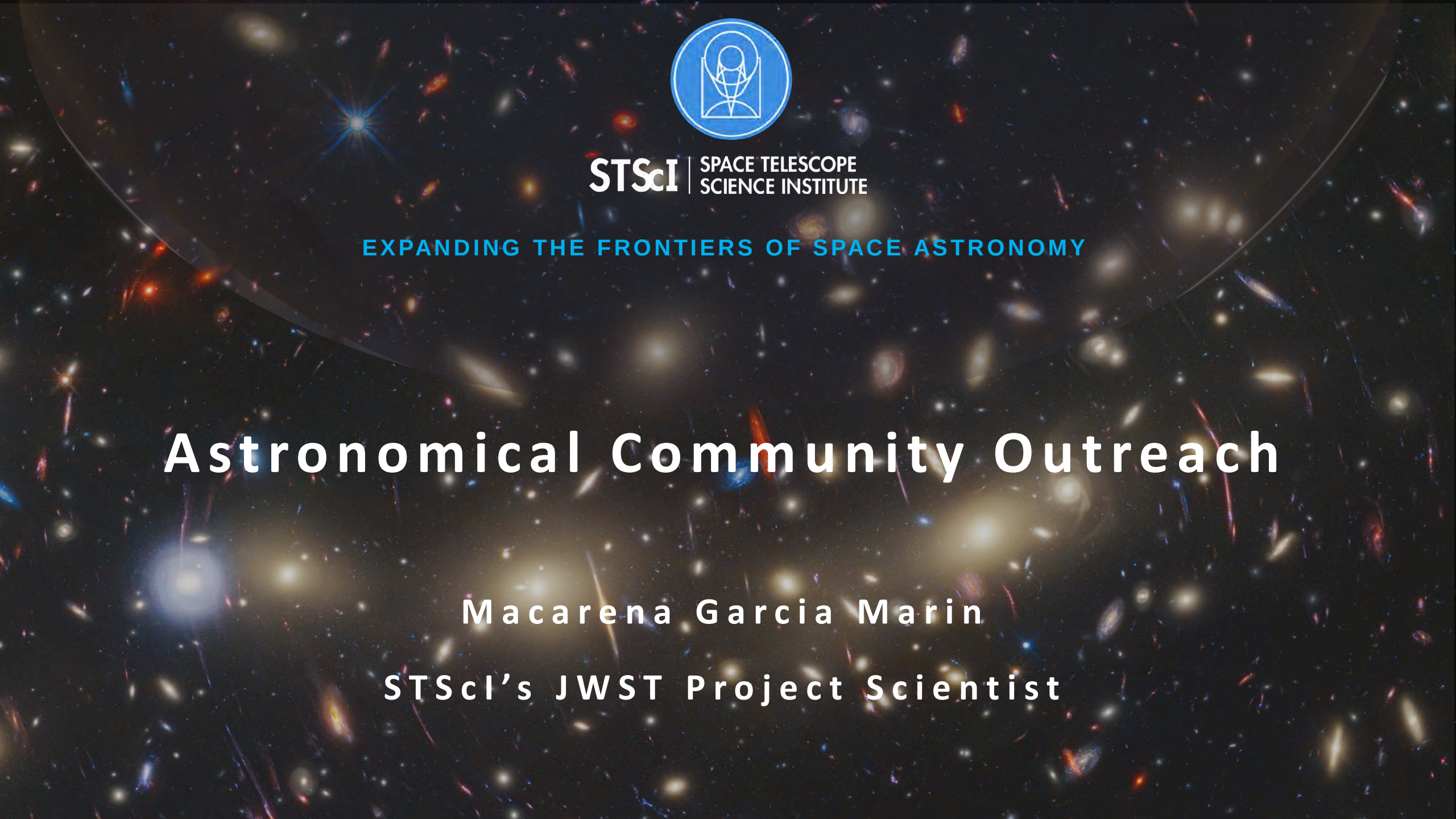


STScI | SPACE TELESCOPE SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

Astronomical Community Outreach

Macarena Garcia Marin

STScI's JWST Project Scientist

Engagement and Training Initiatives

- JWST Summer School
- Webb Office Hours
- JWebbinars
- Information on Laboratory Astrophysics Resources for JWST
- JWST Observer News
- Gathering user's feedback: Surveys
- AAS activities

We seek your input and ideas to improve communication with the community!

JWST Summer School (I)

- A summer school, hosted at STScI every two years.
- Geared towards early career scientists, new JWST PIs, and scientists new to the field.
- First School: August 2025
- Two weeks:
  - First week: Science focus
  - Second week: Proposal preparation and data reduction focus
- 50-60 in person participants (virtual component feasible, specially for the first week)
  - Negotiating with Loyola University to use their dorms at an affordable price
  - ESA may sponsor some European participants

JWST Summer School (II)

- Topic selection: areas compiled by a committee that included STScI, NASA, ESA and JSTUC representatives.
- Areas discussed
  - Time-Domain
  - High-redshift Universe
  - Exoplanets
  - Star and planet formation
  - Solar System
- Considerations: high and strategic impact, clear purpose to the school, field with a steep learning curve/hard to step in.

