

An Introduction to the Cycle 10 ALMA Observing Tool



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Where is the Observing Tool (OT)?

On the science portal under Proposing, click on Observing Tool

Safari File Edit View History Bookmarks Window Help

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

ALMA

About Science **Proposing** Observing Data Processing Tools Documents

Cycle 8 2021
Supplemental Call
ALMA Proposal Review
Proposing Guidance
Cycle 8 2021 Proposer's Guide
Cycle 8 Capabilities
Observing Tool ▶
Sensitivity Calculator
Proposal Template
Duplicate Observations
ALMA Primer
Technical Handbook
DDT proposals

NRAO News
Community Webinar Series for Semester 2022B
Jan 20, 2022
AAS: NRAO Town Hall
Dec 31, 2022
AAS: ALMA Special Session Capability
Dec 31, 2022

Observatory News
ALMA Cycle 9 Pre-Announcement
Dec 15, 2021
ALMA Science Archive object-search and Jupyter Notebooks
Dec 14, 2021
Cycle 8 2021 has started!
Oct 04, 2021
More...

Science Highlight: Norr...

(a) REBELS-20 field

As part of targets we colleagues

The image REBEL S-1



Installing the ALMA OT

You will land here to access the OT's installer



Observing Tool

Observing Tool

The ALMA Observing Tool (OT) is a Java desktop application used for preparing and submitting Director's Discretionary capabilities of ALMA as described in the [Cycle 8 2021 Call](#)

Download & Installation

The OT should run on all common operating systems and installed, but the Cycle 8 version of the OT will come with version of the OT is no longer available. (Web Start remain installer or manually with a tarball distribution.

It is recommended that the OT be installed using the ALM defaults, including the amount of memory the OT may use possible, but the OT will detect if an update is available a **would not run on macOS Catalina due to security issue**

The **tarball** version must be installed manually and the ins

Installer

Tarball

Installer Page



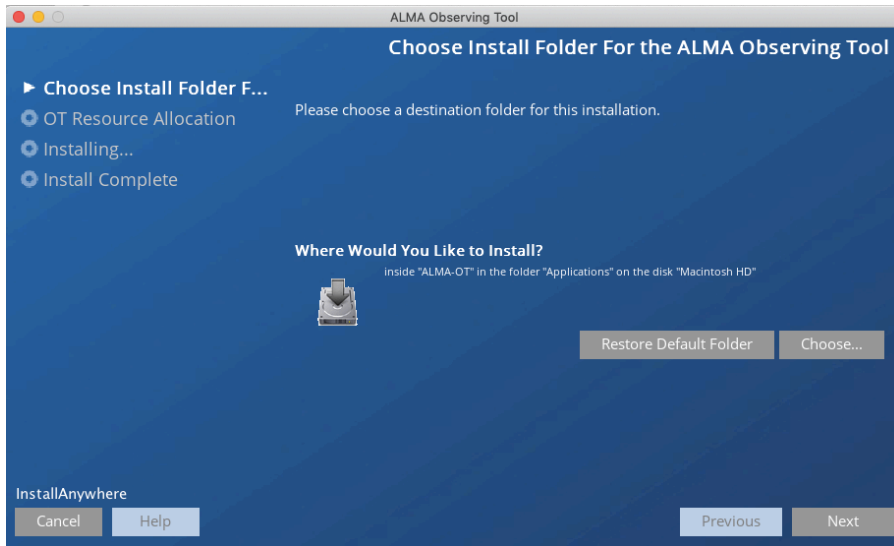
- [Mac OS Installer](#)
- [Linux Installer](#)
- [Windows Installer](#)

An installer .zip is downloaded that expands to the installer application

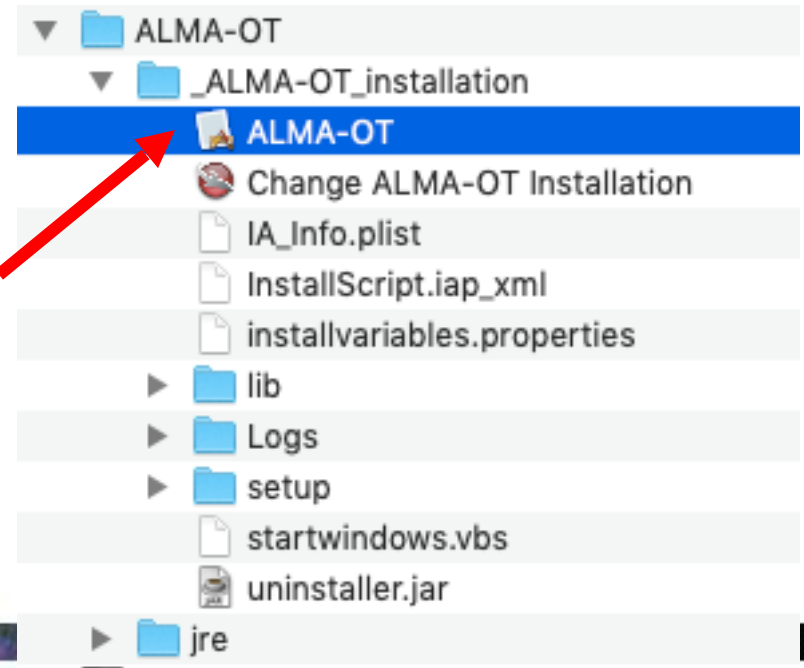
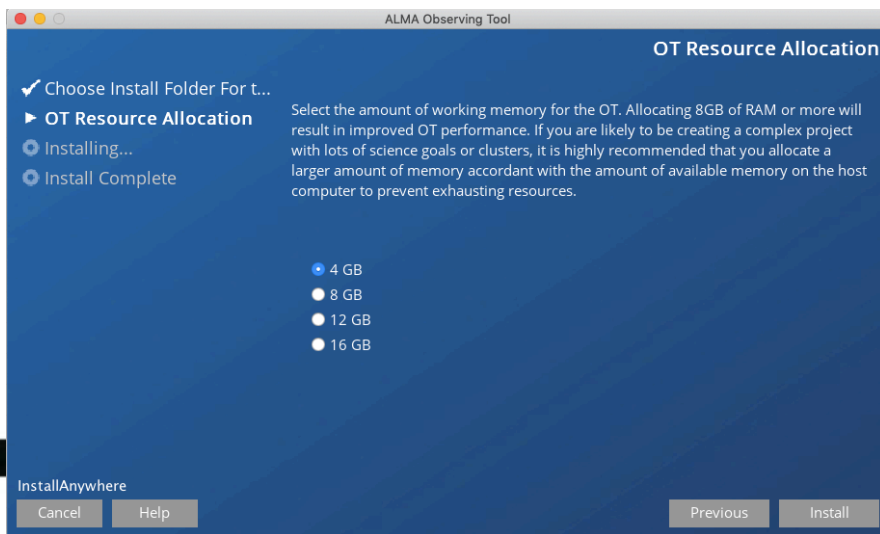


This takes you to the installer's own page

Installing the ALMA OT

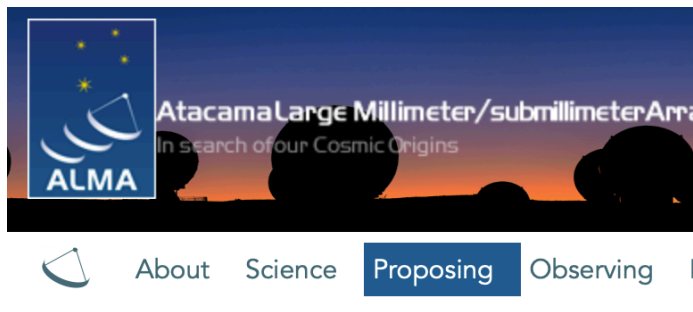


After installation there will be an application in the destination directory and an icon on the desktop



If the installer doesn't work for you

There is a manual installation available for each OS



Observing Tool

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The **tarball** version must be installed manually and the ins

Take the JRE

- [OT tarball for MacOS with a x64-based JRE included](#)
- [OT tarball for Linux with a x64-based JRE included](#)
- [OT tarball for Windows with a x64-based JRE included](#)
- [OT tarball with no JRE included](#)

If you experience problems with the new OT Installer, the tarball version requires to use a pre-installed version of Java 11, a fourth version of the tarball installer

The installation instructions for the tarball version are:

1. Download the tarball in your preferred format:

- [OT tarball for MacOS with a x64-based JRE included](#)
- [OT tarball for Linux with a x64-based JRE included](#)
- [OT tarball for Windows with a x64-based JRE included](#)
- [OT tarball with no JRE included](#)

2. Unpack the tarball (it will unpack into its own directory)

3. Run post-installation setup

■ Linux or Mac OS:

```
cd ALMAOT-C8-2021/setup
./Setup-Linux.sh
cd ..
```

■ MS Windows

-> Go to the ALMAOT-C8-2021/setup directory

-> Double click "Setup-Windows" (may read "Setup-Windows.cmd")

4. Start up the OT

■ Mac OS:

./ALMA-OT.app or double-click in a Finder window

■ Linux:

./ALMA-OT.sh or double-click in a window manager if this is configured

■ MS Windows

Double-click "ALMA-OT" (might read "ALMA-OT.cmd")



Installer

Tarball



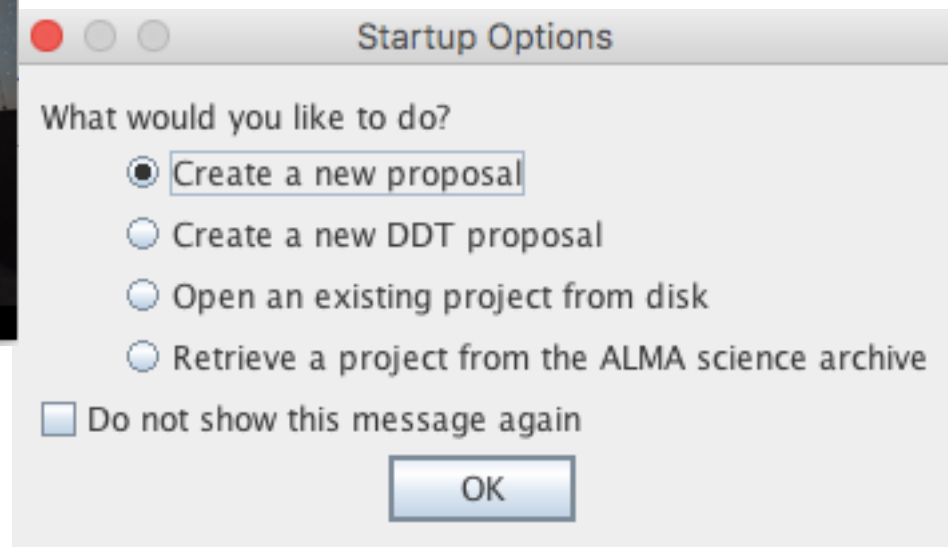
To the OT tarball's page

When the ALMA OT starts

PI: Make sure to use the Cycle 9/10 OT from the Science Portal



Then you see this



The Project node in the J-tree

Project - Observing Tool for ALMA, version Cycle2Test2

File Edit View Tool Search Help Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

- Project
- Proposal

Editors

Spectral Spatial Project

Principal Investigator

Select PI...

