

TOST: RE-Delivery Package for 043TI (T29)

Segment Boundary 2007-116T06:01:00 – 2007-117T22:33:00

Titan C/A= 2007-116T21:32:52, Altitude = 950 km

Epoch = GMB_E043_Titan29

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Douglas Equils

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043TI (T29)

- Science to be accomplished during this flyby:
 - RADAR will perform observations of high latitude dark terrain
 - CIRS will obtain a surface temperature map of region in southern hemisphere, and will do limb mapping for hydrocarbons.
 - ISS will obtain a global map at 1 km/pixel, and will perform monitoring of the disk at 1.5 km/pixel at low solar phase angles.
 - VIMS will obtain phase angle coverage of northern hemisphere

043TI (T29) Timeline

C/A= 116T21:32:52

Start Time	End Time	Prime Activity	Obs. Detail	Op Mode	TLM Mode	Comments
116T06:01	116T06:31	SP Turn to WP	NAC to TI, +X to NTP	DFPW Normal	S_N_ER_3	
116T06:31	116T06:46	OD Uncertainty Dead Time		DFPW Normal	S_N_ER_3	
-14:46	-13:00	CIRS	Mid-IR Temp Map	DFPW Normal	S_N_ER_3	Template M (modified)
-13:00	-10:00	CIRS	FP1	DFPW Normal	S_N_ER_3	Template N
-10:00	-09:00	ISS	Photometry	DFPW Normal	S_N_ER_3	Template N
-09:00	-05:00	VIMS	Cloud Map	DFPW Normal	S_N_ER_3	Template Q
-05:00	-02:10	CIRS	Nadir	RADWU	S_N_ER_5a	Template T; RADWU & 5a for RADAR
-02:10	-01:50	SP turn to RADAR WP	-Z to Titan, -X to 270/-6			
-01:50	-01:15	RADAR	Radiometry	RADRWA	S_N_ER_8	
-01:15	-00:52	RADAR	Scatterometry	RADRWA	S_N_ER_8	
-00:52	-00:30	RWA to RCS Transition		RADRCS	S_N_ER_8	Deadband = (2,2,20)
-00:30	-00:15	RADAR	Altimetry	RADRCS	S_N_ER_8	
-00:15	-00:07	RADAR	Low-Res SAR	RADRCS	S_N_ER_8	
-00:07	+00:07	RADAR	High-Res SAR	RADRCS	S_N_ER_8	
+00:07	+00:15	RADAR	Low-Res SAR	RADRCS	S_N_ER_8	
+00:15	+00:30	RADAR	Altimetry	RADRCS	S_N_ER_8	
+00:30	+00:54	RCS to RWA Transition		RADRWA	S_N_ER_8	
+00:54	+01:15	RADAR	Scatterometry	RADRWA	S_N_ER_8	
+01:15	+04:50	RADAR	Radiometry	RADRWA	S_N_ER_8	Template L
+04:50	+05:10	SP turn to WP	NAC to TI, -X to Sun			
+05:10	+08:00	VIMS	Regional Map	DFPW Normal	S_N_ER_3	Template I
+08:00	+08:36	ISS	NAC Mosaic	DFPW Normal	S_N_ER_3	Template I
+08:36	+09:00	ISS	WAC Photometry	DFPW Normal	S_N_ER_3	Template I
+09:00	+11:00	CIRS		DFPW Normal	S_N_ER_3	Template D
+11:00	+13:00	ISS		DFPW Normal	S_N_ER_3	Template D
+13:00	+14:00	VIMS		DFPW Normal	S_N_ER_3	Template D
+14:00	+14:42	CIRS	Mid-IR Temp Map			Template A (modified)
117T12:15	117T12:30	OD Uncertainty Dead Time		DFPW Normal	S_N_ER_3	
117T12:30	117T13:00	SP Turn to Earth for downlink		DFPW Normal	S_N_ER_3	
117T13:00	117T22:33	Madrid 70-m		DFPW Normal	RTE_N_SPB	

