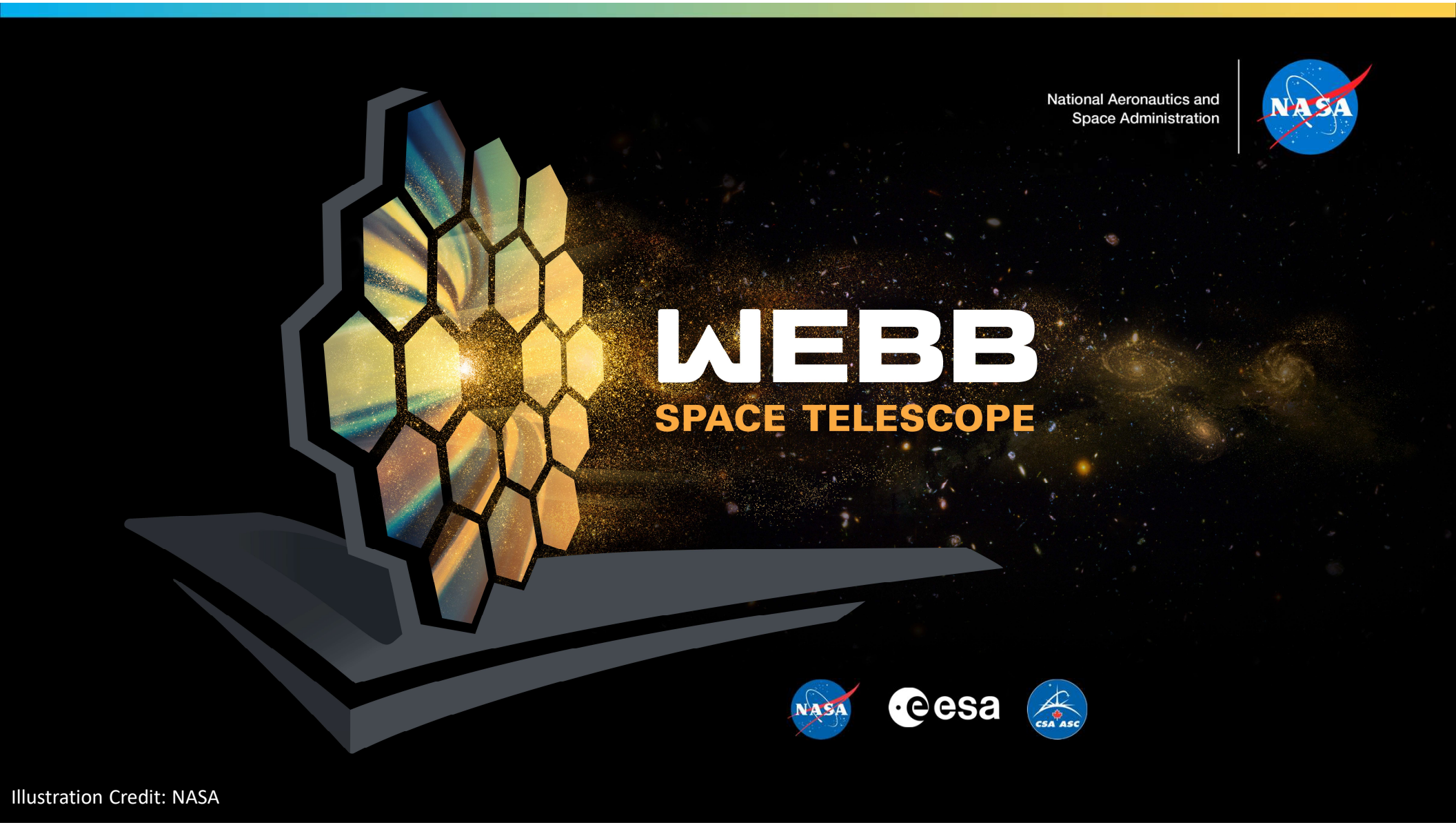


Illustration Credit: NASA

Contents

- What is Webb?
- How do stars fo
- What about ext
- Where does water come from?

Contents

- What is Webb?
- How do stars form?
- What about extrasolar systems?
- Where does water come from?

What's Next for Webb? Unraveling the Birth of Stars & Planetary Systems

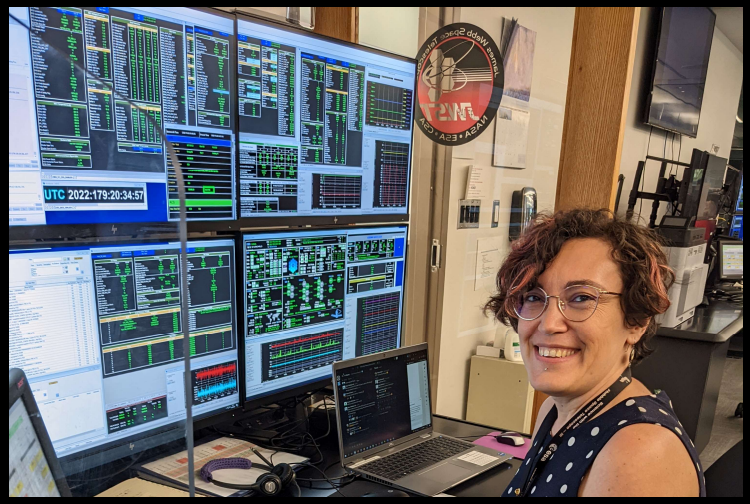
Elena Sabbi

Illustration Credits: NASA, ESA, Northrop Grumman

Ariane Flight VA256

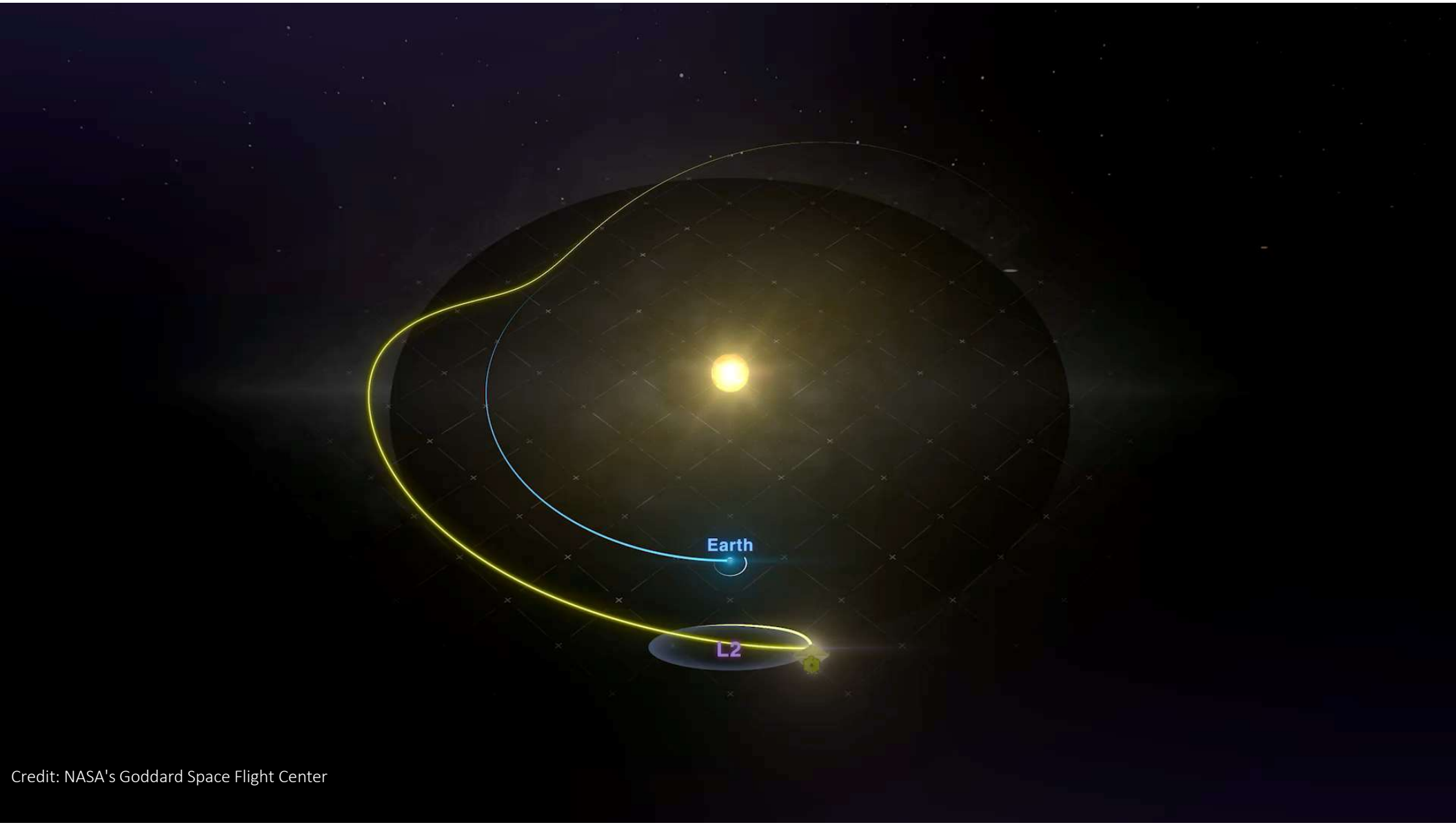
Ariane 5 launches the James Webb Space Telescope

25 December 2021



LAUNCH+
2 hrs
HIGH GAIN ANTENNA DEPLOYMENT

Credit: NASA's Goddard Space Flight Center
Music Credit: Universal Production Music "Connecting Ideas Instrumental"



Credit: NASA's Goddard Space Flight Center

Observing Side

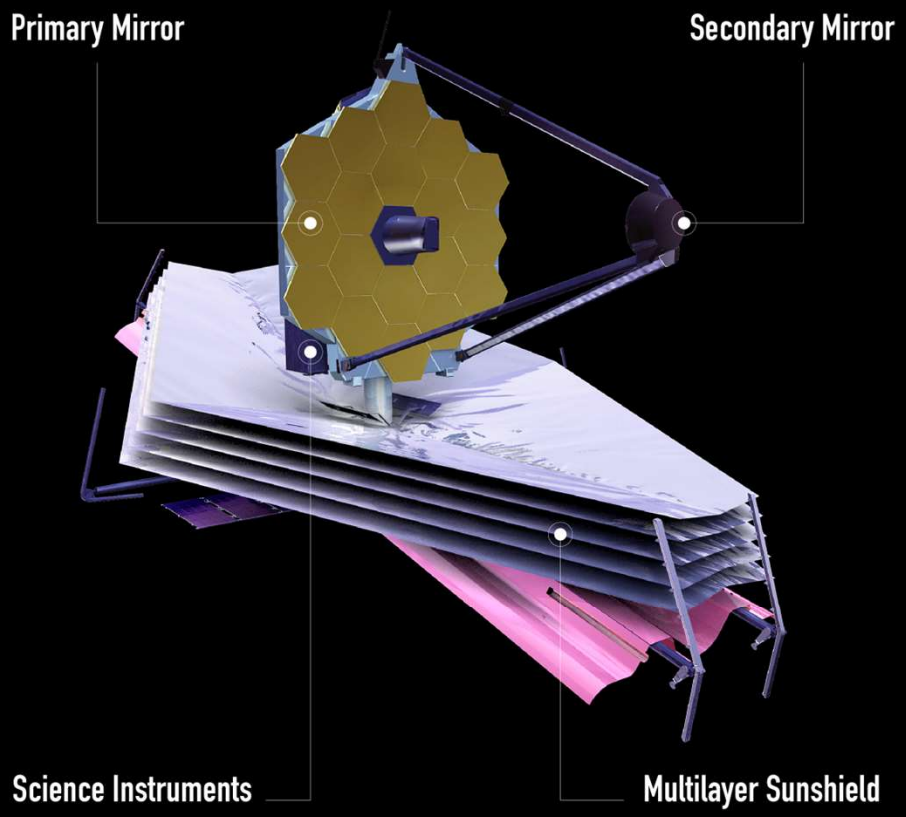
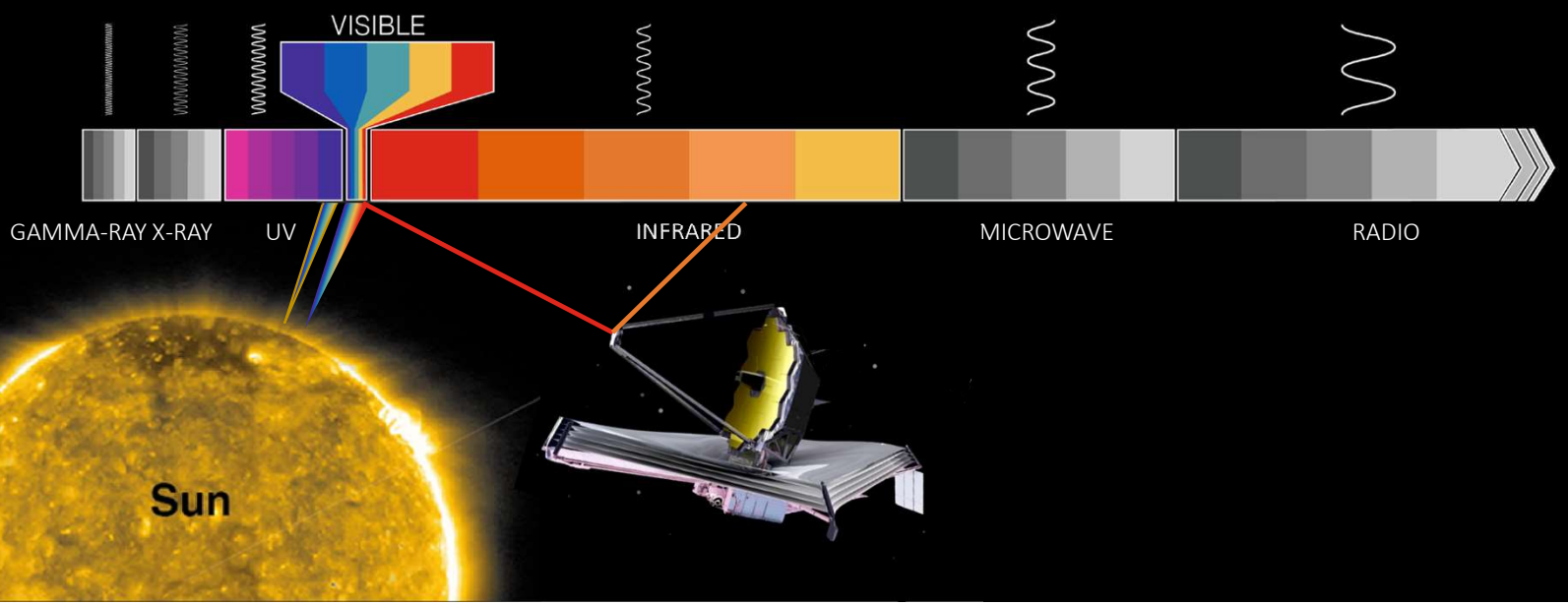


Image Credits: NASA, ESA, and J. Kang (STScI)

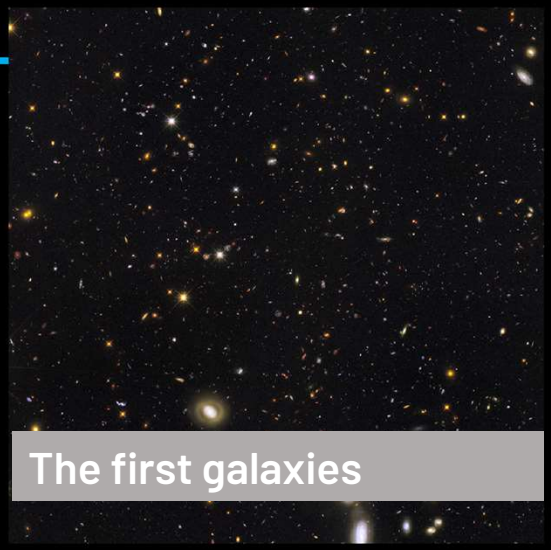
Webb is an Infrared Telescope



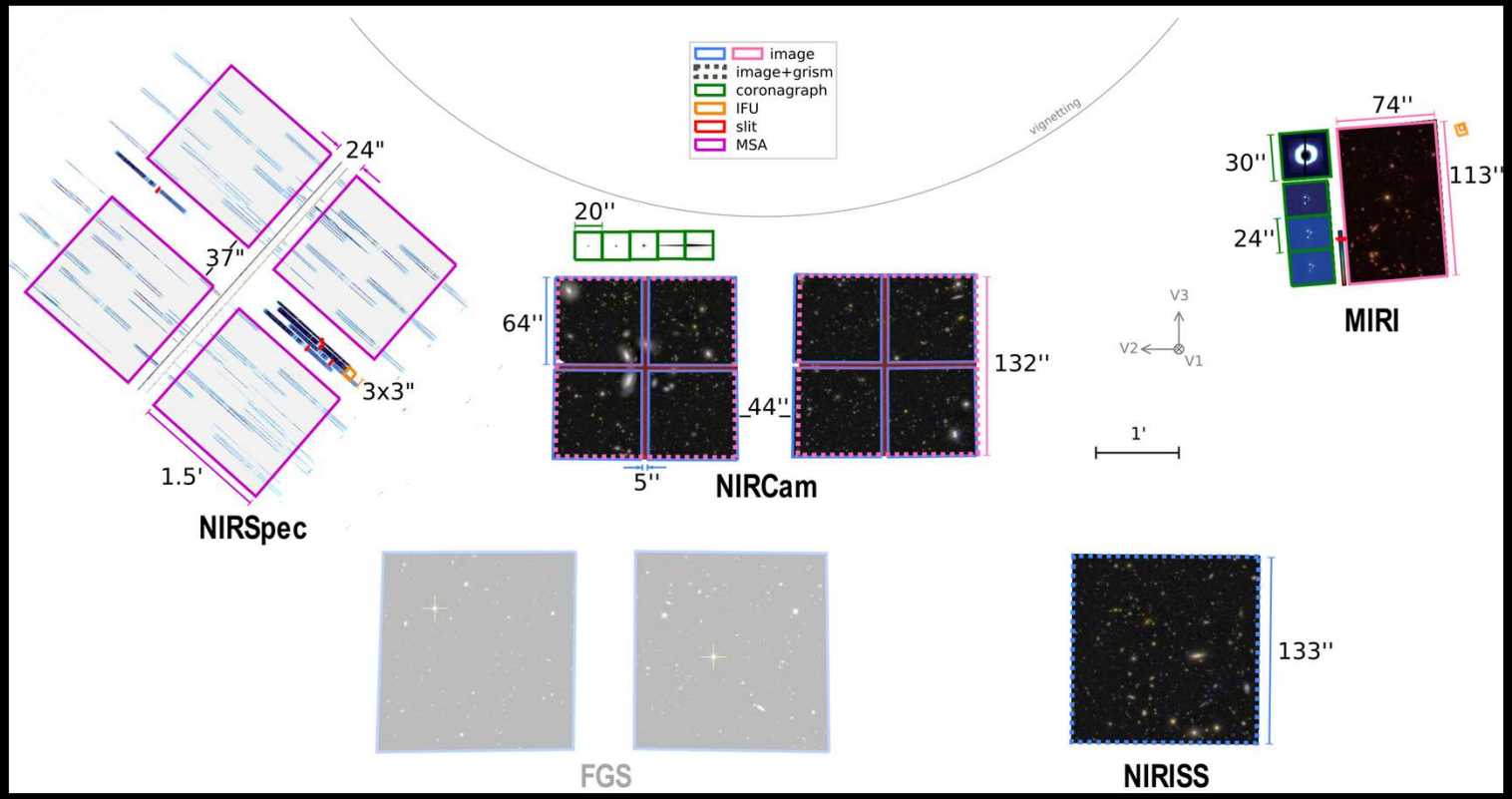
How does the World Look Like in the IR

Credit: Daniel Schwen

Webb's science themes



Credit: NASA, ESA, and L. Calcada (ESO for STScI)



