STScI | SPACE TELESCOPE SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

JWST Data Analysis and Visualization Tools (Jdaviz)

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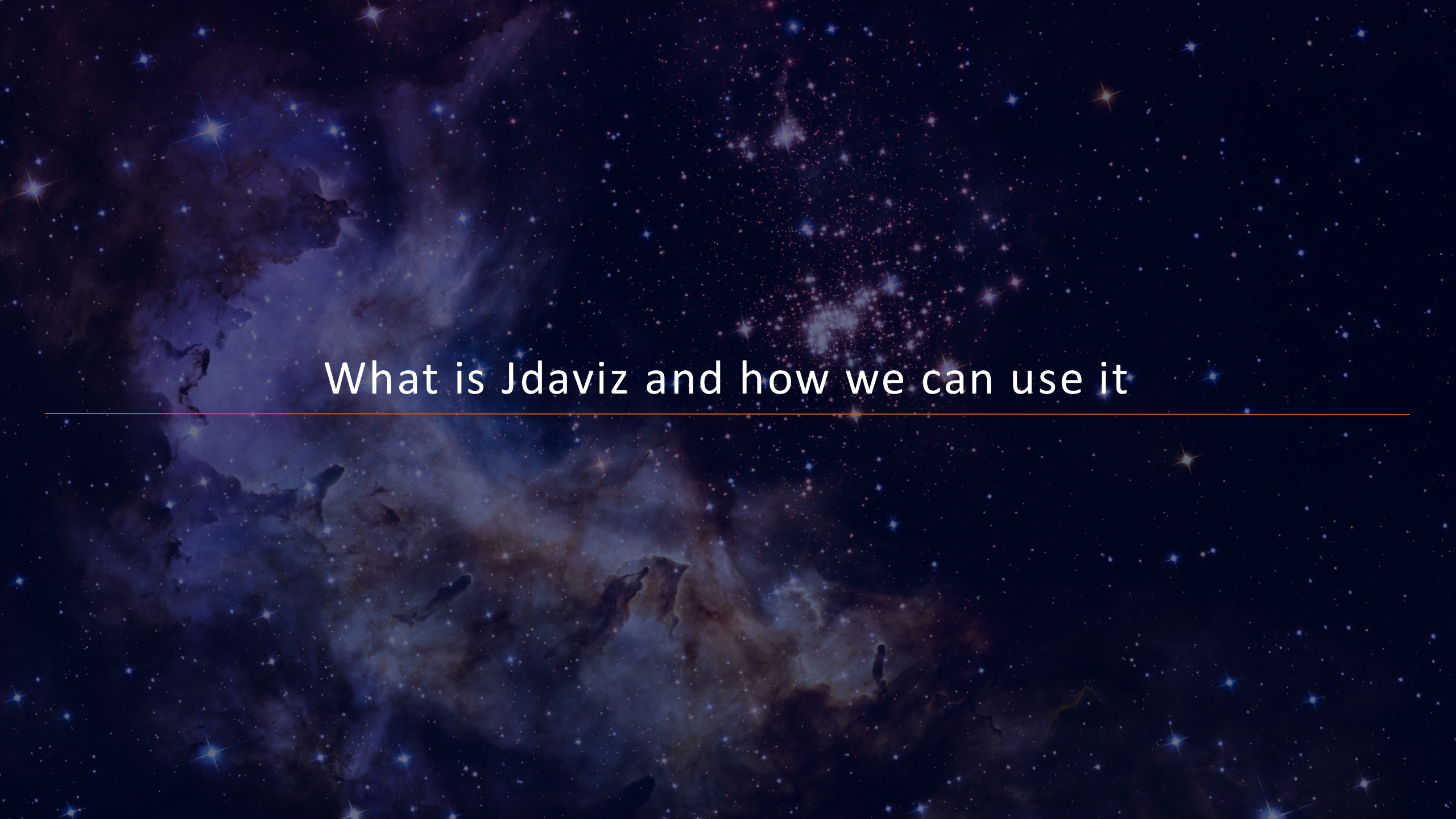

What is Jdaviz and how we can use it

JWST Data Analysis and Visualization Tools

Jdaviz is an open-source Python package to visualize and analyze JWST (and other) data. It is a single package that includes 5 pre-set configurations:

- Imviz – for images
- Specviz – for 1D spectra
- Specviz2d – for 2D and 1D spectra
- Cubeviz – for 3D data cubes
- Mosviz – for many 2D/1D spectra

It can be used

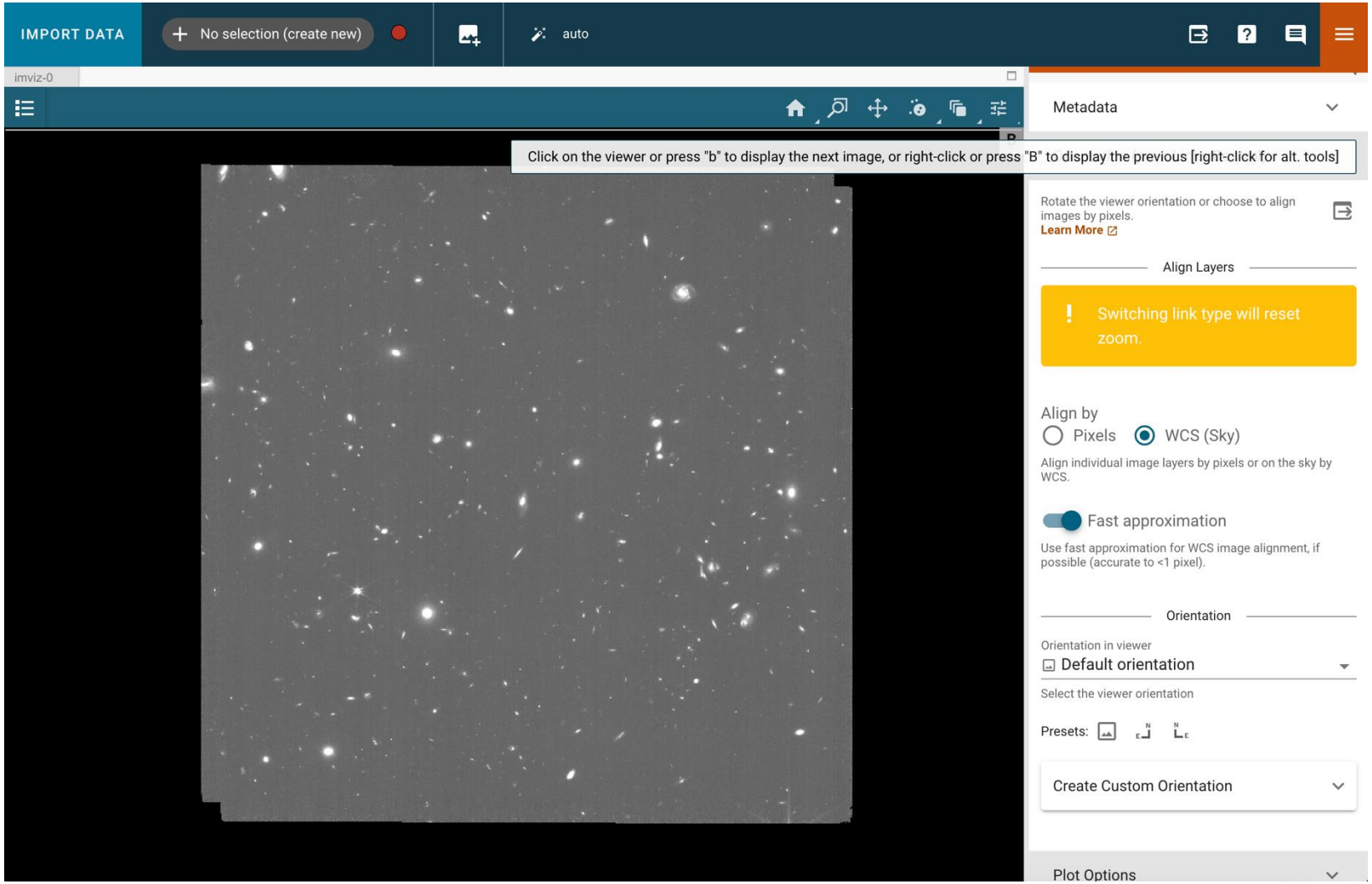
- As a standalone application
- In a Jupyter Notebook
- Embedded in a webpage

What can we do with jdaviz?

The features and functionality built in jdaviz are inspired by use cases presented by the scientist at STScI and by the community (you too!).