043TI (T29) Attitude Strategy*

Request	Riders	Start(SCET)	Start(Epoch)	Duration	End(SCET)	Primary Pointing	Secondary Pointing	Comments
Sequence S029, length = 38 ...		2007-087T08:04:00	E041_SEQUENCE_029+000	037T13:56:00	2007-124T22:00:00			
TOST rev 43 Segment		2007-116T06:01:00		001T16:32:00	2007-117T22:33:00			
SP_043TI_WAYPTTURN116_PRIME	C, M	2007-116T06:01:00		000T00:30:00	2007-116T06:31:00	ISS_NAC to Titan	POS_X to North_Pole_Dir	18.26 min turn from +X to NEP
NEW WAYPOINT		2007-116T06:31:00		000T13:11:52	2007-116T19:42:52	ISS_NAC to Titan	POS_X to North_Pole_Dir	
SP_043TI_DEADTIME116_PRIME	M	2007-116T06:31:00		000T00:15:00	2007-116T06:46:00	ISS_NAC to Titan	POS_X to North_Pole_Dir	
CIRS_043TI_FIRNADCMP001_PRIME	C, I, M, U,	2007-116T06:46:52	GMB_E043_Titan29-000T14:400T04:46:00		2007-116T11:32:52	CIRS_FP1 to Titan	PIC	
ISS_043TI_PHOTOMWAC001_PRIME	C, V	2007-116T11:32:52	GMB_E043_Titan29-000T10:000T01:00:00		2007-116T12:32:52	ISS_NAC to Titan	POS_X to North_Pole_Dir	
VIMS_043TI_MEDRESDRK001_PRIME	C, I, U	2007-116T12:32:52	GMB_E043_Titan29-000T09:000T04:00:00		2007-116T16:32:52	ISS_NAC to Titan	POS_X to North_Pole_Dir	None
CIRS_043TI_FIRNADMAP001_PRIME	C, I, R, U,	2007-116T16:32:52	GMB_E043_Titan29-000T05:000T02:50:00		2007-116T19:22:52	CIRS_FP1 to Titan	POS_X to North_Pole_Dir	
SP_043TI_WAYPTTURN1416_PRIME	C, M, R	2007-116T19:22:52	GMB_E043_Titan29-000T02:1000T00:20:00		2007-116T19:42:52	NEG_Z to Titan	NEG_X to 270.0/-6.0	18.05 min turn
NEW WAYPOINT		2007-116T19:42:52		000T07:00:00	2007-117T02:42:52	NEG_Z to Titan	NEG_X to 270.0/-6.0	
RADAR_043TI_T29INRAD001_PRIME	M	2007-116T19:42:52	GMB_E043_Titan29-000T01:500T00:35:00		2007-116T20:17:52	NEG_Z to Titan	POS_X to North_Pole_Dir	
RADAR_043TI_T29INSCAT001_PRIME	M	2007-116T20:17:52	GMB_E043_Titan29-000T01:1000T00:23:00		2007-116T20:40:52	NEG_Z to Titan	POS_X to North_Pole_Dir	
ENGR_043SC_RADRCS116_PPS	M	2007-116T20:40:52	GMB_E043_Titan29-000T00:5000T00:21:13		2007-116T21:02:05	NEG_Z to Titan	POS_X to North_Pole_Dir	Deadband = (2, 2, 20)
RADAR_043TI_T29INALT001_PRIME	M	2007-116T21:02:52	GMB_E043_Titan29-000T00:3000T00:14:00		2007-116T21:16:52	NEG_Z to Titan	NEG_Y to North_Pole_Dir	
RADAR_043TI_T29ILSAR001_PRIME	M	2007-116T21:16:52	GMB_E043_Titan29-000T00:1000T00:09:00		2007-116T21:25:52	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
RADAR_043TI_T29HISAR001_PRIME	M	2007-116T21:25:52	GMB_E043_Titan29-000T00:0000T00:14:00		2007-116T21:39:52	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
RADAR_043TI_T29OLSAR001_PRIME	M	2007-116T21:39:52	GMB_E043_Titan29+000T00:0000T00:09:00		2007-116T21:48:52	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
RADAR_043TI_T29OTALT001_PRIME	M	2007-116T21:48:52	GMB_E043_Titan29+000T00:0000T00:14:00		2007-116T22:02:52	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
ENGR_043SC_RADRWBIAS413_PPS	M	2007-116T22:02:52	GMB_E043_Titan29+000T00:0000T00:23:18		2007-116T22:26:10	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
RADAR_043TI_T29OSCAT001_PRIME	M	2007-116T22:26:52	GMB_E043_Titan29+000T00:0000T00:23:00		2007-116T22:49:52	NEG_Z to Titan	POS_X to North_Pole_Dir	
RADAR_043TI_T29OUTRAD001_PRIME	M	2007-116T22:49:52	GMB_E043_Titan29+000T01:0000T03:33:00		2007-117T02:22:52	NEG_Z to Titan	POS_X to North_Pole_Dir	Use +X_NTP and -Y_NTP for the two polarizations.
SP_043TI_WAYPTTURN516_PRIME	C	2007-117T02:22:52	GMB_E043_Titan29+000T04:0000T00:20:00		2007-117T02:42:52	ISS_NAC to Titan	NEG_X to Sun	18.28 min turn
NEW WAYPOINT		2007-117T02:42:52		000T19:50:08	2007-117T22:33:00	ISS_NAC to Titan	NEG_X to Sun	
VIMS_043TI_MEDRES001_PRIME	C, I	2007-117T02:42:52	GMB_E043_Titan29+000T05:000T02:50:00		2007-117T05:32:52	ISS_NAC to Titan	NEG_X to Sun	None
ISS_043TI_GLOBMAP001_PRIME	C, V	2007-117T05:32:52	GMB_E043_Titan29+000T08:0000T00:40:00		2007-117T06:12:52	ISS_NAC to Titan	NEG_X to Sun	
ISS_043TI_PHOTOMWAC002_PRIME	C, V	2007-117T06:12:52	GMB_E043_Titan29+000T08:0000T00:20:00		2007-117T06:32:52	ISS_NAC to Titan	NEG_X to Sun	
CIRS_043TI_FIRNADCMP002_PRIME	C, I, U, V	2007-117T06:32:52	GMB_E043_Titan29+000T09:000T02:00:00		2007-117T08:32:52	CIRS_FP1 to Titan	PIC	
ISS_043TI_MONITORNA001_PRIME	C, U, V	2007-117T08:32:52	GMB_E043_Titan29+000T11:000T02:00:00		2007-117T10:32:52	ISS_NAC to Titan	NEG_X to Sun	
VIMS_043TI_GLOBMAP002_PRIME	C, I, U, V	2007-117T10:32:52	GMB_E043_Titan29+000T13:000T01:00:00		2007-117T11:32:52	ISS_NAC to Titan	NEG_X to Sun	None
CIRS_043TI_MDIRTMAP002_PRIME	C, I, V	2007-117T11:32:52	GMB_E043_Titan29+000T14:000T00:42:00		2007-117T12:14:52	CIRS_FPB to Titan	POS_X to North_Pole_Dir	
SP_043TI_DEADTIME117_PRIME	I, V	2007-117T12:15:00		000T00:15:00	2007-117T12:30:00	ISS_NAC to Titan	NEG_X to Sun	
SP_043EA_DLTURN117_PRIME	I, V	2007-117T12:30:00		000T00:30:00	2007-117T13:00:00	XBAND to Earth	NEG_X to NEP	20.97 min turn
SP_043EA_M70METNON117_PRIME	C, M	2007-117T13:00:00		000T09:33:00	2007-117T22:33:00	XBAND to Earth	Rolling	

