

TOST: Integration 091TI (T46) Wrapup Meeting

January 11, 2008

Jo Pitesky, Douglas Equils, Trina Ray, Kim Steadman

Segment Basics

Segment times:

BEG: 2008-307T19:22:00 (November 2)

END: 2008-309T19:08:00 (November 4)

Altitude: 1100 km

Time of C/A: 2008-308T17:35:24

Epoch: GMB_E091_Titan46

<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</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 Value Science</p>	<p>Detailed Meeting</p> <p><u>Present</u> Master Timeline SMT Report Timeline Graphic TOL SPASS DSN Reports High Value Science</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

CIRS – CIRS will scan and integrate on Titan's northern limb, concentrating on far-IR wavelengths to map and identify condensates and aerosols in the winter stratosphere.

ISS – ISS will be acquiring a regional mosaic of Titan's leading hemisphere at mid-southern latitudes, including coverage of Hotei Arcus.

RSS – RSS observations on T46 include ionospheric/atmospheric occultations and bistatic surface scattering on both the ingress and egress sides. The T46 egress atmospheric occultation will be the first to probe the mid northern-latitude of Titan (~34 degs). The ingress occultation probes mid-southern latitude (~40 degs). Combined with results from eight other latitudes probed during the prime mission, the occultations will shed more light on latitudinal variability of the electron density profile of the ionosphere, temperature/pressure profile, extinction profile, and small scale-structure of the neutral atmosphere. Bistatic surface scattering will be observed at low southern latitude on the ingress side (25-30 degs; ~90-110 degs west longitude) and low northern latitude (25-30 degs; ~200-220 degs west longitude) on the egress side. The incidence angle for both sides is close to the Brewster angle range for likely surface compositions. Same- and cross-polarized components of the quasi-specular surface echo, if detectable, provide valuable information about the dielectric constant and physical state of the surface region probed.

MAPS –

Master Timeline for T46

T46	1100km
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Start Time	End Time	Prime Activity	Obs. Detail	Op Mode	TLM Mode	Comments
2008-307T19:22:00	2008-307T20:02:00	SP Turn to WP	NEG_Y to Titan, POS_X to NTP	DFPW Normal	S_N_ER_3	
2008-307T20:02:00	C/A-21:17:50	OD Uncertainty Dead Time		DFPW Normal	S_N_ER_3	
C/A-21:17:50	-13:00	CIRS	Template A	DFPW Normal	S_N_ER_3	
-13:00	-09:00	CIRS	Template C	DFPW Normal	S_N_ER_3	
-09:00	-05:00	ISS	Template H	DFPW Normal	S_N_ER_3	
-05:00	-03:30	ISS	Template S2	DFPW Normal	S_N_ER_3	
-03:30	-03:29	RWA to RCS Transition		ORSRCS	S_N_ER_3	
-03:29	-01:28	CIRS	Template S2	RSS3RCS @ -03:09	S_N_ER_3	
-01:28	-01:20	SP Turn to WP	NEG_Z to Earth, NEG_X to Titan_SC_RAM TBC	RSS3RCS	S_N_ER_3	
-01:20	-00:14	RSS Bistatic	Neg_Z to Titan, NEG_X to SUN	RSS3RCS	S_N_ER_2@-00:30	
-00:14	0	RSS Occ	Neg-Z to Earth, POS_X to Plasma_RAM	RSS3RCS	S_N_ER_2	
2008-308T17:34:50		CLOSEST APPROACH	NEG_Z to Earth, NEG_X to RAM (Check 1:Neg-Y to RAM 2:Neg-X to Co-Rotating Plasma RAM for contamination)	RSS3RCS	S_N_ER_2	
0	+00:19	RSS Occ	Neg-Z to Earth, POS_X to Plasma_RAM	RSS3RCS		
+00:19	+01:20	RSS Bistatic	Neg-Z to Titan, NEG_X to SUN	RSS3RCS	S_N_ER_3@+00:30	
+01:20	+01:29	Turn to Waypoint	NEG_Y to Titan, POS_X to NTP	RSS3RCS	S_N_ER_3	
+01:29	+01:51	RCS to RWA Transition		RSSK	S_N_ER_3	GSE; keep on K-band
+01:51	+09:00	UVIS	Template X	RSSK	S_N_ER_3	
+09:00	+10:00	ISS	Template N	RSSK	S_N_ER_3	
+10:00	+13:00	CIRS	Template N	RSSK	S_N_ER_3	
+13:00	+14:00	ISS	Template M2	RSSK	S_N_ER_3	
+14:00	C/A + 15:38:10	CIRS	Template M2	RSSK	S_N_ER_3	
C/A + 15:38:10	2008-309T9:28:00	OD Uncertainty Dead Time		RSSK	S_N_ER_3	
2008-309T9:28:00	2008-309T10:08:00	SP Turn to Earth for downlink	NEG_Z to Earth, POS_X to NEP	RSSK	S_N_ER_3	
2008-309T10:08:00	2008-309T19:08:00	Goldstone 70M	NEG_Z to Earth, Rolling	RSSK	RTE_N_SPB	Split Roll

