ALMA

Atacama Large Millimeter/submillimeter Array

Cycle 13

Distributed Peer Review

Review Plenary Session • 2026

Proposal Handling Team

SESSION OVERVIEW

Agenda

01 Review Process Basics
How distributed peer review works — roles, structure, two stages

02 Key Policies
Dual-anonymous review, AI use, code of conduct, conflicts of interest

03 Cycle 13 Timeline
Key deadlines and what happens when

04 Reviewer Workflow
Step-by-step: conflicts → read → rank → write → Stage 2

05 Review Quality
The central focus of this session

06 The Reviewer Tool
How to access and use the web-based review interface

Your reviews shape ALMA science.

Your rankings and feedback directly determine which proposals receive telescope time — and which science gets done.

Thank you for contributing!

PROCESS OVERVIEW

How the Review Process Works

1

reviewer per proposal team

10

proposals per reviewer set

2

review stages

1 Before proposals are assigned

- Designate a reviewer for your team
- Submit your scientific expertise
- Provide your conflict-of-interest list

2 Stage 1 — Review*

- 10 proposals to evaluate
- Identify additional conflicts of interest
- Write comments for each proposal
- Rank 1 (strongest) to 10 (weakest)

3 Stage 2 — Reassess

- Read anonymized reviews from peers
- Update ranks and comments

** Stage 1 is mandatory — non-submission results in disqualification of your own proposal.*

TIMELINE

Cycle 13 schedule

28 Apr — Expertise & conflicts due
Submit scientific expertise and conflict of interest list

6 May — **Stage 1 begins** ← You are here
Proposals released to reviewers

13 May — Declare assigned conflicts
Flag conflicts in your assigned proposal set

3 Jun — **Stage 1 deadline**
Mandatory — no extensions · 15:00 UT

4 Jun — Stage 2 begins
Access peer reviews; revise ranks & comments

18 Jun — Stage 2 deadline
Final submissions due

POLICIES

Key policies for reviewers

Dual-Anonymous Review

- Evaluate science, not identities
- Do not seek to identify proposal authors
- If anonymity is significantly broken, notify the PHT — but continue reviewing on merit

Responsible AI Use

- Minor grammar edits are permitted
- Do not upload proposals to AI tools — confidentiality breach
- Do not use AI to evaluate, rank, or generate review content

Code of Conduct

- Declare all conflicts of interest
- Judge on scientific merit only
- Maintain strict confidentiality
- Write constructive, professional feedback

All of these policies are mandatory — non-compliance can result in disqualification of your proposal.

Full policies at almascience.org/proposing/alma-proposal-review/guidelines-for-reviewers

STAGE 1

Conflicts of interest

A conflict of interest exists when your personal or professional interests could benefit from the acceptance or rejection of a proposal

Auto-flagged by JAO

- You are PI or co-I on the proposal
- A PI or co-I on the proposal appears on your pre-submitted conflict list

You must declare

- You are pursuing similar science on the same target
- You gave significant input to the proposal team during its preparation
- Any other strong personal or professional conflict

Not a conflict: suspecting the identity of the proposal team | Lack of expertise in a proposal topic

STAGE 1

Stage 1: What you need to do

6 May – 3 June 2026 · Deadline: 3 June @ 15:00 UT · NO EXTENSIONS

1

Declare conflicts

By 13 May — flag any proposal where you have a professional or personal conflict. Conflicted proposals are reassigned.

2

Read all three sections

Abstract · Scientific Justification · Technical Justification

3

Write comments

Your comments go verbatim to the PI. Be specific, constructive, and professional.

4

Rank 1 – 10

Strongest (1) to weakest (10), based solely on scientific merit.

STAGE 2

Stage 2: Reassess your evaluation

4 June – 18 June 2026

Review peer comments

Read anonymized reviews for the same proposals
Identify strengths or weaknesses you may have missed

Reconsider your evaluation

Reassess your rankings in light of this information
Update your ranking if your assessment has changed

Revise your comments

Revise your comments to reflect your final judgement and clearly support your ranking

Stage 2 improves your reviews.

See how others assessed the same proposals and calibrate your own judgement.

REVIEW CRITERIA

Review criteria

In short: is this important science, and will these observations actually deliver it?

