

TOST: Aftermarket Package 052TI (T37)

Segment Boundary

Start: 2007-322T10:12:00

End: 2007-324T09:57:00

Titan C/A= 2007-323T00:47:26; at 1000 km

**Epoch = GMB E052 Titan37
June 28, 2007**

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052TI (T37)

- Science to be accomplished during this flyby:
 - INMS will attempt to determine atmospheric and ionospheric composition and thermal structure.
 - VIMS will perform Titan high resolution mapping.
 - CIRS will do vertical temperature sounding of Titan's tropopause & stratosphere.

052TI (T37) Timeline C/A= 323T00:47:26

| Start Time | End Time | Prime Activity | Obs. Detail | Op Mode | TLM Mode | Comments |
|------------|-----------|-------------------------------|---------------|-------------|------------|--|
| 322T10:12 | 322T10:42 | SP Turn to waypoint | | DFPW | S_N_ER_3 | NEG_Y to TI, POS_X to NTP (0,-20,0) |
| 322T10:42 | 322T10:57 | OD Uncertainty Dead | | DFPW | S_N_ER_3 | |
| -13:55 | -09:00 | VIMS | Cloud Map | DFPW | S_N_ER_3 | Template O (modified) |
| -09:00 | -05:00 | CIRS | Mid-IR Limb | DFPW | S_N_ER_3 | Template R |
| -05:00 | -02:00 | CIRS | Limb | DFPW | S_N_ER_3 | Template T |
| -02:00 | -01:39 | RWA to RCS Transition | 21 mins | ORS(RCS) | S_N_ER_3 | Deadband (0.5, 20, 0.5) |
| -01:39 | | Begin Custom Period | | ORS(RCS) | S_N_ER_3 | |
| -01:39 | -00:15 | CIRS | High-Res Limb | ORS(RCS) | SNER_2 | Leave at INMS attitude |
| -00:15 | +00:09 | INMS | ORS to Titan | ORS(RCS) | SNER_2 | 2nd axis for ORS; leave at VIMS attitude |
| +00:09 | +00:21 | VIMS | Zero Phase | ORS(RCS) | S_N_ER_3 | Stare |
| +00:21 | +00:44 | RCS to RWA Transition | 23 mins | DFPW Normal | S_N_ER_3 | |
| +00:44 | +02:00 | ISS | High Res | DFPW | S_N_ER_3 | Pick up at VIMS attitude |
| +02:00 | +04:00 | ISS | Regional Map | DFPW Normal | S_N_ER_3 | Template J; Return to waypoint |
| +04:00 | | End Custom Period | | DFPW | S_N_ER_3 | |
| +04:00 | +05:00 | CIRS | | DFPW | S_N_ER_3 | Template J |
| +05:00 | +08:36 | ISS | Global Map | DFPW | S_N_ER_3 | Template H |
| +08:36 | +09:00 | ISS | WAC Photom | DFPW Normal | S_N_ER_3 | Template H |
| +09:00 | +14:00 | CIRS | | DFPW | S_N_ER_3 | Template C |
| +14:00 | +23:19 | CIRS | | DFPW | S_N_ER_3 | Template A (modified) |
| 324T00:12 | 324T00:27 | OD Uncertainty Dead Time | | DFPW Normal | S_N_ER_3 | |
| 324T00:27 | 324T00:57 | SP Turn to Earth for downlink | | DFPW Normal | S_N_ER_3 | NEG_Z to Earth, NEG_X to Sun |
| 324T00:57 | 324T09:57 | Madrid 70-m Array | | DFPW Normal | RTE_N_SP B | |

