

NASA's next space telescope to launch in December

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The \$10 billion observatory, which will be the largest and most powerful telescope launched into space, will take off on a European Space Agency (ESA)

Ariane 5 rocket from Spaceport in French Guiana, on the northeastern coast of South America.

The James Webb Space Telescope, which astronomers hope will herald a new era of discovery, will launch on December 18, NASA said Wednesday.

The \$10 billion observatory, which is a joint project by NASA, the European Space Agency and the Canadian Space Agency, will blast off on an Ariane 5 rocket from Spaceport in French Guiana.

It is currently stowed at contractor Northrop Grumman's facilities in Redondo Beach, California, where it is awaiting shipping.

"Webb is an exemplary mission that signifies the epitome of perseverance," said Webb's NASA program director Gregory Robinson in a statement.

"We are extremely honored to orbit NASA's James Webb Space Telescope with Ariane, a first for Arianespace and the European space team," added Stephane Israel, CEO of Arianespace.

Researchers want to use the [space telescope](#), the largest and most powerful ever built, to look back in time over 13.5 billion years to see the [first stars](#) and galaxies that formed, a few hundred million years after the Big Bang.

A key feature is its ability to detect infrared, as by the time the light from the first objects reaches our telescopes, it has shifted towards the red end of the electromagnetic spectrum as a result of the universe's expansion.

The current premier space telescope, Hubble, only has limited infrared capacity.

Astronomers also hope the James Webb Space Telescope will supercharge the discovery of alien worlds.

The first planets to orbit other stars were detected in the 1990s and there are now more than 4,000 exoplanets that have been confirmed.

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