ALMA Archive

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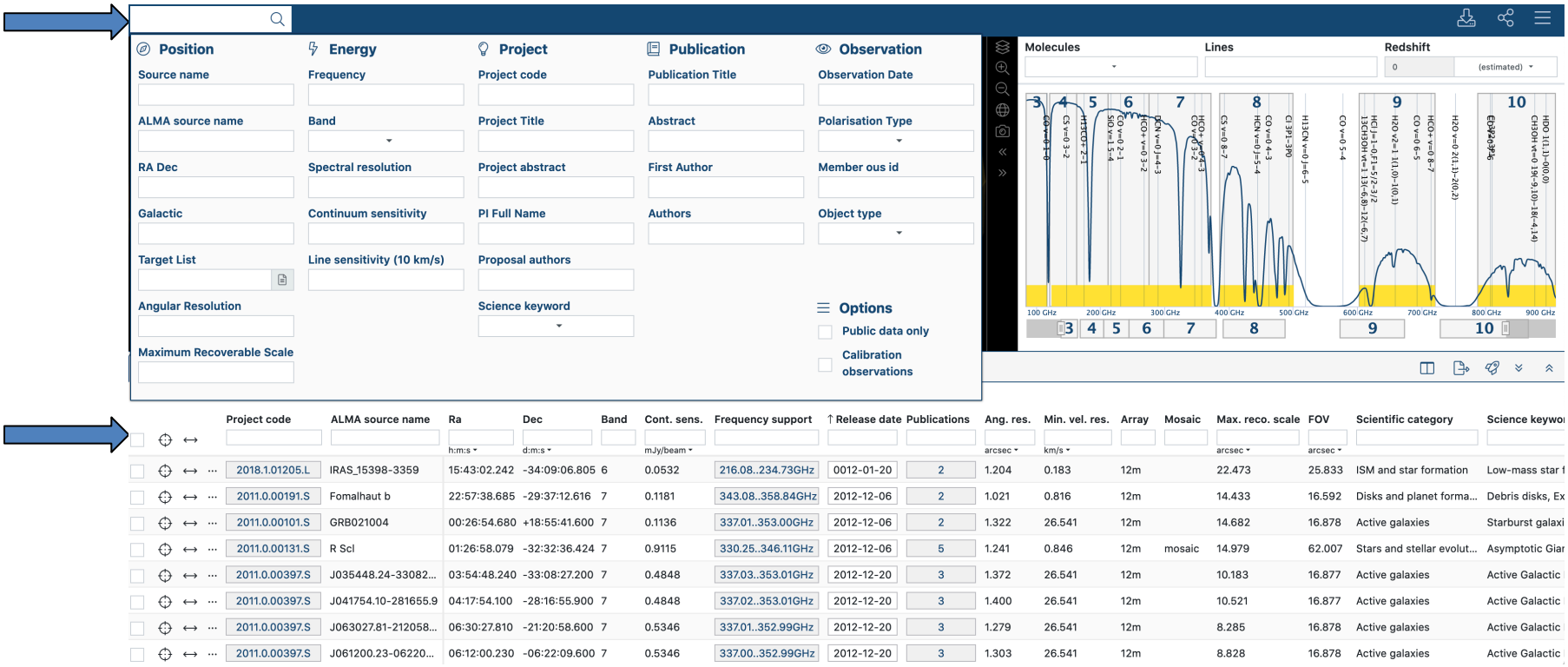
NSF AUI ALMA NAASC North American ALMA Science Center NRAO

Exploring the ALMA Archive

- Check for duplications of your proposed observations
  - Same Target
  - Angular resolution is within a factor of 2
  - RMS is better by a factor of 2
  - See Appendix A of the Users' Policies for complete definition
- Use archival data! No need to apply!
- Archive interface
  - https://almascience.nrao.edu/aq

