



**STScI** | SPACE TELESCOPE  
SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

# JWST Cycle 4 Deadline Proposal Statistics

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Aleksandra Hamanowicz,  
on behalf of the STScI Science Policies Group

November 21, 2024

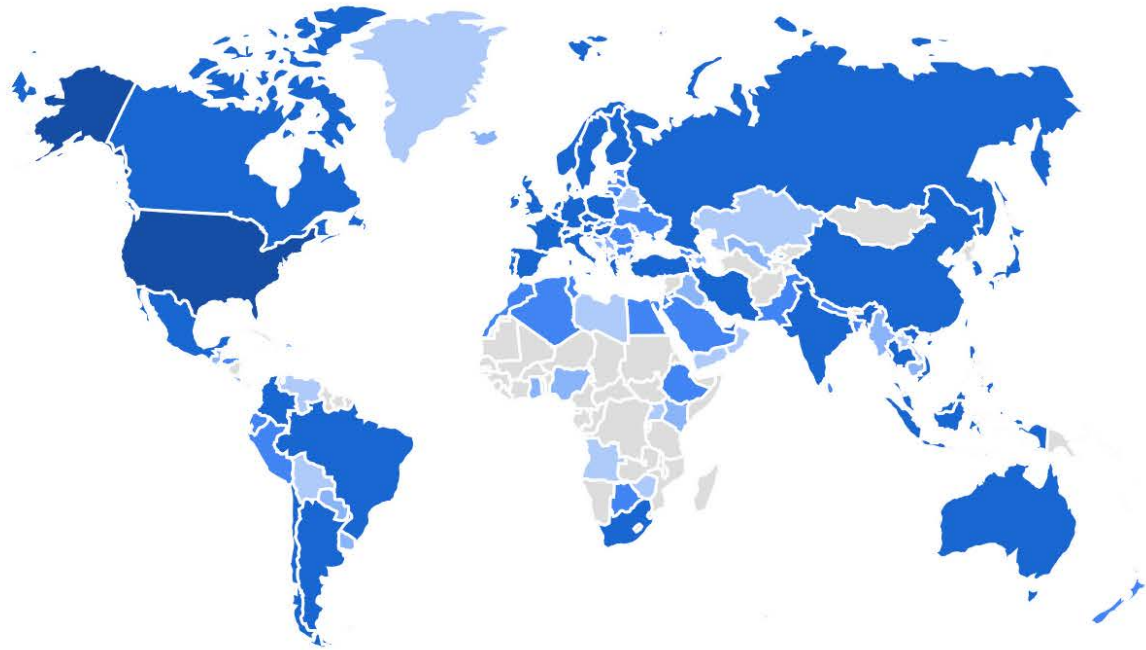


## Cycle 4 Proposal Review Schedule

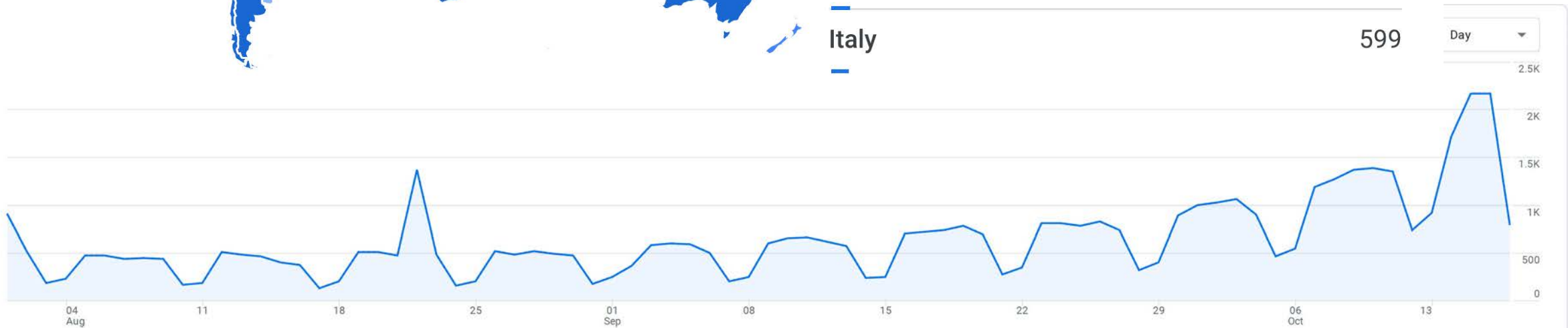
Date	Milestone
August 1, 2024	Call for Proposals Released
October 16, 2024 8 PM EDT	Proposal Deadline
November 4, 2024	Orientation for Discussion Panelists
November 6, 2024	Orientation for External Panelists
November 11, 2024	Proposals released to reviewers for review and grading
January 7, 2025	Orientation meeting for Executive Committee
January 10, 2025	Deadline for Preliminary Grades
January 17, 2025	Release of final Panel Reading Lists
February 3 – 7, 2025	Discussion Panels Meet
Tuesday February 11, 2025	Deadline for Panelist Review Comments
February 10 - 11, 2025	Galactic Executive Committee Meets
February 12 - 13, 2025	Extragalactic Executive Committee Meets
Friday February 17, 2025	Deadline for Chair Signoff on Panel Comments
February 26, 2025	Director's Review
March 5, 2025	Release of Science Program
July 1, 2025	Cycle 4 Science Start



# JDOX Traffic



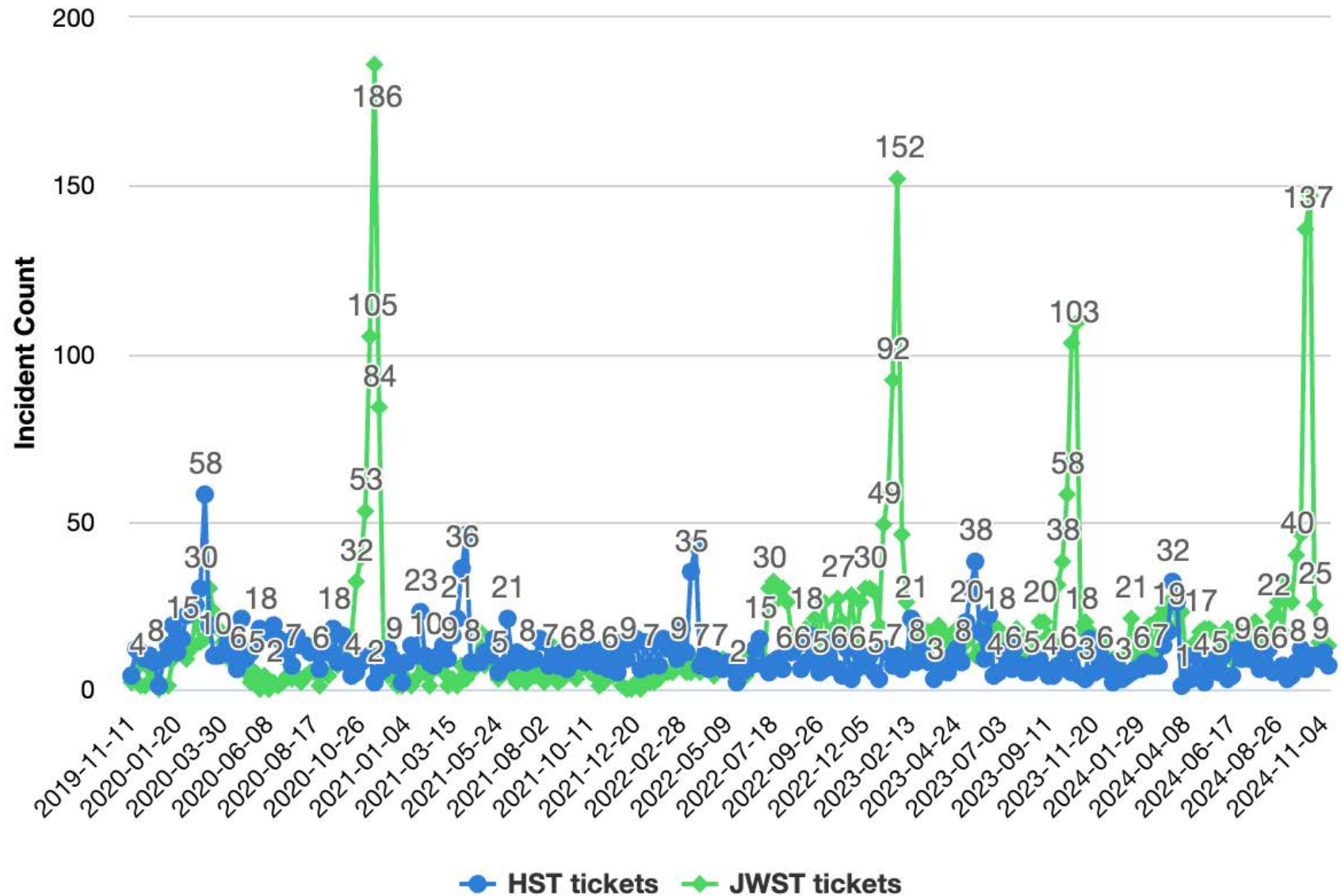
<u>COUNTRY</u>	<u>ACTIVE USERS</u>
United States	9.8K
United Kingdom	1.1K
Germany	750
China	717
Japan	636
Canada	633
Italy	599



○ Total ● All Users



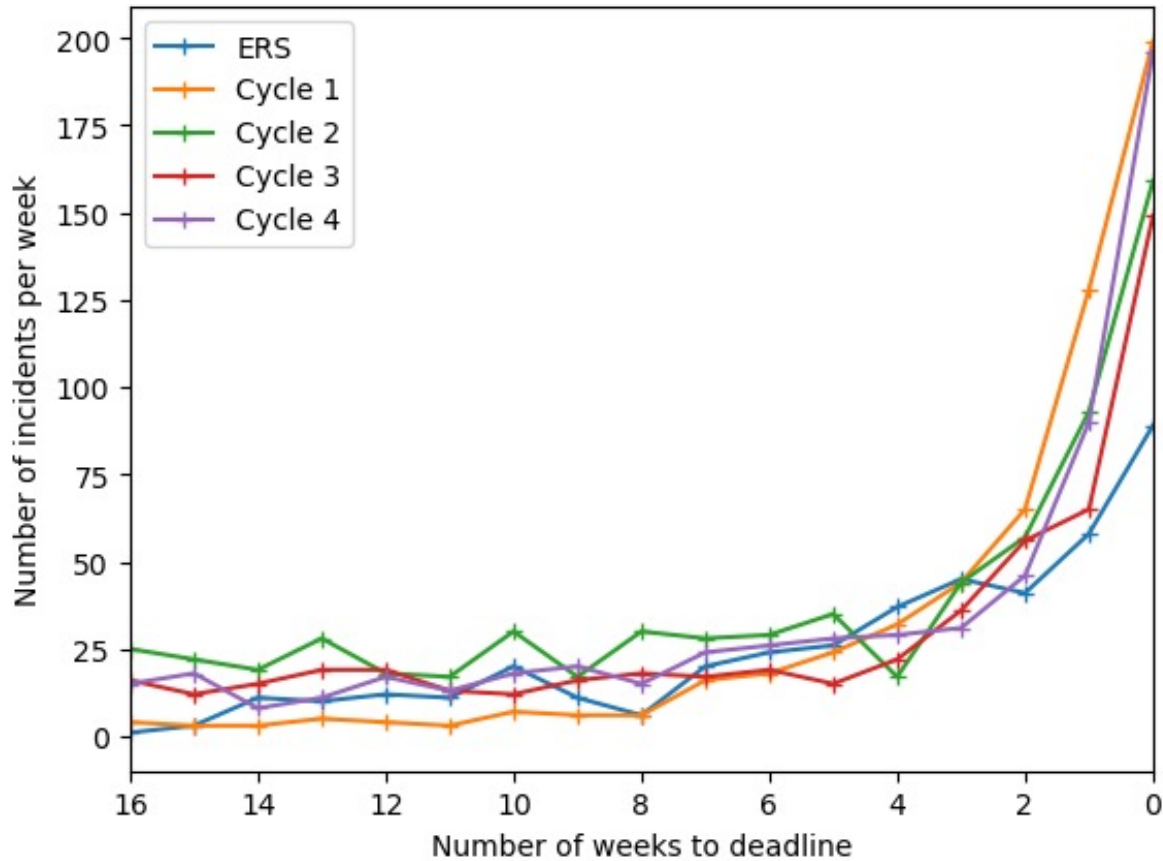
# JWST & HST Tickets vs Proposal Deadlines



