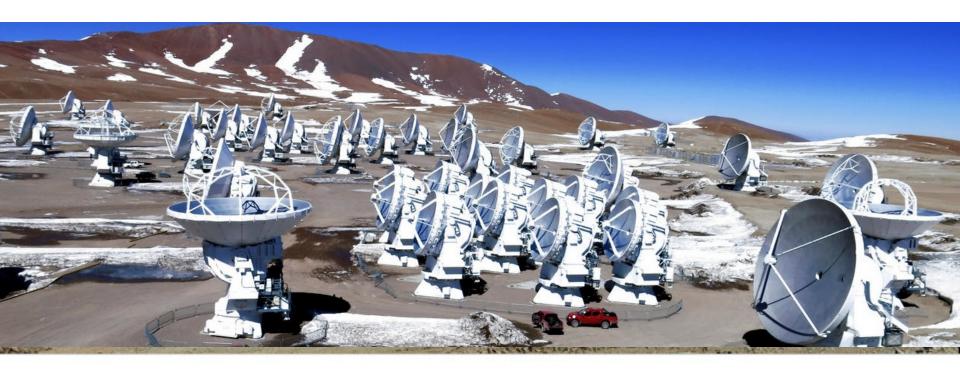
Retrieving ALMA Archival Data



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Authors: Sarah Wood, Erica Keller, Catarina Ubach





Atacama Large Millimeter/submillimeter Array Expanded Very Large Array Very Long Baseline Array

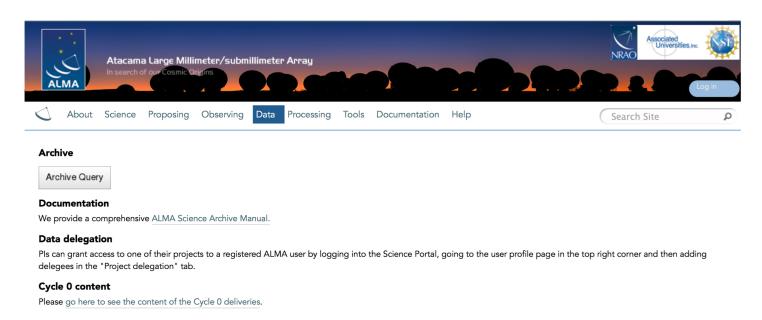




How to find the archive

Go to the science portal: https://almascience.nrao.edu

- Click on "Data" and select "Archive"







Find data in archive:

Archive Query

ALMA Science Archive Query http://almascience.nrao.edu/aq/ ults Table Query Form Query Help Search Reset **Polarisation Position** Energy Time Source name (Sesame) Frequency Observation date Polarisation type Source name (ALMA) Bandwidth Integration time RA Dec Spectral resolution Band Observation **Project Options** Project code View: • raw data project Water vapour Project code ✓ public data only Project code. science observations only Project title PI name Description Project code, in the form YYYY.NNNNN.C.AAA, where: Example 2010.2.00010.N 2010.* 2010.?.*.CSV *.CSV !(*.CSV | *.SIM)