Deadband: (.5, .5, .5)

Telemetry Mode Report

TELEMETRY MODE REPORT

EPOCH RELATIVE	UTC	DURATION	TELEMETRY MODE	REQUEST
	2008-307T19:22:00.000	21:43:24	S_N_ER_3	SP_091NA_G70OBSNON309_NA
GMB_E091_Titan46-000T00:30:00	2008-308T17:05:24.000	01:00:00	S_N_ER_2	SP_091NA_G70OBSNON309_NA
GMB_E091_Titan46+000T00:30:00	2008-308T18:05:24.000	16:02:36	S_N_ER_3	SP_091NA_G70OBSNON309_NA
	2008-309T10:08:00.000	00:45:00	RTE_N_SPB_99540	SP_091EA_G70METNON309_PRIME
	2008-309T10:53:00.000	01:45:00	RTE_N_SPB_124425	SP_091EA_G70METNON309_PRIME
	2008-309T12:38:00.000	04:30:00	RTE_N_SPB_142200	SP_091EA_G70METNON309_PRIME
	2008-309T17:08:00.000	01:45:00	RTE_N_SPB_124425	SP_091EA_G70METNON309_PRIME
	2008-309T18:53:00.000	00:15:00	RTE_N_SPB_110600	SP_091EA_G70METNON309_PRIME

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_091EA_G70METNON309_PRIME	309 10:08	309 19:08	0	3436	196	3632	3551	-80	0	291	53	3896	3578	-318	0	0%	318

Assumes Rings_91_93 can accommodate carryover
(Rings TWT still working that segment)

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	307 19:22	309 10:08	269.2	73.1	459.6	34.1	980.0	123.4	198.5	0.0	693.0	125.6	427.8	0.0	63.5	3447.7
OBSERVATION_SI	307 19:22	309 10:08	0.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0
SP_091EA_G70METNON309_PRIME	309 10:08	309 19:08	54.0	17.0	86.4	3.2	0.0	19.4	61.4	0.0	42.4	4.9	0.0	0.0	0.0	288.8
DAILY TOTAL SCIENCE	307 19:22	309 19:08	323.2	90.1	567.0	37.3	980.0	142.8	259.9	0.0	735.4	130.6	427.8	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)	323.2	90.1	567.0	37.3	980.0	142.8	259.9	0.0	735.4	130.6	427.8	0.0

DSN Report

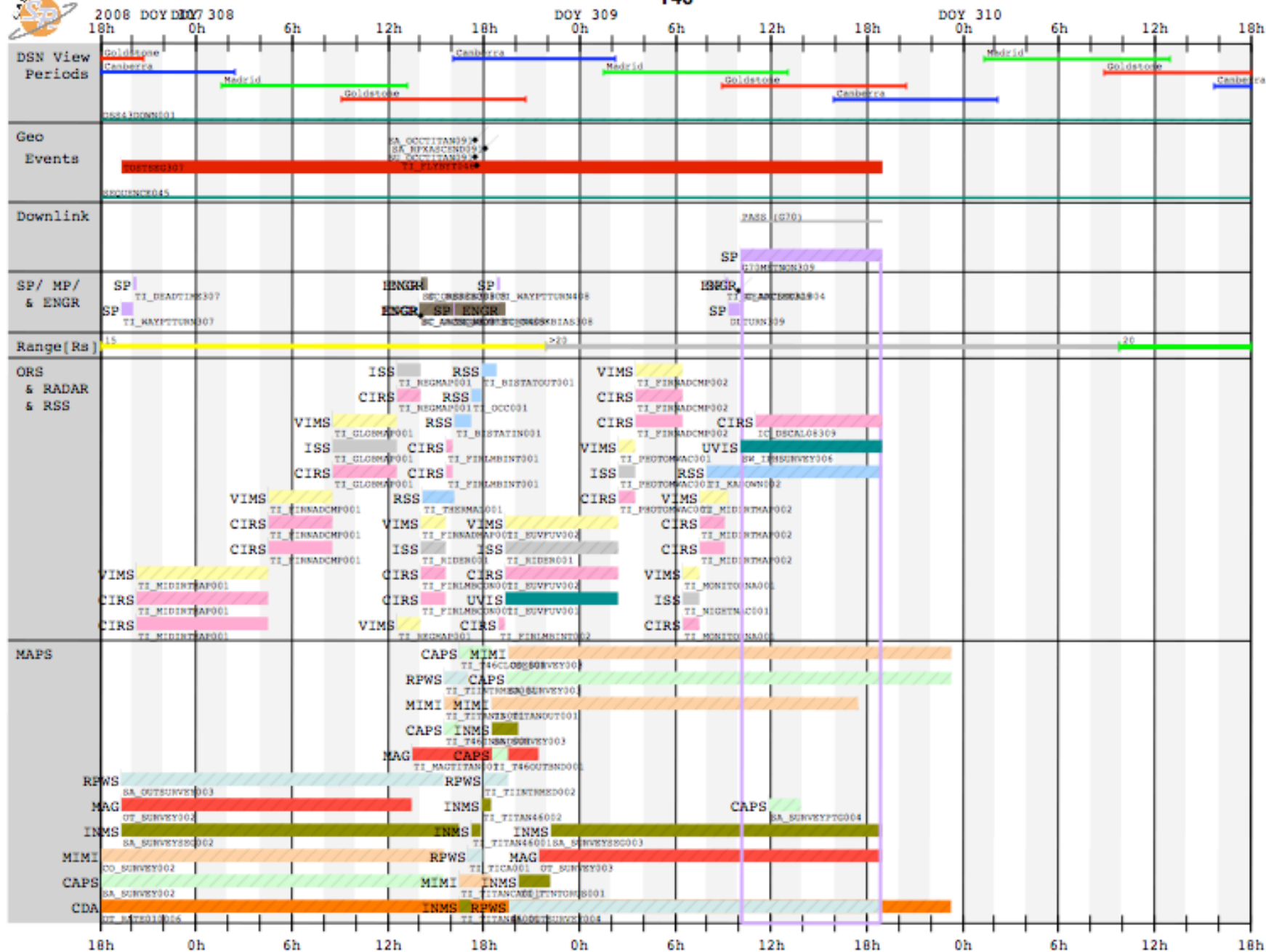
CASSINI DOWNLINK/DSN COVERAGE SUMMARY for T46_071130.apf on 2007-Nov-29 20:00:23
(+ = pass overlaps with previous pass; * = conflicts with DSN maintenance; o = overlaps occultation)