JWST ha 4 trumenti:

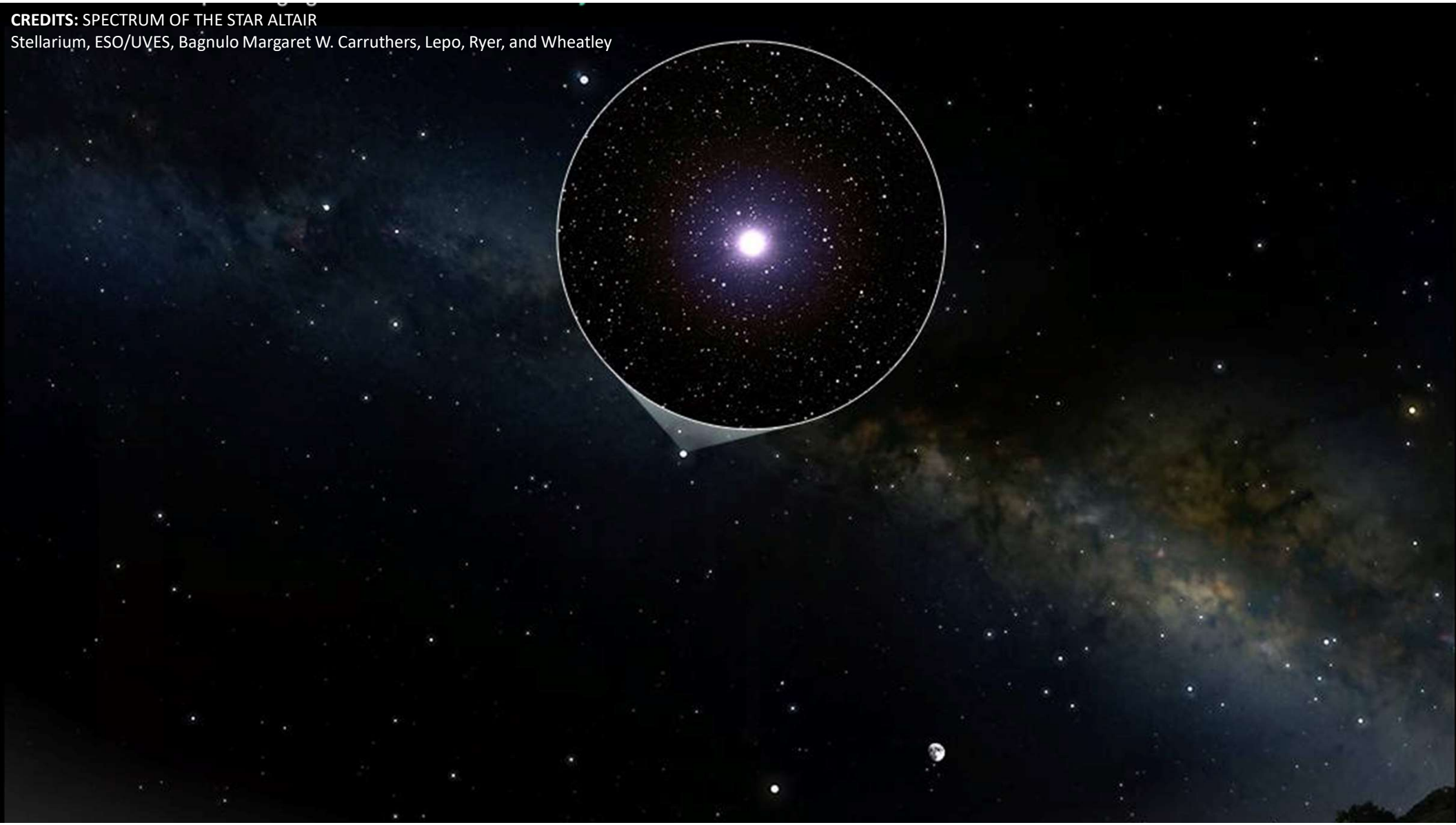
1) NIRCam – Imager nel NIR
2) NIRISS – Imager nel NIR
3) MIRI – Imager nel MIR
4) NIRSpec – spetrografo multi-sorgente (NIR)

FGS strumento guida del telescopio

Credits: JWST-docs.stsci.edu

What's a filter

Image credit: Dean Salman & the ESA/ESO/NASA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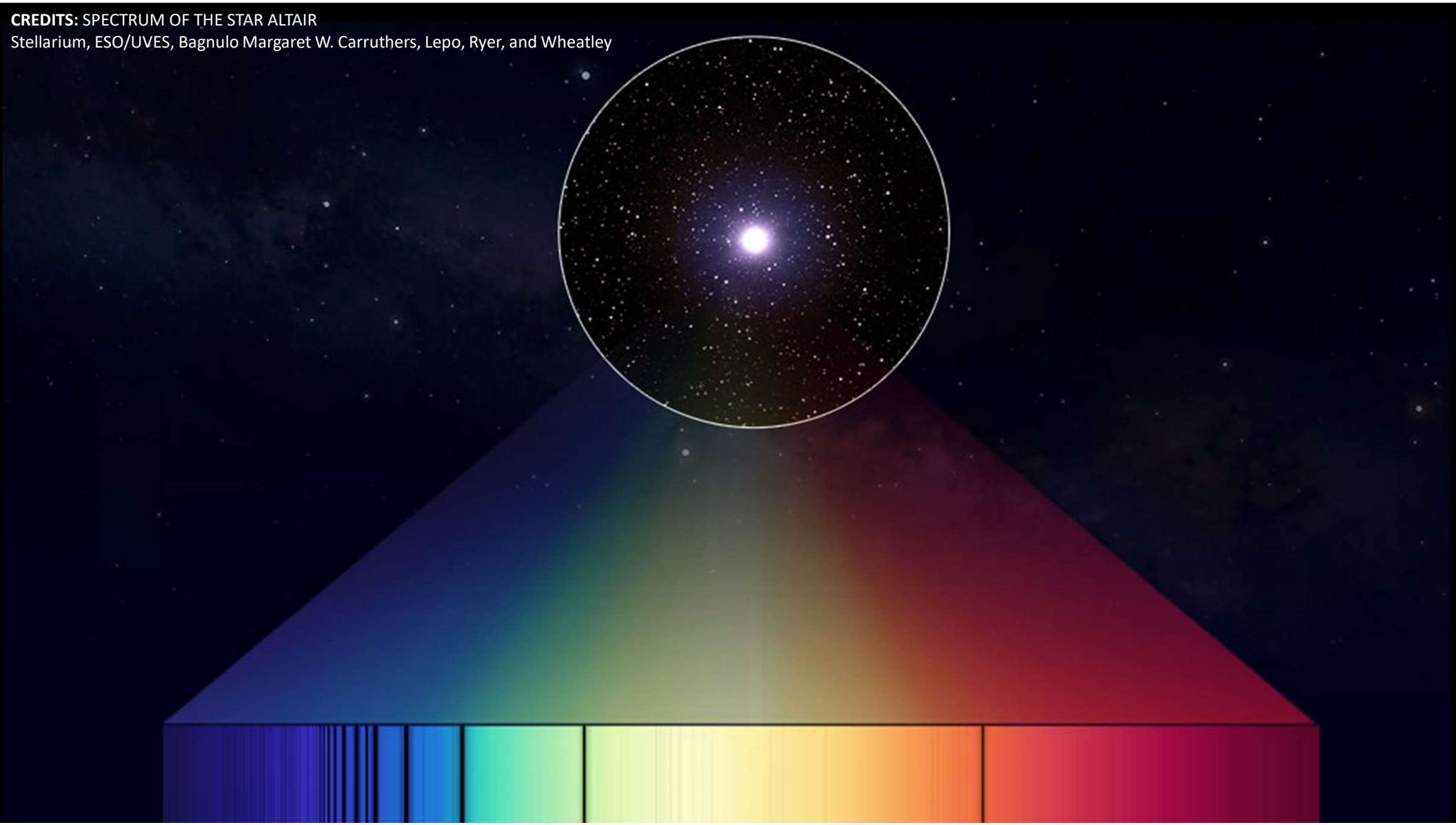
Stellarium, ESO/UVES, Bagnulo Margaret W. Carruthers, Lepo, Ryer, and Wheatley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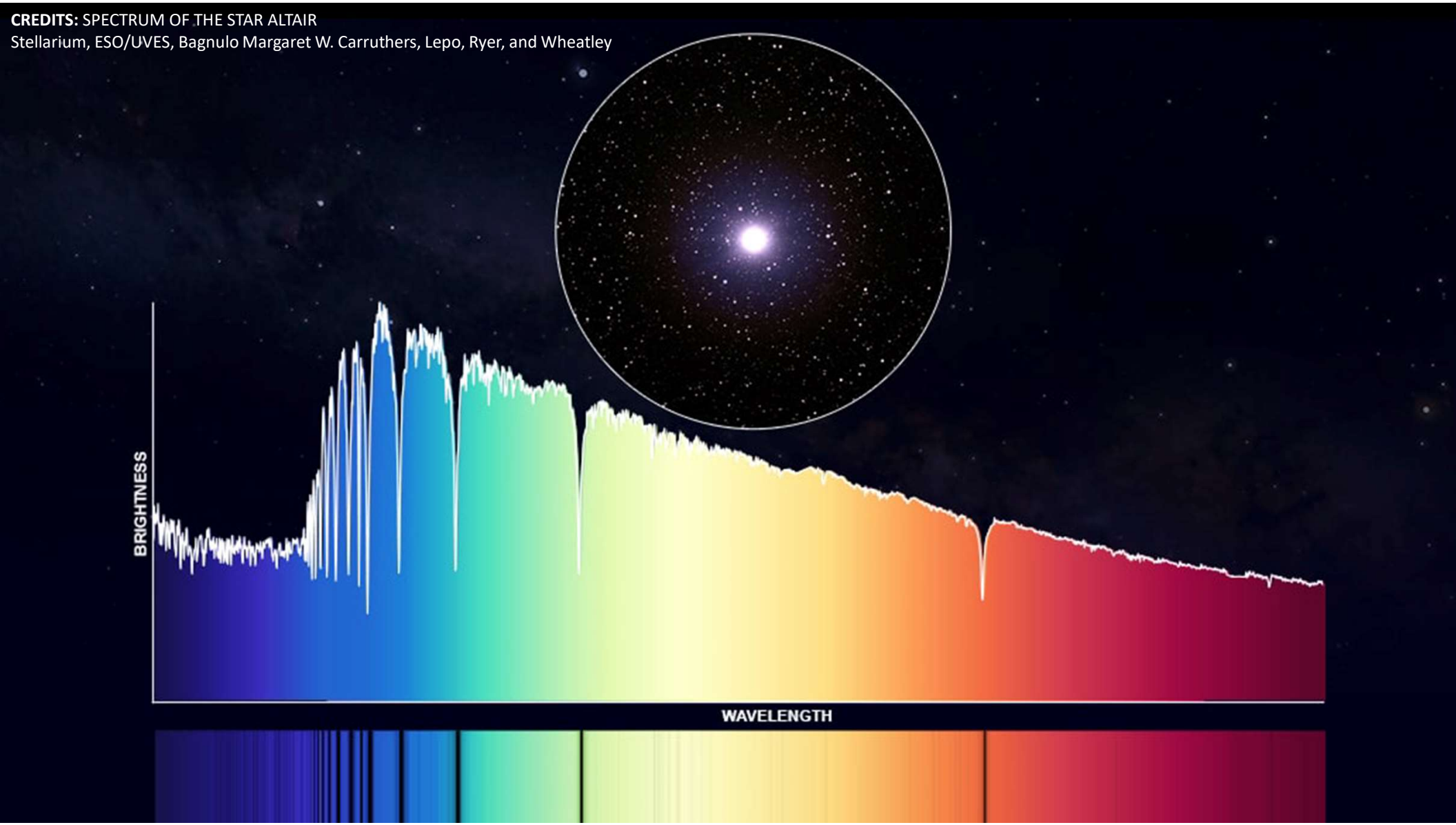
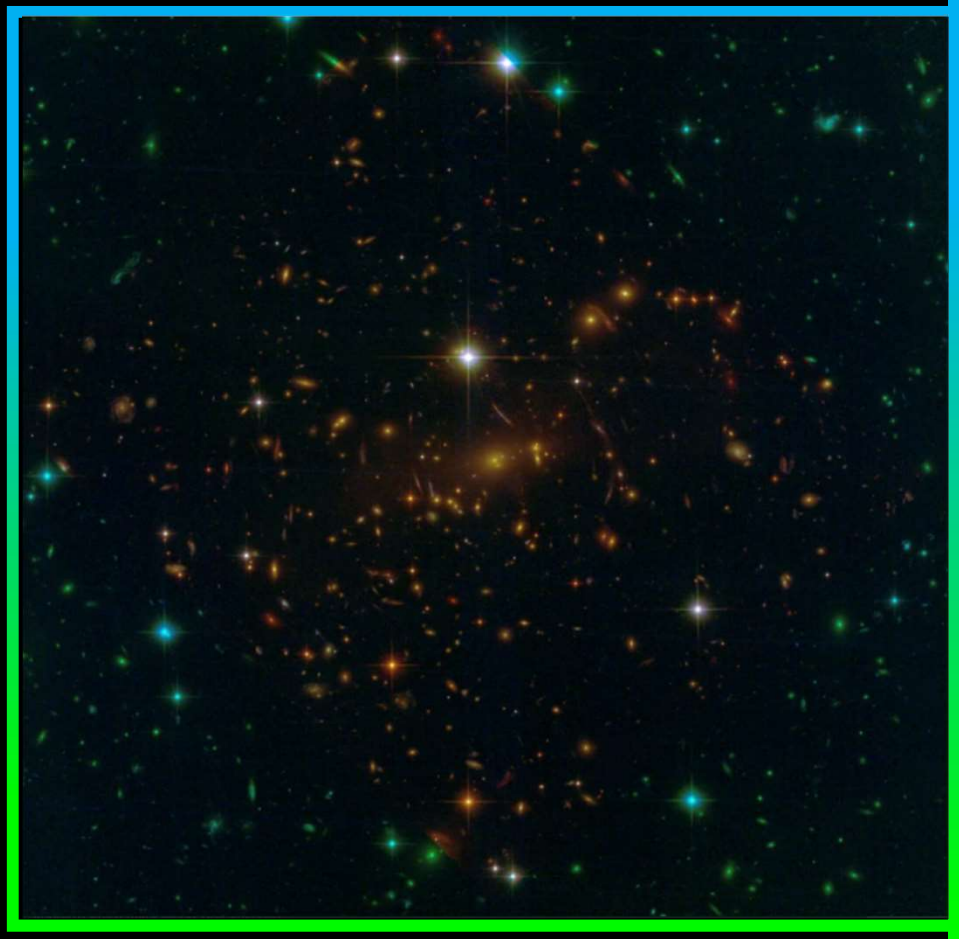
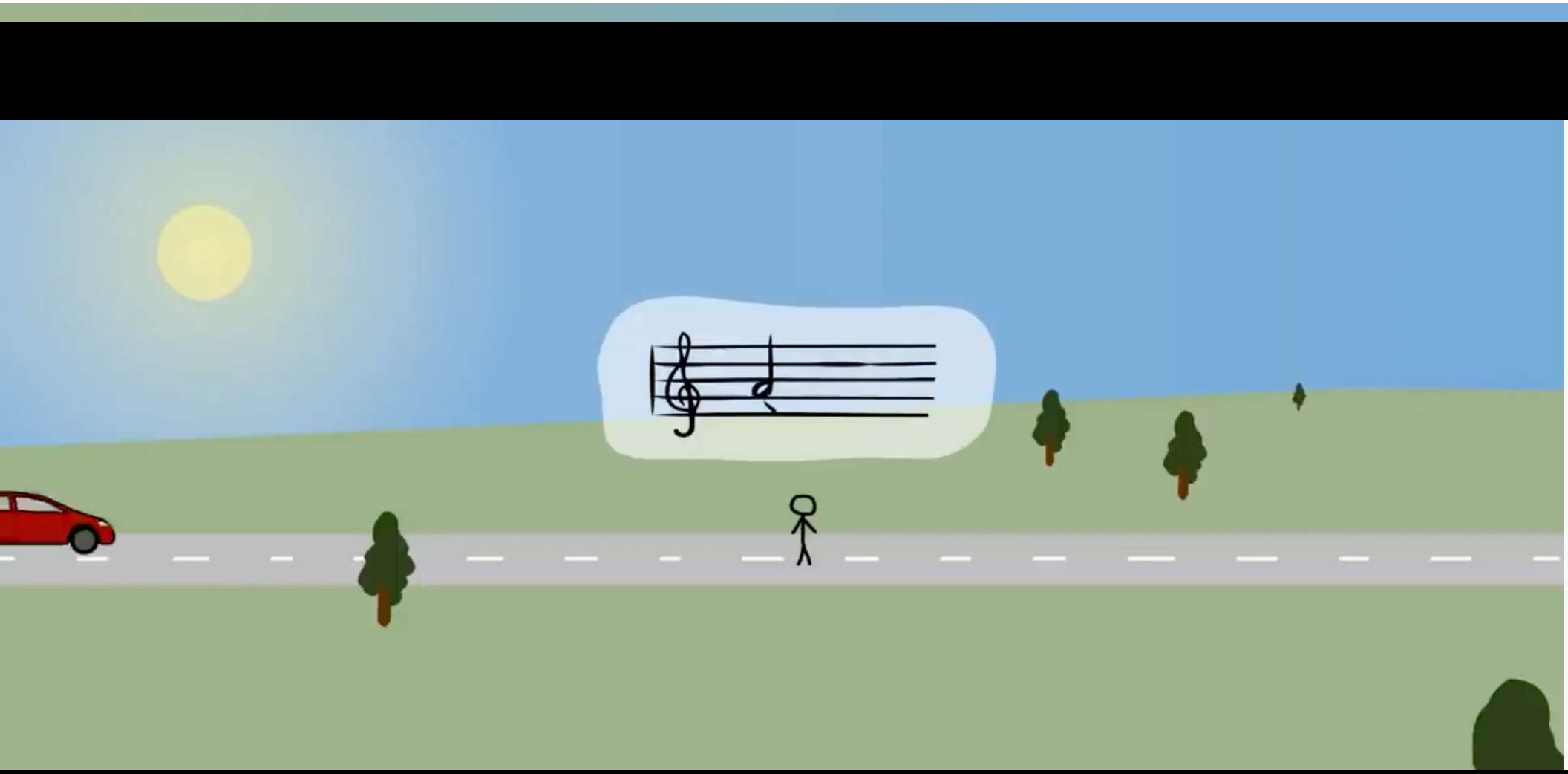


CREDITS: SPECTRUM OF THE STAR ALTAIR
Stellarium, ESO/UVES, Bagnulo Margaret W. Carruthers, Lepo, Ryer, and Wheatley

