A DSPSE status meeting was held at 1000 (EST) at the BATCAVE on 25 March 94 and chaired by Lou Wheatcraft. This meeting discussed spacecraft activities from 1000 on 3/24/94 to 1000 on 3/25/94. This memorandum briefly summarizes the results of the meeting.

**Engineering**

We are currently doing orbit 161 imaging and all data transmission is complete up to orbit 160. There were no DHU resets during the last 24 hours.

All spacecraft systems are nominal at this time. The RCS tank pressures are currently at 267 psi and will probably be approximately 270-275 psi at the time of the first periselene rotation burn. Reaction wheel #1 is now at 1150 rpm during Earth pointing. The ACS engineer is monitoring the speed, but the plan is to not do a momentum dump and take the momentum out as part of the first rotation burn when the jets are activated.

The RCS engineer has decided to leave the latch valve/IDC sequence alone and use the same sequence as has been used for previous burns. He did widen the pressure limits, which should help prevent going to the critical mode during the burn.

The bistatic radar test is still on for orbits 167 and 169. The timelines for these orbits have been completed and given to flight software engineers for scripting and testing of those scripts.

**Flight Software**

No new problems.

The burn script checkout is beginning on the test bed.

The problem with the test bed simulator interface was discussed again. The main problem is that the simulator’s original design requirements were for interface verification and testing. It was not designed to support the number of images the spacecraft takes, especially at the rate for the asteroid flyby. The asteroid flyby software engineers again stated that the simulator problem is impeding their development efforts. This is being looked into some more.

**TAMP**

The periselene rotation burns will take place on 26 March at 0220 GMT (tonight) on orbit 163 (106 m/s) and the other at approximately 1251 GMT (tomorrow morning) (106 m/s) on orbit 165. Each burn will last approximately 70 seconds. The final burn plan was delivered to the DMOC last night. Orbit 164 will be an 8 hour orbit (rather than the normal 5 hours) and will result in a
75 minute shadow period. A contingency trim burn is being scheduled for 25 hours after the second burn. Even if both burns are off by 2%, a trim burn any time within 48 hours will be able to align the orbit properly to fill the mapping gaps during the second month.

TAMP developed a contingency plan in case the second burn is not accomplished on time. The plan is that, if the second burn does not take place, a contingency burn will be scheduled for 6.5 hours later. This burn will place the spacecraft in an orbit that crosses the correct longitudes at the equator (necessary to image the gap between the first months imaging), but the inclination will be off (but within limits) and the lighting will be off (lower angle) by approximately 9°.

TAMP announced that the GSFC FDF would not be supporting Clementine maneuver planning after the end of March. TAMP will perform all maneuver planning. The FDF will still process tracking data and support the orbit determination task.

**Sensors**

Sensor operation during lunar imaging continues to be nominal.

There were no Vega images in the UV/Vis camera the last several orbits. This was explained as a sequence table problem and a fix has been developed. The next Vega observations will be after the RF blockage period.

The repeating image problem at the beginning of SSDR segments is still happening. It has been determined that the repeating images are the same as the repeating images at the end of the previous segment. Why this is happening is still being investigated.

**SMOP - Mapping Results**

Image collection and data transmission has been completed for orbits 156 through 160 and orbit 161 mapping is in progress. Mapping is going very well.

Orbit 163 will be the last mapping orbit for the first month of mapping. Images will be taken from 90°S latitude to 50°N latitude, at which time the sensor doors will be closed, sensors turned off, the spacecraft commanded to the burn attitude, and to an 8 kbps downlink rate. This all happens at 40 minutes before the first burn. The burn will occur at 0220 GMT and last for approximately 70 seconds.

Following the burn, the spacecraft will point the HGA to Earth and the data from orbit 163 mapping will be transmitted. While this is happening, the scripts for the second burn will be scheduled and the second ΔV burn request will be made. SMOP is planning on using the startracker to image the limb when entering the shadow to support the horizon glow experiment. After that, we will transmit that data and then there will be a 57 minute RF blockage period. The RF blockage period ends approximately 90 minutes before the second burn, which is also when TAMP will have new burn parameters, which will be uploaded if required. The second burn occurs at 80°S latitude descending, at 1251 GMT.

At 50°S latitude, imaging for orbit 165 will begin (1330 GMT). This will be a type B mapping orbit. The NIR cryocooler will be turned on 45 minutes before this, which has it being turned on before the burn. The LWIR cryocooler will be turned on after the burn. Following orbit 165 imaging, the data will be transmitted and orbit 166 imaging scripts for a type A orbit will be uplinked. Because of the RF blockage times, there will be no uncompressed images and the only
HiRes imaging will be over the poles. Orbit 167 will be a modified type B orbit and imaging will end at 40°N latitude and the 60 minute bistatic radar test will be performed. Ten minutes after the BSR test, there will be a 70 minute RF blockage followed by the SSDR downlink. Orbit 167 will be conducted with the -X axis forward. Orbit 168 will be a modified Type A RF blockage script, and then Orbit 169 will be conducted similar to orbit 167 with another BSR test at the end.

**Scheduling**

DSN is scheduled to cover the burns, obtain the required tracking data, and for the bistatic radar tests. We could not get DSN to fill the 1 hour 11 minute gap between Pomonkey and Canberra 34 m support. There is 26 m coverage during this period, but engineering would like to have an 8 kbps downlink and normally we can only use a 2 kbps rate during burns with the 26 m antennas.