

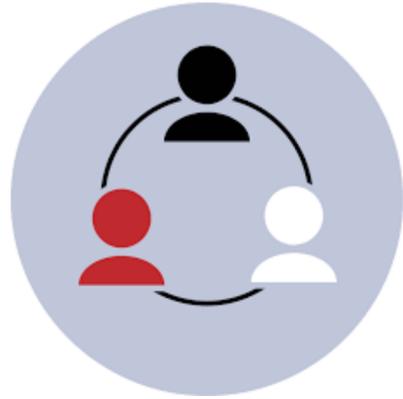


# ALMA Cycle 9

# Distributed Peer Review

Proposal Handling Team  
May 2022

# Goal of presentation



Logistics of distributed peer review



Guidelines to reviewing proposals



## Logistics of distributed peer review

- ◆ Code of conduct
- ◆ Timeline of the process
- ◆ The Reviewer Tool
- ◆ Where do I find relevant information?

# Code of conduct



Reviewers and mentors are expected to behave in an ethical manner

- Will judge the proposals solely on their scientific merit
- Will be mindful of bias in all contexts
- Will declare major conflicts of interest
- The proposal reviews will be constructive and avoid any inappropriate language



All proposal materials related to the review process are strictly confidential

- The assigned proposals may not be distributed or used in any manner not directly related to the review process
- Any data, intellectual property, and non-public information shown in the proposals may be used only for the purpose of carrying out the requested proposal review
- The assigned proposals and the reviews may not be discussed with anyone other than the Proposal Handling Team, or the assigned mentor when applicable
- All electronic and paper copies of the proposal materials must be destroyed as soon as a reviewer completes the proposal review process

# Basics of distributed peer review



Every\* proposal team nominates one person to be a reviewer



Proposal Handling Team (PHT) assigns 10 proposals to the reviewer



Reviewer ranks and write comments for each proposal

\* Excluding Large Programs

# Reviewer timeline for Cycle 9



**April 21**

Proposal deadline

- 1) Proposal PI designates the reviewer in the Observing Tool (OT)

**April 26**

Expertise & conflicts

- 1) Reviewer specifies scientific expertise in User Profile
- 2) Reviewer provides list of conflicts of interest in User Profile

**May 4 - June 1**

Stage 1

- 1) Declare any conflicts of interest in assigned proposals by May 11
- 2) Complete reviews by June 1 @ 15 UT **(MANDATORY!)**

**June 2 - 16**

Stage 2

- 1) Read reviews from other reviewers (optional)
- 2) Modify your ranks and comments as needed (optional)

# Stage 1: Review assigned proposals



May 4 - June 1  
Stage 1

- 1) Declare any conflicts of interest in assigned proposals by May 11
- 2) Complete reviews by June 1 @ 15 UT **(MANDATORY!)**



## Proposal set

- Group of 10 proposals to review
- Assigned to the reviewer based on the reviewer selected expertise or the keywords of the reviewer's submitted proposal
- One Proposal Set is assigned for each submitted proposal on which someone was selected as the reviewer
- When the Proposal Sets are available to start the review process, all reviewers will be informed by email.

# Stage 1: Review assigned proposals



**May 4 - June 1**  
Stage 1

- 1) Declare any conflicts of interest in assigned proposals by May 11
- 2) Complete reviews by June 1 @ 15 UT **(MANDATORY!)**



Declare any additional conflicts in your assigned proposals

- for example: observing the same object(s) with the same goals

# What is considered a conflict of interest?



- In general, a reviewer has a major conflict of interest when their personal or work interests would benefit if the proposal under review is accepted or rejected.



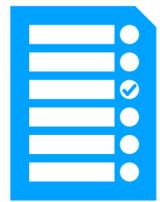
Before assigning the proposals, the PHT will identify major conflicts of interest based on:

- The PI, reviewer, or mentor of the submitted proposal is a PI or co-I of the proposal to be reviewed
- The PI, one of the co-PIs, or one of the co-Is of the proposal to be reviewed is in the conflicts-of-interest list provided by the reviewer or mentor of the submitted proposal
- If the list is not provided by the reviewer, or mentor, then the assignment algorithm constructs a list of conflicts based on the submission history of the reviewer, or the mentor.

# What is considered a conflict of interest?



- In general, a reviewer has a major conflict of interest when their personal or work interests would benefit if the proposal under review is accepted or rejected.



Potential conflicts that are not identified automatically by the PHT:

- The reviewer is proposing to observe the same object with similar science objective.
- The reviewer had provided significant advice to the proposal team on the proposal even through they are not listed as and investigator
- Other reasons the reviewer believes there is a strong conflict of interest



Lack of expertise is not a reason to declare a conflict of interest.

# Stage 1: Review assigned proposals



**May 4 - June 1**  
Stage 1

- 1) Declare any conflicts of interest in assigned proposals by May 11
- 2) Complete reviews by June 1 @ 15 UT **(MANDATORY!)**



Declare any additional conflicts in your assigned proposals

- for example: observing the same object(s) with the same goals



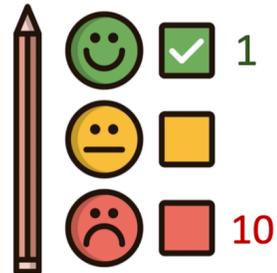
If you identify an additional conflict after you submitted your conflicts, contact the PHT to be assigned another proposal.

# Stage 1: Review assigned proposals



May 4 - June 1  
Stage 1

- 1) Declare any conflicts of interest in assigned proposals by May 11
- 2) Complete reviews by June 1 @ 15 UT (MANDATORY!)



- Rank the proposals from 1 (strongest) to 10 (weakest) based on scientific merit.



- Write comments that summarize the strengths and weaknesses of the proposal
- Comments will be sent to the PI verbatim.



- **Reviewer's proposal will be canceled if the reviews are not submitted on time!**
- Extensions will not be granted since Stage 2 starts on June 2.



The reviewer can be changed after the proposal deadline in exceptional circumstances by having the proposal PI contact the PHT. The Stage 1 deadline though will remain the same.

# Stage 2: Finalize the ranks and reviews



**June 2 - 16**  
Stage 2

- 1) Read reviews from other reviewers (optional)
- 2) Modify your ranks and comments as needed (optional)



Read comments from the other reviewers to see if you overlooked any critical strengths or weaknesses.