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
G70METNON309	309T10:08-19:08	309T11:30-20:30	09:00	99,124,142,124,110	14	309T10:08-19:08	309T11:30-20:30	09:00	60 /15	TP	N003

TO BE UPDATED with DSN support for RSS



T46



TOL for T46 (1 of 2)

Request	Start Time	Epoch	Duration	End Time	Rate	Data Volume	SPASS Type	Primary Pointing	Secondary Pointing	Pointing Agreement
CAPS_091SA_SURVEY002_PRIME	2008-306T05:35:00		002T10:00:13	2008-308T15:35:13	1000	208.813	Non-SPASS			
CAPS_091TI_T46INBND001_PRIME	2008-308T15:35:24	GMB_E091_Titan46-000T02:00:00	000T01:00:00	2008-308T16:35:24	4000	14.4	SPASS Rider			
CAPS_091TI_T46CLOSE001_PRIME	2008-308T16:35:24	GMB_E091_Titan46-000T01:00:00	000T02:00:00	2008-308T18:35:24	16000	115.2	SPASS Rider			
CAPS_091TI_T46OUTBND001_PRIME	2008-308T18:35:24	GMB_E091_Titan46+000T01:00:00	000T01:00:00	2008-308T19:35:24	4000	14.4	SPASS Rider			
CAPS_091SA_SURVEY003_PRIME	2008-308T19:35:13		001T03:54:47	2008-309T23:30:00	1000	100.487	Non-SPASS			
CAPS_091SA_SURVEYPTG004_PRIME	2008-309T12:00:00		000T02:00:00	2008-309T14:00:00	3000	21.6	Non-SPASS			
CDA_091OT_RATE010006 RIDER	2008-305T17:58:00		004T05:31:00	2008-309T23:29:00	524	191.501	Non-SPASS			
CIRS_091TI_MIDIRTMAP001_PRIME	2008-307T20:17:34	GMB_E091_Titan46-000T21:17:50	000T08:17:50	2008-308T04:35:24	4000	119.48	Prime	CIRS_FP1 to Titan	POS_X to North_Pole_Dir	
CIRS_091TI_MIDIRTMAP001_SI	2008-307T20:17:34	GMB_E091_Titan46-000T21:17:50	000T08:17:50	2008-308T04:35:24	0	8	SPASS Rider			
CIRS_091TI_FIRNADCMP001_PRIME	2008-308T04:35:24	GMB_E091_Titan46-000T13:00:00	000T04:00:00	2008-308T08:35:24	4000	57.6	Prime	CIRS_FP1 to Titan	PIC	
CIRS_091TI_FIRNADCMP001_SI	2008-308T04:35:24	GMB_E091_Titan46-000T13:00:00	000T04:00:00	2008-308T08:35:24	0	4	SPASS Rider			
CIRS_091TI_GLOBMAP001_ISS	2008-308T08:35:24	GMB_E091_Titan46-000T09:00:00	000T04:00:00	2008-308T12:35:24	4000	57.6	SPASS Rider			
CIRS_091TI_REGMAP001_ISS	2008-308T12:35:24	GMB_E091_Titan46-000T05:00:00	000T01:30:00	2008-308T14:05:24	2000	10.8	SPASS Rider			
CIRS_091TI_FIRLMBCON001_PRIME	2008-308T14:06:24	GMB_E091_Titan46-000T03:29:00	000T01:39:00	2008-308T15:45:24	4000	23.76	Prime	CIRS_FP1 to Titan	PIC	
CIRS_091TI_FIRLMBCON001_SI	2008-308T14:06:24	GMB_E091_Titan46-000T03:29:00	000T01:39:00	2008-308T15:45:24	0	2	SPASS Rider			
CIRS_091TI_FIRLMBINT001_PRIME	2008-308T15:45:24	GMB_E091_Titan46-000T01:50:00	000T00:22:00	2008-308T16:07:24	4000	5.28	Prime	CIRS_FP1 to Titan	PIC	
CIRS_091TI_FIRLMBINT001_SI	2008-308T15:45:24	GMB_E091_Titan46-000T01:50:00	000T00:22:00	2008-308T16:07:24	0	2	SPASS Rider			
CIRS_091TI_FIRLMBINT002 RIDER	2008-308T19:03:24	GMB_E091_Titan46+000T01:28:00	000T00:24:00	2008-308T19:27:24	4000	5.76	SPASS Rider			
CIRS_091TI_EUVFUV002_UVIS	2008-308T19:27:24	GMB_E091_Titan46+000T01:52:00	000T07:08:00	2008-309T02:35:24	4000	102.72	SPASS Rider			
CIRS_091TI_PHOTOMWAC001_ISS	2008-309T02:35:24	GMB_E091_Titan46+000T09:00:00	000T01:00:00	2008-309T03:35:24	2000	7.2	SPASS Rider			
CIRS_091TI_FIRNADCMP002_PRIME	2008-309T03:35:24	GMB_E091_Titan46+000T10:00:00	000T03:00:00	2008-309T06:35:24	4000	43.2	Prime	CIRS_FP1 to Titan	PIC	
