

# XRT Timeline to be uploaded on 2013/11/21

Period: 2013/11/21 10:04:00 - 2013/11/26 09:18:00

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Normal mode

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## XOB #19E5: AR Standard-A(Filter-Ratio with Al/poly and thin-Be) with PFB, 384x384 at 1064 1048, thin-Be, thick-Al, and Al/Poly context, with G-band (33m)

| Term                            | Pointing (x, y)                       | Comment                                    |
|---------------------------------|---------------------------------------|--|
| 11/21 10:17:00 - 11/21 17:53:54 | Track ( 562.2, 43.8) @ 11/21 10:14:00 | # OP start + 10min, AR 11899 observations. |
| 11/21 18:07:00 - 11/22 05:59:54 | Track ( 620.7, 45.9) @ 11/21 18:04:00 | # AR cont.                                 |

| PROG= 08 Inf.-time(s) |                |                |          |      |       |       |     |     |                      |       |            |          |        |
|-----------------------|----------------|----------------|----------|------|-------|-------|-----|-----|----------------------|-------|------------|----------|--------|
| Subr=                 | 1              | 1-time(s)      | 2.0sec   |      |       |       |     |     |                      |       |            |          |        |
| Seqn=                 | 8              | 2-time(s)      | 2.0sec   |      |       |       |     |     |                      |       |            |          |        |
|                       | Open/G-band    | Open/G-band    | close    | Safe | Norm  | 44ms  | Obs | 1x1 | 384x384 (1064, 1048) | DPCM  | 0          | 0        | 2.0sec |
| Subr=                 | 2              | 2-time(s)      | 2.0sec   |      |       |       |     |     |                      |       |            |          |        |
| Seqn=                 | 24             | 1-time(s)      | 2.0sec   |      |       |       |     |     |                      |       |            |          |        |
|                       | Open/Ti-poly   | Open/thick-Al  | close    | Safe | Dark  | 16.0s | Obs | 1x1 | 384x384 (1064, 1048) | Q=98  | 0          | 0        | 2.0sec |
|                       | Open/G-band    | Open/G-band    | open     | Safe | Norm  | 32ms  | Obs | 1x1 | 384x384 (1064, 1048) | Q=98  | 0          | 0        | 2.0sec |
| Seqn=                 | 42             | 4-time(s)      | 2.0sec   |      |       |       |     |     |                      |       |            |          |        |
|                       | Al-poly/Open   | thin-Be/Open   | close    | Safe | Norm  | 500ms | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 0        | 2.0sec |
|                       | thin-Be/Open   | med-Be/Open    | close    | Safe | Norm  | 5.66s | Obs | 1x1 | 512x512 (1064, 1048) | Q=95  | 3          | 0        | 2.0sec |
|                       | Open/thick-Al  | Open/thick-Al  | close    | Safe | Norm  | 16.0s | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 0        | 2.0sec |
| Seqn=                 | 62             | 8-time(s)      | 240.0sec |      |       |       |     |     |                      |       |            |          |        |
|                       | thin-Be/Open   | med-Be/Open    | close    | Safe | Norm  | 1.00s | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 0        | 2.0sec |
|                       | Al-poly/Open   | thin-Be/Open   | close    | Safe | Norm  | 500ms | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 0        | 2.0sec |
|                       | thin-Be/Open   | med-Be/Open    | close    | Safe | Norm  | 1.00s | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 1        | 2.0sec |
|                       | Al-poly/Open   | thin-Be/Open   | close    | Safe | Norm  | 500ms | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 1        | 2.0sec |
|                       | thin-Be/Open   | med-Be/Open    | close    | Safe | Norm  | 1.00s | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 2        | 2.0sec |
|                       | Al-poly/Open   | thin-Be/Open   | close    | Safe | Norm  | 500ms | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 2        | 2.0sec |
|                       | Default Filter | Thicker Filter | VLS      | mode | image | Exp.  | CCD | Bin | ROI: size (center)   | Comp. | AEC Buffer | Interval |        |

## XOB #19DA: Synoptic Q95 2x2 - Al/mesh(5/128/723) + Dark cal(2x2 4x4 8x8 512 Q98) + Dark cal(1x1 512x2048 - 1x1 2048x512) + Ti-poly(24/362/1443) + Thin

| Term                            | Pointing (x, y)   | Comment                       |
|---------------------------------|-------------------|-------------------------------|
| 11/21 17:57:00 - 11/21 18:03:54 | Fixed ( 0.0, 0.0) | synoptic, shifted -6.0 min    |
| 11/22 06:03:00 - 11/22 06:09:54 | Fixed ( 0.0, 0.0) | synoptic                      |
| 11/22 15:33:00 - 11/22 15:39:30 | Fixed ( 0.0, 0.0) | synoptic, shifted a few hours |
| 11/23 06:33:00 - 11/23 06:39:54 | Fixed ( 0.0, 0.0) | synoptic, shifted 30.0 min    |

| PROG= 17 1-time(s) |                |                |         |      |       |       |     |     |                        |       |            |          |        |
|--------------------|----------------|----------------|---------|------|-------|-------|-----|-----|------------------------|-------|------------|----------|--------|
| Subr=              | 1              | 1-time(s)      | 12.0sec |      |       |       |     |     |                        |       |            |          |        |
| Seqn=              | 84             | 1-time(s)      | 4.0sec  |      |       |       |     |     |                        |       |            |          |        |
|                    | Open/Al-mesh   | Open/Al-mesh   | close   | Safe | Norm  | 5ms   | Obs | 2x2 | 2048x2048 (1024, 1024) | Q=95  | 0          | 0        | 2.0sec |
|                    | Open/Al-mesh   | Open/Al-mesh   | close   | Safe | Norm  | 125ms | Obs | 2x2 | 2048x2048 (1024, 1024) | Q=95  | 0          | 0        | 2.0sec |
|                    | Open/Al-mesh   | Open/Al-mesh   | close   | Safe | Norm  | 707ms | Obs | 2x2 | 2048x2048 (1024, 1024) | Q=95  | 0          | 0        | 2.0sec |
| Seqn=              | 5              | 1-time(s)      | 2.0sec  |      |       |       |     |     |                        |       |            |          |        |
|                    | Open/Ti-poly   | Open/thick-Al  | close   | Safe | Dark  | 500ms | Obs | 2x2 | 2048x2048 (1024, 1024) | Q=98  | 0          | 0        | 2.0sec |
|                    | Open/Ti-poly   | Open/thick-Al  | close   | Safe | Dark  | 500ms | Obs | 4x4 | 2048x2048 (1024, 1024) | Q=98  | 0          | 0        | 2.0sec |
|                    | Open/Ti-poly   | Open/thick-Al  | close   | Safe | Dark  | 500ms | Obs | 8x8 | 2048x2048 (1024, 1024) | Q=98  | 0          | 0        | 2.0sec |
|                    | Open/Ti-poly   | Open/thick-Al  | close   | Safe | Dark  | 500ms | Obs | 1x1 | 2048x512 (1024, 1024)  | DPCM  | 0          | 0        | 2.0sec |
|                    | Open/Ti-poly   | Open/thick-Al  | close   | Safe | Dark  | 500ms | Obs | 1x1 | 512x2048 (1024, 1024)  | DPCM  | 0          | 0        | 2.0sec |
| Seqn=              | 86             | 1-time(s)      | 4.0sec  |      |       |       |     |     |                        |       |            |          |        |
|                    | Open/Ti-poly   | Open/Ti-poly   | close   | Safe | Norm  | 24ms  | Obs | 2x2 | 2048x2048 (1024, 1024) | Q=95  | 0          | 0        | 2.0sec |
|                    | Open/Ti-poly   | Open/Ti-poly   | close   | Safe | Norm  | 354ms | Obs | 2x2 | 2048x2048 (1024, 1024) | Q=95  | 0          | 0        | 2.0sec |
|                    | Open/Ti-poly   | Open/Ti-poly   | close   | Safe | Norm  | 1.41s | Obs | 2x2 | 2048x2048 (1024, 1024) | Q=95  | 0          | 0        | 2.0sec |
| Seqn=              | 95             | 1-time(s)      | 2.0sec  |      |       |       |     |     |                        |       |            |          |        |
|                    | thin-Be/Open   | thin-Be/Open   | close   | Safe | Norm  | 63ms  | Obs | 2x2 | 2048x2048 (1024, 1024) | Q=95  | 0          | 0        | 2.0sec |
|                    | thin-Be/Open   | thin-Be/Open   | close   | Safe | Norm  | 500ms | Obs | 2x2 | 2048x2048 (1024, 1024) | Q=95  | 0          | 0        | 2.0sec |
|                    | thin-Be/Open   | thin-Be/Open   | close   | Safe | Norm  | 2.83s | Obs | 2x2 | 2048x2048 (1024, 1024) | Q=95  | 0          | 0        | 2.0sec |
| Seqn=              | 6              | 1-time(s)      | 2.0sec  |      |       |       |     |     |                        |       |            |          |        |
|                    | Open/G-band    | Open/G-band    | open    | Safe | Norm  | 8ms   | Obs | 2x2 | 2048x2048 (1024, 1024) | Q=90  | 0          | 0        | 2.0sec |
|                    | Open/G-band    | Open/G-band    | close   | Safe | Norm  | 32ms  | Obs | 1x1 | 2048x2048 (1024, 1024) | Q=95  | 0          | 0        | 2.0sec |
|                    | Default Filter | Thicker Filter | VLS     | mode | image | Exp.  | CCD | Bin | ROI: size (center)     | Comp. | AEC Buffer | Interval |        |

## XOB #19E4: AR Standard-A(Filter-Ratio with Al/poly and thin-Be) with PFB, 384x384 at 1064 1048, thin-Be, thick-Al, and Al/Poly context, with G-band (33m)

| Term                            | Pointing (x, y)                       | Comment   |
|---------------------------------|---------------------------------------|---|
| 11/22 06:13:00 - 11/22 15:29:54 | Fixed ( -943.6, -228.8)               | # Fixed pointing at East limb for EIS obs. of returning AR. |
| 11/23 00:44:00 - 11/23 06:29:54 | Track ( 811.5, 55.0) @ 11/23 00:41:00 | AR cont.  |
| 11/23 06:43:00 - 11/23 09:14:00 | Track ( 840.9, 56.8) @ 11/23 06:40:00 | # AR cont.  |

| PROG= 04 Inf.-time(s) |              |               |        |      |      |       |     |     |                      |      |   |   |        |
|-----------------------|--------------|---------------|--------|------|------|-------|-----|-----|----------------------|------|---|---|--------|
| Subr=                 | 1            | 1-time(s)     | 2.0sec |      |      |       |     |     |                      |      |   |   |        |
| Seqn=                 | 8            | 2-time(s)     | 2.0sec |      |      |       |     |     |                      |      |   |   |        |
|                       | Open/G-band  | Open/G-band   | close  | Safe | Norm | 44ms  | Obs | 1x1 | 384x384 (1064, 1048) | DPCM | 0 | 0 | 2.0sec |
| Subr=                 | 2            | 2-time(s)     | 2.0sec |      |      |       |     |     |                      |      |   |   |        |
| Seqn=                 | 24           | 1-time(s)     | 2.0sec |      |      |       |     |     |                      |      |   |   |        |
|                       | Open/Ti-poly | Open/thick-Al | close  | Safe | Dark | 16.0s | Obs | 1x1 | 384x384 (1064, 1048) | Q=98 | 0 | 0 | 2.0sec |
|                       | Open/G-band  | Open/G-band   | open   | Safe | Norm | 32ms  | Obs | 1x1 | 384x384 (1064, 1048) | Q=98 | 0 | 0 | 2.0sec |
| Seqn=                 | 42           | 4-time(s)     | 2.0sec |      |      |       |     |     |                      |      |   |   |        |
|                       | Al-poly/Open | thin-Be/Open  | close  | Safe | Norm | 500ms | Obs | 1x1 | 384x384 (1064, 1048) | Q=95 | 3 | 0 | 2.0sec |
|                       | thin-Be/Open | med-Be/Open   | close  | Safe | Norm | 5.66s | Obs | 1x1 | 512x512 (1064, 1048) | Q=95 | 3 | 0 | 2.0sec |

|                                     |                |       |      |       |       |     |     |                      |       |            |          |        |
|-------------------------------------|----------------|-------|------|-------|-------|-----|-----|----------------------|-------|------------|----------|--------|
| Open/thick-Al                       | Open/thick-Al  | close | Safe | Norm  | 16.0s | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 0        | 2.0sec |
| <b>Seqn= 62 10-time(s) 180.0sec</b> |                |       |      |       |       |     |     |                      |       |            |          |        |
| thin-Be/Open                        | med-Be/Open    | close | Safe | Norm  | 1.00s | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 0        | 2.0sec |
| Al-poly/Open                        | thin-Be/Open   | close | Safe | Norm  | 500ms | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 0        | 2.0sec |
| thin-Be/Open                        | med-Be/Open    | close | Safe | Norm  | 1.00s | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 1        | 2.0sec |
| Al-poly/Open                        | thin-Be/Open   | close | Safe | Norm  | 500ms | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 1        | 2.0sec |
| thin-Be/Open                        | med-Be/Open    | close | Safe | Norm  | 1.00s | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 2        | 2.0sec |
| Al-poly/Open                        | thin-Be/Open   | close | Safe | Norm  | 500ms | Obs | 1x1 | 384x384 (1064, 1048) | Q=95  | 3          | 2        | 2.0sec |
| Default Filter                      | Thicker Filter | VLS   | mode | image | Exp.  | CCD | Bin | ROI: size (center)   | Comp. | AEC Buffer | Interval |        |