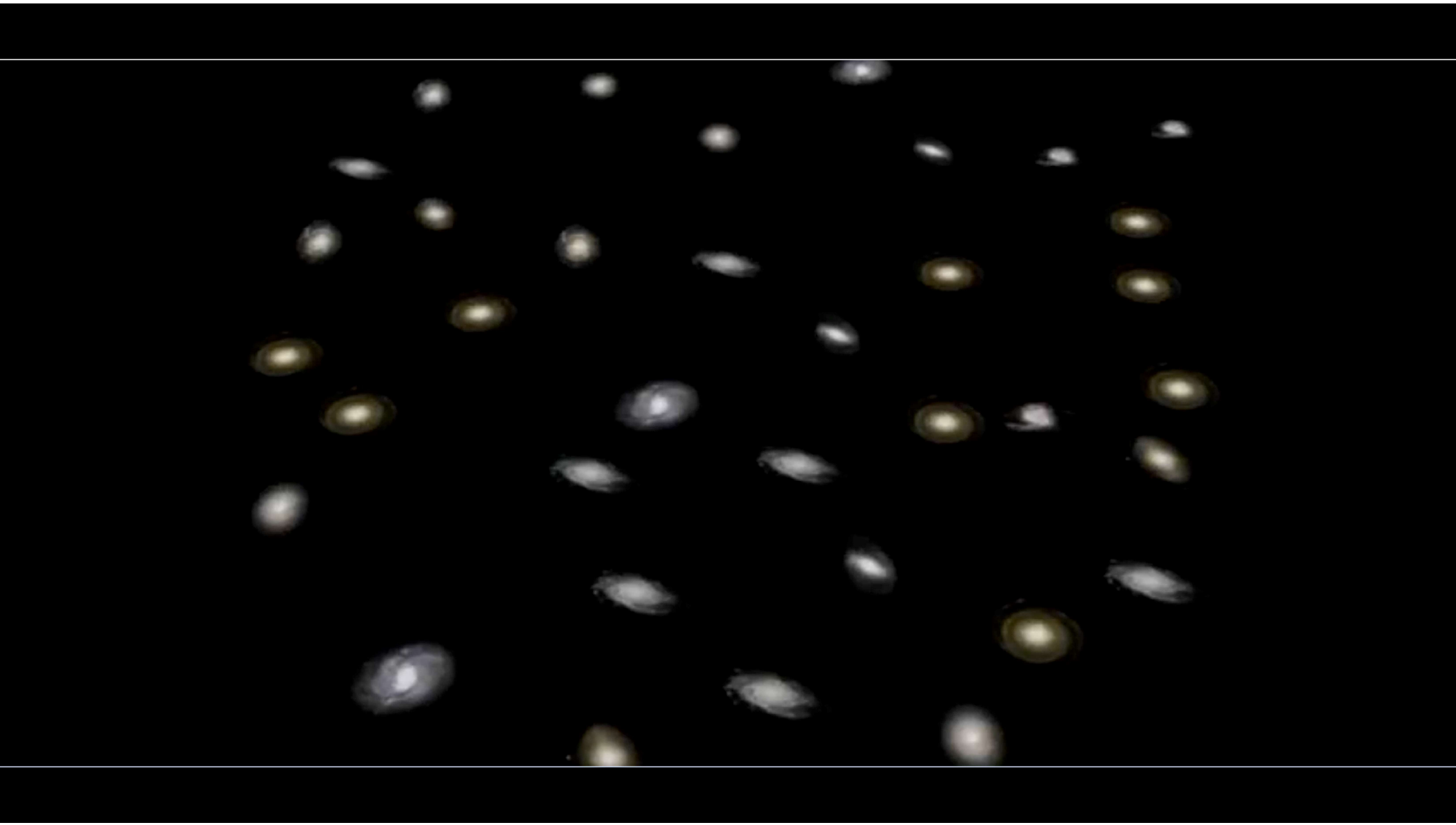
The Origin of Stars & Galaxies



Credit: NASA, ESA, and L. Calcada (ESO for STScI)



Credit: Toon Boom Studio 6.



SMACS J0723.3-7327

Credits: NASA, ESA, CSA, and STScI

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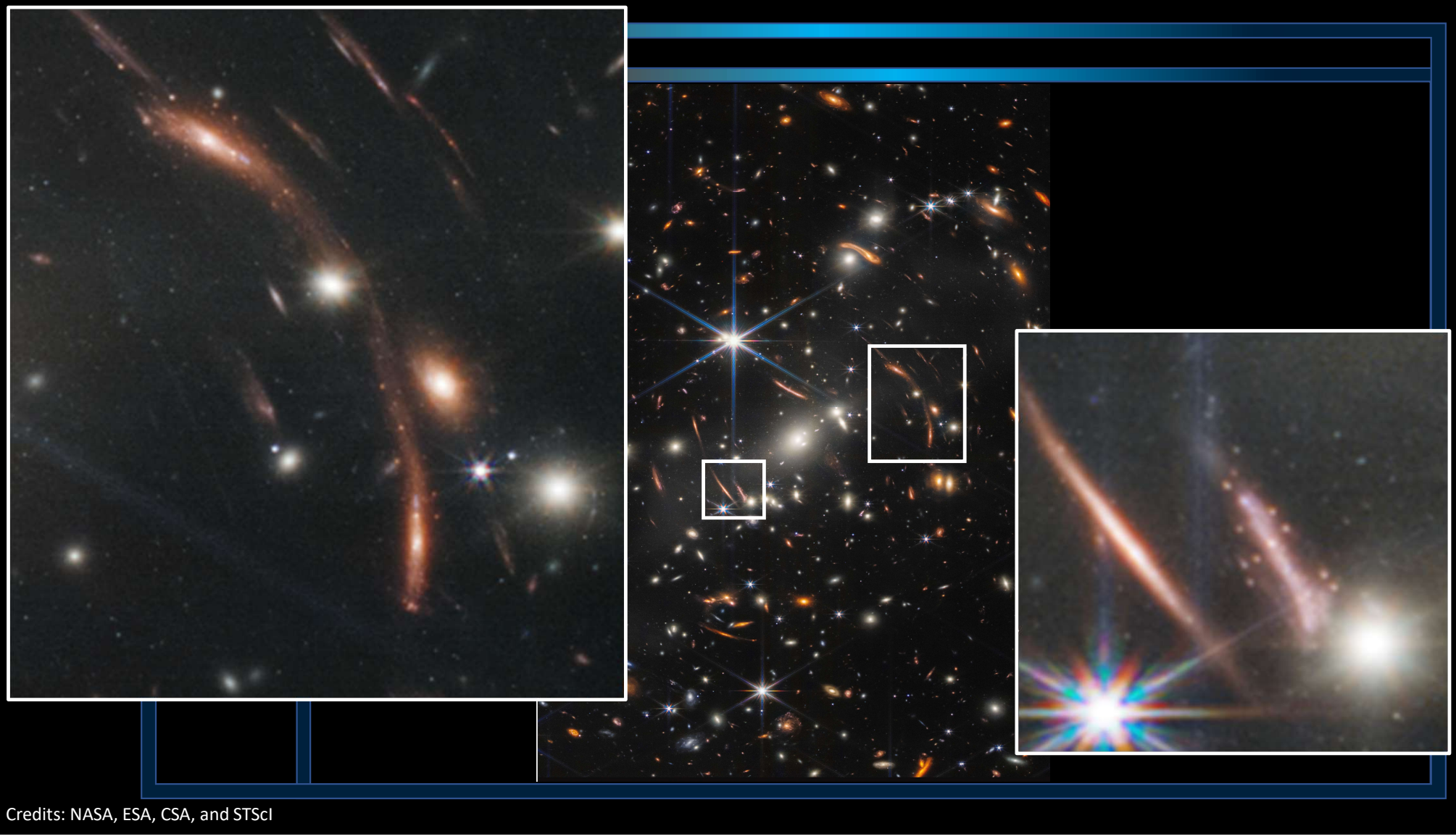

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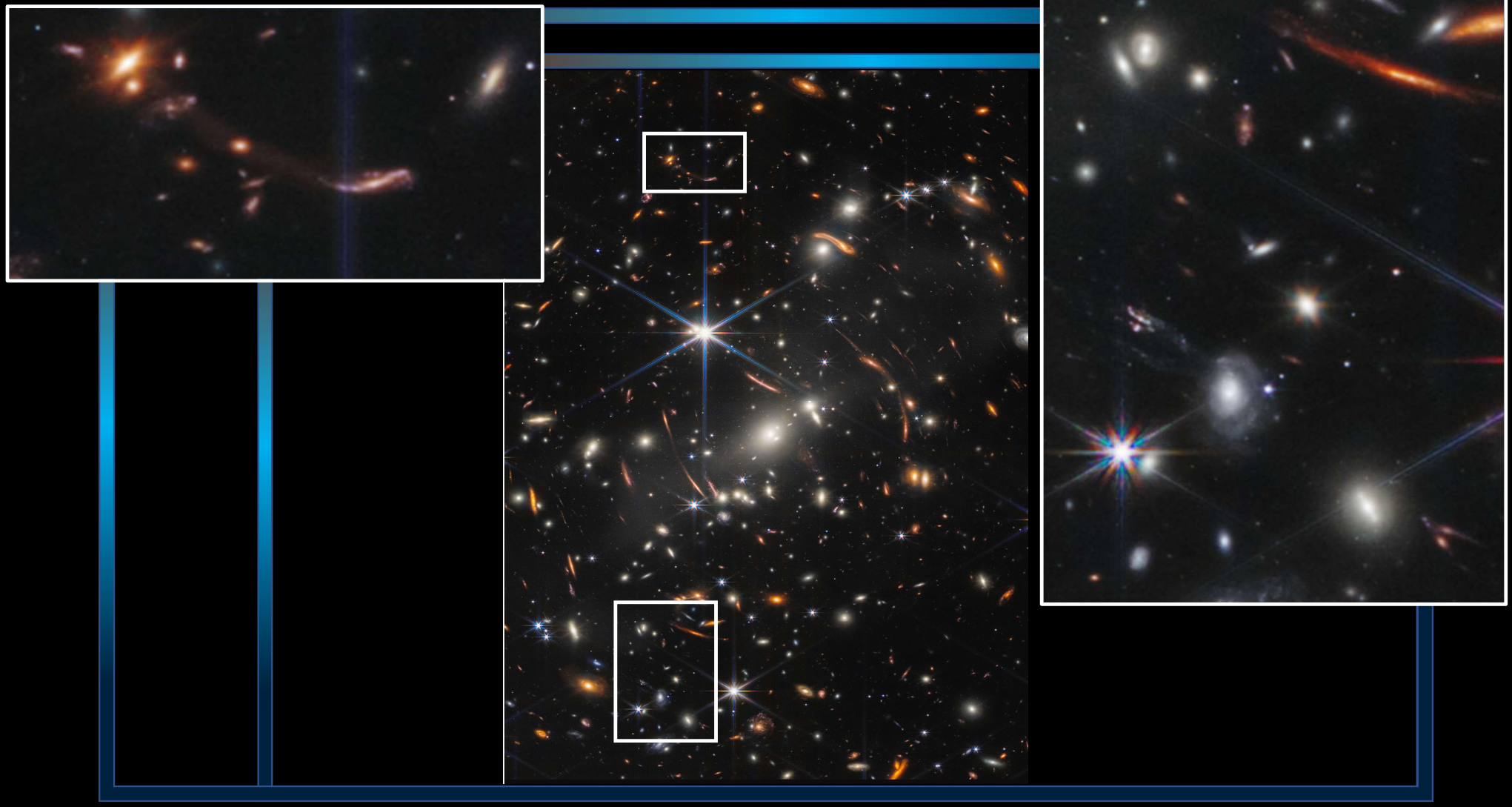

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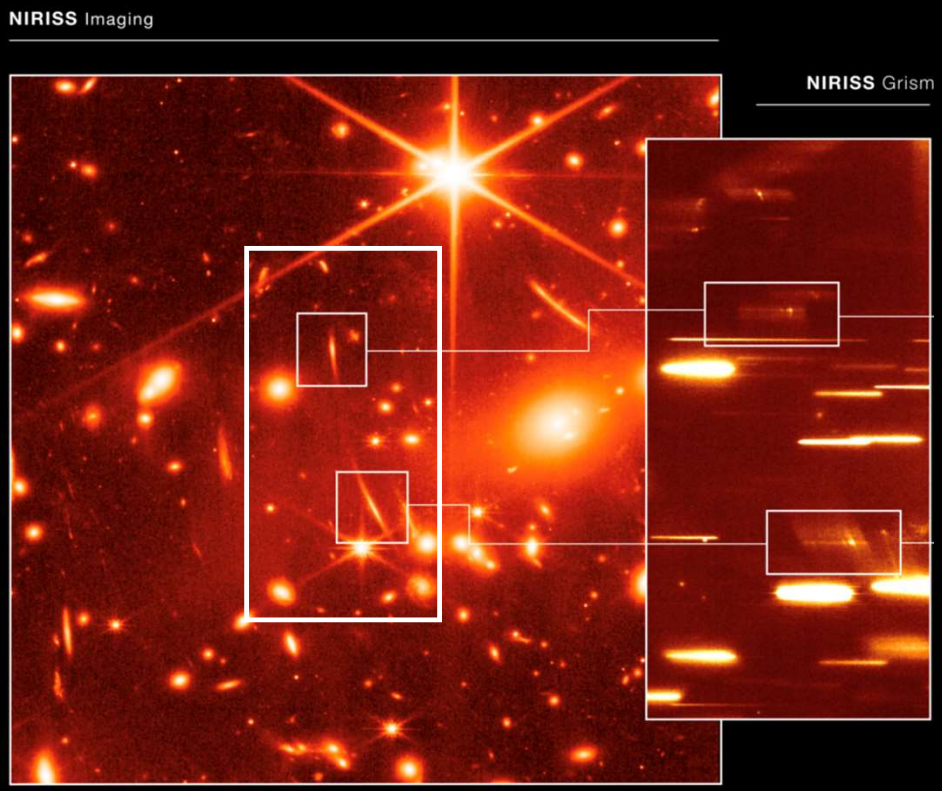
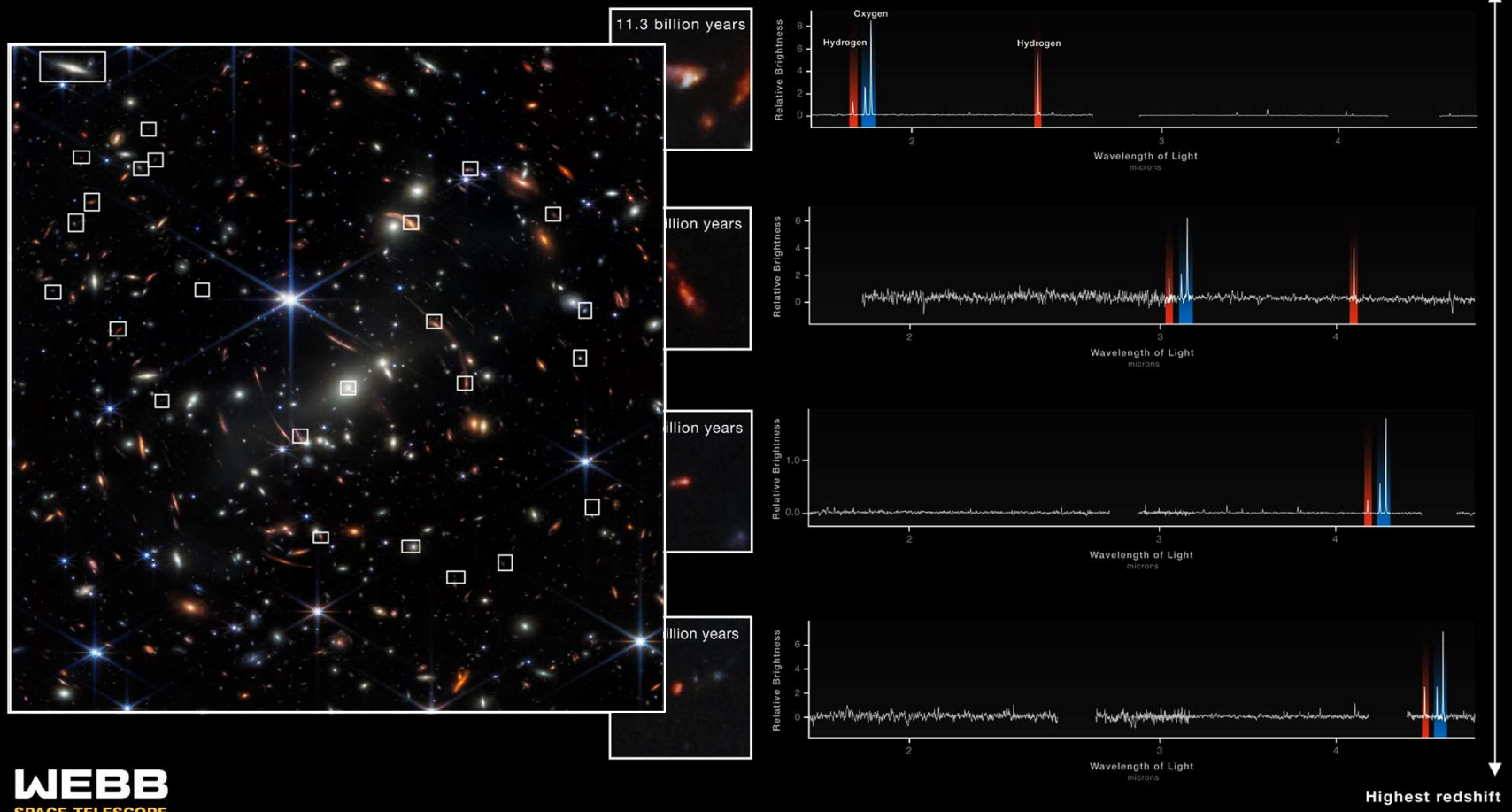


