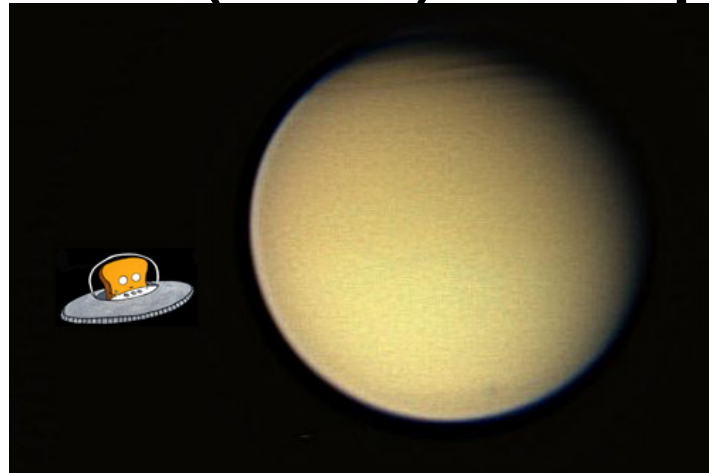


TOST: Integration 122TI (T63) Wrapup



March 6, 2009

Jo Pitesky, Nora Kelly, Trina Ray, Kim Steadman,

Segment Basics

Segment times:

BEG: 2009-345T10:10:00

END: 2009-348T10:10:00

Altitude: 4850 km

Time of C/A: 2009-346T01:03:14

Epoch: GMB_E122_Titan63

Sequence: S55

<p>At least 2 weeks prior to the Kickoff Meeting make sure that all requests are in CIMS</p>	<p>Kickoff Meeting</p> <p><u>Present</u> Master Timeline Draft Op Modes Draft Telem Modes Draft RCS Deadband</p> <p><u>Discuss</u> Timeline Op Modes Telem Modes Deadbands for RCS</p> <p><u>Homework</u> Custom Handoff Attitudes Unique Op Mode Requirements (SCO) Turn Assignments CCRs High Level Science</p>	<p>Detailed Meeting</p> <p><u>Present</u> Master Timeline SMT Report Timeline Graphic TOL SPASS DSN Reports Dual Playback Science Draft Data Volume Cuts</p> <p><u>Discuss</u> Data Volume Cuts</p> <p><u>Homework</u> CCRs High Level Science Objectives</p>	<p>Wrap-up Meeting</p> <p><u>Present</u> Wrap-up Package Checklist High Level Science Objectives</p> <p><u>Discuss</u> N/A</p> <p><u>Homework</u> N/A</p>
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High-level Science Objectives (1)

CAPS-The T63 encounter passes through Titan's wake/magnetotail region, nearly crossing the geometric wake at a range of 1.9 body radii. This is both similar and very complementary to the Voyager and Cassini T9 encounters. This geometry allows the CAPS observations, combined with those of the other MAPS instruments, to explore the interaction between Titan and Saturn's magnetosphere. The encounter occurs near dusk in Saturn's magnetosphere, unlike Voyager (near noon) or T9 (near midnight). *DOY 345*

RADAR – Radiometry inbound *DOY 345*

CIRS – Stratospheric composition *DOY 345-346* and temperature monitoring *DOY 346*; seasonal effects

ISS – ISS will acquire regional- (*DOY 345*) and global-mapping (*DOY 346*) mosaics of northern Adiri and ride along with VIMS (*DOY 346*) and CIRS (*DOY 345*) to monitor clouds. ISS will also monitor Titan to track clouds and the evolution thereof for an extra day after the Titan encounter. *DOY 347*

VIMS – This flyby will allow VIMS to monitor the cloud cover during the inbound period. *DOY 345* After closest approach, VIMS will ride along with ISS to acquire a mosaic of Shangri-La and Belet at a resolution of 40 km per pixel. *DOY 346* Finally, VIMS will acquire a global map for cloud monitoring. *DOY 346*

High-level Science Objectives (2)

UVIS – UVIS will obtain an image cube of Titan's atmosphere at EUV and FUV wavelengths by sweeping its slit across the disk. These cubes provide spectral and spatial information on nitrogen emissions, H emission and absorption, absorption by simple hydrocarbons, and the scattering properties of haze aerosols. This is one of many such cubes gathered over the course of the mission to provide latitude and seasonal coverage of Titan's middle atmosphere and stratosphere. *DOY 345-346*

MIMI– Energetic ion and electron energy input to atmosphere (Poor ENA) *DOY 345-346*

RPWS – Measure thermal plasmas in Titan's ionosphere and surrounding environment; search for lightning in Titan's atmosphere; investigate the interaction of Titan with Saturn's magnetosphere. *DOY 345-346*

MAG – T63 is a north polar, dusk, high altitude flyby. In nominal upstream conditions, Cassini would explore the north lobe of the mid-range magnetic tail. With adequate pointing of MAPS plasma instruments MAG data will also permit to obtain valuable information about the pitch angle distribution of Titan's escaping plasma. This flyby will increase our understanding of the properties of Titan's mid range tail acquired during T9. *DOY 345-346*

