National Aeronautics and Space Administration

OVERVIEW

SpaceX CRS-15 Mission

SpaceX's 15th contracted cargo resupply mission to the International Space Station for NASA will deliver over 5,900 pounds of science and research, crew supplies and vehicle hardware to the orbital laboratory and its crew.

Launch is targeted for no earlier than June 29, 2018 at 5:42 a.m. EDT.

Launch Vehicle
Falcon 9 Rocket

- Two-stage rocket minimizes the number of separation events
- First stage booster flown previously on the launch of NASA's Transiting Exoplanet Survey Satellite (TESS).

Launch Site:
Space Launch Complex 40,
Cape Canaveral Air Force Station in Florida

Robotic Arm Operators for Dragon Capture

Ricky Arnold (prime)
NASA

Drew Feustel
NASA

Dragon Spacecraft

- Hardware and supplies will support dozens of science and research investigations
- This Dragon previously flew on SpaceX CRS-9. It will be attached to station's Harmony module.
- In August, it will re-enter Earth's atmosphere and splash down in the Pacific Ocean off the coast of Baja California

For more information, visit www.nasa.gov/spacex

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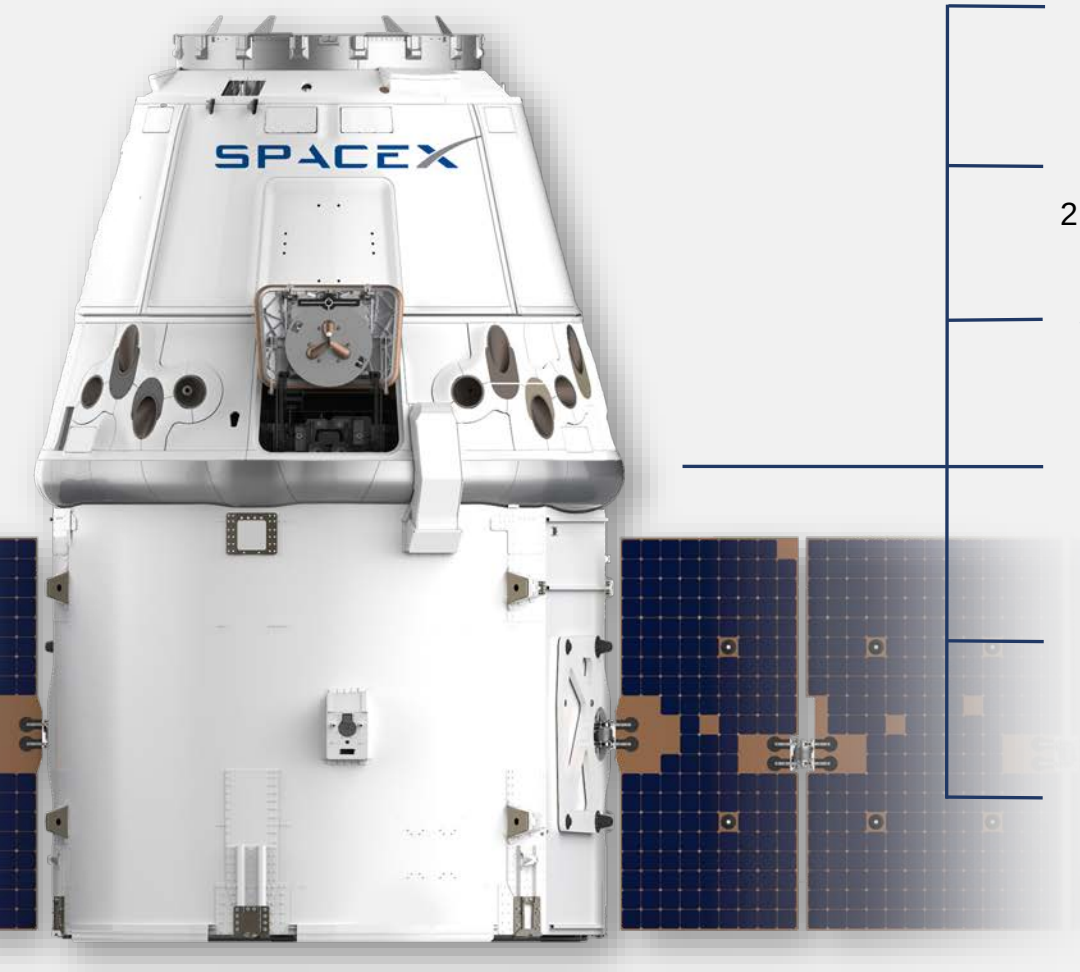
CARGO

SpaceX CRS-15 Mission

*Masses are subject to change prior to launch



Crew Supplies
452 pounds / 205 kilograms

Science Investigations
2,718 pounds / 1,233 kilograms

Spacewalk Equipment
139 pounds / 63 kilograms

Vehicle Hardware
392 pounds / 178 kilograms

Computer Resources
46 pounds / 21 kilograms

Russian Hardware
27 pounds / 12 kilograms

Unpressurized Payloads

ECOSTRESS - 1,213 pounds / 550 kilograms
LATCHING END EFFECTOR - 959 pounds / 435 kilograms

Total Cargo:	**5,946 pounds / 2,697 kilograms**
Total Pressurized Cargo with Packaging:	**3,774 pounds / 1,712 kilograms**
Unpressurized Payloads:	**2,172 pounds / 985 kilograms**

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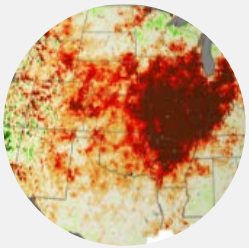
RESEARCH

SpaceX CRS-15 Mission

The SpaceX cargo spacecraft will deliver dozens of investigations to the International Space Station, including studies in cellular biology, Earth science, and artificial intelligence.

A cellular biology investigation (Micro-12) to understand how microgravity affects the growth, gene expression and ability of a model bacterium to transfer electrons through its cell membrane along bacterial nanowires it produces. Such bacteria could be used in microbial fuel cells to make electricity from waste organic material.



An Earth science instrument called ECOsystem Spaceborne Thermal Radiometer Experiment on Space Station (ECOSTRESS) will provide a new space-based measurement of how plants respond to changes in water availability. This data can help society better manage agricultural water use.

An observational pilot study with the Crew Interactive Mobile companion (CIMON), aiming to get first insights into the effects of crew support by an artificial intelligence (AI) in terms of efficiency and acceptance during long-term missions in space.

The Space Algae investigation to sequence the whole genome of an algae population grown in space to identify genes related to growth. Algae may perceive microgravity as an abiotic stress, which can trigger production of algae oils that may help mitigate the harmful effects of microgravity and cosmic radiation during spaceflight, consume waste carbon dioxide, and also provide basic nutrition.