Main Project Information

Priority

None Assigned

History Log

Description

Suggestion

A clean slate. From here, you can:

- Start a new proposal
 - Add blank Science Goals (SG)
- Recall a project from the archive
 - As new or to use as a template
 - Or look at it as-is

Grab and move stiped bars to resize the panes

arrowheads
minimize,
maximize
panes

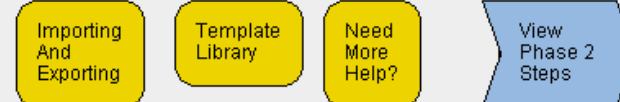
Contextual Help

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

Phase I: Science Proposal



Click on the overview steps to view the contextual help



The Project node in the J-tree

The screenshot displays the J-tree interface. On the left, the 'Project Structure' pane shows a tree view with 'Project' as the root, containing 'Proposal' and 'Planned Observing'. A blue arrow points to the 'Proposal' node. The main 'Editors' pane shows the 'Proposal' form with fields for 'Proposal Title', 'Proposal Cycle' (2021.1), 'Abstract' (max. 1200 characters), 'Proposal Type' (Regular, Target Of Opportunity, VLBI, Large Program, Phased Array), 'Scientific Category' (Cosmology and the High Redshift Universe, Galaxies and Galactic Nuclei, ISM, star formation and astrochemistry, Circumstellar disks, exoplanets and the solar system, Stellar Evolution and the Sun), a list of keywords (Outflows, jets and ionized winds, High-mass star formation, Intermediate-mass star formation, Low-mass star formation, Pre-stellar cores, Infra-Red Dark Clouds (IRDC)), and a 'Student project' checkbox. A blue callout box on the right contains text about meta information. A purple callout box at the bottom left contains text about searching the J-tree. A red arrow points to a search bar at the bottom left.

Project Structure

Proposal Program

Unsubmitted Proposal

Project

Proposal

Planned Observing

This is the J-tree and the proposal node is where you provide a broad description

We'll move down the nodes of the J-tree in the course of these slides

You can search the J-tree for names of nodes, details are in (?) help

Editors

Spectral Spatial Proposal

Proposal Information

Proposal Title

Proposal Cycle 2021.1

This is an abstract

Abstract (max. 1200 characters)

Proposal Type

Regular Target Of Opportunity VLBI

Large Program Phased Array

Scientific Category

Cosmology and the High Redshift Universe Galaxies and Galactic Nuclei ISM, star formation and astrochemistry

Circumstellar disks, exoplanets and the solar system Stellar Evolution and the Sun

Please select one or two keywords

Outflows, jets and ionized winds

High-mass star formation

Intermediate-mass star formation

Low-mass star formation

Pre-stellar cores, Infra-Red Dark Clouds (IRDC)

Student project

Investigators

Feedback

Validation Validation History Log

Description Submission

This page has your meta information, proposal title, abstract, proposal type, scientific category (for the review panels) etcetera

You can search the J-tree for names of nodes, details are in (?) help

New! Joint Proposals w/VLA, VLT, JWST-I

Project Structure

Proposal Program

Unsubmitted Proposal

- 📁 Casting Light on Chameleon's Dark CO
 - 📁 Proposal
 - 📁 Planned Observing
 - 📄 ScienceGoal (Chameleon's dark CO view

Editors

Spectral Spatial Proposal

Student project

Joint Proposals

Is this a Joint Proposal? Yes No

Investigators

Type	Full name	Email	Affiliation	ALMA ID	Executi
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New! Joint Proposals w/VLA, VLT, JWST-I

Joint Proposals

Is this a Joint Proposal? Yes No

Type of Joint Proposal Main Partner

Is ALMA the Main partner?

- During the ALMA call it must be
- Outside the ALMA call it can't be

Observatory	Project Code	Requested Time
JWST	N/A	0.00 h
VLA	N/A	0.00 h
VLT	N/A	0.00 h

Please provide the technical justification for the time requested on JWST as a joint proposal

Please provide the technical justification for the time requested on VLA as a joint proposal

Edit the list of partners
Provide info about partners if ALMA is main

Proposal: pick PI, Col & designate reviewer

The screenshot shows the 'Editors' section of the proposal system. A dropdown menu is open, showing keywords: 'Starburst galaxies', 'Sub-mm Galaxies (SMG)', and 'High-z Active Galactic Nuclei (AGN)'. Below this is a table of investigators. A red arrow points to the 'PI' row in the table. Another red arrow points to a red text box on the right. A yellow callout box is also present.

For DPR. Can be a Co-I but someone must be indicated

Type	Full name	Email	Affiliation	ALMA ID	Executive
PI	Alvaro Aguirre	alvaro.aguirre@alma.cl	Department of Physic...	aaaaaaaaa	Chile

Select PI/Co-I's from registered ALMA users (only)

Investigator search constraints

Name contains

Find Investigators

Full name	Email	Affiliation	ALMA ID
Alvaro Aguirre	alvaro.aguir...	Department...	aaaaaaaaa

Select PI Add CoPI Add Col Remove Collaborator Add from Proposal

Scroll down, pick reviewer/mentor

The screenshot shows a web application interface with a 'Project Structure' sidebar on the left and a main 'Editors' area. The 'Editors' area has tabs for 'Spectral', 'Spatial', and 'Proposal'. Below the tabs are buttons for 'Select PI', 'Add CoPI', 'Add Col', 'Remove Collaborator', and 'Add from Proposal'. The 'Reviewers' section is highlighted with a red box and contains the following text:

Reviewer Information

Please designate a reviewer who will participate in the distributed review process. The reviewer may be the PI of the proposal or one of the co-Is. A student (without a PhD) may serve as the reviewer only if s/he is the PI of the proposal and a mentor (with a PhD) is identified. The mentor does not need to be a co-I on the proposal.

Reviewers are requested to update their user profiles with combinations of scientific categories and keywords which describe their area(s) of expertise using the new 'Expertise' tab in <https://asa.alma.cl/UserRegistration/secure/updateAccount.jsp>. Available expertise information will be used in the distribution of proposal assignments.

Reviewer has a PhD? No Yes **Mentor not needed if "yes"**

Student PI picks PhD mentor

Select Mentor

Mentor name

Mentor has a PhD? No Yes **PhD status of mentor must be confirmed**

Science Case

Please ensure that your science case is properly anonymized following instructions on the Science Portal

Science Case (Mandatory, PDF, 4 pages max.) Attach... Detach View..

Duplicate observations

Briefly justify any new observations that duplicate archival data or accepted programs. Information regarding the ALMA Duplication Policy and how to search archival data and accepted programs can be found at: <http://almascience.org/proposing/duplications>.

Observatory Use Only

Attach the science case as a .pdf

The screenshot shows the 'Editors' window for a 'Proposal' in the 'Project Structure' pane. The 'Science Case' section is highlighted with a red box. It contains instructions for reviewers and a form to attach a PDF file. A red arrow points from the 'Attach...' button to the text box below it.

Project Structure: Unsubmitted Proposal

- Project
 - Proposal
 - Planned Observing

Editors: Spectral, Spatial, Proposal

Select PI Add CoPI Add Col Remove Collaborator Add from Proposal

Reviewer Information

Please designate a reviewer who will participate in the distributed review process. The reviewer may be the PI of the proposal or one of the co-Is. A student (without a PhD) may serve as the reviewer only if s/he is the PI of the proposal and a mentor (with a PhD) is identified. The mentor does not need to be a co-I on the proposal

Reviewers are requested to update their user profiles with combinations of scientific categories and keywords which describe their area(s) of expertise using the new 'Expertise' tab in <https://asa.alma.cl/UserRegistration/secure/updateAccount.jsp>. Available expertise information will be used in the distribution of proposal assignments.

Reviewer has a PhD? No Yes

Select Mentor

Mentor name

Mentor has a PhD? No Yes

Science Case

Please ensure that your science case is properly anonymized following instructions on the Science Portal

Science Case (Mandatory, PDF, 4 pages max.) Attach... Detach View..

Attach a science case, max 4 page .pdf including figures

The .pdf may not contain more than 15% of its text in a font below 12pt
Some .pdf creation software pads files with hidden text in small fonts

Large proposals are allowed 6 pages and require an additional one page management plan



Justify duplicative observing

The screenshot shows the ALMA proposal system interface. On the left is the 'Project Structure' pane with 'Unsubmitted Proposal' selected, containing 'Project', 'Proposal', and 'Planned Observing'. The main 'Editors' pane has tabs for 'Spectral', 'Spatial', and 'Proposal'. At the top of the 'Proposal' tab are buttons: 'Select PI', 'Add CoPI', 'Add Col', 'Remove Collaborator', and 'Add from Proposal'. Below these is the 'Reviewer Information' section with instructions: 'Please designate a reviewer who will participate in the distributed review process. The reviewer may be the PI of the proposal or one of the co-Is. A student (without a PhD) may serve as the reviewer only if s/he is the PI of the proposal and a mentor (with a PhD) is identified. The mentor does not need to be a co-I on the proposal. Reviewers are requested to update their user profiles with combinations of scientific categories and keywords which describe their area(s) of expertise using the new 'Expertise' tab in <https://asa.alma.cl/UserRegistration/secure/updateAccount.jsp>. Available expertise information will be used in the distribution of proposal assignments.' Below this is a radio button for 'Reviewer has a PhD?' with 'No' selected and 'Yes' unselected, and a 'Select Mentor' button above a 'Mentor name' text input field. A blue banner with white text reads 'Justification of duplication of observations'. Below it, a yellow banner with black text reads 'This replaces an earlier mechanism whereby project codes were given'. The 'Science Case (Mandatory, PDF, 4 pages max.)' section has an 'Attach...' button and a 'View...' button. A red-bordered box highlights the 'Duplicate observations' section, which contains the text: 'Briefly justify any new observations that duplicate archival data or accepted programs. Information regarding the ALMA Duplication Policy and how to search archival data and accepted programs can be found at: <http://almascience.org/proposing/duplications>.' A red banner with white text reads 'Give a concise justification if asking to duplicate previous observations or accepted proposals. This is not used if resubmitting a rejected proposal'. At the bottom is the 'Observatory Use Only' section.

Project Structure

Unsubmitted Proposal

Project

Proposal

Planned Observing

Editors

Spectral Spatial Proposal

Select PI Add CoPI Add Col Remove Collaborator Add from Proposal

Reviewer Information

Please designate a reviewer who will participate in the distributed review process. The reviewer may be the PI of the proposal or one of the co-Is. A student (without a PhD) may serve as the reviewer only if s/he is the PI of the proposal and a mentor (with a PhD) is identified. The mentor does not need to be a co-I on the proposal.

