

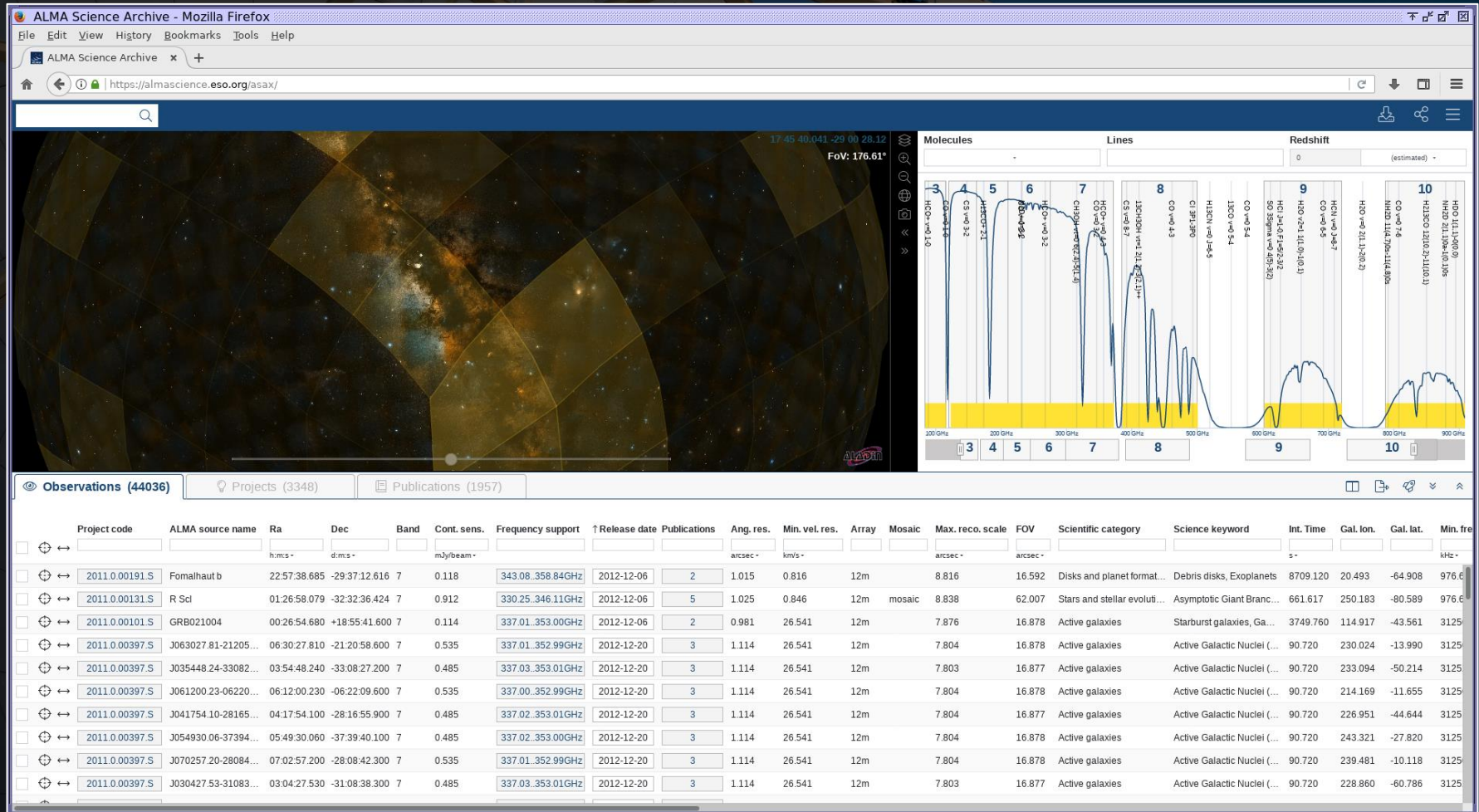
# The ALMA Science Archive

**George Bendo**

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Jodrell Bank Centre for Astrophysics  
The University of Manchester



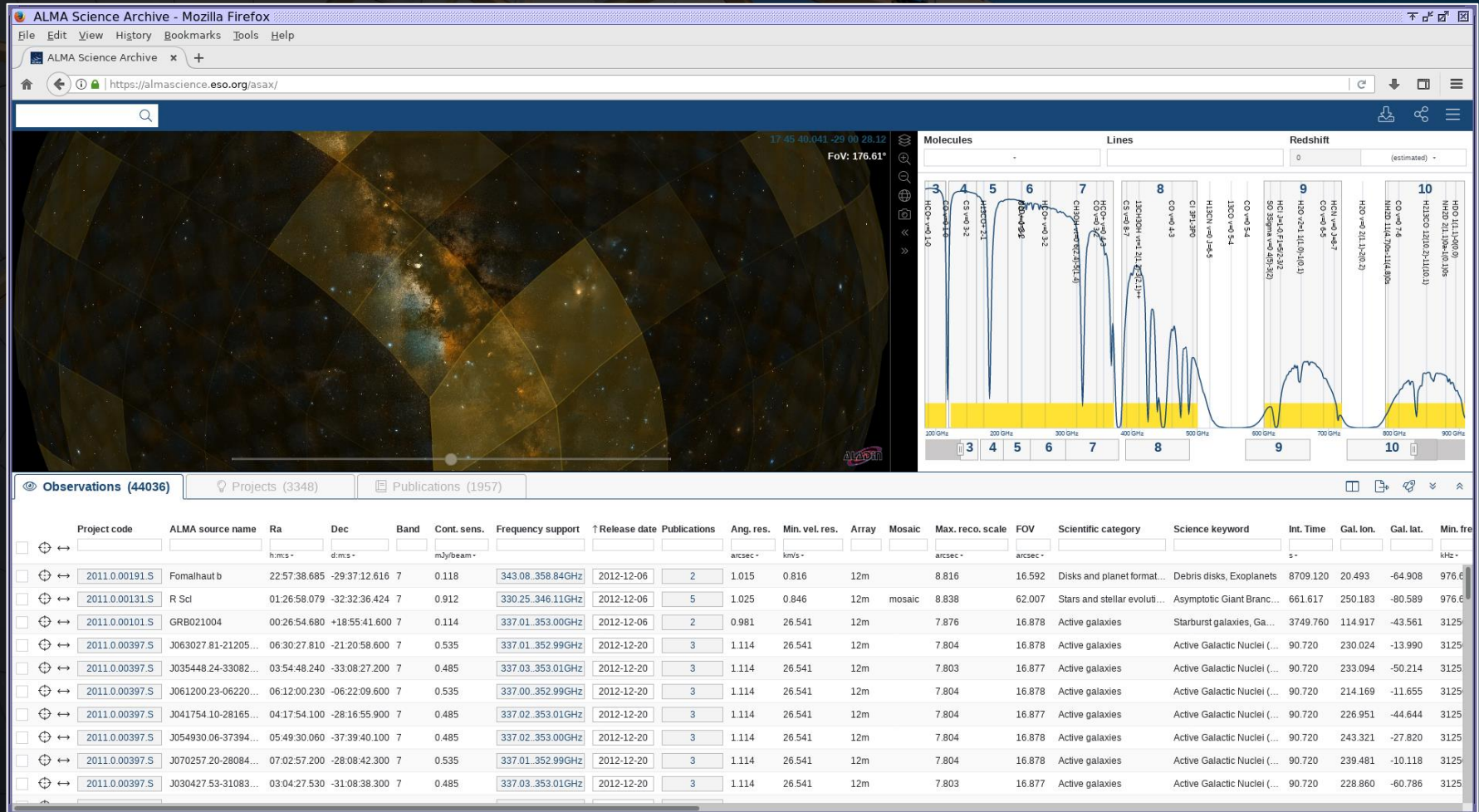
The ALMA Science Archive was updated within the past year. The website is <https://almascience.eso.org/asax/>. The default view shows the entire contents of the archive.





