| P2SC-ROB-WR-074-20110815 Weekly report #074	**P2SC Weekly report**	
Period covered: Date: Written by: Released by:	Mon Aug 15 to Sun Aug 21 2011 Aug 22 2011 M. Dominique A. De Groof	Royal Observatory of Belgium PROBA2 Science Center
To:	LYRA PI, marie.dominique@sidc.be SWAP PI, david@sidc.be	http://proba2.sidc.be ++ 32 (0) 2 373 0 559
cc:	ROB DIR, ronald@oma.be ESA Redu, Etienne.Tilmans@esa.int ESA D/SRE, Joe.Zender@esa.int ESA D/TEC, Karsten.Strauch@esa.int	

1. Science

Solar & Space weather events

Overview
The SWAP images of Aug 15 and Aug 22 are shown below, with annotated active regions:
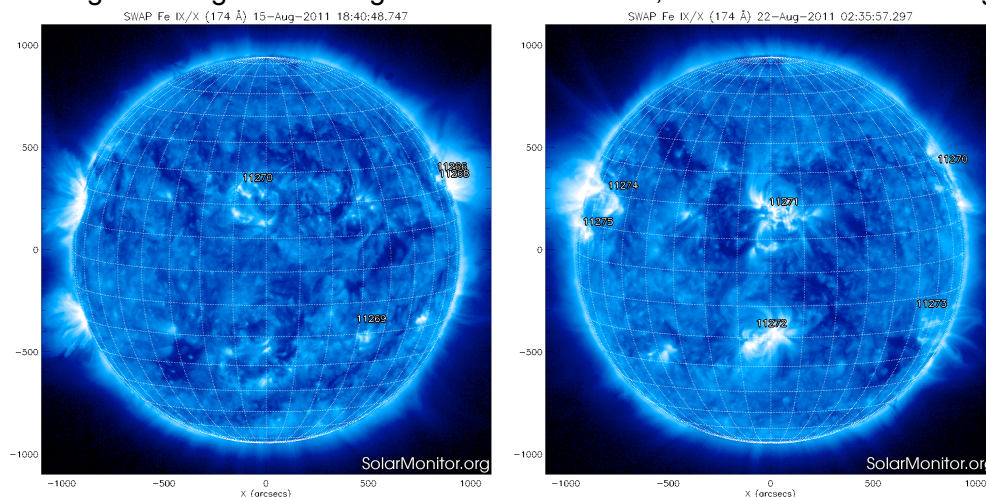
In general the solar activity on the Sun was low. AR 11271 and 11272 were in their declining phase and produce 13 C-class flares (maximum C3.4). Four minor CMEs were detected by SWAP.

Week overview of LYRA Al/Zr signals and SWAP average intensity (SWAVINT in purple):
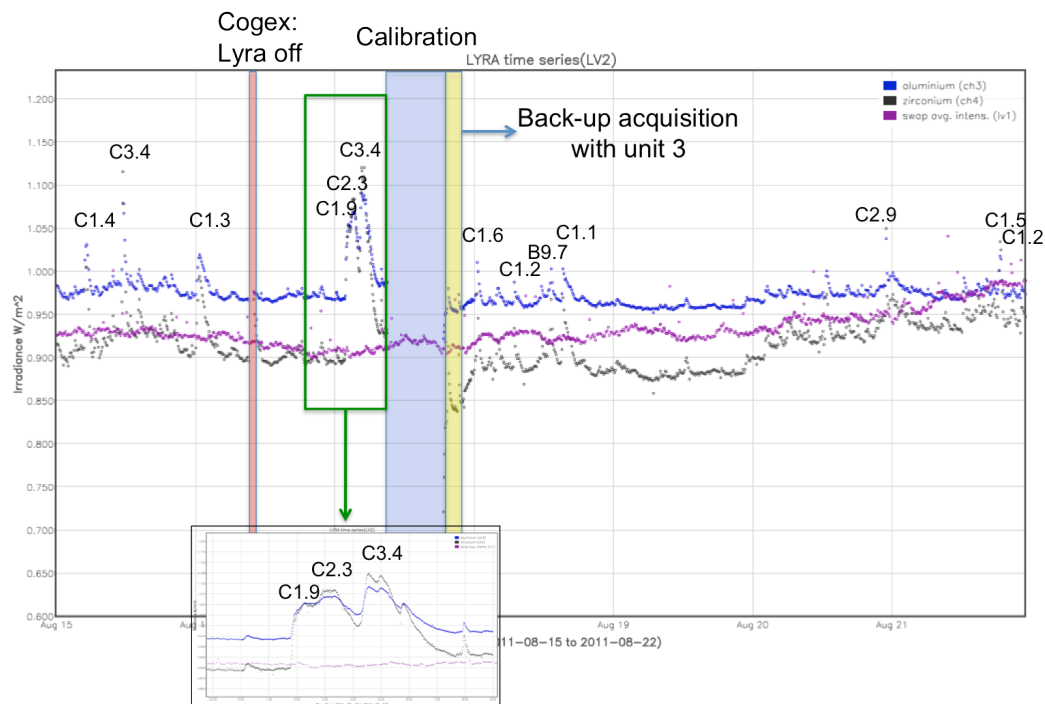
The calibration campaigns are annotated in blue, data gaps in red. The peaks in LYRA signals are due to solar flares. The tiny, periodical peaks in SWAVINT were caused by crossing over the SAA.

