MMO SVT-1c timeline
File: JX-SVT-010
Author: a.dietz-bc

Procedure Summary

This procedure outlines MMO operations to be performed during SVT-1c.

It includes the expected configuration for SVT-1c, the list of procedures and sequences to be executed and the expected duration.

Objectives

The scope of the MMO test in SVT-1c is to retest some activities from SVT-1b and verify their correct execution. All MMO payloads will be operated. This will exercise the operations conduction process during NECP with the payload teams.

Further, the MMO is kept on between SVT-1c day 2 and 4 to acquire data over several hours. In addition, playback of MMO data will be suspended for 2 hours to simulate out of pass operations (e.g. with JAXA receiving a large amount of data at once upon start of MMO data playback) in SVT day 3.

Summary of Constraints

None

Configuration

Start of Procedure MMO off

End of Procedure MMO off

Configuration Control Information

Date	FOP Issue	Version	Modification Description	Author	SPR Ref
18/12/2017		1	Created	a.dietz-bc	
27/02/2018		2	Update after revised input from JAXA.	a.dietz-bc	
07/03/2018		3	Update of procedure after updated test plan and reception of XDOR files. Added section on contingency actions.	a.dietz-bc	

Start of Procedure

MMO setup

Assumptions:

- Test performed on MMO FM
- No HV operations are performed.
- All MMO data is generated and dumped once. If generated several times, there is no problem on JAXA side to process data.

Spacecraft setup

Assumptions:

- All four MMO OBCPs (Switch to Cruise Standby Mode, Switch to Cruise Dormant Mode, MMO Operational Heater Control Start and MMO Emergency switch off) are loaded and available on the OMM.
- SSMM packet store 34 is defined and MMO APIDs (210 and 220) are routed to this packet store. This packet store size is 128 MB. It will be routed by default to VC2.
- Unbounded read of MMO packet store PS34 (with priority 8 and with unbounded read id =34) is on-going at the beginning of each test day.
- No routing of data to VC0.
- The test case will be run with the System TM mode configured as for NECP.
- S12 entries and service 19 entries have been defined.

Data volume

The MMO data rate is 8kbps, i.e. 675 Mbit will be generated during one day in SVT-1c.
For a maximum estimated duration of 58 hours, a total of 1.6 Gbit of data will be generated during SVT-1c.

Displays

DJXA0001 MMO parameters in MPO HK
DJXA0002 MMO Public HK Parameters
DJXA0003 MMO Function Status and Monitorings

Test duration

The duration of the MMO activities on SVT-1c day 2 are 40 minutes.
The expected duration for main MMO block on SVT-1c day 3 is 5 hours. In addition, the MMO dumps will be suspended for 2 hours on this day.
The duration of the MMO activities on SVT-1c day 4 are 30 minutes.

Contingency Actions

1) General MMO issue during MMO test with MMO in Cruise Initial or Standby Mode
Execute procedures:
JX-FCP-002 → AJXF002A - Start OBCP: MMO Switch to Cruise Dormant Mode
JX-SVT-002 → AJXS002B - MMO switch-OFF

Note: instead of first TC sequence, also the Emergency switch-off OBCP could be used (AJXC001A), though there is no time criticality that justifies a use of the Emergency switch-off.

2) General MMO issue during MMO test with MMO in Cruise Checkout Mode
Send MMO command to bring the MMO to Standby Mode:
ZJX00004 → MMO Safing command prior MPO Safe mode

Execute procedures:
JX-FCP-002 → AJXF002A - Start OBCP: MMO Switch to Cruise Dormant Mode
JX-SVT-002 → AJXS002B - MMO switch-OFF

Note: to be confirmed by JAXA, if the safing command is sufficient in all error cases for MDP switch-off.