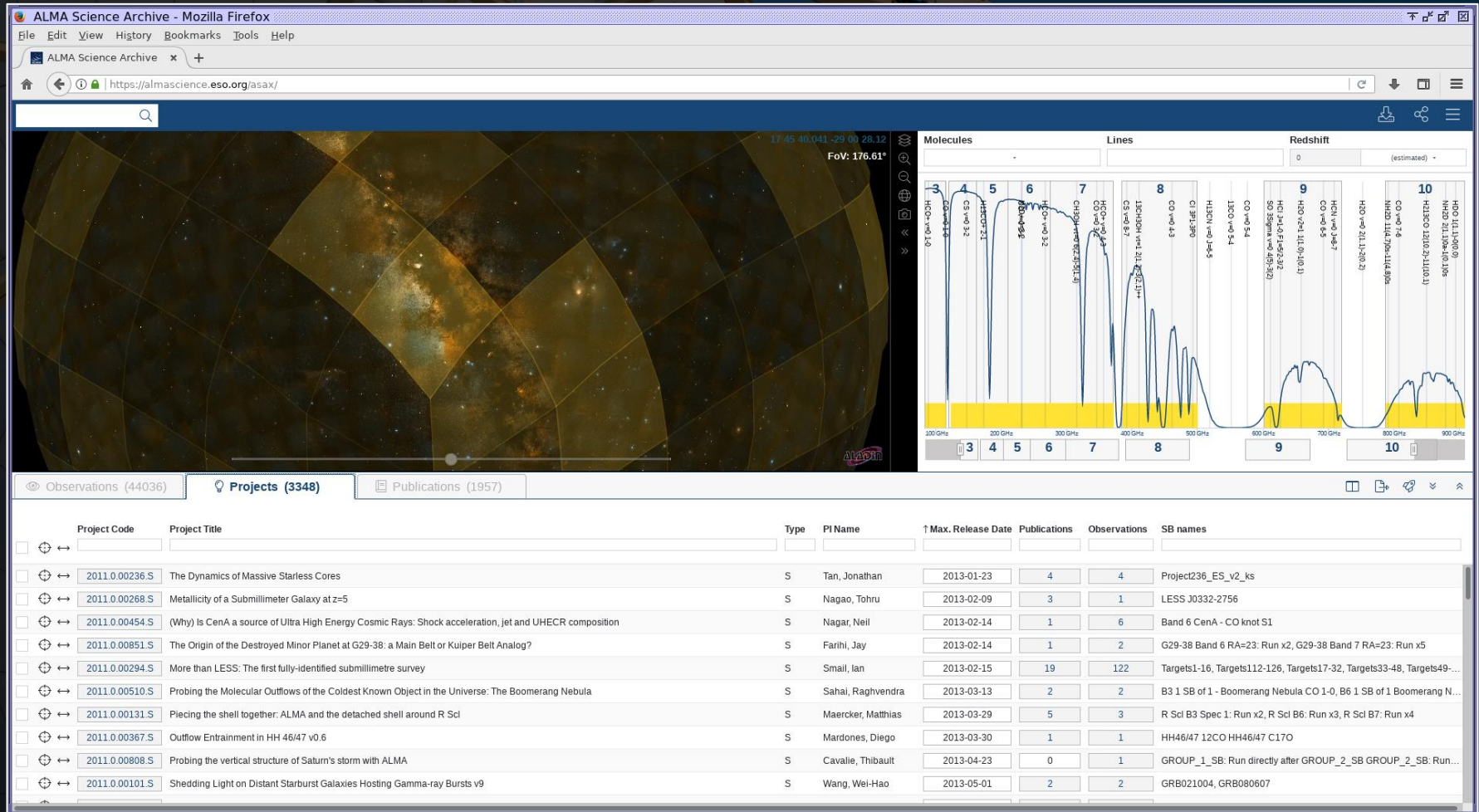
# The interface has three sections:

- The sky viewer
- The spectral viewer
- The results table



# The results table actually has three tabs:

- Observation
- Project
- Publication





# The results table actually has three tabs:

- Observation
- Project
- Publication

ALMA Science Archive - Mozilla Firefox

File Edit View History Bookmarks Tools Help

ALMA Science Archive x +

https://almascience.eso.org/asax/

Search

17:45 40.041 -29 00 28.12  
FoV: 176.61"

Molecules Lines Redshift

0 (estimated)

100 GHz 200 GHz 300 GHz 400 GHz 500 GHz 600 GHz 700 GHz 800 GHz

Observations (44036) Projects (3348) Publications (1957)

BibCode	First Author	Journal	Year	Publication Title	↑ Max. Release Date	Projects	Observations	Authors
2013ApJ...779...96T	Tan, Jonathan C.	ApJ	2013	The Dynamics of Massive Starless Cores with ALMA	2013-01-23	1	4	Tan, Jonathan C.; Kong, Shuo; Butler, Michael J.; Caselli, Paola; Font...
2016ApJ...828.100F	Feng, Siyi	ApJ	2016	Outflow Detection in a 70 $\mu$ m Dark High-Mass Core	2013-01-23	1	4	Feng, Siyi; Beuther, Henrik; Zhang, Qizhou; Liu, Haoyu Baobab; Zh...
2016ApJ...821...94K	Kong, Shuo	ApJ	2016	The Deuterium Fraction in Massive Starless Cores and Dynamical Implications	2013-01-23	1	4	Kong, Shuo; Tan, Jonathan C.; Caselli, Paola; Fontani, Francesco; Pill...
2012A&A...542L..34N	Nagao, T.	A&A	2012	ALMA reveals a chemically evolved submillimeter galaxy at $z = 4.76$	2013-02-09	1	1	Nagao, T.; Maiolino, R.; De Breuck, C.; Caselli, P.; Hatzukade, B.; Saig...
2014MNRAS...444.1821F	Farihi, J.	MNRAS	2014	ALMA and Herschel observations of the prototype dusty and polluted white dwarf G29-38	2013-02-14	1	2	Farihi, J.; Wyatt, M. C.; Greaves, J. S.; Bonsor, A.; Sibthorpe, B.; Panić, O.
2016A&A...586A..45S	Salomé, Q.	A&A	2016	Star formation efficiency along the radio jet in Centaurus A	2013-02-14	1	6	Salomé, Q.; Salomé, P.; Combes, F.; Hamer, S.; Heywood, I.
2017ApJ...840...78D	Danielson, A. L. R.	ApJ	2017	An ALMA Survey of Submillimeter Galaxies in the Extended Chandra Deep Field South: Spectroscopic Redshifts	2013-02-15	1	122	Danielson, A. L. R.; Swinbank, A. M.; Small, Ian; Simpson, J. M.; Case...
2016MNRAS...463..10M	Mackenzie, Todd P.	MNRAS	2016	SEDEBLEND: a new method for deblending spectral energy distributions in confused imaging	2013-02-15	1	122	Mackenzie, Todd P.; Scott, Douglas; Swinbank, Mark
2014ApJ...788.125S	Simpson, J. M.	ApJ	2014	An ALMA Survey of Submillimeter Galaxies in the Extended Chandra Deep Field South: The Redshift Distribution and Evolu...	2013-02-15	1	122	Simpson, J. M.; Swinbank, A. M.; Small, Ian; Alexander, D. M.; Brandt, ...
2016MNRAS...462.1192L	Lindroos, L.	MNRAS	2016	Estimating sizes of faint, distant galaxies in the submillimetre regime	2013-02-15	1	122	Lindroos, L.; Knudsen, K. K.; Fan, L.; Conway, J.; Coppin, K.; Decarli, ...
2014MNRAS...442..577T	Thomson, A. P.	MNRAS	2014	An ALMA survey of submillimetre galaxies in the Extended Chandra Deep Field South: radio properties and the far-infrared/r...	2013-02-15	1	122	Thomson, A. P.; Ivison, R. J.; Simpson, J. M.; Swinbank, A. M.; Small, I...

Searches can be done in one of two ways. The best way to start a search, especially for a single object, is to use the search menu that is displayed when hovering over the rectangle with the magnifying glass.

**ALMA Science Archive - Mozilla Firefox**

File Edit View History Bookmarks Tools Help

ALMA Science Archive

science.eso.org/asax/

**Position**

Source name

ALMA source name

RA Dec

Galactic

Target List

Angular Resolution

Maximum Recoverable Scale

**Energy**

Frequency

Band

Spectral resolution

Continuum sensitivity

Line sensitivity (10 km/s)

**Project**

Project code

Project Title

Project abstract

PI Full Name

Proposal authors

Science keyword

**Publication**

Publication Title

Abstract

First Author

Authors

**Observation**

Observation Date

Polarisation Type

Member ous id

**Options**

☐ Public data only

☐ Calibration observations

**Molecules**

**Lines**

**Redshift**

(estimated)

