



Science Planning & Sequence Team
CASSINI

CASSINI TOST_T125 SEGMENT

Rev 250 Handoff Package

Segment Boundary 2016-334T05:28:00 – 2016-336T09:13:00

3 June 2016

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SMT Report, Timeline, SPASS

Science Highlights

Notes & Liens

This document has been reviewed and determined not to contain export controlled technical data

SMT Report

TOST T125

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 CPACTY (Mb)	MRGN (Mb)	OPNAV (Mb)	SCI (Mb)	ENGR (Mb)	TOTAL (Mb)	CPACTY (Mb)	MARGN (Mb)	NET_MARGN (Mb)	MARGN (%)	CAROV (Mb)	
SP_250EA_C34BWGNON335_PRIME	335 20:13	336 02:26	0	1775	164	1938	3322	1384	0	103	37	2078	384	-1695	0	0%	1695
SP_251EA_C70METNON336_PRIME	336 02:26	336 07:13	1695	0	0	1695	3322	1627	0	94	28	1816	1314	-503	0	0%	502
SP_251EA_M70METNON336_PRIME	336 07:13	336 09:13	502	0	0	502	3322	2820	0	308	12	822	346	-477	0	0%	476

Note: accepting 48 Mb carryover from preceding SOST_250

SSR PARTITION SIZE SUMMARY - SELECTED SSR CONFIGURATION: DOUBLE

OBSERVATION PERIOD	SSR A/B		
	P4 Size (Frames)	P5 Size (Frames)	P6 Size (Frames)
SP_250NA_OBSERV334_NA	188954	10	38863

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	334 05:28	335 20:13	0.0	73.1	312.8	24.0	470.0	41.6	53.5	0.0	346.1	37.6	400.0	0.0	162.0	1920.6
SP_250EA_C34BWGNON335_PRIME	335 20:13	336 02:26	0.0	11.7	56.3	2.2	0.0	5.5	6.2	0.0	20.4	0.0	0.0	0.0	0.0	102.4
SP_251EA_C70METNON336_PRIME	336 02:26	336 07:13	0.0	9.0	51.7	1.7	0.0	4.3	10.3	0.0	15.7	0.0	0.0	0.0	0.0	92.7
SP_251EA_M70METNON336_PRIME	336 07:13	336 09:13	0.0	3.8	21.6	0.7	0.0	3.3	4.3	0.0	6.6	1.1	0.0	0.0	263.7	305.1
DAILY TOTAL SCIENCE	334 05:28	336 09:13	0.0	97.6	442.4	28.7	470.0	54.7	74.4	0.0	388.6	38.7	400.0	0.0	425.6	

	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)	0.0	97.6	442.4	28.7	470.0	54.7	74.4	0.0	388.6	38.7	400.0	0.0