T37 TOL

| Request | AGPEN | Start Time | Epoch | Duration | End Time | Rate | Data Volume | SPASS Type | Primary Pt | Secondary | Pointing Agreement |
|--------------------------------|----------------|-------------------|-------------------------------|--------------|-------------------|-------|-------------|-------------|-------------|-------------------------|--------------------|
| CAPS_052TI_T37EXTINB002_PRIME | CAPS_16000 | 2007-322T10:12:00 | | 000T13:50:25 | 2007-323T00:02:25 | 2500 | 124.562 | SPASS Rider | | | |
| CAPS_052TI_T37CLOSE001_PRIME | CAPS_16000 | 2007-323T00:02:25 | GMB_E052_Titan37-000T00:45:00 | 000T01:30:00 | 2007-323T01:32:25 | 16000 | 86.4 | SPASS Rider | | | |
| CAPS_052TI_T37EXTOUT001_PRIME | CAPS_16000 | 2007-323T01:32:25 | GMB_E052_Titan37+000T00:45:00 | 000T19:42:09 | 2007-323T21:14:34 | 2500 | 177.322 | SPASS Rider | | | |
| CAPS_052SA_SURVEY002_RIDER | CAPS_16000 | 2007-323T21:25:36 | | 001T15:50:00 | 2007-325T13:15:36 | 1000 | 143.4 | Non-SPASS | | | |
| CDA_052OT_DRATE008_RIDER | CDA_524 | 2007-321T21:52:42 | | 000T16:03:18 | 2007-322T13:56:00 | 3668 | 212.003 | Non-SPASS | | | |
| CDA_052DR_1101DUST267_RIDER | CDA_524 | 2007-322T00:52:24 | | 000T13:31:09 | 2007-322T14:23:33 | 524 | 25.503 | Non-SPASS | | | |
| CDA_052RI_1600RINGM038_RIDER | CDA_524 | 2007-322T14:24:31 | | 000T02:00:00 | 2007-322T16:24:31 | 524 | 3.773 | Non-SPASS | | | |
| CDA_052DR_1701DUST395_RIDER | CDA_524 | 2007-322T16:25:31 | | 006T15:19:00 | 2007-329T07:44:31 | 149.9 | 85.953 | Non-SPASS | | | |
| CIRS_052TI_CLOUDMAP001_VIMS | CIRS_4000 | 2007-322T10:52:25 | GMB_E052_Titan37-000T13:55:00 | 000T04:55:00 | 2007-322T15:47:25 | 2000 | 35.4 | SPASS Rider | | | |
| CIRS_052TI_MIRLMBMAP001_PRIME | CIRS_4000 | 2007-322T15:47:25 | GMB_E052_Titan37-000T09:00:00 | 000T04:00:00 | 2007-322T19:47:25 | 4000 | 57.6 | Prime | CIRS_FPEPIC | | |
| CIRS_052TI_MIRLMBMAP001_SI | ISS_SUPPORT_II | 2007-322T15:47:25 | GMB_E052_Titan37-000T09:00:00 | 000T04:00:00 | 2007-322T19:47:25 | 0 | 4 | SPASS Rider | | | |
| CIRS_052TI_FIRNADMAP001_PRIME | CIRS_4000 | 2007-322T19:47:25 | GMB_E052_Titan37-000T05:00:00 | 000T03:00:00 | 2007-322T22:47:25 | 2000 | 21.6 | Prime | CIRS_FP1 | POS_X to North_Pole_Dir | |
| CIRS_052TI_FIRNADMAP001_SI | ISS_SUPPORT_II | 2007-322T19:47:25 | GMB_E052_Titan37-000T05:00:00 | 000T03:00:00 | 2007-322T22:47:25 | 0 | 3 | SPASS Rider | | | |
| CIRS_052TI_FIRLMBINT001_RIDER | CIRS_4000 | 2007-322T22:47:25 | GMB_E052_Titan37-000T02:00:00 | 000T00:21:00 | 2007-322T23:08:25 | 4000 | 5.04 | SPASS Rider | | | |
| CIRS_052TI_FIRLMBIAER001_PRIME | CIRS_4000 | 2007-322T23:08:25 | GMB_E052_Titan37-000T01:39:00 | 000T00:54:00 | 2007-323T00:02:25 | 4000 | 12.96 | Prime | CIRS_FP1 | PIC | |
| CIRS_052TI_FIRLMBIAER001_SI | ISS_SUPPORT_II | 2007-322T23:08:25 | GMB_E052_Titan37-000T01:39:00 | 000T00:54:00 | 2007-323T00:02:25 | 0 | 1 | SPASS Rider | | | |
| CIRS_052TI_FIRLMBT001_PRIME | CIRS_4000 | 2007-323T00:02:25 | GMB_E052_Titan37-000T00:45:00 | 000T00:30:00 | 2007-323T00:32:25 | 4000 | 7.2 | Prime | CIRS_FP1 | PIC | |
