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EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

Implementing the WG Recommendations: Grant Funding Expectations for Cycle 4

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Background

- The Grants Allocation Working Group has recommended:
 - Providing the community with guidance to set expectations on funding allocations
 - Adopting a hybrid review process with formula+FRC
 - “In-guide” requests are assessed for scope and allowability
 - Overguide requests to be reviewed by the FRC
 - Large programs (>\$400K) and AR programs reviewed by the FRC
 - Simplifying the budget submission process
- Here we summarise
 - Guidance for the community on likely funding levels
 - Likely process for FRC budget reviews
 - With contingency
 - Budget submission simplifications
 - Challenges
 - Likely timeline



Reference: Grant funding in JWST Cycle 3

- NASA allocated \$60 million dollars for grant funding
 - Additional \$2 million available in carry over from Cycle 2
- The community requested \$88,942,561
- All proposals were reviewed by the FRC, with the following allocations approved:
 - 206 GO programs received a total of \$47,770,000 (~80%)
 - 37 AR programs received a total of \$8,994,000 (~15%)
 - The average funding level for regular AR and Theory programs was \$185,000
 - The average funding level for Legacy AR programs was \$900,000
 - The residual 5% Cycle 3 funding was allocated to DD programs and joint observatory programs
- All Cycle 3 funding, plus Cycle 2 carryover, has been allocated to Cycle 3 science programs



Cycle 4 program – program numbers

- The Cycle 4 time allocation is 8500 hours
 - This is a 55% increase on the 5500 hours available in Cycle 3
- We therefore anticipate
 - ~320 GO programs
 - ~55 AR programs
 - i.e. ~375 total programs
- Grant funding will remain fixed at \$60 million in Cycle 4
- We propose to provide funding for all programs with US investigators
 - However, we will not be able to provide the same level of funding as in Cycle 3
 - This will impact the science goals that are feasible to support for each program
 - This should factor into community expectations



