P2SC-ROB-WR-005-20100412 Weekly Report # 005	**P2SC Weekly report**	
Period Covered: Date: Written By: Released By:	Mon April 12 to Sun April 18 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 software was updated.

2010-04-12 LYRA telemetry reformatter updated The LYRA telemetry reformatter (LY-TMR) was updated and a new version was installed. This new version fixed the problem of labeling successive lumps as non-mergeable and consequently the erroneous OBET on the ASCII files.
2010-04-12 New quick look viewer for LYRA installed A new quick look viewer for LYRA, developed by Boris Giordanengo, was installed to facilitate the viewing of the LYRA fits files (LY-QLV r2943). It can be reached internally at http://p2sc-s2/LY-QLV/.
2010-04-18 LYRA eng FITS files status The LYRA FITS files are not complete although the situation is improving. Frequently LYRA Telemetry Reformatter and LYRA Engineering Data Generator were not able to insert data into a P2SC internal databases. A disk I/O error happened during the operation. As a consequence, the generation and update of the LYRA FITS files experimented delays. This problem was caused by two LYRA Engineering Data Generator running in parallel. This situation was avoided and the problem did not appear anymore. The root of the problem is still under investigation.

A new version of the PPT, time conversion tool that LYEDG uses to identify and collect the data needed for a particular FITS file, was installed and tested in the P2SC test server s9. On 20 April, the new version will be installed in the operational server s2. It could solve some of the problems the LYEDG is currently showing (incomplete FITS files, incomplete time table in the database).

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 although from 16 to 17 April it decreased to 0.30C.

2010-04-12 Nominal Imaging (IOS000103)
Table acquisition at 100s cadence without jumping over LARs.

2010-04-13 10:00-10:27 SREP_02_LED_Sequence (IOS00104)
The weekly LED calibration sequence was run.

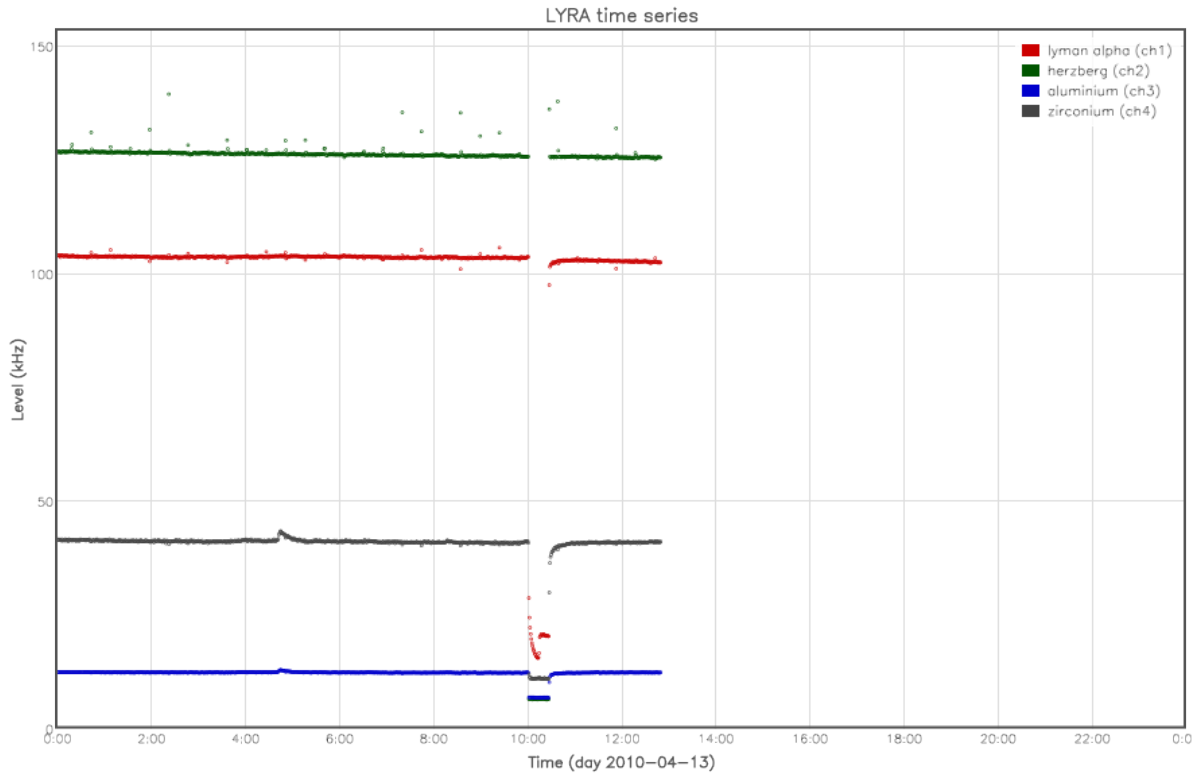
2010-04-14 /2010-04-18 Nominal Imaging (IOS000104)
After the calibration, SWAP remains imaging through a table of 3 entries, with 3 different priority numbers and with a cadence of 120 seconds, without jumping over LARS.
Note that the acquisition cadence was slowed down from 100 to 120 because the SW NB PRO_IM was oscillating between 190 and 285. The cadence was too high.

