



**STScI** | SPACE TELESCOPE  
SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

# Cycle 2 Proposal Submissions and Cycle 3 Plans

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on behalf of the STScI Science Policies Group

March 1, 2023



## Summary

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- The JWST Cycle 2 GO/AR deadline was on January 27 2023
  - A total of 1601 submissions were received by this date
- The 1601 complete proposals include
  - 1466 GO proposals requesting ~36,508 hours
  - 31 Survey proposals requesting up to 4,070 targets
  - 104 AR proposals
  - 527 proposal led by ESA PIs (32.9%)
  - 54 proposals led by Canadian PIs (3.4%)
  - 17987 Co-investigators in total
  - 5450 Unique investigators (PI, co-PI & co-I)
- Representation from
  - 52 Countries
  - 46 US states + DC, Puerto Rico and the Virgin Islands
- TAC meeting is scheduled for April 17 – 20 (Discussion panels) & April 24-27, 2023 (Executive Committee)



# Submission Statistics

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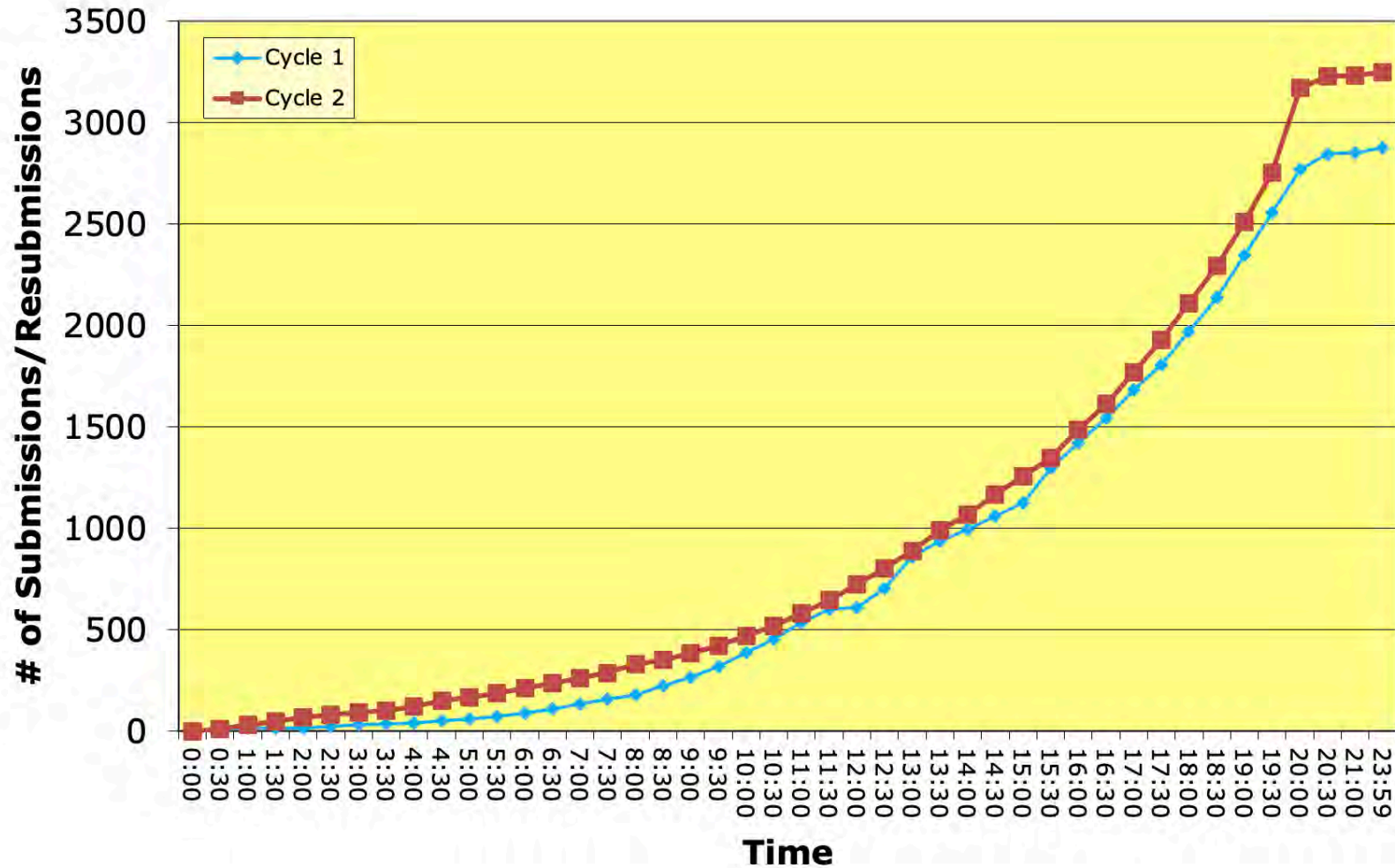