1 Scientific merit

- Does the proposal identify an important, outstanding scientific question?
- Will the observations have high scientific impact on this field?
- Is there a clear plan for how the data will be analyzed?

2 Suitability of observations

- Is the choice of target(s) well justified?
- Are sensitivity, angular resolution, Largest Angular Scale (LAS), and spectral setup sufficient?
- Is the need for new observations clearly justified?
- For Joint Proposals: is it clear why multiple observatories are required?

BIAS

We all have biases. Recognize and mitigate them.

Language bias

- ALMA is a global community — many PIs are not native English speakers
- Strong writing ≠ strong science
- Focus on the scientific idea, not the wording

Clarity vs. familiarity

- Not being familiar with a topic is not, by itself, a weakness
- If the science case is clearly explained, evaluate it on its merits
- If it is unclear, explain what is missing and why it matters

Anchor bias

- First impressions can dominate your judgement
- Revisit your ranking after reading the full proposal

Stay grounded in the criteria: Scientific merit · Suitability of observations

REVIEW QUALITY

Why written reviews matter

Primary feedback to PIs

- Explains the reasoning behind the rank, giving PIs direct insight into how their proposal was assessed
- The primary feedback to help PIs strengthen future proposals

Shared expertise in Stage 2

- Other reviewers read your written assessment in Stage 2 to inform and calibrate their own rankings
- Your domain knowledge strengthens the quality of the community’s collective judgement

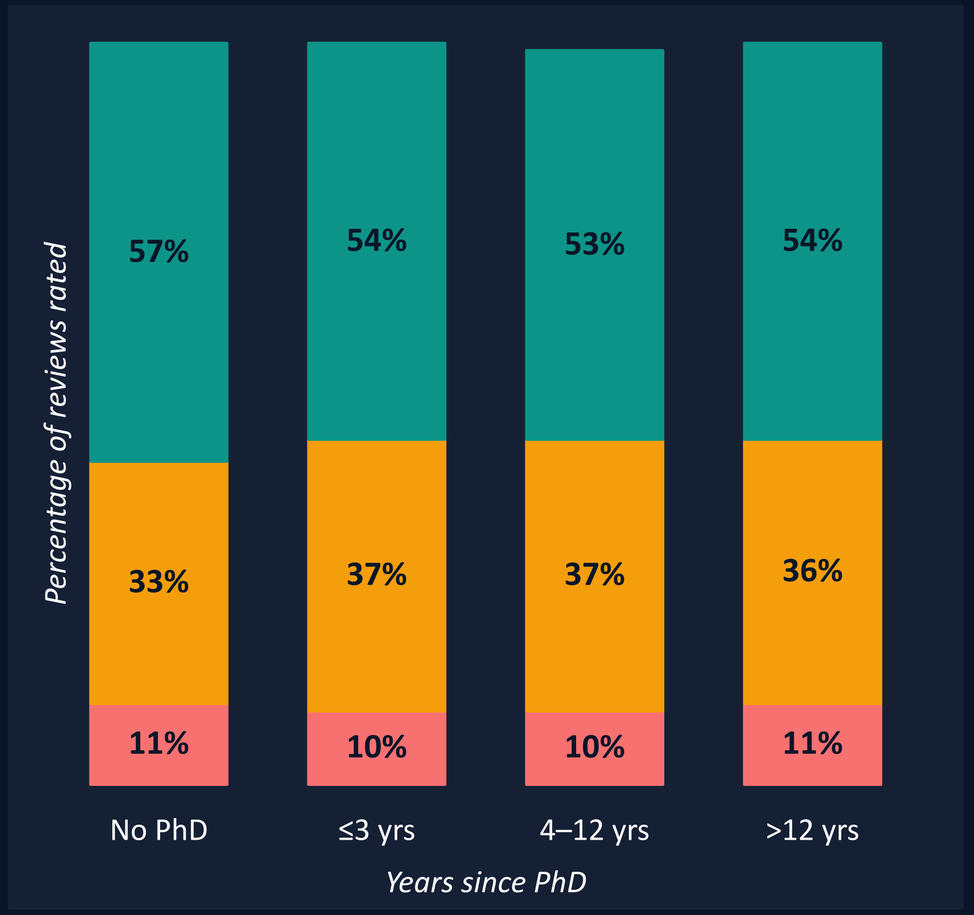
Accountability and trust

- Written justification grounds a rank in the evaluation criteria, making the process transparent and defensible
- This builds trust in the process across the global ALMA community

Every reviewer can write a great review.