3. LYRA instrument status

The LYRA instrument functioned normally during the period.

2010-04-12
LYRA remains acquiring at high cadence.

2010-04-13
SWAP performs the weekly LED sequences from 10:00 to 10:30. Off-points are commanded manually by IOS from 10:00 to 10:26. As a consequence, LYRA perceives signal drops:



2010-04-14 07:00 LREP_02_Calibration

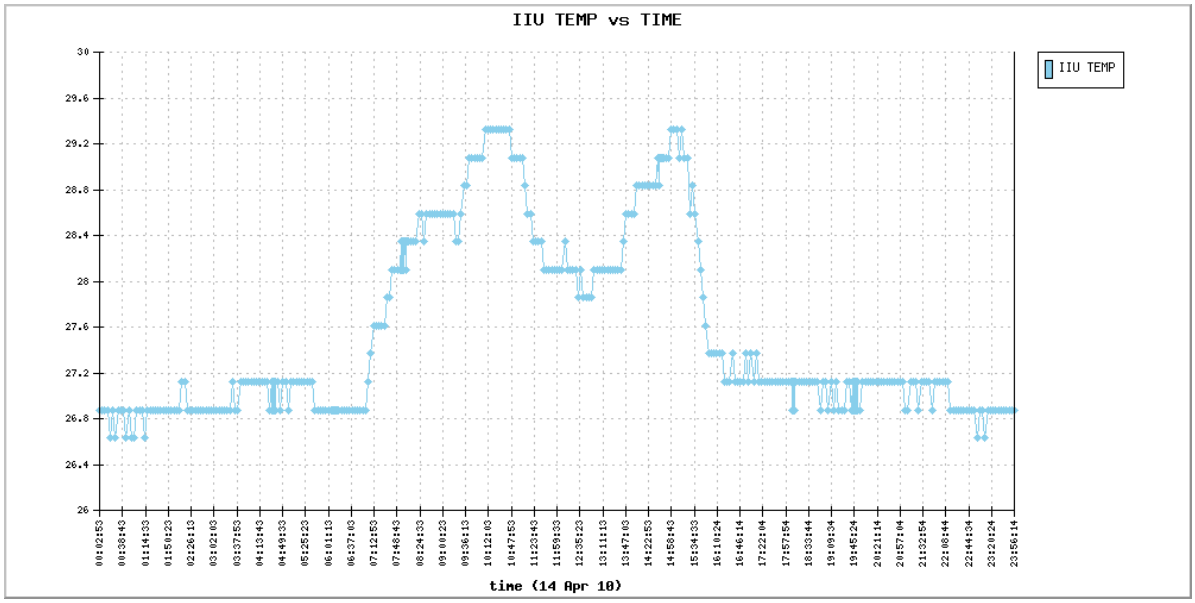
Note that for the very first time, this operation is performed without any additional manual TC is needed.

