

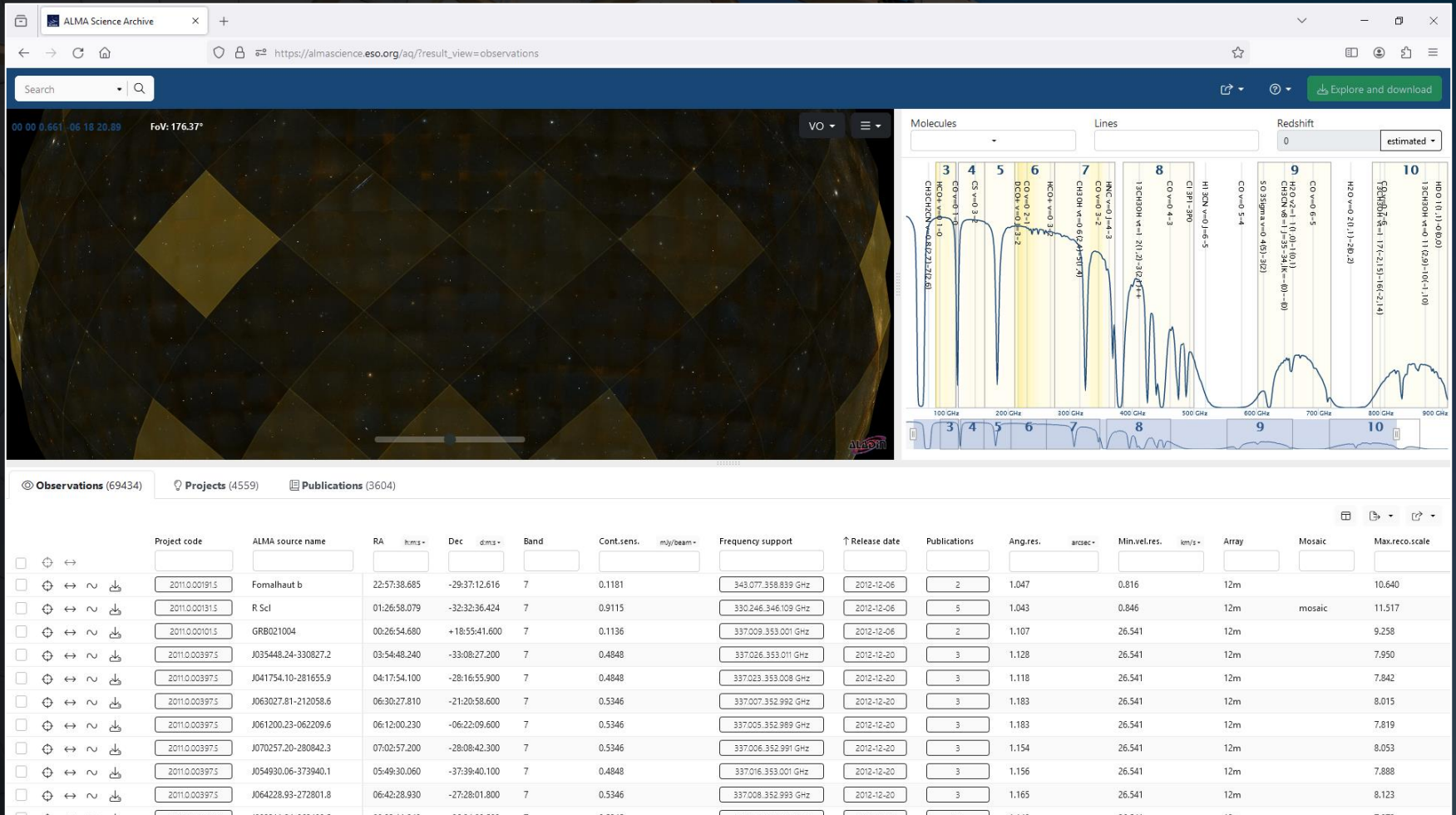
The ALMA Science Archive

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The ALMA Science Archive is located at <https://almascience.eso.org/aq/>.
The default view shows the entire contents of the archive.



The screenshot displays the ALMA Science Archive interface. The top navigation bar includes a search box, a "VO" dropdown, and an "Explore and download" button. The main content area is split into two panels. The left panel shows a spectral plot with a diamond-patterned background, labeled "FoV: 176.37°". The right panel shows a spectral plot with labeled lines and molecules, including HCO, CH₃OH, and H₂O. Below the plots, there are tabs for "Observations (69434)", "Projects (4559)", and "Publications (3604)". A table of observations is displayed below the tabs.

Project code	ALMA source name	RA	lms+	Dec	dms+	Band	Cont.sens.	mJy/beam	Frequency support	Release date	Publications	Ang.res.	arcsec	Min.vel.res.	km/s	Array	Mosaic	Max.reco.scale
2011.0.00191.S	Fomalhaut b	22:57:38.685		-29:37:12.616		7	0.1181		343.077.358.839 GHz	2012-12-06	2	1.047		0.816		12m		10.640
2011.0.00191.S	R. Scl	01:26:58.079		-32:32:36.424		7	0.9115		330.246.346.109 GHz	2012-12-06	5	1.043		0.846		12m	mosaic	11.517
2011.0.00101.S	GRB021004	00:26:54.680		+18:55:41.600		7	0.1136		337.009.353.001 GHz	2012-12-06	2	1.107		26.541		12m		9.258
2011.0.00397.S	J035448.24-330827.2	03:54:48.240		-33:08:27.200		7	0.4848		337.026.353.011 GHz	2012-12-20	3	1.128		26.541		12m		7.950
2011.0.00397.S	J041754.10-281655.9	04:17:54.100		-28:16:55.900		7	0.4848		337.023.353.008 GHz	2012-12-20	3	1.118		26.541		12m		7.842
2011.0.00397.S	J063027.81-212058.6	06:30:27.810		-21:20:58.600		7	0.5346		337.007.352.992 GHz	2012-12-20	3	1.183		26.541		12m		8.015
2011.0.00397.S	J061200.23-062209.6	06:12:00.230		-06:22:09.600		7	0.5346		337.005.352.989 GHz	2012-12-20	3	1.183		26.541		12m		7.819
2011.0.00397.S	J070257.20-280842.3	07:02:57.200		-28:08:42.300		7	0.5346		337.006.352.991 GHz	2012-12-20	3	1.154		26.541		12m		8.053
2011.0.00397.S	J054930.06-373940.1	05:49:30.060		-37:39:40.100		7	0.4848		337.016.353.001 GHz	2012-12-20	3	1.156		26.541		12m		7.888
2011.0.00397.S	J064228.93-272801.8	06:42:28.930		-27:28:01.800		7	0.5346		337.008.352.993 GHz	2012-12-20	3	1.165		26.541		12m		8.123

The interface has three sections:

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

The screenshot displays the ALMA Science Archive interface, which is divided into three main sections:

- Sky Viewer:** Located on the left, it shows a diamond-shaped mosaic of the sky with a central yellow diamond. The FoV is 176.37°.
- Spectral Viewer:** Located on the right, it displays a spectral plot with frequency on the x-axis (100 GHz to 900 GHz) and intensity on the y-axis. The plot shows several absorption lines, with 10 lines highlighted and labeled with their corresponding molecules and transitions. The redshift is estimated to be 0.
- Results Table:** Located at the bottom, it lists observations with columns for Project code, ALMA source name, RA, Dec, Band, Cont. sens., Frequency support, Release date, Publications, Ang. res., Min. vel. res., and Max. reco. scale.

Project code	ALMA source name	RA	Dec	Band	Cont. sens.	Frequency support	Release date	Publications	Ang. res.	Min. vel. res.	Max. reco. scale
2011.0.00191.S	Fomalhaut b	22:57:38.685	-29:37:12.616	7	0.1181	343.077-358.839 GHz	2012-12-06	2	1.047	0.816	10.640
2011.0.00191.S	R. Scl	01:26:58.079	-32:32:36.424	7	0.9115	330.246-346.109 GHz	2012-12-06	5	1.043	0.846	11.517
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2011.0.00397.S	J035448.24-330827.2	03:54:48.240	-33:08:27.200	7	0.4848	337.026-353.011 GHz	2012-12-20	3	1.128	26.541	7.950
2011.0.00397.S	J041754.10-281655.9	04:17:54.100	-28:16:55.900	7	0.4848	337.023-353.008 GHz	2012-12-20	3	1.118	26.541	7.842
2011.0.00397.S	J063027.81-212058.6	06:30:27.810	-21:20:58.600	7	0.5346	337.007-352.992 GHz	2012-12-20	3	1.183	26.541	8.015
2011.0.00397.S	J061200.23-062209.6	06:12:00.230	-06:22:09.600	7	0.5346	337.005-352.989 GHz	2012-12-20	3	1.183	26.541	7.819
2011.0.00397.S	J070257.20-280842.3	07:02:57.200	-28:08:42.300	7	0.5346	337.006-352.991 GHz	2012-12-20	3	1.154	26.541	8.053
2011.0.00397.S	J054930.06-373940.1	05:49:30.060	-37:39:40.100	7	0.4848	337.016-353.001 GHz	2012-12-20	3	1.156	26.541	7.888
2011.0.00397.S	J064228.93-272801.8	06:42:28.930	-27:28:01.800	7	0.5346	337.008-352.993 GHz	2012-12-20	3	1.165	26.541	8.123

The results table actually has three tabs:

- Observation
- Project
- Publication

The screenshot displays the ALMA Science Archive interface. On the left, there is a spectral plot showing intensity versus frequency (GHz) from 100 to 900 GHz. The plot features several labeled absorption lines, including HCO, CS, CO, HNC, CH3OH, and HCN. On the right, a table lists the identified lines with their corresponding redshifts and estimated values. Below the plot, there are three tabs: Observations (69434), Projects (4559), and Publications (3604). The 'Projects' tab is active, showing a table of project entries.

Project Code	Project Title	Type	Joint proposals	PI Name	Proposal authors	↑ Max.Release Date	Publications
2011.0.00236.S	The Dynamics of Massive Starless Cores	S		Tan, Jonathan	Butler, Michael; Fonta...	2013-01-23	4
2011.0.00269.S	Metallicity of a Submillimeter Galaxy at z=5	S		Nagao, Tohru	De Breuck, Carlos; Ha...	2013-02-09	3
2011.0.00454.S	(Why) Is CenA a source of Ultra High Energy Cosmic Rays: Shock acceleration, jet and UHECR composition	S		Nagar, Neil	Smith, Rory; Finlez, C...	2013-02-14	1
2011.0.00851.S	The Origin of the Destroyed Minor Planet at G29-38: a Main Belt or Kuiper Belt Analog?	S		Farihi, Jay	Greaves, Jene; Bonsor...	2013-02-14	1
2011.0.00284.S	More than LESS: The first fully-identified submillimetre survey	S		Smail, Ian	Rix, Hans-Walter; Cha...	2013-02-15	20
2011.0.00510.S	Probing the Molecular Outflows of the Coldest Known Object in the Universe: The Boomerang Nebula	S		Sahai, Raghvendra	Nyman, Lars-Ake; Vle...	2013-03-13	2
2011.0.00131.S	Piecing the shell together: ALMA and the detached shell around R Scl	S		Maercker, Matthias	Ramstedt, Sofia; Pala...	2013-03-29	5
2011.0.00808.S	Probing the vertical structure of Saturn's storm with ALMA	S		Cavalié, Thibault	Moreno, Raphael; Fo...	2013-04-23	0
2011.0.00101.S	Shedding Light on Distant Starburst Galaxies Hosting Gamma-ray Bursts v9	S		Wang, Wei-Hao	Huang, Kuiyuan; Chen...	2013-05-01	2
2011.0.00181.S	Constraining the Formation Mechanisms of Wide-Orbit Planets: The Case of Fomalhaut b v0.6	S		Boley, Aaron	Shabram, Megan; Cor...	2013-05-16	2

The results table actually has three tabs:

- Observation
- Project
- Publication

ALMA Science Archive

https://almascience.eso.org/aq/?result_view=publications

Search

Explore and download

FoV: 176.37°

Molecules Lines Redshift

0 0.00 0.661 06.18 20.89

100 GHz 200 GHz 300 GHz 400 GHz 500 GHz 600 GHz 700 GHz 800 GHz 900 GHz

3 4 5 6 7 8 9 10

CS v=0 3-2
CO v=0 3-2
DCO v=0 3-2
HCO v=0 3-2
CH3OH v=0 6-5 (A) ST-7
HNC v=0 J=4-3
CO v=0 3-2
13CISOH v=1 2(1,2)-3(0,2) 27+
Cl 3H1-3F0
CO v=0 4-3
HI 30N v=0 J=6-5
CO v=0 5-4
CO v=0 6-5
H2O v=2-1 (0,0-1,0,1)
CH3OH v=1 J=35-34 (K=0-0)-10
SiO 3Si(9) v=0 (45)-3(2)
HCO v=0 1-0
CO v=0 1-0
CH3OH v=0 2(2,2)-2(2,0)

Observations (69434) Projects (4559) Publications (3604)