Review quality is consistent across all career stages.

Peer-rated review quality by career stage



Source: Cycle 12 reviewer survey

REVIEW QUALITY

What makes a quality review?

High Quality

- Specific
- Actionable
- Proposal-specific feedback
- Clearly identifies strengths and weaknesses.

EXAMPLE

The target is well motivated — it is the closest protostar of its kind, offering excellent spatial resolution for studying the outflow.

Identifies a strength, explains why, and uses specific details from the proposal.

Adequate

- Some useful insights
- Lacks the detail, clarity, or specificity needed to be fully effective.

EXAMPLE

The target is interesting given its proximity.

Identifies a strength but does not explain why proximity matters scientifically or for this specific proposal.

Low Quality

- Vague or generic comments
- Focuses on minor issues
- Adopts an unprofessional tone.

EXAMPLES

- *The target seems interesting.*
- *The science goals are unclear.*
- *Well-written, low-risk proposal. No major weaknesses identified.*

Vague, generic, with no proposal-specific detail. Does not help the PI understand the ranking.

REVIEW QUALITY

Common features of high-quality reviews

Identify both strengths AND weaknesses

Every review should identify both. Even a strong proposal benefits from knowing what to improve.

Are specific and proposal-focused

Refer to targets, methods, or analysis — not generic statements that would apply to any proposal.

Align comments with the ranking

If a proposal is ranked 8th but list no weaknesses, the PI cannot understand the reasoning behind that ranking.

Are concise, direct and professional

Typically 6–8 focused sentences (but more is fine if needed). Be direct about weaknesses. Critique the proposal, not the team.

REVIEW QUALITY

What a high-quality review looks like

Jets and outflows are a common phenomenon during the protostellar phase, but the exact launching mechanism in this type of source is not fully understood.

Strengths

The target is exceptionally well-justified: its proximity provides excellent spatial resolution, and its young age, high mass-loss rate, and clear outflow structure make it an ideal candidate for probing jet physics. The proposed observations and analysis will directly test the jet launching mechanism by mapping the velocity structure and molecular composition of the outflow at high resolution — measurements that are only possible with ALMA.

Weaknesses

The proposal does not adequately explain how the proposed observations will distinguish between different outflow launching mechanisms — for example, by describing the expected observational signatures for each scenario. Additionally, the need for the requested number of molecular transitions is not well justified; the proposal should explain why these specific lines are optimal for the excitation analysis compared to fewer or alternative transitions.

Brief context — sets the scene without summarizing the proposal

Specific strength — explains WHY the target is well-chosen with proposal-specific detail

Specific weakness — identifies the gap and tells the PI exactly what to improve

*A strong review explains **why** something is a strength or weakness.*

REVIEW QUALITY

Common features of low-quality reviews

- Summarizes the proposal without evaluating its strengths and weaknesses
- Contains generic or vague feedback not specific to the proposal
- Shows a misalignment between written comments and the assigned ranking
- Reuses identical review text across multiple proposals with only minor changes

Reviews that do not meet minimum quality standards will be returned for revision with guidance on how to improve it.

REVIEW QUALITY

Vague reviews fail proposers and the process.

✗ Low quality	✓ High quality
The science goals are unclear.	The proposal should discuss the probability that the candidate high-redshift galaxy is an interloper at lower redshift, which is critical for interpreting the results.
It is not clear that a signal-to-noise of 5 is good enough.	The proposal could better demonstrate that a signal-to-noise ratio of 5 can reliably measure the spectral index and distinguish between the two models.
Well-written, low-risk, high-reward proposal. Addresses a long-standing open question. No major weaknesses identified.	The target is well motivated — it is the closest protostar of its kind, offering excellent spatial resolution. The proposal should better justify why the molecular transitions selected are optimal for the proposed excitation analysis.

