

Pressure Readings recorded at Armagh Observatory

Pressure readings were taken from a mercury in glass barometer at Armagh Observatory, initially thrice daily from 1796 and later twice daily. During 1868-1883, the Automatic Weather Station recorded hourly pressure readings which were published by the Meteorological Office. The data presented here was entered into computer file by Mark Emerson who was supported by grants from the Heritage Lottery Fund and the Irish Soldiers and Sailors Fund.

A continuous recording aneroid barograph remained in use for many years until it was broken circa 2020. The charts from this barograph for many years may still be available at the Public Record Office for Northern Ireland. Charts for later years are retained at the Observatory.

The files in the subdirectory **/raw** contain the daily pressure readings recorded in the main Meteorological Record Books kept at Armagh Observatory. It is believed that all daily data were corrected for temperature recorded by the attached thermometer and for altitude above mean sea level (or Ordnance Survey Data Reference Level at Dublin Bay),

After 1850, the daily data have been checked for homogeneity by Rob Allen and Tara Ansell as part of the Emulate project. A short description of the correction procedure is given in the EMULATE Web Page <https://crudata.uea.ac.uk/projects/emulate/>

The earlier, daily, data, from 1796 to 1826 and 1833 to 1849 were not fully standardised under this project. However, a preliminary standardisation prior to 1850 by the Emulate group gave some provisional mean monthly data for this period.

References:

ARM/MET/001086 (see correspondence between Ana Garcia-Suarez and C.J. Butler with Rob Allen and Tara Ansell of UKMO)
ARM/MET/001084

Files:

/pressure/raw/daily/1796_1800, 1801_1805 etc Pressure readings as recorded in Met Record Books, initially thrice daily and subsequently, (from 1833) twice daily. (inches of mercury)
/pressure/cor/emulate/emulate_armagh.ts Armagh daily pressure data, quality controlled for Emulate project (hPa)
/pressure/cor/emulate_armagh.ts.diurnal.adj Armagh daily pressure data adjusted for diurnal variation (hPa)
/pressure/calibrated/daily/arm-daily-press-1850-2001 Daily Pressure readings from the Emulate project
/pressure/calibrated/monthly/mon-m-pres Monthly means of above
/pressure/calibrated/seas-ann/seas-ann-pres Seasonal and annual means
/pressure/calibrated/monthly/ARMAGH2 Provisional monthly mean pressure data for Armagh (1796-2001) from the Emulate project together with comparison data held by the UKMO for Armagh (Armagh Lustrum, 1796-1910) and Edinburgh (1796-1999)