TOST: Handoff

026TI (T16)

Segment: 2006-201T232:51:00 – 2006-203T23:36:00

Titan C/A: 2006-203T00:25:13, Altitude = 950 km

Epoch: GMB_E026_Titan16

March 1, 2006

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T16 Science Objectives

• Science to be accomplished during this flyby:

– RADAR will obtain high resolution coverage over high northern latitudes.

– UVIS stellar occultation will give a detailed profile of the thermosphere.

– The CIRS observations emphasize the far-infrared part of the spectrum to map Titan's composition. CIRS will perform limb sounding with excellent vertical resolution. CIRS will also map surface temperatures.

- INMS is riding along near C/A (secondary pointing is NEG_X to RAM). They will determine the atmospheric and ionospheric thermal structure.

- MAPS - Observations of Titan's interaction with Saturn's magnetosphere down to a low altitude (950km) at C/A.

026TI(T16) Timeline

C/A 2006-203T00:25:13 @ 950km

Start Time	Duration	End Time	Prime Activity	Obs. Detail	Op Mode	TLM Mode	Comments
2006-201T23:51:00	00T00:30:00	2006-202T00:21:00	SP Turn to WP		DFPW Normal	S&ER-3	NAC to Titan, -X to Sun
2006-202T00:21:00	00T00:15:00	2006-202T00:36:00	OD Uncertainty Dead Time		DFPW Normal	S&ER-3	
TI-23:49	00T14:49	TI-09:00	VIMS	slow scan mosaic	DFPW Normal	S&ER-3	
TI-09:00	00T02:00	TI-07:00	CIRS		DFPW Normal/ RADWU	S&ER-3/ S&ER-5a	RADWU at TI-08:00; S&ER-5a at TI-08:00 for 15 min
TI-07:00	00T01:40	TI-05:20	VIMS		RADAR WU/Rad	S&ER-3	
TI-05:20			Begin Custom Period				
TI-05:20	00T00:18	TI-05:02	RADAR turn from VIMS attitude				
TI-05:02	00T03:25	TI-01:37	RADAR radiometry		RADAR_RWA	S&ER-8	(opmode transition is 44 sec)
TI-01:37	00T00:45:00	TI-00:52	RADAR scatterometry	inbound	RADAR_RWA/ RADAR_RCS	S&ER-8	
TI-00:52	00T00:22	TI-00:30	RWA to RCS transition		RADAR_RCS	S&ER-8	opmode transition is 21 min 13 sec; SPASS PRIME; (2,2,20) deadband
TI-00:30	00T00:15:00	TI-00:15	RADAR altimetry	inbound	RADAR_RCS	S&ER-8	
TI-00:15	00T00:08:00	TI-00:07	RADAR low res SAR	inbound	RADAR_RCS	S&ER-8	
TI-00:07	00T00:14:00	TI+00:07	RADAR high res SAR		RADAR_RCS	S&ER-8	
TI+00:07	00T08:00:00	TI+00:15	RADAR low res SAR	outbound	RADAR_RCS	S&ER-8	
TI+00:15	00T00:15:00	TI+00:30	RADAR altimetry	outbound	RADAR_RCS	S&ER-8	
TI+00:30	00T00:08:00	TI+00:38:00	UVIS turn from RADAR attitude				
TI+00:38:00	00T00:38:30	TI+01:15	UVIS Stellar Occ		ORS_RCS/ DFPW Normal	S&ER-3	ENGR is PRIME until TI+01:00, but UVIS will be performing occ. UVIS is Prime again from 01:00 to 01:15
TI+00:38:00	00T00:23	TI+01:00	RCS to RWA transition		DFPW Normal	S&ER-3	during UVIS; duration of transition is 22 min 36 sec; SPASS NOTE
TI+01:15	00T00:15	TI+01:30	CIRS turn from UVIS attitude				
TI+01:30	00T05:45	TI+07:15	CIRS	Limb integration, followed by north-south scan nadir map, followed by mid-IR on limb	DFPW Normal	S&ER-3	
TI+07:15			End Custom Period				
TI+07:15	00T05:34	TI+12:49	VIMS	stare for cloud monitoring and lightening search	DFPW Normal	S&ER-3	
2006-203T13:15:00	00T00:15	2006-203T13:30:00	OD Uncertainty Dead Time		DFPW Normal	S&ER-3	
~~2006-203T13:30:00~~	~~00T00:30~~	~~2006-203T14:00:00~~	~~SP turn to Earth~~		~~DFPW Normal~~	~~S&ER-3~~	
2006-203T14:00:00	00T09:36	2006-203T23:36:00	Goldstone DL		DFPW Normal	RTE&SPB	