3) MSASI issue during MSASI test case
Send XDOR file: XDOR_BJXR_T009_SVT_1c_MSASI_Step_00005.BC - MSASI POWER OFF

4) PWI issue during PWI test case
Send both XDOR files:
XDOR_BJXR_T005_SVT_1c_PWI_Step_00007.BC - PWI Off sequence
XDOR_BJXR_T005_SVT_1c_PWI_Step_00008.BC - PME PSU: Power OFF

5) MWE
Send both XDOR files:
XDOR_BJXR_T006_SVT_1c_MWE_Step_00004.BC - 4.4 MWE_OFF
XDOR_BJXR_T006_SVT_1c_MWE_Step_00005.BC - 4.5 PME_OFF

6) MGF
Send both XDOR files:
XDOR_BJXR_T007_SVT_1c_MGF_Step_00005.BC - 5.5 MGF_OFF
XDOR_BJXR_T007_SVT_1c_MGF_Step_00006.BC - 5.6 PME_OFF

7) MPPE
During MEA1 test case:
XDOR_BJXR_T008_SVT_1c_MEA1_Step_00006.BC - 6.6 MEA1_OFF

During MEA2 test case:
XDOR_BJXR_T008_SVT_1c_MEA2_Step_00006.BC - 7.6 MEA1_OFF

During MIA test case:
XDOR_BJXR_T008_SVT_1c_MIA_Step_00003.BC - 8.3 MIA_OFF

During MSA test case:
XDOR_BJXR_T010_SVT_1c_MSA_Step_00004.BC - 10.4 MSA_OFF

During ENA test case:
XDOR_BJXR_T010_SVT_1c_ENA_Step_00003.BC - 11.3 ENA_SHUTDOWN
XDOR_BJXR_T010_SVT_1c_ENA_Step_00004.BC - 11.4 ENA_OFF

During HEP test case:
XDOR_BJXR_T010_SVT_1c_HEP_Step_00003.BC - 12.3 HEP-E_OFF
XDOR_BJXR_T010_SVT_1c_HEP_Step_00006.BC- 12.6 HEP-I_OFF

