TOST: Aftermarket Package 054TI (T39)

Segment Boundary

Start:2007-354T08:16:00
End: 2007-356T08:57:00

Titan C/A= 2007-354T22:57:55; at 970 km

Epoch = GMB_E054_Titan39

August 1, 2007

Kim Steadman

Douglas Equils, Candy Hansen, Trina Ray, and Jo Pitesky

054TI (T39)

- Unique science to be accomplished during this flyby:
  - RADAR will obtain high resolution SAR coverage of the south pole region.
  - CIRS will measured stratospheric temperatures; in limb measurements, vertical temperature and compositional profiles will be obtained.
  - ISS will perform a full disk color sequence at 1.4 km/pixel, and will do low phase angle measurements of Rhea.
  - VIMS will do mapping of the mid-latitude regions at small solar phase angles, monitoring of cloud motions on a global scale, and monitoring of the probe landing site.

054TI (T39) Timeline
C/A= 2007-354T22:57:55

Start Time	End Time	Prime Activity	Obs. Detail	Op Mode	TLM Mode	Comments
354T08:16	354T08:46	SP Turn to waypoint	NAC to TI, +X to NTP	DFPW Normal	S_N_ER_3	
354T08:46	354T08:57	OD Uncertainty Dead Time		DFPW Normal	S_N_ER_3	
-13:55	-09:00	VIMS	Cloud Map	DFPW Normal	S_N_ER_3	Template O (modified)
-09:00	-05:06	CIRS	Mid-IR Limb	DFPW Normal/RADWU	S_N_ER_3/5a	Template R; RADWU & S_N_ER_5a at -07:45
-05:06	-04:45	SP turn to RADAR WP	-Z to Titan, -X to 5/-5	RADWU		
-04:45	-02:00	RADAR	Radiometry	RADRWA	S_N_ER_8	Template S
-02:00	-00:52	RADAR	Scatterometry	RADRWA	S_N_ER_8	
-00:52	-00:30	RWA to RCS Transition			S_N_ER_8	
-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	+00:15	RADAR	High-Res SAR	RADRCS	S_N_ER_8	primary -X to ram for INMS
+00:15	+00:30	RADAR	Altimetry	RADRCS	S_N_ER_8	
+00:30	+00:54	RCS to RWA Transition			S_N_ER_8	
+00:54	+02:00	RADAR	Scatterometry	RADRWA	S_N_ER_8	
+02:00	+05:00	RADAR	Radiometry	RADRWA	S_N_ER_8	Template L
+04:45	+05:05	SP Turn to waypoint	NAC to TI, -X to Sun		S_N_ER_3	
+05:05	+09:00	CIRS	Limb Map	DFPW Normal	S_N_ER_3	Template F
+09:00	+11:00	CIRS	FP1	DFPW Normal	S_N_ER_3	Template D
+11:00	+13:00	ISS	Mosaic	DFPW Normal	S_N_ER_3	Template D
+13:00	+14:00	VIMS	Regional Map	DFPW Normal	S_N_ER_3	Template D
+14:00	+15:30	ISS	Rhea	DFPW Normal	S_N_ER_3	
+15:30	+1T00:15	VIMS	Global Map	DFPW Normal	S_N_ER_3	Template B (modified)
355T23:12	355T23:27	OD Uncertainty Dead Time		DFPW Normal	S_N_ER_3	
355T23:27	355T23:57	SP Turn to Earth for downlink		DFPW Normal	S_N_ER_3	
355T23:57	356T08:57	Madrid 70-m Array		DFPW Normal	RTE_N_SPB	

