

# S18 Rev 21 Timeline for RSS T11 Titan Gravity Observation

2006/058, Sun-Mon February 26-27, 2006

Titan Closest Approach C/A: 2006/058-09:44 ERT

EPOCH: GMB\_E021\_Titan11 2006-058T08:25:19 SCET

OWLT = 01:09, RTLTL = 02:18

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

Closed-loop Doppler is prime for gravity. Open-loop is backup

RSR = Radio Science Receiver (open-loop receiver)    RSSG = Radio Science Systems Group

RSSG: Note Telemetry Bit Rate changes during observation for possible change in SNR. Set RSR fgain accordingly. Do no change during observation

DOY	Time ERT	Date/Day PST	Time PST	Event	Comments	RS Support A Do Da
057	22:35	Sun 2/26	2:25 PM	DSS-25 Pre-cal	Cassini specific 4th-order pointing model, TLC enabled	
058	00:05		4:05 PM	DSS-25 BOT	No downlink until ~03:04 ERT	
	00:30		4:30 PM	Ka-band ON (KEX & Ka-TWTA)	On-board s/c. ON prior to start of observation for thermal stab	
					X-TWTA ON since 056/2124 ERT	
	00:46		4:46 PM	DSS-25 Transmitter ON	Unramped uplink predicts	
	02:34		6:34 PM	Begin S/C Turn to Earth	Turn by SP. Telemetry Bit Rate: 1896	
	02:52		6:52 PM	DSS-25 Transmitter OFF	REAL-TIME CHANGE: 5 mins later than 02:47 time in DKF	
	02:55		6:55 PM	RSSG: Begin RSR recording (X & Ka)		
	03:04		7:04 PM	End S/C Turn to Earth (DKF time: 030358)	Signal may be present shortly before 03:04 while s/c is turning	
	03:04		7:04 PM	Begin 1st Segment	2-way at DSS-25	
				DSS-25 Enable Monopulse	After 2-way lock	
				Note to RSSG	Telemetry Bit Rate: 35550 throughout 1st segment	
	05:04		9:04 PM	End 1st Segment		
				Begin S/C Turn from Earth (DKF time: 050404)	Telemetry Bit Rate: 1896 at 050409	
				DSS-25 Disable Monopulse	At loss of Ka-band signal	
	05:10		9:10 PM	RSSG: End RSR Recording (X & Ka)		
	06:16		10:16 PM	DSS-25 Transmitter ON	Unramped uplink predicts	
	06:20		10:20 PM	DSS-34 Pre-cal	Cassini specific 4th-order pointing model	
	07:50		11:50 PM	DSS-34 BOT		
	08:04	Mon 2/27	12:04 AM	Begin S/C Turn to Earth	Turn by SP. Telemetry Bit Rate: 1896	
	08:25		12:25 AM	RSSG: Begin RSR recording (X & Ka)		
	08:34		12:34 AM	End S/C Turn to Earth (DKF time: 083358)		
	08:34		12:34 AM	Begin 2nd Segment	2-way at DSS-25, 3-way at DSS-34	
				DSS-25 and DSS-34 Enable Monopulse	After 2-way lock at DSS-25, 3-way lock at DSS-34	
				Note to RSSG	Telemetry Bit Rate: 14220 throughout 2nd segment	
	09:44		1:44 AM	Titan Closest Approach		
	11:52		3:52 AM	DSS-25 Transmitter OFF	REAL-TIME CHANGE: 5 mins later than 11:47 time in DKF	
	12:15		4:15 AM	DSS-25 EOT		
				DSS-25 Disable Monopulse	At loss of Ka-band signal	
	14:04		6:04 AM	End 2nd Segment		
				Begin S/C Turn from Earth (DKF time: 140411)	Telemetry Bit Rate: 1896 at 140411	
				DSS-34 Disable Monopulse	At loss of Ka-band signal	
	14:10		6:10 AM	RSSG: End RSR Recording (X & Ka)		
	14:30		6:30 AM	DSS-34 EOT		

Aseel: 2/26 4:30 pm - 8:00 pm, 10:00 pm - 4:30 am

Don: 2/26 4:00 pm - 10:30 pm

Danny: 2/26 5 pm - 6:30 am