

2 November 2009

# PROBA2 LAUNCHED

First data of ESA's space weather mission expected in January 2010

WANTED:  
GUEST INVESTIGATORS

## TOY BOX

### PROBA2 (PProject for On-Board Autonomy)

- ESA technology demonstration mission
- development financed by BELSPO
- operations financed by ESA Science, as ESA support to "Nationally led missions"
- built by Verhaert (B)
- sun-synchronous low earth orbit
- pointed at the Sun but able to off-point
- operated from Redu (B)
- Science Center P2SC at ROB
- <http://proba2.sidc.be>

## GAME RULES

### OBJECTIVES

Encourage external investigators to participate in the scientific exploitation of SWAP and LYRA

### PREPARATION

Call for Ideas to scientific community (early 2010)

### SET-UP & PLAY

Selected investigators spend one to few months with PI teams at P2SC to:

- obtain expert knowledge on the instruments
- participate in the daily instrument commanding
- finalize their data analysis following the proposal

### COSTS & DELIVERABLES:

Each guest investigator will get reimbursed for travel, accommodation and living expenses. He/she writes a report on the analysis done.

### AREAS IN WHICH THE GAME CAN BE PLAYED:

- Space Weather Predictions models
- Solar Physics
- Earth atmosphere studies (LYRA)

### ALTERNATIVE PLAYS:

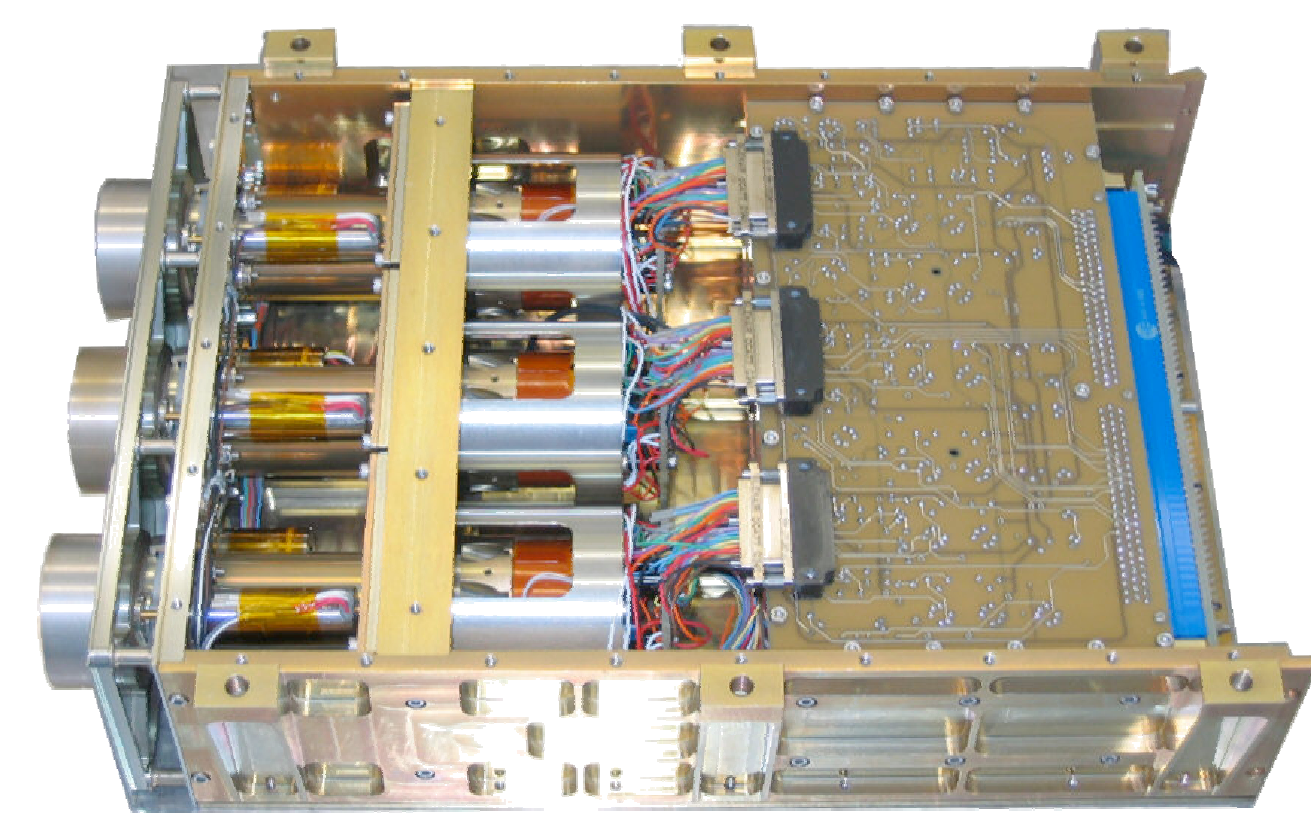
Participation in SWAP and LYRA projects through:

