

Space Coast bustling with 4 crew launches on tap from SpaceX, Boeing

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Before summer, 14 more humans could launch from U.S. soil as SpaceX has three missions set to lift off from Kennedy Space Center on Crew

Dragons while Boeing looks to send its CST-100 Starliner up to the International Space Station for the first time with people on board.

"We're heading into, I would say one of the busiest increments in the history of station," said Kathryn Lueders, NASA's associate administrator for the Space Operations Mission Directorate at press conference last week. "We have a string of critical [missions](#) coming up."

That includes not only crewed flights from the Space Coast, but a replacement Soyuz capsule to be sent up from Russia to the station for one damaged by micrometeorites and resupply missions from SpaceX, Northrop Grumman and Russia in the next four months.

The first crewed flight, though, coming no earlier than Feb. 26 is the Crew-6 [mission](#) flying on SpaceX's Crew Dragon Endeavour taking up NASA astronaut and mission commander Stephen Bowen, flying for the fourth time, and first timers pilot Woody Hoburg of NASA, United Arab Emirates astronaut Sultan AlNeyadi and Roscosmos cosmonaut Andrey Fedyaev. Liftoff from KSC's Launch 39-A atop a Falcon 9 rocket is slated for 2:07 a.m.

This is the second SpaceX launch to bring up a Russian cosmonaut, part of the U.S.-Roscosmos exchange that sends up NASA astronauts on Soyuz crews as well. The presence of AlNeyadi, though, marks the first long-term stay of an astronaut from the United Arab Emirates, and his flight was part of a game of musical chairs among the U.S., Russia and Axiom Space, which had previously purchased a ride on board a Soyuz in 2020, but traded to NASA for a future seat—this seat—on a SpaceX flight.

"It's exciting to have another country's astronaut onboard and it's exciting to expand human spaceflight across the globe," said NASA's Joel Montalbano, manager of the International Space Station Program.

The quartet have more than 250 scientific experiments on their plate for what's planned to be around a 180-day stay on board. They take over for Crew-5, who arrived to the ISS back in October and will fly home with a splashdown off Florida's coast in early March.

Crew-6 joins Expedition 68 on the station, which currently features NASA's Frank Rubio and two Russian cosmonauts who flew up to the ISS on board a Soyuz spacecraft last September, but that spacecraft suffered damage to its coolant system leading to Russia's decision to replace their ride on a launch planned for Feb. 20. The existing Soyuz will depart the station without anyone on board making way for the replacement vehicle. The trio is now scheduled to remain on board until the fall.

The ISS has been continuously occupied since November 2000, orbiting the Earth about every 90 minutes at around 250 miles altitude on average traveling about 17,500 mph.

The normal population of seven could get bumped twice before the summer with short-duration visits from both Boeing's Starliner on the Crew Flight Test (CFT) mission as early as mid-April and the second private Axiom Space mission on a SpaceX Crew Dragon that could come before the end of June.

CFT will bring NASA astronauts Butch Wilmore and Suni Williams launching atop a United Launch Alliance Atlas V rocket from Cape Canaveral Space Force Station's Space Launch Complex 41 on a planned eight-day mission that if successful will pave the way for Starliner to join SpaceX Crew Dragons for normal ferry service from the U.S. on [crew](#) rotation missions to the ISS.

The Ax-2 mission will bring up former NASA astronaut Peggy Whitson, who last flew in 2017 setting an American record with 665 days in [space](#)

. Now Axiom Space's Director of Human Space Flight, Whitson will command the crew of four that also features aviator John Shoffner as pilot and two mission specialist seats paid for by the Saudi Space Commission. The names of those two have not been released.

On the schedule for no earlier than March, and shoehorned between Crew-6 and Ax-2 but not headed for the ISS, is a third SpaceX Crew Dragon mission from KSC—Polaris Dawn.

It's the first of three planned private missions dubbed the Polaris Program spearheaded by billionaire Jared Isaacman that will fly him and three others on board the same spacecraft that flew him on the three-day orbital flight Inspiration4 back in fall 2021—the Crew Dragon Resilience. Also flying are Scott Poteet, given the title of mission pilot, specialist Sarah Gillis, and specialist and medical officer Anna Menon. Both Gillis and Menon are SpaceX employees.

The mission plans to let at least one of the four crew venture outside the spacecraft on a tethered spacewalk during a five-day mission orbiting the Earth at more than 853 miles altitude, which would break a mark set by Gemini 11 in 1966 for crewed low-Earth orbit.

SpaceX has surged ahead of Boeing with its crew capsule since 2020. Both had been running at similar paces in 2019, but Boeing's first attempt to rendezvous with the ISS in December of that year failed, causing more than a year and a half of delays before finally making a successful docking last May.

SpaceX, however, was able to complete its crewed test flight, Demo-2, back in May 2020, setting up its first operational mission later that year with Crew-1. Crew-6 marks SpaceX's sixth operational flight with Crew-7 planned this fall. With With private missions Ax-1 and Inspiration4 already under its belt, the four existing Crew Dragon

spacecraft—Endeavour, Resilience, Endurance and Freedom—have flown eight times with humans on board. That total could grow to 12 by the end of the year.

Crew Dragon Endeavour, which flew on Demo-2, Crew-2 and Ax-1, is making its fourth flight, the most of any of that spacecraft.

"We actually have one more Crew Dragon vehicle in early stages of production now," said SpaceX's Sarah Walker, director of Dragon Mission Management. "We expect it to come online and enter the [flight](#) rotation late next year, I believe. So that'll bring us to a total of three cargo vehicles and five crew vehicles."

She said while initially Crew Dragon is qualified for five flights, the company is "well underway through their qualification campaign to expand that much further. We expect 15 flights for most components. So I think that will carry us well through the manifest we see ahead of us."

SpaceX has NASA contracts for up to 14 crew flights to the ISS in addition to commercial flights.

Boeing has six operational flights on the books for Starliner beyond CFT, but unlike SpaceX, has no announced plans for its use on private missions such as Ax-2.

Axiom Space's initial visit to the ISS also brought a former NASA astronaut as well as three customers who paid \$55 million each for what ended up being nearly 16 days on board the station. Ax-2's stay is slated for 10 days.

NASA is charging Axiom's Space a base of \$10 million for what it calls integration and basic service on top of ISS crew time. Daily costs for food and waste disposal are also part of NASA's published schedule of

costs for commercial visits. While NASA approved the Ax-2 mission last September, it has yet to give approval to any future commercial visits to the station.

Despite the crowded slate to the ISS over the next few months, Lueders said teams around all of the missions are keeping their minds on task.

"This team here knows that they need to focus on us doing this right, and that's carefully working through each of these missions to ensure the safe operation of the International Space Station and our ongoing operations there," she said.

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