

**Cassini End Of Mission**

September 15, 2017 UTC (DOY 258)

Aseel Anabtawi 09/13/2017 (v2)

	ERT UTC OWLT = 1:23:24	SCET	PDT ERT-7hrs 07:00:00	Comments
<b>DOY 2017-257</b>				
DSS-25: Start Pre-Cal	20:40:00	19:16:36	13:40:00	
DSS-14: Start Pre-Cal	20:45:00	19:21:36	13:45:00	
RSSG: Begin DSS-14 and DSS-25 Open-Loop Recordings	21:15:00	19:51:36	14:15:00	
DSS-14 & DSS-25: Beginning Of Track	21:45:00	20:21:36	14:45:00	
RSSG: Note TLM BR 66360	21:45:00	20:21:36	14:45:00	
S/C at Waypoint: X-Band to Earth (0, 0, -16 deg offset), NEG_Y to Saturn	21:45:24	20:22:00	14:45:24	Signal may be detectable before turn is complete
DSS-14: Begin X-Band 1-Way Acquisition	21:45:24	20:22:00	14:45:24	Pc/N0 TLM ON (X-70) = 40 dB-Hz
DSS-25: Begin X-Band 1-Way Acquisition	21:45:24	20:22:00	14:45:24	Pc/N0 TLM ON (X-34) = 34 dB-Hz
RSSG: Enter 1-Way Open-Loop Frequency Offsets as Needed	21:45:24	20:22:00	14:45:24	
<b>DSS-14: Transmitter ON, 18 kW, LCP, RAMP, SWEEP</b>	<b>21:55:00</b>	<b>20:31:36</b>	<b>14:55:00</b>	
RSSG: Note TLM BR 82951	22:00:26	20:37:02	15:00:26	
Begin Spacecraft Transition from RWA to Thrusters	22:10:24	20:47:00	15:10:24	
End Spacecraft Transition to Thrusters	22:31:12	21:07:48	15:31:12	
RSSG: Note TLM BR 110601	23:00:25	21:37:01	16:00:25	
<b>DOY 2017-258</b>				
RSSG: Note TLM BR 124426	00:30:25	23:07:01	17:30:25	
DSS-14 Transmitter ON Observed	00:41:48	23:18:24	17:41:48	
DSS-14: Begin X-Band 2-Way Acquisition	00:41:48	23:18:24	17:41:48	Pc/N0 TLM ON (X-70) = 40 dB-Hz
DSS-25: Begin X-Band 3-Way Acquisition w/DSS-14	00:41:48	23:18:24	17:41:48	Pc/N0 TLM ON (X-34) = 34 dB-Hz
RSSG: Clear 1-Way Open-Loop Frequency Offsets	00:41:48	23:18:24	17:41:48	
S-band ON	01:07:26	23:44:02	18:07:26	Per PEF
Note: DSS-14 Not Required to Support S-band	01:07:26	23:44:02	18:07:26	Equipment not scheduled
Ka-band ON	01:12:22	23:48:58	18:12:22	Per PEF
Note: DSS-25 Not Required to Support Ka-band	01:12:22	23:48:58	18:12:22	Equipment not scheduled
DSS-35: Pre-Cal	01:45:00	00:21:36	18:45:00	
RSSG: Begin DSS-43 and DSS-35 Open-Loop Recordings	02:00:00	00:36:36	19:00:00	Do not start RSR 2 MHz recordings until 08:15 ERT
DSS-43: Pre-Cal	02:15:00	00:51:36	19:15:00	
RSSG: Note TLM BR 110601	02:30:26	01:07:02	19:30:26	
DSS-43 & DSS-35: Beginning Of Track	03:15:00	01:51:36	20:15:00	
DSS-43: Begin X- & S-Band 3-Way Acquisition w/DSS-14	03:15:00	01:51:36	20:15:00	Pc/N0 TLM ON (X-70, S-70) = 40, 42 dB-Hz
DSS-35: Begin X- & Ka-Band 3-Way Acquisition w/DSS-14	03:15:00	01:51:36	20:15:00	Pc/N0 TLM ON (X-34, Ka-34) = 34, 48* dB-Hz *may fluctuate due to s/c pointing offset
DSS-35: Enable Monopulse	03:15:00	01:51:36	20:15:00	~-29 deg EL