Changed to POS_X to NEP

Request	Start Time	Epoch Relative Start Time	Duration	EndTime	Effective Rate (bps)	Data Volume (10 ⁶ bits)	SPASS Type	Primary Pointing	Secondary Pointing	Agreement
CAPS_043SA_SURVEY002_RIDER	2007-114718:54.56		002T00:37:56	2007-116T19:32:52	1000	175.076	Non-SPASS			
CAPS_043SA_SURVEY003_RIDER	2007-116T23:32:52	GMB_E043_Titan29+000T02:00:00	000T23:00:08	2007-117T22:33:00	1000	82.808	Non-SPASS			
CAPS_043SU_MAGBOUND002_PRIME	2007-117T22:33:00		005T01:08:00	2007-122T23:41:00	4000	1744.32	SPASS Rider			
CAPS_043TI_T29CLOSE001_PRIME	2007-116T20:32:52	GMB_E043_Titan29-000T01:00:00	000T02:00:00	2007-116T22:32:52	16000	115.2	SPASS Rider			
CAPS_043TI_T29INBND001_PRIME	2007-116T19:32:52		000T01:00:00	2007-116T20:32:52	4000	14.4	SPASS Rider			
CAPS_043TI_T29OUTBND001_PRIME	2007-116T22:32:52	GMB_E043_Titan29+000T01:00:00	000T01:00:00	2007-116T23:32:52	4000	14.4	SPASS Rider			
CDA_043DR_1008DUST343_RIDER	2007-115T13:11:24		000T19:30:00	2007-116T08:41:24	199.6	14.015	SPASS Rider			
CDA_043DR_1607SUOUT003_RIDER	2007-116T08:42:27		000T02:00:00	2007-116T10:42:27	199.6	1.437	Non-SPASS			
CDA_043DR_1706DUST344_RIDER	2007-116T10:43:23		006T12:41:24	2007-122T23:24:47	149.9	84.536	Non-SPASS			
CIRS_043IC_DSCAL1536_RIDER	2007-117T13:33:00		000T06:00:00	2007-117T19:33:00	4000	86.4	SPASS Rider			
CIRS_043IC_DSCALSHRT001_RIDER	2007-116T19:22:52	GMB_E043_Titan29-000T02:10:00	000T00:20:00	2007-116T19:42:52	4000	4.8	SPASS Rider			
CIRS_043IC_DSCALSHRT002_RIDER	2007-117T02:22:52	GMB_E043_Titan29+000T04:50:00	000T00:20:00	2007-117T02:42:52	4000	4.8	SPASS Rider			
CIRS_043IC_DSCALSHRT003_RIDER	2007-116T06:01:00		000T00:30:00	2007-116T06:31:00	4000	7.2	SPASS Rider			
CIRS_043TI_FIRNADCMPO01_PRIME	2007-116T06:46:52	GMB_E043_Titan29-000T14:46:00	000T04:46:00	2007-116T11:32:52	4000	68.64	Prime	CIRS_FP1 to Titan	PIC	
CIRS_043TI_FIRNADCMPO01_SI	2007-116T06:46:52	GMB_E043_Titan29-000T14:46:00	000T04:46:00	2007-116T11:32:52	0	4	SPASS Rider			
CIRS_043TI_FIRNADCMPO02_ISS	2007-117T08:32:52	GMB_E043_Titan29+000T11:00:00	000T02:00:00	2007-117T10:32:52	2000	14.4	SPASS Rider			
CIRS_043TI_FIRNADCMPO02_PRIME	2007-117T06:32:52	GMB_E043_Titan29+000T09:00:00	000T02:00:00	2007-117T08:32:52	4000	28.8	Prime	CIRS_FP1 to Titan	PIC	
CIRS_043TI_FIRNADCMPO02_SI	2007-117T06:32:52	GMB_E043_Titan29+000T09:00:00	000T02:00:00	2007-117T08:32:52	0	3	SPASS Rider			
CIRS_043TI_FIRNADCMPO02_VIMS	2007-117T10:32:52	GMB_E043_Titan29+000T13:00:00	000T01:00:00	2007-117T11:32:52	2000	7.2	SPASS Rider			
CIRS_043TI_FIRNADCMPO03_ISS	2007-117T08:08:52	GMB_E043_Titan29+000T08:36:00	000T00:24:00	2007-117T06:32:52	2000	2.88	SPASS Rider			
CIRS_043TI_FIRNADCMPO04_ISS	2007-117T05:32:52	GMB_E043_Titan29+000T08:00:00	000T00:36:00	2007-117T06:08:52	2000	4.32	SPASS Rider			
