# Cycle 19 Results and Cycle 20 Preparations

15 November 2011

# Cycle 19 Results

#### **Summary Results**

| Proposals            | Requested   | <u>Approved</u> | % Accepted   | ESA<br>Accepted | ESA %<br>Total |
|----------------------|-------------|-----------------|--------------|-----------------|----------------|
| General<br>Observer  | 798         | 148             | 18.5%        | 32              | 21.6%          |
| Snapshot<br>Archival | 65          | 10              | 15.4%        | 3               | 30.0%          |
| Research             | 88          | 28              | 31.8%        | 0               |                |
| AR Legacy            | 10          | 4               | 40.0%        | 0               |                |
| Theory               | 46          | 9               | 19.6%        | 0               |                |
| <u>Total</u>         | <u>1007</u> | <u>199</u>      | <u>19.8%</u> | <u>35</u>       | 17.6%          |
| Primary<br>Orbits    | 18682       | 2556            | 13.7%        | 531             | 20.8%          |

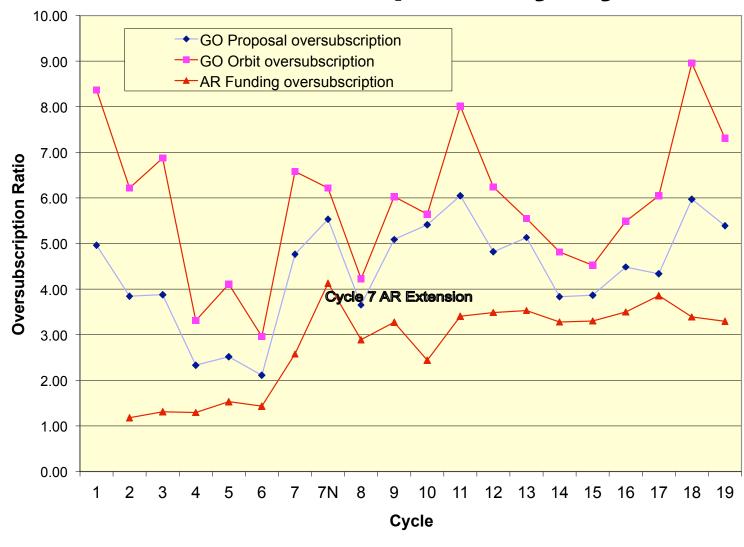
2556 Approved does not include 21 Prime Calibration orbits

#### Programs Recommended by the TAC

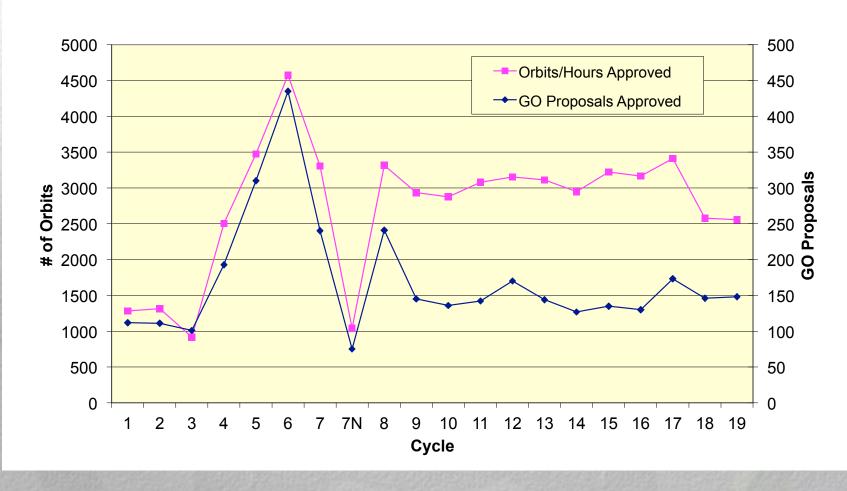
#### **Programs Recommended by the TAC**

