



EXPERIENCE THE 2017 ECLIPSE ACROSS AMERICA THROUGH THE EYES OF NASA

<http://eclipse2017.nasa.gov>

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Credit: Rick Fienberg, TravelQuest International and Wilderness Travel



Credit: S. Habbal, M. Drudmüller and P. Aniol

ECLIPSE-INDUCED CHANGES IN THE IONOSPHERE



Overview

The ionosphere, an electrically charged region of Earth's upper atmosphere, is affected by processes in deeper levels of the atmosphere as well as by incoming Sunlight and particles. Electrons and atoms in the region are constantly shaken by travelling ionospheric disturbances, which move in ripples through the charged gas, ionized by the Sun's ultraviolet light. These disturbances in the ionosphere are often caused by a phenomenon known as atmospheric gravity waves, which can be triggered by eclipses. A team, led by Phil Erickson of Massachusetts Institute of Technology (MIT) Haystack Observatory in Westford, Massachusetts will use an extended network of sensors to monitor the ionosphere as it crosses America, in order to understand the large-scale effects of these disturbances.

Eclipse Science

Using over 6,000 ground-based sensors along with data from NASA's space-based Thermosphere Ionosphere Mesosphere Energetics and Dynamics, or TIMED, mission, the team will monitor the changes in the ionosphere in real-time. The data will be publicly available during the eclipse and available online afterwards.

ADDITIONAL RESOURCES:

TIMED Mission Project Home Page: <http://www.timed.jhuapl.edu>



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