# The ALMA Proposal Submission Process

How to get started, and what to expect



#### Alison Peck, Harvey Liszt, Tony Remijan





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 followup with ALMA facilities...
- You would like examples of science use cases for ALMA
- You were familiar with Cycle 2 and wonder what Cycle 3 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.





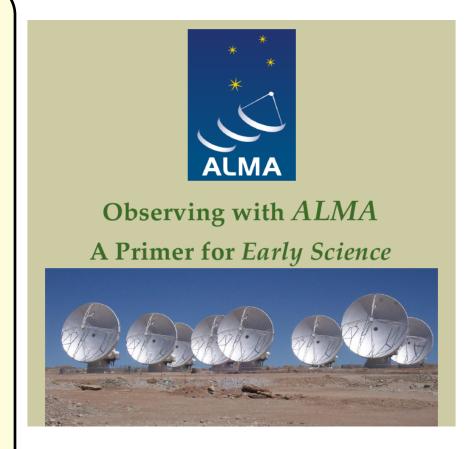
- Read relevant documentation (CfP, Primer, etc...)
- Create an ALMA account by registering at the Science Portal (almascience.org)
- Download the Observing Tool (OT) & related guides
- Prepare the Science Case (PDF file)
- Prepare Science Goals (sources, frequency & correlator setup, integration times) within the OT
- Prepare the Technical Justification
  - New Technical Justification inside each SG
- Make use of the Helpdesk & the Knowledgebase





### **Cycle 3 Documentation & Timeline**

- Call for Proposals
- ALMA Primer
- OT Guide
- ALMA Tech Handbook
- Timeline for Cycle 3
  - Mar 24 Call for Proposals
  - Apr 23 Proposal Deadline
  - Oct 1 Start of Cycle 3
  - Duration 12 months







- 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 (PDF file)
- Prepare Science Goals (sources, frequency & correlator setup, integration times) within the OT
  - New Technical Justification inside each SG
- Make use of the Helpdesk & the Knowledgebase





# www.almascience.org

Atacama Large Millimeter/submillimeter Array

In search of our Cosmic Origins



Search Site

0

**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 NRAO



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 bander.

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

#### **General News**

Release of Science Verification data from the ALMA Long Baseline Campaign

Feb 16, 2015

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

Feb 02, 2015

ALMA Cycle 3 Pre-announcement

Dec 08, 2014

ALMA Status Report: November 2014

Nov 12, 2014

Additional Scope for Long Baseline Science Verification Targets

Oct 30, 2014

More...

**NRAO Events** 

NRAO Community Day at

NRAO User Support

Helpdesk Call for Proposal



**ALMA Science Portal @ NRAO** 



- 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 (PDF file)
- Prepare Science Goals (sources, frequency & correlator setup, integration times) within the OT
  - New Technical Justification inside each SG
- Make use of the Helpdesk & the Knowledgebase



# Downloading the ALMA OT ALMA



About

Proposing

Call for Proposals

Road Map

Sensitivity Calculator

DDT proposals

Observing Tool

Web Start Download

Page

Tarball Download Page

OT Video Tutorials

Troubleshooting

Observing

Data

Documents & Tools

Knowledgebase/FAQ

**User Services at ARCs** 

- Helpdesk
- EU ARC

You are here: Home > Proposing > Observing Tool

#### 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 1 release of the OT is configured for the Early Science Capabilities of ALMA as described in the Cycle 1 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 you have Java 6 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 run time environment. Please use this if you have any problems running the OT tarball install with your default Java.

#### 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 akes 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 tound in the User Manual, while cope is 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.





- 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 (free-form PDF file, 4 pages)
- Prepare Science Goals (sources, frequency & correlator setup, integration times) within the OT
  - New Technical Justification inside each SG
- Make use of the Helpdesk & the Knowledgebase





- 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 (PDF file)
- Prepare Science Goals (sources, frequency & correlator setup, integration times) within the OT
  - New Technical Justification inside each SG
- Make use of the Helpdesk & the Knowledgebase





- 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 (PDF file)
- Prepare Science Goals (sources, frequency & correlator setup, integration times) within the OT
  - >>New Technical Justification inside each SG<<<</li>
- Make use of the Helpdesk & the Knowledgebase