- open data policy
- SWAP & LYRA Science Consortium
- joint observations with other instruments
- support for synoptic space weather programs

## TOYS

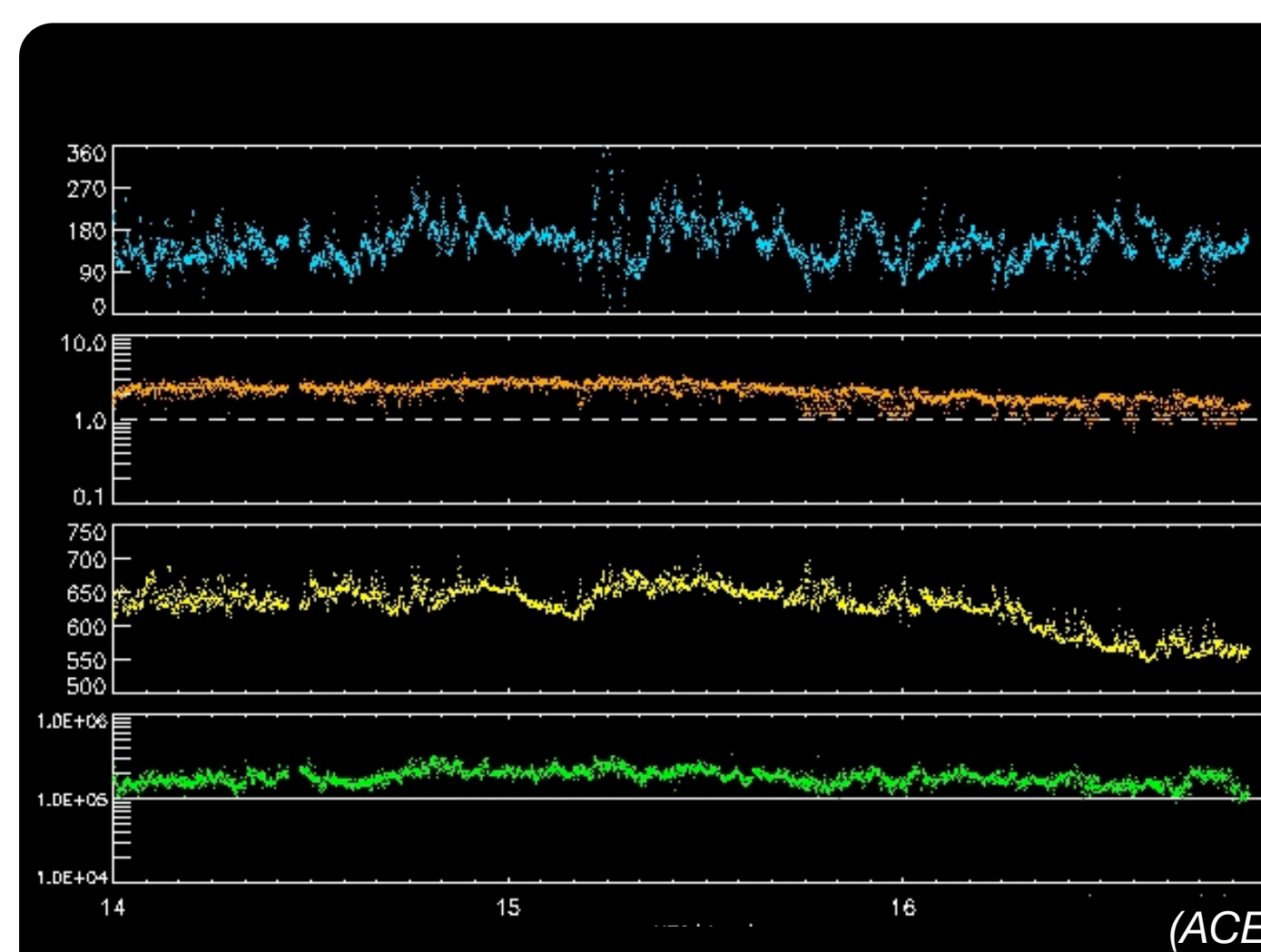


LYRA