# Submission rate

## Proposal Submissions/Resubmissions on

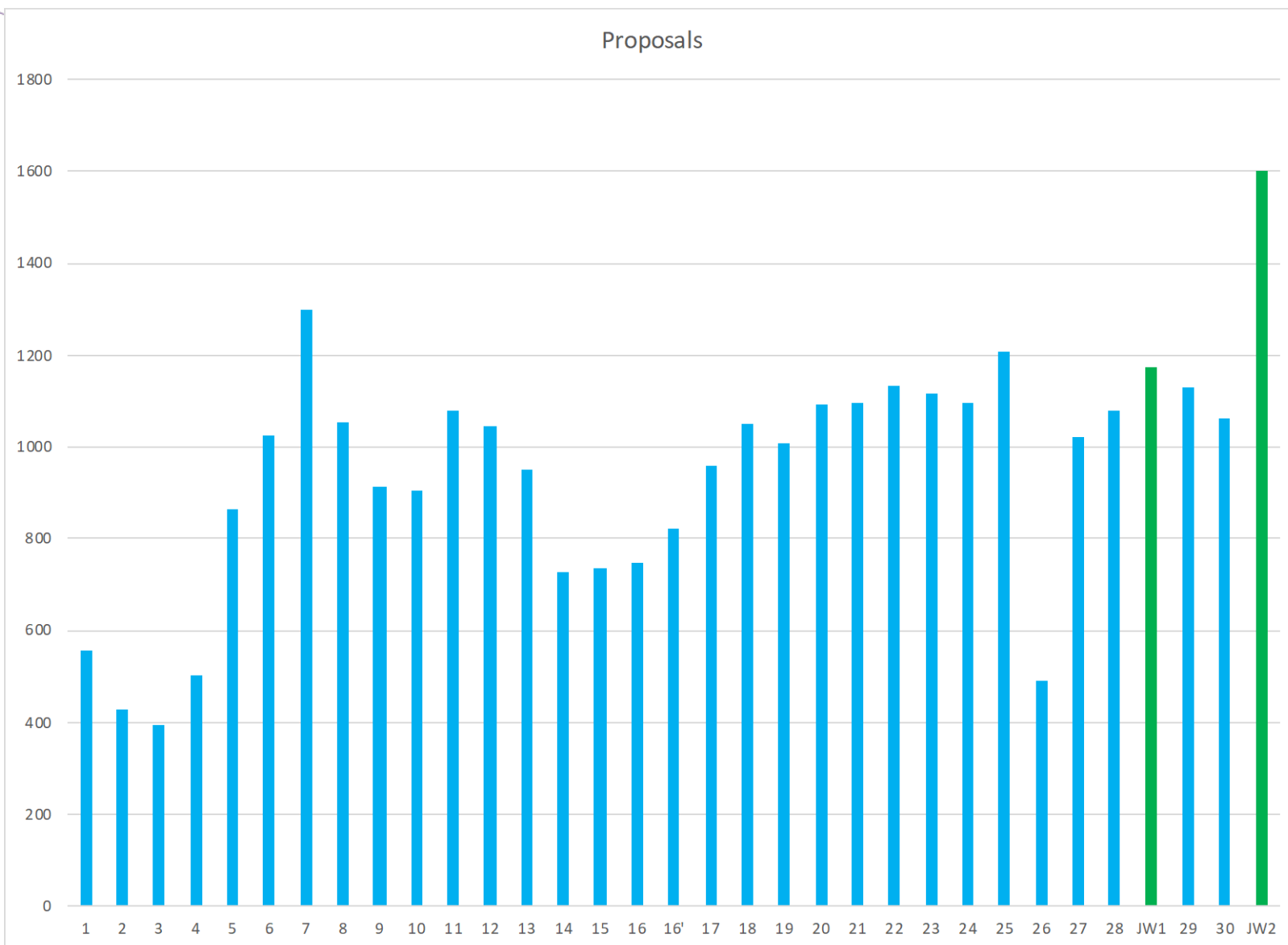
Day of Deadline

Astronomers follow predictable behaviors





# Largest Number of Proposals Ever Received by STScI!



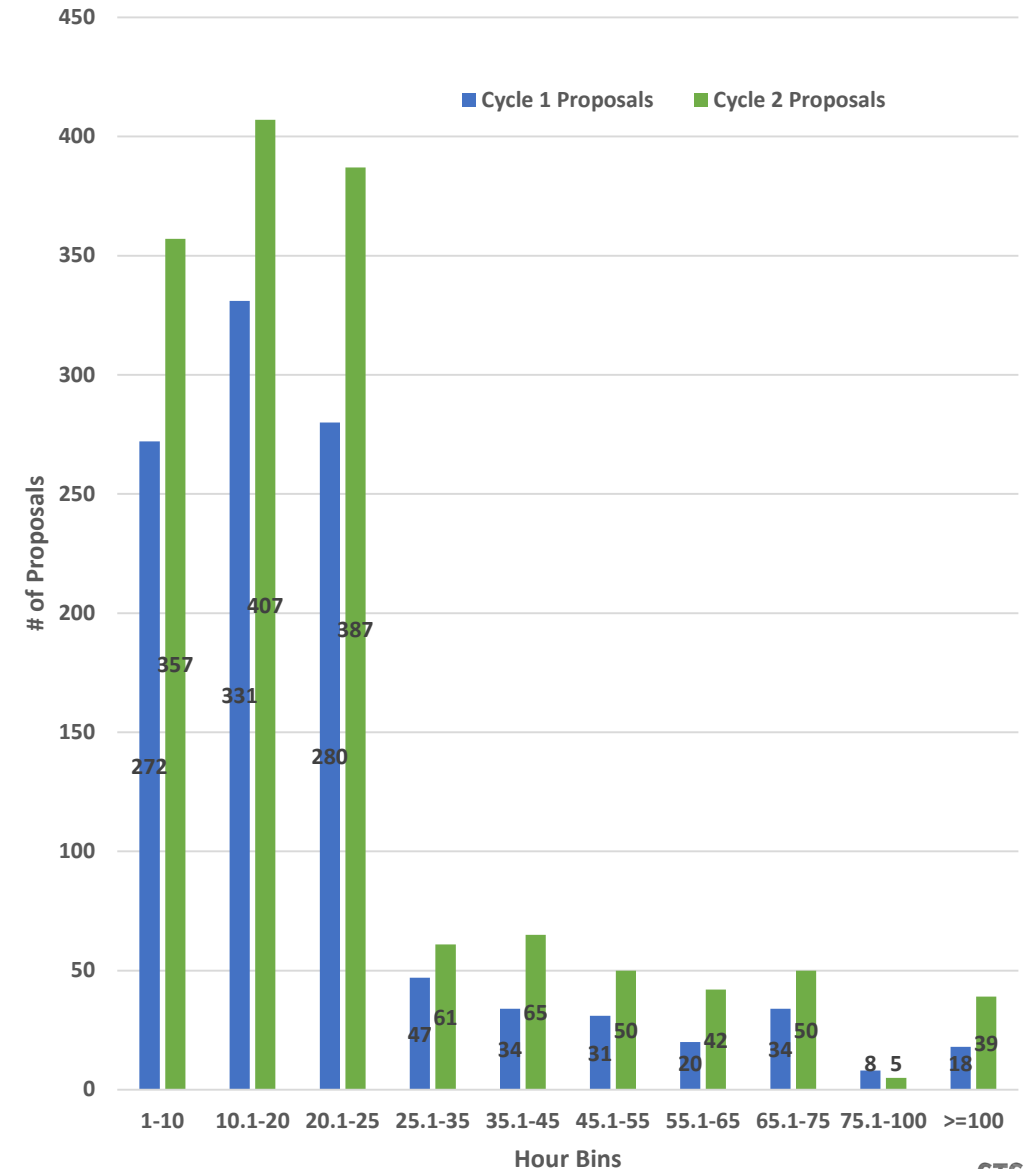
- STScI 23% more proposals for JWST Cycle 2 than for previous record holder!
- Between Cycles 1 and 2, GO and AR proposals increased by 30 – 40%. Survey proposals increased by 220%.