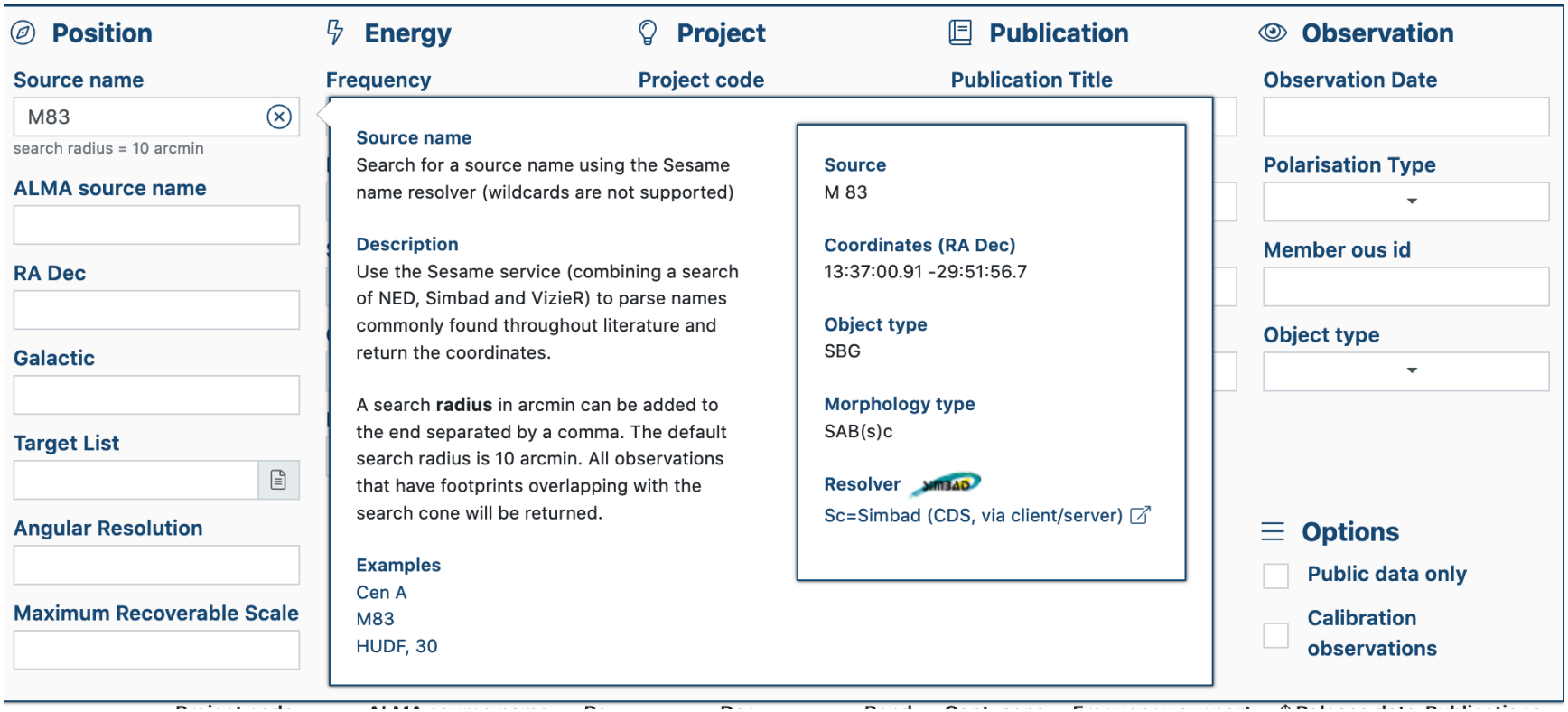
Searching the Archive

- Filter columns based on target, project, or publication
- Hover over the top left search bar for expanded search fields