8) MDM
XDOR_BJXR_T011_SVT_1c_MDM_Step_00003.BC - 13.3 MDM_OFF

Test plan and XDOR references

File name	Description	Test case	Number of TCs	Release Time
XDOR_BJXR_T001_SVT_1c_main_00001.BC	TLM mode 0	T1	2	ASAP
XDOR_BJXR_T001_SVT_1c_main_00002.BC	Prepare Separation	T3	3	ASAP
XDOR_BJXR_T001_SVT_1c_main_00003.BC	MMO initial setup	T4	8	ASAP
XDOR_BJXR_T001_SVT_1c_main_00004.BC	Index pulse configuration	T4	9	1 Block of RT
XDOR_BJXR_T001_SVT_1c_main_00005.BC	TCS MODE STBY	T14	11	1 Block of RT
XDOR_BJXR_T001_SVT_1c_main_00006.BC	BAT MONI_OFF	T14	1	ASAP
XDOR_BJXR_T001_SVT_1c_main_00007.BC	MC STOP	T14	2	ASAP
XDOR_BJXR_T004_SVT_1c_MDP_Step_00001.BC	Switch on MDP	T4	10	2 Block of RT
XDOR_BJXR_T004_SVT_1c_MDP_Step_00002.BC	Switch off MDP	T14	3	ASAP
XDOR_BJXR_T005_SVT_1c_PWI_Step_00001.BC	3.1 MD2U_OPE_CRUISE	T5	1	ASAP
XDOR_BJXR_T005_SVT_1c_PWI_Step_00002.BC	3.2 PME_ON	T5	3	ASAP
XDOR_BJXR_T005_SVT_1c_PWI_Step_00003.BC	3.3 PWI_check	T5	6	1 Block of RT
XDOR_BJXR_T005_SVT_1c_PWI_Step_00004.BC	3.4 PWI_ON	T5	12	1 Block of RT
XDOR_BJXR_T005_SVT_1c_PWI_Step_00005.BC	3.5 MEFISTO_ON	T5	10	1 Block of RT
XDOR_BJXR_T005_SVT_1c_PWI_Step_00006.BC	3.6 PWI_test	T5	8	2 Block of RT
XDOR_BJXR_T005_SVT_1c_PWI_Step_00007.BC	3.7 PWI_OFF	T5	5	ASAP
XDOR_BJXR_T005_SVT_1c_PWI_Step_00008.BC	3.8 MD2U_OPE_NRM	T5	1	ASAP
XDOR_BJXR_T006_SVT_1c_MWE_Step_00001.BC	4.1 PME_ON	T6	3	1 Block of RT
XDOR_BJXR_T006_SVT_1c_MWE_Step_00002.BC	4.2 MWE_ON	T6	1	ASAP
