Summary

- The JWST Cycle 1 GO/AR deadline was on November 24 2020
  - A total of 1174 submissions were received by this date
  - Extension requests from 29 PIs for 40 proposals – all granted
  - All proposals save one were completed by the extension deadline on December 3 2020
- The 1173 complete proposals include
  - 1084 GO proposals for ~24,500 hours
  - 14 Survey proposals for at least 860 hours
  - 75 AR proposals
  - 374 proposal led by ESA PIs (31.9%)
  - 44 proposals led by Canadian PIs (3.8%)
  - 12766 Co-investigators in total
  - 4332 Unique investigators (PI, co-PI & co-I)
- Representation from
  - 44 Countries
  - 45 US states + DC and the Virgin Islands
- TAC meeting is scheduled for February 16-19 (Galactic panels), February 23-26 (Extragalactic panels) & March 1-4 2021 (Executive Committee)
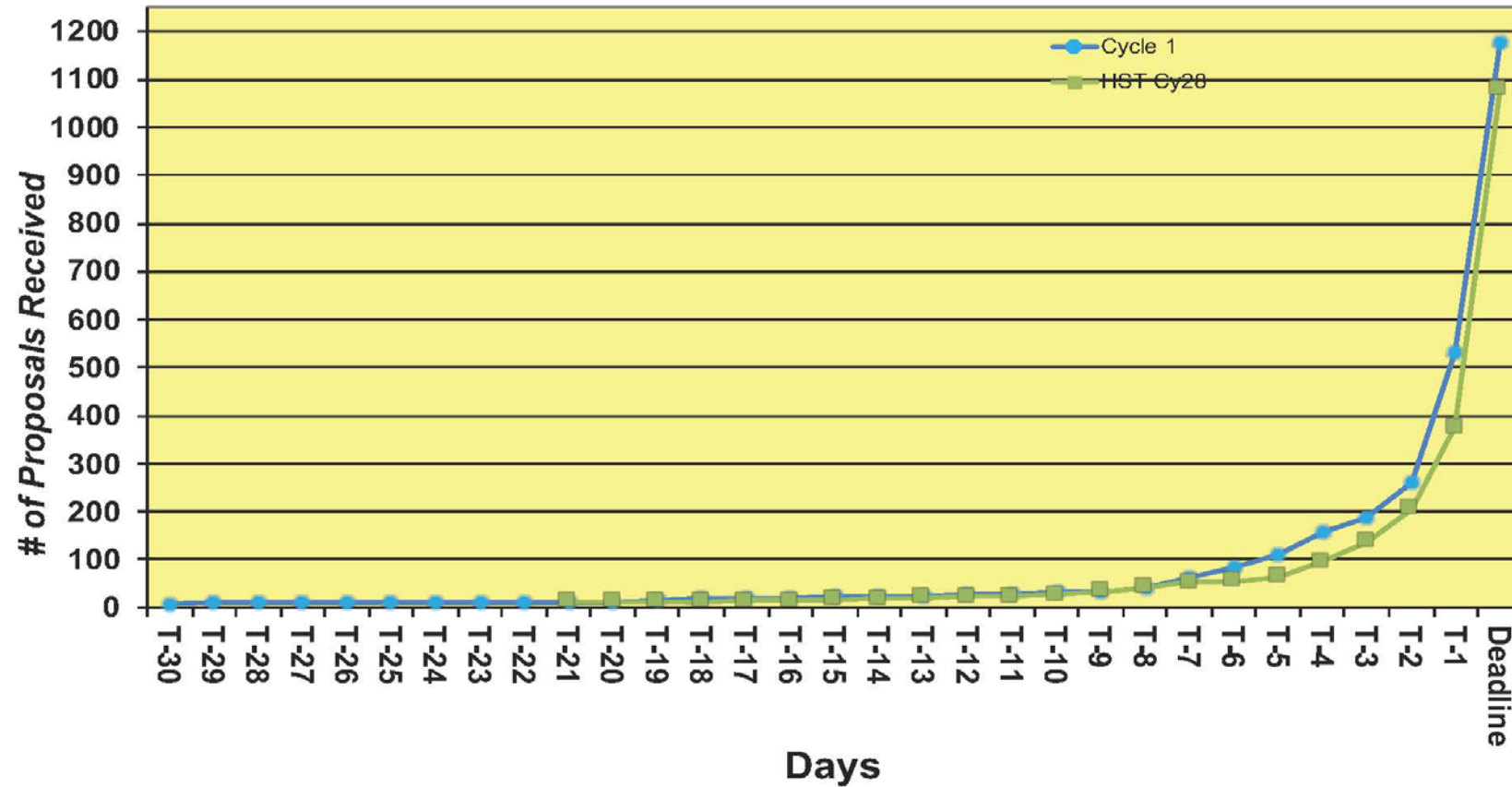
Proposal submissions

JWST Proposal Submissions

**Astronomers follow predictable behaviors**

Proposals

- 1084 GO proposals, including
  - 879 Small for ~13170 hours (~4:1)
  - 168 Medium for ~7854 hours (~8:1)
  - 28 Large for ~3530 hours
  - 20 Treasury for ~1820 hours (~5:1)
  - 5 Calibration for ~63 hours
  - 9 Pure Parallel proposals

- 14 Survey proposals for >860 hours

- 75 AR proposals including
  - 39 Regular AR proposals
  - 33 Theory AR proposals
  - 3 Legacy AR proposals
  - 2 Cloud Computing AR proposals
 - 4 Data Science Software AR proposals

(Some proposals are in multiple categories)
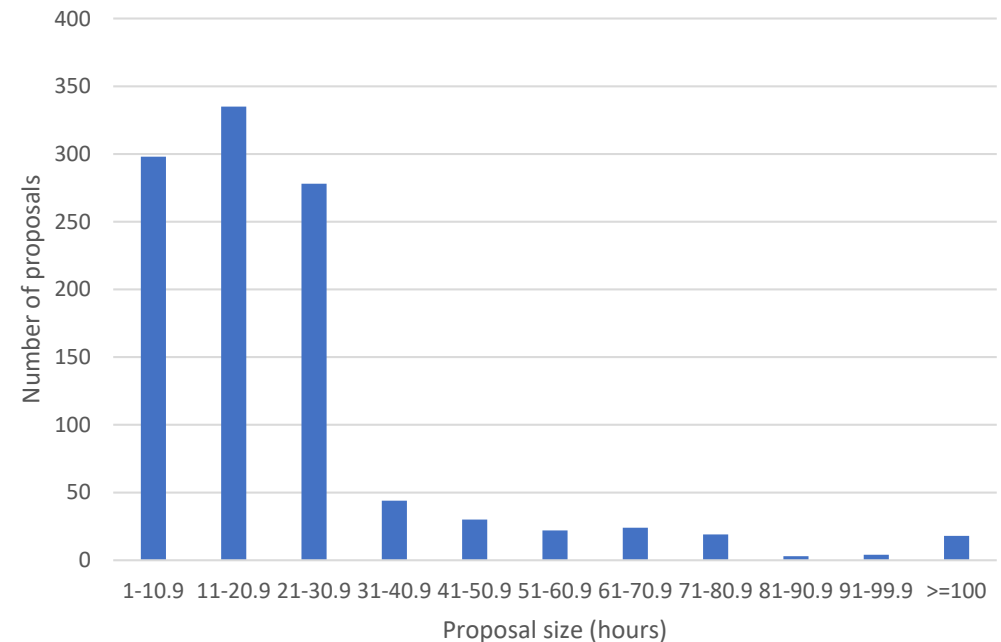
Special categories

- Long-term proposals
    - 18 proposals requesting 536 hours in Cycle 2
    - 11 proposals requesting 449 hours in Cycle 3
- Joint JWST-HST proposals
    - 12 proposals requesting 382 hours and 98 HST orbits
- Target of Opportunity proposals
    - 19 disruptive proposals requesting 333 hours
    - 17 non-disruptive proposals requesting 583 hours
- Instrument use by proposal
    - MIRI – 481 proposals (41%)
    - NIRCam – 346 proposals (29.5%)
    - NIRISS – 54 proposals (4.6%)
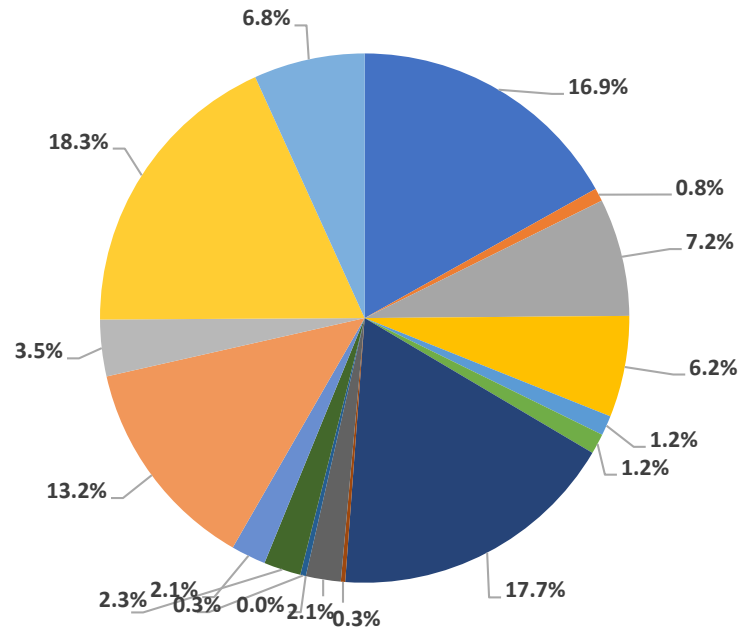   - NIRSpec – 566 proposals (48.3%)

