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**From:** J.D. Smith, on behalf of the JWST Users Committee (JSTUC)

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I am pleased to provide the following updates and formal recommendations on behalf of the JSTUC.

## 1. Summary

Meeting #16 of the James Webb Space Telescope Users Committee (JSTUC) was held shortly after the record-setting Cycle 3 review of proposals. The scale and breadth of its third cycle has cemented JWST as among the foremost scientific facilities ever operated. Its growing scientific impact at the forefront of multiple fields and the community's excitement and broad interests were on full display during the review. Many of the issues and concerns the JSTUC discussed at depth during our two day meeting could be characterized as "coping with such success." Success like this does not appear spontaneously. On behalf of this committee and the entire JWST users community, I want to express our deep gratitude to NASA, STScI, and the entire JWST ground operations team for their tireless work improving the processes and products underlying its many scientific advances, arriving *daily* across so many fields.

Over the course of our two day meeting, the committee held detailed discussions covering a wide range of topics, including instrument performance and trends; the proposal review and time allocation process going forward; pipeline capabilities and prioritization; communication with the JWST community; proposal tooling, the grants process, and more. Below I outline our specific recommendations in these areas.

## 2. The Proposal Review Process

Although the Cycle 3 review process ran smoothly, preliminary feedback indicates that it was stretched to the limit, with nearly 2000 proposals reviewed by more than 500 members of the community. Small scheduling tweaks planned for Cycle 4 will relieve some pressure, but it has become clear that operating JWST reviews using the same process developed for Hubble over the past 30+ years is no longer fully tenable. We make several recommendations to alleviate immediate pressure on the review process and plan for the future:

### 2.1. Page Limits

Our primary recommendation is a **significant reduction in proposal page limits**, to align with other large NASA and community-wide facilities (e.g. Chandra, Swift, Fermi, TESS, ALMA, NOIRLab):

- 4 pages for Small/Medium (+ references),
- 6 pages for Large (+ references), and
- an additional page dedicated exclusively to enhanced data and product delivery plans, for Treasury proposals only.

The page limits for other proposal categories should be adjusted similarly. A change of this magnitude demands early, clear, consistent, and ongoing communication with the community, including on the importance of adhering to updated proposal templates.

## ***2.2. Scientific Panel Categories***

We strongly endorse efforts to update and diversify proposal scientific keywords and resulting panel science categories to better match the type of science JWST sees and to achieve better proposal distribution across panels.

## ***2.3. Proposal Size Boundaries***

We endorse moderate increases in the proposal hour boundaries of *Small*, *Medium* and *Large* programs to help equalize the review load across panels and the executive committee and to accommodate the growing complexity of JWST programs. We recommend clearly indicating as *Small External* those *Small* proposals which are externally reviewed.

## ***2.4. Proposal Scoring Rubrics***

We suggest simplifying the current proposal [scoring rubrics](#), providing the same rubrics to both proposers and reviewers, and giving brief rubric guidelines directly in the proposal scoring interface to help panels run more efficiently.

## ***2.5. Dual Anonymous Policy***

While dual anonymous review has run smoothly for more than half a decade, some small inconsistencies with other NASA selection processes remain, including in the category of self-plagiarism. We urge working towards consistency in applying and adjudicating dual anonymous compliance across all of NASA's projects and programs.

## ***2.6. Planning for the Future***

Looking ahead, depending on the outcomes of the next few cycles, a community-scale effort may be needed to re-appraise the full review process, potentially across multiple facilities. We encourage STScI to closely study the results of the *Cycle 3 Panelist Survey* and work to ensure that, as it adapts, JWST's review retains the key characteristics that give it a strong reputation within the community.

# **3. Pipeline Processing**

We note with thanks clear improvements in the quality of JWST's pipeline-produced data products over the past year. We also emphasize the results of recent user surveys, which indicate that the pipeline is the *foremost issue of concern* for the JWST user community. Much work remains. The community's needs and focus continue to shift, with more than 3/4 of Cycle 3 time awarded for spectroscopy. A well-tested, clearly-documented, and high-performance data pipeline employing modern, high-quality algorithms undergirds *every part* of JWST's scientific ecosystem, translating front-page results into long-term scientific gains.

### ***3.1. JWST Pipeline Coordination and Prioritization***

We strongly support the recent establishment of the *JWST Pipeline Coordination Team* and Director, and recommend clearing any obstacles connecting its top-level pipeline prioritization recommendations to work effort.

### ***3.2. Community Pipeline Contributions***

The success of last year's *Improving Data Products* Workshop proved that many excellent ideas for enhancing the pipeline and its algorithms are under active development within the broader user community. We encourage continued engagement with this group, exploring ways to elevate and reward the work they do which benefits all JWST users.

## **4. MIRI Sensitivity**

We are pleased to note the operational stability and continued growth in capabilities of all four JWST instruments.

Regarding the long wavelength sensitivity loss in MIRI spectroscopy and imaging, the slowing decline and apparent asymptotic approach to only moderately diminished values are welcome news. Nevertheless, we urge vigilance, careful monitoring and frequent re-assessment of performance projections, standing ready to prioritize high-value MIRI observations at long wavelengths should the current trend of sensitivity stabilization not sustain.

## **5. Community Science Working Group on Targets of Opportunity**

The Cycle 3 review made clear that certain high-impact but low-probability transient events and other targets of opportunity face challenges in navigating the traditional TAC process. Panels are naturally hesitant to award precious observing time to proposals with low and uncertain execution likelihood, including those searching for gravitational wave counterparts, interstellar Solar System visitors, and others.

We recommend the formation of a community science working group focused on low-probability events of high scientific interest across all relevant sub-fields. This working group should be charged with making specific, timely recommendations for the use of discretionary JWST time to ensure it is well-positioned to maximize discovery potential when such rare but important events occur.

## **6. Grant Process Review**

Grant budgeting represents a significant workload for successful proposing teams as well as community financial reviewers. We strongly endorse the efforts of the *JWST Grants Review Working Group* to find ways to improve efficiency, decrease the overall workload, and increase equitability in providing financial support for US-based JWST science. We urge STScI to provide this working group with any information and analysis it needs to evaluate the viability of a formulaic component to the grant award process.

## **7. Proposal Tooling**

We are pleased that STScI has identified the need to lower barriers to the use of the JWST

*Exposure Time Calculator*. As a starting point, we recommend normalizing the terminology used across the APT and ETC boundary for describing detailed instrument configurations, and updating the ETC examples available in JDox. Longer term, the community would benefit from development of an *ETC Lite* along the lines of the present HST and Chandra tools.

## **8. Conclusion**

We look forward to working with NASA and STScI to accelerate the process of discovery with JWST, amplify its strong public impact, and enhance engagement with the global JWST community.

Sincerely,

J.D. Smith, on behalf of the JSTUC