AstroView

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Overview

The AstroView tool is an all-sky viewing component of the Portal. This view can be panned, zoomed, and the background image can be switched to one of several background sky surveys. The AstroView tool may be hidden by clicking the double-arrow icon .

Observation Footprints

Astroview represents each observation in a Portal search results table as a wire-frame (or ***footprint***) of the extent of an instrument aperture or detector, centered on the intended target or region. The footprints are superimposed on an image of the sky, as shown in Fig. 1 below.

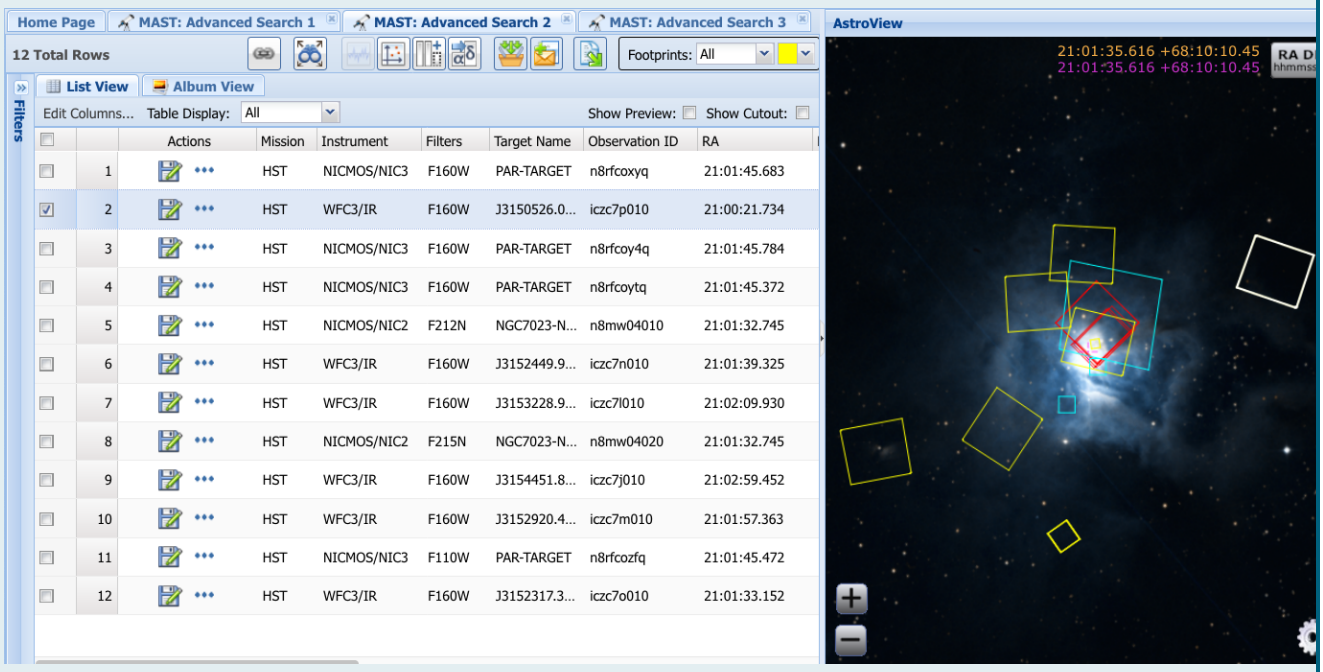


Figure 1 — A results Table panel (*left*) for a Portal search on the star-forming region NGC7023, and the corresponding AstroView panel (*right*). Footprints of observations, represented as wireframes (*boxes in various colors*), correspond to instrument apertures; these are superimposed on a portion of the Digital Sky Survey. The Filters panel has been hidden for clarity. The wireframe of a selected observation in the table is highlighted (*white rectangle*) in AstroView.

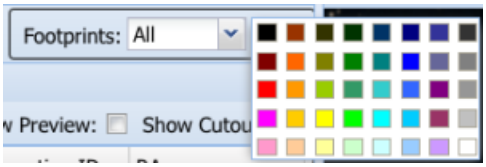
Footprint Selection

Which footprints are displayed in AstroView can be modified with the drop-down menu

for which the choices are:

- None – do not show footprints
- All – show the footprints for all observations in a single search results table
- Selected – show footprints only for observations that are selected in the results table.