WEBB
SPACE TELESCOPE

Credits: NASA, ESA, CSA, and STScI



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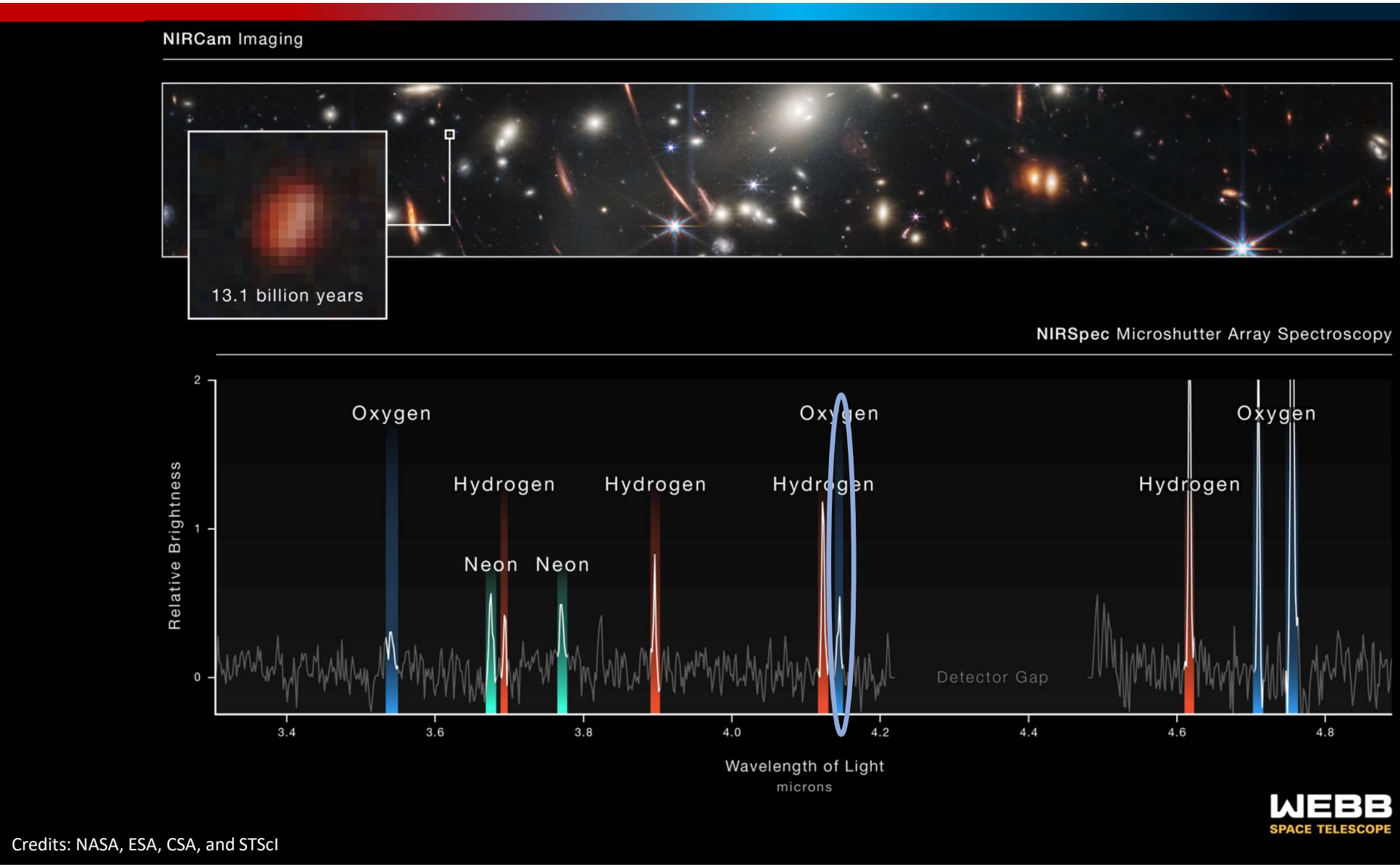
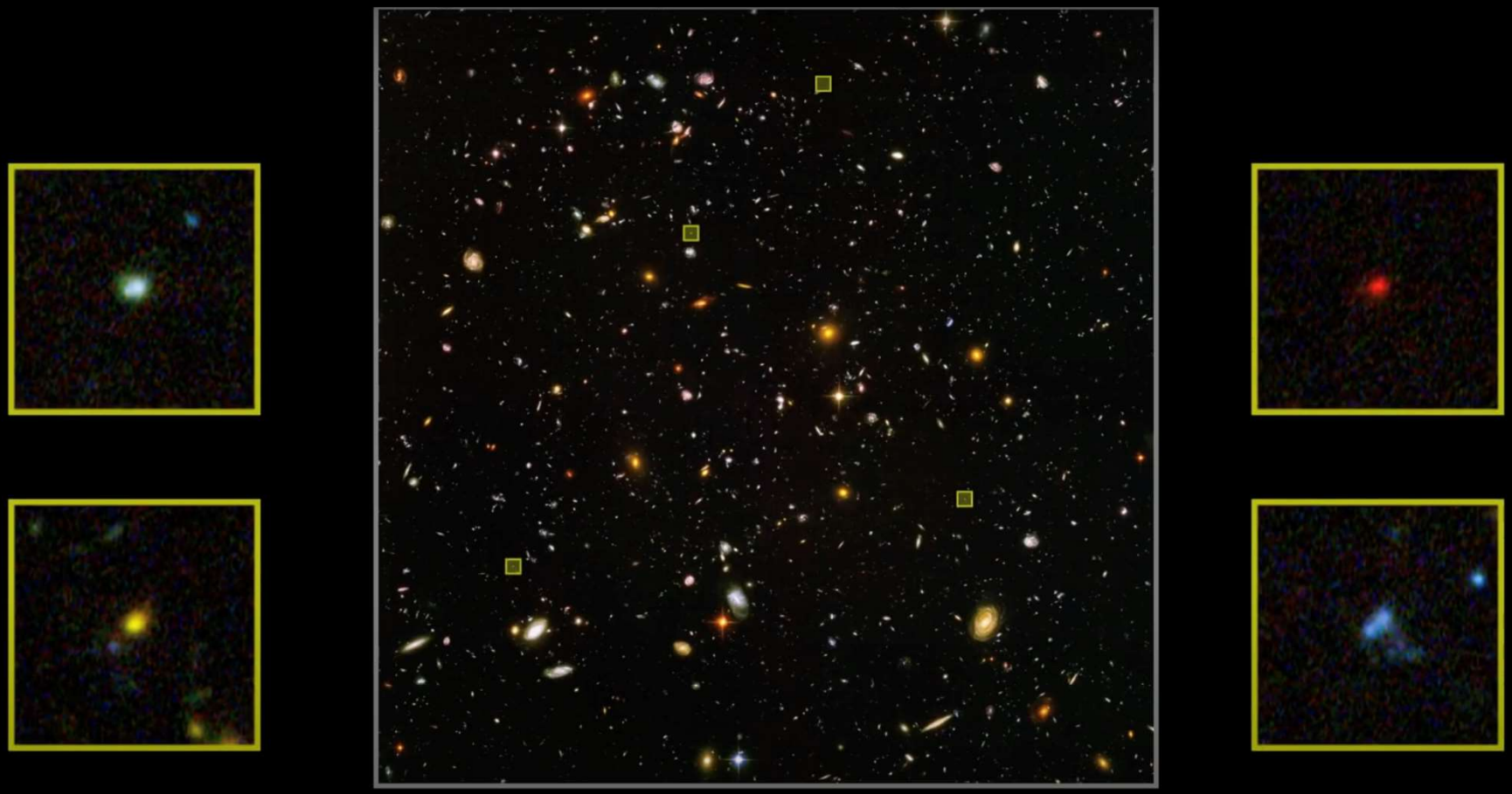


Credits: NASA, ESA, CSA, and STScI

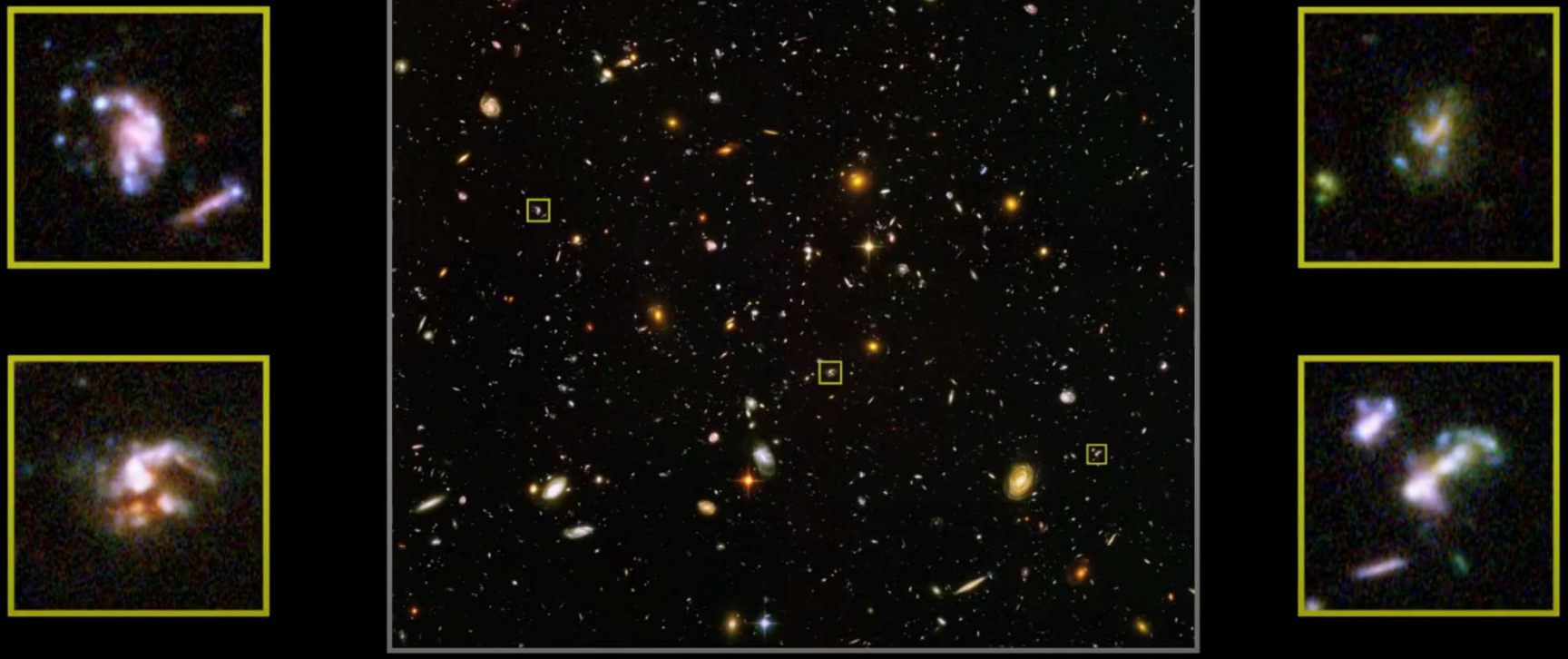
Galaxy Evolution

Credit: NASA, ESA, and L. Calcada (ESO for STScI)