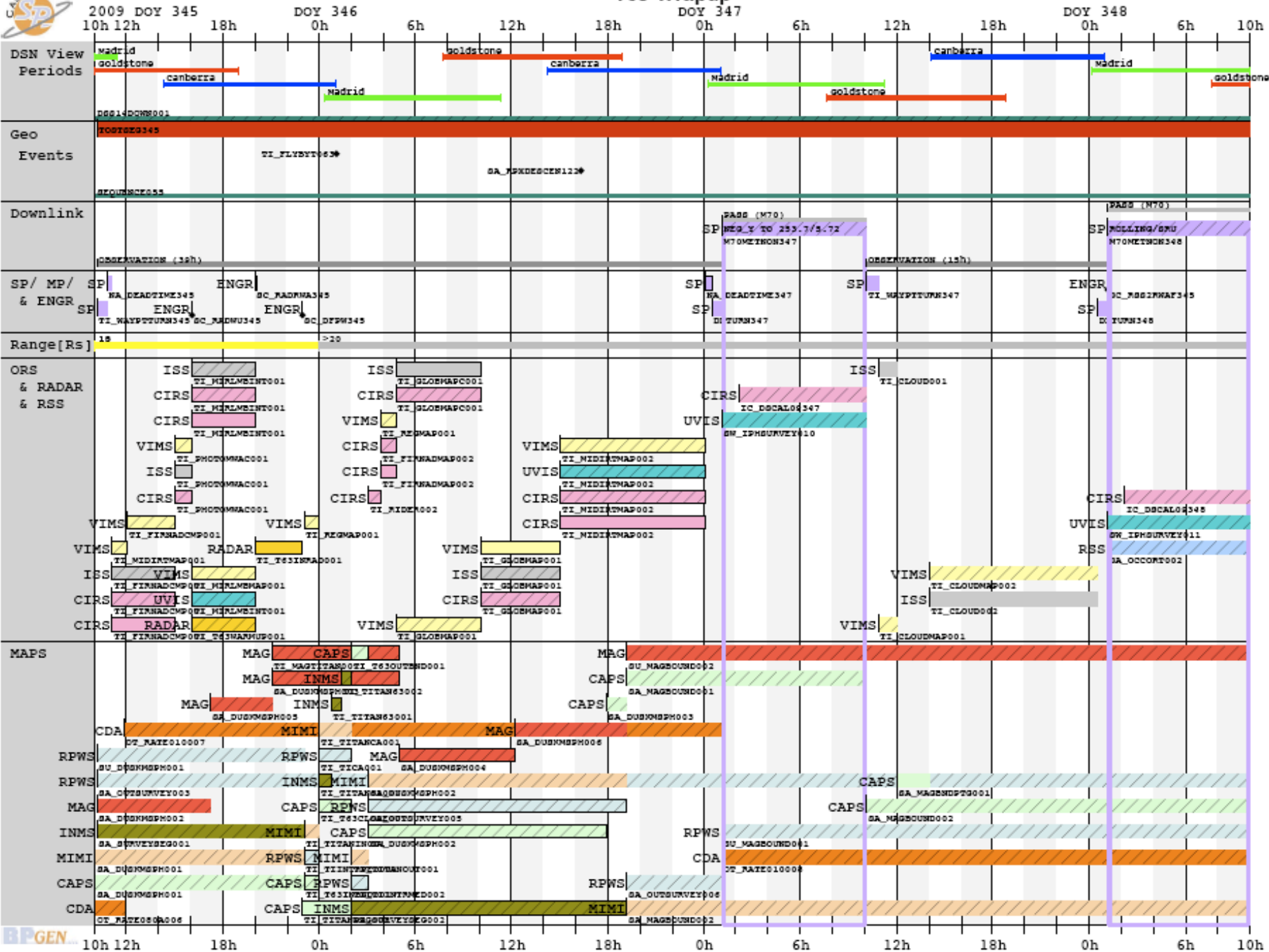
Master Timeline for T63

T63	4850
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Start Time	End Time	Prime Activity	Obs. Detail	Op Mode	TLM Mode	Comments
2009-345T10:10:00	2009-345T10:50:00	SP Turn to WP	NEG_Y to Titan, NEG_X to Sun	DFPW Normal	S_N_ER_3	
2009-345T10:50:00	C/A - 13:57:18	OD Uncertainty Dead Time		DFPW Normal	S_N_ER_3	
C/A - 13:57:18	-10:00	CIRS	Template M4	DFPW Normal	S_N_ER_3	
-10:00	-09:00	ISS	Template N	DFPW Normal	S_N_ER_3	
-09:00	-05:00	CIRS	Template R	RADWU	S_N_ER_5A for 15 minutes, then S_N_ER_3	
-05:00	-02:05	RADAR	Template L	RADRWA	S_N_ER_8	
-02:05	0	CAPS	NEG_Y to 36.467/-12.267, NEG_X to Sun	DFPW Normal	S_N_ER_3	
2009-346T01:03:14		CLOSEST APPROACH		DFPW Normal		
0	+02:45	CAPS		DFPW Normal	S_N_ER_3	
+02:45	+3:45	CIRS	Template S2	DFPW Normal	S_N_ER_3	
+3:45	+9:00	ISS	Template S2	DFPW Normal	S_N_ER_3	
+09:00	+14:00	VIMS	Template V	DFPW Normal	S_N_ER_3	
+14:00	C/A + 23	CIRS	Template A(Z)	DFPW Normal	S_N_ER_3	
C/A + 23	2009-347T00:30:00	OD Uncertainty Dead Time		DFPW Normal	S_N_ER_3	
2009-347T00:30:00	2009-347T01:10:00	SP Turn to Earth for downlink		DFPW Normal	S_N_ER_3	
2009-347T01:10:00	2009-347T10:10:00	70-m Array		DFPW Normal	RTE_N_SPB	
2009-347T10:10:00	2009-347T10:50:00	SP Turn to WP	NEG_Y to Titan, NEG_X to Sun	DFPW Normal	S_N_ER_3	
2009-347T10:50:00	2009-347T12:00:00	ISS		DFPW Normal	S_N_ER_3	
2009-347T12:00:00	2009-347T14:00:00	CAPS		DFPW Normal	S_N_ER_3	
2009-347T14:00:00	2009-348T00:30:00	ISS		DFPW Normal	S_N_ER_3	
2009-348T00:30:00	2009-348T01:10:00	SP Turn to Earth for downlink		DFPW Normal	S_N_ER_3	