CIRS_091TI_FIRNADCMP002_SI	2008-309T03:35:24	GMB_E091_Titan46+000T10:00:00	000T03:00:00	2008-309T06:35:24	0	3	SPASS Rider			
CIRS_091TI_MONITORNA001_ISS	2008-309T06:35:24	GMB_E091_Titan46+000T13:00:00	000T01:00:00	2008-309T07:35:24	4000	14.4	SPASS Rider			
CIRS_091TI_MIDIRTMAP002_PRIME	2008-309T07:35:24	GMB_E091_Titan46+000T14:00:00	000T01:38:10	2008-309T09:13:34	2000	11.78	Prime	CIRS_FP1 to Titan	POS_X to North_Pole_Dir	
CIRS_091TI_MIDIRTMAP002_SI	2008-309T07:35:24	GMB_E091_Titan46+000T14:00:00	000T01:38:10	2008-309T09:13:34	0	2	SPASS Rider			
CIRS_091IC_DSCAL08309_SP	2008-309T11:08:00		000T08:00:00	2008-309T19:08:00	3000	86.4	SPASS Rider			
ENGR_091SC_AACSDUAL003_CDS	2008-308T14:02:24	GMB_E091_Titan46-000T03:33:00	000T05:24:00	2008-308T19:26:24	1638	31.843	Non-SPASS			
ENGR_091SC_ORSRCS308_PPS	2008-308T14:05:24	GMB_E091_Titan46-000T03:30:00	000T00:20:51	2008-308T14:26:15	0	0	SPASS Rider			
ENGR_091SC_ORSRCS308_PRIME	2008-308T14:05:24	GMB_E091_Titan46-000T03:30:00	000T00:01:00	2008-308T14:06:24	0	0	Prime			
ENGR_091SC_RSS3RCS308_PPS	2008-308T14:26:24	GMB_E091_Titan46-000T03:09:00	000T00:05:08	2008-308T14:31:32	0	0	Non-SPASS			
ENGR_091SC_URSSKBIAS308_PPS	2008-308T19:04:24	GMB_E091_Titan46+000T01:29:00	000T00:21:07	2008-308T19:25:31	0	0	Prime			
ENGR_091SC_AACSDUAL004_CDS	2008-309T10:07:47		000T00:00:02	2008-309T10:07:49	0	0	Non-SPASS			
INMS_091SA_SURVEYSEG002_INMS	2008-307T19:22:00		000T21:13:24	2008-308T16:35:24	100	7.64	Non-SPASS			
INMS_091TI_TITAN46001_INMS	2008-308T16:35:24	GMB_E091_Titan46-000T01:00:00	000T00:40:00	2008-308T17:15:24	1498	3.595	Non-SPASS			
INMS_091TI_TITAN46001 RIDER	2008-308T17:15:24	GMB_E091_Titan46-000T00:20:00	000T00:40:00	2008-308T17:55:24	1498	3.595	Non-SPASS			
INMS_091TI_TITAN46002_INMS	2008-308T17:55:24	GMB_E091_Titan46+000T00:20:00	000T00:40:00	2008-308T18:35:24	1498	3.595	Non-SPASS			
INMS_091SA_SURVEY003_INMS	2008-308T18:35:24	GMB_E091_Titan46+000T01:00:00	000T01:39:36	2008-308T20:15:00	100	0.598	Non-SPASS			
INMS_091TI_TINTORIUS001_INMS	2008-308T20:15:00		000T02:00:00	2008-308T22:15:00	1498	10.786	Non-SPASS			
INMS_091SA_SURVEYSEG003_INMS	2008-308T22:15:00		000T20:53:00	2008-309T19:08:00	100	7.518	Non-SPASS			
ISS_091TI_GLOBMAP001_PRIME	2008-308T08:35:24	GMB_E091_Titan46-000T09:00:00	000T04:00:00	2008-308T12:35:24	0	240	Prime	ISS_NAC to Titan	NEG_X to Sun	
ISS_091TI_REGMAP001_PRIME	2008-308T12:35:24	GMB_E091_Titan46-000T05:00:00	000T01:30:00	2008-308T14:05:24	0	200	Prime	ISS_NAC to Titan	NEG_X to Sun	
ISS_091TI_RIDER001_CIRS	2008-308T14:06:24	GMB_E091_Titan46-000T03:29:00	000T01:39:00	2008-308T15:45:24	0	40	SPASS Rider			
ISS_091TI_RIDER001_UVIS	2008-308T19:27:24	GMB_E091_Titan46+000T01:52:00	000T07:08:00	2008-309T02:35:24	0	200	SPASS Rider			
ISS_091TI_PHOTOMWAC001_PRIME	2008-309T02:35:24	GMB_E091_Titan46+000T09:00:00	000T01:00:00	2008-309T03:35:24	0	100	Prime	ISS_NAC to Titan	NEG_X to Sun	
ISS_091TI_NIGHTNAC001_PRIME	2008-309T06:35:24	GMB_E091_Titan46+000T13:00:00	000T01:00:00	2008-309T07:35:24	0	200	Prime	ISS_NAC to Titan	NEG_X to Sun	

