

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Ben Nevis Low Level, County of Inverness, in Lat. $56^{\circ} 49'$, Long. $5^{\circ} 7'$, Distance from Sea 0.03 miles.

Height of Cistern of the Barometer above Mean Sea-Level 42 feet, above Ground 4 feet.

During the MONTH of January 1881.

*The following observations are from the
Barometric observations in the
Cisterns in the fort.*

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.		SELF-REGISTERING THERMOMETERS.		HYGROMETER.		Rain.	WIND.		CLOUDS.		THERMOMETERS under Ground.		Temperature of WELL at depth of feet, No.	SEA.	OZONE.	GENERAL REMARKS.		Days of Month.					
		Reduced to 32°.		Read Daily, at P.M.		Dry No. 52950 Wet No. 52857			9 h. A.M. 9 h. P.M.		9 h. A.M. 9 h. P.M.		9 A.M. 9 P.M.						As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevailing Diseases, etc.						
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max. No. 689	Min. No. 689		9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	9 A.M.	9 P.M.	9 h. A.M.	9 P.M.	9 h. A.M.	9 P.M.	9 h. A.M.	9 P.M.					
		inches.	inches.	inches.	inches.	Max. 689	Min. 689	Max. 689	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.			
1	30-1-3	30-120	44.8	38.0	49.0	31.8	40.9	36.9	41.0	39.2	0.053	SE 0.5	Calm	-	Cum 810	Cum 810	-	-	-	-	-	-	-	1	
2	30-1-3	30-123	42.8	35.0	43.0	34.2	41.2	40.3	36.7	36.0	0.001	Calm	-	Calm	-	Cum 810	Sat 10	-	-	-	-	-	-	2	
3	30-0-85	39-978	42.8	34.0	46.2	7.5	36.2	35.7	35.1	37.5	0.133	Calm	-	Calm	-	SW Cum 810	Cum 810	-	-	-	-	-	-	3	
4	30-1-29	30-803	39.4	32.5	72.2	30.8	38.8	37.0	33.3	30.6	0.001	NE 1	NE 1	-	Nim 10	Cum 84	107	-	-	-	-	-	-	4	
5	30-3-89	30-508	39.3	30.3	72.1	26.7	34.1	31.9	31.9	30.8	0.000	NE 0	NE 1	-	NE Cum 89	Str 2	294	-	-	-	-	-	-	5	
6	30-3-86	30-432	32.0	23.0	42.2	18.4	27.8	27.0	31.1	30.1	0.010	NE 1	Calm	0	N Cum 89	Str 4	-	-	-	-	-	-	-	6	
7	30-2-41	29-951	37.9	29.2	70.2	35.4	35.7	33.7	34.9	32.0	0.004	Calm	0	S 1	SW Cum 810	Cum 810	335	-	-	-	-	-	-	7	
8	29-6-23	29-695	40.0	33.6	30.7	37.9	34.2	35.8	33.9	0.000	S 1	Calm	0	SW Cum 810	Cum 810	-	-	-	-	-	-	-	8		
9	29-9-94	30-205	37.0	27.0	58.8	23.0	28.9	27.9	36.8	34.7	0.000	Calm	0	SE 0.5	-	Str 1	Cum 89	288	-	-	-	-	-	9	
10	30-2-64	30-225	48.0	28.0	64.0	30.0	38.9	36.9	42.3	38.8	0.155	S 2	SW 3	-	SW Cum 810	Cum 810	0.29	-	-	-	-	-	-	10	
11	30-2-34	30-379	46.4	41.0	50.0	38.5	43.2	42.0	40.8	45.3	0.08	S E 2	SW 1	-	Nim 10	Nim 10	-	-	-	-	-	-	-	11	
12	30-5-12	30-682	51.0	46.2	50.0	44.6	46.2	46.0	47.0	46.0	0.066	S 1	S 0.5	-	Nim 10	Cum 810	-	-	-	-	-	-	-	12	
13	30-5-87	30-577	50.0	42.4	63.6	42.8	46.6	43.4	44.3	47.8	0.022	S 1	N 1	-	W Cum 810	Cum 810	-	-	-	-	-	-	-	13	
14	30-7-29	30-809	43.9	31.5	72.8	52.2	39.8	33.9	32.2	30.9	0.013	NW 0.5	E 0	-	N Cum 87	Cum 85	129	-	-	-	-	-	-	14	
15	30-8-62	30-816	45.0	32.5	66.8	28.8	41.0	38.9	42.2	38.8	0.010	SW 0.5	E 0.5	-	NW Cum 10	Cum 810	0.20	-	-	-	-	-	-	15	
16	30-2-65	30-289	41.3	34.7	52.7	2.0	37.4	36.8	36.5	35.3	0.001	E 0	E 0	-	NF Str 10	Cum 88	-	-	-	-	-	-	-	16	
17	30-3-65	30-392	41.3	31.8	8.0	2.0	38.2	31.2	33.2	30.5	0.000	E 0	SE 0.5	-	-	7	Cum 810	132	-	-	-	-	-	-	17
18	30-2-94	30-159	36.6	31.8	42.6	3.0	36.4	32.2	35.7	32.8	0.111	SSE 2	SSE 1	-	Cum 810	Cum 810	-	-	-	-	-	-	-	18	
19	30-0-87	29-764	45.0	33.0	53.8	3.0	37.2	36.8	41.9	40.6	1.941	SX 1	S 3	5	WS Cum 810	Nim 10	-	-	-	-	-	-	-	19	
20	29-1-15	29-046	46.7	29.8	62.2	4.0	44.8	42.8	50.0	29.0	0.226	SSW 2	SX 1	-	Nim 10	WS Cum 810	0.88	-	-	-	-	-	-	20	
21	29-2-84	29-124	48.0	22.7	63.2	3.0	25.0	24.6	33.8	33.6	0.230	SE 1	S 1	-	WS Cum 810	WS Cum 10	232	-	-	-	-	-	-	21	
22	29-2-87	29-477	38.4	28.8	84.3	2.0	36.0	32.6	24.7	20.8	0.322	SW 1	Calm 0	-	NW Cum 810	Cum 810	120	-	-	-	-	-	-	22	
23	28-9-91	29-105	46.9	24.9	69.0	42.5	41.8	41.3	38.2	0.630	S 2	S 1	-	SW Cum 810	Cum 810	0.23	-	-	-	-	-	-	23		
24	29-1-84	29-285	41.9	32.3	47.6	3.0	38.3	33.1	34.9	34.2	0.130	SW 0	WSW 0	-	Cum 810	W Cum 87	-	-	-	-	-	-	-	24	
25	29-6-75	29-575	46.9	31.9	49.9	40.0	36.6	45.7	44.7	47.7	1.061	SSE 1	S 2	-	W Cum 89	Nim 10	-	-	-	-	-	-	-	25	
26	29-5-10	29-329	49.3	42.5	49.1	48.9	42.0	46.8	46.8	46.8	1.229	S 2	S 2	-	SW Cum 10	Nim 10	-	-	-	-	-	-	-	26	
27	29-4-07	29-621	47.0	38.9	82.8	41.0	38.9	43.8	41.1	0.285	S 1	S 1	-	Nim 10	SW Cum 810	160	-	-	-	-	-	-	-	27	
28	29-4-83	29-594	48.0	38.7	60.6	39.9	56.3	64.9	44.5	42.8	0.202	S 1	SSE 1	-	Nim 10	Cum 85	-	-							

INSTRUCTIONS FOR TAKING METEOROLOGICAL OBSERVATIONS.

WITH REMARKS ON THE USE OF INSTRUMENTS.

One of the chief objects that the Scottish Meteorological Society proposed to itself when the Society was established in 1853, and the Dry and Wet Bulb Hygrometer, the framework of which are not likely to stand exposed to the weather, as shown in the past by repeated and annoying breakages of Thermometers of similar construction; and as regards the use of Thermometers, either Negretti and Zambra's or Phillips', it is necessary to justify the publication of Monthly Results from different Observers, it being found that differences between the fixed in the ground. The possess must be of such a length that whether they will sit at the highest temperatures they may be required to register. By the care of the Society, 2. Monders and Observers have a right to have instruments supplied by the Society at the same height of four feet above the ground, the Maximum Thermometer being hung immediately above the Minimum. Very great care should be bestowed on the Observations of the Wind. The Thermometer Box is to be placed over a plot of grass, and in a free open space to which the sun's rays have free access, attention to the day as surrounding conditions enable the Meteorological Bureau to have free access. The Thermometers are suspended on cross-bars in the Box, and each other, as regards their most important features.

As regards the columns of the Schedule, it is open to the Society to use the system of Compensation which the Society's Reports must inevitably fall in achieving one of the main objects of Meteorological Observation. The Council recommend that Observations be made precisely at 9 A.M. and 9 P.M. (Greenwich or Railways Time only), thus rendering it impossible to compare the Climates of Places with

Barometer, fitted for scientific purposes. No Barometer should be used for Meteorological Observation, that is not supplied with some means of adjustment or compensation which will secure the height of the mercury in the tube is accurately measured from the fluctuating surface of the mercury in the cistern. The Barometer in which the error arising from the fluctuating surface of the mercury in the cistern is entirely got rid of is FORTIN'S Barometer, the arrangement consisting of a screw to the bottom of the cistern, which is made of flexible leather, thus raising or depressing the surface till it meets the surface of the unbroken column of spirit. A few throws, or swinging strokes, will generally be sufficient for the purpose, after which the Thermometer is placed in a slanting position, to allow the rest of the spirit still falling to the bottom of the tube to drain down to the column. But another method must be adopted if the portion of spirit in the top of the tube is to be removed. This arrangement of the tube is not so much shorter as to compensate the height of the tube small. Hence should be applied slowly and cautiously to the top end of the tube the detached portion of spirit is can secure for a time. For the top end of the tube the detached portion of spirit till it unites with the rest of the tube, will condense on the glass jacket, and be easily set right by

Fortunately, Spirit Thermometers may be easily set right by Thermometers, Thermometers are graduated on the glass stem. The Thermometer is liable to two dangers—viz., the course of being established by the Society for the systematic investigation of the force of the wind to Barometric Wind. The Thermometer Box is to be placed over a plot of grass, and in a free open space to which the sun's rays have free access, discussion of many of the more important problems of the science.

A Wind-Vane ought to be elevated at least 12 feet above surrounding objects. When it oscillates incessantly, the wind is likely to give highly valuable and important results, particularly in connection with the system of thickly-planted Stations over a limited district round Edinburgh called STATION. The Remarks column is unreasonably too narrow, taken of the scale 0—5 is 4, or blowing fresh.

