

S14 Rev 15 Cassini RSS Hyperion Mass Determination

2005/268-269, Sunday-Monday, September 25-26, 2005

Hyperion Closest Approach C/A: 2005/269-03:44

GMB: GMB_E015_Hyperion 2005-269T02:24:49

OWLT = 01:20, RTLTL = 02:40

Times below are rounded and may differ by a minute from other timelines

Event	ERT UTC (hh:mm)	Local PDT	Comments
DOY 268			
First Segment - Hyperion Inbound		25-Sep	
DSS-25 Pre-cal	14:00	7:00 AM	Cassini specific 4th-order pointing model, TLC Enabled
DSS-25 Beginning Of Track (BOT)	15:30	8:30 AM	No downlink until ~1930 ERT
DSS-26 Pre-cal	16:50	9:50 AM	Cassini specific 4th-order pointing model
DSS-25 Transmitter ON	16:51	9:51 AM	
DSS-26 BOT	18:20	11:20 AM	No downlink until ~1930 ERT
DSS-25 Transmitter OFF	18:53	11:53 AM	REAL-TIME CHANGE: This time is 5 mins later than time in SOE and SFOS
Begin RSS Hyperion Mass Determination - Inbound	19:19	12:19 PM	
Begin S/C Turn to Earth	19:19	12:19 PM	11.3 minute turn
End S/C Turn to Earth/Begin Coherent Downlink	19:31	12:31 PM	Signal may be present shortly before 19:31, but coherent signal begins at 19:31 ERT
DSS-25 Enable Monopulse	19:31	12:31 PM	2-way X-up/X-down and X-up/Ka-down
DSS-26 Enable Monopulse	19:31	12:31 PM	3-way with DSS-25, X-up/X-down and X-up/Ka-down
Begin S/C Turn from Earth	21:29	2:29 PM	Coherent signal may be present for a few minutes after beginning of turn
End Possible Coherent Downlink	21:33	2:29 PM	If signal is still present, this will be end of coherent downlink
DSS-25 Disable Monopulse			At loss of coherent Ka-band signal
DSS-26 Disable Monopulse			At loss of coherent Ka-band signal
End Turn from Earth	21:40	2:40 PM	11.3 minute turn
End RSS Hyperion Mass Determination - Inbound	21:40	2:40 PM	
DOY 269			
Second Segment - Hyperion Outbound			
DSS-55 Pre-cal	00:40	5:40 PM	Cassini specific 4th-order pointing model, TLC Enabled
DSS-55 BOT	02:10	7:10 PM	No downlink until ~05:56 ERT
DSS-55 Transmitter ON	03:17	8:17 PM	
DSS-55 Transmitter OFF	04:40	9:40 PM	REAL-TIME CHANGE: This time is 5 mins later than time in SOE and SFOS
Begin RSS Hyperion Mass Determination - Outbound	05:30	10:30 PM	
Begin S/C Turn to Earth	05:30	10:30 PM	25.8 minute turn
End S/C Turn to Earth/Begin Coherent Downlink	05:56	10:56 PM	Signal may be present shortly before 05:56, but coherent signal begins at 05:56 ERT
DSS-55 Enable Monopulse	05:56	10:56 PM	2-way X-up/X-down and X-up/Ka-down
Begin S/C Turn from Earth	07:16	12:16 AM	Coherent signal may be present for a few minutes after beginning of turn
End RSS Hyperion Mass Determination - Outbound	07:16	12:16 AM	
End Possible Coherent Downlink	07:20	12:20 AM	If signal is still present while s/c is turning, this will be end of coherent downlink
DSS-55 Disable Monopulse			At loss of coherent Ka-band signal