Archive Query

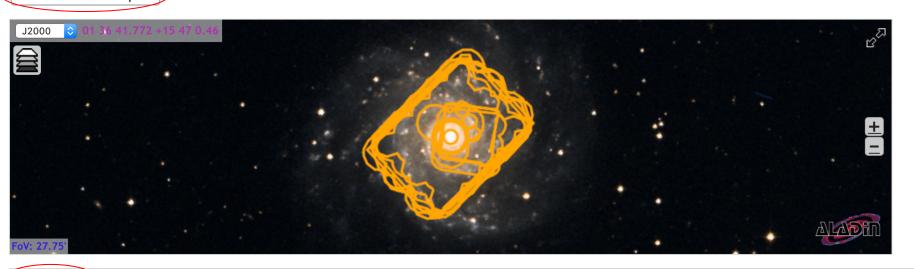
Query Form

Results Table

ALMA Science Archive

Submit download request

Close Viewer Results Bookmark Export Table Results Help



More co	showing 18 of 1	8 rows.								
	Project code	Source name	RA	Dec	Band	Integration	△Release date	Velocity resolution	Frequency support	Pub
Filter:			H:M:S 😊	D:M:S		seconds 🗘		m/s 🗘		
	2013.1.00532.S	ngc628	01:36:41.77	+15:47:00.5	3	391.267	2016-02-27	10486.26	95.96111.70GHz	<u>0</u>
	2012.1.00650.S	M74	01:36:41.59	+15:46:58.7	6	218.690	2016-03-26	635.01	229.57248.39GHz	<u>6</u>
	2013.1.00532.S	ngc628	01:36:41.82	+15:47:01.1	3	805.181	2016-08-07	11344.25	87.87103.22GHz	<u>0</u>
	2013.1.00532.S	ngc628	01:36:41.77	+15:47:00.5	3	11089.680	2016-08-21	5070.93	100.00115.49GHz	<u>0</u>
	2013.1.00532.S	ngc628	01:36:41.77	+15:47:00.5	3	232.608	2016-08-21	5072.03	100.06115.46GHz	<u>0</u>
	2013.1.00532.S	ngc628	01:36:41.77	+15:47:00.5	3	39214.080	2017-02-02	10477.24	95.90111.75GHz	<u>0</u>
	2012.1.00650.S	M74	01:36:41.77	+15:47:00.5	6	31449.600	2017-02-16	634.88	229.54248.36GHz	<u>6</u>
	2016.1.01435.S	NGC_628	01:36:39.35	+15:46:50.3	4	461.611	2018-01-26	61239.49	137.01152.99GHz	1



Archive Query: more columns

	Project code
Filter:	
	2012.1.00090.S

Project code		Project code, in the form YYYY.NNNNN.C.AAA, where:
✓ Source name		Name of the source as registered in the ASDM. Partial matches through wildcards (?, *)
		and boolean OR expressions (" "), can be used.
✓ RA	deg	Right Ascension of the field pointing.
✓ Dec	deg	Declination of the field pointing.
Z Band		ALMA receiver band.
Integration	s	Aggregated integration time for the field in the ASDM.
Release date		
Velocity resolution	m/s	Estimated velocity resolution from all the spectral windows, from frequency resolution.
✓ Velocity resolution ✓ Frequency support		Estimated velocity resolution from all the spectral windows, from frequency resolution. All frequency ranges used by the field
		, , , , , , , , , , , , , , , , , , , ,
		, , , , , , , , , , , , , , , , , , , ,
Frequency support Spatial resolution	GHz	, , , , , , , , , , , , , , , , , , , ,
Frequency support		All frequency ranges used by the field
Frequency support Spatial resolution	GHz	All frequency ranges used by the field Estimated frequency resolution from all the spectral windows, using median values of
Spatial resolution Frequency resolution	GHz	All frequency ranges used by the field Estimated frequency resolution from all the spectral windows, using median values of channel widths.
Frequency support Spatial resolution Frequency resolution Pol products	GHz	All frequency ranges used by the field Estimated frequency resolution from all the spectral windows, using median values of channel widths.
Frequency support Spatial resolution Frequency resolution Pol products Observation date	GHz	All frequency ranges used by the field Estimated frequency resolution from all the spectral windows, using median values of channel widths. Polarisation products provided.
Frequency support Spatial resolution Frequency resolution Pol products Observation date PI name	GHZ	All frequency ranges used by the field Estimated frequency resolution from all the spectral windows, using median values of channel widths. Polarisation products provided. case-insensitive partial match over the full PI name. Wildcards can be used
Frequency support Spatial resolution Frequency resolution Pol products Observation date PI name PWV	GHZ	All frequency ranges used by the field Estimated frequency resolution from all the spectral windows, using median values of channel widths. Polarisation products provided. case-insensitive partial match over the full PI name. Wildcards can be used Estimated precipitable water vapour from the XML_CALWVR_ENTITIES table.