Too much importance cannot be attached to the electric condition of the atmosphere in connection with terrestrial magnetism, barometrical, thermometrical, and electrical meteorological phenomena generally. A proper observatory is in truth, necessary to every complete meteorological observatory. Careful observations are recommended to be made on the changes in the direction of the wind, and stirring of Granaries and other places connected with storms, extra observations at every hour of Greenwich time. Such a system of simultaneous observation, pursued at different Stations, is of occasional occurrence with protected Thermometers, but of

occasional occurrence with exposed Thermometers. Hence a system of observations, in connection with the Periodical Return of the Atmosphere, should be taken. In all cases, but especially when the Vane is stationary, and when the Wind is limited to a direction, with him regarding the purchase of instruments.

Wind, the accuracy of which, both as regards Direction and Force, is of the greatest importance. The accuracy of both the Wind and of the water being noted, Mention what Test-Papers are used, Schonlein's or Moffat's, etc.

The Paper is affixed by a pin to a board in the Thermometer Box, and the indications registered at 9 A.M. and 9 P.M. It is desired that these indications be registered in connection with the force and direction of the wind, at the time of the observation, in the following manner—thus 3^W, as an Ozone paper, when practicable, to be taken, both the depth of the water, and the depth of the wells. Wall and of the water being noted.

Mention what Test-Papers are used, Schonlein's or Moffat's, etc. The observations of the water at the bottom of the wells, and the indications registered at 9 A.M. and 9 P.M. It is desired that these indications be registered in connection with the force and direction of the wind, at the time of the observation, in the following manner—thus 3^W, as an Ozone paper, when practicable, to be taken, both the depth of the water, and the depth of the wells. Wall and of the water being noted.

Remarks, those for which the observations are not valuable.

1. As regards the mean direction should be taken. In all cases, but especially when the Vane is stationary, and when the Wind is limited to a direction, with him regarding the purchase of instruments.

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SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Fort William, County of Inverness, in Lat. $56^{\circ}49'$, Long. $5^{\circ}7'$, Distance from Sea 0.03 miles.

Height of Cistern of the Barometer above Mean Sea-Level 42 feet, above Ground 4 feet.

During the MONTH of February 1881.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	BAROMETER.		SELF-REGISTERING THERMOMETERS, Read Daily, at 9 P.M.				HYGROMETER.		Rain.	WIND.		CLOUDS.		THERMOMETERS under Ground.			GENERAL REMARKS.	Days of Month.						
	Reduced to 32°		Protected in Shade, 4 feet above Ground.				Exposed Black Bulb.			9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer.		9 h. A.M.		9 h. A.M.						
	9 h. A.M.	9 h. P.M.	Barometer.	Attached Thermometer.	Max.	Min.	Sun.	Grass.		Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	No. of hours in which it fell.	Amount in inches.	Direction.	Force.	Direction.	Force.	No. 8 inches.	No. 12 inches.	No. 22 inches.		
1	30.070	30.192	44.0	34.0	75.3	29.8	36.0	34.8	42.1	39.9	30.580	S	0.5	S	1.5	WSW Cum-89	-	Nim 10	0.7				1	
2	30.145	30.181	49.8	40.3	56.2	39.4	46.0	45.8	49.1	48.1	21.54	S	2	SSE	2	-	Nim 10	-	Nim 10	-				2
3	30.124	30.429	50.0	42.8	58.3	45.6	46.9	46.2	44.1	43.0	0.206	S	2	Calm	0	-	Nim 10	-	Cum 810	-				3
4	30.585	30.542	47.5	42.0	57.2	39.8	44.4	43.8	45.6	45.5	2.054	SSW	0	S	1.5	-	St 10	-	Cum 83	0.4				4
5	30.518	30.494	47.1	42.3	51.9	38.0	44.0	43.8	45.1	45.0	0.184	SSW	1	SSW	0	-	Nim 10	-	Nim 10	-				5
6	30.484	30.183	48.4	42.4	58.3	41.2	45.8	44.0	43.5	42.7	0.017	S	1	S	0.5	-	St 10	-	Nim 10	0.8				6
7	30.314	30.175	46.0	41.8	58.7	41.8	49.3	42.6	44.5	43.7	0.210	S	1	SW	1	-	Nim 10	-	Nim 10	-				7
8	30.198	30.414	46.8	34.0	58.9	29.8	48.8	32.8	40.1	38.0	0.022	SE	0.5	SE	0.5	-	St 1	-	Cum 89	3.2				8
9	30.280	30.163	42.9	37.3	62.7	36.1	40.1	37.7	39.4	36.5	0.009	SX	2.5	S	1	SW Cum-56	-	Cum 810	3.6				9	
10	30.059	29.850	44.0	41.0	54.8	37.7	41.1	40.0	43.6	42.8	1.738	S	2	S	2	-	Nim 10	-	Nim 10	-				10
11	29.752	29.887	50.2	36.3	51.3	42.8	47.8	47.2	38.0	36.0	0.725	S	2.5	N	0.5	-	Nim 10	-	Cum 88	-	W 8pm			11
12	30.220	30.309	48.8	32.8	83.8	29.8	36.1	34.4	41.1	37.0	0.017	W	0.5	SW	0.5	-	Nim 10	-	Cum 85	4.1				12
13	30.489	30.417	42.0	32.0	51.6	28.1	33.7	31.8	39.3	38.9	0.063	Calm	0	S	1	-	Cir-C 10	-	Nim 10	-				13
14	30.397	30.440	49.7	39.5	71.6	37.5	46.7	44.9	44.2	43.4	0.012	SW	0	SSW	1	WSW Cum-510	N	Nim 10	0.1				14	
15	30.413	30.349	49.0	40.1	90.8	42.9	45.6	44.7	42.5	40.0	0.005	S	0.5	S	1	SW Cum-510	N	Nim 10	5.5				15	
16	30.439	30.522	47.0	40.8	60.2	37.0	44.0	42.9	44.6	43.7	0.004	SW	0.5	SW	0	WSW Cum-510	-	Cum 810	-				16	
17	30.537	30.517	46.8	43.2	57.9	41.0	44.8	43.5	44.1	42.1	0.000	SSW	0	SW	0.5	SW Cum 10	WSW Cum 510	-	-				17	
18	30.530	30.545	45.6	37.9	60.2	41.5	48.0	42.8	49.2	47.8	0.205	SW	1	SW	0	SW Cum 510	none	0.1					18	
19	30.485	30.352	30.0	30.1	94.7	25.1	32.8	32.0	41.7	38.2	0.000	Calm	0	Calm	0	none	none	7.2					19	
20	30.314	30.244	52.8	30.0	88.6	25.0	38.0	31.1	36.1	33.9	0.000	Calm	0	Calm	0	S Cum 2	none	7.0					20	
21	30.232	30.183	44.2	31.2	71.8	24.6	44.2	31.2	40.3	37.4	0.033	Calm	0	S	0	-	Cum 8	-	St 10	0.6				21
22	30.083	30.162	51.2	30.1	52.1	29.1	48.7	48.8	50.9	46.9	0.253	S	0	S	1	SSW Cum 810	-	SW Cum 810	-				22	
23	30.294	30.239	54.0	47.1	79.0	43.3	49.8	43.0	49.8	43.9	-	SW	1	SSW	0.5	SW Cum 9	SW Cum 4	0.1					23	
24	30.302	30.203	56.2	44.0	95.2	30.8	45.7	42.3	46.5	43.9	-	S	0	SSE	0.5	-	St 4	-	Cum 7	5.4	Haze in morning		24	
25	30.026	29.947	52.9	41.9	87.8	36.2	44.4	40.2	43.1	39.9	-	S	1	SSW	0	none	-	Cum 2	6.0	" "		25		
26	29.874	29.893	56.0	35.6	89.8	31.1	38.7	36.7	39.8	36.3	-	Calm	0	SSE	0.5	-	Cum 2	none	6.8	Haze at night		26		
27	30.147	30.175	45.8	28.8	67.9	23.2	31.1	29.8	37.9	36.1	-	Calm	0	S	0	none	none	4.4	Haze all day		27			
28	29.911	29.842	48.3	37.2	47.2	43.7	40.1	46.1	44.6	42.6	1.095	SSW	1	SSW	1	-	Cum 10	WSW Cum 8	-	Stormy - Wind from Ramblund in morning.		28		
29																							29	
30																							30	
31																							31	

NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
cl.	cirrus.	ms.	meteors.
cl.-cn.	cirro-cumulus.	mb.	mbus.
cl.-cu.	cirro-stratus.	r.	rain.
cu.			

THE METEOROLOGICAL OBSERVATIONS FOR TAKING

ONE of the chief objects that the SCOTTISH METEOROLOGICAL SOCIETY proposed to itself when the Society was established in 1855, was to secure **PERFECT UNIFORMITY** in the system of observation pursued at all its Stations. Uniformity in the observations is absolutely necessary to justify the publication of Monthly Results from different observations, it being found that differences between the Returns from two Stations, so very considerable as to render them quite incomparable, may arise from dissimilarity in the position or shelter of instruments, different hours of observation, or even from the use of differently constructed instruments. It is therefore hoped, that those who kindly furnish Reports to the Society will, by a scrupulous attention to the following Directions, secure for their Monthly Returns an accuracy and value commensurate with the labour and pains involved in making them; and, for the Tables published by the Society, an entire comparableness among the several Returns, without which the Society's Reports must inevitably fail in achieving one of the main objects of Meteorological Observation.

WITH REMARKS ON THE USE OF INSTRUMENTS.

The Council recommend that Observations be made precisely at 9 A.M. and 9 P.M. (Greenwich or Railway Time only), as specified in the following remarks, or at the top of the columns of the Schedule. It is hoped that the utmost punctuality in the time of reading the instruments will be observed. Observers, in some few cases, may find this impossible; in such instances, they are specially requested to mark opposite every reading the time at which it was taken, if not at 9 A.M. or 9 P.M. Weather-Glasses and Aeroids, though well suited to indicate roughly variations of atmospheric pressure, are not fitted for scientific purposes. No Barometer should be used for Meteorological Observation that is not supplied with some means of adjustment or compensation which will secure that the height of the mercury in the tube is accurately measured from the fluctuating surface of the mercury in the cistern.

The Barometer in which the error arising from the fluctuating surface of the mercury in the cistern is entirely got rid of is FORBIN'S Barometer, the arrangement consisting in applying pressure by means of a bellows of the cistern, which is made of flexible

Observations made at different Stations are incomparable, in well-exposed situations. Careful observations are recommended to compare the Climates of places with each other as regards their most important features.

Professor Phillips, and Negretti and Zambra's Maximum Thermometers, and Rutherford's Minimum Thermometer, Registering Thermometers. It is recommended that these Thermometers be graduated on the glass stem. The Minimum Thermometer is liable to two derangements—viz., the ann of spirit breaking, and part of the spirit distilling by high temperature and lodging at the top of the tube. This derangement of occasional occurrence with protected Thermometers, but of frequent occurrence with exposed Thermometers. Hence a systematic examination of Minimum Thermometers ought to be a regular part of the work carried on by each Observer.

