STScI | SPACE TELESCOPE SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

Proposing for JWST

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STScI

Upcoming AAS JWST events

- JWST Open House
  - When: Sunday, January 5, 9.30am-11.30am (IFUs)
  - No registration needed!
  - Monday, January 6, 9.30am-11.30am (Grisms)
  - Tuesday, January 7, 9.30am-11.30am (NIRSpec MSA)
- JWST Exhibitors
  - NASA Booth
    - Questions about JWST Project Status
  - STScI Booth
    - Questions about Proposal Planning
    - JWST Virtual Reality Experience
    - Pick up a copy of the JWST Pocket Guide

Getting ready for the Cycle 1 Call for Proposals

Many updates and improvements to the science and operations center at STScI since last time the Cycle 1 call was issued.

Lessons learned included

1. Start working on proposals earlier
2. Make it easier to discover resources (JDox and beyond)
3. Create training resources with potential to reach larger audience
4. Make it easier to estimate the sensitivity of JWST for simple cases
5. Improve usability, stability, and speed of core tools (APT, ETC, Aladin, MPT)
6. Make it easier to use Ancillary tools (TVTs, Pandeia, JBT, ExoCTK, …

Getting started

https://jwst-docs.stsci.edu/getting-started-guide

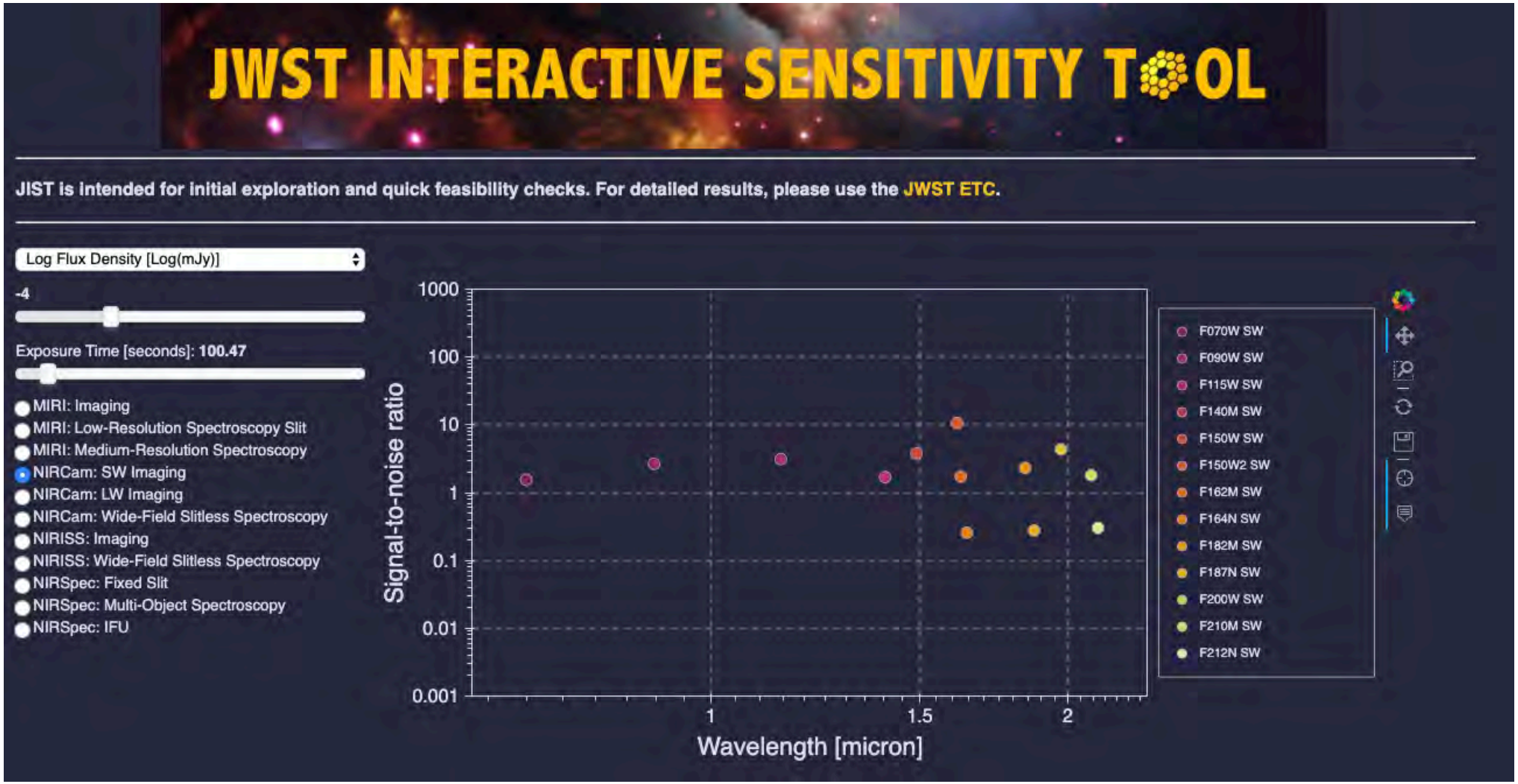
JWST uses single-stream proposal submission – observations are mostly defined at submission, with some exceptions.