- MIRI
- NirCam
- NIRISS
- NIRSpec

Instrument modes – prime only
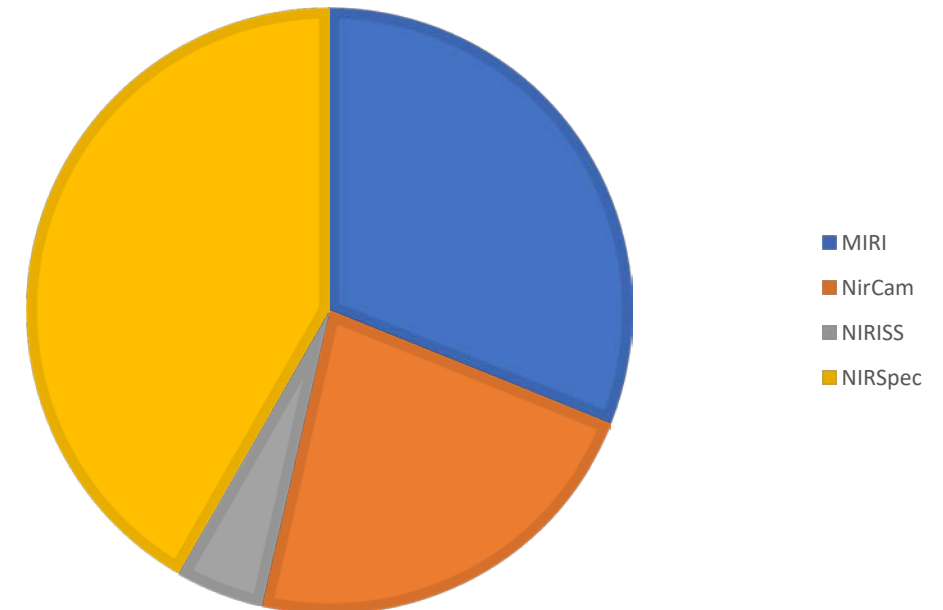
Requested Instrument Modes

72.6% spectroscopy
24.9% imaging
2.3% high-contrast

Personnel

- Overall,
  - 13939 investigators, including 4332 unique investigators [3593 in HST 28]
    - 2347 investigators have been on a past HST proposal
    - **1985 investigators have not been on a past HST proposal**
  - 1173 PIs, including 932 unique investigators from 27 countries, 35 states and DC [1077]
  - 455 Co-PIs from 24 countries and 35 states
  - 12766 co-Is, including 4182 unique investigators from 44 countries, 45 US states, DC and the Virgin Islands [7709, 3414 unique in HST 28]
- ESA
  - 374 PIs (31.9%) on 367 GO, 1 AR and 6 Surveys
  - 148 Co-PIs (33.3%) and 5019 Co-I (39.3%)
- Canada
  - 44 PIs (3.8%) on GO programs
  - 19 Co-PIs (4.3%) and 378 (3.0%) Co-Is
- Gender
  - 31.5% of the proposals have female PIs [28.5% in HST 28]
    - Binary estimate based on publicly available information
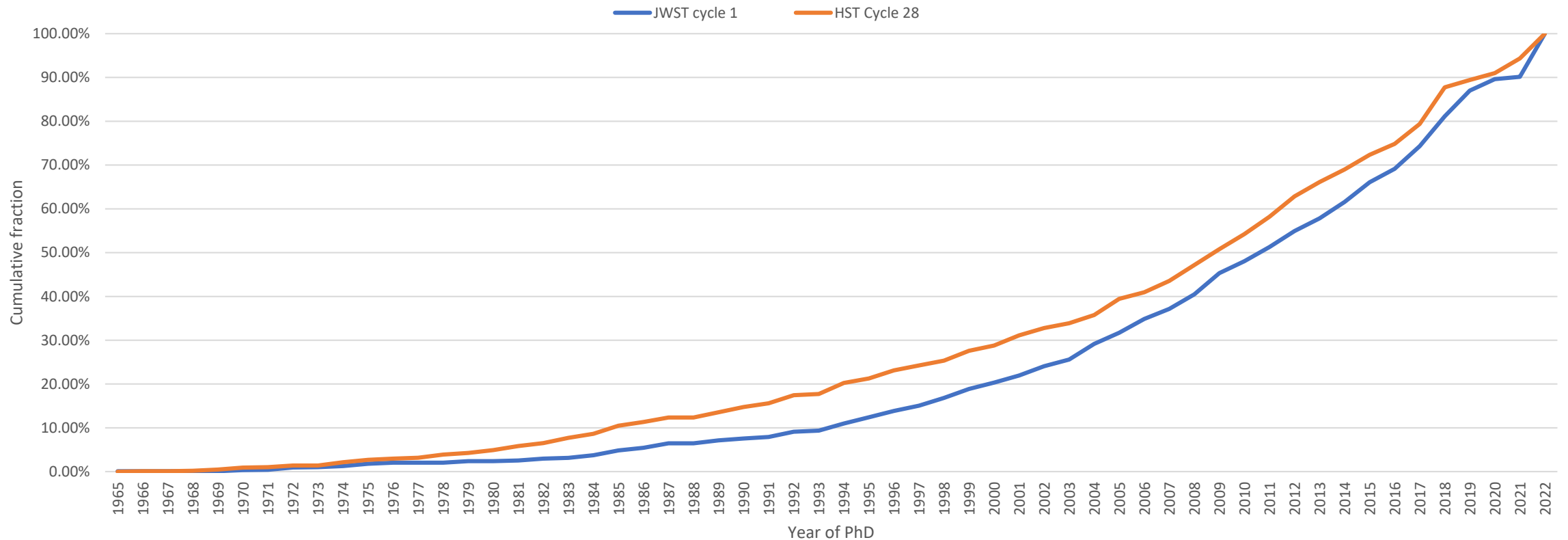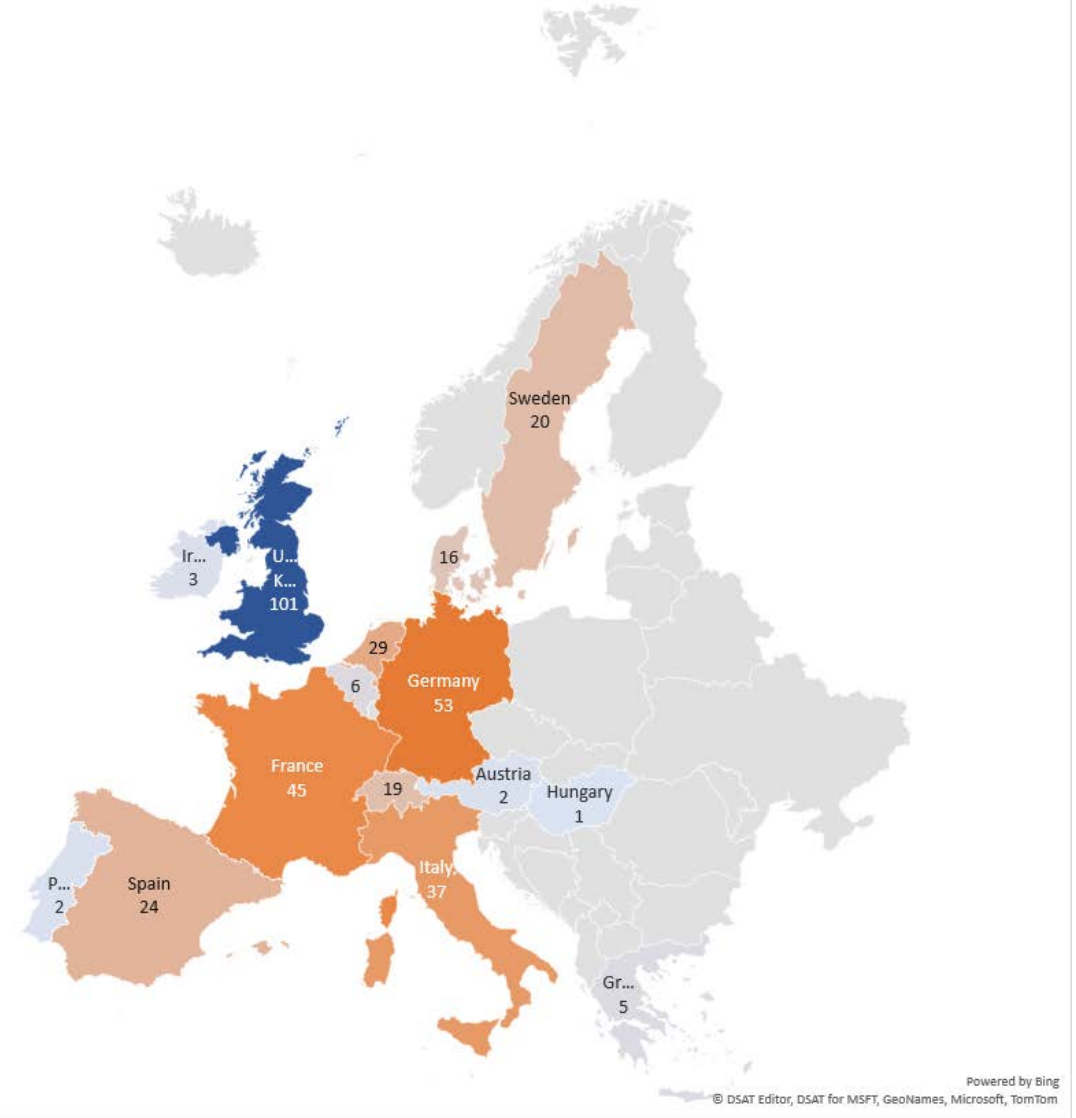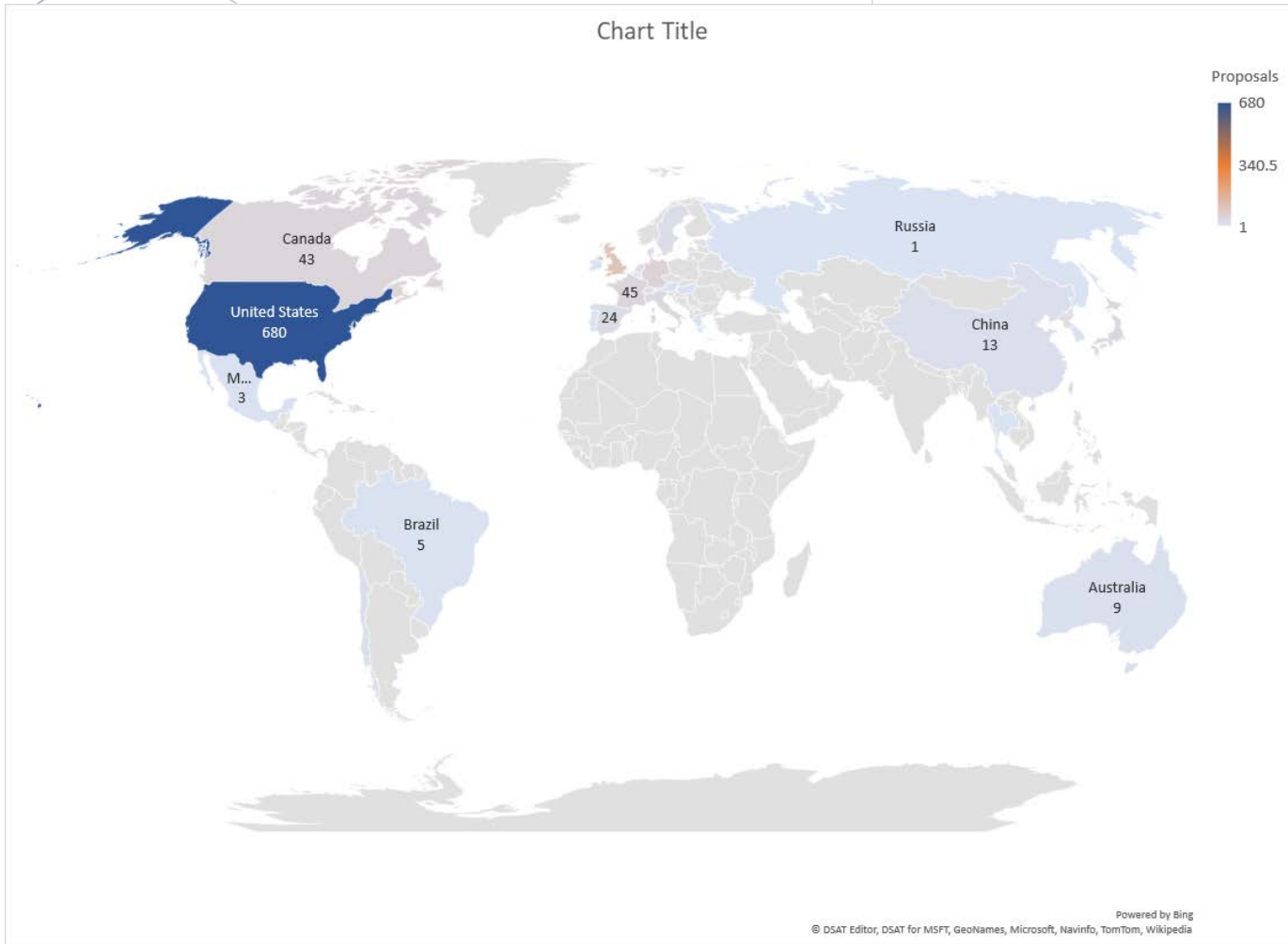
Seniority