| ID     | Resources            | First<br>Name | Last Name     | Institution                            | Title                                                                                                               |
|--------|----------------------|---------------|---------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 0381 A | R Legacy/Calibration | George        | Benedict      | University of Texas at Austin          | Restoring the POS mode Astrometric Precision of FGS-1r and a Definitive Velocity Dispersion for M35                 |
| 0160   | 113                  | Thomas        | Brown         | Space Telescope Science Institute      | The Formation History of the Ultra-Faint Dwarf Galaxies                                                             |
| 0720   | 128                  | Richard       | Ellis         | California Institute of Technology     | Did Galaxies Reionize the Universe?                                                                                 |
| 0322   | 119                  | Timothy       | Heckman       | The Johns Hopkins University           | Understanding the Gas xCycle in Galaxies: Probing the Circumgalactic Medium                                         |
| 0167   | 260 Pure Parallel    | Matthew       | Malkan        | University of California - Los Angeles | WFC3 Infrared Spectroscopic Parallel Survey WISP:<br>A Survey of Star Formation Across Cosmic Time                  |
| 0608   | AR Legacy            | Bahram        | Mobasher      | University of California - Riverside   | Galaxy Evolution Studies from High Precision Panchromatic Photometry of Hubble and Spitzer Survey Fields            |
| 0570   | 64 for 3 Cycles      | Kailash       | Sahu          | Space Telescope Science Institute      | Detecting and Measuring the Masses of Isolated<br>Black Holes and Neutron Stars through Astrometric<br>Microlensing |
| 0558   | 124                  | David         | Sing          | University of Exeter                   | An Optical Transmission Spectral Survey of hot-<br>Jupiter Exoplanetary Atmospheres                                 |
| 0934   | AR Legacy            | Remi          | Soummer       | Space Telescope Science Institute      | Exoplanet Search in the HST NICMOS coronagraphic archive                                                            |
| 0294   | 90 Treasury          | Harry         | Teplitz       | California Institute of Technology     | The Panchromatic Hubble Ultra Deep Field: Ultraviolet Coverage                                                      |
| 0375   | 260 Pure Parallel    | Michele       | Trenti        | University of Colorado at Boulder      | The Brightest of Reionizing Galaxies Pure Parallel Survey                                                           |
| 0867   | AR Legacy            | Roeland       | van der Marel | Space Telescope Science Institute      | Characterization and Modeling of Mass Segregation and Intermediate-Mass Black Holes in Globular Clusters            |

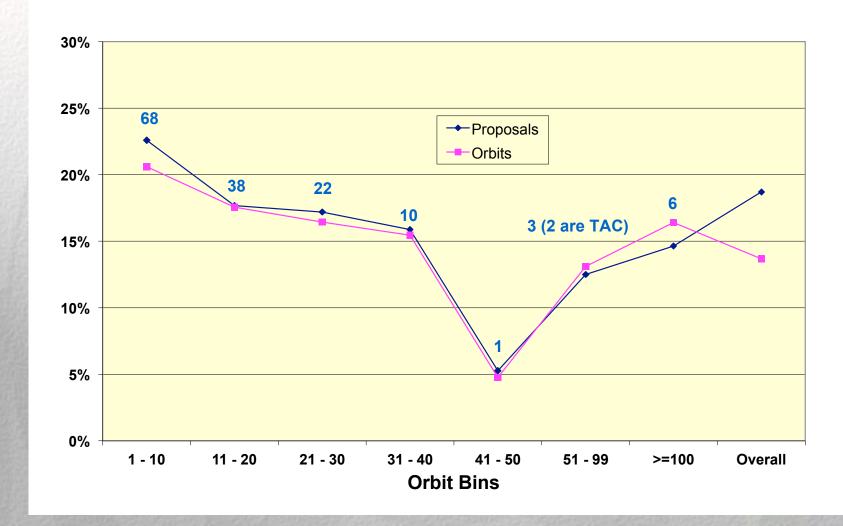
#### **Over-subscription by Cycle**



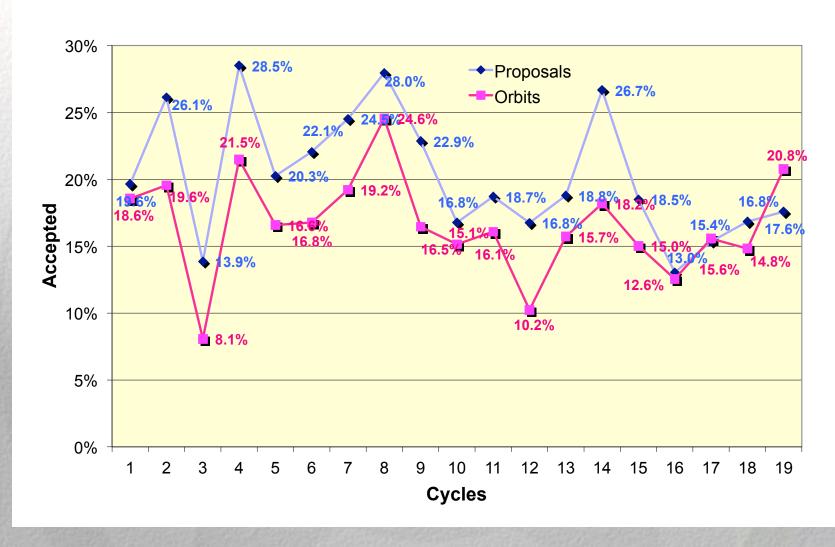
# Approved Orbits and Proposals by Cycle



