



EXPERIENCE THE 2017 ECLIPSE ACROSS AMERICA THROUGH THE EYES OF NASA <http://eclipse2017.nasa.gov>

AUGUST 21, 2017



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



Credit: Rick Fienberg, TravelQuest International and Wilderness Travel

TESTING A POLARIZATION SENSOR



Overview

In Madras, Oregon, a team of NASA scientists led by Nat Gopalswamy at NASA's Goddard Space Flight Center in Greenbelt, Maryland will point a new, specialized polarization camera at the Sun's faint outer atmosphere, the corona, taking several-second exposures of the Sun at four selected wavelengths in just over two minutes. Their images will capture data on the temperature and speed of solar material in the corona. Currently these measurements can only be obtained from Earth-based observations during a total solar eclipse.

Eclipse Science

To study the corona at times and locations outside a total eclipse, scientists use instruments called coronagraphs, which mimic eclipses by using solid disks inside the instruments to block the Sun's bright face in a manner that approximates the function of the Moon's shadow. The new camera incorporates thousands of tiny polarization filters to read light polarized in different directions simultaneously. Testing this instrument is a crucial step toward improving coronagraphs and ultimately, our understanding of the corona—the very root of the solar radiation that fills up Earth's space environment.

ADDITIONAL RESOURCES:

The Sun-Earth Connection: <https://nasa.gov/sunearth>



FS-2017-7-069-GSFC