XDOR_BJXR_T006_SVT_1c_MWE_Step_00003.BC	4.3 MWE_CONTROL_CHECK	T6	1	ASAP
XDOR_BJXR_T006_SVT_1c_MWE_Step_00004.BC	4.4 MWE_OFF	T6	2	1 Block of RT
XDOR_BJXR_T006_SVT_1c_MWE_Step_00005.BC	4.5 PME_OFF	T6	3	1 Block of RT
XDOR_BJXR_T007_SVT_1c_MGF_Step_00001.BC	5.1 MGF-I_ON	T7	6	1 Block of RT
XDOR_BJXR_T007_SVT_1c_MGF_Step_00002.BC	5.2 MGF-ON_ON	T7	5	1 Block of RT
XDOR_BJXR_T007_SVT_1c_MGF_Step_00003.BC	5.3 MGF-I_OBS_SEQ	T7	4	1 Block of RT
XDOR_BJXR_T007_SVT_1c_MGF_Step_00004.BC	5.4 MGF-O_OBS_SEQ	T7	3	1 Block of RT
XDOR_BJXR_T007_SVT_1c_MGF_Step_00005.BC	5.5 MGF_OFF	T7	1	ASAP
XDOR_BJXR_T007_SVT_1c_MGF_Step_00006.BC	5.6 PME_OFF	T7	3	1 Block of RT
XDOR_BJXR_T008_SVT_1c_MEA1_Step_00001.BC	6.1 MEA1_ON	T8	4	1 Block of RT
XDOR_BJXR_T008_SVT_1c_MEA1_Step_00002.BC	6.2 MEA1_SCAN	T8	3	1 Block of RT
XDOR_BJXR_T008_SVT_1c_MEA1_Step_00003.BC	6.3 MEA1_TEST_MODE_ON	T8	1	ASAP
XDOR_BJXR_T008_SVT_1c_MEA1_Step_00004.BC	6.4 MEA1_TEST_MODE_OFF	T8	1	ASAP
XDOR_BJXR_T008_SVT_1c_MEA1_Step_00005.BC	6.5 MEA1_SCAN_OFF	T8	1	ASAP
XDOR_BJXR_T008_SVT_1c_MEA1_Step_00006.BC	6.6 MEA1_OFF	T8	4	1 Block of RT
XDOR_BJXR_T008_SVT_1c_MEA2_Step_00001.BC	7.1 MEA2_ON	T8	4	1 Block of RT
XDOR_BJXR_T008_SVT_1c_MEA2_Step_00002.BC	7.2 MEA2_SCAN	T8	3	1 Block of RT
XDOR_BJXR_T008_SVT_1c_MEA2_Step_00003.BC	7.3 MEA2_TEST_MODE_ON	T8	1	ASAP
XDOR_BJXR_T008_SVT_1c_MEA2_Step_00004.BC	7.4 MEA2_TEST_MODE_OFF	T8	1	ASAP
XDOR_BJXR_T008_SVT_1c_MEA2_Step_00005.BC	7.5 MEA2_SCAN_OFF	T8	1	ASAP