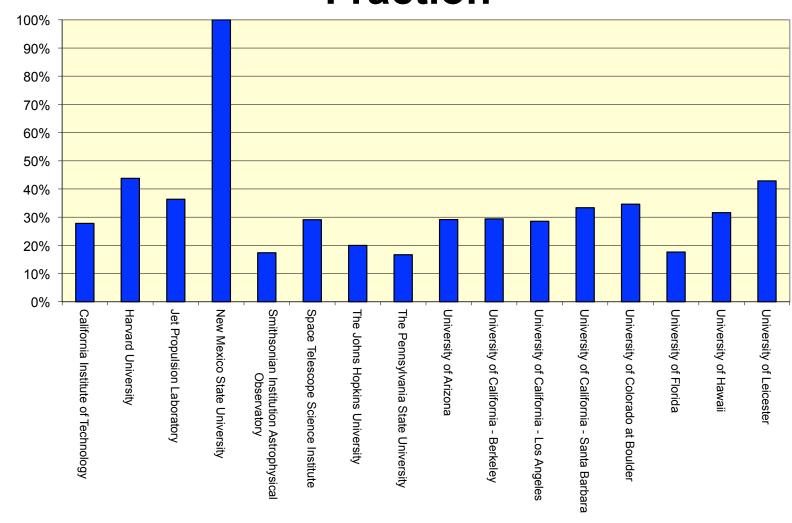
#### **Acceptance Fraction by Size**



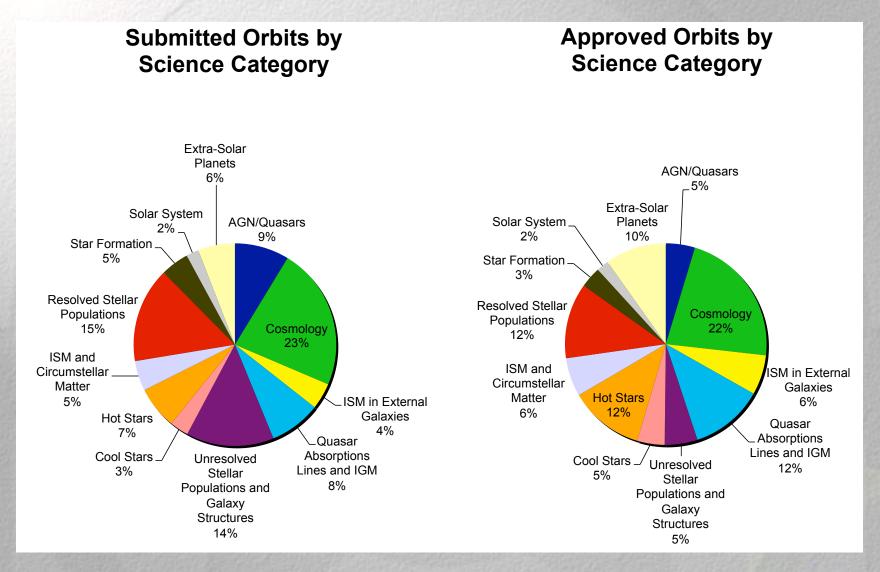
#### **ESA Acceptance Fraction**



# Proposal Institutional Acceptance Fraction



#### Distribution of Science Categories



#### Instrument Usage

|                |              |                |             |          |                     | Instrument<br>Prime + |                  |       |
|----------------|--------------|----------------|-------------|----------|---------------------|-----------------------|------------------|-------|
|                |              |                | Coordinated | k        | Instrument<br>Prime | Coordinated Parallel  | Pure<br>Parallel | Snap  |
| Configuration  | Mode         | Prime %        | Parallel %  | Total    | Usage               | Usage                 | Usage            | Usage |
| ACS/SBC        | Imaging      | 1.9%           | 0.0%        | 1.4%     |                     |                       |                  |       |
| ACS/WFC        | Imaging      | 17.0%          | 49.5%       | 25.4%    |                     |                       |                  | 14.5% |
| ACS/WFC        | Ramp Filter  | 1.6%           | 0.0%        | 1.2%     | 20.5%               | 28.0%                 |                  |       |
| ACS/WFC        | Spectroscopy | 0.0%           | 0.0%        | 0.0%     |                     |                       |                  |       |
| COS/FUV        | Spectroscopy | 15.9%          | 0.0%        | 11.8%    |                     |                       |                  |       |
| COS/NUV        | Imaging      | 0.0%           | 0.0%        | 0.0%     | 17.6%               | 13.1%                 |                  |       |
| COS/NUV        | Spectroscopy | 1.8%           | 0.0%        | 1.3%     |                     |                       |                  | 7.5%  |
| FGS            | POS          | 0.0%           | 0.0%        | 0.0%     | 0.1%                | 0.1%                  |                  |       |
| FGS            | TRANS        | 0.1%           | 0.0%        | 0.1%     |                     |                       |                  |       |
| NIC1           | Imaging      | 0.0%           | 0.0%        | 0.0%     |                     |                       |                  |       |
| NIC2           | Imaging      | 0.0%           | 0.0%        | 0.0%     | 1.3%                | 1.0%                  |                  |       |
| NIC3           | Imaging      | 0.0%           | 0.0%        | 0.0%     |                     |                       |                  |       |
| NIC3           | Spectroscopy | 0.0%           | 0.0%        | 0.0%     |                     |                       |                  |       |
| STIS/CCD       | Imaging      | 2.8%           | 0.0%        | 2.1%     |                     |                       |                  |       |
| STIS/CCD       | Spectroscopy | 9.1%           | 0.0%        | 6.8%     |                     |                       |                  |       |
| STIS/FUV       | Imaging      | 0.5%           | 0.0%        | 0.4%     | 22.2%               | 16.4%                 |                  |       |
| STIS/FUV       | Spectroscopy | 3.5%           | 0.0%        | 2.6%     |                     |                       |                  |       |
| STIS/NUV       | Imaging      | 0.1%           | 0.0%        | 0.1%     |                     |                       |                  |       |
| STIS/NUV       | Spectroscopy | 6.2%           | 0.0%        | 4.6%     |                     |                       |                  |       |