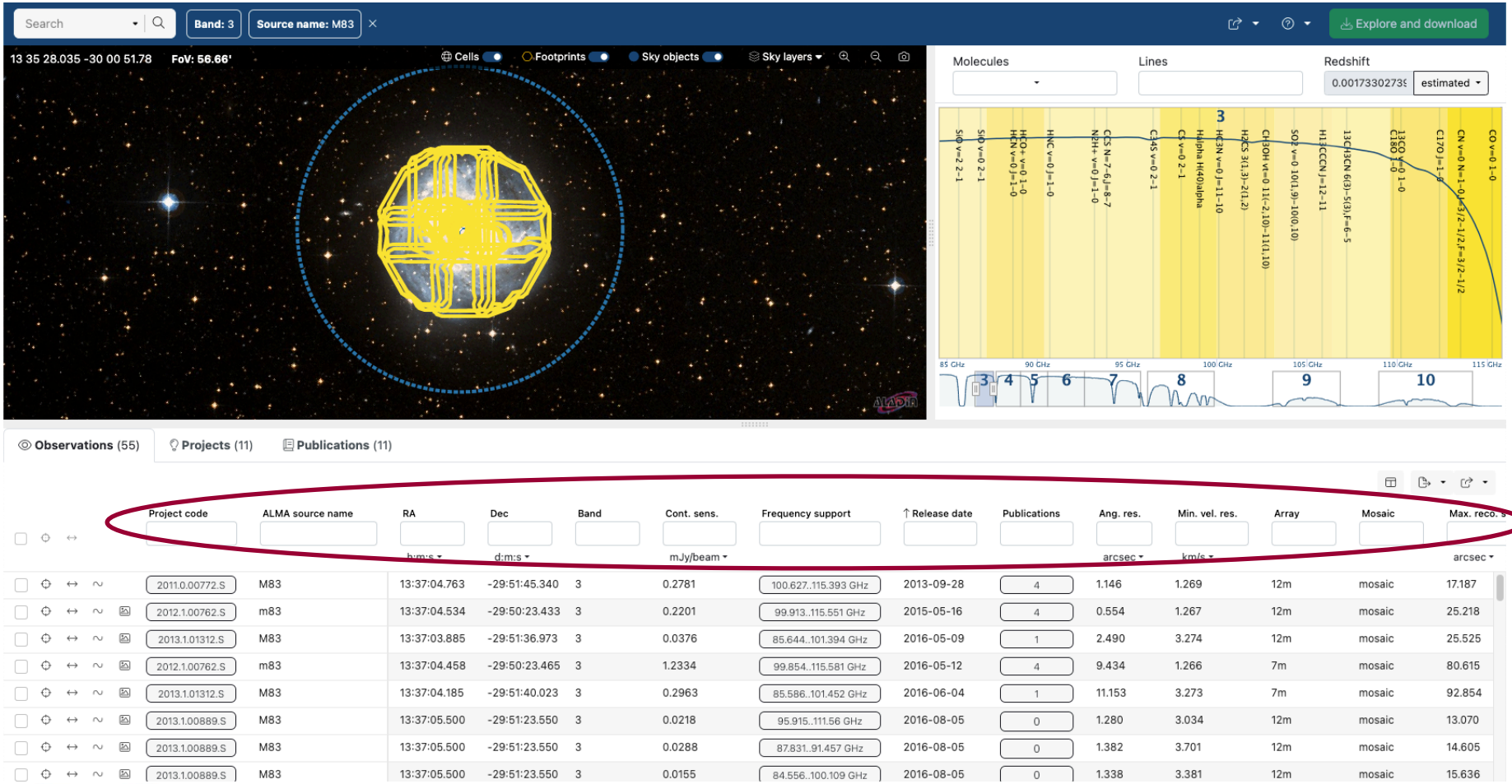


Project code	ALMA source name	Ra	Dec	Band	Cont. sens.	Frequency support	↑ Release date	Publications	Ang. res.	Min. vel. res.	Array	Mosaic	Max. reco. scale	FOV	Scientific category	Science keywo
		h:m:s	d:m:s		mJy/beam				arcsec	km/s			arcsec	arcsec		
2018.1.01205.L	IRAS_15398-3359	15:43:02.242	-34:09:06.805	6	0.0532	216.08..234.73GHz	0012-01-20	2	1.204	0.183	12m		22.473	25.833	ISM and star formation	Low-mass star f
2011.0.00191.S	Fomalhaut b	22:57:38.685	-29:37:12.616	7	0.1181	343.08..358.84GHz	2012-12-06	2	1.021	0.816	12m		14.433	16.592	Disks and planet forma...	Debris disks, Ex
2011.0.00101.S	GRB021004	00:26:54.680	+18:55:41.600	7	0.1136	337.01..353.00GHz	2012-12-06	2	1.322	26.541	12m		14.682	16.878	Active galaxies	Starburst galaxi
2011.0.00131.S	R Scl	01:26:58.079	-32:32:36.424	7	0.9115	330.25..346.11GHz	2012-12-06	5	1.241	0.846	12m	mosaic	14.979	62.007	Stars and stellar evolut...	Asymptotic Giar
2011.0.00397.S	J035448.24-33082...	03:54:48.240	-33:08:27.200	7	0.4848	337.03..353.01GHz	2012-12-20	3	1.372	26.541	12m		10.183	16.877	Active galaxies	Active Galactic
2011.0.00397.S	J041754.10-281655.9	04:17:54.100	-28:16:55.900	7	0.4848	337.02..353.01GHz	2012-12-20	3	1.400	26.541	12m		10.521	16.877	Active galaxies	Active Galactic
2011.0.00397.S	J063027.81-212058...	06:30:27.810	-21:20:58.600	7	0.5346	337.01..352.99GHz	2012-12-20	3	1.279	26.541	12m		8.285	16.878	Active galaxies	Active Galactic
2011.0.00397.S	J061200.23-06220...	06:12:00.230	-06:22:09.600	7	0.5346	337.00..352.99GHz	2012-12-20	3	1.303	26.541	12m		8.828	16.878	Active galaxies	Active Galactic

