STEREO MOC Status Report
Time Period: 2016:277 – 2016:283

STEREO Ahead (STA) Status:

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

   - On day 277, during the DSS-15 support, turbo decoder lock was lost intermittently at 1639z. This anomaly resulted in the loss of 237 frames of real-time telemetry data. See DR# N110396 for more information.

   - On day 279, during the DSS-43 support, turbo decoder lock was lost intermittently beginning at 2233z through 2234z. This anomaly resulted in the loss of 10 frames of SSR data.

   - On day 280, during the DSS-34 support, turbo decoder lock was lost intermittently between 2304z and 2339z. This anomaly resulted in the loss of 4 frames or SSR data.

   - On day 281, during the DSS-15 support, the transmitter tripped off-line at 2013z, just before EOT. While SECCHI was able to get the instrument back in operational mode following the earlier reset, several SCMs and a few MOps recovery commands where not transmitted as planned. The remaining recovery SCMs and MOps commands were successfully sent on the following track. See DR# G117534 for more information.

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

   - On day 281, the SECCHI instrument reset at 07:37:02z. The SECCHI team reconfigured the instrument to operational mode by 1852z. This was the 41st reset of SECCHI on the Ahead observatory.

   - The average daily science data return for Ahead was 4.3 Gbits during this week.

STEREO Behind (STB) Status:

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

   - None.

2. Behind loss of communication anomaly occurred on October 1, 2014. Active recovery operations began with the carrier detection on August 21st, through September 23, 2016. Detailed status of the recovery activities to restore operations 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. 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.

   - On day 277, during the two hour support with DSS-63, no carrier was detected by the DSN. 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 PDU 1553 interface bus off, TWTA to standby, primary and secondary tank and –y panel (R4) heaters on.

   - On day 278, during the two hour support with DSS-14, no carrier was detected by the DSN. 185 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 PDU 1553 interface bus off. At 1530z, the transmitter lost modulation resulting in the aborting of 14 commands. The uplink was restored and command modulation was re-enabled. See DR# G117527 for more information.

   - On day 280, during the two hour support with DSS-14, at 1350z, initial commanding was delayed 19 minutes due to sub

reflector issue at the station. 155 commands were sent for carrier recovery. No carrier was detected by the DSN after attempting to power on the TWTA for 30 minutes. Transitioned to battery recovery operations which consisted of repeatedly sweeping a 3 kHz uplink range and sending commands for IEM switched power and PDU 1553 interface bus off. See DR# G117532 for more information.

- On day 281, during a 4.5 hour support with the 34m station DSS-26 using the 80 KW transmitter to minimize 70m contentions, only 345 out of the expected 800 commands were transmitted during the support. A misconfiguration at the station prevented all commands within a block to be transmitted. Since each command block sends the same commands multiple times, the impact was minimal, other than not being able to maximize the amount of commands sent during the track. No carrier was detected by the DSN after attempting to power on the TWTA for 30 minutes. Transitioned to battery recovery operations which consisted of repeatedly sweeping a 3 kHz uplink range and sending commands for IEM switched power and PDU 1553 interface bus off.

- On day 282, during a 4.5 hour support with the 34m station DSS-26 using the 80 KW transmitter to minimize 70m contentions, 480 commands were transmitted during the support. No carrier was detected by the DSN after attempting to power on the TWTA for 30 minutes. Transitioned to battery recovery operations which consisted of repeatedly sweeping a 3 kHz uplink range and sending commands for IEM switched power and PDU 1553 interface bus off.

- On day 283, during a 5 hour support with DSS-14, 540 commands were transmitted during the support. No carrier was detected by the DSN after attempting to power on the TWTA for 30 minutes. Transitioned to battery recovery operations which consisted of repeatedly sweeping a 3 kHz uplink range and sending commands for IEM switched power and PDU 1553 interface bus off.