

**TOST: Hand-off Package
000TI (T0)**

**Segment Boundary 2004-184T01:06 – 2004-185T23:06
Titan C/A=2004-184T09:30:21.06, 341,500km
Epoch = GMB_E000_Titan0**

July 12, 2003

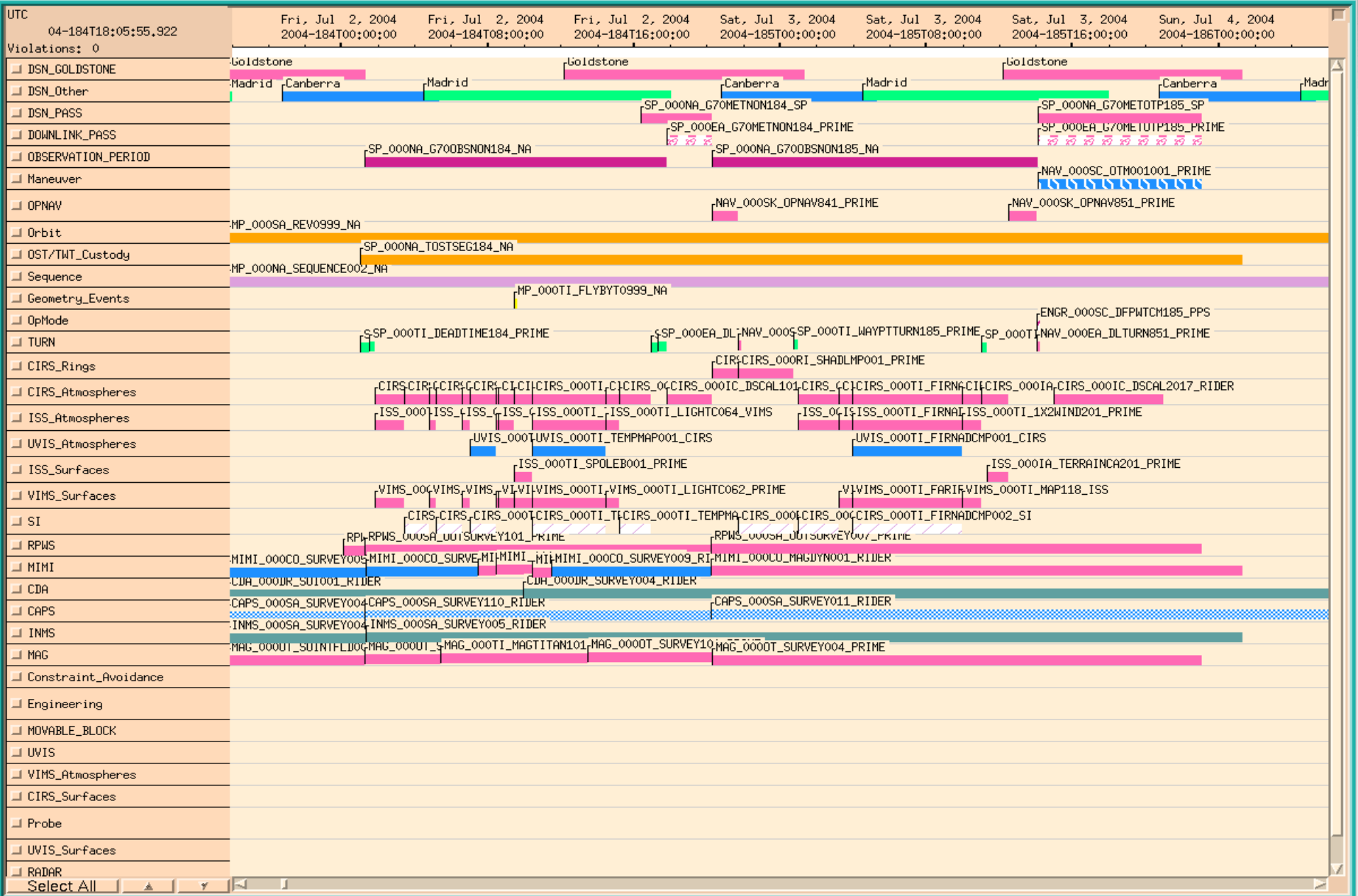
Trina Ray

000TI(T0) Timeline

C/A= 2004-184T09:30:21.06 @341,500km; Illuminated Approach

Start Time	End Time	Prime Activity	Obs. Detail	Op Mode	TLM Mode	Comments
184T01:06	184T01:36	SP turn to waypoint		DFPW	S_N_ER3	
184T01:36	184T01:56	20 min OD Deadtime		DFPW	S_N_ER3	2nd axis -X to Sun
-07:34	-06:00	ISS		DFPW	S_N_ER3	
-06:00	-04:38	CIRS		DFPW	S_N_ER3	
-04:38	-04:14	ISS		DFPW	S_N_ER3	
-04:14	-02:50	CIRS		DFPW	S_N_ER3	
-02:50	-02:26	ISS		DFPW	S_N_ER3	
-02:26	-01:00	CIRS		DFPW	S_N_ER3	
-01:00	-00:51	ISS		DFPW	S_N_ER3	2x2 mosaic
-00:51	0:00	VIMS	Titan Light Curve	DFPW	S_N_ER3	
0:00	+01:00	ISS	Titan S Pole	DFPW	S_N_ER3	Long dwell times
+01:00	+05:00	CIRS	Temp Map	DFPW	S_N_ER3	Incorporate pauses in mosaic for ISS
+05:00	+05:45	VIMS	Titan Light Curve	DFPW	S_N_ER3	
+05:45	+07:30	CIRS		DFPW	S_N_ER3	
184T17:00	184T17:20	20 min OD Deadtime		DFPW	S_N_ER3	
184T17:20	184T17:51	SP turn to Earth		DFPW	S_N_ER3	
184T17:51	184T20:21	Downlink over Goldstone	Downlink over Goldstone	DFPW	RTE_N_PB	- Playback capacity for 2.5 hours of downlink = 862Mbits.
184T20:21	184T21:45	OpNav	Turn to targets then turn to Rings orientation	DFPW	S_N_ER3	new waypoint for Rings, Partition 5 zeroed out, so OpNav data should be routed to Partition 4 by CDS
184T21:45	185T00:45	CIRS	Do rings observations	DFPW	S_N_ER3	turn time to SP for new waypoint
185T00:45	185T01:00	SP	Turn to Titan	DFPW	S_N_ER3	turn time to SP for new waypoint
185T01:00	185T03:15	CIRS	Far IR Map	DFPW	S_N_ER3	
185T03:15	185T04:00	VIMS	Titan Light Curve	DFPW	S_N_ER3	
185T04:00	185T10:00	CIRS	Far IR Map	DFPW	S_N_ER3	
185T10:00	185T11:00	ISS	Titan	DFPW	S_N_ER3	
185T11:00	185T11:20	SP	Turn to lapetus	DFPW	S_N_ER3	New waypoint for lapetus
185T11:20	185T12:30	ISS	lapetus	DFPW	S_N_ER5	
185T12:30	185T14:06	OPNAV		DFPW	S_N_ER5	Partition 5 zeroed out, so OpNav data should be routed to Partition 4 by CDS
185T14:06	185T23:06	Downlink over Goldstone		DFPW-TCM	RTE_N_SPB	Adjusted to correctly line up with DSN pass