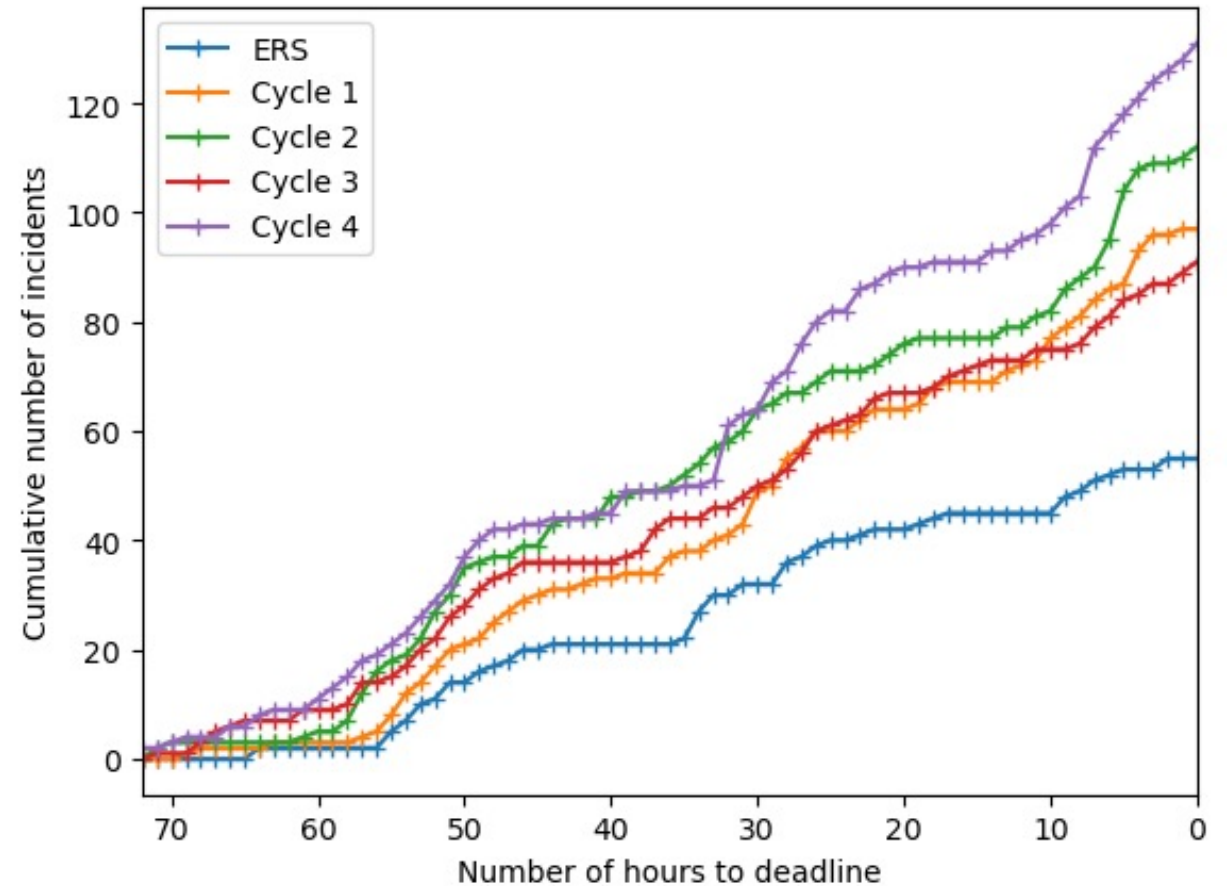


# JWST Help Desk Tickets

319 tickets within 8 weeks from the deadline

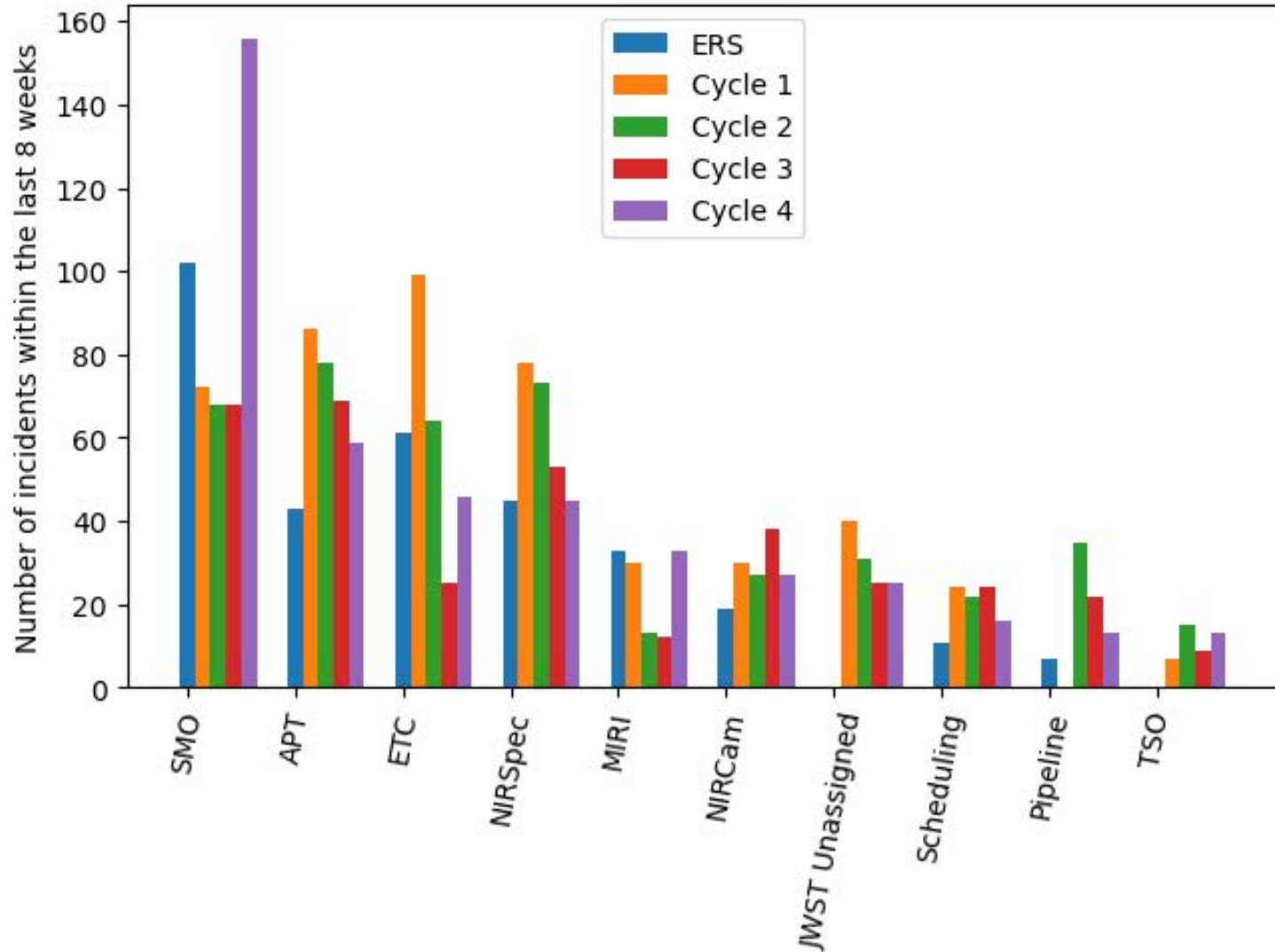


131 tickets submitted within last 3 days (last one 13 min before the deadline!)





# JWST Help Desk Tickets

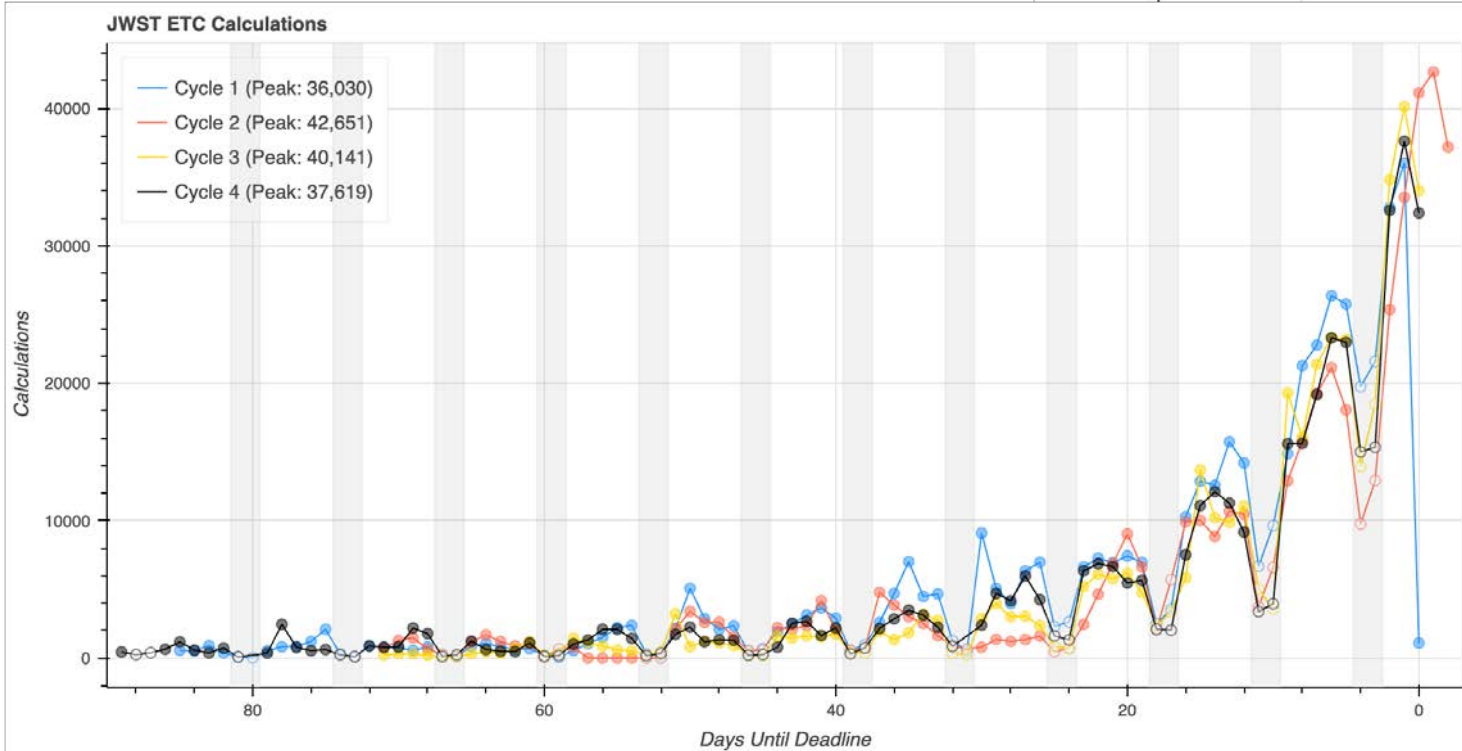
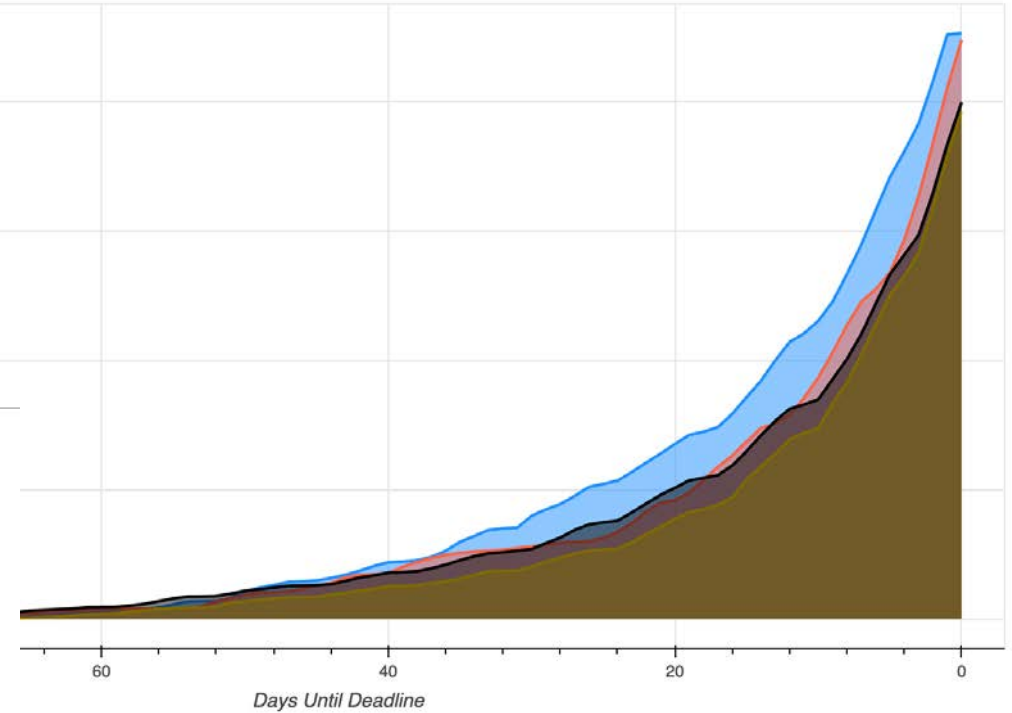
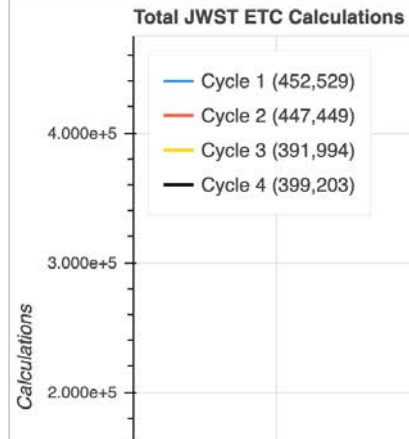