Request	Start Time	Epoch	Duration	End Time	Rate	Mb	SPASS Type	Primary Pointing	Secondary Pointing	Pointing Agreement
CAPS_026IC_ELSCAL001_RIDER	2006-202T12:00:00		000T00:34:08	2006-202T12:34:08	15000	30.7	Non-SPASS			
CAPS_026OT_SURVEY002_PRIME	2006-201T23:51:00		000T10:04:00	2006-202T09:55:00	1000	36.2	Non-SPASS			
CAPS_026SA_SURVEY001_RIDER	2006-202T09:55:00		000T12:30:27	2006-202T22:25:27	1000	45.0	Non-SPASS			
CAPS_026SA_SURVEY002_RIDER	2006-203T02:25:27	GMB_E026_Titan16+000T02:00:00	013T19:00:21	2006-216T21:25:48	1000	1191.6	Non-SPASS			
CAPS_026TI_T16CLOSE001_PRIME	2006-202T23:25:27	GMB_E026_Titan16-000T01:00:00	000T02:00:00	2006-203T01:25:27	16000	115.2	SPASS Rider			
CAPS_026TI_T16INBND001_PRIME	2006-202T22:25:13		000T01:00:14	2006-202T23:25:27	4000	14.5	SPASS Rider			
CAPS_026TI_T16OUTBND001_PRIME	2006-203T01:25:27	GMB_E026_Titan16+000T01:00:00	000T01:00:00	2006-203T02:25:27	4000	14.4	SPASS Rider			
CDA_026DR_1102DUST209_RIDER	2006-203T15:00:31		000T13:56:02	2006-204T04:56:33	524	26.3	Non-SPASS			
CDA_026DR_1700DUST141_RIDER	2006-202T12:48:44		001T00:09:47	2006-203T12:58:31	149.9	13.0	Non-SPASS			
CDA_026DR_2500DUST144_RIDER	2006-198T00:06:00		004T10:40:43	2006-202T10:46:43	149.9	57.6	Non-SPASS			
CDA_026HY_2400HYORX028_RIDER	2006-202T10:47:44		000T01:59:59	2006-202T12:47:43	524	3.8	Non-SPASS			
CDA_026RI_1602RINGM002_RIDER	2006-203T12:59:32		000T01:59:59	2006-203T14:59:31	524	3.8	Non-SPASS			
CIRS_026IC_DSCAL1397_RIDER	2006-203T16:00:00		000T06:00:00	2006-203T22:00:00	3000	64.8	SPASS Rider			
CIRS_026IC_DSCALSHRT001_RIDER	2006-201T23:51:27	GMB_E026_Titan16-001T00:34:00	000T00:30:00	2006-202T00:21:27	4000	7.2	SPASS Rider			
CIRS_026TI_FIRLMBINT003_PRIME	2006-203T01:40:27	GMB_E026_Titan16+000T01:15:00	000T01:00:00	2006-203T02:40:27	4000	14.4	Prime	CIRS_FP1 to Titan	PIC	pick up at ISS_NAC to Spica (201.298/-11.161), POS_X to 200.0/80.0 leave off at waypoint
CIRS_026TI_FIRLMBINT003_SI	2006-203T01:40:27	GMB_E026_Titan16+000T01:15:00	000T01:00:00	2006-203T02:40:27	0	3.0	SPASS Rider			
CIRS_026TI_FIRLMBINT008_UVIS	2006-203T01:10:27	GMB_E026_Titan16+000T00:45:00	000T00:30:00	2006-203T01:40:27	4000	7.2	SPASS Rider			
CIRS_026TI_FIRNADCMP003_VIMS	2006-202T00:36:27	GMB_E026_Titan16-000T23:49:00	000T14:49:00	2006-202T15:25:27	2624	140.0	SPASS Rider			
CIRS_026TI_FIRNADCMP004_VIMS	2006-203T07:40:27	GMB_E026_Titan16+000T07:15:00	000T06:11:00	2006-203T13:51:27	3000	66.8	SPASS Rider			
CIRS_026TI_FIRNADCMP005_VIMS	2006-202T17:25:27	GMB_E026_Titan16-000T07:00:00	000T01:40:00	2006-202T19:05:27	4000	24.0	SPASS Rider			
CIRS_026TI_FIRNADMAP003_PRIME	2006-203T02:40:27	GMB_E026_Titan16+000T02:15:00	000T02:45:00	2006-203T05:25:27	2000	19.8	Prime	CIRS_FP1 to Titan	POS_X to North_Pole_Dir	
CIRS_026TI_FIRNADMAP003_SI	2006-203T02:40:27	GMB_E026_Titan16+000T02:15:00	000T02:45:00	2006-203T05:25:27	0	3.0	SPASS Rider			
CIRS_026TI_MIRLMBINT002_PRIME	2006-202T15:25:27	GMB_E026_Titan16-000T09:00:00	000T02:00:00	2006-202T17:25:27	4000	28.8	Prime	CIRS_FPB to Titan	PIC	
