About the Occultation

- S38 Rev 60 Rings occultation
  - Rings Occ (chord)
  - Telemetry OFF, 1-way mode
  - Covered by Madrid and Goldstone

- From Essam Marouf:

  The S38, Rev 60, ring occultation is a chord occultation that probes all major ring features (A, Cassini Division, B, and C) on the way in and out. The ring opening angle is 8.6 degrees. The occultation will provide valuable information regarding dependence of detectable ring structure on observation geometry and signal frequency, complementing previous ring occultations at various ring longitudes and opening angles. The ring structure together with measured spectrograms of the near-forward scattered signal will help determine/constrain physical ring properties.

DSN Antennas

- DSN Coverage

Station	Pre-cal	BOT	EOT	Post-Cal
DSS-63	061/1605	061/1705	062/0515	062/0530
DSS-14	062/0100	062/0200	062/0515	062/0530
DSS-25	062/0115	062/0215	062/0515	062/0530
DSS-26	062/0115	062/0215	062/0515	062/0530
DSS-55	062/0115	062/0215	062/0515	062/0530

DSS-63 starts early to support OTM-146. 1-hr pre-cal for all BWG (schedules as D/L only)

- Receivers scheduled
  - 2 closed-loop receivers per antenna
  - All open-loop receivers at each complex are scheduled (10 at Goldstone, 8 at Madrid)
  - Open-loop data are prime. Closed-loop data are backup

- Antennas Band and Polarization Capabilities

DSS-14	DSS-25	DSS-26*	DSS-63	DSS-55*
X-RCP X-LCP	X-RCP X-LCP	X-RCP X-LCP	X-RCP X-LCP	X-RCP X-LCP
S-RCP S-LCP	K-RCP	K-RCP K-LCP	S-RCP S-LCP	K-RCP K-LCP

*Either KLCP (switch 43 in B position) or monopulse (switch 43 in A position)

  - LCP data are enhancement. Prime are RCP

RSR/VSR/WVSR Assignment

Aseel: VOCA
Roberto: Displays

DSS	Operator	Station	Open-Loop Receiver	RSR Assignment
63	Danny	rsops1	RSR1	RSR1A -> XRCP
				RSR1B -> SRCP
14	Danny	rsops1	RSR3	RSR3A -> XRCP
				RSR3B -> SRCP
26	Danny	rsops1	RSR1	RSR1A -> XRCP
				RSR1B -> KRCP
25	Elias	rsops2	RSR2	RSR2A -> XRCP
				RSR2B -> KRCP
55	Elias	rsops2	RSR2	RSR2A -> XRCP
				RSR2B -> KRCP
63/55 LCP	Don	rsops3	WVSR1 & VSR1	WVSR1A -> XLCP
14/26 LCP			at 10 & 60	WVSR1B -> SLCP
				VSR1A -> XLCP
				VSR1B -> KLCP

RSSG will be in RS Ops Room at 4:00 pm on Saturday 3/1/08 (061/2300)

ORTs

ORT on DOY 050 (February 19) over DSS-55, X- and Ka-band   **completed**
08 050 1815 1915 0215 0230 DSS-63 CAS TKG PASS 3790 N003 1A1
08 050 2010 2140 0215 0230 DSS-55 CAS TP RSR59-OCCORT1 3790 N750 1A1
-      DSS-63 prime
-      Nominal DSS-55 support
-      DSS-55 collected pointing data (monopulse) to update the 4th-order blind pointing model
-      DSS-55 .5 dB increase in signal power when monopulse was enabled.

ORT on DOY 056 (February 24) over DSS-25, X- and Ka-band   **completed**
08 056 0215 0345 1215 1230 DSS-25 CAS TP RSR59-OCCORT2 3795 N748 1A1
-      Collected pointing data (monopulse) to update the 4th-order blind pointing model

ORT on DOY 057 (February 25) over DSS-25, -26, and -55, X- and Ka-band
08 057 0145 0315 1215 1230 DSS-25 CAS TP RSR60-OCCORT3 3796 N748 1A1
08 057 0145 0315 1215 1230 DSS-26 CAS TP RSR60-OCCORT3 3796 N750 1A1
08 057 0215 0315 0620 0635 DSS-55 CAS TP RSR60-ORT D/L 3796 N71D 1A1
-      DSS-25 prime
-      All to collect pointing data (monopulse) to update the 4th-order blind pointing model
-      DSN testing during DSS-26 last two hours (Ron Creech)

ORT on DOY 058 (February 26) over DSS-26, X- and Ka-band
08 058 0145 0315 1215 1230 DSS-26 CAS TP RSR60-OCCORT5 3797 N750 1A1
-      Collect pointing data (monopulse) to update the 4th-order blind pointing model

ORT on DOY 059 (February 27) over DSS-63, X- and S-band
08 059 0200 0300 1200 1215 DSS-14 CAS TP RSR60-OCCORT4 3798 1639 1A1
08 059 0200 0300 0545 0600 DSS-63 CAS TP RSR60-OCCORT4 3798 1639 1A1
-      Verify X- and S-band signals, RCP and LCP

Misc

Last time Goldstone supported an occultation was July 2007

DSS-55
- Oscillations?
- Use LQG coefficinets?
- Status of KLCP?

Cassini Specific 4th Order Pointing Models
- Status

SNT
- Enable X only at DSS-26 and DSS-55 throughout
- Conduct SNT measurements

DSS-14 and DSS-63 Microwave Configuration
- Configure SRCP low noise to the SP MASER to the 01 output
- Configure SLCP through the diplexer to the SB HEMT to the 02 output