

The ALMA Proposal Submission Process

How to get started, and what to expect



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Atacama Large Millimeter/submillimeter Array
Expanded Very Large Array
Robert C. Byrd Green Bank Telescope
Very Long Baseline Array



This talk is for you if...

- You are new to ALMA and have not yet had experience with the relevant documentation...
- You have not downloaded the ALMA Observing Tool (OT) or even know where to get it.
- You have a fabulous science case that will be essential to follow-up with ALMA facilities
- You would like examples of science use cases for ALMA
- You were familiar with past Cycles and wonder what Cycle 4 capabilities are now available and what changes will be made before the Call for Proposals.

This talk will be available online for reference after this workshop.

Proposal Checklist

- Read relevant documentation (CfP Guide, Primer, etc.)
- Create an ALMA account by registering at the Science Portal (almascience.org)
- Download the Observing Tool (OT) & related guides
- Prepare the Science Case
 - New capabilities for Cycle 4!
- Prepare Science Goals (sources, frequency & correlator setup, integration times) within the OT
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Cycle 4 Documentation & Timeline

- Call for Proposals
- ALMA Primer
- OT Guide
- ALMA Tech Handbook

- Timeline for Cycle 4
 - Mar. 22 – Call for Proposals
 - Apr. 21 – Proposal Deadline
 - Aug. 31 – Review Complete
 - Oct. 1 – Start of Cycle 4
 - Duration – 11 months/year



Observing with *ALMA*
A Primer for Early Science



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User Services at ARCs

- Helpdesk
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Welcome to the Science Portal at NRAO



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General News

ALMA Cycle 4 Information for Large Programs
Feb 04, 2016

Participation of ALMA in GMVA observations in ALMA Cycle 4
Jan 13, 2016

Release of a new installment of Science Verification data
Dec 21, 2015

ALMA Cycle 4 Pre-announcement
Dec 14, 2015

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

NRAO Events

AAAS 2016: Planet Formation With Radio Eyes
Feb 13, 2016
Washington, DC



www.almascience.org
ALMA Science Portal @ NRAO

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Downloading the ALMA OT



- Science
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 - Learn More
 - Sensitivity Calculator
 - DDT proposals
 - Observing Tool
 - Troubleshooting
 - OT Video Tutorials
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User Services at ARCs

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Observing Tool

The ALMA Observing Tool (OT) is a Java application used for the preparation and submission of ALMA Phase I (observing proposal) and Phase II (telescope runfiles for accepted proposals) materials. It is also used for preparing and submitting Director's Discretionary Time (DDT) proposals. The current Cycle 3 release of the OT is configured for the Early Science Capabilities of ALMA as described in the [Cycle 3 Call For Proposals](#). Note that in order to submit proposals you will have to register with the ALMA Science Portal beforehand.

Note that preparation of Cycle 2 Phase II and DDT proposals needs to be done using the Cycle 2 version of the Observing Tool. This version of the OT can be found in the [DDT page](#), or the Phase II menu.

Download & Installation

The OT will run on most common operating systems, as long as you have **Java 8** installed (see the [troubleshooting page](#) if you are experiencing Java problems). The ALMA OT is available in two flavours: Web Start and tarball.

The **Web Start** application is the recommended way of using the OT. It has the advantage that the OT is automatically downloaded and installed on your computer and it will also automatically detect and install updates. There are some issues with Web Start, particularly that it does not work with the Open JDK versions of Java such as the "Iced Tea" flavour common on many modern Linux installations. The Sun/Oracle variant of Java should therefore be installed instead. If this is not possible, then the tarball installation of the OT is available.

The **tarball** version must be installed manually and will not automatically update itself, however there should be no installation issues. For Linux users, we also provide a download complete with a recommended version of the Java Runtime Environment. Please use this if you have any problems running the OT tarball install with your default Java.



Documentation

Extensive documentation is available to help you work with the OT and optimally prepare your proposal:

- If you are a novice OT user you should start with the [OT Quickstart Guide](#), which takes you through the basic steps of ALMA proposal preparation.
- Audio-visual illustrations of different aspects of the OT can be found in the [OT video tutorials](#). These are recommended for novices and advanced users alike.
- More in-depth information on the OT can be found in the [User Manual](#), while concise explanations of all fields and menu items in the OT are given in the [Reference Manual](#). These two documents are also available within the OT under the Help menu.

Troubleshooting

If you have problems with the installation and/or startup of the OT, please see the [troubleshooting page](#). A list of currently known bugs, their status and possible workarounds can be found on the regularly updated [known OT Issues](#) page. A further source of information is the [OT section of the ALMA](#)



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OT Video Tutorials

The OT video tutorials provide an audio-visual demonstration of different aspects of proposal preparation in the OT. Novice users should start with the first video and work their way down, while more experienced users may want to jump straight to one of the specialised videos. Video tutorial 4 is of particular interest even for expert OT users, since the Technical Justification has changed significantly compared to Cycle 2.