1. Know the deadline – May 1, 2020
2. Follow JWSTObserver on Twitter or Facebook for the latest news
3. Become familiar with the JWST capabilities, terminology, and documentation
4. Determine if your targets can be observed (check duplication and visibility)
5. Use the Exposure Time Calculator to determine observing parameters
6. Prepare your proposal file in the Astronomer's Proposal Tool (APT)
7. Write your science proposal text
8. Submit with APT

Proposal tool release schedule

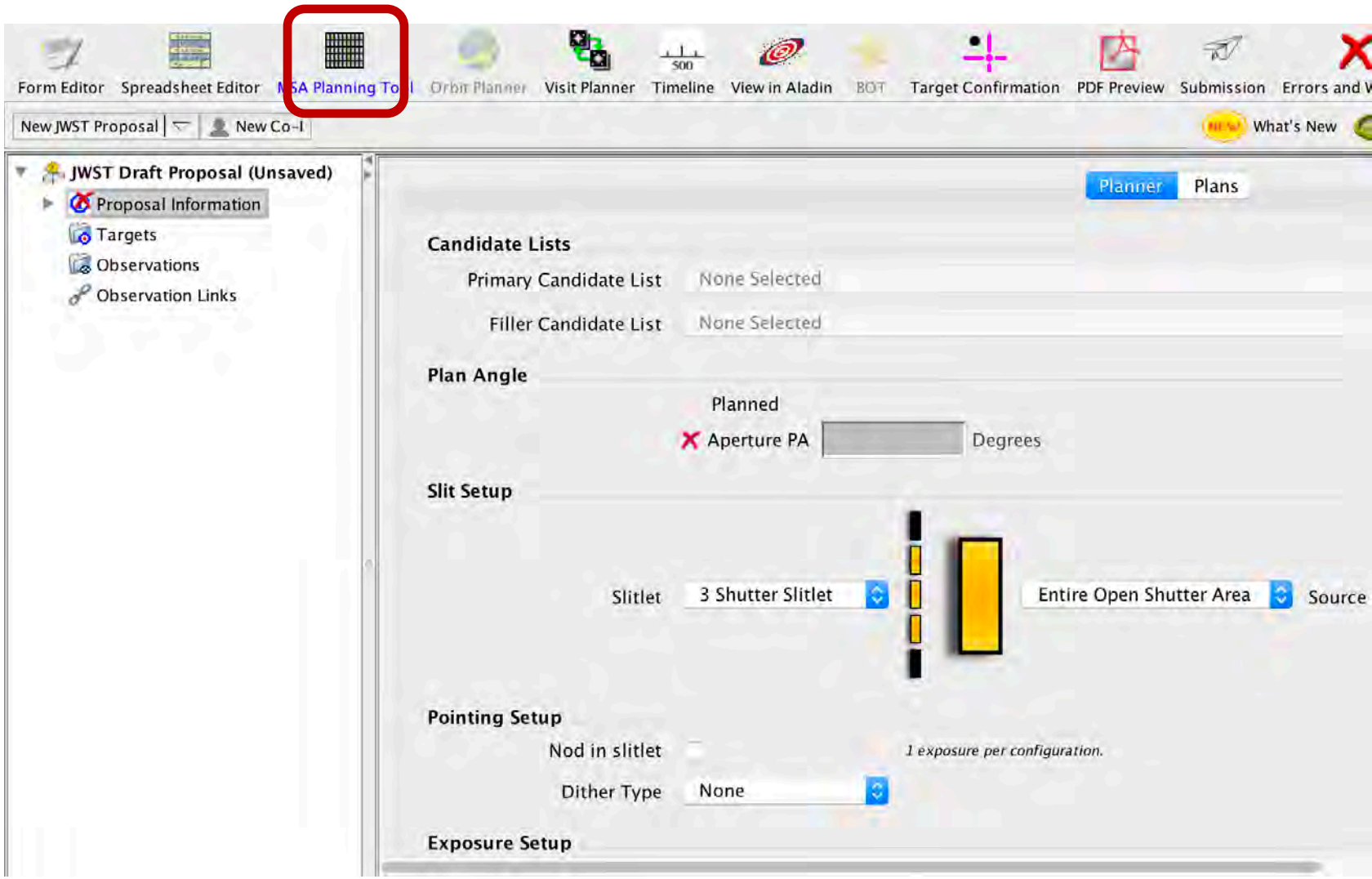
- Our understanding of the observatory and its performance has improved.
- We are working hard on providing you with the best available sensitivities and timing model.
- Changes are relatively minor – there is no reason to wait for the last version!
- APT release schedule (note new version numbering system)
  - 2020.1.1 (January 21, 2020)
    - Includes the new NIRSpec Multi-Shutter Array Planning Tool (MPT).
  - 2020.2 (Early March, 2020) – To be used with your final proposal submission.
- ETC release schedule
  - 1.5.1 (January 27, 2020)
  - Includes an update to the cosmic ray model and the background model.
  - The ETC will be down for the update for ~1 day.
  - You might use the time to watch the tutorial videos, explore feasibility with JIST, etc.