LYIOS00057

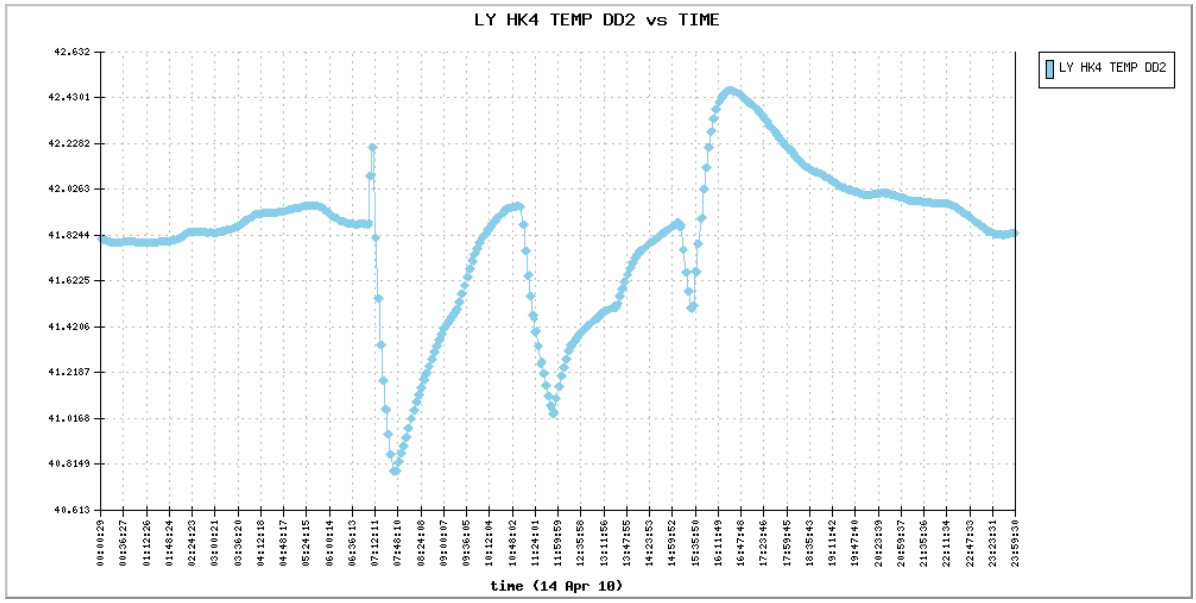
```
LYRA
00057
2010.04.13T09:00:42.000
2010.04.14T06:00:00.000
# generated on 2010-04-13T09:00:43Z by ios.xsl version
1.1
2010.04.14T07:00:00.000 warm_up 50ms unit_2 unit_1 100
off 0 close close
2010.04.14T07:07:00.000 set_heater ab 1 off
2010.04.14T07:07:05.000 set_heater ab 2 off
2010.04.14T07:07:10.000 set_heater ab 3 off
2010.04.14T07:17:00.000 acquisition 50ms unit_2 unit_1
200000 off 0
2010.04.14T07:40:00.000 acquisition 50ms unit_2 unit_1
200000 vis 255
2010.04.14T09:20:00.000 acquisition 50ms unit_2 unit_1
200000 uv 255
2010.04.14T11:00:00.000 acquisition 50ms unit_2 unit_1
```

```
200000 off 0
2010.04.14T11:20:00.000 acquisition 50ms unit_2 unit_3
100 off 0
2010.04.14T11:30:00.000 acquisition 50ms unit_2 unit_3
200000 off 0
2010.04.14T11:50:00.000 acquisition 50ms unit_2 unit_3
200000 vis 255
2010.04.14T13:30:00.000 acquisition 50ms unit_2 unit_3
200000 uv 255
2010.04.14T15:10:00.000 acquisition 50ms unit_2 unit_3
200000 off 0
2010.04.14T15:30:00.000 warm_up 10ms unit_2 off 100 off
0 open close
2010.04.14T15:37:00.000 set_heater ab 1 off
2010.04.14T15:37:05.000 set_heater ab 2 off
2010.04.14T15:37:10.000 set_heater ab 3 off
2010.04.14T15:47:00.000 acquisition 10ms unit_2 off
200000 off 0
```

During the LYRA calibration campaign (LREP_02_Calibration) which took place on 2010-04-14 from 07:00 to 15:37 the Instrument Interface Unit temperature experimented minor ups and downs.



