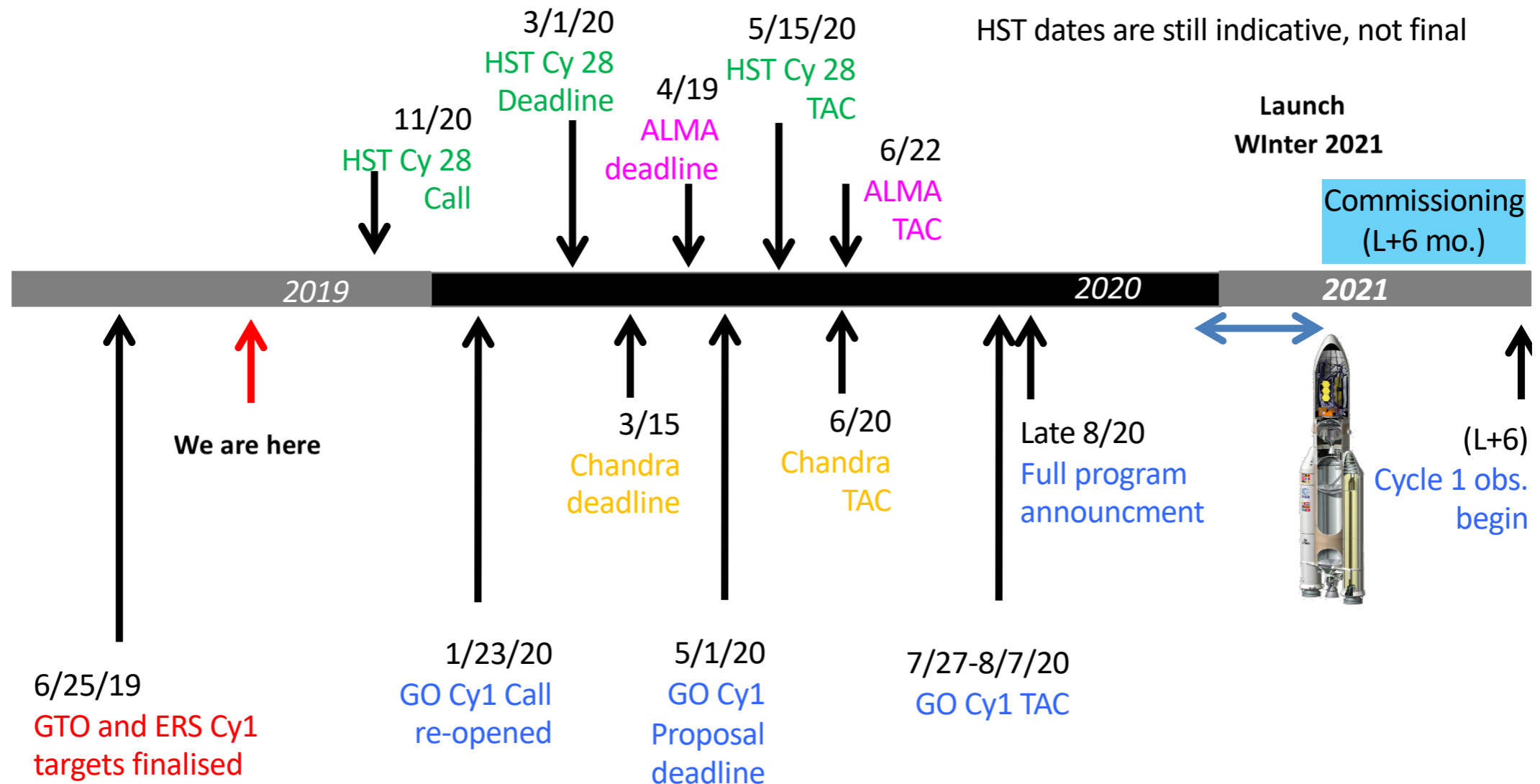




JWST POLICY AND THE CYCLE 1 CALL FOR PROPOSALS

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JWST MASTER CLASS, NOVEMBER 2019