T63-Wrapup



T63 Wrap-Up Telemetry Mode Report

TELEMETRY MODE REPORT

EPOCH RELATIVE	UTC	DURATION	TELEMETRY MODE	REQUEST
	2009-345T10:10:00.000	05:53:14	S_N_ER_3	SP_122NA_M70OBSNON347_NA
GMB_E122_Titan63-000T09:00:00	2009-345T16:03:14.000	00:15:00	S_N_ER_5A	SP_122NA_M70OBSNON347_NA
GMB_E122_Titan63-000T08:45:00	2009-345T16:18:14.000	03:45:00	S_N_ER_3	SP_122NA_M70OBSNON347_NA
GMB_E122_Titan63-000T05:00:00	2009-345T20:03:14.000	02:55:00	S_N_ER_8	SP_122NA_M70OBSNON347_NA
GMB_E122_Titan63-000T02:05:00	2009-345T22:58:14.000	001T02:11:46	S_N_ER_3	SP_122NA_M70OBSNON347_NA
	2009-347T01:10:00.000	01:00:00	RTE_N_SPB_82950	SP_122EA_M70METNON347_PRIME
	2009-347T02:10:00.000	01:15:00	RTE_N_SPB_124425	SP_122EA_M70METNON347_PRIME
	2009-347T03:25:00.000	04:45:00	RTE_N_SPB_142200	SP_122EA_M70METNON347_PRIME
	2009-347T08:10:00.000	01:00:00	RTE_N_SPB_124425	SP_122EA_M70METNON347_PRIME
	2009-347T09:10:00.000	01:00:00	RTE_N_SPB_99540	SP_122EA_M70METNON347_PRIME
	2009-347T10:10:00.000	15:00:00	S_N_ER_3	SP_122NA_M70OBSNON348_NA
	2009-348T01:10:00.000	00:30:00	RTE_N_SPB_82950	SP_122EA_M70METNON348_PRIME
	2009-348T01:40:00.000	01:30:00	RTE_N_SPB_110600	SP_122EA_M70METNON348_PRIME
	2009-348T03:10:00.000	05:00:00	RTE_N_SPB_142200	SP_122EA_M70METNON348_PRIME
	2009-348T08:10:00.000	01:00:00	RTE_N_SPB_124425	SP_122EA_M70METNON348_PRIME
	2009-348T09:10:00.000	01:00:00	RTE_N_SPB_99540	SP_122EA_M70METNON348_PRIME

T63 Wrap-Up SMT Report

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

DOWNLINK PASS NAME	Start doy hh:mm	End doy hh:mm	OBSERVATION_PERIOD							DOWNLINK_PASS							
			P4			P5				RECORDED		PLAYBACK					
			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)	NET_MARGN (%)	CAROVR (Mb)
SP_122EA_M70METNON347_PRIME	347 01:10	347 10:10	0	3371	165	3536	3542	6	0	740	53	4328	3458	-870	0	0%	870
SP_122EA_M70METNON348_PRIME	348 01:10	348 10:10	870	1682	63	2615	3542	927	0	805	53	3473	3473	-1	0	0%	0

T63 Wrap-Up SMT Report (continued)

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	345 10:10	347 01:10	595.8	78.6	292.8	24.1	687.0	227.3	150.7	52.9	750.1	193.1	275.5	0.0	31.9	3359.8
OBSERVATION_SI	345 10:10	347 01:10	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0
SP_122EA_M70METNON347_PRIME	347 01:10	347 10:10	64.8	17.0	86.4	3.2	0.0	64.0	38.9	0.0	453.7	4.9	0.0	0.0	0.0	732.9
DAILY TOTAL SCIENCE	345 10:10	347 10:10	660.6	95.5	391.2	27.3	687.0	291.4	189.6	52.9	1203.7	198.0	275.5	0.0		
OBSERVATION_NOR	347 10:10	348 01:10	216.0	28.3	0.0	5.4	459.0	106.7	64.8	0.0	756.1	0.0	30.0	0.0	12.3	1678.5
SP_122EA_M70METNON348_PRIME	348 01:10	348 10:10	129.6	17.0	86.4	3.2	0.0	64.0	38.9	0.0	453.7	4.9	0.0	0.0	0.0	797.7
DAILY TOTAL SCIENCE	347 10:10	348 10:10	345.6	45.3	86.4	8.6	459.0	170.7	103.7	0.0	1209.7	4.9	30.0	0.0		
			CAPS (Mb)	CDA (Mb)	CIRS (Mb)	INMS (Mb)	ISS (Mb)	MAG (Mb)	MIMI (Mb)	RADAR (Mb)	RPWS (Mb)	UVIS (Mb)	VIMS (Mb)	PROBE (Mb)		
TOTAL RECORDED (OPNAV data not included)			1006.2	140.8	477.6	36.0	1146.0	462.1	293.3	52.9	2413.5	203.0	305.5	0.0		

