



The ALMA Science Archive

Felix Stoehr



ALMA Science Portal



- ALMA Science Portal
- ALMA Data
 - Science Verification data
 - Calibrator Catalogue data
 - Science Archive
- Programmatic access



almascience.org



Atacama Large Millimeter/submillimeter Array

In search of our Cosmic Origins



Please select your preferred ALMA Regional Centre (ARC). Alternatively you will be redirected in 13 seconds to the closest ARC which in your case is at



© C. Mayhew & R. Simmon



ALMA Science Portal at NRAO



ALMA Science Portal at ESO



ALMA Science Portal at NAOJ

Copyright © 2012-2013 ALMA



ALMA Science Portal



Atacama Large Millimeter/submillimeter Array

In search of our Cosmic Origins



Search Site



ESO

NRAO

NAOJ

Log in | Register | Reset Password | Forgot Account

About

Science

Proposing

Observing

Data

Documents & Tools

Knowledgebase/FAQ

You are here: Home

Welcome to the Science Portal at ESO



Atacama Large Millimeter/submillimeter Array

Cycle 3 Call for Proposals

The [Cycle 3 Call for Proposals](#) is now open for scientific observations that will be scheduled from October 2015 to September 2016. The proposal submission deadline is 15:00 UT on April 23, 2015.

This is the website for **The ALMA Science Portal**, served from one of the **ALMA Regional Centers (ARCs)** of the ALMA partner organizations: ESO, NRAO or NAOJ. You may switch between the different instances of the portal through the links to the appropriate ALMA partner at the top banner. Through this portal you can find details about the technical capabilities of ALMA, how to propose for observing time, and how to access ALMA data. It includes links to all official ALMA documents and tools, including those for preparing and submitting proposals and processing ALMA data. In order to access some of the tools, users must register with the project and login to the portal via the links at the top banner.

Each of the three ARCs provides additional **User Services**, including a **Helpdesk** for all user queries. Each ARC maintains additional web pages with information on region-specific user services, such as visitor and student programs, schools, workshops, financial programs and public outreach activities. These are accessed via the links under the **User Services at the ARCs** area in the left menu.

General News

ALMA Cycle 3 Call for Proposals is now open

Mar 24, 2015

Resubmission of unfinished Cycle 1 and 2 proposals for the Cycle 3 proposal review

Mar 24, 2015

Release of Science Verification data from the ALMA Long Baseline Campaign

Feb 17, 2015

Announcement of intent to release a new installment of Science Verification data

Feb 02, 2015

ALMA Cycle 3 Pre-announcement

Dec 08, 2014

More

Local News

2015 Call for 5 PhD Fellowships

Mar 02, 2015

One or two postdoctoral

User Services at ARCs

- Helpdesk
- ALMA Calendars
- EU ARC
- NA ARC
- EA ARC



Project delegation



Atacama Large Millimeter/submillimeter Array

In search of our Cosmic Origins



Search Site

ESO

NRAO

NAOJ

[Log in](#) | [Register](#) | [Reset Password](#) | [Forgot Account](#)

About

Science

Proposing

Observing

Data

Documents & Tools

Knowledgebase/FAQ

You are here: Home

Welcome to the Science Portal at ESO



Atacama Large Millimeter/submillimeter Array

Cycle 3 Call for Proposals

The [Cycle 3 Call for Proposals](#) is now open for scientific observations that will be scheduled from October 2015 to September 2016. The proposal submission deadline is 15:00 UT on April 23, 2015.

This is the website for **The ALMA Science Portal**, served from one of the **ALMA Regional Centers (ARCs)** of the ALMA partner organizations: ESO, NRAO or NAOJ. You may switch between the different instances of the portal through the links to the appropriate ALMA partner at the top banner. Through this portal you can find details about the technical capabilities of ALMA, how to propose for observing time, and how to access ALMA data. It includes links to all official ALMA documents and tools, including those for preparing and submitting proposals and processing ALMA data. In order to access some of the tools, users must register with the project and login to the portal via the links at the top banner.

Each of the three ARCs provides additional **User Services**, including a **Helpdesk** for all user queries. Each ARC maintains additional web pages with information on region-specific user services, such as visitor and student programs, schools, workshops, financial programs and public outreach activities. These are accessed via the links under the **User Services at the ARCs** area in the left menu.

General News

ALMA Cycle 3 Call for Proposals is now open

Mar 24, 2015

Resubmission of unfinished Cycle 1 and 2 proposals for the Cycle 3 proposal review

Mar 24, 2015

Release of Science Verification data from the ALMA Long Baseline Campaign

Feb 17, 2015

Announcement of intent to release a new installment of Science Verification data

Feb 02, 2015

ALMA Cycle 3 Pre-announcement

Dec 08, 2014

More...

Local News

2015 Call for 5 PhD Fellowships

Mar 02, 2015

One or two postdoctoral

User Services at ARCs

- Helpdesk
- ALMA Calendars
- EU ARC
- NA ARC
- EA ARC



Project delegation



Atacama Large Millimeter/submillimeter Array
In search of our Cosmic Origins



Search Site

ESO NRAO NAOJ

- About
- Science
- Proposing
- Observing
- Data
- Documents & Tools
- Knowledgebase/FAQ

User Services at ARCs

- Helpdesk
- ALMA Calendars
- EU ARC
- NA ARC
- EA ARC

You are here: Home

Welcome to the Science Portal at ESO



Cycle 3 Call for Proposals

The [Cycle 3 Call for Proposals](#) is now open for scientific observations that will be scheduled from October 2015 to September 2016. The proposal submission deadline is 15:00 UT on April 23, 2015.

