Cycle 27 Orientation

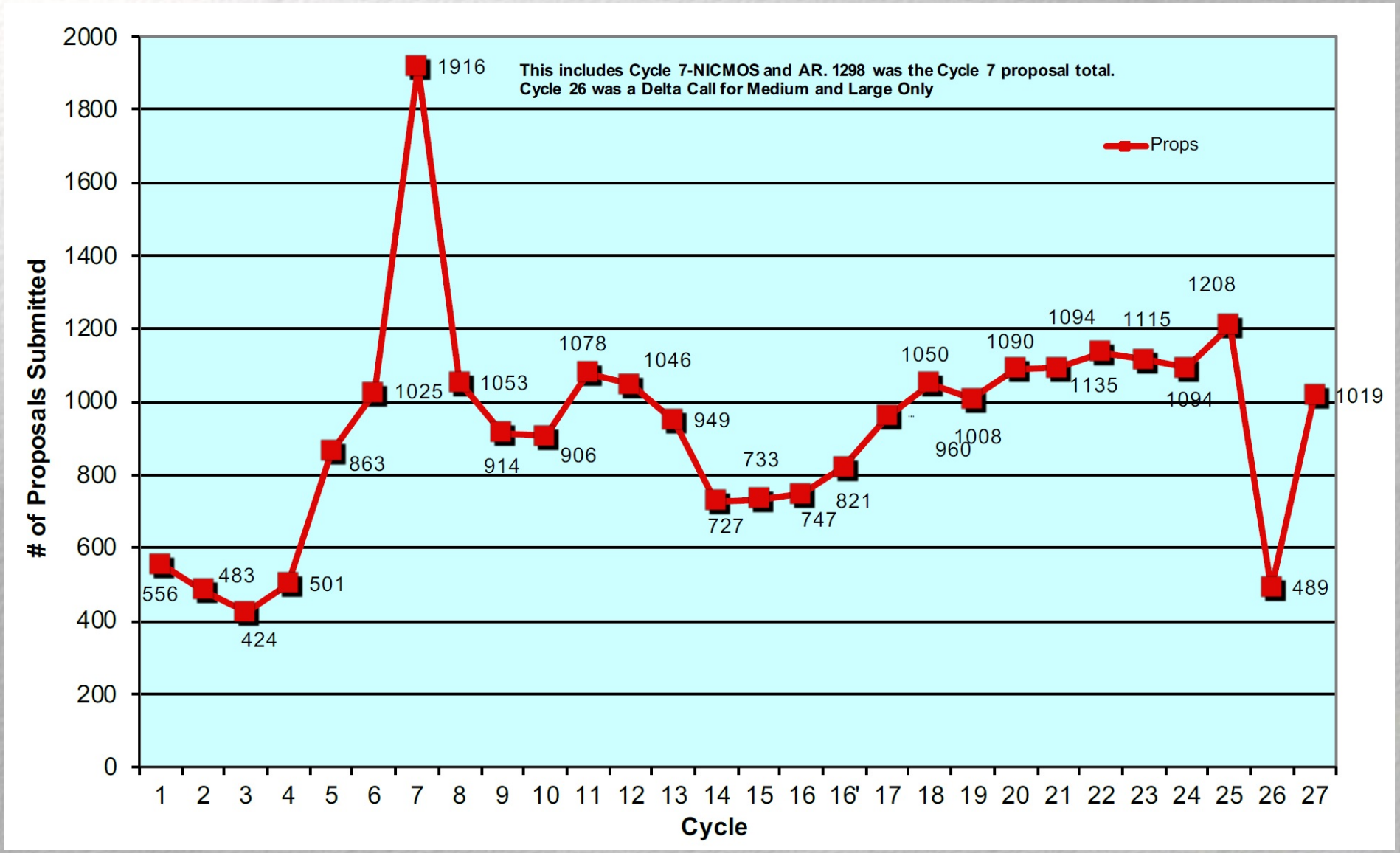
TAC – June 9, 2019

Claus Leitherer

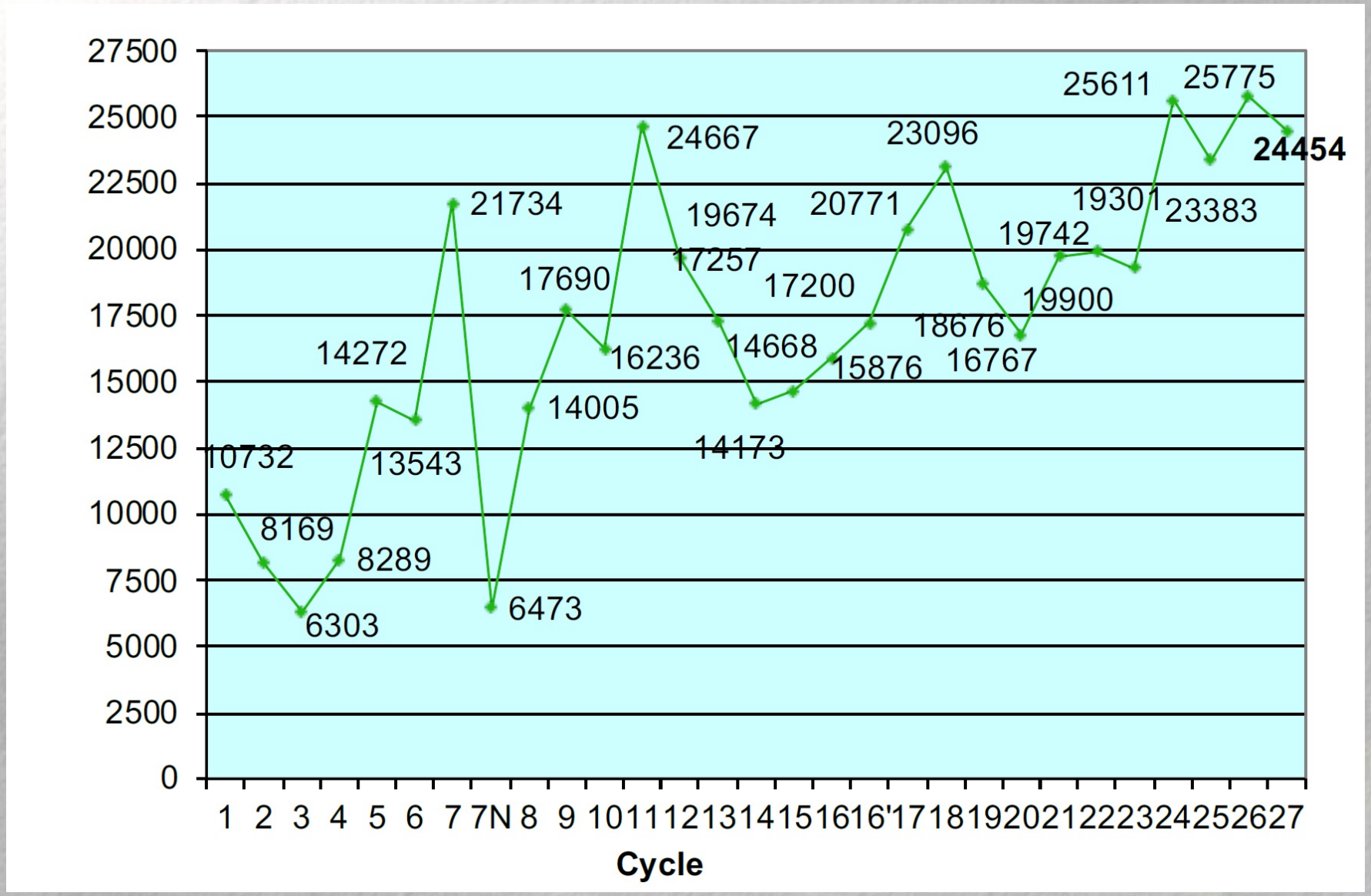
Phase I Schedule for Cycle 27

- January 14 — CP release
- April 5 — Phase I deadline
- April 29 — Download available for panelists
- June 3 — Preliminary grades
- June 10 - 12 — C27 Panels meet
- June 12 - 14 — C27 TAC meets
- June 20 — Director's Review
- End of June — Notifications

Proposals by Cycle



Orbits by Cycle



Summary Statistics

- 1019 Proposals in Cycle 27 (1208 in Cycle 25)
  - 774 NASA, 202 ESA, 43 Other Countries
- 838 (974) GO for 24,454 (23,383) orbits
  - 26 (23) Treasury for 3428 (4281) orbits
  - 54 (40) Large for 5147 (4333) orbits
  - 167 (87) Medium for 8025 (4240) orbits
- 32 (52) SNAPSHOT proposals for 3622 (5316) targets
- 172 (182) Archival proposals
- 9 (3) Pure Parallel programs for 2149 (1525) orbits