Reviewers are requested to update their user profiles with combinations of scientific categories and keywords which describe their area(s) of expertise using the new 'Expertise' tab in <https://asa.alma.cl/UserRegistration/secure/updateAccount.jsp>. Available expertise information will be used in the distribution of proposal assignments.

Reviewer has a PhD? No Yes

Select Mentor

Mentor name

Justification of duplication of observations

This replaces an earlier mechanism whereby project codes were given

Science Case (Mandatory, PDF, 4 pages max.)

Duplicate observations

Briefly justify any new observations that duplicate archival data or accepted programs. Information regarding the ALMA Duplication Policy and how to search archival data and accepted programs can be found at: <http://almascience.org/proposing/duplications>.

Give a concise justification if asking to duplicate previous observations or accepted proposals. This is not used if resubmitting a rejected proposal

Observatory Use Only

Do some science - add a Science Goal

Project - Observing Tool for ALMA, version Cycle2Test2

File Edit View Tool Search Help Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

- Project
 - Proposal

Editors

Spectral Spatial Project

Principal Investigator

- Cut ⌘-X
- Copy ⌘-C
- Paste ⌘-V
- New Science Goal**
- Clone node
- Show Printable Summary of Proposal
- Generate a PDF of Whole Proposal
- Display Project Time Summary
- Expand all ⌘-Z
- Collapse all
- Find previous ⌘-↑
- Find next ⌘-↓
- Delete ⌘-⌫

Feedback

Validation

Suggestion

Overview

Contextual Help

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

Phase I: 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

You can right-click and add blank Science Goals or use options of the File menu as shown on the next slide)

You can clone science goals when you have them

- File
- Edit
- View
- Tool
- Search
- Help
- New Proposal ⌘-N
- New DDT Proposal ⌘-D
- Open Project
- Open Project as New Proposal
- Save ⌘-S
- Save As...
- Show ALMA Template Library
- Use Project as Template
- Validate ⌘-V
- Submit Project
- Preferences
- Save Preferences
- Quit

Editors

Spectral Spatial Title goes here

From ALMA Archive... al Investigator

Select PI...

Main Project Information

Project Title goes here

Assigned Priority



Project Code None Assigned

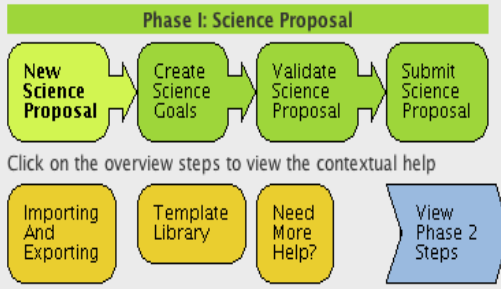
Since Cycle 4, a previously-submitted project can be opened as a new one from the archive

Since Cycle 6, an old DDT proposal can be opened from the archive as a new proposal

The alma template library is no longer included after so much experience with real observing

Click here to simultaneously access another project from disk or archive, which you can use to copy/paste nodes into a new project

- Science Portal
- are registered with the [ALMA](#)
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.



File Edit View Tool Search Help



Project Structure

Proposal Program

Unsubmitted Proposal

Project Structure tree:

- Project
 - Proposal
 - Planned Observing

Anticenter Dark Neutral Matter (read-only)

Anticenter Dark Neutral Matter tree:

- Anticenter Dark Neutral Matter
 - Proposal
 - Planned Observing
 - ScienceGoal (34 Sources-Dark neutral matter in absorption in the Galactic anti-centre)
 - General
 - Field Setup
 - Spectral Setup
 - Calibration
 - Control and Monitoring
 - Technical Information

Editors

Spectral Spatial ScienceGoal (34 Sources-Dark neutral matter in absorption in the Galactic anti-centre)

General (Optional)

Science Goal Name 34 Sources-Dark neutral matter in absorption in the Galactic anti-centre

Narrowband 88 - 98 GHz molecular absorption from gas at the H I → H₂ transition in Galactic anti-center cloud complexes, seen against background point-like QSO; and one broad spectral window for phase cal.

Description

PROJECTS AS TEMPLATES

This science goal in the template can be copied whole into new Planned Observing. Works with any node. Sub-nodes in target SG are overwritten when copy/pasting

2	aj0510+1800-2990-0.33	
	+2756-195-0.20	aj0356+2903-151-0.21
	+1352-413-0.09	aj0213+1820-161-0.13
	+1437i-326-0.68	J0449+1121i-887-0.50
	1731i-213-0.46	J0433+0521i-2178-0.30
8	J0407+0742i-990-0.26	J0426+0518i-372-0.29
	+2319i-160-0.18	J0400+0550i-217-0.27
1	J0329+3510i-254-0.27	J0334+0800i-331-0.39

- Cut ⌘-X
- Copy ⌘-C
- Paste ⌘-V
- Clone node
- Show Printable Summary of ScienceGoal
- Generate a PDF of Whole Proposal
- Display Project Time Summary
- Expand all ⌘-Z
- Collapse all
- Find previous ⌘-↑
- Find next ⌘-↓
- Delete ⌘-X

J0211+1051i-547-0.14

Resolve

System Object?

Name of object Unspecified

System ICRS Sexagesimal display?

Parallax 0.00000 mas

RA 02:11:13.1770

PM RA 0.00000 mas/yr

Dec 10:51:34.799

PM DEC 0.00000 mas/yr

Velocity 0.000 km/s lsrk z 0.000000000 Doppler Type RADIO

 Individual Pointing(s) 1 Rectangular Field

Properties



Project Structure

Proposal Program

Unsubmitted Proposal

- Project
 - Proposal

Editors

Spectral Spatial ScienceGoal (B6 12CO (2-1): NGC3256 mosaic)

General (Optional)

Science Goal Name B6 12CO (2-1): NGC3256 mosaic

Description

This is a project to observe the nearby starburst galaxy NGC3256 in the band 6 in the emission line of 12CO (2-1). As the source is extended, a mosaic will be used to cover the 30x30 arcsec area of interest.

Launch Editor

You're now ready to flesh out the Science Goal (SG)

Give the SG a brief, descriptive name.

Template library. Turn the keys on the JTree below & read the d...

Template library. Turn the keys on the JTree below & read the d...

- Proposal
 - Planned Observing
 - ScienceGoal (B3 spectral sweep CO (9-8): CO
 - ScienceGoal (B7 continuum: COSMOS SMGs)
 - ScienceGoal (B7 CO(9-8): Cosmic Eyelash (z=0.035))
 - ScienceGoal (B9 continuum: Cosmic Eyelash (z=0.035))
 - ScienceGoal (B3 spectral sweep CO (9-8): CO
 - ScienceGoal (B3 continuum: COSMOS SMGs)
 - ScienceGoal (B6 continuum: COSMOS SMGs)
 - ScienceGoal (B7 continuum: COSMOS SMGs)
 - ScienceGoal (B7 CO(9-8): Cosmic Eyelash (z=0.035))
 - ScienceGoal (B3 continuum: COSMOS SMGs)
 - ScienceGoal (B6 12CO (2-1): NGC3256 mosaic)
 - ScienceGoal (B6 13CO (2-1): NGC3256 mosaic)

NGC3256

Source

Source Name NGC3256

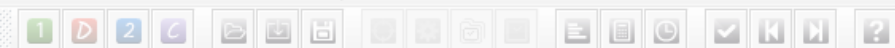
Choose a Solar System Object?

Name of object Unspecified

Sexagesimal Right Ascension 000000

Declination 000000

A description is useful for you, for the technical assessors, and for your Contact Scientist after your project is approved. But it's optional



Project Structure

Proposal Program

Unsubmitted Proposal

- 📁 Casting Light on Chameleon's Dark CO
 - 📁 Proposal
 - 📁 Planned Observing
 - 📁 ScienceGoal (Chameleon's dark CO)
 - 📄 General
 - 📄 **Field Setup**
 - 📄 Spectral Setup
 - 📄 Calibration Setup
 - 📄 Control and Performance
 - 📄 Technical Justification

Editors

Spectral Spatial Field Setup

Source Name Resolve

Choose a Solar System Object? Name of object

System Sexagesimal display? Parallax

Source Coordinates RA PM RA
Dec PM DEC

Source Radial Velocity z Doppler Type

Target Type Individual Pointing(s) 1 Rectangular Field

Expected Source

Line Width

Line Linear Polarization per cent

Line Circular Polarization Percentage per cent

Relative Absolute

RA [arcsec]	Dec [arcsec]
-0.00000	-0.00000
24.00000	26.00000
-12.00000	12.00000
20000.00000	-0.00000

Add Delete Reset Import Export

Add Source Load from File... Export to File... Clone Source Delete Source Delete All Sources

Super-annoying? The OT will issue a validation warning whenever the velocity is left at the 0 km/s default. An archive issue.

The field setup node is where you provide source coordinates and other basic properties for one or more field sources/pointings



Project Structure

Proposal Program

Unsubmitted Proposal

- Casting Light on Chameleon's Dark CO
 - Proposal
 - Planned Observing
 - ScienceGoal (Chameleon's dark CO)
 - ...

Source name, position, proper motion, velocity, velocity rest frame. use "lsrk" for v_{LSR}

Rectangular mosaic or 1/more offset pointings?

The expected source properties are used with the spectral setup, desired angular resolution, rms, to set the S/N, dynamic range and overall project viability

Editors

Spectral

Since Cycle 4, OT defaults to ICRS, the standard radio coordinate system

Source Name: J1136-6827-0.4 Resolve

Choose a Solar System Object? Name of object: Unspecified

System: ICRS Sexagesimal display?

Source Coordinates: RA: 11:36:02.0970 Dec: -68:27:05.810

Source Radial Velocity: 0.000 km/s lsrk z: 0.000000000

Target Type: Individual Pointing(s) 1 Rectangular Field

Expected Source Properties:

Peak Continuum Flux Density per Synthesized Beam	1.00000	Jy
Continuum Linear Polarization	4.0	per cent
Continuum Circular Polarization	0.0	per cent
Peak Line Flux Density per Synthesized Beam	0.10000	Jy
Line Width	3.5	km/s
Line Linear Polarization	0.0	per cent
Line Circular Polarization Percentage	2.0	per cent

Field Center Coordinates:

Coord Type: Relative

Offset Unit: arcsec

#Pointings: 1

RA [arcsec]
0.00000

When you resolve a source name from the server, check all the returned info, some may be unwanted

Expected polarization lower limits were made much simpler in Cycle 7: 0.1% for linear polarization and 1.8% for circular. These are now independent of correlator mode or source extent.