T125 TOST Master Timeline

TOST T125

250TI T125	3158.4
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Start Time	End Time	Prime Activity	Obs. Detail	Op Mode	TLM Mode	Comments
2016-334T05:28:00	2016-334T06:08:00	SP Turn to WP	NEG_Y to Titan, NEG_X to NTP	DFPW Normal	S_N_ER_3	
2016-334T06:08:00	C/A-15:57:20	OD Uncertainty Dead Time				
C/A-15:57:20	-14:00	VIMS	B (TC1a, TC1b, TN2c)	DFPW Normal	S_N_ER_3	
-14:00	-09:00	VIMS	V (TC1a, TC1b, TN2c)	DFPW Normal	S_N_ER_3	
-09:00	-05:00	VIMS	I (TC1a, TC1a, TN2c)	DFPW Normal	S_N_ER_3	
-05:00	-02:15	VIMS	Y (TC1a, TC1b, TN1a, TN2c)	DFPW Normal	S_N_ER_3	
-02:15	-00:30	ISS	TN1a, hand off at wp	DFPW Normal	S_N_ER_3	Hotei
Begin custom period						
-00:30	0	VIMS	TC1a, TN1a	DFPW Normal	S_N_ER_3	
2016-334T22:14:32		CLOSEST APPROACH				
0	+00:15	VIMS	TC1a, TN1a	DFPW Normal	S_N_ER_3	VIMS turning to CIRS attitude
+00:15	+00:45	CIRS	TN1c	DFPW Normal	S_N_ER_3	FIRLMB at 55N and 10S
+00:45	+01:15	CIRS	TN1c	DFPW Normal	S_N_ER_3	FIRLMB at 55N and 10S
+01:15	+02:15	CIRS	TN1c	DFPW Normal	S_N_ER_3	FIRLMB at 55N and 10S
+02:15	+05:00	CIRS	T (TN2c (surface temperature))	DFPW Normal	S_N_ER_3	VIMS Collaborative Riders at +02:15 and +04:45
+05:00	+09:00	CIRS	R (TN1c or Tc1b, decided in implementation)	DFPW Normal	S_N_ER_3	
+09:00	+13:00	CIRS	N1 (Tc1b, TN1c aerosol)	DFPW Normal	S_N_ER_3	
+13:00	C/A+19:33:28	CIRS	M3 (Tc1b (TN1c on outbound))	DFPW Normal	S_N_ER_3	ISS Collaborative Rider
End custom period						
C/A+25:46:28	2016-336T00:16:00	OD Uncertainty Dead Time				
2016-336T00:16:00	2016-336T00:56:00	SP Turn to Earth for downlink	XBAND to Earth, NEG_Y to Saturn Offset: (0.0, 0.0, -9.5 deg)	DFPW Normal	S_N_ER_3	
2016-336T00:56:00	2016-336T02:26:00	Y-Bias window		DFPW Normal	S_N_ER_3	
2016-335T20:13:00	2016-336T02:26:00	Canberra 34M	D/L + concurrent RSS Solar Conjunction Experiment #13	RSS_K_RWAF	RTE_N_SPB	
2016-336T02:26:00	2016-336T07:13:00	Canberra 70M	D/L + concurrent RSS Solar Conjunction Experiment #13	RSS2RWAF	RTE_N_SPB	
2016-336T07:13:00	2016-336T09:13:00	Madrid 70M	D/L + concurrent RSS Solar Conjunction Experiment #13	RSS2RWAF	RTE_N_SPB	Dual playback for VIMS, -00:30 to +00:15