SCIENCE TIMELINE



- ▶ Anticipate receiving 1000 to 1600 proposals, and awarding approximately 300 recommended by the TAC & Panels.
- ▶ Approximately 6000 hours of observing time will be available for the Cycle 1 GO, which include ~2000 hours in oversubscription to maximize scheduling efficiency

PROPOSAL REVIEW PROCESS

- ▶ Anticipate receiving 1000 to 1600 proposals, and awarding approximately 300 recommended by the TAC & Panels.
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SCIENCE TIMELINE

- ▶ NASA paused the JWST proposal submission process on March 27 2018, a few weeks before the initial submission deadline that April. That experience told us that many proposers would have been scrambling to meet the deadline, as most proposals must be “LRP-ready” upon submission, i.e., full specifications of observations, scheduling constraints, and checks for guide-star availability.
- ▶ Given all the deadlines ahead of JWST, we need you to help disseminate the message that JWST is a complex observatory with complex instrumentation, and the community needs to start working on proposals early.

WHERE CAN I FIND INFORMATION?

<http://www.stsci.edu/jwst/science-planning>

Resources for Crafting Your Proposals

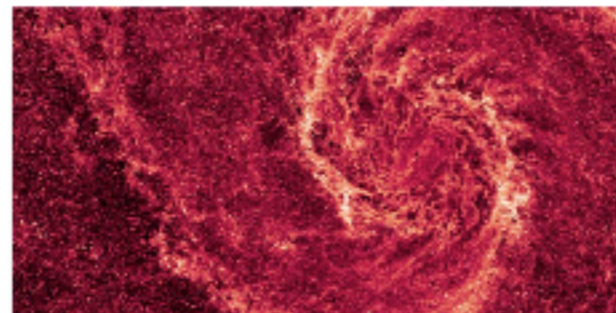
The information provided here in the science planning section can help you learn more about the various JWST programs, including their deadlines and other important dates, and JWST user committees. General information about proposal planning tools is designed to help you prepare your proposals. Links to more technical resources, as well as to simulated data, are also provided.



Calls for Proposals & Policy

Get information on the various programs for JWST Observers

[Learn More](#)



Proposal Planning Toolbox

Access tools and data simulations to help you craft a JWST proposal.

[Learn More](#)



JWST User Committees

Learn about JWST user committees, their membership, and meetings.

[Learn More](#)

WHAT OPPORTUNITIES ARE AVAILABLE IN CYCLE 1?

- ▶ For the Cycle 1 GO/AR Call there will be two overall categories of proposals.
- ▶ New observations are requested through General Observer (GO) proposals.
- ▶ Requests for support for JWST research that does not require new observations are made through Archival Research (AR) proposals.
- ▶ Director's Discretionary proposals will be accepted any time after the start of the science operations of Cycle 1

WHAT OPPORTUNITIES ARE AVAILABLE IN CYCLE 1?

	Size Category	Additional Category	Additional Status	Additional Special Status
General Observer (GO) Program	Small	Joint-HST	Long-Term	Time Constrained
		Calibration		Target of Opportunity
	Medium			Solar System
	Large	Survey	Treasury	Coordinated Parallel
				Pure Parallel
		Pre-imaging Follow-up		

Radio Buttons

Optional Radio Buttons

Optional Check Boxes

Additional Optional Check Boxes

WHAT OPPORTUNITIES ARE AVAILABLE IN CYCLE 1?

	Size Category	Additional Category
Archival Research (AR) Program	Regular	Calibration
		Theory
	Legacy	Community Data Science Software

Radio Buttons

**Optional
Radio Buttons**

GENERAL OBSERVER (GO) OPPORTUNITIES

GO proposals are divvied up by size in the following categories:

- ▶ **Small Proposals** are requests of up to 25 hours. We anticipate approximately 3500 hours for Cycle 1. These proposals are reviewed and recommended by topical panels. Have a default of 12 months of exclusive access rights.
- ▶ **Medium** (25 to 75 hours) are expected to receive ~1500 hours in Cycle 1. These proposals will also be reviewed by topical panels. Default of 12 months of exclusive access.
- ▶ **Large** (>75 hours) are expected to receive approximately 1000 hours (shared with Treasury programs), and will be reviewed by the TAC chairs panel. Have no default exclusive access period, but may request one in the proposal.