# Proposals

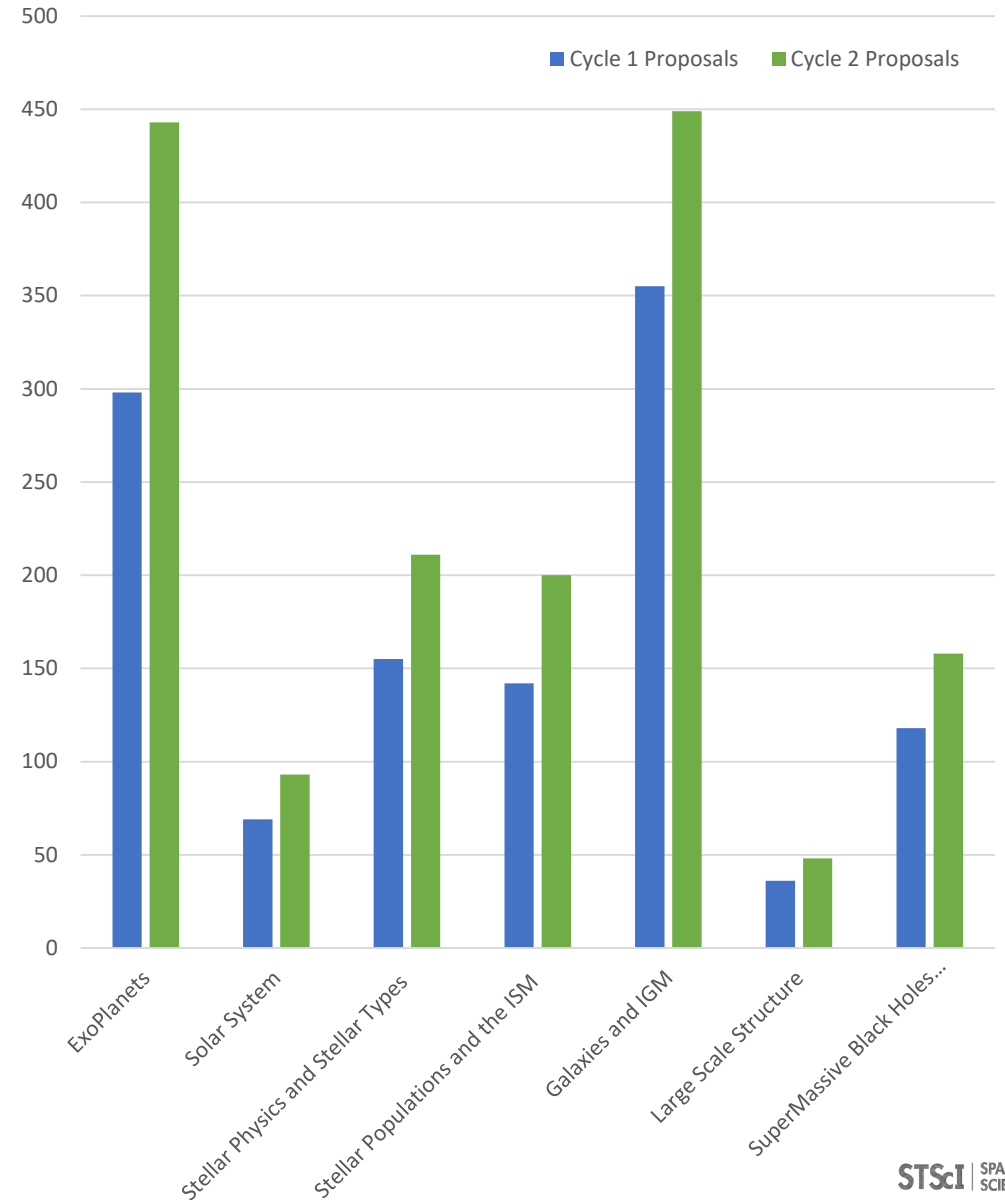
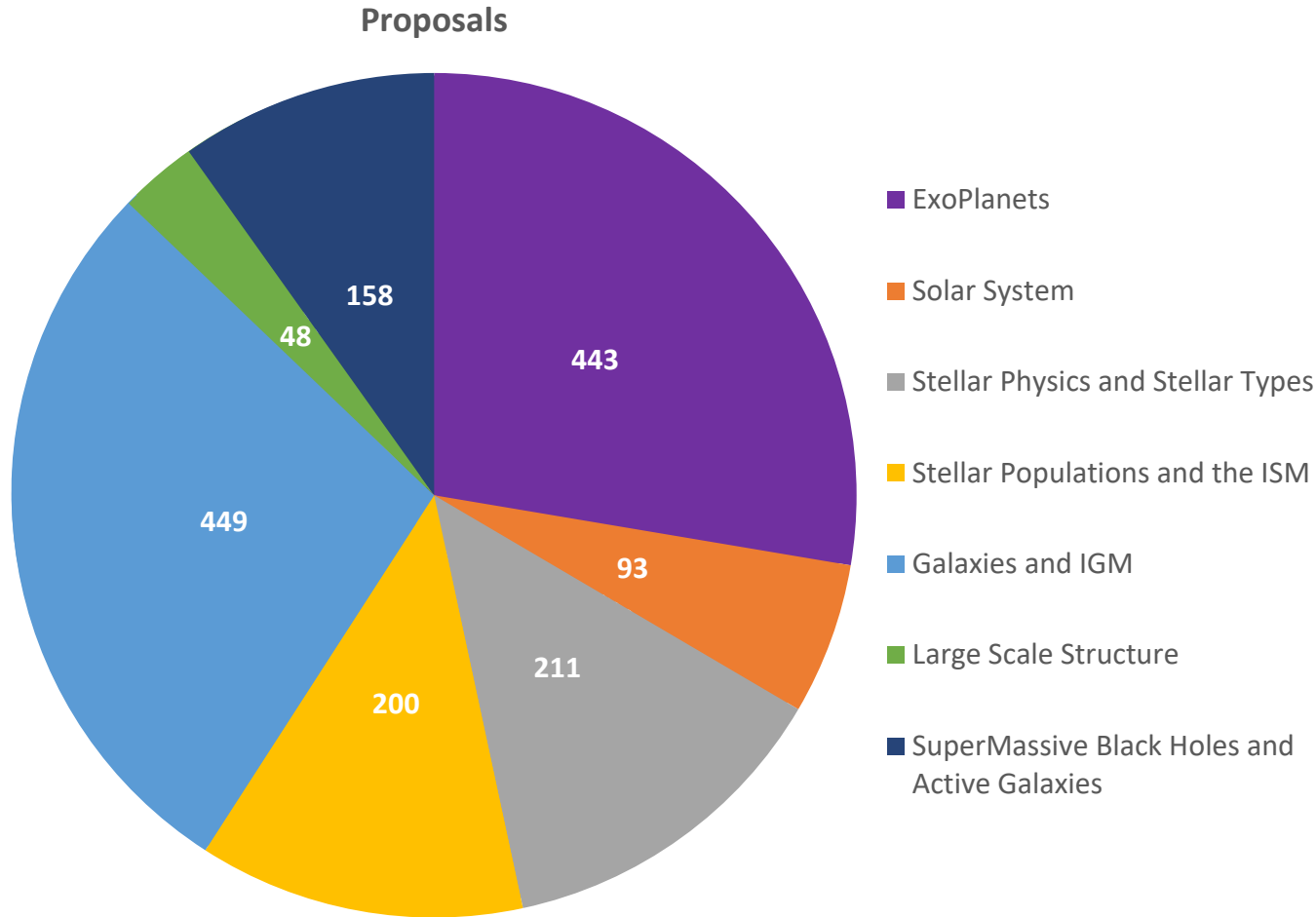
- 1466 GO proposals, including
  - 1149 Small for ~17147 hours
  - 269 Medium for ~13012 hours
  - 48 Large for ~6349 hours
  - 19 Treasury for ~2241 hours
  - 8 Calibration for ~91 hours
  - 4 Pure Parallel proposals for 2145 hours
- 31 Survey proposals
- 104 Archival Research
  - 56 Regular
  - 43 Theory
  - 5 Legacy
  - 3 Calibration
  - 6 Data Science Software