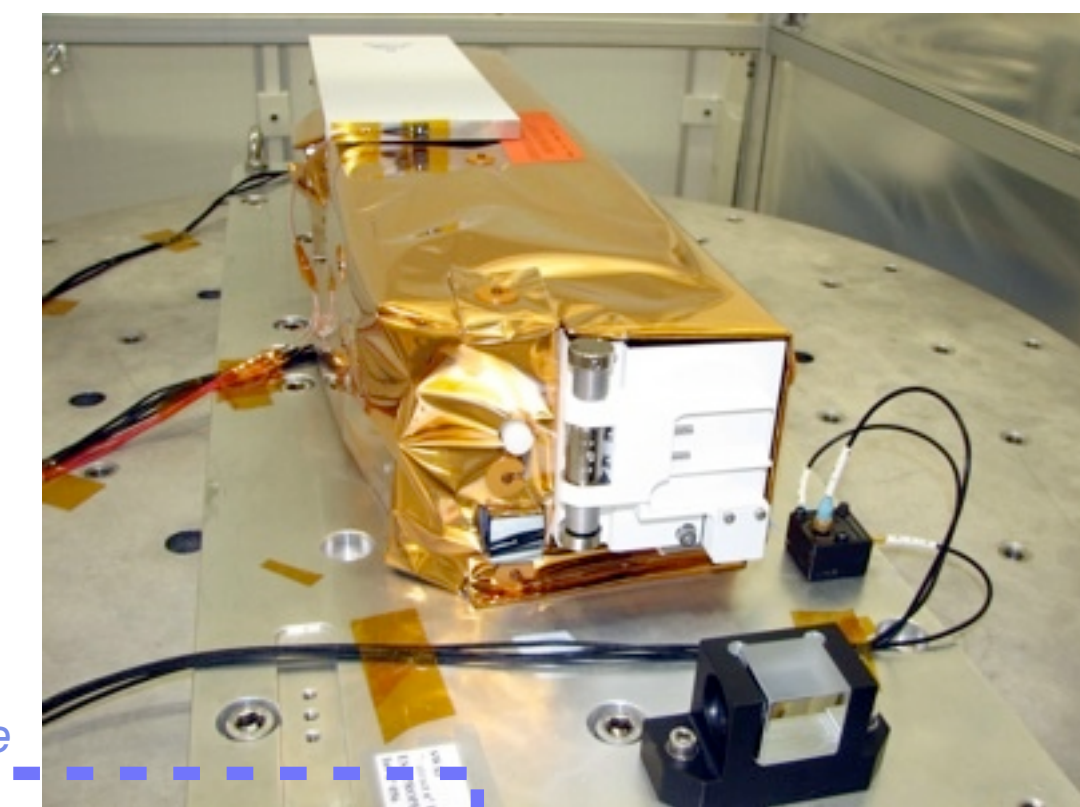
### CHARACTERISTICS:

- solar irradiance UV radiometer
- 4 pass bands in UV, EUV, and XUV
- 3 redundant units & 24 internal LEDs for calibration
- diamond detectors: optically blind & radiation hard



