



**STScI** | SPACE TELESCOPE  
SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

## JWST Cycle 3 External Panelist Orientation

*<https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-peer-review-information>*

---

Christine Chen

on behalf of the STScI Science Policies Group

November 7, 2023



## Today's Orientation

---

1. Welcome from the STScI Interim Director, Marc Postman
2. Welcome and JWST overview from Jeff Valenti (JWST Mission Office)
3. Time Allocation Committee Orientation
  - Overview
  - The Review Process
    - Includes overview on the Dual Anonymous Peer Review by Amaya Moro-Martin (Science Mission Office)
  - Policy Issues
  - Personnel and Logistics
4. JWST Observatory and Instrument performance update from Jeff Valenti



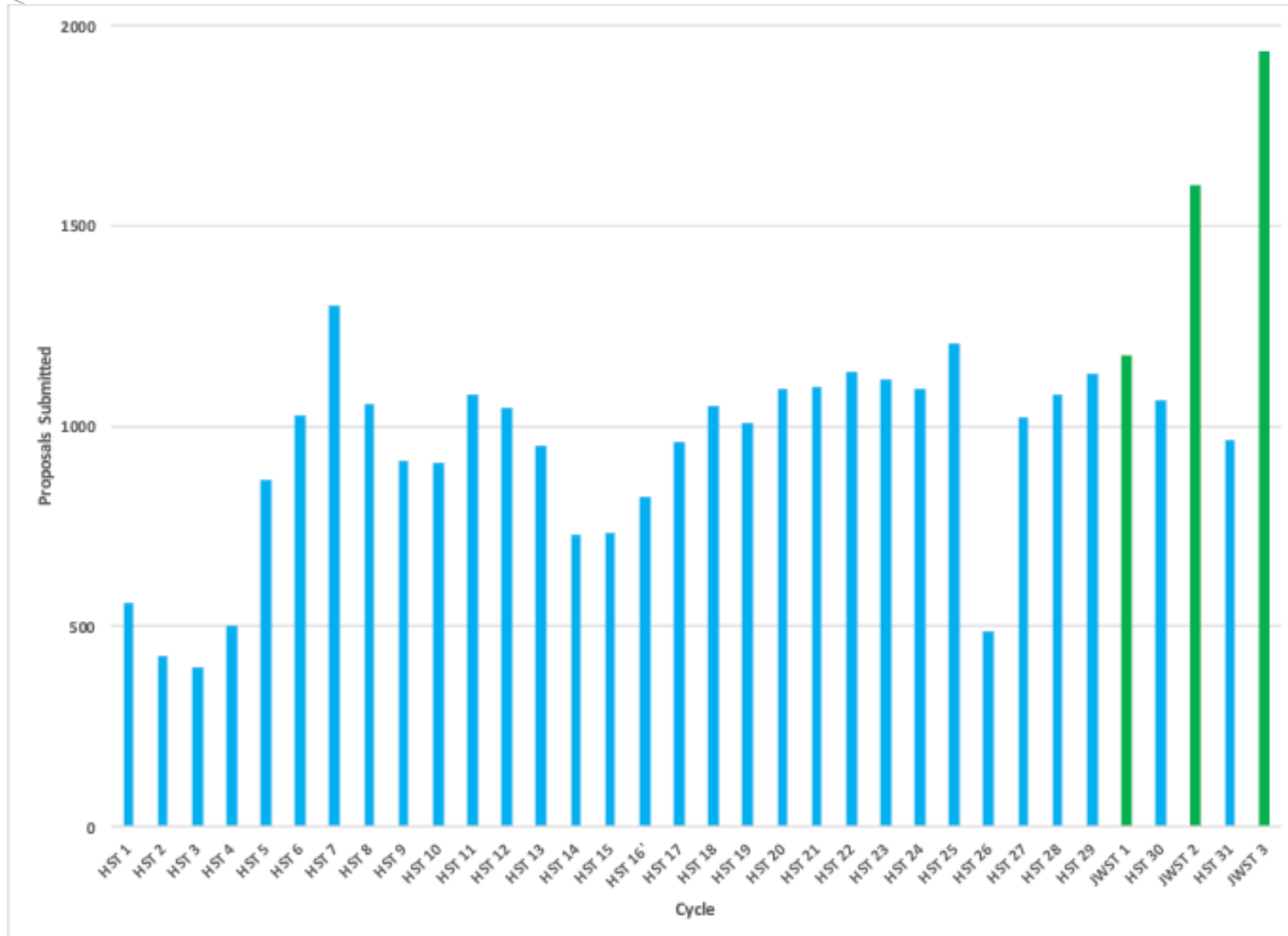
## Your participation is crucial to maximizing the science from JWST