JWST Cycle 1 Principal Investigators skew towards more junior demographics than for HST Cycle 28
- Median year of Phd = 2010 versus 2008 for HST Cycle 28
- 122 student PIs (10.4%) versus 97 (9%) for HST Cycle 28

PIs by country

Not to scale !

PIs by state & province
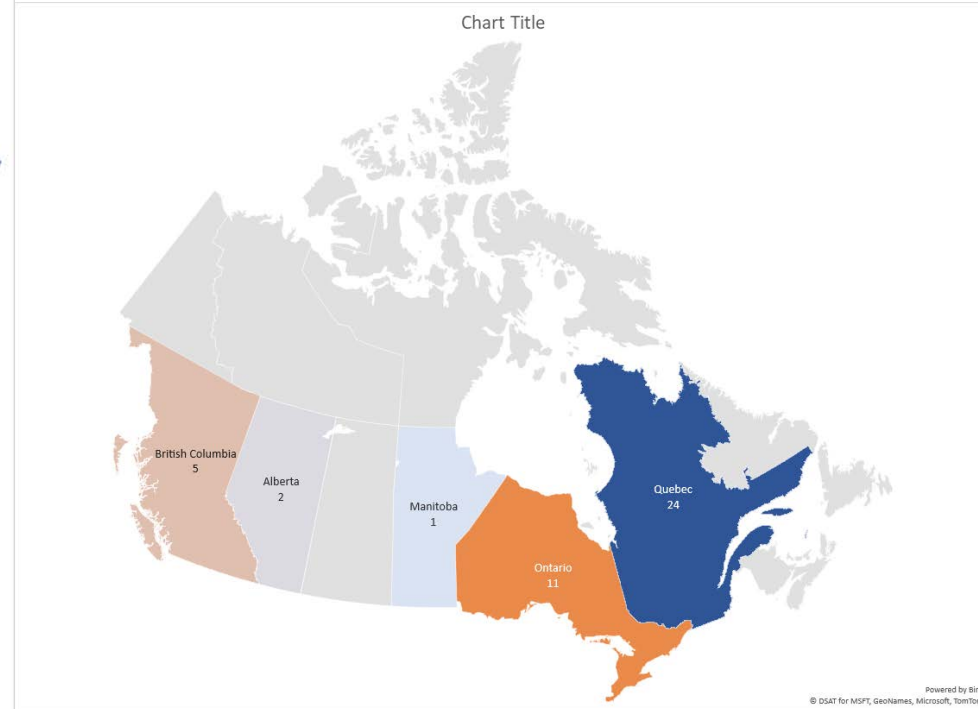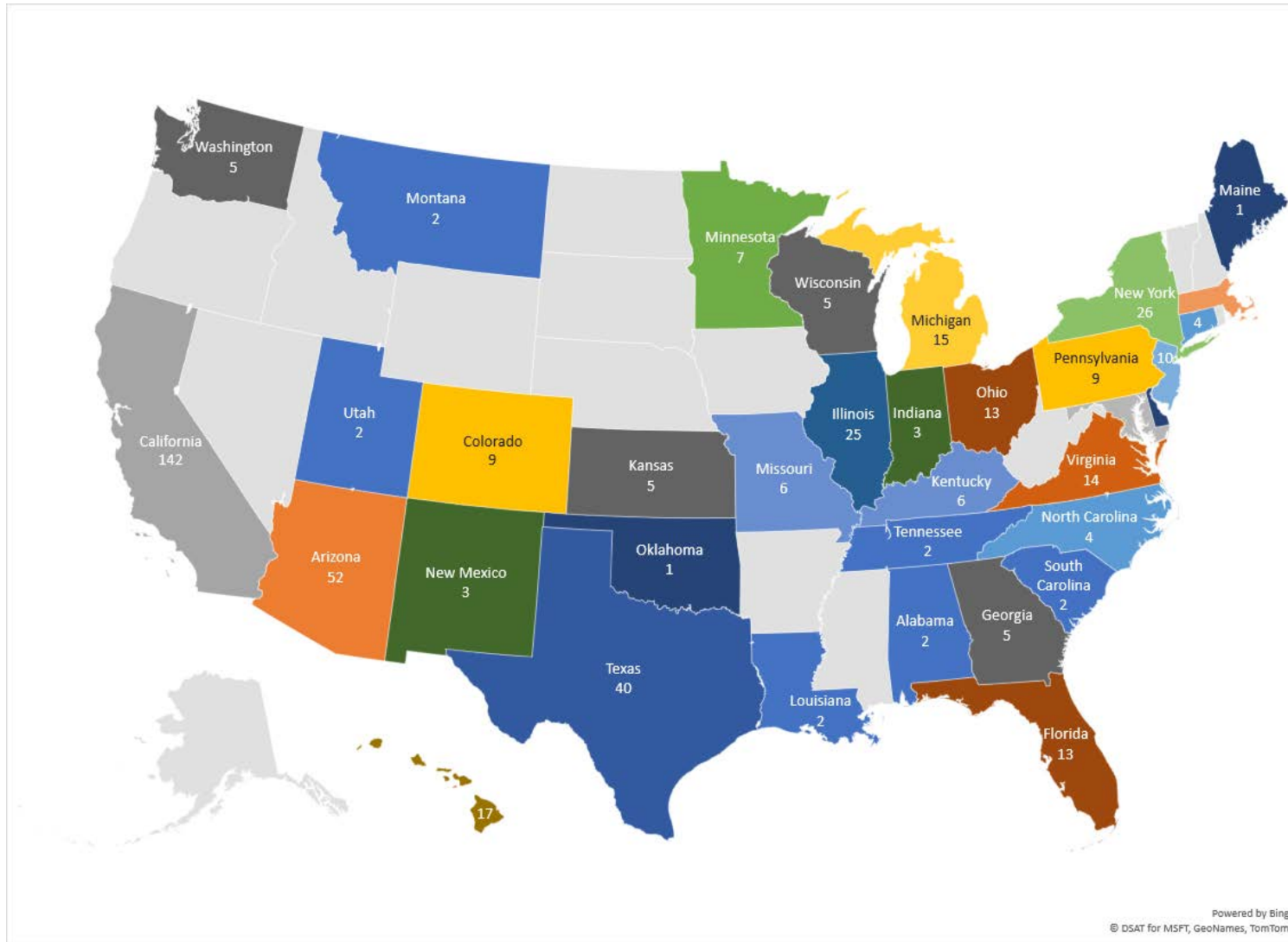
Not to scale !