Feedback

Validation Validation History Log

0 errors, 1 warning : double-click on each row to be taken to the problem

Description

Suggestion

The Spatial Visualizer

The screenshot displays the 'Project - Observing Tool for ALMA' interface. The 'Editors' pane at the top has three tabs: 'Spectral', 'Spatial', and 'Field Setup'. The 'Spatial' tab is selected and circled in red. The main window shows a star field with a green rectangular field of view (FOV) overlaid. A red arrow points from the 'Field Setup' node in the 'Project Structure' tree to the 'Spatial' tab. Another red arrow points from the 'Image Query' section to the 'Image Server' dropdown menu, which is set to 'Digitized Sky (Version II) at ESO'. A third red arrow points from the 'Image Query' section to the 'Image Size' input field, which is set to '10.0'. The right-hand pane contains various parameters for the field setup, including 'Source Radial Velocity' (2794.200 km/s), 'Target Type' (1 Rectangular Field), and '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). The 'Image Query' section includes 'Image Server' (Digitized Sky (Version II) at ESO) and 'Image Size(arcmin)' (10.0). The 'FOV Parameters' section includes 'Representative Frequency (Sky)' (231.546 GHz), 'Antenna Diameter' (12m), 'Antenna Beamsize (HPBW)' (26.706 arcsec), and 'Show Antenna Beamsize' (checked). The 'Image Query' section also includes 'Image Server' (Digitized Sky (Version II) at ESO) and 'Image Size(arcmin)' (10.0). The 'Rectangle' section includes 'p length' (2.00000 arcmin), 'q length' (2.00000 arcmin), 'Position Angle' (0.00000 deg), and 'Spacing' (0.48113). The 'Template library' pane on the left shows a tree structure with 'Field Setup' selected. The 'Overview' pane at the bottom shows 'Contextual Help' and 'Phase I: Science Proposal'.

when you click on this node you will now land on its visualizer tab

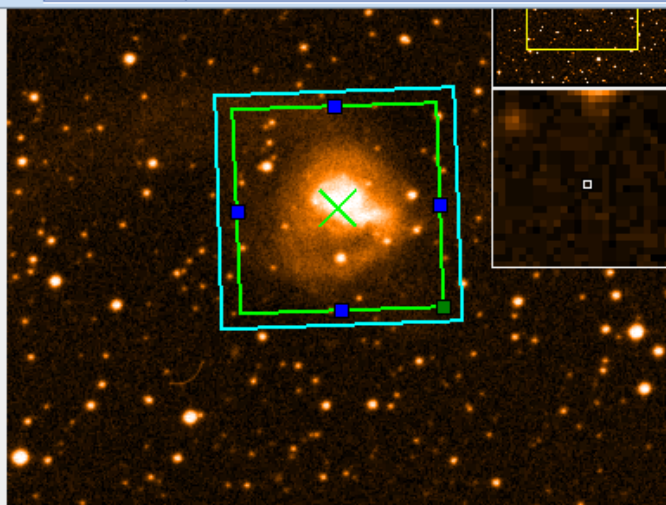
The Spatial tab gives a graphical visualization of the Field Setup.

Select a background image from an online image server

Crafting Mosaics

Editors

Spectral Spatial Field Setup



1x 469, 175 13357.0
10:27:35.522, -43:56:25.99 (J2000)
Image Filename emijan\jsky3\cache\jsky9043341093951517820.fits

FOV Parameters

Representative Frequency (Sky) 231.546 GHz
Antenna Diameter 12m 7m
Antenna Beamsize (HPBW) 26.706 arcsec
Show Antenna Beamsize

Image Query

Image Server Digitized Sky (Version 1)
Image Size(arcmin) 10.0

Setting up the mosaic in the Field Setup

Define the length, width and position angle of the region to mosaic. Default is to separate the field centers by about 48% of the primary beam (the Nyquist rate).

HPBW for 12m antennas are $1.13\lambda/D$

Line Width 0.00000 km/s
Line Polarization Percentage 0.0 %

Rectangle

Coords Type ABSOLUTE RELATIVE

Field Center Coordinates
System J2000
Offset(Longitude) 0.00000
Offset(Latitude) 0.00000

Length 2.0 arcmin
q length 2.0 arcmin
Position Angle 0.00000 deg

Estimated number of 7m Array pointings

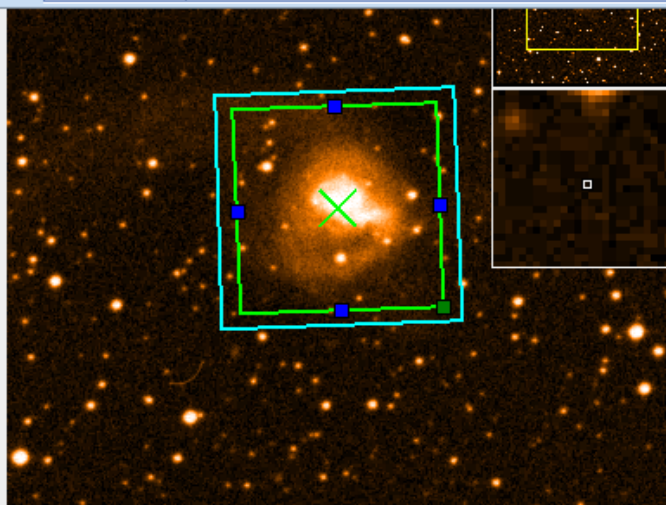
Spacing 0.48112 fraction of main beam
#Pointings 12m Array 105 7m Array 39
Reset to Nyquist Export

No more than 150 12m Array pointings

Crafting Mosaics

Editors

Spectral Spatial Field Setup



1x 469, 175 13357.0
10:27:35.522, -43:56:25.99 (J2000)
Image Filename emijan\jsky3\cache\jsky9043341093951517820.fits

FOV Parameters

Representative Frequency (Sky) 231.546 GHz
Antenna Diameter 12m 7m
Antenna Beamsize (HPBW) 26.706 arcsec
Show Antenna Beamsize

Image Query

Image Server Digitized Sky (Version 1)
Image Size(arcmin) 10.0

Setting up the mosaic in the Field Setup

Define the length, width and position angle of the region to mosaic. Default is to separate the field centers by about 48% of the primary beam (the Nyquist rate).

HPBW for 12m antennas are $1.13\lambda/D$

Line Width 0.00000 km/s
Line Polarization Percentage 0.0 %

Rectangle

Coords Type ABSOLUTE RELATIVE

Field Center Coordinates
System J2000
Offset(Longitude) 0.00000
Offset(Latitude) 0.00000

l length 2.0 arcmin
q length 2.0 arcmin
Position Angle 0.00000 deg

Spacing 0.48112 fraction of main beam
#Pointings 12m Array 105 7m Array 39
Reset to Nyquist Export

Estimated number of 7m Array pointings

No more than 150 12m Array pointings

Crafting Mosaics

The screenshot displays the 'Project - Observing Tool for ALMA' software interface. The main window shows a 'Spatial Image' of NGC3256. A red circle highlights a folder icon in the toolbar, and a red arrow points from a callout box to it. Another red arrow points from a callout box to a mosaic beam pattern icon in the toolbar. The interface includes a 'Project Structure' panel on the left, a 'Template library' panel at the bottom left, and a 'Properties' panel on the right for NGC3256. The 'Properties' panel shows source coordinates (RA: 10:27:51.6000, Dec: -43:54:18.000) and expected source properties like Peak Continuum Flux Density per Beam (0.17400 Jy).

You can load a local fits image

You can turn on/off the mosaic beam pattern

Crafting and displaying mosaics

The screenshot displays the ALMA Observing Tool interface. The main window is titled "Project - Observing Tool for ALMA, version Cycle2Test2". The interface is divided into several sections:

- Project Structure:** A tree view on the left showing the project hierarchy, including "Unsubmitted Proposal", "Planned Observing", and "ScienceGoal (Cop)".
- Editors:** A central panel with tabs for "Spectral", "Spatial", and "Field Setup". The "Spatial" tab is active, showing a "Spatial Image" of a star field. A red circle highlights a toolbar icon (a folder with a plus sign) in the top left of the image editor.
- Source Information:** A panel on the right for "NGC3256" showing source details like "Source Name", "Source Coordinates" (RA: 10:27:51.6000, Dec: -43:54:18.000), and "Source Radial Velocity" (2794.200 km/s).
- Image Properties:** A panel at the bottom showing image dimensions (388,468 x 136,780) and coordinates (10:27:42.245, -43:51:24.64 J2000).

Three callout boxes provide additional information:

- Top Right:** "You can load a local fits image" (with a red arrow pointing to the folder icon in the toolbar).
- Center:** "Recent: The tiling algorithm now allows an even number of pointings in one row" (with a red arrow pointing to the mosaic pattern).
- Bottom Center:** "Each circle is the size of the hpbw & the pattern is centered on the pointing center" (with a red arrow pointing to the circles in the mosaic).

The Spectral Setup Tab

ALMA Observing Tool (FEB2017) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

- Unsubmitted Proposal
 - Project
 - Proposal
 - Planned Observing
 - ScienceGoal (Copy of Chameleon's data)
 - General
 - Field Setup
 - Spectral Setup**
 - Calibration Setup
 - Control and Performance
 - Technical Justification

Editors

Spectral Spatial Spectral Setup

Note that for bands 3 to 8, it is not possible to put 3 basebands in one sideband and the fourth one in the other.

Left/right click to zoom in/out, grab sliding bar to pan
Note: Moving LO1 here is for experimentation only - actual setup determined by the windows

Observed Frequency

Rest Frequency

Overlays: Receiver Bands Transmission DSB Image Spectral Lines Select Lines to Overlay

Water Vapour Column Density: Automatic Choice Manual Choice 1.796mm (5th Octile)

Viewport: Pan to Spectral Window Zoom to Band Reset

Spectral Type

Spectral Line
 Single Continuum
 Spectral Scan

Produce image sidebands (Bands 9 and 10 only)

Polarization products desired XX DUAL FULL

Receiver Band 5 [163.0-211.0 GHz] Reset to Standard Frequency

05

LO1

Continuum

Continuum

Continuum

Continuum

when you click on this node you will land on its visualizer tab

Overlaid lines are saved with the project see below

Bands 9,10 are double sideband but sidebands are correlated separately using 90° Walsh switching. 90° Walsh switching has been on by default since Cycle 7

Continuum & choice of resolution

ALMA Observing Tool (Validation OT) - Project

File Edit View Tool Search Help Perspective 1

Project Structure: Unsubmitted Proposal, Project, Proposal, Planned Observing, ScienceGoal (Sci), General, Field Setup, Spectral Setup, Calibration S, Control and, Technical Jus

Editors: Spectral, Spatial, Spectral Setup

In the table below, it is possible to define up to 16 spectral windows, 4 per baseband as long as the total Fraction per baseband is no more than 1. Each baseband is 2GHz wide and can be separately configured i.e. each spectral window can have a different bandwidth and resolution. Note that for bands 3 to 8, it is not possible to put 3 basebands in one sideband and the fourth one in the other.

