

# 「あすか」 OPERATION REPORT Rev.5 Ver 3.1

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PSR1821-24 → PSR 1509-58 → Crab Pulsar #2 → Crab Nebula #1

|                           |                                                                                          |                                                                                       |                                                                                       |                                                                                       |                                                                                      |      |       |      |      |      |      |      |        |        |        |    |        |
|---------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------|-------|------|------|------|------|------|--------|--------|--------|----|--------|
|                           | PASS 1                                                                                   | PASS 2                                                                                | PASS 3                                                                                | PASS 4                                                                                | PASS 5                                                                               |      |       |      |      |      |      |      |        |        |        |    |        |
| Pass No.                  | 960916-0517                                                                              | 960916-0620                                                                           | 960916-0723                                                                           | 960916-0827                                                                           | 960916-0930                                                                          |      |       |      |      |      |      |      |        |        |        |    |        |
| Operation                 | X-REP<br>OP/OG-04 WRT<br>TCU-MEM<br>ACS-ERR-RST<br>CPU2/3-STOP<br>CPU2/3-RST<br>OP-START | X-REP<br>SBR-A-RNG<br>STAR-02 WRT<br>S-CTLG-CHK<br>OBSERVE<br>RNG-OFF                 | X-REP<br>BDR-STOP<br>X-REP<br>BDR-STOP                                                | X-REP<br>SBR-A-RNG<br>CPU2/3-STOP<br>CPU2/3-RST<br>GIS-MEM<br>RNG-OFF                 | X-REP                                                                                |      |       |      |      |      |      |      |        |        |        |    |        |
| Target                    | PSR1821-24                                                                               | PSR1821-24                                                                            | PSR1821-24                                                                            | PSR1821-24                                                                            | PSR1821-24                                                                           |      |       |      |      |      |      |      |        |        |        |    |        |
| AOS(UT)                   | 08:02:28                                                                                 | 09:44:02                                                                              | 11:25:16                                                                              | 13:06:51                                                                              | 14:48:29                                                                             |      |       |      |      |      |      |      |        |        |        |    |        |
| LOS(UT)                   | 08:14:54                                                                                 | 09:56:33                                                                              | 11:38:16                                                                              | 13:19:37                                                                              | 14:59:58                                                                             |      |       |      |      |      |      |      |        |        |        |    |        |
| Max-El                    | 27.939°                                                                                  | 72.436°                                                                               | Zenith                                                                                | 49.340°                                                                               | 16.491°                                                                              |      |       |      |      |      |      |      |        |        |        |    |        |
| Time                      | 08:08:23                                                                                 | 09:49:36                                                                              | —                                                                                     | 13:12:30                                                                              | 14:53:37                                                                             |      |       |      |      |      |      |      |        |        |        |    |        |
| Rep-band(stat.)           | X ( Complete )                                                                           | X ( Complete )                                                                        | X ( Complete )                                                                        | X ( Complete )                                                                        | X ( Complete )                                                                       |      |       |      |      |      |      |      |        |        |        |    |        |
| Rep-start                 | 08:03:59                                                                                 | 09:44:39                                                                              | 11:26:11/11:31:33                                                                     | 13:07:29                                                                              | 14:49:12                                                                             |      |       |      |      |      |      |      |        |        |        |    |        |
| DP-mode                   | OBS/TCU/OBS                                                                              | OBS/ACS/OBS                                                                           | OBS                                                                                   | OBS/TCU/OBS/<br>GIS_MEM/OBS                                                           | OBS                                                                                  |      |       |      |      |      |      |      |        |        |        |    |        |
| ACS-mode                  | Normal-Pointing                                                                          | Normal-Pointing                                                                       | Normal-Pointing                                                                       | Normal-Pointing                                                                       | Normal-Pointing                                                                      |      |       |      |      |      |      |      |        |        |        |    |        |
| SUN-pos $\theta_s/\phi_s$ | 12.71°/160.00°                                                                           | 12.63°/159.88°                                                                        | 12.59°/159.80°                                                                        | —                                                                                     | —                                                                                    |      |       |      |      |      |      |      |        |        |        |    |        |
| Attitude                  | $\begin{bmatrix} 276.37339^\circ \\ 114.70874^\circ \\ 187.17138^\circ \end{bmatrix}$    | $\begin{bmatrix} 276.37413^\circ \\ 114.70841^\circ \\ 187.17110^\circ \end{bmatrix}$ | $\begin{bmatrix} 276.37404^\circ \\ 114.70848^\circ \\ 187.17066^\circ \end{bmatrix}$ | $\begin{bmatrix} 276.37379^\circ \\ 114.70869^\circ \\ 187.17055^\circ \end{bmatrix}$ | $\begin{bmatrix} 276.3705^\circ \\ 114.70852^\circ \\ 187.16979^\circ \end{bmatrix}$ |      |       |      |      |      |      |      |        |        |        |    |        |
| OP-start(CE)              | 08:11:57 ( 00h )                                                                         | Cont ( 0Bh )                                                                          | Cont ( 16h )                                                                          | Cont ( 21h )                                                                          | Cont ( 2Bh )                                                                         |      |       |      |      |      |      |      |        |        |        |    |        |
| GIS HAM ERR               | ERR → Reset                                                                              | OK                                                                                    | OK                                                                                    | OK                                                                                    | OK                                                                                   |      |       |      |      |      |      |      |        |        |        |    |        |
| ACS ERR                   | (SH)MOMCHG<br>→ Reset                                                                    | —                                                                                     | —                                                                                     | —                                                                                     | —                                                                                    |      |       |      |      |      |      |      |        |        |        |    |        |
| SIS-mode                  | Faint<br>1212/3030                                                                       | Faint<br>1212/3030                                                                    | Faint<br>1212/3030                                                                    | Faint<br>1212/3030                                                                    | Faint<br>1212/3030                                                                   |      |       |      |      |      |      |      |        |        |        |    |        |
| S0/1-TECT                 | −34.98/−34.96°C                                                                          | −34.68/−34.67°C                                                                       | −34.01/−34.08°C                                                                       | −33.42/−33.60°C                                                                       | −33.04/−33.37°C                                                                      |      |       |      |      |      |      |      |        |        |        |    |        |
| S0/1-CCDT                 | −61.62/−61.58°C                                                                          | −61.57/−61.53°C                                                                       | −61.48/−61.39°C                                                                       | −61.29/−61.06°C                                                                       | −60.87/−60.59°C                                                                      |      |       |      |      |      |      |      |        |        |        |    |        |
| GIS-mode                  | PH(8-6-6-0-0)                                                                            | PH(8-6-6-0-0)                                                                         | PH(8-6-6-0-0)                                                                         | PH(8-6-6-0-0)                                                                         | PH(8-6-6-0-0)                                                                        |      |       |      |      |      |      |      |        |        |        |    |        |
| GIS LD Hit                | 24/27 cps                                                                                | 26/29 cps                                                                             | 31/30 cps                                                                             | 28/29                                                                                 | 26/26 cps                                                                            |      |       |      |      |      |      |      |        |        |        |    |        |
| P                         | X                                                                                        | Y                                                                                     | R                                                                                     | S                                                                                     | Pos                                                                                  | MErr | HV_HL | Gain | RT-L | RT-U | Temp | RBMT | CalPk  | CalCnt | CalTim | RT | Pk     |
| 8                         | 6                                                                                        | 6                                                                                     | 0                                                                                     | 0                                                                                     | FLF                                                                                  | 1    | 3/4   | 48   | 159  | 218  | 15.3 | 15.8 | 380.30 | 354    | 4350   |    | no_bit |
| Pass: 960916-0517         |                                                                                          |                                                                                       |                                                                                       |                                                                                       |                                                                                      |      | 3/4   | 40   | 159  | 218  | 10.4 |      | 399.82 | 310    | 4350   |    | no_bit |