JWST Summer School (III)

Selected topic: High-z Transients

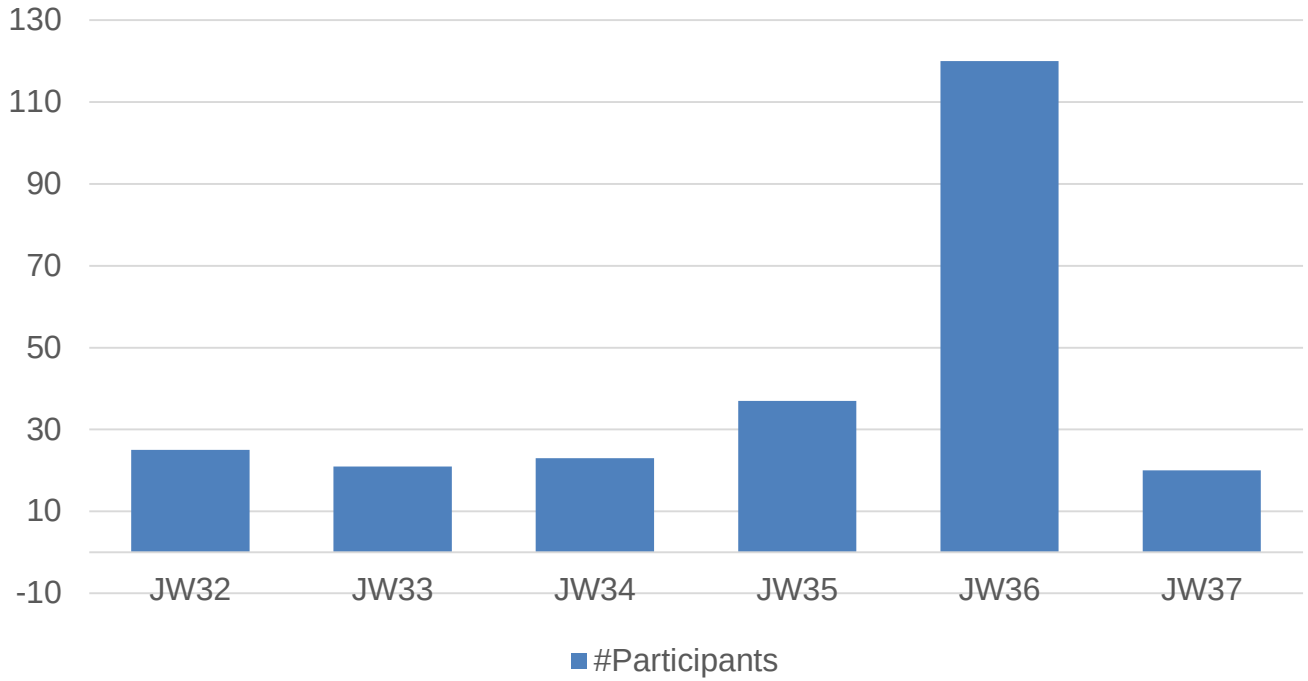
- Summer 2025:
  - Expected start date of Rubin's science
  - Expected submission of follow-up/ToO proposals with JWST's cycle 5.
  - Long-term variability DD initiative should have started
  - COSMOS-3D and NEXUS will be publicly available
  - 2025 will be the first year in which wide and deep JWST surveys with more than 1 epoch are publicly available
  - Techniques are complicated
- Announcement in November
- Currently assembling the SOC (invitations have been sent)

Webb Office Hours

- Started in February 2024, occur 2nd and 4th Thursday of every month
- Announced in several Observer News Items, AAS and EAS, events calendar, and reminders in social media. Also word of mouth
- To-date 18 Webb Office Hours with 26 users, 15 unique (60 questions total)
- Relevant Q&A captured on the JWST events archive
- We think this is worth keeping, as it covers a very specific need. Satisfied users.
- Keep brainstorming for strategies to increase engagement (e.g. redirecting Help Desk requests to Office Hours)

JWebbinars (I)

- Since the last JSTUC meeting we have held 6 unique JWebbinars.
  - JW37 - Planning Solar System Observations with JWST [September 17]
  - JW36 - What's New in JWST Cycle 4 [September 10]
  - JW35- NIRCam Short-wavelength Grisms: A Primer for TSOs [August 29]
  - JW34 - Introduction to WebbPSF: Modeling the Inflight PSF for JWST [July 16]
  - JW33 - JWST NIRSpec MOS Data Reduction [June 27]
  - JW32 - JWST Data Analysis with Jdaviz [May 22]