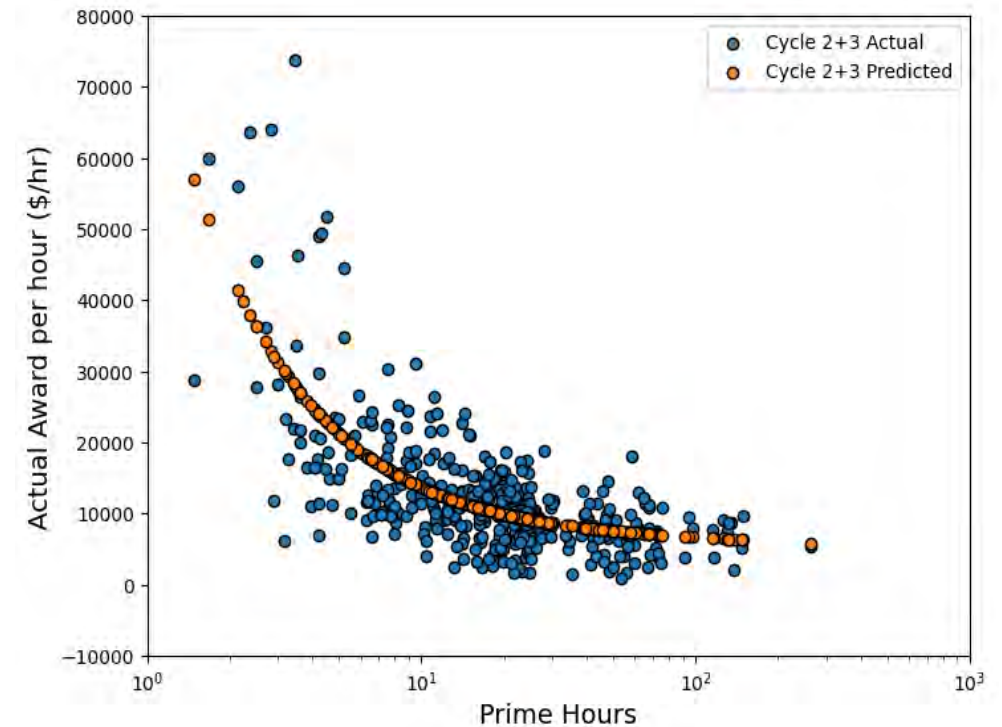
Cycle 4 budget process – baseline plan

- Each PI will be given a target maximum allocation for their program in the initial budget notification letter;
- All proposers will submit a budget request through the standard interface.
 - That's the law
- Proposals that request less than the target maximum allocation, up to \$400,000, will be subject to a scope check by STScI staff, but will not be reviewed by the Financial Review Committee (FRC). Proposals that are flagged as potentially out of scope will be passed on the FRC for further scrutiny.
- Proposals that request more than the target maximum allocation or proposals that request more than \$400,000 will be reviewed directly by the FRC.
 - The FRC will also review all AR programs.
 - A leveler will attend the FRC meeting to monitor the conversation
- Funding for Survey programs and Pure Parallel Programs will be capped.



Finding a formula – guidance from Cycle 3

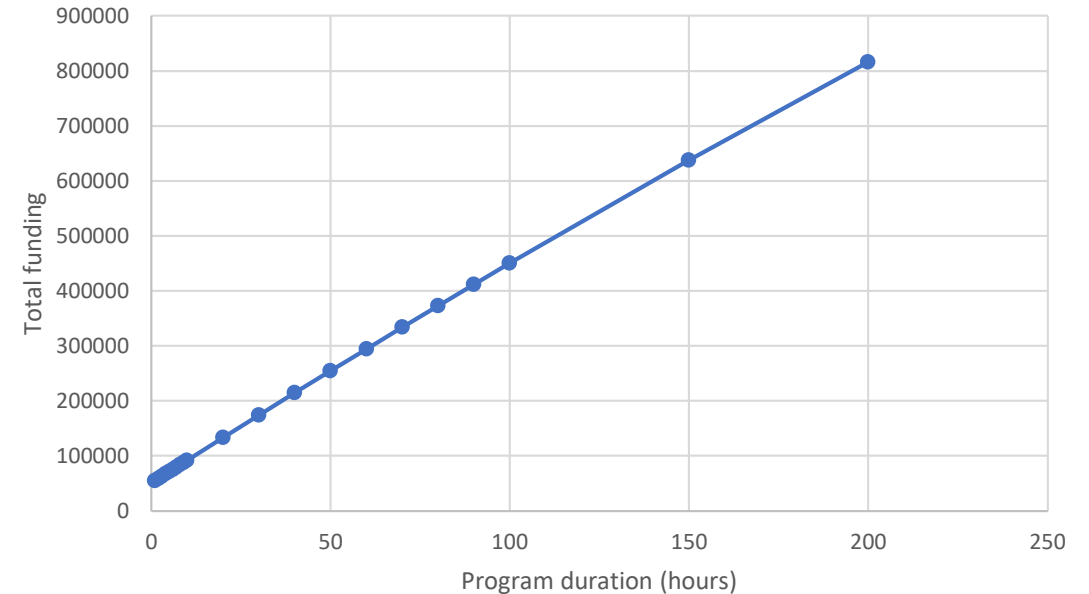
- The Grants WG determined that program size was the major factor that affected funding levels for Cycle 2 & 3 programs
 - With substantial scatter
- Best fit formula
 - $\$ = 75,300 + 6220 \cdot \text{hrs} - 2.52 \cdot \text{hrs} \cdot \text{hrs}$
 - Base value for all programs
 - Progressive scaling with size
 - Same methodology as applied to HST Cy 32
 - \$/hour profile matches HST \$/orbit from past cycles
- We propose to use that approach for Cycle 4
 - The primary purpose is to set expectations
 - Scale the Cy 3 formula to give estimates for Cy 4
 - Final guidance will depend on the mix of programs selected for execution





Cycle 4 – Setting expectations

- Following the Cycle 3 methodology, we adjust the formula:
 - Scaling by 5500/8500 or ~65%
- $GO - \$ \leq 50,450 + 4170 * hrs - 1.7 * hrs * hrs$
- Regular AR - $\$ \leq 124,000$
- Legacy AR - - $\$ \leq 600,000$
- Survey programs - $\$ \leq 100,000$
- Pure Parallel programs - $\$ \leq 300,000$



This is a pre-cycle estimate:

- final numbers will depend on the composition of the Cy4 science program.

