

STEREO MOC Status Report
Time Period: 2006:299 - 2006:302

STEREO Ahead (STA) Status:

1. The Ground System had no significant anomalies during the reporting period.
2. Ahead spacecraft performance has been very good including all launch events executing as expected. All instruments have now been powered with the exception of IMPACT SEP and some early checkouts have occurred. The SWAVES antennas have been deployed, the IMPACT Boom is not deployed but is scheduled for DOY 305. The first Engineering Burn occurred as scheduled and executed without incident on DOY 301. The perigee raising A1 Maneuver executed on DOY 303 and all indications are that it was nominal. This was an 11.7 m/sec delta V. Results of this maneuver from the FDF should be available on DOY 304 to verify maneuver performance. During preparation for the maneuver and following setting of the Thruster Firing Warning bit, the IMPACT IDPU for PLASTIC set the Power Off Request bit and Autonomy Rule 81 fired powering off the PLASTIC instrument. The following Ahead spacecraft anomalies have been identified during this reporting period:

- At approximately 301-0725Z the Ahead spacecraft starting getting continuous count increments to the CE_MEM_SCRUB_MACH_CHK_ERR_CNT. The Flight Software team has identified the cause of the MEM_SCRUB_EDAC_MACHINE_CHK anomalies as a software defect in the memory error interrupt handler that causes the processor NOT to correct single-bit errors. A patch has been prepared to resolve this anomaly should it be found necessary. It has been determined that a system reset would cause Boot to refresh all RAM, thereby correcting any single-bit errors.
- On DOY 300, following deployment of the SWAVES antennas, minor oscillations developed in the spacecraft Y axis. On DOY 302 a change to "soften" some control algorithm parameters was instituted. This change successfully nulled out the antenna oscillations. These changes have been successfully

run in the stand alone environment and the HIL prior to upload. These are most likely not the final set of parameters that we will use in heliocentric orbit. On-board characterization with the Guide Telescope is required.

STEREO Behind (STB) Status:

1. The Ground System had no significant anomalies during the reporting period.
 - On DOY 299-20:20 DSS-25 had a power loss which took out the antenna. DSS-34 was able to come up early and telemetry was flowing from DSS-34 by 20:36.

2. Behind performance has been very good including all launch events executing as expected. All instruments except for IMPACT SEP have been powered and some early checkouts have occurred. The SWAVES antennas have been deployed, the IMPACT Boom is not deployed but is scheduled for DOY 305. The first Engineering Burn occurred as scheduled and executed without incident on DOY 301, this was a .2 m/sec delta V. The perigee raising A1 Maneuver executed on DOY 303 and all indications are that it was nominal. This was an 11.7 m/sec delta V. Results of this maneuver from the FDF should be available on DOY 304 to verify maneuver performance. The "softer" G&C control algorithm parameters were loaded to Behind prior to the SWAVES antenna deployments based on the results from Ahead. During preparation for the maneuver and following setting of the Thruster Firing Warning bit, the IMPACT IDPU for PLASTIC set the Power Off Request bit and Autonomy Rule 81 fired powering off the PLASTIC instrument. No significant anomalies have occurred on the Behind spacecraft.