Spectral Type

Spectral Type: Spectral Line, Single Continuum, Spectral Scan

Produce image sidebands (Bands 9 and 10 only)

Polarization products desired: XX, DUAL, FULL

Spectral Setup Errors

Single Continuum

Receiver Band: 3 [84.0–116.0 GHz] [Reset to Standard Frequency]

Sky Frequency: 97.50000 GHz

Rest Frequency: 97.500000 GHz

Low spectral resolution (TDM), High spectral resolution (FDM)

Fraction	Centre Freq (rest,topo)	Centre Freq (sky,topo)	Transition	Bandwidth, Resolution (smoothed)	Spec Avg.	Representativ Window
1(Full)	90.50000 GHz	90.50000 GHz	Single Continuu...	1875.000 MHz(6211 km/s), 1.129 MHz(3.740 km/s)	2	<input type="radio"/>

Show image spectral windows

Baseband-2

1(Full)	92.50000 GHz	92.50000 GHz	Single Continuu...	1875.000 MHz(6077 km/s), 1.129 MHz(3.659 km/s)	2	<input type="radio"/>
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Standard single continuum setups, can be modified with justification

PI can choose spectral resolution

Online Spatalogue

Create spectral windows centred on spectral lines

Transition Filter

e.g. CO²⁻¹ or "oxide"

Include description

Frequency Filters

ALMA Band



Sky Frequency (GHz)



Receiver/Back End Configuration

- All lines
- Potentially selectable lines
- Lines in defined spws
- Filtering unobservable lines

Upper-state Energy (K)

Min Max

Molecule Filter / Environment

Show

Can't find the transition you're looking for in the offline pool? Find more in the online Spatalogue.

Transitions matching your filter settings:

(double-click column header for primary sort, single-click subsequent columns for secondary sorting. Single clicks will reverse sort order of already selected columns.)

Transition \triangle	Description	Rest Freque... \triangle	Sky Frequency	Upper-state Ene...	Lovas Inten...	Sij μ^2	Catalog
C13CH N=1-0, J=3/2-1/2, F1=1-0, F=3...	Ethynyl	85.256952 GHz	85.254936 ...	4.092 K	0.07	0.754 D ²	Offline
t-CH3CH2OH 6(0,6)-5(1,5)	trans-Ethanol	85.265503 GHz	85.263486 ...	17.483 K	0.25	5.343 D ²	Offline
CH3CN v8=1 J=9-8, K=-1 --3	Methyl Cyanide	85.267374 GHz	85.265357 ...	585.474 K		0.001 D ²	Offline
H2CO 50(6,44)-50(6,45)	Formaldehyde	85.310678 GHz	85.308661 ...	4881.916 K		6.63 D ²	Offline
CC13CCH N=9-8, J=19/2-17/2, F1=17/...	1,3-Butadiynyl radical	85.331915 GHz	85.329897 ...	20.474 K	0.03	6.372 D ²	Offline
CC13CCH N=9-8, J=19/2-17/2, F1=19/...	1,3-Butadiynyl radical	85.331917 GHz	85.329898 ...	20.473 K	0.03	7.12 D ²	Offline
CC13CCH N=9-8, J=19/2-17/2, F1=19/...	1,3-Butadiynyl radical	85.331935 GHz	85.329916 ...	20.473 K	0.03	7.888 D ²	Offline
CC13CCH N=9-8, J=19/2-17/2, F1=17/...	1,3-Butadiynyl radical	85.331936 GHz	85.329918 ...	20.473 K	0.03	7.138 D ²	Offline
c-HCCCCH v=0 2(1,2)-1(0,1)	Cyclopropenylidene	85.338893 GHz	85.336875 ...	6.445 K		3.1 52.945 D ²	Offline
HCS+ 2-1	Thioformylum	85.347869 GHz	85.345850 ...	6.143 K	0.4	7.668 D ²	Offline
CH3OH v t=1 14(10,4)-14(11,3)	Methanol	85.355421 GHz	85.353402 ...	1156.266 K		5.135 D ²	Offline
U-85396	UNIDENTIFIED	85.466000 GHz	85.462978 ...		0.1		Offline
CH3CCH v...	UNIDENTIFIED	85.466000 GHz	85.462978 ...				Offline
CH3CCH v...	UNIDENTIFIED	85.466000 GHz	85.462978 ...				Offline
CH3CCH v...	UNIDENTIFIED	85.466000 GHz	85.462978 ...				Offline
U-85468.3	UNIDENTIFIED	85.466000 GHz	85.466279 ...		1.84		Offline
U-85486.6	UNIDENTIFIED	85.486600 GHz	85.484578 ...		0.22		Offline
CH3CN v8=1 J=65-65, K=2-0	Methyl Cyanide	85.489615 GHz	85.487593 ...	2424.382 K		0.675 D ²	Offline
U-85492.6	UNIDENTIFIED	85.492600 GHz	85.490578 ...		0.18		Offline
CH3C4H 21(0)-20(1)	Methyl diacetylene	85.497333 GHz	85.495311 ...	55.32 K		58.628 D ²	Offline
CH3C4H 21(0)-20(0)	Methyl diacetylene	85.498166 GHz	85.496144 ...	47.402 K	0.1	58.699 D ²	Offline
U-85499.3	UNIDENTIFIED	85.499300 GHz	85.497278 ...		-0.1		Offline
CH3CN v8=1 J=39-39, K=3-1	Methyl Cyanide	85.500670 GHz	85.498648 ...	1239.893 K		0.15 D ²	Offline
CH3OH v t=1 22(8,14)-22(6,16)	Methanol	85.501157 GHz	85.499135 ...	1180.751 K		0.043 D ²	Offline
U-85506	UNIDENTIFIED	85.506000 GHz	85.502978 ...				Offline

Select one or more lines from a splatalogue-based list you can filter using the tools at left (see below)

Spectral windows in this baseband (maximum of four)

Transition \triangle	Description	Rest Frequency \triangle	Sky Frequency
U-85468.3	UNIDENTIFIED	85.468300 GHz	85.466279 GHz

Transition Filter

 e.g. CO²⁻¹ or "oxide"
 Include description

Frequency Filters
 ALMA Band
 1 2 3 4 5 6 7 8 9
 Sky Frequency (GHz)
 Min Max

Receiver/Back End Configuration
 All lines
 Potentially selectable lines
 Lines in defined spws
 Filtering unobservable lines

Upper-state Energy (K)
 Min Max

Molecule Filter / Environment
 Show

Can't find the transition you're looking for in the offline pool? Find more in the online Splatalogue.

Filter by name

The line lists can be long, so use filters

Filter by receiver band / frequency

**The Receiver/Back End Configuration Filters were revised in Cycle 7
 Potentially selectable => in either sideband**

Before Cycle 7 this used a slider

Transition	Description	Rest Frequency	Sky Frequency	Energy	Other	Status
CH ₃ NH ₂ 4(1)A ₂ -4(0)A ₁ , F=5-5	Methylamine	86.074729 GHz	86.072693 ...	25.405 K	7.29 D ²	Offline
CH ₃ NH ₂ 4(1)A ₂ -4(0)A ₁ , F=5-5	Methylamine	86.075367 GHz	86.073331 ...	25.405 K	2.193 D ²	Offline
CH ₃ NH ₂ 4(1)A ₂ -4(0)A ₁	Methylamine	86.074729 GHz	86.072693 ...	25.405 K	7.29 D ²	Offline
CH ₃ NH ₂ 4(1)A ₂ -4(0)A ₁ , F=4-4	Methylamine	86.075367 GHz	86.073331 ...	25.405 K	2.193 D ²	Offline
SO 3Σ v=0 2(2)-1(1)	Sulfur Monoxide	86.093950 GHz	86.091914 ...	19.314 K	1.7 3.534 D ²	Offline
				43.712 K	0 D ²	Offline
				109.97 K	0.007 D ²	Offline
					0.5	Offline
					0.5	Offline
U-86151.6	UNIDENTIFIED	86.151600 GHz	86.149562 ...		0.6	Offline
13CH ₃ OH v _t =1 5(3,3)-6(2,5)	Methanol	86.168150 GHz	86.166112 ...	451.624 K	0.162 D ²	Offline
				23.345 K	1.6	Offline
					0.9	Offline
					0.9	Offline
				1227.895 K	7.175 D ²	Offline
					0.9	Offline
				8.357 K	2.994 D ²	Offline
				8.357 K	5.709 D ²	Offline
				8.357 K	0.28 23.651 D ²	Offline
CH ₃ OCH ₃ 2(2,0)-2(1,1) AA	Dimethyl ether	86.228720 GHz	86.226681 ...	8.357 K	8.981 D ²	Offline
U-86239.6	UNIDENTIFIED	86.239600 GHz	86.237560 ...		1.7	Offline
				1775.339 K	17.4 19.495 D ²	Offline
					1.6	Offline
					0.8	Offline
				86.252808 ...	716.792 K	0.6 124.513 D ²
U-86259.7	UNIDENTIFIED	86.259700 GHz	86.257660 ...		0.12	Offline

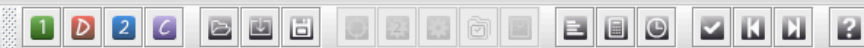
The online Splatalogue is accessible again in Cycle 9 after being out of action in Cycle 8

Spectral windows in this baseband (maximum of four)

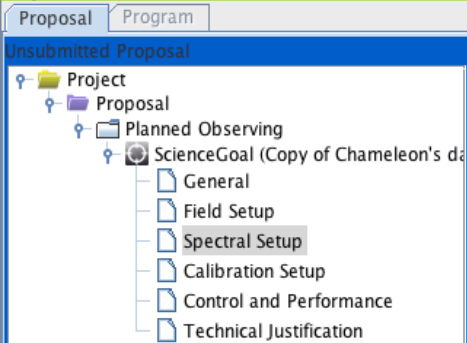
Transition	Description	Rest Frequency	Sky Frequency
our pseudo continuum		88.000000 GHz	87.997919 GHz

Remove spectral window(s)

File Edit View Tool Search Help



Project Structure



Editors

Scrolled down from previous slide

ADD spectral windows to get started!

