Timeline for Cassini Rev 60 RSS Occultation of Saturn's Rings on March 2, 2008 (DOY 062 ERT UTC)

Essam Marouf 02/21/2008 (v1)

	ERT UTC	SCET	PST	
	OWLT =		ERT-8hrs	Comments
	1:09:02		8:00:00	
DSS-63: Start Precal (OTM-46, DOY 061)	17:05:00	15:55:58	9:05:00	
DSS-63: Begin-of-Track (DOY 061)	18:05:00	16:55:58	10:05:00	
DSS-14: Start Precal	1:10:00	0:00:58	17:10:00	
DSS-25 &26: Start Precal	1:15:00	0:05:58	17:15:00	
DSS-55: Start Precal	1:15:00	0:05:58	17:15:00	
DSS14: Begin-of-Track	2:00:00	0:50:58	18:00:00	Cassini HGA is Earth pointed; downlink may be detectable
DSS-25 & 26: Begin-of-Track	2:15:00	1:05:58	18:15:00	Cassini HGA is Earth pointed; downlink may be detectable
DSS-55: Begin-of-Track	2:15:00	1:05:58	18:15:00	Cassini HGA is Earth pointed; downlink is detectable
DSS-55: Enable Monopulse	2:17:00	1:07:58	18:17:00	Enable monopulse only when requested by radio science
DSS-25 & 26 Enable Monopulse	2:17:00	1:07:58	18:17:00	Enable monopulse only when requested by radio science
DSS-25 & 26: Disable Monopulse	TBD			Real-time decision
DSS-55: Disable Monopulse	TBD			Real-time decision
DSS-55, 63 : SNT Mesurement	TBD			Real-time decision
DSS-25, 26, 14: SNT Masurements	TBD			Real-time decision
TWNC ON/ RNG OFF	3:04:55	1:55:53	19:04:55	
Start Live Moveable Block (LMB)	3:05:02	1:56:00	19:05:02	Cassini HGA is Earth pointed
TLM OFF	3:05:06	1:56:04	19:05:06	
Start Free-Space Baseline	3:08:55	1:59:53	19:08:55	$PC/N0 (X70, X&Ka34, S70) = \sim 56, 49, 49, and 42 dB$
Ring F	3:16:35	2:07:33	19:16:35	Rings F is only detectable in postprocessing
Ring A in	3:17:24	2:08:22	19:17:24	Detectable signals over most of Ring A
Enke Gap	3:18:07	2:09:05	19:18:07	Signals are back very briefly to full strength

i i			Ì	i i
Ring A out	3:20:43	2:11:41	19:20:43	Relatively strong signals in the Cassini Division
Ring B in	3:21:46	2:12:44	19:21:46	Signals may be detectrable over inner region of Ring B
Ring C in	3:28:20	2:19:18	19:28:20	Signals detectable but briefly blocked by dense ringlets
Ring C out	3:35:00	2:25:58	19:35:00	$PC/N0 (X70, X&Ka34, S70) = \sim 56, 49, 49, and 42 dB$
Ring C in	3:43:48	2:34:46	19:43:48	All ring features occultes again in reverse order
Top ofionosphere (~68,000 km)	3:43:54	2:34:52	19:43:54	The upper ionosphere will be mixed with the rings
Ring B in	3:50:29	2:41:27	19:50:29	Signals likely absent over most of Ring B
Ring B out	3:57:02	2:48:00	19:57:02	Relatively strong signals in the Cassini Division
Ring A in	3:58:06	2:49:04	19:58:06	Detectable signals over most of Ring A
Encke gap	4:00:42	2:51:40	20:00:42	Signals are back very briefly to full strength
Ring A out	4:01:24	2:52:22	20:01:24	$PC/N0 (X70, X&Ka34, S70) = \sim 56, 49, 49, and 42 dB$
Ring F	4:02:14	2:53:12	20:02:14	Rings F is only detectable in postprocessing
End of Rev 60 RSS Observations	4:03:55	2:54:53	20:03:55	Official end of the rev 60 RSS ring occultation
S/C Turn to start a solar occultation	4:03:55	2:54:53	20:03:55	All radio signals are lost briefly after this time
DSS-25, 26, & 14: SNT Measurement	4:10:00	3:00:58	20:10:00	
DSS-55, 63: SNT Measurement	4:10:00	3:00:58	20:10:00	
DSS-55 & 63: End of Track	5:15:00	4:05:58	21:15:00	
DSS-25, 26 & 14: End of Track	5:15:00	4:05:58	21:15:00	
DSS-55 & 63: End of Postcal	5:30:00	4:20:58	21:30:00	
DSS-25, 26, & 14: End of Postcal	5:30:00	4:20:58	21:30:00	
TLM ON/ TWNC OFF/ RNG LOW	6:29:03	5:20:01	22:29:03	

DSS-25, 26, & 14 Related Activities

DSS-55 & 63 Related Activities

All times are based on the rev 60 Live Update 080221AP_SCPSE_08050_08076.bsp OD published on Feb 21, 2008

The OD timing uncertainty is still large and could make ring event times above differ from actual times by order of 1 minute or so.