Co-Is & co-PIs by country
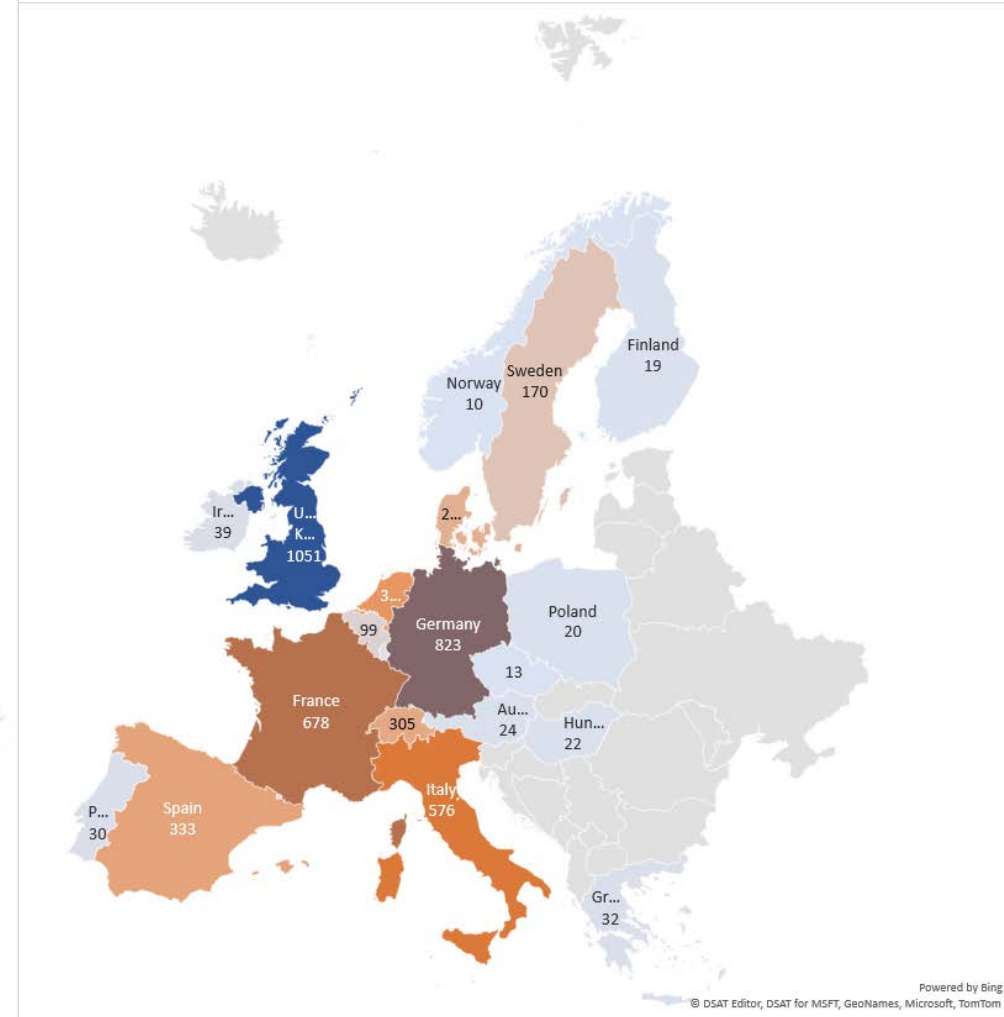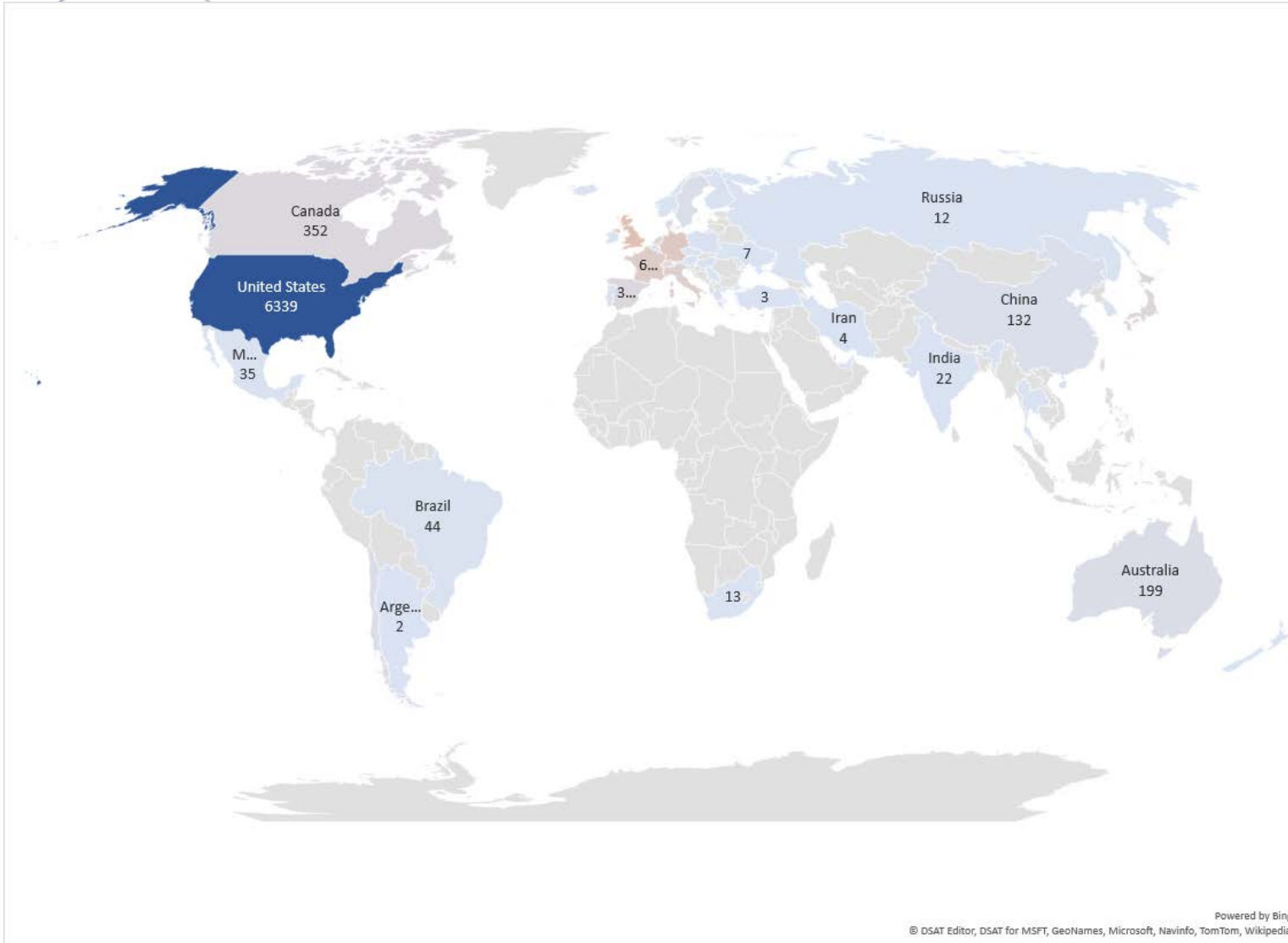
Co-Is & co-PIs by state & province
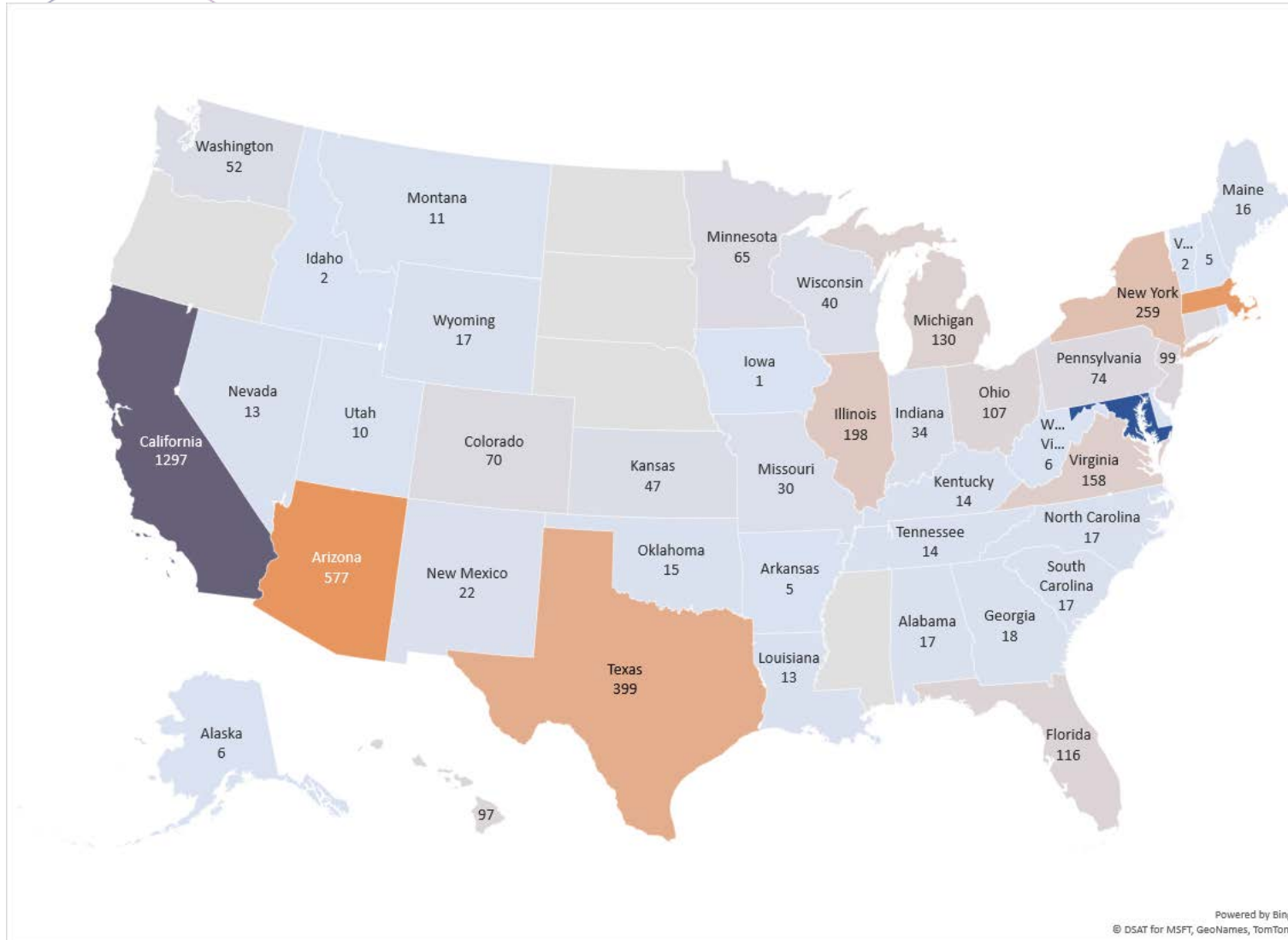
TAC preparations

