



STScI | SPACE TELESCOPE
SCIENCE INSTITUTE

**EXPANDING THE FRONTIERS OF SPACE
ASTRONOMY**

STScI Town Hall Welcome

Kenneth Sembach
Director

AAS (Virtual) Meeting, January 13, 2021



STScI Status

Hubble, MAST, Roman, Webb, and Makidon Optics Lab operations are progressing well. Our teams are available to help you achieve your science.

This is a busy year of preparations and on-site commissioning rehearsals for JWST launch in October.

Other noteworthy items for this calendar year include:

- Most Institute work will continue to be done from home until pandemic conditions ease significantly
- Visitation to the Institute will be restricted until staff return to the office
- Workshops, colloquia, and committee meetings will be held virtually

The 2021 STScI Spring Colloquium consists of a series of talks held every Wednesday at **3 PM ET** from **February 10 through May 19**.

JOIN US

STScI to broadcast Spring Colloquium to all via Facebook Live

- Talks will be broadcast live, and will be open to the entire community
- List of speakers and topics will be posted on www.stsci.edu

We will stream the colloquia via Facebook live. You do not need to have a Facebook account to access our Facebook Live stream.

To watch the spring colloquia, go to:

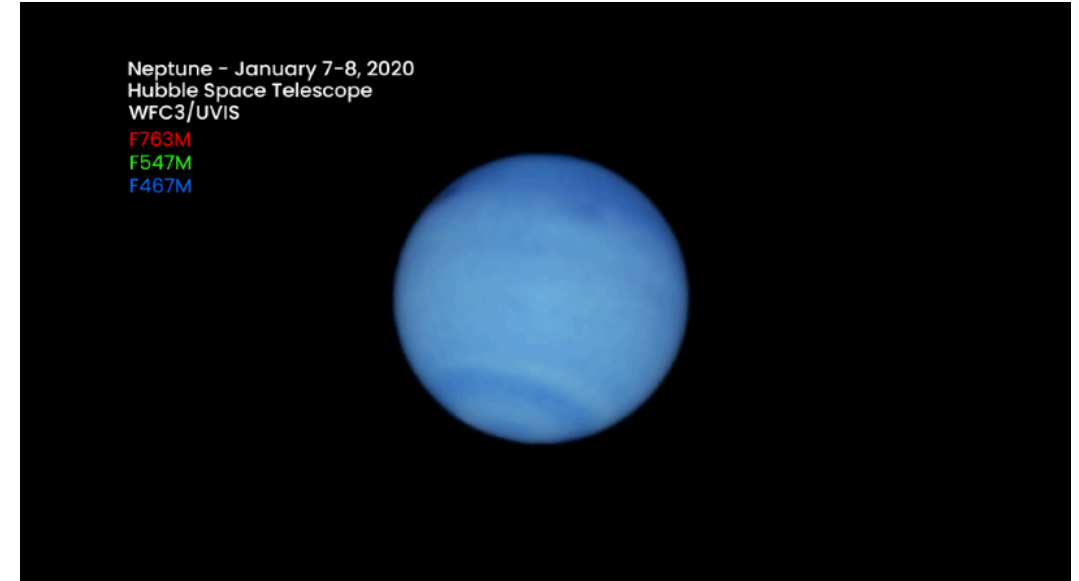
<https://www.facebook.com/STScILiveScienceEvents>





Hubble Operations Proceeding Normally During Pandemic

- Hubble operations are mostly remote, with a few exceptions
 - Delivery of the weekly observing plan (flight ops)
 - Anomaly response and mitigation of gyro issues
- No concerns; observatory & instruments healthy
- Cycle 28 in progress
- Cycle 29 Call for Proposals to be released today (January 13), with April 9 deadline
- COS 2030 lifetime extension
 - Two new lifetime positions under development, ready for use in Cycle 29 (Oct 2021)



Dark Storm on Neptune Reverses Direction, Possibly Shedding a Fragment
(Release #2020-59)

Science Results from Hubble's Archive - Special Session #424, tomorrow (January 14)

