

A photograph of the Hubble Space Telescope in orbit above Earth. The telescope's large solar panel array is visible on the left, and the main body of the telescope is on the right. The Earth's surface with white clouds is visible in the background against a dark blue sky. The sun is shining brightly from the upper right, creating a lens flare effect.

TAC – May 11, 2020

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# Cycle 28 Orientation

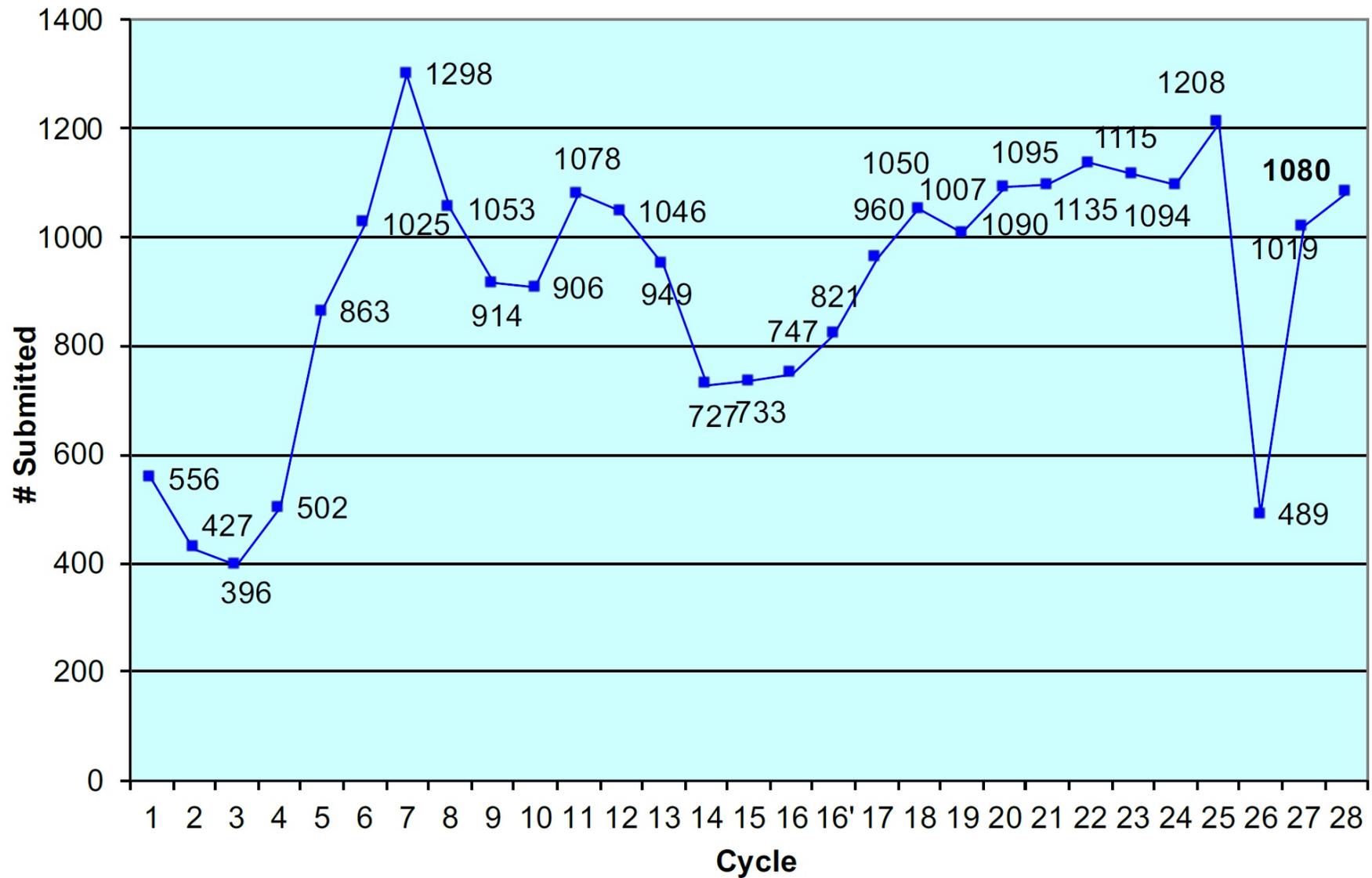
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HST TAC Process