Total of 246 participants

All material available online and frequently downloaded

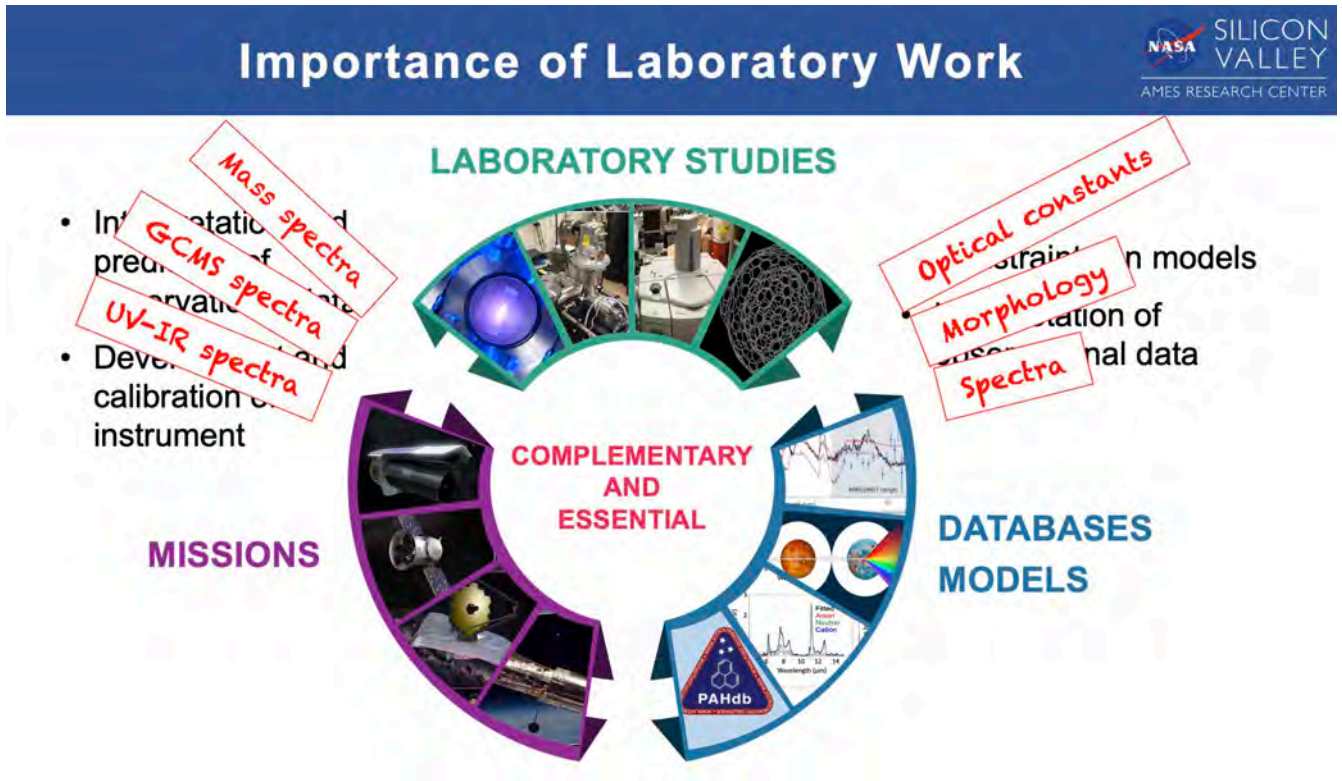
JWebbinars (II)

- Upcoming topics
  - JWST Grant Funding
  - JWST Coronagraphy (data reduction and analysis)
  - Pipeline 101
  - Spectral extraction
  - Laboratory astrophysics resources for JWST (externally provided)

- The JWebbinar format is dynamic enough to accommodate short notice trainings (e.g. NIRCam Short-wavelength Grisms)

Laboratory Astrophysics Resources for JWST (I)

Meeting with the NASA Ames Astrophysics group, in particular Sciamma-O'Brien, E., McKinnon, A., Rangwala, N.



PROPOSAL

Add Laboratory Astrophysics Resources on the JWST STScI website. For example in the Science Planning webpage.

NEED

Scientists working on proposal can use laboratory astrophysics resources to develop new projects for JWST proposals and further interpret observations.

VALUE

Bringing awareness to existing databases providing experimental and theoretical data and models to enhance the science return of JWST.

Laboratory Astrophysics Resources for JWST (II)

Example use cases:

- Importance of PAHs in the Universe

- The Importance of Optical Constants
  - Solid dust grains (nm to sub-µm) in the interstellar medium
  - Exoplanetary atmospheric aerosols

Laboratory Astrophysics Resources for JWST (III)

Resources for Crafting Your Proposals

The information provided in this section can help you learn more about the various JWST programs, including their deadlines and other important dates, and JWST user committees. The proposal planning tools and proposal training resources are designed to help you prepare your proposals. Links to more technical resources, as well as to simulated data, are also provided.

Calls for Proposals & Policy

Get information on the various programs for JWST Observers

Learn More

Proposal Planning Toolbox

Access tools and data simulations to help you craft a JWST proposal.

Learn More

Proposal Preparation Training

Discover local training events and use our proposal preparation support materials.

Learn More

JWST User Committees

Learn about JWST user committees, their membership, and meetings.