JWST Interactive Sensitivity Tool (jist.stsci.edu)



Re-written MSA Planning Tool

- MPT = MSA Planning Tool for NIRSpec multi-object spectroscopy
- Improved performance and stability
- Improved workflow within APT
- Will read your old MPT plans
- Part of APT 2020.1
- Interested in knowing more – attend the NIRSpec MOS open house session on Tuesday, January 7, 2020 (9.30am-11.30am).



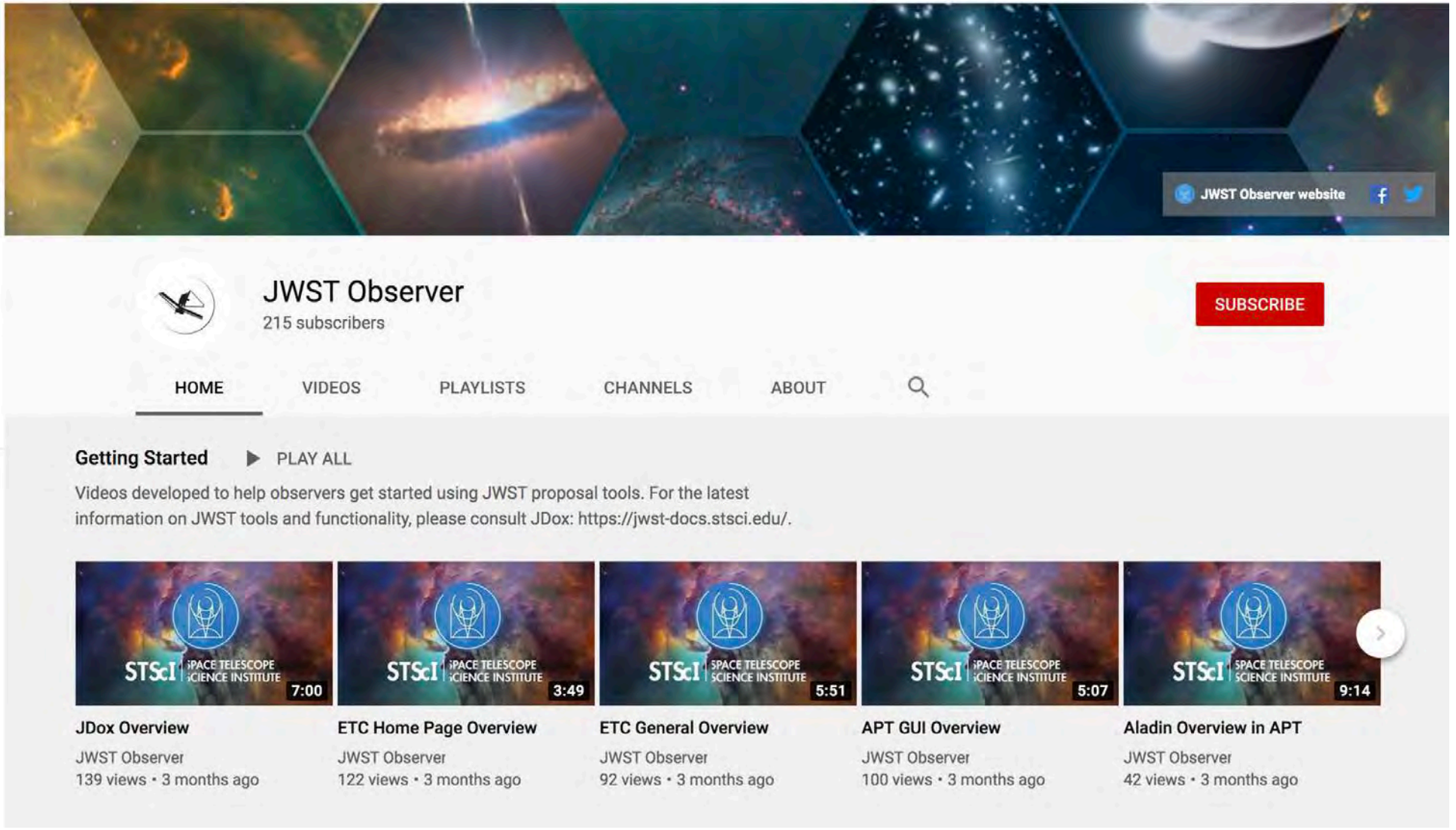
Improved documentation navigation and new example science programs

