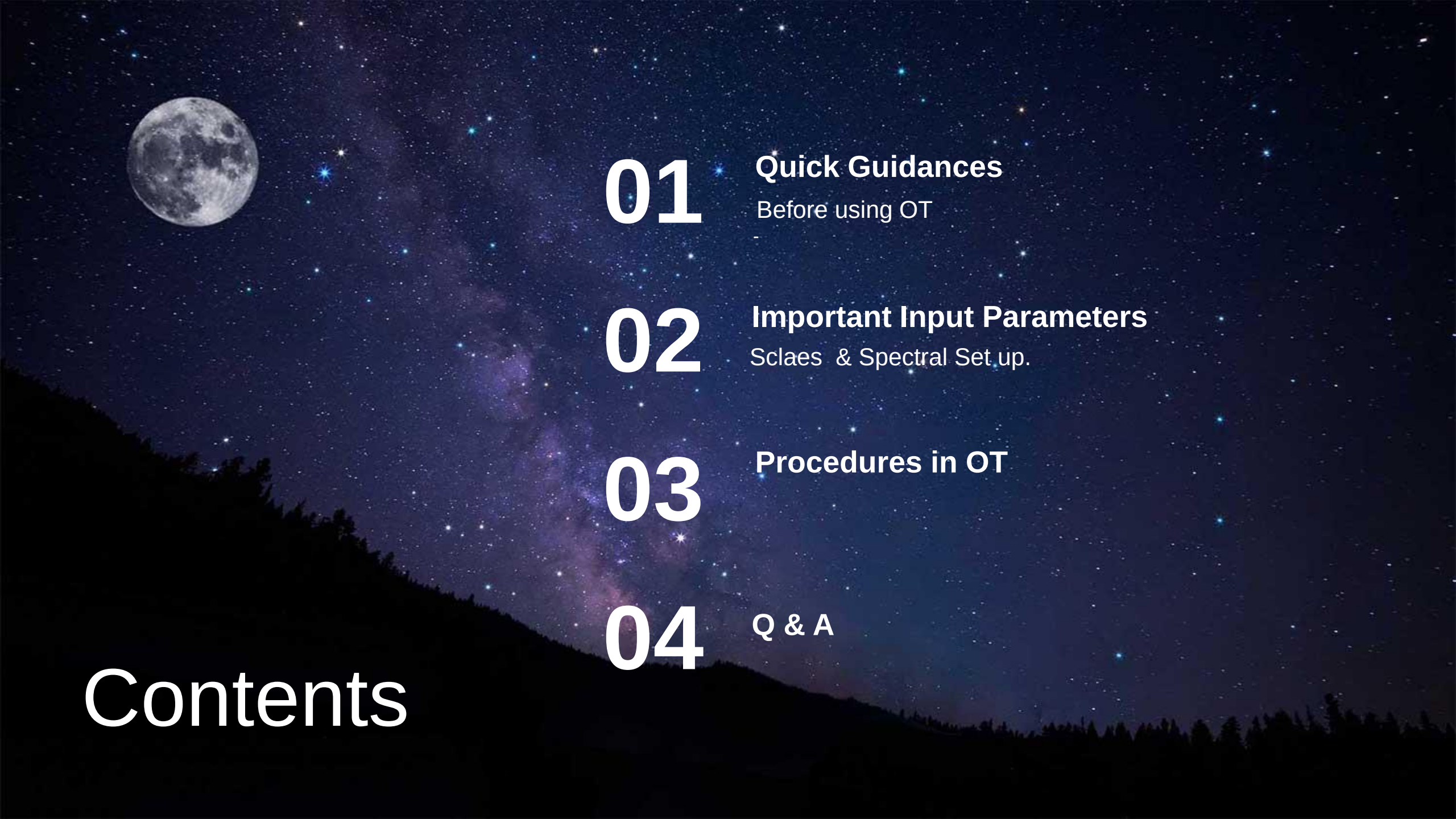
Townhall meeting for ALMA Cycle 11 proposal preparation

Observing Tool

2024. 3. 26. Seokho Lee (KASI)



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Quick Guidance

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- ALMA Proposal Review
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- Observing Tool
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  - OT Video Tutorials
- Sensitivity Calculator
- ALMA Primer
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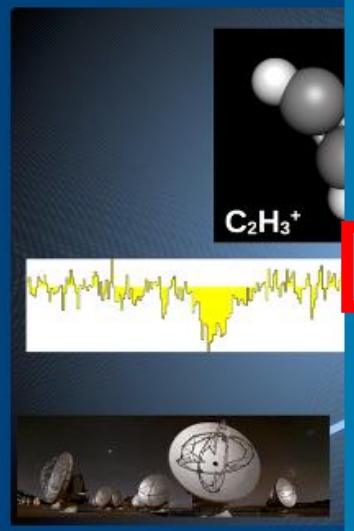
- Proposal Template
- Duplicate Observations
- DDT proposals

Science Highlight

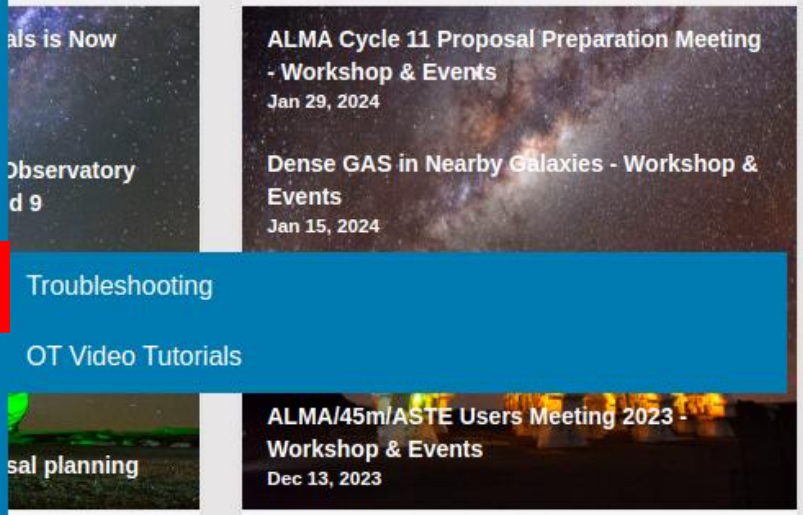
Protonated acetylene in the z=0.



View of the molecule (crea
absorption spectrum obse
of sight of the quasar PKS
(here observed with the M
radio wavelengths) is lens
galaxy at z=0.89 (optical image from HST).

The line of sight to the lensed blazar PKS1830-211 intercepts the disk of a foreground spiral galaxy at z=0.89 where absorption has been detected for more than 60 molecular species, mostly at mm wavelengths. In a paper accepted for publication in A&A. Dr. Sebastian Muller and colleagues report the detection of a new

NAOJ News



More...

ALMA Status

More...

-stop source for information and tools aimed at the scientific community as a whole, including proposers, archive researchers, ALMA
cies.

ALMA Basics	Configuration Schedule
ALMA Science	SnooPI
ALMA Primer	DDT Proposals

Observing Tool

The ALMA Observing Tool (OT) is a Java desktop application used for the preparation and submission of ALMA Phase 1 proposals and, for those which are accepted, Phase 2 materials (Scheduling Blocks). It is also used for preparing and submitting Director's Discretionary Time (DDT) proposals and Supplemental Call (ACA stand-alone) proposals. The current *Cycle 11* release of the OT is configured for the present capabilities of ALMA as described in the Proposer's Guide. Note that in order to submit proposals you will have to register with the ALMA Science Portal beforehand.

Download & Installation

The OT should run on all common operating systems and depends on a version of Java being available. The Cycle 11 version of the OT will come with its own version of Java 17 and thus the users need no longer worry about their local Java installation. Unfortunately, as Java 17 does not include Web Start, this version of the OT is no longer available. The Cycle 11 OT can be installed in two different ways, either with a modern installer or manually with a tarball distribution.

It is recommended that the OT be installed using the ALMA **OT Installer**. This uses a modern graphical interface to report the progress of the installation and allows the user to change various settings from their defaults, including the amount of memory the OT may use. The installation will produce an executable file that can be used to start the OT. If problems are encountered with the installer, then the tarball must be used.

The **tarball** version must be installed manually and the instructions for doing this have not changed.

Installer Tarball

NOTE: For those who require the **Cycle 10 version of the OT,** it can be found here.

Documentation

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

- If you are a novice OT user you should start with the **OT Quickstart Guide**, which takes you through the basic steps of ALMA proposal preparation.

Installer Page

- Mac OS Installer
- Linux Installer
- Windows Installer

Click on one of the links next to the OT Logo to download the Cycle 11 OT Installer for your particular operating system. The Installer is an executable file which can be started by double-clicking in a file-manager window or started from a shell's command line. Once started, it will take you through a number of screens which, for example, allow you to change the default amount of memory available to the OT. In most cases you can just accept all the defaults using the 'Next' button and click 'Install' when you are happy.

After the Installer has finished, an executable file ('ALMA-OT.sh' on Linux and 'ALMA-OT.command' on Macs) should be found inside a directory named 'ALMAOT-C11-2024'. This can be run from the command line or by double-clicking in a file manager if this is configured in this way. We recommend that the name of this directory not be changed so that multiple versions of the OT (for use in different cycles) can be maintained on your computer. On Macs, a shortcut will be created on your Desktop with the name 'ALMAOT-C11-2024' - the OS will probably ask to control your Finder for this to happen. In the case of macOS, if the ALMA OT is started via clicking on the desktop icon, a separate terminal window opens which should not be shut down whilst the OT is running.

Additional Information

- The Mac download is a zip archive which must first be opened in order to extract the installer. This will often be done automatically for you or a suitable program will be suggested ('Archive Utility').
- On Linux, typing 'sh almaot-C11-2024.bin' is the recommended way of starting the installer - it should not be necessary to make it executable. However, if this does not work, please run “chmod u+x almaot-C11-2024.bin” and then “./almaot-C11-2024.bin”.
- There may be various issues related to security when running the Installer. Mac users may need to give permission to run the tool by opening the 'Security & Privacy' menu of 'System Preferences' and this menu should also be set to allow the use of apps from 'identified developers'. Alternatively, running the installer by right-clicking and choosing 'Open' (maybe twice) might work. On Windows, we are aware of 'Defender SmartScreen' - this can be bypassed by clicking on 'More Info'.
- It also appears that the installer will not work on older versions of macOS. So far, we only know that this is the case for 10.10 Yosemite. Users of this OS will have to use the tarball version.
- In contrast to the previous 'automated' OT installation (Web Start), the OT will no longer update itself automatically if an update is released. However, the OT will inform you if an update is available after which a new version of the OT Installer should be downloaded and the install procedure repeated. Re-running the Installer will overwrite the previous installation.

WARNING: Oracle have reported a serious incompatibility between macOS Sonoma 14.4 and Java which may result in the OT terminating unexpectedly – there is no workaround. Users are advised to avoid using Sonoma 14.4 and the OT if possible. If this is not possible and a user encounters this problem, the OT does have a project auto-backup facility which can be used as a recovery mechanism. Please contact the helpdesk should more information be required.

Installer Page

YOU (and your Co-Is) shoud be registered in ALMA site.

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Account info | Demographics | Expertise | Conflicts of interest | Confirm

New Account Registration

Next

First name	●	
Middle initials		
Surname	●	
Gender		
E-mail	●	
Re-type E-mail	●	
Receive optional emails		☐
Account name	●	

Important Input Parameters

Important parameters I

- Scales (Control and Performance; Field Setup)
  - Angular Resolution (beam size) ~ depend on the longest baseline
  - Maximum Recoverable Scale (MRS)
    - depends on the shortest baseline (~ 10 x beam size)
    - When the scale is loger than MRS, the emission is resolve out
    - Largest Angular Structure (LAS) should be shorther than MRS.
    - LAS > MRS → multiple configuration or ACA and TP are added.
  - Field of View (FOV)
    - FWHM of the 12m telescope primary beam
      - ~19 arcsec (33 arcsec) @ 300 GHz for 12m (7m)
    - Area of target is larger than 1/3 FOV, mosaic is needed.

Schadule for C11 configurations

Start date	Configuration	Longest baseline	LST for best observing conditions
2024 October 1	C-3	0.50 km	~ 22—10 h
2024 October 20	C-2	0.31 km	~ 23—11 h
2024 November 10	C-1	0.16 km	~ 1—13 h
2024 November 30	C-2	0.31 km	~ 2—14 h
2024 December 20	C-3	0.50 km	~ 4—15 h
2025 January 10	C-4	0.78 km	~ 5—17 h
2025 February 1	*No observations due to maintenance*		
2025 March 1	C-4	0.78 km	~ 8—21 h
2025 March 20	C-5	1.4 km	~ 9—23 h
2025 April 20	C-6	2.5 km	~ 11—1 h
2025 May 20	C-7	3.6 km	~ 13—3 h
2025 June 20	C-8	8.5 km	~ 14—5 h
2025 July 11	C-9	13.9 km	~ 16—6 h
2025 July 30	C-10	16.2 km	~ 17—7 h
2025 August 20	C-9	13.9 km	~ 19—8 h
2025 September 10	C-8	8.5 km	~ 20—9 h

Band 5 (around 183GHz) and 7-10 are recommended within LST ranges (not Dec-March)

AR and MRS for C11 configurations

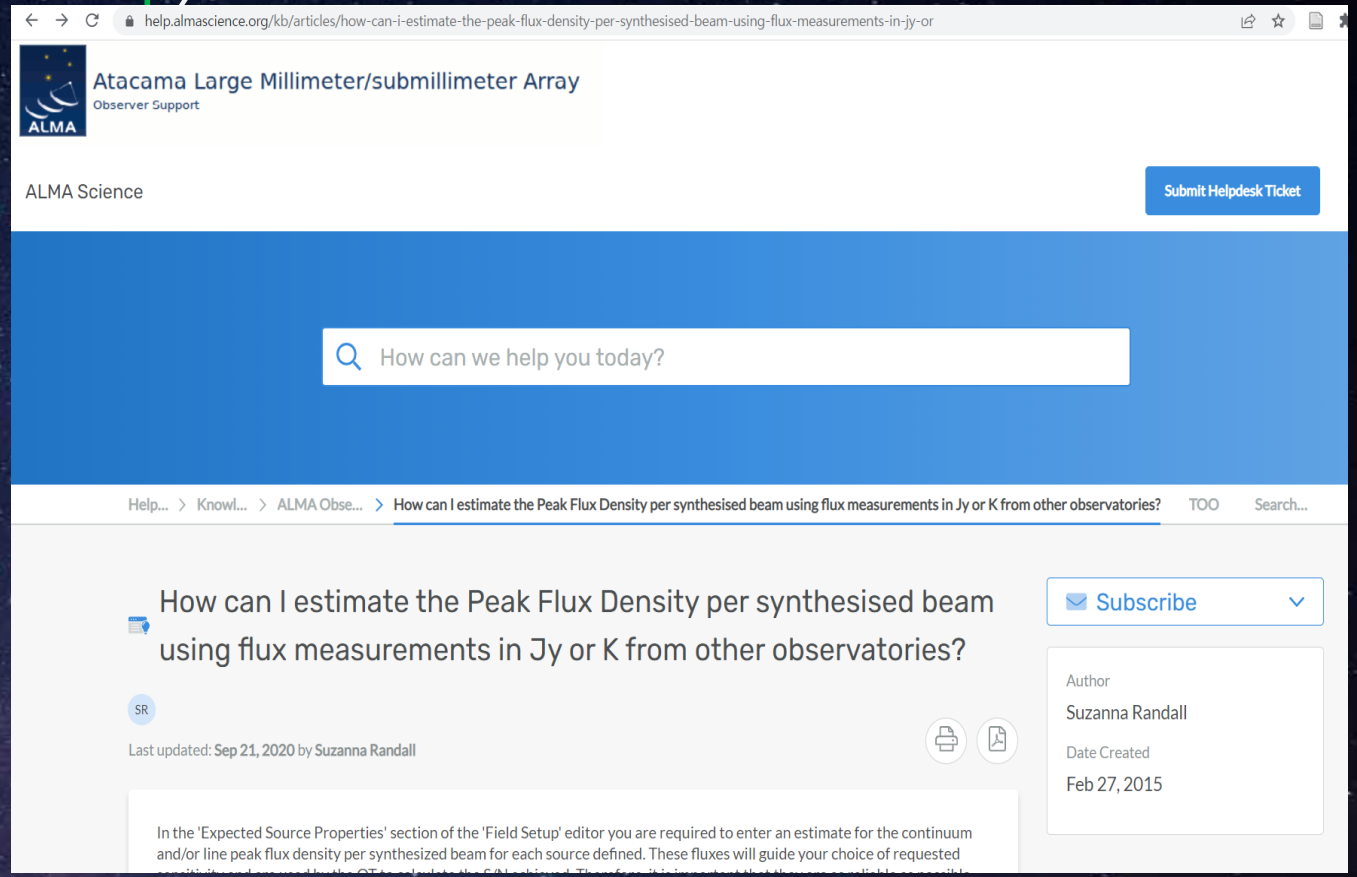
Config.	L_{max} / L_{min}	Band / Freq. (GHz)	1 / 40	3 / 100	4 / 150	5 / 185	6 / 230	7 / 345	8 / 460	9 / 650	10 / 870
7-m	**45 m**	θ_{res} (arcsec)	31.5	12.5	8.35	6.77	5.45	3.63	2.72	1.93	1.44
	9 m	θ_{MRS} (arcsec)	167	66.7	44.5	36.1	29.0	19.3	14.5	10.3	7.67
C-1	**161 m**	θ_{res} (arcsec)	8.45	3.38	2.25	1.83	1.47	0.98	0.74	0.52	0.39
	15 m	θ_{MRS} (arcsec)	71.2	28.5	19.0	15.4	12.4	8.25	6.19	4.38	3.27
C-2	**314 m**	θ_{res} (arcsec)	5.75	2.30	1.53	1.24	1.00	0.67	0.50	0.35	0.26
	15 m	θ_{MRS} (arcsec)	56.5	22.6	15.0	12.2	9.81	6.54	4.90	3.47	2.59
C-3	**500 m**	θ_{res} (arcsec)	3.55	1.42	0.94	0.77	0.62	0.41	0.31	0.22	0.16
	15 m	θ_{MRS} (arcsec)	40.5	16.2	10.8	8.73	7.02	4.68	3.51	2.48	1.86
C-4	**784 m**	θ_{res} (arcsec)	2.30	0.92	0.61	0.50	0.40	0.27	0.20	0.14	0.11
	15 m	θ_{MRS} (arcsec)	28.0	11.2	7.50	6.08	4.89	3.26	2.44	1.73	1.29
C-5	**1.4 km**	θ_{res} (arcsec)	1.38	0.55	0.36	0.30	0.24	0.16	0.12	0.084	0.063
	15 m	θ_{MRS} (arcsec)	16.8	6.70	4.47	3.62	2.91	1.94	1.46	1.03	0.77
C-6	**2.5 km**	θ_{res} (arcsec)	0.78	0.31	0.20	0.17	0.13	0.089	0.067	0.047	0.035
	15 m	θ_{MRS} (arcsec)	10.3	4.11	2.74	2.22	1.78	1.19	0.89	0.63	0.47
C-7	**3.6 km**	θ_{res} (arcsec)	0.53	0.21	0.14	0.11	0.092	0.061	0.046	0.033	0.024
	64 m	θ_{MRS} (arcsec)	6.45	2.58	1.72	1.40	1.12	0.75	0.56	0.40	0.30
C-8	**8.5 km**	θ_{res} (arcsec)	0.24	0.096	0.064	0.052	0.042	0.028	0.021	0.015	0.011
	110 m	θ_{MRS} (arcsec)	3.55	1.42	0.95	0.77	0.62	0.41	0.31	0.22	0.16
C-9	**13.9 km**	θ_{res} (arcsec)	0.14	0.057	0.038	0.031	0.025	0.017	0.012	0.0088	0.0066
	368 m	θ_{MRS} (arcsec)	2.03	0.81	0.54	0.44	0.35	0.24	0.18	0.13	0.093
C-10	**16.2 km**	θ_{res} (arcsec)	0.11	0.042	0.028	0.023	0.018	0.012	0.0091	0.0065	0.0048
	244 m	θ_{MRS} (arcsec)	1.25	0.50	0.33	0.27	0.22	0.14	0.11	0.077	0.057