GENERAL OBSERVER (GO) OPPORTUNITIES

- ▶ The **Joint JWST-HST** opportunity recognizes the inherent “double jeopardy” in proposing to both reviews to do multi-wavelength work. The JWST TAC review can award up to 150 orbits with HST in Cycle 29 to programs in which JWST observations comprise the primary science, and an ancillary small (< 35 orbits) allocation with HST complements the JWST proposal. The prime JWST observations can be small, medium, or large in size category.
 - ▶ We are developing guidelines for HST/JWST overlap in capabilities.
- ▶ **Survey programs** improve the efficiency of JWST by providing short, schedule-filling observations when gaps are identified. Analogous to the HST-Snapshots, filling targets will be drawn from these lists with no guarantee any will be observed. We anticipate allocating up to 1200 hours of Survey Proposals, of which we expect only about 200 hours (1 in 6) will be executed. Survey programs can be small, medium, or large in size category.

GENERAL OBSERVER (GO) OPPORTUNITIES

- ▶ While STScI will manage calibration data and software for the most important and most used observatory modes, not all JWST configurations will be calibrated. **Calibration Proposals** allows the community to fill this gap. These should be for observations which are of benefit to the community. There is no set allocation, and proposals may be small, medium, or large in size.

GENERAL OBSERVER (GO) OPPORTUNITIES

- ▶ **Treasury Status Programs** are designed to create datasets of lasting value to the mission, by solving multiple scientific problems while simultaneously enabling a variety of compelling investigations. They should also provide enabling scientific products that go beyond what will be produced by the JWST calibration pipeline. No size limit—proposals can be both Large and Treasury. Treasury status programs have no exclusive access periods
- ▶ **Long-Term Status Programs** scientifically require observing time to be split over more than one cycle to accomplish science goals. May request up to 3 cycles—no continuation proposal. No size limit.

GO SPECIAL OBSERVATION TYPES AND RESTRICTIONS

- ▶ Observations of **Solar System objects** is limited due to the limited field of regard. The Sun, Mercury, Venus, Earth, and Moon cannot be observed due to orientation of the sunshade.
- ▶ **Target of Opportunity** observations are of transient phenomena that occur at unexpected times and locations. These programs are activated when alerted by the PI. Due to limits in inserting them into schedule, and effects on efficiency, Cycle 1 will be limited to 8 disruptive (w/ turnaround less than 14 days) ToO triggers. Ultra-disruptive ToOs (w/ less than 3 day turnaround) incur an additional 45 minutes of overhead per activation.

GO SPECIAL OBSERVATION TYPES AND RESTRICTIONS

- ▶ **Time Constrained** observations require execution within a constrained time period, e.g., observations of specific phases of variable stars, exoplanet transits, and some solar system phenomena. **Time Series** observations fall in this category.
- ▶ **Time Critical** observations are those that require an activation at a precise time, specified to within a window of 1 hour. These observations carry an overhead of 60 minutes per activation.

GO SPECIAL OBSERVATION TYPES AND RESTRICTIONS

- ▶ Science parallel observations involve simultaneous operation of two instruments into increase science return
 - ▶ **Coordinated parallels** are from a single program, to achieve complementary observations
 - ▶ **Pure parallels** involve separate, distinct programs, not necessarily with the complementary goals.
- ▶ Coordinated parallels combinations are limited to the following instrument modes in Cycle 1:
 - ▶ NIRCam Imaging + MIRI Imaging
 - ▶ NIRCam Imaging + NIRISS WFSS
 - ▶ MIRI Imaging + NIRISS WFSS
 - ▶ NIRCam Imaging + NIRSS Imaging (NIRCam must be prime)
 - ▶ NIRSpec MOS + NIRCam Imaging (NIRSpec must be prime)
- ▶ Most 2-instrument modes will be available for Pure parallels, but there may be limited time (if any) offered.