T63 Wrap-Up DSN Report

CASSINI DOWNLINK/DSN COVERAGE SUMMARY for 122TI_T63_090226.apf on 2009-Feb-26 14:30:51
 (+ = pass overlaps with previous pass; * = conflicts with DSN 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
M70METNON347	347T01:10-10:10	347T02:30-11:30	09:00	82,124,142,124,99	63	347T01:10-10:10	347T02:29-11:29	09:00	60 /15	TP	N003
M70METNON348	348T01:10-10:10	348T02:30-11:30	09:00	82,110,142,124,99	63	348T01:10-10:10	348T02:29-11:29	09:00	60 /15	RSS ORT/	1639

TOL for T63 (1 of 2)

Request	Start Time	Epoch	Duration	End Time	Rate	Data Volume	SPASS Type	Primary Pointing	Pointing	Pointing Agreement
MP_119NA_DSS14DOWN001_NA	2009-275T22:33:19		212T00:12:49	2010-122T22:46:08	0	0	Non-SPASS			
MP_121NA_SEQUENCE055_NA	2009-317T19:21:00		039T04:05:00	2009-356T23:26:00	0	0	SPASS Note			
CDA_122OT_RATE080A006_RIDER	2009-344T13:13:00		000T22:38:58	2009-345T11:51:58	4192	341.807	Non-SPASS			
CAPS_122SA_DUSKMSPH001_PRIME	2009-345T09:07:00		000T13:56:14	2009-345T23:03:14	4000	200.696	SPASS Rider			
MIMI_122SA_DUSKMSPH001_RIDER	2009-345T09:07:00		000T13:56:15	2009-345T23:03:15	1100	55.193	SPASS Rider			
INMS_122SA_SURVEYSEG001_INMS	2009-345T10:10:00		000T13:53:14	2009-346T00:03:14	100	4.999	Non-SPASS			
MAG_122SA_DUSKMSPH002_MAPS	2009-345T10:10:00		000T07:02:32	2009-345T17:12:32	988	25.048	Non-SPASS			
RPWS_122SA_OUTSURVEY003_PRIME	2009-345T10:10:00		003T00:00:00	2009-348T10:10:00	0.3	0.079	Non-SPASS			
RPWS_122SU_DUSKMSPH001_CAPS	2009-345T10:10:00		000T12:53:14	2009-345T23:03:14	2099.9	97.422	Non-SPASS			
SP_122NA_M70OBSNON347_NA	2009-345T10:10:00		001T15:00:00	2009-347T01:10:00	0	0	Non-SPASS			
SP_122NA_TOSTSEG345_NA	2009-345T10:10:00		003T00:00:00	2009-348T10:10:00	0	0	SPASS Note			
SP_122TI_WAYPTTURN345_PRIME	2009-345T10:10:00		000T00:40:00	2009-345T10:50:00	0	0	New Waypoint	NEG_Y to Titan	NEG_X to Sun	
SP_122NA_DEADTIME345_PRIME	2009-345T10:50:00		000T00:15:56	2009-345T11:05:56	0	0	Prime	NEG_Y to Titan	NEG_X to Sun	
CIRS_122TI_FIRNADCP001_PRIME	2009-345T11:05:56	GMB_E122_Titan63-000T13:57:18	000T03:57:18	2009-345T15:03:14	4000	56.952	Prime	CIRS_FP1 to Titan	PIC	
CIRS_122TI_FIRNADCP001_SI	2009-345T11:05:56	GMB_E122_Titan63-000T13:57:18	000T03:57:18	2009-345T15:03:14	0	4	SPASS Rider			
ISS_122TI_FIRNADCP001_CIRS	2009-345T11:05:56	GMB_E122_Titan63-000T13:57:18	000T03:57:18	2009-345T15:03:14	0	20	SPASS Rider			
VIMS_122TI_MIDIRTMAP001_CIRS	2009-345T11:05:56	GMB_E122_Titan63-000T13:57:18	000T00:57:18	2009-345T12:03:14	2181.5	7.5	SPASS Rider			
CDA_122OT_RATE010007_RIDER	2009-345T11:51:58		001T13:18:02	2009-347T01:10:00	394	52.914	Non-SPASS			
VIMS_122TI_FIRNADCP001_CIRS	2009-345T12:03:14	GMB_E122_Titan63-000T13:00:00	000T03:00:00	2009-345T15:03:14	1851.9	20	SPASS Rider			
CIRS_122TI_PHOTOMWAC001_ISS	2009-345T15:03:14	GMB_E122_Titan63-000T10:00:00	000T01:00:00	2009-345T16:03:14	4000	14.4	SPASS Rider			
ISS_122TI_PHOTOMWAC001_PRIME	2009-345T15:03:14	GMB_E122_Titan63-000T10:00:00	000T01:00:00	2009-345T16:03:14	0	70	Prime	ISS_NAC to Titan (0.0,0.0,1.5 deg. offset)	NEG_X to Sun	
VIMS_122TI_PHOTOMWAC001_ISS	2009-345T15:03:14	GMB_E122_Titan63-000T10:00:00	000T01:00:00	2009-345T16:03:14	4166.7	15	SPASS Rider			
CIRS_122TI_MIRLMBINT001_PRIME	2009-345T16:03:14	GMB_E122_Titan63-000T09:00:00	000T04:00:00	2009-345T20:03:14	4000	57.6	Prime	CIRS_FP2 to Titan	PIC	
