RADARSAT CONSTELLATION MISSION

WEBCAST

Launch webcast will go live about 15 minutes before liftoff at spacex.com/webcast

PHOTOS

High-resolution photos will be posted at flickr.com/spacex

MISSION OVERVIEW

SpaceX is targeting Wednesday, June 12 for launch of RADARSAT Constellation Mission from Space Launch Complex 4E (SLC-4E) at Vandenberg Air Force Base in California. The primary launch window opens at 7:17 a.m. PDT, or 14:17 UTC, and closes at 7:30 a.m. PDT, or 14:30 UTC. The satellites will begin deployment approximately 54 minutes after launch. A backup launch window opens on Thursday, June 13 at 7:17 a.m. PDT, or 14:17 UTC, and closes at 7:30 a.m. PDT, or 14:30 UTC.

Falcon 9's first stage for launch of RADARSAT Constellation Mission previously supported Crew Dragon's first demonstration mission in March 2019. Following stage separation, Falcon 9's first stage will return to land on SpaceX's Landing Zone 4 (LZ-4) at Vandenberg Air Force Base.

PAYLOAD

The RADARSAT Constellation Mission (RCM) is the evolution of the RADARSAT Program and builds on Canada's expertise and leadership in Earth observation from space. It consists of three identical C-band Synthetic Aperture Radar (SAR) Earth observation satellites.

Built by MDA, a Maxar company, the three-satellite configuration of the RCM will provide daily revisits of Canada's vast territory and maritime approaches, including the Arctic up to 4 times a day, as well as daily access to any point of 90% of the world's surface.

The RCM will support the Government of Canada in delivering responsive and cost-effective services to meet Canadian needs in areas like maritime surveillance, ecosystem and climate change monitoring, and helping disaster relief efforts. For example:

- The RCM will help create precise sea ice maps of Canada's oceans and the Great Lakes to facilitate navigation and commercial maritime transportation. Each satellite also carries an Automatic Identification System receiver, allowing improved detection and tracking of vessels of interest.
- The highly accurate data collected by RCM will enable farmers to maximize crop yields while reducing energy consumption and the use of potential pollutants.
- Like RADARSAT-2, the RCM will support relief efforts by providing images of areas affected by disasters to help organize emergency response efforts and protect the local population.

SPACEX.COM CONTACT

Eva Behrend
Sr. Communications Manager
310-363-6247
media@spacex.com

MISSION TIMELINE (all times approximate)

COUNTDOWN

Hour/Min/Sec	Events
- 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 SATELLITE DEPLOYMENTS

Hour/Min/Sec	Events
00:01:03	Max Q (moment of peak mechanical stress on the rocket)
00:02:13	1st stage main engine cutoff (MECO)
00:02:17	1st and 2nd stages separate
00:02:24	2nd stage engine starts
00:02:49	Fairing deployment
00:03:18	Boostback burn complete
00:06:04	1st stage entry burn begin
00:07:53	1st stage landing
00:08:28	2nd stage engine cutoff (SECO-1)
00:50:08	2nd stage engine restarts
00:50:12	2nd stage engine cutoff (SECO-2)
00:54:43	RCM-1 deployment
00:58:24	RCM-2 deployment
01:02:13	RCM-3 deployment

LAUNCH FACILITY

Space Launch Complex 4E at Vandenberg Air Force Base, California

SpaceX's Space Launch Complex 4E at Vandenberg Air Force Base has a long history dating back to the early 1960s. Originally an Atlas launch pad activated in 1962, SLC-4E was in active use until its last Titan IV launch in 2005. SpaceX's groundbreaking was in July 2011, and extensive modifications and reconstruction of the launch pad were completed just 17 months later.

SLC-4E consists of a concrete launch pad/apron and a flame exhaust duct. Surrounding the pad are RP-1 and liquid oxygen storage tanks and an integration hangar. Before launch, Falcon 9's stages, fairing and the mission payload are housed inside the hangar. A crane/lift system moves Falcon 9 into a transporter erector system and the fairing and its payload are mated to the rocket. The vehicle is rolled from the hangar to the launch pad shortly before launch to minimize exposure to the elements.