	H	
6 0	02.97	578.4	56.6	411.9	57.0	W	20 0	24 59.12	535.7	57.4	376.9	56.5	H	
7 0	04.44	574.8	56.6	399.1	57.1	W	22 0	25 06.54	533.9	57.1	354.5	56.5	W	
8 0	05.36	587.2	56.5	400.6	56.8	W	23 0	09.05	538.9	57.0	332.1	57.0	H	
10 0	05.94	557.7	56.1	374.7	56.3	W	26 0 0	11.84	541.4	57.2	328.8	57.2	W	
							1 0	14.33	548.2	57.3	331.6	57.5	H	
18 0	25 04.22	547.8	53.0	355.8	52.5	H	2 3	14.91	556.4	57.8	344.6	58.2	W	
20 0	00.31	543.7	52.6	366.6	52.2	H	4 0	10.95	554.4	58.7	375.7	59.2	H	
22 0	03.92	530.1	52.6	368.9	52.7	W	6 0	08.31	556.2	59.9	373.2	60.4	W	
23 0	06.48	524.1	53.0	358.8	53.6	W	7 0	07.10	565.4	60.3	367.0	60.7	W	
21 0 0	13.25	516.4	53.6	357.2	54.7	W	8 0	05.80	563.6	60.4	366.5	60.8	W	
1 0	13.29	538.5	54.8	352.7	56.2	H	10 0	06.48	559.1	60.1	355.6	60.0	W	
2 0	16.52	559.8	56.2	347.3	57.6	W								
4 0	07.64	566.2	57.7	423.1	58.7	H	18 0	25 01.18	546.1	56.3	364.1	55.4	H	
6 0	05.15	570.6	58.6	392.3	59.5	W	20 0	00.98	539.9	55.7	368.0	55.0	H	
7 0	00.06	570.4	59.1	407.9	60.1	W	22 0	01.58	535.0	55.3	360.5	54.8	W	
8 0	03.35	569.9	59.7	410.7	60.5	W	23 0	06.29	534.8	55.2	359.7	55.2	H	
10 0	07.31	559.0	59.8	386.9	60.1	W	27 0 0	09.62	539.7	55.3	347.5	55.3	W	
							1 0	12.31	544.0	55.4	358.9	55.5	H	
18 0	25 01.14	544.6	56.1	378.5	55.5	H	2 0	13.52	545.7	55.6	361.7	55.8	W	
20 0	24 57.93	527.0	55.6	393.0	55.3	H	4 0	11.44	553.0	56.0	384.8	56.2	H	
22 0	25 03.13	513.9	55.6	387.9	55.7	W	6 0	05.79	562.1	56.4	389.7	56.7	W	
23 0	08.88	517.7	55.7	378.4	56.0	H	7 0	05.09	563.4	56.6	387.2	56.7	W	
22 0 0	11.34	534.9	56.0	376.1	56.4	W	8 0	05.70	565.7	56.6	377.2	56.7	W	
1 0	09.22	534.6	56.4	377.3	56.7	H	10 0	06.12	557.7	56.3	373.9	56.3	W	
2 0	15.83	556.6	56.7	397.2	57.2	W								
4 0	13.79	533.1	57.3	401.7	57.9	H	18 0	25 02.79	548.4	53.2	381.9	52.3	H	
6 0	05.79	552.2	57.9	405.6	58.3	W	20 0	24 59.36	547.4	53.0	386.5	52.3	W	
7 0	03.75	553.2	57.9	412.7	58.3	W	22 0	25 03.34	539.3	52.8	376.8	52.5	W	
8 0	01.61	563.4	57.8	410.2	58.0	W	23 0	04.68	538.1	52.8	322.7	53.0	H	
10 0	06.84	551.9	57.4	382.5	57.3	W	28 0 0	09.05	537.4	53.2	368.8	53.7	W	
							1 0	11.17	539.9	53.5	365.2	54.5	H	
18 0	25 00.85	546.6	55.5	380.7	55.5	H	2 0	12.72	549.3	54.3	361.8	55.2	W	
20 0	00.62	527.6	55.2	385.0	55.3	H	4 0	11.41	552.0	55.8	380.7	57.0	H	
22 0	06.63	523.2	55.2	365.4	55.3	W	6 0	07.45	558.7	57.7	384.1	58.5	W	
23 0	11.62	533.5	55.1	357.7	55.2	H	7 0	06.50	565.3	58.4	378.7	59.0	W	
23 0 0	13.52	540.6	55.1	352.0	55.3	W	8 0	05.52	563.8	58.7	376.7	59.3	W	
1 0	16.08	543.9	55.2	356.5	55.5	H	10 0	06.26	556.8	59.0	363.8	59.5	W	

DECLINATION. Magnet untouched, April 14^d, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.				
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			d.	h.	m.	Sc. Div.	°	Mic. Div.	°	Sc. Div.	°		
d. h. m.	°	'	Sc. Div.	°	Mic. Div.	°	H	3	2	0	25	12-56	50-1	70-4	387-6	71-5	H	
28 18 0	25 01-76	549-0	56-0	373-9	55-5	H					11-61	560-0	72-9	374-0	71-2	W		
20 0	24 57-81	543-9	55-7	375-4	55-4	H					08-79	558-9	75-4	385-9	76-5	H		
22 0	25 03-30	535-6	55-7	373-5	55-9	W					02-08	563-1	76-4	393-3	77-3	H		
23 4	06-70	535-0	56-0	372-5	56-5	W					06-63	558-5	77-0	414-3	77-5	H		
29 0 0	08-32	539-5	56-6	367-3	57-5	W					07-24	549-8	77-0	410-4	77-5	H		
1 0	13-67	542-8	57-4	363-1	58-7	H												
2 0	14-60	539-3	58-7	362-0	60-2	H												
4 0	11-74	560-0	61-2	345-2	62-6	H												
6 0	08-29	566-8	63-0	363-8	64-2	W												
7 0	07-34	566-1	63-6	367-7	64-6	W												
8 0	06-36	567-3	64-0	368-4	65-0	W												
10 0	25 06-48	560-6	64-3	358-2	65-2	W												
								4	0	0								
											1	0						
											11-14	540-8	71-5	394-4	72-5	H		
18 0	24 57-37	551-8	59-9	329-5	59-3	H					12-01	549-9	72-5	399-3	73-5	H		
20 0	25 00-84	548-6	59-7	356-3	59-2	H					12-02	560-9	74-7	417-6	75-8	W		
22 0	04-71	539-9	59-7	354-0	59-8	W					12-23	562-6	76-8	432-2	77-7	H		
23 0	10-13	539-7	59-8	347-5	60-3	H					07-00	569-4	77-6	424-9	78-4	H		
30 0 0	13-96	546-3	60-3	341-2	60-8	W					06-73	557-7	78-2	417-0	78-7	H		
1 0	16-92	557-4	60-7	341-3	61-0	H					07-17	544-3	78-2	409-8	78-3	H		
2 0	15-86	554-5	61-1	349-3	62-0	W												
4 0	12-55	559-7	62-7	367-2	63-5	W					25 00-30	531-1	72-2	430-3	70-4	W		
6 0	10-56	583-7	64-2	385-7	65-0	W					03-88	534-2	71-0	401-8	69-3	W		
7 0	00-35	571-8	64-9	425-0	65-6	W					05-08	538-2	70-3	381-6	69-3	H		
8 0	04-93	565-6	65-4	404-0	66-0	W					08-65	537-7	70-3	380-3	69-9	W		
10 0	05-58	563-6	65-5	376-6	66-0	W					5 0	0	11-17	530-5	70-5	378-1	70-7	H
											1	0	12-95	535-6	71-7	380-7	71-7	H
31 18 0	25 03-90	530-2	63-0	342-5	61-9	W					12-58	547-5	72-0	385-5	72-8	H		
20 0	02-42	533-7	62-4	349-4	61-3	W					12-70	552-0	74-1	386-6	75-0	W		
22 0	06-70	532-6	61-8	347-5	61-3	H					09-51	564-1	76-2	387-0	77-2	H		
23 0	07-58	533-6	61-9	343-9	61-9	H					07-07	556-2	76-8	397-8	77-7	H		
1 0 0	10-81	538-3	62-4	345-9	62-8	H					05-69	558-4	77-2	406-1	77-8	H		
1 0	11-27	546-3	63-3	357-0	64-2	H					25 06-90	552-4	77-3	413-5	77-5	H		
2 0	12-62	539-7	64-4	359-6	65-7	H												
4 0	12-29	558-7	67-0	362-2	68-2	H					24 59-09	542-2	72-7	361-7	71-4	W		
6 0	09-33	550-6	69-5	379-0	70-7	H					24 59-23	531-2	71-8	406-7	70-5	W		
7 0	06-06	568-2	70-6	396-3	71-7	H					25 02-72	541-3	71-2	398-8	70-5	H		
8 0	06-43	565-0	71-4	398-4	72-3	H					06-04	541-1	71-2	404-4	70-8	W		
10 0	07-00	555-2	72-0	402-2	73-5	H					6 0	0	09-89	545-0	71-4	384-9	71-5	H
											1	0	11-74	538-5	71-8	391-4	72-3	H
18 0	25 02-37	537-1	67-4	220-5	66-5	H					11-64	544-0	72-7	389-3	73-5	H		
20 0	00-53	525-4	66-6	288-0	65-7	H					11-88	550-2	74-7	395-0	75-5	W		
22 0	07-22	512-8	66-3	345-7	66-0	W					10-67	568-5	76-2	416-8	76-8	H		
23 0	10-60	523-9	66-4	349-7	66-7	H					08-06	567-2	76-7	433-1	77-2	H		
2 0 0	14-40	538-3	67-0	350-9	67-8	W					08-11	570-8	77-0	426-7	77-3	H		
1 0	13-54	544-3	67-8	359-9	68-8	H					04-21	550-4	76-8	413-8	77-3	H		
2 0	14-98	550-1	69-0	371-2	70-1	W												
4 0	11-88	550-4	71-2	367-6	72-5	H		7	18	20	25 01-52	539-4	66-7	403-5	65-3	W		
6 0	08-61	563-0	72-8	371-6	73-9	W					00-40	534-4	66-0	411-8	64-8	W		
7 0	06-98	565-6	73-3	387-5	74-5	W					02-62	531-0	65-5	411-9	64-7	H		
8 0	01-09	549-4	73-9	440-5	74-8	W					04-14	533-0	65-3	406-6	64-5	W		
10 0	01-61	549-4	74-2	387-2	74-7	W					07-20	536-9	65-2	402-7	64-5	H		
											1	0	09-74	545-2	65-0	398-9	64-7	H
18 0	25 01-65	534-4	69-4	334-4	68-2	W					18-21	544-9	65-0	400-5	65-0	H		
20 0	00-92	517-4	68-7	389-7	67-5	W					12-22	547-3	65-4	411-7	65-4	W		
22 0	06-76	533-7	68-0	390-4	67-5	H					08-08	552-1	65-8	414-0	65-7	H		
23 0	10-47	533-3	68-1	382-8	68-2	H					06-63	554-7	66-0	414-9	66-0	H		
3 0 0	12-18	535-5	68-5	369-2	69-0	H					05-42	558-7	65-9	412-6	66-0	H		
1 0	13-09	543-4	69-4	371-7	70-3	H					05-55	556-8	65-7	416-1	65-5	H		

DECLINATION. Magnet untouched, April 14^d, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0-000135$. BALANCE. Observed 3^m after the Declination, $k=0-000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Sc. Div.	°	Mic. Div.	°		
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		
8 18 0	25 00-20	531-1	63-4	312-2	62-8	W	13 2 0	25 20-90	531-9	66-0	386-8	67-0	H	
	20 0	530-7	63-0	347-7	62-6	W		4 0	13-86	566-4	68-3	394-3	69-4	B
22 0	25 05-72	530-1	63-0	371-5	63-0	H		6 0	09-53	562-3	70-0	398-2	71-2	H
23 0	04-41	534-0	63-4	393-1	63-7	W		7 0	07-37	570-6	70-5	401-8	71-5	H
9 0 0	06-46	537-6	63-8	400-7	64-5	H		8 0	06-21	565-8	70-8	414-2	71-6	H
1 2	11-01	545-1	64-5	415-4	65-3	H	10 0		25 06-23	566-6	70-8	400-2	71-5	H
2 0	13-27	548-4	65-3	425-3	66-2	H								
4 0	25 12-29	562-6	66-6	431-9	67-5	W	14 18 0	24 57-91	547-3	69-6	334-5	68-3	W	
6 0†	24 59-66	604-0	67-8	507-1	68-7	H		20 0	24 58-77	540-0	68-5	406-8	67-3	W
7 0	25 07-10	571-7	68-3	496-8	69-2	H		22 0	25 08-45	521-0	67-8	412-0	67-2	H
8 0	07-76	564-0	68-8	460-6	69-5	H		23 0	10-09	519-0	67-8	408-1	67-6	W
10 0	05-32	547-2	68-9	412-3	69-3	H	15 0		03-84	527-8	68-0	412-3	68-0	H
								1 0	10-70	532-7	68-3	417-3	69-0	H
18 0	25 01-49	538-8	65-8	351-9	65-5	W		2 0	12-53	546-0	69-0	409-3	69-7	H
20 0	24 58-87	525-3	65-4	407-9	65-0	W		4 0	11-75	559-0	70-7	414-4	71-6	W
22 0	25 01-29	521-2	65-2	418-1	65-2	H		6 0	06-46	595-0	72-6	452-3	73-4	H
23 0	05-22	520-0	65-3	420-9	65-6	W		7 0	25 04-98	587-5	73-3	468-8	74-0	H
10 0 0	08-90	523-0	65-6	411-9	65-9	H		8 0	24 58-45	573-2	73-7	466-2	74-3	W
1 0	11-07	543-1	66-0	402-6	66-5	H	10 0†		24 53-65	569-5	73-8	412-4	74-0	H
2 0	12-62	553-8	66-4	405-0	67-2	H								
4 0	10-43	575-4	67-6	440-6	68-2	W	18 0		25 04-15	542-1	69-0	373-0	67-8	W
6 0	09-73	560-8	68-0	460-2	68-5	H		20 0	07-40	526-1	68-3	393-7	67-2	W
7 0	09-53	563-0	68-0	441-5	68-5	H		22 0	03-81	531-6	67-8	399-3	67-2	H
8 0	08-48	557-3	67-8	423-4	68-2	H		23 0	02-79	527-6	67-8	396-7	67-8	W
10 0	07-47	553-7	67-3	412-6	67-3	H	16 0		08-85	515-9	68-0	410-0	68-5	H
								1 0	07-87	526-9	68-8	418-1	69-7	H
18 0	25 01-72	538-9	63-7	414-2	62-8	W		2 0	08-55	540-8	70-0	425-2	71-2	H
20 0	24 59-46	532-3	63-2	430-8	62-4	W		4 0	12-63	572-0	72-4	461-5	73-7	W
22 0	25 00-44	523-2	62-8	424-8	62-4	H		6 0	11-27	564-4	74-3	410-0	75-2	H
23 0	03-72	519-2	62-8	416-9	62-7	W		7 0	09-02	572-5	74-8	407-0	75-5	H
11 0 0	08-12	526-9	62-9	410-9	63-0	B		8 0	07-45	561-8	75-3	416-2	75-8	H
1 0	10-70	535-8	63-2	407-0	63-5	B	10 0		07-54	552-3	75-6	405-6	76-2	H
2 0	12-72	544-7	63-7	403-7	64-4	H								
4 0	11-84	553-3	65-0	403-0	65-8	W	18 0		25 06-21	545-9	70-5	404-6	69-5	W
6 0	08-86	558-3	66-1	410-9	66-6	H		20 0	01-95	537-8	69-8	413-8	68-8	W
7 0	07-07	561-0	66-1	410-2	66-7	H		22 0	01-24	518-1	68-7	410-5	68-7	H
8 0	06-39	558-7	66-1	410-2	66-7	H		23 0	10-87	529-1	69-2	401-7	69-3	W
10 0	05-85	555-1	65-7	405-4	66-0	H	17 0		11-84	542-6	69-7	380-4	70-2	H
								1 0	13-90	538-2	70-5	394-2	71-5	H
18 0	25 00-53	546-1	62-6	414-1	61-9	W		2 0	12-90	551-9	71-6	386-6	72-8	H
20 0	25 00-04	538-0	62-0	417-7	61-4	W		4 0	14-94	557-6	74-2	395-3	75-3	H
22 0	24 59-88	545-6	62-1	411-3	62-1	H		6 0	08-32	559-7	76-6	413-7	77-7	H
23 0	25 03-41	529-1	62-3	402-7	62-8	W		7 0	06-50	563-6	77-5	414-6	78-3	H
12 0 0	08-77	531-7	62-8	392-7	63-5	H		8 0	07-34	569-5	78-2	418-2	78-8	H
1 0	12-72	532-3	63-6	390-8	64-2	B	10 0		06-50	562-8	78-6	419-1	79-1	H
2 0	12-11	545-0	64-2	384-9	65-2	H								
4 0	13-12	563-5	65-9	398-0	66-9	W	18 0		25 02-19	546-0	73-7	433-3	72-8	W
6 0	08-28	567-2	67-2	415-2	68-0	H		20 0	01-22	535-3	72-9	446-2	72-0	H
7 0	08-46	565-1	67-4	411-2	68-2	H		22 0	03-74	533-4	72-4	426-6	72-0	W
8 0	05-85	564-9	67-6	413-2	68-2	W		23 0	05-32	532-8	72-4	425-0	72-4	W
10 0	06-51	557-6	67-5	402-2	68-0	H	18 0		04-75	543-6	72-7	414-4	73-3	H
								1 0	11-84	535-4	73-5	411-4	74-3	H
18 0	25 00-03	549-9	64-1	415-1	63-8	W		2 0	11-46	547-5	74-4	406-3	75-5	H
20 0	24 59-48	543-3	64-0	416-3	63-6	W		4 0	09-15	539-4	76-2	416-9	77-1	W
22 0	24 59-43	539-6	63-8	390-4	63-8	W		6 0	06-50	559-1	76-5	404-8	77-2	H
23 0	25 11-44	544-9	64-0	378-0	64-2	H		7 0	07-17	555-1	76-7	402-8	77-5	W
13 0 0	08-48	563-8	64-5	361-5	65-0	W		8 0	05-32	566-1	77-0	402-0	77-5	H
1 0	10-06	568-1	65-7	370-9	66-0	H	10 0		06-97	551-8	77-0	394-3	77-2	H

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0-000135$.BALANCE. Observed 3^m after the Declination, $k=0-000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m. 18 18 3†	25 12-22	533-0	73-2	386-1	72-3	W	24 2 0	25 10-77	553-4	58-0	382-5	58-2	W
20 0	08-14	544-3	72-5	351-9	71-7	W	4 0	10-03	565-9	59-0	410-5	59-5	H
22 0	04-91	533-0	72-1	395-2	71-7	H	6 0	03-09	565-1	60-0	425-0	60-6	W
23 0	05-09	541-6	72-1	394-4	72-2	W	7 0	06-70	566-3	60-5	417-9	61-0	W
19 0 0	11-07	540-7	72-6	399-7	73-2	H	8 0	07-69	571-7	60-9	404-5	61-5	W
1 0	11-24	547-8	73-2	394-1	74-0	H	10 0	06-24	557-1	61-1	391-8	61-4	W
2 0	07-49	550-2	74-3	393-7	75-2	H							
4 0	08-23	548-4	76-2	403-1	77-0	W	18 0	25 00-99	547-0	57-2	395-3	56-5	W
6 0	07-67	559-8	77-3	390-1	77-8	H	20 0	01-41	543-0	56-8	396-0	56-3	W
7 0	06-36	558-6	77-6	391-6	78-0	W	22 0	03-81	528-6	56-7	377-0	56-7	H
8 0	07-08	557-2	77-6	393-2	78-0	W	23 0	05-25	536-8	57-0	376-6	57-7	W
10 0	06-59	550-4	77-4	397-0	77-3	W	25 0 0	07-54	548-2	57-8	379-5	58-8	W
							1 0	11-21	551-1	58-7	380-1	59-5	B
18 0	25 02-87	539-6	71-2	416-0	69-3	W	2 3	12-35	560-2	59-3	383-0	60-3	W
20 0	00-30	532-4	69-6	403-3	67-5	W	4 0	10-20	552-8	60-1	397-0	61-0	H
22 0	03-30	530-0	68-3	390-0	66-4	H	6 0	07-76	568-0	60-6	399-8	61-7	H
23 0	06-70	529-4	67-9	389-2	66-3	W	7 0	05-06	580-6	60-7	397-4	61-5	H
20 0 0	11-91	526-5	67-7	384-8	66-3	H	8 0	07-52	562-2	60-7	395-9	61-2	H
1 0	15-01	541-2	67-4	381-8	66-3	H	10 0	06-26	556-8	60-4	391-2	60-5	H
2 0	17-67	546-4	67-4	379-6	66-6	H							
4 0	09-22	553-7	67-6	379-0	67-1	W	18 0	25 01-31	545-7	56-0	367-7	55-0	W
6 0	04-98	551-1	67-7	390-5	67-2	H	20 0	25 00-22	542-2	55-2	379-5	54-7	W
7 0	04-98	553-1	67-7	390-1	67-0	H	22 0	24 59-14	536-6	55-0	379-7	55-2	H
8 0	05-08	555-4	67-6	387-6	66-9	H	23 0	25 02-46	533-6	55-5	375-5	56-0	W
10 0	07-20	550-6	67-3	393-1	66-7	H	26 0 0	07-17	533-2	56-0	362-7	56-8	H
							1 0	10-00	541-3	56-9	354-4	57-8	H
21 18 0	25 02-28	548-8	65-7	392-0	65-3	W	2 0	12-45	548-4	57-7	357-6	58-5	H
20 0	08-95	535-2	65-4	399-5	65-0	W	4 0	11-99	554-8	58-3	364-6	59-2	H
22 0	11-00	536-3	65-4	381-5	65-5	H	6 0	09-42	561-4	58-7	370-4	59-5	H
23 0	12-49	539-8	65-7	378-3	66-1	W	7 0	08-36	569-7	58-8	366-6	59-5	H
22 0 0	14-10	546-6	66-3	366-0	67-0	H	8 0	07-05	568-9	58-8	376-5	59-5	H
1 0	17-36	544-7	67-2	364-4	68-0	H	10 0	25 06-43	564-5	59-2	376-6	59-2	H
2 0	14-70	555-3	68-0	372-8	69-2	H							
4 0	11-19	562-9	70-0	388-9	71-3	W	18 0	24 57-05	538-7	57-2	368-5	57-2	W
6 0	08-85	559-2	71-8	410-2	73-0	H	20 0	24 59-88	552-4	57-6	365-0	57-8	W
7 0	09-00	566-7	72-4	404-1	73-4	W	22 0	25 01-46	537-3	58-0	372-9	58-7	H
8 0	07-74	566-2	72-6	401-1	73-5	H	23 0	04-17	534-4	58-6	373-7	59-3	W
10 0	25 03-99	559-1	72-5	410-8	73-0	B	27 0 0	07-10	535-4	59-1	375-5	60-0	H
							1 0	03-68	541-0	59-7	371-8	61-2	H
18 0	24 58-45	542-9	70-0	375-0	69-7	W	2 0	10-83	543-9	60-3	355-9	61-5	H
20 0	25 02-20	535-2	69-3	394-1	69-0	W	4 0	11-64	556-7	62-0	364-3	63-0	W
22 0	04-93	532-6	68-9	384-7	68-7	W	6 0	07-79	573-4	63-0	388-6	64-0	H
23 0	08-21	538-1	68-7	385-6	68-5	W	7 0	06-64	567-8	63-3	411-4	64-2	H
23 0 0	08-46	551-2	68-7	379-0	68-5	H	8 0	07-71	580-3	63-5	413-8	64-3	H
1 0	10-56	547-7	68-6	386-8	68-6	H	10 0	04-17	556-9	63-4	414-5	64-0	H
2 0	09-56	564-9	68-6	384-4	68-7	H							
4 0	09-96	555-4	68-7	426-0	68-8	W	28 18 0	25 03-94	539-2	61-4	344-3	61-0	H
6 0	07-91	564-5	68-1	432-8	67-7	H	20 0	24 58-58	545-1	61-4	378-2	61-5	H
7 0	06-29	566-7	67-7	434-7	66-9	H	22 0	25 03-02	524-4	61-7	391-4	61-8	W
8 0	25 08-31	564-3	67-0	427-8	66-0	H	23 0	03-23	531-5	61-8	387-0	62-2	H
10 0	24 59-74	554-5	66-5	417-3	64-2	H	29 0 0	06-03	537-1	62-3	376-4	62-8	W
							1 0	09-08	533-5	62-6	374-1	63-2	H
18 0	25 00-72	540-5	59-6	382-5	57-7	W	2 0	12-23	554-3	63-0	378-2	63-8	W
20 0	02-06	539-5	58-3	377-6	56-6	W	4 0	10-09	560-9	64-2	384-1	64-9	H
22 0	04-71	536-4	57-5	379-9	56-2	H	6 0	09-69	574-4	64-9	384-6	65-4	W
23 0	07-22	535-0	57-3	374-9	56-5	W	.7 0	07-94	578-7	65-0	394-2	65-4	W
24 0 0	09-84	545-6	57-3	372-0	56-7	H	8-0	07-76	576-5	64-9	409-5	65-1	W
1 0	12-51	550-8	57-4	375-4	57-5	H	10 0	01-04	556-6	64-4	397-3	64-3	W

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2nd after the Declination, $k=0.000135$. BALANCE. Observed 3rd after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
		d. h. m.	°	Sc. Div.	°	Mic. Div.	°	d. h. m.	°	Sc. Div.	°	Mic. Div.	°
29 18 0	24 57.26	551.0	61.7	338.2	61.0	H	4 2 0	25 15.79	540.6	64.1	444.6	65.3	W
20 0	25 01.72	543.5	61.2	369.4	60.8	H	4 0	09.32	566.2	65.4	405.5	66.9	H
22 0	02.33	527.9	61.1	383.4	61.0	W	6 0	06.83	564.9	66.8	362.4	68.5	W
23 0	08.01	525.0	61.2	373.8	61.2	H	7 0	08.08	564.1	67.4	364.6	69.1	W
30 0 0	10.58	534.2	61.2	369.1	61.4	W	8 0	07.78	567.5	68.2	369.6	69.8	W
1 0	12.36	547.1	61.5	371.4	62.0	H	10 0	06.68	560.6	68.8	369.3	69.7	W
2 0	14.94	552.2	61.9	375.1	62.3	W							
4 0	12.26	561.9	62.5	375.3	62.8	W	5 18 0	25 00.82	540.0	66.4	325.7	65.2	H
6 0	09.62	560.6	62.4	406.1	62.6	W	20 0	00.91	538.4	65.7	379.2	64.2	H
7 0	08.23	569.5	62.2	411.8	62.5	W	22 0	04.51	530.6	64.9	379.1	63.5	W
8 0	05.79	573.8	62.1	416.8	62.3	W	23 0	00.96	525.0	64.5	356.8	63.2	H
10 0	07.57	559.2	61.6	400.6	61.5	W	6 0 0†	19.68	497.2	64.1	397.6	62.9	W
							1 0	12.22	554.7	63.8	371.5	62.7	H
18 0	25 07.44	559.5	58.8	357.8	58.2	H	2 0	16.59	560.1	63.6	385.6	62.6	W
20 0	24 58.32	537.3	58.7	387.0	58.2	H	4 0	08.01	553.8	63.2	397.6	62.7	H
22 0	25 01.65	530.3	58.6	373.7	58.6	W	6 0	08.34	564.1	62.9	472.0	62.2	W
23 0	07.15	534.5	58.8	377.3	59.2	H	7 0	02.15	566.6	62.7	465.8	61.9	W
1 0 0	09.77	537.0	59.2	370.8	59.6	W	8 0	05.35	568.9	62.4	442.3	61.6	W
1 0	11.69	542.4	59.7	350.7	60.5	H	10 0†	25 01.29	558.2	61.8	404.8	60.4	W
2 0	12.31	545.0	60.0	W							
4 0	10.23	566.6	60.5	H	18 0	24 59.81	533.6	58.4	342.3	56.7	H
6 0	08.50	578.3	61.0	W	20 0	25 01.05	539.2	57.8	361.5	56.7	H
7 3	07.31	558.6	61.1	W	22 0	03.79	536.7	57.7	383.5	57.3	W
8 0	08.11	559.6	61.3	W	23 0	07.07	529.7	57.7	386.8	57.7	H
10 0	06.44	558.2	61.4	W	7 0 0	11.05	536.3	57.9	378.4	58.3	W
							1 0	12.89	544.8	58.2	374.2	59.0	H
18 0	24 54.21	546.7	60.8	H	2 0	15.25	559.4	58.7	383.5	59.7	W
20 0	24 52.23	534.7	60.8	H	4 0	07.38	569.0	59.8	429.4	61.5	H
22 0	25 07.98	524.5	61.2	W	6 0	08.12	566.3	61.1	407.8	62.7	W
23 0	11.12	546.3	61.6	H	7 0	07.29	568.1	61.5	393.6	62.9	W
2 0 0	14.87	535.7	62.0	W	8 0	06.34	570.6	61.9	392.9	63.2	W
1 0	17.42	533.6	62.6	H	10 0	07.34	549.9	62.0	388.3	62.6	W
2 0	17.15	544.6	63.1	W							
4 0	16.15	560.2	64.7	H	18 0	25 08.73	537.7	59.4	286.6	58.7	H
6 0	10.81	578.4	66.0	W	20 0	24 58.52	536.6	59.0	366.7	58.5	W
7 0	10.43	576.6	66.5	W	22 0	25 02.15	527.6	58.9	395.5	58.9	W
8 0	09.26	570.3	66.6	W	23 0	07.04	532.1	58.9	386.2	59.0	W
10 0	08.70	559.2	66.6	W	8 0 0	09.13	538.6	59.0	370.9	59.5	W
							1 0	12.06	531.8	59.2	373.1	59.7	H
18 0	25 03.74	549.2	64.4	312.5	64.5	H	2 0	11.28	545.8	59.3	353.6	59.7	W
20 0	11.86	540.1	64.2	340.5	64.2	H	4 0	09.08	557.0	59.3	379.5	59.7	H
22 0	11.55	528.1	64.0	364.9	64.3	W	6 0	06.66	566.2	59.3	385.3	59.5	W
23 0	11.44	532.1	64.1	366.5	64.8	W	7 0	06.59	562.6	59.3	387.9	59.3	W
3 0 0	11.30	527.2	64.3	366.2	65.0	W	8 0	02.28	560.6	59.1	403.8	59.0	W
1 0	12.18	539.1	64.5	384.7	65.3	H	10 0	05.49	559.6	58.8	394.2	58.5	W
2 0	13.94	544.3	64.7	404.2	65.4	W							
4 0	08.65	555.9	65.0	477.4	65.8	H	18 0	25 01.96	547.3	57.0	373.4	56.2	H
6 0	09.89	567.8	65.4	449.5	66.0	W	20 0	25 03.57	532.8	56.6	389.7	56.0	W
7 0	08.43	567.7	65.4	443.4	65.9	W	22 0	24 59.70	528.0	56.4	391.6	56.1	W
8 0	08.21	567.9	65.3	426.2	65.7	W	23 0	25 04.73	523.9	56.4	392.0	56.2	H
10 0	07.47	558.7	65.0	416.0	65.2	W	9 0 0	08.29	526.1	56.4	373.5	56.3	W
							1 0	11.48	535.9	56.4	374.3	56.4	H
18 0	25 02.26	515.4	63.2	207.8	62.5	H	2 0	12.45	545.9	56.4	378.0	56.5	W
20 0	01.90	536.8	62.8	300.1	62.5	H	4 0	12.35	559.3	56.6	390.8	56.9	H
22 0	05.52	526.3	62.8	356.2	63.1	W	6 0	08.50	569.0	56.9	402.6	57.4	W
23 0	10.80	518.4	63.0	364.3	63.7	H	7 0	06.64	561.4	57.1	405.8	57.7	W
4 0 0	15.02	543.1	63.3	355.0	64.1	W	8 0	06.50	561.2	57.3	394.9	57.8	W
1 0	15.41	537.9	63.7	403.1	64.5	H	10 0	02.17	556.7	57.5	393.5	58.0	W

DECLINATION. Magnet untouched, April 14^d, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

July 1^d—2^d. Observations of deflection of the balance needle were made for the purpose of determining the value (k) of a micro-meter division, in parts of the whole vertical force. The observations after July 2^d are reduced to be comparable with those before that date. See *Introduction*, p. xlivi.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
9 18 0	25 00-47	546.5	56.7	370.7	56.6	H	15 2 0	25 11-27	550.1	66.2	381.1	67.3	W
20 0	02-59	537.8	56.8	375.4	57.2	H	4 0	08-16	565.4	67.2	416.4	68.4	H
22 0	02-97	531.5	57.3	377.0	58.4	W	6 0	08-88	557.8	68.0	432.3	69.3	W
23 0	04-82	527.0	57.8	373.3	59.2	H	7 0	08-72	565.0	68.2	413.8	69.3	W
10 0 0	09-20	531.5	58.6	363.4	60.5	W	8 0	04-98	560.7	68.3	409.2	69.1	W
1 0	11-07	537.3	59.5	341.0	61.9	H	10 0	05-23	558.0	68.1	392.3	68.2	W
2 0	12-45	544.0	60.6	335.4	63.2	W							
4 0	12-04	560.9	62.3	365.3	64.9	H	18 0	25 01-78	540.0	65.7	362.0	65.0	H
6 0	09-62	577.1	63.8	386.3	66.5	W	20 0	24 58-43	541.2	65.2	382.8	64.7	H
7 0	08-85	574.1	64.5	387.6	66.9	W	22 0	25 00-06	531.3	65.0	392.8	65.0	W
8 0	08-05	568.9	65.0	385.5	67.2	W	23 0	03-97	530.8	65.2	375.7	65.2	H
10 0 0	25 06-14	559.7	65.2	373.4	66.3	W	16 0 0	07-94	521.7	65.4	363.2	65.9	W
							1 0	12-55	529.2	65.7	360.0	66.5	H
18 0	24 58-55	547.7	61.0	400.5	60.0	H	2 0	12-69	547.3	66.0	340.9	67.0	W
20 0	24 54-92	537.3	60.7	392.9	59.7	H	4 0	11-30	568.2	66.5	381.4	67.2	H
22 0	25 02-84	539.4	60.3	358.7	60.3	W	6 0	06-16	558.8	66.5	394.9	66.9	W
23 0	08-39	543.9	60.5	329.0	60.9	H	7 0	05-29	564.0	66.4	396.0	66.9	W
11 0 0	12-06	554.4	60.8	323.6	61.5	W	8 0	04-91	564.4	66.4	388.8	66.7	W
1 0	15-92	541.2	61.2	359.9	62.2	H	10 0	07-04	553.5	66.0	393.6	65.8	W
2 0†	17-40	508.1	61.5	388.5	62.5	W							
4 0†	15-29	577.7	62.3	568.2	63.7	H	18 0	25 01-75	548.3	63.4	387.8	62.5	H
6 0	13-05	579.8	63.0	533.0	64.2	W	20 0	04-17	539.4	62.8	401.1	62.0	H
7 0	10-09	570.5	63.0	511.2	64.0	W	22 0	04-55	529.6	62.7	409.4	62.7	W
8 0	02-99	570.7	63.0	533.0	63.8	W	23 0	09-96	535.0	62.8	401.4	63.2	H
10 0	06-43	558.9	62.7	381.5	63.0	W	17 0 0	08-85	540.1	63.0	367.3	63.6	W
							1 0	09-02	546.9	63.3	372.8	63.8	H
12 18 0	25 04-17	542.8	62.8	353.2	63.2	H	2 0	09-82	547.9	63.5	371.4	64.0	W
20 0	24 59-23	544.0	63.4	374.5	63.8	H	4 0	09-35	546.9	63.8	402.6	64.5	H
22 0	25 05-15	538.0	63.8	386.9	64.5	W	6 0	08-08	578.8	64.0	421.3	64.5	W
23 0	02-62	536.7	64.0	385.5	65.2	H	7 0	03-23	580.9	63.9	429.3	64.3	W
13 0 0	12-65	526.2	64.6	375.8	65.9	W	8 0	06-12	559.7	63.8	419.1	64.1	W
1 0	13-09	536.7	65.1	377.1	66.5	H	10 0	06-77	554.1	63.5	393.2	63.5	W
2 0	12-98	541.6	65.6	384.3	67.0	W							
4 0	11-77	565.4	66.7	409.1	68.2	H	18 0	25 01-68	545.9	60.0	402.4	58.7	H
6 0	06-32	596.5	67.6	524.7	69.3	W	20 0	24 56-85	541.8	59.5	426.3	58.2	H
7 0†	14-80	592.9	67.9	547.4	69.4	W	22 0	25 06-46	532.0	59.3	401.7	59.0	W
8 0†	11-34	570.4	68.2	499.6	69.5	W	23 0	08-52	525.5	59.3	404.0	59.4	H
10 0	02-19	542.5	68.1	427.3	68.6	W	18 0 0	10-50	547.4	59.5	388.4	59.8	W
							1 0	14-17	551.3	59.7	378.0	60.0	H
18 0	25 03-67	541.0	64.3	364.2	63.0	H	2 0	13-16	552.2	59.8	372.0	60.0	W
20 0	25 00-53	532.8	63.6	374.5	62.7	H	4 0	10-41	565.0	59.8	406.7	60.2	H
22 0	24 59-73	522.2	63.4	395.2	63.1	W	6 0	08-46	567.6	60.2	481.3	60.9	W
23 0	25 03-68	518.1	63.5	390.8	63.9	H	7 0	05-92	560.1	60.5	485.4	61.6	W
14 0 0	05-77	532.5	64.0	389.6	65.0	W	8 0	07-20	564.1	60.9	441.7	61.7	W
1 0	08-46	536.8	64.7	382.3	66.2	H	10 0	07-31	568.4	60.8	394.8	60.8	W
2 0	09-80	540.3	65.6	383.5	67.7	W							
4 0	11-01	566.2	67.9	354.9	70.5	H	19 18 0	25 02-93	539.7	59.7	362.4	58.8	H
6 0	08-41	561.4	69.4	377.4	71.3	W	20 0	03-43	524.7	59.2	389.1	58.7	H
7 0	06-79	563.0	69.7	388.1	71.2	W	22 0	02-45	533.4	59.5	373.6	60.0	W
8 0	25 06-06	574.1	69.7	387.6	71.0	W	23 0	06-73	529.1	59.8	371.5	61.0	H
10 0†	24 57-05	559.6	69.4	399.7	69.7	W	20 0 0	09-05	547.8	60.4	365.4	61.7	W
							1 0	08-77	552.7	60.9	361.5	62.4	H
18 0	25 14-01	546.8	65.7	317.4	64.6	H	2 0	09-06	554.6	61.6	370.2	63.3	W
20 0	03-48	549.1	65.2	337.1	64.5	H	4 0	04-62	570.9	62.8	392.2	64.4	B
22 0	02-84	538.0	65.0	389.6	65.1	W	6 0	06-86	566.0	63.8	386.2	65.5	W
23 0	08-25	526.3	65.2	397.7	65.5	H	7 0	06-79	565.4	64.2	369.2	65.5	W
15 0 0	09-76	541.4	65.5	374.4	66.0	W	8 0	25 06-50	567.5	64.4	369.1	65.3	W
1 0	13-00	551.5	65.8	372.5	66.5	H	10 0	24 59-83	561.4	64.1	386.1	64.3	W

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
20 18 0	25 04.78	548.4	61.3	342.5	60.5	H	25 2 0	25 10.41	544.6	62.1	366.0	63.4	W
20 0	03.09	538.6	60.8	360.4	60.2	H	4 0†	12.98	579.5	63.2	383.9	64.7	H
22 0	04.93	537.7	60.6	370.3	60.4	W	6 0	10.04	574.8	64.2	414.1	65.5	W
23 0	07.24	534.2	60.6	361.7	60.5	W	7 0	07.67	584.0	64.6	406.6	65.8	W
21 0 0	07.13	547.6	60.7	376.1	61.0	W	8 0	25 00.57	581.2	64.8	418.7	65.7	W
1 0	10.43	557.6	61.0	396.7	61.5	B	10 0†	24 54.72	573.5	64.5	308.2	64.5	W
2 0	10.07	555.7	61.3	394.9	62.2	W							
4 0	09.03	559.5	62.4	379.0	63.9	H	26 18 0	25 01.01	548.0	62.5	367.1	62.1	W
6 0	07.27	569.2	63.6	383.9	64.8	W	20 0	01.34	538.8	62.4	370.9	62.3	W
7 15	07.57	561.2	63.9	391.3	64.9	W	22 2	06.53	534.8	62.5	360.0	63.1	H
8 0	05.18	561.7	63.9	391.8	64.7	W	23 0	10.09	534.8	63.0	360.2	63.9	B
10 0	06.44	555.1	63.6	380.2	63.9	W	27 0	11.21	539.2	63.6	356.0	65.0	H
							1 0	12.22	541.6	64.4	343.8	66.2	H
18 0	25 07.51	553.5	61.3	347.2	60.6	H	2 0	14.17	548.8	65.4	350.4	67.2	H
20 0	02.96	552.0	60.9	341.4	60.4	H	4 0	12.22	560.4	66.7	404.1	68.7	W
22 0	00.96	536.4	60.8	367.3	60.8	W	6 0	07.84	573.3	67.8	412.2	69.5	H
23 0	05.58	530.7	60.8	378.3	61.4	H	7 0	02.69	569.7	68.0	423.9	69.5	H
22 0 0	08.77	533.3	61.2	379.8	62.0	W	8 0	05.23	568.7	68.0	403.6	69.2	H
1 0	10.87	539.5	61.7	373.3	62.8	H	10 0	25 03.37	556.7	68.0	374.8	68.5	H
2 0	10.23	547.9	62.2	368.1	63.5	W							
4 0	09.29	560.2	63.2	388.1	64.6	H	18 0	24 59.16	533.9	66.3	332.6	66.2	W
6 0	05.29	583.9	64.0	415.9	65.5	W	20 0	25 01.54	536.3	66.1	357.1	66.0	W
7 0	02.69	569.6	64.3	446.5	65.5	W	22 0	02.05	534.2	66.0	362.9	66.3	H
8 0	07.11	561.9	64.5	416.0	65.3	W	23 0	03.94	533.2	66.1	360.4	66.8	W
10 0	07.40	560.6	64.2	386.1	64.5	W	28 0	06.63	531.1	66.6	354.1	67.5	H
							1 0	10.58	536.2	67.0	350.8	68.3	H
18 0	25 01.41	553.1	61.8	390.5	61.0	H	2 0	13.32	544.6	67.8	350.3	69.5	H
20 0	06.01	545.3	61.4	389.7	60.9	H	4 0	11.81	557.7	69.0	357.9	70.7	W
22 0	10.03	528.6	61.4	385.9	61.5	W	6 0	08.21	565.9	69.8	381.5	70.8	H
23 0	09.91	538.9	61.5	361.9	61.8	H	7 0	05.38	556.5	69.8	391.2	70.6	H
23 0 0	14.87	547.0	61.7	366.0	62.1	W	8 0	06.26	563.3	69.7	384.0	70.2	H
1 0	15.20	552.4	61.8	370.2	62.3	H	10 0	25 05.02	559.7	69.0	372.4	69.2	H
2 0	13.63	565.1	62.0	388.6	62.5	W							
4 0	10.83	565.6	62.4	415.9	63.2	W	18 0	24 59.50	545.7	66.7	391.3	66.1	W
6 0	09.87	552.1	63.0	443.6	63.8	W	20 0	24 57.01	545.5	66.3	380.8	65.7	W
7 0	08.06	561.8	63.0	419.6	63.7	W	22 0	25 00.85	535.4	66.0	374.4	65.7	H
8 0	05.58	564.3	63.1	413.8	63.7	W	23 0	05.55	535.5	66.0	377.5	65.9	W
10 0	04.91	549.4	63.0	371.9	63.2	W	29 0	08.75	543.2	66.0	355.7	66.0	H
							1 0	13.27	544.0	66.0	356.0	66.0	H
18 0	25 00.20	547.0	61.0	390.2	60.2	H	2 0	16.55	546.5	66.0	360.4	66.1	H
20 0	00.01	540.8	60.7	403.7	60.2	H	4 0†	16.80	575.0	66.1	451.0	66.2	W
22 0	02.46	537.2	60.5	378.3	60.3	W	6 0†	14.78	614.9	65.9	656.4	65.8	H
23 0	05.42	537.8	60.4	379.3	60.7	H	7 0†	07.20	590.1	65.6	552.2	65.1	H
24 0 0	09.19	545.8	60.6	374.3	61.2	W	8 0	08.41	556.5	65.3	485.0	64.1	H
1 0	13.00	551.9	61.0	366.1	61.9	H	10 0	07.64	545.6	64.7	401.0	63.4	H
2 0	14.64	556.3	61.5	367.8	62.8	W							
4 0	12.22	575.4	62.8	367.0	64.3	H	18 0	25 02.15	545.4	62.4	382.4	61.3	W
6 0	10.40	587.1	63.7	374.5	65.2	W	20 0	02.12	532.2	62.0	383.3	61.1	W
7 0	25 09.10	599.5	64.0	413.7	65.3	W	22 0	04.14	527.3	61.8	374.2	61.7	H
8 0†	24 59.34	563.4	64.4	480.9	65.4	W	23 0	07.00	528.7	62.0	373.7	62.1	W
10 0	25 04.17	564.3	64.3	410.1	64.3	W	30 0	10.09	529.1	62.2	367.1	62.6	H
							1 0	13.02	536.0	62.7	365.7	63.3	H
18 0	24 57.86	539.5	60.8	367.4	59.7	H	2 0	12.42	541.0	63.1	356.7	64.2	H
20 0	25 01.01	536.8	60.7	368.6	60.0	H	4 0	12.45	571.0	64.4	363.5	65.9	W
22 0	02.52	536.5	60.7	363.8	60.6	W	6 0	09.19	567.2	65.7	390.1	67.3	H
23 0	05.62	536.6	60.8	357.3	61.2	H	7 0	07.64	577.7	66.2	393.0	67.7	H
25 0 0	08.41	540.5	61.1	344.8	61.8	W	8 0	25 07.27	574.2	66.6	397.9	67.7	H
1 0	09.56	552.5	61.6	342.4	62.7	H	10 0	24 51.93	550.3	66.7	386.6	66.9	H

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2nd after the Declination, $k=0.000135$. BALANCE. Observed 3rd after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.			
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
30 18 15	24 57.98	538.3	64.6	303.2	64.0	W	5 2	25 11.74	551.0	67.3	364.5	68.0	H	
20 0	25 00.44	533.2	64.2	355.6	63.8	W	4 0	08.82	548.8	68.3	380.8	68.8	W	
22 0	04.17	530.5	64.0	363.6	63.8	H	6 0	05.58	561.6	69.5	370.3	69.9	W	
23 0	05.99	542.5	64.0	361.2	64.3	W	7 0	04.37	560.2	70.0	378.2	70.5	W	
31 0 0	11.24	540.8	64.3	358.3	65.0	H	8 0	04.29	558.0	70.3	382.3	70.5	W	
	13.90	539.5	64.7	347.9	65.7	H	10 0	25 06.93	562.1	70.4	365.3	70.4	W	
	2 0	557.0	65.5	344.9	66.9	H								
	4 0	564.8	66.8	375.4	68.3	W	18 0	24 57.31	545.0	66.4	384.1	65.8	W	
	6 0	588.8	67.7	434.1	68.7	H	20 0	24 57.88	545.4	65.5	380.9	65.1	H	
	7 0	573.5	67.7	434.8	68.3	H	22 3	25 05.65	540.4	65.0	360.8	65.2	H	
	8 0	576.4	67.7	389.2	67.7	H	23 0	12.72	528.4	65.1	358.9	65.6	W	
	10 0	558.0	66.9	378.5	66.7	H	6 0 0	12.23	546.0	65.7	335.6	66.5	H	
							1 0	18.07	535.4	66.7	335.8	67.7	H	
18 0	25 00.17	534.6	64.4	358.0	63.6	W	2 0	18.34	551.7	68.1	331.0	69.2	H	
20 0	01.65	538.6	64.0	368.4	63.6	W	4 0	05.47	562.7	71.0	418.4	72.0	W	
22 0	00.18	529.4	64.2	374.0	64.3	H	6 0	06.83	577.7	73.7	418.6	74.3	H	
23 0	01.54	534.1	64.4	374.9	65.0	W	7 0	05.25	561.9	74.5	418.3	74.8	W	
1 0 0	07.17	530.9	64.8	362.0	65.9	H	8 0	06.21	563.5	75.0	420.9	75.2	H	
	09.46	538.0	334.1	67.2	H	10 0	25 01.54	550.9	74.8	396.1	74.5	H	
	2 0	524.9	344.1	68.2	H								
	4 0	555.5	376.2	70.3	H	18 6	24 55.02	542.5	69.0	251.5	68.2	W	
	6 0	586.8	434.7	71.8	H	20 0	25 07.20	525.3	68.0	352.6	67.5	W	
	7 0	06.23	563.2	404.5	71.9	H	22 0	07.00	504.6	67.2	368.7	66.8	H
	8 0	25 05.45	565.0	401.0	71.7	H	23 0	15.54	503.3	67.1	365.5	66.8	W
	10 0	24 57.78	549.8	349.0	70.7	H	7 0 0	16.25	513.1	66.8	364.3	66.9	H
							1 6	17.76	528.6	66.8	409.9	67.2	H	
2 18 0	25 00.45	544.4	347.6	66.5	W	2 0	18.81	535.3	67.0	390.4	67.3	H	
20 0	03.34	534.3	355.9	66.5	W	4 0	13.84	553.6	67.2	433.7	67.4	W	
22 0	00.44	526.8	365.8	66.5	H	6 0	11.10	589.2	67.2	440.8	67.2	H	
23 0	04.58	543.3	379.2	66.7	H	7 0	07.54	571.1	67.0	472.8	67.1	H	
3 0 0	05.52	537.1	385.8	66.9	H	8 0	09.46	567.2	66.8	443.9	67.0	H	
	07.54	540.1	381.1	67.2	H	10 0	04.21	552.7	66.7	344.1	66.8	H	
	2 0	536.0	377.7	67.7	H								
	4 0	561.9	72.0	357.1	68.5	H	18 0	25 09.49	544.5	65.7	269.6	65.7	W	
	6 0	574.8	71.5	395.6	71.5	H	20 0	13.23	533.5	65.4	288.3	65.5	W	
	7 0	00.44	565.8	72.0	417.9	72.2	H	22 0	08.41	502.5	65.4	363.8	65.7	W
	8 0	03.90	560.1	72.5	397.1	72.5	H	23 0	09.49	519.4	65.7	385.1	66.0	W
	10 0	05.82	562.0	72.6	368.7	72.3	H	8 0 0	10.23	530.9	65.8	387.8	66.4	H
							1 0	13.37	529.1	66.5	418.7	67.0	B	
18 0	25 00.04	544.5	67.6	389.7	67.0	W	2 0	07.45	564.4	66.9	448.2	67.3	H	
20 0	24 59.70	535.8	66.7	399.1	66.3	W	4 0	10.33	578.2	68.1	412.7	68.7	W	
22 0	25 00.72	530.1	66.4	405.5	66.7	H	6 0	25 03.67	573.6	69.4	475.9	69.8	H	
23 0	06.86	523.3	66.6	399.5	67.0	W	7 0	24 59.93	562.4	69.8	436.0	70.2	H	
4 0 0	11.00	532.3	67.0	378.3	67.7	H	8 0	25 04.96	582.0	70.2	418.3	70.4	H	
	11.42	539.0	67.6	360.8	68.2	H	10 0	04.42	551.2	70.1	360.2	70.2	H	
	2 3	12.63	539.8	68.3	367.2	68.9	H							
	4 0	08.82	551.2	69.8	375.3	70.3	W	9 18 0	25 07.24	515.3	64.2	294.2	63.7	W
	6 0	558.4	71.0	389.6	71.2	H	20 0	04.39	532.5	63.6	358.9	63.2	W	
	7 0	03.90	564.8	71.2	384.5	71.5	H	22 0	07.62	519.2	63.2	389.7	63.2	H
	8 3	03.70	558.1	71.2	391.3	71.5	H	23 0	10.16	518.7	63.3	387.3	63.6	W
	10 0	04.37	554.8	70.9	379.2	70.8	H	10 0 0	10.67	532.6	63.7	393.2	64.2	H
							1 0	14.70	532.2	64.2	406.9	65.0	H	
18 4	25 00.08	544.7	67.0	391.2	66.8	H	2 0	14.13	544.6	65.0	435.1	65.4	H	
20 0	24 58.90	537.0	66.6	394.6	66.2	H	4 0	11.95	550.8	66.3	388.8	66.9	W	
22 0	25 02.01	533.7	66.0	385.9	66.0	W	6 0	04.96	551.3	67.3	450.5	67.7	H	
23 0	03.92	534.5	66.0	387.4	66.3	W	7 0	06.32	563.6	67.7	465.3	67.7	H	
5 0 0	08.41	538.2	66.4	381.6	67.0	W	8 0	02.06	566.1	67.5	444.7	67.3	H	
	11.32	545.0	67.0	369.4	67.5	H	10 0	03.45	550.8	66.7	395.8	66.6	H	

DECLINATION. Magnet untouched. April 14^d, 1846—May 1847.

DECLINATION. Magnet unit
BIFILAR. Observed 2^m after the Declination, $k = 0.000135$.

BALANCE. Observed 3^m after the Declination, $k=0.000010$.

[†] Extra Observations made

Aug. 1^d—2^d. Observations of deflection of the bifilar magnet made to determine (*k*) the value of one scale division of the bifilar in parts of the whole horizontal force: during these observations the bifilar thermometer was removed, and the observations at the hours have been corrected to the temperature of the balance magnet.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Sc. Div.	°	Mic. Div.	°		
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°				Sc. Div.	°	Mic. Div.	°		
10 18 0	25 06.24	539.2	62.7	357.4	62.2	H	15 2 0	25 11.00	552.4	61.2	444.4	61.8	H	
	20 0	543.4	61.9	346.4	61.6	H	4 0	10.87	573.8	61.9	433.0	62.5	H	
	22 0	00.82	528.3	61.5	381.2	61.5	W	6 0	06.07	553.9	62.2	493.5	62.7	H
	23 0	04.69	522.2	61.6	386.3	61.8	H	7 0	06.06	559.9	62.3	466.6	62.7	H
11 0 0	08.88	528.0	61.7	382.2	62.2	W	8 0	25 05.58	554.4	62.3	429.8	62.7	H	
	1 0	11.57	534.6	62.0	382.9	62.5	H	10 0	24 57.31	566.3	62.2	365.2	62.5	H
	2 0	12.80	544.3	62.3	393.4	62.7	W							
	4 0	11.34	555.4	62.8	407.6	63.5	H	16 18 0†	25 11.03	522.5	62.2	262.6	62.0	W
	6 0	08.01	564.8	63.6	409.3	64.0	W	20 0	11.37	543.9	61.7	284.2	61.5	W
	7 0	06.30	563.1	63.9	406.7	64.3	W	22 0	09.54	524.2	61.6	363.7	61.8	H
	8 0	05.47	565.7	64.0	391.5	64.2	W	23 0	10.30	537.4	61.8	368.5	62.2	H
	10 0	01.27	547.6	63.7	387.0	63.7	W	17 0 0	11.12	539.8	62.2	353.9	62.7	H
							1 0	09.51	536.4	62.6	353.7	63.2	H	
	18 0	25 01.63	554.3	61.3	362.7	61.0	W	2 0	10.16	541.9	63.2	356.2	63.5	H
	20 0	04.58	540.9	61.0	375.8	60.8	W	4 0	08.34	547.1	63.6	365.7	64.0	W
	22 0	00.74	537.7	60.8	393.1	61.0	H	6 0	25 04.37	569.3	64.0	403.1	64.5	H
	23 0	03.99	530.3	60.9	388.1	61.2	W	7 0†	24 55.53	592.5	64.2	446.8	64.7	H
12 0 0	08.65	525.5	61.2	387.1	61.5	H	8 0	25 04.31	560.1	64.3	412.4	64.7	H	
	1 0	10.23	541.3	61.6	382.3	62.2	H	10 0	04.46	556.1	64.3	373.6	64.5	H
	2 0	11.52	551.2	62.1	381.6	62.7	H							
	4 0†	02.48	578.0	63.1	495.9	63.7	W	18 0	25 00.06	541.9	62.2	347.3	62.2	H
	6 0	08.26	574.9	64.4	510.1	64.8	H	20 0	01.38	541.1	61.6	357.8	61.5	H
	7 0	08.08	566.4	65.0	485.9	65.2	H	22 0	02.77	535.3	61.2	372.0	61.1	W
	8 0	25 10.23	568.9	65.1	441.0	65.3	H	23 0	05.42	530.7	61.1	364.4	61.0	H
	10 0†	24 57.71	539.5	64.8	353.0	64.8	H	18 0 0	09.60	544.4	60.9	355.9	61.1	W
							1 0	11.07	543.2	61.0	362.2	61.2	H	
	18 0	25 07.57	531.0	62.4	325.4	62.2	W	2 0	13.46	545.2	61.0	353.0	61.2	W
	20 0	11.75	538.0	61.9	343.2	62.0	W	4 0	10.11	548.5	62.0	375.2	62.7	W
	22 0	11.89	507.1	61.9	380.4	62.2	H	6 0	05.40	553.8	63.6	412.1	64.1	W
	23 0	10.56	535.3	61.9	371.2	62.6	W	7 0	02.84	564.8	64.0	417.7	64.4	W
13 0 0	10.25	542.9	62.4	379.7	63.0	H	8 0	04.95	564.0	64.3	392.1	64.5	W	
	1 0	11.54	529.2	62.7	403.5	63.2	H	10 0	04.24	552.8	64.0	369.0	64.0	W
	2 0	08.99	543.9	63.0	441.7	63.5	H							
	4 0	09.69	554.6	63.5	498.6	64.0	W	18 0	25 00.84	545.6	61.1	352.3	60.7	W
	6 0	05.45	568.7	64.6	507.1	65.0	H	20 0	01.61	536.1	60.3	378.4	60.1	W
	7 0	04.04	562.7	65.0	478.8	65.3	H	22 0	03.45	529.9	59.9	377.1	60.0	H
	8 0	02.67	562.6	65.2	468.8	65.3	H	23 0	06.79	531.5	60.0	372.6	60.5	W
	10 0	06.79	557.3	64.8	389.0	64.7	H	19 0 0	10.80	529.2	60.7	371.8	61.5	H
							1 0	11.41	543.5	61.7	364.3	62.6	H	
	18 0	25 12.35	550.5	60.5	205.9	59.8	W	2 0	11.00	554.3	62.7	365.5	63.4	H
	20 0	06.88	544.7	59.5	223.6	58.9	W	4 0	08.75	551.6	64.4	369.3	65.0	W
	22 0	02.01	527.6	59.0	323.9	59.0	H	6 0	02.93	568.3	65.9	436.0	65.5	H
	23 0	07.27	528.3	59.0	332.5	59.3	W	7 0	01.93	564.5	66.7	445.3	66.7	H
14 0 0	08.90	530.1	59.3	338.6	60.0	W	8 0	03.55	559.1	67.0	426.8	67.0	H	
	1 0	12.31	542.9	60.1	345.5	61.0	H	10 0	01.45	550.5	66.8	371.7	66.7	H
	2 0	14.92	558.2	61.1	359.5	62.2	H							
	4 0†	12.75	524.2	63.3	540.4	64.0	W	18 0	25 00.51	542.6	62.6	382.7	62.1	W
	6 0	08.11	554.0	64.8	439.8	65.3	H	20 0	01.14	534.1	61.7	378.6	61.3	W
	7 0	25 07.84	562.0	65.2	403.0	65.7	H	22 0	00.40	533.6	61.3	363.2	61.2	H
	8 0†	24 59.93	564.3	65.4	431.0	65.5	H	23 0	05.02	536.5	61.2	358.4	61.3	W
	10 0†	24 57.71	532.1	65.0	293.4	64.2	H	20 0 0	09.08	537.8	61.3	355.1	61.5	H
							1 0	13.05	547.3	61.4	348.2	61.7	H	
	18 0	25 03.14	548.2	61.7	301.6	61.4	W	2 0	14.53	548.4	61.6	355.5	61.9	H
	20 0	00.42	527.1	61.0	360.8	60.7	W	4 0	07.51	552.5	61.9	385.5	62.3	W
	22 0	05.69	516.4	60.5	382.6	60.5	H	6 0	04.37	565.3	62.2	385.9	62.7	H
	23 0	07.60	521.8	60.6	394.5	60.8	W	7 0	04.37	558.5	62.2	386.8	62.7	H
15 0 0	12.92	524.1	60.7	402.0	61.0	H	8 0	05.05	558.1	62.2	374.1	62.7	H	
	1 0	15.27	528.4	60.9	402.7	61.5	H	10 0	05.22	554.8	62.2	367.2	62.5	H

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
20 18 0	25 02.42	547.4	61.1	370.7	61.1	W 26	2 15.14	551.9	59.7	341.4	61.0	W
20 0	24 59.86	535.1	61.0	383.3	61.1	W	4 3	11.57	554.0	62.2	369.4	63.8
22 0	25 05.52	530.9	60.8	368.1	61.0	H	6 0	08.38	559.6	64.4	368.4	65.8
23 0	06.14	534.6	61.0	357.0	61.3	W	7 0	07.24	560.9	65.0	359.4	66.3
21 0 0	10.83	542.0	61.2	346.9	61.5	H	8 0	00.64	563.3	65.6	365.2	66.6
1 0	14.40	540.3	61.7	343.9	62.2	H	10 0	25 06.59	553.9	65.5	352.7	65.9
2 0	14.37	541.7	62.2	353.1	63.0	H						
4 0	10.38	551.7	63.7	379.0	64.3	W	18 0	24 57.71	546.8	60.5	296.9	59.5
6 0	06.97	562.9	65.2	363.9	65.7	H	20 0	25 01.31	534.6	58.2	348.3	58.2
7 0	05.25	571.9	65.6	367.7	66.0	H	22 0	07.34	525.4	58.5	366.0	57.8
8 0	04.44	558.1	66.0	401.3	66.2	H	23 0	11.77	532.6	58.2	360.8	58.0
10 0	03.40	552.8	65.7	373.5	65.7	H	27 0 0	15.01	529.1	58.3	368.3	58.4
							1 0	13.09	539.0	58.7	367.5	59.5
18 0	25 01.98	556.0	62.9	374.1	62.7	W	2 0	12.49	547.9	59.5	359.7	60.5
20 0	08.65	538.6	62.3	365.5	62.0	W	4 0	08.88	555.8	61.8	362.4	63.5
22 0	01.75	531.7	61.8	362.5	61.8	H	6 0	05.25	563.2	64.0	348.9	65.3
23 0	06.73	529.3	61.9	357.3	62.3	W	7 0	03.13	581.4	64.8	357.2	65.8
22 0 0	12.72	533.9	62.3	346.3	63.0	H	8 0 †	25 01.63	565.1	65.2	410.5	66.0
1 0	17.70	538.1	63.1	336.0	64.0	H	10 0 †	24 57.98	524.7	65.5	318.4	66.2
2 0	17.93	552.3	64.1	332.2	65.2	H						
4 0	11.81	566.4	66.5	346.7	67.3	W	18 0	25 02.12	544.1	63.0	350.8	62.5
6 0	08.79	563.6	68.7	378.5	69.0	H	20 0	24 58.85	542.9	62.0	370.5	61.5
7 0	05.58	566.3	69.2	390.4	69.8	H	22 0	25 01.21	536.6	61.6	360.5	61.5
8 0	05.29	558.7	69.6	389.3	69.7	H	23 0	05.09	535.1	61.6	348.3	61.9
10 0 †	16.08	533.7	69.3	206.2	69.2	H	28 0 0	10.88	535.0	61.9	335.8	62.8
							1 0	14.87	540.2	62.7	332.8	63.9
23 18 0	25 00.89	549.3	60.4	386.7	60.0	H	2 0	16.13	556.3	63.6	329.9	65.1
20 0	24 59.54	543.6	59.8	389.5	59.6	H	4 3	09.29	566.1	65.7	354.6	67.2
22 0	25 02.46	533.6	59.6	387.0	59.6	W	6 0	25 08.01	573.7	67.2	432.0	68.3
23 0	05.25	532.9	59.8	375.3	60.1	H	7 0 †	24 56.11	584.2	67.7	462.6	68.5
24 0 0	10.30	533.1	60.2	358.8	60.8	W	8 0	25 05.15	558.4	67.9	428.4	68.6
1 0	14.65	539.7	61.0	351.6	62.0	H	10 0 †	25 04.84	549.5	67.6	279.5	67.9
2 0	15.41	544.2	62.3	349.6	63.1	W						
4 0	11.28	556.8	64.0	370.3	64.7	H	18 0	24 58.85	546.0	65.0	349.4	64.5
6 0	08.52	569.5	65.0	376.2	65.3	W	20 0	25 01.65	523.7	64.2	350.1	63.9
7 0	08.95	577.4	65.3	382.9	65.5	W	22 0	04.29	523.8	63.7	355.0	63.5
8 0	03.75	555.3	65.4	401.1	65.4	W	23 0	10.13	521.6	63.5	351.9	63.5
10 0 †	01.96	548.4	64.9	325.1	64.5	W	29 0 0	12.04	540.5	63.6	332.3	63.8
							1 0	15.36	555.8	63.7	328.7	64.2
18 0	25 06.04	526.7	59.1	321.4	58.0	H	2 0	14.94	554.4	64.0	350.0	64.6
20 0	00.00	537.6	57.6	369.9	56.7	H	4 0	11.44	553.4	65.0	373.7	66.0
22 0	04.86	521.1	56.9	379.4	56.5	W	6 0 †	25 00.60	590.3	65.8	394.8	66.8
23 0	09.76	523.6	56.8	376.9	57.0	H	7 0	24 58.82	576.3	66.0	413.9	67.2
25 0 0	13.91	543.9	57.3	364.5	58.0	W	8 0	25 05.11	562.3	66.3	399.1	67.0
1 0	10.83	549.4	58.3	378.9	59.5	H	10 0 †	25 02.55	594.5	66.1	301.7	66.3
2 0	12.42	547.4	59.8	377.5	60.8	W						
4 0	11.59	556.8	62.5	381.7	63.3	H	30 18 0	25 03.27	541.3	64.0	349.5	63.7
6 0	07.00	568.5	64.0	371.1	64.7	W	20 0	00.25	541.9	63.4	364.0	63.2
7 0 †	25 03.38	546.0	64.6	410.4	65.0	W	22 0	03.28	533.4	63.1	367.6	63.3
8 0	24 57.71	567.4	64.8	386.0	65.2	W	23 0	06.19	529.5	63.2	365.9	63.4
10 0	25 05.11	553.7	64.6	357.6	64.6	W	31 0 0	07.15	536.2	63.3	347.3	63.7
							1 0	09.00	536.5	63.4	345.4	63.7
18 0	25 00.57	543.9	59.7	349.7	59.0	H	2 0	11.98	542.8	63.3	343.7	63.5
20 0	24 59.90	531.2	58.4	383.8	58.0	H	4 0	09.37	550.2	63.2	362.2	63.5
22 0	25 05.36	516.6	57.7	375.4	57.6	W	6 0	06.01	555.5	63.3	371.4	63.8
23 0	06.97	532.2	57.7	364.6	58.1	H	7 0	05.08	560.3	63.5	372.4	63.9
26 0 0	11.52	534.2	58.0	356.8	58.7	W	8 0	04.15	561.2	63.5	371.9	63.8
1 0	13.12	549.8	58.8	345.9	59.9	H	10 0	02.22	554.0	63.4	344.5	63.2

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Aug. 27th 1^h. The declination was noted 25°01'41", but as it was found to be 25°14'80" with little apparent change at 1^h 20^m, it was believed that the reading at 1^h was 20 scale divisions in error, and it has been corrected accordingly.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	d. h. m.	° '	Sc. Div.	°	Mic. Div.	°
31 18 0	25 00-60	543.7	58.8	366.7	57.5	H	2 2 0	25 17-15	557.2	63.9	387.7	65.2	H
20 0	01-04	538.7	57.7	389.3	56.2	H	4 0	24 57-14	634.6	65.9	739.2	67.3	W
22 0	03-02	532.9	56.8	328.2	55.9	W	6 0	25 11-82	625.1	67.4	601.5	68.6	W
23 0	06-39	537.2	56.7	382.2	56.2	H	7 0	24 59-63	560.1	67.8	475.3	69.2	H
1 0 0	09-89	541.4	56.7	370.2	57.0	W	8 0	24 57-34	552.1	67.9	440.2	68.8	W
1 0	13-12	551.8	57.4	354.9	58.2	H	10 0	25 07-51	513.4	67.7	132.7	68.0	W
2 0	14-10	560.0	58.3	352.4	59.5	W							
4 0	09-42	561.1	61.5	346.4	62.0	H	6 18 0	25 03-06	539.8	66.0	372.1	65.8	H
6 0	06-16	555.3	62.4	362.0	63.6	W	20 0	02-42	536.7	65.4	382.1	65.2	H
7 0	05-02	558.0	62.9	375.8	63.8	W	22 0	05-80	526.7	65.1	381.4	65.1	W
8 0	05-06	559.3	63.0	373.4	63.8	W	23 0	07-60	530.4	65.1	369.4	65.1	B
10 0	04-58	556.9	62.8	362.4	63.2	W	7 0 0	09-29	536.9	65.7	364.7	66.5	H
							1 0	10-20	538.4	66.3	362.6	67.3	H
18 0	25 00-13	547.0	59.8	356.5	59.5	H	2 0	09-20	541.2	67.0	370.9	68.2	W
20 0	02-12	543.6	59.2	361.1	59.0	H	4 0	06-12	550.7	68.8	371.7	70.2	W
23 0	04-88	536.5	58.9	365.6	58.8	W	6 0	03-94	547.8	70.6	369.3	71.8	W
23 0	08-31	539.4	59.0	363.0	59.1	H	7 0	04-44	548.7	71.2	370.9	72.3	W
2 0 0	10-00	538.9	59.0	355.7	59.5	W	8 0	04-98	548.0	71.5	365.9	72.2	H
1 0	10-25	544.1	59.5	352.6	60.5	H	10 0	03-97	545.4	71.3	366.7	71.7	W
2 0	12-36	552.6	60.2	346.3	61.3	W							
4 0	07-98	557.5	61.8	346.8	63.0	H	18 0	25 05-29	540.1	67.8	378.9	67.3	H
6 0	05-38	562.1	62.8	341.1	63.8	W	20 0	11-51	530.1	67.2	329.1	66.7	H
7 0	05-82	561.5	63.1	343.7	64.0	W	22 0	12-01	527.2	66.6	339.0	66.5	W
8 0	01-54	558.7	63.3	349.3	64.0	W	23 0	11-54	528.0	66.6	356.0	66.7	H
10 0	05-52	556.9	63.1	355.6	63.6	W	8 0 0	14-80	526.8	66.6	380.7	66.9	W
							1 0	14-57	541.5	66.8	395.4	67.0	H
18 0	25 00-64	545.2	60.3	364.8	60.0	H	2 0	13-37	558.7	66.8	431.0	67.0	W
20 0	03-27	535.5	60.0	370.6	59.7	H	4 0	10-67	593.6	66.8	532.9	67.2	H
22 0	04-88	535.8	59.8	357.3	60.0	W	6 0	25 14-04	588.1	67.2	539.0	67.5	W
23 0	08-29	534.4	60.0	350.5	60.5	H	7 0	24 57-02	569.8	67.3	501.5	67.6	W
3 0 0	10-06	536.7	60.4	345.0	61.3	W	8 0	24 58-42	536.9	67.4	426.6	67.4	W
1 0	10-61	541.7	61.2	339.3	62.4	H	10 0	24 59-66	536.8	67.0	390.7	66.8	W
2 0	11-19	548.3	62.0	330.6	63.2	W							
4 0	06-84	560.4	63.2	340.5	64.2	H	18 0	25 02-01	538.1	63.0	398.2	61.8	H
6 0	03-88	560.1	63.8	347.3	64.7	W	20 0	02-12	533.4	62.2	404.4	61.0	H
7 0	04-75	554.8	64.0	345.9	64.8	W	22 0	05-80	519.9	61.6	401.2	61.0	W
8 0	05-08	558.3	64.0	345.6	64.8	W	23 0	09-66	526.0	61.5	402.0	61.2	H
10 0	05-50	558.7	63.9	348.6	64.4	W	9 0 5	12-51	528.7	61.7	396.1	61.9	W
							1 0	12-38	537.9	62.0	389.3	62.5	H
18 0	25 12-51	536.7	61.5	304.5	61.5	H	2 0	11-27	550.6	62.5	381.9	63.1	W
20 0	02-03	543.9	61.2	273.7	61.2	H	4 0	04-31	555.6	63.6	432.5	64.2	H
22 0	17-56	530.5	61.1	302.9	61.5	W	6 0	04-64	562.3	64.3	489.3	65.0	W
23 0	14-50	539.3	61.4	360.6	62.0	H	7 0	01-22	553.9	64.5	453.7	65.0	W
4 0 0	16-57	526.8	61.9	353.5	62.7	W	8 0	03-34	551.7	64.6	415.6	65.0	W
1 0	18-84	554.0	62.4	361.7	63.4	H	10 0	08-77	548.8	64.3	385.6	64.3	W
2 0	18-68	536.9	63.0	406.0	64.0	W							
4 0	14-50	544.5	64.4	415.9	65.4	H	18 0	25 03-43	540.7	59.0	411.8	57.5	H
6 0	06-73	548.5	65.7	401.8	66.7	W	20 0	01-98	533.6	57.5	408.4	56.0	W
7 0	06-16	547.3	66.0	387.1	66.8	W	22 0	08-11	529.9	56.6	389.5	55.5	W
8 0	25 06-12	552.3	66.0	375.3	66.8	W	23 0	10-09	529.6	56.4	385.4	55.8	H
10 0	07 24 54-70	549.3	66.0	376.8	66.5	W	10 0 0	12-60	537.8	56.5	379.3	56.5	W
							1 0	12-18	540.0	57.1	380.7	57.7	H
18 0	25 04-14	559.7	63.5	336.9	63.5	H	2 0	11-41	540.5	58.0	375.2	59.0	W
20 0	12-01	527.9	63.0	369.4	63.0	H	4 0	08-72	559.4	60.2	393.1	61.5	H
22 0	13-41	515.3	62.7	379.9	62.7	W	6 0	06-93	557.3	62.3	431.7	63.3	W
23 0	15-04	517.6	62.7	415.1	62.8	H	7 0	03-81	556.8	63.1	457.5	63.7	H
5 0 0	18-82	521.6	62.8	392.7	63.4	H	8 0	01-98	553.6	63.2	465.9	63.7	H
1 0	20-72	556.1	63.4	418.4	64.2	H	10 0	01-65	543.1	63.0	404.6	63.3	W

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Mic. Div.	°	
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°		
10 18 0	25 00.74	555.9	59.4	368.9	58.8	H	16 2 0	25 12.87	544.3	61.7	369.3	62.3	W	
20 0	04.37	529.2	58.7	372.3	58.2	H	4 0	08.28	547.8	62.8	362.4	63.5	H	
22 0	20.30	534.1	58.4	341.2	58.3	W	6 0	05.77	553.0	63.5	359.4	64.2	W	
23 0	16.55	542.6	58.6	364.6	58.8	H	7 0	05.36	556.2	63.7	357.0	64.3	W	
11 0 0	17.78	525.4	58.9	392.1	59.5	W	8 0	05.30	556.8	63.8	355.0	64.3	W	
1 0	17.93	534.0	59.6	413.7	60.5	H	10 0	04.71	553.2	63.7	357.7	64.2	W	
2 0	17.58	563.3	60.5	452.5	61.8	W								
4 0	25 12.01	537.0	63.1	477.4	64.8	W	18 0	25 04.75	548.7	61.5	337.9	61.0	H	
6 0	24 43.69	589.2	65.5	741.9	67.0	W	20 0	01.16	546.4	60.7	358.2	60.2	H	
7 0	24 57.75	563.2	66.2	529.4	67.5	W	22 0	05.30	528.8	60.3	367.5	60.0	W	
8 0	25 03.77	550.8	66.7	444.7	67.7	W	23 0	10.20	527.4	60.2	362.5	60.0	H	
10 0	06.50	579.3	66.9	228.1	67.6	W	17 0 0	12.56	537.2	60.2	354.0	60.3	W	
							1 0	14.50	537.7	60.4	361.5	61.0	H	
18 0	25 01.31	532.0	64.4	292.8	64.2	H	2 0	13.94	541.4	60.9	368.4	61.5	W	
20 0	06.44	519.9	63.8	346.6	63.7	H	4 0	07.89	549.9	61.9	365.8	62.7	W	
22 0	08.52	520.3	63.6	378.6	63.7	W	6 0	06.16	559.3	62.5	380.1	63.2	W	
23 0	12.15	527.4	63.6	386.4	64.0	W	7 0	05.65	547.1	62.7	396.1	63.2	W	
12 0 0	09.98	524.5	63.9	389.7	64.5	W	8 0	03.81	555.7	62.7	389.6	63.2	W	
1 0	11.37	538.5	64.5	401.3	65.7	H	10 0	07.11	555.0	62.6	312.8	62.8	W	
2 0	13.16	558.4	65.1	389.6	66.3	W								
4 0	05.15	571.6	66.8	477.2	67.8	H	18 0	25 03.90	548.8	60.2	366.7	59.5	H	
6 0	05.92	543.7	67.6	417.5	68.3	W	20 0	02.45	543.5	59.4	370.7	58.5	H	
7 0	02.75	558.5	67.6	397.8	68.0	W	22 0	05.55	543.0	58.7	363.6	58.2	W	
8 0	04.71	552.5	67.4	374.1	67.6	W	23 0	08.99	538.6	58.5	356.9	58.3	H	
10 0	09.17	556.7	66.7	287.3	66.8	W	18 0 0	12.60	541.7	58.6	362.2	58.9	W	
							1 0	14.33	531.5	59.0	365.3	59.7	H	
13 18 0	25 01.68	550.4	63.7	286.0	62.0	H	2 0	12.75	544.1	59.6	360.5	60.5	W	
20 0	07.81	515.0	62.7	343.0	62.0	H	4 0	08.77	544.4	61.1	370.9	62.0	H	
22 0	13.44	533.6	62.0	326.5	61.5	W	6 0	05.42	549.4	62.0	374.8	62.7	W	
23 0	16.65	554.4	61.9	341.1	61.8	H	7 0	05.72	553.1	62.1	365.8	62.7	W	
14 0 0	14.91	537.1	62.0	342.6	62.5	W	8 0	25 05.29	555.7	62.0	363.0	62.3	W	
1 0	12.82	534.1	62.6	372.0	63.2	H	10 0	24 59.61	557.2	61.3	359.7	61.0	W	
2 0	11.91	546.5	63.1	413.3	63.9	W								
4 0	08.58	557.1	64.7	461.5	65.9	H	18 0	25 03.47	547.7	56.7	368.1	55.6	H	
6 0	04.76	558.1	66.2	402.3	67.3	W	20 0	01.68	549.1	55.8	377.7	55.0	H	
7 0	02.82	554.1	66.8	406.3	67.7	W	22 0	04.56	537.0	55.1	382.2	54.7	W	
8 0	02.33	550.6	67.2	402.3	67.8	W	23 0	07.67	538.7	55.0	373.6	55.0	H	
10 0	02.13	557.6	67.2	355.4	67.5	W	19 0 0	10.47	543.3	55.3	365.6	55.6	W	
							1 0	14.20	542.7	55.8	373.3	56.2	H	
18 0	25 07.52	535.9	63.7	314.5	63.0	H	2 0	12.85	547.2	56.3	378.2	57.1	W	
20 0	08.11	540.3	62.7	334.3	62.0	H	4 0	11.41	559.9	57.2	389.0	58.0	H	
22 0	14.07	507.3	62.2	368.6	61.7	W	6 0	25 11.72	557.1	57.8	422.2	58.4	W	
23 0	12.98	528.7	62.0	360.4	62.0	W	7 0	24 54.41	551.0	57.9	477.7	58.4	W	
15 0 0	12.67	525.5	62.2	366.2	62.6	W	8 0	25 02.39	555.0	57.9	413.4	58.5	W	
1 6	08.03	535.9	62.8	363.0	63.7	H	10 0	24 59.56	552.6	57.9	409.2	58.3	W	
2 0	12.75	529.3	63.6	365.6	64.8	W								
4 0	09.69	541.0	65.7	407.2	66.8	H	20 18 0	25 00.00	549.1	56.3	358.7	56.2	H	
6 0	04.55	556.4	67.2	370.4	68.3	W	20 0	02.79	546.1	56.1	353.5	56.0	H	
7 0	03.02	554.0	67.8	371.1	68.5	W	22 0	04.44	540.5	55.9	355.0	56.0	W	
8 0	03.95	553.8	68.0	373.8	68.6	W	23 0	07.40	540.7	56.0	349.1	56.2	H	
10 0	00.99	546.0	67.7	358.4	67.9	W	21 0 0	09.39	538.7	56.4	350.4	57.0	W	
							1 0	13.05	545.7	57.0	351.6	57.8	H	
18 0	25 02.08	543.5	63.3	369.8	62.5	H	2 0	12.15	544.5	57.6	353.1	58.6	W	
20 0	01.34	537.3	62.2	379.7	61.0	H	4 0	09.35	558.9	58.9	348.8	60.0	H	
22 0	03.57	529.7	61.3	374.5	60.5	W	6 0	08.46	564.8	60.0	343.2	60.5	W	
23 0	06.43	528.8	61.1	374.8	60.7	H	7 0	25 08.73	571.9	60.3	362.2	60.6	W	
16 0 0	09.77	534.8	61.1	366.6	61.0	W	8 0	24 41.23	567.2	60.4	498.7	60.4	W	
1 0	11.48	544.4	61.3	366.9	61.7	H	10 0	25 02.32	551.1	60.0	376.8	60.2	W	

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		
21 18 0	24 55.12	518.7	56.6	119.4	55.6	W	26 2 0	25 08.83	548.8	56.5	373.3	56.7	H	
20 0†	25 11.98	505.8	55.2	133.6	54.0	H	4 0	07.57	551.8	57.0	383.1	57.6	W	
22 0	14.10	472.3	54.0	298.4	53.2	H	6 0	06.19	553.9	57.7	364.9	58.2	H	
23 0†	18.37	487.7	53.8	395.7	53.2	H	7 0	04.89	556.9	58.0	358.1	58.6	H	
22 0 0†	15.47	532.0	53.8	546.7	53.2	H	8 0	05.79	556.8	58.2	360.6	58.8	H	
1 0†	15.41	591.2	53.9	664.6	54.2	H	10 0	02.96	550.2	58.3	359.2	58.7	H	
2 0†	06.86	641.9	54.2	650.9	55.0	H								
4 0†	25 11.74	624.1	55.7	607.5	56.7	H	27 18 0	25 00.40	547.0	56.6	331.1	54.5	W	
6 0†	24 45.40	554.8	56.9	453.3	57.8	B	20 0	05.50	549.2	54.4	339.4	53.2	W	
7 0†	25 11.57	463.6	57.1	257.6	58.0	B	22 0	01.45	534.7	53.3	358.6	52.3	H	
8 0†	24 21.92	515.4	57.3	272.2	58.3	B	23 0	06.43	535.0	53.0	348.8	52.3	W	
10 0†	24 47.59	362.2	57.5	-21.6	58.5	W	28 0 0	07.58	533.5	52.8	338.3	52.5	H	
								1 0	09.87	539.6	52.8	340.7	52.7	W
18 0	25 18.47	540.6	56.4	210.4	57.0	H	2 0	09.62	539.0	52.8	333.0	52.8	H	
20 0	02.42	536.5	56.4	301.1	57.0	H	4 0	07.82	554.6	53.0	351.0	53.2	W	
22 0	03.75	532.4	56.5	307.2	57.0	W	6 0	25 06.97	558.5	53.2	374.2	53.5	H	
23 0	07.04	532.8	56.6	307.0	57.2	H	7 0†	24 56.23	581.4	53.2	350.7	53.5	H	
23 0 0	08.65	532.7	56.7	304.3	57.3	W	8 0	25 00.94	547.0	53.3	358.8	53.7	H	
1 0	09.29	531.6	56.8	306.3	57.4	H	10 0	02.01	547.1	53.3	352.6	53.7	H	
2 0	09.33	534.2	57.1	310.1	57.9	W								
4 0	06.12	541.1	57.8	313.4	58.7	H	18 0	25 02.48	551.0	53.0	343.2	53.2	W	
6 0	05.65	550.1	58.4	316.5	59.3	W	20 0	01.01	549.8	53.0	344.3	53.1	W	
7 0	05.43	552.0	58.6	317.6	59.3	W	22 0	02.32	537.9	52.8	342.9	52.9	H	
8 0	06.41	561.8	58.7	323.4	59.4	W	23 0	04.39	534.3	52.8	335.9	53.0	W	
10 0	25 04.82	544.9	58.7	380.2	59.1	W	29 0 0	06.63	539.8	52.7	326.1	52.8	H	
								1 0	08.21	544.4	52.7	320.4	52.7	H
18 30	24 59.17	543.4	56.6	317.2	56.6	W	2 0	09.15	548.1	52.6	325.7	52.7	H	
20 0	25 02.26	538.9	56.3	329.6	56.3	W	4 0	06.14	550.5	52.6	340.9	52.8	W	
22 0	04.95	529.3	56.0	331.4	56.2	H	6 0	04.34	554.3	52.6	344.5	52.7	H	
23 0	08.52	527.8	56.0	328.6	56.3	W	7 0	01.41	556.1	52.5	349.8	52.8	H	
24 0 0	11.84	536.7	56.2	327.4	56.7	H	8 0	04.04	549.6	52.5	357.2	52.8	H	
1 0	11.41	540.0	56.6	327.7	57.3	H	10 0	01.01	549.4	52.5	363.3	52.7	H	
2 0	12.58	544.9	57.2	334.3	58.1	H								
4 0	06.84	546.2	58.6	345.7	59.8	W	18 0	25 01.75	553.1	52.1	341.7	52.3	W	
6 0	05.32	553.6	59.7	338.4	60.7	H	20 0	00.98	547.1	52.0	351.3	52.2	W	
7 0	25 05.22	553.2	60.0	364.7	60.8	W	22 0	00.55	540.7	52.2	339.6	52.4	H	
8 0†	24 52.57	571.3	60.0	344.6	60.7	H	23 0	02.89	537.4	52.2	337.3	52.8	W	
10 0	25 00.40	548.0	60.1	360.5	60.5	H	30 0 0	08.68	542.4	52.6	328.3	53.5	H	
								1 0	08.88	541.0	53.1	331.3	54.2	H
18 0	25 00.98	544.4	58.9	344.3	59.0	W	2 0	09.49	549.7	54.0	334.4	55.3	H	
20 0	00.98	540.6	58.6	347.6	58.8	W	4 0	06.32	549.9	55.6	332.7	56.9	W	
22 0	02.45	534.6	58.5	341.9	58.7	H	6 0	04.59	550.9	57.0	341.9	58.2	H	
23 0	04.91	533.8	58.6	341.2	59.0	W	7 0	03.77	556.4	57.6	340.1	58.5	H	
25 0 0	09.35	533.3	58.8	351.3	59.6	H	8 0	00.17	552.5	57.7	344.3	58.7	H	
1 0	09.56	541.7	59.4	333.7	60.3	H	10 0	25 01.95	546.2	57.5	351.3	58.2	H	
2 0	11.72	541.3	60.0	329.6	61.2	H								
4 0	10.16	545.5	61.3	341.2	62.4	W	18 0	24 59.56	550.1	55.5	324.3	55.5	W	
6 0	08.01	572.1	62.0	344.7	63.0	H	20 0	25 06.74	541.8	55.0	308.3	55.3	W	
7 0	08.01	558.1	62.2	363.7	63.0	H	22 0	01.18	534.5	54.8	320.4	55.2	H	
8 0	03.50	553.5	62.2	369.7	62.8	H	23 0	06.93	530.4	54.9	321.4	55.4	W	
10 0	03.70	549.5	61.8	357.6	62.3	H	1 0 0	07.79	534.3	55.0	322.7	55.7	H	
								1 0	08.34	540.5	55.2	329.5	56.0	H
18 0	25 01.68	541.3	58.7	334.7	58.2	W	2 0	12.15	554.8	55.7	340.7	56.7	H	
20 0	05.27	537.3	57.9	349.1	57.0	W	4 0	08.29	555.8	57.2	365.7	58.3	W	
22 0	09.66	522.4	57.1	359.7	56.6	H	6 0	25 05.53	560.4	58.6	346.2	59.7	W	
23 0	07.65	532.5	56.8	356.8	56.3	W	7 0	24 59.73	557.1	59.0	390.9	59.7	H	
26 0 0	08.85	533.8	56.6	359.0	56.2	H	8 0	24 49.77	545.7	59.0	362.1	59.5	H	
1 0	10.50	532.7	56.5	371.0	56.7	H	10 0	25 03.85	549.8	58.4	344.7	58.5	H	

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°	
1 18 0	25 02-15	546.9	53.9	333.9	52.8	W	7 2 0	25 09-15	545.3	54.3	327.6	55.0	H
20 0	02-39	539.7	52.7	335.2	51.5	W	4 0	25 10-67	559.6	55.1	389.9	55.8	W
22 0	03-43	535.2	51.8	336.4	50.7	H	6 0	25 04-42	555.0	55.5	432.5	56.0	H
23 0	07-37	526.1	51.6	330.7	51.0	W	7 0†	24 53-58	549.8	55.5	443.7	55.8	H
2 0 0	11-30	535.9	51.6	337.4	51.5	H	8 0†	24 56-70	525.8	55.4	253.7	55.7	H
1 0	13-25	547.8	51.9	330.3	52.3	H	10 0†	24 55-53	524.0	55.2	311.3	55.7	H
2 0	16-15	541.6	52.7	345.7	53.7	H							
4 0	11-68	551.1	54.5	353.6	55.7	W	18 0†	24 50-08	558.4	52.7	-218.6	52.3	W
6 0	25 02-01	535.6	55.8	401.9	56.8	H	20 0	25 06-32	506.0	52.2	+189.8	52.1	W
7 0†	24 48-30	555.7	56.2	390.4	57.2	H	22 0	06-56	533.7	51.8	295.9	51.7	H
8 0	24 57-24	536.9	56.5	377.1	57.2	H	23 0	09-62	537.4	51.8	331.3	51.8	W
10 0†	24 53-52	539.7	56.2	258.3	56.6	H	8 0	13-29	540.8	51.8	342.6	52.2	H
							1 0	21-39	500.9	52.0	440.4	52.6	H
18 0	25 03-45	538.8	54.2	197.9	54.2	W	2 0†	20-42	565.1	52.5	516.4	53.2	H
20 0	09-08	540.4	53.5	275.7	53.2	W	4 0†	25 14-71	610.1	53.4	666.6	54.5	H
22 0	10-83	532.2	52.8	306.1	52.7	H	6 0†	24 51-49	546.0	54.0	544.4	55.0	H
23 4	12-25	533.6	52.7	313.0	52.9	W	7 0†	25 02-01	536.9	54.1	472.6	55.0	H
3 0 0	11-74	541.4	52.8	315.7	53.4	H	8 0†	06-21	532.1	54.1	429.2	55.0	H
1 0	12-31	540.5	53.2	321.5	54.2	H	10 0	05-18	538.1	54.0	344.1	54.7	H
2 0	11-86	545.0	53.8	327.9	55.2	H							
4 0	09-22	557.4	55.5	327.8	56.8	W	18 0	25 07-54	537.0	52.4	298.5	52.3	W
6 0	07-13	565.7	57.3	315.4	58.2	H	20 0	06-36	534.7	52.0	327.0	52.1	W
7 0	03-77	552.0	57.6	350.8	58.3	H	22 0	04-41	535.6	51.8	349.3	52.0	H
8 0	05-99	558.0	57.6	340.0	58.0	H	23 0	06-93	527.9	51.9	350.2	52.2	W
10 0	04-64	558.0	56.8	331.5	57.0	H	9 0	06-39	515.3	51.9	364.8	52.3	H
							1 0	06-06	534.2	52.0	377.4	52.5	H
4 18 0	25 03-47	552.5	52.1	339.2	52.4	W	2 0	08-63	536.4	52.1	368.1	52.5	H
20 0	03-50	546.6	52.1	342.3	52.6	W	4 0	07-49	550.6	52.2	388.1	52.6	W
22 0	02-79	540.6	52.7	348.4	53.2	H	6 0	25 04-07	550.5	52.4	399.9	53.2	H
23 0	04-95	536.7	53.0	347.7	54.0	W	7 0	24 57-04	549.9	52.7	395.2	53.7	H
5 0 0	07-84	538.6	53.6	342.0	54.7	H	8 0	25 10-67	545.5	53.0	382.7	54.0	H
1 0	08-92	544.3	54.1	334.1	55.3	W	10 0	25 01-75	550.1	53.7	329.5	54.7	H
2 0	10-77	551.1	54.7	336.1	55.7	H							
4 0	07-02	539.8	55.4	368.7	56.4	W	18 0†	25 04-64	558.5	54.7	95.9	55.4	W
6 0	05-65	550.1	56.0	343.5	56.8	H	20 0	11-98	534.5	54.9	189.0	55.7	W
7 0	04-44	553.2	56.2	334.7	57.1	H	22 0	11-66	518.4	55.0	301.0	55.8	H
8 0	03-82	551.8	56.2	327.7	57.2	H	23 3	11-03	516.7	55.3	335.4	56.2	W
10 0	03-60	552.6	56.6	322.3	57.2	H	10 0	13-46	514.7	55.7	334.4	55.6	H
							1 0	16-79	523.6	56.0	364.8	57.0	H
18 0	25 02-82	551.8	56.3	321.7	56.8	W	2 0	14-26	528.1	56.3	428.2	57.2	H
20 0	02-13	548.6	56.2	322.2	56.7	W	4 0	15-27	551.1	56.9	578.7	57.8	W
22 0	04-68	540.7	56.3	326.2	56.9	H	6 0	04-91	544.1	57.4	432.1	58.7	H
23 0	06-50	537.4	56.4	324.9	57.0	W	7 0	05-49	547.0	57.6	413.6	58.3	H
6 0 0	09-47	539.4	56.5	324.9	57.0	H	8 0	02-39	548.1	57.7	418.4	58.2	H
1 0	11-84	541.5	56.7	329.2	57.3	H	10 0	04-68	549.0	57.5	366.3	58.0	H
2 0	11-91	546.2	57.0	335.1	58.0	H							
4 0	07-92	549.7	57.7	365.0	58.6	W	11 18 0	25 02-89	551.5	54.0	297.4	54.4	W
6 0	25 03-81	546.5	58.3	371.8	58.7	H	20 0	07-13	543.8	53.9	334.6	54.3	W
7 0	24 58-65	554.6	58.3	365.6	58.5	H	22 0	13-12	519.8	53.8	326.9	54.2	H
8 0	25 02-35	548.6	58.0	357.3	58.2	H	23 0	08-46	531.5	53.9	347.2	54.3	W
10 0	24 55-49	539.5	57.2	329.4	57.2	H	12 0	13-29	539.9	53.8	348.7	54.4	H
							1 0	15-20	535.3	54.0	363.2	54.7	H
18 0	25 08-34	556.4	54.6	282.0	54.2	W	2 0	09-29	544.6	54.0	386.7	54.7	H
20 0	02-94	550.5	54.0	309.0	53.4	W	4 0	08-01	540.0	54.1	380.2	54.6	W
22 0	06-37	537.6	53.5	326.4	53.1	H	6 0	04-37	553.0	54.0	361.5	54.0	H
23 0	07-29	534.6	53.4	332.2	53.4	W	7 0	25 03-63	547.4	53.7	375.4	53.7	H
7 0 0	08-86	537.5	53.5	336.3	53.9	H	8 0	24 56-77	548.5	53.5	381.2	53.3	H
1 0	09-82	540.6	53.8	342.0	54.4	H	10 0	25 02-69	550.9	53.0	356.3	52.9	H