CIRS_026TI_MIRLMBINT002_SI	2006-202T15:25:27	GMB_E026_Titan16-000T09:00:00	000T02:00:00	2006-202T17:25:27	0	3.0	SPASS Rider			
CIRS_026TI_MIRLMBMAP003_PRIME	2006-203T05:25:27	GMB_E026_Titan16+000T05:00:00	000T02:15:00	2006-203T07:40:27	2000	16.2	Prime	CIRS_FP1 to Titan	PIC	hand off at waypoint
CIRS_026TI_MIRLMBMAP003_SI	2006-203T05:25:27	GMB_E026_Titan16+000T05:00:00	000T02:15:00	2006-203T07:40:27	0	4.0	SPASS Rider			
ENGR_026SC_DEADBAND203_AACS	2006-203T00:52:27	GMB_E026_Titan16+000T00:27:00	000T00:00:01	2006-203T00:52:28	0	0.0	SPASS Note			
ENGR_026SC_DFPWBIAS203_PPS	2006-203T01:03:27	GMB_E026_Titan16+000T00:38:00	000T00:21:05	2006-203T01:24:32	0	0.0	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
ENGR_026SC_ORSRCS203_PPS	2006-203T00:55:27	GMB_E026_Titan16+000T00:30:00	000T00:00:06	2006-203T00:55:33	0	0.0	Non-SPASS			
ENGR_026SC_RADRCS202_PPS	2006-202T23:33:27	GMB_E026_Titan16-000T00:52:00	000T00:21:15	2006-202T23:54:42	0	0.0	Prime	NEG_Z to Titan	NEG_Y to North_Pole_Dir	Deadband = (2, 2, 20)
ENGR_026SC_RADRWA202_PPS	2006-202T19:05:27	GMB_E026_Titan16-000T05:20:00	000T00:00:44	2006-202T19:06:11	0	0.0	Non-SPASS			
ENGR_026SC_RADWU202_PPS	2006-202T16:25:27	GMB_E026_Titan16-000T08:00:00	000T00:00:07	2006-202T16:25:34	0	0.0	Non-SPASS			
ENGR_026SC_ROUTEREU001_CDS	2006-203T01:00:27	GMB_E026_Titan16+000T00:35:00	000T00:55:00	2006-203T01:55:27	227	0.7	Non-SPASS			
ENGR_026SC_RSSKRWAF203_PPS	2006-203T11:45:27	GMB_E026_Titan16+000T11:20:00	000T00:05:04	2006-203T11:50:31	0	0.0	Non-SPASS			
INMS_026OT_MAGTAIL002_CAPS	2006-201T23:51:00		000T12:54:33	2006-202T12:45:33	100	4.6	Non-SPASS			
INMS_026SA_SURVEY002_RIDER	2006-203T12:25:27	GMB_E026_Titan16+000T12:00:00	000T11:14:27	2006-203T23:39:54	50	2.0	Non-SPASS			
INMS_026TI_T16CLOSE001_INMS	2006-202T23:25:27	GMB_E026_Titan16-000T01:00:00	000T02:00:00	2006-203T01:25:27	1498	10.8	Non-SPASS			
INMS_026TI_T16INBD001_RADAR	2006-202T12:45:33		000T10:39:54	2006-202T23:25:27	100	3.8	Non-SPASS			
INMS_026TI_T16OUTBD001_RADAR	2006-203T01:25:27	GMB_E026_Titan16+000T01:00:00	000T11:00:00	2006-203T12:25:27	100	4.0	Non-SPASS			
ISS_026TI_CLOUDMAP001_VIMS	2006-203T07:40:27	GMB_E026_Titan16+000T07:15:00	000T05:34:00	2006-203T13:14:27	0	249.0	SPASS Rider			
ISS_026TI_FIRLMBINT003_CIRS	2006-203T01:40:27	GMB_E026_Titan16+000T01:15:00	000T01:00:00	2006-203T02:40:27	0	30.0	SPASS Rider			
ISS_026TI_FIRNADMAP003_CIRS	2006-203T02:40:27	GMB_E026_Titan16+000T02:15:00	000T02:45:00	2006-203T05:25:27	0	262.0	SPASS Rider			
ISS_026TI_GLOBALMAP001_VIMS	2006-202T00:36:27	GMB_E026_Titan16-000T23:49:00	000T14:49:00	2006-202T15:25:27	0	20.0	SPASS Rider			
ISS_026TI_HIRES001_VIMS	2006-202T17:25:27	GMB_E026_Titan16-000T07:00:00	000T01:40:00	2006-202T19:05:27	0	30.0	SPASS Rider			
ISS_026TI_MIRLMBINT002_CIRS	2006-202T15:25:27	GMB_E026_Titan16-000T09:00:00	000T02:00:00	2006-202T17:25:27	0	30.0	SPASS Rider			
ISS_026TI_MIRLMBMAP003_CIRS	2006-203T05:25:27	GMB_E026_Titan16+000T05:00:00	000T02:15:00	2006-203T07:40:27	0	150.0	SPASS Rider			