- Number of tickets over the last 8 weeks
  - SMO (156)
  - APT (59)
  - ETC (46)
- SMO was by far the group taking care of most tickets in the last weeks
- JWST Unassigned is mostly MIRI

Top Fulfillers	
Alex Hamanowicz	90
Karla Peterson	59
Joseph Filippazzo	46



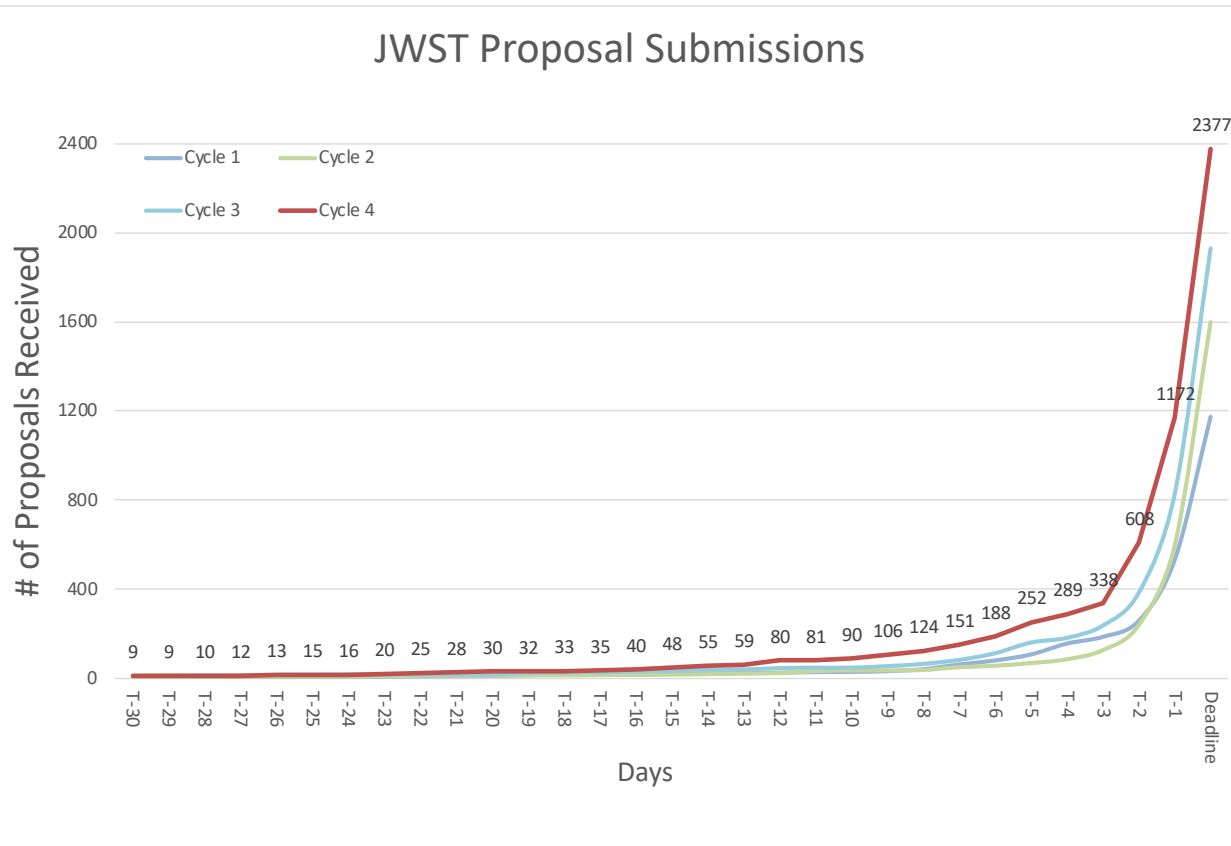
# Exposure Time Calculator (ETC) Cycle 4



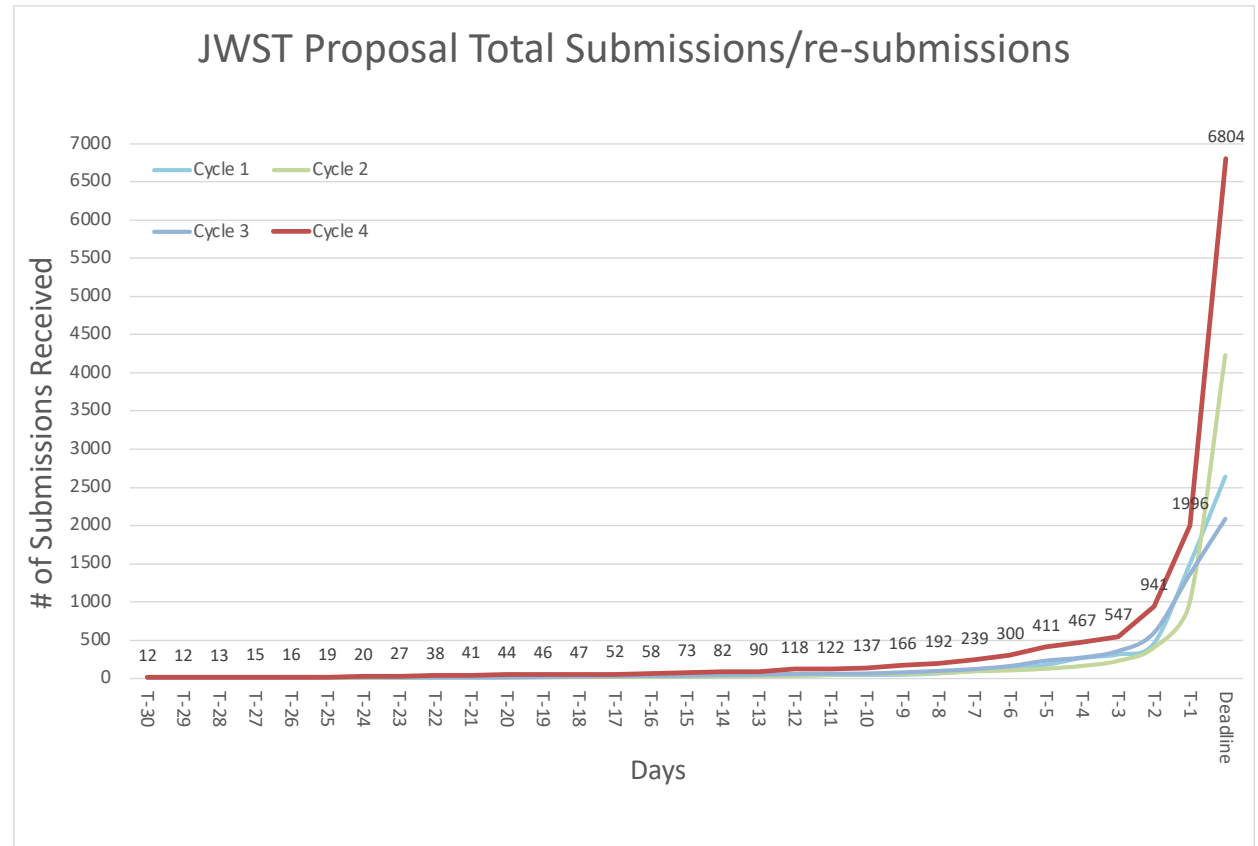


# Submissions

### JWST Proposal Submissions



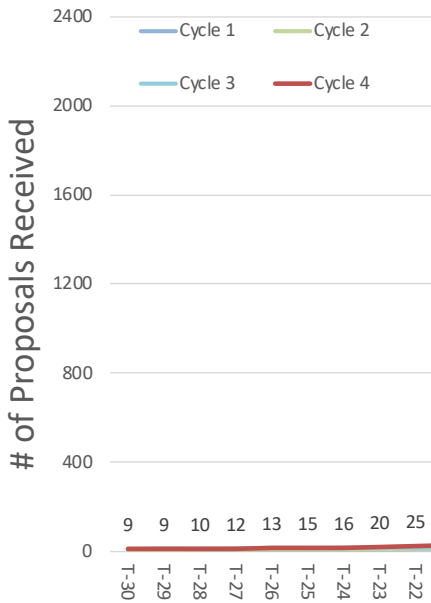
### JWST Proposal Total Submissions/re-submissions



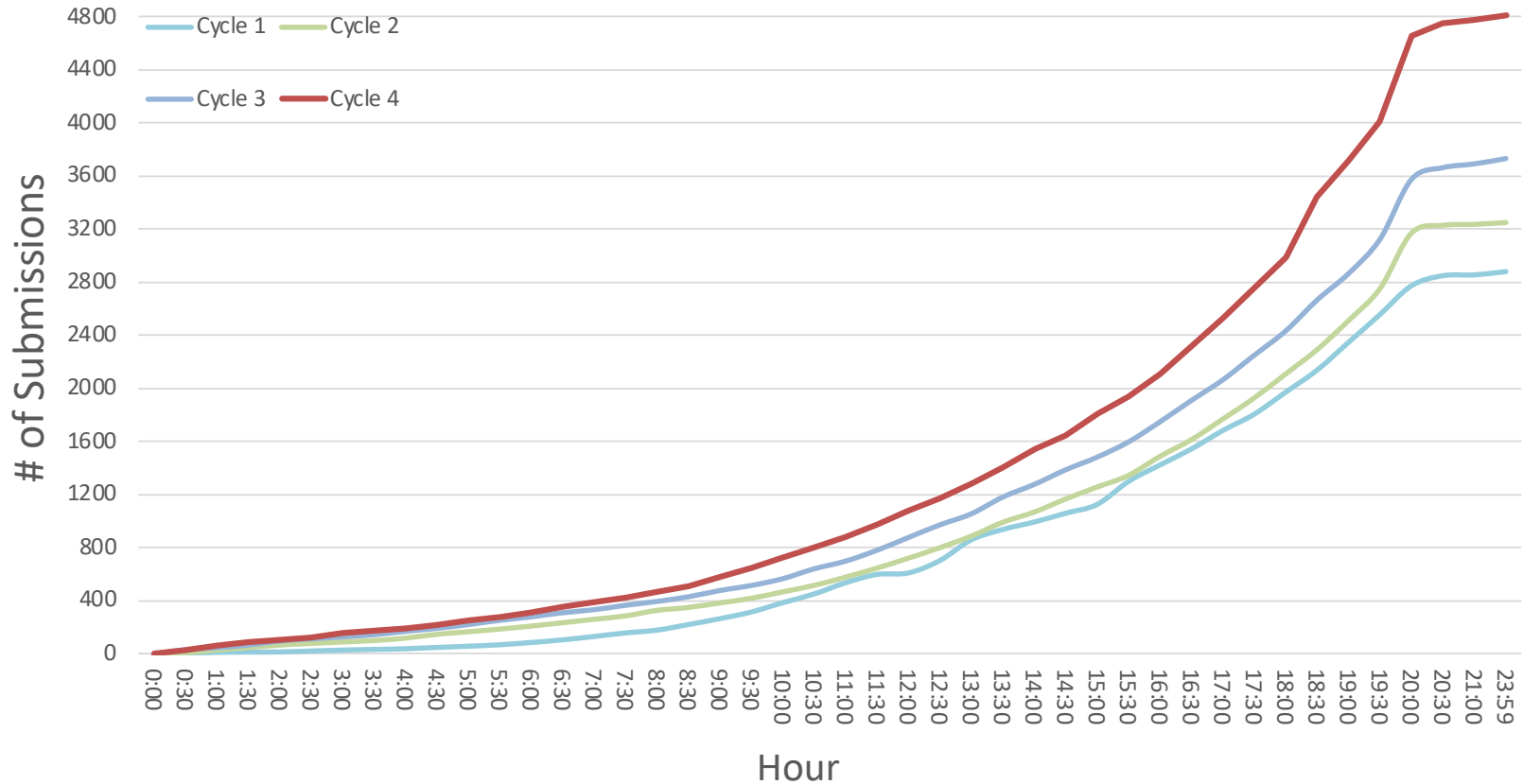


# Submissions

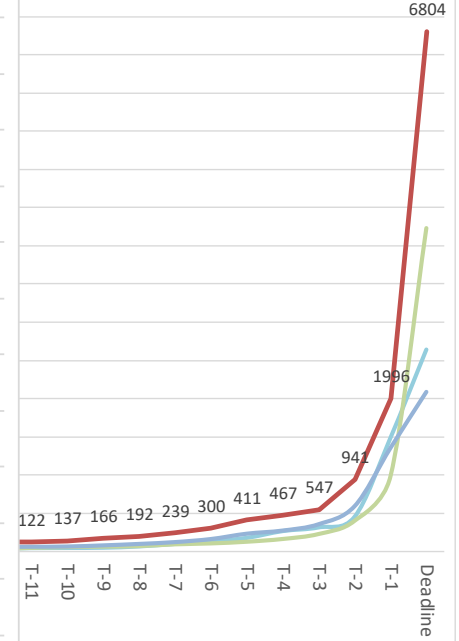
JWS



## Proposal Submissions/Resubmissions on the Deadline Day



e-submissions





## Summary

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- The JWST Cycle 4 GO/AR deadline was on October 16, 2024
  - A total of 2377 submissions were received by this date
  - 2 proposals were later found non-compliant and 1 was withdrawn leaving **2374** proposals to undergo the review
- The 2374 (1931) complete proposals include
- 710 proposal led by ESA PIs (30 %)
- 78 proposals led by Canadian PIs (3.3 %)
- 31255 (24031) Co-investigators in total
  - 6845 (6291) Unique investigators (PI, co-PI & co-I)
- Representation from
  - 61 (57) Countries (5 new JWST counties: Bangladesh, Hong Kong, Morocco, Pakistan, Saudi Arabia)
  - 46 US states + DC and PR (47 states + DC)
- TAC meeting is scheduled for February 3 - 7, 2025 and February 10 – 13, 2025 (Galactic and Extragalactic Executive Committees)