REVIEWER TOOL

Using the Reviewer Tool

Access via ALMA Science Portal → almascience.org/proposing/alma-proposal-review/how-to-use-the-reviewer-tool

1

Declare conflicts of interest

Browse abstracts and flag conflicts before PDFs are released

2

Download your Proposal Set

Download full PDF packages for your 10 assigned proposals

3

Write and submit your reviews

Draft comments (sent verbatim to PI), rank 1–10, submit by 3 June

4

Use “Comment to JAO” for concerns

Flag anonymity violations or other issues privately — does NOT go to the PI

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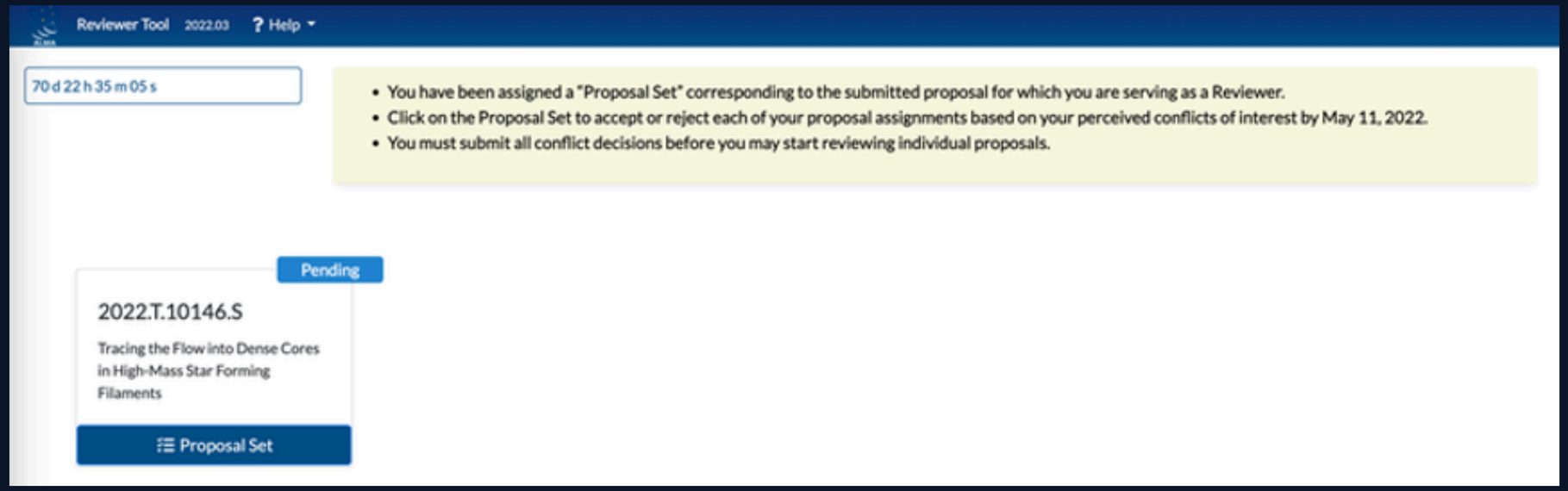

SUMMARY

Your review checklist

1. Prepare	• Allocate 2–3 days for your proposal set • Review ALMA's review criteria • Mitigate unconscious bias
2. Read	• Abstract • Scientific Justification • Technical Justification
3. Write	• Write specific, proposal-specific comments • Ensure strengths and weaknesses are clearly identified
4. Rank & Submit	• Rank 1–10 on scientific merit • Ensure comments align with ranking • Submit by 3 June @ 15:00 UT
5. Stage 2 — Reassess	• Read peer reviews (4–18 June) • Update ranks and comments

SUPPORT

We are here to help.

ALMA Helpdesk

help.almascience.org

- Questions about a proposal
- Conflict of interest concerns
- Problems with the Reviewer Tool
- Raise concerns early — timely resolution matters

Comment to JAO field

In the Reviewer Tool

- Potential dual-anonymous violations
- PDF format issues
- Other proposal-specific notes not requiring immediate action

Guidelines for Reviewers

almascience.org/proposing/alma-proposal-review

- Review criteria in detail
- Conflicts of interest policy
- AI use policy
- How to write a useful review

Thank you.

Your contribution makes ALMA's time allocation fair, transparent, and community-driven.

Questions? · https://help.almascience.org