File name	Description	Test case	Number of TCs	Release Time
XDOR_BJXR_T008_SVT_1c_MEA2_Step_00006.BC	7.6 MEA2_OFF	T8	4	1 Block of RT
XDOR_BJXR_T008_SVT_1c_MIA_Step_00001.BC	8.1 MIA_ON	T8	5	1 Block of RT
XDOR_BJXR_T008_SVT_1c_MIA_Step_00002.BC	8.2 MIA_CHECK	T8	7	1 Block of RT
XDOR_BJXR_T008_SVT_1c_MIA_Step_00003.BC	8.3 MIA_OFF	T8	5	1 Block of RT
XDOR_BJXR_T009_SVT_1c_MSASI_Step_00001.BC	9.1 SET_TLM_MODE_11	T9	1	ASAP
XDOR_BJXR_T009_SVT_1c_MSASI_Step_00002.BC	9.2 MD2U_OPE_CRUISE	T9	1	ASAP
XDOR_BJXR_T009_SVT_1c_MSASI_Step_00003.BC	9.3 MSASI_ON	T9	5	ASAP
XDOR_BJXR_T009_SVT_1c_MSASI_Step_00004.BC	9.4 MSASI_OBS_SEQ	T9	7	ASAP
XDOR_BJXR_T009_SVT_1c_MSASI_Step_00005.BC	9.5 MSASI_OFF	T9	3	ASAP
XDOR_BJXR_T009_SVT_1c_MSASI_Step_00006.BC	9.6 MD2U_OPE_NRM	T9	1	ASAP
XDOR_BJXR_T009_SVT_1c_MSASI_Step_00007.BC	9.7 SET_TLM_MODE_10	T9	1	ASAP
XDOR_BJXR_T010_SVT_1c_MSA_Step_00001.BC	10.1 MSA_ON	T10	3	1 Block of RT
XDOR_BJXR_T010_SVT_1c_MSA_Step_00002.BC	10.2 MSA_CHECK	T10	2	1 Block of RT
XDOR_BJXR_T010_SVT_1c_MSA_Step_00003.BC	10.3 MSA_CAL	T10	11	1 Block of RT
XDOR_BJXR_T010_SVT_1c_MSA_Step_00004.BC	10.4 MSA_OFF	T10	3	1 Block of RT
XDOR_BJXR_T010_SVT_1c_ENA_Step_00001.BC	11.1 ENA_ON	T10	5	1 Block of RT
XDOR_BJXR_T010_SVT_1c_ENA_Step_00002.BC	11.2 ENA_CHECK	T10	4	1 Block of RT
XDOR_BJXR_T010_SVT_1c_ENA_Step_00003.BC	11.3 ENA_SHUTDOWN	T10	2	1 Block of RT
XDOR_BJXR_T010_SVT_1c_ENA_Step_00004.BC	11.4 ENA_OFF	T10	3	1 Block of RT
XDOR_BJXR_T010_SVT_1c_HEP_Step_00001.BC	12.1 HEP-E_ON	T10	4	1 Block of RT
XDOR_BJXR_T010_SVT_1c_HEP_Step_00002.BC	12.2 HEP-E_PARAM_SET	T10	11	1 Block of RT
XDOR_BJXR_T010_SVT_1c_HEP_Step_00003.BC	12.3 HEP-E_OFF	T10	4	1 Block of RT
XDOR_BJXR_T010_SVT_1c_HEP_Step_00004.BC	12.4 HEP-I_ON	T10	4	1 Block of RT
XDOR_BJXR_T010_SVT_1c_HEP_Step_00005.BC	12.5 HEP-I_PARAM_SET	T10	9	1 Block of RT
XDOR_BJXR_T010_SVT_1c_HEP_Step_00006.BC	12.6 HEP-I_OFF	T10	4	1 Block of RT
XDOR_BJXR_T011_SVT_1c_MDM_Step_00001.BC	13.1 MDM_ON	T11	6	ASAP
XDOR_BJXR_T011_SVT_1c_MDM_Step_00002.BC	13.2 MDM_check	T11	3	1 Block of RT
XDOR_BJXR_T011_SVT_1c_MDM_Step_00003.BC	13.3 MDM_OFF	T11	4	1 Block of RT
XDOR_BJXR_SVT1c_MTL_00001.BC	MTL commanding	T12	26	1 Block of RT