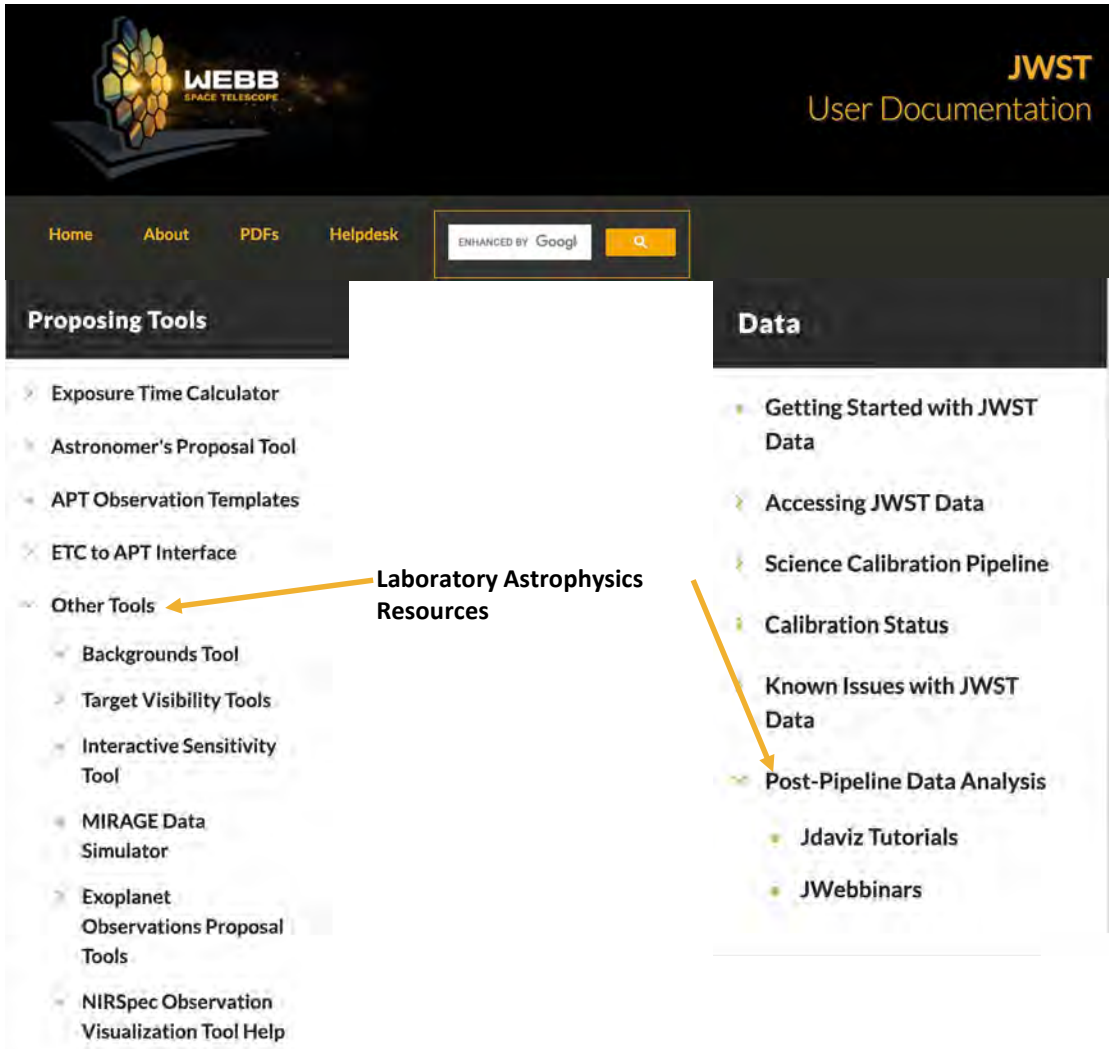
Learn More

Laboratory Astrophysics Resources

Open-access datasets and tools to enhance your proposals.

Learn More

Examples of where to add the resources.
Still need to close the loop on user support coordination