This is the website for **The ALMA Science Portal**, served from one of the **ALMA Regional Centers (ARCs)** of the ALMA partner organizations: ESO, NRAO or NAOJ. You may switch between the different instances of the portal through the links to the appropriate ALMA partner at the top banner. Through this portal you can find details about the technical capabilities of ALMA, how to propose for observing time, and how to access ALMA data. It includes links to all official ALMA documents and tools, including those for preparing and submitting proposals and processing ALMA data. In order to access some of the tools, users must register with the project and login to the portal via the links at the top banner.

Felix Stoehr

- Profile
- Log out
- ALMA Cycle 3 Proposals is now open
Mar 24, 2015
- Resubmission of unfinished Cycle 1 and 2 proposals for the Cycle 3 proposal review
Mar 24, 2015
- Release of Science Verification data from the ALMA Long Baseline Campaign
Feb 17, 2015
- Announcement of intent to release a new installment of Science Verification data
Feb 02, 2015
- ALMA Cycle 3 Pre-announcement
Dec 08, 2014
- More...



Project delegation



Atacama Large Millimeter/submillimeter Array
In search of our Cosmic Origins

ESO NRAO NAOJ

Account info **Project delegation** Account linking

Allow access to your projects

Project code	Project title	Delegees
--------------	---------------	----------

+ Add delegee

- Remove delegee



ALMA Science Portal



Atacama Large Millimeter/submillimeter Array
In search of our Cosmic Origins



Search Site

ESO

NRAO

NAOJ

[Log in](#) | [Register](#) | [Reset Password](#) | [Forgot Account](#)

[About](#)

[Science](#)

[Proposing](#)

[Observing](#)

[Data](#)

[Documents & Tools](#)

[Knowledgebase/FAQ](#)

User Services at ARCs

- [Helpdesk](#)
- [ALMA Calendars](#)
- [EU ARC](#)
- [NA ARC](#)
- [EA ARC](#)

You are here: [Home](#)

Welcome to the Science Portal at ESO



Atacama Large Millimeter/submillimeter Array

Cycle 3 Call for Proposals

The [Cycle 3 Call for Proposals](#) is now open for scientific observations that will be scheduled from October 2015 to September 2016. The proposal submission deadline is 15:00 UT on April 23, 2015.

This is the website for **The ALMA Science Portal**, served from one of the **ALMA Regional Centers (ARCs)** of the ALMA partner organizations: ESO, NRAO or NAOJ. You may switch between the different instances of the portal through the links to the appropriate ALMA partner at the top banner. Through this portal you can find details about the technical capabilities of ALMA, how to propose for observing time, and how to access ALMA data. It includes links to all official ALMA documents and tools, including those for preparing and submitting proposals and processing ALMA data. In order to access some of the tools, users must register with the project and login to the portal via the links at the top banner.

Each of the three ARCs provides additional **User Services**, including a **Helpdesk** for all user queries. Each ARC maintains additional web pages with information on region-specific user services, such as visitor and student programs, schools, workshops, financial programs and public outreach activities. These are accessed via the links under the **User Services at the ARCs** area in the left menu.

General News

[ALMA Cycle 3 Call for Proposals is now open](#)

Mar 24, 2015

[Resubmission of unfinished Cycle 1 and 2 proposals for the Cycle 3 proposal review](#)

Mar 24, 2015

[Release of Science Verification data from the ALMA Long Baseline Campaign](#)

Feb 17, 2015

[Announcement of intent to release a new installment of Science Verification data](#)

Feb 02, 2015

[ALMA Cycle 3 Pre-announcement](#)

Dec 08, 2014

[More...](#)

Local News

[2015 Call for 5 PhD Fellowships](#)

Mar 02, 2015

[One or two postdoctoral](#)



ALMA Science Portal



Atacama Large Millimeter/submillimeter Array
In search of our Cosmic Origins



Search Site



ESO

NRAO

NAOJ

[Log in](#) | [Register](#) | [Reset Password](#) | [Forgot Account](#)

[About](#)

[Science](#)

[Proposing](#)

[Observing](#)

[Data](#)

[Archive](#)

[Calibrator Catalogue](#)

[Science Verification](#)

[Data Processing](#)

[Documents & Tools](#)

[Knowledgebase/FAQ](#)

**User Services at
ARCs**

- [Helpdesk](#)
- [ALMA Calendars](#)
- [EU ARC](#)
- [NA ARC](#)
- [EA ARC](#)

You are here: [Home](#) > [Data](#)

ALMA Data

The ALMA Archive

The first ALMA Science data are now public. These data are accessible through the Science Portal without user registration.

Data still within its proprietary period is only accessible to PIs as authenticated users. The data proprietary period is 12 months, starting at the time when data is delivered to the PI. A single project may be divided into more than one delivery and in these cases a unique 12 month proprietary period is defined for each delivered data set.

Access is provided through the [Archive link](#) in the left side-bar.

The ALMA Archive is under development and will eventually provide access to all data obtained by the ALMA observatory. This includes: raw science data from the correlators, calibration data, processed and quality assured data, including image data cubes as well as logs and reports on project execution and quality assurance.

The ALMA Calibrator Source Catalogue

A web-based user interface to the calibrator database is provided through the [Calibrator Catalogue link](#) in the left side-bar.