| CIRS_052TI_FIRLMBT001_SI | ISS_SUPPORT_II | 2007-323T00:02:25 | GMB_E052_Titan37-000T00:45:00 | 000T00:30:00 | 2007-323T00:32:25 | 0 | 1 | SPASS Rider | | | |
| CIRS_052IC_T37RMPNT001_INMS | CIRS_4000 | 2007-323T00:32:25 | GMB_E052_Titan37-000T00:15:00 | 000T00:24:00 | 2007-323T00:56:25 | 3400 | 4.896 | SPASS Rider | | | |
| CIRS_052TI_FIRLMBT002_RIDER | CIRS_4000 | 2007-323T01:08:25 | GMB_E052_Titan37+000T09:00:00 | 000T00:23:00 | 2007-323T01:31:25 | 4000 | 5.52 | SPASS Rider | | | |
| CIRS_052TI_HIRESNAC001_VIMS | CIRS_4000 | 2007-323T01:31:25 | GMB_E052_Titan37+000T00:44:00 | 000T01:16:00 | 2007-323T02:47:25 | 4000 | 18.24 | SPASS Rider | | | |
| CIRS_052TI_REGMAP001_ISS | CIRS_4000 | 2007-323T02:47:25 | GMB_E052_Titan37+000T02:00:00 | 000T02:00:00 | 2007-323T04:47:25 | 4000 | 28.8 | SPASS Rider | | | |
| CIRS_052TI_FIRNADMAP002_PRIME | CIRS_4000 | 2007-323T04:47:25 | GMB_E052_Titan37+000T04:00:00 | 000T01:00:00 | 2007-323T05:47:25 | 4000 | 14.4 | Prime | CIRS_FP1 | POS_X to North_Pole_Dir | |
| CIRS_052TI_FIRNADMAP002_SI | ISS_SUPPORT_II | 2007-323T04:47:25 | GMB_E052_Titan37+000T04:00:00 | 000T01:00:00 | 2007-323T05:47:25 | 0 | 1 | SPASS Rider | | | |
| CIRS_052TI_GLOBMAP002_ISS | CIRS_4000 | 2007-323T05:47:25 | GMB_E052_Titan37+000T05:00:00 | 000T03:36:00 | 2007-323T09:23:25 | 2000 | 25.92 | SPASS Rider | | | |
| CIRS_052TI_PHOTOMWAC002_ISS | CIRS_4000 | 2007-323T09:23:25 | GMB_E052_Titan37+000T08:36:00 | 000T00:24:00 | 2007-323T09:47:25 | 2000 | 2.88 | SPASS Rider | | | |
| CIRS_052TI_FIRNADCMPO02_PRIME | CIRS_4000 | 2007-323T09:47:25 | GMB_E052_Titan37+000T09:00:00 | 000T05:00:00 | 2007-323T14:47:25 | 4000 | 72 | Prime | CIRS_FP1 | PIC | |
| CIRS_052TI_FIRNADCMPO02_SI | ISS_SUPPORT_II | 2007-323T09:47:25 | GMB_E052_Titan37+000T09:00:00 | 000T05:00:00 | 2007-323T14:47:25 | 0 | 5 | SPASS Rider | | | |
| CIRS_052TI_MIDIPTMAP002_PRIME | CIRS_4000 | 2007-323T14:47:25 | GMB_E052_Titan37+000T14:00:00 | 000T07:00:00 | 2007-323T21:47:25 | 2000 | 50.4 | Prime | CIRS_FPE | POS_X to North_Pole_Dir | |
| CIRS_052TI_MIDIPTMAP002_SI | ISS_SUPPORT_II | 2007-323T14:47:25 | GMB_E052_Titan37+000T14:00:00 | 000T07:00:00 | 2007-323T21:47:25 | 0 | 10 | SPASS Rider | | | |
| CIRS_052TI_COMPMAP016_PRIME | CIRS_4000 | 2007-323T22:47:25 | GMB_E052_Titan37+000T22:00:00 | 000T02:19:09 | 2007-324T01:06:34 | 4000 | 33.396 | Prime | CIRS_FPE | POS_X to North_Pole_Dir | |
| CIRS_052IC_DSCAL1642_RIDER | CIRS_4000 | 2007-324T02:27:00 | | 000T06:00:00 | 2007-324T08:27:00 | 4000 | 86.4 | SPASS Rider | | | |
| ENGR_052SC_ORSRCS322_PPS | OpMode | 2007-322T22:47:25 | GMB_E052_Titan37-000T02:00:00 | 000T00:20:49 | 2007-322T23:08:14 | 0 | 0 | Prime | CIRS_FPEPIC | Deadband = (0.5, 20, | |
| ENGR_052SC_AACSQUAL001_CDS | ENGR_1638 | 2007-323T00:32:25 | GMB_E052_Titan37-000T00:15:00 | 000T00:30:00 | 2007-323T01:02:25 | 1638 | 2.948 | Non-SPASS | | | |
| ENGR_052SC_DFPWBIA323_PPS | OpMode | 2007-323T01:08:25 | GMB_E052_Titan37+000T00:21:00 | 000T00:22:42 | 2007-323T01:31:07 | 0 | 0 | Prime | ISS_NAC | NEG_Z to NTP | |
| ENGR_052SC_AACSQUAL002_CDS | ENGR_1638 | 2007-324T00:56:47 | | 000T00:00:02 | 2007-324T00:56:49 | 0 | 0 | Non-SPASS | | | |