CIRS_043TI_FIRNADCMPO05_ISS	2007-116T11:32:52	GMB_E043_Titan29-000T10:00:00	000T01:00:00	2007-116T12:32:52	2000	7.2	SPASS Rider			
CIRS_043TI_FIRNADMAP001_PRIME	2007-116T16:32:52	GMB_E043_Titan29-000T05:00:00	000T02:50:00	2007-116T19:22:52	2000	20.4	Prime	CIRS_FP1 to Titan	POS_X to North_Pole_Dir	
CIRS_043TI_FIRNADMAP001_SI	2007-116T16:32:52	GMB_E043_Titan29-000T05:00:00	000T02:50:00	2007-116T19:22:52	0	3	SPASS Rider			
CIRS_043TI_FIRNADMAP002_VIMS	2007-117T02:42:52	GMB_E043_Titan29+000T05:10:00	000T02:50:00	2007-117T05:32:52	2000	20.4	SPASS Rider			
CIRS_043TI_FIRNADMAP003_VIMS	2007-116T12:32:52	GMB_E043_Titan29-000T09:00:00	000T04:00:00	2007-116T16:32:52	2000	28.8	SPASS Rider			
CIRS_043TI_MIDIRTMAP002_PRIME	2007-117T11:32:52	GMB_E043_Titan29+000T14:00:00	000T00:42:00	2007-117T12:14:52	3600	9.072	Prime	CIRS_FPB to Titan	POS_X to North_Pole_Dir	
CIRS_043TI_MIDIRTMAP002_SI	2007-117T11:32:52	GMB_E043_Titan29+000T14:00:00	000T00:42:00	2007-117T12:14:52	0	1	SPASS Rider			
ENGR_043SC_DFPW116_PPS	2007-117T02:17:15	GMB_E043_Titan29+000T04:44:23	000T00:00:37	2007-117T02:17:52	0	0	Non-SPASS			
ENGR_043SC_RADRCS116_PPS	2007-116T20:40:52	GMB_E043_Titan29-000T00:52:00	000T00:21:13	2007-116T21:02:05	0	0	Prime	NEG_Z to Titan	POS_X to North_Pole_Dir	Deadband = (2, 2, 20)
ENGR_043SC_RADRW116_PPS	2007-116T19:47:52	GMB_E043_Titan29-000T01:45:00	000T00:00:44	2007-116T19:48:36	0	0	Non-SPASS			
ENGR_043SC_RADRWBIAS413_PPS	2007-116T22:02:52	GMB_E043_Titan29+000T00:30:00	000T00:23:18	2007-116T22:26:10	0	0	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
ENGR_043SC_RADWU116_PPS	2007-116T16:47:52	GMB_E043_Titan29-000T04:45:00	000T00:00:07	2007-116T16:47:59	0	0	Non-SPASS			
INMS_043SA_MRO006_RIDER	2007-117T09:32:52		000T00:33:00	2007-117T10:05:52	1044.1	2.067	Non-SPASS			
INMS_043SA_SURVEY004_RIDER	2007-115T07:21:30		001T02:11:22	2007-116T09:32:52	50	4.714	Non-SPASS			
INMS_043SA_SURVEY005_RIDER	2007-117T10:05:52		000T10:04:08	2007-117T20:10:00	50	1.812	Non-SPASS			
INMS_043SU_MAGBOUND002_CAPS	2007-117T20:10:00		000T09:50:00	2007-118T06:00:00	100	3.54	Non-SPASS			
INMS_043TI_T29CLOSE001_RADAR	2007-116T20:32:52	GMB_E043_Titan29-000T01:00:00	000T02:00:00	2007-116T22:32:52	1498	10.786	Non-SPASS			
INMS_043TI_T29INBND01_RADAR	2007-116T09:32:52	GMB_E043_Titan29-000T12:00:00	000T11:00:00	2007-116T20:32:52	100	3.96	Non-SPASS			
INMS_043TI_T29OUTBND001_RADAR	2007-116T22:32:52	GMB_E043_Titan29+000T01:00:00	000T11:00:00	2007-117T09:32:52	100	3.96	Non-SPASS			
ISS_043TI_FIRNADCMPO01_CIRS	2007-116T06:46:52	GMB_E043_Titan29-000T14:46:00	000T04:46:00	2007-116T11:32:52	0	20	SPASS Rider			