The intention is to provide a more complex, public search tool for calibrator sources, which can also be accessed through the Observing Tool and included into the Scheduling Blocks. The principles of the calibrator selection during observation are described in the [ALMA Cycle 2 Technical Handbook](#), A.8 'Calibration source selection'

The data comprise ALMA calibrator measurements of the flux density for sources drawn from seed catalogues such as ATCA, SMA and VLA, and use updated coordinates from VLBI. Stated flux density uncertainties do not in all cases fully account for uncertainties in the planetary models used for the primary amplitude calibration. Structure information, expressed as the acceptable uv range, is available for sources where relevant for past and current ranges of ALMA baseline. Polarization information will be added during Cycle 2. For further details on the Calibrator Source Catalogue, see Fomalont, E., et al., 2014, 'The Calibration of ALMA using Radio Sources', [The Messenger](#), 155, 19"



Science Verification Data





Atacama Large Millimeter/submillimeter Array
In search of our Cosmic Origins



ESO
NRAO
NAOJ

- About
- Science
- Proposing
- Observing
- Data
- Archive
- Calibrator Catalogue
- Science Verification
- ALMA Science Verification
- Data Processing
- Documents & Tools
- Knowledgebase/FAQ

User Services at ARCs

- Helpdesk
- ALMA Calendars
- EU ARC
- NA ARC

You are here: [Home](#) > [Data](#) > Science Verification

Science Verification Data

For general information on the Science Verification process and Verification projects, please use the link below:

[Science Verification](#)

Currently Available Science Verification Data:

We now have several datasets available to demonstrate the early capabilities of ALMA were available and while many of the subsystems were still being tested, so they are not expected from the system as it is today. They are provided here as a means for testing strategies and reduction techniques. Given that the data have been taken during early observing modes or strategies, so we ask the user to please review carefully the data before they will be expected during full operations, as indicated below.

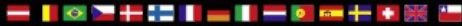
Note that only data with prepared CASA guides are kept up to date with the knowledge base article: "[If my data were calibrated and imaged in CASA 3.3 and](#)"

For reference the list of Science Verification targets that was provided with the observations have been completed or are in progress. We do not expect to observe

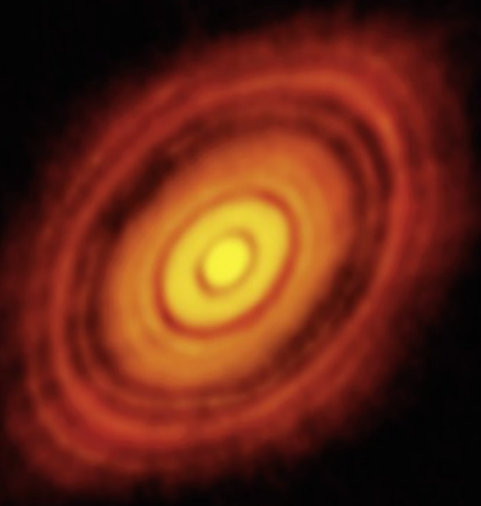
1. **TW Hya: Band 7, high spectral resolution.** Many thanks to the following people: *Hughes, Stuart Corder, Chunhua Qi, Karin Oberg, Michiel Hogerheide, Andrea Isella, Dmitry Semenov.*

Additional data on TW Hya is available (without a separate CASA guide) here: [Band 3](#), [Band 6](#).


The Messenger



No. 138 – December 2014



Go ahead for two-phase E-ELT construction
15 years of VLT Service Mode
The X-shooter spectral library
Galaxy clusters with CLASH-VLT





Calibrator Source Catalogue



Atacama Large Millimeter/submillimeter Array
In search of our Cosmic Origins

[ESO](#)[NRAO](#)[NAOJ](#)[Log in](#) | [Register](#) | [Reset Password](#) | [Forgot Account](#)[About](#)[Science](#)[Proposing](#)[Observing](#)[Data](#)[Archive](#)[Calibrator Catalogue](#)[Science Verification](#)[Data Processing](#)[Documents & Tools](#)[Knowledgebase/FAQ](#)

User Services at ARCs

- [Helpdesk](#)
- [ALMA Calendars](#)
- [EU ARC](#)
- [NA ARC](#)
- [EA ARC](#)

You are here: [Home](#) > [Data](#)

ALMA Data

The ALMA Archive

The first ALMA Science data are now public. These data are accessible through the Science Portal without user registration.

Data still within its proprietary period is only accessible to PIs as authenticated users. The data proprietary period is 12 months, starting at the time when data is delivered to the PI. A single project may be divided into more than one delivery and in these cases a unique 12 month proprietary period is defined for each delivered data set.

Access is provided through the [Archive link](#) in the left side-bar.

The ALMA Archive is under development and will eventually provide access to all data obtained by the ALMA observatory. This includes: raw science data from the correlators, calibration data, processed and quality assured data, including image data cubes as well as logs and reports on project execution and quality assurance.

The ALMA Calibrator Source Catalogue

A web-based user interface to the calibrator database is provided through the [Calibrator Catalogue link](#) in the left side-bar.

The intention is to provide a more complex, public search tool for calibrator sources, which can also be accessed through the Observing Tool and included into the Scheduling Blocks. The principles of the calibrator selection during observation are described in the [ALMA Cycle 2 Technical Handbook](#), A.8 'Calibration source selection'

The data comprise ALMA calibrator measurements of the flux density for sources drawn from seed catalogues such as ATCA, SMA and VLA, and use updated coordinates from VLBI. Stated flux density uncertainties do not in all cases fully account for uncertainties in the planetary models used for the primary amplitude calibration. Structure information, expressed as the acceptable uv range, is available for sources where relevant for past and current ranges of ALMA baseline. Polarization information will be added during Cycle 2. For further details on the Calibrator Source Catalogue, see Fomalont, E., et al., 2014, 'The Calibration of ALMA using Radio Sources', [The Messenger](#), 155, 19"



Calibrator Source Catalogue



ALMA Calibrator Source Catalogue

[Query Form](#) [Result Table](#) [Result Plot](#)

Position

Source name

RA

Dec

Search radius

Energy

Band

Frequency Min

Frequency Max

Flux Density Min

Flux Density Max

Time

After

Before





Calibrator Catalogue



ALMA Calibrator Source Catalogue

[Query Form](#)[Result Table](#)[Result Plot](#)Download

Note:

- hover over the column headers for more information
- click on the column headers to sort
- right-click on the column headers to display columns

