



STScI | SPACE TELESCOPE
SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

STScI Town Hall

Nancy A. Levenson

AAS June 8, 2021

#217_stsci_town_hall



STScI status

We continue to be available to support your science, using Hubble, Webb, Roman, and MAST archive.

Most Institute staff are working from home now. More people will return on-site in the coming months, but we will not host visitors or conferences in person through the calendar year.

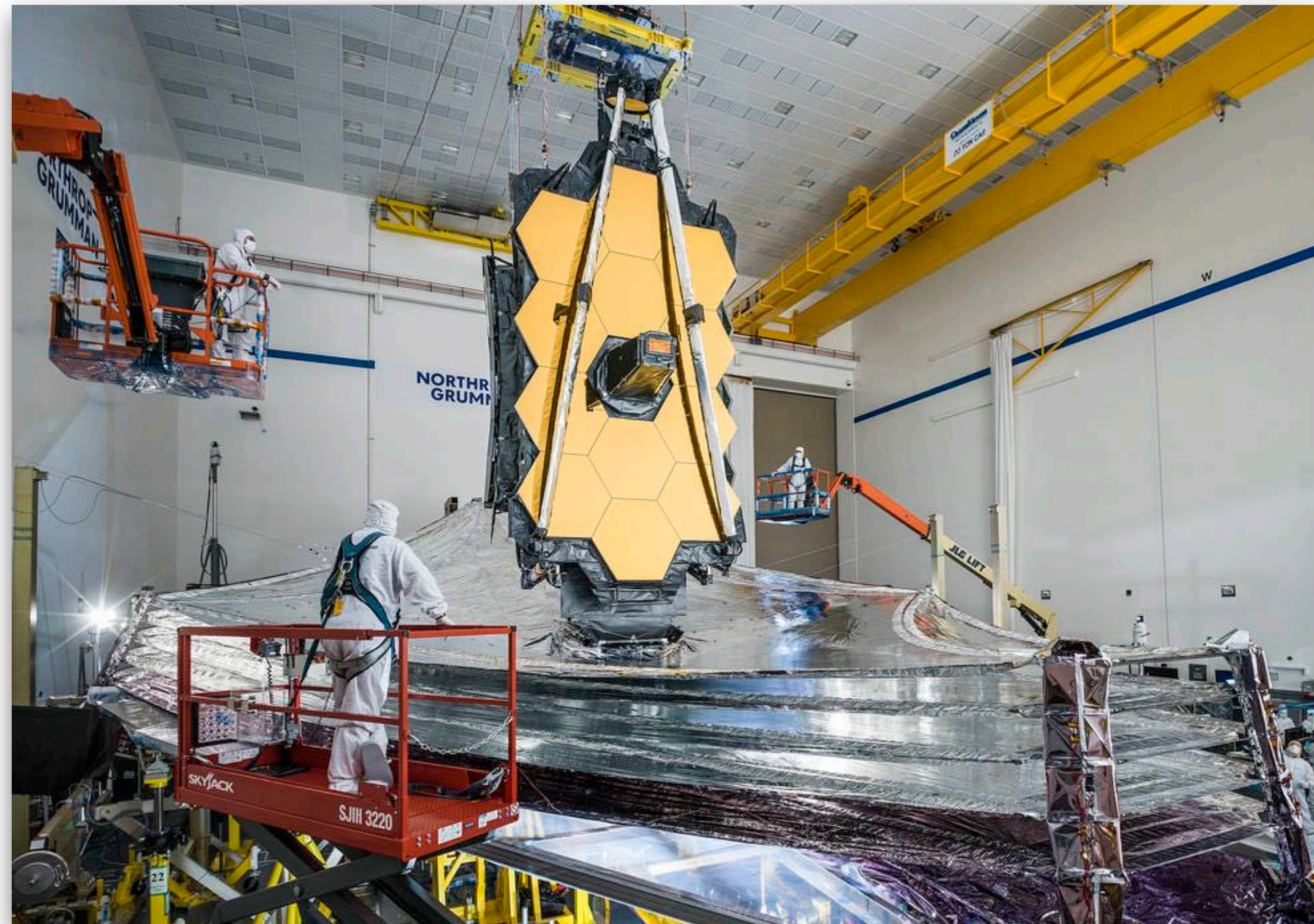
Lots of activity to support Webb launch and commissioning.