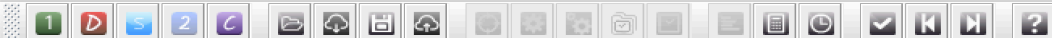
This option will call up the spectral line picker. Spectral windows added this way retain line id and other info from the Splatologue

Frequencies may also be entered by hand

Representative Frequency

The representative frequency is used in conjunction with the sensitivity entered on the 'Control and Performance' page to estimate the required observing time and to set the size of the antenna beam shown in the 'Spatial Visual' editor. If the transition you are most interested in does

Fraction	Centre Freq (rest,lsrk)	Centre Freq (obs,lsrk)	Line ID	Bandwidth	Velocity	Resolution	Spec. Avg.	Representative Window
1(Full)	98.70000 GHz	98.69607 GHz	continuum	1875.000 MHz			1	<input type="radio"/>
Baseband-2								
1/2	97.99517 GHz	97.99127 GHz	I-C3H v=0 J=9...	58.594 MHz(179 km/s), 70.557 kHz(0.216 km/s)			2	<input type="radio"/>
1/2	97.98095 GHz	97.97705 GHz	CS v=0 2-1	58.594 MHz(179 km/s), 61.035 kHz(0.187 km/s)			1	<input type="radio"/>
Baseband-3								
1/2	86.67076 GHz	86.66731 GHz	HCO 1(0,1)-0(...	58.594 MHz(203 km/s), 61.035 kHz(0.211 km/s)			1	<input type="radio"/>
1/2	87.31690 GHz	87.31342 GHz	CCH v=0 N=1-...	58.594 MHz(201 km/s), 61.035 kHz(0.210 km/s)			1	<input type="radio"/>



Project Structure

- Proposal
 - Planned Observing
 - ScienceGoal (34 Sources-Dark)
 - General
 - Field Setup
 - Spectral Setup**
 - Calibration Setup
 - Control and Performance
 - Technical Justification

Editors

Spectral Setup Errors

Spectral Line

Polarization products desired: XX DUAL FULL

Baseband-1

Fraction	Centre Freq (rest,lsrk)	Centre Freq (sky,bar)	Transition	Bandwidth, Resolution (smoothed)	Spec Avg	Representative Window
1(Full)	88.00000 G...	87.99792 G...	our pseudo c...	1875.000 MHz(6388 km/s), 1.129 MHz(3.846 km/s) (2-bit)	2	<input type="radio"/>
				117.188 MHz(399 km/s), 202.227 kHz(0.961 km/s) (4-bit)		
				234.375 MHz(798 km/s), 141.113 kHz(0.481 km/s) (2-bit)		
				234.375 MHz(798 km/s), 564.453 kHz(1.923 km/s) (4-bit)		
				468.750 MHz(1597 km/s), 282.227 kHz(0.961 km/s) (2-bit)		
				468.750 MHz(1597 km/s), 1.129 MHz(3.846 km/s) (4-bit)		
				937.500 MHz(3194 km/s), 564.453 kHz(1.923 km/s) (2-bit)		
				937.500 MHz(3194 km/s), 2.258 MHz(7.692 km/s) (4-bit)		
				1875.000 MHz(6388 km/s), 1.129 MHz(3.846 km/s) (2-bit)		

Baseband-2

1/2	86.33992 G...	86.33788 G...	H13CN v=0 J...	58.594 MHz(203 km/s), 70.557 kHz(0.245 km/s) (2-bit)	2	<input type="radio"/>
1/2	86.75429 G...	86.75224 G...	H13CO+ 1-0	58.594 MHz(202 km/s), 70.557 kHz(0.244 km/s) (2-bit)	2	<input type="radio"/>

Baseband-3

1/2	86.67076 G...	86.66871 G...	HCO 1(0,1)-0...	58.594 MHz(203 km/s), 70.557 kHz(0.244 km/s) (2-bit)	2	<input type="radio"/>
1/2	87.31690 G...	87.31483 G...	CCH v=0 N=...	58.594 MHz(201 km/s), 61.035 kHz(0.210 km/s) (2-bit)	1	<input type="radio"/>

Baseband-4

1/2	88.63160 G...	88.62950 G...	HCN v=0 J=1...	58.594 MHz(198 km/s), 61.035 kHz(0.206 km/s) (2-bit)	1	<input type="radio"/>
1/2	89.18853 G...	89.18642 G...	HCO+ v=0 1-0	58.594 MHz(197 km/s), 61.035 kHz(0.205 km/s) (2-bit)	1	<input checked="" type="radio"/>

Double click here to select bandwidth & resolution from a dropdown list

New!! 4bit sampling modes are available when 1 spw fills a whole baseband

The spectral setup has a visualizer for spectral windows and spectral lines

The spectral tab gives a graphical visualization of the spectral setup. The orange vertical bars are sidebands. This setup is okay!

Drag the green slider to slide the VIEW

Drag the yellow vertical to move the first LO

Click in the yellow area to MAGNIFY

Zoom in here to start

Project Structure: Unsubmitted Proposal, Project, Proposal, Planned Observing, ScienceGoal (Copy of B6 12CO (2-1): NO), General, Field Setup, Spectral Setup, Calibration Setup, Control and Performance, Technical Justification.

Editors: Spectral, Spectral Setup

Observed Frequency: 190,000 to 250,000

Rest Frequency: 190,000 to 250,000

Overlays: Receiver Bands Transmission Overlay Lines DSB Image

Water Vapour Column Density: Automatic Choice Manual Choice 1.262mm (4th Octile)

Viewport:

Feedback: Validation, Validation History, Log

Description: Suggestion

Contextual Help Phase I: Science Proposal

The Control and Performance Page

File Edit View Tool Search Help | Perspective 1

Project Structure: Unsubmitted Proposal > Project > Proposal > Planned Observing > ScienceGoal (Science Goal) > Control and Performance

Editors: Spectral Spatial Control and Performance

These parameters are used to control various aspects of the observations, including the required antenna configurations and integration times.

Control and Performance

Configuration Information

Antenna Beamsize ($1.13 * \lambda / D$)	12m 58.074 arcsec	7m 99.555 arcsec	
Number of Antennas	12m 43	7m 10	TP 3
	ACA 7m configuration	Most compact 12m configuration	Most extended 12m configuration
Longest baseline	0.049 km	0.161 km	8.548 km
Synthesized beamsize	13.190 arcsec	3.514 arcsec	0.102 arcsec
Shortest baseline	0.009 km	0.015 km	0.113 km
Maximum recoverable scale	68.450 arcsec	29.934 arcsec	1.477 arcsec

Desired Performance

Desired Angular Resolution (Synthesized Beam) Single Range Any Standalone ACA

0.00000 arcsec

Largest Angular Structure in source Undefined arcsec

Desired sensitivity per pointing 0.00000 Jy equivalent to Infinity K

Bandwidth used for Sensitivity AggregateBandWidth Frequency Width 7.500000 GHz

Override OT's sensitivity-based time estimate (must be justified) Yes No Enter total time estimate 0.00000 h

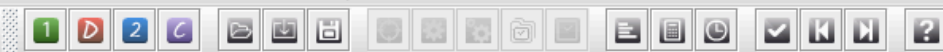
Science Goal Breakdown: time estimate, clustering, beam and configurations Planning and Time Estimate

Simultaneous 12-m and ACA observations Yes No

Are the observations time-constrained? Yes No

New look, better description, same great function

File Edit View Tool Search Help



Project Structure

Proposal Program

Unsubmitted Proposal

- Project name
 - Proposal
 - Planned Observing
 - ScienceGoal (Copy of 34 Sources)
 - General
 - Field Setup
 - Spectral Setup
 - Calibration Setup
 - Control and Performance**
 - Technical Justification

Editors

Spectral Spatial **Control and Performance**

These parameters are used to control various aspects of the observation

Control and Performance

Configuration Information

Antenna Beamsize ($1.13 * \lambda / D$) 12m 8.260 arcsec

Number of Antennas 12m 43

ACA 7m configuration Mos

Longest baseline 0.049 km 0.16

Synthesized beamsize 2.046 arcsec 0.62

Shortest baseline 0.009 km 0.01

Maximum recoverable scale 10.413 arcsec 4.773

Desired Performance

Desired Angular Resolution (Synthesized Beam) Single Range Any Standalone ACA

0.10000 arcsec to 0.20000 arcsec

Largest Angular Structure in source 1.00000 arcsec

Desired sensitivity per pointing 0.50000 Jy

Bandwidth used for Sensitivity AggregateBandWidth

Override OT's sensitivity-based time estimate (must be justified) Yes No

Science Goal Breakdown: (time estimate, clustering, beam and configurations) Planning and Time

Simultaneous 12-m and ACA observations Yes NoAre the observations time-constrained? Yes No

RANGE:
You can specify an acceptable range of angular resolution for the 12m array. This implies a set of configuration possibilities, use the planning & time estimate to see what they are

Since Cycle 6 the min and max allowed user-input angular resolutions are $\frac{1}{2}$ the smallest and twice the largest of the values shown for the 12m configurations



Project Structure

Proposal Program

Unsubmitted Proposal

- Project
 - Proposal
 - Planned Observing
 - ScienceGoal (Copy of Chameleon's d
 - General
 - Field Setup
 - Spectral Setup
 - Calibration Setup
 - Control and Performance**
 - Technical Justification

Editors

Spectral Spatial **Control and Performance**

These parameters are used to control various aspects of the observations, including the required antenna configurations and integration times.

Control and Performance

Configuration Information

Antenna Beamsize ($1.13 * \lambda / D$)	12m	<input type="text" value="38.309 arcsec"/>	7m	<input type="text" value="65.672 arcsec"/>		
Number of Antennas	12m	<input type="text" value="43"/>	7m	<input type="text" value="10"/>	TP	<input type="text" value="3"/>
		ACA 7m configuration	Most compact 12m configuration	Most extended 12m configuration		
Longest baseline	<input type="text" value="0.049 km"/>	<input type="text" value="0.161 km"/>	<input type="text" value="2.517 km"/>			
Synthesized beamsize	<input type="text" value="10.103 arcsec"/>	<input type="text" value="2.906 arcsec"/>	<input type="text" value="0.236 arcsec"/>			
Shortest baseline	<input type="text" value="0.009 km"/>	<input type="text" value="0.015 km"/>	<input type="text" value="0.015 km"/>			
Maximum recoverable scale	<input type="text" value="47.725 arcsec"/>	<input type="text" value="24.192 arcsec"/>	<input type="text" value="3.555 arcsec"/>			

Desired Performance

Desired Angular Resolution (Synthesized Beam) Single Range Any Standalone ACA

Desired sensitivity per pointing

Bandwidth used for Sensitivity

Science goal integration time

Override OT's sensitivity-based time estimate (must be justified)

Are the observations time-constrained? Yes No

With "ANY" there is no largest angular scale (0 by definition) or angular resolution and the project is supposed to be suited to any non-LB configuration

The "ANY" option replaced older ways of specifying a point source but is more general



Project Structure

- Unsubmitted Proposal
 - Project
 - Proposal
 - Planned Observing
 - ScienceGoal (Science Goal)
 - General
 - Field Setup
 - Spectral Setup
 - Calibration Setup
 - Control and Performance
 - Technical Justification

Editors

- Spectral
- Spatial
- Control and Performance

These parameters are used to control various aspects of the observations, including the required antenna configurations and integration times.