	BibCode	First Author	Journal	Year	Publication Title	↑ Max. Release Date	Projects	Observations	Authors
<input type="checkbox"/>	2013ApJ...779...96T	Tan, Jonathan C.	ApJ	2013	The Dynamics of Massive Starless Cores with ALMA	2013-01-23	1	7	Tan, Jonathan C.; Kong,
<input type="checkbox"/>	2016ApJ...828...100F	Feng, Siyi	ApJ	2016	Outflow Detection in a 70 μ m Dark High-Mass Core	2013-01-23	1	7	Feng, Siyi; Beuther, H
<input type="checkbox"/>	2016ApJ...821...94K	Kong, Shuo	ApJ	2016	The Deuterium Fraction in Massive Starless Cores and Dynamical Implications	2013-01-23	1	7	Kong, Shuo; Tan, Jonat
<input type="checkbox"/>	2012A&A...542L...34N	Nagao, T.	A&A	2012	ALMA reveals a chemically evolved submillimeter galaxy at z = 4.76	2013-02-09	1	4	Nagao, T.; Maiolino, R;
<input type="checkbox"/>	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	8	Farihi, J.; Wyatt, M. C.;
<input type="checkbox"/>	2016A&A...586A...45S	Salomé, Q.	A&A	2016	Star formation efficiency along the radio jet in Centaurus A	2013-02-14	1	8	Salomé, Q.; Salomé, P;
<input type="checkbox"/>	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	140	Danielson, A. L. R.; Swi
<input type="checkbox"/>	2016MNRAS...462...1192L	Lindroos, L.	MNRAS	2016	Estimating sizes of faint, distant galaxies in the submillimetre regime	2013-02-15	1	140	Lindroos, L.; Knudsen, J
<input type="checkbox"/>	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 Evolution...	2013-02-15	1	140	Simpson, J. M.; Swinba
<input type="checkbox"/>	2016MNRAS...463...10M	MacKenzie, Todd P.	MNRAS	2016	SEDBLEND: a new method for deblending spectral energy distributions in confused imaging	2013-02-15	1	140	MacKenzie, Todd P.; Sc
<input type="checkbox"/>	2013MNRAS...438...1000C	Colebatch, A. M.	MNRAS	2013	An ALMA survey of submillimeter Galaxies in the Extended Chandra Deep Field South: the infrared properties of GMCs	2013-02-15	1	140	Colebatch, A. M.; Clow

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.

The screenshot displays the ALMA Science Center website interface. A yellow arrow points to the search bar at the top left. Below the search bar, there are several filter categories: Position, Energy, Project, Publication, and Observation. Each category has a list of input fields for searching. To the right of these filters is a spectral plot showing intensity versus frequency (GHz) from 100 to 900 GHz. The plot features several labeled peaks, numbered 3 through 10, corresponding to different molecules and lines. Below the plot, there is a table of observations with columns for Project code, ALMA source name, RA, Dec, Band, Cont. sens., Frequency support, Release date, Publications, and other parameters.

Search Filters:

- Position:** Source name, ALMA source name, RA Dec, Galactic, Target List, Angular Resolution, Max. 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:** BibCode, Publication Title, Abstract, First Author, Authors.
- Observation:** Observation Date, Polarisation Type, Member ous id, Object type, Public data only, Calibration observations.

Spectral Plot Labels:

- 3: HCO v=0-1(1-0)
- 4: CS v=0-3(2-2)
- 5: CO v=0-3(2-2)
- 6: DCO v=0-3(2-2)
- 7: HCO v=0-3(2-2)
- 8: HNC v=0-1(4-3)
- 9: HCO v=0-2(1-0)
- 10: HCO v=0-1(0-0)

Observations Table:

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
2011.0.00191.S	Fomalhaut b	22:57:38.685	-29:37:12.616	7	0.1181	343.077-358.839 GHz	2012-12-06	2	1.047	0.816	12m		10.640
2011.0.00191.S	R. Scl	01:26:58.079	-32:32:36.424	7	0.9115	330.246-346.109 GHz	2012-12-06	5	1.043	0.846	12m	mosaic	11.517
2011.0.00101.S	GRB021004	00:26:54.680	+18:55:41.600	7	0.1136	337.009-353.001 GHz	2012-12-06	2	1.107	26.541	12m		9.258
2011.0.00397.S	J035448.24-330827.2	03:54:48.240	-33:08:27.200	7	0.4848	337.026-353.011 GHz	2012-12-20	3	1.128	26.541	12m		7.950
2011.0.00397.S	J041754.10-281655.9	04:17:54.100	-28:16:55.900	7	0.4848	337.023-353.008 GHz	2012-12-20	3	1.118	26.541	12m		7.842
2011.0.00397.S	J063027.81-212058.6	06:30:27.810	-21:20:58.600	7	0.5346	337.007-352.992 GHz	2012-12-20	3	1.183	26.541	12m		8.015
2011.0.00397.S	J061200.23-062209.6	06:12:00.230	-06:22:09.600	7	0.5346	337.005-352.989 GHz	2012-12-20	3	1.183	26.541	12m		7.819
2011.0.00397.S	J070257.20-280842.3	07:02:57.200	-28:08:42.300	7	0.5346	337.006-352.991 GHz	2012-12-20	3	1.154	26.541	12m		8.053
2011.0.00397.S	J054930.06-373940.1	05:49:30.060	-37:39:40.100	7	0.4848	337.016-353.001 GHz	2012-12-20	3	1.156	26.541	12m		7.888
2011.0.00397.S	J064228.93-272801.8	06:42:28.930	-27:28:01.800	7	0.5346	337.008-352.993 GHz	2012-12-20	3	1.165	26.541	12m		8.123

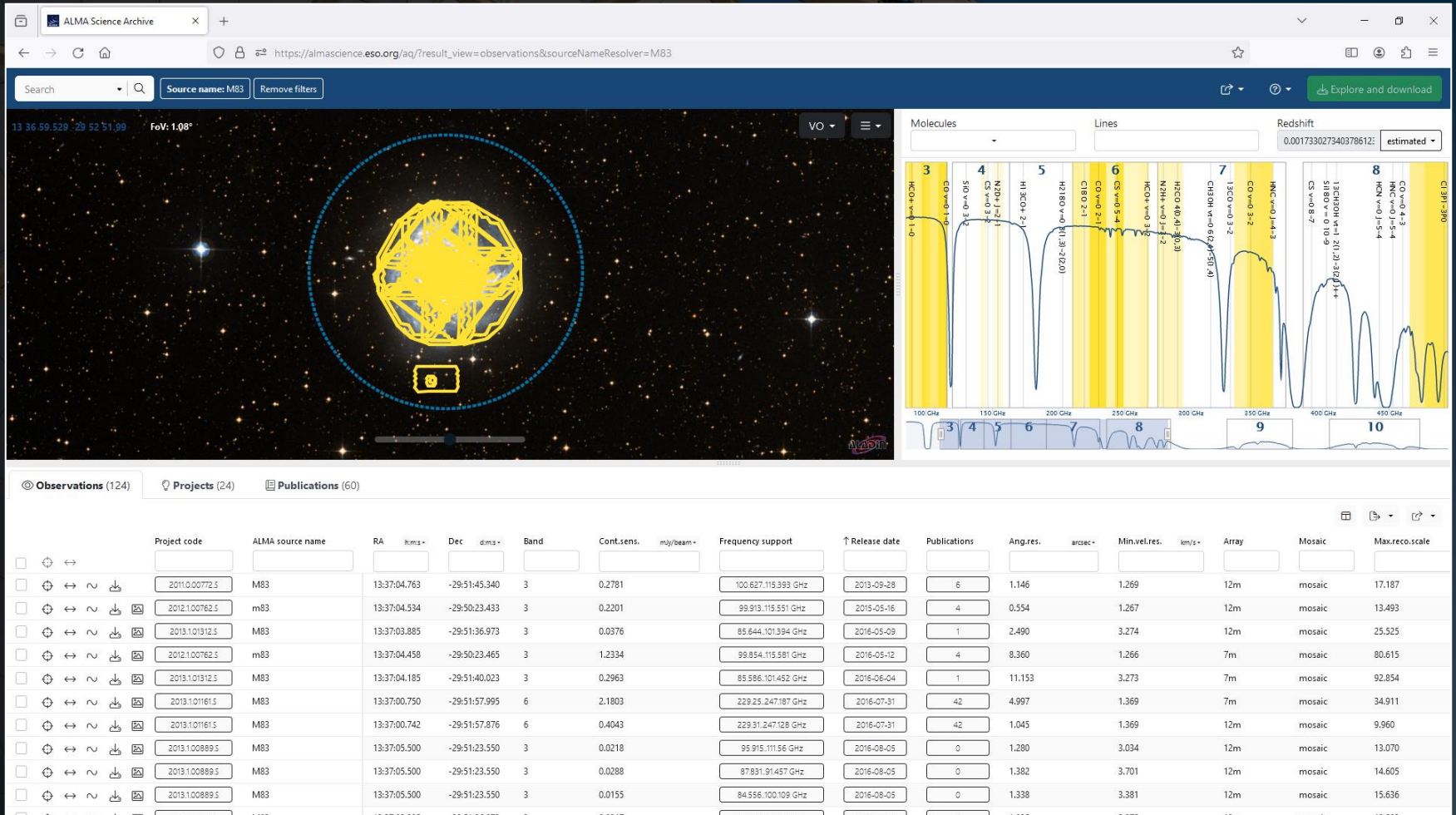
The other method is to type in search criteria in the entry fields above each column in the results table. This can also be done after initially setting up a search using the search menu.

The screenshot displays the ALMA Science Archive interface. At the top, there is a search bar and navigation icons. Below the search bar, a spectral plot is shown with a frequency range from 0 to 900 GHz. The plot features several labeled peaks corresponding to different molecules and lines. A yellow arrow points to the 'Projects' tab in the navigation bar, which is highlighted in the table below.

Molecules | **Lines** | **Redshift** (estimated)

Project	ALMA source name	RA	lms+	Dec	dms+	Band	Cont.sens.	mJy/beam	Frequency support	Release date	Publications	Ang.res.	arcsec	Min.vel.res.	km/s	Array	Mosaic	Max.reco.scale
2011.0.00191.5	Fomalhaut b	22:57:38.685	-29:37:12.616	7	0.1181	343.077.358.839 GHz	2012-12-06	2	1.047	0.816	12m	10.640						
2011.0.00191.5	R. Scl	01:26:58.079	-32:32:36.424	7	0.9115	330.246.346.109 GHz	2012-12-06	5	1.043	0.846	12m	mosaic	11.517					
2011.0.00101.5	GRB021004	00:26:54.680	+18:55:41.600	7	0.1136	337.009.353.001 GHz	2012-12-06	2	1.107	26.541	12m	9.258						
2011.0.00397.5	J035448.24-330827.2	03:54:48.240	-33:08:27.200	7	0.4848	337.026.353.011 GHz	2012-12-20	3	1.128	26.541	12m	7.950						
2011.0.00397.5	J041754.10-281655.9	04:17:54.100	-28:16:55.900	7	0.4848	337.023.353.008 GHz	2012-12-20	3	1.118	26.541	12m	7.842						
2011.0.00397.5	J063027.81-212058.6	06:30:27.810	-21:20:58.600	7	0.5346	337.007.352.992 GHz	2012-12-20	3	1.183	26.541	12m	8.015						
2011.0.00397.5	J061200.23-062209.6	06:12:00.230	-06:22:09.600	7	0.5346	337.005.352.989 GHz	2012-12-20	3	1.183	26.541	12m	7.819						
2011.0.00397.5	J070257.20-280842.3	07:02:57.200	-28:08:42.300	7	0.5346	337.006.352.991 GHz	2012-12-20	3	1.154	26.541	12m	8.053						
2011.0.00397.5	J054930.06-373940.1	05:49:30.060	-37:39:40.100	7	0.4848	337.016.353.001 GHz	2012-12-20	3	1.156	26.541	12m	7.888						
2011.0.00397.5	J064228.93-272801.8	06:42:28.930	-27:28:01.800	7	0.5346	337.008.352.993 GHz	2012-12-20	3	1.165	26.541	12m	8.123						

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 screenshot displays the ALMA Science Archive interface for source M83. The top section shows a search bar with 'Source name: M83' and a 'Remove filters' button. Below this is a navigation menu with 'Observations (124)', 'Projects (24)', and 'Publications (60)'. The main content area is split into two panels. The left panel shows a star field with a color selection dialog box. The right panel shows a spectral plot with various molecular lines labeled and a redshift of 0.001733027340378612. Below the plot is a table of observations.