Name	RA	RA Err.	DEC	DEC Err.	Freq.	Band	Flux ▼	Flux Err.	UvMin	UvMax	Observed
J0319+4130 J03...	03:19:48.1601	±0.0001	+41:30:42.106	±0.0001	91.5	3	19.28	±0.95		> 508.6	2015-01-13
J0319+4130 J03...	03:19:48.1601	±0.0001	+41:30:42.106	±0.0001	103.5	3	18.05	±0.80		> 508.6	2015-01-13
J2253+1608 J22...	22:53:57.7479	±0.0001	+16:08:53.561	±0.0001	91.5	3	17.43	±0.42		> 343.6	2015-01-04
J2253+1608 J22...	22:53:57.7479	±0.0001	+16:08:53.561	±0.0001	103.5	3	17.31	±0.36		> 343.6	2015-01-04
J1256-0547 J125...	12:56:11.1666	±0.0001	-05:47:21.525	±0.0001	91.5	3	13.81	±0.45		> 1160.7	2014-12-29
J1256-0547 J125...	12:56:11.1666	±0.0001	-05:47:21.525	±0.0001	91.5	3	13.72	±0.43		> 1160.7	2014-12-28
J2253+1608 J22...	22:53:57.7479	±0.0001	+16:08:53.561	±0.0001	233.0	6	12.87	±0.80		> 343.6	2015-01-03
J1229+0203 J12...	12:29:06.7000	±0.0001	+02:03:08.598	±0.0001	91.5	3	12.64	±0.57	20.0	> 1196.6	2014-12-29
J2253+1608 J22...	22:53:57.7479	±0.0001	+16:08:53.561	±0.0001	343.5	7	12.38	±0.73		> 343.6	2014-10-05
J1229+0203 J12...	12:29:06.7000	±0.0001	+02:03:08.598	±0.0001	91.5	3	12.29	±0.77	20.0	> 1196.6	2014-12-28
J0319+4130 J03...	03:19:48.1601	±0.0001	+41:30:42.106	±0.0001	233.0	6	11.3	±0.89		> 508.6	2014-10-12
J2202+4216 J22...	22:02:43.2914	±0.0001	+42:16:39.980	±0.0001	97.7	3	8.96	±0.45		> 64.4	2011-10-31
J2202+4216 J22...	22:02:43.2914	±0.0001	+42:16:39.980	±0.0001	109.8	3	8.91	±0.45		> 72.4	2011-10-31
J1256-0547 J125...	12:56:11.1666	±0.0001	-05:47:21.525	±0.0001	233.0	6	8.38	±0.39		> 1160.7	2014-12-01
J0319+4130 J03...	03:19:48.1601	±0.0001	+41:30:42.106	±0.0001	343.5	7	7.68	±1.00		> 508.6	2015-01-01
J1256-0547 J125...	12:56:11.1666	±0.0001	-05:47:21.525	±0.0001	343.5	7	6.64	±0.60		> 1160.7	2015-01-03
J1229+0203 J12...	12:29:06.7000	±0.0001	+02:03:08.598	±0.0001	233.0	6	5.71	±0.28	20.0	> 1196.6	2014-12-01
J0522-3627 J052...	05:22:57.9846	±0.0001	-36:27:30.851	±0.0001	91.5	3	5.34	±0.21	20.0	> 656.6	2014-12-28
J0522-3627 J052...	05:22:57.9846	±0.0001	-36:27:30.851	±0.0001	103.5	3	5.26	±0.21	20.0	> 656.6	2014-12-28
J0854+2006 J08...	08:54:48.8749	±0.0001	+20:06:30.641	±0.0001	91.5	3	5.13	±0.17		> 1470.4	2014-12-16
J0854+2006 J08...	08:54:48.8749	±0.0001	+20:06:30.641	±0.0001	103.5	3	5.05	±0.18		> 1470.4	2014-12-16