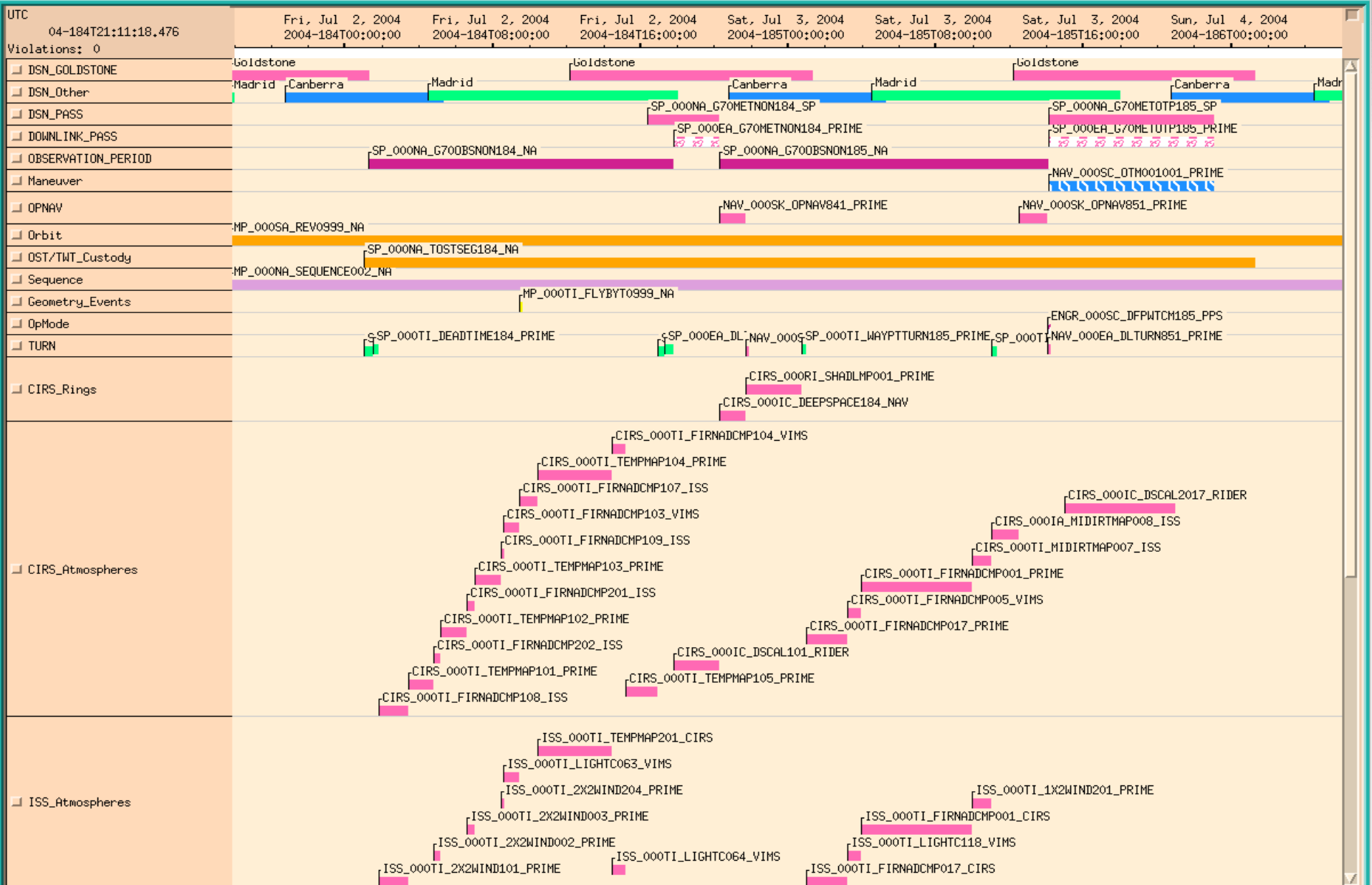
000TI (Titan-0 Flyby)



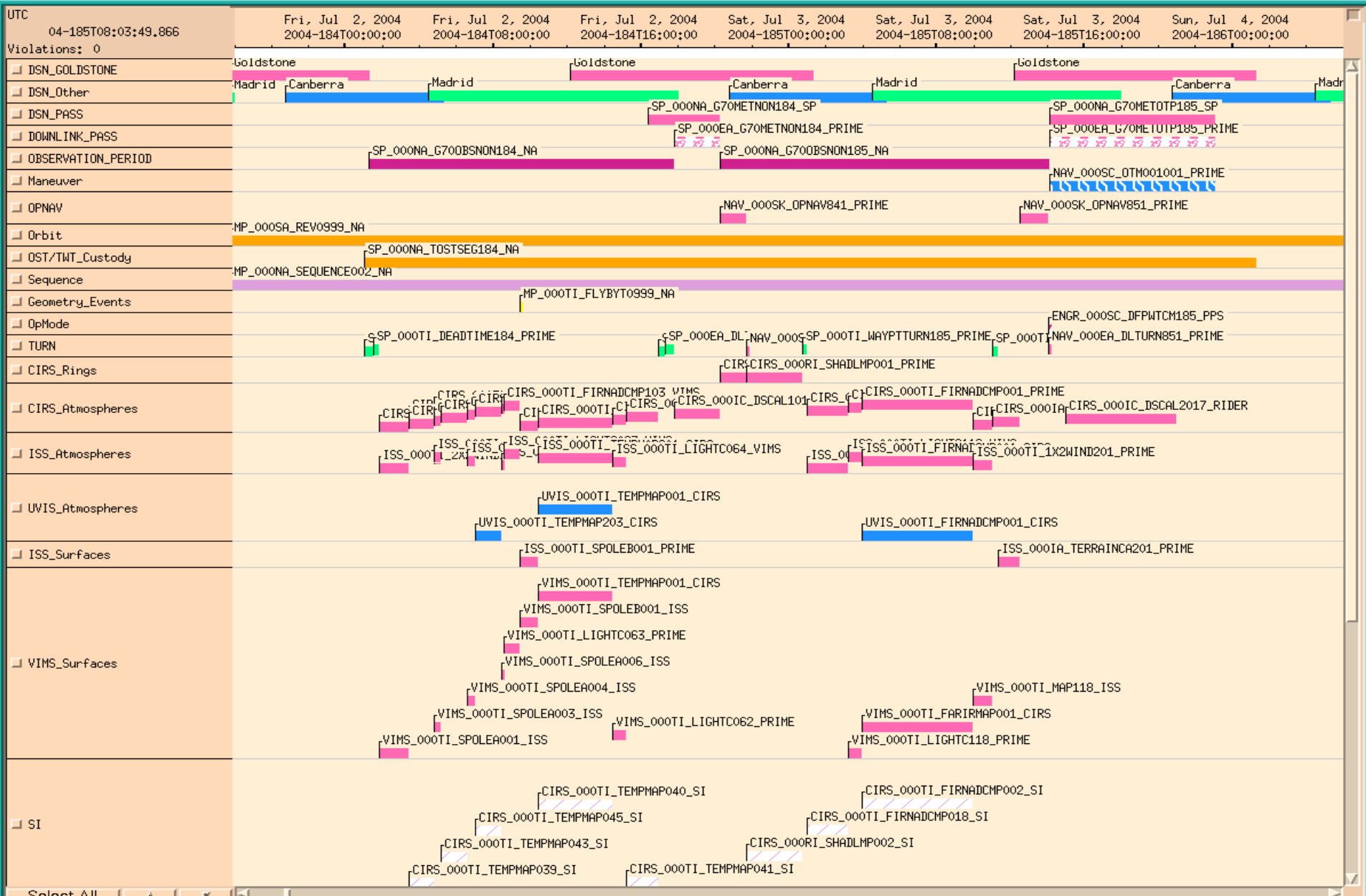
Zoomed out on selected display(s).



