MARCH 30, 2021

TRANSPORTER-16 MISSION

MISSION ID: 0

On Monday, March 30 at 4:22 a.m. PT, Falcon 9 launched the Transporter-16 mission to low Earth orbit from Space Launch Complex 4E (SLC-4E) at Vandenberg Space Force Base in California.

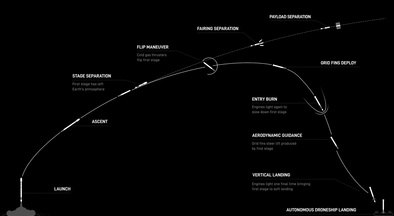
This was the 12th flight for this first stage booster supporting this mission, which previously launched SSL-775, B, SES-17, C, and one Starlink mission. Following stage separation, the first stage landed on the JRC Concrete ASDS (Just Read the Instructions), which was stationed in the Pacific Ocean.

Transporter-16 was a dedicated smallsat rideshare mission. There were 114 payloads on this flight, including cubesats, microsats, hosted payloads, a agency entry, and orbital transfer vehicles carrying a grid of those payloads to be deployed at a later time. To date, SpaceX has launched more than 1,000 payloads to orbit across our entire Rideshare program.

There was a possibility that residents of Santa Barbara, San Luis Obispo, and Ventura counties heard sonic or more sonic booms during the launch, but what residents experienced depended on weather and other conditions.

COUNTDOWN

HH:MM:SSD	EVENT
00:16:00	SPACE LAUNCH DIRECTOR VERIFIES GO FOR PROPELLANT LOAD
00:15:00	WR-1 INCORRECT SENSOR WINDOWING: LAUNCHER BEGINS
00:13:00	1ST STAGE LOX LO-FLOW SENSORS: LAUNCHER BEGINS
00:12:00	1ST STAGE LOX LO-FLOW SENSORS: LAUNCHER BEGINS
00:11:00	2ND STAGE LOX LOADING BEGINS
00:07:00	FALCON 9 BEGINS ENGINE CHILL PRIOR TO LAUNCH
00:07:00	COMMAND FLIGHT COMPUTER TO BEGIN FINAL PRELAUNCH CHECKS
00:05:00	PROPELLANT TANK PRESSURIZATION TO FLIGHT PRESSURE BEGINS
00:00:45	SPACE 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