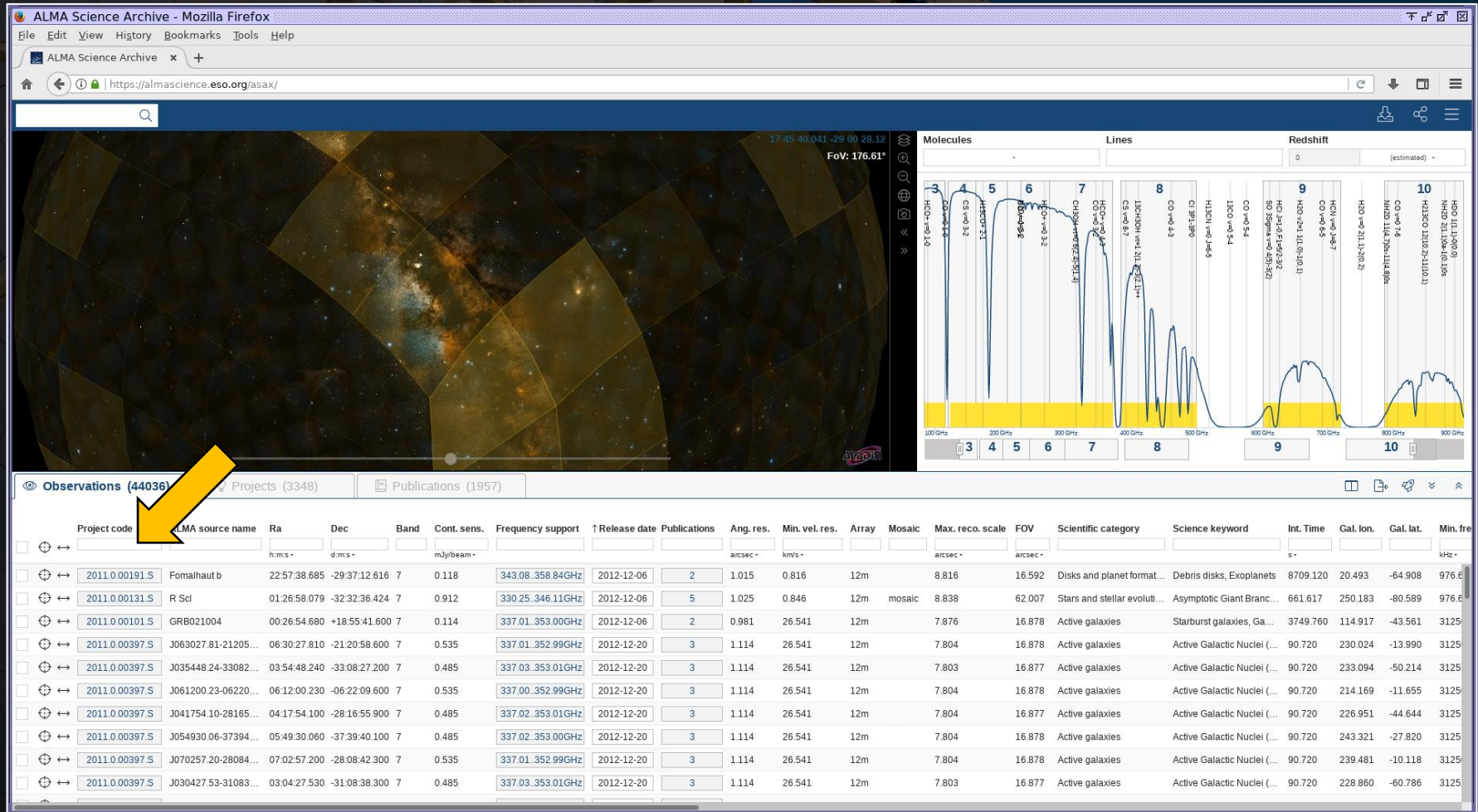
**Observations (44036)**

Projects (3348)

Publications (1957)

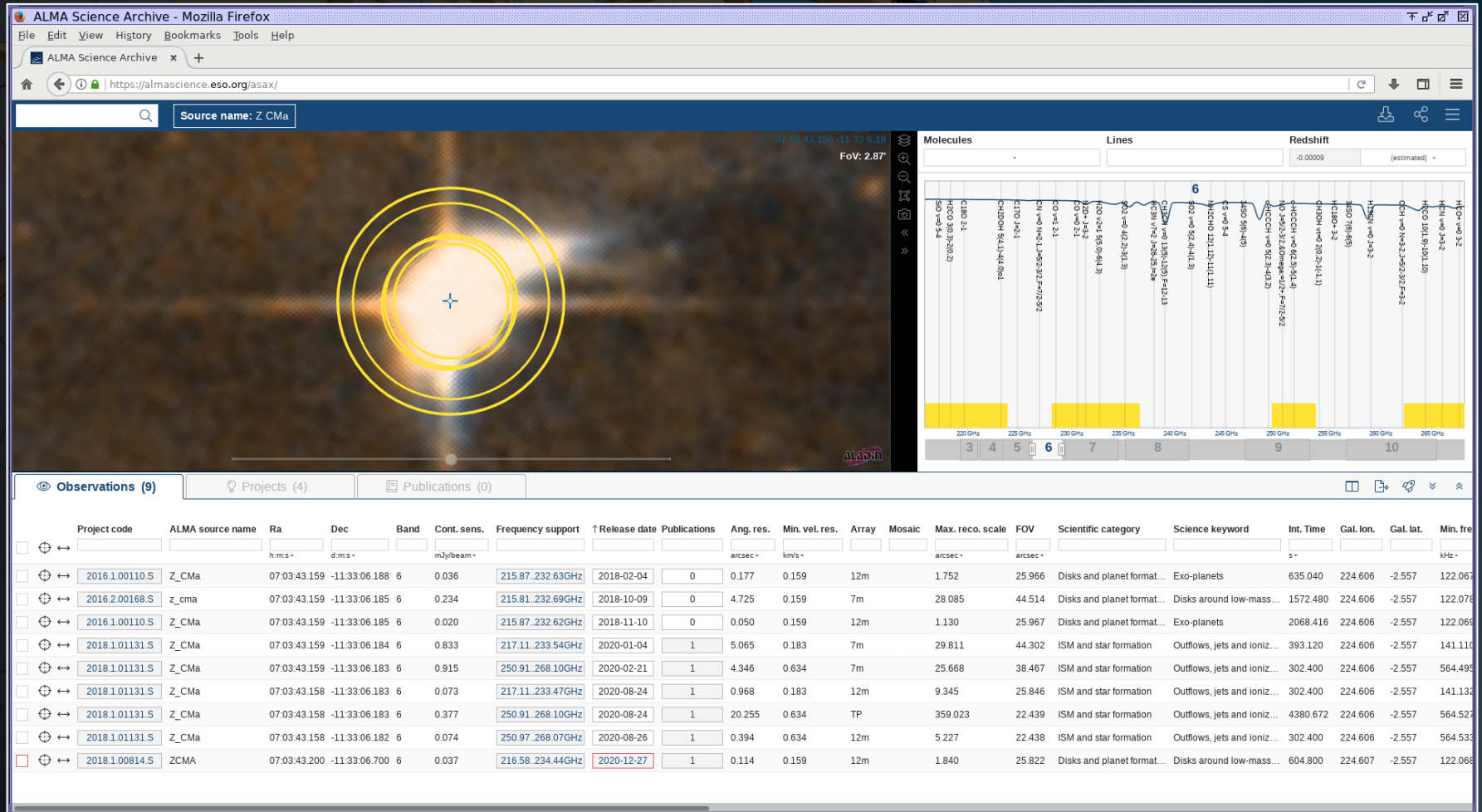
	Project code	ALMA source name	Ra	Dec	Band	Cont. sens.	Frequency support	Release date	Publications	Ang. res.	Min. vel. res.	Array	Mosaic	Max. reco. scale	FOV	Scientific category	Science keyword	Int. Time	Gal. lon.	Gal. lat.	Min. fre.
			h:m:s	d:m:s		mJy/beam				arcsec	km/s			arcsec	arcsec			s			kHz
<input type="checkbox"/>	<a href="#">2011.0.00191.S</a>	Fomalhaut b	22:57:38.685	-29:37:12.616	7	0.118	343.08..358.84GHz	2012-12-06	2	1.015	0.816	12m		8.816	16.592	Disks and planet format...	Debris disks, Exoplanets	8709.120	20.493	-64.908	976.6
<input type="checkbox"/>	<a href="#">2011.0.00131.S</a>	R Scl	01:26:58.079	-32:32:36.424	7	0.912	330.25..346.11GHz	2012-12-06	5	1.025	0.846	12m	mosaic	8.838	62.007	Stars and stellar evol...	Asymptotic Giant Branc...	661.617	250.183	-80.589	976.6
<input type="checkbox"/>	<a href="#">2011.0.00101.S</a>	GRB021004	00:26:54.680	+18:55:41.600	7	0.114	337.01..353.00GHz	2012-12-06	2	0.981	26.541	12m		7.876	16.878	Active galaxies	Starburst galaxies, Ga...	3749.760	114.917	-43.561	3125
<input type="checkbox"/>	<a href="#">2011.0.00397.S</a>	J063027.81-21205...	06:30:27.810	-21:20:58.600	7	0.535	337.01..352.99GHz	2012-12-20	3	1.114	26.541	12m		7.804	16.878	Active galaxies	Active Galactic Nuclei (...)	90.720	230.024	-13.990	3125
<input type="checkbox"/>	<a href="#">2011.0.00397.S</a>	J035448.24-33082...	03:54:48.240	-33:08:27.200	7	0.485	337.03..353.01GHz	2012-12-20	3	1.114	26.541	12m		7.803	16.877	Active galaxies	Active Galactic Nuclei (...)	90.720	233.094	-50.214	3125
<input type="checkbox"/>	<a href="#">2011.0.00397.S</a>	J061200.23-06220...	06:12:00.230	-06:22:09.600	7	0.535	337.00..352.99GHz	2012-12-20	3	1.114	26.541	12m		7.804	16.878	Active galaxies	Active Galactic Nuclei (...)	90.720	214.169	-11.655	3125
<input type="checkbox"/>	<a href="#">2011.0.00397.S</a>	J041754.10-28165...	04:17:54.100	-28:16:55.900	7	0.485	337.02..353.01GHz	2012-12-20	3	1.114	26.541	12m		7.804	16.877	Active galaxies	Active Galactic Nuclei (...)	90.720	226.951	-44.644	3125
<input type="checkbox"/>	<a href="#">2011.0.00397.S</a>	J054930.06-37394...	05:49:30.060	-37:39:40.100	7	0.485	337.02..353.00GHz	2012-12-20	3	1.114	26.541	12m		7.804	16.878	Active galaxies	Active Galactic Nuclei (...)	90.720	243.321	-27.820	3125
<input type="checkbox"/>	<a href="#">2011.0.00397.S</a>	J070257.20-28084...	07:02:57.200	-28:08:42.300	7	0.535	337.01..352.99GHz	2012-12-20	3	1.114	26.541	12m		7.804	16.878	Active galaxies	Active Galactic Nuclei (...)	90.720	239.481	-10.118	3125
<input type="checkbox"/>	<a href="#">2011.0.00397.S</a>	J030427.53-31083...	03:04:27.530	-31:08:38.300	7	0.485	337.03..353.01GHz	2012-12-20	3	1.114	26.541	12m		7.803	16.877	Active galaxies	Active Galactic Nuclei (...)	90.720	228.860	-60.786	3125

The other method is to type in search criteria in the entry fields above each column in the results table. This can also be done after initially setting up a search using the search menu.