Most Extended configuration	Allowed Compact configuration pairings	Extended 12-m Array Multiplier	Multiplier if compact 12-m Array needed	Multiplier if 7-m Array needed	Multiplier if TP Array needed and allowed (with 7-m Array in 4x4-bit mode)	Multiplier if TP Array needed and allowed (with 7-m Array in 2x2-bit mode)
7-m Array	**TP**			1	1.7	1.4
C-1	**7-m Array & TP**	1		7.0	11.9	9.5
C-2	**7-m Array & TP**	1		4.7	7.9	6.3
C-3	**7-m Array & TP**	1		2.4	4.1	3.3
C-4	**C-1 & 7-m Array & TP**	1	0.34	2.4	4.0	3.2
C-5	**C-2 & 7-m Array & TP**	1	0.26	1.2	2.1	1.7
C-6	**C-3 & 7-m Array & TP**	1	0.25	0.6	1.0	0.8
C-7	**C-4**	1	0.23			
C-8	**C-5**	1	0.22			
C-9	**C-6**	1	0.21			
C-10	–	1				

Table A-2: Allowed Array Combinations and Time Multipliers. See Chapter 7 of the Technical Handbook for relevant equations and detailed considerations. If the array configuration that meets the AR request according to Table A-1 has a MRS that is smaller than the LAS request, the OT checks if adding more compact array configurations, following the restrictions of this Table, fulfills the LAS request. If so, the final setup consists of the selected combination of arrays. Otherwise, the OT returns a validation error.

Important parameters II

- Expected Source properties (Field Setup)
  - Position, souce velocity
  - Peak Flux Density per beam
    - SNR > 3
  - Polarization
    - linear > 0.1% (< 0.3 FOV)
    - circular > 1.8 % (<0.1 FOV)
  - Line width
    - > 3 x spectral resolution

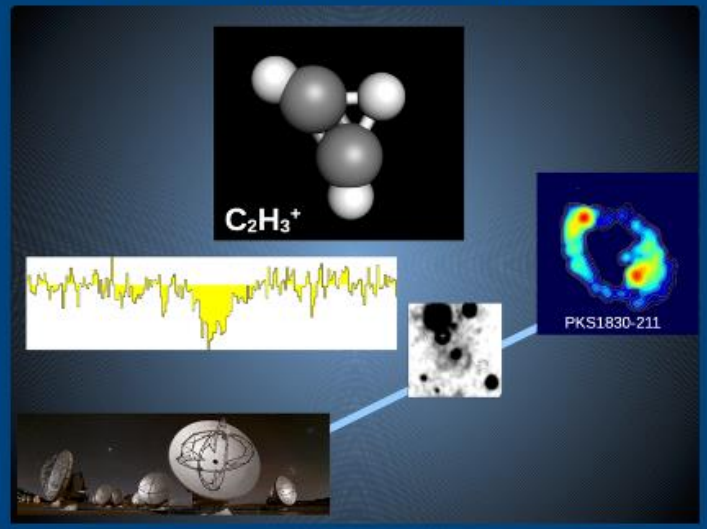


You should describe how to derive/adopt these values in Technical Justification

https://help.almascience.org/kb/articles/how-can-i-estimate-the-peak-flux-density-per-synthesised-beam-using-flux-measurements-in-jy-or

Science Highlight

Protonated acetylene in the z=0.89 absorber toward PKS1830-211



View of the molecule (created with MolView) and an absorption spectrum observed with ALMA in the line of sight of the quasar PKS1830-211. The quasar (here observed with the MERLIN interferometer at radio wavelengths) is lensed by a foreground spiral galaxy at z=0.89 (optical image from HST).

The line of sight to the lensed blazar PKS1830-211 intercepts the disk of a foreground spiral galaxy at z=0.89 where absorption has been detected for more than 60 molecular species, mostly at mm wavelengths. In a paper accepted for publication in A&A. Dr. Sebastian Muller and colleagues report the detection of a new

Observatory News

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Quick Links

ALMA Basics	Configuration Schedule
ALMA Science	SnooPI
ALMA Primer	DDT Proposals

Atacama Large Millimeter/submillimeter Array
Observer Support

ALMA Science

Submit Helpdesk Ticket | Log in

How can we help you today?

Help Center > Knowledgebase TOO Search Sci Portal

Knowledgebase

General (1)

- What Cycle 9 proposal issues and clarifications should I ...

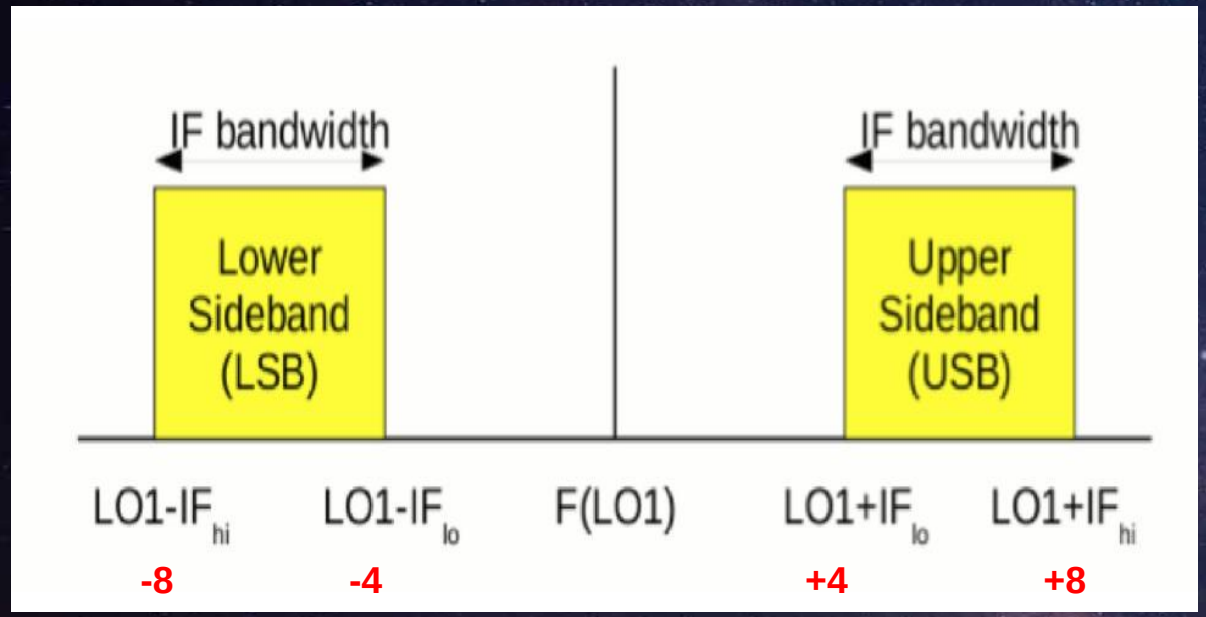
ALMA Observing Tool (OT) (44)

- What do the time estimates in the summary PDF page g...
- My project requires good uv-coverage. How should I set ...

Important parameters III

- Spectral Setup
  - LSB and/or USB
  - 4 basebands (with 2GHz max. width)
  - 2 or 4 basebands in the one sideband

LSB/USB (<4GHz, ≤4 basebands)
Baseband (<2GHz, ≤4spws)
Spectral window(spw)



Band	Frequency range (GHz)	Wavelength range (mm)	IF range (GHz)	Type
1	35 – 50	8.5 – 6	4 – 12	SSB
3	84 – 116	3.6 – 2.6	4 – 8	2SB
4	125 – 163	2.4 – 1.8	4 – 8	2SB
5	158 – 211	1.9 – 1.4	4 – 8	2SB
6	211 – 275	1.4 – 1.1	4.5 – 10	2SB
7	275 – 373	1.1 – 0.8	4 – 8	2SB
8	385 – 500	0.78 – 0.60	4 – 8	2SB
9	602 – 720	0.50 – 0.42	4 – 12	DSB
10	787 – 950	0.38 – 0.32	4 – 12	DSB

Spws in a baseband
- one faction 1
- two fraction ½
- four faction ¼
- one fraction ½ + two fraction ¼

Spectral windows (SPW) should have the same resolution.

Bandwidth (MHz)	Channel spacing (MHz)	Spectral resolution (MHz)	Number of channels	Correlator mode	Bit Mode
1875	15.6	31.2	120	TDM	
938	0.976	1.952	1024	FDM	4x4 ⋆
1875	0.488	0.976	3840	FDM	2x2
469	0.488	0.976	1024	FDM	4x4
938	0.244	0.488	3840	FDM	2x2
234	0.244	0.488	1024	FDM	4x4
469	0.122	0.244	3840	FDM	2x2
117	0.122	0.244	1024	FDM	4x4
234	0.061	0.122	3840	FDM	2x2
58.6	0.061	0.122	1024	FDM	4x4
117	0.0305	0.061	3840	FDM	2x2
58.6	0.0153	0.0305	3840	FDM	2x2

Table 5.1: Available spectral windows in multi-region mode (dual polarization). Each time the fraction is changed, the number of channels and bandwidth of a particular correlator mode is halved. Each row corresponds to a particular spectral resolution.

Spectral resolution ∝ 1/ fraction for a given bandwidth

Fraction = 1		Fraction = 1/2		Fraction = 1/4	
Bandwidth (MHz)	# channels	Bandwidth (MHz)	# channels	Bandwidth (MHz)	# channels
1875	4096	937.5	2048	468.75	1024
937.5	4096	468.75	2048	234.375	1024
468.75	4096	234.375	2048	117.118	1024
234.375	4096	117.118	2048	58.594	1024
117.118	4096	58.594	2048	not available	
58.594	4096	not available		not available	

Procedures In OT

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

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

Project

Assigned Priority

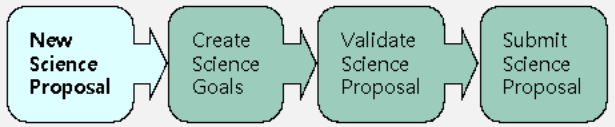
Project Code None Assigned

Overview

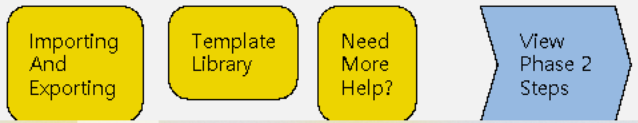
Contextual Help

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



Click on the overview steps to view the contextual help



ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Project

Principal Investigator

Select PI...

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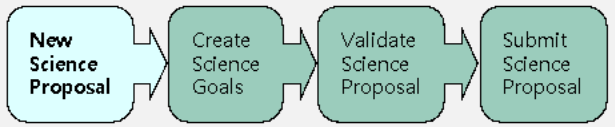
Phase I: Science Proposal



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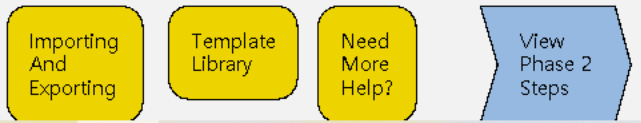

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Proposal

Proposal Information

Proposal Title

Proposal Cycle 2023.1

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

Please select one or two keywords

Student project

Feedback

Validation Validation History Log

Overview

Contextual Help

1. Please ensure you and your co-Is are registered with the ALMA Science Portal

Phase I: Science Proposal

New Science | Create Science | Validate Science | Submit Science

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

- Project
  - Proposal
    - Planned Observing
      - ScienceGoal (Test)
        - General
        - Field Setup
        - Spectral Setup
        - Calibration Setup
        - Control and Perf
        - Technical Justific

Editors

Spectral Spatial Proposal

Proposal Information

Proposal Title

Display help from reference manual

Please select one or two keywords

ALMA Observing Tool Reference Manual

Contents Search Favourites

- Proposal Information
- Investigators
- Reviewer Information
- Science Case
- Management Plan
- Duplicate observations
- Observatory Use Only
- Phase 1 and Phase 2 Science Goals
  - General
  - Field Setup
  - Spectral Setup
  - Calibration Setup
  - Control and Performance
  - Technical Justification
- Phase 2 Program Scheduling Blocks

Next Up Previous Contents

Next: Investigators **Up:** The Phase 1 Proposal: **Previous:** Advanced Options **Contents**

Proposal Information

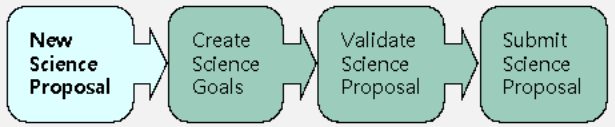
- **Proposal Title**: The title of the project can be entered here and is limited to 120 characters.
- **Proposal Cycle**: This is formed from the proposal year and the submission period. If a non-submitted proposal created during a previous cycle is read into the OT the old proposal cycle will be shown, but this will be updated to the current cycle if the project is then submitted.
- **Abstract**: The abstract can be entered as plain text and is limited to 1200 characters.
- **Proposal Type**: Four projects types are currently available

Overview

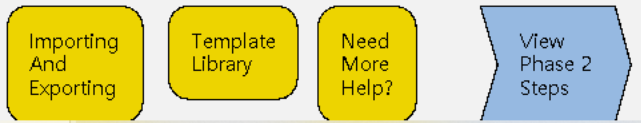
Contextual Help

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



Click on the overview steps to view the contextual help



ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Proposal

Circumstellar disks, exoplanets and the solar system

Stellar Evolution and the Sun

Please select one or two keywords

Student project

Joint Proposals

Is this a Joint Proposal? Yes No

Investigators

Type	Full name	Email	Affiliation	ALMA ID	Executive	Reviewer
PI	Not set	Not set	Not set	Not set	Non-ALMA	☑