ISS_043TI_FIRNADCMPO02_CIRS	2007-117T06:32:52	GMB_E043_Titan29+000T09:00:00	000T02:00:00	2007-117T08:32:52	0	20	SPASS Rider			
ISS_043TI_FIRNADMAP001_CIRS	2007-116T16:32:52	GMB_E043_Titan29-000T05:00:00	000T02:50:00	2007-116T19:22:52	0	20	SPASS Rider			
ISS_043TI_GLOBMAP001_PRIME	2007-117T05:32:52	GMB_E043_Titan29+000T08:00:00	000T00:40:00	2007-117T06:12:52	0	150	Prime	ISS_NAC to Titan	NEG_X to Sun	
ISS_043TI_GLOBMAP002_VIMS	2007-117T10:32:52	GMB_E043_Titan29+000T13:00:00	000T01:00:00	2007-117T11:32:52	0	20	SPASS Rider			
ISS_043TI_MEDRES001_VIMS	2007-117T02:42:52	GMB_E043_Titan29+000T05:10:00	000T02:50:00	2007-117T05:32:52	0	20	SPASS Rider			
ISS_043TI_MEDRESDRK001_VIMS	2007-116T12:32:52	GMB_E043_Titan29-000T09:00:00	000T04:00:00	2007-116T16:32:52	0	20	SPASS Rider			
ISS_043TI_MIDIRTMAP002_CIRS	2007-117T11:32:52	GMB_E043_Titan29+000T14:00:00	000T01:15:00	2007-117T12:47:52	0	20	SPASS Rider			
ISS_043TI_MONITORNA001_PRIME	2007-117T08:32:52	GMB_E043_Titan29+000T11:00:00	000T02:00:00	2007-117T10:32:52	0	300	Prime	ISS_NAC to Titan	NEG_X to Sun	
ISS_043TI_PHOTOMWVAC001_PRIME	2007-116T11:32:52	GMB_E043_Titan29-000T10:00:00	000T01:00:00	2007-116T12:32:52	0	30	Prime	ISS_NAC to Titan	POS_X to North_Pole_Dir	
ISS_043TI_PHOTOMWVAC002_PRIME	2007-117T06:12:52	GMB_E043_Titan29+000T08:40:00	000T00:20:00	2007-117T06:32:52	0	30	Prime	ISS_NAC to Titan	NEG_X to Sun	
MAG_043OT_SURVEY002_PRIME	2007-116T06:01:00		000T13:31:52	2007-116T19:32:52	600	29.227	Non-SPASS			
MAG_043OT_SURVEY004_PRIME	2007-116T23:32:52	GMB_E043_Titan29+000T02:00:00	000T20:37:08	2007-117T20:10:00	600	44.537	Non-SPASS			
MAG_043SU_MAGBOUND001_MAPS	2007-117T20:10:00		000T02:13:00	2007-117T22:23:00	600	4.788	Non-SPASS			
MAG_043SU_MAGBOUND002_MAPS	2007-117T22:23:00		006T23:37:00	2007-124T22:00:00	1976	1192.36	Non-SPASS			
MAG_043TI_MAGTITAN01_PRIME	2007-116T19:32:52	GMB_E043_Titan29-000T02:00:00	000T04:00:00	2007-116T23:32:52	1976	28.454	Non-SPASS			
MIMI_043CO_SURVEY005_RIDER	2007-116T23:38:00		000T20:32:00	2007-117T20:10:00	750	55.44	Non-SPASS			
MIMI_043CO_SURVEY007_RIDER	2007-115T21:00:01		000T08:59:59	2007-116T06:00:00	900	29.159	Non-SPASS			
MIMI_043CO_SURVEY008_RIDER	2007-116T06:00:01		000T13:38:00	2007-116T19:38:01	750	36.81	Non-SPASS			
MIMI_043SU_MAGBOUND002_RIDER	2007-117T20:10:00		000T09:50:00	2007-118T06:00:00	1806	63.932	SPASS Rider			
MIMI_043TI_T29CLOSE001_CAPS	2007-116T20:32:52	GMB_E043_Titan29-000T01:00:00	000T02:00:00	2007-116T22:32:52	1800	12.96	SPASS Rider			
MIMI_043TI_T29INBND001_CAPS	2007-116T19:32:52	GMB_E043_Titan29-000T02:00:00	000T01:00:00	2007-116T20:32:52	1800	6.48	SPASS Rider			
MIMI_043TI_T29OUTBND001_CAPS	2007-116T22:32:52	GMB_E043_Titan29+000T01:00:00	000T01:00:00	2007-116T23:32:52	2000	7.2	SPASS Rider			