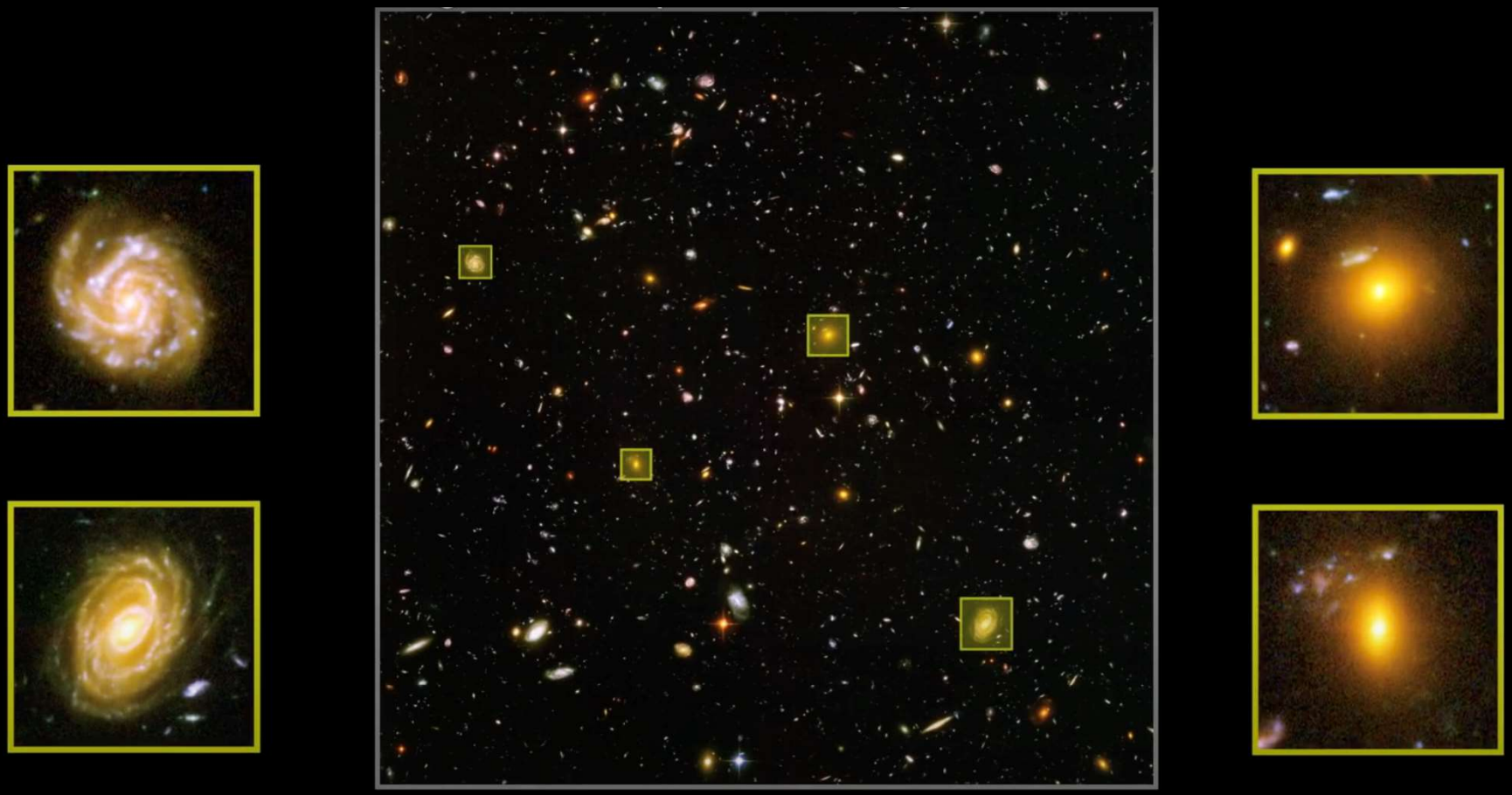
Large distance: small dots

Credit: NASA, ESA, and S. Beckwith (STScI) and the HUDF Team



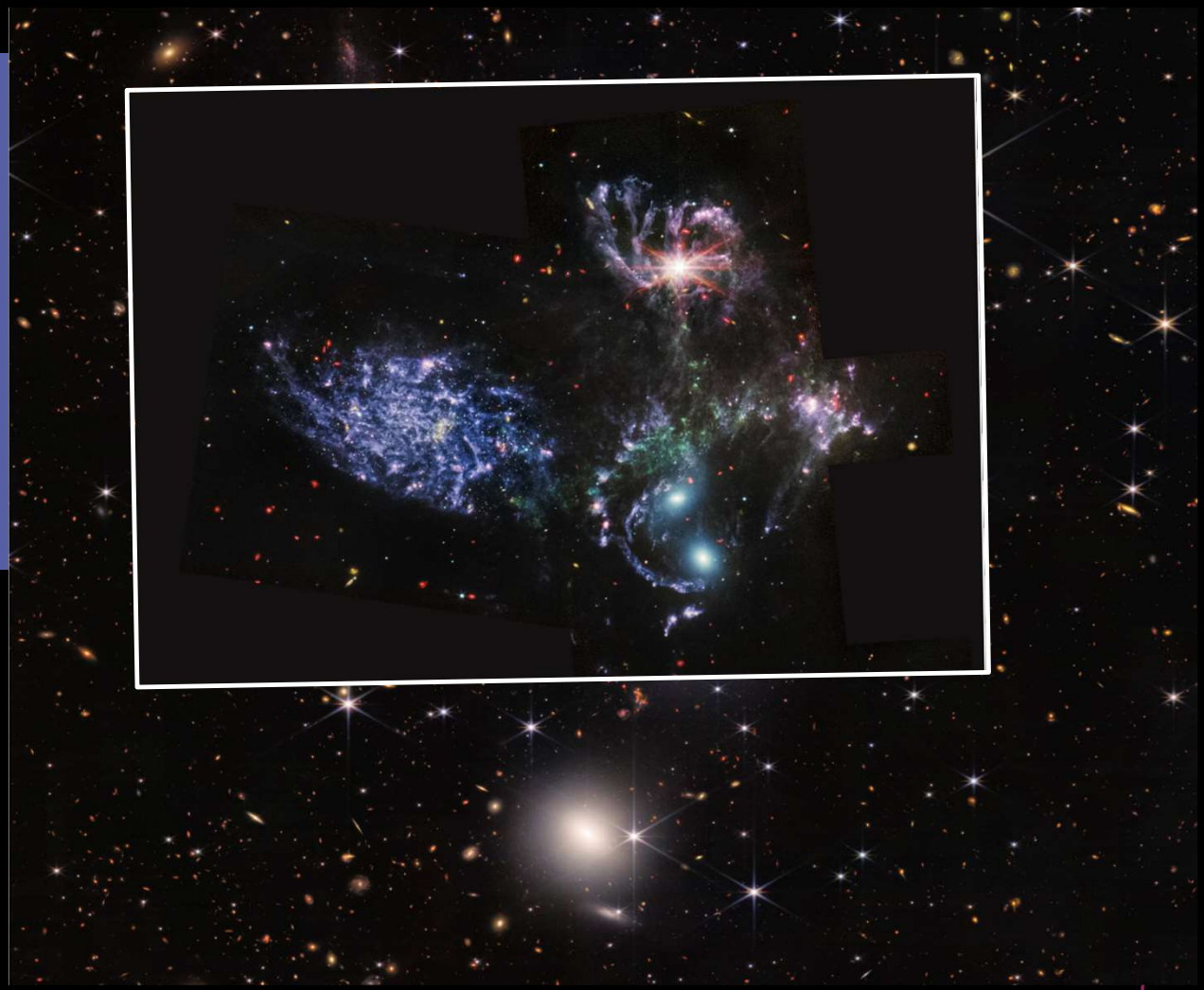
Intermediate distance: irregulars

Credit: NASA, ESA, and S. Beckwith (STScI) and the HUDF Team

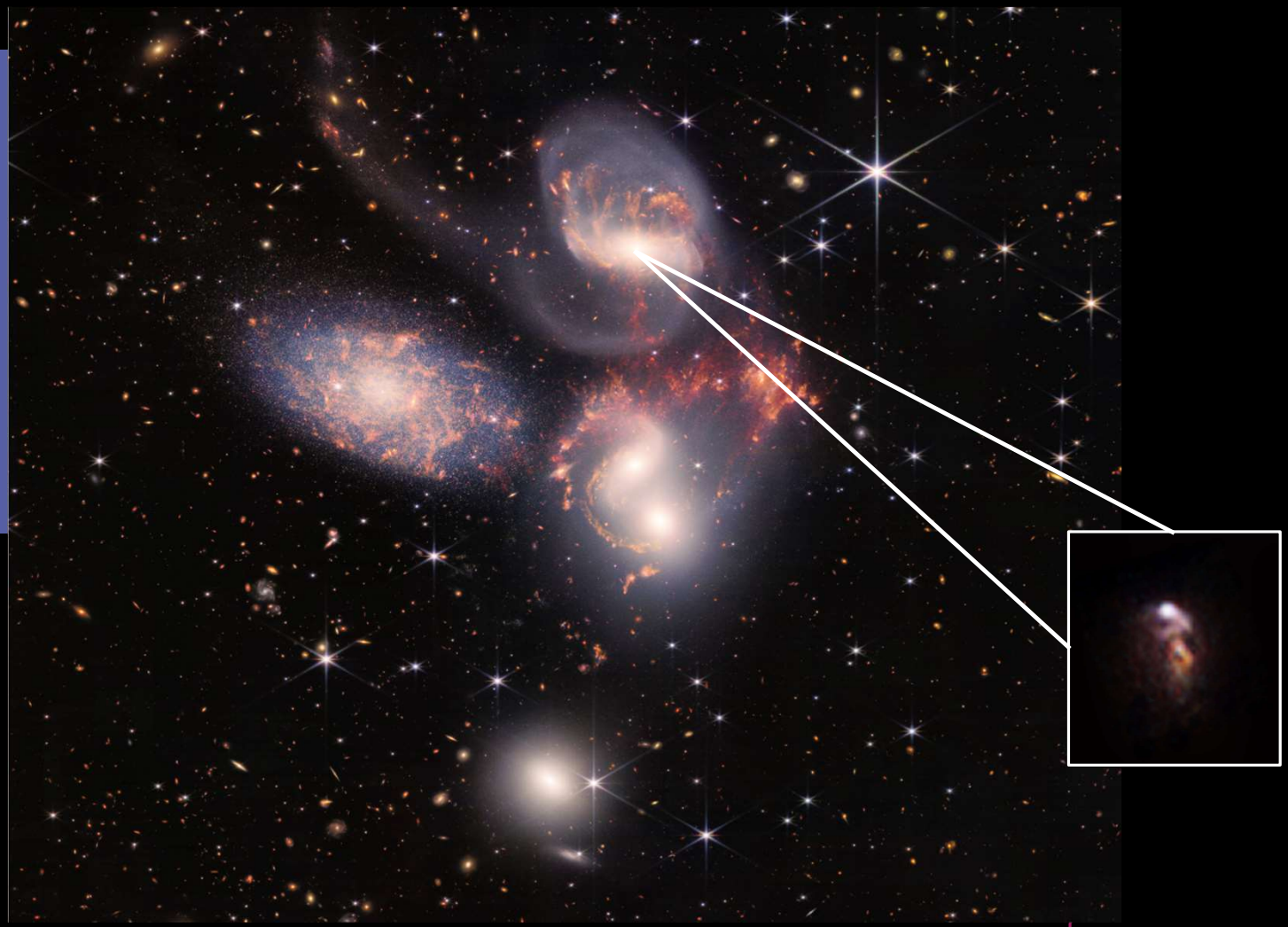


Nearby: spirals and ellipticals

Credit: NASA, ESA, and S. Beckwith (STScI) and the HUDF Team



Credits: NASA, ESA, CSA, and STScI



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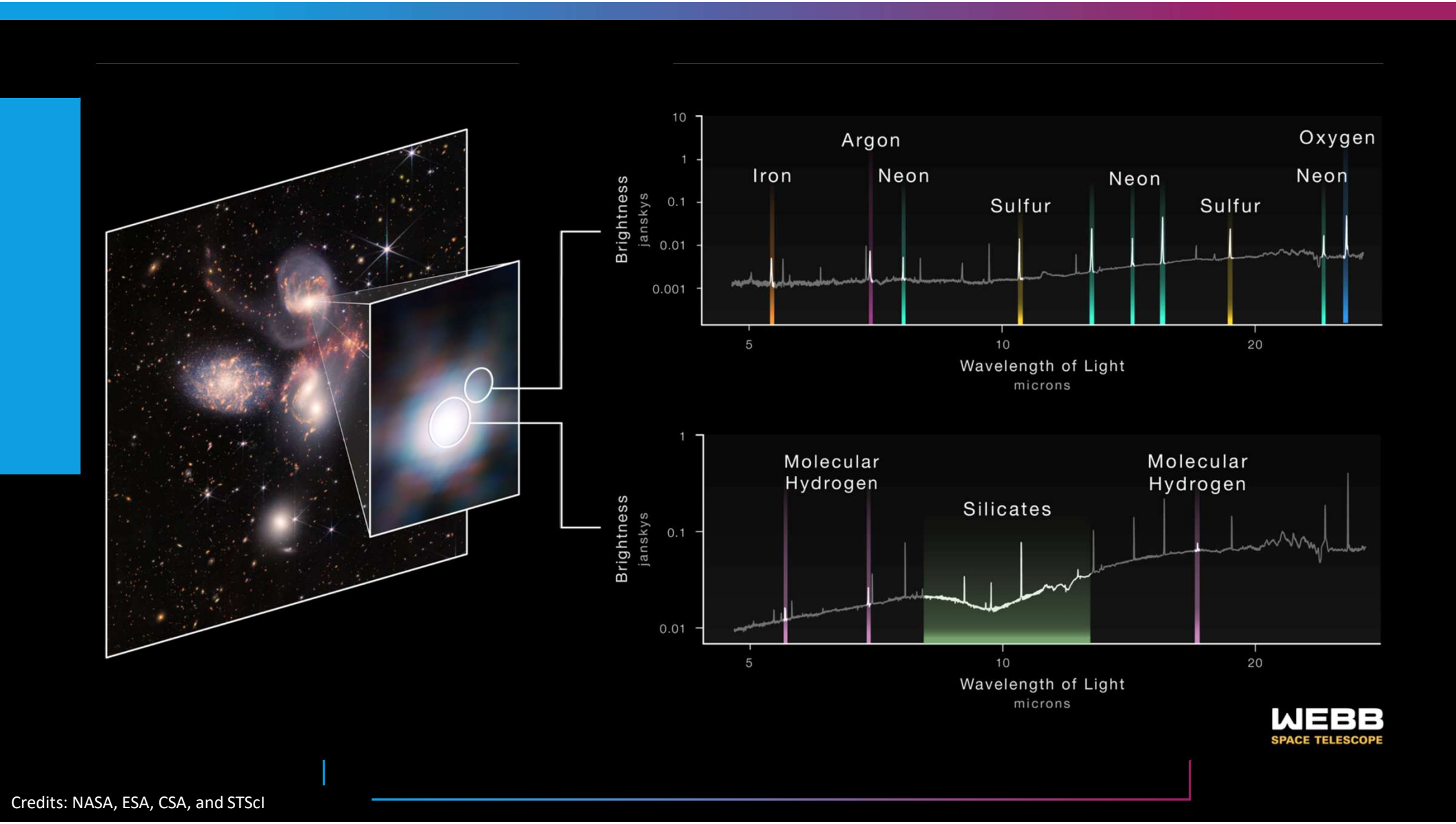

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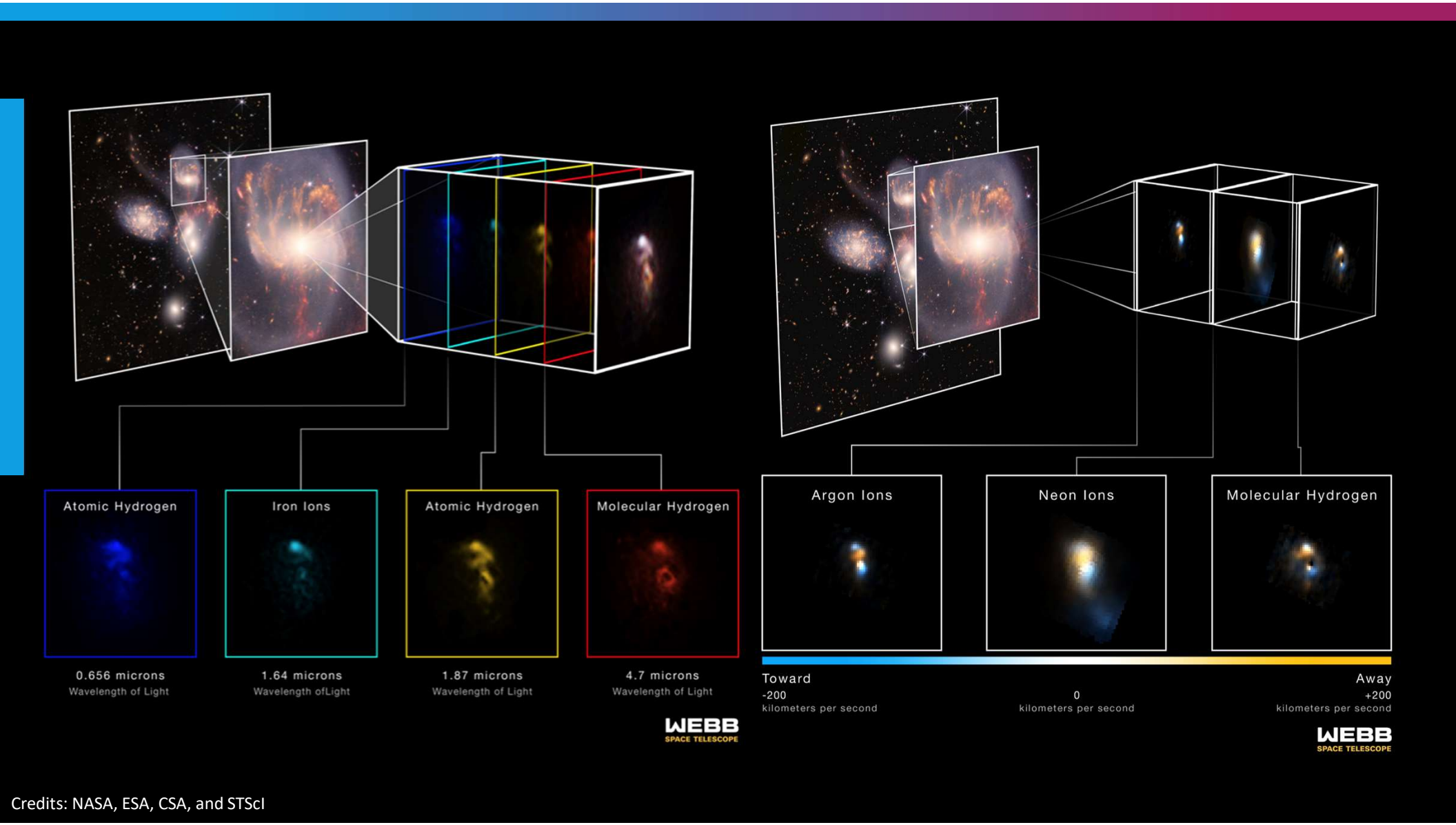
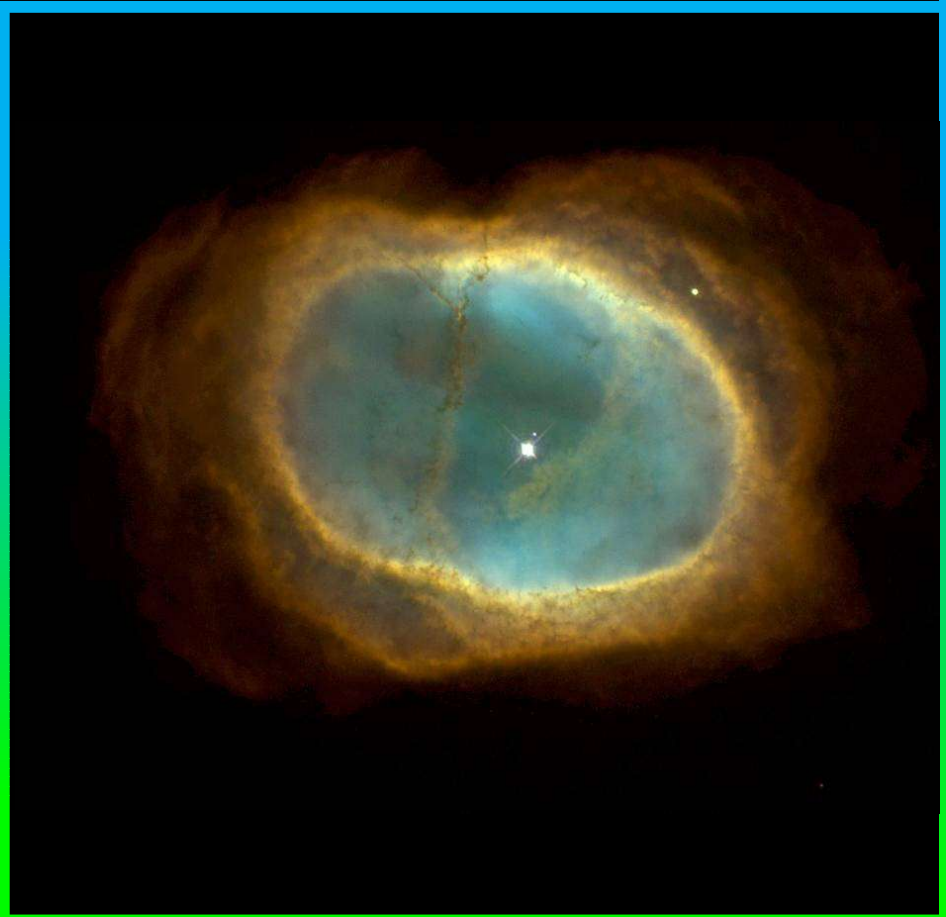


Credits: NASA, ESA, CSA, and STScI

The life-cycle of the stars



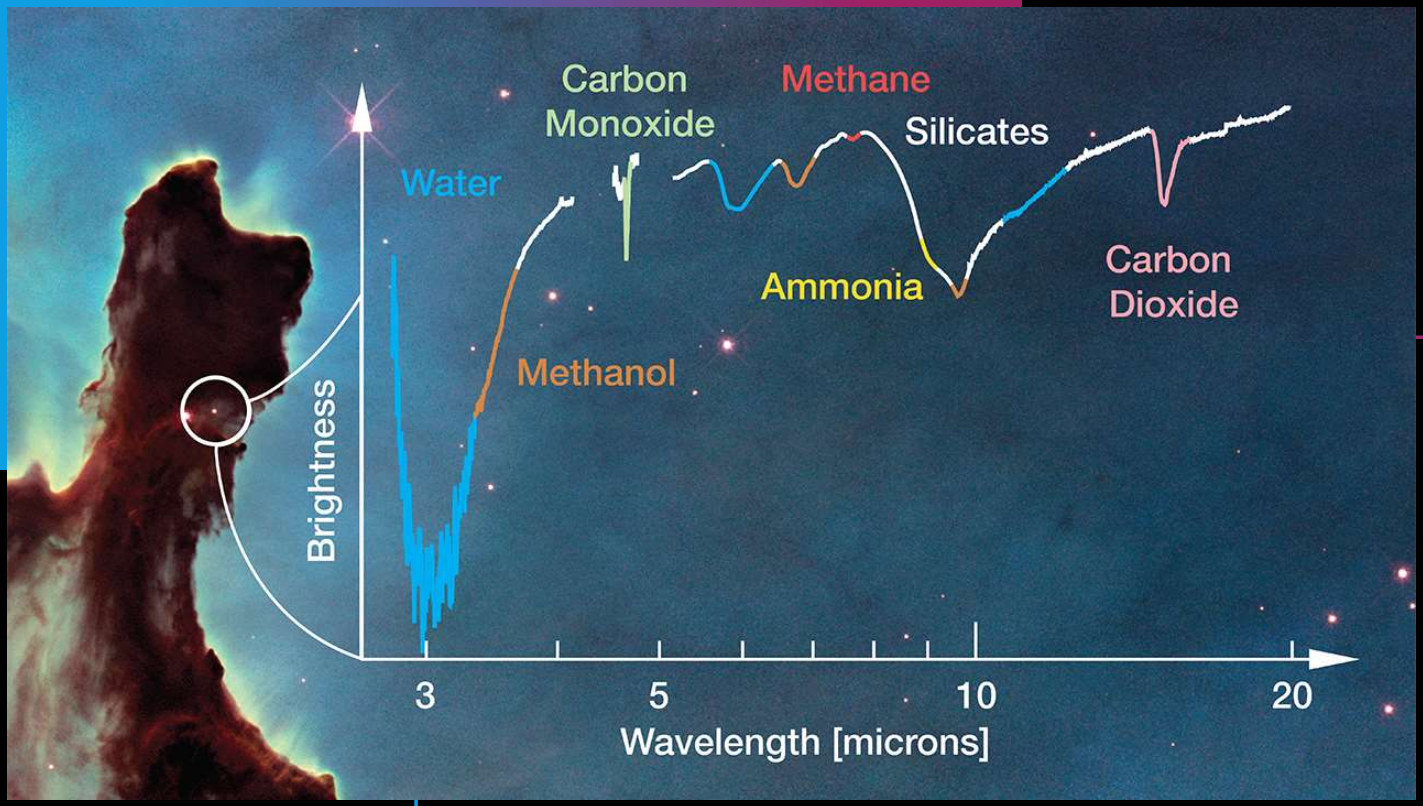
Credit: NASA, ESA, and L. Calcada (ESO for STScI)


Video: NASA, ESA, and G. Bacon (STScI)
Optical (Hubble)

Webb can see through the thick walls of dust where stars are forming

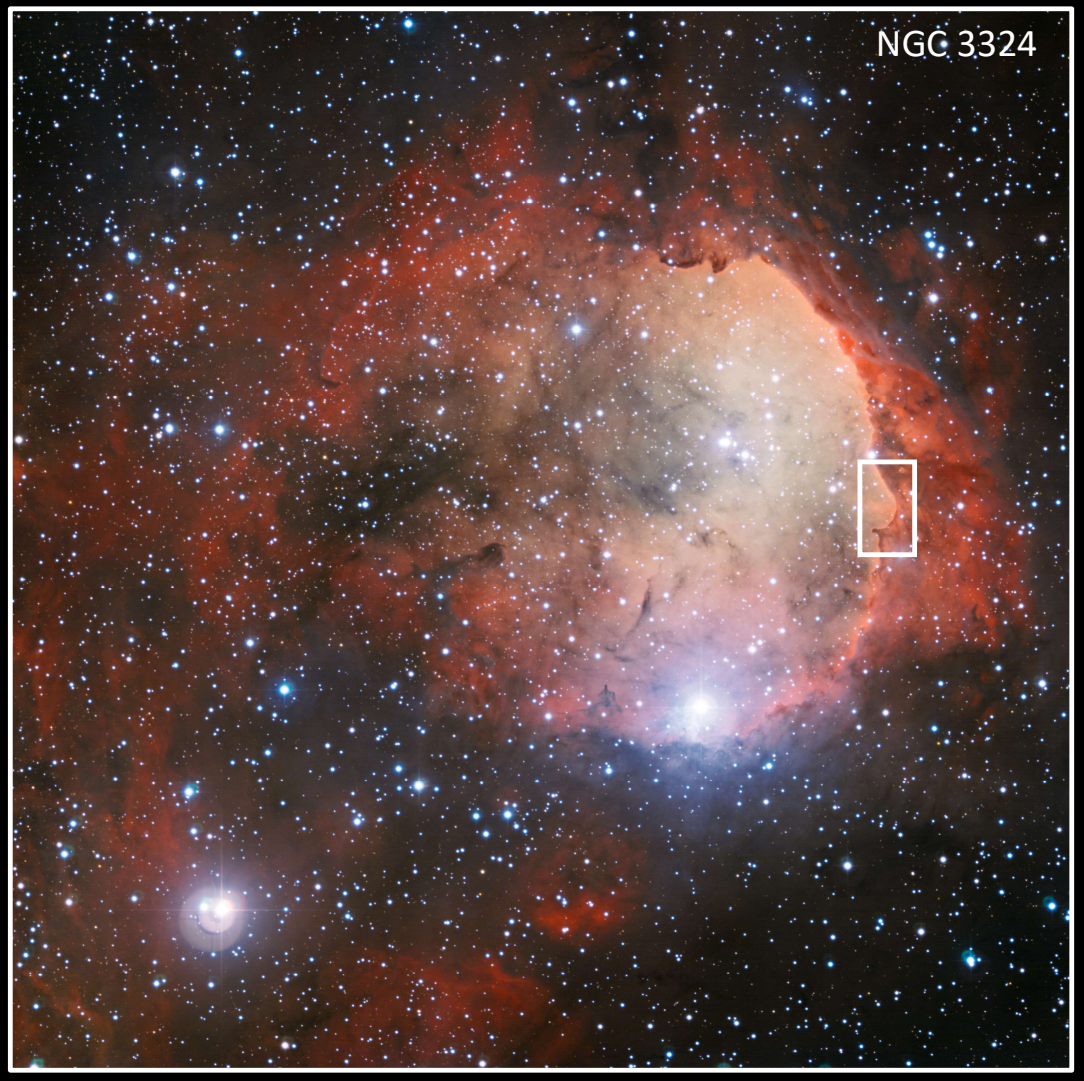
Image credits: NASA, CXC, SSC, NOAO, DSS