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|-------------------------------|-----------------|-------------------|-------------------------------|--------------|-------------------|---------|---------|-------------|-----------------------|----------------|--|
| INMS_052TI_TINTERACT002_CAPS | INMS_1498 | 2007-322T00:51:00 | | 000T11:56:25 | 2007-322T12:47:25 | 100 | 4.299 | Non-SPASS | | | |
| INMS_052TI_T37INBD001_ISS | INMS_1498 | 2007-322T12:47:25 | GMB_E052_Titan37-000T12:00:00 | 000T11:00:00 | 2007-322T23:47:25 | 100 | 3.96 | Non-SPASS | | | |
| INMS_052TI_T37RMPNT001_INMS | INMS_1498 | 2007-322T23:47:25 | GMB_E052_Titan37-000T01:00:00 | 000T00:45:00 | 2007-323T00:32:25 | 1498 | 4.045 | Non-SPASS | | | |
| INMS_052TI_T37RMPNT001_PRIME | INMS_1498 | 2007-323T00:32:25 | GMB_E052_Titan37-000T00:15:00 | 000T00:24:00 | 2007-323T00:56:25 | 1498 | 2.157 | Prime | NEG_X to | NEG_Y to Titan | |
| INMS_052TI_T37RMPNT002_INMS | INMS_1498 | 2007-323T00:56:25 | GMB_E052_Titan37+000T00:09:00 | 000T00:51:00 | 2007-323T01:47:25 | 1498 | 4.584 | Non-SPASS | | | |
| INMS_052TI_T37OUTBD001_VIMS | INMS_1498 | 2007-323T01:47:25 | GMB_E052_Titan37+000T01:00:00 | 000T11:00:00 | 2007-323T12:47:25 | 100 | 3.96 | Non-SPASS | | | |
| INMS_052TI_TINTERACT003_CAPS | INMS_1498 | 2007-323T12:47:25 | GMB_E052_Titan37+000T12:00:00 | 000T08:29:15 | 2007-323T21:16:40 | 100 | 3.056 | Non-SPASS | | | |
| INMS_052SA_SURVEY004_RIDER | INMS_1498 | 2007-323T21:27:42 | | 000T03:23:18 | 2007-324T00:51:00 | 50 | 0.61 | Non-SPASS | | | |
| INMS_052SA_SURVEY008_RIDER | INMS_1498 | 2007-324T00:51:00 | | 002T09:06:00 | 2007-326T09:57:00 | 50 | 10.278 | Non-SPASS | | | |
| ISS_052TI_CLOUDMAP001_VIMS | ISS_Phot_1_by_1 | 2007-322T10:52:25 | GMB_E052_Titan37-000T13:55:00 | 000T04:55:00 | 2007-322T15:47:25 | 0 | 5 | SPASS Rider | | | |
| ISS_052TI_MIRLMBMAP001_CIRS | ISS_Phot_1_by_1 | 2007-322T15:47:25 | GMB_E052_Titan37-000T09:00:00 | 000T04:00:00 | 2007-322T19:47:25 | 0 | 5 | SPASS Rider | | | |
| ISS_052TI_FIRNADMAP001_CIRS | ISS_Phot_1_by_1 | 2007-322T19:47:25 | GMB_E052_Titan37-000T05:00:00 | 000T03:00:00 | 2007-322T22:47:25 | 0 | 5 | SPASS Rider | | | |
| ISS_052TI_FIRLMBAE001_CIRS | ISS_Phot_1_by_1 | 2007-322T23:08:25 | GMB_E052_Titan37-000T01:39:00 | 000T00:54:00 | 2007-323T00:02:25 | 0 | 5 | SPASS Rider | | | |
| ISS_052TI_FIRLMBT001_CIRS | ISS_Phot_1_by_1 | 2007-323T00:02:25 | GMB_E052_Titan37-000T00:45:00 | 000T00:30:00 | 2007-323T00:32:25 | 0 | 5 | SPASS Rider | | | |
| ISS_052TI_HIGHRES001_VIMS | ISS_Phot_1_by_1 | 2007-323T00:56:25 | GMB_E052_Titan37+000T00:09:00 | 000T00:12:00 | 2007-323T01:08:25 | 0 | 30 | SPASS Rider | | | |
| ISS_052SC_DFPWBIA5323_ENGR | ISS_Phot_1_by_1 | 2007-323T01:08:25 | GMB_E052_Titan37+000T00:21:00 | 000T00:23:00 | 2007-323T01:31:25 | 0 | 30 | SPASS Rider | | | |
| ISS_052TI_HIRESNAC001_VIMS | ISS_Phot_1_by_1 | 2007-323T01:31:25 | GMB_E052_Titan37+000T00:44:00 | 000T01:16:00 | 2007-323T02:47:25 | 0 | 150 | SPASS Rider | | | |
| ISS_052TI_REGMAP001_PRIME | ISS_Phot_1_by_1 | 2007-323T02:47:25 | GMB_E052_Titan37+000T02:00:00 | 000T02:00:00 | 2007-323T04:47:25 | 0 | 300 | Prime | ISS_NAC (NEG_X to Sun | | |
| ISS_052TI_FIRNADMAP002_CIRS | ISS_Phot_1_by_1 | 2007-323T04:47:25 | GMB_E052_Titan37+000T04:00:00 | 000T01:00:00 | 2007-323T05:47:25 | 0 | 5 | SPASS Rider | | | |
| ISS_052TI_GLOBMAP002_PRIME | ISS_Phot_1_by_1 | 2007-323T05:47:25 | GMB_E052_Titan37+000T05:00:00 | 000T03:36:00 | 2007-323T09:23:25 | 0 | 180 | Prime | ISS_NAC (NEG_X to Sun | | |
