



**STScI** | SPACE TELESCOPE  
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EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

# Policy Changes for Director's Discretionary Programs

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December 2, 2025



## Overview of DD Programs

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- The Director's Discretionary (DD) call provides an opportunity to submit proposals outside of the main cycle call for proposals for cases of **compelling scientific urgency**.
- **Time-Critical:** for follow up of newly-discovered unexpected transient phenomena; or when developments since the last main cycle call make a time-critical observation necessary.
- **Discovery:** for timely follow-up of new discoveries that provide a critical link in the understanding of phenomena that would have significant impact on the broader field.



## Why reflect on the DD policies?

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- **HST** has had Time-Critical DDs for a long time. Discovery DDs were introduced when we discontinued Mid-Cycle programs.
- **JWST** has had Time-Critical DDs since shortly after launch and Discovery DDs for two years.
- **So how is it going? What we have learned?**
- In particular, we have seen a surge in JWST DD submissions that is putting **significant strain** on the community and the **diluting the focus** of the DD opportunity as a whole. These policy changes seek to address these issue.



# How are DDs reviewed?

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- Preliminary look at the proposal for policy compliance and showstoppers for scheduling
  - Contact planning and scheduling team for input if needed
- Identify experts in the field and send for peer review:
  - Each proposal is reviewed ideally by **4 in-field experts**
  - Reviewers must **not be conflicted** (which can sometimes be challenging!)
  - If a reviewer declines, we need to invite another, but sometimes it's hard to recruit and we move on with 3 reviews, or even 2 in extreme cases
  - Often reviewers agree to review but do not send a review
  - Often invited reviewers do not respond to the request
- Compile and synthesise the responses of the reviewers, prepare a brief report
- Discuss within the DD team to reach a consensus recommendation
  - Contact planning and scheduling for input if needed
- Submit recommendation to Director's Office for approval



## By the Numbers — 2025 (to November 30)

17 in November - a record-breaking month

- **JWST:**
  - **Time-Critical:** 53 proposals (28 approved, 19 rejected, 2 disqualified, 4 pending)
  - **Discovery:** 32 proposals (8 approved, 20 rejected, 4 disqualified, 0 pending)
  - **Reviewers:** 85 proposals → target 340 reviewers with 4 reviewers per proposal (for comparison, ~550 reviewers for Cycle 5 TAC)
- **HST:**
  - *Discovery DDs permitted, but flag in APT pending, so no breakdown*
  - **Total:** 25 proposals (9 approved, 16 rejected, 0 pending)
  - **Reviewers:** 25 proposals → target 100 reviewers with 4 reviewers per proposal



# Review Challenges

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- DDs are **time-intensive for the community** to review and for STScI staff to coordinate.
- Finding so many reviewers is **challenging** and the workload for reviewers is **high**. Although the overall community is large, **the community with expertise in areas that lend themselves to DD proposals is much smaller**.
- This is time **very** well spent to enable exciting, time-critical and accelerating science. But community and staff time is a finite resource, and should not be spent on unproductive activities.
- Proposals almost always look more attractive when they are viewed in isolation as opposed to being matched against other proposals in the same science area. DD time **is** capped, but this isn't readily evident to reviewers when asked to review a single program.
- These run alongside the standard annual reviews — increases burden on reviewers.

A cosmic background image featuring a dark space filled with numerous stars of various colors (blue, orange, white) and several spiral galaxies. A prominent bright blue and white starburst is visible on the right side, and a bright orange and red starburst is on the left. The overall scene is a deep space view.