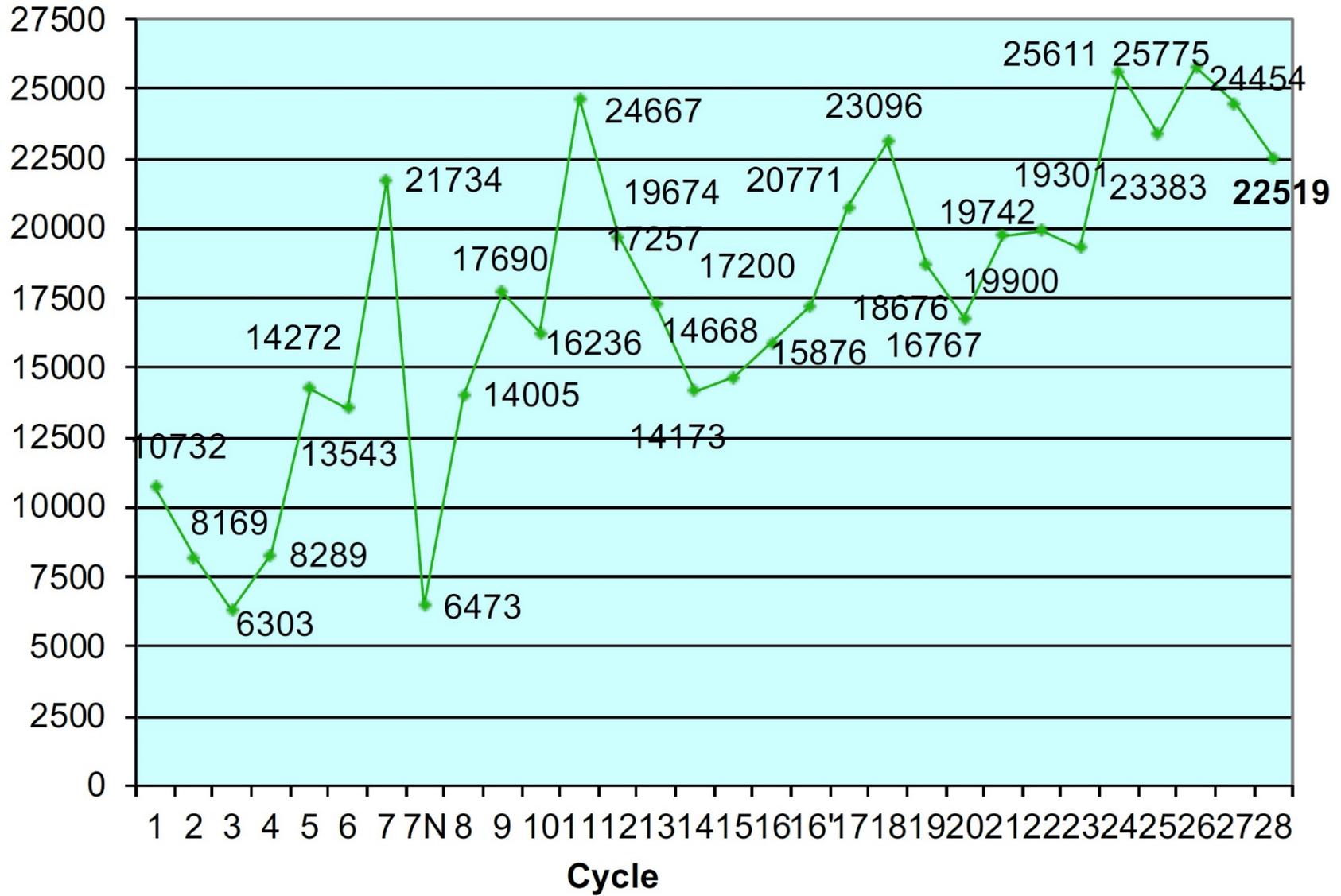
# Phase I Schedule for Cycle 28

- **December 2** CP release
- **March 6** Phase I deadline
- **March 30** Download available for panelists
- **April 29** Reviews and grades due
- **May 11 - 15** C28 virtual TAC meets
- **May 21** Director's Review
- **End of May** Notifications

