

XRT Timeline to be uploaded on 2015/08/22

Period: 2015/08/22 10:31:00 - 2015/08/27 10:26:00

* * * * *

Normal mode

* * * * *

NOT USED

* * * * *

Flare mode

* * * * *

NOT USED

* * * * *

Active Region Search

* * * * *

NOT USED

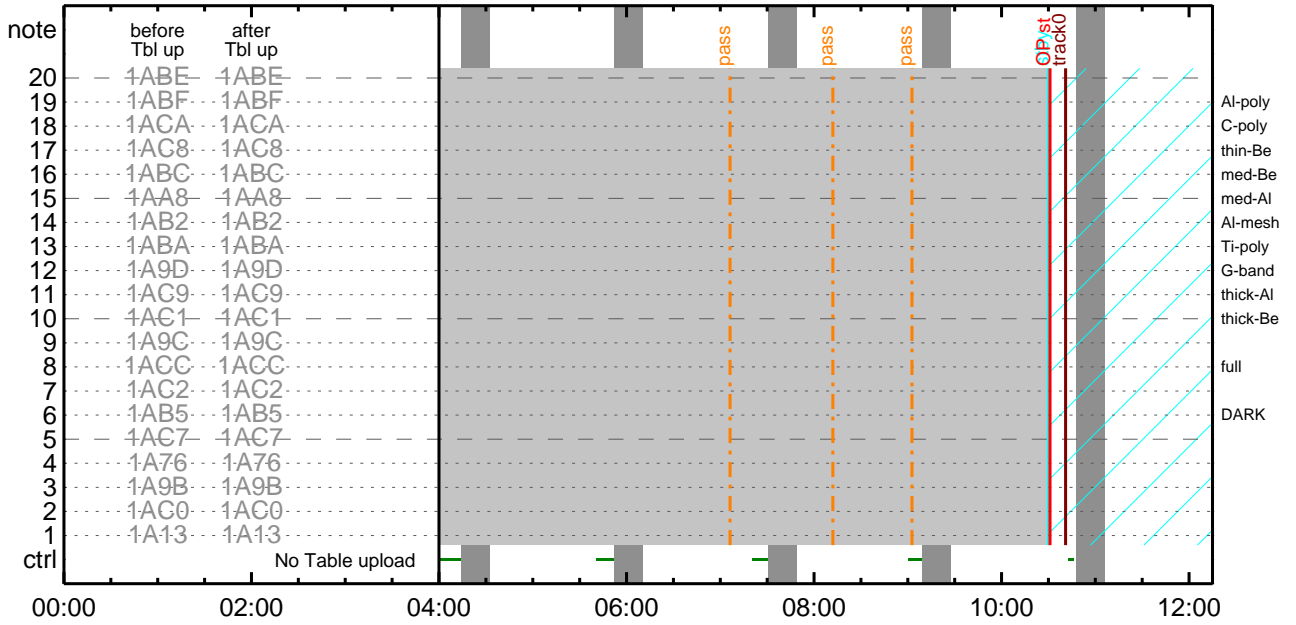
* * * * *

Flare Detection

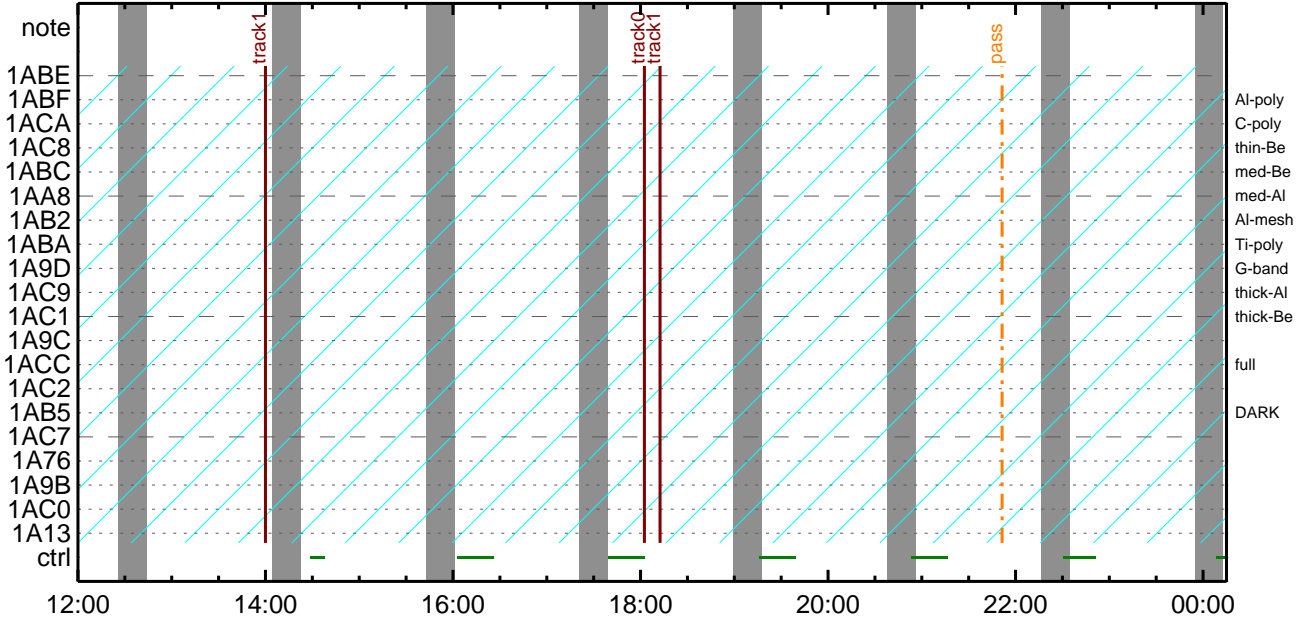
* * * * *

NOT USED

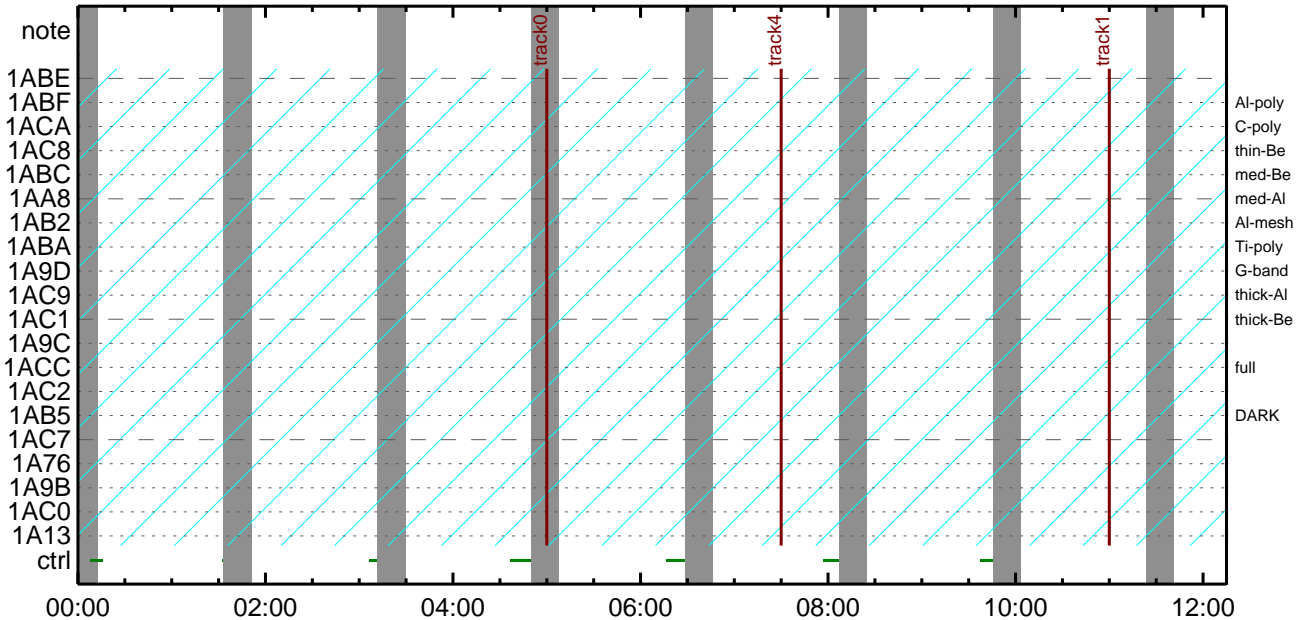
CMDI #0347 2015/08/22



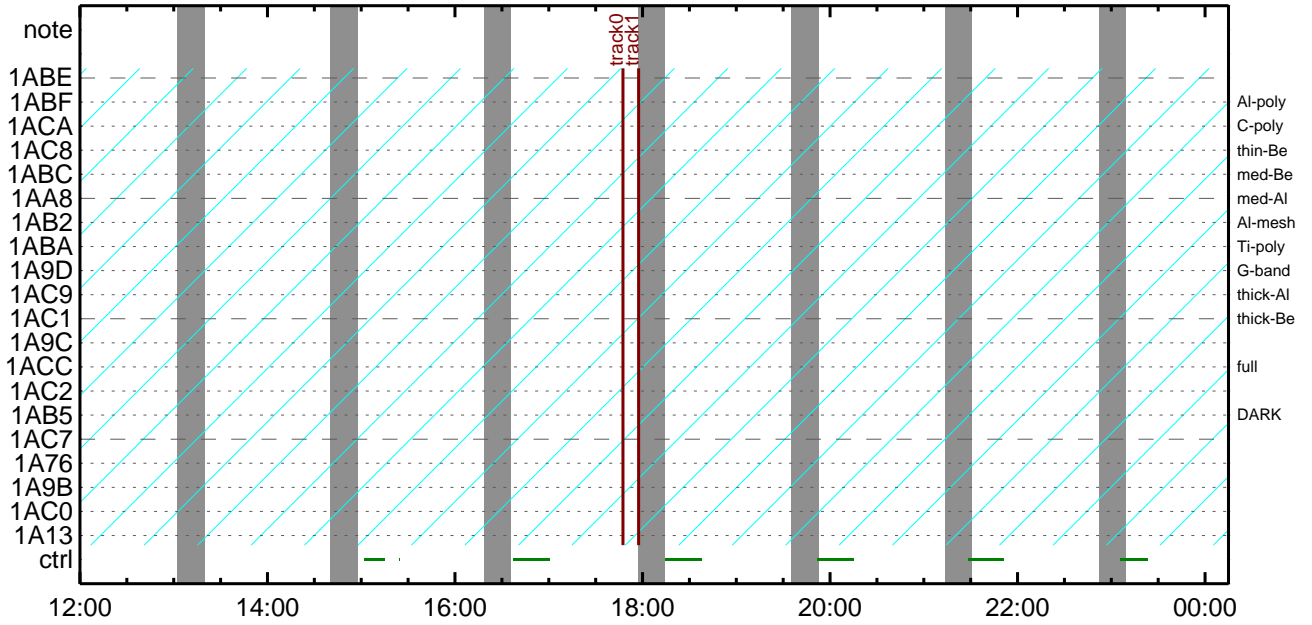
CMDI #0347 2015/08/22



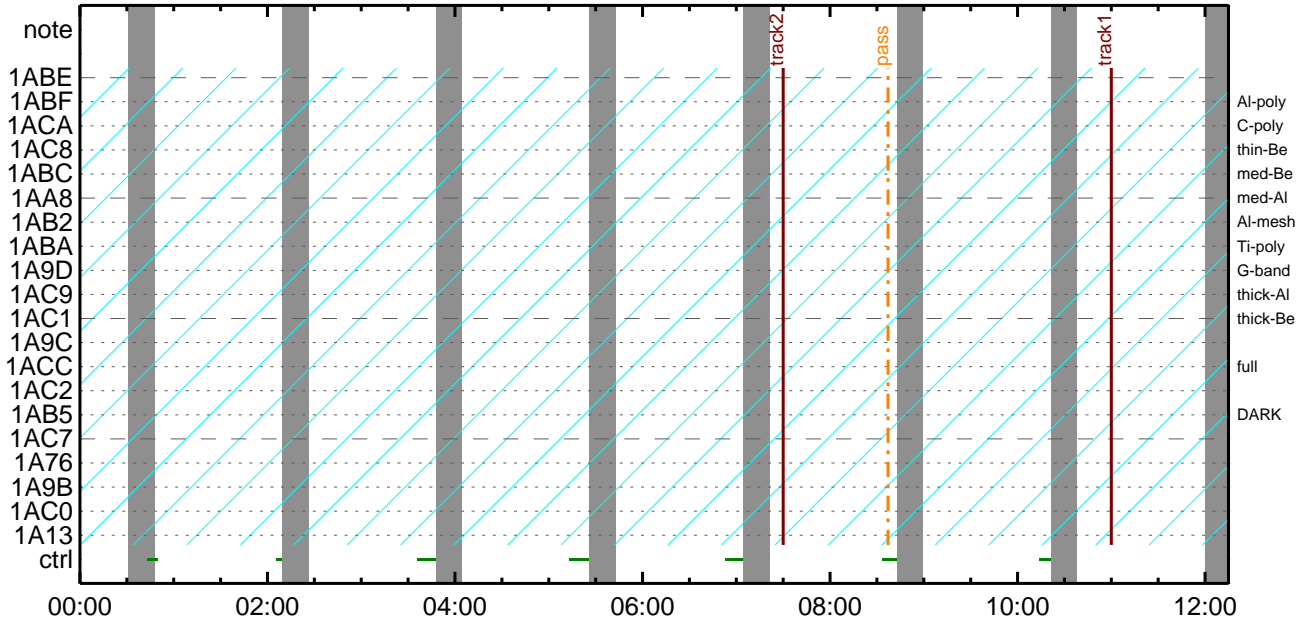
CMDI #0347 2015/08/23



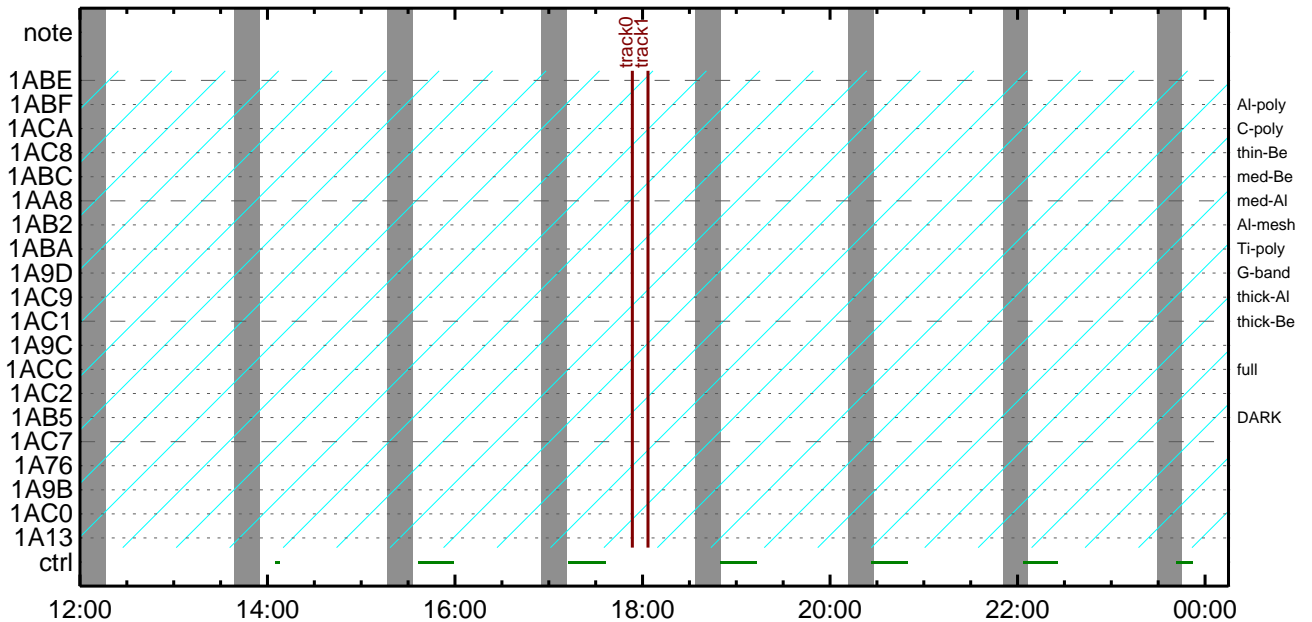
CMDI #0347 2015/08/23



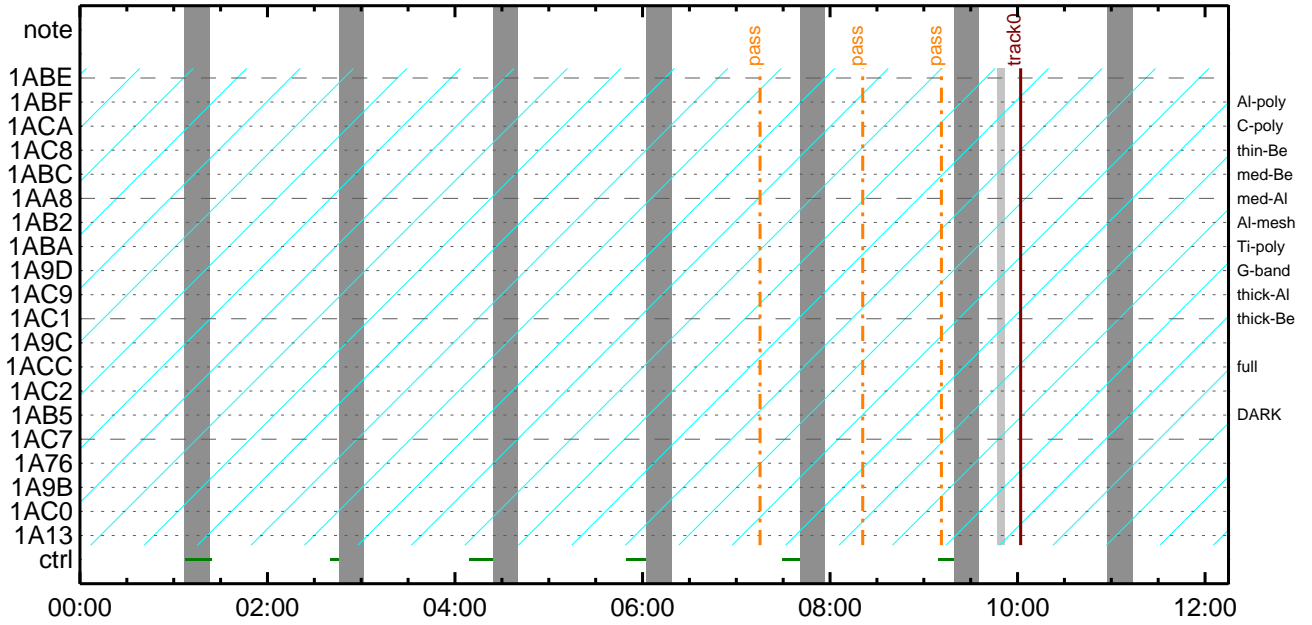
CMDI #0347 2015/08/24



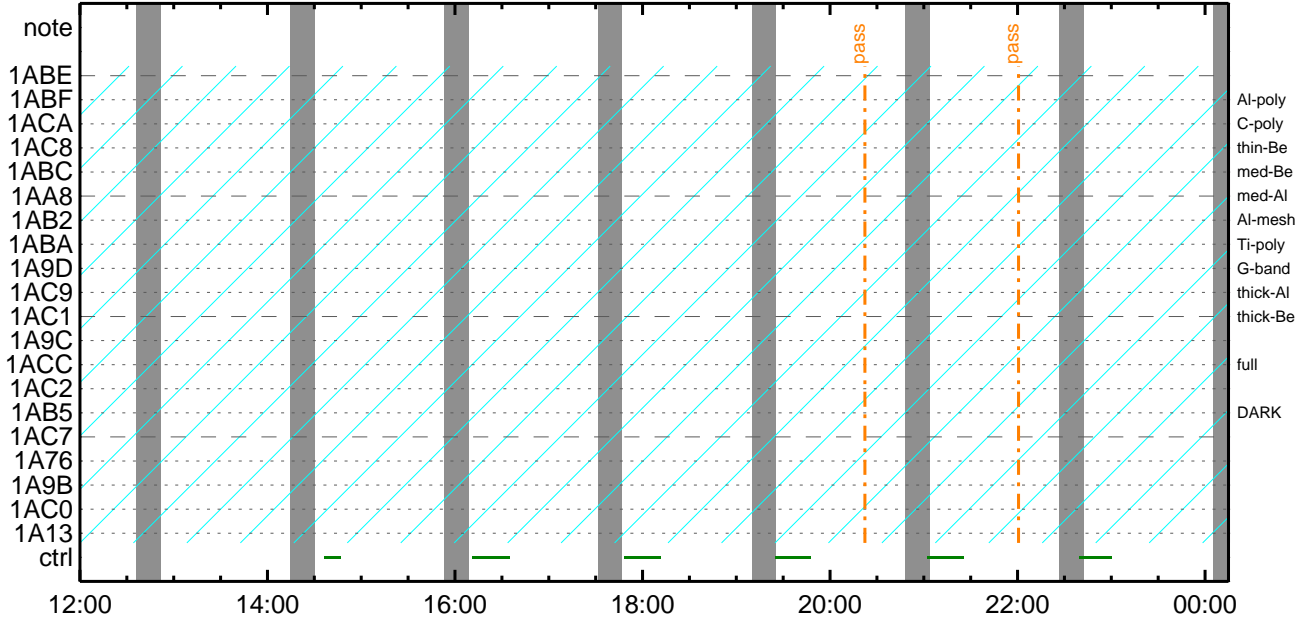
CMDI #0347 2015/08/24



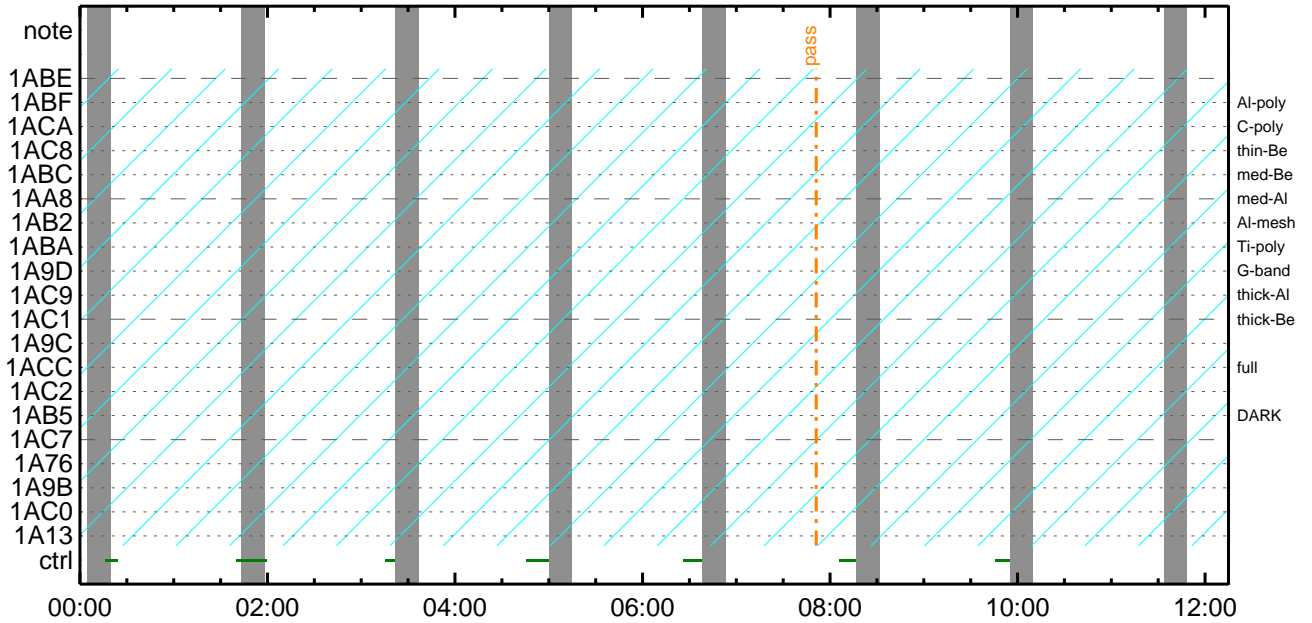
CMDI #0347 2015/08/25



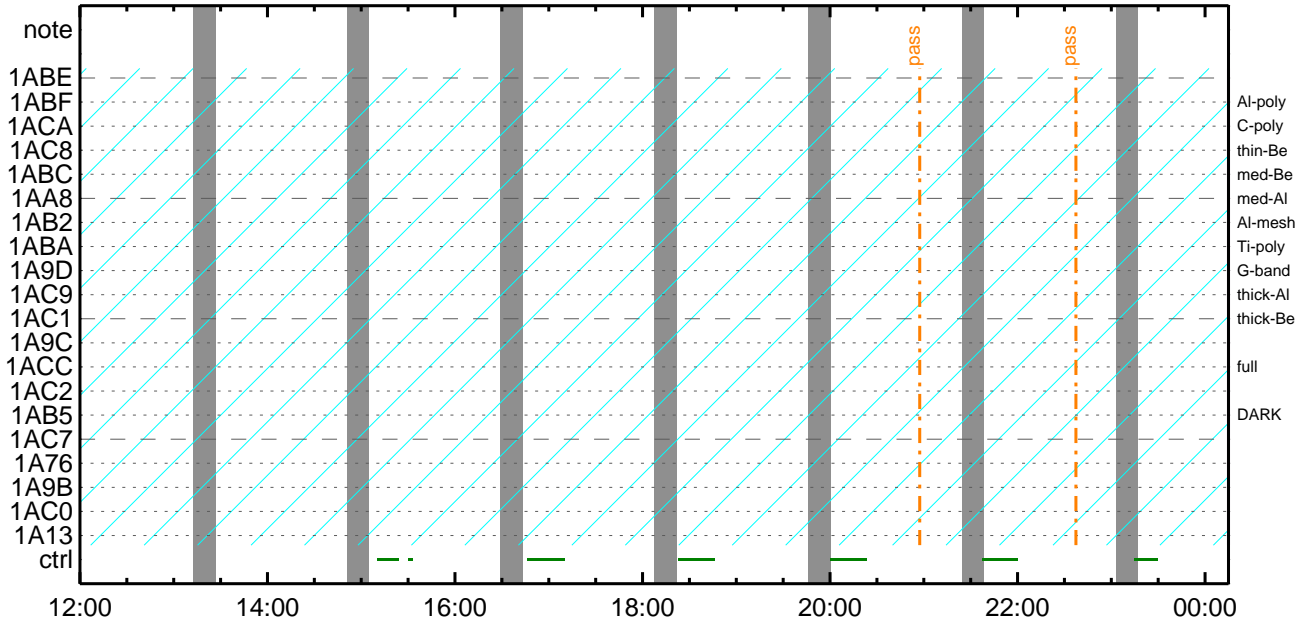
CMDI #0347 2015/08/25



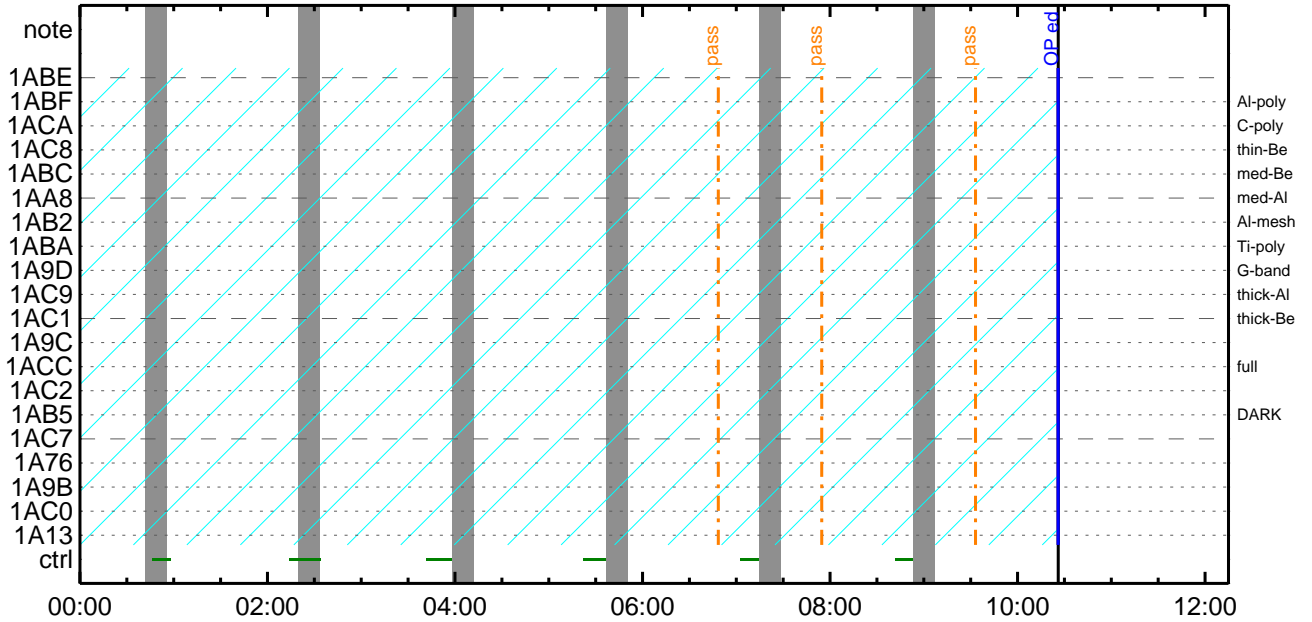
CMDI #0347 2015/08/26



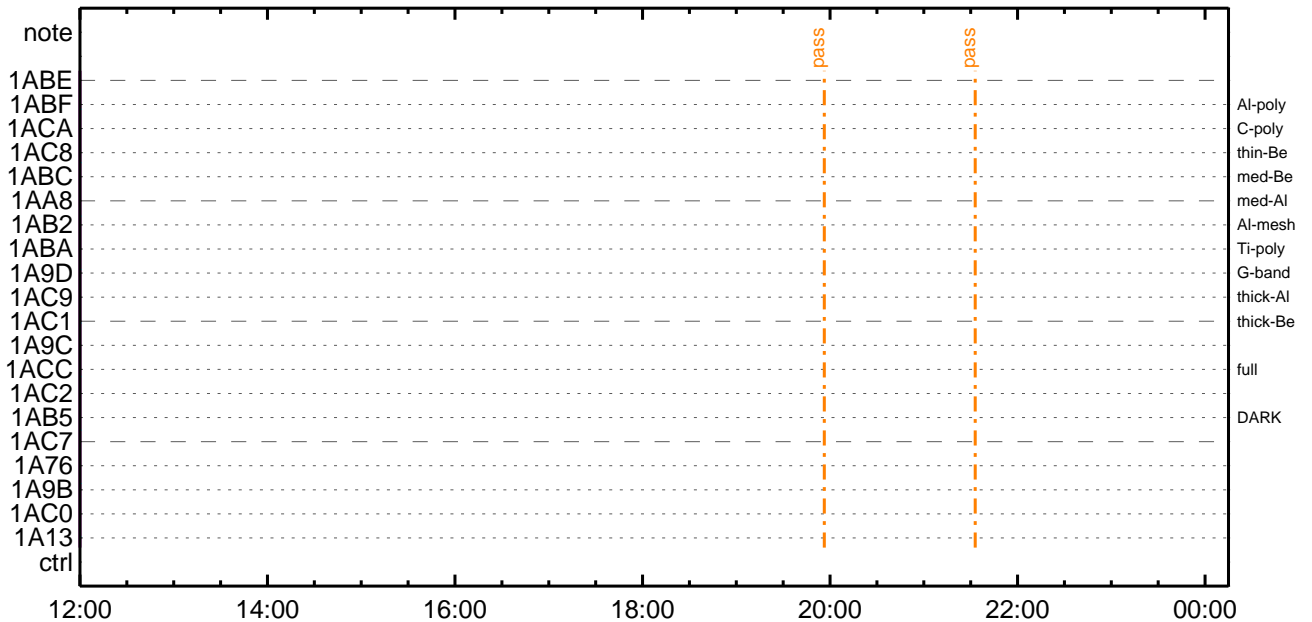
CMDI #0347 2015/08/26



CMDI #0347 2015/08/27



CMDI #0347 2015/08/27



(a) Spacecraft Operation Procedure (real-commands)

```
main-330 2015-08-22 13:49:15 205 33 SOLAR-B MAIN //
0001 C.
0002 . C. ***** AOS *****
0003 C.
0004 . C. ;ãAOSYÄY$YÄY-¼Ä»Ü;ä
