

The SDO Data Center

Solar Dynamics Observatory (SDO)

At

The Royal Observatory of Belgium.

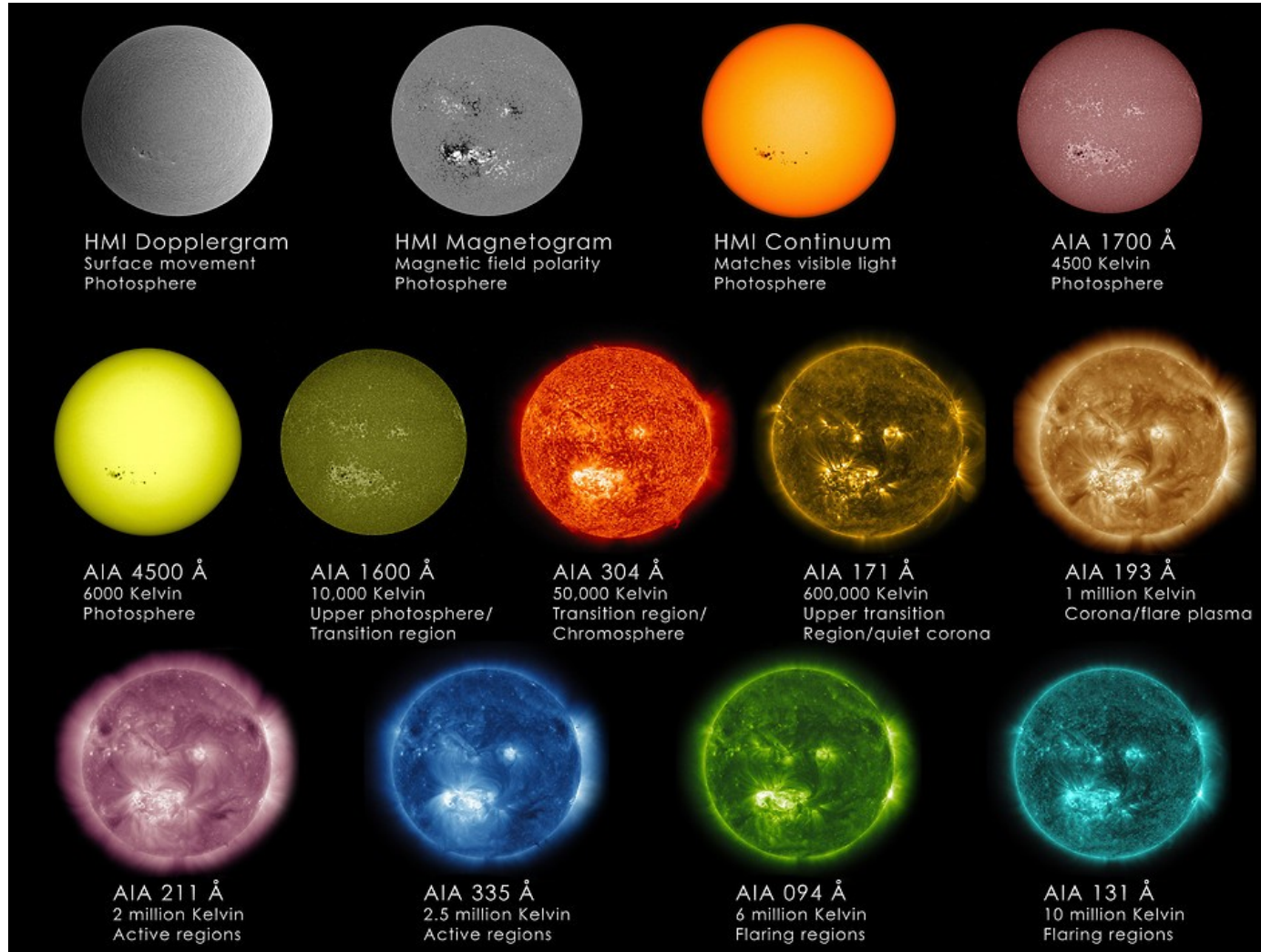
The Solar Dynamics Observatory satellite