TOL for T46 (2 of 2)

Request	Start Time	Epoch	Duration	End Time	Rate	Data Volume	SPASS Type	Primary Pointing	Secondary Pointing	Pointing Agreement
MAG_091OT_SURVEY002_PRIME	2008-307T19:22:00		000T18:13:24	2008-308T13:35:24	600	39.362	Non-SPASS			
MAG_091TI_MAGTITAN001_PRIME	2008-308T13:35:24	GMB_E091_Titan46-000T04:00:00	000T08:00:00	2008-308T21:35:24	1976	56.909	Non-SPASS			
MAG_091OT_SURVEY003_PRIME	2008-308T21:35:24	GMB_E091_Titan46+000T04:00:00	000T21:32:36	2008-309T19:08:00	600	46.534	Non-SPASS			
MIMI_091CO_SURVEY002_RIDER	2008-307T00:35:00		001T15:00:24	2008-308T15:35:24	900	126.382	Non-SPASS			
MIMI_091TI_TITANIN001_RIDER	2008-308T15:35:24	GMB_E091_Titan46-000T02:00:00	000T01:00:00	2008-308T16:35:24	1200	4.32	SPASS Rider			
MIMI_091TI_TITANCA001_RIDER	2008-308T16:35:24	GMB_E091_Titan46-000T01:00:00	000T02:00:00	2008-308T18:35:24	2000	14.4	SPASS Rider			
MIMI_091TI_TITANOUT001_RIDER	2008-308T18:35:24	GMB_E091_Titan46+000T01:00:00	000T23:00:00	2008-309T17:35:24	1200	99.36	SPASS Rider			
MIMI_091CO_SURVEY003_RIDER	2008-308T19:35:24	GMB_E091_Titan46+000T02:00:00	001T03:54:36	2008-309T23:30:00	900	90.428	Non-SPASS			
MP_087NA_DSS43DOWN001_NA	2008-273T00:00:00		181T23:59:59	2009-088T23:59:59	0	0	Non-SPASS			
MP_089NA_SEQUENCE045_NA	2008-292T20:21:00		038T21:34:00	2008-331T17:55:00	0	0	SPASS Note			
MP_091SU_OCCTITAN091_NA	2008-308T17:29:08		000T00:00:01	2008-308T17:29:09	0	0	Non-SPASS			
MP_091EA_OCCTITAN091_NA	2008-308T17:29:26		000T00:00:01	2008-308T17:29:27	0	0	Non-SPASS			
MP_091TI_FLYBYT046_NA	2008-308T17:35:14		000T00:00:01	2008-308T17:35:15	0	0	SPASS Note			
MP_091SA_RPXASCEND091_NA	2008-308T18:08:06		000T00:00:01	2008-308T18:08:07	0	0	Non-SPASS			
RPWS_091SA_OUTSURVEY003_PRIME	2008-307T19:22:00		000T20:13:24	2008-308T15:35:24	1310	95.374	Non-SPASS			
RPWS_091TI_TIIINTRMED001_PRIME	2008-308T15:35:24	GMB_E091_Titan46-000T02:00:00	000T01:30:00	2008-308T17:05:24	15232	82.253	Non-SPASS			
RPWS_091TI_TICA001_PRIME	2008-308T17:05:24	GMB_E091_Titan46-000T00:30:00	000T01:00:00	2008-308T18:05:24	101250	364.498	Non-SPASS			
RPWS_091TI_TIIINTRMED002_PRIME	2008-308T18:05:24	GMB_E091_Titan46+000T00:30:00	000T01:30:00	2008-308T19:35:24	15232	82.253	Non-SPASS			
RPWS_091SA_OUTSURVEY004_PRIME	2008-308T19:35:24	GMB_E091_Titan46+000T02:00:00	000T23:32:36	2008-309T19:08:00	1310	111.031	Non-SPASS			
RSS_091TI_THERMAL001_RSS	2008-308T14:10:24	GMB_E091_Titan46-000T03:25:00	000T02:05:00	2008-308T16:15:24	0	0	SPASS Rider			
RSS_091TI_BISTATIN001_PRIME	2008-308T16:15:24	GMB_E091_Titan46-000T01:20:00	000T01:06:00	2008-308T17:21:24	0	0	Prime	XBAND to Titan		
RSS_091TI_OCC001_PRIME	2008-308T17:21:24	GMB_E091_Titan46-000T00:14:00	000T00:33:00	2008-308T17:54:24	0	0	Prime	XBAND to Earth		1. Pointing driven with ivd file.
RSS_091TI_BISTATOUT001_PRIME	2008-308T17:54:24	GMB_E091_Titan46+000T00:19:00	000T01:01:00	2008-308T18:55:24	0	0	Prime	XBAND to Titan		1. Pointing, driven with ivd file, to specular point on Titan.
