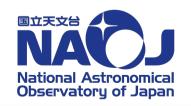
# Proposing your observations for ALMA Cycle 12

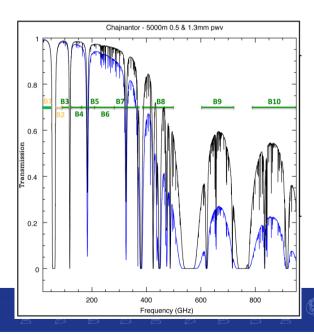
Akiko Kawamura East Asia ALMA Regional Center

21st March 2025





- Interferometer consisting of 66 antennas in total
- Fifty 12-m antennas → 12-m Array
- Atacama Compact Array (ACA; Morita Array)
  - Twelve 7-m (7-m Array), Four 12-m (Total Power, TP)
- From 315µm to 8.5 mm (Band 1 to 10, except for Band 2) for Cycle 12





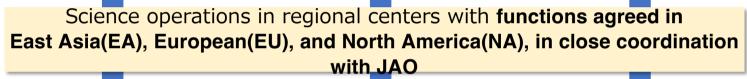




## ALMA Regional Center (ARC): Interface for users

### Joint ALMA Observatory (JAO)

**Effective array operations**: Execution of programs under suitable conditions **High availability of the array for science**: Repairs, Preventive maintenance





**EU ARC** 

EU ALMA users







- ARC provides support for users in the respective regions so that users can concentrate on proposing observations, data analysis, and science discussion.
- Support can be optimized to the regional situation (e.g., native language, specific demands from users).



### What should proposers know? What's new?

Observing capabilities

Taniguchi-san's talk

**Observing Tool** 

Gianni-san's talk

Scheduling and Phase 2 generation viewpoints

Yu-Ting-san's talk

Tips for writing proposals

Zhengyi -san's talk





### Proposing observations in ALMA

- "Cycle" in ALMA: One year period, starting from October every year
  - Cycle 12: From October 2025 to September 2026
- Calls every year
  - Main Call
    - 12-m Array, 7-m Array, TP
    - Call for Proposals in March
    - Observations from October to next September
    - In Cycle 12, 4300 hours for each of the 12-m, 7-m, and TP Arrays same as for Cycle 11
- Director's Discretionary Time proposals (DDT)
  - Users can propose anytime in the on-going cycle
  - DDT projects will stay in the queue for 12 months







### Proposing observations for Main call

- Science observations will be scheduled and executed by taking into account multiple factors including, for example, weather, proposal grade, and executive balance
- Priorities
  - Grade A
    - Highest grade, carried over to the next Cycle (Long baseline SBs are not carried over to the next Cycle without LB)
  - Grade B
    - No carry over
  - Grade C
    - Filler
- After observations
  - Quality assurance (checking if meeting the PI's request) per MOUS → if fine, deliver to the PI
  - Data become public after 12 months for main call proposals

"Users Policies" https://almascience.nao .ac.ip/documents-andtools/cycle12/almauser-policies









### Proposal types

- Regular, Large Program, Target of Opportunity, VLBI and phased-array, Joint proposal, (and DDT)
- Regular program
  - Execution time does not exceed 50 hours on the 12-m Array or 150 hours on the 7-m Array in stand-alone mode.
  - Incl. time-critical, multi-epoch observations, and monitoring for a fixed time-interval.
- Large Program
  - Estimated execution time >50 hours on the 12-m Array (with or without accompanying ACA time) or 150 hours on the 7-m Array in stand-alone mode.
  - Large Programs should not involve time-critical or ToO observations, full polarization measurements, solar observations, VLBI, Phased Array mode, Astrometric observations.
  - Large Programs may fill up to 50% of the Cycle 12 configurations.





- Joint Proposals will be multi-wavelength and/or multi-observatory in nature. Synergies between ALMA and major facilities are expected.
- JWST, VLA, and VLT are the "partner observatories". You can request time for any or all of these facilities.
- By agreement, each partner facility will allow ALMA to allocate time as follows. You will submit the proposal to the "Main observatory" that takes the longest observing time.
- If ALMA is the Main observatory, there are no restrictions for the ALMA's observing modes. But there are some restrictions in the other observatories (especially for ToO). Please check the Proposer's Guide carefully.