0005 C.
0006 C. YÄY$;¼Y³YFYÖYÉÄ÷ç®
0007 +. DC 00-00 NULL_DUMMY_CMD
0008 C.
0009 . C. ***** AOCs : Reload orbital element (send every contact) *****
0010 C. Äí;ËççpÄâ•µ°Æ»ÍxÄÇçüçYÄY×Yí;¼YÉ;ËËèµ•ííÉ;ËèE¼°CÖâ•ç¼í¹ççî;çÄ®,ùâ¹âèçpçÄ÷ç®â•çÈçççççè;ñ
0011 +. DC 02-8E AOCU_ORB_UPD
0012 C.
0013 C.
0014 . C. *****
0015 C. OP/OGYí;¼YÉ;|YÄYÖY×
0016 C. *****
0017 C.
0018 . C. ;ãOP/OGYí;¼YÉ;ä
0019 . S. OP op-330:OP
0020 ()
0021 . S. OG og-330:OG
0022 ()
0023 C.
0024 . C. ;ãnMOG&OPî°èYÄYÖY×;ä
0025 C. NMOG(0x200000-0x207FFF;§ 32 kbyte)
0026 +. DC 01-23 DHU_DMA_DMP_PRM_SET
0027 BC (20 00 7f 01 02)
0028 C. çç[HK1_DMP_TOP_ADRS_1] EQ 40
0029 C. çç[HK1_DMP_TOP_ADRS_0] EQ 0
0030 C. çç[HK1_DMP_BLOCK_NUM] EQ 127
0031 C. çç[HK1_DMP_REPEAT_NUM] EQ 0
0032 C. çç[HK1_DMA_DMP_PIM] EQ DHU
0033 +. DC 01-22 DHU_MODE_CHNG
0034 BC (07 0b f8)
0035 C. çç[HK1_PKT_FORM_NO] EQ 7
0036 C. çç[HK1_PKT_GEN_TIME] EQ 0.25 s
0037 C. çç[HK1_S_TLM_BIT_RATE] EQ 32k
0038 C. çç[HK1_X_TLM_BIT_RATE] EQ 4M
0039 C. çç[HK1_DMP_CHK_FLG] EQ EXEC
0040 . C. YÄYÖY×¼ªªî»çð³îç§
0041 C. çç[HK1_DMP_CHK_FLG] EQ NON
0042 . C. RAM ID=NMOGçî¼E¹ç•è²îOKçð³îç§
0043 C.
0044 C. NMOG(0x208000-0x20FFFF;§ 32 kbyte)
0045 +. DC 01-23 DHU_DMA_DMP_PRM_SET
0046 BC (20 80 7f 01 02)
0047 C. çç[HK1_DMP_TOP_ADRS_1] EQ 41
