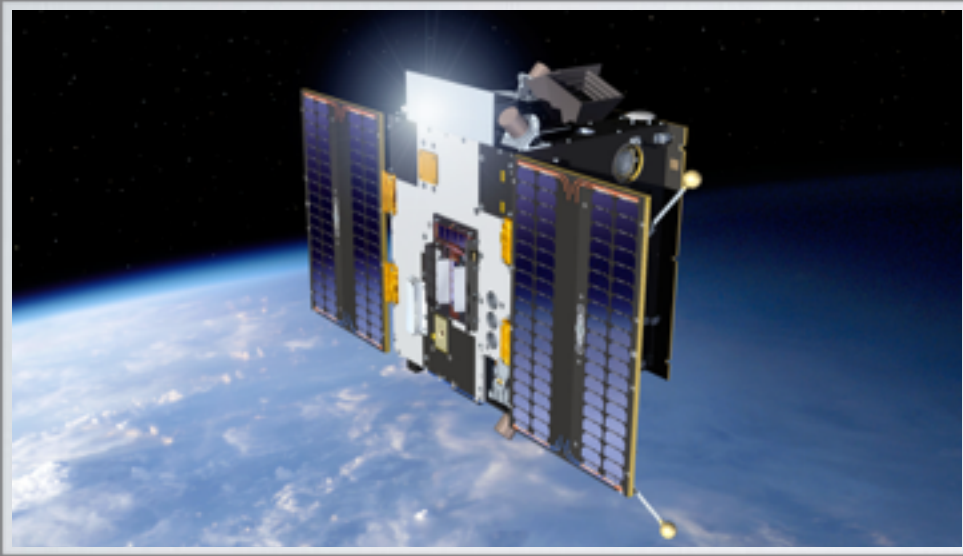
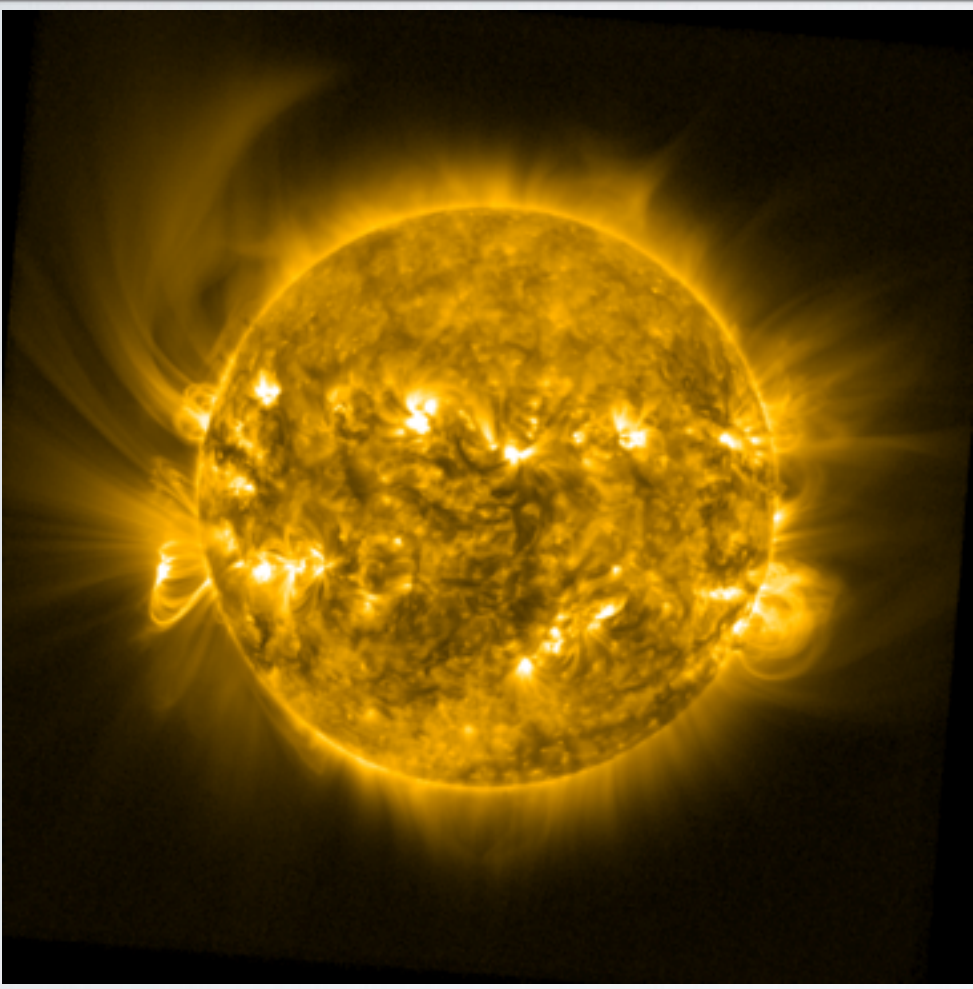