Partner	Maximum time ALMA can allocate on partner observatory	Maximum time partner observatory can allocate on each ALMA array
JWST	115 hours	115 hours
VLA	5% of available time	50 hours
VLT	50 hours	50 hours



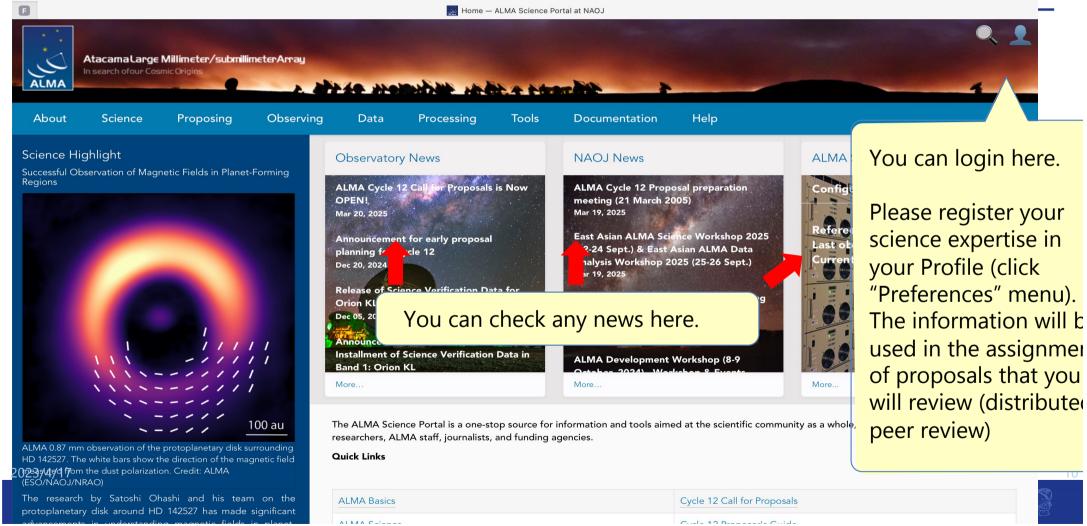
## Schedule

Date	Milestone
20 March 2025 (15:00 UTC)	Release of Cycle 12 CfP, Observing Tool, and supporting documents, and opening of the Archive for proposal submission
24 April 2025 (15:00 UTC)	Proposal submission deadline for Cycle 12 proposals
4 June 2025 (15:00 UT)	Deadline to submit reviews for the distributed peer review system
August 2025	Announcement of the outcome of the proposal review process
October 2025	Start of ALMA Cycle 12 science observations
September 2026	End of ALMA Cycle 12



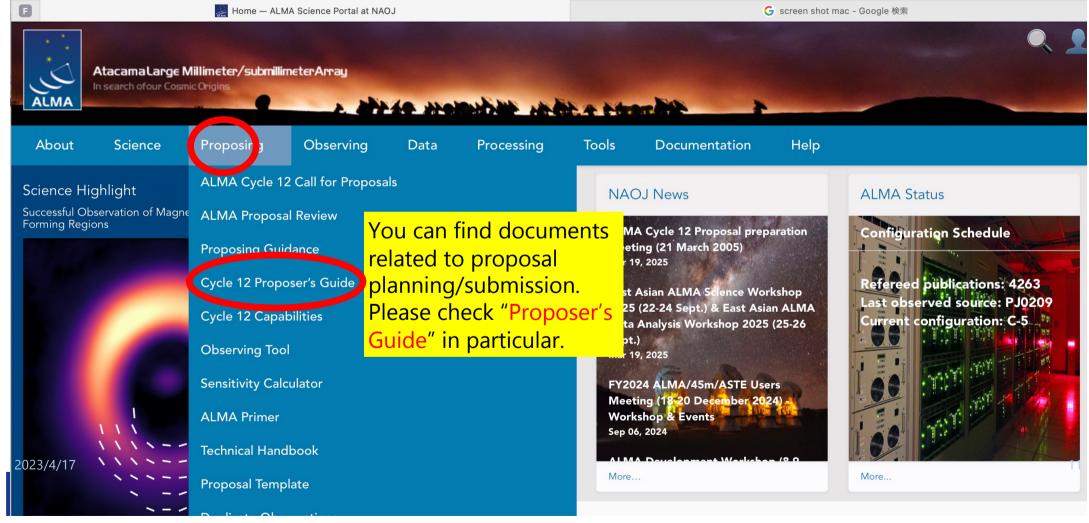


## Information is in the Science Portal https://almascience.nao.ac.jp/





## Information is in the Science Portal https://almascience.nao.ac.jp/





## Information is in the Science Portal https://almascience.nao.ac.jp/



### Cycle 12 Proposer's Guide

### Download PDF version

### Cycle 12 Call for Proposals

The Atacama Large Millimeter/submillimeter Array (ALMA) Director, on behalf of the Joint ALMA Observatory (JAO) and the partner organizations in East Asia, Europe, and North America, is pleased to announce the ALMA Cycle 12 Call for Proposals (CfP) for scientific observations to be scheduled from October 2025 to September 2026. We encourage interested parties to follow the ALMA Science Portal (<a href="https://www.almascience.org">www.almascience.org</a>) for the latest information.