TOL (con't)

MAG_026OT_MAGTAIL001_MAPS	2006-201T23:51:00		000T10:04:00	2006-202T09:55:00	600	21.7	Non-SPASS			
MAG_026OT_SURVEY001_PRIME	2006-202T09:55:00		000T10:30:27	2006-202T20:25:27	600	22.7	Non-SPASS			
MAG_026OT_SURVEY004_PRIME	2006-203T04:25:27	GMB_E026_Titan16+000T04:00:00	000T19:10:47	2006-203T23:36:14	600	41.4	Non-SPASS			
MAG_026TI_MAGTITAN001_PRIME	2006-202T20:25:27	GMB_E026_Titan16-000T04:00:00	000T08:00:00	2006-203T04:25:27	1976	56.9	Non-SPASS			
MIMI_026CO_SURVEY001_RIDER	2006-202T09:55:00		000T12:30:27	2006-202T22:25:27	900	40.5	Non-SPASS			
MIMI_026CO_SURVEY002_RIDER	2006-203T02:25:27	GMB_E026_Titan16+000T02:00:00	000T21:34:47	2006-204T00:00:14	900	69.9	Non-SPASS			
MIMI_026OT_MAGTAIL002_RIDER	2006-201T23:51:01		000T10:04:00	2006-202T09:55:01	900	32.6	SPASS Rider			
MIMI_026TI_T16CLOSE001_CAPS	2006-202T23:25:27	GMB_E026_Titan16-000T01:00:00	000T02:00:00	2006-203T01:25:27	2000	14.4	SPASS Rider			
MIMI_026TI_T16INBND001_CAPS	2006-202T22:25:27	GMB_E026_Titan16-000T02:00:00	000T01:00:00	2006-202T23:25:27	2000	7.2	SPASS Rider			
MIMI_026TI_T16OUTBND001_CAPS	2006-203T01:25:27	GMB_E026_Titan16+000T01:00:00	000T01:00:00	2006-203T02:25:27	2000	7.2	SPASS Rider			
MP_024NA_DSS63DOWN001_NA	2006-142T00:00:00		105T00:00:00	2006-247T00:00:00	0	0.0	Non-SPASS			
MP_024SA_DSS63DOWN001_NA	2006-142T00:00:00		133T00:00:00	2006-275T00:00:00	0	0.0	Non-SPASS			
MP_026NA_SEQUENCE022_NA	2006-198T00:06:00	E026_SEQUENCE_022+000T00:00:00	033T22:00:00	2006-231T22:06:00	0	0.0	SPASS Note			
MP_026SA_REV026_NA	2006-193T05:18:00		023T16:07:00	2006-216T21:25:00	0	0.0	Non-SPASS			
MP_026SA_RPXDESCEN026_NA	2006-203T02:35:36		000T00:00:01	2006-203T02:35:37	0	0.0	Non-SPASS			
MP_026TI_FLYBYT016_NA	2006-203T00:25:27		000T00:00:01	2006-203T00:25:28	0	0.0	Non-SPASS			
RADAR_026OT_WARM4TI16001_RIDER	2006-202T16:25:27	GMB_E026_Titan16-000T08:00:00	000T02:40:00	2006-202T19:05:27	255.4	2.5	SPASS Rider			
RADAR_026TI_T16HISAR001_PRIME	2006-203T00:18:27	GMB_E026_Titan16-000T00:07:00	000T00:14:00	2006-203T00:32:27	364800	306.4	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
RADAR_026TI_T16INALT001_PRIME	2006-202T23:55:27	GMB_E026_Titan16-000T00:30:00	000T00:15:00	2006-203T00:10:27	28016.6	25.2	Prime	NEG_Z to Titan	NEG_Y to North_Pole_Dir	
RADAR_026TI_T16INLRES001_PRIME	2006-203T00:10:27	GMB_E026_Titan16-000T00:15:00	000T00:08:00	2006-203T00:18:27	194985.6	93.6	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
RADAR_026TI_T16INSCAT001_PRIME	2006-202T22:42:27	GMB_E026_Titan16-000T01:43:00	000T00:51:00	2006-202T23:33:27	25171.2	77.0	Prime	NEG_Z to Titan	NEG_Y to North_Pole_Dir	RADAR must control primary and secondary for adequate performance.
RADAR_026TI_T16OTALT001_PRIME	2006-203T00:40:27	GMB_E026_Titan16+000T00:15:00	000T00:15:00	2006-203T00:55:27	28016.6	25.2	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM	hand off at -Z to Titan, -X to Titan_SC_RAM
RADAR_026TI_T16OTLRES001_PRIME	2006-203T00:32:27	GMB_E026_Titan16+000T00:07:00	000T00:08:00	2006-203T00:40:27	194985.6	93.6	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
RADAR_026TI_T16RADIOM001_PRIME	2006-202T19:05:27	GMB_E026_Titan16-000T05:20:00	000T03:37:00	2006-202T22:42:27	3830.4	49.9	Prime	NEG_Z to Titan	POS_X to North_Pole_Dir	Use -Y to NTP for the 2nd polarization. RADAR must control primary and secondary for adequate performance.