Select PI | Add CoPI | Add CoI | Remove Collaborator | Add from Proposal

Feedback

Validation Validation History Log

Overview

Contextual Help

1. Please ensure you and your co-Is are registered with the ALMA Science Portal

Phase I: Science Proposal

New Science | Create Science | Validate Science | Submit Science

ALMA Observing Tool (Cycle 10 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Proposal

1

Joint Proposals

Is this a Joint Proposal? Yes No

Type of Joint Proposal Main Partner

Observatory	Project Code	Requested Time

2

Add Partner Observatory | Remove Partner Observatory

Investigators

Type	Full name	Email	Affiliation	ALMA ID	Executive	Reviewer

Comparison of Observing time
Main : ALMA > Partner
Partner : ALMA < Partner

Feedback

Validation Validation History Log

	Description	Suggestion

Overview

Contextual Help

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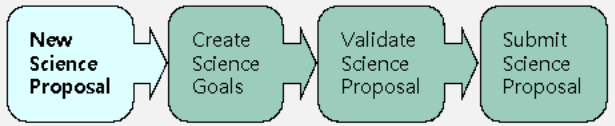
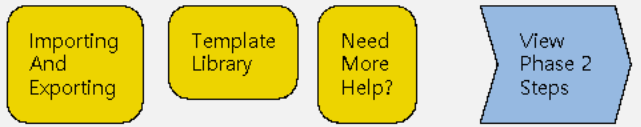
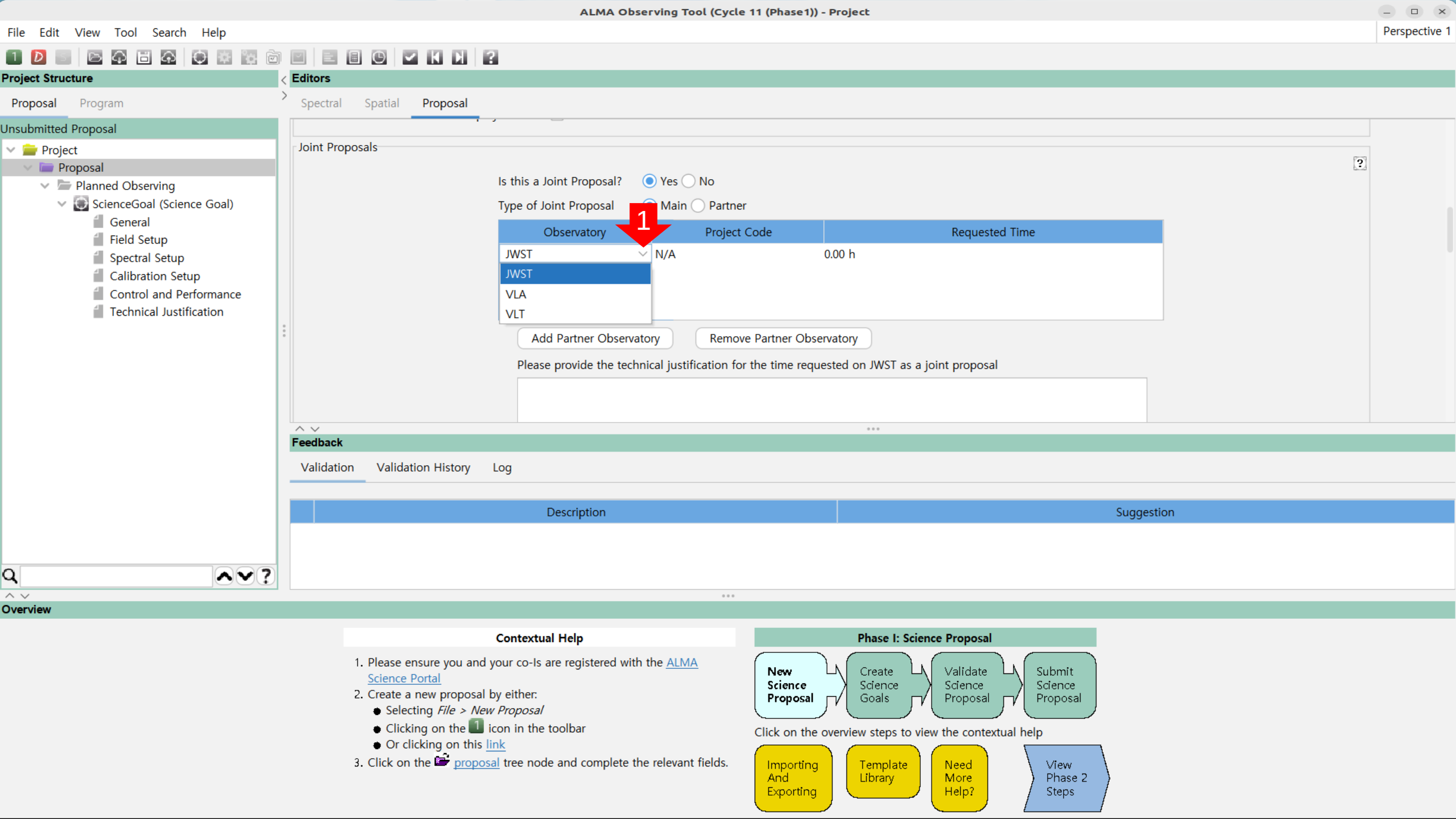
Phase I: Science Proposal



Click on the overview steps to view the contextual help




ALMA Observing Tool (Cycle 11 (Phase1)) - Project
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ScienceGoal (Science Goal)
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Calibration Setup
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Technical Justification
Editors
Spectral Spatial Proposal
Joint Proposals
Is this a Joint Proposal? Yes No
Type of Joint Proposal Main Partner
1
Observatory
Project Code
Requested Time
JWST
N/A
0.00 h
JWST
VLA
VLT
Add Partner Observatory
Remove Partner Observatory
Please provide the technical justification for the time requested on JWST as a joint proposal
Feedback
Validation Validation History Log
Description
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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 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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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        - Spectral Setup
        - Calibration Setup
        - Control and Performance
        - Technical Justification

Editors

Spectral Spatial Proposal

Joint Proposals

Is this a Joint Proposal? Yes No

Type of Joint Proposal Main Partner

Observatory	Project Code	Requested Time
JWST	N/A	1.0 h

Add Partner Observatory | Remove Partner Observatory

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

Feedback

Validation Validation History Log

	Description	Suggestion

Overview

Contextual Help

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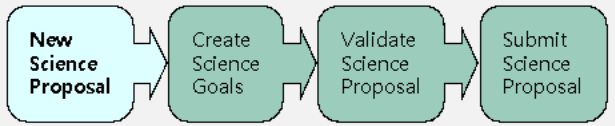
Phase I: Science Proposal



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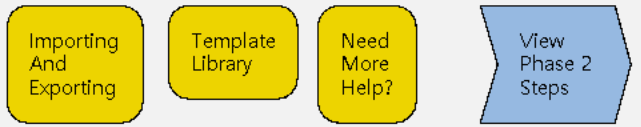

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

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        - Control and Performance
        - Technical Justification

Editors

Spectral Spatial Proposal

Student project ☐

Joint Proposals

Is this a Joint Proposal? (•) Yes ( ) No

Type of Joint Proposal (•) Main ( ) Partner

Observatory	Project Code	Requested Time
JWST	N/A	1.00 h

Add Partner Observatory | Remove Partner Observatory

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

over 50 characters!

Investigators

Feedback

Validation Validation History Log

	Description	Suggestion

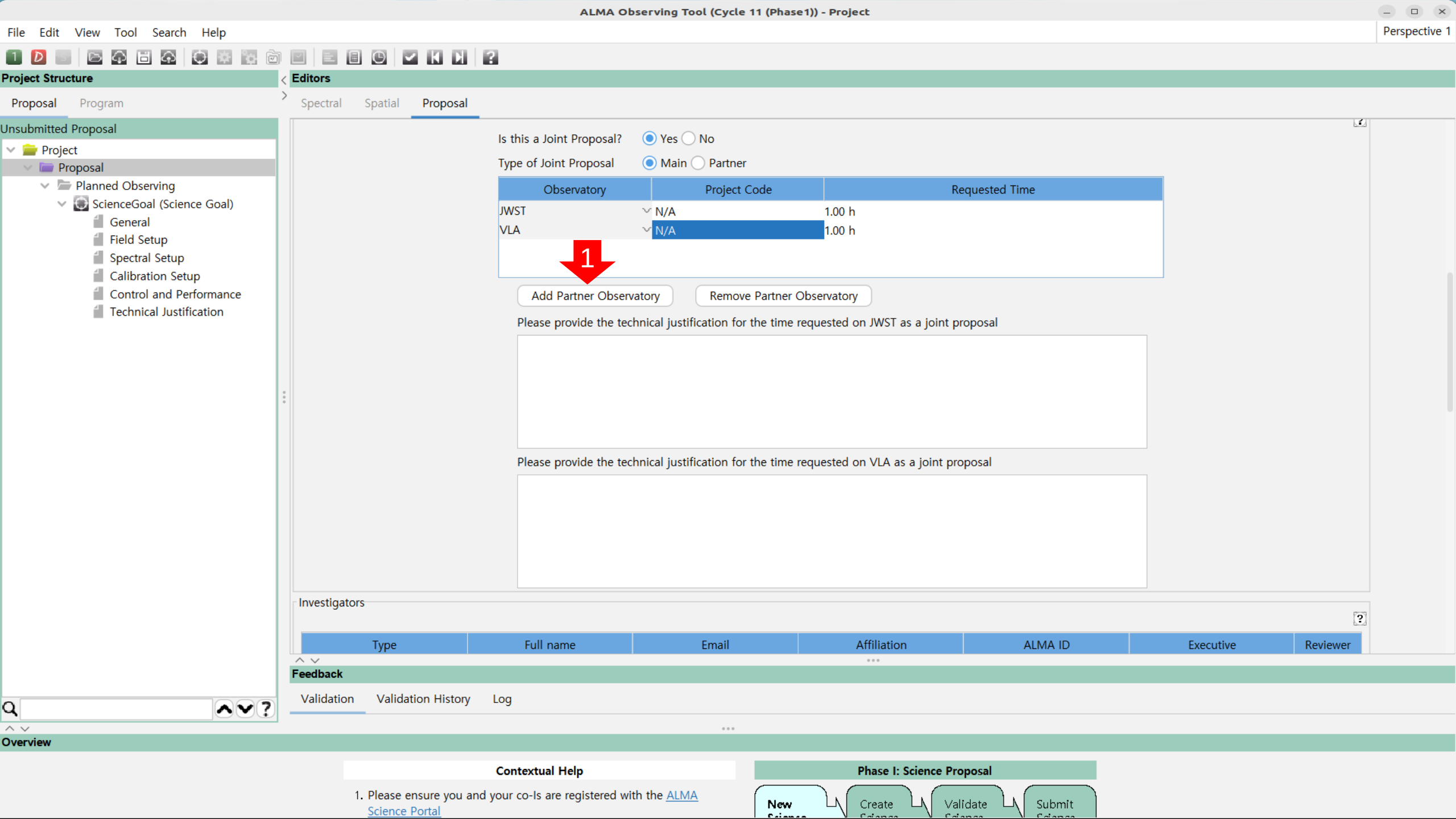
Overview

Contextual Help

1. Please ensure you and your co-Is are registered with the ALMA Science Portal

Phase I: Science Proposal

New | Create | Validate | Submit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Is this a Joint Proposal? Yes No
Type of Joint Proposal Main Partner
Observatory
Project Code
Requested Time
JWST N/A 1.00 h
VLA N/A 1.00 h
1
Add Partner Observatory
Remove Partner Observatory
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
Investigators
Type
Full name
Email
Affiliation
ALMA ID
Executive
Reviewer
Feedback
Validation Validation History Log
Overview
Contextual Help
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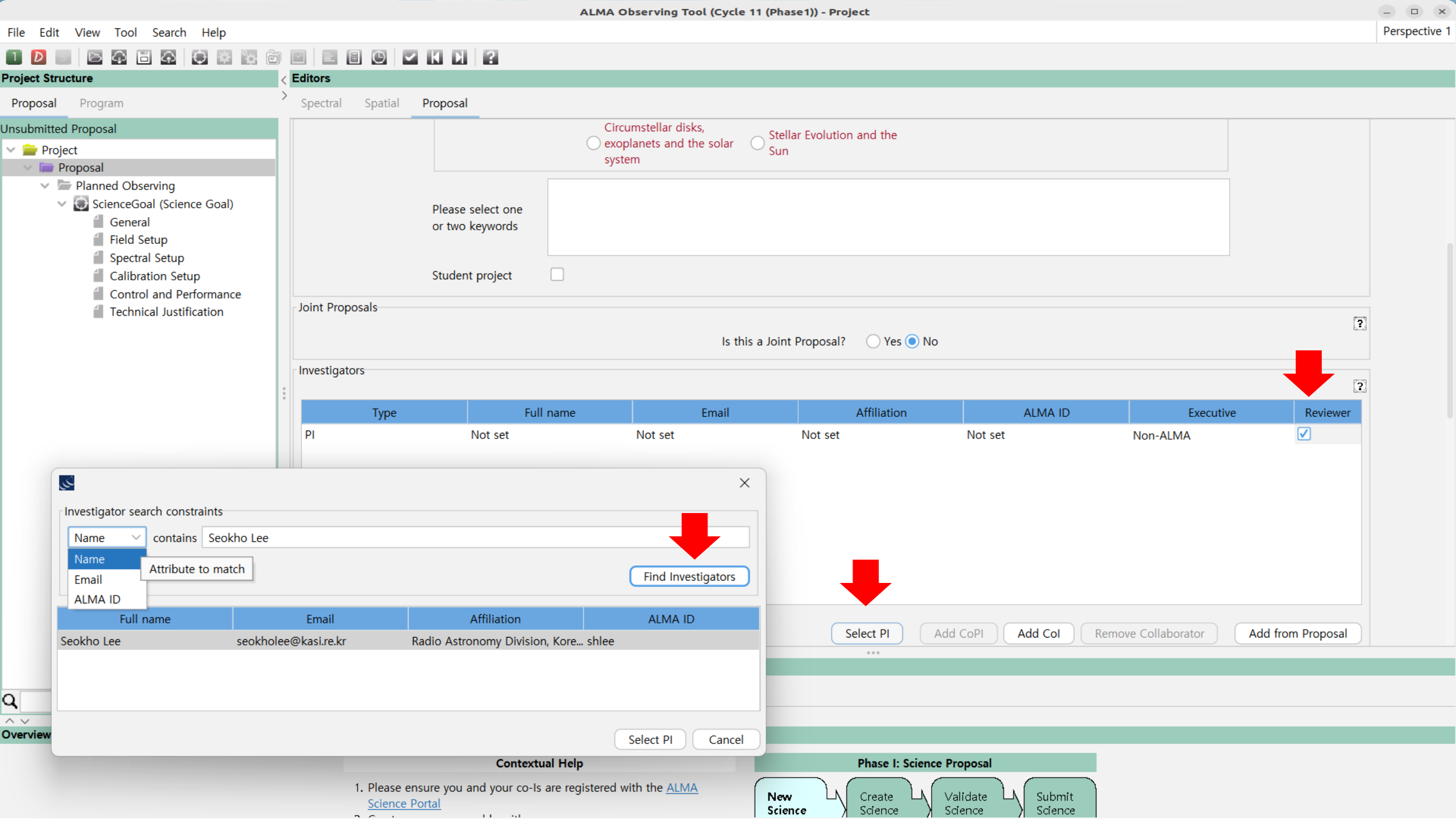
Phase I: Science Proposal
New
Create
Validate
Submit


ALMA Observing Tool (Cycle 11 (Phase1)) - Project
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Technical Justification
Circumstellar disks, exoplanets and the solar system
Stellar Evolution and the Sun
Please select one or two keywords
Student project
Joint Proposals
Is this a Joint Proposal? Yes No
Investigators
Type Full name Email Affiliation ALMA ID Executive Reviewer
PI Not set Not set Not set Not set Non-ALMA
Select PI
Add CoPI
Add CoI
Remove Collaborator
Add from Proposal
Investigator search constraints
Name contains Seokho Lee
Name
Email
ALMA ID
Attribute to match
Find Investigators
Full name Email Affiliation ALMA ID
Seokho Lee seokholee@kasi.re.kr Radio Astronomy Division, Kore... shlee
Select PI
Cancel
Overview
Contextual Help
1. Please ensure you and your co-Is are registered with the ALMA Science Portal
Phase I: Science Proposal
New Science
Create Science
Validate Science
Submit Science

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

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Editors

Spectral Spatial 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 other investigators.
A student (without a PhD) may serve as the reviewer only if they are the PI of the proposal and a mentor (with a PhD) is identified.
The mentor does not need to be an investigator 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

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.