---

- The JWST Cycle 3 TAC review is supported by 414 panel members, including 251 external panelists and 163 virtual panelists.
- This is a *community* process: you have 1931 proposals to review, from 6291 total investigators.
- Getting your grades in on time and writing thoughtful reviews doesn't just help the STScI staff—it helps your fellow panelists and the proposers.



# Cycle 3 Proposal Submissions



Largest number of proposals received by any observatory in response to a Call for Proposals!



# JWST Cycle 3 Proposal Review Schedule

Date	Milestone
October 25, 2023	GO/AR Cycle 3 Proposal Deadline
November 6, 2023	Orientation meeting for Discussion panelists
November 9, 2023	STScI Releases proposals to panelists for review and preliminary grading
January 17, 2024	Deadline for panelists to submit preliminary grades for proposals that they are assigned
January 19, 2024	STScI sends each Discussion panelist the list of proposals to be discussed by their panel
January 29 – February 2, 2024	Telescope Allocation Committee: Discussion Panels
February 5 – 7, 2024	Telescope Allocation Committee: Executive Committee Meeting
February 28, 2024	PI notification letters are distributed
July 1, 2024	Beginning of Cycle 3 Observations



# Overview

---



## Useful Definitions

---

- **Virtual panels/panelists:** 16 panels meeting virtually, and discussing, grading, ranking, and providing written feedback on proposals in their respective science categories. Pre-pandemic, these panels physically met at STScI.
- **External panels/panelists:** 5 panels (none for Large Scale Structure) grading and providing written feedback on a subset of Small (<15 hours) and Archival proposals. Their grades are used by STScI to generate a rank-ordered list of proposals in each science category.
- **Expert reviewers:** experts who provide written input for the largest proposals but are not members of the TAC.
- **Executive Committee:** the panel discussing, grading, ranking, and providing written feedback on the largest proposals, composed of the TAC Chair, Panel Chairs, and At-Large Members.
- **Telescope Allocation Committee (TAC):** the body of all members of the Executive Committee and the Virtual and External panels.



## Telescope Allocation Committee (TAC) Organization

---

- **Overall TAC Chair:** Emily Levesque (University of Washington)
- JWST has followed in the footsteps of HST, utilizing a **hybrid approach**, with each of **seven scientific categories** having a corresponding topical panel **divided into external panels and virtual panels**. In addition to reviewing proposals, the discussion panels advise the Panel Chair on Large, Treasury, and AR Legacy proposals for review by the Executive Committee.
- The **Executive Committee**, led by the TAC Chair, is comprised of the At-Large members (3) and the Panel Chairs (16). The Executive Committee reviews the Large, Treasury, and AR Legacy programs and reviews the overall programmatic balance.





## Virtual versus External Panels

---

Hybrid approach: dividing proposals between external review and panel discussion.

External panels provide the assessment and grading of a subset of Small GO proposals (<15 hours).

- These proposals are ranked by STScI using the grades of the external panelists.

Discussion panels review the remaining Small (>15 – 25 hours) GO, Medium GO, Survey proposals. After the initial triage, panelists interact virtually by video-conference to finalize their rankings.

- These proposals are ranked after the discussion and re-grading in the group panels.

Exceptions – all LSS and all Small/Medium Target of Opportunity proposals will be reviewed by the virtual panels.