Color Selection Dialog:

Optical: DSS colored → Infrared: AllWISE-color

- Ultraviolet - GALEX-GR6-Color - native - [trash]
- Optical - DSS colored - native - [trash]**
- Infrared - AllWISE-color - native - [trash]

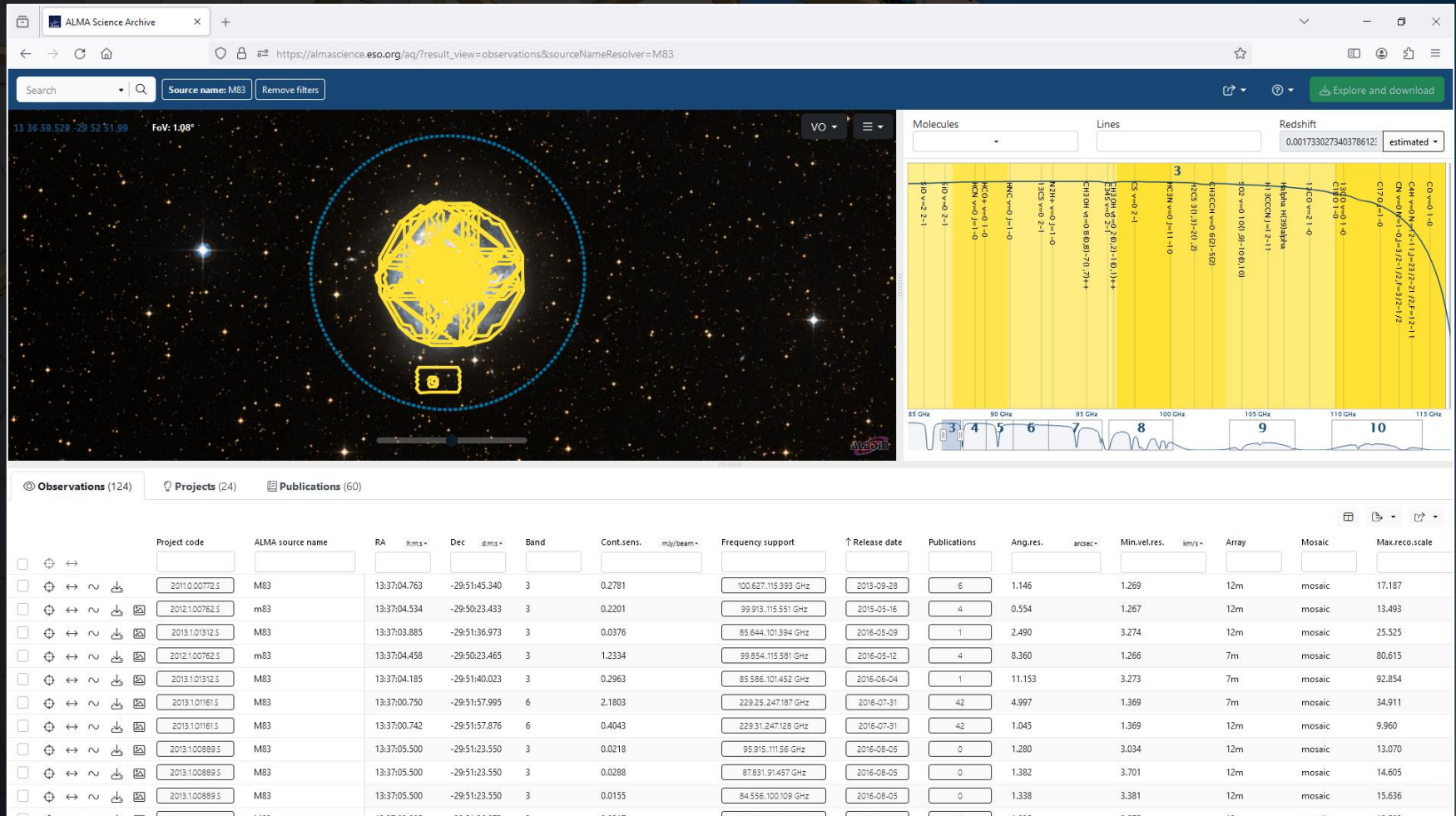
Spectral Plot Labels:

- 3: CO v=0-1-0
- 4: N2H+ J=2-1, CS v=0-0-0, SiO v=0-0-0
- 5: HI 3C0+2-1, H2 180 v=0-0 (1,3)-2(2,0)
- 6: CO v=0-2-1, CS v=0-5-4
- 7: HCO+ v=0-3-2, N2H+ v=0-1-2, H2CO 4(0,4)-3(0,3), CH3OH v=0-6-0 (A), HNC v=0-1+1-3
- 8: CO v=0-4-3, HNC v=0-1+3-4, HCN v=0-1+3-4, 13C18O v=1-2(1,2)-3(2,0) 1+1, SiO v=0-0-10 9, CS v=0-8-7
- 9: 13C18O v=0-6-0 (A)
- 10: CO v=0-4-3

Observations Table:

Project code	ALMA source name	RA	lms+	Dec	dms-	Band	Cont.sens.	mJ/beam	Frequency support	Release date	Publications	Ang.res.	arcsec	Min.vel.res.	km/s	Array	Mosaic	Max.reco.scale
2011.0.00772.S	M83	13:37:04.763		-29:51:45.340		3	0.2781		100.627.115.393 GHz	2013-09-28	6	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	13.493
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	8.360		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
2013.1.01161.S	M83	13:37:00.750		-29:51:57.995		6	2.1803		229.25.247.187 GHz	2016-07-31	42	4.997		1.369		7m	mosaic	34.911
2013.1.01161.S	M83	13:37:00.742		-29:51:57.876		6	0.4043		229.31.247.128 GHz	2016-07-31	42	1.045		1.369		12m	mosaic	9.960
2013.1.00889.S	M83	13:37:05.500		-29:51:23.550		3	0.0218		95.915.111.556 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		87.931.91.457 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

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 screenshot displays the ALMA Science Archive interface. At the top, there is a search bar with "Source name: M83" and a "Remove filters" button. Below the search bar is a star map showing the location of M83 (NGC 3627) in the constellation Virgo, with a yellow outline of the ALMA array and a blue dashed circle indicating the field of view (FoV: 1.08°). To the right of the map is a spectrum plot showing the frequency ranges of the observations. The plot is divided into 10 channels, with the following molecules and lines identified: 3 (CD v=0-1-0), 4 (ND₂-J=2-1, CS v=0-2-2, SiO v=0-3-0), 5 (HI 3C(1)-2-1, C18O 2-1, H2 180 v=0-1(1,3)-2(2,0)), 6 (CO v=0-2-1, CS v=0-5-4), 7 (HCO⁺ v=0-3-2, HCO⁺ v=0-3-2, HCO⁺ v=0-3-2, HCO⁺ v=0-6(0,1)-5(0,1), N2H⁺ v=0-1-2, HCO⁺ v=0-3-2), 8 (HCO⁺ v=0-4-3, HNC v=0-1-3-4, HCN v=0-1-3-4), 9 (13C18O v=1-2(1,2)-3(2,1)+, Si18O v=0-10-9, CS v=0-8-7), and 10 (C13H1-3(0)). The spectrum plot shows the intensity of the lines across the frequency range from 100 GHz to 450 GHz. Below the map and spectrum is a table of observations. The table has columns for Project code, ALMA source name, RA, lms, Dec, dms, Band, Cont.sens., mJy/beam, Frequency support, Release date, Publications, Ang.res., arcsec, Min.vel.res., km/s, Array, Mosaic, and Max.reco.scale. The row for project 2013.1.01312.S is highlighted in yellow, and a yellow arrow points to it from the left.

Project code	ALMA source name	RA	lms	Dec	dms	Band	Cont.sens.	mJy/beam	Frequency support	Release date	Publications	Ang.res.	arcsec	Min.vel.res.	km/s	Array	Mosaic	Max.reco.scale
2011.0.00772.S	M83	13:37:04.763		-29:51:45.340		3	0.2781		100.627.115.393 GHz	2013-09-28	6	1.146		1.269		12m	mosaic	17.187
2012.1.00762.S	m83	13:37:04.458		-29:50:23.433		3	0.2201		99.913.115.551 GHz	2015-05-16	4	0.554		1.267		12m	mosaic	13.493
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	8.360		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
2013.1.01161.S	M83	13:37:00.750		-29:51:57.995		6	2.1803		229.25.247.187 GHz	2016-07-31	42	4.997		1.369		7m	mosaic	34.911
2013.1.01161.S	M83	13:37:00.742		-29:51:57.876		6	0.4043		229.31.247.128 GHz	2016-07-31	42	1.045		1.369		12m	mosaic	9.960
2013.1.00889.S	M83	13:37:05.500		-29:51:23.550		3	0.0218		95.915.111.556 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		87.931.91.457 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

Hovering the cursor over items in boxes will reveal a pop-up window with extra information.

The screenshot displays the ALMA Science Archive interface. On the left, a star field image shows a yellow molecular cloud structure. The top navigation bar includes a search bar with 'Source name: M83' and a 'Remove filters' button. The main content area is divided into two panels: a spectral plot on the right and a table of observations on the left.

The spectral plot shows intensity versus frequency (GHz) from 100 to 450 GHz. It features several labeled peaks corresponding to different molecules and transitions, such as CO, HCN, and HCO+. The plot is divided into 10 numbered regions.

The table of observations lists various parameters for each observation, including frequency, position, and resolution. A yellow arrow points to a specific row in the table, which is highlighted in yellow. A pop-up window is overlaid on this row, providing detailed information about the project.

Project 2013.1.01312.S

Project title: Wide-field imaging of dense gas in the nearby barred galaxy M83

PI name: Hirota, Akihiko

Proposal abstract: We propose to make a sensitive mosaic observations of the nearby barred galaxy M83 in HCN (J=1-0). The cycle0 observations of M83 in 12CO (1-0) enabled us to identify ~200 giant molecular clouds (GMCs) over wide range of galactic environments. Comparison with the HI regions indicated that progress of star formation strongly depends on the ratio between two time scales, namely free-fall time and crossing-time. In addition, by adopting a star formation law (SF-law) which relates, SFR, gas mass, and the two time scales, excellent agreement between the observation and the model were obtained for the radial distribution based analyses. Motivated by this finding, we aim to investigate the formation process of dense gas in terms of its environmental dependence, with the deep HCN observation. Since gas clouds denser than 1e4 cm^-3 is known to be the basic unit of star formation, to verify the environmental dependence of SF-law, it is more essential to clarify the formation process of such dense gas. By comparing the deep HCN data with the CO data, and with the already available working hypothesis (time scale dependence of SF), we will address the formation process of dense gas.

Acknowledgement: This paper makes use of the following ALMA data: ADS/JAO.ALMA#2013.1.01312.S 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. The Joint ALMA Observatory is operated by ESO, AUI/NRAO and NAOJ. In addition, publications from this project must include the standard NRAO acknowledgement: The National Radio Astronomy Observatory is a facility of the National Science Foundation operated under cooperative agreement by Associated Universities, Inc.

Support	Release date	Publications	Ang.res.	arcsec-	Min.vel.res.	km/s-	Array	Mosaic	Max.reco.scale
7.115.393 GHz	2013-09-28	6	1.146		1.269		12m	mosaic	17.187
3.115.551 GHz	2015-05-16	4	0.554		1.267		12m	mosaic	13.493
4.101.394 GHz	2016-05-09	1	2.490		3.274		12m	mosaic	25.525
4.115.581 GHz	2016-05-12	4	8.360		1.266		7m	mosaic	80.615
2013.1.01312.S M83	2016-06-04	1	11.153		3.273		7m	mosaic	92.854
2013.1.01161.S M83	2016-07-31	42	4.997		1.369		7m	mosaic	34.911
2013.1.01161.S M83	2016-07-31	42	1.045		1.369		12m	mosaic	9.960
2013.1.00889.S M83	2016-08-05	0	1.280		3.034		12m	mosaic	13.070
2013.1.00889.S M83	2016-08-05	0	1.382		3.701		12m	mosaic	14.605
2013.1.00889.S M83	2016-08-05	0	1.338		3.381		12m	mosaic	15.636

Additionally, hovering over the box with the squares inside it on the left will reveal preview images, links to those images, and links to quality assurance information.

The screenshot displays the ALMA Science Archive interface. At the top, there is a search bar with the source name 'M83' and a 'Remove filters' button. Below the search bar, the 'Observations (124)' section shows a list of observations. A yellow arrow points to a specific observation entry in the list. The 'Previews for M83_CTR' window is open, showing details for two spectral windows (SPW 0 and SPW 1). The SPW 0 details include:

- Member ID: [member.uid_A001_X1295_X2d.M83_CTR_sci.spw29.cube.lpbcor.fits](#) (533 MB)
- Band: 3
- Frequency type: line
- Frequency range: 112.355..114.229 GHz
- Frequency resolution: 1,128.906 kHz
- Continuum sensitivity: 0.266
- Line sensitivity 10km/s (estimate): 8.749 mJy/beam@10km/s
- Line sensitivity native (estimate): 0.393 uJy/beam@native
- Polarizations: XX YY
- Array: 12m

 The SPW 1 details include:

- Member ID: [member.uid_A001_X1295_X2d.M83_CTR_sci.spw21.cube.lpbcor.fits](#) (33 MB)
- Band: 3
- Frequency type: continuum
- Frequency range: 113.809..115.793 GHz
- Frequency resolution: 31,250 kHz
- Continuum sensitivity: 0.266
- Line sensitivity 10km/s (estimate): 9.693 mJy/beam@10km/s
- Line sensitivity native (estimate): 0.424 uJy/beam@native
- Polarizations: XX YY
- Array: 12m

 On the right side, a spectral plot shows the intensity of the signal across a frequency range from 100 GHz to 450 GHz. The plot is labeled with various molecules and lines, including CO, HCN, HNC, NH3, and HCO+. The plot shows several absorption lines, with the most prominent ones around 115 GHz and 230 GHz. Below the spectral plot, there is a table with columns for 'Release date', 'Publications', 'Ang.res.', 'arcsec', 'Min.vel.res.', 'km/s', 'Array', 'Mosaic', and 'Max.reco.scale'. The table lists several observations, with the one corresponding to the selected observation highlighted in yellow.