Calibrator Catalogue

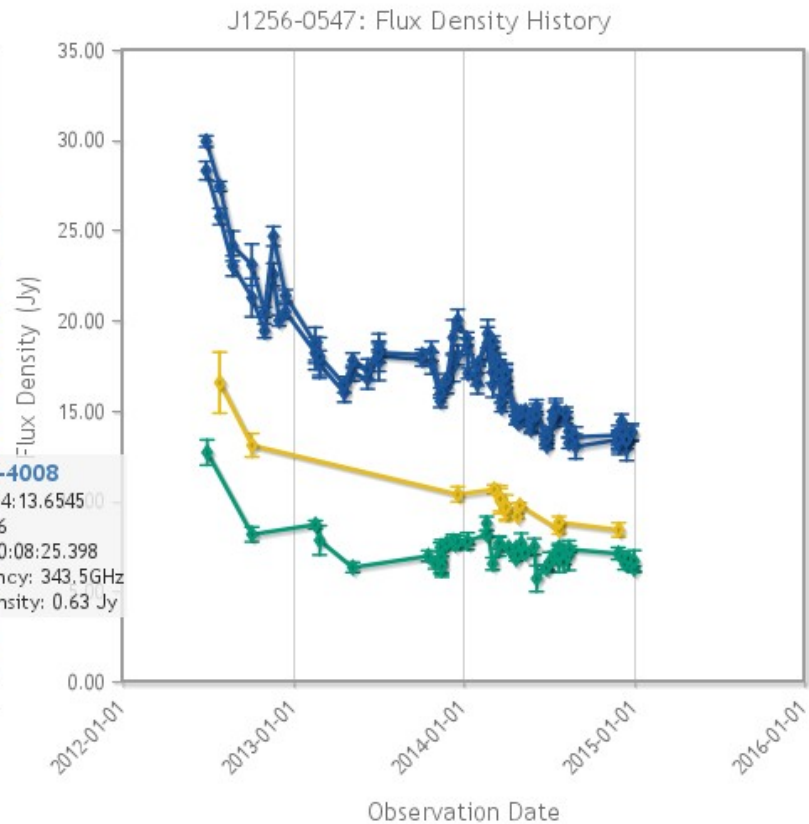
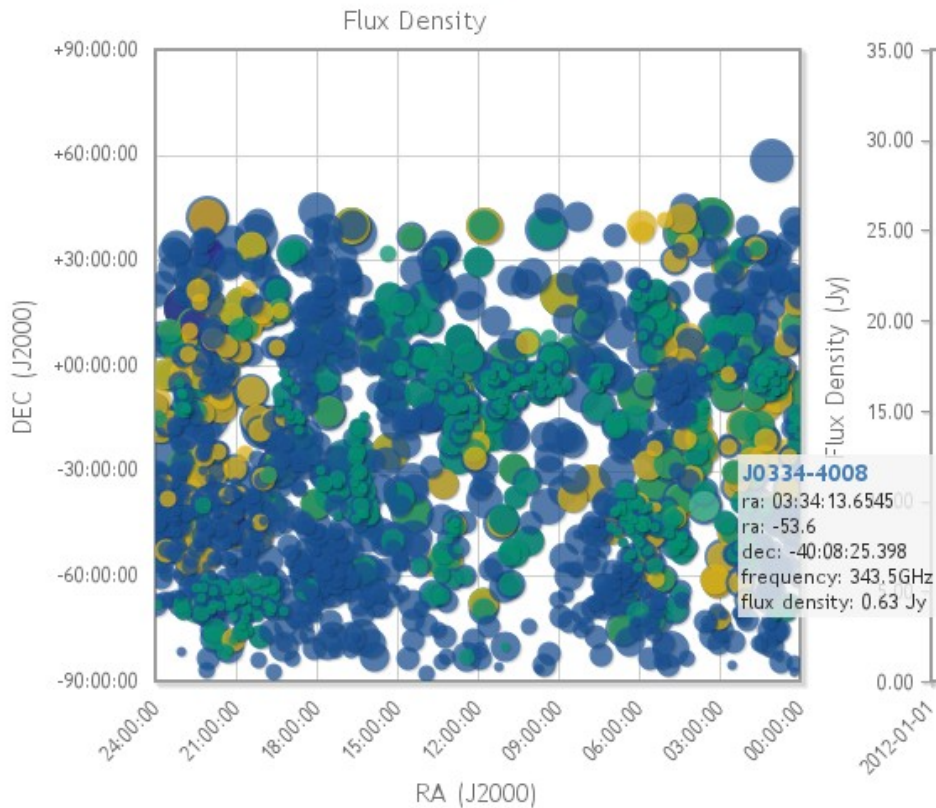


ALMA Calibrator Source Catalogue

Query Form

Result Table

Result Plot



- ALMA-Band 3
- ALMA-Band 6
- ALMA-Band 7
- ALMA-Band 9

- Flux Range Jy
- < 0.03
 - [0.03, 0.1)
 - [0.1, 0.3)
 - [0.3, 1.0)
 - [1.0, 3.0)



ALMA Science Archive



Atacama Large Millimeter/submillimeter Array
In search of our Cosmic Origins

[ESO](#)[NRAO](#)[NAOJ](#)[Log in](#) | [Register](#) | [Reset Password](#) | [Forgot Account](#)[About](#)[Science](#)[Proposing](#)[Observing](#)[Data](#)[Archive](#)[Calibrator Catalogue](#)[Science Verification](#)[Data Processing](#)[Documents & Tools](#)[Knowledgebase/FAQ](#)

User Services at ARCs

- [Helpdesk](#)
- [ALMA Calendars](#)
- [EU ARC](#)
- [NA ARC](#)
- [EA ARC](#)

You are here: [Home](#) > [Data](#)

ALMA Data

The ALMA Archive

The first ALMA Science data are now public. These data are accessible through the Science Portal without user registration.

Data still within its proprietary period is only accessible to PIs as authenticated users. The data proprietary period is 12 months, starting at the time when data is delivered to the PI. A single project may be divided into more than one delivery and in these cases a unique 12 month proprietary period is defined for each delivered data set.

Access is provided through the [Archive link](#) in the left side-bar.

The ALMA Archive is under development and will eventually provide access to all data obtained by the ALMA observatory. This includes: raw science data from the correlators, calibration data, processed and quality assured data, including image data cubes as well as logs and reports on project execution and quality assurance.

The ALMA Calibrator Source Catalogue

A web-based user interface to the calibrator database is provided through the [Calibrator Catalogue link](#) in the left side-bar.

The intention is to provide a more complex, public search tool for calibrator sources, which can also be accessed through the Observing Tool and included into the Scheduling Blocks. The principles of the calibrator selection during observation are described in the [ALMA Cycle 2 Technical Handbook](#), A.8 'Calibration source selection'

The data comprise ALMA calibrator measurements of the flux density for sources drawn from seed catalogues such as ATCA, SMA and VLA, and use updated coordinates from VLBI. Stated flux density uncertainties do not in all cases fully account for uncertainties in the planetary models used for the primary amplitude calibration. Structure information, expressed as the acceptable uv range, is available for sources where relevant for past and current ranges of ALMA baseline. Polarization information will be added during Cycle 2. For further details on the Calibrator Source Catalogue, see Fomalont, E., et al., 2014, 'The Calibration of ALMA using Radio Sources', [The Messenger](#), 155, 19"



ALMA Science Archive



Goal

Provide a Science Archive with web access and programmatic access to metadata and data. This Science Archive should understand queries by physical concepts and should be intuitively usable by non-radio astronomers and expert radio-astronomers alike.

Status

Currently the ALMA Science Archive only queries on the raw metadata → many rows for a single source may be returned.

The user interface, although it has improved a lot recently, is still under heavy development.

