

Python and Javascript developments for accessing data collections.

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□ Outline

- [astroquery.cds](#)
 - Description and how it works
 - Demo
 - Future improvements
- A new data collections discovery widget for web portals.
 - What is it ?
 - Demo

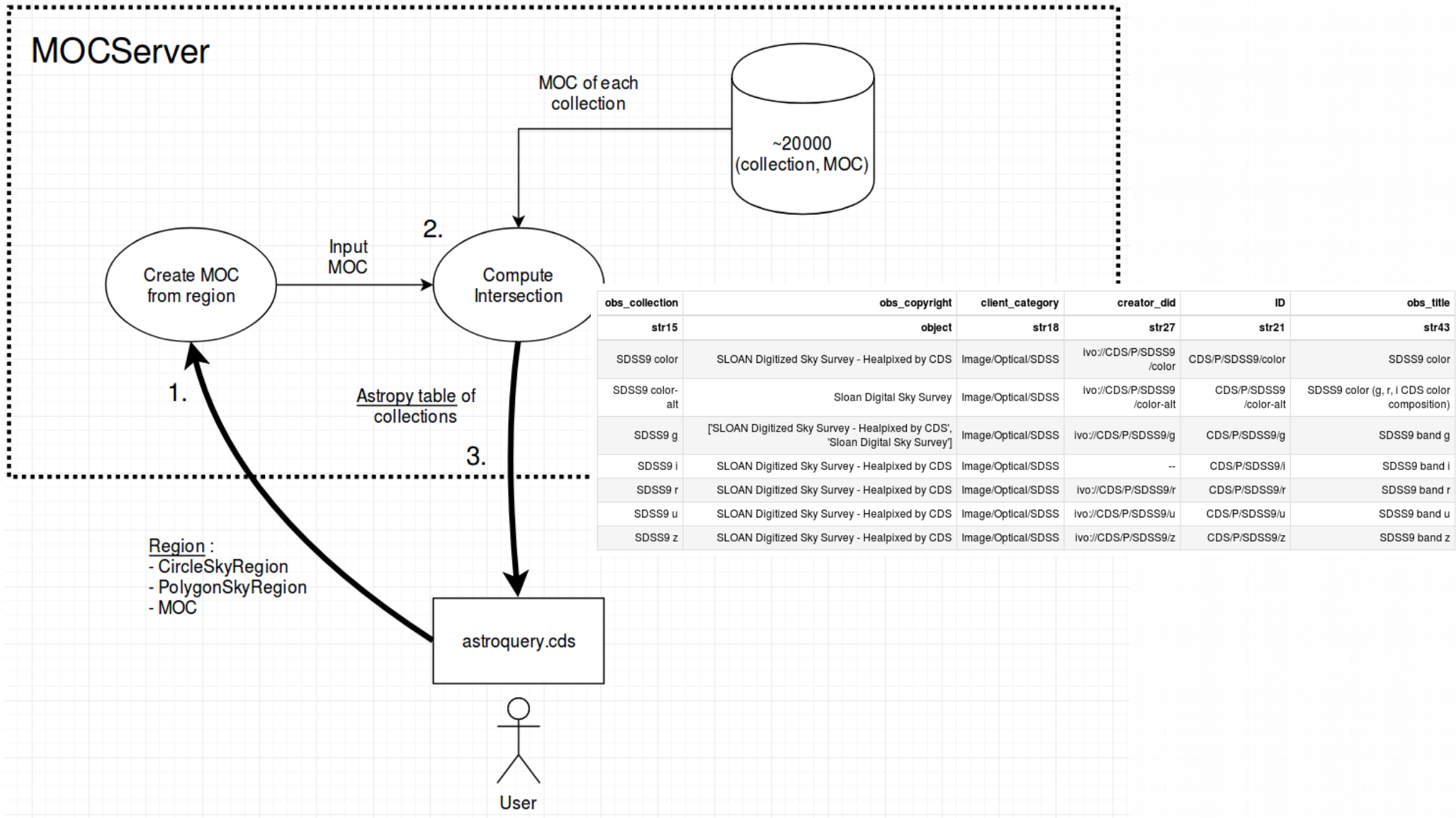
□ Astroquery.cds

- A new astroquery module
 - Link to the doc [here](#)
- Merged into the master branch on July 23
 - Available for the next release v0.3.9
 - Dependencies
 - astropy/regions
 - astropy-healpix and MOCPy

□ Astroquery.cds

- Python API to retrieve data collections :
 - in a region of interest (circle, polygon, MOC)
 - matching specific meta-data constraints.
 - Examples :
 - Get the collections having a MOC covering at least 30 % of the sky
 - Retrieve all HST collections
 - Get the collection with a specific bibcode
- Query the CDS MOCServer

Astroquery.cds



□ Notebook example

Examples of notebooks using astroquery.cds [here](#)
and [here](#)

□ Things to be done in the future

- Integration of MOCs in `astropy/regions` :
 - Update `astroquery.cds` to take `MOCsSkyRegion` objects
- Update `astroquery.Simbad/VizieR` to add a method for querying them by a MOC.

□ New discovery widget for web portals

- Enables the user to search for a collection and access it in the web portal
 - Similar to the discovery tree in Aladin Desktop
 - Generic self-contained widget embeddable in different web portals (Aladin Lite, Firefly, ...)
- Written in Typescript + VueJS web framework

□ Demo

- Github repo : <https://github.com/cds-astro/discovery-widget>

The screenshot shows the ALADIN discovery widget interface. At the top left, there is a coordinate field displaying 'J2000' and '18 22 41.715 -10 27 59.64'. Below this is a vertical toolbar with icons for zooming, panning, and other navigation functions. The main interface is divided into two primary panels:

- Collection Selection Tool:** This panel is located on the left and contains a list of data collections. The top collection is 'CDS/P/SDSS9', which is expanded to show several sub-collections: 'SDSS9 color', 'SDSS9 color (g, r, i CDS color composition)', 'SDSS9 band g', 'SDSS9 band i', 'SDSS9 band r', 'SDSS9 band u', and 'SDSS9 band z'. A search bar is located at the bottom of this panel.
- SDSS9 color Detail Panel:** This panel is located on the right and provides detailed information about the selected 'SDSS9 color' collection. It includes a small thumbnail image of a galaxy, the text 'CDS/P/SDSS9/color', and a description: 'The Sloan Digital Sky Survey is a multi-filter imaging and spectroscopic redshift survey using a dedicated 2.5-m wide-angle optical telescope at Apache Point Observatory in New Mexico, United States. Data collection began in 2000, and the final imaging data release covers over 35% of the sky. This color covers over 35% of the sky. This color'. Below the text are three tabs: 'Image', 'Coverage', and 'Properties'.

At the bottom left, there is a 'PoV: 25.42°' indicator. At the bottom right, the 'ALADIN' logo is visible.