RPWS_026OT_MAGTAIL002_CAPS	2006-201T23:51:00		000T10:04:00	2006-202T09:55:00	1310	47.5	Non-SPASS			
RPWS_026SA_INSURVEY001_PRIME	2006-203T18:05:00		000T05:31:00	2006-203T23:36:00	1310	26.0	Non-SPASS			
RPWS_026SA_OUTSURVEY001_PRIME	2006-202T09:55:00		000T12:30:27	2006-202T22:25:27	1310	59.0	Non-SPASS			
RPWS_026SA_OUTSURVEY003_PRIME	2006-203T02:25:27	GMB_E026_Titan16+000T02:00:00	000T15:39:47	2006-203T18:05:14	1310	73.9	Non-SPASS			
RPWS_026TI_TICA001_PRIME	2006-202T23:55:27	GMB_E026_Titan16-000T00:30:00	000T01:00:00	2006-203T00:55:27	30464	109.7	Non-SPASS			
RPWS_026TI_TIINTRMED001_PRIME	2006-202T22:25:27	GMB_E026_Titan16-000T02:00:00	000T01:30:00	2006-202T23:55:27	3500	18.9	Non-SPASS			
RPWS_026TI_TIINTRMED002_PRIME	2006-203T00:55:27	GMB_E026_Titan16+000T00:30:00	000T01:30:00	2006-203T02:25:27	12499.4	67.5	Non-SPASS			
RSS_026EA_SCE3001_RSS	2006-203T11:51:00		000T11:45:00	2006-203T23:36:00	0	0.0	SPASS Rider			
SP_026EA_DLTURN203_PRIME	2006-203T13:30:00		000T00:30:00	2006-203T14:00:00	0	0.0	Prime	XBAND to Earth	POS_X to NEP	
SP_026EA_G70ARRNON203_PRIME	2006-203T14:00:00		000T09:36:00	2006-203T23:36:00	0	0.0	Prime	XBAND to Earth	Rolling/SRU	
SP_026NA_BEGCUSTOM202_PRIME	2006-202T19:05:27	GMB_E026_Titan16-000T05:20:00	000T00:01:00	2006-202T19:06:27	0	0.0	SPASS Note			
SP_026NA_DEADTIME202_PRIME	2006-202T00:21:00		000T00:15:27	2006-202T00:36:27	0	0.0	Prime	ISS_NAC to Titan	NEG_X to Sun	
SP_026NA_DEADTIME203_PRIME	2006-203T13:14:27	GMB_E026_Titan16+000T12:49:00	000T00:15:47	2006-203T13:30:14	0	0.0	Prime	ISS_NAC to Titan	NEG_X to Sun	
SP_026NA_ENDCUSTOM203_PRIME	2006-203T07:40:27	GMB_E026_Titan16+000T07:15:00	000T00:01:00	2006-203T07:41:27	0	0.0	SPASS Note			
SP_026NA_G70ARR2ND203_SP	2006-203T14:00:00		000T09:36:00	2006-203T23:36:00	0	0.0	Non-SPASS			
SP_026NA_G70ARRNON203_SP	2006-203T14:00:00		000T09:36:00	2006-203T23:36:00	0	0.0	Non-SPASS			
SP_026NA_G70OBSNON203_NA	2006-201T23:51:00		001T14:09:00	2006-203T14:00:00	0	0.0	Non-SPASS			
SP_026NA_TOSTSEG201_NA	2006-201T23:51:00		001T23:45:00	2006-203T23:36:00	0	0.0	SPASS Note			
SP_026TI_WAYPTTURN201_PRIME	2006-201T23:51:00		000T00:30:00	2006-202T00:21:00	0	0.0	New Waypoint	ISS_NAC to Titan	NEG_X to Sun	
UVIS_026ST_ALPVIR002_PRIME	2006-203T00:55:27	GMB_E026_Titan16+000T00:30:00	000T00:45:00	2006-203T01:40:27	32096	86.7	Prime	ISS_NAC to 201.298/-11.161	POS_X to 200.0/80.0	pick up at -Z to TI, -X to Titan SC Ram
VIMS_026TI_CLOUDMAP001_PRIME	2006-203T07:40:27	GMB_E026_Titan16+000T07:15:00	000T05:34:00	2006-203T13:14:27	3642.7	73.0	Prime	ISS_NAC to Titan	NEG_X to Sun	
VIMS_026TI_COMPMAP001_CIRS	2006-202T15:25:27	GMB_E026_Titan16-000T09:00:00	000T02:00:00	2006-202T17:25:27	3750	27.0	SPASS Rider			
VIMS_026TI_GLOBALMAP001_PRIME	2006-202T00:36:27	GMB_E026_Titan16-000T23:49:00	000T14:49:00	2006-202T15:25:27	3374.6	180.0	Prime	VIMS_IR to Titan	NEG_X to Sun	
VIMS_026TI_HIRES001_PRIME	2006-202T17:25:27	GMB_E026_Titan16-000T07:00:00	000T01:40:00	2006-202T19:05:27	32333.3	194.0	Prime	VIMS_IR to Titan	NEG_X to Sun	
VIMS_026TI_LIMB001_CIRS	2006-203T01:40:27	GMB_E026_Titan16+000T01:15:00	000T06:00:00	2006-203T07:40:27	2083.3	45.0	SPASS Rider			