The JAO anticipates allocating 4300 hours on the 12-m Array and 4300 hours on the ALMA Compact Array (ACA), also known as the Morita Array, for successful proposals in Cycle 12. The ACA allocation includes 4300 hours each on the 7-m Array and the Total Power (TP) Array. Proposals must be prepared and submitted using the ALMA Observing Tool (OT), which is available for download from the Science Portal.

Proposal reviews will be conducted via a dual-anonymous process. While proposers will still enter their names and affiliations in the ALMA OT, their identities will be concealed from the science reviewers. It will be the responsibility of the investigators to write their proposals such that anonymity is preserved. In addition, ALMA is using distributed peer review for proposals requesting less than 50 hours on the 12-m Array and for ACA stand-alone proposals requesting less than 150 hours on the 7-m Array. The Principal Investigator (PI) for such proposals, or a designee from the list of investigators, will review and rank 10 submitted proposals from this Call, for each proposal submitted.

ALMA Cycle 12 proposal submission will open at 15:00 Universal Coordinated Time (UTC) on Thursday, 20 March 2025. The Cycle 12 proposal submission deadline is 15:00 UTC on Thursday, 24 April 2025. These and other important milestones for Cycle 12 are summarized in Table 1. Pls are responsible for submitting their proposals successfully by the deadline and are strongly advised to submit proposals early.

### Cycle 12 Call for Proposals

- 1. What's new in Cycle 12
  - 1.1 Technical and observing capabilities
  - 1.2 Proposal Preparation and Review
  - 1.2.1 Proposal Preparation
  - 1.2.2 Large Program Scheduling feasibility
  - 1.2.3 Distributed peer review
- 2. ALMA overview
- 2.1 The ALMA partnership
- 2.2 The ALMA telescope
- 2.3 The Joint ALMA Observatory and the ALMA Regional Centers
- 2.4 The ALMA Science Portal
- 2.5 ALMA proposal eligibility
- 3. Proposal types
- 3.1 Regular proposals
- 3.2 Target of Opportunity proposals
- 3.3 Large Programs
- 3.4 mm-VLBI and Phased Array proposals

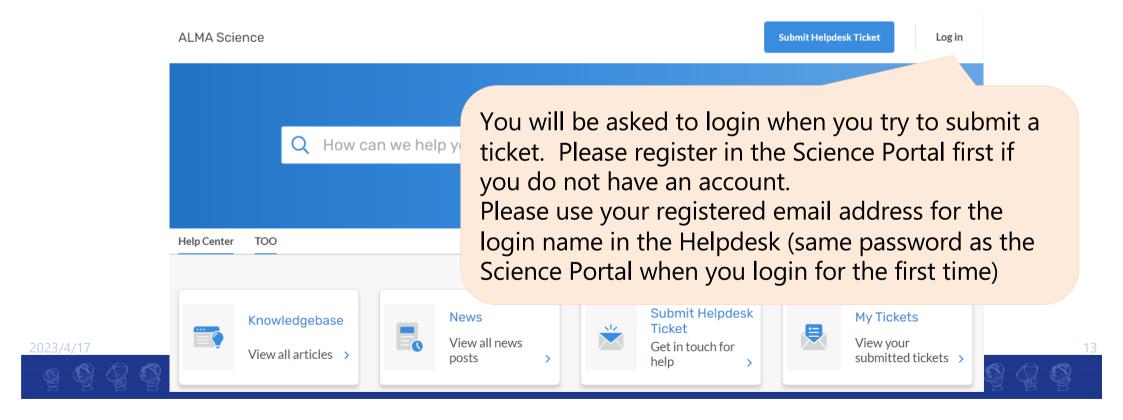






## ... and ask us via Helpdesk https://help.almascience.org

• We can also accept Japanese questions although you may need to wait until the Japanese staff are available (be careful, in particular just before the deadline)