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.	
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
12 18 0	25 03.11	551.4	50.1	349.0	49.1	W	17 2 0	25 09.54	544.9	52.2	314.4	53.0	H
20 0	02.75	547.2	49.3	360.5	48.3	W	4 0	07.29	552.3	52.7	306.7	53.7	W
22 0	04.68	538.5	48.8	363.8	48.0	H	6 0	04.71	557.4	53.1	304.7	54.0	H
23 0	09.22	537.8	48.7	362.8	48.2	W	7 0	04.07	559.6	53.2	304.2	54.2	H
13 0 0	07.60	535.9	48.7	362.7	48.4	H	8 0	04.34	557.7	53.2	304.6	54.2	H
1 0	08.65	537.6	48.6	359.8	48.7	H	10 0	00.06	559.1	53.5	305.8	54.2	H
2 0	09.42	545.3	48.7	356.2	49.0	H							
4 0	06.71	545.4	49.0	365.6	49.3	W	18 18 0	25 02.62	555.1	52.7	302.4	52.7	H
6 0	25 04.64	548.5	49.0	371.3	49.2	H	20 0	02.19	551.1	52.5	311.9	52.7	H
7 0	24 53.95	565.3	49.0	357.6	49.2	H	22 0	01.72	542.3	52.4	327.5	52.6	W
8 0	25 02.66	547.2	48.8	358.7	49.0	H	23 0	04.82	539.7	52.5	315.8	52.9	H
10 0	02.99	545.1	48.5	302.1	48.5	H	19 0	08.53	539.8	52.7	314.2	53.3	W
							1 0	09.08	545.4	53.0	315.8	53.5	H
18 0	25 02.22	553.1	46.7	326.1	46.5	W	2 0	08.39	550.7	53.0	322.1	53.7	W
20 0	04.24	552.9	46.3	330.3	46.1	W	4 0	07.00	560.3	53.4	324.5	54.2	H
22 0	04.48	542.3	45.8	345.0	45.7	H	6 0	06.70	549.9	53.6	362.2	54.3	W
23 0	06.73	532.9	45.7	347.2	45.6	W	7 0	10.45	551.6	53.6	385.2	54.3	W
14 0 0	10.00	535.4	45.5	340.9	45.5	H	8 0	05.67	556.9	53.6	365.3	54.1	W
1 0	10.56	541.4	45.4	337.4	45.5	H	10 0	03.48	553.1	53.4	345.3	53.7	W
2 0	10.03	544.3	45.4	335.5	45.5	H							
4 0	05.99	549.8	45.4	345.4	45.8	W	18 10	25 01.09	554.8	52.3	289.9	52.5	H
6 0	03.16	551.1	45.7	352.1	46.7	H	20 0	03.88	551.5	52.1	317.2	52.2	H
7 0	03.02	553.6	45.9	347.5	46.5	H	22 0	04.96	539.4	51.8	320.9	51.8	W
8 0	03.35	552.6	45.9	347.2	46.6	H	23 0	04.34	540.3	51.8	323.2	52.0	H
10 0	04.02	553.3	46.2	348.8	46.7	H	20 0	08.28	542.7	51.7	322.0	52.2	W
							1 0	09.22	541.2	52.1	315.2	52.7	H
18 0	25 02.97	555.5	46.6	329.8	47.0	W	2 0	11.49	549.2	52.4	317.6	53.2	W
20 0	02.39	552.4	46.7	335.9	47.2	W	4 0	13.29	550.1	53.2	326.4	54.4	H
22 0	03.63	545.5	46.9	338.2	47.5	H	6 0	06.30	553.1	54.1	358.1	55.0	W
23 0	06.09	543.8	47.1	334.2	48.0	W	7 0	06.16	557.6	54.3	331.5	55.2	W
15 0 0	06.56	542.1	47.6	326.4	48.5	H	8 0	00.62	554.5	54.4	335.7	55.2	W
1 0	08.68	546.1	48.0	322.3	49.2	H	10 0	04.10	552.8	54.3	322.8	54.8	W
2 0	08.99	549.0	48.6	317.5	49.7	H							
4 0	06.83	553.8	49.7	313.8	50.8	W	18 0	25 02.53	552.4	51.7	319.9	51.3	H
6 0	04.31	553.8	50.6	316.7	51.5	H	20 0	02.40	550.9	51.0	326.6	50.5	H
7 0	02.43	556.0	50.7	319.2	51.7	H	22 0	02.26	541.0	50.6	344.0	50.1	W
8 0	03.09	558.9	50.8	310.8	51.7	H	23 0	04.89	540.5	50.3	338.9	49.9	H
10 0	04.07	555.5	50.8	314.9	51.5	H	21 0	07.24	534.6	50.2	345.1	50.0	W
							1 0	12.38	546.5	50.2	334.4	50.4	H
18 15	25 02.94	559.9	49.1	262.2	49.3	W	2 0	09.22	549.4	50.3	324.2	50.6	W
20 0	01.90	551.9	48.8	295.4	49.0	W	4 0	08.58	557.5	50.9	329.5	51.6	H
22 0	04.68	537.3	48.4	329.0	48.5	H	6 0	05.23	555.5	51.5	327.4	52.0	W
23 0	08.65	535.6	48.3	329.3	48.6	W	7 0	04.05	553.4	51.6	329.1	52.1	W
16 0 0	09.57	540.3	48.4	324.4	49.0	H	8 0	03.43	555.2	51.6	327.4	52.1	W
1 0	10.28	539.4	48.8	331.0	49.5	H	10 0	02.01	566.2	51.5	315.8	51.8	W
2 0	09.47	541.6	49.3	321.9	50.3	H							
4 0	07.57	549.1	50.6	324.5	51.7	W	18 0	25 02.87	546.5	50.5	282.3	50.5	H
6 0	03.06	551.6	51.6	320.3	52.7	H	20 0	04.01	540.5	50.2	318.6	50.2	H
7 0	03.09	556.6	52.0	319.0	53.0	H	22 0	05.45	520.8	50.0	332.6	50.0	W
8 0	03.43	555.7	52.2	316.7	53.0	H	23 0	03.74	539.9	50.0	318.5	50.0	H
10 0	02.42	550.1	52.3	323.4	53.0	H	22 0	10.90	545.7	50.0	328.2	50.0	W
							1 0	12.25	545.4	50.0	338.1	50.5	H
18 0	25 02.50	555.8	51.6	302.3	52.0	W	2 0	12.72	545.8	50.1	355.6	50.6	W
20 0	02.87	558.6	51.4	299.8	51.8	W	4 0	25 11.03	552.7	50.4	388.0	50.8	H
22 0	02.05	542.9	51.3	313.6	51.7	H	6 0	24 47.66	537.6	50.5	395.6	51.0	W
23 0	04.14	538.2	51.4	316.5	52.1	W	7 0	24 53.00	534.4	50.6	375.7	51.2	W
17 0 0	07.07	537.4	51.6	312.9	52.2	H	8 0	25 02.84	541.7	50.6	360.6	51.2	W
1 0	09.19	541.0	51.8	312.7	52.6	H	10 0	03.70	555.6	50.5	372.1	50.7	W

DECLINATION. Magnet untouched, April 14^d—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.								
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			d.	h.	m.	°	'	Sc. Div.	°	Mic. Div.	°	Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.		
22 18 0	25 03-77	550-7	48-7	301-1	48-5	H	28	2	0	25	09-82	548-1	47-8	290-0	48-8	W						
20 0	01-31	544-7	48-2	324-6	48-0	H		4	0		07-94	552-1	48-7	304-1	49-7	H						
22 0	05-89	527-3	47-9	335-8	47-7	W		6	0		05-65	557-5	49-3	298-2	50-1	W						
23 0	07-13	533-1	47-7	328-8	47-7	H		7	0		00-80	554-4	49-5	303-0	50-3	W						
23 0	08-25	538-0	47-8	307-8	48-0	W		8	0		04-64	560-8	49-5	296-4	50-2	W						
1 0	10-16	544-7	47-8	306-1	48-2	H		10	0		01-61	562-7	49-5	298-4	50-0	W						
2 0	11-07	546-3	48-0	311-8	48-5	W																
4 0	07-34	554-7	48-4	313-7	49-0	H		18	0		25 03-00	554-3	47-8	282-1	48-0	H						
6 0	05-00	558-2	48-9	310-6	49-5	W		20	0		03-87	549-3	47-4	298-6	47-4	H						
7 0	05-29	555-1	49-2	312-9	49-6	W		22	0		04-86	541-7	47-0	308-1	47-1	W						
8 0	03-65	557-1	49-0	309-9	49-4	W		23	0		07-63	538-4	46-8	300-6	47-0	H						
10 0	02-52	555-0	48-7	306-6	48-8	W		29	0	0	08-65	541-6	46-8	299-2	47-1	W						
									1	0		08-80	539-9	47-0	297-3	47-5	H					
18 0	25 06-63	548-7	46-7	290-6	46-5	H		2	0		09-82	551-5	47-5	296-8	48-6	W						
20 0	03-70	549-1	46-2	310-8	46-2	H		4	0		08-08	557-0	49-2	299-2	50-2	H						
22 0	01-05	541-0	46-0	324-2	46-1	W		6	0		04-66	556-6	50-5	290-1	51-4	W						
23 0	02-70	540-4	46-0	311-3	46-2	H		7	0		03-09	559-3	50-8	287-8	51-5	H						
24 0	06-16	543-5	46-0	307-3	46-3	W		8	0		00-80	558-7	50-8	295-1	51-3	W						
1 0	08-08	545-1	46-2	311-3	46-7	H		10	0		02-62	550-1	50-3	302-3	50-4	W						
2 0	08-77	548-7	46-4	311-4	47-0	W																
4 0	06-63	551-8	47-0	323-5	47-8	H		18	0		25 04-58	552-0	46-9	274-6	46-3	H						
6 0	05-72	558-3	47-6	317-7	48-3	W		20	0		01-45	551-9	46-1	300-5	45-5	H						
7 0	25 06-12	555-9	47-7	317-1	48-3	W		22	0		02-25	547-0	45-2	306-5	44-7	W						
8 0	24 51-52	566-2	47-7	322-7	48-3	W		23	0		03-99	539-7	44-8	308-2	44-5	H						
10 0	25 03-20	552-7	47-8	318-8	48-4	W		30	0	0	10-21	532-0	44-8	310-7	44-5	W						
									1	0		12-58	536-4	44-7	311-9	44-7	H					
25 18 0	25 02-25	553-5	46-8	314-5	46-2	H		2	0		13-52	540-2	44-7	318-2	45-0	W						
20 0	02-55	550-4	46-0	320-3	45-2	H		4	0		06-86	549-0	45-4	325-0	46-2	H						
22 0	01-34	545-0	45-1	325-1	44-6	W		6	0		05-72	554-7	46-3	303-9	47-0	W						
23 3	01-68	544-9	44-8	323-9	44-7	H		7	0		04-14	556-3	46-7	301-5	47-2	W						
26 0	07-76	544-0	44-9	325-3	45-1	W		8	0		03-45	556-1	46-9	298-7	47-3	W						
1 0	09-29	540-7	45-0	322-9	45-8	H		10	0		01-61	553-9	46-7	298-4	47-0	W						
2 0	11-82	548-6	45-3	315-0	46-0	W																
4 2	07-51	556-3	46-7	321-6	47-6	H		18	0		25 02-69	554-0	45-3	274-0	45-6	H						
6 0	06-29	551-4	48-1	321-9	49-0	W		20	0		04-05	553-1	45-3	286-0	45-7	H						
7 0	05-11	558-0	48-5	318-8	49-2	W		22	0		02-72	547-1	45-6	292-3	46-1	W						
8 0	06-36	559-6	48-5	315-1	49-0	W		23	0		05-69	541-6	45-8	291-3	46-3	H						
10 0	01-54	553-3	48-2	317-2	48-5	W		31	0	0	08-56	539-3	46-0	288-3	46-8	W						
									1	0		08-46	548-3	46-4	287-7	47-2	H					
18 0	25 02-80	553-7	44-6	321-2	43-8	H		2	0		10-43	557-1	46-9	292-7	47-7	W						
20 0	01-98	551-8	43-4	323-6	42-7	H		4	0		25 07-87	549-9	47-7	303-6	48-5	H						
22 0	02-39	538-9	42-4	334-9	41-7	W		6	0		24 58-42	554-3	48-1	299-9	49-1	W						
23 0	04-78	537-0	42-2	328-6	41-7	H		7	0		25 04-34	561-3	48-4	291-4	49-3	W						
27 0	07-13	540-3	42-0	320-4	42-1	W		8	0		02-15	557-8	48-7	292-5	49-6	W						
1 0	10-85	548-8	42-2	315-8	42-7	H		10	0		03-63	558-7	49-1	283-0	49-8	W						
2 0	10-63	545-8	42-6	318-3	43-6	W																
4 0	08-11	551-6	44-4	323-2	45-7	H	1	18	0		25 06-97	555-9	49-9	265-5	50-0	H						
6 0	05-02	553-3	46-3	317-6	47-3	W		20	0		03-81	552-4	49-9	269-4	49-9	H						
7 0	04-59	559-1	46-7	307-8	47-5	W		22	0		03-20	542-2	49-8	283-3	49-8	W						
8 0	05-23	560-0	46-9	306-6	47-6	W		23	0		04-34	537-4	49-8	287-1	50-2	H						
10 0	01-07	550-2	47-0	298-4	47-7	W		2	0	0	08-63	539-8	50-0	287-2	50-5	W						
									1	0		12-02	536-7	50-3	300-1	51-0	H					
18 0	25 03-37	553-6	46-8	298-5	47-2	H		2	0		12-55	536-4	50-6	322-5	51-2	W						
20 0	02-72	553-7	46-6	296-9	47-2	H		4	0		07-10	554-7	51-2	329-6	51-9	H						
22 0	01-52	547-8	46-7	308-3	47-3	W		6	0		03-43	549-2	51-5	337-1	52-0	W						
23 0	03-94	543-4	46-9	302-8	47-5	W		7	0		02-40	544-6	51-6	320-3	52-1	W						
28 0	07-10	541-5	47-1	292-4	48-0	H		8	0		25 03-72	545-8	51-6	313-6	52-0	W						
1 0	08-61	544-5	47-4	296-9	48-3	H		10	0		24 54-45	543-6	51-5	238-1	51-9	W						

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0\cdot000135$. BALANCE. Observed 3^m after the Declination, $k=0\cdot000010$.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	°	Sc. Div.	°	Sc. Div.	°		d. h. m.	°	Sc. Div.	°	Sc. Div.	°	
2 18 0	25 04:48	549.9	51.0	279.5	51.4	H	7 2 0	25 10:18	550.7	49.7	301.1	50.0	W
20 0	05:29	555.0	51.1	268.4	51.3	H	4 0	06:32	553.2	50.3	292.8	50.8	H
22 0	05:05	534.1	50.9	289.2	51.1	W	6 0	04:62	559.3	51.0	299.9	51.5	W
23 0	08:75	541.2	50.8	286.3	51.2	H	7 0	04:71	557.2	51.1	298.2	51.6	W
3 0 0	09:62	541.2	51.0	283.5	51.5	W	8 0	25 00:74	540.1	51.2	334.9	51.7	W
1 0	11:17	540.2	51.3	293.8	52.0	H	10 0	24 46:68	520.6	51.4	251.6	51.9	W
2 0	13:63	544.0	51.6	304.3	52.4	W							
4 0	07:04	555.1	52.0	308.9	52.7	H	8 18 0	25 01:95	555.0	49.5	294.0	49.5	H
6 0	04:05	557.2	52.4	287.4	53.0	W	20 0	03:70	553.0	49.0	302.9	49.0	H
7 0	03:50	555.3	52.4	282.7	53.0	W	22 0	03:50	545.9	48.6	301.6	48.2	W
8 0	03:20	554.6	52.5	284.0	53.0	W	23 0	04:81	539.3	48.2	305.2	48.0	H
10 0	03:20	559.2	52.6	277.5	53.2	W	9 0 0	06:84	538.6	48.0	303.7	47.7	W
							1 0	10:09	543.9	47.8	298.0	47.5	H
18 0	25 02:01	555.0	52.5	276.4	52.7	H	2 0	08:72	543.4	47.8	302.2	47.6	W
20 0	02:39	550.3	52.1	273.7	52.2	H	4 0	06:09	552.1	47.6	309.9	47.5	H
22 0	03:23	545.8	51.8	283.0	52.0	W	6 0	03:90	555.9	47.5	295.8	47.3	W
23 0	04:86	541.5	51.8	289.9	52.2	H	7 0	03:97	556.0	47.3	296.5	47.2	W
4 0 0	06:90	543.1	52.0	285.8	52.5	W	8 0	01:52	552.0	47.1	304.5	46.9	W
1 0	07:35	548.3	52.3	281.3	53.1	H	10 0	01:21	551.0	46.6	292.4	46.2	W
2 0	06:09	549.9	52.7	279.4	53.5	W							
4 0	03:74	552.8	53.4	273.5	54.3	H	18 0	25 03:04	556.4	44.2	307.1	44.0	H
6 0	04:58	557.1	53.9	270.1	54.8	W	20 0	01:88	554.6	43.6	306.6	43.2	H
7 0	03:63	556.1	54.0	272.8	54.8	W	22 0	01:85	543.4	42.9	309.4	42.3	W
8 0	03:48	556.8	54.1	273.8	54.9	W	23 0	04:31	542.0	42.5	308.6	42.2	H
10 0	03:14	558.5	54.1	275.5	54.9	W	10 0 0	08:43	535.7	42.3	308.2	42.2	W
							1 0	08:41	540.9	42.3	303.0	42.6	H
18 0	25 02:12	552.9	53.1	269.1	53.2	H	2 5	08:34	550.8	42.6	304.2	43.3	W
20 0	05:89	547.7	52.7	279.8	52.5	H	4 0	06:06	557.1	44.0	303.5	45.2	H
22 0	03:81	546.9	52.1	293.1	51.8	W	6 0	04:55	558.9	45.7	293.0	46.7	W
23 0	06:32	540.2	51.9	291.9	51.7	H	7 0	03:88	560.0	46.0	289.8	46.8	W
5 0 0	07:08	541.8	51.8	290.2	51.8	W	8 0	03:70	559.9	46.1	287.9	46.7	W
1 0	09:76	549.7	51.7	287.6	52.0	H	10 0	02:19	556.8	45.8	289.8	46.0	W
2 0	09:46	552.9	51.9	297.8	52.4	W							
4 0	06:26	554.0	52.6	307.8	53.2	H	18 0	25 03:13	558.7	42.6	296.7	42.3	H
6 0	04:53	555.0	53.3	301.3	54.0	W	20 0	01:95	554.2	41.8	299.4	41.5	H
7 0	02:99	556.0	53.4	297.5	54.0	W	22 0	02:08	548.9	41.0	309.4	40.6	W
8 0	25 03:37	557.9	53.4	291.6	53.9	W	23 0	03:81	545.1	40.7	304.2	40.2	H
10 0	24 59:39	557.8	53.3	290.0	53.7	W	11 0 0	06:10	544.8	40.4	307.5	40.3	W
							1 0	08:34	553.1	41.3	305.4	40.5	H
18 0	25 04:61	554.3	53.3	282.9	54.0	H	2 0	07:94	554.4	40.4	306.2	40.8	W
20 0	03:81	553.4	53.2	280.7	53.8	H	4 0	05:62	559.7	40.8	305.5	41.5	H
22 0	02:37	547.3	53.2	288.8	53.6	W	6 0	05:32	558.5	41.3	295.5	42.2	W
23 0	03:35	543.7	53.1	278.6	53.5	H	7 0	07:34	554.1	41.7	302.8	42.5	W
6 0 0	08:08	545.6	53.1	277.3	53.5	W	8 0	25 04:53	558.5	41.9	302.7	42.8	W
1 0	07:67	541.7	53.2	283.2	53.7	H	10 0	24 53:64	544.4	42.2	309.9	43.1	W
2 0	07:74	549.8	53.1	282.6	53.8	W							
4 0	05:79	555.2	53.4	287.7	54.2	H	18 0	25 02:96	558.0	42.8	279.6	43.6	H
6 0	04:22	558.5	53.6	286.9	54.1	W	20 0	01:75	554.5	43.0	284.3	43.7	H
7 0	04:95	560.2	53.6	290.7	54.0	W	22 0	01:73	545.8	43.2	287.6	44.0	W
8 0	03:63	557.5	53.4	291.7	53.6	W	23 0	03:74	542.2	43.3	286.2	44.2	H
10 0	03:84	553.4	52.9	286.9	52.9	W	12 0 0	05:96	544.5	43.4	279.5	44.3	W
							1 0	07:47	546.4	43.7	275.5	44.7	H
18 0	25 05:50	557.4	50.7	275.6	50.2	H	2 0	08:12	550.2	43.9	271.9	44.8	W
20 0	02:22	553.8	50.2	286.7	49.7	H	4 0	06:59	556.1	44.3	278.2	45.2	H
22 0	01:18	547.0	49.8	293.6	49.5	W	6 0	05:08	558.7	44.6	276.7	45.5	W
23 0	03:48	539.9	49.7	296.6	49.5	H	7 0	04:42	560.1	44.8	275.3	45.7	W
7 0 0	06:50	540.8	49.6	294.8	49.5	W	8 0	03:61	560.0	44.9	275.9	45.8	W
1 0	08:61	544.5	49.6	296.5	49.7	H	10 0	03:14	561.0	45.1	273.4	46.0	W

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	BIFILAR.		BALANCE.		Observer's Initial.		
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			
		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	
12 18 0	25 02-17	557.6	45.4	271.6	46.1	H	18	2 0	25 08-16	545.2	48.6	300.9	49.7	H
20 0	01-85	558.5	45.4	271.3	46.1	H		4 0	09-33	536.3	49.2	331.4	50.1	W
22 0	01-68	550.6	45.6	276.6	46.2	W		6 0	04-73	550.9	49.6	318.0	50.2	H
23 0	03-14	546.9	45.7	273.3	46.2	H		7 0	03-35	548.6	49.6	312.5	50.5	H
13 0 0	05-80	545.2	45.7	268.3	46.3	W		8 0	02-69	549.0	49.7	311.1	50.5	H
1 0	07-81	549.2	45.7	269.6	46.5	H		10 0	08-18	549.5	49.7	311.2	50.4	H
2 0	08-70	554.6	45.9	268.1	46.5	W								
4 0	07-00	557.6	46.0	272.2	46.8	H		18 0	25 03-04	549.4	48.5	307.5	48.5	H
6 0	06-09	562.9	46.3	268.1	47.2	H		20 0	02-89	546.7	48.0	307.8	48.3	H
7 0	06-39	559.2	46.5	270.4	47.2	H		22 0	03-30	543.2	47.9	318.0	48.0	W
8 0	25 05-96	558.5	46.4	279.3	47.2	H		23 0	05-15	539.1	47.8	320.3	48.0	W
10 0	24 59-26	558.8	46.7	291.1	47.5	H	19	0 0	06-04	540.0	47.7	321.7	48.1	W
								1 0	06-91	546.7	47.8	320.6	48.5	H
18 0	25 01-92	557.7	46.0	252.3	46.5	H		2 0	06-17	548.9	48.1	319.0	49.0	W
20 0	02-67	557.2	45.9	265.6	46.2	H		4 0	04-05	552.3	49.0	309.5	49.7	H
22 0	05-25	546.0	45.8	270.3	46.1	W		6 0	03-48	557.0	49.3	305.6	49.8	W
23 0	06-29	537.0	45.7	275.6	46.0	W		7 0	04-48	558.2	49.4	300.2	49.8	W
14 0 0	07-65	547.7	45.6	273.4	46.0	W		8 0	05-25	560.1	49.2	299.1	49.7	W
1 0	08-95	550.4	45.5	275.3	46.0	W		10 0	01-81	552.7	49.0	316.0	49.5	W
2 0	08-11	551.0	45.5	279.2	46.0	W								
4 0	06-06	553.3	45.4	284.5	46.0	H		18 0	25 02-45	555.2	48.7	299.2	49.0	W
6 0	03-90	556.5	45.3	278.4	45.8	W		20 0	02-75	552.9	48.6	297.4	49.0	W
7 0	03-67	557.2	45.3	279.1	45.8	W		22 0	02-89	548.0	48.5	300.2	49.0	H
8 0	25 03-43	554.6	45.2	280.6	45.6	W		23 0	03-74	548.2	48.6	303.0	49.1	W
10 0	24 58-25	551.6	45.0	290.5	45.5	W	20	0 0	08-99	549.2	48.6	299.7	49.0	H
								1 0	13-63	547.5	48.6	304.0	49.0	H
15 18 0	25 02-62	557.1	42.3	282.9	42.4	W		2 0	07-76	555.6	48.7	304.3	49.2	H
20 0	01-34	557.2	41.9	285.2	41.8	W		4 0	06-43	563.7	49.0	318.8	49.6	W
22 0	01-41	550.0	41.5	288.0	41.6	H		6 0	07-96	559.5	49.0	326.6	49.6	W
23 0	03-48	547.2	41.4	282.1	41.7	W		7 0	03-04	558.0	49.1	334.4	49.6	W
16 0 0	06-12	549.6	41.4	283.9	42.0	H		8 0	25 04-78	551.9	49.0	336.8	49.5	W
1 0	07-38	551.3	41.7	284.5	42.4	H		10 0	24 59-24	567.6	49.1	294.2	49.6	W
2 0	07-29	552.2	42.1	287.1	43.5	H								
4 0	06-23	555.9	42.8	278.3	43.9	W		18 0	25 02-84	551.2	48.3	291.9	48.6	W
6 0	04-41	557.3	43.2	273.3	44.2	H		20 0	01-75	552.4	48.1	298.8	48.1	W
7 0	03-43	558.5	43.4	271.8	44.2	H		22 0	00-57	548.4	47.7	297.3	47.5	H
8 0	03-02	559.7	43.4	270.8	44.2	H		23 0	05-35	546.6	47.6	293.8	47.5	W
10 0	25 00-33	556.8	43.3	280.2	44.0	H	21	0 0	05-05	547.6	47.5	291.5	47.7	H
								1 0	06-06	549.3	47.6	300.6	48.2	H
18 0	24 59-26	563.8	42.6	253.5	43.2	W		2 0	04-98	547.7	47.8	302.7	48.5	H
20 0	25 01-68	561.2	42.7	258.0	43.3	W		4 0	07-34	545.0	48.1	316.0	48.7	W
22 0	02-32	553.1	42.8	269.7	43.5	H		6 0	04-04	559.3	48.2	309.9	48.7	H
23 0	03-52	550.6	43.0	270.0	43.8	W		7 0	04-91	555.2	48.0	312.0	48.7	H
17 0 0	05-92	548.2	43.2	270.5	44.2	H		8 0	03-35	555.2	48.0	308.9	48.5	H
1 0	09-79	553.7	43.6	270.7	44.7	H		10 0	00-18	559.9	47.8	292.8	48.0	H
2 0	10-09	553.5	44.0	277.4	45.0	H								
4 0	08-31	557.2	44.7	273.0	45.8	W	22	18 0	25 02-08	553.4	42.8	289.6	42.7	W
6 0	07-30	564.3	45.5	287.3	46.5	H		20 0	02-39	556.3	42.4	285.2	42.2	W
7 0	05-79	652.7	46.0	823.4	47.0	H		22 0	01-90	550.2	42.0	285.6	41.7	H
8 0	08-11	671.0	46.7	796.8	48.3	H		23 0	04-31	546.8	41.7	271.2	41.6	W
10 0	00-74	539.5	47.8	466.0	49.5	H	23	0 0	05-11	544.9	41.6	269.5	41.7	H
								1 0	06-26	550.6	41.5	273.2	41.7	H
18 15	25 06-26	547.8	48.1	252.7	48.8	W		2 0	06-16	554.5	41.7	279.7	42.0	H
20 0	04-42	549.0	47.9	252.9	48.5	W		4 0	04-71	555.9	41.9	285.1	42.4	W
22 0	06-76	534.6	47.7	283.6	48.2	H		6 0	04-01	558.4	42.0	287.3	43.0	H
23 0	08-88	518.8	47.6	305.4	48.3	W		7 0	03-38	560.0	42.3	282.2	43.2	H
18 0 0	06-56	538.1	47.8	298.5	48.7	H		8 0	03-57	557.6	42.6	283.2	43.7	H
1 0	09-19	542.8	48.1	298.8	49.2	H		10 0	02-46	556.3	42.8	279.4	43.7	H

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ′	Sc. Div.	°	Mic. Div.	°	
23 18 0	25 02-75	557-3	43-3	273-5	44-1	W	28 2 0	25 07-07	550-0	37-6	293-5	37-2	H
20 0	02-10	557-1	43-8	276-7	44-7	W	4 0	25 05-02	552-7	37-4	290-2	37-2	W
22 0	01-48	548-2	44-2	283-5	45-4	H	6 0	24 59-63	566-3	37-2	303-7	37-3	H
23 0	04-10	546-1	44-0	277-1	45-8	W	7 0	24 56-16	543-2	37-2	284-3	37-3	H
24 0 0	05-58	548-2	45-2	273-7	46-2	H	8 0	24 57-78	545-2	37-2	304-8	37-3	H
1 0	07-64	550-1	45-7	268-1	47-0	H	10 0	25 03-81	547-8	37-0	294-0	37-2	H
2 0	05-80	552-1	46-2	272-0	47-6	H							
4 0	04-17	559-5	47-4	283-3	48-5	W	29 18 0	25 02-59	559-9	33-8	246-1	34-0	H
6 0	03-38	560-0	48-0	285-1	49-0	W	20 0	07-67	555-4	33-7	247-3	34-0	H
7 0	03-23	558-3	48-0	285-0	49-0	H	22 12	03-13	546-1	33-6	266-3	33-7	W
8 0	02-70	558-5	47-9	282-0	48-7	H	23 0	04-88	548-5	33-7	274-4	34-2	H
10 0	00-77	560-2	47-6	274-3	48-0	H	30 0 0	04-34	539-0	33-9	276-9	34-6	W
							1 0	08-48	546-8	34-2	287-6	35-0	H
18 0	25 02-55	557-8	45-6	292-5	45-6	W	2 0	07-62	556-0	34-6	288-2	35-4	W
20 0	02-19	556-7	45-2	299-4	45-3	W	4 0	02-01	553-6	35-2	334-0	36-0	H
22 0	02-79	549-1	45-0	293-8	45-2	H	6 0	02-20	559-3	35-5	297-5	36-2	W
23 0	04-28	546-5	44-9	271-4	45-1	W	7 0	01-34	557-1	35-4	291-6	36-2	W
25 0 0	05-89	548-0	44-8	273-4	45-1	H	8 0	01-48	554-8	35-4	290-5	36-0	W
1 0	06-46	549-6	44-7	274-8	45-2	H	10 0	01-75	554-1	35-0	284-3	35-5	W
2 0	06-83	553-9	44-8	277-7	45-2	H							
4 0	05-18	558-6	44-9	279-5	45-4	W	18 0	25 02-94	556-3	34-3	267-5	34-8	W
6 0	04-12	557-2	44-9	287-0	45-5	H	20 0	08-06	555-3	34-4	261-2	35-2	W
7 0	03-63	558-2	44-9	284-2	45-5	H	22 0	03-02	552-4	34-7	267-5	35-5	H
8 0	03-27	558-0	45-0	285-1	45-5	H	23 0	03-38	550-0	35-0	269-9	35-8	W
10 0	02-03	559-5	45-0	278-1	45-6	H	1 0 0	05-29	554-1	35-3	275-1	36-3	H
							1 0	06-39	556-3	35-8	274-1	37-0	H
18 0	25 01-95	559-7	45-2	271-1	45-7	W	2 0	06-32	557-4	36-6	274-7	37-9	H
20 0	01-99	560-2	45-1	269-9	45-5	W	4 0	04-24	559-5	37-9	288-2	39-3	W
22 0	01-98	548-8	45-0	269-5	45-5	H	6 0	25 01-95	562-1	38-7	279-9	40-0	H
23 0	04-58	559-5	45-0	262-2	45-5	W	7 0	24 53-04	576-4	38-8	268-9	40-2	W
26 0 0	06-12	560-4	45-0	258-3	45-5	H	8 0	25 01-51	550-0	38-9	270-1	40-0	H
1 0	06-30	561-9	45-0	255-3	45-6	W	10 0	02-01	558-3	38-7	276-4	40-0	H
2 0	06-83	566-5	45-1	262-3	45-7	H							
4 0†	08-25	548-1	45-2	470-4	45-9	W	18 0	25 05-15	553-8	36-1	266-3	35-8	W
6 0†	11-77	596-2	45-6	557-1	46-5	H	20 0	03-81	556-3	35-2	260-0	34-8	W
7 0†	25 10-09	597-4	45-8	832-7	46-2	H	22 0	03-47	546-8	34-4	271-4	33-7	H
8 0	24 54-55	535-6	46-0	460-9	46-5	H	23 0	06-01	532-8	34-0	278-1	33-3	W
10 0†	24 45-81	575-3	46-0	131-0	46-7	H	2 0 0	06-83	546-5	33-7	274-1	33-0	H
							1 0	08-05	550-1	33-4	280-5	33-2	H
18 0	25 03-37	553-7	45-6	273-2	45-9	W	2 0	09-49	547-3	33-3	276-3	33-5	H
20 0†	10-90	538-3	45-3	279-6	45-7	W	4 0	05-42	556-9	33-6	283-7	34-0	W
22 0	08-18	553-2	45-2	303-5	45-5	H	6 0	02-66	558-2	33-7	281-4	34-2	H
23 0	05-27	547-4	45-2	305-0	45-5	W	7 0	03-57	556-2	33-7	278-7	34-0	H
27 0 0	08-99	549-2	45-1	311-7	45-4	H	8 0	01-41	573-7	33-4	277-6	33-7	H
1 0	10-00	539-2	45-1	324-1	45-3	H	10 0	02-01	553-1	32-8	275-2	32-5	H
2 0	09-26	540-7	45-0	353-0	45-2	H							
4 0	08-23	557-3	44-8	332-8	44-9	W	18 0	25 02-48	556-7	29-3	266-9	28-5	W
6 0	25 02-94	550-6	44-3	333-1	44-4	H	20 0	02-79	555-3	28-6	265-9	27-8	W
7 0	24 59-19	542-0	44-0	335-8	44-0	H	22 0	02-22	549-6	28-0	269-5	27-5	H
8 0	24 58-72	549-6	43-8	322-0	43-7	H	23 0	02-84	548-8	27-9	264-9	27-6	W
10 0	25 02-12	552-8	43-2	298-0	43-2	H	3 0 0	05-72	550-4	28-0	271-6	28-0	H
							1 0	06-56	551-4	28-2	268-2	28-5	H
18 0	25 03-16	554-5	40-6	238-5	40-0	W	2 0	07-67	553-1	28-8	276-3	29-5	H
20 0	02-64	548-5	39-7	264-4	38-8	W	4 0	05-09	559-2	30-0	274-9	30-8	W
22 0	06-79	526-7	38-7	289-7	37-7	H	6 0	03-40	559-8	31-0	272-9	32-0	H
23 0	05-60	538-9	38-3	299-3	37-5	W	7 0	03-00	559-3	31-2	269-7	32-4	H
28 0 0	07-34	549-2	38-1	293-0	37-2	H	8 0	03-00	558-5	31-7	272-0	33-0	H
1 0	08-48	551-7	37-8	289-8	37-2	H	10 0	00-33	556-9	32-0	273-1	33-5	H

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$.BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Nov. 27th 2^h. The declinometer was noted 25° 02' 52", but from the steadiness of the instruments during the day it was believed that the reading was 10 scale divisions in error; it has been altered accordingly.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.		BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.			Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	Mic. Div.	°	
d. h. m.	°	Sc. Div.	°	Mic. Div.	°		d. h. m.	°	Sc. Div.	°	Mic. Div.	°		
3 18 0	25 00.47	561.1	32.6	263.0	33.3	W	9 2 0	25 05.90	557.4	40.6	263.8	41.7	H	
20 0	03.70	564.1	32.4	242.8	32.9	W	4 0	05.45	561.7	41.4	270.8	42.6	W	
22 0	04.51	555.7	32.2	258.3	32.5	H	6 0	05.36	565.0	41.8	273.2	42.8	H	
23 0	05.43	554.1	32.0	259.4	32.5	W	7 0	05.72	564.9	41.9	274.1	42.9	H	
4 0 0	06.79	545.8	32.0	269.3	32.8	H	8 0	25 05.65	561.6	41.8	278.8	42.7	H	
1 0	07.18	549.0	32.2	272.4	33.2	H	10 0	24 40.47	560.5	41.6	302.2	42.4	H	
2 0	09.24	553.7	32.5	277.2	33.5	H								
4 0	08.93	554.5	33.3	291.6	34.3	W	18 0	25 05.18	561.0	41.5	244.3	42.2	W	
6 0	11.95	552.5	33.8	322.2	34.7	H	20 0	03.20	558.8	41.7	259.6	42.5	W	
7 0	03.81	556.7	33.9	327.7	34.8	H	22 0	02.59	552.1	41.8	271.9	42.5	H	
8 0	02.46	548.7	33.9	331.4	34.5	H	23 0	03.74	548.5	41.9	272.2	42.5	W	
10 0	01.68	556.7	33.3	294.7	33.8	H	10 0 0	06.48	552.6	41.8	270.2	42.3	H	
							1 0	06.50	551.6	41.7	273.5	42.2	H	
18 8	25 02.91	563.4	31.7	272.6	31.9	W	2 0	07.37	551.7	41.6	266.4	42.0	H	
20 0	03.37	563.5	31.8	271.8	32.3	W	4 0	25 06.81	555.7	41.2	281.7	41.4	W	
22 0	03.02	556.1	32.1	273.8	32.8	H	6 0	24 59.93	550.9	40.5	304.1	40.3	H	
23 0	02.46	552.7	32.4	273.2	33.3	W	7 0	25 03.35	557.0	40.0	286.3	39.7	H	
5 0 0	03.84	551.6	32.8	270.9	33.8	H	8 0	25 03.43	557.1	39.7	290.8	39.0	H	
1 0	05.49	554.0	33.4	271.2	34.5	H	10 0	24 53.17	547.7	38.4	277.7	37.5	H	
2 0	06.06	557.1	34.0	271.0	35.2	H								
4 0	06.46	557.9	35.1	278.3	36.7	W	18 0	25 01.86	561.0	34.5	235.5	33.5	W	
6 0	04.71	559.9	36.3	275.3	37.6	H	20 0	04.24	556.4	33.8	249.5	32.9	W	
7 0	03.13	560.9	36.6	272.8	37.7	H	22 0	04.68	550.4	33.2	255.8	32.5	H	
8 0	02.99	561.6	36.8	272.4	38.0	H	23 0	05.89	548.5	32.9	260.0	32.2	W	
10 0	02.08	554.3	37.0	286.1	38.2	H	11 0 0	05.72	552.0	32.7	263.1	32.2	H	
							1 0	07.35	547.2	32.6	267.5	32.3	H	
6 18 0	25 02.55	561.8	36.4	269.5	36.8	W	2 0	07.98	551.8	32.4	268.0	32.2	H	
20 0	02.35	561.7	36.3	267.5	36.7	W	4 0	06.66	554.7	32.4	285.0	32.4	W	
22 0	02.23	556.3	36.4	266.5	36.7	H	6 0	04.28	554.0	32.3	286.2	32.5	H	
23 0	03.90	554.7	36.4	270.6	36.9	W	7 0	04.78	555.8	32.2	283.5	32.2	H	
7 0 0	04.84	555.8	36.6	270.4	37.2	H	8 0	02.91	555.3	32.0	285.7	32.2	H	
1 0	05.05	553.3	36.8	275.4	37.5	H	10 0	02.06	550.5	31.8	281.2	31.9	H	
2 0	05.52	557.2	37.0	275.8	38.0	H								
4 0	04.35	561.0	37.7	274.0	38.5	W	18 0	25 01.54	556.7	31.9	253.7	32.1	W	
6 0	04.17	561.9	38.0	274.9	38.8	H	20 0	03.48	559.1	31.9	250.2	32.4	W	
7 0	02.66	558.3	38.0	277.2	39.1	H	22 0	02.72	557.4	32.0	251.6	32.5	H	
8 0	02.89	562.3	38.2	273.3	39.2	H	23 0	04.62	553.0	32.1	257.1	32.6	W	
10 0	02.12	561.3	38.3	270.5	39.2	H	12 0 0	04.48	552.0	32.2	260.1	32.7	H	
							1 0	05.58	549.2	32.2	264.9	33.0	H	
18 0	25 02.05	561.0	37.6	267.0	38.0	W	2 0	07.55	555.0	32.5	259.1	33.2	W	
20 0	02.57	560.9	37.5	266.8	37.9	W	4 0	05.35	557.0	32.8	264.0	33.4	W	
22 0	02.70	556.6	37.4	267.7	37.9	H	6 0	04.34	560.9	32.8	262.0	33.3	W	
23 0	03.63	554.7	37.6	269.7	38.0	W	7 0	04.91	561.9	32.7	264.2	33.2	W	
8 0 0	04.71	554.1	37.7	269.4	38.2	H	8 0	25 03.37	561.1	32.6	267.3	33.1	W	
1 0	05.40	554.0	37.7	266.4	38.5	H	10 0	24 59.19	553.2	32.3	275.1	32.6	W	
2 0	06.32	559.7	38.0	265.2	38.8	H								
4 0	05.03	561.7	38.7	269.7	39.7	W	13 18 0	25 02.93	537.0	28.0	261.4	27.7	H	
6 0	03.60	563.5	39.2	267.6	40.3	H	20 0	02.86	538.2	27.5	259.1	27.4	H	
7 0	03.20	564.8	39.5	266.9	40.5	H	22 0	03.41	555.3	27.0	256.7	26.8	W	
8 0	02.43	564.3	39.7	266.7	40.8	H	23 0	03.09	554.3	27.0	258.3	26.8	H	
10 0	01.72	564.3	40.0	267.5	41.2	H	14 0 0	04.53	552.7	27.0	259.3	26.8	W	
							1 0	05.58	554.2	27.1	260.3	27.5	H	
18 0	25 01.36	564.9	40.0	253.8	40.8	W	2 0	06.03	556.7	27.4	258.4	27.9	W	
20 0	02.28	565.6	40.1	255.9	40.8	W	4 0	04.71	560.8	28.2	257.6	28.5	H	
22 0	02.28	559.1	40.2	261.1	40.8	H	6 0	05.60	565.4	28.7	256.6	29.3	W	
23 0	03.38	557.4	40.2	266.5	40.8	W	7 0	05.08	560.7	28.8	257.9	29.4	W	
9 0 0	04.58	553.2	40.2	266.9	40.8	H	8 0	03.57	559.5	28.9	263.0	29.4	W	
1 0	05.67	553.8	40.3	266.1	41.2	H	10 0	02.13	558.0	28.9	279.9	29.4	W	

DECLINATION. Magnet untouched, April 14th 1846—May 1847.BIFILAR. Observed 2nd after the Declination, $k=0.000135$. BALANCE. Observed 3rd after the Declination, $k=0.000010$.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° ' ″	Sc. Div.	°	Mic. Div.	°		d. h. m.	° ' ″	Sc. Div.	°	Mic. Div.	°	
14 18 0	25 01.61	557.5	28.7	272.1	29.3	H	19 2 0	25 05.18	558.6	37.8	266.5	39.0	W
20 0	02.87	547.3	28.8	259.5	29.5	H	4 0	03.97	562.0	38.7	271.4	40.1	W
22 0	05.42	555.2	28.9	260.3	29.5	W	6 0	03.94	563.2	39.6	269.3	40.8	W
23 0	05.42	551.5	29.0	260.0	29.5	H	7 0	03.47	564.6	39.9	268.0	41.2	W
15 0 0	05.49	549.9	29.2	263.5	29.8	W	8 0	02.66	563.9	40.2	264.9	41.7	W
1 0	06.63	552.9	29.7	263.0	30.5	H	10 0	02.01	560.8	40.9	276.3	42.3	W
2 0	06.79	557.6	30.0	270.3	31.0	H							
4 0	04.84	559.4	30.7	278.4	31.5	H	20 18 0	25 02.08	560.7	41.3	265.8	41.6	W
6 0	03.30	560.8	30.8	273.5	31.5	H	20 0	02.20	562.4	41.1	261.6	41.4	W
7 0	03.41	560.4	30.7	273.4	31.5	H	22 0	03.54	560.8	41.0	258.1	41.3	W
8 0	03.02	559.5	30.7	272.9	31.5	H	23 0	04.59	558.7	41.0	261.9	41.3	W
10 0	01.81	558.1	30.9	274.2	31.6	W	21 0 0	06.07	560.9	40.9	265.2	41.3	W
							1 0	04.64	559.4	40.9	269.0	41.4	W
18 0	25 02.42	558.6	30.7	267.9	31.7	H	2 0	04.68	561.5	41.0	269.2	41.5	W
20 0	02.50	557.2	30.6	266.3	31.2	H	4 0	04.17	563.8	41.1	273.5	41.7	W
22 0	02.82	556.8	30.5	265.3	30.8	W	6 0	02.80	563.5	41.1	273.6	41.7	W
23 0	04.14	555.1	30.5	271.2	30.9	H	7 0	02.57	564.0	41.1	271.0	41.6	W
16 0 0	05.02	554.4	30.6	269.8	30.9	W	8 0	02.01	563.7	41.0	270.1	41.5	B
1 0	05.45	554.8	30.7	267.0	31.2	H	10 0	01.41	562.1	40.9	262.8	41.3	B
2 0	05.92	557.2	31.0	271.2	31.8	W							
4 0	04.84	570.5	31.8	277.0	33.0	H	18 0	25 00.51	561.0	39.5	263.8	39.5	W
6 0	03.70	561.0	32.3	267.9	33.2	W	20 0	01.48	560.2	39.1	259.8	39.2	H
7 0	03.30	561.5	32.5	267.2	33.5	W	22 0	03.97	560.3	39.0	250.6	39.0	H
8 0	03.55	562.9	32.7	266.5	33.6	W	23 0	04.95	559.5	38.8	251.4	38.8	H
10 0	03.16	559.5	32.9	269.0	33.7	W	22 0 0	04.98	558.9	38.7	252.7	38.7	H
							1 0	05.76	559.9	38.6	249.6	38.7	H
18 0	25 02.20	558.3	32.2	262.3	32.7	H	2 0	04.93	560.9	38.6	253.2	38.8	W
20 0	01.72	557.8	31.9	263.4	32.2	H	4 0	03.74	564.3	38.5	259.1	38.8	W
22 0	02.33	554.2	31.5	269.8	31.5	W	6 0	03.40	566.4	38.5	260.1	38.8	W
23 0	04.37	552.5	31.4	267.7	31.5	H	7 0	03.13	566.2	38.5	260.3	38.8	W
17 0 0	05.60	553.9	31.3	266.6	31.7	W	8 0	02.52	565.7	38.4	259.5	38.7	W
1 0	06.63	557.4	31.4	265.8	32.1	H	10 0	01.92	558.6	38.0	262.5	38.3	W
2 0	06.64	560.2	31.7	270.8	32.4	W							
4 0	04.34	561.4	32.3	273.6	33.5	H	18 0	25 02.19	566.6	37.0	249.5	37.2	H
6 0	03.54	564.5	32.7	266.2	33.5	W	20 0	02.89	563.8	36.6	249.1	36.7	W
7 0	02.80	563.5	32.8	265.7	33.5	W	22 0	04.76	566.3	36.6	247.8	36.7	W
8 0	02.89	564.1	32.7	263.7	33.3	W	23 0	06.07	558.2	36.5	252.1	36.7	H
10 0	03.94	557.7	32.5	271.5	32.9	W	23 0 0	04.91	555.8	36.4	259.8	36.7	W
							1 0	07.45	561.7	36.4	258.4	36.7	H
18 0	25 02.55	561.0	29.9	262.7	29.3	W	2 0	07.29	560.1	36.5	262.8	36.9	W
20 0	01.58	559.5	28.9	258.3	28.2	W	4 0	25 08.53	555.8	36.6	274.6	37.0	H
22 0	03.94	555.3	28.2	256.4	27.5	W	6 0†	24 58.60	552.8	36.6	340.5	36.8	W
23 0	03.48	552.7	27.9	257.3	27.4	W	7 0	24 56.67	559.5	36.5	324.0	36.8	W
18 0 0	06.81	556.3	27.7	255.4	27.4	W	8 0	24 59.36	541.8	36.4	393.3	36.8	W
1 0	07.94	557.7	27.7	259.4	27.8	W	10 0†	25 08.88	551.9	36.4	272.1	36.6	W
2 0	06.06	557.5	27.9	266.1	28.5	W							
4 0	04.71	561.6	29.0	270.0	29.8	W	18 0	25 01.81	554.9	35.7	227.8	36.0	H
6 0	05.55	563.5	30.1	264.6	31.0	W	20 0	02.79	558.6	35.5	253.7	35.6	H
7 0	02.96	555.7	30.7	269.0	31.7	W	22 0	04.95	550.6	35.0	257.9	34.8	W
8 0	25 03.65	562.6	31.2	264.7	32.5	W	23 0	06.21	548.6	34.7	263.6	34.6	W
10 0	24 58.18	550.4	32.3	278.5	33.5	W	24 0 0	06.03	555.6	34.5	268.7	34.4	W
							1 0	06.39	553.5	34.4	269.5	34.4	H
18 0	25 02.67	561.5	36.0	263.1	37.1	W	2 0	05.52	558.2	34.3	275.4	34.4	W
20 0	02.26	561.4	36.5	258.7	37.5	W	4 0	00.96	557.6	34.2	281.7	34.4	H
22 0	02.13	558.5	36.9	258.4	37.9	W	6 0	25 05.25	558.4	33.9	286.0	34.0	W
23 0	03.21	557.1	37.0	258.6	38.1	W	7 0	24 54.12	548.0	33.7	305.7	33.7	W
19 0 0	04.17	555.0	37.2	258.8	38.3	W	8 0	25 04.05	556.7	33.6	289.7	33.5	W
1 0	05.72	557.3	37.5	261.3	38.6	W	10 0	01.01	555.7	33.0	276.8	32.9	W

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

† Extra Observations made.

Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.	Göttingen Mean Time of Declina- tion Obs.	DECLINA- TION.	BIFILAR.		BALANCE.		Observer's Initial.
		Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.				Cor- rected.	Thermo- meter.	Cor- rected.	Thermo- meter.	
d. h. m.	° '	Sc. Div.	°	Mic. Div.	°		d. h. m.	° '	Sc. Div.	°	Mic. Div.	°	
24 18 0	25 01-43	565.4	31.0	266.1	30.7	H	28 18 0	25 02-75	562.3	37.5	241.0	38.6	H
20 0	07-69	558.2	30.7	270.2	30.7	H	20 0	03-23	560.7	37.6	243.2	38.5	H
22 0	04-51	559.9	30.7	249.9	30.7	W	22 0	02-91	556.0	37.6	248.8	38.2	W
23 0	04-78	555.3	30.7	253.6	30.7	H	23 0	01-78	553.9	37.6	250.3	38.2	H
25 0 0	05-82	556.9	30.6	260.9	30.7	W	29 0 0	03-95	554.2	37.7	248.5	38.8	W
1 3	07-20	554.8	30.7	266.4	31.0	H	1 0	04-21	556.3	38.2	242.8	39.5	H
2 0	05-87	552.9	30.9	272.8	31.1	W	2 0	05-55	568.1	38.6	240.0	39.8	W
4 0	02-96	542.9	31.2	290.4	31.7	H	4 0	03-90	559.4	39.2	241.8	40.5	H
6 0	02-93	556.4	31.3	283.0	31.8	W	6 0	02-25	560.5	39.5	241.2	40.5	W
7 0	25 02-39	561.0	31.3	282.7	31.9	H	7 0	25 03-02	560.0	39.6	241.0	40.6	H
8 0	24 58-08	559.8	31.3	278.0	32.0	H	8 0	24 56-03	573.4	39.7	232.9	40.7	H
10 0	25 02-46	553.8	31.3	269.4	31.8	W	10 0	25 01-66	559.1	39.8	236.6	40.7	W
18 0	25 02-01	556.8	30.7	255.6	31.1	H	18 0	25 01-78	561.9	38.8	231.0	39.2	H
20 0	01-75	554.9	30.4	262.4	30.7	H	20 0	01-34	558.3	38.5	234.7	38.7	H
22 0	04-37	550.1	30.3	269.6	30.6	W	22 0	01-97	555.9	38.1	239.9	38.3	W
23 0	04-31	551.2	30.4	272.1	30.7	H	23 0	03-30	545.3	38.0	242.6	38.2	H
26 0 0	07-79	552.1	30.5	268.8	31.0	W	30 0 0	05-00	557.0	37.9	245.8	38.0	W
1 0	08-01	552.5	30.8	269.8	31.8	H	1 0	05-13	556.5	37.8	244.4	38.2	H
2 0	25 06-66	556.1	31.4	277.7	32.6	W	2 0	05-43	558.4	37.9	243.3	38.4	W
4 0	24 59-50	552.5	33.0	303.1	34.5	H	4 0	03-14	560.7	38.6	250.0	39.5	H
6 0	25 04-46	559.1	34.2	277.4	35.3	W	6 0	02-35	558.9	39.2	244.8	40.1	W
7 0	02-79	558.6	34.5	272.1	35.5	W	7 0	01-83	557.7	39.3	245.2	40.1	W
8 0	01-54	557.2	34.6	275.8	35.5	W	8 0	01-92	560.5	39.4	245.1	40.1	W
10 0	00-65	555.5	34.5	271.5	35.2	W	10 0	00-94	560.5	39.4	243.5	40.1	W
27 18 0	25 02-13	559.5	30.8	261.1	30.8	H	18 0	25 01-98	562.8	39.5	235.4	40.2	H
20 0	02-99	560.3	30.8	269.1	31.7	H	20 0	01-68	561.7	39.5	253.8	40.3	H
22 0	03-57	555.9	31.5	273.8	32.3	W	22 0	01-78	559.3	39.7	251.5	40.4	W
23 0	04-34	551.4	31.8	276.7	32.8	H	23 0	02-61	558.5	39.8	253.0	40.5	H
28 0 0	06-19	555.7	32.3	275.2	33.3	W	31 0 0	03-27	558.9	39.9	253.7	40.7	W
1 0	06-63	557.0	32.8	268.5	34.2	H	1 0	04-07	557.8	40.1	254.3	41.0	H
2 0	06-29	557.5	33.6	265.5	34.8	W	2 0	05-33	560.8	40.4	253.0	41.2	H
4 0	25 04-64	558.5	35.0	271.9	36.5	W	4 2	03-30	560.7	41.0	251.2	42.2	H
6 0	24 55-78	561.8	36.0	268.2	37.2	W	6 0	02-46	563.1	41.6	244.1	42.5	W
7 0	25 01-85	562.0	36.4	261.6	37.6	W	7 0	01-88	563.3	41.8	231.8	43.0	H
8 0	24 55-76	567.1	36.6	257.0	37.7	W	8 0	25 01-76	561.8	42.0	241.0	43.2	H
10 0	25 01-18	558.2	36.9	249.2	37.9	W	10 0	24 59-71	561.2	42.2	240.7	43.1	W

DECLINATION. Magnet untouched, April 14th, 1846—May 1847.BIFILAR. Observed 2^m after the Declination, $k=0.000135$. BALANCE. Observed 3^m after the Declination, $k=0.000010$.

EXTRA OBSERVATIONS

OF

MAGNETOMETERS.

MAKERSTOUN OBSERVATORY,

1846.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.							
d. h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h.	Min.	°	'	
Jan. 7 6	0	25	00.28	2	532.4	3	405.4	25 10	10	25	06.53	12	531.6	13	421.0	13 7	0	25	09.02	
	30	24	55.22	32	545.1	33	411.0		35	25	06.70	37	532.1	38	415.4		30	12.69		
	47	25	01.21	48	533.8	49	418.2	25 12	11	24	58.65	12	543.3	13	398.4	13 8	0	05.43		
7 7	0		01.18	2	539.5	3	416.9		19		58.11	20	550.8	21	408.7	13 10	0	10.11		
	15		06.14	17	544.5	18	410.9									5	25	00.44		
7 8	0	07.64		2	551.5	3	398.8	26 7	0	25	07.37	2	546.4	3	418.0		10	24	53.67	
									30		02.96	32	539.4	33	429.5		15	48.40		
7 13	0	25	09.67	2	541.4	3	370.9		45		05.72	47	539.6	48	427.6		20	51.72		
	40		06.06	42	545.2	43	361.7	26 8	0		06.86	2	545.2	3	418.3		25	54.45		
7 14	0	03.65		2	545.2	3	361.3	26 9	5		06.79	7	544.0	8	393.1		30	49.95		
								26 10	0		02.35	2	541.4	3	382.4		35	48.38		
23 20	0	25	26.37	2	559.1	3	333.0										40	48.95		
	10		26.47	12	562.6	13	331.8	Mar.									45	47.08		
				23	533.4	24	330.9	4 10	0	25	00.28	2	562.3	3	360.5		50	47.77		
	25		17.39	27	536.8	28	330.5		10		03.70	12	551.9	13	360.9	13 11	0	48.72		
	40		11.27	42	546.1	43	328.7		20		05.72	22	547.3	23	362.9		51	24 56.16		
23 22	0	25	19.86	2	537.9	3	332.7											25 02.32		
24 7	0	24	49.54	2	512.8	3	400.0	12 8	0	24	58.55	2	549.8	3	370.8	13 18	0	10.40		
	5		43.52	7	520.3	8	430.6	12 9	0	25	00.40	2	551.7	3	369.2	13 19	17	12.92		
	10		39.19	12	525.9	13	430.7	12 10	0	03.82	2	553.8	3	364.5		30	15.52			
	15		34.82	17	535.7	18	429.0	13 2	0	25	22.96	2	541.4	3	363.2		35	16.38		
	20		36.99	22	543.2	23	428.5		5		21.09	7	543.5	8	364.2		40	16.75		
	25		39.04	27	542.9	28	429.0		15		19.59	17	545.0	18	371.5		45	16.75		
	30		39.65	32	541.6	33	428.7		35		17.29	37	546.0	38	385.8		50	17.53		
	45		43.42	47	561.0	48	413.9	13 3	0	21.09	2	545.2	3	402.8	13 20	0	14.65			
24 8	0	53.15	2	559.9	3	403.4		25		21.59	27	538.7	28	423.6		10	13.02			
24 9	0	24	57.01	2	530.5	3	389.5		46		25.78	47	559.4	48	431.4		20	11.12		
24 10	0	25	02.13	2	533.7	3	390.3		50		26.30	52	556.5	53	435.3		30	09.62		
									55		24.93	57	567.2	58	435.8		40	08.01		
Feb. 8 23	0	25	08.85	2	556.8	3	395.1	13 4	0	26.18	2	559.8	3	437.1	13 22	0	09.22			
	5		10.75	7	554.4	8	395.1		10		25.96	12	553.2	13	453.6	14 2	0	17.56		
	15		12.38	17	550.2	18	396.2		20		20.52	22	555.1	23	459.8		45	21.44		
	20		12.82	22	552.7	23	395.8		35		22.53	37	563.0	38	462.5		30	24 59.29		
	30		12.35	32	552.6	33	395.5		50		21.79	52	563.9	53	482.7		35	25 01.81		
9 0	0	11.22	2	552.0	3	400.4	13 5	0	19.41	2	556.7	3	489.0		40	02.69		45	04.95	
								10		20.52	12	545.7	13	500.8						
15 20	0	25	16.65	2	555.0	3	430.8		15		17.80	17	552.7	18	500.8		50	07.54		
	25		11.34	27	551.4	28	432.8		25		19.95	27	558.1	28	490.9	14 4	0	10.50		
15 22	0	10.74		2	539.8	3	400.3		35		19.98	37	576.2	38	495.0		10	12.72		
16 7	0	24	49.48	2	533.8	3	382.4		45		19.84	47	577.4	48	532.7		15	14.80		
	10		40.96	12	548.0	13	384.7		50		18.18	52	578.5	53	551.4		20	15.91		
	20		45.78	22	558.1	23	385.2	13 6	0	15.98	57	576.7	58	579.7		30	14.73			
	30		53.81	32	561.4	33	381.3		5		15.24	2	561.8	3	575.5		40	17.46		
	45		55.76	47	559.9	48	370.6		10		02.94	7	559.5	8	564.4		50	10.77		
16 8	0	24	53.88	2	561.0	3	363.8		15		00.87	17	587.8	18	615.4	14 5	0	08.95		
16 9	0	25	04.91	2	553.4	3	343.8		20		05.47	22	635.3	23	670.4		10	13.30		
16 10	0	24	57.62	2	535.0	3	354.5		25		02.66	34	555.0	13	584.9		15	05.72		
									25		25.06.12	26	628.1	27	645.3		20	25 03.84		
20 10	0	25	00.84	2	552.6	3	370.9		28		602.6	29	627.2				26	24 49.49		
	10		01.14	12	551.5	13	375.3		30		24.53.85	32	570.8	33	569.4		28	50.78		
	20		02.25	22	550.9	23	377.1		35		25.05.58	36	545.2				30	54.23		
									35		25.05.58	37	544.6	38	527.4		32	24 58.38		
25 8	0	25	11.77	2	545.9	3	368.2					42	544.0	43	514.1		40	03.23		
25 9	50		20.52	52	528.0	53	400.0		40		10.83	47	535.5	48	503.9		45	05.80		
	55		18.61	57	522.8	58	407.3		45		10.98	50	58.14	52	539.4		50	07.17		
25 10	0	15.76	2	522.6	3	416.9		50		08.14	52	540.4	53	491.6		55	08.25			
	5		09.13	7	529.4	8	417.7		55		08.93	57	540.4	58	479.9	14 6	0			

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.Jan. 7^a 6^b. Clock 10^s fast, set right.Jan. 24^a 7^b 10^m. Clock 15^s slow, set right.Feb. 27^a 19^b. Clock 36^s slow, set right; rate 1^s:5; diminished.Mar. 13^a 8^b—10^b. The declination magnet was looked at occasionally; there appeared to be little motion.

BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.			
Min.	Sc. Div.	Min.	Mic. Div.		d.	h.		Min.	Sc. Div.	Min.	Mic. Div.		d.	h.		Min.	Sc. Div.	Min.	Mic. Div.		
2	540.9	3	472.1		14	6		10	25 09.49	12	536.1	13	468.0	16	10	55	24 56.47	57	506.1	58	221.7
32	543.0	33	447.0			20		08.34	22	539.4	23	464.9	16	11	0	56.40	2	501.3	3	216.1	
2	540.9	3	454.9			30		05.45	32	547.3	33	458.4			5	56.14	7	495.1	8	217.0	
2	522.6	3	396.5			40		08.59	42	552.6	43	452.1			10	52.87	12	499.1	13	221.8	
7	519.4	8	397.5			50		25 05.50	52	539.4	53	453.1			15	50.75	17	503.9	18	230.7	
12	531.1	13	400.3	14	7	0		24 55.96	2	548.5	3	448.3			20	49.98	22	516.4	23	230.0	
17	545.8	18	394.8			5		49.98	7	566.0	8	433.8			25	52.60	27	516.8	28	209.4	
22	542.8	23	393.7			10		48.20	12	598.7	13	417.3					29	509.4			
27	528.5	28	400.0			15		24 59.93	17	593.7	18	412.5			30	24 58.18	31	520.0			
32	530.1	33	399.4			20		25 07.81	22	567.0	23	411.9					32	527.9	33	190.9	
37	536.3	38	395.8			25		25 06.23	27	551.8	28	410.3					34	534.5			
42	532.9	43	392.1			30		25 05.52	32	539.3	33	455.9			35	25 01.27	37	539.6	38	173.5	
47	536.0	48	385.0			35		24 58.80	37	550.6	38	398.5			40	24 58.70	42	549.3	43	155.5	
52	536.2	53	375.8			45		25 01.88	47	546.8	48	392.6					44	560.0			
2	530.1	3	365.0			55		24 55.51	57	545.0	58	390.4			45	57.51	46	558.5	47	148.6	
52	531.1	53	384.5	14	8	0		24 56.03	2	543.4	3	391.2			48	57.51					
2	545.2	3	345.3			10		24 59.37	12	528.4	13	399.4			50	56.03	52	564.3	53	168.1	
18	521.8	19	348.8	14	10	35		25 00.81	37	542.0	38	397.7			55	50.69	57	559.4	58	171.1	
27	517.8	28	345.7			0		25 08.88	2	543.4	3	319.8	16	12	0	51.76	2	546.8	3	179.0	
32	518.5	33	339.5			15		24 57.71	17	552.1	18	318.3			5	53.95	7	534.0	8	182.0	
37	518.0	38	332.6			30		25 02.22	32	544.0	33	328.2			10	54.80	12	528.1	13	180.3	
42	520.9	43	327.8	16	7	0		25 03.00	2	553.2	3	411.3			15	24 59.57	17	517.1	18	175.6	
47	524.6	48	324.0			10		24 58.53	12	554.4	13	407.0			20	25 08.25	22	510.6	23	159.3	
52	525.3	53	322.0			42		25 02.32	43	550.2	44	402.9			25	13.05	27	498.1	28	138.8	
2	531.7	3	319.5	16	8	0		24 59.04	2	549.0	3	407.0			30	15.85	32	490.0	33	115.3	
12	537.0	13	314.9			27		24 55.60	28	536.5	29	421.3			35	14.99	37	480.5	38	84.2	
22	538.0	23	312.9			40		25 01.18	42	535.7	43	425.1			40	10.16	42	501.9	43	78.4	
32	536.5	33	314.1			50		07.67	52	538.9	53	422.2			45	04.14	47	513.6	48	78.8	
42	537.6	43	318.1	16	9	0		04.07	2	547.2	3	384.6			50	00.71	52	547.5	53	96.0	
2	531.1	3	350.3			5		07.27	7	529.9	8	359.9			55	01.32	57	550.3	58	101.7	
2	531.9	3	417.8			10		05.22	12	526.5	13	347.2	16	13	0	03.75	2	551.3	3	115.1	
47	563.1	48	435.5			15		25 03.67	17	525.7	18	334.6									
27	544.8	28	553.3			19		541.3					17	2	0	25 22.25	2	537.4	3	422.1	
32	559.9	33	536.1			20		24 58.25	21	565.6	22	308.7	17	3	0	25 21.73	2	544.1	3	439.3	
37	558.8	38	524.9					23	576.9	24	294.4	17	4	0	25 16.21	2	556.4	3	430.7		
42	564.7	43	514.8			25		25 12.51	26	573.6	27	279.9	17	8	0	25 05.94	2	543.6	3	423.4	
47	565.7	48	509.8			28		17.67	29	569.4			17	9	25	24 52.35	27	584.8	28	356.1	
52	562.8	53	506.5			30		22.80	31	544.6	32	254.4			30	24 49.37	32	589.4	33	343.0	
2	561.1	3	496.3			33		26.79	34	504.3			40	25 02.15	42	572.9	43	328.2			
12	561.0	13	494.1			35		23.78	36	490.5	37	244.9			45	09.96	47	553.0	48	330.7	
17	561.6	18	494.1					38	492.0	39	257.6			50	12.35	52	532.0	53	334.6		
22	559.2	23	494.8			40		25 04.68	41	507.0	42	258.4			55	05.22	57	534.2	58	334.3	
32	564.2	33	495.9			43		24 57.55	44	513.1			17	10	0	01.85	2	542.1	3	333.0	
42	557.3	43	499.3			45		55.83	46	526.2	47	246.9			5	01.95	7	548.9	8	333.9	
52	557.5	53	514.0			48		54.46	49	537.2			10	03.37	12	552.4	13	334.1			
57	570.1	58	503.8			50		53.34	51	554.4	52	251.5	17	20	0	07.72	2	533.0	3	379.8	
2	568.9	3	498.2			53		54.73	54	570.4			30	08.34	32	531.3	33	384.2			
12	545.0	13	490.7			55		24 58.29	57	566.3	58	256.0	17	22	0	25 04.89	2	536.3	3	390.7	
17	544.1	18	495.7	16	10	0		25 10.30	2	552.8	3	264.4	18	10	0	24 58.29	2	574.8	3	364.9	
22	543.6	23	513.9			5		25 11.44	7	527.3	8	283.4			15	25 02.75	16	562.5	17	363.9	
27	566.1	28	507.8			10		25 03.50	12	537.8	13	299.9									
32	580.7					15		24 58.56	17	545.1	18	302.2	26	0	0	25 16.36	2	524.2	3	353.7	
		33	497.7			20		24 59.50	22	536.3	23	295.9			20	17.56	22	544.7	23	348.2	
37	577.5	38	493.2			25		25 00.01	27	531.3	28	293.3			35	16.38	37	531.5	38	351.2	
42	560.8	43	486.7			30		24 58.72	32	536.7	33	284.8	26	1	0	15.81	2	541.3	3	349.0	
47	556.1	48	480.7			35		25 01.51	37	524.5	38	265.7	26	2	0	22.10	2	565.9	3	354.6	
52	551.2	53	477.1			40		05.52	42	513.4	43	251.2			45	18.30	47	555.3	48	375.3	
2	548.3	3	471.4			45		03.00	47	506.0	48	238.3	26	3	0	17.10	2	543.2	3	383.8	
						50		00.85	52	504.7	53	233.2			15	16.60	17	544.1	18	387.5	

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.			BALANCE Corrected.			Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.			BALANCE Corrected.			Gött. Mean Time.	DECLINATION.										
	d.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.		d.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.		d.	h.	Min.	°	'						
March.											April.																				
26	3	30	25	12.98	32	552.0	33	389.4		6	10	50	25	16.55	52	470.8	53	140.1	15	9	30	25	02.17								
26	4	0	09.66	2	556.2	3	395.1				55	17.60	57	471.7	58	135.5	15	10	0	24	59.90										
27	7	0	24 59.16	2	543.0	3	388.9			6	11	0	18.13	2	493.4	3	143.9														
	15	24 53.95	17	554.7	18	387.7				10	15.47	12	497.7	13	83.4	15	23	0	25	08.82											
27	8	0	25 03.48	2	554.8	3	378.2				15	15.51	17	525.8	18	76.7															
30	4	0	25 05.32	2	561.1	3	394.3				25	02.55	27	572.3	28	105.3															
	20	06.70	22	558.5	23	404.5				30	14.73	32	558.4	33	124.9																
	40	09.69	42	551.5	43	401.0				35	10.90	37	548.2	38	140.7	16	0	0	15.02												
30	5	0	11.34	2	519.2	3	396.7				40	15.37	42	528.8	43	152.3	16	4	0	15.94											
30	6	0	08.68	2	550.9	3	387.8				45	12.22	47	521.8	48	160.5															
											50	14.85	52	515.0	53	186.1															
											55	12.04	57	511.5	58	199.7															
April.										6	12	0	25 06.23	2	516.3	3	200.2														
6	4	0	25 20.90	2	585.6	3	432.3				10	24 59.59	12	531.0	13	182.6	16	5	0	24 58.58											
	10	18.75	12	575.1	13	435.1				20	25 01.21	22	551.4	23	176.1																
	25	25 18.03	27	564.2	28	440.1				30	09.82	32	532.3	33	187.2																
6	6	0	24 56.37	2	582.4	3	524.4				40	08.68	42	522.3	43	194.6															
	10	25 01.95	12	576.9	13	522.7				50	03.97	52	522.1	53	209.4																
	20	04.82	22	571.8	23	517.9				6	13	0	00.13	2	528.4	3	211.6														
	40	09.42	42	567.0	43	507.8				10	02.01	12	530.1	13	215.5																
6	7	0	25 11.98	2	566.0	3	507.2				20	02.96	22	526.5	23	215.8															
	55	24 44.23	57	537.9	58	485.8				6	22	0	15.39	2	516.8	3	366.9														
6	8	0	24 46.19	2	542.7	3	462.7				15	14.40	17	527.1	18	361.3	16	6	0	10.80											
	5	24 50.18	7	552.4	8	443.0				30	11.88	32	531.4	33	359.9																
	11	25 00.71	12	549.6	13	434.8				6	23	0	25 10.31	2	538.1	3	361.3	16	7	0	24 59.32										
	15	03.23	17	539.6	18	434.4																									
	20	03.97	22	535.0	23	425.2				7	7	0	24 53.17	2	561.7	3	419.0														
	25	03.43	27	528.7	28	422.7					5	24 54.59	7	563.1	8	418.3															
	30	25 01.88	32	526.8	33	420.0					20	24 59.53	22	560.2	23	417.5															
	46	24 57.41	47	516.7	48	396.1	7	8	0		25	02.19	2	549.6	3	409.4															
	50	24 51.32	52	522.9	53	362.6	7	10	0		03.50	2	540.6	3	384.3																
	55	24 55.73	57	508.2	58	339.2	7	11	0		04.51	2	529.4	3	363.5																
6	9	0	25 00.00	2	490.6	3	332.7																								
	5	24 57.37	7	497.2	8	340.2	10	8	0		25	02.37	2	548.8	3	443.8	16	8	0	25 00.53											
	10	52.87	12	492.3	13	325.1					15	02.99	17	546.8	18	436.2															
	15	54.89	17	487.7	18	305.8					32	05.38	33	555.8	34	424.2															
	21	56.37	22	481.3	23	311.5	10	9	0		20	24 59.53	22	560.2	23	417.5															
	25	51.90	27	481.6	28	289.1	10	10	0		05.29	2	561.1	3	405.7																
	30	51.79	32	475.0	33	257.4					05.70	2	556.1	3	383.2	16	9	0	25 01.58												
	34	474.1					13	7	0		25	13.72	2	555.9	3	470.8															
	35	24 54.82	37	471.3	38	234.9					37	04.61	39	538.2	40	478.0															
	39	455.6									50	01.51	52	549.8	53	461.8															
	40	25 00.27	41	438.9	43	188.9	13	8	0		02.80	2	553.9	3	452.7																
		44	431.4				13	9	0		02.79	2	551.3	3	414.1																
	45	08.34	46	424.7	47	129.6	13	10	0		10.06	2	553.3	3	266.9																
		48	433.4	49	110.8						15	08.01	17	555.8	18	271.8															
	50	12.65	52	411.2	53	68.8																									
		54	424.6	55	67.8	14	8	0			25	03.93	2	562.2	3	370.1															
	55½	14.06	57	437.2	58	68.0	14	9	0		24	50.92	2	564.2	3	407.6															
		59	126.2								15	56.11	17	574.3	18	379.4															
6	10	0	15.31	2	431.3	3	84.0				30	59.56	32	559.5	33	365.8															
	5	10.30	7	451.8	8	120.9	14	10	0		48.27	2	554.6	3	342.6																
	10	10.43	12	481.3	13	160.9					15	48.67	17	540.9	18	336.7															
	15	07.67	17	490.3	18	172.2					30	50.62	32	543.3	33	335.4															
	20	05.52	22	488.3	23	175.2					45	49.24	47	544.1	48	333.5															
	25	05.18	27	497.2	28	183.3	14	11	0		52.94	2	544.5	3	332.3																
	30	07.45	32	487.0	33	198.7																									
	35	02.89	37	509.1	38	209.9	15	8	0		25	00.87	2	551.4	3	384.3															
	40	04.04	42	521.7	43	201.2					50	24 56.70	52	575.3	53	376.4															
	45	10.97	47	510.5	48	156.5	15	9	0		25	01.16	2	566.8	3	375.9															

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.

BIFILAR Corrected.	BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.			
Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	April.	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	April.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.
32 551.4	33	372.1	16 9	56	24	42.81	57	553.6	58	252.1	16	20	15	25	14.13		17	515.3	18	327.8
2 544.0	3	374.6					59	575.1			30		15.54	32	514.6		33	323.0		
2 505.9	3	340.3	16 10	0	24	44.73	2	585.5	3	253.9								2 555.3	3	359.5
27 518.9	28	368.2		5	24	53.27	7	576.2	8	254.0	21	10	0	25	06.79		12 555.4	13	358.2	
32 517.8	33	377.2		10	25	01.39	12	560.8	13	256.1										
42 515.2	43	389.2		15	25	01.54	17	555.7	18	258.0										
2 524.3	3	409.4		25	25	01.07	27	546.6	28	260.8										
2 566.2	3	490.5		35	24	59.59	37	533.8	38	254.0	4	2	0	25	18.92		2 551.2	3	335.6	
17 570.2	18	504.9	16 11	45	24	58.32	47	522.7	48	258.2	4	3	55		22.50		57 582.3	58	408.1	
32 573.8	33	512.3		0	25	02.69	2	516.8	3	263.8	4	4	0		21.32		2 579.3	3	418.1	
52 588.7	53	529.3		10	24	47.26	12	544.9	13	251.1					10	18.54	12	567.0	13	441.3
57 596.4	58	536.0		15	24	51.59	17	557.7	18	222.0					15	19.58	17	551.1	18	410.3
2 613.9	3	540.4		20	25	02.52	22	546.5	23	199.6					20	18.34	22	549.6	23	463.8
7 631.2	8	527.2		25	06.09		27	538.4	28	182.7					25	16.86	27	550.7	28	471.2
9 626.1				30	06.12		32	538.5	33	169.9					30	16.23	32	553.9	33	479.4
12 614.1	13	517.5		35	05.45		37	534.9	38	149.0					35	14.17	37	549.0	38	484.7
17 605.4	18	511.3		40	25	05.35	42	525.0	43	173.4					40	12.98	42	551.8	43	486.3
22 601.2	23	509.8		50	24	53.92	52	521.8	53	177.1					45	12.35	47	558.9	48	484.9
27 585.2	28	510.3	16 12	55	24	56.20	57	517.5	58	175.3	4	5	0		14.46	2	556.9	3	488.0	
32 585.9	33	510.6		0	24	56.00	2	518.3	3	166.5					15	15.04	17	566.4	18	485.2
42 574.1	43	504.1		10	25	00.60	12	508.7	13	155.1					30	15.04	32	577.1	33	483.6
2 560.2	3	501.2		15	25	00.55	17	500.6	18	155.1					50	09.76	52	569.9	53	489.5
32 562.8	33	491.1		20	24	57.01	22	535.7	23	159.5	4	6	0		12.23	2	564.0	3	487.4	
2 591.9	3	458.3		25	24	52.50	27	512.3	28	159.5	4	8	0		25	04.88	2	573.1	3	504.2
12 574.6	13	444.3		30	24	57.75	32	494.8	33	146.5	4	9	0		24	59.83	2	545.5	3	500.1
22 584.7	23	426.5		35	25	05.69	37	483.2						35	49.48	37	550.6	38	421.3	
32 546.5	33	423.7		38	480.4		39	130.8						40	51.72	42	543.8	43	382.6	
37 531.7	38	428.3		40 ₁	06.12		42	481.1	43	121.1					45	56.30	47	528.5	48	350.8
42 539.1	43	430.6		44	482.7		46	481.4						50	58.70	52	514.9	53	331.8	
47 550.2	48	430.6		45	07.94		47	482.4	48	114.5	4	10	0		55	55.40	57	502.7	58	308.7
52 554.8	53	429.4		49	480.4		51	476.7						10	50.13	12	496.7	13	257.2	
57 556.6	58	428.5		50	07.60		52	478.1	53	108.5				15	49.37	17	490.2	18	234.9	
2 557.6	3	427.1		54	481.3		56	483.3						20	46.61	21	465.4	22	194.9	
17 540.2	18	431.1		55	07.07		57	482.7	58	100.4					23	459.3				
37 548.4	38	417.3		59	478.0		60	476.8						24	453.7					
47 535.1	48	417.0		7	474.2		8	68.0						25	44.90	27	446.5	26	180.5	
2 547.2	3	388.9	16 13	0	08.32	1	476.3							30	43.58	31	451.9	32	170.3	
12 548.9	13	380.3		2	472.5		3	72.7						35	43.72	37	485.7	36	167.4	
17 530.4	18	356.4		4	473.0		6	476.8						39	489.4					
21 514.0				5	09.79		7	474.2						40	44.53	42	491.6	43	137.2	
22 517.5	23	333.3		10	08.34		11	482.5						45	49.14	47	483.2	48	103.4	
24 522.8				12	481.5		13	76.8						50	53.54	52	491.5	53	103.1	
27 529.2	28	296.9		14	488.4		16	483.7						55	54.72	57	495.2	58	115.3	
32 528.3	33	252.6		15	04.71		17	481.4	18	82.3	4	11	0		52.67	2	501.0	3	95.5	
34 519.6				19	480.7		21	475.0						5	50.46	7	503.8	8	85.9	
36 516.3				22	473.8		23	84.5						10	50.04	12	504.8	13	79.8	
37 511.7	37 ₁ ₂	230.9		24	483.1									20	52.87	22	510.2	23	104.5	
39 503.3				25	24	55.06	26	485.9						9	10	0	24	57.56	2	541.1
41 504.3	43	219.0		27	489.1		28	86.0						10	24	58.72	12	538.0	13	368.8
42 509.7				29	498.1															
44 507.4				30	51.09		32	506.4	33	89.4	11	18	0		24	51.10	2	529.2	3	235.7
46 501.5				35	24	49.10	37	510.0	38	90.0					10	50.89	12	527.8	13	242.1
47 486.2	48	217.1												20	53.27	22	531.7	23	245.3	
49 471.4														30	53.79	32	540.9	33	248.2	
51 481.3																				
52 493.4	53	243.6																		
54 515.5																				
				16 20	0	25 09.27	2	519.3	3	328.0										

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.

EXTRA OBSERVATIONS OF MAGNETOMETERS, MAY 11—13, 1846.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.							
	d.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	
May.										May.										May.				
11 18	50	24	54.62	52	554.3	53	258.6	12	4	35	25	16.48	37	565.3	38	446.6	12 11	5	24	47.76				
11 19	0	25	00.33	2	554.1	3	261.0	12	5	0	09.66	2	563.3	3	457.1			10		53.20				
	30	24	58.58	32	549.4	33	263.8			12 6	0	06.61	2	643.9	3	483.3			15		54.62			
	50		58.89	52	525.0	53	279.5				5	13.29	7	627.3	8	528.1			20		48.28			
	55		57.41	57	514.5	58	282.3				10	03.02	12	610.9	13	505.4			25		40.96			
11 20	0		58.63	2	508.2	3	286.7				15	08.85	17	602.6	18	482.7			30		41.97			
			4	503.0							20	04.91	22	603.1	23	480.2								
	5	24	59.76	7	502.8	8	291.1				25	04.44	27	604.7	28	479.0								
	10	25	01.48	12	501.2	13	293.2				30	05.08	32	603.4	33	473.5			35		24	56.82		
	15		00.87	17	507.7	18	291.8				35	06.26	37	598.5	38	465.7								
	20		01.27	22	502.5	23	301.2				45	25 10.75	47	603.9	48	484.7			40		25	06.79		
	25		03.20	27	494.5	28	294.4				50	24 57.44	52	639.1	53	477.9			45		24	55.60		
	30		05.29	32	498.6	33	290.9				55	25 06.45	57	637.0	58	413.2					47	55.63		
	35		08.01	37	502.6	38	291.7	12	7	0	25 17.61	2	572.8	3	412.9					50	54.89			
	40		10.47	42	504.8	43	291.4				4	566.9								52	54.32			
	45		06.23	47	485.2						5	25 01.75	6	580.9	7	454.4								
			48	483.5	49	292.3					8	606.9								55	49.71			
	50		04.51	51	484.5						10	24 45.57	11	632.1	12	427.9								
			52	482.5	53	292.5					13	51.14	14	638.3										
			54	476.4							15	54.82								16	407.2	12 12	0	57.21
	55		04.55	56	469.9							17	630.9	18	401.9					2	55.73			
			57	466.1	58	293.9					20	24 59.53	22	623.6	23	390.1				4	56.07			
			59	462.9							25	25 02.67	27	615.0	28	383.5								
11 21	0		01.19	1	467.3						30	04.37	32	603.9	33	377.2					8	24	58.32	
			2	472.7	3	292.0					35	06.26	37	604.8	38	366.0					10	25	00.13	
			4	477.9							40	16.65	42	566.0	43	367.6					13	06.89		
	5		01.43	6	478.9						45	14.03	47	546.8	48	380.7								
			7	475.7	8	294.3					49	554.7												
	10		03.55	12	482.5	13	294.2				50	25 00.33	52	561.7	53	393.4								
	15		04.61	17	486.2	18	294.5				55	24 54.28	57	574.2	58	387.4					17		17.29	
	20		11.44	22	494.5	23	296.1	12	8	0	24 56.18	2	577.8	3	375.6					19		23.07		
	25		11.81	27	500.5	28	294.8				11	25 02.69	12	564.4	13	394.2					21		27.04	
	30		13.49	32	505.1	33	291.4				20	24 58.47	22	577.3	23	401.2					23		31.18	
	35		11.71	37	509.9	38	287.0				30	25 04.98	32	564.0	33	399.9					25		30.04	
	40		11.84	42	507.4	43	286.6	12	9	0	25 01.43	2	550.7	3	402.3					27		28.22		
	45		13.56	47	516.6	48	283.2				35	24 59.64	37	536.7	38	310.3					29		22.80	
11 22	0		11.99	2	517.7	3	282.5				40	25 03.16	42	526.2	43	270.7					31		20.38	
	30		11.00	32	517.1	33	290.6				45	07.91	47	512.7	48	246.2					33		17.49	
11 23	0		10.43	2	492.4	3	315.8				50	06.63	52	505.8	53	243.9					35		16.75	
	10		12.82	12	505.8	13	315.2				55	25 00.94	57	513.8	58	238.0					38		15.09	
	15		14.08	17	494.5	18	320.0	12	10	0	24 58.16	2	520.8	3	219.6					40		13.67		
	20		17.91	22	500.3	23	320.9				10	25 05.25	12	510.4	13	163.8					45		09.26	
	25		16.92	27	504.1	28	320.3				15	09.32	17	503.5	18	122.0					50		07.44	
	30		18.95	32	497.0	33	320.6				20	14.33	21	477.4	22	80.4					55		04.51	
	35		18.55	37	498.3	38	324.4				23	474.9	24	70.2	12 13	0	03.30							
	40		18.97	42	507.8	43	322.7				25	14.03	26	474.1	27	54.2				5		01.18		
	45		20.20	47	504.4	48	325.3				28	477.0	29	56.1					16		02.28			
	50		19.53	52	511.9						30	14.50	31	510.6	32	78.5								
12 0	0		19.61	2	509.1	3	324.1				35	10.97	37	494.2	38	110.0	12 18	0		02.39				
	25		19.31	27	518.9	28	327.4				40	03.23	39	488.8					30		05.70			
	40		16.87	42	507.8	43	334.5				41	25 00.58	42	503.1	43	152.5	12 20	0		03.82				
	50		17.39	52	509.7	53	335.7				45	24 52.17	44	509.4					12 23	0	10.87			
12 1	0		16.41	2	522.8	3	335.3				46	51.76	47	507.7	48	151.6					30		10.77	
	10		16.12	12	524.2	13	336.0				50	48.83	49	505.9					13 0	0	12.13			
	30		15.07	32	538.4	33	333.4				51	48.36	52	505.0	53	152.8	13 2	0		14.26				
	45		15.79	47	530.3	48	337.4				55	46.72							13 3	0	13.72			
12 2	0		15.45	2	534.5	3	339.9				56	46.28	57	503.9	58	169.4	13 4	0		03.87				
12 3	0		19.17	2	574.1	3	392.2	12	11	0	43.65							13 5	0	08.99				
	32		14.98	33	568.4	34	465.2				1	43.82	2	514.7	3	169.4	13 6	0		07.92				
12 4	0		10.06	2	555.4	3	486.5				4	518.3							13 8	0	04.10			

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.May 11^d 22^b 10^m. Clock 23^s slow, set right.

BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.		DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.		DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		
Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	May.		Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	June.		Min.	Sc. Div.	Min.	Mic. Div.			
7	518.1	8	167.6	13	9	0	25 00.62	2	561.2	3	361.8	22	14	0	24 59.44	2	543.3	3	265.7			
9	525.4			13	10	0	04.34	2	543.2	3	353.8			35	24 55.06	37	550.4	38	269.7			
12	517.5	13	184.3	14	8	0	25 11.41	2	576.1	3	371.5	22	15	0	25 05.15	2	526.0	3	298.9			
17	513.4	18	197.2	14	9	0	03.90	2	552.0	3	351.8			10	12.98	12	525.7	13	298.4			
22	514.8	23	200.8	14	10	0	06.37	2	551.4	3	348.2			15	14.26	17	530.8					
27	512.5	28	165.9											20	14.60	22	534.7	23	290.5			
32	489.0	33	98.7	18	18	0	25 12.67	2	546.1	3	296.2			25	13.99	27	538.7	28	284.9			
34	479.3					40	03.70	42	549.7	43	290.8			30	12.08	32	539.8	33	282.1			
36	457.7	37	91.9	18	19	0	02.72	2	553.8	3	291.3			45	08.43	47	543.6	48	283.9			
38	452.7	39	93.3	18	20	0	02.05	2	573.0	3	317.9	22	16	0	25 04.37	2	548.0	3	282.6			
41	385.7	42	99.2											22	17	0	24 58.69	2	527.6	3	347.5	
43	376.9	44	102.2	23	4	0	25 15.14	2	583.8	3	396.4	22	18	0	24 58.45	2	542.9	3	375.0			
46	401.5	47	106.7					32	607.0	33	427.2											
48	386.8	49	102.0			35	06.83	37	614.0	38	431.7	July.										
51	401.2	52	102.4			40	08.45	42	614.9	43	438.4	3	18	0	25 02.26	2	515.4	3	207.8			
53	417.2					45	09.19	47	607.0	48	443.9	3	19	0	24 59.66	2	529.0	3	262.6			
54	399.8					50	09.08	52	608.0	53	444.3	3	20	0	25 01.90	2	536.8	3	300.1			
56	418.6	57	73.3	23	5	0	02.46	2	592.9	3	459.8											
58	424.1	59	52.2			10	01.11	12	583.5	13	472.6	6	0	0	25 19.68	2	497.2	3	397.6			
1	423.2					20	03.74	22	569.5	23	477.8			10	17.81	12	507.7	13	395.6			
3	427.0	2	39.7			30	03.02	32	570.2	33	478.9			20	11.93	22	527.5	23	390.2			
5	424.1	4	26.2			45	05.69	47	562.3	48	475.6			30	14.15	32	538.5	33	389.7			
7	433.3	6	5.2	23	6	0	07.10	2	562.0	3	413.2			40	13.64	42	547.9	43	383.9			
9	464.4	8	+ 2.1	June.										6	1	0	12.22	2	554.7	3	371.5	
11	479.7	11	-20.9	2	8	0	25 01.09	2	549.4	3	440.5	6	10	0	25 01.29	2	558.2	3	404.8			
12	484.7	13	-43.1			5	24 55.29	7	545.7	8	453.3			10	24 55.73	12	566.8	13	391.6			
14	479.0	15	-93.6			10	47.62	12	560.2	13	458.5			15	54.66	17	571.1	18	387.0			
16	471.7	17	-113.6			15	37.16	17	587.6	18	441.3			20	54.77	22	574.6	23	378.7			
18	476.9					20	38.91	22	606.4	23	430.3			25	24 58.63	27	570.0	28	375.7			
20	471.6	19	-115.7			25	47.79	27	590.8	28	430.0			30	25 02.13	32	558.4	33	370.2			
22	482.7					30	50.49	32	580.3	33	434.9											
24	485.3	23	-92.5			40	54.38	42	567.1	43	436.0	7	20	0	24 58.52	2	536.6	3	366.7			
26	491.8	26	-63.0	2	9	0	24 58.42	2	561.0	3	422.9			25	24 57.64	27	534.0	28	383.7			
28	498.9				2	10	0	25 01.61	2	549.4	3	387.2	7	22	0	25 02.15	2	527.6	3	395.5		
30	502.4	29	-18.1																			
32	507.9	32	+ 7.3	9	6	0	24 59.66	2	604.0	3	507.1	11	2	0	25 17.40	2	508.1	3	388.5			
34	501.9					10	24 59.23	12	593.3	13	519.5			10	19.39	12	532.7	13	383.1			
36	512.5	35	11.8			20	25 00.44	22	598.4	23	517.4			15	19.89	17	566.4	18	372.9			
39	522.0	37	21.8			45	07.54	47	579.1	48	504.0			20	23.07	22	592.0	23	364.6			
42	530.8	43	41.6	9	7	0	07.10	2	571.7	3	496.8			25	23.92	27	604.1	28	362.3			
47	533.4	48	60.0											30	22.03	32	571.0	33	385.2			
52	539.5	53	88.3	15	9	2	25 07.84	3	565.4	4	440.1			35	19.58	37	556.1	38	403.1			
57	536.6	58	95.7			45	24 59.51	47	558.6	48	427.5			40	19.26	42	544.0	43	422.6			
2	534.1	3	116.1	15	10	0	24 53.65	2	569.5	3	412.4			45	23.56	47	531.8	48	443.4			
7	529.4	8	129.2			10	25 01.04	12	559.8	13	409.4			50	23.61	52	506.5	53	463.4			
17	530.2	18	148.2			15	02.53	17	556.2	18	404.8			55	22.10	57	516.0	58	462.0			
2	531.3	3	319.8	18	18	0	25 12.22	2	533.0	3	386.2			5	24.82	2	552.2	3	454.9			
32	528.1	33	333.5			50	16.21	52	538.4	53	355.3			10	25.47	12	559.8	13	467.0			
2	535.2	3	347.4	18	19	0	17.80	2	538.5	3	350.5			15	25.02	17	573.3	18	475.2			
2	515.2	3	353.2			15	19.84	17	542.3	18	345.9			20	25.80	22	591.3	23	483.1			
32	526.2	33	351.3			20	18.94	22	544.0	23	345.0			25	23.70	27	569.9	28	505.2			
2	530.4	3	354.6			30	17.53	32	545.6	33	344.4			30	21.24	32	565.9	33	516.6			
2	541.8	3	368.0			40	15.88	42	544.4	43	345.5			35	18.82	37	557.1	38	530.6			
2	563.2	3	377.4	18	20	0	08.14	2	544.3	3	351.9			40	15.49	42	554.0	43	546.5			
2	598.5	3	404.6											45	16.57	47	555.7	48	558.9			
2	576.1	3	394.4	22	13	0	25 16.15	2	535.5	3	266.9			50	14.33	52	560.3	53	567.7			
2	576.4	3	395.2			16	25 02.48	17	537.4	18	246.4			55	13.99	57	573.6	58	563.9			
2	560.6	3	389.7			25	24 59.01	27	550.4	28	270.8	11	4	0	15.29	2	577.7	3	568.2			

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.June 15^d 2^h. Clock 26^s fast, set right.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			
d. h. July.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h. July.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h. Aug.	Min.	°	'	
11 4	5	25	17.17	7	585.5	8	566.5	25 6	0	25	10.04	2	574.8	3	414.1	6 20	45	25	10.43	
	10		15.24	12	587.4	13	568.1		0		00.57	2	581.2	3	418.7		50	07	13	
	15		16.72	17	588.8	18	578.3		10		02.26	12	580.1	13	413.8		55	07	40	
	25		15.58	27	570.7	28	608.5		0		25 01.92	2	559.2	3	398.2	6 21	5	11	27	
	30		14.87	32	558.6	33	614.3		0		24 54.72	2	573.5	3	308.2		10	14	67	
	35		13.29	37	571.7	38	603.4		5		25 00.99	7	560.0	8	306.1		20	16	82	
	40		13.46	42	575.6	43	599.4		12		03.81	12	552.3	13	308.4	6 22	0	07	00	
	45		12.75	47	574.7	48	595.2		15		03.34	17	553.0	18	310.9		5	11	98	
				52	575.5	53	591.9										10	10	13	
	55		14.46	57	572.5	58	585.6		29	4	0	25	16.80	2	575.0	3	451.0		15	11
11 5	0		14.40	2	572.6	3	579.8		15		19.68	17	595.2	18	463.8		20	12	38	
	5		14.98	7	569.0	8	573.2		20		17.89	22	611.1	23	460.5		25	09	73	
	15		12.48	17	564.1	18	559.9		25		19.17	27	607.7	28	473.1		30	10	30	
	30		12.72	32	594.9	33	529.6		30		16.92	32	590.3	33	487.5		45	11	64	
	35		13.41	37	597.5	38	526.5		35		17.42	37	600.0	38	497.5		6 23	0	15	54
11 5	45		13.30	47	572.8	48	539.8		40		16.36	42	603.1	43	507.0		5	13	12	
11 6	0		13.05	2	579.8	3	533.0		45		15.47	47	606.0	48	511.7		30	09	86	
									50		17.33	52	597.4	53	521.5		40	13	99	
13 6	0	25	06.32	2	596.5	3	524.7		55		19.28	57	587.7	58	536.4		50	15	34	
	15		07.47	17	598.3	18	527.1	29 5	0		18.50	2	595.2	3	554.4	7 0	0	16	25	
	0		14.80	2	592.9	3	547.4		10		18.84	12	610.2	13	584.6		15	16	75	
	5		12.78	7	576.0	8	545.1		25		12.51	27	607.2	28	628.5		30	14	87	
	10		07.00	12	565.5	13	570.0		35		13.70	37	618.2	38	638.1		50	19	58	
	15		02.08	17	577.2	18	575.1		40		13.12	42	615.4	43	675.1	7 1	0	17	76	
	20	25	00.10	22	578.3	23	560.6		50		11.24	52	624.9	53	635.4		20	20	96	
	25	24	56.77	26	586.8	27	552.2		29	6	0	14.78	2	614.0	3	656.4	7 2	0	18	81
	30	55.73	32	593.7	33	537.8		5		09.42	7	610.3	8	671.6	7 3	0	14	53		
	35	56.50	37	590.1	38	529.0		10		02.87	12	614.0	13	670.9		7 4	0	13	84	
13 7	40	56.30	42	597.4	43	517.8		15		05.77	17	610.2	18	681.0	7 7	0	07	54		
	45	24	58.52	47	601.3	48	506.0		21	25	02.28	22	609.8	23	702.6	32	01	54		
	50	25	03.04	52	595.8	53	499.9		25	24	59.88	27	583.2	28	658.0	7 8	0	09	46	
	0	11.34	2	570.4	3	499.6		30		57.89	32	584.5	33	606.5	30	00	27			
	10	03.43	12	566.1	13	492.6		35	24	59.66	37	588.7	38	584.4		40	25	04	64	
13 8	20	05.99	22	573.5	23	481.8		40	25	01.99	42	588.8	43	572.0		45	24	30	40	
	30	05.79	32	568.0	33	474.0		45		05.05	47	581.4	48	566.8		49		26	07	
	45	25	05.45	47	571.1	48	460.8		50		06.06	52	584.4	53	562.7		50		29	33
	30	24	59.50	32	556.5	33	450.3		55		07.61	57	588.6	58	560.0		54		48	23
	40	24	58.79	42	555.7	43	441.8	29 7	0		07.20	2	590.1	3	552.2	7 9	0	25	13	72
13 10	0	25	02.19	2	542.5	3	427.3		10		09.15	12	575.1	13	538.1		5	25	11	07
	10	25	01.72	12	545.3	13	416.3		25		07.92	27	573.7	28	522.4		10	24	59	79
								29	8	0	08.41	2	556.5	3	485.0		15		55	56
14 10	0	24	57.05	2	559.6	3	399.7										25	24	58	45
	10	24	56.10	12	561.1	13	390.2	Aug. 1 8	0	25	05.45	2	565.0	3	401.0		35	25	03	28
	20	24	57.64	22	556.2	23	381.7		35	24	51.32	37	562.4	38	399.7		45		02	08
	0	25	14.01	2	546.8	3	317.4		40	46.52	42	581.8	43	388.6	7 10	0	04	21		
	14 19	0	09.42	2	544.8	3	325.5		45	50.04	47	586.8	48	388.8		7 20	0	25	13	23
14 20	0	03.48	2	549.1	3	337.1		50	56.40	52	586.8	53	392.6		10	10	10	80		
	1	9	0	24	59.95	2	570.6		0	24	59.95	2	570.6	3	386.5		35	05	65	
	10	25	05.29	12	570.3	13	375.7		10	25	05.29	12	570.3	13	375.7		35	05	41	
	20	03.28	22	564.0	23	364.7		20	25	03.37	32	562.2	33	352.4		10	07	79		
	30	25	03.37	13	386.1				30	25	03.37	32	562.2	33	352.4		35	05	85	
24 8	0	24	59.34	2	563.4	3	480.9	1 10	0	24	57.78	2	549.8	3	349.0		7 23	0	09	49
	10	25	02.15	12	568.0	13	470.6		6 20	0	25	07.20	2	525.3	3	352.6	8 2	0	07	45
	20	03.37	22	561.8	23	464.2	15	06.16	17	482.7	18	363.1		25		08	65			
	24 10	0	04.17	2	564.3	3	410.1	20	05.55	22	490.6	23	360.9		40		10	09		
	30	10.06	32	560.7	33	396.4		25	10.33	27	510.1	28	356.1		30		10	00		
25 4	0	25	12.98	2	579.5	3	383.9		30	13.81	32	508.2	33	357.0		8 3	10	11	61	
	20	10.27	22	561.0	23	397.1		40	09.89	42	480.5	43	361.6		8 4	0	10	33		
	30	10.06	32	560.7	33	396.4														

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.

BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.			Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.	
Min.	Sc. Div.	Min.	Mic. Div.	d. h. Aug.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h. Aug.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	
47	470.6	48	364.0	8 4	55	24	58.23	57	590.8	58	476.3	14 8	0	24	59.93	2	564.3	3	431.0	
52	459.1	53	358.8	8 5	0	25	00.82	2	586.6	3	477.5	40		52.94	42	560.3	43	433.5		
57	471.3	58	349.0		5	01.65		7	579.3	8	477.9	14 9	0	59.59	2	554.1	3	419.1		
7	484.0	8	352.2					17	579.4	18	476.8		30	24	59.34	32	544.7	33	363.3	
12	489.7	13	352.7		25	02.25		27	572.5	28	489.2		45	25	05.96	47	529.3	48	317.2	
22	504.3	23	346.8	8 6	0	03.67		2	573.6	3	475.9		50	06.17	52	523.5	53	310.3		
2	504.6	3	368.7		30	25	05.96	32	569.7	33	454.9		55	25	03.34	57	524.1	58	307.5	
7	519.4	8	377.1	8 7	0	24	59.93	2	562.4	3	436.0	14 10	0	24	57.71	2	532.1	3	293.4	
12	519.4	13	377.4	8 8	0	25	04.96	2	582.0	3	418.3		10	56.43	12	543.3	13	277.8		
17	525.6	18	375.9	8 9	15	24	58.38	17	566.2	18	361.7		15	55.73	17	547.5	18	270.3		
22	520.1	23	375.0		35	25	02.13	37	544.9	38	362.0									
27	532.4	28	373.0			45	00.42	47	556.9	48	360.4	15 10	0	24	57.31	2	566.3	3	365.2	
32	518.4	33	369.4	8 10	0	04.42		2	551.2	3	360.2		10	24	57.98	12	566.4	13	363.7	
47	519.1	48	368.3																	
2	503.3	3	365.5	12 4	0	25	02.48	2	578.0	3	495.9	16 18	0	25	11.03	2	522.5	3	262.6	
7	507.9	8	363.7		10	03.94		12	582.9	13	505.3		55	18.08	57	517.6	58	270.3		
32	512.4	35	387.9		35	10.01		37	575.8	38	514.8	16 19	0	18.40	2	513.8	3	274.2		
42	507.3	43	410.6	12 6	0	25	08.26	2	574.9	3	510.1		5	18.67	7	512.9	8	275.1		
52	509.5	53	412.8	12 10	0	24	57.71	2	539.5	3	353.0		15	18.30	17	515.9	18	279.3		
2	513.1	3	364.3		15	59.86		17	527.6	18	333.4		30	16.68	32	534.6	33	277.1		
17	539.7	18	407.6			22	507.3	23	331.7			50	13.25	52	546.7	53	276.5			
32	524.1	33	428.6		25	58.92		27	510.9	28	336.0	16 20	0	25	11.37	2	543.9	3	284.2	
52	531.8	53	414.7		30	58.02		32	517.4	33	332.2									
2	528.6	3	409.9		45	53.38		47	535.5	48	300.0	17 7	0	24	55.53	2	592.5	3	446.8	
22	528.5	23	404.1		55	48.97		57	512.2	58	277.1		10	25.02.28	12	568.2	13	450.0		
2	535.3	3	390.4	12 11	0	44.53		2	546.7	3	278.0		20	04.61	22	545.4	23	446.2		
2	566.8	3	396.3		5	43.35		7	558.5	8	267.2		30	01.01	32	553.3	33	437.6		
2	553.6	3	433.7		10	50.42		12	551.8	13	255.5	17 8	0	04.31	2	560.1	3	412.4		
2	571.1	3	472.8		15	55.36		17	545.3	18	244.9									
33	584.2	34	451.6		20	24	55.93	22	553.4	23	245.7	22 10	0	25	16.08	2	533.7	3	206.2	
2	567.2	3	443.9		30	25	03.74	32	539.6	33	243.8		10	24	58.65	12	577.0	13	267.2	
32	553.3	33	376.3	12 20	0	25	11.75	2	538.0	3	343.2		20	25	02.79	22	572.5	23	199.6	
42	510.2	43	350.2		40	10.50		42	534.6	43	348.2		30	09.15	32	548.3	33	201.7		
47	552.6	48	362.9	12 22	0	11.89		2	507.1	3	380.4		40	06.27	42	529.6	43	218.1		
52	613.0	53	318.8	12 23	0	10.56		32	524.4	33	362.9		45	25	03.11	47	528.8	48	238.5	
57	602.2	58	318.7	13 4	0	25	09.69	2	554.6	3	498.6		50	24	58.92	52	535.7	53	260.8	
2	551.9	3	337.0		30	10.00		32	556.0	33	517.4		15	58.99	17	549.5	18	279.7		
7	524.8	8	345.6	13 5	0	11.61		2	553.3	3	524.8	24 10	0	25	01.96	2	548.4	3	325.1	
12	544.5	13	350.6	13 6	0	05.45		2	568.7	3	507.1	24 11	13	24	42.84					
17	554.1	18	351.1									15	42.41	17	538.0	18	228.0			
27	559.9			13 18	0	25	12.35	2	550.5	3	205.9		20	45.11	22	548.8	23	223.3		
37	553.3	38	352.1		25	08.99		27	530.2	28	200.3		25	50.75	27	535.9	28	212.6		
47	553.0	48	350.8	13 20	0	06.88		2	544.7	3	223.6		30	41.43	32	530.0	33	198.7		
2	552.7	3	344.1		14 4	0	25	12.75	2	524.2	3	540.4		35	47.30	37	534.5	38	182.6	
2	533.5	3	288.3		5	03.16		7	589.9	8	536.5		40	48.30	42	542.4	43	183.1		
12	527.8	13	298.7		10	03.84		12	598.1	13	527.4		45	48.47	47	549.8	48	185.9		
37	528.2	38	323.1		15	08.05		17	595.5	18	522.4		50	48.54	52	554.8	53	187.4		
2	502.5	3	363.8		20	12.15		22	592.8	23	514.6	24 12	0	52.64	2	557.4	3	196.0		
12	499.6	13	361.2		25	17.63		27	575.5	28	520.9									
37	510.0	38	373.4		30	15.36		32	562.5	33	533.3	25 7	0	25	03.38	2	546.0	3	410.4	
2	519.4	3	385.1		35	08.72		37	560.1	38	531.2		15	24	56.20	17	566.0	18	416.7	
2	564.4	3	448.2		40	07.47		42	574.9	43	523.5		20	55.09	22	576.3	23	412.0		
27	538.6	28	456.6		45	07.72		47	581.6	48	515.6		30	55.19	32	577.2	33	401.6		
42	545.7	43	439.9		50	05.55		52	578.3	53	508.5		40	24	57.17	42	598.4	43	386.6	
12	569.7	13	424.7	14 5	0	07.84		2	571.7	3	491.3		45	25	00.71	47	582.7	48	388.8	
32	547.8	33	433.8		15	07.37		17	555.9	18	479.2		55	24	57.81	57	569.8	58	386.5	
2	578.2	3	412.7	14 6	0	25	08.11	2	554.0	3	439.8	25 8	0	24	57.71	2	567.4	3	386.0	

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.

Gött. Mean Time.	DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			
			Min.	Sc.	Div.	Min.	Mic.	Div.	d.	h.	Min.	Sc.	Div.	Min.	Mic.	Div.	d.	h.
Aug. 25 9	0	25 01-48	2	554-7	3	366-1	28	11	20	24 56-40	22	530-0	23	240-8	5	0	30	25 21-34
25 10	0	05-11	2	553-7	3	357-6			25	54-35	27	532-0	28	248-2	5	1	0	20-72
									30	52-60	32	536-7	33	261-2			30	23-58
27 8	0	25 01-63	2	565-1	3	410-5			35	51-14	37	542-8	38	271-2			40	13-09
	30	24 55-94	32	545-4	33	448-4			40	51-79	42	547-6	43	277-8	5	2	0	25 17-15
	40	51-70	42	538-0	43	499-6			45	52-53	47	549-6	48	279-0	5	4	0	24 57-14
	45	40-76	47	554-4	48	520-0			50	54-63	52	549-1	53	284-3			5	44-88
	50	31-54	52	569-7	51	530-5			55	57-34	57	545-6	58	294-0			10	46-63
	53	26-50	54	581-3	54	504-0	28	12	0	58-18	2	544-3	3	298-3			15	53-32
	55	30-07	57	579-9	58	457-0			5	24 59-01	7	542-8	8	303-9			20	55-91
27 9	0	37-41	2	578-0	3	421-6			32	25 00-74	33	545-3	34	306-4			25	24 58-03
	5	42-81	7	576-1	8	399-2	28	12	35	25 00-80	37	545-1	38	307-9			30	25 00-77
	10	49-03	12	563-1	13	388-3											35	01-85
	20	54-89	22	546-4	23	371-9	29	6	0	25 00-60	2	590-3	3	394-8	5	5	1	07-27
	30	50-92	32	533-4	33	360-1			25	25 01-24	27	572-2	28	405-5			30	04-84
	40	55-02	42	535-6	43	342-0			50	25 01-45	52	569-2	53	410-6			45	13-16
27 10	0	57-98	2	524-7	3	318-4	29	7	0	24 58-82	2	576-3	3	413-9	5	6	0	11-82
	10	25 00-31	12	528-6	13	296-6	29	8	0	25 05-11	2	562-3	3	399-1			10	04-91
	20	25 00-51	22	520-8	23	296-6	29	9	52	24 54-68	53	580-1	54	318-4				
	30	24 54-95	32	521-3	33	276-0	29	10	0	25 02-55	2	594-5	3	301-7			15	25 02-89
	35	53-85	37	513-6	38	265-6			5	07-04	7	590-9	8	290-0			20	24 54-65
	40	53-51	42	519-8	43	246-9			10	10-27	12	576-8	13	282-4			25	55-63
	45	52-33	47	514-4	48	208-5			15	11-24	17	565-2	18	274-0			30	50-36
	50	24 56-87	52	507-2	53	164-4			20	11-32	22	554-5	23	267-7			35	53-67
	55	25 00-87	57	507-2	58	138-4			25	10-11	27	549-3	38	262-7			40	45-79
27 11	0	04-17	2	493-4	3	128-3			30	09-19	32	544-4	33	262-4			45	49-30
	5	04-34	7	499-6	8	131-3										50	51-86	
	10	03-30	12	495-6	13	122-2										55	57-04	
	15	04-21	17	492-3	18	112-8	3	18	0	25 12-51	2	536-7	3	304-5	5	7	0	59-63
	20	25 04-05	22	472-5	23	115-3			20	25 05-87	22	549-8	23	251-2			5	51-99
	25	24 53-95	27	466-9	28	127-2			40	25 04-58	42	554-8	43	260-4			10	47-59
	30	40-39	32	491-2	33	142-4	3	19	0	24 58-42	2	559-4	3	257-8			15	45-27
	35	32-25	37	552-2	38	139-4	3	20	0	25 02-03	2	543-9	3	273-7			20	40-56
	36	32-?	39	569-1		3 22	0			17-56	2	530-5	3	302-9			25	54-68
	40	37-74	42	555-4	43	128-2			20	16-79	22	537-9	23	320-3	5	8	0	24 57-34
	45	42-71	47	536-0	48	99-7			30	14-98	32	538-0	33	340-4	5	9	55	25 04-44
	50	45-91	52	536-1	53	76-3	3	23	0	25 14-50	2	539-3	3	360-6	5	10	0	25 07-51
	55	49-61	57	534-4	58	103-5										10	24 57-98	
27 12	0	24 49-00	2	541-5	3	121-5	4	9	55	24 58-74	57	554-0	58	379-7			15	47-40
						4 10	0			54-70	2	549-3	3	376-8			20	44-09
28 7	0	24 56-11	2	584-2	3	462-6			5	50-36	7	559-8	8	368-6			25	43-23
	10	24 58-18	12	574-7	13	459-8			10	49-34	12	579-5	13	356-3			30	46-16
	35	25 00-30	37	563-7	38	450-0			15	50-22	17	595-7	18	338-2			35	52-03
28 8	0	05-15	2	558-4	3	428-4			20	24 57-28	22	590-7	23	327-9				
28 10	0	04-84	2	549-5	3	279-5			25	25 02-96	27	583-6	28	320-4	7	20	0	25 11-51
	6	15-27	7	540-0	8	239-1			30	25 06-86	32	579-7	33	313-1			25	12-58
	10	19-82	12	513-7	13	189-5										40	11-64	
	15	24-66	17	499-8	18	135-8	4	20	0	25 12-01	2	527-9	3	369-4	7	22	0	25 12-01
	20	25 12-11	22	489-5	23	122-7			10	14-33	12	511-5	13	372-0				
	25	24 54-06	27	542-2	28	158-1			15	13-91	17	528-9	18	371-0			15	58-92
	30	44-12	32	580-3	33	181-7			30	15-58	32	520-3	33	365-5	8	8	0	24 58-42
	35	45-11	37	584-9	38	184-5			45	08-55	47	536-9	48	374-0			15	57-78
	40	49-91	42	591-4	43	190-5	4	21	0	07-62	2	532-2	3	366-7			30	50-04
	45	24 56-90	47	581-5	48	199-2	4	22	0	13-41	2	515-3	3	379-9			40	45 24 56-77
	50	25 00-87	52	567-1	53	199-1			20	17-15	22	515-4	23	394-3	45		50	25 00-62
	55	03-94	57	551-3	58	198-1			40	13-88	42	515-2	43	393-1			55	25 00-25
28 11	0	00-87	2	557-2	3	205-5	4	23	0	15-04	2	517-6	3	415-1			55	25 00-25
	5	03-09	7	545-6	8	209-3			35	16-30	37	519-4	38	402-5	8	9	0	24 59-14
	10	03-70	12	530-3	13	221-1			50	14-94	52	528-8	53	392-3			10	25 00-28
	15	01-34	17	523-1	18	229-8	5	0	0	18-82	2	521-6	3	392-7	8	10	0	24 59-66

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.Aug. 27^d 11^h. The balance needle has been vibrating the most of the evening.Aug. 28^d 10^h 14^m. Clock 15^s fast, set right.

BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.	BALANCE Corrected.	Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.	BALANCE Corrected.										
Min.	Sec. Div.	Min.	Mic. Div.	d.	h.	Sept.	Min.	Sec. Div.	Min.	Mic. Div.	d.	h.	Sept.	Min.	Sec. Div.	Min.	Mic. Div.						
32	527.7	33	407.0	10	8	0	25	01.98	2	553.6	3	465.9	21	8	20	24	37.53	22	584.4	23	495.6		
2	556.1	3	418.4	10	9	40	25	03.25	42	538.3	43	427.9			25		39.95	27	577.5	28	506.2		
32	561.2	33	473.1			50	24	59.88	52	545.3	53	416.1			30		37.91	32	578.4	33	478.8		
12	537.8	43	487.6	10	10	0	25	01.65	2	543.1	3	404.6			35		37.26	37	555.4	38	404.8		
2	557.2	3	479.7									40			40		37.56	42	576.8	38	421.5		
2	634.6	3	739.2	10	22	0	25	20.30	2	534.1	3	341.2			45		39.14	47	571.6	48	419.2		
7	624.4	8	705.9			15			17	535.9	18	358.5			50		35.66	52	579.0	53	400.1		
12	604.5	13	674.0			30			17.31	32	533.4	33	357.1			55		38.15	57	564.4	58	353.7	
17	591.3	18	669.2	10	23	0			16.55	2	542.6	3	364.6	21	9	0		48.16	2	554.1	3	343.9	
22	601.7	23	648.2	11	2	0			17.58	2	563.3	3	452.5			5		24.55.53	7	546.2	8	343.1	
27	608.4	28	631.1			10			15.64	12	554.5	13	470.8			10		25.02.12	12	536.2	13	353.2	
32	601.1	33	615.6			30			13.46	32	539.1	33	467.8			15		02.55	17	540.5	18	376.1	
37	609.5	38	616.3	11	3	0			10.77	2	566.8	3	459.7			20		25.00.48	22	543.2	23	395.8	
2	595.2	3	566.3			30			09.66	32	561.2	33	470.2			25		24.55.26	27	558.7	28	394.0	
32	564.7	33	543.5	11	4	0	25	12.01	2	537.0	3	477.4			30		53.98	32	551.7	33	385.0		
17	611.5	48	544.2	11	6	0	24	43.69	2	589.2	3	741.9			35		24.55.53	37	547.1	38	378.5		
2	625.1	3	601.5			5			32.28	7	585.3	6	748.0			45		25.01.34	47	551.8	48	375.1	
12	612.4	13	665.7			9			21.89		8	718.2	21	10	0		02.32	2	551.1	3	376.8		
11	624.5					10			22.13	11	600.2			15		02.94	17	558.2	18	375.5			
17	621.3	18	663.9			12			25.33	14	605.1	13	614.1	21	12	0		25.02.66	2	543.4	3	357.6	
22	585.2	23	592.0			15			31.61	17	606.5	18	583.9	21	13	0		24.54.52	2	529.7	3	185.4	
27	561.6	28	564.7			20			42.01	22	593.4	23	578.9			7		515.4	8	183.0			
32	594.7	33	555.4			25			43.76	27	593.1	28	566.1			10		52.33	12	517.1	13	198.6	
37	585.8	38	537.6			30			24.53.74	32	584.3	33	556.6			15		49.17	17	522.1	18	233.6	
12	594.6	43	497.0			35			25.00.27	37	552.8	38	564.1			20		47.62	22	529.8	23	248.8	
47	602.6	48	464.6			40			24.58.02	42	547.1	43	570.5			25		48.50	27	526.9	28	251.8	
52	594.1	53	461.7			45			52.77	47	554.7	48	561.8			30		49.84	32	522.7	33	251.8	
57	582.6	58	465.5			50			52.35	52	566.6	53	549.7			40		48.70	42	532.9	43	270.3	
2	560.1	3	475.3			55			56.40	57	563.2	58	540.1	21	14	0		52.33	2	532.4	3	279.7	
7	560.7	8	475.7	11	7	0			57.75	2	563.2	3	529.4	21	15	0		58.22	2	531.7	3	304.6	
12	566.1	13	467.7			20			24.56.27	22	556.4	23	493.8	21	16	0		47.08	2	522.0	3	217.8	
17	572.6	18	456.9	11	8	0	25	03.77	2	550.8	3	444.7			30		43.11	32	509.7	33	97.3		
22	566.0	23	453.5	11	9	50			02.91	52	556.4	53	289.6			40		45.85	42	525.7	43	243	
27	562.0	28	459.9	11	10	0			06.50	2	579.3	3	228.1			50		45.67	52	534.6			
2	552.1	3	440.2			5			12.11	7	553.8	8	200.4	21	17	0		46.08	2	525.4	3	141.5	
57	526.5	58	117.3			10			25.03.55	12	560.2	13	195.6			30		56.07	32	527.1	33	191.6	
2	513.4	3	132.7			15			24.54.43	17	590.6	18	178.0	21	18	0		24.55.12	2	518.7	3	119.4	
12	514.7	13	250.8			20			25.03.27	22	582.3	23	173.5	21	20	0		25.11.98	2	505.8	3	133.6	
17	533.1	18	273.5			25			12.28	27	552.5	28	183.7			15		07.69	17	496.6	18	147.6	
22	531.0	23	257.9			30			10.77	32	533.5	33	186.9			25		10.01	27	492.6	28	218.5	
27	544.0	28	248.0			35			07.34	37	529.3	38	182.5			35		09.29	37	479.9	38	235.7	
32	544.1	33	235.4			40			04.61	42	536.2	43	186.5			40		11.91	42	482.6	43	234.7	
37	534.2	38	226.1			45			04.17	47	545.3	48	193.5			50		15.18	52	493.1	53	205.9	
						50			07.07	52	541.7	53	199.8	21	21	0		11.51	2	486.5	3	207.1	
2	530.1	3	329.1	13	20	0	25	07.81	2	515.0	3	343.0			10		12.28	12	486.6	13	231.2		
27	526.4	28	329.3			15			07.51	17	505.7	18	343.8			20		16.32	22	476.7	23	258.8	
42	527.4	43	326.7			35			11.74	37	520.1	38	343.7			30		16.75	32	476.3	33	273.6	
2	527.2	3	339.0		13	21	0		16.43	2	522.6	3	332.4			40		17.58	42	469.1	43	288.3	
2	536.9	3	426.6		13	22	0		13.44	2	533.6	3	326.5	21	22	0		14.44	52	476.6	53	286.3	
17	522.1	18	414.3	19	7	0	24	54.41	2	551.0	3	477.7			21	23	0		18.37	2	487.7	3	395.7
32	518.4	33	384.9		20			41.39	22	554.3	23	457.2			15		17.19	17	498.1	18	454.0		
42	547.0	43	369.1		30			24.55.63	32	564.0	33	440.3			25		18.63	27	496.5	28	502.5		
47	531.0	48	346.0	19	8	0	25	02.39	2	555.0	3	413.4			35		15.11	37	505.4	38	524.1		
52	519.7	53	338.6										22	0	0		14.87	47	516.5	48	523.8		
57	519.0	58	339.9	21	8	0	24	41.23	2	567.2	3	498.7			10		15.38	12	556.2	13	546.7		
2	528.0	3	344.2			5			35.07	7	578.4	8	505.2			20		14.78	22	541.0	23	633.9	
12	531.8	13	356.8			10			32.95	12	592.6	13	518.8			25		15.14	27	550.1	28	626.7	
2	536.8	3	390.7			15			36.76	17	584.0	18	507.2			30		14.91	32	542.9	33	615.4	

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.		
	d.	h.	Min.	Min.	Sc. Div.	Min.	Mic. Div.		d.	h.	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'
Sept. 22 0	40	25	19.21	42	571.3	43	636.9	22 Sept.	25	25	04.78	25	646.6	25	668.3	22 Sept.	4	25	24.89
	45		18.84	47	563.8	48	653.9		27		04.28	27	642.7	27	634.5		5		20.69
	50		15.61	52	577.7	53	692.1		29		07.34	29	640.0	29	617.2		6		15.58
	55		14.35	57	581.9	58	678.7		30		07.02	30	635.9	30	615.8		7		17.15
	0		15.41	2	591.2	3	664.6		32		06.53	32	629.1	32	602.5		8		15.61
	10		13.46	12	628.9	13	693.3		34		08.95	34	627.3	34	596.2		9		16.57
	15		08.99	17	680.0	18	779.9		35		09.96	35	626.5	35	599.3		10		19.44
				19	695.2				37		07.78	37	620.2	37	612.5		11		22.41
				21	682.5				40		03.57	40	606.5	40	599.2		12		25.28
	20		02.79	22	677.9	23	758.1		42		05.29	42	599.1	42	581.9		15		19.91
22 1	25	25	07.13	26	708.0	28	776.5	22 Sept.	45		05.08	47	595.1	48	577.3	22 Sept.	17		14.60
	30	24	57.76	32	735.?	33	698.4		50		06.26	52	607.0	53	574.4		20		06.59
	35	25	04.31	35	707.0				55		08.59	57	605.8	58	572.5		22		05.55
				37	694.9	38	691.1		0		11.74	2	624.1	3	607.5		25		02.45
	40		11.10	42	715.0	43	655.3		11		11.44	11	662.6	10	596.2		27		07.54
	45		17.63	47	692.5	48	703.2		12		19.51	12	668.9		589.2		30		10.63
				49	683.9				13		25.56	13	660.9	13	612.9		35	25	04.44
	50	09.56	52	676.5	53	644.7			14		24.66	14	644.5	14	644.8		40	24	58.99
	55	07.17	57	645.5	58	661.8			15		17.42	15	637.4	15	666.8		45	25	10.09
	0	06.86	2	641.9	3	650.9			16		11.03	16	644.4	16	671.4		50	04.58	
22 2	5	01.78	7	652.5	8	629.8		22 Sept.	17		11.30	17	670.8	17	672.4				
	10	14.33	12	658.0	13	716.8			18		26.97	18	675.3	18	674.5				
	15	05.13	17	672.2	18	657.6			19		31.28	19	651.1	19	680.0	22 Sept.	55	25	01.27
	20	17.36	22	663.7	23	759.4			20		32.69	20	640.0	20	689.4		56	24	55.70
	25	05.45	27	645.1	28	673.0			21		30.87	21	639.8	21	714.1				
	30	17.12	32	671.7					22		25.29	22	626.5	22	747.0	22 Sept.	0	24	45.40
	35	09.56	36	726.6	36	817.1			23		12.72	23	632.6	23	767.8				
			37	700.0	38	785.4			24	25	03.20	24	635.8	24	775.4				
	40	03.40	41	706.0	42	732.9			25	24	55.56	25	649.1	25	772.0	22 Sept.	4	25	24.42
	42	14.87	43	683.9	44	761.4			26	24	54.99	26	659.3	26	766.0		5		37.33
22 3	44	02.62	45	678.9	46	704.0		22 Sept.	27	24	58.72	27	658.4	27	756.4		6		48.49
	45	01.02	47	689.5					28	25	02.62	28	650.5	28	758.2		7		46.58
	47	04.17	48	695.4	48	701.1			29		04.17	29	655.4	29	763.1		8		47.59
			49	700.0					30		07.24	30	658.5	30	770.3		9		45.30
	50	25	06.39		50	731.3			31		09.86	31	659.9	31	774.3	22 Sept.	10		42.61
			51	704.0	51	733.0			32		13.72	32	652.4	32	771.9		11		38.69
	52	24	59.76	52	704.0	53	688.4		33		13.90	33	639.5	33	763.0	22 Sept.	12		36.69
	55	25	01.49	54	708.0	55	702.0		34		16.35	34	630.6	34	760.0		13		36.00
			56	708.0	56	591.6			35		15.81	35	618.9	35	748.1	22 Sept.	14		36.37
	58	08.31	58	690.6	58	657.2			36		13.72	36	614.1	36	743.1		15		32.89
22 3				59	680.5				37		10.16	37	612.2	37	737.2	22 Sept.	16		27.05
	0	01.14	0	668.9	0	684.0			38		02.52	38	614.0	38	728.8		17		19.37
	2	00.53	2	661.4	2	629.5			39		02.89	39	620.2	39	718.8	22 Sept.	18		13.76
			3	669.0	3	603.0			40		03.37	40	628.6	40	713.9		19		14.77
	5	13.66	5	674.9	5	564.6			41		03.37	41	632.3	41	715.1	22 Sept.	20		15.71
	7	19.84	7	673.8	7	596.8			45		14.33	45	639.7	45	754.8		21		15.64
			8	672.4	8	533.8			50		11.64	50	621.3	50	757.6	22 Sept.	22		14.50
	9	12.45	9	669.6	9	559.4			53		13.96	53	665.7	53	762.8		23		13.99
	10	11.10	10	666.5	10	663.1			55		33.70	55	700.0	55	750.5	22 Sept.	24		15.64
	12	08.88	12	673.4	12	685.4			56		47.42	56	680.0	56	755.5		25		14.23
	14	09.05	14	686.8	14	700.0			56 ₁		51.11	57	656.9	57	757.2	22 Sept.	26		12.85
	15	09.62	15	686.4	15	704.2			57		36.59	57	666.8	58	774.2		27		23.88
	17	00.98	17	672.2	17	677.8			58		23.54	58	689.7	59	773.9	22 Sept.	28		21.59
	19	02.99	19	668.0	19	620.6			59		21.93	59	686.5	0	763.0		29		20.42
	20	07.96	20	667.7	20	596.7			1		21.12	1	679.8	1	736.6	22 Sept.	30		19.41
	22	14.33	22	662.0	22	608.9			2		23.54	2	669.8	2	729.2		31		15.56
	24	09.89	24	650.0	24	662.4			3		24.39	3	677.4	3	731.3	22 Sept.	32		14.58
															33		19.48		

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.Sept. 22^d 1^h 26^m. Bifilar magnet out of the field of the reading telescope; highest estimated reading perhaps 740 sc. div.Sept. 22^d 5^h 46^m. The bifilar magnet went rapidly out of sight; highest estimated reading perhaps 760 sc. div. about 51^s. The scale came into view at 52^m 10^s.

BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.			
Min.	Sc. Div.	Min.	Mic. Div.	d. Sept.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. Sept.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.
4	681.9	4	724.9	22	6	35	25	19.10	35	643.2	35	579.1	22	7	35	24	34.20	35	517.2	35	495.7
5	666.7	5	704.4			36		16.06	36	634.9					36		31.51	36	510.1	36	496.2
6	651.5	6	696.0			37		643.8	37	567.6					37		29.63	37	513.2	37	499.7
7	632.6	7	689.4			38		07.25	38	664.0	38	557.1			38		30.13	38	514.3	38	494.8
8	613.8					39		06.73	39	663.3					39		29.73	39	525.7	39	486.3
9	600.1	9	675.2			40		05.96	40	652.5	40	563.6			40		32.99	40	534.9	40	482.4
10	596.2	10	662.8						41	633.5	41	573.2			41		30.78	41	526.8	41	482.9
11	596.9					42		24.50	38	617.0					42		27.21	42	530.2	42	485.4
12	602.8	12	675.8			43		41.43	43	588.3	43	603.8			43		27.68	43	536.9	43	480.9
15	621.2	15	729.3			44		31.54	44	563.3	44	618.3			44		27.51	44	535.6	44	470.9
17	638.3	17	758.3			45		25.36	45	558.4	45	608.8			45		25.96	45	522.3	45	462.5
20	644.2	20	773.2			46		24.18	46	557.8	46	583.9			46		25.90	46	517.2	46	455.0
22	632.9	22	759.9			47		28.38	47	557.3	47	530.9			47		25.53	47	516.0	47	454.1
25	613.1	25	735.3			48		40.29	48	552.1	48	464.4			48		24.68	48	516.5		
27	615.9	27	724.6			49		51.16	49	542.4	49	453.9			49		23.20	49	511.7	49	433.4
30	599.2	30	746.7			50		51.90	50	533.5	50	450.9			50		20.38	50	507.0	50	427.1
37	635.7	38	812.6						51	526.7					51		18.40	51	503.1	51	412.7
42	645.6	43	795.5			52		55.70	52	525.4	52	443.5			52		16.28	52	504.6	52	392.8
47	646.9	48	802.9						53	526.6					53		15.74	53	511.3	53	378.3
49	740.?					54		57.08	54	521.7	54	397.0			54		16.55	54	513.1	54	356.8
(out of field)						55		24.57	51	522.7	55	411.0			55		17.89	55	514.3	55	335.5
52	730.	53	768.8						56	512.6	56	391.1			56		19.03	56	514.5	56	332.0
54	658.5					57		25.08	14	481.6	57	374.6			57		18.36	57	511.7	57	326.0
57	621.2	58	717.9	22	7	0		11.57	0	446.9	0	320.3	22	8	0		19.50	59	514.2	59	301.6
59	684.9								59	448.6	59	335.2			59		21.92	0	515.0	0	290.2
1	566.5								1	451.4					1		23.34	1	515.1		
2	554.8	2	491.3			2		20.06	2	463.6	2	268.4			2		24.68	2	515.4	2	279.2
3	557.2	3	453.3						3	370.0	3	257.6			3		26.64	3	515.4	3	272.2
5	562.8	4	432.2			4		26.87	(out of field)	4	227.0				4		27.80	4	514.6	4	266.3
6	562.8	5	422.3			5		24.55		5	177.0				5		29.80	5	510.9	5	260.8
6	568.5	6	429.8			6		30.91		6	131.5				6		32.12	6	506.4	6	252.4
8	561.7	7	457.8			7		39.35		7	96.1				7		32.89	7	503.1		
9	571.6	8	50.37			8				8	162.1				8		33.26	8	502.1	8	236.9
9	571.6	9	489.3			9		52.90		9	300.1				9		33.33	9	499.6	9	231.4
10	587.8	10	499.4			10		43.79	10	461.5	10	382.5			10		33.49	10	494.9	10	223.0
11	604.8					11		.27.24	11	492.5					11		34.40	11	490.7	11	218.0
12	625.1					12		15.94	12	483.2	12	346.7			12		34.13	12	486.9	12	207.6
13	642.3	13	531.5			13		09.89	13	484.5	13	330.2			13		33.93	13	485.2	13	200.1
14	663.1	14	553.5			14		25.05	14	481.7	14	336.8			14		34.08	14	484.6	14	190.1
15	681.3	15	596.6			15		24.58	15	478.1	15	342.8			15		34.32	15	482.6	15	184.2
16	680.1	16	630.1			16		53.67	16	475.5	16	358.9			16		35.19	16	480.9	16	172.2
17	670.0	17	648.6			17		51.99	17	483.8	17	365.4			17		37.46	17	479.4	17	163.3
18	673.0					18		51.91	18	492.2	18	368.4			18		38.91	18	477.8	18	159.3
19	692.1	19	642.6			19		53.17	19	509.7	19	370.9			19		39.21	19	475.1	19	153.9
20	702.0	20	656.5			20		56.90	20	526.3					20		38.80	20	473.5	20	154.0
21	701.0					21		24.59	21	546.8	21	368.5			25		39.41	25	463.3	25	117.3
22	691.1	22	681.2			22		25.04	22	560.5	22	388.6			30		41.84	30	439.9	30	76.2
23	685.1	23	686.2			23		25.01	23	564.8	23	405.6			32		44.12	32	432.9	32	58.3
24	686.6					24		24.59	24	563.3	24	417.6			35		44.16	35	435.1	35	27.4
25	686.4	25	670.4			25		57.71	25	561.6	25	440.2			37		45.31	37	430.6	37	+ 0.5
26	696.0	26	654.8			26		54.18	26	559.7	26	460.7			40		45.98	40	429.5	40	- 19.9
27	712.0	27	646.8			27		46.90	27	564.9	27	462.3			42		46.48	42	442.1	42	- 22.4
28	711.0					28		43.65	28	575.4	28	456.8			45		46.95	45	464.0	45	- 13.3
29	703.0	29	665.4			29		43.55	29	574.8	29	440.8			48		52.13	48	479.4	48	+ 2.9
30	671.9	30	682.4			30		45.69	30	564.5	30	448.4			53		49.91	53	492.4	54	+ 47.6
31	611.8	31	672.0			31		41.50	31	547.0	31	463.4			55		58.92	57	495.9	58	+ 62.0
32	590.7	32	637.8			32		41.23	32	542.9	32	474.0	22	9	0		58.47	2	490.8	3	+ 71.6
33	606.9	33	598.5			33		37.46	33	534.9	33	486.0			5		51.22	7	457.9	8	+ 30.8
34	632.2	34	577.0			34		35.42	34	525.7	34	490.6			10		48.30	12	449.7	13	- 2.1

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.

Sept. 22d 7h 3m 20s. The bifilar scale went out of sight. The force was least perhaps about 7m, when the estimated scale reading would probably be less than 300 sc. div.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.		
d. h. Sept.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h. Sept.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h. Oct.	Min.	°	'
22 9	15	24	47-69	17	440-7	18	-33-3	28 9	0	25	01-95	2	535-3	3	359-9	7 18	20	25	11-30
	20		50-51	22	432-8	23	-47-6	28 10	0		02-01	2	547-1	3	352-6		25		12-92
	25		53-71	27	414-7	28	-64-3										30		07-60
	30		55-09	32	395-2	33	-83-7	30 8	0	25	00-17	2	552-5	3	344-3		35		08-34
	35		57-64	37	372-0	38	-116-5	30 9	0	24	54-41	2	557-5	3	336-5		40		11-71
	40		(out of field)	43	-135-2	30 10		0	25	01-95		2	546-2	3	351-3		45		13-32
	45		54-12		48	-105-7											50		20-05
	50		51-32		53	-68-4											55		20-32
	55		47-35		58	-71-1	1 8	0	24	49-77	2	545-7	3	362-1	7 19	0		17-15	
	0	47-59	4	374-	3	-21-6		30	24	58-38	32	550-8	33	359-0		5		13-49	
22 10	5		22-84	(out of field)	8	-60-4	1 10	0	25	03-85	2	549-8	3	344-7		10		10-47	
	10	24	4-91														45		02-22
	11	23	57-51					2 7	0	24	48-30	2	555-7	3	390-4	7 20	0		06-32
	12		53-18		12 ¹ ₂	-60-9		15		55-76	17	545-1	18	384-2	7 22	0		06-56	
	13		57-35					40		57-58	42	546-8	43	379-7		10		09-08	
	14		56-88		14 ¹ ₂	-77-8	2 8	0		57-24	2	536-9	3	377-1	7 23	0		09-62	
	15		51-43				2 10	0		53-52	2	539-7	3	258-3	8 0	0		13-29	
	16		51-38		16 ¹ ₂	-106-3		10		51-86	12	546-6	13	263-5		30		17-42	
	17		57-25	(out of field)	17 ¹ ₂	-144-6		20		50-65	22	541-3	23	262-4	8 1	0		21-39	
	18		55-09					30		48-45	32	534-4	33	262-0	8 2	0		20-42	
22 11	19	23	59-17					40		46-31	42	535-1	43	259-2		15		20-85	
			20	515-8	20	-198-8		50		46-34	52	538-0	53	259-2		20		23-41	
			22	502-9	22	-287-8	2 11	0		46-19	2	539-4	3	256-0					
	23	24	25-02	24	476-9	24	-356-3		10		48-23	12	527-3	13	264-0		25		27-31
	25		36-65	26	440-3	26	-361-3		20		48-23	22	527-1	23	240-4		30		21-83
	27		45-60	28	440-4	28	-296-8										35		18-84
	29		49-41	30	476-1	31	-164-8	7 7	0	24	53-58	2	549-8	3	443-7		40		23-78
	32		46-95	33	505-7	33 ¹ ₂	-98-3		10		50-08	12	553-5	13	444-1		45		18-34
	34		39-72	35	511-2	35	-114-3		20		55-83	22	546-4	23	440-5		50		16-62
	36		41-57	37	506-2	37	-124-3	7 8	0		56-70	2	525-8	3	253-7		55		13-56
22 12	38		47-62	39	518-2	39	-120-3		8		30-60	9	538-9				39		21-46
	40		49-64	41	513-2	41	-72-8		10		33-37	12	541-4	13	312-0		44		10-27
	42		47-82	43	518-4	43	-61-8		15		34-97					49		08-61	
	44		49-37	45	523-2	45	-52-3					17	555-8	18	276-8		54		06-79
	46		49-95	47	525-0	47	-32-3		20		38-71	22	567-2	23	206-9		59		00-77
	48		50-62	49	520-9	49	-18-3		25		24-49-27	27	563-3	28	210-6		64		09-26
	50		51-96	52	519-2	53	-0-8		30		25-04-08	32	543-0	33	214-0	8 3	0		12-25
	55		54-36	57	517-4	58	+ 2-7		35		15-17	37	502-9	38	238-9		69		18-63
	0	24	55-29	2	504-2	3	-21-3					39	499-3				74		04-58
	5	25	00-50	7	513-9	8	- 9-3		40		25-09-46	41	495-7				79		02-57
22 13	10		03-43	12	517-2	13	- 5-4		45		24-44-73	44	505-8				84		08-56
	15		05-96	17	512-2	18	- 28-0		46		43-82	47	525-9	48	307-7		89		06-86
	20		04-98	22	516-9	23	- 15-3		50		44-12	49	534-6				94		04-26
	0	18-47	2	540-6	3	+210-4		51		44-90	52	537-0	53	315-7		99		02-25	
22 18	20		10-20	22	543-8	23	222-2		55		43-45	57	537-4	58	314-0		104		09-26
22 19	5		03-30	7	546-3	8	263-3		7 9	0	50-51	2	530-5	3	317-2		119		12-25
22 20	0	25	02-42	2	536-5	3	301-1		5		51-46	7	530-8	8	316-8		124		18-63
24 8	0	24	52-57	2	571-3	3	344-6		10		51-02	12	538-2	13	317-7		134		09-44
10		25	00-10	12	554-1	13	351-9		15		52-33	17	536-7	18	310-6		149		03-37
25		24	58-42	27	547-3	28	355-6		30		54-41	32	542-4	33	304-5		154		04-10
24 9	0	25	04-68	2	549-1	3	355-3		45		56-01	47	524-1	48	309-1		169		03-97
24 10	0	25	00-40	2	548-0	3	360-5	7 10	0		55-53	2	524-0	3	311-3		174		04-58
28 7	0	24	56-23	2	581-4	3	350-7		15		24-56-03	17	537-9	18	323-0		189		08-18
10		52-57	12	563-8	13	348-4	7 18	0		24-50-08	2	558-4	3	-218-6		204		09-76	
20		51-39	22	567-4	23	344-9		5		24-58-82	7	477-2	8	-187-0		215		06-36	
30		24	54-43	32	565-0	33	345-1		10		25-04-53	12	488-5	13	-143-2		226		01-01
28 8	0	25	00-94	2	547-0	3	358-8		15		12-45	17	492-5	18	-123-9		234		24-49-62

BIFILAR. $k=0.000135$.

BALANCE. $k=0.000010$.

Sept. 22^d 9^h 35^m. The bifilar scale again went out of sight, it just came into sight at 10^h 4^m, and did not reappear again till 10^h 20^m.

BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.	
Min.	Sc. Div.	Min.	Mic. Div.	d. Oct.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. Oct.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.
22	474.4	23	-120.1	8 3	24	24	46.33	24	638.4	24	700.4	9 19	10	25	16.95	12	535.0	13	147.3
27	473.7	28	-161.3		25	47.42		25	644.0	25	681.4		40		18.77	42	533.8	43	174.0
32	481.7	33	-178.6		26	48.70		26	647.7	26	664.1	9 20	0		11.98	2	534.5	3	189.0
37	464.5	38	-147.7		27	53.47		27	646.7	27	666.0					2	551.1	3	578.7
42	462.2	43	-79.3		29	24	56.97	28	647.3	28	669.9	10 4	0	25	15.27	22	552.3	23	550.6
47	488.3	48	-45.3		30	25	01.04	30	645.5	30	662.3		20		13.63	2	555.6	3	522.0
52	504.6	53	-34.9			32	641.1		32	664.1	10 5	0		11.66	2	544.1	3	432.1	
57	494.9	58	-34.9		35	04.78		37	654.9	38	766.8	10 6	0	04.91					
2	509.6	3	-49.3		40	15.91		42	647.0	43	805.1								
7	508.3	8	-27.1		45	11.64		47	630.4	48	774.3	13 7	0	24	53.95	2	565.3	3	357.6
12	509.0	13	+10.9		50	25	07.17	52	603.4	53	735.1		10	24	56.10	12	560.4	13	358.6
47	525.9	48	+163.7		55	24	57.81	57	617.3	58	636.7	13 8	0	25	02.66	2	547.2	3	358.7
2	506.0	3	189.8	8 4	0	25	14.71	2	610.1	3	666.6								
2	533.7	3	295.9		5	20.32		7	593.4	8	717.9	22 6	0	24	47.66	2	537.6	3	395.6
12	535.6	13	313.1		10	07.20		12	588.7	13	682.4		5		38.80	7	543.1	8	383.1
2	537.4	3	331.3		15	08.85		17	594.7	18	642.1		10		34.63	12	569.2	13	369.3
2	540.8	3	342.6		20	11.84		22	583.2	23	631.9		15		39.58	17	579.4	18	365.9
32	534.3	33	471.8		25	10.83		27	571.5	28	606.9		20		46.08	22	573.7	23	365.3
2	500.9	3	440.4		30	11.77		32	568.1	33	606.1		30		55.29	32	555.3	33	363.0
2	565.1	3	516.4		40	17.91		42	572.1	43	640.7		45		52.24	47	527.2	48	376.4
17	566.5	18	535.8		45	08.80		47	577.6	48	621.5	22 7	0	24	53.00	2	534.4	3	375.7
22	593.0	23	549.5		55	14.40		57	571.6	58	619.4		30	25	00.60	32	538.5	33	360.4
24	591.4			8 5	0	16.55		2	590.9	3	707.2	22 8	0	02.84	2	541.7	3	360.6	
27	590.9	28	578.1		5	07.79		7	591.9	8	700.4	22 9	45	02.15	47	548.7	48	259.9	
32	619.9	33	597.7		10	01.38		12	569.5	13	629.4		50	02.28	52	551.7	53	259.4	
34	621.8				15	00.47		17	559.6	18	596.0	22 10	0	03.70	2	555.6	3	266.1	
37	628.1	37	601.7		20	01.58		22	548.6	23	584.5								
39	621.7				25	00.17		27	554.9	28	585.2	24 8	0	24	51.52	2	566.2	3	322.7
42	622.8	43	644.1		30	25	02.19	32	553.4	33	618.9		10	24	54.75	12	581.9	13	315.9
	44	675.9			40	24	48.43	42	544.9	43	614.4	24 9	0	24	59.46	2	550.4	3	319.2
47	641.0	48	705.0		45	49.91		47	541.3	48	578.6	24 10	0	25	03.20	2	552.7	3	318.8
49	641.7				50	50.38		52	540.5	53	570.8								
52	643.6	53	738.6		55	47.56		57	554.4	58	550.4	Nov.							
54	649.2			8 6	0	51.59		2	546.0	3	544.4	7 8	0	25	00.74	2	540.1	3	334.9
56	659.9				5	51.59		7	545.5	8	545.6		15	24	56.60	17	536.4	18	348.1
57	669.5	58	722.6		10	48.83		12	547.3	13	542.7		40		56.61	42	531.6	43	339.0
59	683.1				15	45.89		17	567.0	18	519.9	7 9	50		46.32	52	518.6	53	267.9
1	684.8	0	763.2		20	53.54		22	561.7	23	510.1		55		46.11	57	517.4	58	256.5
3	680.1	3	831.8		25	57.84		27	545.3	28	509.7	7 10	0	46.68	2	520.6	3	251.6	
4	684.7	4	843.0		30	55.26		32	539.0	33	502.6		10	49.75	12	515.0	13	246.8	
5	692.9	5	837.6		41	55.76		42	547.9	43	478.0								
6	699.0	6	831.9	8 7	50	24	58.49	52	542.3	53	477.4	17 6	0	25	13.30	2	564.3	3	286.3
7	695.0	7	786.9	8 8	0	25	02.01	2	536.9	3	472.6		30		37.95	32	544.8	33	457.9
8	693.3	8	752.1		10	03.94		12	546.5	13	402.4		37		31.82	38	655.9	38	673.5
9	680.5	9	717.5		20	08.82		22	528.7	23	402.3		39		27.17	39	662.2		
10	686.3	10	729.7		25	04.04		27	532.4	28	395.4		40		646.4	40	704.4		
11	696.3	11	732.6		35	03.77		37	534.8	38	390.7		41		21.53	41	620.2		
12	696.8	12	743.8		50	02.22		52	539.8	53	382.4		42		622.7	42	688.1		
13	690.3	13	774.9	8 9	0	03.13		2	545.4	3	375.5		43		16.90	43	625.0		
14	681.5	14	791.7		30	05.45		32	534.4	33	352.7		44		620.9	44	685.2		
15	681.3	15	781.6	8 10	0	05.18		2	538.1	3	344.1		45		16.77	45	626.0		
16	680.8	16	767.0										46		26.05	46	654.7		
17	682.0	17	754.1	9 8	0	25	10.67	2	545.5	3	382.7		47		19.44	47	669.8	47	692.4
18	687.4	18	731.5		40	00.27		42	551.9	43	371.8		48		20.35	48	688.0	48	695.4
19	688.4	19	711.4	9 10	0	01.75		2	550.1	3	329.5		49		23.34	49	690.5	49	694.5
20	674.6	20	705.0										50		22.40	50	667.3	50	695.5
21	653.4	21	717.9										51		19.78	51	648.8	51	697.1
22	631.0	22	729.6	9 18	0	25	04.64	2	558.5	3	95.9		52		18.16	52	639.3	52	698.6
23	626.2	23	721.2	9 19	0	16.72		2	539.5	3	138.0		53		17.60	53	636.0	53	708.7

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.

Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.	DECLINATION.			
d. h. Nov.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h. Nov.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d. h. Nov.	Min.	°	'	
17 8	54	25	15.59	54	636.9	54	714.4	17 7	30	25	29.06	30	627.7	17 8	8	25	06.12			
	55		13.72	55	619.0	55	716.9		31		27.55	32	593.1		10		07.67			
	56		11.61	56	607.4	56	721.0		34		23.81	35	625.2		12		04.55			
	57		08.58	57	603.4				35		23.21	35	625.2		14		04.68			
	58		06.07	58	611.2	58	740.1		36		22.40	36	631.4		16		04.41			
	59		05.11	59	621.1	59	756.8		37		20.40	37	637.3		22		02.52			
	0		05.79	0	634.2	0	778.9		38		18.23	38	639.4		24		05.60			
				1	661.5	1	797.6		39		18.90	39	649.9		26		07.34			
	2		02.75	2	652.7	2	811.7		40		12.22	40	665.4		30		04.55			
	3		02.12	3	666.8	3	823.4		41		11.77	41	672.9		35		05.32			
	4		25 00.40	4	663.1	4	844.8		42		11.71	42	685.0		40		00.28			
	5		24 58.92	5	669.8	5	847.8		43		13.05	43	688.0		45		57.64			
	6		57.31	6	679.3	6	859.4					44	692.0	44	776.9	50		55.15		
	7		58.55	7	689.6	7	869.6		45		08.75	45	702.0	55		56.16				
	8		24 59.59	8	698.9	8	877.3					46	704.0	46	761.4	55		54.41		
				9	710.	9	883.0		47		10.28	47	706.0	40		00.21				
	10		25 00.74	(out of field)		10	891.6					48	695.0	48	786.4	45		24 59.39		
					11	894.3			49		10.36	49	691.0	50		02.01				
	12		08.95		12	899.9						50	692.0	50	780.4	55		02.01		
	13		08.68	13	684.0	13	901.7		51		12.15	51	696.0	55		01.05				
	14		04.04	14	656.5	14	890.4					52	695.0	52	787.3	5		01.05		
	15		01.05	15	651.0	15	873.0		53		10.70	53	698.0	17	9	0				
	16		01.11	16	656.6	16	864.7					54	704.0	54	792.6	20		01.05		
	17		04.01	17	649.2	17	847.9		55		09.93	55	707.0	30		00.74				
	18		05.69	18	652.2	18	825.2					56	695.0	56	797.5	45		00.28		
	19		16.19	19	667.5	19	808.8		57		05.92	57	677.0	17	10	0				
	20		09.56	20	681.0	20	796.8					58	674.0	58	796.8	26	4	0		
	21		13.32	21	681.7	21	801.5					59	686.0				10		08.25	
	22		14.51	22	693.2	22	801.2	17 8	0		08.11	0	682.0		15		18.70			
	23		18.40	23	710.	23	807.4					1	674.0	1	793.3	20		14.23		
	24		21.56	24	684.0	24	814.4		2		11.03	2	671.0		25		07.20			
	25		27.01	25	666.1	25	812.9					3	657.0	3	796.8	30		08.34		
	26		30.04	26	659.6	26	810.9		4		08.82	4	648.5		35		13.05			
	27		30.38	27	642.7	27	799.5					5	648.9	5	790.4	40		15.41		
	28		29.66	28	637.2	28	790.3		6		05.29	6	647.0		45		17.26			
	29		27.84	29	643.2	29	786.9					7	650.4	7	796.6	45		15.81		

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.Nov. 17^d 9^h 45^m. Clock 21^s slow; set right.

BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.		DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.		Gött. Mean Time.		DECLINATION.		BIFILAR Corrected.		BALANCE Corrected.			
Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.	d.	h.	Min.	°	'	Min.	Sc. Div.	Min.	Mic. Div.
8	646.6	26	4	50	25	10.80	52	564.8	53	394.7	26	20	30	25	06.32	32	547.7	33	288.2		
9	645.6	26	5	0	14.91	2	568.7	3	402.8	26	22	0	08.18	2	553.2	3	303.5				
10	648.2	15		08.14	17	554.1	18	431.2													
11	648.6	30		07.71	32	559.7	33	426.1													
12	649.9	26	6	0	11.77	2	596.2	3	557.1	9	8	0	25	05.65	2	561.6	3	278.8			
13	651.3	13	792.1	10	14.50	12	601.2	13	576.9	9	9	15	25	05.11	17	549.1	18	293.7			
14	654.7	15	789.5	15	26.87	17	582.2	18	640.5	9	10	0	24	40.47	2	560.5	3	302.2			
19	667.1	17	782.3	20	20.69	22	590.5	23	682.1				5	41.70	7	558.8	8	293.0			
21	653.9	20	803.2	20	20.72	27	577.6	28	688.0				10	43.62	12	558.8	13	292.5			
23	655.1	25	819.0	25	23.24	32	563.1	33	691.7	23	6	0	24	58.60	2	552.8	3	340.5			
25	658.4	26	818.3	35	17.73	37	584.7	38	714.2				30	47.76	32	563.7	33	348.8			
27	658.7	28	764.5	40	16.32	42	576.7	43	707.1				50	52.03	52	561.1	53	332.3			
32	619.3	33	745.0	45	19.37	47	585.1	48	710.8	23	7	0	24	56.67	2	559.5	3	324.0			
37	623.6	38	773.4	50	24.12	52	575.4	53	745.4	23	10	0	25	08.88	2	551.9	3	143.3			
42	609.8	43	806.6	55	14.43	57	594.0	58	787.7				5	25.74	7	540.4	8	160.1			
47	629.3	48	814.4	26	7	0	10.09	2	597.4	3	832.7		10	24.59	13	554.8	14	143.3			
52	611.6	53	818.2	5	25.00	33	596.0	8	830.9				15	25.02	17	555.9	18	142.6			
57	611.7	58	806.8	10	24.55	60	558.0	13	764.6				20	04.91	22	553.2	23	150.5			
2	577.5	3	774.7	15	49.07	17	554.0						25	06.12	27	547.7	28	149.9			
7	584.5	8	749.5	20	48.23	22	533.4	23	622.0				30	05.79	32	543.0	33	137.5			
12	567.5	13	735.1	25	50.85	27	535.6	28	604.4				35	07.78	37	531.0	38	133.6			
22	559.9	23	666.1	30	49.71	32	524.4	33	577.8				40	05.90	42	517.4	43	134.8			
32	547.6	33	579.3	40	41.97	42	525.5	43	507.8				45	25.01	47	510.1	48	144.1			
47	539.8	48	500.4	45	44.90	47	532.7	48	490.7				50	24.53	52	519.1	53	158.0			
2	539.5	3	466.0	55	53.00	57	535.6	58	468.3				55	47.49	57	532.7	58	162.9			
26	8	0		54.55	2	535.6	3	460.9	23	11	0		46.48	2	537.7	3	168.1				
2	548.1	3	470.4	30	57.31	32	533.2	33	393.2				5	45.98	7	545.3	8	175.8			
12	547.1	13	459.7	26	10	0	24.45	81	275.3	3	231.0		10	47.96	12	542.5	13	177.8			
17	547.0	18	459.8	10	25.00	64	12	564.2	13	205.9		15	50.38	17	535.9						
22	558.1	23	442.7	20	25.00	50	22	541.3	23	188.8		20	51.27	22	533.2	23	176.4				
27	562.9	28	425.0	30	24.58	62	32	546.9	33	128.4		30	54.77	32	542.2	33	180.3				
32	557.2	33	419.8	40	25.01	01	42	558.7	43	127.2											
37	553.7	38	410.6							24	20	0	25	07.69	2	558.2	3	270.2			
42	551.9	43	407.5	26	20	0	10.90	2	538.3	3	279.6		15	07.49	17	561.5	18	254.2			
47	551.4	48	405.5		16	14.10	17	530.5	18	289.2	24	22	0	04.51	2	559.9	3	249.9			

BIFILAR. $k=0.000135$.BALANCE. $k=0.000010$.

NOTES ON THE AURORÆ BOREALES SEEN AT MAKERSTOUN.

Gött. M. T.
d. h. m.

- Feb. 25 9 50. Auroral arch, upper margin passing through α Cygni.
 55. Auroral arch, lower margin passing through α Cygni.
 10 0. Arch 1° higher, steady; reaches from W by N. to NE by N.
 10 10. Arch nearly as before; the eastern termination is rounded like portion of a circle, but the western termination, which is brightest, is sharp, starting in a nearly straight line, making an acute angle with the horizon.
 35. Arch much fainter, the lower edge passing through α Cygni.
 11 40^m—50^m. Bright auroral arch like ermine, about 7° altitude; black sky (?) within, ultimately broke up into several small arches with short streamers.
 12 15. The arch is rather irregular, and consists solely of pencils.
 19. Arch irregular, but light more homogeneous.
 Feb. 26 10 30. Auroral light to N., with faint streamers shooting from the horizon.
 Mar. 16 8 55. Auroral light to N., to an altitude of 12° ; partially obscured by clouds; throwing out faint streamers.
 9 0. Aurora obscured by clouds.
 9 40. An auroral belt passing through λ Orionis and between Castor and Pollux; rather nearer Castor than Pollux.
 34. The belt broken into two; probably the whole semicircle would be visible if the sky were clear, it is seen through haze.
 42. The arch is 4° broad, it passes south of Pollux through γ Orionis and γ Geminorum to 45° altitude from E. horizon, where it is lost behind clouds; the arch is now single.
 45. The arch passes between α and γ Orionis, south of Pollux and through ϵ Bootis. 50^m. The arch has a bend towards the south between the zenith and Orion.
 54. The arch fainter, passes through α Orionis and ϵ Bootis, it is about 3° broad. 55^m. It now passes about 4° to south of α Orionis, and 3° to south of ϵ Bootis.
 10 3. Arch disappearing about the zenith. 10^m. Arch still visible but very faint. 15^m. Arch gone.
 11 35. Auroral light seen throughout the night above the clouds on the N. horizon.
 April 6 11 40. The sky has been somewhat milky to N., but owing to the moonlight and clouds it could not with certainty be called aurora. The sky throughout the evening generally covered with rather large cirro-cumuli, a species of cloud which, if my memory serves, is rather common under the auspices of an increasing or nearly full moon (B.)
 13 8. Faint auroral light to NW.? the clouds have moved off in that quarter, the sky merely looks milky there however.
 18. There is no doubt that there is a faint aurora.
 April 16 10 45. Faint auroral light to N.; it has appeared the same for some time, and no streamers have been observed.
 11 35. Sky becoming overcast; light still seen to N. 13^h 35^m. Sky overcast.
 Aug. 24 11 15. Diffuse auroral light with occasional faint streamers. 20^m. Faint streamers to NW.
 Aug. 27 10 15. Diffuse, faint auroral light seen among the clouds; a faint broad beam to W by S., stretching towards the zenith; much obscured by clouds.
 25. Streamer rises from W by S., pointing south of zenith, another streamer is connected with it at about 15° altitude, the latter passes through the zenith. Auroral patches to N.
 40. Streamer to W by S., narrow and distinct, making an angle of about 10° or 15° with the circle through the zenith and W by S.
 45. The origin of the streamer has moved further south on the horizon, but it is now very faint. Auroral bank to N., altitude about 10° . Cloudy to E., S., and N. Sky chiefly from N. to W. and to SW.
 11 10. An auroral arch or bank, rather patchy and irregular; occasionally short dumpy streamers. 15^m. Arch pulsating. 20^m. Only the NW. quadrant visible, continuous and rapid pulsation as high as Ursa Major.
 23. Patches disappeared, to a considerable extent. 26^m. Patches reappeared but not so bright as before.
 36. Faint streamers from NW. horizon. 39^m. Streamers bright.
 41. Brightest streamer to WNW. 45^m. Much fainter. 55^m. Aurora nearly disappeared. Sky becoming overcast.
 Aug. 29 10 25. Slight magnetic irregularities; aurora looked for, but none visible.
 Sept. 10 9 40. Faint auroral arch about 7° altitude.
 Sept. 11 10 34. Auroral beam 2° broad, rising to an altitude of 20° from W by S.; the rest of the aurora very faint. 45^m. Beam still continues, but fainter and shorter. 50^m. Aurora very faint; the beam has disappeared.

NOTES ON THE AURORÆ BOREALES SEEN AT MAKERSTOUN.

Gött. M. T.

d. h. m.

- Sept. 21 13 0. Aurora to N., consisting chiefly of patches of light and bundles of streamers to an altitude of 40° , with incessant pulsation throughout the whole extent of the aurora; the aurora is not very bright, and it is obscured to a considerable extent by a black mass of clouds.
15. No material change in the aurora; it has a very confused appearance;—an indescribable mass of bundles of streamers and patches, with incessant and rapid pulsation.
- 13 30. Aurora become fainter.
- Oct. 8 8 20. Auroral light; faint streamers to N. and NW.
- Oct. 9 8 5. Several bright streamers sprung up from NNW.
- Oct. 22 10 Faint auroral light seen through an opening in the clouds?
- Nov. 17 7 34. Bright aurora over the sky; partially cloudy; quite overcast a little ago. A portion of an arch to south, perhaps 30° (?) altitude from SSE.
36. About this minute a bright patch of auroral light seen to ESE., altitude about 30° .
41. Broad streak of aurora reaching from SW. to SSW.; altitude of the middle of the streak at its termination in azimuth S 20° W, is 18° . Diffused auroral light, mixed with cirrus clouds; hazy and dark spaces; difficult to say where the aurora is bounded, or whether it be cut off by clouds.
43. The aurora forms a bay to SW.; bright to NE., from an altitude of 10° , over zenith to W.; dark space to SW.; bay to W., persistent.
46. Centre of bay, 17° altitude, very bright above W 27° S. There seems no cloud in the dark space at the bay, yet the stars seem dimmer in it than in the bright light of the aurora; cirrus clouds to N., formed of parallel linear cirri.
50. Outline of auroral bay, like a reaping hook, the end of the handle in the horizon about W 30° S.; the top of the handle, altitude 8° above W 44° S.; the middle of the hook, 13° altitude above W 26° S.; and the top of the hook, 27° altitude above W 53° S. The light extends among the clouds to N. and NE. up to the zenith.
51. The auroral light extends to the south of the zenith, about 70° altitude above SSW., where it mixes with a light cloud, from which it can scarcely be distinguished; aurora on SE. horizon, or cloud.?
56. The clouds are moving off to E. The light to NE. springs from cloud, altitude 9° ; its eastern extremity is at E 20° N.
- 8 0. Incipient streamers amidst light to NE. and to W by N. The light is retrograding towards N., and has nearly attained the W. and NE. points of the horizon.
2. Streamers more distinct to NE.
3. A streak of aurora, unconnected with the horizon, has appeared suddenly to S. The streak is about 2° broad and 10° long, and the middle of it (both as regards length and breadth) is due south, at an altitude of 12° . The streak disappeared in a minute or two.
6. Incipient arch springs from W., altitude of summit 26° .
7. Light about equally luminous to NE. and WSW.; slightly more concentrated at the former. As the clouds clear off, the greater part of the sky found covered with a milky aurora; faint, equally diffused light, excepting that here and there the light, more condensed, has the appearance of arches; the height of the *well-defined* aurora above the south is about 65° ; this is only an approximation, as the light *thins off*.
11. The bay to WSW. is nearly obliterated. The southern portion of the light was at one time best defined, but it is now like the rest.
19. Altitude of *well-defined* light from SSW., 65° .
24. Altitude of *well-defined* light from SSW., 70° .
27. The clouds have moved more eastwards; sky covered to north, from 70° above SSW., with milky aurora.
36. The *well-defined* aurora now only reaches to the zenith.
43. The altitude of *well-defined* aurora is now 85° above SSW. The northern semi-hemisphere is covered with milky aurora as before. This milky appearance of the aurora is precisely of the kind observed covering the sky, Feb. 1, 1845, &c. (See page 120.)
58. The auroral light has drawn nearer to the north.
59. Altitude of auroral segment above NNW., 57° .
- 8 0. Altitude of auroral segment above NNW., 48° .
1. Altitude of auroral segment above NNW., 47° .
5. It again became cloudy, but the aurora crept nearer and nearer the N. horizon.
- Dec. 8 9 15. Auroral arch to N. $10^{\text{h}} 5^{\text{m}}$. Auroral arch to N.

OBSERVATIONS OF MAGNETIC DIP,

AND FOR THE

ABSOLUTE HORIZONTAL INTENSITY.

MAKERSTOUN OBSERVATORY,

1846.

Göttingen Mean Time, Middle of Observation.	Duration.	NEEDLE.			FACE OF CIRCLE E.		FACE OF CIRCLE W.		Mean.	Observed Dip.	Observer's Initial.
		Num- ber.	Tem- pera- ture.	End dip- ping.	Mark on Needle	Mark on Needle	E.	W.			
d. h. m.	m.				° ,'	° ,'	° ,'	° ,'	° ,'	° ,'	
Jan. 2 23 35	40	2	39	B	72 37.0	71 19.5	72 9.0	70 44.0	71 42.37		W
Jan. 3 4 20	30	2		B	72 44.0	71 17.5	72 6.0	70 47.5	71 43.75	71 29.93*	W
Jan. 5 23 12	25	2	45	A	70 56.0	72 18.5	70 14.5	71 28.0	71 14.25		W
Jan. 6 4 30	20	2		A	70 58.0	72 17.5	70 29.0	71 33.0	71 19.37		W
Jan. 8 22 52	25	2	47	B	72 22.0	71 17.5	71 56.5	70 49.5	71 36.37		W
Jan. 9 4 35	20	2	45	B	72 23.0	71 19.5	71 54.0	70 54.0	71 37.62	71 27.34	W
Jan. 12 22 41	22	2	29	A	71 10.0	72 24.0	70 17.0	71 19.0	71 17.50		W
Jan. 13 4 38	15	2	35	A	71 5.0	72 23.0	70 15.5	71 28.0	71 17.87		W
Jan. 15 22 36	18	2	32	B	72 36.0	71 18.0	71 54.0	70 48.0	71 39.00		W
Jan. 16 4 40	20	2	35	B	72 30.5	71 18.5	71 57.0	70 53.0	71 39.75	71 26.93	W
Jan. 19 22 35	20	2	44	A	71 3.0	71 58.0	70 30.5	71 26.5	71 14.50		W
Jan. 20 22 37	25	2	39	A	71 17.5	72 8.5	70 19.5	71 23.0	71 17.12		W
Jan. 21 4 50	20	2	44	A	71 7.0	72 7.0	70 22.0	71 27.0	71 15.75	71 25.84	W
Jan. 23 22 36	22	2	38	B	72 14.0	71 20.0	71 54.5	70 54.5	71 35.75		W
Jan. 24 4 32	15	2	44	B	72 10.0	71 23.0	71 49.5	70 56.5	71 34.75		W
Feb. 1 22 52	25	2	43	A	71 12.0	72 8.0	70 32.5	71 24.0	71 19.12		W
Feb. 2 4 43	17	2	47	A	71 8.5	72 3.5	70 35.5	71 35.0	71 20.62	71 28.28	W
Feb. 4 22 50	40	2	41	B	72 24.5	71 22.5	71 49.0	70 54.0	71 37.50		W
Feb. 5 5 20	30	2	42	B	72 19.5	71 26.0	71 46.0	70 52.0	71 35.87		W
Feb. 9 22 52	35	2	31	A	71 20.0	72 18.5	70 24.5	71 17.5	71 20.12		B
Feb. 11 4 32	25	2	44	A	71 10.0	72 13.0	70 32.5	71 22.5	71 19.50	71 26.06	B
Feb. 12 22 37	25	2	44	B	72 18.0	71 16.5	71 45.0	70 51.5	71 32.75		B
Feb. 14 4 27	15	2	48	B	72 16.5	71 16.5	71 45.5	70 49.0	71 31.87		B

* Unsatisfactory Observations, end B dipping.

OBSERVATIONS OF DEFLECTIONS FOR THE ABSOLUTE HORIZONTAL INTENSITY, 1846. 347

Göttingen Mean Time of Observation.	DEFLECTING BAR.			DECLINOMETER.		Unifilar Reading.	Deflection corrected for Torsion.	BIFILAR.		Log. $\frac{1}{2} r^3 \tan. u.$	
	Distance = r .	N. Pole.	Tempe- rature.	Observed Reading.	Reduced to Unifilar.			Reading Cor- rected.	Thermome- ter.		
Feb. 16	d. h. m.	Feet.		°	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	°		
	1 17			E {	49.1	7.75	8.64	540.1	45.1		
	2 0	5.0	E {	W {	49.9	10.56	11.77	535.2	45.5	0.4515588	
	2 54		W {	E {	49.6	10.12	11.28	545.3	45.9		
	2 8		W {	W {	49.5	10.06	11.22	542.1	45.5		
	1 21		E {	E {	49.1	5.41	6.03	541.3	45.2		
	1 57	5.5	E {	W {	50.2	9.62	10.72	535.3	45.4	0.4521956	
	2 50		W {	E {	49.6	9.28	10.35	542.1	45.8		
	2 12		W {	W {	49.2	10.06	11.22	543.0	45.5		
	1 24		E {	E {	49.2	4.36	4.86	538.8	45.2		
	1 54	6.0	E {	W {	50.4	8.62	9.61	533.0	45.4	0.4527909	
	2 46		W {	E {	49.6	8.24	9.18	540.1	45.8		
	2 15		W {	W {	49.0	10.70	11.93	543.8	45.6		
	1 27		E {	E {	49.3	4.43	4.93	538.3	45.2		
	1 51	6.5	E {	W {	50.6	7.50	8.36	531.5	45.4	0.4530940	
	2 42		W {	E {	49.3	7.16	7.98	543.6	45.8		
	2 18		W {	W {	48.8	9.71	10.82	544.8	45.6		
	1 30		E {	E {	49.3	4.76	5.31	535.4	45.2		
	1 48	7.0	E {	W {	50.7	6.96	7.76	531.2	45.4	0.4531420	
	2 39		W {	E {	49.1	6.84	7.62	545.6	45.8		
	2 22		W {	W {	48.8	10.06	11.22	545.5	45.6		
	1 34		E {	E {	49.4	3.16	3.53	534.6	45.3		
	1 44	7.5	E {	W {	50.2	5.40	6.02	533.4	45.3	0.4535303	
	2 35		W {	E {	49.0	7.46	8.32	546.9	45.7		
	2 25		W {	W {	48.8	9.15	10.20	546.3	45.7		
	1 37		E {	E {	49.6	5.18	5.78	531.5	45.3		
	1 41	8.0	E {	W {	49.8	5.21	5.81	532.9	45.3	0.4538820	
	2 31		W {	E {	48.9	8.96	9.99	544.1	45.7		
	2 28		W {	W {	48.8	9.79	10.91	544.3	45.7		
April 14	0 37		Magnet away.	{	3.69	4.11	244.77	(Diff.)			
	3 4				9.41	10.49	251.09	Sc. Div.			
	5 16				13.28	14.80	492.81	2 34 59.8	554.2	53.7	
	4 42	5.0	E {	W {	55.7	10.65	11.87	30.06	548.4	53.3	0.4496891
	5 30		W {	E {	59.0	13.91	15.50	493.01	551.6	53.7	
	6 0		W {	W {	57.4	15.01	16.73	34.10	552.2	54.0	
	5 3		E {	E {	54.7	11.78	13.13	434.18	552.9	53.6	
	4 46	5.5	E {	W {	55.7	11.11	12.38	87.31	546.6	53.4	0.4502303
	5 35		W {	E {	58.6	14.04	15.66	436.47	550.1	53.8	
	5 55		W {	W {	56.4	14.89	16.60	91.06	552.4	53.9	
	4 59		E {	E {	54.6	11.90	13.26	394.86	550.5	53.5	
	4 50	6.0	E {	W {	55.2	11.53	12.85	127.31	545.9	53.4	0.4508358
	5 39		W {	E {	58.0	14.19	15.82	397.07	550.6	53.8	
	5 51		W {	W {	56.5	14.61	16.28	130.37	552.0	53.9	
	4 56		E {	E {	54.7	11.97	13.34	366.51	548.8	53.4	
	4 53	6.5	E {	W {	54.8	11.81	13.16	155.88	547.0	53.4	0.4513829
	5 43		W {	E {	57.4	14.41	16.06	368.91	551.7	53.8	
	5 47		W {	W {	57.0	14.51	16.17	158.65	551.8	53.9	
	2 50		Magnet away.	{	3.50	3.90	252.74	(Diff.)			
	6 7				15.51	17.29	265.16	Sc. Div.			

348 OBSERVATIONS OF VIBRATIONS FOR THE ABSOLUTE HORIZONTAL INTENSITY, 1846.

Date.	N. END OF MAGNET MOVING E.					N. END OF MAGNET MOVING W.					BIFILAR.		
	No. of Vib.	Time of Transit.	No. of Vib.	Time of Transit.	Time of one Vib.	No. of Vib.	Time of Transit.	No. of Vib.	Time of Transit.	Time of one Vib.	Time of Obs.	Read- ing Cor.	Thermome- ter.
Feb. 16	0	3 47 5.7	70	4 5 13.0	15.533	1	47 21.5	71	5 29.0	15.536	3 48	550.2	46.3
	6	48 39.1	76	6 46.2	530	5	48 23.6	75	6 31.2	537		552.3	
	10	49 41.2	80	7 48.3	530	11	49 57.1	81	8 4.2	530		551.6	
	16	51 14.5	86	9 21.4	527	15	50 59.2	85	9 6.5	533	4 3	555.4	
	20	52 16.7	90	10 23.6	527	21	52 32.4	91	10 39.6	531		557.0	
	26	53 50.0	96	11 56.6	523	25	53 34.6	95	11 41.7	530		557.7	
	30	54 52.0	100	12 58.8	526	31	55 7.8	101	13 15.0	531		552.5	
	36	56 25.0	106	14 31.7	524	35	56 9.9	105	14 17.0	530		549.2	
	40	57 27.3	110	15 33.9	523	41	57 43.2	111	15 50.0	526			
	46	59 0.6	116	17 7.0	520	45	58 45.3	115	16 52.1	526			
	50	4 0 2.7	120	18 9.0	519	51	0 18.6	121	18 25.2	523			
	56	1 35.8	126	19 42.2	520	55	1 20.6	125	19 27.3	524			
	60	2 37.8	130	20 44.4	523	61	2 53.8	131	21 0.7	527			
	66	4 11.0	136	22 17.7	524	65	3 56.0	135	22 2.7	524			

Mean observed time of one vibration = 15^s.5270. Semi-arc of vibration, commencing 8°, ending 21°. Temperature of magnet, 48°.7. Rate of clock - 1^s.7

April 14	0	7 38 56.4	60	7 54 30.0	15.560	1	39 12.8	61	54 47.2	15.573	7 43	565.9	54.4
	6	40 30.0	66	56 3.4	557	5	40 15.1	65	55 49.5	573	48	563.7	
	10	41 32.2	70	57 5.4	553	11	41 47.6	71	57 21.6	567	53	562.3	
	16	43 5.6	76	58 38.8	553	15	42 51.0	75	58 25.0	567	58	560.0	
	20	44 7.8	80	59 40.9	552	21	44 24.4	81	59 58.4	567	8 3	562.2	
	26	45 41.2	86	8 1 14.2	550	25	45 26.7	85	1 0.6	565		559.4	
	30	46 43.4	90	2 16.3	548	31	47 0.1	91	2 34.0	565			
	36	48 16.8	96	3 49.6	547	35	48 2.5	95	3 36.2	562		Mean	562.3
	40	49 19.0	100	4 51.7	545	41	49 35.7	101	5 9.6	565			
	46	50 52.3	106	6 24.9	543	45	50 38.0	105	6 11.7	562			
	50	51 54.5	110	7 27.1	543	51	52 11.5	111	7 45.1	560			
	56	53 27.8	116	9 0.4	543	56	53 13.7	115	8 47.4	562			

Mean observed time of one vibration = 15^s.5576. Semi-arc of vibration, commencing 7½°, ending 11°. Temperature of magnet, 56°.2.

Gött. Mean Time.	DEFLECTING BAR.			UNIFILAR.			Declino- meter.	Unifilar Circle Reading Reduced.	Deflection.	BIFILAR.		Log. $\frac{1}{2} r^3 \sin. u.$
	Distance = r .	N. Pole.	Tem- pera- ture.	Circle Reading.	Scale Reading.	Sc. Div.				Reading Cor- rected.	Ther- mome- ter.	
	d. h.	Feet.		°	° / "	Sc. Div.	Sc. Div.	° / "	° / "	Sc. Div.	°	
JUNE 23, 1846.												
1 55	Magnet away.			91 44 5	273.90	4.00		91 35 20				
3 19	E {	E	71.0	108 46 30	274.30	3.75	108 38 19	17 0 39	575.9	68.7	9.1662338	
3 6		W	70.8	74 16 20	291.40	3.15	74 25 33		567.4	68.7		
4 19	W {	E	69.8	108 36 20	280.10	5.52	108 32 45	12 40 34	557.2	68.7	9.1650658	
4 27		W	69.8	74 42 30	285.80	8.00	74 42 54		571.7	68.6		
3 24	E {	E	71.0	104 11 20	290.20	6.12	104 17 21	9 43 52	573.2	68.7	9.1648515	
2 59		W	70.7	78 58 25	272.70	4.55	78 48 6		557.1	68.7		
4 16	W {	E	69.8	104 8 20	287.90	4.85	104 12 56	7 38 4	557.7	68.7	9.1642171	
4 33		W	69.8	79 9 40	275.50	7.90	78 59 54		565.4	68.6		
3 29	E {	E	71.1	101 26 30	277.40	6.27	101 19 42	6 6 12	568.4	68.7	9.1637963	
2 53		W	70.6	81 58 55	272.40	7.12	81 46 35		549.6	68.7		
4 13	W {	E	70.0	101 18 40	283.40	6.40	101 17 44	4 57 2	562.1	68.7	9.1631516	
4 37		W	69.8	81 59 40	282.60	10.27	81 55 21		567.0	68.6		
3 35	E {	E	71.0	99 21 35	277.50	6.95	99 14 26	4 57 2	560.2	68.7	9.1631516	
2 45		W	70.6	84 6 45	271.60	6.45	83 54 5		550.0	68.7		
4 9	W {	E	70.0	99 8 30	287.10	5.72	99 11 44	23 5 1	562.5	68.7	9.1553068	
4 41		W	69.7	84 6 10	281.80	12.12	83 59 49		557.8	68.6		
3 40	E {	E	70.8	97 46 55	279.60	6.25	97 42 19	16 37 15	555.0	68.7	9.1553784	
2 40		W	70.2	85 29 50	281.10	6.40	85 26 37		547.6	68.7		
4 0	W {	E	70.4	97 29 30	293.90	4.20	97 40 30	9 31 59	554.6	68.7	9.1554058	
4 44		W	69.6	85 35 30	284.60	12.90	85 31 25		562.8	68.6		
3 43	E {	E	70.8	96 31 57	285.50	6.05	96 33 21	7 29 35	553.9	68.7	9.1556499	
2 34		W	69.8	86 35 15	285.10	5.40	86 36 42		558.9	68.7		
3 56	W {	E	70.8	96 31 57	281.80	3.60	96 31 19	5 59 41	555.3	68.7	9.1556812	
4 47		W	69.5	86 45 10	283.20	12.70	86 39 50		562.2	68.6		
23 45	Magnet away.			91 43 40	274.60	5.12	91 34 52					

JANUARY 2, 1847.

1 48	Magnet away.			91 12 0	281.20	7.90	91 7 53					
4 0	E {	E	45.2	114 18 30	282.55	11.90	114 13 2	23 5 1	560.3	40.7	9.1553068	
1 58		W	41.8	67 58 5	281.20	6.55	67 54 52		557.2	40.7		
3 56	W {	E	44.7	114 18 30	281.00	11.67	114 11 39	12 24 55	560.5	40.7	9.1553784	
2 5		W	42.0	67 58 5	295.60	5.70	68 9 46		556.7	40.7		
3 48	E {	E	44.3	107 52 5	281.35	11.95	107 45 24	9 31 59	560.8	40.7	9.1554058	
2 15		W	42.4	74 34 45	275.55	5.32	74 26 44		558.8	40.7		
3 52	W {	E	44.4	107 52 5	279.30	11.82	107 43 25	7 29 35	560.0	40.7	9.1556499	
2 11		W	42.1	74 34 45	283.10	7.00	74 33 7		556.9	40.7		
3 43	E {	E	44.2	103 39 5	281.95	11.60	103 33 13	5 59 41	560.5	40.7	9.1556812	
2 21		W	43.0	78 46 0	278.20	6.15	78 40 5		557.3	40.7		
3 40	E {	E	44.1	103 39 5	281.45	11.80	103 32 35	4 52 16	560.0	40.7	9.1556718	
2 26		W	43.4	78 46 0	285.10	7.52	78 46 1		556.0	40.7		
3 31	E {	E	44.1	100 46 10	281.85	11.50	100 40 17	23 5 1	559.9	40.7	9.1552407	
2 35		W	43.2	81 39 50	280.75	9.40	81 34 16		555.2	40.7		
3 35	W {	E	44.0	100 46 10	281.65	11.97	100 39 45	5 59 41	559.0	40.7	9.1556499	
2 32		W	42.8	81 39 50	283.90	8.75	81 37 50		555.7	40.7		
3 26	E {	E	44.4	98 42 45	282.95	12.25	98 37 28	4 52 16	559.3	40.7	9.1556812	
2 41		W	43.4	83 44 25	279.00	10.02	83 36 41		555.0	40.7		
3 24	W {	E	44.5	98 42 45	282.85	11.92	98 37 34	23 5 1	558.0	40.7	9.1556718	
2 44		W	43.5	83 44 25	282.60	10.42	83 40 0		554.8	40.7		
3 15	E {	E	44.4	97 16 10	279.50	11.60	97 7 52	9 31 59	556.4	40.7	9.1556812	
2 51		W	43.8	85 16 10	278.50	11.02	85 7 15		555.2	40.7		
3 19	W {	E	44.4	97 16 10	279.10	11.70	97 7 24	4 52 16	558.1	40.7		
2 49		W	43.5	85 16 10	280.30	10.67	85 9 17		555.1	40.7		
3 9	E {	E	44.1	96 8 0	280.55	11.70	96 0 41	5 59 41	558.0	40.7	9.1556812	
2 55		W	43.9	86 22 35	280.00	11.40	86 14 55		555.8	40.7		
3 6	W {	E	44.0	96 8 0	280.10	11.67	96 0 15	4 52 16	557.7	40.7		
2 58		W	44.0	86 22 35	282.10	11.45	86 16 58		556.2	40.7		
4 9	Magnet away.			91 13 45	281.00	11.80	91 6 49					

OBSERVATIONS OF ABSOLUTE HORIZONTAL INTENSITY, 1847.