Time Allocation Committee (TAC) Organization

- **Two Meeting Co-Chairs:** Monica Tosi (Galactic Panel Chair) and Michael Eracleous (Extragalactic Panel Chair).

- **Seven Scientific Categories:** (1) Solar System Astronomy, (2) Exoplanets and Exoplanet Formation, (3) Stellar Physics and Stellar Types, (4) Stellar Populations and the Interstellar Medium, (5) Galaxies, (6) Supermassive Black Holes and Active Galaxies, and (7) Large Scale Structure of the Universe/Cosmology.

- Each scientific category has 1 – 4 topical panels, depending on the number of proposals submitted. Each panel is asked to review up to 75 Small and Medium proposals and to advise the Panel Chair on Large, Treasury, and AR Legacy proposals.

- The Executive Committee, led by the meeting Co-Chairs, is comprised of the At-Large members (2) and the Panel Chairs. The Executive Committee reviews the Large, Treasury, and AR Legacy programs and reviews the overall programmatic balance.

Planning the Telescope Allocation Committee

Our estimates of the proposal numbers and distribution by science category were based on past experience from Spitzer and HST
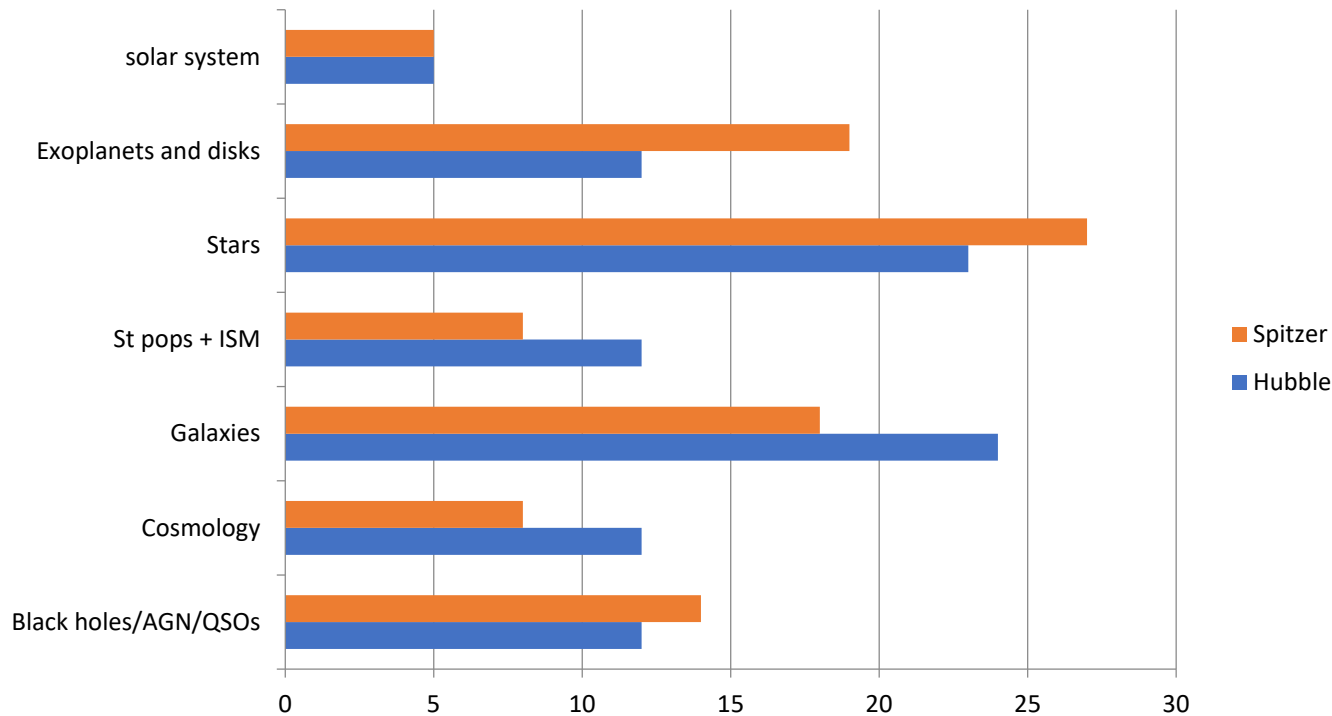
Science Category	Originally Planned Number of Topical Panels
Solar System	1
Exoplanets and Disks	3
Stars	5
Stellar Pops + ISM	2
Galaxies	4
Cosmology	2
Black Holes/AGN/QSOs	3

