P2SC-ROB-WR-038-20101129 Weekly report #038	**P2SC Weekly report**	
Period covered: Date: Written by: Released by:	Mon Nov 29 to Sun Dec 05 2010 Mon Dec 06 2010 Joe Zender Marie Dominique	Royal Observatory of Belgium PROBA2 Science Center
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1. Science

Solar & Space weather events

A quiet week on the sun. Several B class flares and 1 C class flare on December 1st.
On Dec 4, the birth of Active Region 11132 close to the centre of the solar disk was beautifully observed by SWAP (see http://proba2.sidc.be/swap/data/mpg/movies/2010/12/20101204_swap_movie.mp4).

Scientific campaigns
The following SWAP campaigns were executed:

- 2010-12-05T01:23 SWAP mosaicking, duration 1h15
- 2010-12-01T23:46 SWAP mosaicking, duration 1h15

All SWAP campaigns were executed successfully with the exception of missing SWAP images on 1 December due to UV/visual eclipse.

The following LYRA campaigns were executed:

- 2010-12-03, occultation measurements U2/U3 from 09:08 - 09:51, 50msec integration
- 2010-12-02, occultation measurements U2/U3 from 09:59 - 10:42, 50msec integration
- 2010-12-01, occultation measurements U2/U1 from 09:11 - 09:54, 50msec integration
- 2010-11-30, occultation measurements U2/U3 from 10:02 - 10:45, 50msec integration
- 2010-11-29, occultation measurements U2/U3 from 10:52 - 11:35, 10msec integration

All LYRA campaigns were executed successfully. The jumps in the channels as reported in the previous reporting period were observed this week too.

Outreach, papers, presentations, etc.

2. LYRA instrument status

Calibration
No calibration campaign was run this week.

IOS & operations
IOS115 up to IOS119 were uploaded onboard.
To correct a jump in the Herzberg channel data, a reset of the Unit2 was planned for the evening of 1 December. Due to not obeying a minimal delay time between warm-up commands, the warm-up including the open cover was never executed onboard. As a consequence, unit2 acquired dark current from 2010-12-01T19:15 until 2010-12-02T10:50. The warm-up command from 10:50 was not immediately followed by an acquisition command setting the VFC calibration period. As a consequence, the data from 10:50 until 20:47 contain only calibration voltage measurements. The standard fits file contains valid science data from 2010-12-02T20:47 onwards again.

Temperatures
The LYRA temperature sensors measured stabilized temperatures over the whole week with the exception of a drop followed by an increase on 2010-12-02. The drop and increase can be explained by the operations of the DSLP, TPMU and CCM instruments.

3. SWAP instrument status

MCPM errors
The number of MCPM errors increased from 208 to 209 on 2010-11-30T22:24:20, and from 209 to 210 on 2010-12-03T12:24:13.

IOS & operations
SWAP operations were nominal over the week. The weekly LED calibration was executed on 2010-11-30T10:50.
SWAP IOS211 up to IOS214 were prepared and sent to Redu to command the mosaicking campaigns.

SWAP detector and IIU temperature

Also the SWAP detector temperatures were constant over the week with the drop and increase on 2010-12-02, as seen by the LYRA sensors.

4. PROBA2 Science Center Status

Joe Zender was operator during this week.
LMAT was updated to release r3828 to avoid double detections of input files in the dropbox.

5. Data reception & discussions with MOC

The LYRA occultation measurements were supported by the MOC operator by opening and closing the unit3 (unit1) doors via control procedures.
At the end of the campaign on 2010-12-01T09:54, the cover of unit1 was closed. However the parameter LYR111 stayed at “0” instead of being reset to “1”. The MOC operator fixed this parameter.

Data coverage HK nominal
Data coverage SWAP nominal, with the exception of ● pass 3129, 2010-12-04, corrupted packages received, 9 images lost ● pass 3111, 2010-12-02, corupted packages received, 5 images lost
Data coverage LYRA nominal

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
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