**You are an external panelist.**



## Panels and Associated Science Categories

---

Topical panels have these science categories:

- **Solar System:** all bodies in our solar system
- **Exoplanets and Planet Formation:** exoplanets, planet formation, debris disks
- **Stellar Physics:** cool + hot stars, late stages, low-mass stars, star formation, supernovae
- **Stellar Populations:** Resolved stellar populations in galaxies, Milky Way structure, star clusters, ISM in Local Group galaxies
- **Galaxies:** stellar content of galaxies, ISM in other galaxies, dynamics, galaxy evolution, galaxy outflows, galaxy halos, intergalactic medium, circumgalactic medium, quasar absorption lines
- **Supermassive Black Holes:** AGN, quasars, SMBH, jets, galaxy/BH co-evolution
- **Large-scale Structure:** cosmology, lensing, galaxy clusters, surveys, deep fields, distance scale (*discussion panel only*)



## Types of Proposals

---

- **Regular General Observer (GO):** Regular observing proposals.
- **Survey:** Observing proposals of relatively short (>90-100 minutes per visit), easy to schedule observations. Surveys request a list of targets, and attempt to minimize data volume. There is no guarantee of which or how many targets will be observed, proposal should explain how success will be achieved with a *subset* of proposed targets. Target list likely to be “generic”. Used to increase the observing efficiency of the observatory. JWST survey programs are analogous to HST Snapshot programs.
- **Archival (AR):** Archival research proposals; US PI’s and co-I’s can request funding. Data-based AR proposals must be primarily based on JWST data. Regular AR proposals are reviewed by the virtual panels. “Legacy” AR proposals are broader in scope and are reviewed by the EC.
  - **Theory proposals:** results should enhance the value of JWST observational programs through their broad interpretation (in the context of new models or theories) or by refining the knowledge needed to interpret specific observational results.

More info: <https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-call-for-proposals-for-cycle-3/jwst-proposal-categories>



## Special Categories of Proposals

---

- **Joint Proposals:** programs in which JWST science is the prime science, but multi-wavelength observations from another ancillary observatory (HST, Chandra, XMM-Newton, NOIRLab, NASA-Keck, ALMA, NRAO) are critical for the science goals of the proposal. Expert reviews will be provided for additional feedback specifically on the joint-observatory aspect of these proposals. You can access these reviews in SPIRIT.
- **Calibration Proposals:** not linked explicitly to a specific science program; provide a calibration or calibration software that can be used by the community for existing or future programs. Can be GO or Archival.
- **Long-term:** Proposals requesting time for both this cycle and in the future (up through Cycle 4). These future observations will still require resources to execute and analyze, and thus must be fully justified scientifically.
- **Archival Cloud Computing:** Proposals requesting funding to use Amazon Web Services (AWS) for data analysis, as all non-exclusive access JWST data is available via AWS
- **Archival Data Science Software:** Proposals requesting financial support to develop software products available to the community for the purpose of analyzing JWST data.

More at: <https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-call-for-proposals-for-cycle-3/jwst-proposal-categories>



## Special Categories of Proposals

---

- **GO-Archival Proposals:** GO programs that include a **significant** archival component. Low levels of archival work are not required to set this flag. These proposals should also provide an analysis plan for the archival work.
- This flag is new this cycle, so implementation may be inconsistent. In particular, you may see very different levels of archival work in programs with this flag set. We will also be lenient about the lack of analysis plan this time, as long as the archival work is well-justified elsewhere in the proposal.



## Special Categories of Observations

---

- **Parallel Observations:** Since JWST's instruments are located at different positions in the focal plane, it is possible to observe simultaneously with one or more instruments in addition to the primary instrument. While these observations do not count toward a panel's hour allocation, **they do require resources** for both STScI support (including consideration of data rate), and US investigators can request funding for their analysis. Thus any **parallel observations must be well-justified and approved by the TAC.**
  - “Coordinated Parallel”: Parallel observations part of the same program as the primary observations; may have different science goals. Must be fully described and justified scientifically; can be rejected even if the primary observations are approved.
  - “Pure Parallel”: Proposed independently of the primary observations. Reviewed by the Executive Committee regardless of size.

More at: <https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-call-for-proposals-for-cycle-3/jwst-proposal-categories>



## Special Categories of Observations

---

In general, if it looks like a proposal is requesting something special (e.g., scheduling requirements, including time-critical observations and non-interruptible sequences, need for a specific roll angle, need for target of opportunity observations), check that they list this requirement in the “Special Requirements”. Likewise, if something is specified in the Special Requirements, consider whether or not it is scientifically justified in the proposal.

All “Special Requirements” must be mentioned in the Phase I proposal in order to be implemented, so it is up to you to verify these requirements are required scientifically.