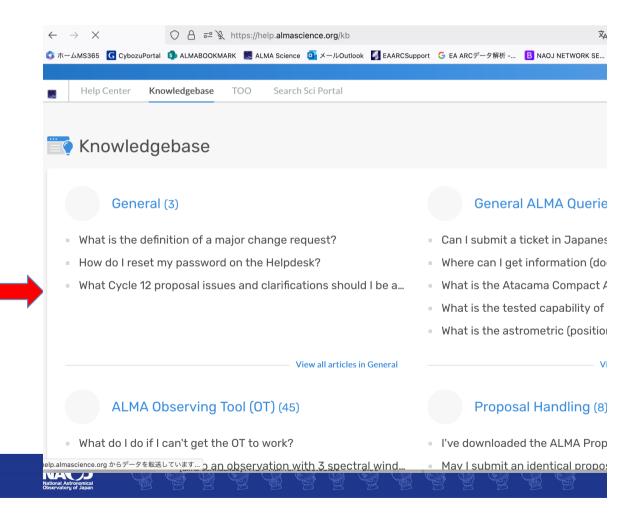




## ... and ask us via the Helpdesk https://help.almascience.org

- Any changes, clarifications, or bugs that are discovered after the publication of the Proposer's Guide will be documented in the Knowledgebase article.
- Helpdesk → Knowledgebase
- Recommend to monitor this page regularly

https://help.almascience.org/kb/articles/what-cycle-12-proposal-issues-and-clarifications-should-i-be-aware-of-before-submitting-my-pro





## Emergency department @Helpdesk

Date	Milestone
20 March 2025 (15:00 UTC)	Release of Cycle 12 CfP, Observing Tool, and supporting documents, and opening of the Archive for proposal submission
45 April 2025 (15:00 UTC)	Proposal submission deadline for Cycle 12 proposals
4 June 2025 (15:00 UT)	Deadline to submit reviews for the distributed peer review system
August 2025	Announcement of the outcome of the proposal review process
October 2025	Start of ALMA Cycle 12 science observations
September 2026	End of ALMA Cycle 12

Emergency Department in the Helpdesk: will start 72 hours before the deadline. → Only to be used to address problems that "block" your proposal. Need to be written in English.

You can submit tickets to the usual department if the topic is not related to the proposal submission. Those will be handled as usual.





## Register/update at ALMA Science Portal & "Expertise" in your profile

- Please register/update at Science Portal for your ALMA ID and profile. This is necessary to submit your proposal and/or your collaborators to include you as a Co-I.
- Please register/update your "Expertise" in your user profile. This is extremely important for the proposal assignments in the <u>distributed peer review system</u>.









## Proposal format -> please see Zhengyi's talk

- Page limits
  - Total length: 4 pages for Regular, ToO, mm-VLBI, Joint, and DDT proposals, 7 pages for Large Programs (A4 or US Letter)
- Font size: no smaller than 12 points including figure captions, tables and references
  - FAQ: <a href="https://help.almascience.org/kb/articles/why-is-the-ot-is-complaining-that-the-text-in-my-pdf-is-too-small">https://help.almascience.org/kb/articles/why-is-the-ot-is-complaining-that-the-text-in-my-pdf-is-too-small</a>
- Latex template is in the Science Portal and users are recommended to use it.
- Keep the anonymity in your proposal writing





### Other notes

- Observations that are strongly encouraged include:
  - ACA, especially in the LST range of 20h to 1h (note that ACA stand-alone proposals had, on average, a very high acceptance rate of 82% in Cycle 11)
  - High frequency (Bands 8, 9, and 10) in any configuration
  - Low frequency (Bands 1, 3, and 4) at long baselines (C-7 and C-8)
- Please carefully check that your observing setting at Phase 1 (proposal submission) is correct. Major changes can't be done so easily (Yu-Ting's talk)
- Source coordinates (see Users Policies):
  - Please do not intentionally hide the true coordinates.
- Proprietary periods (see User Policies):
  - PIs can't voluntarily waive the proprietary period in their proposal.
- ALMA-J User support (ALMA-J Users Email List)

https://www2.nao.ac.jp/~eaarc/DATARED/alma\_users\_email\_list.html





## - Thank you -

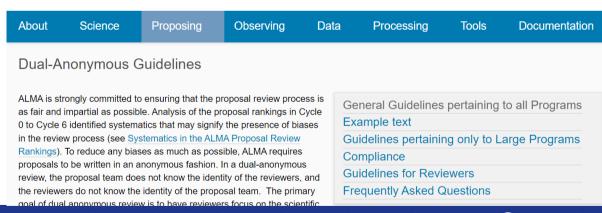






## Heaping the anonymity in your proposal writing proposal writing please refer to Andrea and Zhengni's talk

- Goal: To have reviewers focus on the scientific merit of the proposal rather than the proposal team
- It is the responsibility of the proposers to ensure anonymity is preserved in the information provided in the <u>cover sheet</u>, and when preparing the <u>Scientific Justification</u> and <u>Technical</u> Justification.
- You do not have to be too worried about possible rejections as long as you are trying to follow the guideline. But, please do not ignore the guideline, and please do not clearly specify who is the PI in the proposal text, e.g., please do not say "We showed in Smith et al. (2019) that ...".