Data Volume Summary

DATA VOLUME SUMMARY --- TRANSFER FRAME OVERHEAD INCLUDED (80 BITS PER 8800-BIT FRAME)

			OBSERVATION_PERIOD							DOWNLINK_PASS							
			P4						P5	RECORDED		PLAYBACK					
DOWNLINK PASS NAME	Start doy hh:mm	End doy hh:mm	START (Mb)	SCI (Mb)	HK+E (Mb)	TOTAL (Mb)	CPACTY (Mb)	MRGN (Mb)	OPNAV (Mb)	SCI (Mb)	ENGR (Mb)	TOTAL (Mb)	CPACTY (Mb)	MARGN (Mb)	NET_MARGN (Mb)	CAROVR (%)	CAROVR (Mb)
SP_026EA_G70ARRNON203_PRIME	203 14:00	203 23:36	0	3371	136	3506	3532	26	0	218	57	3781	3996	215	215	5%	0

DATA VOLUME REPORT --- TRANSFER FRAME OVERHEAD NOT INCLUDED

Event	Start doy hh:mm	End doy hh:mm	CAPS (Mb)	CDA (Mb)	CIRS (Mb)	INMS (Mb)	ISS (Mb)	MAG (Mb)	MIMI (Mb)	RADAR (Mb)	RPWS (Mb)	UVIS (Mb)	VIMS (Mb)	PROBE (Mb)	ENGR (Mb)	TOTAL (Mb)
OBSERVATION_NOR	201 23:51	203 14:00	297.7	24.6	324.3	23.5	771.0	122.0	139.4	671.2	357.1	77.0	519.0	0.0	5.0	3332.0
OBSERVATION_SI	201 23:51	203 14:00	0.0	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0
SP_026EA_G70ARRNON203_PRIME	203 14:00	203 23:36	34.6	18.1	64.8	1.7	0.0	20.7	31.1	0.0	45.3	0.0	0.0	0.0	0.0	216.3
DAILY TOTAL SCIENCE	201 23:51	203 23:36	332.3	42.7	402.1	25.2	771.0	142.8	170.5	671.2	402.4	77.0	519.0	0.0		