(Some proposals are in multiple categories)





# Science Categories

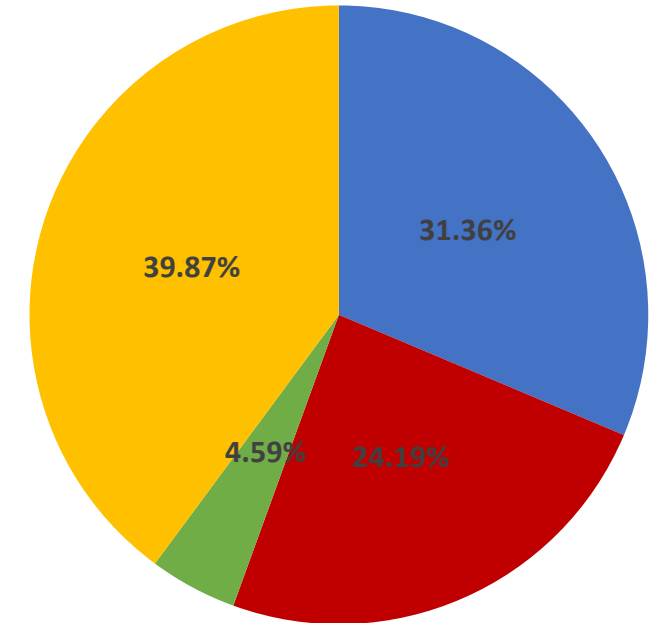




## Special Categories

- **Long-term proposals**
  - 16 proposals requesting 521 hours in Cycle 3
  - 7 proposals requesting 123 hours in Cycle 4
- **Target of Opportunity proposals**
  - 3 Ultra disruptive proposals requesting 53 hours
  - 4 disruptive proposals requesting 72 hours
  - 30 non-disruptive proposals requesting 887 hours
  - 2 disruptive/non-disruptive proposals requesting 35 hours
- **Joint Observatories**
  - ALMA proposals 6 proposals requesting 29 hours and 70 JWST hours
  - Chandra proposals 3 proposals requesting 241 Ksecs and 86 JWST hours
  - HST proposals 20 proposals requesting 183 orbits and 690 JWST hours
  - Keck proposals 5 proposals requesting 8 nights and 168 JWST hours
  - XMM proposals 2 proposals requesting 100 Ksecs and 28 JWST hours
  - No Joint NOIRLab