*(Cycle 3 stats in parens)*



# Proposals

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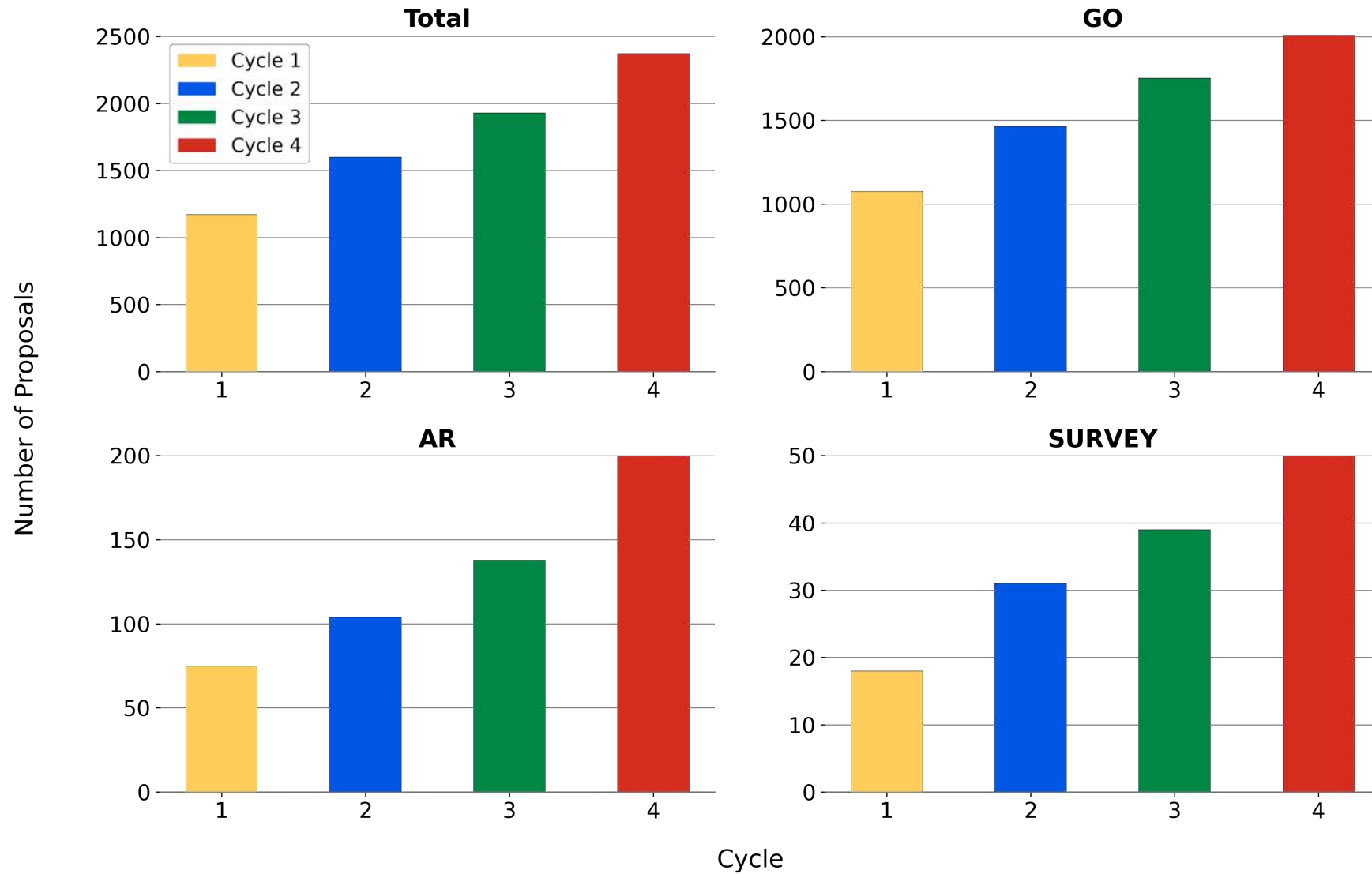
- 2107 (1753) GO proposals for 75,138 (48781) Hours, including
  - 908 Very Small for 10299 hours
  - 796 Small for 26454 hours
  - 326 Medium for 25610 hours
  - 77 Large for 12775 hours
  - 41 Treasury for 6837 hours
  - 6 GO Calibration for 76 hours
  - 10 Pure Parallel proposals for 3888 parallel hours
- 50 (39) Survey proposals
- 217 (139) Archival Research
  - 106 Regular
  - 94 Theory
  - 20 Legacy
  - 4 Cloud Computing
  - 15 Data Science Software

(Some proposals are in multiple categories)

*(Cycle 3 stats in parens)*

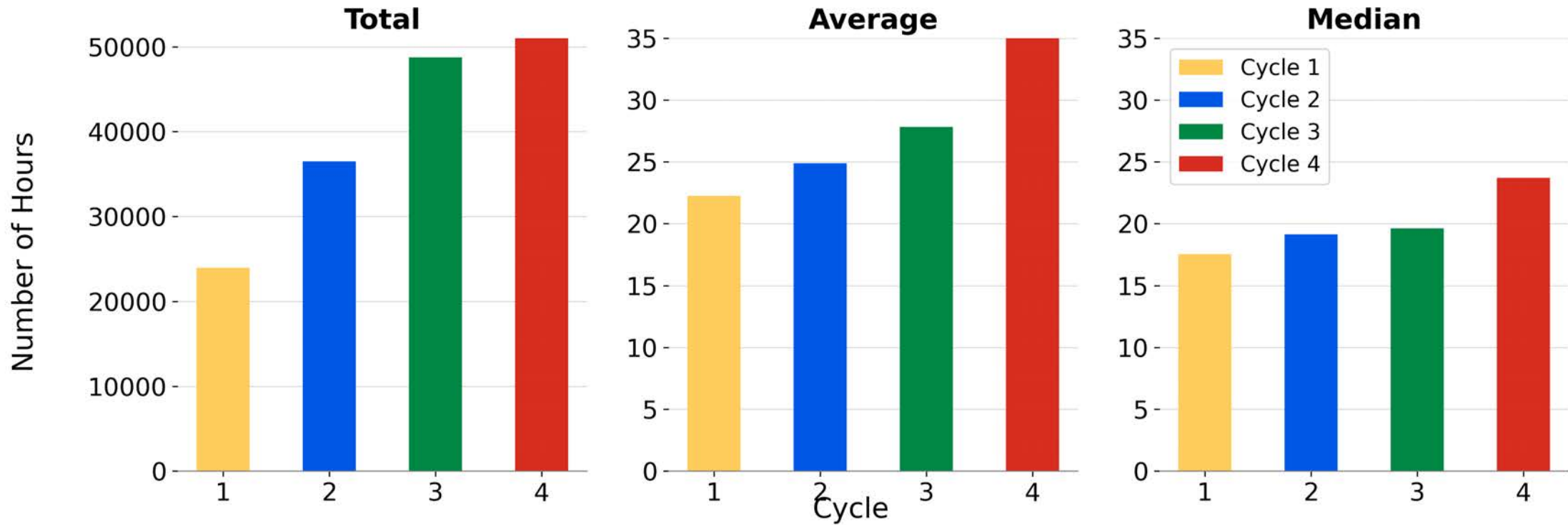


# Proposal Numbers



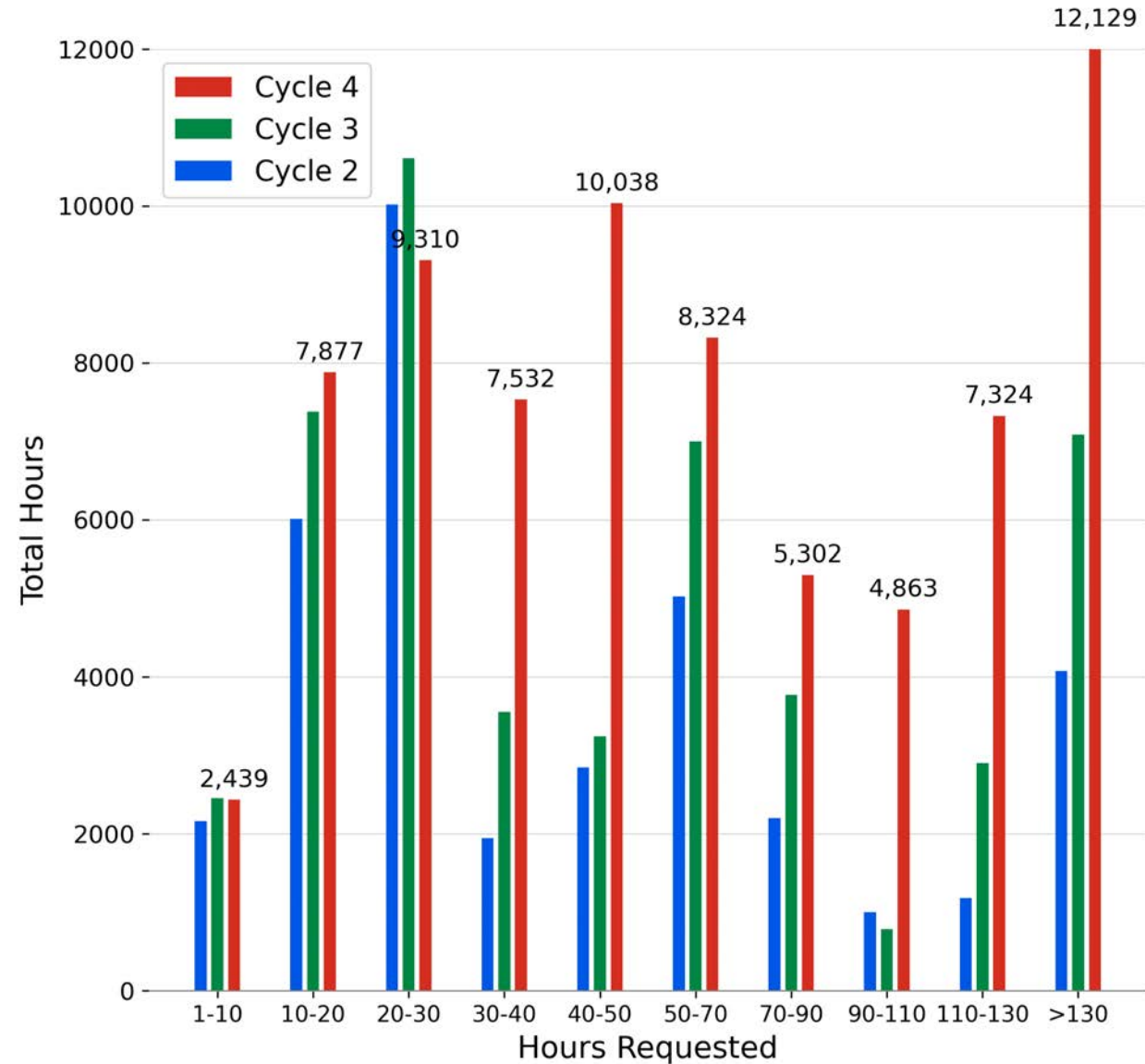
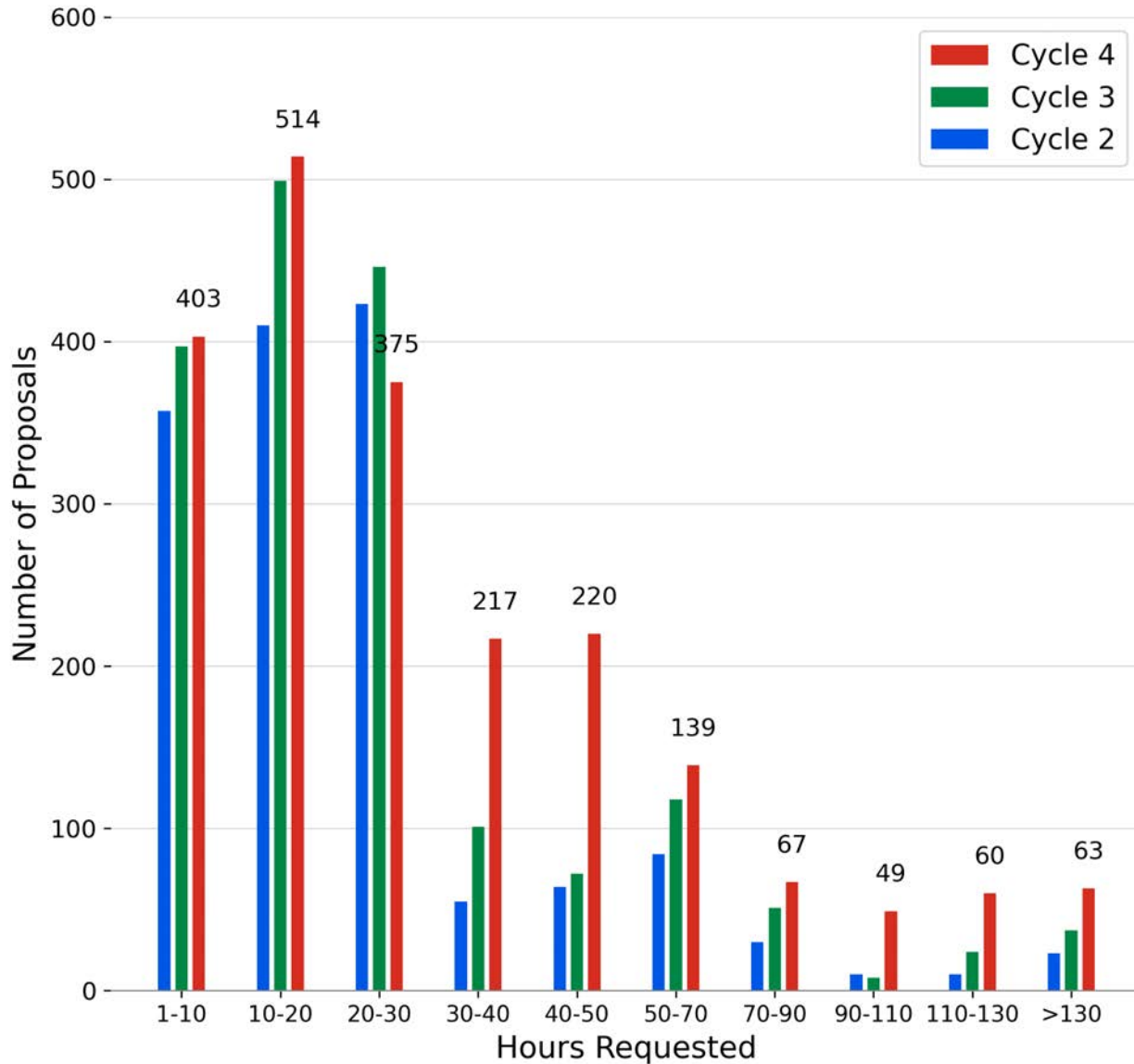