SIS Mode Changes: Faint 1212/3030 for PSR1821 and Crab pulsar, Faint 1111/3333 for PSR1509 and Crab Nebula

GIS Mode Changes: PH 8-6-6-0-0-10 for PSR1821 and Crab pulsar, PH 8-8-8-0-0-7 for PSR1509, PH 10-8-8-5-0-0 for Crab Nebula

## Battery Condition (min/max)

|             |             |            |            |           |           |
|-------------|-------------|------------|------------|-----------|-----------|
| BAT_V-A     | BAT_V-B     | BAT_I-A    | BAT_I-B    | BAT_T-A   | BAT_T-B   |
| 19.20/23.30 | 19.20/23.30 | -5.16/4.75 | -4.94/4.78 | 4.82/9.03 | 4.82/8.46 |

## Maneuver Operation

| Start Time  | Target Name    | # | $(\alpha, \delta)$      | $(\phi, \theta, \psi)$             |
|-------------|----------------|---|-------------------------|------------------------------------|
| 09/16 19:40 | PSR 1509-58    | 6 | ( 228.4816 , -59.1357 ) | ( 228.8673 , 149.1823 , 147.2124 ) |
| 09/17 00:23 | Crab Pulsar #2 | 1 | ( 83.6330 , 22.0145 )   | ( 83.0618 , 68.1081 , 0.1625 )     |
| 09/17 07:50 | Crab Nebula #1 | 2 | ( 83.6330 , 22.0145 )   | ( 83.4426 , 68.0925 , 12.0789 )    |

**Comment:** 本日の運用: We observed PSR 1821-24 (timing calibration, MOT). The counting rate is 0.03 cps for SIS and 0.03 cps for GIS.

今日受信してみると、SIS1 が日照の時にサチるという現象は直っていました。どうやら Gal.Ridge-3 #9-10 のときの姿勢に限った現象のようです。何と不運なことだろう。衛星のお尻の方向から陽が当たっているためか、CCD、GIS の温度が少しずつ上昇しています。(山内S)

日曜日に小型ロケットの打ち上げがありました。打ち上げを見たのは今年の冬に続いて 2 度めでラッキー。その後、都井岬で野生馬を見ました。車の運転は楽しいなあ。(伊予本)