Clicking on the C symbol will launch CARTA, which can be used to inspect the data in more detail and even make measurements.

ALMA Science Archive

Source name: M83

FOV: 1.08"

Observations (124)

Previews for M83_CTR

ALMA

README Q&A report Weblog

SPW 0: 112.355..114.229GHz, 1,128.906 kHz, XX YY

member.uid_A001_X1295_X2d.M83_CTR_sci.spw29.cube.lpbcor.fits 533 MB

Band: 3
 Frequency type: line
 Frequency range: 112.355..114.229
 Frequency resolution: 1,128.906 kHz
 Continuum sensitivity: 0.266
 Line sensitivity 10km/s (estimate): 8.749 mJy/beam@10km/s
 Line sensitivity native (estimate): 0.393 uJy/beam@native
 Polarizations: XX YY
 Array: 12m

SPW 1: 113.809..115.793GHz, 31,250 kHz, XX YY

member.uid_A001_X1295_X2d.M83_CTR_sci.spw21.cube.lpbcor.fits 33 MB

Frequency type: continuum
 Frequency range: 113.809..115.793
 Frequency resolution: 31,250 kHz
 Continuum sensitivity: 0.266
 Line sensitivity 10km/s (estimate): 9.693 mJy/beam@10km/s
 Line sensitivity native (estimate): 0.424 uJy/beam@native
 Polarizations: XX YY
 Array: 12m

Molecules Lines Redshift

0.001733027340378612: estimated

100 GHz 150 GHz 200 GHz 250 GHz 300 GHz 350 GHz 400 GHz 450 GHz

Release date	Publications	Ang.res.	arcsec	Min.vel.res.	km/s	Array	Mosaic	Max.reco.scale
2019-10-30	2	1,448		0.318		12m		24,722
2019-10-30	2	1,388		0.318		12m	mosaic	26,393
2019-12-07	2	1,358		0.318		12m	mosaic	17,749
2019-12-07	2	1,359		0.318		12m		17,602
2020-01-07	2	9,338		0.318		7m		63,050
2020-01-07	2	9,338		0.318		7m	mosaic	68,095
2020-01-10	2	8,965		0.318		7m		65,835
2020-01-10	2	8,960		0.318		7m	mosaic	67,720
2020-01-25	2	9,351		0.318		7m		63,296
2020-01-25	2	9,336		0.318		7m	mosaic	67,551
2020-02-01	2	8,299		0.318		7m		64,064

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

The screenshot displays the ALMA Science Archive interface. At the top, the search bar shows "Source name: M83". Below the search bar is a visualization of the source M83, showing a yellow molecular cloud structure against a star field. To the right of the visualization is a spectral plot showing intensity versus frequency (GHz). The plot is labeled with various molecules and lines, including CO, HCN, HNC, and HCO. A yellow arrow points to the "↑ Ang.res." column in the table below.

Project code	ALMA source name	RA	lms+	Dec	dms-	Band	Cont.sens.	mJy/beam	Frequency support	Release date	Publications	↑ Ang.res.	arcsec	Min.vel.res.	km/s	Array	Mosaic	Max.reco.scale
2022.1.00951.S	NGC_5236	13:37:00.919		-29:51:56.740		6	0.0326		227.369.245.512 GHz	2024-07-12	0	0.043		1.389		12m		0.833
2018.1.00624.S	M83	13:37:06.765		-29:53:23.398		6	0.2940		213.927.231155 GHz	2018-06-28	0	0.135		0.367		12m	mosaic	3.369
2013.1.01161.S	M83	13:37:00.750		-29:51:58.000		6	0.1162		229.309.247.128 GHz	2018-10-06	42	0.194		1.370		12m	mosaic	3.909
2022.1.00951.S	NGC_5236	13:37:00.919		-29:51:56.740		6	0.0891		227.37.245.512 GHz	2024-04-17	0	0.248		1.389		12m		3.411
2022.1.00359.S	M83XUV-Field1	13:37:05.182		-29:59:53.765		7	0.0543		342.512.358.451 GHz	2024-03-06	0	0.285		0.490		12m	mosaic	3.774
2015.1.01177.S	m83	13:37:00.919		-29:51:56.740		3	0.0115		85.604.101.271 GHz	2017-11-07	4	0.375		3.470		12m		7.319
2013.1.01161.S	M83	13:37:00.742		-29:51:57.876		6	0.2194		229.309.247.128 GHz	2016-10-07	42	0.496		1.370		12m	mosaic	4.300
2013.1.00861.S	M83	13:37:03.967		-29:59:47.584		6	0.3025		214.933.234.1 GHz	2016-11-19	3	0.552		2.515		12m	mosaic	5.143
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	13.493
2016.1.00386.S	M83	13:36:45.171		-29:52:17.997		6	0.2331		229.677.24713 GHz	2018-03-01	21	0.585		0.734		12m	mosaic	5.971

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

ALMA Science Archive

Search Source name: M83 Remove filters 1 column filter active

Explore and download

13 30 59.600, 29 55 11.22 FoV: 39.08'

Molecules Lines Redshift 0.001733027398586273: estimated

Band: 7

Observations (12)	Projects (24)	Publications (60)																
Band: 7	Remove tab filters																	
Project code	ALMA source name	RA	lms+	Dec	dms+	Band	Cont.sens.	mJy/beam	Frequency support	Release date	Publications	Ang.res.	arcsec	Min.vel.res.	km/s	Array	Mosaic	Max.reco.scale
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	0.4992		344.252-360.112 GHz	2017-04-19	1	0.620		0.846		12m	mosaic	6.173
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	0.5700		344.252-360.112 GHz	2017-05-20	1	0.621		0.846		12m	mosaic	6.027
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	0.7863		344.188-360.175 GHz	2017-09-06	1	14.924		0.846		TP		264.543
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	4.4317		344.188-360.175 GHz	2017-11-24	1	2.902		0.846		7m	mosaic	24.657
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	0.9173		344.188-360.174 GHz	2018-02-13	1	14.924		0.846		TP		264.543
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	0.0018		278.265-293.908 GHz	2018-03-28	2	1.198		1.990		12m	mosaic	10.069
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	3.5680		344.188-360.175 GHz	2018-05-19	1	2.655		0.846		7m	mosaic	24.657
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	0.3908		278.203-293.971 GHz	2019-06-10	2	3.948		1.990		7m	mosaic	25.492
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	0.0859		341.501-357.496 GHz	2020-08-14	1	0.738		0.980		12m	mosaic	7.465
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	2.1331		340.487-356.496 GHz	2023-10-11	0	3.067		1.639		7m	mosaic	24.917

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.

The screenshot displays the ALMA Science Archive interface. At the top, the browser address bar shows the URL: https://almascience.eso.org/aq/?result_view=observations&sourceNameResolver=M83. The search bar contains "Source name: M83".

The main interface is divided into three panels:

- Map Panel:** Shows a star field with a yellow outline of the ALMA array and a blue dashed circle. A yellow box highlights a specific field, and a yellow arrow points to the checkbox in the table below.
- Spectral Plot Panel:** Displays a frequency spectrum from 100 GHz to 450 GHz. The plot shows several absorption lines, with labels for molecules and lines. The selected observation's frequency range is highlighted in yellow.
- Table Panel:** A table listing observations for source M83. The selected observation is highlighted in orange.

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
2016.1.00164.5	M83	13:37:00.914	-29:52:00.137	6	0.3060	243.006-263.003 GHz	2019-06-10	2	4.475	2.226	7m	mosaic	28.487
2017.1.00079.5	M83	13:37:11.914	-29:52:03.089	3	0.2588	112.354-115.793 GHz	2019-10-10	2	1.359	0.318	12m	mosaic	26.711
2017.1.00079.5	M83_CTR	13:37:00.512	-29:51:59.645	3	0.2588	112.354-115.793 GHz	2019-10-10	2	1.377	0.318	12m		24.647
2017.1.00079.5	M83_CTR	13:37:00.512	-29:51:59.645	3	0.2826	112.354-115.793 GHz	2019-10-30	2	1.448	0.318	12m		24.722
2017.1.00079.5	M83	13:36:59.529	-29:52:06.979	3	0.2826	112.354-115.793 GHz	2019-10-30	2	1.388	0.318	12m	mosaic	26.393
2017.1.00079.5	M83	13:36:59.254	-29:54:50.022	3	0.2661	112.355-115.793 GHz	2019-12-07	2	1.358	0.318	12m	mosaic	17.749
2017.1.00079.5	M83_CTR	13:37:00.512	-29:51:59.645	3	0.2661	112.355-115.793 GHz	2019-12-07	2	1.359	0.318	12m		17.602
2017.1.00079.5	M83_CTR	13:37:00.512	-29:51:59.645	3	2.7112	112.292-115.793 GHz	2020-01-07	2	9.338	0.318	7m		63.050
2017.1.00079.5	M83	13:36:59.310	-29:52:07.873	3	2.7130	112.292-115.793 GHz	2020-01-07	2	9.338	0.318	7m	mosaic	68.095
2017.1.00079.5	M83_CTR	13:37:00.512	-29:51:59.645	3	2.8286	112.292-115.793 GHz	2020-01-10	2	8.965	0.318	7m		65.835

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.

ALMA Science Archive

Search Source name: M83 Remove filters

Explore and download

Molecules Lines Redshift 0.001733027340378612: estimated

100 GHz 150 GHz 200 GHz 250 GHz 300 GHz 350 GHz 400 GHz 450 GHz

Observations (124) Projects (24) Publications (60)

	Project code	ALMA source name	RA	hms -	Dec	dms -	Band	Cont.sens.	mJy/beam -	Frequency support	Release date	Publications	Ang.res.	arcsec -	Min.vel.res.	km/s -	Array	Mosaic	Max.reco.scale
<input type="checkbox"/>	2021.1.01195.5	M83	13:36:53.230	-29:52:48.725	3	0.0258	90.189.105.689 GHz	2023-07-08	0	1.020	3.260	12m	mosaic	18.723					
<input type="checkbox"/>	2021.1.01195.5	M83	13:36:53.229	-29:52:48.786	7	2.1331	340.497.356.486 GHz	2023-10-11	0	3.067	1.639	7m	mosaic	24.917					
<input checked="" type="checkbox"/>	2022.1.00359.5	M83XUV-Field1	13:37:05.182	-29:59:53.765	7	0.0543	342.512.358.451 GHz	2024-03-06	0	0.285	0.490	12m	mosaic	3.774					
<input type="checkbox"/>	2022.1.00991.5	NGC_5236	13:37:00.919	-29:51:56.740	6	0.0891	227.37.245.512 GHz	2024-04-17	0	0.248	1.389	12m		3.411					
<input type="checkbox"/>	2022.1.01713.5	M83_ARM	13:37:07.881	-29:51:17.173	6	0.1823	251.095.268.103 GHz	2024-06-15	0	4.102	2.184	7m		26.060					
<input type="checkbox"/>	2022.1.00859.5	m83	13:37:00.919	-29:51:56.740	8	2.1997	478.169.494.153 GHz	2024-06-27	0	10.811	0.688	TP		191.639					
<input type="checkbox"/>	2022.1.00991.5	NGC_5236	13:37:00.919	-29:51:56.740	6	0.0326	227.369.245.512 GHz	2024-07-12	0	0.043	1.389	12m		0.833					
<input type="checkbox"/>	2021.1.01195.5	M83	13:36:53.230	-29:52:48.725	7	0.2712	340.56.356.433 GHz	2024-09-22	0	0.627	1.639	12m	mosaic	6.841					
<input type="checkbox"/>	2022.1.00859.5	m83	13:37:07.500	-29:51:30.000	8	7.9168	478.169.494.153 GHz	2024-11-03	0	1.419	0.688	7m	mosaic	15.809					
<input type="checkbox"/>	2022.1.01713.5	M83_CTR	13:37:00.590	-29:51:57.080	6	0.3450	251.094.268.102 GHz	In progress	0	4.374	2.184	7m	mosaic	33.450					

The interface has several other options as well. These include copying the link to the search results, selecting the columns that are displayed and saving the search results.

The screenshot displays the ALMA Science Archive interface. At the top, the browser address bar shows the URL: https://almascience.eso.org/aq/?result_view=observations&sourceNameResolver=M83&observationsSortProp=releaseDate&observationsSortDir=asc. A yellow arrow points to the top right corner of the interface, where there are icons for sharing, a search icon, and a green button labeled "Explore and download".