Science categories - results

We underestimated the proportion/number of Exoplanet and Disk & Galaxies proposals

We overestimated the proportion/number of Stellar Physics proposals

ORIGINAL ESTIMATE
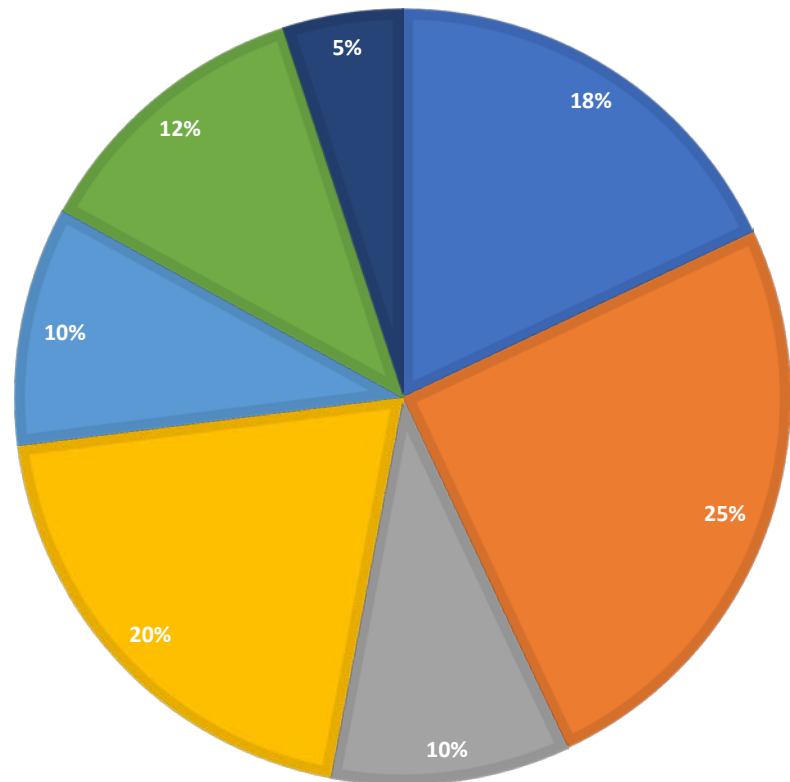
CYCLE 1 SUBMISSIONS
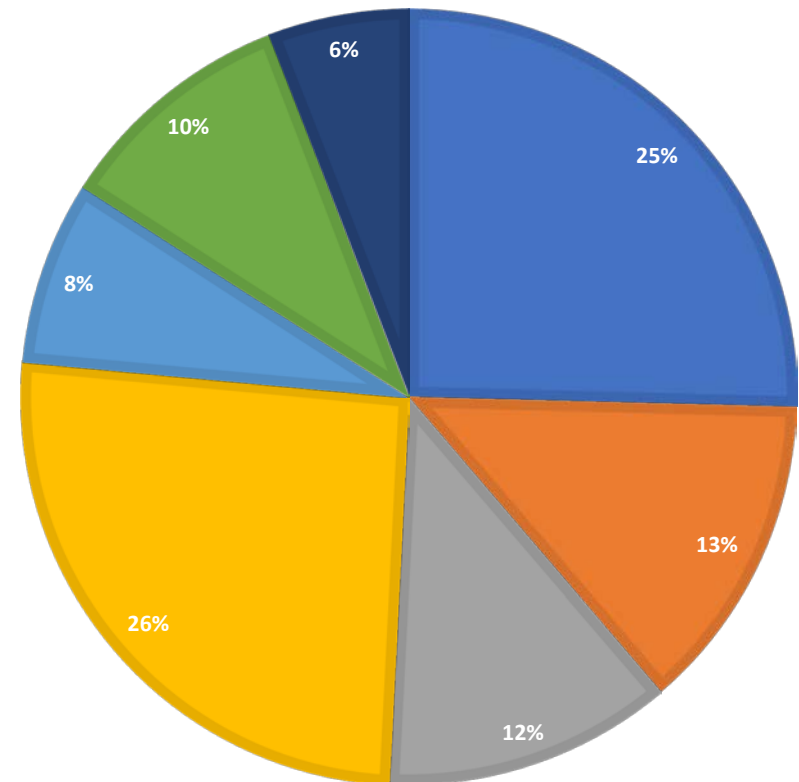
- Exoplanets and disks
- Stellar physics
- Stellar pops
- Galaxies
- Cosmology
- SMBH
- Solar system

- Based on the proposal pressure, STScI is both recruiting additional panelists and releasing panelists, depending on the Science Category
  - Exoplanets and Exoplanet Formation requires 1 additional panel
  - Stellar Physics and Stellar Types requires 2 fewer panels
  - Supermassive Black Holes and Active Galaxies requires 1 fewer panel

Initial TAC Demographics

Executive Committee

- Space Agency: 17 NASA (74%), 3 ESA (13%), and 3 CSA (13%)
- Gender: 13 Male (54%), 11 Female (46%)
- Ethnicity: 21 European descent (91%), Minority (9%)

TAC Overall

- Space Agency: 142 NASA (72%), 47 ESA (24%), and 8 CSA (4%)
- Gender: 103 Male (50%), 102 Female (50%)
- Ethnicity: 173 European descent (84%), Minority (16%)

Proposal demographics

- Space Agency: 755 NASA (64.3%), 374 ESA (31.9%), and 44 CSA (3.8%)
- Gender: 103 Male (68.5%), 102 Female (31.5%)

Proposal Review Assignments

- Once the proposals have been sorted into Science Categories and the Panelists have been finalized for a Science Categories, proposals are assigned to Panel Members

- Software matches proposals to Panel Members using the Scientific Keywords that were specified on the proposal by the Principal Investigators

- Conflicts are determined based on lists of close collaborators and competitors submitted by panelists

- Assignments are adjusted by hand to ensure that (1) there is at least one "expert" review per proposal (either the Primary or Secondary Reviewer), (2) there are no Conflicts of Interest, and (2) no Panel Members are overloaded.

- SMO has compiled an extensive set of TAC instructions that will be published as part of JDox in mid-December

- TAC Instructions and Proposal Review packages, for all Science Categories except "Exoplanets and Exoplanet Formation", are expected to be distributed to TAC members during the week of December 14th, 2020.

Dual Anonymous Review

In a Dual Anonymous Review, the identities of the proposal teams have been removed from the proposals prior to the preliminary review.

During the TAC meeting, panels discuss proposals without knowing the identities of the proposal teams. Each panel has a Leveler whose task, working with the Panel Chair, is to re-focus discussion of the proposal on the selection criteria if it strays to the identities of the proposal teams. The Leveler can stop the discussion if necessary.

Once the proposals have been ranked, reviewers are given access to the Team Expertise summary submitted by the proposers. If a panel is concerned that a proposal team lacks sufficient expertise, they can provide a written recommendation to the STScI Director that a proposal be removed from the ranking. A removed proposal can not be replaced with another lower ranked proposal.

For more information, please see https://jwst-docs.stsci.edu/jwst-opportunities-and-policies/jwst-call-for-proposals-for-cycle-1/jwst-cycle-1-anonymous-proposal-review

Selection Criteria and Scoring System

Selection Criteria

- The scientific merit of the program and its contribution to advancement of knowledge – How does the proposed investigation impact our knowledge with the specific sub-field?

- The program's impact for astronomy in general – Are there implications for other science areas and/or insights into larger-scale questions?

- A demonstration that the unique capabilities of JWST are required to achieve the science goals – suitability for JWST; how much of an advantage does JWST data offer over other facilities? This applies to both GO and AR proposals; Theory proposals should have broad applicability to JWST observational programs.

Scoring System

Grade	Impact within the sub-field	Out-of-field impact	Suitability
1	Potential for transformative results	Transformative implications for one or more other sub-fields	Science goals can only be achieved with JWST
2	Potential for major advancement	Major implications for one or more other sub-fields	Major advantages in using JWST over other facilities
3	Potential for moderate advancement	Some implications for one or more other sub-fields	Some advantages in using JWST over other facilities
4	Potential for minor advancement	Minor impacts on other sub-fields	Minor advantages in using JWST over other facilities
5	Limited potential for advancing the field	Little or no impact for other sub-fields	JWST offers little or no advantage over other facilities or the advantages of using JWST are unclear.

Small and Medium Proposal Review

Step 1: Panelists are assigned proposals to review before the TAC meeting. For Preliminary Grading, each proposal has 6 reviewers, including 1 primary reviewer, 1 or 2 secondary reviewers, and 3 – 4 additional reviewers. Each reviewer assigns grades for (1) Scientific Merit, (2) Importance to Astronomy, and (3) Uniqueness of JWST. Based on the preliminary grades, STScI triages proposals and the higher ranked proposals advance to the next stage. The triage lists are distributed and panelists are asked to review all surviving proposals so they can contribute to the discussion.