T125 TOST SPASS

TOST T125

Request	Riders	Start (SCET)	Start (Epoch)	Duration	End	Primary	Secondary	Comments
Sequence S97, length = 72 days		2016-328T05:43:00		072T01:22:00	2017-034T07:05:00			
Titan Flyby T125 Segment		2016-334T05:28:00		002T03:45:00	2016-336T09:13:00			
SP_250TI_WAYPTTURN334_PRIME		2016-334T05:28:00		000T00:40:00	2016-334T06:08:00	NEG_Y to Titan	NEG_X to NTP	
NEW WAYPOINT		2016-334T06:08:00		001T12:35:00	2016-335T18:43:00	NEG_Y to Titan	NEG_X to NTP	
SP_250TI_DEADTIME334_PRIME		2016-334T06:08:00		000T00:09:12	2016-334T06:17:12	NEG_Y to Titan	NEG_X to NTP	
VIMS_250TI_GLOBMAP001_PRIME	C, I	2016-334T06:17:12	GMB_E250_TITAN_T125-000T15:57:20	000T01:57:20	2016-334T08:14:32	VIMS_IR to Titan	NEG_X to NTP	
VIMS_250TI_GLOBMAP002_PRIME	C, I	2016-334T08:14:32	GMB_E250_TITAN_T125-000T14:00:00	000T05:00:00	2016-334T13:14:32	VIMS_IR to Titan	NEG_X to NTP	
VIMS_250TI_MEDRES001_PRIME	C, I	2016-334T13:14:32	GMB_E250_TITAN_T125-000T09:00:00	000T04:00:00	2016-334T17:14:32	VIMS_IR to Titan	NEG_X to NTP	
VIMS_250TI_REGMAP001_PRIME	C, I	2016-334T17:14:32	GMB_E250_TITAN_T125-000T05:00:00	000T02:45:00	2016-334T19:59:32	VIMS_IR to Titan	NEG_X to NTP	
ISS_250TI_REGMAP001_PRIME	C, M, V	2016-334T19:59:32	GMB_E250_TITAN_T125-000T02:15:00	000T01:45:00	2016-334T21:44:32	ISS_NAC to Titan	NEG_X to NTP	
Begin Dual Playback Science		2016-334T21:44:32	GMB_E250_TITAN_T125-000T00:30:00	000T00:00:01	2016-334T21:44:33			
Begin Custom Period		2016-334T21:44:32	GMB_E250_TITAN_T125-000T00:30:00	000T00:00:01	2016-334T21:44:33			
VIMS_250TI_HIRES001_PRIME	C, I, M	2016-334T21:44:32	GMB_E250_TITAN_T125-000T00:30:00	000T00:45:00	2016-334T22:29:32	VIMS_IR to Titan	NEG_X to 28.0/22.0	Pick up at NEG_Y to Titan, NEG_X to NTP; Hand off at CIRS_FP1 to Titan, NEG_X to 28.0/22.0.
250TI (t) T125 TITAN Outbound		2016-334T22:14:32		000T00:00:01	2016-334T22:14:33			
End Dual Playback Science		2016-334T22:29:32	GMB_E250_TITAN_T125+000T00:15:00	000T00:00:01	2016-334T22:29:33			
CIRS_250TI_FIRLMBT002_PRIME	M, V	2016-334T22:29:32	GMB_E250_TITAN_T125+000T00:15:00	000T00:30:00	2016-334T22:59:32	CIRS_FP1 to Titan	PIC	Pick up at CIRS_FP1 to Titan, NEG_X to 28.0/22.0; Hand off at CIRS_FP1 to Titan, PIC.
CIRS_250TI_FIRLMBT002_PRIME	M, V	2016-334T22:59:32	GMB_E250_TITAN_T125+000T00:45:00	000T00:30:00	2016-334T23:29:32	CIRS_FP1 to Titan	PIC	Pick up at CIRS_FP1 to Titan, PIC; Hand off at CIRS_FP1 to Titan, PIC.
CIRS_250TI_FIRLMBWTR001_PRIME	M, V	2016-334T23:29:32	GMB_E250_TITAN_T125+000T01:15:00	000T01:00:00	2016-335T00:29:32	CIRS_FP1 to Titan	PIC	Pick up at CIRS_FP1 to Titan, PIC; Hand off at CIRS_FP1 to Titan, PIC.
CIRS_250TI_FIRNADMAP002_PRIME	V	2016-335T00:29:32	GMB_E250_TITAN_T125+000T02:15:00	000T02:45:00	2016-335T03:14:32	CIRS_FP1 to Titan	NEG_X to NTP	Collaborative Rider(s): VIMS. Pick up at CIRS_FP1 to Titan, PIC; Hand off at CIRS_FP1 to Titan, NEG_X to NTP. Collaborative Rider(s):
CIRS_250TI_MIRLMBINT002_PRIME	I, V	2016-335T03:14:32	GMB_E250_TITAN_T125+000T05:00:00	000T04:00:00	2016-335T07:14:32	CIRS_FP1 to Titan	PIC	Pick up at CIRS_FP1 to Titan, NEG_X to NTP; Hand off at CIRS_FP1 to Titan, NEG_X to NTP.
CIRS_250TI_FIRNADCMP002_PRIME	I, U, V	2016-335T07:14:32	GMB_E250_TITAN_T125+000T09:00:00	000T04:00:00	2016-335T11:14:32	CIRS_FP1 to Titan	NEG_X to NTP	Pick up at CIRS_FP1 to Titan, NEG_X to NTP; Hand off at CIRS_FP1 to Titan, NEG_X to NTP.
CIRS_250TI_MIDIRMAP002_PRIME	I, V	2016-335T11:14:32	GMB_E250_TITAN_T125+000T13:00:00	000T06:33:28	2016-335T17:48:00	CIRS_FP1 to Titan	NEG_X to NTP	Collaborative Rider(s): ISS. Pick up at CIRS_FP1 to Titan, NEG_X to NTP; Hand off at NEG_Y to Titan, NEG_X to NTP. Collaborative Rider(s): ISS. Template M3?
End Custom Period		2016-335T17:48:00	GMB_E250_TITAN_T125+000T19:33:28	000T00:00:01	2016-335T17:48:01			
SP_250TI_DEADTIME335_PRIME		2016-335T17:48:00	GMB_E250_TITAN_T125+000T19:33:28	000T00:15:00	2016-335T18:03:00	NEG_Y to Titan	NEG_X to NTP	
SP_250EA_DLTURN335_PRIME		2016-335T18:03:00		000T00:40:00	2016-335T18:43:00	XBAND to Earth (0.0,0.0,-9.5 deg. offset)	NEG_Y to Saturn	
NEW WAYPOINT		2016-335T18:43:00		000T14:30:00	2016-336T09:13:00	XBAND to Earth (0.0,0.0,-9.5 deg. offset)	NEG_Y to Saturn	
SP_250EA_YGAP335_PRIME	E	2016-335T18:43:00		000T01:30:00	2016-335T20:13:00	XBAND to Earth (0.0,0.0,-9.5 deg. offset)	NEG_Y to Saturn	
SP_250EA_C34BWGNON335_PRIME	C, R	2016-335T20:13:00		000T06:13:00	2016-336T02:26:00	XBAND to Earth (0.0,0.0,-9.5 deg. offset)	5_Hr_Rolling	MIMI.NEG_Y to Saturn (0.0,-9.5).
Apoapse Per = 7.2 d, inc = 63.7 deg		2016-335T23:31:40		000T00:00:01	2016-335T23:31:41			
SP_251EA_C70METNON336_PRIME	C, R	2016-336T02:26:00		000T04:47:00	2016-336T07:13:00	XBAND to Earth (0.0,0.0,-9.5 deg. offset)	4_Hr_Rolling	MIMI.NEG_Y to Saturn (0.0,-9.5).
Pointer Reset in preparatio...		2016-336T07:13:00		000T00:00:01	2016-336T07:13:01			
SP_251EA_M70METNON336_PRIME	C, R	2016-336T07:13:00		000T02:00:00	2016-336T09:13:00	XBAND to Earth (0.0,0.0,-9.5 deg. offset)	NEG_Y to Saturn	MIMI.NEG_Y to Saturn (0.0,-9.5).