# Hours Requested



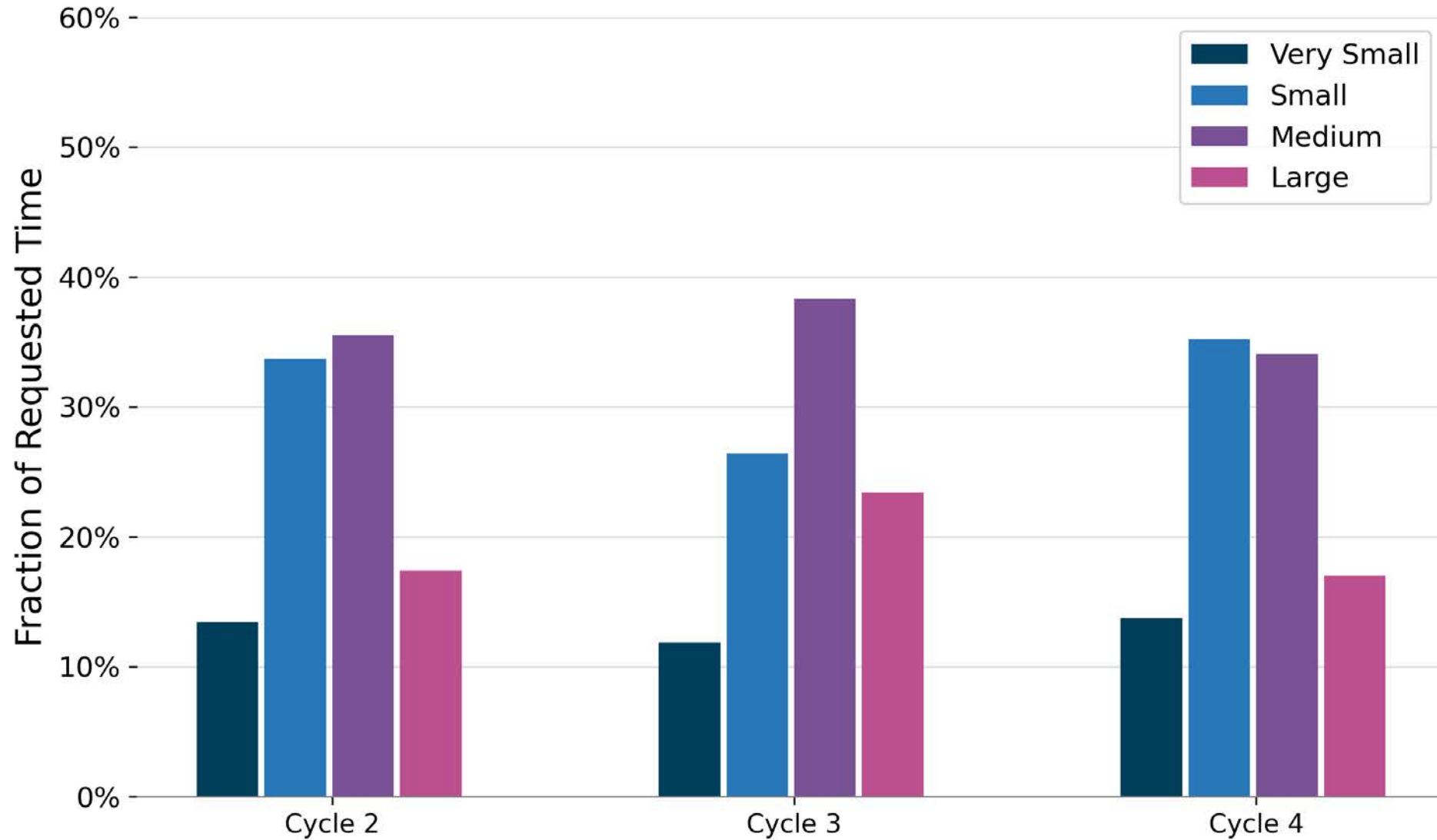


# Proposal Size Distribution for Proposals and Hours



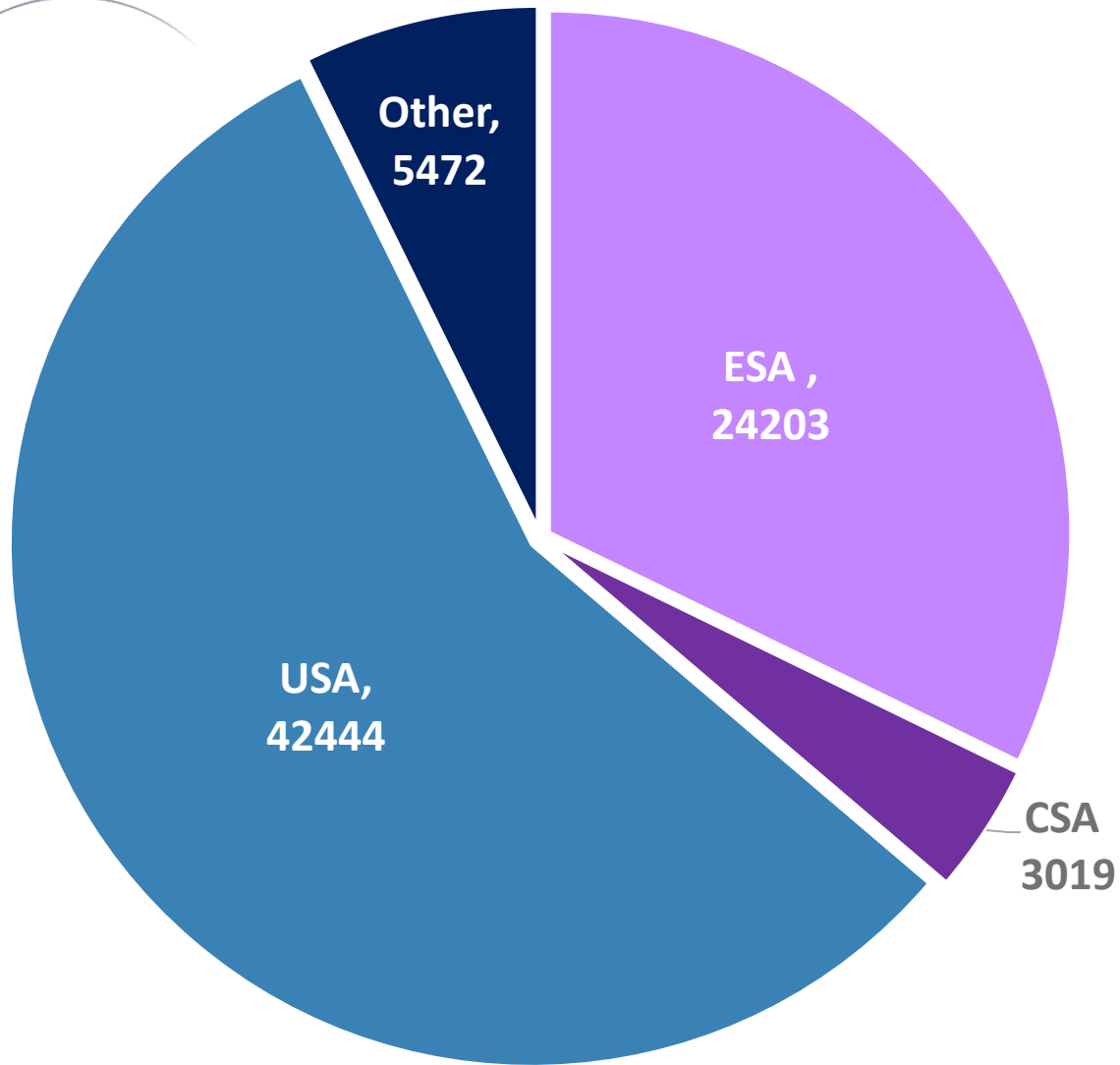


## Fraction of time by Proposal Size

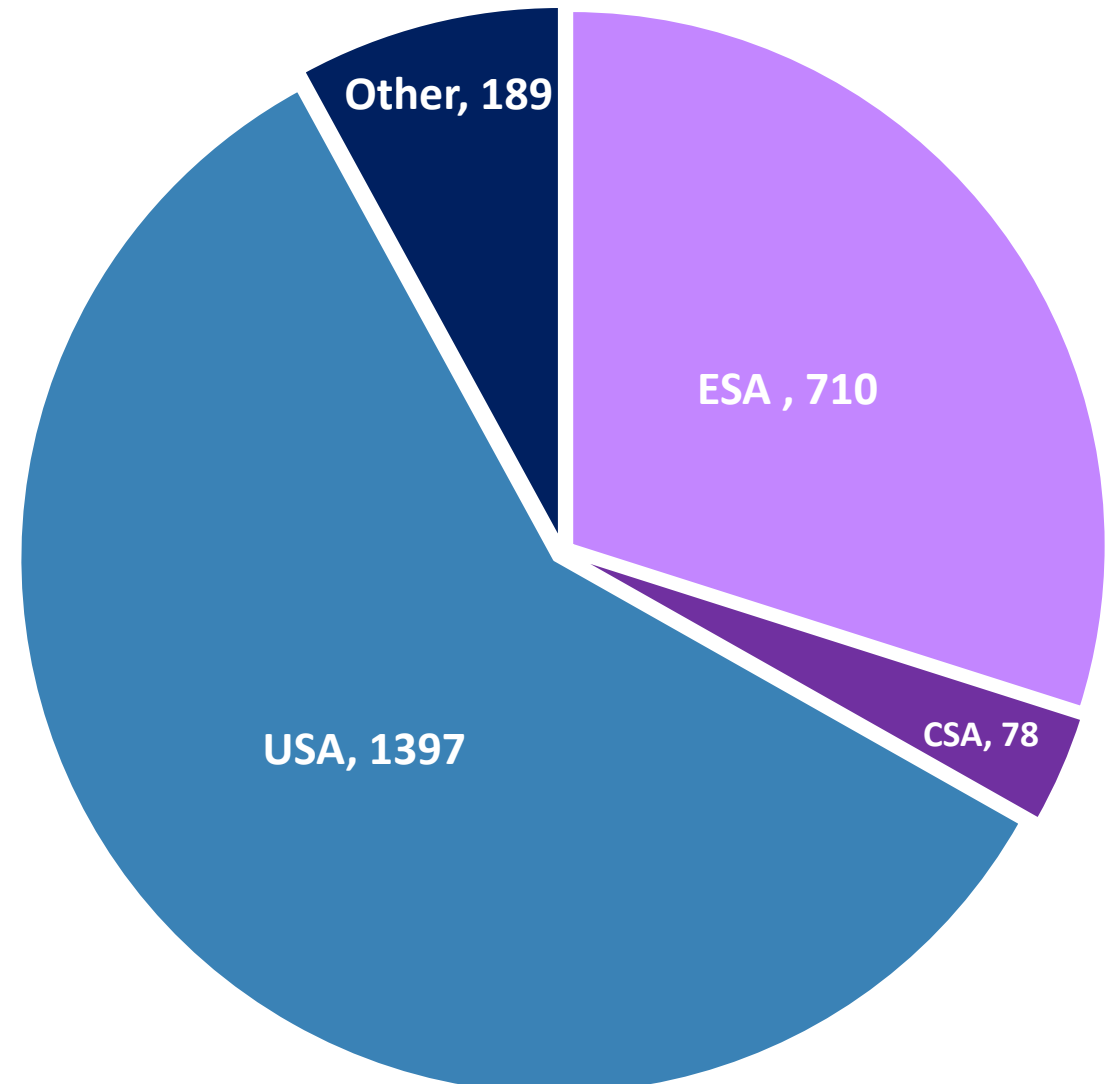




## Hours and Proposals around the World



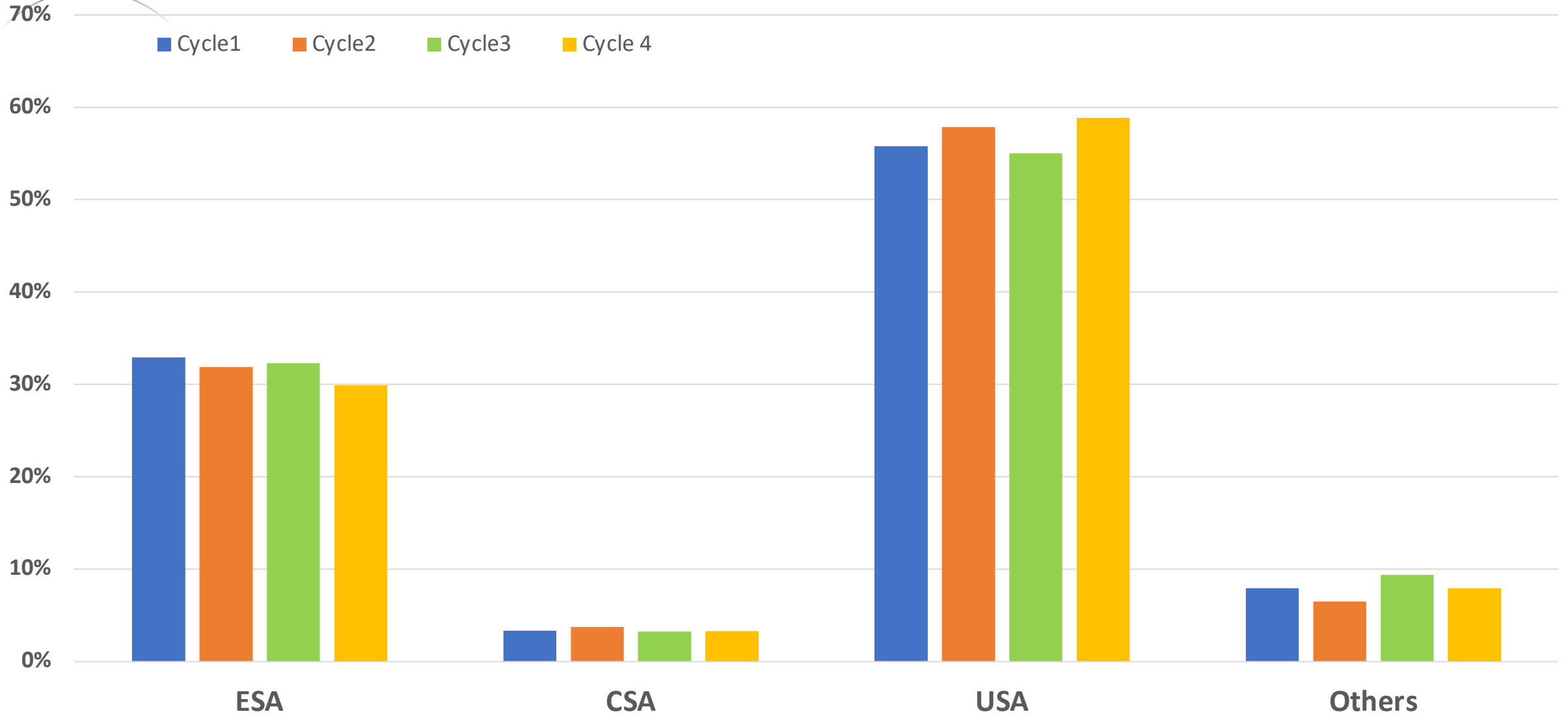
**Hours**



**Proposals**

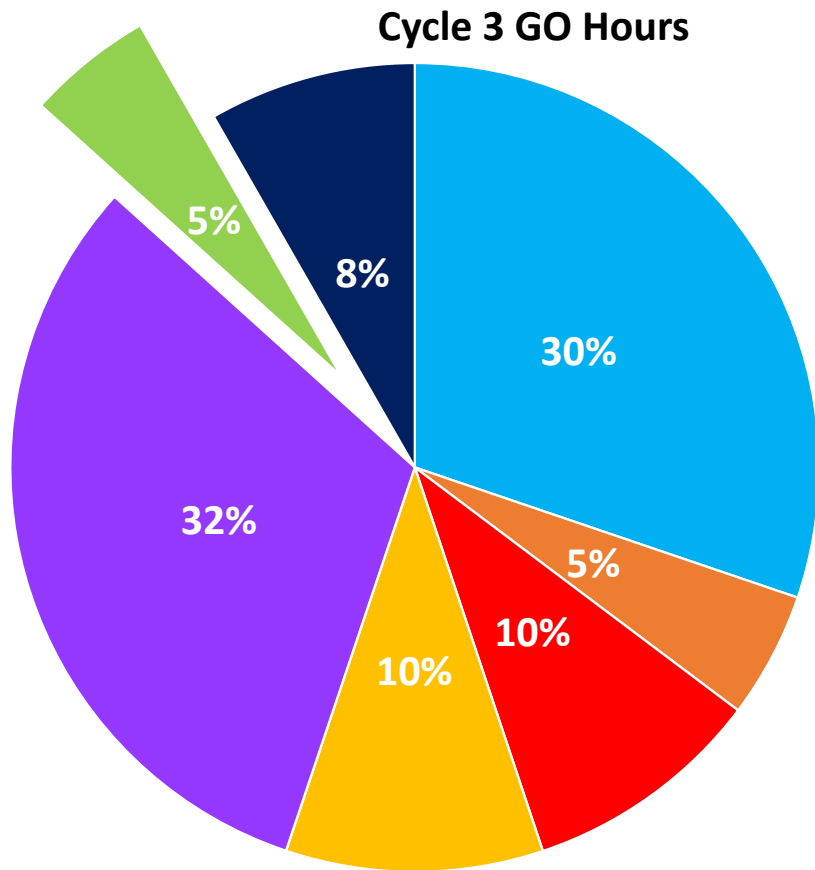


# Geographic request by Cycle

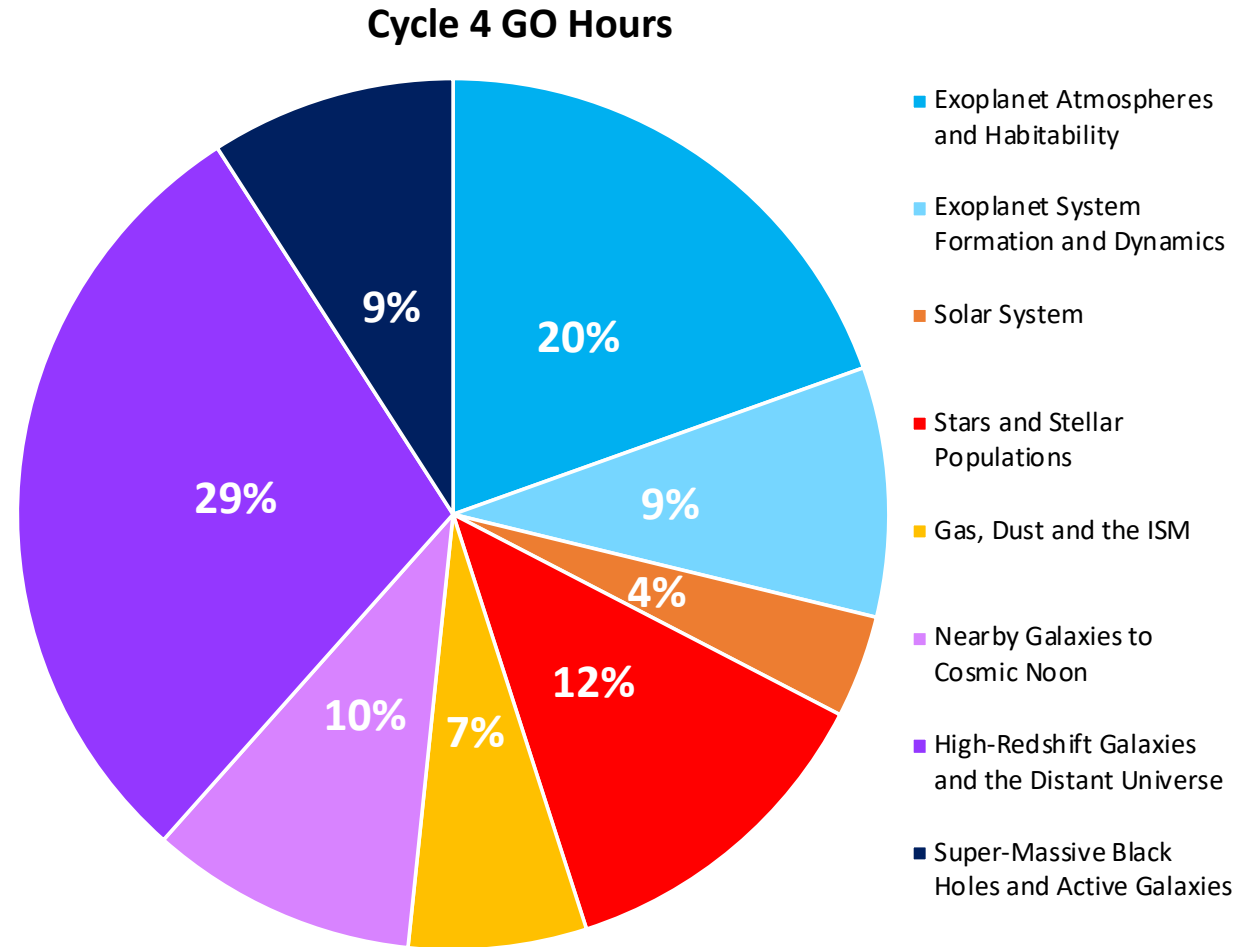




# Science Categories change between Cycle 3 and Cycle 4



- ExoPlanets
