


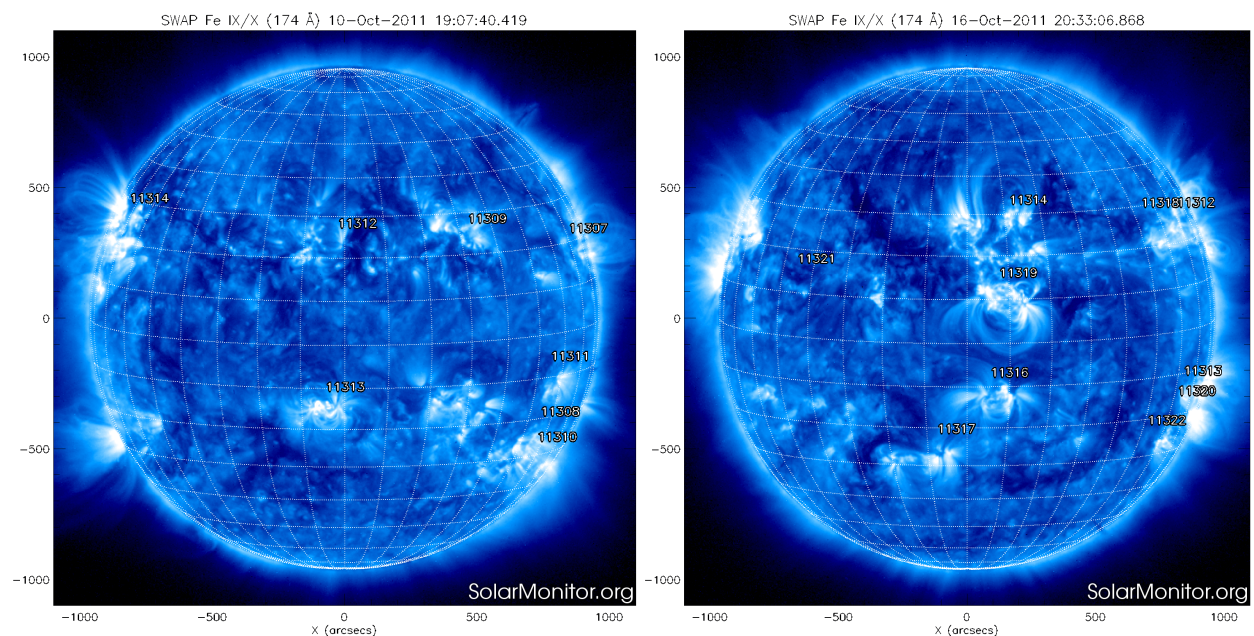
P2SC-ROB-WR-082- 20111010 Weekly report #082	P2SC Weekly report	
Period covered: Date: Written by: Released by:	Mon Oct 10 to Sun Oct 17, 2011 Wed 19 Oct 2011 Erik Pylyser David Berghmans	Royal Observatory of Belgium PROBA2 Science Center
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1. Science

