

Research Highlights

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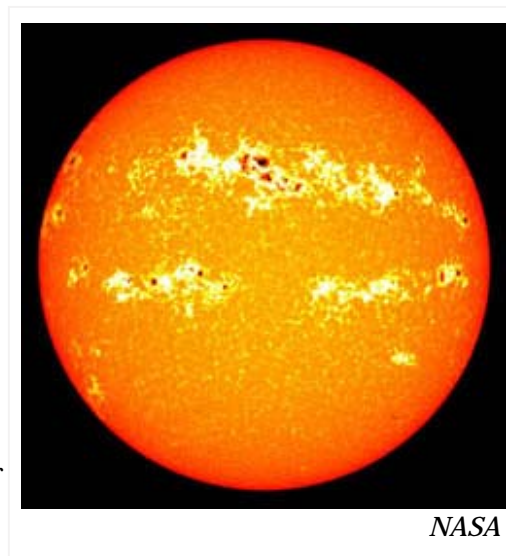
Solar low scenario

Olive Heffernan

[***Geophys. Res. Lett.* 37, L05707 10.1029/2010GL042710 \(2010\)**](#)

A weakening of the sun's activity, such as happened in the late seventeenth century, would only moderately offset global warming, finds a new study. The sun is currently in a phase of low activity, leading some to suggest that its warming influence will wane further in the coming decades to the extent that Earth could experience a 'grand solar minimum'.

Georg Feulner and Stefan Rahmstorf of the Potsdam Institute for Climate Impact Research in Potsdam, Germany, used a coupled climate model to explore how a lull in solar activity could influence future temperatures. They assumed that during a grand solar minimum, the amount of radiation reaching Earth would be similar to that during the Maunder Minimum, a period of low solar activity linked to the noticeably low temperatures of the Little Ice Age that began in about 1645. They found that by 2100 temperatures would be no more than 0.3 °C lower than in a scenario with solar activity similar to recent decades.



The authors conclude that a grand solar minimum would reduce human-induced global warming only slightly. They also note that any offset in warming would be temporary, lasting at most several decades or a century.

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