T125 TOST High-Priority Observations

TOST T125

T125 Summary of PIEs and Other High Priority Observations							
Discipline	CIMS Request Name	Start Time	End Time	Flexibility in secondary pointing	Comments (e.g., pointing tolerance, uniqueness; relative priority)	Science Traceability Matrix Code(s)	Pointing designer POC
Titan	ISS_250TI_REGMAP001_PRIME	2016-334T19:59:32	2016-334T21:44:32	Flexible		TN1a	Jason Perry <volcano@pele@gmail.com>
Titan	VIMS_250TI_HIRES001_PRIME	2016-334T21:44:32	2016-334T22:29:32	Flexible	Dual Playback data	TC1a, TN1a	Edward Audi <edaudi@lpl.arizona.edu>
Titan	CIRS_250TI_FIRLMBT002_PRIME	2016-334T22:29:32	2016-334T22:59:32	Significant Science Impact if Secondary Changed	Significant Impact to Science	TN1c	Todd Ansty <tma22@cornell.edu>
Titan	CIRS_250TI_FIRLMBT002_PRIME	2016-334T22:59:32	2016-334T23:29:32	Significant Science Impact if Secondary Changed	Significant Impact to Science	TN1c	Todd Ansty <tma22@cornell.edu>
Titan	CIRS_250TI_FIRLMBWTR001_PRIME	2016-334T23:29:32	2016-335T00:29:32	Significant Science Impact if Secondary Changed	Significant Impact to Science	TN1c	Todd Ansty <tma22@cornell.edu>
Titan	CIRS_250TI_MIRLMBINT002_PRIME	2016-335T03:14:32	2016-335T07:14:32	Significant Science Impact if Secondary Changed	Significant Impact to Science	TN1c	Todd Ansty <tma22@cornell.edu>