# Proposals by Cycle



# Orbits by Cycle



# Summary Statistics

- 1080 Proposals in Cycle 28 (1019 in Cycle 27)
  - 823 NASA, 213 ESA, 44 Other Countries
- 865 (838) GO for 22,519 (24,454) orbits
  - 22 (26) Treasury for 2886 (3428) orbits
  - 39 (54) Large for 4033 (5147) orbits
  - 130 (167) Medium for 6259 (8025) orbits
- 41 (32) SNAPSHOT proposals for 6160 (3622) targets
- 174 (172) Archival proposals
- 8 (9) Pure Parallel programs for 2195 (2146) orbits

# Revised TAC Process in Cycle 28 (1)

- Hybrid approach: dividing proposals between external review and virtual discussion.
- **External panelists** provide the assessment and grading of a subset of Small GO proposals (1 – 15 orbits) including Snapshot and Archival proposals.
  - **These proposals are ranked using the grades of the external panelists.**
- **Virtual panels** review the remaining Small GO, Medium, Archival Legacy, Large and Treasury proposals. Group panelists interact virtually by video-conference.
  - **These proposals are ranked after the discussion and grading in the group panels.**
- Exception – all Solar System proposals will be reviewed by the virtual group panel (due to the small proposal pool)
- **You are an external panelist.**

# Revised Process (2)

Proposals reviewed by external panelists:

- Proposals are categorized by science topic and sent to seven 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
  - Orbit allocation by topic based on proposal/orbit pressure
- The highest ranked proposals are marked as recommended for acceptance
  - “Recommended” proposals made available to panel chairs 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.

# Policy Issues

# Conflict of Interest

Our goal is informed, unbiased discussion of each proposal

- Reviewers should have neither direct nor indirect interest vested in the outcome of the review
- Reviewers assigned to the proposal should 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
- Do not try to guess the names of the investigators on the proposal.
- In almost all cases conflicts are already recorded in our database.
- Additional conflicts may be flagged during the review.

# General guidance for Cycle 28

- Panel members should assume that all instruments will be performing nominally in Cycle 28
- Panel members should not (yet) make comparisons with JWST capabilities
- Panel members should not modify proposals unless there is a very strong scientific justification
- Panel members should *not* reject proposals based on technical considerations
  - All proposals are reviewed by STScI after Phase I. If technical questions arise during the panel review, please summon a relevant expert.
- Panel members should *not* take scheduling considerations into account in grading proposals.

**Concentrate on recommending the best science..**

**...but recognize that it may not be possible to schedule some highly ranked programs**

# Panel Procedures

# Panel Distribution in Cycle 28

- Eight panels with these science categories:
  - Solar System: all bodies in our solar system (*virtual panel only*)
  - Planets and Planet Formation: exoplanets, planet formation, debris disks
  - Stellar Physics: cool+hot stars, late stages, low-mass stars, star formation
  - Stellar Populations: Galactic structure, star clusters, resolved stellar populations in galaxies, ISM in local galaxies
  - Galaxies: stellar content of galaxies, ISM in galaxies, dynamics, galaxy evolution
  - Circum- and Intergalactic Medium: outflows, galaxy halos, IGM, QSO absorption lines
  - Supermassive Black Holes: AGN, QSO, SMBH, jets, galaxy/BH co-evolution
  - Large-scale Structure: cosmology, lensing, galaxy clusters, surveys, deep fields

# Review Criteria

- The scientific merit of the program and its potential contribution to the advancement of scientific knowledge
- The program's importance to astronomy in general
- The extent to which the proposal demonstrates sufficient understanding to assure a thorough analysis of the data
- A demonstration that the unique capabilities of HST are required to achieve the science goals of the program.