Webb: closing in on launch later this year

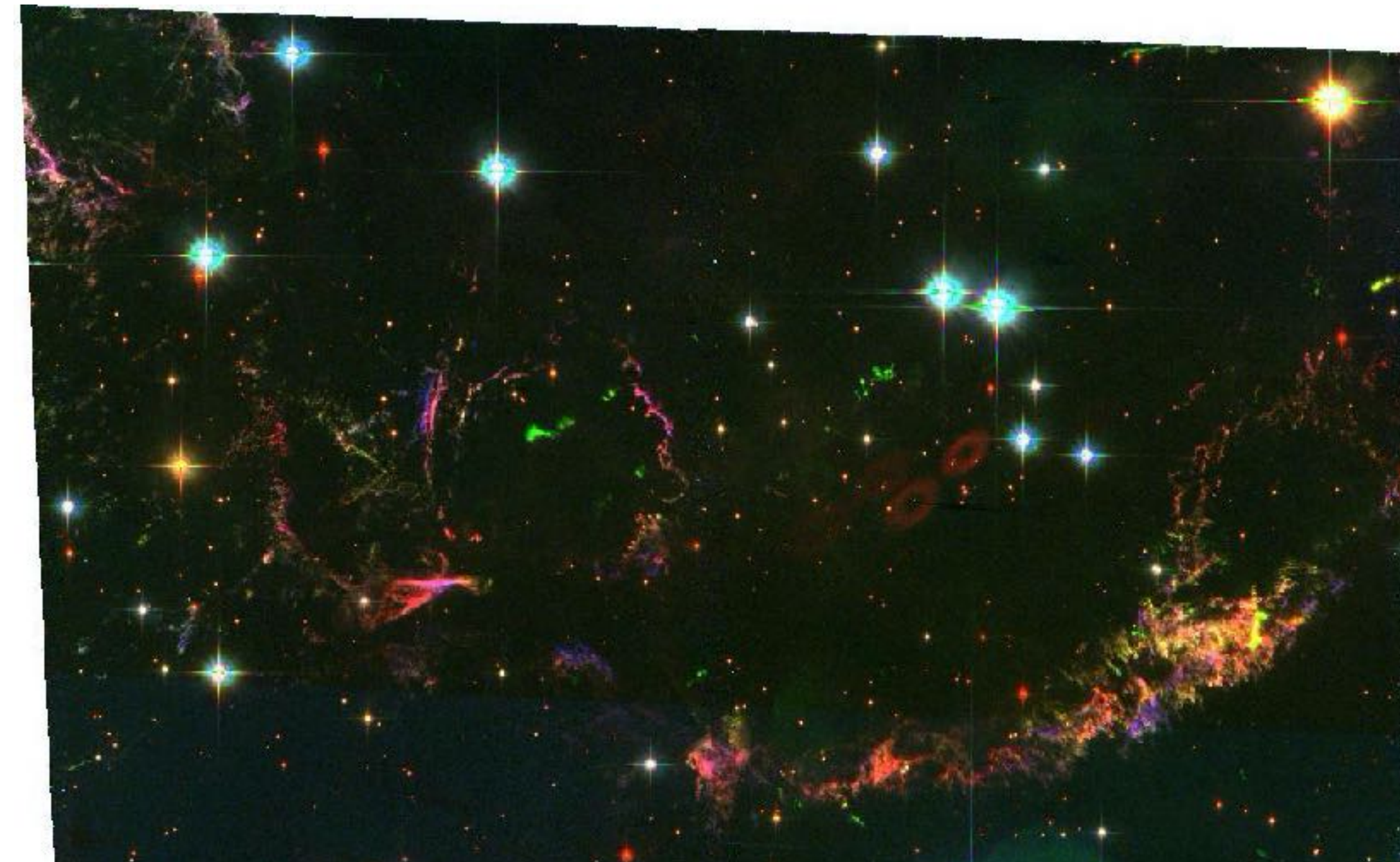
- final stowing of sunshield in process
- ship to launch site late this summer
- JWWebbinars for tools and data methods <https://www.stsci.edu/jwst/science-execution/jwebbinars>
 - materials and recordings available
- more about Webb science program today from Christine Chen





Hubble operations proceeding normally

- Observatory and instruments are healthy
 - updated guide star catalog using Gaia astrometry and photometry
- Occasional anomalies have been resolved rapidly
- Planning for the long term
 - e.g., COS 2030 lifetime extension
- Cycle 28 observations in progress
- Cycle 29 proposal review this month
- Hubble Advanced Products
 - mosaics automatically produced
- Hubble in the Cloud
 - automatic reprocessing with calibration updates