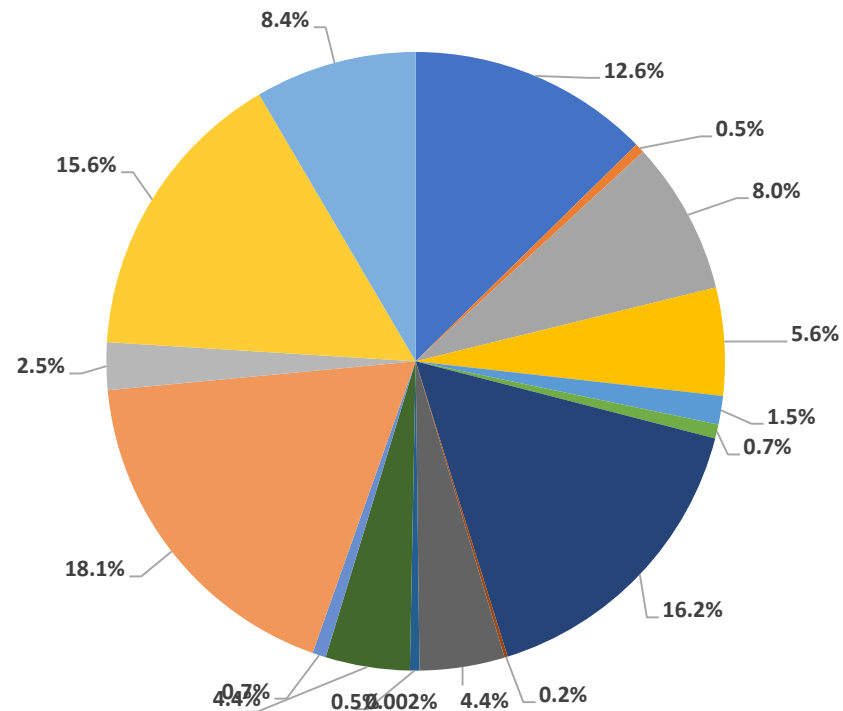
■ MIRI ■ NIRCам ■ NIRISS ■ NIRSpec





# Requested Instrument Modes

- MIRI Medium Resolution Spectroscopy
- MIRI Coronagraphy
- MIRI Imaging
- MIRI LRS
- NIRCam Coronagraphy
- NIRCam GrismTimeSeries
- NIRCam Imaging
- NIRCam TimeSeries
- NIRCam WFSS
- NIRISS Imaging
- NIRISS AMI
- NIRISS SOSS
- NIRISS WFSS
- NIRSpec BrightObjectTimeSeries
- NIRSpec FixedSlitSpectroscopy
- NIRSpec IFUSpectroscopy
- NIRSpec MOS



73.6% Spectroscopy vs 26.4% Imaging



## Personnel

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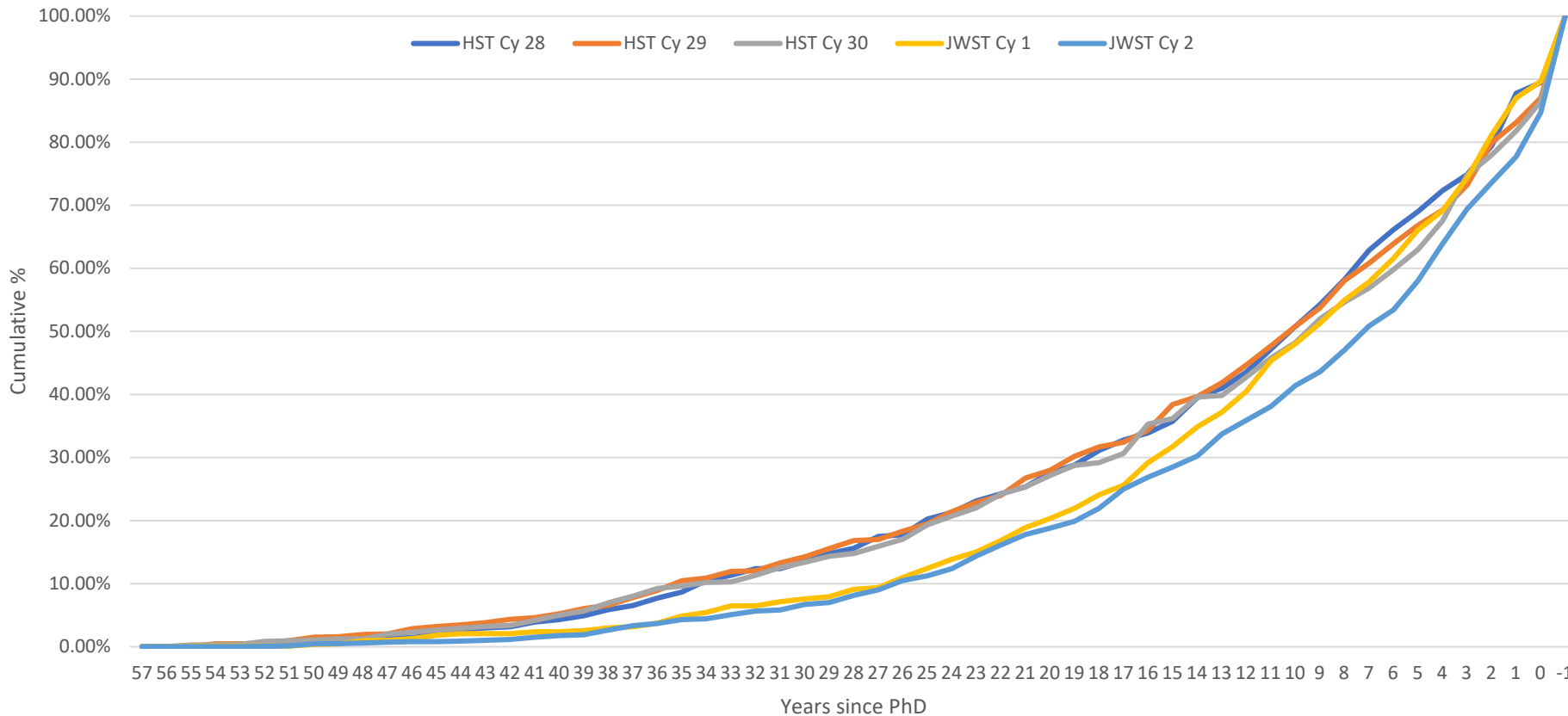
- Overall,
  - 20357 investigators, including 5450 unique investigators [4332 unique in Cycle 1]
  - 1601 PIs, including 1265 unique investigators from 33 countries, 38 states and DC
  - 769 Co-PIs from 30 countries and 32 states and DC
  - 17987 co-Is, including 5161 unique investigators from 51 countries, 45 US states, DC, Puerto Rico and the Virgin Islands ESA [12766, 4182 unique in Cycle 1]
- ESA
  - 527 PIs (32.9%) [31.9% in Cycle 1]
  - 291 Co-PIs (37.8%) and 7340 Co-I (40.8%)
- Canada
  - 54 PIs (3.4%) [3.8% in Cycle 1]
  - 16 Co-PIs (2.1%) and 538 (3.0%) Co-Is
- Gender: 1085 male and 516 female (32.2%) [31.5% in Cycle 1]
- Student: PIs 15.3% highest ever fraction; 146 male and 97 female student PIs