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### Flare mode

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### XOB #19DE: Flare obs. dynamics - thin-Be high cadence long/short pairs + context (med-Al,thick-Be -384x384 + Al-poly 512x512 2x2)-Gband (45ms)-15 loc

| Term                            | Pointing (x, y)                       | Comment   |
|---------------------------------|---------------------------------------|---|
| 11/21 10:17:00 - 11/21 17:53:54 | Track ( 562.2, 43.8) @ 11/21 10:14:00 | # OP start + 10min, AR 11899 observations.                  |
| 11/21 18:07:00 - 11/22 05:59:54 | Track ( 620.7, 45.9) @ 11/21 18:04:00 | # AR cont.  |
| 11/22 06:13:00 - 11/22 15:29:54 | Fixed ( -943.6, -228.8)               | # Fixed pointing at East limb for EIS obs. of returning AR. |
| 11/23 00:44:00 - 11/23 06:29:54 | Track ( 811.5, 55.0) @ 11/23 00:41:00 | AR cont.  |
| 11/23 06:43:00 - 11/23 09:14:00 | Track ( 840.9, 56.8) @ 11/23 06:40:00 | # AR cont.  |

### PROG= 13 15-time(s)

|                                  |                  |       |      |       |       |     |     |                      |       |            |          |        |
|----------------------------------|------------------|-------|------|-------|-------|-----|-----|----------------------|-------|------------|----------|--------|
| <b>Subr= 1 45-time(s) 2.0sec</b> |                  |       |      |       |       |     |     |                      |       |            |          |        |
| <b>Seqn= 44 1-time(s) 8.0sec</b> |                  |       |      |       |       |     |     |                      |       |            |          |        |
| thin-Be/Open                     | med-Be/Open      | close | Safe | Norm  | 250ms | Obs | 1x1 | 384x384 (1024, 1024) | Q=95  | 2          | 0        | 2.0sec |
| thin-Be/Open                     | med-Be/Open      | close | Safe | Norm  | 8ms   | Obs | 1x1 | 384x384 (1024, 1024) | Q=95  | 3          | 0        | 2.0sec |
| <b>Subr= 2 1-time(s) 2.0sec</b>  |                  |       |      |       |       |     |     |                      |       |            |          |        |
| <b>Seqn= 10 1-time(s) 2.0sec</b> |                  |       |      |       |       |     |     |                      |       |            |          |        |
| med-Al/Open                      | med-Al/thick-Al  | close | Safe | Norm  | 500ms | Obs | 1x1 | 384x384 (1024, 1024) | Q=95  | 3          | 0        | 2.0sec |
| Open/thick-Be                    | Open/thick-Be    | close | Safe | Norm  | 2.00s | Obs | 1x1 | 384x384 (1024, 1024) | Q=95  | 3          | 0        | 2.0sec |
| <b>Seqn= 11 1-time(s) 2.0sec</b> |                  |       |      |       |       |     |     |                      |       |            |          |        |
| Al-poly/Open                     | Al-poly/thick-Al | close | Safe | Norm  | 125ms | Obs | 2x2 | 512x512 (1024, 1024) | Q=95  | 2          | 0        | 2.0sec |
| <b>Seqn= 15 1-time(s) 2.0sec</b> |                  |       |      |       |       |     |     |                      |       |            |          |        |
| Open/G-band                      | Open/G-band      | open  | Safe | Norm  | 44ms  | Obs | 1x1 | 384x384 (1024, 1024) | Q=98  | 0          | 0        | 2.0sec |
| Open/thick-Al                    | Open/thick-Al    | close | Safe | Dark  | 1.00s | Obs | 1x1 | 384x384 (1024, 1024) | Q=98  | 0          | 0        | 2.0sec |
| Open/thick-Al                    | Open/thick-Al    | close | Safe | Dark  | 1.00s | Obs | 2x2 | 512x512 (1024, 1024) | Q=98  | 0          | 0        | 2.0sec |
| Default Filter                   | Thicker Filter   | VLS   | mode | image | Exp.  | CCD | Bin | ROI: size (center)   | Comp. | AEC Buffer | Interval |        |

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### Active Region Search

\* \* \* \* \*

NOT USED

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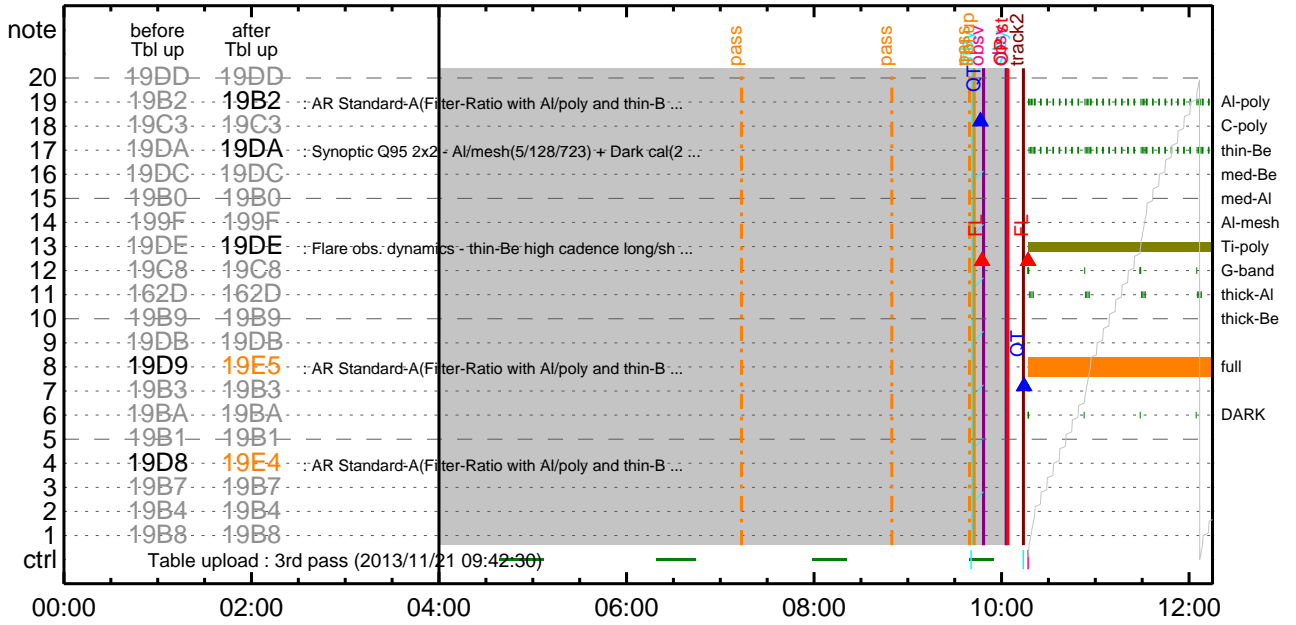
### Flare Detection

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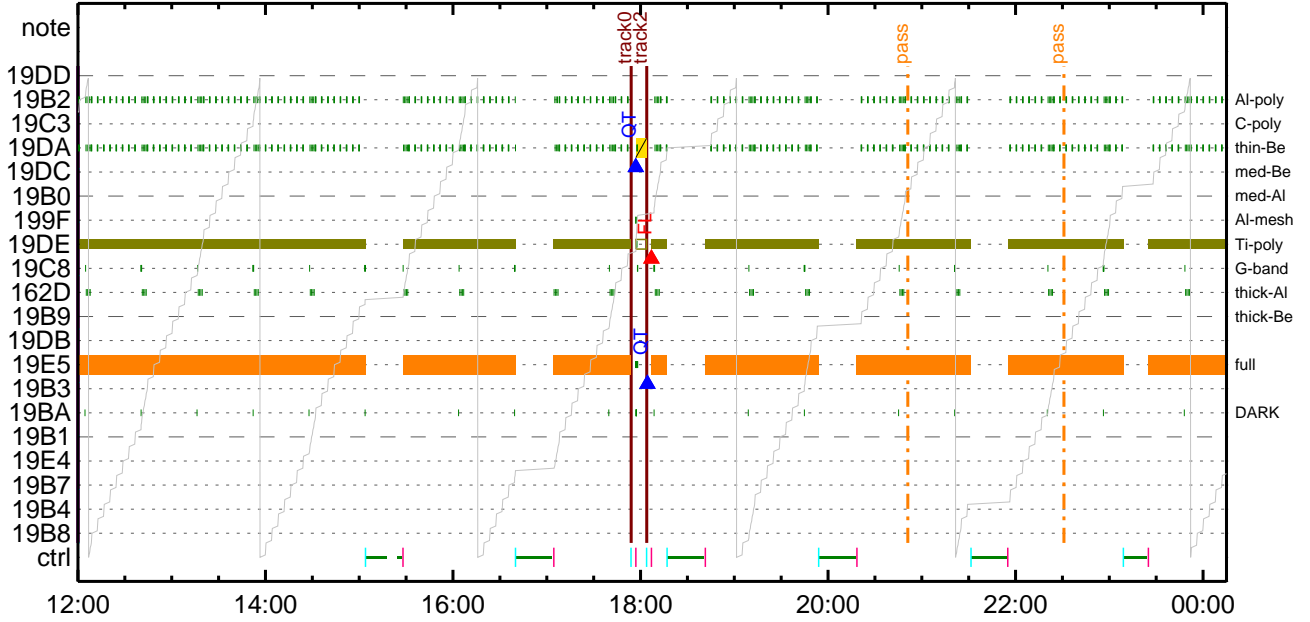
### FLD Patrol

| Term                            | Pointing (x, y)                       | Comment   |      |       |      |     |     |                    |       |            |          |
|---------------------------------|---------------------------------------|---|------|-------|------|-----|-----|--------------------|-------|------------|----------|
| 11/21 18:04:16 - 11/22 06:00:16 | Track ( 620.7, 45.9) @ 11/21 18:04:00 | # AR cont.  |      |       |      |     |     |                    |       |            |          |
| 11/22 06:10:16 - 11/22 15:30:16 | Fixed ( -943.6, -228.8)               | # Fixed pointing at East limb for EIS obs. of returning AR. |      |       |      |     |     |                    |       |            |          |
| 11/23 00:41:16 - 11/23 06:30:16 | Track ( 811.5, 55.0) @ 11/23 00:41:00 | AR cont.  |      |       |      |     |     |                    |       |            |          |
| 11/23 06:40:16 - 11/26 09:18:00 | Track ( 840.9, 56.8) @ 11/23 06:40:00 | # AR cont.  |      |       |      |     |     |                    |       |            |          |
| Open/Ti-poly                    | Open/thick-Al                         | close   | Safe | Norm  | 8ms  | Obs | 8x8 |                    | Q=50  |            | 30sec    |
| Default Filter                  | Thicker Filter                        | VLS   | mode | image | Exp. | CCD | Bin | ROI: size (center) | Comp. | AEC Buffer | Interval |