T39 TOL

Request	AGPEN	Start Time	Epoch	Duration	End Time	Rate	Data Volume	SPASS Type	Primary Pointing	Secondary
CAPS_054SA_SURVEY003_RIDER	CAPS_16000	2007-353T19:15:00		001T01:42:55	2007-354T20:57:55	1000	92.575	Non-SPASS		
CAPS_054TI_T39INBND001_PRIME	CAPS_16000	2007-354T20:57:55	GMB_E054_Titan39-000T02:00:00	000T01:15:00	2007-354T22:12:55	4000	18	SPASS Rider		
CAPS_054TI_T39CLOSE001_PRIME	CAPS_16000	2007-354T22:12:55	GMB_E054_Titan39-000T00:45:00	000T01:30:00	2007-354T23:42:55	16000	86.4	SPASS Rider		
CAPS_054TI_T39OUTBND001_PRIME	CAPS_16000	2007-354T23:42:55	GMB_E054_Titan39+000T00:45:00	000T01:15:00	2007-355T00:57:55	4000	18	SPASS Rider		
CAPS_054SA_SURVEY002_RIDER	CAPS_16000	2007-355T00:57:55	GMB_E054_Titan39+000T02:00:00	000T21:59:19	2007-355T22:57:14	1000	79.159	Non-SPASS		
CAPS_054SA_SURVEY001_PRIME	CAPS_16000	2007-355T22:56:00		003T16:21:00	2007-359T15:17:00	1000	318.06	Non-SPASS		
CDA_054DR_1307DUST410_RIDER	CDA_524	2007-354T03:00:34		006T22:13:43	2007-361T01:14:17	149.9	89.682	Non-SPASS		
CIRS_054TI_CLOUDMAP001_VIMS	CIRS_4000	2007-354T09:02:55	GMB_E054_Titan39-000T13:55:00	000T04:55:00	2007-354T13:57:55	2000	35.4	SPASS Rider		
CIRS_054TI_MIRLMBMAP001_PRIME	CIRS_4000	2007-354T13:57:55	GMB_E054_Titan39-000T09:00:00	000T03:54:00	2007-354T17:51:55	4000	56.16	Prime	CIRS_FPB to Titan	PIC
CIRS_054TI_MIRLMBMAP001_SI	ISS_SUPPORT_IN	2007-354T13:57:55	GMB_E054_Titan39-000T09:00:00	000T03:54:00	2007-354T17:51:55	0	4	SPASS Rider		
CIRS_054TI_MIRLMBINT002_PRIME	CIRS_4000	2007-355T04:02:55	GMB_E054_Titan39+000T05:05:00	000T03:55:00	2007-355T07:57:55	4000	56.4	Prime	CIRS_FPB to Titan	PIC
CIRS_054TI_MIRLMBINT002_SI	ISS_SUPPORT_IN	2007-355T04:02:55	GMB_E054_Titan39+000T05:05:00	000T03:55:00	2007-355T07:57:55	0	1	SPASS Rider		
CIRS_054TI_FIRNADCMP002_PRIME	CIRS_4000	2007-355T07:57:55	GMB_E054_Titan39+000T09:00:00	000T02:00:00	2007-355T09:57:55	4000	28.8	Prime	CIRS_FP1 to Titan	PIC
CIRS_054TI_FIRNADCMP002_SI	ISS_SUPPORT_IN	2007-355T07:57:55	GMB_E054_Titan39+000T09:00:00	000T02:00:00	2007-355T09:57:55	0	2	SPASS Rider		
CIRS_054TI_MONITORNA001_ISS	CIRS_4000	2007-355T09:57:55	GMB_E054_Titan39+000T11:00:00	000T02:00:00	2007-355T11:57:55	2000	14.4	SPASS Rider		
CIRS_054TI_GLOBMAP002_VIMS	CIRS_4000	2007-355T11:57:55	GMB_E054_Titan39+000T13:00:00	000T01:00:00	2007-355T12:57:55	2000	7.2	SPASS Rider		
