



# ESA JWST update



JWST Users Committee

February 28, 2023

Chris Evans

ESA JWST Project Scientist

Head of ESA Office @STScI

# Multi-mission partnership with STScI



- HST

Three decades of successful collaboration on Hubble  
NASA-ESA Hubble MOU renewed to December 2024  
13 ESA-funded personnel supporting Hubble science operations



- JWST

Significant contribution of ESA JWST team in commissioning  
Handover from development to operations for European contributions (NIRSpec & MIRI) on Oct 6-7  
15 ESA-funded personnel during science operations





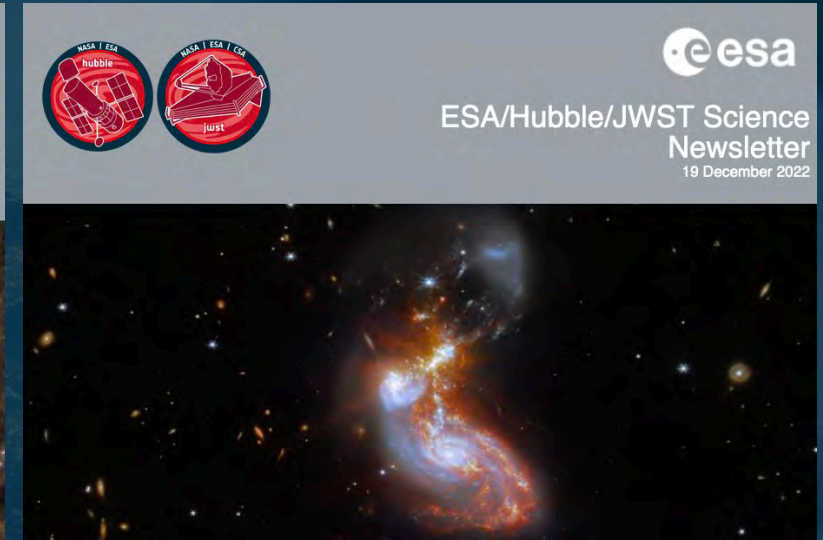
## EUROPEAN ASTRONOMICAL SOCIETY ANNUAL MEETING

JULY 10<sup>TH</sup> – 14<sup>TH</sup>, 2023  
ICE KRAKÓW, POLAND