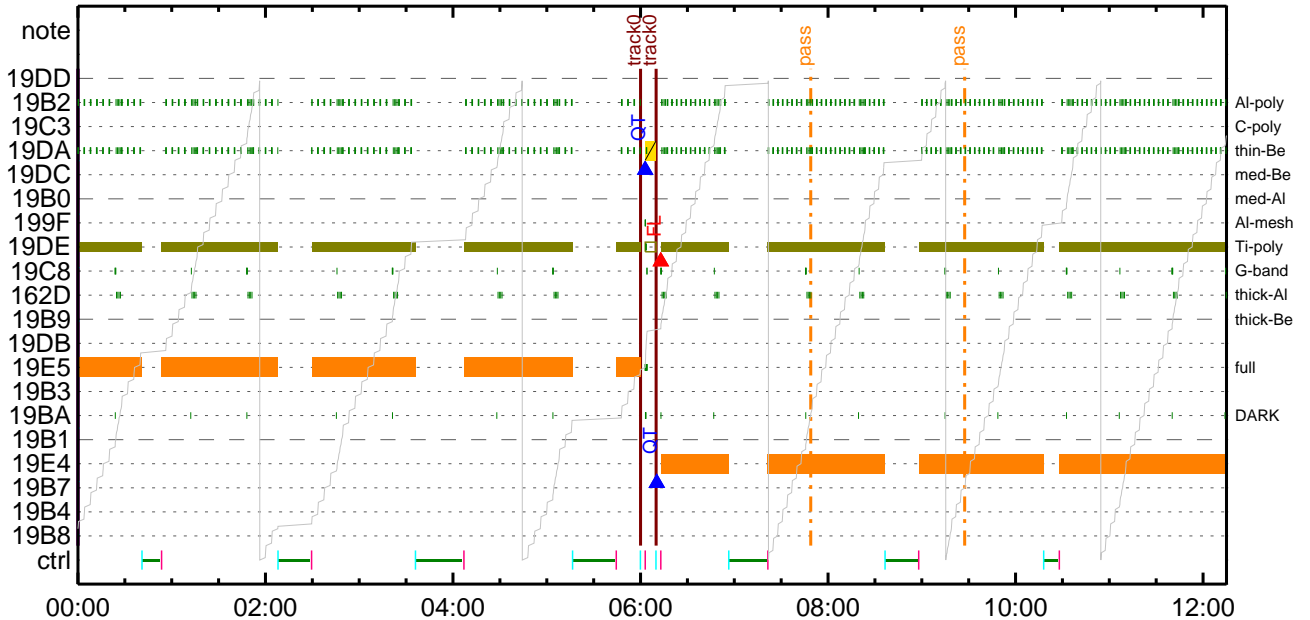
### CMDI #0920 2013/11/21



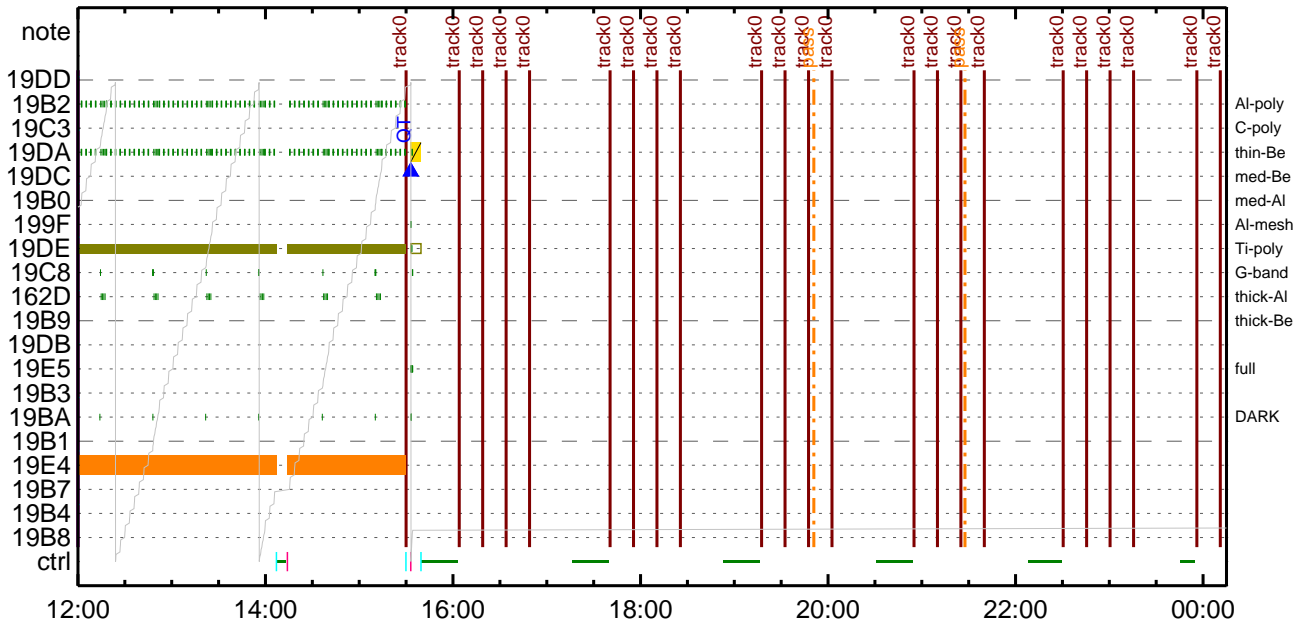
### CMDI #0920 2013/11/21



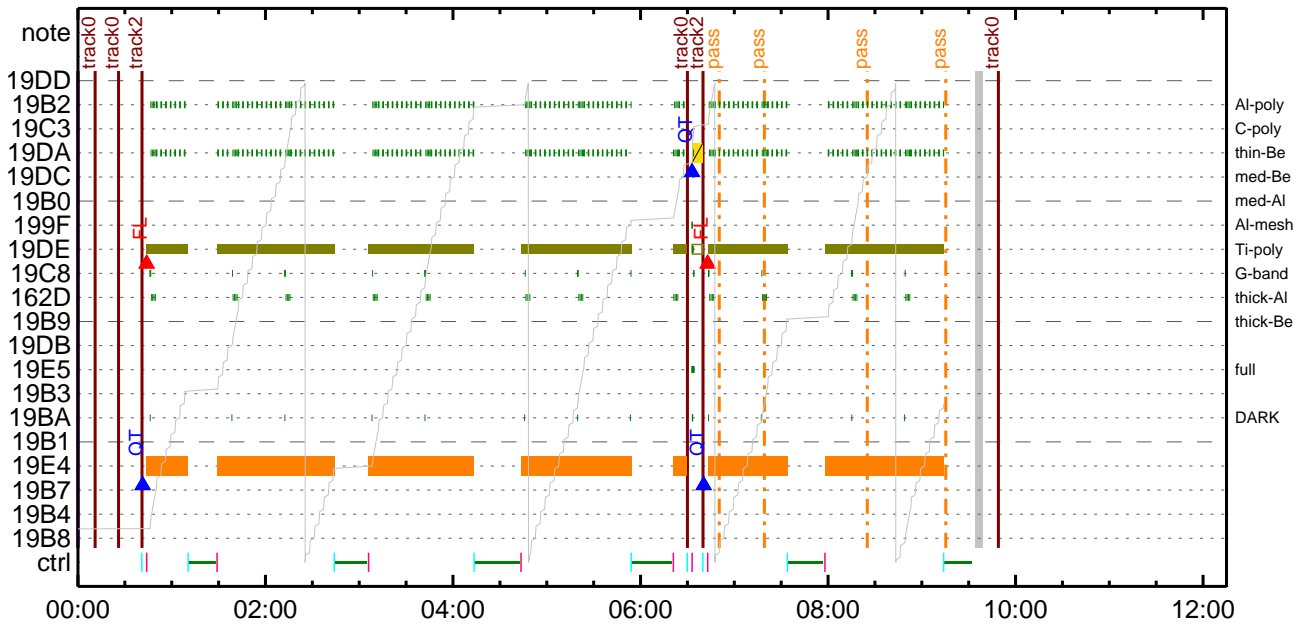
### CMDI #0920 2013/11/22



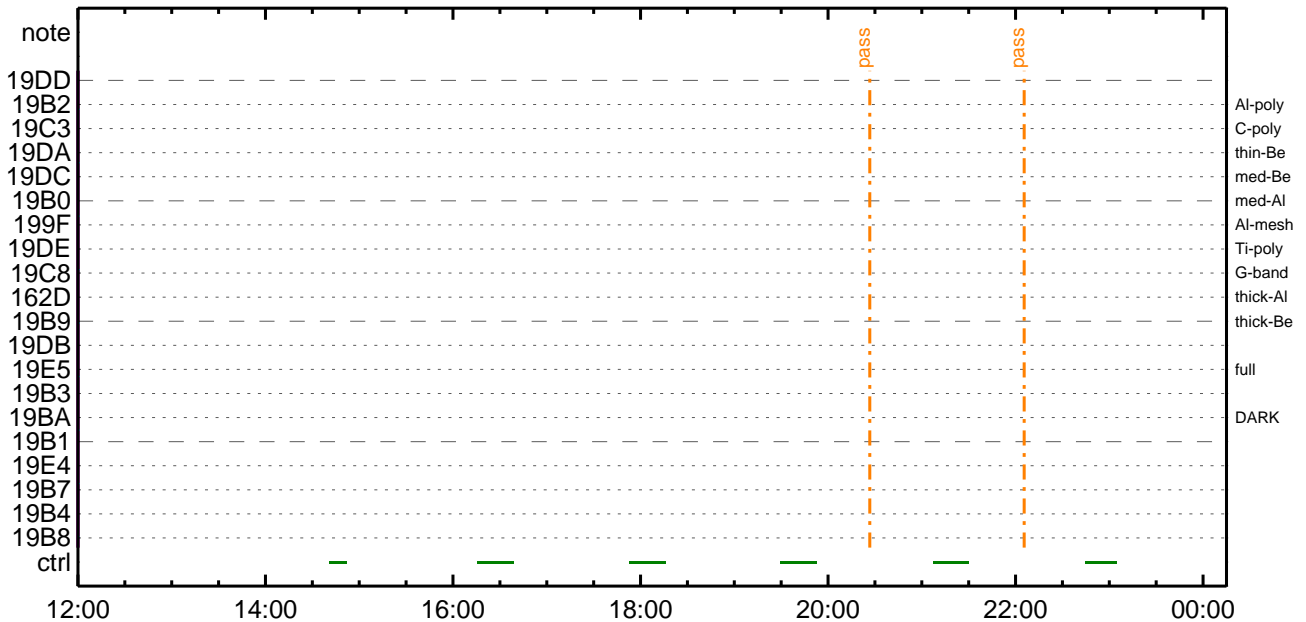
### CMDI #0920 2013/11/22



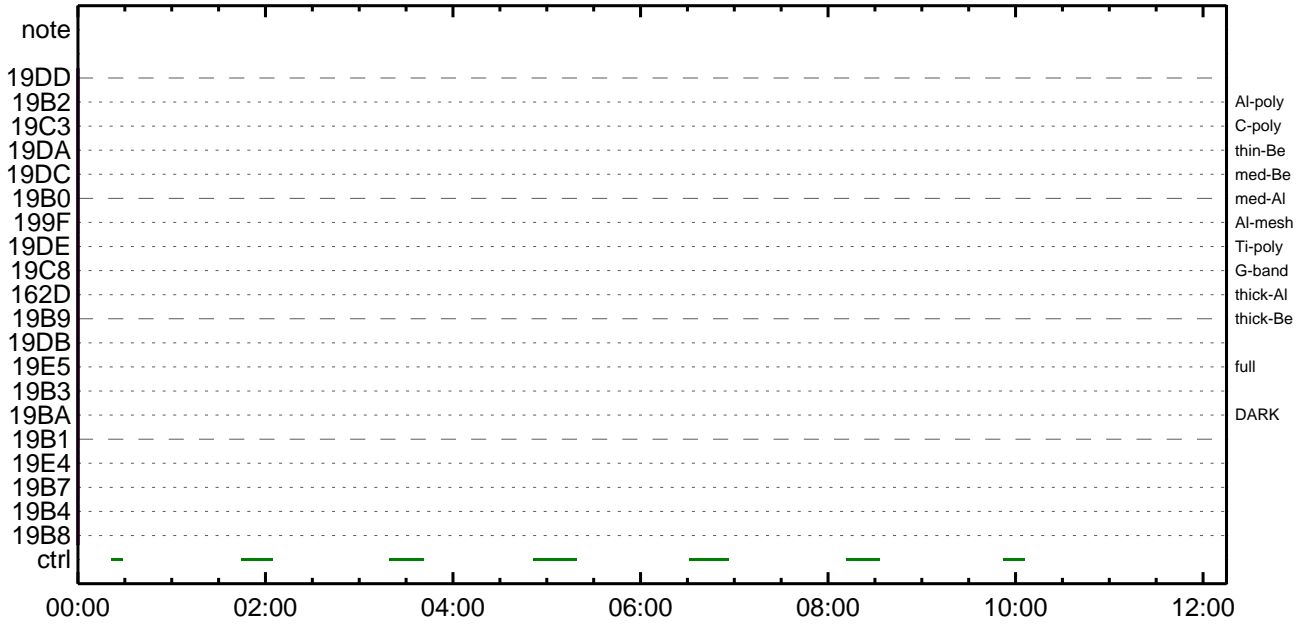
### CMDI #0920 2013/11/23



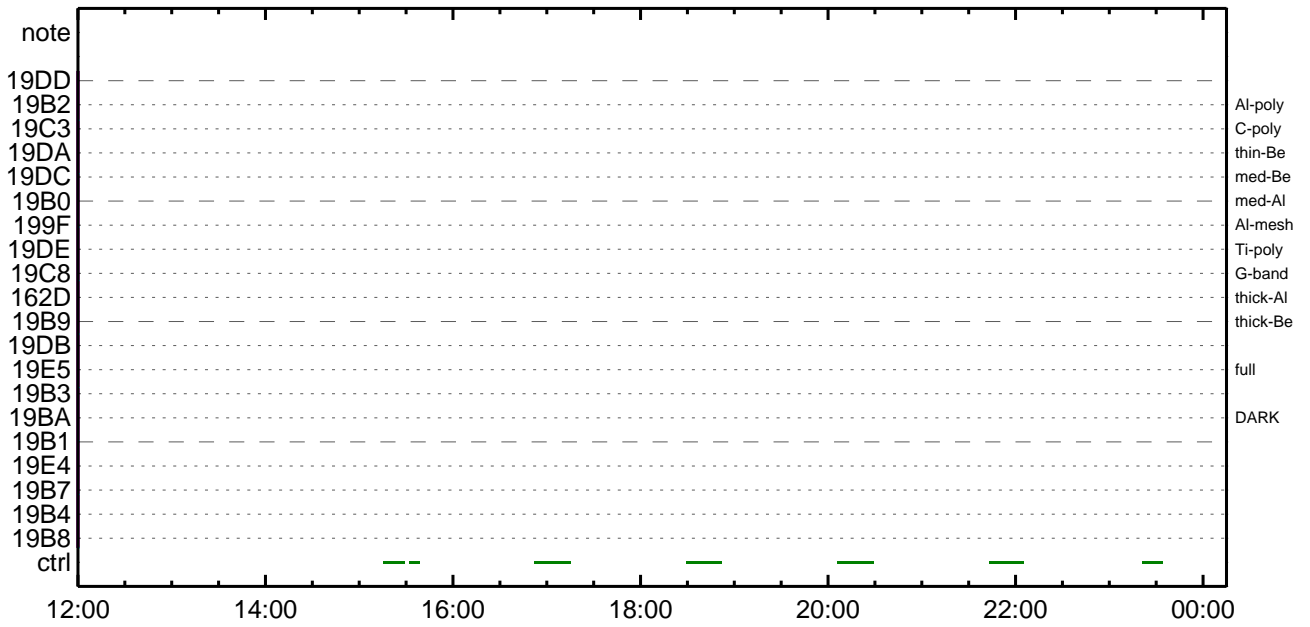
### CMDI #0920 2013/11/23



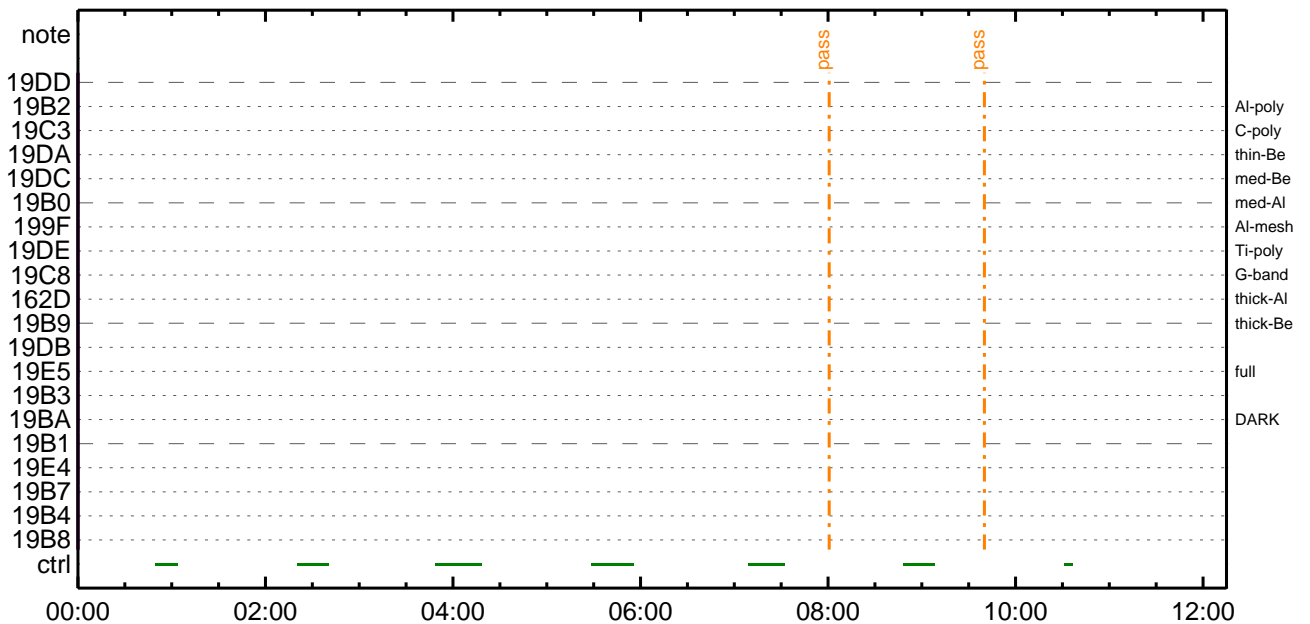
CMDI #0920 2013/11/24



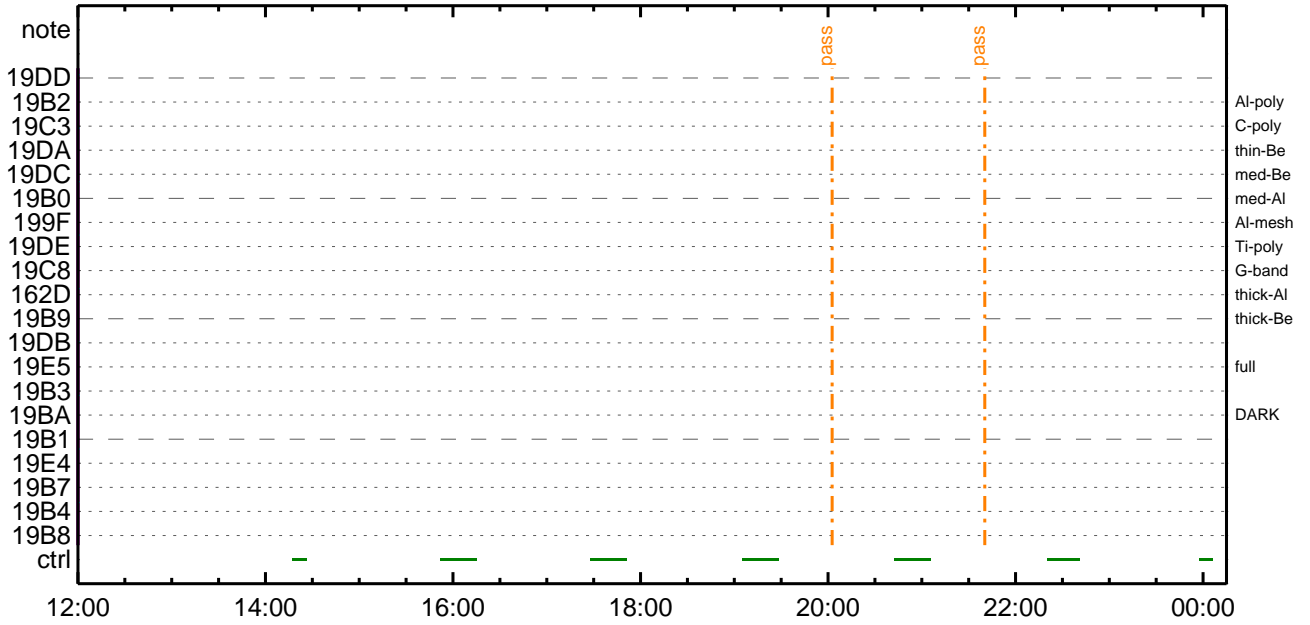
CMDI #0920 2013/11/24



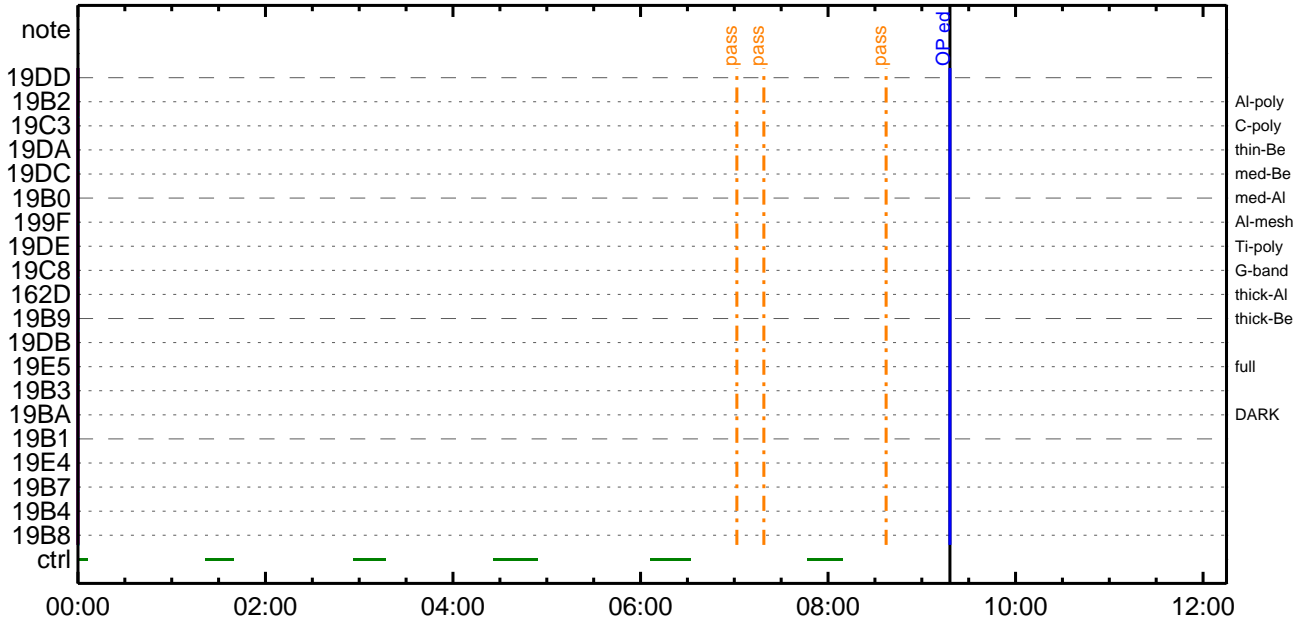
CMDI #0920 2013/11/25



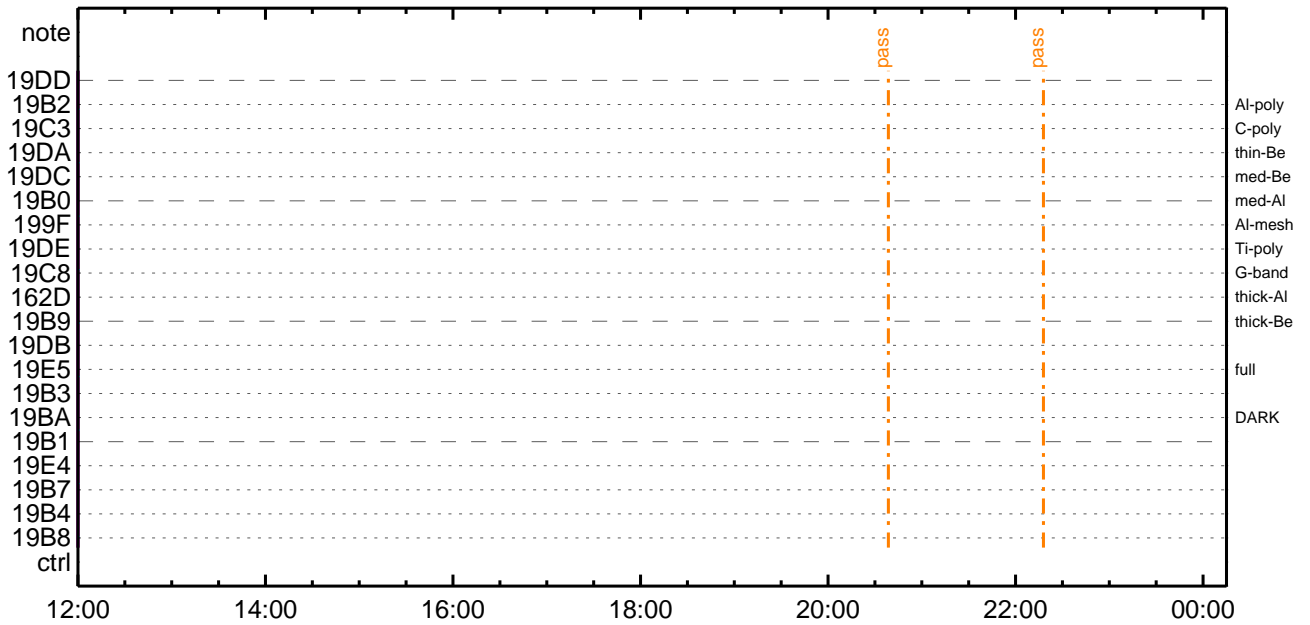
CMDI #0920 2013/11/25



CMDI #0920 2013/11/26



CMDI #0920 2013/11/26





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0096 C.
0097 C.
0098 C. *****
0099 C. OP/OGY1;4YE;|YAYOYx
0100 C. *****
0101 C.
0102 C. ;ãOP/OGY1;4YE;ã
0103 S. OP op-051:OP
0104 ( )
0105 S. OG og-051:OG
0106 ( )
0107 C.
0108 C. ;ãNMOG&OPfî°èYAYOYx;ã
0109 C. NMOG(0x200000-0x207FFF;§ 32 kbyte)
0110 +. DC 01-23 DHU_DMA_DMP_PRM_SET
0111 BC (20 00 7f 01 02)
0112 C. çç[HK1_DMP_TOP_ADRS_1] EQ 40
0113 C. çç[HK1_DMP_TOP_ADRS_0] EQ 0
0114 C. çç[HK1_DMP_BLOCK_NUM] EQ 127
0115 C. çç[HK1_DMP_REPEAT_NUM] EQ 0
0116 C. çç[HK1_DMA_DMP_PIM] EQ DHU