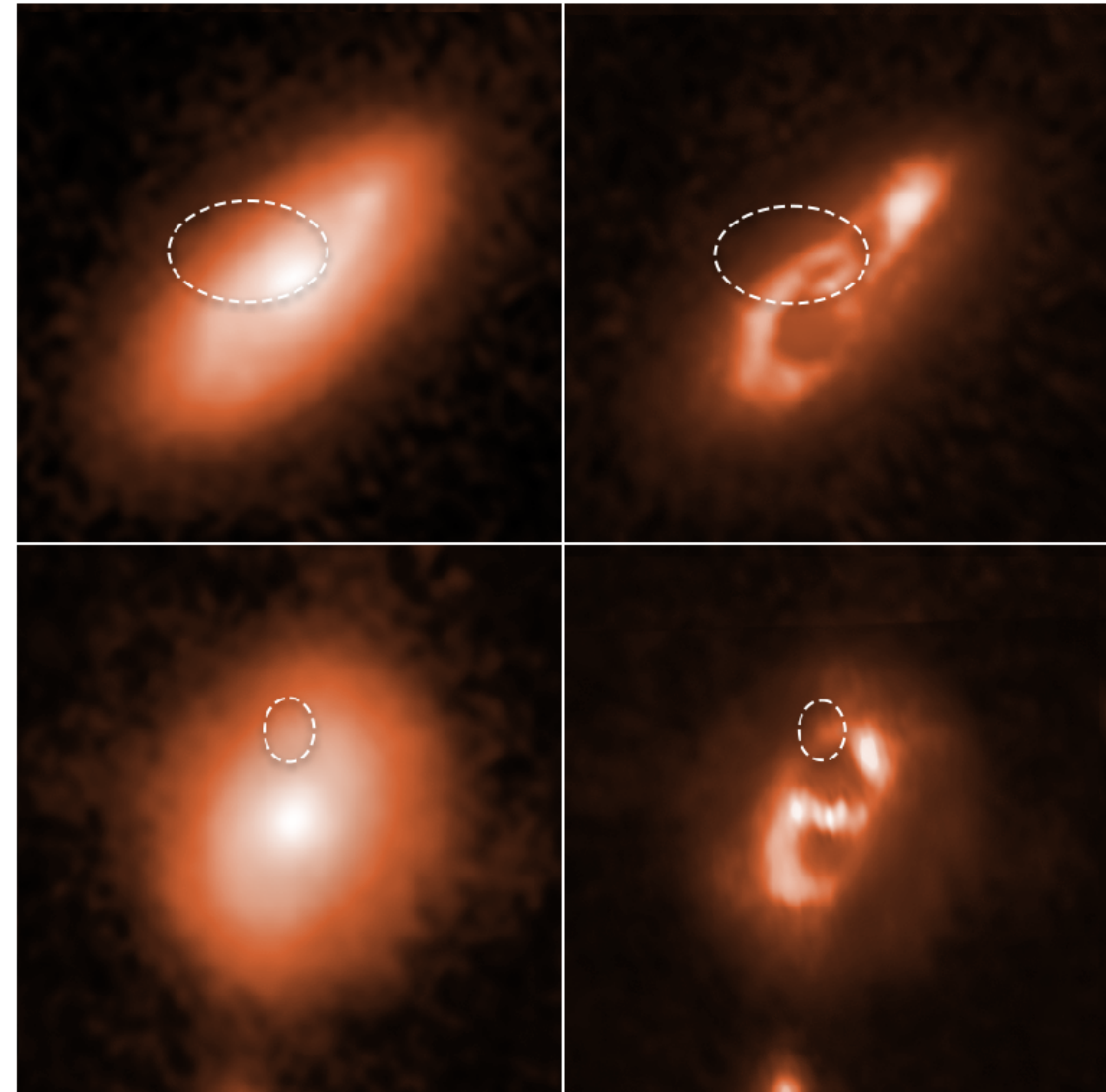




Hubble remains scientifically vital

- Some fast radio bursts localized to spiral galaxy arms

- Share your results! STScI can help disseminate newsworthy Hubble findings
<https://www.stsci.edu/news/scientist-resources>



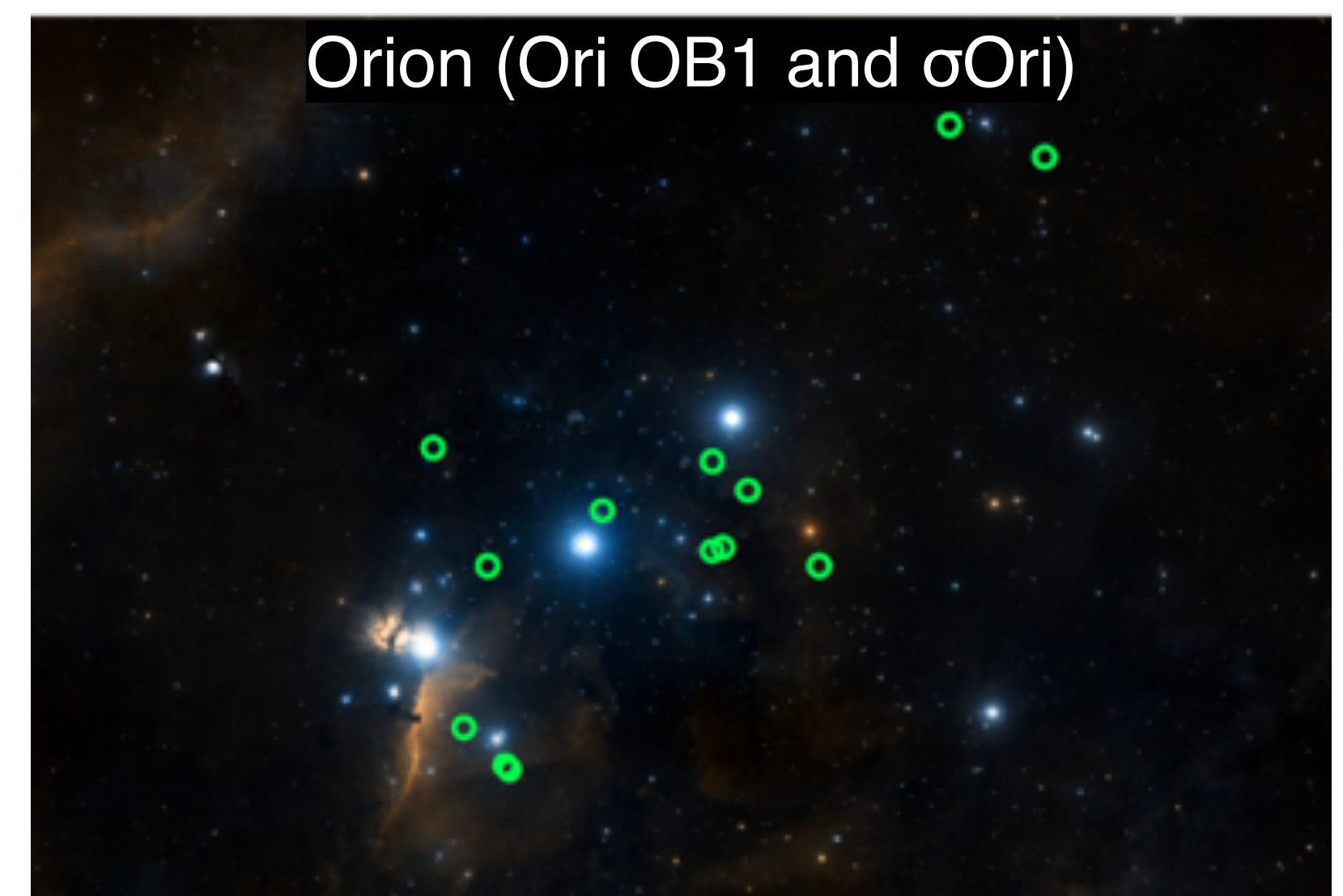


ULLYSES Second Data Release

ULLYSES: Ultraviolet Legacy Library of Young Stars as Essential Standards

<https://ullyses.stsci.edu/index.html>

- Large Director's Discretionary program for the community, to obtain a spectroscopic reference sample of young low- and high-mass stars
- Second data release March 2021
 - medium- and high-resolution UV spectra and high-level science products for:
 - 122 massive stars in Large and Small Magellanic Clouds
 - 13 T Tauri stars in Ori OB1 and Sigma Ori star-forming regions



