

Timeline for Cassini Rev 70 RSS Saturn Atmospheric Occultation on June 1/2, 2008 (DOY 153/154)

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	ERT UTC OWLT = 1:18:20	SCET	PDT ERT-7hrs 7:00:00	Comments
Begin RSS3a Op-Mode				
DSS-25 Start Precal	20:00:00	18:41:40	13:00:00	
DSS-26 Start Precal	20:30:00	19:11:40	13:30:00	
DSS-14 Start Precal	20:45:00	19:26:40	13:45:00	
DSS-25 & 26 Begin of Track	21:30:00	20:11:40	14:30:00	
DSS-14: Begin of Track	21:45:00	20:26:40	14:45:00	
SNT Measurement (all bands)	TBD			
TWNC ON	22:17:20	20:59:00	15:17:20	
TLM OFF	22:17:26	20:59:06	15:17:26	SP Turn to Earth (1 hour!)
Start Live Moveable Block (LMB)	22:17:28	20:59:08	15:17:28	Downlink likely detectable before 22:17:28
DSS-25 & 26 Enable Monopulse	TBD			Enable monopulse once receivers are in lock
DSS-25 & 26 Disable Monopulse	TBD			Real-Time decision to leave or remove the offset
Start Free-Space Baseline	22:27:28	21:09:08	15:27:28	PC/N0 (X70, X&Ka34, S70) = ~54, 48, 48, and 42 dB
Top of the ionosphere (@~68,000 km)	22:39:04	21:20:44	15:39:04	Ionosphere primarily affects signal frequency
Troposphere in (~0.1° BA)	22:49:56	21:31:36	15:49:56	S/X/Ka signal intensities start to drop and scintillate
Likely loss of Ka-band signal (~1.15° BA)	22:53:15	21:34:55	15:53:15	Approximate time
Likely loss of X-band signal (~1.35° BA)	22:53:52	21:35:32	15:53:52	Approximate time
Likely loss of S-band signal (~1.55° BA)	22:54:30	21:36:10	15:54:30	Approximate time (clear of the rings)
Cassini is Behind Saturn				No S/X/Ka downlink detectable
SNT Measurement (all bands)	23:26:00	22:07:40	16:26:00	
Weak S-band signal (~1.55° BA)	23:59:17	22:40:57	16:59:17	Weak but increasing and scintillating S-band signal
Weak X-band signal (~1.35° BA)	23:59:54	22:41:34	16:59:54	Weak but increasing and scintillating X-band signal
Weak Ka-band signal (~1.15° BA)	0:00:31	22:42:11	17:00:31	Weak but increasing and scintillating Ka-band signal
Troposphere Out (~0.1° BA)	0:03:43	22:45:23	17:03:43	PC/N0 (X70, X&Ka34, S70) = ~54, 48, 48, and 42 dB

Ionosphere Out (~68,000 km)	0:17:35	22:59:15	17:17:35	Ionosphere primarily affects signal frequency
End of Free-Space Baseline	0:31:28	23:13:08	17:31:28	
DSS-25 & 26 Enable Monopulse	0:39:00	23:20:40	17:39:00	
End of Live Moveable Block (LMB)	0:41:28	23:23:08	17:41:28	
TLM ON	0:41:33	23:23:13	17:41:33	
TWNC OFF	0:41:34	23:23:14	17:41:34	
DSS-14, 25, & 26 End of Track	1:30:00	0:11:40	18:30:00	
SNT Measurement (all bands)	TBD			
DSS-14, 25, & 26 Postacl	1:45:00	0:26:40	18:45:00	
End of RSS3a op-mode				

Indicates DSS-14, 25, & 26 Related Activities

All times are based on ref traj 080520 (to be updated after Rev 70 Live Update)

Monopulse strategy is preliminary and may be modified in real-time