



San Mateo County Astronomical Society



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Presentation on Friday December 10, 2021, 8:00pm PT

Dr. Thomas Greene

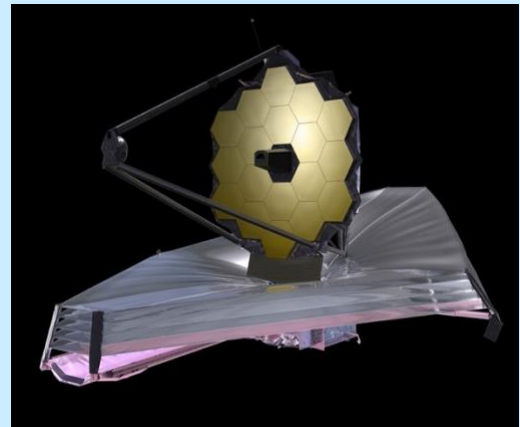
Astrophysicist, Space Science and Astrobiology Division, NASA Ames Research Center

The James Webb Space Telescope: Great science will be launching soon!

Free and open to the public. Via Zoom video conference.

[Click here to access the Zoom link](#)

The James Webb Space Telescope will be the most powerful and complex astronomical space observatory ever built. It will launch in December and will unfold itself before arriving in its final orbit in the Sun – Earth system about a month later. The large 6.5-m diameter JWST primary mirror and its infrared instruments will allow it to see some of the very first luminous objects that formed in the Universe shortly after the Big Bang. Other major science themes of JWST encompass studying the assembly of galaxies, the birth of stars and planetary systems, and planetary systems and the origins of life. JWST will be the premier astrophysics space observatory for NASA and the European Space Agency (ESA) over its 5 – 10 year mission lifetime. It will augment the Hubble Space Telescope, which primarily works at visible and ultraviolet light wavelengths. In addition to the topics covered in this talk, many scientists will use JWST to make discoveries that we have not yet imagined.



JWST employs many unique technologies, and the mission has been in development for 20 years. All major hardware components including the telescope, spacecraft, and all science instruments have been completed, and a significant amount of this work was done in the Bay Area and California. The completed integrated observatory will be launched from the ESA spaceport in French Guiana, and scientists from all over the world will use it. In this talk I will illustrate the mission's science potential and highlight some aspects of its technologies, launch, and operations plans.

Biography:

Thomas Greene is an astrophysicist in the Space Science and Astrobiology Division at NASA's Ames Research Center. He conducts observational studies of exoplanets and young stars and develops astronomical technologies and instrumentation.



Dr. Greene is a co-investigator on the NIRCam and MIRI science instruments of the James Webb Space Telescope and serves on the JWST Users Committee. While at NASA Ames he has served as the Director of the Ames Center for Exoplanet Studies, Project Scientist of the SOFIA mission, and Chief of the Astrophysics Branch. Before joining NASA, he worked at the Lockheed Martin Advanced Technology Center on NASA astrophysics missions. Prior to that, Dr. Greene was on the faculty of the University of Hawaii where he was a support astronomer and later Director of the NASA Infrared Telescope Facility (IRTF).

He received his Ph.D. in astronomy from the University of Arizona. Dr. Greene currently co-chairs the US National Academies of Sciences' Committee on Astronomy and Astrophysics (CAA) and is a NASA representative on the W. M. Keck Observatory Science Steering Committee.