Fortunately, Spirit Thermometers may be easily set right by one, when the column of spirit chances to separate. Let the Thermometer be taken in the hand by the end farthest from the bulb, raised above the head, and then forcibly swung down towards the feet: the object being, on the principle of centrifugal force, to

scale 0—5 is 4, or blowing fresh.

Too much importance cannot be attached to the electric condensation of the atmosphere in connection with terrestrial magnetism, barometrical, thermometrical, and meteorological phenomena generally. A proper Electrometer is, in truth, necessary to every complete meteorological observatory.

The Remarks column is unavoidably too narrow. Some of the most valuable Observations that can be taken are assigned. The use of contractions ought, therefore, to be taken every advantage of, and a list of such as are in general use is given at the foot of the column. Besides special and extraordinary Observations, great prominence ought to be given in this column to prevalent Diseases, differences in character, colour, velocity, and direction between the Lower and Upper Strata of clouds, the Colour of the Sky, etc. Remarks ought to be made on the occurrence of Meteors, Aurora Boreales, remarkable depressions, elevations, and fluctuations

Remarks.—A self-registering instrument which shows the amount of Wind that passes it per day; from which also the mean Velocity of the Wind at the time of observation may be ascertained. For indicating the Force of the Wind at any particular hour of observation, the Pressure Anemometers recently brought under the notice of the Society by Mr. T. Stevenson, the Honorary Secretary, and Mr. R. Ballingall, the Society's Observer at Eallaibus, are recommended as likely to secure

of the Barometer, Thunder-Storms, and remarkable falls of Snow, Hail, or Rain, the Hour of Storms of Wind commencing, attaining their maximum, and ending, as well as such Notes on Storms as have been hinted at above. When lofty hills are in the vicinity of a Station, the Height of Clouds and of the Snow-line in winter should be recorded. By the use of abbreviations, the state of the weather at 9 A.M. and 9 P.M. should be registered, either in two columns, otherwise uncopied, or ruled off for the purpose, from the column of 'Remarks'. Observations in connection with the Periodic Return of the Seasons, possess not only great scientific value, but connection with are of considerable importance in connection with the Periodic Return of Agriculture, Horticulture, and Natural History. The Council would direct the special attention of Observers to the registration of such phenomena, so that the published Summaries may fairly represent the whole of Scotland. Observations ought to be confined to individual trees and shrubs; to particular species of birds, and, in the case of crops, to specified sorts reared from year to year on a selected piece of ground or farm. The Annual Table, published yearly in the Society's Journal, will indicate the species of plants and animals to which special attention is more particularly directed. The Council recommend Observers, before purchasing new instruments, and in repairing old ones, to communicate with the Meteorological Secretary, in order that every instrument may be examined and improved before being used; and they consider it necessary that he should have full power to reject any instrument which, on being presented for comparison, does not afford him satisfaction.

A. B.
(By Order)

Rain Gauges. perfectly unobjectionable situation for observation, arising partly from the difficulty of obtaining a level piece of ground, in as open a situation as the Observer can secure for it. As it is often difficult to obtain a position and partly from the defective nature of the instruments used. The Rain Gauge should not be placed on a slope or terrace, but on a level piece of ground, and the tube be small. Heat should be applied slowly and cautiously to the top end of the tube where the detached portion of spirit is, as free and unobstructed by surrounding objects as is desirable, being turned into vapour by the heat, will condense on the surface of the unbroken column of spirit. Care must be taken that heat is not applied too quickly; for, if this be done, the tube will break and the instrument be destroyed. The best way to apply the requisite amount of heat is by bringing the end of the tube at hand, a piece of heated metal will serve instead.

The bulbs of the Thermometers for registering the greatest heat from the sun's rays, and the least from radiation during night, have a black coating, which may easily be made, or mended, by the application of a mixture of lampblack and printer's ink. They are placed in shallow blackened boxes, whose sides protect the bulbs from the wind and the sun's heat.

Black-Bulb Thermometers. The Maximum should be freely exposed to the sun, and the Minimum should rest on wooden supports a few inches from the surface of the grass, in an open situation. Snow must not be allowed to cover either of these Thermometers; nor the sun's heat to affect the Minimum Thermometer by distillation.

Black-bulbs enclosed in 'glass jackets' may also be used, being indeed preferable to the observation of Solar and Terrestrial Radiation is not yet in a sufficient state of development to afford a recommendation of the same.

Snow-falls. shower occurs, it should be noted in the 'Remarks', and the letter S affixed to the depth of water received in Gauge.

EDINBURGH, December 1881.

To the SECRETARY

Scottish Meteorological Society,

122 George Street.

EDINBURGH.

BOOK POST.



Have the Goodness also to state any information you may be able to collect relative to the Crops of Gram, Hay, Potatoes, Turnips, Fruits, etc., whether plentiful, or in preference; whether any have suffered from blight, disease, etc. Whether epidemic disease prevails among cattle; and the Agricultural condition of the district generally.

daily Maxima and Minima by Thermometers continuously immersed, to be instituted at points along the coast, by the method proposed by Mr. T. Stevenson, and already commenced at Peterhead and Liverpool. The Temperature of the water at the bottom of Wells ought when practicable, to be taken, both the depth of the wells. Well and of the water being noted. Mention what Test-Papers are used, Schölein's or Moffat's, etc. The Paper is affixed by a pin to a board in the Thermometer Box and the indications registered at 9 A.M. Ozone.

and 9 P.M. It is desired that these indications be registered in connection with the force and direction of the wind at the time of observation, in the following manner:—thus $3\frac{3}{4}$ N.W., as an Ozone entry in the schedule will indicate that the Ozone paper is tinted as $\frac{3}{4}$ on the scale, that the wind is from the N.W., and that its force on the scale 0—5 is 4, or blowing fresh.

Too much importance cannot be attached to the electric condition of the atmosphere in connection with terrestrial magnetism, barometrical, thermometrical, and meteorological phenomena generally. A proper Electrometer is, in truth, necessary to every complete meteorological observatory.

The Remarks column is unavoidably too narrow. Some of the

Remarks. Observations that can be taken are most valuable, those for which no rules can be given nor hours assigned. The use of contractions ought, therefore, to be taken every advantage of, and a list of such as are in general use is given at the foot of the column. Besides special and extraordinary Observations, great prominence ought to be given in this column to Prevalent Diseases, differences in character, colour, velocity, and direction between the Lower and Upper Strata of clouds, the Colour of the Sky, etc. Remarks ought to be made on the occurrence of Meteors, Aurora Boreales, remarkable depressions, elevations, and fluctuations

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is more particularly interested. The Council recommend Observers, before purchasing new instruments, and in repairing old ones, to communicate with the Meteorological Secretary, in order that every instrument may be examined and improved before being used; and they consider it necessary that he should have full power to reject any instrument which, on being presented for comparison, does not afford him satisfaction.

First Cut
For Raised.

CHOPS,	mentioning variety	seed of
Barley,	Bere or Biggs	
Oats,	Wheat,	
Beans,	Pease,	
Barley,	Potatoes,	
Wheat,	Turnips,	
Pease,	Thistles,	
Beans,	Grass,	

INVESTMENT IN THE FUTURE		INVESTMENT IN THE PAST	
INVESTMENT IN THE FUTURE	INVESTMENT IN THE PAST	INVESTMENT IN THE PAST	INVESTMENT IN THE FUTURE
1. <i>Divest</i>	2. <i>Leave</i>	3. <i>Stay</i>	4. <i>Appear</i>
5. <i>Buds</i>	6. <i>Leaves</i>	7. <i>Flowers</i>	8. <i>Fruits</i>
9. <i>Leaves</i>	10. <i>Flowers</i>	11. <i>Leaves</i>	12. <i>Leaves</i>
13. <i>Leaves</i>	14. <i>Leaves</i>	15. <i>Leaves</i>	16. <i>Leaves</i>
17. <i>Leaves</i>	18. <i>Leaves</i>	19. <i>Leaves</i>	20. <i>Leaves</i>
21. <i>Leaves</i>	22. <i>Leaves</i>	23. <i>Leaves</i>	24. <i>Leaves</i>
25. <i>Leaves</i>	26. <i>Leaves</i>	27. <i>Leaves</i>	28. <i>Leaves</i>
29. <i>Leaves</i>	30. <i>Leaves</i>	31. <i>Leaves</i>	32. <i>Leaves</i>
33. <i>Leaves</i>	34. <i>Leaves</i>	35. <i>Leaves</i>	36. <i>Leaves</i>
37. <i>Leaves</i>	38. <i>Leaves</i>	39. <i>Leaves</i>	40. <i>Leaves</i>
41. <i>Leaves</i>	42. <i>Leaves</i>	43. <i>Leaves</i>	44. <i>Leaves</i>
45. <i>Leaves</i>	46. <i>Leaves</i>	47. <i>Leaves</i>	48. <i>Leaves</i>
49. <i>Leaves</i>	50. <i>Leaves</i>	51. <i>Leaves</i>	52. <i>Leaves</i>
53. <i>Leaves</i>	54. <i>Leaves</i>	55. <i>Leaves</i>	56. <i>Leaves</i>
57. <i>Leaves</i>	58. <i>Leaves</i>	59. <i>Leaves</i>	60. <i>Leaves</i>
61. <i>Leaves</i>	62. <i>Leaves</i>	63. <i>Leaves</i>	64. <i>Leaves</i>
65. <i>Leaves</i>	66. <i>Leaves</i>	67. <i>Leaves</i>	68. <i>Leaves</i>
69. <i>Leaves</i>	70. <i>Leaves</i>	71. <i>Leaves</i>	72. <i>Leaves</i>
73. <i>Leaves</i>	74. <i>Leaves</i>	75. <i>Leaves</i>	76. <i>Leaves</i>
77. <i>Leaves</i>	78. <i>Leaves</i>	79. <i>Leaves</i>	80. <i>Leaves</i>
81. <i>Leaves</i>	82. <i>Leaves</i>	83. <i>Leaves</i>	84. <i>Leaves</i>
85. <i>Leaves</i>	86. <i>Leaves</i>	87. <i>Leaves</i>	88. <i>Leaves</i>
89. <i>Leaves</i>	90. <i>Leaves</i>	91. <i>Leaves</i>	92. <i>Leaves</i>
93. <i>Leaves</i>	94. <i>Leaves</i>	95. <i>Leaves</i>	96. <i>Leaves</i>
97. <i>Leaves</i>	98. <i>Leaves</i>	99. <i>Leaves</i>	100. <i>Leaves</i>

FOREST TREES		OBSERVATION
Alder,		
Ash,		
Beech,		
Birch,		
Elm,		
Larch,		
Lime,		
Oak,		
Seamore or P.		

OBSERVATIONS IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Fort William, County of Inverness, in Lat. $56^{\circ}49'$, Long. $5^{\circ}7'$ W. Distance from Sea 003 miles.

