

The ALMA Proposal Preparation Process

How to get started and what to expect



Dyas Utomo (OSU) & Angus Mok (Toledo)



Atacama Large Millimeter/submillimeter Array
Expanded Very Large Array

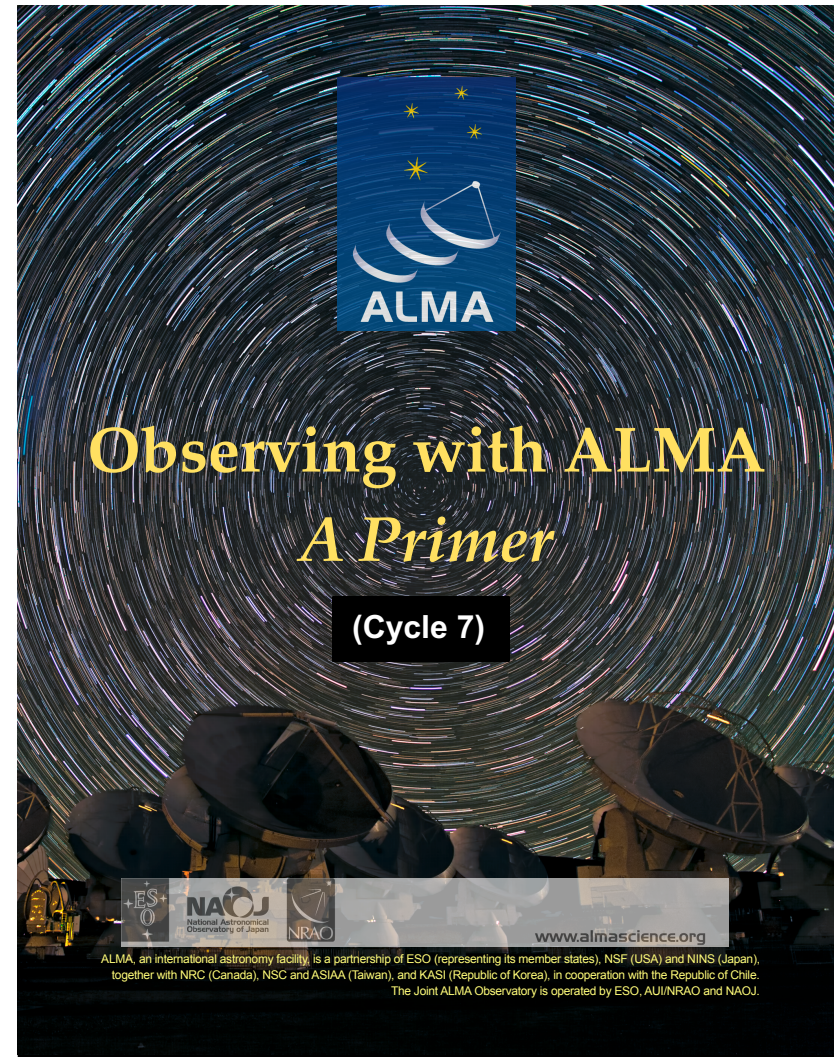


Proposal Checklist

- 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 7!
- Prepare Science Goals (sources, frequency & correlator setup, integration times) within the OT
- Make use of the Helpdesk & the Knowledgebase

Cycle 7 Documentation & Timeline

- Call for Proposals
- Proposer's Guide
- ALMA Primer
- OT Guide
- ALMA Tech Handbook
- Timeline for Cycle 7
 - Mar. 19 – Call for Proposals
 - **Apr. 17** – Proposal Deadline
 - **End of July** – Results to PIs
 - Sept. 5 – Phase 2 submission
 - Oct. 2019 – Start of Cycle 7
 - Sept. 2020 – End of Cycle 7



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ALMA Science Portal @ NRAO



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Announcement of 3mm VLBI in Cycle 7
Jan 07, 2019

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Dec 19, 2018

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More...

NRAO News

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More...

Status

[Configuration Schedule](#)
[Cycle 6 Highest Priority Projects](#)

Refereed publications: 1300
Last observed source:
Northeast_Section_of_NGC6334
Current configuration: C43-1

More...

Hover your mouse to Log In, there is automatic drop-down menu, and click on Register

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Downloading the ALMA OT



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Observing Tool

The ALMA Observing Tool (OT) is a Java application used for the preparation and submission of ALMA Phase 1 (observing proposal) and Phase 2 (telescope runfiles for accepted proposals) materials. It is also used for preparing and submitting Director's Discretionary Time (DDT) proposals. The current *Cycle 6* release of the OT is configured for the present capabilities of ALMA as described in the [Cycle 6 Call For Proposals](#). Note that in order to submit proposals you will have to register with the ALMA Science Portal beforehand.

Download & Installation

The OT will run on most common operating systems, as long as a **64-bit version of Java 8** is 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 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.

Webstart

Tarball

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.



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Science Case

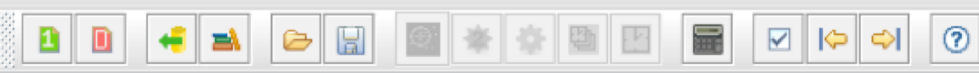
- Must include:
 - Astronomical Importance
 - Estimated intensity, S/N
- May include:
 - Figures
 - Tables
 - References
- Free-form PDF document
 - 12+ font, English only **** new: the OT will check font size!**
 - maximum 20 MB file size
 - 4 pages (6 for Large Projects)
 - A4 or US Letter format

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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...

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

- Proposal
 - Planned Observing
 - ScienceGoal (B3 spectral sweep: PK: Cosmic Eye)
 - ScienceGoal (B7 continuum: COSMO)
 - ScienceGoal (B7 CO(9-8): Cosmic Eye)
 - ScienceGoal (B9 continuum: Cosmic Eye)
 - ScienceGoal (B3 spectral sweep: PK: Cosmic Eye)
 - 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: Massive Star Formation)
 - ScienceGoal (B9 spectral line: Massive Star Formation)
 - ScienceGoal (B3 continuum: Protostar)
 - ScienceGoal (B6 continuum: Protostar)

Editors

Spectral Spatial Field Setup

Source Name NGC3256 Resolve

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 -43:54:18.0000 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 Regular 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

See the OT presentation!

Feedback

Validation Validation History Log

Description	Suggestion

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ALMA



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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)

Live Chat Software by Kayako

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SEARCH

Knowledgebase

General ALMA Queries (13)

- Can I submit a ticket in Japanese?
- How close can ALMA observe to the Sun?

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?

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?

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?

Resources & Observer Support (12)

- How do I arrange a visit to one of the ARCs?
- Where can I find ALMA documentation and manuals?

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"?





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Knowledgebase

- General ALMA Queries (14)
- Early Science - Cycle 2
- Early Science - Cycle 1 (31)
- Resources & Observer Support (12)
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- Offline Data Reduction and/or CASA (15)
- Development Program (1)

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ALMA Helpdesk @ NRAO (logged in view)



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.

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 at the end of July 2019.

After submission

- Phase II (Creating and Queuing Scheduling Blocks)
 - PIs review their scheduling blocks by Sept. 5, 2019
 - Any change requests need to go to the Helpdesk, and possibly a formal change request
 - 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 SnooPI tool on the Science Portal:

<https://almascience.nrao.edu/observing/snoopi>