

About the Occultation

- S41 Rev 70 Saturn Atmospheric occultation
 - Ingress and Egress
 - Telemetry OFF, 1-way mode
 - Covered by Goldstone

- From Essam Marouf:

The S41 Rev 70 atmospheric occultation is [the second in a family of five radio science atmospheric occultations that systematically probe the northern and southern hemispheres of Saturn. The ingress occultation probes 35.8 deg North latitude and the egress occultation probes 63.2 deg South latitude](#), both measured near-the top of the troposphere. Collectively, the occultations will provide important information about the winds in Saturn's atmosphere. They also provide information about the large- and small-scale structure of the atmosphere, the temperature/pressure profile, abundance of microwave absorbing species, and the electron number density profile in the ionosphere.

DSN Antennas

- DSN Coverage

Station	Pre-cal	BOT	EOT	Post-Cal
DSS-25	153/2000	153/2130	154/0130	154/0145
DSS-26	153/2030	153/2130	154/0130	154/0145
DSS-14	153/2045	153/2145	154/0130	154/0145

26 scheduled as downlink only pass

- Receivers scheduled

- 2 closed-loop receivers per antenna
- Six RSRs at 10, One VSR (A&B) and One WVSR (A&B)
 - Total: 8 open-loop receivers at Goldstone
- Open-loop data are prime. Closed-loop data are backup

- Antennas Band and Polarization Capabilities

DSS-14	DSS-25	DSS-26*
X-RCP X-LCP	X-RCP X-LCP	X-RCP X-LCP
S-RCP S-LCP	K-RCP	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. No antenna w/ K-LCP capability this time!

RSR/VSR/WVSR Assignment

Aseel: VOCA

Danny: Displays

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

RSSG will be in RS Ops Room at 12:30 pm on Sunday 6/1/08 (153/1930)

ORTs

Just one ORT planned since there were recent activities over Goldstone

ORT on DOY 151 (May 30) over DSS-25, X- and Ka-band

08 151 1915 2045 0545 0600 DSS-25 CAS TP SEQ RS ORT3 3891 N748 1A1

- Also prime pass
- To collect pointing data (monopulse) to update the 4th-order blind pointing model

Monopulse data from DOY 138 Saturn gravity and occultation were sent to David

Misc

Goldstone Monopulse

- Status

Cassini Specific 4th Order Pointing Models

- Status/plan

SNT

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

DSS-14 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
- Status of DSS-14