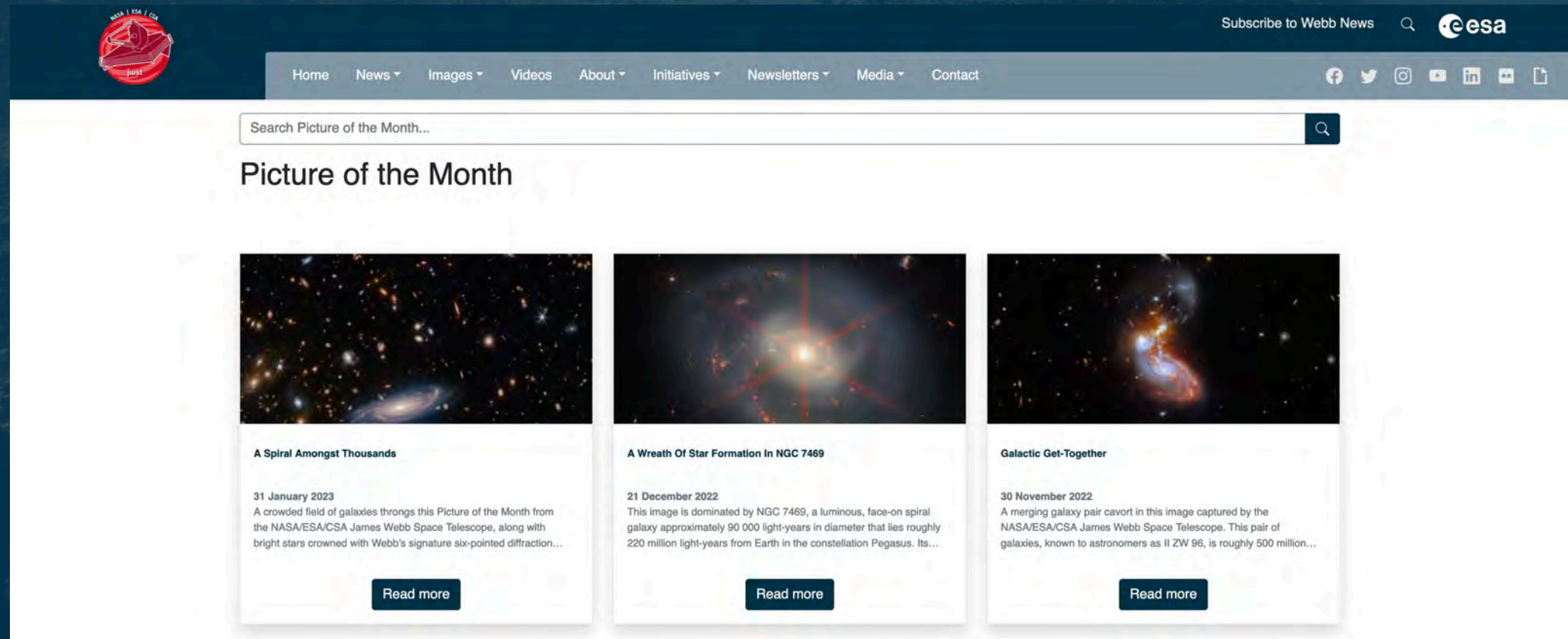
- JWST community session:
  - Overview of observatory, incl. status and future timelines
  - Introduction to eJWST archive and ESASky
  - First year science highlights
- Several JWST sessions: active galaxies, galaxy assembly, gravitational lensing, protostars/planets
- Other ESA sessions: ESA Science programme, ESA Space Science Archives
- ‘The hitchhiker’s guide to astronomy education, public outreach and communication’

## Science newsletters:



Plans for in-person JWST data workshop in Europe & webinars later in 2023, which complement activities at STScI (e.g. JWWebbinars)

- Public outreach web-pages: <https://esawebb.org>
- Working closely and effectively with STScI/OPO and NASA Comms