Attitude Strategy Spreadsheet

Request	Riders	Start (SCET)	Start (Epoch)	Duration	End (SCET)	Primary	Secondary	Comments
Sequence S022, length = 34 ...		2006-198T00:06:00	E026_SEQUENCE_022+00	033T22:00:00	2006-231T22:06:00			
TOST rev 26 Segment		2006-201T23:51:00		001T23:45:00	2006-203T23:36:00			
SP_026TI_WAYPTTURN201_PRIME	C, M	2006-201T23:51:00		000T00:30:00	2006-202T00:21:00	ISS_NAC to Titan	NEG_X to Sun	
NEW WAYPOINT		**2006-202T00:21:00**		**001T23:15:00**	**2006-203T23:36:00**	**ISS_NAC to Titan**	**NEG_X to Sun**	
SP_026NA_DEADTIME202_PRIME	**C, M**	**2006-202T00:21:00**		**000T00:15:27**	**2006-202T00:36:27**	**ISS_NAC to Titan**	**NEG_X to Sun**	
VIMS_026TI_GLOBALMAP001_PRIME	C, I, M	2006-202T00:36:27	GMB_E026_Titan16-000T23:49:00	000T14:49:00	2006-202T15:25:27	VIMS_IR to Titan	NEG_X to Sun	
CIRS_026TI_MIRLMBINT002_PRIME	C, I, R, V	2006-202T15:25:27	GMB_E026_Titan16-000T09:00:00	000T02:00:00	2006-202T17:25:27	CIRS_FPB to Titan	PIC	
VIMS_026TI_HIRES001_PRIME	C, I, R	2006-202T17:25:27	GMB_E026_Titan16-000T07:00:00	000T01:40:00	2006-202T19:05:27	VIMS_IR to Titan	NEG_X to Sun	
Begin Custom		**2006-202T19:05:27**	**GMB_E026_Titan16-000T05:20:00**	**000T00:01:00**	**2006-202T19:06:27**			
RADAR_026TI_T16RADIOM001_PRIME	M	2006-202T19:05:27	GMB_E026_Titan16-000T05:20:00	000T03:37:00	2006-202T22:42:27	NEG_Z to Titan	POS_X to North_Pole_Dir	Pick up at ISS_NAC to Titan, NEG_X to Sun; Hand off at NEG_Z to Titan (-8.053,62.989,0.0 deg. offset), NEG_Y to North_Pole_Dir. Use -Y to NTP for the 2nd polarization. RADAR must control primary and secondary for adequate performance.
RADAR_026TI_T16INSCAT001_PRIME	M	2006-202T22:42:27	GMB_E026_Titan16-000T01:43:00	000T00:51:00	2006-202T23:33:27	NEG_Z to Titan	NEG_Y to North_Pole_Dir	Pick up at NEG_Z to Titan (-8.053,62.989,0.0 deg. offset), NEG_Y to North_Pole_Dir; Hand off at NEG_Z to Titan, NEG_Y to North_Pole_Dir. RADAR must control primary and secondary for adequate performance.
ENGR_026SC_RADRCS202_PPS	M	2006-202T23:33:27	GMB_E026_Titan16-000T00:52:00	000T00:21:15	2006-202T23:54:42	NEG_Z to Titan	NEG_Y to North_Pole_Dir	Pick up at NEG_Z to Titan, NEG_Y to North_Pole_Dir; Hand off at NEG_Z to Titan, NEG_Y to North_Pole_Dir. Deadband = (2, 2, 20)
RADAR_026TI_T16INALT001_PRIME	M	2006-202T23:55:27	GMB_E026_Titan16-000T00:30:00	000T00:15:00	2006-203T00:10:27	NEG_Z to Titan	NEG_Y to North_Pole_Dir	Pick up at NEG_Z to Titan, NEG_Y to North_Pole_Dir; Hand off at NEG_Z to Titan, NEG_X to Titan_SC_RAM.
RADAR_026TI_T16INLRES001_PRIME	M	2006-203T00:10:27	GMB_E026_Titan16-000T00:15:00	000T00:08:00	2006-203T00:18:27	NEG_Z to Titan	NEG_X to Titan_SC_RAM	Pick up at NEG_Z to Titan, NEG_X to Titan_SC_RAM; Hand off at NEG_Z to Titan, NEG_X to Titan_SC_RAM.
RADAR_026TI_T16HISAR001_PRIME	M	2006-203T00:18:27	GMB_E026_Titan16-000T00:07:00	000T00:14:00	2006-203T00:32:27	NEG_Z to Titan	NEG_X to Titan_SC_RAM	Pick up at NEG_Z to Titan, NEG_X to Titan_SC_RAM; Hand off at NEG_Z to Titan, NEG_X to Titan_SC_RAM.
RADAR_026TI_T16OTLRES001_PRIME	M	2006-203T00:32:27	GMB_E026_Titan16+000T00:07:00	000T00:08:00	2006-203T00:40:27	NEG_Z to Titan	NEG_X to Titan_SC_RAM	Pick up at NEG_Z to Titan, NEG_X to Titan_SC_RAM; Hand off at NEG_Z to Titan, NEG_X to Titan_SC_RAM.
RADAR_026TI_T16OTALT001_PRIME	M	2006-203T00:40:27	GMB_E026_Titan16+000T00:15:00	000T00:15:00	2006-203T00:55:27	NEG_Z to Titan	NEG_X to Titan_SC_RAM	Pick up at NEG_Z to Titan, NEG_X to Titan_SC_RAM; Hand off at NEG_Z to Titan, NEG_X to Titan_SC_RAM. hand off at -Z to Titan, -X to Titan_SC_RAM
Set deadband to (2, 2, 2) f...		2006-203T00:52:27	GMB_E026_Titan16+000T00:27:00	000T00:00:01	2006-203T00:52:28			
UVIS_026ST_ALPVIR002_PRIME	M	2006-203T00:55:27	GMB_E026_Titan16+000T00:30:00	000T00:08:00	2006-203T01:03:27	ISS_NAC to 201.298/-11.161	POS_X to 200.0/80.0	Pick up at NEG_Z to Titan, NEG_X to Titan_SC_RAM; Hand off at ISS_NAC to 201.298/-11.161, POS_X to 200.0/80.0. pick up at -Z to TI, -X to Titan SC Ram
1 UVIS request in SASF		**2006-203T01:03:27**	**GMB_E026_Titan16+000T00:38:00**	**000T00:00:01**	**2006-203T01:03:28**			
ENGR_026SC_DFPWBIAS203_PPS	C, M, U	2006-203T01:03:27	GMB_E026_Titan16+000T00:38:00	000T00:21:05	2006-203T01:24:32	NEG_Z to Titan	NEG_X to Titan_SC_RAM	Pick up at NEG_Z to Titan, NEG_X to Titan_SC_RAM; Hand off at NEG_Z to Titan, NEG_X to Titan_SC_RAM.
UVIS_026ST_ALPVIR003_PRIME	C, M	2006-203T01:25:27	GMB_E026_Titan16+000T01:00:00	000T00:15:00	2006-203T01:40:27	ISS_NAC to 201.298/-11.161	POS_X to 200.0/80.0	Pick up at ISS_NAC to 201.298/-11.161, POS_X to 200.0/80.0; Hand off at ISS_NAC to 201.298/-11.161, POS_X to 200.0/80.0. pick up at -Z to TI, -X to Titan SC Ram
CIRS_026TI_FIRLMBINT003_PRIME	C, I, M, V	2006-203T01:40:27	GMB_E026_Titan16+000T01:15:00	000T01:00:00	2006-203T02:40:27	CIRS_FP1 to Titan	PIC	Pick up at ISS_NAC to 201.298/-11.161, POS_X to 200.0/80.0; Hand off at ISS_NAC to Titan, PIC. pick up at ISS_NAC to Spica (201.298/-11.161), POS_X to 200.0/80.0 leave off at waypoint
CIRS_026TI_FIRNADMAP003_PRIME	C, I, V	2006-203T02:40:27	GMB_E026_Titan16+000T02:15:00	000T02:45:00	2006-203T05:25:27	CIRS_FP1 to Titan	POS_X to North_Pole_Dir	Pick up at ISS_NAC to Titan, PIC; Hand off at ISS_NAC to Titan, NEG_X to Sun.
CIRS_026TI_MIRLMBMAP003_PRIME	C, I, V	2006-203T05:25:27	GMB_E026_Titan16+000T05:00:00	000T02:15:00	2006-203T07:40:27	CIRS_FP1 to Titan	PIC	Pick up at ISS_NAC to Titan, NEG_X to Sun; Hand off at ISS_NAC to Titan, NEG_X to Sun. hand off at waypoint
End Custom		**2006-203T07:40:27**	**GMB_E026_Titan16+000T07:15:00**	**000T00:01:00**	**2006-203T07:41:27**			
VIMS_026TI_CLOUDMAP001_PRIME	C, I, R	2006-203T07:40:27	GMB_E026_Titan16+000T07:15:00	000T05:34:00	2006-203T13:14:27	ISS_NAC to Titan	NEG_X to Sun	
SP_026NA_DEADTIME203_PRIME	**C, R**	**2006-203T13:14:27**	**GMB_E026_Titan16+000T12:49:00**	**000T00:15:33**	**2006-203T13:30:00**	**ISS_NAC to Titan**	**NEG_X to Sun**	
SP_026EA_DLTURN203_PRIME	C, R	2006-203T13:30:00		000T00:30:00	2006-203T14:00:00	XBAND to Earth	POS_X to NEP	
SP_026EA_G70ARRNON203_PRIME	C, R	2006-203T14:00:00		000T09:36:00	2006-203T23:36:00	XBAND to Earth	Rolling/SRU	

