


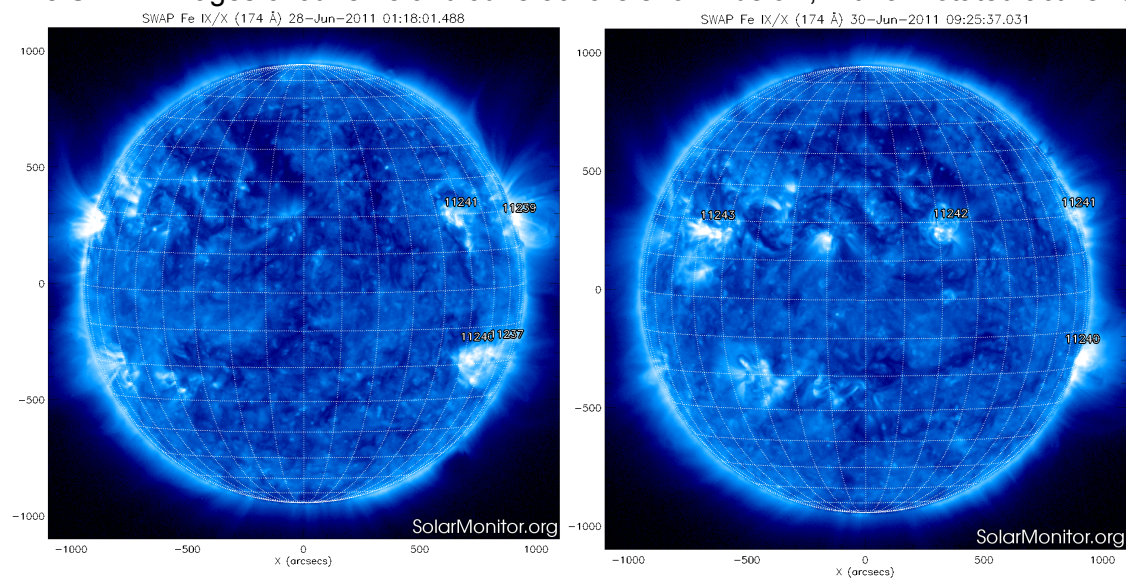
P2SC-ROB-WR-067- 20110627 Weekly report #67	P2SC Weekly report	
Period covered: Date: Written by: Released by:	Mon JUN 27 to Sun JUL 03 2011 July 3 2011 David Berghmans Marie Dominique	Royal Observatory of Belgium PROBA2 Science Center
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1. Science

Solar & Space weather events

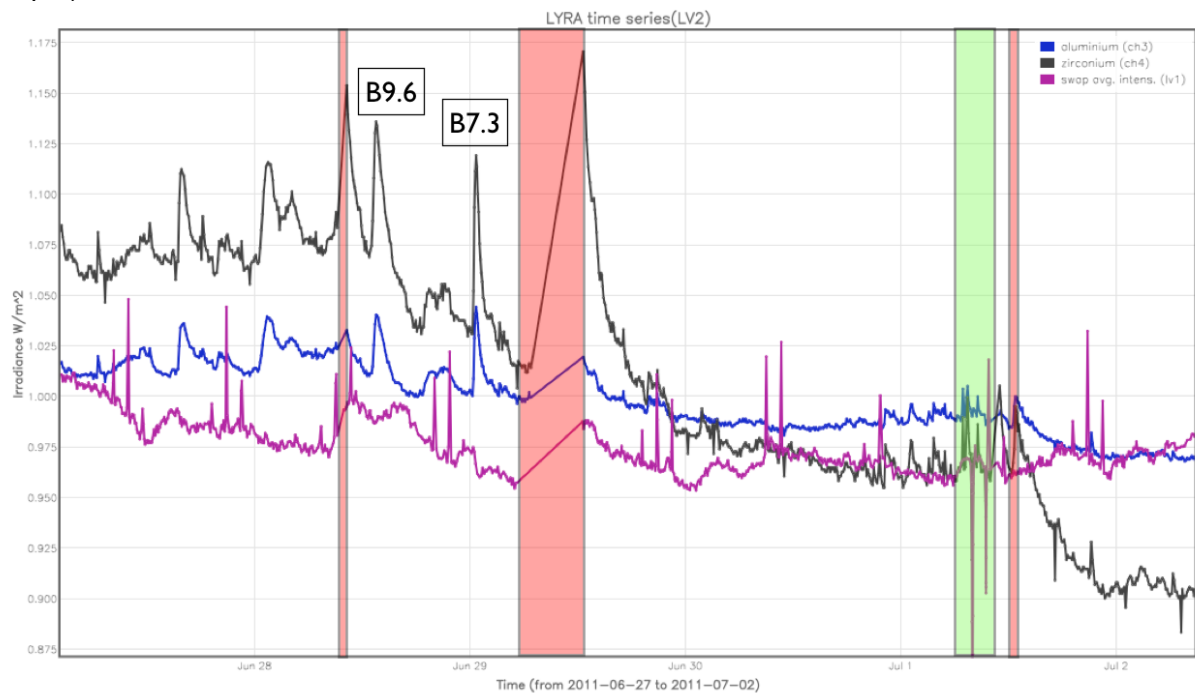
Overview

The SWAP images of June 28 and June 30 are shown below, with annotated active regions:



Note in particular the fast growth of region 11242 on June 30. Solar activity was very quiet during the period. There were no flares reaching the C-class level.

Week overview of LYRA Al/Zr signals and SWAP average intensity (SWAP average intensity in purple):



Data gaps are shown in red. The big red block corresponds to a satellite reboot, the thinner red blocks correspond to propulsion campaigns. The peaks in LYRA signals are due to solar flares. The two biggest flares are annotated. The tiny, periodical peaks in SWAPINT were caused by crossing over the SAA. The green block is the period of the July 1 solar eclipse, the two transits can be seen as two downward spikes in the purple SWAP average intensity curve.

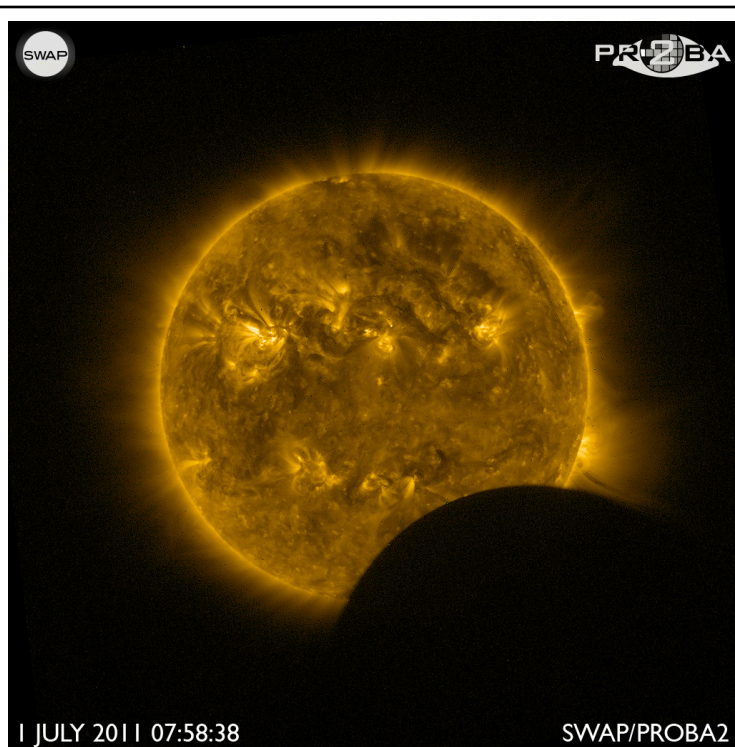
Specific events

A noteworthy event was a West-limb eruption on June 29:



Scientific campaigns

A solar eclipse happened on July 1 AM above the South Pole. A dedicated web page for the press was developed: http://proba2.oma.be/swap/data/mpg/movies/campaign_movies/20110701_eclipse/



Outreach, papers, presentations, etc.

D. Berghmans presented “PROBA2 Space Weather services” to the Space Weather Working Team (Brussels, June 28).

L. Dolla presented “A comparison of quasi-periodic pulsations in different wavebands” to the BUKS workshop (Mallorca, June 27).

The deadline for the second round of PROBA2 Guest Investigator proposals ended on July 1 2011. The received proposals will be reviewed in the coming weeks by the SWAP and LYRA science consortium.

To be explored

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2. LYRA instrument status

Calibration

There were no LYRA calibration campaigns executed during the period.