# VP Harris, French President Get First Look at Galactic Get Together



November PotM: II Zw96

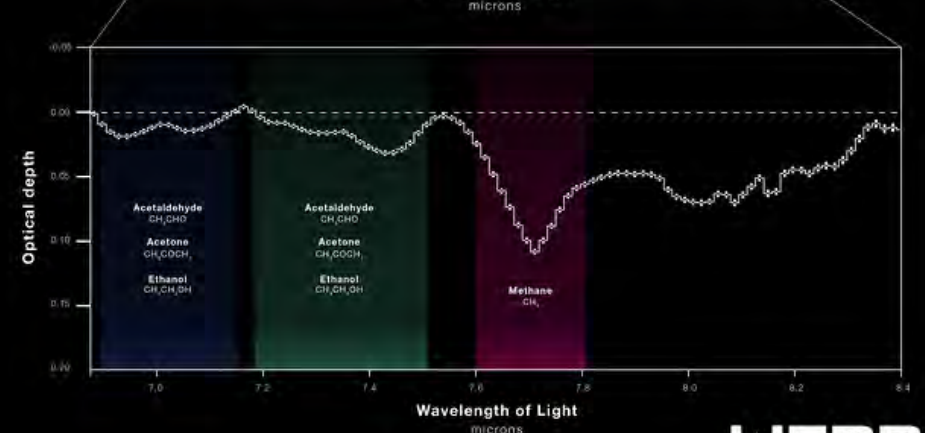
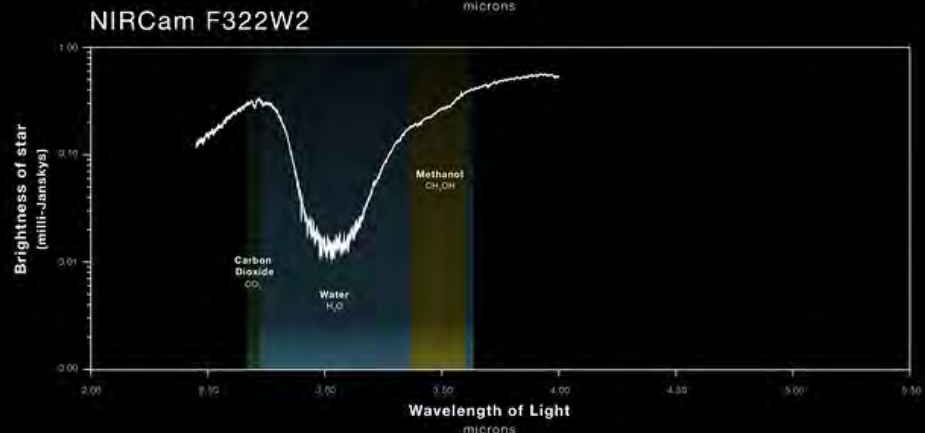
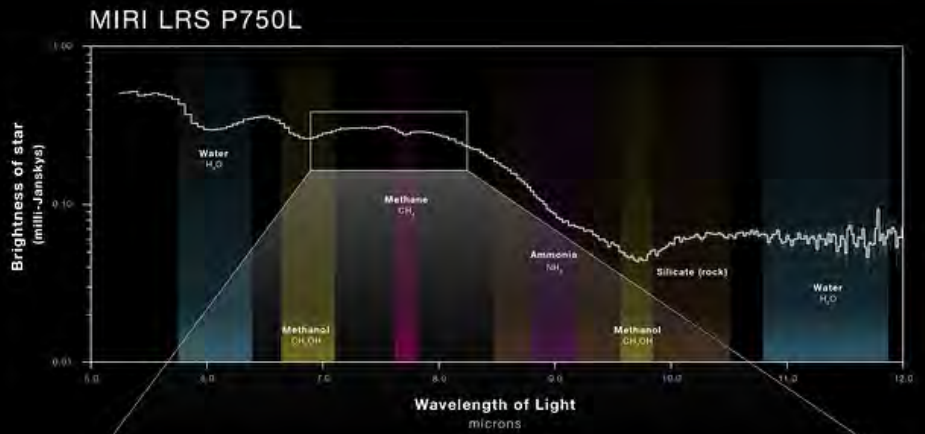
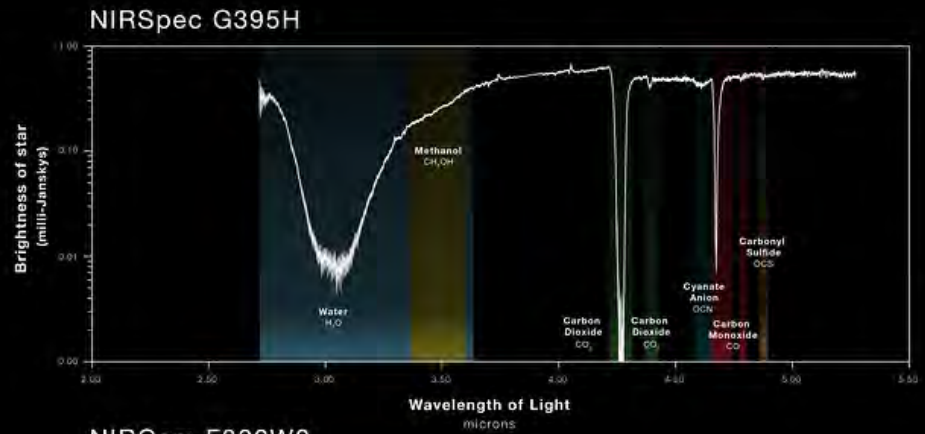
Credit: ESA/Webb, NASA & CSA, L. Armus, A. Evans





Credit: ESA/Webb, NASA, CSA & M. Zamani (ESA/Webb), F. Sun (Steward), Z. Smith (Open Uni.) & Ice Age ERS Team