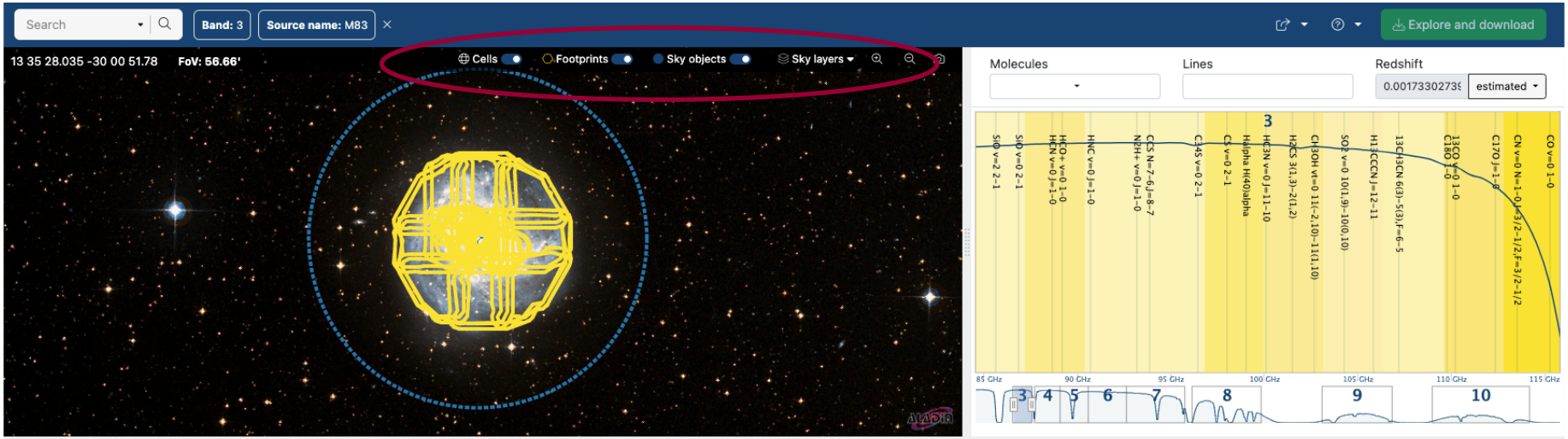
Search for your Favorite Source



Apply Column Sub-Filters



Modify Data Viewed

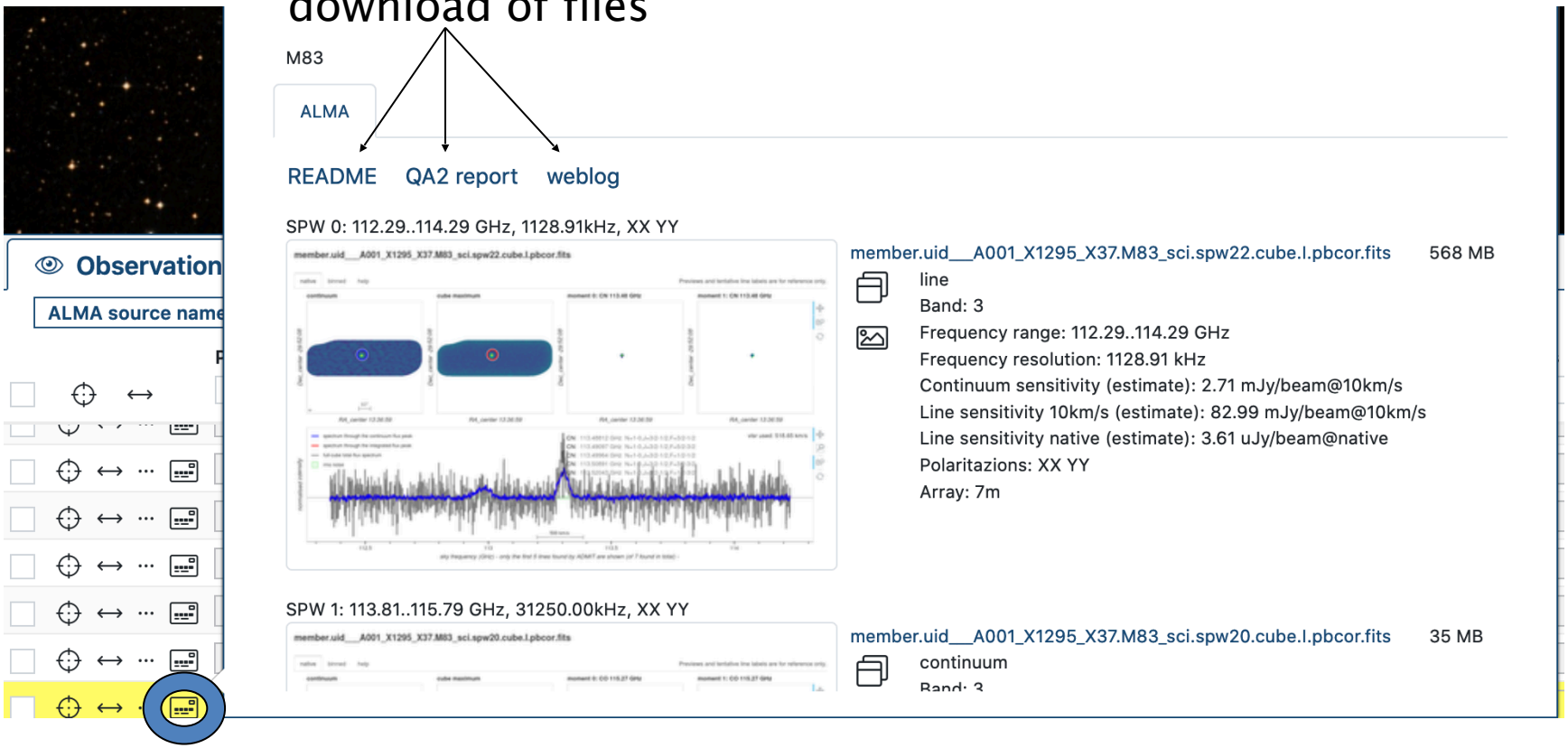


Observations (55) | Projects (11) | Publications (11)

Project code	ALMA source name	RA (h:m:s)	Dec (d:m:s)	Band	Cont. sens. (mJy/beam)	Frequency support	↑ Release date	Publications	Ang. res. (arcsec)	Min. vel. res. (km/s)	Array	Mosaic	Max. reco. s (arcsec)
2011.0.00772.S	M83	13:37:04.763	-29:51:45.340	3	0.2781	100.627..115.393 GHz	2013-09-28	4	1.146	1.269	12m	mosaic	17.187
2012.1.00762.S	m83	13:37:04.534	-29:50:23.433	3	0.2201	99.913..115.551 GHz	2015-05-16	4	0.554	1.267	12m	mosaic	25.218
2013.1.01312.S	M83	13:37:03.885	-29:51:36.973	3	0.0376	85.644..101.394 GHz	2016-05-09	1	2.490	3.274	12m	mosaic	25.525
2012.1.00762.S	m83	13:37:04.458	-29:50:23.465	3	1.2334	99.854..115.581 GHz	2016-05-12	4	9.434	1.266	7m	mosaic	80.615
2013.1.01312.S	M83	13:37:04.185	-29:51:40.023	3	0.2963	85.586..101.452 GHz	2016-06-04	1	11.153	3.273	7m	mosaic	92.854
2013.1.00889.S	M83	13:37:05.500	-29:51:23.550	3	0.0218	95.915..111.56 GHz	2016-08-05	0	1.280	3.034	12m	mosaic	13.070
2013.1.00889.S	M83	13:37:05.500	-29:51:23.550	3	0.0288	87.831..91.457 GHz	2016-08-05	0	1.382	3.701	12m	mosaic	14.605
2013.1.00889.S	M83	13:37:05.500	-29:51:23.550	3	0.0155	84.556..100.109 GHz	2016-08-05	0	1.338	3.381	12m	mosaic	15.636