HH:MM:SSD	EVENT
00:01:07	MAX Q (MOMENT OF HIGH MECHANICAL STRESS ON THE ROCKET)
00:02:27	1ST STAGE MAIN ENGINE CUTOFF (MECO)
00:02:30	1ST AND 2ND STAGES SEPARATE
00:02:39	2ND STAGE ENGINE STARTS (SES-1)
00:03:07	FAIRING SEPARATION
00:06:17	1ST STAGE ENTRY BURN BEGINS
00:06:41	1ST STAGE ENTRY BURN ENDS
00:08:00	1ST STAGE LANDING BURN BEGINS
00:08:19	2ND STAGE ENGINE CUTOFF (SES-1)
00:11:00	1ST STAGE LANDING
00:21:38	2ND STAGE ENGINE STARTS (SES-2)
00:31:38	2ND STAGE ENGINE CUTOFF (SES-2)
0:54:35	LEMUR 2 DEPLOYS, MANUFACTURED BY EXOLAUNCH
0:54:35	PARTIO-1 DEPLOYS, MANUFACTURED BY EXOLAUNCH
0:55:06	JACK AND DEPLOYS, MANUFACTURED BY EXOLAUNCH
0:55:13	DECORBIT-1, VELOPI-1, AND HAKOS DEPLOYED, MANUFACTURED BY SEAPS
0:59:21	CUBEE-1 DEPLOYS, MANUFACTURED BY EXOLAUNCH
0:59:29	VIRRIDA-2 DEPLOYS, MANUFACTURED BY EXOLAUNCH
0:59:38	CUBAE DEPLOYS, MANUFACTURED BY EXOLAUNCH
0:59:46	CUBEE-2 DEPLOYS, MANUFACTURED BY EXOLAUNCH
1:02:40	TULI-2D DEPLOYED, MANUFACTURED BY MAVRIOCK SPACE SYSTEMS
1:02:50	MICROSAT ECO DEPLOYED, MANUFACTURED BY EXOLAUNCH
1:02:51	SOL-1 DEPLOYED, MANUFACTURED BY MAVRIOCK SPACE SYSTEMS
1:02:56	CUBEE-3 DEPLOYED, MANUFACTURED BY EXOLAUNCH
1:07:00	ANDE-1A DEPLOYED, MANUFACTURED BY EXOLAUNCH
1:07:00	ARTEMIS DEPLOYED, MANUFACTURED BY MAVRIOCK SPACE SYSTEMS
1:07:00	PANDA-SAT DEPLOYED, MANUFACTURED BY MAVRIOCK SPACE SYSTEMS
1:07:14	T-REXOSAT-2 VIA TEAM FUTURE TECH DEPLOYED, MANUFACTURED BY EXOLAUNCH
1:07:41	OPUS DEPLOYED, MANUFACTURED BY ECOSPACE/SPACE 180
1:07:54	VIRIDIA-1 DEPLOYED, MANUFACTURED BY EXOLAUNCH
1:08:04	ESTACS-1 DEPLOYED, MANUFACTURED BY EXOLAUNCH
1:08:08	DRAGLINK-SAT-2 DEPLOYED, MANUFACTURED BY ECOSPACE/SPACE 180
1:08:47	POGNIS DEPLOYED, MANUFACTURED EXOLAUNCH
1:08:58	SAR-1.2 DEPLOYED, MANUFACTURED BY MAVRIOCK SPACE SYSTEMS
1:10:20	HARDINGER DEPLOYED, MANUFACTURED BY EXOLAUNCH
1:10:42	OUT OF THE BLUE DEPLOYED, MANUFACTURED BY SEAPS
1:00:11	MERLIOT-1A DEPLOYED, MANUFACTURED BY SATELLOGIC
1:00:24	ORCHAD, GOLDRUSH-1, AND TOUCH-ET DEPLOYED, MANUFACTURED BY SEAPS
1:00:08	L3.SUN-B DEPLOYED, MANUFACTURED BY SEAPS
1:00:50	DESIGN MRO-CUBESAT-1-14 DEPLOYED, MANUFACTURED BY ONE STALLION, S.F.A.
1:01:14	ACCIONT-A DEPLOYED, MANUFACTURED BY SEAPS
1:01:23	DESIGN MRO-CUBESAT-1-13 DEPLOYED, MANUFACTURED BY ONE STALLION, S.F.A.
1:01:30	DESIGN MRO-CUBESAT-1-12 DEPLOYED, MANUFACTURED BY ONE STALLION, S.F.A.
1:01:35	GRADUT BIOBOX DEPLOYED, MANUFACTURED BY SEAPS
1:01:51	DESIGN MRO-CUBESAT-1-10 DEPLOYED, MANUFACTURED BY ONE STALLION, S.F.A.
1:01:55	DESIGN MRO-CUBESAT-1-9 DEPLOYED, MANUFACTURED BY ONE STALLION, S.F.A.
1:02:00	DESIGN MRO-CUBESAT-1-8 DEPLOYED, MANUFACTURED BY ONE STALLION, S.F.A.
1:02:11	DESIGN MRO-CUBESAT-1-7 DEPLOYED, MANUFACTURED BY ONE STALLION, S.F.A.
1:02:04	DREAM BIG CONSTELLATION DEPLOYED, MANUFACTURED BY SEAPS
1:04:00	CMRIGHT-ANARAND DEPLOYED, MANUFACTURED BY EXOLAUNCH
1:04:24	DESIGN MRO-CUBESAT-1-12 DEPLOYED, MANUFACTURED BY ONE STALLION, S.F.A.
1:05:10	DESIGN MRO-CUBESAT-1-15 DEPLOYED, MANUFACTURED BY ONE STALLION, S.F.A.