CIRS_122TI_MIRLMBINT001_SI	2009-345T16:03:14	GMB_E122_Titan63-000T09:00:00	000T04:00:00	2009-345T20:03:14	0	4	SPASS Rider			
ENGR_122SC_RADWU345_PPS	2009-345T16:03:14	GMB_E122_Titan63-000T09:00:00	000T00:00:07	2009-345T16:03:21	0	0	Non-SPASS			
ISS_122TI_MIRLMBINT001_CIRS	2009-345T16:03:14	GMB_E122_Titan63-000T09:00:00	000T04:00:00	2009-345T20:03:14	0	27	SPASS Rider			
RADAR_122TI_T63WARMUP001_RIDE	2009-345T16:03:14	GMB_E122_Titan63-000T09:00:00	000T04:00:00	2009-345T20:03:14	474.2	6.829	SPASS Rider			
UVIS_122TI_MIRLMBINT001_CIRS	2009-345T16:03:14	GMB_E122_Titan63-000T09:00:00	000T04:00:00	2009-345T20:03:14	5032	72.461	SPASS Rider			
VIMS_122TI_MIRLMBMAP001_CIRS	2009-345T16:03:14	GMB_E122_Titan63-000T09:00:00	000T04:00:00	2009-345T20:03:14	1388.9	20	SPASS Rider			
MAG_122SA_DUSKMSPH005_MAPS	2009-345T17:12:32		000T03:50:42	2009-345T21:03:14	1976	27.352	Non-SPASS			
ENGR_122SC_RADRWA345_PPS	2009-345T20:03:14	GMB_E122_Titan63-000T05:00:00	000T00:00:44	2009-345T20:03:58	0	0	Non-SPASS			
RADAR_122TI_T63INRAD001_PRIME	2009-345T20:03:14	GMB_E122_Titan63-000T05:00:00	000T02:55:00	2009-345T22:58:14	4997.8	52.476	Prime	NEG_Z to Titan	NEG_Y to NTP	NTP for the two orthogonal polarizations.
MAG_122SA_DUSKMSPH003_MAPS	2009-345T21:03:14	GMB_E122_Titan63-000T04:00:00	000T08:00:00	2009-346T05:03:14	0	0	Non-SPASS			
MAG_122TI_MAGTITAN001_PRIME	2009-345T21:03:14	GMB_E122_Titan63-000T04:00:00	000T08:00:00	2009-346T05:03:14	1976	56.909	Non-SPASS			
ENGR_122SC_DFPW345_PPS	2009-345T22:57:37	GMB_E122_Titan63-000T02:05:37	000T00:00:37	2009-345T22:58:14	0	0	Non-SPASS			
CAPS_122TI_TITANPTG001_PRIME	2009-345T22:58:14	GMB_E122_Titan63-000T02:05:00	000T04:50:00	2009-346T03:48:14	0	0	Prime	NEG_Y to 36.467/- 12.267	NEG_X to Sun	
CAPS_122TI_T63INBND001_PRIME	2009-345T23:03:14	GMB_E122_Titan63-000T02:00:00	000T01:00:00	2009-346T00:03:14	4000	14.4	SPASS Rider			
RPWS_122TI_TIINTRMED001_PRIME	2009-345T23:03:14	GMB_E122_Titan63-000T02:00:00	000T01:00:00	2009-346T00:03:14	15232	54.835	Non-SPASS			
VIMS_122TI_REGMAP001_CAPS	2009-345T23:03:14	GMB_E122_Titan63-000T02:00:00	000T01:00:00	2009-346T00:03:14	5555.6	20	SPASS Rider			
MIMI_122TI_TITANIN001_RIDER	2009-345T23:03:15		000T01:00:00	2009-346T00:03:15	1200	4.32	SPASS Rider			
CAPS_122TI_T63CLOSE001_PRIME	2009-346T00:03:14	GMB_E122_Titan63-000T01:00:00	000T02:00:00	2009-346T02:03:14	16000	115.2	SPASS Rider			
INMS_122TI_TITAN63001_INMS	2009-346T00:03:14	GMB_E122_Titan63-000T01:00:00	000T00:40:00	2009-346T00:43:14	1498	3.595	Non-SPASS			
RPWS_122TI_TICA001_PRIME	2009-346T00:03:14	GMB_E122_Titan63-000T01:00:00	000T02:00:00	2009-346T02:03:14	60927.4	438.677	Non-SPASS			
MIMI_122TI_TITANCA001_RIDER	2009-346T00:03:15		000T02:00:00	2009-346T02:03:15	1800	12.96	SPASS Rider			
INMS_122TI_TITAN63001_RIDER	2009-346T00:43:14	GMB_E122_Titan63-000T00:20:00	000T00:40:00	2009-346T01:23:14	1498	3.595	Non-SPASS			
MP_122TI_FLYBYT063_NA	2009-346T01:03:14		000T00:00:01	2009-346T01:03:15	0	0	SPASS Note			
INMS_122TI_TITAN63002_INMS	2009-346T01:23:14	GMB_E122_Titan63+000T00:20:00	000T00:40:00	2009-346T02:03:14	1498	3.595	Non-SPASS			
CAPS_122TI_T63OUTBND001_PRIME	2009-346T02:03:14	GMB_E122_Titan63+000T01:00:00	000T01:00:00	2009-346T03:03:14	4000	14.4	SPASS Rider			
INMS_122SA_SURVEYSEG002_INMS	2009-346T02:03:14	GMB_E122_Titan63+000T01:00:00	002T08:06:45	2009-348T10:09:59	100	20.201	Non-SPASS			

