The Atmospheric Science User Forum

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December 2017

SAGE III/ISS V5 Data Release

The first wave of atmospheric data from SAGE III/ISS is now available for public use through NASA’s Atmospheric Science Data Center. Launched February 19, 2017, the instrument is now providing measurements of ozone, aerosols and nitrogen dioxide. SAGE III/ISS scientists are seeking feedback on this initial data from the international atmospheric science community. The initial release of SAGE III/ISS products focuses on solar occultation. While not included initially, later releases will include lunar occultation and water vapor data.

Currently Available SAGE III/ISS L1B & L2 Solar Event Products

- Species Profiles (HDF-EOS) V5 (g3bssp)
  http://doi.org/10.5067/ISS/SAGEIII/SOLAR_HDF4_L2-V5.0

- Species Profiles (Native) V5 (g3bsspb)
  http://doi.org/10.5067/ISS/SAGEIII/SOLAR_BINARY_L2-V5.0

- Transmission Data (HDF-EOS) V5 (g3bt)
  http://doi.org/10.5067/ISS/SAGEIII/SOLAR_HDF4_L1B-V5.0

- Transmission Data (Native) V5 (g3btt)
  http://doi.org/10.5067/ISS/SAGEIII/SOLAR_BINARY_L1B-V5.0

Subsequent data releases will follow a monthly release schedule. Stay connected for additional SAGEIII-ISIS data products, documentation and data ordering options. Click here to subscribe for the SAGE news list to receive emailed updates.

The plots below show a latitude-altitude cross section of nitrogen dioxide and aerosols (extinction ratio) for both sunrise and sunset during June 2017.

Nitrogen dioxide displays strong variability during the day, low amounts at sunrise, and much larger amounts at sunset. Sunlight causes the increase in nitrogen dioxide during the day.

Stratospheric aerosols peak in the equatorial lower stratosphere and remain well contained in the tropics.

MISR Imagery

August 27, 2017 Tropical Storm Harvey Spotted

The Multi-angle Imaging SpectroRadiometer (MISR) instrument on NASA’s Terra satellite passed over then-Tropical Storm Harvey about noon local time, the day after the storm first made landfall in Texas as a Category 4 hurricane. At this time, the center of the tropical storm was located just northwest of the city of Victoria and maximum wind speeds on the ground were around 40 miles per hour according to the National Oceanic and Atmospheric Administration (NOAA), which matches well with the near-surface winds calculated by MISR to the west of Corpus Christi.

Questions from the Forum

DSCOVR User Question:

Why we cannot see the moon during solar eclipses on the march 9th 2016 images...the EPIC camera is 4 times further away from the earth than the moon and the shadow from the eclipse is clearly visible... please explain where the moon is in the image and why we cannot see it, the moon was supposed to be along the ecliptic plane that day as it passed over which would put it directly at the center of the earth from the L1 EPIC field of view.

Answer:

The angle between EPIC and the Sun on March 9th 2016 is 8.78 degrees. If we see the shadow, we cannot see the moon. Note that the angular size of the Earth is around 0.5 degrees.