Step 2: Panels meet to discuss surviving proposals. Each panel has an allocation of N hours. The discussions are organized by a Panel Chair with the support of a Panel Support Scientist and a Leveler. Triaged proposal can be proposed for resurrection by unconflicted reviewers. Panelists review and grade the proposals; AR proposals are ranked together with GOs. Once the grading is complete, the ranked list is compiled. Panels can re-rank proposals to allow for science balance etc. Once the ranking is complete, panelists are given access to the Team Expertise for proposals above the 2N line. Panelists provide written consensus reports for every proposal.

Large, Treasury, Legacy AR Proposal Review

- Large, Treasury, and Legacy AR proposals have a similar review format as the Small and Medium proposals. Panel Chairs provide preliminary grades for all of the Large, Treasury, and Legacy AR proposals. During the Galactic and Extragalactic meetings, Panel Chairs solicit evaluations from their Panel Members. Finally, the proposals are discussed at the Executive Committee Meeting after the topical panels meet.

- Unlike the Small and Medium proposals, external reviews are solicited for each of the Large, Treasury, and Legacy AR proposals. These reviews will be made available to the Executive Committee prior to the Executive Committee meeting.

Cycle 1 Proposal Review Schedule

Date	Milestone
November 24, 2020	Cycle 1 Proposal Deadline
December 14, 2020	STScI releases proposals to panelists for review and preliminary grading
January 8, 2021	Deadline for panelists to identify additional conflicts of interest (and to recommend proposals that should be moved to another Science Category)
January 28, 2021	Orientation meeting for Panel Chairs
February 3, 2021	Deadline for Galactic panelists to submit preliminary grades for proposals that they are assigned
February 4, 2021	Orientation meeting for Galactic Panelists
February 6, 2021	STScI releases the list of proposals that will be discussed in the Galactic panels; panelists should review all those proposals in preparation for the panel meeting.
February 10, 2021	Deadline for Extragalactic panelists to submit preliminary grades for proposals that they are assigned
February 11, 2021	Orientation meeting for Extragalactic Panelists
February 12, 2021	Deadline for Executive Committee to submit preliminary grades for Large and Treasury proposals that they are assigned
February 13, 2021	STScI releases the list of proposals that will be discussed in the Extragalactic panels; panelists should review all those proposals in preparation for the panel meeting.
February 15, 2021	STScI releases the list of proposals that will be discussed in the Executive Committee meeting; Committee members should review all those proposals in preparation for the panel meeting.
February 16 - 19, 2021	Galactic panels meet
February 22 - 25, 2021	Extragalactic panels meet
March 1 - 4, 2021	Executive Committee meets
March 11, 2021	Deadline for Panel Chairs to submit final consensus reports
April 7, 2021	STScI releases Cycle 1 GO Science Program

Key Dates

- December 14th, 2020: Distribution of the proposals to the reviewers
- February 3rd – 10th, 2021: Preliminary grades due at STScI
- February 16th – 29th, 2021: Virtual TAC Meetings
- April 2021: STScI Releases Cycle 1 GO Program

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Next steps

- Complete review assignments
  - Finalize proposal distribution by panel
  - Assign preliminary graders, primary & secondary reviewers

- Initial briefing for STScI panel support staff, early January
  - Includes Panel Support Scientists, INS support, Levelers
  - Overview of the process

- Practice/training sessions for support staff, late January
  - Worked examples with the SPIRIT TAC software

- Leveler orientation session, late January/early February

- Orientation meeting with TAC Chair, Panel Chairs and At-Large members, early February

- TAC general orientation sessions, mid-February
  - At least 2 sessions, morning & afternoon, to accommodate time zones
  - Presentations on instrument status (JWSTMO), Dual Anonymous and Unconscious Bias (SMO), and an Overview of the TAC process (SMO)

Summary

- The JWST Cycle 1 GO/AR deadline was on November 24 2020
  - A total of 1174 submissions were received by this date
  - Extension requests from 29 PIs for 40 proposals – all granted
  - All proposals save one were completed by the extension deadline on December 3 2020

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    - 1985 investigators have not previously applied for HST time

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  - 45 US states + DC and the Virgin Islands

- TAC meeting is scheduled for February 16-19 (Galactic panels), February 23-26 (Extragalactic panels) & March 1-4 2021 (Executive Committee)

Backup

TAC Instructions

The TAC instructions include the following sections:

- Cycle 1 Review Getting started

- Cycle 1 Review Overview

- Cycle 1 Review Selection Criteria and Scoring System

- Dual Anonymous Proposal Guide for Reviewers

- Conflicts of Interest

- Galactic/Extragalact Panel Meetings

- Executive Committee meeting

- Panel reports

- Confidentiality

- Executive Committee Expert Reviews

- Guidelines for Panel Chairs

- Guidelines for Panel Advisors and Observers

- Guidelines for Panel Support Scientists

- Guidelines for levelers

- Guidelines fro Science Policy Group (SPG) Members

- Bluejeans and Slack Guidelines

- Cycle 1 Review orientation

- Unconscious Bias Training

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Investigators by country

Country	PI	Co-PI	Co-I	Country	PI	Co-PI	Co-I	Country	PI	Co-PI	Co-I
Argentina			2	Hungary	1	2	20	Portugal	2		30
Australia	9	5	194	Iceland			12	Russia	1	1	11
Austria	2	1	23	India			22	South Africa			13
Belgium	6	1	98	Ireland	3	1	38	Spain	24	8	325
Brazil	5	3	41	Iran			4	Serbia			6
Canada	43	18	334	Israel	1		38	Sweden	20	9	161
Chile	14	2	181	Italy	37	15	561	Switzerland	19		350
China	13	4	128	Japan	37	15	374	Thailand	1		9
Cyprus			4	Korea	4	1	43	Turkey			3
Czechoslovakia			13	Lebanon			1	UK	101	27	1024
Denmark	16	16	253	Mexico	3		35	Ukraine			7
Finland		1	18	Netherlands	29	10	389	United Arab Emirates			2
France	45	29	648	Norway			10	USA	680	250	6088
Germany	53	21	801	New Zealand			4				
Greece	5	1	31	Poland			20				

Investigators by state/province

Country	PI	Co-PI	Co-I	Country	PI	Co-PI	Co-I	Country	PI	Co-PI	Co-I
Alaska		1	5	Louisiana	2	1	12	South Carolina	2		17
Alabama	2		17	Massachusetts	54	24	515	Tennessee	2		14
Arkansas		1	4	Maryland	166	60	1459	Texas	40	16	383
Arizona	52	15	562	Maine	1		16	Utah	2	1	9
California	142	48	1249	Michigan	15	5	125	Virginia	14	6	152
Colorado	9	3	67	Minnesota	7	2	63	Virgin Islands			1
Connecticut	4	3	67	Missouri	6	1	29	Vermont			2
District of Columbia	7	6	110	Montana		2	9	Washington	5	1	51
Delaware	1		3	North Carolina	4		17	Wisconsin	5	1	6
Florida	13	9	107	New Hampshire			5	West Virginia			2
Georgia	5		18	New Jersey	10	1	98	Wyoming		1	16
Hawaii	17	6	91	New Mexico	3	1	21				
Iowa			1	New York	26	10	249	Alberta	2		10
Idaho			2	Nevada		2	11	British Columbia	5	7	50
Illinois	25	12	186	Ohio	13	4	103	Manitoba	1		15
Indiana	3		34	Oklahoma	1	2	13	Nova Scotia			1
Kansas	5		47	Pennsylvania	9	5	69	Ontario	11	3	123
Kentucky	6		14	Rhode Island			1	Quebec	24	8	135

Instrument modes – prime only

Instrument	# of Observations	Prime %	Coordinated Parallel %	Total	Mode	Instrument Prime Usage	Instrument Prime + Coordinated Parallel Usage	Prime	Parallel	Total
MIRI	1784	16.9%	####	16.9%	MIRI Medium Resolution Spectroscopy			8121797		8121797
MIRI	99	0.8%	####	0.8%	MIRI Coronography			386403		386403
MIRI	704	7.2%	####	7.2%	MIRI Imaging	31.1%	31.1%	3457109	0	3457109
MIRI	400	6.2%	####	6.2%	MIRI LRS			2978507		2978507
NirCam	189	1.2%	####	1.2%	NIRCam Coronography			582139		582139
NirCam	66	1.2%	####	1.2%	NIRCam GrismTimeSeries			595123		595123
NirCam	1161	17.7%	####	17.7%	NIRCam Imaging	22.5%	22.5%	8501628	0	8501628
NirCam	16	0.3%	####	0.3%	NIRCam TimeSeries			128013		128013
NirCam	87	2.1%	####	2.1%	NIRCam WFSS			1026015		1026015
NIRISS		0.0%	####	0.0%	NIRISS Imaging			0	0	0
NIRISS	43	0.3%	####	0.3%	NIRISS AMI			163375		163375
NIRISS	69	2.3%	####	2.3%	NIRISS SOSS	4.7%	4.7%	1091694		1091694
NIRISS	40	2.1%	####	2.1%	NIRISS WFSS			1021744		1021744
NIRSpec	345	13.2%	####	13.2%	NIRSpec BrightObjectTimeSeries			6330178		6330178
NIRSpec	534	3.5%	####	3.5%	NIRSpec FixedSlitSpectroscopy			1661816		1661816
NIRSpec	1423	18.3%	####	18.3%	NIRSpec IFUSpectroscopy	41.7%	41.7%	8806702		8806702
NIRSpec	163	6.8%	####	6.8%	NIRSpec MOS			3264339		3264339
		100%	####	100%		100%	100%	48116582	0	48116582