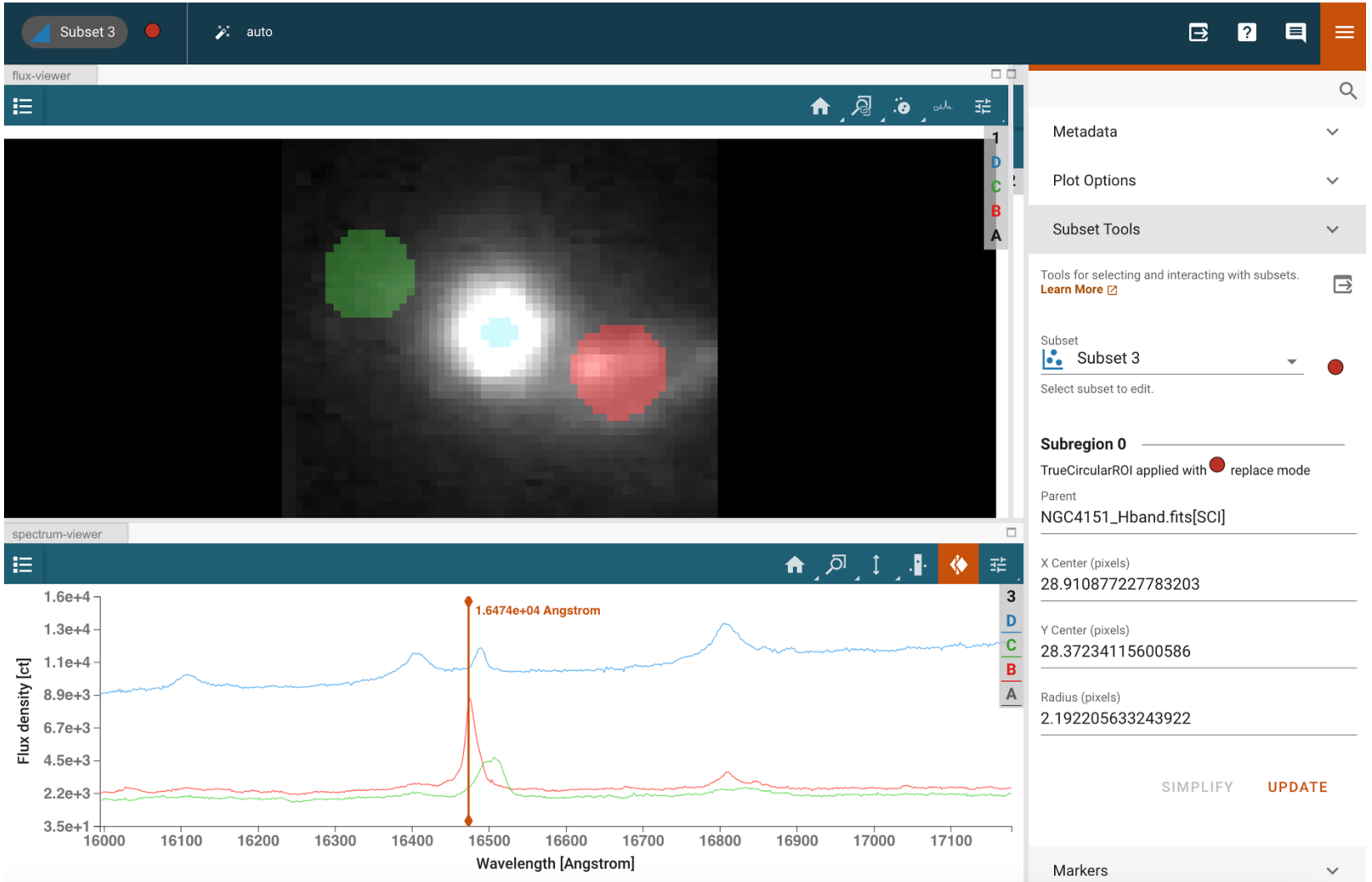
What can we do with jdaviz?

For example, **when working with images**, we might want to load images of the same part of the sky, obtained with different filters, align them on the sky, and blink to inspect differences.



