# NASA delays next-generation space telescope until 2020 (Update)

March 27 2018, by Marcia Dunn

In this April 13, 2017 photo provided by NASA, technicians lift the mirror of the James Webb Space Telescope using a crane at the Goddard Space Flight Center in Greenbelt, Md. The telescope's 18-segmented gold mirror is specially designed to capture infrared light from the first galaxies that formed in the early universe. On Tuesday, March 27, 2018, NASA announced it has delayed the launch of the next-generation space telescope until 2020. (Laura Betz/NASA via AP)

NASA is delaying the launch of its next-generation space telescope—its

highest science priority—until at least 2020.

Top officials said Tuesday that more time is needed to assemble and test the James Webb Space Telescope, which is considered a successor to the long-orbiting Hubble Space Telescope.

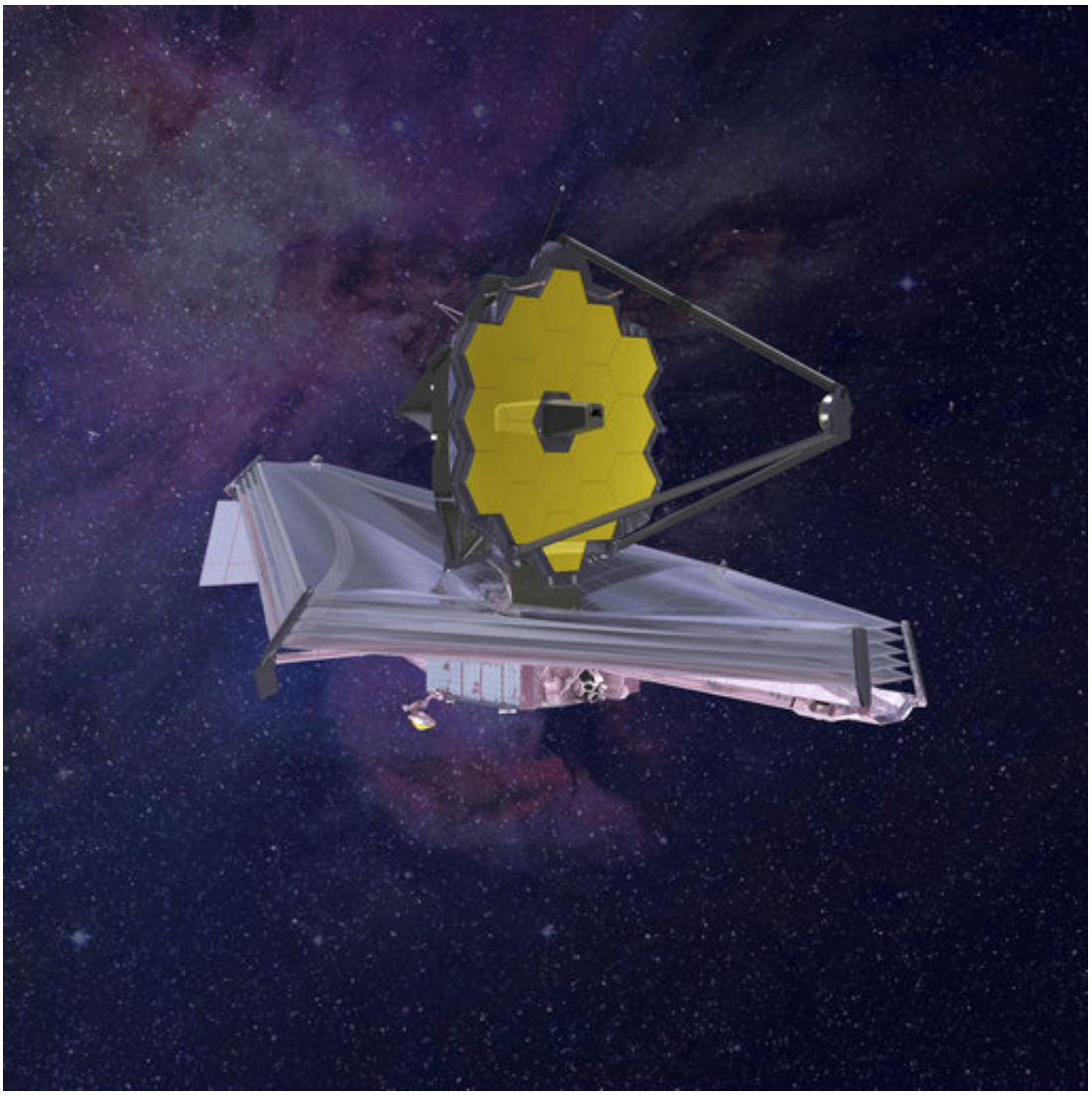
It's the latest in a series of delays for the telescope, dating back a decade. More recently, Webb was supposed to fly this year, but last fall NASA bumped the launch until 2019.

"Simply put, we have one shot to get this right before going into space," explained Thomas Zurbuchen, NASA's associate administrator of science.

For such a highly complex machine designed to "look at the universe in a way that we've never seen it," there can be no shortcuts, he stressed. The telescope will study planets orbiting other stars, while probing the earliest times of the cosmos.

Some mistakes were made while preparing the telescope, which slowed work. At the same time, NASA underestimated the scale of the job, Zurbuchen said.

Unlike Hubble, which was serviced regularly by space shuttle astronauts, Webb will orbit the sun at a point about 1 million miles (1.6 million kilometers) from Earth—unreachable in case of a breakdown. Hubble lifted off in 1990 with a flawed mirror that blurred its vision; spacewalking astronauts had to fix it in 1993.



This 2015 illustration provided by Northrop Grumman via NASA shows the James Webb Space Telescope. On Tuesday, March 27 2018, NASA announced it is delaying the launch of its next-generation space telescope until 2020. (Northrop Grumman/NASA via AP)

"You've heard this before, but it rings true for us. Really, failure is not an option," Zurbuchen told reporters in a teleconference.

NASA and its partner, the European Space Agency, will firm up a new launch date, now tentatively targeted for May 2020 from French Guiana.

An independent review board is being formed to look into the remaining work and feasible launch dates.

Once a date is actually set, NASA said it will provide a new cost estimate. Officials acknowledge the cost may exceed the $8 billion development cap set by Congress. NASA already has poured $7.3 billion into the telescope, said Acting Administrator Robert Lightfoot. He promised Congress would receive a detailed report on schedule and cost this summer.

The telescope is named after the NASA administrator who oversaw the Mercury and Gemini programs and development of the Apollo moon missions. All its parts are now at Northrop Grumman Aerospace Systems in Redondo Beach, California. The two halves of the 13,500-pound (6,100-kilogram) observatory still must be joined and the entire structure tested.

"Extensive testing is the only way to ensure that the mission will succeed with high confidence," Zurbuchen said.

In addition to a mirror 21 feet (6.5 meters) across, Webb will sport a five-layer sunshield the size of a tennis court so it can make infrared observations at frigid temperatures. Several tears across all five layers occurred during folding and deployment of the sunshield during testing. The spacecraft's propulsion system also had its share of trouble.

NASA, meanwhile, is launching a planet-hunting spacecraft named Tess on April 16 from Cape Canaveral. Tess will serve as a scout for Webb, identifying planets around nearby stars that Webb later will study for possible signs of life.

Neither Tess nor other joint missions will be impacted by the Webb delays, Zurbuchen said.