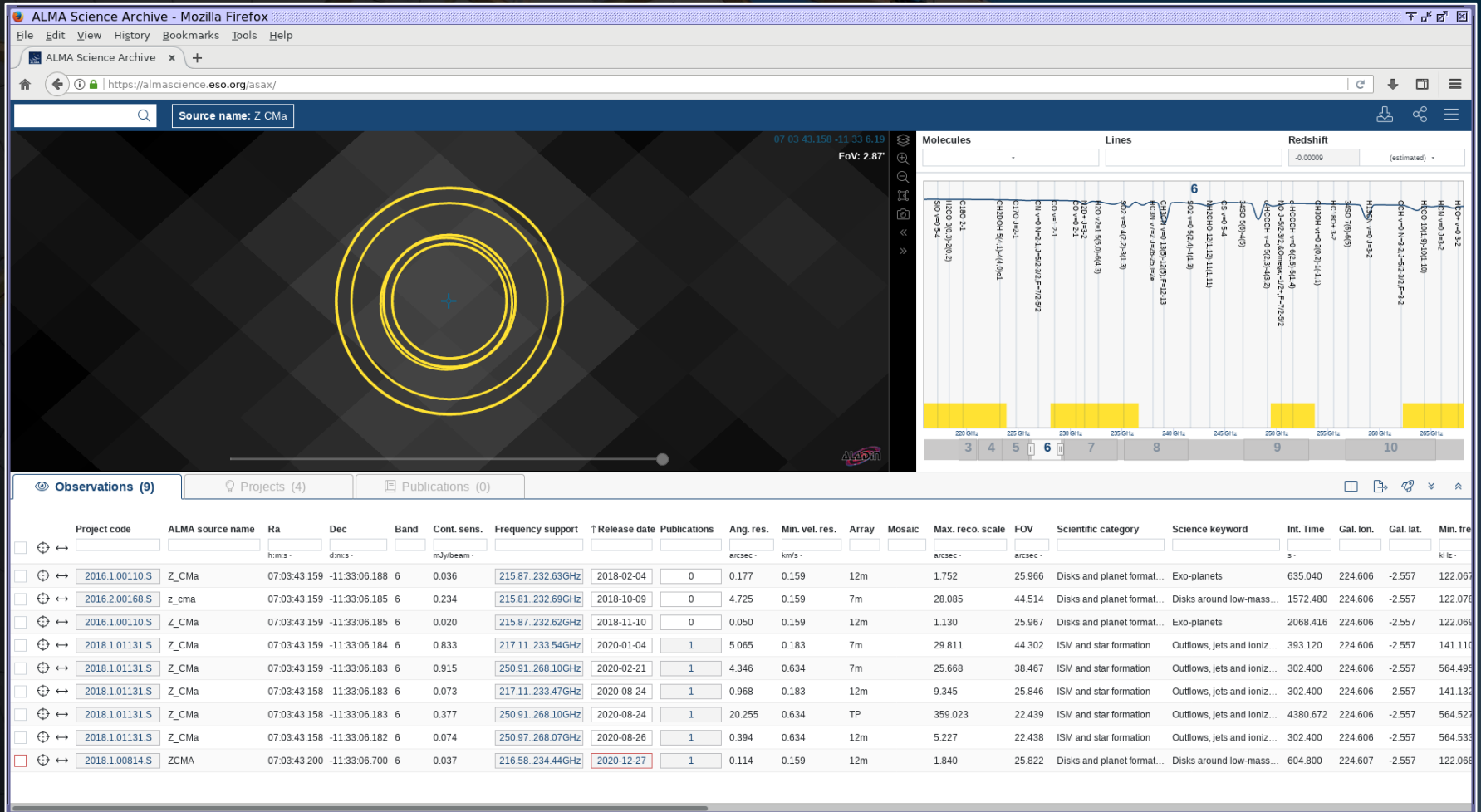


When the number of results in the results table changes, the map and spectrum panels will automatically adjust to show the observed fields and spectra in more detail.

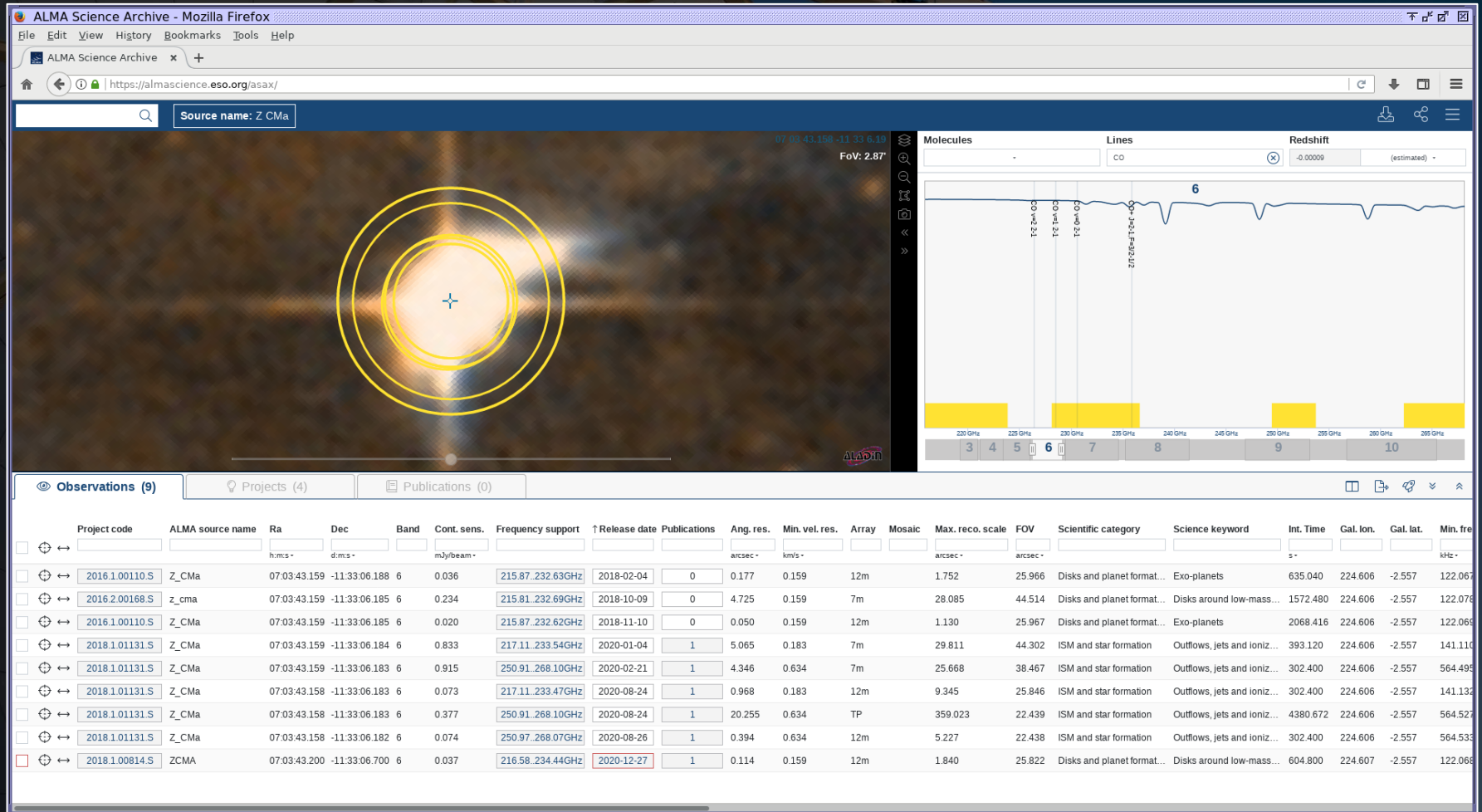




The map display can be adjusted to display different wavebands. The spectrum can be adjusted to show broader or narrower frequency ranges, to show different spectral lines, and to show those lines at different redshifts.