RSS_091TI_KADOWN002_RSS	2008-309T08:03:00		000T11:05:00	2008-309T19:08:00	0	0	SPASS Rider			
SP_091NA_G70OBSNON309_NA	2008-307T19:22:00		001T14:46:00	2008-309T10:08:00	0	0	Non-SPASS			
SP_091NA_TOSTSEG307_NA	2008-307T19:22:00		001T23:46:00	2008-309T19:08:00	0	0	SPASS Note			
SP_091TI_WAYPTTURN307_PRIME	2008-307T19:22:00		000T00:40:00	2008-307T20:02:00	0	0	New Waypoint	NEG_Y to Titan	POS_X to NTP	
SP_091TI_DEADTIME307_PRIME	2008-307T20:02:00		000T00:15:34	2008-307T20:17:34	0	0	Prime	NEG_Y to Titan	POS_X to NTP	
SP_091TI_WAYPTTURN409_PRIME	2008-308T16:07:24	GMB_E091_Titan46-000T01:28:00	000T00:08:00	2008-308T16:15:24	0	0	New Waypoint	NEG_Z to Earth	NEG_X to Titan_SC_RAM	on thrusters. 7 min turn/1 min margin
SP_091TI_WAYPTTURN408_PRIME	2008-308T18:55:24	GMB_E091_Titan46+000T01:20:00	000T00:09:00	2008-308T19:04:24	0	0	New Waypoint	NEG_Y to Titan	NEG_X to Titan_SC_RAM	on thrusters. 8 min turn/1 min margin
SP_091TI_DEADTIME309_PRIME	2008-309T09:13:34	GMB_E091_Titan46+000T15:38:10	000T00:14:26	2008-309T09:28:00	0	0	Prime	NEG_Y to Titan	NEG_X to Titan_SC_RAM	
SP_091EA_DLTURN309_PRIME	2008-309T09:28:00		000T00:40:00	2008-309T10:08:00	0	0	Prime	XBAND to Earth	POS_X to NEP	
SP_091EA_G70METNON309_PRIME	2008-309T10:08:00		000T09:00:00	2008-309T19:08:00	0	0	Prime	XBAND to Earth	Rolling/SRU	POS_X to NEP
SP_091NA_G70METNON309_SP	2008-309T10:08:00		000T09:00:00	2008-309T19:08:00	0	0	Non-SPASS			
UVIS_091TI_EUVFUV001_PRIME	2008-308T19:26:24	GMB_E091_Titan46+000T01:51:00	000T07:09:00	2008-309T02:35:24	4881	125.638	Prime	UVIS_FUV to Titan	POS_X to North_Pole_Dir	
UVIS_091SW_IPHSURVEY006_RIDER	2008-309T10:08:00		000T09:00:00	2008-309T19:08:00	152.5	4.94	Non-SPASS			
VIMS_091TI_MIDIRTMAP001_CIRS	2008-307T20:17:34	GMB_E091_Titan46-000T21:17:50	000T08:17:50	2008-308T04:35:24	1843.2	55.056	SPASS Rider			
VIMS_091TI_FIRNADCMPO01_CIRS	2008-308T04:35:24	GMB_E091_Titan46-000T13:00:00	000T04:00:00	2008-308T08:35:24	1843.2	26.542	SPASS Rider			
VIMS_091TI_GLOBMAP001_ISS	2008-308T08:35:24	GMB_E091_Titan46-000T09:00:00	000T04:00:00	2008-308T12:35:24	3686.4	53.084	SPASS Rider			
VIMS_091TI_REGMAP001_ISS	2008-308T12:35:24	GMB_E091_Titan46-000T05:00:00	000T01:30:00	2008-308T14:05:24	14745.6	79.626	SPASS Rider			
VIMS_091TI_FIRNADMAP001_CIRS	2008-308T14:06:24	GMB_E091_Titan46-000T03:29:00	000T01:39:00	2008-308T15:45:24	7372.8	43.794	SPASS Rider			
VIMS_091TI_EUVFUV002_UVIS	2008-308T19:27:24	GMB_E091_Titan46+000T01:52:00	000T07:08:00	2008-309T02:35:24	2211.8	56.8	SPASS Rider			
VIMS_091TI_PHOTOMWAC001_ISS	2008-309T02:35:24	GMB_E091_Titan46+000T09:00:00	000T01:00:00	2008-309T03:35:24	7372.8	26.542	SPASS Rider			
VIMS_091TI_FIRNADCMPO02_CIRS	2008-309T03:35:24	GMB_E091_Titan46+000T10:00:00	000T03:00:00	2008-309T06:35:24	2764.8	29.86	SPASS Rider			
VIMS_091TI_MONITORNA001_ISS	2008-309T06:35:24	GMB_E091_Titan46+000T13:00:00	000T01:00:00	2008-309T07:35:24	7372.8	26.542	SPASS Rider			
VIMS_091TI_MIDIRTMAP002_CIRS	2008-309T07:35:24	GMB_E091_Titan46+000T14:00:00	000T01:48:10	2008-309T09:23:34	4608	29.906	SPASS Rider			

