

Cassini T51: Titan Outbound Bistatic Scattering Observations

on March 27, 2009 (DOY 086) ERT, UTC

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	ERT UTC OWLT = 1:10:12	SCET UTC	PDT ERT - 7 hrs 7:00:00	Comments
Start Pre-Cal DSS 25	2:30:00	1:19:48	19:30:00	Guided by Real-Time Instructions from RSS Ops-Room
Start Pre-Cal DSS 14	3:15:00	2:04:48	20:15:00	Guided by Real-Time Instructions from RSS Ops-Room
S-Band ON (full warmup)	4:08:46	2:58:34	21:08:46	
Load Free-Space Predicts	5:00:00	3:49:48	22:00:00	
Begin-of-Track DSS 14	5:15:00	4:04:48	22:15:00	No S/X carrier signals detectable
SNT Measurement (DSS-14)	5:20:00			Allow for 5 min between SNT measurement & minical 1
Ka-Band ON (short warmup)	5:27:40	4:17:28	22:27:40	
Begin-of-Track DSS 25	5:30:00	4:19:48	22:30:00	No Ka-carrier signal detectable
SNT Measurement (DSS-25)	5:31:00			Allow for 5 min between SNT measurement & minical 1
Start Minical 1	5:40:00			Guided by Real-Time Instructions from RSS Ops-Room; must end by 06:09:00
Titan Closest Approach	5:53:48	4:43:36	22:53:48	
TWNC ON	6:08:48	4:58:36	23:08:48	
Start Turn from Waypoint toTitan	6:08:51	4:58:39	23:08:51	Carrier signals remain undetectable till 07:10:00
TLM OFF	6:08:53	4:58:41	23:08:53	
Load Bistatic Egress Predicts	6:09:00	4:58:48	23:09:00	
End Targetting Turn to Titan	6:14:25	5:04:13	23:14:25	
Start turn to Titan specular point	6:16:03	5:05:51	23:16:03	
End Turn to Titan specular point	6:16:15	5:06:03	23:16:15	HGA boresight starts tracking the specular point (IVD file)
Start Bistatic Observations	6:16:15	5:06:03	23:16:15	Potential weak surface echoes centered within the
End Bistatic Observations	7:04:19	5:54:07	0:04:19	observations bandwidth may be detectable in real-time
Start turn to Earth point	7:04:21	5:54:09	0:04:21	
Load Free-space Predicts	7:07:00	5:56:48	0:07:00	
End turn to Earth point	7:10:00	5:59:48	0:10:00	
Start 5 minutes free-space baseline	7:10:00	5:59:48	0:10:00	PC/N0 ~ 54, 48, & 42 dB-Hz for X-, Ka-, S-Band

Enable Monopulse: DSS 25	7:14:32	6:04:20	0:14:32	
End of T51 RSS Observation	7:15:32	6:05:20	0:15:32	
Start Turn to Waypoint	7:15:34	6:05:22	0:15:34	Quick loss of Ka-, then X-, then S-band signals
End Turn to Waypoint	7:21:19	6:11:07	0:21:19	
TLM ON	7:21:42	6:11:30	0:21:42	
TWNC OFF	7:21:46	6:11:34	0:21:46	
Start Minical 2	7:25:00	6:14:48	0:25:00	Guided by Real-Time Instructions from RSS Ops-Room
SNT Measurement (DSS-14, 25)	7:55:00	6:44:48	0:55:00	Allow for 5 min between minical 2 & SNT measurements
End-of-Track DSS 25, 14	8:00:00	6:49:48	1:00:00	
End of Post-Cal DSS 25, 14	9:00:00	7:49:48	2:00:00	Guided by Real-Time Instructions from RSS Ops-Room

- Goldstone Activities
- Switching of Frequency Predicts
- Mini Calibration; SNT Measurements

Times are based on the 080806 reference trajectory and may change after the Live Update Block (LUB) on 3/20/09