

First look: NASA's James Webb space telescope fully stowed

May 14 2020, by Thaddeus Cesari



For NASA's James Webb Space Telescope to fit into an Ariane V rocket for launch, it must fold up. This graphic shows how Webb fits into the rocket fairing with little room to spare. Credit: ArianeSpace.com

NASA's James Webb Space Telescope has been successfully folded and stowed into the same configuration it will have when loaded onto an Ariane 5 rocket for launch next year.

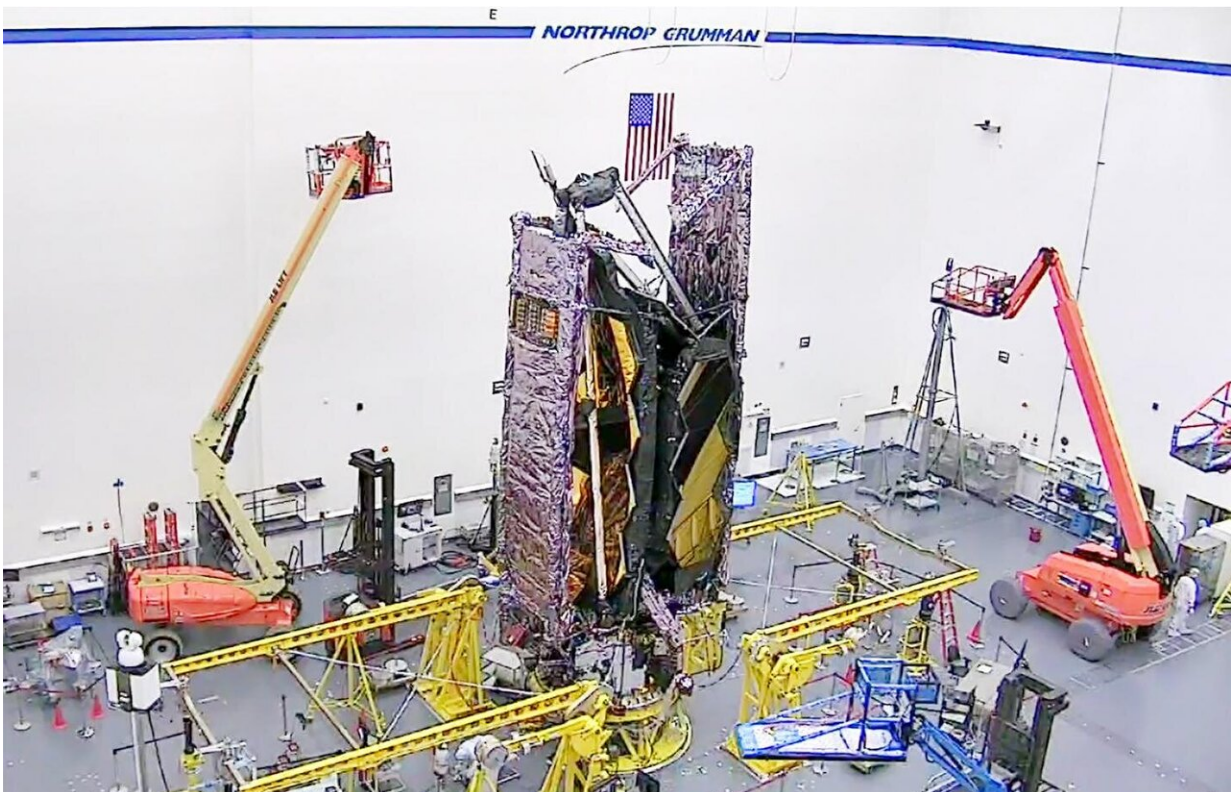
Webb is NASA's largest and most complex space science telescope ever built. Too big for any rocket available in its fully expanded form, the entire observatory was designed to fold in on itself to achieve a much smaller configuration. Once in space, the observatory will unfold and stretch itself out in a carefully practiced series of steps before beginning to make groundbreaking observations of the cosmos.

"The James Webb Space Telescope achieved another significant milestone with the entire observatory in its launch configuration for the first time, in preparation for environmental testing," said Bill Ochs, Webb project manager for NASA Goddard Space Flight Center in Greenbelt, Maryland. "I am very proud of the entire Northrop Grumman and NASA integration and test team. This accomplishment demonstrates the outstanding dedication and diligence of the team in such trying times due to COVID-19."

The testing team's charter is to make sure every piece of hardware and every piece of software that comprise Webb will work not only individually, but as a full observatory. Now that Webb is completely assembled, technicians and engineers have seized the unique opportunity to command the entire spacecraft and carry out the various stages of

movement and deployment it will perform when in space. By folding and stowing the spacecraft into the same configuration when it launches from French Guiana, the engineering team can confidently move forward with final environmental testing (acoustics and vibration). After completing the series of tests, Webb will be deployed one last time on Earth for testing prior to preparing for launch.

"While operating under augmented personal safety measures because of the novel coronavirus (COVID-19), the project continues to make good progress and achieve significant milestones in preparation for upcoming environmental testing," said Gregory L. Robinson, the Webb program director at NASA Headquarters in Washington, D.C. "Team member safety continues to be our highest priority as the project takes precautions to protect Webb's hardware and continue with integration and testing. NASA will continually assess the project's schedule and adjust decisions as the situation evolves."



A first look at NASA's James Webb Space Telescope fully stowed into the same configuration it will have when loaded into an Ariane V rocket for launch. The image was taken from a webcam in the clean room at Northrop Grumman, in Redondo Beach, California. With staffing restrictions in place due to COVID-19, only essential staff are allowed in the clean room. Credit: Northrop Grumman

Provided by NASA's Goddard Space Flight Center

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