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Block	Time	Duration	Procedure	Command or Sequence	XDOR	Activity	MMO Start Mode	MMO End Mode	XDOR Name	Number of TCs	Release Mode [automatic/TC by TC]	Remarks
MMO DAY 1: MMO switch-ON												
MMO switch-ON and prepare MMO for 1553B monitoring												
1	T1	5	JX-SVT-002	AJXV002A		MMO switch-ON (heater switch-on)	OFF	Cruise Dormant				
		15	JX-CRP-090	AJXC090A		MMO Switch to Cruise Initial mode on CNV-A - manually	Cruise Dormant	Cruise Initial				Check that MMO dumps are open and received on VC2.
		5		AJXF999A	X	MMO TM mode configuration for 1553B monitoring	Cruise Initial	Cruise Initial	XDOR_BJXR_T001_SVT_1c_main_00001.BC	2	Command by command	At the end of this day, the MMO dumps will remain open.
MMO DAY 2: Main MMO block												
Preparation for MMO Test												
2	T2					Prepare SSMM for test, i.e. change TM mode to NECP one (Cruise high system TM mode)	Cruise Initial	Cruise Initial				Dumps of MMO data from PS34 is on-going. No routing of data to VC0. Data is expected to be dumped from VC2 once it is generated, i.e. the data is expected to arrive in real-time. The system TM mode is set to the one in NECP.
		15	JX-FCP-003	AJXF003A		MMO Operational Heater Control Start by OBCP ZJXK4242	Cruise Initial	Cruise Standby				
		5	JX-SVT-003	AJXV003A		Set MMO HK rate to 1sec	Cruise Standby	Cruise Standby				
Separation commands												
3	T3	5		AJXF999A	X	Set MMO ready for Separation	Cruise Standby	Cruise Standby	XDOR_BJXR_T001_SVT_1c_main_00002.BC	3	Command by command	Enable command modes and SYS timer. This is needed to return "Ready for Sep." to MPO.
		15	JX-SVT-004	AJXV004B		Send MMO commands for separation - MMO Separation Status Check request - MMO Post Separation Sequence disable	Cruise Standby	Cruise Standby				
MMO system switch-ON												
4	T4	20		AJXF999A	X	MMO system switch-ON - switch-on of bus systems - switch on MDP	Cruise Standby	Cruise C/O mode	XDOR_BJXR_T001_SVT_1c_main_00003.BC XDOR_BJXR_T001_SVT_1c_main_00004.BC XDOR_BJXR_T004_SVT_1c_MDP_Step_00001.BC	27	Command by command and automatic release with verification steps in between	initial setup Index piulse configuration MDP ON
NECP scenario												
5	T5	30		AJXF999A	X	PWI check	Cruise C/O mode	Cruise C/O mode	XDOR_BJXR_T005_SVT_1c_PWI_Step_00001.BC XDOR_BJXR_T005_SVT_1c_PWI_Step_00002.BC XDOR_BJXR_T005_SVT_1c_PWI_Step_00003.BC XDOR_BJXR_T005_SVT_1c_PWI_Step_00004.BC XDOR_BJXR_T005_SVT_1c_PWI_Step_00005.BC XDOR_BJXR_T005_SVT_1c_PWI_Step_00006.BC XDOR_BJXR_T005_SVT_1c_PWI_Step_00007.BC XDOR_BJXR_T005_SVT_1c_PWI_Step_00008.BC	46	Command by command and automatic release with verification steps in between	3.1 MD2U_OPE_CRUISE 3.2 PME_ON 3.3 PWI_check 3.4 PWI_ON 3.5 MEFISTO_ON 3.6 PWI_test 3.7 PWI_OFF 3.8 MD2U_OPE_NRM Note that parallel MPO activities will be taking place in SVT-1c.
		2				Go-No Go decision point						
	T6	15		AJXF999A	X	MWE check	Cruise C/O mode	Cruise C/O mode	XDOR_BJXR_T006_SVT_1c_MWE_Step_00001.BC XDOR_BJXR_T006_SVT_1c_MWE_Step_00002.BC XDOR_BJXR_T006_SVT_1c_MWE_Step_00003.BC XDOR_BJXR_T006_SVT_1c_MWE_Step_00004.BC XDOR_BJXR_T006_SVT_1c_MWE_Step_00005.BC	10	Command by command and automatic release with verification steps in between	4.1 PME_ON 4.2 MWE_ON 4.3 MWE_CONTROL_CHECK 4.4 MWE_OFF 4.5 PME_OFF
		2				Go-No Go decision point						
	T7	20		AJXF999A	X	MGF check	Cruise C/O mode	Cruise C/O mode	XDOR_BJXR_T007_SVT_1c_MGF_Step_00001.BC XDOR_BJXR_T007_SVT_1c_MGF_Step_00002.BC XDOR_BJXR_T007_SVT_1c_MGF_Step_00003.BC XDOR_BJXR_T007_SVT_1c_MGF_Step_00004.BC XDOR_BJXR_T007_SVT_1c_MGF_Step_00005.BC XDOR_BJXR_T007_SVT_1c_MGF_Step_00006.BC	22	Command by command and automatic release with verification steps in between	5.1 MGF-I_ON 5.2 MGF-ON_ON 5.3 MGF-I_OBS_SEQ 5.4 MGF-O_OBS_SEQ 5.5 MGF_OFF 5.6 PME_OFF
		2				Go-No Go decision point						