Review schedule

- Panels meet Monday morning → noon Wednesday
- Panels review broad science areas
- "Mirror" panels minimize conflicts (except for Solar System)
- Panels review
    - Regular (Small and Medium) GO proposals (1-74 orbits)
    - Snapshot proposals (<250 targets)
    - Regular Archive & Theory proposals
    - Calibration proposals
- Panelists advise panel chair on Large/Treasury proposals
    - Past Large/Treasury programs: http://archive.stsci.edu/hst/tall.html
- TAC meets Wednesday noon → 5pm Friday
- TAC reviews
    - Large GO (≥75 orbits) & Large Snapshot proposals
    - Treasury GO proposals
    - AR Legacy Proposals

Policy Issues

Conflict of Interest

Our goal is informed, unbiased discussion of each proposal

- Voting committee members should have neither direct nor indirect interest vested in the outcome of the review
- The subset of the review committee discussing 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
- Panelists may flag additional conflicts during the meeting
  - Please raise any such concerns with SPG members
  - Do **not** identify the potential cause to panelists

Conflict of interest: procedures

- Panelists complete the Conflicts of Interest Disclosure form
- Chair (aided by PSS) is responsible for checking conflicts.
- Do not try to guess the names of the investigators on the proposal.
- In almost all cases conflicts are already recorded in our database.
- Note conflicts before discussing each proposal.
- Do **not** state the nature of the conflict (e.g., "I am a co-I on this proposal")

Conflicted panelists leave the room and do not vote.

If in doubt, ask SPG for clarification.

General guidance for Cycle 27

- Panel members should assume that all instruments will be performing nominally in Cycle 27
- 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 27

- 15 panels with these science categories:
  - Solar System: all bodies in our solar system
  - Planets and Planet Formation1/2: exoplanets, planet formation, debris disks
  - Stellar Physics 1/2/3: cool+hot stars, late stages, low-mass stars, star formation, local ISM
  - Stellar Populations 1/2: Galactic structure, resolved stellar populations in galaxies
  - Galaxies & IGM 1/2/3/: stellar content of galaxies, ISM in galaxies, dynamics, galaxy evolution, circumgalactic medium, IGM, QSO absorption lines
  - Black Holes and Hosts 1/2: AGN, QSO, SMBH, jets, galaxy/BH co-evolution
  - Cosmology 1/2: cosmology, lensing, galaxy clusters, surveys, deep fields

Panel Review: Logistics

- Panel Chair runs meeting
  - Select a co-Chair (or ask At-Large Member) to run the meeting if Chair has to leave for conflict and to assist with review of comments on day 3
- PSS maintains database, produces ranked lists, answer questions or summon STScI staff experts, as needed.
- Technical and Policy support is available from STScI staff:
  - SPG (policy)
  - INS (instrument expertise)
  - OED (scheduling and implementation)
- Contact list by phone in each meeting room

Proposals for Review

- All proposals were ranked prior to the panel meeting based on the preliminary grades.
- The top 60% (40%) of the proposals have been advanced for face-to-face review in each panel (TAC).
- The preliminary grades will be erased prior to the discussion.
- Each non-conflicted panelist may suggest one (1) proposal from the triage for inclusion in the review. A strong justification must be provided.
- This process is necessary in order to limit the number of proposals for discussion.
  - Spend time discussing the best proposals
  - Avoid discussing proposals that are less likely to be approved

Review Criteria *(posted in each meeting room)*

- 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

Detailed Procedures

1. Panelists with conflicts of interest leave the room. This includes STScI staff and Observers
2. The Chair manages the process and may participate in the discussion, but does not vote.
3. Primary reviewer summarizes and reviews proposal. Secondary reviewer adds supplementary comments.
4. Discussion among panelists.
5. Specify resource allocation: primary orbits, coordinated or pure parallel, exclusive access period, duplication justification.
6. Vote on proposal via Web-Reviewer System. **EVERYONE IN THE ROOM EXCEPT THE CHAIR MUST VOTE – NO ABSTENTIONS**
7. Primary Reviewer is responsible for collating all relevant comments, and recording those comments via Web-Reviewer System.

Panel Review: overview

- Each panel has a specific allocation of **N orbits for Small proposals**
- **Medium** proposals have a **separate orbit allocation**
- Snapshot & Archive/Theory allocations are drawn from a central pool
- Calibration proposals are drawn from a separate pool of orbits
- Panelists review and grade the proposals assigned to their panel, and produce **a ranked list of Small and Medium programs** that encompasses at least 2×N orbits
- N is defined by the orbits of **Small** proposals
- All proposals receive (polite) comments
- Panelists comment on a subset of the TAC proposals

Medium Proposals

- Medium proposals are reviewed solely in their assigned panel.
- Each panel ranks the Medium proposals together with all other proposals.
- The top-ranked Medium proposal may be recommended for acceptance if it is above the 1×N line. **Panels should not artificially move a Medium proposal above the line.**
- There is no orbit charge to the panel for the top-ranked medium proposal.
- Additional Medium proposals may be recommended by using the orbit pool of the panel.
- The Chairs of mirror panels will discuss the ranking in their panels during breakfast.
- A summary of the recommended Medium proposals will be provided by the Chairs at the beginning of the TAC meeting.