Image Credits: NASA/ESA, Caltech/N. Flagey (IAS/SSC & A. Noriega-Crespo (SSC/Caltech)

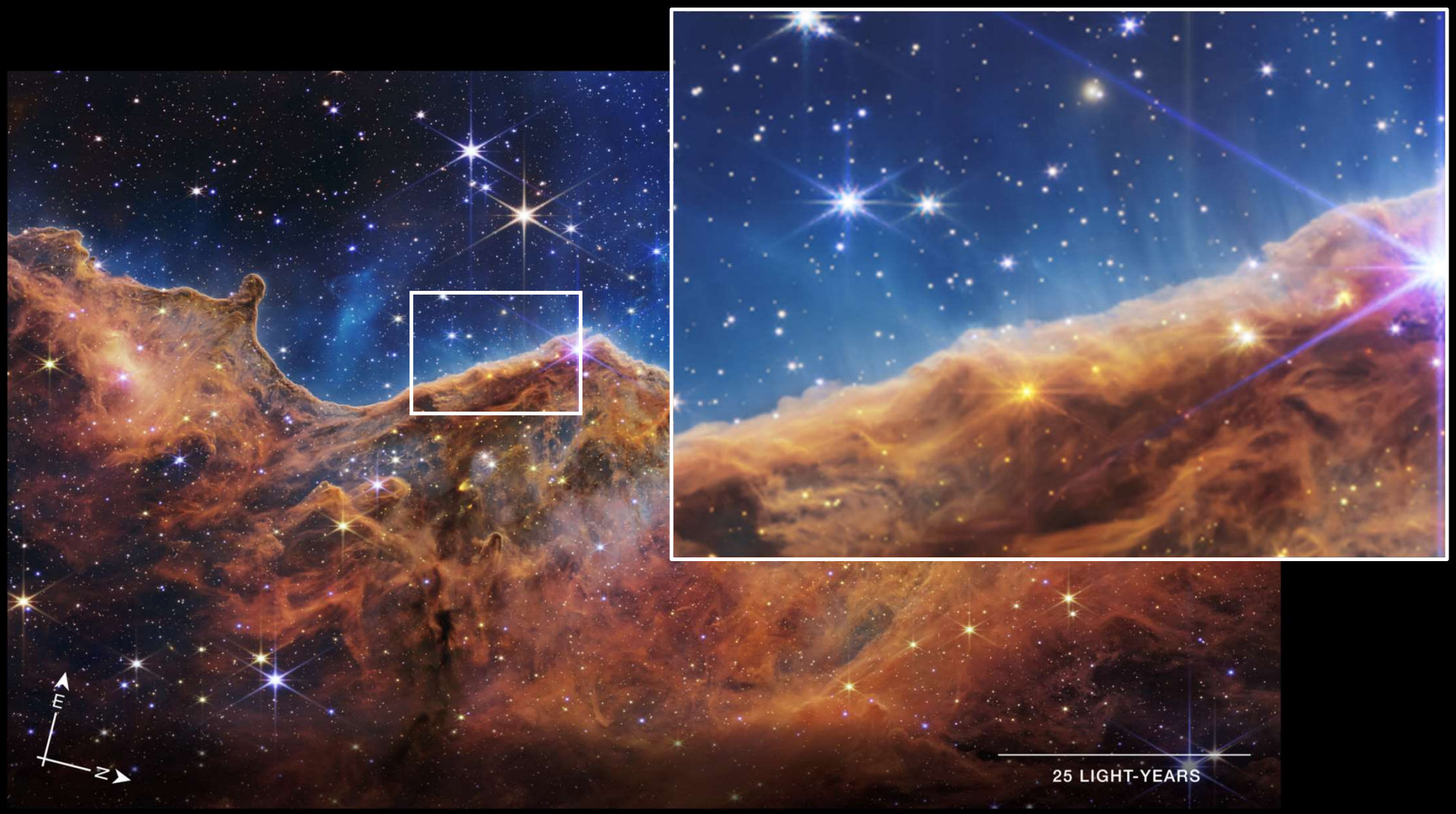


Webb's spectra will show us where the life building blocs are coming from

IMAGE: NASA, ESA, M. McClare (University of Amsterdam), A. Boogert (UH Manoa), Hubble Heritage Project (STScI)


NGC 3324


25 LIGHT-YEARS
N
E



Credits: NASA, ESA, CSA, and STScI

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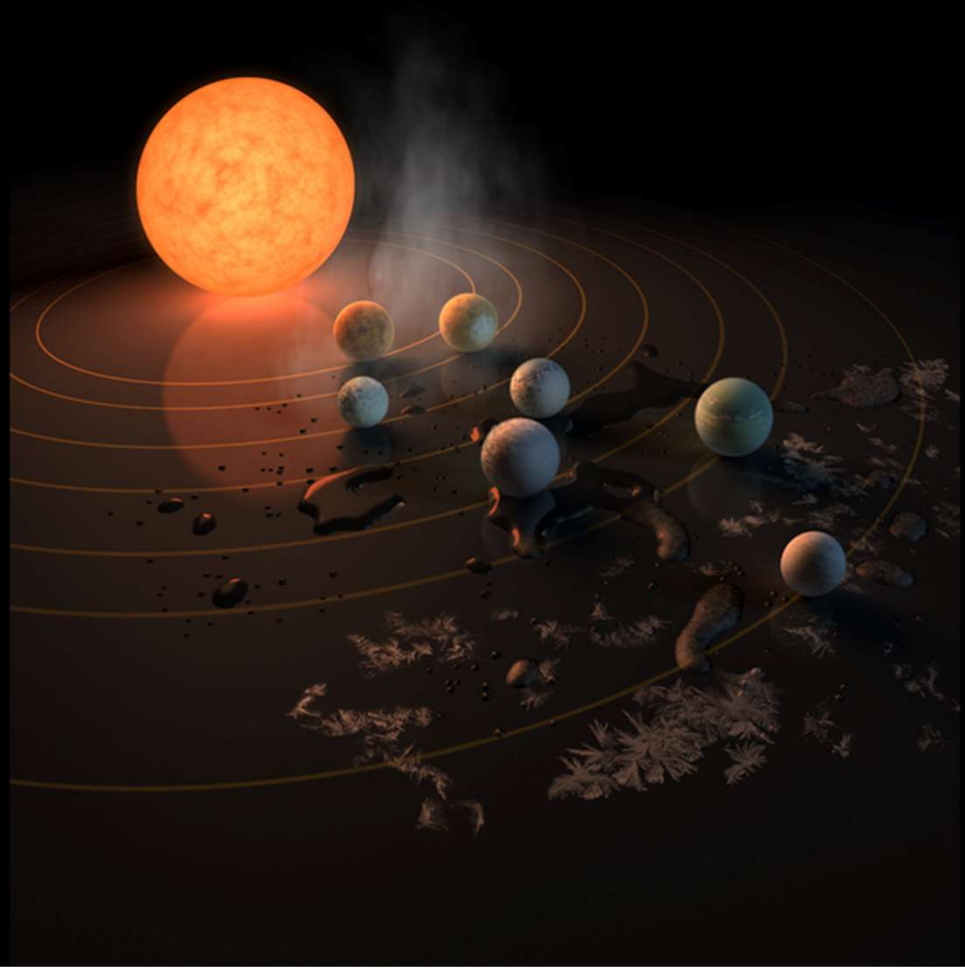
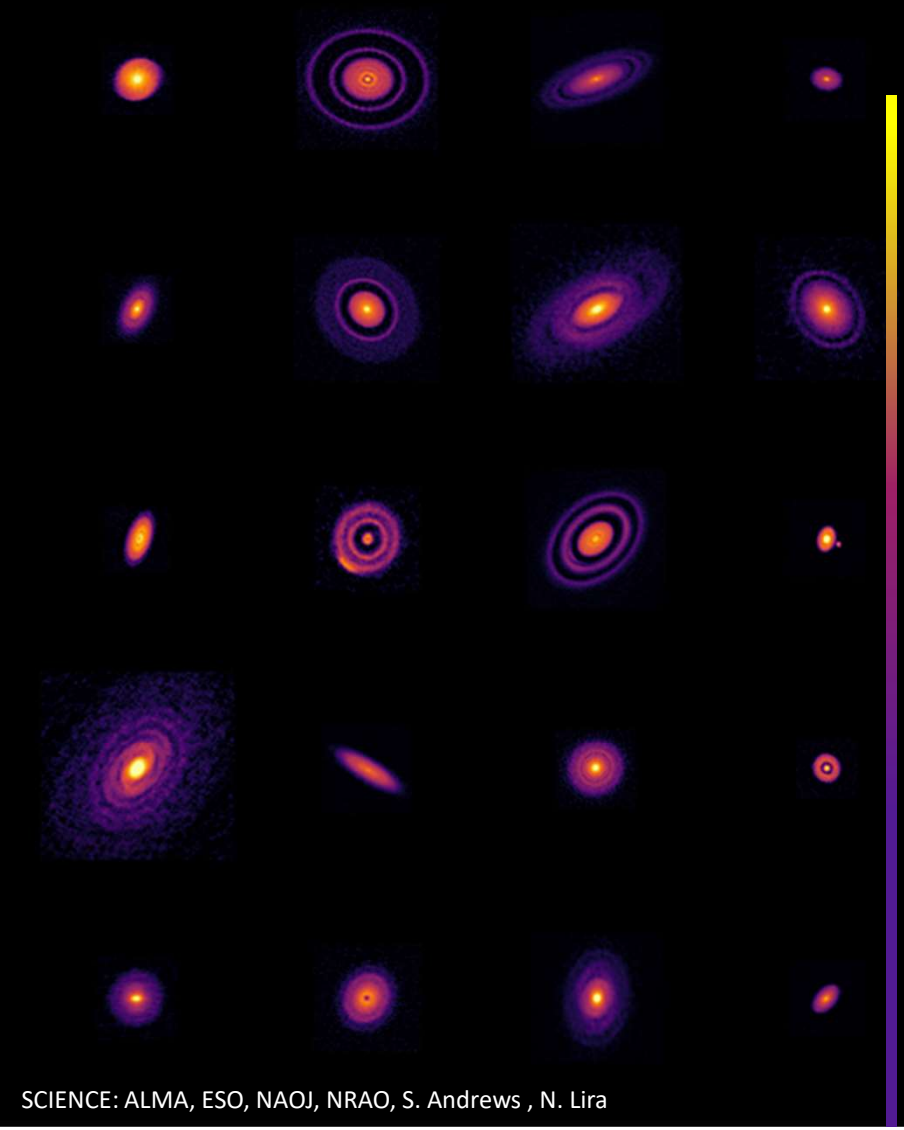
Credits: NASA, ESA, CSA, and STScI

Understand the origin of other solar systems



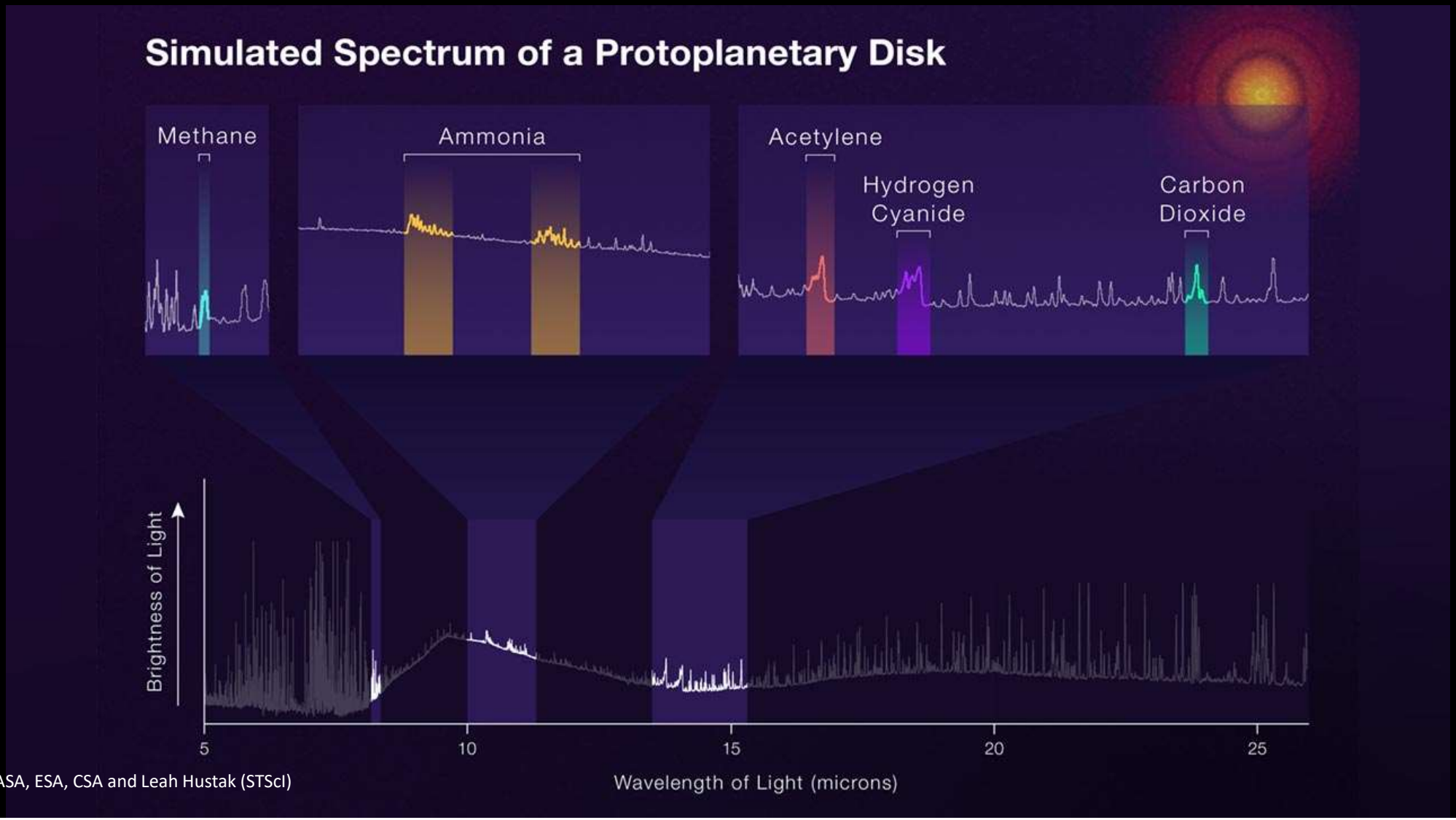
M. McCaughrean (Max-Planck-Institute for Astronomy), C. R. O'Dell (Rice University), and NASA/ESA.

NASA, ESA, Daniel Apai (University of Arizona), Glenn Schneider (University of Arizona)

