STEREO MOC Status Report
Time Period: 2016:270 - 2016:276

STEREO Ahead (STA) Status:

1. The following Ground System anomalies/events occurred during this reporting period:

   - On day 270, during the DSS-14 support, the command uplink was lost at 1606z due to a transmitter issue. The station was directed to stay one-way for the remainder of the track to avoid further data loss. This anomaly resulted in the loss of 1358 frames of real-time telemetry only. See DR# G117506 for more information.

   - On day 271, during the DSS-25 support, turbo decoder lock was lost briefly at 1843z. This anomaly resulted in the loss of one frame of SSR data.

   - On day 273, during the DSS-54 support, turbo decoder lock was lost briefly at 1244z. This anomaly resulted in the loss of five frames of SSR data.

   - On day 275, during the DSS-55 support, the transmitter was red for the entire support. Also, turbo decoder lock was lost briefly at 1104z. These anomalies resulted in the loss of 4.5 hours of commanding and two tracking data and one frame of SSR data. See DR# M109576 for more information.

   - On day 276, during the DSS-55 support, the transmitter was red for the entire support. This anomaly resulted in the loss of 4.3 hours of commanding and two tracking data. See DR# M109578 for more information.

2. The following spacecraft/instrument events occurred during this week. The Ahead observatory operated nominally during this week.

   - On day 271, the 36th SECCHI stepped calibration was executed successfully at 1155z. This was the 5th SECCHI stepped calibration roll to be conducted without gyro use.

   - The average daily science data return for Ahead was 5.1 Gbits during this week.

STEREO Behind (STB) Status:

1. The following Ground System anomalies/events occurred during this reporting period:

   - None.

2. Detailed status of the recovery activities to restore operations from the Behind loss of communication anomaly, which occurred on October 1, 2014, are listed below.

   - Behind Observatory Status – From the last telemetry received on September 18th, low main bus voltage, 2 (#6 & 9) out of 11 battery cells are currently not functioning, attitude uncontrolled, rotating at a ~45 second period about its principal axis of inertia. Current orientation may support some solar array input. While propellant is suspected to be frozen, both propulsion tank latch valves are open and pressure transducer #2 is not functioning. Power switching boards are on; nearly all switched loads are off including the IEM (avionics) and PDU 1553 interface bus with the TWTA in standby and propulsion primary and secondary tank heaters on and –Y panel (R4) heaters on. EA mode is enabled. The battery charge rate is C/10. Necessary macro sequences have been tested to allow the peak power tracker in C&DH standby mode to protect the battery. These macro sequences will be loaded to EEPROM when the communications supports longer commands. Active recovery operations began with the carrier detection on August 21, 2016. Detailed status of the recovery activities to restore operations from the Behind loss of communication anomaly, which occurred on October 1, 2014, are listed below.

   - On day 271, during the two hour support with DSS-14, no carrier was detected by the DSN after repeatedly attempting to power on the TWTA. Transitioned to battery recovery operations which consisted of repeatedly sweeping a 3 kHz uplink range and sending commands for IEM switched power and 1553 off, TWTA to standby, primary and secondary tank and –y panel (R4) heaters on.

   - On day 274, during the 2 hour support with the 34m station DSS-26 using the 80 KW transmitter to minimize 70m

contentions, 200 commands were sent for battery state of charge recovery. This consisted of repeatedly sweeping a 3 kHz uplink range and sending commands for IEM switched power and 1553 off, TWTA to standby, primary and secondary tank and –y panel (R4) heaters on.

- On day 276, during the two hour support with DSS-63, no carrier was detected by the DSN after repeatedly attempting to power on the TWTA first using the –Z LGA then switching to the +Z LGA.