Armagh Observatory, Maximum and Minimum Air Temperature Series

Maximum and Minimum Thermometers were installed at Armagh Observatory during 1843 and readings from these and similar thermometers were recorded daily until mercury in glass thermometers were withdrawn by the UK Met Office in 2019? It is expected that mercury in glass replacements may be reinstated in 2022. In the interim, digital maximum and minimum temperature readings have been made. A full comparison of the new digital system with the former glass thermometers has yet to be completed.

A comprehensive description of the equipment used for measuring air temperature at Armagh Observatory and the corrections necessary for instrumental error, exposure and the time of reading has been published in the International Journal of Climatology, Volume 25 by Butler etal. (2005a) Please refer to this for general information on the three principal air temperature datsets from Armagh, namely Series I (twice daily readings of air temperature, 1795-1825, 1833-1882), Series II (daily maximum and minimum temperatures, 1844-current) and Series III (twice-daily dry-bulb temperature readings, 1844-1965). Further details of the corrections made to standardise the Maximum and Minimum temperature series are given in another paper in the Armagh Observatory Meteorological Data series, Butler et al. (2005b).

References

Butler, C.J.,Garcia-Suarez, A.M., Coughlin, A.D.S. and Morrell, C. (2005a) Air temperature at Armagh Observatory, Northern Ireland from 1796 to 2002. Int. J. Climatol. 25, 1055-1079.

Butler, C.J., Garcia-Suarez, A.M., Coughlin, A.D.S. and Cardwell, D. (2005b)Meteorological Data recorded at Armagh Observatory: Volume 2 - Daily, Mean Monthly, Seasonal and Annual, Maximum and Minimum Temperatures, 1844-2004.

Details of Individual Files in this directory

daily/raw-verif/ tmax1844_1849 ..... tmin1844_1849 etc
daily readings from the log book in decadal blocks

daily/calibrated/tccmax1844-2004, tccmin1844-2004
daily data calibrated according to details in publications

monthly/TMAXC-MON-C, TMINC-MON-C
Mean monthly maximum and minimum calibrated temperatures for each year

monthly/tm-mon-maxmin-dtr-A
Mean monthly maximum, minimum, and mean daily temperature range for each month in decimal year

seas-ann/tm-an-maxmin-dtr
Mean annual maximum and mininum temperature and daily temperature range

seas-ann/tm-seas-maxmin-dtr
Mean seasonal maximum and minimum temperatures and daily temperature range

Archive References

ARM/MET/001060, ARM/MET/001067, ARM/MET/001068, ARM/MET/001072, ARM/MET/001073, ARM/MET/001077