Future

Abstracts, Previews, metadata of publications, previews, visualization, access to individual science-grade products.



ALMA Science Archive



ALMA Science Archive Query

Query Form

Results Table

Search

Reset

[Query Help](#)

Position

Source name (Resolver)

Cen A ✓

Source name (ALMA)

RA Dec

Spatial resolution

Observation

Water vapour

Energy

Frequency

Source name (Resolver)

Case-insensitive search for source name, to be resolved with Sesame. Wildcard matching is disabled.

Usage.

Use Sesame (via. NED, Simbad and Vizier) to parse names commonly found throughout literature. A green tick indicates a successful search, otherwise, a red cross is returned.

Example

[Cen A](#)
[NGC3375](#)
[ARP220](#)

Time

Observation date

Source

NAME CENTAURUS A

Coordinates (RA Dec)

13:25:27.61 -43:01:08.8

Object type

Sy2 (Seyfert 2 Galaxy)

Morphology Type

S0pec

Resolver

Sesame using [Simbad](#)

Polarisation

Polarisation type

Options

View: raw data project

public data only

science observations only



ALMA Science Archive



ALMA Science Archive Query

Query Form

Results Table

Search

Reset

[Query Help](#)

Position

Source name (Resolver)

Cen A

Source name (ALMA)

RA Dec

Spatial resolution

Energy

Frequency

Bandwidth

Spectral resolution

Band

Time

Observation date

Integration time

Polarisation

Polarisation type

Observation

Water vapour

Project

Project code

Project title

PI name

co

- Cicone, Claudia
- Codella, Claudio
- Colina, Luis
- Combes, Francoise
- Conley, Alexander
- Coppin, Kristen
- Corder, Stuartt
- Cordiner, Martin
- Cortes, Paulo

PI Full Name

ALMA PI name

Description

case-insensitive partial match over the full PI name. Wildcards can be used

Example

Smith, Fred

SMP*

fr?d

Options

View: raw data project

public data only

science observations only



ALMA Science Archive



ALMA Science Archive Query

Query Form

Results Table

Search

Reset

[Query Help](#)

Position

Source name (Resolver)
Source name (ALMA)
RA Dec
Spatial resolution

Energy

Frequency

Bandwidth
Spectral resolution

Band

Time

Observation date
Integration time

Polarisation

Polarisation type

Observation

Water vapour

Project

Project code
Project title
PI name

Options

View: raw data project
 public data only
 science observations only



ALMA Science Archive



ALMA Science Archive Query

[Query Form](#)[Results Table](#)[Query Help](#)

Query Help

The tooltips that appear when you hover over the search boxes will give examples of searches, and show the unit in which to enter numerical quantities. The name resolver (SESAME) will resolve names of non-solar system objects using the SIMBAD, NED, and VizieR databases.

By default, the results of a search will be a list of publically available, raw observations of science targets. To see a project-level view, and/or proprietary data, choose the appropriate options in the lower-right box. In order to see also data from calibrator observations, select the appropriate entries from the "Scan Intent" field.

Below are a list of operators and wildcards that may be used in the search fields (apart from the name resolver field, which accepts no operators).

Numerical Operators		String Operators		String Wildcards		Logical Operators	
Equal	=	Equal	~	Any text	*	Or	
Not Equal	!=	Exactly equal (case sensitive)	=	Any single character	?		
Less than	<	Exactly equal (no wild cards)	==				
Less than or equal	≤	Not equal	!~				
Greater than	>	Not exactly equal (no wildcards)	!=				
Greater than or equal	≥						



ALMA Science Archive



ALMA Science Archive Query

Query Form Results Table

Search Reset

[Query Help](#)

Position

Source name (Resolver)
Cen A ✓
Source name (ALMA)
RA Dec
Spatial resolution

Energy

Frequency
Bandwidth
Spectral resolution
Band

Time

Observation date
Integration time

Polarisation

Polarisation type

Observation

Water vapour

Project

Project code
Project title
PI name

Options

View: raw data project

- public data only
- science observations only



ALMA Science Archive



ALMA Science Archive Query

Query Form

Results Table

Submit download request

public

[Results Bookmark](#) [Export Table](#) [Results Help](#)

Showing 1000 rows (1000 before filtering).

[More columns](#)

<input type="checkbox"/>	Project code	Source name ▲	RA	Dec	Band	Integration	Release date	Velocity resolution	Frequency support
Filter:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="m/s"/>	<input type="text"/>
<input type="checkbox"/>	2011.0.00010.S	CenA	13:25:27.62	-43:01:08.8	3	516.403	2015-02-12	415.31	87.05..89.14GHz
<input type="checkbox"/>	2011.0.00010.S	CenA	13:25:27.62	-43:01:08.8	3	516.546	2015-02-12	415.31	87.05..89.14GHz
<input type="checkbox"/>	2011.0.00010.S	CenA	13:25:27.62	-43:01:08.8	6	692.215	2015-02-12	667.58	217.61..220.48GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - CO knot S1	13:26:16.10	-42:46:55.7	6	57.255	2013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N1	13:27:25.30	-42:40:17.5	6	57.218	2013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N2	13:26:56.80	-42:41:37.4	6	57.226	2013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N3	13:26:40.50	-42:43:50.6	6	57.225	2013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N4	13:26:34.20	-42:46:19.8	6	57.237	2013-02-14	1324.13	211.67..231.05GHz
<input checked="" type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:27.62	-43:01:08.8	7	32.534	2015-06-30	848.45	332.20..347.95GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:14.85	-43:00:26.8	3	8.559	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:16.90	-43:00:13.9	3	8.559	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:16.90	-43:00:39.7	3	8.559	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:16.90	-42:59:48.0	3	8.606	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:18.94	-43:00:00.9	3	8.606	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:18.94	-43:00:52.6	3	8.559	In Progress	1269.75	112.30..115.30GHz

proprietary

has not yet been delivered to the PI



ALMA Science Archive



ALMA Science Archive Query

Query Form

Results Table

Submit download request

Results Bookmark Export Table Results Help

Showing 1000 rows (1000 before filtering).