0048 C. çç[HK1_DMP_TOP_ADRS_0] EQ 0
0049 C. çç[HK1_DMP_BLOCK_NUM] EQ 127
0050 C. çç[HK1_DMP_REPEAT_NUM] EQ 0
0051 C. çç[HK1_DMA_DMP_PIM] EQ DHU
0052 +. DC 01-22 DHU_MODE_CHNG
0053 BC (07 0b f8)
0054 C. çç[HK1_PKT_FORM_NO] EQ 7
0055 C. çç[HK1_PKT_GEN_TIME] EQ 0.25 s
0056 C. çç[HK1_S_TLM_BIT_RATE] EQ 32k
0057 C. çç[HK1_X_TLM_BIT_RATE] EQ 4M
0058 C. çç[HK1_DMP_CHK_FLG] EQ EXEC
0059 . C. YÄYÖY×¼ªªî»çð³îç§
0060 C. çç[HK1_DMP_CHK_FLG] EQ NON
0061 . C. RAM ID=NMOGçî¼E¹ç•è²îOKçð³îç§
0062 C.
0063 C. NMOG(0x210000-0x210FFF;§ 256byte)+OP(0x210100-0x2141FF: 16.25kbyte)
0064 +. DC 01-23 DHU_DMA_DMP_PRM_SET
0065 BC (21 00 41 01 02)
0066 C. çç[HK1_DMP_TOP_ADRS_1] EQ 42
0067 C. çç[HK1_DMP_TOP_ADRS_0] EQ 0
0068 C. çç[HK1_DMP_BLOCK_NUM] EQ 65
0069 C. çç[HK1_DMP_REPEAT_NUM] EQ 0
0070 C. çç[HK1_DMA_DMP_PIM] EQ DHU
0071 +. DC 01-22 DHU_MODE_CHNG
0072 BC (07 0b f8)
0073 C. çç[HK1_PKT_FORM_NO] EQ 7
0074 C. çç[HK1_PKT_GEN_TIME] EQ 0.25 s
0075 C. çç[HK1_S_TLM_BIT_RATE] EQ 32k
0076 C. çç[HK1_X_TLM_BIT_RATE] EQ 4M
0077 C. çç[HK1_DMP_CHK_FLG] EQ EXEC
0078 . C. YÄYÖY×¼ªªî»çð³îç§
0079 C. çç[HK1_DMP_CHK_FLG] EQ NON
0080 . C. RAM ID=NMOG, RAM ID=OPçî¼E¹ç•è²îOKçð³îç§
0081 C.
0082 . C. ***** çÈ²¼çî¼Ä´¶Å°çÈÈ¬çÄ÷ç® (¼ãµ-YÄYÖY×¼E¼ççðÄÖÄççªªâ¬ç¼í¹çççç) *****
0083 C. DHUYâ;¼YÉ;Ë¼Y¼; Yí;¼YÉ;Ëçðíáç¹
