

Image: Mars 2020 rover's seven-foot-long robotic arm installed

July 1 2019



On June 21, 2019, engineers at NASA's Jet Propulsion Laboratory install the main robotic arm on the Mars 2020 rover. Measuring 7 feet (2.1 meters) long, the arm will allow the rover to work as a human geologist would: by holding and using science tools with its turret. Credit: NASA/JPL-Caltech

In this image, taken on June 21, 2019, engineers at NASA's Jet Propulsion Laboratory in Pasadena, California, install the main robotic arm on the Mars 2020 rover. (A smaller arm to handle Mars samples will

be installed inside the rover as well.) The main arm includes five electrical motors and five joints (known as the shoulder azimuth joint, shoulder elevation joint, elbow joint, wrist joint and turret joint). Measuring 7 feet (2.1 meters) long, the arm will allow the rover to work as a human geologist would: by holding and using science tools with its turret, which is essentially its "hand."

"You have to give a hand to our [rover](#) arm installation team," said Ryan van Schilifgaarde, a support engineer at JPL for Mars 2020 assembly. "They made an extremely intricate operation look easy. We're looking forward to more of the same when the arm will receive its turret in the next few weeks."

The rover's turret will include high-definition cameras, science instruments, and a percussive drill and coring mechanism. Those tools will be used to analyze and collect samples of Martian rock and soil, which will be cached on the surface for return to Earth by a future mission.

Mars 2020 will launch from Cape Canaveral Air Force Station in Florida in July of 2020. It will land at Jezero Crater on Feb. 18, 2021.

Charged with returning astronauts to the Moon by 2024, NASA's Artemis lunar exploration plans will establish a sustained [human presence](#) on and around the Moon by 2028. We will use what we learn on the Moon to prepare to send astronauts to Mars.

JPL is building and will manage operations of the Mars 2020 rover for the NASA Science Mission Directorate at the agency's headquarters in Washington.

More information: For more information about the mission, visit: mars.nasa.gov/mars2020/

Provided by Jet Propulsion Laboratory

Citation: Image: Mars 2020 rover's seven-foot-long robotic arm installed (2019, July 1) retrieved 26 April 2024 from

<https://phys.org/news/2019-07-image-mars-rover-seven-foot-long-robotic.html>

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