- Launched on February 11, 2010
- Geosynchronous orbit – Can take data continuous
- Instruments:
 - ❑ Atmospheric Imaging Assembly (AIA)
 - 4k by 4k for science purposes
 - 1k by 1k for Space Weather forecasting
 - ❑ Helioseismic and Magnetic Imager (HMI)
 - ❑ Extreme Ultraviolet Variability Experiment (EVE)
- The satellite sends down about 1.5 terabytes of data per day



CREDIT: NASA

The Solar Dynamics Observatory data



SDO Data Center at ROB

- We acquire SDO-AIA and SDO-HMI data from the Center for Astrophysics located in Harvard and provision the data in Europe
- Since 2015 our goal is to efficient provision of data on demand rather than on the latest available data.
- Data access overview: <http://sdo.oma.be/>
 - Web Application
 - 1 hour AIA and HMI synopic data by ftp
 - 2 minutes AIA synoptic data by ftp
 - NASAs Virtual Solar Observatory
 - IDL - SolarSoft
 - Python - SunPy

SDO data access

Web Application – SDO Wizard

The SDO Wizard interface is divided into two main sections: search criteria and search results.

Select search criteria:

- Start date: 2010-03-29 00:00:00
- End date: 2010-05-15 00:00:00
- Cadence: second(s)
- Best quality: ?
- Wavelengths: 94A, 131A, 171A, 193A

Search results:

Date	Wavelength	Quality
2010-05-12 23:59:59	1600.0	0
2010-05-13 00:00:00	193.0	0
2010-05-13 00:00:02	94.0	0
2010-05-13 00:00:03	335.0	0
2010-05-13 00:00:05	171.0	0
2010-05-13 00:00:06	211.0	0
2010-05-13 00:00:08	304.0	0
2010-05-13 00:00:09	131.0	0
2010-05-13 00:00:11	1600.0	0
2010-05-13 00:00:12	193.0	0
2010-05-13 00:00:14	94.0	0
2010-05-13 00:00:15	335.0	0

Buttons: Search data, Export data, Export keywords

<http://sdo.oma.be/wizard/>

ESA's Space Weather Portal

The ESA's Space Weather Portal features a navigation menu on the left and a main content area on the right.

Navigation Menu:

- CURRENT SPACE WEATHER
- SPACE WEATHER AT ESA
- SERVICE DOMAINS
- EXPERT SERVICE CENTRES
 - ESC Solar Weather
 - ESC Heliospheric Weather
 - ESC Space Radiation
 - ESC Ionospheric Weather
 - ESC Geomagnetic Conditions
- OTHER RESOURCES
- CONTACT
- REQUEST FOR REGISTRATION

Main Content:

Welcome to the SSA Space Weather Service Network
Please note that all SSA-SWE Services are under review/construction

Federated products from the Solar Influences Data analysis Center (ROB)