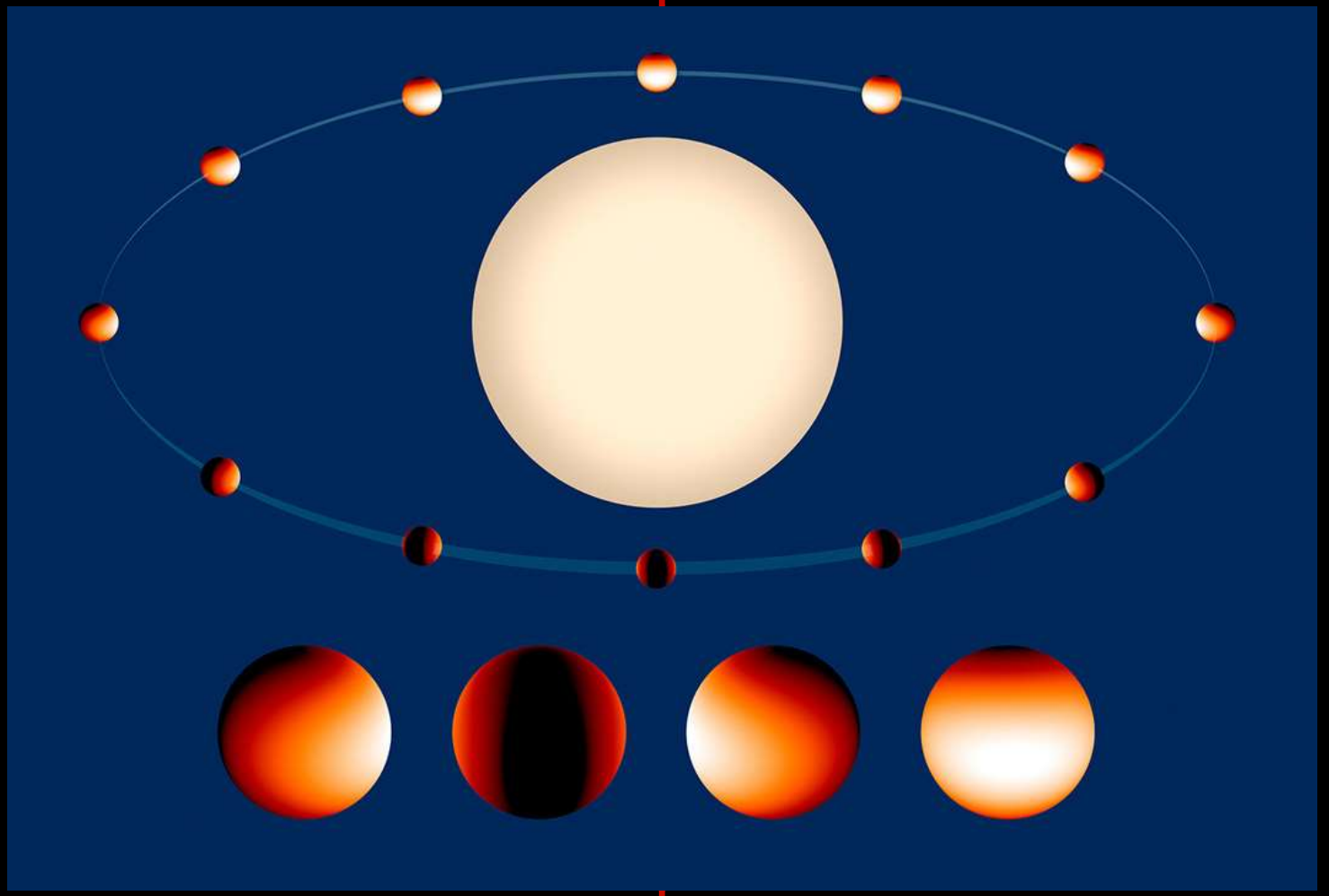


SCIENCE: ALMA, ESO, NAOJ, NRAO, S. Andrews , N. Lira

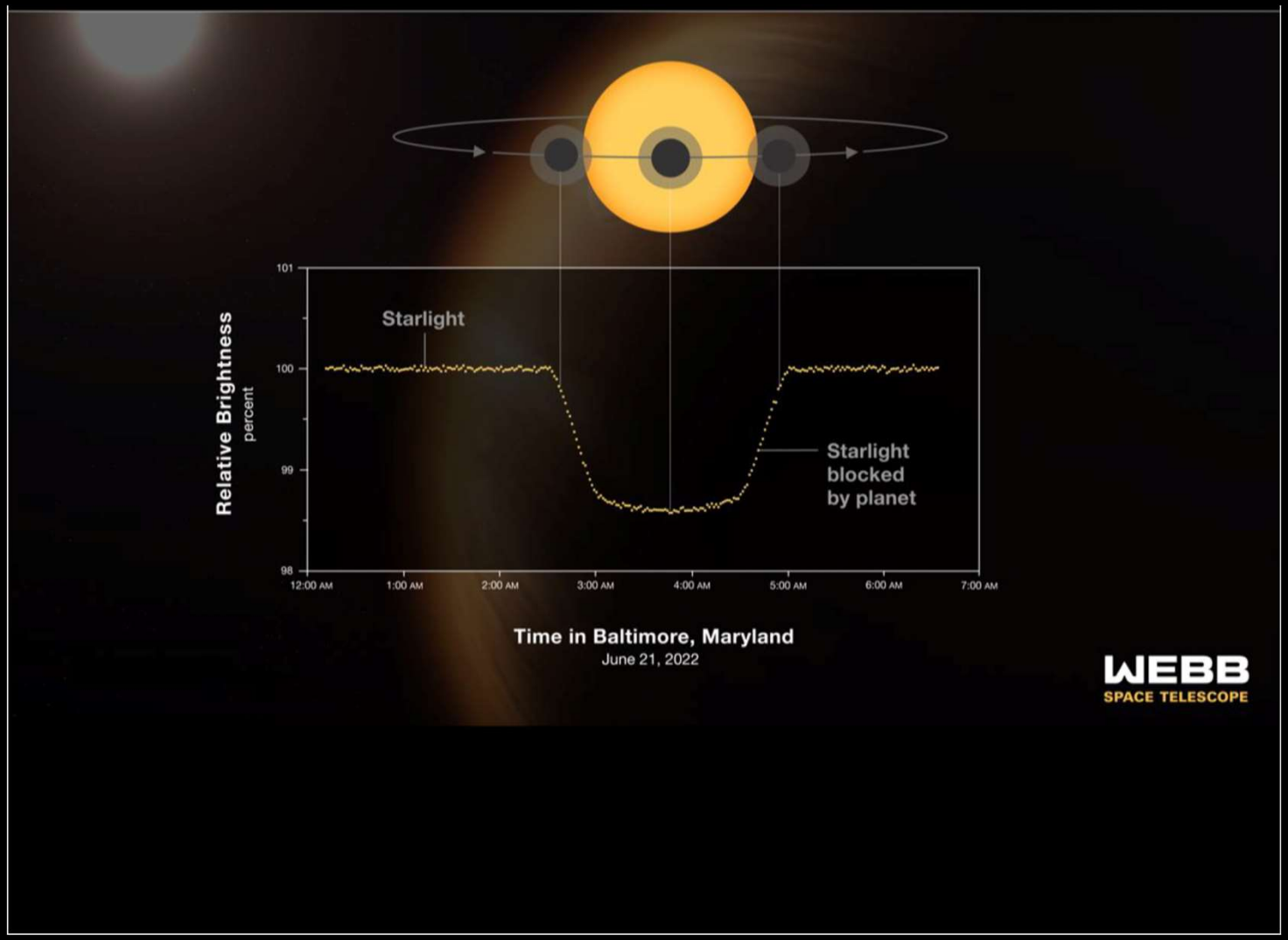
Protoplanetary disks



NASA, ESA, CSA and Leah Hustak (STScI)

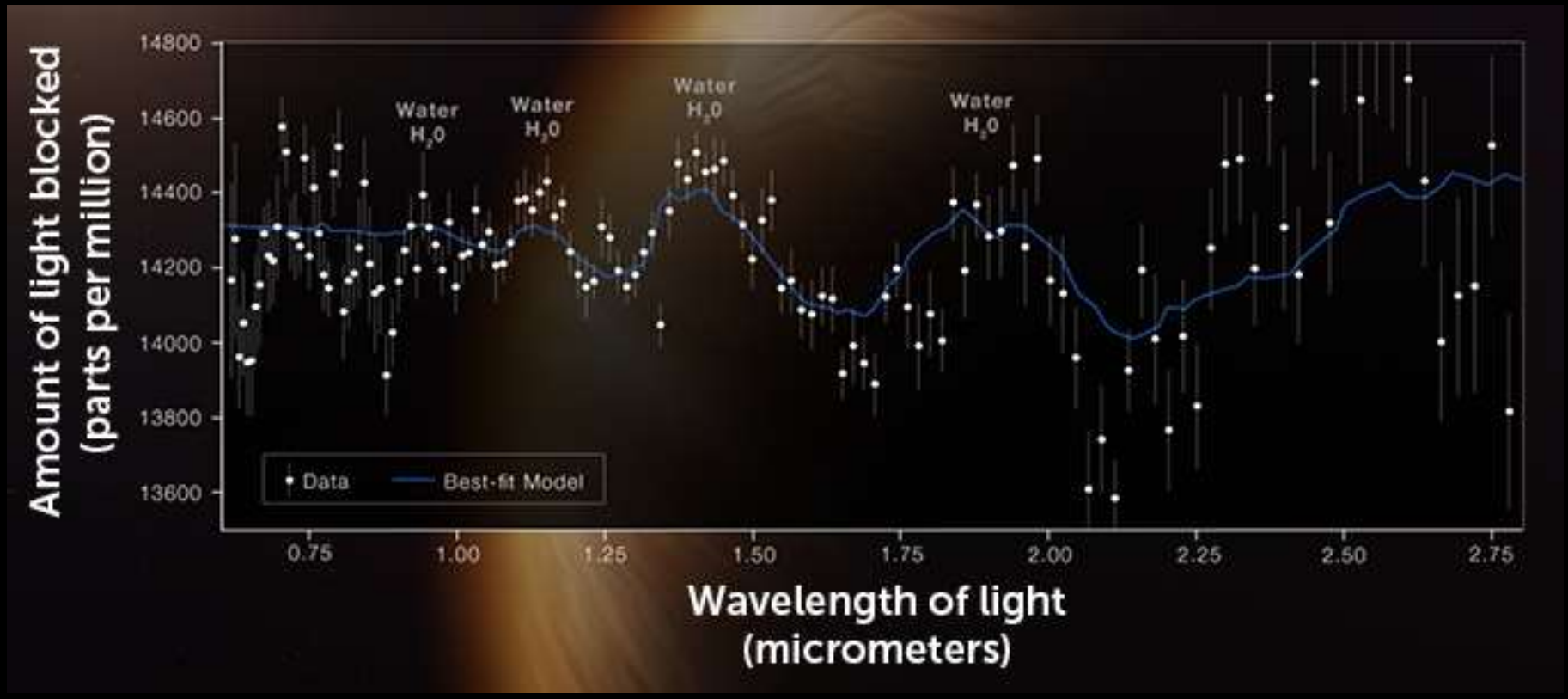


CREDIT: NASA, ESA, and K. Stevenson, L. Kreidberg, and J. Bean (University of Chicago).



Credits: NASA, ESA, CSA, and STScI

Credit NASA and Suomi National Polar-Orbiting Partnership satellite



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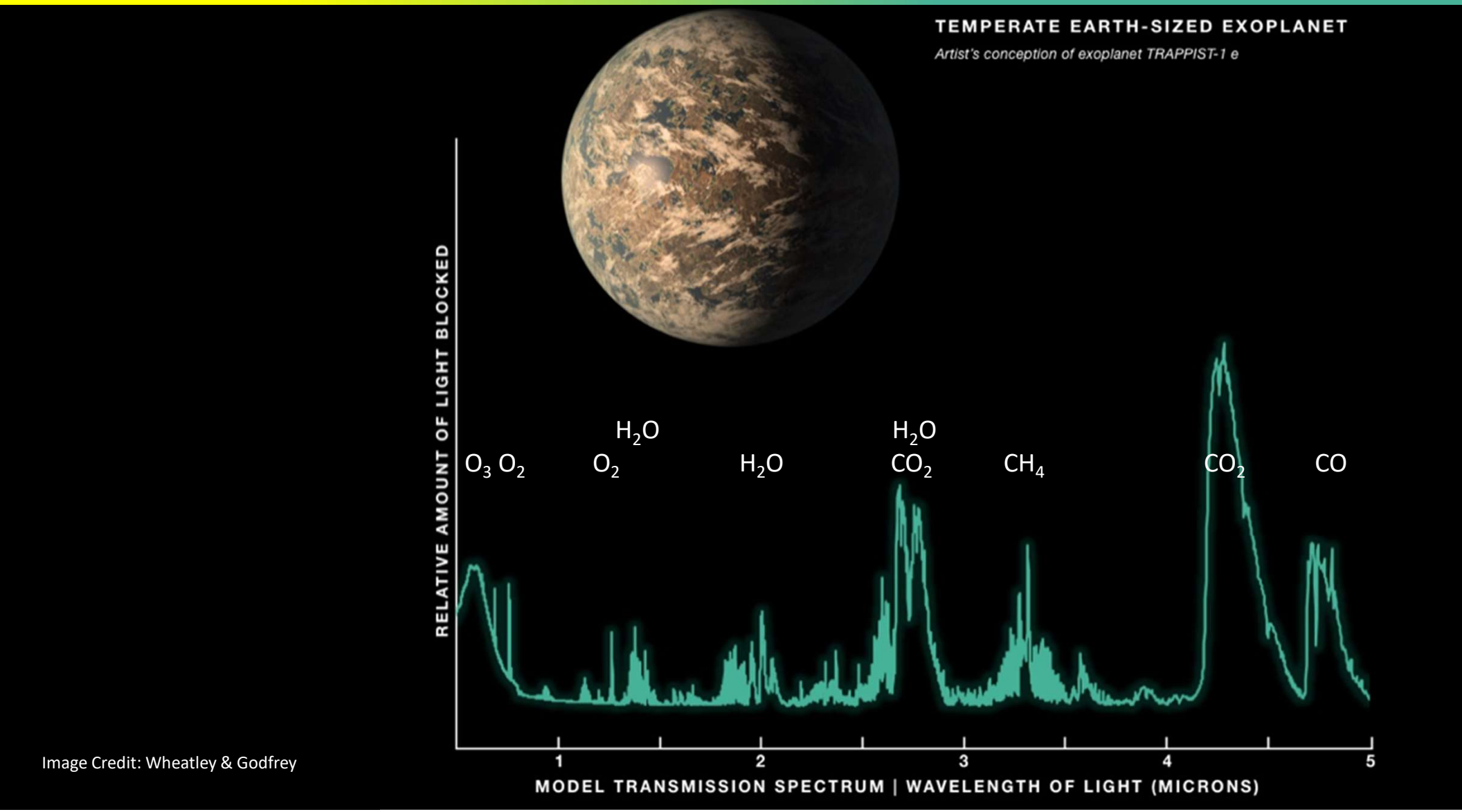
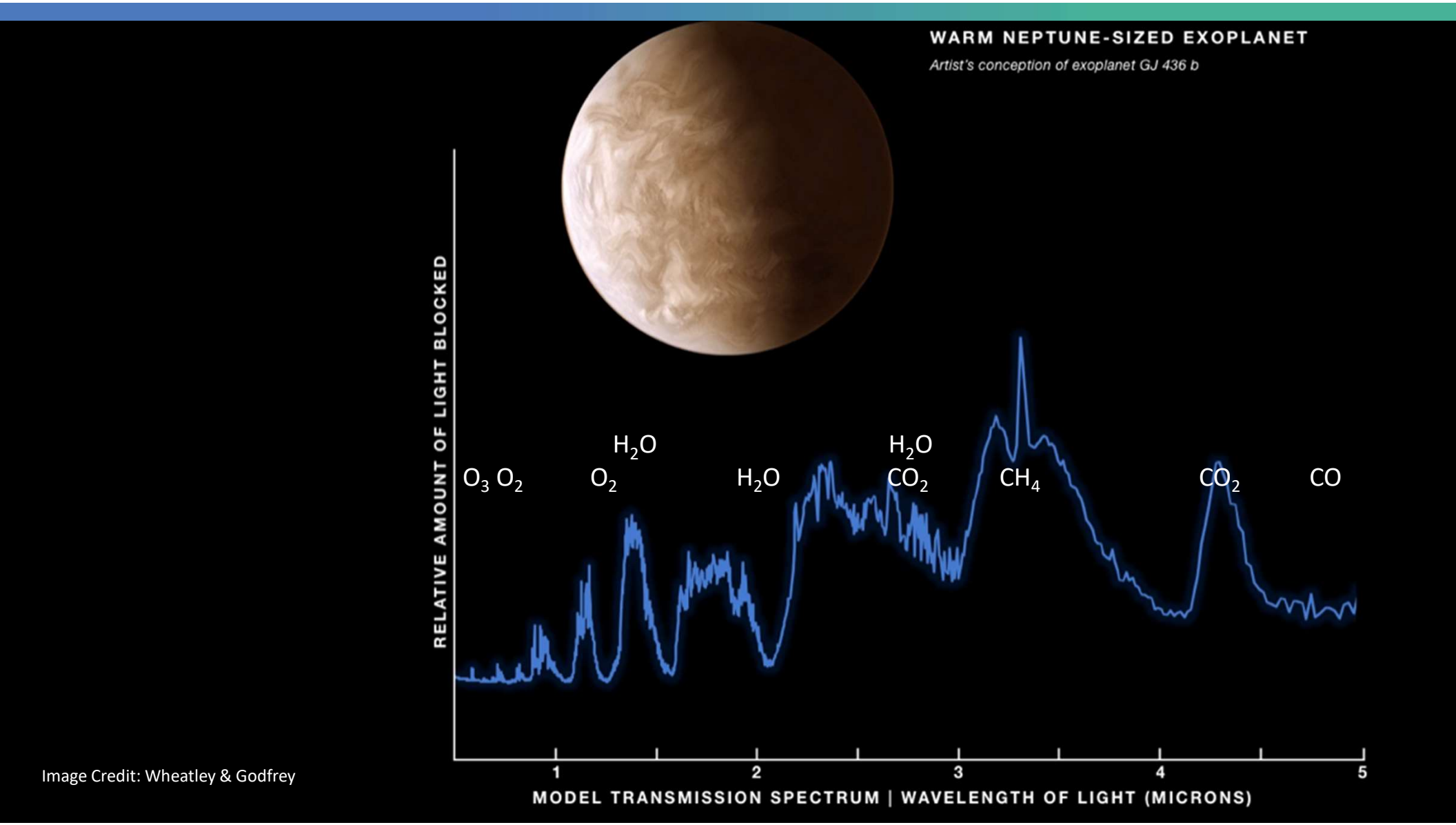


Image Credit: Wheatley & Godfrey



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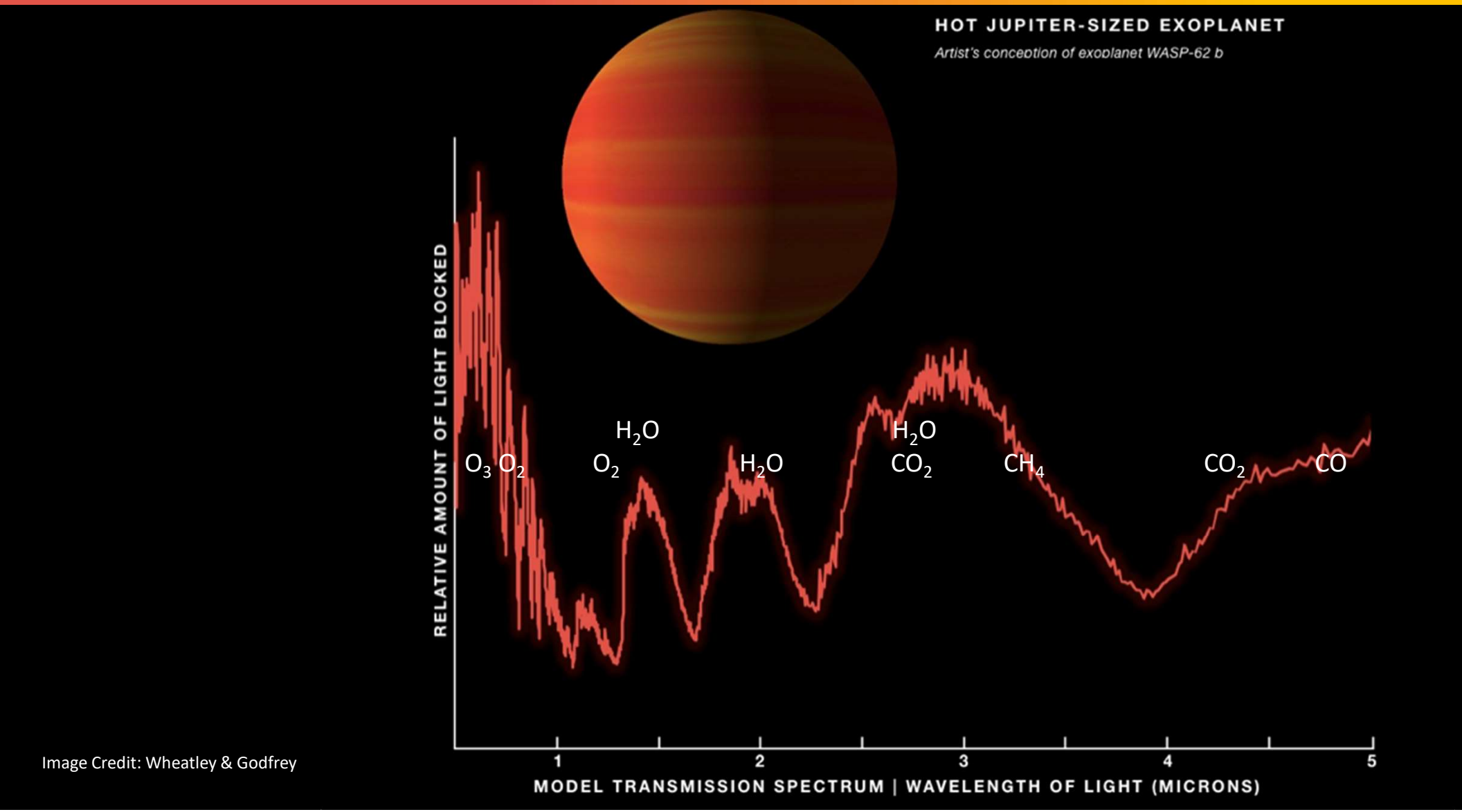

