



AX-1 MISSION

MISSION OVERVIEW

SpaceX is targeting Friday, April 8 for Falcon 9's launch of Axiom Space's **Ax-1** mission to the International Space Station from historic Launch Complex 39A (LC-39A) at NASA's Kennedy Space Center in Florida. The instantaneous launch window opens at 11:17 a.m. ET, 15:17 UTC, with a backup opportunity available on Saturday, April 9 at 10:54 a.m. ET, 14:54 UTC.

This will be the fifth flight for this Falcon 9 first stage booster, which previously supported launch of GPS III Space Vehicle 04, GPS III Space Vehicle 05, Inspiration4, and one Starlink mission. Following stage separation, Falcon 9's first stage will land on the A Shortfall of Gravitas droneship stationed in the Atlantic Ocean. The Dragon spacecraft supporting this mission previously flew the Demo-2 and Crew-2 missions.

Axiom Space's Ax-1 mission is the first all-private human spaceflight mission to the International Space Station. The Ax-1 crew will participate in educational outreach and conduct **innovative research** experiments while on the orbiting laboratory.

WEBCAST

[The webcast](#) for the Ax-1 mission will go live approximately three hours before liftoff and will remain live until roughly fifteen minutes post launch. Live mission coverage will resume about two hours prior to docking.

PHOTOS

High-resolution photos will be posted at [flickr.com/spacex](https://www.flickr.com/photos/spacex/).

THE ASTRONAUTS



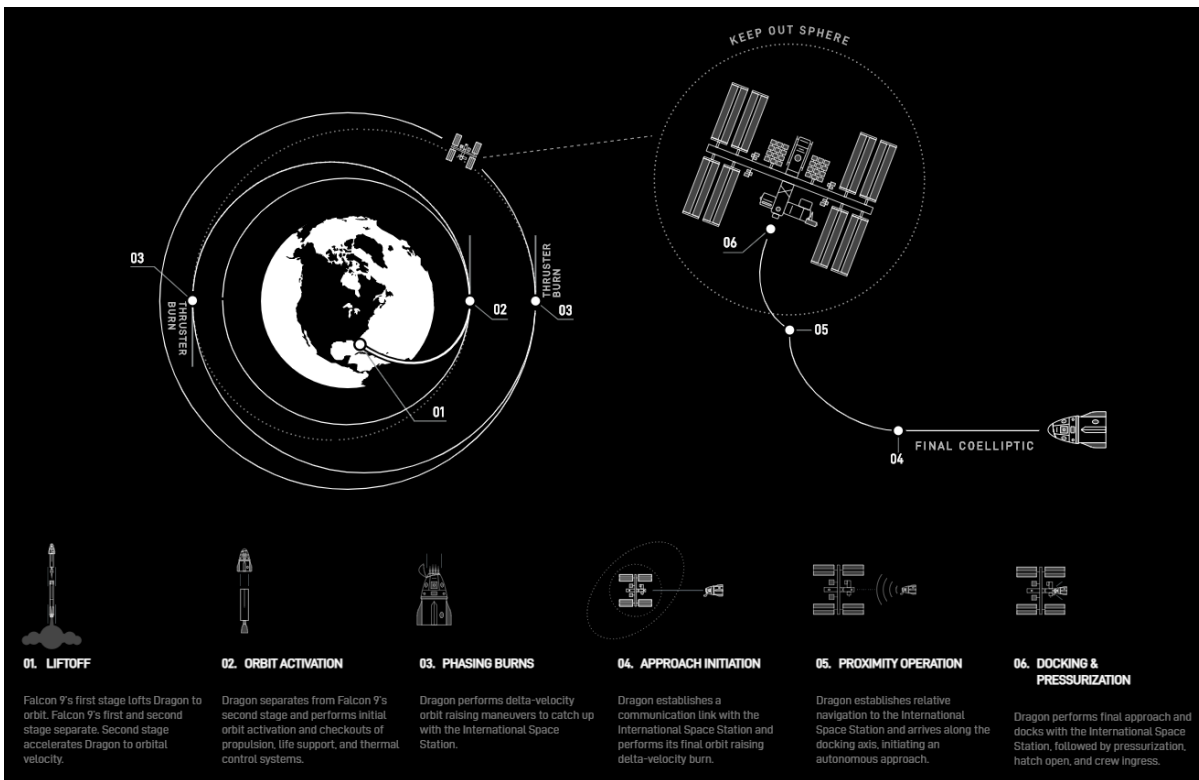
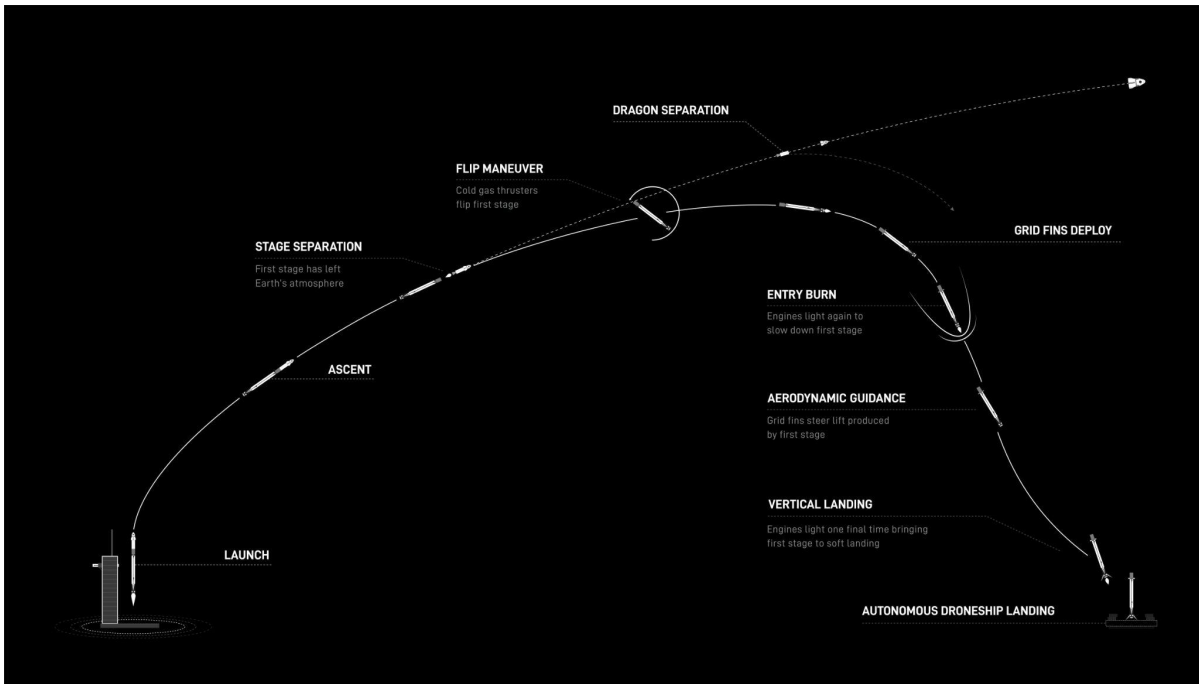
Michael López-Alegría, Commander