SDO/AIA Latest Solar EUV images

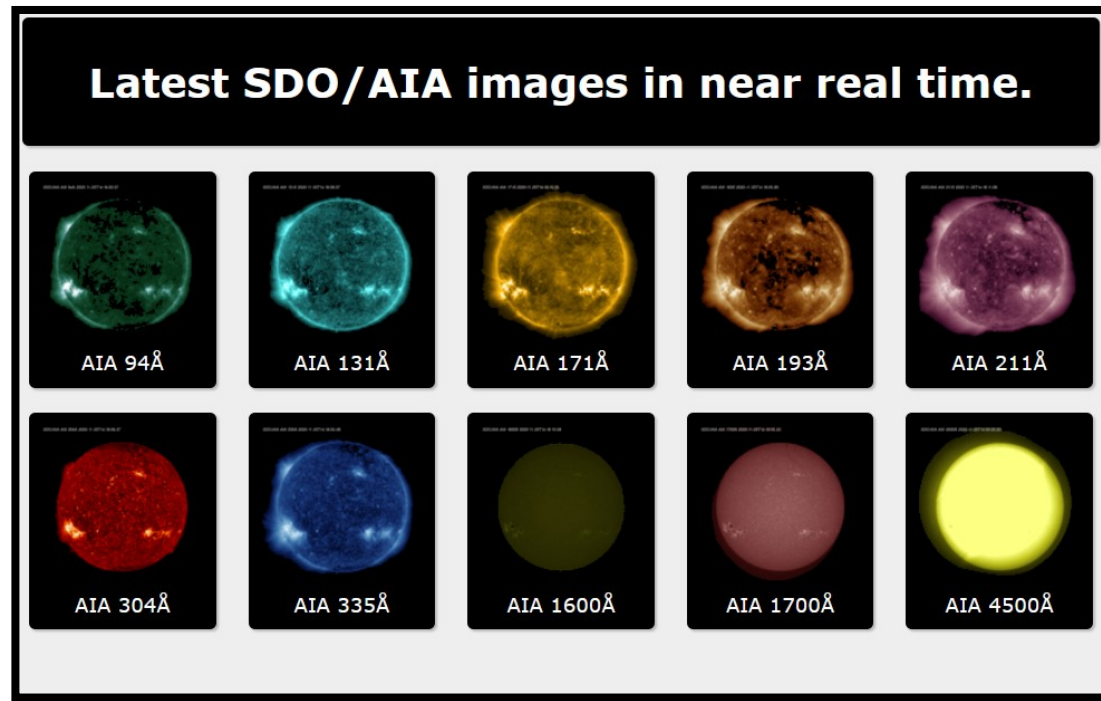
The AIA Instrument onboard the SDO spacecraft provides full disc images in several different UV and EUV wavelength bands. The SIDC redistributes AIA 1024 x 1024 pixels AIA quicklook images at a 3 minutes cadence in near-real-time; 4096 by 4096 pixels AIA and HMI images in science quality at a 1 hour cadence; and videos for the last 24 hours of AIA images in all wavelengths for forecasting purposes.

Video player showing a solar image.

<https://swe.ssa.esa.int/>

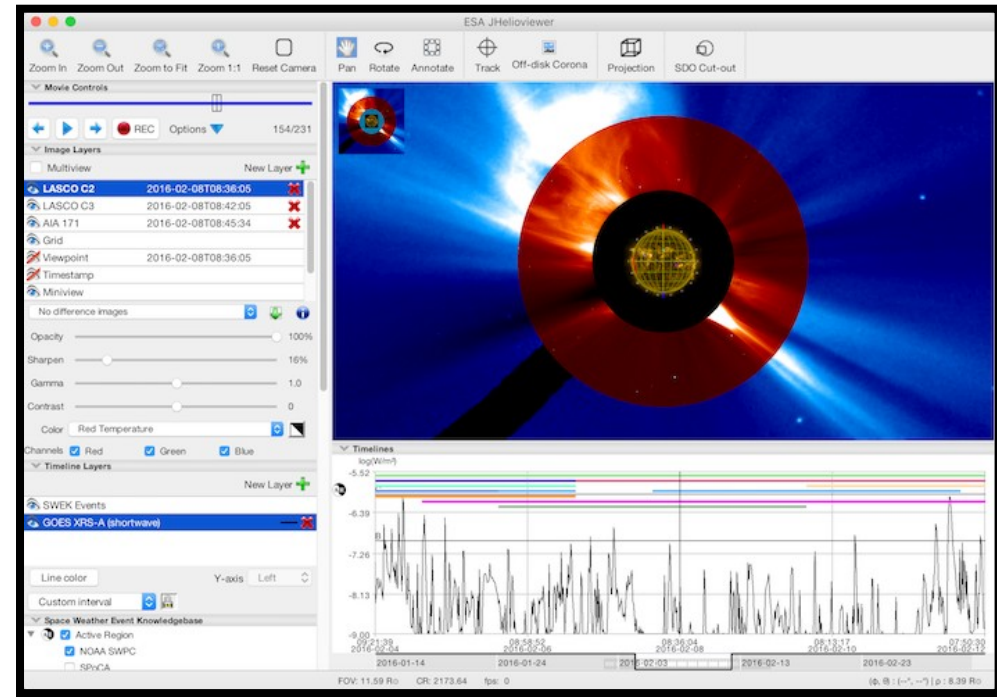
Latest 1k by 1k quick view data

Dedicated webpage



<http://sdo.oma.be/latest/>

JHelioviewer - Explore the Sun



<http://www.jhelioviewer.org/>