Tech Justification New for Cycle 3 File Edit View Tool Search Help Perspective 1 Project Structure Proposal Program Spectral Spatial Technical Justification Enter a Technical Justification for this Science Goal, paying special attention to the parameters reproduced below. Observing Tool for ALMA Cycle3 Ground roposal 🚰 Sensitivity Planned Observing ? ScienceGoal (Science Goal) Requested RMS over 2.4414062500000005E-4 GHz is 3.00 mJy For a peak flux density of 30.00 mJy, the achieved S/N is 10.0 General Field Setup Achieved RMS over the total 351.56 MHz bandwidth is 111.80 uJy For a continuum flux density of 100.00 mJy, the achieved S/N is 894.4 Spectral Setup For a peak line flux of 30.00 mJy, the achieved S/N over 1/3 of the source line width ( 30.00 km/s / 3 = 10.00 km/s ) is 26.1 Calibration Setup Line width / bandwidth used for sensitivity 30.00 km/s / 731.92 m/s = 40.99 Technical Justification Dynamic Range: 33.33 Justify your requested RMS and resulting S/N for the spectral line and/or continuum observations. For line observations also justify the bandwidth used for the sensitivity calculation. Here would be the standard required justification of Template library. Turn the keys on the JTr... 🗙 the sensitivity parameters • Template library. Turn the keys on th Proposal Planned Observing ScienceGoal (B3 spectral sv ScienceGoal (B7 continuum ScienceGoal (B7 CO(9-8): 0 ? ScienceGoal (B9 continuum ScienceGoal (B3 spectral sv There are separate sections for Sensitivity, Imaging and Correlator ScienceGoal (B3 continuum ScienceGoal (B6 continuum ScienceGoal (B7 continuum Each requires its own 50+ word justification ScienceGoal (B6 continuum ScienceGoal (B3 continuum) ScienceGoal (B6 12CO (2-) Each comes with a summary of input information and details of how ScienceGoal (B6 13CO (2-1 it is construed to specify the program ScienceGoal (B6 spectral lir ScienceGoal (B9 spectral lir ScienceGoal (B3 continuum ScienceGoal (B6 continuum





- 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 (PDF file)
- Prepare Science Goals (sources, frequency & correlator setup, integration times) within the OT
  - New Technical Justification inside each SG
- Make use of the Helpdesk & the Knowledgebase



# www.almascience.org





#### 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 NRAO



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 on 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.

NRAO User Support

Helpdesk

#### **General News**

Release of Science Verification data from the ALMA Long Baseline Campaign

Feb 16, 2015

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

Feb 02, 2015

ALMA Cycle 3 Pre-announcement

Dec 08, 2014

ALMA Status Report: November 2014

Nov 12, 2014

Additional Scope for Long Baseline Science Verification Targets

Oct 30, 2014

More...

