



Web-based Observing Tool (OT)

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What is the OT?

- The ALMA Observing Tool (OT) is used to create and submit an ALMA proposal
- From cycle 13, we will use the web-based OT instead of the Desktop-based OT
- Access the OT at <https://cycle-13.sps.alma.cl/>



OT Documentation



On the [Science Portal](#), go to Documentation -> Cycle 13 -> Phase 1 & 2

- [User manual](#) (Describes how to use the OT for preparing ALMA proposals)
- [Reference manual](#) (An in-depth description of the OT)
- [Video Tutorials](#)
 - even if you are familiar with the desktop-based OT, it is recommended to at least watch the following video tutorials:
 - “What’s new: main differences from the desktop-based OT”
 - “Introduction and the staging area”
- [FAQ and Known issues](#)

Main differences to Desktop-based OT



- You need to be online :-)
 - Supported browsers: Chrome, Firefox and Safari
- No local saving or loading of proposals (no .aot files). Your proposals now live in the staging area.
- Autosaving without history or Undo!
- Spatial Visualizer now based on Aladin Sky Atlas

Welcome screen



 Welcome Lenka Filipova

What would you like to do?

 Create a new proposal

 Retrieve a project from the server

 Open project as new proposal

or

 Log out

Create a new proposal (draft)

Open a draft or a submitted proposal from the **staging area**

Make a copy of a proposal in the **staging area** (can be used to copy proposals from previous cycles!)

Header bar



The header bar is a dark blue horizontal strip. On the left, it contains the ALMA logo and the text "ALMA Observing Tool". In the center, the text "My awesome proposal" is displayed. To the right of this text is a row of icons: a document with a plus sign, a cloud, a copy icon, a refresh icon, a calendar, a radio telescope, an information icon, a PDF icon, and a checkmark. Further right is a "Submit project" button with an upload icon and a user name "Iffilipova" with a dropdown arrow. Below the main bar, there are two tabs: "Proposal" (active) and "Science Plan".

Callout labels and their corresponding icons:

- Proposal title (points to "My awesome proposal")
- Create a new draft proposal (points to the document with plus icon)
- Open project as new proposal (make a copy) (points to the cloud icon)
- Sensitivity calculator (points to the radio telescope icon)
- OT documentation (points to the information icon)
- Validate (points to the checkmark icon)
- Submit project (points to the "Submit project" button)
- Open a draft or submitted proposal (points to the "Proposal" tab)
- Revert a project with unsubmitted changes to the submitted archive version (points to the refresh icon)
- Open configuration tables (points to the radio telescope icon)
- Generate PDF (points to the PDF icon)

Staging area - Proposal Statuses



Each proposal is in one of the following statuses:

- **Draft** (proposal that has not yet been submitted; can be deleted)
- **Submitted** (proposal was submitted)
- **Unsubmitted changes** (proposal was submitted and later modified)

Staging area

“Retrieve a project from the server” or “Open project as new proposal” opens the staging area



Retrieve a project from the server

Search type Display all my projects Filter projects

Filter on status Draft (1) Unsubmitted changes (0) Submitted (12) Show all (13)

Status	Project Name	Project Code	PI ALMA ID	Creation Time ↓	Modification Time	Subm
Draft		None Assigned	Ifilipova	2026-03-20 13:56:07 (an hour ago)	2026-03-20 14:55:06 (6 minutes ago)	
Submitted	Deep observations in Corona Australis	2026.1.61943.S	Ifilipova	2026-03-11 13:54:42 (9 days ago)	2026-03-11 13:54:42 (9 days ago)	2026-03-11 13:54:42 (9 days ago)
Submitted	High angular resolution observations of a disc	2026.1.61935.S	Ifilipova	2026-03-11 13:45:54 (9 days ago)	2026-03-11 13:45:54 (9 days ago)	2026-03-11 13:45:54 (9 days ago)
Submitted	Stellar system cradles: An example of proposal	2026.1.61931.S	Ifilipova	2026-03-11 13:14:21 (9 days ago)	2026-03-11 13:14:21 (9 days ago)	2026-03-11 13:14:21 (9 days ago)
Submitted	Characterizing the physical condition of the accretion shock in CB 68	2025.1.01700.S	thsiao	2026-03-10 14:07:20 (10 days ago)	2026-03-10 14:07:20 (10 days ago)	2026-03-10 14:07:20 (10 days ago)
Submitted	Copy of Resubmitted with different institutions TAIWANESE POPUP DIFFERENT TITLE	2026.1.53856.L	dtaub	2026-03-10 09:48:24 (10 days ago)	2026-03-10 09:48:24 (10 days ago)	2026-03-10 09:48:24 (10 days ago)

13 project(s) found

<< < 1 2 3 > >>

X Cancel

Open selected project

Filter by Proposal Status

Users have access to all proposals (“draft”, “submitted” and “unsubmitted changes”) on which they are PI, CoPI or CoI

Autosaving - BE CAREFUL!



