

MODIS IOT Weekly Report

Mission Operations Days: 2001/013 to 2001/019

January 12, 2001 20:00:00 GMT to January 19, 2001 20:00:00 GMT

Terra Spacecraft and MODIS Instrument Status:

Terra (AM-1) is in Normal Mode

MODIS is in B-side Science Mode

Blackbody	A Off; B On	Nominal
Calibration Electronics	A Off; B On	Nominal
Control Processor	A Off; B On	Nominal
Door: Nadir	Unlatched, open	Nominal
Space View	Unlatched, open	Nominal
Solar Diffuser	Unlatched, closed	Nominal
FDDI Formatter	A Off; B On	Nominal
FDDI Port	A On; B Off	Nominal
FIFO Memory	1 & 2 Off; 3 & 4 On	Nominal
Format Processor	A Off; B On	Nominal
Power Supply:1	Off	Nominal
2	On	Nominal
PV FPAs: VIS	A Off; B On	Nominal
NIR	A Off; B On	Nominal
SMIR	A Off; B On	Nominal
LWIR	A Off; B On	Nominal
PC FPA: LWIR	A Off; B On	Nominal
Radiative Cooler:		
Outgas Heaters	All Off	Nominal
LWIR FPA Heater	On	Nominal
SMIR FPA Heater	Off	Nominal
Scan Assembly	A Off; B On	Nominal
SDSM	Off	Nominal
SRCA	Off	Nominal
Survival Heaters: PS1	Enabled	Nominal
PS2	Enabled	Nominal
Timing Generator	A Off; B On	Nominal
Flight Software	Rev BD + 2 patches	Nominal
Inhibit Ids Set	None	Nominal

TMONs enabled

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Nominal

This Week's Completed MODIS Activities:

Friday, January 12, 2001

None

Saturday, January 13, 2001

013/16:59:42 ATC Move Formatter to Night ahead by 3:23 to ensure 50/50 day/night
013/17:17:25 FOT ATC commanding: Begin Slew to -3.584 degrees
013/17:20:29 ATC Set Formatter to Day Rate
013/17:20:31 ATC Set SCIABNORM Flag to ABNORM
013/17:20:33 ATC PC DC Restore to OFF
013/17:20:35 ATC PV DC Restore to OFF
013/17:20:37 ATC Sector Rotation to -3072 (EA to SV and OBCs)
013/17:27:07 ATC Sector Rotation to Zero (Normal)
013/17:27:09 ATC PV DC Restore to ON
013/17:27:11 ATC PC DC Restore to ON
013/17:27:13 ATC Set SCIABNORM Flag to NORM
013/17:27:15 ATC Set Formatter to Night Rate
013/17:29:39 FOT ATC commanding: Returned to nominal attitude
013/17:55:53 ATC Move Formatter to Day later by 3:23 to ensure 50/50 day/night

Note: For the second lunar calibration below, the spacecraft did NOT do a roll maneuver. Terra's nominal attitude allowed for a "free" view of the moon through the space view port.

013/23:35:13 ATC Move Formatter to Night ahead by 3:23 to ensure 50/50 day/night
013/23:54:04 ATC Set Formatter to Day Rate
013/23:54:06 ATC Set SCIABNORM Flag to ABNORM
013/23:54:08 ATC PC DC Restore to OFF
013/23:54:10 ATC PV DC Restore to OFF
013/23:54:12 ATC Sector Rotation to -3072 (EA to SV and OBCs)

Sunday, January 14, 2001

014/00:00:42 ATC Sector Rotation to Zero (Normal)
014/00:00:44 ATC PV DC Restore to ON

014/00:00:46 ATC PC DC Restore to ON
014/00:00:48 ATC Set SCIABNORM Flag to NORM
014/00:00:50 ATC Set Formatter to Night Rate
014/00:31:23 ATC Move Formatter to Day later by 3:23 to ensure 50/50 day/night

Monday, January 15, 2001

None

Tuesday, January 16, 2001

None

Wednesday, January 17, 2001

None

Thursday, January 18, 2001

018/21:17:40 ATC OA-16: SDSM Screened

018/22:56:32 ATC OA-15: SDSM Open

Friday, January 19, 2001

None

This Week's Scheduled MODIS Activities Not Completed:

None

Upcoming MODIS Events:

Friday, January 19, 2001

None

Saturday, January 20, 2001

None

Sunday, January 21, 2001

None

Monday, January 22, 2001

None

Tuesday, January 23, 2001

None

Wednesday, January 24, 2001
None

Thursday, January 25, 2001
None

Friday, January 26, 2001
None

Maneuvers:

A drag makeup maneuver was performed by the FOT at 017/19:38:00 to 017/21:08:00. The next MODIS Lunar Calibration Roll Maneuver is planned for 2001/043, February 12th

MODIS Anomalies:

No formatter anomalies have been detected since switching to B-side science operations. The MODIS IOT is continuing to monitor changes with the radiative cooler temperatures and focal plane power.

General Instrument Comments:

MODIS is in Science Mode on the B-side with the SVD and NAD open, operating with the Formatter Resolution Flight Software Patches (FRFSP). No new events have been witnessed by the FRFSP since the B-Side Transition on DOY 2000/304.

MODIS Telemetry Trends:

The Radiative Cooler intermediate stage temperature has slowly been increasing since approximately day 2000/240. During this time the LWIR focal plane heater margin has been decreasing. The IOT is continuing to trend these telemetry mnemonics.

Temperature trends are correlating with the solar beta angle. This includes a steadying of the intermediate stage outgas temperature. This temperature is expected to increase again when the beta angle gets smaller.

Non-MODIS Significant Events:

None.

Limited Life Item Status:

SRCA 10W Lamp #1: 179.2 of 500 hours

SRCA 10W Lamp #2: 139.2 of 500 hours

SRCA 10W Lamp #3: 148.4 of 500 hours

SRCA 10W Lamp #4: 61.5 of 500 hours

SRCA 1W Lamp #1: 556.6 of 4000 hours

SRCA 1W Lamp #2: 276.3 of 4000 hours

Solar Diffuser Door: 1507 of 3022 Movements

Nadir Aperture Door: 532 of 1316 Movements

Space View Door: 437 of 1316 Movements