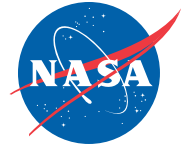




National Aeronautics and  
Space Administration



## NASA'S COMMERCIAL CREW PROGRAM MISSION OVERVIEW

## NASA's SpaceX Crew-3



NASA's SpaceX Crew-3 mission is the third crew rotation flight of the Crew Dragon spacecraft and Falcon 9 rocket, carrying NASA astronauts [Raja Chari](#), mission commander, [Tom Marshburn](#), pilot, and [Kayla Barron](#), mission specialist and ESA (European Space Agency) astronaut [Matthias Maurer](#), who also will serve as a mission specialist.

This is the first spaceflight for Chari, Barron and Mauer. It is the third spaceflight for Marshburn, who previously served as a crew member of the space shuttle STS-127 mission in 2009 and Expedition 34/35 aboard the space station, which concluded in 2013.

The mission will lift off from Launch Complex 39A at NASA's Kennedy Space Center in Florida. The crew is scheduled for a long-duration stay aboard the orbiting laboratory, living and working as part of what is expected to be a seven-member crew.



### LAUNCH VEHICLE

#### SpaceX Falcon 9

**HEIGHT:** 229.6 ft

**DIAMETER:** 12 ft

**PROPELLENT:** LOX (liquid oxygen) and rocket grade kerosene (RP-1)

**PROPULSION:** 9 SpaceX Merlin engines – 190,000 lbf each

**LAUNCH LOCATION:** Launch Complex 39A at NASA's Kennedy Space Center in Florida

Falcon 9 will launch Dragon from historic Launch Complex 39A, accelerating to help Dragon reach 17,500 mph to reach an intercept course with the International Space Station. The Falcon 9 that will be used to launch this mission is the same booster that launched NASA's Crew-1, marking the first time a flight-proven booster will be used for a crewed launch.

### SPACECRAFT

#### SpaceX Crew Dragon

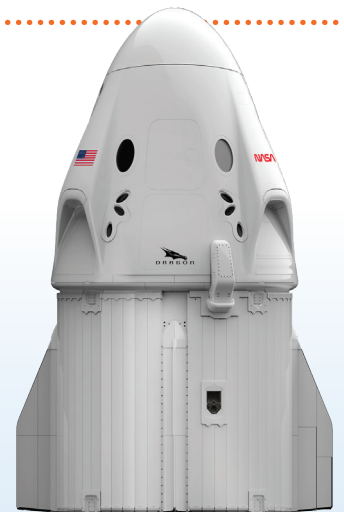
**HEIGHT:** 26.7 ft

**DIAMETER:** 13 ft

**VOLUME:** 328 ft<sup>3</sup>

**CREW CAPACITY:** Up to seven

**RETURN:** Splashdown-based water return



Once in orbit, the crew and SpaceX mission control will monitor a series of automatic maneuvers that will guide Dragon and the Crew-2 astronauts to the International Space Station. After a predetermined time in orbit driven by the launch date, Dragon will be in position to rendezvous and dock with the station. The spacecraft is designed to autonomously dock, with the ability for the crew to take control and pilot manually if necessary.

The Dragon being used in this flight will remain docked to the station for approximately six months, the full-length of a long-duration International Space Station expedition. It is the same Dragon astronauts Douglas Hurley and Robert Behnken named Endeavour and flew to the station for their historic Demo-2 mission.

# MEET THE CREW-3 CREW

**Raja Chari**  
COMMANDER

Hometown: Milwaukee, WI  
Previous Missions:  
First Mission



**Thomas Marshburn**  
PILOT

Hometown: Statesville, NC  
Previous Missions: STS-127,  
Expeditions 34/35



**Kayla Barron**  
MISSION SPECIALIST

Hometown: Richland, WA  
(born in Pocatella, ID)  
Previous Missions:  
First Mission



**Matthias Maurer**  
MISSION SPECIALIST

Hometown: Sankt Wendel  
(Saarland), Germany  
Previous Missions:  
First Mission



## BEHIND THE DESIGN



The Crew Dragon Crew-3 patch highlights the beauty of space and the vehicle that is delivering our team to the International Space Station. The sunlit capsule heralds the dawn of a new era of human space flight, as commercial vehicles expand into low earth orbit. The capsule flies upward, thrusting beyond the edge of the circle, representing an international effort that pushes to reach new heights of space exploration. The flames below the capsule honor the of thousands of workers who contributed to the US commercial vehicle effort—the fire in their hearts propels the program’s success. Since Crew-3 is the third operational flight to the Space Station, the number three figures prominently in both the shape of the exhaust below the capsule and the highlighted stars. A dragon is embedded in the exhaust opposite the three for the capsule’s namesake. Finally, four red planets represent the four crew members of the mission, as well as humanity’s dream to explore Mars and even more distant planetary bodies.