SPASS

Request	Riders	Start (SCET)	Start (Epoch)	Duration	End (SCET)	Primary	Secondary	Comments
Sequence S45, length = 39 days		2008-292T20:21:00		038T21:34:00	2008-331T17:55:00			
Titan Flyby T46 Segment		2008-307T19:22:00		001T23:46:00	2008-309T19:08:00			
SP_091TI_WAYPTTURN307_PRIME		2008-307T19:22:00		000T00:40:00	2008-307T20:02:00	NEG Y to Titan	POS X to NTP	
NEW WAYPOINT		2008-307T20:02:00		000T20:13:24	2008-308T16:15:24	NEG Y to Titan	POS X to NTP	
SP_091TI_DEADTIME307_PRIME		2008-307T20:02:00		000T00:15:34	2008-307T20:17:34	NEG Y to Titan	POS X to NTP	
CIRS_091TI_MIDIRTMAP001_PRIME	C, V	2008-307T20:17:34	GMB_E091_Titan46-000T21:17:5000T08:17:50	2008-308T04:35:24	CIRS_FP1 to Titan	POS X to North_Pole_Dir		
CIRS_091TI_FIRNADCMP001_PRIME	C, V	2008-308T04:35:24	GMB_E091_Titan46-000T13:00:0000T04:00:00	2008-308T08:35:24	CIRS_FP1 to Titan	PIC		
ISS_091TI_GLOBMAP001_PRIME	C, V	2008-308T08:35:24	GMB_E091_Titan46-000T09:00:0000T04:00:00	2008-308T12:35:24	ISS_NAC to Titan	NEG X to Sun		
ISS_091TI_REGMAP001_PRIME	C, V	2008-308T12:35:24	GMB_E091_Titan46-000T05:00:0000T01:30:00	2008-308T14:05:24	ISS_NAC to Titan	NEG X to Sun		
ENGR_091SC_ORSRCS308_PRIME	E	2008-308T14:05:24	GMB_E091_Titan46-000T03:30:0000T00:01:00	2008-308T14:06:24				
CIRS_091TI_FIRLMBCON001_PRIME	C, E, I, M, R	2008-308T14:06:24	GMB_E091_Titan46-000T03:29:0000T01:39:00	2008-308T15:45:24	CIRS_FP1 to Titan	PIC		
CIRS_091TI_FIRLMBINT001_PRIME	C, M, R	2008-308T15:45:24	GMB_E091_Titan46-000T01:50:0000T00:22:00	2008-308T16:07:24	CIRS_FP1 to Titan	PIC		
SP_091TI_WAYPTTURN409_PRIME	M, R	2008-308T16:07:24	GMB_E091_Titan46-000T01:28:0000T00:08:00	2008-308T16:15:24	NEG Z to Earth	NEG X to Titan_SC_RAM	on thrusters. 7 min turn/1 min margin	
NEW WAYPOINT		2008-308T16:15:24		000T02:49:00	2008-308T19:04:24	NEG Z to Earth	NEG X to Titan_SC_RAM	
RSS_091TI_BISTATIN001_PRIME	M	2008-308T16:15:24	GMB_E091_Titan46-000T01:20:0000T01:06:00	2008-308T17:21:24	XBAND to Titan			
RSS_091TI_OCC001_PRIME	M	2008-308T17:21:24	GMB_E091_Titan46-000T00:14:0000T00:33:00	2008-308T17:54:24	XBAND to Earth			1. Pointing driven with ivd file.