000TI (Titan-0 Flyby)

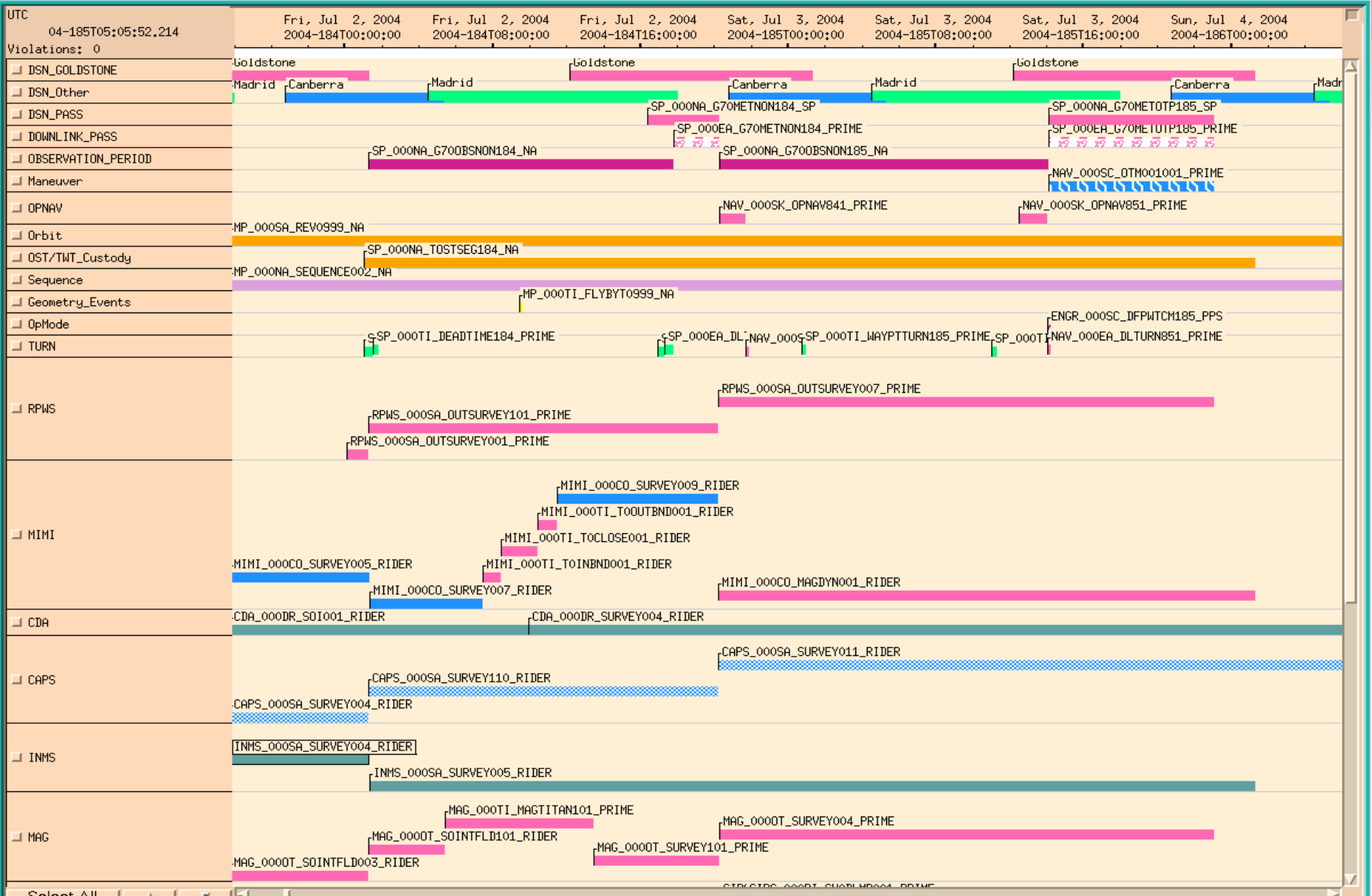


000TI (Titan-0 Flyby)





000TI (Titan-0 Flyby)



Zoomed out on selected display(s).