ARCHIVAL RESEARCH (AR) PROGRAMS

- ▶ Observations that are no longer in the exclusive access periods are freely available for analysis and are retrieved through MAST.
- ▶ For Cycle 1 this will include DD ERS datasets, which have no exclusive access periods, and some GTO datasets that will be made public.
- ▶ The JWST **Archival Research (AR) Program** can provide financial support for the analysis of such datasets.

ARCHIVAL RESEARCH (AR) PROGRAMS

- ▶ **Regular** AR proposals analyze a specific subset of JWST data to address a specific science issue not addressed by the original program. Awards will be typically less than \$150,000 with a median of \$75,000.
- ▶ **Legacy** AR proposals differ in that they provide a homogeneous set of calibrated data or data products to the scientific community. Award will be a minimum of \$150,000
- ▶ **Calibration** AR proposals may undertake a reanalysis of calibration data, or may develop a specialized software for JWST calibration. These should be consistent with Regular AR proposals in funding size.

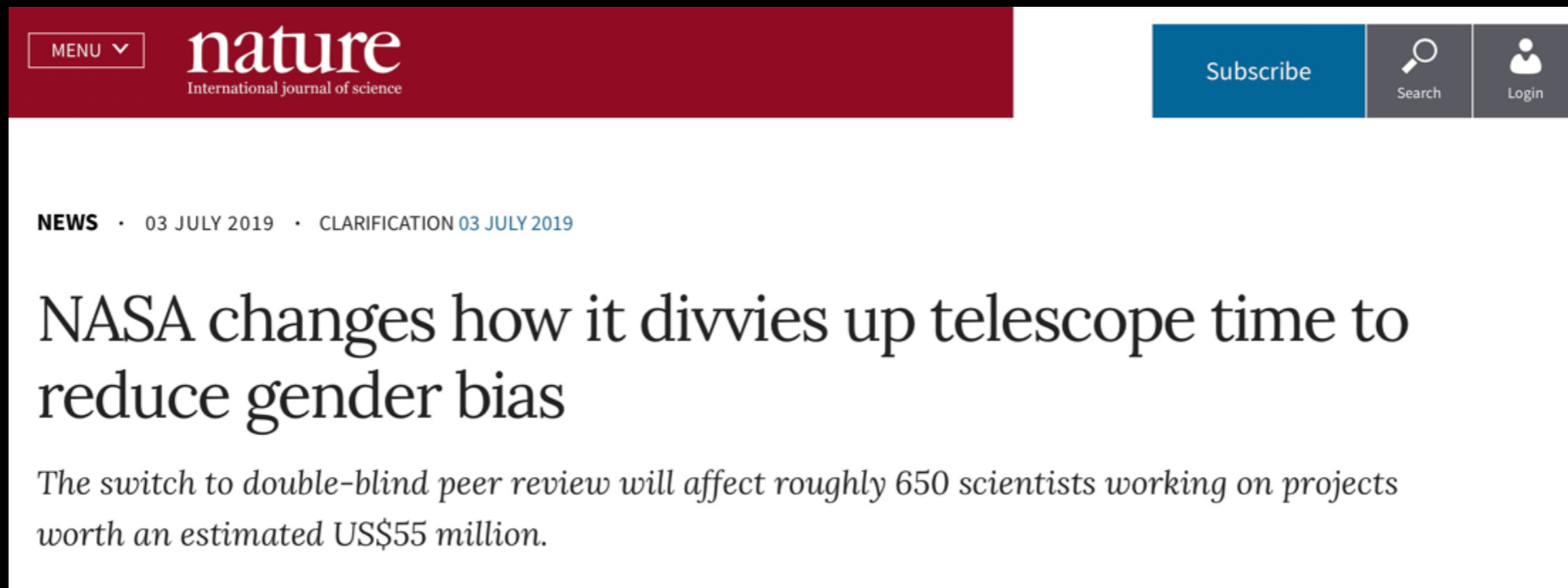
ARCHIVAL RESEARCH (AR) PROGRAMS

- ▶ **Theory** proposals provide financial support for theoretical research that has a lasting benefit for the current or future observational programs with JWST. These should be consistent with the Regular AR funding size.
- ▶ **Community Data Science Software** proposals are an opportunity to obtain financial support for the development of additional data science software products that will be made available to the community for the purposes of analyzing JWST data. There are numerous possibilities for the types of products that could be developed. Examples include: scripts to mitigate artifacts from specific detectors, tools to identify and extract fluxes/magnitudes from multiple sources within a field, utility software for working with JWST data products, or codes to produce background-subtracted spectra or software to interact with JWST archive services