0117 +. DC 01-22 DHU_MODE_CHNG
0118 BC (07 0b f8)
0119 C. çç[HK1_PKT_FORM_NO] EQ 7
0120 C. çç[HK1_PKT_GEN_TIME] EQ 0.25 s
0121 C. çç[HK1_S_TLM_BIT_RATE] EQ 32k
0122 C. çç[HK1_X_TLM_BIT_RATE] EQ 4M
0123 C. çç[HK1_DMP_CHK_FLG] EQ EXEC
0124 C. YAYOYx½ªî»ò³îÇ§
0125 C. çç[HK1_DMP_CHK_FLG] EQ NON
0126 C. RAM ID=NMOG²î¼E¹ç•è²îOKò³îÇ§
0127 C.
0128 C. NMOG(0x208000-0x20FFFF;§ 32 kbyte)
0129 +. DC 01-23 DHU_DMA_DMP_PRM_SET
0130 BC (20 80 7f 01 02)
0131 C. çç[HK1_DMP_TOP_ADRS_1] EQ 41
0132 C. çç[HK1_DMP_TOP_ADRS_0] EQ 0
0133 C. çç[HK1_DMP_BLOCK_NUM] EQ 127
0134 C. çç[HK1_DMP_REPEAT_NUM] EQ 0
0135 C. çç[HK1_DMA_DMP_PIM] EQ DHU
0136 +. DC 01-22 DHU_MODE_CHNG
0137 BC (07 0b f8)
0138 C. çç[HK1_PKT_FORM_NO] EQ 7
0139 C. çç[HK1_PKT_GEN_TIME] EQ 0.25 s
0140 C. çç[HK1_S_TLM_BIT_RATE] EQ 32k
0141 C. çç[HK1_X_TLM_BIT_RATE] EQ 4M
0142 C. çç[HK1_DMP_CHK_FLG] EQ EXEC
0143 C. YAYOYx½ªî»ò³îÇ§
0144 C. çç[HK1_DMP_CHK_FLG] EQ NON
0145 C. RAM ID=NMOG²î¼E¹ç•è²îOKò³îÇ§
0146 C.
0147 C. NMOG(0x210000-0x2100FF;§ 256byte)+OP(0x210100-0x2141FF: 16.25kbyte)
0148 +. DC 01-23 DHU_DMA_DMP_PRM_SET
0149 BC (21 00 41 01 02)
0150 C. çç[HK1_DMP_TOP_ADRS_1] EQ 42
0151 C. çç[HK1_DMP_TOP_ADRS_0] EQ 0
0152 C. çç[HK1_DMP_BLOCK_NUM] EQ 65
0153 C. çç[HK1_DMP_REPEAT_NUM] EQ 0
0154 C. çç[HK1_DMA_DMP_PIM] EQ DHU