Important takeaway: It will not be possible to fund Cy 4 JWST programs at a level that can support all possible scientific objectives

- This is likely true for all programs, regardless of scale



What breaks the hybrid process?

- The underlying assumption is that the overwhelming majority of proposers will hue to the guidance
 - The FRC will be expected to review ~100 programs
- If that assumption is not valid then
 - The FRC may be overwhelmed by the number of proposals forwarded for review
 - If the requests substantially exceed the available funding, the FRC is poorly placed to make adjustments
 - In general, the FRC is a good mechanism to verify work levels
 - It's not a good mechanism to apply substantive cuts that go below verifiable work levels
 - JWST grant funding is capped and there are no reserves even for well justified increases
 - If requests for additional funds are declined, PIs will be required to do more work to adjust budgets to match the original target maximum allocation
- Bottom line, if a substantial number of Cy4 programs exceed the target maximum value, the FRC and the community will be overworked to no purpose

Given the circumstances, all Cy4 budget requests may be capped at the assigned target maximum value without possibility of appeal.

STScI will inform the community of the final decision in a timely manner.



Budget submission simplifications

- Contribution table only includes co-Is with 5% or more
- Budget Narratives
 - Over-arching Program Narrative by PI limited to 5 pages for \leq \$400K and 7 pages for larger
 - The narrative should summarise the overall work plan for the program, covering substantive contributions by all co-Is or associated personnel
 - This submission must provide sufficient information for the scope & allowability check
 - Single page summary submitted by each co-I (for compliance)
 - Narrative must be limited to scope and work, NOT science justification
- GRA is also working to simplify the information required for the Program Management Plan
 - Currently plans are asked to address items listed in 12 separate bullets
 - GRA is looking to consolidate that list while still ensuring that the plans are compliant with federal requirements



Communications

- STScI will announce the revised budget procedures via JWSTObserver
 - Full information will be provided on Grants web pages
 - Notification at both the JWST and STScI Town Halls at the AAS & at the STScI booth
- All PIs will be informed of the process in Grant notification letters
- As usual, Grants Administration will hold a webinar to advise successful proposers of the revised system



Challenges

- Updates to STGMS software
 - The system will need to be modified to enable (semi-?) automatic generation of target maximum allocations (“offers”) for the initial budget notification letters
 - The system will also need modification to enable automated comparison of the “offer” against the “request”
 - This may be deferred to Cycle 5
- STScI staff workload
 - Hybrid approach is most labour intensive of FRC-only, formula-only and hybrid
 - GRA and SMO currently lack resources to cover the scope and compliance review
 - Assume ~210 proposals, 20-30 minutes per proposal = ~70-105 hours work
 - Also leveler for FRC meeting
 - GRA support for the community for HST, JWST & NHFP will be curtailed during the budget reviews
 - Some aspects of the new process may require manual implementation for Cycle 4
 - These issues will likely affect the timeline for finalizing and approving Cycle 4 budgets
- Community Workload
 - The hybrid approach may reduce (depending on compliance with “offers”) but will not eliminate the need for budget revisions



Likely Timeline

JWST Cy4 TAC	February 3 – 13
Contract Value from JWSTP	mid-February
DO Review	February 26
JW4 notifications	early March 2025
Budget notifications (w/amts)	early-mid March
Webinar for proposers	mid March
JW4 Budget deadline	April 17
GRA compliance & cost reviews	April 18 – mid-June
STScI assessment of total budget request & utility of appeal process	April 24
Conflicts, leveling, and assignments for Internal Panel & FRC. Supporting documentation	May 5 - 23
Training for Internal Review Panel	wk of May 12
Budgets to Internal Review Panel & FRC	May 26
Budget scope checks	By mid-June (tbc)
Flagged budgets to FRC	June 19
FRC review	July 8 - 11
Director's Review	Mid-August

- The Cycle 4 hybrid process will include several manual steps and therefore will require more time for budget prep prior to passing on the FRC/scope check
- Programs with out of scope or unallowable budget items will need to submit revised budgets



Back-up Slides



Budget flow chart

