

'Go for launch': SpaceX, NASA set for milestone mission

May 27 2020, by Ivan Couronne



This NASA photo shows the SpaceX Falcon 9 rocket with the company's Crew Dragon spacecraft onboard on the launch pad at Launch Complex 39A at sunrise on launch day

SpaceX's landmark launch to the International Space Station—the first crewed mission to blast off from US soil in almost a decade and a first for the commercial sector—was set to proceed on time Wednesday,

following weather worries.

"We are go for launch!" tweeted NASA chief Jim Bridenstine.

The hatch had been closed on the Crew Dragon capsule carrying astronauts Bob Behnken and Doug Hurley, and the access ramp to the spacecraft had been retracted.

The pair could be seen on a video feed wearing futuristic white uniforms adorned with the US flag and the logos of NASA and SpaceX as they performed checks on their touch screens.

The launch is scheduled for 4:33 pm (2033 GMT) from the Kennedy Space Center's Launch Pad 39A. Neil Armstrong and his Apollo 11 crewmates lifted off from the same spot on their historic journey to the Moon.

The mission has proceeded despite shutdowns caused by the coronavirus pandemic, with the crew in quarantine for the past two weeks.

President Donald Trump and First Lady Melania Trump are expected to attend, though the launch could yet be postponed, with thunderstorms criss-crossing the area since the morning.

The next steps before takeoff will be the filling of the rocket tanks.

A tropical storm had earlier formed off the coast of South Carolina, presenting a possible risk if astronauts were forced to carry out an emergency landing in the Atlantic shortly after takeoff, but it weakened after making landfall.

SpaceX win over Boeing

Founded in 2002, Space Exploration Technologies Corp. has torn up the rules to produce a lower-cost alternative to human spaceflight that has gradually won over skeptics.

By 2012, it had become the first private company to dock a cargo capsule at the ISS, resupplying the station regularly ever since.

Two years later, NASA ordered the next step: to transport its astronauts there by adapting the Dragon capsule.

"SpaceX would not be here without NASA," Musk said last year, after a successful dress rehearsal without humans for the trip to the ISS.

The space agency paid more than \$3 billion for SpaceX to design, build, test and operate its reusable capsule for six future space round trips.

The project has experienced delays, explosions, and parachute problems—but even so, SpaceX has beaten aerospace giant Boeing to the punch.



US President Donald Trump has arrived at the Kennedy Space Center for the launch

Boeing's NASA entry, the Starliner, is still not ready.

The move by NASA to invest in privately developed spacecraft—a more budget-friendly proposition than spending tens of billions of dollars developing such systems itself, as it had done for decades—was begun under the presidency of George W. Bush for cargo, and then under Barack Obama for human flight.

At the time, there was immense hostility in Congress and NASA to the start-up's claims of what it could achieve.



NASA astronauts Douglas Hurley, left, and Robert Behnken, wearing SpaceX spacesuits, are seen as they depart the Neil A. Armstrong Operations and Checkout Building for Launch Complex 39A to board the SpaceX Crew Dragon spacecraft