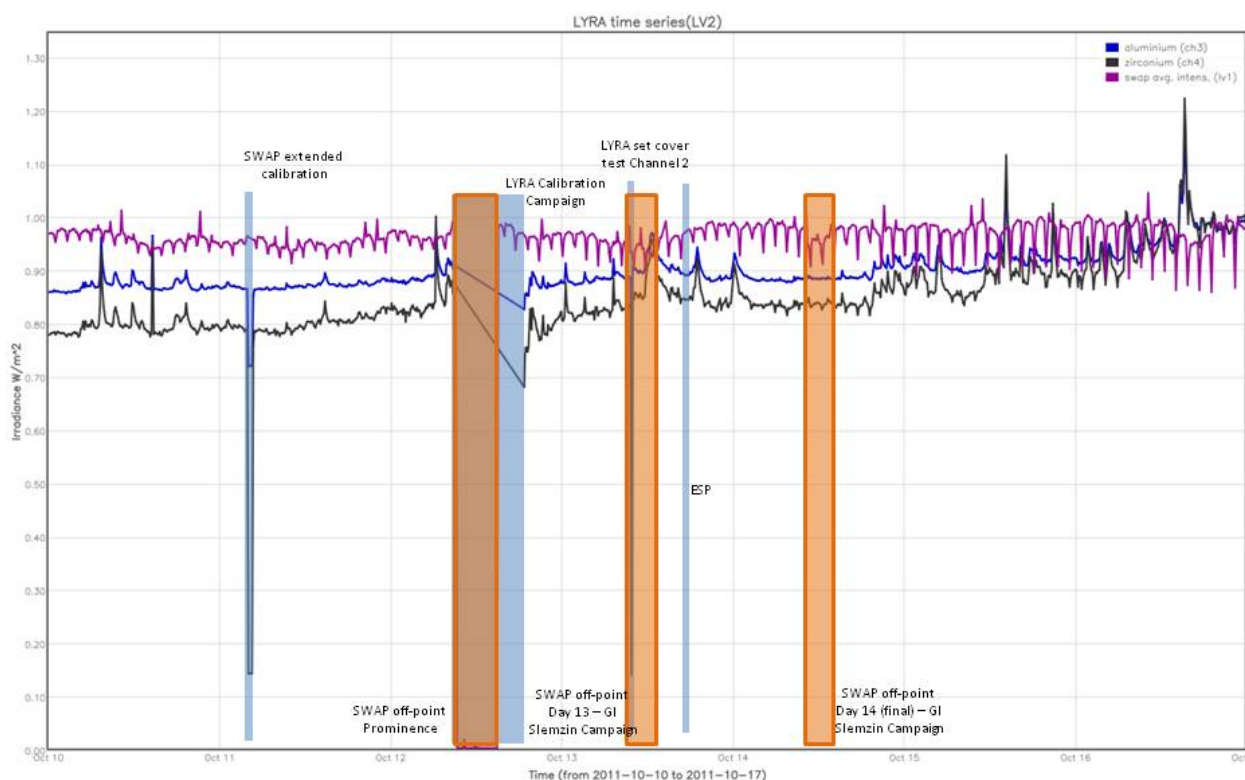
Solar & Space weather events

Overview

The SWAP images of October 10 and October 16 are shown below, with annotated active regions:



Solar activity evolved from LOW/Medium early in the week towards Medium by the end of the week. Flaring activity was in the C-level. The number of C-flares gradually increases in the course of the week.



Above we show the weekly overview of LYRA Al/Zr signals and SWAP average intensity (SWAVINT in purple). SWAVINT as well as the LYRA channels start to exhibit luminosity dips, due to the upcoming occultation season.

The blue areas indicate, from left to right, the weekly SWAP calibration campaign, the LYRA bi-weekly calibration campaign, the set-cover test for LYRA Channel 2 and the weekly ESP campaign/jump, respectively. The orange areas indicate a 5 hour limb observation of a prominence (West off-pointing), Day 13 and Day 14 (final) of the GI campaign for Vladimir Slemzin, (also West off-pointing) respectively.

Scientific campaigns

The Guest Investigator campaign of Vladimir Slemzin (starting on 1/10) was finalised with two West off-pointing campaigns on Thu 13 and Fri 14.

On Wednesday, a campaign was started to follow a prominence at the West limb which may 'go off'. The campaign was to last about 5 hours. However, due to an operator error, the off pointing was wrong. The prominence did not 'go off'.

Outreach, papers, presentations, etc.

David Berghmans?...

To be explored

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2. LYRA instrument status

Calibration

A calibration campaign was executed successfully on Wed 12/10.

IOS & operations

Monday 10 Oct	Tuesday 11 Oct	Wednesday 12 Oct	Thursday 13 Oct	Friday 14 Oct	Saturday 15 Oct	Sunday 16 Oct
Nominal acquisition	Nominal acquisition	Nominal acquisition + Calibration campaign	Nominal acquisition + Test of the "set cover" TC with unit2	Nominal acquisition	Nominal acquisition	Nominal acquisition
LYIOS00194	LYIOS00195	LYIOS00195	LYIOS00196	LYIOS00196	LYIOS00196	L YIOS00196

A test of the 'set cover' commands for LYRA Channel 2 were executed on Thursday. Channel 2 was closed for 5 minutes and re-opened with the set cover commands. The on-board execution was successful.

LYRA detector temperature

The LYRA detector 2 temperature (nominal unit) fluctuated between 46.7 and 48.4 degrees Celsius during nominal operations.

The overall evolution is normal.

To be explored

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3. SWAP instrument status

Calibration

The weekly 'extended' SWAP calibration campaign was executed on Tuesday.

MCPM recoverable errors

Increased from 549 to 603 this week.

The number of MCPM unrecoverable errors is still 0.

IOS & operations

Monday 10 Oct	Tuesday 11 Oct	Wednesday 12 Oct	Thursday 13 Oct	Friday 14 Oct	Saturday 15 Oct	Sunday 16 Oct
Nominal acquisition 110s cadence Day 10 GI Slemzin IOS00336 565 images	Nominal acquisition + calibration campaign, including extra darks acquisition Day 11 GI Slemzin IOS00337 633 images	Nominal acquisition+ West off pointing for prominence Day 12 GI Slemzin IOS00338 588 images	Nominal acquisition + ESP campaign Day 13 GI Slemzin IOS00338 635 images	Nominal acquisition Day 14 GI Slemzin IOS00338 642 images	Nominal acquisition IOS00338 691 images	Nominal acquisition IOS00338 645 images

SWAP detector temperature

The SWAP Cold Finger Temperature fluctuated between -0.38 and 1.16 degrees Celsius. Temperature evolution is normal.

To be explored

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4. PROBA2 Science Center Status

Marie Dominique, supported by Erik Pylyser and Koen Stegen, was operator during this week.

The following tools were updated on the operational server:

* complete repository update : 14/10/2011: [r4247](#)

5. Data reception & discussions with MOC**Passes**

All data were received.

Data coverage HK

The HK data were complete this week.

Data coverage SWAP

All data was received. On Monday, the temporal resolution of SWAP images was still lower than nominal due to the MCPM blockage of Sat 08/10.

Statistics for complete week:

Total number of images between 2011 Oct 10 0UT and 2011 Oct 16 0UT: 3757

Highest cadence in this period: 0 seconds

Average cadence in this period: 138.01 seconds

Number of image gaps larger than 300 seconds: 2

Largest data gap: 29.00 minutes

Another large data gap of 29 min was commanded to allow for an ESP test.

Data coverage LYRA

The LYRA data were complete this week.

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
IU	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