Scientific campaigns

- Cogex campaign on Aug 16 from 09:14 to 09:47
- Lyra calibration on Aug 17 from 09:00 to 19:20
- Lyra back-up acquisition with unit 3 on Aug 17 from 19:28 to 21:08
- ESP campaign on Aug 18 from 09:22 to 09:51

Outreach, papers, presentations, etc.

- A. Shapiro (PMOD) submitted a paper entitled "Eclipses observed by LYRA - a sensitive tool to test the models for the solar irradiance" in the frame of the *Solar Physics* topical issue.
- Spiros Patsourakos was visiting in the framework of the Guest Investigator Program
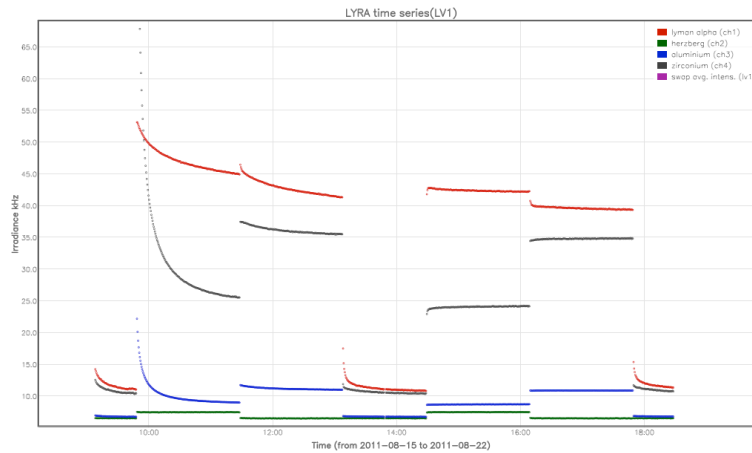
To be explored
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2. LYRA instrument status

Calibration
The bi-weekly calibration campaign took place on Aug 17 from 09:00 to 19:20. It was followed by a back-up acquisition with unit 3 from 19:28 to 21:08.
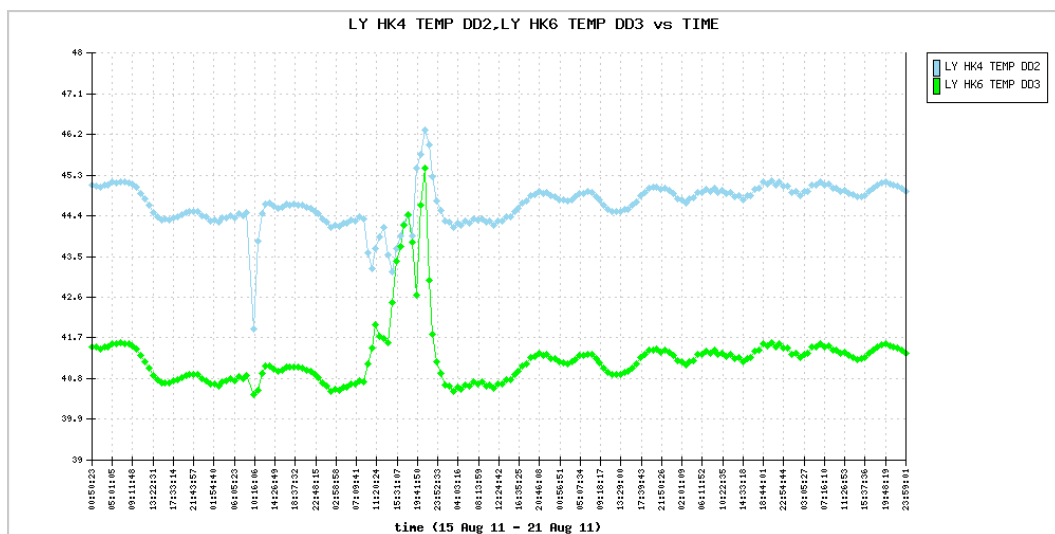
IOS & operations