Gött. Mean Time.	DEFLECTING BAR.			UNIFILAR.			Declino- meter.	Unifilar Circle Reading Reduced.	Deflection.	BIFILAR.		$\frac{1}{2} r^3 \sin u$					
	Distance $= r$.	N. Pole.	Tem- pera- ture.	Circle Reading.	Scale Reading.	Sc. Div.				Sc. Div.	°	'	"				
				°	'	"					Sc. Div.	°	'	"			
d.	h.	Feet.	°	'	"	Sc. Div.	Sc. Div.	°	'	"	Sc. Div.	°	'	"			
MAY 31, 1847.																	
3 53		Magnet away.	236	36	47	189.67	3.42	236	34	8							
4 14	0.85	E { W	75.5	266	16	23	192.60	4.02	266	16	20	29 31 46	571.9	65.6	9-1809059		
4 3		E { W	77.5	207	16	13	190.30	3.07	207	14	28		573.0	65.3			
4 26		W { E	74.8	266	16	23	174.30	3.95	265	57	30		569.9	65.8			
4 10		W { E	76.7	207	16	13	169.02	3.32	206	52	29		573.8	65.5			
4 35		E { E	73.7	249	44	27	190.35	4.57	249	41	43		574.8	66.0			
4 46	1.10	E { W	73.2	223	23	13	191.80	4.77	223	21	51	13 9 45	579.5	66.2	9-18111979		
4 40		E { W	73.4	249	44	27	195.80	4.22	249	47	33		578.3	66.1			
4 50		W { W	73.1	223	23	13	198.80	5.70	223	28	25		577.4	66.3			
5 4		E { E	72.6	243	44	33	189.97	6.45	243	40	12		587.5	66.7			
4 55		E { W	72.7	229	37	3	189.52	6.62	229	32	6		580.3	66.4	9-1808954		
5 7	1.35	E { W	72.6	243	44	33	186.90	6.00	243	37	21	7 4 5	585.9	66.8			
4 58		W { W	72.8	229	37	3	186.65	6.70	229	29	7		584.4	66.5			
5 13		E { E	72.6	240	31	50	210.27	5.85	240	48	47		576.9	66.9			
5 23		E { W	72.6	232	23	13	189.52	5.67	232	18	55		567.5	67.1	9-1812125		
5 17		W { E	72.6	240	31	50	211.70	5.37	240	50	28		570.4	67.0			
5 26	1.60	W { W	72.7	232	23	13	190.65	5.80	232	20	0	4 15 5	562.5	67.1			
5 32		Magnet away.	236	36	50	191.32	5.00	236	34	49							

Gött. Mean Time.	DEFLECTING BAR.			UNIFILAR.			Declino- meter.	Unifilar Circle Reading Reduced.	Deflection.	BIFILAR.		$\frac{1}{2} r^3 \sin u$					
	Distance $= r$.	N. Pole.	Tem- pera- ture.	Circle Reading.	Scale Reading.	Sc. Div.				Sc. Div.	°	'	"				
				°	'	"					Sc. Div.	°	'	"			
d.	h.	Feet.	°	'	"	Sc. Div.	Sc. Div.	°	'	"	Sc. Div.	°	'	"			
JUNE 15, 1847.																	
4 40		Magnet away.	236	26	3	194.05	1.17	236	29	25							
4 53	0.85	E { W	62.6	265	19	30	191.87	1.10	265	20	41	28 56 24	568.8	58.2	9-1728174		
6 23		E { W	60.9	207	21	17	222.62	4.45	207	51	44		580.7	58.2			
4 57		W { E	62.5	265	19	30	209.52	1.05	265	38	49		567.2	58.2			
6 19		W { W	61.2	207	21	17	193.65	4.30	207	22	8		580.8	58.2			
5 9		E { E	62.3	249	27	23	188.32	1.65	249	24	33		566.8	58.2			
6 5	1.10	E { W	62.0	223	44	23	189.22	4.45	223	40	26	12 55 36	574.9	58.2	9-1730075		
5 6		W { E	62.3	249	27	23	193.22	1.07	249	29	58		567.8	58.2			
6 11		W { W	61.5	223	44	23	180.37	4.20	223	31	42		575.0	58.2			
5 15		E { E	62.2	243	30	7	188.83	1.77	243	27	43		567.0	58.2			
5 56		E { W	62.0	229	34	43	193.92	4.42	229	35	46		572.8	58.2	9-1732048		
5 19	1.35	E { W	62.2	243	30	7	190.57	1.57	243	29	38	6 57 22	574.1	58.2			
5 53		W { W	62.0	229	34	43	190.00	3.87	229	32	7		574.0	58.2			
5 32		E { E	62.2	240	43	20	189.42	2.60	240	41	0		567.0	58.2			
5 40		E { W	62.1	232	16	47	196.70	3.07	232	21	35		571.6	58.2	9-1730914		
5 23		W { E	62.2	240	43	20	190.38	2.50	240	42	3		565.7	58.2			
5 45	1.60	W { W	62.0	232	16	47	195.17	3.07	232	20	0	4 10 22	575.7	58.2			
6 30		Magnet away.	236	30	17	194.20	5.10	236	31	9							

Gött. Mean Time.	DEFLECTING BAR.			UNIFILAR.			Declino- meter.	Unifilar Circle Reading Reduced.	Deflection.	BIFILAR.		$\frac{1}{2} r^3 \sin u$					
	Distance $= r$.	N. Pole.	Tem- pera- ture.	Circle Reading.	Scale Reading.	Sc. Div.				Sc. Div.	°	'	"				
				°	'	"					Sc. Div.	°	'	"			
d.	h.	Feet.	°	'	"	Sc. Div.	Sc. Div.	°	'	"	Sc. Div.	°	'	"			
3 30		Magnet away.	237	20	17	45.05	3.07	237	18	18							
3 37	0.85	E { W	58.0	266	20	32	45.30	4.25	266	18	17	28 52 10	566.2	54.1	9-1732091		
4 46		E { W	58.6	208	45	55	35.15	8.85	208	20	6		568.6	54.1			
3 42		W { E	57.9	266	20	32	41.67	4.15	266	11	1		563.2	54.1			
4 42		W { W	58.6	208	45	55	45.20	8.65	208	40	30		569.0	54.1			
3 54		E { E	58.2	250	13	30	46.90	5.55	250	13	36		564.5	54.1			
4 31	1.10	E { W	58.6	224	27	35	44.93	7.40	224	22	28	12 53 21	572.4	54.1	9-1733823		
3 50		E { W	58.1	250	13	30	45.72	5.15	250	11	29		563.6	54.1			
4 35		W { W	58.6	224	27	35	48.40	7.72	224	29	15		571.4	54.1			
4 6		E { E	58.4	241	56	43	45.07	6.02	241	52	49		563.2	54.1			
4 24		E { W	58.6	232	49	47	43.87	7.10	232	42	44		571.0	54.1	9-1733835		
4 10	1.55	E { E	58.4	241	56	43	45.00	6.57	241	52	18	4 34 29	572.7	54.1			
4 21		W { W	58.7	232	49	47	44.72	7.10	232	44	26		570.6	54.1			

Gött. Mean Time.	DEFLECTING BAR.			UNIFILAR.			Declino- meter.	Unifilar Circle Reading Reduced.	Deflection.	BIFILAR.			Log. $\frac{1}{2} r^3 \sin. u.$
	Distance = r .	N. Pole.	Tem- pera- ture.	Circle Reading.	Scale Reading.	Sc. Div.				Sc. Div.	Sc. Div.	Ther- mome- ter.	
	d. h.	Feet.	°	° ' "	° ' "	Sc. Div.	Sc. Div.	° ' "	° ' "	Sc. Div.	°	°	
SEPTEMBER 13—14, 1847.													
23 50			E	56.6	260 30 42	56.41	8.00	260 48 20		536.5	50.2		
22 53	0.85		W	53.2	213 17 5	44.27	12.17	213 7 25	{ 23 46 15	535.4	50.2		9.0941498
23 46			E	56.3	260 30 42	45.12	8.57	260 25 10		535.1	50.2		
22 56			W	53.4	213 17 5	40.65	10.75	213 1 5		536.4	50.2		
23 33			E	55.8	247 46 18	44.55	8.85	247 39 27		535.6	50.2		
23 6	1.10		W	54.1	226 11 32	46.52	11.07	226 7 9	{ 10 44 40	534.0	50.2		9.0945213
23 37			E	55.9	247 46 18	40.37	8.55	247 31 13		534.5	50.2		
23 2			W	53.8	226 11 32	45.37	11.05	226 4 51		533.6	50.2		
23 26			E	55.3	240 46 30	45.85	9.92	240 41 32		534.1	50.2		
23 13	1.55		W	54.6	233 6 43	45.96	10.55	233 1 34	{ 3 49 36	534.1	50.2		9.0948615
23 23			E	55.0	240 46 30	44.76	9.87	240 39 23		534.4	50.2		
23 16			W	54.6	233 6 43	45.67	10.62	233 0 55		533.9	50.2		
23 55		Magnet away.			236 56 7	44.74	7.15	236 50 47					

The observations, June 23, 1846 and Jan. 2, 1847, were made with a unifilar magnetometer, by Mr JONES of London, belonging to Professor FORBES. The observations, May 31, June 15, Sept. 11, and Sept. 14, 1847, were made with a theodolite magnetometer, by Mr JONES, belonging to Sir THOMAS BRISBANE.

The following magnets were used in these observations:—

June 23, 1846.	Suspended.	Solid, 2·5 inch.	Deflector.	Solid, 3·65 inch.	F.
Jan. 2, 1847.	3·0 inch.	Idem.	F.
May 31, 1847.	Hollow (with mirror), 3·0 inch B. 6.	Collimator, 3·65 inch.	M.
June 15, 1847.	Idem.	Idem.	M.
Sept. 11, 1847.	Collimator, 3·0 inch.	Idem.	M.
Sept. 14, 1847.	Idem.	Collimator marked 4.	B.

The magnets used on the first two days belong to Professor FORBES' instrument; those used afterwards belong to Sir THOMAS BRISBANE's instrument, with the exception of the collimator deflector marked 4, used Sept. 14, 1847, which belongs to an instrument made by Mr JONES for Professor BACHE of New York.

An abstract of the observations for the times of vibrations of the different deflectors is given on the following page, and the final results will be found in the Addendum to the Introduction.

352 OBSERVATIONS OF VIBRATIONS FOR THE ABSOLUTE HORIZONTAL INTENSITY, 1846-7.

Göttingen Mean Time.	Bar.	Ring on or off.	No. of Vibra- tions.	Semiarcs of Vibration.	Temp. of Bar.	Observed Time of One Vibration.	BIFILAR.		COEFFICIENTS FOR								
							Reading Corrected.	Tempe- rature.	Torsion, $= \Phi$.	Tempera- ture, $= q$.	Induction, $= \frac{\delta m}{m}$.						
d. h.																	
1846.																	
June 24	4	F	On	323	16—3	65·4	12.14708	562·4	59·3	0.002143	0.000300						
June 24	7	F	Off	369	23—4	67·5	4.96988	568·7	60·5	-0.001112	-0.00300						
Dec. 31	2	F	Off	357	25—3	48·0	5.01310	560·9	40·5	-0.000834	-0.00300						
1847.																	
Jan. 1	3	F	On	319	23—5	44·8	12.20431	563·8	41·1	-0.001431	-0.00300						
May 31	10	M	Off	351	35—10	71·3	5.03812	574·8	69·1	-0.000300	-0.00100						
June 15	7	M	Off	357	50—15	59·6	5.08227	576·7	58·2	-0.000300	-0.00100						
Sept. 10	21	M	On	319	53—24	49·7	12.51917	537·3	53·2	-0.002132	-0.00100						
Sept. 10	23	M	Off	357	42—12	57·1	5.10007	545·0	53·8	-0.000953	-0.00100						
Sept. 12	22	B	On	219	32—17	55·0	14.17608	527·6	52·2	-0.001807	-0.00090						
Sept. 12	23	B	Off	357	22—10	60·1	5.75353	524·9	52·1	-0.000871	-0.00090						

DIMENSIONS OF THE INERTIA RINGS.

	FOR MAGNET F.	FOR MAGNET M.	FOR MAGNET B.
External Diameter, . . .	3·635 inch.	3·515 inch.	3·604 inch.
Internal Diameter, . . .	2·971 inch.	2·912 inch.	2·932 inch.
Thickness,	0·142 inch.	0·187 inch.	0·172 inch.
Weight,	1074·77 grains.	1254·50 grains.	1299·40 grains.

See footnote to the previous page.

DAILY METEOROLOGICAL
OBSERVATIONS.

MAKERSTOUN OBSERVATORY,

1846.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Se.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1b.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
0 13	28.998	40.7	37.7	3.0	2.2	1.1	23			1.0 Masses of scud.
14	28.980	41.2	37.5	3.7	2.9	2.3	24			0.5 Id.
15	29.015	40.2	36.9	3.3	2.7	1.2	22			0.2 Id.
16	033	40.7	37.1	3.6	2.9	1.9	24			0.3 Id.
17	077	40.8	37.3	3.5	2.8	1.5	25			0.5 Id.
18	136	40.0	36.9	3.1	2.7	1.2	25			1.5 Id.
19	214	40.6	37.3	3.3	2.1	2.4	26			9.5 Scud and cirro-strati?
20	287	37.6	36.7	0.9	2.3	1.3	27			9.8 Id.; rain lately; sky to E.
21	338	37.4	35.9	1.5	1.7	0.7	27	25 : — : —		3.0 Scud; cirro-strati and cirri to E.; clouds tinged red.
22	389	37.3	34.3	3.0	1.6	0.5	27			1.0 Cumulo-strati on E. horizon; cirro-strati; scud on
23	414	37.2	34.2	3.0	1.3	0.8	25			0.5 Id. ☩ [Cheviot. ☩
1 0	433	38.3	34.7	3.6	1.9	0.9	26			0.2 Id.; cirrous haze. ☩
1	466	38.7	35.7	3.0	2.8	1.6	24			0.1 Id.; id. ☩
2	481	38.4	34.3	4.1	3.1	1.3	25			0.1 Id.; patches of scud; id. ☩
3	502	37.6	34.2	3.4	1.6	0.8	24			0.5 Loose scud; cumulo-strati; cirro-strati. ☩
4	526	36.0	32.9	3.1	1.5	1.0	24			0.5 Cumulo-strati on NE. horizon; cumuli to SE. ☩
5	556	35.6	32.2	3.4	1.7	0.5	24			0.2 Id. ☩
6	584	35.4	32.2	3.2	1.6	0.5	21			0.2 Patches of scud and cumuli; a slight haze on horizon. ☩
7	602	35.2	31.8	3.4	1.1	0.4	25			0.2 Haze round horizon. ☩
8	623	35.0	31.2	3.8	1.2	2.6	28			0.0 Clear. ☩
9	652	34.8	31.3	3.5	2.3	2.0	25			0.0 Id. ☩
10	678	34.9	31.0	3.9	1.8	0.5	25			0.0 Id.; haze on horizon. ☩
11	721	33.5	30.4	3.1	1.0	0.8	25			0.0 Id.; id. ☩
12	741	33.4	30.2	3.2	0.5	0.2	26			0.0 Id.; id. ☩
13	29.756	33.6	30.1	3.5	0.3	0.2	25			0.0 Clear; haze on horizon.
14	781	33.8	30.1	3.7	0.6	0.3	25			0.0 Id.; id.
15	805	33.5	29.8	3.7	0.7	0.9	26			0.0 Id.; id.; streak of cloud to SW.
16	847	32.5	29.2	3.3	0.8	0.1	26			0.1 Id.; id.; clouds on horizon.
17	869	32.6	29.4	3.2	0.6	0.1	27			0.1 Id.; id.; id.
18	903	30.2	27.9	2.3	0.2	0.1	20			0.2 Id.; id.; id.
19	939	30.6	28.4	2.2	0.0	0.0	12			0.3 Masses of cirro-strati to E.
20	29.972	32.0	29.1	2.9	0.1	0.0	24			0.3 Cirro-strati and cirri to E.; cumulo-strati on E. hor.
21	30.018	28.4	27.0	1.4	0.1	0.0	16	— : — : 28		3.0 Thin and barred cirri across the sky; id.
22	033	30.6	28.4	2.2	0.0	0.0	20			0.8 Cirro-strati and thin cirri. ☩
23	073	30.6	28.9	1.7	0.0	0.0	24			0.8 Id. ☩
2 0	094	33.2	30.8	2.4	0.0	0.0	20			1.0 Thin cirri; cumulo-strati on E. horizon. ☩
1	109	33.8	31.8	2.0	0.0	0.0	16			0.8 Cumuli and cirri on E. horizon; cir.-cum.-str. to W. ☩
2	118	35.0	32.3	2.7	0.0	0.0	13	— : 30 : 30		3.0 Cirro-cumuli and cirri; cumulo-strati in haze to E. ☩
3	125	35.3	32.4	2.9	0.0	0.0	24	— : 30 : —		5.0 Id. ☩
4	147	33.6	31.3	2.3	0.0	0.0	18			3.0 Cirro-cumulo-strati. [nearly at right angles. ☩
5	153	31.7	30.3	1.4	0.0	0.0	16			9.8 Cir.-str. lying in bands N by W. to S by E., with bars
6	168	31.4	30.5	0.9	0.0	0.0	15			10.0 Sky covered with cirrus haze. ☩
7	182	31.4	30.7	0.7	0.0	0.0	1			10.0 Id. ☩
8	189	32.2	30.8	1.4	0.0	0.0	15			10.0 Id. ☩
9	176	31.7	30.8	0.9	0.0	0.0	16			10.0 Cirro-stratus and cirrus haze.
10	178	31.6	30.8	0.8	0.0	0.0	25			10.0 Id.
11	175	32.2	31.2	1.0	0.0	0.0	20			10.0 Id.; a few stars dimly visible.
12	163	33.0	31.1	1.9	0.0	0.0	20			9.5 Id.
13	30.151	34.0	31.7	2.3	0.0	0.0				10.0 Cirro-stratus and cirrus haze.
14	140	34.6	32.2	2.4	0.0	0.0				10.0 Id.
15	123	34.3	32.2	2.1	0.0	0.0				10.0 Id.
16	118	34.8	32.7	2.1	0.0	0.0	16			10.0 Id.; shower of hail, afterwards of rain ^{0.8}
17	088	33.1	32.6	0.5	0.0	0.0	22			10.0 Id.; a few stars dimly visible.
18	073	35.2	32.7	2.5	0.0	0.1	17			10.0 Id.
19	052	36.0	34.7	1.3	0.3	0.3	19			10.0 Id.; rain ^{0.2}
20	038	36.7	35.3	1.4	0.2	0.1	18			10.0 Id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt	pt. pt. pt.	0-10.	
2 21	30.007	37.4	36.1	1.3	0.0	0.0	20	— : 20 : —	10.0	Thick cirro-stratus and scud.
22	003	39.2	37.7	1.5	0.2	0.0	31	— : 20 : —	10.0	Id.
23	30.000	39.5	38.1	1.4	0.2	0.2	18	— : 20 : —	10.0	Id.
3 0	29.978	40.5	39.0	1.5	0.1	0.1	18	— : 20 : —	10.0	Id.
1	955	41.6	40.0	1.6	0.2	0.0	16	— : 19 : —	10.0	Id.
2	940	43.4	41.7	1.7	0.1	0.2	17	— : 19 : —	10.0	Id.
3	909	44.7	43.0	1.7	0.5	0.8	18	19 : — : —	9.9	Scud; cirro-cumulo-strati.
4	888	43.8	42.4	1.4	0.5	0.0	16	19 : — : —	10.0	Id.; cirro-strati.
5	865	42.7	41.3	1.4	0.3	0.1	17	19 : — : —	10.0	
6	853	42.7	41.4	1.3	0.2	0.1	16		10.0	Scud; cirro-strati.
7	825	44.7	42.9	1.8	0.5	0.5	17		10.0	Id.; id.
8	809	43.2	41.8	1.4	0.7	0.2	18		9.5	Id.; id.
9	776	43.8	42.4	1.4	1.3	0.5	18	— : 19 : —	9.5	Cirro-cumulo-stratus; lunar corona.
10	748	43.2	41.8	1.4	0.8	0.6	17		7.5	Id.
11	715	43.9	42.6	1.3	1.0	0.5	16		10.0	Thick cirro-stratus and scud.
12	687	44.0	42.9	1.1	1.5	0.3	16		10.0	Id.
23½	29.560	37.7	36.3	1.4	3.9	0.1	20	— : 19 : —	2.0	Cirri and cirro-strati.
4 13	29.766	35.4	33.6	1.8	1.2	0.1	19		9.5	Scud and cirro-strati.
14	774	33.9	32.4	1.5	0.1	0.0	18		3.0	Id.
15	779	35.3	33.7	1.6	0.1	0.1	20		6.0	Id.
16	784	34.3	32.9	1.4	0.1	0.0	16		9.8	Id.
17	788	37.5	35.3	2.2	0.0	0.0	20		3.5	Id.
18	798	33.4	32.3	1.1	0.1	0.1	20		3.5	Id.
19	806	30.7	30.1	0.6	0.1	0.0	20		0.2	Cirro-strati on SE. horizon.
20	829	29.4	28.8	0.6	0.1	0.0	18		0.3	Id.
21	849	28.8	0.0	0.0	0.0	17		1.0?	Scud on horizon; thin cirri to N.; very thin cirri to S.
22	858	31.2	30.4	0.8	0.0	0.0	20		0.5	Cum.-str. on E. hor.; clouds on Cheviot; thin streaks
23	876	33.3	32.1	1.2	0.1	0.0	20		0.8	As before; more cirri forming to W. ⊖ [of cirri]. ⊖
5 0	869	35.1	32.7	2.4	0.1	0.0	16	— : — : 30	2.5	Woolly cirri; cumulo-strati on E. horizon. ⊖
1	863	36.5	35.0	1.5	0.0	0.0			3.0	Id. ⊖
2	855	36.7	35.2	1.5	0.0	0.0	14		0.5	Id. ⊖ [a thin haze. ⊖]
3	850	37.0	35.3	1.7	0.0	0.0			1.0	Cirro and cirro-str.; Venus is visible, shining through
4	847	34.0	33.1	0.9	0.0	0.0	4		4.0	Cirro-strati and cirri radiating from NW.
5	832	34.4	33.3	1.1	0.1	0.0	20		4.0	Woolly cirro-strati and cirri.
6	823	36.0	35.6	0.4	0.0	0.0	26		9.8	Cirro-strati and cirrus haze.
7	805	34.7	33.7	1.0	0.1	0.1	20		10.0	Cirro-strati and thick cirrus haze.
8	785	37.2	35.7	1.5	0.2	0.1	19		10.0	Id.
9	782	37.2	35.6	1.6	0.2	0.1	16		10.0	Thick cirrus-haze.
10	761	37.0	35.7	1.3	0.1	0.1	20		10.0	Id.; rain ^{0.5}
11	715	36.9	35.7	1.2	0.8	0.4	17		10.0	Scud and mass of cirro-strati; drops of rain.
12	687	37.8	36.4	1.4	0.7	0.7	17		10.0	Id.
13	29.656	39.1	37.7	1.4	1.5	1.4	17		10.0	Scud and mass of cirro-strati.
14	628	39.5	38.2	1.3	1.7	1.3	17		10.0	Id.
15	625	41.1	40.0	1.1	1.1	0.3	17		10.0	Id.; rain ^{0.2}
16	595	41.2	40.0	1.2	0.6	0.1	17		10.0	Id.
17	589	40.9	39.9	1.0	1.4	0.6	17		10.0	Id.
18	569	41.7	40.4	1.3	0.7	0.5	17		10.0	Id.
19	576	42.8	41.4	1.4	0.4	0.2	18		10.0	Id.
20	564	45.6	44.0	1.6	0.2	0.2	18		10.0	Id.; clouds red to E.
21	579	44.7	43.6	1.1	0.3	0.2	19	24 : — : —	10.0	Scud; dense homogeneous cirro-stratus.
22	596	46.2	43.5	2.7	0.3	0.6	21		10.0	Cirro-cumulo-strati and cirro-str., radiating from SSE.
23	600	45.6	43.4	2.2	0.6	0.2	20	— : 28 : —	10.0	Ribbed cirro-strati; patches of scud; sheets of cir.-str.
6 0	605	47.1	44.6	2.5	1.1	0.2	20	20 : — : —	10.0	Cirro-stratous scud; mass of cirro-stratus.
1	593	47.0	45.0	2.0	0.8	0.3	19		10.0	Id.; id.
2	584	48.0	46.7	1.3	0.4	0.2	18	21 : — : —	10.0	Id.; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^h .	10 ^m .	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
6 3	29.581	48.9	47.3	1.6	0.7	0.3	18	24 : — : —	10.0	Scud; mass of cirro-stratus.
4	589	48.9	47.3	1.6	0.4	0.1	18	23 : — : —	10.0	Id.; id.
5	600	49.7	47.7	2.0	0.3	0.1	18	22 : — : —	10.0	Id.; cirro-strati, tinged red to W.
6	604	50.5	48.2	2.3	0.5	1.1	20		10.0	Id.; cirro-stratus.
7	629	50.0	48.0	2.0	1.3	0.8	18		10.0	Id.; id.; a few drops of rain.
8	638	49.2	47.7	1.5	0.9	0.7	18		10.0	Id.; id. [fully coloured corona.]
9	639	49.1	47.5	1.6	0.9	0.9	19	23 : — : —	9.5	Id.; cir. and cir. haze; indistinct lunar halo; beauti-
10	639	48.4	46.6	1.8	1.1	1.2	20	23 : — : —	9.2	Id.; id.; lunar corona.
11	632	47.6	45.7	1.9	1.3	0.7	20		9.5	Woolly cirri and cirrus haze; lunar corona. ↗
12	630	48.3	46.2	2.1	2.2	2.3	20		9.5	Scud; cirri and cirro-strati.
13	29.654	48.1	46.0	2.1	3.0	1.0	20		9.7	Scud; cirri and cirro-strati.
14	655	47.7	45.5	2.2	0.9	0.9	20		9.9	Id.; id.
15	663	47.9	45.2	2.7	1.2	1.3	19		9.7	Id.; id. ↗
16	684	48.0	44.9	3.1	0.8	0.4	18		9.9	Id.; id.
17	694	47.5	44.5	3.0	1.2	0.1	20		10.0	Id.; id.
18	683	46.6	44.1	2.5	0.7	0.4	18		10.0	Id.; id.
19	709	47.6	44.8	2.8	0.8	0.7	18		10.0	Id.; id.
20	707	46.8	44.6	2.2	0.5	0.1	17		9.9	Id.; id.; the cirri and cirro-str. red to E.
21	718	47.0	44.7	2.3	1.3	0.9	18	21 : — : —	9.9	Id.; cirro-strati.
22	688	47.0	44.8	2.2	0.9	0.3	20	21 : — : —	9.8	Id.; id.; cirri.
23	729	47.4	45.2	2.2	1.2	1.6	18	22 : — : —	9.6	Id.; id.; id.
7 0	733	48.1	45.6	2.5	2.4	2.8	19	22 : 20 : —	9.5	Id.; id.; id.; drops of rain.
1	728	48.0	45.9	2.1	4.0	2.5	18	22 : — : —	9.5	Id.; id.; woolly cirri.
2	734	48.5	46.1	2.4	4.5	2.3	19	22 : — : —	9.8	Id.; id.; id.
3	748	48.2	45.8	2.4	3.7	2.6	20	22 : — : 24	9.0	Id.; thick woolly cirri.
4	785	48.7	46.1	2.6	1.9	0.8	20	21 : — : —	9.8	Id.; cirro-strati and cumulo-strati to E.
5	813	48.3	46.0	2.3	1.1	1.0	20	21 : — : —	9.9	Id.; cirro-strati.
6	828	48.4	45.8	2.6	1.1	1.7	20		9.8	Id.
7	842	48.6	46.0	2.6	1.8	2.0	19	22 : — : —	9.8	Id.
8	852	47.8	45.6	2.2	1.3	1.3	20	22 : — : —	9.0	Id.; thin haze; diffuse lunar corona. ↗
9	854	48.1	45.9	2.2	2.2	1.8	19		9.7	Id.
10	863	47.0	45.0	2.0	2.8	1.4	20	22 : — : —	5.0	Id.; thin haze.
11	880	48.0	45.4	2.6	1.8	1.3	20	22 : — : —	9.0	Id.; cirri and cir. haze; lunar corona as before. ↗
12	859	47.5	45.2	2.3	2.8	3.0	20	22 : — : —	9.0	Id.; id., radiating from WSW.; id. ↗
13	29.852	47.8	45.2	2.6	6.2	3.7	19	22 : — : —	7.0	Scud; cirri, radiating from WSW.; the band of blue of corona getting
14	858	48.2	45.4	2.8	3.9	4.5	19	22 : — : —	5.0	Id.; cir. and cirro-str. ↗ [fainter; the yellow is as bright as ever.]
15	862	48.3	45.7	2.6	6.2	4.0	18		6.0	Id.; id.
16	877	48.1	45.7	2.4	4.2	2.8	18		3.0	Id.; cirro-strati and cirri. ↗
17	882	47.5	45.7	1.8	4.5	2.0	18		9.0	Id.; id.; cirrus haze.
18	926	47.7	46.0	1.7	2.6	1.5	18		10.0	Id.
19	947	47.9	46.2	1.7	1.6	1.2	20		9.9	Id.
20	964	48.0	46.3	1.7	1.6	1.2	20		9.5	Id.; cirro-str. and cir. haze, tinged with red to SE.
21	29.993	48.0	46.4	1.6	1.9	1.7	20	21 : — : —	9.5	Smoky scud; fine cirro-strati and cirri.
22	30.021	48.6	47.1	1.5	2.2	1.3	18	22 : — : —	9.5	Id.; cirro-strati and cirrus haze.
23	044	49.4	47.7	1.7	1.7	1.3	19	21 : — : —	10.0	Id.; id.
8 0	057	49.8	48.0	1.8	1.9	0.4	22	21 : — : —	10.0	Scud.
1	067	50.3	48.4	1.9	0.8	0.2	20 v.	21 : — : —	9.8	Id.
2	075	51.0	49.0	2.0	0.3	0.1	20	22 : — : —	9.5	Id.; cirro-strati.
3	084	50.8	48.8	2.0	0.1	0.0	20	22 : — : —	9.5	Id.; id.
4	109	50.6	48.6	2.0	0.2	0.1	20	22 : — : —	9.8	Id.; id.
5	132	49.9	47.9	2.0	0.6	0.3	20	22 : — : —	8.0	Id.; id., tinged with red.
6	142	49.6	47.3	2.3	0.7	0.8	20		9.9	Id.
7	148	48.7	46.8	1.9	1.3	0.8	20	22 : — : —	8.5	Id.; cirro-strati; small corona.
8	184	48.8	46.7	2.1	0.5	0.4	19		8.5	Cirro-cumulo-strati; id.
9	187	48.8	46.7	2.1	1.3	0.8	19	— : 22 : —	9.5	Id.; id.
10	191	48.2	46.2	2.0	2.0	1.0	20	— : 24 : —	5.0	Id.; cirri.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Jan. 7th 10^h. Lunar corona; from the moon to about 3½° from it, is a uniform greenish-yellow colour, then a band of yellowish-red half a degree broad, and last a band of blue about 1½° broad; the extreme radius of the corona is about 6° or 7°.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h.	10 m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
8 11	30.215	48.4	46.3	2.1	1.7	1.0	20		9.8	Cirro-cumulo-strati; coloured lunar corona. ↗
12	240	46.6	45.1	1.5	1.0	0.3	19		7.0	Id. ↗
13	239	45.0	43.7	1.3	0.6	0.2	20		2.0	Woolly cirri lying E. and W. ↗
14	247	44.9	43.4	1.5	0.3	0.1	24		7.0	Cirro-strati.
15	251	43.6	42.5	1.1	0.7	0.1	19		4.0	Id. ↗
16	262	43.4	42.3	1.1	0.0	0.0	12		10.0	Id.
17	267	45.4	43.8	1.6	0.3	0.0	20		10.0	Id.
18	256	45.4	44.0	1.4	1.5	1.1	20		10.0	Id.
19	264	45.0	43.4	1.6	1.3	1.4	20		10.0	Scud and cirro-strati.
20	271	44.2	42.2	2.0	1.0	1.2	21	21 : — : —	9.9	Id.; clouds red to E.
21	280	44.0	42.3	1.7	2.2	0.8	21	21 : — : —	8.0	Scud; cirri and cirro-strati.
22	296	45.2	43.2	2.0	0.8	0.7	21	21 : — : —	9.5	Id.; id.
23	296	46.2	43.7	2.5	1.6	1.3	20	21 : — : —	9.5	Id.; id. Θ
9 0	30.304	46.2	43.8	2.4	1.8	0.4	22	20 : — : —	9.0	Scud; cirri and cirro-strati.
1	285	46.3	44.2	2.1	0.8	0.8	22	20 : — : —	9.9	Id.; dense mass of cirro-stratus.
2	260	46.2	43.9	2.3	1.3	1.4	20	— : 20 : —	9.9	Cirro-stratus scud and cirro-stratus.
3	253	45.7	43.5	2.2	1.1	0.2	21	— : 20 : —	10.0	Id.
4	251	45.0	43.3	1.7	1.2	0.5	21	— : 20 : —	10.0	Id.
5	243	44.3	42.6	1.7	1.5	0.2	20		10.0	Dense mass of cirro-stratus.
6	225	44.0	41.9	2.1	1.0	0.7	18		10.0	Id.
7	229	43.9	41.7	2.2	1.5	0.4	18		10.0	Id.
8	213	44.0	41.4	2.6	2.4	1.6	20		10.0	Scud and cirro-strati.
9	202	43.7	40.9	2.8	2.4	0.8	21		10.0	Id.
10	187	43.7	41.0	2.7	1.0	1.6	20		10.0	Id.
11	155	43.5	41.3	2.2	1.6	1.3	18		10.0	Id.
12	149	44.0	41.6	2.4	2.3	0.6	18		10.0	Id.
13	134	44.3	41.5	2.8	2.6	1.4	19		10.0	Id.
14	109	44.4	41.9	2.5	2.3	1.9	20		9.8	Id.; drops of rain.
15	118	44.6	42.0	2.6	2.3	0.3	21		10.0	Id.
16	093	44.8	41.8	3.0	1.6	1.5	20		10.0	Id.
17	097	45.1	41.7	3.4	1.3	1.0	20		10.0	Id.
18	079	44.9	42.1	2.8	1.6	1.4	18		10.0	Id.
19	060	45.0	42.4	2.6	1.3	0.3	18		9.5	Id.
20	031	45.1	42.7	2.4	1.5	1.5	20		10.0	Id.
21	032	45.0	42.7	2.3	1.2	0.7	20	23 : — : —	10.0	Id.
22	050	45.4	43.2	2.2	1.3	0.7	20	22 : — : —	9.8	Scud; cirro-strati and cirri.
23	045	45.7	43.4	2.3	1.2	1.2	20	25 : — : 22	8.5	Id.; woolly cirri; cirro-strati. Θ
10 0	30.042	46.7	44.4	2.3	2.7	1.5	22	24 : — : 20	5.5	Scud and cirro-stratus scud; woolly cirri. Θ
1	031	47.8	45.3	2.5	1.3	1.7	20	20 : 24 : —	8.0	Loose scud; loose cirro-strati; drops of rain.
2	013	48.2	45.8	2.4	2.6	1.3	20	20 : 24 : —	8.5	Id.; id.; woolly cirri. Θ
3	009	47.8	45.3	2.5	1.4	1.1	21	21 : 20 : —	9.5	Id.; id.; id.
4	018	47.6	45.4	2.2	1.3	0.5	20	21 : 24 : —	9.9	Id.; id.
5	010	47.0	45.4	1.6	1.2	0.3	20	— : 24 : —	10.0	Cirro-stratus scud.
6	011	47.3	45.6	1.7	0.5	0.3	20		9.5	Cirro-cumulo-strati; cirro-strati.
7	007	47.4	45.6	1.8	0.7	0.1	18		10.0	Scud and cirro-strati.
8	017	47.6	46.0	1.6	0.1	0.0	18		9.8	Id.
9	011	48.0	45.8	2.2	0.3	0.3	21	24 : 25 : —	7.0	Scud; cirro-cumulo-strati. Θ
10	026	47.2	45.6	1.6	0.5	0.0	18		9.0	Id.; id.
11	030	47.3	45.0	2.3	0.2	0.2	20		9.0	Cirro-cumulo-strati and cirrous haze. ↗
12	051	46.5	44.7	1.8	0.2	0.1	20	24 : 25 : —	9.0	Scud; cirro-cumulo-strati. ↗
23 ³ ₄	30.057	38.7	38.0	0.7	0.2	0.0	20	— : — : —	3.0	Loose scud; patches of cirri.
11 19	29.765	41.0	39.7	1.3	0.5	0.1	16		10.0	Scud and cirro-strati.
20	752	40.5	39.0	1.5	0.2	0.2	17		10.0	Id.
22	742	39.9	38.5	1.4	0.2	0.1	16	21 : — : —	10.0	Id.; hazy.
12 0	722	40.1	38.2	1.9	0.2	0.1	20	22 : — : —	10.0	Scud; cirro-strati and cirrus haze; traces of a halo.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Jan. 9th 6^h. Observations made at 6^h 15^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
12 2	29.673	41.8	39.6	2.2	0.1	0.0	20	20 : 20 : —	10.0
4	628	36.3	35.3	1.0	0.1	0.1	16	— : — : 18	4.5
6	576	34.0	33.5	0.5	0.0	0.0	8		7.0
8	536	30.0	29.7	0.3	0.0	0.0	24		10.0
10	507	28.8	0.0	0.0			9.5
18	29.411	30.5	30.0	0.5	0.1	0.0	24	— : 21 : —	5.0
20	406	31.8	31.4	0.4	0.0	0.0			9.8
22	403	30.3	30.1	0.2	0.0	0.0		— : — : 20	7.0
13 0	384	33.4	32.4	1.0	0.0	0.0	10		9.8
2	360	35.1	34.0	1.1	0.0	0.0	24	16 : — : —	10.0
4	313	35.1	34.3	0.8	0.0	0.0	6		10.0
6	281	36.4	35.7	0.7	0.0	0.0	2		10.0
8	252	37.6	37.0	0.6	0.1	0.0	4		9.8
10	248	38.5	37.7	0.8	0.1	0.0	8	12 : — : —	10.0
18	29.204	35.9	35.3	0.6	0.1	0.0	9		9.8
20	230	36.0	35.6	0.4	0.0	0.0	4		10.0
22	244	35.7	35.4	0.3	0.0	0.0	0	15 : 16 : —	9.8
14 0	266	42.2	40.9	1.3	0.0	0.0	1	— : 16 : —	9.0
2	267	44.0	41.4	2.6	0.1	0.0	2	— : 14 : —	10.0
4	280	43.3	41.3	2.0	0.1	0.0		15 : — : —	9.8
6	290	42.3	40.3	2.0	0.1	0.0	4		10.0
8	311	41.0	39.7	1.3	0.1	0.0	2		10.0
10	325	42.9	41.2	1.7	0.7	0.4	12		10.0
18	29.304	40.5	39.7	0.8	0.6	0.2	14	18 : — : —	7.0
20	316	40.0	39.2	0.8	0.6	0.6	17		2.5
22	343	40.4	39.5	0.9	0.1	0.0	8	16 : — : —	9.5
15 0	360	45.1	43.9	1.2	0.4	0.1	17	16 : — : —	10.0
2	364	46.8	45.3	1.5	0.2	0.0	18	18 : — : —	10.0
4	428	44.7	44.0	0.7	0.1	0.1	22	— : 24 : —	9.8
6	495	43.6	41.3	2.3	0.2	0.1	20	— : 25 : —	5.0
8	539	38.0	36.6	1.4	0.1	0.1	16		0.2
10	592	35.7	34.9	0.8	0.0	0.0			0.5
18	29.617	35.8	35.5	0.3	0.1	0.0	30	— : 20 : —	9.0
20	621	30.7	0.0	0.0	0.0	30		10.0
22	645	33.0	32.6	0.4	0.0	0.0	22		10.0
16 0	628	34.6	34.3	0.3	0.0	0.0			10.0
2	586	34.0	33.9	0.1	0.0	0.0	20		10.0
4	575	33.2	33.0	0.2	0.1	0.0	28		10.0
6	560	31.6	31.4	0.2	0.0	0.0			10.0
8	564	30.4	30.2	0.2	0.0	0.0			9.8
10	573	31.0	30.8	0.2	0.0	0.0	0		10.0
18	29.518	33.0	32.4	0.6	0.1	0.0	24		8.0
20	531	34.3	33.7	0.6	0.0	0.0	30		10.0
22	544	37.5	37.1	0.4	0.0	0.0	4		10.0
17 0	543	43.6	43.3	0.3	0.1	0.0	4	11 : 11 : —	9.9
2	533	43.9	43.0	0.9	0.1	0.1	16	11 : — : —	10.0
4	535	43.5	42.3	1.2	0.2	0.0	2		8.5
6	538	43.0	42.0	1.0	0.1	0.1			10.0
8	545	42.9	42.1	0.8	0.4	0.1	6		10.0
10	550	42.6	41.6	1.0	0.4	0.1	4		10.0
23 ¹ ₂	29.515	41.4	40.3	1.1	0.5	0.1	4	9 : — : —	10.0
18 18	29.197	39.1	37.9	1.2	0.3	0.2	12		10.0
20	139	39.2	37.9	1.3	0.4	0.8	11	12 : — : —	10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	lbs.	lbs.	pt.		
		in.	°	°	10m.	pt.	pt.	pt.		
d. h.										
18 22	29.077	42.5	40.1	2.4	1.3	1.5	10	12 : — : —	10-0	Thick scud.
19 0	28.999	42.9	41.0	1.9	2.6	0.8	8	10 : — : —	10-0	Id.; dense homogeneous cirro-strati.
2	901	42.9	41.4	1.5	1.5	0.5	8	9 : — : —	10-0	Id.; id.; rain ^{0.5}
4	819	43.4	41.4	2.0	1.2	1.3	8	11 : — : —	10-0	Scud; dense mass of cirro-strati.
6	759	43.6	42.0	1.6	0.9	0.1	10		10-0	Id.; id.; rain ^{0.5}
8	682	43.4	42.5	0.9	0.3	0.2	6		10-0	Dark.
10	625	43.4	42.9	0.5	0.3	0.3	2		10-0	Id.
18	28.504	45.2	44.9	0.3	0.2	0.0			10-0	Fog, objects invisible at $\frac{1}{4}$ of a mile.
20	524	44.7	44.5	0.2	0.0	0.0	8		10-0	Id., id. 200 yards.
22	570	44.8	43.5	1.3	0.4	0.4	19	21 : — : —	10-0	Scud; homogeneous cirro-stratus; rain ^{0.2}
20 0	605	45.0	43.5	1.5	1.7	1.2	20	23 : — : —	10-0	Thick scud; drops of rain.
2	679	43.7	41.9	1.8	1.4	0.6	21	23 : — : —	10-0	Id.; rain ¹
4	754	43.2	41.5	1.7	2.8	1.5	22	24 : — : —	10-0	Id.; id.
6	810	43.6	41.9	1.7	1.7	1.4	21		10-0	Id.; rain ^{0.2}
8	853	44.9	41.9	3.0	2.5	2.0	21		10-0	Id.
10	28.894	44.9	41.4	3.5	2.6	2.2	19		10-0	Id.
18	29.015	38.6	37.2	1.4	2.5	0.5	20		0-2	Cirro-strati on S. horizon. ☺
20	027	37.5	36.4	1.1	0.6	0.2	21		0-5	Scud and cirro-strati on S. and E. horizon. ☺
22	029	38.3	36.7	1.6	0.3	0.1	19		0-8	Scud and masses of cirro-strati on horizon. ☺
21 0	031	43.0	41.3	1.7	0.1	0.0	16	— : 22 : 22	7-0	Woolly cirro-strati and cirri; scud on horizon. ☺
2	29.019	45.8	43.6	2.2	0.0	0.0	15	— : 21 : —	8-5	Cirro-stratous scud; cirro-strati and cirri.
4	28.987	43.7	41.8	1.9	0.2	0.1	14	— : 21 : —	9-5	Dense mass of cirro-stratus.
6	946	39.5	38.4	1.1	0.1	0.0	6		7-0	Cirr.-str. and cirr.-cumul.-str., in bands lying from W. to E.
8	906	40.0	38.7	1.3	0.0	0.0			10-0	Cirro-strati and cirrus haze.
10	829	41.9	40.9	1.0	0.1	0.0	12		10-0	Id.
18	28.498	42.6	42.4	0.2	0.2	0.2	3		10-0	Scud; rain ¹
20	502	42.9	42.7	0.2	0.2	0.2	3		10-0	Id.; rain ^{1.5}
22	513	43.6	43.2	0.4	0.2	0.1	4		10-0	Clouds homogeneous; drizzling rain ^{0.5}
22 0	568	44.4	44.0	0.4	0.2	0.0	1		10-0	Id.; id.
2	646	44.2	43.7	0.5	0.2	0.2	30	30 : — : —	10-0	Scud; dense cirro-stratus; rain ^{0.5}
4	721	43.8	43.3	0.5	0.2	0.1	22	29 : — : —	10-0	Id.; id.; rain ^{0.2}
6	772	43.0	42.5	0.5	0.1	0.0	18		10-0	Scud and dense cirro-stratus.
8	802	43.2	42.6	0.6	0.0	0.0	22		10-0	Id. [clear about 9 ^h .]
10	802	44.0	43.5	0.5	0.0	0.0	20		10-0	Id.; drizzling rain ^{0.2} ; the sky was partially
18	28.838	36.0	35.5	0.5	0.1	0.0			1-0	Scud and cirro-strati on horizon. ☺
20	845	38.3	37.7	0.6	0.1	0.0	30	30 : 30 : —	9-5	Scud and cirro-cumulo-strati. ☺
22	869	39.5	39.0	0.5	0.0	0.0	20	22 : 22 : —	9-8	Scud and cirro-strati; rain ^{0.2}
23 0	868	47.1	46.4	0.7	0.0	0.0		20 : 20 : —	9-8	Id.
2	857	47.5	46.2	1.3	0.2	0.1	20	21 : — : —	7-0	Scud; cirro-strati; woolly cirri.
4	860	44.7	43.5	1.2	0.1	0.0	24	24 : — : —	9-0	Id.; id.
6	879	43.6	43.0	0.6	0.0	0.0			10-0	Cirro-stratous scud.
8	900	41.7	41.5	0.2	0.0	0.0			10-0	Scud and cirr.-str.; a few stars indistinctly visible.
10	28.911	41.6	41.4	0.2	0.0	0.0	22		9-7	Scud and cirro-strati; rain ^{0.2}
18	29.051	39.0	38.6	0.4	0.1	0.0			10-0	Scud.
20	098	38.8	38.4	0.4	0.1	0.0	20	— : 29 : —	9-8	Cirro-cumulo-strati.
22	157	38.0	37.6	0.4	0.0	0.0		— : 29 : —	4-0	Id.; patches of cirri.
24 0	204	42.4	41.6	0.8	0.0	0.0		— : 28 : —	9-7	Id.
2	223	45.7	43.7	2.0	0.0	0.0	22	— : 24 : —	3-5	Cirro-strati and cirro-cumulo-strati.
4	237	43.3	41.4	1.9	0.3	0.2	19		1-0	Id. on horizon. ☺
6	274	39.8	39.0	0.8	0.1	0.0	26		3-0	Scud.
8	264	39.4	38.5	0.9	0.0	0.0	24		9-7	Id.
10	220	38.7	38.3	0.4	0.0	0.0	0		4-0	Cirro-strati and haze.
23 4	28.815	50.2	48.0	2.2	3.3	0.4	18	21 : — : —	Scud and masses of watery cirro-strati.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	pt.	pt.
d. h.	in.	°	°	°	1 ^{h.}	10 ^{m.}				0—10.	
25 18	28.758	47.6	46.5	1.1	1.6	0.0	16	18 : — : —		10.0	Scud and cirro-strati.
20	756	47.2	45.9	1.3	0.1	0.1	16	19 : — : —		10.0	Id.
22	757	48.1	46.5	1.6	0.1	0.1	17	19 : — : —		7.0	Scud; thin cirri and haze.
26 0	753	50.0	47.7	2.3	0.2	0.1	18	19 : — : —		9.8	Scud and cirro-strati; slight shower.
2	743	50.7	49.2	1.5	0.2	0.1	17	20 : — : —		9.8	Id.; id.
4	754	50.3	48.2	2.1	0.3	0.2	19	19 : — : —		9.8	Scud; cirro-strati and cirri seen above.
6	761	46.4	44.9	1.5	0.3	0.1	16	19 : — : —		9.5	Id.
8	775	46.6	45.5	1.1	0.2	0.1	17			10.0	Scud and cirro-stratus.
10	789	46.4	45.3	1.1	0.2	0.1	16			10.0	Id.
18	28.855	45.0	43.3	1.7	1.0	0.8	17			5.0	Scud; hazy.
20	888	45.8	44.3	1.5	1.0	0.2	18	21 : — : —		10.0	Id.; cirro-strati.
22	28.942	47.6	46.0	1.6	0.6	0.7	17	22 : — : —		9.8	Id.; id.
27 0	29.009	49.7	47.4	2.3	1.4	1.0	19	22 : — : —		8.5	Id.; id.
2	054	50.8	48.0	2.8	1.5	0.6	19	22 : — : —		10.0	Id.; id.; drops of rain.
4	088	47.9	46.5	1.4	1.0	0.6	19	22 : — : 24		5.0	Id.; woolly cirri; cirro-strati.
6	137	47.4	45.7	1.7	0.6	0.7	20	23 : — : —		7.0	Id.
8	181	42.1	40.8	1.3	0.3	0.1	16			0.5	Sheets of cirro-strati and scud.
10	192	43.9	42.8	1.1	0.2	0.2	20			2.0	Cirro-strati and haze.
18	29.055	43.8	41.5	2.3	0.7	0.2	16			10.0	Scud; dark.
20	28.997	42.6	41.2	1.4	1.0	0.2	16			10.0	Id.; dense mass of cirro-stratus; rain ¹
22	967	43.5	42.2	1.3	1.0	0.5	16	19 : — : —		10.0	Id.; continuous rain ²⁻³ [halo. Θ]
28 0	966	46.2	44.8	1.4	0.5	0.1	20	20 : — : 18		9.0	Id.; woolly cirri, cirrous haze, and cirro-strati; solar
2	965	48.0	45.2	2.8	1.1	0.4	18	21 : — : —		9.0	Id.; cirro-strati and cirri.
4	974	46.7	43.8	2.9	1.7	0.4	18	20 : — : 19		6.0	Id.; thick woolly cirri; cirro-strati.
6	971	44.6	41.9	2.7	1.8	0.7	18			4.0	Scud and cirro-strati.
8	28.987	42.5	40.4	2.1	1.5	0.6	20			2.0v.	Id.
10	29.007	42.7	40.5	2.2	2.4	0.1	18			5.0	Id.
18	28.950	44.9	41.9	3.0	4.0	3.2	20			8.5	Scud and cirro-strati; stars dim.
20	28.970	45.7	43.0	2.7	4.0	0.8	18	22 : — : —		9.8	Scud.
22	29.003	44.8	44.0	0.8	0.7	0.2	20	20 : — : —		10.0	Scud; dense mass of cirro-stratus; drizzling rain ^{0.5}
29 0	009	46.7	44.9	1.8	0.8	0.9	17	20 : — : —		9.7	Id.; cirro-strati; cirri.
2	057	47.3	45.2	2.1	0.9	0.1	20	22 : — : —		9.0	Id.; woolly cirri; cirro-strati.
4	101	47.0	44.5	2.5	0.5	0.1	20	22 : — : —		9.8	Id.; mass of cirro-strati.
6	142	45.6	43.7	1.9	0.6	0.1	18	23 : — : —		8.0	Id.
8	198	46.6	43.1	3.5	0.9	0.6	20			2.0	Id.; cirro-strati.
10	272	45.7	42.7	3.0	1.8	0.3	20			2.0	Id.; id.
18	29.463	44.8	42.3	2.5	1.0	0.7	23			10.0	Scud. [especially to E.]
20	467	42.4	41.4	1.0	1.1	0.2	20			10.0	Scud and cir. str., cloud tinged red over the whole sky,
22	430	43.6	41.7	1.9	1.0	0.2	17			10.0	Dense cirro-stratus, nearly homogeneous.
30 0	371	46.0	43.6	2.4	1.9	0.6	19	20 : — : —		10.0	Scud; cirro-strati.
2	315	49.3	47.1	2.2	3.8	2.3	18	22 : — : —		10.0	Id.; id.
4	301	50.0	48.2	1.8	4.2	0.9	22	23 : — : —		10.0	Scud; mass of cirro-strati and cirrous haze.
6	334	51.5	46.0	5.5	2.5	2.2	22			9.5	Patches of scud, cirro-strati, and cirrous haze.
8	368	49.6	44.6	5.0	3.2	3.0	21			7.0	Cirro-strati and cirrous haze.
10	406	48.5	43.9	4.6	4.7	1.6	21			9.0	Id.
18	29.400	49.0	47.9	1.1	3.6	0.5	18			10.0	Scud and cirro-strati; rain ^{0.2}
20	401	50.3	47.8	2.5	1.6	1.0	20	23 : — : —		10.0	Id.
22	362	49.0	47.0	2.0	2.8	1.9	17	20 : — : —		10.0	Scud; dense cirro-stratus.
31 0	317	50.9	48.4	2.5	3.4	2.7	19	21 : — : —		10.0	Id.; id.
2	283	51.0	48.9	2.1	3.4	1.5	21	21 : — : —		10.0	Id.; id.; drops of rain.
4	229	50.7	48.7	2.0	3.3	2.8	20	21 : — : 24		9.8	Loose scud moving rapidly; woolly cirri; cirro-strati.
6	197	49.7	48.6	1.1	5.4	2.0	21	21 : — : —		10.0	Scud; rain occasionally since last observation.
8	156	50.3	49.0	1.3	3.2	1.9	18			10.0	Id.; rain ^{0.2}
10	134	50.3	49.6	0.7	2.2	0.1	19			10.0	Id.; rain ¹

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From	pt.	pt.	pt.
d. h. 31 23 ¹ ₂	in. 29.390	44.8	40.5	4.3	3.1	0.6	23	24 : — : —	10.0	Thick scud.
1 18	29.378	39.5	37.7	1.8	6.1	0.1	22		3.0	Cirro-strati.
20	421	37.5	36.4	1.1	0.2	0.1	20		6.0	Id. and woolly cirri.
22	458	40.4	38.4	2.0	0.5	0.7	26		4.0	Cirri and cirr.-str., generally lying N by E. to S by W. ☽
2 0	508	44.3	41.0	3.3	1.2	0.3	26	28 : — : —	0.5	Patches of cumuli and sheets of cirro-strati. ☽
2	510	46.3	42.2	4.1	0.9	0.8	23	— : 28 : —	4.0	Cirr.-str. and cirr.-cumul.-str.; masses of cum. on hor. ☽
4	540	45.8	42.0	3.8	1.0	0.3	24	24 : — : —	9.8	Scud; mass of cirro-strati.
6	551	44.9	40.1	4.8	0.3	0.2	20		9.9	Dense cirro-stratus.
8	562	44.5	41.2	3.3	0.4	0.3	23		10.0	Id.
10	565	42.9	40.6	2.3	0.4	0.1	18		9.8	Cirro-strati and cirro-cumulo-strati.
18	29.457	45.9	44.4	1.5	0.8	0.1	17		10.0	Scud and cirro-strati; dark.
20	422	46.6	45.0	1.6	0.5	0.1	28	21 : — : —	10.0	Scud; cirro-stratus.
22	389	48.1	47.1	1.0	1.7	0.4	18		10.0	Dense homogeneous mass of clouds.
3 0	323	50.4	48.3	2.1	1.1	1.0	18	19 : — : —	9.9	Scud.
2	247	50.7	48.4	2.3	0.8	0.5	19	20 : — : —	10.0	Id.
4	138	49.3	46.3	3.0	3.4	3.0	19	20 : — : —	10.0	Id.; mass of cirro-stratus.
6	026	48.4	46.8	1.6	6.8	3.3	20		10.0	Scud; rain ^{0.5} ; stormy.
8	119	44.8	42.1	2.7	7.0	1.1	22	25 : — : —	3.0	
10	206	42.8	39.3	3.5	2.3	2.2	21		2.0	
18	29.453	35.6	34.7	0.9	2.8	0.8	21		10.0	Scud; rain ¹
20	472	33.7	33.5	0.2	0.8	0.2	21		1.5	Id. and cumuli on S. horizon; snow on the ground.
22	513	36.0	34.9	1.1	0.9	1.1	22	24 : — : —	1.0	Loose scud.
4 0	543	39.6	37.4	2.2	0.9	1.2	20	— : 26 : 26	1.0	Woolly cirri and cirro-strati. ☽
2	547	42.3	38.6	3.7	1.8	1.0	21		2.0	Scud and loose cumuli; cirri and cirrous haze. ☽
4	555	41.8	39.0	2.8	1.7	1.4	20	23 : — : —	8.0	Scud; cirro-strati and cirrous haze.
6	544	41.6	39.0	2.6	1.5	1.0	20	23 : — : —	8.0	Id.; id. ☽
8	550	40.4	38.8	1.6	1.0	0.2	21		10.0	Homogeneous cirro-stratus and cirrous haze. ☽
10	543	39.5	37.4	2.1	0.9	0.2	21		7.0	Patches of scud; cir. haze; faint lunar halo and cor. ☽
18	29.398	40.4	38.6	1.8	1.0	0.2	21		10.0	Scud and cirro-strati.
20	383	38.3	37.0	1.3	0.8	0.3	20	24 : — : —	6.0	Cirro-stratus scud; loose scud; cirr.-str.; drops of rain.
22	402	40.6	38.4	2.2	0.5	0.2	19	25 : — : —	7.0	Scud; cirro-strati.
5 0	422	43.2	39.0	4.2	1.6	0.9	21	24 : — : 26	2.5	Id.; cirri. ☽
2	445	43.3	38.8	4.5	1.6	0.3	25	25 : — : —	4.0	Scud and loose cumuli; linear cirri.
4	452	43.2	38.9	4.3	...	0.5	25 : — : —		7.0	Cirro-stratus scud; cumuli and linear cirri. ☽
6	474	39.0	35.7	3.3	1.0	0.2	22		1.0	Cirro-strati on horizon; scud and cumuli to W. ☽
8	499	36.2	34.3	1.9	0.8	0.2	17		5.0	Woolly and mottled cirri and cirro-strati. ☽
10	492	38.9	35.8	3.1	0.5	0.7	22		9.5	Thin cirr.-str. and woolly cirri; portion of a lunar halo [and corona.] ☽
18	29.526	35.7	33.9	1.8	0.9	0.2	19		0.5	Clouds on S. horizon.
20	547	35.0	33.5	1.5	0.4	...			4.0	Loose scud; cirri and cirro-strati; hazy.
22	555	36.3	34.7	1.6	0.1	0.1	16		10.0	Cirro-stratus and cirrous haze; patches of scud.
6 0	563	40.8	38.7	2.1	0.9	0.8	18		10.0	Scud; thick cirro-strati and cirro-cumulo-strati.
2	501	43.2	40.7	2.5	1.0	1.1	19	20 : — : —	10.0	Id.; dense cirro-stratus and haze; rain ^{0.2}
4	418	40.7	39.3	1.4	2.5	2.4	19		10.0	Loose scud; id.; rain ^{0.5}
6	364	46.1	44.0	2.1	2.1	0.9	20	23 : — : —	10.0	Scud; cirro-strati.
8	331	46.5	44.5	2.0	1.8	0.5	20		10.0	Scud and loose cumuli; cirro-strati; drops of rain.
10	295	46.3	44.6	1.7	1.4	1.5	19		10.0	Id.; id.; id.
18	29.105	44.4	40.4	4.0	7.6	4.5	20		2.0	Cloud on horizon. [showers; wind in gusts.]
20	064	43.0	39.6	3.4	7.5	5.9	24	24 : — : —	9.9	Scud; cum. and cirr.-str. on S. and E. hor.; frequent
22	108	43.0	40.3	2.7	8.2	3.3	25	24 : — : —	10.0	Loose scud; rain ¹⁻³ ; very stormy.
7 0	156	44.0	41.1	2.9	5.7	2.7	26	25 : — : —	10.0	Scud; the sky has been partially clear occasionally since
2	152	45.4	41.9	3.5	5.5	2.2	24	26 : — : 25	4.0	Scud; woolly cirri. ☽ [23 ^h ; drops of rain.]
4	222	45.3	41.0	4.3	5.5	4.0	24	— : 25 : —	9.0	Cirro-stratus scud: cirro-strati and cirrous haze. ☽
6	412	40.0	38.3	1.7	5.0	1.5	28		10.0	Nearly homogeneous; cirr.-str. and scud; drops of rain.
8	522	39.4	37.2	2.2	0.9	0.4	28	28 : — : —	4.0	Scud; slight showers occasionally. ☽

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.
Feb. 2^d 5^h. Dense cirro-stratus moved up from about NW., in large regular waves, lying ENE. to WSW.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^h .	10 ^m .	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0-10.	
7 10	29.588	36.0	34.0	2.0	1.1	0.0	20		2.5	Cirro-strati.
23	29.719	36.0	32.0	4.0	2.2	1.2	28		0.5	A few cirro-strati on horizon.)
8 18	30.022	35.6	34.0	1.6	3.1	0.6	31		9.9	Scud.
20	039	34.5	32.6	1.9	0.7	1.0	31	2 : — : —	2.5	Id.; cumuli on horizon; nimbi on E. horizon.
22	076	36.0	33.0	3.0	2.0	1.0	30	— : 0 : —	9.5	Cirro-stratus scud; shower of snow to E.?
9 0	105	37.0	33.8	3.2	2.3	1.3	31	— : 0 : —	10.0	Id.; heavy shower of snow about 22 ^h 40 ^m .
2	110	33.6	32.7	0.9	1.7	0.7	0		8.0	Snowing heavily since 1 ^h , just ceasing, clouds clearing
4	121	35.0	33.5	1.5	2.5	1.6	1		10.0	Scud; hail. [off from N.
6	132	33.2	32.6	0.6	2.6	0.4	31		3.0	Scud, nimbi, cum., and cir.-str.; snowing heavily till 5 ^h .)
8	163	31.8	31.0	0.8	1.0	0.1	30	2 : — : —	2.0	Scud and loose cumuli; snow about 7 ^h .)
10	186	29.3	28.6	0.7	0.1	0.0	4		2.0	Id.)
18	30.238	26.3	26.3	...	0.0	0.0	24		4.0	Scud and cir-cum.-strati; occasionally a few flakes of
20	254	25.8	25.6	0.2	0.0	0.0	24		10.0	Homogeneous; slight snow. [snow.
22	268	29.2	29.4	...	0.0	0.0			9.8	Id.; fog to N., objects invisible at $\frac{1}{2}$ a-mile dis-
10 0	268	35.0	32.7	2.3	0.0	0.0	22		9.8	Cir.-str. and cir.; foggy. [tance; snow 4 $\frac{1}{4}$ in. deep. Θ
2	235	35.3	34.0	1.3	0.0	0.0			9.8	Woolly cirri, cirro-strati, and cirrus haze. Θ
4	204	34.0	32.7	1.3	0.1	0.0			10.0	Cirro-strati and cirrus haze.
6	172	30.4	29.2	1.2	0.1	0.0	18		10.0	Id.)
8	122	33.0	31.3	1.7	0.1	0.1	20		10.0	Homogeneous mass.)
10	090	33.7	31.8	1.9	0.5	0.2	24		7.0	Cirro-strati and cirrus haze; lunar corona.)
18	29.893	37.5	35.6	1.9	1.5	0.2	24		2.5	Scud; cirro-strati.)
20	876	37.2	35.7	1.5	0.1	0.0	20	30 : — : —	5.0	Id.; id. [and cum.-strati on E. hor.
22	887	40.0	37.4	2.6	0.3	0.2	28		9.0	Dense mass of cirro-str.; streaks of cirri to E.; cir.-str.
11 0	896	41.5	38.7	2.8	0.4	0.3	28	— : — : 29	8.5	Woolly cirri; cir.-str. and cir. haze; a few patches of
2	896	43.8	40.0	3.8	0.5	0.1	25		9.5	Thick mass of cirro-stratus. ● [scud on hor. Θ
4	888	42.1	38.7	3.4	0.1	0.0	24	— : — : 0	10.0	Woolly cirri and cirro-strati.
6	886	37.9	35.6	2.3	0.0	0.0	26	— : 0 : —	6.0	Cirro-cumulo-strati; cirro-strati and cirrus haze.
8	882	40.0	37.3	2.7	0.1	0.1	21		10.0	Id.; id.
10	884	39.8	38.1	1.7	0.0	0.0	20		10.0	Thick mass of cirro-stratus.
18	29.901	35.2	34.6	0.6	0.1	0.0	24		2.0	Cirro-strati and cirri.)
20	896	30.3	30.0	0.3	0.0	0.0	16		3.0	Haze and cirro-strati.
22	914	36.8	35.8	1.0	0.1	0.1	22	— : 0 : —	9.8	Cir.-cum.-str. and thick woolly cir.; cir.-str.; haze. Θ
12 0	926	41.3	39.0	2.3	0.2	0.2	21		2.0	Cirro-strati, woolly cirri, and cirrus haze. ○
2	930	45.5	42.0	3.5	0.2	0.1	19		3.0	Id.; cumuli. ○
4	891	46.9	42.6	4.3	0.2	0.1	24		5.0	Woolly cirri and cirrus haze; cumuli. ○
6	884	43.7	40.4	3.3	0.2	0.1	20	25 : — : —	6.5	Scud and loose cum.; cir.-str., woolly cirri, and cirrus
8	880	42.3	39.8	2.5	0.1	0.1	20		10.0	Mass of cirro-stratus. [haze; clouds tinged red.
10	873	40.9	38.8	2.1	0.1	0.1	26		10.0	Large cirro-cumulo-strati.
18	29.843	36.0	34.6	1.4	0.1	0.0	22		0.5	Patches of cirro-stratus.)
20	858	36.1	34.6	1.5	0.2	0.0	24	31 : — : —	7.0	Scud; patches of cirro-strati and streaks of cirri.
22	863	39.3	37.7	1.6	0.2	0.1	21		3.0	Cirri; cirro-strati; patches of scud. ○
13 0	874	43.7	41.5	2.2	0.8	0.2	24		2.0	Scud, cirro-strati, and haze on horizon. ○
2	869	47.3	43.3	4.0	0.3	0.1	24	29 : — : —	3.0	Loose cumuli and cumulo-strati; cirro-str. and haze. ○
4	865	47.0	43.2	3.8	0.3	0.4	26	28 : — : —	3.0	Id.; bands of cir.-str. to NE.; loose scud;
6	861	44.1	40.6	3.5	0.3	0.1	26		2.0	As before; clouds tinged red. [cirrus haze. ○
8	863	40.6	38.2	2.4	0.2	0.1	26		1.0	Cirro-strati to NE.
10	850	40.8	38.6	2.2	0.2	0.2	25		3.5	Woolly cirri and cirrus haze.)
18	29.850	41.2	38.3	2.9	0.4	0.2	28		10.0	Cirro-stratus scud.
20	864	41.0	38.6	2.4	0.2	0.0	24	— : 30 : —	10.0	Id.
22	897	43.2	39.5	3.7	0.1	0.2	27	— : 31 : —	9.9	Id.
14 0	928	45.3	41.6	3.7	0.3	0.1	29	— : 0 : —	10.0	Id.
2	957	45.7	41.3	4.4	0.4	0.1	28	— : 0 : —	9.9	Id.; bands of cir.-str. to NE.; cum. to S.;
4	958	45.5	41.7	3.8	0.1	0.0	24	— : 31 : —	8.0	Cirro-cumuli. [haze on hor.
6	978	43.5	40.4	3.1	0.1	0.0	22	— : 31 : —	9.9	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Feb. 9^d 18^h. Observation made at 18^h 9^m.

Feb. 13^d 18^h. Observation made at 18^h 6^m.

Gott. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^m	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	Scud and cirro-stratus.
14 8	29.986	43.2	39.8	3.4	0.1	0.1	24		10.0	Scud.
10	29.993	43.2	39.8	3.4	0.2	0.1	26		10.0	
15 0	29.996	44.8	41.8	3.0	0.4	0.1	20		3.0	Masses of scud and loose cumuli; cirro-strati.
18	29.941	45.6	42.5	3.1	1.5	0.6	26		10.0	Thick cirro-stratus.
20	29.959	45.0	42.3	2.7	0.8	0.1	20		10.0	Id.
22	29.973	46.7	43.7	3.0	0.3	0.1	22	— : 0 : —	9.5	Cirro-stratus scud; scud lying on Cheviot.
16 0	30.001	47.8	44.3	3.5	0.2	0.1	18	— : 30 : —	9.8	Cirro-strati; patches of scud.
2	30.013	48.6	44.4	4.2	0.1	0.1	23		9.8	Wavy cirro-strati.
4	29.992	49.3	45.4	3.9	0.1	0.0	23	— : 28 : —	9.5	Cirro-cumulo-strati.
6	986	44.0	41.8	2.2	0.0	0.0	20	— : 28 : —	5.0	Id.; cirro-strati; haze.
8	994	42.6	41.2	1.4	0.0	0.0	10		10.0	Dark.
10	996	42.9	41.4	1.5	0.0	0.0	0		10.0	Id.
18	29.956	40.7	39.4	1.3	0.1	0.0	18		9.8	Scud and cirro-strati.
20	942	41.7	39.3	2.4	0.0	0.0	24	— : 24 : —	9.5	Id.
22	941	43.5	41.0	2.5	0.1	0.0		— : 25 : —	8.5	Cirro-stratus scud; woolly cirri; patches of scud.
17 0	910	47.0	42.2	4.8	0.5	0.3	28	29 : — : —	9.0	Scud and cirro-stratus scud; cumuli and cirri.
2	880	46.7	42.0	4.7	0.4	0.4	30		9.9	Id.; cirro-strati.
4	866	46.5	42.4	4.1	0.3	0.1	28	28 : — : —	9.8	Id.; slight shower to E.
6	847	44.5	41.5	3.0	0.1	0.1	25	— : 29 : —	10.0	Dense mass of wavy cirro-strati.
8	836	43.2	40.2	3.0	0.1	0.0	23		4.0	Cirro-strati; clear in zenith.
10	830	42.2	39.8	2.4	0.0	0.0	21		10.0	Id.; dark.
18	29.776	39.7	37.5	2.2	0.1	0.0	24		9.5	Cirro-stratus scud.
20	790	40.0	37.9	2.1	0.1	0.0	24	— : 0 : —	10.0	Id.
22	797	42.0	39.9	2.1	0.1	0.0	18	— : 0 : —	10.0	Id.
18 0	809	45.5	41.8	3.7	0.0	0.0	22	— : 0 : —	10.0	Id.
2	800	49.2	44.3	4.9	0.1	0.0	22	— : 0 : —	9.5	Id.
4	788	48.5	43.4	5.1	0.1	0.0			9.5	Id.
6	793	45.0	41.2	3.8	0.1	0.1	21	— : 28 : —	8.5	Id.; clouds tinged red to N.
8	788	43.9	40.8	3.1	0.1	0.1	23		10.0	Id.; dark.
10	787	42.1	40.0	2.1	0.1	0.0	21		10.0	Id.; id.
18	717	41.0	38.6	2.4	0.2	0.1	19		9.9	Cirro-stratus scud; clouds broken.
20	729	41.0	38.2	2.8	0.2	0.1	19		10.0	Dense mass of cirro-strati.
22	735	42.9	40.0	2.9	0.0	0.0	24	— : 0 : —	10.0	Cirro-stratus scud.
19 0	748	46.0	41.8	4.2	0.0	0.0		— : 30 : —	10.0	Id.
2	747	45.1	41.6	3.5	0.1	0.1	18		10.0	Id.
4	749	43.6	40.4	3.2	0.2	0.1	24		10.0	Id.
6	754	42.5	39.6	2.9	0.1	0.0	0	28 : — : —	10.0	Thick scud; dense cirro-stratus scud and cir.-str. above.
8	769	41.9	39.1	2.8	0.0	0.0			10.0	Dark.
10	786	41.9	39.2	2.7	0.0	0.0	20		10.0	Id.
18	29.796	39.3	37.6	1.7	0.0	0.0			10.0	Dense cirro-stratus scud and cirro-strati.
20	801	39.0	37.1	1.9	0.0	0.0	16		10.0	Id.
22	804	39.8	37.9	1.9	0.1	0.0	20		10.0	Id.
20 0	806	41.7	39.2	2.5	0.1	0.0	18	— : 24 : —	10.0	Id.
2	769	44.5	40.3	4.2	0.1	0.0	16		10.0	Id.
4	750	44.8	40.0	4.8	0.1	0.0	16	— : 24 : —	10.0	Dense cirro-stratus and scud.
6	754	43.4	40.0	3.4	0.1	0.0	18		10.0	Id.
8	747	42.8	40.3	2.5	0.1	0.0	22		10.0	Id.; dark.
10	739	42.3	40.4	1.9	0.0	0.0			10.0	Id.; id.
18	29.684	46.6	45.4	1.2	0.2	0.2	16		10.0	Densely overcast; some rain has fallen during the night.
20	681	46.9	45.6	1.3	0.4	0.1	17	20 : — : —	10.0	Thick scud and cirro-stratus.
22	655	50.3	48.4	1.9	2.2	2.5	19	19 : — : —	9.8	Scud; cirro-strati and woolly cirri.
21 0	670	50.6	48.7	1.9	3.1	1.4	18	19 : — : —	10.0	Id.; dense mass of cirro-stratus; slight drizzle.
2	640	52.4	49.4	3.0	3.0	1.4	19	21 : — : —	10.0	Id.; id.
4	648	51.3	48.4	2.9	2.8	1.4	19	20 : — : 23	9.0	Id.; woolly, linear, and diffuse cirri; cirrus haze.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
21 6	29.703	48.5	46.9	1.6	1.4	0.9	20	21 : — : —	10.0	Scud ; mass of cirro-stratus.
8	713	47.6	46.0	1.6	1.7	0.2	19		9.5	Id. ; clouds broken.
10	697	45.8	44.1	1.7	0.2	0.3	19		8.0	Id. ; cirro-strati and haze ; stars dim.
23 ¹ ₄	29.380	52.3	49.4	2.9	3.6	3.1	16			Scud and cirro-stratus. At 3 ^h , the maximum pressure of the wind was 9.2 lb. ; and at 7 ^h , it was 11.0 lb.
22 18	29.363	51.1	48.9	2.2	11.0	0.6	20		10.0	Very slight drizzle.
20	372	51.0	48.7	2.3	1.8	0.1	18	19 : — : —	10.0	Thick scud and cirro-stratus.
22	383	51.1	48.9	2.2	0.3	0.2	22	20 : — : —	10.0	Scud ; cirro-strati above.
23 0	396	51.3	49.0	2.3	1.2	1.1	20	20 : 20 : —	9.0	Id. ; cirro-cumulo-strati and cirro-strati.
2	402	52.6	49.8	2.8	1.4	0.6	19	20 : — : —	9.8	Scud and loose cumuli ; cirro-strati.
4	390	52.3	49.5	2.8	1.1	0.3	20	20 : — : —	8.0	Id.
6	399	50.8	48.9	1.9	0.7	0.2	18	20 : — : —	9.9	Id. ; cirro-strati.
8	396	50.2	48.5	1.7	0.2	0.2	18		10.0	Scud ; a few drops of rain.
10	366	48.2	47.3	0.9	0.1	0.0	20		10.0	Id.
18	29.169	50.2	49.2	1.0	1.7	0.1	18		9.8	Scud.
20	160	48.9	47.6	1.3	0.1	0.1	20	17 : — : —	10.0	Id. ; woolly cirri and cirro-strati.
22	110	53.5	50.6	2.9	0.6	0.4	20	16 : — : —	10.0	Id. ; woolly cirri.
24 0	063	54.0	51.9	2.1	2.3	1.9	20	18 : — : —	10.0	Id. ; id. ; passing showers.
2	077	54.2	52.2	2.0	2.4	1.7	18	17 : — : —	9.0	Scud and loose cum. ; woolly cirri ; showers ^{5—2} since last
4	073	54.2	49.5	4.7	3.7	1.9	18	18 : — : 20	9.8	Scud ; woolly cirri and cirro-strati. [observation.]
6	069	50.4	47.5	2.9	2.4	0.1	18	18 : — : 18	7.5	Id. ; woolly cirri ; cirro-strati.
8	29.052	50.8	48.2	2.6	0.1	0.1	20		10.0	Id. ; dark ; rain ¹
10	28.974	53.0	51.4	1.6	2.0	1.0	14		10.0	Id. ; id. ; rain ^{0.5}
18	28.880	49.8	46.6	3.2	2.8	1.2	17		10.0	Scud and cir. str. ; occasionally a few drops of rain.
20	880	48.1	46.6	1.5	1.9	0.5	17	17 : — : —	9.5	Scud ; cirro-strati.
22	863	49.5	48.2	1.3	2.9	1.6	17	18 : — : —	10.0	Id. ; id.
25 0	28.931	51.7	49.2	2.5	3.8	2.1	18	20 : — : —	9.9	Id. ; id. ; cirri.
2	29.014	51.4	48.6	2.8	2.2	1.2	20	21 : — : —	10.0	Scud and loose cumuli ; cirri and cirro-strati.
4	076	51.2	48.3	2.9	2.6	1.4	20	20 : — : —	10.0	Scud ; cirro-strati ; rain ^{0.5}
6	157	48.8	47.2	1.6	0.9	0.7	20	22 : — : —	10.0	Id. ; id. ; rain ³
8	252	45.0	42.3	2.7	1.8	0.4	20		10.0	Id. ; id. [tremity of an auroral arch.]
10	295	43.8	42.0	1.8	1.3	0.8	18		0.5	Patches of scud ; long streak of cir. str. from the E. ex-
18	29.386	43.3	41.9	1.4	1.0	0.0	18		9.9	Scud and cirro-strati.
20	380	43.3	41.2	2.1	0.1	0.1	20	20 : 20 : —	9.7	Id.
22	381	47.2	44.0	3.2	0.2	0.4	18	20 : 20 : —	9.0	Id. ; woolly cirri. Θ
26 0	368	51.7	48.1	3.6	1.5	2.1	17	20 : 18 : —	9.5	Scud ; cirro-strati ; drops of rain ; rainbow.
2	366	53.8	49.8	4.0	2.1	0.6	18	19 : — : —	9.5	Scud and loose cumuli.
4	327	54.8	50.6	4.2	1.7	0.6	18	— : 19 : 21	6.0	Cir. str. scud ; woolly cirri ; cir. str. ; patches of scud. ○
6	284	51.5	47.9	3.6	1.8	1.7	16	— : 20 : 20	9.9	Thick woolly cirri and cir. str. ; cir. str. ; drops of rain.
8	281	50.7	48.2	2.5	1.4	0.8	15		10.0	Scud ; dark ; rain ¹
10	286	50.9	48.7	2.2	1.2	0.2	15		8.5	Id.
18	29.262	49.2	47.0	2.2	2.6	0.3	16		3.0	Masses of scud and cirro-strati.
20	294	51.2	48.3	2.9	0.8	0.3	18	20 : — : —	7.5	Scud.
22	331	51.3	48.7	2.6	0.6	0.1	16	20 : — : 18	9.5	Id. ; thick woolly cirri ; cirro-strati. ●
27 0	367	55.2	50.8	4.4	0.4	0.1	16	20 : — : —	10.0	Id. ; dense mass of cirro-stratus and haze. ●
2	374	57.5	52.6	4.9	0.2	0.1	16		10.0	Thick mass of cirro-stratus ; patches of scud.
4	383	54.7	50.6	4.1	0.1	0.0	16	17 : 17 : —	9.5	Scud and dense homogeneous cir. str. ; sky to NW.
6	379	51.0	49.0	2.0	0.7	0.1	24	— : 17 : —	9.8	Cir. str. scud ; wavy cirro-strati ; shower 15 ^m since.
8	388	50.0	47.3	2.7	0.2	0.1	16		10.0	Scud and cirro-strati.
10	382	48.5	47.2	1.3	0.0	0.0			6.0	Id.
18	29.359	45.9	45.2	0.7	0.0	0.0	19		0.5	Cirro-strati on horizon.
20	366	45.0	44.3	0.7	0.0	0.0	18	17 : — : 18	4.0	Scud ; woolly cirri.
22	382	50.0	48.4	1.6	0.0	0.0	19	— : 17 : —	8.5	Cir.-cum.-str. and cir. str. ; cum.-str. on E. horizon. ○
28 0	392	56.6	53.2	3.4	0.0	0.0	18	19 : — : —	10.0	Scud ; cirro-strati ; cumuli and cumulo-strati.
2	393	55.2	52.0	3.2	0.4	0.5	16	20 : — : —	10.0	Id. ; mass of cirro-stratus.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
28 4	29.417	51.2	47.4	3.8	1.1	1.0	20	20 : — : —	9.7	Masses of ragged scud ; dense homogeneous cir.-str. ; sky
6	462	50.0	47.3	2.7	1.1	0.1	24	21 : — : —	10.0	Scud ; cirro-strati. [on W. horizon.
8	490	48.7	46.8	1.9	0.5	0.2	22		8.5	Id. ; id. ; sky in zenith.
10	518	48.4	46.8	1.6	1.0	0.1	22		10.0	Id. ; id.
23½	29.633	49.6	46.5	3.1	1.7	0.3	19	19 : — : —	10.0	Scud and cirro-strati.
1 18	29.387	48.8	45.9	2.9	2.8	2.0	20		9.8	Scud.
20	445	46.1	43.9	2.2	3.2	0.6	20	20 : — : —	4.0	Id.
22	464	47.7	44.2	3.5	2.6	1.6	20	22 : — : —	3.6	Scud and loose cumuli ; cirro-strati. ⊖
2 0	497	50.7	46.2	4.5	1.2	0.8	18	21 : — : —	2.5	Id. ; id. ⊖
2	483	52.3	46.7	5.6	1.7	0.2	17	19 : — : —	9.0	Id. ; woolly cirri ; mass of cirro-str.
4	423	50.3	45.2	5.1	1.1	0.2	16		9.9	Nearly homogeneous mass of cirro-stratus.
6	370	47.2	43.6	3.6	2.6	1.7	17	18 : — : 17	8.0	Smoky scud ; woolly cir. ; sheets of cir.-str. ; cumo-str. on S. hor. ; cir.
8	326	45.9	43.2	2.7	1.5	2.3	16	18 : — : —	8.0	Scud ; cirro-str.) [haze ; clouds tinged yellow ; sky stormy-looking.
10	298	45.4	43.3	2.1	1.6	1.4	18		10.0	Id. ; id. ; rain ¹)
18	29.245	43.0	41.6	1.4	2.2	1.5	17		10.0	Scud ; rain ^{0.5}
20	219	45.0	43.4	1.6	2.8	0.9	16	18 : — : —	10.0	Loose scud ; homogeneous mass of cirro-stratus ; rain ¹
22	198	49.4	48.5	0.9	2.7	1.3	18	19 : — : —	10.0	Scud ; dense mass of cirro-stratus ; rain ¹
3 0	193	51.7	50.1	1.6	1.6	0.5	18	19 : — : —	10.0	Id. ; id. ; rain ^{0.2}
2	160	52.4	50.1	2.3	3.3	2.2	18	19 : — : —	10.0	Id. ; id.
4	141	52.3	50.0	2.3	3.2	3.8	18	18 : — : —	10.0	Id. ; id. ; rain ^{0.5}
6	128	50.8	49.1	1.7	2.4	0.8	16	18 : — : —	10.0	Id. ; id. ; id.
8	100	50.6	48.8	1.8	2.8	1.4	19		10.0	Id. ; id. ; id.
10	29.052	50.7	49.0	1.7	2.6	1.8	17		10.0	Id. ; id. ; id.
18	28.740	50.3	47.6	2.7	8.4	4.1	16		10.0	Scud and cirro-strati.
20	708	49.5	47.5	2.0	5.8	2.3	17	18 : — : —	9.7	Scud ; rain ^{0.5—2} ; stormy.
22	705	49.8	44.8	5.0	10.7	9.4	16	19 : — : —	9.0	Id. and loose cumuli. ⊖
4 0	787	49.3	44.9	4.4	10.5	4.2	18	20 : 20 : —	8.5	Scud ; cirro-stratus scud. ⊖
2	824	48.3	44.0	4.3	8.0	0.2	18	21 : — : —	8.5	Scud and loose cumuli.
4	940	48.4	44.0	4.4	3.1	1.6	19	20 : — : —	3.0	Id. ; streaks of cirri. ⊖
6	28.998	44.4	42.0	2.4	2.1	0.4	19	20 : — : —	4.0	Id. ; id. ; cum. to N.)
8	29.042	43.7	41.4	2.3	0.5	0.6	19		4.0	Scud.
10	082	43.0	41.6	1.4	0.4	0.1	18	20 : — : —	6.0	Id.)
18	29.148	38.7	38.2	0.5	0.5	0.0	17		2.5	Scud.
20	176	41.1	40.3	0.8	0.0	0.0	20	21 : — : —	7.0	Id. ⊖
22	197	45.3	43.2	2.1	0.1	0.1	19	19 : — : —	8.0	Id. ; cirro-strati.
5 0	216	47.5	44.2	3.3	0.7	0.4	21	22 : — : —	4.5	Id. ; cumuli and cumulo-strati ; nimbi to E. ⊖
2	215	49.5	43.2	6.3	1.0	0.2	20	20 : — : —	2.5	Loose cum. ; piles of cum. ; cumo-str. ; nimbi on S. hor. ⊖
4	238	49.3	43.4	5.9	0.9	0.3	20	22 : — : —	2.0	Cumuli ; streaks of cirro-strati.
6	254	44.5	41.2	3.3	0.4	0.1	20		0.2	Scud and cumuli on N. horizon ; streaks of cirri. ⊖
8	280	40.0	37.8	2.2	0.2	0.1	22		0.0	Quite clear.)
10	293	35.8	35.0	0.8	0.0	0.0	20		0.2	Cirri to W.)
18	29.256	32.8	32.5	0.3	0.0	0.0	24		10.0	Cirro-strati ; fog. [hoar-frost.
20	272	32.6	32.4	0.2	0.0	0.0	22		10.0	Id. ; id. ; objects visible at 40 yards ; much
22	278	36.0	35.6	0.4	0.0	0.0	22	— : 20 : —	9.9	Cir.-str. scud ; mass of cir.-str. and woolly cir. ; cumo-str. and haze on
6 0	291	43.6	42.2	1.4	0.0	0.0	20	— : 21 : —	7.0	Cir.-cum.-str. and woolly cir. ; cumo-str. and cir. haze. ⊖ [E. hor. ●
2	282	48.0	42.7	5.3	0.4	0.4	21		1.5	Cumuli and cumulo-strati on horizon ; cirri to W. ⊖
4	284	46.2	41.8	4.4	0.7	0.2	19	21 : — : —	9.5	Thick scud ; cirro-strati.
6	268	43.4	41.2	2.2	0.6	0.2	17	20 : — : —	9.8	Id. ; id.
8	252	41.2	40.0	1.2	0.6	0.1	17	20 : — : —	9.0	Scud and cirro-cumulo-strati ; cirro-strati. ⚡
10	222	41.0	40.0	1.0	0.1	0.3	18		10.0	Scud ; rain ²
18	29.275	39.4	37.5	1.9	1.2	0.3	22		8.0	Scud and cirro-strati.
20	315	36.8	35.7	1.1	0.3	0.0	20	24 : 28 : 28	3.0	Scud ; sheets of cirro-strati and woolly cirri. ⊖
22	342	42.0	39.0	3.0	0.7	0.5	21	24 : — : —	3.0	Scud ; woolly cirri and cirro-strati. ⊖
7 0	357	46.4	41.5	4.9	1.4	0.7	19	24 : — : —	6.0	Scud and loose cumuli ; woolly cirri. ⊖

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

March 2^d 4^h 40^m. The clouds were marked with hollows and hanging fragments ; heavy gusts of wind and drops of rain.

March 3^d 2^h. Observations made at 2^h 10^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Cl., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10m.	From		
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
7 2	29.369	48.5	43.7	4.8	1.1	0.7	22	25 : — : —	7.0
4	396	46.1	41.7	4.4	0.8	0.9	25	26 : — : —	8.5
6	438	43.2	39.8	3.4	1.3	0.1	21		3.0
8	486	39.7	37.0	2.7	0.8	0.2	24		0.5
10	522	36.3	35.0	1.3	0.2	0.0	20		0.1
23 ¹ ₂	29.625	44.2	40.0	4.2	0.3	0.1	20	28 : — : 28	0.5
8 18	29.852	29.2	29.2	...	0.6	0.0	18		0.2
20	906	32.0	31.5	0.5	0.0	0.0	20	22 : — : —	7.0
22	930	40.0	38.7	1.3	0.0	0.0	22	— : 25 : —	7.0
9 0	945	45.8	43.0	2.8	0.2	0.1	20	22 : — : —	10.0
2	947	46.6	43.6	3.0	0.4	0.2	20	22 : — : —	9.7
4	944	48.7	45.2	3.5	0.1	0.0	20	26 : — : —	9.9
6	29.969	47.0	43.5	3.5	0.3	0.0	26	26 : 30 : —	7.0
8	30.012	44.1	41.5	2.6	0.1	0.1	25		7.0
10	044	42.1	40.3	1.8	0.1	0.0	20	— : 30 : —	8.0
18	30.087	42.0	40.0	2.0	0.2	0.1	18		9.5
20	091	42.3	40.2	2.1	0.3	0.2	16	— : 24 : —	9.5
22	089	46.3	43.2	3.1	0.7	0.4	20	— : 26 : —	7.0
10 0	084	50.2	46.0	4.2	1.4	0.9	20	— : 24 : —	6.0
2	064	51.3	46.4	4.9	1.7	1.3	22	23 : — : —	9.5
4	056	49.2	44.6	4.6	2.5	1.3	20	20 : — : —	10.0
6	029	47.0	43.6	3.4	1.1	0.2	22	20 : — : —	10.0
8	30.016	44.6	42.1	2.5	0.5	0.2	23		10.0
10	29.992	46.3	43.4	2.9	1.0	1.1	22		10.0
18	30.070	45.0	44.0	1.0	1.6	0.0	20		10.0
20	144	45.0	44.2	0.8	0.0	0.0	22		10.0
22	217	46.5	45.6	0.9	0.6	0.0	4	— : 0 : —	9.8
11 0	286	48.6	44.4	4.2	0.8	0.3	4	5 : 0 : —	9.5
2	303	48.5	44.2	4.3	0.2	0.0	4	8 : — : —	4.0
4	332	48.5	44.0	4.5	0.2	0.1	7	— : — : 28	4.5
6	345	46.3	42.6	3.7	0.0	0.0	14		0.5
8	352	39.5	38.1	1.4	0.0	0.0	18		0.3
10	380	35.5	34.9	0.6	0.0	0.0	20		0.0
18	30.347	41.7	40.7	1.0	0.0	0.0			10.0
20	341	46.0	44.8	1.2	0.1	0.1	20	21 : — : —	10.0
22	332	48.1	46.3	1.8	0.4	0.4	20	21 : — : —	10.0
12 0	307	52.0	48.3	3.7	0.7	0.4	19	20 : — : —	10.0
2	261	52.6	47.4	5.2	1.7	1.1	19	20 : — : —	5.0
4	225	50.4	46.4	4.0	2.1	1.2	19	20 : — : —	8.5
6	195	47.8	44.8	3.0	2.4	1.1	19	21 : 24 : 24	4.0
8	165	45.0	43.1	1.9	3.0	2.1	20		4.0
10	149	47.1	45.0	2.1	2.3	1.5	19		9.5
18	29.996	46.7	44.2	2.5	3.4	0.4	18		9.5
20	979	45.4	44.4	1.0	1.3	0.7	18		10.0
22	950	47.0	45.1	1.9	2.5	0.8	20	22 : — : —	10.0
13 0	920	52.6	47.9	4.7	2.2	2.0	20	23 : — : —	8.0
2	919	52.9	46.7	6.2	3.7	2.8	21	24 : — : —	4.0
4	906	52.2	45.5	6.7	3.7	3.0	23	24 : — : —	8.5
6	911	47.3	42.3	5.0	3.1	1.3	21	24 : 28 : 28	8.0
8	915	45.4	41.4	4.0	1.3	0.4	22		8.0
10	907	44.5	40.2	4.3	0.3	0.2	19		9.5
18	29.626	44.3	42.3	2.0	2.5	2.5	19		10.0
20	522	45.6	44.8	0.8	2.8	1.6	20	22 : 24 : —	10.0
22	458	53.1	50.0	3.1	2.5	3.0	23	24 : — : —	10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Mar. 7th 3^h. Great piles of cumulo-strati and nimbi; also masses of nimbus having the appearance of flames, with occasionally small dark streaks of cirro-stratus below.

Mar. 11. Humble-bee seen.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.:C.s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From		
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.
14 0	29.510	52.0	47.0	5.0	4.1	2.0	24	25 : — : —	9.7
2	565	51.1	45.6	5.5	3.0	0.8	22	25 : 26 : 26	8.5
4	568	49.8	43.4	6.4	3.1	2.6	23	25 : 25 : 25	6.0
6	593	46.2	41.2	5.0	3.1	0.5	25	25 : — : —	2.5
8	628	43.0	38.4	4.6	1.3	1.2	20		3.5
10	625	42.8	39.4	3.4	0.9	0.3	22		9.8
23 ¹	29.676	45.5	40.9	4.6	1.6	0.1	28	26 : 28 : —	9.0
15 18	28.923	47.0	45.2	1.8	4.1	2.0	19	20 : — : —	10.0
20	814	47.0	45.8	1.2	3.7	3.2	19	21 : — : —	10.0
22	783	43.6	42.1	1.5	3.8	2.0	22	22 : — : —	10.0
16 0	745	46.2	41.1	5.1	3.5	1.5	20	22 : — : —	9.5
2	692	40.6	37.6	3.0	5.5	4.8	21	22 : — : —	9.5
4	591	45.0	39.6	5.4	3.8	5.2	20	22 : — : —	4.0
6	535	38.7	36.6	2.1	7.8	4.0	19	21 : — : —	10.0
8	492	39.2	36.2	3.0	7.4	2.8	19	23 : — : —	1.0
10	533	39.8	35.5	4.3	7.0	3.4	26		9.8
18	28.974	33.2	29.5	3.7	4.2	1.2	24		1.0
20	29.050	32.4	28.7	3.7	1.6	0.2	26		2.0
22	118	35.0	30.1	4.9	0.4	0.0	22	— : 24 : —	7.5
17 0	144	35.5	30.6	4.9	0.8	0.6	22		8.0
2	150	36.5	30.6	5.9	0.5	0.3	25	26 : 24 : —	6.0
4	153	38.4	31.7	6.7	2.1	1.2	26	27 : — : —	6.0
6	168	36.2	31.2	5.0	1.7	1.3	25	26 : — : —	1.5
8	195	34.8	32.0	2.8	2.5	0.7	28		10.0
10	237	32.4	31.9	0.5	1.6	0.1	28		10.0
18	29.306	31.8	31.2	0.6	0.2	0.1	2		10.0
20	343	30.0	30.4	...	0.1	0.1	3		10.0
22	383	31.4	30.0	1.4	0.5	0.3	0		10.0
18 0	404	33.0	31.7	1.3	0.6	0.2	0		10.0
2	406	33.0	31.7	1.3	0.7	0.4	0		10.0
4	413	31.6	29.7	1.9	0.5	0.1	30		10.0
6	419	31.5	29.9	1.6	0.6	0.1	0		10.0
8	422	26.6	25.7	0.9	0.0	0.0	26		9.0
10	427	25.0	24.4	0.6	0.0	0.0	20		3.0
18	29.434	12.2	12.3	...	0.0	0.0			1.0
20	443	9.3	10.0	...	0.0	0.0			1.5
22	449	17.0	17.0	...	0.0	0.0			0.3
19 0	446	26.3	24.0	2.3	0.0	0.0	26		0.5
2	430	31.4	28.5	2.9	0.0	0.0	0		0.5
4	436	32.3	29.2	3.1	0.0	0.0	2		0.8
6	440	31.3	28.9	2.4	0.1	0.0	30	2 : — : —	2.5
8	440	27.8	26.2	1.6	0.0	0.0			8.5
10	441	26.5	25.6	0.9	0.0	0.0	24		10.0
18	29.452	26.3	25.8	0.5	0.2	0.1	26	5 : — : —	9.8
20	466	25.5	24.2	1.3	0.2	0.1	28	— : — : 4	7.0
22	474	29.5	27.6	1.9	0.9	0.3	28		0.8
20 0	477	33.9	31.2	2.7	0.5	0.3	30		1.0
2	491	36.4	33.6	2.8	0.9	0.3	30		2.0
4	504	36.7	34.6	2.1	0.4	0.1	2		2.0
6	509	35.0	31.6	3.4	0.1	0.0	2		0.8
8	508	25.7	25.0	0.7	0.0	0.0	17		0.2
10	489	23.6	22.9	0.7	0.0	0.0	18		0.0
18	29.236	30.7	29.0	1.7	1.2	0.4	18		10.0
20	143	32.8	30.2	2.6	2.7	1.5	16		10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

March 16th 2nd. Heavy showers of hail since 1^h 30^m; rain^{0.2} at present, with occasional flakes of snow.

