P2SC-ROB-WR-079-20110919 Weekly report #079	**P2SC Weekly report**	
Period covered: Date: Written by: Released by:	Mon Sep 19 to Sun Sep 25 2011 Wed 28 Sep 2011 Erik Pylyser David Berghmans	Royal Observatory of Belgium PROBA2 Science Center
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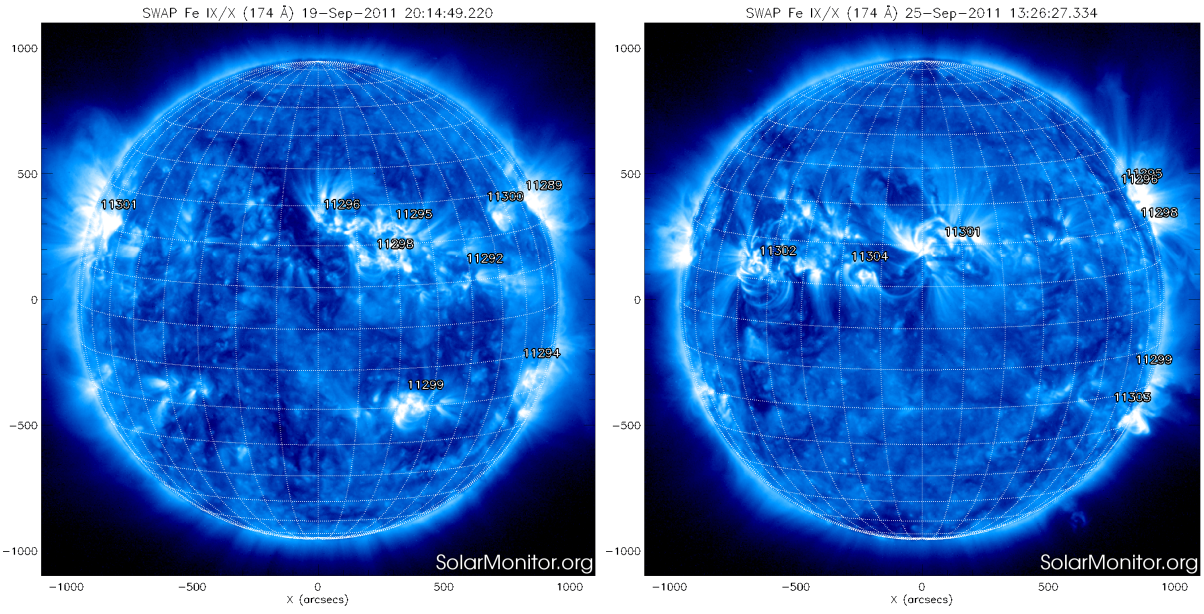
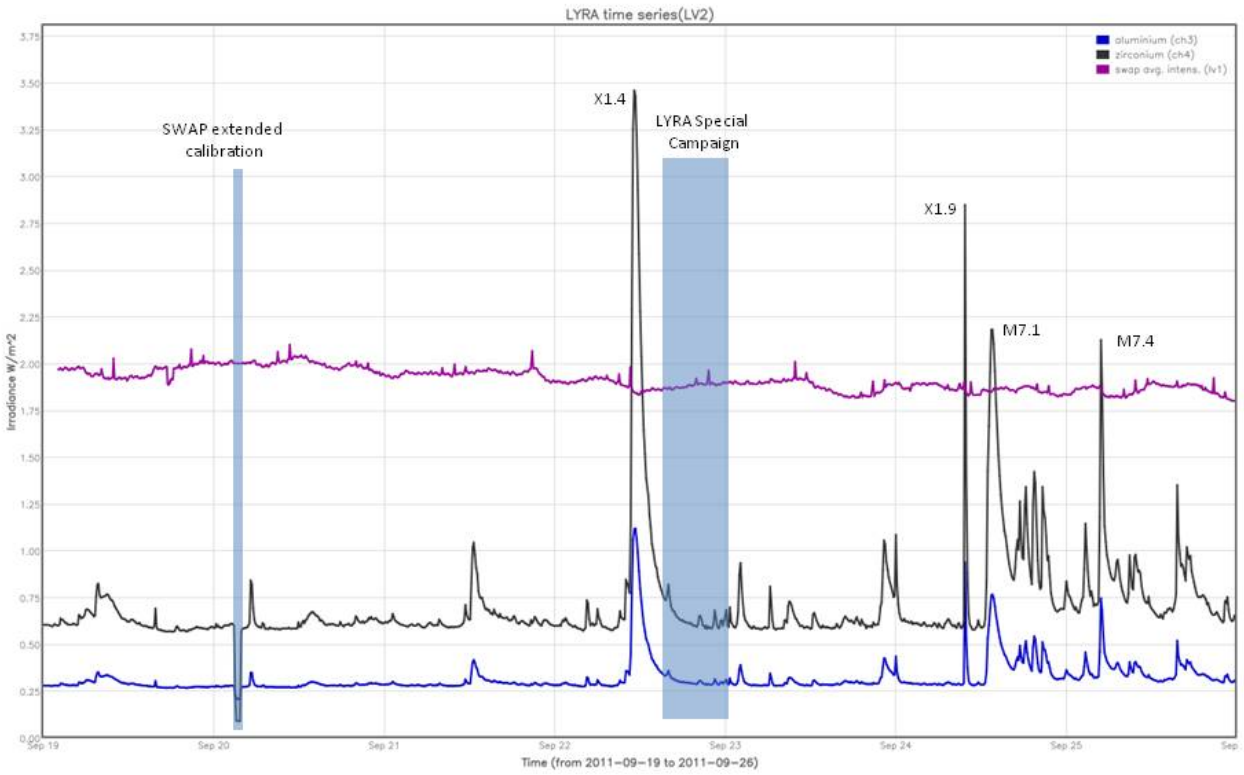
1. Science