Monday 15 Aug	Tuesday 16 Aug	Wednesday 17 Aug	Thursday 18 Aug	Friday 19 Aug	Saturday 20 Aug	Sunday 21 Aug
Nominal acquisition	Nominal acquisition + cogex campaign	Nominal acquisition + calibration + back-up unit3	Nominal acquisition	Nominal acquisition	Nominal acquisition	Nominal acquisition
LYIOS00187	LYIOS00187	LYIOS00187	LYIOS00187	LYIOS00187	LYIOS00187	LYIOS00187

LYRA detector temperature

The LYRA detector 2 temperature (nominal unit) fluctuated between 43 and 45.5 degrees Celsius. Effects were seen of DSLP week-end activities, as well as of the LYRA calibration and back-up acquisition campaigns. The sudden drop to 41.5° on Aug 16, 09:45 is due to the switch-off of the instrument to support the Cogex campaign

To be explored
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3. SWAP instrument status

Calibration:/

MCPM recoverable errors
increased from 226 to 248 this week.
The number of MCPM unrecoverable errors is still 0.

IOS & operations

The SWAP IOS covering the COGEX campaign was not sent. Therefore, SWAP remained acquiring during the campaign instead of being switched to IDLE mode.

Monday 15 Aug	Tuesday 16 Aug	Wednesday 17 Aug	Thursday 18 Aug	Friday 19 Aug	Saturday 20 Aug	Sunday 21 Aug
Nominal acquisition	Nominal acquisition + Cogex campaign (SWAP in acquisition)	Nominal acquisition	Nominal acquisition + ESP campaign	Nominal acquisition	Nominal acquisition	Nominal acquisition
IOS00322 769 images	IOS00322 763 images	IOS00322 667 images	IOS00323 706 images	IOS00323 659 images	IOS00323 701 images	IOS00323 648 images

SWAP detector temperature
The SWAP Cold Finger Temperature fluctuated between -1.6 to -2.65 degrees Celsius. Effects were seen of DSLP activities during the WE.
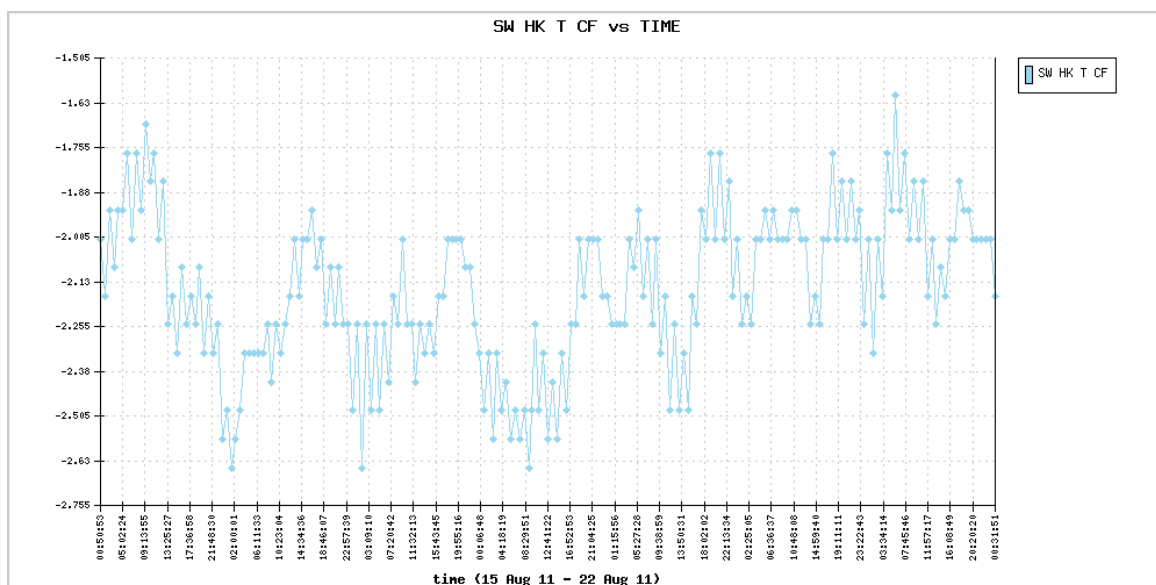
To be explored
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4. PROBA2 Science Center Status

M. Dominique was operator during this week.

No tool was updated on the operational server.

5. Data reception & discussions with MOC

Passes
In general the data reception this week was good
The following passes contained corrupted or truncated data: 5443, 5447, 5471, 5487, 5489

Data coverage HK
The HK data were complete this week.

Data coverage SWAP
The overall data coverage was good.
Statistics for complete week:
Total number of images between 2011 Aug 15 0UT and 2011 Aug 22 0UT: 5050
Highest cadence in this period: 110 seconds
Average cadence in this period: 119.76 seconds
Number of image gaps larger than 300 seconds: 1
Largest data gap: 29.00 minutes, due to ESP campaign

Data coverage LYRA
The LYRA data were complete this week (see overview in Sect.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
DSLP	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)
MCPM	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