PROBA a Space Weather Tool

Matthew J West - Royal Observatory Belgium



SWAP



SWAP is a small EUV telescope that images the solar corona with a bandpass around 17.4 nm, a bandpass that corresponds to a temperature of roughly 1 million degrees, with a cadence of 1 image per 1-2 minutes, and field of view (FOV) of 54 arcmin.

The large FOV and high time cadence provides an excellent opportunity to monitor on and off-limb structures, such as **EUV waves, coronal dimmings, coronal holes, flares** and track **CMEs** to the base of coronagraph images such as LASCO.

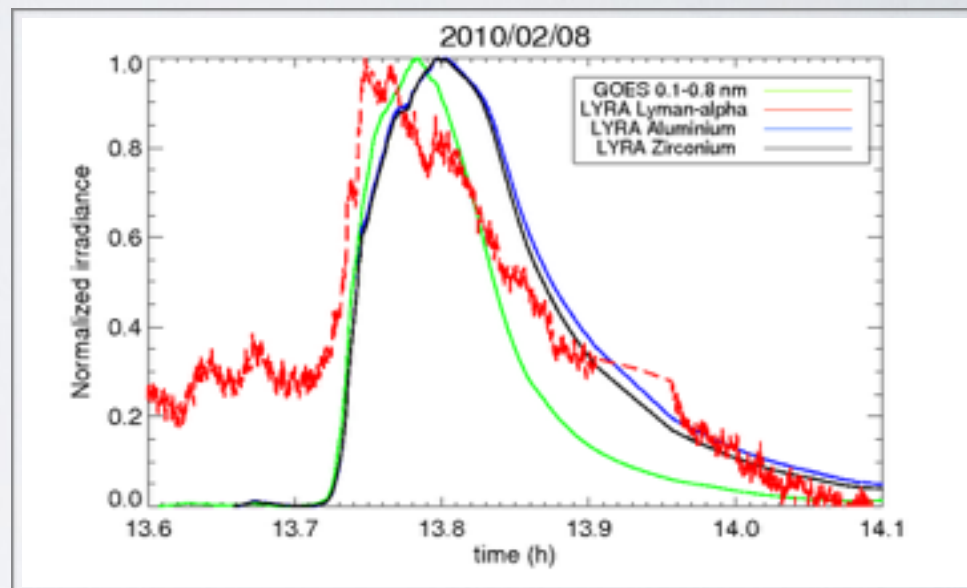
SWAP is also useful for long duration studies, and has been used to study the extended corona over several years.

PROBA2 - the second satellite in ESAs **Project for On-Board Autonomy (PROBA)** program

PROBA2 is the second satellite in ESAs PROBA program. The satellite is now managed through the Space Situational Awareness program (2013), providing space weather monitoring and tools, as well as continuing as a research platform. PROBA2 has several science instruments including:

- **SWAP** - Sun Watcher with Active Pixel System & Image Processing (an EUV imager).
- **LYRA** - Large Yield Radiometer.

LYRA



LYRA is an ultraviolet irradiance radiometer that observes the Sun in four passbands, chosen for their relevance to solar physics, aeronomy and space weather. This instrument can also detect **flares** and analyze the atmospheric composition of the Earth.

LYRA can acquire with one or two units simultaneously, with cadences chosen in the 100Hz to 0.1Hz interval, providing a continual near real time irradiance light curve.

Not only has LYRA been used to study short term solar phenomena such as **flares** and **QPPs**, but it's also used to study the long term evolution of the solar irradiance.

SWAP & LYRA data is freely available online or through SolarSoft and IDL.

For more information, or to see the data in near real time visit: <http://proba2.oma.be>

Feel free to drop by our fair stand for more information and ask any questions you may have.

