



NG-20 Mission

Delivering Cargo to the International Space Station



Mission Parameters

Launch Vehicle:
Falcon 9 Rocket

Cargo Spacecraft:
Cygnus

Launch Site:
Space Launch Complex
40 (SLC-40)
Cape Canaveral Space
Force Station

Ascent Cargo Mass:
Up to 3,748 kg (8,263 lbs.)

Descent Cargo Mass:
Up to 3,850 kg (8,487 lbs.)

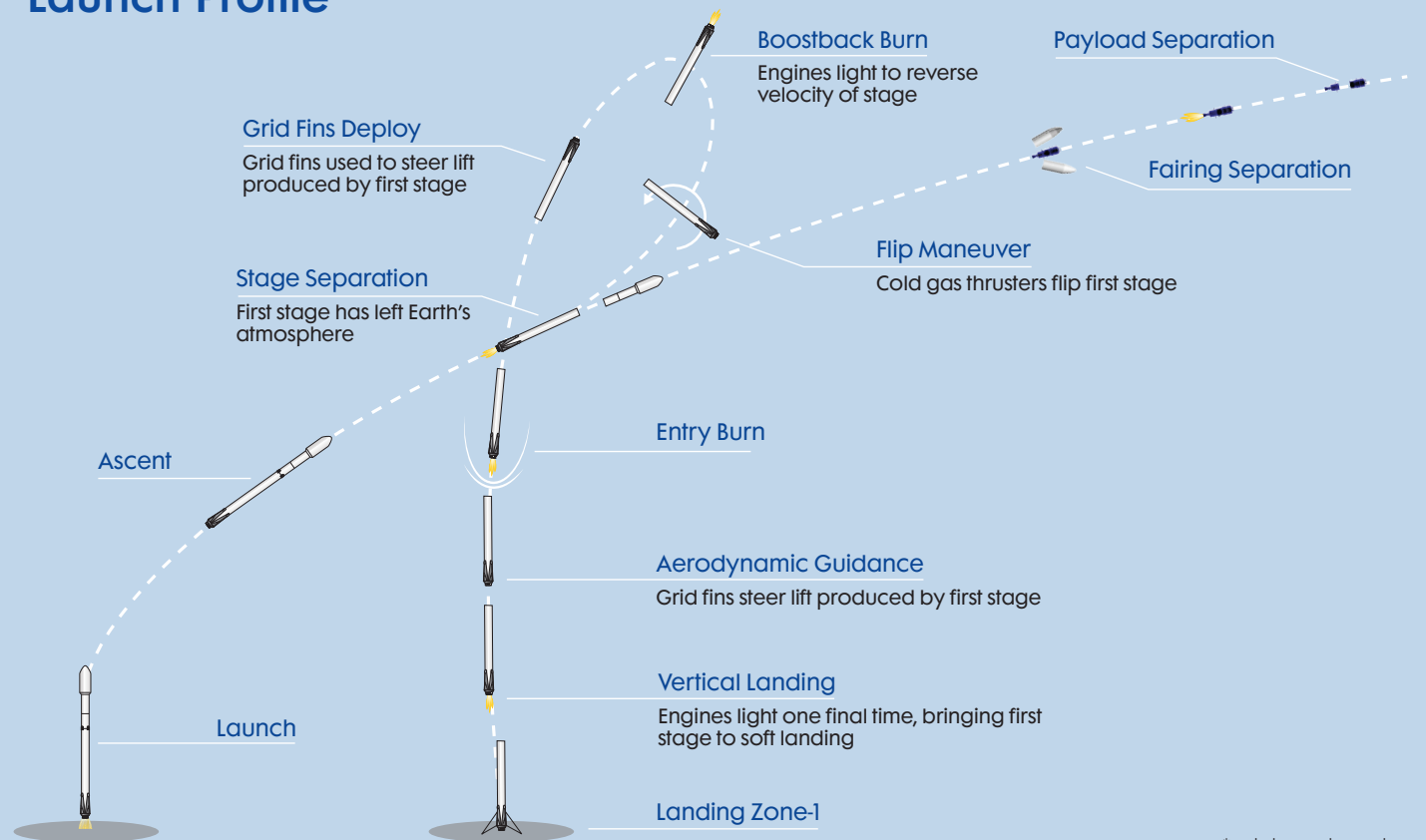
Initial Orbit Altitude:
245 km x 245 km

Inclination:
51.64°

Transit to Station:
Two Days

Duration at Station:
Up to 180 Days Berthed

Launch Profile



*not drawn to scale

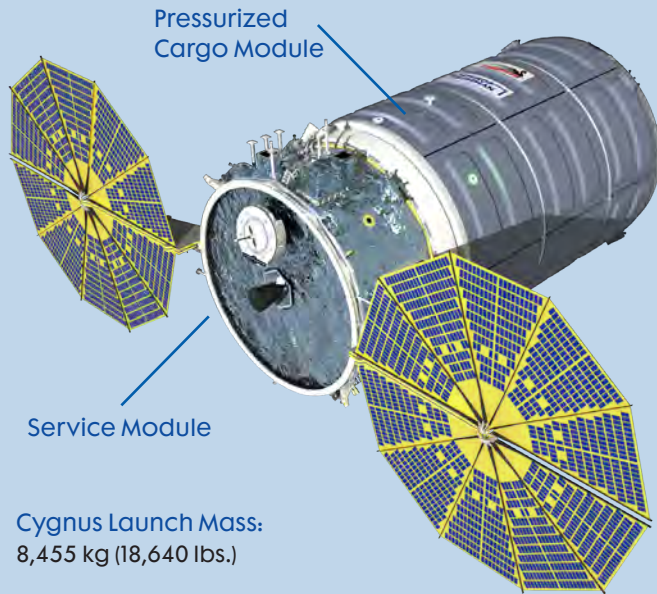
Mission Description

For the NG-20 mission, the Cygnus spacecraft will deliver more than 3,700 kg. (8,200 lb.) of cargo to the space station. Cygnus is comprised of two primary components, the Pressurized Cargo Module and the Service Module. In keeping with company tradition, each spacecraft is named after an important figure in the aerospace industry. Northrop Grumman is honored to name the NG-20 Cygnus spacecraft after NASA astronaut