| WFC3/IR        | Imaging      | 14.5%          | 2.7%        | 11.4%    |                     |                       | 37.5%            | 42.2% |
| WFC3/IR        | Spectroscopy | 3.6%           | 0.0%        | 2.7%     | 38.3%               | 41.5%                 | 25.0%            | 4.5%  |
| WFC3/UVIS      | Imaging      | 19.0%          | 47.8%       | 26.4%    |                     |                       | 37.5%            | 31.3% |
| WFC3/UVIS      | Spectroscopy | 1.2%           | 0.0%        | 0.9%     |                     |                       | 0.0%             |       |
|                |              |                | Imaging     | Spectros | сору                | FGS                   |                  |       |
|                | Арр          | roved GO Prime | 57.31%      | 41.2%    |                     | 0.1%                  |                  |       |
| Total GO Usage | ACS          | COS            | FGS         | NICMOS   |                     | WFC3                  |                  |       |
|                | 25.0%        | 11.7%          | 0.1%        | 0.0%     | 14.7%               | 48.6%                 |                  |       |

#### **Targets of Opportunity**

| ID              | Orbits | Disruptive Activations | Non-Disruptive<br>Activations | Total<br>Activations | Type of ToO              |
|-----------------|--------|------------------------|-------------------------------|----------------------|--------------------------|
| 0044.hammel     | 3      | 1                      | Activations                   | 1                    | Uranus                   |
| 0082.jewitt     | 2      |                        | 1                             | 1                    | Main Belt Comet          |
| 0097.schwarz    | 3      |                        | 3                             | 3                    | Nova                     |
| 0249.filippenko | 15     | 1                      |                               | 1                    | Ic Supernova             |
| 0309.goobar     | 24     |                        | 6                             | 6                    | la Supernova             |
| 0376.weaver     | 10     |                        | 1                             | 1                    | Bright Comet             |
| 0439.benecchi   | 6      |                        | 3                             | 3                    | KBO                      |
| 0460.de_luca    | 1      | 1                      |                               | 1                    | Crab Nebula              |
| 0559.tanvir     | 17     | 2                      | 1                             | 3                    | GRBs                     |
| 0598.stocke     | 15     |                        | 3                             | 3                    | Blazers                  |
| 0663.quimby     | 4      | 1                      |                               | 1                    | Super-Luminous Supernova |
| 0683.kirshner   | 14     | 1                      |                               | 1                    | Core Collapse Supernova  |
| 0815.foley      | 8      | 1                      |                               | 1                    | la Supernova             |
| 0927.fruchter   | 21     | 1                      |                               | 1                    | GRB                      |
| 0993.rest       | 12     |                        | 1                             | 1                    | Cas A                    |
| 0994.soderberg  | 5      |                        | 3                             | 3                    | Core Collapse Supernova  |
|                 | 160    | 9                      | 22                            | 31                   |                          |