Larry Connor, Pilot

Eytan Stibbe, Mission Specialist

Mark Pathy, Mission Specialist

MISSION PROFILE



01. LIFTOFF

Falcon 9's first stage lofts Dragon to orbit. Falcon 9's first and second stage separate. Second stage accelerates Dragon to orbital velocity.



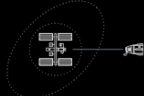
02. ORBIT ACTIVATION

Dragon separates from Falcon 9's second stage and performs initial orbit activation and checkouts of propulsion, life support, and thermal control systems.



03. PHASING BURNS

Dragon performs delta-velocity orbit raising maneuvers to catch up with the International Space Station.



04. APPROACH INITIATION

Dragon establishes a communication link with the International Space Station and performs its final orbit raising delta-velocity burn.



05. PROXIMITY OPERATION

Dragon establishes relative navigation to the International Space Station and arrives along the docking axis, initiating an autonomous approach.



06. DOCKING & PRESSURIZATION

Dragon performs final approach and docks with the International Space Station, followed by pressurization, hatch open, and crew ingress.

MISSION TIMELINE (ALL TIMES APPROXIMATE)

COUNTDOWN

Hr/Min/Sec	Event
- 00:45:00	SpaceX Launch Director verifies go for propellant load
- 00:42:00	Crew access arm retracts
- 00:37:00	Dragon's launch escape system is armed
- 00:35:00	RP-1 (rocket grade kerosene) loading begins
- 00:35:00	1st stage LOX (liquid oxygen) loading begins
- 00:16:00	2nd stage LOX loading begins
- 00:07:00	Falcon 9 begins engine chill prior to launch
- 00:05:00	Dragon transitions to internal power
- 00:01:00	Command flight computer to begin final prelaunch checks
- 00:01:00	Propellant tank pressurization to flight pressure begins
- 00:00:45	SpaceX Launch Director verifies go for launch
- 00:00:03	Engine controller commands engine ignition sequence to start
- 00:00:00	Falcon 9 liftoff

LAUNCH, LANDING AND DEPLOYMENT

Hr/Min/Sec	Event
00:01:02	Max Q (moment of peak mechanical stress on the rocket)
00:02:35	1st stage main engine cutoff (MECO)
00:02:39	1st and 2nd stages separate
00:02:46	2nd stage engine starts
00:07:25	1st stage entry burn begins
00:08:48	2nd stage engine cutoff (SECO-1)
00:09:02	1st stage landing burn begins
00:09:29	1st stage landing
00:12:07	Dragon separates from 2nd stage
00:12:55	Dragon nosecone open sequence begins