

# SpaceX Dragon's final test: making it to Earth in one piece

March 8 2019

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A Falcon 9 rocket from the private US-based SpaceX is scheduled to lift off, weather permitting, on March 2 to take the Crew Dragon test capsule to the ISS

Crew Dragon, the new vessel built by SpaceX for NASA is set to return Friday off the coast of Florida—the most perilous part of a mission to

prove it can take US astronauts to the International Space Station.

Dragon will undock from the ISS Friday at 0731 GMT. Five hours later, the capsule will leave Earth orbit and re-enter the atmosphere, testing its heat shield. Splashdown is expected at 8:45am Eastern Time (1345 GMT).

"I'd say hypersonic re-entry is probably my biggest concern," Elon Musk, the founder and head of SpaceX, said last Saturday following the capsule's launch from the Kennedy Space Center.

"Will the parachutes deploy correctly? And will the system guide Dragon 2 to the right location and splashdown safely?" he asked.

The mission has been hitch-free thus far. Dragon docked with the ISS Sunday without incident, and the [space station](#)'s three current crew members were able to open the hatch and enter the capsule. They closed the airlock Thursday.

This time around, Dragon's own crew member is a dummy, named Ripley. But if all goes well, the next flight will see two US astronauts book a return trip to the ISS, sometime before the end of the year, according to NASA.

Its descent will be broadcast in its entirety by NASA and SpaceX, thanks in large part to a camera embedded in Dragon.

A NASA spokesman told AFP a drone would be on hand to try to film the capsule, which will be slowed by four parachutes as it falls.

Long lens cameras have also been loaded onto the salvage boat. SpaceX did not broadcast images of Dragon's interior during the flight up to the ISS.

## Like Apollo

NASA and the administration of President Donald Trump have spent all week extolling the historic nature of the mission.

It represents the first private space mission to the ISS, as well as the first time a space vessel capable of carrying people was launched by the US in eight years.

Dragon also marks a return to a "vintage" format: it is the first US capsule since the pioneering Apollo program of the 1960s and 70s.

Capsules have no wings and fall to the earth, their descent slowed only by parachutes—much like the Russian Soyuz craft, which land in the steppes of Kazakhstan.

The last generation of US spacecraft, the Space shuttles, landed like airplanes. Shuttles took American astronauts to space from 1981 to 2011, but their cost proved prohibitive, while two of the original four craft had catastrophic accidents, killing 14 crew members.

After the program was retired, the US government, under then president Barack Obama, turned toward SpaceX and Boeing to develop a new way to ferry its crews, paying the firms for their services.

Due to development delays, the switch has come to fruition only Trump.

For now, Russia will continue to be the only country taking humans to the ISS. NASA buys seats for its astronauts, who train with their cosmonaut counterparts.

Russia, for its part, has not seemed particularly enthused with the success of the Dragon flight.

While the space world was busy congratulating SpaceX and NASA last Saturday, Roskomos tweeted only the following day, praising the US space agency (not SpaceX) but insisting the "safety of flights should be irreproachable," a pointed reference to technical objections Russians had raised on Dragon's approach procedure towards the ISS.

But the [space](#) agencies themselves insist that cooperation remains excellent.

In the long run, said NASA's Johnson Space Center director Mark Geyer, US astronauts will continue to learn Russian, and vice versa.

"There'll be a Russian on our flights, and we'll still have an American on a Soyuz flight. That's mainly because we always want, in case there are issues with either system, that we have an integrated crew."

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