91TI (t) T46 TITAN Outbou...		2008-308T17:35:14	000T00:00:01	2008-308T17:35:15				
RSS_091TI_BISTATOUT001_PRIME	M	2008-308T17:54:24	GMB_E091_Titan46+000T00:19:0000T01:01:00	2008-308T18:55:24	XBAND to Titan			1. Pointing, driven with ivd file, to specular point on Titan.
SP_091TI_WAYPTTURN408_PRIME	C, M	2008-308T18:55:24	GMB_E091_Titan46+000T01:20:0000T00:09:00	2008-308T19:04:24	NEG Y to Titan	NEG X to Titan_SC_RAM	on thrusters. 8 min turn/1 min margin	
NEW WAYPOINT		2008-308T19:04:24		001T00:03:36	2008-309T19:08:00	NEG Y to Titan	NEG X to Titan_SC_RAM	
ENGR_091SC_URSSKBIAS308_PPS	C, M	2008-308T19:04:24	GMB_E091_Titan46+000T01:29:0000T00:21:07	2008-308T19:25:31				
UVIS_091TI_EUVFUV001_PRIME	C, I, M, V	2008-308T19:26:24	GMB_E091_Titan46+000T01:51:0000T07:09:00	2008-309T02:35:24	UVIS_FUV to Titan	NEG X to Sun		
ISS_091TI_PHOTOMWAC001_PRIME	C, M, V	2008-309T02:35:24	GMB_E091_Titan46+000T09:00:0000T01:00:00	2008-309T03:35:24	ISS_NAC to Titan	NEG X to Sun		
CIRS_091TI_FIRNADCMP002_PRIME	C, M, V	2008-309T03:35:24	GMB_E091_Titan46+000T10:00:0000T03:00:00	2008-309T06:35:24	CIRS_FP1 to Titan	PIC		
ISS_091TI_NIGHTNAC001_PRIME	C, M, V	2008-309T06:35:24	GMB_E091_Titan46+000T13:00:0000T01:00:00	2008-309T07:35:24	ISS_NAC to Titan	NEG X to Sun		
CIRS_091TI_MIDIRTMAP002_PRIME	C, M, R, V	2008-309T07:35:24	GMB_E091_Titan46+000T14:00:0000T01:38:10	2008-309T09:13:34	CIRS_FP1 to Titan	POS X to North_Pole_Dir		
SP_091TI_DEADTIME309_PRIME	M, R, V	2008-309T09:13:34	GMB_E091_Titan46+000T15:0000T00:14:26	2008-309T09:28:00	NEG Y to Titan	NEG X to Titan_SC_RAM		
SP_091EA_DLTURN309_PRIME	M, R	2008-309T09:28:00	000T00:40:00	2008-309T10:08:00	XBAND to Earth	POS X to NEP		
SP_091EA_G70METNON309_PRIME	C, M, R	2008-309T10:08:00	000T09:00:00	2008-309T19:08:00	XBAND to Earth	Rolling/SRU	POS X to NEP	

No high-value science identified

RSS to complete pointing information
for C/A in CIMS

Open Issues

- Finish work with Jeff Boyer and MIMI re: secondary orientation for C/A waypoint.
- SP/RSS to complete DSN support and level 2 support
- Science Highlights needed from MAPS
- Confirm data volume carryover with RINGS TWT