MIRRORS



HUBBLE

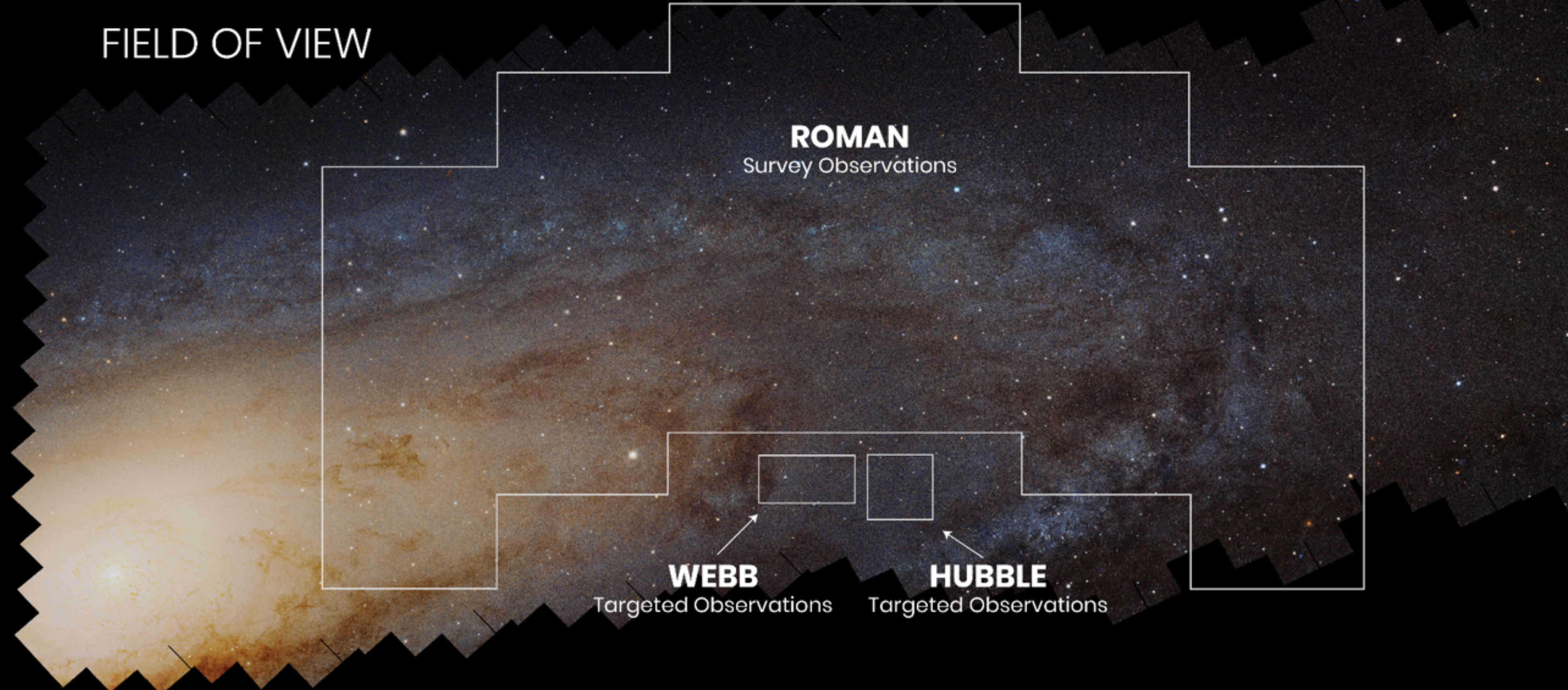


ROMAN



WEBB

FIELD OF VIEW



ROMAN

Survey Observations

WEBB

Targeted Observations