November 29 (DOY 334) – The T125 campaign, the last ORS closest-approach targeted-Titan flyby of the mission, begins with VIMS as prime observer. On the inbound, VIMS will acquire a mosaic that includes the eastern part of Xanadu, Hotei Arcus, Menrva, and the North Pole. In addition, VIMS will monitor cloud activity and the evolution of the south polar vortex. ISS and CIRS will ride along with VIMS: in particular, ISS will image Titan's surface and atmosphere over the sub-Saturnian and leading hemisphere at mid-southern latitudes. ISS takes over as prime and will acquire a medium- to high-resolution mosaic over Titan's leading hemisphere, including Hotei Regio. At closest approach, VIMS is prime and will acquire a high-resolution map of the North Pole to look for variations at and around the seas and lakes.

On the outbound, CIRS is prime until the end of segment, and will perform a number of important and unique last-of-kind observations, starting with the final far-infrared limb observations and surface temperature map. These will provide the last opportunity for vertical profile determination of gases, such as water and aerosols, in the mission. VIMS will ride along on these observations, looking for specular reflections on Titan seas to monitor the evolution of the liquid hydrocarbon reservoirs. UVIS will ride along on the temperature map to obtain vertical profiles of emissions of nitrogen and hydrocarbons, which are diagnostic of temperature and excitation processes in the high atmosphere of Titan. In fact, this observation provides UVIS a limb viewing opportunity at the highest spatial resolution available outside of occultations.

T125 has MAPS objectives as well. MAG will explore the north sector of Titan's magnetic tail. MIMI will measure energetic ion and electron energy input to Titan's atmosphere. Finally, RPWS will measure thermal plasmas in Titan's ionosphere and surrounding environment, search for lightning in Titan's atmosphere, and investigate the interaction of Titan with Saturn's atmosphere.

November 30 (DOY 335) – CIRS continues as prime for the remainder of T125 outbound. CIRS will make limb and nadir observations in the mid-infrared that will extend temporal coverage of seasonal change in Titan's stratosphere as the southern hemisphere approaches winter solstice. VIMS, ISS, and UVIS are riding along with CIRS. VIMS will look again for specular reflections on Titan seas to monitor the evolution of the liquid hydrocarbon reservoirs. In particular, VIMS has collaborative opportunities at Kraken Mare, including the throat of Kraken. ISS will image Titan's surface and atmosphere over the trailing hemisphere at mid-northern latitudes. UVIS will ride along on CIRS NADCMP primes to obtain long integration times and thus, high signal/noise data on hydrocarbon emissions, nitrogen airglow, and haze properties, although with lower vertical resolution relative to limb observations or occultations.

T125 MAPS objectives continue into DOY 335.

Playback of the data follows, and will occur over a split Canberra 34M/70M downlink. The first pass of the final RSS Solar Conjunction Experiment in the mission (SCE #13) will take place during the downlinks as well. The RSS SCE is a month long experiment centered around conjunction day (minimum SEP) to characterize the solar corona at 2 frequency bands (X and Ka1 or X and S, depending on DSN antenna used for downlink – for T125 as current: DSS-34 will be X and Ka1, and DSS-43 & 63 will be X & S-band), and assess the electron content and possible Faraday rotation.

