A DSPSE status meeting was held at 1000 (EST) at the BATCAVE on 28 March 94 and chaired by Don Horan. This meeting discussed spacecraft activities from 1000 on 3/26/94 to 1000 on 3/28/94. This memorandum briefly summarizes the results of the meeting.

**Engineering**

All spacecraft systems are nominal at this time. A trim maneuver was performed Sunday at 1830 GMT to fine tune the orbit. The battery pressure is getting down to 350 - 360 psi, but returns to the fully charged state before the next shadowed period. The transmitter is being turned off during the RF occultation periods. The RCS tank pressures are at 348 psi.

The bistatic radar tests scheduled for orbits 167 and 169 were not successful. During the orbit 167 attempt, after an hour into the test, it was determined that the Madrid 70m subnet local oscillator would not accept the command to tune to the proper spacecraft frequency. We had completed all the detailed planning at our end and DSN said they would have no problem supporting, so this problem was a surprise. No useful data was collected during the orbit 167 test attempt. Because it was a weekend and only 10 hours between this test and the orbit 169 attempt would not allow enough time to make the required hardware and software changes, the orbit 169 attempt was canceled. The NRL RF engineer plans on developing a detailed verification procedure to demonstrate that the DSN site can support the next test opportunities, which will occur two weeks from now. This will include verifying the ability to point at a location on the lunar surface, while so pointing verify receipt of lunar background noise, and the ability to lock onto the spacecraft’s downlink frequency. A rehearsal will also be scheduled.

**Flight Software**

No new problems. Flight software engineers supported the burns well. There have been no resets. Test bed time in the afternoons is being made available to the GNC flyby software engineers to develop and verify the flyby software. Apparently, the simulator image rate problem has been fixed. The patch to fix the time loss during slews will be schedule for upload during orbit 185 on Wednesday.

**TAMP**

A contingency trim burn was performed. Without the trim burn, it looked like the overlap requirement would be violated after 4 days. With the trim burn, this requirement will be met until April 12 when a maintenance burn is scheduled to raise the perilune as well as adjust the overlap. As summary of the rotation burns was presented:
<table>
<thead>
<tr>
<th>ROT</th>
<th>Start Time</th>
<th>Planned Burn Mag</th>
<th>Actual Burn Mag</th>
<th>Est. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROT #1</td>
<td>3/26 02:21:07.26</td>
<td>105.787 m/s</td>
<td>106.041 m/s</td>
<td>0.24% over burn</td>
</tr>
<tr>
<td>ROT #2</td>
<td>3/26 12:41:05.60</td>
<td>107.030 m/s</td>
<td>106.242 m/s</td>
<td>0.74% under burn</td>
</tr>
<tr>
<td>ROT Trim</td>
<td>3/27 18:30:00.00</td>
<td>3.941 m/s</td>
<td>3.812 m/s</td>
<td>3.27% under burn</td>
</tr>
</tbody>
</table>

**Sensors**

Sensor operation during lunar imaging continues to be nominal. TAMP has computed the current overlap at the equator to be 17% on the left of the FOV and 12% on the right of the FOV. The Sensor Engineer presented actual lunar images showing the overlap, which verified the TAMP numbers.

The ranging data looks good. However, during review of the orbit 172 ranging data, a 1 hour time shift was noted. This problem is being investigated by the Data Manager and Sensor engineers.

Sensor temperatures are all within limits except the known problem with the startracker A low lens temperature.

The sensor engineers are working with the Data Manager to compare the factory, pre-launch, and in flight flat field data. Some differences have been noted and are being investigated.

Higher resolution data of the Plato Crater were obtained over the weekend. It looks like the UV/Vis is able to resolve objects of 600 meters.

More UV/Vis and HiRes images of Vega for sensor degradation evaluation will be obtained starting with orbit 178 following the RF occultation orbits.

**SMOP - Mapping Results**

Image collection and data transmission has been completed for orbits 165 through 174 and orbit 175 mapping is in progress. Mapping is going very well. All data has been downlinked up to this orbit. We had a good plan for handling the RF occultation orbits and the spacecraft engineer and data manager were able to get all required data downlinked. The last orbit with RF occultation will be this afternoon. The affected orbits were conducted with reduced image sets, no uncompressed images were taken, and HiRes imaging was limited to the poles.

During orbit 178 we will pass almost directly over a Saturn IVB impact crater and will take HiRes images over this region. The crater is approximately 40 meters wide and it is borderline on whether or not it will be visible in the HiRes images.

Over the weekend, in between rotation burns, the startracker was used to obtain lunar limb images. Earthset was visible in some of the images, as well as some very interesting horizon glow data.

We will begin taking images of the Earth with all sensors on every orbit, along with the Vega images, as soon as the Earth-Spacecraft-Sun angle is large enough.
During orbits 183 and 184, we will try out our procedures to obtain images of land missed during orbit 51. If this works, we will use these procedures to recover missing data from orbits 111 and 131.

**Scheduling**

DSN is scheduled to support normal lunar mapping operations.