#### **NRAO Events**

NRAO Community Day at

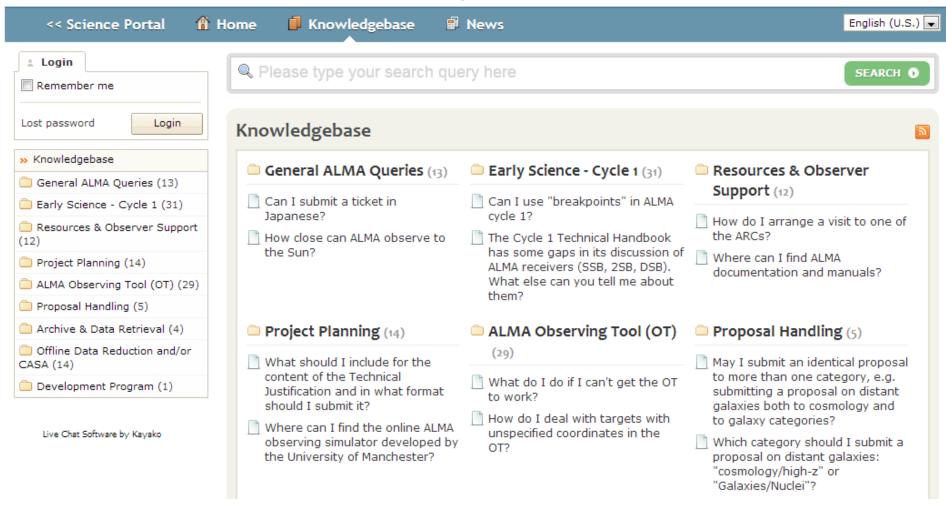


### I could use a hand...

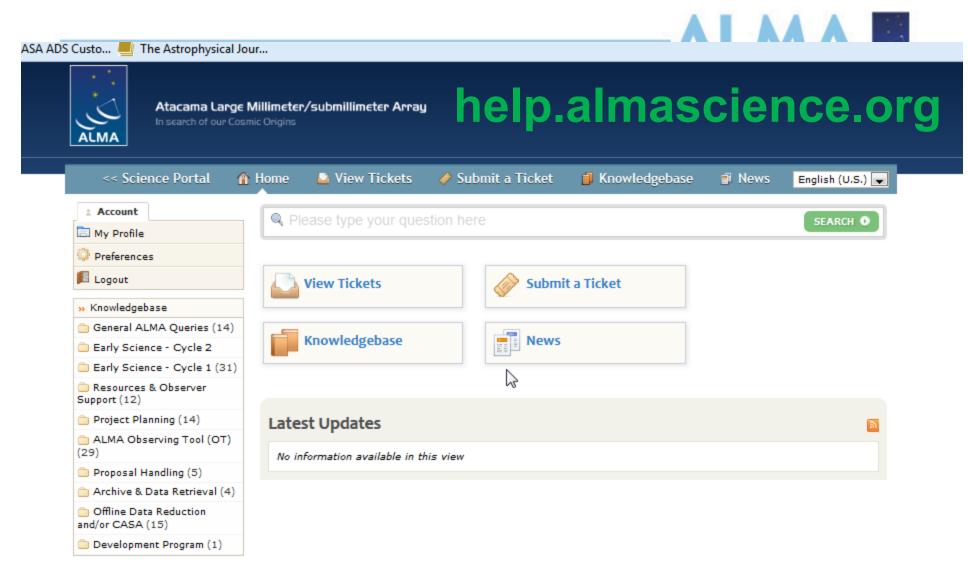




### Have no fear, the ALMA Helpdesk is here...



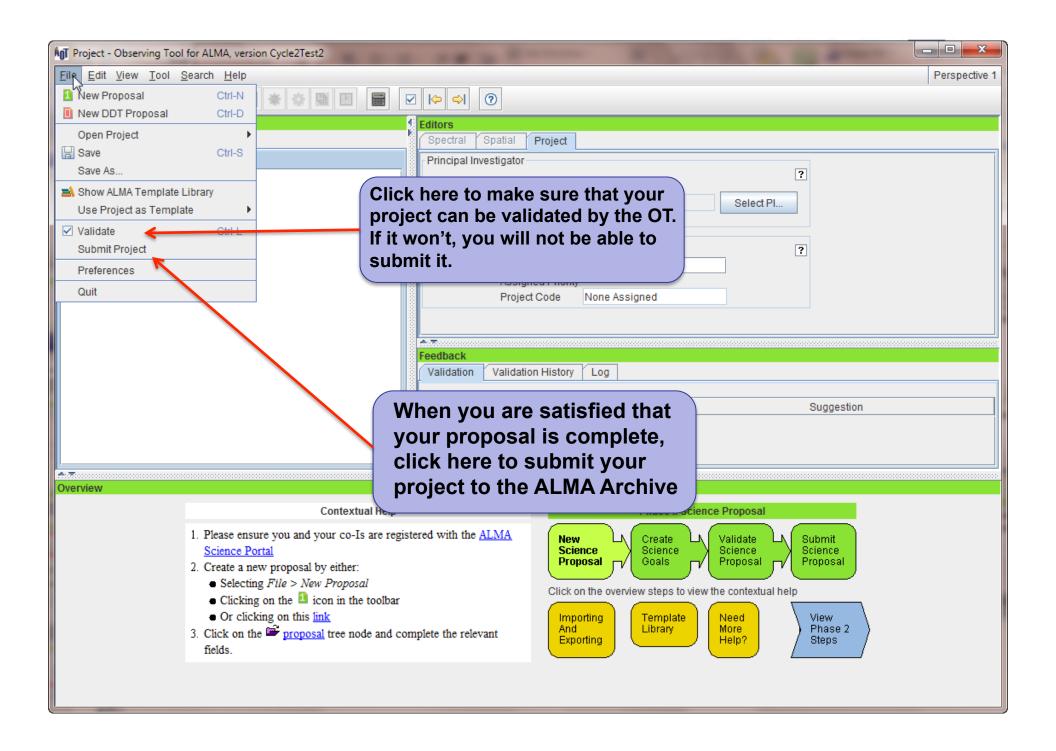




Help Desk Software by Kayako Resolve

\_ALMA Helpdesk @ NRAO (logged in view) \_\_\_\_







### Then what happens?

- 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 on or around July 29, 2015.



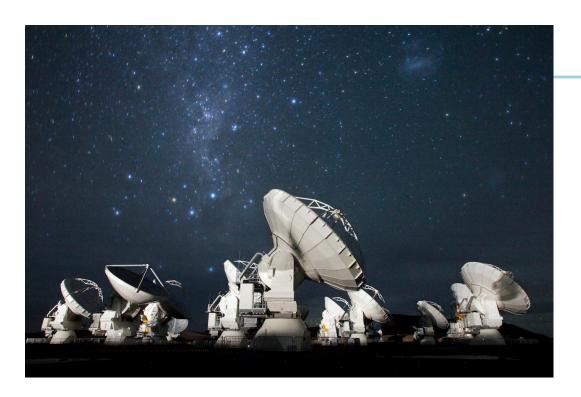


### Then what happens?

- If successful, you will be contacted about Phase II SBs depending on project, you may be able to create your own SBs by clicking appropriate button (instructions will be provided) or someone from an ALMA Phase II Group may create them for you and contact you for approval. Respond to them promptly.
- 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 at:

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.