The main view is split into two panels. The left panel shows a sky map with a yellow beam footprint centered on the source M83. The right panel shows a spectral plot with labeled lines. The plot has a frequency axis from 100 GHz to 450 GHz. The lines are labeled with their corresponding molecules and transitions:

- 3: CO v=0 1-0
- 4: NH₃ J_K-1-1
- 5: HI 3C0+ 2-2
- 6: CS v=0 2-1
- 7: HCO v=0 3-2
- 8: HCO v=0 3-2
- 9: HCO v=0 3-2
- 10: HCO v=0 3-2

Below the sky map and spectral plot, there are tabs for "Observations (118)", "Projects (21)", and "Publications (35)". The "Observations" tab is active, showing a table of observations.

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	Scientist	
		hms	dms		mJy/beam	GHz			arcsec	km/s			arcsec	arcsec		
<input type="checkbox"/>	20171.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	0.2518	112.355-115.793 GHz	2020-03-03	1	1.377	0.318	12m		18.377	51.046	Local U
<input type="checkbox"/>	20171.00079.S	M83	13:37:00.031	-29:49:28.093	3	2.2701	112.292-115.793 GHz	2020-03-07	1	9.345	0.318	7m	mosaic	67.522	617.666	Local U
<input checked="" type="checkbox"/>	20171.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	2.2770	112.292-115.793 GHz	2020-03-07	1	9.347	0.318	7m		63.281	87.531	Local U
<input type="checkbox"/>	20171.00079.S	M83	13:36:59.254	-29:54:50.022	3	2.2566	112.292-115.793 GHz	2020-06-21	1	9.419	0.318	7m	mosaic	63.537	617.412	Local U
<input type="checkbox"/>	20171.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	2.2538	112.292-115.793 GHz	2020-06-21	1	9.418	0.318	7m		61.156	87.530	Local U
<input type="checkbox"/>	20171.00079.S	M83	13:36:59.529	-29:52:06.980	3	0.4313	112.294-115.793 GHz	2020-06-28	1	46.089	0.318	TP		816.942	51.059	Local U
<input type="checkbox"/>	20171.00079.S	M83	13:36:59.529	-29:52:06.980	3	0.4204	112.294-115.793 GHz	2020-06-29	1	46.089	0.318	TP		816.942	51.059	Local U
<input type="checkbox"/>	20171.00065.S	M83	13:37:05.823	-29:59:57.260	7	0.0859	341.501-357.496 GHz	2020-08-14	1	0.738	0.980	12m	mosaic	7.465	45.733	Local U
<input type="checkbox"/>	20171.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	0.2661	112.355-115.793 GHz	2021-03-04	1	1.370	0.318	12m		22.053	51.045	Local U

The interface has several other options as well. These include copying the link to the search results, selecting the columns that are displayed and saving the search results.

The screenshot displays the ALMA Science Archive interface. On the left, a star field is shown with a yellow ALMA antenna array overlay and a blue dashed circle indicating the field of view (FoV: 1.08"). On the right, a spectral plot shows intensity versus frequency (100 GHz to 450 GHz) with various molecular lines identified. A yellow arrow points to the 'Explore and download' button in the top right corner of the interface.

Below the spectral plot, a table lists the search results. The table has the following columns: Project code, ALMA source name, RA, lms-, Dec, dms-, Band, Cont.sens., mJy/beam-, Frequency support, Release date, Publications, Ang.res., arcsec-, Min.vel.res., km/s-, Array, Mosaic, and Max.reco.scale.

Project code	ALMA source name	RA	lms-	Dec	dms-	Band	Cont.sens.	mJy/beam-	Frequency support	Release date	Publications	Ang.res.	arcsec-	Min.vel.res.	km/s-	Array	Mosaic	Max.reco.scale
2016.1.00164.S	M83	13:37:00.914		-29:52:00.137		6	0.3060		243.006, 263.003 GHz	2019-06-10	2	4.475		2.226		7m	mosaic	28.487
2017.1.00079.S	M83	13:37:11.914		-29:52:03.089		3	0.2588		112.354, 115.793 GHz	2019-10-10	2	1.359		0.318		12m	mosaic	26.711
2017.1.00079.S	M83_CTR	13:37:00.512		-29:51:59.645		3	0.2588		112.354, 115.793 GHz	2019-10-10	2	1.377		0.318		12m		24.647
2017.1.00079.S	M83_CTR	13:37:00.512		-29:51:59.645		3	0.2826		112.354, 115.793 GHz	2019-10-30	2	1.448		0.318		12m		24.722
2017.1.00079.S	M83	13:36:59.529		-29:52:06.979		3	0.2826		112.354, 115.793 GHz	2019-10-30	2	1.388		0.318		12m	mosaic	26.393
2017.1.00079.S	M83	13:36:59.254		-29:54:50.022		3	0.2661		112.355, 115.793 GHz	2019-12-07	2	1.358		0.318		12m	mosaic	17.749
2017.1.00079.S	M83_CTR	13:37:00.512		-29:51:59.645		3	0.2661		112.355, 115.793 GHz	2019-12-07	2	1.359		0.318		12m		17.602
2017.1.00079.S	M83_CTR	13:37:00.512		-29:51:59.645		3	2.7112		112.292, 115.793 GHz	2020-01-07	2	9.338		0.318		7m		63.050
2017.1.00079.S	M83	13:36:59.310		-29:52:07.873		3	2.7130		112.292, 115.793 GHz	2020-01-07	2	9.338		0.318		7m	mosaic	68.095
2017.1.00079.S	M83_CTR	13:37:00.512		-29:51:59.645		3	2.8286		112.292, 115.793 GHz	2020-01-10	2	8.965		0.318		7m		65.835

Selected data can be downloaded by clicking on the green “Explore and download” box at the top right. This will open a new display within the browser window listing the files associated with the selected dataset.

The screenshot displays the ALMA Science Archive interface. At the top, there is a search bar and a filter for 'Source name: M83'. A green button labeled 'Explore and download' is highlighted with a yellow arrow. Below the search bar, there is a spectral plot showing intensity versus frequency (GHz) from 100 to 450 GHz. The plot is annotated with various molecular lines and their corresponding redshifts. Below the plot, there is a table of observations with columns for Project code, ALMA source name, RA, Dec, Band, Cont. sens., Frequency support, Release date, Publications, and Max. reco. scale. The table is sorted by Release date, and the observation with the most recent date (2019-10-30) is highlighted in yellow.

Project code	ALMA source name	RA	Dec	Band	Cont. sens.	Frequency support	Release date	Publications	Max. reco. scale
2016.1.00164.S	M83	13:37:00.914	-29:52:00.137	6	0.3060	243.006-263.003 GHz	2019-06-10	2	28.487
2017.1.00079.S	M83	13:37:11.914	-29:52:03.089	3	0.2588	112.354-115.793 GHz	2019-10-10	2	26.711
2017.1.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	0.2588	112.354-115.793 GHz	2019-10-10	2	24.647
2017.1.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	0.2826	112.354-115.793 GHz	2019-10-30	2	24.722
2017.1.00079.S	M83	13:36:59.529	-29:52:06.979	3	0.2826	112.354-115.793 GHz	2019-10-30	2	26.393
2017.1.00079.S	M83	13:36:59.254	-29:54:50.022	3	0.2661	112.355-115.793 GHz	2019-12-07	2	17.749
2017.1.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	0.2661	112.355-115.793 GHz	2019-12-07	2	17.602
2017.1.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	2.7112	112.292-115.793 GHz	2020-01-07	2	63.050
2017.1.00079.S	M83	13:36:59.310	-29:52:07.873	3	2.7130	112.292-115.793 GHz	2020-01-07	2	68.095
2017.1.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	2.8286	112.292-115.793 GHz	2020-01-10	2	65.835

The Request Handler will display all of the files associated with the selected Scheduling Blocks.

ALMA Science Archive

Source name: M83 Remove filters

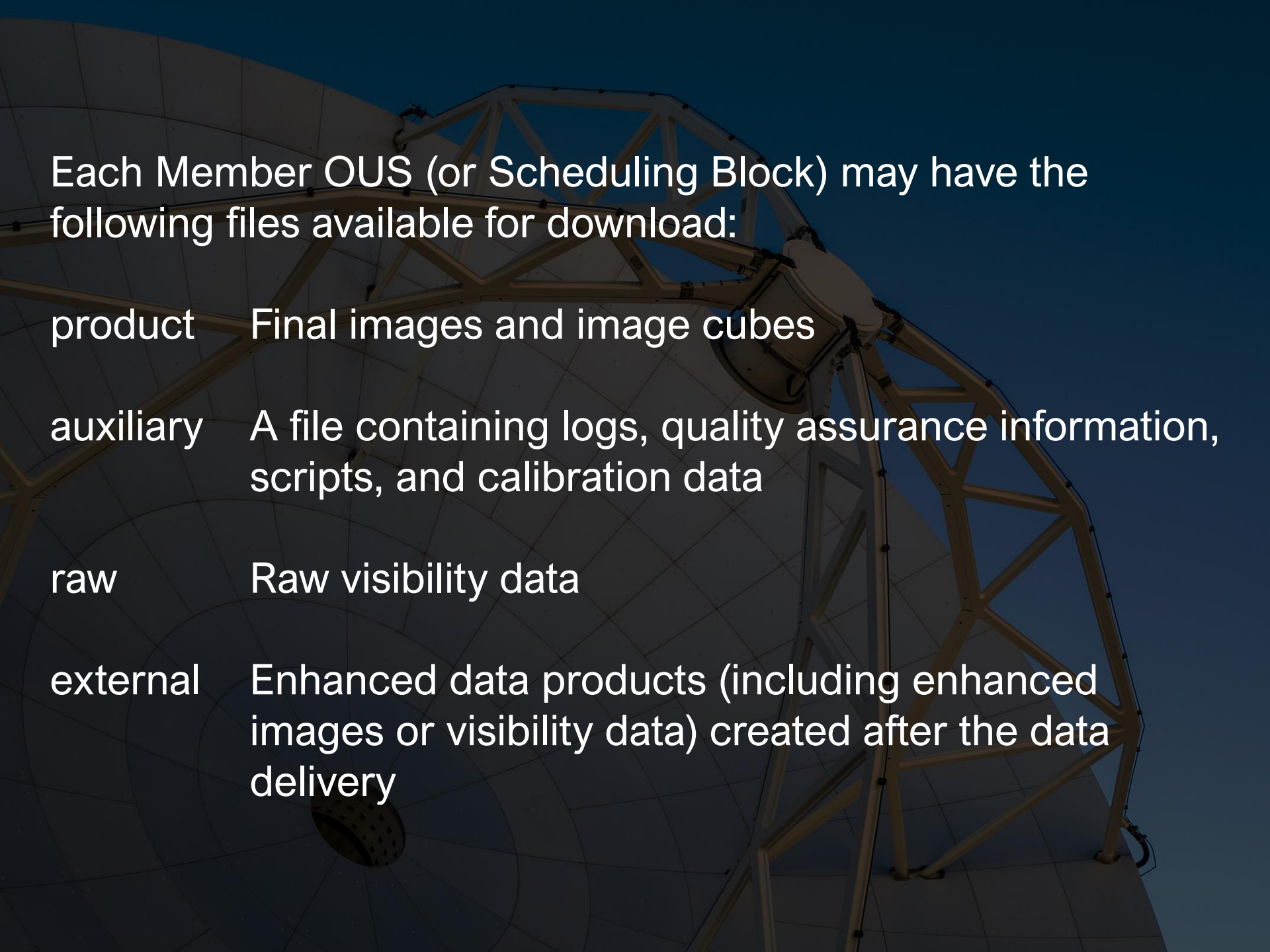
Download 4 GB Open legacy Request Handler Login

Project (1)	Name	Size	↑ Project	↑ GOUS	↑ MOUS
✓	member.uid_A001_X1295_X21.M83_CTR_sci.spw29.cube.lpb.fits.gz (product)	206 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
✓	member.uid_A001_X1295_X21.qa2_report.pdf (auxiliary, qa)	70 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
✓	uid_A002_Xcfc232_X1a9.qa0_report.html (auxiliary, qa)	105 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
✓	uid_A002_Xcfc232_X1a9.ms.flagversions.tgz (auxiliary, calibration)	2 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
✓	member.uid_A001_X1295_X21.calimage.product_rename.bt (auxiliary, script)	19 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
✓	uid_A002_Xcfc232_X22a.ms.flagversions.tgz (auxiliary, calibration)	2 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
✓	member.uid_A001_X1295_X21.M83_CTR_sci.spw29.mfs.lpb.fits.gz (product)	111 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
✓	member.uid_A001_X1295_X21.session_1.auxcaltables.tgz (auxiliary, calibration)	62 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
✓	uid_A002_Xcbf591_X1a50.qa0_report.pdf (auxiliary, qa)	567 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
✓	member.uid_A001_X1295_X21.M83_CTR_sci.spw29.mfs.lpbcor.fits (product)	335 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21

Band: 3
Frequency range: 112.354..114.229
Frequency resolution: 1.128.906 kHz
Line sens. (10km/s): 9.28mJy/beam
Line sens. (native): 0.417uJy/beam
Polarizations: XX YY
Array: 12m

Band: 3
Array: 12m

2017.1.00079.S	M83	13:36:59.310	-29:52:07.873	3	2.7130	112.292.115.793 GHz	2020-01-07	2	9.338	0.318	7m	mosaic	68.095
2017.1.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	2.8286	112.292.115.793 GHz	2020-01-10	2	8.965	0.318	7m		65.835



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

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

The legacy version of this page is accessible through a link at the top, but it works poorly for projects with multiple Scheduling Blocks.