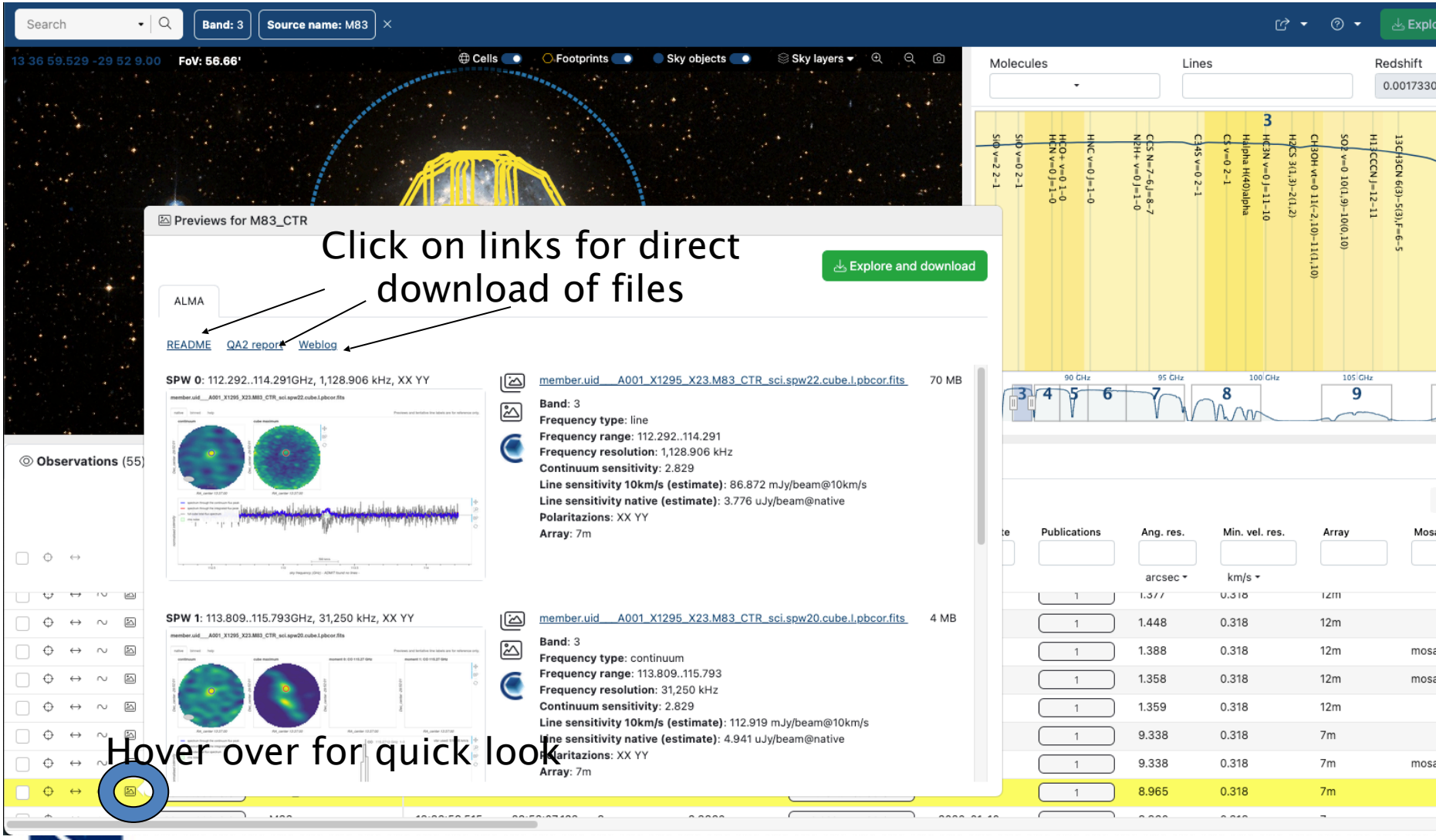
New: Quick Look Images and Spectra

Click on links for direct download of files

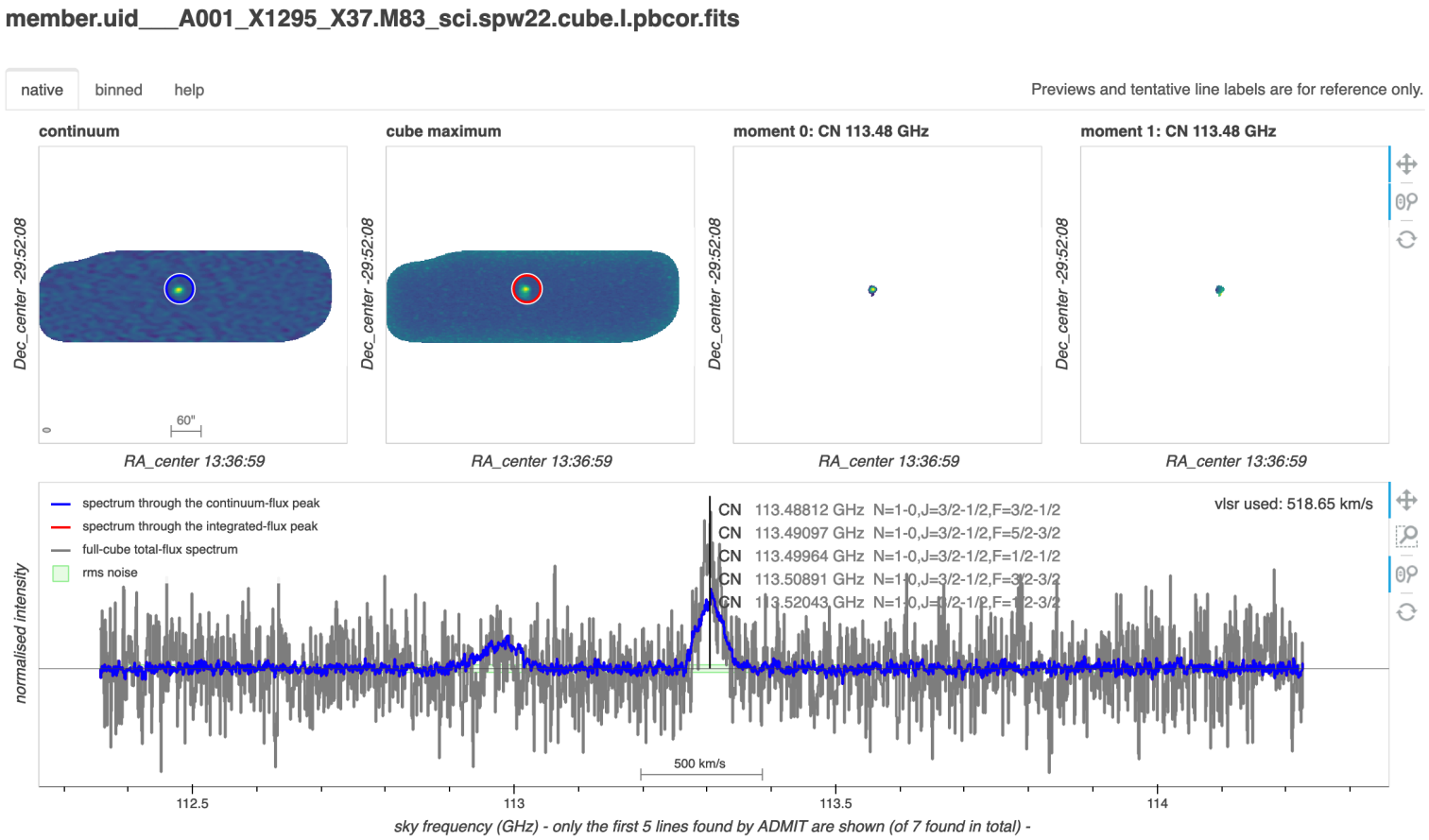


Hover over for quick look

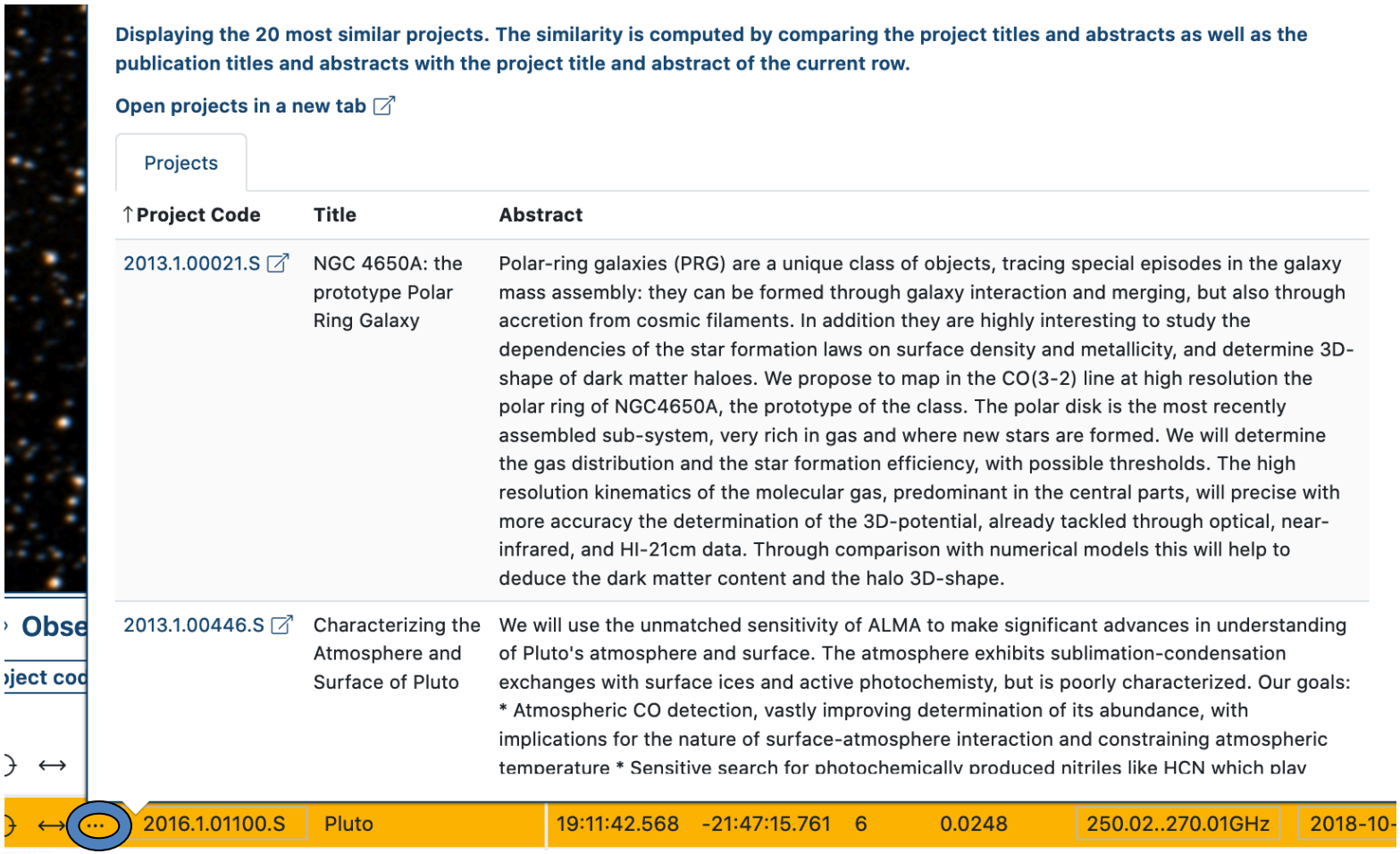
New: Quick Look Images and Spectra



New: Interactive Exploration



New: Generate List of Similar Projects



Displaying the 20 most similar projects. The similarity is computed by comparing the project titles and abstracts as well as the publication titles and abstracts with the project title and abstract of the current row.

Open projects in a new tab

Projects

↑Project Code	Title	Abstract
2013.1.00021.S	NGC 4650A: the prototype Polar Ring Galaxy	Polar-ring galaxies (PRG) are a unique class of objects, tracing special episodes in the galaxy mass assembly: they can be formed through galaxy