CIRS_054RH_PHOT016NP001_ISS	CIRS_4000	2007-355T12:57:55	GMB_E054_Titan39+000T14:00:00	000T01:30:00	2007-355T14:27:55	4000	21.6	SPASS Rider		
CIRS_054TI_GLOBMAPFA001_VIMS	CIRS_4000	2007-355T14:27:55	GMB_E054_Titan39+000T15:30:00	000T08:45:00	2007-355T23:12:55	2000	63	SPASS Rider		
CIRS_054IC_DSCAL1659_RIDER	CIRS_4000	2007-356T01:27:00		000T06:00:00	2007-356T07:27:00	4000	86.4	SPASS Rider		
ENGR_054SC_RADWU354_PPS	OpMode	2007-354T15:12:55	GMB_E054_Titan39-000T07:45:00	000T00:00:07	2007-354T15:13:02	0	0	Non-SPASS		
ENGR_054SC_RADRWA354_PPS	OpMode	2007-354T18:12:55	GMB_E054_Titan39-000T04:45:00	000T00:00:44	2007-354T18:13:39	0	0	Non-SPASS		
ENGR_054SC_RADRCS354_PPS	OpMode	2007-354T22:05:55	GMB_E054_Titan39-000T00:52:00	000T00:21:13	2007-354T22:27:08	0	0	Prime	NEG_Z to Titan	PIC
ENGR_054SC_AACSDUAL001_CDS	ENGR_1638	2007-354T22:42:55	GMB_E054_Titan39-000T00:15:00	000T00:30:00	2007-354T23:12:55	1638	2.948	Non-SPASS		
ENGR_054SC_RADRWBIAS454_PPS	OpMode	2007-354T23:27:55	GMB_E054_Titan39+000T00:30:00	000T00:23:18	2007-354T23:51:13	0	0	Prime	NEG_Z to Titan	PIC
ENGR_054SC_DFPW355_PPS	OpMode	2007-355T03:42:18	GMB_E054_Titan39+000T04:44:23	000T00:00:37	2007-355T03:42:55	0	0	Non-SPASS		
ENGR_054SC_AACSDUAL002_CDS	ENGR_1638	2007-355T23:56:47		000T00:00:02	2007-355T23:56:49	0	0	Non-SPASS		
INMS_054SA_SURVEY005_RIDER	INMS_1498	2007-353T16:07:55		000T18:48:46	2007-354T10:56:41	50	3.386	Non-SPASS		
INMS_054TI_T39INBD001_RADAR	INMS_1498	2007-354T10:56:41		000T11:01:14	2007-354T21:57:55	100	3.967	Non-SPASS		
INMS_054TI_T39RMPNT001_INMS	INMS_1498	2007-354T21:57:55	GMB_E054_Titan39-000T01:00:00	000T01:00:00	2007-354T22:57:55	1498	5.393	Non-SPASS		
INMS_054TI_T39RMPNT001_RIDER	INMS_1498	2007-354T22:57:55	GMB_E054_Titan39-000T00:00:00	000T00:15:00	2007-354T23:12:55	1498	1.348	SPASS Rider		
INMS_054TI_T39RMPNT002_INMS	INMS_1498	2007-354T23:12:55	GMB_E054_Titan39+000T00:15:00	000T00:45:00	2007-354T23:57:55	1498	4.045	Non-SPASS		
INMS_054TI_T39OUTBD001_RADAR	INMS_1498	2007-354T23:57:55	GMB_E054_Titan39+000T01:00:00	000T11:00:00	2007-355T10:57:55	100	3.96	Non-SPASS		
INMS_054SA_SURVEY004_RIDER	INMS_1498	2007-355T10:53:09		000T12:01:51	2007-355T22:55:00	50	2.166	Non-SPASS		
INMS_054SU_MAGBOUND001_CAPS	INMS_1498	2007-355T22:55:00		002T09:07:00	2007-358T08:02:00	50	10.281	Non-SPASS		