TOL for T63 (2 of 2)

Request	Start Time	Epoch	Duration	End Time	Rate	Data Volume	SPASS Type	Primary Pointing	Pointing	Pointing Agreement
RPWS_122TI_TIINTRMED002_PRIME	2009-346T02:03:14	GMB_E122_Titan63+000T01:00:00	000T01:00:00	2009-346T03:03:14	15232	54.835	Non-SPASS			
MIMI_122TI_TITANOUT001_RIDER	2009-346T02:03:15		000T01:00:00	2009-346T03:03:15	1200	4.32	SPASS Rider			
CAPS_122SA_DUSKMSPH002_PRIME	2009-346T03:03:14	GMB_E122_Titan63+000T02:00:00	000T14:51:46	2009-346T17:55:00	4000	214.024	SPASS Rider			
CIRS_122TI_RIDER002_SP	2009-346T03:03:14	GMB_E122_Titan63+000T02:00:00	000T00:45:00	2009-346T03:48:14	4000	10.8	SPASS Rider			
RPWS_122SA_OUTSURVEY005_PRIME	2009-346T03:03:14	GMB_E122_Titan63+000T02:00:00	000T16:08:46	2009-346T19:12:00	1310	76.146	Non-SPASS			
MIMI_122SA_DUSKMSPH002_RIDER	2009-346T03:03:15		000T16:08:45	2009-346T19:12:00	900	52.312	SPASS Rider			
CIRS_122TI_FIRNADMAP002_PRIME	2009-346T03:48:14	GMB_E122_Titan63+000T02:45:00	000T01:00:00	2009-346T04:48:14	4000	14.4	Prime	CIRS_FP1 to Titan	POS_X to North_Pole_Dir	
CIRS_122TI_FIRNADMAP002_SI	2009-346T03:48:14	GMB_E122_Titan63+000T02:45:00	000T01:00:00	2009-346T04:48:14	0	2	SPASS Rider			
VIMS_122TI_REGMAP001_CIRS	2009-346T03:48:14	GMB_E122_Titan63+000T02:45:00	000T01:00:00	2009-346T04:48:14	11111.1	40	SPASS Rider			
CIRS_122TI_GLOBMAPC001_ISS	2009-346T04:48:14	GMB_E122_Titan63+000T03:45:00	000T05:15:00	2009-346T10:03:14	2000	37.8	SPASS Rider			
ISS_122TI_GLOBMAPC001_PRIME	2009-346T04:48:14	GMB_E122_Titan63+000T03:45:00	000T05:15:00	2009-346T10:03:14	0	520	Prime	ISS_NAC to Titan (0.0,0.0,1.5 deg. offset)	NEG_X to Sun	
VIMS_122TI_GLOBMAP001_ISS	2009-346T04:48:14	GMB_E122_Titan63+000T03:45:00	000T05:15:00	2009-346T10:03:14	4232.8	80	SPASS Rider			
MAG_122SA_DUSKMSPH004_MAPS	2009-346T05:03:14	GMB_E122_Titan63+000T04:00:00	000T07:06:14	2009-346T12:09:28	1976	50.534	Non-SPASS			
CIRS_122TI_GLOBMAP001_VIMS	2009-346T10:03:14	GMB_E122_Titan63+000T09:00:00	000T05:00:00	2009-346T15:03:14	2000	36	SPASS Rider			
ISS_122TI_GLOBMAP001_VIMS	2009-346T10:03:14	GMB_E122_Titan63+000T09:00:00	000T05:00:00	2009-346T15:03:14	0	50	SPASS Rider			
VIMS_122TI_GLOBMAP001_PRIME	2009-346T10:03:14	GMB_E122_Titan63+000T09:00:00	000T05:00:00	2009-346T15:03:14	2388.9	43	Prime	VIMS_IR to Titan	NEG_X to Sun	
MAG_122SA_DUSKMSPH006_MAPS	2009-346T12:09:28		000T07:02:32	2009-346T19:12:00	988	25.048	Non-SPASS			
CIRS_122TI_MIDIRTMAP002_PRIME	2009-346T15:03:14	GMB_E122_Titan63+000T14:00:00	000T09:00:00	2009-347T00:03:14	2000	64.8	Prime	CIRS_FPB to Titan	POS_X to North_Pole_Dir	
CIRS_122TI_MIDIRTMAP002_SI	2009-346T15:03:14	GMB_E122_Titan63+000T14:00:00	000T09:00:00	2009-347T00:03:14	0	2	SPASS Rider			
UVIS_122TI_MIDIRTMAP002_CIRS	2009-346T15:03:14	GMB_E122_Titan63+000T14:00:00	000T09:00:00	2009-347T00:03:14	3723.7	120.647	SPASS Rider			
VIMS_122TI_MIDIRTMAP002_CIRS	2009-346T15:03:14	GMB_E122_Titan63+000T14:00:00	000T09:00:00	2009-347T00:03:14	925.9	30	SPASS Rider			
MP_122SA_RPXDESCEN122_NA	2009-346T16:22:31		000T00:00:01	2009-346T16:22:32	0	0	Non-SPASS			
