

# 1859 solar flare, ozone depletion studied

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U.S. scientists believe an 1859 solar flare destroyed more of the Earth's ozone than did a 1989 solar flare -- the strongest ever monitored by satellite.

Researchers led by Brian Charles Thomas of Washburn University used data on nitrate enhancements from Greenland ice cores to determine the September 1859 solar proton event released 6.5 times more energy than did the 1989 event.

Models using that energy release showed 3.5 times more ozone was destroyed during the 1859 episode than in 1989. And since ozone regulates the amount of harmful ultraviolet radiation reaching Earth, the researchers said understanding intense solar proton events will be important in predicting potential damage to the biosphere.

The study by Thomas, Charles Jackbon of the Goddard Space Flight Center, and Adrian Melott of the University of Kansas appears in the current issue of the journal *Geophysical Research Letters*.

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