About the Occultation

- S43 Rev 81 Saturn rings occultation
  – Telemetry OFF, 1-way mode
  – Covered by Canberra and Narrabri

- From Essam Marouf:

  The S43 Rev 81 radio science ring occultation is the second in a family of four fast chord occultations that probe the rings when the opening angle B is small (about 5 to 7 degrees). For Rev 81, B = 6 deg. The long path of the radio signals through the rings when B is small makes these occultations especially sensitive to ring features of small optical depth, like Ring C and the Cassini Division. More optically thick ring regions, like Ring B, become mostly noise-limited. The observation geometry complements in nature earlier occultations conducted at larger B angles, providing valuable information about the variability of ring structure and scattering properties with ring viewing geometry.

DSN Antennas

- DSN Coverage

Station	Pre-cal	BOT	EOT	Post-Cal
DSS-43	232/0450	232/0520	232/0800	232/0815
DSS-47	232/0530	232/0600	232/0730	232/0800

Last planned DSS-47 support!!

- Receivers scheduled
  - 2 closed-loop receivers for DSS-43
  - Open-loop receivers: RSR, VSR, WVSR at DSS-43, RSR at Narrabri
  - Open-loop data are prime. Closed-loop data are backup

- Antennas Band and Polarization Capabilities

DSS-43

X-RCP
X-LCP

S-RCP
S-LCP

  - LCP data are enhancement. Prime are RCP

RSR/VSR/WVSR Assignment

Aseel: VOCA

DSS	Operator	Station		Open-Loop Receiver		RSR Assignment	
43	Danny	rsops1		RSR2		RSR2A -> XRCP	
						RSR2B -> SRCP	
47	Don	rsops3		RSR2		RSR2A -> KRCP	
43 LCP	Don	rsops3		VSR1		43 VSR1A -> XLCP	
						43 VSR1B -> SLCP	

RSSG will be in RS Ops Room at 9:00 pm on Monday 8/18/08 (232/0400)

ORTs

- None!

But so that the page is not blank …

Misc

S-band may be noisy due to low SEP angle (approaching solar conjunction)

Entire experiment over low elevation angles (less than 30 degrees)

No BWG, No 4th order pointing models

SNT
- Normally enable X-band at BWG. Disable this time?
- Conduct SNT measurements

DSS-43 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