

COSMO-SKYMED SECOND GENERATION MISSION

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On Friday, January 2 at 6:09 p.m. PT, Falcon 9 launched the [COSMO-SkyMed Second Generation](#) mission for the Italian Space Agency and the Italian Ministry of Defence to low-Earth orbit from Space Launch Complex 4E (SLC-4E) at Vandenberg Space Force Base in California.

This was the 21st flight for the first stage booster supporting this mission which previously launched Crew-7, CRS-29, PACE, Transporter-10, EarthCARE, NROL-186, Transporter-13, TRACERS, NROL-48, and 11 Starlink missions. Following stage separation, the first stage landed on Landing Zone 4 (LZ-4) at Vandenberg Space Force Base.

There was the possibility that residents of Santa Barbara, San Luis Obispo, and Ventura counties may hear [one or more sonic booms](#) during the launch, but what residents experienced depended on weather and other conditions.

COUNTDOWN

HR/MIN/SEC	EVENT
00:38:00	SPACE X 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	SPACE X 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

All Times Approximate

HR/MIN/SEC	EVENT
00:01:12	MAX Q (MOMENT OF PEAK MECHANICAL STRESS ON THE ROCKET)
00:02:15	1ST STAGE MAIN ENGINE CUTOFF (MECO)
00:02:18	1ST AND 2ND STAGES SEPARATE
00:02:22	STAGE 1 FLIP
00:02:26	2ND STAGE ENGINE STARTS (SES-1)
00:02:31	BOOSTBACK BURN STARTS
00:02:37	FAIRING SEPARATION
00:03:11	BOOSTBACK BURN ENDS
00:06:37	1ST STAGE ENTRY BURN BEGINS
00:07:02	1ST STAGE ENTRY BURN ENDS
00:07:53	1ST STAGE LANDING BURN BEGINS
00:08:23	1ST STAGE LANDING
00:10:31	2ND STAGE ENGINE CUTOFF (SECO-1)
00:12:52	CSG FLIGHT MODEL 3 (CSG-FM3) DEPLOYS