TOL (all CIMS) sorted by Team

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_000SA_SURVEY004_RIDER	2004-183705:21.00		000T20:00:00	2004-184T01:21:00	1000	72	Non-SPASS			
CAPS_000SA_SURVEY110_RIDER	2004-184T01:21:00		000T18:56:00	2004-184T20:17:00	700	47.712	Non-SPASS			
CAPS_000SA_SURVEY011_RIDER	2004-184T20:17:00		009T16:43:00	2004-194T13:00:00	1000	837.78	Non-SPASS			
CDA_000DR_SOI001_RIDER	2004-181T10:00:00		003T00:00:00	2004-184T10:00:00	299.7	77.69	Non-SPASS			
CDA_000DR_SURVEY004_RIDER	2004-184T10:00:00		056T06:13:00	2004-240T16:13:00	149.9	728.456	Non-SPASS			
CIRS_000TI_FIRNADCMP108_ISS	2004-184T01:58:21	GMB_E000_Titan0-000T07:34:00	000T01:34:00	2004-184T03:30:21	2000	11.28	SPASS Rider			
CIRS_000TI_TEMPMPAP039_SI	2004-184T03:30:21	GMB_E000_Titan0-000T06:00:00	000T01:22:00	2004-184T04:52:21	0	2	SPASS Rider			
CIRS_000TI_TEMPMPAP101_PRIME	2004-184T03:30:21	GMB_E000_Titan0-000T06:00:00	000T01:22:00	2004-184T04:52:21	2000	9.84	Prime	CIRS_FP1 to Titan	PIC	
CIRS_000TI_FIRNADCMP202_ISS	2004-184T04:52:21	GMB_E000_Titan0-000T04:38:00	000T00:24:00	2004-184T05:16:21	2000	2.88	SPASS Rider			
CIRS_000TI_TEMPMPAP043_SI	2004-184T05:16:21	GMB_E000_Titan0-000T04:14:00	000T01:24:00	2004-184T06:40:21	0	2	SPASS Rider			
CIRS_000TI_TEMPMPAP102_PRIME	2004-184T05:16:21	GMB_E000_Titan0-000T04:14:00	000T01:24:00	2004-184T06:40:21	2000	10.08	Prime	CIRS_FP1 to Titan	PIC	
CIRS_000TI_FIRNADCMP201_ISS	2004-184T06:40:21	GMB_E000_Titan0-000T02:50:00	000T00:24:00	2004-184T07:04:21	2000	2.88	SPASS Rider			
CIRS_000TI_TEMPMPAP045_SI	2004-184T07:04:21	GMB_E000_Titan0-000T02:26:00	000T01:26:00	2004-184T08:30:21	0	2	SPASS Rider			
CIRS_000TI_TEMPMPAP103_PRIME	2004-184T07:04:21	GMB_E000_Titan0-000T02:26:00	000T01:26:00	2004-184T08:30:21	2000	10.32	Prime	CIRS_FP1 to Titan	PIC	
CIRS_000TI_FIRNADCMP109_ISS	2004-184T08:30:21	GMB_E000_Titan0-000T01:00:00	000T00:09:00	2004-184T08:39:21	2000	1.08	SPASS Rider			
CIRS_000TI_FIRNADCMP103_VIMS	2004-184T08:39:21	GMB_E000_Titan0-000T00:51:00	000T00:51:00	2004-184T09:30:21	2000	6.12	SPASS Rider			
CIRS_000TI_FIRNADCMP107_ISS	2004-184T09:30:21	GMB_E000_Titan0-000T00:00:00	000T01:00:00	2004-184T10:30:21	2680	9.648	SPASS Rider			
CIRS_000TI_TEMPMPAP040_SI	2004-184T10:30:21	GMB_E000_Titan0+000T01:00:00	000T04:00:00	2004-184T14:30:21	0	4	SPASS Rider			
CIRS_000TI_TEMPMPAP104_PRIME	2004-184T10:30:21	GMB_E000_Titan0+000T01:00:00	000T04:00:00	2004-184T14:30:21	2000	28.8	Prime	CIRS_FP1 to Titan	PIC	
CIRS_000TI_FIRNADCMP104_VIMS	2004-184T14:30:21	GMB_E000_Titan0+000T05:00:00	000T00:45:00	2004-184T15:15:21	2000	5.4	SPASS Rider			
CIRS_000TI_TEMPMPAP041_SI	2004-184T15:15:21	GMB_E000_Titan0+000T05:45:00	000T01:45:00	2004-184T17:00:21	0	2	SPASS Rider			
CIRS_000TI_TEMPMPAP105_PRIME	2004-184T15:15:21	GMB_E000_Titan0+000T05:45:00	000T01:45:00	2004-184T17:00:21	2000	12.6	Prime	CIRS_FP1 to Titan	PIC	
CIRS_000IC_DSCAL101_RIDER	2004-184T17:51:00		000T02:30:00	2004-184T20:21:00	4000	36	SPASS Rider			
CIRS_000IC_DEEPSPACE184_NAV	2004-184T20:21:00		000T01:24:00	2004-184T21:45:00	2200	11.088	SPASS Rider			
CIRS_000RI_SHADLMP001_PRIME	2004-184T21:45:00		000T03:00:00	2004-185T00:45:00	2180	23.544	Prime	CIRS_FP1 to Rings	PIC	
CIRS_000RI_SHADLMP002_SI	2004-184T21:45:00		000T03:00:00	2004-185T00:45:00	0	10	SPASS Rider			
CIRS_000TI_FIRNADCMP017_PRIME	2004-185T01:00:00		000T02:15:00	2004-185T03:15:00	2400	19.44	Prime	CIRS_FP1 to Titan	NEG_X to Sun	
CIRS_000TI_FIRNADCMP018_SI	2004-185T01:00:00		000T02:15:00	2004-185T03:15:00	0	2	SPASS Rider			
CIRS_000TI_FIRNADCMP005_VIMS	2004-185T03:15:00		000T00:45:00	2004-185T04:00:00	2000	5.4	SPASS Rider			
CIRS_000TI_FIRNADCMP001_PRIME	2004-185T04:00:00		000T06:00:00	2004-185T10:00:00	2200	47.52	Prime	CIRS_FP1 to Titan	NEG_X to Sun	
CIRS_000TI_FIRNADCMP002_SI	2004-185T04:00:00		000T06:00:00	2004-185T10:00:00	0	4	SPASS Rider			
CIRS_000TI_MIDIRTMAP007_ISS	2004-185T10:00:00		000T01:00:00	2004-185T11:00:00	2000	7.2	SPASS Rider			
CIRS_000IA_MIDIRTMAP008_ISS	2004-185T11:00:00		000T01:30:00	2004-185T12:30:00	2000	10.8	SPASS Rider			
CIRS_000IC_DSCAL2017_RIDER	2004-185T15:00:00		000T06:00:00	2004-185T21:00:00	4000	86.4	SPASS Rider			
ENGR_000SC_DFFWTCM185_PPS	2004-185T14:05:02		000T00:00:58	2004-185T14:06:00	0	0	Non-SPASS			
INMS_000SA_SURVEY004_RIDER	2004-183T14:40:00		000T10:45:00	2004-184T01:25:00	50	1.935	Non-SPASS			
INMS_000SA_SURVEY005_RIDER	2004-184T01:25:00		001T23:54:00	2004-186T01:19:00	50	8.622	Non-SPASS			
ISS_000TI_2X2WIND101_PRIME	2004-184T01:58:21	GMB_E000_Titan0-000T07:34:00	000T01:34:00	2004-184T03:30:21	0	61	Prime	ISS_NAC to Titan	NEG_X to Sun	
ISS_000TI_2X2WIND002_PRIME	2004-184T04:52:21	GMB_E000_Titan0-000T04:38:00	000T00:24:00	2004-184T05:16:21	0	65	Prime	ISS_NAC to Titan	NEG_X to Sun	
ISS_000TI_2X2WIND003_PRIME	2004-184T06:40:21	GMB_E000_Titan0-000T02:50:00	000T00:24:00	2004-184T07:04:21	0	65	Prime	ISS_NAC to Titan	NEG_X to Sun	
ISS_000TI_2X2WIND204_PRIME	2004-184T08:30:21	GMB_E000_Titan0-000T01:00:00	000T00:09:00	2004-184T08:39:21	0	29.76	Prime	ISS_NAC to Titan	NEG_X to Sun	
ISS_000TI_LIGHTC063_VIMS	2004-184T08:39:21	GMB_E000_Titan0-000T00:51:00	000T00:51:00	2004-184T09:30:21	0	50	SPASS Rider			
ISS_000TI_SPOLEB001_PRIME	2004-184T09:30:21	GMB_E000_Titan0+000T00:00:00	000T01:00:00	2004-184T10:30:21	0	130	Prime	ISS_NAC to Titan	NEG_X to Sun	
ISS_000TI_TEMPMPAP201_CIRS	2004-184T10:30:21	GMB_E000_Titan0+000T01:00:00	000T04:00:00	2004-184T14:30:21	0	25	SPASS Rider			
ISS_000TI_LIGHTC064_VIMS	2004-184T14:30:21	GMB_E000_Titan0+000T05:00:00	000T00:45:00	2004-184T15:15:21	0	25	SPASS Rider			
ISS_000TI_LIGHTC118_VIMS	2004-185T03:15:00		000T00:45:00	2004-185T04:00:00	0	24	SPASS Rider			
ISS_000TI_FIRNADCMP001_CIRS	2004-185T04:00:00		000T06:00:00	2004-185T10:00:00	0	99	SPASS Rider			
ISS_000TI_1X2WIND201_PRIME	2004-185T10:00:00		000T01:00:00	2004-185T11:00:00	0	188	Prime	ISS_NAC to Titan	NEG_X to Sun	
ISS_000IA_TERRAINCA201_PRIME	2004-185T11:20:00		000T01:10:00	2004-185T12:30:00	0	32	Prime	ISS_NAC to Iapetus	NEG_X to Sun	Custom handoff to NAV