Height of Cistern of the Barometer above Mean Sea-Level 42 feet, above Ground 4 feet.

During the MONTH of March 1891.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.		SELF-REGISTERING THERMOMETERS, Read Daily, at 9 P.M.				HYGROMETER, Corrected for Index error, Dry Bulb, Wet Bulb.				Rain.	WIND.				CLOUDS.		THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS.		Days of Month.									
		Reduced to 32°		9 h. A.M.	9 h. P.M.	Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.	9 h. P.M.		Readings of the H. Cup Anemometer.		9 h. A.M.	9 h. P.M.	Velocity (0-10) and Direction.		Amount (0-10) and Species.	9 h. A.M.	SUNSHINE.	9 h. A.M.	9 h. P.M.	As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.											
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max.	Min.	Max. in Sun.	Min. in Sun.	Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Direction.	Force.	Direction.	Force.	9 h. A.M.	Hours.	No. 8 inches.	No. 12 inches.	No. 22 inches.	9 A.M.	9 P.M.	9 A.M.	9 P.M.						
		inches.	inches.	inches.	inches.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°		
1	9.848	9.685	54.8425	73.3430	47.9469	51.7499	0.200	SW	0.5	SW	1	W.W. Cum. 9-10mm	10.0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
2	9.740	9.729	52.0365	92.6362	32.2384	57.1358	0.227	SW	0.5	SW	2.0	SW Cum 9-10mm	10.1	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9			
3	9.949	9.123	43.1308	66.8309	38.7341	40.9369	0.432	W	1	W	1	N.W. Cum 6-7mm	10.2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
4	9.817	9.892	53.0374	60.8361	49.740	43.2391	0.622	SW	1.5	NNW	1.5	- Cum 10-12mm	9.0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7			
5	9.852	9.651	47.0392	51.9385	42.7410	46.1438	1.016	SW	0.5	N.W.	1	Nim 10-12mm	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
6	9.609	9.597	46.0329	97.8329	53.8735	48.8348	0.077	SW	1	SW	0.5	N.W. Cum 9-10mm	8.4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
7	9.634	9.718	36.0233	100.2240	28.226	22.9229	0.000	N	0.5	N	0.5	- Cir. 1	None	7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
8	9.778	9.858	35.9200	104.9145	26.8256	23.9220	0.000	N	1	S	0.5	None	None	8.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
9	9.938	9.810	38.9172	93.9108	21.1207	20.7205	0.000	Calm	Calm	Calm	Calm	- Cir. 2	None	7.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
10	9.673	9.604	36.9283	96.0130	28.7219	28.7260	0.000	Cal.	0.5	Cal.	0.5	- Cir. 1	None	2.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
11	9.518	9.677	39.0225	16.018.0	31.229.9	29.928.9	0.000	NNE	1.0	Cal.	0.5	None	None	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
12	9.748	9.816	44.318.2	52.712.6	28.521.8	31.928.4	0.000	N	0.5	N	0.5	None	None	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
13	9.913	9.932	44.011.0	96.913.5	25.323.9	36.131.8	0.000	Cal.	SE	0.5	None	None	9.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
14	9.831	9.629	44.431.2	102.327.6	37.031.0	37.832.9	0.028	SSE	1	SW	1	- Cir. 8 N.W. Cum 14	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
15	9.163	9.118	40.936.0	64.834.5	38.835.4	39.036.9	0.058	SSE	1	NNE	0.5	- Nim 10-12mm	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
16	9.566	9.752	43.037.9	96.538.8	39.135.3	39.334.8	0.021	NNE	1.5	NE	1.5	- Cum 8.10 N.E. Cum 8	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
17	9.866	9.010	44.037.6	96.134.8	38.936.1	41.337.6	0.000	NNE	0.5	NE	1	- Nim 10 ENE Cum 3	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
18	0.110	0.034	45.033.3	98.529.2	29.237.8	35.240.1	0.01	SW	1	N.E.	1	ENE Cum 10-12mm	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
19	0.035	9.893	46.231.2	106.627.5	27.538.0	34.140.7	0.005	Calm	W	1	Calm	3	W.N.W. Cum 10	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
20	9.929	0.002	45.233.6	112.232.9	29.40.8	37.135.7	0.000	NNE	1	Cal.	0.5	NE Cum 8-Cum 1	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
21	9.954	9.967	51.129.2	107.923.0	38.835.8	35.935.9	0.000	SW	0	N	0.5	N Cum 10 NNE Cum 10	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9.969	9.899	48.733.1	68.030.8	36.233.1	39.739.7	0.030	NE	0.5	SSE	0.5	- Cir. 9-10mm	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9.753	9.082	40.537.3	92.216.3	36.340.9	40.038.9</																													

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Fort William, County of Inverness, in Lat. $56^{\circ}49'$, Long. $5^{\circ}7'W$. Distance from Sea 0.03 miles.

Height of Cistern of the Barometer above Mean Sea-Level 42 feet, above Ground 4 feet.

During the MONTH of April 1891.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.		SELF-REGISTERING THERMOMETERS, Read Daily, at 9 P.M.		HYGROMETER		Rain.	WIND.	CLOUDS.		THERMOMETERS under Ground.			GENERAL REMARKS.	DAYS OF MONTH.		
		Reduced to 32°		Protected in Shade 4 feet above Ground.		Exposed Black Bulbs.		No. of hours in which it fell.	9 h. A.M.	9 h. P.M.	Readings of the H. Cup Anemometer No.	9 h. A.M.	9 h. P.M.	No. 3 inches.	No. 12 inches.	No. 22 inches.		
		9 h. A.M.	9 h. P.M.	Max. Min.	Max. in Sun's rays	Min. on Grass.	Dry bulb.					Velocity (0-6) and Species.	Amount (0-10) and Direction.	Velocity (0-6) and Species.	Amount (0-10) and Direction.	SUNSHINE Hours.		
		Barometer.	Attached Thermometer.	No. 689	No. 689	No. 689	No. 689	No. 689	No. 689	No. 689	No. 689	No. 689	No. 689	No. 689	No. 689	No. 689	No. 689	
1	29-545	29-740	48-8 30-9 110	48-8 28-9 110	40-8 34-3	40-8 36-0	0.003	SE 1	N 0.5	None	SSCum 8	8-26						1
2	29-708	29-744	42-0 36-0 55-5	42-0 36-0 55-5	41-0 36-9 38-9	41-0 36-9 38-9	—	S 0.5	SE 2	SE Cum 10	SE Cum 7	—						2
3	29-713	29-643	41-7 36-1 78-2	41-7 36-1 78-2	37-1 33-0 39-1	37-1 33-0 39-1	0.032	S 1.5	SE 2	SE Cum 10	SE Cum 10	10-3						3
4	29-569	29-602	46-1 39-9 100-0	46-1 39-9 100-0	37-0 44-2 40-0	46-1 39-9 100-0	0.062	SE 1.5	SE 2	SE Cum 10	SE Cum 10	10-3						4
5	29-613	29-689	46-9 40-4 55-0	46-9 40-4 55-0	37-2 42-8 59-1	46-9 40-4 55-0	—	S 0.5	SE 1	SE Cum 10	SE Cum 9	—						5
6	29-763	29-891	46-0 34-0 112-8	46-0 34-0 112-8	38-8 42-9 38-3	46-0 34-0 112-8	—	SE 2	Calm	SE Cum 10	Cal 2	3-16						6
7	30-015	30-118	46-2 33-6 110-0	46-2 33-6 110-0	33-0 39-1 33-7	46-2 33-6 110-0	—	Calm	Calm	Cal 1	Cal 3	3-12						7
8	30-190	30-177	50-3 29-0 111-8	50-3 29-0 111-8	23-5 37-1 34-6	50-3 29-0 111-8	—	N 1	N 0.5	NE Cum 2	None	11-22						8
9	30-200	30-188	53-8 28-0 105-8	53-8 28-0 105-8	22-8 36-1 34-4	53-8 28-0 105-8	—	Calm	Calm	Cal 1	None	8-58						9
10	30-158	30-105	54-9 34-3 115-9	54-9 34-3 115-9	27-3 42-7 38-3	54-9 34-3 115-9	—	Calm	SE 1	Cal 1	Cal 9	1-23						10
11	30-149	30-219	54-9 42-2 108-1	54-9 42-2 108-1	28-8 37-8 44-8	54-9 42-2 108-1	—	E 1	E 1.5	SE Cum 3	None	10-65						11
12	30-186	30-047	50-0 34-2 111-2	50-0 34-2 111-2	27-3 45-3 37-9	50-0 34-2 111-2	—	SE 1.5	SE 1	None	SE Cum 8	5-62						12
13	29-987	30-090	50-0 40-1 108-0	50-0 40-1 108-0	32-1 43-8 37-9	50-0 40-1 108-0	—	FSE 2	S 0.5	SE Cum 10	Cum 10	2-10						13
14	30-132	30-106	50-0 37-6 110-7	50-0 37-6 110-7	36-6 42-8 37-2	50-0 37-6 110-7	0.048	S 0.5	SW 0.5	Cum 10	Cum 7	1-54						14
15	30-046	30-035	50-0 34-0 104-8	50-0 34-0 104-8	29-1 42-1 42-8	50-0 34-0 104-8	0.117	W 0.5	W 0.5	W Cum 8	None	10-50						15
16	29-941	30-094	51-9 36-0 112-8	51-9 36-0 112-8	36-0 44-0 41-4	51-9 36-0 112-8	0.010	W 1	Calm	W Cum 5	None	7-86						16
17	30-177	30-165	51-0 29-1 118-0	51-0 29-1 118-0	23-2 40-2 35-0	51-0 29-1 118-0	—	N 0	E 0.5	Cum 1	None	11-60						17
18	30-193	30-210	51-1 32-1 120-2	51-1 32-1 120-2	26-3 45-7 34-4	51-1 32-1 120-2	—	N 1.5	NE 0	Cum 4	NE Cum 2	9-49						18
19	30-249	30-283	55-1 32-1 116-1	55-1 32-1 116-1	26-2 42-9 35-3	55-1 32-1 116-1	—	Calm	Calm	None	Cum 2	8-46						19
20	30-361	30-382	54-2 30-0 117-2	54-2 30-0 117-2	28-2 41-9 38-3	54-2 30-0 117-2	—	N 0	N 0	None	E Cum 2	7-40						20
21	30-381	30-320	52-8 32-7 112-0	52-8 32-7 112-0	27-0 43-9 40-1	52-8 32-7 112-0	—	S 0.5	N 0.5	NE Cum 8	E Cum 1	4-73						21
22	30-284	30-276	52-9 33-7 118-0	52-9 33-7 118-0	27-0 44-8 38-7	52-9 33-7 118-0	—	NNE 0.5	Calm	Cum 2	NE Cum 1	10-21						22
23	30-309	30-325	51-0 31-7 113-3	51-0 31-7 113-3	24-2 44-9 38-8	51-0 31-7 113-3	—	NE 0.5	NE 1	X Cum 1	NE Cum 1	7-178						23
24	30-332	30-239	51-3 38-0 99-2	51-3 38-0 99-2	34-0 43-0 38-3	51-3 38-0 99-2	—	N 0.5	Calm	Cum 8	9 0.67						24	
25	30-169	30-047	54-0 37-8 113-3	54-0 37-8 113-3	34-7 39-7 39-7	54-0 37-8 113-3	—	Calm	E 1	W Cum 5	None	7-94						25
26	29-940	24-801	52-0 30-8 128-1	52-0 30-8 128-1	21-7 44-4 38-4	52-0 30-8 128-1	—	SW 0.5	E 0.5	SW Cum 10	None	4-26						26
27	29-690	29-468	57-0 34-0 96-2	57-0 34-0 96-2	28-0 45-5 41-8	57-0 34-0 96-2	0.130	SW 0.5	S 1	Cum 3	Cum 9	2-240						27
28	29-507	29-595	47-3 37-3 111-1	47-3 37-3 111-1	32-8 42-8 38-0	47-3 37-3 111-1	0.009	W 1.5	WSW 1	WW Cum 5	Cum 3	7-07						28
29	29-511	29-837	46-3 33-4 80-0	46-3 33-4 80-0	37-8 41-1 40-3	46-3 33-4 80-0	0.160	Calm	Calm	SW Cum 8	None	10-0.07						29
30	29-373	29-881	53-3 41-1 117-4	53-3 41-1 117-4	39-3 45-1 45-1	53-3 41-1 117-4	0.615	SW 0.5	Calm	SW Cum 8	None	10-3.98						30
31																		31
Suns.	12-12-13	10-15-13	10-10-13	10-10-13	15-8	11-15-16	16-13	16-12	16-10	8	4							
Means.	29-691	29-314	167															