# Seniority

JWST Cycle 2 PIs are skewed to a more junior demographic than previous cycles

- Median offset = 7 yrs vs 9.5 yrs JWST 1 & HST 30; 10 yrs in HST 28 & 29



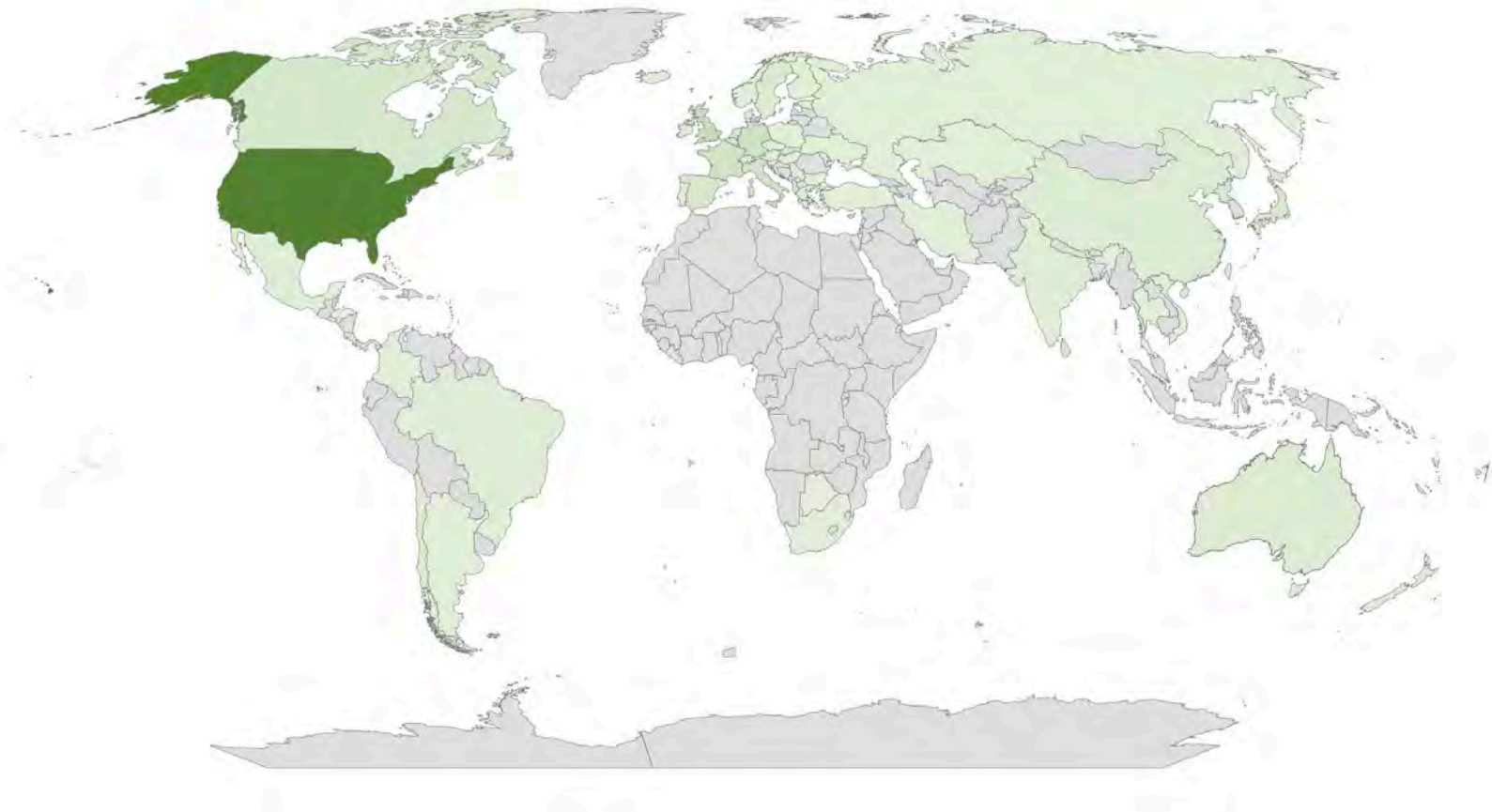
## Student PIs

	JWST 1	JWST 2
M	73	148
F	49	98
Total	122	246
%	10.4	15.3



# JWST Investigators around the World

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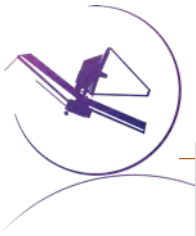
**ESA Investigators**  
PI – CoPI – Col  
527 – 291 – 7340  
Total 8158 – 2262 *Unique*





# US Investigators





# Canadian Investigators



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**PI – CoPI – Col**  
54 – 35 – 537  
626 – 163 *Unique*  
13 STScI CSA

A deep blue and purple nebula with wispy, ethereal clouds of gas and dust. The background is a dense field of stars, many of which are bright blue, creating a sparkling effect against the dark cosmic backdrop. The overall scene is a vast, beautiful representation of interstellar space.

# TAC Preparations

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## Time Allocation Committee (TAC) Organization

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- **Meeting Chair:** Roberto Abraham

### New for Cycle 2

- **External Panels:** To reduce the workload for Discussion panels, the smallest proposals (< 15 hours) will be evaluated by External Panelists who provide their reviews asynchronously. Based on the HST External Review system, a Solar System External Panel was not recruited. LSS received only 4 proposals for the LSS External Panel. Therefore, the Galaxies and LSS External Panels were merged.
- **Joint Proposals:** Submissions were received for all observatories except NOIRLab. Expert reviews were solicited from the communities of Joint Observatories as advisory to the JWST TAC. NASA Keck opted out of Expert reviews.



## Proposal Review Assignments

- STScI expected to receive substantially more proposals in Cycle 2 and planned the number of Discussion panels assuming 1500 proposals
- Exact number of hours allocated to Small, Medium, and Large categories will be adjusted to reflect proposal submissions
- To mitigate the workload
  - Each proposal in each Discussion panel was assigned 5 preliminary reviewers, including 1 Primary reviewer, 1 Secondary reviewer, and 3 Graders
  - Each proposal in each External panel was assigned 5 Graders

### Projected Number of Panels Needed Based on Cycle 1 Demographics (w/External Reviews)

Total Proposals	Solar System	Exoplanets	Stellar Physics	Stellar Pops	Galaxies	SMBH	LSS	Total Panels
1170	1 (37)	3 (56)	2 (43)	2 (40)	3 (60)	1 (65)	1 (19)	11
<b>1500</b>	<b>1 (47)</b>	<b>3 (71)</b>	<b>2 (55)</b>	<b>2 (51)</b>	<b>3 (77)</b>	<b>2 (42)</b>	<b>1 (23)</b>	<b>14</b>
2000	1 (63)	4 (71)	2 (73)	2 (68)	4 (76)	2 (55)	1 (31)	18