- Every edit of the proposal is immediately saved, **overwriting** the previous version of the proposal
 - For most fields, the save is triggered when the user leaves the field (exceptions: Project Name, Abstract, and Duplicated Observation fields are saved once user stops typing for 0.5 s)
- There is **no history!**
- There is **no Undo!**
- What if you want to try something out?
 - **Make a copy of the proposal** (use “Open project as new proposal”)
Note that the title of the copied proposals will be “Copy of...”
 - **Make a copy of the Science Goal**
- Proposals with unsubmitted changes can be reverted to the last submitted version

Making a copy



ALMA Open project as new proposal

Search type Display all my projects Filter projects

PI ALMA ID is Ifilipova

Filter on status **Draft (1)** Unsubmitted changes (0) Submitted (7) Show all (8)

Status	Project Name	Project Code	PI ALMA ID	Creation Time ↓	Modification Time	Subm
Draft		None Assigned	Ifilipova	2026-03-20 13:56:07 (2 hours ago)	2026-03-20 14:55:06 (39 minutes ago)	
Submitted	Deep observations in Corona Australis	2026.1.61943.S	Ifilipova	2026-03-11 13:54:42 (9 days ago)	2026-03-11 13:54:42 (9 days ago)	2026-03-11 13:54:42 (9 days ago)
Submitted	High angular resolution observations of a disc	2026.1.61935.S	Ifilipova	2026-03-11 13:45:54 (9 days ago)	2026-03-11 13:45:54 (9 days ago)	2026-03-11 13:45:54 (9 days ago)
Submitted	Stellar system cradles: An example of proposal	2026.1.61931.S	Ifilipova	2026-03-11 13:14:21 (9 days ago)	2026-03-11 13:14:21 (9 days ago)	2026-03-11 13:14:21 (9 days ago)
Submitted	Resubmitted with different institutions TAIWANESE POPUP DIFFERENT TTILE	2026.1.53837.S	Ifilipova	2026-03-10 08:36:48 (10 days ago)	2026-03-10 08:36:48 (10 days ago)	2026-03-10 08:36:48 (10 days ago)
Submitted	TAIWANESE POPUP DIFFERENT TTILE	2026.1.40494.S	Ifilipova	2026-03-10 08:23:36 (10 days ago)	2026-03-10 08:23:36 (10 days ago)	2026-03-10 08:23:36 (10 days ago)

8 project(s) found

Cancel Open project as new proposal

“Open project as new proposal” allows to make a copy of a proposal.

The copy will be in draft status.

A copy allows to test something without overwriting the original proposal. Alternatively, one can also copy a Science Goal.

Autosaving - BE CAREFUL!



- co-Is have full editing rights! Clear communication between PI and co-Is is essential to ensure that there are no unwanted overwrites of the proposal
 - Only the PI can submit the proposal
 - co-Is cannot delete draft proposals
- Simultaneous editing is strongly discouraged
 - An error message is shown if editing is attempted on a proposal that has already been edited by another user:

Error saving last changes

Error! There was a problem saving your last changes. You should reload the project because a newer version exists on the server.

Outdated tag for If-Match header: last update at 2026-03-19T13:24:09 by user gianni

[Reload project](#)

“Proposal” page



ALMA Observing Tool Submit project gianni

Proposal Science Plan

? Main Project Information

Project Name Project name is required

Assigned Project Code

? Proposal Information

Proposal cycle

Abstract Abstract is required

[Generate PDF of Whole Proposal](#)

? Proposal Type

Regular Target Of Opportunity VLBI Large Program Phased Array

? Scientific Category

Cosmology and the High Redshift Universe Galaxies and Galactic Nuclei ISM, star formation and astrochemistry Circumstellar disks, exoplanets and the solar system Stellar Evolution and the Sun

A scientific category is required.

? Joint Proposals

Is this a Joint Proposal? Yes No

? Investigators

[Select PI](#) [Add CoPI](#) [Add Col](#) [Add from project](#) [Select all collaborator\(s\)](#) [Unselect collaborator\(s\)](#) [Remove collaborator\(s\)](#)

Reviewer	Type ↓	Full Name	Affiliation	ALMA ID	Executive
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- here you enter general information about your proposal:
 - Project Name
 - Abstract
 - Proposal type
 - Science category
 - Joint Proposal
 - PI / co-Is
 - Reviewer information
 - Science Justification
 - Justification for duplicate observations

Science plan



- your proposal consists of one or several Science Goals (SGs)
- a SG can have several targets, but only one spectral setup, sensitivity and resolution
 - Example: observe 10 sources with the same spectral setup, sensitivity and resolution: one SG
 - Example: observe the same source in Band 3 and Band 6: two SGs
- SGs can be copied!

Science Plan and Science Goals



Copy or delete Science Goal here.

By default, an empty Science Goal is defined. Science Goals can be added with the plus button.