interaction and merging, but also through accretion from cosmic filaments. In addition they are highly interesting to study the dependencies of the star formation laws on surface density and metallicity, and determine 3D-shape of dark matter haloes. We propose to map in the CO(3-2) line at high resolution the polar ring of NGC4650A, the prototype of the class. The polar disk is the most recently assembled sub-system, very rich in gas and where new stars are formed. We will determine the gas distribution and the star formation efficiency, with possible thresholds. The high resolution kinematics of the molecular gas, predominant in the central parts, will precise with more accuracy the determination of the 3D-potential, already tackled through optical, near-infrared, and HI-21cm data. Through comparison with numerical models this will help to deduce the dark matter content and the halo 3D-shape.
2013.1.00446.S	Characterizing the Atmosphere and Surface of Pluto	We will use the unmatched sensitivity of ALMA to make significant advances in understanding of Pluto's atmosphere and surface. The atmosphere exhibits sublimation-condensation exchanges with surface ices and active photochemisty, but is poorly characterized. Our goals: * Atmospheric CO detection, vastly improving determination of its abundance, with implications for the nature of surface-atmosphere interaction and constraining atmospheric temperature * Sensitive search for photochemically produced nitriles like HCN which play

Obse

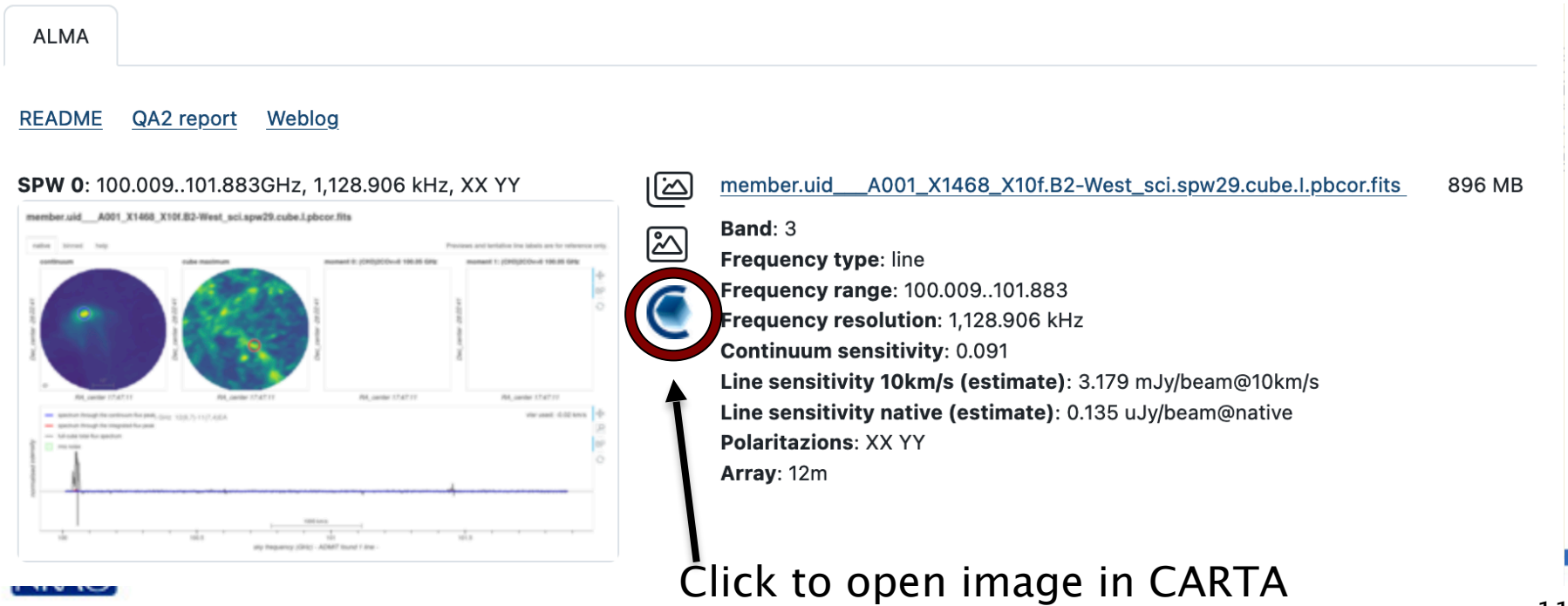
oject coc

2016.1.01100.S | Pluto | 19:11:42.568 | -21:47:15.761 | 6 | 0.0248 | 250.02..270.01GHz | 2018-10-