Update your ranks and comments as needed.



Stage 2 is optional. If a reviewer does not complete Stage 2, the Stage 1 ranks/comments are considered final.

# The Reviewer Tool



<https://almascience.org/proposing/alma-proposal-review/reviewer-tool>

A screenshot of a web browser showing the ALMA Reviewer Tool page. The browser's address bar displays the URL. The page header features the ALMA logo and the text "Atacama Large Millimeter/submillimeter Array In search of our Cosmic Origins". A navigation menu includes "About", "Science", "Proposing", "Observing", "Data", "Processing", "Tools", "Documentation", and "Help". The main content area is titled "ALMA Reviewer Tool" and contains a large circular logo with the text "ALMA REVIEWER TOOL". Below the logo is the instruction "Click the logo to start". A paragraph of text explains the tool's purpose and provides a link to "How to Use the Reviewer Tool". At the bottom, there is a link to "Return to the main ALMA Proposal Review page" and a footer with "Site Map", "Accessibility", "Contact", "Privacy Statement", and "Region: EA EU NA".

ALMA Reviewer Tool



Click the logo to start

The Reviewer Tool is a web interface which is used by distributed peer review Reviewers to submit ranks and reviews during the proposal review process. It can be accessed by clicking the logo above; note that Reviewers will need to log in with their ALMA credentials. Reviewers will be notified when the process has been opened and the tool is available. A detailed set of instructions describing [How to Use the Reviewer Tool can be found here](#).

Return to the [main ALMA Proposal Review page](#)

# The Reviewer Tool



The screenshot shows the ALMA Reviewer Tool interface. At the top, there is a navigation bar with links to Astronomy, HR, PHT, Confluence, Navision, Wikis, SQL-commands, Other, and Files - ALMA. The main header displays "Reviewer Tool 2022.04" and a "Help" dropdown. A timer in the top left shows "36 d 12 h 49 m 43 s". A central message box contains instructions: "You have been assigned a 'Proposal Set' corresponding to each submitted proposal for which you are serving as a Reviewer. Click on a Proposal Set to accept or reject each of your proposal assignments based on your perceived conflicts of interest by May 11, 2022. You must submit all conflict decisions before you may start reviewing individual proposals." A "Submit conflict decisions" button is in the top right.

Below the message, two proposal sets are visible:

- 2022.T.10798.S** (Pending): Imaging the Magnetized Cold Gas Accretion within 0.5 pc of the supermassive black hole SgrA\*. A "Proposal Set" button is at the bottom.
- 2022.T.11456.S**: Suppressed Star Formation in the Core of Sgr A\*. A "Proposal Set" button is at the bottom.

A modal dialog titled "ALMA Reviewer Tool" is open, containing the following text:

By clicking below, I acknowledge that:

- All of the review materials that I will see as part of the review process are strictly confidential.
- I will behave in an ethical manner and will rank the proposals assigned to me based solely on their scientific merits.
- I will declare any perceived conflicts of interest on my assigned proposals by 15 UT May 11, 2022 in order to ensure timely reassignments for all Reviewers.
- The proposal(s) for which I am serving as a Reviewer will be rejected if I do not submit my ranks and reviews by 15 UT June 1, 2022.

The review process is described in detail at <https://almascience.org/proposing/alma-proposal-review/distributed-peer-review>. In particular, Reviewers should review the guidelines describing:

- Review criteria
- Conflict criteria
- Unconscious bias
- Writing constructive comments to PIs

An "Accept" button is located at the bottom right of the modal.

# The Reviewer Tool



Proposal 2022.T.10145.S

Assessment

Proposal Information

Rank:

Comments to the PI ([click here for guidelines](#)) 

(0 / 4000)

Indicate the proposal's strengths and weaknesses.

Comments to the JAO (optional and confidential) 

Reviewers can use “Comments to the JAO” to provide confidential comments to the JAO. For example:

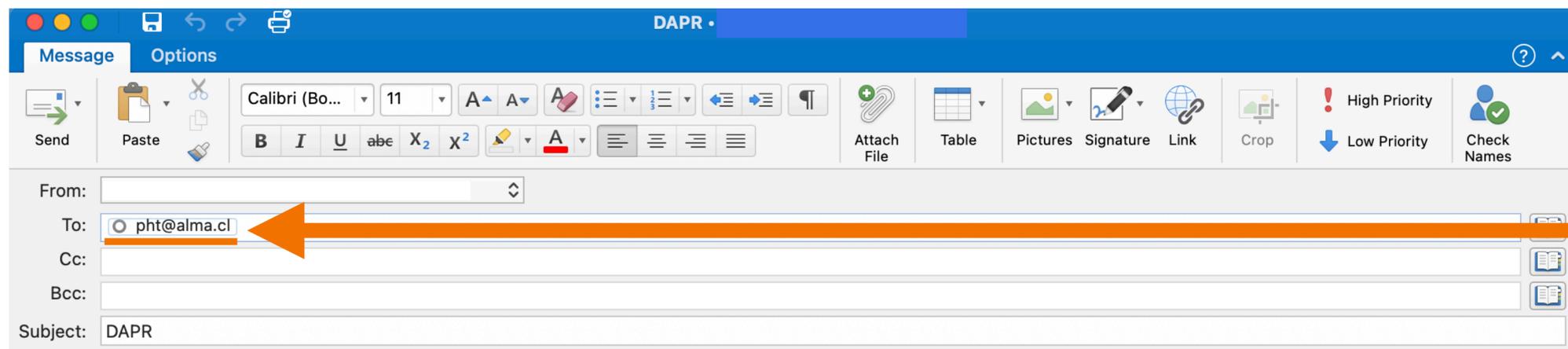
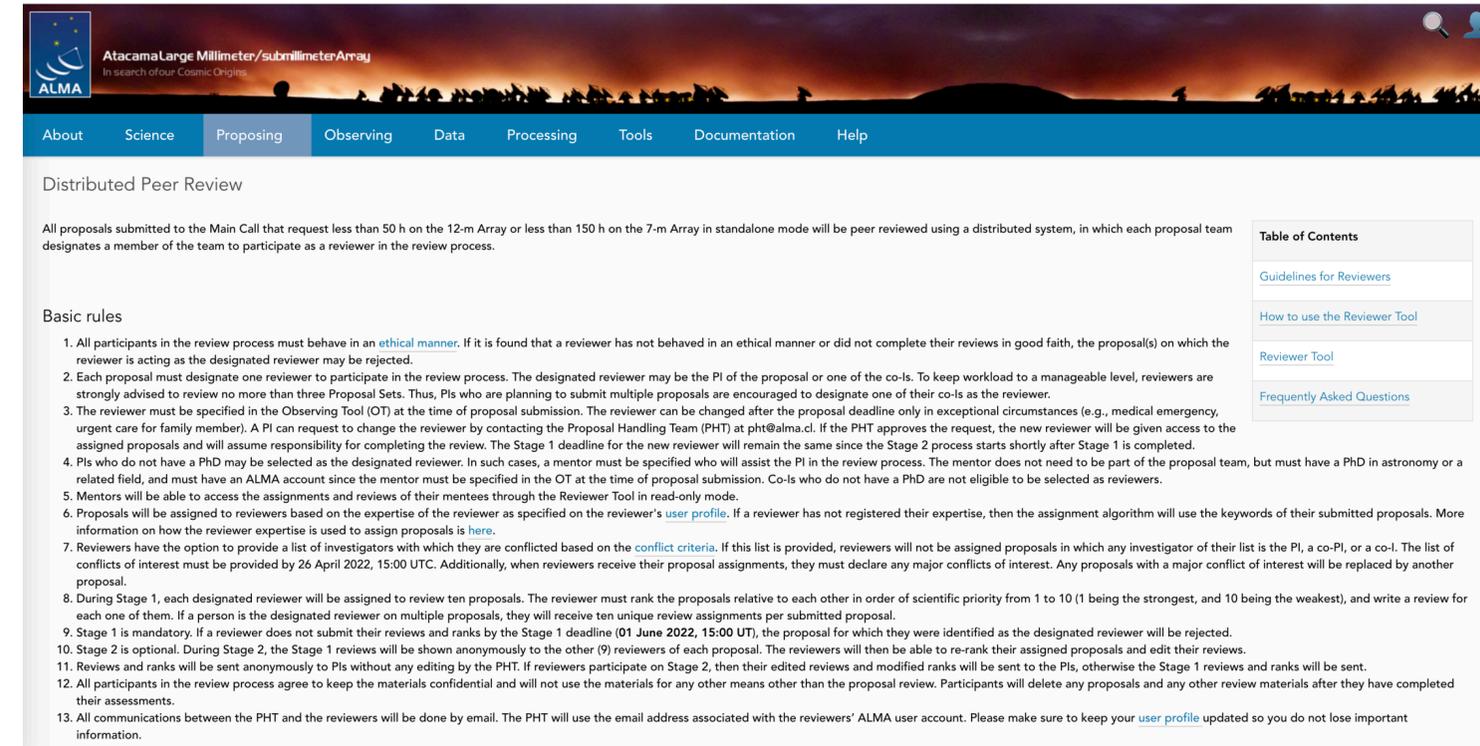
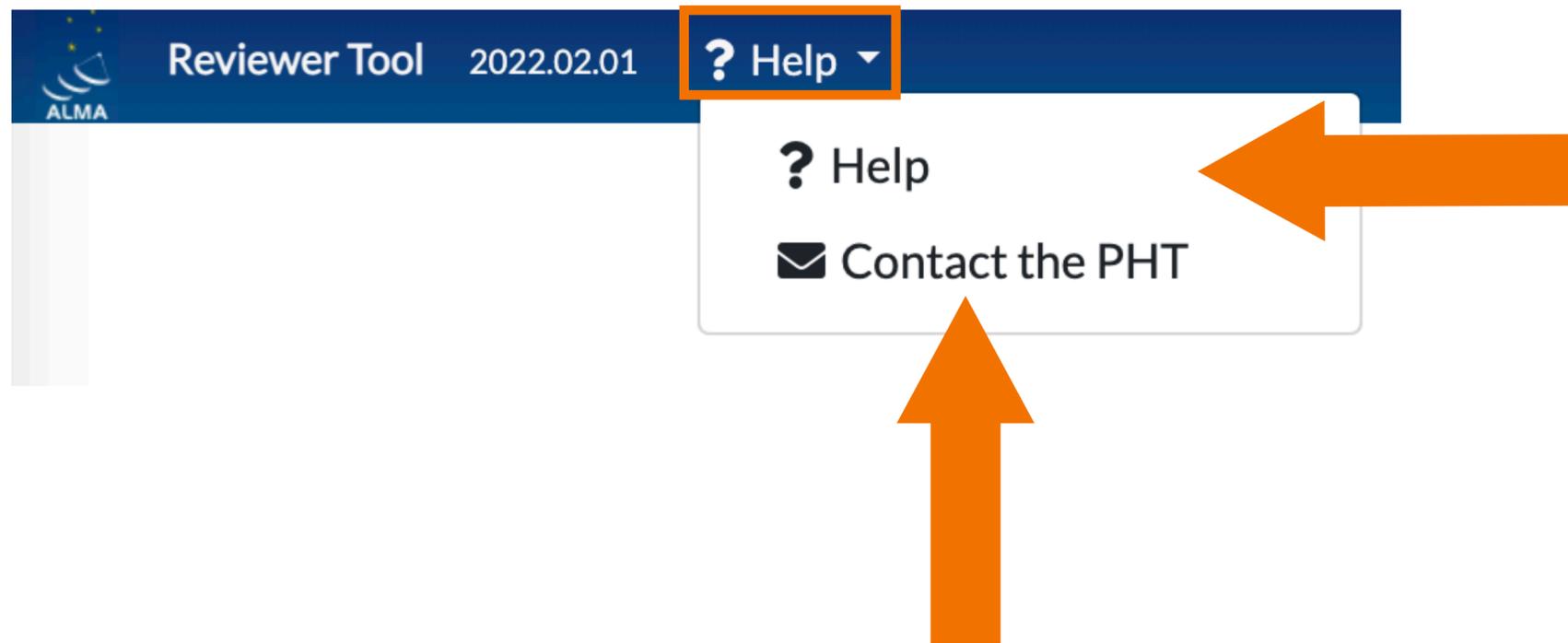
- Possible violations to the dual-anonymous guidelines
- Possible violations to the PDF format and/or minimum font size
- Concerns about the observational setup
- Other topics that you would like to share with the PHT