| ISS_052TI_PHOTOMWAC002_PRIME | ISS_Phot_1_by_1 | 2007-323T09:23:25 | GMB_E052_Titan37+000T08:36:00 | 000T00:24:00 | 2007-323T09:47:25 | 0 | 30 | Prime | ISS_NAC (NEG_X to Sun | | |
| ISS_052TI_FIRNADCMP002_CIRS | ISS_Phot_1_by_1 | 2007-323T09:47:25 | GMB_E052_Titan37+000T09:00:00 | 000T05:00:00 | 2007-323T14:47:25 | 0 | 5 | SPASS Rider | | | |
| ISS_052TI_MIDIRMAP002_CIRS | ISS_Phot_1_by_1 | 2007-323T14:47:25 | GMB_E052_Titan37+000T14:00:00 | 000T08:00:00 | 2007-323T22:47:25 | 0 | 5 | SPASS Rider | | | |
| MAG_052CO_TINTERACT002_MAPS | MAG_1976 | 2007-322T10:12:00 | | 000T10:35:25 | 2007-322T20:47:25 | 600 | 22.875 | Non-SPASS | | | |
| MAG_052TI_MAGTITAND001_PRIME | MAG_1976 | 2007-322T20:47:25 | GMB_E052_Titan37-000T04:00:00 | 000T08:00:00 | 2007-323T04:47:25 | 1976 | 56.909 | Non-SPASS | | | |
| MAG_052CO_TINTERACT003_MAPS | MAG_1976 | 2007-323T04:47:25 | GMB_E052_Titan37+000T04:00:00 | 000T08:26:59 | 2007-323T13:14:24 | 1976 | 60.108 | Non-SPASS | | | |
| MAG_052OT_SURVEY003_PRIME | MAG_1976 | 2007-323T13:14:24 | | 000T20:43:36 | 2007-324T09:58:00 | 600 | 44.77 | Non-SPASS | | | |
| MIMI_052TI_T37EXTINB002_CAPS | MIMI_8000 | 2007-322T10:12:01 | | 000T13:35:24 | 2007-322T23:47:25 | 1600 | 78.278 | SPASS Rider | | | |
| MIMI_052TI_T37CLOSE001_CAPS | MIMI_8000 | 2007-322T23:47:25 | GMB_E052_Titan37-000T01:00:00 | 000T02:00:00 | 2007-323T01:47:25 | 2000 | 14.4 | SPASS Rider | | | |
| MIMI_052TI_T37EXTOUT001_CAPS | MIMI_8000 | 2007-323T01:47:25 | GMB_E052_Titan37+000T01:00:00 | 000T22:58:09 | 2007-324T00:45:34 | 1550 | 128.168 | SPASS Rider | | | |
| MIMI_052SA_MAGDYN004_PRIME | MIMI_8000 | 2007-324T00:51:01 | | 000T22:23:55 | 2007-324T23:14:56 | 1200 | 96.762 | SPASS Rider | | | |
| MP_050NA_DSS45DOWN001_NA | MILESTONE | 2007-274T00:00:00 | | 048T23:59:59 | 2007-322T23:59:59 | 0 | 0 | Non-SPASS | | | |
| MP_051NA_DSS65DOWN001_NA | MILESTONE | 2007-302T00:00:00 | | 041T23:59:59 | 2007-343T23:59:59 | 0 | 0 | Non-SPASS | | | |
| MP_051NA_SEQUENCE035_NA | MILESTONE | 2007-304T18:40:00 | E051_SEQUENCE_035+000T00:00 | 043T21:20:00 | 2007-348T16:00:00 | 0 | 0 | SPASS Note | | | |
| MP_052TI_FLYBYT037_NA | MILESTONE | 2007-323T00:47:25 | | 000T00:00:01 | 2007-323T00:47:26 | 0 | 0 | Non-SPASS | | | |
| MP_052SA_RPXASCEND052_NA | MILESTONE | 2007-323T04:36:18 | | 000T00:00:01 | 2007-323T04:36:19 | 0 | 0 | Non-SPASS | | | |
| RPWS_052CO_TINTERACT002_CAPS | RPWS_30464 | 2007-322T10:12:00 | | 000T12:35:25 | 2007-322T22:47:25 | 2000 | 90.65 | Non-SPASS | | | |
| RPWS_052TI_TIINTRMED001_PRIME | RPWS_30464 | 2007-322T22:47:25 | GMB_E052_Titan37-000T02:00:00 | 000T01:30:00 | 2007-323T00:17:25 | 2999.9 | 16.199 | Non-SPASS | | | |
| RPWS_052TI_TICA001_PRIME | RPWS_182784 | 2007-323T00:17:25 | GMB_E052_Titan37-000T00:30:00 | 000T00:39:00 | 2007-323T00:56:25 | 100001 | 234.003 | Non-SPASS | | | |
| RPWS_052TI_TICA002_PRIME | RPWS_182784 | 2007-323T00:56:25 | GMB_E052_Titan37+000T00:09:00 | 000T00:21:00 | 2007-323T01:17:25 | 60928.7 | 76.77 | Non-SPASS | | | |
| RPWS_052TI_TIINTRMED002_PRIME | RPWS_30464 | 2007-323T01:17:25 | GMB_E052_Titan37+000T00:30:00 | 000T01:30:00 | 2007-323T02:47:25 | 2999.9 | 16.199 | Non-SPASS | | | |
| RPWS_052CO_TINTERACT003_CAPS | RPWS_30464 | 2007-323T02:47:25 | GMB_E052_Titan37+000T02:00:00 | 000T18:27:09 | 2007-323T21:14:34 | 2000 | 132.858 | Non-SPASS | | | |
| RPWS_052SA_OUTSURVEY002_PRIME | RPWS_30464 | 2007-323T21:20:00 | | 000T12:37:00 | 2007-324T09:57:00 | 1310 | 59.501 | Non-SPASS | | | |