## CHAMAELEON I DARK CLOUD BACKGROUND STAR NIR38 ICE CHEMICAL COMPOSITION

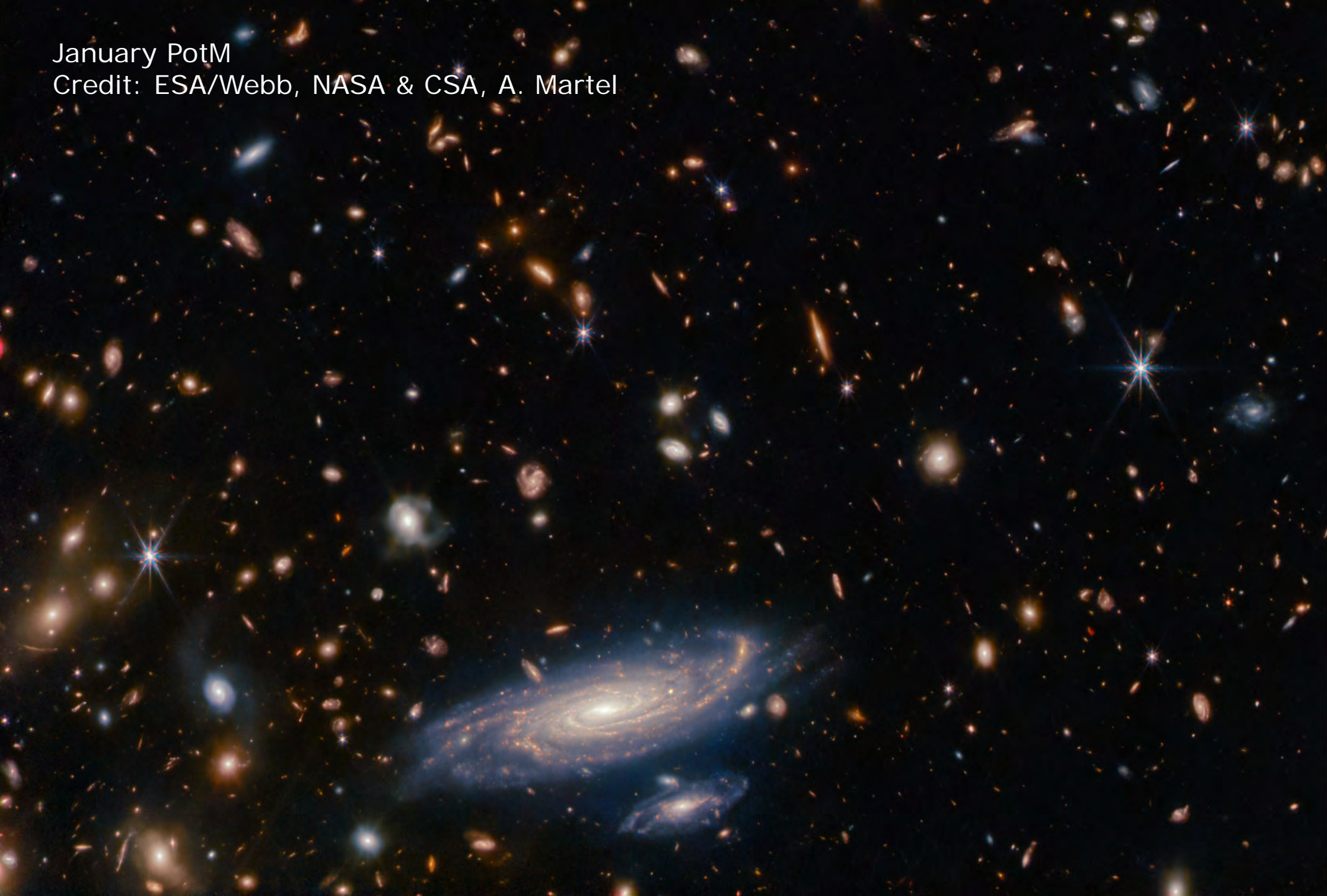


Credit: ESA/Webb, NASA, CSA & J. Olmstead (STScI), M. K. McClure (Leiden), K. Pontoppidan (STScI), N. Crouzet (Leiden), Z. Smith (Open Uni.)