T39 TOL

Request	AGPEN	Start Time	Epoch	Duration	End Time	Rate	Data Volume	SPASS Type	Primary Pointing	Secondary Pointing Agreement
ISS_054TI_CLOUDMAP001_VIMS	ISS_Phot_1_by_1	2007-354T09:02:55	GMB_E054_Titan39-000T13:55:00	000T04:55:00	2007-354T13:57:55	0	10	SPASS Rider		
ISS_054TI_MIRLMBMAP001_CIRS	ISS_Phot_1_by_1	2007-354T13:57:55	GMB_E054_Titan39-000T09:00:00	000T03:54:00	2007-354T17:51:55	0	10	SPASS Rider		
ISS_054TI_MIRLMBINT002_CIRS	ISS_Phot_1_by_1	2007-355T04:12:55	GMB_E054_Titan39+000T05:15:00	000T03:45:00	2007-355T07:57:55	0	10	SPASS Rider		
ISS_054TI_FIRNADCMP002_CIRS	ISS_Phot_1_by_1	2007-355T07:57:55	GMB_E054_Titan39+000T09:00:00	000T02:00:00	2007-355T09:57:55	0	10	SPASS Rider		
ISS_054TI_MONITORNA001_PRIME	ISS_Phot_1_by_1	2007-355T09:57:55	GMB_E054_Titan39+000T11:00:00	000T02:00:00	2007-355T11:57:55	0	300	Prime	ISS_NAC to Titan	NEG_X to Sun
ISS_054TI_GLOBMAP002_VIMS	ISS_Phot_1_by_1	2007-355T11:57:55	GMB_E054_Titan39+000T13:00:00	000T01:00:00	2007-355T12:57:55	0	10	SPASS Rider		
ISS_054RH_PHOT016NP001_PRIME	ISS_Phot_1_by_1	2007-355T12:57:55	GMB_E054_Titan39+000T14:00:00	000T01:30:00	2007-355T14:27:55	0	42.5	Prime	UVIS_FUV to Rhea	NEG_X to Sun
ISS_054TI_GLOBMAPFA001_VIMS	ISS_Phot_1_by_1	2007-355T14:27:55	GMB_E054_Titan39+000T15:30:00	000T08:45:00	2007-355T23:12:55	0	10	SPASS Rider		
MAG_054OT_SURVEY002_PRIME	MAG_1976	2007-354T08:16:00		000T10:41:55	2007-354T18:57:55	600	23.109	Non-SPASS		
MAG_054TI_MAGTITAN001_PRIME	MAG_1976	2007-354T18:57:55	GMB_E054_Titan39-000T04:00:00	000T08:00:00	2007-355T02:57:55	1976	56.909	Non-SPASS		
MAG_054OT_SURVEY004_PRIME	MAG_1976	2007-355T02:57:55	GMB_E054_Titan39+000T04:00:00	001T00:35:13	2007-356T03:33:08	600	53.108	Non-SPASS		
MAG_054SU_MAGBOUND001_MAPS	MAG_1976	2007-356T03:28:22		000T05:28:38	2007-356T08:57:00	1976	38.963	Non-SPASS		
MIMI_054SA_MAGDYN004_PRIME	MIMI_8000	2007-354T08:16:01		000T12:41:54	2007-354T20:57:55	1380	63.085	SPASS Rider		
MIMI_054TI_T39INBND001_CAPS	MIMI_8000	2007-354T20:57:55	GMB_E054_Titan39-000T02:00:00	000T01:00:00	2007-354T21:57:55	2000	7.2	SPASS Rider		
MIMI_054TI_T39CLOSE001_CAPS	MIMI_8000	2007-354T21:57:55	GMB_E054_Titan39-000T01:00:00	000T02:00:00	2007-354T23:57:55	2000	14.4	SPASS Rider		
MIMI_054TI_T39OUTBND001_CAPS	MIMI_8000	2007-354T23:57:55	GMB_E054_Titan39+000T01:00:00	000T01:00:00	2007-355T00:57:55	2000	7.2	SPASS Rider		
MIMI_054CO_SURVEY004_RIDER	MIMI_8000	2007-355T00:57:55	GMB_E054_Titan39+000T02:00:00	000T21:58:19	2007-355T22:56:14	900	71.189	Non-SPASS		