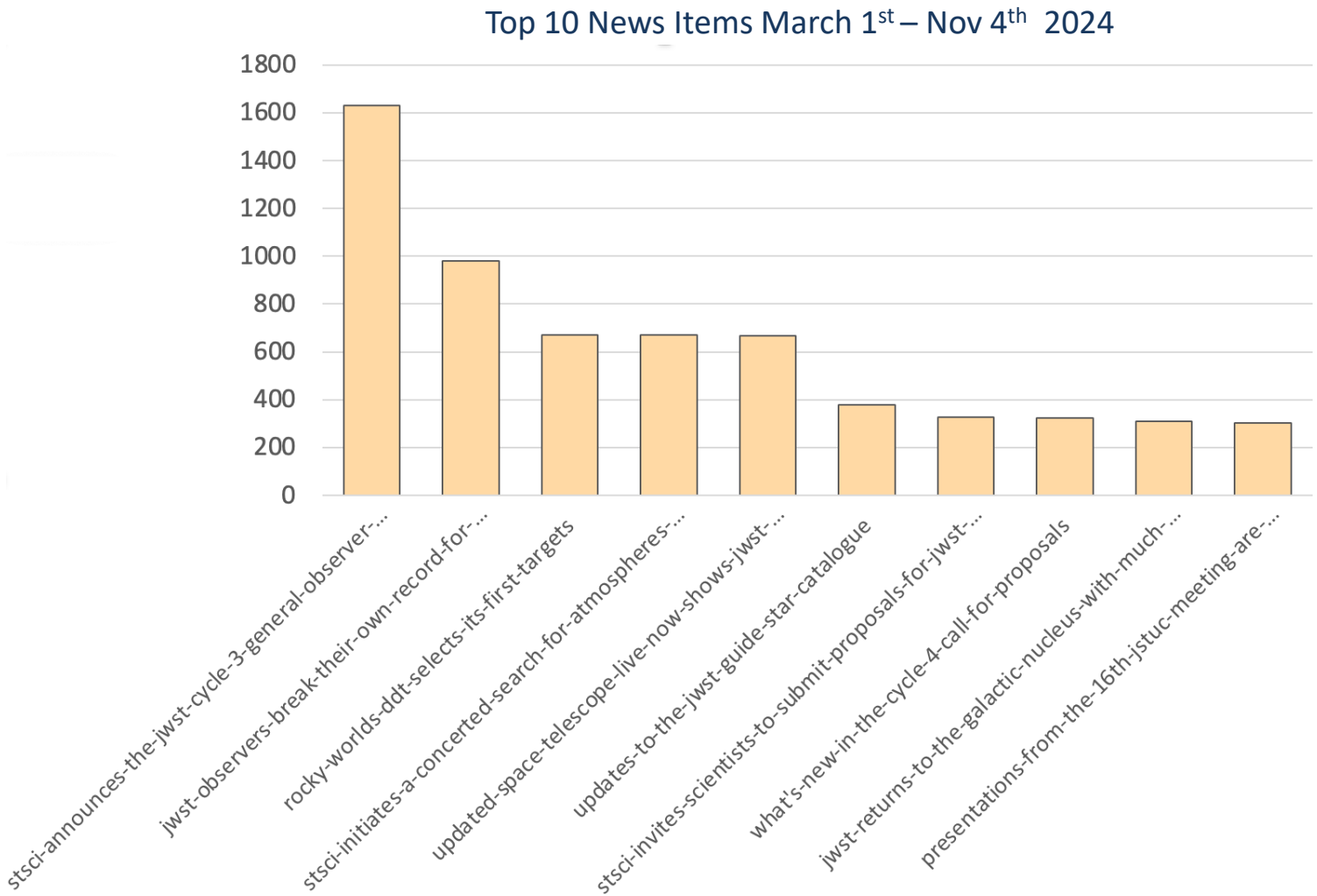


JWST Observer News

- Our primary line of sharing news and communicating with our User community

- Since the last JSTUC meeting we have published 44 News Items:
  - Pipeline news
  - Calibrations updates
  - Rocky Worlds DDT program
  - Cycle 3 and Cycle 4 CfP results

- More than 4,200 subscribers. Since the last JSTUC meeting ~9000 views on the news page.
  - We like the idea of automatically subscribing all successful proposers



Mini-surveys at conferences (I)

Prepared a very short JWST User Satisfaction questionnaire (<1 min) in Survey Monkey for the 244th AAS and the EAS 2024 participants.

Survey	# Participants	# JWST users	# non JWST users
AAS 244	79	26	53
eas 2024 Padova	144	74	70
Total	223	100	123

Mini-surveys at conferences (II)

- Level of satisfaction with the support provided by the Help Desk

Meeting	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Have not used
244th AAS	0	1	2	4	10	8
EAS 2024	4	2	6	18	21	20
% JWST users	4%	3%	8%	22%	31%	n/a

- Level of satisfaction with the JWST pipeline and its products

Meeting	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Have not used
244th AAS	0	2	3	12	4	4
EAS 2024	2	4	8	34	17	7
% JWST users	2%	6%	11%	46%	23%	n/a

(not all participants answered all questions)

Continuous feedback surveys

- Send survey to program PI, Co-PI, contact(s)
- One month after first successful observation in a program (start June 2024)

Programs contacted	122
Responses received	27
Response rate	22%

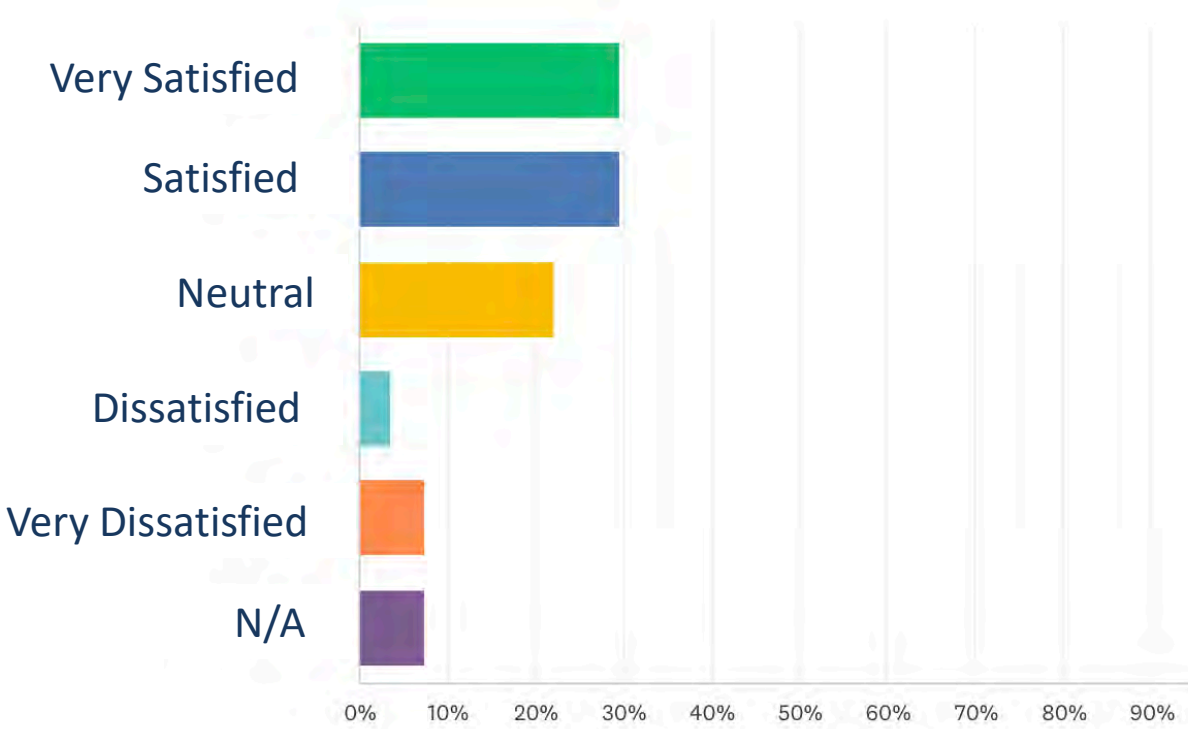
- Nine months after first successful observation in a program (start July 2024)