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|-------------------------------|--------------|-------------------|-------------------------------|--------------|-------------------|---------|--------|--------------|-----------|--------------|------------|
| SP_052NA_M70OBSNON324_NA | OBSERVATION | 2007-322T10:12:00 | | 001T14:45:00 | 2007-324T00:57:00 | 0 | 0 | Non-SPASS | | | |
| SP_052NA_TOSTSEG322_NA | MILESTONE | 2007-322T10:12:00 | | 001T23:45:00 | 2007-324T09:57:00 | 0 | 0 | SPASS Note | | | |
| SP_052TI_WAYPTTURN322_PRIME | MILESTONE | 2007-322T10:12:00 | | 000T00:30:00 | 2007-322T10:42:00 | 0 | 0 | New Waypoint | ISS_NAC t | POS_X to | SP Turn to |
| SP_052TI_DEADTIME322_PRIME | MILESTONE | 2007-322T10:42:00 | | 000T00:10:25 | 2007-322T10:52:25 | 0 | 0 | Prime | ISS_NAC t | POS_X to | North_Pole |
| SP_052NA_BEGCUSTOM322_NA | MILESTONE | 2007-322T23:08:25 | GMB_E052_Titan37-000T01:39:00 | 000T00:00:01 | 2007-322T23:08:26 | 0 | 0 | SPASS Note | | | |
| SP_052NA_ENDCUSTOM323_NA | MILESTONE | 2007-323T04:47:25 | GMB_E052_Titan37+000T04:00:00 | 000T00:00:01 | 2007-323T04:47:26 | 0 | 0 | SPASS Note | | | |
| SP_052TI_DEADTIME324_PRIME | MILESTONE | 2007-324T00:06:34 | GMB_E052_Titan37+000T23:19:09 | 000T00:09:24 | 2007-324T00:15:58 | 0 | 0 | Prime | ISS_NAC t | POS_X to | North_Pole |
| SP_052EA_DLTURN324_PRIME | MILESTONE | 2007-324T00:27:00 | | 000T00:30:00 | 2007-324T00:57:00 | 0 | 0 | Prime | XBAND to | POS_X to | SP Turn to |
| SP_052EA_M70ARRNON324_PRIME | DOWNLINK_PAS | 2007-324T00:57:00 | | 000T09:00:00 | 2007-324T09:57:00 | 0 | 0 | Prime | XBAND to | 3_Hr_Rolling | |
| SP_052NA_M70ARR2ND324_SP | DSN_PASS | 2007-324T00:57:00 | | 000T09:00:00 | 2007-324T09:57:00 | 0 | 0 | Non-SPASS | | | |
| SP_052NA_M70ARRNON324_SP | DSN_PASS | 2007-324T00:57:00 | | 000T09:00:00 | 2007-324T09:57:00 | 0 | 0 | Non-SPASS | | | |
| UVIS_052TI_CLOUDMAP001_VIMS | UVIS_5032 | 2007-322T10:52:25 | GMB_E052_Titan37-000T13:55:00 | 000T04:55:00 | 2007-322T15:47:25 | 4025.6 | 71.253 | SPASS Rider | | | |
| UVIS_052TI_FIRLMBINT001_CIRS | UVIS_5032 | 2007-322T23:11:25 | GMB_E052_Titan37-000T01:36:00 | 000T01:21:00 | 2007-323T00:32:25 | 1006.4 | 4.891 | SPASS Rider | | | |
| UVIS_052SW_IPHSURVEY019_RIDER | UVIS_5032 | 2007-324T00:57:00 | | 000T09:00:00 | 2007-324T09:57:00 | 76 | 2.462 | Non-SPASS | | | |
| VIMS_052TI_CLOUDMAP001_PRIME | VIMS_18432 | 2007-322T10:52:25 | GMB_E052_Titan37-000T13:55:00 | 000T04:55:00 | 2007-322T15:47:25 | 3050.8 | 54 | Prime | ISS_NAC t | NEG_X to | Sun |
| VIMS_052TI_MIRLMBINT001_CIRS | VIMS_18432 | 2007-322T15:47:25 | GMB_E052_Titan37-000T09:00:00 | 000T04:00:00 | 2007-322T19:47:25 | 2222.2 | 32 | SPASS Rider | | | |
| VIMS_052TI_MIRLMBINT002_CIRS | VIMS_18432 | 2007-322T19:47:25 | GMB_E052_Titan37-000T05:00:00 | 000T03:00:00 | 2007-322T22:47:25 | 2222.2 | 24 | SPASS Rider | | | |
| VIMS_052TI_HIRESLMB002_CIRS | VIMS_18432 | 2007-322T23:11:25 | GMB_E052_Titan37-000T01:36:00 | 000T01:21:00 | 2007-323T00:32:25 | 9259.3 | 45 | SPASS Rider | | | |
| VIMS_052TI_HIRES001_INMS | VIMS_18432 | 2007-323T00:32:25 | GMB_E052_Titan37-000T00:15:00 | 000T00:24:00 | 2007-323T00:56:25 | 6250 | 9 | SPASS Rider | | | |
| VIMS_052TI_HIGHRES001_PRIME | VIMS_18432 | 2007-323T00:56:25 | GMB_E052_Titan37+000T00:09:00 | 000T00:12:00 | 2007-323T01:08:25 | 50000 | 36 | Prime | NEG_Y to | NEG_Z to | North_Pole |
| VIMS_052TI_TRANS003_ENGR | VIMS_18432 | 2007-323T01:08:25 | GMB_E052_Titan37+000T00:21:00 | 000T00:23:49 | 2007-323T01:32:14 | 12596.2 | 18 | SPASS Rider | | | |
| VIMS_052TI_HIRESNAC001_PRIME | VIMS_18432 | 2007-323T01:31:25 | GMB_E052_Titan37+000T00:44:00 | 000T01:16:00 | 2007-323T02:47:25 | 15350.9 | 70 | Prime | VIMS_IR t | NEG_X to | Sun |
| VIMS_052TI_REGMAP001_ISS | VIMS_18432 | 2007-323T02:47:25 | GMB_E052_Titan37+000T02:00:00 | 000T02:00:00 | 2007-323T04:47:25 | 11111.1 | 80 | SPASS Rider | | | |
| VIMS_052TI_FIRNADMP001_CIRS | VIMS_18432 | 2007-323T04:47:25 | GMB_E052_Titan37+000T04:00:00 | 000T01:00:00 | 2007-323T05:47:25 | 8333.3 | 30 | SPASS Rider | | | |
| VIMS_052TI_GLOBMAP002_ISS | VIMS_18432 | 2007-323T05:47:25 | GMB_E052_Titan37+000T05:00:00 | 000T03:36:00 | 2007-323T09:23:25 | 6172.8 | 80 | SPASS Rider | | | |
| VIMS_052TI_WAC001_ISS | VIMS_18432 | 2007-323T09:23:25 | GMB_E052_Titan37+000T08:36:00 | 000T00:24:00 | 2007-323T09:47:25 | 55555.6 | 80 | SPASS Rider | | | |
| VIMS_052TI_WACPHOTO001_ISS | VIMS_18432 | 2007-323T09:23:25 | GMB_E052_Titan37+000T08:36:00 | 000T00:24:00 | 2007-323T09:47:25 | 16666.7 | 24 | SPASS Rider | | | |
| VIMS_052TI_MIRLMBINT003_CIRS | VIMS_18432 | 2007-323T09:47:25 | GMB_E052_Titan37+000T09:00:00 | 000T05:00:00 | 2007-323T14:47:25 | 1500 | 27 | SPASS Rider | | | |
| VIMS_052TI_MIRTEMP001_CIRS | VIMS_18432 | 2007-323T14:47:25 | GMB_E052_Titan37+000T14:00:00 | 000T09:09:00 | 2007-323T23:56:25 | 546.4 | 18 | SPASS Rider | | | |