Solar & Space weather events

Overview

The SWAP images of September 19 and September 25 are shown below, with annotated active regions:





Above we show the weekly overview of LYRA Al/Zr signals and SWAP average intensity (SWAVINT in purple).

Solar activity was low until AR 1302 crossed the limb on Wed and started erupting vigorously on Thu 22nd. An X-flare emerged on Thu, as well as on Sat 24th. The Saturday X1.9 flare initiated a train of 13M and 8 C-flares during the whole week-end.

Scientific campaigns

A single flare hunting campaign was executed on Thu 22nd, between 13:00 and midnight.

Outreach, papers, presentations, etc.

None.

To be explored
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2. LYRA instrument status

Calibration
LYRA calibration campaigns occurred on Wednesday at 09:00, followed by a back-up acquisition campaign on 19:20.

IOS & operations

Monday 19 Sep	Tuesday 20 Sep	Wednesday 21 Sep	Thursday 22 Sep	Friday 23 Sep	Saturday 24 Sep	Sunday 25 Sep
Nominal acquisition LYIOS00191	Nominal acquisition LYIOS00191	Nominal acquisition + LYRA calibration campaign & b/u acquisition LYIOS00191	Nominal acquisition + Special LYRA data acquisition campaign (11 hours) LYIOS00192	Nominal acquisition LYIOS00192	Nominal acquisition LYIOS00192	Nominal acquisition LYIOS00192

LYRA detector temperature

The LYRA detector 2 temperature (nominal unit) fluctuated between 45.3 and 46.8 degrees Celsius during nominal operations. During the special LYRA campaign, the temperature reached 48.6 degrees.

The overall evolution is normal.

To be explored
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3. SWAP instrument status

Calibration
The weekly 'extended' SWAP calibration campaigns was executed on Tuesday.

MCPM recoverable errors
Increased from 380 to 441 this week.
The number of MCPM unrecoverable errors is still 0.

IOS & operations

Monday 19 Sep	Tuesday 20 Sep	Wednesday 21 Sep	Thursday 22 Sep	Friday 23 Sep	Saturday 24 Sep	Sunday 25 Sep
Nominal acquisition 110s cadence IOS00329 & IOS00332 553 images	Nominal acquisition + calibration campaign, including extra darks acquisition IOS00332 735 images	Nominal acquisition IOS00332 786 images	Nominal acquisition + ESP campaign IOS00332 654 images	Nominal acquisition IOS00333 629 images	Nominal acquisition IOS00333 701 images	Nominal acquisition IOS00333 721 images

SWAP detector temperature
The SWAP Cold Finger Temperature fluctuated between -1,83 and -0,67 degrees Celsius.
Temperature evolution is normal.

To be explored
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4. PROBA2 Science Center Status

Anik Degroof, supported by Erik Pylyser, was operator during this week.

No tools were updated on the operational server.

5. Data reception & discussions with MOC

Passes

All passes, except pass 5748 (see below) were received nominally.

Data coverage HK
The HK data were complete this week.

Data coverage SWAP

BINSWAP_5748 (on 19/09 - from Svalbard) was lost. The pass schedule was not submitted to Enertec. This results in a data gap between 22:53 (18 Sep) and 2:05 (19 Sep).

Statistics for complete week:

Total number of images between 2011 Sep 19 0UT and 2011 Sep 26 0UT: 4779
Highest cadence in this period: 20 seconds
Average cadence in this period: 124.99 seconds
Number of image gaps larger than 300 seconds: 4
Largest data gap: 29.00 minutes

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

Data coverage LYRA
The HK 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
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