



Solar signal in recent climate

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This paper will review the evidence for a solar influence on climate on decadal to centennial timescales. For nearly thirty years direct measurements of solar irradiance from satellites have permitted a quantitative assessment of the variability in the solar energetic input to Earth while over forty years of meteorological records have been compiled into global 'reanalysed' datasets. The paper will discuss the extent to which statistically robust solar signals in atmospheric temperature and wind fields, and in other meteorological parameters such as the North Atlantic Oscillation, can be extracted from these datasets. It will go on to assess the ability of climate models to reproduce the apparent signals and the implications of these results for the mechanisms involved in determining sun-climate links on a much wider range of timescales.