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Fort William*, County of *Inverness*, in Lat. $56^{\circ}49'$, Long. $5^{\circ}47'W$, Distance from Sea 0.03 miles.

Height of Cistern of the Barometer above Mean Sea-Level 42 feet, above Ground 4 feet.

During the MONTH of *June* 1891.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	BAROMETER.		SELF-REGISTERING THERMOMETERS, Read Daily, at 8 P.M.		HYGROMETER, Corrected for index error, Dry No. Wet No.		Rain.	WIND.		CLOUDS.		THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS.		Days of Month.							
	Reduced to 32°		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.			9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer.		9 h. A.M.		9 h. P.M.		9 h. A.M.								
	Days of Month.	9 h. A.M.	9 h. P.M.	Max. in Sun.	Min. in Sun.	Max. in Grass.	Min. in Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	No. of hours in which it fell.	Amount in inches.	9 h. A.M.	9 h. P.M.	Velocity (0-10) and Direction.	Amount (0-10) and Direction.	Velocity (0-10) and Direction.	Amount (0-10) and Direction.	No. 3 inches.	No. 12 inches.	No. 22 inches.				
1	29.919	9.915	72.8	50.9	124.5	46.2	59.2	53.7	63.8	52.9	—	N 0.5 E 0.5	7	Cir 3	None 0	4.89	—	None 20	Cir 3	None 0	4.89	—	—	—	1	
2	9.875	9.980	73.0	57.5	136.7	46.2	65.8	65.9	52.0	—	SE 1	Calm	3	Cir 3	None 0	7.84	—	None 1	Calm	3	None 0	7.84	—	—	—	2
3	30.019	9.990	62.9	47.0	117.8	44.7	53.7	50.0	47.2	43.9	—	NE 1	NE 2	2	Cal 1	None 0	14.63	—	Cal 1	None 0	14.63	—	—	—	—	3
4	9.949	9.962	62.9	42.0	118.1	37.6	50.4	44.9	49.2	46.4	—	NE 2	NE 1.5	0	None 1	None 0	14.74	—	None 1	None 0	14.74	—	—	—	—	4
5	30.051	0.132	64.0	41.9	122.8	32.9	57.6	49.0	49.8	45.8	—	NE 0.5	NE 1	0	None 2	None 0	14.51	—	None 2	None 0	14.51	—	—	—	—	5
6	0.148	0.089	65.7	41.1	123.2	34.3	49.1	44.0	53.9	48.2	—	NE 0.5	NE 0.5	0	None 0	None 0	13.21	—	None 0	None 0	13.21	—	—	—	—	6
7	0.079	0.136	57.3	41.7	138.8	33.7	48.8	45.4	48.3	48.7	—	NE 1	NE 1	0	None 3	None 0	8.90	—	None 3	None 0	8.90	—	—	—	—	7
8	0.144	0.124	66.8	46.6	126.1	35.2	55.1	46.9	56.2	47.8	—	NE 0.5	NE 1	0	SE Cal 2	SE Cal 0	15.67	—	SE Cal 2	SE Cal 0	15.67	—	—	—	—	8
9	0.060	9.927	68.0	37.7	128.1	29.2	54.7	48.6	55.9	48.0	—	Calm	NE 0.5	0	None 0	None 0	12.52	—	None 0	None 0	12.52	—	—	—	—	9
10	0.008	0.109	61.2	44.0	119.3	36.1	51.8	45.9	52.7	47.2	—	NE 1	NE 0.5	0	None 5	None 0	10.66	—	None 5	None 0	10.66	—	—	—	—	10
11	0.171	0.216	67.2	36.0	126.6	28.3	53.9	48.3	54.6	48.0	—	SW 0.5	Calm	0	None 0	None 0	15.09	—	None 0	None 0	15.09	—	—	—	—	11
12	0.322	0.309	68.5	39.0	121.3	31.3	53.6	48.0	49.9	47.2	0.016	SW 1	SW 0.5	0	None	None 0	14.51	—	None	None 0	14.51	—	—	—	—	12
13	0.189	0.118	56.1	44.7	76.9	41.0	50.0	48.8	51.5	49.0	0.012	SW 1	SSW 0.5	0	SW Cal 10	SW Cal 10	0.08	—	SW Cal 10	SW Cal 10	0.08	—	—	—	—	13
14	0.079	9.993	56.9	47.0	76.9	40.0	47.0	40.0	50.9	48.0	0.263	SSW 1	Calm	0	SW Cal 10	SW Cal 10	0.55	—	SW Cal 10	SW Cal 10	0.55	—	—	—	—	14
15	29.800	9.836	56.0	47.0	71.5	47.5	50.1	49.7	53.1	51.7	0.086	SW 1	SW 1	0	None 10	None 9	—	—	None 10	None 9	—	—	—	—	—	15
16	29.181	0.035	57.7	47.1	112.0	34.0	53.7	52.0	52.2	50.0	0.146	SW 0.5	SW 1	0	None 10	None 10	0.40	—	None 10	None 10	0.40	—	—	—	—	16
17	30.006	0.052	67.2	51.3	73.7	51.0	54.2	53.9	53.9	53.5	0.689	SW 1	SW 1	0	None 10	None 10	—	—	None 10	None 10	—	—	—	—	—	17
18	0.069	0.195	57.0	52.4	81.8	52.8	55.9	53.5	53.8	53.5	0.166	SSW 1	SW 1	0	SW Cal 10	SW Cal 10	0.08	—	SW Cal 10	SW Cal 10	0.08	—	—	—	—	18
19	0.276	0.287	65.8	52.0	121.2	1	54.0	53.7	59.1	56.9	—	WSW 0.5	SW 0.5	0	None 10	None 1	4.69	—	None 10	None 1	4.69	—	—	—	—	19
20	0.318	0.291	75.0	47.8	120.9	1	62.6	58.9	63.3	60.3	—	Calm	Calm	0	None 3	None 2	14.30	—	None 3	None 2	14.30	—	—	—	—	20
21	0.281	0.257	76.1	53.3	129.0	48.1	66.0	62.0	66.2	60.6	—	Calm	Calm	0	None 0	None 0	12.58	—	None 0	None 0	12.58	—	—	—	—	21
22	0.302	0.265	77.9	64.7	133.0	54.3	64.6	57.9	71.1	61.9	—	Calm	SE 1	0	None 0	None 0	13.55	—	None 0	None 0	13.55	—	—	—	—	22
23	0.285	0.171	76.2	53.0	132.1	48.2	60.9	56.9	59.1	54.5	—	N 31	NE 1	0	None 0	None 0	15.03	—	None 0	None 0	15.03	—	—	—	—	23
24	0.050	0.066	76.4	54.0	137.1	52.6	66.1	59.6	69.6	61.0	—	NE 1	NE 0	0	None 14	None 14	10.41	—	None 14	None 14	10.41	—	—	—	—	24
25	0.021	9.852	77.9	55.7	141.4	57.4	63.2	59.2	67.2	59.4	—	NE 0.5	Calm	0	SE Cal 3	SE Cal 2	9.25	—	SE Cal 3	SE Cal 2	9.25	—	—	—	—	25
26	29.735	9.631	75.1	56.9	124.3	61.8	73.6	63.9	73.9	61.8	0.745	Bar 0	Calm	0	SE Jun 3	SE Jun 3	2.95	—	SE Jun 3	SE Jun 3	2.95	—	—	—	—	26
27	1.617	9.627	65.9	55.3	119.2	45.0	65.0	60.0	71.1	55.1</td																

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Fort William, County of Inverness, in Lat. $56^{\circ}49'$, Long. $5^{\circ}7'W$, Distance from Sea 0.03 miles.

Height of Cistern of the Barometer above Mean Sea-Level 42 feet, above Ground 4 feet.