MP_041NA_SEQUENCE029_NA	2007-087T08:04:00	E041_SEQUENCE_029+000T00:00:00	037T13:56:00	2007-124T22:00:00	0	0	SPASS Note				
MP_043EA_OCCITITAN043_NA	2007-116T21:11:55		000T00:21:18	2007-116T21:33:13	0	0	Non-SPASS				
MP_043SA_REV043_NA	2007-106T20:52:58		016T02:41:08	2007-122T23:34:06	0	0	Non-SPASS				
MP_043SA_RPXASCEND043_NA	2007-116T21:35:04		000T00:00:01	2007-116T21:35:05	0	0	Non-SPASS				
MP_043SU_OCCITITAN043_NA	2007-116T21:10:35		000T00:22:30	2007-116T21:33:05	0	0	Non-SPASS				
MP_043TI_FLYBYT029_NA	2007-116T21:32:52		000T00:00:01	2007-116T21:32:53	0	0	Non-SPASS				
RADAR_043TI_T29INRAD001_PRIME	2007-116T19:42:52	GMB_E043_Titan29+000T01:50:00	000T00:35:00	2007-116T20:17:52	4487	9.423	Prime	NEG_Z to Titan	POS_X to North_Pole_Dir		
RADAR_043TI_T29INSCAT001_PRIME	2007-116T20:17:52	GMB_E043_Titan29+000T01:15:00	000T00:23:00	2007-116T20:40:52	32212	44.452	Prime	NEG_Z to Titan	POS_X to North_Pole_Dir		
RADAR_043TI_T29OUTRAD001_PRIME	2007-116T22:49:52	GMB_E043_Titan29+000T01:17:00	000T03:33:00	2007-117T02:22:52	4633	59.209	Prime	NEG_Z to Titan	POS_X to North_Pole_Dir	Use +X_NTP and -Y_NTP for the two polarizations.	
RADAR_043TI_T29WARMUP001_RIDER	2007-116T16:42:52	GMB_E043_Titan29+000T04:50:00	000T03:00:00	2007-116T19:42:52	474.2	5.122	SPASS Rider				
RADAR_043TI_T29HISAR001_PRIME	2007-116T21:25:52	GMB_E043_Titan29+000T00:07:00	000T00:14:00	2007-116T21:39:52	364800	306.432	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM		
RADAR_043TI_T29ILSAR001_PRIME	2007-116T21:16:52	GMB_E043_Titan29+000T00:16:00	000T00:09:00	2007-116T21:25:52	250216	135.117	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM		
RADAR_043TI_T29INALT001_PRIME	2007-116T21:02:52	GMB_E043_Titan29+000T00:30:00	000T00:14:00	2007-116T21:16:52	32212	27.058	Prime	NEG_Z to Titan	NEG_Y to North_Pole_Dir		
RADAR_043TI_T29OLSAR001_PRIME	2007-116T21:39:52	GMB_E043_Titan29+000T00:07:00	000T00:09:00	2007-116T21:48:52	250216	135.117	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM		
RADAR_043TI_T29OSCAT001_PRIME	2007-116T22:26:52	GMB_E043_Titan29+000T00:54:00	000T00:23:00	2007-116T22:49:52	32212	44.452	Prime	NEG_Z to Titan	POS_X to North_Pole_Dir		
RADAR_043TI_T29OTALT001_PRIME	2007-116T21:48:52	GMB_E043_Titan29+000T00:16:00	000T00:14:00	2007-116T22:02:52	32212	27.058	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM		
RPWS_043SA_OUTSURVEY002_PRIME	2007-116T06:01:00		000T13:31:52	2007-116T19:32:52	1310	63.813	Non-SPASS				
RPWS_043SA_OUTSURVEY003_PRIME	2007-116T23:32:52	GMB_E043_Titan29+000T02:00:00	000T23:00:08	2007-117T22:33:00	1310	108.48	Non-SPASS				
RPWS_043TI_TIIINTRMED001_PRIME	2007-116T19:32:52	GMB_E043_Titan29+000T02:00:00	000T04:00:00	2007-116T23:32:52	12499	179.991	Non-SPASS				
SP_043EA_DLTURN117_PRIME	2007-117T12:30:00		000T00:30:00	2007-117T13:00:00	0	0	Prime	XBAND to Earth	NEG_X to NEP	20.97 min turn	
SP_043EA_M70METNON117_PRIME	2007-117T13:00:00		000T09:33:00	2007-117T22:33:00	0	0	Prime	XBAND to Earth	Rolling		
SP_043NA_M70METNON117_SP	2007-117T13:00:00		000T09:33:00	2007-117T22:33:00	0	0	Non-SPASS				
SP_043NA_M70OBSNON117_NA	2007-116T06:01:00		001T06:59:00	2007-117T13:00:00	0	0	Non-SPASS				