### *The Micrometeoroid Avoidance Zone (the MAZ)*

The MAZ is defined as a cone of a specified half angle around the orbital motion direction, also referred to as “the ram vector,” scheduled to reduce the severity of impacts of micrometeoroids on the mirror. **For MAZ considerations: Leave the scheduling to STScI. Judge all proposals based on the science.**

When in doubt, check out the Call for Proposals: <https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-call-for-proposals-for-cycle-3>



# The Review Process

---





## General Guidelines

---

- Access proposals at <https://spirit.stsci.edu/>. **All grades and comments will be entered through this portal.** See <https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-peer-review-information/reviews-grades-and-comments/spirit-webreviewer-tool-guide> (and your email) for full instructions.
- **Anticipate how much time it will take to review proposals.** Including writing comments, it may take 30–45 minutes per proposal. There are ten weeks between now and the deadline (**Wednesday, January 17, 2024**). Plan accordingly and budget your time; doing a few proposals a day is a *lot* less stressful than saving them all for the last minute—and leads to better reviews and comments for the proposers.
- You may want to **start by reading all of the abstracts** for your assigned proposals, instead of digging straight into individual proposals. This will help you get an overview of the task, and it is good for finding conflicts of interest early (e.g., competing proposals or unidentified close collaborators), which helps everyone.
- **Take notes.** It may be a while between reading a proposal in detail and discussing it on the panel, and your notes will help both you and the other panelists.



