

STEREO MOC Status Report
Time Period: 2013:196 - 2013:202

STEREO Ahead (STA) Status:

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

- On day 198, data file transfers failed from the DSN and to the SSC via the MOC SSH software. This failure was due to a new version of OpenSSH that was deployed late Tuesday evening to comply with new security requirements. While this new version of SSH was deployed successfully to other APL missions, the STEREO implementation was unique. The old version of SSH was reinstalled on day 199 at 1430z and the SSC data transfers began working again. The DSN data files were retrieved manually by MOPS and the science data processing, level zero and other data products were made available later on day 199.
- On day 200, during the DSS-43 support, turbo decoder lock was lost intermittently beginning at 201-0114z through 201-0235z. This anomaly resulted in the loss of seven frames of SSR data.

2. The following spacecraft/instrument events occurred during this week:

- The average daily SSR playback volume for Ahead was 4.4 Gbits during this week.

STEREO Behind (STB) Status:

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

- On day 197, during the DSS-34 support, the ranging data was degraded beginning at 0411z through 0740z due to weather. See DR #C109448 for more information.
- On day 198, during the DSS-14 support, the receiver unexpectedly went out of lock beginning at 1921z through 1925z due to antenna pointing errors. This anomaly resulted in the loss of 17841 frames of SSR data. See DR #G114086 for more information.

- On day 198, data file transfers failed from the DSN and to the SSC via the MOC SSH software. This failure was due to a new version of OpenSSH that was deployed late Tuesday evening to comply with new security requirements. While this new version of SSH was deployed successfully to other APL missions, the STEREO implementation was unique. The old version of SSH was reinstalled on day 199 at 1430z and the SSC data transfers began working again. The DSN data files were retrieved manually by MOPS and the science data processing, level zero and other data products were made available later on day 199.
- On day 199, during the DSS-34 support, the station was unable to lock telemetry and ranging for the entire support (199:23:20z - 200:03:30z) due to heavy rain over the Canberra complex. The bad weather delayed the detection of the spacecraft transponder reset anomaly, listed below. See DR #C109456 for more information.
- On day 200, during the DSS-54 support, the station was unable to lock telemetry until 1813z (1 hr. & 43 min. late) due to the Fault protection (Autonomy Rule #36) detection of the transponder reset and reconfiguring the transponder to emergency uplink and downlink data rates (11.71 bps) on the high gain antenna (HGA). The spacecraft was configured back to the nominal downlink data rate (120 Kbps) at 1857z and MOPS began the anomaly recovery procedure.

2. The following spacecraft/instrument events occurred during this week:

- On day 199, the Behind observatory autonomy rule #36 (Transponder Reset Detection) fired at 04:27:49z. Fault protection reconfigured the transponder to emergency downlink data rate (11.71 bps) on the high gain antenna (HGA). The observatory remained in operational mode, with all instruments collecting data. Unfortunately, the day 199 scheduled track at 2325z with DSS-34 was canceled due to heavy rain, which delayed the discovery of the anomaly until the next scheduled support at 200-1630z with DSS-54. The anomaly recovery was completed during the DSS-24 support at 201-0200z. Due to the lost track and anomaly recovery, approximately twelve hours of science data was lost for the PLASTIC and SWAVES instruments. The cause of the anomaly is currently under investigation by the engineer team.

- On day 200, the SSR science partitions filled as follows:

SWAVES (Part 13) reached 100% full at 1909z for 4.9 hours.
PLASTIC(Part 17) reached 95% full at 2102z for 3.0 hours.

The cause was the transponder reset anomaly and recovery on DOY 199-201.

- On day 201, the SSR science partitions filled as follows:

SWAVES (Part 13) remained 100% full at 0000z for 2.4 hours.
SWAVES (Part 13) reached 100% full at 0752z for 6.6 hours.
PLASTIC(Part 17) remained 95% full at 1214z for 0.9 hours.
PLASTIC(Part 17) reached 95% full at 0708z for 7.5 hours.

The cause was the transponder reset anomaly and recovery on DOY 199-201.

- On The average daily SSR playback volume for Behind was 3.0 Gbits during this week.