SP_043NA_TOSTSEG116_NA	2007-116T06:01:00		001T16:32:00	2007-117T22:33:00	0	0	SPASS Note				
SP_043TI_DEADTIME116_PRIME	2007-116T06:31:00		000T00:15:00	2007-116T06:46:00	0	0	Prime	ISS_NAC to Titan	POS_X to North_Pole_Dir		
SP_043TI_DEADTIME117_PRIME	2007-117T12:15:00		000T00:15:00	2007-117T12:30:00	0	0	Prime	ISS_NAC to Titan	NEG_X to Sun		
SP_043TI_WAYPTTURN116_PRIME	2007-116T06:01:00		000T00:30:00	2007-116T06:31:00	0	0	New Waypoint	ISS_NAC to Titan	POS_X to North_Pole_Dir	18.26 min turn from +X to NEP	
SP_043TI_WAYPTTURN416_PRIME	2007-116T19:22:52	GMB_E043_Titan29+000T02:10:00	000T00:20:00	2007-116T19:42:52	0	0	New Waypoint	NEG_Z to Titan	NEG_X to 270.0/-6.0	18.05 min turn	
SP_043TI_WAYPTTURN516_PRIME	2007-117T02:22:52	GMB_E043_Titan29+000T04:50:00	000T00:20:00	2007-117T02:42:52	0	0	New Waypoint	ISS_NAC to Titan	NEG_X to Sun	18.28 min turn	
UVIS_043TI_FIRNADCOMP001_CIRS	2007-116T06:46:52	GMB_E043_Titan29+000T14:46:00	000T04:46:00	2007-116T11:32:52	1006.4	17.27	SPASS Rider				
UVIS_043TI_FIRNADCOMP002_CIRS	2007-117T06:32:52	GMB_E043_Titan29+000T09:00:00	000T02:00:00	2007-117T08:32:52	1006.4	7.246	SPASS Rider				
UVIS_043TI_FIRNADMAP001_CIRS	2007-116T16:32:52	GMB_E043_Titan29+000T05:00:00	000T02:45:00	2007-116T19:17:52	5032	49.817	SPASS Rider				
UVIS_043TI_MEDRESDRK001_VIMS	2007-116T12:32:52	GMB_E043_Titan29+000T09:00:00	000T04:00:00	2007-116T16:32:52	1006.4	14.492	SPASS Rider				
UVIS_043TI_TEMPMPA001_CIRS	2007-117T06:32:52	GMB_E043_Titan29+000T09:00:00	000T05:00:00	2007-117T11:32:52	5032	90.576	SPASS Rider				
VIMS_043TI_FIRNADCOMP001_CIRS	2007-116T08:32:52	GMB_E043_Titan29+000T13:00:00	000T03:00:00	2007-116T11:32:52	3333.3	36	SPASS Rider				
VIMS_043TI_GLOBMAP001_ISS	2007-117T05:32:52	GMB_E043_Titan29+000T08:00:00	000T00:36:00	2007-117T06:08:52	17593	38	SPASS Rider				
VIMS_043TI_GLOBMAP002_PRIME	2007-117T10:32:52	GMB_E043_Titan29+000T13:00:00	000T01:00:00	2007-117T11:32:52	10000	36	Prime	ISS_NAC to Titan	NEG_X to Sun	None	
VIMS_043TI_MEDRES001_PRIME	2007-117T02:42:52	GMB_E043_Titan29+000T05:10:00	000T02:50:00	2007-117T05:32:52	14118	144	Prime	ISS_NAC to Titan	NEG_X to Sun	None	
VIMS_043TI_MEDRESDRK001_PRIME	2007-116T12:32:52	GMB_E043_Titan29+000T09:00:00	000T04:00:00	2007-116T16:32:52	10000	144	Prime	ISS_NAC to Titan	POS_X to North_Pole_Dir	None	
VIMS_043TI_MIRLIMB001_CIRS	2007-116T16:32:52	GMB_E043_Titan29+000T05:00:00	000T02:50:00	2007-116T19:22:52	5294.1	54	SPASS Rider				
VIMS_043TI_MIRLIMB002_CIRS	2007-117T06:32:52	GMB_E043_Titan29+000T09:00:00	000T05:00:00	2007-117T11:32:52	3000	54	SPASS Rider				
VIMS_043TI_MIRTEMP001_CIRS	2007-116T06:46:52	GMB_E043_Titan29+000T14:46:00	000T01:46:00	2007-116T08:32:52	2830.2	18	SPASS Rider				
VIMS_043TI_MIRTEMP002_CIRS	2007-117T11:32:52	GMB_E043_Titan29+000T14:00:00	000T01:05:00	2007-117T12:37:52	4615.4	18	SPASS Rider				
VIMS_043TI_PHOTMAP001_ISS	2007-116T11:32:52	GMB_E043_Titan29+000T10:00:00	000T01:00:00	2007-116T12:32:52	11111	40	SPASS Rider				
VIMS_043TI_WACPHOT001_ISS	2007-117T06:08:52	GMB_E043_Titan29+000T08:36:00	000T00:24:00	2007-117T06:32:52	26389	38	SPASS Rider				