Control and Performance

Configuration Information

Antenna Beamsize ($1.13 * \lambda / D$)	12m	58.074 arcsec	7m	99.555 arcsec		
Number of Antennas	12m	43	7m	10	TP	3
		ACA 7m configuration	Most compact 12m configuration	Most extended 12m configuration		
Longest baseline		0.049 km	0.161 km	8.548 km		
Synthesized beamsize		13.190 arcsec	3.514 arcsec	0.102 arcsec		
Shortest baseline		0.009 km	0.015 km	0.113 km		
Maximum recoverable scale		68.450 arcsec	29.934 arcsec	1.477 arcsec		

Desired Performance

Desired Angular Resolution (Synthesized Beam) Single Range Any Standalone ACA

arcsec

Largest Angular Structure in source arcsec

Desired sensitivity per pointing Jy equivalent to

Bandwidth used for Sensitivity Frequency Width

Override OT's sensitivity-based time estimate (must be justified) Yes No Enter total time estimate h

Science Goal Breakdown:
time estimate, clustering, beam and configurations

Simultaneous 12-m and ACA observations Yes No

Are the observations time-constrained? Yes No

Note: The operation is longer than details.

Input Parameters

Requested sensitivity 500.0 mJy
Bandwidth used for sensitivity 1.875 GHz
Representative frequency (sky, first source) 704.983 GHz

Estimated Total time for Science Goal 3.40 h

Source Name	RA	Dec	Velocity
aj0252+1718i-342-0...	02:52:07.7190	17:18:42.686	0.000 km/s
aj0242+1742-168-...	02:42:24.2680	17:42:58.849	0.000 km/s
aj0231+1322-790-...	02:31:45.8940	13:22:54.716	0.000 km/s

Possible Configuration Combinations

12-m (1)	12-m (2)	7-m	TP	Nominal Beam(")	Max expected axial ratio
C43-4	None	No	No	0.973863 x 1.10910	1.5

Input Parameters

Precipitable water vapour (all sources) 0.472mm (1st Octile)

Time required for 12m (1) [C43-4]

Time on source per pointing (first source) 1.75 min [10.18 ms]
Total number of pointings (all sources) 3
Number of tunings 1
Total time on source 5.24 min [29.40 ms]
Total calibration time 15.60 min
Other overheads 1.97 min
Total time for 1 SB execution 22.80 min
Number of SB executions 1
Total time to complete SB 22.80 min

Calibration Breakdown per SB execution

2 x Pointing 4.00 min

Close

Use the planning&time estimate popup to see how your sources will be observed, how they may have been clustered and how the time is being used. When many combinations of configurations are shown, the 1st choice minimizes 12m time

The time estimate popup shows how the OT has grouped targets into clusters and what combinations of synthesis + TP will be used to observe them

This also shows how your time is distributed among the various things that happen

The beam ellipticity is shown with the maximum axial ratio that will be allowed during scheduling

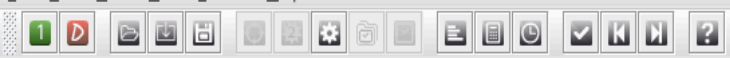
Use "planning&time estimate" to see what combinations are possible, what was chosen

SG Planning and Time Estimates

ALMA Observing Tool (2015.8) - Debris Disk Structure around Nearby Sun-like Stars (2015)

Time Estimate

File Edit View Tool Search Help



Project Structure

- Proposal
- Program
- Debris Disk Structure around Nearby Sun-like Stars
 - Science Plan
 - ScienceGoal (HD 10647) - generat
 - General
 - Field Setup
 - Spectral Setup
 - Calibration Setup
 - Control and Performance
 - Technical Justification
 - SG OUS (HD 10647)
 - Group OUS
 - Member OUS (HD_10647)
 - HD_10647_a_06_TE
 - Group 1 : Calibra
 - Group 2 : Science
 - 6 Targets
 - query Pointing
 - query Pointing
 - query Amplitu

Editors

Spectral Spatial Control and Performance

These parameters are used to control various aspects of the observations, including the

Control and Performance

Configuration Information

Antenna Beamsize ($1.13 * \lambda / D$)	12m	25.260 arcsec	7m	43.3
Number of Antennas	12m	40	7m	10
Longest baseline		0.049 km		0.157 km
Synthesized beamsize		5.712 arcsec		1.721 arcsec

ACA 7m configuration Most compact

Science Goal Breakdown:
time estimate, clustering, beam and configurations

Feedback Validation

scroll down in the planning popup to see a breakdown of how the required time is comprised by its various constituents

This project needs 12m + 7m synthesis owing to the combination of angular resolution and largest angular scale

Note: The time in brackets is that required to reach the sensitivity. Operational requirements often mean that the actual observed time is longer, especially for mosaics. Please see the User Manual for more details.

Input Parameters

Requested sensitivity	0.01400 mJy
Bandwidth used for sensitivity	7.500 GHz
Representative frequency (sky, first source)	230.52 GHz

Estimated Total time for Science Goal **6.02 h**

SB-1

Input Parameters

Precipitable water vapour (all sources)	1.796mm (5th Octile)
---	----------------------

Time required for C40-3

Time on source per pointing (first source)	1.44 h [1.43 h]
Total number of pointings (all sources)	1
Number of tunings	1
Total time on source	1.44 h [1.43 h]
Total calibration time	49.50 min
Other overheads	14.30 min
Total time for 1 SB execution	1.25 h
Number of SB executions	2
Total time to complete SB	2.51 h

Calibration Breakdown per SB execution

1 x Pointing	36.00 min
1 x SidebandRatio	1.58 min
1 x Amplitude	2.50 min
1 x Bandpass	5.00 min
6 x Phase	3.00 min
2 x CheckSource	2.00 min
7 x Atmospheric	4.67 min
Calibration overheads	5.40 min

Additional Arrays

ACA 7-m time (t_12m x 1.40)	3.51 h
Total ACA time (max[t_7-m, t_TP])	3.51 h

Estimated total time for SB-1 **6.02 h**

Close

File Edit View **Tool** Search Help

- ALMA Calibrator Selection Tool...
- ALMA LO Configuration Tool...
- Sensitivity Calculator...
- Generate SBs from the Selected Goal
- Generate Phase I SBs from all the Science Goals
- Generate Phase II SBs from all the Science Goals
- Export selected Scheduling
- Generate a PDF of Whole P
- Disable Edit Protect

Display Project Time Summary

Use Tool->display project time summary on the main menu to see these summaries per science goal

Total and Calibration Times

Science Goal	12-m Ext.		12-m Compact		12-m Ext. + Compact		ACA 7-m		ACA TP		Overall	
	Tot.	Cal.	Tot.	Cal.	Tot.	Cal.	Tot.	Cal.	Tot.	Cal.	Tot.	Cal.
MSXiiiRA16a1	51.12 min	24.75 min	-	-	51.12 min	24.75 min	-	-	-	-	51.12 min	24.75 min
MSXiiiRA16a2	51.12 min	24.75 min	-	-	51.12 min	24.75 min	-	-	-	-	51.12 min	24.75 min
MSXiiiRA16a3	51.97 min	24.75 min	-	-	51.97 min	24.75 min	-	-	-	-	51.97 min	24.75 min
MSXiiiRA16a4	51.12 min	24.75 min	-	-	51.12 min	24.75 min	-	-	-	-	51.12 min	24.75 min
MSXiiiRA16b1	1.29 h	29.95 min	-	-	1.29 h	29.95 min	-	-	-	-	1.29 h	29.95 min
MSXiiiRA16b2	1.29 h	29.95 min	-	-	1.29 h	29.95 min	-	-	-	-	1.29 h	29.95 min
Overall	6.01 h	2.65 h	-	-	6.01 h	2.65 h	-	-	-	-	6.01 h	2.65 h

Template library. Turn the keys on the JTr...

- Template library. Turn the keys on the
- Proposal
- Planned Observing
 - ScienceGoal (B3 spectral sv
 - ScienceGoal (B7 continuum
 - ScienceGoal (B7 CO(9-8): C
 - ScienceGoal (B9 continuum
 - ScienceGoal (B3 spectral sv
 - ScienceGoal (B3 continuum
 - ScienceGoal (B6 continuum
 - ScienceGoal (B7 continuum
 - ScienceGoal (B6 continuum
 - ScienceGoal (B3 continuum
 - ScienceGoal (B6 12CO (2-1
 - ScienceGoal (B6 13CO (2-1
 - ScienceGoal (B6 spectral lir
 - ScienceGoal (B9 spectral lir
 - ScienceGoal (B3 continuum
 - ScienceGoal (B6 continuum

Data Volumes and Data Rates

Science Goal	Data Volume			Data Rate		
	12-m	ACA 7-m	ACA TP	12-m	ACA 7-m	ACA TP
MSXiiiRA16a1	54.85 GB	-	-	18.31 MB/s	-	-
MSXiiiRA16a2	54.85 GB	-	-	18.31 MB/s	-	-
MSXiiiRA16a3	55.77 GB	-	-	18.31 MB/s	-	-
MSXiiiRA16a4	54.85 GB	-	-	18.31 MB/s	-	-
MSXiiiRA16b1	83.35 GB	-	-	18.31 MB/s	-	-
MSXiiiRA16b2	83.35 GB	-	-	18.31 MB/s	-	-
Overall	387.01 GB	-	-			

OK

Technical Justification

The screenshot displays the ALMA Observing Tool (2014.6) interface. The main window is titled "ALMA Observing Tool (2014.6) - Observing Tool for ALMA Cycle3 Groundhog Day Test". The interface is divided into several panes:

- Project Structure:** A tree view on the left showing the project hierarchy. The "Technical Justification" folder is highlighted with a red circle.
- Editors:** A central pane with tabs for "Spectral", "Spatial", and "Technical Justification". The "Technical Justification" tab is active.
- Technical Justification Content:** The main area contains a form for entering technical justification. It includes a header "Enter a Technical Justification for this Science Goal, paying special attention to the parameters reproduced below." and a section titled "Sensitivity" (circled in red). The content includes several lines of text with numerical values in input fields:
 - 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
 - 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
 - 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
 - Line width / bandwidth used for sensitivity 30.00 km/s / 731.92 m/s = 40.99
 - Dynamic Range: 33.33
- Justification Prompt:** Below the input fields, there is a prompt: "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." This is followed by a large empty text box containing the text: "Here would be the standard required justification of the sensitivity parameters".
- Template Library:** A pane at the bottom left shows a list of templates, including "ScienceGoal (B3 spectral sv)", "ScienceGoal (B7 continuum)", etc.

There are separate standard sections for Sensitivity, Imaging and Correlator and another may appear to allow you to justify some of the parameter choices you may have made

Each requires its own 50+ word justification

Each standard section comes with a summary of the requested input information to detail the different technical aspects of your program.

When the time is ripe ... validate & submit

Note the spiffy new icons!

Click in either place to check that your project will validate in the OT. If it doesn't validate when you submit, the archive will reject it.