TAC proposals & cross-panel overlap

Panelists are asked to comment on a subset of the TAC proposals

- Proposals are assigned to appropriate sets of mirror panels considering topic and proposal load
- This allows more scope for specialist commentary, informing the chairs and aiding discussion in the TAC meeting
- Consider overlap between TAC and panel programs and consider the ranking relative to the panel proposals
- Same rules apply for conflict of interest as with panel proposals
- Panelists are *not required* to vote on TAC proposals, but may choose to do so, at the panel chair's discretion, as a guide to relative rankings

Cross-panel issues

- Mirror panels may be assigned similar proposals due to in-panel conflicts
- After initial ranking, Chairs meet to identify, discuss and, if necessary, resolve overlapping Small and Medium proposals
- If additional expertise is necessary, Chairs can ask for input from (subsets) of other mirror panels or at-large members

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 core implementation team is in place.
- The program details are not finalized (including observing modes and targets); these will be determined in consultation with the community;
- This call gives an opportunity to the community to propose complementary GO and AR programs, particularly pure parallel programs.
- Accepted GO programs will have priority on targets: ULLYSES will be designed around any accepted GO programs.
- As always, judge on the science – no special treatment of ULLYSES-related programs (positive or negative).

Possible panel schedule

- Panels have ~40 proposals to discuss
- Discuss triage *process* at the outset
- Discuss and grade non-triaged proposals (~10 hrs)
- Discuss and grade any resurrected triage proposals (~1 hr)
  - Some panels prefer to group proposals by subject and intersperse the resurrected proposals
- Finalize ranking of Small, Medium, Snapshot, and Archival proposals and define "do not award" lower limit
  - Panels should consider the scientific balance
  - Panels re-rank proposals without changing the grades
- Discuss TAC proposals
- Write final report and review comments

~8 hours

- Total ~ 20 hours

Proposal Comments

- Comments are required for all proposals (including triaged proposals); these are entered via the Web-Reviewer tool.
- Primary reviewer is responsible for writing the comments; add any comments arising from the discussion to produce a final set of comments for each proposal.
- Don't make up reasons for rejection – if a proposal was good, but just didn't quite make the cut, then say so. Be particularly careful near the allocation boundaries, and remember that highly ranked proposals may not be schedulable.
- Use *Mandatory* comments only to exclude targets [e.g. duplications] or to reduce observing time allocation.
- All other comments are *advisory*.

Grading the proposals: some suggestions

Grading process & panel responsibilities

- Keep all proposal types (GO, SNAP, AR) together.
- Maintain one panel score sheet with all proposals included. This ensures that the grading is done in a uniform way
- Produce a final ranked list that combines all proposals categories. Use the same grading scale for all types:
  - Rank at least twice as many proposals as there are above cut-off line
  - Set a "do not award" lower limit
  - No need to rank carefully those proposals that clearly will not get accepted.
- Panel Chair writes a short summary, documenting the primary decisions of the panel, the reasoning that went into those decisions and the manner in which contentious issues were resolved .
  - The summary should capture the logic and rationale of the panel's conclusions in sufficient detail so that it can be recalled and understood later by the STScI Director and/or the TAC

Confidentiality

- Remember that you should not discuss the outcome of the panel evaluations, now or in the future.
- Many panel members (and STScI staff) are also proposers; don't discuss results during breaks.
- If the panel wants to send a particularly important message to a proposer, use the comments.

Orbit allocations

Cycle 27 Allocations

- 2700 orbits for GO (Large + Medium + Small)
  - 1500 for Small proposals (panels)
  - 600 for Medium proposals (panels)
  - 600 for Large/Treasury programs (TAC)
- TAC may recommend adjustments to the Small/Medium/Large split
- Orbit oversubscription is ~5:1, 13:1 and 14:1 for Small, Medium, and TAC, respectively.
- SNAP: ~ 800 targets available across panels
  - (~1:4.5 of targets proposed)
- AR: no budget required in Phase 1