**Policy Change 1:**  
**Discontinuing small-scale Pilot or Test  
observations as DDs**



# Discovery DD Programs

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## From the Call for DD Proposals:

*Discovery Director's Discretionary Time proposals are suitable for observations of compelling scientific urgency that significantly accelerate scientific discovery. Examples of potentially appropriate Discovery DD time requests include:*

- ***The timely follow-up of new discoveries that provide a critical link in the understanding of phenomena that would have significant impact on the broader field; (A) “Accelerate”***
- ***Small-scale pilot or test observations that would have an extraordinary impact on the broader field if they were successful. (B) “Pilot-Test”***

*Examples of observations that are not suitable for Discovery DD time requests include:*

- *Observations that are a subset of larger observing programs planned for future cycles; (C)*
- *Observations that are requested in order to prepare for more / follow-up observations in future cycles; (D)*
- *Observations that do not have significantly compelling scientific urgency, and would therefore be more appropriately evaluated by the TAC review process during a standard observing cycle. (E)*



## Success Rates in 2025 (to November 30)

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- **HST Combined (mostly Time-Critical):** 36% successful
- **JWST Time-Critical:** 57% successful
- **JWST Discovery:** 25% successful
  
- **Discovery** subdivided (based on STScI assessment, not PIs):
  - **Accelerate:** 33% successful
  - **Pilot-Test:** 13% successful
  
- **Accelerate** programs are **accepted at more than twice the rate** of Pilot-Test programs. The Accelerate programs have a success rate closer to the Time-Critical DDs. The **Pilot-Test** success rate is much **lower**.



## Policy Change: Discontinuing Small Scale Pilot and Test Programs

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- **Reminder:** DDs are **time-consuming** to review. Community effort is a finite resource, and should not be spent on unproductive activities.
- Given the low success rate, we believe that category **(B)** is not meeting the objectives of the Discovery DD opportunity and is not productive. **We will be discontinuing small-scale pilot or test programs as eligible for submission in response to both the JWST and HST DD Calls.**
- We hope that this will refocus the intent of the Discovery DDs to maximise their scientific impact, while reducing the workload on the reviewers in the scientific community and on our staff.

A cosmic background image featuring a dark space filled with numerous stars of various colors (blue, orange, white) and several spiral galaxies. A prominent bright blue star with a starburst effect is located on the right side. A large, multi-colored nebula or starburst is visible on the left side, with colors ranging from blue to red and orange.

**Policy Change 2:  
In-House Urgency Review**



## Rejections of DD Programs

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- **Time-Critical DDs** are rejected for a variety of reasons, most often due to concerns about whether the observations could achieve the scientific goals or the feasibility of the proposed work.
- The majority of **rejected Discovery DDs** (13 of 15, includes “accelerate” and “pilot”) are deemed to be **strong** programs that are rejected because they do **not** make a strong case for the **scientific urgency** of the observations, and the reviewers believe they would be more appropriate submitted in response to the next main Call for Proposals.



# Example Reviews of Discovery DD Programs

- *“... the actual immediate scientific impact of the putative confirmation of this LRD is not so compelling and urgent to justify a DDT, it could be achieved in an ordinary GO proposal.”*
- *“The case for DDT time is not well justified. The argument provided (not wishing to wait to compete in the regular GO round) could be applied to every JWST proposal. DDT time is for urgent observations that can only be achieved with an upcoming DDT proposal. There is no intrinsic reason why the proposal can’t obtain the data through the regular GO round.”*
- *“This is an interesting object, but I am not convinced that DD time should be invested in it. ... it is not entirely convincing that this is a unique object nor one that cannot wait for follow up in the normal TAC cycle.”*
- *“The observation can easily be proposed through the standard TAC process. DDT merely gets it faster and hedges against high proposal pressure. As such, I think my verdict is that I would let it proceed through the normal TAC process...”*
- *“I do not agree with the proposers view of the urgency of this spectroscopic confirmation for guiding the community’s direction for the Cycle 5 call for proposals.”*
- *“Justification for this being a DDT request, rather than a regular proposal, was not compelling.”*



# Review of DD Proposals

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- At present, all DDs are sent for **peer review** by experts in the field.
  - **Reminder:** we aim for 4 reviewers per proposal
  - **Reminder:** at 81 proposals for JWST → target 324 reviewers
- Given the high volume of JWST DDs of both types, this policy is becoming **challenging**.
  - **Reminder:** DDs are **time-intensive for the community** to review and finding reviewers is difficult.
- **Reviewers are giving us very clear feedback that a lot of Discovery DD proposals do not clear the bar for urgency.**