Close

# The Reviewer Tool



## Looking for help



[pht@alma.cl](mailto:pht@alma.cl)

# Relevant information



<https://almascience.org/proposing/alma-proposal-review>

- Dual-anonymous guidelines
- Description of the distributed peer review
- Detailed guidelines for the reviewers
- FAQ

# Relevant information



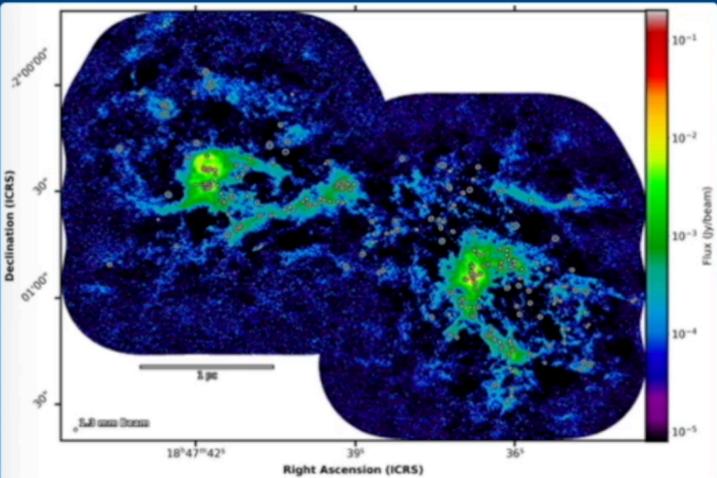
almascience.nrao.edu

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

About Science Proposing Observing Data Processing Tools Documentation Help

### Science Highlight

Top-heavy Core Mass function revealed by ALMA-IMF: a challenge to the IMF universality



The W43-MM2&MM3 protocluster cloud, as imaged at 1.3 mm by the ALMA 12 m array. White ellipses outline the size of the 208 compact cores of few thousand AU size extracted by the core extraction algorithm getsf.

The ALMA-IMF Large Program aims to answer the longstanding question on whether the Initial Mass Function (IMF) inherits its shape from its core content, and more precisely the Core Mass Function (CMF). To do that, ALMA-IMF has targeted and imaged 15 high-mass star-forming regions in the nearby Milky Way ( $d \leq 6$  kpc). In a recently accepted paper (Pouteau et al., 2022), the team has used high-resolution,  $\sim 0.5$  arcsec, Band 6 (1.3 mm) and Band 3 (3 mm) data to detect and extract  $\sim 200$  peaked cloud structures of few thousand AU, called cores, in the W43-MM2&MM3 protocluster cloud (see figure). The authors find that, unlike what was found for several decades, the CMF of this cloud - qualified as mini-starburst - is top-heavy, i.e. it has an excess of high-mass cores compared to low and...

More...

### Observatory News

- ALMA Cycle 9 Call for Proposals is Now OPEN! Mar 24, 2022
- ALMA Science Archive previews Feb 14, 2022
- QA0+ results now available from SnooPI Jan 31, 2022
- ALMA Cycle 9 Pre-Announcement Dec 15, 2021
- ALMA Science Archive object-type search, text-based similarity search and Jupyter Notebooks Dec 14, 2021

More...

### NRAO Events

- 18th Synthesis Imaging Workshop May 18, 2022
- Computational Astrophysics in the ngVLA Era: Synergistic Simulations, Theory, and Observations Jun 07, 2022
- AAS: NRAO Town Hall Jun 13, 2022
- The VLA Sky Survey in the Multiwavelength Spotlight Sep 07, 2022
- AAS: NRAO Town Hall Dec 31, 2022

More...

### ALMA Status

Configuration Schedule

Refereed publications: 2753  
Last observed source: J233413.05+212327.5  
Current configuration: C-2

More...

The ALMA Science Portal is a one-stop source for information and tools aimed at the scientific community as a whole, including proposers, archive researchers, ALMA staff, journalists, and funding agencies.

### Quick Links

<a href="#">ALMA Basics</a>	<a href="#">Cycle 9 Call for Proposals</a>
<a href="#">ALMA Science</a>	<a href="#">Cycle 9 Proposer's Guide</a>
<a href="#">ALMA Primer</a>	<a href="#">Proposing Guidance</a>

Site Map Accessibility Contact Privacy Statement

Region: EA EU NA



# Questions?



# Guidelines to reviewing proposals

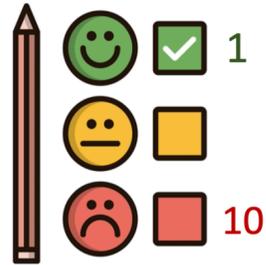
- ◆ Goals
- ◆ Review criteria
- ◆ Best practices for writing reviews
- ◆ Lessons Learned from Cycle 8



# Goals



## Goals of the proposal review



- Establish a ranked list for all assignments within a Proposal Set



- Provide a comment to the PI with the strengths and weaknesses for each assigned proposal in a Proposal Set

## How long will this take?



- You should plan to spend about 1-2 working days to review one Proposal Set

# Proposal components



Abstract



Scientific Justification



Technical Justification



All three components are important and should be read by reviewers.

# Review criteria



## Overall scientific merit

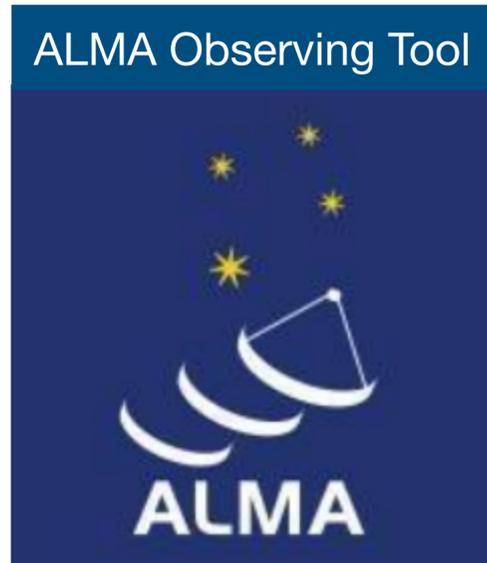
- Does the proposal clearly indicate which important, outstanding questions will be addressed?
- Will the proposed observations have a high scientific impact on this particular field and address the specific science goals of the proposal?
- Does the proposal clearly describe how the data will be analyzed in order to achieve the science goals?