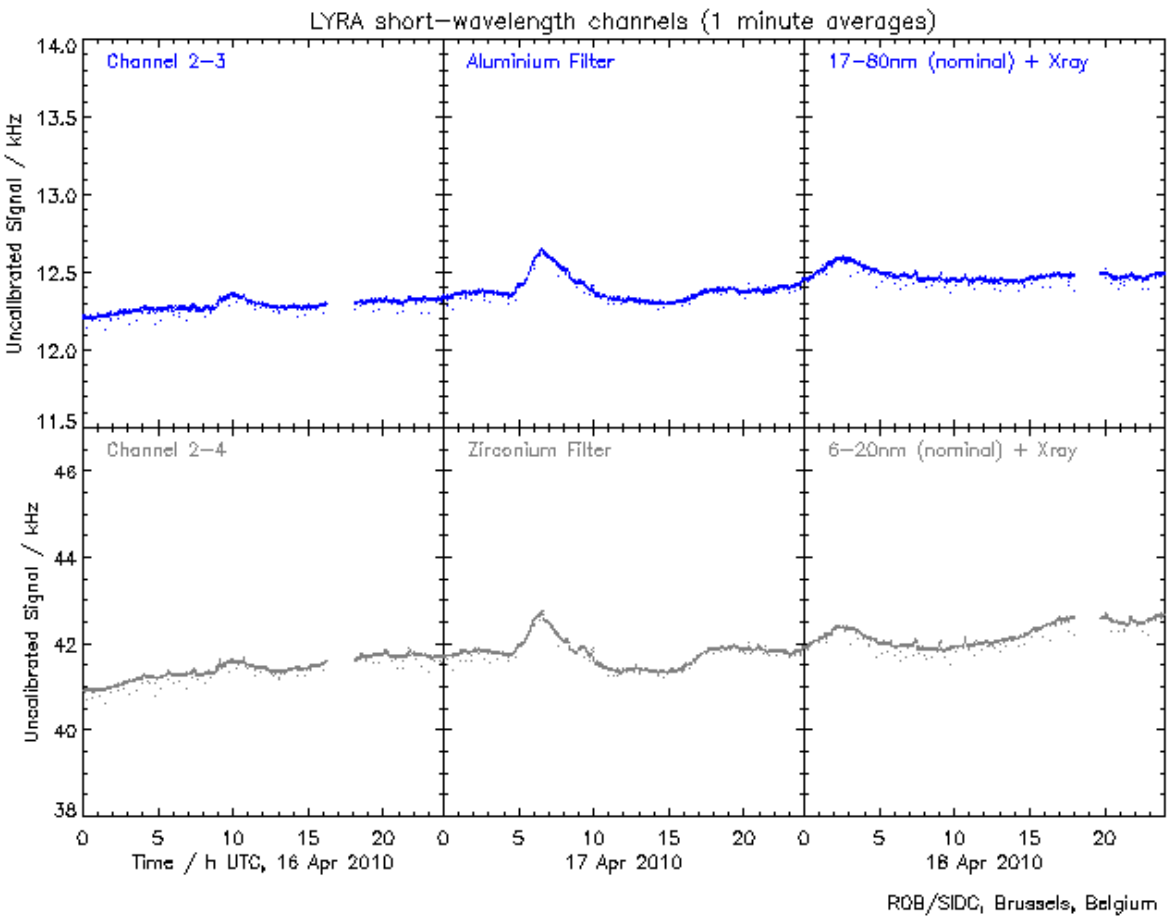
These raises in the IIU temp could be explained through the raises in LYRA head 2 temp.