FAQ in EA: Resubmission, Project code/ID of previous/ongoing observations

→ Examples in the Science Portal

https://almascience.nao.ac.jp/proposing/a lma-proposal-review/dual-anonymous





## Review process →

- Panel review for Large programs, distributed peer review for the others
- Distributed Peer Review: For each proposal submitted, the PI or a designee from the list of investigators will review and rank 10 submitted proposals.
- DPR: reviewers can be assigned a maximum of <u>five proposal sets</u> (i.e., 50 proposals) → Thus PIs
  who are planning to submit more proposals are encouraged to designate one of their co-Is as
  reviewer.
- All proposals will be reviewed in dual-anonymous
  - Exception: one-page management plan for Large Programs
- Joint Proposals will also be reviewed with the DPR system. Joint Proposals should follow the users' policies and call for proposal guidelines of each of the requested partner observatories, as well as extra limitations and rules imposed on Joint Proposals.
- All Joint Proposals will be technically assessed by each of the requested observatories. Each observatory will follow their technical criteria. If any of the involved observatories declares the proposal infeasible, ALMA will reject the entirety of this proposal.



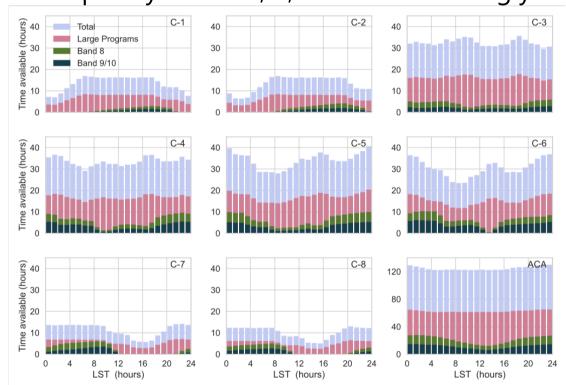
### High frequency observations

• Projects with observations in the highest frequency Bands 8, 9, and 10 are strongly

encouraged.

 Prioritized to execute if the weather condition is good.

- But please check carefully the availability of "high frequency time" for a given configuration and Band (shown in PG).
- B2B transfer to obtain a good and bright phase calibrator
  - → Gianni's talk(OT)



"I hesitated to propose when I saw how little time ALMA has spent for HF bands." ...but this also comes from few proposals.



## Dual-anonymous

### FAQ: Resubmission

While proposers may note if they are resubmitting an ongoing proposal, they cannot indicate the proposal code, investigator's name, priority grade, and/or ranking of the previous proposal.

For example, instead of

"This is a resubmission of our ongoing program 2021.1.02045.S (PI: Smith). Half of our targets have been observed and we are resubmitting the proposal to obtain the remaining half."

proposers can write

"This is a resubmission of our ongoing program. Half of the targets have been observed and we are resubmitting the proposal to observe the remaining half."

Such text is normally included in the "duplication justification" on the proposal cover sheet or the first lines of the Scientific Justification. If data are shown from the ongoing program, it must be presented in a dual-anonymous fashion following the guidelines.



## Dual-anonymous

FAQ: Project code/ID of previous/ongoing observations

- Example 1,
  - Instead of:

```
"Figure 1 shows the image from our Cycle 7 ALMA program (2019.1.02045.S, PI Smith)." proposers can write
```

"Figure 1 shows the image from the Cycle 7 ALMA program 2019.1.02045.S."

"Figure 1 shows the data from an ALMA Cycle 7 program (private communication)."

Example 2, instead of:

```
"We will combine these ALMA observations with the HST program led by Chang et al."
```

or

"The proposed ALMA observations will be combined with our HST data..." proposers can write

"We will combine these ALMA observations with the HST observations (HST code XXX)."

"The proposed ALMA observations will be combined with available HST data (private communication)..."

• Example 3, instead of:

"We use our group's line identification package STAR..." or "We use the line identification package STAR by co-I Sandra Smith..."

proposers can write

"We use the line identification package STAR (obtained via private communication)..."