TOL (all CIMS) sorted by Team

MAG_0000T_SOINTFLD003_RIDER	2004-183T00:51:00		000T14:30:00	2004-184T01:21:00	600	31.32	SPASS Rider			
MAG_0000T_SOINTFLD101_RIDER	2004-184T01:21:00		000T04:09:21	2004-184T05:30:21	600	8.983	SPASS Rider			
MAG_0000TI_MAGTITAN101_PRIME	2004-184T05:30:21	GMB_E000_Titan0-000T04:00:00	000T08:00:00	2004-184T13:30:21	600	17.28	Non-SPASS			
MAG_0000T_SURVEY101_PRIME	2004-184T13:30:21	GMB_E000_Titan0+000T04:00:00	000T06:50:39	2004-184T20:21:00	600	14.783	Non-SPASS			
MAG_0000T_SURVEY004_PRIME	2004-184T20:21:00		001T02:45:00	2004-185T23:06:00	600	57.78	Non-SPASS			
MIMI_000CO_SURVEY005_RIDER	2004-183T06:25:00		000T19:00:00	2004-184T01:25:00	900	61.56	Non-SPASS			
MIMI_000CO_SURVEY007_RIDER	2004-184T01:25:01		000T06:07:10	2004-184T07:32:11	724.8	15.967	Non-SPASS			
MIMI_000TI_TOINBND001_RIDER	2004-184T07:32:10		000T00:58:11	2004-184T08:30:21	724.8	2.538	SPASS Rider			
MIMI_000TI_TOCLOSE001_RIDER	2004-184T08:30:21	GMB_E000_Titan0-000T01:00:00	000T02:00:00	2004-184T10:30:21	724.8	5.219	SPASS Rider			
MIMI_000TI_TOOUTBND001_RIDER	2004-184T10:30:21	GMB_E000_Titan0+000T01:00:00	000T01:01:49	2004-184T11:32:10	724.8	2.688	SPASS Rider			
MIMI_000CO_SURVEY009_RIDER	2004-184T11:32:21		000T08:44:39	2004-184T20:17:00	724.8	22.816	Non-SPASS			
MIMI_000CO_MAGDYNO01_RIDER	2004-184T20:17:00		001T05:02:00	2004-186T01:19:00	1200	125.424	SPASS Rider			
MP_000SA_REV0999_NA	2004-136T00:00:00		104T12:39:54	2004-240T12:39:54	0	0	Non-SPASS			
MP_000NA_SEQUENCE002_NA	2004-170T23:52:00	E000_SEQUENCE_002+000T00:00:00	041T21:40:00	2004-212T21:32:00	0	0	SPASS Note			
MP_000TI_FLYBYT0999_NA	2004-184T09:30:31		000T00:00:01	2004-184T09:30:32	0	0	Non-SPASS			
NAV_000SK_OPNAV841_PRIME	2004-184T20:21:00		000T01:23:00	2004-184T21:44:00	0	26.115	Prime	ISS_NAC to Satellites	NEG_X to Sun	Starts at Earth point, ends at waypoint
NAV_000SA_WAYPTTURN841_PRIME	2004-184T21:44:00		000T00:01:00	2004-184T21:45:00	0	0	New Waypoint	ISS_NAC to Saturn	NEG_X to Sun	
NAV_000SK_OPNAV851_PRIME	2004-185T12:30:00		000T01:35:00	2004-185T14:05:00	0	34.62	Prime	ISS_NAC to Satellites	NEG_X to Sun	Starts at waypoint (ISS_NAC to Iapetus, NEG_X to Sun), ends at Earth point
NAV_000EA_DLTURN851_PRIME	2004-185T14:05:00		000T00:01:00	2004-185T14:06:00	0	0	Prime	XBAND to Earth	POS_X to NEP	
NAV_000SC_OTM001001_PRIME	2004-185T14:06:00		000T09:00:00	2004-185T23:06:00	0	0	SPASS Rider			
RPWS_000SA_OUTSURVEY001_PRIME	2004-184T00:10:00		000T01:11:00	2004-184T01:21:00	1080	4.601	Non-SPASS			
RPWS_000SA_OUTSURVEY101_PRIME	2004-184T01:21:00		000T18:56:00	2004-184T20:17:00	700.1	47.716	Non-SPASS			
RPWS_000SA_OUTSURVEY007_PRIME	2004-184T20:17:00		001T02:49:00	2004-185T23:06:00	1310	126.469	Non-SPASS			
SP_000NA_TOSTSEG184_NA	2004-184T01:06:00		002T00:13:00	2004-186T01:19:00	0	0	SPASS Note			
SP_000TI_WAYPTTURN184_PRIME	2004-184T01:06:00		000T00:30:00	2004-184T01:36:00	0	0	New Waypoint	ISS_NAC to Titan	NEG_X to Sun	SP Turn to Waypoint
SP_000NA_G700BSNON184_NA	2004-184T01:21:00		000T16:30:00	2004-184T17:51:00	0	0	Non-SPASS			
SP_000TI_DEADTIME184_PRIME	2004-184T01:36:00		000T00:20:00	2004-184T01:56:00	0	0	Prime	ISS_NAC to Titan	NEG_X to Sun	
SP_000NA_G700METNON184_SP	2004-184T16:27:00		000T03:54:00	2004-184T20:21:00	0	0	Non-SPASS			
SP_000TI_DEADTIME584_PRIME	2004-184T17:00:00		000T00:20:00	2004-184T17:20:00	0	0	Prime	ISS_NAC to Titan	NEG_X to Sun	
SP_000EA_DLTURN184_PRIME	2004-184T17:20:00		000T00:30:00	2004-184T17:50:00	0	0	Prime	XBAND to Earth	NEG_X to Saturn	SP Turn to Earth
SP_000EA_G700METNON184_PRIME	2004-184T17:51:00		000T02:30:00	2004-184T20:21:00	0	0	Prime	XBAND to Earth	NEG_X to Saturn	
SP_000NA_G700BSNON185_NA	2004-184T20:21:00		000T17:45:00	2004-185T14:06:00	0	0	Non-SPASS			
SP_000TI_WAYPTTURN185_PRIME	2004-185T00:45:00		000T00:15:00	2004-185T01:00:00	0	0	New Waypoint	ISS_NAC to Titan	NEG_X to Sun	
SP_000TI_WAYPTTURN585_PRIME	2004-185T11:00:00		000T00:20:00	2004-185T11:20:00	0	0	New Waypoint	ISS_NAC to Iapetus	NEG_X to Sun	SP Turn to Waypoint
SP_000EA_G700METOTP185_PRIME	2004-185T14:06:00		000T09:00:00	2004-185T23:06:00	0	0	Prime	XBAND to Earth	POS_X to NEP	
SP_000NA_G700METOTP185_SP	2004-185T14:06:00		000T09:00:00	2004-185T23:06:00	0	0	Non-SPASS			
UVIS_000TI_TEMPMPAP203_CIRS	2004-184T07:04:21	GMB_E000_Titan0-000T02:26:00	000T01:26:00	2004-184T08:30:21	754.8	3.895	SPASS Rider			
UVIS_000TI_TEMPMPAP001_CIRS	2004-184T10:30:21	GMB_E000_Titan0+000T01:00:00	000T04:00:00	2004-184T14:30:21	1006.4	14.492	SPASS Rider			
UVIS_000TI_FIRNADCMPO01_CIRS	2004-185T04:00:00		000T06:00:00	2004-185T10:00:00	166.1	3.587	SPASS Rider			
VIMS_000TI_SPOLEA001_ISS	2004-184T01:56:21	GMB_E000_Titan0-000T07:34:00	000T01:34:00	2004-184T03:30:21	886.5	5	SPASS Rider			
VIMS_000TI_SPOLEA003_ISS	2004-184T04:52:21	GMB_E000_Titan0-000T04:38:00	000T00:24:00	2004-184T05:16:21	3472.2	5	SPASS Rider			
VIMS_000TI_SPOLEA004_ISS	2004-184T06:40:21	GMB_E000_Titan0-000T02:50:00	000T00:24:00	2004-184T07:04:21	3472.2	5	SPASS Rider			
VIMS_000TI_SPOLEA006_ISS	2004-184T08:30:21	GMB_E000_Titan0-000T01:00:00	000T00:09:00	2004-184T08:39:21	9259.3	5	SPASS Rider			
VIMS_000TI_LIGHTC063_PRIME	2004-184T08:39:21	GMB_E000_Titan0-000T00:51:00	000T00:51:00	2004-184T09:30:21	5882.4	18	Prime	ISS_NAC to Titan	NEG_X to Sun	
VIMS_000TI_SPOLEB001_ISS	2004-184T09:30:21	GMB_E000_Titan0+000T00:00:00	000T01:00:00	2004-184T10:30:21	2777.8	10	SPASS Rider			
VIMS_000TI_TEMPMPAP001_CIRS	2004-184T10:30:21	GMB_E000_Titan0+000T01:00:00	000T04:00:00	2004-184T14:30:21	1388.9	20	SPASS Rider			
VIMS_000TI_LIGHTC062_PRIME	2004-184T14:30:21	GMB_E000_Titan0+000T05:00:00	000T00:45:00	2004-184T15:15:21	3703.7	10	Prime	ISS_NAC to Titan	NEG_X to Sun	
VIMS_000TI_LIGHTC118_PRIME	2004-185T03:15:00		000T00:45:00	2004-185T04:00:00	3703.7	10	Prime	ISS_NAC to Titan	NEG_X to Sun	
VIMS_000TI_FARIRMAP001_CIRS	2004-185T04:00:00		000T06:00:00	2004-185T10:00:00	463	10	SPASS Rider			
VIMS_000TI_MAP118_ISS	2004-185T10:00:00		000T01:00:00	2004-185T11:00:00	2777.8	10	SPASS Rider			