Science Goals (1)



Project Overview

Time Summary

Data Volumes & Data Rates

Go to Selected | Expand All | Collapse All

Science Goal

Copy science goal

Delete science goal

Spectral Setup

Calibration Setup

Control and Performance

Technical Justification

Science Goal Name	No. Sources	Band	Spec. Type	No. Spec. Wind.	Pol.	Calibration Setup	Rep. Freq.	Ang. Res.	Largest Scale	Sens.
Science Goal	1	undefined	Spectral Line	0	Dual	System	0.00000 GHz	0.00000 arcsec	-1.00000 arcsec	0.00000 Jy

Field setup

Automatically import Source properties from the Simbad database



ALMA Observing Tool

Proposal Science Plan

Submit project iflipova

Science Goals (1)

Go to Selected Expand All Collapse All

Science Goal

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

Source

Source name Resolve source

Source name is required

Choose a Solar System Object?

System ICRS Sexagesimal display

RA 00:00:00.0000 ✓ hh:mm:ss

Dec +00:00:00.000 ✓ dd:mm:ss

Source coordinates

Parallax 0.00000 ✓ mas

PM RA 0.00000 ✓ mas/yr

PM Dec 0.00000 ✓ mas/yr

Source Radial Velocity 0.00000 ✓ km/s lsrk

z 0.000000000 ✓ Doppler Type RADIO

Target Type Individual Pointing(s)

ICRS 00 00 00.0 +0 0 0

FOV Parameters

Representative Frequency (Sky) 1.00000 GHz

Array Type 12m

Antenna Beamsize (HPBW) 5822.94963 arcsec

Show Antenna Beamsize

Expected Source Properties

Peak Continuum Flux Density per Synthesized Beam 0.00000 ✓ Jy

Continuum Linear Polarization 0.00000 ✓ per cent

Sources can be added, imported, exported or deleted.

Field setup - Spatial visualizer



The screenshot displays the ALMA Observing Tool interface. On the left, there is a sidebar with 'Science Goals (1)' and a 'Field setup' section containing buttons for 'General', 'Spectral Setup', 'Calibration Setup', 'Control and Performance', and 'Technical Justification'. The main area is divided into several panels:

- Source:** A form for entering source information. Fields include 'Source name' (with a red error message 'Source name is required'), 'System' (set to ICRS), 'RA' (00:00:00.0000), 'Dec' (+00:00:00.0000), 'Parallax' (0.00000), 'PM RA' (0.00000), 'PM Dec' (0.00000), 'Source Radial Velocity' (0.00000), and 'z' (0.00000000). Units are specified for each field.
- Expected Source Properties:** A table of properties with input fields and units:

Peak Continuum Flux Density per Synthesized Beam	0.00000	✓	Jy
Continuum Linear Polarization	0.00000	✓	per cent
Continuum Circular Polarization	0.00000	✓	per cent
Peak Line Flux Density per Synthesized Beam	0.00000	○	Jy
Line Width	0.00000	○	km/s
- Spatial Visualizer:** A central window showing a star field. A 'Stack' menu is open, listing options like 'Overlays', 'Pointings 1/3 Beam Size', 'Pointings Beam Size', 'Pointings', 'Target Center', 'Add a new HIPS', 'Browse HIPS', 'Add a composite HIPS', 'FITS image file', and 'Load local HIPS'. Below the visualizer, 'FOV Parameters' are shown: Representative Frequency (1.00000 GHz), Array Type (12m), and Antenna Beamsize (5822.94963).

Expected source properties are important for the technical justification

Spatial visualizer displays the browser version of the Aladin interactive Sky Atlas

Load FITS files by accessing the Overlays Menu and clicking on the plus sign next to "Surveys"

Field setup - Target Type

Individual Pointing(s)

change the coordinates of the source.

Individual pointings can be added in the visualizer **but not moved or removed**. Alternative: define pointings in CARTA and then import

ICRS 18 14 05.08 -17 55 51.0

Set coordinates + Add pointing Reset FOV

15.00' x 6.433'

FOV Parameters

Representative Frequency (Sky)	104.50000	GHz
Array Type	<input checked="" type="radio"/> 12m <input type="radio"/> 7m	
Antenna Beamsize (HPBW)	55.72201	arcsec
Show Antenna Beamsize	<input checked="" type="checkbox"/>	

All sources in an SG must use the same Target Type ("Individual Pointings(s)" or "Rectangular Field")

Rectangular Field

No interactivity implemented for rectangles yet (you cannot draw, resize or rotate the rectangle)

ICRS 18 14 05.08 -17 55 51.0

Set coordinates Reset FOV Show pointing positions

17.10' x 7.334'

FOV Parameters

Representative Frequency (Sky)	104.50000	GHz
Array Type	<input checked="" type="radio"/> 12m <input type="radio"/> 7m	
Antenna Beamsize (HPBW)	55.72201	arcsec
Show Antenna Beamsize	<input checked="" type="checkbox"/>	



Toggle activates pointing positions.