HUBBLE

Targeted Observations

WAVELENGTH



HUBBLE



ROMAN



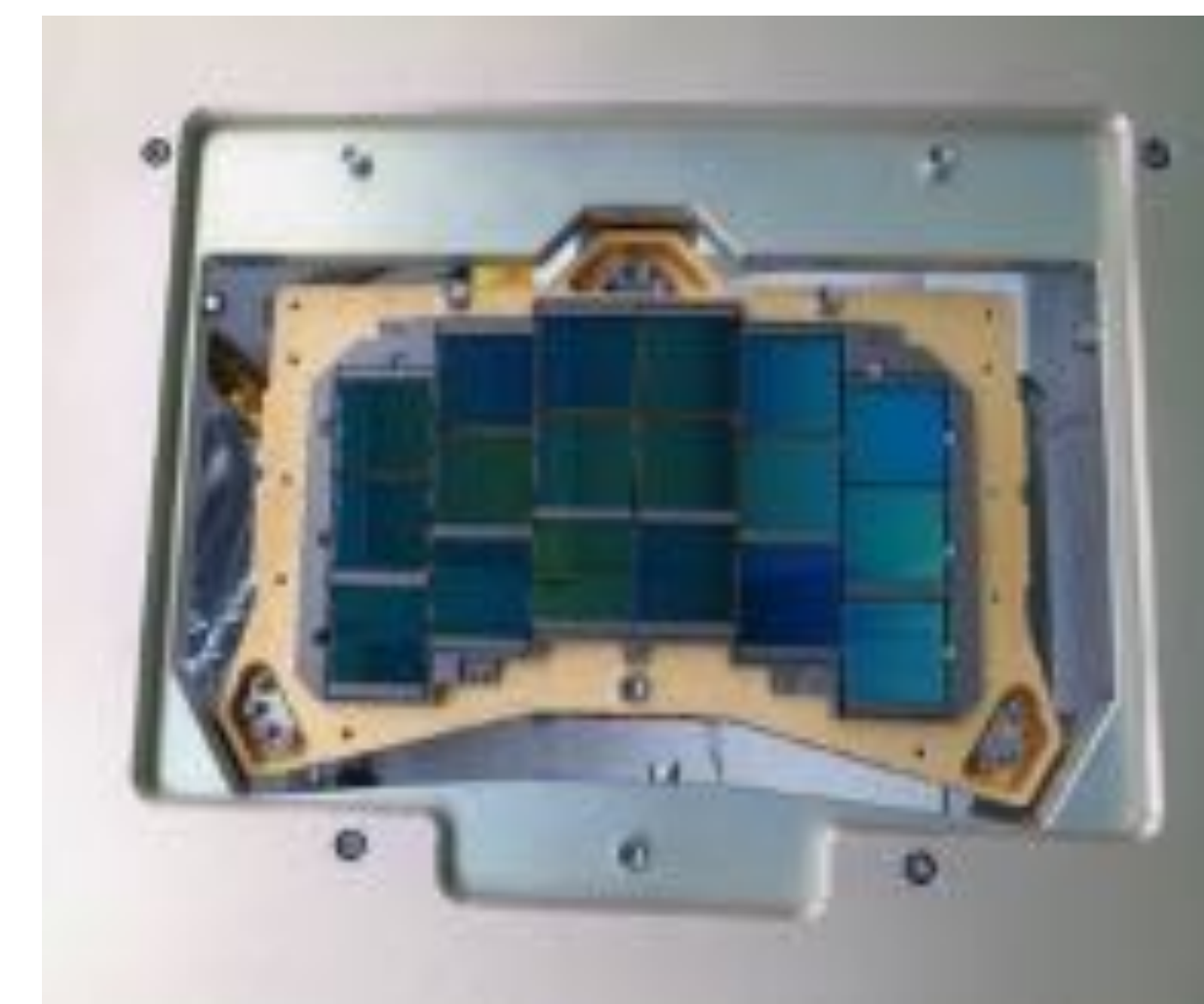
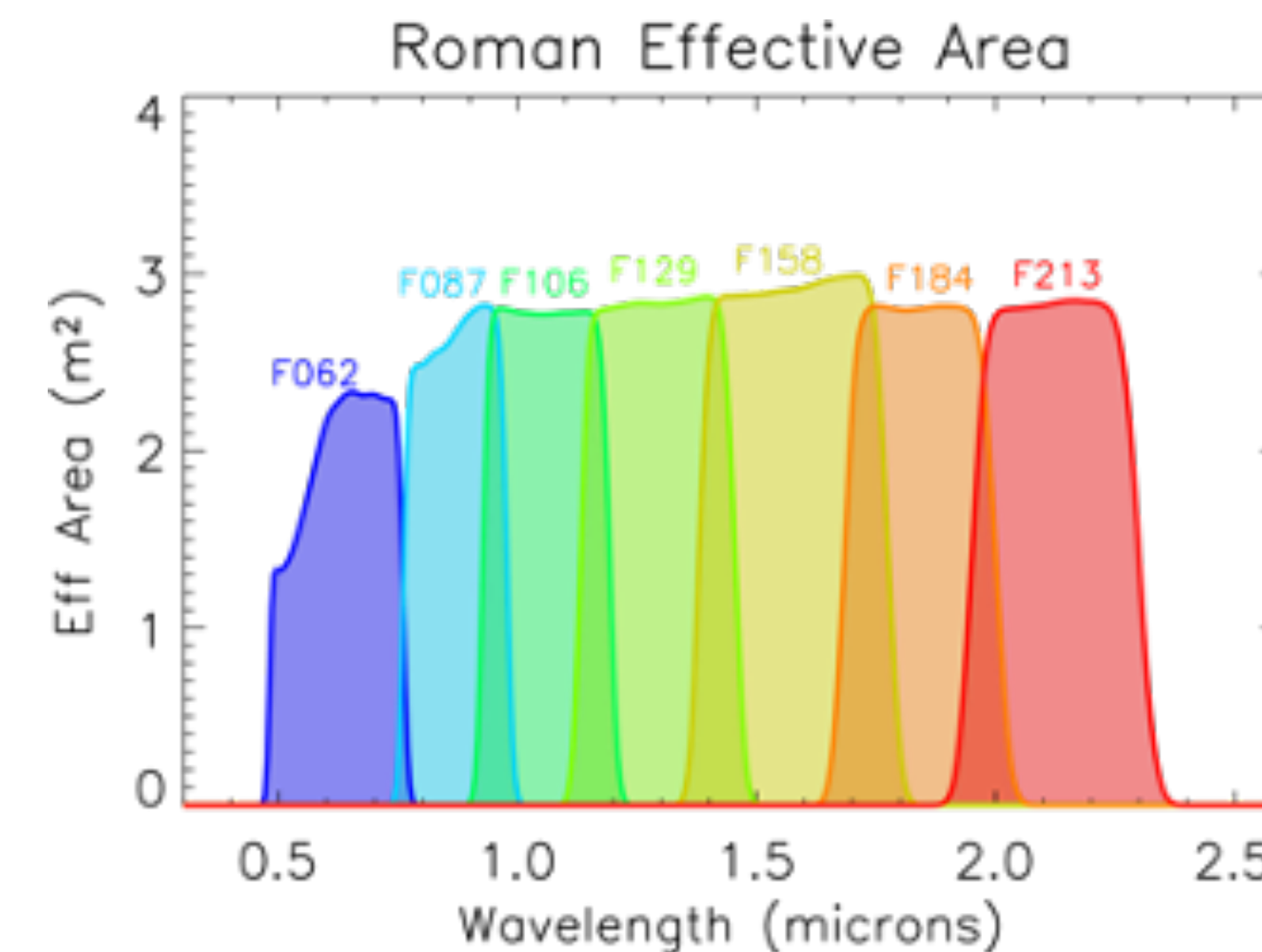
WEBB

