The SOLARNET project and the Solar Virtual Observatory (SVO)

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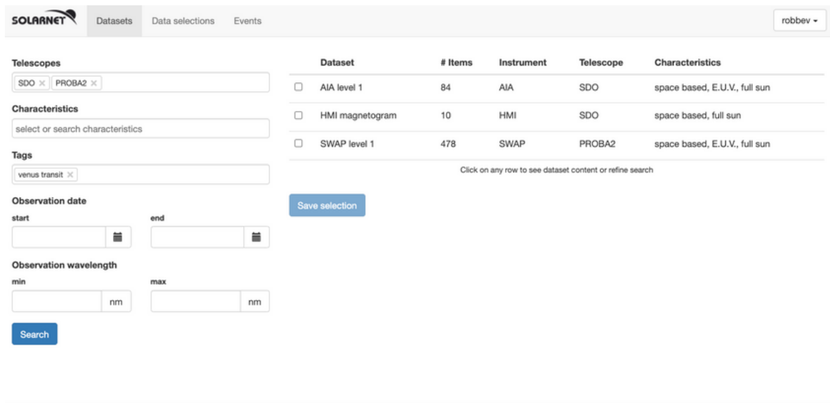
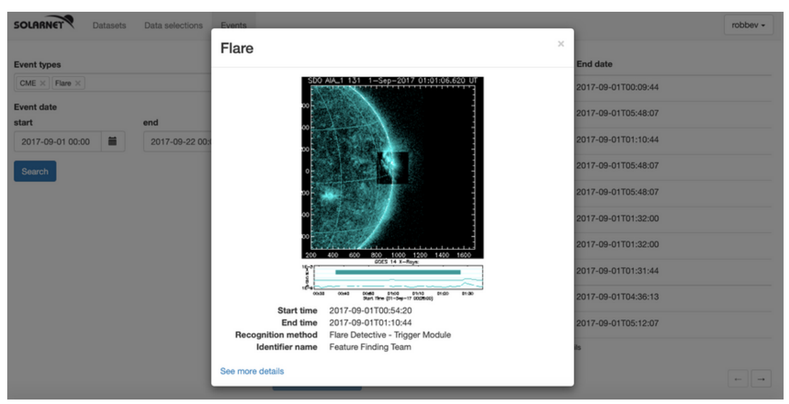
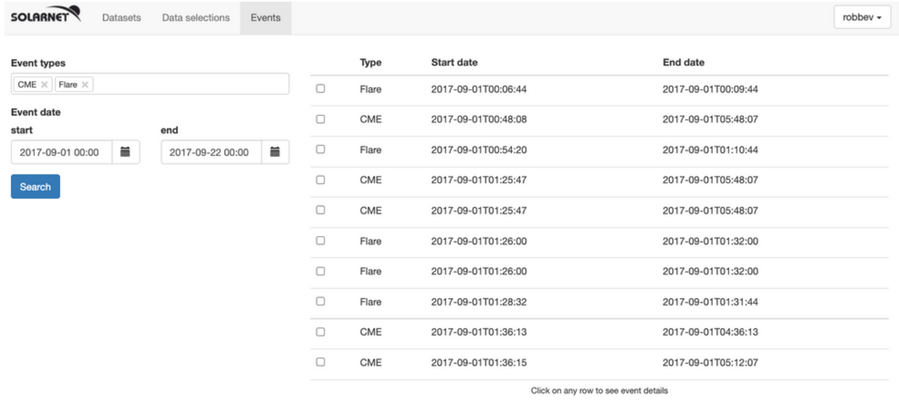
Developed in the framework of the H2020 SOLARNET project, the Solar Virtual Observatory (SVO) aims at making solar data more findable and accessible to the solar physics community. The SVO allows searching across multiple datasets as well as across the Heliophysics Event Database (HEK) and lets you search for data that overlaps with events from the HEK. It is conceived so that other event databases may also be linked to the SVO, such as for example for the ROB Event database that is soon to be publicly released. These capabilities will help researchers in discovering and accessing solar datasets from synoptic observations as well as solar data taken during short observation campaigns.
At the heart of the SVO lies a database populated with meta-data from datasets taken by space- and ground-based telescopes. It is designed to be easily interoperable with external tools and is accessible through a web interface as well as python and IDL clients








```python
from __future__ import print_function
from SOLARNET import datasets

# See all available datasets
for dataset in datasets:
        print(dataset)

# Get a specific dataset
aia_lev1 = datasets["aia_lev1"]

# Filter the record in that dataset for June 2012 the 6th with a wavelength of 171A
filtered_aia_lev1 = aia_lev1.filter("DATE-OBS", "2012 June 6", WAVELNTH = 171)

# Display the date of observation and the wavelength in that filtered dataset
for record in filtered_aia_lev1:
        print(record.meta_data["DATE-OBS"], record.meta_data["WAVELNTH"])

# Download the data from a record
record = filtered_aia_lev1[0]
record.download("/tmp")

# Get the data as a BytesIO [1] without saving to disk
data = record.data()

# Open the data as a fits file (see astropy.io.fits [2])
hdus = record.HDUs()
```

http://solarnet.oma.be/

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