Field setup - Target Type



Individual Pointing(s)

Add pointing

import pointing

export pointing

beam size depends on frequency -> define pointings or rectangular field after spectral setup

Field Centre Coordinates

Coordinates Type Relative Absolute

Array Type 12m 7m

Offset Unit

Number of Pointings

Pointings

RA [arcsec]	Dec [arcsec]
<input type="text" value="0.00000"/>	<input type="text" value="0.00000"/>
<input type="text" value="23.59548"/>	<input type="text" value="32.86514"/>
<input type="text" value="-12.64045"/>	<input type="text" value="27.80896"/>

Rectangular Field

Export all pointings of the rectangle

Rectangle

Coordinates Type Relative Absolute

Field Centre Coordinates

Offset (Longitude)

Offset (Latitude)

p length

q length

Position Angle

Spacing

fraction of antenna beamsize

Number of Pointings

Spectral Setup



You can also use your mouse to zoom

Zoom options

Visualisation

← Pan to Spectral Window 🔍 Zoom to Band 🔍 Zoom in 🔍 Zoom out ↻ Reset

Observed Frequency (GHz)
Rest Frequency (GHz)

Overlays
 Receiver Bands Transmission DSB Image

Spectral Lines
 Display Spectral Lines ⚙️ Select Spectral Lines to Overlay

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

Spectral Type
 Spectral Line Single Continuum Spectral Scan

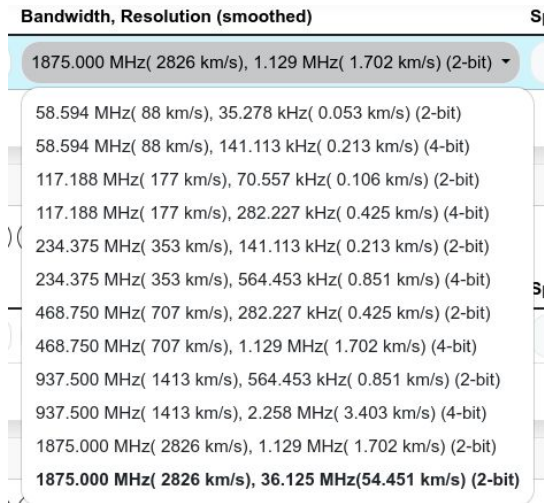
Produce Image Sidebands (Bands 9 and 10 only)

Polarization Products Desired
 XX Dual Full

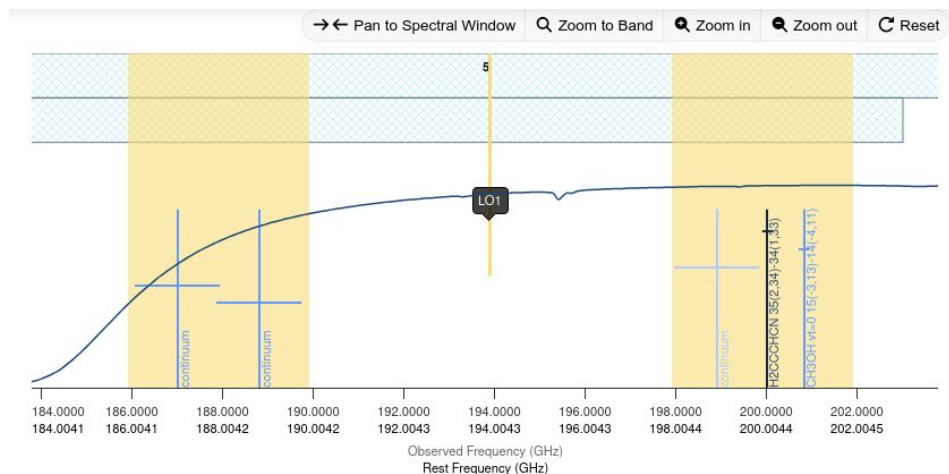
- Spectral types:
- *Spectral Line*
 - *Single Continuum* (shortcut to define four continuum spectral windows)
 - *Spectral Scan* (to cover a wide, uninterrupted frequency range)

Spectral Line

- 4 basebands of ~2 GHz each
- each baseband can contain up to 4 spectral windows (i.e. up to 16 spectral windows in total)
- the higher the spectral resolution, the lower the bandwidth of the spectral window
- basebands not needed for spectral line observations should be used for continuum to maximise total bandwidth (helps calibration)!



The higher the spectral resolution, the lower the bandwidth of the spectral window



Example of a setup using continuum spectral windows to maximise the total bandwidth

Spectral Setup - Spectral Line Picker



Baseband-1

+ Add spectral window centred on a spectral line + Add spectral window manually Delete all

Fraction	Centre Freq (rest, hel)	Centre Freq (sky, hel)	Transition name	Bandwidth, Resolution (smoothed)	Spec. Avg.
1/2	200.016811 GHz	200.01238 GHz	H2CCCHCN 35(2,34)	234.375 MHz(351 km/s), 282.227 kHz(0.423 km/s) (2-bit)	2
1/2	200.82073 GHz	200.81628 GHz	CH3OH vt=0 15(-,3,1)	234.375 MHz(350 km/s), 282.227 kHz(0.421 km/s) (2-bit)	2

Show image spectral windows

Create spectral windows centred on spectral lines

Transition Filter: e.g. CO*2-1* or *oxide* Include descriptions

ALMA Bands: Min 5 Max 5

Sky Frequency (GHz): Min 35 Max 950

Upper-state Energy (K): Min Max

Molecular Filter/Environment: Show Most common molecules

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

Reset Filters + Add selected lines to spectral window(s)