Project - Observing Tool for ALMA, version Cycle2Test2

Editors

Spectral Spatial Project

Project Assigned Priority Project Code None Assigned

Feedback

Validation Validation History Log

Description Suggestion

Overview

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 **1** icon in the toolbar
 - Or clicking on this [link](#)
3. Click on the [proposal](#) tree node and complete the relevant fields.

Phase I: Science Proposal



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

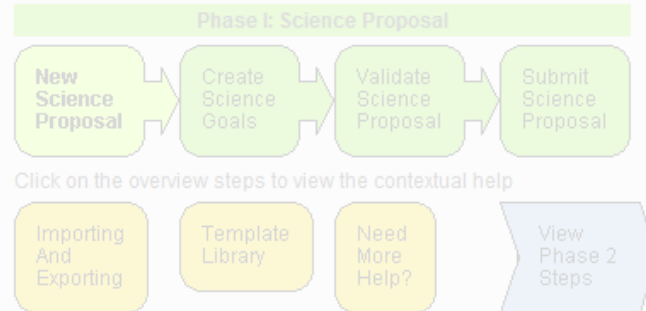
Click on the overview steps to view the contextual help

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

When the time is ripe ... validate & submit

The screenshot shows the ALMA Observing Tool interface. The menu bar includes 'File', 'Edit', 'Tools', 'Help', and 'Project'. The 'File' menu is open, showing options like 'New Proposal', 'New DDT Proposal', 'Open Project', 'Open Project as New Proposal', 'Save', 'Save As...', 'Show ALMA Template Library', 'Use Project as Template', 'Validate', 'Submit Project', 'Preferences', 'Save Preferences', and 'Quit'. The 'Validate' option is checked and highlighted with a red arrow. A blue callout box points to the 'Validate' option with the text: 'Click in either place to make sure that your project will be validated by the OT. If it doesn't validate when you submit, the archive will reject it.' Another blue callout box points to the 'Validate' option with the text: 'The OT lets you know while it's validating.' A 'Validating' dialog box is open in the foreground, displaying the text: 'The project is being validated, please wait.' and a 'Cancel' button. The dialog box has a loading spinner icon in the top right corner. The background interface shows a toolbar with icons for 'New Proposal', 'New DDT Proposal', 'Open Project', 'Open Project as New Proposal', 'Save', 'Save As...', 'Show ALMA Template Library', 'Use Project as Template', 'Validate', 'Submit Project', 'Preferences', 'Save Preferences', and 'Quit'. The 'Validate' icon is highlighted with a red arrow. The 'Validating' dialog box is a modal window with a title bar, a close button, and a 'Cancel' button. The dialog box contains the text 'The project is being validated, please wait.' and a loading spinner icon. The dialog box is positioned in the center of the screen, overlapping the main interface.

- 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.



File Edit View Tool Search Help



Project Structure

Proposal Program

Unsubmitted Proposal

- Observing Tool for ALMA Cycle3 Groundhog Day Test
 - Proposal
 - Planned Observing
 - ScienceGoal (Science Goal)
 - General
 - Field Setup
 - Spectral Setup
 - Calibration Setup
 - Control and Performance
 - Technical Justification

Template library. Turn the keys on the J...

Template library. Turn the keys on the J...

- Proposal
 - Planned Observing
 - ScienceGoal (B3 spectral)
 - ScienceGoal (B7 continuum)
 - ScienceGoal (B7 CO(9-8))
 - ScienceGoal (B9 continuum)
 - ScienceGoal (B3 spectral)
 - ScienceGoal (B3 continuum)
 - ScienceGoal (B6 continuum)
 - ScienceGoal (B7 continuum)
 - ScienceGoal (B6 continuum)
 - ScienceGoal (B3 continuum)
 - ScienceGoal (B6 12CO (2-1))
 - ScienceGoal (B6 13CO (2-1))
 - ScienceGoal (B6 spectral)
 - ScienceGoal (B9 spectral)
 - ScienceGoal (B3 continuum)
 - ScienceGoal (B6 continuum)

Editors

Spectral Spatial ScienceGoal (Science Goal)

System J2000 Sexagesimal display?

Parallax 0.00000 mas

Source Coordinates RA 22:02:43.2912 PM RA 0.00000 mas/yr

Dec -42:16:39.978 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 0.00000 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 %

Field Center Coordinates

Offset

arcsec

1

RA [arcsec]	Dec [arcsec]
0.00000	0.00000

Clicking on a validation error should take you to the problem directly

New! The text in these messages can be copied

Feedback

Validation Validation History Log

9 errors, 0 warnings

Description	Suggestion
<input checked="" type="checkbox"/> No Principal Investigator specified	Select the top level Project node in the tree and fill in the Principal Investigator field
<input checked="" type="checkbox"/> No scientific category defined	Select Proposal node and set a scientific category
<input checked="" type="checkbox"/> No document found - you must add a Science Case to your proposal	Select the proposal node in the Proposal tab and add your document
<input checked="" type="checkbox"/> Must select a minimum of 1 science keywords	Select the Proposal node and then add some science keywords (minimum 1
<input checked="" type="checkbox"/> Expected peak continuum flux is required for a single continuum	Select the Target Parameters (anti-bllac) in the Science Goal and enter a valid value
<input checked="" type="checkbox"/> Either a continuum or a line polarization percentage is required for	Select the Target Parameters (anti-bllac) in the Science Goal and enter a valid value

When the time is ripe ... validate & submit

Project - Observing Tool for ALMA, version Cycle2Test2

Editors

Spectral Spatial Project

Principal Investigator

ALMA Observing Tool (Validation OT) - CRIS

File Edit View Tool Search Help

Main Project Information

Project

Assigned Priority

Project Code None Assigned

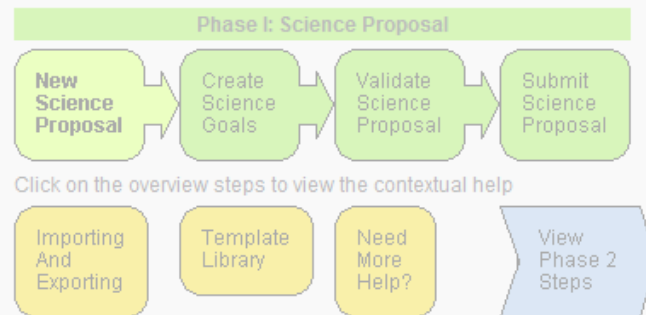
Feedback

Validation Validation History Log

Description Suggestion

When you are satisfied that your proposal is complete, use the top level File menu to submit it to the archive

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



When the time is ripe ... validate & submit

Project - Observing Tool for ALMA, version Cycle2Test2

Editors

Spectral Spatial Project

Principal Investigator

ALMA Observing Tool (Validation OT) - CRIS

File Edit View Tool Search Help

Submit Project to ALMA

Project Structure

Project Code: None Assigned

Feedback

Validation Validation History Log

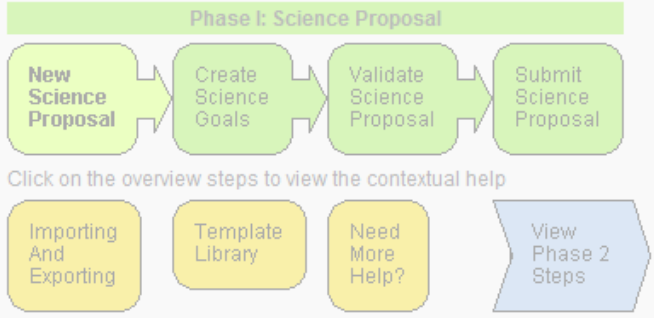
Description Suggestion

Overview

Or use the upload icon below the main menu

When you are satisfied that your proposal is complete, use the top level File menu to submit it to the archive

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



A Few OT Tips and Tricks

- Submit early and often!! You can submit early before adding colleagues.
- Ask colleagues for previous .aot files to start out with a template
- You can open multiple copies of the ALMA-OT.app to view multiple projects at once
- There was a bug in the C9 OT where if you were trying to do a mosaic of an extragalactic object you had to put in a $z=0$
- Put your figures in as a PDF, pngs can cause errors. You may get an error about too small of text when you clearly have everything in 12pt font. Sometimes there can be phantom text in figures - having figures as pdfs can help with this. You can try to highlight your figures in a document viewer to see phantom text.
- If you are writing a Large Program Proposal, the NAASC asks that you set-up a time to chat with a NAASC staff member just to go through your technical set-up

A Few OT Tips and Tricks

- You can ask for a zoom help session for any part of your proposal writing process (including the OT) at <https://help.almascience.org/>

How can we help you today?

Help Center TOO Search Sci Portal

Knowledgebase Submit Helpdesk Ticket My Tickets View your tickets >

Face to Face Visit Arrange a visit >

Department *
Face to Face Support (NA) ✓

Type of visit *
Please choose how you would like your expert help. In person, virtually, or just a short chat. For more details, please visit <https://science.nrao.edu/facilities/alma/visitors-shortterm>
Please keep in mind that all visitors to NRAO (virtual or face-to-face) are expected to follow our code of conduct <https://info.nrao.edu/hr/Conduct>
Visit the NAASC (in person) - A week or so long visit where you come to us and we work on your project together. Please give us at minimum a month notice.
Virtual Face to Face - A week or so of a F2F, but over zoom and slack. We expect the visitor to make the visit top priority. Please give us at minimum a two week notice.
NAASC Chat - A couple hours of one on one with an expert. Please give us at minimum a one week notice.

Visit the NAASC (in person) Virtual Face to Face NAASC Chat

A Few OT Tips and Tricks

- The standard Ctrl-Z (undo) and Ctrl-Y (redo) functionality are now available in most text edit fields:
- Source coordinates in the field setup
- The frequency input fields of the spectral setup
- The LAS input field in the control and performance page
- Any of the text fields in the Technical Justification editor
- Description field of General node associated with an SG
- Fields in a science parameters editor
- Frequency input fields in the spectral spec editor
- Time-related input fields in correlator configuration

Have no fear, ALMA Helpdesk is here...

The screenshot displays the ALMA Helpdesk user interface. At the top, a browser address bar shows the URL <https://help.almascience.org>. Below the address bar is a search bar with the text "Do you know where I can get a hamburger?" and a "Go" button. A dropdown menu below the search bar indicates "No results found".

The main navigation area includes a "Help Center" link and a "TOO" link. Below this are four primary action buttons:

- Knowledgebase**: View all articles >
- News**: View all news posts >
- Submit Helpdesk Ticket**: Get in touch for help >
- My tickets**: View your submitted tickets >

A central message box reads: "Welcome to the new ALMA Helpdesk User Interface! Please use your email with your ALMA Science Portal password when logging in to view and submit tickets."

Below the message is a "News" section with a sub-header "News". A news article is visible, dated "MAR 24", with the title "Cycle 7 observation suspension and the delay of the Cycle 8 proposal".

