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## **The Sun's magnetic activity and its effects on Earth**

For much of the 20th C the global warming trend has been accompanied by an increase of the Sun's magnetic activity (11-y sunspot cycle). This has triggered a (still ongoing) debate about the degree of significance of correlations between the Sun and meteorological observables, about possible as yet unrecognized mechanisms of variability within the Sun itself, and ways in which climate might be more sensitive to small solar phenomena than realized so far. The current status of our knowledge of the Sun are reviewed in this context. Though nothing convincingly relevant for climate has yet been found, the question itself has revived the study of the Sun's magnetic activity, some spectacular examples of which will be highlighted.