

Timeline for Cassini Rev 58 RSS Ring and Atmospheric Occultations on February 08, 2008 (DOY 039)

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	ERT UTC OWLT = 1:09:17	SCET	PST ERT-8hrs 8:00:00	Comments
DSS-34: Start Precal	14:45:00	13:35:43	6:45:00	
DSS-43: Start Precal	15:30:00	14:20:43	7:30:00	
DSS-34 & 43 Begin of Track	16:30:00	15:20:43	8:30:00	
Science Planning S/C Turn 1 to Waypoint	16:34:17	15:25:00	8:34:17	Cassini HGA is Earth pointed shortly before 17:04:17
Science Planning S/C Turn 2 to Waypoint	17:04:17	15:55:00	9:04:17	Cassini HGA is Earth pointed but S/C is rolling
DSS-34: Enable Monopulse	17:05:00	15:55:43	9:05:00	Enable monopulse when receiver is locked
TWNC ON/ RNG OFF/ TLM OFF	17:19:10	16:09:53	9:19:10	
Start Live Moveable Block (LMB)	17:19:17	16:10:00	9:19:17	HGA is Earth pointed and S/C is not rolling
DSS-34: Disable Monopulse				Real-Time decision to leave or remove the offset
Start Free-Space Baseline	17:35:38	16:26:21	9:35:38	PC/N0 (X70, X&Ka34, S70) = ~56, 49, 49, and 42 dB
DSS-55: Start Precal	18:05:00	16:55:43	10:05:00	
Ring F	18:05:21	16:56:04	10:05:21	Rings F is only detectable in postprocessing
Ring A in	18:06:07	16:56:50	10:06:07	Detectable signals over most of Ring A
Enke Gap	18:06:47	16:57:30	10:06:47	Signals are back briefly to full strength
Ring A out	18:09:14	16:59:57	10:09:14	Relatively strong signals in the Cassini Division
Ring B in	18:10:13	17:00:56	10:10:13	Signals will be small or absent in Ring B
Ring C in	18:16:24	17:07:07	10:16:24	Signals detectable in Ring C
Ring C out	18:22:38	17:13:21	10:22:38	PC/N0 (X70, X&Ka34, S70) = ~56, 49, 49, and 42 dB
Ionosphere in (~68,000 km)	18:29:43	17:20:26	10:29:43	The ionosphere will be mixed with the rings
Ring C in	18:31:02	17:21:45	10:31:02	Ring C occulted again on the way out
DSS-63: Start Precal	18:35:00	17:25:43	10:35:00	

Ring B in	18:37:17	17:28:00	10:37:17	Signals will be small or absent in Ring B
Official end of ring occultaion (in Ring B)	18:39:14	17:29:57	10:39:14	Rings continue to be observed through the atmosphere
Start turn to Saturn's limb	18:39:43	17:30:26	10:39:43	
Start tracking Saturns limb	18:39:51	17:30:34	10:39:51	
Troposphere in (~0.1° BA)	18:43:01	17:33:44	10:43:01	Atmopshere is observed mixed with he rings
Likely loss of Ka-band signal (~1.15° BA)	18:52:06	17:42:49	10:52:06	Approximae time
Likely loss of X-band signal (~1.35° BA)	18:54:23	17:45:06	10:54:23	Approcimate time
Likely loss of S-band signal (~1.55° BA)	18:57:06	17:47:49	10:57:06	Approximate time
Cassini is Behind Saturn				Downlink is blocked by Saturn
Weak S-band signal (~1.55° BA)	19:18:31	18:09:14	11:18:31	Weak but increasing and scintillating S-band signal
Weak X-band signal (~1.35° BA)	19:21:19	18:12:02	11:21:19	Weak but increasing and scintillating X-band signal
Weak Ka-band signal (~1.15° BA)	19:23:40	18:14:23	11:23:40	Weak but increasing and scintillating Ka-band signal
Troposphere Out (~0.1° BA)	19:33:02	18:23:45	11:33:02	PC/N0 (X70, X&Ka34, S70) = ~56, 49, 49, and 42 dB
DSS-55 & 63 Begin of Track	19:35:00	18:25:43	11:35:00	
DSS-55: Enable Monopulse	19:35:30	18:26:13	11:35:30	Enable monopulse once receiver is locked; keep enabled
Ionosphere Out (~68,000 km)	19:56:19	18:47:02	11:56:19	Ionosphere primarily affects signal frequency
End of Free-Space Baseline	20:08:38	18:59:21	12:08:38	
DSS-34 & 43: End of Track	20:20:00	19:10:43	12:20:00	
End of Live Moveable Block (LMB)	20:22:17	19:13:00	12:22:17	All signals observables till this time
TLM ON/ TWNC OFF/ RNG LOW	20:22:26	19:13:09	12:22:26	End of RSS Rev 58 occultation experiments
Start VIMS Dione observation	20:23:17	19:14:00	12:23:17	HGA is not Earth pointed; no downlink
DSS-34 & 43: End of Postcal	20:35:00	19:25:43	12:35:00	
DSS-55 & 63: End of Track	20:40:00	19:30:43	12:40:00	
DSS-55 & 63: End of Postcal	20:55:00	19:45:43	12:55:00	

Indicates DSS-34 & 43 Related Activities

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All times are based on the rev 56 live update OD on January 31, 2008 (080131AP_SCPSE_08031_08057.bsp)

Some Ring Edges are known to be noncircular, which will affect ring event times above