### STRENGTHS & OPPORTUNITIES:

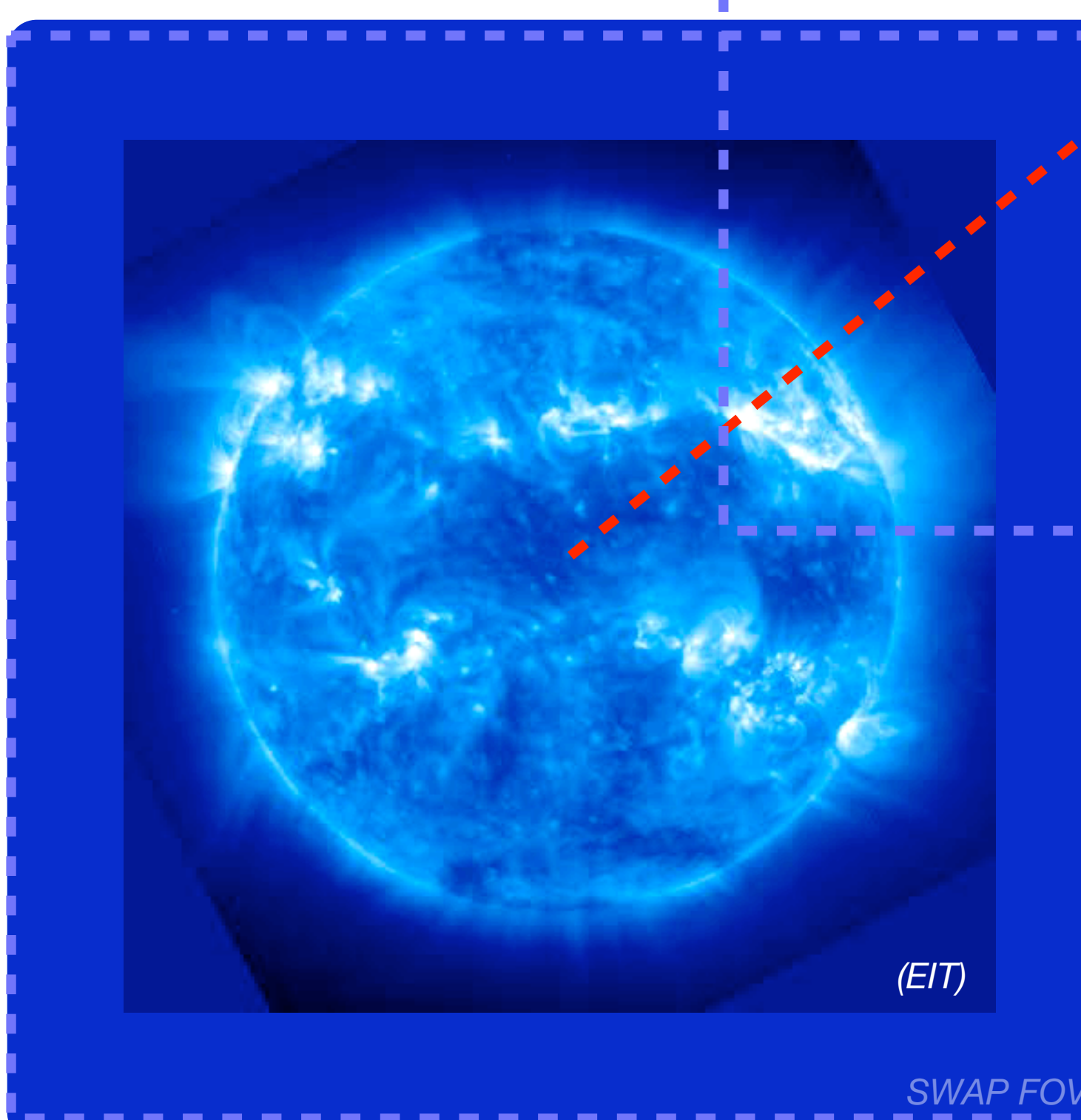
- high cadence up to 100Hz
- continuous monitoring of solar flares
- monitors pass bands controlling chemistry in Earth's atmosphere



### CHARACTERISTICS:

up to 3 degrees away from solar centre

- lightweight, off-axis EUV telescope
- images the 1 million degree solar corona at 17.4 nm
- 1024x1024 CMOS-APS detector
- large FOV: 54'x54' & off-pointing abilities



### STRENGTHS & OPPORTUNITIES:

- tuned for all space weather events
- CME watch program at 1 min cadence (up to 10s)
- onboard image processing & event recognition
- flexible pointing & automated CME tracking