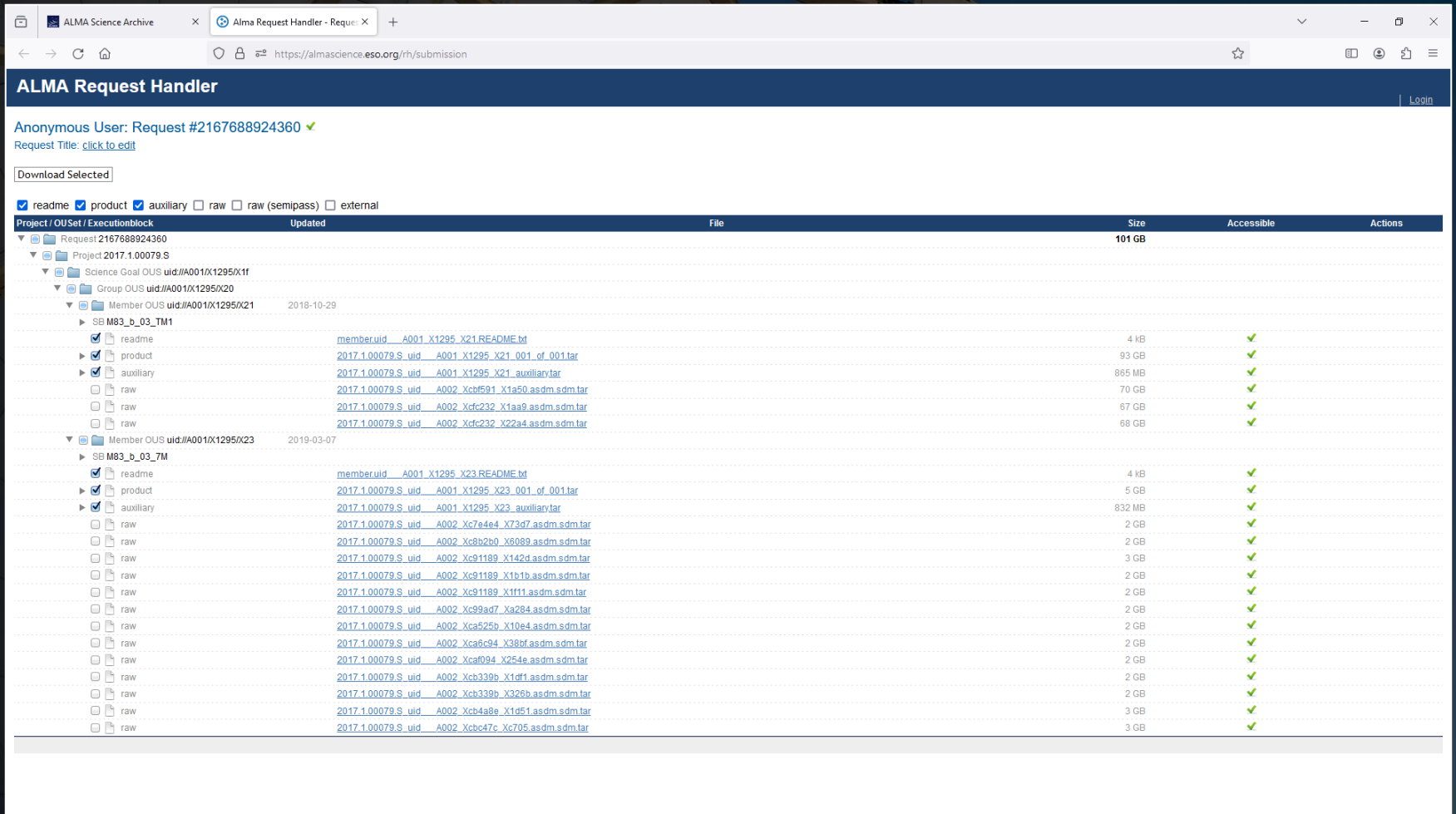
The screenshot shows the ALMA Science Archive web interface. At the top, the browser address bar displays the URL: `https://almascience.eso.org/aa/?result_view=observations&sourceNameResolver=M83`. A search bar contains the text "Source name: M83". Below the search bar, there are two buttons: "Download 4 GB" and "Open legacy", with a yellow arrow pointing to the latter. The main content area is a table of files with columns for Name, Size, Project, GOUS, and MOUS. The table lists various files including calibration products, reports, and scripts. A detailed view of a selected file is shown, including a spectral plot and technical parameters such as Band: 3, Frequency range: 112.354..114.229, and Array: 12m. The bottom of the interface shows a table of observation parameters for two different scheduling blocks.

Project (1)	Group ObsUniSet (1)	Member ObsUniSet (1)	Source (1)	Collection (1)	Array (1)	File type (8)	File class (11)		
member.uid_A001_X1295_X21.M83_CTR_sci.spw29.cube.lpb.fits.gz	member.uid_A001_X1295_X21.qa2_report.pdf	uid_A002_Xcfc232_X1a9.qa0_report.html	uid_A002_Xcfc232_X1a9.ms.flagversions.tgz	member.uid_A001_X1295_X21.calimage.product_rename.bt	uid_A002_Xcfc232_X22a.ms.flagversions.tgz	member.uid_A001_X1295_X21.M83_CTR_sci.spw29.mfs.lpb.fits.gz	member.uid_A001_X1295_X21.session_1.auxcaltables.tgz	uid_A002_Xcbf591_X1a50.qa0_report.pdf	member.uid_A001_X1295_X21.M83_CTR_sci.spw29.mfs.lpbcor.fits

Band: 3
Frequency range: 112.354..114.229
Frequency resolution: 1.128.906 kHz
Line sens. (10km/s): 9.28mJy/beam
Line sens. (native): 0.417uJy/beam
Polarizations: XX YY
Array: 12m

Time	Source	RA	DEC	Chan	Freq	ObsID	Integ	Flux	Beam	Scale	Resolution
2017.1.00079.S	M83	13:36:59.310	-29:52:07.873	3	2.7130	112.292.115.793 GHz	2020-01-07	2	9.338	0.318	7m mosaic 68.095
2017.1.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	2.8286	112.292.115.793 GHz	2020-01-10	2	8.965	0.318	7m 65.835

The legacy version of this page is accessible through a link at the top, but it works poorly for projects with multiple Scheduling Blocks.



The screenshot shows the ALMA Request Handler web interface. At the top, the browser address bar displays the URL <https://almascience.eso.org/rh/submission>. The page header includes the text "ALMA Request Handler" and a "Login" link. Below the header, the user is identified as "Anonymous User: Request #2167688924360" with a green checkmark. A "Request Title: [click to edit](#)" link is provided. A "Download Selected" button is visible. Below this, there are several checked checkboxes for file types: readme, product, auxiliary, raw, raw (semipass), and external. The main content area is a table with columns for "Project / OUSet / Executionblock", "Updated", "File", "Size", "Accessible", and "Actions". The table lists files for two different Scheduling Blocks (SB M83_b_03_TM1 and SB M83_b_03_7M) under the request ID 2167688924360. Each file entry includes a checkbox, a file name, a size, and an "Accessible" status (indicated by a green checkmark).

Project / OUSet / Executionblock	Updated	File	Size	Accessible	Actions
Request 2167688924360			101 GB		
Project 2017.1.00079.S					
Science Goal OUS uid://A001X1295X1f					
Group OUS uid://A001X1295X20					
Member OUS uid://A001X1295X21	2018-10-29				
SB M83_b_03_TM1					
<input checked="" type="checkbox"/> readme		memberuid_A001_X1295_X21_README.txt	4 kB	✓	
<input checked="" type="checkbox"/> product		2017.1.00079.S_uid_A001_X1295_X21_001_of_001.tar	93 GB	✓	
<input checked="" type="checkbox"/> auxiliary		2017.1.00079.S_uid_A001_X1295_X21_auxiliary.tar	865 MB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xcbf591_X1a50.asdm.sdm.tar	70 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xcfc232_X1aa9.asdm.sdm.tar	67 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xcfc232_X22a4.asdm.sdm.tar	68 GB	✓	
Member OUS uid://A001X1295X23	2019-03-07				
SB M83_b_03_7M					
<input checked="" type="checkbox"/> readme		memberuid_A001_X1295_X23_README.txt	4 kB	✓	
<input checked="" type="checkbox"/> product		2017.1.00079.S_uid_A001_X1295_X23_001_of_001.tar	5 GB	✓	
<input checked="" type="checkbox"/> auxiliary		2017.1.00079.S_uid_A001_X1295_X23_auxiliary.tar	832 MB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xc7e4e4_X73d7.asdm.sdm.tar	2 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xc8b2b0_X6089.asdm.sdm.tar	2 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xc91189_X142d.asdm.sdm.tar	3 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xc91189_X1b1b.asdm.sdm.tar	2 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xc91189_X1f11.asdm.sdm.tar	2 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xc99ad7_Xa284.asdm.sdm.tar	2 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xca525b_X10e4.asdm.sdm.tar	2 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xca8c94_X38bf.asdm.sdm.tar	2 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xcaf094_X254e.asdm.sdm.tar	2 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xcb339b_X1df1.asdm.sdm.tar	2 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xcb339b_X326b.asdm.sdm.tar	2 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xcb4a8e_X1d51.asdm.sdm.tar	3 GB	✓	
<input type="checkbox"/> raw		2017.1.00079.S_uid_A002_Xcb47c_X705.asdm.sdm.tar	3 GB	✓	

Clicking on one of the C symbols next to an image will display the image in CARTA.

The screenshot shows the ALMA Science Archive web interface. The browser address bar displays https://almascience.eso.org/aq/?result_view=observations&sourceNameResolver=M83. The search bar contains "Source name: M83". A sidebar on the left lists categories: Project (1), Group ObsUniSet (1), Member ObsUniSet (1), Source (1), Collection (1), Array (1), File type (8), and File class (11). The main content area is a table of files with columns for Name, Size, Project, GOUS, and MOUS. A yellow arrow points to a 'C' icon next to a spectral plot for the file `member.uid_A001_X1295_X21.M83_CTR_sci.spw29.mfs.lpbcor.fits`. The plot shows a spectral line with the following parameters: Band: 3, Array: 12m, Frequency range: 112.354..114.229 GHz, Frequency resolution: 1.128.906 kHz, Line sens. (10km/s): 9.28mJy/beam, Line sens. (native): 0.417uJy/beam, and Polarizations: XX YY.

Name	Size	Project	GOUS	MOUS
<code>member.uid_A001_X1295_X21.M83_CTR_sci.spw29.cube.lpb.fits.gz</code> (product)	206 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<code>member.uid_A001_X1295_X21.qa2_report.pdf</code> (auxiliary, qa)	70 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<code>uid_A002_Xcfc232_X1a9.qa0_report.html</code> (auxiliary, qa)	105 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<code>uid_A002_Xcfc232_X1a9.ms.flagversions.tgz</code> (auxiliary, calibration)	2 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<code>member.uid_A001_X1295_X21.calimage.product_rename.bt</code> (auxiliary, script)	19 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<code>uid_A002_Xcfc232_X22a.ms.flagversions.tgz</code> (auxiliary, calibration)	2 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<code>member.uid_A001_X1295_X21.M83_CTR_sci.spw29.mfs.lpbcor.fits.gz</code> (product)	111 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<code>member.uid_A001_X1295_X21.session_1.auxcaltables.tgz</code> (auxiliary, calibration)	62 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<code>uid_A002_Xcbf591_X1a50.qa0_report.pdf</code> (auxiliary, qa)	567 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<code>member.uid_A001_X1295_X21.M83_CTR_sci.spw29.mfs.lpbcor.fits</code> (product)	335 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<code>uid_A002_Xcbf591_X1a50.qa0_report.html</code> (auxiliary, qa)	98 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<code>member.uid_A001_X1295_X21.scriptForPI.py</code> (auxiliary, script)	19 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<code>member.uid_A001_X1295_X21.M83_CTR_sci.spw21_25_27_29.cont.lpbcor.fits</code> (product)	335 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21

Clicking on one of the C symbols next to an image will display the image in CARTA.

The screenshot shows the ALMA Science Archive web interface. A modal window titled "CARTA" is open, displaying a radio continuum image of a source. The image is a circular field with a color scale from -0.002 to 0.002 Jy/beam. The WCS is (13:37:00.52, -29:51:59.8). The image is titled "member.uid__A001_X1295_X21.M83_CTR_sci.spw29.mfs.lpbcor.fits".