# Policy Change: Scientific Urgency Review of DD Programs

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- **We will be performing an in-house review of the scientific urgency of submitted DD proposals.**
- This review will be performed by a team of scientists with a range of scientific expertise. The team will discuss the proposal and reach a consensus about whether the proposal is scientifically urgent and if it should be sent for review.
  - In cases where the scientific urgency is not clear or there is disagreement, the proposal will be sent for peer review.
- If the decision is to review, the proposal will follow the usual process.
- If the decision is **not** to review, a summary of the decision would be sent to the **Director's Office for concurrence**, then the proposal would be **rejected without review**.
- We hope that this will refocus the intent of the DDs to maximise their scientific impact, while reducing the workload on the reviewers in the scientific community and on our staff.

The background of the slide is a deep space image featuring a variety of celestial objects. In the upper left, there is a prominent, bright blue and white nebula or star-forming region. Scattered throughout the dark field are numerous galaxies, including several bright yellow and orange elliptical galaxies, and many smaller, distant stars and galaxy clusters. The overall color palette is dominated by the dark blues and blacks of space, punctuated by the warm colors of galaxies and the cool colors of the nebula.

**Policy Change 3:**  
**Disallowing Pure Parallels and Survey/  
Snapshots as DDs**



# Overview of DD Programs (Again)

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- The Director's Discretionary (DD) call provides an opportunity to submit proposals outside of the main cycle call for proposals for cases of compelling scientific urgency. **DD proposals are intended to be small in scope and time request.**
  - **Time-Critical:** for follow up of newly-discovered unexpected transient phenomena; or when developments since the last main cycle call make a time-critical observation necessary.
    - These are typically <15h for JWST and <5 orbits for HST.
  - **Discovery:** for timely follow-up of new discoveries that provide a critical link in the understanding of phenomena that would have significant impact on the broader field, particularly those important for planning future observations with major facilities; or for small-scale pilot or test observations that would have an extraordinary impact on the broader field if they were successful.
    - These are typically <10 hours for JWST and <10 orbits for HST.
- **For both categories, the programs centre on specific targets and observations that must be completed in a specific, constrained timeframe.**



# Overview of Pure Parallel & Survey/SNAP Programs

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- **Pure Parallel (PP) Programs:**
  - Provide opportunities to use instruments other than the primary instrument on observations from unrelated proposals.
  - Can be of any size, but they are typically very large (hundreds of JWST hours or HST orbits).
  - The number of pure parallel opportunities executed and the specific opportunities executed cannot be guaranteed.
- **Survey (JWST)/Snapshot (SNAP, HST) programs:**
  - Fill scheduling gaps, simple with minimal constraints, submitted as a pool of potential targets.
  - Target pools can be any size, but owing to their nature the target pools are typically large (many tens or hundreds of hours/orbits).
  - STScI explicitly does not guarantee any specific completion fraction or guarantee which targets will be observed. Typically, the completion rate is ~20% for Surveys on JWST and ~33% for SNAPs on HST.
- Both types are typically well-suited to **large survey-style investigations** where the science goals can be achieved with **any of a set of observations**, and are **ill-suited to investigations where specific targets or a specific completion rate is required**.



# Policy Change: Disallowing PPs and Surveys/SNAPs as DDs

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- **DD Programs:**
  - DD proposals are intended to be **small** in scope and time request.
  - For both categories, the programs centre on **specific targets** and observations that must be completed in a **specific, constrained timeframe**.
- **Pure Parallels & Surveys:**
  - Typical **very large** set of opportunities/target pools.
  - Well-suited to **large survey-style investigations** where the science goals can be achieved with **any of a set of observations**, and are **ill-suited to investigations where specific targets or a specific completion rate is required**.
- **These types of programs are incompatible in size, purpose and goals, and we will be explicitly disallowing Pure Parallels and Surveys from submission as DD programs.**