Example science programs by instrument

Table 1. Example science programs

Program reference #	Prime instrument(s) and template(s)	Parallel instrument and template (if any)	Example science program title (links go to the relevant articles)
MIRI			
28	MIRI MRS	---	MIRI MRS Spectroscopy of a Late M Star
(See other MIRI examples in the Multi-instrument section.)			
NIRCam			
22	NIRCam Imaging	MIRI Imaging	NIRCam Deep Field Imaging with MIRI Imaging Parallels
29	NIRCam TIme-Series	---	NIRCam Time-Series Imaging of HAT-P-18 b
30	NIRCam Grism Time-Series	---	NIRCam Grism Time-Series Observations of GJ 436b
37	NIRCam WFSS	---	NIRCam WFSS Deep Galaxy Observations

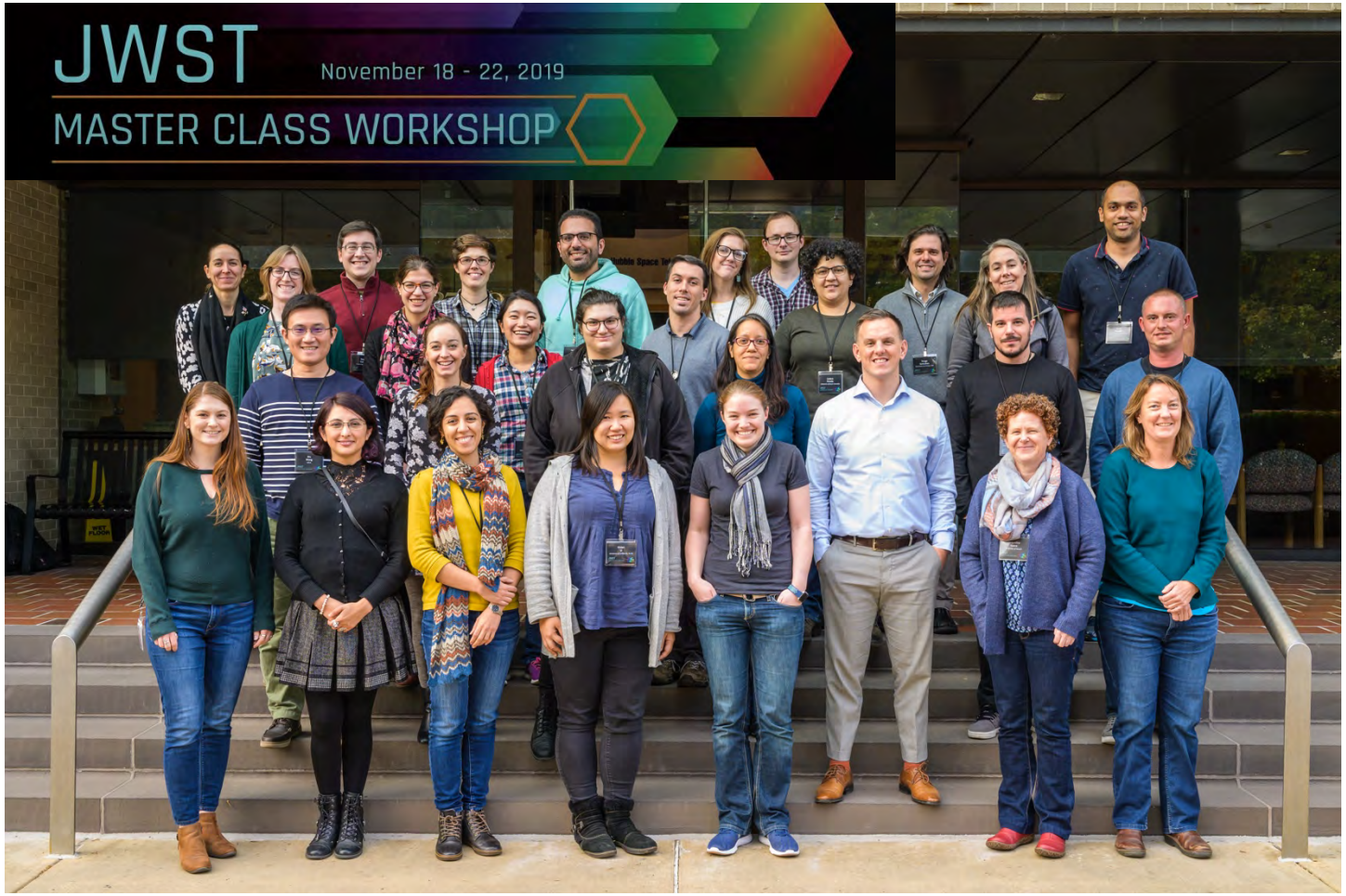
New video tutorials



Training opportunities

Presentation by Katey Alatalo

- 1st JWST Master Class – training the trainer
  - Intensive 4.5 day workshop at STScI
  - Took place November 18-22, 2019
  - Cohort of 28 participants
- Local community workshops
  - **The Master Class Graduates committed to hosting local training workshops**
  - >30 workshops being planned
  - January-March 2020 time frame
  - Supported remotely by STScI
  - http://www.stsci.edu/jwst/science-planning/proposal-training
- All teaching materials collected in a "Workshop-in-a-box"
  - Also useful for self-teaching



The JWST Users' Committee

Voting members

Name	Institution	Notes
James Bullock	University of California, Irvine	Chair
Kat Barger	Texas Christian University	
Natalie Batalha	UC Santa Cruz	
Sadia Caballero-Nieves	Florida Institute of Technology	
Stephane Charlot	Istitute d'Astrophysique	NIRSpec team
Duncan Farrah	Virginia Tech	