March 17th 2nd. Anemometer vane found frozen.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From				
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.	
20 22	29.042	34.3	31.5	2.8	3.8	3.6	16			9.8	Cirro-stratus and cirrous haze.
21 0	28.950	34.8	34.3	0.5	4.4	3.1	16 v.			10.0	Snow ³
2	882	35.0	33.4	1.6	3.8	1.3	16			10.0	Id.
4	818	35.8	34.8	1.0	6.2	1.3	17	17 : — : —		10.0	Scud ; mass of cirro-stratus.
6	776	37.1	35.2	1.9	2.8	2.1	16			3.0	Scud and cirro-strati.
8	785	35.2	34.4	0.8	1.4	0.1	20	20 : — : —		9.8	Scud ; several showers of rain since last observation.
10	759	33.4	32.9	0.5	0.3	0.0	18			0.0	Clear.
23 ³	28.684	42.5	40.8	1.7	1.7	0.8	17	18 : 18 : —		10.0	Scud ; woolly cirro-strati ; showers occasionally.
22 7	776	
18	28.786	31.0	32.0	...	1.5	0.0	18	— : — : 18		4.0	Woolly cirri ; cir.-str. and haze ; scud on Cheviot. ☉
20	788	35.8	32.7	3.1	0.0	0.0	18			7.0	Woolly cirri and cirro-stratus ; cirro-strati. ☽
22	800	39.7	37.3	2.4	0.0	0.0	16	— : 20 : —		7.5	Woolly cirro-strati.
23 0	806	44.8	41.1	3.7	0.3	0.1	16	16 : — : —		5.0	Loose cumuli ; cirro-strati.
2	813	42.0	39.3	2.7	0.3	0.2	16	18 : — : —		10.0	Scud ; thick cirro-stratus.
4	820	41.7	39.2	2.5	0.2	0.2	14			10.0	Id. ; id.
6	838	42.0	39.8	2.2	0.5	0.1	16	18 : — : —		10.0	Id. ; dense cirro-stratus ; shower ^{0.5}
8	875	39.1	38.1	1.0	0.3	0.1	15			9.7	Id. ; id. ; id.
10	892	38.6	38.0	0.6	0.1	0.0	20			9.7	Id. ; rain ²
18	28.949	35.2	35.0	0.2	0.1	0.0	14	— : 20 : —		9.8	Cirro-stratus scud and cirro-strati.
20	956	38.6	38.1	0.5	0.0	0.0	20			7.5	Woolly cirri and cirro-strati.
22	975	42.8	41.1	1.7	0.0	0.0	23	19 : 18 : —		9.0	Scud ; woolly cirro-strati.
24 0	983	50.3	46.4	3.9	0.1	0.0	14	15 : 16 : —		9.5	Id. ; id.
2	983	49.4	45.2	4.2	0.2	0.1	16	15 : 16 : —		9.0	Id. ; id.
4	976	46.5	42.8	3.7	0.2	0.1	18	16 : — : —		9.5	Id. ; cumulo-strati ; cirro-strati ; drops of rain.
6	983	45.8	42.7	3.1	0.2	0.1	18	20 : — : —		9.8	Scud ; nimbi ; loose cum. and cir.-str. ; raining to SW. ;
8	28.998	39.0	38.2	0.8	0.0	0.0				7.0	Scud and loose cumuli. [showers around.]
10	29.003	37.0	36.5	0.5	0.0	0.0	20			5.0	Scud and cirro-stratus.
18	29.001	32.5	32.2	0.3	0.0	0.0	11	— : 21 : —		5.0	Cirro-cumulo-strati ; cirro-strati ; mist in the valleys.
20	027	34.2	34.0	0.2	0.0	0.0	18	— : 20 : —		7.5	Id. ; id. ☽
22	033	42.8	41.0	1.8	0.0	0.0	17	20 : — : —		5.0	Scud ; cirro-cumulo-strati ; drops of rain.
25 0	052	45.5	43.7	1.8	0.0	0.0		20 : — : —		10.0	Loose scud ; thick scud and cir.-str. ; occasional showers.
2	043	46.3	42.3	4.0	0.1	0.1	18	20 : 20 : —		5.0	Scud and loose cum. ; sheets of cir.-str. and wo. cirri. ☽
4	041	47.7	43.4	4.3	0.1	0.1	18	21 : — : —		7.5	Scud and loose cum. ; nimbi ; cir.-str. ; woolly cirri. ☽
6	043	48.6	43.6	5.0	0.0	0.0	16	24 : — : —		6.0	Heavy cumuli and scud. ☽
8	072	40.7	39.1	1.6	0.0	0.0				7.0	Thick woolly cir.-str. rad. from N by W., with the radii curved towards the E. ; patches of scud.
10	096	34.8	34.2	0.6	0.0	0.0	20			2.0	Scud and cirro-strati.
18	29.185	32.6	32.2	0.4	0.0	0.0	18			9.8	Dense mass of cirro-strati ; hoar-frost on the ground.
20	222	35.0	34.7	0.3	0.0	0.0	18	— : 0 : —		10.0	Scud ; mass of cirro-stratus.
22	254	41.9	40.1	1.8	0.0	0.0	24	0 : — : —		9.8	Masses of loose cumulous scud ; cirro-cumulo-strati.
26 0	282	44.7	41.5	3.2	0.0	0.0	26	29 : — : —		5.5	Loose cumuli ; cir.-cum.-str. ; cum.-str. on horizon. ☽
2	298	46.7	43.7	3.0	0.0	0.0	16	30 : — : —		8.0	Scud, loose cumul., and cirro-stratus scud. ☽
4	314	46.0	42.0	4.0	0.1	0.1	21	— : 24 : —		9.0	Cirro-cumulo-strati ; cumuli and cirro-strati.
6	312	44.7	41.8	2.9	0.0	0.0	18	— : 28 : —		9.0	Id. ; hazy.
8	335	41.4	39.4	2.0	0.0	0.0	18			2.5	Cumulo-strati to S.
10	354	37.9	36.1	1.8	0.0	0.0	22			1.0	Cirro-stratus and haze on horizon.
18	29.388	39.2	37.2	2.0	0.2	0.1	22	25 : — : —		9.9	Cirro-stratus scud ; cirro-strati.
20	445	40.7	38.8	1.9	0.1	0.0	20	24 : 25 : 25		9.8	Id. ; woolly cirri and cirro-cumulo strati. ☽
22	396	44.3	40.6	3.7	0.1	0.1	21	27 : — : —		9.9	Scud ; cirro-strati.
27 0	388	47.3	42.2	5.1	0.3	0.2	24	26 : — : —		9.8	Scud and loose cumuli ; cirro-strati.
2	359	47.8	41.6	6.2	0.5	0.2	20	25 : — : —		9.0	Heavy cumuli ; nimbi ; partial showers to N. ☽
4	365	43.0	39.7	3.3	1.4	0.1	25	26 : 23 : —		9.2	Scud and nimbi ; cir-cum-str. ; cum.-str. on hor. ; heavy shower of hail lately.
6	348	46.2	41.2	5.0	0.6	0.2	24	26 : 25 : —		3.0	Loose cum. ; cum.-str. ; nimbi to E. ; sheets of cir.-str. ☽
8	359	41.4	38.5	2.9	0.2	0.1	21	26 : — : —		5.0	Scud and sheets of cirro-strati.
10	365	38.9	36.9	2.0	0.1	0.1	18			4.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

March 21^d 10^h. Observation made at 10^h 10^m.

March 26^d 10^h. Observation made at 10^h 5^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From			
in.	35.8	35.0	0.8	0.1	0.0	pt.	pt.	pt.	0—10.
4. h. 27 18	29.374	35.8	35.0	0.8	0.1	0.0	4 : — : —	10.0	Dense mass of cirro-stratus scud.
20	387	37.8	37.2	0.6	0.0	0.0	6 : — : —	4.0	Loose scud; cumulo-strati on E. horizon; cir.-str. ○
22	402	44.0	40.7	3.3	0.2	0.3	5	4 : — : —	8.0
28 0	410	43.7	40.0	3.7	0.7	0.3	0	4 : — : —	9.0
2	409	45.3	40.4	4.9	1.5	0.7	2	4 : — : —	7.0
4	411	44.2	39.3	4.9	1.9	0.7	3	3 : — : —	6.0
6	429	40.0	38.0	2.0	1.7	0.4	0	3 : — : —	3.0
8	453	38.3	36.6	1.7	0.7	0.1	0		2.0
10	467	36.1	35.0	1.1	0.1	0.0	30		2.0
23 ¹ ₂	29.750	44.0	37.9	6.1	1.7	0.3	0	0 : — : —	8.0
29 18	29.905	34.6	33.7	0.9	0.6	0.0			9.0
20	909	36.4	35.4	1.0	0.0	0.0	20		6.0
22	908	43.6	40.7	2.9	0.0	0.0	20		7.5
30 0	891	48.4	42.1	6.3	0.0	0.0	14	12 : — : —	7.0
2	874	49.7	42.6	7.1	0.0	0.0	10	14 : — : —	9.5
4	827	51.7	43.3	8.4	0.1	0.1	12	14 : 14 : —	5.5
6	786	47.7	40.7	7.0	0.3	0.3	15	14 : 14 : —	7.0
8	772	40.9	37.9	3.0	0.5	0.1	14		8.0
10	743	41.0	37.9	3.1	0.3	0.1	13		10.0
18	29.587	30.2	29.6	0.6	0.7	0.0	20		3.0
20	549	35.2	33.8	1.4	0.0	0.0	18		9.0
22	499	42.3	38.3	4.0	0.0	0.0	20		9.5
31 0	449	47.8	42.4	5.4	0.0	0.0	18		9.5
2	403	50.1	44.1	6.0	0.0	0.0	20		10.0
4	331	48.8	42.2	6.6	0.2	0.2	14		10.0
6	291	47.0	42.1	4.9	0.0	0.0			10.0
8	236	44.3	41.3	3.0	0.0	0.0	14	— : 18 : —	10.0
10	190	42.3	41.0	1.3	0.0	0.0	4		10.0
18	29.078	42.5	41.2	1.3	0.9	0.3	20		9.8
20	667	44.2	42.7	1.5	0.7	0.6	19	— : — : 22	6.0
22	669	46.2	43.2	3.0	0.7	0.4	16	22 : — : —	10.0
1 0	048	44.9	43.1	1.8	0.7	0.0	20		10.0
2	039	46.6	44.8	1.8	0.1	0.1	22	21 : — : —	10.0
4	012	50.3	47.4	2.9	0.2	0.1	21	21 : — : —	8.0
6	29.003	47.0	45.3	1.7	0.1	0.0	18	22 : — : —	10.0
8	28.995	45.3	44.6	0.7	0.1	0.1	0		9.5
10	988	43.6	43.0	0.6	0.1	0.0	26		8.0
18	28.968	41.6	41.1	0.5	0.1	0.0	20	22 : — : —	10.0
20	965	46.0	44.7	1.3	0.1	0.1	21		4.5
22	956	52.3	49.0	3.3	0.3	0.1	18	21 : — : —	7.0
2 0	941	53.7	48.4	5.3	0.1	0.1	16	15 : — : —	4.0
2	905	57.0	50.5	6.5	0.1	0.1	4	14 : — : 14	7.0
4	863	54.8	49.7	5.1	0.9	0.1	10	— : 14 : —	8.5
6	845	50.2	46.8	3.4	0.3	0.1	6	8 : — : —	10.0
8	852	44.2	43.6	0.6	0.5	0.2	3		10.0
10	851	43.8	43.3	0.5	0.4	0.1	4		10.0
18	28.823	43.0	42.5	0.5	1.2	1.0	1		10.0
20	856	42.4	41.4	1.0	1.5	1.3	0	2 : — : —	10.0
22	900	41.8	40.1	1.7	3.8	3.4	1	1 : — : —	10.0
3 0	28.951	42.2	40.4	1.8	3.5	3.3	1	0 : — : —	10.0
2	29.026	42.0	39.0	3.0	3.5	1.6	0	0 : — : —	10.0
4	088	43.2	38.2	5.0	3.7	1.7	0	1 : — : —	7.0
6	145	42.4	37.4	5.0	3.1	0.8	1	1 : — : —	3.5
8	211	36.9	33.6	3.3	1.2	0.1	30	31 : — : —	2.5

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

April 2^d 3^h. Several peals of thunder heard to S., from 2^h 40^m till 3^h 0^m; a shower about 3^h.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From	pt.	pt.	pt.
d. h. 3 10	in. 29.259	° 35.6	° 33.2	° 2.4	lbs. 0.2	lbs. 0.0	pt. 28		0—10. 2·0	Scud and loose cumuli.
18	29.357	30.5	29.7	0.8	0.1	0.0	20		10·0	Dense mass of cirro-stratus; cumuli on E. horizon.
20	366	33.9	32.0	1.9	0.0	0.0	16		10·0	Id.; cirro-strati.
22	351	40.0	37.0	3.0	0.0	0.0	12	— : — : 20	9·5	Woolly and interlaced cirri; cumulo-strati to N. & E. ☀
4 0	319	41.3	38.0	3.3	0.0	0.1	6	9 : 12 : —	9·5	Scud in patches; masses of scud; cirri and cir. haze.
2	272	41.1	37.9	3.2	0.3	0.3	5	8 : — : —	9·9	Scud; nearly homogeneous cirro-strati; slight shower lately.
4	231	39.2	37.3	1.9	0.3	0.3	4	6 : — : —	10·0	Id.; cirro-stratus; rain ¹
6	216	36.4	35.4	1.0	1.0	0.7	5	6 : — : —	10·0	Id.; dense homogeneous cirro-stratus; drops of rain.
8	189	35.5	35.0	0.5	0.6	0.3	5		10·0	Densely overcast; rain ^{0·5} ; sleet occasionally.
10	178	35.4	34.5	0.9	0.1	0.1	4		10·0	Homogeneous cirrus haze.
23 $\frac{1}{2}$	29.135	44.1	39.4	4.7	1·2	0·7	6	6 : — : —	10·0	Scud and cum.; cir. haze; solar halo throughout the day.
5 18	28.962	36.7	35.7	1·0	1·2	0·1	4	4 : — : —	10·0	Scud and cirro-stratus.
20	29.069	39.6	37.6	2·0	0·1	0·1	3	5 : — : —	9·8	Scud; cirro-cumuli.
22	069	43.0	38.3	4·7	1·2	0·4	4	5 : — : —	6·0	Scud and loose cumuli; woolly and linear cirri. ☀
6 0	070	42·7	38·5	4·2	1·0	0·5	4	5 : — : —	9·8	Scud; cumuli and woolly cirri. [1 ^h 30 ^m .]
2	078	40·0	39·4	0·6	2·7	0·8	2	4 : — : —	10·0	Id.; dense cirro-strati; shower of rain and sleet about
4	088	43·0	39·4	3·6	2·7	2·6	4	5 : — : —	10·0	Scud and loose cumuli; dense mass of cirro-stratus.
6	100	41·5	37·1	4·4	3·3	2·2	2	3 : — : —	9·9	Scud; cirro-cumulo-strati; cirro-strati; cirrous mass.
8	114	39·7	36·5	3·2	2·3	1·0	2		4·0	Cirro-cumulo-strati; cirro-strati and woolly cirri.
10	123	39·2	36·2	3·0	1·2	0·6	2		8·0	Id.; id. ☀
18	29.113	37·5	35·9	1·6	1·4	0·9	30	3 : — : —	8·0	Scud; cirro-cumuli and cirro-strati.
20	119	39·2	37·0	2·2	1·0	0·9	0	3 : — : —	9·5	Id.; id.
22	117	42·0	38·3	3·7	2·3	1·6	0	2 : — : —	10·0	Id.; cirro-strati and cirrous haze.
7 0	118	42·3	38·8	3·5	2·3	1·8	1	2 : — : —	10·0	Id.; id.
2	128	41·4	39·6	1·8	2·4	1·7	0	2 : — : —	10·0	Id.; id.; rain ^{0·2}
4	123	43·7	41·3	2·4	1·9	1·4	0	2 : — : —	10·0	Scud.
6	131	42·4	40·8	1·6	1·3	0·8	0	2 : — : —	10·0	Id.; cirro-cumulo-strati.
8	145	41·7	39·7	2·0	0·9	0·5	2	2 : — : —	10·0	Id.; id.
10	136	40·2	39·0	1·2	0·5	0·3	2	2 : — : —	10·0	Id.; cirrous mass; lunar corona. ☀
18	29.128	40·0	39·5	0·5	0·5	0·3	0	6 : 6 : —	10·0	Dense mass of cirro-stratus and scud; drizzling rain ^{0·5}
20	151	42·0	41·4	0·6	0·3	0·2	3	4 : — : —	10·0	Loose scud; drizzling rain ^{0·2}
22	169	42·7	42·0	0·7	0·3	0·2	5	5 : — : —	10·0	Id.; id.
8 0	188	44·7	42·0	2·7	0·7	0·6	5	4 : — : —	10·0	Id.; id.
2	215	42·8	41·8	1·0	0·8	0·6	4	4 : — : —	10·0	Scud; id.
4	237	42·1	40·1	2·0	0·9	0·5	4	4 : — : —	10·0	Id.; dense cirro-stratus.
6	280	42·0	40·2	1·8	0·2	0·3	4	4 : — : —	9·8	Id.; id.; cirro-strati; sky to E.
8	297	40·0	38·7	1·3	0·2	0·2	5	4 : — : —	10·0	Id.; id.; id.
10	321	39·7	38·5	1·2	0·1	0·0	6		10·0	Id.
18	29.370	29·7	29·7	0·0	0·0	0·0			0·5	Sheets of cirro-cumuli. ☀
20	393	35·5	35·2	0·3	0·1	0·0	20		0·3	Id.
22	410	41·6	39·6	2·0	0·1	0·1	22		0·8	Cumuli, cirro-strati, and haze on horizon. ☀
9 0	413	47·7	42·7	5·0	0·1	0·1	24	24 : — : —	9·5	Scud and cumuli; cirro-strati.
2	409	49·2	43·2	6·0	0·1	0·1	23	24 : — : —	7·5	Id.; id.; hazy on horizon. ☀
4	401	50·9	44·3	6·6	0·1	0·1	24	25 : — : —	8·0	Scud and loose cumuli; cirro-cumulo-strati.
6	405	47·2	44·2	3·0	1·4	0·1	18	24 : — : —	6·0	Scud and cumuli; cumulo-strati; rain falling to E.
8	444	43·4	40·8	2·6	1·0	0·1	19	24 : — : —	7·0	Scud; cumuli and cumulo-strati.
10	439	40·2	38·8	1·4	0·2	0·1	18		2·0	Scud and cirro-strati. ☀
18	29.466	37·0	36·0	1·0	0·4	0·1	20	26 : — : —	5·0	Scud and cirro-strati.
20	482	41·4	40·1	1·3	0·2	0·1	20	— : 26 : —	4·0	Cirro-strati, cirro-cumuli, and cirri. ☀
22	488	45·3	41·7	3·6	0·2	0·1	23		2·0	Loose scud and cumuli, cumulo-strati, and cirro-strati. ☀
10 0	432	48·9	43·0	5·9	0·2	0·1	24	24 : — : —	8·0	Scud and cumuli; cirro-strati. ☀
2	490	50·8	46·2	4·6	0·2	0·3	17	25 : — : —	8·5	Id.; id.
4	473	50·7	45·8	4·9	0·5	0·3	18	25 : — : —	9·5	Cumuli and cirro-stratus scud.
6	459	50·8	45·4	5·4	0·6	0·5	17	24 : — : 23	3·5	Loose cumuli; woolly cir.; piles of cumuli; cirro-strati. ☀

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From		
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
10 8	29.480	43.5	40.7	2.8	0.6	0.2	18	— : — : 24	7.0
10	468	37.7	37.0	0.7	0.1	0.1	18		8.0
18	29.359	35.0	34.6	0.4	0.0	0.0	8	— : 18 : —	10.0
20	335	38.9	37.9	1.0	0.0	0.0			10.0
22	290	46.7	44.0	2.7	0.4	0.9	16	14 : — : —	10.0
11 0	246	47.0	44.2	2.8	3.1	1.3	14	14 : — : —	10.0
2	225	49.0	46.0	3.0	3.7	1.3	14	15 : — : —	10.0
4	189	51.0	47.8	3.2	1.5	0.2	12	14 : — : —	10.0
6	153	49.7	47.4	2.3	1.1	0.2	15	14 : — : —	10.0
8	125	46.0	45.2	0.8	0.2	0.1	2	14 : — : —	10.0
10	103	45.4	44.9	0.5	0.3	0.2	4		10.0
23 ¹ ₂	29.086	58.2	53.7	4.5	0.5	0.4	16	18 : — : —	8.0
12 18	29.205	49.0	46.6	2.4	2.9	0.4	14	13 : 15 : —	10.0
20	185	50.3	48.2	2.1	1.2	0.1	14	— : 15 : —	10.0
22	160	51.8	49.7	2.1	0.5	1.0	16	— : 15 : —	10.0
13 0	187	53.2	50.6	2.6	1.0	0.7	18	18 : — : —	9.8
2	188	58.0	52.3	5.7	1.7	1.6	17	16 : 17 : 21	7.0
4	186	58.6	53.1	5.5	2.3	0.8	16	18 : — : —	5.0
6	231	52.7	50.8	1.9	2.5	0.2	17	18 : — : —	9.9
8	289	50.0	48.0	2.0	1.5	0.8	17	18 : — : —	9.5
10	341	50.0	48.8	1.2	1.0	1.1	18		10.0
18	29.463	43.4	42.8	0.6	1.3	0.1	18		1.0
20	499	47.7	46.0	1.7	0.1	0.0	24		10.0
22	528	52.2	49.5	2.7	0.0	0.0	16	16 : — : —	10.0
14 0	531	56.9	52.2	4.7	0.0	0.0	14	16 : — : —	9.5
2	538	53.4	50.4	3.0	1.1	0.1	4	— : 16 : —	7.5
4	525	54.6	50.4	4.2	0.1	0.1	7	16 : — : —	10.0
6	533	56.2	52.4	3.8	0.3	0.1	11	— : 16 : —	10.0
8	564	51.6	49.0	2.6	0.3	0.1	7		10.0
10	586	50.7	47.7	3.0	0.0	0.0	7		9.8
18	29.597	45.4	45.1	0.3	1.2	1.3	3	4 : — : —	10.0
20	619	44.5	44.3	0.2	1.2	0.7	4		10.0
22	637	45.0	44.6	0.4	1.3	0.8	4		10.0
15 0	675	45.6	44.7	0.9	1.2	0.8	6		10.0
2	694	45.8	45.4	0.4	0.8	0.4	5		10.0
4	730	45.1	44.9	0.2	0.9	0.3	4		10.0
6	740	45.2	44.9	0.3	1.4	0.3	2		10.0
8	784	45.0	44.5	0.5	0.5	0.2	6		10.0
10	809	44.8	44.3	0.5	0.9	0.2	5		10.0
18	29.868	44.7	44.0	0.7	0.3	0.1	4	10 : 8 : —	10.0
20	872	46.2	45.1	1.1	0.1	0.0	0	11 : — : —	10.0
22	887	49.3	47.1	2.2	0.1	0.1	13	12 : — : —	10.0
16 0	875	51.2	48.6	2.6	0.1	0.1	16	— : 13 : —	10.0
2	851	55.8	52.5	3.3	0.6	0.1	11	— : 14 : —	9.9
4	829	53.3	50.5	2.8	0.3	0.1	13	16 : — : —	7.0
6	805	52.2	49.3	2.9	0.4	0.3	18	18 : — : —	6.0
8	815	50.0	47.8	2.2	0.4	0.1	14	18 : — : —	9.0
10	794	46.2	45.2	1.0	0.7	0.1	14		1.0
18	29.728	47.7	46.6	1.1	1.0	0.0	17	16 : — : —	10.0
20	730	47.8	46.6	1.2	0.0	0.0	24	27 : — : —	10.0
22	717	48.5	47.6	0.9	0.1	0.0	18	— : — : —	10.0
17 0	707	48.8	47.7	1.1	0.0	0.0	16		10.0
2	700	49.3	48.2	1.1	0.1	0.0	31		10.0
4	698	47.6	46.6	1.0	0.0	0.0	0		10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

April 12th. At 3^h 30^m, two or three faint peals of thunder heard; from 4^h 40^m till 5^h 30^m, much thunder was heard, chiefly from black clouds to SE. and N., distance generally more than 3 miles; shower of rain about 4^h 40^m, and of hail about 6^h.

April 14th 5^h. The wind blowing from NE by E. (5.)

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. n.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10. 10.0	Thick scud ; rain ^{0.2} ; misty.
17 6	29.714	46.2	45.4	0.8	0.0	0.0	0	0 : — : —	10.0	Scotch mist ; object invisible at 1 mile.
8	730	45.6	45.1	0.5	0.0	0.0	31		10.0	Id. ; rain ¹
10	740	45.3	44.8	0.5	0.0	0.0	30		10.0	
18	29.788	43.0	42.5	0.5	0.0	0.0	4	6 : — : —	10.0	Misty scud ; rain ^{0.2}
20	817	42.7	41.9	0.8	0.1	0.1	3	4 : — : —	10.0	Scud ; cirro-stratus.
22	833	44.7	42.2	2.5	0.1	0.0	1	4 : — : —	10.0	Id. ; id.
18 0	849	46.7	43.2	3.5	0.1	0.1	2	2 : — : —	10.0	Id. ; id.
2	850	47.8	44.4	3.4	0.1	0.2	2	1 : — : —	10.0	Id. ; id.
4	860	48.3	44.8	3.5	0.3	0.1	4	2 : — : —	10.0	Id. ; id.
6	874	46.0	43.4	2.6	0.2	0.0	3	2 : — : —	10.0	Id. ; id.
8	889	44.0	42.3	1.7	0.2	0.1	2	3 : — : —	10.0	Id. ; id.
10	918	43.5	42.2	1.3	0.2	0.1	2		10.0	Id. ; dark.
23 ³	30.022	45.3	41.6	3.7	0.8	0.2	3	7 : — : —	10.0	Scud and loose cumuli ; cirro-stratus.
19 18	30.038	39.0	37.8	1.2	0.8	0.0	8	3 : — : —	9.8	Scud.
20	044	43.5	42.3	1.2	0.0	0.0		1 : — : 2	4.0	Scud and cumuli ; patches of woolly cirri.
22	038	44.8	42.2	2.6	0.4	0.1	8	7 : — : —	4.5	Id. ○
20 0	30.027	47.0	42.0	5.0	0.2	0.1	8	8 : — : —	7.0	Id. ○
2	29.996	49.3	44.3	5.0	0.6	0.2	6	10 : — : —	7.5	Id. ○
4	974	48.5	43.0	5.5	1.1	0.6	6	10 : — : —	2.5	Cumuli. ○
6	958	47.2	42.2	5.0	0.7	0.3	8		1.0	Id. on horizon. ○
8	956	42.5	40.3	2.2	0.4	0.0	4		1.0	Sheets of cirro-strati. ○
10	947	38.5	37.8	0.7	0.1	0.1	2		0.5	Cirro-strati on W. and NW. horizon.
18	29.882	33.6	33.4	0.2	0.0	0.0			10.0	Fog, objects invisible at 200 yards.
20	880	37.7	37.0	0.7	0.0	0.0			10.0	Id., id. half-a-mile.
22	865	41.2	39.7	1.5	0.0	0.0	12	6 : — : —	3.0	Thin scud ; woolly cirri, cumuli, and cumulo-strati. ○
21 0	841	47.0	43.6	3.4	0.1	0.1	4	8 : 16 : —	8.5	Id. ; loose cumuli, cirro-strati, and cirri. ○
2	828	45.6	43.2	2.4	0.5	0.2	17		9.0	Seud, cumuli, nimbi, cirro-strati, and woolly cirri.
4	800	46.5	42.7	3.8	0.4	0.1	2	10 : 16 : —	7.0	Seud and cumuli ; cirro-strati ; showers occasionally. ○
6	807	43.3	42.2	1.1	0.6	0.1	22	10 : — : —	9.5	Seud ; thick woolly cirri, cir.-str. and cirri ; heavy shower of hail and rain at 5h.
8	837	41.3	39.2	2.1	0.1	0.1	5	— : 14 : —	9.5	Cir.-cum.-str. ; cirro-stratus, haze, and cum. ; thick scud
10	822	39.0	37.9	1.1	0.1	0.1	8		2.5	Seud and cirro-strati on horizon. [lying on Cheviot.
18	29.799	35.3	35.0	0.3	0.0	0.0		6 : 8 : —	9.7	Seud ; cirro-strati and woolly cirri.
20	805	41.6	40.6	1.0	0.0	0.0	4	5 : — : —	10.0	Id. ; drops of rain.
22	807	44.3	42.0	2.3	0.4	0.2	4	6 : — : —	10.0	Id. ; id.
22 0	804	44.7	43.7	1.0	0.8	0.8	4	7 : — : —	9.8	Id. ; shower ² ; heavy shower of hail at 23 ^h .
2	812	48.1	44.0	4.1	1.9	0.8	5	7 : — : —	9.8	Id. ; cirro-strati ; occasional showers.
4	827	48.3	44.3	4.0	1.9	1.0	5	7 : — : —	6.5	Seud and cumuli. ○
6	834	47.2	42.8	4.4	1.3	1.2	6	7 : — : —	3.0	Loose seud ; cir.-cum.-str., cir.-str., and woolly cirri. ○
8	856	43.3	40.3	3.0	1.3	0.2	3	6 : — : —	3.0	Cirro-cumulo-strati ; cirro-strati.
10	866	40.7	39.2	1.5	0.3	0.1	2		2.5	Id. ; id.
18	29.834	41.3	39.1	2.2	0.5	0.1	5	2 : — : —	9.5	Seud ; cirro-strati.
20	824	43.0	40.5	2.5	1.7	2.1	2	2 : 5 : —	4.0	Id. ; cirro-cumulo-strati. ○
22	826	45.2	41.7	3.5	2.2	1.7	2	4 : — : —	9.0	Id. ; id. ; cumulo-strati.
23 0	815	44.2	42.0	2.2	2.7	1.7	2	3 : — : —	10.0	Id. ; dense mass of cirro-stratus.
2	786	48.2	44.7	3.5	2.2	1.6	3	4 : — : —	10.0	Id. ; cirro-stratus ; woolly cirri. ○
4	765	48.7	44.7	4.0	2.2	2.3	2	3 : 6 : —	9.9	Id. ; cirro-cumulo-strati ; cirro-strati.
6	741	43.6	42.7	0.9	2.6	0.4	3	2 : 2 : —	9.5	Thin seud ; large cir.-cum.-str. ; cir.-str. ; heavy shower of rain and
8	735	43.0	42.0	1.0	1.6	0.8	1	2 : — : —	10.0	[hail at 5h 45 ^m . Seud ; cirro-stratus ; rain ²⁻³
10	728	42.3	41.7	0.6	0.9	0.6	2		10.0	Id.
18	29.745	43.6	43.0	0.6	1.1	0.1	2		10.0	Homogeneous seud and cirro-stratus ; a tendency to drizzle.
20	754	44.0	42.6	1.4	0.7	0.8	4	5 : — : —	10.0	Seud ; rain ^{0.5}
22	734	43.0	41.7	1.3	1.3	0.9	1	5 : — : —	10.0	Id. ; id.
24 0	693	45.2	44.1	1.1	1.4	1.1	4	5 : — : —	10.0	Id. ; rain ^{0.2}
2	688	45.3	43.8	1.5	1.2	0.7	6	5 : — : —	10.0	Id. ; drifting rain ^{0.5}

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (seud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	pt.	pt.	pt.	
4 4	in. 29.674	46.0	45.3	0.7	1.8	0.7	6	6 : — : —	0—10.	Scud ; drizzling rain ^{0.5}
6	688	45.4	43.8	1.6	1.2	0.5	6	6 : 12 : 8	10.0	Id. ; cumulous scud ; woolly cirri ; drizzling rain ^{0.2}
8	728	45.3	44.3	1.0	0.6	0.1	6	9 : 8 : —	9.8	Thick scud ; cirro-strati and cirro-cumulo-strati.
10	772	44.0	43.0	1.0	0.2	0.1	5		10.0	Scud and cirro-stratus.
18	29.776	43.0	42.8	0.2	0.0	0.0			10.0	Homogeneous mass of clouds ; misty.
20	791	45.0	44.2	0.8	0.0	0.0	4	4 : — : —	10.0	Id. ; id.
22	801	48.7	46.3	2.4	0.0	0.0	31	8 : 11 : —	8.0	Scud ; cirro-cumulo-strati ; cumulo-strati. [lately.
25 0	796	51.0	47.0	4.0	0.1	0.1	5	5 : 8 : —	9.8	Loose scud ; loose cum. ; cir.-cum.-str. ; drops of rain
2	792	51.0	47.6	3.4	0.5	0.3	3	4 : 8 : —	9.5	Scud and loose cumuli ; id.
4	779	50.1	46.0	4.1	0.6	0.1	2	6 : 8 : —	7.0	Scud ; loose cumuli. ☺
6	767	49.4	45.8	3.6	0.2	0.2	2	2 : — : —	9.0	Scud and cirro-strati.
8	773	45.8	43.3	2.5	0.7	0.2	2	2 : — : —	10.0	Id.
10	776	44.2	43.3	0.9	0.7	0.7	1		10.0	Id. ; dark ; rain ^{0.5}
23 ³ ₄	29.692	40.5	37.4	3.1	3.7	2.7	1	3 : 3 : —	7.0	{ Cumuli and cirro-strati ; occasional showers of rain, hail, and snow throughout the day.
26 18	29.676	35.6	33.3	2.3	4.5	0.1	28	— : 0 : —	7.5	Cirro-cumulo-strati ; cumuli on horizon.
20	685	39.6	35.7	3.9	1.8	0.9	29	— : 0 : —	4.0	Id. ; id. ☺
22	695	42.5	36.8	5.7	1.5	0.7	29	0 : 0 : —	9.5	Scud and cirro-cumulo-strati ; cirro-strati.
27 0	682	45.0	38.4	6.6	1.2	0.4	28	31 : 31 : —	9.8	Id. ; id.
2	680	45.3	39.3	6.0	0.7	0.3	27	— : 29 : —	10.0	Cirro-stratus scud.
4	656	46.6	40.2	6.4	0.3	0.1	24	29 : 29 : —	10.0	Thick scud and cirro-strati.
6	643	45.6	39.8	5.8	0.0	0.0	22	29 : 29 : —	9.8	Id. ; cirro-cumulo-strati.
8	633	42.7	39.4	3.3	0.1	0.0	23	— : 28 : —	9.5	Wavy cir.-str. and cir.-cum. ; clouds tinged red to W.
10	634	40.0	38.4	1.6	0.0	0.0	20		8.0	Scud and cirro-strati.
18	29.653	36.0	35.1	0.9	0.0	0.0		0 : 0 : —	9.5	Thick cir.-str. and scud ; a slight shower of rain and
20	672	40.8	38.5	2.3	0.0	0.0	0	28 : — : —	9.5	Cirro-stratus scud. [hail lately.
22	693	46.2	40.2	6.0	0.1	0.0	0	30 : — : —	9.8	Id. ; cumuli on N. and E. horizon.
28 0	711	45.4	39.3	6.1	0.2	0.1	30	30 : 30 : —	9.6	Scud and cirro-cumulo-strati ; cum. ; rain falling to S.
2	736	46.3	39.0	7.3	1.1	0.3	30	30 : 30 : —	9.5	Id. ; id. ; cumulo-strati.
4	750	46.5	39.4	7.1	0.8	0.9	0	30 : — : —	6.0	Scud and cum. ; occasionally a few drops of rain and hail.
6	782	46.3	40.3	6.0	0.8	0.2	0		0.7	Cumulo-strati and cirro-strati round horizon. ☺
8	821	42.2	37.7	4.5	0.3	0.1	4	29 : 29 : —	0.8	Scud and cirro-cumulo-strati. ☺
10	848	33.2	32.2	1.0	0.0	0.0	20		0.2	Cirro-strati on N. horizon. ☺
18	29.885	33.4	32.7	0.7	0.0	0.0	18		0.7	Sheets of woolly cirri and cirro-cumulo-strati. ☺
20	899	42.7	38.7	4.0	0.1	0.1	22	— : 28 : —	8.0	Cirro-cumulo-strati.
22	912	48.0	42.2	5.8	0.5	0.2	23	29 : — : —	6.0	Scud and loose cumuli ; cirro-strati. ☺
29 0	903	51.2	46.2	5.0	1.2	0.2	28	— : 28 : —	9.8	Cirro-stratus scud.
2	873	52.7	46.6	6.1	1.3	1.6	23	24 : — : —	7.0	Scud and loose cumuli ; cirro-strati and woolly cirri.
4	869	52.0	46.6	5.4	2.3	1.2	24	24 : — : —	6.0	Cumuli.
6	858	52.5	45.8	6.7	2.6	1.2	25		2.0	Loose cumuli ; cumulo-strati and cirro-strati. ☺
8	919	44.7	42.7	2.0	1.8	1.2	0		9.5	Dense mass of thick scud.
10	29.977	40.2	39.5	0.7	0.8	0.1	2		10.0	Scud ; rain ¹ since last observation.
18	30.041	38.5	37.1	1.4	0.3	0.0	2	— : 28 : —	9.8	Cirro-stratus scud and cirro-cumulo-strati.
20	058	42.4	40.0	2.4	0.0	0.0	17		10.0	Dense cirro-stratus ; patches of scud to E.
22	058	46.0	41.8	4.2	0.0	0.0	17		10.0	Id.
30 0	053	50.3	45.0	5.3	0.0	0.0	18	— : 20 : —	10.0	Id.
2	035	49.2	44.5	4.7	0.1	0.0	18	— : 19 : —	10.0	Id.
4	30.007	50.4	47.0	3.4	0.1	0.1	20	23 : — : —	10.0	Scud and dense cirro-stratus ; light rain lately.
6	29.994	48.3	46.0	2.3	0.0	0.0		22 : — : —	10.0	Id. ; slight drizzle.
8	30.002	47.0	44.3	2.7	0.2	0.0	21	20 : — : —	10.0	Cirro-stratus scud ; smoky scud to N. ; cirro-strati.
10	020	45.4	43.4	2.0	0.0	0.0	19		10.0	Id.
18	30.010	44.4	43.4	1.0	0.0	0.0		20 : — : —	10.0	Thick scud and cirro-stratus.
20	020	48.9	46.0	2.9	0.0	0.0	17	22 : — : —	10.0	Id.
22	30.007	53.2	49.0	4.2	0.1	0.0	18	20 : — : —	10.0	Id.
1 0	29.982	56.0	51.2	4.8	0.7	0.5	19	20 : — : —	10.0	Scud and cirro-stratus ; atmospheric haze.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

April 29th 8^h. A dense mass of thick scud has risen from N. and NE., and is now nearly over the whole sky; there are different shades of colour; the lowest is whitish smoky scud, and is detached from the rest; there is a bluish cloud, and a very black one; they are moving in various directions, but principally from N.

DAILY METEOROLOGICAL OBSERVATIONS, MAY 1—7, 1846.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
1 2	29.971	54.2	50.8	3.4	1.5	0.6	19	21 : — : —	10.0	Scud and cirro-stratus ; atmospheric haze.
4	935	55.7	52.4	3.3	1.2	1.7	20	22 : — : —	10.0	Scud ; dense cir.-str. and cir. haze ; atmospheric haze.
6	912	53.2	51.2	2.0	1.3	0.4	20	22 : — : —	10.0	Thin scud ; id. ; id.
8	893	52.0	50.3	1.7	0.7	0.1	18	22 : — : —	10.0	Id. ; id. ; id.
10	853	51.9	50.9	1.0	1.4	0.4	18		10.0	Id. ; id. ; id.
18	29.817	51.3	48.4	2.9	2.9	0.1	18	25 : — : —	9.8	Scud ; cirro-strati.
20	835	53.1	48.4	4.7	1.3	0.8	24	25 : — : —	9.0	Id. ; id. ; cirro-cumuli.
22	840	54.8	49.0	5.8	2.3	1.8	24	26 : — : —	6.0	Id. ; id.
2 0	865	57.5	50.3	7.2	1.8	1.1	22	26 : — : —	8.5	Scud and loose cumuli ; cirro-strati. Θ [of cir.-str. Θ
2	864	59.7	50.7	9.0	1.4	1.5	24	26 : — : 24	6.5	Id. ; woolly cirri ; cum.-str. ; sheets
4	865	58.1	50.1	8.0	2.0	1.0	26	25 : 24 : —	9.9	Masses of scud ; cirro-cumulo-strati and cirro-strati.
6	863	55.2	47.5	7.7	1.9	1.1	24		10.0	Dense mass of cirro-stratus ; cirro-cumulo-str. above.
8	894	52.7	46.7	6.0	1.0	0.3	20		10.0	Cir.-str. over the whole sky ; a few patches of scud.
10	906	51.0	44.6	6.4	0.5	0.3	22		10.0	As before.
3 0½	29.898	56.0	49.7	6.3	0.5	0.3	12		8.0	Scud and cumuli.
18	29.809	44.4	42.8	1.6	1.3	0.0	6		10.0	Nearly homogeneous ; scud on E. horizon.
20	807	44.8	42.2	2.6	0.6	0.7	12	14 : — : —	10.0	Scud ; dense cirrus mass : rain ⁰⁻⁵
22	792	43.4	41.9	1.5	1.3	0.2	10	10 : — : —	10.0	Id. ; dense mass of cirro-stratus and scud ; rain ⁰⁻⁵
4 0	752	42.8	40.7	2.1	1.2	0.9	10		10.0	Dense cirro-stratus and scud ; rain ⁰⁻⁵
2	708	44.0	41.4	2.6	1.2	0.7	10	10 : — : —	10.0	Masses of scud ; cirro-strati ; drops of rain.
4	661	44.0	41.7	2.3	1.5	0.6	8	— : 13 : —	10.0	Masses of wavy cirro-strati ; loose scud ; rain ¹
6	624	41.6	40.6	1.0	2.2	1.0	11	12 : — : —	10.0	Scud ; dense cirro-stratus ; rain ² ; rain ³⁻⁴ 15m ago.
8	578	42.9	41.1	1.8	1.9	0.9	11	12 : — : —	10.0	Id. ; id. ; id.
10	556	44.0	42.1	1.9	1.9	0.4	12		10.0	Thick scud and cirro-stratus.
18	29.431	45.5	44.0	1.5	0.9	0.2	12	12 : — : —	10.0	Scud ; mass of cirro-stratus.
20	420	47.7	46.2	1.5	0.2	0.1	9	14 : — : —	10.0	Id. ; id.
22	395	53.5	50.0	3.5	0.1	0.1	14	18 : — : —	7.0	Scud and loose cumuli ; woolly cirri. Θ
5 0	386	55.4	50.9	4.5	0.2	0.1	4	20 : — : —	10.0	Thick scud.
2	347	56.0	52.1	3.9	0.2	0.2	0	20 : — : 19	5.0	Cumuli ; woolly cirri. Θ
4	324	55.8	52.2	3.6	0.3	0.3	6	17 : — : —	8.0	Scud and cumuli ; cumulo-strati and haze on horizon.
6	305	51.1	50.0	1.1	0.6	0.1	6		10.0	Rain ²⁻⁴ ; 5h 45m, two peals of thunder, the interval for one of them
8	292	49.9	48.8	1.1	0.2	0.2	0	9 : — : —	10.0	Scud ; dense cir.-str. ; occasional shower ²⁻⁴ being 24 ⁸ .
10	271	46.5	46.0	0.5	0.3	0.1	4		10.0	Rain ¹⁻²
18	29.194	45.0	44.7	0.3	0.4	0.0	0		10.0	Homogeneous ; rain ⁰⁻²
20	193	46.2	45.4	0.8	0.1	0.1	23	— : 29 : —	10.0	Cirro-stratus scud.
22	193	51.4	48.6	2.8	0.1	0.1	26	25 : — : —	10.0	Thick scud and loose cumuli.
6 0	195	51.3	48.4	2.9	0.3	0.1	27	26 : 26 : —	10.0	Thick scud and cirro-strati.
2	202	53.7	50.0	3.7	0.3	0.2	30	25 : 25 : —	10.0	Id.
4	204	53.0	48.7	4.3	0.4	0.2	31	— : 24 : —	8.5	Cirro-cumulo-strati ; cumuli ; woolly cirri.
6	212	53.5	49.2	4.3	0.4	0.1	30	24 : — : —	8.5	Scud, loose cumuli, and cirro-cumulo-strati. Θ
8	227	51.2	48.3	2.9	0.2	0.0	26	25 : — : —	9.8	Id. ; cirro-strati ; id. Θ
10	241	50.0	47.0	3.0	0.3	0.1	20		9.8	Scud and cirro-strati ; drops of rain.
18	29.320	41.7	40.2	1.5	0.5	0.1	20		0.2	Cirro-strati and linear cirri on horizon. ○
20	342	47.3	43.7	3.6	0.4	0.3	19	21 : — : —	3.0	Scud and loose cumuli ; cumulo-strati on horizon. ○
22	348	52.7	45.2	7.5	1.2	0.8	19	24 : — : —	7.0	Scud and cumuli ; woolly cirri. ○
7 0	355	56.0	47.8	8.2	2.7	0.9	19	23 : — : —	9.0	Id. ○
2	366	53.5	46.6	6.9	2.1	1.4	24	24 : — : —	9.5	Scud, loose cumuli, and cirro-strati.
4	369	53.1	47.0	6.1	1.9	0.6	18	23 : — : —	9.5	Scud, loose cum., cir.-cum.-str., woolly cir., and cir. haze.
6	378	53.9	48.1	5.8	2.2	1.4	20	23 : — : —	7.0	Masses of cir-str. ; woolly cir. and cir. haze over the sky.
8	381	49.8	46.2	3.6	2.0	1.2	20	— : 24 : —	10.0	Thick scud and cirro-stratus.
10	405	48.0	45.6	2.4	1.7	0.7	20		10.0	Scud ; cirro-strati. ○
18	29.448	46.9	43.9	3.0	0.9	0.2	18	24 : — : —	1.5	Scud ; cirro-strati. ○
20	482	50.4	45.3	5.1	0.9	0.8	22	25 : — : —	9.0	Id. ; id. ○
22	518	53.0	46.9	6.1	1.9	1.6	21	25 : — : —	4.0	Cumuli. ○

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

May 7th. Cuckoo heard.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	lbs.	lbs.	pt.	pt.	pt.
d. h.	in.	°	°	°							
8 0	29.548	56.0	48.4	7.6	2.3	1.1	26	25 : — : —	0—10.	Cumuli.	⊖
2	582	57.9	49.1	8.8	1.6	0.9	25	24 : — : —	5.0	Id.	⊖
4	605	59.2	50.2	9.0	2.2	1.2	23	27 : — : —	6.0	Id.	⊖
6	647	57.6	50.0	7.6	1.1	0.5	22	26 : — : —	5.0	Id.; linear cirri.	⊖
8	673	52.1	47.0	5.1	0.4	0.3	26		9.0	Masses of cirro-strati; cirrus haze; solar halo.	
10	698	47.0	43.6	3.4	0.3	0.0	22		2.0	Sheets of cirri and cir. haze; traces of a lunar halo. ⊫	
18	29.730	40.4	39.8	0.6	0.2	0.0	20		0.2	Cirri and haze round horizon.	⊖
20	716	47.7	46.3	1.4	0.2	0.1	18		0.5	Scud, cirro-strati, and cirri round horizon.	⊖
22	680	57.2	51.1	6.1	0.4	0.3	15	15 : — : —	7.0	Cumuli; a few tufts of cirri.	⊖
9 0	640	59.4	51.4	8.0	1.3	1.8	16	15 : — : 20	3.0	Id.; woolly cirri.	⊖
2	612	60.6	51.6	9.0	1.8	1.7	18	18 : — : —	7.0	Masses of cum.; woolly cirri and cir. haze; solar halo. ⊖	⊖
4	557	61.3	52.3	9.0	2.1	1.2	18	17 : — : 22	8.0	Id.; woolly and mottled cirri; very hazy on hor. ⊖	⊖
6	524	57.9	51.6	6.3	2.0	0.3	20	18 : — : —	10.0	Thick scud and cirro-stratus.	
8	488	55.9	51.6	4.3	0.4	0.1	18	17 : — : —	10.0	Id.	
10	452	53.0	49.8	3.2	0.5	0.8	19	18 : — : —	9.5	Scud; cir.-str. and cir. haze; portion of a lunar halo. ⊫	
23 ¹	29.366	55.3	49.0	6.3	2.8	0.9	19	21 : — : —	3.0	Loose cumuli; showers of rain and hail about 5 ^h .	
10 18	29.650	47.0	44.3	2.7	3.9	0.5	20		1.0	Scud and cirro-strati to S.; cirri and haze to N.	⊖
20	674	50.2	46.7	3.5	1.0	0.7	19	21 : — : —	9.0	Scud and loose cumuli; cirri and cirrus haze.	⊖
22	684	54.5	49.6	4.9	2.1	2.0	17	21 : — : —	6.0	Id.; id.	
11 0	698	58.5	50.8	7.7	3.0	2.3	18	21 : — : —	8.0	Id.; id.	⊖
2	706	58.2	49.9	8.3	3.6	3.0	19	21 : — : —	2.0	Id.	⊖
4	698	57.8	48.8	9.0	4.0	2.9	20	21 : — : —	6.0	Id.	⊖
6	706	57.0	49.5	7.5	3.6	1.6	18	20 : — : —	2.0	Id.; cirro-strati.	⊖
8	726	51.4	46.5	4.9	2.5	1.0	18	— : — : 22	7.0	Woolly cirri.	
10	741	46.6	44.0	2.6	1.2	0.4	18		4.0	Id.; cirro-strati.	⊖
18	29.718	43.5	41.4	2.1	0.7	0.1	18	— : 20 : 20	6.0	Thick woolly cirri and cirro-strati.	●
20	711	53.9	48.7	5.2	0.6	0.9	16		8.0	Thick woolly cirri; part of a halo.	⊖
22	717	58.0	50.2	7.8	1.6	0.8	18	— : 22 : 22	9.0	Woolly cirri and cirro-strati; patches of scud.	⊖
12 0	708	60.8	52.0	8.8	2.1	1.7	18		9.8	Masses of cumuli; woolly cirri and cirro-strati.	
2	695	63.6	53.7	9.9	2.4	2.0	16	15 : — : —	9.8	Id.; cirrus haze and cirro-stratus.	⊖
4	679	62.2	52.5	9.7	1.7	0.5	17	16 : — : —	10.0	Cum.; cir.-str. and cir. haze; hazy and electric-looking.	
6	682	58.4	52.2	6.2	1.4	0.9	15		10.0	Scud and electric-looking cum.; cirro-stratus and haze.	
8	696	53.3	50.0	3.3	2.2	0.3	14	16 : — : —	10.0	Thick dark scud; cir.-str. and cir. haze; slight showers	
10	722	51.9	48.6	3.3	0.6	0.0			10.0	Thick scud and cirro-stratus. [occasionally.]	
18	29.758	44.6	43.7	0.9	0.7	0.0	4		8.5	Thick woolly cirri and cirrus haze; patches of scud.	⊖
20	766	49.8	47.8	2.0	0.1	0.1	4	— : — : 10	9.5	Thick woolly cirri; cumulo-strati to NW.	⊖
22	774	56.9	51.6	5.3	0.3	0.7	7	9 : — : —	7.0	Scud and loose cumuli; cirri and cirrus haze.	
13 0	777	55.5	50.6	4.9	1.8	1.3	6	10 : — : —	9.0	Masses of cum.; woolly cirri and cir. haze; solar halo.	⊖
2	793	57.6	52.4	5.2	1.4	0.8	6	9 : — : 12	9.0	Id.; id.	⊖
4	805	56.3	51.6	4.7	1.6	1.2	6	9 : — : 12	7.5	Thin scud and cumuli; woolly cirri.	⊖
6	831	54.3	50.4	3.9	1.5	0.8	8	10 : — : —	10.0	Scud and cumuli; cirro-stratus and cirrus haze.	
8	859	49.3	46.2	3.1	0.6	0.5	4		9.0	Woolly cirri, cirro-strati, and cirrus haze.	
10	899	46.4	45.0	1.4	0.5	0.3	3	* 6 : — : —	10.0	Scud; cirro-stratus and cirrus haze.	
18	29.953	46.3	44.8	1.5	0.6	0.7	4	4 : — : —	10.0	Cirro-stratus scud.	
20	979	47.5	45.4	2.1	0.8	0.4	2	5 : — : —	9.8	Scud and loose cumuli.	
22	984	52.6	48.8	3.8	0.8	0.9	4	7 : — : —	7.0	Id.; woolly cirri.	⊖
14 0	978	54.0	49.7	4.3	0.8	0.4	2	7 : — : —	4.0	Id.; id.	⊖
2	968	55.6	48.5	7.1	0.8	0.5	6		0.8	Masses of scud and cum.; thin cir. and cir. haze; halo.	⊖
4	954	55.2	48.4	6.8	0.8	0.8	5	6 : — : —	0.8	Id.; thin woolly cirri.	⊖
6	952	54.4	48.0	6.4	0.9	0.4	3		0.5	A few small patches of scud and cum.; woolly cirri.	⊖
8	955	50.8	46.5	4.3	0.7	0.1	6		0.3	Cirrus haze and cirri on horizon.	⊖
10	939	44.5	43.0	1.5	0.2	0.0	0		0.3	Cirri on horizon.	
18	29.885	41.2	41.0	0.2	0.1	0.0	18		10.0	Homogeneous; misty.	
20	876	43.8	42.9	0.9	0.1	0.1	24	22 : — : —	9.8	Cirro-stratus scud; misty.	●

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

May 12^d 20^h. Very hazy round horizon; small portion of a halo.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From				
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0-10.	
14 22	29.831	50.0	46.2	3.8	0.1	0.1	13	12 : — : —	0-4	Masses of cumuli to S. and SE. ○
15 0	784	56.7	48.9	7.8	1.3	0.8	12	14 : — : —	0-8	Small detached masses of cumuli. ○
2	745	59.0	51.1	7.9	0.9	0.3	16	15 : — : —	5-0	Loose cumuli; hazy. ○
4	702	62.6	52.6	10.0	1.1	0.2	16	21 : — : —	8-5	Id.; id. ○
6	674	56.9	50.2	6.7	1.1	0.8	14	20 : — : —	8-0	Id.; id. ○
8	667	50.7	46.3	4.4	0.8	0.4	15		2-5	Cirri and cirrus haze on horizon.
10	671	46.2	41.9	4.3	0.4	0.4	17		4-0	Cirri, cirro-strati, and cirrus haze.
18	29.590	39.4	38.5	0.9	0.4	0.0			2-5	Cir.-cum.-str., cir.-str., woolly cirri, and cirrus haze. ○
20	575	47.5	43.7	3.8	0.1	0.0	6		2-5	Woolly cirri and cirro-strati; hazy. ○
22	521	54.0	47.4	6.6	0.2	0.2	14	10 : — : 20	1-0	Masses of loose cumuli; sheets of woolly cirri. ○
16 0	490	55.0	47.0	8.0	0.8	0.8	15		0-5	Small patches of cumuli. ○
2	459	55.6	47.9	7.7	1.5	1.5	12	12 : — : —	6-0	Cumuli. ○
4	422	54.6	48.2	6.4	1.3	1.1	12	13 : — : —	9-0	Scud; cumuli and cirro-strati. ○
6	373	52.2	46.6	5.6	1.3	1.0	8	11 : — : —	6-5	Cumuli; streaks of cirri. ○
8	358	48.6	43.2	5.4	1.5	0.9	8	11 : — : 14	3-0	Loose cumuli, woolly cirri, cirrus haze, and sheets of scud; rain ⁰⁻⁵ commenced at 9 ^h 50 ^m . [cir.-str. ○
10	29.326	46.0	44.5	1.5	0.5	0.3	6	9 : — : —	10-0	
23 ¹ ₂	28.909	47.5	47.2	0.3	1.1	0.5	3	6 : — : —	10-0	Misty scud; drizzling rain.
17 3	826	
8	877	51.4	49.4	2.0	0.8	0.3	18	— : 20 : —	10-0	Thick cirro-stratus scud.
18	28.807	47.8	47.2	0.6	0.3	0.0	14	— : 12 : —	7-0	Cirro-cumulo-strati; cirro-strati; patches of scud. ○
20	824	49.6	47.0	2.6	0.3	0.1	16	15 : — : —	8-5	Scud; cirro-strati. [drops of rain.
22	816	50.5	46.8	3.7	2.0	2.0	15	14 : 14 : —	8-5	Masses of scud and loose cumuli; cirro-strati; a few
18 0	802	54.6	49.6	5.0	1.8	1.7	14	14 : — : —	9-8	Scud, loose cumuli, and cirro-strati.
2	803	50.2	48.8	1.4	1.1	0.2	10	13 : — : —	10-0	Scud and cirro-strati; showers since 1 ^h .
4	793	50.3	47.3	3.0	0.8	0.7	10	12 : — : —	10-0	Id.
6	772	50.8	47.5	3.3	0.7	0.4	6	12 : — : —	10-0	Scud and cirro-stratus.
8	780	48.0	47.5	0.5	0.6	0.2	4	8 : — : —	10-0	Scud; rain ⁰⁻⁵
10	784	48.4	47.8	0.6	0.2	0.1	2		10-0	Scud and cirro-strati; drops of rain.
18	28.919	47.8	46.3	1.5	0.2	0.0	21		10-0	Cirro-stratus scud and cirro-strati.
20	28.976	48.8	46.2	2.6	0.8	0.4	24	24 : — : —	10-0	Scud; cirro-strati.
22	29.028	53.7	48.0	5.7	1.8	1.0	24	24 : 24 : —	8-0	Scud and loose cum.; sheets of cir.-str. and wool, cirri. ○
19 0	067	55.9	48.3	7.6	1.9	1.6	21	24 : 26 : 26	8-0	Cumuli; cirri and cirro-strati, moving very slowly. ○
2	096	59.0	51.2	7.8	2.2	2.4	18	24 : — : —	9-5	Scud, cumuli, and cirro-strati. ○
4	119	57.0	49.7	7.3	3.1	1.9	19	21 : — : —	6-0	Id., id., and woolly cirri. ○
6	129	56.1	47.1	9.0	1.9	1.6	18	20 : — : —	2-0	Cumuli; cirro-strati to S. ○
8	129	51.1	46.9	4.2	1.9	0.1	18	— : — : 20	9-0	Cirri, cirrus haze, and cirro-strati.
10	104	49.8	46.0	3.8	0.5	1.0	15		10-0	Cirro-strati and cirrus haze.
18	29.006	50.2	47.8	2.4	2.5	0.2	16	— : 17 : —	3-0	Cirro-stratus scud; cirro-strati; hazy on horizon. ○
20	003	53.7	48.4	5.3	2.3	3.0	16	17 : 17 : —	4-5	Scud and cirro-strati; hazy on horizon. ○
22	037	58.5	51.8	6.7	2.8	2.2	16	18 : — : —	7-5	Scud and cumuli.
20 0	074	58.4	51.1	7.3	2.9	1.3	18	17 : — : —	9-0	Id. [in ragged masses.
2	106	56.8	52.2	4.6	1.2	0.3	19	16 : — : —	9-0	Scud, nimbi, and cum.-str.; some of the scud hanging
4	131	58.6	52.3	6.3	0.7	0.5	12	16 : — : —	9-8	Scud and cum.; cir.-str.; a peal of thunder heard to E.
6	169	53.0	49.6	3.4	0.8	0.1	16	15 : — : —	9-8	Scud and cir.-str. [very heavy shower of hail about 3 ^b .
8	215	52.4	49.2	3.2	0.2	0.2	16	— : 12 : —	9-0	Cirro-strati, cirrus haze, and cirri.
10	254	44.5	43.4	1.1	0.5	0.1	16		4-0	Cirro-strati and cirri.
18	29.449	45.7	44.8	0.9	0.2	0.1	22		5-5	Cirro-cumulo-strati and cirro-strati; haze on horizon. ○
20	503	51.2	48.6	2.6	0.1	0.0	28	— : 16 : —	6-0	Id.; haze on horizon. ○
22	544	56.3	51.8	4.5	0.2	0.1	31	20 : 16 : —	2-0	Masses of scud and loose cumuli in two currents. ○
21 0	580	60.3	54.0	6.3	0.2	0.1	8	24 : — : —	5-0	Cumuli; two or three peals of thunder to SE. and also
2	615	53.1	52.1	1.0	1.0	0.5	6		9-0	Thunder-storm. [to N. ○
4	655	58.7	55.2	3.5	0.5	0.2	21		3-5	Cir.-cum.-str., cum., and haze; thunder to S. and SW.
6	672	59.0	54.4	4.6	0.3	0.1	16		1-0	Cumuli and cirro-strati. ○ [since 2 ^h ○
8	722	53.3	50.4	2.9	0.3	0.2	20	— : 26 : —	3-0	Cirro-strati and cirri to W.; cumuli to E.

May 15^d 0^h. Observation made at 0^h 6^m, 16^d 8^h. Coloured parhelia and portion of a solar halo. 17^d 18^h. Observation made at 18^h 7^m.

May 20^d 2^h. Between 1^h 45^m and 2^h 0^m, three peals of thunder heard towards the SE.; slight shower.

May 21^d 2^h. Thunder-storm since about 1^h 20^m, chiefly to northwards; the intervals varying from 2^s to 8^s, generally about 5^s; at 1^h 37^m, a very brilliant flash to NNE., consisting of three simultaneous streaks, followed immediately by a single one, from the horizon to 20° altitude, the interval being 5^s; about 1^h 45^m, it commenced raining, the drops being very large; at 1^h 50^m, it commenced to hail very violently, some of the hailstones being about 0.3 inch in diameter, afterwards becoming rain. The clouds are chiefly thick black scud and cumulo-stratus, moving from various directions, but principally from ENE.; the last peal of thunder was heard about 1^h 50^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m	pt.	pt.	pt.		
d. h. 21 10	in. 29.750	° 46.2	° 45.3	° 0.9	lbs. 0.1	lbs. 0.0	pt. 22	pt.	pt.	0-10. 2.0	Cirro-strati and cirri.
18	29.810	49.2	47.8	1.4	0.1	0.0	24	19 : — : —	8.0	Misty scud ; woolly cirri and cirrous haze. ☒	
20	832	53.7	51.3	2.4	0.6	0.2	18	19 : — : —	9.9	Scud ; cirro-stratus. [cirro-stratus.	
22	842	57.6	52.2	5.4	0.7	0.3	22	22 : — : —	10.0	Masses of scud and loose cum. ; dense homogeneous	
22 0	862	58.6	53.5	5.1	0.9	0.8	18	22 : — : —	10.0	Patches of scud ; dense homogeneous cirro-stratus.	
2	860	57.0	52.4	4.6	1.1	1.0	20	22 : — : —	10.0	Id. ; id.	
4	843	58.8	53.2	5.6	1.6	1.8	20	20 : 26 : —	9.9	Scud ; cirro-cumulo-strati.	
6	831	53.6	50.1	3.5	2.4	1.3	21	22 : — : —	10.0	Thick scud.	
8	857	52.0	50.0	2.0	1.3	0.8	18	21 : — : —	10.0	Id.	
10	871	51.5	50.2	1.3	0.7	0.2	20	21 : — : —	10.0	Id.	
18	29.920	52.2	50.0	2.2	0.3	0.1	26	— : 28 : —	9.9	Dense mass of cirro-stratus.	
20	29.970	53.2	51.2	2.0	0.1	0.1	29	— : 29 : —	10.0	Cirro-stratus scud ; cirro-stratus ; drizzling rain.	
22	30.015	49.3	48.6	0.7	0.5	0.3	4	5 : — : —	10.0	Misty loose scud ; slight drizzle since 20 ^h .	
23 0	014	52.3	50.7	1.6	0.2	0.1	3	7 : — : —	10.0	Id.	
2	016	56.7	53.2	3.5	0.2	0.2	2	5 : 20 : —	9.0	Scud ; cirro-cumulo-strati.	
4	30.008	56.9	53.0	3.9	0.2	0.2	8	— : 21 : —	6.0	Cirro-cumulo-strati and cirro-strati. ☒	
6	29.991	58.7	54.4	4.3	0.2	0.1	2	21 : — : —	8.0	Scud and cumuli. ☐	
8	998	56.0	52.4	3.6	0.2	0.1	2	22 : — : —	9.5	Cirro-stratus scud and cirro-cumulo-strati. ☐	
10	998	51.3	49.7	1.6	0.1	0.1	18		9.0	Cirro-strati.	
23 1	29.988	56.4	49.0	7.4	1.1	0.5	22	24 : 27 : 27	4.0	Masses of cumuli ; cirro-cumuli and linear cirri. ☒	
24 18	29.878	54.4	52.0	2.4	1.7	1.5	24	24 : — : 28	7.0	Scud ; woolly cirri ; cirro-strati. ☐	
20	866	57.7	53.8	3.9	1.3	1.1	24	24 : — : —	9.5	Id. ; id. ; id.	
22	867	58.0	53.7	4.3	2.6	1.4	20	23 : — : —	9.9	Id. ; cirro-strati and cirri.	
25 0	828	60.8	55.3	5.5	2.2	1.8	22	24 : — : —	8.5	Id. ; cirro-cumuli and cirro-strati.	
2	811	60.5	54.8	5.7	3.2	2.6	26	25 : 26 : —	7.0	Id. ; cirro-cumuli, mottled cirri, and cirro-strati. ☒	
4	801	62.0	55.2	6.8	4.2	2.0	26	26 : 24 : —	6.5	Id. ; id.	
6	778	59.3	53.5	5.8	3.8	2.7	26	26 : 25 : —	3.5	Id. ; sheets of mottled cirro-strati. ☒	
8	801	56.3	51.3	5.0	3.5	0.3	27	25 : — : —	5.0	Id. ; id. ☐	
10	811	50.6	45.8	4.8	1.5	0.4	21	26 : — : —	1.0	Id. ; cirro-strati.	
18	29.829	48.8	46.0	2.8	1.8	0.5	22	— : — : 29	8.5	Woolly and mottled cir. and cir.-str. ; patches of scud.	
20	836	52.3	46.2	6.1	1.0	0.6	25	27 : — : —	3.5	Scud and loose cumuli ; cirro-strati. ☒	
22	838	54.6	46.9	7.7	1.2	1.2	26	27 : — : —	7.0	Loose cumuli. ☒	
26 0	838	57.7	48.8	8.9	1.6	1.1	26	27 : — : —	4.0	Id.	
2	837	59.1	50.0	9.1	1.8	1.0	24	27 : — : —	8.0	Id.	
4	840	60.7	51.4	9.3	2.6	1.8	24	28 : — : —	8.5	Id.	
6	835	55.8	48.4	7.4	3.4	1.8	24	27 : — : —	3.0	Id.	
8	845	52.4	47.0	5.4	1.7	1.9	22	26 : — : 27	5.0	Scud ; woolly and curled cirri.	
10	831	49.9	44.8	5.1	1.6	0.9	21	27 : — : —	5.0	Id. ; cirro-strati.	
18	29.793	49.9	46.3	3.6	1.3	0.8	22	26 : — : —	10.0	Scud ; cirro-strati above.	
20	795	51.5	46.8	4.7	1.0	0.4	23	26 : — : —	10.0	Id. ; id.	
22	773	53.7	47.3	6.4	1.7	1.0	26	26 : — : —	9.5	Id. ; cirro-strati and cirro-cumuli.	
27 0	769	54.1	48.2	5.9	1.9	1.1	25	26 : — : —	10.0	Thick scud ; cumuli on horizon to S. and N. ; cir.-str.	
2	765	53.6	49.8	3.8	2.0	0.6	26	26 : — : —	8.5	Thick scud ; cum. on horizon to S. and N. ; cir.-str. ; slight shower.	
4	763	56.4	48.0	8.4	2.0	1.7	29	27 : — : —	9.0	Id. ; id. to E. and N. ; rain ^{0.5}	
6	801	52.3	46.4	5.9	2.3	0.4	2	27 : — : —	8.0	Thick scud and loose cumuli.	
8	822	51.0	46.8	4.2	0.3	0.1	0	27 : — : —	9.5	[to E. about 7 ^h . Scud and cir.-str. ; drops of rain occasionally ; a portion of a rainbow	
10	854	47.0	45.0	2.0	0.1	0.0	28	28 : — : —	7.0		
18	29.948	44.9	42.2	2.7	0.2	0.1	27		2.0	Woolly cirri radiating from SSE. ; hazy on horizon. ☒	
20	974	49.4	43.5	5.9	0.4	0.3	30	29 : — : —	2.0	Loose cumuli.	
22	982	54.4	46.6	7.8	0.7	0.3	28	1 : — : —	6.0	Cumuli.	
28 0	29.997	55.3	47.2	8.1	0.5	0.4	0	1 : — : —	3.5	Id.	
2	30.006	57.7	48.4	9.3	0.6	0.3	29	30 : — : —	3.5	Id.	
4	30.000	58.9	49.2	9.7	0.6	0.1	26	26 : — : —	4.0	Id. ; woolly cirri. ☒	
6	29.992	60.1	50.7	9.4	0.4	0.0	27	7 : — : —	3.5	Scud, loose cumuli, and cirro-strati. ☐	

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{b.}	From 10 ^{m.}	lbs.	lbs.	pt.	
d. h. 28 8	in. 29.995	56.5	49.3	7.2	0.1	0.0	0	— : 28 : —	0-10. 9.5	Cirro-cumulo-strati and cirro-strati.
10	30.014	51.3	46.5	4.8	0.2	0.0	16	—	2.0	Cirro-cumuli and cirro-strati.
18	30.066	47.0	45.2	1.8	0.2	0.0	18	—	9.0	Thick woolly cirri rad. from SSE. and NNW.; solar
20	064	54.8	49.7	5.1	0.1	0.0	21	— : — : 28	8.5	Id. Θ [halo. Θ]
22	057	59.1	51.3	7.8	0.2	0.1	22	— : — : 28	3.5	Woolly and tufted cirri; masses of cumuli; a tendency
29 0	047	64.8	55.0	9.8	0.1	0.1	4	24 : — : —	3.5	Cumuli; cirri. \odot [to a halo in the cirri. \odot]
2	037	68.8	57.5	11.3	0.4	0.3	22	— : 24 : —	9.5	Cirro-cumulo-strati. Θ
4	012	68.3	57.2	11.1	1.1	0.7	22	— : 24 : —	8.5	Large cirro-cumulo-strati and loose cumuli. \odot
6	007	65.0	56.0	9.0	1.6	0.5	22	— : 24 : —	3.0	Cirro-cumulo-strati. Θ
8	009	59.9	54.5	5.4	1.4	0.4	20	— : 24 : —	3.0	Id. \odot
10	015	52.3	49.1	3.2	0.6	0.0	18	—	0.8	Cirro-strati. $)$
18	29.979	52.3	49.2	3.1	0.5	0.0	20	—	2.5	Cirro-strati, woolly cirri, and cirrous haze. \odot
20	985	60.3	54.3	6.0	0.2	0.2	22	— : 24 : —	7.0	Cirro-cumulo-strati; cirro-strati. \odot
22	978	60.1	53.1	7.0	1.5	1.3	28	23 : — : —	3.0	Scud and cumuli. \odot
30 0	982	62.0	53.9	8.1	1.2	1.1	28	23 : — : —	5.0	Id. \odot
2	987	63.1	54.4	8.7	2.1	0.5	25	24 : — : —	2.5	Id. \odot
4	969	65.0	55.1	9.9	1.1	0.6	30	25 : 24 : —	2.5	Id.; haze on horizon. \odot
6	967	64.2	55.5	8.7	0.8	0.3	24	27 : — : —	3.5	Id.; id.; woolly cirri. \odot
8	977	59.3	53.0	6.3	0.5	0.2	23	29 : — : 24	6.0	Scud and masses of cirro-stratus; woolly cirri. \odot
10	29.984	53.6	50.3	3.3	0.3	0.0	24	—	1.0	Sheets of cirro-strati and cirri. $)$
23 ¹	30.002	63.8	56.3	7.5	0.1	0.1	8	22 : — : —	2.0	Detached masses of cumuli; streaks of cirri. \odot
31 18	29.961	48.7	47.2	1.5	0.9	0.0	20	—	0.2	Patches of cir. and cir.-str.; hazy on hor., like fog clear.
20	967	55.0	51.0	4.0	0.1	0.1	22	—	0.2	Cirri and haze near horizon. \odot [ing off; heavy dew. \odot]
22	958	65.7	56.0	9.7	0.1	0.0	22	—	0.2	Id.; patches of cumuli to SE. \odot
1 0	949	69.4	56.9	12.5	0.1	0.0	20	—	0.5	Id.; id.
2	931	72.9	59.2	13.7	0.2	0.1	30	—	0.2	Id.; patch of cumulus to E. \odot
4	922	76.2	61.0	15.2	0.2	0.1	16	—	0.2	A few small patches of cumulus; milky haze. \odot
6	913	74.6	60.8	13.8	0.3	0.3	19	—	0.7	Cum. and cum.-str. to W.; cum. to S.; hazy round hor. \odot
8	924	70.2	60.4	9.8	0.3	0.0	20	—	0.7	Cirri and cirrous haze round horizon. \odot
10	949	58.5	56.2	2.3	0.1	0.0	16	—	1.0	Id. \odot
18	29.969	53.7	51.7	2.0	0.1	0.0	24	—	0.5	Misty on horizon. \odot
20	972	61.8	58.2	3.6	0.1	0.0	14	—	0.2	Hazy. \odot
22	972	72.3	62.6	9.7	0.4	0.1	24	—	0.4	Small patches of cum. in a brownish haze about the hor. \odot
2 0	968	76.6	64.7	11.9	0.5	0.4	18	23 : --- : —	2.0	Masses of cum.-str. and small patches of cum.; hazy on
2	953	80.1	65.3	14.8	0.6	0.5	20	24 : — : —	6.0	Cumuli and cumulo-strati. \odot [hor. \odot]
4	953	73.8	66.2	7.6	0.4	0.1	23	20 : — : —	9.8	As before; a smart shower at 3 ¹ h for 10m; 2 or 3 peals of thunder since 3h 50m.
6	950	74.3	67.0	7.3	0.2	0.0	12	—	2.0	Cumulo-strati and sheets of cirro-strati; haze on hor. \odot
8	955	71.1	66.0	5.1	0.0	0.0	30	— : 24 : —	3.0	Cirro-strati, cirro-cumuli, and masses of cumuli.
10	29.969	61.4	58.8	2.6	0.0	0.0	—	—	1.0	Cirro-strati and cirro-cumuli to N. $)$
18	30.010	53.0	51.6	1.4	0.1	0.0	20	—	0.0	Clear; haze on horizon. \odot
20	010	61.4	58.4	3.0	0.1	0.0	26	—	0.0	Id.; id. \odot
22	30.000	71.9	64.6	7.3	0.1	0.0	16	—	0.0	Id.; id. \odot
3 0	29.987	76.3	61.5	14.8	0.1	0.0	17	—	0.5	Id.; cumuli and haze on horizon. \odot
2	975	78.6	64.2	14.4	0.2	0.1	5	21 : — : —	3.0	Cumuli and cumulo-strati; hazy on horizon. \odot
4	953	81.7	66.7	15.0	0.2	0.1	19	20 : — : —	2.5	Id., having an internal motion. \odot
6	942	79.7	65.2	14.5	0.2	0.1	26	—	2.5	Id.; cirro-strati; haze on hor. \odot
8	956	71.7	64.0	7.7	0.3	0.1	25	—	4.0	Cumuli, cumulo-strati, cirri, and cirrous haze. \odot
10	961	63.2	60.2	3.0	0.1	0.0	20	—	2.0	Cirro-strati, cirri, and cirrous haze. \odot
18	29.960	56.4	55.0	1.4	0.1	0.0	22	—	0.3	Haze on horizon, with a few patches of cirro-strati in-
20	960	63.0	59.5	3.5	0.1	0.0	22	—	0.0	Haze near horizon. \odot [terspersed. \odot]
22	953	72.7	66.2	6.5	0.1	0.0	1	—	1.5	Cirro-cumulo-strati, cirro-strati, and cirrous haze. \odot
4 0	933	79.8	67.5	12.3	0.1	0.2	22	16 : — : —	1.5	Cumuli and cum.-str.; much haze in the atmosphere. \odot
2	913	81.6	65.2	16.4	0.4	0.2	21	17 : — : —	6.5	As before; distant thunder to E., first heard about 1 ^h . \odot
4	899	82.0	65.7	16.3	0.4	0.2	21	—	2.5	Cumuli and cumulo-strati; atmosphere very hazy. \odot

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

June 3^d. The dry thermometer was several times observed as high as 82°.4.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m			
d. h.	in.				lbs.	lbs.	pt.		
4 6	29.895	78.4	+64.5	13.9	0.4	0.1	21	0-10.	Cumuli and cumulo-strati; atmosphere very hazy. ☺
8	896	73.8	62.4	11.4	0.2	0.1	21	2.5	Cirro-strati and haze round horizon. ☺
10	910	62.8	+58.0	4.8	0.1	0.0	15	0.5	Woolly cirri, cirro-strati, and cirrus haze. ☺
								0.7	
18	29.910	52.8	50.7	+2.1	0.2	0.1	20	— : — : 20	Sheets of woolly and mottled cirri. ☺
20	914	63.6	58.4	+5.2	0.1	0.0	26	— : — : 20	Woolly and linear cirri; haze on horizon. ☺
22	906	73.7	62.8	10.9	0.2	0.2	22	— : — : 22	Id. ☺
5 0	894	78.2	62.8	15.4	0.4	0.4	25	— : — : 24	Id.; cirro-strati and haze on hor. ☺
2	886	80.6	64.8	15.8	0.4	0.2	21	7.0	Thick woolly cirri; patches of cum. on E. and SE. hor. ☺
4	865	81.0	64.0	17.0	0.4	0.1	21	7.5	Cumuli; woolly cirri and cirro-strati. ☺
6	850	78.3	+65.2	13.1	0.2	0.1	22	5.0	As before; Cheviot obscured by the haze; solar halo at 5 ^h . ☺
8	850	72.8	64.5	8.3	0.1	0.0	23	7.0	Thick woolly cirri; cum. to E.; very hazy on horizon. ☺
10	856	67.4	+61.4	6.0	0.1	0.0	22	9.0	Thick woolly cirri; cum. to E.; very hazy on horizon. ☺
								10.0	Cirro-stratus scud; mass of cirro-stratus. ☺
18	29.850	55.0	51.6	+3.4	0.1	0.0		2.0	Thin cirro-cumuli and cirri over the sky. ☺
20	840	62.0	57.2	+4.8	0.0	0.0	22	2.5	Cirro-cumuli, cirro-strati, and linear cirri. ☺
22	825	74.3	62.4	11.9	0.6	0.4	18	4.5	Woolly cirri; cirro-strati and cirrus haze. ☺
6 0	815	76.2	60.9	15.3	1.0	1.2	21	5.0	Id.; cumulo-strati; very hazy on horizon. ☺
2	804	80.6	62.2	18.4	1.3	0.5	19	8.5	Wool. & mot. cir.; cum. & cumo.-str. on hor.; very hazy. ☺
4	797	77.6	61.0	16.6	1.2	0.8	20	8.5	Woolly cirri, becoming thicker; cumuli. ☺
6	784	75.8	61.2	14.6	0.5	0.3	18	7.0	Cir.-cumo.-str., cir.-str., and cir.; cum. and haze on hor.; halo at 5 ^h . ☺
8	791	70.0	60.7	9.3	0.4	0.1	19	4.0	Cir.-str., cir.-cum., woolly and diffuse cir.; hazy on hor. ☺
10	810	63.7	58.6	5.1	0.2	0.1	20	9.0	As before. ☺
23 ¹	29.782	69.2	62.6	6.6	0.4	0.3	5	3.0	Cum.; patches of cirro-strati; much atmospheric haze. ☺
7 18 ¹	29.673	56.9	55.0	1.9	0.9	0.0	2	10.0	Thick scud.
20	667	60.0	56.6	3.4	0.0	0.0	12	10.0	Id.
22	658	57.8	55.5	2.3	0.1	0.0	3	10.0	Scud to N.; dense mass of cirro-stratus.
8 0	645	62.0	58.2	3.8	0.2	0.2	13	10.0	Cirro-stratus scud.
2	629	64.0	59.3	4.7	0.3	0.2	14	10.0	Nearly homogeneous.
4	598	68.1	62.6	5.5	0.3	0.0	14	10.0	Dense scud and cirro-stratus.
6	581	64.2	60.2	4.0	0.1	0.1	6	10.0	Dense scud.
8	572	59.3	58.1	1.2	0.1	0.1	4	10.0	Id.; slight drizzle.
10	561	58.5	57.8	0.7	0.0	0.0	8	9.5	Cir.-str. scud and cir.-cumo.-str.; misty on horizon.
18	29.516	56.4	55.1	1.3	0.2	0.0	18	9.8	Cirro-cumulo-strati and cirro-stratus scud.
20	513	60.3	58.1	2.2	0.0	0.0	10	9.8	Patches of loose scud; cirro-stratus scud.
22	499	65.9	60.6	5.3	0.1	0.0	7	6.5	Cir.-cumo.-str. and loose cum.; cirro-strati on N. hor. ☺
9 0	488	66.4	60.7	5.7	0.3	0.1	24	9.0	Id. and cirro-stratus; cumulo-strati on hor. ☺
2	471	66.7	60.9	5.8	0.3	0.3	3	9.5	Scud and loose cumuli; cirro-strati; cumulo-strati.
4	459	66.6	60.6	6.0	0.3	0.1	4	10.0	Thick scud and cumuli; distant thunder to E.
6	458	68.0	60.0	+8.0	0.4	0.2	24	8.5	Cum. & cir.-cumo.-str.; cumo.-str. & haze round hor.; electric-like to E.
8	466	65.2	58.0	7.2	0.4	0.4	21	6.0	Cir.-cum. and cir.-str.; ragged cum. and haze on hor. ☺
10	485	60.0	56.4	+3.6	0.6	0.3	18	8.5	Cirro-stratus scud and cirro-cumulo-strati; cir.-str.
18	29.510	59.0	57.0	2.0	0.5	0.6	20	10.0	Dense uniform mass of clouds.
20	524	62.1	58.7	3.4	0.5	0.8	18	10.0	Scud; densely overcast.
22	542	66.3	60.7	5.6	0.9	0.5	18	10.0	Id.; cirro-cumulo-strati and cirro-strati. ●
10 0	555	66.8	60.8	6.0	0.9	0.6	18	10.0	Loose scud; cum. on N. hor.; dense cir.-str.; solar halo. ●
2	556	70.5	60.8	9.7	1.6	1.0	18	10.0	Cir.-cum.; cir.-str.; cum. to N. and E.; solar halo. ☺
4	553	65.4	57.3	8.1	1.8	0.9	20	10.0	Masses of scud & loose cum.; homogeneous cir. haze &
6	521	64.0	59.0	5.0	1.7	2.2	18	10.0	Scud; cir.-str. scud and cir.-str.; drops of rain. [cir.-str.
8	493	60.7	58.2	2.5	2.8	1.6	18	10.0	Scud, moving rapidly; rain ² since last observation.
10	494	59.3	57.8	1.5	2.6	2.1	20	9.8	Thick smoky scud; cirro-strati above.
18	29.720	55.1	51.1	+4.0	3.0	1.0	20	7.0	Scud; woolly cirri. ☺
20	774	58.8	53.9	+4.9	1.4	0.6	20	6.5	Id.; id.; cirro-strati. ☺
22	793	61.5	58.4	3.1	1.6	0.8	21	6.0	Id.; id.; id. ☺
11 0	817	65.7	55.7	10.0	2.6	1.1	21	8.0	Loose edged cum.; wool., mot., & diffuse cir. & cir. haze. ☺
2	840	66.0	54.8	11.2	1.7	1.0	20	8.5	Cirro-cumulo-strati and cumuli; cirro-strati. ●

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

June 5th 2^h. Very hazy on horizon; broken portion of a halo.

