

Billionaire's 2nd SpaceX trip featuring spacewalk aims for early summer launch

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Billionaire Jared Issacman, who flew to space once with SpaceX, is already set for launch No. 2 in early summer.

The mission calls for new spacesuits introduced this past weekend designed so the [crew](#) can survive the plan to suck out all of the air of the spacecraft and allow Issacman and a crewmate to make the first commercial spacewalk in history.

Flying on the Crew Dragon Resilience again, the mission dubbed Polaris Dawn is the first of up to three flights Issacman wants to fly, culminating in what is supposed to be the first crewed mission of SpaceX's Starship.

For now, though, the mission has to use SpaceX's existing rocket options, so he and his three crewmates will launch atop a Falcon 9 from Kennedy Space Center's Launch Complex 39-A. It will mark Issacman's return after his Inspiration4 mission in 2021.

That flight featured three crewmates chosen through a series of contests and fundraisers as well as a representative of his altruistic target, St. Jude Children's Research Hospital.

His crewmates for Polaris Dawn include two SpaceX employees and one of Issacman's pilot friends. The SpaceX crew are mission specialist and medical officer Anna Menon and mission specialist Sarah Gillis. Issacman's flight buddy is mission pilot Scott Poteet, a retired U.S. Air Force lieutenant colonel and demonstration pilot who flew with the Air Force Thunderbirds. He acted as mission director for the Inspiration4 flight.

The crew and SpaceX technical leads held a discussion Sunday on X to detail parts of the mission and discuss the new extravehicular activity (EVA) spacesuit the quartet will wear during the planned spacewalk.

"We hope to learn an awful lot about our suit and the operation associated with it because it's the first commercial EVA, the first time you don't have government astronauts undertaking such a mission,"

Issacman said. "That's important because if we are going to get to the moon or Mars someday we're going to have to get out of our vehicles, out of the safety of the habitat and explore and build and repair things."

Isaacman will be joined by Evans outside the spacecraft. But Resilience doesn't have an airlock, which means all four crew will need the special suits to endure the vacuum of space as the entire cabin will lack an atmosphere.

The suits are similar to the intravehicular activity (IVA) suits that have been worn on the 13 crewed Dragon flights. The new EVA suits have helmets with visors that include digital heads-up displays, allowing the wearer know the [suit](#)'s pressure, temperature and relative humidity.

"We were in SpaceX leaving on a Friday. We come back on a Monday, there's a heads-up display in the suits," Issacman said. "Now the first version of it didn't look anywhere near as sleek and refined as our current flight hardware, but they did it in a weekend. It was like a weekend project because they knew that we needed this type of information."

The new suits also have greater flexibility and protective enhancements adding more seals and pressure valves to keep the crew safe.

The spacewalk is the second of three major goals for the five-day flight plan. The first is to take Dragon to an altitude much higher than previous flights, flying up to 870 miles above Earth on an elliptical orbit.

The record for orbital altitude for a crewed mission was set In 1966, when NASA astronauts Pete Conrad and Richard Gordon flew on the Gemini 11 to 853 miles.

"That puts us just inside the Van Allen radiation belt," Issacman said. "It's an awesome opportunity for us to get some data. But really, it's

about kind of pushing beyond our comfort zone and where we've been at for the last 20 some odd years."

The International Space Station orbits the Earth at about 250 miles.

"If we're going to get to the moon, Mars and beyond, we have got to start venturing out a little bit farther," he said.

After that's accomplished, the Dragon will head back down to about 430 miles altitude where the one-hour spacewalk will happen. Issacman and Evans' suits will be tethered the entire time.

"The suits themselves are fed by the vehicle so all of our [life support](#) is going to be coming from the vehicle—oxygen tanks inside the spacecraft fed through an umbilical to our suits," Evans said. "The umbilicals provide our electronics, our life support, and that is really our connection to the vehicle."

While two will venture out, having all four exposed to the vacuum of space has never been done before. SpaceX is replacing the cupola window feature that Resilience flew with on Inspiration4 with an exit hatch instead. After the spacewalk, the crew will have to repressurize the capsule.

The final main objective of the mission is to test laser-based communication using Starlink satellites, but the five days will also be filled with about 40 science experiments.

When the Polaris Dawn mission was originally announced, it had a target of launching in late 2022, but the time needed to develop the suits and ensure a safe mission kept pushing the launch date. SpaceX has already launched two crewed missions this year with Crew-8 and Axiom-3 with Crew-9 and Axiom-4 targeting August and October later this year.

Polaris Dawn will thread the needle with its planned summer liftoff.

"It's a very ambitious mission," Issacman said. "It's coming up really, really fast."

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