Tom Greene	NASA-Ames	NIRCam team
Amanda Hendrix	Planetary Science Institute	
Kelsey Johnson	University of Virginia	
Heather Knutson	California Institute of Technology	
David Lafrenière	Université de Montréal	NIRISS team
Mario Mateo	University of Michigan	
Els Peeters	University of Western Ontario	
Laura Pentericci	INAF, Osservatorio Astronomica di Roma	
Alastair Glasse	Royal Observatory, Edinburgh	MIRI team
Johan Richard	Université de Lyon	
Tomasso Treu	University of California, Los Angeles	

Non-Voting members

Name	Institution	Notes
Jean Dupuis	CSA	CSA, ex officio
Pierre Ferruit	ESTEC	ESA, ex officio
Antonella Nota	STScI	ESA, ex officio
Eric Smith	JWST Program Scientist	NASA, Ex officio
John Mather	JWST Senior Project Scientist	NASA, Ex officio
Ken Sembach	STScI, Director	Ex officio
Neill Reid	STScI, Science Mission Office	Ex officio
Alessandra Aloisi	STScI, Science Mission Office	Ex officio
Mike Ressler	NASA-JPL	MIRI team observer

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What happens after the Cy1 deadline?

- Presentation by Lou Strolger on the science timeline, including when to expect the Cy1 results.
- Directors' Discretionary Early Release Science teams committed to deliver data and tools in time for Cy2 proposals.
- Switching gears to data analysis preparation – keep an eye out for news about:
  - From May 1, 2020 until launch.
  - Training in the use of the JWST data pipeline
  - New simulated data
  - Post-pipeline analysis tools based on astropy
  - Example science use cases in the form of Jupyter Notebooks
  - Just-in-time resources for self-teaching during commissioning
  - Data Analysis Training Workshops