0155 +. DC 01-22 DHU_MODE_CHNG
0156 BC (07 0b f8)
0157 C. çç[HK1_PKT_FORM_NO] EQ 7
0158 C. çç[HK1_PKT_GEN_TIME] EQ 0.25 s
0159 C. çç[HK1_S_TLM_BIT_RATE] EQ 32k
0160 C. çç[HK1_X_TLM_BIT_RATE] EQ 4M
0161 C. çç[HK1_DMP_CHK_FLG] EQ EXEC
0162 C. YAYOYx½ªî»ò³îÇ§
0163 C. çç[HK1_DMP_CHK_FLG] EQ NON
0164 C. RAM ID=NMOG, RAM ID=OP²î¼E¹ç•è²îOKò³îÇ§
0165 C.
0166 C. ***** °E²¼òî¼Ã´¶Á°òEÉ¬ò°Á÷¿@ (¼âµ-YAYOYx½ê¼çòðÁÓÆòÇ¼ª°¬òE¼î¹çòçòâ) *****
0167 C. DHUYâ;4YE;E¼Y½;Yî;4YE;Eòðîã¹
0168 +. DC 01-22 DHU_MODE_CHNG
0169 BC (02 0a f8)
0170 C. çç[HK1_PKT_FORM_NO] EQ 2
0171 C. çç[HK1_PKT_GEN_TIME] EQ 0.5S
0172 C. çç[HK1_S_TLM_BIT_RATE] EQ 32K
0173 C. çç[HK1_X_TLM_BIT_RATE] EQ 4M
0174 C.
0175 C. *****
0176 C. TI-CMD SET (OPOG STOP/COPY/START)
0177 C. *****
0178 C.
0179 C. NOTICE ;§ OPOG UPLOAD²-Á÷¿@NG²î¼î¹ç;ç°E²¼òî¼TI-CMDÁ÷¿@²î¼Á¹Ôª°¬E²ò³òE;f
0180 C. ²ò³òE;çSET²EEDUMP²î¼±°îYÑY¹ç¹Ôª|²³òE;f
0181 C.
0182 C. TIY³Y²YOYE²òðÁDî¿(UT)
0183 +. TI 2013-11-21 09:59:00.0
0184 DC 01-B3 DHU_OP_STOP
0185 C. çç[HK1_TI_CMD_NUM] EQ 1COUNTUP
0186 C.
0187 +. TI 2013-11-21 09:59:01.0
0188 DC 01-B4 DHU_OP_COPY
0189 C. çç[HK1_TI_CMD_NUM] EQ 1COUNTUP
0190 C.
0191 +. TI 2013-11-21 09:59:01.0
0192 DC 01-B5 DHU_OPOG_COPY
0193 C. çç[HK1_TI_CMD_NUM] EQ 1COUNTUP

```









(a) Spacecraft Operation Procedure (real-commands)