Data Volume Summary (all CIMS)

Allocation for first Observation Block from October PSG

Start	End	CAPS	CDA	CIRS	INMS	ISS	MAG	MIMI	RADAR	RPWS	UVIS	VIMS	PROBE	ENGR	TOTAL
		40	8.4	135	2.8	450	52	50	0	40	4	70	0	0	860

DATA VOLUME SUMMARY

DOWNLINK PASS NAME	Start doy hh:mm	End doy hh:mm	OBSERVATION_PERIOD								DOWNLINK_PASS						
			START (Mb)	SCI (Mb)	HK+E (Mb)	TOTAL (Mb)	CPACTY (Mb)	MARGIN (%)	OPNAV (Mb)	SCI (Mb)	ENGR (Mb)	TOTAL (Mb)	CPACTY (Mb)	MARGIN (%)	CAROVR (Mb)		
SP_000EA_G70METNON184_PRIME	184 17:51	184 20:21	0	849	57	906	3567	2661	75%	0	63	15	983	926	-57	-6%	57
SP_000EA_G70METOTP185_PRIME	185 14:06	185 23:06	57	854	62	973	3568	2595	73%	0	226	53	1252	2786	1534	55%	0

DATA VOLUME REPORT

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)
Total should be <860																
OBSERVATION_NOR	184 01:21	184 17:51	41.6	13.6	110.9	3.0	450.8	35.6	43.1	0.0	41.6	18.4	78.0	0.0	0.0	836.5
OBSERVATION_SI	184 01:21	184 17:51	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_000EA_G70METNON184_PRIME	184 17:51	184 20:21	6.4	1.3	36.0	0.4	0.0	5.4	6.6	0.0	6.4	0.0	0.0	0.0	0.0	62.7
DAILY TOTAL SCIENCE	184 01:21	184 20:21	48.0	14.9	158.9	3.4	450.8	41.0	49.7	0.0	48.0	18.4	78.0	0.0	0.0	836.5
Total should be <860																
OBSERVATION_NOR	184 20:21	185 14:06	63.9	9.6	125.0	3.2	403.9	38.3	76.7	0.0	83.7	3.6	30.0	0.0	0.0	837.9
OBSERVATION_SI	184 20:21	185 14:06	0.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0
SP_000EA_G70METOTP185_PRIME	185 14:06	185 23:06	32.4	4.9	86.4	1.6	0.0	19.4	38.9	0.0	42.4	0.0	0.0	0.0	0.0	226.0
DAILY TOTAL SCIENCE	184 20:21	185 23:06	96.3	14.4	227.4	4.8	403.9	57.8	115.6	0.0	126.2	3.6	30.0	0.0	0.0	837.9