043TI (T29) Telemetry Modes**

TELEMETRY MODE REPORT

SCET	TELEMETRY MODE	REQUEST
2007-116T06:01:00.000	S_N_ER_3	SP_043NA_M70OBSNON117_NA
2007-116T16:42:52.000	S_N_ER_5A	SP_043NA_M70OBSNON117_NA
2007-116T16:57:52.000	S_N_ER_3	SP_043NA_M70OBSNON117_NA
2007-116T19:42:52.000	S_N_ER_8	SP_043NA_M70OBSNON117_NA
2007-117T02:22:52.000	S_N_ER_3	SP_043NA_M70OBSNON117_NA
2007-117T13:00:00.000	RTE_N_SPB_124425	SP_043EA_M70METNON117_PRIME
2007-117T13:46:00.000	RTE_N_SPB_142200	SP_043EA_M70METNON117_PRIME
2007-117T16:01:00.000	RTE_N_SPB_165900	SP_043EA_M70METNON117_PRIME
2007-117T20:16:00.000	RTE_N_SPB_142200	SP_043EA_M70METNON117_PRIME
2007-117T22:18:00.000	RTE_N_SPB_124425	SP_043EA_M70METNON117_PRIME

043TI (T29) Data Volume**

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)	CAROVR (%)	
SP_043EA_M70METNON117_PRIME	117 13:00	117 22:33	0	3282	112	3394	3493	99	0	232	56	3682	4388	707	706	16%	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	116 06:01	117 13:00	241.1	17.5	228.9	21.9	650.0	86.7	99.5	788.7	307.2	179.4	620.0	0.0	0.0	3241.1
OBSERVATION_SI	116 06:01	117 13:00	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0
SP_043EA_M70METNON117_PRIME	117 13:00	117 22:33	34.4	5.2	86.4	2.1	0.0	21.5	34.8	0.0	45.0	0.0	0.0	0.0	0.0	229.4
DAILY TOTAL SCIENCE	116 06:01	117 22:33	275.5	22.7	326.3	24.1	650.0	108.2	134.3	788.7	352.3	179.4	620.0	0.0		

AVERAGE DATA RATE REPORT (calculated over observation periods and downlink passes)

Event	Start doy hh:mm	End doy hh:mm	CAPS (bps)	CDA (bps)	INMS (bps)	MAG (bps)	MIMI (bps)	RPWS (bps)	UVIS (bps)
SP_043NA_M70OBSNON117_NA	116 06:01	117 13:00	2161.9	157.2	196.6	777.6	892.0	2754.6	1608.4
SP_043EA_M70METNON117_PRIME	117 13:00	117 22:33	1000.0	149.9	62.5	624.0	1013.5	1310.0	0.0

043TI (T29) DSN Requests*

CASSINI DOWNLINK/DSN COVERAGE SUMMARY for CIMS_043TI_T29.apf generated on 2004-Mar-29 15:01:45
 (+ = 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	RADIO_CONFIG R UD D UD MAR
M70METNON117	117T13:00-22:33	117T14:14-23:47	09:33	82,110,142,124,110	63	117T13:00-22:33	117T14:10-23:50	09:40	15/15	R XX - -- --0

Open Issues

- No open issues. New Data Rates in ap_downlink eliminated Downlink Margin problem.

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 waypoints.	C		
2. All turns to and from waypoints checked for violations and margins. <input type="checkbox"/> CAPS <input type="checkbox"/> CDA <input type="checkbox"/> CIRS <input type="checkbox"/> INMS <input type="checkbox"/> ISS <input type="checkbox"/> MIMI <input type="checkbox"/> MAG <input type="checkbox"/> NAV <input type="checkbox"/> RADAR <input type="checkbox"/> RPWS <input type="checkbox"/> RSS <input type="checkbox"/> UVIS <input type="checkbox"/> VIMS Each Prime Instrument agrees to accept a reduction in observation time during implementation if problems arise.	C		
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	N/A		
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.	C	K. Klaasen's margin for flyby is min. according to memo dated .	
6. Waypoints changes are ≤3 per day A. All turns that accomplish the waypoint strategy are requested by SP or OpNav.	C		
7. Live Movable Blocks limited to the following orbits: 7, 8, 9, 10, 12, 28, 51, 56, 57, 60, 63, 64	N/A		

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

(DOUBLE-CLICK TO MAKE CHANGES)