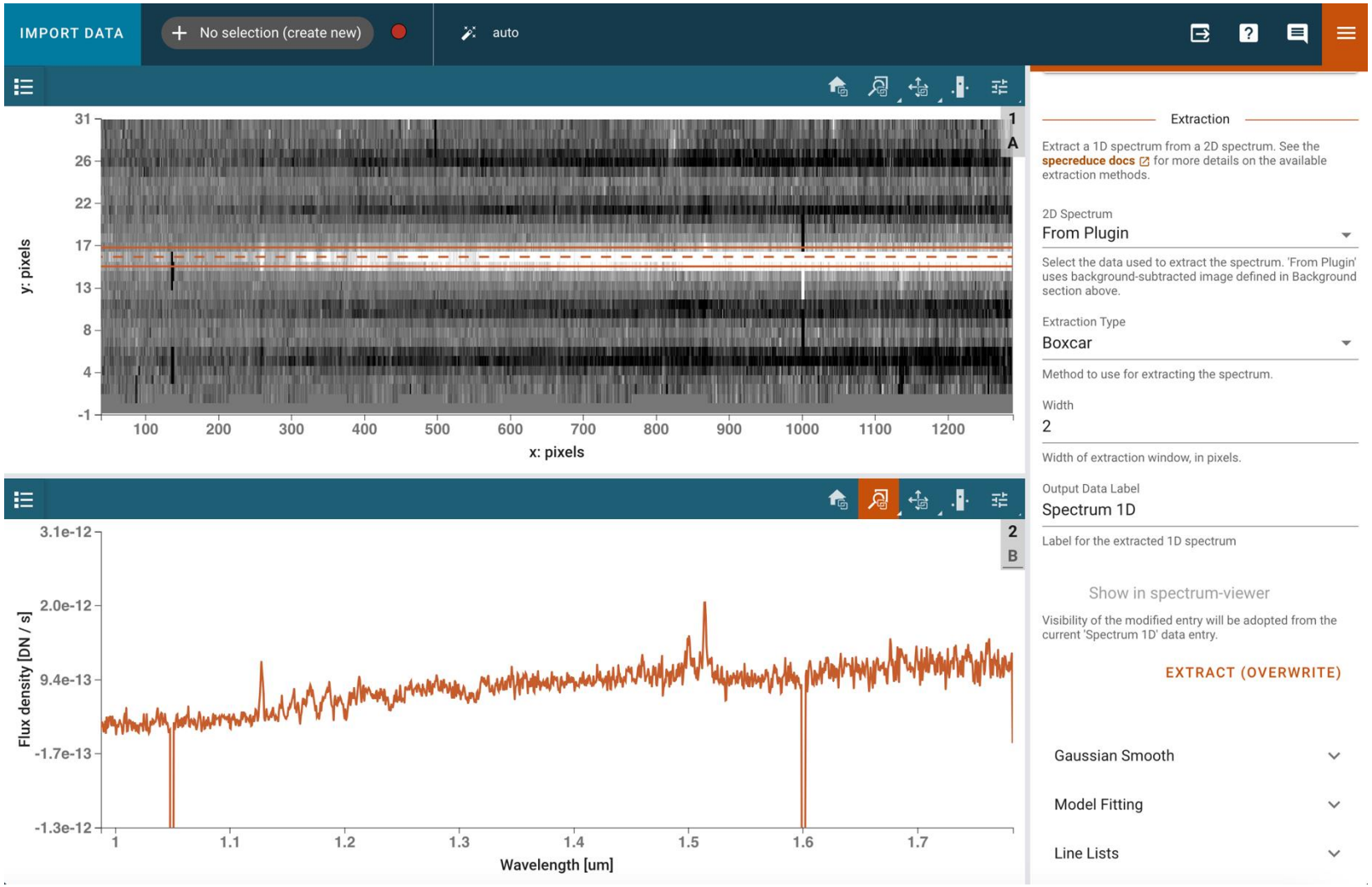
What can we do with jdaviz?

For example, **when working with cubes,** we might want to inspect the spaxels around an object and look for outflows or rotation. We could also make a moment map.



What can we do with jdaviz?

For example, **when working with spectra**, we might inspect what we have obtained with our automatic extraction and find that some objects are problematic. We can open them in Specviz2d and do a custom extraction with the help of the user interface.




Where is everything?

Where is everything?