## Suitability of the observations to achieve the scientific goals

- Is the choice of target (or targets) clearly described and well justified?
- Are the requested signal-to-noise ratio, angular resolution, largest angular scale, and spectral setup sufficient to achieve the science goals?
- Does the proposal justify why new observations are needed to achieve the goals?

# Technical Justification



Observing Tool performs (most) technical validations

- ➔ reviewers can assume requested sensitivity, angular resolution, largest angular scale, and correlator setup are valid and can be achieved technically.

Reviewers should evaluate if setup is sufficient to achieve science goals.



Sensitivity

Correlator  
setup

Largest  
angular scale

Angular  
resolution



The proposal should clearly justifying the setup with references as appropriate.

# Special cases



Reviewers should review **all proposals** following the same review criteria

- Resubmissions

If the proposal is accepted any science goals which have already been observed will be descoped

- High-risk/high-impact

Reviewers are encouraged to give full consideration to well-designed high-risk/high-impact proposals even if there is no guarantee of a positive outcome or definite detection

- Proposal size

A proposal should not be down/up graded solely based on the amount of requested observing time.

# Best practices for writing reviews



- Summarize both strengths and weaknesses
- Avoid giving the impression a minor weakness was the cause of a poor ranking
- Take care to ensure strengths and weaknesses do not contradict each other



- Do not ask questions in your review
- Questions usually indicate a proposal weakness - state the weakness directly



- A proposal review is NOT just a summary of the proposal
- While the reviewer may include a BRIEF (~ 1 sentence) summary, the bulk of the contents need to discuss the strengths and weaknesses of the proposal

# Best practices for writing reviews



- Be as specific as possible when writing reviews
- Avoid generic statements that could apply to most proposals
- Critique the proposal and not the PI or the proposal team



- Use complete sentences when writing the comments
- Be concise, it is not necessary to write a lengthy review, but avoid writing a single sentence



- Be professional and constructive
- Do not use sarcasm or any insulting language

# Best practices for writing reviews



- Do not include statements about scheduling feasibility
- Do not include explicit references to other proposals that you are reviewing, such as project codes
- Maintain anonymity
- Proof-read your reviews

# Example review

Jets and outflows have been shown to be a common phenomenon during the protostellar phase, but details about the exact mechanism in the type of source proposed here are not fully known. **The proposed target is very well justified and given its proximity, will provide excellent spatial resolution to study the structure of the outflow. The observations and analysis described will shed light on the physics of jet launching and accretion, leading to a better understanding of the evolution of this type of source.**

However, the proposal did not adequately explain how the proposed observations will test whether the observed phenomenon is a result of the particular outflow launching mechanism or other scenarios discussed in the proposal. Also, the proposal did not adequately explain why the requested number of molecular transitions are needed for the proposed excitation analysis, compared with the pros and cons of instead observing fewer or different transitions.

## **Brief summary of proposal**

## **Strengths specific to the proposal**

## **Weaknesses specific to the proposal**

Comments should indicate the strengths/weaknesses of the proposal, not the PI or the proposal team.

# Unconscious bias



Unconscious bias in the review process is when a reviewer holds a bias (of which they are often unaware) in favor of, or against, a proposal for reasons other than scientific merit.

Examples include: culture, age, prestige, language, gender, and institutional bias.

ALMA is committed to awarding telescope time purely on the basis of scientific merit. As reviewers:

- Be aware of unconscious bias
- Keep your review factual and as objective as possible

To reduce any potential bias ALMA implemented dual-anonymous review in Cycle 8.