DIRECTOR'S DISCRETIONARY TIME PROPOSALS

- ▶ Nominally, up to 10% of the available JWST time in any cycle may be reserved for **Director's Discretionary (DD)** time allocations. A substantial fraction has already been given to DD ERS programs.
- ▶ DD proposals allow the timely follow-up of transient phenomena or other new discoveries that could not have been plausibly proposed for in response to the Cycle 1 call.
- ▶ DD proposals will be accepted at any time during Cycle 1, post-launch.

DUAL ANONYMOUS PROPOSAL REVIEW



The screenshot shows the top of a Nature news article. The header includes the Nature logo, a 'MENU' dropdown, and navigation buttons for 'Subscribe', 'Search', and 'Login'. The article title is 'NASA changes how it divvies up telescope time to reduce gender bias'. The sub-headline reads: 'The switch to double-blind peer review will affect roughly 650 scientists working on projects worth an estimated US\$55 million.'

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NASA changes how it divvies up telescope time to reduce gender bias

The switch to double-blind peer review will affect roughly 650 scientists working on projects worth an estimated US\$55 million.

- ▶ STScI uses a dual anonymous proposal review for both JWST and HST
- ▶ The identity of proposers are not known to reviewers in the process of scientific ranking.
- ▶ This requires thought in crafting proposals.

PROPOSAL SUBMISSION AND REVIEW PROCESS

- ▶ Proposers craft and submit their proposals with the Astronomers Proposal Tool (APT) to include the technical description of their request (instrument setups, orbit planning and scheduling constraints, etc.) and a separate Scientific Justification and Observation Description (PDF) section.
- ▶ Proposals are distributed to reviewers a few weeks after the proposal deadline for preliminary grading.
 - results of the grading determine what proposals are carried forward to the in-person review (triage).
- ▶ In person review discusses proposals not eliminated in the triage, to arrive at a scientific ranking, recommending awards up to a nominal orbit allocation.
- ▶ The Director makes awards based on these recommendations.

PROPOSAL SUBMISSION AND REVIEW PROCESS

- ▶ Proposers craft their PDFs (scientific justification and description of observations) to be anonymous.
 - Exclude names and affiliations of the proposing team, including in figures and references to personal websites.
 - Do not claim ownership of past work, e.g., “my successful HST program (GO-#####)...” or “Our analysis shown in Strolger et al. 2012...”
 - Rather, cite references in passive third person, e.g., “The HST program GO-##### did...”, or “Analysis shown by Strolger et al. 2012...”. This includes references to proprietary data and software.
 - Do describe the work proposed, e.g., “We propose to do the following...” or “We will measure the effects of...”

Proposers **can** provide reviewers with all the relevant information

COMPLIANCE WITH ANONYMIZING GUIDELINES

- ▶ Proposals that have egregiously violated these rules should have already been brought to the attention of the SPG and flagged for disqualification prior to the meeting.
- ▶ Less serious cases (a stray “we” or “our”) should be also be pointed out. Panelists should attempt to ignore these less flagrant errors whenever possible, and keep focused on the scientific merits.
- ▶ Cases that are too difficult to ignore (levelers could be important in making that decision), or not sufficiently anonymized, should be commented on in the recommendations to the Director, and may be disqualified.
- ▶ Panelists should provide specific feedback in their comments to proposers if a proposal was not sufficiently made anonymous.

PROPOSAL SUBMISSION AND REVIEW PROCESS

- ▶ Proposers must submit a **Team Expertise and Background** exposition with their Phase I submission. This section is separated from the main body of the proposal, not anonymous, and will be used in a final stage of the review after the scientific ranking is completed.
- ▶ Proposers are no longer required to submit detailed Management Plans for Large, Treasury, or Archival programs at Phase I. These will be required and reviewed in budget proposal process.