June 9th 4^h. Very thick electric-looking scud and cumuli, some of the scud hanging in detached patches; uniform to E., distant thunder there occasionally since 3^h.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	pt.	pt.	pt.	
d. h. 11 4	in. 29.867	° 63.5	° 56.0	° 7.5	lbs. 2.1	lbs. 1.2	20	23 : — : —	9.0	Scud ; loose cumuli ; cirro-cumulo-strati.
6	881	62.7	56.2	6.5	0.8	0.3	19	24 : — : —	9.9	Thick scud, cirro-stratus ; drops of rain.
8	893	59.2	56.7	2.5	0.4	0.1	20	23 : 22 : —	9.8	Scud ; cirro-cumulo-strati.
10	905	57.6	54.9	2.7	0.6	0.6	22	23 : — : —	9.8	Cirro-stratus scud ; cirro-strati and haze.
18	29.939	53.2	52.2	1.0	0.5	0.0	20	20 : — : —	6.5	Loose misty scud. ● [horizon. ○
20	944	61.1	57.9	3.2	0.5	0.3	18	21 : — : —	6.0	Scud ; cirro-cumulo-strati on S. ○
22	932	64.7	58.7	6.0	0.8	0.8	21	22 : — : —	3.5	Loose cumuli ; cirro-strati. ○
12 0	925	66.7	58.2	8.5	1.4	1.0	17	22 : — : —	9.5	Scud and loose cumuli ; cirro-strati above. ○
2	902	68.4	58.2	10.2	1.5	1.1	20	23 : — : —	5.5	Id. ; cumulo-strati on E. horizon. ○
4	886	70.3	59.0	11.3	2.0	1.5	20	22 : — : —	5.0	Masses of cumuli ; cirro-cumulo-strati. ○
6	877	67.7	59.7	8.0	1.6	0.5	18	22 : — : —	7.5	Id. ; woolly cirri. ○
8	878	62.4	57.2	5.2	1.4	0.4	19	— : 23 : 23	1.0	Cirri. ○
10	890	57.0	54.2	2.8	1.0	0.1	3	— : 23 : 23	6.0	Woolly cirri and cirro-cumuli ; cirro-strati and haze.
18	29.876	67.0	55.6	1.4	0.3	0.0	26	— : — : —	5.0	Cirro-strati, cirri, and cirro-cumulo-strati. ○
20	897	62.0	58.4	3.6	0.4	0.1	22	25 : — : —	9.9	Thick scud.
22	898	66.1	59.8	6.3	0.4	0.4	24	24 : — : —	9.0	Scud ; cirri ; cirro-cumuli.
13 0	897	69.0	60.6	8.4	0.9	1.2	24	24 : — : —	7.5	Scud and loose cumuli ; cirro-cumuli and cirro-strati. ○
2	882	73.2	60.9	12.3	1.1	0.6	21	24 : — : —	8.0	Id. ; id. ; woolly cirri. ○
4	888	71.8	61.7	10.1	0.8	0.5	25	23 : — : —	8.0	Id. ; hazy cirro-strati and cirri. ○
6	889	68.6	59.8	8.8	0.9	0.6	21	— : 24 : —	10.0	Cirro-stratus scud ; cirro-strati. [cirro-cumuli. ○
8	884	67.2	59.8	7.4	0.4	0.2	21	— : 26 : 24	5.0	Id. ; wo. and mot. cir. ; cirro-strati with mot. edges;
10	902	62.8	58.0	4.8	0.2	0.2	21	— : — : 24	7.0	Woolly and mottled cirri and cirro-strati.
23 $\frac{1}{2}$	29.904	72.7	64.5	8.2	0.4	0.3	22	25 : — : —	4.0	Cumuli ; cirri and cirro-strati ; solar halo at 4 ^h . ○
14 18	29.944	55.3	53.7	1.6	1.9	0.0	14	— : 27 : —	7.0	Cirro-cumuli, cirro-strati, and cirri. ○
20	949	60.7	56.3	4.4	0.3	0.1	18	24 : 26 : —	4.0	Masses of scud to W. ; cirro-cumulo-strati, cirri, and cirro-strati. ○
22	971	66.3	59.4	6.9	0.6	0.7	19	— : 25 : —	4.5	Cirro-cumuli, woolly cirri, and cirro-strati ; cirro-strati. ○
15 0	988	67.7	59.7	8.0	0.7	0.4	19	— : — : —	3.0	Id. ; cirrus haze. ○
2	988	71.6	61.6	10.0	0.5	0.3	24	— : 24 : —	1.5	Id. ; woolly cirri ; cirrus haze. ○
4	979	73.7	61.8	11.9	0.4	0.3	20	— : — : —	1.0	Patches of cumuli ; sheets of cirri. ○
6	973	70.4	62.0	8.4	0.4	0.4	20	— : — : 24	7.0	Wo. and mot. cirri ; cumulo-strati and haze on hor. ○
8	29.998	66.9	59.7	7.2	0.6	0.1	22	— : — : —	7.0	Woolly cirri and cirrus haze ; cirro-strati. ○
10	30.026	61.7	56.0	5.7	0.3	0.2	2	— : — : —	4.0	Id. ; cirro-strati.
18	30.077	53.7	50.3	3.4	0.1	0.0	22	— : — : —	0.5	Patches and sheets of cirri. ○
20	091	60.8	54.3	6.5	0.1	0.0	10	— : — : —	0.3	Id. ○
22	092	69.8	60.3	9.5	0.2	0.2	11	— : — : —	2.0	Woolly cirri and cirro-cumuli ; hazy on horizon. ○
16 0	093	74.4	62.0	12.4	0.1	0.1	14	— : — : 24	0.5	Id. ; id. ○
2	088	78.4	64.0	14.4	0.3	0.1	16	— : — : —	1.0	Woolly cirri and cirro-strati ; id. ○
4	087	74.2	64.1	10.1	0.6	0.3	28	— : — : 22	1.0	Sheets of woolly cirri ; patches of cumuli. ○
6	092	72.2	63.9	8.3	0.4	0.2	28	— : — : —	3.0	Mottled and woolly cirri ; cirro-strati and haze on hor. ○
8	100	69.2	62.2	7.0	0.2	0.1	24	— : — : —	3.5	As before. ○
10	115	61.7	59.0	4.2	0.1	0.0	—	— : — : —	1.5	Cirri and cirrus haze.
18	30.114	53.9	52.3	1.6	0.1	0.0	20	— : — : —	1.5	Woolly and feathered cirri. ○
20	113	61.4	58.1	3.3	0.1	0.0	20	— : — : 28	1.0	Id. ○
22	104	72.7	64.3	8.4	0.1	0.1	4	— : — : —	0.5	Id. ○
17 0	094	77.9	64.2	13.7	0.1	0.0	0	— : — : —	0.3	A few cumuli on S. and N. horizon ; haze on horizon. ○
2	073	79.8	63.5	16.3	0.2	0.1	0	— : — : —	0.5	Id. ○
4	045	81.8	63.6	18.2	0.1	0.1	31	— : — : —	1.0	Cumuli and haze. ○
6	018	79.2	66.8	12.4	0.3	0.3	31	— : — : —	1.5	Loose cumulo-strati to E. ; atmospheric haze. ○
8	029	74.4	65.4	9.0	0.2	0.1	21	— : — : —	1.5	As before. ○
10	045	66.0	62.0	4.0	0.1	0.1	4	— : — : —	1.0	Cirro-strati and haze on horizon. ○
18	30.008	57.7	56.1	1.6	0.1	0.0	—	— : — : —	0.0	Much haze on horizon ; heavy dew on the ground. ○
20	30.007	64.3	61.3	3.0	0.0	0.0	30	— : — : —	0.0	Id. ○
22	30.000	73.2	64.7	8.5	0.1	0.0	5	— : — : —	0.2	Patches of loose cumulo-strati to N. and SE. ; very hazy on hor. ○
18 0	29.982	79.9	68.8	11.1	0.2	0.0	4	— : — : —	1.0	Cumuli and haze on hor. ○

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1b. 10m.	From			
d. h. 18 2	in. 29.944	79.3	69.8	9.5	0.2 0.2	4	16 : — : —	9.5	Cumuli ; thunder-storm. (See footnote.)
4	943	65.6	63.0	2.6	1.9 0.0	6		8.5	Thunder-storm nearly ended.
6	913	76.7	66.7	10.0	0.2 0.1	8		9.0	Dense mass of cirro-stratus.
8	908	73.0	66.5	6.5	0.1 0.0	14	— : 16 : —	8.5	Cirro-stratus scud ; cirro-strati and haze. ⊖
10	910	66.0	63.2	2.8	0.1 0.0	18		10.0	Id.; id.
18	29.862	60.3	58.3	2.0	0.1 0.0	22	— : 18 : —	9.0	Cir.-str.; cir.-cum. and cirri; parhelia seen at 18 ^h 30 ^m . ⊖
20	861	67.0	63.5	3.5	0.1 0.0	20		9.5	Cir.-str. and cir. haze becoming thicker ; a few cumuli.
22	846	74.8	67.4	7.4	0.2 0.1	20	— : — : 16	5.5	Woolly cirri ; cumuli and haze round horizon. ⊖
19 0	830	80.5	68.2	12.3	0.3 0.1	21	18 : — : —	5.0	Piles of cumuli to N. and W. ; hazy on hor. ; distant thunder to E. ⊖
2	821	83.6	68.9	14.7	0.6 0.3	16	21 : — : —	8.0	Cum.-str.; cirri; cirro-strati; distant thunder to E. ⊖
4	831	75.1	63.7	11.4	1.0 0.1	30	20 : 20 : —	7.5	Cumuli and woolly cirro-stratus. {occasionally till 7 ^h . ⊖
6	841	71.8	63.7	8.1	0.6 0.2	18	— : 24 : —	7.5	Cir.-cum.-str.; large cum.-str.; cir.-str. and cirri; distant thunder
8	850	69.7	64.5	5.2	0.3 0.0	20	— : 28 : —	7.0	Loose scud ; cir.-cum. ; cirri. ; cumulo-strati on hor. ⊖
10	29.912	59.5	57.5	2.0	1.8 0.8	2	4 : — : —	10.0	Scud ; the wind sprung up about 9 ^h and scud came up about 9 ^h 30 ^m .
18	30.024	54.1	51.8	2.3	0.8 0.3	2	4 : — : —	10.0	Scud.
20	053	55.2	51.7	3.5	0.7 0.4	2	3 : — : —	10.0	Id.
22	078	56.6	52.4	4.2	0.8 0.6	2	3 : — : —	10.0	Id.
20 0	095	58.7	53.0	5.7	0.8 0.4	4	3 : — : —	9.8	Id.; cirro-strati.
2	086	59.2	53.1	6.1	0.7 0.7	4	4 : — : 24	7.5	Scud and cirro-cumulo-strati; woolly cirri. ⊖
4	089	57.5	52.0	5.5	1.1 0.7	4	5 : — : 24	7.0	Scud; woolly cirri, moving very slowly. ⊖
6	092	56.8	51.5	5.3	0.7 0.2	2	— : — : 24	7.0	Woolly cirri; cirrous haze. ⊖
8	101	54.6	50.3	4.3	0.3 0.3	7		2.5	Id.; cirro-cumulo-strati. ⊖
10	110	51.2	49.2	2.0	0.3 0.1	2	8 : — : —	7.0	Scud and cirro-cumulo-strati.
23 1	30.013	68.1	58.4	9.7	0.3 0.2	12		0.0	Clear during the most of the day; cirri in the evening.
21 18	29.798	54.0	50.9	3.1	1.1 0.0	0	— : — : 18	3.0	Woolly and mottled cirri; cir.-cum. and cirro-strati. ⊖
20	779	60.6	54.5	6.1	0.0 0.0	12		7.0	Woolly cirri and cirro-strati. ⊖
22	742	69.9	57.2	12.7	0.2 0.1	4	— : — : 18	6.0	Id.
22 0	697	75.3	59.4	15.9	0.5 0.4	14	— : — : 18	8.0	Id.; very hazy on horizon. ⊖
2	652	77.7	63.5	14.2	1.0 0.7	16	— : — : 18	6.0	Id.; id.
4	593	76.0	65.8	10.2	1.4 0.4	12	19 : 16 : —	8.0	Scud to SW.; cir.-str. and cir. haze, becoming thicker; portion of a halo.
6	554	73.8	62.8	11.0	1.3 0.4	14	— : — : 21	8.0	Woolly cirri and cir. haze; scud and cum. to W.; portion of a halo. ⊖
8	527	69.5	62.2	7.3	0.5 0.2	15	16 : — : —	9.0	Cumuli; mass of cirri and cirrous haze; distant thunder to W.
10	538	65.3	61.4	3.9	0.9 0.1	18	— : 15 : —	10.0	Loose and spotted cirro-strati; mass of cirrous haze.
18	29.345	60.9	60.2	0.7	0.0 0.0	4	14 : — : —	10.0	Loose cum.; cir.-str. and cir. haze; portion of a halo. ⊖
20	327	60.5	60.0	0.5	0.0 0.0	4	14 : — : —	10.0	Scud; dense mass of clouds; rain ³ since 19 ^h 30 ^m .
22	256	63.3	61.7	1.6	0.2 0.1	6	5 : — : —	10.0	Thick scud; dense covering of clouds; rain ¹
23 0	215	64.0	62.6	1.4	0.2 0.2	7	5 : — : —	10.0	Id.; id.; rain ²
2	142	63.4	62.1	1.3	0.3 0.3	2	4 : — : —	10.0	Scud; id.; misty; rain ^{0.5}
4	097	57.9	57.0	0.9	0.5 0.5	25	26 : — : —	10.0	Thick scud; rain ²⁻³
6	066	52.7	51.4	1.3	1.8 1.1	26	26 : — : —	10.0	Id.; id.
8	055	51.7	49.8	1.9	1.6 1.0	20	24 : — : —	9.9	Id.; cirro-strati.
10	29.038	50.4	48.2	2.2	1.1 0.6	22	23 : — : —	10.0	Id.
18	28.988	47.1	46.0	1.1	2.7 1.7	19	24 : — : —	10.0	Scud; dense homogeneous mass of clouds; rain ¹
20	29.003	50.0	48.0	2.0	2.1 1.4	22	24 : — : —	10.0	Id.; id.; rain ^{0.5}
22	030	53.8	50.2	3.6	2.5 1.8	22	24 : — : —	10.0	Id.; id.
24 0	045	58.9	52.7	6.2	2.3 0.9	22	24 : — : —	9.8	Scud and cumuli; woolly cirri and cirro-strati. ⊖
2	069	59.2	52.6	6.6	1.8 0.7	22	24 : — : —	10.0	Masses of scud; dense homogeneous cir.-str. and haze.
4	080	59.9	52.0	7.9	1.3 0.3	23	24 : — : —	10.0	Id.; cir.-str. and cir. haze; portion of a solar halo. ⊖
6	078	59.8	52.4	7.4	1.1 0.3	28	24 : — : —	8.0	Masses of scud and loose cum.; cir. and cir. haze. ⊖

June 18^d 2^h—4^h. Great piles of electric cumuli; masses of black scud and cumuli; uniform to E.; very hazy; distant thunder heard first at 1^h 50^m, many peals since; three flashes of lightning from 1^h 55^m till 2^h 0^m to E. from horizon to altitude 5°, followed by irregular and rather faint peals. At 2^h 30^m, a streak to SE., thunder in 30°. 2^h 55^m. There has been a continuous intermitting grumbling to E. and SE. since 2^h; thunder has now commenced to SW. and W., three flashes seen to SW., altitude 5°, thunder following in about 25°. From this time there was an uninterrupted thundering, sometimes 3 or 4 flashes and peals in a minute; the flashes were generally from the horizon to an altitude of 7° or 8°, interval 20^s to 25^s; about 3^h 25^m, the thunder had come nearer, the intervals being 7^s to 9^s, and the flashes reaching an altitude of from 20° to 30°, many of the streaks seeming to be repeated four or five times. 3^h 25^m. Gusts of wind from about W., large drops of rain, clouds moving from N.; 30^m, a streak reaching from SW. to WNW. at an altitude of 20°, interval 10^s; 30^m—40^m, thunder chiefly to NW., the peals not so very frequent; 43^m, two very loud peals in rapid succession, intervals 34^s and 14^s, large hailstones, with heavy rain. 4^h 45^m to 4^h 0^m. Occasional flashes, with thunder in about 12°; very heavy rain. 4^h 0^m. Clouds beginning to clear off from SW., rain ceased at 4^h 10^m; a sharp peal was heard at 4^h 15^m; very distant peals were heard occasionally afterwards; during the storm the temperature fell to 60°. June 19^d 4^h. About 3^h it was very black to N., and a good deal of rather distant thunder was heard from that quarter, with wind, which lowered the temperature about 8°; the thunder worked round by E. to SE., where it now is, but rather distant; dark-looking all round the horizon; sky in zenith.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0-10.	
24 8	29.101	55.7	50.7	45.0	0.4	0.1	22		7.0	Nimbi near hor.; cir. and cir.-str.; indistinct parhelion. ☺
10	122	49.5	47.5	2.0	0.3	0.1	20		3.0	Cirro-strati and cirrus haze.
18	29.206	49.2	46.8	2.4	0.2	0.0	23	— : 21 : —	7.5	Cirro-cumuli.
20	223	52.0	49.8	2.2	0.1	0.0	24		3.0	Masses of scud and cumuli; cirro-cumuli. ☺
22	234	59.6	54.5	5.1	0.1	0.0	20	22 : — : —	3.0	Scud and loose cumuli; woolly cirri. ☺ [rain to E.
25 0	238	62.0	54.4	7.6	0.1	0.0	22	18 : — : —	9.7	Scud and heavy masses of loose cum.; loose cir.-cum.-str.;
2	272	60.1	54.0	6.1	0.3	0.1	12	16 : — : —	9.8	As before; a peal of distant thunder to SE. at 1 ^h 55 ^m ; drops of rain.
4	306	56.2	52.8	3.4	0.9	0.1	6		9.5	Loose scud; mass of cir.-str.; cum. str. on horizon; rain falling to S.
6	315	59.0	54.4	4.6	0.1	0.0	12	— : 21 : —	8.5	Cir.-cum.-str. and cir.-str.; cum.-str. ☺ [rain ²⁻³ since 2 ^h . ●
8	332	52.0	49.4	2.6	0.3	0.0	20	— : — : 20	3.0	Woolly cirri; cirro-strati and cumuli. ☺
10	356	46.0	45.4	0.6	0.1	0.0	18		0.5	Cirro-strati and haze on horizon.
18	29.402	43.5	43.2	0.3	0.0	0.0			10.0	Fog; trees invisible at 250 yards.
20	397	50.1	49.2	0.9	0.0	0.0	6	— : 16 : 16	6.0	Sheets of cir.-str. and woolly cir. ☺ [of a solar halo. ☺
22	384	61.2	54.2	7.0	1.2	1.0	14	18 : — : —	9.0	Scud and loose cum.; woolly cir. and cir. haze; portion
26 0	372	63.4	56.0	7.4	1.4	0.6	13	11 : — : —	10.0	Id.; dense mass of cirrous haze. ●
2	356	60.0	54.2	5.8	1.6	0.9	10	14 : — : —	10.0	Scud; mass of cirro-stratus.
4	338	57.7	54.7	3.0	1.2	0.4	12	14 : — : —	10.0	Id.; id.; rain ¹⁻²
6	317	57.6	55.2	2.4	0.4	0.3	14		10.0	Id. to W.; id.; rain ^{0.5}
8	326	55.5	53.4	2.1	0.5	0.2	14	14 : — : —	10.0	Scud; id.; rain ¹⁻²
10	336	53.5	52.3	1.2	0.3	0.1	10	15 : — : —	10.0	Id.; id.
18	29.318	52.0	51.1	0.9	0.1	0.0	20		1.0	Sheets of cirro-strati.
20	329	56.7	54.0	2.7	0.1	0.0	24	18 : — : —	3.0	Scud and loose cumuli. ☺
22	324	62.5	51.9	10.6	0.3	0.2	19	18 : — : —	8.5	Id.; cirro-strati. ☺
27 0	344	62.7	53.3	9.4	0.4	0.2	16	18 : — : —	9.5	As before; shower ⁴ about 10 ^m since. [looking to E. ☺
2	354	67.8	59.0	8.8	1.0	0.7	22	— : 17 : —	5.0	Cir.-cum.-str.; cum.-str. on hor.; nimbi to SE.; electric-
4	379	60.6	55.8	4.8	0.9	0.1	22	17 : — : —	9.9	Thick scud and cirro-stratus; loose cumuli on S. hor.
6	364	65.0	57.9	7.1	0.6	0.3	18	18 : — : —	8.5	Scud; cumuli and cumulo-strati on horizon; rain ^{0.5}
8	405	58.0	56.0	2.0	0.3	0.1	19	18 : — : —	9.8	As before; rain ²
10	429	55.5	54.4	1.1	0.1	0.1	22	— : 17 : —	6.5	Cumulo-strati and cirro-strati. ☺
23 ¹	29.496	65.7	59.0	6.7	1.0	0.3	16	16 : — : —	10.0	Loose cum.; thick cir.-str.; heavy rain in the evening.
28 18	29.335	56.7	53.2	3.5	2.3	0.5	18	19 : — : —	2.0	Scud; cirro-strati on S. horizon. ☺
20	332	60.6	54.8	5.8	2.0	1.5	18	19 : — : —	7.0	Scud and loose cumuli.
22	318	63.8	56.5	7.3	2.6	2.0	18	19 : — : —	6.5	Loose cumuli; rain falling to SE.
29 0	310	64.3	55.6	8.7	3.3	1.5	19	18 : — : —	8.0	Id.; sheets of cirro-strati. ☺
2	303	62.8	57.0	5.8	3.5	2.0	17	19 : — : —	7.0	Scud and loose cumuli; slight shower.
4	268	63.3	56.4	6.9	7.5	3.5	19	19 : — : —	3.0	Scud and cum.; woolly cirri to E.; nimbi round hor. ☺
6	248	61.3	54.0	7.3	7.1	4.5	19	18 : 21 : 21	7.0	Scud and cumuli; woolly cirri and cirro-cumuli.
8	275	58.1	55.0	3.1	6.6	1.8	19	20 : — : —	9.0	Scud and cirro-strati.
10	290	57.3	54.2	3.1	2.1	1.3	17	20 : — : —	9.7	Scud.
18	29.296	55.4	53.7	1.7	2.4	0.6	20	20 : — : —	9.5	Thick scud, cirro-cumulo-strati, and woolly cirri.
20	292	59.0	55.3	3.7	2.6	2.4	18	21 : — : —	9.5	Id.; id.; showers occasionally.
22	320	58.7	54.8	3.9	3.6	1.8	20	21 : — : —	10.0	Id.
30 0	336	62.1	57.2	4.9	2.7	2.1	18	21 : — : —	9.9	Id.; occasional slight showers.
2	360	60.3	55.7	4.6	6.0	3.0	20	21 : — : —	10.0	Id.; id.
4	391	58.0	55.1	2.9	3.9	1.0	20	21 : — : —	10.0	Scud; rain ²
6	411	58.0	54.0	4.0	2.4	0.7	20	21 : — : —	9.0	Masses of scud and loose cumuli; cirro-strati. ☺
8	417	56.5	53.6	2.9	1.9	0.9	22	22 : — : —	8.0	Scud; sheets of woolly cirri.
10	454	54.4	51.6	2.8	1.6	0.3	19	23 : — : —	5.0	Id.
18	29.532	53.5	50.8	2.7	1.8	0.7	21	25 : — : —	7.5	Scud and cirro-cumulo-strati; cirro-str. and woolly cir.
20	548	58.3	53.7	4.6	1.2	1.0	21	24 : — : —	9.5	Id.; id.
22	546	61.9	55.8	6.1	1.2	1.2	20	22 : — : —	10.0	Masses of cumulous scud; homogeneous cirro-stratus.
1 0	537	61.1	56.1	5.0	1.4	0.6	21	21 : — : —	10.0	Scud; homogeneous cirro-stratus; drops of rain.
2	504	60.6	57.1	3.5	1.4	1.0	19	20 : — : —	10.0	Id.; rain ¹
4	467	61.5	58.4	3.1	1.6	0.5	20	19 : — : —	10.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From			
1 ^{h.}	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.
1 6	29.440	60.6	58.2	2.4	0.8	0.5	17	20 : — : —	10.0
8	432	59.4	57.6	1.8	0.9	0.3	20	21 : — : —	10.0
10	443	58.8	57.6	1.2	0.5	0.4	20	24 : — : —	9.5
18	29.522	59.9	55.7	4.2	0.7	0.1	22	— : 20 : —	9.5
20	560	61.3	54.8	+6.5	0.6	0.3	18	24 : — : —	9.0
22	587	63.0	55.6	7.4	1.2	1.0	21	22 : — : —	9.5
2 0	626	64.2	57.3	6.9	1.2	0.8	22	23 : — : —	5.0
2	646	65.8	57.6	8.2	1.4	0.7	24	23 : — : —	8.0
4	669	67.5	61.4	6.1	1.2	0.7	22	24 : — : —	8.5
6	679	67.0	60.6	+6.4	0.9	0.4	18	24 : — : —	9.0
8	697	62.4	59.0	+3.4	0.5	0.2	20	25 : — : —	9.7
10	715	59.8	57.2	2.6	0.5	0.0	20		10.0
18	29.728	60.0	59.0	1.0	0.3	0.2	20		10.0
20	738	61.2	59.3	1.9	1.1	0.6	20		10.0
22	753	61.5	59.1	2.4	1.7	2.5	17	19 : — : —	10.0
3 0	776	62.9	59.2	3.7	3.0	1.5	17	20 : — : —	10.0
2	786	63.6	59.3	4.3	2.9	1.6	20	20 : — : —	9.7
4	784	65.7	61.8	3.9	2.6	1.6	23	21 : — : —	9.9
6	793	62.3	58.7	3.6	1.2	0.6	20	20 : — : —	10.0
8	797	61.3	57.4	3.9	1.1	0.1	14	20 : — : —	9.0
10	816	59.8	56.6	3.2	0.3	0.2	0	20 : — : —	10.0
18	29.816	58.8	55.9	2.9	1.3	0.7	16	20 : — : —	9.9
20	817	61.5	58.7	2.8	1.3	1.0	17	21 : — : —	9.9
22	832	64.2	60.2	4.0	1.7	1.5	20	20 : — : —	9.8
4 0	845	64.5	60.2	4.3	2.1	0.4	18		10.0
2	838	69.2	62.6	6.6	1.5	1.1	16	21 : — : —	6.5
4	813	68.8	63.7	5.1	1.1	0.4	22	18 : — : —	2.0
6	798	68.0	62.1	5.9	0.7	0.3	22		1.0
8	790	63.2	58.3	4.9	0.5	0.5	20		0.5
10	787	56.0	54.6	1.4	0.3	0.0	18		0.5
23 ¹	29.534	76.1	68.3	7.8	0.3	0.0	14	— : 20 : —	2.0
5 8 ³	...	61.6	60.2	1.4	5.8	0.0	8	4 : 15 : —	10.0
18	29.074	56.3	54.0	2.3	1.8	0.8	20	21 : — : —	9.5
20	087	56.5	54.4	2.1	1.7	1.8	20	20 : — : —	10.0
22	080	54.0	53.3	0.7	1.6	1.3	18	20 : — : —	10.0
6 0	096	55.3	54.1	1.2	1.3	1.0	18	18 : — : —	10.0
2	100	57.0	55.6	1.4	1.8	0.8	18	19 : — : —	10.0
4	099	58.5	55.6	2.9	1.3	0.4	18	20 : — : —	10.0
6	115	56.3	55.0	1.3	0.6	0.4	20	22 : 25 : —	10.0
8	172	54.8	52.6	2.2	1.7	1.0	30	0 : — : —	10.0
10	228	53.4	50.7	2.7	2.3	1.5	0	31 : — : —	9.5
18	29.368	51.0	46.2	4.8	1.7	0.1	28	27 : — : —	7.5
20	399	53.5	47.4	6.1	0.8	0.7	31	30 : — : —	2.0
22	418	55.9	49.0	6.9	1.3	1.6	31	28 : — : —	6.5
7 0	460	59.1	51.0	8.1	1.2	0.4	28	28 : — : —	8.0
2	478	61.1	52.1	9.0	0.4	0.1	23	30 : — : —	9.5
4	496	62.1	52.8	9.3	0.3	0.1	0	25 : — : —	8.0
6	512	58.0	52.9	5.1	0.1	0.1	0	24 : — : —	9.5
8	521	57.2	53.6	3.6	0.3	0.0	22		3.0
10	548	53.2	50.2	3.0	0.1	0.0	24		9.0
18	29.576	50.7	48.9	1.8	0.1	0.0	4		10.0
20	587	54.9	51.3	3.6	0.3	0.2	3	12 : — : —	10.0
22	599	54.2	51.2	3.0	0.4	0.3	4	12 : — : —	10.0
8 0	590	58.4	53.0	5.4	0.5	0.5	6	16 : 12 : —	10.0

July 5^d. Between 3^h and 4^h the sky became covered with cirro-stratus and cirrus haze; about 6^h, very thick electric scud and loose cumuli came up from SW., with thunder and high wind; from 6^h till about 7^h 30^m, there was a great deal of thunder and lightning, the intervals between the flashes and the reports varying from 4^s to 12^s; about 7^h, the storm seemed to have passed off to eastward; about 7^h 15^m, a loud peal was heard to SW., the interval being 11^s; at 7^h 30^m, a brilliant flash, followed in 2^s by a deafening report resembling a rapid succession of discharges of artillery; no loud thunder was heard after this; 9^h, sky covered with dense cirro-stratus, uniform to E. and NE., occasional flashes of lightning there; loose white stratus creeping over Cheviot. There was continuous rain from 6^h till 8^h, and at night after 10^h.

July 6^d 4^h. 2.023 in. of rain fell in less than 24 hours.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.} 10 ^{m.}	From				
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
8 2	29.590	55.6	51.9	3.7	0.5	0.1	8	12 : — : —	10.0	Thick scud and cirro-strati.
4	583	55.7	51.3	4.4	0.4	0.3	4	13 : — : —	10.0	Id.
6	582	54.4	51.8	2.6	0.5	0.1	4	9 : — : —	10.0	Scud and dense cirro-stratus ; rain ^{0.5}
8	578	52.7	51.7	1.0	0.3	0.2	4	10 : — : —	10.0	Id. ; drops of rain.
10	579	51.9	51.2	0.7	0.2	0.1	4	12 : — : —	10.0	Thick scud ; rain ^{1—2}
18	29.544	52.7	51.7	1.0	0.3	0.2	6	9 : — : —	10.0	Scud ; cirro-stratus ; Cheviot invisible.
20	554	53.5	52.6	0.9	0.3	0.2	2	7 : — : —	10.0	Id. ; id. ; id. ; rain ^{0.5}
22	549	54.0	53.0	1.0	0.5	0.5	4	5 : — : —	10.0	Scud ; rain ¹
9 0	548	54.3	53.4	0.9	0.7	0.5	4	4 : — : —	10.0	Id.
2	540	56.9	55.7	1.2	0.5	0.2	5	6 : — : —	10.0	Id.
4	547	56.2	54.8	1.4	0.4	0.1	5	10 : — : —	10.0	Id.
6	537	56.4	55.2	1.2	0.4	0.2	4	7 : — : —	10.0	Scud ; rain ¹ from 4 ^h 30 ^m till 5 ^h 40 ^m .
8	548	56.5	55.1	1.4	0.3	0.1	5	7 : — : —	10.0	Id. ; dense cirro-stratus.
10	576	55.0	53.6	1.4	0.3	0.2	4	7 : — : —	10.0	Id. ; id.
										[of scud to N. ●]
18	29.617	53.7	52.8	0.9	0.2	0.0	—	— : 28 : —	9.8	Large cir.-cum.-str. ; cir.-str. and haze on hor. ; patches
20	651	58.0	56.2	1.8	0.0	0.0	16	4 : — : —	10.0	Scud ; cirro-cumulo-strati and cirro-strati above.
22	665	62.8	58.0	4.8	0.0	0.0	24	28 : 28 : 0	7.0	Masses of cum. and cir.-cum. ; woolly and tufted cir. ○
10 0	673	66.0	58.8	7.2	0.3	0.1	21	26 : 26 : 0	7.0	As before ; woolly cirri and cirro-strati. ○
2	680	64.8	58.0	6.8	0.1	0.1	26	28 : 28 : —	8.0	Scud, cumuli, and cirro-cumulo-strati.
4	676	65.2	58.8	6.4	0.2	0.1	27	26 : 26 : —	9.8	As before ; very electric-looking. ●
6	684	65.4	57.0	8.4	0.5	0.3	26	—	5.0	Loose cumuli, cirro-strati, and cirrous haze. ○
8	716	59.0	53.6	5.4	0.7	0.5	26	— : — : 30	3.0	Cirri and cirrus haze. ○
10	744	54.2	51.4	2.8	0.5	0.1	20	—	3.0	Id. ; masses of scud to W.
18	29.797	52.7	50.2	2.5	0.2	0.1	20	— : 30 : —	5.5	Cir.-cum.-str. and cir.-str. ; woolly and mottled cirri. Θ
20	805	56.0	51.7	4.3	0.6	0.4	21	— : 29 : —	9.5	Cirro-stratus scud and cirro-stratus ; linear cirri.
22	808	59.3	52.7	6.6	1.3	0.9	25	26 : — : —	10.0	Scud and loose cumuli ; cirro-strati and cirrous haze.
11 0	808	59.9	54.1	5.8	1.2	0.4	24	24 : — : —	10.0	Thick cirro-stratus scud.
2	812	62.0	54.7	7.3	0.9	0.7	24	26 : — : —	9.9	Thick scud ; cirrus haze ; portion of a solar halo. Θ
4	817	61.7	54.9	6.8	1.5	0.7	24	26 : — : —	10.0	Id. ; id.
6	826	58.4	53.4	5.0	1.0	0.4	21	25 : — : —	10.0	Scud, cirro-stratus, and cirro-cumuli.
8	820	57.6	52.2	5.4	0.4	0.3	20	— : 26 : —	10.0	Cirro-strati and cirro-cumuli.
10	826	56.1	51.6	4.5	0.5	0.3	24	—	10.0	Cirro-stratus and cirrous haze.
23 ₄	29.681	58.2	56.0	2.2	3.1	1.4	19	22 : — : —	10.0	Scud, cirro-stratus and cirrous haze. [on Cheviot. ○]
12 18	29.737	61.9	59.3	2.6	2.5	0.1	22	— : 24 : 24	5.0	Cir.-cum.-str. ; woolly cir. ; cir.-str. and scud ; scud lying
20	751	67.3	63.4	3.9	0.1	0.0	8 v.	— : 24 : —	9.5	Cirro-stratus scud and cirro-cumulo-strati.
22	757	64.4	61.0	3.4	0.5	0.5	18	24 : — : —	10.0	Scud ; cirro-strati.
13 0	749	68.8	64.1	4.7	0.6	0.4	19	22 : — : —	10.0	Id. ; id.
2	736	69.2	64.4	4.8	0.8	0.6	19	22 : — : —	10.0	Id. ; id. ; cirro-cumuli.
4	705	69.3	64.7	4.6	0.8	0.6	18	22 : — : —	9.9	Id. ; id.
6	677	67.6	63.4	4.2	0.9	0.5	20	20 : 22 : —	9.5	Id. ; id. ; cirri.
8	665	64.3	60.3	4.0	0.6	0.2	20	20 : 22 : —	6.5	Id. ; cirro-cumuli. Θ
10	660	58.4	56.2	2.2	0.3	0.2	26	20 : — : —	2.0	Masses of scud ; sheets of cirro-cumuli.
18	29.546	54.2	53.0	1.2	0.3	0.0	24	—	10.0	Dense mass of cirro-stratus.
20	540	59.5	57.3	2.2	0.1	0.0	20	— : 20 : —	9.9	Cirro-strati and cirro-cumulo-strati.
22	523	64.7	60.7	4.0	0.0	0.0	26	— : 19 : —	9.8	Cirro-cumuli ; a few masses of cumuli on horizon.
14 0	493	71.3	63.0	8.3	0.1	0.1	28	— : 18 : —	6.0	Id. ; masses of cumuli. ○
2	467	72.0	62.2	9.8	0.2	0.0	8	— : 18 : —	7.0	Id. ; id.
4	460	68.8	63.3	5.5	0.3	0.3	4	— : 21 : —	9.0	Cirro-cumulo-strati ; cumuli and haze round horizon.
6	461	65.3	60.5	4.8	0.5	0.1	2	— : 20 : —	9.8	Cirro-cumuli ; cirro-strati ; cumuli ; hazy.
8	476	63.7	59.7	4.0	0.2	0.1	4	—	10.0	Cirro-cumulo-strati ; cirrous haze and cirro-strati.
10	499	61.8	58.2	3.6	0.2	0.1	22	18 : — : —	10.0	Scud ; cirro-strati and cirri.
18	29.534	57.7	56.0	1.7	0.4	0.2	23	— : 24 : —	6.0	Cirro-cumulo-strati and cirro-strati ; woolly cirri.
20	557	61.1	57.4	3.7	0.5	0.3	22	24 : — : —	9.9	Scud ; cirro-cumulo-strati and cirro-strati.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.		
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	lbs.	lbs.	pt.	pt.	pt.
d. h. 14 22	in. 29.561	°	°	°	0.6	0.3	20	23 : — : —	10-0	Scud and cumuli.	
15 0	578	67.2	62.0	5.2	1.1	0.1	22	24 : — : —	10-0	Scud; cirro-strati; drizzling shower at 23 ^h .	
2	568	63.6	60.7	2.9	0.7	0.5	28	23 : — : —	9.5	Id.; cirro-cumulo-strati.	
4	575	68.0	61.0	7.0	0.9	0.3	21	22 : — : —	9.8	Id.; id.; cirro-strati.	
6	561	67.0	60.1	6.9	0.7	0.1	26	23 : — : —	8.0	Id.; id.	
8	553	63.0	59.7	3.3	0.6	0.4	20	23 : — : —	9.5	Id.; id.	
10	549	60.6	58.7	1.9	0.6	0.3	18	21 : — : —	10.0		
18	29.397	59.0	58.0	1.0	0.4	0.2	22	21 : — : —	10.0	Scud; dense mass of cirro-stratus.	
20	359	63.7	61.1	2.6	0.4	0.2	18	20 : — : —	10.0	Id.; id.	●
22	326	63.4	60.9	2.5	0.7	0.6	18	19 : — : —	10.0	Id.; id.	●
16 0	296	66.0	60.2	5.8	2.0	1.0	18	19 : — : —	10.0	Id.; cirro-stratus and cirrous haze.	
2	265	64.1	58.6	5.5	0.9	0.7	18	19 : — : —	10.0	Id.; id.	
4	234	62.0	58.2	3.8	1.6	0.6	18	20 : — : —	10.0	Id.; id.	
6	186	62.6	58.0	4.6	0.4	0.2	19	20 : — : —	10.0	Id.; id.	
8	156	60.0	56.9	3.1	0.6	0.1	19	20 : — : —	10.0	Id.; id.; cirro-cumuli.	
10	29.112	57.5	55.6	1.9	0.3	0.0	4	20 : — : —	9.8	Scud and cirro-strati.	
18	28.978	55.4	54.6	0.8	0.1	0.0	19	21 : — : —	9.9	Scud; cirro-strati; rain ²	
20	970	58.8	57.5	1.3	0.0	0.0	20	20 : — : —	9.9	Id.; id.; rain ¹	
22	967	61.0	56.2	4.8	0.4	0.3	24	22 : 24 : —	8.0	Scud and loose cumuli; cirro-cumulo-strati.	Θ
17 0	966	60.1	55.0	5.1	1.0	0.5	24	24 : — : —	10.0	Scud and cirro-stratus.	
2	970	62.6	58.4	4.2	0.9	0.3	23	24 : — : —	10.0	Thick scud; heavy shower at 1 ^h 30 ^m .	
4	977	60.2	56.3	3.9	0.7	0.4	27	24 : — : —	10.0	Id.; wavy cirro-strati; showers occasionally.	
6	28.990	59.2	54.2	5.0	0.6	0.3	28	23 : — : —	9.8	Scud, loose cum., and cir.-str.; rather electric-looking.	
8	29.000	57.2	53.5	3.7	1.1	0.4	24	24 : 24 : —	9.7	Id.; id.; showers occasionally.	
10	017	55.4	52.0	3.4	0.5	0.7	20	24 : 24 : —	8.0	Scud and cirro-cumulo-strati.	
18	29.034	50.2	48.7	1.5	0.6	0.1	21	— : 22 : —	9.8	Cirro-stratus scud; woolly cirri and cir.-str. [halo. Θ	
20	29.011	56.0	53.0	3.0	0.2	0.1	20	— : 19 : —	9.5	Cir.-cum.-str.; woolly cir. and cir.-str.; portion of a solar	
22	28.973	60.6	54.7	5.9	0.3	0.3	15	14 : — : —	10.0	Scud; dense homogeneous cirro-stratus; rain ^{0.5}	
18 0	915	60.5	55.2	5.3	0.2	0.2	12	10 : — : —	10.0	Id.; id.; id.	
2	860	54.0	53.0	1.0	0.5	0.2	10	12 : 12 : —	10.0	Scud and dense homogeneous cir.-str.; continuous rain ¹⁻³	
4	800	62.2	58.2	4.0	0.3	0.4	15	17 : 17 : —	10.0	Id.	
6	778	62.2	58.2	4.0	0.7	0.6	16	19 : 19 : —	10.0	Id.	
8	787	53.3	51.6	1.7	1.6	1.5	22	24 : 20 : —	10.0	Two currents of scud; drizzling rain ^{0.2}	
10	28.860	51.2	48.4	2.8	1.8	1.5	23	25 : — : —	6.5	Scud.	
23	29.183	59.2	52.8	6.4	2.8	0.5	22	22 : — : —	8.0	Cumuli, scud, and sheets of cirri.	
19 18	29.489	51.2	50.2	1.0	2.8	0.0	12	20 : — : —	9.5	Scud; cumuli and cirro-strati.	
20	519	61.2	56.0	5.2	0.3	0.3	16	20 : — : —	7.0	Scud and cumuli; cumulo-strati on horizon.	Θ
22	541	61.9	56.3	5.6	1.2	0.6	20	20 : — : —	7.0	Id.; sheets of cirro-strati and cirri.	Θ
20 0	549	64.4	57.0	7.4	1.5	1.0	20	20 : — : —	6.0	Id.; cirro-cumuli.	
2	572	63.4	57.1	6.3	2.4	0.4	22	20 : — : —	7.0	Id.; id.	
4	584	64.3	55.9	8.4	2.5	1.5	20	19 : — : 23	2.7	Id.; cirri.	Θ
6	594	62.5	56.2	6.3	2.4	1.0	21	21 : — : 20	6.0	Id.; id.	Θ
8	614	57.3	55.3	2.0	1.1	0.3	20	21 : — : —	9.8	Id.; cirro-strati and cirrous haze.	
10	614	54.6	53.0	1.6	0.3	0.1	20	21 : — : —	10.0	Id.; id.	
18	29.515	53.5	52.7	0.8	0.9	0.1	14	— : 18 : —	10.0	Cirro-stratus scud and cirro-stratus; rain ^{0.5}	
20	479	57.2	55.2	2.0	0.2	0.1	16	— : 20 : —	10.0	Id. [rain ^{0.2}	
22	444	59.6	57.5	2.1	0.5	0.1	16	16 : — : —	10.0	Scud; dense uniform mass of clouds above; drizzling	
21 0	418	64.0	61.2	2.8	0.2	0.2	20	18 : — : —	9.9	Id.; cir.-str.; heavy rain at intervals since last obser-	
2	390	65.0	61.4	3.6	0.6	0.4	21	20 : — : —	9.5	Id.; id.; id. [vation.	
4	355	65.4	59.4	6.0	1.3	0.9	18	22 : 22 : —	9.5	Scud and cirro-cumulo-strati; cum.-str. and cirro-strati.	
6	349	62.1	59.0	3.1	1.8	0.6	20	22 : — : —	9.8	Scud, loose cumuli and cirro-cumulo-strati.	
8	338	59.6	57.4	2.2	1.4	0.5	20	20 : — : —	10.0	Scud; cirro-strati; rain occasionally.	
10	329	57.6	56.6	1.0	0.6	0.3	21	— : — : —	10.0	Scud and cirro-stratus; rain ^{0.5}	
18	29.386	54.5	50.6	+3.9	2.1	1.0	21	24 : — : 28	4.5	Patches of scud; woolly cirri; cirro-strati.	Θ

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	lbs.	lbs.	pt.	
d. h.	in.	°	°	°						
21 20	29.417	58.2	53.2	+5.0	1.4	0.7	23	26 : 26 : —	8.5	Scud and cirro-cumulo-strati; woolly cirri.
22	446	60.9	54.8	6.1	2.5	2.4	22	25 : — : —	6.0	Scud and loose cumuli. ☽
22 0	483	62.9	56.5	6.4	2.5	0.9	26	25 : — : —	8.0	Id. ☽
2	510	62.3	56.4	5.9	2.0	1.1	20	24 : — : —	6.0	Id. ☽
4	530	63.2	56.4	6.8	1.8	0.6	22	23 : — : —	8.0	Id.; cumulo-strati on horizon. ☽
6	540	63.5	55.5	8.0	2.1	0.8	21	24 : — : —	9.5	Scud, loose cum., cir.-str., and cir. haze; solar halo at 5 ^h .
8	553	59.3	55.4	3.9	0.6	0.2	19	22 : 22 : —	10.0	Thick cirro-stratus and scud.
10	555	56.7	55.4	1.3	0.3	0.1	18		10.0	Id.; rain ^{0.2}
18	29.496	57.2	56.3	0.9	0.5	0.1	19	19 : — : —	10.0	Scud; wavy cirro-strati.
20	470	61.1	58.0	3.1	0.4	0.1	16		10.0	Cirro-stratus scud and cirro-strati.
22	430	62.5	58.3	4.2	1.3	1.3	16	17 : — : —	10.0	Scud; dense cirro-stratus.
23 0	379	62.1	58.1	4.0	1.8	2.2	15	17 : — : —	10.0	Id.; id.; rain ¹
2	346	61.7	58.5	3.2	2.7	1.3	17	17 : — : —	10.0	Id.; id.
4	305	65.2	60.6	4.6	3.8	2.4	16	17 : — : —	10.0	Id.; id.
6	286	60.6	60.0	0.6	3.0	1.0	18	18 : — : —	10.0	Id.; slight drizzle.
8	282	60.5	57.0	3.5	3.0	2.0	17	19 : 20 : 20	9.8	Id.; cirri and cirro-cumuli.
10	327	59.0	56.3	2.7	3.1	1.4	18	20 : — : —	9.7	Id.; cirro-strati and cirrus haze.
18	29.410	54.5	51.9	2.6	2.2	0.5	20	19 : — : 20	9.0	Scud; woolly cir.; cum. on hor.; portion of a halo. ☽
20	424	57.7	53.8	3.9	1.3	0.4	19	20 : 20 : 20	9.8	Id.; woolly cirri and cirro-stratus.
22	439	59.5	54.5	5.0	1.6	1.0	18	18 : 20 : —	9.5	Id.; thick cirro-stratus and cirrus haze.
24 0	440	64.0	57.0	7.0	2.5	1.2	18	19 : — : —	3.0	Scud and cumuli; woolly cirri to W. ☽
2	448	63.7	54.5	9.2	2.7	1.3	19	18 : — : —	9.8	Patches of scud; woolly cirri and cirro-strati.
4	447	62.5	53.8	8.7	2.1	2.3	19	— : — : 18	8.5	Woolly cirri; scud and cumuli on horizon. ☽
6	454	61.5	53.4	+8.1	1.8	1.3	18	19 : — : 18	2.0	Masses of scud and cumuli; tufts of cirri. ☽
8	465	57.6	52.3	+5.3	1.8	1.1	20		0.5	Patches of scud; cirro-strati on horizon. ☽
10	477	52.2	50.4	1.8	0.6	0.0	16		0.5	Cirro-strati on horizon.
18	29.535	54.2	51.6	+2.6	0.1	0.1	20	— : — : 19	6.0	Woolly cir.; cir.-str.; patches of scud on S. horizon. ☽
20	550	57.2	53.0	+4.2	1.3	0.7	20	21 : — : —	5.0	Scud and cumuli; woolly cirri and cirro-strati. ☽
22	573	60.0	53.4	6.6	1.7	1.2	22	20 : — : —	3.0	Cumuli. ☽
25 0	597	63.6	56.3	7.3	1.8	0.9	22	20 : — : —	4.0	Scud and cumuli; occasional slight showers. ☽
2	610	63.5	55.9	7.6	1.7	1.5	20	22 : — : —	3.0	Id.; id. ☽
4	628	63.1	55.6	7.5	2.2	1.5	22	22 : — : —	1.5	Id.; woolly cirri and cirro-strati. ☽
6	639	61.5	55.9	5.6	2.5	0.9	21	22 : — : —	3.5	Id.; id. [the S. of the sun.]
8	677	57.3	54.2	3.1	1.6	0.3	18		6.5	Cir.-str. and woolly cir.; cum. on S. hor.; parhelion to
10	707	55.9	53.9	2.0	0.4	0.0	20		9.0	Scud; cir.-str.; cir. haze; cum. on S. hor.; drops of rain.
23	29.826	62.3	54.6	7.7	0.2	0.2	20	20 : — : —	7.0	Cumuli; linear cirri.
26 18	29.661	61.4	60.1	1.3	2.0	1.2	18	20 : — : —	10.0	Scud; light drizzling rain.
20	668	62.1	60.2	1.9	1.5	0.5	20	21 : 22 : —	9.9	Id.; cir.-cum. and cir.-str.; rain occasionally since 18 ^h .
22	695	66.6	63.2	3.4	0.9	1.3	21	21 : — : —	10.0	Id.; cirro-stratus.
27 0	709	66.7	63.2	3.5	2.3	1.7	18	— : 21 : —	10.0	Cirro-stratus scud and cirro-strati.
2	726	70.2	65.8	4.4	2.6	1.7	19	21 : — : —	9.9	Scud moving quickly; cir.-strati with mottled edges to W.; Cheviot
4	735	69.6	64.6	5.0	3.0	1.4	22	22 : — : —	9.8	Scud; cirro-strati and cirri. [covered with mist; drops of rain.]
6	756	67.7	63.7	4.0	1.6	1.5	20	21 : — : 24	7.0	Scud; woolly and mottled cirri; cirro-strati. ☽
8	764	65.4	63.2	2.2	2.4	1.0	20	21 : — : —	6.5	Misty scud; cirro-strati. ☽
10	773	63.4	61.7	1.7	1.8	1.2	20	21 : 20 : —	8.0	Id.; cirro-cumulo-strati; cirro-strati.
18	29.809	63.7	61.4	2.3	1.6	0.9	18	20 : — : —	9.8	Scud.
20	825	63.2	61.6	1.6	1.6	0.1	18	21 : — : —	10.0	Id.; slight drizzling rain.
22	832	68.6	64.8	3.8	1.4	0.6	18	21 : — : —	9.9	Id.; cirro-strati.
28 0	841	70.3	65.3	5.0	1.9	1.4	19	20 : — : —	9.9	Id.; cumulo-strati on E. horizon.
2	838	70.2	64.8	5.4	2.4	2.2	22	20 : — : 21	8.0	Id.; thick woolly cirri; cum.-str. on hor.; portion of
4	825	68.3	63.5	4.8	1.8	1.3	20	20 : — : —	9.7	Id.; cirro-strati. [a halo.] ☽
6	828	67.8	62.6	5.2	3.5	1.1	21	20 : 20 : —	9.5	Id.; cirro-stratus.
8	823	65.2	61.2	4.0	1.9	0.1	18	— : 21 : —	9.9	Cirro-stratus scud and cirro-strati; woolly cirri.
10	824	62.7	60.2	2.5	1.3	0.2	18		9.9	Scud and cirro-strati.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.			
d. h. 28 18	in. 29.848	° 61.1	° 59.7	° 1.4	lbs. 0.1	lbs. 0.0	pt. 24	pt. 19 : — : —	0—10. Scud.
20	874	57.5	55.6	1.9	0.2	0.0	31		10.0 Id.
22	886	63.4	59.4	4.0	0.0	0.0	4	20 : — : —	10.0 Scud and cirro-stratus.
29 0	891	61.5	59.6	1.9	0.0	0.0	4	20 : — : —	10.0 Id.; rain ²
2	905	61.3	59.7	1.6	0.2	0.2	4	4 : — : —	10.0 Cirro-stratus scud.
4	904	59.1	57.8	1.3	0.3	0.3	3	5 : — : —	10.0 Scud; rain ²
6	901	56.6	55.8	0.8	0.3	0.2	4		10.0 Nearly homogeneous.
8	896	56.0	55.6	0.4	0.3	0.2	4	5 : — : —	10.0 Scud; rain ^{2—4}
10	907	55.6	55.2	0.4	0.3	0.1	4		10.0 Id.; rain ^{0—5}
18	29.900	57.3	57.1	0.2	0.4	0.1	4		10.0 Rain ³ ; mist.
20	905	59.3	59.0	0.3	0.5	0.1	4		10.0 Rain ^{0—2} ; id.; no rain fell after 20 ^h .
22	917	62.2	61.3	0.9	0.2	0.1	7		10.0 Homogeneous mass.
30 0	942	62.9	62.0	0.9	0.2	0.2	3		10.0 Id.; misty, objects invisible at 3 miles.
2	952	67.2	64.7	2.5	0.2	0.2	6	3 : — : —	10.0 Scud; misty on horizon.
4	947	68.2	65.1	3.1	0.8	0.8	2	6 : — : —	7.0 Id.; cirri.
6	954	64.4	62.3	2.1	0.6	0.4	6	7 : 9 : —	5.0 Misty scud; cum. and cir.-cum.-str.; woolly cirri; very
8	972	61.6	60.6	1.0	0.7	0.5	6		10.0 Dense mass of cirro-stratus. [hazy on E. hor. ⊖
10	986	60.2	59.7	0.5	0.4	0.2	6		10.0 Id.
18	29.963	58.3	57.9	0.4	0.2	0.2	6		10.0 Scotch mist; objects invisible at $\frac{3}{4}$ of a mile.
20	971	58.8	58.0	0.8	0.2	0.1	6		10.0 Id.; id.
22	958	61.2	59.6	1.6	0.2	0.1	2	6 : — : —	10.0 Misty scud.
31 0	937	65.2	62.2	3.0	0.2	0.2	8	5 : — : —	5.5 Scud and loose cum.; woolly cirri; very hazy on hor. ⊖
2	917	63.9	61.4	2.5	0.7	0.4	5		9.9 Scud and cirro-stratus; hazy on horizon.
4	882	62.4	60.1	2.3	0.9	0.5	7	5 : — : —	9.8 Misty scud.
6	871	61.2	59.2	2.0	0.4	0.4	2	5 : — : —	10.0 Scud; cirro-stratus.
8	864	58.3	57.8	0.5	0.4	0.3	4		10.0 Misty scud; misty, objects invisible at 2 miles.
10	855	56.7	56.6	0.1	0.3	0.1	4		10.0 Very misty, objects invisible at 1 mile.
18	29.779	58.7	58.5	0.2	0.2	0.0	3		10.0 Mist, objects invisible at 500 yards.
20	774	62.0	60.5	1.5	0.3	0.1	3	5 : — : —	Scud; mist cleared off.
22	746	64.7	62.4	2.3	0.2	0.1	6	5 : — : —	2.5 Id.; cumuli and haze on E. horizon.
1 0	728	70.0	64.4	5.6	0.4	0.3	8		0.5 Sheets of cirro-strati to S.
2	707	70.6	64.4	6.2	0.6	0.2	6	— : 10 : —	6.0 Cirro-cumulo-strati and cirro-strati.
4	667	70.0	64.8	5.2	3.0	0.4	2		0.5 Cumulo-strati and haze on E. and S. horizon.
6	646	68.2	64.9	3.3	0.8	0.3	5	— : 8 : —	4.5 Cirro-cumulo-strati; cirro-strati and haze.
8	657	63.4	62.3	1.1	0.5	0.3	5		10.0 Misty scud; mist coming on.
10	676	61.6	61.4	0.2	0.4	0.2	4		10.0 Very misty, objects invisible at $\frac{1}{4}$ of a mile.
22 ²	29.641	64.2	62.6	1.6	0.3	0.1	2	6 : — : —	10.0 Thick foggy clouds.
2 18	29.630	62.3	62.0	0.3	0.5	0.0	4		10.0 Fog, objects invisible at 500 yards.
20	637	63.3	62.9	0.4	0.1	0.0	4		10.0 Id.; id.; slight drizzling rain.
22	645	65.0	64.2	0.8	0.2	0.1	4		10.0 Id.; id. 1½ miles.
3 0	662	67.6	65.2	2.4	0.1	0.1	6		10.0 Id.; id. 3 miles.
2	663	71.8	67.7	4.1	0.1	0.1	3	14 : 10 : —	4.5 Scud and cumuli; woolly cirro-cumuli; hazy on hor. ⊖
4	661	76.5	66.7	9.8	0.3	0.4	8v.	13 : — : —	5.0 Cumuli; woolly cirri; cumuli and haze on horizon. ⊖
6	666	74.3	61.7	12.6	0.3	0.2	12		2.0 Woolly cirri; cum.-str. on S. hor.; cir.-str. and haze on
8	676	68.6	62.8	5.8	0.3	0.1	11		1.5 Woolly cirri and cirro-strati. ⊖ [hor. ⊖]
10	709	62.8	60.4	2.4	0.1	0.1	0		0.7 Woolly cirro-cumuli, cirri, and cirro-strati. ⊖
18	29.711	59.1	58.9	0.2	0.1	0.0	4		10.0 Fog, trees invisible at $\frac{3}{4}$ of a mile.
20	729	63.1	60.6	2.5	0.2	0.2	4	7 : — : —	9.5 Scud.
22	734	65.8	62.1	3.7	0.2	0.2	4	9 : — : —	2.5 Id.; cumuli and cirro-strati. ⊖
4 0	724	69.8	63.8	6.0	0.3	0.2	6	10 : 13 : —	6.5 Two currents of cumuli; woolly cirri and cirro-strati. ⊖
2	723	71.1	62.5	8.6	0.5	0.3	8	11 : — : —	7.5 Loose cumuli; woolly cirri; cirro-strati.
4	717	71.6	63.5	8.1	0.3	0.2	4	10 : 14 : —	7.5 Scud; loose cumuli; cirro-cumuli.
6	710	67.8	61.0	6.8	0.2	0.2	12	8 : 16 : —	8.0 Id.; id.; woolly cirri.
8	721	66.0	60.4	5.6	0.2	0.1	10	12 : — : —	7.0 Scud and cumuli; id. ⊖

July 29^d 11^h. Severe thunder-storm from 11^h till 13^h, the lightning chiefly sheet, and the nearest distance of the thunder about half-a-mile; heavy rain all night, sometimes excessively heavy.
 July 29^d 20^h. 3·063 in. of rain fell in about 19 hours.
 July 30^d 18^h. Observation made at 18^h 15^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	From	lbs.	lbs.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
4 10	29.738	61.3	59.8	1.5	0.2	0.1	4			7.0
18	29.737	58.3	57.8	0.5	0.1	0.0	1			10.0
20	747	60.0	59.2	0.8	0.0	0.0				10.0
22	741	64.0	61.0	3.0	0.1	0.1	4	6 : 12 : —		9.5
5 0	741	69.0	63.6	5.4	0.1	0.1	8	16 : — : —		9.9
2	731	64.0	62.5	1.5	0.1	0.1	4			10.0
4	722	70.5	65.2	5.3	0.3	0.1	14	12 : — : 20		4.0
6	722	69.9	64.9	5.0	0.1	0.0	16	22 : 22 : —		9.7
8	729	66.7	63.8	2.9	0.1	0.1	18	— : 24 : —		9.5
10	745	60.0	59.4	0.6	0.1	0.0	20			1.0
18	29.756	53.0	52.8	0.2	0.1	0.0	18			2.0
20	762	59.0	57.8	1.2	0.0	0.0	20			0.5
22	754	68.0	64.2	3.8	0.1	0.1	20			0.5
6 0	757	72.0	63.8	8.2	0.1	0.1	12	— : — : 24		5.0
2	733	74.7	65.3	9.4	0.1	0.1	14	— : — : 23		4.0
4	707	76.9	66.6	10.3	0.1	0.0	30			7.0
6	695	73.3	68.0	5.3	0.2	0.2	3			3.0
8	700	68.5	63.0	5.5	0.3	0.1	1	— : 22 : —		3.5
10	700	61.2	60.0	1.2	0.1	0.1	2			2.5
18	29.642	58.1	57.4	0.7	0.2	0.1	4	6 : — : —		10.0
20	647	62.4	60.4	2.0	0.1	0.1	3	6 : — : —		9.9
22	635	60.8	60.3	0.5	0.0	0.0	4	5 : — : —		10.0
7 0	620	63.0	62.0	1.0	0.3	0.6	4	5 : — : —		10.0
2	589	63.3	62.1	1.2	0.9	0.4	8	— : 5 : —		10.0
4	592	63.1	63.0	0.1	0.8	0.3	2			10.0
6	536	63.8	63.2	0.6	0.4	0.5	4			10.0
8	518	63.2	63.0	0.2	0.5	0.4	6			10.0
10	515	62.8	62.6	0.2	0.5	0.3	6			10.0
18	29.406	62.4	62.2	0.2	0.6	0.1	4	7 : — : —		10.0
20	427	64.8	64.3	0.5	0.1	0.0	8	6 : — : —		10.0
22	427	67.2	65.2	2.0	0.0	0.0				10.0
8 0	426	69.2	66.2	3.0	0.1	0.0	31	13 : 13 : —		10.0
2	418	67.8	65.0	2.8	0.4	0.1	8 v.	13 : — : —		9.9
4	405	72.4	69.0	3.4	0.1	0.1	30	18 : — : —		8.0
6	404	71.2	67.2	4.0	0.1	0.1	4	— : 18 : —		8.5
8	404	65.6	63.4	2.2	0.1	0.1	18			4.0
10	423	61.8	61.2	0.6	0.1	0.1	18			7.5
22 ³	29.508	67.3	62.3	5.0	0.5	0.3	20	20 : — : —		9.0
9 18	29.648	55.0	54.5	0.5	1.3	0.1	20	20 : — : —		3.5
20	653	58.1	55.7	2.4	0.5	0.3	20	20 : — : —		3.0
22	645	63.2	58.2	5.0	1.5	0.7	21	20 : — : —		3.0
10 0	643	64.7	58.7	6.0	1.3	1.2	20	20 : — : —		9.5
2	641	66.3	59.4	6.9	2.8	1.2	19	19 : — : —		7.0
4	628	64.6	59.8	4.8	1.9	1.0	19	18 : — : —		8.0
6	605	63.2	58.6	4.6	1.1	0.6	18	18 : — : —		9.5
8	602	58.8	56.2	2.6	0.7	0.2	19	19 : 18 : —		6.0
10	605	55.2	53.5	1.7	0.5	0.2	20			0.2
18	29.580	55.0	53.5	1.5	1.1	1.2	21	— : 21 : 22		6.5
20	592	57.0	53.7	3.3	2.1	1.1	20	22 : — : —		9.8
22	600	59.9	55.3	4.6	1.8	1.2	22	22 : — : —		10.0
11 0	611	62.0	57.4	4.6	2.1	1.3	20	21 : — : —		9.8

Aug. 6^d 18^h. Observation made at 18^h 6^m. The tops of cumuli seen occasionally to S. beyond the scud; several peals of distant thunder heard to SSW. since 19^h 45^m. The thunder gradually came nearer till 21^h when its distance was about 1½ miles, it then passed off towards NE.; nearly continuous heavy rain from 20^h 25^m till 21^h 15^m; rain²⁻³ afterwards.

Aug. 6^d 20^h. From 0^h 20^m frequent distant thunder was heard to the S. and SW.; about 1^h 15^m, it had approached nearer, when the thunder followed the lightning in 20^s; about 1^h 30^m, a black mass of cloud came up over the zenith, when loud peals of thunder followed the lightning in 5^s to 8^s; at 1^h 35^m, the rain began to fall in spoonfuls, and when it ceased at 1^h 55^m it was found that 0.590 inch had fallen in 20^m. The storm moved off to NE., with occasional peals of thunder afterwards. 2^h 0^m. Thick black mass to N., with loose detached patches below.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 h.	From	lbs.	lbs.	pt.	pt.
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
11 2	29.620	61.5	56.6	4.9	2.4	1.3	20	22 : — : —	—	9.8
4	636	62.5	57.0	5.5	2.2	1.7	20	22 : 24 : —	—	8.0
6	648	61.4	56.7	4.7	2.6	0.9	20	22 : — : —	—	9.5
8	655	58.2	55.1	3.1	1.3	0.4	19	23 : 22 : —	—	7.0
10	691	57.4	54.8	2.6	0.7	0.2	20	—	—	9.9
18	29.754	55.0	52.6	2.4	0.5	0.2	18	24 : 24 : —	—	7.0
20	777	58.2	54.8	3.4	0.2	0.1	20	23 : — : —	—	9.8
22	789	60.7	55.7	5.0	0.4	0.1	22	23 : — : —	—	10.0
12 0	781	62.3	57.5	4.8	0.3	0.3	22	23 : — : —	—	9.5
2	785	63.7	58.2	5.5	0.6	0.1	21	22 : — : —	—	9.9
4	762	64.2	57.1	7.1	0.6	0.6	21	24 : — : —	—	9.0
6	755	64.6	56.2	8.4	0.8	0.2	22	— : 23 : 24	—	4.0
8	732	59.2	55.8	3.4	0.3	0.1	22	22 : — : —	—	10.0
10	697	56.8	54.2	2.6	0.3	0.1	8	—	—	9.9
18	29.358	57.6	56.8	0.8	0.3	0.2	18	19 : — : —	—	9.8
20	299	60.7	59.2	1.5	1.7	0.6	17	18 : — : —	—	10.0
22	226	65.7	62.8	2.9	1.2	2.1	16	18 : — : —	—	10.0
13 0	172	61.0	60.7	0.3	2.2	0.8	16	21 : — : —	—	10.0
2	118	64.3	62.8	1.5	0.5	0.1	18	18 : — : —	—	9.9
4	157	66.0	61.1	4.9	1.1	0.3	21	25 : — : —	—	7.0
6	215	63.2	57.8	5.4	1.1	1.3	30	— : 28 : —	—	3.0
8	331	59.4	54.7	4.7	1.8	0.6	30	— : 27 : —	—	9.5
10	415	56.2	52.8	3.4	1.6	0.2	29	—	—	10.0
18	29.589	46.7	45.0	1.7	0.5	0.2	22	— : — : 25	—	2.0
20	614	52.9	50.0	2.9	0.2	0.2	22	26 : — : —	—	2.0
22	617	57.8	51.4	6.4	0.2	0.3	23	24 : 24 : —	—	3.0
14 0	642	62.3	55.5	6.8	0.2	0.2	22	24 : 24 : —	—	8.0
2	650	65.9	57.8	8.1	0.4	0.3	18	22 : 22 : —	—	9.5
4	649	63.8	56.7	7.1	0.9	0.1	18	22 : — : —	—	7.0
6	640	62.6	56.0	6.6	0.4	0.1	18	— : 18 : 23	—	5.0
8	652	58.3	54.0	4.3	0.1	0.1	18	— : 20 : —	—	9.0
10	619	53.0	51.0	2.0	0.1	0.1	30	—	—	9.0
18	29.504	53.6	52.9	0.7	0.0	0.0	30	14 : 14 : —	—	10.0
20	461	57.0	55.3	1.7	0.3	0.2	12	14 : — : —	—	9.9
22	426	62.0	58.6	3.4	0.5	0.3	15	17 : — : —	—	10.0
15 0	401	64.2	60.2	4.0	0.8	1.1	18	18 : — : —	—	10.0
2	374	62.4	60.7	1.7	0.8	0.2	17	17 : — : —	—	10.0
4	357	62.2	60.2	2.0	0.3	0.2	16	18 : — : —	—	10.0
6	337	58.4	57.0	1.4	0.5	0.1	17	— : 16 : 16	—	7.0
8	339	56.9	55.1	1.8	0.3	0.3	20	—	—	0.5
10	349	54.5	53.2	1.3	0.2	0.2	22	—	—	0.5
22 ³	29.425	62.4	57.6	4.8	1.4	0.7	20	22 : — : —	—	8.0
16 18	29.514	56.4	55.0	1.4	1.6	0.1	18	18 : 18 : —	—	10.0
20	523	60.4	58.3	2.1	0.1	0.1	17	20 : 20 : —	—	9.8
22	520	64.0	60.1	3.9	0.4	0.3	20	20 : 20 : —	—	10.0
17 0	510	65.6	59.6	6.0	0.7	0.8	16	— : 20 : —	—	4.0
2	508	61.8	57.8	4.0	0.8	0.1	20	— : 20 : —	—	10.0
4	489	62.6	59.9	2.7	0.4	0.2	17	18 : — : —	—	9.9
6	463	63.8	60.3	3.5	0.2	0.1	8	21 : — : —	—	9.8
8	456	61.0	58.7	2.3	0.1	0.1	12	— : 18 : —	—	9.8
10	446	58.0	56.2	1.8	0.1	0.1	8	—	—	10.0
18	29.316	56.0	55.5	0.5	0.4	0.4	3	12 : — : —	—	10.0
20	305	57.0	55.6	1.4	0.4	0.2	6	12 : — : —	—	10.0
22	295	58.0	57.2	0.8	0.5	0.4	7	12 : — : —	—	10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
18 0	29.274	58.8	58.4	0.4	0.4	0.1	6	11 : — : —	10.0	Scud ; mass of cirro-strati ; rain ²
2	265	63.6	61.0	2.6	0.2	0.1	4	11 : — : —	9.5	Id. ; loose cumuli ; cirro-cumulo-strati. ○
4	261	66.7	61.4	5.3	0.1	0.1	11	14 : — : —	5.0	Loose cumuli. ○
6	273	62.6	59.5	3.1	0.1	0.1	18	14 : — : —	7.5	Electric clouds to S. and W. ; cumuli ; woolly cirri.
8	307	56.2	55.0	1.2	0.2	0.0	10	10 : — : 14	5.0	Scud ; cirri.
10	339	55.8	55.6	0.2	0.1	0.1	2		10.0	Overcast ; slight fog.
18	29.406	52.0	51.6	0.4	0.2	0.0	14		10.0	Fog, rendering trees invisible at $\frac{1}{2}$ of a mile.
20	439	53.0	52.5	0.5	0.1	0.0	24	22 : 6 : —	8.5	Loose foggy scud clearing off ; scud and woolly cirro-strati.
22	456	62.8	60.3	2.5	0.1	0.1	6	3 : 0 : —	8.5	Misty scud ; loose cumuli ; woolly cirri.
19 0	468	64.0	58.8	5.2	0.3	0.4	2	2 : — : —	8.5	Scud and loose cumuli ; large piles of cumuli to W.
2	478	65.0	59.2	5.8	0.5	0.2	4	31 : — : —	3.5	Loose cumuli. ○
4	483	65.4	59.0	6.4	0.4	0.2	2	1 : — : —	4.0	Id. ○
6	503	64.0	59.0	5.0	0.2	0.1	7		1.5	Cum., cum.-str., cirri, and cirrus haze round horizon. ○
8	512	59.2	57.9	1.3	0.1	0.1	31		0.2	Stratus and haze round horizon.
10	536	54.8	54.2	0.6	0.1	0.1	18		7.5	Scud and cirro-strati ; misty.
18	29.514	52.8	52.3	0.5	0.1	0.0	20	— : 30 : —	9.8	Cirro-cumulo-strati and cirro-strati.
20	512	57.0	55.3	1.7	0.2	0.2	20	24 : 30 : —	10.0	A few patches of scud ; cirro-strati, cirro-cumulus, and cirrus haze.
22	509	59.7	56.0	3.7	0.5	0.4	22		10.0	Id. ; dense mass of cirro-stratus.
20 0	498	59.6	57.8	1.8	0.4	0.1	18	18 : — : —	10.0	Loose scud ; dense mass of cirro-strati ; rain ^{1—2} since last
2	481	60.6	58.8	1.8	0.4	0.3	20	20 : — : —	10.0	Scud ; rain ^{1—5} [observation.]
4	460	62.1	60.0	2.1	0.2	0.1	17	21 : — : —	10.0	Id. ; cirro-strati.
6	457	60.8	58.6	2.2	0.2	0.1	21	21 : — : —	9.9	Id. ; id.
8	471	59.6	58.0	1.6	0.1	0.1	22	24 : — : —	10.0	Id. ; cirro-stratus.
10	488	58.3	57.5	0.8	0.1	0.1	19		10.0	Id. ; id.
18	29.564	59.0	57.5	1.5	0.1	0.1	24	2 : — : —	10.0	Scud ; cirro-stratus.
20	621	60.1	58.2	1.9	0.5	0.1	0	2 : — : —	10.0	Id.
22	671	60.0	57.3	2.7	0.5	0.7	1	2 : — : —	10.0	Id. ; id.
21 0	705	62.2	58.0	4.2	0.4	0.3	1	1 : 1 : —	9.9	Scud and cirro-cumulo-strati ; cirro-stratus. ●
2	733	65.0	60.2	4.8	0.3	0.1	5	0 : 0 : —	9.9	Id. ; id. ●
4	741	66.7	61.6	5.1	0.1	0.1	18	14 : 30 : —	7.0	Scud and loose cumuli ; loose cirro-cumulo-strati. ○
6	755	66.7	60.8	5.9	0.1	0.1	1	— : 30 : —	9.0	Cirro-cumulo-strati.
8	793	59.2	57.0	2.2	0.1	0.1	4	28 : — : —	3.0	Scud ; woolly cirri.
10	815	58.0	56.5	1.5	0.1	0.0			9.0	Scud and cirro-strati.
18	29.819	54.0	53.0	1.0	0.1	0.0	20	— : 26 : —	6.0	Cirro-cumulo-strati. [from about WSW. an hour ago.
20	836	54.2	53.2	1.0	0.2	0.1	30		10.0	Fog, trees are invisible at 400 yards. The fog came up
22	836	60.4	57.6	2.8	0.1	0.1	20		1.0	Cumulo-strati ; cumuli and haze round horizon. ○
22 0	828	66.5	62.2	4.3	0.3	0.2	18	24 : — : —	6.0	Loose cumuli. ○
2	827	67.8	62.8	5.0	0.7	0.3	18	21 : — : —	5.0	Id. ○
4	819	69.4	63.9	5.5	0.5	0.3	20	29 : — : —	2.5	Scud and loose cumuli ; streaks of cirro-stratus. ○
6	825	66.0	62.0	4.0	0.2	0.1	3	29 : 24 : —	4.5	Loose cum. ; cirro-cumulo-strati ; cirrus rad. from SW by S. ; Cirro-stratus. [very hazy on hor. ○
8	843	63.0	60.0	3.0	0.1	0.1	4	— : 29 : —	10.0	Cirro-stratus. Id.
10	858	61.7	60.0	1.7	0.1	0.1	20		10.0	Scud ; drizzling rain.
23 0	29.995	56.0	55.7	0.3	1.0	0.4	4	4 : — : —	10.0	Cirro-cumulo-strati ; woolly cirri. ○
18	30.051	50.3	50.1	0.2	0.6	0.0	18	— : 31 : 21	8.0	Id. ; loose scud on S. hor.
20	067	55.2	53.5	1.7	0.1	0.1	15	— : 31 : —	9.8	Scud ; cirro-cumulo-strati ; both currents moving slowly.
22	065	59.2	54.7	4.5	0.1	0.0	8	2 : 1 : —	9.8	Masses of cumuli ; cirro-cumulo-strati. ○
24 0	080	64.0	57.7	6.3	0.2	0.1	16	4 : 30 : —	9.0	Id. ; id. ○
2	081	63.7	57.1	6.6	0.3	0.1	4	— : 31 : —	10.0	Cumuli. ○
4	077	61.7	55.5	6.2	0.2	0.2	5	0 : 28 : —	5.0	Haze and cirro-strati on horizon. ○
6	083	60.0	54.2	5.8	0.5	0.3	5		0.5	Very clear.
8	095	55.7	53.1	2.6	0.3	0.3	4		0.0	Streak of cloud on N. hor. ; mist in the valleys. ○
10	117	47.3	46.6	0.7	0.1	0.0	20		1.5	Cirrus radiating from NW. ; cum. and haze on N. hor. ○
18	30.124	42.0	41.7	+0.3	0.1	0.0	16		0.1	
20	132	48.8	48.1	+0.7	0.1	0.0	20		1.5	

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Aug. 18^h 6^m. Two or three peals of thunder since 5^h from S. and SW.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h. 24 22	in. 30.123	56.9	54.0	2.9	0.1	0.1	pt. 19	pt. pt. pt.	0—10. 1·0	Detached masses of cumuli on hor.; patches of cirri. ☉
25 0	121	65.0	58.6	6·4	0·2	0·1	20	30: — : —	8·0	Scud and cumuli; cirrus haze.
2	101	65.9	58.6	7·3	0·1	0·1	12	30: 28: 28	9·5	Id.; woolly cirri, cir. cum., and cir. haze; solar
4	091	65·4	57·2	8·2	0·1	0·1	12	31: — : —	9·9	Scud; cirro-strati and cirri. ☀ [halo. ☐
6	082	61·7	57·0	4·7	0·3	0·1	6	— : 26: 26	8·0	Woolly cirri, cirro-cumuli, and cirro-strati. ☐
8	076	57·4	55·1	2·3	0·2	0·0	2		2·5	Cirro-strati and cirrus haze.
10	079	51·3	50·0	1·3	0·0	0·0	16		0·5	Clouds and haze on horizon; stars rather dim.
18	30.040	44·8	44·4	0·4	0·1	0·0	17	— : 0: —	8·0	Cirro-cumulo-strati; very misty. ☀
20	047	49·7	48·8	0·9	0·1	0·0	6	— : 2: —	3·0	Id.; mist clearing off. ☐
22	039	58·7	55·8	2·9	0·0	0·0	24	— : 6: —	6·0	Id. ☒
26 0	30.019	63·0	58·0	5·0	0·0	0·0	0		2·0	Cumuli. ☒
2	29.991	66·4	58·8	7·6	0·1	0·1	8	10: — : —	5·0	Id. ☒
4	965	67·2	59·3	7·9	0·2	0·2	4	9: — : —	3·0	Id.; very hazy round horizon. ☒
6	951	65·3	58·8	6·5	0·4	0·3	10		0·5	Id.; id. ☒
8	950	58·4	55·7	2·7	0·2	0·0	0		1·0	Cirro-strati and cirrus haze on horizon.
10	959	51·2	50·6	0·6	0·0	0·0			0·5	Haze on horizon.
18	29.920	43·7	43·4	0·3	0·1	0·0	17		8·0	Woolly and mottled cirri; fog, objects invisible at 200
20	927	48·7	48·2	0·5	0·1	0·0	20		8·0	As before. ☀ [yards.
22	921	55·6	53·7	1·9	0·0	0·0	30	— : 8: —	7·0	Cirro-cumuli. ☒
27 0	907	61·2	56·4	4·8	0·1	0·1	0		3·0	Cum.; cir. cum.; the motion of the clouds is scarcely
2	889	65·9	57·0	8·9	0·2	0·1	16		4·0	Id., moving very slowly. ☐ [perceptible. ☒
4	870	65·6	57·2	8·4	0·3	0·2	20	16: — : 16	3·0	Id.; woolly cirri. ☒
6	851	64·9	59·5	5·4	0·4	0·2	12	20: 20: —	6·0	Scud, cumuli, and cirro-cumulo-strati; woolly cirri. ☒
8	865	61·6	58·1	3·5	0·3	0·1	20	— : 20: —	7·0	Thick cirro-stratus scud.
10	882	59·3	56·4	2·9	0·2	0·0	20		8·0	Scud.
18	29.908	49·5	48·8	0·7	0·1	0·1	18	— : — : 16	4·5	Woolly cirri, cirro-cumulo-strati and cir. str.; misty. ☒
20	907	53·2	50·7	2·5	0·1	0·1	25		0·5	Cirri and haze on horizon. ☒
22	922	60·3	57·4	2·9	0·1	0·0	28		2·0	Cirri and cirro-strati, chiefly to S.; cum. on N. hor. ☒
28 0	936	65·1	58·9	6·2	0·2	0·1	2	— : — : 12	3·0	Woolly cirri; large piles and ranges of cum. on N. and
2	920	67·3	62·0	5·3	0·4	0·3	6	10: — : 14	4·0	Cumuli; cirri. ☒ [S. hor. ☒
4	917	67·7	60·4	7·3	0·4	0·3	2	— : — : 16	3·0	Woolly and mottled cirri; cumuli round horizon. ☒
6	915	64·9	60·3	4·6	0·4	0·1	4		2·0	Cumuli and cirri. ☒
8	927	60·0	58·2	1·8	0·2	0·1	3		2·0	Cirro-strati and cirri.
10	933	57·0	56·4	0·6	0·1	0·0	4		10·0	Overcast.
18	29.923	55·3	54·7	0·6	0·1	0·0			10·0	Homogeneous; misty.
20	901	56·7	55·4	1·3	0·1	0·0	4	— : 8: —	10·0	Cirro-stratus scud and cirro-stratus.
22	906	58·8	56·9	1·9	0·1	0·0	4v.	— : 4: —	10·0	Thick cirro-stratus and scud.
29 0	889	64·5	59·3	5·2	0·1	0·1	8	— : 4: —	10·0	Id.
2	880	65·9	60·7	5·2	0·1	0·1	28	2: — : —	9·0	Masses of scud and loose cum.; cir. haze; solar halo.
4	854	64·2	60·3	3·9	0·1	0·2	2	4: — : —	10·0	Masses of scud; cirro-stratus. ☒
6	845	62·4	59·0	3·4	0·3	0·2	3	— : 0: —	7·0	Cirro-cumuli; patches of cumuli; cirrus haze. ☐
8	853	57·6	56·0	1·6	0·2	0·1	4		6·0	Id.; cirrus haze.
10	853	53·0	52·6	0·4	0·2	0·0	8		1·0	Cirro-strati and haze near horizon.
23	29.858	62·7	59·0	3·7	0·6	0·5	20	20: — : 28	5·0	Masses of loose cumuli; cirri and cirrus haze. ☒
30 18	29.880	57·3	55·2	2·1	1·0	0·0	8	— : 18: —	9·9	Cirro-stratus scud and wavy cirro-strati.
20	876	60·7	58·2	2·5	0·6	0·4	16	17: — : —	9·9	Scud; cirro-strati.
22	872	64·3	60·3	4·0	0·8	0·8	18	20: — : —	10·0	Id.; id.
31 0	878	57·7	53·1	4·6	0·8	0·4	26	18: — : —	10·0	Thick scud; rain ¹
2	908	56·2	54·5	1·7	0·5	0·2	17	20: 20: —	10·0	Scud and cirro-strati; rain ¹
4	945	61·0	57·1	3·9	0·3	0·3	22	28: — : —	9·8	Scud; cirro-strati; cirrus haze; solar halo. ☒
6	29.950	60·2	54·4	5·8	0·4	0·3	28	26: — : —	6·0	Scud and loose cumuli; cirro-cumulo-strati; cir. str. ☐
8	30.000	54·0	51·3	2·7	0·4	0·1	28	30: — : —	3·0	Id. ☒
10	30.038	51·6	49·2	2·4	0·2	0·2	24		1·0	Id. ☒
18	30.106	40·1	39·7	0·4	0·2	0·1	17		1·0	Woolly cirri, cum., and haze to E.; patch of scud to N. ☐

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Aug. 25th 10^h 5^m. A very brilliant meteor was seen moving from about β Herculis to Arcturus, exploding about 2° N. of Arcturus; its diameter was about 10' or 12'; it was of a bright white light, leaving a train of reddish sparks; its form changed rapidly during its course and after its disappearance, a small red ball continued for 5° or 6° in the same direction; the meteor moved over about 30° in about 3^s.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1h.	From 10m.	lbs.	lbs.	pt.	pt.	0-10.
d. h.	in.	°	°	°							
31 20	30.122	47.9	46.4	+1.5	0-2	0-0	20				0-5
22	121	54.6	51.2	3.4	0-2	0-1	25				1-0
1 0	106	60.4	53.6	6.8	0-2	0-4	16	20 : — : —		3-0	Cumuli and cirri near horizon. ☺
2	086	63.4	55.0	8.4	0-5	0-3	24	20 : 30 : —		7-0	Cumuli; cirri. ☺
4	072	65.8	58.2	7.6	0-5	0-1	21	24 : — : —		8-0	Id.; id. ☺
6	076	60.1	54.4	5.7	0-8	0-1	23	26 : 26 : —		9-5	Scud and cumuli; woolly cirri; cirro-strati. ☺
8	082	56.0	51.3	4.7	0-2	0-2	22			7-0	Scud; cirro-strati and cirro-cumulo-strati; cir. haze. ☺
10	078	53.8	51.4	2.4	0-2	0-2	24	— : 28 : —		9-8	Cirro-strati and cirro-cumulo-strati. ☺
18	30.038	52.7	51.5	1.2	0-4	0-3	22	— : 25 : —		6-0	Cir-cum.-str.; cir-str.; hazy on hor.; scud on Cheviot. ☺
20	047	54.8	52.2	2.6	0-4	0-3	20	— : 24 : —		10-0	Cirro-cumulo-strati and cirro-strati.
22	056	58.8	55.4	3.4	0-4	0-3	21	24 : 24 : —		9-9	Patches of scud, cirro-strati, cir-cum. and cir. haze.
2 0	043	65.1	59.4	5.7	0-9	0-7	22	23 : — : —		9-5	Patches of scud and cumuli, woolly cirri, and cir-str.
2	041	65.0	59.2	5.8	0-8	0-5	22	24 : — : —		10-0	Scud, cirro-strati, and cirrus haze.
4	029	65.0	58.6	6.4	0-8	0-3	20	24 : — : —		9-8	Id., id., and cirro-cumuli.
6	023	63.0	58.2	4.8	0-6	0-3	20	23 : 23 : —		7-0	Id.; cirro-cumuli; cirro-strati. ☺
8	034	58.6	56.0	2.6	0-5	0-2	20	24 : 24 : —		7-0	Masses of scud; cirro-strati; cirro-cumuli. ☺
10	046	54.5	53.4	1.1	0-3	0-1	20			2-0	Cirro-strati. ☺
18	30.021	55.0	53.2	1.8	0-3	0-4	28	26 : — : —		9-2	Scud; cirro-strati.
20	032	58.8	56.0	2.8	0-6	0-5	26	— : 26 : —		9-0	Cirro-stratus scud; sheets of cirro-strati; cir. haze. ☺
22	051	63.6	59.8	3.8	0-7	0-8	20	— : 24 : —		9-5	Masses of cirro-stratus scud; milky cirrus haze. ☺
3 0	044	66.6	60.8	5.8	1-4	0-7	21	— : 26 : —		9-5	Cirro-stratus scud; woolly cirri; cirrus haze. ☺
2	039	65.3	60.8	4.5	1-1	0-6	20	— : 25 : —		10-0	Id.
4	036	64.2	61.0	3.2	0-9	0-5	20	— : 24 : —		9-0	Id.; cirrus haze.
6	019	64.1	60.6	3.5	0-5	0-3	18	21 : — : —		10-0	Scud.
8	038	60.3	57.6	2.7	0-5	0-2	20			6-0	Masses of scud; cirrus haze. ☺
10	045	55.8	54.2	1.6	0-3	0-2	21			2-0	Id.; id. ☺
18	30.065	60.0	58.0	2.0	0-2	0-1	3	— : 4 : —		10-0	Cirro-stratus scud.
20	080	61.3	59.2	2.1	0-1	0-0	4	— : 6 : —		10-0	Id.
22	080	65.7	61.7	4.0	0-1	0-1	3	5 : — : —		9-5	Scud; cirrus haze.
4 0	074	67.3	62.0	5.3	0-1	0-1	6	5 : — : —		10-0	Id.
2	062	64.0	61.6	2.4	0-3	0-3	8	6 : — : —		7-0	Id. ☺
4	043	65.9	60.9	5.0	0-3	0-2	8	6 : — : —		5-0	Id.
6	037	64.0	60.4	3.6	0-3	0-2	4	5 : — : —		10-0	Id.
8	035	60.4	59.0	1.4	0-2	0-2	4			10-0	Id.
10	028	58.6	57.5	1.1	0-2	0-2	3			10-0	Id.
18	30.000	55.4	54.9	0-5	0-1	0-0	8			10-0	Dense mist, objects invisible at 500 yards.
20	009	56.4	55.9	0-5	0-1	0-0	8			10-0	Id., id. at $\frac{1}{2}$ a mile.
22	30.006	62.5	60.2	2.3	0-1	0-1	14			10-0	Scud and cirro-strati; remains of a fog.
5 0	29.986	68.4	64.4	4.0	0-1	0-1	30	19 : — : —		7-0	Loose cumuli; cumuli and haze on horizon. ☺
2	955	70.2	64.2	6.0	0-1	0-1	22	17 : — : —		7-0	Id.; id. ☺
4	929	69.3	63.3	6.0	0-2	0-1	8	17 : — : —		9-5	Scud and cirro-cumulo-strati; much haze.
6	905	67.4	61.8	5.6	0-1	0-1	16	17 : — : —		3-0	Id.; id.
8	904	58.8	56.7	2.1	0-1	0-1	16			3-0	Cirro-strati and thick haze on horizon. ☺
10	903	56.3	54.5	1.8	0-1	0-1	20			2-0	Id. ☺
22 ³ ₄	29.790	65.6	61.2	4.4	0-4	0-5	16	18 : — : —		5-0	Scud and loose cumuli. ☺
6 18	29.685	56.2	55.9	0-3	1-0	0-1	19	— : 18 : —		5-0	Cir-cum.-str.; cirro-strati; foggy; mist in the valleys.
20	689	59.2	58.5	0-7	0-1	0-1	28			2-0	Cirro-strati and fog round horizon. ☺
22	690	66.0	63.7	2.3	0-2	0-2	21	20 : — : —		4-0	Scud and loose cumuli.
7 0	680	70.5	64.7	5.8	0-3	0-2	19	17 : — : —		6-0	Id. ☺
2	661	72.3	65.8	6-5	0-4	0-2	22	18 : — : —		4-0	Id. ☺
4	626	72.4	64.9	7-5	0-3	0-3	18	17 : — : —		4-0	Id. ☺
6	597	70.6	63.9	6-7	0-4	0-1	22			3-5	Cumuli and cumulo-strati; much haze. ☺
8	597	65.5	61.6	3-9	0-1	0-1	20	— : 16 : —		8-5	As before; very electric-looking to E.
10	591	59.0	57.5	1-5	0-1	0-1	20			2-0	Cirri and cirrus haze; diffuse lunar corona. ☺

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s. : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	lbs. 10m	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
7 18	29.526	58.4	57.4	1.0	0.2	0.1	12	18 : — : —	10-0	Homogeneous; misty.
20	516	61.7	59.9	1.8	0.1	0.1	15	— : 18 : 18	9.5	Scud and cumuli; misty. Θ
22	502	64.9	60.9	4.0	0.4	0.4	18	19 : 19 : —	9.0	Woolly cirri and cirro-strati; scud and loose cumuli. Θ
8 0	517	65.0	59.5	5.5	1.4	1.1	20	18 : 18 : —	10.0	Scud and thick cirro-stratus.
2	528	62.5	59.4	3.1	0.7	0.3	18	18 : 18 : —	10.0	Id.; slight rain since 1 ^h .
4	528	66.5	61.6	4.9	2.1	0.8	20	22 : — : —	2.5	Loose cumuli; cumulo-strati and cirro-strati. ○
6	578	63.8	57.0	6.8	1.2	0.3	20	22 : — : —	3.0	Id. ○
8	631	57.0	54.7	2.3	0.4	0.3	18		3.0	Cirro-strati; cirro-cumuli and cirrus haze.
10	660	53.8	52.7	1.1	0.3	0.2	19		3.0	Cirro-strati and cirri. ♫
18	29.688	49.8	49.0	0.8	0.4	0.1	17	— : 18 : —	8.0	Cirro-stratus scud; woolly cirri and cirro-strati.
20	713	56.5	54.0	2.5	0.3	0.3	17	— : 18 : —	9.5	Woolly cirri and cirro-stratus. Θ
22	758	62.4	58.2	4.2	0.7	0.5	20	19 : --- : —	10.0	Scud and loose cumuli; woolly cirri and cirro-strati. Θ
9 0	786	64.7	58.7	6.0	0.8	0.8	20	19 : — : —	9.0	Id.; id.; solar
2	830	66.9	59.0	7.9	1.1	0.5	20	20 : — : —	9.5	Scud and loose cum.; cir-cum. and cir-str. [halo. Θ
4	864	62.7	56.8	5.9	0.4	0.1	24	21 : — : —	9.8	Scud; cirro-strati and cumulo-strati.
6	902	62.6	56.7	5.9	0.3	0.1	18	20 : — : —	3.0	Id. ○
8	29.958	54.0	50.5	3.5	0.2	0.1	22		0.5	Cirro-strati to SE.
10	30.006	46.7	45.8	0.9	0.1	0.0	16		0.2	Patches of cloud to E. ♫
18	30.106	39.2	38.9	0.3	0.1	0.0			2.0	Woolly and linear cirri on horizon; mist in the valleys.
20	137	45.4	44.7	0.7	0.1	0.0	17	— : — : 30	4.0	Id.
22	151	55.6	53.3	2.3	0.1	0.1	20	— : — : 30	1.0	Cirri. ○
10 0	146	61.6	54.8	6.8	0.7	0.7	20	23 : — : —	0.3	Patches of scud. ○
2	140	62.6	56.0	6.6	1.3	0.5	20	22 : — : —	0.3	Id. ○
4	129	64.4	56.3	8.1	0.9	0.8	18		0.2	Woolly and mottled cirri. ○
6	124	62.7	55.6	7.1	1.0	0.4	19	— : — : 28	3.0	
8	148	55.6	51.6	4.0	0.6	0.2	17		7.5	Woolly cirri and cirro-strati.
10	171	50.5	48.5	2.0	0.3	0.2	18		2.0	Cirri and cirro-strati. ♫
18	30.174	53.4	52.0	1.4	0.3	0.1	18	— : 29 : —	6.0	Cirro-cumulo-strati and cirro-strati.
20	194	56.8	54.8	2.0	0.2	0.1	20		9.9	Cirro-stratus scud; slight drizzling rain.
22	199	63.0	59.1	3.9	0.2	0.2	22	— : 28 : —	9.0	Cirro-strati and cirro-stratus scud.
11 0	193	68.6	63.2	5.4	0.3	0.3	20	— : 24 : —	6.0	Cirro-strati and cirro-cumulo-strati. ○
2	182	72.8	65.6	7.2	0.4	0.2	24		3.0	Masses of cirro-strati; woolly cirri. ○
4	185	73.0	65.4	7.6	0.5	0.3	28	— : 28 : —	8.5	Cirro-strati; cirro-cumuli and woolly cirri. Θ
6	184	69.3	64.2	5.1	0.4	0.1	26	— : 28 : —	9.8	Cirro-strati; cirri; cirrus haze.
8	211	63.1	61.3	1.8	0.1	0.1	18		9.5	Cirro-strati and woolly cirri.
10	229	59.2	58.3	0.9	0.0	0.0	22		3.0	Cirro-strati and cirrus haze; faint aurora.
18	30.247	56.0	55.4	0.6	0.1	0.1	20		9.0	Scud; woolly cirri.
20	272	59.5	58.4	1.1	0.1	0.0	16		8.5	Cirro-cumulo-strati and cirro-str.; motion imperceptible.
22	298	64.7	61.5	3.2	0.0	0.0	0		9.5	Id., moving very slowly.
12 0	301	68.8	63.1	5.7	0.1	0.1	8	— : 2 : —	6.0	Woolly cir-cum.-str.; cirro-cumuli; detached cumuli. Θ
2	306	67.7	62.6	5.1	0.5	0.3	6	28 : — : —	9.7	Scud and loose cumuli; cirro-strati.
4	311	65.0	61.2	3.8	0.4	0.4	6	4 : 0 : —	10.0	Scud; cirro-cumulo-strati.
6	317	59.9	58.2	1.7	0.4	0.3	4	5 : — : —	10.0	Uniform mass of scud and cirro-stratus.
8	337	57.6	55.6	2.0	0.4	0.1	6	6 : — : —	10.0	Id.
10	351	57.0	55.0	2.0	0.2	0.0	0		10.0	Overcast.
22 ³	30.288	59.0	56.1	2.9	0.1	0.1	16		0.5	
13 18	30.099	46.8	46.5	0.3	0.2	0.2	20	24 : — : —	2.0	Misty scud; cirri; fog in the valleys.
20	094	51.2	50.8	0.4	0.2	0.1	20		0.5	Fog on horizon. ○
22	091	60.7	59.0	1.7	0.2	0.1	6	26 : — : —	9.0	Loose scud.
14 0	.076	67.0	62.6	4.4	0.2	0.2	0	27 : — : —	8.0	Scud and loose cumuli.
2	053	67.0	63.1	3.9	0.3	0.2	4	26 : — : —	4.0	Scud, cumuli, and haze. ○
4	025	69.0	64.7	4.3	0.2	0.1	16	26 : — : —	8.5	Cumuli; very hazy on horizon. ○
6	000	68.5	64.3	4.2	0.3	0.2	28	25 : — : —	5.0	Scud and cumuli; much haze. Θ
8	008	60.4	59.1	1.3	0.1	0.0	28	25 : — : —	2.5	Scud.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.
Sept. 9th 0^h. Observation made at 0^h 5^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1 ^{b.}	From	lbs.	lbs.	pt.	pt.	pt.
d. h.	in.	°	°	°	1 ^{b.}	10 ^{m.}				0—10.	
14 10	30.023	57.1	56.7	0.4	0.0	0.0	26	28 : — : —	1.0	Scud.	
18	30.012	49.3	49.1	0.2	0.1	0.0	20	— : 27 : —	9.0	Misty scud ; cirro-strati ; mist on the ground.	
20	020	57.2	56.5	0.7	0.1	0.1	18	— : 27 : —	9.5	Cirro-cumulo-strati and cirro-strati ; fog on horizon. Θ	
22	028	62.7	60.6	2.1	0.0	0.0	14	27 : — : —	7.5	Scud.	
15 0	019	66.5	61.6	4.9	0.2	0.1	0	26 : — : —	7.0	Scud and cumuli.	○
2	30.005	68.6	63.0	5.6	0.2	0.1	4	25 : — : —	7.0	Id.; hazy.	○
4	29.990	67.5	62.3	5.2	0.2	0.1	3	25 : — : 24	7.0	Id.; woolly cirri ; very hazy.	Θ
6	983	67.0	60.1	6.9	0.3	0.2	0	26 : — : —	2.0	Id.; sheets of cirri and cirro-strati.	○
8	997	58.9	57.4	1.5	0.3	0.0	4		0.4	Sheets of cirro-cumuli.	
10	998	51.5	51.4	0.1	0.0	0.0			0.2	Haze on horizon ; stratus in the valleys.	
18	29.985	46.2	46.0	0.2	0.1	0.0	18	— : 24 : —	6.0	Cirro-cumulo-strati ; woolly cirri ; fog, objects invisible	
20	30.006	50.1	49.7	0.4	0.1	0.1	17		7.5	Thick woolly cirri ; fog in the valleys. [at 300 yards.	
22	30.001	58.3	56.2	2.1	0.1	0.0	28	— : 25 : —	9.8	Loose cirro-cumulo-strati.	
16 0	29.991	64.0	60.3	3.7	0.0	0.0	30		10.0	Id.	
2	967	68.7	64.2	4.5	0.1	0.1	16	— : 24 : —	10.0	Cirro-stratus scud.	
4	942	65.3	61.9	3.4	0.1	0.0	20	— : 24 : —	10.0	Id.	
6	925	64.0	59.3	4.7	0.1	0.0	26	— : 22 : —	10.0	Id.	
8	932	60.4	58.4	2.0	0.0	0.0	24		10.0	Id.	
10	914	58.2	57.0	1.2	0.0	0.0	16		9.5	Id.	
18	29.847	52.4	51.5	0.9	0.1	0.0	17	— : 24 : —	9.9	Cirro-cumulo-strati.	
20	847	55.0	54.0	1.0	0.1	0.1	8	— : 26 : —	10.0	Cirro-stratus scud.	
22	849	59.0	57.0	2.0	0.1	0.0	22		10.0	Id.; hazy ; clouds nearly uniform.	
17 0	829	63.0	58.6	4.4	0.1	0.1	28	— : 30 : —	10.0	Id.	
2	808	65.8	60.0	5.8	0.1	0.1	4	— : 30 : —	10.0	Id.	
4	792	63.0	58.6	4.4	0.1	0.1	8	— : 30 : —	9.8	Id.	
6	780	61.2	57.0	4.2	0.0	0.0	8		10.0	Id.	
8	789	57.3	54.0	3.3	0.2	0.1	2		10.0	Id.	
10	792	55.8	53.6	2.2	0.1	0.0	2		10.0	Dark.	
18	29.799	47.8	46.3	1.5	0.4	0.1	28	4 : — : —	4.5	Scud ; woolly cirri.	
20	793	48.0	46.3	1.7	0.1	0.1	30		0.5	Cirro-cumulo-strati and cirro-strati on E. horizon.	○
22	795	53.5	50.3	3.2	0.1	0.1	8	6 : — : —	1.5	Loose cumuli.	○
18 0	790	57.0	52.1	4.9	0.2	0.1	2	10 : — : —	9.5	Id.	
2	754	57.7	53.1	4.6	0.2	0.2	3	10 : — : —	7.0	Id.	
4	738	58.2	52.6	5.6	0.3	0.2	4	— : 16 : —	8.5	Cirro-cumulo-strati.	Θ
6	708	55.6	50.6	5.0	0.2	0.1	4	— : 18 : —	3.0	Id.	○
8	706	47.0	45.6	1.4	0.1	0.0	20		0.5	Patches of cirri.	
10	699	44.4	43.6	0.8	0.0	0.0	18		9.8	Scud.	
18	29.584	45.9	45.0	0.9	0.2	0.0	23	26 : — : —	10.0	Scud.	
20	560	49.0	48.0	1.0	0.0	0.0	17	— : 26 : —	10.0	Cirro-cumulo-strati and scud.	
22	527	58.0	54.0	4.0	0.2	0.1	20	— : 26 : —	10.0	Cirro-cumulo-strati ; cirrus haze.	
19 0	492	61.2	55.5	5.7	0.3	0.2	22	28 : — : —	10.0	Scud and cirro-stratus ; haze.	
2	461	61.1	56.1	5.0	0.2	0.1	20		10.0	Thick covering of cirro-stratus ; much haze.	
4	444	56.8	55.0	1.8	0.2	0.1	20		10.0	Id.; id.; rain ^{1.5}	
6	423	55.0	54.0	1.0	0.2	0.2	18		10.0	Densely overcast ; rain ¹	
8	415	54.1	53.4	0.7	0.2	0.1	18		10.0	Id.; id.	
10	402	53.7	53.3	0.4	0.1	0.0	2		10.0	Id.; very light rain.	
22 ³	29.367	59.2	56.6	2.6	0.0	0.0	0	4 : 30 : —	10.0	{ Masses of loose cumulous scud ; cirro-cumulo-strati ; both currents moving very slowly.	
20 18	29.531	51.7	51.0	0.7	1.1	0.0	2		9.9	Cirro-stratus scud ; sky to E. ; slight drizzling rain.	
20	557	52.5	51.2	1.3	0.2	0.1	3	— : 4 : —	9.8	Cirro-cumulo-strati and cirro-strati.	
22	572	56.5	52.0	4.5	0.6	1.0	5	7 : — : —	3.5	Cumuli ; cirro-cumulo-strati to SW.	○
21 0	578	58.2	52.3	5.9	0.5	0.4	6	7 : — : —	3.0	Id.	○
2	570	58.5	51.3	7.2	0.4	0.4	4	9 : — : —	3.0	Id.	○
4	556	57.2	50.0	7.2	0.4	0.3	6		2.5	Id.	○
6	566	55.0	49.0	6.0	0.3	0.2	6	8 : — : —	2.0	Scud and cumuli.	