MIMI_054SU_MAGBOUND002_RIDER	MIMI_8000	2007-355T22:55:01		000T10:01:59	2007-356T08:57:00	1800	65.014	SPASS Rider		
MP_054SA_REV054_NA	MILESTONE	2007-345T05:34:35		000T00:00:01	2007-345T05:34:36	0	0	Non-SPASS		
MP_054NA_SEQUENCE036_NA	MILESTONE	2007-348T16:00:00	E054_SEQUENCE_036+000T00:00:(	038T21:35:00	2008-022T13:35:00	0	0	SPASS Note		
MP_054TI_FLYBYT039_NA	MILESTONE	2007-354T22:57:55		000T00:00:01	2007-354T22:57:56	0	0	Non-SPASS		
MP_054SA_RPXASCEND054_NA	MILESTONE	2007-355T00:15:06		000T00:00:01	2007-355T00:15:07	0	0	Non-SPASS		
RADAR_054TI_T39WARMUP001_RIDER	RADAR_364800	2007-354T15:12:55	GMB_E054_Titan39-000T07:45:00	000T03:00:00	2007-354T18:12:55	474.2	5.122	SPASS Rider		
RADAR_054TI_T39INRAD001_PRIME	RADAR_364800	2007-354T18:12:55	GMB_E054_Titan39-000T04:45:00	000T03:15:00	2007-354T21:27:55	4414.1	51.645	Prime	NEG_Z to Titan (0.0,	NEG_X to Use -X_NTP and +Y_N
RADAR_054TI_T39INSCAT001_PRIME	RADAR_364800	2007-354T21:27:55	GMB_E054_Titan39-000T01:30:00	000T00:38:00	2007-354T22:05:55	16817	38.343	Prime	NEG_Z to Titan	POS_X to North_Pole_Dir
RADAR_054TI_T39INALT001_PRIME	RADAR_364800	2007-354T22:27:55	GMB_E054_Titan39-000T00:30:00	000T00:15:00	2007-354T22:42:55	16817	15.136	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM
RADAR_054TI_T39INLSAR001_PRIME	RADAR_364800	2007-354T22:42:55	GMB_E054_Titan39-000T00:15:00	000T00:08:00	2007-354T22:50:55	181999	87.359	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM
RADAR_054TI_T39HISAR001_PRIME	RADAR_364800	2007-354T22:50:55	GMB_E054_Titan39-000T00:07:00	000T00:07:00	2007-354T22:57:55	364800	153.216	Prime	NEG_Z to Titan	NEG_X to Titan_SC_RAM
RADAR_054TI_T39RASAR001_PRIME	RADAR_364800	2007-354T22:57:55	GMB_E054_Titan39+000T00:00:00	000T00:15:00	2007-354T23:12:55	250216	225.195	Prime	NEG_X to Titan_SC_	NEG_Z to ˙Made prime for INMS.
RADAR_054TI_T39OUTALT001_PRIME	RADAR_364800	2007-354T23:12:55	GMB_E054_Titan39+000T00:15:00	000T00:15:00	2007-354T23:27:55	16817	15.136	Prime	NEG_Z to Titan	NEG_Y to North_Pole_Dir
RADAR_054TI_T39OUTSCT001_PRIME	RADAR_364800	2007-354T23:51:55	GMB_E054_Titan39+000T00:54:00	000T00:38:00	2007-355T00:29:55	16817	38.343	Prime	NEG_Z to Titan	POS_X to North_Pole_Dir
RADAR_054TI_T39OUTRAD001_PRIME	RADAR_364800	2007-355T00:29:55	GMB_E054_Titan39+000T01:32:00	000T03:13:00	2007-355T03:42:55	4012.8	46.468	Prime	NEG_Z to Titan (0.0,	NEG_Y to lUse -Y_NTP and -X_N