## Selection of Proposals Reviewed by External Panels

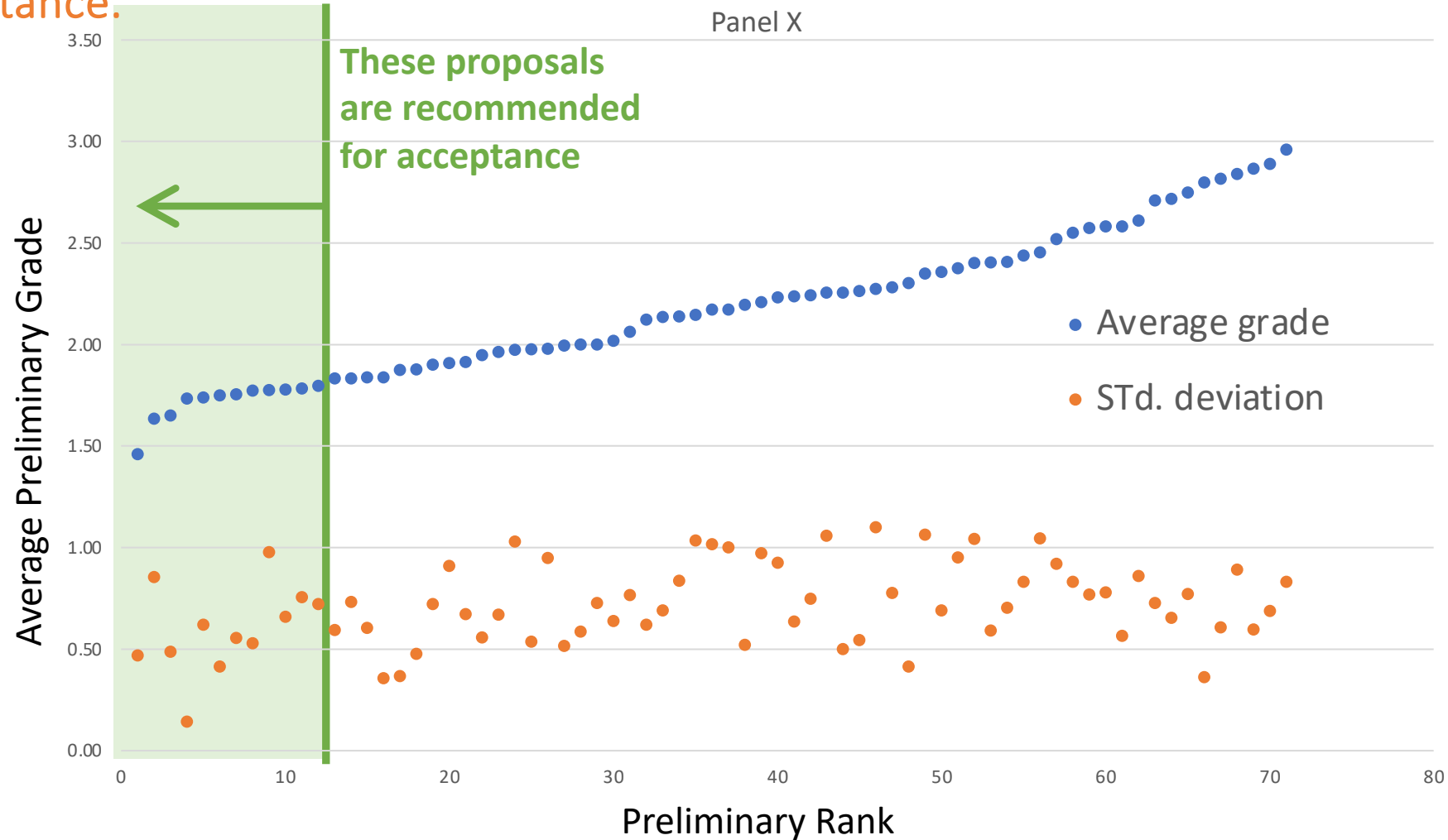
---

- **External panels grade proposals between now and January 17.**
- The proposals are categorized by science topic and sent to five panels which host external panelists who are experts on this topic.
  - Reviewers grade on an absolute system (excellent → poor)
  - Grades are collected, averaged, and ranked list compiled for that topic
  - Hour allocation is done by topic, based on hour pressure
- Comments from each reviewer for externally reviewed proposals are returned to the proposers verbatim
- ALL proposals should be graded using the same scale.
- The highest ranked proposals are marked as recommended for acceptance
  - “Recommended” proposals made available to the Chairs of the virtual panels prior to the virtual panel meetings
  - The panel chairs will use this information to monitor the programmatic balance of the recommended list of proposals reviewed by individual and group panelists.



# Selection of Proposals Reviewed by External Panels

STScI averages grades & marks highest ranked proposals as recommended for acceptance.





## Selection Criteria

---

- **Impact within the sub-field:** The scientific merit of the program and its contribution to advancement of knowledge.
  - The immediate sub-field of the proposal is the niche area of the program, not the whole broad science area of the topical panel to which it was assigned.
- **Out-of-field impact:** The program's impact for astronomy in general. Are there implications for other science areas and/or insights into larger-scale questions?
  - The proposal does not have to impact all of astronomy, but should ideally impact a number of other sub-fields or provide significant impacts in at least one other sub-field.
- **Suitability:** The necessity for JWST observations or relevance to JWST science. For observing programs, this means a demonstration that the unique capabilities of JWST are required to achieve the science goals; how much of a scientific advantage does JWST data offer over other facilities?

The evaluation should be based on what is written in the proposal, not on the reviewer's broader knowledge.

Reviewers must ensure that the comments address some or all of these primary criteria.

<https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-peer-review-information/reviews-grades-and-comments/selection-criteria-and-scoring-system>



## We use a “Stellar Magnitude” Scoring System: 1 is BEST

Grade	Impact within the sub-field	Out-of-field impact	Suitability
1	Potential for transformative results	Transformative implications for one or more other sub-fields	Science goals can only be achieved with JWST
2	Potential for major advancement	Major implications for one or more other sub-fields	Major advantages in using JWST over other facilities
3	Potential for moderate advancement	Some implications for one or more other sub-fields	Some advantages in using JWST over other facilities
4	Potential for minor advancement	Minor impacts on other sub-fields	Minor advantages in using JWST over other facilities
5	Limited potential for advancing the field	Little or no impact for other sub-fields	JWST offers little or no advantage over other facilities or the advantages of using JWST are unclear.

Longer descriptions, more details and examples at: <https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-peer-review-information/reviews-grades-and-comments/selection-criteria-and-scoring-system>



## Proposal Comments

---

- Comments are required for all proposals.
- **The deadline for you to enter ALL of your comments is Wednesday, January 17, 2024.**
- Don't make up reasons for rejection – if a proposal was good, but not great, then say so.
- Have your comments reflect your grades: you will not know whether or not a proposal is recommended for acceptance.
- **All comments go back to the proposers verbatim**, e.g.,

*Strengths:*

Reviewer #1: The proposed observations will revolutionize our understanding of space krakens.