CONSIDERATIONS FOR THE PEER REVIEW

- ▶ **Consider proposals solely on the scientific merit of what's proposed.**
- ▶ Do not spend any time attempting to identify the PI or the team. Even if you think you know, discuss the science and not the people.
- ▶ In the panel discussions leading up to the scientific ranking, do not make guesses on identities, insinuate the likely identities, or instigate discussion on a possible team's past work.
 - **Levelers** will be present in each room to help insure this doesn't happen.
- ▶ Keep in mind that language can be very important. Utilize the appropriately neutral pronouns (e.g., "what they propose", or "the team has evaluated data from a C25 program").

CONSIDERATIONS FOR THE PEER REVIEW

- ▶ Proposals that have not been sufficiently anonymized should be considered non-compliant and flagged for possible rejection.
- ▶ Proposers will have done their job if it is reasonably ambiguous who submitted the proposal.
- ▶ However, as this is new, and there may be an occasional “slip-up”. If these can be ignored and not impact the anonymity of the review or discussion, then do so. However, if the mistakenly revealed identity simply cannot be ignored, the proposal should be flagged.
 - Science Policy Group personnel should be notified (at any point in the review process) if a proposal is not adequately anonymized
 - **Levelers** will be present in each discussion room and can help with that decision.

AND A FINAL CHECK

- ▶ HST time is openly available to any scientists who presents a highly compelling scientific case. However that time is a highly valued resource that must be used responsibly.
- ▶ After the scientific ranking is complete, the panel be given the list of investigators (alphabetized) and the **Team Expertise and Background** sections for those proposals above their nominal orbit-allocation line.
- ▶ Panelists should raise specific proposals for discussion. If there are clear, compelling deficiencies in the expertise required to see through the goals of the proposal, panel must decide by consensus to flag the submission for disqualification, and provide a detailed justification in their comments to the Director.

AND A FINAL CHECK

- ▶ The criteria for sufficient expertise is left to the panels in order to evaluate cases as necessary (e.g., particularly difficult datasets, difficult analyses, or programs of exceptionally high risk).
- ▶ General inexperience with HST data should not, in itself, be a disqualifier. Nor should the failure to publish past datasets, unless there's an extraordinary issue with the team's publication history.
- ▶ **Proposals can only be eliminated in this final review. It will not be used to re-evaluate or upgrade programs below the nominal allocation line.**
- ▶ If a panel should choose to essentially disqualify a proposal after the scientific ranking, that panel effectively loses those orbits.
- ▶ Comments to the proposers should be based on scientific discussion, i.e., the discussion leading to the scientific ranking. It should not include comments on the team or their expertise.

PROPOSAL REVIEW PROCESS

- ▶ The time allocation committee (TAC) review will span two weeks
 - ▶ Week 1: "Galactic" topics; Week 2: "Extragalactic"
 - ▶ ~10 topical panels will meet each week, Monday through mid-day Wednesday, to review GO small and medium, and AR proposals.
 - ▶ Panel chairs will review Large, Treasury, and AR Legacy proposals mid-Wednesday through Friday
- ▶ Recommendations will be approved at the Director's review, approximately 1 to 2 weeks after the Extragalactic TAC.
- ▶ Full program to be announced in late-August 2020
- ▶ All proposals require a technical review. Most reviews will take place in late-2020 to prepare the Cycle 1 Long Range Plan.

WHAT HAPPENS IF LAUNCH SLIPS?

- ▶ The JWST Space Telescope Users Committee (JSTUC) recommended the following:

“With the new Cycle 1 call scheduled for in January 2020, we strongly recommend that the call not be cancelled once it is opened. Although there is no indication that any further delay in launch is expected, the potential science impact of such a slip could be mitigated by advising proposers for Cycle 1 GO time to discuss how their science would be impacted by a delay in observations. Impact could be further mitigated by allowing a mechanism for PIs to change targets in the event of a delayed observing window.”