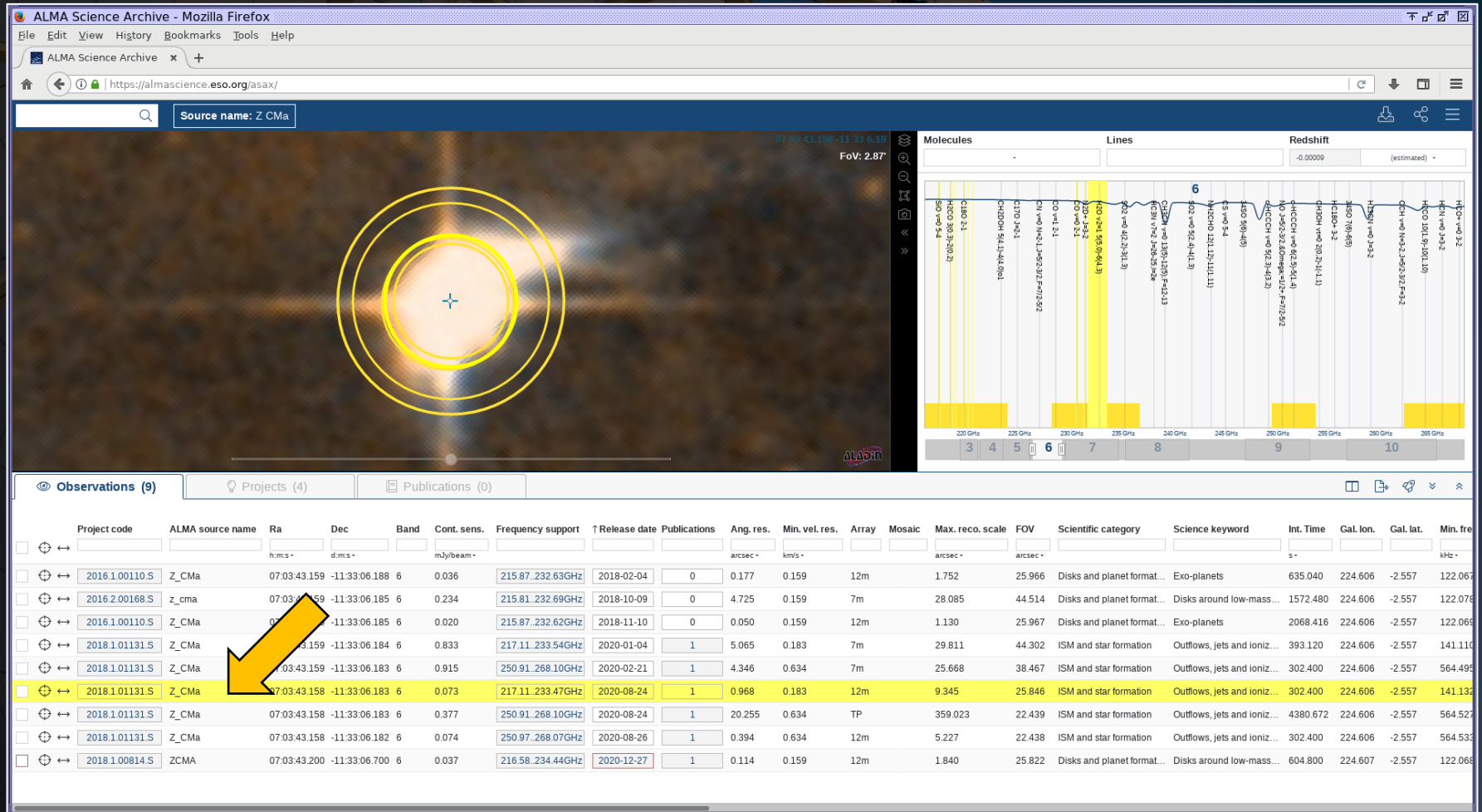


The map display can be adjusted to display different wavebands. The spectrum can be adjusted to show broader or narrower frequency ranges, to show different spectral lines, and to show those lines at different redshifts.

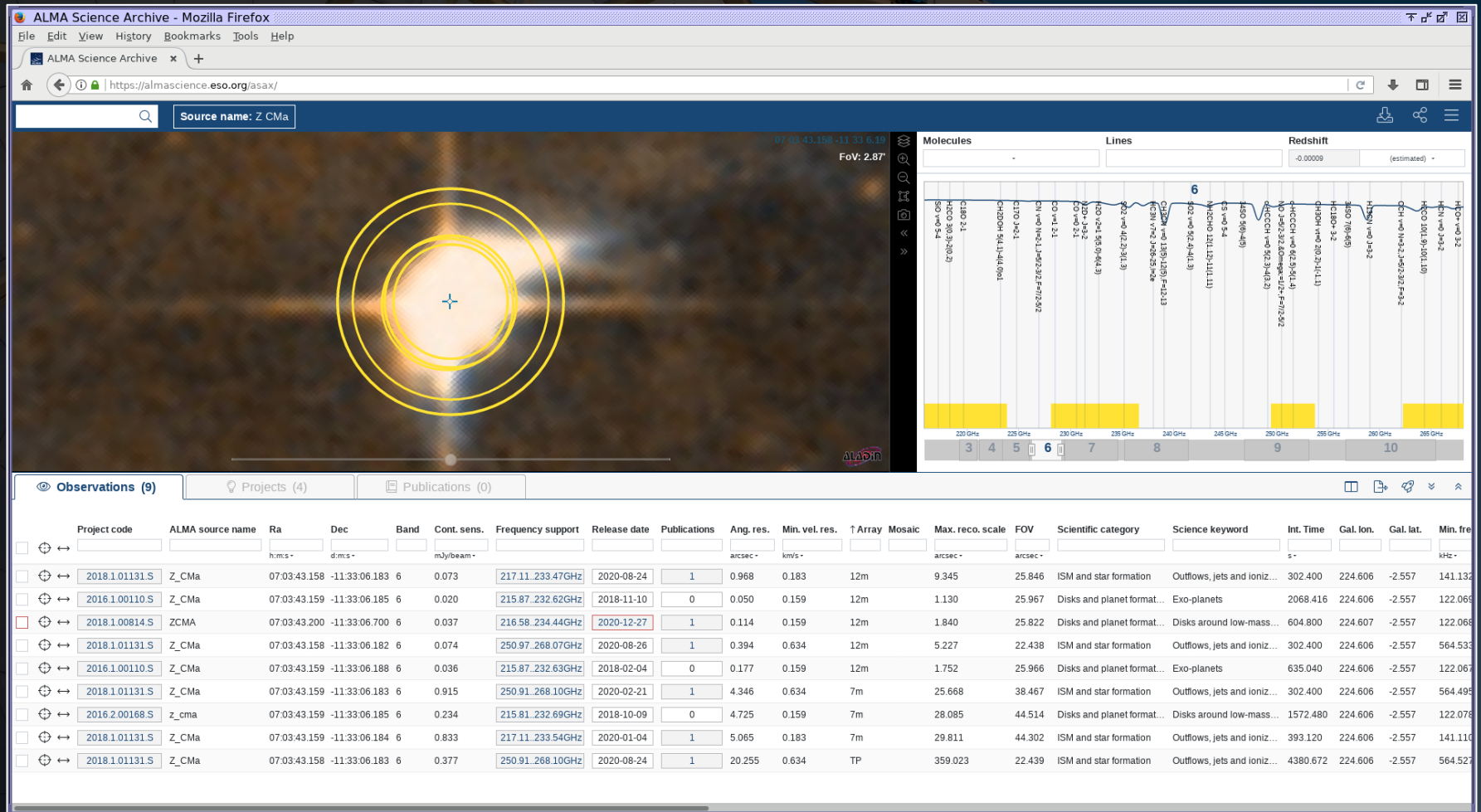




Hovering over an entry in the results table will highlight the row, the field in the map panel, and the frequency ranges in the spectrum panel.

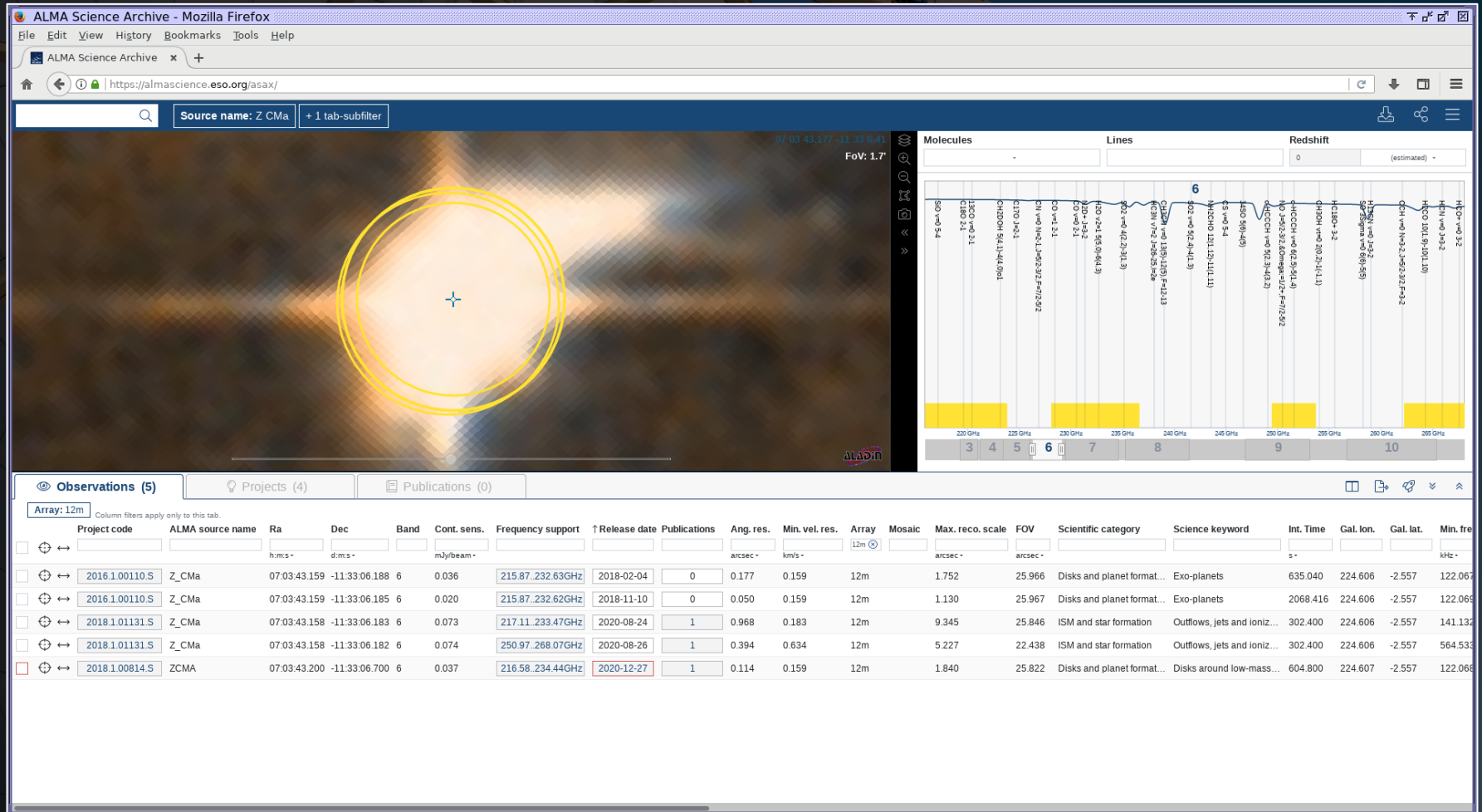


The results from a search can be sorted by any column. The results can also be further filtered.