CAPS_122SA_DUSKMSPH003_PRIME	2009-346T17:55:00		000T01:17:00	2009-346T19:12:00	2000	9.24	SPASS Rider			
CAPS_122SA_MAGBOUND001_PRIME	2009-346T19:12:00		000T14:58:00	2009-347T10:10:00	2000	107.76	SPASS Rider			
MAG_122SU_MAGBOUND002_MAPS	2009-346T19:12:00		001T14:58:00	2009-348T10:10:00	1976	277.193	Non-SPASS			
MIMI_122SA_MAGBOUND002_RIDER	2009-346T19:12:00		001T14:58:00	2009-348T10:10:00	1200	168.336	SPASS Rider			
RPWS_122SA_OUTSURVEY006_PRIME	2009-346T19:12:00		000T05:58:00	2009-347T01:10:00	1310	28.139	Non-SPASS			
SP_122NA_DEADTIME347_PRIME	2009-347T00:03:14	GMB_E122_Titan63+000T23:00:00	000T00:26:46	2009-347T00:30:00	0	0	Prime	NEG_Y to Titan	NEG_X to Sun	
SP_122EA_DLTURN347_PRIME	2009-347T00:30:00		000T00:40:00	2009-347T01:10:00	0	0	Prime	XBAND to Earth	253.7/5.72	
CDA_122OT_RATE010008_RIDER	2009-347T01:10:00		005T04:43:58	2009-352T05:53:58	524	235.296	Non-SPASS			
RPWS_122SU_MAGBOUND001_CAPS	2009-347T01:10:00		001T09:00:00	2009-348T10:10:00	14001.3	1663.349	Non-SPASS			
SP_122EA_M70METNON347_PRIME	2009-347T01:10:00		000T09:00:00	2009-347T10:10:00	0	0	Prime	XBAND to Earth	NEG_Y to 253.7/5.72	(0.0,0.0,-9.5 deg. offset)
SP_122NA_M70METNON347_SP	2009-347T01:10:00		000T09:00:00	2009-347T10:10:00	0	0	Non-SPASS			
UVIS_122SW_IPHSURVEY010_RIDER	2009-347T01:10:00		000T09:00:00	2009-347T10:10:00	152.5	4.94	Non-SPASS			
CIRS_122IC_DSCAL09347_SP	2009-347T02:10:00		000T08:00:00	2009-347T10:10:00	3000	86.4	SPASS Rider			
CAPS_122SA_MAGBOUND002_PRIME	2009-347T10:10:00		004T19:37:00	2009-352T05:47:00	4000	1664.88	SPASS Rider			
SP_122NA_M70OBSNON348_NA	2009-347T10:10:00		000T15:00:00	2009-348T01:10:00	0	0	Non-SPASS			
SP_122TI_WAYPTTURN347_PRIME	2009-347T10:10:00		000T00:40:00	2009-347T10:50:00	0	0	New Waypoint	NEG_Y to Titan	NEG_X to Sun	
ISS_122TI_CLOUD001_PRIME	2009-347T10:50:00		000T01:10:00	2009-347T12:00:00	0	100	Prime	ISS_NAC to Titan	NEG_X to Sun	
VIMS_122TI_CLOUDMAP001_ISS	2009-347T10:50:00		000T01:10:00	2009-347T12:00:00	2381	10	SPASS Rider			
CAPS_122SA_MAGBNDPTG001_PRIME	2009-347T12:00:00		000T02:00:00	2009-347T14:00:00	0	0	Prime	POS_Y to COROT	PIC	
ISS_122TI_CLOUD002_PRIME	2009-347T14:00:00		000T10:30:00	2009-348T00:30:00	0	359	Prime	ISS_NAC to Titan	NEG_X to Sun	
VIMS_122TI_CLOUDMAP002_ISS	2009-347T14:00:00		000T10:30:00	2009-348T00:30:00	529.1	20	SPASS Rider			
SP_122EA_DLTURN348_PRIME	2009-348T00:30:00		000T00:40:00	2009-348T01:10:00	0	0	Prime	XBAND to Earth	POS_X to NEP	
ENGR_122SC_RSS2RWAF345_PPS	2009-348T01:09:54		000T00:00:06	2009-348T01:10:00	0	0	Non-SPASS			
RSS_122SA_OCCORT002_RSS	2009-348T01:10:00		000T09:00:00	2009-348T10:10:00	0	0	SPASS Rider			
SP_122EA_M70METNON348_PRIME	2009-348T01:10:00		000T09:00:00	2009-348T10:10:00	0	0	Prime	XBAND to Earth	Rolling/SRU	POS_X to NEP
SP_122NA_M70METNON348_SP	2009-348T01:10:00		000T09:00:00	2009-348T10:10:00	0	0	Non-SPASS			
UVIS_122SW_IPHSURVEY011_RIDER	2009-348T01:10:00		000T09:00:00	2009-348T10:10:00	152.5	4.94	Non-SPASS			
CIRS_122IC_DSCAL09348_SP	2009-348T02:10:00		000T08:00:00	2009-348T10:10:00	3000	86.4	SPASS Rider			