Transition	Description	Rest Frequency (GHz) ↑	Sky Frequency (GHz)	Upper-state Energy (K)	Lovas Intensity	Sij μ² (D²)
CH3OH vt=0 15(2,13)-14(3,11)	Methanol	198.394051	198.389653	300.976000		4.534000
CH3OH vt=0 10(0,10)-9(1,9) ++	Methanol	198.403220	198.398822	127.599000		9.465000
SO2 v=0 42(6,36)-41(7,35)	Sulfur dioxide	198.847860	198.843452	923.565000		17.798000
13CH3OH vt=0 6(-4,3)-(-3,5)	Methanol	198.913892	198.909482	135.915000		0.796000

24 lines(s) found

Spectral windows in this baseband (maximum of four) Remove spectral window(s)

Transition	Rest Frequency (GHz)	Sky Frequency (GHz)
H2CCCHCN 35(2,34)-34(1,33)	200.016811	200.012377
CH3OH vt=0 15(-,3,13)-14(-,4,11)	200.820730	200.816278

X Cancel

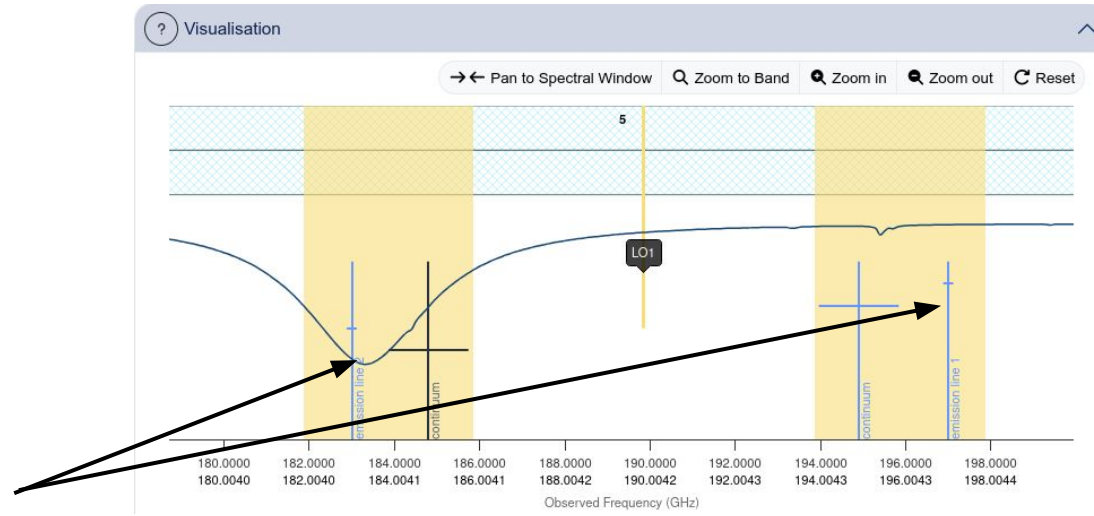
Open Spectral Line Picker

If one uses the transition filter, one needs to click outside of the field for the search to start.

Representative window



- pay attention to the representative window, because it affects the time estimate! (e.g. if the atmospheric transmission is very different for different windows)
- choose the window most important for your science



Very different atmospheric transmission. Choice of representative window will strongly affect time estimate!

Calibration Setup



- leave it at default values, unless you know what you are doing

Select calibration strategy

? Goal Calibrators

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)

DGC Override

Control and Performance - Desired Performance



If desired, you can put the same value twice, but the OT will extend it to a $\pm 20\%$ range behind the scenes

Angular resolution options

- Custom
- Any (science can be done with any configuration)
- Standalone ACA (use only 7M array)

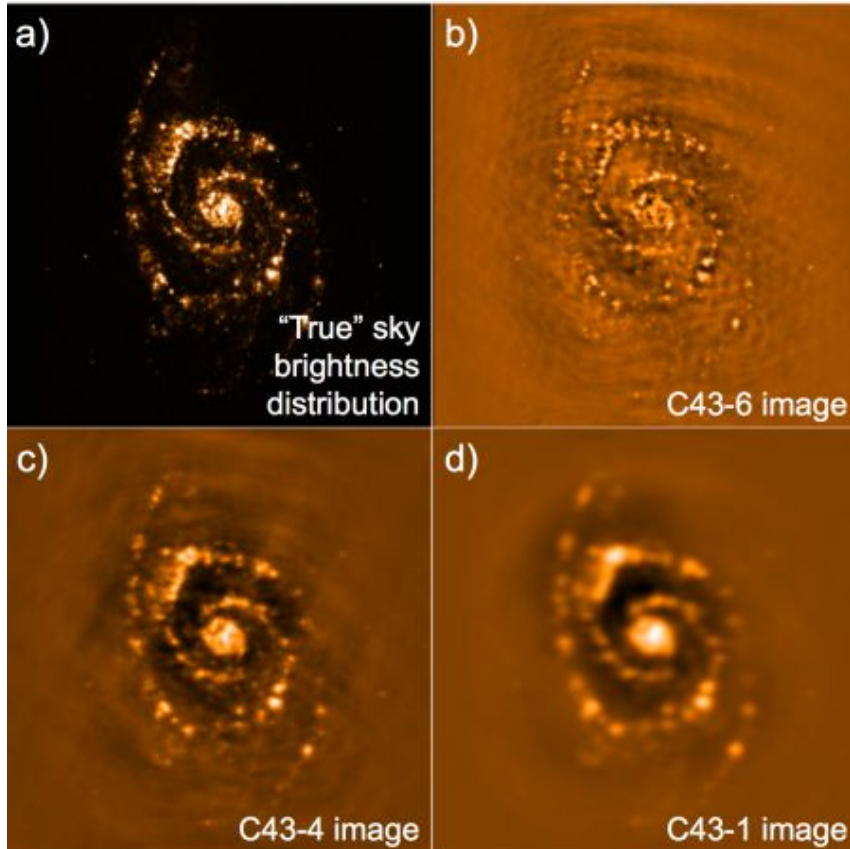
The screenshot shows the "Desired Performance" configuration page. It has three tabs: "Desired Performance" (selected), "Planning and Time Estimate", and "Configuration Information". The "Desired Performance" section includes the following fields:

- Desired Angular Resolution:** Radio buttons for "Custom (Single/Range)" (selected), "Any", and "Standalone ACA". Below is a text input: "Enter the desired minimum and maximum angular resolution. For a single angular resolution, please enter the same value twice." The input shows "0.60000" and "0.90000" in arcsec.
- Largest Angular Structure in source:** Input field with value "8.00000" in arcsec.
- Desired mosaic sensitivity:** Input field with value "0.00040" in Jy, equivalent to "15.55894" mK @ "0.900" and "35.00761" mK @ "0.600".
- Bandwidth used for Sensitivity:** A dropdown menu for "RepWindowEffectiveChannelWidth" and an input field for "Frequency Width" with value "0.1953125" in MHz.
- Override OT's sensitivity-based time estimate (must be justified):** Radio buttons for "Yes" and "No" (selected).
- Simultaneous 12-m and ACA observations:** Radio buttons for "Yes" and "No" (selected).
- Are the observations time-constrained?:** Radio buttons for "Yes" and "No" (selected).

Three black arrows point from the text above to the "Desired Angular Resolution" input, the "Frequency Width" input, and the "No" radio button for "Override OT's sensitivity-based time estimate".

Pay attention to the Bandwidth used for Sensitivity!

Largest angular structure



- interferometers filter out large scale emission (maximum recoverable scale is approximately $0.6\lambda/L_{\min}$, where L_{\min} is the shortest baseline)
- you need to enter the largest angular structure you would like to recover
- the OT will automatically add compact configurations if necessary
- see <https://www.youtube.com/watch?v=9iDNq82t7gs>

Simulated observations illustrating spatial filtering (Fig. 3.6 in Technical Handbook cycle 11)



Control and Performance - 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	4.000 mJy
Bandwidth used for sensitivity	0.195 MHz
Representative frequency (sky, first source)	196.996 GHz

Estimated Total time for Science Goal

5.26 h

Cluster 1

Sources

Source Name	RA	Dec	Velocity
fomalhaut c	22:47:54.5182	-24:22:18.881	6.646 km/s

Possible Configuration Combinations

12-m(1)	12-m(2)	7-m	TP
C-4	C-1	No	No

Input Parameters

Precipitable water vapour (all sources)	1.796mm (5th Octile)
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Time required for 12m (1) [C-4]

Time on source per pointing (first source)	14.51 min [14.35 min]
Total number of pointings (all sources)	10
Number of tunings	1
Total time on source	2.42 h [2.39 h]
Total calibration time	1.28 h
Other overheads	14.00 min
Total time for 1 SB execution	1.31 h
Number of SB executions	3
Total time to complete SB	3.93 h

Calibration Breakdown per SB execution

2 x Pointing	4.00 min
1 x Amplitude/bandpass	10.00 min
7 x Phase	3.50 min
6 x Atmospheric	4.00 min
Calibration overheads	4.00 min

Additional Arrays

Time required for additional 12-m	1.34 h
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Estimated total time for cluster 1

5.26 h



Control and Performance - Configuration Information

Desired Performance

Planning and Time Estimate

Configuration Information

Antenna Beamsize ($1.13 * \lambda/D$)

12m 29.55878 arcsec

7m 50.67219 arcsec

Number of Antennas

12m 43

7m 10

TP 3

	ACA 7m Configuration	Most compact 12m configuration	Most extended 12m configuration
Longest baseline	49 m	160.7 m	16196.6 m
Synthesized beamsize	6.35553 arcsec	1.68218 arcsec	0.02589 arcsec
Shortest baseline	9 m	15.1 m	256.1 m
Maximum recoverable scale	33.84756 arcsec	14.46626 arcsec	0.25178 arcsec

Technical Justification (TJ)



- **quantitatively** justify your technical setup (usually three text boxes):
 - Sensitivity
 - Imaging (angular resolution, largest angular scale)
 - Correlator Setup (=Spectral Setup)
- you need to convince the reviewers that your setup
 - can achieve your scientific goals
 - uses ALMA time efficiently
- the Technical Justification is important!
 - If you have a weak science case, a good TJ will not save you
 - ...but if you write a bad TJ, your proposal might be rejected even though you have a great science case (もったいない！)
- look at examples from your colleagues!