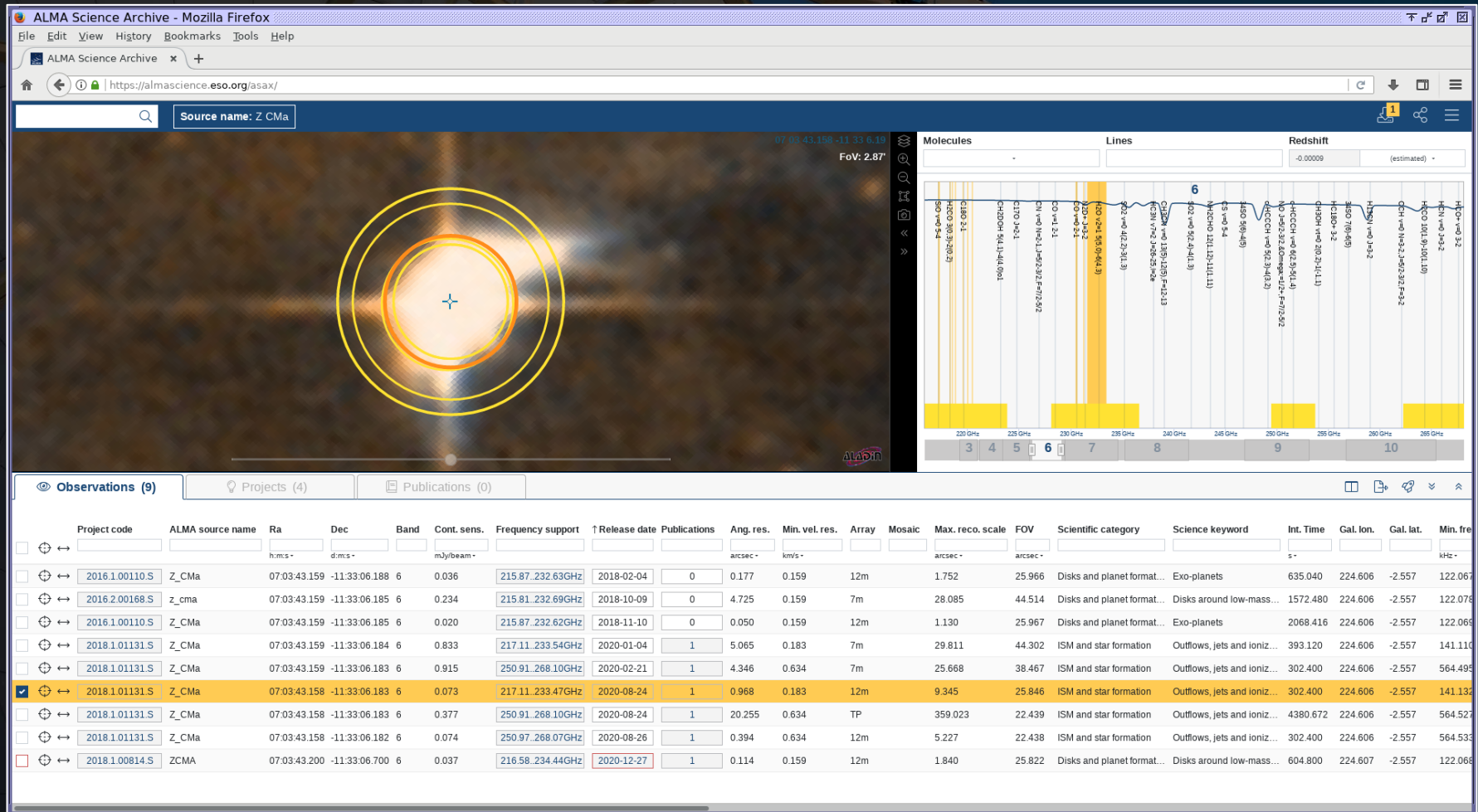




The results from a search can be sorted by any column. The results can also be further filtered.

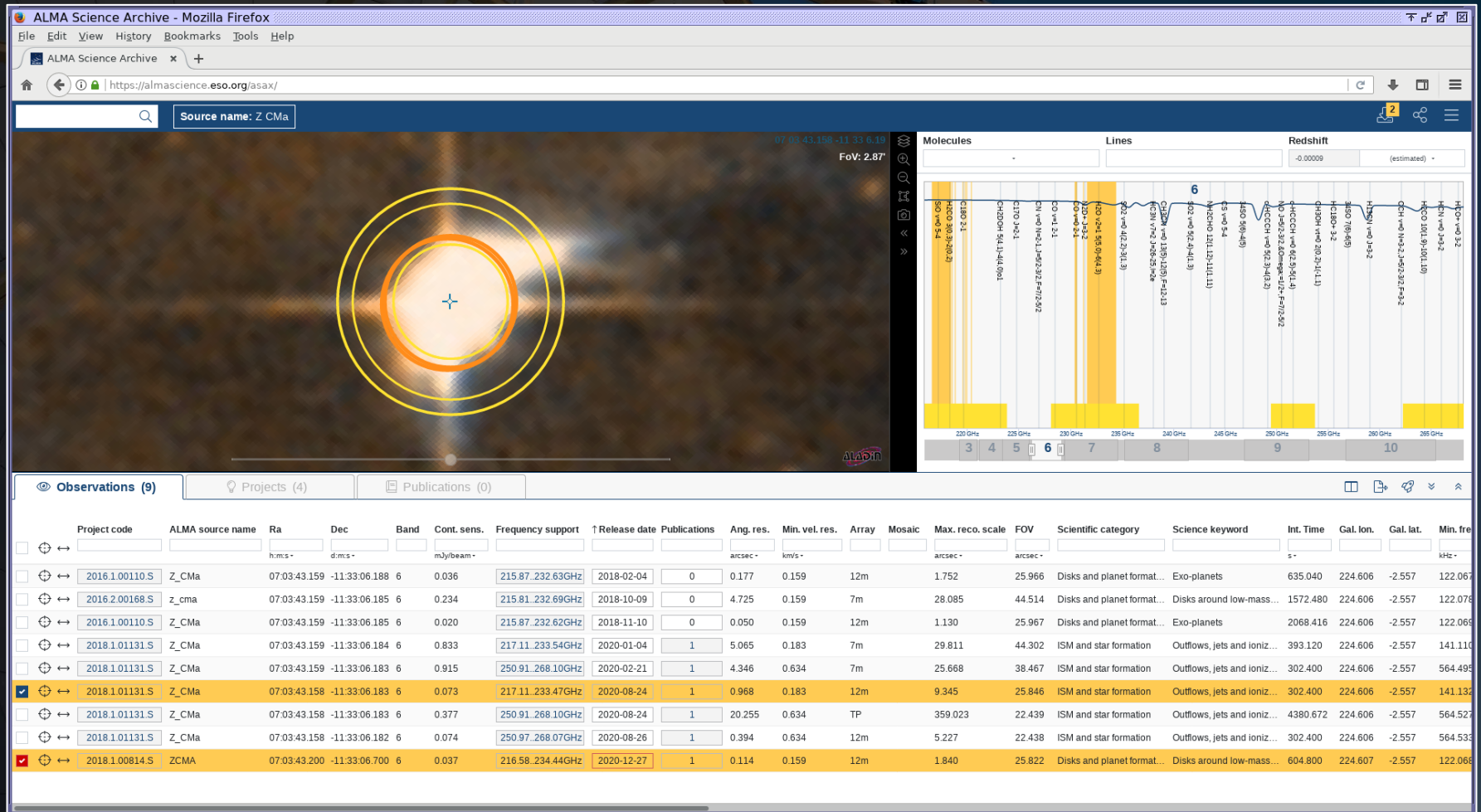


Clicking on the checkbox next to an observation will select the data for download. The row will change to orange as will the field in the map panel and the frequency range in the spectral plot.





Proprietary data can be selected but cannot be downloaded. The checkbox will appear red when these data are selected. Other data (such as for programs where the observations are not yet complete or where the data are in QA3) cannot be selected.