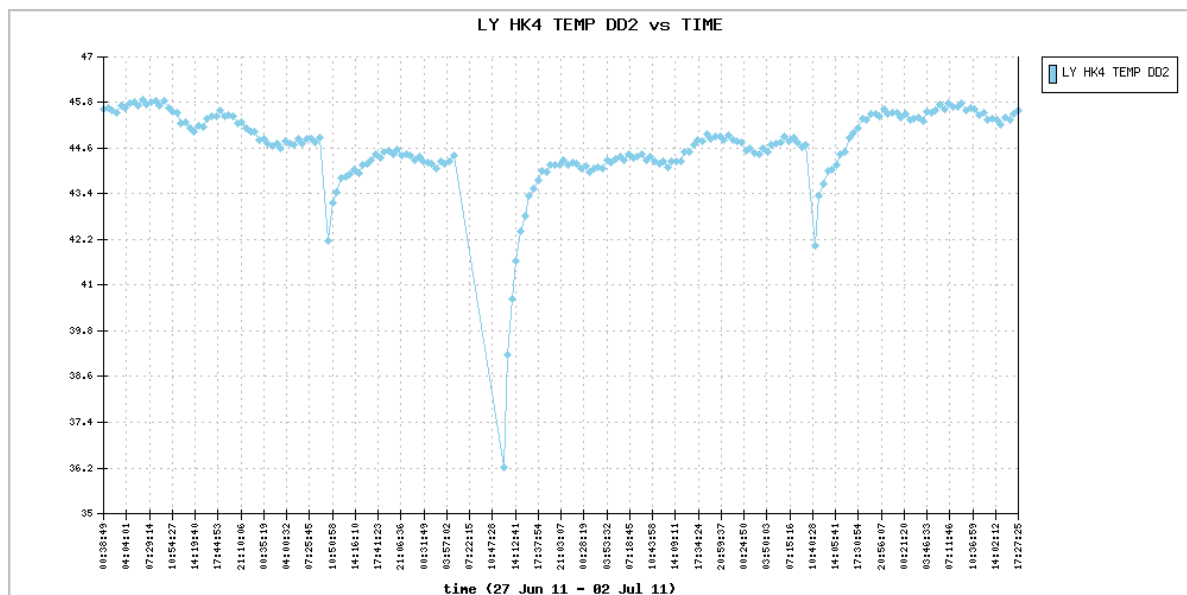
IOS & operations

Monday Jun 27	Tuesday Jun 28	Wednesday Jun 29	Thursday Jun 30	Friday Jul 1	Saturday Jul 2	Sunday Jul 3
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Nominal acquisition	Nominal acquisition	Nominal acquisition	Nominal acquisition	Nominal acquisition	Nominal acquisition	Nominal acquisition
		Satellite reboot: data gap from 06:50 till 12:30		Eclipse campaign Propulsion campaign: data gap from 10:00 till 10:38		
LYIOS00175	LYIOS00176	LYIOS00177	LYIOS00177	LYIOS00177	LYIOS00177	LYIOS00177

LYRA detector temperature

The LYRA detector 2 temperature (nominal unit) fluctuated between 44 and 46 degrees Celsius. Downward excursion were seen as a consequence of the propulsion campaigns and the satellite reboot.



To be explored

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3. SWAP instrument status

Calibration

There was no SWAP calibration campaign during the present period.

MCPM errors

The number of MCPM recoverable increased up till 1334 before the satellite reboot of June 29, 06:50. After that, it was reset to and remained at zero. The number of MCPM unrecoverable errors was zero all the time.

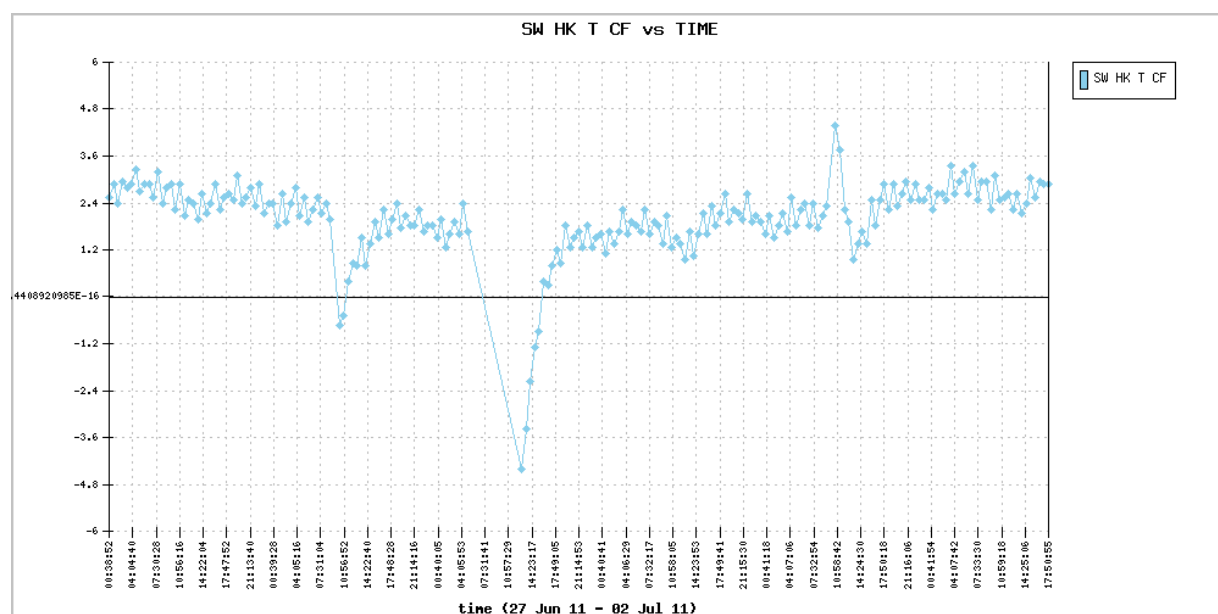
IOS & operations

Note that the usual ESP campaign on Thursday was skipped this week.

