About the Occultation

- S39 Rev 63 Rings occultation
  - Rings Occ (chord)
  - Telemetry OFF, 1-way mode
  - Covered by Madrid

- From Essam Marouf:

  The S39, Rev 63, 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 9.6 degrees. The occultation will provide valuable information regarding dependence of detectable ring structure and forward scattering on observation geometry and signal frequency, complementing information from previous ring observations. The ring occultation is followed by a grazing ionospheric occultation.

DSN Antennas

- DSN Coverage

Station	Pre-cal	BOT	EOT	Post-Cal
DSS-63	092/1515	092/1645	092/2120	092/2135
DSS-55	092/1545	092/1645	092/2120	092/2135

- Receivers scheduled
  - 2 closed-loop receivers per antenna
  - All open-loop receivers (8 total)
  - Open-loop data are prime. Closed-loop data are backup

- Antennas Band and Polarization Capabilities

DSS-63	DSS-55*
X-RCP X-LCP	X-RCP X-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
?: Displays

DSS	Operator	Station	Open-Loop Receiver	RSR Assignment
63	Danny	rsops1	RSR1	RSR1A -> XRCP
				RSR1B -> SRCP
55	Elias	rsops2	RSR2	RSR2A -> XRCP
				RSR2B -> KRCP
63/55 LCP	Don	rsops3	VSR1 and WVSR1	63 WVSR1A -> XLCP
				63 WVSR1B -> SLCP
				55 VSR1A -> XLCP
				55 VSR1B -> KLCP

RSSG will be in RS Ops Room at 7:45 am on Tuesday 4/1/08 (092/1445)

ORTs

ORT on DOY 084 (March 24) over DSS-55, X- and Ka-band **completed**
08 084 1645 1815 0245 0300 DSS-55 CAS TP RSR62-OCCORT1 3824 N750 1A1
- Weather: cloudy
- eDMD monopulse corrections < 6
- Nominal DSS-55 support. Collected mono pointing data to update the 4th-order blind pointing model

ORT on DOY 086 (March 26) over DSS-55, X- and Ka-band **completed**
08 086 1630 1730 0230 0245 DSS-63 CAS T/P T42PB 3826 N003 1A1
08 086 2035 2135 0230 0245 DSS-55 CAS TP RSR62-ORT D/L 3826 N71D 1A1
- DSS-63 prime for telemetry and uplink
- Weather: cloudy and windy (average 10, max. 17 mph)
- eDMD monopulse corrections < 4 and typically about ± 1.4
- Nominal DSS-55 support. Collected mono pointing data to update the 4th-order blind pointing model

ORT on DOY 088 (March 27-28) over DSS-63, X= and S-band
08 088 0000 0100 1000 1015 DSS-25 CAS TKG PASS 3827 N006 1A1
08 088 0010 0110 0345 0400 DSS-63 CAS TP RSR63-OCCORT3 3827 1639 1A1
- We realized yesterday that S-band will not be ON during the DSS-63 pass, and will be powered ON at 088/0430 ERT
- DSS-63 to verify X-band RCP and LCP signals only

Two GSEs are scheduled around the occultation over DSS-55
08 091 1615 1745 0215 0230 DSS-55 CAS TP RSR63-KADWN1 3831 N750 1A1

08 093 1545 1715 0215 0230 DSS-55 CAS TP RSR63-KADWN2 3833 N750 1A1
08 093 1615 1715 0215 0230 DSS-63 CAS TKG PASS 3833 N003 1A1

Misc

DSS-55
- Oscillations?
- Use LQG coefficinets?
  - BOT AZ 88.33 degrees, EOT AZ 162.11
  - If yes, include in NOPE's BM?
- Status of KLCP?

Cassini Specific 4th Order Pointing Models
- Status

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

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