

NASA's new Moon rocket to launch as soon as August 29

July 20 2022



Artemis-1 is set to journey around the far side of the Moon in a mission lasting four to six weeks -- longer than any ship for astronauts has done without docking, before returning home faster and hotter than ever before.

Mark your calendars: NASA's Artemis program to return to the Moon

could launch its first uncrewed test flight as soon as August 29, the agency said Wednesday.

Artemis-1 is the first in a series of missions as the United States seeks to return humans to the Moon, build a sustained presence there, and use the lessons gained to plan a trip to Mars sometime in the 2030s.

NASA associate administrator Jim Free told reporters the first window of possible launch dates for the giant Space Launch System (SLS) and Orion crew capsule were August 29, September 2, and September 5.

The decision follows final checks on the ground at the Kennedy Space Center in Florida known as "wet dress rehearsals."

The last of these tests, carried out in June, met 90 percent of the team's goals, and on Wednesday Cliff Lanham, senior vehicle operations manager, said engineers have now replaced faulty seals that had caused a hydrogen leak on SLS during the final trial.

Artemis-1 is set to journey around the far side of the Moon in a [mission](#) lasting four to six weeks—longer than any ship for astronauts has done without docking, before returning home faster and hotter than every vessel before.

It will also deploy a number of small satellites called CubeSats to perform experiments in space.

Artemis mission manager Mike Sarafin told reporters: "Our first and our primary objective is to demonstrate Orion's [heat shield](#) in lunar reentry conditions."

When the capsule returns from the Moon, it will be traveling about 24,500 miles an hour (39,400 kilometers per hour) and experience

temperatures half as hot as the Sun outside its heat shield.

The second objective is to demonstrate the flight worthiness of the rocket and crew capsule as they perform all their maneuvers over the course of the mission.

Finally, NASA will look to successfully retrieve Orion after splashdown, and thoroughly inspect it.

Artemis-2 will be the first crewed test, flying around the Moon but not landing, while Artemis-3 will see the first woman and first person of color touch down on the lunar south pole.

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Citation: NASA's new Moon rocket to launch as soon as August 29 (2022, July 20) retrieved 12 February 2025 from <https://phys.org/news/2022-07-nasa-moon-rocket-august.html>

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