- Solar System
- Stellar Physics and Stellar Types
- Stellar Populations and the ISM
- Galaxies and IGM
- Large Scale Structure
- SuperMassive Black Holes and Active Galaxies

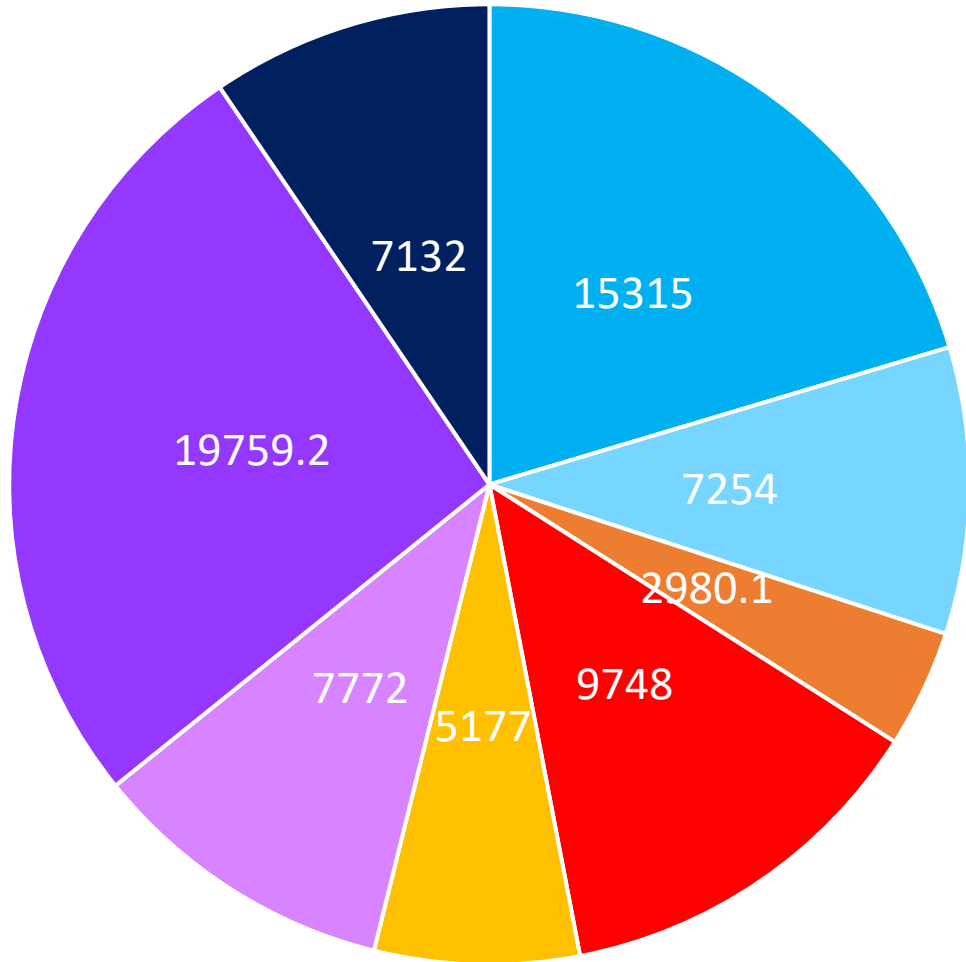


- Exoplanet Atmospheres and Habitability
- Exoplanet System Formation and Dynamics
- Solar System
- Stars and Stellar Populations
- Gas, Dust and the ISM
- Nearby Galaxies to Cosmic Noon
- High-Redshift Galaxies and the Distant Universe
- Super-Massive Black Holes and Active Galaxies