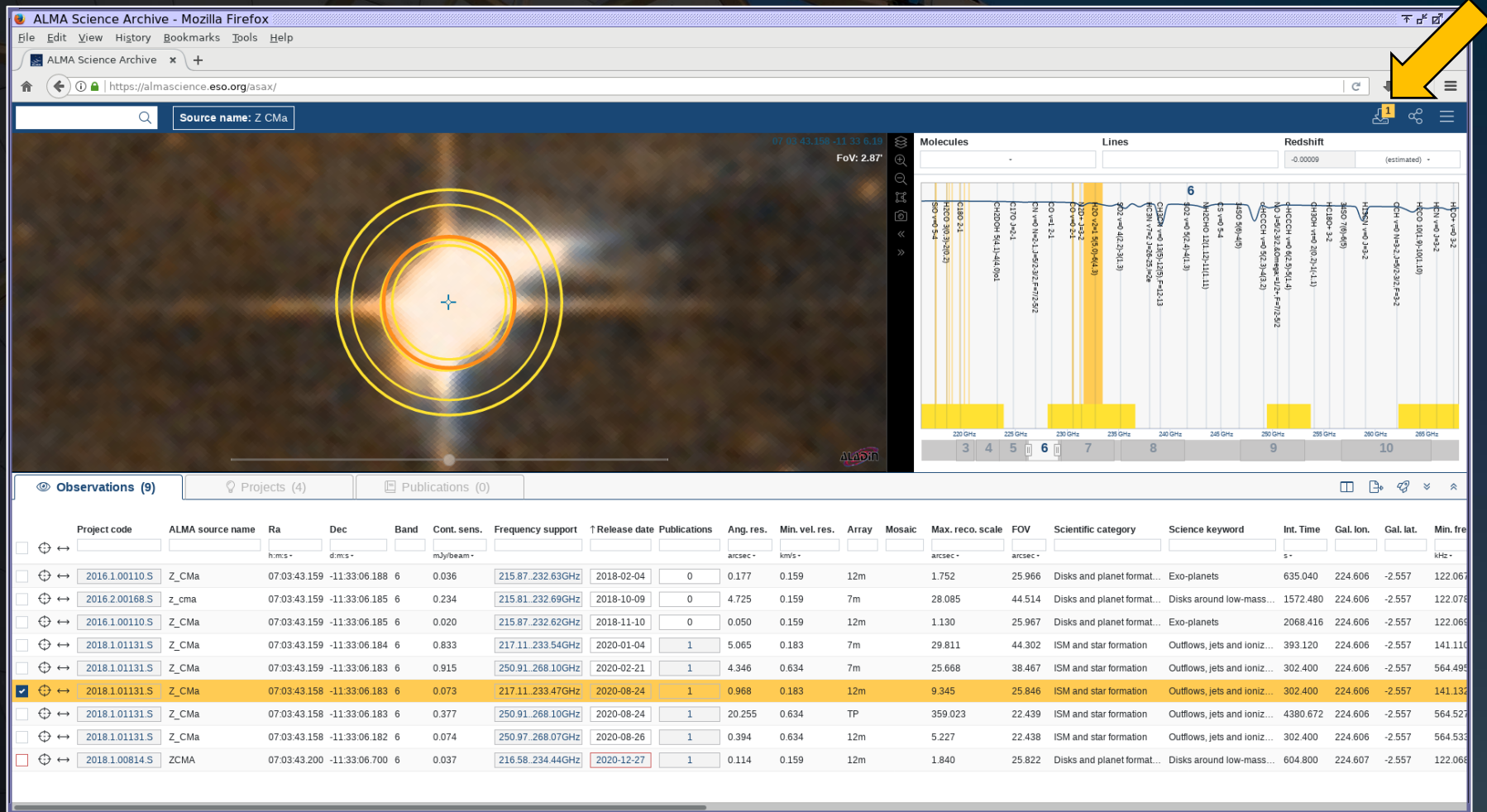


The interface has several other options as well. These include saving the search results (or a link to those results), accessing documentation, and adjusting the display.





Selected data can be downloaded by clicking on the download icon at the top right. When request download is selected, this will open a new browser window or tab. If proprietary data were selected, a login screen will appear first.



ALMA Science Archive - Mozilla Firefox

Source name: Z\_CMa

07 03 43.158 -11 33 6.19  
FoV: 2.87'

Molecules Lines Redshift

Download icon (indicated by yellow arrow)

Observations (9) Projects (4) Publications (0)

	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 keyword	Int. Time	Gal. lon.	Gal. lat.	Min. fre.
			h:m:s	d:m:s		mJy/beam				arcsec	km/s			arcsec	arcsec			s			kHz
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">2016.1.00110.S</a>	Z_CMa	07:03:43.159	-11:33:06.188	6	0.036	<a href="#">215.87_232.63GHz</a>	2018-02-04	0	0.177	0.159	12m	1.752	25.966	Disks and planet format...	Exo-planets	635.040	224.606	-2.557	122.067
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">2016.2.00168.S</a>	z_cma	07:03:43.159	-11:33:06.185	6	0.234	<a href="#">215.81_232.69GHz</a>	2018-10-09	0	4.725	0.159	7m	28.085	44.514	Disks and planet format...	Disks around low-mass...	1572.480	224.606	-2.557	122.078
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">2016.1.00110.S</a>	Z_CMa	07:03:43.159	-11:33:06.185	6	0.020	<a href="#">215.87_232.62GHz</a>	2018-11-10	0	0.050	0.159	12m	1.130	25.967	Disks and planet format...	Exo-planets	2068.416	224.606	-2.557	122.065
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">2018.1.01131.S</a>	Z_CMa	07:03:43.159	-11:33:06.184	6	0.833	<a href="#">217.11_233.54GHz</a>	2020-01-04	1	5.065	0.183	7m	29.811	44.302	ISM and star formation	Outflows, jets and ioniz...	393.120	224.606	-2.557	141.110
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">2018.1.01131.S</a>	Z_CMa	07:03:43.159	-11:33:06.183	6	0.915	<a href="#">250.91_268.10GHz</a>	2020-02-21	1	4.346	0.634	7m	25.668	38.467	ISM and star formation	Outflows, jets and ioniz...	302.400	224.606	-2.557	564.495
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">2018.1.01131.S</a>	Z_CMa	07:03:43.158	-11:33:06.183	6	0.073	<a href="#">217.11_233.47GHz</a>	2020-08-24	1	0.968	0.183	12m	9.345	25.846	ISM and star formation	Outflows, jets and ioniz...	302.400	224.606	-2.557	141.132
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">2018.1.01131.S</a>	Z_CMa	07:03:43.158	-11:33:06.183	6	0.377	<a href="#">250.91_268.10GHz</a>	2020-08-24	1	20.255	0.634	TP	359.023	22.439	ISM and star formation	Outflows, jets and ioniz...	4380.672	224.606	-2.557	564.527
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">2018.1.01131.S</a>	Z_CMa	07:03:43.158	-11:33:06.182	6	0.074	<a href="#">250.97_268.07GHz</a>	2020-08-26	1	0.394	0.634	12m	5.227	22.438	ISM and star formation	Outflows, jets and ioniz...	302.400	224.606	-2.557	564.533
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">2018.1.00814.S</a>	ZCMA	07:03:43.200	-11:33:06.700	6	0.037	<a href="#">216.58_234.44GHz</a>	2020-12-27	1	0.114	0.159	12m	1.840	25.822	Disks and planet format...	Disks around low-mass...	604.800	224.607	-2.557	122.068

The new page displays the data associated with the entries selected in the search interface. Data are sorted by Science Goal, Group OUS, and Member OUS. (A Member OUS is a unit of data containing one SB.)

