

Launch Campaign	Launch Provider	Mission Name	Launch Date	Deployment Status	Rocket	Mission Description	Payload(s)	Organization(s)
Cargo Resupply	ELaNa 38	DALI (Daily Atmospheric Ionospheric Limb Imager)	12/21/21	1/26/22	Falcon 9	This mission will use a 6U cubesat to study molecular oxygen density of Earth's upper atmosphere to help understand the processes that affect the upper atmosphere and ionosphere.	The Daily Atmospheric Ionospheric Limb Imager	Aerospace Corporation
Cargo Resupply		GASPACS (Get Away Special Passive Attitude Control Satellite)	12/21/21		Falcon 9	The 1U CubeSat is a technology demonstration mission designed to test inflatable structures in space. The project aims to present a possible solution to the limited capacity of spacecraft by providing an inflatable boom that can be packed into a small space and then extended into something much larger.	AeroBoom and camera	Utah State University
Cargo Resupply		PATCOOL (Passive Thermal Coating Observatory Operating in Low-Earth Orbit)	12/21/21		Falcon 9	This mission will use a 3U to test the thermal samples when completely isolated from all sources of heat transfer aside from the Sun and deep space. A secondary objective is to test the a drag de-orbit device to modulate the drag area of a host CubeSat while maintaining passive 3-axis stabilization using aerodynamic and gravity gradient torques.	Aluminum housing for containing samples and ADAMUS Laboratory's drag de-orbit device	NASA's Kennedy Space Center, University of Florida
Cargo Resupply		TARGIT (Tethering And Ranging mission of the Georgia Institute of Technology)	12/21/21		Falcon 9	This project aims to act like a technology demonstration for more complex LiDAR imaging missions; a 3U cubesat will test on-orbit an imaging LiDAR (light detection and ranging) system capable of cm-level topographic mapping. The mission will accomplish this by tethering an inflatable target of known shape and reflectance that will serve to verify the performance of the imaging LiDAR and its supporting subsystems.	Optical imager	Georgia Tech Research Corporation
Landsat 9	ELaNa 34	CUTE (Colorado Ultraviolet Transit Experiment)	9/27/21	9/27/21	Atlas V	CUTE is a 6U spacecraft that will characterize the composition and mass-loss rates of exoplanet atmospheres by measuring how the NUV light from the host star is changed as the exoplanet transits in front of the star and passes through the planet's atmosphere.	Near-ultraviolet (NUV) transmission spectroscopy	University of Colorado at Boulder
Landsat 9		CuPID (Boston University)	9/27/21	9/27/21	Atlas V	The main objective of this mission is to use a 6U spacecraft to measure soft X-rays emitted from the process of charge-exchange when plasma from the solar wind collides with neutral atoms in the Earth's distant atmosphere.	A soft X-ray imager, microdosimeter suite, and three-axis magnetometer	Boston University
Cargo Resupply	ELaNa 37	CAPSat (Cool Annealing Payload Satellite)	8/29/21	10/12/21	Falcon 9	This is a 3U CubeSat will evaluate technologies for healing radiation damage in crystalline single photon detectors.	SPAD (single-photon avalanche detectors) quantum annealing payload	University of Illinois
Cargo Resupply		PR-CuNaR2 (Puerto Rico CubeSat NanoRocks-2)	8/29/21	10/12/21	Falcon 9	As the first Puerto Rican spacecraft, this 3U mission will study low-energy collisions in a space environment and will use a mechanically shaken device to study low-energy particle collisions.	GimmeRF (Gimme Radio Frequency) receiver and CARLO (Charge Analyzer Responsive to Local Oscillation) instrument.	International American University of Puerto Rico - Bayamon Campus
Cargo Resupply		Space Hauc (Science Program Around Communications Engineering with High-Achieving Undergraduate Cadres)	8/29/21	10/12/21	Falcon 9	This is a 3U CubeSat educational mission intended primarily as a hands-on student training mission that will also demonstrate X-band beam steering from a CubeSat platform.	X-Band Phased Array Communications	University of Massachusetts-Lowell
Cargo Resupply	ELaNa 36	RamSat	6/3/21	6/14/21	SpaceX 22 – Falcon 9	This 2U CubeSat will capture images of forest regrowth, sending those images to ground control in Robertsville Middle Schools' STEM Classroom using radio communication.	Multispectral and near-infrared cameras	Oak Ridge Public School (Robertsville Middle School)
Cargo Resupply	ELaNa 33	IT-SPINS (Ionospheric-Thermospheric Scanning Photometer for Ion-Neutral Studies)	2/20/21	6/29/2021 22:50:00 UTC	NG-15 – Antares	This mission will provide the first two-dimensional (2D) tomographic imaging from a 3U research CubeSat, addressing the basic nature of the nocturnal ionosphere. Once deployed, the 3U CubeSat will commence a more than six-month mission of measuring the properties of Earth's atmosphere at the edge of outer space.	CubeSat Tiny Ionospheric Photometer (CTIP) instrument	Montana State University, Applied Physics Laboratory at Johns Hopkins University
SpaceX Transporter 1	ELaNa 35	PTD-1 (Pathfinder Technology Demonstrator 1)	1/24/21	1/24/2021 01:16:28 UTC from Sherpa-FX dispenser	Falcon 9	This project will test the operation of a variety of novel technologies on five demonstration missions on a 6U CubeSat. PTD-1 is the first of five of these demonstrations that will test the HYDROS-C water thruster developed by Tethers Unlimited.	Hydros-C propulsion system	NASA's Ames Research Center & Glen Research Center, Tyvak Nanosatellite Systems
SpaceX Transporter 1	Commercial Provider	VR3X	1/24/21	01/24/2021 00:59:09 UTC from Maverick's Mercury Dispenser	Falcon 9	V-R3x consists of three 1U CubeSats aimed to demonstrate novel spacecraft swarm technologies and techniques for radio networking and navigation. This small scale demonstration will allow the implementation for future larger multi-spacecraft missions, enabling NASA to pursue its future science, technology, and exploration goals.	COTS S-band SemTech SX1280 Transceiver	NASA's Ames Research Center, Stanford University, and Carnegie Mellon University