Nancy Grace Roman Space Telescope
Hubble quality, with 100 times the field of view



Roman progress

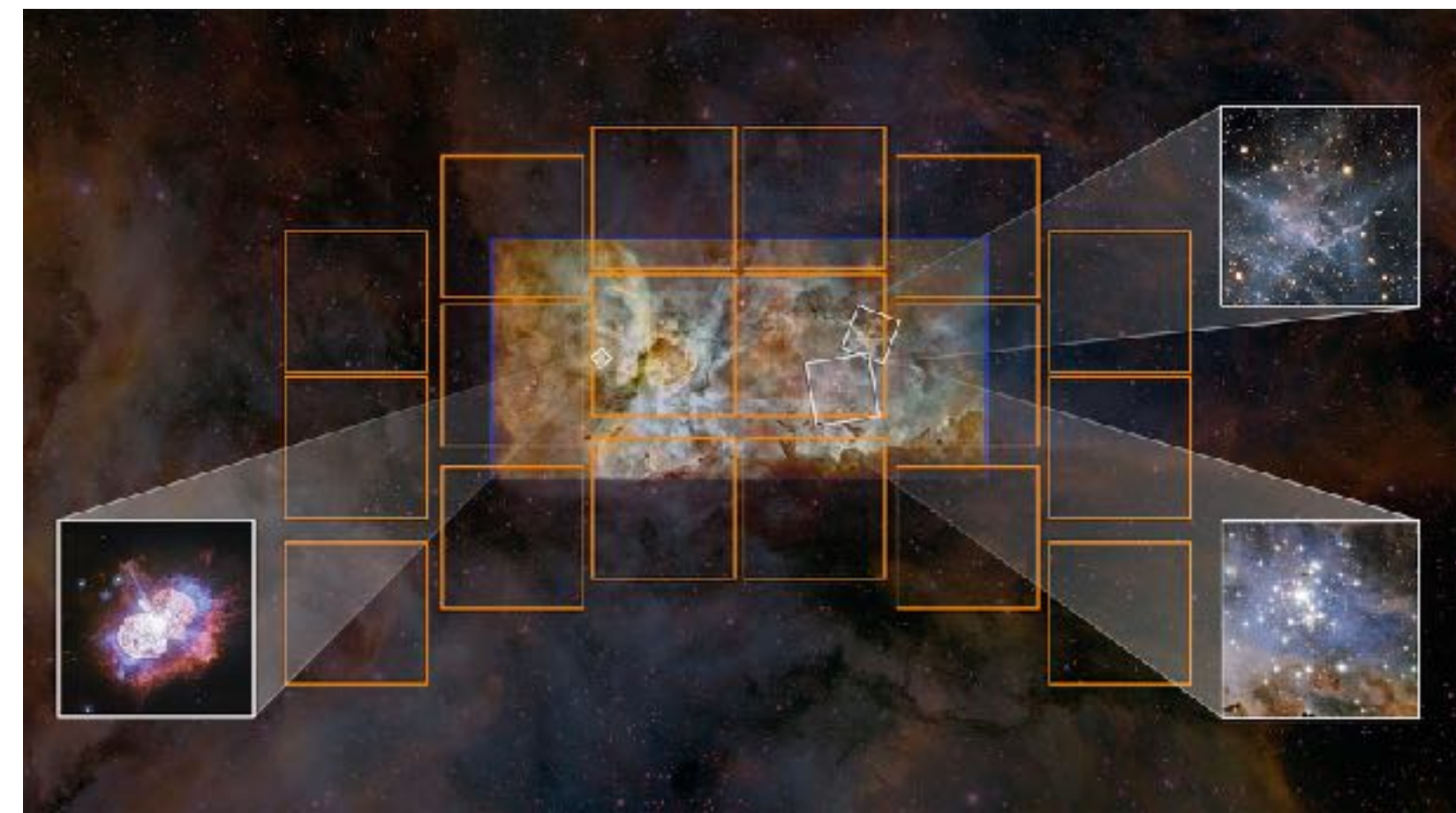
- working toward launch in mid-2020's
- Wide-Field Instrument (WFI)
 - imaging 0.5–2.3 μm
 - slitless spectroscopy 0.75–1.93 μm
- Coronagraph Instrument (CGI) technology demonstration
- primary mirror complete
- all WFI science detectors available
- mission critical design review September 2021
- distributed support and partnership with STScI, IPAC, JPL, and Goddard Space Flight Center
- scientist resources: <https://www.stsci.edu/roman>





Science opportunities with Roman

- ALL data with zero exclusive access period
- community input will define core survey observations
 - High Latitude Wide Area Survey
 - High Latitude Time Domain Survey
 - Galactic Bulge Time Domain Survey
- coronagraph instrument program
- great observatory astrophysics
 - independent proposals for new observations or use of planned surveys
- coming this year:
 - call for input on “early” science needs
 - research and support opportunity through NASA ROSES





Mikulski Archive for Space Telescopes (MAST)

- multi-mission archive, including Hubble, Webb, Roman, Pan-STARRS, and others
- durably link data to publications with a Digital Object Identifier (DOI)





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All *HST*, *FUSE*, and *GALEX* data used in this paper can be found in MAST: [10.17909/T9FG6R](https://mast.stsci.edu/doi/10.17909/T9FG6R). Zheng et al. 2017