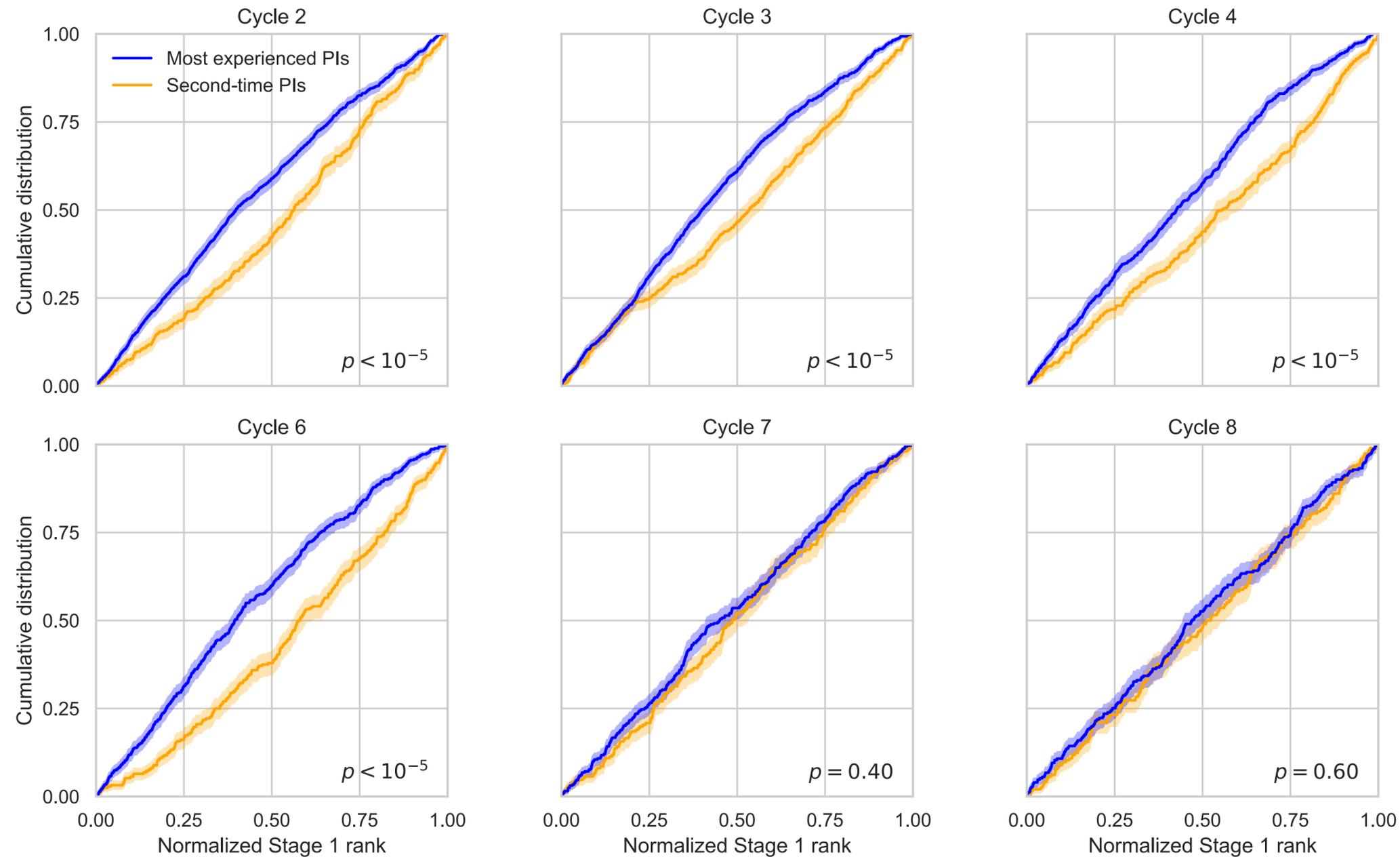
# Dual-anonymous



Remember the role of reviewers is to evaluate the scientific merit of the proposal:

- Review the proposal based on the scientific merit
- Do not try to guess the identity of the PI or the proposer team
- If a proposal does not follow the dual-anonymous guidelines:
  - Review it solely by its scientific merit
  - Inform the PHT using the box "Comment to JAO" via the Reviewer Tool

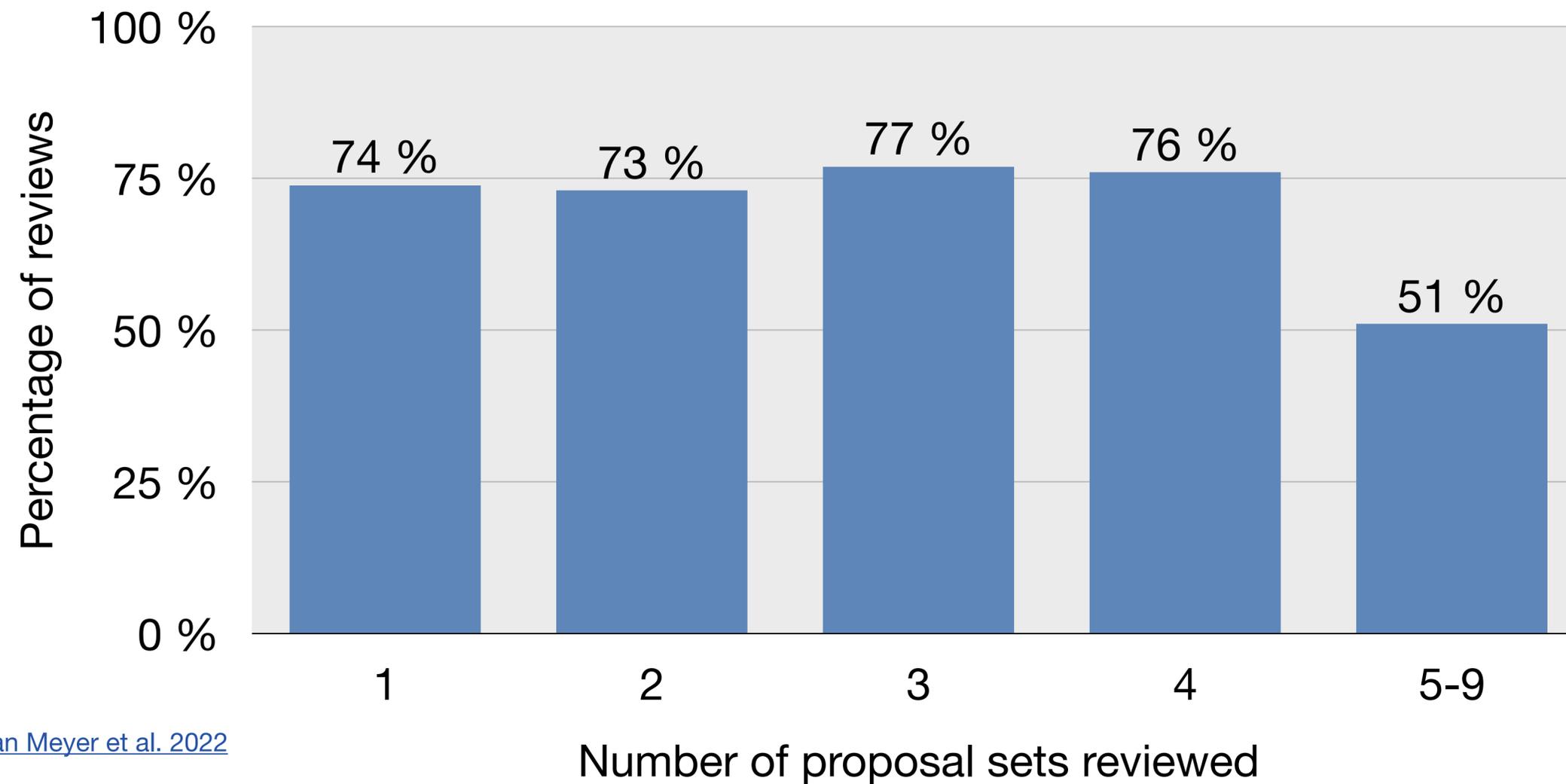
# Impact over our systematics



# Review workload



Helpfulness of a review vs. number of proposal sets reviewed in Cycle 8



[Donovan Meyer et al. 2022](#)