```
main-053 2013-11-21 13:33:35 130 33 SOLAR-B MAIN //
0001 C.
0002 . C. ***** AOS *****
0003 C.
0004 . C. ;ãAOSYÁY$YÁY-¼Á»Û;ä
0005 C.
0006 C. YÁYB;¼Y³YF¥ÖYÉÁ+¿®
0007 +. DC 00-00 NULL_DUMMY_CMD
0008 C.
0009 . C. ***** AOCS : Reload orbital element (send every contact) *****
0010 C. Áí;È¿¿ãÄ•µ°È»Í×ÁÇ¿ÍYçYÁY×Yí;¼YÉ;ÈÈ%µ•ííÉ;ÈÈ¼°ÇÖã•¿¿¼l¹ç¿Í;çÁ®, ù¿¹ãÈãÈãÇÁ+¿®ã•¿Èãã³ãÈ;f
0011 +. DC 02-8E AOCS_ORB_UPD
0012 C.
0013 C.
0014 . C. *****
0015 C. SOT table upload
0016 C. *****
0017 . C. < Stop SP table >
0018 +. DC 07-F0 MDP_SP_CTRL_MANU
0019 BC (61)
0020 C. -----
0021 C. MDP_SP_CTRL_MODE = MANU [ ]
0022 C. -----
0023 C.
0024 . C. <Upload SP Observation Table>
0025 . S. RAM ram-287:MDP_OBS_S
0026 ( )
0027 C.
0028 . C. < Dump RAMID=MDP_OBS_S >
0029 +. DC 07-F0 MDP_DUMP_SPTBL
0030 BC (83 07 00 00 00 38 b8)
0031 C. -----
0032 C. MDP_OBS_S verify = OK/NG [ ]
0033 C. -----
0034 C.
0035 C. *****
0036 C. SOT TI command set
0037 C. *****
0038 C. Execute, after the success of TBL upload.
0039 +. TI 2013-11-21 10:03:18.0
0040 DC 07-F0 MDP_SOT_MODE_OBSV
0041 BC (40)
0042 C. -----
0043 C. HK1_TI_CMD_NUM = 1 CNTUP [ ]
0044 C. -----
0045 C.
0046 C.
0047 C. ***** XRT START *****
0048 C.
0049 +. DC 07-F0 MDP_XRT_CTRL_MANU
0050 BC (c1)
0051 + DC 07-F0 MDP_XRT_MODE_STBY
0052 BC (c3)
0053 . C. ----- Success Verify ? OK / NG____
0054 C.
0055 C. XRT Obs. Table Upload
0056 . S. RAM ram-291:MDP_OBS_X
0057 ( )
0058 C.
0059 +. DC 07-F0 MDP_DUMP_XRTTBL
0060 BC (84 07 00 00 00 3a d4)
0061 . C. ----- Comparison Check ? OK / ERR ____
0062 C.
0063 C.
0064 +. DC 07-F0 MDP_XRT_ROI_SET
0065 BC (cd 01 b1 b1 04 04)
0066 + DC 07-F0 MDP_XRT_ROI_SET
0067 BC (cd 02 b1 b1 08 08)
0068 + DC 07-F0 MDP_XRT_ROI_SET
0069 BC (cd 03 b1 b1 08 08)
0070 + DC 07-F0 MDP_XRT_ROI_SET
0071 BC (cd 04 b1 b1 06 06)
0072 + DC 07-F0 MDP_XRT_ROI_SET
0073 BC (cd 05 85 83 06 06)
0074 + DC 07-F0 MDP_XRT_ROI_SET
0075 BC (cd 06 85 83 06 06)
0076 + DC 07-F0 MDP_XRT_ROI_SET
0077 BC (cd 07 85 83 08 08)
0078 + DC 07-F0 MDP_XRT_ROI_SET
0079 BC (cd 08 80 80 20 20)
0080 + DC 07-F0 MDP_XRT_ROI_SET
0081 BC (cd 09 80 80 20 08)
0082 + DC 07-F0 MDP_XRT_ROI_SET
0083 BC (cd 0a 80 80 08 20)
0084 + DC 07-F0 MDP_XRT_ROI_SET
0085 BC (cd 0f 80 80 06 06)
0086 + DC 07-F0 MDP_XRT_ROI_SET
0087 BC (cd 10 80 80 08 08)
0088 + DC 07-F0 MDP_XRT_FLD_ENA
0089 BC (d8)
0090 + DC 07-F0 MDP_XRT_FLRCTRL_ENA
0091 BC (c8)
0092 + DC 07-F0 MDP_XRT_AEC_RESET
0093 BC (d0)
0094 + DC 07-F0 MDP_XRT_ARS_DIS
0095 BC (d5)
```