Technical Justification



Enter a technical justification for this science goal, paying special attention to the parameters reproduced below.

? Sensitivity

Requested RMS over 297.231 m/s is 4.00 mJy

For a peak flux density of 10.00 μ Jy , the S/N is 0.0

Achieved RMS over the total 4.219 GHz bandwidth is 27.06 μ Jy, 1.05 mK-2.37 mK

For a continuum flux density of 0.00 Jy, 0.00 mK-0.00 mK , the achieved S/N is 0.0

For a peak line flux of 10.00 μ Jy , the achieved S/N over 1/3 of the source line width (2.00 km/s / 3 = 666.67 m/s) is 0.0

Note that one or more of the S/N estimates are < 3. Please double-check the RMS and/or line fluxes entered and/or address the issue below.

Line width / bandwidth used for sensitivity (2.00 km/s / 297.23 m/s) = 6.73

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.

Technical Justification cannot be blank.

? Imaging

pay particular attention to any blue text and be sure to include the corresponding justification

Technical Justification: Sensitivity



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.

Technical Justification cannot be blank.

- What is the justification for the requested sensitivity?
 - What is the expected source brightness?
 - What S/N ratio do you need, and why?
 - Example: “To measure the disk size with an error of ~20%, our simulated observations indicate that we need a peak S/N of at least 10 in a single beam. Considering the total flux of the source measured by Camelot (1999), we expect a flux of 1 mJy/beam. Thus, we request a sensitivity of 0.1 mJy/beam...”
- For line observations, justify also the bandwidth used for the sensitivity calculation
 - Example: “As described in the Scientific Justification, to distinguish between our two hypotheses, we need to measure the CO 2-1 spectrum with a peak S/N of at least 5. Our models predict a CO 2-1 peak flux larger than 20 mJy. Thus, we request a sensitivity of 4 mJy over the bandwidth of a single channel.”
- If you do both line and continuum observations, be sure to discuss both

Technical Justification: Imaging



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

Technical Justification cannot be blank.

- Why do you need to achieve the requested angular resolution for your science?
 - What do you want to resolve?
 - Example: "To accurately characterise the ring morphology, we need to resolve it with at least 5 beams. Given the ring width of 0.5" measured by Lancelot (1988), we thus request an angular resolution of 0.1"..."
- What is the maximum angular scale you need to recover for your science, and why?
 - Example: "For our science, we need to recover the large scale emission of our source. Therefore, we set the largest angular scale equal to the galaxy diameter..."

Technical Justification: Correlator configuration



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

Technical Justification cannot be blank.





- What is the idea behind your spectral setup?
 - Example: “We place one spectral window onto the CO 2-1 line, while the remaining three spectral windows will observe the continuum to aid calibration. The continuum spectral windows will observe in FDM mode to allow serendipitous line detection...”
- What spectral resolution do you need, and why?
 - Example: “We want to resolve the line shape with at least 10 resolution elements to characterise the kinematics of the source in detail. Given the known line width of 10 km/s (Robin et al. 2000), we thus need a spectral resolution of 1 km/s.”
- Why did you choose Band X?
 - Example: “Observations in Band X give best tradeoff between the achieved S/N and the required observing time...”

Validation



- Your proposal needs to validate without errors to be submitted
- It is recommended to validate your proposal often!

Click here to be taken
directly to the error
location

Type	Actions	Message	Suggestion
Error		No Project Name specified	Select the Proposal tab and fill in the Project Name field
Error		Abstract appears to be empty	Select the Proposal tab and edit your abstract
Error		No scientific category defined	Select the Proposal tab and set a scientific category
Error		No document found - you must add a Science Case to your proposal	Select the Proposal tab and add your document

Project Overview / Time Summary / Data Volumes & Data Rates



Click on Science Plan



Proposal **Science Plan**

Science Goals (1) + Project Overview Time Summary Data Volumes & Data Rates

Science Goal Name	No. Sources	Band	Spec. Type	No. Spec. Wind.	Pol.	Calibration Setup	Rep. Freq.	Ang. Res.	Largest Scale	Sens.
Science Goal	1	3	Single Continuum	4	Dual	System	104.50000 GHz	1.00000 arcsec	50.00000 arcsec	0.00100 Jy

Science Goals (1) + Project Overview **Time Summary** Data Volumes & Data Rates

Expand all science goals Collapse all science goals

Science Goal Name	12-m(1)		12-m(2)		12-m(1+2)		ACA 7-m		ACA TP		Overall	
	Tot.	Cal.	Tot.	Cal.	Tot.	Cal.	Tot.	Cal.	Tot.	Cal.	Tot.	Cal.
Science Goal	20.37 min	13.17 min	-	-	20.37 min	13.17 min	35.78 min	19.83 min	-	-	56.15 min	33.00 min
Cluster 1	20.37 min	13.17 min	-	-	20.37 min	13.17 min	35.78 min	19.83 min	-	-	56.15 min	33.00 min
Overall	20.37 min	13.17 min	-	-	20.37 min	13.17 min	35.78 min	19.83 min	-	-	56.15 min	33.00 min