Data Volume Summary (all CIMS)

CAPS	CDA	CIRS	INMS	ISS	MAG	MIMI	RADAR	RPWS	UVIS	VIMS	PROBE
(Mb)	(Mb)	(Mb)	(Mb)	(Mb)	(Mb)	(Mb)	(Mb)	(Mb)	(Mb)	(Mb)	(Mb)

TOTAL RECORDED (OPNAV data not included)	144.3	29.3	386.3	8.2	854.7	98.8	165.3	0.0	174.2	22.0	108.0	0.0
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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_000NA_G70OBSNON184_NA	184 01:21	184 17:51	700.0	228.4	50.0	600.0	725.4	700.1	309.5
SP_000EA_G70METNON184_PRIME	184 17:51	184 20:21	708.0	149.9	50.0	600.0	737.5	716.3	0.0
SP_000NA_G70OBSNON185_NA	184 20:21	185 14:06	1000.0	149.9	50.0	600.0	1200.0	1310.0	56.1
SP_000EA_G70METOTFP185_PRIME	185 14:06	185 23:06	1000.0	149.9	50.0	600.0	1200.0	1310.0	0.0

Telemetry Mode Report

TELEMETRY MODE REPORT

SCET	TELEMETRY MODE	REQUEST
2004-141T01:54:00	S_N_ER_3	SP_000NA_G70OBSNON184_NA
2004-184T17:51:00	RTE_N_SPB_124425	SP_000EA_G70METNON184_PRIME
2004-184T20:21:00	S_N_ER_3	SP_000NA_G70OBSNON185_NA
2004-185T11:20:00	S_N_ER_5	SP_000NA_G70OBSNON185_NA
2004-185T14:06:00	RTE_N_SPB_99540	SP_000EA_G70METOTP185_PRIME
2004-185T14:21:00	RTE_N_SPB_110600	SP_000EA_G70METOTP185_PRIME
2004-185T15:21:00	RTE_N_SPB_124425	SP_000EA_G70METOTP185_PRIME
2004-185T22:21:00	RTE_N_SPB_110600	SP_000EA_G70METOTP185_PRIME

SSR Strategy Description

- see separate presentation slide 000TI_T0_030712_SSRstrategy.ppt found in </www/sp/ubertwt/twtdoc/>
- Partition 5 zeroed out, so OpNav data should be routed to Partition 4 by CDS

Attitude Strategy Spreadsheet

Request	Riders	Start(SCET)	Start(Epoch)	Duration	End(SCET)	Primary Pointing	Secondary Pointing	Comments
Sequence S002, length = 42 ...		2004-170723:52:00	E000_SEQUENCE_002+000T00:00:00	041T21:40:00	2004-212T21:32:00			
TOST rev 0 Segment		2004-184T01:08:00		002T00:13:00	2004-186T01:19:00			
SP_000TI_WAYPTTURN184_PRIME	M	2004-184T01:06:00		000T00:30:00	2004-184T01:36:00	ISS_NAC to Titan	NEG_X to Sun	SP Turn to Waypoint
NEW WAYPOINT		2004-184T01:36:00		000T20:09:00	2004-184T21:45:00	ISS_NAC to Titan	NEG_X to Sun	
SP_000TI_DEADTIME184_PRIME	M	2004-184T01:36:00		000T00:20:00	2004-184T01:56:00	ISS_NAC to Titan	NEG_X to Sun	
ISS_000TI_2X2WIND101_PRIME	C, M, V	2004-184T01:56:21	GMB_E000_Titan0-000T07:34:00	000T01:34:00	2004-184T03:30:21	ISS_NAC to Titan	NEG_X to Sun	
CIRS_000TI_TEMPMPAP101_PRIME	C, M	2004-184T03:30:21	GMB_E000_Titan0-000T06:00:00	000T01:22:00	2004-184T04:52:21	CIRS_FP1 to Titan	PIC	
ISS_000TI_2X2WIND002_PRIME	C, M, V	2004-184T04:52:21	GMB_E000_Titan0-000T04:38:00	000T00:24:00	2004-184T05:16:21	ISS_NAC to Titan	NEG_X to Sun	
CIRS_000TI_TEMPMPAP102_PRIME	C, M	2004-184T05:16:21	GMB_E000_Titan0-000T04:14:00	000T01:24:00	2004-184T06:40:21	CIRS_FP1 to Titan	PIC	
ISS_000TI_2X2WIND003_PRIME	C, V	2004-184T06:40:21	GMB_E000_Titan0-000T02:50:00	000T00:24:00	2004-184T07:04:21	ISS_NAC to Titan	NEG_X to Sun	
CIRS_000TI_TEMPMPAP103_PRIME	C, M, U	2004-184T07:04:21	GMB_E000_Titan0-000T02:26:00	000T01:26:00	2004-184T08:30:21	CIRS_FP1 to Titan	PIC	
ISS_000TI_2X2WIND204_PRIME	C, M, V	2004-184T08:30:21	GMB_E000_Titan0-000T01:00:00	000T00:09:00	2004-184T08:39:21	ISS_NAC to Titan	NEG_X to Sun	
VIMS_000TI_LIGHTC063_PRIME	C, I, M	2004-184T08:39:21	GMB_E000_Titan0-000T00:51:00	000T00:51:00	2004-184T09:30:21	ISS_NAC to Titan	NEG_X to Sun	
ISS_000TI_SPOLEB001_PRIME	C, M, V	2004-184T09:30:21	GMB_E000_Titan0+000T00:00:00	000T01:00:00	2004-184T10:30:21	ISS_NAC to Titan	NEG_X to Sun	
CIRS_000TI_TEMPMPAP104_PRIME	C, I, M, U, V	2004-184T10:30:21	GMB_E000_Titan0+000T01:00:00	000T04:00:00	2004-184T14:30:21	CIRS_FP1 to Titan	PIC	
VIMS_000TI_LIGHTC062_PRIME	C, I	2004-184T14:30:21	GMB_E000_Titan0+000T05:00:00	000T00:45:00	2004-184T15:15:21	ISS_NAC to Titan	NEG_X to Sun	
CIRS_000TI_TEMPMPAP105_PRIME	C	2004-184T15:15:21	GMB_E000_Titan0+000T05:45:00	000T01:45:00	2004-184T17:00:21	CIRS_FP1 to Titan	PIC	
SP_000TI_DEADTIME584_PRIME		2004-184T17:00:21		000T00:19:39	2004-184T17:20:00	ISS_NAC to Titan	NEG_X to Sun	
SP_000EA_DLTRN184_PRIME		2004-184T17:20:00		000T00:30:00	2004-184T17:50:00	XBAND to Earth	NEG_X to Saturn	SP Turn to Earth
SP_000EA_G70METNON184_PRIME	C, M	2004-184T17:51:00		000T02:30:00	2004-184T20:21:00	XBAND to Earth	NEG_X to Saturn	
NAV_000SK_OPNAV841_PRIME	C, M	2004-184T20:21:00		000T01:23:00	2004-184T21:44:00	ISS_NAC to Satellites	NEG_X to Sun	Starts at Earth point, ends at waypoint
NAV_000SA_WAYPTTURN841_PRIME	C, M	2004-184T21:44:00		000T00:01:00	2004-184T21:45:00	ISS_NAC to Saturn	NEG_X to Sun	
NEW WAYPOINT		2004-184T21:45:00		000T03:15:00	2004-185T01:00:00	ISS_NAC to Saturn	NEG_X to Sun	
CIRS_000RI_SHADLMP001_PRIME	C, M	2004-184T21:45:00		000T03:00:00	2004-185T00:45:00	CIRS_FP1 to Rings	PIC	
SP_000TI_WAYPTTURN185_PRIME	M	2004-185T00:45:00		000T00:15:00	2004-185T01:00:00	ISS_NAC to Titan	NEG_X to Sun	
NEW WAYPOINT		2004-185T01:00:00		000T10:20:00	2004-185T11:20:00	ISS_NAC to Titan	NEG_X to Sun	
CIRS_000TI_FIRNADCMP017_PRIME	C, M	2004-185T01:00:00		000T02:15:00	2004-185T03:15:00	CIRS_FP1 to Titan	NEG_X to Sun	
VIMS_000TI_LIGHTC118_PRIME	C, I, M	2004-185T03:15:00		000T00:45:00	2004-185T04:00:00	ISS_NAC to Titan	NEG_X to Sun	
CIRS_000TI_FIRNADCMP001_PRIME	C, I, M, U, V	2004-185T04:00:00		000T06:00:00	2004-185T10:00:00	CIRS_FP1 to Titan	NEG_X to Sun	
ISS_000TI_1X2WIND201_PRIME	C, M, V	2004-185T10:00:00		000T01:00:00	2004-185T11:00:00	ISS_NAC to Titan	NEG_X to Sun	
SP_000TI_WAYPTTURN585_PRIME	C, M	2004-185T11:00:00		000T00:20:00	2004-185T11:20:00	ISS_NAC to Iapetus	NEG_X to Sun	SP Turn to Waypoint
NEW WAYPOINT		2004-185T11:20:00		000T11:46:00	2004-185T23:06:00	ISS_NAC to Iapetus	NEG_X to Sun	
ISS_000IA_TERRAINCA201_PRIME	C, M	2004-185T11:20:00		000T01:10:00	2004-185T12:30:00	ISS_NAC to Iapetus	NEG_X to Sun	Custom handoff to NAV
NAV_000SK_OPNAV851_PRIME	M	2004-185T12:30:00		000T01:35:00	2004-185T14:05:00	ISS_NAC to Satellites	NEG_X to Sun	Starts at waypoint (ISS_NAC to Iapetus, NEG_X to Sun), ends at Earth point
NAV_000EA_DLTRN851_PRIME	M	2004-185T14:05:00		000T00:01:00	2004-185T14:06:00	XBAND to Earth	POS_X to NEP	
SP_000EA_G70METOTP185_PRIME	C, M, N	2004-185T14:06:00		000T09:00:00	2004-185T23:06:00	XBAND to Earth	POS_X to NEP	