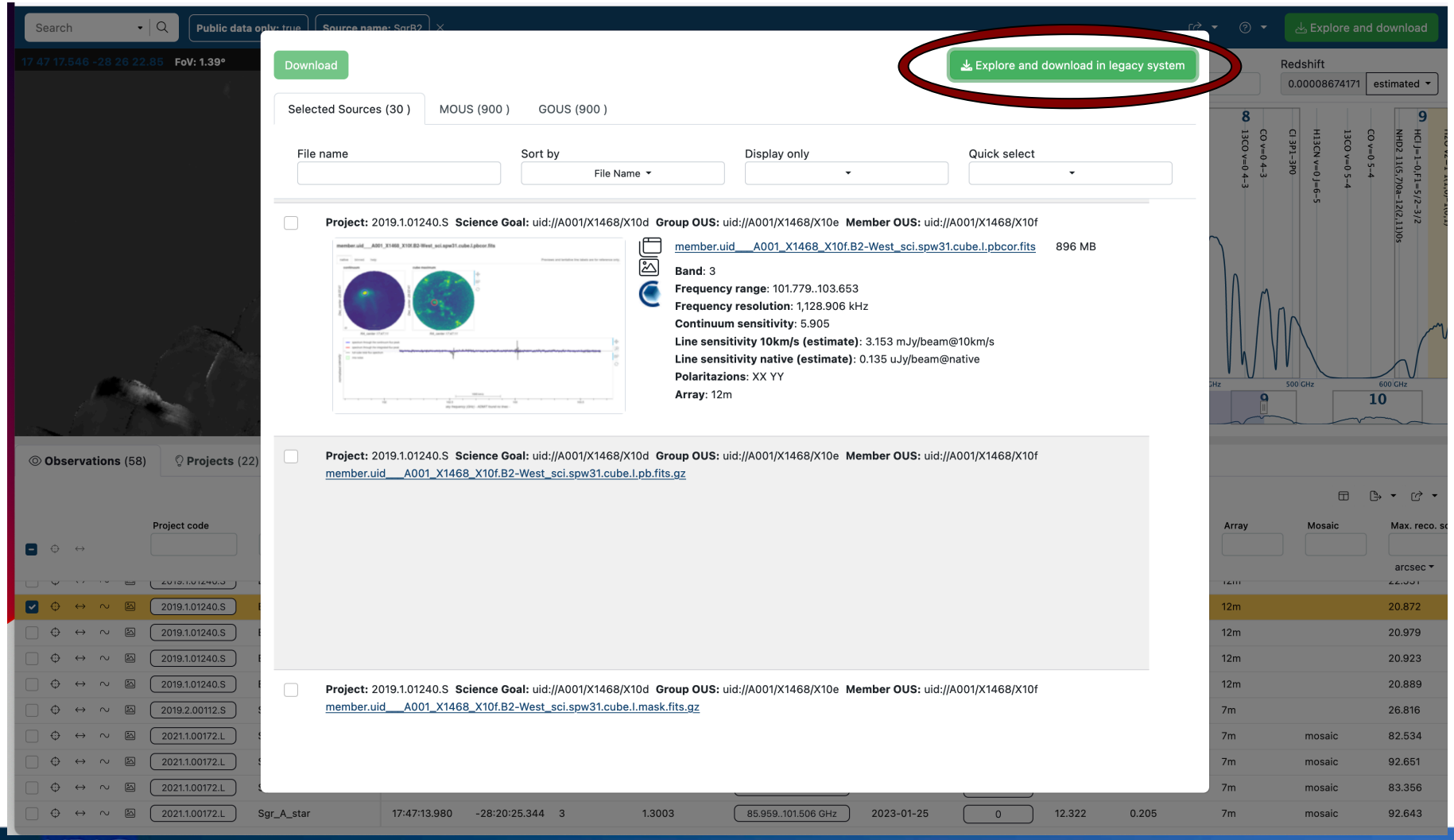
Hover over for similar projects and publications

Aside: CARTA (Cube Analysis and Rendering Tool for Astronomy)

- FITS pb-corrected (*.pbcor) images available to open in CARTA (web hosted)
- For quick exploration
  - For science, we recommend downloading the cube and using CARTA on your own computer



Find Data to Download



ALMA

For more info:

https://almascience.nrao.edu/

ALMA is a partnership of ESO (representing its member states), NSF (USA) and NINS (Japan), together with NRC (Canada), MOST and ASIAA (Taiwan), and KASI (Republic of Korea), in cooperation with the Republic of Chile. ALMA construction and operations are led on behalf of Europe by ESO, on behalf of North America by the National Radio Astronomy Observatory (NRAO), which is managed by Associated Universities, Inc. (AUI), and on behalf of East Asia by the National Astronomical Observatory of Japan (NAOJ). The Joint ALMA Observatory (JAO) provides the unified leadership and management of the construction and operation of ALMA. The Joint ALMA Observatory is operated by ESO, AUI/NRAO and NAOJ.

NRAO