052TI T37 Attitude Strategy

| Request | Riders | Start (SCET) | Start (Epoch) | Duration | End (SCET) | Primary | Secondary | Comments |
|--------------------------------|------------|--------------------------|--|--------------------------|--------------------------|---|--------------------------------|--|
| Sequence S035, length = 42 ... | | 2007-304T18:40:00 | E051_SEQUENCE_035+000 | 043T21:20:00 | 2007-348T16:00:00 | | | |
| TOST rev 52 Segment | | 2007-322T10:12:00 | | 001T23:45:00 | 2007-324T09:57:00 | | | |
| SP_052TI_WAYPTTURN322_PRIME | M | 2007-322T10:12:00 | | 000T00:30:00 | 2007-322T10:42:00 | ISS_NAC to Titan (0.0,-20.0,0.0 deg. offset) | POS_X to North_Pole_Dir | SP Turn to Waypoint |
| NEW WAYPOINT | | 2007-322T10:42:00 | | 001T23:15:00 | 2007-324T09:57:00 | ISS_NAC to Titan (0.0,-20.0,0.0 deg. offset) | POS_X to North_Pole_Dir | |
| SP_052TI_DEADTIME322_PRIME | M | 2007-322T10:42:00 | | 000T00:10:25 | 2007-322T10:52:25 | ISS_NAC to Titan (0.0,-20.0,0.0 deg. offset) | POS_X to North_Pole_Dir | |
| VIMS_052TI_CLOUDMAP001_PRIME | C, I, M, U | 2007-322T10:52:25 | GMB_E052_Titan37-000T13:5000T04:55:00 | 2007-322T15:47:25 | 2007-322T15:47:25 | ISS_NAC to Titan | NEG_X to Sun | |
| CIRS_052TI_MIRLMBMAP001_PRIME | C, I, M, V | 2007-322T15:47:25 | GMB_E052_Titan37-000T09:0000T04:00:00 | 2007-322T19:47:25 | 2007-322T19:47:25 | CIRS_FP1 to Titan | PIC | |
| CIRS_052TI_FIRNADMAP001_PRIME | C, I, M, V | 2007-322T19:47:25 | GMB_E052_Titan37-000T05:0000T03:00:00 | 2007-322T22:47:25 | 2007-322T22:47:25 | CIRS_FP1 to Titan | POS_X to North_Pole_Dir | |
| ENGR_052SC_ORSRCS322_PPS | C, M | 2007-322T22:47:25 | GMB_E052_Titan37-000T02:0000T00:20:49 | 2007-322T23:08:14 | 2007-322T23:08:14 | CIRS_FP1 to Titan | PIC | Deadband = (0.5, 20, 0.5) |
| Begin Custom Period | | 2007-322T23:08:25 | GMB_E052_Titan37-000T01:0000T00:00:01 | 2007-322T23:08:25 | 2007-322T23:08:25 | ISS_NAC to Titan (0.0,-20.0,0.0 deg. offset) | POS_X to North_Pole_Dir | |
| CIRS_052TI_FIRLMBAR001_PRIME | C, I, M, U | 2007-322T23:08:25 | GMB_E052_Titan37-000T01:0000T00:54:00 | 2007-323T00:02:25 | 2007-323T00:02:25 | CIRS_FP1 to Titan | PIC | Pick up at ISS_NAC to Titan (0.0,-20.0,0.0 deg. offset), POS_X to North_Pole_Dir, Hand off at CIRS_FP1 to Titan, PIC. |
| CIRS_052TI_FIRLMBT001_PRIME | C, I, M, U | 2007-323T00:02:25 | GMB_E052_Titan37-000T00:0000T00:30:00 | 2007-323T00:32:25 | 2007-323T00:32:25 | CIRS_FP1 to Titan | PIC | Pick up at CIRS_FP1 to Titan, PIC; Hand off at NEG_X to Titan_SC_RAM, NEG_Y to Titan. |
| INMS_052TI_T37RMPNT001_PRIME | C, M, V | 2007-323T00:32:25 | GMB_E052_Titan37-000T00:1000T00:24:00 | 2007-323T00:56:25 | 2007-323T00:56:25 | NEG_X to Titan_SC_RAM | NEG_Y to Titan | Pick up at NEG_X to Titan_SC_RAM, NEG_Y to Titan; Hand off at NEG_Y to Titan (0.0,60.0,0.0 deg. offset), POS_Z to NTP. |
| VIMS_052TI_HIGHRES001_PRIME | I, M | 2007-323T00:56:25 | GMB_E052_Titan37+000T00:0000T00:12:00 | 2007-323T01:08:25 | 2007-323T01:08:25 | NEG_Y to Titan (0.0,60.0,0.0 deg. offset) | NEG_Z to North_Pole_Dir | Pick up at NEG_Y to Titan (0.0,60.0,0.0 deg. offset), POS_Z to NTP; Hand off at ISS_NAC to Titan (0.0,60.0,0.0 deg. offset), NEG_Z to NTP. |
| ENGR_052SC_DFPWBIAS323_PPS | C, I, M, V | 2007-323T01:08:25 | GMB_E052_Titan37+000T00:0000T00:22:42 | 2007-323T01:31:07 | 2007-323T01:31:07 | ISS_NAC to Titan (0.0,60.0,0.0 deg. offset) | NEG_Z to NTP | Pick up at ISS_NAC to Titan (0.0,60.0,0.0 deg. offset), NEG_Z to NTP; Hand off at ISS_NAC to Titan (0.0,60.0,0.0 deg. offset), NEG_Z to NTP. |
| VIMS_052TI_HIRESNAC001_PRIME | C, I, M, V | 2007-323T01:31:25 | GMB_E052_Titan37+000T00:0000T01:16:00 | 2007-323T02:47:25 | 2007-323T02:47:25 | VIMS_IR to Titan | NEG_X to Sun | Pick up at ISS_NAC to Titan (0.0,60.0,0.0 deg. offset), NEG_Z to NTP; Hand off at ISS_NAC to Titan, NEG_X to Sun. |
| ISS_052TI_REGMAP001_PRIME | C, M, V | 2007-323T02:47:25 | GMB_E052_Titan37+000T02:0000T02:00:00 | 2007-323T04:47:25 | 2007-323T04:47:25 | ISS_NAC to Titan | NEG_X to Sun | Pick up at ISS_NAC to Titan, NEG_X to Sun; Hand off at ISS_NAC to Titan (0.0,-20.0,0.0 deg. offset), POS_X to North_Pole_Dir. |
| End Custom Period | | 2007-323T04:47:25 | GMB_E052_Titan37+000T04:0000T00:00:01 | 2007-323T04:47:25 | 2007-323T04:47:25 | ISS_NAC to Titan | POS_X to North_Pole_Dir | |
| CIRS_052TI_FIRNADMAP002_PRIME | C, I, M, V | 2007-323T04:47:25 | GMB_E052_Titan37+000T04:0000T01:00:00 | 2007-323T05:47:25 | 2007-323T05:47:25 | CIRS_FP1 to Titan | POS_X to North_Pole_Dir | |
| ISS_052TI_GLOBMAP002_PRIME | C, M, V | 2007-323T05:47:25 | GMB_E052_Titan37+000T05:0000T03:36:00 | 2007-323T09:23:25 | 2007-323T09:23:25 | ISS_NAC to Titan | NEG_X to Sun | |
| ISS_052TI_PHOTOHWAC002_PRIME | C, M, V | 2007-323T09:23:25 | GMB_E052_Titan37+000T08:0000T00:24:00 | 2007-323T09:47:25 | 2007-323T09:47:25 | ISS_NAC to Titan | NEG_X to Sun | |
| CIRS_052TI_FIRNADCMP002_PRIME | C, I, M, V | 2007-323T09:47:25 | GMB_E052_Titan37+000T09:0000T05:00:00 | 2007-323T14:47:25 | 2007-323T14:47:25 | CIRS_FP1 to Titan | PIC | |
| CIRS_052TI_MIDIRTMAP002_PRIME | C, I, M, V | 2007-323T14:47:25 | GMB_E052_Titan37+000T14:0000T07:00:00 | 2007-323T21:47:25 | 2007-323T21:47:25 | CIRS_FP1 to Titan | POS_X to North_Pole_Dir | |
| CIRS_052TI_COMPMAP016_PRIME | I, M, V | 2007-323T21:47:25 | GMB_E052_Titan37+000T21:0000T02:19:09 | 2007-324T00:06:34 | 2007-324T00:06:34 | CIRS_FP1 to Titan | POS_X to North_Pole_Dir | |
| SP_052TI_DEADTIME324_PRIME | M | 2007-324T00:06:34 | GMB_E052_Titan37+000T23:0000T00:20:26 | 2007-324T00:27:00 | 2007-324T00:27:00 | ISS_NAC to Titan (0.0,-20.0,0.0 deg. offset) | POS_X to North_Pole_Dir | |
| SP_052EA_DLTURN324_PRIME | M | 2007-324T00:27:00 | | 000T00:30:00 | 2007-324T00:57:00 | XBAND to Earth | POS_X to NEP | SP Turn to Earth |
| SP_052EA_M70ARRNON324_PRIME | C, M | 2007-324T00:57:00 | | 000T09:00:00 | 2007-324T09:57:00 | XBAND to Earth | 3_Hr_Rolling | |