T39 TOL

Request	AGPEN	Start Time	Epoch	Duration	End Time	Rate	Data Volume	SPASS Type	Primary Pointing	Secondary Pointing Ag
RPWS_054SA_OUTSURVEY002_PRIME	RPWS_30464	2007-354T08:16:00		001T13:09:00	2007-355T21:25:00	1310	175.201	Non-SPASS		
RPWS_054TI_TIINTRMED001_PRIME	RPWS_30464	2007-354T20:57:55	GMB_E054_Titan39-000T02:00:00	000T01:30:00	2007-354T22:27:55	12499	67.497	Non-SPASS		
RPWS_054TI_TICA001_PRIME	RPWS_182784	2007-354T22:27:55	GMB_E054_Titan39-000T00:30:00	000T01:00:00	2007-354T23:27:55	30464	109.671	Non-SPASS		
RPWS_054TI_TIINTRMED002_PRIME	RPWS_30464	2007-354T23:27:55	GMB_E054_Titan39+000T00:30:00	000T01:30:00	2007-355T00:57:55	12499	67.497	Non-SPASS		
RPWS_054SU_MAGBOUND001_CAPS	RPWS_30464	2007-355T21:25:00		000T11:32:00	2007-356T08:57:00	9000	373.68	Non-SPASS		
SP_054NA_M70OBSNON355_NA	OBSERVATION_P	2007-354T08:16:00		001T15:41:00	2007-355T23:57:00	0	0	Non-SPASS		
SP_054NA_TOSTSEG354_NA	MILESTONE	2007-354T08:16:00		002T00:41:00	2007-356T08:57:00	0	0	SPASS Note		
SP_054TI_WAYPTTURN354_PRIME	MILESTONE	2007-354T08:16:00		000T00:30:00	2007-354T08:46:00	0	0	New Waypoint	ISS_NAC to Titan	POS_X to | 11.27 min t
SP_054TI_DEADTIME354_PRIME	MILESTONE	2007-354T08:46:00		000T00:16:55	2007-354T09:02:55	0	0	Prime	ISS_NAC to Titan	POS_X to North_Pole_
SP_054TI_WAYPTTURN454_PRIME	MILESTONE	2007-354T17:51:55	GMB_E054_Titan39-000T05:06:00	000T00:21:00	2007-354T18:12:55	0	0	New Waypoint	NEG_Z to Titan	NEG_X to 18.47 min t
SP_054TI_WAYPTTURN355_PRIME	MILESTONE	2007-355T03:42:55	GMB_E054_Titan39+000T04:45:00	000T00:20:00	2007-355T04:02:55	0	0	New Waypoint	ISS_NAC to Titan	NEG_X to 17.73 min t
SP_054TI_DEADTIME355_PRIME	MILESTONE	2007-355T23:12:55	GMB_E054_Titan39+001T00:15:00	000T00:18:51	2007-355T23:31:46	0	0	Prime	ISS_NAC to Titan	NEG_X to Sun
SP_054EA_DLTURN355_PRIME	MILESTONE	2007-355T23:27:00		000T00:30:00	2007-355T23:57:00	0	0	Prime	XBAND to Earth	POS_X to | 18.37 min t
SP_054EA_M70ARRNON355_PRIME	DOWNLINK_PASS	2007-355T23:57:00		000T09:00:00	2007-356T08:57:00	0	0	Prime	XBAND to Earth	6_Hr_Rolling
SP_054NA_M70ARR2ND355_SP	DSN_PASS	2007-355T23:57:00		000T09:00:00	2007-356T08:57:00	0	0	Non-SPASS		
SP_054NA_M70ARRNON355_SP	DSN_PASS	2007-355T23:57:00		000T09:00:00	2007-356T08:57:00	0	0	Non-SPASS		
UVIS_054TI_CLOUDMAP001_VIMS	UVIS_5032	2007-354T09:02:55	GMB_E054_Titan39-000T13:55:00	000T04:55:00	2007-354T13:57:55	1006.4	17.813	SPASS Rider		
UVIS_054TI_MIRLMBMAP001_CIRS	UVIS_5032	2007-354T13:57:55	GMB_E054_Titan39-000T09:00:00	000T03:54:00	2007-354T17:51:55	5032	70.649	SPASS Rider		
UVIS_054TI_MIRLMBINT002_CIRS	UVIS_5032	2007-355T04:03:55	GMB_E054_Titan39+000T05:06:00	000T03:54:00	2007-355T07:57:55	5032	70.649	SPASS Rider		
UVIS_054SW_IPHSURVEY016_RIDER	UVIS_5032	2007-355T23:57:00		000T09:00:00	2007-356T08:57:00	76	2.462	Non-SPASS		
VIMS_054TI_CLOUDMAP001_PRIME	VIMS_18432	2007-354T09:02:55	GMB_E054_Titan39-000T13:55:00	000T04:55:00	2007-354T13:57:55	3785.3	67	Prime	ISS_NAC to Titan	POS_X to North_Pole_
VIMS_054TI_MIRLMBINT002_CIRS	VIMS_18432	2007-354T13:57:55	GMB_E054_Titan39-000T09:00:00	000T03:54:00	2007-354T17:51:55	4772.1	67	SPASS Rider		
VIMS_054TI_MIRLMBINT001_CIRS	VIMS_18432	2007-355T04:02:55	GMB_E054_Titan39+000T05:05:00	000T03:55:00	2007-355T07:57:55	10213	144	SPASS Rider		
VIMS_054TI_FIRNADCMP001_CIRS	VIMS_18432	2007-355T07:57:55	GMB_E054_Titan39+000T09:00:00	000T02:00:00	2007-355T09:57:55	5000	36	SPASS Rider		
VIMS_054TI_MOSAIC001_ISS	VIMS_18432	2007-355T09:57:55	GMB_E054_Titan39+000T11:00:00	000T02:00:00	2007-355T11:57:55	11111	80	SPASS Rider		
VIMS_054TI_GLOBMAP002_PRIME	VIMS_18432	2007-355T11:57:55	GMB_E054_Titan39+000T13:00:00	000T01:00:00	2007-355T12:57:55	40000	144	Prime	ISS_NAC to Titan	NEG_X to Sun
VIMS_054TI_GLOBMAPFA001_PRIME	VIMS_18432	2007-355T14:27:55	GMB_E054_Titan39+000T15:30:00	000T08:45:00	2007-355T23:12:55	3650.8	115	Prime	ISS_NAC to Titan	NEG_X to Sun