## Initial TAC Demographics

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- Executive Committee
  - Space Agency: 12 NASA (67%), 5 ESA (28%), and 1 CSA (6%)
  - Gender: 6 Male (33%), 12 Female (67%)
- TAC Overall
  - 115 Discussion and 195 External Panelists
  - Space Agency: 121 NASA (39%), 108 ESA (35%), 18 CSA (6%), 63 other (20%)
  - Gender: 191 Male (55%), 148 Female (42%)
- Proposal demographics
  - Space Agency: 880 NASA (55%), 527 ESA (33%), 54 CSA (3.4%), 140 Other (8.7%)
  - Gender: 1085 Male (67.8%), 516 Female (32.2%)



# TAC Training

- SMO has compiled an extensive set of TAC instructions that were published as part of JDox in mid-February
- TAC Instructions and Proposal Review packages, for all Science Categories, were distributed to TAC members during the week of February 15th, 2023.
- Executive Committee training will take place March 14, 2023.

For more information, please see on-line TAC Instructions <https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-peer-review-information>

The screenshot shows a web browser window displaying the JWST Peer Review Information page. The browser's address bar shows the URL: <https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-peer-review-information>. The page features a dark header with the JWST logo and the text "User Documentation". Below the header is a navigation bar with links for Home, About, Acronyms, and Helpdesk, along with a search bar. The main content area is titled "JWST Peer Review Information" and includes a sub-header "Proposing Opportunities" with a list of links: Opportunities and Policies, Call for Proposals for Cycle 2, Cycle 2 GTO Call for Proposals, Director's Discretionary (DD) Time Proposals, General Science Policies, Peer Review Information - Cycle 2 (highlighted), Peer Review Guide, General Info and Getting Started, Reviews, Grades and Comments, Panel Meetings, STScI Staff, and Past Proposal Opportunities. The main text describes the Science Policies Group (SPG) and its role in managing observing time on the Hubble Space Telescope (HST) and the James Webb Space Telescope (JWST). It also mentions the SPG's key objective to optimize and maximize scientific productivity. A "Next: JWST Peer Review Guide" link is visible. At the bottom, there is a table with "Latest updates" and "Originally published" (14 Feb 2023).



## Cycle 2 Proposal Review Schedule

Date	Milestone
January 27, 2023	GO/AR Cycle 2 Proposal Deadline
February 15, 2023	Discussion Panelist Orientation STScI Releases proposals to Discussion panelists for review and preliminary grading
February 16, 2023	External Panelist Orientation STScI Releases proposals to External panelists for review and preliminary grading
March 14, 2023	Panel Chair Orientation
March 29, 2023	Deadline for panelists to submit preliminary grades
April 17 – 20, 2023	Telescope Allocation Committee: Virtual Discussion Panels
April 24 – 27, 2023	Telescope Allocation Committee: In-person Executive Committee Meeting
May 5, 2023	Director's Review
May 6 – June 30, 2023	Program Implementation of accepted proposals
May 10, 2023	PI notification letters are distributed
July 1, 2023	Beginning of Cycle 2 Observations

A background image of a starry night sky. In the center, there is a large, glowing nebula with intricate, wispy structures in shades of blue, purple, and brown. The sky is filled with numerous stars of varying colors, including bright blue, white, and yellow. A thin, horizontal orange line spans the width of the image, positioned just below the text.

# Cycle 3 Plans



## Cycle 3 Science Timeline

Date	Milestone
August 15, 2023	GO/AR Cycle 3 Call for Proposals Issued
October 27, 2023	GO/AR Cycle 3 Proposal Deadline
November 9, 2023	STScI Releases proposals to panelists for review and preliminary grading
January 17, 2024	Deadline for panelists to submit preliminary grades for proposals that they are assigned
January 29 – February 1, 2024	Telescope Allocation Committee: Discussion Panels
February 5 – 8, 2024	Telescope Allocation Committee: Executive Committee Meeting
February 15, 2024	Director's Review
February 16 – June 30, 2024	Program Implementation of accepted proposals
February 20, 2024	PI notification letters are distributed
July 1, 2024	Beginning of Cycle 3 Observations



# Time Allocation Committee (TAC) Planning

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## External Panelists

- All External Panelists were invited to serve for two Cycles (2 and 3)
- The Solar System science category will have an External Panel
- The Large Scale Structure (LSS) science category will not have an External Panel. Instead, the <15 hour LSS proposals will be reviewed by the LSS Discussion Panel.

## Scientific Keywords

- Used to assign proposals to reviewers
- Plan to update scientific keywords available in APT for Cycle 3 Proposal Deadline
- Plan to release surveys (e.g. one for proposers and another for TAC members) requesting feedback on current Scientific Keywords



## Soliciting JSTUC Feedback

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### 1. Discussion panel workload

Cycle 2 has resulted in relatively high workloads for most panels

- a. Should we consider raising the cutoff between External panels and Discussion panels, e.g. from 15 to 18 hours?
- b. Should we consider adding additional panels for high pressure areas, notably Exoplanets and Galaxies?

### 2. The Small-Medium boundary

- Is 25 hours the appropriate place to set the boundary between Small and Medium proposals?

### 3. Additional comments, questions, and/or suggestions?

A deep blue and black night sky filled with numerous stars of varying colors, including bright blue, white, and yellow. A large, diffuse nebula with wispy, ethereal structures in shades of blue, purple, and brown is visible on the left side of the frame. A thin, horizontal orange line spans across the middle of the image, positioned just below the text.