[More columns](#)

<input type="checkbox"/>	Project code	Source name <small>▲</small>	RA	Dec	Band	Integration	Release date	Velocity resolution	Frequency support
Filter:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="m/s"/> <small>▼</small>	<input type="text"/>
<input type="checkbox"/>	2011.0.00010.S	CenA	13:25:27.62	-43:01:08.8	3	516			87.05..89.14GHz
<input type="checkbox"/>	2011.0.00010.S	CenA	13:25:27.62	-43:01:08.8	3	516			87.05..89.14GHz
<input type="checkbox"/>	2011.0.00010.S	CenA	13:25:27.62	-43:01:08.8	6	692			217.61..220.48GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - CO knot S1	13:26:16.10	-42:46:55.7	6	57.3			211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N1	13:27:25.30	-42:40:17.5	6	57.3			211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N2	13:26:56.80	-42:41:37.4	6	57.3			211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N3	13:26:40.50	-42:43:50.6	6	57.3			211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N4	13:26:34.20	-42:46:19.8	6	57.237	2013-02-14	1324.13	211.67..231.05GHz
<input checked="" type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:27.62	-43:01:08.8	7	32.534	2015-06-30	848.45	332.20..347.95GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:14.85	-43:00:26.8	3	8.559	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:16.90	-43:00:13.9	3	8.559	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:16.90	-43:00:39.7	3	8.559	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:16.90	-42:59:48.0	3	8.606	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:18.94	-43:00:00.9	3	8.606	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:18.94	-43:00:52.6	3	8.559	In Progress	1269.75	112.30..115.30GHz

Frequency	Resolution	Polarization
211.67..213.55GHz	976.56kHz	XX YY
213.67..215.54GHz	976.56kHz	XX YY
226.66..228.53GHz	976.56kHz	XX YY
229.18..231.05GHz	976.56kHz	XX YY



ALMA Science Archive



ALMA Science Archive Query

[Query Form](#)[Results Table](#)[Results Bookmark](#) [Export Table](#) [Results Help](#)

Export Table

To download the results table, click on one of the links below:

[VOTable \(XML Format\)](#)[CSV \(Comma Separated Values\)](#)[TSV \(Tab Separated Values\)](#)[Submit download request](#)

Showing 1000 rows (1000 before filtering).

[More columns](#)

<input type="checkbox"/>	Project code	Source name ▲	RA	Dec	Band	Integration	Release date	Velocity resolution	Frequency support
Filter:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="m/s"/> ▼	<input type="text"/>
<input type="checkbox"/>	2011.0.00010.S	CenA	13:25:27.62	-43:01:08.8	3	516.403	2015-02-12	415.31	87.05..89.14GHz
<input type="checkbox"/>	2011.0.00010.S	CenA	13:25:27.62	-43:01:08.8	3	516.546	2015-02-12	415.31	87.05..89.14GHz
<input type="checkbox"/>	2011.0.00010.S	CenA	13:25:27.62	-43:01:08.8	6	692.215	2015-02-12	667.58	217.61..220.48GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - CO knot S1	13:26:16.10	-42:46:55.7	6	57.255	2013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N1	13:27:25.30	-42:40:17.5	6	57.218	2013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N2	13:26:56.80	-42:41:37.4	6	57.226	2013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N3	13:26:40.50	-42:43:50.6	6	57.225	2013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N4	13:26:34.20	-42:46:19.8	6	57.237	2013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2012.1.00010.S	Centaurus A	13:25:27.62	-43:01:08.8	7	32.534	2015-06-30	848.45	232.20..247.95GHz



ALMA Science Archive



ALMA Science Archive Query

Query Form

Results Table

Submit download request

[Results Bookmark](#) [Export Table](#) [Results Help](#)

Showing 1000 rows (1000 before filtering).

[More columns](#)

<input type="checkbox"/>	Project code	Source name ▲	RA	Dec	Band	Integration	Release date	Velocity resolution	Frequency support
Filter:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="m/s"/>	<input type="text"/>
<input type="checkbox"/>	2011.0.00010.S	CenA	13:25:27.62	-43:01:08.8	3	516.403	2015-02-12	415.31	87.05..89.14GHz
<input type="checkbox"/>	2011.0.00010.S	CenA	13:25:27.62	-43:01:08.8	3	516.546	2015-02-12	415.31	87.05..89.14GHz
<input type="checkbox"/>	2011.0.00010.S	CenA	13:25:27.62	-43:01:08.8	6	692.215	2015-02-12	667.58	217.61..220.48GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - CO knot S1	13:26:16.10	-42:46:55.7	6	57.255	2013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N1	13:27:25.30	-42:40:17.5	6	57.218	2013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N2	13:26:56.80	-42:41:37.4	6	57.226	2013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N3	13:26:40.50	-42:43:50.6			013-02-14	1324.13	211.67..231.05GHz
<input type="checkbox"/>	2011.0.00454.S	CenA - Xray N4	13:26:34.20	-42:46:19.8			013-02-14	1324.13	211.67..231.05GHz
<input checked="" type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:27.62	-43:01:08.8			015-06-30	848.45	332.20..347.95GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:14.85	-43:00:26.8			In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:16.90	-43:00:13.9			In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:16.90	-43:00:39.7	3	8.559	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:16.90	-42:59:48.0	3	8.606	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:18.94	-43:00:00.9	3	8.606	In Progress	1269.75	112.30..115.30GHz
<input type="checkbox"/>	2012.1.00019.S	Centaurus_A	13:25:18.94	-43:00:52.6	3	8.559	In Progress	1269.75	112.30..115.30GHz