Telemetry Mode Report

TELEMETRY MODE REPORT

EPOCH RELATIVE	UTC	DURATION	TELEMETRY MODE	REQUEST
	2006-201T23:51:00.000	16:34:27	S_N_ER_3	SP_026NA_G70OBSNON203_NA
GMB_E026_Titan16-000T08:00:00	2006-202T16:25:27.000	00:15:00	S_N_ER_5A	SP_026NA_G70OBSNON203_NA
GMB_E026_Titan16-000T07:45:00	2006-202T16:40:27.000	02:25:00	S_N_ER_3	SP_026NA_G70OBSNON203_NA
GMB_E026_Titan16-000T05:20:00	2006-202T19:05:27.000	05:55:00	S_N_ER_8	SP_026NA_G70OBSNON203_NA
GMB_E026_Titan16+000T00:35:00	2006-203T01:00:27.000	12:59:33	S_N_ER_3	SP_026NA_G70OBSNON203_NA
	2006-203T14:00:00.000	00:15:00	RTE_N_SPB_99540	SP_026EA_G70ARRNON203_PRIME
	2006-203T14:15:00.000	00:21:00	RTE_N_SPB_110600	SP_026EA_G70ARRNON203_PRIME
	2006-203T14:36:00.000	01:15:00	RTE_N_SPB_124425	SP_026EA_G70ARRNON203_PRIME
	2006-203T15:51:00.000	07:15:00	RTE_N_SPB_142200	SP_026EA_G70ARRNON203_PRIME
	2006-203T23:06:00.000	00:30:00	RTE_N_SPB_124425	SP_026EA_G70ARRNON203_PRIME

DSN Requests

CASSINI DOWNLINK/DSN COVERAGE SUMMARY for T16.apf on 2006-Jan-30 11:38:54
(+ = pass overlaps with previous pass; * = conflicts with DSN weekly maintenance; o = overlaps occultation)

DOWNLINK PASS					DSN PASS						
NAME	START_TO_END SCET	START_TO_END ERT	DUR hh:mm	DATA_RATES kbps	ID	START_TO_END SCET	START_TO_END ERT	DUR hh:mm	CALS min	LABEL	CNFG
G70ARRNON203	203T14:00-23:36	203T15:24-01:00	09:36	99,110,124,142,124	25	203T14:00-23:36	203T15:20-01:00	09:40	90/15	RSS Sol	N748
				^-- and also -->	14	203T14:00-23:36	203T15:20-01:00	09:40	60/15	Ranging_	X_up_on

NAV Requests

CASSINI NAVIGATION SUMMARY for T16.apf on 2006-Jan-30 11:39:58
(+ = pass overlaps with previous pass; * = conflicts with DSN weekly maintenance; o = overlaps occultation)

ON EARTH-LINE FOR DOWNLINK			TRACKING SUPPORT						
NAME	START_TO_END SCET	DUR hh:mm	ID	BOT_TO_EOT UTC	GND_UPLINK UTC	ARRIV_SC SCET	RCV_GND ERT	2-WAY DOP hh:mm OK?	RNG OK?
-(missing)--	---------------	-----	gap in doppler data of 42 hours					NO	NO
G70ARRNON203	203T14:00-23:36	09:36	25	203T15:20-01:00	15:30-00:55	16:54-23:36	18:18-01:00	06:42 Y?	YES
	^-- and also -->		14	203T15:20-01:00	15:30-00:55	16:54-23:36	18:18-01:00	06:42 Y?	Y?

Open Issues

- None

TWT/OST Integration Constraint and Guideline Checklist

Below are Target Working Team (TWT) and Orbiter Science Team (OST) constraints that must be followed during segment implementation. Any exceptions to constraint numbers 3, 4, 6, or 7 must be approved by the Science Planning Manager.

Constraint	C=Comply V=Violate N/A=Not Applicable	Comments	Disposition
1. A. SP has checked all waypoints turns to and from waypoints.			
B. All initial downlink attitudes have been checked as waypo ints.			
2. All turns to and from waypoints checked for violations and margins. ☐CAPS ☐CDA ☐CIRS ☐INMS ☐ISS ☐MIMI ☐MAG ☐NAV ☐RADAR ☐RPWS ☐RSS ☐UVIS ☐VIMS Each Prime Instrument agrees to accept a reduction in observation time during implementation if problems arise.			
3. Custom handoffs limited to:			
A. ±3 hours from targeted Icy Satellite flyby			
B. ±3 hours from targeted Titan Flyby			
C. OpNavs preceding/following a downlink			
4. Minimum 30 min SPASS Prime request duration outside ±5 hours from targeted satellite flyby (5 min. integer duration if >30 min.)			
5. Live and Ground Movable Blocks include appropriate time margins.		K. Klaasen's margin for flyby is min. according to memo dated .	
6. Waypo ints changes are Š3 per day			
A. All turns that accomplish the waypoint strategy are requested by SP or OpNav.			
7. Live Movable Blocks limited to the following orbits: 7, 8, 9, 10, 12, 28, 51, 56, 57, 60, 63, 64			

Guideline	Yes / No	Comments
1. Were repeatable/reusable templates used where possible?		
2. During Pre-Integration: Was 30 min. used for 90º RWA turns and/or 10 min. for RCS turns?		

(DOUBLE-CLICK TO MAKE CHANGES)