

The Link between the Solar Dynamo and Climate - the Evidence from a long Mean Air Temperature Series from Northern Ireland,
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Abstract

It has been shown by Friss-Christensen and Lassen (1991) that there is a close correspondence in the behaviour of the mean northern hemisphere air temperature and the length of the sunspot cycle, over the period 1861-1990. This result would appear to be of considerable importance for studies of both past and future climate and suggests that as the solar dynamo speeds up it causes, by some process as yet unknown, an increase in the temperature of the Earth's troposphere. In this paper we extend the comparison between sunspot cycle length and temperature back to the late 18th century using data accumulated at Armagh Observatory since 1795. Our data strongly support the contention that solar variability has been the principal cause of temperature changes over the past two centuries.