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

# Panel Review: overview

- Each panel hosting individual panelists has a specific allocation of **orbits for Small proposals**.
- Snapshot & Archive allocations are drawn from a central pool.
- Individual panelists review and grade the proposals assigned to them.
- STScI produces a ranked list of all programs in each panel based on the received grades.
- Small proposals on the rank-ordered list are recommended for acceptance until the cumulative orbit request exceeds the allocation.
- Archival and Snapshot proposals ranked within the list of recommended Small proposals are recommended for acceptance as well.

# ULLYSES: Hubble UV Legacy Library of Young Stars as Essential Standards

- Up to 1000 orbits of Director's Discretionary time made available for an HST UV Legacy program on star formation and associated stellar physics.
- The program details have been finalized (including observing modes and targets).
- This call gives an opportunity to the community to propose complementary GO and AR programs, particularly pure parallel programs.
- As always, judge on the science – no special treatment of ULLYSES-related programs (positive or negative).

# Grading process

- Keep all proposal types (Small/Snapshot/Archival) together.
- Do not use different grading scales for different proposal types.
- This ensures that the grading is done in a uniform way.

# Confidentiality

- Remember that you should not discuss the contents of the proposals – now, or in the future.

# Orbit Allocations

# Cycle 28 Allocations

- 2700 orbits for GO (Large + Medium + Small)
  - 1400 for Small proposals (1 – 34 orbits)
  - 700 for Medium proposals (35 – 74 orbits)
  - 600 for Large/Treasury programs (TAC)
- TAC may recommend adjustments to the Small/Medium/Large split
- Orbit oversubscription is 5.4×, 11.5× and 11.5× for Small, Medium, and TAC, respectively.
- SNAP: ~ 1000 targets available across panels
  - (~6.2× oversubscription)
- AR: no budget required in Phase 1

# After the TAC

- As usual, we welcome feedback on the TAC process
  - Can we improve it?
  - What were the main shortcomings?
  - Can we make it “faster”, “cheaper”, “better”?
- We will send email to all TAC and Panel members requesting your views of the process

# THANK YOU!!!!

- The TAC review is supported by hundreds of panelists worldwide
- Including panelists from ESA member states
- Continuing partnership with ESA

# Backup

# Types of Proposals

Standard proposals	
GO	Small/Joint (1-34 orbits); Medium (35-74); Large ( $\geq 75$ )
AR	Legacy
Special categories	
Long-term	allocate time in C28 – C30 if justified <u>scientifically</u>
ToO	ultra-fast (<2 d) ToO: up to 1 activation allowed; 2-21 d ToOs: 8 activations; >21 d: no limit
CVZ	no penalty to observer if executed as non-CVZ
Calibrations	Calibrate specific modes of HST observation
Reg. HST-Chandra	< 75 HST, up to 400 ksec Chandra, < 15% time-constrained
Large HST-Chandra	$\geq 75$ HST, up to 600 ksec Chandra, < 15% time-constrained
HST-XMM	Up to 150 ksec
HST-NOAO	Up to 15-20 nights available on most telescopes
HST-NRAO	Up to 3% of the available time (North America)
HST-TESS	Up to 100 TESS targets

# Close collaborators

## Who qualifies as a close collaborator?

- **Active** collaborator on a current research program (including Cycle 28 HST proposals)
- **Active** co-author on 3 or more papers in last 3 years
  - i.e. more than a participant in a large project (e.g. SDSS)
- **Active** collaborator on several recent programs
  - At least 3 projects completed in last 3 years

**Key question:** would my personal research benefit (or would there be an *appearance* of benefit) if this proposal is accepted?

**If the answer is yes, then there is a conflict**

# Duplication policy

- To maximize observing efficiency, later-cycle GO programs may not duplicate observations in current or past GO programs; duplicate targets will be disallowed or embargoed unless justified scientifically
- Duplications are defined as *same target or field, same instrument and mode, similar spectral range, similar exposure time. Consult SPG staff if in doubt.*
- The PI is responsible for noting duplications. Panels should approve duplications explicitly (in comments) or observations can be disallowed.
- Same-cycle duplications: avoid duplicate targets within and between panels. No “forced collaborations” allowed.

STScI instrument scientists will check accepted proposals for duplications