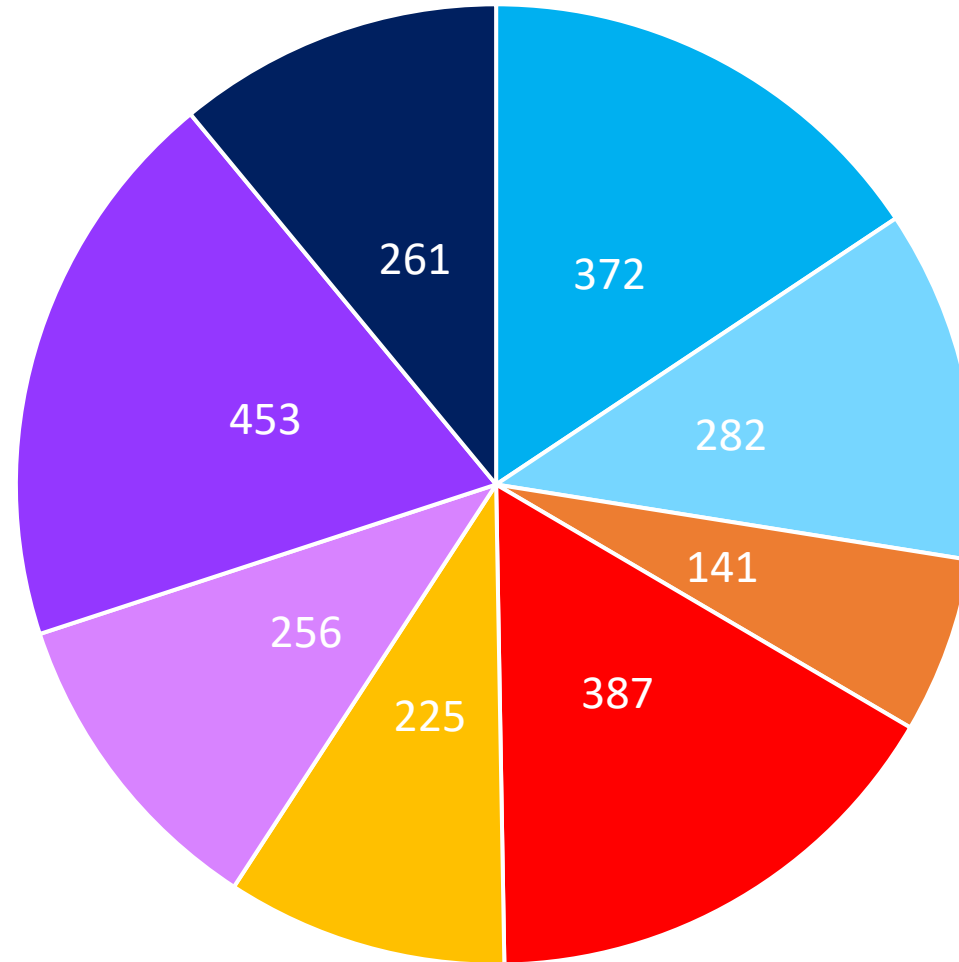


# Science Categories

## Cycle 4 Hours (GO only)



## Cycle 4 Proposals

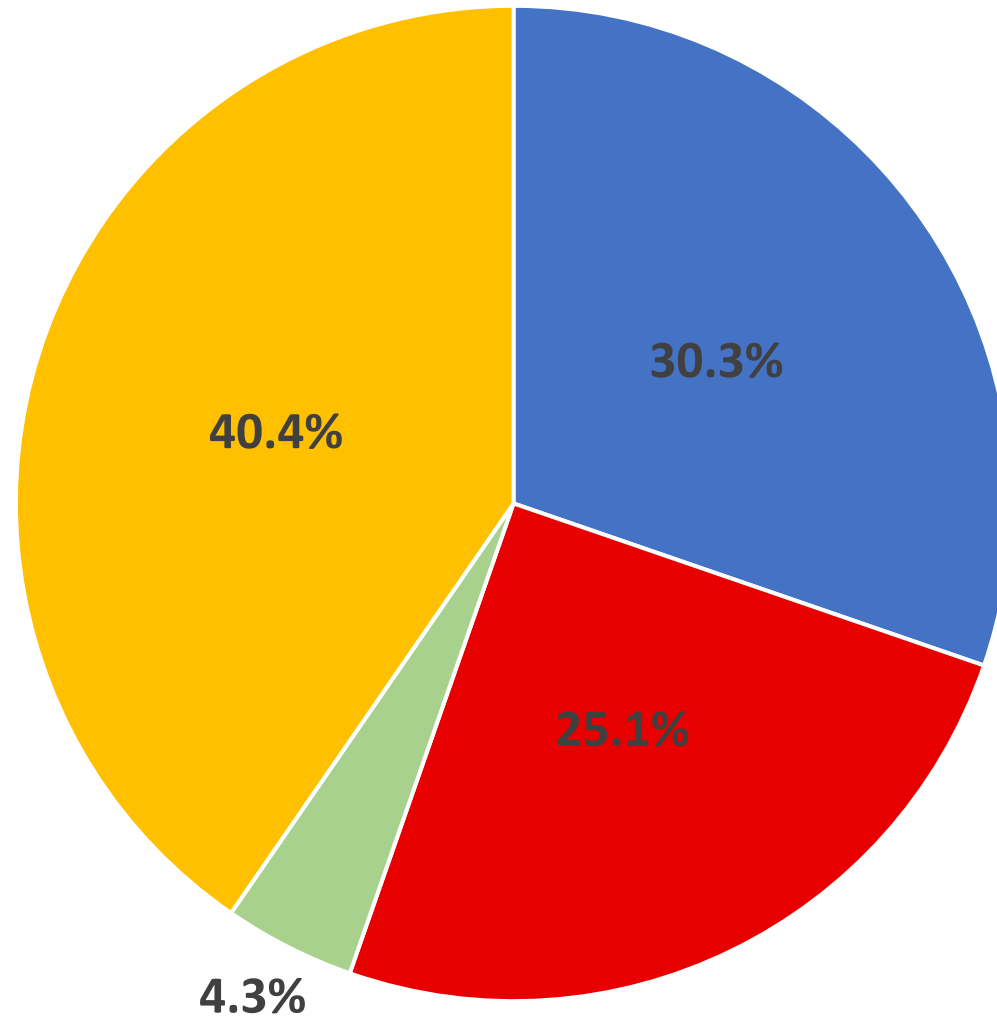


- Exoplanet Atmospheres and Habitability
- Exoplanet System Formation and Dynamics
- Solar System
- Stars and Stellar Populations
- Gas, Dust and the ISM
- Nearby Galaxies to Cosmic Noon
- High-Redshift Galaxies and the Distant Universe
- Super-Massive Black Holes and Active Galaxies



## Prime Instruments by Fraction of Proposals

■ MIRI ■ NIRCam ■ NIRISS ■ NIRSpec



**Spectroscopy 68 %**  
**Imaging 32 %**

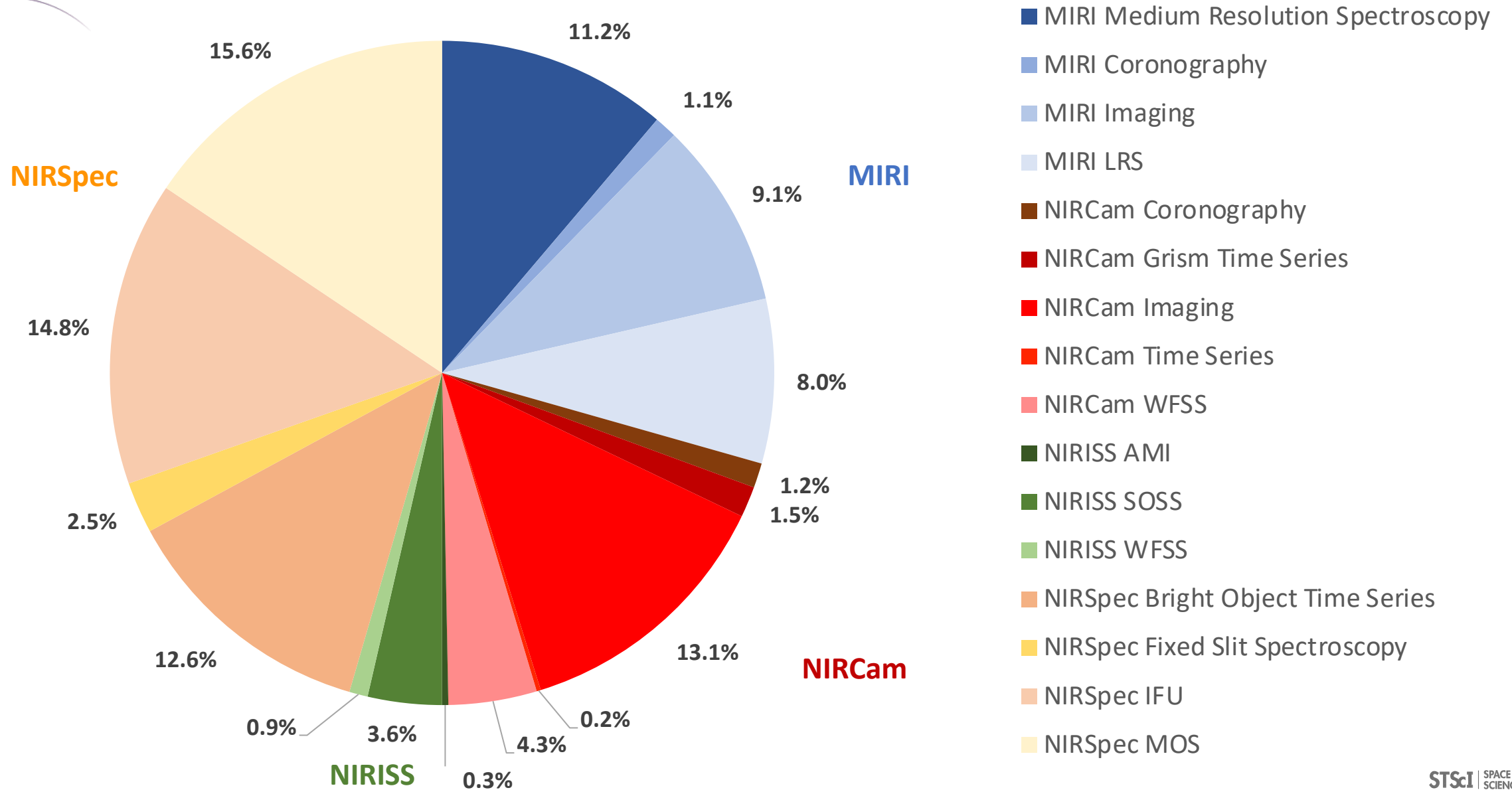


## Instrument modes – prime only

Mode	Prime Time % Mode	Prime Time % Instrument
MIRI Medium Resolution Spectroscopy	11.2 %	29.4 %
MIRI Coronagraphy	1.1 %	
MIRI Imaging	9.1 %	
MIRI LRS	8.0 %	
NIRCam Coronagraphy	1.2 %	20.2 %
NIRCam Grism Time Series	1.5 %	
NIRCam Imaging	13.1 %	
NIRCam Time Series	0.2 %	
NIRCam WFSS	4.3 %	
NIRISS Imaging	< 0.1 %	4.8 %
NIRISS AMI	0.3 %	
NIRISS SOSS	3.6 %	
NIRISS WFSS	0.9 %	
NIRSpec Bright Object Time Series	12.6 %	45.5 %
NIRSpec Fixed Slit Spectroscopy	2.5 %	
NIRSpec IFU	14.8 %	
NIRSpec MOS	15.6 %	



# Requested Modes in Fraction of Prime Time





## Special categories

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- **Target of Opportunity proposals**
  - 1 Ultra disruptive proposals requesting 17 hours
  - 8 disruptive proposals requesting 187 hours
  - 59 non-disruptive proposals requesting 1420 hours
  - 4 disruptive/non-disruptive proposals requesting 130 hours (subset of above)
- **Joint Observatories**
  - HST: 35 proposals requesting 398 orbits and 1130.5 JWST hours
  - ALMA: 17 proposals requesting 164 hours and 427.7 JWST hours
  - Chandra: 1 proposals requesting 40 Ksecs and 9.3 JWST hours
  - Keck: 5 proposals requesting 7.5 nights and 199.5 JWST hours
  - XMM: 9 proposals requesting 585 Ksecs and 167 JWST hours
  - NOIRLab: 4 proposals requesting 12.7 nights and JWST 238 Prime
  - NRAO: 6 proposals requesting 68.7 hours and 293 JWST hours
- **Future Cycles proposals**
  - 63 proposals requesting 2026 hours in Cycle 5
  - 39 proposals requesting 1007 hours in Cycle 6