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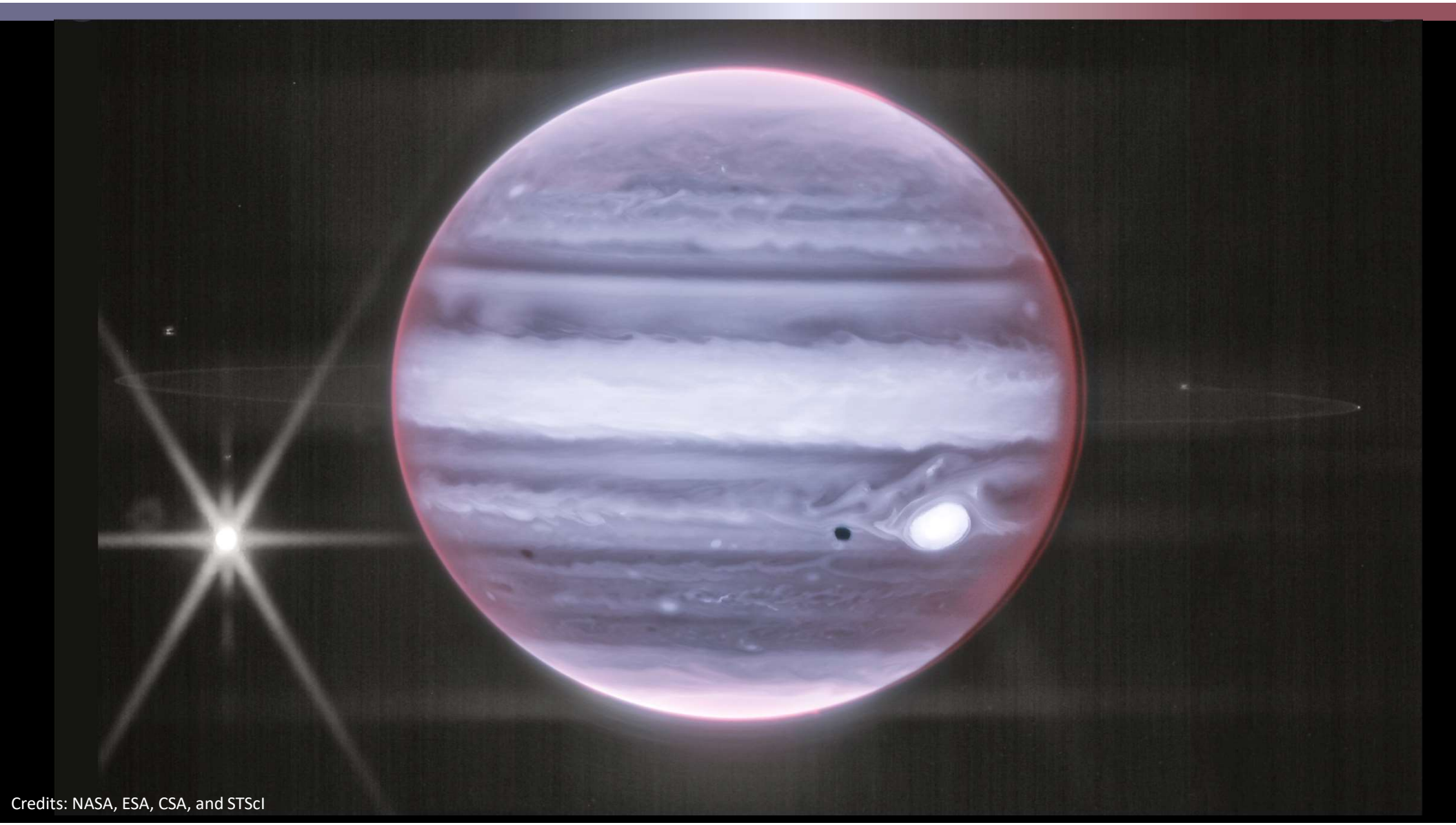

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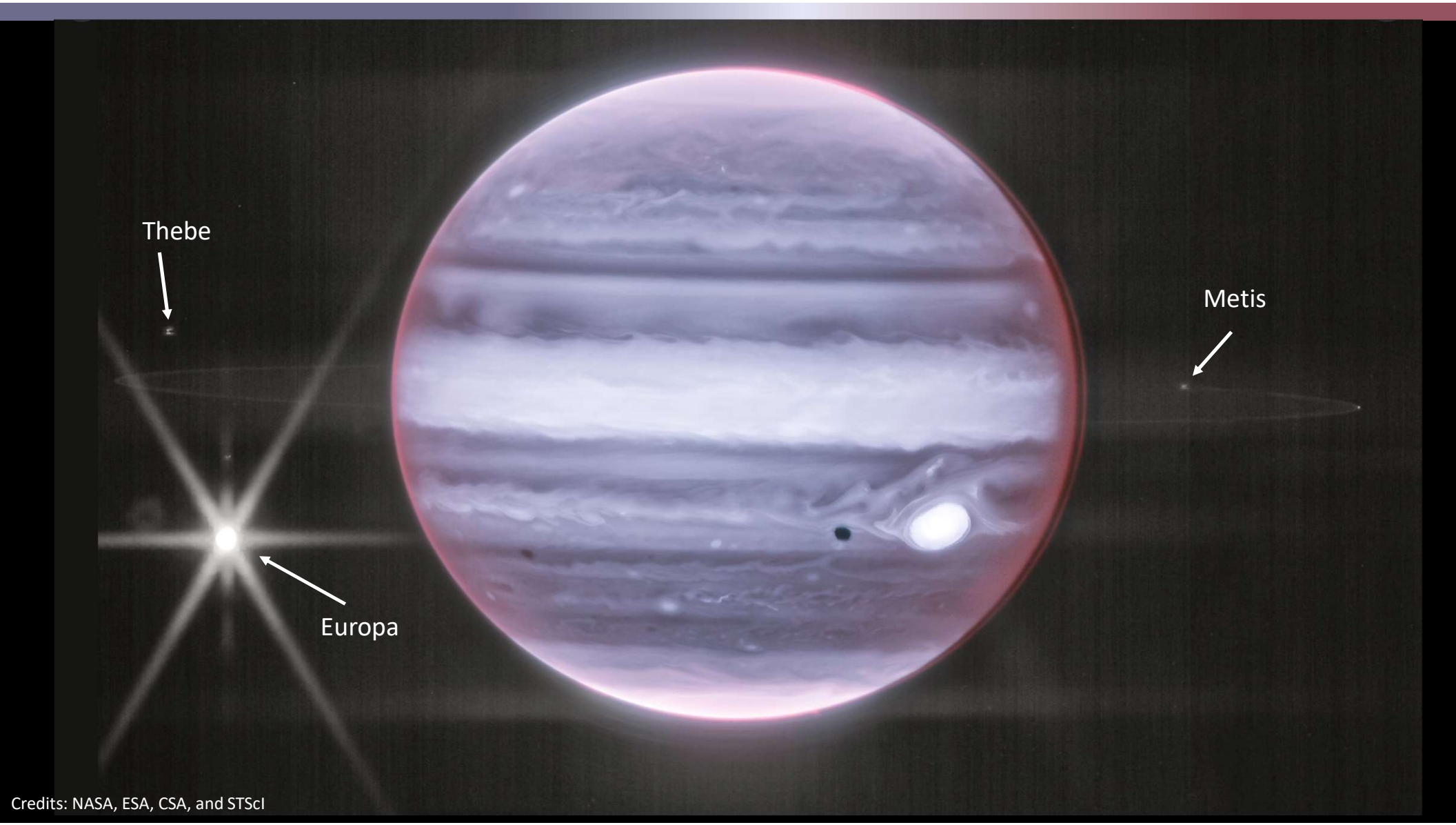


Credits: NASA, ESA, CSA, and STScI

Domande?

Infrared Light Helps Us Find Distant Planets

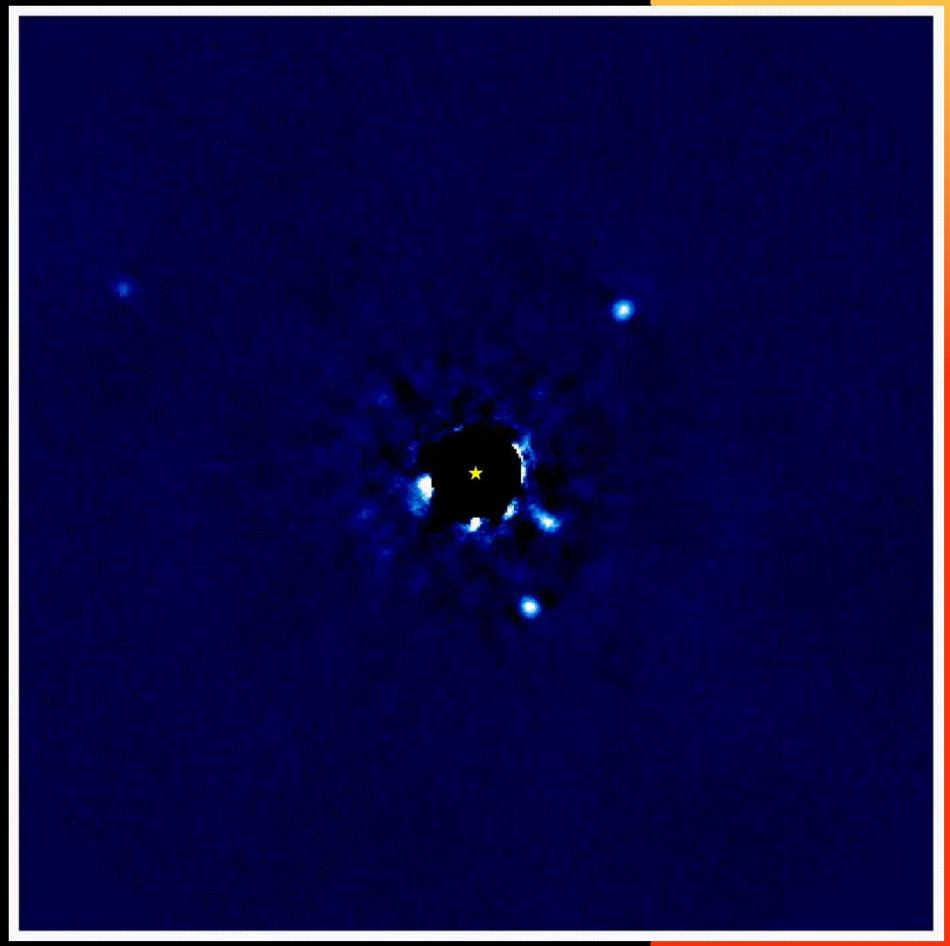
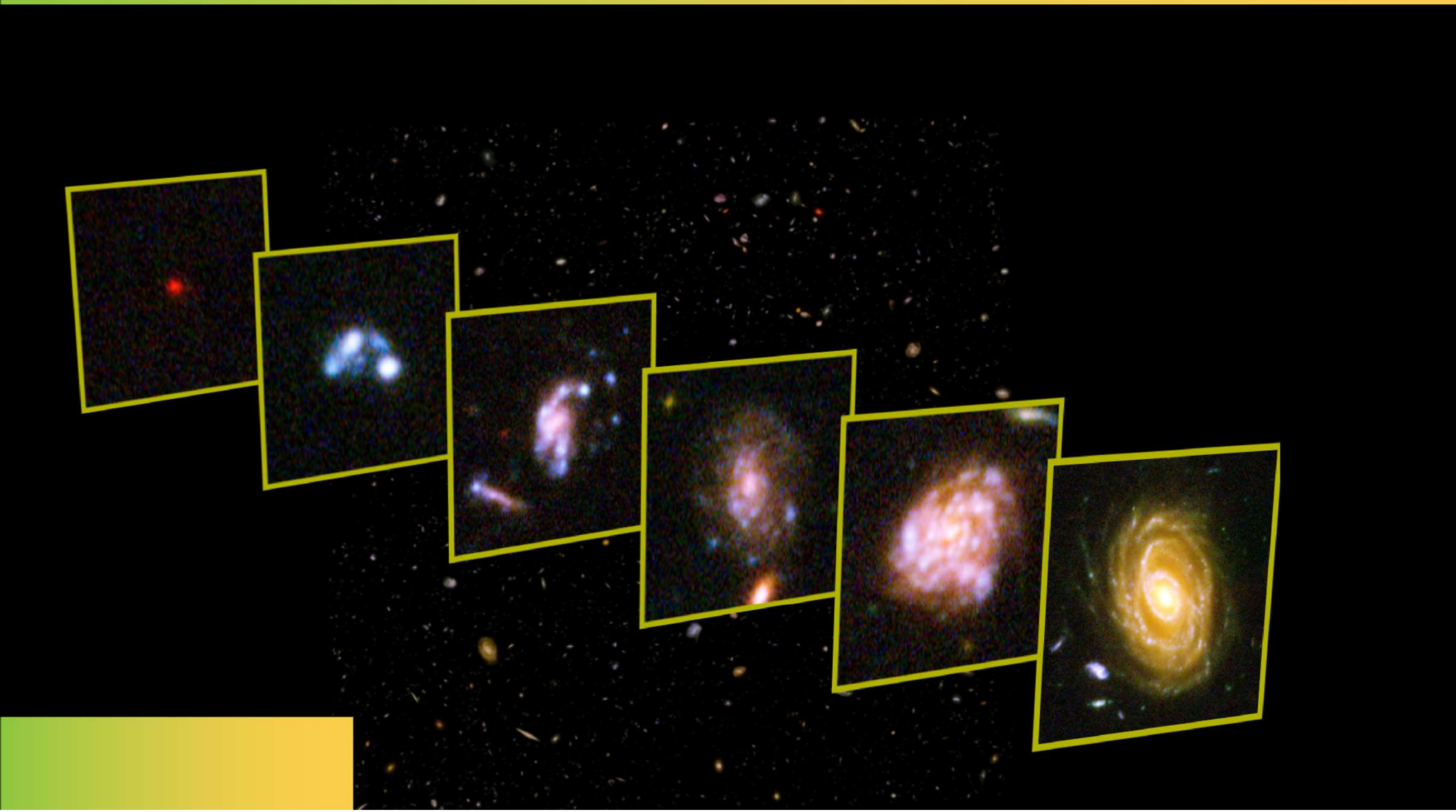
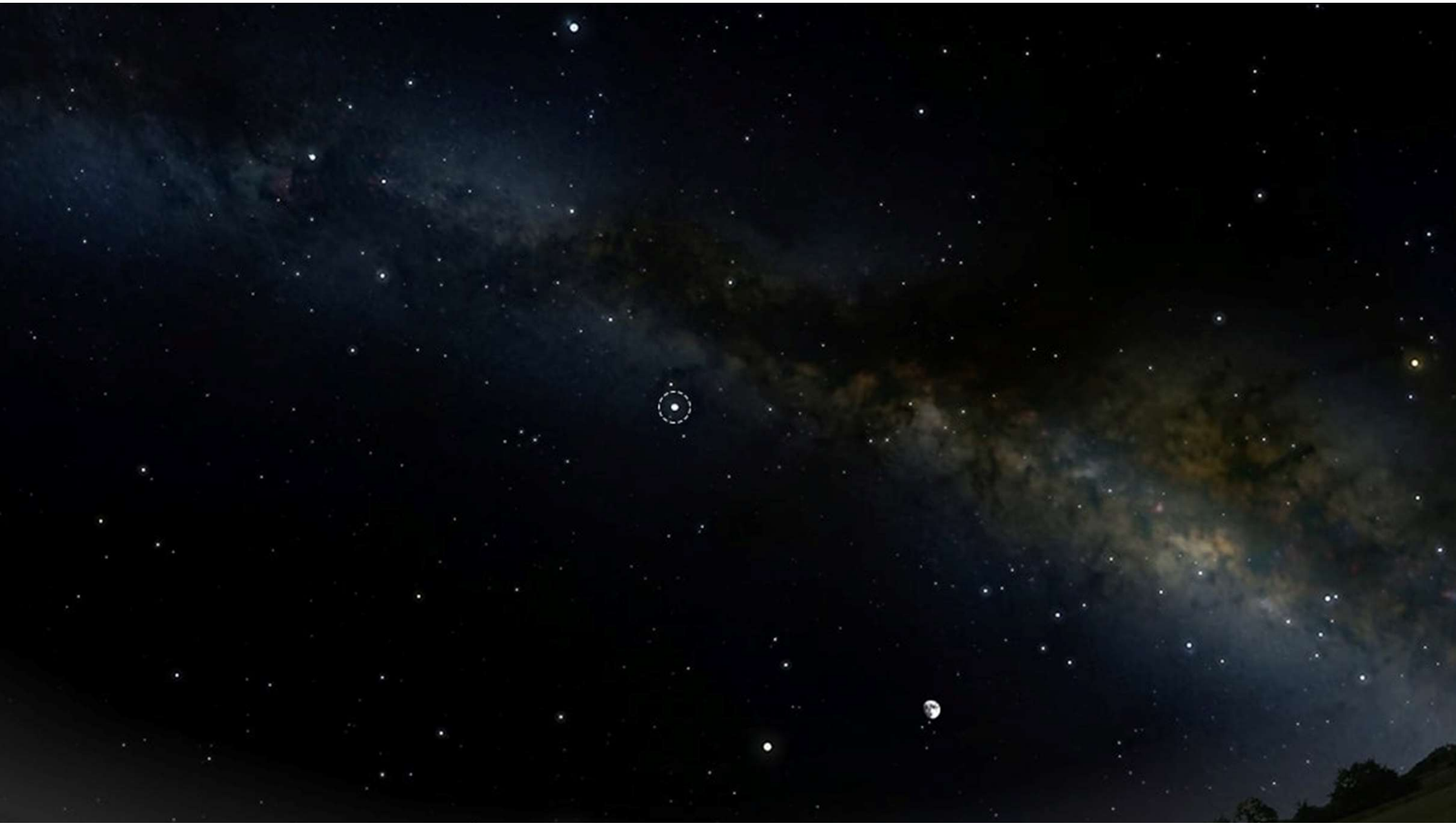


Image credits: ESO-HAWK-I





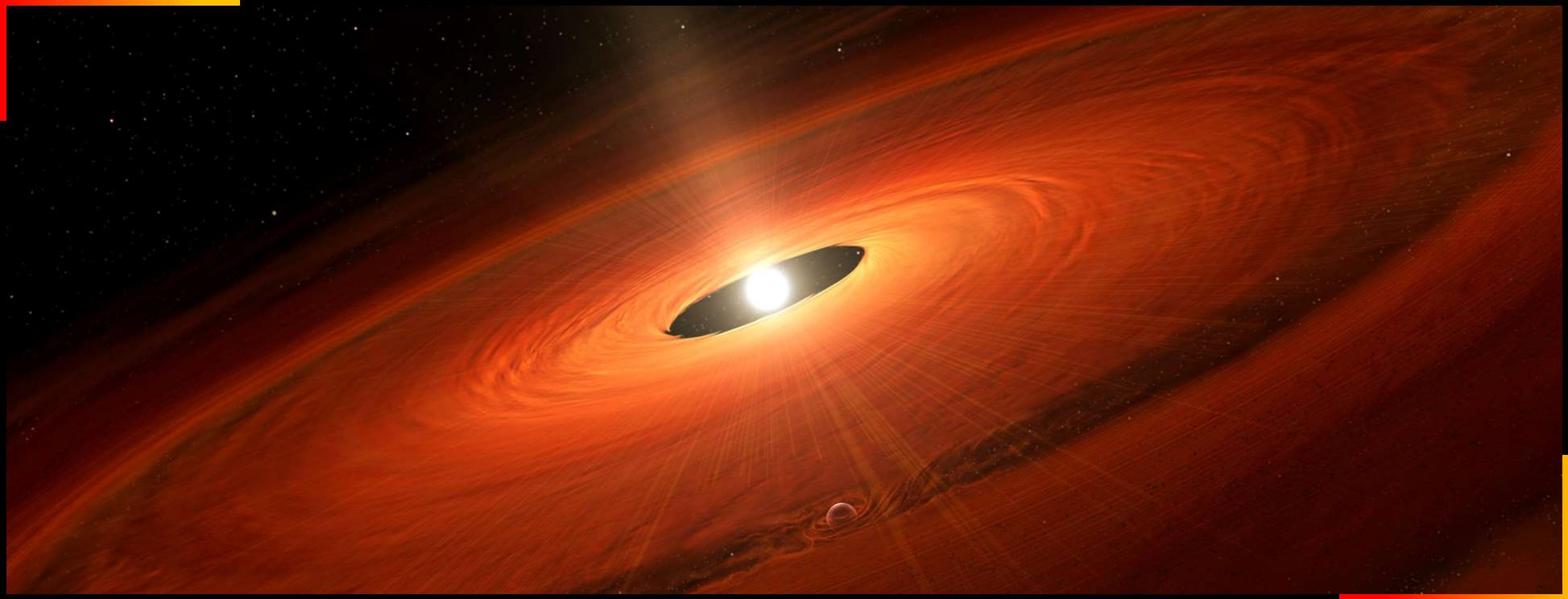


Illustration: NAOJ