

June 22 - June 28, 2001

The Terra spacecraft is in nominal mode. All instruments are in nominal science mode with the exception of MOPITT, which has been in Standby Mode since experiencing a cooler system anomaly on May 7, 2001, and MODIS, which is in Survival Mode after experiencing an anomaly on June 15, 2001.

A decision was made to restart MODIS on Power Supply 1 and Command Processor B, and the restart was executed on DOY 179 (June 28, 2001 at ~3:00 PM EDT). The B side processor did properly come-up when initiated. Preliminary analysis indicates that Power Supply 1 is working but that something not fully understood is happening within the processor. Analysis is continuing to determine if this is a temperature related anomaly experienced in thermal vacuum or a problem experienced due to the new cross strap configuration. Analysis is ongoing and there are daily teleconferences conducted between the NASA Goddard-based anomaly resolution team and the instrument vendor.

Several tests were conducted this week on the MOPITT instrument in an effort to determine the correct operating parameters to bring channels 5-8 back to operating temperature. The displacer mechanism in compressor B appears to no longer be functional, rendering the B-side cooler inoperative. A test is now in progress at slightly reduced compressor amplitudes and frequencies ("balanced" between coolers A and B) to determine if proper cooling can be achieved with compressor A without overheating compressor B, as has happened in earlier test scenarios. This test has now been running for almost 24 hours and has brought the instrument temperatures closer to the operational range than in previous tests. Over the next few days the MOPITT team will continue the step-wise changing of parameters to bring the cooler fully into operational range for channels 5-8.

A successful Drag Make Up Maneuver with a 20.7-second burn duration was conducted on DOY 178 (June 27, 2001). A Master Oscillator frequency adjust was also performed on DOY 178. ("DOY" refers to day of the year.)

The ASTER shortwave infrared (SWIR) Temperature anomaly investigation is ongoing. SWIR heaters 3 and 4 were turned off on June 20 and the SWIR Capillary Pumped Heat Transport System set point will be incrementally lowered by 4.5 degrees starting on or about July 24.

<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.