0084 +. DC 01-22 DHU_MODE_CHNG
0085 BC (02 0a f8)
0086 C. çç[HK1_PKT_FORM_NO] EQ 2
0087 C. çç[HK1_PKT_GEN_TIME] EQ 0.5S
0088 C. çç[HK1_S_TLM_BIT_RATE] EQ 32k
0089 C. çç[HK1_X_TLM_BIT_RATE] EQ 4M
0090 C.
0091 . C. *****
0092 C. TI-CMD SET (OPOG STOP/COPY/START)
0093 C. *****
0094 C.
0095 . C. NOTICE |§ OPOG UPLOADç¬Ä÷ç®NGçî¼í¹çç; ç°È²¼çî¼TI-CMDÄ÷ç®çî¼Ä¹Ôçç•çÈççççè;ñ
```

```

0096 C.          SET EDUMP I±°iYNY¹aÇ¹Ôa|a³aE;f
0097 C.
0098 . C. TIY³YF¥ÖYÉaðÀDİ¿(UT)
0099 +. TI 2015-08-22 10:26:00.0
0100 DC 01-B3 DHU_OP_STOP
0101 C.          ÇÇ[HK1_TI_CMD_NUM]           EQ      1COUNTUP
0102 C.
0103 +. TI 2015-08-22 10:26:01.0
0104 DC 01-B4 DHU_OP_COPY
0105 C.          ÇÇ[HK1_TI_CMD_NUM]           EQ      1COUNTUP
0106 C.
0107 +. TI 2015-08-22 10:26:01.0
0108 DC 01-B5 DHU_OPOG_COPY
0109 C.          ÇÇ[HK1_TI_CMD_NUM]           EQ      1COUNTUP
0110 C.
0111 +. TI 2015-08-22 10:30:59.5
0112 DC 01-B2 DHU_OP_START
0113 C.          ÇÇ[HK1_TI_CMD_NUM]           EQ      1COUNTUP
0114 C.
0115 C.  °Ê²¼aİÄê%îÍÑaİYÁY$YÁY-¹àİÜ
0116 C.          ÇÇ[HK1_TI_CMD_ENA/DIS]       EQ      ENA
0117 C.          ÇÇ[HK1_TI_CMD_NUM]         EQ      4
0118 C.          ÇÇ[HK1_NEXT_EXEC_PIM]       EQ      DHU
0119 C.          ÇÇ[HK1_NEXT_EXEC_DC]       EQ      0xB3