OT Video Tutorial 1: Useful to Know

This video will give you a general overview of how the OT works, including the layout, various tools, and some useful tips and tricks. It will also introduce the concept of Science Goals, which contain all the technical details of the observations proposed.



OT Video Tutorial 2: The Spectral Setup

Here, we demonstrate how to set up continuum, spectral line and spectral scan observations and introduce the spectral visualisation tool as well as the

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Science Case

- Must include:
 - Estimated intensity, S/N
 - Technical Justification

- May include:
 - Figures
 - Tables
 - References

- Free-form PDF document
 - 12+ font, English only
 - 20 MB file size
 - 4 pages (6 for Large Projects)

Start date	Configuration	Longest baseline	LST for best observing conditions	Days available
2016 October 14	C40-7	2.7 km	~ 22h - 11h	13
2016 November 4	C40-6	2 km	~ 23h - 12h	11
2016 November 25	C40-5	1 km	~ 1h - 13h	7
2016 December 9	C40-4	0.75 km	~ 2h - 14h	7
2016 December 23	C40-3	0.5 km	~ 3h - 15h	11
2017 January 13	C40-2	0.25 km	~ 4h - 17h	9
2017 February 1-28	<i>February shutdown</i>			
2017 March 16	C40-1	0.15 km	~ 8h - 22h	17
2017 April 6	C40-3	0.5 km	~ 9h - 23h	11
2017 April 27	C40-5	1 km	~ 10h - 1h	7
2017 May 11	<i>Move to configuration C40-9</i>			
2017 June 8	C40-9	12.6 km	~ 12h - 3h	16
2017 July 6	C40-8	5.4 km	~ 14h - 5h	22
2017 August 17	C40-7	2.7 km	~ 17h - 8h	23

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New Capabilities

- VLBI / Phased ALMA
- Full Polarization
- Solar Observing
- Standalone ACA
- No 10° source restriction

<http://youtu.be/YMISe-C8GUs>

Large Projects

- Any project >50 hours
- Standard observing modes
- Automatic 'A' grade
- +2 pages for Science Case
 - Data/Project Mgmt. Plans
 - Enhanced Data Products

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Project Structure

Proposal Program

Unsubmitted Proposal

- Project
 - Proposal
 - Planned Observing
 - ScienceGoal (Copy of B6 12CO (2-1): NGC3256)
 - General
 - Field Setup
 - Spectral Setup
 - Calibration Setup
 - Control and Performance
 - Technical Justification

Template library. Turn the keys on the JTree below & r...

- Proposal
 - Planned Observing
 - ScienceGoal (B3 spectral sweep CO)
 - ScienceGoal (B7 continuum: COSMO)
 - ScienceGoal (B7 CO(9-8): Cosmic Eye)
 - ScienceGoal (B9 continuum: Cosmic Eye)
 - ScienceGoal (B3 spectral sweep: PK)
 - ScienceGoal (B3 continuum: GRB To)
 - ScienceGoal (B6 continuum: GRB To)
 - ScienceGoal (B7 continuum: GRB To)
 - ScienceGoal (B6 continuum: GRB To)
 - ScienceGoal (B3 continuum: GRB To)
 - ScienceGoal (B6 12CO (2-1): NGC3256)
 - ScienceGoal (B6 13CO (2-1): NGC3256)
 - ScienceGoal (B6 spectral line: Massif)
 - ScienceGoal (B9 spectral line: Massif)
 - ScienceGoal (B3 continuum: Protostar)
 - ScienceGoal (B6 continuum: Protostar)

Editors

Spectral Spatial Field Setup

Source Name: NGC3256

Choose a Solar System Object? Name of object: Unspecified

System: J2000 Sexagesimal display? Parallax: 0.00000 mas

Source Coordinates: RA: 10:27:51.6000 PM RA: 0.00000 mas/yr
Dec: -43:54:18.000 PM DEC: 0.00000 mas/yr

Source Radial Velocity: 0.000 km/s hel z: 0.000000000 Doppler Type: RELATIVISTIC

Target Type: Individual Pointing(s) 1 Rectangular Field

Expected Source Properties

Peak Continuum Flux Density per Beam: 0.17400 Jy

Continuum Polarization Percentage: 0.0 %

Peak Line Flux Density per Beam: 0.00000 Jy

Line Width: 0.00000 km/s

Line Polarization Percentage: 0.0 %

Rectangle

Coords Type: ABSOLUTE RELATIVE

System: J2000

Field Center Coordinates: Offset(Longitude): 0.00000 arcsec
Offset(Latitude): 0.00000 arcsec

Feedback

Validation Validation History Log

Description	Suggestion
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Dec 07, 2015

Release of a new installment of ALMA Test data

Nov 11, 2015

More...