Frequency support	
335.99351.99GHz	





Resources

Check the science portal for possible maintenance message. https://almascience.nrao.edu

There are 3 versions of the ALMA archive. If one is down, it is possible 1 of the other two are available.

- NRAO: http://almascience.nrao.edu/aq/
- ESO: http://almascience.eso.org/aq/
- NAOJ: <u>almascience.nao.ac.jp/aq/</u>

Contact your local helpdesk and provide:

- Project ID
- SBname
- ASDM
- What method you are using to download?







For more info:

https://almascience.nrao.edu/

The Atacama Large Millimeter/submillimeter Array (ALMA), an international astronomy facility, is a partnership of Europe, North America and East Asia in cooperation with the Republic of Chile. ALMA is funded in Europe by the European Organization for Astronomical Research in the Southern Hemisphere (ESO), in North America by the U.S. National Science Foundation (NSF) in cooperation with the National Research Council of Canada (NRC) and the National Science Council of Taiwan (NSC), and in East Asia by the National Institutes of Natural Sciences (NINS) of Japan in cooperation with the Academia Sinica (AS) in Taiwan. ALMA construction and operations are led on behalf of Europe by ESO, on behalf of North America by the National Radio Astronomy Observatory (NRAO), which is managed by Associated Universities, Inc. (AUI), and on behalf of East Asia by the National Astronomical Observatory of Japan (NAOJ). The Joint ALMA Observatory (JAO) provides the unified leadership and management of the construction and operation of ALMA.





Appendix





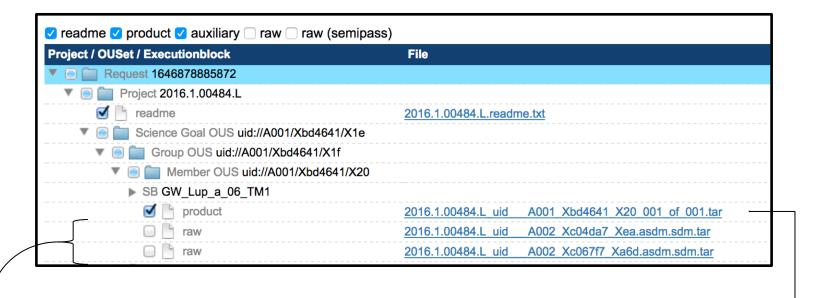
Downloading the data: Request Handler

- All data downloaded as tar files
- Large data sets may be broken into several pieces
 - Name is [project_code]_[OUS_ID]_m_of_n.tar
 - Raw data packaged as one tar file per execution block (EB)
 - name is [project_code]_[EB_ID].asdm.sdm.tar
- For Cycle 0-4 projects: tar ball download only
- For Cycle 5-present: individual files + tar ball
 - FITS images
 - Diagnostic plots
 - Weblog, etc.

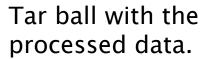




Cycles 0-4



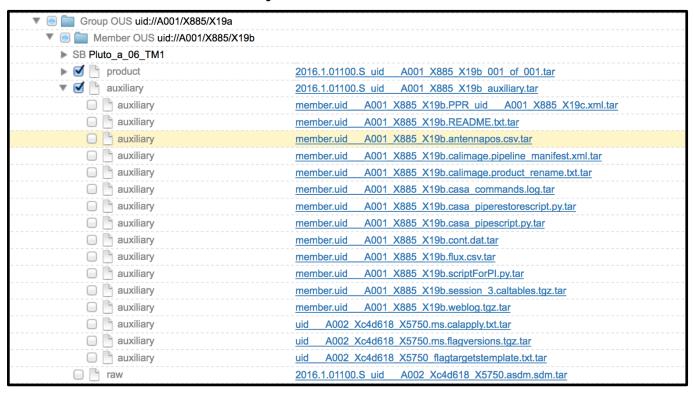
Raw data tar balls.