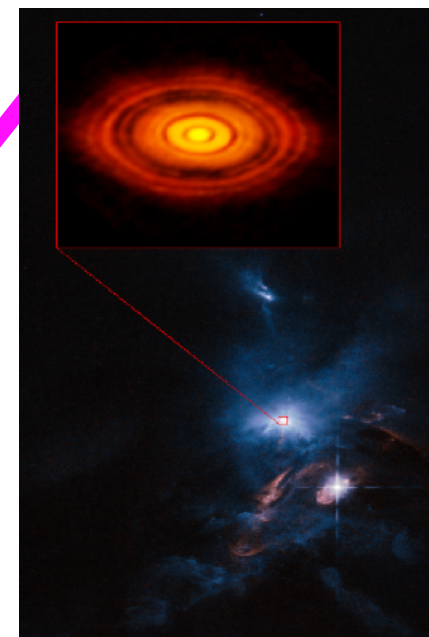
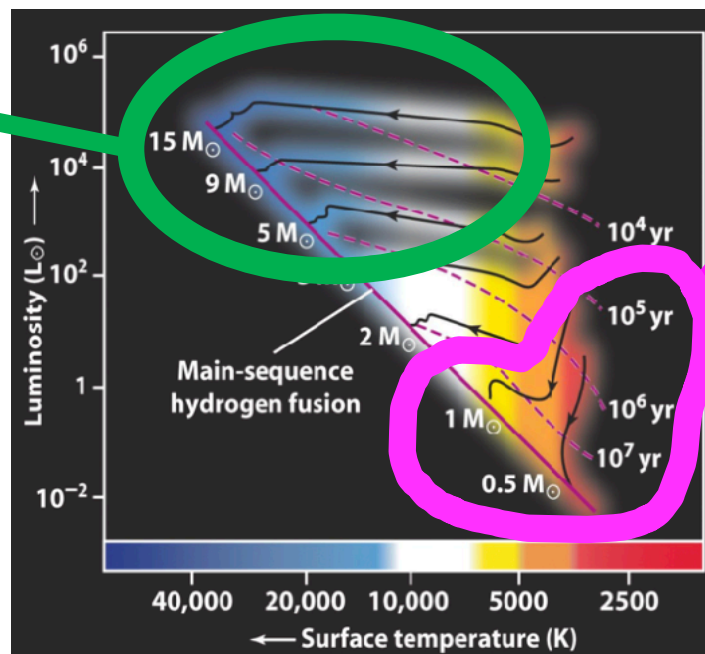


Ultraviolet Legacy Library of Young Stars as Essential Standards (ULLYSES)

- Director's Discretionary program on behalf of the community to obtain a spectroscopic reference sample of young low and high mass stars
- First data release made available in November 2020. Observations will continue for several cycles.
- Accompanying talk by J. Roman-Duval



~500 orbits to extend the spectroscopic library of O and B stars to low metallicity (8-50% solar)

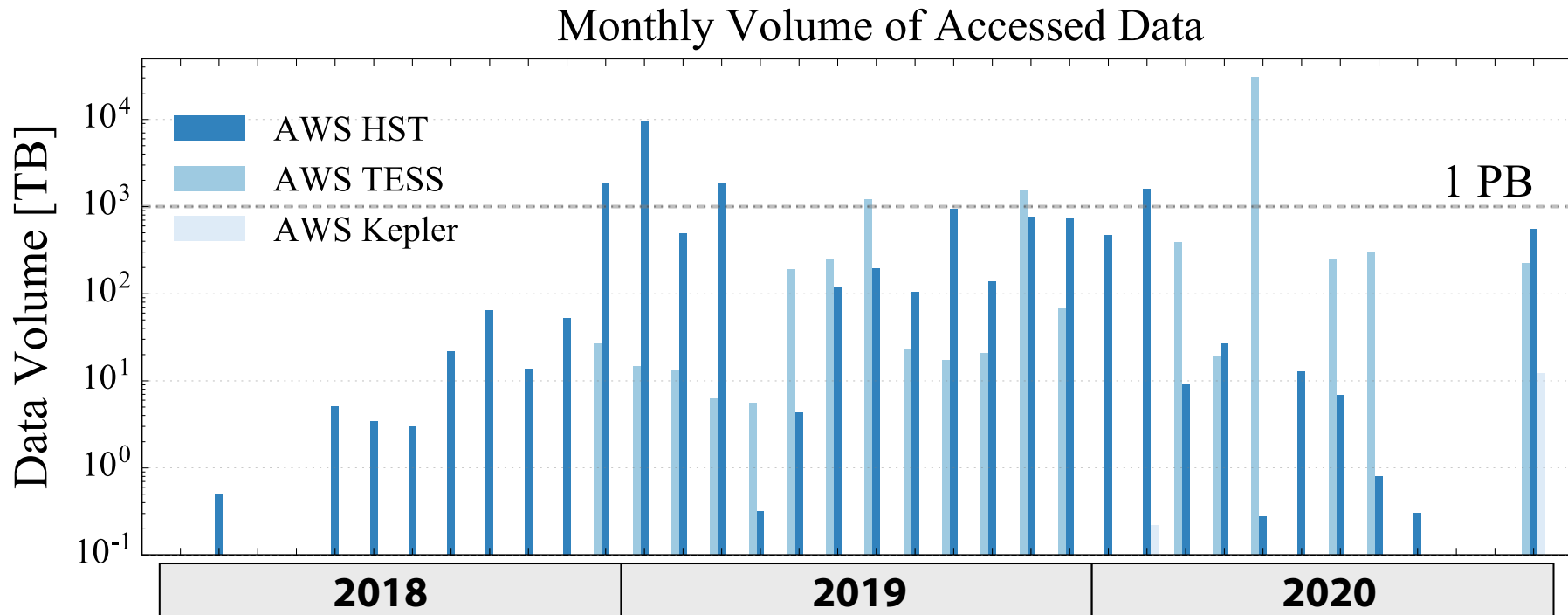


~500 orbits to obtain a spectroscopic library and time monitoring of T Tauri stars (younger than 10 Myr, mass $< 1 M_{\odot}$)



Data Science and Archives at STScI

- Hubble, Kepler, and TESS datasets in the cloud are being used heavily, often exceeding 1,000 TB of data accessed each month.
 - These cloud data are easy to access and currently free to download from AWS, which will make working with them even easier from any cloud or system.