4. Science

2010-04-12 LYRA daily graphs for space weather monitoring

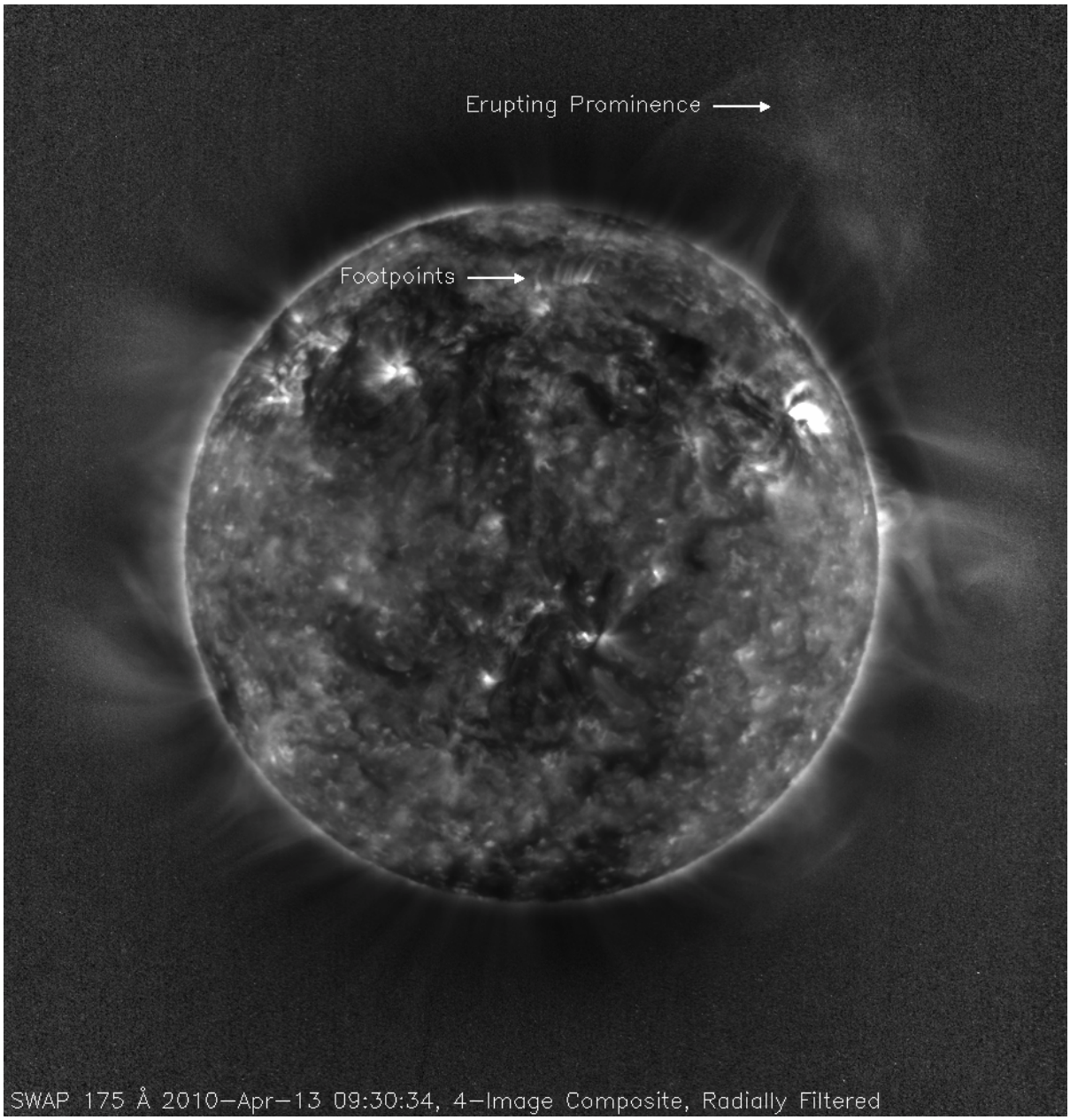
Ingolf Dammasch now produces on a daily basis the LYRA curves below. This will later be automated. The "LYRA latest graph" is published on http://sidc.be and http://proba2.sidc.be.



2010-04-13 SWAP shows a major eruptive prominence.

SWAP was acquiring an image every 120 seconds on Tuesday 13 April when a solar eruption took place. The full range of phenomena associated with this event could be monitored.

In the picture shown below, we can see the erupting prominence as a large, bright feature, extending outward from the Sun's surface. During the eruption, the footpoints of the prominence brighten up.



5. Data reception & discussions with MOC

Overview of the received data.
This section overviews the recovery data from pass 956 to pass 1019 (12-04-2010 / 18-04-2010).

House keeping data

No aberrant values anymore.
HK gaps:
2010-04-12T22:08:41 and 2010-04-13T00:26:057
2010-04-16T16:25:26 and 2010-04-16T18:07:32.
2010-04-18T18:09:41 and 2010-04-18T19:44:38.

Science data
SWAP and LYRA science data are missing from pass 999.
SWAP and LYRA science data are missing from pass 1018.
Few corrupted images.