Proposal **Science Plan**

Science Goals (1) + Project Overview Time Summary **Data Volumes & Data Rates**

Expand all science goals Collapse all science goals

Science Goal Name	Data Volume			Avg. Data Rate		
	12-m (1+2)	ACA 7-m	ACA TP	12-m (1+2)	ACA 7-m	ACA TP
Science Goal	1.88 GB	393.61 MB	-	-	-	-
Cluster 1	1.88 GB	393.61 MB	-	1.93 MB	0.21 MB	-
Overall	1.88 GB	393.61 MB	-			

Known issues

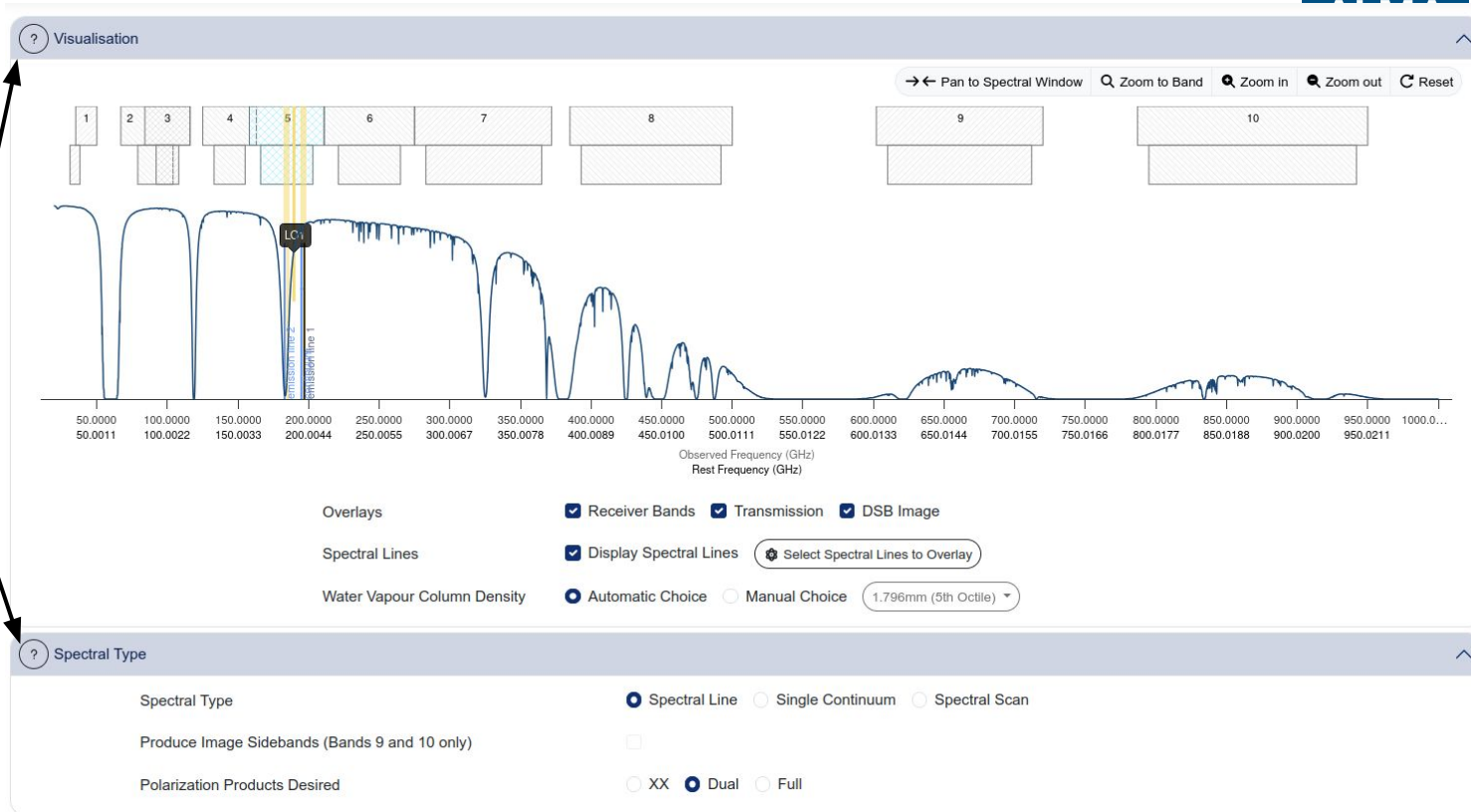


- For the full list of known issues, please check <https://almascience.nao.ac.jp/proposing/observing-tool/faq-and-known-issues>
- Enter button does not work in all fields. It is recommended to use the tab button to move away from a field.
- Spectral Line Picker: Click away from transition filter field to start the search

help function



Use the help function by clicking on the question mark!



Final tips

- log out after your work is done
- delete drafts from time to time to keep staging area clean
- write your proposals early, submit early!



Good Luck!