



# IXPE MISSION

## MISSION OVERVIEW

SpaceX is targeting Thursday, December 9 for Falcon 9's launch of NASA's Imaging X-ray Polarimetry Explorer (**IXPE**) mission to low Earth orbit from historic Launch Complex 39A (LC-39A) at NASA's Kennedy Space Center in Florida. The 90-minute launch window opens at 1:00 a.m. EST (6:00 UTC). A backup opportunity is available on Friday, December 10 with the same 90-minute launch window, should it be needed.

This will be the fifth flight for this Falcon 9's first stage booster, which previously supported launch of Crew-1, Crew-2, SXM-8, and CRS-23. Following stage separation, Falcon 9's first stage will land on the Just Read the Instructions droneship, which will be located in the Atlantic Ocean.

## WEBCAST

[A live webcast of this mission](#) will begin about 15 minutes prior to liftoff.

## PHOTOS

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

## MISSION PROFILE



# MISSION TIMELINE (ALL TIMES APPROXIMATE)

## COUNTDOWN

<b>Hr/Min/Sec</b>	<b>Event</b>
- 00:38:00	SpaceX Launch Director verifies go for propellant load
- 00:35:00	RP-1 (rocket grade kerosene) loading underway
- 00:35:00	1st stage LOX (liquid oxygen) loading underway
- 00:16:00	2nd stage LOX loading underway
- 00:07:00	Falcon 9 begins engine chill prior to launch
- 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

<b>Hr/Min/Sec</b>	<b>Event</b>
00:01:12	Max Q (moment of peak mechanical stress on the rocket)
00:02:33	1st stage main engine cutoff (MECO)
00:02:36	1st and 2nd stages separate
00:02:44	2nd stage engine starts
00:03:37	Fairing deployment
00:06:19	1st stage entry burn start
00:06:47	1st stage entry burn complete
00:08:04	2nd stage engine cutoff (SECO-1)
00:08:10	1st stage landing burn start
00:08:35	1st stage landing burn complete
00:28:51	2nd stage engine starts
00:29:51	2nd stage engine cutoff (SECO-2)
00:33:22	IXPE deploys