Overview

Contextual Help

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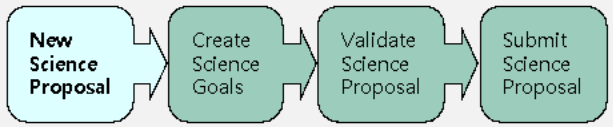
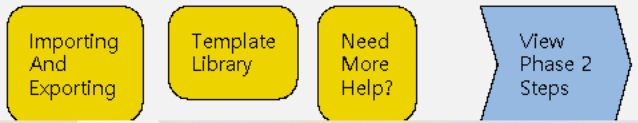
Phase I: Science Proposal



Click on the overview steps to view the contextual help



ALMA Observing Tool (Cycle 10 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Proposal

- Abide by the maximum number of Proposal Sets that are to be assigned for review to any individual (refer to the Proposer's Guide for more information).
- Update their user profiles with combinations of scientific categories and keywords which describe their area(s) of expertise using the new 'Expertise' tab in the link below. Available expertise information will be used in the distribution of proposal assignments.

https://asa.alma.cl/UserRegistration/secure/updateAccount.jsp

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

12 point (<15%)
< 20 MB

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:

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Observatory Use Only

Feedback

Validation Validation History Log

Overview

Contextual Help

1. Please ensure you and your co-Is are registered with the ALMA Science Portal

Phase I: Science Proposal

New Science | Create Science | Validate Science | Submit Science

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

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        - Field Setup
        - Spectral Setup
        - Calibration Setup
        - Control and Performance
        - Technical Justification

Editors

Spectral Spatial Planned Observing

Summary table of Science Goals. Double-clicking on a row will take you to that Science Goal

Science Goal	No. Sources	Band	Spec. Type	No. Spec. Win.	Pol.	Calibration Setup	Ang. Res.	Largest Scale	Rep. Freq.	Sens.
Science Goal	1	undefined	Spectral line	0	Dual	System	0.0 arcsec	Undefined	Undefined	Undefined

Overview

Contextual Help

1. Please ensure you and your co-Is are registered with the ALMA Science Portal
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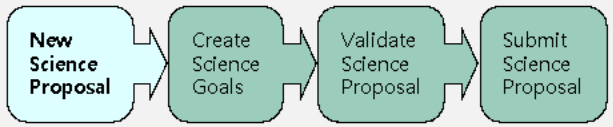
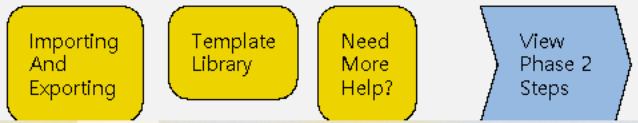
Phase I: Science Proposal



Click on the overview steps to view the contextual help



ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial ScienceGoal (Science Goal)

General (Optional)

Science Goal Name: Science Goal

Description:

SinglePoint

Source

Source Name: Resolve

Choose a Solar System Object? Name of object: Unspecified

Source Coordinates — System: ICRS; Sexagesimal display?

RA: 00:00:00.0000

Dec: 00:00:00.000

Parallax: 0.00000 mas

PM RA: 0.00000 mas/yr

PM Dec: 0.00000 mas/yr

Overview

Contextual Help

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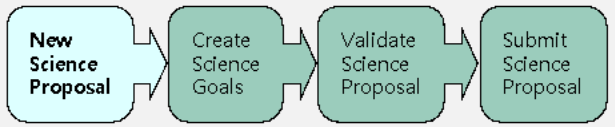
Phase I: Science Proposal



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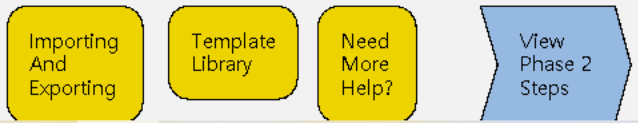

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

- Test
  - Proposal
    - Planned Observing
      - ScienceGoal (Test)
        - General
        - Field Setup
        - Spectral Set
        - Calibration
        - Control and
        - Technical Ju

Cut Ctrl-X
Copy Ctrl-C
Paste Ctrl-V
Clone node
Show Printable Summary of ScienceGoal
Generate a PDF of Whole Proposal
Display Project Time Summary
Rename
Expand all Ctrl-Z
Collapse all
Find previous Alt-Up
Find next Alt-Down
Delete Delete

Editors

Spectral Spatial ScienceGoal (Test)

General (Optional)

Science Goal Name: Test

Description

TW_Hya Resolve

r System Object? Name of object: Unspecified

Source Coordinates

System: ICRS Sexagesimal display?

RA: 11:01:52.0913

Dec: -34:42:15.750

Parallax: 16.62890 mas

PM RA: -68.30900 mas/yr

PM Dec: -13.90000 mas/yr

Overview

Contextual Help

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   - 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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal | Program

Unsubmitted Proposal

- Test
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    - Planned Obs...
      - ScienceGo...
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        - Field S...
        - Spectr...
        - Calibra...
        - Contro...
        - Techni...

Cut Ctrl-X
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New Science Goal
Clone node
Show Printable Summary of all Science Goals
Generate a PDF of Whole Proposal
Display Project Time Summary
Expand all Ctrl-Z
Collapse all
Find previous Alt-Up
Find next Alt-Down
Delete Delete

Paste

Editors

Spectral | Spatial | Planned Observing

Summary table of Science Goals. Double-clicking on a row will take you to that Science Goal

Science Goal	No. Sources	Band	Spec. Type	No. Spec. Win.	Pol.	Calibration Setup	Ang. Res.	Largest Scale	Rep. Freq.	Sens.
Test	1	7	Spectral line	3	Dual	System	0.015 arcsec	1.0 arcsec	345.795990 GHz	10 mJy

Overview

Contextual Help

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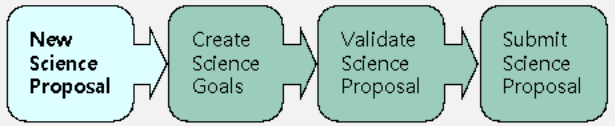
Phase I: Science Proposal



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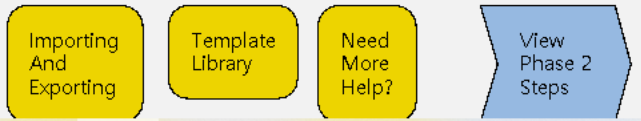

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal | Program

Unsubmitted Proposal

- Test
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        - Field Setup
        - Spectral Setup
        - Calibration Setup
        - Control and Performance
        - Technical Justification
      - ScienceGoal (Copy of Test)
        - General
        - Field Setup
        - Spectral Setup
        - Calibration Setup
        - Control and Performance
        - Technical Justification

Editors

Spectral | Spatial | Planned Observing

Summary table of Science Goals. Double-clicking on a row will take you to that Science Goal

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Test	1	7	Spectral line	3	Dual	System	0.015 arcsec	1.0 arcsec	345.795990 GHz	10 mJy

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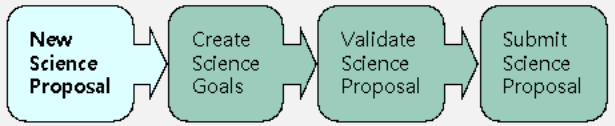
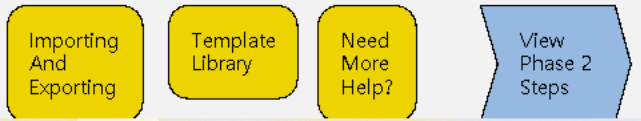
   - Selecting *File > New Proposal*
   - Clicking on the icon in the toolbar
   - Or clicking on this link
3. Click on the proposal tree node and complete the relevant fields.

Phase I: Science Proposal



Click on the overview steps to view the contextual help



ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Field Setup

Spatial Image

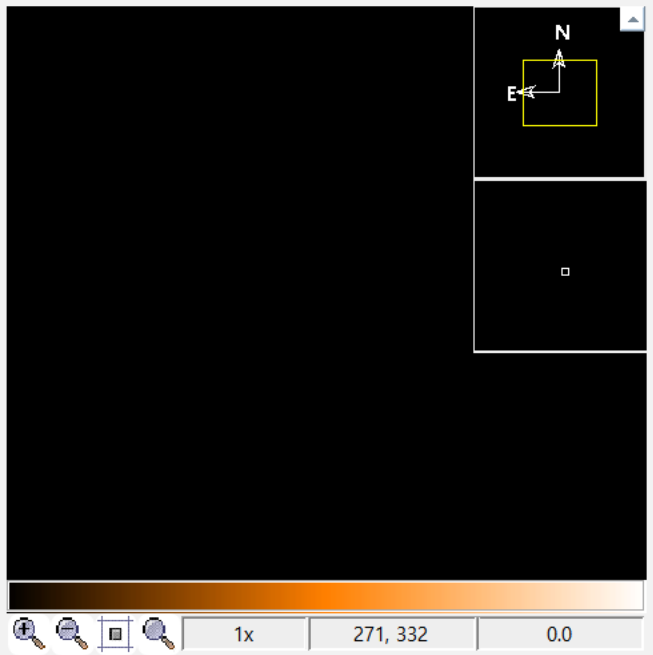


Image Filename

TW Hya

Source

Source Name: TW Hya — Resolve

Get source details from SIMBAD or NED

Choose a Solar System Object? Name of object: Unspecified

Source Coordinates — System: ICRS; Sexagesimal display? ☑

RA: 00:00:00.0000 — Parallax: 0.00000 mas

Dec: 00:00:00.000 — PM RA: 0.00000 mas/yr — PM Dec: 0.00000 mas/yr

Source Radial Velocity: 0.000 km/s lsrk — z: 0.000000000 — Doppler Type: RADIO

Target Type: ◉ Individual Pointing(s) ○ 1 Rectangular Field

Expected Source Properties

Peak Continuum Flux Density per Synthesized Beam	0.00000	Jy
Continuum Linear Polarization	0.0	per cent
Continuum Circular Polarization	0.0	per cent
Peak Line Flux Density per Synthesized Beam	0.00000	Jy
Line Width	0.00000	km/s
Line Linear Polarization	0.0	per cent
Line Circular Polarization	0.0	per cent

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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Field Setup

Spatial Image

TW Hya

Source

Source Name: TW Hya — Resolve

Choose a Solar System Object? — Name of object: Unspecified

Parallax 0.00000 mas

PM RA 0.00000 mas/yr

PM Dec 0.00000 mas/yr

z 0.000000000 Doppler Type: RADIO

angular Field

ed Beam 0.00000 Jy

0.0 per cent

0.0 per cent

0.00000 Jy

0.00000 km/s

0.0 per cent

0.0 per cent

Image Filename

Name Resolver Results

simbad.u-strasbg.fr (SIMBAD) found 1 match for the object 'TW Hya'.

Name / Alias	Position		Proper Motion		Velocity
	RA	Dec	RA	Dec	
V* TW Hya	11:01:51.9053	-34:42:17.033	-68.309 mas/yr	-13.9 mas/yr	12.335 km/s

Cancel Select

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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

You should check that the “Resolved information” is correct!!!

File Edit View Tool Search Help

Perspective

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Field Setup

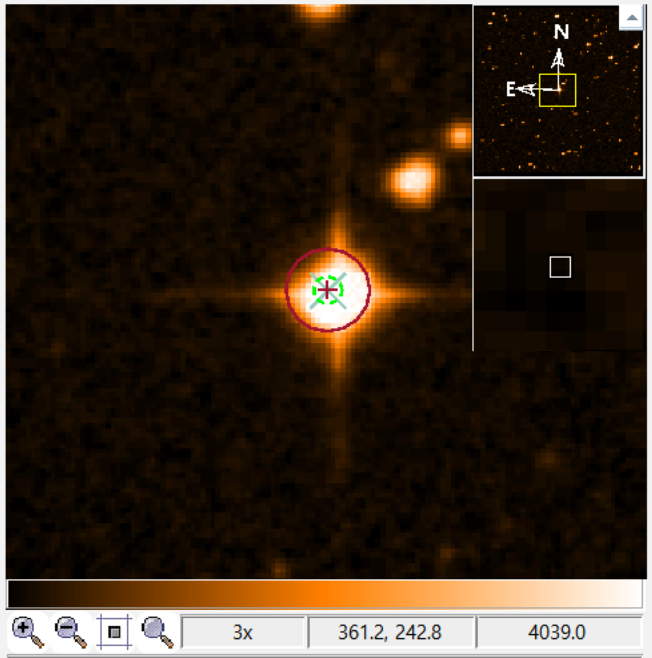


Image Filename unitl₩.jsky3₩cache₩jsky12077043586718440107.fits

FOV Parameters

Source

Source Name: TW Hya — Resolve

Choose a Solar System Object? — Name of object: Unspecified

Source Coordinates — System: ICRS — Sexagesimal display? ☑

RA: 11:01:52.0913 — Parallax: 16.62890 mas

Dec: -34:42:15.750 — PM RA: -68.30900 mas/yr — PM Dec: -13.90000 mas/yr

Source Radial Velocity: 12.335 km/s hel — z: 0.000041146 — Doppler Type: RELATIVISTIC

Target Type: ◉ Individual Pointing(s) ○ 1 Rectangular Field

Expected Source Properties

Peak Continuum Flux Density per Synthesized Beam	50.00000	mJy
Continuum Linear Polarization	0.0	per cent
Continuum Circular Polarization	0.0	per cent
Peak Line Flux Density per Synthesized Beam	10.00000	mJy
Line Width	1.00000	km/s
Line Linear Polarization	0.0	per cent
Line Circular Polarization	0.0	per cent

Field Centre Coordinates

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 | Template Library | Need More | View Phase 2

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Field Setup

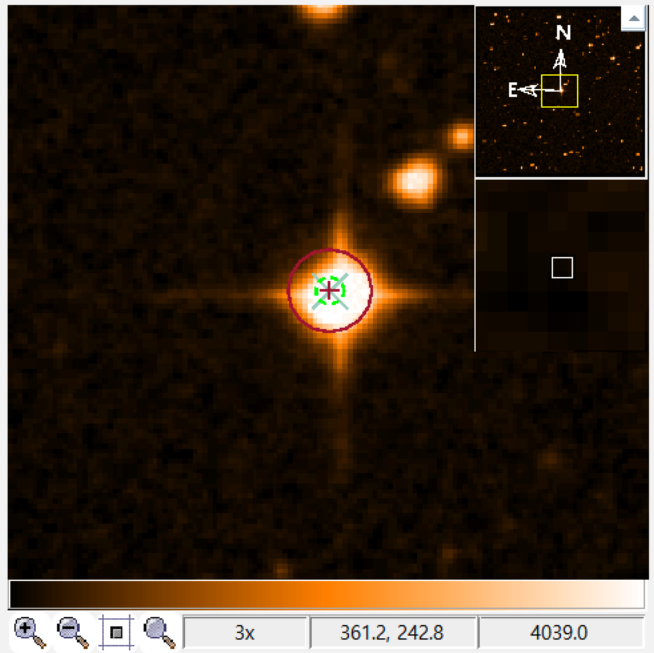


Image Filename unitl₩jsky3₩cache₩jsky1207704358671844010 7.fits

FOV Parameters

Source

Source Name: TW Hya — Resolve

Choose a Solar System Object? — Name of object: Unspecified

System: ICRS — Sexagesimal display? ☑

ICRS / FK5 J2000 / galactic / ecliptic / horizon / azel

RA: 11:01:52.0913 — Parallax: 16.62890 mas

Dec: -34:42:15.750 — PM RA: -68.30900 mas/yr — PM Dec: -13.90000 mas/yr

12.335 km/s hel — lsrk — Doppler Type: RELATIVISTIC

bar / lsrk / topo / hel

Individual Pointing(s) 1 Rectangular Fiel

Continuum Flux Density per Synthesized Beam

Continuum Linear Polarization

Continuum Circular Polarization: 0.0 per cent

Peak Line Flux Density per Synthesized Beam: 10.00000 mJy

Line Width: 1.00000 km/s

Line Linear Polarization: 0.0 per cent

Line Circular Polarization: 0.0 per cent

Field Centre Coordinates

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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Field Setup

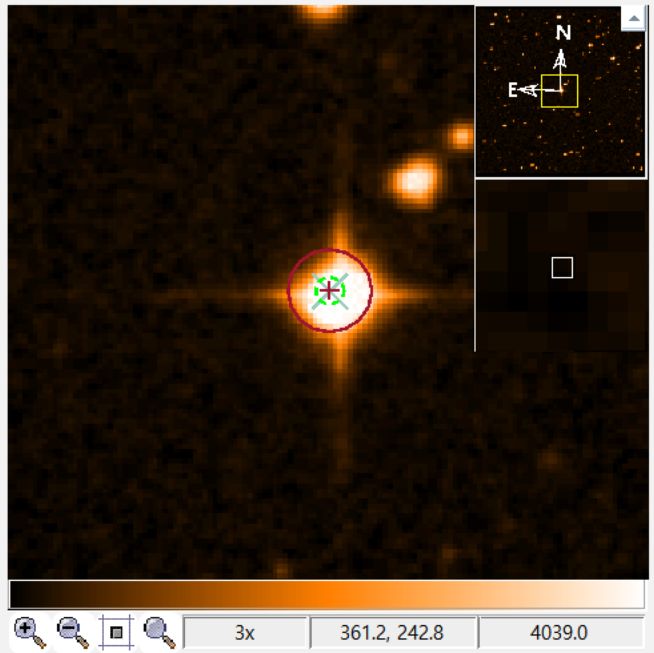


Image Filename unitl₩.jsky3₩cache₩jsky12077043586718440107.fits

FOV Parameters

Source

Source Name	TW Hya				Resolve
Choose a Solar System Object?		Name of object	Unspecified		
Source Coordinates	System ICRS	Sexagesimal display? ☑	Parallax	16.62890	mas
	RA 11:01:52.0913		PM RA	-68.30900	mas/yr
	Dec -34:42:15.750		PM Dec	-13.90000	mas/yr
Source Radial Velocity	12.335	km/s	hel	z 0.000041146	Doppler Type RELATIVISTIC
Target Type	◉ Individual Pointing(s) ○ 1 Rectangular Field				

Expected Source Properties

Peak Continuum Flux Density per Synthesized Beam	50.00000	mJy
Continuum Linear Polarization	0.0	per cent
Continuum Circular Polarization	0.0	per cent
Peak Line Flux Density per Synthesized Beam	10.00000	mJy
Line Width	1.00000	km/s
Line Linear Polarization	0.0	per cent
Line Circular Polarization	0.0	per cent

Field Centre Coordinates

Overview

You should describe how to get these vaues in T.J.