Backup Slides



## Investigators by country

Country	PI	Co-I	Co-PI	Country	PI	Co-I	Co-PI	Country	PI	Co-I	Co-PI
Abu Dhabi		6		France	56	938	45	Poland	3	20	
Argentina		2		Germany	58	1026	42	Portugal	3	37	3
Australia	19	266	9	Greece	2	44	2	Russia		26	1
Austria	7	60	6	Honduras		2		Serbia		8	
Belgium	12	154	4	Hungary	5	42	1	South Africa		12	
Bulgaria		1		India	9	74	1	Slovenia		10	
Brazil	9	40	5	Iceland		9		Spain	34	576	20
Botswana		1		Iran		1	1	Sweden	27	262	16
Canada	53	527	35	Ireland	3	61		Switzerland	21	421	13
Chile	22	278	10	Israel	3	65	1	Taiwan	8	67	5
China	14	216	11	Italy	79	946	37	Thailand	2	20	
Columbia		2		Japan	47	501	10	The Netherlands	39	604	15
Cyprus		11		Kazakhstan		1		The Vatican		1	
Czech Republic	1	9		Korea	3	44	2	Turkey		3	1
Denmark	14	323	14	Mexico	7	60	4	Ukraine		5	
Estonia		2		New Zealand		2		United Kingdom	138	1576	59
Finland	7	23	2	Norway	2	11		United States	893	8588	394
<b>Total</b>	<b>1602</b>	<b>17987</b>	<b>769</b>					Vietnam	1		



## Investigators by state/province

Country	PI	Co-I	Co-PI	Country	PI	Co-I	Co-PI	Country	PI	Co-I	Co-PI
Alaska	0	6	2	Louisiana	3	7	1	Pennsylvania	17	142	8
Alabama	5	28	1	Massachusetts	69	686	40	Puerto Rico	0	1	0
Arkansas	0	11	1	Maryland	194	2251	94	South Carolina	3	15	0
Arizona	82	809	45	Maine	0	19	0	Tennessee	3	26	0
California	164	1505	58	Michigan	25	201	15	Texas	54	551	19
Colorado	8	100	3	Minnesota	8	93	4	Utah	5	40	1
Connecticut	8	104	2	Missouri	8	37	1	Virginia	26	216	17
District of Columbia	25	228	9	Mississippi	0	3	0	Virgin Islands	0	3	0
Delaware	1	5	0	Montana	3	6	3	Vermont	0	2	0
Florida	21	126	14	North Carolina	3	23	3	Washington	6	66	4
Georgia	1	16	0	New Hampshire	2	13	0	Wisconsin	12	93	1
Hawaii	17	125	4	New Jersey	8	130	3	West Virginia	0	5	0
Iowa	1	3	0	New Mexico	2	25	1	Wyoming	0	16	2
Idaho	1	2	0	New York	7	322	16				
Illinois	33	238	10	Nevada	0	5	0				
Indiana	2	1		Ohio	21	173	4	<i>Total Investigator</i>	1601	17987	769
Kansas	6	50	2	Oklahoma	3	18	3	<i>Unique</i>	1265	595	5161
Kentucky	5	18	0	Oregon	1	0	3	<i>STScI</i>	92	1173	52

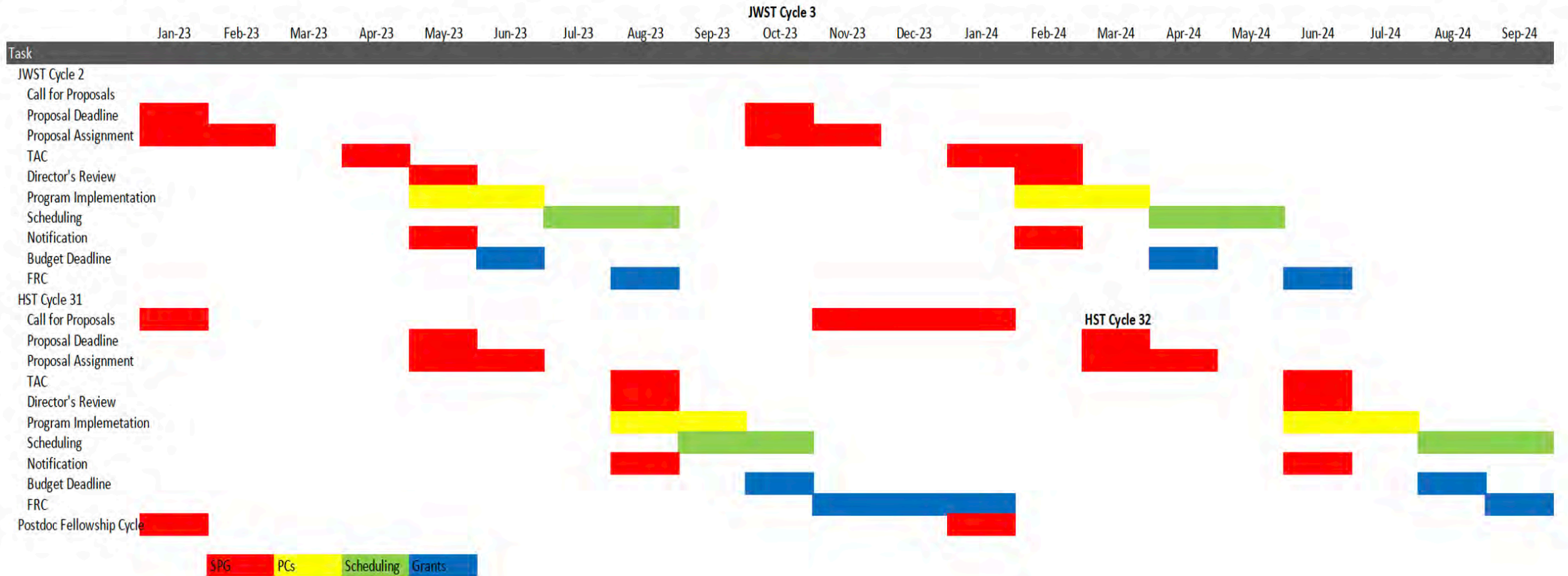


## Cycle 2 Proposal Review Schedule

Date	Milestone
November 15, 2022	Call for Proposals Released
January 27, 2023	Proposal Deadline
→ February 15, 2023	Proposals released to reviewers for review and grading
February 15, 2023	Orientation for Discussion Panelists
February 16, 2023	Orientation for External Panelists
March 13, 2023	Orientation meeting for Executive Committee
March 29, 2023	Deadline for Preliminary Grades
April 3, 2023	Release of final Panel Reading Lists
April 17 – 20, 2023	Discussion Panels Meet
April 23, 2023	Deadline for Panelist Review Comments
April 24 – 27, 2023	Executive Committee Meets
April 30, 2023	Deadline for Chair Signoff on Panel Comments
May 5, 2023	Director's Review
May 10, 2023	Release of Science Program
July 1, 2023	Cycle 2 Science Start



# Cycle 2 and 3 Science Timelines



**Cycle 3 Deadline is October 27, 2023**  
**Maintain Cycle 3/HST 32 Cadence in future cycles**