A DSPSE status meeting was held at 1000 (EST) at the BATCAVE on 24 March 94 and chaired by Don Horan. This meeting discussed spacecraft activities from 1000 on 3/23/94 to 1000 on 3/24/94. This memorandum briefly summarizes the results of the meeting.

**Engineering**

We are currently doing orbit 156 imaging; all data transmission complete up to orbit 155. 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 266 psi and will probably be approximately 270-275 psi at the time of the first periselene rotation burn. Reaction wheel #1 is now a little over 1000 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 RF engineer performed a short auxiliary oscillator test on transmitter B to characterize the frequency in preparation for the bistatic radar test.

The spacecraft is using startracker B and will stay on startracker B for the rest of mapping.

A desire to be able to use an 8 kbps downlink during the burns was expressed. Scheduling will see if DSN can schedule a 34 m antenna during this time.

**Flight Software**

No new problems. A concern was expressed on the scheduling of the test bed. With the upcoming rotation burns, bistatic radar tests, and new mapping scripts, the asteroid flyby software development needs to be bumped. The asteroid flyby software engineers agreed and also stated that they were having problems with the simulator that was impeding their development efforts. There appears to be a problem with the H/W frame grabber. This is being looked into.

A question was asked on the timeline for loading the scripts for the two rotation maneuvers. It was decided to load both sets of burn scripts along with orbit 163 mapping scripts while orbit 162 SSDR data was being downlinked, and then schedule the orbit 163 mapping scripts and the rotation burn #1 scripts as well as load the ΔV register to schedule the burn. Then, following the first burn, the second burn scripts (which are already loaded) will be scheduled along with the ΔV register updated to schedule the second burn. Then, at 1.5 hours before the second burn, if the final maneuver plan requires new scripts and the ΔV register to be updated, this will be done with plenty of time. If no update is required, the spacecraft will already have the required scripts.
Another topic discussed was whether or not the RCS burn sequence should be modified to open the RCS latch valves before starting IDC to avoid the pressure spikes that have caused a mode change during past burns when the pressure in the RCS tanks was so high. It was decided that the RCS engineer needed to decide, but for these two critical burns we would rather not change the way we have done past burns unless there is a good rationale for the change and we have a high level of confidence in the change.

**TAMP**

The periselene rotation burns are still scheduled for 26 March at 0220 GMT on orbit 163 (106 m/s) and the other at approximately 1251 GMT (106 m/s) on orbit 165. Both burns will be approximately 70 seconds. The final burn plan will be delivered to the DMOOC by 2100 GMT and ready for the flight software engineers by 2300 GMT. 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 for the second month.

TAMP liked the idea of waiting to dump the momentum as part of the burn preparations because this would minimize effects on the orbit. FDF received good tracking data yesterday and was able to get a good solid orbit solution.

TAMP was asked to develop a contingency plan in case the second burn is not accomplished on time.

**Sensors**

Sensor operation during lunar imaging continues to be nominal.

A program was developed to aid in getting rid of the 1950 time tag problem.

There is a possible problem in that it seems there are unexplained gaps in UV/Vis images from the south pole to 70 degrees latitude on orbit 133. The sensor engineers will look into this problem.

A graph was shown that indicates there has been no decrease in HiRes sensitivity.

**SMOP - Mapping Results**

Imaging has been completed for orbits 152 through 155 and orbit 156 mapping is in progress. Mapping is going very well.

On orbit 157, HiRes camera color images will be taken over the Apollo 17 landing site.

A memo will be distributed today outlining how mapping scripts will be modified during the orbits that will have RF blockages.

A study is in progress on the time errors for each orbit. The data indicates that the console engineers need to be more consistent in the time updates and the updates should be made at the south pole just before imaging begins. (After the RF blockage period is over, the flight software patch will be installed on the spacecraft to fix the loss of time during slew problem, and then this problem will go away.)
Scheduling

DSN is scheduled to cover the burns, obtain the required tracking data, and for the bistatic radar tests. We are still working on getting full coverage for the contingency trim burn.