Dr. Patricia "Patty" Hilliard Robertson, an accomplished medical doctor and aerobatic pilot who passed away before she was able to fly to the ISS. The S.S. Patricia "Patty" Hilliard Robertson will be launched into orbit using a Falcon 9 rocket from Space Launch Complex 40 at Cape Canaveral Space Force Station in Florida. Northrop Grumman will once again load critical, time-sensitive cargo into Cygnus 24 hours before the scheduled launch.

Upon arrival at the International Space Station, the cargo will be unloaded from Cygnus. Beginning with the NG-17 mission, Cygnus offers the capability to perform routine reboost services as needed while berthed to the station. Once its mission has been completed, Cygnus will perform a safe, destructive reentry into Earth's atmosphere.

Cygnus Spacecraft



Cygnus Launch Mass:
8,455 kg (18,640 lbs.)

Propellant Mass:
1,218 kg (2,685 lbs.)

Ascent Cargo Mass:
Up to 3,748 kg (8,263 lbs.)

Pressurized Volume:
27 m³

Height:
6.39 m (21 ft.)

Power Generation:
2 fixed wing UltraFlex™ solar arrays,
ZTI gallium arsenide cells

Descent Cargo Mass:
Up to 3,850 kg (8,487 lbs.)

Falcon 9 Launch Vehicle



Diameter:
3.7 m (12 ft.)

Height:
70 m (229.6 ft.)

Mass:
549,054 kg (1,207,920 lbs.)

Payload to LEO:
22,800 kg (50,265 lbs.)