0120 C.
0121 . C. *****
0122 C. TIİİ°èYÁYÖY×
0123 C. *****
0124 C.
0125 C. TI_TBL(0x03AB00-0x03AEFF;§ 1024byte)
0126 +. DC 01-23 DHU_DMA_DMP_PRM_SET
0127 BC          (03 ab 03 01 02)
0128 C.          ÇÇ[HK1_DMP_TOP_ADRS_1]       EQ      07
0129 C.          ÇÇ[HK1_DMP_TOP_ADRS_0]       EQ      2B
0130 C.          ÇÇ[HK1_DMP_BLOCK_NUM]       EQ      3
0131 C.          ÇÇ[HK1_DMP_REPEAT_NUM]      EQ      0
0132 C.          ÇÇ[HK1_DMA_DMP_PIM]        EQ      DHU
0133 +. DC 01-22 DHU_MODE_CHNG
0134 BC          (07 0b f8)
0135 C.          ÇÇ[HK1_PKT_FORM_NO]         EQ      7
0136 C.          ÇÇ[HK1_PKT_GEN_TIME]        EQ      0.25 s
0137 C.          ÇÇ[HK1_S_TLM_BIT_RATE]      EQ      32k
0138 C.          ÇÇ[HK1_X_TLM_BIT_RATE]     EQ      4M
0139 C.          ÇÇ[HK1_DMP_CHK_FLG]        EQ      EXEC
0140 C.
0141 . C. YÁYÖY×½ªİ»að³İÇ$
0142 C.          ÇÇ[HK1_DMP_CHK_FLG]        EQ      NON
0143 C.
0144 . C. RAM ID=TI_TBLaİ%Ê¹Ç•ê²İOKað³İÇ$
0145 C.
0146 . C. DHUYâ;¼YÉ;Ê¼Y½,Yì;¼YÈ;Ëaðİáa¹
0147 +. DC 01-22 DHU_MODE_CHNG
0148 BC          (02 0a f8)
0149 C.          ÇÇ[HK1_PKT_FORM_NO]         EQ      2
0150 C.          ÇÇ[HK1_PKT_GEN_TIME]        EQ      0.5S
0151 C.          ÇÇ[HK1_S_TLM_BIT_RATE]      EQ      32K