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Sept. 17^a. The most of the swallows seem to have gone off to-day.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.
21 8	29.585	51.3	48.9	2.4	0.1	0.1	6		9.5
10	588	50.6	48.6	2.0	0.1	0.1	2		9.0
18	29.561	35.0	34.7	0.3	0.0	0.0	24	— : 16 : —	3.0
20	574	41.2	41.1	0.1	0.1	0.0	22	— : 16 : —	2.0
22	575	51.0	48.6	2.4	0.2	0.1	12	14 : 14 : —	8.0
22 0	560	57.0	51.5	5.5	0.4	0.4	10	11 : 11 : —	9.5
2	523	58.7	53.8	4.9	0.3	0.8	10	12 : 12 : —	7.0
4	499	58.2	52.8	5.4	0.8	0.7			4.0
6	468	55.4	51.2	4.2	0.8	0.2	6		7.0
8	471	54.7	50.7	4.0	0.4	0.4	12		10.0
10	440	54.4	49.7	4.7	1.5	0.5	12		8.0
18	29.289	54.3	53.1	1.2	0.6	0.8	6	13 : — : —	10.0
20	244	55.1	54.8	0.3	1.7	1.3	6	11 : — : —	10.0
22	204	57.6	56.4	1.2	0.9	0.3	4	10 : — : —	10.0
23 0	154	58.6	58.0	0.6	0.5	1.0	12	13 : — : —	10.0
2	135	63.4	61.0	2.4	0.9	0.2	12	16 : — : —	9.5
4	125	60.9	59.4	1.5	0.4	0.2	14	16 : — : —	10.0
6	124	58.6	58.0	0.6	0.2	0.1	28	15 : — : —	10.0
8	131	55.6	55.5	0.1	0.0	0.0	28		4.0
10	133	51.2	50.9	0.3	0.0	0.0			2.0
18	29.138	50.7	50.6	0.1	0.0	0.0			10.0
20	159	51.6	51.4	0.2	0.0	0.0			10.0
22	174	55.7	55.3	0.4	0.1	0.0	10		10.0
24 0	189	59.4	57.6	1.8	0.1	0.1	8	14 : — : —	9.9
2	190	63.2	59.3	3.9	0.1	0.1	8	— : 14 : —	5.5
4	181	63.4	60.3	3.1	0.1	0.1	10	16 : — : —	9.7
6	218	57.7	56.8	0.9	0.3	0.3	4	5 : — : —	10.0
8	258	55.3	55.1	0.2	0.3	0.1	2		10.0
10	282	54.8	54.6	0.2	0.1	0.1	1		10.0
18	29.361	55.4	54.9	0.5	0.0	0.0	22	28 : — : —	10.0
20	392	55.5	54.0	1.5	0.2	0.1	21	26 : — : —	8.0
22	430	58.6	55.3	3.3	0.3	0.3	20	— : 23 : —	6.0
25 0	440	61.7	55.8	5.9	0.5	0.6	20	26 : — : —	7.0
2	448	62.6	56.4	6.2	0.6	0.2	21	— : 24 : —	9.9
4	447	63.2	57.6	5.6	0.5	0.1	24	24 : 24 : —	9.5
6	454	59.7	55.4	4.3	0.3	0.1	22	24 : — : —	8.0
8	480	55.1	52.8	2.3	0.1	0.1	20		7.0
10	483	54.9	53.3	1.6	0.3	0.1	19		6.0
18	29.407	46.0	45.7	0.3	0.2	0.0	4		9.5
20	390	48.9	48.2	0.7	0.0	0.0	4	18 : — : —	10.0
22	360	52.3	51.2	1.1	0.0	0.0	3		10.0
26 0	311	56.3	54.5	1.8	0.4	0.2	18		10.0
2	277	58.6	55.9	2.7	1.4	0.8	17	— : 17 : —	9.9
4	227	61.4	57.7	3.7	1.5	0.5	14	18 : — : —	6.5
6	223	58.6	57.3	1.3	0.8	0.3	16	19 : — : —	10.0
8	220	56.5	55.4	1.1	0.6	0.3	18		9.0
10	238	56.2	55.0	1.2	0.5	0.2	18		7.0
22 1	29.343	57.0	54.6	2.4	1.2	0.2	18	24 : 14 : —	8.0
27 18	29.362	38.0	37.8	0.2	1.2	0.0	16		3.0
20	379	39.6	39.3	0.3	0.0	0.0	18	— : — : 20	3.0
22	363	47.3	46.5	0.8	0.1	0.1	6	— : 14 : —	8.5
28 0	338	53.2	51.7	1.5	0.1	0.1	2	8 : — : —	9.9
2	305	53.4	52.6	0.8	0.4	0.3	4	11 : — : —	10.0
4	296	52.0	51.4	0.6	0.5	0.4	4	9 : — : —	10.0

Sept. 22^d 10^h. There is evidently a bright aurora, but it is almost wholly obscured by clouds.

Sept. 23^d 0^h. About 23^h the wind changed for a short time, the clouds moving from WSW., shortly afterwards two currents were observed; rain²⁻⁵ since 22^h.

Sept. 23^d 18^h. Observation made at 18^h 30^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From	pt.	pt.	pt.
d. h.	in.	°	°	°	lbs.	lbs.	pt.	10 : — : —	0—10.	Scud ; rain ⁵
28 6	29.295	48.4	47.9	0.5	0.5	0.1	0	10 : — : —	10.0	Id. ; rain ^{3—5}
8	280	49.2	49.0	0.2	0.2	0.2	0	10 : — : —	10.0	Id. ; rain ^{0.5}
10	256	49.8	49.3	0.5	0.2	0.1	14	10 : — : —	10.0	Scud ; uniform mass above ; rain ³
18	29.105	50.0	49.5	0.5	0.5	0.1	0	10 : — : —	10.0	Scud ; uniform mass above ; rain ⁴
20	092	48.8	48.4	0.4	0.1	0.0	0	0 : — : —	10.0	Scud ; id. ; rain ²
22	075	48.2	47.9	0.3	0.2	0.1	24	0 : — : —	10.0	Scud ; id. ; rain ³
29 0	046	49.0	48.5	0.5	0.6	0.4	1	2 : — : —	10.0	Scud ; id. ; rain ^{0.5}
2	050	49.4	49.2	0.2	0.7	0.1	28	0 : — : —	10.0	Scud ; id. ; rain ^{0.5}
4	027	50.3	49.9	0.4	0.5	0.7	23	26 : — : —	10.0	Scud ; id. ; rain ^{0.2}
6	069	50.8	49.6	1.2	1.6	1.1	27	29 : — : —	10.0	Scud ; id.
8	063	51.8	50.2	1.6	2.4	1.5	30	10 : — : —	10.0	Cirro-strati.
10	149	51.2	49.8	1.4	0.2	0.2	31	10 : — : —	10.0	Scud ; cirro-strati.
18	29.383	51.0	49.5	1.5	0.4	0.1	30	1 : — : —	9.5	Scud ; cirro-cumulo-strati.
20	435	50.6	48.6	2.0	0.4	0.1	31	2 : 2 : —	7.0	Id. ; id.
22	478	53.0	51.4	1.6	0.1	0.1	31	2 : — : —	7.5	Scud and loose cumuli ; woolly cirri.
30 0	491	57.3	53.6	3.7	0.3	0.2	4	2 : — : —	7.0	Id. ; id.
2	516	57.7	53.2	4.5	0.2	0.1	4	0 : — : —	9.0	Cirri ; masses of scud and cumuli.
4	527	57.7	52.6	5.1	0.2	0.1	4	— : — : 31	9.0	Cirro-strati and cirri.
6	547	54.2	52.3	1.9	0.1	0.1	12	— : 30 : 30	9.5	Dense mass of cirro-strati.
8	572	51.0	50.2	0.8	0.1	0.0	30	10 : — : —	10.0	Cirro-strati and cirro-cumulo-strati.
10	581	49.4	48.8	0.6	0.1	0.0	6	10 : — : —	10.0	Scud.
18	29.563	51.6	50.6	1.0	0.2	0.1	16	22 : — : —	10.0	Id. ; cirro-cumulo-strati.
20	573	53.1	51.7	1.4	0.5	0.4	20	23 : 22 : —	9.5	Id. ; cirro-strati.
22	593	55.5	53.4	2.1	0.5	0.1	22	21 : — : —	10.0	Id. ; cirro-cumulo-strati.
1 0	578	57.7	55.4	2.3	0.3	0.3	22	22 : — : —	9.9	Id. ; id.
2	586	62.8	59.0	3.8	0.4	0.4	19	24 : 21 : —	9.5	Scud and loose cumuli ; cirri.
4	607	60.6	53.6	7.0	0.6	0.6	25	24 : — : 23	3.0	Thin cirri and cirrous haze.
6	638	55.2	50.0	5.2	0.9	0.1	20	— : — : —	0.3	Id.
8	666	49.7	47.6	2.1	0.3	0.1	22	— : — : —	1.0	Cirri.
10	676	44.2	43.8	0.4	0.1	0.1	16	— : — : —	0.5	Cirri ; cirro-strati ; stratus in the valleys ; much dew.
18	29.621	38.7	38.3	0.4	0.1	0.1	16	— : — : 20	4.0	Id. ; id. ; stratus.
20	616	40.5	40.2	0.3	0.1	0.0	22	— : 19 : —	8.0	Woolly cirro-cumulo-strati ; fog, objects invisible at $1\frac{1}{2}$ mile.
22	583	49.6	49.0	0.6	0.1	0.1	18	— : 18 : —	9.0	Id. ; stratus ; patches of scud on E. and S. hor.
2 0	517	56.9	52.3	4.6	0.1	0.1	31	16 : 17 : —	7.5	Scud and cumuli ; woolly cirro-cumulo-strati ; haze on hor.
2	453	60.3	55.3	5.0	0.4	0.3	18	20 : — : —	7.0	Id. ; cirro-cumulo-strati.
4	387	59.7	54.2	5.5	0.4	0.3	18	18 : 18 : —	9.0	Scud and cirro-cumulo-strati ; cirro-strati.
6	363	55.4	51.4	4.0	0.4	0.1	20	— : — : —	0.5	A few patches of scud ; cirro-strati and stratus.
8	348	47.2	46.5	0.7	0.2	0.1	20	— : 24 : —	6.0	Cirro-cumulo-strati and cirro-strati ; foggy on hor.
10	324	45.8	45.6	0.2	0.1	0.0	18	— : — : —	0.5	Cirro-strati on horizon.
18	29.384	42.0	41.0	1.0	0.4	0.1	20	— : — : —	0.2	A few patches of cirro-stratus.
20	413	43.3	41.7	1.6	0.2	0.1	18	— : — : —	0.5	Patches of scud ; cirro-strati and haze.
22	423	50.9	48.2	2.7	0.2	0.2	22	— : — : —	0.5	Scud and cumuli ; cumuli and cirro-strati.
3 0	433	55.0	49.4	5.6	0.4	0.3	22	24 : — : —	8.0	Id. ; cumulo-strati on E. hor.
2	435	56.0	50.4	5.6	0.9	0.2	26	23 : — : —	3.0	Cumuli ; cirri.
4	445	58.0	51.1	6.9	1.0	0.5	22	22 : — : —	2.0	Cirro-strati and haze on horizon.
6	466	51.2	47.2	4.0	0.5	0.2	16	— : — : —	0.2	Id.
8	496	46.2	44.4	1.8	0.8	0.0	22	— : — : —	0.1	Id.
10	505	44.1	43.2	0.9	0.2	0.1	26	— : — : —	0.1	Id.
23	29.472	52.2	48.5	3.7	1.0	0.4	14	— : 20 : —	10.0	Cirro-stratus and haze.
4 18	29.322	55.0	52.6	2.4	2.0	0.3	11	11 : — : —	10.0	Scud ; cirro-stratus and cirrous haze.
20	326	56.9	53.6	3.3	0.4	0.2	12	11 : — : —	10.0	Id. ; id.
22	303	59.1	55.2	3.9	1.3	0.9	14	13 : 14 : —	9.9	Loose scud ; cirro-strati and cirro-cumulo-strati ; cir. haze.
5 0	277	61.6	56.4	5.2	1.6	0.8	10	11 : — : —	9.9	Scud ; cirro-strati.
2	241	59.3	56.5	2.8	1.7	1.4	14	11 : — : —	10.0	Id. ; id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
5 4	29.209	58.7	56.4	2.3	1.3	0.5	10	11 : — : —	10.0	Scud; cirro-strati.
6	180	57.8	56.4	1.4	0.7	0.1	10	11 : — : —	10.0	Id.; id.
8	166	55.9	54.0	1.9	0.6	0.2	16	14 : 14 : —	5.0	Scud and cirro-eumulo-strati.
10	29.146	56.0	54.0	2.0	0.2	0.2	16	14 : 14 : —	5.0	Id.
18	28.986	56.0	53.8	2.2	1.0	0.4	13		9.5	Scud and cirro-strati.
20	930	55.9	53.7	2.2	0.8	1.0	14	14 : 15 : —	6.0	Scud; cirro-cumuli.
22	880	57.3	54.3	3.0	2.0	0.8	14	16 : — : —	9.9	Id.; cirro-strati.
6 0	845	57.6	55.4	2.2	1.6	1.7	18	18 : — : —	6.0	Id.; cumuli and cumulo-strati; cirro-strati.
2	916	58.4	51.2	7.2	3.8	2.0	18	21 : — : —	4.0	Scud and loose cumuli; cirro-strati.
4	28.965	56.1	50.0	6.1	2.3	1.4	18	22 : — : —	1.5	Id.
6	29.002	51.0	47.6	3.4	1.7	0.2	18		2.0	Patches of scud; cirro-strati and cirrous haze.
8	037	49.8	47.3	2.5	0.8	0.4	17		2.0	Scud and loose cumuli.
10	29.043	49.0	46.8	2.2	0.5	0.2	18	19 : — : —	5.0	Id.
18	28.981	46.9	45.6	1.3	1.9	0.4	17		2.5	Scud and cirri.
20	980	47.8	46.4	1.4	1.3	0.4	18	— : 18 : 18	7.0	Cirro-strati and woolly cirri; cumuli on horizon.
22	963	52.8	49.7	3.1	2.1	1.5	18	— : — : 18	6.0	Thick woolly cirri; cirro-strati; seud lying on Cheviot.
7 0	943	54.2	49.7	4.5	2.3	1.3	18	17 : — : 18	3.0	Scud and loose cum.; woolly cirri; cirro-strati on hor.
2	901	56.0	50.2	5.8	2.8	0.7	20	17 : — : —	9.0	Scud; cumuli and cirro-strati; rain ^{0.2}
4	858	54.6	49.6	5.0	2.5	1.2	18	18 : 22 : 22	5.0	Scud and cumuli; cirri and cirro-strati.
6	804	52.2	47.7	4.5	1.5	0.3	12	17 : — : —	10.0	Thick scud; id.
8	748	49.7	48.2	1.5	2.3	1.6	16		10.0	Dark; rain ^{2.5}
10	745	46.0	45.2	0.8	1.2	0.2	18		3.0	Cirro-strati to N.
18	28.850	46.7	45.4	1.3	0.9	0.1	21		2.0	Scud and cirro-strati.
20	879	47.1	46.0	1.1	0.6	0.7	19		6.0	Cirro-strati and cirrous haze.
22	902	51.2	49.2	2.0	1.1	0.8	20	— : 24 : —	10.0	Cirro-stratus seud and cirro-strati; cirrous haze.
8 0	921	54.2	50.7	3.5	1.6	0.8	20	23 : — : —	9.9	Scud; cirro-stratus and cirrous haze; rain ^{0.5}
2	932	54.8	50.4	4.4	1.7	0.7	22	22 : — : —	9.7	Id.; id.; cum. on hor.
4	954	53.2	50.2	3.0	1.6	0.7	18	24 : — : —	9.7	Id.; id.; id.
6	28.997	51.0	48.3	2.7	0.8	0.7	20	23 : — : —	9.5	Loose seud; loose cirro-strati; dense cirro-strati in variously-coloured and
8	29.042	49.5	47.7	1.8	1.1	1.0	18		6.5	Cirro-strati and haze on N. and E. hor. ☰ [contorted sheets.]
10	083	48.0	46.7	1.3	1.0	0.3	20	24 : — : —	2.5	Scud; cirro-strati and haze.
18	29.186	50.0	48.7	1.3	1.3	0.3	22	22 : — : —	3.5	Scud and cirro-strati; thin haze, causing a faint lunar
20	196	50.1	49.0	1.1	0.4	0.3	18	20 : — : —	10.0	Scud; cirro-stratus. [halo.]
22	192	52.4	50.8	1.6	0.4	0.1	16		10.0	Loose seud; dense mass of cirro-stratus.
9 0	142	51.7	50.4	1.3	0.5	0.2	10	16 : — : —	10.0	Id.; id.; rain ^{1.5}
2	29.042	50.9	49.5	1.4	0.4	0.1	12	16 : — : —	10.0	Id.; id. [rain.]
4	28.930	54.9	54.0	0.9	0.3	0.2	19	20 : — : —	10.0	Scud; cirro-strati; bank of white clouds to E.; drops of
6	896	58.2	57.3	0.9	1.5	1.7	20	19 : — : —	10.0	Scud moving rapidly; cirro-stratus.
8	887	57.0	54.8	2.2	1.8	1.0	18		2.5	Scud and cirro-strati.
10	880	56.0	53.8	2.2	1.7	1.3	18		5.0	
18	28.730	54.9	53.3	1.6	3.5	0.9	19		9.8	Scud; cirro-cumuli; drops of rain.
20	713	56.4	55.2	1.2	1.1	1.2	18	20 : — : —	9.5	Id.; cirro-strati; rain occasionally.
22	742	59.3	57.2	2.1	1.1	0.8	18	20 : — : —	9.5	Id.; id.
10 0	820	58.0	57.1	0.9	2.0	1.2	20	21 : — : —	9.9	Id.; id.
2	891	59.0	57.6	1.4	1.8	0.7	22	23 : — : —	10.0	Id.; id.
4	28.949	60.0	54.3	5.7	1.6	1.7	20	24 : 24 : —	3.0	Scud and cumuli; sheets of cirro-strati and cirri. ☰
6	29.053	56.7	52.6	4.1	1.9	0.6	20	25 : — : —	6.0	Scud; bank of cirro-strati to E.; cirro-strati and cirri to W.
8	171	54.7	51.2	3.5	1.0	0.5	22		3.0	Scud and cirro-strati; principally to E.
10	262	54.2	50.6	3.6	0.9	0.4	24		10.0	Id.; dark.
23	29.422	50.3	49.7	0.6	0.6	0.1	6	14 : 14 : —	9.5	Scud; cirro-cumuli and cirro-strati.
11 18	29.251	52.1	51.6	0.5	1.7	1.7	2		10.0	Scud; rain ^{0.5}
20	282	52.3	51.8	0.5	2.1	1.8	3	5 : — : —	10.0	Id.; rain ²
22	342	52.8	51.9	0.9	1.9	1.4	3	4 : — : —	10.0	Id.; id.
12 0	381	53.3	52.0	1.3	3.1	3.8	2	4 : — : —	10.0	Id.; rain ¹ .

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
12 2	29.433	51.0	49.0	2.0	5.2	2.6	2	4 : — : —	10.0	Scud.
4	493	51.9	47.1	4.8	4.7	3.2	2	3 : — : —	10.0	Id.; cir.-str. and cir.-cum.; parhelion seen about 3 ^{h.}
6	554	49.2	46.0	3.2	4.2	2.8	2	3 : — : —	10.0	Id.
8	619	49.0	44.4	4.6	4.5	3.0	2		9.8	Id.; dark.
10	686	44.5	42.8	1.7	3.3	2.6	0		9.9	Id.; rain ¹
18	29.786	43.7	40.1	3.6	5.1	1.2	31	3 : — : —	7.5	Scud.
20	814	43.9	40.3	3.6	2.1	1.0	0	2 : — : —	7.0	Id.
22	834	45.7	42.2	3.5	2.2	1.2	31	2 : — : —	3.0	Id.; cirro-strati.
13 0	812	47.6	43.0	4.6	2.6	1.5	0	— : 3 : —	7.5	Cirro-strati and cirro-cumulo-strati.
2	801	47.8	43.3	4.5	1.7	0.7	31	0 : — : —	10.0	Scud.
4	781	47.6	41.4	6.2	1.7	0.6	0	2 : — : —	9.5	Id.
6	745	44.8	41.0	3.8	0.6	0.3	0	2 : — : —	7.0	Id.
8	698	41.6	38.8	2.8	0.2	0.2	20		6.5	Id.
10	642	40.5	38.7	1.8	0.1	0.1	18		8.0	Id.; stars dim.
18	29.244	41.6	39.0	2.6	0.5	0.5	18		10.0	Scud; a few spits of rain.
20	29.115	39.5	38.4	1.1	0.8	0.3	13	14 : — : —	10.0	Id.; rain ^{1—2} since 18 ^h 20 ^m .
22	28.956	40.6	39.7	0.9	1.8	1.0	14	14 : — : —	10.0	Id.; rain ^{1—2}
14 0	866	43.0	42.0	1.0	2.4	1.1	14	14 : — : —	10.0	Id.; rain ²
2	776	44.7	43.6	1.1	1.2	0.2	20	16 : — : —	9.9	Id.; rain ¹
4	698	48.4	47.0	1.4	0.3	0.1	2	18 : — : —	9.5	Scud; cirro-strati.
6	664	45.3	43.8	1.5	0.1	0.1	3	16 : — : —	10.0	Id.; id.
8	638	45.2	44.8	0.4	0.1	0.1	8		10.0	Slight drizzle; very dark.
10	616	45.3	44.9	0.4	0.1	0.0	3		10.0	Very dark.
18	28.596	44.8	44.6	0.2	0.0	0.0			10.0	Scud; misty.
20	637	45.1	45.0	0.1	0.0	0.0	18		10.0	Fog, trees invisible at 200 yards; scud and cir.-str.
22	665	48.0	47.4	0.6	0.1	0.1	24	— : 15 : —	9.5	Cirro-cumulo-strati and cirro-strati; foggy.
15 0	700	53.0	50.5	2.5	0.1	0.1	7	— : 13 : —	7.5	Large cir-cum.-str. and cir.-str.; cum.-str. on hor.
2	725	52.8	50.4	2.4	0.1	0.1	2	13 : — : —	9.0	Scud and cumuli; id.
4	750	52.6	49.9	2.7	0.1	0.0	8	15 : — : —	9.5	Id.
6	792	48.0	46.9	1.1	0.1	0.0	6	— : 15 : —	6.5	Cirro-cumulo-strati; cumulo-strati and cirro-strati.
8	835	47.7	47.0	0.7	0.1	0.1	6		8.5	Scud and cirro-strati.
10	854	43.5	43.2	0.3	0.1	0.1	18		5.0	Id.; misty.
18	28.959	42.0	41.8	0.2	0.0	0.0	6		10.0	Fog, trees invisible at 200 yards.
20	28.996	41.8	41.6	0.2	0.0	0.0	8		10.0	Id., id.
22	29.015	45.6	45.2	0.4	0.1	0.0	6		10.0	Id., id., 1 mile.
16 0	031	51.8	51.0	0.8	0.1	0.0	28	— : 13 : —	9.0	Misty scud and cirro-cumulo-strati; cirro-strati.
2	035	53.7	51.3	2.4	0.1	0.1	8		9.8	Id.; id.
4	047	54.2	52.1	2.1	0.1	0.1	4	6 : 12 : —	9.5	Scud; cirro-strati and cirro-cumuli; cumulo-strati.
6	085	51.6	50.9	0.7	0.2	0.1	4	5 : — : —	10.0	Scud; rain ^{0.5}
8	107	50.8	50.4	0.4	0.2	0.1	2		10.0	Id.; misty.
10	133	43.2	42.8	0.4	0.1	0.1	8		3.0	Scud and cirro-strati near horizon.
18	29.210	47.9	47.6	0.3	0.1	0.0	20		10.0	Scud; slight mist.
20	242	48.9	48.6	0.3	0.1	0.0	0	6 : — : —	10.0	Id.; id.
22	261	52.8	51.2	1.6	0.2	0.2	7	6 : — : —	10.0	Id.
17 0	263	53.8	52.8	1.0	0.4	0.2	2	5 : — : —	10.0	Id.; drops of rain.
2	258	55.6	53.7	1.9	0.6	0.3	2	5 : — : —	10.0	Smoky scud, very low, moving rather quickly.
4	269	53.5	53.1	0.4	0.6	0.3	1	4 : — : —	10.0	Scud; rain ²
6	282	53.2	52.8	0.4	0.5	0.3	2	4 : — : —	10.0	Id.; rain ¹
8	306	53.8	53.2	0.6	0.4	0.2	3		10.0	Id.
10	333	52.4	52.2	0.2	0.3	0.1	3		7.0	Id.; clear in zenith.
23	29.389	52.3	51.5	0.8	0.2	0.1	6	6 : — : —	10.0	Uniform misty scud.
18 18	29.262	50.8	50.3	0.5	0.3	0.2	20		10.0	Scud; rain ¹
20	290	50.8	50.0	0.8	0.6	0.2	22		10.0	Dense mass of cirro-stratus.
22	317	55.2	53.3	1.9	0.3	0.2	20	— : 18 : —	8.0	Cirro-cumulo-strati; scud and loose cum. near hor. Θ

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.
Oct. 15^a 18^b. Observation made at 18^b 15^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h. 10m.	From	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
19 0	29.335	52.7	51.1	1.6	0.6	0.2	19	18 : — : —	—	10.0
2	323	54.0	52.3	1.7	0.8	0.4	18	19 : 19 : —	—	9.8
4	314	53.5	51.2	2.3	0.8	0.9	18	18 : 20 : —	—	8.0
6	302	52.2	49.8	2.4	1.3	0.8	18	18 : — : —	—	10.0
8	295	49.0	47.8	1.2	0.7	0.2	16			2.0
10	258	50.0	48.2	1.8	1.0	0.6	17			3.0
18	29.201	46.7	46.0	0.7	1.8	0.0	21			9.9
20	225	46.0	45.3	0.7	0.1	0.1	2	— : 15 : —	—	9.0
22	227	49.3	47.4	1.9	0.1	0.0	28	— : 16 : —	—	6.0
20 0	215	53.5	50.1	3.4	0.2	0.1	21	— : 14 : 14	—	9.5
2	193	56.0	51.2	4.8	0.3	0.3	18	14 : — : 16	—	8.0
4	192	53.3	49.3	4.0	0.3	0.1	20	18 : 17 : —	—	9.0
6	172	49.6	47.7	1.9	0.1	0.1	18	18 : — : —	—	10.0
8	149	48.4	47.0	1.4	0.1	0.1	22			8.0
10	29.126	46.6	45.7	0.9	0.1	0.0	28			9.0
18	28.828	44.2	42.3	1.9	0.7	0.8	12			9.9
20	748	44.5	43.4	1.1	1.3	0.2	6	12 : — : —	—	10.0
22	679	46.6	45.3	1.3	1.5	0.9	14	13 : — : —	—	10.0
21 0	625	54.0	51.6	2.4	1.8	0.5	13	14 : 13 : —	—	9.5
2	585	52.2	49.6	2.6	0.3	0.1	6	— : 12 : —	—	9.8
4	582	51.3	48.2	3.1	0.2	0.1	1	13 : 14 : —	—	9.8
6	587	49.0	47.6	1.4	0.1	0.1	4	12 : — : —	—	9.8
8	613	46.6	46.0	0.6	0.0	0.0	16			10.0
10	613	46.7	45.9	0.8	0.1	0.1	4			10.0
18	28.667	46.3	45.6	0.7	0.2	0.1	29			10.0
20	697	46.6	45.7	0.9	0.1	0.0	0	— : 2 : —	—	9.8
22	736	48.0	46.3	1.7	0.3	0.2	2	2 : 2 : —	—	10.0
22 0	763	51.1	49.2	1.9	0.3	0.2	31	1 : — : —	—	9.0
2	779	49.9	47.5	2.4	0.7	0.5	27	0 : — : —	—	9.8
4	802	48.3	47.9	0.4	0.7	0.7	30	31 : — : —	—	1.0
6	847	47.9	46.1	1.8	1.2	1.1	29	30 : 30 : —	—	9.5
8	893	48.1	45.9	2.2	1.9	1.7	29			10.0
10	28.940	47.4	44.2	3.2	1.9	0.9	28			9.8
18	29.165	44.7	40.3	4.4	3.2	1.3	28			9.5
20	241	42.5	38.5	4.0	1.3	0.6	26	29 : — : —	—	2.5
22	298	44.7	40.5	4.2	0.5	0.2	21	29 : — : —	—	2.5
23 0	352	46.5	40.7	5.8	1.4	0.4	27	29 : — : —	—	3.0
2	381	46.0	40.2	5.8	1.1	0.3	24	26 : — : —	—	4.0
4	403	46.3	40.3	6.0	0.4	0.2	28	25 : — : 29	—	6.0
6	424	43.5	39.3	4.2	0.1	0.1	20	23 : — : —	—	7.5
8	418	40.1	37.5	2.6	0.2	0.2	23			4.0
10	396	39.6	37.5	2.1	0.1	0.1	24			10.0
18	29.192	41.0	39.9	1.1	0.5	0.3	14			10.0
20	183	41.7	41.0	0.7	0.3	0.0	0			10.0
22	191	44.4	43.1	1.3	0.0	0.0	10			10.0
24 0	197	46.8	45.3	1.5	0.1	0.0	21	22 : — : —	—	8.5
2	190	49.0	46.7	2.3	0.0	0.0	28	22 : — : —	—	9.8
4	209	45.8	43.7	2.1	0.3	0.4	30			10.0
6	243	44.2	42.5	1.7	0.4	0.1	16	28 : — : —	—	10.0
8	278	44.8	43.2	1.6	0.2	0.1	27			10.0
10	345	46.0	44.8	1.2	1.9	2.8	0			10.0
22 ³	29.715	49.5	46.7	2.8	3.7	1.8	2	3 : — : —	—	7.0
25 18	29.708	32.0	31.7	0.3	1.8	0.0			0.1	Cirri on E. horizon; mist on the ground.
20	706	32.5	32.5	0.0	0.0	0.0	17		6.5	Woolly and linear cirri; bank of cirro-strati to W. ☽

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Oct. 19^d 18^h. Observation made at 18^h 10^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.} , 10 ^{m.}	From				
d. h. 25 22	in. 29.727	° 40.6	° 40.3	° 0.3	lbs. 0.1	lbs. 0.0	pt. 30	pt. 23 : — : —	pt. — : 0 : —	0—10. 9.5
26 0	737	46.6	45.3	1.3	0.1	0.1	24	20 : — : —	— : — : —	7.5
2	746	51.6	48.2	3.4	0.2	0.1	24	20 : — : —	— : — : —	4.0
4	790	50.7	47.2	3.5	0.3	0.1	24	20 : — : —	— : — : —	1.5
6	837	39.8	39.3	0.5	0.2	0.0	20	20 : — : —	— : — : —	1.0
8	881	37.0	36.8	0.2	0.1	0.0	20	20 : — : —	— : — : —	0.0
10	29.935	36.1	35.9	0.2	0.1	0.1	23	20 : — : —	— : — : —	0.0
18	30.026	30.0	29.7	0.3	0.1	0.0	16	20 : — : —	— : — : —	0.1
20	051	28.5	28.2	0.3	0.0	0.0	18	20 : — : —	— : — : —	1.5
22	060	37.0	36.4	0.6	0.1	0.1	22	20 : — : —	— : — : —	9.0
27 0	061	44.0	42.9	1.1	0.1	0.0	24	20 : — : —	— : — : —	8.0
2	048	48.8	47.3	1.5	0.0	0.0	2	20 : — : —	— : — : —	7.0
4	036	47.8	46.8	1.0	0.1	0.0	20	20 : — : 30	— : — : —	8.0
6	028	41.5	41.3	0.2	0.1	0.1	20	21 : — : 30	— : — : —	7.0
8	021	42.5	42.1	0.4	0.0	0.0	2	21 : — : 30	— : — : —	10.0
10	005	44.6	43.6	1.0	0.0	0.0	16	20 : — : —	— : — : —	10.0
18	29.939	44.2	43.5	0.7	0.3	0.0	20	20 : — : —	— : — : —	10.0
20	928	44.8	43.8	1.0	0.3	0.1	22	— : 0 : —	— : — : —	8.0
22	916	49.0	46.4	2.6	0.3	0.3	18	— : 0 : —	— : — : —	8.0
28 0	896	51.2	48.2	3.0	0.3	0.1	18	19 : — : —	— : — : —	9.5
2	859	52.8	48.9	3.9	0.3	0.3	18	20 : 3 : —	— : — : —	7.5
4	842	51.6	48.6	3.0	0.2	0.2	18	19 : 3 : —	— : — : —	8.0
6	831	47.0	45.3	1.7	0.2	0.2	18	— : 2 : —	— : — : —	8.0
8	841	45.7	43.9	1.8	0.3	0.1	16	20 : — : —	— : — : —	7.0
10	849	44.5	43.2	1.3	0.1	0.0	16	20 : — : —	— : — : —	10.0
18	29.890	39.8	39.5	0.3	0.0	0.0	16	20 : — : —	— : — : —	6.5
20	907	41.4	41.0	0.4	0.0	0.0	16	20 : — : —	— : — : —	9.0
22	939	42.0	41.7	0.3	0.1	0.0	8	20 : — : —	— : — : —	2.5
29 0	942	47.2	45.7	1.5	0.1	0.0	6	20 : — : —	— : — : —	0.5
2	925	51.0	47.4	3.6	0.1	0.1	31	20 : — : —	— : — : —	0.5
4	924	50.2	47.5	2.7	0.1	0.1	4	20 : — : —	— : — : —	0.5
6	936	40.4	40.0	0.4	0.2	0.1	18	20 : — : —	— : — : —	2.0
8	970	38.5	38.0	0.5	0.0	0.0	26	20 : — : —	— : — : —	6.0
10	971	37.7	37.4	0.3	0.0	0.0	24	20 : — : —	— : — : —	8.0
18	29.941	33.3	33.3	0.0	0.1	0.0	20	20 : — : —	— : — : —	0.5
20	928	32.2	32.1	0.1	0.1	0.1	17	20 : — : —	— : — : —	0.5
22	959	41.8	41.0	0.8	0.1	0.1	26	20 : — : —	— : — : —	9.8
30 0	938	47.4	46.6	0.8	0.1	0.1	24	21 : — : —	— : — : —	10.0
2	901	50.3	48.5	1.8	0.2	0.1	18	20 : — : —	— : — : —	2.0
4	902	49.0	47.0	2.0	0.6	0.3	18	23 : — : —	— : — : —	4.0
6	898	45.2	44.0	1.2	0.4	0.1	22	21 : — : —	— : — : —	9.5
8	888	40.0	39.7	0.3	0.2	0.1	16	20 : — : —	— : — : —	1.0
10	881	37.9	37.6	0.3	0.1	0.0	22	20 : — : —	— : — : —	3.0
18	29.786	46.7	44.9	1.8	0.6	0.5	18	20 : — : —	— : — : —	7.5
20	785	46.7	44.9	1.8	0.7	0.3	18	20 : — : —	— : — : —	9.5
22	774	49.5	47.6	1.9	0.4	0.3	18	20 : — : —	— : — : —	10.0
31 0	754	50.7	48.5	2.2	1.5	0.7	18	20 : — : —	— : — : —	10.0
2	725	52.1	49.6	2.5	2.2	0.9	20	20 : — : —	— : — : —	9.9
4	702	51.7	49.2	2.5	1.0	0.4	20	19 : — : —	— : — : —	9.5
6	684	52.2	49.8	2.4	1.9	1.1	18	20 : — : —	— : — : —	10.0
8	681	51.6	49.6	2.0	1.0	0.4	18	20 : — : —	— : — : —	10.0
10	670	51.8	49.6	2.2	1.0	0.6	18	20 : — : —	— : — : —	10.0
22 ³	29.644	51.9	49.5	2.4	1.8	0.3	17	19 : — : —	— : — : —	10.0
1 18	29.608	49.4	47.2	2.2	1.7	0.3	20	20 : — : —	— : — : —	10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.:C.-s.:Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
1 20	29.611	49.8	47.3	2.5	0.8	0.5	18	16 : — : —	9.5	Cir.-str. scud ; cir.-str. ; scud on Cheviot ; clouds tinged
22	617	51.1	48.1	3.0	1.0	0.4	18	— : 15 : —	9.0	Cirro-strati and cirro-cumuli. ⊖ [red to E.]
2 0	626	52.7	49.1	3.6	1.9	0.9	16	17 : 15 : —	8.0	Scud ; cirri and cirro-strati.
2	599	54.0	50.1	3.9	1.2	0.8	16	16 : — : —	9.0	Id. ; id.
4	586	50.7	47.8	2.9	2.4	2.1	16	17 : 16 : —	9.5	Id. ; id. ; hazy round horizon. ⊖
6	598	51.0	48.0	3.0	1.6	1.7	16	17 : 17 : —	9.5	Scud and cirro-cumulo-strati.
8	585	50.3	47.6	2.7	1.7	1.1	16		9.0	Id.
10	570	50.4	48.0	2.4	2.2	1.0	16		10.0	Id.
18	29.619	51.3	50.0	1.3	1.5	0.1	20	17 : 17 : —	7.5	Scud and cirro-cumulo-strati.
20	659	49.2	47.6	1.6	0.1	0.1	23	18 : 18 : —	6.0	Id.
22	693	48.0	47.0	1.0	0.1	0.0	16	18 : — : —	1.0	Scud and loose cumuli. ⊖
3 0	714	53.3	50.4	2.9	0.3	0.1	16	18 : — : —	8.5	Masses of loose cumuli near the hor. ; woolly cir.-str.
2	717	53.4	49.6	3.8	0.4	0.3	16		9.8	Thick cirro-stratus.
4	704	53.0	49.0	4.0	0.5	0.1	16	— : 18 : —	10.0	Id.
6	693	50.8	48.9	1.9	0.2	0.1	10		10.0	Thick scud ; slight rain.
8	667	54.1	52.2	1.9	1.4	0.7	16	18 : 18 : —	5.0	Scud and cirro-cumulo-strati. ⊙
10	654	53.0	51.5	1.5	1.8	1.5	18		3.0	Id. ⊙
18	29.722	48.3	46.3	2.0	2.0	0.3	16		0.2	Cirro-strati on W. horizon. ⊙
20	714	47.9	46.2	1.7	0.4	0.2	16		2.0	Cirro-stratus and cirrus haze.
22	731	52.7	50.3	2.4	1.7	1.0	16		2.0	Clouds on horizon. ⊖
4 0	735	55.8	52.3	3.5	1.8	1.3	16	16 : — : —	7.0	Scud, loose cumuli, and sheets of cirro-strati. ⊖
2	713	56.0	52.5	3.5	1.3	1.1	16	16 : — : 16	3.5	Id., id. ; woolly cirri. ⊖
4	710	54.7	51.6	3.1	2.7	0.9	16	17 : — : —	10.0	Id. ; rain ^{0.5}
6	714	54.0	52.0	2.0	1.2	0.8	14		10.0	Id.
8	727	53.6	52.2	1.4	0.8	0.2	16		9.5	Id.
10	758	52.7	51.9	0.8	0.5	0.0	18		10.0	Scud and cirro-strati ; rain ^{0.2}
18	29.888	45.9	45.5	0.4	0.5	0.1	16		9.5	Cirro-strati and cirrus haze ; lunar halo. ♫
20	922	41.5	41.3	0.2	0.1	0.1	0		4.0	Cirri and cirrus haze ; mist in the valleys.
22	935	46.4	45.4	1.0	0.1	0.0	2	— : — : 16	4.0	Woolly cirri. ⊖
5 0	941	50.6	49.0	1.6	0.1	0.0	4	— : — : 16	7.0	Id. ⊖
2	928	52.6	50.0	2.6	0.1	0.1	6	— : — : 18	5.0	Id. ⊖
4	906	53.0	50.6	2.4	0.3	0.5	12	— : — : 18	9.0	Id. ; haze on horizon. ⊖
6	899	49.4	47.6	1.8	0.5	0.3	14	16 : — : —	7.0	Scud ; cirro-strati.
8	897	52.0	50.0	2.0	0.8	0.5	16		9.8	Id.
10	897	53.2	51.8	1.4	0.6	0.1	16		10.0	Scud ; slight drizzle.
18	29.892	52.8	51.3	1.5	1.1	0.9	16		9.5	Scud, cirro-strati, and woolly cirri ; lunar corona. ♫
20	912	49.5	47.7	1.8	1.3	0.3	16	— : 18 : —	9.0	Cirro-stratus scud ; woolly cirri and cirrus haze.
22	922	50.3	48.0	2.3	1.7	0.3	14	15 : 16 : —	10.0	Scud ; cirro-strati ; cirrus haze.
6 0	925	51.5	48.4	3.1	0.8	0.1	20	— : 16 : —	10.0	Cirro-strati and cirrus haze.
2	905	53.4	49.7	3.7	1.1	0.2	16	— : 17 : —	9.8	Cirro-strati and cirro-cumuli.
4	911	49.4	47.4	2.0	1.5	0.2	2	14 : 17 : —	9.0	Thin scud ; woolly cirri and cirro-strati.
6	907	46.3	44.5	1.8	0.4	0.3	12		9.0	Cirro-strati ; cirrus haze.
8	918	46.4	44.2	2.2	0.7	0.1	8		9.8	Id. ; id.
10	926	45.6	43.7	1.9	0.3	0.2	14		9.5	Id. ; id.
18	29.939	44.7	43.0	1.7	0.9	0.1	18		9.5	Thick cirro-stratus and cirrus haze.)
20	950	42.0	41.3	0.7	0.1	0.1	18		9.5	Id.
22	982	45.0	43.8	1.2	0.1	0.0	20	— : 20 : —	7.0	Cirro-strati, cirro-cumuli, and cirri.
7 0	994	50.3	47.2	3.1	0.3	0.2	18	20 : — : —	10.0	Patches of ragged scud ; dense cirro-stratus.
2	29.992	52.2	49.0	3.2	0.3	0.3	16	— : 22 : —	8.0	Cirro-cumulo-strati. ⊖
4	30.012	51.2	48.2	3.0	0.4	0.2	22	— : 22 : —	6.0	Id. ; haze round horizon. ⊖
6	036	48.6	47.2	1.4	0.1	0.0	18		9.8	Scud and cirro-cumulo-strati.
8	056	48.1	47.0	1.1	0.0	0.0	16		5.0	Id. ; clouds breaking up.
10	071	48.6	47.7	0.9	0.1	0.0	24		10.0	Id.
22 ¹	30.174	50.7	49.6	1.1	0.0	0.0			10.0	A uniform mass of cloud.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.	
		Dry.	Wet.	Diff.	Maximum force in 1b.	From 10m.	pt.	pt.	pt.	
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
8 18	30.234	42.5	41.6	0.9	0.4	0.2	18			10.0 Mass of cirro-stratus.
20	253	40.0	39.0	1.0	0.4	0.2	18			Id.
22	271	40.0	39.0	1.0	0.5	0.3	18			10.0 Misty uniform mass of clouds.
9 0	289	42.1	40.8	1.3	0.2	0.2	17			10.0 Id.
2	276	40.7	38.8	1.9	0.3	0.1	20	16 : — : —	5.0	Misty loose scud.
4	278	40.8	39.3	1.5	0.2	0.1	28	14 : — : —	4.0	Id.; hazy on horizon.
6	288	36.4	35.9	0.5	0.1	0.0	18	16 : — : —	9.0	Thin misty scud.
8	301	34.0	33.7	0.3	0.0	0.0	18		3.0	Id.
10	309	35.1	34.9	0.2	0.0	0.0	18		10.0	Id.
18	30.309	31.2	30.9	0.3	0.1	0.0			10.0	Mist, objects invisible at 100 yards.
20	326	29.8	31.9	...	0.0	0.0			10.0	Id.
22	347	31.0	30.8	0.2	0.1	0.1	20		0.0	Clear.
10 0	352	39.0	38.0	1.0	0.1	0.1	22		0.0	Id.
2	327	45.7	43.8	1.9	0.1	0.1	8		0.2	Id.; a few patches of cloud to S.
4	307	45.8	43.6	2.2	0.1	0.1	4		0.2	Id.; id.
6	321	40.4	39.9	0.5	0.1	0.0	26		1.0	Cirro-strati and haze on horizon.
8	316	33.8	33.5	0.3	0.1	0.0	20		0.5	Haze on horizon.
10	324	30.6	0.1	0.0	18		2.0	Id.; slight fog coming on.
18	30.319	31.2	31.2	...	0.1	0.0	— : 12 : —		3.0	Cirro-cumulo-strati.
20	334	28.8	29.2	...	0.1	0.0			1.0	Scud and cirro-strati on S. and E. horizon; misty.
22	328	32.6	32.0	0.6	0.1	0.0	28	— : 12 : —	6.0	Cirro-stratus scud.
11 0	318	39.1	38.4	0.7	0.1	0.1	17	— : 12 : —	9.0	Id.
2	305	44.0	42.4	1.6	0.1	0.1	30	— : 12 : —	9.0	Id.
4	305	43.3	42.3	1.0	0.1	0.1	4	— : 12 : —	9.8	Id.
6	301	42.3	41.7	0.6	0.0	0.0	30		9.5	Id.
8	300	41.5	41.0	0.5	0.0	0.0	18		10.0	Id.
10	307	41.1	40.7	0.4	0.0	0.0	28		10.0	Id.
18	30.303	42.1	41.9	0.2	0.1	0.0			10.0	Scud; mass of cirro-stratus.
20	321	42.5	42.1	0.4	0.1	0.0	4	4 : — : —	10.0	Id.; id.
22	341	45.1	43.2	1.9	0.1	0.1	4	4 : — : —	10.0	Id.
12 0	348	45.6	43.2	2.4	0.3	0.1	2	4 : — : —	10.0	Id.
2	333	46.0	43.6	2.4	0.3	0.2	0	4 : — : —	10.0	Id.
4	322	45.6	43.7	1.9	0.1	0.1	6	5 : — : —	10.0	Id.
6	324	45.0	43.6	1.4	0.0	0.0	6		10.0	Id.
8	335	45.1	43.6	1.5	0.0	0.0	8		10.0	Dark.
10	329	43.9	43.1	0.8	0.0	0.0	0		10.0	Id.
18	30.286	43.8	42.8	1.0	0.1	0.1	12		10.0	Scud and cirro-stratus.
20	276	44.6	42.9	1.7	0.1	0.0	14		10.0	Id.
22	282	45.1	43.5	1.6	0.0	0.0	12		10.0	Id.
13 0	280	45.9	43.7	2.2	0.0	0.0	22		10.0	Id.
2	253	45.7	43.4	2.3	0.0	0.0			10.0	Id.
4	235	44.8	42.7	2.1	0.0	0.0	31		10.0	Id.
6	220	43.8	42.5	1.3	0.0	0.0			10.0	Id.
8	216	43.7	42.4	1.3	0.0	0.0			10.0	Very dark.
10	212	43.3	42.2	1.1	0.0	0.0			10.0	Id.
18	30.148	42.2	41.3	0.9	0.1	0.0			10.0	Very dark.
20	162	41.6	39.2	2.4	0.1	0.0			10.0	Homogeneous.
22	161	41.8	40.0	1.8	0.1	0.0	24		10.0	Id.
14 0	145	42.5	40.3	2.2	0.1	0.0			10.0	Id.
2	128	42.0	39.8	2.2	0.0	0.0			10.0	Id.
4	114	41.2	39.2	2.0	0.1	0.0			10.0	Id.
6	112	40.5	38.7	1.8	0.1	0.0			10.0	Id.
8	114	40.1	38.2	1.9	0.1	0.0	26		10.0	Id.
10	102	40.0	38.3	1.7	0.0	0.0	8		10.0	Id.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.		Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1h.	10m.	From		
d. h. 14 23	in. 30.028	° 40.6	° 39.5	° 1.1	lbs. 0.1	lbs. 0.0	pt.	pt. pt. pt.	0—10. 10.0
15 18	29.918	34.7	33.9	0.8	0.4	0.1	14		Homogeneous.
20	914	40.0	38.2	1.8	0.1	0.1	2		Patches of scud and cirro-strati.)
22	908	42.5	40.3	2.2	1.8	0.4	16		Cirro-strati and patches of scud.
16 0	875	46.0	43.0	3.0	1.3	1.5	16	14 : 16 : —	Loose scud; cirro-strati and woolly cirri. ⊖
2	836	46.9	43.2	3.7	4.6	2.3	14	14 : — : —	Scud; cirro-strati and cirrous haze. ⊖
4	783	45.2	42.3	2.9	2.4	2.2	14	14 : — : 24	Id.; woolly cirri and cirrous haze. ⊖
6	761	41.3	38.8	2.5	2.5	0.7	14		Id.; id.
8	764	42.2	39.8	2.4	2.8	1.8	14		Id.
10	757	41.5	39.2	2.3	3.2	0.3	14		Scud and cirro-strati.
18	29.524	44.3	42.9	1.4	1.6	0.2	14		Thin clouds; slight shower.
20	502	45.6	43.9	1.7	0.4	0.2	20		Patches of scud; dense cirro-stratus.
22	491	45.3	43.8	1.5	1.9	0.3	18		Id.; id.
17 0	448	48.7	46.6	2.1	1.9	0.8	16	16 : — : —	Scud; dense mass of cirro-stratus.
2	416	48.8	46.7	2.1	1.8	1.7	16	17 : — : —	Id.; id.; drops of rain.
4	420	52.6	50.4	2.2	2.0	0.9	17	18 : — : —	Id.; id.
6	456	50.7	49.0	1.7	1.0	0.2	18		Scud and cirro-strati.
8	464	48.6	47.1	1.5	0.3	0.2	18		Id.; auroral arch.
10	480	48.0	47.0	1.0	0.6	0.4	18		Scud; slight drizzling rain.
18	29.455	45.3	44.0	1.3	0.7	0.2	26		Masses of scud.
20	455	45.0	43.8	1.2	0.6	0.3	20		Scud.
22	441	46.6	44.9	1.7	0.6	0.4	18		Patches of scud; cirro-strati and cirrous haze on hor. ⊖
18 0	420	50.7	48.0	2.7	1.6	1.3	18	— : 20 : —	Cirro-cumulo-strati; cirro-strati. ⊖
2	383	51.5	48.3	3.2	0.9	0.7	18	20 : — : —	Scud; id.
4	332	50.7	47.9	2.8	1.7	0.5	16	20 : — : —	Id.
6	309	50.0	47.1	2.9	1.3	0.8	16		Id.
8	312	49.5	47.2	2.3	1.5	1.0	18		Id.; drops of rain.
10	316	48.6	46.3	2.3	0.9	0.2	18		Id.
18	29.254	45.7	44.3	1.4	1.4	1.0	18		Scud; slight drizzle.
20	270	44.3	43.3	1.0	1.4	0.3	18	22 : — : —	Id.; cirro-strati.
22	287	46.1	44.6	1.5	1.2	0.8	20	21 : — : —	Scud and loose cumuli.
19 0	300	49.2	46.0	3.2	1.8	2.6	20	22 : — : —	Id.
2	310	49.7	45.1	4.6	2.9	1.2	21	22 : — : 22	Id.; mottled cirri. ⊖
4	314	47.2	44.1	3.1	2.3	0.7	18		Patches of scud; woolly cirri. ⊖
6	304	45.1	43.3	1.8	1.3	0.3	18		Scud; cirro-strati.
8	273	47.8	45.5	2.3	2.0	1.1	18		Id.
10	256	49.4	46.5	2.9	2.2	3.3	18		Id.; a flash of lightning to SW.
18	29.101	49.6	47.0	2.6	4.2	0.6	15		Scud; cirro-strati.
20	29.014	48.8	46.5	2.3	1.8	2.7	16		Id.; id.; drops of rain.
22	28.916	48.6	46.3	2.3	3.4	2.2	15	14 : — : —	Id.; id.; rain ^{0.5}
20 0	792	49.0	47.0	2.0	5.2	2.5	14	14 : — : —	Id.; id.
2	668	51.0	48.0	3.0	4.4	2.5	14	17 : 15 : —	Id.; two currents.
4	529	49.8	46.3	3.5	3.8	2.0	13	14 : — : —	Id.
6	372	47.9	45.8	2.1	4.5	4.1	15		Id.; slight rain.
8	286	50.0	49.0	1.0	5.1	4.6	18		Id.; id.
10	544	48.6	45.1	3.5	3.2	1.0	20		Id.
18	28.965	44.9	42.5	2.4	5.8	2.2	19		Scud.
20	29.024	43.1	40.5	2.6	2.7	1.7	20		Patches of scud; cirro-strati.
22	095	44.6	42.2	2.4	1.6	0.9	20	— : — : 21	Woolly cirri; scud to W.; scud and cirro-strati on hor. ⊖
21 0	148	46.9	43.7	3.2	1.7	0.9	21	22 : — : —	Scud; woolly cirri and cirro-strati. ⊖
2	155	46.3	42.8	3.5	1.6	0.6	19	21 : — : —	Scud and cumuli; woolly cirri. ⊖
4	144	47.2	44.2	3.0	0.7	0.3	18	20 : — : —	Scud.
6	124	42.9	41.9	1.0	0.4	0.5	16		Id. and cirro-strati.)
8	104	44.0	42.6	1.4	0.5	0.2	18		Dark; rain ² .

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Nov. 17th 18^h. Observation made at 18^h 15^m.

Nov. 20th. Additional observations of the barometer, 7^h 0^m, 28.304; 7^h 50^m, 28.267; 8^h 0^m, 28.286; 8^h 40^m, 28.387.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Cl., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^h .	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
21 10	29.047	43.4	42.5	0.9	0.6	0.3	18		5.0	Scud and cirro-strati.
22 ³ ₄	28.965	40.2	38.7	1.5	0.9	0.2	20	24 : 22 : —	3.0	Scud; sheets of cirro-strati.
22 18	29.379	37.8	35.6	2.2	1.7	0.5	20		0.5	Haze and cirro-strati on horizon.
20	414	34.5	33.5	1.0	0.5	0.3	19		0.3	Id.
22	444	36.0	34.7	1.3	0.3	0.1	11	— : — : 27	2.0	Woolly cirri; cirro-strati on horizon. ☺
23 0	441	41.2	39.3	1.9	0.1	0.1	16	— : 26 : —	9.9	Cirro-cumulo-strati and cirro-stratus; cirrous haze.
2	423	43.2	41.2	2.0	0.1	0.1	17		10.0	Dense mass of cirro-stratus.
4	401	43.4	42.1	1.3	0.2	0.1	16	— : 26 : —	10.0	Cirro-stratus; drops of rain.
6	384	42.0	41.2	0.8	0.1	0.1	15		10.0	Id.
8	370	42.3	41.4	0.9	0.1	0.0			10.0	Id.
10	320	42.3	41.4	0.9	0.0	0.0			10.0	Id.; rain ^{0.5}
18	29.177	48.0	47.6	0.4	0.3	0.0			9.0	Scud.
20	204	50.4	49.8	0.6	0.4	0.1	18	22 : — : —	10.0	Id.
22	228	51.2	50.5	0.7	0.1	0.4	19	23 : — : —	10.0	Id.
24 0	248	53.2	52.0	1.2	0.5	0.1	22	— : 23 : —	6.0	Cirro-cumulo-strati and cirro-strati. ☺
2	262	52.4	50.2	2.2	0.3	0.3	21	— : 22 : —	8.0	Id.
4	283	50.7	47.0	3.7	0.4	0.3	20	— : 22 : —	5.0	
6	312	45.6	42.9	2.7	0.3	0.0	18		0.5	Clouds on horizon. ☺
8	369	40.3	39.3	1.0	0.1	0.0	18		0.2	Id. ☺
10	359	38.0	37.8	0.2	0.2	0.0	17		1.0	Cirro-cumulo-strati to SW. ☺
18	29.323	42.0	41.3	0.7	0.5	0.1	24		9.5	Scud.
20	289	42.5	42.0	0.5	0.3	0.1	16	22 : — : —	9.5	Id.; cirro-stratus.
22	273	44.0	43.4	0.6	0.1	0.1	25		9.8	Id.; id.
25 0	240	43.2	42.8	0.4	0.1	0.0	6		9.9	Mass of cirro-stratus.
2	185	44.0	43.4	0.6	0.1	0.0			10.0	Id.; misty on horizon.
4	131	43.6	43.0	0.6	0.1	0.1	10		10.0	Patches of scud; dense uniform cirro-stratus.
6	088	42.8	42.6	0.2	0.1	0.0	3		10.0	Scud and cirro-strati; rain ¹
8	29.016	43.4	43.0	0.4	0.1	0.0			10.0	Id.
10	28.952	43.7	42.9	0.8	0.1	0.0	2		10.0	Scud and cirro-strati; rain ¹
18	28.829	44.3	43.1	1.2	1.0	0.4	30		10.0	Rain ¹
20	851	43.7	42.5	1.2	0.7	0.4	30		10.0	Id.
22	886	43.8	41.4	2.4	0.7	0.6	28	— : 30 : —	10.0	Cirro-stratous scud and cirro-stratus.
26 0	916	45.2	41.8	3.4	0.5	0.3	28		10.0	Id.
2	925	46.0	42.7	3.3	0.6	0.5	28		10.0	Id.
4	945	45.6	42.7	2.9	0.6	0.5	28		10.0	Id.
6	28.983	44.5	42.5	2.0	0.5	0.4	26		10.0	Id.; rain ¹
8	29.010	43.8	42.4	1.4	0.5	0.4	28		10.0	Id.
10	027	44.3	42.9	1.4	0.6	0.4	28		10.0	Clouds broken.
18	29.137	43.0	42.5	0.5	1.6	1.5	0		10.0	Rain ¹
20	185	43.0	41.8	1.2	2.4	1.9	0		10.0	Showers.
22	242	43.7	40.9	2.8	3.1	1.6	0	2 : — : —	10.0	Scud; cirro-strati.
27 0	274	40.7	38.8	1.9	4.0	0.7	0	0 : — : —	9.9	Id.; id.; rain ^{0.5}
2	287	41.0	39.2	1.8	3.0	1.0	0	0 : — : —	9.5	Id.; id.; cumuli on N. horizon.
4	299	38.0	36.6	1.4	3.8	2.4	0	0 : — : —	9.0	Id.; frequent showers of drifting rain and hail. ☺
6	325	38.5	36.3	2.2	2.6	0.6	0		6.0	Id.
8	334	37.5	35.0	2.5	1.8	1.2	31	1 : 1 : —	4.0	Id. and cirro-cumulo-strati. ☺
10	338	36.4	34.0	2.4	1.5	1.0	30		2.0	Scud and cirro-strati on horizon.
18	29.270	28.6	27.3	1.3	1.8	0.1	26		1.0	Clouds on horizon.
20	279	24.9	24.8	0.1	0.3	0.1	20		1.0	Id.
22	305	29.8	28.0	1.8	0.2	0.2	29		0.7	Id.
28 0	319	33.0	32.2	0.8	1.0	0.7	31		9.8	Scud; snow ^{0.5}
2	330	33.5	32.9	0.6	0.7	0.2	20		10.0	Id.; showers of snow. [hail.]
4	365	36.2	33.6	2.6	0.3	0.2	0	2 : — : —	10.0	Scud and loose cumuli; occasional showers of snow and
6	427	37.7	36.0	1.7	3.3	1.2	30		6.0	Cirro-strati; cirri and cumuli; lunar corona and portion of a halo. ☺

Nov. 26^d 1^h 25^m. A portion of a halo 23° vertically above the sun, with the horns turned from the sun.

Nov. 26^d 4¹₂^b. New silk put on wet thermometer.

Nov. 28^d. Thunder said to have been heard to-day. Two flashes of lightning were seen by an individual at Sprouston (6 miles E by N. from Makerstoun.) There were two or three showers of a sort of hail at Makerstoun.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc. : C.-s : Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
28 8	29.469	36.6	35.2	1.4	2.7	0.7	29			0.2
10	500	36.0	35.8	0.2	1.3	0.3	2			1.5
22 ¹	29.571	32.6	31.8	0.8	2.9	1.0	30	30 : 2 : —		6.0
29 18	29.756	31.0	30.6	0.4	2.2	0.2	31			6.0
20	778	30.6	30.2	0.4	0.2	0.2	30			9.8
22	812	30.9	30.0	0.9	1.0	0.5	29	1 : — : —		8.0
30 0	823	32.6	30.7	1.9	0.7	0.2	30	1 : — : —		7.0
2	808	31.7	29.3	2.4	0.5	0.3	18	1 : — : —		4.0
4	811	28.2	26.7	1.5	0.2	0.1	19			5.0
6	793	26.5	25.5	1.0	0.3	0.1	16			8.0
8	759	28.8	26.6	2.2	0.4	0.3	22	— : 28 : —		10.0
10	707	30.4	28.0	2.4	0.8	0.5	22			9.5
18	29.503	36.0	35.0	1.0	2.8	0.8	20			10.0
20	469	36.6	35.9	0.7	2.4	0.8	21			10.0
22	429	37.7	37.0	0.7	1.3	1.0	20			9.9
1 0	384	40.2	38.7	1.5	0.8	0.4	20	— : 26 : —		7.0
2	355	40.3	38.4	1.9	0.7	0.2	20			0.5
4	326	39.1	37.0	2.1	0.3	0.3	24			0.5
6	348	36.8	35.2	1.6	0.3	0.2	25			0.2
8	354	33.5	31.8	1.7	0.1	0.2	29			0.0
10	360	31.2	29.6	1.6	0.3	0.1	22			0.5
18	29.319	22.8	23.0	...	0.4	0.0	18			3.0
20	317	21.3	22.0	...	0.0	0.0				2.5
22	311	19.5	19.7	...	0.1	0.1	15			1.0
2 0	311	26.3	24.5	1.8	0.1	0.1	20			0.2
2	297	27.5	26.0	1.5	0.1	0.1	21			0.5
4	298	24.7	24.0	0.7	0.1	0.0				0.5
6	298	18.5	18.5	...	0.1	0.1	15			0.5
8	328	16.8	17.2	...	0.1	0.1	20			0.2
10	331	16.0	16.0	...	0.1	0.0	21			0.0
18	29.339	19.0	19.0	...	0.0	0.0				0.2
20	350	24.0	23.2	0.8	0.2	0.2	14			1.0
22	375	28.6	27.4	1.2	0.1	0.0		— : — : 29		2.5
3 0	389	34.4	31.8	2.6	0.4	0.2	27	— : — : 29		6.0
2	418	35.3	34.2	1.1	0.4	0.1	27	27 : 0 : —		9.5
4	447	35.4	34.6	0.8	0.4	0.2	28	28 : 0 : —		10.0
6	479	35.2	34.7	0.5	0.4	0.4	29			8.5
8	501	36.0	33.8	2.2	0.8	0.6	28	0 : — : —		7.5
10	550	36.2	33.5	2.7	0.9	0.8	28	1 : — : —		7.0
18	29.669	30.6	29.2	1.4	0.6	0.2	27			0.5
20	699	28.7	27.8	0.9	0.2	0.1	26			1.0
22	726	31.3	30.3	1.0	0.4	0.3	28			0.7
4 0	764	33.5	31.0	2.5	0.5	0.4	29	— : — : 1		5.0
2	761	33.8	30.6	3.2	0.4	0.1	28			0.5
4	786	31.7	29.3	2.4	0.1	0.1	18			0.5
6	801	23.8	22.9	0.9	0.1	0.0	18			0.5
8	801	23.9	23.7	0.2	0.1	0.0	20			0.5
10	795	22.5	22.0	0.5	0.1	0.0	20			9.5
18	29.648	35.4	32.6	2.8	0.2	0.0	23			10.0
20	599	36.1	35.0	1.1	0.2	0.1	24			10.0
22	540	39.3	38.0	1.3	0.3	0.4	20	21 : — : —		10.0
5 0	464	42.0	40.6	1.4	0.8	0.7	20	21 : — : —		10.0
2	378	42.0	40.9	1.1	1.4	0.8	20	24 : — : 27		9.5
4	373	43.0	41.9	1.1	1.3	0.2	18	24 : — : —		10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Dec. 4th. A new vane, composed of oiled silk stretched on a light frame of wood, erected instead of the turkey-feather one.

Dec. 4th 18^m. Observation made at 18^h 8^m.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
5 6	29.358	39.8	37.5	2.3	0.7	0.2	22			2.0
8	378	36.9	35.5	1.4	0.2	0.1	22			0.5
10	397	38.2	36.0	2.2	0.4	0.2	24			8.0
22 ¹ ₂	29.566	37.2	34.5	2.7	0.7	0.5	28			1.0
6 18	29.848	37.0	34.4	2.6	1.9	0.7	29			8.0
20	888	37.5	34.7	2.8	2.3	0.6	29	— : 0 : —		9.0
22	934	38.7	35.7	3.0	1.3	0.5	30	— : 1 : —		9.0
7 0	968	38.3	36.0	2.3	0.4	0.1	27			2.5
2	977	39.6	37.2	2.4	0.3	0.2	30	— : — : 1		8.0
4	29.999	38.7	36.2	2.5	0.3	0.0	26			10.0
6	30.014	37.0	35.3	1.7	0.2	0.0	22			10.0
8	048	35.1	33.9	1.2	0.1	0.1	20			3.0
10	060	33.0	32.0	1.0	0.1	0.0	24			1.5
18	30.089	36.0	35.5	0.5	0.0	0.0				10.0
20	115	36.6	36.0	0.6	0.0	0.0	20			10.0
22	146	38.0	37.4	0.6	0.1	0.0	16			9.8
8 0	148	40.7	39.8	0.9	0.1	0.1	22			9.9
2	123	42.8	41.6	1.2	0.1	0.1	22			9.9
4	132	41.8	40.9	0.9	0.0	0.0	20	28 : 28 : —		10.0
6	137	40.7	39.6	1.1	0.1	0.1	24			9.8
8	138	40.2	39.1	1.1	0.1	0.0	22			10.0
10	135	38.8	37.7	1.1	0.2	0.1	20			8.5
18	30.076	41.0	39.2	1.8	0.2	0.0	24			10.0
20	070	40.6	39.0	1.6	0.5	0.1	24			10.0
22	059	41.9	41.1	0.8	0.2	0.1	20	0 : — : —		9.5
9 0	30.030	40.6	38.8	1.8	0.2	0.2	22			3.0
2	29.998	44.6	42.2	2.4	0.2	0.1	22	— : 0 : —		8.0
4	962	42.4	40.2	2.2	0.3	0.3	24	0 : — : —		7.0
6	937	36.5	35.6	0.9	0.3	0.1	15			0.5
8	903	37.0	36.3	0.7	0.2	0.2	25			0.2
10	866	38.8	37.8	1.0	0.2	0.2	22			0.5
18	29.555	45.8	43.8	2.0	1.3	0.8	24			3.0
20	555	39.4	38.4	1.0	1.9	0.6	0			10.0
22	564	38.8	36.6	2.2	1.2	2.0	0	0 : 24 : —		9.0
10 0	573	37.7	34.8	2.9	1.9	1.9	31	— : 28 : —		8.5
2	574	36.1	32.4	3.7	1.3	0.6	31	31 : 28 : —		8.0
4	560	33.7	29.5	4.2	2.0	2.0	0	0 : — : —		4.0
6	569	29.2	26.6	2.6	2.8	1.0	30			0.5
8	560	28.2	25.6	2.6	2.5	1.5	30			0.5
10	545	27.8	25.2	2.3	2.8	1.2	30			0.2
18	29.531	29.2	26.6	2.6	2.4	1.0	29			5.0
20	513	27.9	25.4	2.5	2.5	0.6	28			7.0
22	484	28.4	26.0	2.4	1.8	3.3	27			7.0
11 0	492	29.0	27.4	1.6	2.9	1.2	29	— : 4 : 4		8.0
2	472	30.2	27.4	2.8	2.2	1.1	29	0 : — : 4		8.0
4	469	29.4	26.8	2.6	1.6	1.3	29	0 : — : —		8.5
6	476	29.8	27.6	2.2	0.9	0.5	28			9.0
8	491	30.1	27.8	2.3	1.7	0.8	29			3.0
10	505	32.0	29.5	2.5	3.5	2.0	30			9.5
18	29.575	30.9	29.9	1.0	4.7	1.1	30			10.0
20	580	32.3	30.5	1.8	1.3	1.2	30			10.0
22	625	32.3	31.3	1.0	1.0	0.6	30			9.9
12 0	647	31.9	30.6	1.3	1.5	0.5	0			10.0
2	627	31.4	29.2	2.2	0.9	0.6	30	2 : — : —		4.0
										Heavy shower of snow.
										Cirro-str. and cir. haze ; cum. on hor. ♦ [the ground. ♦
										Woolly cirri and cirr.-str. ; scud and cum. on N. and E. ♦
										Id.; woolly cirri; cirro-strati; loose scud.
										Cirro-cumulo-strati and cirro-strati; cum. on N. and E. hor.
										Scud; cirro-cumulo-strati; cum. on N. and E. hor.
										Clouds on horizon.
										Clouds on horizon.
										Id.; auroral arch to N.
										Scud; in passing over the moon it produces a coloured
										Scud; shower at 19 ^h 45 ^m . [corona. ♦
										Id.; cirro-cum. str.; ragged cum. on N. and E. hor.
										Scud; cirro-cumulo-strati and cirro-strati; loose scud.
										Clouds on S. horizon.
										Clouds on horizon.
										Id.;
										Id.; snow ^{0.5} ● [hor. ○
										Masses of scud, cirro-strati, and cirri.
										Scud and cirro-strati.
										Id.
										Id.
										Heavy shower of snow.
										Cirro-str. and cir. haze ; occasional showers of snow. ♦
										Id.; id.
										Snows
										Scud and loose cumuli; snow about 4½ inches deep.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1b.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
12 4	29.626	31.0	28.6	2.4	0.9	0.6	29	1 : — : —	8.0	Scud and cumuli.
6	625	29.4	27.4	2.0	1.3	1.0	28		2.0	Id.
8	654	29.0	27.0	2.0	1.5	0.9	29		1.0	Patches of scud.
10	657	28.6	26.6	2.0	1.5	0.6	30		1.0	Clouds on horizon.
23	29.617	28.4	1.3	0.4	30		2.0	
13 18	29.382	23.0	0.1	23		0.2	Clouds on E. horizon.
20	359	24.7	22.7	2.0	0.1	0.0	20		1.0	Bank of cirro-strati on E. horizon.
22	355	27.2	25.0	2.2	...	0.4	28	0 : — : 0	4.0	Scud and woolly cirri; cumuli on horizon.
14 0	343	28.6	26.4	2.2	...	0.5	27	— : 30 : —	4.0	Woolly cirro-strati; cumulo-strati on horizon.
2	331	29.7	27.2	2.5	...	0.3	28	— : 31 : —	2.5	Id.; cumuli and nimbi to E.
4	305	29.2	26.3	2.9	...	0.2	28		2.5	Id.; id.
6	299	29.2	26.6	2.6	...	0.4	28		0.5	Clouds near horizon.
8	300	28.8	27.0	1.8	...	0.5	28		2.0	Id.
10	294	26.6	24.9	1.7	...	0.5	28		0.5	Id.
18	29.256	30.3	28.3	2.0	1.0	1.0	0		9.8	Scud; snowing.
20	288	29.0	28.0	1.0	1.0	0.3	0		9.8	Id.
22	360	29.2	28.4	0.8	...	0.2	31		10.0	Shower of snow.
15 0	397	31.6	30.3	1.3	...	0.2	28	0 : — : —	7.0	Scud and nimbi; occasional showers of snow.
2	409	28.3	27.4	0.9	0.2	0.1	28		2.0	Scud to S. and E.
4	411	29.0	27.4	1.6	0.6	0.3	27		2.5	Cumuli, cirro-strati, and haze on E. horizon.
6	426	30.6	29.5	1.1	0.9	0.8	28		1.0	Clouds on horizon.
8	441	31.0	29.8	1.2	2.2	1.2	28		0.2	Id.
10	459	32.0	30.6	1.4	1.8	0.8	0		2.0	Id.
18	29.502	30.2	28.2	2.0	2.3	0.8	28		0.5	Clouds on horizon.
20	517	31.2	28.7	2.5	1.2	0.5	28		5.0	Cirri and cirro-strati.
22	540	30.6	28.0	2.6	0.7	0.4	27		2.0	Scud and cirro-strati on horizon.
16 0	541	32.1	29.5	2.6	0.5	0.3	27		2.0	Id.
2	523	34.8	31.6	3.2	0.3	0.2	28	— : 1 : —	7.0	Cirro-cumulo-strati.
4	496	34.7	31.8	2.9	0.3	0.2	24		10.0	Mass of cirro-stratus.
6	487	32.8	32.2	0.6	0.3	0.1	24		10.0	Snowing.
8	456	32.5	32.1	0.4	0.1	0.0	20		10.0	Id.
10	436	31.6	31.6	...	0.0	0.0	20		10.0	A few flakes of snow falling.
18	29.447	24.8	23.6	1.2	0.1	0.0			0.5	Clouds on S. horizon.
20	448	20.8	19.7	1.1	0.1	0.1	23		1.0	Bank of scud and cirro-strati to N.
22	478	29.0	28.0	1.0	0.1	0.1	28	31 : — : —	8.0	Scud.
17 0	501	33.3	31.1	2.2	0.8	0.4	28	0 : — : —	3.0	Id.
2	565	34.6	32.6	2.0	1.5	0.3	0	1 : — : —	10.0	Heavy snow showers since 1 ^h .
4	643	32.2	1.2	0.1	31		3.0	Cumuli and nimbi.
6	713	29.7	27.8	1.9	0.2	0.1	2		3.0	Scud and cumuli.
8	781	27.4	26.7	0.7	0.5	0.0	22		1.0	Clouds on E. horizon.
10	825	25.6	24.8	0.8	0.1	0.0	18		1.0	Id.
18	29.864	13.0	13.0	...	0.0	0.0	18		1.0	Cirro-strati and thin haze.
20	852	18.5	18.0	0.5	0.2	0.1	20		3.0	Id.
22	826	25.5	24.4	1.1	0.2	0.1	24		5.0	Cirro-strati and cirrous haze.
18 0	773	34.4	32.3	2.1	0.6	0.4	22	— : 28 : —	10.0	Cirro-strati; a parhelion at 23 ^h .
2	714	36.8	34.6	2.2	1.5	1.0	20	— : 26 : —	10.0	Id.
4	639	38.5	35.6	2.9	3.4	1.7	20	24 : 30 : —	9.5	Scud; cirro-strati.
6	556	38.6	36.8	1.8	1.8	1.3	19		9.5	Id.; id.
8	520	39.6	38.4	1.2	1.6	1.0	20		10.0	Id.
10	480	41.0	39.5	1.5	1.5	0.3	19		10.0	Id.
18	29.475	39.4	39.1	0.3	0.9	0.0	12		3.0	Scud and thin haze.
20	492	38.9	38.6	0.3	0.1	0.0	20		10.0	Scud; the snow is disappearing rapidly.
22	505	38.8	38.4	0.4	0.0	0.0	0		10.0	Fog, trees invisible at 200 yards; slight drizzling rain.
19 0	485	40.7	40.3	0.4	0.0	0.0	8	26 : — : —	10.0	Scud; cirro-strati; fog clearing off.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Dec. 12th 10^h. Three bright flashes of lightning seen to E.

Dec. 15th 10^h. About 10th 7^m, it had become overcast and a shower of snow commenced.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1 ^{h.}	10 ^{m.}	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt. pt. pt.	0—10.	
19 2	29.456	46.0	45.1	0.9	0.6	0.3	18	21 : — : —	9.9	Scud.
4	452	45.9	45.0	0.9	0.7	0.5	18	19 : 22 : 22	9.0	Loose driving scud; scud; cirri and cirro-strati.
6	427	45.0	44.3	0.7	1.1	0.1	20		10.0	Scud.
8	414	45.4	44.4	1.0	0.8	0.3	22		9.5	Id.
10	407	45.7	44.1	1.6	0.8	0.6	23		5.0	Id.
23	29.176	43.9	41.5	2.4	2.3	1.0	23	22 : — : —	6.0	Scud.
20 18	28.851	39.8	39.4	0.4	2.2	0.0	2		10.0	Scud; rain ^{0.5}
20	778	39.3	39.0	0.3	0.0	0.0	2		10.0	Id.; rain ²
22	745	38.7	38.4	0.3	0.1	0.1	6	4 : — : —	10.0	Misty scud; rain ^{0.5}
21 0	708	41.8	41.3	0.5	0.1	0.1	20		10.0	Thick cirro-stratus and cirrus haze.
2	683	41.5	41.0	0.5	0.5	0.3	30	31 : — : —	10.0	Scud; rain ¹
4	690	40.3	39.1	1.2	0.4	0.2	28	0 : — : —	10.0	Scud; cirro-stratus.
6	689	38.0	37.1	0.9	0.7	0.9	28		10.0	Scud and dense cirro-stratus.
8	708	37.9	36.8	1.1	0.2	0.1	22		10.0	Id., breaking slightly to N.
10	717	35.2	34.6	0.6	0.1	0.1	21		7.5	Cirro-stratus.
18	28.788	34.4	33.5	0.9	0.1	0.1	26		10.0	Scud and cirro-stratus.
20	822	34.8	34.1	0.7	0.1	0.1	27		10.0	Id.
22	848	34.5	33.2	1.3	0.1	0.1	28	— : 0 : —	9.0	Cirro-cumulo-strati; cirro-stratus scud and cirro-strati.
22 0	861	35.2	33.6	1.6	0.1	0.1	26	— : 0 : —	9.9	Cirro-stratus scud; cirro-strati.
2	861	37.0	34.7	2.3	0.2	0.1	28	28 : 28 : —	9.5	Scud and cirro-stratus.
4	859	35.7	33.8	1.9	0.2	0.1	26	28 : 28 : —	9.0	Id.
6	847	33.9	32.2	1.7	0.1	0.1	28		8.0	Scud and cirro-cumulo-strati.
8	820	33.3	31.6	1.7	0.1	0.0	12		3.0	Id.
10	801	33.3	32.6	0.7	0.1	0.0	26		10.0	Scud and cirro-stratus.
18	28.681	34.0	32.8	1.2	2.7	0.9	0		3.0	Scud; snow on the ground.
20	689	33.0	32.6	0.4	2.8	2.1	0		10.0	Snow ²
22	748	35.3	33.7	1.6	3.7	1.5	2		10.0	Scud; shower of snow.
23 0	787	36.9	33.4	3.5	2.4	2.0	2	2 : — : —	10.0	Id.
2	819	36.5	33.0	3.5	2.4	1.6	0	4 : — : —	10.0	Id.
4	849	33.8	33.2	0.6	2.8	2.7	1		10.0	Id.; snow ¹
6	870	33.4	33.0	0.4	3.4	2.1	0		10.0	Heavy snow and sleet.
8	899	33.9	33.4	0.5	4.4	2.3	2		10.0	Continuous snow and sleet.
10	949	33.2	32.7	0.5	2.9	0.4	2		10.0	Id.
18	29.096	30.0	28.0	2.0	1.3	0.2	2		9.0	Scud and cirro-strati.
20	126	26.0	25.3	0.7	0.1	0.0			6.0	Cirro-cumulo-strati and woolly cirri.
22	174	27.8	26.6	1.2	0.0	0.0	30	4 : — : —	6.0	Scud, cumuli, and nimbi; cirro-strati.
24 0	207	31.1	30.0	1.1	0.1	0.1	2	4 : — : —	7.0	Id.
2	213	28.6	27.6	1.0	0.4	0.3	28		3.0	Cumuli and nimbi; parhelion at 1 ^{h.}
4	221	28.7	27.5	1.2	0.5	0.4	28		2.0	Id.
6	251	27.1	26.6	0.5	0.4	0.3	30		3.0	[the zenith from about N.] Cum. and scud on hor.; masses of clouds occasionally passing over
8	274	23.7	23.0	0.7	0.2	0.1	20		0.5	Clouds on horizon.
10	295	23.4	22.5	0.9	0.2	0.1	24		0.0	Clear.
18	29.438	29.9	28.4	1.5	1.0	0.4	31		4.0	Scud.
20	498	31.0	29.6	1.4	0.3	0.2	31		9.5	Id.; snow ²
22	568	27.6	26.2	1.4	0.4	0.3	28	0 : — : —	4.0	Scud and loose cumuli.
25 0	636	29.2	28.1	1.1	0.7	0.4	28		2.0	Cumulo-strati and nimbi on horizon.
2	672	28.2	26.7	1.5	0.9	0.4	28		2.0	Id.
4	707	28.3	26.4	1.9	0.4	0.5	28		2.0	Id.; haze round hor.
6	743	31.0	28.4	2.6	0.6	0.3	28		1.0	Masses of cirro-stratus to SE.
8	792	31.3	29.0	2.3	0.5	0.3	26		0.2	Cirro-strati and haze on E. horizon.
10	832	31.4	29.3	2.1	0.6	0.3	28		0.3	Sheets of thin cirro-strati and cirri.
18	29.930	25.2	24.6	0.6	0.4	0.0	22		0.0	Clear.
20	29.925	32.4	30.8	1.6	0.3	0.2	22		0.2	Cirro-strati on E. horizon.
22	30.010	34.8	32.3	2.5	0.3	0.3	20		0.4	Cirro-strati on N. horizon.

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

Gött. Mean Time.	BARO- METER at 32°.	THERMOMETERS.			WIND.			Clouds, Sc.: C.-s.: Ci., moving from	Sky clouded.	Species of Clouds and Meteorological Remarks.
		Dry.	Wet.	Diff.	Maximum force in 1b.	10m.	From			
d. h.	in.	°	°	°	lbs.	lbs.	pt.	pt.	pt.	0—10.
26 0	30.045	34.3	32.4	1.9	0.1	0.1	16			0.5
2	065	36.6	34.8	1.8	0.1	0.1	16			1.0
4	089	34.2	33.2	1.0	0.1	0.0	19	— : — : 0		5.0
6	119	31.6	0.1	0.0	18			3.0
8	154	29.0	28.6	0.4	0.1	0.0	16			2.0
10	167	24.1	23.9	0.2	0.0	0.0	18			0.0
22½	30.214	17.3	0.0	0.0				10.0
27 18	30.104	36.6	35.0	1.6	...	0.1	22			10.0
20	115	38.2	37.5	0.7	0.1	0.1	21			9.5
22	130	37.5	36.7	0.8	0.2	0.2	18	26 : — : —		3.0
28 0	141	37.9	37.0	0.9	0.3	0.2	17			0.5
2	140	39.7	38.2	1.5	0.2	0.1	16	28 : — : —		3.0
4	134	38.3	37.2	1.1	0.4	0.3	18	28 : — : —		9.5
6	147	37.0	36.3	0.7	0.2	0.1	18			10.0
8	147	36.5	36.1	0.4	0.0	0.0	16			10.0
10	133	37.0	36.6	0.4	0.0	0.0	20			10.0
18	30.100	36.9	36.6	0.3	0.2	0.0	20			3.0
20	105	36.8	36.3	0.5	0.1	0.1	21			5.0
22	131	37.6	37.2	0.4	0.3	0.1	18	21 : — : —		2.0
29 0	125	40.0	39.1	0.9	0.3	0.2	18			9.0
2	111	41.0	40.1	0.9	0.2	0.2	20	20 : — : —		10.0
4	125	40.2	39.3	0.9	0.5	0.1	20	24 : — : —		9.9
6	147	39.1	38.3	0.8	0.4	0.0	14			10.0
8	161	38.9	38.2	0.7	0.2	0.1	20			10.0
10	186	37.8	37.5	0.3	0.2	0.0	0	— : 24 : —		3.0
18	30.232	33.5	33.3	0.2	0.3	0.1	18			5.0
20	242	32.7	32.5	0.2	0.1	0.1	18			10.0
22	260	34.3	34.0	0.3	0.3	0.1	22	22 : — : 26		4.0
30 0	278	34.8	34.4	0.4	0.3	0.1	18			0.5
2	256	36.5	36.2	0.3	0.1	0.0	20			0.5
4	261	39.2	38.3	0.9	0.2	0.2	22	— : — : 0		2.5
6	274	35.6	35.2	0.4	0.3	0.1	16			3.0
8	274	36.6	36.2	0.4	0.1	0.0	20			10.0
10	263	37.4	37.0	0.4	0.0	0.0	18			10.0
18	30.269	39.2	38.8	0.4	0.3	0.1	19			10.0
20	271	40.8	40.3	0.5	0.1	0.1	18			10.0
22	304	41.1	40.6	0.5	0.1	0.1	22	— : 28 : —		8.0
31 0	299	42.0	41.5	0.5	0.2	0.1	20	30 : — : —		6.0
2	276	43.8	43.2	0.6	0.1	0.1	5			9.8
4	280	43.6	42.8	0.8	0.1	0.1	22			9.9
6	272	42.4	41.8	0.6	0.1	0.0	20			10.0
8	283	40.2	39.8	0.4	0.0	0.0	22			10.0
10	284	39.8	39.6	0.2	0.1	0.0	26			10.0

The direction of the wind is indicated by the number of the point of the compass, reckoning N. = 0, E. = 8, S. = 16, W. = 24. The motions of the three strata of clouds, Sc. (scud), C.-s. (cirro-stratus), and Ci. (cirrus), are indicated in a similar manner.

DAILY AND EXTRA
METEOROLOGICAL OBSERVATIONS.

MAKERSTOUN OBSERVATORY,

1846.

Civil Day.	TEMPERATURE.		RADIATION.		Rain in Gauge at Noon.	TEMPERATURE.		RADIATION.		Rain in Gauge at Noon.	TEMPERATURE.		RADIATION.		Rain in Gauge at Noon.
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.	
	•	•	•	•	in.	•	•	•	•	in.	•	•	•	•	in.
JULY.															
1	50.5	64.3	48.0	83.7	0.058	37.8	65.1	34.9	106.0	0.121	49.0	53.2	49.1	56.0	0.005
2	52.7	68.3	45.6	102.3	.052	49.2	67.4	44.6	93.5	.000	44.9	54.0	41.6	70.2	.000
3	55.2	66.5	51.8	78.8	.059	47.8	68.4	45.2	92.0	.000	43.3	54.4	39.1	75.6	.013
4	55.4	71.3	53.3	100.7	.003	49.6	68.0?	46.7000	43.0	55.8	35.3	71.4	.000
5	44.7	80.5	41.9	114.0	0.000	53.3	74.3	52.2	105.0	.000	39.0	52.3	33.6	71.2	.092
6	52.1	60.5	44.4	61.4	1.895	52.1	74.2	47.2	102.5	46.0	53.2	41.1	72.8	.004
7	48.0	64.5	45.6	107.2	0.150	53.9	74.1	51.7	105.7	.087	40.4	53.5	36.8	66.4	.000
8	47.0	59.5	44.7	87.2	.000	53.3	68.7	50.6	80.8	.000	46.7	51.5	42.1?	53.0
9	48.7	56.7	50.1	60.4	.266	48.0	67.3	43.2	97.0	.005	38.5	43.1	34.1	57.2	.000
10	49.4	70.2	48.1	112.3	.053	36.5	63.5	33.6	94.3	.000	28.2	45.3	26.8	76.5	.000
11	46.5	64.5	42.7	88.5	.000	45.8	74.4	42.3	110.5	.000	26.4	44.5	23.2	51.8	.008
12	52.0	68.3	51.1	86.8	54.2	71.2	50.7	103.3	.000	38.4	45.3	34.1	46.5	.000
13	57.7	72.7	55.6	100.8	.036	41.5	68.5	38.5	112.5	42.1	45.5	41.9	46.8	.000
14	50.6	78.0	48.3	119.2	.000	46.9	71.7	44.5	116.8	.000	40.1	42.3	39.4	43.2	.000
15	53.3	71.0	50.7	108.8	.006	47.4	71.3	44.5	115.8	.000	38.2	41.5	37.9	42.0
16	55.9	70.0	56.5	82.0	.011	44.8	70.0	43.0	79.7	.000	32.0	46.5	27.2	53.5	.000
17	52.4	64.3	52.7	88.3	.230	46.1	67.5	44.6	86.7	.010	37.0	52.1	30.2	51.0	.010
18	45.6	67.1	42.1	75.0	.132	42.5	60.1	37.4	104.8	.000	40.9	51.6	38.4	64.5	.020
19	45.5	63.9	42.1	95.7	40.0	64.0	34.9	79.5	.005	41.1	49.5	38.5	65.0	.036
20	47.4	65.1	46.2	95.8	.383	51.2	62.1	51.9	90.8	.245	43.0	52.5	39.2	62.2	.064
21	50.7	69.5	48.7	88.2	.360	50.0	58.3	50.6	104.7	.103	41.6	46.7	39.1	62.2	.070
22	50.8	65.7	47.6	101.3	.211	33.2	59.0	29.8000	36.0	42.3	32.2	59.0
23	50.4	67.6	47.7	75.0	.016	51.2	64.7	46.9?	75.2	.644	33.0	42.8	28.6	46.6	.160
24	52.4	65.9	49.4	98.0	.021	47.1	65.0	43.9	99.0	.053	40.3	54.9	40.2	69.8	.293
25	47.4	64.7	44.6	96.0	.010	53.3	64.3	52.9	103.8	.005	36.3	44.5?	31.1000
26	48.6	68.8	45.2	102.3	40.5	62.8	36.5	71.8	.040	41.1	45.6	40.8	47.5	.288
27	52.4	72.3	52.2	96.2	.077	47.9	61.2	46.2	94.5	.130	40.0	44.5	40.4	44.5	.172
28	58.9	75.1	59.2	105.5	.000	34.7	55.4	30.9	61.0	0.003	23.0	37.1	19.4	42.0	.050
29	55.8	65.3	54.6	74.0	0.085	46.3	51.2	45.2	51.6	2.750	26.2	34.5	22.4	40.6
30	53.4	70.1	55.1	93.5	3.063	47.4	60.3	43.1	98.7	0.490	28.1	32.3	23.2	40.8	.750
31	55.8	68.7	58.1	114.0	0.005										
AUGUST.															
OCTOBER.															
1	54.0?	72.3	120.5	0.000	44.7	65.5	40.1	99.6	0.016	25.4	40.9	22.4	51.0	0.024
2	58.5	71.5	57.1	91.2	34.4	61.9	30.7	96.0	.000	17.6	26.4	14.2	41.5	.000
3	59.5	77.3	60.6	114.8	.058	38.8	58.8	33.2	92.0	.000	14.4	37.6	10.2	48.5	.000
4	51.2	73.2	46.4	113.5	.000	36.9	55.7	31.4	60.3	26.5	33.2	19.9	44.5	.000
5	54.3	72.1	48.3	105.1	.184	49.7	61.9	43.0	67.9	.000	20.6	43.1	16.2	42.3	.013
6	50.3	80.3	48.7	118.6	.056	50.7	58.5	46.9	85.0	.049	30.4	38.4	25.2	46.5
7	51.3	68.2	45.9	79.8	0.491	44.2	57.2	42.1	76.6	.095	34.5	39.6	30.6	46.5	.000
8	58.0?	75.2	89.9	1.815	41.7	56.1	38.9	71.9	.147	30.1	42.7	26.2	44.5	.000
9	54.7	72.3	50.8	96.5	45.2	57.5	40.8	56.7	.158	34.7	44.2	31.2	54.0	.000
10	52.3	68.6	48.1	99.7	.014	52.3	60.4	49.4	69.7	.152	31.1	45.7?	25.6020
11	49.2	65.8	45.2	88.2	.000	42.3	59.1	35.6	89.0	24.8	30.2	18.9	32.2	.000
12	52.0	67.5	46.2	89.0	.000	49.7	53.5	50.2	59.0	.530	27.7	32.2	25.4	34.0?	.360
13	52.1	67.4	52.1	77.0	.880	40.3	49.6	36.4	75.5	.080	23.9	29.5	19.6	39.0
14	43.7	69.1	39.3	105.5	.195	37.3	48.7	33.1	52.5	.410	16.0	29.7	7.6	39.5	.000
15	50.3	65.2	47.1	70.0	.068	42.5	54.3	41.3	79.4	.055	24.1	32.1	17.7	37.0	.140
16	47.7	66.5	45.4	99.5	.160	38.5	55.2	34.4	79.1	.002	27.6	34.3	24.2	45.5	.000
17	50.3	67.6	44.7	99.4	.003	45.3	56.1	39.7	67.7	.000	19.4	38.7	15.2	42.2	.070
18	53.8	69.4	52.6	92.5	.263	48.7	55.3	44.6	60.4	10.6	42.3	5.4	43.0?	.050
19	46.1	67.6	41.7	111.0	.037	48.2	56.1	48.3	69.0	.638	36.9	45.8	34.7	45.0	.000
20	48.3	64.7	43.5	65.6	.024	44.2	56.1	42.3	81.0	.032	39.7	44.7	36.6	53.4
21	55.7	70.4	55.6	94.6	.076	36.5	54.9	31.9	68.0	.077	37.5	41.7	35.1	44.0	.262
22	49.4	70.3	45.9	106.5	.000	43.5	52.3	39.4	66.5	.239	30.7	36.3	28.2	46.5	.062
23	53.3	57.3	57.6	65.0	39.7	47.3	35.4	75.3	.211	29.7	36.2	26.1	36.5	.102
24	48.0	66.4	43.2	114.0	.148	36.7	49.3	32.1	67.8	.294	21.0	30.5	18.4	33.0	.738
25	37.0	69.9	33.4	107.0	.000	40.5	51.5	39.6	68.8	.300	18.4	30.0?	12.8	33.5	.000
26	39.8	66.7	36.2	110.8	.000	29.4	52.1	25.8	78.2	.026	23.7	35.6	18.8	54.2	.000
27	39.7	66.7	36.2	114.6	.003	25.5	48.7	23.3	80.5	.010	15.0	26.8	13.3	35.0
28	47.1	68.3	41.6	112.2	.000	38.2	52.8	32.5	59.4	.001	18.2	38.6	14.6	49.6	.000
29	53.3	69.1	43.2	84.8	.000	37.5	50.5	32.7	82.8	.000	34.0	41.3	31.8	44.5	.000
30	46.0	70.7	44.4	102.3	30.9	50.7	27.9	64.4	.000	30.7	38.6	27.2	53.5	.000
31	54.2	66.5	51.1	73.5	.200	35.2	52.1	31.1	53.7	.000	35.6	44.0	47.5	.000

EXTRA METEOROLOGICAL OBSERVATIONS, 1846.