```
0096 + DC 07-F0 MDP_XRT_FLD_RESET
0097 BC (da)
0098 + DC 07-F0 MDP_XRT_QT_PROG_SET
0099 BC (c4 13)
0100 + DC 07-F0 MDP_XRT_FL_PROG_SET
0101 BC (c5 0d)
0102 . C. ----- Success Verify ? OK / NG ____
0103 C.
0104 C.
0105 . C. All OK? Yes--> Please Proceed. / No --> Stop here.
0106 C.
0107 +. DC 07-F0 MDP_XRT_MODE_OBSV
0108 BC (c2)
0109 +. TI 2013-11-21 10:03:02.0
0110 DC 07-F0 MDP_XRT_MODE_OBSV
0111 BC (c2)
0112 . C. ----- Success Verify ? OK / NG ____
0113 C.
0114 C. ***** XRT END *****
0115 C.
0116 . C. ***** MDP 'úÃîâî»ö¼ÝðËÂð¹æDCBC•x²è *****
0117 C. (%ã°îÿÓÿÁÿËÿÏÿËÿáÿçÿèæ¼æ¼Á»Û¹æè)
0118 . S. DC-BC dcbc-402:DCBC
0119 (MDP_known_event)
0120 C.
0121 C.
0122 . C. ***** ÿÐÿ¹·Ï Daily±¿ÎÑæË'Ø¹æèDCBC•x²è *****
0123 . S. DC-BC dcbc-153:DCBC
0124 (SPECIAL-CMD_DAILY_OPERATIN_DCB)
0125 C.
0126 C.
0127 . C. ;ãLOSÿÁÿ§ÿËÿËÿ-¼Á»Û;ã
0128 C.
0129 . C. ***** LOS *****
0130 C.
```

Nov 21, 13 13:35

XRT\_OGLIST\_0920.chk

Page 1/5

\*\*\* OP Sequence for XRT \*\*\*

|            |            |                                   |   |       |                |  |  |  |
|------------|------------|-----------------------------------|---|-------|----------------|--|--|--|
| 2013/11/21 | 10:13:54.0 | XRT_CTRL_MANU_402_OG [0x192]      |   |       |                |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |
| 2013/11/21 | 10:13:56.0 | XRT_FOCUS_POSITION_410_OG [0x19a] |   |       |                |  |  |  |
|            |            | XRT_FOCUS_POSITION                | 4 | 07-F8 | 22 fe 97 00    |  |  |  |
| 2013/11/21 | 10:14:00.0 | AOCS_Ore-point_Start_1_OG [0x097] |   |       |                |  |  |  |
|            |            | AOCU_NM                           | 5 | 02-76 | 02 00 00 00 00 |  |  |  |
| 2013/11/21 | 10:14:16.0 | XRT_FLD_ENA_411_OG [0x19b]        |   |       |                |  |  |  |
|            |            | MDP_XRT_FLD_ENA                   | 1 | 07-F0 | d8             |  |  |  |
| 2013/11/21 | 10:14:18.0 | XRT_FLRCTRL_ENA_412_OG [0x19c]    |   |       |                |  |  |  |
|            |            | MDP_XRT_FLRCTRL_ENA               | 1 | 07-F0 | c8             |  |  |  |
| 2013/11/21 | 10:14:20.0 | XRT_AEC_RESET_413_OG [0x19d]      |   |       |                |  |  |  |
|            |            | MDP_XRT_AEC_RESET                 | 1 | 07-F0 | d0             |  |  |  |
| 2013/11/21 | 10:14:22.0 | XRT_ARS_DIS_423_OG [0x1a7]        |   |       |                |  |  |  |
|            |            | MDP_XRT_ARS_DIS                   | 1 | 07-F0 | d5             |  |  |  |
| 2013/11/21 | 10:14:24.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |
| 2013/11/21 | 10:14:26.0 | XRT_QT_PROG_SET_444_OG [0x1bc]    |   |       |                |  |  |  |
|            |            | MDP_XRT_QT_PROG_SET               | 2 | 07-F0 | c4 08          |  |  |  |
| 2013/11/21 | 10:16:58.0 | XRT_FL_PROG_SET_421_OG [0x1a5]    |   |       |                |  |  |  |
|            |            | MDP_XRT_FL_PROG_SET               | 2 | 07-F0 | c5 0d          |  |  |  |
| 2013/11/21 | 10:17:00.0 | XRT_CTRL_AUTO_408_OG [0x198]      |   |       |                |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |
| 2013/11/21 | 15:04:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |
| 2013/11/21 | 15:04:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |
| 2013/11/21 | 15:04:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |
| 2013/11/21 | 15:07:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |
| 2013/11/21 | 15:27:00.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |
| 2013/11/21 | 15:28:00.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |
| 2013/11/21 | 16:40:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |
| 2013/11/21 | 16:40:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |
| 2013/11/21 | 16:40:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |
| 2013/11/21 | 16:43:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |
| 2013/11/21 | 17:03:30.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |
| 2013/11/21 | 17:04:30.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |
| 2013/11/21 | 17:53:54.0 | XRT_CTRL_MANU_402_OG [0x192]      |   |       |                |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |
| 2013/11/21 | 17:53:56.0 | XRT_FOCUS_POSITION_403_OG [0x193] |   |       |                |  |  |  |
|            |            | XRT_FOCUS_POSITION                | 4 | 07-F8 | 22 ff aa 00    |  |  |  |
| 2013/11/21 | 17:54:00.0 | AOCS_Ore-point_Start_2_OG [0x098] |   |       |                |  |  |  |
|            |            | AOCU_NM                           | 5 | 02-76 | 00 00 00 00 00 |  |  |  |
| 2013/11/21 | 17:54:16.0 | XRT_FLD_DIS_434_OG [0x1b2]        |   |       |                |  |  |  |
|            |            | MDP_XRT_FLD_DIS                   | 1 | 07-F0 | d9             |  |  |  |
| 2013/11/21 | 17:56:54.0 | XRT_FLRCTRL_DIS_405_OG [0x195]    |   |       |                |  |  |  |
|            |            | MDP_XRT_FLRCTRL_DIS               | 1 | 07-F0 | c9             |  |  |  |
| 2013/11/21 | 17:56:56.0 | XRT_ARS_DIS_423_OG [0x1a7]        |   |       |                |  |  |  |
|            |            | MDP_XRT_ARS_DIS                   | 1 | 07-F0 | d5             |  |  |  |
| 2013/11/21 | 17:56:58.0 | XRT_QT_PROG_SET_446_OG [0x1be]    |   |       |                |  |  |  |
|            |            | MDP_XRT_QT_PROG_SET               | 2 | 07-F0 | c4 11          |  |  |  |
| 2013/11/21 | 17:57:00.0 | XRT_CTRL_AUTO_408_OG [0x198]      |   |       |                |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |
| 2013/11/21 | 18:03:54.0 | XRT_CTRL_MANU_402_OG [0x192]      |   |       |                |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |
| 2013/11/21 | 18:03:56.0 | XRT_FOCUS_POSITION_410_OG [0x19a] |   |       |                |  |  |  |
|            |            | XRT_FOCUS_POSITION                | 4 | 07-F8 | 22 fe 97 00    |  |  |  |
| 2013/11/21 | 18:04:00.0 | AOCS_Ore-point_Start_1_OG [0x097] |   |       |                |  |  |  |
|            |            | AOCU_NM                           | 5 | 02-76 | 02 00 00 00 00 |  |  |  |
| 2013/11/21 | 18:04:16.0 | XRT_FLD_ENA_411_OG [0x19b]        |   |       |                |  |  |  |
|            |            | MDP_XRT_FLD_ENA                   | 1 | 07-F0 | d8             |  |  |  |
| 2013/11/21 | 18:04:18.0 | XRT_FLRCTRL_ENA_412_OG [0x19c]    |   |       |                |  |  |  |
|            |            | MDP_XRT_FLRCTRL_ENA               | 1 | 07-F0 | c8             |  |  |  |
| 2013/11/21 | 18:04:20.0 | XRT_AEC_RESET_413_OG [0x19d]      |   |       |                |  |  |  |
|            |            | MDP_XRT_AEC_RESET                 | 1 | 07-F0 | d0             |  |  |  |
| 2013/11/21 | 18:04:22.0 | XRT_ARS_DIS_423_OG [0x1a7]        |   |       |                |  |  |  |
|            |            | MDP_XRT_ARS_DIS                   | 1 | 07-F0 | d5             |  |  |  |
| 2013/11/21 | 18:04:24.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |
| 2013/11/21 | 18:04:26.0 | XRT_QT_PROG_SET_444_OG [0x1bc]    |   |       |                |  |  |  |
|            |            | MDP_XRT_QT_PROG_SET               | 2 | 07-F0 | c4 08          |  |  |  |
| 2013/11/21 | 18:06:58.0 | XRT_FL_PROG_SET_421_OG [0x1a5]    |   |       |                |  |  |  |
|            |            | MDP_XRT_FL_PROG_SET               | 2 | 07-F0 | c5 0d          |  |  |  |
| 2013/11/21 | 18:07:00.0 | XRT_CTRL_AUTO_408_OG [0x198]      |   |       |                |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |
| 2013/11/21 | 18:17:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |
| 2013/11/21 | 18:17:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |
| 2013/11/21 | 18:17:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |
| 2013/11/21 | 18:20:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |
| 2013/11/21 | 18:40:30.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |

Nov 21, 13 13:35

## XRT\_OGLIST\_0920.chk

Page 2/5

|            |            |                                   |   |       |                |  |  |  |  |
|------------|------------|-----------------------------------|---|-------|----------------|--|--|--|--|
| 2013/11/21 | 18:41:30.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/21 | 19:54:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/21 | 19:54:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/21 | 19:54:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/21 | 19:57:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/21 | 20:17:30.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/21 | 20:18:30.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/21 | 21:31:30.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/21 | 21:31:32.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/21 | 21:31:34.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/21 | 21:34:44.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/21 | 21:54:00.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/21 | 21:55:00.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/21 | 23:09:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/21 | 23:09:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/21 | 23:09:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/21 | 23:12:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/21 | 23:24:00.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/21 | 23:25:00.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/22 | 00:41:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/22 | 00:41:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/22 | 00:41:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/22 | 00:44:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/22 | 00:52:30.5 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/22 | 00:53:30.5 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/22 | 02:08:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/22 | 02:08:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/22 | 02:08:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/22 | 02:11:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/22 | 02:28:30.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/22 | 02:29:30.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/22 | 03:36:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/22 | 03:36:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/22 | 03:36:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/22 | 03:39:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/22 | 04:06:00.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/22 | 04:07:00.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/22 | 05:16:30.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/22 | 05:16:32.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/22 | 05:16:34.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/22 | 05:19:44.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/22 | 05:43:30.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/22 | 05:44:30.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/22 | 05:59:54.0 | XRT_CTRL_MANU_402_OG [0x192]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/22 | 05:59:56.0 | XRT_FOCUS_POSITION_403_OG [0x193] |   |       |                |  |  |  |  |
|            |            | XRT_FOCUS_POSITION                | 4 | 07-F8 | 22 ff aa 00    |  |  |  |  |
| 2013/11/22 | 06:00:00.0 | AOCS_Ore-point_Start_2_OG [0x098] |   |       |                |  |  |  |  |
|            |            | AOCU_NM                           | 5 | 02-76 | 00 00 00 00 00 |  |  |  |  |
| 2013/11/22 | 06:00:16.0 | XRT_FLD_DIS_434_OG [0x1b2]        |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_DIS                   | 1 | 07-F0 | d9             |  |  |  |  |
| 2013/11/22 | 06:02:54.0 | XRT_FLRCTRL_DIS_405_OG [0x195]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLRCTRL_DIS               | 1 | 07-F0 | c9             |  |  |  |  |
| 2013/11/22 | 06:02:56.0 | XRT_ARS_DIS_423_OG [0x1a7]        |   |       |                |  |  |  |  |
|            |            | MDP_XRT_ARS_DIS                   | 1 | 07-F0 | d5             |  |  |  |  |
| 2013/11/22 | 06:02:58.0 | XRT_QT_PROG_SET_446_OG [0x1be]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_QT_PROG_SET               | 2 | 07-F0 | c4 11          |  |  |  |  |

Nov 21, 13 13:35

## XRT\_OGLIST\_0920.chk

Page 3/5

|            |            |                                   |   |       |                |  |  |  |  |
|------------|------------|-----------------------------------|---|-------|----------------|--|--|--|--|
| 2013/11/22 | 06:03:00.0 | XRT_CTRL_AUTO_408_OG [0x198]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/22 | 06:09:54.0 | XRT_CTRL_MANU_402_OG [0x192]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/22 | 06:09:56.0 | XRT_FOCUS_POSITION_410_OG [0x19a] |   |       |                |  |  |  |  |
|            |            | XRT_FOCUS_POSITION                | 4 | 07-F8 | 22 fe 97 00    |  |  |  |  |
| 2013/11/22 | 06:10:00.0 | AOCS_Ore-point_Start_3_OG [0x099] |   |       |                |  |  |  |  |
|            |            | AOCU_NM                           | 5 | 02-76 | 00 14 5a 53 df |  |  |  |  |
| 2013/11/22 | 06:10:16.0 | XRT_FLD_ENA_411_OG [0x19b]        |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_ENA                   | 1 | 07-F0 | d8             |  |  |  |  |
| 2013/11/22 | 06:10:18.0 | XRT_FLRCTRL_ENA_412_OG [0x19c]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLRCTRL_ENA               | 1 | 07-F0 | c8             |  |  |  |  |
| 2013/11/22 | 06:10:20.0 | XRT_AEC_RESET_413_OG [0x19d]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_AEC_RESET                 | 1 | 07-F0 | d0             |  |  |  |  |
| 2013/11/22 | 06:10:22.0 | XRT_ARS_DIS_423_OG [0x1a7]        |   |       |                |  |  |  |  |
|            |            | MDP_XRT_ARS_DIS                   | 1 | 07-F0 | d5             |  |  |  |  |
| 2013/11/22 | 06:10:24.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/22 | 06:10:26.0 | XRT_QT_PROG_SET_414_OG [0x19e]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_QT_PROG_SET               | 2 | 07-F0 | c4 04          |  |  |  |  |
| 2013/11/22 | 06:12:58.0 | XRT_FL_PROG_SET_421_OG [0x1a5]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FL_PROG_SET               | 2 | 07-F0 | c5 0d          |  |  |  |  |
