

Image: James Webb Space Telescope wings arrive for testing at Marshall

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Credit: NASA/MSFC/Fred Deaton

NASA Marshall Space Flight Center's X-ray and Cryogenic Test Facility recently received the James Webb Space Telescope's wings for testing.

In order to prepare the Webb structures to meet the extreme temperatures of space, engineers at the X-ray and Cryogenic Facility will

carefully examine telescope components inside a vacuum chamber that simulates the hyper-cold of space, chilling the hardware from room temperature down to a frigid minus 414 F. Results will reveal any imperfections that occur with the components so changes can be made if needed.

The wings have 900 separate parts and enable the mirrors to be folded and fit within a 16.4 foot diameter fairing aboard a rocket. Most of the parts were made from lightweight graphite composite materials using advanced fabrication techniques. Once the telescope is in space, the wings will enable the unfolding of the mirror section to its full 21-foot diameter.

The wing assemblies were designed and constructed by aerospace and defense product supplier ATK at its Utah facility.

The [James Webb Space Telescope](#) is the world's next-generation [space observatory](#) and successor to the [Hubble Space Telescope](#). The most powerful space telescope ever built, the Webb telescope will provide images of the first galaxies ever formed, and will explore planets around distant stars. It is a joint project of NASA, the [European Space Agency](#) and the [Canadian Space Agency](#).

Provided by NASA

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