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The screenshot displays the MAST web interface. At the top, there is a search bar with a dropdown menu for 'Select a collection...' set to 'MAST Observations by Object Name or RA/Dec'. To the right, there is a search input field with the placeholder 'Enter object name or RA and Dec to cone search' and a 'Search' button. Below the search bar, there are links for 'About Collections...', 'Show Examples...', 'Random Search', and 'Advanced Search'. A navigation bar includes 'Upload Target List', 'My Download Basket: 0 files', and links for 'User Manual/Help', 'Leave Feedback', and 'About This Site'. The main content area shows '40 Total Rows' and a 'Filters' sidebar on the left. The filters include 'Keyword/Text Filter', 'Mission' (HST: 30 of 30, FUSE: 8 of 8, GALEX: 2 of 2), 'Provenance Name' (CALCOS: 30 of 30, NGS: 2 of 2), and 'Instrument' (COS/FUV: 30 of 30, FUV: 8 of 8, GALEX: 2 of 2). The main table is in 'List View' and shows columns for 'Actions', 'Observation T...', 'Mission', 'Provenance Name', 'Instrument', and 'Project'. The table contains 11 rows of data, all with 'science' as the observation type and 'HST' as the mission.

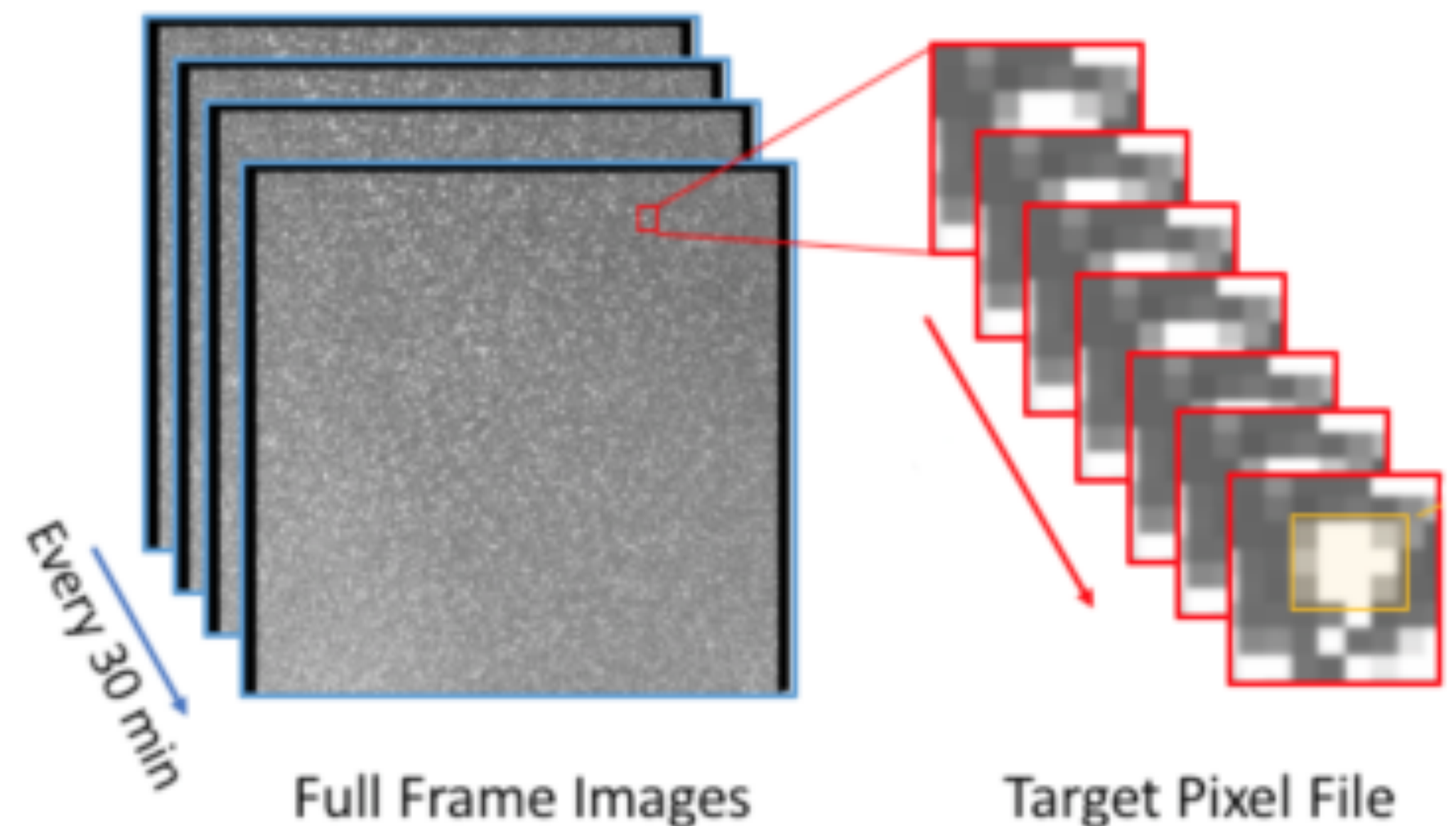
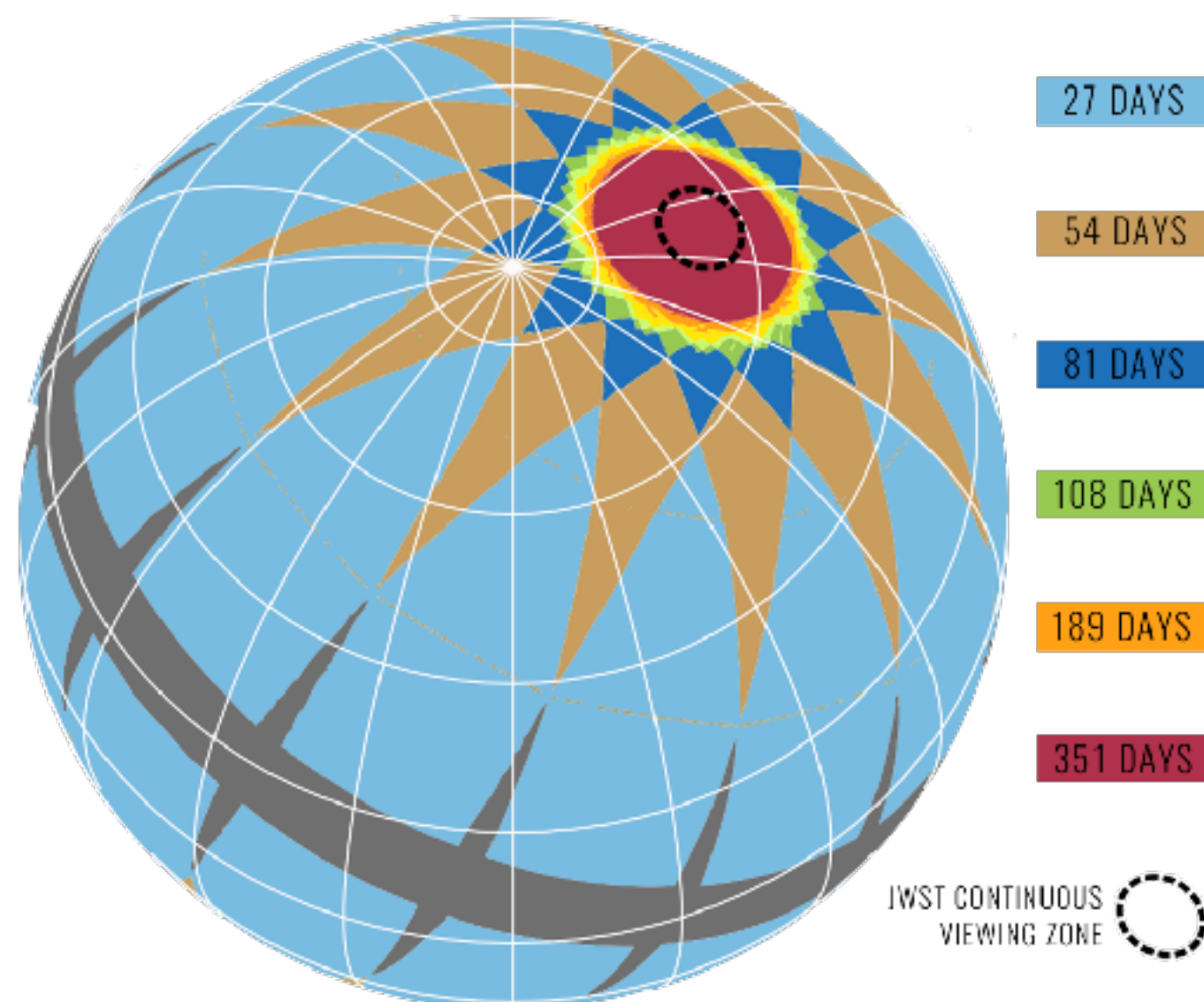
	Actions	Observation T...	Mission	Provenance Name	Instrument	Project
1	[Icons]	science	HST	CALCOS	COS/FUV	HST
2	[Icons]	science	HST	CALCOS	COS/FUV	HST
3	[Icons]	science	HST	CALCOS	COS/FUV	HST
4	[Icons]	science	HST	CALCOS	COS/FUV	HST
5	[Icons]	science	HST	CALCOS	COS/FUV	HST
6	[Icons]	science	HST	CALCOS	COS/FUV	HST
7	[Icons]	science	HST	CALCOS	COS/FUV	HST
8	[Icons]	science	HST	CALCOS	COS/FUV	HST
9	[Icons]	science	HST	CALCOS	COS/FUV	HST
10	[Icons]	science	HST	CALCOS	COS/FUV	HST
11	[Icons]	science	HST	CALCOS	COS/FUV	HST