052TI (T37) Telemetry Modes

TELEMETRY MODE REPORT

| EPOCH RELATIVE | UTC | DURATION | TELEMETRY MODE | REQUEST |
|-------------------------------|-----------------------|--------------|------------------|-----------------------------|
| | 2007-322T10:12:00.000 | 12:56:25 | S_N_ER_3 | SP_052NA_M70OBSNON324_NA |
| GMB_E052_Titan37-000T01:39:00 | 2007-322T23:08:25.000 | 01:48:00 | S_N_ER_2 | SP_052NA_M70OBSNON324_NA |
| GMB_E052_Titan37+000T00:09:00 | 2007-323T00:56:25.000 | 001T00:00:35 | S_N_ER_3 | SP_052NA_M70OBSNON324_NA |
| | 2007-324T00:57:00.000 | 00:15:00 | RTE_N_SPB_110600 | SP_052EA_M70ARRNON324_PRIME |
| | 2007-324T01:12:00.000 | 01:00:00 | RTE_N_SPB_124425 | SP_052EA_M70ARRNON324_PRIME |
| | 2007-324T02:12:00.000 | 07:15:00 | RTE_N_SPB_142200 | SP_052EA_M70ARRNON324_PRIME |
| | 2007-324T09:27:00.000 | 00:30:00 | RTE_N_SPB_124425 | SP_052EA_M70ARRNON324_PRIME |

DSN Requests

CASSINI DOWNLINK/DSN COVERAGE SUMMARY for 052TI_T37_2007-06-25v2.xml on 2007-Jun-25 09:09:53
 (+ = 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 | DATA_RATES hh:mm kbps | ID | START_TO_END SCET | START_TO_END ERT | DUR | CALS | LABEL | CNFG |
| M70ARRNON324 | 324T00:57-09:57 | 324T02:15-11:15 | 09:00 | 110,124,142,124 | 54 | 324T00:57-09:57 | 324T02:15-11:15 | 09:00 | 60/15 | Ranging_X_up_off | |
| | | | | ^-- and also --> | 63 | 324T00:57-09:57 | 324T02:15-11:15 | 09:00 | 60/15 | Ranging_X_up_on | |

052TI (T37) 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 (Mb) |
| SP_052EA_M70ARRNON324_PRIME | 324 00:57 | 324 09:57 | 0 | 3388 | 135 | 3523 | 3569 | 46 | 0 | 231 | 53 | 3807 | 3792 | -15 | 0 | 0% | 15 |

052TI (T37) Data Volume

SSR PARTITION SIZE SUMMARY - SELECTED SSR CONFIGURATION: DOUBLE

| OBSERVATION PERIOD | SSR A/B | | |
|--------------------------|---------------------|---------------------|---------------------|
| | P4 Size (Frames) | P5 Size (Frames) | P6 Size (Frames) |
| SP_052NA_M70OBSNON324_NA | 202978 | 206 | 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 | 322 10:12 | 324 00:57 | 401.0 | 78.5 | 396.3 | 23.3 | 760.0 | 165.2 | 221.3 | 0.0 | 583.7 | 76.1 | 627.0 | 0.0 | 2.9 | 3335.4 |
| OBSERVATION_SI | 322 10:12 | 324 00:57 | 0.0 | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25.0 |
| SP_052EA_M70ARRNON324_PRIME | 324 00:57 | 324 09:57 | 32.4 | 4.9 | 86.4 | 1.6 | 0.0 | 19.4 | 38.9 | 0.0 | 42.4 | 2.5 | 0.0 | 0.0 | 0.0 | 228.5 |
| DAILY TOTAL SCIENCE | 322 10:12 | 324 09:57 | 433.4 | 83.4 | 507.7 | 24.9 | 760.0 | 184.6 | 260.2 | 0.0 | 626.2 | 78.6 | 627.0 | 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 | 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 | | |
| | 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 | | |
| | V | custom periods away from C/A are needed because the Sun is so close to Titan | |
| | 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 A. All turns that accomplish the waypoint strategy are requested by SP or OpNav. | C | | |
| | 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? | Yes | |

(DOUBLE-CLICK TO MAKE CHANGES)