January PotM

Credit: ESA/Webb, NASA & CSA, A. Martel



## A Spiral Amongst Thousands

### About the Object

Name: [LEDA 2046648](#)

Constellation: Hercules

Category: [Galaxies](#)  
[NIRCam](#)  
[Picture of the Month](#)

### Coordinates

Position (RA): 16 58 32.92

Position (Dec): 34° 16' 33.15"

Field of view: 2.17 x 1.46 arcminutes

Orientation: North is 72.4° left of vertical



View in ESASky:



View in WorldWide Telescope:



A crowded field of [galaxies](#) throngs this [Picture of the Month](#) from the NASA/ESA/CSA James Webb Space Telescope, along with bright stars crowned with Webb's signature six-pointed diffraction spikes. The large [spiral galaxy](#) at the base of this image is accompanied by a profusion of smaller, more distant galaxies which range from fully-fledged spirals to mere bright smudges. Named LEDA 2046648, it is situated a little over a billion light-years from Earth, in the constellation Hercules.

One of Webb's principle science goals is to observe distant galaxies in the early universe to understand the details of their formation, evolution, and composition. Webb's keen infrared vision helps the telescope peer back in time, as the light from these distant galaxies is redshifted towards infrared wavelengths. Comparing these systems with galaxies in the local universe will help astronomers understand how galaxies grew to form the structure we see today. Webb will also probe the chemical composition of thousands of galaxies to shed light on how heavy elements were formed and built up as galaxies evolved.

To take full advantage of Webb's potential for galaxy archeology, astronomers and engineers must first calibrate the telescope's instruments and systems. Each of Webb's instruments contains a labyrinthine array of mirrors and other optical elements that redirect and focus starlight gathered by Webb's main mirror. This particular observation was part of the commissioning campaign for Webb's [Near-InfraRed Imager and Slitless Spectrograph](#) (NIRISS). As well as performing science in its own right, NIRISS supports parallel observations with Webb's [Near-InfraRed Camera](#) (NIRCam). NIRCam captured this galaxy-studded image while

### About the Image

Id: potm2301a

Type: Observation

Release date: 31 January 2023, 06:00

Size: 4218 x 2843 px

### Image Formats

- [Fullsize Original](#)  
68.7 MB
- [Large JPEG](#)  
2.1 MB
- [Publication TIFF 4K](#)  
16.2 MB
- [Publication JPEG](#)  
1.9 MB
- [Screensize JPEG](#)  
170.2 KB

### Zoomable

- [Zoomable](#)

### Wallpapers

- [1024x768](#)  
212.0 KB
- [1280x1024](#)  
305.4 KB
- [1600x1200](#)  
417.8 KB
- [1920x1200](#)  
492.7 KB
- [2048x1536](#)  
646.9 KB

12000 16 58 32.916 +34 16 33.15 FoV: 6.5' X 4.2' 2MASS color JHK

Sci. Mode  En  Feedback

Search...

Rows: 46

### About the Object

Name: [LEDA 2046648](#)

Constellation: Hercules

Category: [Galaxies](#)  
[NIRCam](#)  
[Picture of the Month](#)

### Coordinates

Position (RA): 16 58 32.92

Position (Dec): 34° 16' 33.15"

Field of view: 2.17 x 1.46 arcminutes

Orientation: North is 72.4° left of vertical

View in ESASky:

View in WorldWide Telescope:

### ESA/Webb Outreach Images

Hide Footprints

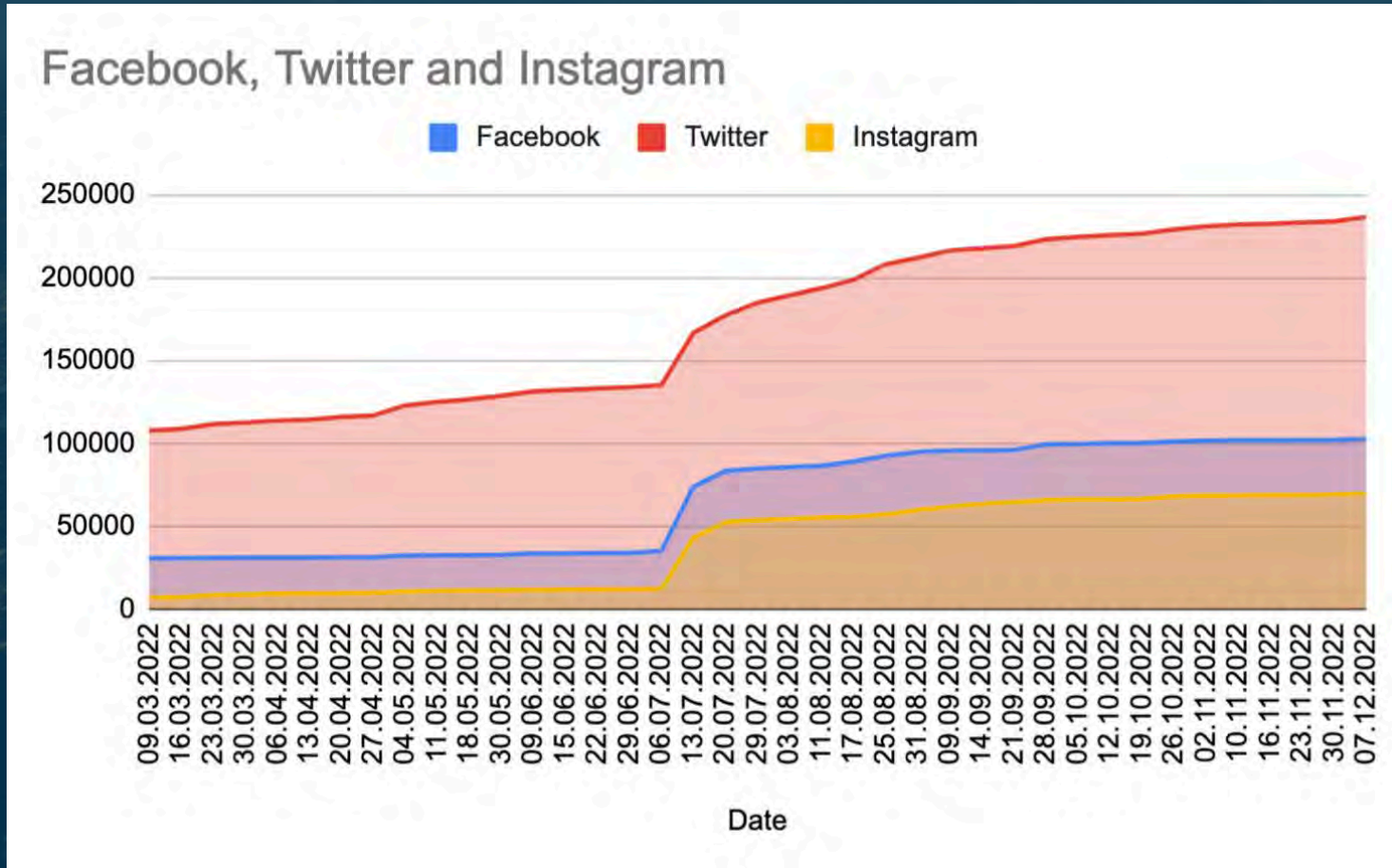
Object Name	Description
filter column...	filter column...
▶ Outside Field of View (44 images)	
▼ In Field of View (2 images)	
LEDA 2046648	A Spiral Amongst Thousands
LEDA 2046648	A Spiral Amongst Thousands

#### A Spiral Amongst Thousands

This image displays a wider view of the field of stars and galaxies surrounding the spiral galaxy LEDA 2046648. Webb's NIRCam instrument has picked out a profusion of smaller, more distant galaxies and bright stars around this galaxy, demonstrating the telescope's impressive resolution in infrared wavelengths. Calibration images such as this one were critical to verify the telescope's capabilities as it was prepared for science operations, and this one doesn't disappoint. [Image description: Ma...

[Show More](#)

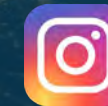
Use social media to build an engaged & educated community



@ESA\_Webb



@ESAWebb



esawebb