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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Field Setup

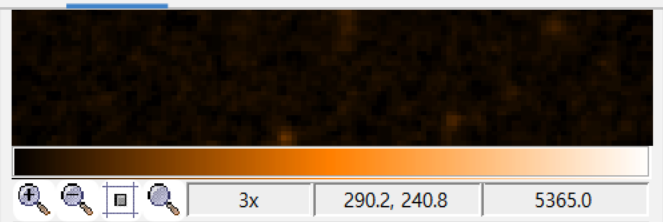


Image Filename unitl₩.jsky3₩cache₩jsky12077043586718440107.fits

FOV Parameters

Representative Frequency (Sky) 345.782 GHz

Array Type 12m

Antenna Beamsize (HPBW) 16.840 arcsec

Show Antenna Beamsize

Image Query

Image Server Digitized Sky (Version II) at ESO

Image Size(arcmin) 10.0 Query

Continuum Linear Polarization 0.0 per cent

Continuum Circular Polarization 0.0 per cent

Peak Line Flux Density per Synthesized Beam 10.00000 mJy

Line Width 1.00000 km/s

Line Linear Polarization 0.0 per cent

Line Circular Polarization 0.0 per cent

Field Centre Coordinates

Mosaic
Multiple positions

Coord Type Relative Absolute

Array Type 12m

Offset Unit arcsec

#Pointings 12m Array 1

RA [arcsec]	Dec [arcsec]
0.00000	0.00000

Add Delete Reset Import Export

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

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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

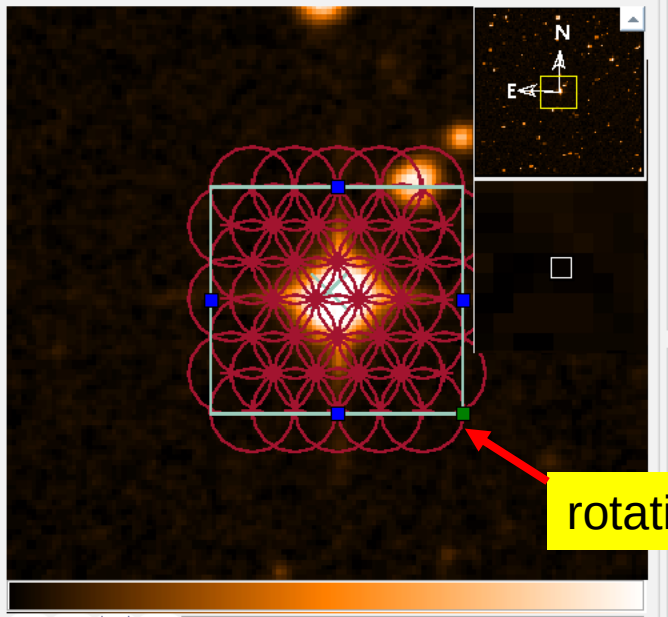
Editors

Spectral Spatial Field Setup

Draw box

Show mosaic

Spatial Image



3x 359.8, 265.8 3842.0

11:01:46.951, -34:42:46.14 (J2000)

Image Filename unitl¥isky3¥cache¥isky12077043586718440107.fits

TW Hya

Source

Source Name: TW Hya — Resolve

Choose a Solar System Object? Name of object: Unspecified

Source Coordinates — System: ICRS; Sexagesimal display?

RA: 11:01:52.0913 Dec: -34:42:15.750

Parallax: 16.62890 mas

PM RA: -68.30900 mas/yr

PM Dec: -13.90000 mas/yr

Source Radial Velocity: 12.335 km/s hel z: 0.000041146 Doppler Type: RELATIVISTIC

Target Type: Individual Pointing(s) 1 Rectangular Field

Expected Source Properties

Peak Continuum Flux Density per Synthesized Beam	50.00000	mJy
Continuum Linear Polarization	0.0	per cent
Continuum Circular Polarization	0.0	per cent
Peak Line Flux Density per Synthesized Beam	10.00000	mJy
Line Width	1.00000	km/s
Line Linear Polarization	0.0	per cent
Line Circular Polarization	0.0	per cent

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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Field Setup

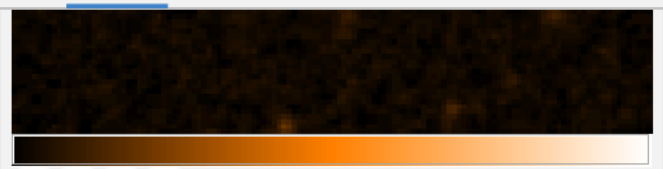


Image Filename unitl₩.jsky3₩cache₩jsky12077043586718440107.fits

FOV Parameters

Representative Frequency (Sky) 345.782 GHz

Array Type 12m

Antenna Beamsize (HPBW) 16.840 arcsec

Show Antenna Beamsize

Image Query

Image Server Digitized Sky (Version II) at ESO

Image Size(arcmin) 10.0 Query

Continuum Linear Polarization 0.0 per cent

Continuum Circular Polarization 0.0 per cent

Peak Line Flux Density per Synthesized Beam 10.00000 mJy

Line Width 1.00000 km/s

Line Linear Polarization 0.0 per cent

Line Circular Polarization 0.0 per cent

Rectangle

Coords Type Relative Absolute

Field Centre Coordinates

Offset(Longitude) 0 arcsec

Offset(Latitude) 0 arcsec

p length 50.0 arcsec

q length 40.0 arcsec

Position Angle 0.0 deg

Length of the 'p' side of the rectangle

Spacing 0.51093 fraction of antenna beamsize Reset to Nyquist

#Pointings 12m Array 33 Export

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

Overview

Contextual Help

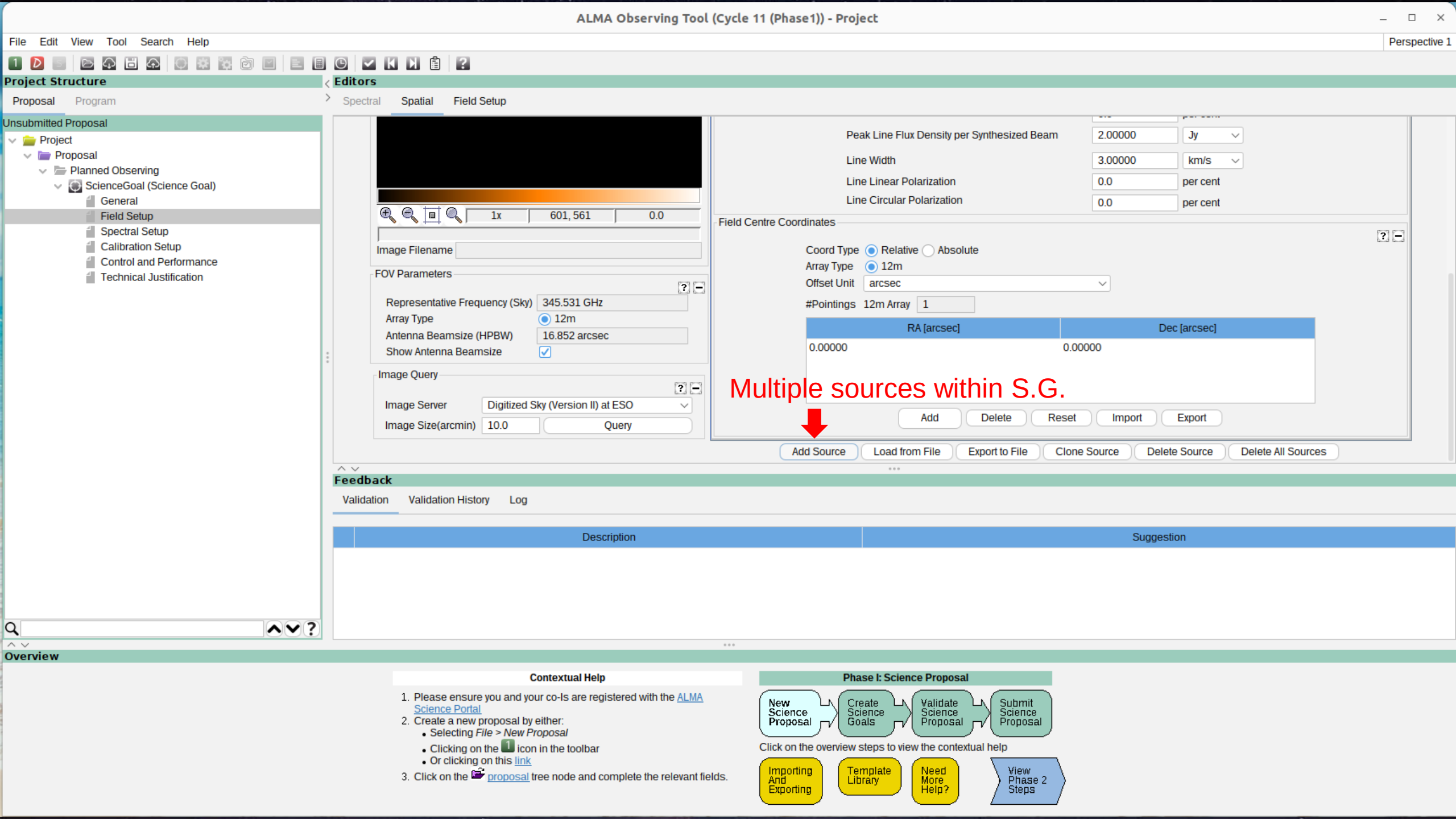
1. Please ensure you and your co-Is are registered with the ALMA Science Portal
2. Create a new proposal by either:
   - Selecting *File > New Proposal*
   - Clicking on the 1 icon in the toolbar
   - Or clicking on this link
3. Click on the proposal tree node and complete the relevant fields.

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


ALMA Observing Tool (Cycle 11 (Phase1)) - Project
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Planned Observing
ScienceGoal (Science Goal)
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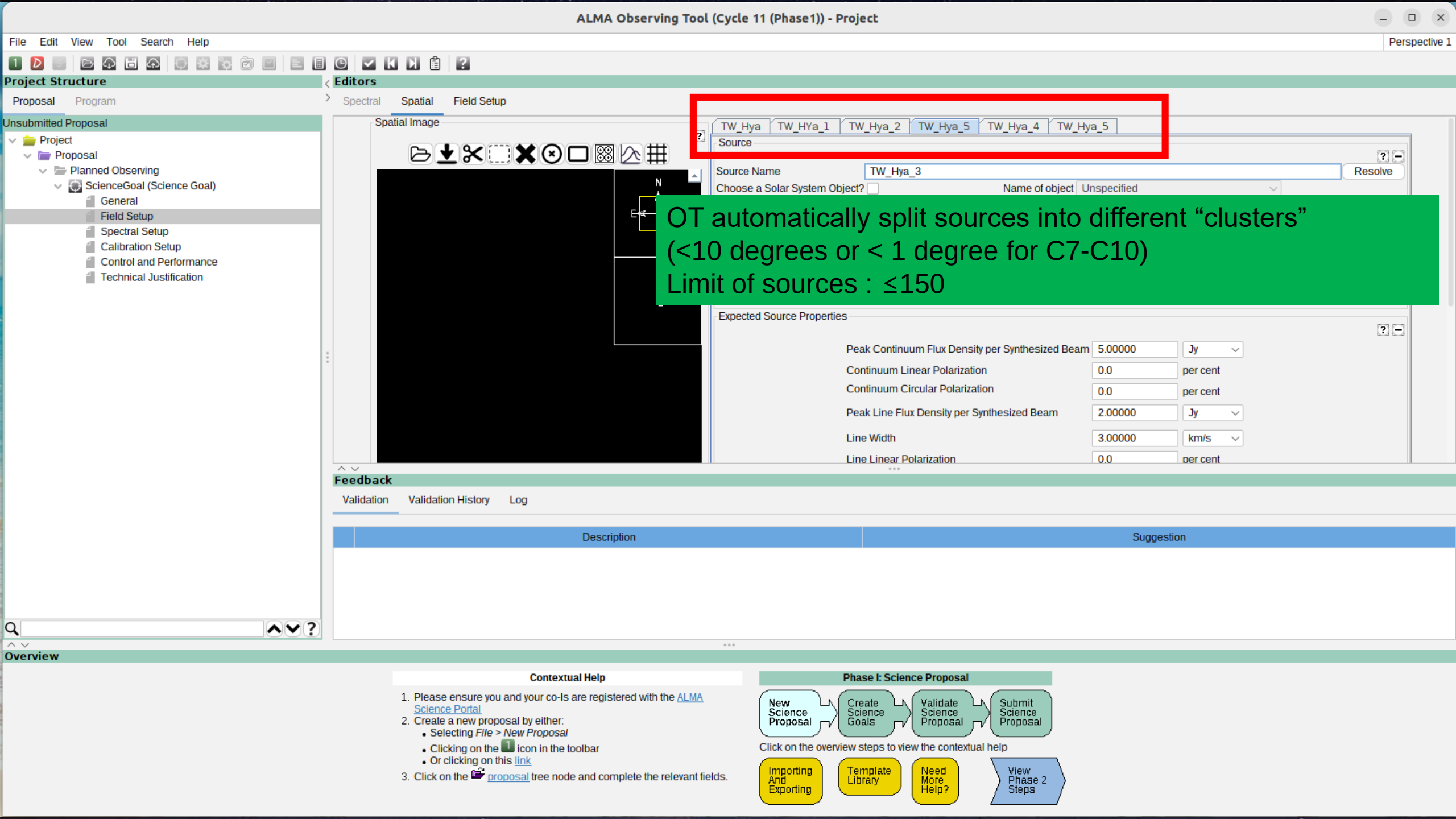
Spectral Setup
Calibration Setup
Control and Performance
Technical Justification
Editors
Spectral Spatial Field Setup
1x 601, 561 0.0
Image Filename
FOV Parameters
Representative Frequency (Sky) 345.531 GHz
Array Type 12m
Antenna Beamsize (HPBW) 16.852 arcsec
Show Antenna Beamsize
Image Query
Image Server Digitized Sky (Version II) at ESO
Image Size(arcmin) 10.0 Query
Peak Line Flux Density per Synthesized Beam 2.00000 Jy
Line Width 3.00000 km/s
Line Linear Polarization 0.0 per cent
Line Circular Polarization 0.0 per cent
Field Centre Coordinates
Coord Type Relative Absolute
Array Type 12m
Offset Unit arcsec
#Pointings 12m Array 1
RA [arcsec] Dec [arcsec]
0.00000 0.00000
Multiple sources within S.G.
Add Delete Reset Import Export
Add Source Load from File Export to File Clone Source Delete Source Delete All Sources
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 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


ALMA Observing Tool (Cycle 11 (Phase1)) - Project
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Spatial Image
TW_Hya TW_HYa_1 TW_Hya_2 TW_Hya_5 TW_Hya_4 TW_Hya_5
Source
Source Name TW_Hya_3
Resolve
Choose a Solar System Object?
Name of object Unspecified
OT automatically split sources into different “clusters”
(<10 degrees or < 1 degree for C7-C10)
Limit of sources : ≤150
Expected Source Properties
Peak Continuum Flux Density per Synthesized Beam 5.00000 Jy
Continuum Linear Polarization 0.0 per cent
Continuum Circular Polarization 0.0 per cent
Peak Line Flux Density per Synthesized Beam 2.00000 Jy
Line Width 3.00000 km/s
Line Linear Polarization 0.0 per cent
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 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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

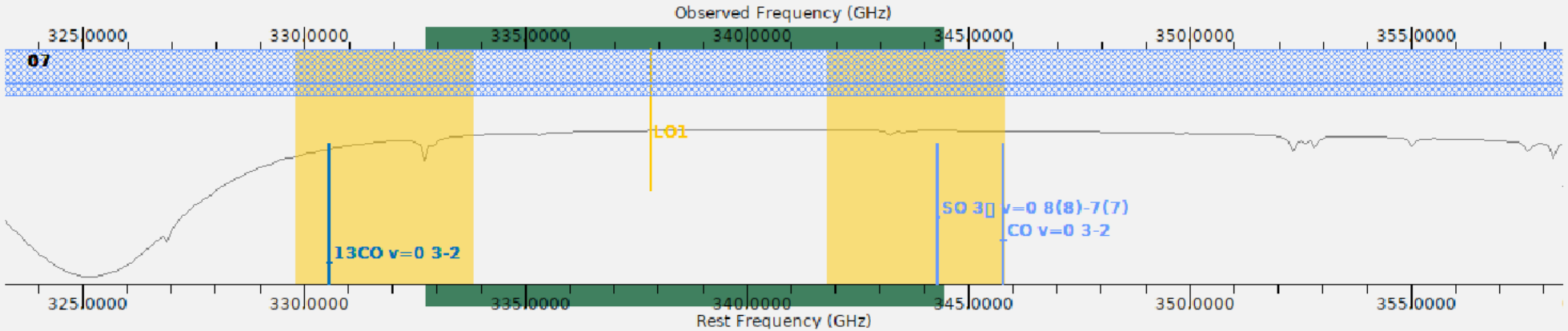
Editors

Spectral Spatial Spectral Setup

Visualisation

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.