TESS and other missions

- Transiting Exoplanet Survey Satellite (TESS) data hosted at MAST
 - all-sky transit survey
- special capabilities including cutouts
- notebook-based science “platform” for data discovery is under development
- support for smaller missions
 - contact STScI’s Community Missions Office: cmo@stsci.edu

TESS 2-YEAR SKY COVERAGE MAP





User committees and input to STScI

User committees welcome your input. Their reports and contact information are available on the [STScI.edu](https://www.stsci.edu) website.

Space Telescope Users Committee (STUC)

<https://www.stsci.edu/hst/about/space-telescope-users-committee>

JWST Users Committee (JSTUC)

<https://www.stsci.edu/jwst/science-planning/user-committees/jwst-users-committee>

MAST Users Group (MUG)

<https://archive.stsci.edu/mug/>

Roman Space Telescope Advisory Committee (RSTAC)

<https://www.stsci.edu/roman/about/roman-advisory-committee-rstac>



AAS Webinars and more ways to connect

Public Engagement Opportunities with NASA's Universe of Learning

Tuesday, June 8, 4:00-4:30 PM (EDT)

A New Way to Search for HST Data

Wednesday, June 9, 4:30–5:00 PM (EDT)

Visit us in the STSci Booth #exb_stsci

jobs!

Experts from Hubble, Webb, Roman, MAST, and Human Resources

handouts and resources!

Slides from today

<https://outerspace.stsci.edu/display/AAS/AAS+Home>