Jdaviz lives on Github

The documentation is on readthedocs

Example notebooks are on Github

Example videos are linked in the documentation (we are working on making more)

What we will see today

Today's demos

Specviz/Specviz2d

Plot options, exporting data, and spectral extraction.

Imviz

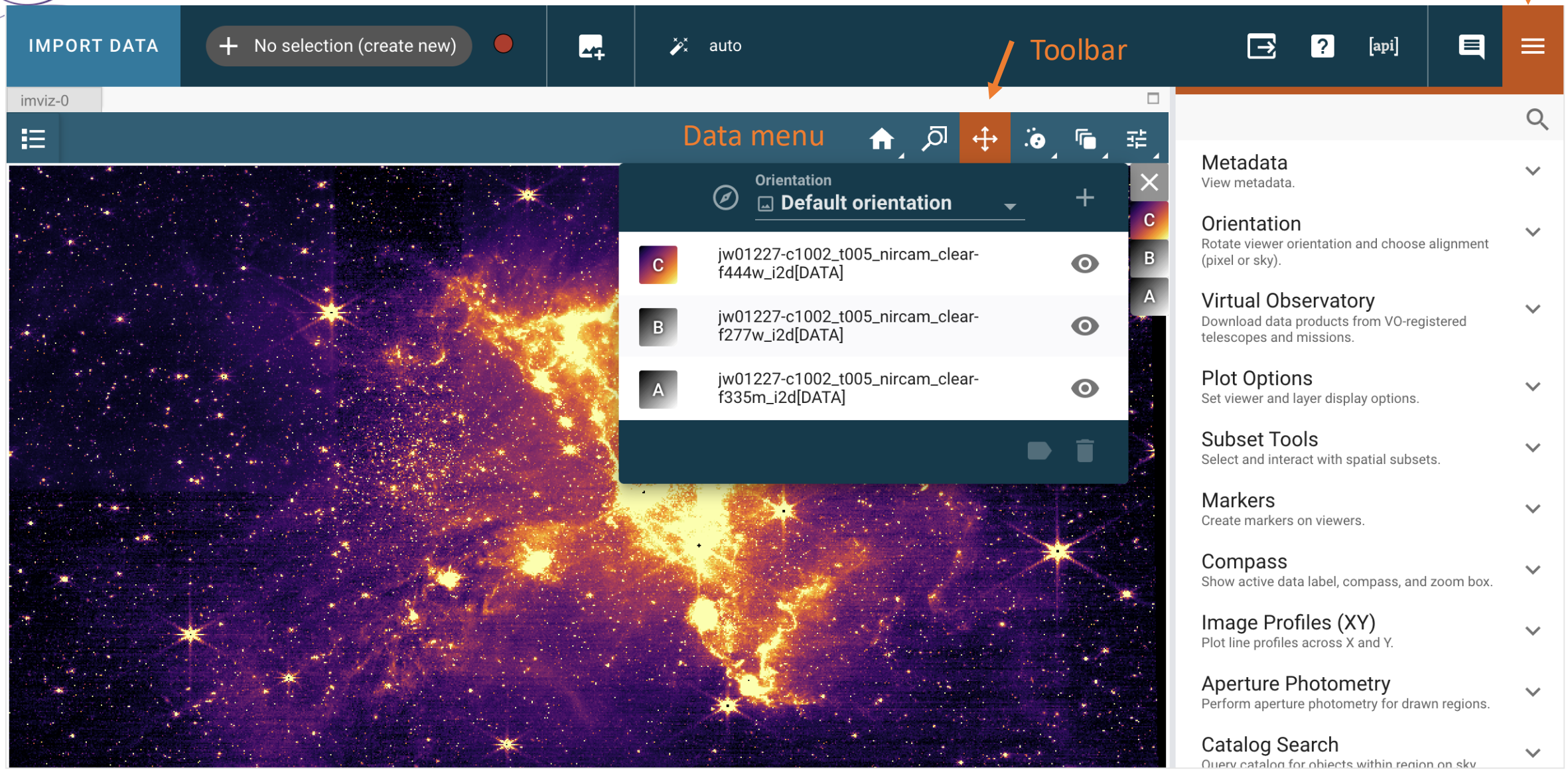
Image alignment, plotting catalogs, creating subsets, and aperture photometry.

Cubeviz

Moment maps, spectral extraction, and unit conversion.


Let’s discover the interface

The Interface

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