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



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

Water Vapour Column Density: Automatic Cho (4th Octile)

Toggle receiver bands overlay

Viewport: Pan to Spectral Window Zoom to Band Reset

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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Two mode for Single Continuum

Project Structure

Proposal Program

Unsubmitted Proposal

- Accretion Instabilities in EC 53
  - Proposal
    - Planned Observing
      - ScienceGoal (B6 C18O + SO + SiO
      - ScienceGoal (Copy of B6 C18O + S
        - General
        - Field Setup
        - Spectral Setup
        - Calibration Setup
        - Control and Performance
        - Technical Justification

Editors

Spectral Spatial Spectral Setup

Water Vapour Column Density: Automatic Choice / Manual Choice 0.913mm (3rd Octile)

Viewport: Pan to Spectral Window | Zoom to Band | Reset

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: 7 [275.0-373.0 GHz]

Reset to Standard Frequency

Sky Frequency: 343.50000 GHz

Rest Frequency: 343.509739 GHz

Low spectral resolution (TDM)

High spectral resolution (FDM)

Baseband-1

Fraction	Centre Freq (rest,topo)	Centre Freq (sky,topo)	Transition	Bandwidth, Resolution (smoothed)	Spec. Avg.	Representative Window
1(Full)	336.50954 GHz	336.50000 GHz	Single Continuum	1875.000 MHz(1670 km/s), 1.129 MHz(1.006 km/s) (2-bit)	2	

Feedback

Validation Validation History Log

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:

Phase I: Science Proposal

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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Spectral Setup

Spectral Type

Spectral Type: Spectral Line / Single Continuum / Spectral Scan

Produce image sidebands (Bands 9 and 10 only)

Polarization products desired: XX / DUAL / FULL

Line survey at a point

Highest spectral resolution

polarization

Spectral Setup Errors

Spectral Line

Baseband-1

Fraction	Centre Freq (rest,hel)	Centre Freq (sky,hel)	Transition	Bandwidth, Resolution (smoothed)	Spec. Avg.	Representative Window
1/2	345.79599 GHz	345.78176 GHz	CO v=0 3-2	234.375 MHz(203 km/s), 244.141 kHz(0.212 km/s)	1	◉
1/4	344.31061 GHz	344.29645 GHz	SO 3Σ v=0 8(8)-7(7)	117.188 MHz(102 km/s), 282.227 kHz(0.246 km/s)	2	○

Add spectral window centred on a spectral line | Add spectral window manually | Delete | Show image spectral windows

Baseband-2

1(Full)	330.58797 GHz	330.57436 GHz	13CO v=0 3-2	234.375 MHz(213 km/s), 141.113 kHz(0.128 km/s)	2	○

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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective

Project Structu

Proposal

Unsubmitted P

Test

Overview

Create spectral windows centred on spectral lines

Transition Filter

*

*e.g. CO*2-1* or *oxide**

Include description

Frequency Filters

ALMA Band

1 2 3 4 5 6 7 8 9 10

Sky Frequency (GHz)

Min 31.3 Max 950

Receiver/Back End Configuration

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

Upper-state Energy (K)

Min 0 Max 0

Molecule Filter / Environment

Show all atoms and molecules

- all atoms and molecules
- most common molecules
- hot cores
- dark clouds
- diffuse clouds
- AGBs, PPNs and PNs
- comets
- planets
- extra-Galactic

Can't f
offline

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	Description	Rest Frequency	Sky Frequency	Upper-state Energy	Lovas Intensity	Sij μ²	Catalog
CH3CN v=0 18(4)-17(4), F=17-16	Methyl Cyanide	330.969808 GHz	330.956190 GHz	265.219 K	1.38	496.315 D²	Offline
CH3CN v=0 18(4)-17(4), F=17-18	Methyl Cyanide	330.969812 GHz	330.956195 GHz	265.219 K	1.38	0.001 D²	Offline
CH3CN v=0 18(4)-17(4), F=19-18	Methyl Cyanide	330.969815 GHz	330.956198 GHz	265.219 K	1.38	554.827 D²	Offline
CH3CN v8=1 J =18-17, K = -12 --12	Methyl Cyanide	330.977817 GHz	330.964199 GHz	1861.315 K		286.041 D²	Offline
CH3CN v8=1 J =38-38, K =10-8	Methyl Cyanide	330.988159 GHz	330.974541 GHz	1758.834 K		0.017 D²	Offline
CH3CN v8=1 J =18-17, K =14-14	Methyl Cyanide	331.009015 GHz	330.995396 GHz	1881.454 K		203.422 D²	Offline
CH3CN v=0 18(3)-17(3), F=18-17	Methyl Cyanide	331.014296 GHz	331.000677 GHz	215.24 K	1.38	1073.219 D²	Offline
CH3CN v=0 18(3)-17(3), F=17-16	Methyl Cyanide	331.014306 GHz	331.000687 GHz	215.24 K	1.38	1015.053 D²	Offline
CH3CN v=0 18(3)-17(3), F=19-18	Methyl Cyanide	331.014315 GHz	331.000695 GHz	215.24 K	1.38	1134.981 D²	Offline
CH3CN v=0 18(3)-17(3), F=17-18	Methyl Cyanide	331.014315 GHz	331.000695 GHz	215.24 K	1.38	0.003 D²	Offline
CH3CN v=0 18(2)-17(2), F=18-17	Methyl Cyanide	331.046102 GHz	331.032481 GHz	179.533 K	1.6	545.146 D²	Offline
CH3CN v=0 18(2)-17(2), F=17-16	Methyl Cyanide	331.046104 GHz	331.032483 GHz	179.533 K	1.6	515.6 D²	Offline
CH3CN v=0 18(2)-17(2), F=19-18	Methyl Cyanide	331.046113 GHz	331.032492 GHz	179.533 K	1.6	576.385 D²	Offline
CH3CN v=0 18(2)-17(2), F=17-18	Methyl Cyanide	331.046115 GHz	331.032494 GHz	179.533 K	1.6	0.001 D²	Offline
CH3CN v=0 18(1)-17(1), F=17-16	Methyl Cyanide	331.065188 GHz	331.051566 GHz	158.106 K	1.64	520.407 D²	Offline
CH3CN v=0 18(1)-17(1), F=18-17	Methyl Cyanide	331.065191 GHz	331.051570 GHz	158.106 K	1.64	550.355 D²	Offline
CH3CN v=0 18(1)-17(1), F=19-18	Methyl Cyanide	331.065197 GHz	331.051576 GHz	158.106 K	1.64	581.893 D²	Offline
CH3CN v=0 18(1)-17(1), F=17-18	Methyl Cyanide	331.065201 GHz	331.051579 GHz	158.106 K	1.64	0.001 D²	Offline
CH3CN v=0 18(0)-17(0), F=17-18	Methyl Cyanide	331.071563 GHz	331.057942 GHz	150.963 K	1.77	0.001 D²	Offline

Add to spectral window list

Spectral windows in this baseband (maximum of four)

Transition	Description	Rest Frequency	Sky Frequency

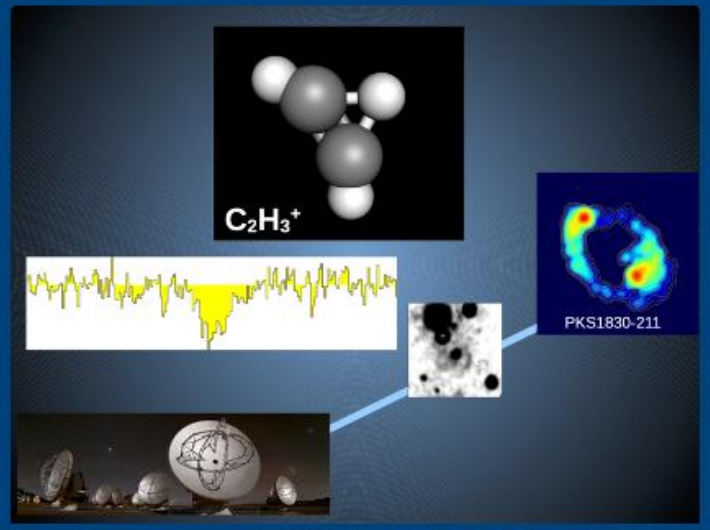
Remove spectral window(s)

Cancel Ok

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

Science Highlight

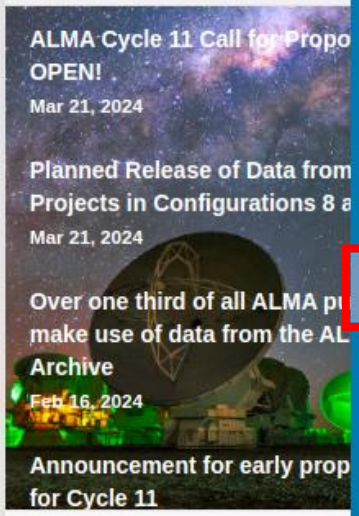
Protonated acetylene in the z=0.89 absorber toward PKS1830-211



View of the molecule (created with MolView) and an absorption spectrum observed with ALMA in the line of sight of the quasar PKS1830-211. The quasar (here observed with the MERLIN interferometer at radio wavelengths) is lensed by a foreground spiral galaxy at z=0.89 (optical image from HST).

The line of sight to the lensed blazar PKS1830-211 intercepts the disk of a foreground spiral galaxy at z=0.89 where absorption has been detected for more than 60 molecular species, mostly at mm wavelengths. In a paper accepted for publication in A&A. Dr. Sebastian Muller and colleagues report the detection of a new

Observatory News



More...

ALMA Status

More...

Tools menu:

- Observing Tool
- Sensitivity Calculator
- CASA Simulator
- ALMA Primer Instructional Videos
- Observation Support Tool
- Splatalogue
- NRAO Science Ready Data Products
- Toyama Microwave Atlas
- Community-Developed
- EU ARC network
- Staff Tools
- Japanese Virtual Obs.
- Solar Ephemeris

The ALMA Science Portal is a or whole, including proposers, archive researchers, ALMA staff, journalists, and funding age

Quick Links

ALMA Basics	
ALMA Science	SnooPI
ALMA Primer	DDT Proposals

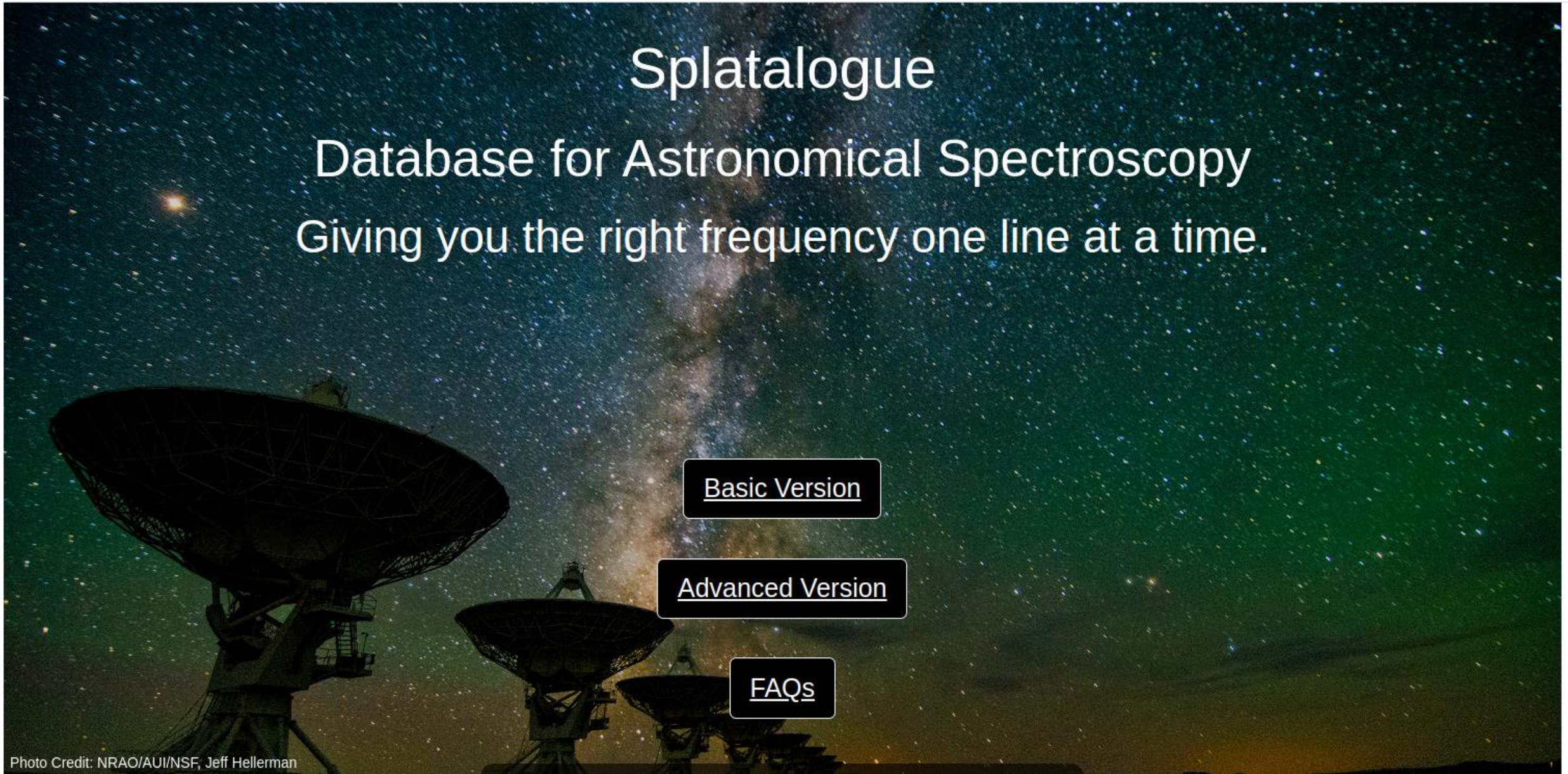

Splatalogue
Database for Astronomical Spectroscopy
Giving you the right frequency one line at a time.
Basic Version
Advanced Version
FAQs
Photo Credit: NRAO/AUI/NSF, Jeff Hellerman

Photo Credit: NRAO/AUI/NSF

Search Species

e.g. ammonia, carbon, methanol, CO

Search Parameters

Quick Picker | Query Filters | Astronomical Filters | Export Data

CO v = 0 | ^{13}CO v = 0
$C^{17}O$ | $C^{18}O$
CH_3OH v_t = 0 | H_2CO
HCN v = 0 | HNC v = 0
$H^{13}CN$ v = 0 | $HC^{15}N$ v = 0
DCN v = 0 | HCO^+ v = 0
CS | $H^{13}CO^+$
NH_3 | C I
C II | O I
O III | N II
H_2O v = 0 | HDO
SiO v = 0 | More molecules

Save and Restore Settings

Settings Name

Save | Restore

Telescope Bands

ALMA Band 5 (163-211 GHz)
ALMA Band 6 (211-275 GHz)
ALMA Band 7 (275-373 GHz)
ALMA Band 8 (385-500 GHz)

Energy Range

From To

E_L (cm^{-1}) E_L (K)

Specify a Frequency Range

From To

+ Frequency Range | - Frequency Range

Frequency Unit GHz

Load Freqs From listobs

Choose Files No file chosen

Load Freqs From ObsProposal.xml

Choose Files No file chosen

Redshift 0

None
Top 20 list
Planetary Atmosphere
Hot Cores
Dark Clouds
Diffuse Clouds
Comets
AGB/PPN/PN
Extragalactic

Export Fields

Export current fields
Export current fields without Resolved QNs
Export CASA fields