0152 C.          ÇÇ[HK1_X_TLM_BIT_RATE]     EQ      4M
0153 C.
0154 C. *****
0155 C. SOT TI command set
0156 C. *****
0157 C. Execute, after the success of OP upload.
0158 +. TI 2015-08-22 10:30:16.0
0159 DC 07-F0 MDP_SOT_MODE_STBY
0160 BC          (41)
0161 . C. -----
0162 C.      HK1_TI_CMD_NUM          = 1 CNTUP [ ]
0163 C. -----
0164 C. ***** SOT END *****
0165 C.
0166 C. ***** XRT START *****
0167 C. Execute, after the success of OP upload.
0168 +. TI 2015-08-22 10:30:00.0
0169 DC 07-F0 MDP_XRT_MODE_STBY
0170 BC          (c3)
0171 . C.          [ ] [HK1_TI_CMD_NUM]      EQ      1COUNTUP
0172 C.
0173 C. ***** XRT END *****
0174 . C. Stop EIS observation and temporarily disable EIS mode changes
0175 C.
0176 C.
0177 C. ***** Start EIS operation (TI set) *****
0178 C. Execute, after the success of OP upload.
0179 C. Set EIS TI-commands
0180 +. TI 2015-08-22 10:30:30.0
0181 DC 07-FC EIS_MODE_MANU
0182 BC          (21 02)
0183 +. TI 2015-08-22 10:30:40.0
0184 DC 07-FC EIS_MODE_CHG_DIS
0185 BC          (22)
0186 . C.          [ ] [HK1_TI_CMD_NUM]      EQ      2 COUNTUP
0187 C. ***** End EIS operation (TI set) *****
0188 C.
0189 C.
0190 C.
0191 . C. ***** MDP `ÃÄİaİ»ö¼YaÈÄa¹aèDCBC•x²è *****
0192 C. (%â°İYÖYÁYÉY¥Y¥YáYÇYéaÈ%¼a¼Ä»Üa¹aé)
0193 . S. DC-BC dcbc-402:DCBC