054TI T39 Attitude Strategy

Request	Riders	Start (SCET)	Start (Epoch)	Duration	End (SCET)	Primary	Secondary	Comments
Sequence S036, length = 39 ...		2007-348T16:00:00	E054_SEQUENCE_036+000T	038T21:35:00	2008-022T13:35:00			
TOST rev 54 Segment		2007-354T08:16:00		002T00:41:00	2007-356T08:57:00			
SP_054TI_WAYPTTURN354_PRIME	M	2007-354T08:16:00		000T00:30:00	2007-354T08:46:00	ISS_NAC to Titan	POS_X to North_Pole_Dir	11.27 min turn from +X to NEP
NEW WAYPOINT		**2007-354T08:46:00**		**000T09:26:55**	**2007-354T18:12:55**	**ISS_NAC to Titan**	**POS_X to North_Pole_Dir**	
SP_054TI_DEADTIME354_PRIME	**M**	**2007-354T08:46:00**		**000T00:16:55**	**2007-354T09:02:55**	**ISS_NAC to Titan**	**POS_X to North_Pole_Dir**	
VIMS_054TI_CLOUDMAP001_PRIME	C, I, M, U	2007-354T09:02:55	GMB_E054_Titan39-000T13:5	000T04:55:00	2007-354T13:57:55	ISS_NAC to Titan	POS_X to North_Pole_Dir	
CIRS_054TI_MIRLMBMAP001_PRIME	C, I, M, R, U	2007-354T13:57:55	GMB_E054_Titan39-000T09:0	000T03:54:00	2007-354T17:51:55	CIRS_FPB to Titan	PIC	
SP_054TI_WAYPTTURN454_PRIME	M, R	2007-354T17:51:55	GMB_E054_Titan39-000T05:0	000T00:21:00	2007-354T18:12:55	NEG_Z to Titan	NEG_X to 5.0/-5.0	18.47 min turn
NEW WAYPOINT		**2007-354T18:12:55**		**000T09:50:00**	**2007-355T04:02:55**	**NEG_Z to Titan**	**NEG_X to 5.0/-5.0**	
RADAR_054TI_T39INRAD001_PRIME	M	2007-354T18:12:55	GMB_E054_Titan39-000T04:4	000T03:15:00	2007-354T21:27:55	NEG_Z to Titan (0.0,0.0,45.0 deg. c	NEG_X to North_Pole_Dir	Use -X_NTP and +Y_NTP with offset (0,0,45) for the two polarizations.
RADAR_054TI_T39INSCAT001_PRIME	M	2007-354T21:27:55	GMB_E054_Titan39-000T01:3	000T00:38:00	2007-354T22:05:55	NEG_Z to Titan	POS_X to North_Pole_Dir	
ENGR_054SC_RADRCS354_PPS	M	2007-354T22:05:55	GMB_E054_Titan39-000T00:5	000T00:21:13	2007-354T22:27:08	NEG_Z to Titan	PIC	Deadband = (2, 2, 20)
RADAR_054TI_T39INALT001_PRIME	M	2007-354T22:27:55	GMB_E054_Titan39-000T00:3	000T00:15:00	2007-354T22:42:55	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
Begin High Value Science		2007-354T22:34:55		000T00:00:01	2007-354T22:34:56			
RADAR_054TI_T39INLSAR001_PRIME	M	2007-354T22:42:55	GMB_E054_Titan39-000T00:1	000T00:08:00	2007-354T22:50:55	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
RADAR_054TI_T39HISAR001_PRIME	M	2007-354T22:50:55	GMB_E054_Titan39-000T00:0	000T00:07:00	2007-354T22:57:55	NEG_Z to Titan	NEG_X to Titan_SC_RAM	
RADAR_054TI_T39RASAR001_PRIME	M	2007-354T22:57:55	GMB_E054_Titan39+000T00:(	000T00:15:00	2007-354T23:12:55	NEG_X to Titan_SC_RAM	NEG_Z to Titan	Made prime for INMS.
RADAR_054TI_T39OUTALT001_PRIME	M	2007-354T23:12:55	GMB_E054_Titan39+000T00:·	000T00:15:00	2007-354T23:27:55	NEG_Z to Titan	NEG_Y to North_Pole_Dir	
End High Value Science		2007-354T23:15:55		000T00:00:01	2007-354T23:15:56			
ENGR_054SC_RADRWBIAS454_PPS	M	2007-354T23:27:55	GMB_E054_Titan39+000T00::	000T00:23:18	2007-354T23:51:13	NEG_Z to Titan	PIC	
RADAR_054TI_T39OUTSCT001_PRIME	M	2007-354T23:51:55	GMB_E054_Titan39+000T00:(	000T00:38:00	2007-355T00:29:55	NEG_Z to Titan	POS_X to North_Pole_Dir	
RADAR_054TI_T39OUTRAD001_PRIME	M	2007-355T00:29:55	GMB_E054_Titan39+000T01::	000T03:13:00	2007-355T03:42:55	NEG_Z to Titan (0.0,0.0,-45.0 deg.	NEG_Y to North_Pole_Dir	Use -Y_NTP and -X_NTP with offset (0,0,-45) for the two polarizations.
SP_054TI_WAYPTTURN355_PRIME		2007-355T03:42:55	GMB_E054_Titan39+000T04:·	000T00:20:00	2007-355T04:02:55	ISS_NAC to Titan	NEG_X to Sun	17.73 min turn
NEW WAYPOINT		**2007-355T04:02:55**		**001T04:54:05**	**2007-356T08:57:00**	**ISS_NAC to Titan**	**NEG_X to Sun**	
CIRS_054TI_MIRLMBINT002_PRIME	C, I, U, V	2007-355T04:02:55	GMB_E054_Titan39+000T05:(	000T03:55:00	2007-355T07:57:55	CIRS_FPB to Titan	PIC	
CIRS_054TI_FIRNADCMP002_PRIME	C, I, V	2007-355T07:57:55	GMB_E054_Titan39+000T09:(	000T02:00:00	2007-355T09:57:55	CIRS_FP1 to Titan	PIC	
ISS_054TI_MONITORNA001_PRIME	C, V	2007-355T09:57:55	GMB_E054_Titan39+000T11:(	000T02:00:00	2007-355T11:57:55	ISS_NAC to Titan	NEG_X to Sun	
VIMS_054TI_GLOBMAP002_PRIME	C, I	2007-355T11:57:55	GMB_E054_Titan39+000T13:(	000T01:00:00	2007-355T12:57:55	ISS_NAC to Titan	NEG_X to Sun	
ISS_054RH_PHOT016NP001_PRIME	C	2007-355T12:57:55	GMB_E054_Titan39+000T14:(	000T01:30:00	2007-355T14:27:55	UVIS_FUV to Rhea	NEG_X to Sun	
VIMS_054TI_GLOBMAPFA001_PRIME	C, I, M	2007-355T14:27:55	GMB_E054_Titan39+000T15::	000T08:45:00	2007-355T23:12:55	ISS_NAC to Titan	NEG_X to Sun	
SP_054TI_DEADTIME355_PRIME	**M**	**2007-355T23:12:55**	**GMB_E054_Titan39+001T00:**	**000T00:14:05**	**2007-355T23:27:00**	**ISS_NAC to Titan**	**NEG_X to Sun**	
SP_054EA_DLTURN355_PRIME	M	2007-355T23:27:00		000T00:30:00	2007-355T23:57:00	XBAND to Earth	POS_X to NEP	18.37 min turn
SP_054EA_M70ARRNON355_PRIME	C, M	2007-355T23:57:00		000T09:00:00	2007-356T08:57:00	XBAND to Earth	6_Hr_Rolling	