During the MONTH of July 1891.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.		SELF-REGISTERING THERMOMETERS, Read Daily, at 9 P.M.		HYGROMETER, Corrected for Index error		Rain.	WIND.		CLOUDS.		THERMOMETERS under Ground.			SEA. Temp. Surface	OZONE	GENERAL REMARKS.		Days of Month.			
		Reduced to 32°		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.			9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer.		9 A.M.		9 P.M.		9 h. A.M.				
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max. in Sun's rays.	Min. on Grass.		Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	No. of hours in which it fell.	No. in inches.	Velocity (0-6)	Amount (0-10)	Velocity (0-6)	Amount (0-10)	SUNSHINE	No. 3 inches.	No. 12 inches.	No. 22 inches.	
		* No. 689	No. 689	No. 689	No. 689	No. 689	No. 689																
1	9-609	9630	622 52.9	1300 52.5	537	53.0	53.2	53.1	—	S 1	—	—	—	10	5	5.6	—	—	—	—	—	1	
2	9-599	9563	614 44.0	121.9	56.9	53.2	55.2	53.8	0907	Calm	Calm	SSE	10	—	8	10	2.1	—	—	—	—	2	
3	9-637	7782	610 51.2	135.5 49.6	54.4	52.8	54.0	49.9	0102	Calm	SE 0.5	—	—	9	5	5.4	—	—	—	—	—	3	
4	9-685	9-904	592 50.0	102.8 48.0	56.8	52.2	56.6	50.9	—	S 0.5	Calm	SW	10	—	10	0.1	—	—	—	—	—	4	
5	9-807	9-612	600 47.0	91.0 44.1	55.8	52.1	57.6	53.0	0141	Calm	S 0.5	—	—	5	10	10	—	—	—	—	—	5	
6	9-502	9-388	673 50.1	131.2 52.8	53.0	51.6	50.0	49.7	0410	S 0.5	Calm	—	—	8	10	10	5.3	—	—	—	—	6	
7	9-418	9-566	643 49.8	120.9 49.1	54.1	41.9	57.8	50.5	0528	Calm	Calm	—	—	8	10	10	2.9	569	—	—	—	7	
8	9-775	9-981	570 52.8	95.7 52.7	54.2	52.2	53.3	50.2	0128	NNE 1	N 1.5	—	—	10	8	10	—	—	—	—	—	8	
9	0-106	0-109	666 49.0	127.0 47.0	52.0	47.5	56.8	56.1	—	NNE 1	NW 1.5	NE	Calm	7	1	1.5	—	—	—	—	—	9	
10	0-075	0-015	620 48.9	116.0 44.7	56.0	53.4	55.6	52.8	0001	Calm	S 0.5	WSW	Calm	8	10	10	0.4	—	—	—	—	10	
11	9-957	9-905	579 52.9	88.9 53.0	56.2	52.2	53.7	52.4	0003	SW 0.5	SW 0.5	SW	Calm	10	10	10	—	548	—	—	—	11	
12	9-898	0-006	591 51.8	108.9 52.1	56.0	53.9	54.2	53.8	0088	SW 0.5	S 0.5	SW	Calm	8	10	10	0.3	—	—	—	—	12	
13	0-145	0-299	576 52.9	178.2 54.2	6.2	55.1	55.4	51.7	—	SW 0.5	SSE 0.5	SW	Calm	10	10	10	8.9	—	—	—	—	13	
14	0-371	0-300	735 46.0	135.0 42.0	61.6	56.4	62.0	57.6	—	N 1	V 1	—	—	10	10	10	—	—	—	—	—	14	
15	0-213	0-008	685 52.6	129.9 46.5	53.7	53.9	54.9	53.8	0027	NNE 1	N 0.5	ENE	Calm	4	10	10	9.9	—	—	—	—	15	
16	9-827	9-744	69.0 54.2	133.0 53.1	60.9	56.8	57.5	56.8	0322	NE 1.5	Calm	SE	Calm	1	10	10	4.7	—	—	—	—	16	
17	9-686	9-759	60.0 53.9	100.3 53.5	58.3	57.8	55.9	56.7	0402	Calm	S 0.5	SE	Calm	4	10	10	1.8	—	—	—	—	17	
18	9-743	9-818	692 51.0	123.2 45.1	67.8	59.6	58.8	53.0	0296	Calm	S 0.5	SE	Calm	4	10	10	4.8	57.7	—	—	—	18	
19	9-771	9-774	659 49.8	125.7 42.4	63.8	56.0	57.1	55.0	0188	S 0.5	S 1	SE	Calm	4	10	10	6.0	—	—	—	—	19	
20	9-741	9-812	60.1 54.0	108.9 54.5	54.7	54.0	55.9	55.6	0172	SW 0.5	S 1	SW	Calm	10	10	10	0.2	—	—	—	—	20	
21	9-786	9-731	613 54.5	108.2 54.5	57.1	56.7	56.0	53.9	0202	SW 0.5	Calm	SW	Calm	10	10	10	1.4	—	—	—	—	21	
22	9-761	9-855	60.8 44.9	106.0 46.2	53.9	53.2	58.6	53.9	0003	Calm	NNE 0.5	—	—	10	10	10	0.2	56.5	—	—	—	22	
23	9-940	9-936	62.9 54.0	100.5 54.0	58.7	55.2	55.0	52.0	0004	Calm	S 0.5	N	Calm	10	10	10	0.1	—	—	—	—	23	
24	9-881	9-952	59.2 52.6	109.0 49.5	56.5	52.0	53.8	51.7	0003	S 1	W 0.5	W	Calm	4	10	10	1.7	—	—	—	—	24	
25	0-015	0-051	010.0 52.2	105.0 51.2	57.7	52.6	54.7	52.9	0012	SW 1	SW 1	W	Calm	8	10	10	1.4	—	—	—	—	25	
26	9-939	9-756	62.1 52.2	103.9 50.1	54.9	54.7	54.9	53.8	0022	SW 1	SW 0.5	SW	Calm	10	10	10	0.3	—	—	—	—	26	
27	9-673	9-688	58.5 50.0	133.2 46.1	53.0	46.0	53.2	47.8	0002	N	1	WSW	0.5	7	10	10	6.8	—	—	—	—	27	
28	9-696	9-624	56.6 48.2	124.7 44.2	52.1	47.2	51.0	46.1	—	WSW	0.5	W	10	10	10	5.6	—	—	—	—	28		
29	9-523	9-634	62.0 45.2	104.5 44.9	53.9	50.1	53.6	51.7	—	WSW	1.5	WSW	1	10	10	10	5.6	—	—	—	—	29	
30	9-818	9-410	68.1 50.9	134.2 45.5	58.0	52.7	55.9	53.7	—	NE	1	N	0.5	—	1	10	2	7.1	—	—	—	30	
31	9-940	9-915	64.0 52.2	136.0 53.1	57.7	52.7	54.9	52.2	0001	Calm													

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Fort William*, County of *Inverness*, in Lat. $56^{\circ} 49'$, Long. $5^{\circ} 7' W$, Distance from Sea 103 miles.

Height of Cistern of the Barometer above Mean Sea-Level 42 feet, above Ground 4 feet.

During the MONTH of *September* 1891.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.		SELF-REGISTERING THERMOMETERS, Read Daily, at 9 P.M.		HYGROMETER, Corrected for Index Error, Dry No. _____ Wet No. _____		Rain.	WIND.		CLOUDS.		THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS.		Days of Month.			
		Reduced to 32°		Protected in Shade, feet above Ground.		Exposed Black Bulbs.			9 h. A.M.		9 h. P.M.		9 h. A.M.					As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevailing Diseases, etc.					
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.		Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.		Mention the hour at which Storms, including Thunder and Lightning, began and ended.					
		inches.	°	inches.	°	°	°	°	°	°	°	°	feet.	inches.	inches.	inches.	inches.	inches.	Temperature of WELL at depth of 10 ft. at 9 A.M. & 9 P.M.	0-10.			
1	1	56.34		8.899		58.0	53.0	101.8	51.8	56.1	52.7	53.5	51.0	1320	SSW 2	SW 2	SW 10	- Cum 10	0.14			1	
2	2	92.27		9.576		56.1	49.9	89.1	50.8	53.6	52.1	52.0	49.6	0706	SSW 1	S 1	- Cum 10	- Cum 4	-			2	
3	3	98.15		9.872		59.5	48.8	114.4	46.1	51.9	48.9	50.8	49.0	0105	S 0.5	SE 0	S Cum 3	S Cum 9	1.92			3	
4	4	9.889		9.910		62.0	48.0	128.1	43.1	53.0	51.2	49.7	47.0	0245	Calm	SSW 0.5	SW 10	- Cum 4	8.46			4	
5	5	97.98		9.587		57.7	49.6	91.0	45.1	52.0	51.0	53.3	52.0	0922	SW 0.5	SW 1	SW 10	- Cum 10	0.01			5	
6	6	9.496		9.617		55.4	47.0	111.0	45.0	48.0	45.9	49.0	47.0	1440	S 1	SW 0.5	WSW 8	S Cum 6	1.27			6	
7	7	9.827		9.493		61.4	45.0	123.9	45.0	53.0	50.0	48.8	44.9	0009	W 0	Calm	W Cum 9	W Cum 6	6.12			7	
8	8	9.434		9.478		62.0	40.9	85.8	32.9	49.8	47.5	56.8	55.0	0232	NE 0.5	Calm	- SW 10	- SW 10	0.02	54.0		8	
9	9	9.932		9.483		60.0	52.4	74.0	47.8	57.2	50.7	59.9	57.1	0958	Calm	S 1	- Cum 10	- Cum 10	-			9	
10	10	0.009		0.031		70.2	54.3	122.6	50.3	60.3	55.8	57.8	57.0	0240	Calm	SW 0.5	WSW 8	- Cum 10	6.12			10	
11	11	0.986		9.583		55.7	55.6	111.3	54.1	57.7	56.5	52.9	50.1	-	SW 0.5	SW 0.5	S Cum 10	WSW 8	1.06	57.9		11	
12	12	0.000		9.607		66.0	52.9	115.1	52.9	61.1	57.9	54.1	53.7	0001	W 1	Calm	W Cum 10	W Cum 10	10.48			12	
13	13	9.852		9.695		74.8	48.1	124.0	43.8	54.2	53.9	61.7	59.9	0267	- 10.5	Calm	- SW 10	- Cum 10	3.89			13	
14	14	9.685		9.703		60.0	49.5	123.2	50.4	53.0	53.0	51.3	48.0	0233	Calm	S 0.5	- Cum 10	W Cum 9	3.26			14	
15	15	9.949		0.031		58.1	47.1	111.6	42.1	50.3	47.9	55.0	52.7	0143	SW 0.5	SW 1	W Cum 6	W Cum 10	1.44			15	
16	16	0.006		9.860		58.5	57.0	74.0	57.8	55.6	54.7	56.9	55.6	0814	SW 1	SW 1.5	SW 10	- Cum 10	-			16	
17	17	9.775		9.681		57.9	54.7	79.0	54.2	53.6	56.1	55.2	52.2	0008	SW 1	SW 0.5	- SW 10	- SW 10	-	55.4		17	
18	18	9.621		9.672		61.0	52.3	117.9	52.6	53.5	53.3	54.5	53.6	0297	SW 1	SW 1	SW 10	- Cum 10	3.17			18	
19	19	9.773		9.652		54.7	57.4	74.0	108.1	49.1	55.0	52.3	49.8	47.7	0034	SW 1	SSE 0.5	SW 10	SW 10	1.75	55.0		19
20	20	9.792		9.788		57.0	43.9	118.4	32.9	48.2	46.9	48.4	47.6	0076	Calm	N 0.5	- Cum 10	- Cum 10	3.20			20	
21	21	9.817		9.943		52.8	46.5	66.0	46.2	50.2	50.3	45.1	48.2	0002	NNE 2	NE 1	- Cum 10	- Cum 10	-			21	
22	22	0.032		0.075		54.4	58.9	118.3	37.5	47.3	45.4	52.0	39.9	-	NE 1.5	Calm	NE Cum 2	W Cum 2	6.36			22	
23	23	0.085		0.017		60.4	35.4	126.2	22.8	0	44.7	41.9	53.9	49.0	0315	NE 0.5	SSE 0.5	W Cum 10	- Cum 10	-			23
24	24	9.839		9.915		57.4	55.1	114.9	45.3	53.5	52.3	52.1	50.0	0458	Calm	S 0.5	SW 10	- Cum 9	1.44			24	
25	25	9.981		9.506		61.0	41.0	100.4	48.0	51.2	50.7	56.9	53.4	0792	S 0.5	8.0	8.0	- Cum 10	10.46			25	
26	26	9.235		9.223		60.7	49.1	104.1	47.9	52.3	49.8	53.0	49.8	1287	SSW 2.5	SW 2	SW Cum 10	- Cum 10	0.20			26	
27	27	9.682		9.790		55.2	47.4	90.6	44.4	45.1	40.6	49.7	49.2	0564	WSW 1	S 1	W Cum 9	- SW 10	0.57			27	
28	28	9.620		9.573		59.5	50.5	66.4	47.8	52.3	52.9	50.4	35.2	1228	SSW 1	S 2	- Cum 10	- Cum 10	-			28	
29	29	9.506		9.516		54.8	50.9	87.9	49.0	51.9	49.9	52.2	50.1	0530	SSW 1	S 2	- Cum 10	- Cum 10	0.73			29	
30	30	9.345		9.332		57.0	45.0	105.9	46.5	54.0	49.0	52.2	47.2	0670	SSE 2.5	S 3	SSW 10	- Cum 8	4.05			30	
31																					31		
Sums.		174.14		19.17		16.10	16.11	114.1	14.12	12.9	14.15	14.15	12.11	0124	5	6				9.0			