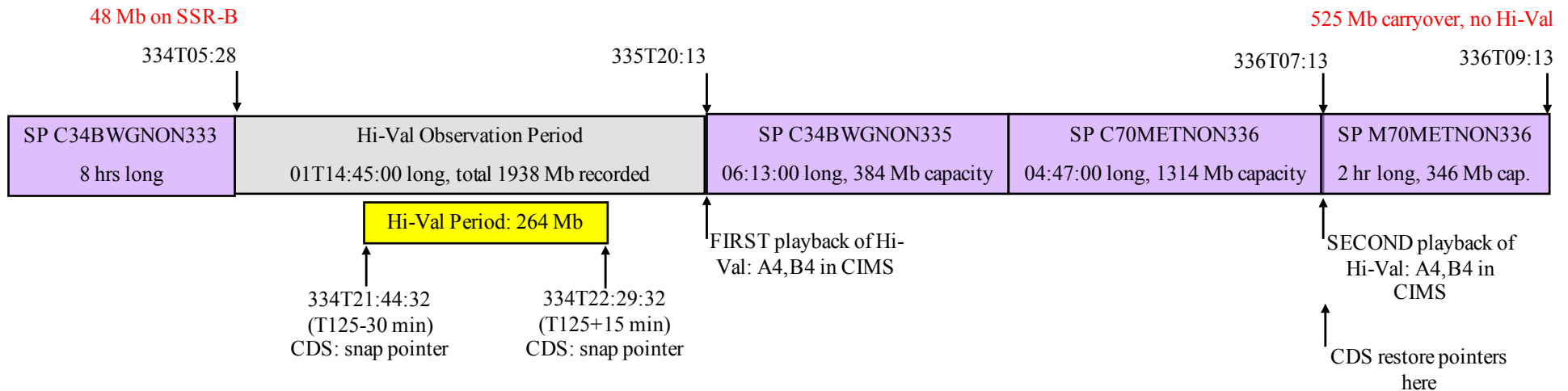
December 1 (DOY 336) – Playback continues over the Canberra 70M downlink, followed immediately by Dual Playback of the high-value VIMS data over the subsequent Madrid 70M downlink. SCE #13 continues over these downlinks as well.

T125 Dual Playback

TOST T125

Flyby	BEGHIVAL	ENDHIVAL	P4 Dual Playback Data Volume	SSR empty before hi-val observation period? (if not verify any carryover on A fits with Hi-Val data)	SSR-A empty after first playback?	PPL set to A4,B4 for first AND second playbacks?	SSRs empty after second playback? (if not does any Hi-Val data carry over?)
T125	T125-30 min	T125+15 min	264 Mb	No (carryover on SSR-B only)	Yes	Yes	No (no Hi-Val carryover)

Playbacks contiguous:



Reminder - ALL instruments' data is played back twice during P4 dual playback periods

Notes (1/3)

TOST T125

- Pointing:
 - Custom Period invoked to minimize turn time between VIMS and CIRS at closest approach.
 - Note: turns checked in CTV & PDT but designs not delivered: T125 not a FRPO segment.
 - Waypoint secondaries chosen for science, but close to RBOT-friendly RA/DECs.
 - Rolling downlink over 11-hour split pass (DSS-34/DSS-43): 5-hour + 4-hour rolls over the 2 passes to meet SCO Rolling Guidelines.
 - Apoapse in segment: AACS “2 of 3” Rule met – no MAG rolls in segment.
- Data Volume:
 - TOST agrees to 48 Mb carryover from preceding SOST_250 segment.
 - Saturn_251 has agreed to 525 Mb carryover from T125 segment.
 - SMT warnings:
 - SP_250EA_C34BWGNON335_PRIME: Priority List conflicts with selected SSR (SSR_B) – OK and expected. Dual Playback strategy requires SSR_A playback first.
 - SP_251EA_C70METNON336_PRIME: Priority List conflicts with selected SSR (SSR_B) – OK and expected. Dual Playback strategy requires SSR_A playback first.
 - SP_251EA_M70METNON336_PRIME: Priority List conflicts with selected SSR (SSR_B) – OK and expected. Dual Playback strategy requires SSR_A playback first.