Ending dependence on Russia

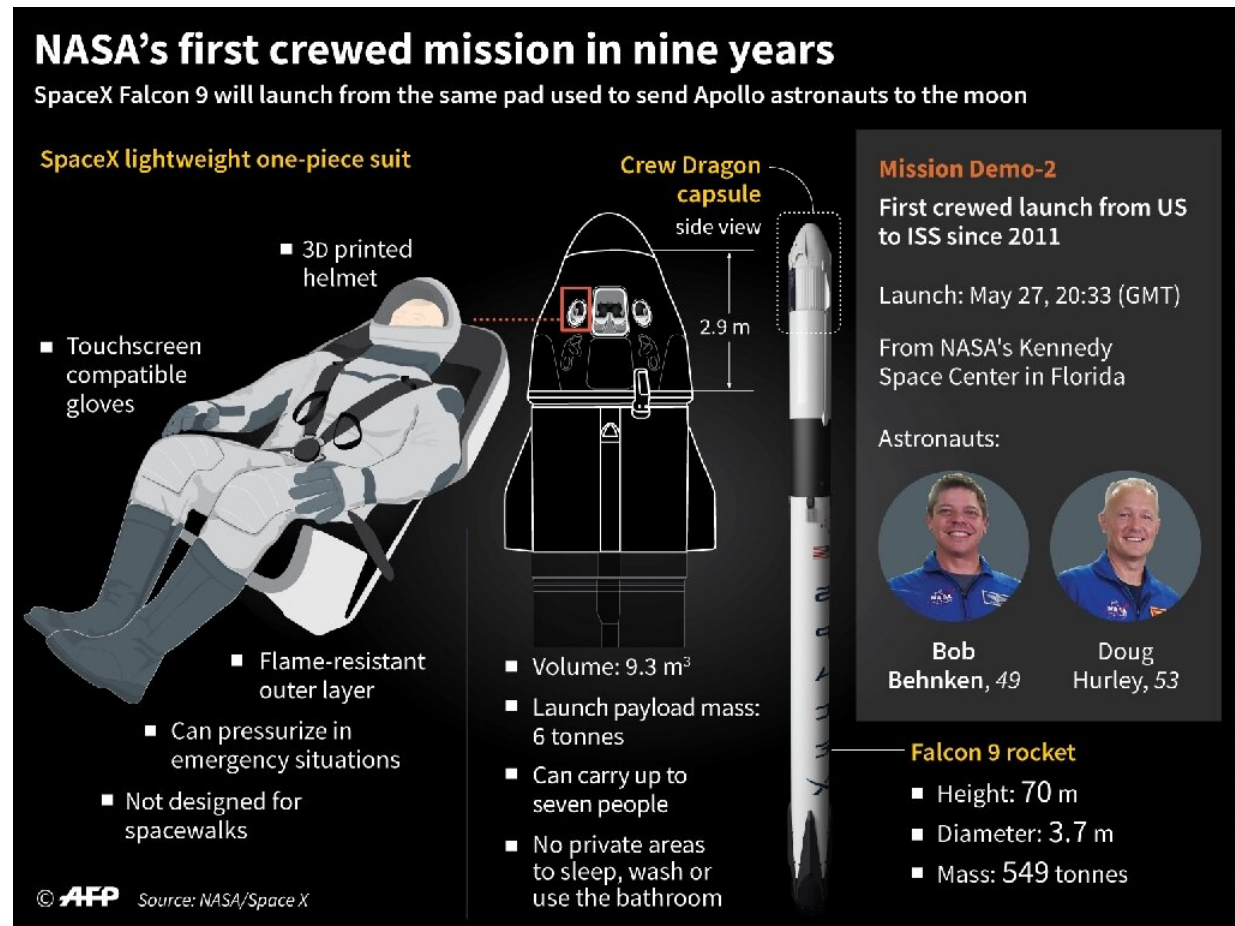
A decade on, it is Trump who will attend the launch.

The Republican is trying to reaffirm American domination of space, militarily but also by ordering a return to the Moon in 2024.

If NASA can entrust "low Earth orbit" space travel to the private sector, it would free up dollars for its more distant missions.

"We envision a future where low Earth orbit is entirely commercialized, where NASA is one customer of many customers," Bridenstine said.

Crew Dragon is a capsule like Apollo, but updated for the 21st century. Touch screens have replaced switches. The interior has more subtle lighting.



Graphic on NASA's first crewed mission since 2011, as it sends two US astronauts to the International Space Station, with the launch date set for May 27.

It looks entirely different from the huge winged space shuttles that carried astronauts into space from US soil from 1981 to 2011.

"We're expecting a smooth ride but we're expecting a loud ride," said Behnken, who, like Hurley, flew in the shuttles twice.

Unlike the shuttles, one of which—the Challenger—exploded in 1986 after launch, Dragon can eject in an emergency if the Falcon 9 rocket has a problem boosting it into space.

Crew Dragon will catch up with the space station on Thursday at an altitude of 400 kilometers, and will probably remain docked there until August.

If it fulfills its mission and is certified safe, it will mean the Americans will no longer depend on Russia for access to space: since 2011, the Russian Soyuz rockets were the only space taxis available.

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