| 2013/11/22 | 06:13:00.0 | XRT_CTRL_AUTO_408_OG [0x198]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/22 | 06:56:30.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/22 | 06:56:32.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/22 | 06:56:34.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/22 | 06:59:44.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/22 | 07:20:30.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/22 | 07:21:30.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/22 | 08:36:30.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/22 | 08:36:32.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/22 | 08:36:34.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/22 | 08:39:44.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/22 | 08:57:00.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/22 | 08:58:00.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/22 | 10:18:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/22 | 10:18:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/22 | 10:18:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/22 | 10:21:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/22 | 10:27:00.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/22 | 10:28:00.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/22 | 14:07:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/22 | 14:07:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/22 | 14:07:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/22 | 14:10:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/22 | 14:13:00.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/22 | 14:14:00.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/22 | 15:29:54.0 | XRT_CTRL_MANU_402_OG [0x192]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/22 | 15:29:56.0 | XRT_FOCUS_POSITION_403_OG [0x193] |   |       |                |  |  |  |  |
|            |            | XRT_FOCUS_POSITION                | 4 | 07-F8 | 22 ff aa 00    |  |  |  |  |
| 2013/11/22 | 15:30:00.0 | AOCS_Ore-point_Start_2_OG [0x098] |   |       |                |  |  |  |  |
|            |            | AOCU_NM                           | 5 | 02-76 | 00 00 00 00 00 |  |  |  |  |
| 2013/11/22 | 15:30:16.0 | XRT_FLD_DIS_434_OG [0x1b2]        |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_DIS                   | 1 | 07-F0 | d9             |  |  |  |  |
| 2013/11/22 | 15:32:54.0 | XRT_FLRCTRL_DIS_405_OG [0x195]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLRCTRL_DIS               | 1 | 07-F0 | c9             |  |  |  |  |
| 2013/11/22 | 15:32:56.0 | XRT_ARS_DIS_423_OG [0x1a7]        |   |       |                |  |  |  |  |
|            |            | MDP_XRT_ARS_DIS                   | 1 | 07-F0 | d5             |  |  |  |  |
| 2013/11/22 | 15:32:58.0 | XRT_QT_PROG_SET_446_OG [0x1be]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_QT_PROG_SET               | 2 | 07-F0 | c4 11          |  |  |  |  |
| 2013/11/22 | 15:33:00.0 | XRT_CTRL_AUTO_408_OG [0x198]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/22 | 15:39:30.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/22 | 15:39:32.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/22 | 15:39:34.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/22 | 15:42:44.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/22 | 16:04:00.0 | AOCS_Ore-point_Start_4_OG [0x09a] |   |       |                |  |  |  |  |



Nov 21, 13 13:35

## XRT\_OGLIST\_0920.chk

Page 4/5

|            |            |                                    |                     |   |       |    |    |    |    |       |
|------------|------------|------------------------------------|---------------------|---|-------|----|----|----|----|-------|
| 2013/11/22 | 16:19:00.0 | AOCs_OrE-point_Start_5_OG [0x09b]  | AOCU_NM             | 5 | 02-76 | 00 | 15 | db | 52 | 7e    |
|            |            |                                    | AOCU_NM             | 5 | 02-76 | 00 | 1a | 24 | 41 | f3    |
| 2013/11/22 | 16:34:00.0 | AOCs_OrE-point_Start_6_OG [0x09c]  | AOCU_NM             | 5 | 02-76 | 00 | 1a | c0 | 31 | b2    |
| 2013/11/22 | 16:49:00.0 | AOCs_OrE-point_Start_7_OG [0x09d]  | AOCU_NM             | 5 | 02-76 | 00 | 1b | 02 | 21 | 0e    |
| 2013/11/22 | 17:40:30.0 | AOCs_OrE-point_Start_8_OG [0x09e]  | AOCU_NM             | 5 | 02-76 | 00 | 1b | 4b | 10 | 18    |
| 2013/11/22 | 17:55:30.0 | AOCs_OrE-point_Start_9_OG [0x09f]  | AOCU_NM             | 5 | 02-76 | 00 | 1b | 4b | fe | c1    |
| 2013/11/22 | 18:10:30.0 | AOCs_OrE-point_Start_10_OG [0x0a0] | AOCU_NM             | 5 | 02-76 | 00 | 1b | 4b | f2 | 98    |
| 2013/11/22 | 18:25:30.0 | AOCs_OrE-point_Start_11_OG [0x0a1] | AOCU_NM             | 5 | 02-76 | 00 | 1b | 02 | e1 | 9a    |
| 2013/11/22 | 19:17:30.0 | AOCs_OrE-point_Start_12_OG [0x0a2] | AOCU_NM             | 5 | 02-76 | 00 | 1a | c0 | d0 | fe    |
| 2013/11/22 | 19:32:30.0 | AOCs_OrE-point_Start_13_OG [0x0a3] | AOCU_NM             | 5 | 02-76 | 00 | 1a | 24 | c0 | b5    |
| 2013/11/22 | 19:47:30.0 | AOCs_OrE-point_Start_14_OG [0x0a4] | AOCU_NM             | 5 | 02-76 | 00 | 15 | db | b0 | 32    |
| 2013/11/22 | 20:02:30.0 | AOCs_OrE-point_Start_15_OG [0x0a5] | AOCU_NM             | 5 | 02-76 | 00 | ff | 1b | 54 | fd    |
| 2013/11/22 | 20:55:00.0 | AOCs_OrE-point_Start_16_OG [0x0a6] | AOCU_NM             | 5 | 02-76 | 00 | 03 | be | 45 | 58    |
| 2013/11/22 | 21:10:00.0 | AOCs_OrE-point_Start_17_OG [0x0a7] | AOCU_NM             | 5 | 02-76 | 00 | 04 | 5a | 35 | 26    |
| 2013/11/22 | 21:25:00.0 | AOCs_OrE-point_Start_18_OG [0x0a8] | AOCU_NM             | 5 | 02-76 | 00 | 04 | b4 | 24 | 9b    |
| 2013/11/22 | 21:40:00.0 | AOCs_OrE-point_Start_19_OG [0x0a9] | AOCU_NM             | 5 | 02-76 | 00 | 04 | e5 | 13 | be    |
| 2013/11/22 | 22:30:30.0 | AOCs_OrE-point_Start_20_OG [0x0aa] | AOCU_NM             | 5 | 02-76 | 00 | 04 | fd | 02 | 7e    |
| 2013/11/22 | 22:45:30.0 | AOCs_OrE-point_Start_21_OG [0x0ab] | AOCU_NM             | 5 | 02-76 | 00 | 04 | fd | 00 | 31    |
| 2013/11/22 | 23:00:30.0 | AOCs_OrE-point_Start_22_OG [0x0ac] | AOCU_NM             | 5 | 02-76 | 00 | 04 | e5 | ee | f2    |
| 2013/11/22 | 23:15:30.0 | AOCs_OrE-point_Start_23_OG [0x0ad] | AOCU_NM             | 5 | 02-76 | 00 | 04 | b4 | de | 0d    |
| 2013/11/22 | 23:56:00.0 | AOCs_OrE-point_Start_24_OG [0x0ae] | AOCU_NM             | 5 | 02-76 | 00 | 04 | 5a | cd | 82    |
| 2013/11/23 | 00:11:00.0 | AOCs_OrE-point_Start_25_OG [0x0af] | AOCU_NM             | 5 | 02-76 | 00 | 03 | be | bd | 59    |
| 2013/11/23 | 00:26:00.0 | AOCs_OrE-point_Start_26_OG [0x0b0] | AOCU_NM             | 5 | 02-76 | 00 | ff | 1b | ad | b3    |
| 2013/11/23 | 00:40:54.0 | XRT_CTRL_MANU_402_OG [0x192]       | MDP_XRT_CTRL_MANU   | 1 | 07-F0 |    |    |    |    | c1    |
| 2013/11/23 | 00:40:56.0 | XRT_FOCUS_POSITION_410_OG [0x19a]  | XRT_FOCUS_POSITION  | 4 | 07-F8 | 22 | fe | 97 |    | 00    |
| 2013/11/23 | 00:41:00.0 | AOCs_OrE-point_Start_1_OG [0x097]  | AOCU_NM             | 5 | 02-76 | 02 | 00 | 00 | 00 | 00    |
| 2013/11/23 | 00:41:16.0 | XRT_FLD_ENA_411_OG [0x19b]         | MDP_XRT_FLD_ENA     | 1 | 07-F0 |    |    |    |    | d8    |
| 2013/11/23 | 00:41:18.0 | XRT_FLRCTRL_ENA_412_OG [0x19c]     | MDP_XRT_FLRCTRL_ENA | 1 | 07-F0 |    |    |    |    | c8    |
| 2013/11/23 | 00:41:20.0 | XRT_AEC_RESET_413_OG [0x19d]       | MDP_XRT_AEC_RESET   | 1 | 07-F0 |    |    |    |    | d0    |
| 2013/11/23 | 00:41:22.0 | XRT_ARS_DIS_423_OG [0x1a7]         | MDP_XRT_ARS_DIS     | 1 | 07-F0 |    |    |    |    | d5    |
| 2013/11/23 | 00:41:24.0 | XRT_FLD_RESET_415_OG [0x19f]       | MDP_XRT_FLD_RESET   | 1 | 07-F0 |    |    |    |    | da    |
| 2013/11/23 | 00:41:26.0 | XRT_QT_PROG_SET_414_OG [0x19e]     | MDP_XRT_QT_PROG_SET | 2 | 07-F0 |    |    |    |    | c4 04 |
| 2013/11/23 | 00:43:58.0 | XRT_FL_PROG_SET_421_OG [0x1a5]     | MDP_XRT_FL_PROG_SET | 2 | 07-F0 |    |    |    |    | c5 0d |
| 2013/11/23 | 00:44:00.0 | XRT_CTRL_AUTO_408_OG [0x198]       | MDP_XRT_CTRL_AUTO   | 1 | 07-F0 |    |    |    |    | c0    |
| 2013/11/23 | 01:10:30.0 | XRT_CTRL_MANU_400_OG [0x190]       | MDP_XRT_CTRL_MANU   | 1 | 07-F0 |    |    |    |    | c1    |
| 2013/11/23 | 01:10:32.0 | XRT_FLD_RESET_415_OG [0x19f]       | MDP_XRT_FLD_RESET   | 1 | 07-F0 |    |    |    |    | da    |
| 2013/11/23 | 01:10:34.0 | XRT_PREFLR_STRT_418_OG [0x1a2]     | MDP_XRT_PREFLR_STRT | 1 | 07-F0 |    |    |    |    | e8    |
| 2013/11/23 | 01:13:44.0 | XRT_PREFLR_STOP_419_OG [0x1a3]     | MDP_XRT_PREFLR_STOP | 1 | 07-F0 |    |    |    |    | e9    |
| 2013/11/23 | 01:28:00.0 | XRT_Custom_430_OG [0x1ae]          |                     |   |       |    |    |    |    |       |
| 2013/11/23 | 01:29:00.0 | XRT_CTRL_AUTO_424_OG [0x1a8]       | MDP_XRT_CTRL_AUTO   | 1 | 07-F0 |    |    |    |    | c0    |
| 2013/11/23 | 02:44:00.0 | XRT_CTRL_MANU_400_OG [0x190]       | MDP_XRT_CTRL_MANU   | 1 | 07-F0 |    |    |    |    | c1    |
| 2013/11/23 | 02:44:02.0 | XRT_FLD_RESET_415_OG [0x19f]       | MDP_XRT_FLD_RESET   | 1 | 07-F0 |    |    |    |    | da    |
| 2013/11/23 | 02:44:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]     | MDP_XRT_PREFLR_STRT | 1 | 07-F0 |    |    |    |    | e8    |
| 2013/11/23 | 02:47:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]     | MDP_XRT_PREFLR_STOP | 1 | 07-F0 |    |    |    |    | e9    |
| 2013/11/23 | 03:05:00.0 | XRT_Custom_430_OG [0x1ae]          |                     |   |       |    |    |    |    |       |
| 2013/11/23 | 03:06:00.0 | XRT_CTRL_AUTO_424_OG [0x1a8]       | MDP_XRT_CTRL_AUTO   | 1 | 07-F0 |    |    |    |    | c0    |
| 2013/11/23 | 04:13:30.0 | XRT_CTRL_MANU_400_OG [0x190]       | MDP_XRT_CTRL_MANU   | 1 | 07-F0 |    |    |    |    | c1    |
| 2013/11/23 | 04:13:32.0 | XRT_FLD_RESET_415_OG [0x19f]       | MDP_XRT_FLD_RESET   | 1 | 07-F0 |    |    |    |    | da    |

Nov 21, 13 13:35

## XRT\_OGLIST\_0920.chk

Page 5/5

|            |            |                                   |   |       |                |  |  |  |  |
|------------|------------|-----------------------------------|---|-------|----------------|--|--|--|--|
| 2013/11/23 | 04:13:34.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/23 | 04:16:44.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/23 | 04:42:30.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/23 | 04:43:30.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/23 | 05:54:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/23 | 05:54:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/23 | 05:54:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/23 | 05:57:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/23 | 06:20:00.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/23 | 06:21:00.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/23 | 06:29:54.0 | XRT_CTRL_MANU_402_OG [0x192]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/23 | 06:29:56.0 | XRT_FOCUS_POSITION_403_OG [0x193] |   |       |                |  |  |  |  |
|            |            | XRT_FOCUS_POSITION                | 4 | 07-F8 | 22 ff aa 00    |  |  |  |  |
| 2013/11/23 | 06:30:00.0 | AOCS_Ore-point_Start_2_OG [0x098] |   |       |                |  |  |  |  |
|            |            | AOCU_NM                           | 5 | 02-76 | 00 00 00 00 00 |  |  |  |  |
| 2013/11/23 | 06:30:16.0 | XRT_FLD_DIS_434_OG [0x1b2]        |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_DIS                   | 1 | 07-F0 | d9             |  |  |  |  |
| 2013/11/23 | 06:32:54.0 | XRT_FLRCTRL_DIS_405_OG [0x195]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLRCTRL_DIS               | 1 | 07-F0 | c9             |  |  |  |  |
| 2013/11/23 | 06:32:56.0 | XRT_ARS_DIS_423_OG [0x1a7]        |   |       |                |  |  |  |  |
|            |            | MDP_XRT_ARS_DIS                   | 1 | 07-F0 | d5             |  |  |  |  |
| 2013/11/23 | 06:32:58.0 | XRT_QT_PROG_SET_446_OG [0x1be]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_QT_PROG_SET               | 2 | 07-F0 | c4 11          |  |  |  |  |
| 2013/11/23 | 06:33:00.0 | XRT_CTRL_AUTO_408_OG [0x198]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/23 | 06:39:54.0 | XRT_CTRL_MANU_402_OG [0x192]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/23 | 06:39:56.0 | XRT_FOCUS_POSITION_410_OG [0x19a] |   |       |                |  |  |  |  |
|            |            | XRT_FOCUS_POSITION                | 4 | 07-F8 | 22 fe 97 00    |  |  |  |  |
| 2013/11/23 | 06:40:00.0 | AOCS_Ore-point_Start_1_OG [0x097] |   |       |                |  |  |  |  |
|            |            | AOCU_NM                           | 5 | 02-76 | 02 00 00 00 00 |  |  |  |  |
| 2013/11/23 | 06:40:16.0 | XRT_FLD_ENA_411_OG [0x19b]        |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_ENA                   | 1 | 07-F0 | d8             |  |  |  |  |
| 2013/11/23 | 06:40:18.0 | XRT_FLRCTRL_ENA_412_OG [0x19c]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLRCTRL_ENA               | 1 | 07-F0 | c8             |  |  |  |  |
| 2013/11/23 | 06:40:20.0 | XRT_AEC_RESET_413_OG [0x19d]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_AEC_RESET                 | 1 | 07-F0 | d0             |  |  |  |  |
| 2013/11/23 | 06:40:22.0 | XRT_ARS_DIS_423_OG [0x1a7]        |   |       |                |  |  |  |  |
|            |            | MDP_XRT_ARS_DIS                   | 1 | 07-F0 | d5             |  |  |  |  |
| 2013/11/23 | 06:40:24.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/23 | 06:40:26.0 | XRT_QT_PROG_SET_414_OG [0x19e]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_QT_PROG_SET               | 2 | 07-F0 | c4 04          |  |  |  |  |
| 2013/11/23 | 06:42:58.0 | XRT_FL_PROG_SET_421_OG [0x1a5]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FL_PROG_SET               | 2 | 07-F0 | c5 0d          |  |  |  |  |
| 2013/11/23 | 06:43:00.0 | XRT_CTRL_AUTO_408_OG [0x198]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/23 | 07:34:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/23 | 07:34:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/23 | 07:34:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/23 | 07:37:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/23 | 07:57:00.0 | XRT_Custom_430_OG [0x1ae]         |   |       |                |  |  |  |  |
| 2013/11/23 | 07:58:00.0 | XRT_CTRL_AUTO_424_OG [0x1a8]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_AUTO                 | 1 | 07-F0 | c0             |  |  |  |  |
| 2013/11/23 | 09:14:00.0 | XRT_CTRL_MANU_400_OG [0x190]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_CTRL_MANU                 | 1 | 07-F0 | c1             |  |  |  |  |
| 2013/11/23 | 09:14:02.0 | XRT_FLD_RESET_415_OG [0x19f]      |   |       |                |  |  |  |  |
|            |            | MDP_XRT_FLD_RESET                 | 1 | 07-F0 | da             |  |  |  |  |
| 2013/11/23 | 09:14:04.0 | XRT_PREFLR_STRT_418_OG [0x1a2]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STRT               | 1 | 07-F0 | e8             |  |  |  |  |
| 2013/11/23 | 09:17:14.0 | XRT_PREFLR_STOP_419_OG [0x1a3]    |   |       |                |  |  |  |  |
|            |            | MDP_XRT_PREFLR_STOP               | 1 | 07-F0 | e9             |  |  |  |  |
| 2013/11/23 | 09:49:00.0 | AOCS_Ore-point_Start_2_OG [0x098] |   |       |                |  |  |  |  |
|            |            | AOCU_NM                           | 5 | 02-76 | 00 00 00 00 00 |  |  |  |  |