NRAO Events

AAAS 2016: Planet Formation With Radio Eyes

Feb 13, 2016

Washington, DC

www.almascience.org

ALMA Science Portal @ NRAO



I could use a hand...

Have no fear, the ALMA Helpdesk is here...

ALMA



Login

Remember me

Lost password

- » Knowledgebase
 - General ALMA Queries (13)
 - Early Science - Cycle 1 (31)
 - Resources & Observer Support (12)
 - Project Planning (14)
 - ALMA Observing Tool (OT) (29)
 - Proposal Handling (5)
 - Archive & Data Retrieval (4)
 - Offline Data Reduction and/or CASA (14)
 - Development Program (1)

Knowledgebase

- General ALMA Queries (13)**
 - Can I submit a ticket in Japanese?
 - How close can ALMA observe to the Sun?
- Early Science - Cycle 1 (31)**
 - Can I use "breakpoints" in ALMA cycle 1?
 - The Cycle 1 Technical Handbook has some gaps in its discussion of ALMA receivers (SSB, 2SB, DSB). What else can you tell me about them?
- Resources & Observer Support (12)**
 - How do I arrange a visit to one of the ARCs?
 - Where can I find ALMA documentation and manuals?
- Project Planning (14)**
 - What should I include for the content of the Technical Justification and in what format should I submit it?
 - Where can I find the online ALMA observing simulator developed by the University of Manchester?
- ALMA Observing Tool (OT) (29)**
 - What do I do if I can't get the OT to work?
 - How do I deal with targets with unspecified coordinates in the OT?
- Proposal Handling (5)**
 - May I submit an identical proposal to more than one category, e.g. submitting a proposal on distant galaxies both to cosmology and to galaxy categories?
 - Which category should I submit a proposal on distant galaxies: "cosmology/high-z" or "Galaxies/Nudei"?

Live Chat Software by Kayako





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Early Science - Cycle 2

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Please type your question here

View Tickets

Submit a Ticket

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Latest Updates

No information available in this view

help.almascience.org

ALMA Helpdesk @ NRAO (logged in view)

The screenshot shows the 'Agt Project - Observing Tool for ALMA, version Cycle2Test2' application window. The 'File' menu is open, showing options like 'New Proposal', 'New DDT Proposal', 'Open Project', 'Save', 'Validate', and 'Submit Project'. Two callout boxes provide instructions: one points to the 'Validate' menu item, and another points to the 'Submit Project' menu item. The main interface includes an 'Editors' section with tabs for 'Spectral', 'Spatial', and 'Project', and a 'Feedback' section with tabs for 'Validation', 'Validation History', and 'Log'. A 'Contextual Help' panel is visible at the bottom, containing a list of steps and a flowchart for 'Phase 1: Science Proposal'.

Click here to make sure that your project can be validated by the OT. If it won't, you will not be able to submit it.

When you are satisfied that your proposal is complete, click here to submit your project to the ALMA Archive

Contextual Help

1. Please ensure you and your co-Is are registered with the [ALMA Science Portal](#)
2. Create a new proposal by either:
 - Selecting *File > New Proposal*
 - Clicking on the icon in the toolbar
 - Or clicking on this [link](#)
3. Click on the [proposal](#) tree node and complete the relevant fields.

Phase 1: Science Proposal

New Science Proposal → Create Science Goals → Validate Science Proposal → Submit Science Proposal

Click on the overview steps to view the contextual help

Importing And Exporting | Template Library | Need More Help? | View Phase 2 Steps

After submission

- Remember, you can resubmit as often as needed, but keep in mind that the server is quite busy right before the deadline
- Standard and ToO proposals will be reviewed by the ALMA Proposal Review Committee (APRC) and the ALMA Review Panels (ARP).
- All proposals will be subject to Technical Assessment by a selected group of JAO and ARC experts.
- Proposals will be assessed on the basis of the overall scientific merit of the proposed investigation and its potential contribution to the advancement of scientific knowledge.
- Following approval by the Directors Council, the outcome of the Proposal Review Process will be communicated to the PIs of all valid submitted proposals, expected in August 2016.

After submission

- Phase II
 - Scheduling Blocks are generated in batches
 - These roughly coincide with configuration schedule
 - Depending on project, you may be able to create your own SBs
 - Otherwise, P2G will create them for your review
 - Review and respond these SBs!
 - Being prompt helps ensure your project can be observed!
- Then wait – dynamic scheduling means your Contact Scientist doesn't know when your project will run. As observations are made, updates are shown in the Project Tracker on the Science Portal:

<https://almascience.nrao.edu/observing/project-tracker>



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.