Galactic Science Categories

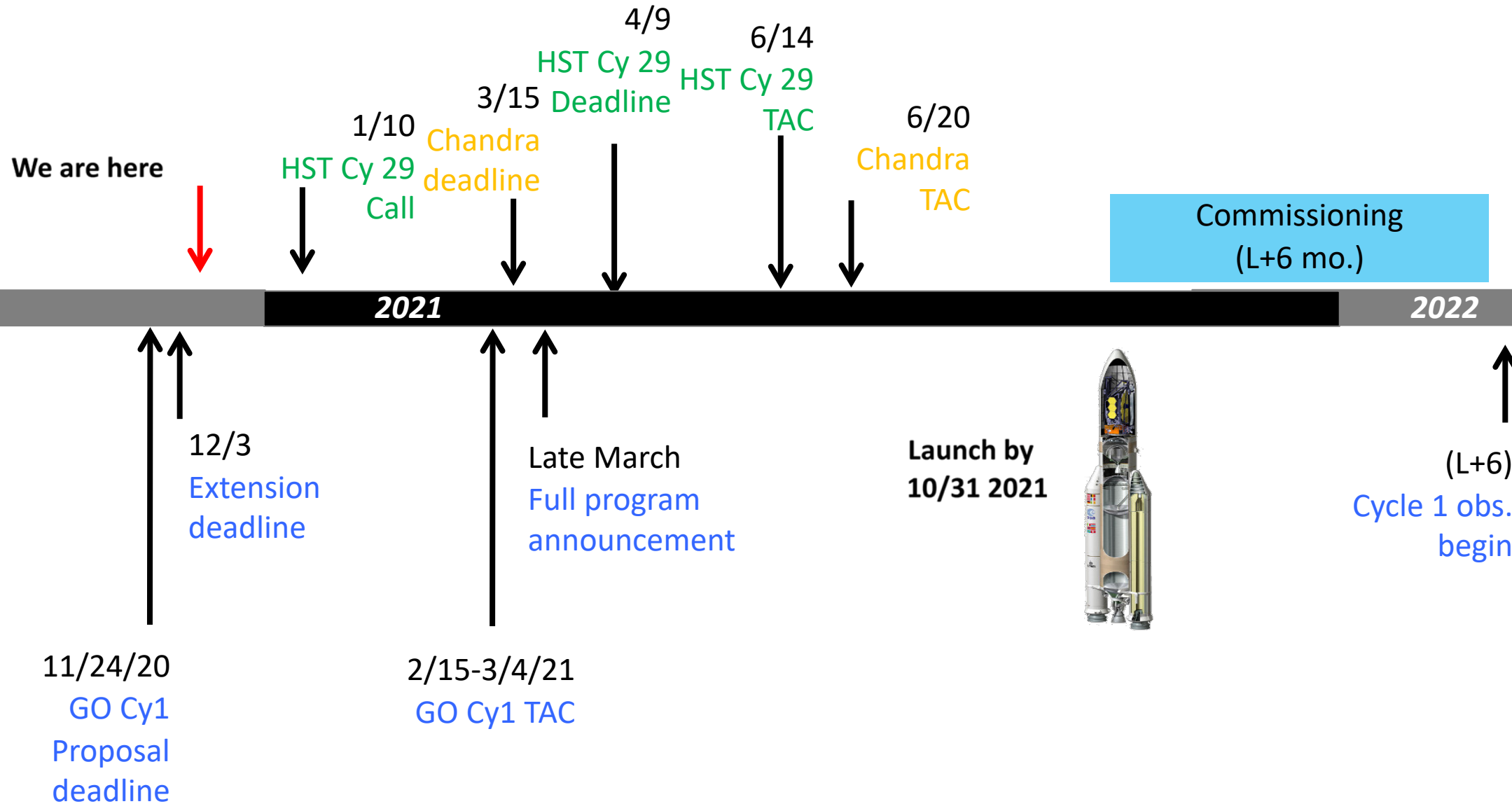| Science Category	Scientific Topics
Solar System	**Asteroids**, Centaurs, **Comets**, **Inner Planets**, Irregular Satellites, Near-Earth objects, **Outer Planets**, Planetary Atmospheres, Planetary rings, Planetary surfaces, Small solar system bodies, Space weather, **Trans-Neptunian Objects**, Trojan asteroids, Zodiacal cloud
Exoplanets and Exoplanet Formation	**Debris Disks**, **Exoplanets**, Exoplanet atmospheres, Exoplanet evolution, Exoplanet formation, Exoplanet structure, Exoplanet surfaces, Exoplanet systems, Free floating planets, **Protoplanetary disks**
Stellar Physics and Stellar Types	Astrometry, Binary stars/Trinary stars, **Brown dwarf stars**, Early-type stars, **Evolved stars**, Gamma-ray bursts, H II regions, **Low Mass stars**, **Massive stars**, Molecular clouds, **Neutron stars**, Planetary nebulae, Pre-main sequence stars, **Protostars**, Pulsars, Stellar abundances, Stellar accretion disks, Stellar atmospheres, Stellar Evolution, Stellar jets, Supernovae, Variable stars, **White dwarf stars**, **Young Stellar Objects (YSOs)**
Stellar Populations and the ISM	Galactic center, Galaxy bulges, Galaxy halos, Galaxy spheroids, Globular star clusters, **H II regions**, Hertzsprung Russell diagram, **(Gas and dust in the galactic) Interstellar Medium**, Local Group, Magellanic Clouds, Open star clusters, Population I stars, Population II stars, Population III stars, **Resolved Stellar Populations**, **Star Formation**, **Star clusters**

Extragalactic science categories

Science Category	Scientific Topics
Galaxies	Disk galaxies, **Dwarf galaxies**, **Elliptical galaxies**, Emission line galaxies, Galaxy bulges, Galaxy classification systems, Galaxy dark matter halos, Galaxy disks, Galaxy environments, **Galaxy Evolution**, Galaxy formation, Galaxy mergers, Galaxy spheroids, Galaxy stellar halos, Galaxy structure, high-redshift galaxies, **Interacting galaxies**, Irregular galaxies, Local group, **Luminous infrared galaxies**, Magellanic clouds, **Nearby galaxies**, Quenched Galaxies, **Starburst galaxies**, **Ultraluminous infrared galaxies, Unresolved Stellar Populations**
Supermassive Black Holes and Active Galaxies	**AGN,** AGN host galaxies, Blazars, Broad-absorption line quasar, Emission line galaxies, **Feedback Mechanisms**, Galaxy jets, Galaxy winds, High-luminosity active galactic nuclei, Markarian Galaxies, M-sigma relation, **QSOs**, Quasars, Quenched galaxies, Radio cores, Reverberation mapping, Seyfert galaxies, Stellar accretion disks, Stellar feedback, Supermassive black holes, X-ray active galactic nuclei
Large Scale Structure of the Universe	**Cosmic infrared background**, Cosmological parameters, **Cosmology**, Dark Energy, **Dark Matter**, Dark Matter Distribution, **Extragalactic Legacy and Deep Fields**, **Galaxy Clusters**, Galaxy groups, **Gamma-ray bursts**, **Gravitational lensing**, **High-z Universe**, Intracluster medium, **Large-scale structure of the universe**, Protogalaxies, Reionization, Supernova

Science Timeline – JWST Cycle 1

We are here

4/9 — HST Cy 29 Deadline

6/14 — HST Cy 29 TAC

6/20 — Chandra TAC

3/15 — Chandra deadline

1/10 — HST Cy 29 Call

Commissioning (L+6 mo.)

2020   2021   2022

12/3 — Extension deadline

Late March — Full program announcement

Launch by 10/31 2021

(L+6) Cycle 1 obs. begin

11/24/20 — GO Cy1 Proposal deadline

2/15-3/4/21 — GO Cy1 TAC

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Science Timeline – JWST Cycle 2

1/7
HST Cy 30 Call

3/15
Chandra Cy 24 deadline

4/8
HST Cy 30 Deadline

6/13
HST Cy 30 TAC

6/20
Chandra Cy24 TAC

1/6
HST Cy 31 Call

3/15
Chandra Cy 25 deadline

4/7
HST Cy 31 Deadline

Commissioning (L+6 mo.)

2021   2022   2023

Launch by 10/31 2021

L+6
Start of Cycle 1 science observations

L+8
GTO Cy2 Call for proposals

L+11
GO Cy2 Call for proposals

L+13
GO Cy2 Deadline

L+15.5
GO Cy2 TAC

L+18
Cycle 2 starts

HST & Chandra dates are estimates

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