- DSN:
 - Juno has requested DSS-43 to 335T01:26 SCET for their PJ5 (+10h) activity. Cassini has accommodated by splitting the main downlink from DSS-43 to DSS-34 handing over to DSS-43.
 - Cassini has cut 923 Mb to accommodate this request.
 - The DSS-34/DSS-43 split pass now has a total downlink capacity of 1698 Mb, barely enough to preserve the dual playback.
 - Note: Juno has not finalized their 70M requests and may propose more DSS-43 time from Cassini. Further requests should involve Project Management.
 - Dual Playback pass originally preceded main downlink; moved to DSS-63 after main downlink
 - Segment boundary extended at end by 1h 45m, approved by following segment Saturn_251.
 - DSS-35 extended maintenance from DOY 325-344: Not requested in T125
 - RSS Solar Conjunction Experiment #13: RSS would have preferred DSS-35 over DSS-34 for SCE. DSS-36 may be a preferable substitute as well (will be available resource by then?)
 - AP_Downlink report check warnings:
 - SP_250EA_C34BWGNON335_PRIME has an unusual priority playback list – OK and expected. Dual Playback strategy requires SSR_A playback first.
 - SP_251EA_C70METNON336_PRIME has an unusual priority playback list – OK and expected. Dual Playback strategy requires SSR_A playback first.
 - SP_251EA_M70METNON336_PRIME has an unusual priority playback list – OK and expected. Dual Playback strategy requires SSR_A playback first.
 - SP_251EA_M70METNON336_SP - fully within DSS-63 weekly maintenance; move elsewhere to resolve. Pass must be on DSS-63 for Dual Playback strategy to work.
 - SP_251EA_C70METNON336_PRIME, SP_251EA_M70METNON336_PRIME an unusual DSN lockup time; usual for post-handover passes is 60 sec. OK and expected, Playback occurs at BOT with no D/L handover, 300 seconds required.

- Resource checker (6 items):
 - SP_250EA_C34BWGNON335_PRIME: First_Part value of SSRAP4 does not match default of SSRBP4, Second_Part value of SSRBP4 does not match default of SSRAP4 – OK and expected. Dual Playback strategy requires SSR_A playback first.
 - SP_251EA_C70METNON336_PRIME: First_Part value of SSRAP4 does not match default of SSRBP4, Second_Part value of SSRBP4 does not match default of SSRAP4 – OK and expected. Dual Playback strategy requires SSR_A playback first.
 - SP_251EA_M70METNON336_PRIME: First_Part value of SSRAP4 does not match default of SSRBP4, Second_Part value of SSRBP4 does not match default of SSRAP4 – OK and expected. Dual Playback strategy requires SSR_A playback first.
 - CIRS_250TI_FIRLMBT002_PRIME: Custom period request is using PIC in secondary BV of handoff pointing – OK, CIRS picking up/handing off to self.
 - CIRS_250TI_FIRLMBAE002_PRIME: Custom period request is using PIC in secondary BV of handoff pointing – OK, CIRS picking up/handing off to self.
 - CIRS_250TI_FIRLMBWTR001_PRIME: Custom period request is using PIC in secondary BV of handoff pointing – OK, CIRS picking up/handing off to self.
- Opmodes:
 - No unique opmodes.
 - RSS Solar Conjunction Experiment #13 on downlink passes:
 - RSS requests RSSKRWAF on DSS-34, then RSS2RWAF on DSS-43 and DSS-63.
 - Note: if stations change during DSN negotiation, please consult with RSS for appropriate Opmode.
- Hydrazine:
 - No RCS, not applicable.
- Special Activities:
 - Dual Playback for VIMS

Sequence Liens (should all be SPLAT items):

- T125 Dual Playback
 - SPLAT item initiated for SP to track viability of dual playback strategy following DSN negotiations.
- RSS Solar Conjunction Experiment
 - SPLAT item initiated for SP/RSS/SCO to track Opmode in case of station change due to DSN negotiations.