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Fort William, County of Inverness, in Lat. 56°49', Long. 5°7'W, Distance from Sea 003 miles.

Height of Cistern of the Barometer above Mean Sea-Level 42 feet, above Ground 4 feet.

During the MONTH of October 1891.

The Hours of Observation are of Greenwich Time.

ELECTRICITY. Days of Month.	BAROMETER.		SELF-REGISTERING THERMOMETERS, Read Daily, at 9 P.M.		HYGROMETER, Corrected for Index Errors		Rain.	WIND.		CLOUDS.		THERMOMETERS under Ground.			SEA. Temperature of WELL at Depth of feet, No.	OZONE.	GENERAL REMARKS.		Days of Month.				
	9 h. A.M.	9 h. P.M.	Protected in Shade, 4 feet above Ground.	Exposed Black Bulbs.	Dry No.	Wet No.		9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.	SUNSHINE.	9 h. A.M.	9 A.M.	9 P.M.		As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.						
	No. 629	No. 629	No. 629	No. 629	Max.	Min.	No. 629	No. 629	No. 629	9 h. A.M.	9 h. P.M.	Amount in hours in which it fell.	No. 9	9 h. A.M.	9 h. P.M.	Velocity (0-6) and Direction.	Amount (0-10) and Species.	Velocity (0-10) and Direction.	Amount (0-10) and Species.	No. 3 inches.	No. 12 inches.	No. 22 inches.	
1	29.578	29.416	520.450	112.5 41.8	47.9	46.9	47.7	46.0	0.407	5 0.5	5 0.5	SW Cum 10	- Cum 10	16									1
2	29.667	29.830	600.442	112.7 41.2	48.3	46.0	49.9	47.0	0.467	Calm	5 0.5	- Cum 4	- Cum 5	7.7									2
3	29.815	29.856	580.455	60.3	53.1	52.5	57.1	55.9	0.450	SSW 1	SW 1	- Cum 10	- Sta 10	-									3
4	29.853	29.823	52.2 45.0	62.7 52.8	54.2	53.0	54.9	52.3	0.740	SSW 1	SW 1	- Cum 10	- Sta 10	-									4
5	29.635	29.217	60.0 46.2	107.2 50.2	55.8	51.7	57.8	44.8	0.847	5 0.5	5 0.5	- Cum 10	5 Cum 3	3.2									5
6	28.909	29.015	58.2 44.3	77.0 50.1	52.2	57.5	45.7	45.9	0.803	SSW 1	W 0.5	- Cum 10	5 Cum 3	0.5									6
7	29.140	29.852	57.1 45.6	107.0 40.1	51.0	47.5	53.5	46.3	0.001	SW 1	SSW 1.5	SW Cum 10	- Cum 1	3.1									7
8	29.489	29.222	57.1 45.5	113.9 45.5	51.6	47.0	52.8	48.0	0.537	SW 1	S 1.5	- Cum 10	- Cum 10	4.2									8
9	29.149	29.444	56.3 45.0	77.2 45.4	53.3	47.2	48.2	46.6	0.422	S 2.5	S 2	SS Cum 4	- Cum 10	1.3									9
10	27.506	26.446	57.4 47.2	110.5 44.5	57.8	46.9	57.8	48.1	0.141	SW 1	SSW 0.5	SW Cum 10	- Cum 9	4.4									10
11	27.180	26.893	56.3 47.8	72.7 46.3	55.1	49.4	51.8	46.6	0.419	SW 1	SW 1.5	5 Cum 10	SW Cum 2	-									11
12	29.060	29.190	54.0 44.2	110.0 43.2	48.7	44.0	48.5	48.1	0.112	S 1.5	SE 0.5	SW Cum 10	S Cum 8	5.2									12
13	24.108	28.052	53.0 41.2	104.0 34.5	48.7	42.7	51.8	47.1	1.893	Calm	SE 2	SS Cum 10	1	3.4									13
14	28.607	29.067	57.0 44.3	74.2 41.0	46.8	43.8	48.7	45.6	0.893	SSW 2	SW 1.5	SW Cum 10	- Cum 10	0.7									14
15	24.187	29.368	50.0 42.0	90.0 42.2	47.4	44.5	43.9	42.4	0.379	SW 0.5	SW 0.5	- Cum 10	- Cum 10	0.2									15
16	29.096	29.057	52.0 39.2	98.2 33.0	42.0	40.2	44.3	44.7	0.168	N 1	S 0.5	N Cum 10	- Cum 10	1.1									16
17	29.487	29.708	57.1 42.3	103.9 43.0	48.9	44.2	45.6	41.2	0.043	W 1	Calm	WW Cum 9	- Cum 4	1.9									17
18	29.261	29.261	52.0 38.0	77.9 38.3	44.7	43.7	47.9	45.0	0.940	Calm	SSW 1	- Cum 10	- Cum 10	0.5									18
19	29.451	29.229	52.2 40.0	104.8 42.0	46.0	42.9	42.6	40.6	0.230	W 0.5	S 0.5	W Cum 8	S Cum 4	3.4									19
20	29.204	24.075	53.2 40.0	103.1 38.3	44.9	41.8	50.7	46.1	0.129	S 0	S 1	S Cum 9	S Cum 4	2.3									20
21	28.916	28.899	53.3 44.2	102.6	49.9	45.7	50.0	45.4	0.172	Calm	SE 0.5	S Cum 10	S Cum 5	1.4									21
22	28.982	29.126	56.0 44.0	100.7 36.4	48.1	46.0	45.1	43.9	0.045	Calm	S 0.5	- Cum 8	- Cum 7	3.3									22
23	29.283	29.446	58.2 33.7	99.0 26.9	34.7	34.1	45.4	42.9	0.029	E 0	S 0.5	E Cum 4	- Cum 4	5.8									23
24	29.637	29.824	51.8 36.3	105.8	47.3	43.8	36.8	35.9	0.003	SW 1	Calm	SW Cum 7	None	2.2									24
25	29.919	30.087	57.3 29.4	93.3 29.7	30.5	30.0	30.0	30.6	0.001	E 0.5	E 0.5	Li 4	Li 4	6.8									25
26	30.220	30.254	52.8 32.5	94.1 26.6	38.1	30.7	41.4	40.0	-	E 0.5	E 0.5	E Cum 3	E Cum 2	6.2									26
27	30.291	30.299	52.3 33.8	93.0 24.6	45.9	42.2	41.2	37.9	-	E 0	ESE 0.5	None	None	6.8									27
28	30.294	30.250	56.3 34.5	96.5 26.1	36.7	35.0	36.9	35.1	0.003	E 0.5	Calm	None	None	6.7									28
29	30.461	30.542	47.3 26.5	84.3 20.6	28.7	28.0	34.1	37.0	-	E 0.5	Calm	Cr 1	St 10	5.5									29
30	30.600	30.604	53.0 34.4	84.0 28.0	38.7	37.0	38.2	37.0	0.004	Calm	Calm	- St 10	None	3.6									30
31	30.711	30.668	48.9 30.0	82.3 23.9	30.7	30.2	39.6	38.3	-	Calm	E 0	None	- Cum 1	5.4									31

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Fort Williams*, County of *Inverness*, in Lat. $56^{\circ}49'$, Long. $5^{\circ}45'W$, Distance from Sea 003 miles.

Height of Cistern of the Barometer above Mean Sea-Level 42 feet, above Ground 4 feet.