- Add to Google Calendar
- Add to Live Calendar
- Add to Yahoo! Calendar
- iCal
- vCalendar



ALMA Science Archive



Atacama Large Millimeter/Submillimeter Array
In search of our Cosmic Origins

Request Handler

Login

Archive Requests Req #848,936,240

Request #848936240 by Anonymous User ✓

[Click to edit](#)

Include raw

[Requested Projects](#) / [OUSets](#) / [Executionblocks](#)

Data entities 1-4 of 4

Project / OUSet / Executionblock	File	Size	Access
<input type="checkbox"/> Project 2012.1.00090.S			
<input type="checkbox"/> Science Goal OUS uid://A002/X5eed86/X29			
<input type="checkbox"/> Group OUS uid://A002/X5eed86/X2a			
<input type="checkbox"/> Member OUS uid://A002/X5eed86/X2b			
	<input type="checkbox"/> 2012.1.00090.S_uid_A002_X5eed86_X2b_001_of_001.tar	377.8MB	✓
	<input type="checkbox"/> 2012.1.00090.S_uid_A002_X7143f6_Xf9b.asdm.sdm.tar	4.0GB	✓

Data entities 1-4 of 4


4.3GB





ALMA Science Archive





Atacama Large Millimeter/Submillimeter Array
In search of our Cosmic Origins

Login

Request Handler

Archive Requests
Req #848,936,240

Request #848936240 by Anonymous User ✓
[Click to edit](#)

[Requested Projects / OUSets / Executionblocks](#)

Project / OUSet / Executionblock

- ✓ Project 2012.1.00090.S
 - ✓ Science Goal OUS uid://A002/X5eed86/X29
 - ✓ Group OUS uid://A002/X5eed86/X2a
 - ☐ ✓ Member OUS uid://A002/X5eed86/X2b

Choose one of the following download methods:

Download Script

The downloads are scripted for you. You just need to execute the script from the command line. [Help](#)

Download Manager

ALMA's download manager is launched as a browser applet. This is a simpler, more user-friendly way to download files in parallel, allowing you to pause and resume.

Web Start Download Manager

ALMA's download manager is launched as a desktop application via Java Web Start. It will not stop if you close your browser.

File List

View a text file containing a list of URLs. This is useful for using third-party download manager's such as *DownThemAll*.




side raw

Select All
Deselect All
Download Selected

	Size	Access
	377.8MB	✓
	4.0GB	✓
		4.3GB

Copyright © 2011 ALMA

ALMA, a worldwide collaboration



Download script

Downloading

```
https://almascience.eso.org/dataPortal/requests/anonymous/848936240/ALMA/2012.1.00090.S_uid___A002_X5eed86_X2b_001_of_001.tar/2012.1.00090.S_uid___A002_X5eed86_X2b_001_of_001.tar
```

```
https://almascience.eso.org/dataPortal/requests/anonymous/848936240/ALMA/uid___A002_X7143f6_Xf9b/2012.1.00090.S_uid___A002_X7143f6_Xf9b.asdm.sdm.tar
```

in up to 5 parallel streams. Total size is 4.3GB. This may take a while ...

```
starting download of 2012.1.00090.S_uid___A002_X7143f6_Xf9b.asdm.sdm.tar
```

```
starting download of 2012.1.00090.S_uid___A002_X5eed86_X2b_001_of_001.tar
```



ALMA Science Archive



ALMA Download Manager

Filename	Status	Progress	
2012.1.00090.S_uid__A002_X5eed86_X2b_001_of_001.tar	Completed	100% - 377.8MB of 377.8MB, 6.0GB/s	▲
2012.1.00090.S_uid__A002_X7143f6_Xf9b.asdm.sdm.tar	Completed	100% - 4.0GB of 4.0GB, 96.5GB/s	▲

16:29:12 2012.1.00090.S_uid__A002_X5eed86_X2b_001_of_001.tar Downloading ---> 16:29:12 Completed 377.8MB 6.0GB/s
16:29:12 2012.1.00090.S_uid__A002_X7143f6_Xf9b.asdm.sdm.tar Downloading ---> 16:29:12 Completed 4.0GB 96.5GB/s

Speed: 0.0bytes/s | Completed 2 of 2 files, failed 0 | 4.3GB of 4.3GB Concurrent Downloads:



ALMA Science Archive



File list

Request 848936240

total size of files: 4.3GB

PLEASE do not attempt to chop a single download into pieces to make it faster. This places a significant load on our servers and may result in your downloads being throttled. For example, in the Firefox plugin *DownThemAll*, make sure that the property "Max. Number of Segments Per Downloads" is set to 1. Likewise, it's easy to download more than 5 files in parallel. Please don't.

- https://almascience.eso.org/dataPortal/requests/anonymous/848936240/ALMA/2012.1.00090.S_uid__A002_X5eed86_X2b_001_of_001.tar/2012.1.00090.S_uid__A002_X5eed86_X2b_001_of_001.tar
- https://almascience.eso.org/dataPortal/requests/anonymous/848936240/ALMA/uid__A002_X7143f6_Xf9b/2012.1.00090.S_uid__A002_X7143f6_Xf9b.asdm.sdm.tar



astroquery



- ALMA provides programmatic access to metadata and data
- Astroquery, an externally developed python package (Adam Ginsburg), makes use of this functionality
- <https://astroquery.readthedocs.org/en/latest/alma/alma.html>
- Documentation: <http://goo.gl/21QQnI>



astroquery



Example

```
from astroquery.alma import Alma
import numpy as np

m83_data = Alma.query_object('M83')
print(m83_data)

myAlma = Alma()
myAlma.cache_location = '/big/external/drive/'
myAlma.retrieve_data_from_uid(uids[0])
```



ALMA Science Archive



Questions, suggestions, comments, wishes?

help.almascience.org