Field Separator

Tab
Colon

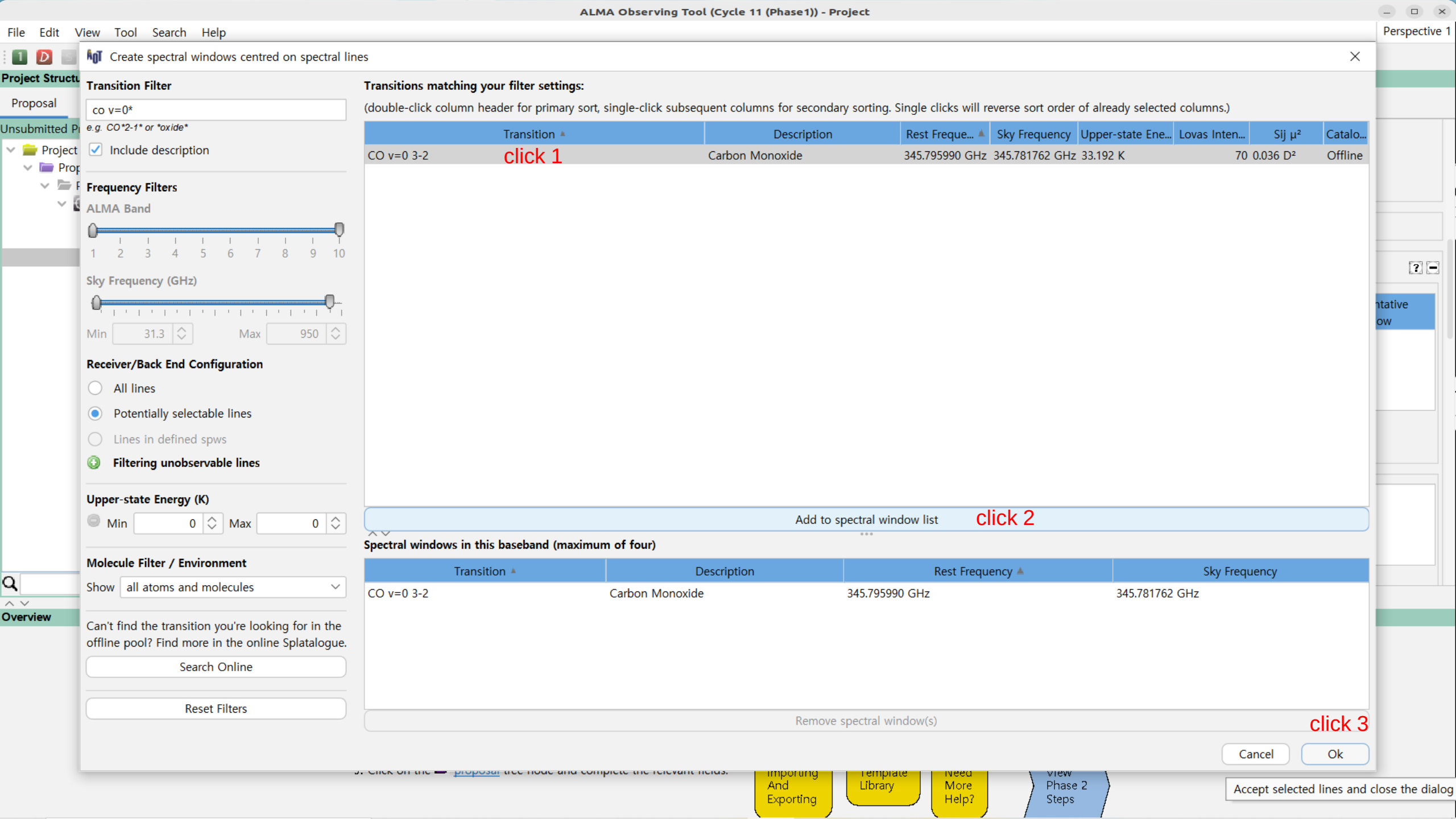
Range

All Records
Current Page

Export

Search Results

Search


ALMA Observing Tool (Cycle 11 (Phase1)) - Project
File Edit View Tool Search Help
Perspective 1
Create spectral windows centred on spectral lines
Transition Filter
co v=0*
e.g. CO*2-1* or *oxide*
Include description
Frequency Filters
ALMA Band
1 2 3 4 5 6 7 8 9 10
Sky Frequency (GHz)
Min 31.3 Max 950
Receiver/Back End Configuration
All lines
Potentially selectable lines
Lines in defined spws
Filtering unobservable lines
Upper-state Energy (K)
Min 0 Max 0
Molecule Filter / Environment
Show all atoms and molecules
Can't find the transition you're looking for in the offline pool? Find more in the online Splatalogue.
Search Online
Reset Filters
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 | Description | Rest Freque... | Sky Frequency | Upper-state Ene... | Lovas Inten... | Sij μ² | Catalo...
CO v=0 3-2 | Carbon Monoxide | 345.795990 GHz | 345.781762 GHz | 33.192 K | 70 | 0.036 D² | Offline
click 1
Add to spectral window list
click 2
Spectral windows in this baseband (maximum of four)
Transition | Description | Rest Frequency | Sky Frequency
CO v=0 3-2 | Carbon Monoxide | 345.795990 GHz | 345.781762 GHz
Remove spectral window(s)
click 3
Cancel
Ok
Importing And Exporting
Template Library
Need More Help?
View Phase 2 Steps
Accept selected lines and close the dialog

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Spectral Setup

Spectral Type: Single Continuum / Spectral Scan

Produce image sidebands (Bands 9 and 10 only)

Polarization products desired: XX DUAL FULL

Spectral Setup Errors

Spectral Line

Baseband-1

Fraction	Centre Freq (rest,hel)	Centre Freq (sky,hel)	Transition	Bandwidth, Resolution (smoothed)	Spec. Avg.	Representative Window
1(Full)	345.79599 GHz	345.78176 GHz	CO v=0 3-2	117.188 MHz(102 km/s), 70.557 kHz(0.061 km/s)	2	◉

1(Full)
1/2
1/4

Add spectral window centred on a spectral line | Add spectral window manually | Delete | Show image spectral windows

Baseband-2

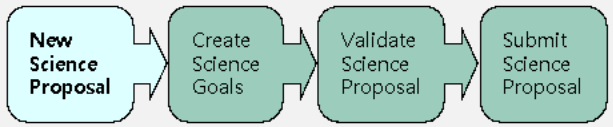
Add spectral window centred on a spectral line | Add spectral window manually | Delete | Show image spectral windows

Overview

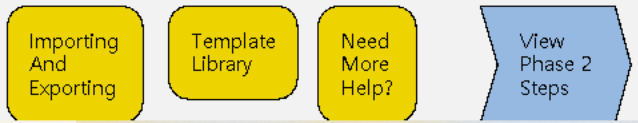
Contextual Help

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



Click on the overview steps to view the contextual help



ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

- Accretion Instabilities in EC 53
  - Proposal
    - Planned Observing
      - ScienceGoal (B6 C18O + SO + SiO
        - General
        - Field Setup
        - Spectral Setup
        - Calibration Setup
        - Control and Performance
        - Technical Justification
      - ScienceGoal (Copy of B6 C18O + S
        - General
        - Field Setup
        - Spectral Setup
        - Calibration Setup
        - Control and Performance
        - Technical Justification
      - ScienceGoal (Copy of Copy of B6 C
        - General
        - Field Setup
        - Spectral Setup
        - Calibration Setup
        - Control and Performance
        - Technical Justification

Editors

Spectral Spatial Spectral Setup

Baseband-4

1(Full) 230.53800 GHz 230.54486 GHz CO v=0 2-1 | 234.375 MHz(305 km/s), 141.113 kHz(0.183 km/s) (2 | 2

58.594 MHz(76 km/s), 141.113 kHz(0.183 km/s) (4-bit)
117.188 MHz(152 km/s), 70.557 kHz(0.092 km/s) (2-bit)
117.188 MHz(152 km/s), 282.227 kHz(0.367 km/s) (4-bit)
234.375 MHz(305 km/s), 141.113 kHz(0.183 km/s) (2-bit)
234.375 MHz(305 km/s), 564.453 kHz(0.734 km/s) (4-bit)
468.750 MHz(610 km/s), 282.227 kHz(0.367 km/s) (2-bit)
468.750 MHz(610 km/s), 1.129 MHz(1.468 km/s) (4-bit)
937.500 MHz(1219 km/s), 564.453 kHz(0.734 km/s) (2-bit)
937.500 MHz(1219 km/s), 2.258 MHz(2.936 km/s) (4-bit)
1875.000 MHz(2438 km/s), 1.129 MHz(1.468 km/s) (2-bit)
1875.000 MHz(2438 km/s), 36.125 MHz(46.976 km/s) (2-bit)

Add spectral window centred on a spectral line

Representative Frequency

The representative frequency is used in conjunction with
observing time and to set the size of the antenna beam s
not fall in the centre of the chosen spectral window, its fr
shown in the targets table below.

Rest Frequencies

Please set the rest frequencies of spectral lines that will be observed. These will be used during data reduction to set the velocity scale and will enhance the ALMA Science Archive. We recommend that this be done once the spectral setup is fully defined.

Feedback

Validation Validation History Log

Description	Suggestion

Overview

Contextual Help | Phase I: Science Proposal

16°C 흐림

오후 1:20 2023-04-18

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

Create spectral windows centred on spectral lines

Transition Filter

*

*e.g. CO*2-1* or *oxide**

Include description

Frequency Filters

ALMA Band

1 2 3 4 5 6 7 8 9 10

Sky Frequency (GHz)

Min 31.3 Max 950

Receiver/Back End Configuration

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

Upper-state Energy (K)

Min 0 Max 0

Molecule Filter / Environment

Show all atoms and molecules

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

Search Online

Reset Filters

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	Description	Rest Frequency	Sky Frequency	Upper-state Energy	Lovas Intensity	Sij μ²	Catalog
13CH3OH v t=0 5 (...	Methanol	349.222565 GHz	349.208196 GHz	56.339 K		0 D²	Offline
CH3CN v=0 19(6)-1...	Methyl Cyanide	349.212338 GHz	349.197970 GHz	424.7 K	0.71	1106.34 D²	Offline
CH3CN v=0 19(6)-1...	Methyl Cyanide	349.212332 GHz	349.197964 GHz	424.7 K	0.71	995.379 D²	Offline
CH3CN v=0 19(6)-1...	Methyl Cyanide	349.212321 GHz	349.197953 GHz	424.7 K	0.71	0.002 D²	Offline
CH3CN v=0 19(6)-1...	Methyl Cyanide	349.212285 GHz	349.197917 GHz	424.7 K	0.71	1049.515 D²	Offline
CH3CN v8=1 J =19...	Methyl Cyanide	349.208926 GHz	349.194558 GHz	2089.502 K		204.763 D²	Offline
CH3CN v8=1 J =19...	Methyl Cyanide	349.174395 GHz	349.160028 GHz	2068.707 K		289.09 D²	Offline
CH3CN v=0 19(7)-1...	Methyl Cyanide	349.125319 GHz	349.110955 GHz	517.407 K	0.5	531.025 D²	Offline
CH3CN v=0 19(7)-1...	Methyl Cyanide	349.125315 GHz	349.110950 GHz	517.407 K	0.5	477.876 D²	Offline
CH3CN v=0 19(7)-1...	Methyl Cyanide	349.125298 GHz	349.110934 GHz	517.407 K	0.5	0.001 D²	Offline
CH3CN v=0 19(7)-1...	Methyl Cyanide	349.125249 GHz	349.110884 GHz	517.407 K	0.5	503.75 D²	Offline
CH3OH v t=0 14(1,...	Methanol	349.107020 GHz	349.092656 GHz	260.203 K	3.52	25.799 D²	Offline
13CH3OH v t=0 4 (...	Methanol	349.097921 GHz	349.083558 GHz	45.01 K		0 D²	Offline
13CH3OH v t=0 3 (...	Methanol	349.034424 GHz	349.020063 GHz	35.947 K		0 D²	Offline
CH3CN v=0 19(8)-1...	Methyl Cyanide	349.025009 GHz	349.010648 GHz	624.32 K	1.03	505.523 D²	Offline
CH3CN v=0 19(8)-1...	Methyl Cyanide	349.025006 GHz	349.010646 GHz	624.32 K	1.03	454.821 D²	Offline
CH3CN v=0 19(8)-1...	Methyl Cyanide	349.024983 GHz	349.010623 GHz	624.32 K	1.03	0.001 D²	Offline
CH3CN v=0 19(8)-1...	Methyl Cyanide	349.024918 GHz	349.010558 GHz	624.32 K	1.03	479.558 D²	Offline
CH3CN v8=1 J =19...	Methyl Cyanide	349.016636 GHz	349.002276 GHz	2294.548 K		316.133 D²	Offline

Add to spectral window list

Spectral windows in this baseband (maximum of four)

Transition	Description	Rest Frequency	Sky Frequency
SO 3Σ v=0 8(8)-7(7)	Sulfur Monoxide	344.310612 GHz	344.296446 GHz
CO v=0 3-2		345.795990 GHz	345.781762 GHz
SiO v=0 8-7	Silicon Monoxide	347.330579 GHz	347.316288 GHz

Remove spectral window(s)

Cancel Ok

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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal Program

Unsubmitted Proposal

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

Editors

Spectral Spatial Spectral Setup

Produce image sidebands (Bands 9 and 10 only)

Polarization products desired: XX DUAL FULL

Spectral Setup Errors

The spectral window range exceeds the baseband width : 3.051092345699999 GHz

Spectral Line

Baseband-1

Fraction	Centre Freq (rest,hel)	Centre Freq (sky,hel)	Transition	Bandwidth, Resolution (smoothed)	Spec. Avg.	Representative Window
1/2	345.79599 GHz	345.78176 GHz	CO v=0 3-2	58.594 MHz, 70.557 kHz	2	◉
1/4	344.31061 GHz	344.29645 GHz	SO 3Σ v=0 8(8)-7(7)	58.594 MHz, 141.113 kHz	2	○
1/4	347.33058 GHz	347.31628793178334 GHz	SiO v=0 8-7	Please select a correlator mode	1	○

Add spectral window centred on a spectral line | Add spectral window manually | Delete | Show image spectral windows

Baseband-2

Error : over the width of the baseband

Add spectral window centred on a spectral line | Add spectral window manually | Delete | Show image spectral windows

Overview

Contextual Help

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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

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Editors

Spectral Spatial Spectral Setup

Produce image sidebands (Bands 9 and 10 only)

Polarization products desired: XX DUAL FULL

Spectral Setup Errors

Baseband-1 : Spectral window resolution mismatch in spectral set-up. All windows must be allocated the same resolution.

Spectral Line

Baseband-1

Fraction	Centre Freq (rest,hel)	Centre Freq (sky,hel)	Transition	Bandwidth, Resolution (smoothed)	Spec. Avg.	Representative Window
1/2	345.79599 GHz	345.78176 GHz	CO v=0 3-2	58.594 MHz(51 km/s), 70.557 kHz(0.061 km/s)	2	●
1/4	344.31061 GHz	344.29645 GHz	SO 3Σ v=0 8(8)-7(7)	58.594 MHz(51 km/s), 141.113 kHz(0.123 km/s)	2	○

Add spectral window centred on a spectral line | Add spectral window manually | Delete | Show image spectral windows

Baseband-2

Error : different spectral resolution within the baseband

Add spectral window centred on a spectral line | Add spectral window manually | Delete | Show image spectral windows

Overview

Contextual Help

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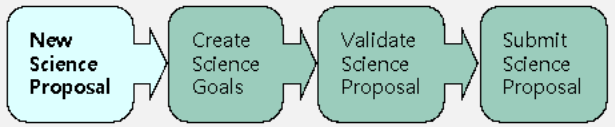
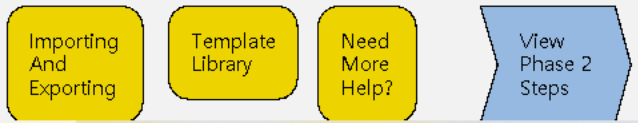
Phase I: Science Proposal



Click on the overview steps to view the contextual help



ALMA Observing Tool (Cycle 11 (Phase1)) - Project

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Editors

Spectral Spatial Spectral Setup

Polarization products desired: XX (•) DUAL ( ) FULL

Spectral Setup Errors

Can not configure LOs for these spectral windows

Spectral Line

Baseband-1

Fraction	Centre Freq (rest,hel)	Centre Freq (sky,hel)	Transition	Bandwidth, Resolution (smoothed)	Spec. Avg.	Representative Window
1/2	345.79599 GHz	345.78176 GHz	CO v=0 3-2	117.188 MHz, 141.113 kHz	2	(•)
1/4	344.31061 GHz	344.29645 GHz	SO 3Σ v=0 8(8)-7(7)	58.594 MHz, 141.113 kHz	2	( )

Add spectral window centred on a spectral line | Add spectral window manually | Delete | Show image spectral windows

Baseband-2

1/2	329.33055 GHz	329.31700 GHz	C18O 3-2	Please select a correlator mode	1	( )

Error : Outside of IF bandwidth

Add spectral window centred on a spectral line | Add spectral window manually | Delete | Show image spectral windows

Baseband-3

Overview

Contextual Help

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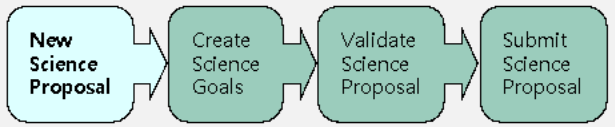
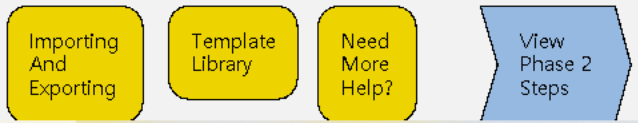
Phase I: Science Proposal



Click on the overview steps to view the contextual help



ALMA Observing Tool (Cycle 11 (Phase1)) - Project

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Editors

Spectral Spatial Spectral Setup

Polarization products desired: XX DUAL FULL

Spectral Setup Errors

Spectral Line

Baseband-1

Fraction	Centre Freq (rest,hel)	Centre Freq (sky,hel)	Transition	Bandwidth, Resolution (smoothed)	Spec. Avg.	Representative Window
1/2	345.79599 GHz	345.78176 GHz	CO v=0 3-2	117.188 MHz(102 km/s), 141.113 kHz(0.122 km/s)	2	◉
1/4	344.31061 GHz	344.29645 GHz	SO 3Σ v=0 8(8)-7(7)	58.594 MHz(51 km/s), 141.113 kHz(0.123 km/s)	2	○

Add spectral window centred on a spectral line | Add spectral window manually | Delete | Show image spectral windows

Baseband-2

1(Full)	330.58797 GHz	330.57436 GHz	13CO v=0 3-2	117.188 MHz(106 km/s), 70.557 kHz(0.064 km/s)	2	○

Add spectral window centred on a spectral line | Add spectral window manually | Delete | Show image spectral windows

Baseband-3

Overview

Contextual Help

1. Please ensure you and your co-Is are registered with the ALMA Science Po
2. Create a n
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3. Click on the proposal tree node and complete the relevant fields.

