## About the Occultation

- S43 Rev 82 Saturn rings occultation
  - Telemetry OFF, 1-way mode
  - Covered by Madrid
- From Essam Marouf:

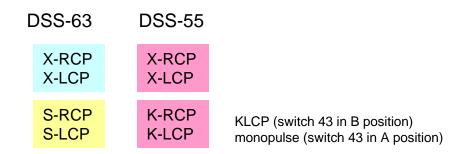
The S43 Rev 82 radio science ring occultation is the third in a family of four fast chord occultations that probe the rings when the opening angle B is small (about 5 to 7 degrees). For Rev 82, B = 5.6 deg. The long path of the radio signals through the rings when B is small makes these occultations 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-55	239/1230	239/1400	239/1715	239/1730
DSS-63	239/1300	239/1400	239/1715	239/1730

- Receivers scheduled
  - 2 closed-loop receivers per antenna
  - All open-loop receivers
    - Total: 8 open-loop receivers
  - Open-loop data are prime. Closed-loop data are backup
- Antennas Band and Polarization Capabilities



LCP data are enhancement. Prime are RCP

# RSR/VSR/WVSR Assignment

Aseel: VOCA

DSS	Operator	Station	Open-Loop Receiver		RSR Assignment	
63	Danny	rsops1	RSR1		RSR1A -> XRCP	
					RSR1B -> SRCP	
55	Danny	rsops1	RSR2		RSR2A -> XRCP	
					RSR2B -> KRCP	
63/55 LCP	Don	rsops3	WVSR1 & VSR1 63 WVSR1A -> XLCP		1A -> XLCP	
					63 WVSR1	B -> SLCP
					55 VSR1A -> XLCP	
					55 VSR1B -> KLCP	

RSSG will be in RS Ops Room at 5:30 am on Tuesday 8/26/08 (239/1230)

## Misc

No ORTs perior to occultation!

- Last DSS-55 support was on DOY 225 and was nominal

Low SEP. S-band likely to be noisy

No update to the DSS-55 Cassini specific 4th order pointing model (no new ORT data)

Pointing was good during last support

#### SNT

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

DSS-55 azimuth angles from ~212 to 262 degrees

- 260 at 1705 (hhmm). Experiment is over by that time
- Can use LQG coefficients if needed

**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