Programs contacted	75
Responses received	22
Response rate	29%

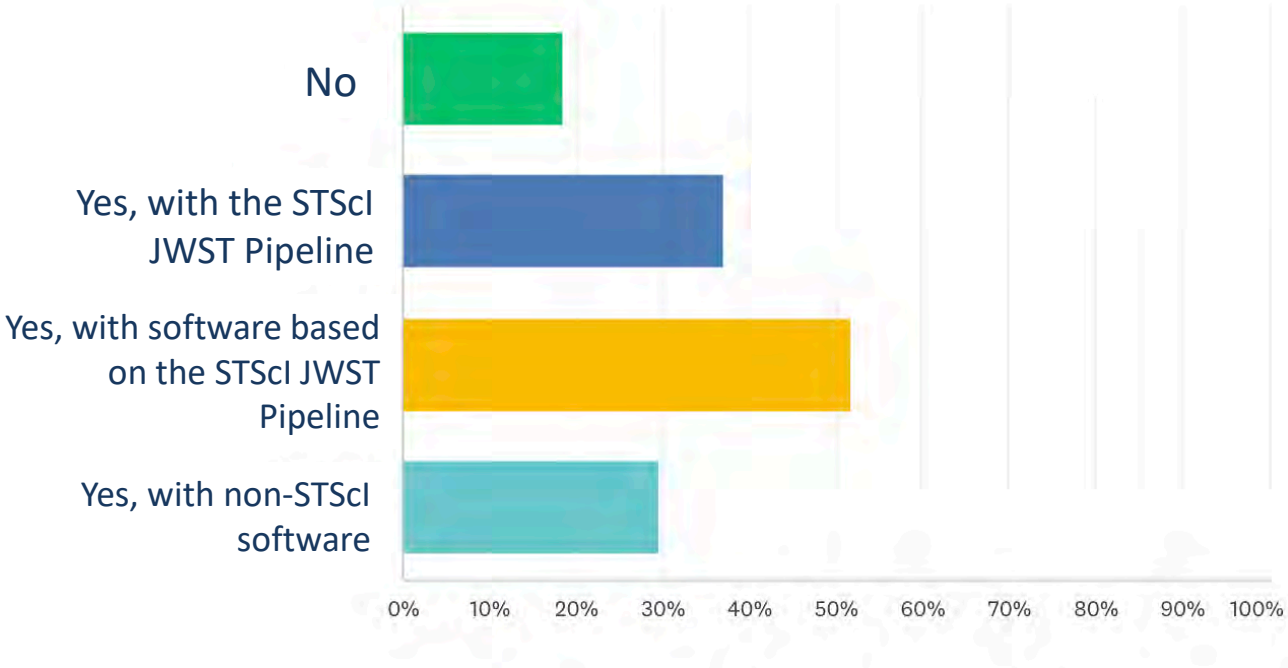
- Snapshot November 4th 2024. Not enough answers yet to be statistically significant/breaking it by observing mode.