Data Science and Archives at STScI

- JWST spectroscopic data analysis tools (Jdaviz) work in desktop applications, in notebooks, and are being integrated into MAST for seamless online exploration.
- Kepler now has a repository of 20+ notebooks documenting many ways to do new science with this now fully archival mission.
- MAST has a new prototype data sonification project: *astronify*

ASTRONIFY

<https://astronify.readthedocs.io/>

- Data Science Mission Office has a new Head (Josh Peek) and a new Data Scientist (Michelle Ntampaka)





James Webb Space Telescope - It's Launch Year!

Final pre-ship tests, closeout, and reviews this spring/summer.

Ship to launch site this summer.

Launch this fall: October 31

JWST Town Hall Tomorrow
(Session #419, 1:40-2:40 PM)

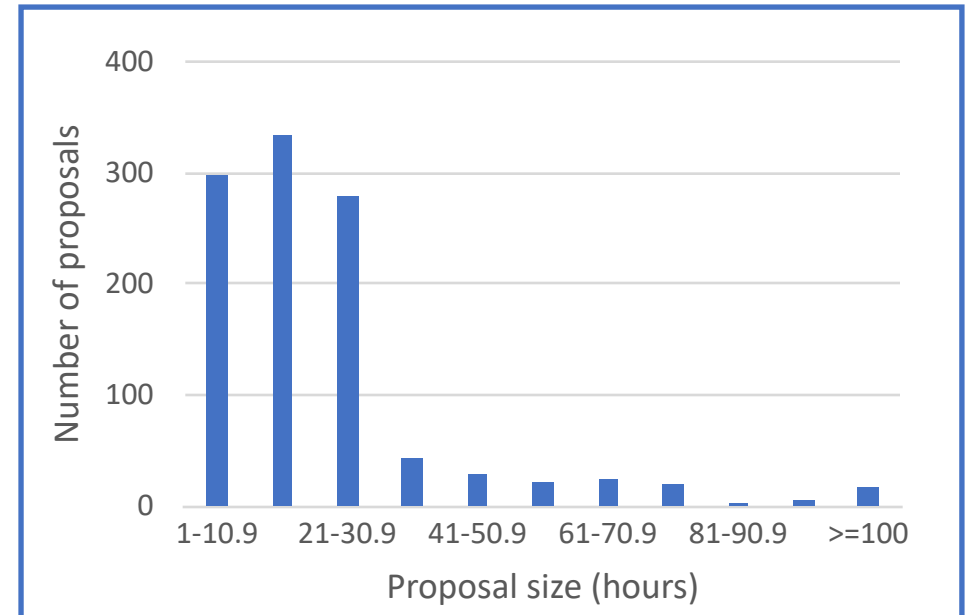


To help ensure success, technicians carefully inspect the James Webb Space Telescope's sunshield before deployment testing begins, while it is occurring, and perform a full post-test analysis to ensure the observatory is operating as planned. Credits: NASA/Chris Gunn



JWST Cycle 1 – Summary Statistics

- 1173 proposals were received by the JWST Cycle 1 GO/AR deadline, including
 - 1084 GO proposals for ~24,500 hours (4:1 over-subscription)
 - 14 Survey proposals
 - 75 AR proposals
 - 374 proposal led by ESA PIs (31.9%)
 - 44 proposals led by Canadian PIs (3.8%)
- 12766 investigators in total
 - 4332 unique investigators (PI, co-PI, or co-I)
 - 1985 have not appeared on past HST proposals
 - 31.5% of PIs are female
 - 10.4% of investigators (122) are students
- TAC meeting: February 16-19 (Galactic panels), February 23-26 (Extragalactic panels) & March 1-4 (Executive Committee)
- More details at the JWST Town Hall (January 14, Session 419, 1:40-2:40 PM)





Roman Space Telescope

STScI is the Roman Science Operations Center.

Observatory science program and core community surveys will be major areas of discussion with the community this year.

See accompanying talk by K. Gilbert.



Nancy Grace Roman
1925-2018



Excellent progress to date on observatory development and ground systems, despite pandemic conditions

On track for launch in mid-2020s

Roman Town Hall Friday (Session #520, 1:40-2:40 PM)



STSci Town Hall

Ken Sembach (sembach@stsci.edu)

Welcome and status

Julia Roman-Duval (duval@stsci.edu)

The Ultraviolet Legacy Library of Young Stars as Essential Standards (ULLYSES) Director's Discretionary Program

Karoline Gilbert (kgilbert@stsci.edu)

Community Science with Roman: Realizing the scientific potential of Roman Space Telescope Surveys

Remi Soummer (soummer@stsci.edu)

Advancing Technologies for Future Segmented Telescopes

All presentations can be found at:

<https://outerspace.stsci.edu/display/AAS/STSci+Town+Hall+-+January+2021>