

HARCOURT C. "ACE" VERNON MEMORIAL LECTURE

Tuesday, October 3, 2017 | 7:30 PM
Clayton Hall Conference Center



Preparing to Explore the Universe with the James Webb Space Telescope



Jane Rigby
*Deputy Project Scientist
for Operations—JWST,
NASA*

Like a giant golden eye, NASA's James Webb Space Telescope will peer back to the beginning of time and watch galaxies collide. It will capture gorgeous images of stars and planets being

born. It will search for new planets and pursue the age-old question: Is life out there?

Astrophysicist Jane Rigby, who grew up in Sussex County, Delaware, is the deputy project scientist for this amazing new space tool. She will show us how it will revolutionize our view of the universe and fill us in on preparations for the telescope's launch in October 2018.



**James Webb Space
Telescope Mural Image**

Illustration courtesy of
Northrop Grumman

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The James Webb Space Telescope



Fun Facts



Who is the telescope named for?

James Webb, who headed up NASA in the 1960s, is said to have done more for science than any other government official. He took the U.S. on its first voyages of discovery into outer space, including landing a man on the moon.

How big is it?

JWST will be the largest space telescope ever launched—as tall as a three-story building. Its mirror is 21 feet across and includes 18 individual segments made from beryllium and coated in gold. A giant sunshield, as big as a tennis court, will protect it from the sun's heat.

What will it look for?

JWST will look far back in time, to the origins of the universe. It will deliver amazing photos of galaxies and stars being born and also search for exoplanets—planets outside our solar system. It will be able to detect if an exoplanet has liquid water on its surface, an important indicator that life may be present. With the ability to see a penny 24 miles away, it will send images with incredible sharpness back to Earth.

How and when will it be launched into space?

JWST will be folded up like origami, tucked inside the nose of a rocket and open up like a transformer once launched into space, a million miles from Earth. It will be launched on an Ariane-5 rocket in South America. It is expected to launch in October 2018.

Webb Mirror Tilt Panorama, May 4, 2016

A composite of nine wide-angle images showing the NASA Goddard clean room on May 4, 2016, when the uncovered flight primary mirror of the James Webb Space Telescope was tilted into a vertical position.

Credit: NASA/Francis Reddy (Syneren Technologies)

Learn more:

Delaware Asteroseismic Research Center at UD
www.physics.udel.edu/darc

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