The CARTA viewer includes several panels:

- X Profile: Cursor X**: A plot showing the value profile across the X coordinate (0 to 1). The value ranges from 0.00e+0 to 1.00e+0.
- Y Profile: Cursor X**: A plot showing the value profile across the Y coordinate (0 to 1). The value ranges from 0.00e+0 to 1.00e+0.
- Render Configuration X**: A histogram showing the distribution of values (Jy/beam) from -0.003 to 0.003. The distribution is centered around 0. The histogram shows 99.9% of the data is within the range [-0.002, 0.002].
- Clip min**: -0.002231687991
- Clip max**: 0.002643396978
- Scaling**: Linear
- Colormap**: A color bar showing the mapping from values to colors.
- Invert colormap**: A toggle switch.
- Image List X**: A table showing the image list.

The Image List X table has the following data:

Image	Layers	Matching	Channel
0 member.uid__A001	R	XY R	0

The background interface shows a search for "M83" and a list of observations. The table below shows the search results:

Image	Source	RA	Dec	Beam	Frequency	Bandwidth	Channels	Flux	Resolution	Integration	Scale	Notes	
20171.00079.5	M83	13:36:59.310	-29:52:07.873	3	2.7130	112.292.115.793 GHz	2020-01-07	2	9.338	0.318	7m	mosaic	68.095
20171.00079.5	M83_CTR	13:37:00.512	-29:51:59.645	3	2.8286	112.292.115.793 GHz	2020-01-10	2	8.965	0.318	7m		65.835

The search results can be filtered using the drop-down menus on the left. This is useful for selecting subsets of these files for different purposes.

ALMA Science Archive

Search Source name: M83 Remove filters

Download 4 GB Open legacy Request Handler Login

Project (1)	Name	Size	Project	GOUS	MOUS
Group ObsUniSet (1)	member.uid_A001_X1295_X21.M83_CTR_sci.spw29.cube.lpb.fits.gz	(product) 206 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
Member ObsUniSet (1)	member.uid_A001_X1295_X21.qa2_report.pdf	(auxiliary, qa) 70 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
Source (1)	uid_A002_Xcfc232_X1a9.qa0_report.html	(auxiliary, qa) 105 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
Collection (1)	uid_A002_Xcfc232_X1a9.ms.flagversions.tgz	(auxiliary, calibration) 2 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
Array (1)	member.uid_A001_X1295_X21.calimage.product_rename.bt	(auxiliary, script) 19 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
File type (8)	uid_A002_Xcfc232_X22a.ms.flagversions.tgz	(auxiliary, calibration) 2 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
File class (11)	member.uid_A001_X1295_X21.M83_CTR_sci.spw29.mfs.lpb.fits.gz	(product) 111 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
	member.uid_A001_X1295_X21.session_1.auxcaltables.tgz	(auxiliary, calibration) 62 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
	uid_A002_Xcbf591_X1a50.qa0_report.pdf	(auxiliary, qa) 567 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
	member.uid_A001_X1295_X21.M83_CTR_sci.spw29.mfs.lpbcor.fits	(product) 335 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21

Band: 3
Frequency range: 112.354..114.229
Frequency resolution: 1.128.906 kHz
Line sens. (10km/s): 9.28mJy/beam
Line sens. (native): 0.417uJy/beam
Polarizations: XX YY
Array: 12m

Band: 3
Array: 12m

2017.1.00079.S M83 13:36:59.310 -29:52:07.873 3 2.7130 112.292.115.793 GHz 2020-01-07 2 9.338 0.318 7m mosaic 68.095

2017.1.00079.S M83_CTR 13:37:00.512 -29:51:59.645 3 2.8286 112.292.115.793 GHz 2020-01-10 2 8.965 0.318 7m mosaic 65.835

To select just the images, go to "File type" and select only "images/x-fits".

The screenshot shows the ALMA Science Archive web interface. The browser address bar displays `https://almascience.eso.org/aq/?result_view=observations&sourceNameResolver=M83`. The search bar contains "Source name: M83". A sidebar on the left contains a filter menu with the following sections:

- Project (1)
- Group ObsUniSet (1)
- Member ObsUniSet (1)
- Source (1)
- Collection (1)
- Array (1)
- File type (8)**
 - search for file type
 - application/x-gzip (27)
 - image/x-fits **only** (9)
 - text/plain (9)
 - application/pdf (7)
 - application/tar (5)
 - [see 3 more](#)
- File class (1)

A yellow arrow points to the "image/x-fits only" option. The main content area displays a table of files with the following columns: Name, Size, Project, GOUS, and MOUS. Three files are listed, all of type "image/x-fits":

Name	Size	Project	GOUS	MOUS
<input checked="" type="checkbox"/> member.uid_A001_X1295_X21.M83_CTR_sci.spw29.mfs.lpbcor.fits	(product) 335 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> member.uid_A001_X1295_X21.M83_CTR_sci.spw21_25_27_29.cont.lpbcor.fits	(product) 335 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> member.uid_A001_X1295_X21.M83_CTR_sci.spw25.mfs.lpbcor.fits	(product) 335 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21

Each file entry includes a thumbnail of a FITS image and a metadata panel on the right. The metadata for the first file is:

- Band: 3
- Frequency range: 112.354-114.229
- Frequency resolution: 1,128.906 kHz
- Line sens. (10km/s): 9.28mJy/beam
- Line sens. (native): 0.417uJy/beam
- Polarizations: XX YY
- Array: 12m

At the bottom of the page, a table provides detailed observation parameters for the selected files.

Observation ID	Source	RA	Dec	Band	Frequency	Resolution	Flux	Beam	Integration	Array	Position Angle		
20171.00079.S	M83	13:36:59.310	-29:52:07.873	3	2.7130	112.292, 115.793 GHz	2020-Q1-07	2	9.338	0.318	7m	mosaic	68.095
20171.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	2.8286	112.292, 115.793 GHz	2020-Q1-10	2	8.965	0.318	7m		65.835

To select just the Quality Assurance filts, go to "File class" and select only "qa0", "qa2", and "weblog". (Some tar files associated with the project will also be displayed, but these can be ignored.)

ALMA Science Archive

Source name: M83

Download 599 MB

Open legacy Request Handler

Member ObsUniSet (1)

Source

Collection (1)

Array

File type (4)

File class (11)

- science
- calibration
- mask
- qa0
- qa2
- aux
- casa_commands
- ppr
- readme
- weblog

Name	Size	Project	GOUS	MOUS
member.uid_A001_X1295_X21.qa2_report.pdf	70 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
uid_A002_Xcfc232_X1a9.qa0_report.html	105 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
uid_A002_Xcbf591_X1a50.qa0_report.pdf	567 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
uid_A002_Xcbf591_X1a50.qa0_report.html	98 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
member.uid_A001_X1295_X21.hifa_calimage.weblog.tgz	595 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
member.uid_A001_X1295_X21.uid_A002_Xcbf591_X1a50.qa0_report.pdf	479 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
uid_A002_Xcfc232_X22a4.qa0_report.pdf	712 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
2017.1.00079.S.uid_A002_Xcfc232_X1a9.asdm.sdm.tar	63 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
2017.1.00079.S.uid_A001_X1295_X21_001_of_001.tar	87 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
member.uid_A001_X1295_X21.uid_A002_Xcfc232_X1a9.qa0_report.pdf	464 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
member.uid_A001_X1295_X21.uid_A002_Xcfc232_X22a4.qa0_report.pdf	516 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
member.uid_A001_X1295_X21.qa2_report.html	107 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
uid_A002_Xcfc232_X1a9.qa0_report.pdf	617 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
2017.1.00079.S.uid_A002_Xcfc232_X22a4.asdm.sdm.tar	63 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
2017.1.00079.S.uid_A001_X1295_X21_auxiliary.tar	825 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
uid_A002_Xcfc232_X22a4.qa0_report.html	112 kB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
2017.1.00079.S.uid_A002_Xcbf591_X1a50.asdm.sdm.tar	65 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21

2017.1.00079.S M83 13:36:59.310 -29:52:07.873 3 2.7130 112.292.115.793 GHz 2020-01-07 2 9.338 0.318 7m mosaic 68.095

2017.1.00079.S M83_CTR 13:37:00.512 -29:51:59.645 3 2.8286 112.292.115.793 GHz 2020-01-10 2 8.965 0.318 7m mosaic 65.835

To select just the files needed to recreate the calibrated visibility data (for creating new images), go to "File type" and select only "application/tar". After that select all of the files with "(raw)" or "(auxiliary)" after their names.

The screenshot shows the ALMA Science Archive web interface. The browser address bar displays `https://almascience.eso.org/faq/result_view=observations&sourceNameResolver=M83`. The search bar contains "Source name: M83". A blue banner at the top indicates "Download 192 GB" and "Open legacy Request Handler".

The left sidebar shows a navigation menu with the following sections:

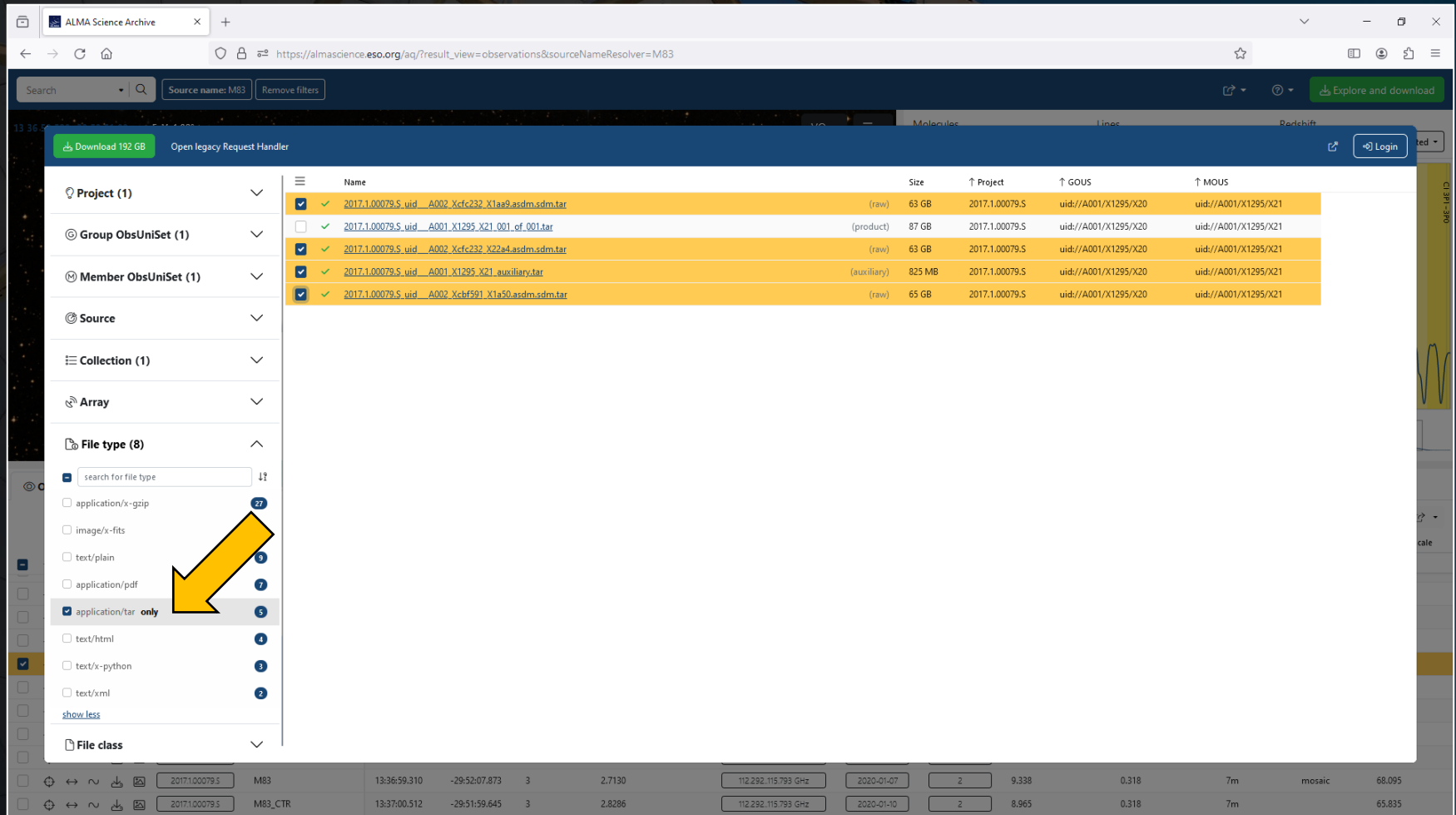
- Project (1)
- Group ObsUniSet (1)
- Member ObsUniSet (1)
- Source
- Collection (1)
- Array
- File type (8)
 - search for file type
 - application/x-gzip (27)
 - image/x-fits (3)
 - text/plain (7)
 - application/pdf (5) **← Yellow arrow pointing here**
 - text/html (4)
 - text/x-python (3)
 - text/xml (2)
 - [show less](#)
- File class

The main table displays a list of files with the following columns: Name, Size, Project, GOUS, and MOUS. The selected files are highlighted in yellow:

Name	Size	Project	GOUS	MOUS
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A002_Xcfc232_X1a9.asdm.sdm.tar (raw)	63 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input type="checkbox"/> 2017.1.00079.S_uid_A001_X1295_X21_001_of_001.tar (product)	87 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A002_Xcfc232_X22a4.asdm.sdm.tar (raw)	63 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A001_X1295_X21_auxiliary.tar (auxiliary)	825 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A002_Xcbf591_X1a50.asdm.sdm.tar (raw)	65 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21

The bottom of the interface shows a table of observation parameters for two sources, M83 and M83_CTR, including coordinates, frequencies, and observation dates.