# Archival Research and Calibrations

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- 217 Archival Research
  - 106 Regular
  - 94 Theory
  - 20 Legacy
  - 4 Cloud Computing
  - 15 Data Science Software
- 9 Calibrations
  - 6 GO for 76 hours
  - 3 Archival Research



# Proposers Demographics

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- Overall,
  - 31255 investigators, including 6845 unique investigators (*6291*)
    - 61 (*56*) Countries
    - 47 US states + DC and PR (*47 US states + DC*)
    - 411 Unique PI Institutions
    - 863 Unique Institutions (total)
    - 11 serving Minority Institutions
  - 2374 PIs, including 1655 unique investigators from 42 countries, 40 states *and DC*
  - 1374 Co-PIs, including 933 unique investigators from 34 countries and 38 states *and DC*
  - 27507 Co-Is, including 6531 unique investigators from 60 countries, 47 US states, *DC and PR* (*23023, 6008 unique in Cycle 3*)
- ESA
  - 710 PIs (30 %)
  - 453 Co-PIs (33 %) and 10198 Co-I (37 %)
- Canada
  - 78 PIs (3.3 %)
  - 78 Co-PIs (5.7 %) and 857 (3.1 %) Co-Is







# ESA Investigators

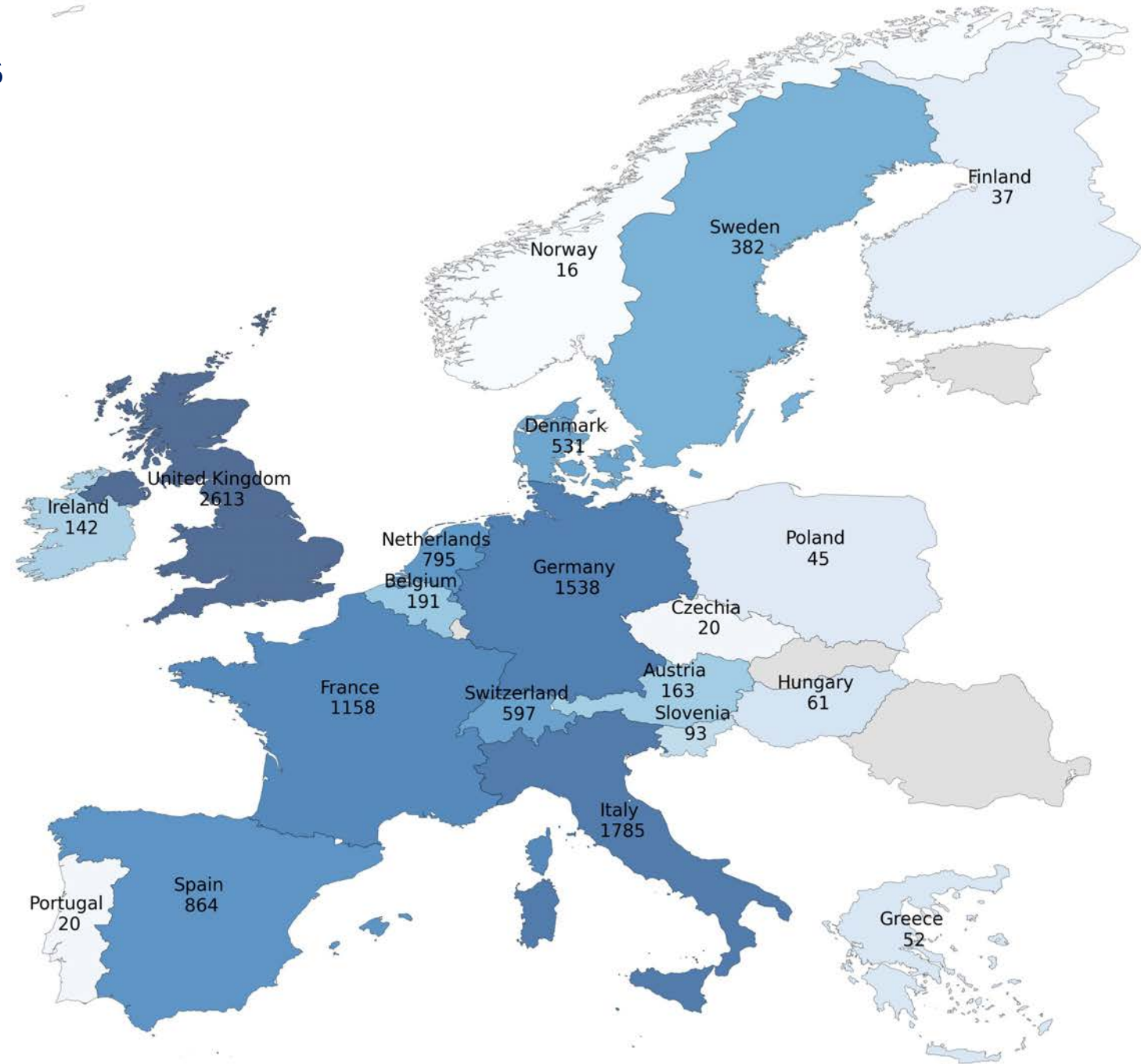
## ESA Investigators

PI – CoPI – Col

710 – 453 - 10198

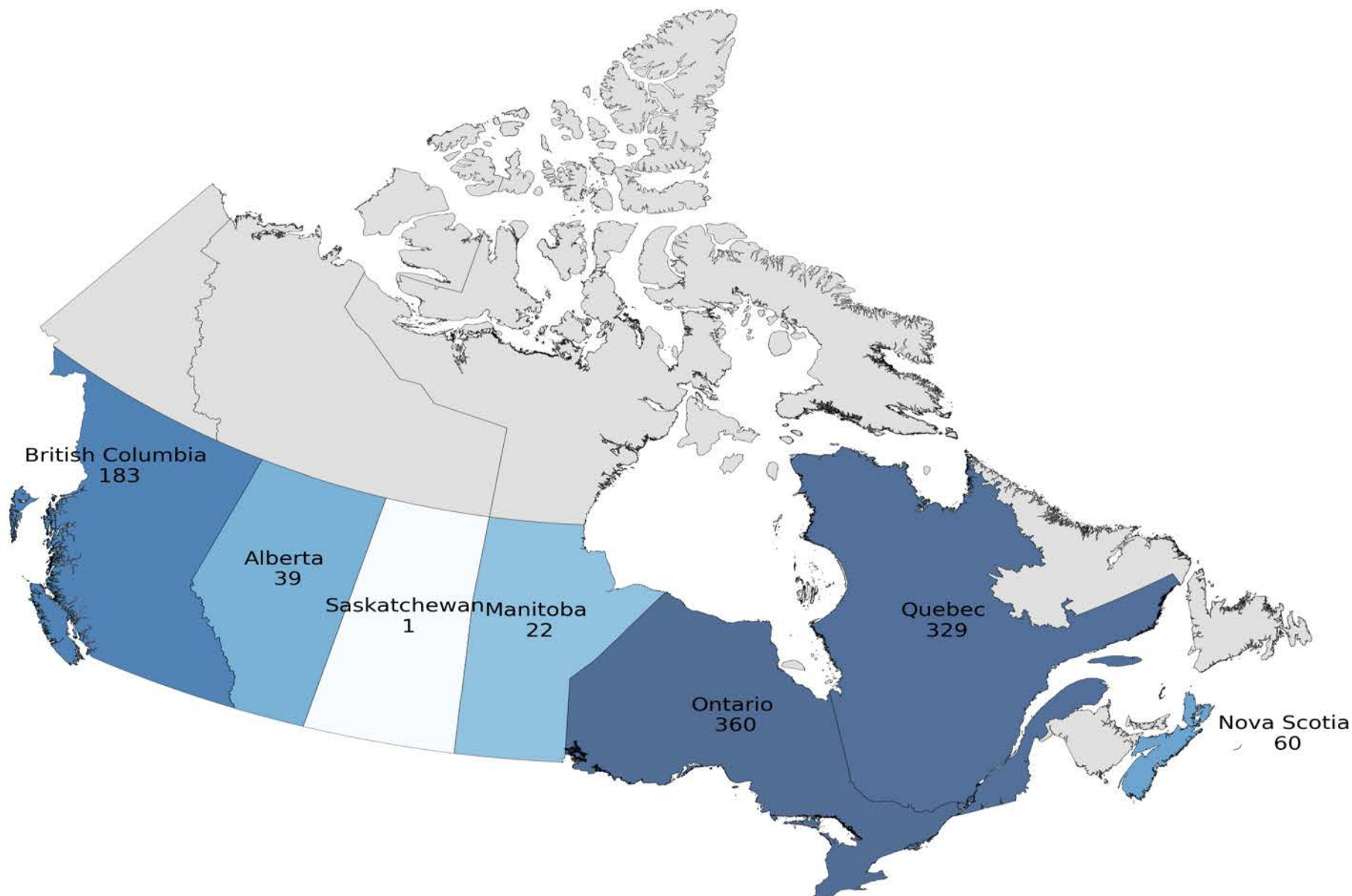
Total 11361 – 3451 *Unique*

286 *STScI ESA*





# Canadian Investigators



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**PI – CoPI – Col**  
78 – 78 – 857  
1013 – 311 *Unique*  
7 STSci CSA

# Investigators by country

Country	PI	Co-PI	Co-I	Country	PI	Co-PI	Co-I	Country	PI	Co-PI	Co-I
Argentina	1	1	11	Honduras			1	Saudi Arabia			1
Australia	29	14	412	Hong Kong	1	1	2	Serbia			6
Austria	14	8	141	Hungary	7	3	51	Slovenia	7	3	83
Belgium	10	4	177	Iceland			5	South Africa			14
Bangladesh	1		3	India	9	4	101	Spain	48	39	777
Bostwana			1	Iran	1	1	1	Sweden	30	13	339
Brazil	5	1	44	Ireland	11	8	123	Switzerland	34	24	539
Bulgaria	1		3	Israel	6	1	115	Taiwan	8		87
Canada	77	78	851	Italy	109	74	1602	Thailand	3		27
Chile	20	16	335	Japan	77	19	777	The Netherlands	54	27	714
China	32	26	498	Kazakhstan			13	The Vatican			1
Columbia			3	Korea	3	2	79	Turkey	1	2	18
Croatia			2	Mexico	2		53	Ukraine	1		1
Cyprus			5	Morocco	1		1	United Arab Emirates			1
Czech Republic	2		18	Namibia			1	United Kingdom	176	88	2349
Denmark	19	27	485	New Zealand	1		2	United States	1397	766	14045
Ecuador	1	1	4	Norway	1	1	14	Uruguay		1	
Finland	7		30	Pakistan			1	Venezuela			1
France	58	48	1052	Poland	2	7	36	Vietnam			2
Germany	104	63	1371	Portugal	2	1	17		<i>New countries in green</i>		
Greece	2		50	Russia		2	23				



# Investigators by US State and Territory

Country	PI	Co-PI	Co-I	Country	PI	Co-PI	Co-I	Country	PI	Co-PI	Co-I
Alabama	12	7	117	Kentucky	9	1	55	Oklahoma	4	1	23
Alaska			11	Louisiana	2	1	10	Oregon	1		1
Arizona	126	73	1416	Maine	2	1	26	Pennsylvania	23	14	252
Arkansas			12	Maryland	270	165	3388	Puerto Rico			2
California	261	140	2285	Massachusetts	135	81	1322	Rhode Island	2	1	17
Colorado	24	11	194	Michigan	41	34	362	South Carolina	3	1	26
Connecticut	10	4	130	Minnesota	8	6	103	Tennessee	3	2	33
Delaware	3	1	10	Mississippi			3	Texas	80	41	851
District of Columbia	26	17	309	Missouri	26	15	65	Utah	4	1	30
Florida	33	11	253	Montana	3	4	10	Vermont			3
Georgia	3	1	19	Nevada			11	Virginia	43	29	360
Hawaii	22	11	178	New Hampshire	2		33	Washington	9	4	123
Idaho	3		7	New Jersey	16	15	203	West Virginia			4
Illinois	6	23	542	New Mexico	5	1	50	Wisconsin	9	6	139
Indiana	14	4	99	New York	54	26	586	Wyoming		1	31
Iowa	2	2	17	North Carolina	9	3	54				
Kansas	7	3	88	Ohio	26	8	245				

# Acknowledgements

## **JWST Science Policies Group**

Katey Alatalo, Amaya Moro-Marin, Laura Watkins, Neill Reid, Mercedes Lopez-Morales, Amy Jones, David Stark, Joshua Lothringer, Jamila Pegues, Nikolay Nikolov, Linda Smith, Rebecca Levy  
Brett Blacker, Amber Armstrong

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## **Statistics by:**

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Shireen Gonzaga – JDox  
Joseph Filippazzo - ETC