ACTINOMETER.

Makertown Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60s.	Effect of Sun.	Mean of Group.	Sun's Altitude.	Makertown Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60s.	Effect of Sun.	Mean of Group.	Sun's Altitude.		
		Begun.	Ended.							Sc. div.	Sc. div.						
		d.	h.	m.	s.	Sc. div.	Sc. div.	d.	h.	m.	s.	Sc. div.	Sc. div.	Sc. div.	Sc. div.	Sc. div.	
MAY 15, 16, 1846.																	
15 23 31 0	Sun	13.8	20.3	+ 6.5				31 22 47 45	Sun	33.2	39.9	+ 6.7					
32 30	Shade	20.7	20.8	+ 0.1	6.4			49 15	Shade	38.7	35.8	- 2.9	9.8				
34 0	Sun	23.8	30.3	+ 6.5	6.6			50 45	Sun	38.8	46.0	+ 7.2	10.2				
35 30	Shade	30.3	30.0	- 0.3	6.7			52 15	Shade	44.8	41.7	- 3.1	9.5				
37 0	Sun	33.0	39.4	+ 6.4	6.9			53 45	Sun	44.7	50.3	+ 5.6	9.3				
38 30	Shade	39.1	38.5	- 0.6	6.9	6.80	53.4	55 15	Shade	48.3	44.0	- 4.3	9.8				
40 0	Sun	41.4	47.7	+ 6.3	6.9			56 45	Sun	22.2	27.6	+ 5.4	9.6				
41 30	Shade	47.5	46.9	- 0.6	6.9			58 15	Shade	25.7	21.6	- 4.1	9.7				
43 0	Sun	49.7	55.9	+ 6.2	6.9			59 45	Sun	24.2	29.9	+ 5.7	9.8				
44 30	Shade	18.3	17.5	- 0.8	7.0			31 23 1 15	Shade	27.9	23.7	- 4.2	9.6				
46 0	Sun	20.3	26.5	+ 6.2				2 45	Sun	25.8	30.8	+ 5.0	9.4				
16 0 27 30	Sun	22.3	27.0	+ 4.7				4 15	Shade	28.7	24.1	- 4.6	9.7				
29 0	Shade	24.8	22.4	- 2.4	5.9	6.00	53.0	5 45	Sun	26.4	31.6	+ 5.2					
30 30	Sun	24.6	27.0	+ 2.4	6.1												
32 0	Shade	24.8	19.8	- 5.0													
MAY 31, 1846.																	
31 21 26 45	Sun	17.9	26.6	+ 8.7				1 0 54 45	Sun	36.7	45.8	+ 9.1					
28 15	Shade	27.2	28.0	+ 0.8	8.0			56 15	Shade	46.0	45.7	- 0.3	9.1				
29 45	Sun	31.9	40.7	+ 8.8	8.2			57 45	Sun	49.4	58.0	+ 8.6	9.3				
31 15	Shade	41.3	41.8	+ 0.5	8.0			59 15	Shade	58.0	57.0	- 1.0	9.5				
32 45	Sun	45.6	53.8	+ 8.2	7.9			1 1 0 45	Sun	31.0	39.4	+ 8.4	9.4				
34 15	Shade	54.1	54.3	+ 0.2	8.1	8.21	47.4	2 15	Shade	39.2	38.1	- 1.1	9.4				
35 45	Sun	16.5	24.9	+ 8.4	8.4			3 45	Sun	41.7	49.8	+ 8.1	9.3				
37 15	Shade	25.2	25.1	- 0.1	8.4			5 15	Shade	49.3	47.9	- 1.4	9.5				
38 45	Sun	28.7	36.9	+ 8.2	8.4			6 45	Sun	51.6	59.8	+ 8.2	9.6				
40 15	Shade	37.0	36.7	- 0.3	8.5			8 15	Shade	59.5	58.2	- 1.3	9.3				
41 45	Sun	40.3	48.6	+ 8.3				9 45	Sun	61.6	69.5	+ 7.9	9.4				
31 22 9 45	Sun	12.3	20.5	+ 8.2				11 15	Shade	69.0	67.4	- 1.6	9.5				
11 15	Shade	20.1	19.0	- 1.1	9.0			12 45	Sun	30.7	38.6	+ 7.9	9.7				
12 45	Sun	22.7	30.4	+ 7.7	9.1			14 15	Shade	38.0	36.0	- 2.0	9.6				
14 15	Shade	29.9	28.3	- 1.6	9.5			15 45	Sun	39.5	46.9	+ 7.4	9.6				
15 45	Sun	31.8	39.9	+ 8.1	9.6			17 15	Shade	45.9	43.5	- 2.4	9.5				
17 15	Shade	39.3	37.9	- 1.4	9.4	9.39	51.7	18 45	Sun	46.5	53.3	+ 6.8	9.5				
18 45	Sun	15.9	23.8	+ 7.9	9.7			20 25	Shade	51.8	48.9	- 2.9	9.6				
20 15	Shade	23.0	20.8	- 2.2	9.7			21 45	Sun	50.7	57.4	+ 6.7	9.8				
21 45	Sun	23.7	30.8	+ 7.1	9.3			23 15	Shade	56.1	52.8	- 3.3	10.3				
23 15	Shade	29.9	27.7	- 2.2	9.2			24 45	Sun	55.8	63.0	+ 7.2	10.0				
24 45	Sun	30.8	37.8	+ 7.0				26 15	Shade	62.1	59.7	- 2.4	9.7				
31 22 31 45	Sun	5.3	14.5	+ 9.2				27 55	Sun	63.9	71.3	+ 7.4					
33 21	Shade	16.0	10.2	- 5.8	13.7												
34 45	Sun	11.6	18.2	+ 6.6	12.7			1 1 50 45	Sun	17.5	22.3	+ 4.8					
36 15	Shade	16.9	10.4	- 6.5	12.3			52 15	Shade	19.8	14.8	- 5.0	10.3				
37 45	Sun	12.9	17.9	+ 5.0	12.1	11.97	53.4	53 45	Sun	17.2	23.0	+ 5.8	10.4				
39 15	Shade	15.3	7.6	- 7.7	11.6			55 15	Shade	21.1	16.9	- 4.2	9.7				
40 45	Sun	8.0	10.7	+ 2.7	10.4			56 45	Sun	19.5	24.8	+ 5.3	10.1				
42 15	Shade	20.1	12.3	- 7.8	11.0			58 15	Shade	57.4	52.1	- 5.3	10.7				
43 45	Sun	14.2	17.8	+ 3.6				59 45	Sun	54.5	60.0	+ 5.5	10.6				
								1 2 1 15	Shade	58.0	53.0	- 5.0	10.7				
								2 45	Sun	55.5	61.3	+ 5.8	10.9				
								4 15	Shade	59.1	53.9	- 5.2	10.7				
								5 45	Sun	56.4	61.6	+ 5.2	10.6				

May 15th 23^h 44^m. Screw withdrawn.May 16th 0^h 30^m. Clouds near the sun.May 31st 21^h 35^m, 30^s. Screw withdrawn.May 31st 22^h 10^m. Dry thermometer, 67°.5, wet thermometer, 55°.5.May 31st 22^h 31^m—45^m. Glass plate removed from the instrument, replaced after 22^h 45^m.May 31st 22^h 34^m 30^s. Screw turned in.May 31st 22^h 42^m 0^s. Screw turned in.May 31st 22^h 58^m. Sky somewhat milky.May 31st 23^h 6^m. During the preceding observations, there was a small bubble of air about 0.1 inch in diameter in the bulb attached to a small piece of sediment.June 1st 1^h 58^m 0^s. Screw turned in.

ACTINOMETER.

Makerstoun Mean Time of First Reading.		In Sun or Shade.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.	Makerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.			
d.	h.	m.	s.	Begun.	Sc. div.	Ended.	Sc. div.	Sc. div.	°	d.	h.	m.	s.	Sc. div.	Sc. div.	Sc. div.	Sc. div.		
JUNE 1, 1846.																			
1	2	7	15	Shade	59.0	53.3	- 5.7	11.1		1	4	0	45	Sun	57.3	62.8	+ 5.5		
	8	45		Sun	55.3	60.9	+ 5.6	11.1			2	15		Shade	61.8	58.7	- 3.1	8.7	
10	15			Shade	58.7	53.5	- 5.2	10.6	10.70	10.40	3	45		Sun	61.2	66.9	+ 5.7	8.7	
11	45			Sun	55.2	60.4	+ 5.2	10.4			5	15		Shade	65.8	62.8	- 3.0	8.5	
13	15			Shade	58.1	52.8	- 5.3	10.3			6	45		Sun	64.9	70.2	+ 5.3	8.5	
14	45			Sun	55.0	59.7	+ 4.7	10.2			8	15		Shade	68.9	65.6	- 3.3	8.6	
16	15			Shade	57.1	51.4	- 5.7	10.5			9	55		Sun	68.7	74.1	+ 5.4	8.6	
17	45			Sun	53.4	58.3	+ 4.9	10.4	10.40	47.6	11	15		Shade	73.4	70.3	- 3.1	8.7	
19	15			Shade	56.0	50.6	- 5.4	10.4			12	45		Sun	72.8	78.6	+ 5.8		
20	45			Sun	52.8	57.8	+ 5.0	10.5											
22	15			Shade	55.4	49.7	- 5.7	10.7											
23	45			Sun	51.5	56.5	+ 5.0	10.3			1	5	4	45	Sun	51.3	56.1	+ 4.8	
25	15			Shade	54.2	49.3	- 4.9	10.1	10.38	46.8	6	15		Shade	55.0	52.1	- 2.9	7.6	
26	45			Sun	51.6	57.1	+ 5.5	10.5			7	45		Sun	54.0	58.7	+ 4.7	7.7	
28	15			Shade	54.4	49.3	- 5.1	10.3			9	15		Shade	57.4	54.4	- 3.0	7.4	
29	45			Sun	51.0	55.8	+ 4.8	10.2			10	45		Sun	55.7	59.8	+ 4.1	7.2	
31	15			Shade	53.2	47.4	- 5.8	10.3			12	15		Shade	58.6	55.4	- 3.2	7.3	
32	45			Sun	49.2	53.4	+ 4.2	10.1	10.12	45.9	13	45		Sun	57.2	61.3	+ 4.1	7.4	
34	15			Shade	50.7	44.7	- 6.0	10.0			15	15		Shade	60.1	56.8	- 3.3	7.2	
35	45			Sun	46.4	50.3	+ 3.9	10.0			16	45		Sun	58.3	62.0	+ 3.7	7.0	
37	15			Shade	57.6	51.4	- 6.2	10.1			18	15		Shade	60.6	57.2	- 3.4	7.0	
38	45			Sun	52.7	56.6	+ 3.9	9.9			19	45		Sun	58.7	62.1	+ 3.4	6.9	
40	15			Shade	53.9	48.2	- 5.7	10.0	9.92	44.9	21	15		Shade	60.7	57.0	- 3.7	7.1	
41	45			Sun	49.9	54.6	+ 4.7	9.9			22	45		Sun	58.6	62.0	+ 3.4		
43	15			Shade	52.3	47.6	- 4.7	9.7											
44	45			Sun	49.7	54.9	+ 5.2	9.8			1	6	24	45	Sun	53.9	57.2	+ 3.3	
46	15			Shade	52.8	48.3	- 4.5	9.9			26	15		Shade	56.9	55.6	- 1.3	4.5	
47	45			Sun	50.6	56.3	+ 5.7	10.3	10.02	44.0	27	45		Sun	56.8	59.9	+ 3.1	4.5	
49	15			Shade	54.4	49.7	- 4.7	10.1			29	15		Shade	59.4	57.9	- 1.5	4.6	
50	45			Sun	51.7	56.7	+ 5.0	10.0			30	45		Sun	59.0	62.1	+ 3.1	4.6	
52	15			Shade	54.2	48.8	- 5.4	9.8			32	15		Shade	61.6	60.0	- 1.6	4.5	
53	45			Sun	50.6	54.4	+ 3.8	9.6			33	45		Sun	61.2	63.9	+ 2.7	4.4	
55	15			Shade	51.6	45.5	- 6.1	9.8	9.72	43.1	35	15		Shade	63.2	61.4	- 1.8	4.3	
56	45			Sun	46.8	50.4	+ 3.6	9.6			36	45		Sun	62.5	64.8	+ 2.3	4.2	
58	15			Shade	47.6	41.7	- 5.9	9.8			38	15		Shade	64.1	62.1	- 2.0	4.3	
59	45			Sun	43.2	47.4	+ 4.2				39	45		Sun	63.0	65.2	+ 2.2		
1	3	34	45	Sun	51.6	57.2	+ 5.6				1	7	6	45	Sun	33.4	34.8	+ 1.4	
	36	15		Shade	55.9	52.8	- 3.1	8.7			8	15		Shade	34.1	32.8	- 1.3	2.7	
37	45			Sun	55.0	60.7	+ 5.7	8.7			9	45		Sun	54.3	55.8	+ 1.5	2.8	
39	15			Shade	59.5	56.7	- 2.8	8.4			11	15		Shade	55.3	54.1	- 1.2	2.5	
40	45			Sun	59.1	64.7	+ 5.6	8.8			12	45		Sun	54.8	56.0	+ 1.2	2.4	
42	15			Shade	63.4	59.9	- 3.5	9.1	8.79	36.9	14	15		Shade	55.4	54.2	- 1.2	2.4	
43	45			Sun	62.3	67.9	+ 5.6	8.9			15	45		Sun	54.8	55.9	+ 1.1	2.3	
45	15			Shade	66.6	63.4	- 3.2	9.0			17	15		Shade	55.3	54.0	- 1.3	2.3	
46	45			Sun	65.9	71.8	+ 5.9	8.9			18	45		Sun	54.6	55.4	+ 0.8	2.2	
48	15			Shade	70.6	67.8	- 2.8	8.6			20	15		Shade	54.9	53.4	- 1.5	2.3	
49	45			Sun	70.2	76.0	+ 5.8				21	45		Sun	53.7	54.5	+ 0.8		

June 1st 2nd 25^m. There has been a very thin cirrus haze over a considerable portion of the sky the most of the day.

June 1st 2nd 37^m 0^s. Screw turned in.

June 1st 6th 25^m. No clouds near the sun; hazy near south horizon.

June 1st 6th 34^m. Light breeze.

June 1st 7th 9^m 30^s. Screw turned in.

EXTRA METEOROLOGICAL OBSERVATIONS, 1846.

ACTINOMETER.

Makertoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60 ^s .	Effect of Sun.	Mean of Group.	Sun's Altitude.	Makertoun Mean Time of First Reading.	Observation.		Change in 60 ^s .	Effect of Sun.	Mean of Group.	Sun's Altitude.	
		Begin.	Ended.						Sc. div.	Sc. div.					
		d.	h.	m.	s.				d.	h.	m.	s.			
JUNE 1, 2, 1846.															
1 20 19 50	Sun	45.4	52.4	+ 7.0				2 18 21 0	Sun	46.8	50.5	+ 3.7			
21 20	Shade	53.3	54.7	+ 1.4	5.4			22 30	Shade	50.1	48.8	- 1.3	4.9		
22 50	Sun	57.7	64.4	+ 6.7	5.7			24 0	Sun	50.0	53.6	+ 3.6	5.2		
24 20	Shade	66.3	67.0	+ 0.7	5.8			25 30	Shade	53.0	51.2	- 1.8	5.3		
25 50	Sun	70.1	76.4	+ 6.3	5.8	5.92	38.9	27 0	Sun	52.7	56.1	+ 3.4	5.1		
27 20	Shade	77.0	77.3	+ 0.3	6.1			28 30	Shade	55.4	53.7	- 1.7	5.3		
28 50	Sun	80.2	86.7	+ 6.5	6.2			30 0	Sun	55.0	58.7	+ 3.7	5.4		
30 20	Shade	87.0	87.4	+ 0.4	6.1			31 30	Shade	57.9	56.1	- 1.8	5.4		
31 50	Sun	54.3	60.8	+ 6.5	6.3			33 0	Sun	57.7	61.1	+ 3.4	5.1		
33 20	Shade	61.2	61.3	+ 0.1	6.3			34 30	Shade	60.5	58.9	- 1.6	5.2		
34 50	Sun	64.7	71.0	+ 6.3	6.3			36 0	Sun	60.4	64.3	+ 3.9	5.4		
36 20	Shade	71.2	71.2	0.0	6.4			37 30	Shade	63.7	62.4	- 1.3	5.3		
38 0	Sun	75.0	81.5	+ 6.5	6.6	6.53	40.5	39 0	Sun	64.5	68.5	+ 4.0			
39 20	Shade	81.6	81.3	- 0.3	6.7										
40 50	Sun	53.7	60.0	+ 6.3	6.7										
42 20	Shade	60.0	59.6	- 0.4	6.7										
43 50	Sun	62.3	68.6	+ 6.3											
JUNE 2, 3, 1846.															
1 21 36 50	Sun	41.8	47.1	+ 5.3				2 19 15 0	Sun	45.9	51.1	+ 5.2			
38 20	Shade	46.1	43.8	- 2.3	7.4			16 30	Shade	51.0	50.4	- 0.6	5.9		
39 50	Sun	46.0	50.9	+ 4.9	7.4			18 0	Sun	52.9	58.4	+ 5.5	6.2		
41 20	Shade	49.4	46.7	- 2.7	7.5			19 30	Shade	58.2	57.5	- 0.7	6.0		
42 50	Sun	48.4	53.1	+ 4.7	7.6	7.56	48.4	21 0	Sun	59.7	64.8	+ 5.1	5.8		
44 20	Shade	51.7	48.6	- 3.1	7.9			22 30	Shade	64.5	63.7	- 0.8	6.0		
45 50	Sun	50.4	55.3	+ 4.9	7.6			24 0	Sun	66.0	71.3	+ 5.3	6.2		
47 20	Shade	54.4	52.0	- 2.4	7.5			25 30	Shade	71.0	70.1	- 0.9	6.1		
48 50	Sun	54.3	59.5	+ 5.2				27 0	Sun	72.6	77.8	+ 5.2	6.2		
JUNE 2, 3, 1846.															
2 17 30 0	Sun	44.3	46.9	+ 2.6				2 20 35 0	Sun	39.0	46.1	+ 7.1			
31 30	Shade	46.6	45.7	- 0.9	3.3			36 30	Shade	46.2	45.7	- 0.5	7.7		
33 0	Sun	46.7	49.0	+ 2.3	3.3			38 0	Sun	48.9	56.2	+ 7.3	7.8		
34 30	Shade	48.6	47.5	- 1.1	3.4			39 30	Shade	56.1	55.6	- 0.5	7.6		
36 0	Sun	48.4	50.8	+ 2.4	3.5			41 0	Sun	58.7	65.6	+ 6.9	7.5		
37 30	Shade	50.4	49.3	- 1.1	3.5			42 30	Shade	65.5	64.7	- 0.8	7.8		
39 0	Sun	50.3	52.9	+ 2.6	3.6	3.62	15.8	44 0	Sun	67.7	74.7	+ 7.0	7.9		
40 30	Shade	52.4	51.4	- 1.0	3.6			45 30	Shade	74.5	73.4	- 1.1	8.2		
42 0	Sun	52.5	55.0	+ 2.5	3.7			47 0	Sun	76.3	83.4	+ 7.1	8.2		
43 30	Shade	54.4	53.0	- 1.4	4.0			48 30	Shade	83.3	82.2	- 1.1	8.3		
45 0	Sun	54.0	56.7	+ 2.7	4.0			50 0	Sun	85.1	92.4	+ 7.3			
46 30	Shade	56.1	54.8	- 1.3	3.9										
48 0	Sun	55.9	58.4	+ 2.5											
JUNE 2, 3, 1846.															
2 21 45 0	Sun	51.3	59.0	+ 7.7				2 21 45 0	Sun	51.3	59.0	+ 7.7			
46 30	Shade	58.6	56.8	- 1.8	9.3			46 30	Shade	58.6	56.8	- 1.8	9.3		
48 0	Sun	60.0	67.3	+ 7.3	9.3			48 0	Sun	60.0	67.3	+ 7.3	9.3		
49 30	Shade	66.8	64.6	- 2.2	9.3			49 30	Shade	66.8	64.6	- 2.2	9.3		
51 0	Sun	67.4	74.4	+ 7.0	9.1			51 0	Sun	67.4	74.4	+ 7.0	9.1		
52 30	Shade	73.7	71.8	- 1.9	9.1			52 30	Shade	73.7	71.8	- 1.9	9.1		
54 0	Sun	75.0	82.5	+ 7.5	9.4			54 0	Sun	75.0	82.5	+ 7.5	9.4		
55 30	Shade	82.1	80.2	- 1.9	9.5			55 30	Shade	82.1	80.2	- 1.9	9.5		
57 0	Sun	83.4	91.0	+ 7.6	9.4			57 0	Sun	83.4	91.0	+ 7.6	9.4		
58 30	Shade	90.6	88.8	- 1.8	9.2			58 30	Shade	90.6	88.8	- 1.8	9.2		
2 22 0 0	Sun	66.7	73.8	+ 7.1				2 22 0 0	Sun	66.7	73.8	+ 7.1			

June 1^d 21^h 37^m. Breeze; a few patches of cloud, none near the sun; hazy from horizon to 20° altitude.June 2^d 17^h 35^m. Cloudless; haze on horizon.June 2^d 20^h 35^m. Sky very favourable.June 2^d 21^h 50^m. Splendid sky.June 2^d 21^h 59^m 45^s. Screw withdrawn.

9.29 49.5

ACTINOMETER.

Makerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60 ^s .	Effect of Sun.	Mean of Group.	Sun's Altitude.	Makerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60 ^s .	Effect of Sun.	Mean of Group.	Sun's Altitude.	
		Begun.	Ended.							Sc. div.	Sc. div.					
		d. h. m. s.														
JUNE 2, 1846.																
2 22 7 0	Sun	37.9	43.8	+5.9						2 23 38 0	Sun	43.8	50.2	+6.4		
8 30	Shade	40.7	34.0	-6.7	12.5					39 30	Shade	49.2	46.3	-2.9	9.6	
10 0	Sun	69.2	75.0	+5.8	12.3					41 0	Sun	49.1	56.2	+7.1	10.0	
11 30	Shade	71.3	65.1	-6.2	11.6					42 30	Shade	55.2	52.3	-2.9	10.0	
13 0	Sun	66.7	71.8	+5.1	12.3	12.83	51.5			44 0	Sun	55.4	62.4	+7.0	9.5	
14 30	Shade	68.6	60.4	-8.2	13.7					45 30	Shade	61.5	59.3	-2.2	9.5	9.79 56.6
16 0	Sun	62.6	68.4	+5.8	13.9					47 0	Sun	62.7	70.3	+7.6	10.0	
17 30	Shade	65.7	57.7	-8.0	13.5					48 30	Shade	69.7	67.2	-2.5	9.9	
19 0	Sun	59.9	65.1	+5.2						50 0	Sun	70.7	78.0	+7.3		
JUNE 2, 1846.																
2 22 28 0	Sun	63.7	71.6	+7.9						2 23 38 0	Sun	43.8	50.2	+6.4		
29 30	Shade	70.9	68.8	-2.1	9.8					39 30	Shade	49.2	46.3	-2.9	9.6	
31 0	Sun	72.1	79.7	+7.6	9.8					41 0	Sun	49.1	56.2	+7.1	10.0	
32 30	Shade	79.0	76.7	-2.3	9.8					42 30	Shade	55.2	52.3	-2.9	10.0	
34 0	Sun	79.8	87.1	+7.3	9.8	9.81	53.3			44 0	Sun	55.4	62.4	+7.0	9.5	
35 30	Shade	86.1	83.3	-2.8	10.0					45 30	Shade	61.5	59.3	-2.2	9.5	
37 0	Sun	62.3	69.3	+7.0	9.7					47 0	Sun	62.7	70.3	+7.6	10.0	
38 30	Shade	68.4	65.7	-2.7	9.8					48 30	Shade	69.7	67.2	-2.5	9.9	
40 0	Sun	69.0	76.2	+7.2						50 0	Sun	70.7	78.0	+7.3		
JUNE 16, 17, 1846.																
2 22 43 0	Sun	80.6	87.4	+6.8						16 23 39 15	Sun	31.6	40.7	+9.1		
44 30	Shade	84.6	78.2	-6.4	11.8					40 45	Shade	41.4	41.4	0.0	8.6	
46 0	Sun	78.4	82.4	+4.0	12.5					42 15	Sun	45.1	53.3	+8.2	8.4	
47 30	Shade	78.9	68.2	-10.7	13.9					43 45	Shade	53.5	53.1	-0.4	7.9	
49 0	Sun	68.4	70.8	+2.4	13.4					45 15	Sun	56.6	63.3	+6.7	7.3	8.13 57.7
50 30	Shade	65.7	54.4	-11.3	14.8					46 45	Shade	63.2	62.4	-0.8	7.9	
52 0	Sun	75.3	79.8	+4.5	13.8	12.89	54.6			48 15	Sun	65.5	73.1	+7.6	8.5	
53 30	Shade	76.0	68.7	-7.3	13.2					49 45	Shade	72.9	72.0	-0.9	8.3	
55 0	Sun	71.5	78.6	+7.1	13.2					51 15	Sun	75.6	82.9	+7.3		
56 30	Shade	76.3	71.3	-5.0	11.7											
58 0	Sun	74.2	80.4	+6.2	11.5											
59 30	Shade	78.3	72.6	-5.7	12.0											
2 23 1 0	Sun	74.5	80.8	+6.3												
JUNE 17, 1846.																
2 23 5 0	Sun	68.6	75.8	+7.2						17 0 27 15	Sun	12.6	18.1	+5.5		
6 30	Shade	75.0	72.7	-2.3	9.8					28 45	Shade	16.4	12.2	-4.2	9.5	
8 0	Sun	75.8	83.6	+7.8	10.2					30 15	Sun	14.6	19.8	+5.2	9.6	
9 30	Shade	82.6	80.0	-2.6	10.5					31 45	Shade	73.3	68.8	-4.5	9.5	
11 0	Sun	83.3	91.3	+8.0	10.6	10.33	55.6			33 25	Sun	71.6	76.4	+4.8	9.4	
12 30	Shade	65.4	62.9	-2.5	10.5					34 45	Shade	75.1	70.3	-4.8	9.9	9.48 57.2
14 0	Sun	66.3	74.4	+8.1	10.5					37 15	Sun	77.4	82.7	+5.3	9.8	
15 30	Shade	73.9	71.6	-2.3	10.2					38 45	Shade	81.0	76.8	-4.2	9.3	
17 0	Sun	74.7	82.3	+7.6						40 15	Sun	79.0	84.0	+5.0	9.1	
										41 45	Shade	82.1	78.2	-3.9	9.2	
										43 15	Sun	80.7	86.3	+5.6		

June 2^d 22^h 7^m—20^m. Glass plate removed from the instrument; replaced after 20^m.June 2^d 22^h 9^m 45^s. Screw turned in.June 2^d 22^h 13^m. Two very small patches of cloud formed to SE.; sun very clear.June 2^d 22^h 36^m 45^s. Screw withdrawn.June 2^d 22^h 43^m—23^h 2^m. Glass plate removed from the instrument; replaced after 2^m.June 2^d 23^h 8^m. Patches of cumuli appearing on various parts of the horizon.June 2^d 23^h 12^m 15^s. Screw withdrawn.June 2^d 23^h 43^m. Cumuli increasing; dry thermometer 77°.5; wet thermometer 62°.4.June 16^d 23^h 44^m. A few cumuli about the horizon.June 17^d 0^h 31^m 30^s. Screw turned in.June 17^d 0^h 36^m. One set of observations missed.

ACTINOMETER.

Makerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.	Makerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60°.	Effect of Sun.	Mean of Group.	Sun's Altitude.			
		Begun.	Ended.							Sc. div.	Sc. div.							
		d. h. m. s.					°	d. h. m. s.						Sc. div.	Sc. div.	Sc. div.		
JULY 2, 3, 1847.																		
2 21 23 12	Sun	43.2	57.7	+ 14.5					Sun	39.9	49.0	+ 9.1						
24 42	Shade	58.2	57.9	- 0.3	14.7				13 42	Shade	46.1	38.1	- 8.0	17.6				
26 12	Sun	63.5	77.8	+ 14.3	14.9				15 12	Sun	41.2	51.3	+ 10.1	18.1				
27 42	Shade	81.3	80.4	- 0.9	15.0				16 42	Shade	49.0	41.0	- 8.0	17.5				
29 12	Sun	11.7	25.7	+ 14.0	15.0	15.04	46.9		18 12	Sun	43.8	52.7	+ 8.9	17.3				
30 42	Shade	25.9	24.8	- 1.1	15.0				19 42	Shade	49.1	40.2	- 8.9	18.0				
32 12	Sun	30.0	43.7	+ 13.7	15.2				21 12	Sun	43.0	52.3	+ 9.3					
33 42	Shade	43.6	41.7	- 1.9	15.5													
35 12	Sun	46.7	60.3	+ 13.6														
JULY 2, 3, 1847.																		
2 21 57 12	Sun	28.8	40.2	+ 11.4					2 23 12 12	Sun	44.1	54.5	+ 10.4					
58 42	Shade	38.0	30.8	- 7.2	18.8				41 42	Shade	52.9	47.8	- 5.1	15.9				
2 22 0 12	Sun	34.8	46.6	+ 11.8	19.2				43 12	Sun	51.9	63.1	+ 11.2	16.6				
1 42	Shade	45.7	38.1	- 7.6	18.7				44 42	Shade	61.6	55.9	- 5.7	16.6				
3 12	Sun	41.5	52.0	+ 10.5	18.7				46 12	Sun	59.5	70.2	+ 10.7	16.6				
4 42	Shade	48.9	40.2	- 8.7	18.2	18.78	50.8		47 42	Shade	68.3	62.2	- 6.1	17.3				
6 17	Sun	44.2	52.8	+ 8.6	18.1				49 12	Sun	66.2	77.8	+ 11.6	17.4				
7 42	Shade	49.2	39.0	- 10.2	19.6				50 42	Shade	76.4	70.9	- 5.5	16.4				
9 12	Sun	42.1	52.3	+ 10.2	19.4				52 12	Sun	36.0	46.1	+ 10.1					
10 42	Shade	49.4	41.1	- 8.3	18.3													
12 12	Sun	43.8	53.6	+ 9.8														
2 22 39 12	Sun	25.0	35.2	+ 10.2														
40 42	Shade	32.1	23.3	- 8.8	18.4													
42 12	Sun	26.7	35.7	+ 9.0	17.8	18.10	54.2											
43 42	Shade	32.1	23.3	- 8.8	18.1													
45 12	Sun	26.2	35.8	+ 9.6														
2 22 50 12	Sun	38.1	46.7	+ 8.6														
51 42	Shade	43.7	34.0	- 9.7	18.3													
53 12	Sun	37.0	45.6	+ 8.6	17.9	18.07	55.0											
54 52	Shade	46.7	31.8	- 8.9	17.9													
56 12	Sun	34.3	43.8	+ 9.5														
2 22 59 12	Sun	36.8	42.4	+ 5.6														
2 23 0 42	Shade	37.2	23.8	- 13.4	18.6													
2 12	Sun	45.8	50.7	+ 4.9	19.4													
3 42	Shade	45.6	30.0	- 15.6	18.8	18.38	55.6											
5 12	Sun	30.4	31.8	+ 1.4	16.0													
6 42	Shade	24.0	10.4	- 13.6	19.1													
8 12	Sun	13.2	22.7	+ 9.5														

July 2^d, 1847. The cylinder of the actinometer having burst in the previous winter, the broken parts have been replaced by new ones.

July 2^d 21^h 23^m. Observations made at east end of Observatory.

July 2^d 21^h 30^m. Dry thermometer, 63°7; wet thermometer, 59°7.

July 2^d 21^h 57^m. Observations made on the south side of Observatory.

July 2^d 22^h 10^m. Barometer, 29.945 in.; dry thermometer, 65°2; wet thermometer, 58°7.

July 2^d 22^h 39^m. Observations made at west end of Observatory.

July 2^d 22^h 52^m. Dry thermometer, 68°3; wet thermometer, 61°0.

July 2^d 22^h 59^m—23^h 9^m. Glass plate removed from the instrument; replaced after 9^m.

July 2^d 23^h 44^m. Dry thermometer, 71°6; wet thermometer, 62°5.

July 3^d 1^h 22^m. Dry thermometer, 75°0; wet thermometer, 61°7; too much wind.

July 3^d 2^h 17^m. Dry thermometer, 75°6; wet thermometer, 61°9.

18.33 48.6

16.81 43.8

ACTINOMETER.

Makerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60s.	Effect of Sun.	Mean of Group.	Sun's Altitude.	Makerstoun Mean Time of First Reading.	In Sun or Shade.	Observation.		Change in 60s.	Effect of Sun.	Mean of Group.	Sun's Altitude.	
		Begin.	Ended.							Sc. div.	Sc. div.					
d. h. m. s.		Sc. div.	Sc. div.	Sc. div.	Sc. div.	Sc. div.	°	d. h. m. s.		Sc. div.	Sc. div.	Sc. div.	Sc. div.	Sc. div.	°	
JULY 3, 1847.																
3 3 26 12	Sun	29.7	39.6	+ 9.9				3 7 16 12	Sun	55.0	59.3	+ 4.3				
27 42	Shade	37.0	29.3	- 7.7	17.6			17 42	Shade	58.6	54.8	- 3.8	7.8			
29 12	Sun	31.9	41.8	+ 9.9	18.0			19 12	Sun	55.8	59.6	+ 3.8	7.9			
30 42	Shade	38.3	29.7	- 8.6	18.2			20 42	Shade	58.6	54.3	- 4.3	7.9			
32 12	Sun	31.8	41.1	+ 9.3	17.4	17.76	39.9	22 12	Sun	55.0	58.4	+ 3.4	7.6			
33 42	Shade	38.4	30.8	- 7.6	17.4			23 42	Shade	57.3	53.2	- 4.1	7.3	7.49	8.3	
35 12	Sun	33.9	44.1	+ 10.2	18.0			25 12	Sun	53.8	56.8	+ 3.0	7.1			
36 42	Shade	41.7	33.7	- 8.0	17.7			26 42	Shade	55.8	51.6	- 4.2	7.3			
38 12	Sun	36.8	46.0	+ 9.2				28 12	Sun	52.0	55.2	+ 3.2	7.5			
								29 42	Shade	53.9	49.6	- 4.3	7.0			
								31 12	Sun	50.0	52.3	+ 2.3				
3 4 14 12	Sun	39.6	51.8	+ 12.2				3 7 40 12	Sun	46.2	47.4	+ 1.2				
15 42	Shade	50.9	45.8	- 5.1	16.6			41 42	Shade	46.0	41.4	- 4.6	5.5			
17 12	Sun	49.4	60.2	+ 10.8	16.3			43 12	Sun	41.3	41.9	+ 0.6	5.4			
18 42	Shade	58.7	52.7	- 6.0	16.8			44 42	Shade	40.3	35.4	- 4.9	5.4			
20 12	Sun	55.9	66.6	+ 10.7	16.8	16.44	33.3	46 12	Sun	35.1	35.5	+ 0.4	5.1			
21 42	Shade	65.2	59.0	- 6.2	16.4			47 42	Shade	33.8	29.2	- 4.6	4.8			
23 12	Sun	62.2	72.0	+ 9.8	16.2			49 12	Sun	29.1	29.2	+ 0.1	4.6	4.67	5.3	
24 42	Shade	70.2	63.7	- 6.5	16.0			50 42	Shade	27.3	23.0	- 4.3	4.3			
26 12	Sun	66.5	75.7	+ 9.2				52 12	Sun	22.8	22.8	0.0	4.2			
								53 42	Shade	53.4	49.3	- 4.1	4.0			
3 5 3 12	Sun	50.3	61.0	+ 10.7				55 12	Sun	49.0	48.8	- 0.2	4.2			
4 42	Shade	60.2	56.3	- 3.9	14.2			56 42	Shade	46.8	42.1	- 4.7	3.9			
6 12	Sun	59.9	69.8	+ 9.9	14.3			58 12	Sun	41.3	39.8	- 1.5				
7 42	Shade	68.3	63.4	- 4.9	14.6			3 8 3 12	Sun	24.4	23.2	- 1.2				
9 12	Sun	66.6	76.2	+ 9.6	14.5	14.40	26.4	4 42	Shade	21.2	16.6	- 4.6	3.2			
10 42	Shade	74.8	70.0	- 4.8	14.2			6 12	Sun	15.4	13.7	- 1.7	2.5			
12 12	Sun	37.7	46.9	+ 9.2	14.2			7 42	Shade	47.1	43.2	- 3.9	2.0			
13 42	Shade	45.6	40.4	- 5.2	14.8			9 12	Sun	42.2	40.0	- 2.2	1.9			
15 12	Sun	43.5	53.6	+ 10.1				10 42	Shade	38.2	33.8	- 4.4	2.3	2.29	3.0	
								12 12	Sun	32.5	30.5	- 2.0	2.8			
3 6 13 12	Sun	51.0	59.7	+ 8.7				13 42	Shade	28.8	23.6	- 5.2	3.0			
14 42	Shade	59.1	55.8	- 3.3	11.3			15 12	Sun	23.4	21.0	- 2.4	2.1			
16 12	Sun	58.0	65.3	+ 7.3	10.9			16 42	Shade	19.2	15.4	- 3.8	0.8			
17 42	Shade	64.6	60.6	- 4.0	11.2			18 12	Sun	13.8	10.1	- 3.7	0.0			
19 12	Sun	62.8	69.8	+ 7.0	11.1	11.23	16.7	19 42	Shade	8.3	4.7	- 3.6	0.0			
20 42	Shade	68.9	64.6	- 4.3	11.3			21 12	Sun	3.0	- 0.6	- 3.6				
22 12	Sun	66.7	73.6	+ 6.9	11.4											
23 42	Shade	72.2	67.5	- 4.7	11.4											
25 12	Sun	69.2	75.8	+ 6.6												

July 3d 3h 32m. Dry thermometer, 76°.0; wet thermometer, 62°.8.

July 3d 4h 19m. Dry thermometer, 74°.6; wet thermometer, 62°.6; barometer, 29.859 in.

July 3d 6h 21m. Dry thermometer, 71°.7; wet thermometer, 60°.7.

July 3d 7h 24m. Dry thermometer, 68°.4; wet thermometer, 59°.7; barometer, 29.825 in.

July 3d 7h 40m. Observations made near the rain-gauge. 58m. The last sun observation not good; the sun near trees.

July 3d 8h 11m. The sun is about 14° distant from a ridge of land. 15m. The sun just touches the projecting branch of a tree, the readings probably not affected by this. 18m. About 0.4 of the sun's face visible. 21m 12s. Sun invisible.

DATES OF FLOWERING AND LEAFING OF PLANTS, &c.

Feb.	15. <i>Primula acaulis</i> in flower. Crows coming. 15. <i>Ranunculus Ficaria</i> in flower. 15. <i>Crataegus oxyacantha</i> in leaf. 15. <i>Corylus Avellana</i> , catkins open. 23. <i>Crataegus oxyacantha</i> , leaves more developed. 24. Two bats seen ; one seen by the gardener 10 days ago. Toads coupling. 29. <i>Pulmonaria officinalis</i> in flower.	March	1. <i>Æsculus Hippocastanum</i> in leaf. 1. <i>Viola canina</i> in flower. 1. Frogs coupling. 11. Humble bee seen. 29. <i>Cerasus Padus</i> in leaf at least a week.
March	1. <i>Buxus sempervirens</i> in flower. 1. <i>Larix Europaea</i> in leaf. 1. <i>Mercurialis perennis</i> in flower. 1. <i>Lychnis diurna</i> in flower. 1. <i>Sambucus nigra</i> in leaf a week at least. 1. <i>Larix Europaea</i> in flower. 1. <i>Ulmus montana</i> in flower. 1. <i>Fragaria vesca</i> in flower. 1. <i>Lamium purpureum</i> in flower. 1. <i>Prunus spinosa</i> in leaf.	April	3. Swallows seen at Kelso. 11. Two swallows seen (<i>Hirundo rustica.</i>) 12. <i>Agraphis nutans</i> in flower ; flower-stalk very short, having been stunted by the late frost. 12. <i>Pyrus aucuparia</i> in leaf two or three days.
		Sept.	17. The most of the swallows seem to have gone off to-day.
		Oct.	20. <i>Fraxinus excelsior</i> , majority of leaves off one tree. 31. <i>Platanus occidentalis</i> , majority of leaves off.
		Nov.	3. <i>Fagus sylvatica</i> , majority of leaves off. 3. <i>Ulmus montana</i> , id.

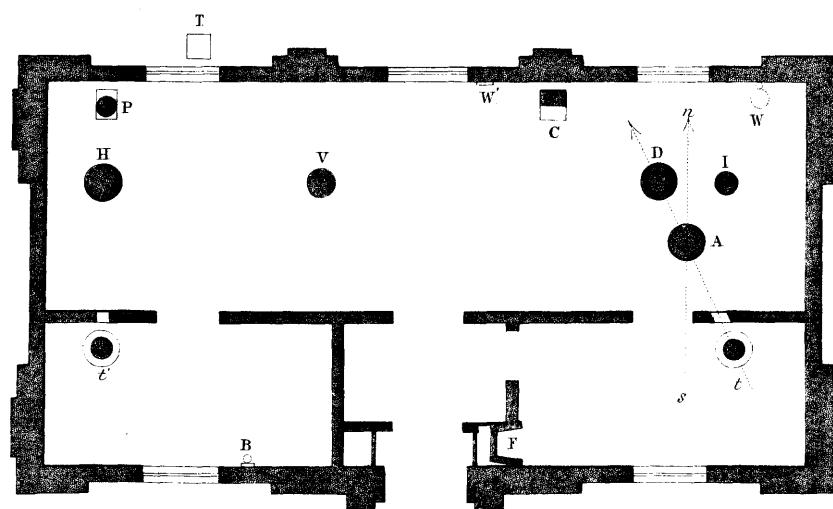
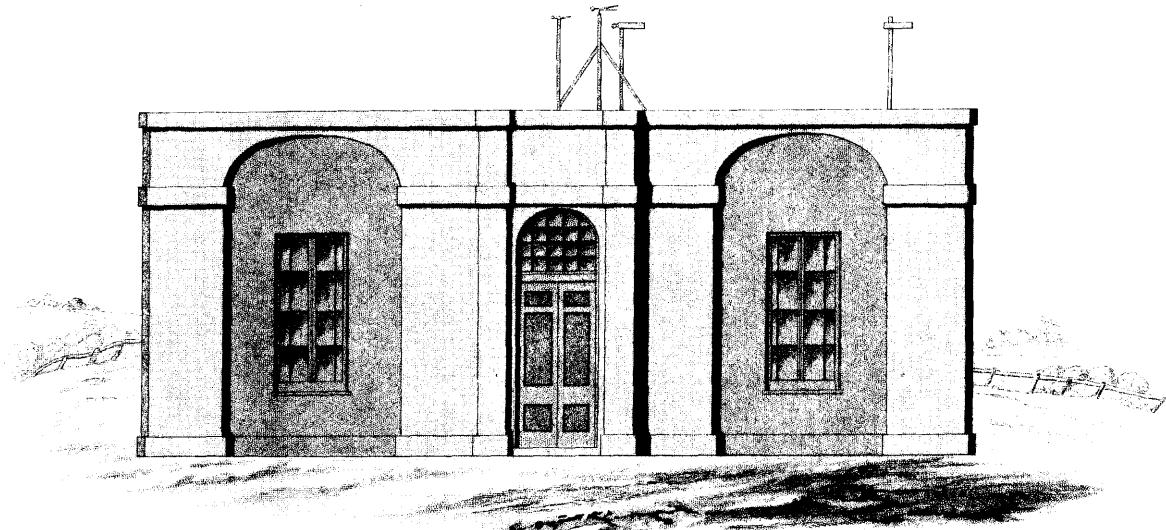
TEMPERATURE OF WATER IN THE COTTAGE AND GARDEN PUMP-WELLS, AND IN THE RIVER TWEED.

Gött. M. T.	Cottage.		Garden.		Gött. M. T.	Tweed.		Gött. M. T.	Tweed.				
	d.	h.	°	°		d.	h.	°	d.	h.	°		
March	9	5	44·4	46·6	June	3	7	73·7	June	17	9	76·6
	15	5	44·4		4	8	73·3		17	19	71·5
	23	5	44·3	46·9		4	19½	67·6		18	8	75·7
	30	5	44·1	47·0		5	7½	73·9		18	18½	70·7*
April	6	5	44·05	46·95		5	19	68·6		19	18½	68·8
	20	5	44·5	47·7		6	9	73·4		20	7	69·2
	27	5	44·6	48·1		7	19	66·7		21	18½	66·0
May	10	5	45·2	48·6		16	8	75·2				

* June 18^d 18^h. River Tweed slightly discoloured by rain.

MAKERSTOUN MAGNETIC OBSERVATORY.

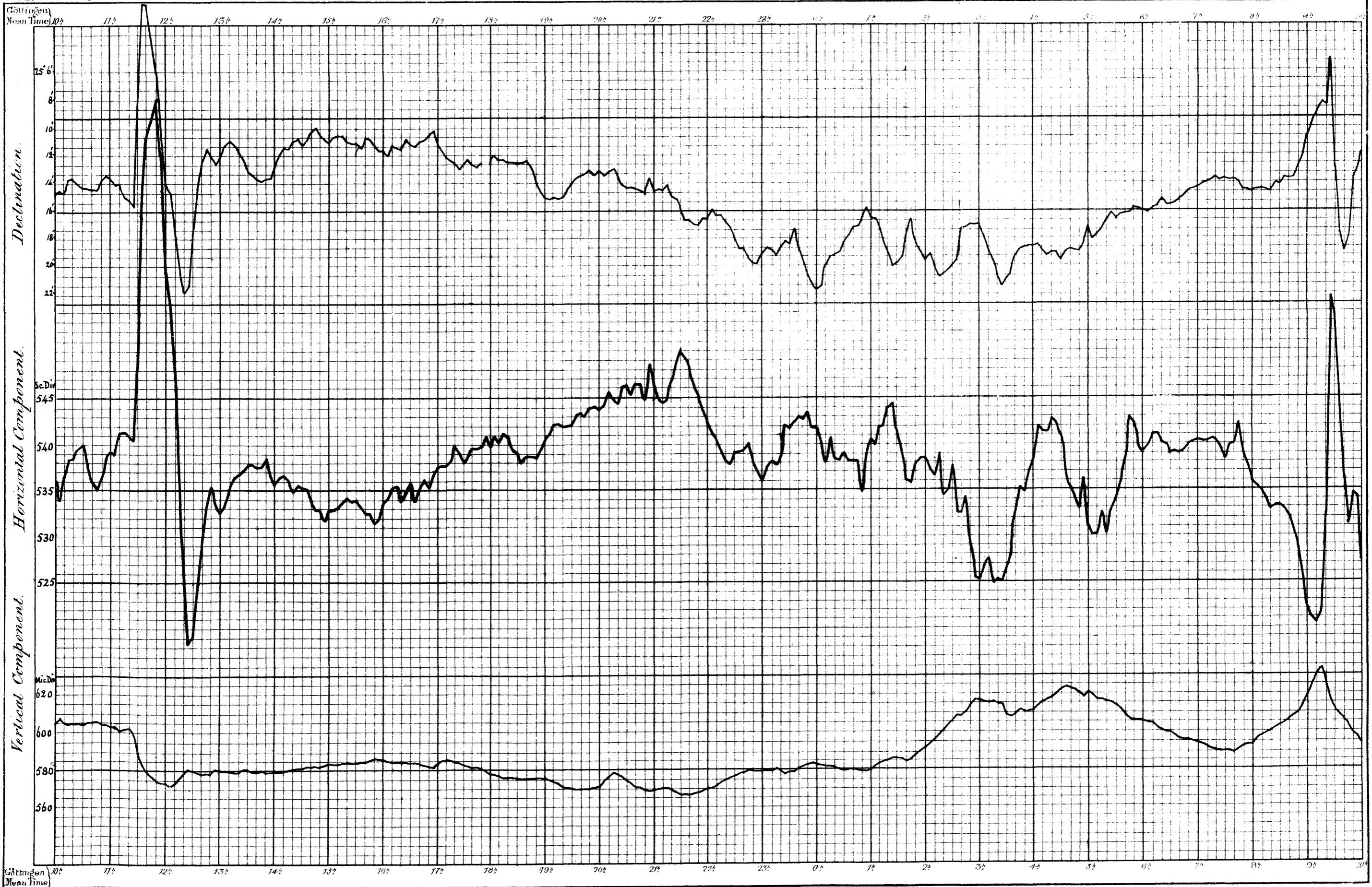
PLATE I. Royal Soc. Trans. Edin. Vol. LXV.



Term-Day Magnetical Observations. January 22, 23, 1845.

Plate II.

Göttingen Observations.

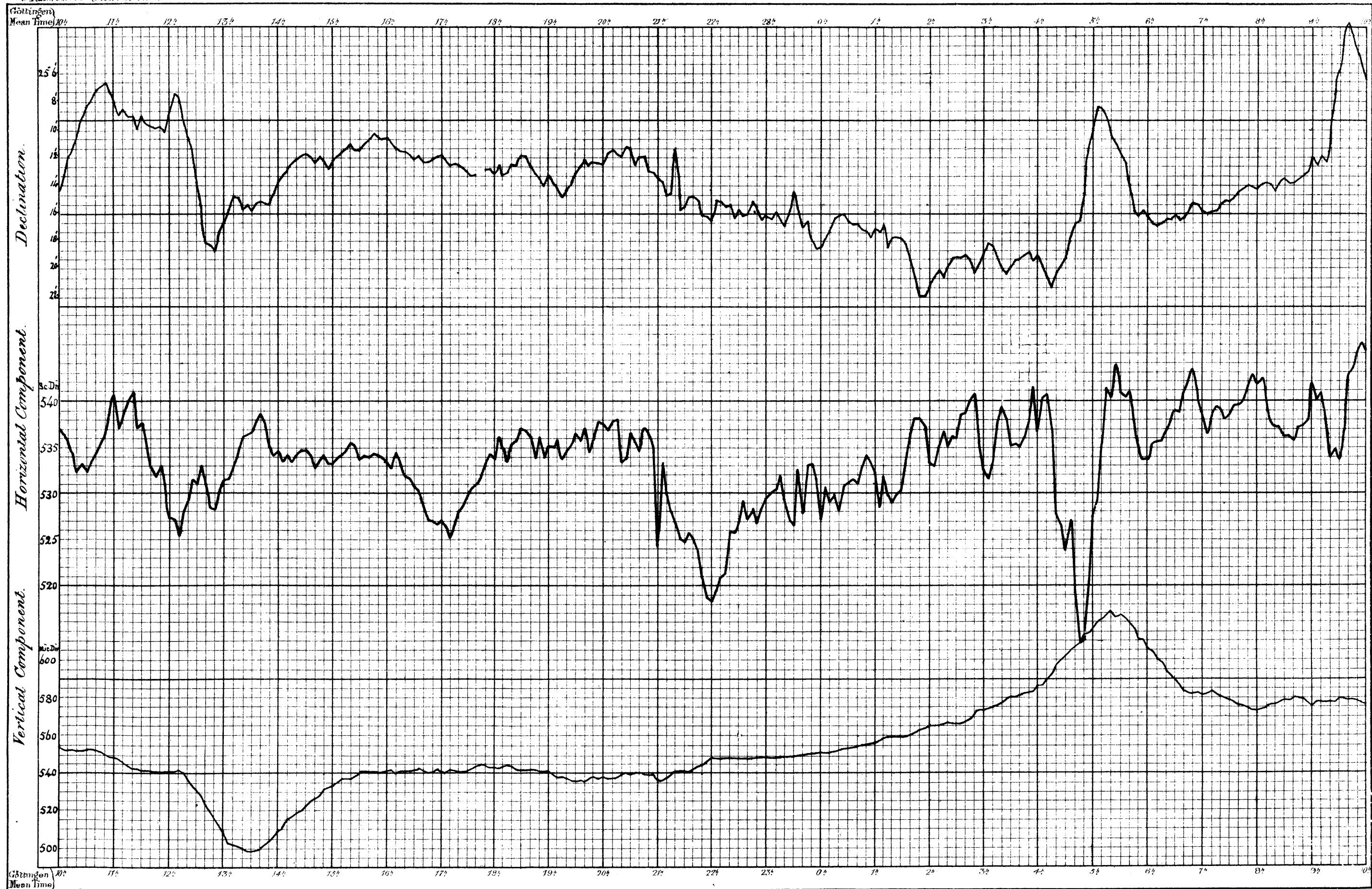


Ascending Curves indicate decreasing westerly declination and increasing force.

Term-Day Magnetical Observations. February 21, 22, 1845.

Plate III.

Makrostöcke Observations.

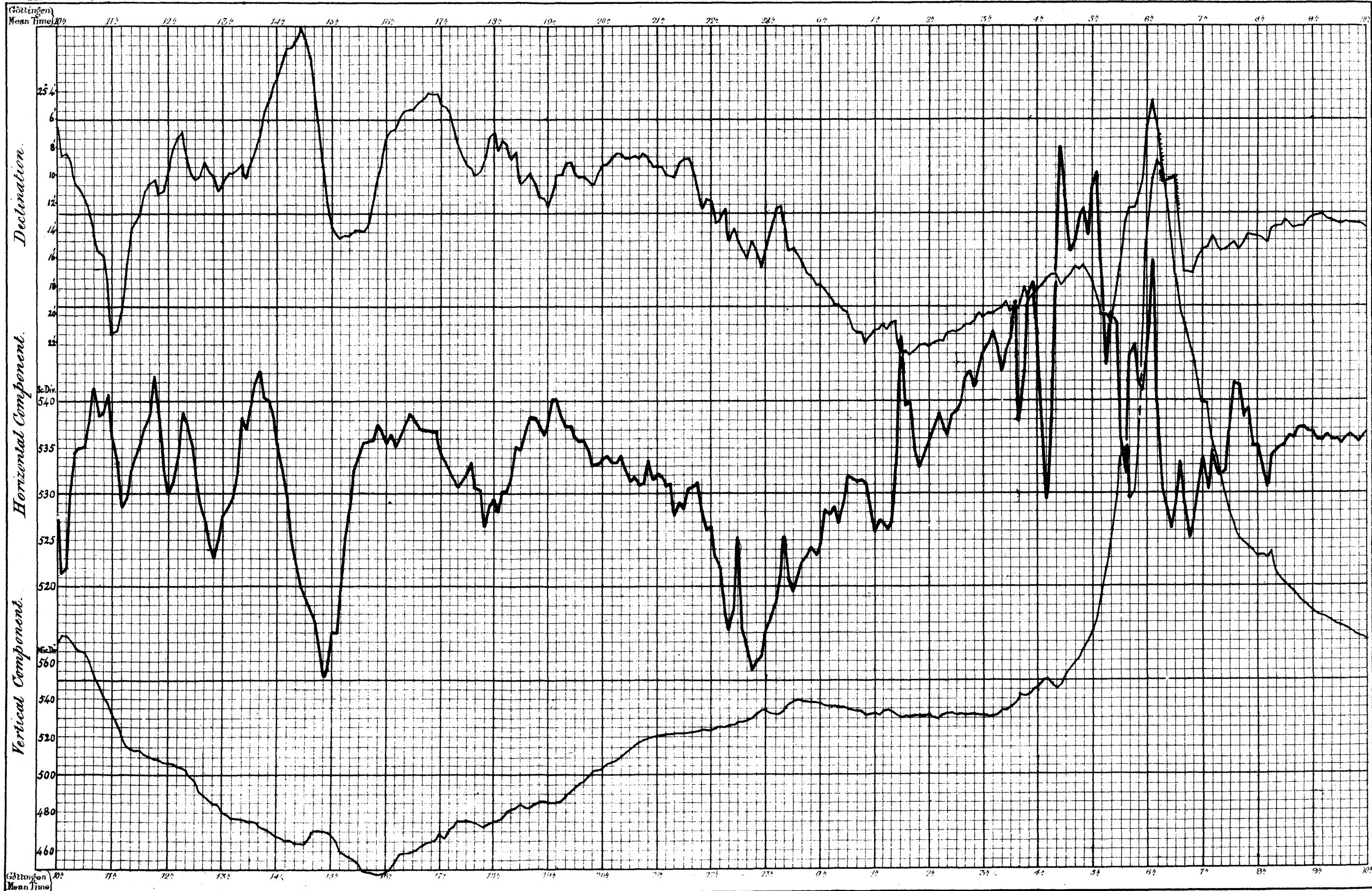


Ascending Curves indicate decreasing westerly declination and increasing force.

Term-Day Magnetic Observations March 19, 20, 1845.

Plate IV.

Göttingen Observations.

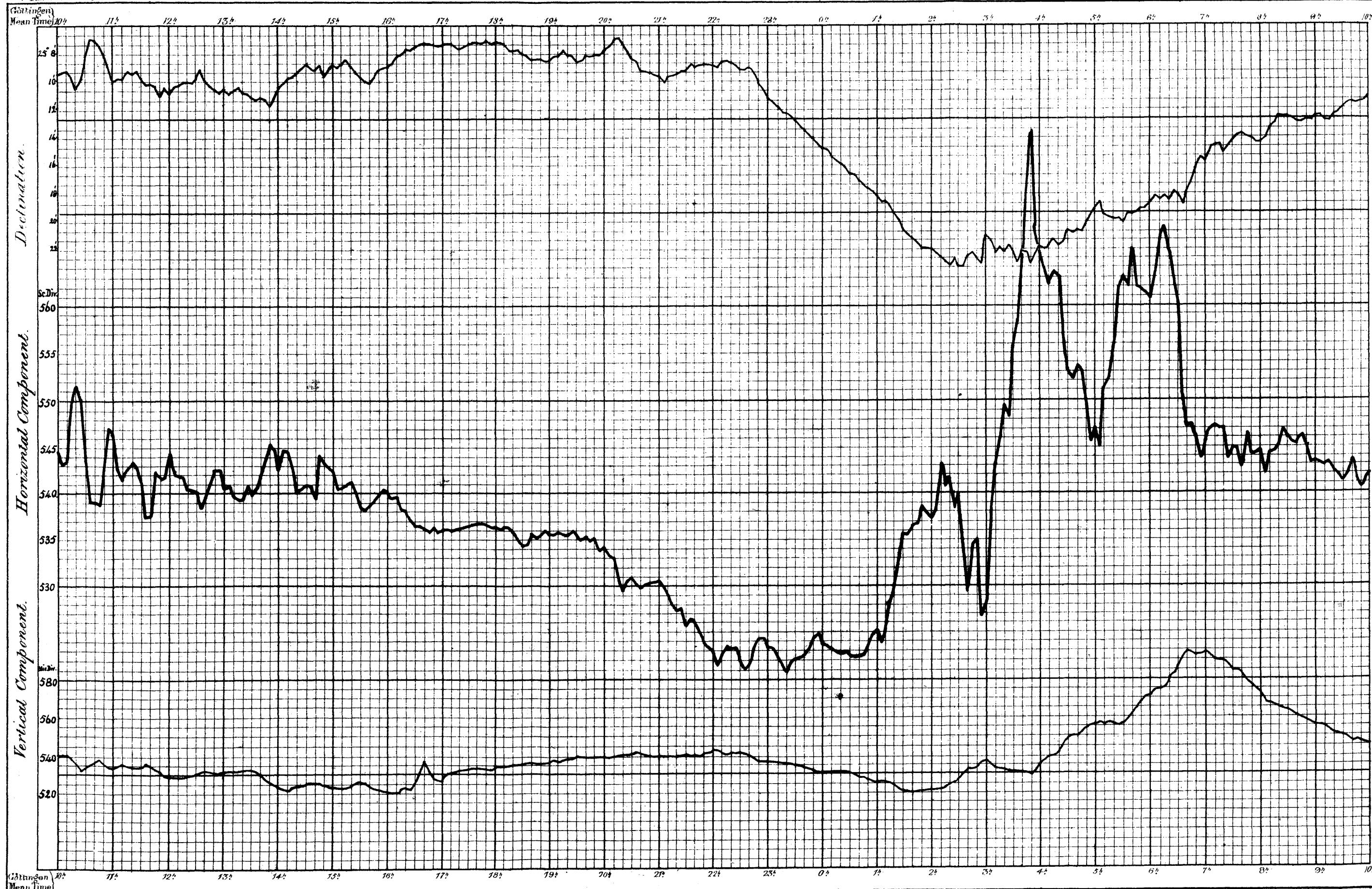


Ascending curves indicate decreasing westerly declination and increasing force.

Term-Day Magnetical Observations. April 23, 24, 1845.

Plate V.

Nukerstow Observations.

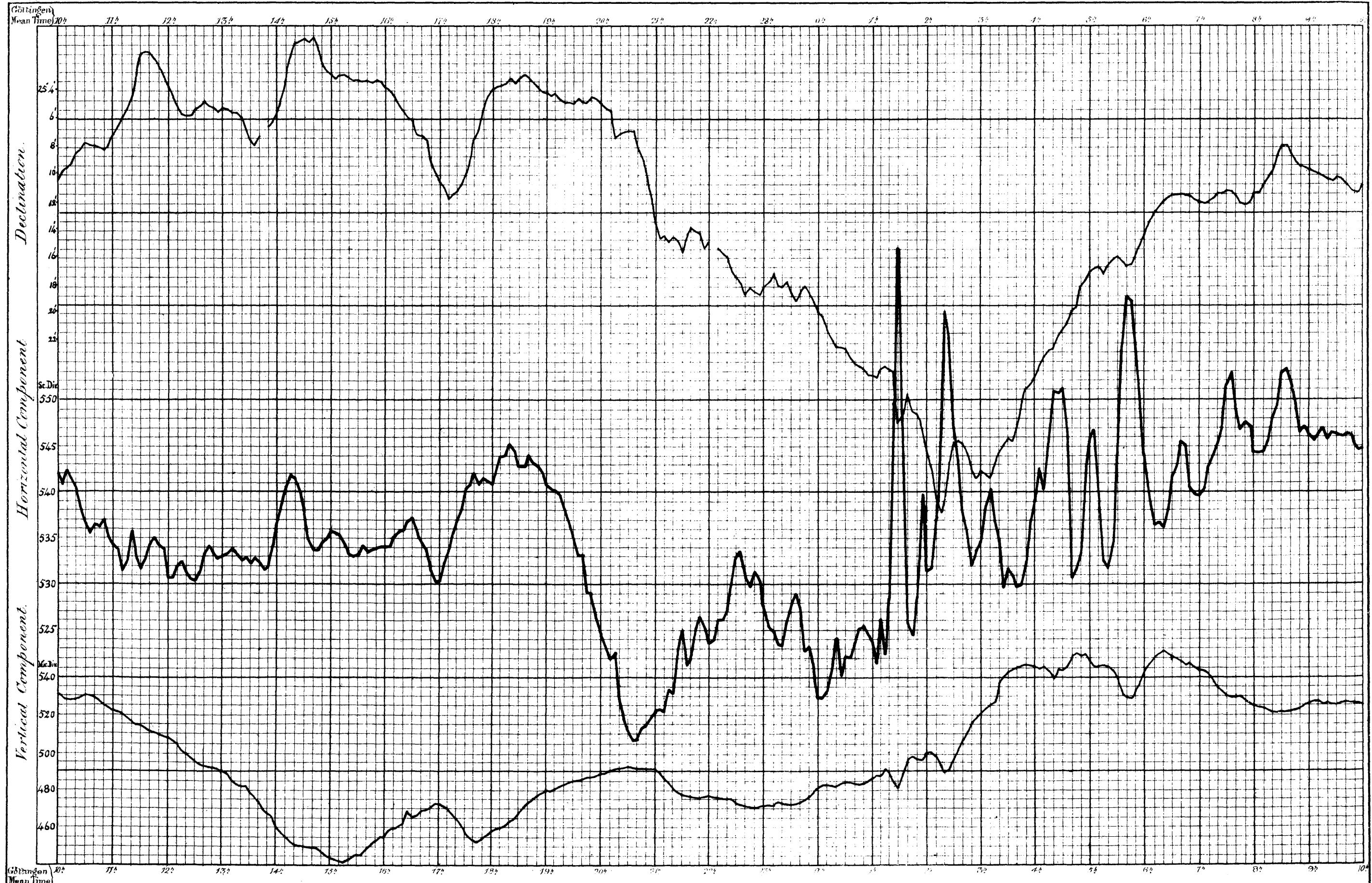


Ascending Curves indicate decreasing westerly declination and increasing force.

Term-Day Magnetic Observations. May 30, 31, 1845.

Plate VI.

Mukerstour. Observations.

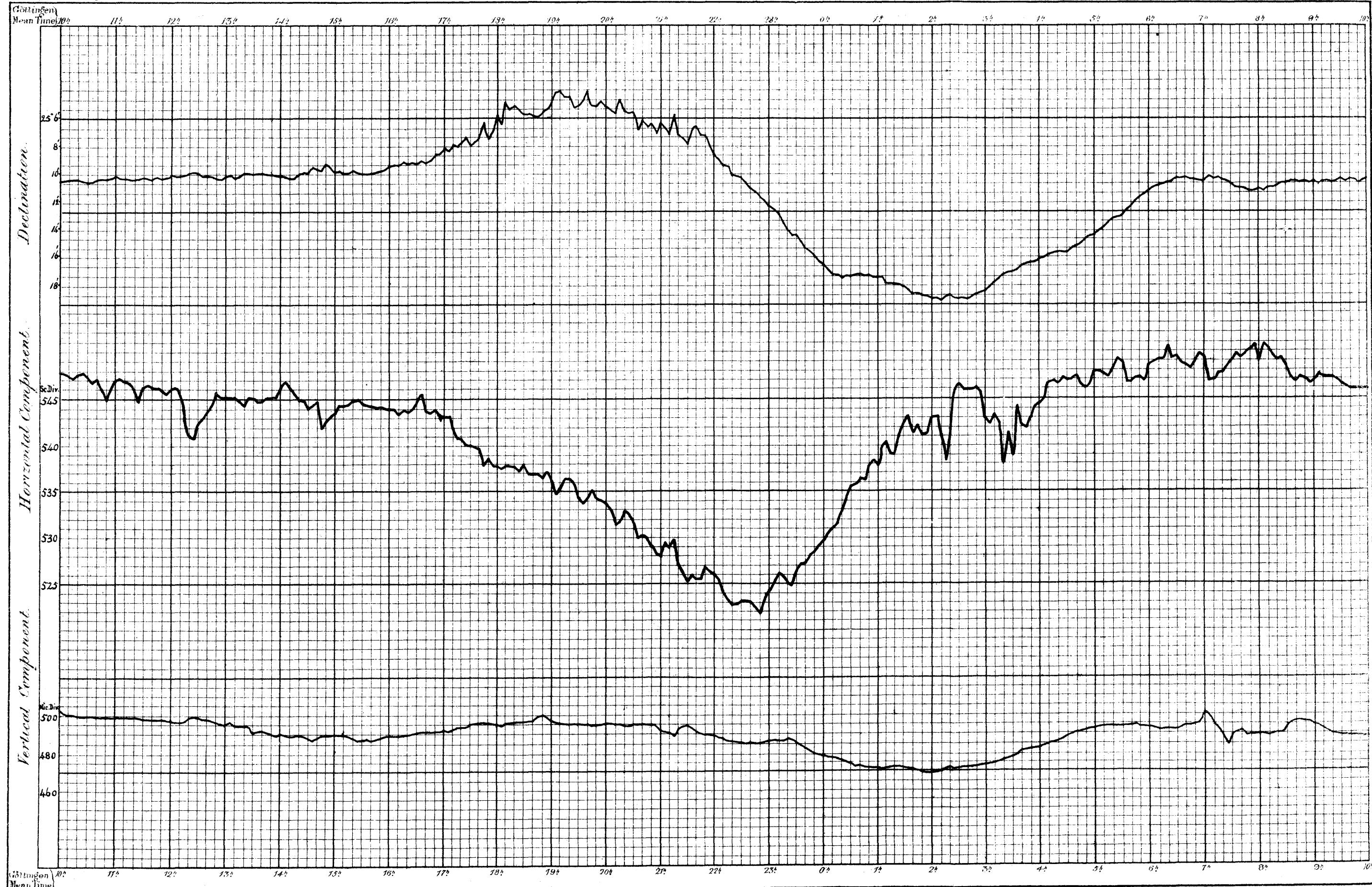


Ascending curves indicate decreasing westerly declination and increasing force.

Term-Day Magnetic Observations. June 18, 19, 1845.

Plate VII.

Makroscop. Observations.



Ascending Curves indicate decreasing westerly declination and increasing force.

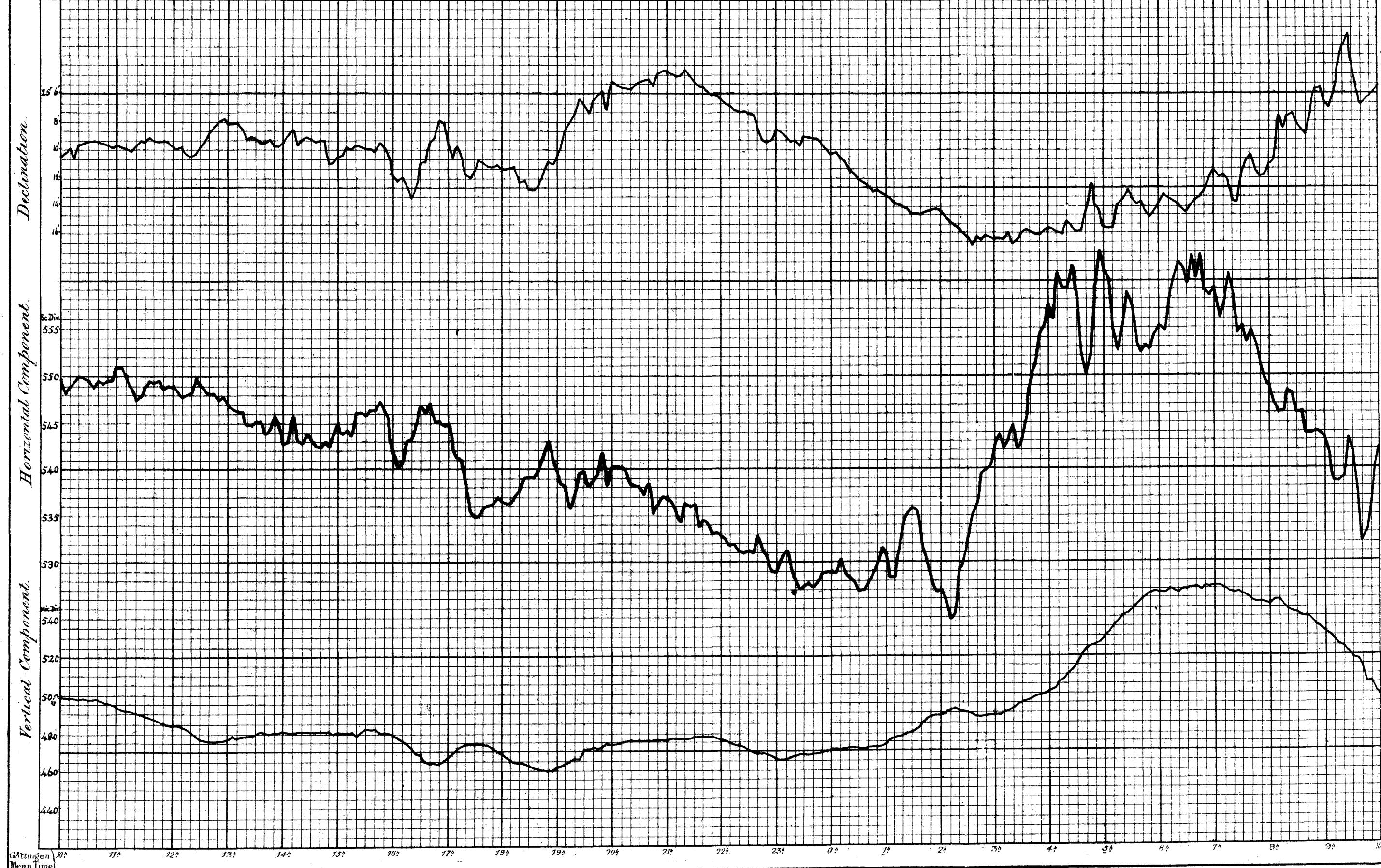
Term-Day Magnetic Observations July 23, 24, 1845.

Plate. VII.

Makrosturm Observations.

Göttingen

Mean Time

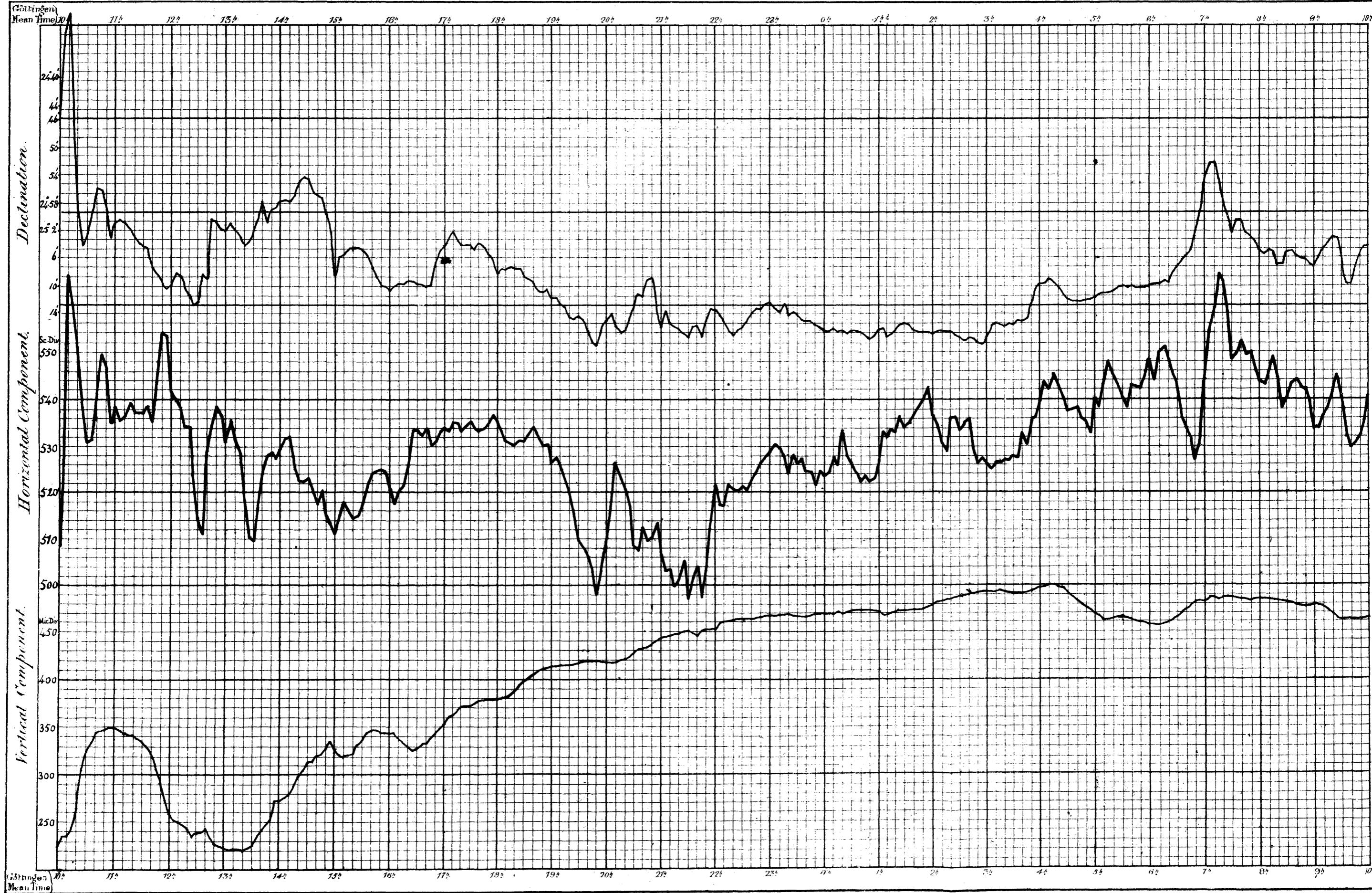


Ascending Curves indicate decreasing westerly declination and increasing force.

Term-Day Magnetical Observations August 29, 30, 1845.

Plate IX.

Nakarstoun Observations.



Ascending Curves indicate decreasing westerly declination and increasing force.

Term-Day Magnetical Observations. September 24, 25, 1845.

Plate X.

Wabersheim Observations.

Göttingen

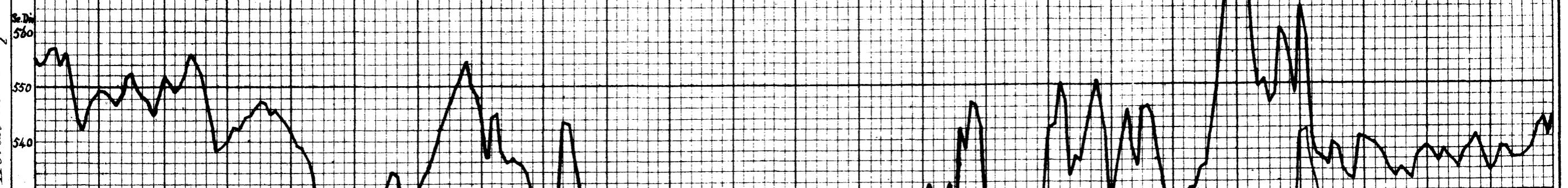
Mean Time

10^h 11^h 12^h 13^h 14^h 15^h 16^h 17^h 18^h 19^h 20^h 21^h 22^h 23^h 0^h 1^h 2^h 3^h 4^h 5^h 6^h 7^h 8^h 9^h 10^h

Declination.

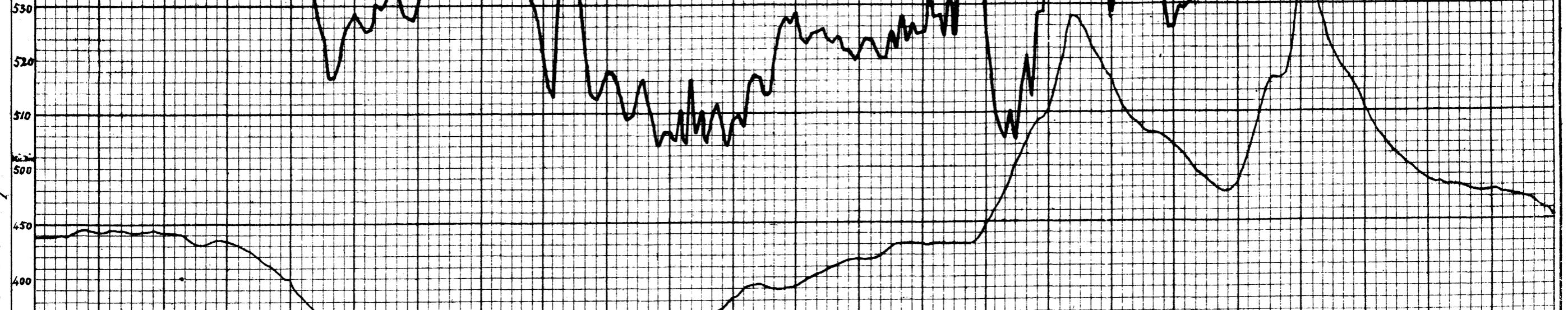


Horizontal Component.



Half the usual scale.

Vertical Component.



Göttingen

Mean Time

10^h 11^h 12^h 13^h 14^h 15^h 16^h 17^h 18^h 19^h 20^h 21^h 22^h 23^h 0^h 1^h 2^h 3^h 4^h 5^h 6^h 7^h 8^h 9^h 10^h

Ascending Curves indicate decreasing westerly declination and increasing force.

Term-Day Magnetical Observations October 22, 23: 1845.

Plate XI.

Nubierung. Observations:

Göttingen

Mean Time

10^h

11^h

12^h

13^h

14^h

15^h

16^h

17^h

18^h

19^h

20^h

21^h

22^h

23^h

0^h

1^h

2^h

3^h

4^h

5^h

6^h

7^h

8^h

9^h

10^h

Declination.

Horizontal Component.

Vertical Component.

Göttingen

Mean Time

10^h

11^h

12^h

13^h

14^h

15^h

16^h

17^h

18^h

19^h

20^h

21^h

22^h

0^h

1^h

2^h

3^h

4^h

5^h

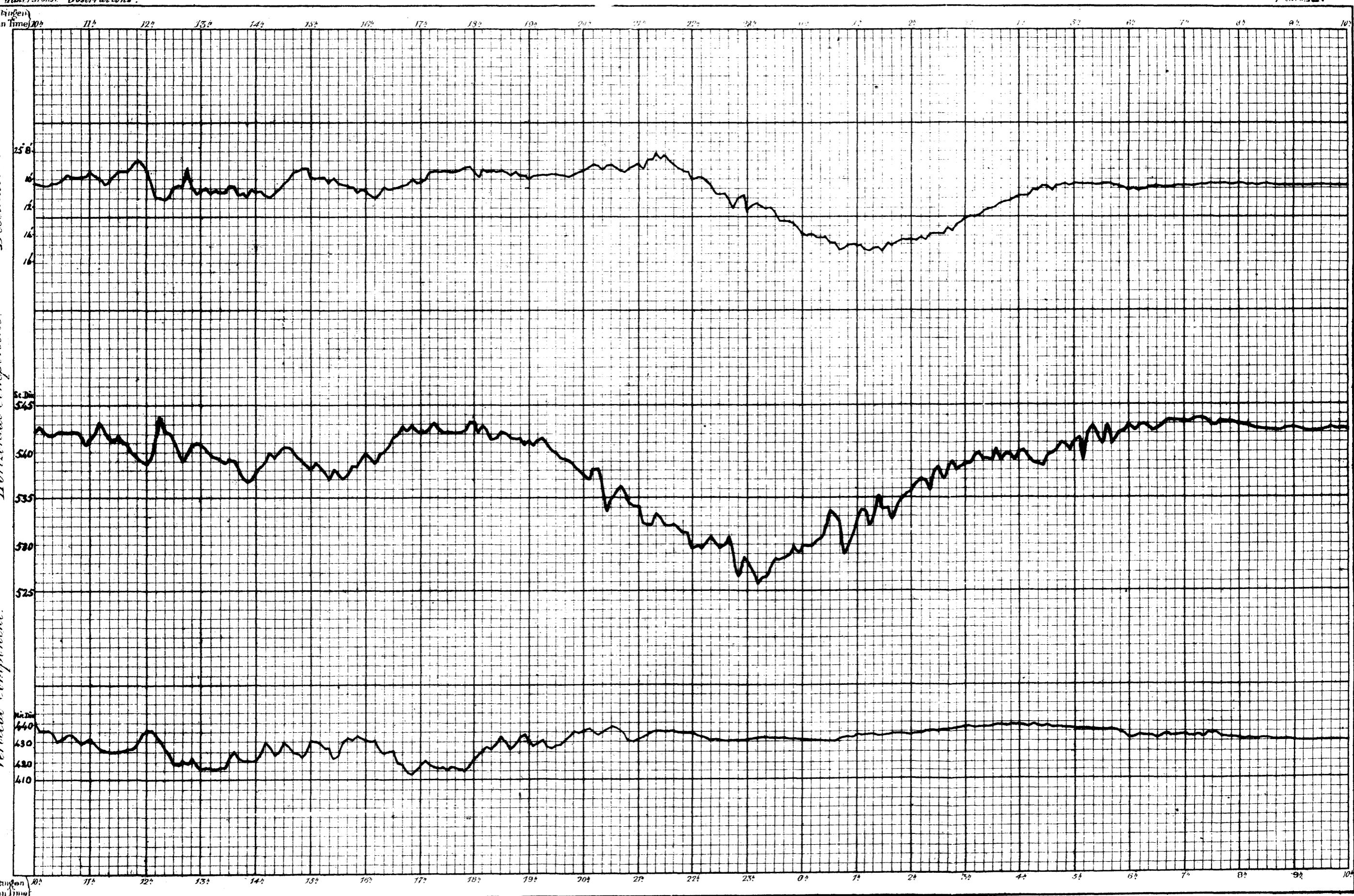
6^h

7^h

8^h

9^h

10^h



Ascending Curves indicate decreasing westerly declination and increasing force.

Term-Day Magnetical Observations. November 28, 29, 1845.

Plate XII.

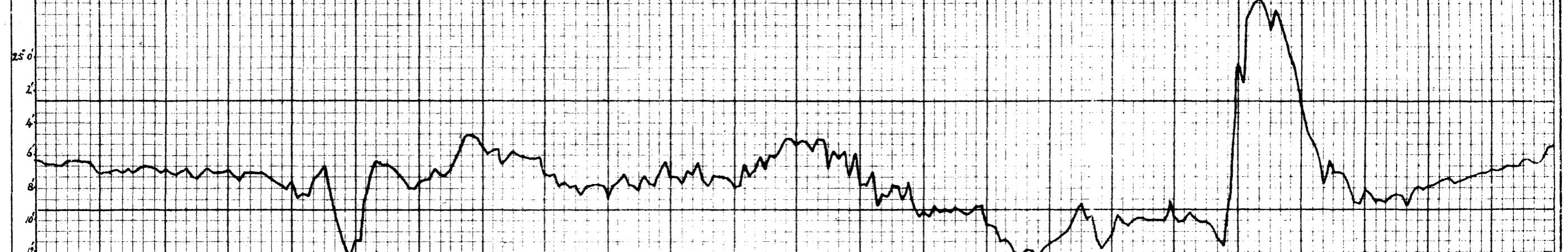
Mukershouw Observations.

Göttingen

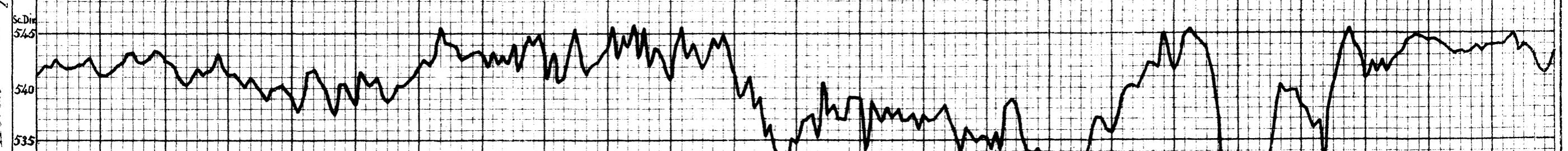
Mean Time

10^h 11^h 12^h 13^h 14^h 15^h 16^h 17^h 18^h 19^h 20^h 21^h 22^h 23^h 0^h 1^h 2^h 3^h 4^h 5^h 6^h 7^h 8^h 9^h 10^h

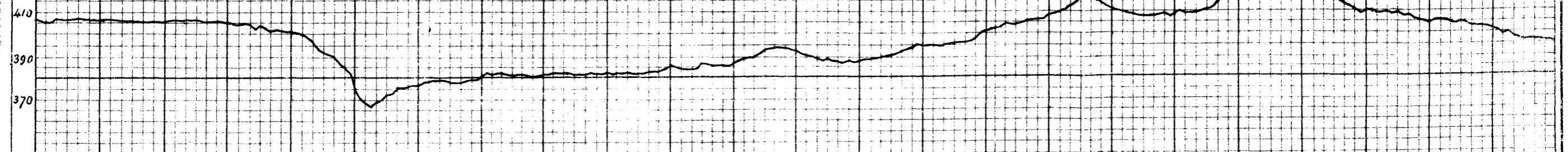
Declination.



Horizontal Component.



Vertical Component.

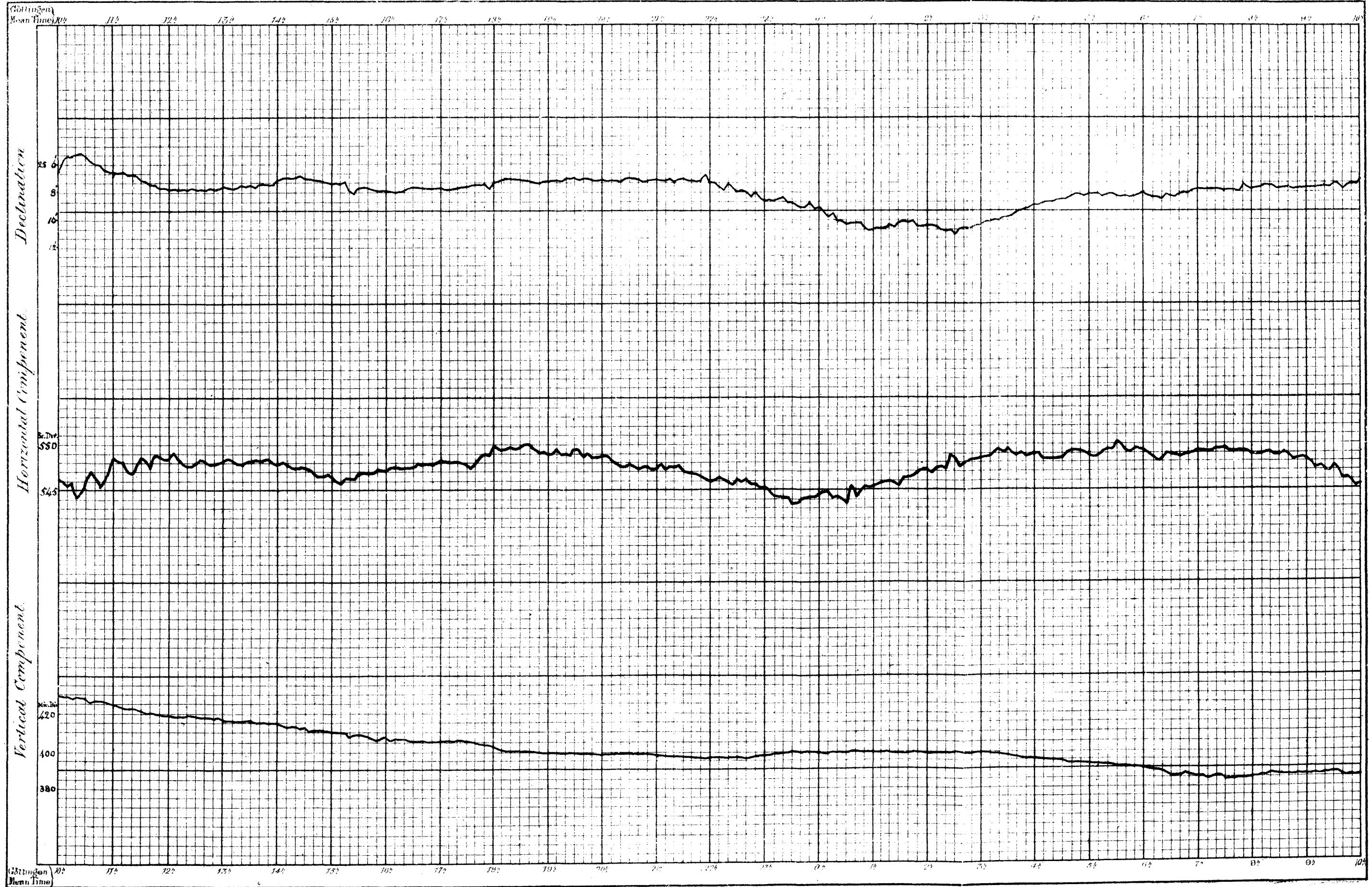


Ascending Curves indicate decreasing westerly declination and increasing force.

Term-Day Magnetical Observations December 24, 25: 1845.

Plate XIII.

Nickerstown Observations



Ascending Curves indicate decreasing westerly declination and increasing force.