Reviewer #2: Only JWST can get IR observations of space krakens, and the proposal makes a strong case for why the IR is important for determining how long space krakens live.

*Weaknesses:*

Reviewer #1: It is not clear from this proposal what implications the proposed data and analyses will have for other classes of space creatures.

Reviewer #2: The target signal-to-noise of ten zillion is not well justified in the proposal.



# Proposal Comments: Practical Instructions

4567 Review Comments

Save Review Review Completed

Strengths    Weaknesses    Resources    Comments    Technical Notes    Instructions

Other categories are optional and rarely used. Most of what you think should go here can probably be listed as a “strength” or a “weakness”. *Leave blank unless actively needed!*

If any duplications are not well-justified, “Resources” is a good place to note this.

See the Spirit documentation for where to enter your own personal “notes”.

Enter review comments related to the strengths of the proposal.



## Proposal Comments: Detailed Instructions

---

- Proposal feedback comments should be concise.
- Please **avoid asking questions in the comments**.
  - For example, “the proposal did not sufficiently motivate the number of requested targets” is preferred over “why have 6 targets instead of 5?”
- The reports should focus on the scientific content and not the reviewer: **do not reference yourself**. If it was not clear *to you*, then it was simply not clear.
  - For example, "The proposal did not sufficiently explain why these targets were chosen" is preferred over "It is not clear to me why these targets were chosen"
- Avoid any comments that may be perceived as derogatory.
- You cannot be sure at the time of writing feedback comments whether the proposal will be accepted. The **comments should be phrased in such a way that they are sensible and meaningful regardless of the final outcome**.

For more information: <https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-peer-review-information/reviews-grades-and-comments/proposal-feedback-comments>





## Proposal Comments: Detailed Instructions

---

- Avoid statements that create the impression that the low ranking of a proposal is due to a minor mistake.
  - Many proposals do not have obvious weaknesses but are just less compelling than others: in such a case, acknowledge that the considered proposal is good but that it had limitations.
- Never include in the report an explicit reference to another proposal, such as the proposal ID.
- Whenever possible, make suggestions for possible improvements, but avoid giving the impression that following those suggestions guarantees that the proposal will be more successful in next cycle.
- JWST is a shared resource and we receive proposals from all over the world, many from non-native English speakers. The proposal should be understandable, but please take care to **judge the science in the proposal, not the quality of the language or the grammar.**

For more information: <https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-peer-review-information/reviews-grades-and-comments/proposal-feedback-comments>



# Policy Issues

---



## Code of Conduct

---

All participants in the proposal review process are expected to:

- Be mindful of bias in all contexts.
- **Be respectful** in any written or verbal communications you have as part of the review process.
- Step in to address abusive or bullying behavior.
- **Be respectful of all** regardless of differences (professional or otherwise).
- Actively help create an environment free of harassment.
- **Be polite and professional** in your written feedback comments, *especially* when providing critical comments.
- JWST is a shared resource and we receive proposals from all over the world, many from non-native English speakers. The proposal should be understandable, but please take care to **judge the science in the proposal, not the quality of the language or the grammar.**

*Please report any violations of the code of conduct to your SPG manager or your PSS.*



## Confidentiality

---

- Remember that you should not discuss the proposals you review or your evaluations – now, or in the future.
- Do not post comments to Facebook, Twitter, Instagram, TikTok, etc. regarding the content or your participation in the panel meeting.
- Individual reviews should be independent; do not consult with other panelists.
- Confidentiality carries from prior years: Do not discuss/compare prior years proposals in this review, even with panel members who also served in prior years.
- Please purge any review files from your computer after the review.
- Panelist names will be shared in the STScI Newsletter after the selections are public; only then should you feel free to update your c.v., etc.