T63 Wrapup SPASS

Request	Riders	Start (SCET)	Start (Epoch)	Duration	End (SCET)	Primary	Secondary	Comments
Sequence S55, length = 39 days		2009-317T19:21:00		039T04:05:00	2009-356T23:26:00			
Titan Flyby T63 Segment		2009-345T10:10:00		003T00:00:00	2009-348T10:10:00			
SP_122TI_WAYPTTURN345_PRIME	M	2009-345T10:10:00		000T00:40:00	2009-345T10:50:00	NEG_Y to Titan	NEG_X to Sun	
NEW WAYPOINT		2009-345T10:50:00		002T00:00:00	2009-347T10:50:00	NEG_Y to Titan	NEG_X to Sun	
SP_122NA_DEADTIME345_PRIMI M		2009-345T10:50:00		000T00:15:56	2009-345T11:05:5	NEG_Y to Titan	NEG_X to Sun	
CIRS_122TI_FIRNADCMP001_PRIME	C, I, M, V	2009-345T11:05:56	GMB_E122_Titan63-000T13:57:18	000T03:57:18	2009-345T15:03:14	CIRS_FP1 to Titan	PIC	
ISS_122TI_PHOTOMWAC001_PRIME	C, M, V	2009-345T15:03:14	GMB_E122_Titan63-000T10:00:00	000T01:00:00	2009-345T16:03:14	ISS_NAC to Titan (0.0,0.0,1.5 deg. offset)	NEG_X to Sun	
CIRS_122TI_MIRLMBINT001_PRIME	C, I, M, R, U	2009-345T16:03:14	GMB_E122_Titan63-000T09:00:00	000T04:00:00	2009-345T20:03:14	CIRS_FPB to Titan	PIC	
RADAR_122TI_T63INRAD001_PRIME	M	2009-345T20:03:14	GMB_E122_Titan63-000T05:00:00	000T02:55:00	2009-345T22:58:14	NEG_Z to Titan	NEG_Y to NTP	Use -Y to NTP and -X to NTP for the two orthogonal polarizations.
CAPS_122TI_TITANPTG001_PRIME	C, M, V	2009-345T22:58:14	GMB_E122_Titan63-000T02:05:00	000T04:50:00	2009-346T03:48:14	NEG_Y to 36.467/-12.267	NEG_X to Sun	
122TI (t) T63 TITAN Outbo...		2009-346T01:03:14		000T00:00:01	2009-346T01:03:15			
CIRS_122TI_FIRNADMAP002_PRIME	C, M, V	2009-346T03:48:14	GMB_E122_Titan63+000T02:45:00	000T01:00:00	2009-346T04:48:14	CIRS_FP1 to Titan	POS_X to North_Pole_Dir	
ISS_122TI_GLOBMAPC001_PRIME	C, M, V	2009-346T04:48:14	GMB_E122_Titan63+000T03:45:00	000T05:15:00	2009-346T10:03:14	ISS_NAC to Titan (0.0,0.0,1.5 deg. offset)	NEG_X to Sun	
VIMS_122TI_GLOBMAP001_PRIME	C, I, M	2009-346T10:03:14	GMB_E122_Titan63+000T09:00:00	000T05:00:00	2009-346T15:03:14	VIMS_IR to Titan	NEG_X to Sun	
CIRS_122TI_MIDIRTMAP002_PRIME	C, M, U, V	2009-346T15:03:14	GMB_E122_Titan63+000T14:00:00	000T09:00:00	2009-347T00:03:14	CIRS_FPB to Titan	POS_X to North_Pole_Dir	
SP_122NA_DEADTIME347_PRIMI M		2009-347T00:03:1	GMB_E122_Titan63+000T23:00:	000T00:26:46	2009-347T00:30:0	NEG_Y to Titan	NEG_X to Sun	
SP_122EA_DLTURN347_PRIME	M	2009-347T00:30:00		000T00:40:00	2009-347T01:10:00	XBAND to Earth	NEG_Y to 253.7/5.72	
SP_122EA_M70METNON347_PRIME	C, M	2009-347T01:10:00		000T09:00:00	2009-347T10:10:00	XBAND to Earth	NEG_Y to 253.7/5.72	MIMI NEG_Y to Saturn (0.0,0.0,-9.5 deg.
SP_122TI_WAYPTTURN347_PRIME	M	2009-347T10:10:00		000T00:40:00	2009-347T10:50:00	NEG_Y to Titan	NEG_X to Sun	
NEW WAYPOINT		2009-347T10:50:00		000T23:20:00	2009-348T10:10:0	NEG_Y to Titan	NEG_X to Sun	
ISS_122TI_CLOUD001_PRIME	M, V	2009-347T10:50:00		000T01:10:00	2009-347T12:00:00	ISS_NAC to Titan	NEG_X to Sun	
CAPS_122SA_MAGBNPTG001_PRIM	M	2009-347T12:00:00		000T02:00:00	2009-347T14:00:00	POS_Y to COROT	PIC	
ISS_122TI_CLOUD002_PRIME	M, V	2009-347T14:00:00		000T10:30:00	2009-348T00:30:00	ISS_NAC to Titan	NEG_X to Sun	
SP_122EA_DLTURN348_PRIME	M	2009-348T00:30:00		000T00:40:00	2009-348T01:10:00	XBAND to Earth	POS_X to NEP	
SP_122EA_M70METNON348_PRIME	C, M, R	2009-348T01:10:00		000T09:00:00	2009-348T10:10:00	XBAND to Earth	Rolling/SRU	POS_X to NEP

T63 Wrapup Open Issues

- False error in CRC about mismatch in opmode

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“From” OpMode of DFPW_normal in Request ENGR_122SC_DFPWTCM349_PPS does not match
“To” Opmode of RSS2RWAP-SLOW in Request ENGR_122SC_RSS2RWAF345_PPS

APGEN fields are correct; ignore CRC error

Smaller open issues:

None