

November 16 - November 22, 2001

The Terra spacecraft is in nominal mode. All instruments are in nominal science mode.

The Leonid meteor shower peaked on November 18, 2001. Components of the Terra Flight Operations Team engineering staff provided 24-hour support in the EOS Operations Center on November 18 to be on-hand to respond quickly in the event of any Leonid-related anomalies. The meteor shower passed without incident to Terra. The only potential effect observed during the event was several saturations of the on board Tri-axial Magnetometer.

The MISR Team performed instrument monitoring of the Leonid event. Two 5-minute bursts of expedited data were generated by MISR to coincide with two predicted spikes in meteor activity on November 18. Analysis of the data reveals nothing out of the ordinary in the imagery.

Precursor activities for the upcoming sequence of Inclination Adjust maneuvers have commenced. In addition to ongoing Flight Dynamics analyses, a Propellant Gauging Command Authorization meeting was held on November 19, 2001, to begin the process of increasing propellant tank temperatures and observing the cooling curve to obtain an accurate estimate of the propellant remaining on board Terra. The propellant remaining is estimated after each Drag Make-up maneuver as part of the pre- and post-maneuver Flight Dynamics analyses, but this is the first time since the early part of the mission that actual Propellant Gauging will be performed. The first Inclination Adjust maneuver in the sequence is targeted for December 12, 2001. Current estimates of solar activity indicate that a Drag Make-up maneuver will be required about a week prior to the first Inclination Adjust maneuver.

Several MDA2BITE trips (High Gain Antenna Motor Drive Assembly opto-coupler Single Event Upsets) occurred during this reporting period, with no resultant non-recoverable data loss.

Terra Plans:

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- Planning for next Drag Make-up Maneuver
- Planning for first Inclination Adjust maneuver
- ASTER Direct Downlink (DDL) testing over GSFC
- Continued certification testing with commercial polar ground station sites
- Continued planning for additional Polar Ground Station Science Data Downlink demonstrations