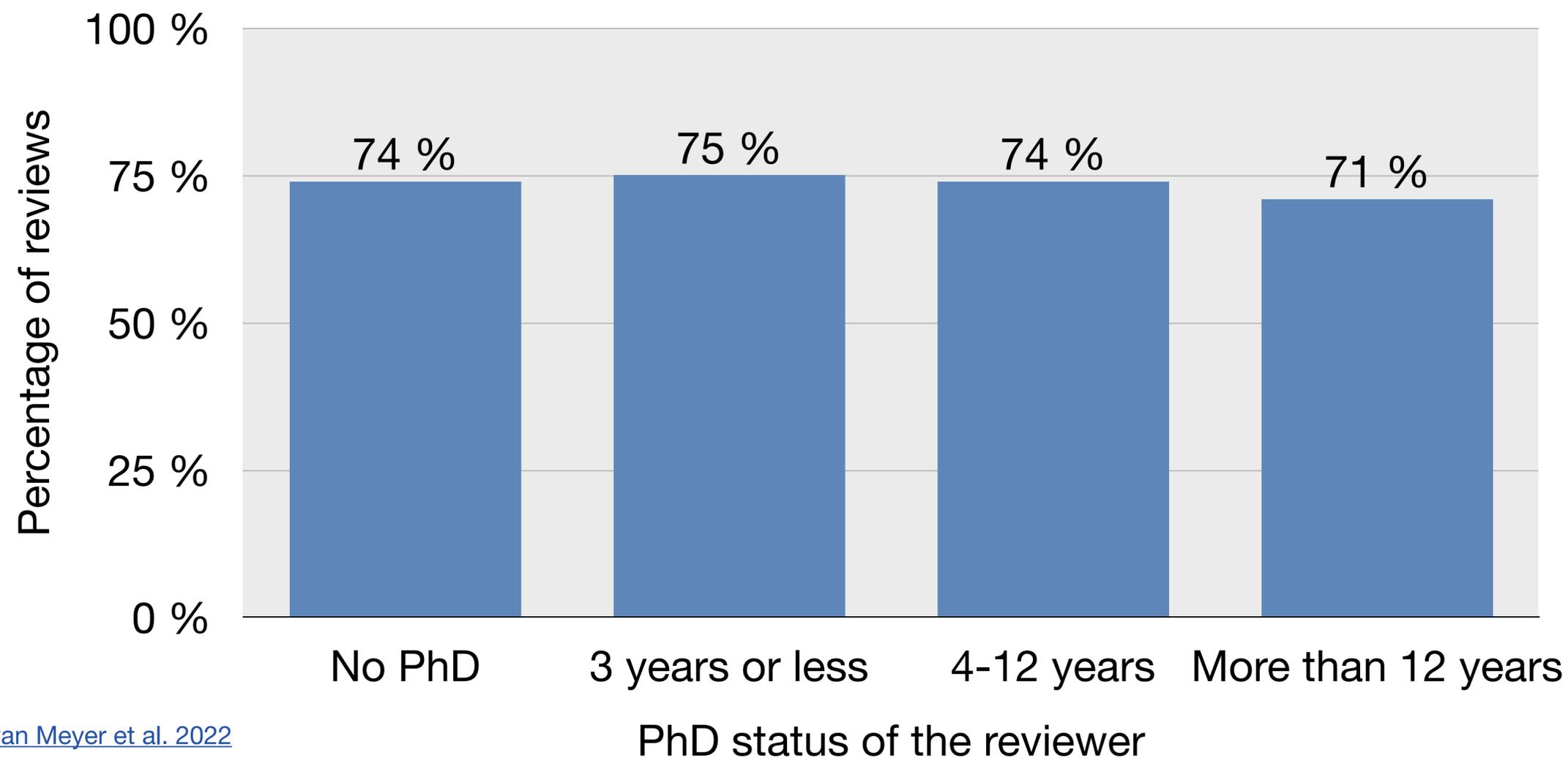


If you have many Proposal Sets to review, be sure to allocate sufficient time to review them all satisfactorily.

# Everyone can write helpful reviews!



Helpfulness of a review vs. career status of the reviewer in Cycle 8



[Donovan Meyer et al. 2022](#)