Monday Jun 27	Tuesday Jun 28	Wednesday Jun 29	Thursday Jun 30	Friday Jul 1	Saturday Jul 2	Sunday Jul 3
Nominal acquisition	Nominal acquisition Propulsion campaign: data gap from 9:14 till 9:52	Nominal acquisition Satellite reboot: data gap from 06:50 till 12:30	Nominal acquisition	Nominal acquisition Eclipse campaign Propulsion campaign: data gap from 10:00 till 10:38	Nominal acquisition	Nominal acquisition
IOS00310 708 images	IOS00313 699 images	IOS00313/314 530 images	IOS00314 784 images	IOS00314 642 images	IOS00314 X images	IOS00314 X images

SWAP detector temperature

The SWAP Cold Finger Temperature was at 2.8 degrees in the beginning of the week. Downward excursion were observed to following the satellite reboot (-5.2C) on June 29 and the propulsion campaigns of June 28 (-1.5C). In contrast an upward excursion could be seen during the propulsion campaigning of July 1.



To be explored

The data of the July 1 (partial) solar eclipse will be used to further characterise the SWAP telescope PSF.

4. PROBA2 Science Center Status

David Berghmans was operator during this week, with the additional support of Erik Pyllyer.

There were no tools updated on the operational server,

5. Data reception & discussions with MOC

- Data reception was interrupted on Saturday June 25 following pass 4977 (before the period of this report) until Sunday evening. Finally most data was recovered and received at P2SC by June 28.
- However LYRA_AD_4982 continued to contain a data gap between June 25 17:21 and 20:19 (which is the period between pass 4981 and 4982). This caused a housekeeping data gap and subsequently a gap in SWAP Level 1 data. Fortunately the data was recoverable at Redu and was sent on July 1.
- An interruption in the Belgacom internet service in Redu caused a temporary delay in communication in the evening of July 1.

6. APPENDIX Frequently used acronyms

ADP	Ancillary Data Processor
ADPMS	Advanced Data and Power Management System
AOCS	Attitude and Orbit Control System
APS	Active Pixel image Sensor
ASIC	Application Specific Integrated Circuit
BBE	Base Band Equipment
CME	Coronal Mass Ejection
COGEX	Cool Gas Generator Experiment
CRC	Cyclic Redundancy Check
DR	Destructive Readout
DSLPL	Dual Segmented Langmuir Probe
EIT	Extreme ultraviolet Imaging Telescope
FITS	Flexible Image Transport System
FOV	Field Of View FPA Focal Plane Assembly
FPGA	Field Programmable Gate Arrays
GPS	Global Positioning System
HAS	High Accuracy Star tracker
HK	Housekeeping
ICD	Interface Control Document
IIU	Instrument Interface Unit
IOS	Instrument Operations Sheet
LED	Light Emitting Diode
LEO	Low Earth Orbit
LYRA	LYman alpha RAdiometer
LYTMR	LYRA Telemetry Reformatter (software module of P2SC)
LYEDG	LYRA Engineering Data Generator (software module of P2SC)
MCMP	Mass Memory, Compression and Packetisation Module
MOC	Mission Operation Center
NDR	Non Destructive Readout
OBET	On board Elapsed Time
OBSW	On board Software
PE	Proximity Electronics
PGA	Programmable Gain Amplifier
PI	Principal Investigator

P2SC	PROBA2 Science Center
PPT	Pointing, Positioning and Time (software module of P2SC)
ROB	Royal Observatory of Belgium
SAA	South Atlantic Anomaly
SCOS	Spacecraft Operation System
SEU	Single Event Upset
SOHO	Solar and Heliospheric Observatory
SWAP	Sun Watcher using APS detector and image Processing
SWAVINT	SWAP AVerage INTensity
SWBSDG	SWAP Base Science Data Generator
SWEDG	SWAP Engineering Data Generator (software module of P2SC)
SWTMR	SWAP Telemetry Reformatter (software module of P2SC)
TBC	To Be Confirmed
TBD	To Be Defined
TBW	To Be Written
TC	Telecommand
TPMU	Thermal Plasma Measurement Unit
UTC	Coordinated Universal Time
UV	Ultraviolet