During the MONTH of *November* 1891.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.		SELF-REGISTERING THERMOMETERS.		HYGROMETER.		Rain.	WIND.		CLOUDS.		THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS.		Days of Month.		
		Reduced to 32°		Read Daily, at 9 P.M.		corrected for index error			9 h. A.M.	9 h. P.M.	No. of hours in which it fell.	Amount in inches.	9 h. A.M.	9 h. P.M.	9 h. A.M.	9 h. P.M.		As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.				
		9 h. A.M.	9 h. P.M.	Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.		Max.	Min.	Max. in Sun.	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	9 h. A.M.	9 h. P.M.	No. 3 inches.	No. 12 inches.	No. 22 inches.	
		inches.	inches.	* No. 689	No. 689	No. 644	No. 644															
1	30-673	30-632	52-677	920	33-3	42-8	41-8	45-4	44-5	—	Calm	NE 0-5	Cirro	6	—	Cum 2	5-43	—	Surface	Temp.	1	
2	30-586	30-582	56-9	370	40-4	31-0	37-8	37-2	38-0	37-1	—	ESE 0-5	Calm	Zone	Zone	5-80	—	49-1	—	—	2	
3	30-533	30-497	46-0	36-6	55-9	30-8	42-0	40-7	46-0	41-1	—	N 0-5	N 0-5	Str 10	Str 10	—	—	—	—	—	3	
4	30-572	30-656	48-5	10-0	45-2	42-8	44-2	42-8	44-2	41-8	—	E 0-5	N 0-5	ESE Cum 5-10	—	Str 10	—	51-9	—	—	4	
5	30-665	30-546	45-1	41-0	46-7	39-3	41-8	41-0	44-8	44-0	0-011	Calm	S 0-5	Str 10	Str 10	—	—	—	—	—	5	
6	30-428	30-242	47-3	13-5	51-6	42-2	45-6	44-6	46-8	46-0	0-102	SE 0-5	S 1	Cum-S 10	Cum 10	—	—	—	—	—	6	
7	30-314	30-096	49-3	35-7	962	30-0	37-2	37-0	46-4	42-8	—	Calm	SW 1	Stratus 9	Cum 10	1-72	—	—	—	—	7	
8	29-730	29-309	44-7	45-5	59-6	42-4	47-1	40-8	48-8	45-9	0-874	SW 1-5	SW 2	Cum 7	Cum 10	—	—	—	—	—	8	
9	29-200	29-143	48-0	37-0	51-2	39-2	43-7	41-2	34-7	32-7	1-094	SW 1-5	Calm	Cum 8-10	Cum 10	—	—	—	—	—	9	
10	29-223	29-155	43-2	35-9	82-2	32-7	41-0	39-1	46-2	37-3	0-069	S 1	S 1	Woolcum 8	Woolcum 7	0-84	—	—	—	—	10	
11	28-671	28-516	44-0	34-3	44-9	37-9	43-0	40-2	42-7	41-0	0-053	N 1	E 1	E Cum-S 10	Woolcum 10	—	—	—	—	—	11	
12	29-015	29-180	47-0	36-5	79-0	35-2	43-0	38-0	46-0	41-9	0-002	SW 1	SE 1	Woolcum 8	SE Cum 5	1-30	46-6	—	—	—	12	
13	29-077	29-972	52-7	39-6	61-2	32-5	51-7	45-2	45-8	43-6	0-068	E 0-5	E 0-5	ESE Cum 10	Woolcum 8	—	—	—	—	—	13	
14	29-115	29-297	47-1	41-0	51-0	39-6	44-9	41-6	42-1	39-9	0-002	SE 0-5	Calm	Cum 10	SSSE Cum 5	—	—	—	—	—	14	
15	29-432	29-548	46-4	37-2	74-7	33-4	41-9	40-1	40-1	38-9	—	NE 0-5	Calm	Cum 7	E Cum 7	0-35	—	—	—	—	15	
16	29-599	29-570	44-9	32-2	73-1	25-4	35-7	34-9	43-9	38-4	0-110	Calm	SE 1	Cum 10	SSSE Cum 2	0-93	—	—	—	—	16	
17	29-565	29-749	46-0	37-0	80-2	35-9	37-9	38-6	37-9	38-6	0-009	SE 0-5	SE 0-5	SSSE Cum 10	SE Cum 10	1-25	—	—	—	—	17	
18	29-670	29-439	47-8	43-1	45-1	28-4	39-3	37-3	47-0	45-6	0-745	Calm	S 1	Cum 10	Stratus 10	—	—	—	—	—	18	
19	29-438	29-499	49-2	45-2	64-0	42-7	47-9	44-0	46-2	44-0	0-641	SSW 2	SSW 1-5	SSW 9	Woolcum 10	0-02	—	—	—	—	19	
20	29-656	29-810	47-1	40-2	84-2	38-9	43-8	42-7	41-9	40-7	0-030	SW 0-5	Calm	Woolcum 10	Cum 7	0-48	—	—	—	—	20	
21	29-573	29-904	46-1	35-4	85-2	30-0	36-4	35-6	37-7	36-4	0-010	Calm	ESE 0-5	Cum 2	Cum 5	1-84	46-3	—	—	—	21	
22	29-592	29-813	39-0	31-1	85-2	26-8	33-5	32-9	33-9	33-0	0-002	Calm	Calm	Cum 1	Str 10	1-13	—	—	—	—	22	
23	29-762	29-795	39-1	29-1	44-1	21-2	35-2	31-6	36-1	35-8	0-010	Calm	Calm	Str 10	Woolcum 10	—	—	—	—	23		
24	29-827	29-665	35-3	29-0	57-4	27-2	32-3	33-2	30-1	34-9	0-050	Calm	Calm	Str 10	Cum 10	1-26	—	—	—	24		
25	29-440	29-489	41-9	29-0	57-2	26-7	37-8	36-7	36-1	33-4	0-023	Calm	Calm	Cum 10	Woolcum 2	0-06	—	—	—	25		
26	29-448	29-600	58-0	29-2	46-0	30-2	54-7	53-9	29-9	29-7	0-014	S 0-5	SE 0-5	SSSE Cum 8	Zone	—	—	—	—	26		
27	29-764	29-715	34-3	23-8	58-0	18-6	24-7	24-3	33-3	32-1	0-003	Calm	Calm	None	Str 7	1-79	46-4	—	—	27		
28	29-422	29-165	49-0	31-8	48-3	26-8	42-7	37-9	46-7	41-1	0-005	SE 0-5	SE Cum 10	Woolcum 3	—	—	—	—	—	28		
29	29-557	29-577	47-7	37-8	62-4	38-7	63-2	41-3	40-0	38-0	0-109	SSW 2	SE 1	Woolcum 10	Woolcum 10	0-56	—	—	—	29		
30	29-472	29-519	45-8	39-3	47-5	34-0	43-1	40-2	43-1	41-0	0-168	SSW 2	SSW 2	Woolcum 10	Woolcum 10	—	—	—	—	30		
31																				31		
Sums.	151511	151615	1910	164	134	1413	1510	1512	1514	1516	678	6	5	139	217	76	72	363	—	NOTATION USED IN GENERAL REMARKS.		
Means.	24717	29690	458366	64																		

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Fort William, County of Inverness, in Lat. $56^{\circ}49'$, Long. $5^{\circ}7'W$, Distance from Sea 0.03 miles.

Height of Cistern of the Barometer above Mean Sea-Level 12 feet, above Ground 4 feet.

During the MONTH of December 1891

The Hours of Observation are of Greenwich Time.

BAROMETER, "corrected Mean" at 9 A.M., <i>minus</i> the Correction $\dagger\dagger$ } =	<u>29. 637</u>
for Temp. (Col. 2), =	
"Corrected Mean" of Barometer at 9 P.M., <i>minus</i> the Correction $\dagger\dagger$ } =	<u>29. 618</u>
for Temp. (Col. 4), =	
Mean at Station, corrected, and at 32°,	<u>29. 628</u>
Correction for height, feet above Mean Sea-level,.....	<u>47</u>
Mean, reduced to 32°, and Sea-level,	<u>29. 675</u>
Highest Reading, corrected for Index error, on the 21th,.....	<u>30. 527</u>
Lowest Do. Do., on the 9th,.....	<u>28. 537</u>
Difference, or Monthly Range	<u>1.990</u>

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 3 th,.....	=	55.8
Lowest in Month, corrected for Index errors, on the 22 th,	=	26.8
Difference, or Monthly Range,	=	29.0
"Corrected Mean" of all the Highest, (Col. 5),	=	45.7
"Corrected Mean" of all the Lowest, (Col. 6),	=	35.8
Difference, or Mean Daily Range,	=	9.9
** Calculated Mean Temperature of Month,	=	40.8

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11),	=	40.6
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12),	=	38.4
†† Computed Temperature of Dew-Point,	=	35.6
†† Do. Elastic Force of Vapour,	=	209
†† Do. Weight of Vapour in a Cubic Foot of Air,	=	
†† Relative Humidity (Saturation = 100),	=	83

WIND.								SUMMARY.			
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day.
A.M.	2	1	1	1	15	2	2	7	0.87		
P.M.	2		2	14	4			9	.82		
Mean.	1	1	1	2	14	3	1	8	0.84		

*Observations made and
Return verified by*

(Signed)

Angus Rankin

INSTRUCTIONS FOR TAKING METEOROLOGICAL OBSERVATIONS

WITH REMARKS ON THE USE OF INSTRUMENTS.

One of the chief objects that the Scottish Meteorological Society

proposed, to itself when the Society was established in 1850, was

to secure greater uniformity in the system of observation pursued

at all its Stations.

Uniformity in the observations is absolutely necessary to justify the publication of Monthly Results from off

faculties of observations, it being found that differences between the results from two Stations, so very considerable as to render them

quite incommensurable, in the position or

shelter of instruments, different hours of observation, or even from

observers, in some few cases, may find this impossible;

in such instances they are specially requested to mark opposite every

reading the time at which it was taken, if not 9 A.M. or 9 P.M.

Weather-Glasses and Aneroids, though well suited to indicate

roughly variations of atmospheric pressure, are not

of occasional occurrence with protected Thermometers, but of

frequency, with exposed Thermometers. Hence a syste-

matic examination of Minimum Thermometers ought to be a

regular part of the work carried on by each Observer.

Fortunately, Spirit Thermometers may be easily set right by

removing the column of spirit from the fluctuating

surface of the mercury in the cistern. Its scale

convenience of requiring no adjustments of the cistern. Its scale

inches are not true inches, but so much shorter as to compensate the

error that would otherwise arise from the fluctuations of the surface

of mercury in the cistern. This is an excellent Barometer to be used for Meteorological Observation, as it is not subject to

any point which forms the surface of the instrument.

The Barometer originally constructed by Mr. Adie of London

and usually called the Board of Trade Barometer, has the great

convenience of requiring no adjustments of the cistern. Its scale

inches are not true inches, but so much shorter as to compensate the

error that would otherwise arise from the fluctuations of the surface

of mercury in the cistern. This is an excellent Barometer to be used for Meteorological Observation, as it is not subject to

any point which forms the surface of the instrument.

A modification of Fornis's Barometer is used as a number of the

Society's Stations by which the coincidence of the zero point with

the surface of the mercury is indicated by a little ivory point, which

passes through the tube, and the tube is closed by a stopper.

Observation, as specified in the following remarks, or at the top of the Schedule. It is hoped that the

Professors Phillips, and Negretti, and Zambra's Thermometers, and the Dry and Wet Bulb Thermometers, and the Barometer, will be used for Meteorological Observation, and in every system of Meteorological Observation, made by the Society, Members and Observers, will be invited to achieve one of the main objects of Meteorological Observation.

The Council recommend that Observations be made periodically, at 9 A.M. and 9 P.M. (Greenwich or Railway Time only),

thus rendering it impossible to compare the climates of places with each other as regards their most important features.

The Council regard the question of UNIFORMITY OF HEIGHT

ABOVE GROUND, AND METHOD IN PROTECTING THE THERMOMETERS, as vital in every system of Meteorological Observation, since while

Observations made at different Stations are incomparable, the

Barometer would recommend the use of different heights for the

thermometers, and the height of the Box, and the distance of the

thermometers from the ground, will be of such a length that when the

thermometers are hung in position the Bulbs of the Minimum

Thermometer, and the Dry and Wet Bulb Thermometers will be

in contact with the bottom of the Box, and the distance of the

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