Continuous feedback surveys: 1 month

Satisfaction with MAST products

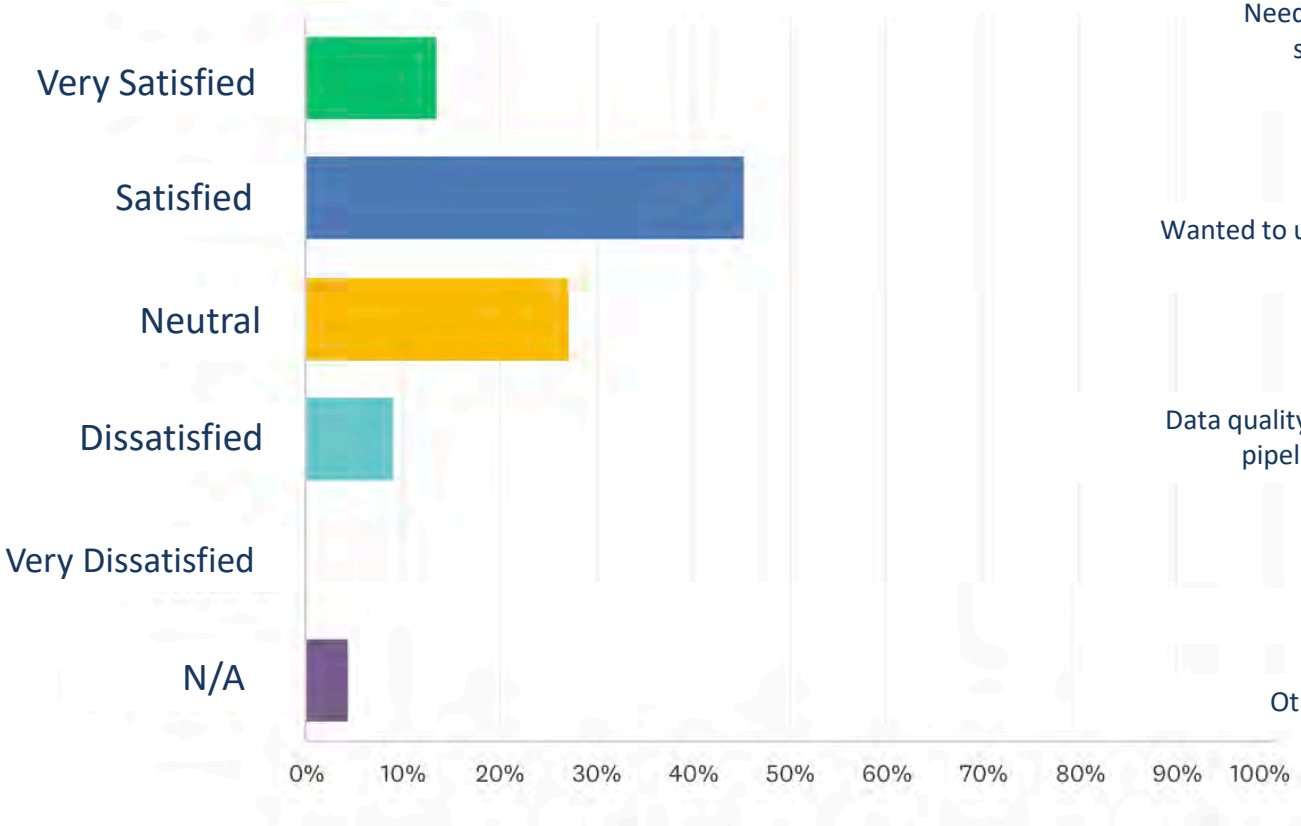


Plan to reprocess data?

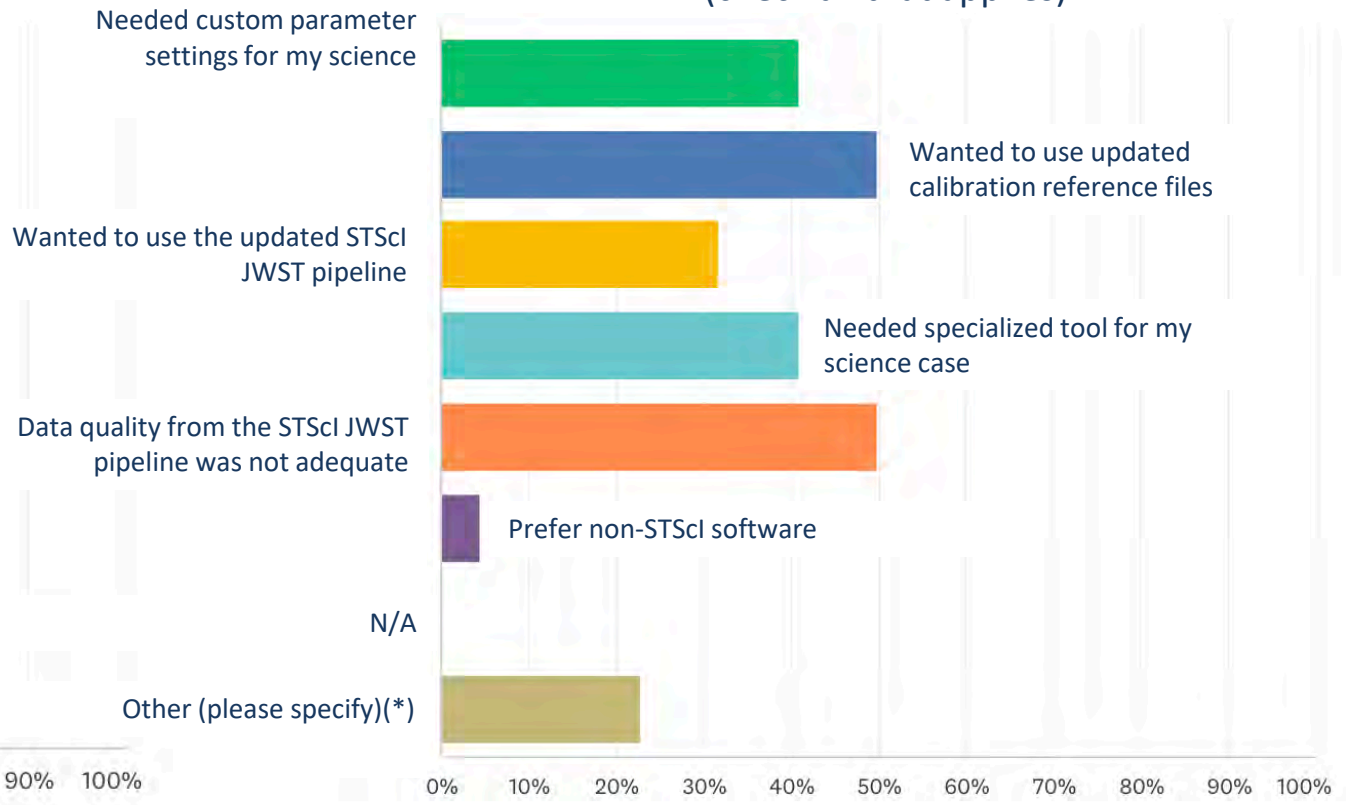


Continuous feedback surveys: 9 months

Satisfaction with MAST products



Reasons to reprocessed the data yourself (check all that applies)



(*) **Grizli** G. Brammer, slitless spectroscopy
MSAEXP, G. Brammer, shutter footprints from SIAF transformations
PJPIPE, Thomas Williams, PHANGS team imaging processing
JWSTSPEC, Ian Yu Wong, customized end-to-end processing and spectral extraction of JWST spectroscopic data.
Eureka! Taylor Bell, JWST Time-Series Observations

Annual User Survey

- Planned to be submitted around Nov 20th , it will be open for about 3 weeks
- Will request users feedback on:
  - Proposals changes such as page limit and proposal categories
  - Proposal pressure
  - Proposal planning process and tools
  - Usefulness of proposal-relevant JWebbinars and materials
  - User support via the Help Desk etc.