ALMA Request Handler - Request Details - Mozilla Firefox

File Edit View History Bookmarks Tools Help

ALMA Science Archive x ALMA Request Handler - ... x +

https://almascience.eso.org/irh/submission

## ALMA Request Handler

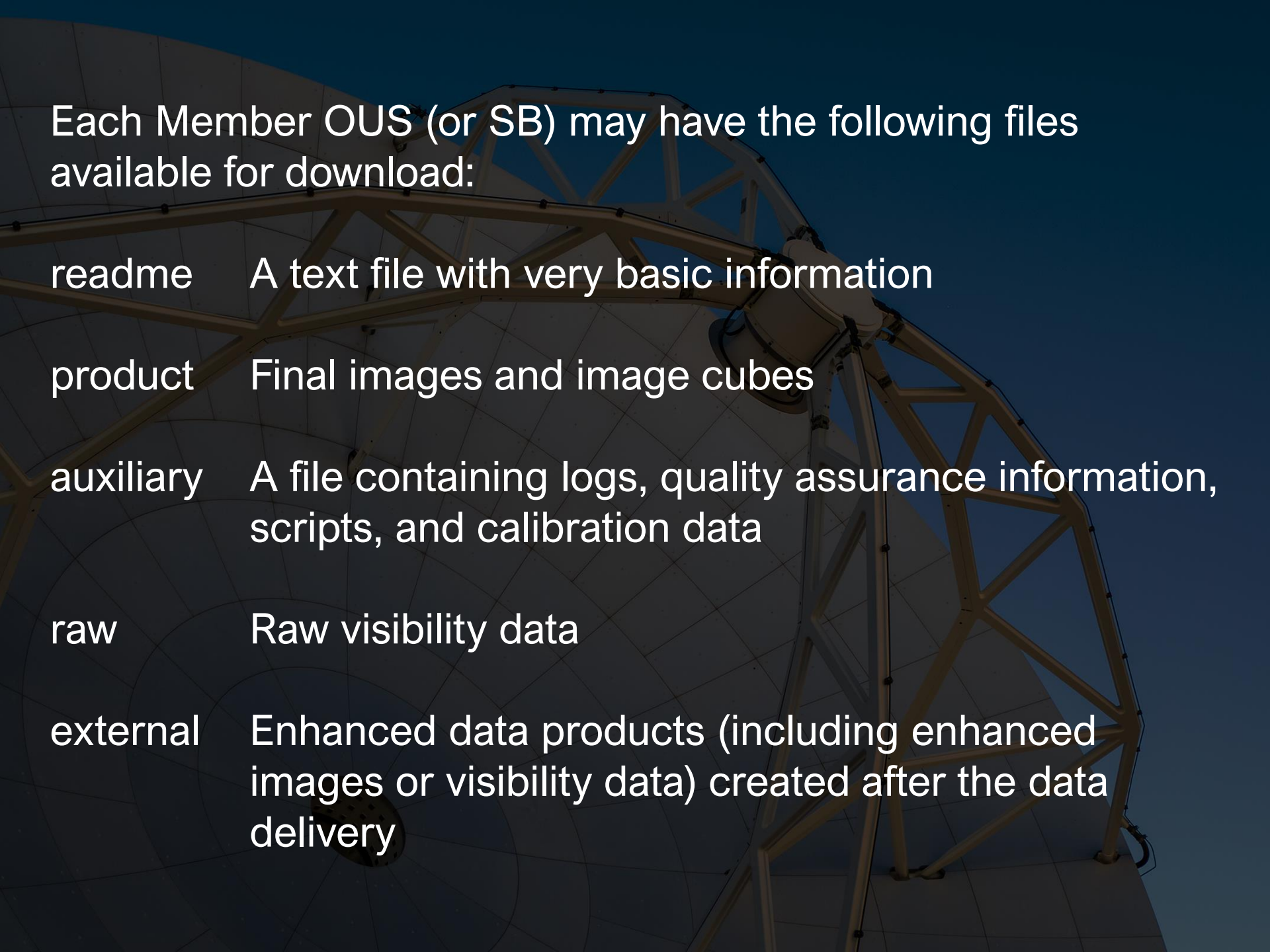
Anonymous User: Request #2154895553204 ✓

Request Title: [click to edit](#)

Download Selected

☒ readme ☒ product ☒ auxiliary ☐ raw ☐ raw (semipass) ☐ external

Project / OUSet / Executionblock	File	Size	Accessible
Request 2154895553204		5 GiB	
Project 2018.1.01131.S			
Science Goal uid://A001/X135b/X60			
Group OUS uid://A001/X135b/X61			
Member OUS uid://A001/X135b/X64			
SB V1647_Or_a_06_TM2			
<input checked="" type="checkbox"/> readme	<a href="#">memberuid_A001_X135b_X64 README.txt</a>	258 B	✓
<input checked="" type="checkbox"/> product	<a href="#">2018.1.01131.S_uid_A001_X135b_X64_001_of_001.tar</a>	2 GiB	✓
<input checked="" type="checkbox"/> auxiliary	<a href="#">2018.1.01131.S_uid_A001_X135b_X64_auxiliary.tar</a>	338 MiB	✓
<input type="checkbox"/> raw	<a href="#">2018.1.01131.S_uid_A002_Xd9668b_Xa8e1.asdm.sdm.tar</a>	6 GiB	✓
Member OUS uid://A001/X135b/X66			
SB V1647_Or_a_06_7M			
<input checked="" type="checkbox"/> readme	<a href="#">memberuid_A001_X135b_X66 README.txt</a>	3 KiB	✓
<input checked="" type="checkbox"/> product	<a href="#">2018.1.01131.S_uid_A001_X135b_X66_001_of_001.tar</a>	222 MiB	✓
<input checked="" type="checkbox"/> auxiliary	<a href="#">2018.1.01131.S_uid_A001_X135b_X66_auxiliary.tar</a>	177 MiB	✓
<input type="checkbox"/> raw	<a href="#">2018.1.01131.S_uid_A002_Xd8fc22_X5da.asdm.sdm.tar</a>	777 MiB	✓
Group OUS uid://A001/X135b/X68			
Member OUS uid://A001/X135b/X6b			
SB Z_CMa_a_06_TM2			
<input checked="" type="checkbox"/> readme	<a href="#">memberuid_A001_X135b_X6b README.txt</a>	258 B	✓
<input checked="" type="checkbox"/> product	<a href="#">2018.1.01131.S_uid_A001_X135b_X6b_001_of_001.tar</a>	2 GiB	✓
<input checked="" type="checkbox"/> auxiliary	<a href="#">2018.1.01131.S_uid_A001_X135b_X6b_auxiliary.tar</a>	347 MiB	✓
<input type="checkbox"/> raw	<a href="#">2018.1.01131.S_uid_A002_Xd98580_X354.asdm.sdm.tar</a>	7 GiB	✓
Member OUS uid://A001/X135b/X6d			
SB Z_CMa_b_06_7M			
<input checked="" type="checkbox"/> readme	<a href="#">memberuid_A001_X135b_X6d README.txt</a>	258 B	✓
<input checked="" type="checkbox"/> product	<a href="#">2018.1.01131.S_uid_A001_X135b_X6d_001_of_001.tar</a>	209 MiB	✓
<input checked="" type="checkbox"/> auxiliary	<a href="#">2018.1.01131.S_uid_A001_X135b_X6d_auxiliary.tar</a>	147 MiB	✓
<input type="checkbox"/> raw	<a href="#">2018.1.01131.S_uid_A002_Xd3c7c2_X5388.asdm.sdm.tar</a>	677 MiB	✓



Each Member OUS (or SB) may have the following files available for download:

readme     A text file with very basic information

product     Final images and image cubes

auxiliary     A file containing logs, quality assurance information, scripts, and calibration data

raw     Raw visibility data

external     Enhanced data products (including enhanced images or visibility data) created after the data delivery



Each file can be individually selected for download, or subsets of data can be selected for download. Proprietary data cannot be downloaded without logging in and without being delegate access to the data.

ALMA Request Handler - Request Details - Mozilla Firefox

File Edit View History Bookmarks Tools Help

ALMA Science Archive x ALMA Request Handler - ... x +

https://almascience.eso.org/irh/submission

## ALMA Request Handler

Anonymous User: Request #2154895553204 ✓

Request Title: [click to edit](#)

Download Selected

☒ readme ☒ product ☒ auxiliary ☐ raw ☐ raw (semipass) ☐ external

Project / OUSet / Executionblock	File	Size	Accessible
Request 2154895553204		9 GiB	
Project 2018.1.01131.S			
Science Goal OUS uid://A001/X135b/X60			
Group OUS uid://A001/X135b/X61			
Member OUS uid://A001/X135b/X64			
SB V1647_Or_a_06_TM2			
readme	<a href="#">memberuid_A001_X135b_X64 README.txt</a>	258 B	✓
product	<a href="#">2018.1.01131.S_uid_A001_X135b_X64_001_of_001.tar</a>	2 GiB	✓
auxiliary	<a href="#">2018.1.01131.S_uid_A001_X135b_X64_auxiliary.tar</a>	338 MiB	✓
raw	<a href="#">2018.1.01131.S_uid_A002_Xd9668b_Xa8e1.asdm.sdm.tar</a>	6 GiB	✓
Member OUS uid://A001/X135b/X66			
SB V1647_Or_a_06_7M			
readme	<a href="#">memberuid_A001_X135b_X66 README.txt</a>	3 KiB	✓
product	<a href="#">2018.1.01131.S_uid_A001_X135b_X66_001_of_001.tar</a>	222 MiB	✓
auxiliary	<a href="#">2018.1.01131.S_uid_A001_X135b_X66_auxiliary.tar</a>	177 MiB	✓
raw	<a href="#">2018.1.01131.S_uid_A002_Xd8fc22_X5da.asdm.sdm.tar</a>	777 MiB	✓
Group OUS uid://A001/X135b/X68			
Member OUS uid://A001/X135b/X6b			
SB Z_CMa_a_06_TM2			
readme	<a href="#">memberuid_A001_X135b_X6b README.txt</a>	258 B	✓
product	<a href="#">2018.1.01131.S_uid_A001_X135b_X6b_001_of_001.tar</a>	2 GiB	✓
auxiliary	<a href="#">2018.1.01131.S_uid_A001_X135b_X6b_auxiliary.tar</a>	347 MiB	✓
raw	<a href="#">2018.1.01131.S_uid_A002_Xd98580_X354.asdm.sdm.tar</a>	7 GiB	✓
Member OUS uid://A001/X135b/X6d			
SB Z_CMa_b_06_7M			
readme	<a href="#">memberuid_A001_X135b_X6d README.txt</a>	258 B	✓
product	<a href="#">2018.1.01131.S_uid_A001_X135b_X6d_001_of_001.tar</a>	209 MiB	✓
auxiliary	<a href="#">2018.1.01131.S_uid_A001_X135b_X6d_auxiliary.tar</a>	147 MiB	✓
raw	<a href="#">2018.1.01131.S_uid_A002_Xd3c7c2_X5388.asdm.sdm.tar</a>	677 MiB	✓



When data download is started, two options are available.

- The download script can be executed in a Linux/Mac console to download data. The file must be made executable using `chmod` before doing this. When the file is executed, the data will be downloaded to the current directory.

If the script is interrupted, it is possible to restart the downloads from where they were stopped by restarting the script.

- The other download option is the file list. The file list is just a set of links directly to the data.

The individual results in the ALMA request handler page include links that can also be clicked on to download the data.