

# SES O3B MPOWER MISSION



## MISSION OVERVIEW

SpaceX is targeting Friday, December 16 for a Falcon 9 launch of **the SES O3b mPOWER mission** to medium-Earth orbit from Space Launch Complex 40 (SLC-40) at Cape Canaveral Space Force Station in Florida. The 87-minute launch window opens at 4:21 p.m. ET (21:21 UTC), and a backup opportunity is available on Saturday, December 17 with the same window.

The first stage booster supporting this mission previously launched CRS-22, Crew-3, Turksat 5B, Crew-4, CRS-25, Eutelsat HOTBIRD 13G and one Starlink mission. Following stage separation, the first stage will land on the A Shortfall of Gravitas dronship, which will be stationed in the Atlantic Ocean.

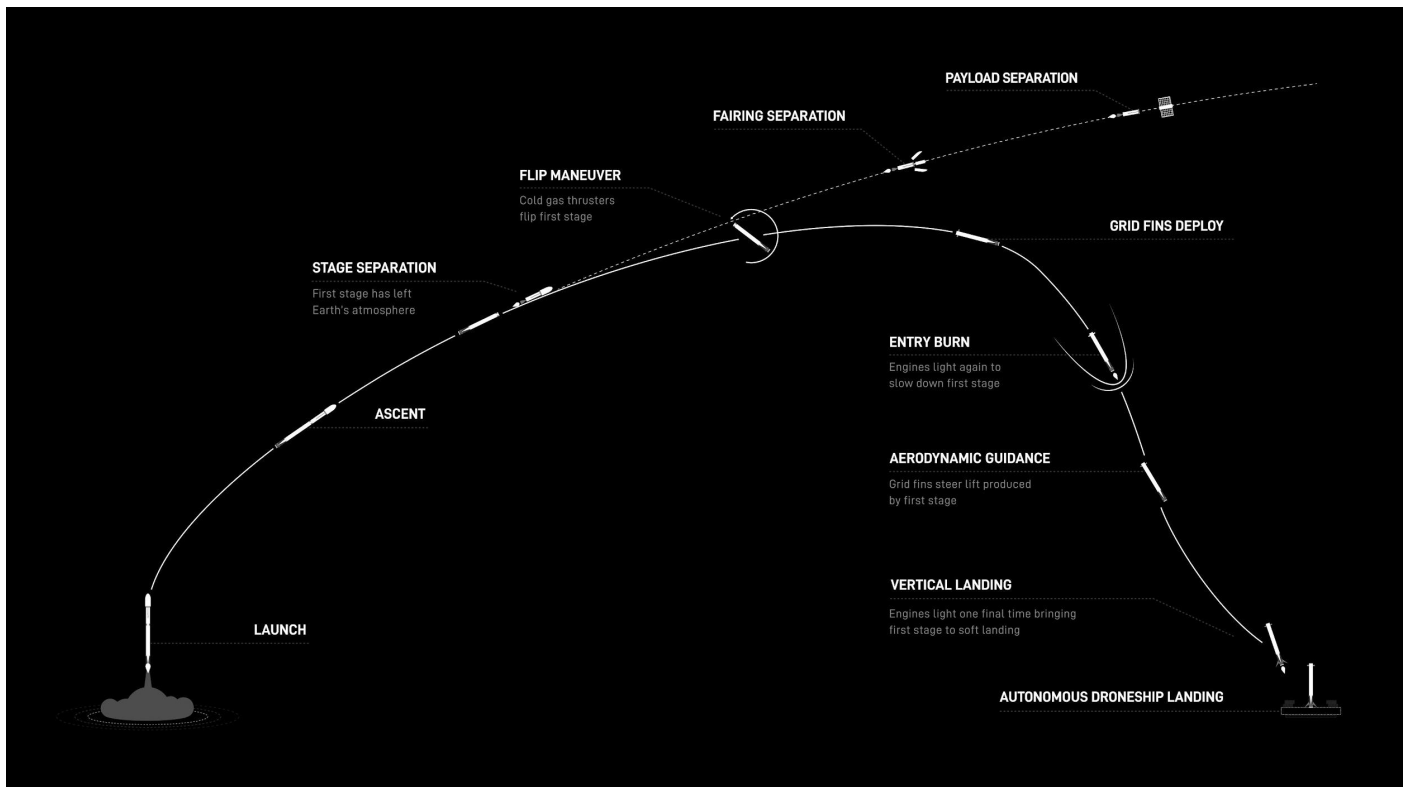
## WEBCAST

[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 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
- 00:01:00	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
00:03:22	Fairing deployment
00:06:33	1st stage entry burn start
00:06:55	1st stage entry burn complete
00:08:03	2nd stage engine cutoff (SECO-1)
00:08:24	1st stage landing burn start
00:08:47	1st stage landing
00:27:10	2nd stage engine starts (SES-2)
00:27:43	2nd stage engine cutoff (SECO-2)
01:49:52	2nd stage engine starts (SES-3)
01:50:18	2nd stage engine cutoff (SECO-3)
01:53:19	First O3b mPOWER satellite deploy
02:00:19	Second O3b mPOWER satellite deploys