National Aeronautics and Space Administration

NASA'S COMMERCIAL CREW PROGRAM

MISSION OVERVIEW

NASA's SpaceX **Crew-4**

NASA's SpaceX Crew-4 mission is the fourth crew rotational flight of the Crew Dragon spacecraft and Falcon 9 rocket, carrying NASA astronauts Kjell Lindgren, mission commander, Bob Hines, pilot, and Jessica Watkins, mission specialist, as well as ESA (European Space Agency) astronaut Samantha Cristoforetti, who also will serve as a mission specialist.

This is the first spaceflight for Hines and Watkins and the second flight for Lindgren and Cirstoforetti.

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 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

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 fourth mission for this Falcon 9 which previously supported CRS-22, Crew-3, and Turksat-5B. Flying crew on a fourth-flight booster will be a first for the Commercial Crew Program and a huge accomplishment for the program and industry.

SPACECRAFT

SpaceX Crew Dragon

HEIGHT: 26.7 ft

DIAMETER: 13 ft

VOLUME: 328 ft^3

CREW CAPACITY: Up to seven

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

The Crew-4 mission will fly a new Crew Dragon spacecraft that the crew has named *Freedom*. The name celebrates a fundamental human right, and the industry and innovation that emanate from the unencumbered human spirit. The name is also meant to pay tribute to Freedom 7, the first United States human spaceflight, and the hard work and ingenuity of those involved in Commercial Crew today to usher in a new era of human spaceflight. Crew-4 is scheduled for a long duration stay of up to six months aboard station conducting science and maintenance before returning to Earth in the fall of 2022.

MEET THE **CREW-4** ASTRONAUTS

Kjell Lindgren
COMMANDER

Hometown: Taipei, Taiwan

Previous Missions:
Expedition 44/45

Bob Hines
PILOT

Hometown: Fayetteville, NC

Previous Missions:
First Mission

Jessica Watkins
MISSION SPECIALIST

Hometown: Lafayette, CO
(born in Gaithersburg, MD)

Previous Missions:
First Mission

Samantha Cristoforetti
MISSION SPECIALIST

Hometown: Milan, Italy

Previous Missions:
Expedition 42/43

BEHIND THE DESIGN

The free-flying Dragon capsule forms the thorax of the central element of the patch, the Dragonfly – a beautiful and agile flyer. For many, the dragonfly represents transformation and good fortune. On its way to the International Space Station, the capsule appears suspended in low Earth orbit with the Earth below and Moon above. Four bright stars represent the four crewmembers' families and their steadfast patience, love, and support. The remaining multitude of stars represent the countless members of the NASA, SpaceX, and international partner teams, whose ingenuity, vigilance, and tireless work has made this mission possible.

Patch designer: Alexandra Lindgren

SP-2022-03-171-KSC