Orbit Allocation

based on a combination of orbit and proposal pressure

Panel	Small GO props	Small GO orbits	Medium GO props	Allocation
Sol. System	30	271	3	64
Planets 1	48	685	10	127
Planets 2	41	538	15	104
Stars 1	59	590	11	131
Stars 2	60	663	10	140
Stars 3	59	665	10	139
St. Pop. 1	20	282	12	52
St. Pop. 2	25	323	5	63
Galaxies 1	46	740	17	129
Galaxies 2	51	894	18	150
Galaxies 3	41	598	23	109
Blackholes1	28	369	9	71
Blackholes2	30	415	10	78
Cosmology1	26	422	9	73
Cosmology2	25	399	6	70
TAC	*81*	*8575*		*600*

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

JWST Science Planning Timeline (as of May 2019)

Cycle 1 Call for Proposals timeline
March 2021 JWST launch
HST Cy. 28 schedule

11/20 HST Cy 28 Call

3/4/20 HST Cy 28 Deadline

5/15/20 HST Cy 28 TAC

Commissioning (L+6 mo.)

2019 | 2020 | 2021

We are here

6/25/19 GTO and ERS Cy1 targets finalised

1/23/20 GO Cy1 Call re-opened

5/1/20 GO Cy1 Proposal deadline

7/27-8/7/20 GO Cy1 TAC

Launch March 30 2021

(L+6) Cycle 1 obs. begin

THANK YOU!!!!

- The TAC review is supported by 156 panelists
- 38 panelists from ESA member states
- ESA provides full funding for participation of ESA panelists
- Continuing partnership with ESA

Personnel & Logistics

Key STScI Staff

- Director's Office
  - **Ken Sembach** – Director
  - **Nancy Levenson** – Deputy Director
  - **Neill Reid** – Assoc. Director for Science
- Science Mission Office
  - **Alessandra Aloisi** – SMO Mission Head
  - **Claus Leitherer** – Head of Science Policies Group
  - **Katey Alatalo, Christine Chen, Andy Fruchter, Amaya Moro-Martín, Molly Peeples, Lou Strolger** – SPG Astronomers
  - **Brett Blacker** – SPG Technical Manager
  - **Alisa Meizlish** – SMO Administrative Lead
  - **Martha Devaud** – SPG Administrative Staff
  - **Sherita Hanna** – SPG Administrative Staff
  - **Flory Hill** – SPG Administrative Staff
  - **Karen Sealover** – ESA Administrative Staff
- Hubble Mission Office
  - **Tom Brown** – HST Mission Office Head
  - **Carol Christian, John MacKenty, Rachel Osten** – Mission Office Scientists
- Operations & Engineering Division
  - **Denise Taylor** – Operation Planning Branch

Observers

- **Ken Carpenter** – NASA
- **Knicole Colon** – NASA
- **Bethany Downer** – ESA
- **Kevin Hartnett** – NASA
- **Jessica Kirk –** U. Colorado
- **Antonella Nota –** ESA

Panel Information

Panel	Panel Support	Panel Chair	Building	Room
Solar System	Matthew Maclay	Michael Wong	Muller	224
Planets 1	Nathan Miles	Hannah Jang-Condell	Muller	112
Planets 2	Hannah Drew-Moyer	Diana Valencia	Muller	S101
Stars 1	Hannah Wakeford	Lex Kaper	Muller	N420
Stars 2	Tom Wilson	Lida Oskinova	Muller	Boardroom
Stars 3	Roger Cohen	Cynthia Froning	Muller	CafCon
St. Pop. 1	Toumas Kangas	Rupali Chandar	Muller	S322
St. Pop. 2	Mattia Libralato	Danny Lennon	Muller	G16H
Galaxies-IGM 1	Trisha Ashley	Dawn Erb	Rotunda	RW333
Galaxies-IGM 2	Jenna Ryon	George Becker	Rotunda	216
Galaxies-IGM 3	Svea Hernandez	Scott Trager	Rotunda	RW414
Blackholes 1	Laura Prichard	Aaron Barth	Rotunda	RS406
Blackholes 2	Camellia Magness	Chris O'Dea	Rotunda	RW231
Cosmology 1	David French	Liliya Williams	Rotunda	RS490
Cosmology 2	Elena Sacchi	Eiichi Egami	Rotunda	RE220
TAC	Brett Blacker	Rachel Somerville	Muller	S321

Backup

Types of Proposals

Standard proposals	
GO	Small/Joint (1-34 orbits); Medium (35-74); Large (≥ 75)
AR	Legacy
Special categories	
Long-term	allocate time in C27 - C29 if justified **scientifically**
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	≥ 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 27 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.
- Cross-panel duplications flagged by STScI staff and resolved by Chairs of "mirror" panels

(@Breakfast meeting, 2nd/3rd days).

STScI instrument scientists will check accepted proposals for duplications