# Cycle 20 Proposal Review Schedule

- 12/7/11: Call for Proposals release (date tentative)
- 2/24/12: Phase I Proposal deadline
- 3/23/12: Proposals made available to reviewers
- 5/16/12: Preliminary grades due
- 5/21/12 5/25/12: Panels and TAC meet
- June 2012: Notifications sent out

## Cycle 20 Features

- Cycle 20 will start on 10/1/12 and end on 9/30/13
- All five instruments will be offered (if operational): ACS, COS, FGS, STIS, WFC3
- The same proposal categories as in C19 will be offered
- Joint Chandra-HST programs: up to 100 orbits
- Joint XMM-Newton-HST programs: up to 30 orbits
- Joint Spitzer-HST programs will not be offered

#### RA Restrictions

- As a result of a large backlog of approved orbits clustered in certain parts of the sky, RA restrictions will be imposed.
- Users are restricted to a **maximum of 30 orbits** on targets within each of the following RA intervals:

```
165 < RA < 205 degrees (11h00m < RA < 13h40m)
350 < RA < 75 degrees (23h20m < RA < 5h00m)
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- Any observations within these RA ranges must have the Increase Scheduling Flexibility flag checked in APT.
   Successful proposers will be required to use the SCHED100 scheduling requirement.
- These restrictions will be in effect only for Cycle 20.

# Targets of Opportunity

- Three categories: **Non-disruptive** ToOs, which can be accommodated within the standard scheduling process. **Disruptive** ToOs (2<t<14 days), which are rapid-response observations that require revision of an existing HST observing schedule. **Ultra-rapid** ToO programs, requiring a turn-around of <2 days.
- No limits on the number of non-disruptive ToOs in Cycle 20
- We expect to accept  $\sim 8$  –12 disruptive ToOs in Cycle 20, and at most 1 2 ultra-rapid ToOs.
- Ultra-rapid ToOs requesting COS, STIS/MAMA and ACS/ SBC are not allowed.

# Cycle 20 Tentative Orbit Allocation

- Roughly 2800 orbits available for Cycle 20 GO's
- Break-down: 1800 orbits for panels; 400 as subsidy for medium sized proposals; 600 for the TAC
- Remaining orbits:
  - o 750 orbits for MCTs
  - o 130 for Chandra/XMM-Newton
  - o 100 for DD
  - o 400 for calibration, failures, carry-over, etc.

# Medium Sized Proposals

- Medium sized proposals request 40 99 orbits
- Panels tend to be reluctant to recommend medium sized proposals because of the orbit cost
- We will provide a **subsidy** with a progressive increase (as we did in Cycle 19)

#### Panel Structure

- Regular GO programs: 14 panels (same number as in C19)
- Planets and Star Formation 1/2: local and distant solar systems, exoplanets, star formation
- Stars 1/2/3: cool and hot stars in any stellar evolutionary phase
- Stellar Populations 1/2: resolved stellar populations in the Galaxy and the nearby universe
- Galaxies 1/2/3: stellar content of galaxies, ISM in galaxies, dynamics, galaxy morphology, galaxy evolution
- QSO and IGM 1/2: QSOs, IGM, QSO absorption lines
- Cosmology 1/2: cosmology, lensing, GRB, deep surveys

## Panel Structure (cont.)

- Expect roughly 75 proposals per panel
- All panels will have roughly the same size
- Large/Treasury proposals will be reviewed by the TAC
- C19: 59 proposals with the TAC; similar number expected in C20

## Panel Structure (cont.)

- Chairs for all 14 panels (plus 3 TAC At-Large members) have been selected and have agreed to serve
- Panel Chairs and At-Large members will form the TAC chaired by Mario Mateo
- Each panel will have 8 Panelists and the Chair
- Candidate Panelists are currently being contacted
- Pay particular attention to diversity and balance between senior and junior astronomers

#### TAC Location

- The meeting rooms in the JHU P&A building will not be available to STScI in May 2012.
- The STScI building does not have enough meeting rooms to support the panel meetings.
- The review will be held off-site at the Crowne
   Plaza Baltimore North