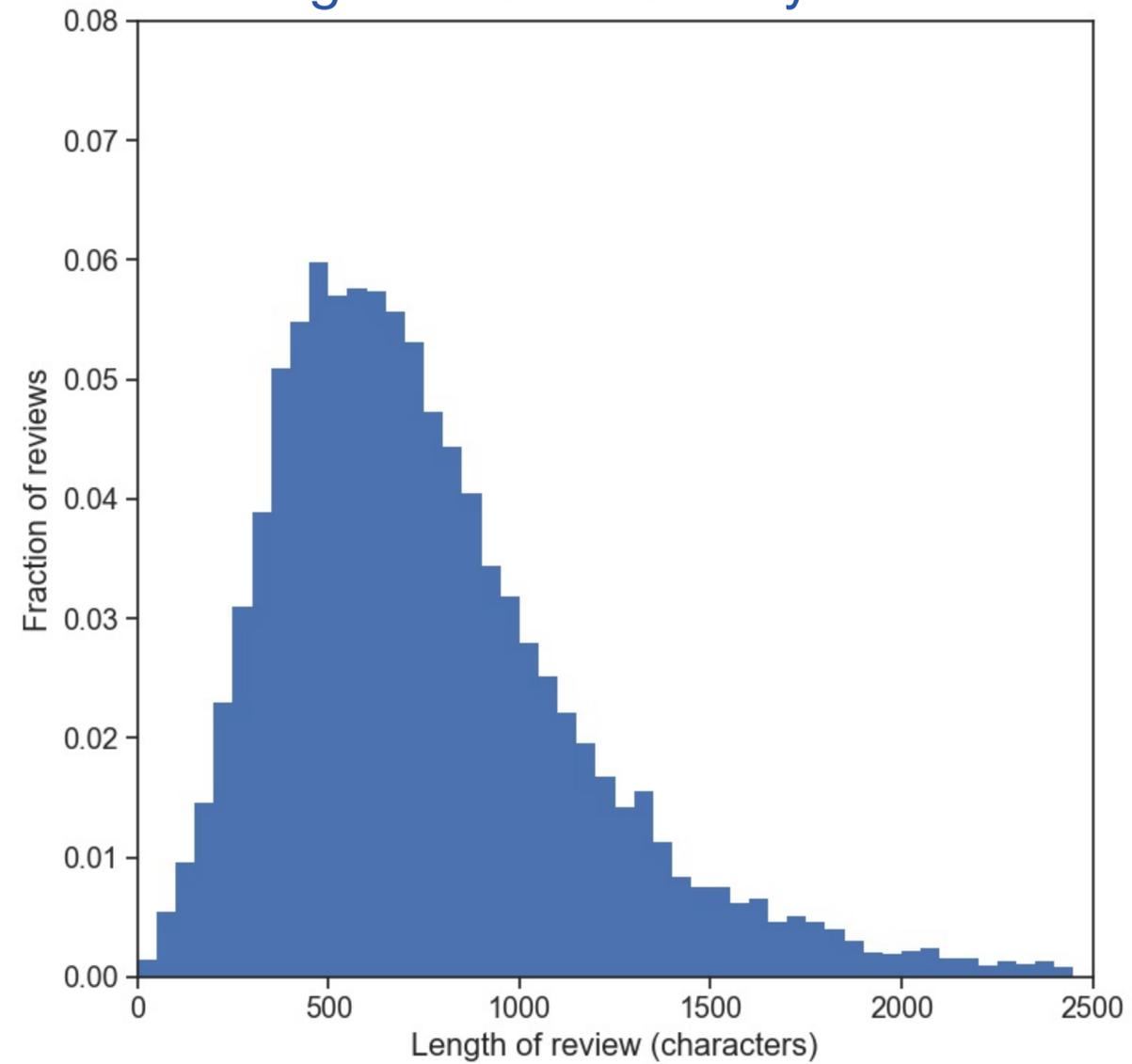


Students and young postdocs write just as helpful reviews as more experienced astronomers.

# Length of review



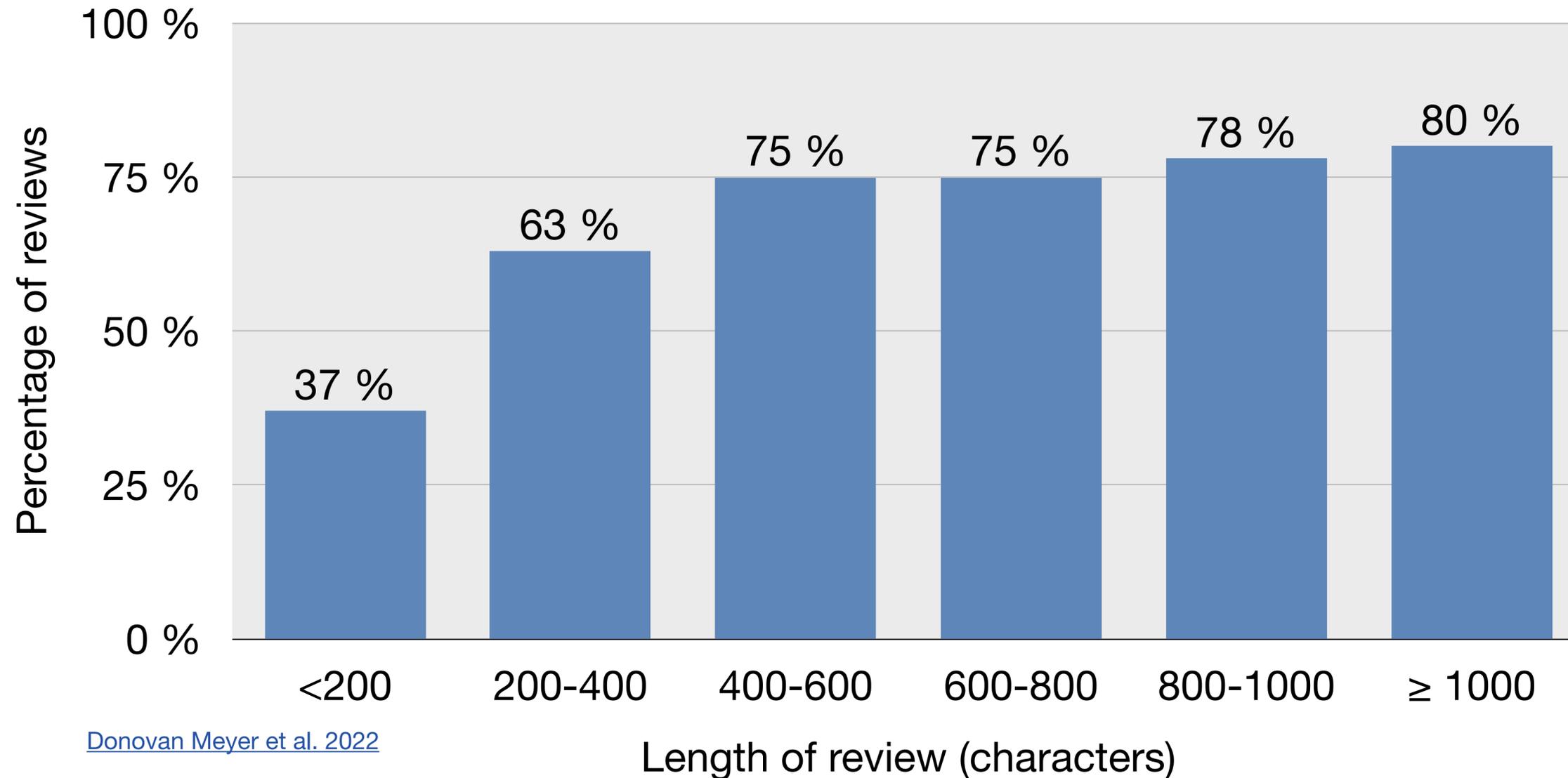
Length of reviews in Cycle 8



- Typical length of a review is ~700 characters, or about 6 sentences.

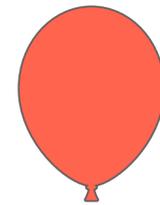
# Length of review

Helpfulness of a review vs. length of the comment to PI

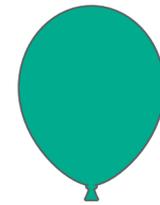


[Donovan Meyer et al. 2022](#)





We appreciate you share your expertise and your time with us!



Your are contributing to the observatory's quest to study the universe in the millimeter/submillimeter wavelength range!



# Questions?