Phase I: Science Proposal

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Representative window (frequency) is used to estimate beam size and sensitivity

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      - ScienceGoal (Copy of Test)
        - General
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        - Control and Performance

Editors

Spectral Spatial Spectral Setup

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 not fall in the centre of the chosen spectral window, its frequency can be changed here. The sky equivalents of the representative frequency are shown in the targets table below.

345.79599 GHz

Rest Frequencies

Please set the rest frequencies of spectral lines that will be observed. These will be used during data reduction to set the velocity scale and will enhance the ALMA Science Archive. We recommend that this be done once the spectral setup is fully defined.

Define Rest Frequencies

Sources

Source Name	Velocity	Frame	Representative Frequency (Observed)
TW Hya	12.335 km...	hel	345.7818 GHz

Overview

Contextual Help

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2. Create a n
   - Selecti
   - Clickin
   - Or clic
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Representative window (frequency) is used to estimate beam size and sensitivity

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        - Calibration Setup
        - Control and Performance
        - Technical Justification
      - ScienceGoal (Copy of Test)
        - General
        - Field Setup
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Editors

Spectral Spatial Calibration Setup

Select calibration strategy.

Goal Calibrators

By default, calibrators will be selected automatically at runtime and a single observation will be used to calibrate the bandpass and flux scale.

- (•) System-defined calibration (recommended)
- ( ) System-defined calibration (force separate amplitude calibration using solar-system object)
- ( ) User-defined calibration

Astrometry

If you wish positional accuracy that is better than that provided by default (see the Proposer's Guide for more information) then select enhanced accuracy.

- (•) Standard positional accuracy (default)
- ( ) Enhanced positional accuracy

DGC Override (observatory-use only)

Overview

Contextual Help

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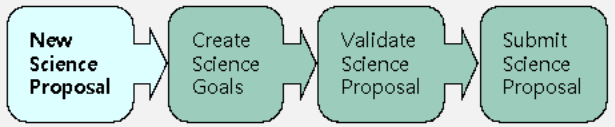
Phase I: Science Proposal



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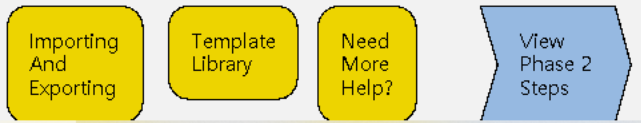

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Editors

Spectral Spatial Control and Performance

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

Configuration Information

Antenna Beamsize (1.13 * λ / D)	12m	16.840 arcsec	7m	28.868 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	16.197 km
Synthesized beamsize	3.632 arcsec	0.938 arcsec	0.016 arcsec
Shortest baseline	0.009 km	0.015 km	0.256 km
Maximum recoverable scale	19.388 arcsec	8.391 arcsec	0.145 arcsec

Desired Performance

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

0.05 arcsec to 0.15 arcsec

Largest Angular Structure in source 1.00000 arcsec

Desired sensitivity per pointing 3.3 mJy equivalent to 45.450 mK @ 0.150 "

Feedback

Validation Validation History Log

Description	Suggestion

Overview

Contextual Help

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Phase I: Science Proposal

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

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ALMA Observing Tool (Cycle 11 (Phase1)) - Project

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Editors

Spectral | Spatial | Control and Performance

Shortest baseline	0.009 km	0.015 km	0.256 km
Maximum recoverable scale	19.388 arcsec	8.391 arcsec	0.145 arcsec

Desired Performance

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

0.05 arcsec to 0.15 arcsec

Largest Angular Structure in source: 1.00000 arcsec

Desired sensitivity per pointing: 3.3 mJy equivalent to 1.4998 K @ 0.150 "

and 13.499 K @ 0.0500 "

Bandwidth used for Sensitivity: RepWindowEffectiveChannelWidth — Frequency Width 0.195313 MHz

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

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

Range is recommended (single ~ < 20%)

Flux unit is used although K can be chosen.

$$\left(\frac{T}{1\ \mathrm{K}}\right) = \left(\frac{S_\nu}{1\ \mathrm{Jy}}\right)\left[13.6\left(\frac{300\ \mathrm{GHz}}{\nu}\right)^2\left(\frac{1''}{\theta_{max}}\right)\left(\frac{1''}{\theta_{min}}\right)\right]$$

Feedback

Validation | Validation History | Log

	Description	Suggestion

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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

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ALMA Observing Tool (Cycle 11 (Phase1)) - Project

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Editors

Spectral Spatial Control and Performance

Shortest baseline	0.009 km	0.015 km	0.256 km
Maximum recoverable scale	19.388 arcsec	8.391 arcsec	0.145 arcsec

Desired Performance

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

0.05 arcsec to 0.15 arcsec

Largest Angular Structure in source 1.00000 arcsec

Desired sensitivity per pointing 3.3 mJy equivalent to 1.4998 K @ 0.150 "

and 13.499 K @ 0.0500 "

Bandwidth used for Sensitivity RepWindowEffectiveChannelWidth Frequency Width 0.195313 MHz

- RepresentativeWindowBandWidth
- RepWindowEffectiveChannelWidth
- AggregateBandWidth
- LargestWindowBandWidth
- FinestEffectiveChannelWidth
- User

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

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

Simultaneous 12-m and ACA observations

Are the observations time-constrained? ○ Yes ◉ No

Line

Continuum

Feedback

Validation Validation History Log

	Description	Suggestion

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Phase I: Science Proposal

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

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        - Calibration Setup
        - Control and Performance
        - Technical Justification

Editors

Spectral Spatial Control and Performance

Maximum recoverable scale | 19.388 arcsec | 8.391 arcsec | 0.145 arc

Desired Performance

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

0.05000 arcsec to 0.15000

Largest Angular Structure in source 1.00000 arcsec

Desired sensitivity per pointing 3.30000 mJy equivalent to 1.4998 K

and 13.499 K

Bandwidth used for Sensitivity RepWindowEffectiveChannelWidth Frequency Widt

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

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

Feedback

Validation Validation History Log

Description

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Contextual Help

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Phas

New Science Proposal

Cre Scie Goa

Click on the overview s

Importing And Exporting

Ten Libr

Planning and Time Estimate

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	3.300 mJy
Bandwidth used for sensitivity	0.195 MHz
Representative frequency (sky, first source)	345.782 GHz

Estimated Total time for Science Goal **8.93 h**

Cluster 1

Source Name	RA	Dec	Velocity
TW Hya	11:01:51.9053	-34:42:17.033	12.335 km/s

Possible Configuration Combinations

12-m (1)	12-m (2)	7-m	TP
C-6	None	No	No

Input Parameters

Precipitable water vapour (all sources)	1.262mm (4th Octile)

Time required for 12m (1) [C-6]

Time on source per pointing (first source)	2.82 h [2.77 h]
Total number of pointings (all sources)	1
Number of tunings	1
Total time on source	2.82 h [2.77 h]
Total calibration time	5.80 h
Other overheads	18.40 min
Total time for 1 SB execution	1.49 h
Number of SB executions	6
Total time to complete SB	8.93 h

Calibration Breakdown per SB execution

4 x Pointing	8.00 min
1 x Amplitude/bandpass	10.00 min
19 x Phase	5.70 min
4 x CheckSource	2.00 min
2 x DGC	8.00 min
10 x Atmospheric	6.67 min
1 x DGC Bandpass	5.00 min

Close

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

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Editors

Spectral Spatial Technical Justification

Enter a Technical Justification for this Science Goal, paying special attention to the parameters reproduced below.

Sensitivity

Requested RMS over 105.835 m/s is 10.00 mJy

For a peak flux density of 100.00 mJy , the S/N is 10.0

Achieved RMS over the total 410.156 MHz bandwidth is 163.60 uJy, 1.86 K-7.44 K

For a continuum flux density of 50.00 mJy, 568.12 K-2272.49 K , the achieved S/N is 305.6

For a peak line flux of 100.00 mJy , the achieved S/N over 1/3 of the source line width (1.00 km/s / 3 = 333.33 m/s) is 18.7

Line width / bandwidth used for sensitivity (1.00 km/s / 105.83 m/s) = 9.45

Spectral Dynamic Range (continuum flux / line rms): 5.27

Spectral dynamic range is related with the bandpass accuracy. It is 1000 (3-6), 400 (7), 250 (8) , 170 (9), and 150 (10).

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.

aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa

Imaging

Overview

Contextual Help

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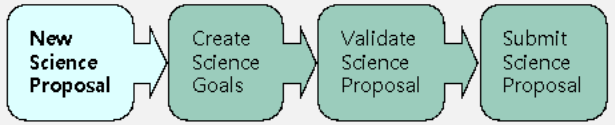
Phase I: Science Proposal



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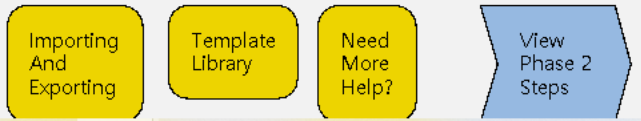

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

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        - General
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Editors

Spectral Spatial Technical Justification

Imaging

Requested angular resolution 50.00 mas - 10.00 mas

Requested Largest Angular Scale 1.00 arcsec

Justify the chosen angular resolution and largest angular scale for the source(s) in this Science Goal

Correlator configuration

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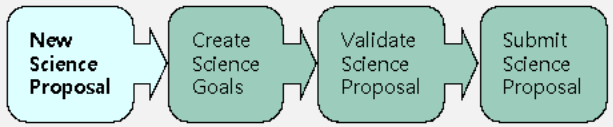
Phase I: Science Proposal



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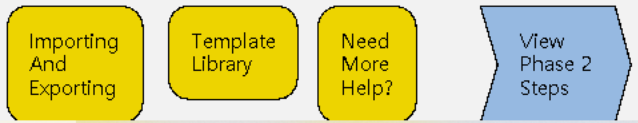

Project Structure

Proposal | Program

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        - General
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        - Calibration Setup
        - Control and Performance

Editors

Spectral | Spatial | Technical Justification

Correlator configuration

line width / representative spectral window resolution: 1.00 km/s / 52.92 m/s = 18.90

Representative spectral window width : 50.80 km/s

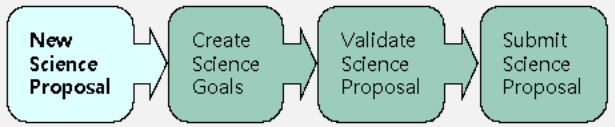
Justify your correlator set-up with particular reference to the number of spectral resolution elements per line width.
You may want to consider spectral averaging to lower the data rate

Overview

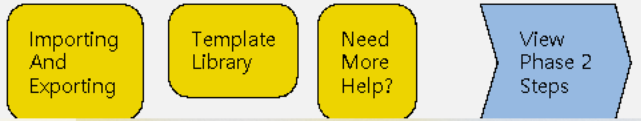
Contextual Help

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 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



Click on the overview steps to view the contextual help



ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

Project Structure

Proposal | Program

Unsubmitted Proposal

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

Editors

Spectral | Spatial | Proposal

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

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:

Feedback

Validation | Validation History | Log

10 errors, 3 warnings : double-click on each row to be taken to the problem

Description	Suggestion
No document found - you must add a Science Case to your proposal	Select the proposal node in the Proposal tab and add your document
No mentor has been defined	Please select a mentor (must be a registered ALMA user)
Neither the reviewer or mentor have a PhD	Please select a reviewer or mentor with a PhD

Overview

Contextual Help

1. Please ensure you and your co-Is are registered with the ALMA Science Portal
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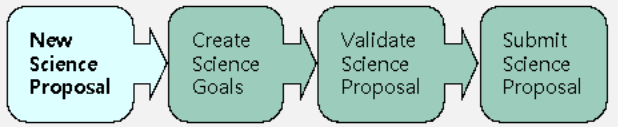
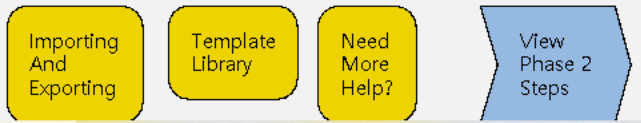
Phase I: Science Proposal



Click on the overview steps to view the contextual help



ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

ALMA LO Configuration Tool...
Sensitivity Calculator...
Generate SBs from the Selected Goal Ctrl-B
Display Project Time Summary
Generate Phase 2 SBs from all the Science Goals Ctrl-B
Generate a PDF of Whole Proposal
Disable Edit P
Generate a PDF of Whole Proposal

Project Structure

Proposal Progr

Unsubmitted Propos

- Test
  - Proposal
    - Plann
      - Sc
        - General
        - Field Setup
        - Spectral Setup
        - Calibration Setup
        - Control and Performance
        - Technical Justification

nical Justification

Requested angular resolution 50.00 mas - 10.00 mas

Requested Largest Angular Scale 1.00 arcsec

Justify the chosen angular resolution and largest angular scale for the source(s) in this Science Goal

aaaaaaaaaaaaaaaaaaaaaaaaaaaa

Feedback

Validation Validation History Log

7 errors, 3 warnings : double-click on each row to be taken to the problem

Description	Suggestion
Neither the reviewer or mentor have a PhD	Please select a reviewer or mentor with a PhD
Spectral setup has low aggregate bandwidth	Calibration will use bandwidth switching. Increase the bandwidth if possible
Desired angular resolution is outside the range allowed by the available arrays and	Select the Control Parameters in the Science Goal and enter a valid value
Part of spw CO v=0 3-2 in BB 2 lies within 30 MHz of the baseband edge. This could result in	Move the spw away from the baseband edge to avoid this problem.

Overview

Contextual Help

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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

ALMA Observing Tool (Cycle 11 (Phase1)) - Project

File Edit View Tool Search Help

Perspective 1

- New Proposal Ctrl-N
- New DDT Proposal Ctrl-D
- New Supplemental Call Proposal
- Open Project
- Open Project as New Proposal
- Save Ctrl-S
- Save As...
- Show ALMA Template Library
- Use Project as Template
- Validate Ctrl-L
- Submit Project
- Preferences
- Save Preferences
- Quit

Submit Project to ALMA

Editors

Spectral | Spatial | Technical Justification

Imaging

Requested angular resolution: 50.00 mas - 10.00 mas

Requested Largest Angular Scale: 1.00 arcsec

Justify the chosen angular resolution and largest angular scale for the source(s) in this Science Goal

aaaaaaaaaaaaaaaaaaaaaaaaaaaa

Feedback

Validation | Validation History | Log

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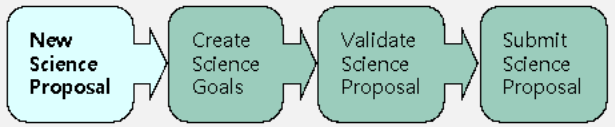
Phase I: Science Proposal



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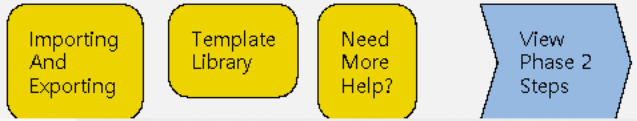


Q&A