


P2SC-ROB- WR-004-20100405 Weekly Report # 004	P2SC Weekly report	
Period Covered: Date: Written By: Released By:	Mon April 05 to Sun April 11 2010 April 12 2010 C.Cabanas D. Berghmans	Royal Observatory of Belgium PROBA2 Science Center
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1. PROBA2 Science Center Status

Carlos Cabanas was the P2SC operator during the period. The P2SC hardware and software functioned normally.

2010-04-05 Incomplete LYRA ENG FITS files

While running the LYEDG in beta test mode we noted that the produced FITS files are not complete. The problem is being investigated along 3 tracks:

- Incomplete data delivery by REDU. This was definitely part of the problem as the situation improved after reprocessing problematic passes.
- A possible problem in the LYEDG, the tool that produces the FITS files
- A possible problem with the the time-conversion tool (PPT) that the LYEDG uses to identify & collect the data needed for a particular FITS file.

2010-04-05 New Ancillary Data Processor finished

Final tests were performed successfully. New version will be installed into the operational server and transition from the old ancillary database schema to the new one will be done next week.

2010-04-06 SWBSDG test runs

The SWAP Base Science Data Generator (SWBSDG) runs in the operational server as a test of the software, which is at Alpha level. The software is properly removing dark current and artefacts due to the on-board pixel map correction, but is not yet producing properly aligned, oriented, scaled images. ROB is working together with the group at

Trinity College in Dublin to produce a beta-version of the software within the next week or two. Once final versions of the Level-0 FITS files are available, the Beta-level version of the SW-BSDG will be installed. Once that update is complete, the level-1 FITS files it produces will be publicly available for evaluation by end-users.

2010-04-08 LYTMR bug-fix

There was a bug in the LYRA Telemetry Reformatter (LY-TMR), which had as consequence that some successive lumps were labeled as non-mergeable and had a erroneous OBET on the ASCII files. This bug has been fixed.

2. SWAP instrument status

The SWAP instrument functioned normally during the period. The 'MCPM NB RECOV ER' remains fixed at 143. The detector temperature ('SW HK T CF') remained in average at 0.5C

2010-04-05 Nominal Imaging (IOS000102)

Table acquisition at typically 100s cadence without jumping over LARs.

2010-04-06 10:00-10:27 SREP_02_LED_Sequence (IOS00103)

The weekly LED calibration sequence was run.

2010-04-06 Nominal Imaging till the end of the period (IOS000103)

Table Acquisition (3 different, low priority numbers) at a 100s cadence.

3. LYRA instrument status

The LYRA instrument functioned normally during the period.

2010-04-06

Size of the LYRA on board store was decreased by 5 MB due to the DSLP test performed from Tue 2010-04-06 to Fri 2010-04-16 (The P2 techno store size was increased by 5 MB).

2010-04-07 09:00 LREP_02_Calibration

Cancelled

2010-04-07 15:00 LREP_03_Backup

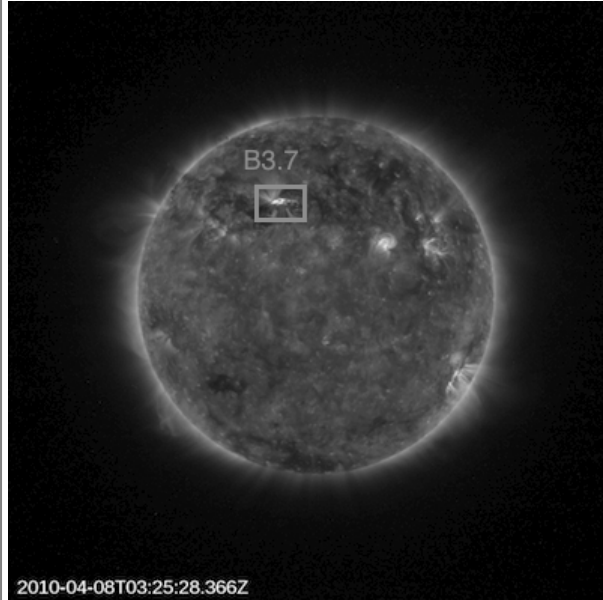
Cancelled

2010-04-08 LYRA IOS 00056

LYRA was switched to high cadence (Thursday 08 April) after the buffer had been resized (Tuesday 06 April). High cadence acquisition will be kept until the end of the test (Friday 16 April)

4. Science

2010-04-08 03:25



A B3.7 flare (02:30-03:50) happened on April 8 with peak time at 03:25. The event was well observed with LYRA in the Aluminum and Zirconium channels with an interesting "precursor spike" at 02:30. SWAP images the event throughout the whole period and shows pre-flare activity, EIT wave & dimming and post flare loops. Below an image at the peak time.

5. Data reception & discussions with MOC

Overview of the received data.

House keeping data

No aberrant HK values during the period.

Variable HK cadence (10 sec,10 min).

HK gaps from 2010-04-05 T22:21 to 2010-04-05T01:12 and from 2010-04-09T22:16 to 2010-04-09T00:04.

Science data

After the reprocessing of the data, most of the science packets have arrived to P2SC.

Some of them did not arrive but we already know the problem, for example, BINSWAP_922 (*Due to a scheduling problem, the TX ON command was not on-board and therefore no data received*).

There are some missing pass files without any explanation, for instance BINSWAP930 and BINSWAP946.

The SWAP Telemetry Reformatter has reported examples of corrupted images with the first packet corrupted.

Examples:

-BINSWAP201004112314060000041834PROCESSED
(BINSWAP_956_SVA1_2010.04.12T02.00.04.tar)

-BINSWAP201004111909060000041723PROCESSED
(BINSWAP_955_SVA1_2010.04.11T22.47.00.tar)

-BINSWAP201004110554060000041408PROCESSED
(BINSWAP_950_SVA1_2010.04.11T09.28.05.tar)

- BINSWAP201004102314050000041187PROCESSED
(BINSWAP_947_SVA1_2010.04.11T02.51.04.tar)

-BINSWAP201004092314030000040726PROCESSED
(/BINSWAP_939_SVA1_2010.04.10T02.02.16.tar)

-BINSWAP201004061714000000039794PROCESSED
(BINSWAP_913_SVA1_2010.04.08T14.15.06.tar)

Reprocessing

Several passes were reprocessed by REDU during this week. Mainly, the reasons for the reprocessing were:

- the playback of the BBE session failed during Svalbard downlink passes.
- the signal dropped during Svalbard passes (Telemetry Pakets and HK were lost)
- the TMPPpb2Print application blocked during the AD extraction.
- scheduling problem, the TX ON command was not on-board and therefore no data received.