Cycles 5-Present







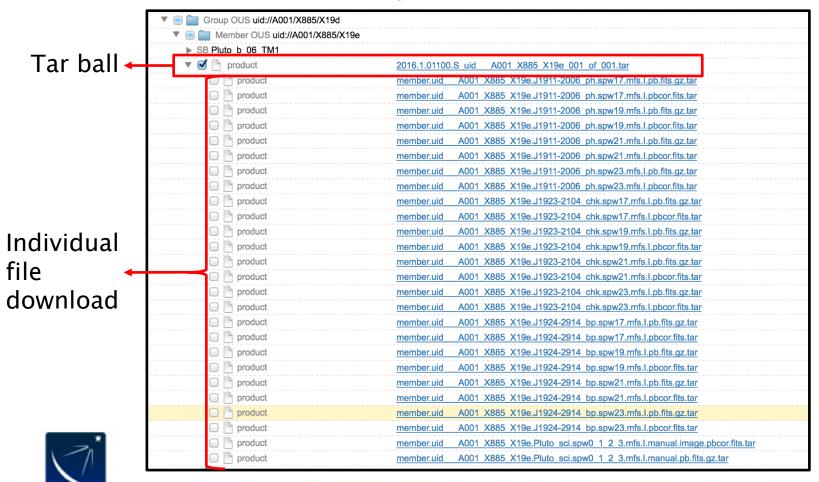
Cycles 5-Present







Cycles 5-Present





From do-not-reply@nrao.edu 😭
Subject ALMA Archive at NRAO: Request 223292105
Reply to

Reply

Reply All

⇒ Forward

rd Archive

Junk

1:24 PM

Other Actions

O Delete

Dear () () ()

Thank you for using the ALMA archive.

Your data selection (4.3GB) is available from this link

https://almascience.nrao.edu/rh/requests/nbrunett/223292105

We hope they meet your expectations and will lead to a successful completion of your scientific program.

Publications making use of these data must include the following statement in the acknowledgment:

"This paper makes use of the following ALMA data: ADS/JAO.ALMA#2012.1.00090.S. ALMA is a partnership of ESO (representing its member states), NSF (USA) and NINS (Japan), together with NRC (Canada) and NSC and ASIAA (Taiwan), in cooperation with the Republic of Chile. The Joint ALMA Observatory is operated by ESO, AUI/NRAO and NAOJ."

Please submit your requests for help, for a visit to the ARC, or to report any problems discovered in your data through the ALMA Helpdesk at https://help.almascience.org.

Best regards,

The North American ALMA Archive at the NAASC

Summary:

Files available: 2 (4.3GB)

Files under proprietary period: 0 (-)

Files not available: 0 (-)

Details:

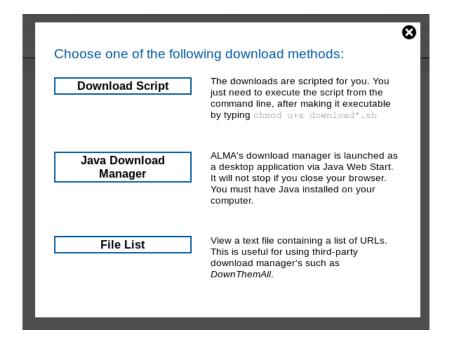
Files available:

- 2012.1.00090.S_uid__ A002_X5eed86_X2b_001_of_001.tar : AUTHORIZED
- 2012.1.00090.S_uid__ A002_X7143f6_Xf9b.asdm.sdm.tar : AUTHORIZED

Files under proprietary period:



Request Handler: Download options







Request Handler: script

```
#!/bin/bash
#Please use the current script to download the whole content of request
223732763

echo "Please provide a password"
read -s PASSWORD

wget    --auth-no-challenge    --no-check-certificate    --http-user="nbrunett" --
http-password=$PASSWORD
https://almascience.nrao.edu/dataPortal/api/requests/nbrunett/223732763/ALMA/2
012.1.00090.S_uid__A002_X5eed86_X2b_001_of_001.tar/2012.1.00090.S_uid__A002_
X5eed86_X2b_001_of_001.tar
.
.
.
.
.
```



Request Handler: Java Download Manager