Selecting one or more observations in the results table also highlights in white the corresponding wireframe(s). The color of the rest of the wireframes *in a single search* can be specified with the color-picker drop-down menu.



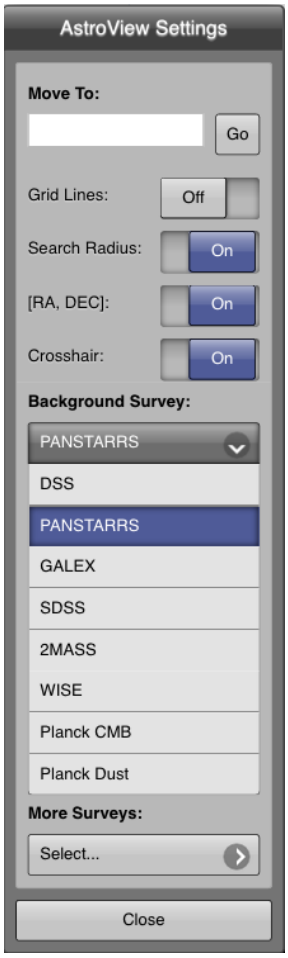
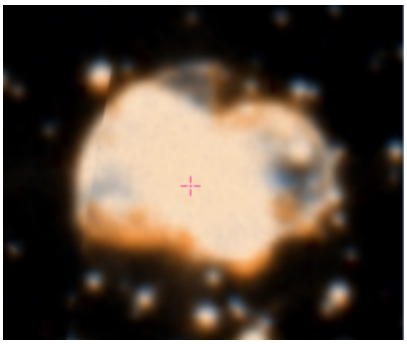
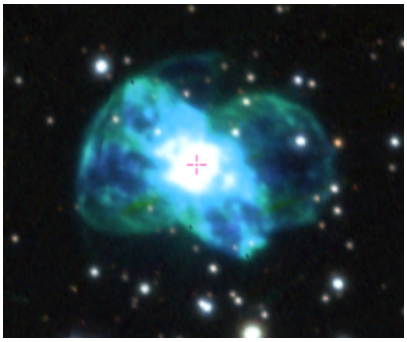
The results of all searches in a Portal session will be displayed in AstroView. The footprints of the results of each individual search may be represented in a separate color. This can be useful, for example, when planning future observations if the footprint of archived observations from different instruments or filters are represented different colors. In Fig. 1 the colors represent:

Red	Planned JWST images with MIRI and NIRCam in various IR bands
Yellow	Existing HST observations with NICMOS and with the WFC3/IR channel
Cyan	Existing HST observations with WFPC2 and ACS in various optical bands
White	Highlighted wireframe of the selected HST/WFC3 image

Background Survey

The sky background on which the footprints are superimposed is taken from a sky survey. The default of the Digital Sky Survey may be changed to another available survey in the following way:

	Action	**Result**	
1	Click the gear icon (lower right of the panel) to bring up the *AstroView Settings* menu.		

2	Select a background survey from one of the drop-down menus. The new background will load quickly, so you can browse the choices before closing. The surveys have different resolutions and depth, and few of them cover the full sky. The example at left shows NGC 2440 in the DSS and Pan-STARRS surveys.		 DSS  Pan-STARRS
3	When finished, click the ***Close*** button.		

> **Sky survey coverage**
>
> Not all available sky surveys used with Astroview have all-sky coverage. For example, selecting SDSS for targets with extreme southern declination will result in a uniformly black background. All Astroview functions will continue to work.

Pan, Zoom, and Coordinates

To ***pan*** the AstroView window to a different position, press mouse button-1 over the image, and drag to a new position. To adjust the ***zoom*** level, either

- scroll with your mouse over the AstroView panel, or
- use the icons in the lower-left: or .

Coordinates are by default shown at the upper-right of the image.

- The upper coordinates (in orange) show the coordinates of the position of your cursor in the image.
- The lower coordinates (in purple) correspond to the last selected position in the image (probably the center of one of the observation footprints).

Click the

button to change the coordinates from sexagesimal to degrees and back.

For Further Reading...

- Data Browsing Tools