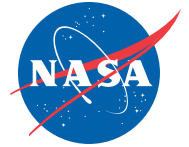




National Aeronautics and
Space Administration



NASA'S COMMERCIAL CREW PROGRAM MISSION OVERVIEW

NASA's SpaceX Crew-7



NASA and SpaceX are gearing up to launch an international crew of four on an American rocket and spacecraft to the International Space Station. NASA's SpaceX Crew-7 will launch NASA astronaut Jasmin Moghbeli, mission commander; ESA (European Space Agency) astronaut Andreas Mogensen, pilot; JAXA (Japan Aerospace Exploration Agency) astronaut Satoshi Furukawa; and Roscosmos cosmonaut Konstantin Borisov, who will both join as mission specialists.

Following its arrival to the space station, Crew-7 will dock to the space-facing, or zenith, port of the Harmony module. The flight is the seventh crew rotation mission with SpaceX to station, and the eighth flight of a SpaceX Dragon with people as part of NASA's Commercial Crew Program.



LAUNCH VEHICLE

SpaceX Falcon 9 Rocket

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

The SpaceX Falcon 9 will launch Dragon from historic Launch Complex 39A. It will accelerate Dragon to an orbital velocity of 17,500 mph prior to spacecraft separation and rendezvous and docking with the International Space Station. This will be the first mission for this Falcon 9 first stage booster. Following liftoff, the Falcon 9 first stage will separate from the second stage and land at SpaceX's Landing Zone 1 at Cape Canaveral Space Force Station in Florida.



SPACECRAFT

SpaceX Dragon

HEIGHT: 26.7 ft

DIAMETER: 13 ft

VOLUME: 328 ft³

CREW CAPACITY: Up to seven

RETURN: Splashdown-based water return off the coast of Florida

The Crew-7 mission will fly aboard SpaceX's Dragon spacecraft. The spacecraft, named Endurance, previously supported NASA's SpaceX Crew-3 and Crew-5 flights to and from the space station. As part of the refurbishment process, teams installed new components, including the heat shield, parachutes, and Draco engines.

These critical hardware components help the spacecraft withstand launch and reentry, and provide steering and thrust to the spacecraft.

MEET CREW-7

Jasmin Moghbeli
COMMANDER



Hometown:
Baldwin, New York
Previous Missions:
First Mission

Andreas Mogensen
PILOT



Hometown:
Copenhagen, Denmark
Previous Missions:
Ten-day mission to the
space station in 2015

Satoshi Furukawa
MISSION SPECIALIST



Hometown:
Kanagawa, Japan
Previous Missions:
Expeditions 28 and 29

Konstantin Borisov
MISSION SPECIALIST



Hometown:
Zhukovsky, Russia
Previous Missions:
First Mission

SCIENCE

While aboard the microgravity laboratory, the crew will perform [science](#), technology demonstrations, and maintenance activities.

The [International Space Station External Microorganisms](#) investigation will involve astronauts collecting samples during a spacewalk to determine whether the space station releases microorganisms through life support system vents. With this, scientists hope to better understand microorganisms' ability to survive and reproduce in space.

ESA's [Sleep in Orbit](#) investigation will examine the physiological differences between sleep on Earth and in space, and a collection of 14 ongoing experiments – called Complement of Integrated Protocols for Human Exploration Research ([CIPHER](#)) - will collect multiple physiological and psychological measures to view how extended time in space affects the human body.

BEHIND THE DESIGN



Central to the Crew-7 patch is the colorful Earth, with its beauty and magnificence standing out against the white dragon and black background. The caring dragon holds the Earth protectively, highlighting that every aspect of Crew-7's long-duration mission is ultimately for the benefit of our home planet and those on it. The dragon is a shoutout to the namesake of SpaceX's Dragon spacecraft delivering the crew of four to and from the International Space Station. The dragon is on guard for threats against the Earth, its neck craned in the shape of a "7" to represent the seventh operational flight of a Dragon spacecraft to the International Space Station for NASA. The dragon's tail curves upwards towards a golden star, symbolizing the ascent towards the stars in honor of the pioneering spirit and perseverance that continue to propel us further in human space exploration. The colors blue, white, and red on the tail symbolize the international make-up of the four crew members, with the colors encompassing those used in the flags of all four nations. The crew is proud to represent the progress that can be achieved for all of humanity when we work together in unity. Crew-7 dedicates this patch to all those who contributed to the success of the mission, especially their families, and to the next generation of explorers.