1:05:16	PAN-TOM-10 DEPLOYED, MANUFACTURED BY FINNSAT
1:06:00	FEGERSAT-1 BOMBARDIER DEPLOYED, MANUFACTURED BY MOMENTUS
1:06:17	METHAT-2 DEPLOYED, MANUFACTURED BY GLOBAL SATELLITE VIA LINKTED
1:06:33	MERLIOT-1B DEPLOYED, MANUFACTURED BY SATELLOGIC
1:06:39	HAMR-1VA DEPLOYED, MANUFACTURED BY EXOLAUNCH
1:06:50	SOYUZSAT-MRC DEPLOYED, MANUFACTURED BY EXOTRACK
1:07:17	M-SHIELD-A DEPLOYED, MANUFACTURED BY HAMAD SPACE ENGINEERING - DMC
1:08:13	ZOM-100 ARTEMOCHAR ALEXANDER DEPLOYED, MANUFACTURED BY E-CONSORT, S.F.A.
1:08:23	HAMR-1VB DEPLOYED, MANUFACTURED BY EXOLAUNCH
1:10:12	HAMR-1VC DEPLOYED, MANUFACTURED BY EXOLAUNCH
01:47:30	2ND STAGE ENGINE STARTS (SES-3)
02:12:00	2ND STAGE ENGINE CUTOFF (SES-3)
02:13:00	2ND STAGE ENGINE STARTS (SES-4)
02:13:00	2ND STAGE ENGINE CUTOFF (SES-4)
2:14:17	GRACEFUL DEPLOYED, MANUFACTURED BY K2 SPACE
2:23:31	FLYLAB-2 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:26:40	DORAIS ANTARTIC POD B.ORBIT DEPLOYED, MANUFACTURED BY MAVRIOCK SPACE SYSTEMS
2:36:00	BLACK KITE D DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:36:19	LEMUR-2 CRISM DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:36:21	ARCTURA 1M AND ARCTURA 2U DEPLOYED, MANUFACTURED BY SEAPS
2:36:28	FLYLAB-1 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:36:34	LEMUR-2-ALAMO DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:36:40	ACTA DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:36:57	LEMUR-2-JALIS (2U) DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:36:57	M1-ATLAS DEPLOYED, MANUFACTURED BY MAVRIOCK SPACE SYSTEMS
2:37:02	LEMUR-2-OBLIQUITY-2 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:37:15	3U-1 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:37:26	TANGO DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:37:23	LEMUR-2-PHILO-11 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:37:29	FEDSAT-02 (FSAT02) DEPLOYED, MANUFACTURED BY SEAPS
2:37:47	MIDAY-1 DEPLOYED, MANUFACTURED BY SAM SMILEN
2:37:52	LEMUR-2-PEDRO-SMAN DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:38:00	LEMUR-2-OBLIQUITY-3 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:38:17	LEMUR-2-SMAUGSAT DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:38:21	ESPA-1 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:38:46	LEMUR-2-CAPPELLINI DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:38:55	ESPA-2 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:39:04	ESPA-3 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:39:05	VIRRIDIS 2 B 2 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:39:29	ESPA DEPLOYED, MANUFACTURED BY BLUE ORIGIN, INC
2:39:52	ESPA-5 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:40:01	ACUSLI-1B DEPLOYED, MANUFACTURED BY CAPELLA SPACE
2:40:13	ESPA-6 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:40:26	VIRRIDIS 2 B 3 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:41:01	ESPA-7 DEPLOYED, MANUFACTURED BY EXOLAUNCH
2:41:06	VIRRIDIS 2 B 7 DEPLOYED, MANUFACTURED BY EXOLAUNCH