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	T8	40		AJXF999A	X	MPPE(1) check	Cruise C/O mode	Cruise C/O mode	XDOR_BJXR_T008_SVT_1c_MEA1_Step_00001.BC XDOR_BJXR_T008_SVT_1c_MEA1_Step_00002.BC XDOR_BJXR_T008_SVT_1c_MEA1_Step_00003.BC XDOR_BJXR_T008_SVT_1c_MEA1_Step_00004.BC XDOR_BJXR_T008_SVT_1c_MEA1_Step_00005.BC XDOR_BJXR_T008_SVT_1c_MEA1_Step_00006.BC XDOR_BJXR_T009_SVT_1c_MEA2_Step_00001.BC XDOR_BJXR_T009_SVT_1c_MEA2_Step_00002.BC XDOR_BJXR_T009_SVT_1c_MEA2_Step_00003.BC XDOR_BJXR_T009_SVT_1c_MEA2_Step_00004.BC XDOR_BJXR_T009_SVT_1c_MEA2_Step_00005.BC XDOR_BJXR_T009_SVT_1c_MEA2_Step_00006.BC XDOR_BJXR_T008_SVT_1c_MIA_Step_00001.BC XDOR_BJXR_T008_SVT_1c_MIA_Step_00002.BC XDOR_BJXR_T008_SVT_1c_MIA_Step_00003.BC	45	Command by command and automatic release with verification steps in between	6.1 MEA1_ON 6.2 MEA1_SCAN 6.3 MEA1_TEST_MODE_ON 6.4 MEA1_TEST_MODE_OFF 6.5 MEA1_SCAN_OFF 6.6 MEA1_OFF 7.1 MEA2_ON 7.2 MEA2_SCAN 7.3 MEA2_TEST_MODE_ON 7.4 MEA2_TEST_MODE_OFF 7.5 MEA2_SCAN_OFF 7.6 MEA2_OFF 8.1 MIA_ON 8.2 MIA_CHECK 8.3 MIA_OFF
		2				Go-No Go decision point						
	T9	20		AJXF999A	X	MSASI check (can be skipped if running short on time)	Cruise C/O mode	Cruise C/O mode	XDOR_BJXR_T009_SVT_1c_MSASI_Step_00001.BC XDOR_BJXR_T009_SVT_1c_MSASI_Step_00002.BC XDOR_BJXR_T009_SVT_1c_MSASI_Step_00003.BC XDOR_BJXR_T009_SVT_1c_MSASI_Step_00004.BC XDOR_BJXR_T009_SVT_1c_MSASI_Step_00005.BC XDOR_BJXR_T009_SVT_1c_MSASI_Step_00006.BC XDOR_BJXR_T009_SVT_1c_MSASI_Step_00007.BC	19	Command by command	9.1 SET_TLM_MODE_11 9.2 MD2U_OPE_CRUISE 9.3 MSASI_ON 9.4 MSASI_OBS_SEQ 9.5 MSASI_OFF 9.6 MD2U_OPE_NRM 9.7 SET_TLM_MODE_10
		2				Go-No Go decision point						
	T10	40		AJXF999A	X	MPPE(2) check	Cruise C/O mode	Cruise C/O mode	XDOR_BJXR_T010_SVT_1c_MSA_Step_00001.BC XDOR_BJXR_T010_SVT_1c_MSA_Step_00002.BC XDOR_BJXR_T010_SVT_1c_MSA_Step_00003.BC XDOR_BJXR_T010_SVT_1c_MSA_Step_00004.BC XDOR_BJXR_T010_SVT_1c_ENA_Step_00001.BC XDOR_BJXR_T010_SVT_1c_ENA_Step_00002.BC XDOR_BJXR_T010_SVT_1c_ENA_Step_00003.BC XDOR_BJXR_T010_SVT_1c_ENA_Step_00004.BC XDOR_BJXR_T010_SVT_1c_HEP_Step_00001.BC XDOR_BJXR_T010_SVT_1c_HEP_Step_00002.BC XDOR_BJXR_T010_SVT_1c_HEP_Step_00003.BC XDOR_BJXR_T010_SVT_1c_HEP_Step_00004.BC XDOR_BJXR_T010_SVT_1c_HEP_Step_00005.BC XDOR_BJXR_T010_SVT_1c_HEP_Step_00006.BC	69	automatic release with verification steps in between	10.1 MSA_ON 10.2 MSA_CHECK 10.3 MSA_CAL 10.4 MSA_OFF 11.1 ENA_ON 11.2 ENA_CHECK 11.3 ENA_SHUTDOWN 11.4 ENA_OFF 12.1 HEP-E_ON 12.2 HEP-E_PARAM_SET 12.3 HEP-E_OFF 12.4 HEP-I_ON 12.5 HEP-I_PARAM_SET 12.6 HEP-I_OFF
		2				Go-No Go decision point						
	T11			AJXF999A	X	MDM check	Cruise C/O mode	Cruise C/O mode	XDOR_BJXR_T011_SVT_1c_MDM_Step_00001.BC XDOR_BJXR_T011_SVT_1c_MDM_Step_00002.BC XDOR_BJXR_T011_SVT_1c_MDM_Step_00003.BC	13	Command by command and automatic release with verification steps in between	13.1 MDM_ON 13.2 MDM_check 13.3 MDM_OFF
		2				Go-No Go decision point						
	T12	15		AJXF999A	X	MTL commanding of MMO	Cruise C/O mode	Cruise C/O mode	XDOR_BJXR_SVT1c_MTL_00001.BC	26	automatic release; commands with relative release time	Note: time to release commands and execute via MTL is to be decided during SVT-1c.