```

```
0194 (MDP_known_event)
0195 C.
0196 C.
0197 . C. ***** ¥ÐŸ!•İ Daily±;İÑøĒ'Øσ¹αēDCBC•x²è *****
0198 . S. DC-BC dcbc-153:DCBC
0199 (SPECIAL-CMD_DAILY_OPERATIN_DCB)
0200 C.
0201 C.
0202 . C. ;ãLOS¥Á¥S¥Ã¥~¼Â»Ü;ã
0203 C.
0204 . C. ***** LOS *****
0205 C.
```



```
0096 C.
0097 C.
0098 . C. ***** AOCS Commands (Tracking Curve Upload) *****
0099 C. Upload the Orbit Element and the Target Attitude
0100 C. RAM-ID:TARGET_ATT
0101 . S. RAM ram-150:TARGET_ATT
0102 ( )
0103 C.
0104 C.
0105 C. Set the dump memory area of TARGET_ATT
0106 +. DC 02-48 AOCU_DUMP_SET
0107 BC (07 00 00 00 18 00)
0108 C.
0109 C. <A_STS1>[MEMORY OPERATE STATUS] ADRS = 070000 [ ]
0110 C.
0111 C.
0112 C. Change the TLMFormatNo for the AOCS Dump Format
0113 +. DC 01-22 DHU_MODE_CHNG
0114 BC (04 0b f8)
0115 C.
0116 C. Wait for AOCSDUMP to end
0117 C.
0118 . C. Check the dump memory
0119 C.
0120 C. Result = OK [ ]
0121 C.
0122 +. DC 01-22 DHU_MODE_CHNG
0123 BC (02 0a f8)
0124 C.
0125 C. <A_***>[TLM STS] FMT = 2 [ ]
0126 C.
0127 +. DC 02-8E AOCU_ORB_UPD
0128 . C.
0129 . C. Load OBSTBL, dump OBSTBL, enable EIS mode changes
0130 +. DC 07-FC EIS_MODE_CHG_ENA
0131 BC (20)
0132 . C. Verify EIS_MODE_CHG_FLG is ENA
0133 +. DC 07-FC EIS_MODE_MANU
0134 BC (21 02)
0135 . C. Verify EIS in MANUAL mode
0136 . C. Estimated OBSTBL upload time is 1m23s
0137 C. *****
0138 C. EIS START OBSTBL LOAD
0139 C. *****
0140 . S. RAM ram-820:EIS_OBSTBL
0141 ( )
0142 +. DC 07-FC EIS_DUMP_OBSTBL
0143 BC (07 07 07 00 00 70 00)
0144 C.
0145 C. Execute, after the success of OBSTBL upload.
0146 C. Set EIS TI-commands
0147 +. TI 2015-08-22 10:30:50.0
0148 DC 07-FC EIS_MODE_CHG_ENA
0149 BC (20)
0150 . C. [ ] [HK1_TI_CMD_NUM] EQ 1 COUNTUP
0151 C. *****
0152 C. EIS END OBSTBL LOAD
0153 C. *****
0154 C.
0155 . C. ***** MDP 'uAÎaÎ»ô¼YðEÄða¹æDCBC•x²è *****
0156 C. (¼a°iYÓYÄYÈYÏYÈYáYçYèaE¾¼a¼Ä»Ûa¹æ)
0157 . S. DC-BC dcbc-402:DCBC
0158 (MDP_known_event)
0159 C.
0160 C.
0161 . C. ***** YDÿ¹•Ï Daily±çÏÑaË'Øa¹æDCBC•x²è *****
0162 . S. DC-BC dcbc-153:DCBC
0163 (SPECIAL-CMD_DAILY_OPERATIN_DCB)
0164 C.
0165 C.
0166 . C. ;ãLOS¥Á¥§¥Ä¥-¼Ä»Û;ã
0167 C.
0168 . C. ***** LOS *****
0169 C.
```