Start RSS Rev293 In-Situ Occultation	03:17:24	01:54:00	20:17:24	Observation timed to overlap Canberra coverage
DSS-43: Transmitter ON, 18 kW, LCP, RAMP	03:25:00	02:01:36	20:25:00	Uplink Transfer from DSS-14 to DSS-43
DSS-14: Transmitter OFF	03:25:05	02:01:41	20:25:05	
S/C 10min turn to Waypoint: X-Band to Earth (0, 0, 0), POS_Y to NSP	03:37:24	02:14:00	20:37:24	Pc/N0 (Ka-34) = 48 dB-Hz. s/c pointing offset cleared. Nominal Ka-band signal levels
DSS-14 & DSS-25: End Of Track	03:40:00	02:16:36	20:40:00	
DSS-14 & DSS-25: Post-Cal	03:55:00	02:31:36	20:55:00	
RSSG: End DSS-14 and DSS-25 Open-Loop Recordings	04:00:00	02:36:36	21:00:00	
RSSG: Note TLM BR 124426	04:00:27	02:37:03	21:00:27	
DSS-74: Start Pre-Cal	05:30:00	04:06:36	22:30:00	
DSS-43 Transmitter ON Observed	06:11:51	04:48:27	23:11:51	
DSS-43: Begin X- & S-Band 2-Way Acquisition	06:11:51	04:48:27	23:11:51	Pc/N0 TLM ON (X-70, S-70) = 40 dB-Hz, 42 dB-Hz
DSS-35: Begin X- & Ka-Band 3-Way Acquisition w/DSS-43	06:11:51	04:48:27	23:11:51	Pc/N0 TLM ON (X-34, Ka-34) = 34 dB-Hz, 48 dB-Hz
DSS-74: Beginning Of Track	06:15:00	04:51:36	23:15:00	
DSS-74: Begin X- & S-Band 3-Way Acquisition w/DSS-43	06:15:00	04:51:36	23:15:00	
RSSG: Begin RSR 2 MHz Recordings	08:15:00	06:51:36	01:15:00	WVSRs have been recording since 02:00:00
RSSG: Note TLM BR 27650	08:37:28	07:14:04	01:37:28	
S/C 15min turn to Waypoint: X-Band to Earth (0, 0, 0), NEG_X to SC_RAM	08:52:24	07:29:00	01:52:24	
<b>Estimated Loss Of Signal</b>	<b>11:55:16</b>	10:31:52	04:55:16	Based on the loss of signal radius of 61484.5 km

### Farewell Our Beloved Spacecraft

RSSG: End RSR 2 MHz Recordings	12:15:00	10:51:36	05:15:00	
RSSG: End All Open-Loop Recordings	12:30:00	11:06:36	05:30:00	DO NOT SCRIPT. Real-time command after LOS is confirmed
DSS-43: Transmitter OFF	14:10:00	12:46:36	07:10:00	
DSS-43 & DSS-35: End Of Track	14:15:00	12:51:36	07:15:00	Stations may be released earlier
End RSS Rev293 In-Situ Occultation	14:15:24	12:52:00	07:15:24	Observation was timed to overlap Canberra coverage, but will end at LOS
DSS-43 & DSS-35: Post-Cal	14:30:00	13:06:36	07:30:00	
DSS-74: End Of Track	14:30:00	13:06:36	07:30:00	Station may be released earlier
DSS-74: Post-Cal	14:45:00	13:21:36	07:45:00	

Goldstone DSS-14 & DSS-25 related activities
Canberra DSS-43 & DSS-35 related activities
New Norcia DSS-74 related activities