054TI (T39) Telemetry Modes

TELEMETRY MODE REPORT

EPOCH RELATIVE	UTC	DURATION	TELEMETRY MODE	REQUEST
	2007-354T08:16:00.000	06:56:55	S_N_ER_3	SP_054NA_M70OBSNON355_NA
GMB_E054_Titan39-000T07:45:00	2007-354T15:12:55.000	00:15:00	S_N_ER_5A	SP_054NA_M70OBSNON355_NA
GMB_E054_Titan39-000T07:30:00	2007-354T15:27:55.000	02:45:00	S_N_ER_3	SP_054NA_M70OBSNON355_NA
GMB_E054_Titan39-000T04:45:00	2007-354T18:12:55.000	09:30:00	S_N_ER_8	SP_054NA_M70OBSNON355_NA
GMB_E054_Titan39+000T04:45:00	2007-355T03:42:55.000	09:15:00	S_N_ER_3	SP_054NA_M70OBSNON355_NA
GMB_E054_Titan39+000T14:00:00	2007-355T12:57:55.000	01:30:00	S_N_ER_5	SP_054NA_M70OBSNON355_NA
GMB_E054_Titan39+000T15:30:00	2007-355T14:27:55.000	09:29:05	S_N_ER_3	SP_054NA_M70OBSNON355_NA
	2007-355T23:57:00.000	00:34:00	RTE_N_SPB_142200	SP_054EA_M70ARRNON355_PRIME
	2007-356T00:31:00.000	06:30:00	RTE_N_SPB_165900	SP_054EA_M70ARRNON355_PRIME
	2007-356T07:01:00.000	01:15:00	RTE_N_SPB_142200	SP_054EA_M70ARRNON355_PRIME
	2007-356T08:16:00.000	00:26:00	RTE_N_SPB_124425	SP_054EA_M70ARRNON355_PRIME
	2007-356T08:42:00.000	00:15:00	RTE_N_SPB_110600	SP_054EA_M70ARRNON355_PRIME

DSN Requests

CASSINI DOWNLINK/DSN COVERAGE SUMMARY for T39_2007-07-30.xml on 2007-Aug-01 11:06:22
(+ = 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
M70ARRNON355	355T23:57-08:57	356T01:11-10:11	09:00	142,165,142,124,110	54	355T23:57-08:57	356T01:10-10:15	09:05	60/15	Ranging_ X_up_off
				^-- and also -->	63	355T23:57-08:57	356T01:10-10:15	09:05	60/15	Ranging_ X_up_on

054TI (T39) Data Volume

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 (Mb)
SP_054EA_M70ARRNON355_PRIME	355 23:57	356 08:57	0	3418	171	3589	3547	-41	0	529	53	4129	4318	188	189	4%	0

054TI (T39) Data Volume

SSR PARTITION SIZE SUMMARY - SELECTED SSR CONFIGURATION: DOUBLE

OBSERVATION PERIOD	SSR A/B P4 Size (Frames)	SSR A/B P5 Size (Frames)	SSR A/B P6 Size (Frames)
SP_054NA_M70OBSNON355_NA	201742	488	25596

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	354 08:16	355 23:57	272.5	21.4	297.4	21.5	427.5	125.3	169.8	704.9	527.2	159.1	653.0	0.0	35.4	3415.0
OBSERVATION_SI	354 08:16	355 23:57	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
SP_054EA_M70ARRNON355_PRIME	355 23:57	356 08:57	32.4	4.9	86.4	1.6	0.0	46.7	58.3	0.0	291.6	2.5	0.0	0.0	0.0	524.4
DAILY TOTAL SCIENCE	354 08:16	356 08:57	304.9	26.3	390.8	23.2	427.5	172.1	228.1	704.9	818.8	161.6	653.0	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)	304.9	26.3	390.8	23.2	427.5	172.1	228.1	704.9	818.8	161.6	653.0	0.0

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.	C		
B. All initial downlink attitudes have been checked as waypoints.	C		
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.	C		
3. Custom handoffs limited to:			
A. ±3 hours from targeted Icy Satellite flyby	N/A		
B. ±3 hours from targeted Titan Flyby	N/A		
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.)	C		
5. Live and Ground Movable Blocks include appropriate time margins.	C	K. Klaasen's margin for flyby T335 is 15 min. according to memo dated .	
6. Waypoints changes are ≤3 per day	C		
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 90º RWA turns and/or 10 min. for RCS turns?	Yes	

(DOUBLE-CLICK TO MAKE CHANGES)