(a) Spacecraft Operation Procedure (real-commands)

```

main-332 2015-08-22 13:49:15 79 33 SOLAR-B MAIN //
0001 C.
0002 . C. ***** AOS *****
0003 C.
0004 . C. ;ãAOSYÁY$YÁY-¼Á»Û;ã
0005 C.
0006 C. YÀYB;¼Y³YF¥ÖYÉÁ+¿®
0007 +. DC 00-00 NULL_DUMMY_CMD
0008 C.
0009 . C. ***** AOCSS : Reload orbital element (send every contact) *****
0010 C. Áí;È¿¿òÀò•µ°È»Í×ÁÇóÍYçYÁY×Yí;¼YÉj;ÈÈèµ•ííÉ;ÈòÈ¼°ÇÒò•ò¿¼í¹çòí;çÀ®), ùò¹òèòòòòÇÁ+¿®ò•òÈòòòòò²òÈ;f
0011 +. DC 02-8E AOCU_ORB_UPD
0012 C.
0013 C.
0014 . C. *****
0015 C. SOT table upload
0016 C. *****
0017 . C. < Stop FG table >
0018 +. DC 07-F0 MDP_FG_CTRL_MANU
0019 BC (51)
0020 . C. -----
0021 C. MDP_FG_CTRL_MODE = MANU [ ]
0022 C. -----
0023 C.
0024 . C. <Upload FG Observation Table>
0025 . S. RAM ram-262:MDP_OBS_F
0026 ( )
0027 C.
0028 . C. < Dump RAMID=MDP_OBS_F >
0029 +. DC 07-F0 MDP_DUMP_FGTBL
0030 BC (82 07 00 00 00 38 b8)
0031 C. -----
0032 C. MDP_OBS_F verify = OK/NG [ ]
0033 C. -----
0034 C.
0035 . C. < Stop SP table >
0036 +. DC 07-F0 MDP_SP_CTRL_MANU
0037 BC (61)
0038 C. -----
0039 C. MDP_SP_CTRL_MODE = MANU [ ]
0040 C. -----
0041 C.
0042 . C. <Upload SP Observation Table>
0043 . S. RAM ram-284:MDP_OBS_S
0044 ( )
0045 C.
0046 . C. < Dump RAMID=MDP_OBS_S >
0047 +. DC 07-F0 MDP_DUMP_SPTBL
0048 BC (83 07 00 00 00 38 b8)
0049 C. -----
0050 C. MDP_OBS_S verify = OK/NG [ ]
0051 C. -----
0052 C.
0053 C. *****
0054 C. SOT TI command set
0055 C. *****
0056 C. Execute, after the success of TBL upload.
0057 +. TI 2015-08-22 10:30:18.0
0058 DC 07-F0 MDP_SOT_MODE_OBSV
0059 BC (40)
0060 . C. -----
0061 C. HK1_TI_CMD_NUM = 1 CNTUP [ ]
0062 C. -----
0063 C.
0064 C.
0065 . C. ***** MDP `ûÁîóî»óYóÈÁò¹òéDCBC•×²è *****
0066 C. (¾á°íYÖYÁYÈY¥YÈYfáYçYÈòÈ¼°ÇÒò•ò¿¼í¹çòí;çÀ®)
0067 . S. DC-BC dcbc-402:DCBC
0068 (MDP_known_event)
0069 C.
0070 C.
0071 . C. ***** YDY¹•İ Daily±;¿ÍÑòÈ´Øò¹òéDCBC•×²è *****
0072 . S. DC-BC dcbc-153:DCBC
0073 (SPECIAL-CMD_DAILY_OPERATIN_DCB)
0074 C.
0075 C.
0076 . C. ;ãLOSÁY$YÁY-¼Á»Û;ã
0077 C.
0078 . C. ***** LOS *****
0079 C.

```

*** OP Sequence for XRT ***

2015/08/22	10:41:00.0	AOCS_ORe-point_Start_1_OG [0x097]							
		AOCU_NM	5	02-76	00	c6	36	39	ca
2015/08/22	14:00:00.0	AOCS_ORe-point_Start_2_OG [0x098]							
		AOCU_NM	5	02-76	01	00	00	00	00
2015/08/22	18:02:30.0	AOCS_ORe-point_Start_3_OG [0x099]							
		AOCU_NM	5	02-76	00	00	00	00	00
2015/08/22	18:12:30.0	AOCS_ORe-point_Start_2_OG [0x098]							
		AOCU_NM	5	02-76	01	00	00	00	00
2015/08/23	05:00:00.0	AOCS_ORe-point_Start_4_OG [0x09a]							
		AOCU_NM	5	02-76	00	13	53	51	fb
2015/08/23	07:30:00.0	AOCS_ORe-point_Start_5_OG [0x09b]							
		AOCU_NM	5	02-76	04	00	00	00	00
2015/08/23	11:00:00.0	AOCS_ORe-point_Start_2_OG [0x098]							
		AOCU_NM	5	02-76	01	00	00	00	00
2015/08/23	17:47:30.0	AOCS_ORe-point_Start_3_OG [0x099]							
		AOCU_NM	5	02-76	00	00	00	00	00
2015/08/23	17:57:30.0	AOCS_ORe-point_Start_2_OG [0x098]							
		AOCU_NM	5	02-76	01	00	00	00	00
2015/08/24	07:30:00.0	AOCS_ORe-point_Start_6_OG [0x09c]							
		AOCU_NM	5	02-76	02	00	00	00	00
2015/08/24	11:00:00.0	AOCS_ORe-point_Start_2_OG [0x098]							
		AOCU_NM	5	02-76	01	00	00	00	00
2015/08/24	17:53:30.0	AOCS_ORe-point_Start_3_OG [0x099]							
		AOCU_NM	5	02-76	00	00	00	00	00
2015/08/24	18:03:30.0	AOCS_ORe-point_Start_2_OG [0x098]							
		AOCU_NM	5	02-76	01	00	00	00	00
2015/08/25	06:30:00.0	XRT_TCIB_XRT_S_HTR_A_DIS_416_OG [0x1a0]							
		TCIB_XRT_S_HTR_A_DIS	0	04-C0					
2015/08/25	10:02:00.0	AOCS_ORe-point_Start_3_OG [0x099]							
		AOCU_NM	5	02-76	00	00	00	00	00