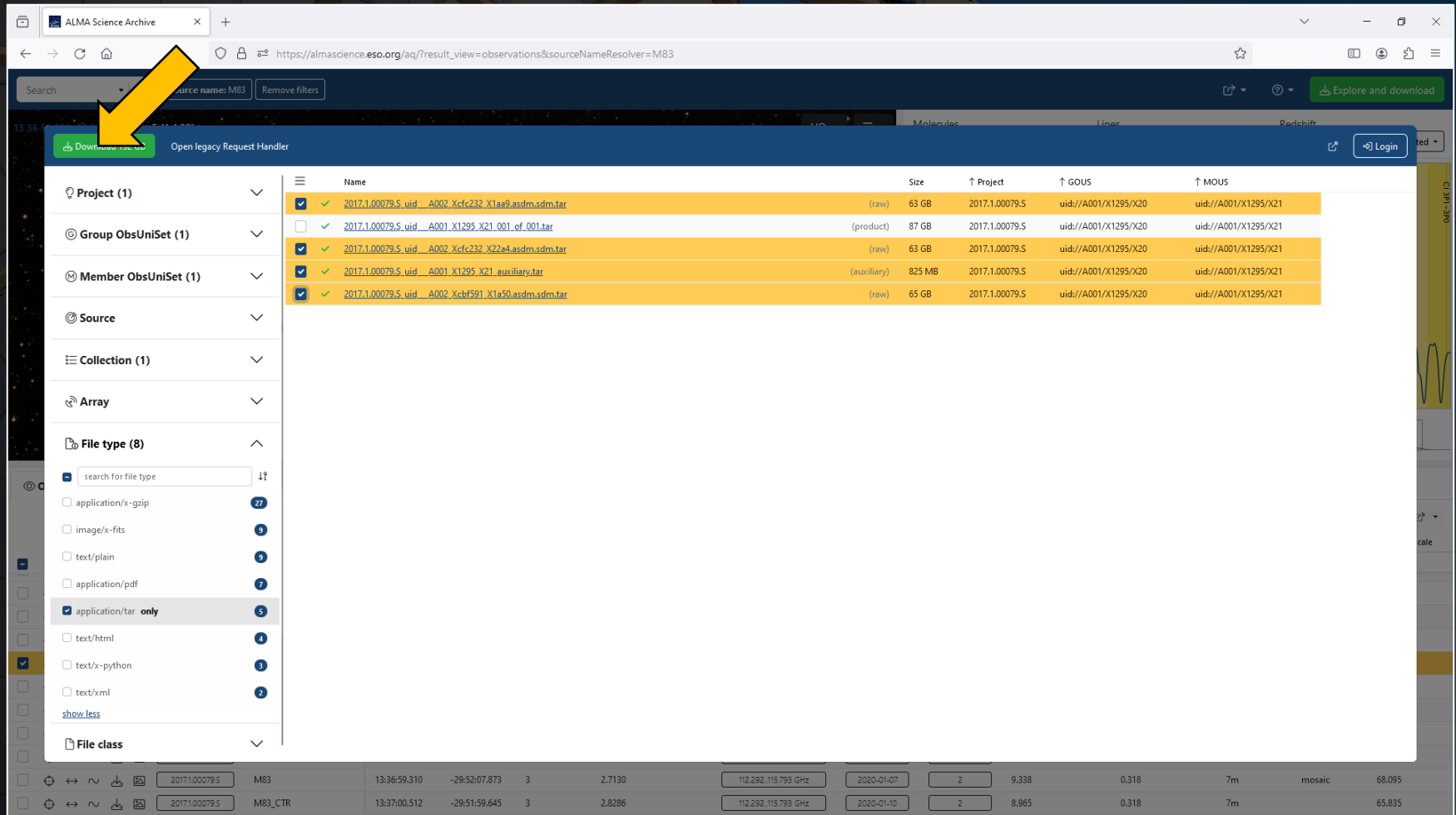
To select just the files needed to recreate the calibrated visibility data (for creating new images), go to "File type" and select only "application/tar". After that select all of the files with "(raw)" or "(auxiliary)" after their names.



The screenshot shows the ALMA Science Archive interface. The left sidebar is expanded to the "File type (8)" section. A search box for file types is present, and the "application/tar" option is selected and highlighted with a yellow arrow. The main table displays a list of files with columns for Name, Size, Project, GOUS, and MOUS. The selected files are highlighted in yellow.

Name	Size	Project	GOUS	MOUS
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A002_Xcfc232_X1a9.asdm.sdm.tar	(raw) 63 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input type="checkbox"/> 2017.1.00079.S_uid_A001_X1295_X21_001_of_001.tar	(product) 87 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A002_Xcfc232_X22a4.asdm.sdm.tar	(raw) 63 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A001_X1295_X21_auxiliary.tar	(auxiliary) 825 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A002_Xcbf591_X1a50.asdm.sdm.tar	(raw) 65 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21

After selecting the data for download, the download process can be started by clicking on the Download button in the upper left corner of the Request Handler. This will generate a download script. It is also possible to select the individual files for download by directly clicking on the filenames.



The screenshot displays the ALMA Science Archive interface. A yellow arrow points to the 'Download' button in the upper left corner of the Request Handler overlay. The overlay shows a list of files with columns for Name, Size, Project, GOUS, and MOUS. The 'File type' filter is set to 'application/tar only'.

Name	Size	Project	GOUS	MOUS
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A002_Xcfc232_X1a9.asdm.sdm.tar	(raw) 63 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input type="checkbox"/> 2017.1.00079.S_uid_A001_X1295_X21_001_of_001.tar	(product) 87 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A002_Xcfc232_X22a4.asdm.sdm.tar	(raw) 63 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A001_X1295_X21_auxiliary.tar	(auxiliary) 825 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A002_Xcbf591_X1a50.asdm.sdm.tar	(raw) 65 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21

File type (8):

- application/x-gzip (27)
- image/x-fits (9)
- text/plain (9)
- application/pdf (7)
- application/tar only (5)
- text/html (4)
- text/x-python (3)
- text/xml (2)

File class:

File class	Count
application/tar only	5
text/html	4
text/x-python	3
text/xml	2

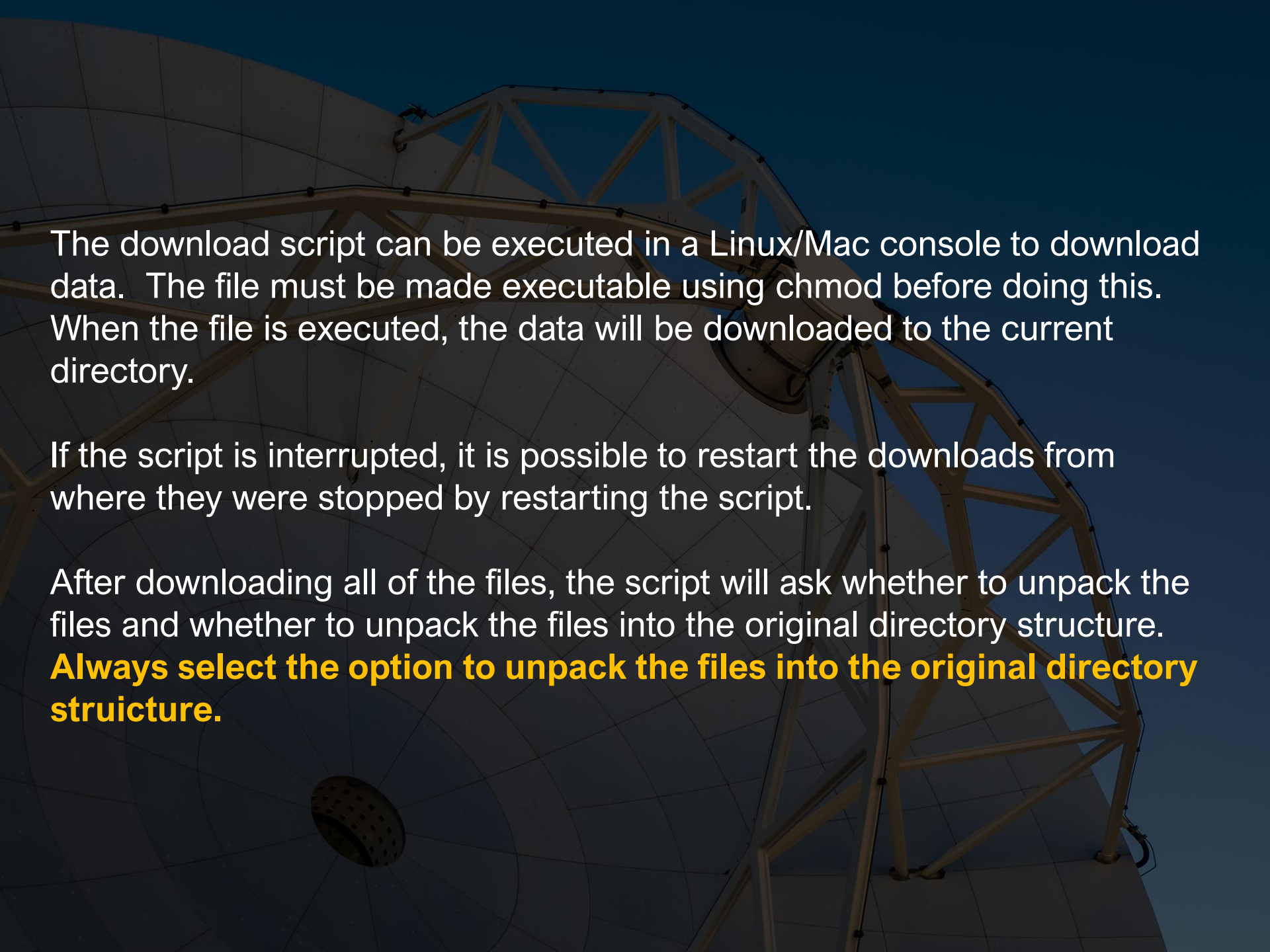
After selecting the data for download, the download process can be started by clicking on the Download button in the upper left corner of the Request Handler. This will generate a download script. It is also possible to select the individual files for download by directly clicking on the filenames.

The screenshot displays the ALMA Science Archive web interface. At the top, a search bar shows 'Source name: M83'. A blue bar contains a 'Download 192 GB' button and an 'Open legacy Request Handler' link. Below this is a table of files with columns for Name, Size, Project, GOUS, and MOUS. A yellow arrow points to the 'Download 192 GB' button. The table lists several files, including raw data and auxiliary files. On the left, a sidebar shows file type filters, with 'application/tar only' selected. At the bottom, a table shows observation details for M83 and M83_CTR.

Name	Size	Project	GOUS	MOUS
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A002_Xcfc232_X22a4.asdm.sdm.tar	(raw) 63 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input type="checkbox"/> 2017.1.00079.S_uid_A001_X1295_X21_001_of_001.tar	(product) 87 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A002_Xcfc232_X22a4.asdm.sdm.tar	(raw) 63 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A001_X1295_X21_auxiliary.tar	(auxiliary) 825 MB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21
<input checked="" type="checkbox"/> 2017.1.00079.S_uid_A002_Xcbf591_X1a50.asdm.sdm.tar	(raw) 65 GB	2017.1.00079.S	uid://A001/X1295/X20	uid://A001/X1295/X21

File type	Count
application/x-gzip	27
image/x-fits	9
text/plain	9
application/pdf	7
application/tar only	5
text/html	4
text/x-python	3
text/xml	2

File class	Count												
2017.1.00079.S	M83	13:36:59.310	-29:52:07.873	3	2.7130	112.292.115.793 GHz	2020-01-07	2	9.338	0.318	7m	mosaic	68.095
2017.1.00079.S	M83_CTR	13:37:00.512	-29:51:59.645	3	2.8286	112.292.115.793 GHz	2020-01-10	2	8.965	0.318	7m		65.835

A large satellite dish antenna structure is visible in the background, with its metal framework and grid pattern. The sky is a deep, clear blue. The text is overlaid on the left side of the image.

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.

After downloading all of the files, the script will ask whether to unpack the files and whether to unpack the files into the original directory structure.

Always select the option to unpack the files into the original directory structure.