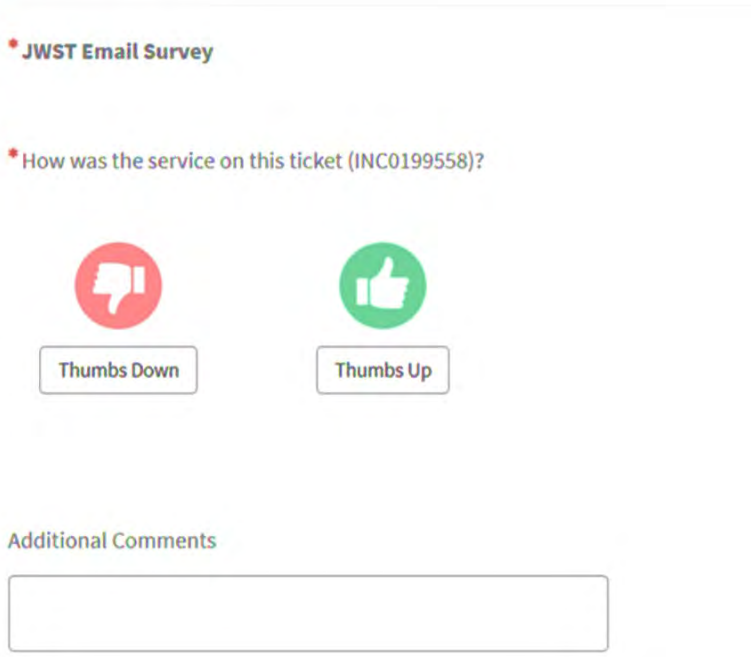
- Little emphasis on pipeline and calibrations

Help Desk Satisfaction Survey

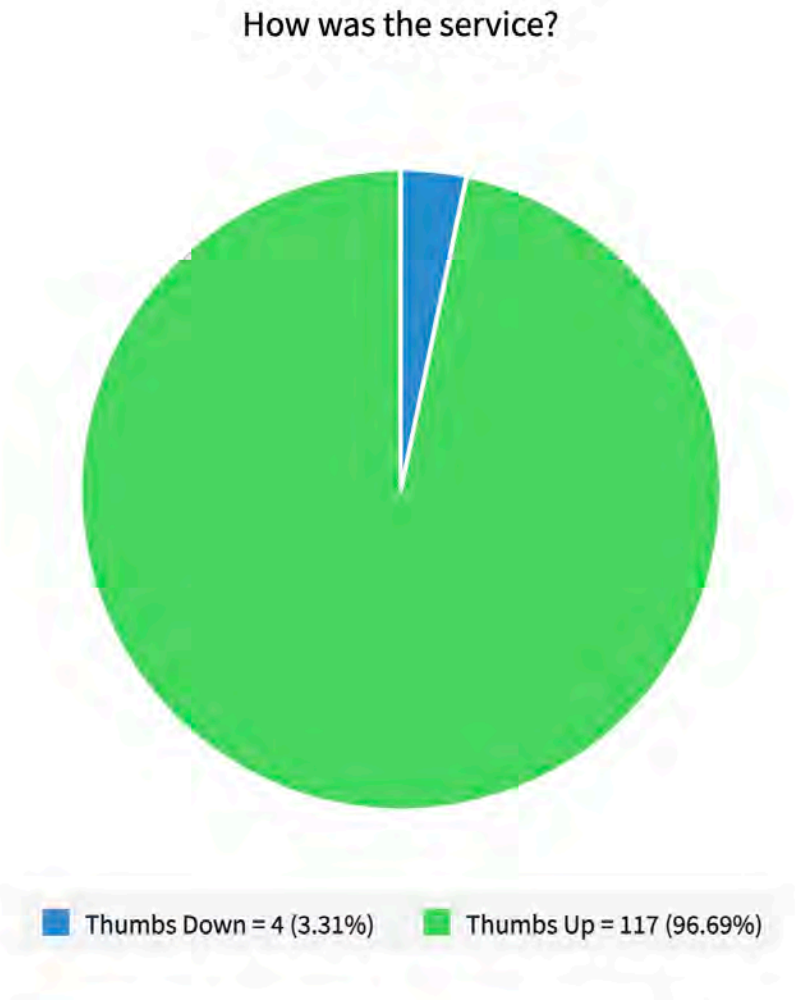
A thumbs-up -down survey.

- Users are emailed the survey when their ticket has been resolved.
- They receive it only once a month if they submit multiple questions in a month.

On average ~15 Help Desk tickets per week when not in CfP period



Results from October 2024



AAS 245th JWST Activities

JWST STScI-driven activities

- Workshops:
  - The JWST Calibration Pipeline: A Hands-on Workshop
  - Python Data Analysis with the James Webb and Roman Space Telescopes
- Special Session:
  - The Rocky Worlds Program: a search for atmospheres on rocky exoplanets around M-dwarfs
- JWST Town Hall
- Have signed up for contributions using the NASA Hyperwall
- Presence at the STScI booth with "Ask the Experts" sessions
- Business card with Observer News subscription QR code