## Dual Anonymous Review

---

- The goal of Dual Anonymous Review is to put the focus on the **science** and remove the focus from the proposing team.
- In a Dual Anonymous Review, the identities of the proposal teams have been removed from the proposals prior to the preliminary review.
- During all stages of the panel review process, reviewers grade and rank proposals without knowing the identities of the proposal teams.
- **Panelists should flag any proposals they identify as not compliant** with the posted Dual Anonymous Review guidelines and bring them to the attention of the Science Policies Group (email your Science Policies Group Manager; these names are at the end of this presentation). **SPG will review and then provide guidance for how to proceed.**



## Conflict of Interest

---

Our goal is informed, unbiased discussion of each proposal

- Grading panel members should have neither direct nor indirect interest vested in the outcome of the review
- Grading panel members should also have sufficient knowledge to assess the science

Anonymizing proposal simplifies conflicts

- We only consider personal conflicts
  - Direct involvement in the proposal
  - Involvement of close collaborators/competitors/family members based on names supplied by individual panelists
- Institutional conflicts are **not** considered
- Most identified by automated checks and info provided by you
- If you strongly suspect you have a conflict with a given proposal, you are conflicted.
- **Panelists may flag additional conflicts found while reviewing a proposal**
  - **Please raise any such concerns with your PSS and SPG manager.**



## Conflict of Interest

---

**If you have not yet identified your conflicts of interest, please do so IMMEDIATELY.**



## General Guidelines

---

- Panel Members should assume that all instruments will be performing nominally in Cycle 3
- Panel Members should *not* reject or downgrade proposals based on technical considerations without concurrence by STScI
  - STScI will perform a technical review on all accepted proposals and will work with successful PIs to make programs flight ready. If technical questions arise during the panel review, please ask your PSS, who will contact a relevant expert.
- Panel Members should *not* take scheduling considerations into account in grading proposals, but any scheduling constraints *must* be clearly stated *and* scientifically justified.

**Concentrate on recommending the best science... but recognize that it may not be possible to schedule all highly ranked programs**





# Personnel & Logistics

---



## Other Relevant STScI Personnel

---

- Nancy Levenson – Interim Director
- Marc Postman – Interim Deputy Director
- Neill Reid – Associate Director for Science
- Alessandra Aloisi – Science Mission Office Head
- Elena Sabbi, Laura Watkins – Science Mission Office Deputy Heads
- Christine Chen – JWST Science Policies Lead
- Katey Alatalo – JWST Science Policies Deputy
- Amaya Moro-Martin, Jamila Pegues, Linda Smith – Science Policies Group Scientists
- Brett Blacker – TAC Technical Manager
- Aleksandra Hamanowicz – Deputy TAC Technical Manager
- Massimo Stiavelli – JWST Mission Office Head
- Jeff Valenti – JWST Mission Office Mission Scientist
- Macarena Garcia Marin – JWST Mission Office Deputy Project Scientist
- Chris Evans – Head of the ESA Office & ESA JWST Project Scientist, STScI
- Paule Sonnentrucker – ESA JWST Mission Manager, STScI
- Beth Perriello – Observations Planning Branch
- Darlene Spencer – Events Planning Group Staff



## Where (or Who) to Go To for Help

---

- Call for proposals: <https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-call-for-proposals-for-cycle-3>
- Full online documentation for the review process: <https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-peer-review-information>
- Questions? When in doubt, email your Panel Support Scientist (PSS)!
- Potential conflict of interest? Email your PSS.
- Problems accessing Spirit? Email [wasabi@stsci.edu](mailto:wasabi@stsci.edu) and/or Brett Blacker
- Questions about JWST instruments and their capabilities, or technical feasibility of a proposed program? Email your PSS and SPG Manager.
- Want to give an update on your status or require an extension on deadlines? Email your SPG Manager.



## Panel Personnel

Panel	SPG Manager
Solar System	Amaya Moro-Martin
Exoplanets	Katey Alatalo
Stellar Physics	Linda Smith
Stellar Populations	Christine Chen
Galaxies	Jamila Pegues
Supermassive BH	Elena Sabbi

*Panel Support Scientist: Amy Jones*



## After the TAC ...

---

- As always, we welcome feedback on the TAC process
  - How did the grading process work?
  - Can we improve it?
  - What were the main shortcomings?
- We will send email to all Panel members with a survey requesting your views of the process. Please fill it out! Many of the process improvements this year were in a direct response to previous surveys: we value your input!!



Thank you!

---

The JWST TAC would not be possible without your critical support and contributions!



Back Up

---