DSN Requests

CASSINI DSN COVERAGE SUMMARY for CIMS_000TI_T0.apf generated on 2003-Jul-12 01:16:25

(+ = pass overlaps with previous pass; * = in conflict with DSN weekly maintenance)

C ANT	ID	BOT_TO_EOT	DUR	XMT_AT	2WAY_PERIOD	DUR	DL_PERIOD	DL_PERIOD	DUR	NOT CALS	RADIO_CONFIG	DATA_RATES
		ERT	hh:mm	ERT	ERT	hh:mm	ERT	SCET	hh:mm	min	UD D UD MAR	kbps
G 70MET	14	184T17:50-21:45	03:55	184T18:00	20:48-21:45	00:57	184T19:15-21:45	184T17:51-20:21	02:30	--- 15/15 XX	- - -	--0 124
G 70MET	14	185T15:30-00:30	09:00	185T15:40	18:28-00:30	06:02	185T15:30-00:30	185T14:06-23:06	09:00	OTP 15/15 XX	- - -	--0 99,110,124,110

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 checked="" type="checkbox"/> CAPS <input checked="" type="checkbox"/> CDA <input checked="" type="checkbox"/> CIRS <input checked="" type="checkbox"/> INMS <input checked="" type="checkbox"/> ISS <input checked="" type="checkbox"/> MIMI <input checked="" type="checkbox"/> MAG <input checked="" type="checkbox"/> NAV <input checked="" type="checkbox"/> RADAR <input checked="" type="checkbox"/> RPWS <input checked="" type="checkbox"/> RSS <input checked="" type="checkbox"/> UVIS <input checked="" 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			
4. Minimum 30 min SPASS Prime request duration outside ±5 hours from targeted satellite flyby (5 min. integer duration if >30 min.)	V	2, both waypoint turns that are shorter than 30 min, checked in PDT	
5. Live and Ground Movable Blocks include appropriate time margins.	V	K. Klaasen's margin for flyby T0 is 20 min. according to memo dated NONE.	We used a verbal input from Jerry Jones
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	C		

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

(DOUBLE-CLICK TO MAKE CHANGES)

Science Planning Handoff Comments

- High Level Science Summary
 - Validating the Titan Atmospheric model Huygens will be using, in particular the observations of temperature and composition. First look at the surface with ISS (2 km/pix). First measurements of Titan at different wavelengths. Unique look at the South Pole region.
- Pointing Issues
 - None
- Data Volume Issues
 - Lien: CDS must manage the playback pointers by hand, partition 5 zeroed out, so OpNav data should be routed to Partition 4. 860 Total Mbits allocated to TOST for data collection. – see SPLAT next page
- CIMS Issues
 - None
- Power Issues
 - None
- Flight Rule/Mission Plan Guidelines and Constraint Issues
 - Are we on thruster control at 1300km? What are the deadband requirements if so?
 - 350,000km flyby – not on thrusters
 - Are all PRIME and ORS observations are epoch relative?
 - Yes
 - OD Uncertainty called out explicitly?
 - 20 minutes dead time at the start and end of timeline.

SPLAT

TOST Priority 1 Open Issues								
SOP#	Priority	Location of Lien from...	Team	Time	Request	Lien or Action	Proposed Solution	Disposition
TOST-T0-1	P1	TWT Handoff Package	CDS			CDS must manage the playback pointers by hand. Note that partition 5 was zeroed out so OpNav data should be routed to Partition 4. 860 Total Mbits allocated to TOST for data collection. Separate SSR handoff slide on SP website. MP (John Smith) and CDS (Mike Sierchio) have been working the specifics of this since June 2002 and further refinements of the specifics may occur after TWT handoff.	Manage pointers by hand	