MMO SVT-1c timeline
File: JX-SVT-010
Author: a.dietz-bc

Block	Time	Duration	Procedure	Command or Sequence	XDOR	Activity	MMO Start Mode	MMO End Mode	XDOR Name	Number of TCs	Release Mode [automatic/TC by TC]	Remarks
	T13	1		ZSM00215		Stop dumps of MMO data to VC2 Parameter PSM00245 (Sto Read id) = 34	Cruise C/O mode	Cruise C/O mode				
		5		ZSM00171		Start dumps of MMO data to VC0 Parameters PSM00245 Sto Read id = 34 PSM00230 Sto PS id = 34 PSM00250 Sto VC flag = 1 PSM00251 Sto VC id for S15 = VC0 PSM00252 Sto Pri flag = 0 PSM00253 Sto Pri id = 0	Cruise C/O mode	Cruise C/O mode				Keep dumps on VC0 running for 5 minutes
		1		ZSM00215		Stop dumps of MMO data to VC0 Parameter PSM00245 (Sto Read id) = 34	Cruise C/O mode	Cruise C/O mode				
		1		ZSM00171		Start dumps of MMO data to VC2 Parameters PSM00245 Sto Read id = 34 PSM00230 Sto PS id = 34 PSM00250 Sto VC flag = 1 PSM00251 Sto VC id for S15 = VC2 PSM00252 Sto Pri flag = 0 PSM00253 Sto Pri id = 0	Cruise C/O mode	Cruise C/O mode				
Prepare MMO for 1553B monitoring												
6	T14	10		AJXF999A	X	Switch OFF MDP TCS MODE STBY BAT Cell monitor OFF ATMC/SYS TIMER STOP	Cruise C/O mode	Cruise Standby	XDOR_BJXR_T004_SVT_1c_MDP_Step_00002.BC XDOR_BJXR_T001_SVT_1c_main_00004.BC XDOR_BJXR_T001_SVT_1c_main_00005.BC XDOR_BJXR_T001_SVT_1c_main_00006.BC	17	Command by command	Shutdown operational heaters before ending the MMO test slot. This will make the 1553B monitoring task easier.
		5		AJXF999A	X	MMO TM mode configuration for 1553B monitoring	Cruise Standby	Cruise Standby	XDOR_BJXR_T001_SVT_1c_main_00001.BC	2	Command by command	same XDOR as day 1 At the end of day 2, the MMO dumps remain open.
Suspending dumps of MMO data to simulate a ground station non visibility during NECP												
8	T15	1		ZSM00215		Stop dumps of MMO data to VC2 Parameter PSM00245 (Sto Read id) = 34	Cruise Standby	Cruise Standby				Stop MMO dumps during the second day for a period of 2 hours. This simulates data dumps outside pass.
		1		ZSM00171		Start dumps of MMO data to VC2 Parameters PSM00245 Sto Read id = 34 PSM00230 Sto PS id = 34 PSM00250 Sto VC flag = 0 PSM00251 Sto VC id for S15 = VC2 PSM00252 Sto Pri flag = 0 PSM00253 Sto Pri id = 0	Cruise Standby	Cruise Standby				Start the MMO PS dumps after two hours. Dumping the stored data should take around 3 minutes. Note, packet store will be dumped on VC2 with priority 8.
MMO DAY 3: Switch off MMO												
Keep MMO on until end of MMO Day 3 during SVT-1c and switch-off at end												
9	T16	5	JX-FCP-002	AJXF002A		Start OBCP: MMO Switch to Cruise Dormant Mode	Cruise Standby	Cruise Dormant				Overall slot considered is 30 min
		5	JX-SVT-002	AJXV002B		MMO switch-OFF	Cruise Dormant	OFF				Note, same two procedures to be used in case of contingency
	T17					Stop dumps of MMO data to VC2	OFF	OFF				Dumps are stopped automatically after PFM handover back to AIT at the end of SVT-1c day 4.

End of Procedure