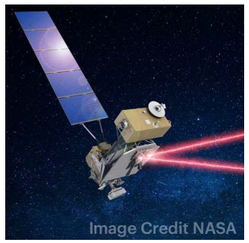
MISSION

A United Launch Alliance (ULA) Atlas V 551 rocket will launch the Space Test Program-3 (STP-3) mission for the U.S. Space Force's (USSF) Space Systems Command. STP-3 is a co-manifested mission that matures technology and reduces future space program risk by advancing nuclear detonation detection, space domain awareness, weather and communication. Both spacecraft will be delivered to geosynchronous orbit. Liftoff will occur from Space Launch Complex-41 at Cape Canaveral Space Force Station, Florida.

Built by Northrop Grumman, the primary spacecraft is STP Satellite (STPSat)-6 and the rideshare spacecraft is the Long Duration Propulsive Evolved Expendable Launch Vehicle (EELV) Secondary Payload Adapter (ESPA) or LDPE-1. STPSat-6 carries nine payloads including the Space and Atmospheric Burst Reporting System 3 (SABRS-3), an operational mission from the National Nuclear Security Administration, NASA's Laser Communication Relay Demonstration (LCRD) payload to test technologies for the next generation of data relay satellites, and several Department of Defense Space Experiments Review Board space weather and situational awareness payloads. LDPE-1 is designed for a 1-3 year mission life and carries experimental payloads. The experiments are intended for rapid risk reduction efforts to inform future programs.



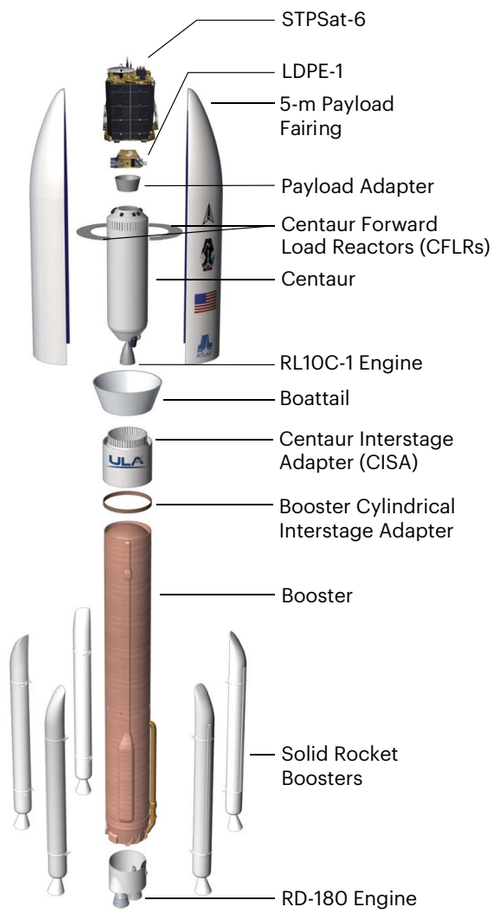
The Atlas V rocket debuts several features designed to reduce risk and accumulate flight experience before use on ULA's Vulcan rocket. The PLF is produced out of autoclave, a new manufacturing method to cure carbon fiber composites that is a more efficient production process resulting in lower cost and lower system mass while maintaining reliability and quality. The in-flight power system supplies power to the satellites' batteries during the rocket's long-duration ascent, ensuring the spacecraft have fully charged batteries when deployed into geosynchronous orbit. Utilizing existing flight computers, GPS enhanced navigation provides GPS signals to improve Centaur's navigation system performance and orbital accuracy. And finally, the booster rate gyro (BoRG) unit is a low-cost alternative rate gyroscope package. The design utilizes simplified processing and commercial IMUs built into a triple-channel architecture to significantly reduce unit cost and weight.

LAUNCH VEHICLE

Payload Fairing (PLF)
The spacecraft is encapsulated in a 17.7-ft (5-m) diameter short payload fairing. The 5-m PLF is a sandwich composite structure made with a vented aluminum-honeycomb core and graphite-epoxy face sheets. The bisector (two-piece shell) PLF encapsulates both the Centaur and the satellite. The vehicle's height with the 5-m short PLF is approximately 196 ft (59.7 m).

Centaur
The Centaur second stage is 10 ft (3 m) in diameter and 41.5 ft (12.6 m) in length. Its propellant tanks are pressure-stabilized and constructed of corrosion-resistant stainless steel. Centaur is a cryogenic vehicle, fueled with liquid hydrogen and liquid oxygen, powered by an RL10C-1 engine producing 22,900 lb (101.9 kilo-Newtons) of thrust. The cryogenic tanks are insulated with a combination of helium-purged blankets, radiation shields and spray-on foam insulation (SOFI). The Centaur forward adapter (CFA) provides structural mountings for the fault-tolerant avionics system and structural and electrical interfaces with the spacecraft.

Booster
The booster is 12.5 ft (3.8 m) in diameter and 106.5 ft (32.5 m) in length. The booster's tanks are structurally rigid and constructed of isogrid aluminum barrels, spun-formed aluminum domes and intertank skirts. Booster propulsion is provided by the RD-180 engine system (a single engine with two thrust chambers). The RD-180 burns RP-1 (Rocket Propellant-1 or highly purified kerosene) and liquid oxygen and delivers 860,200 lb (3.83 mega-Newtons) of thrust at sea level. Five solid rocket boosters (SRBs) generate the additional power required at liftoff, providing 371,550 lb (1.6 mega-Newtons) of thrust. The Centaur avionics system, provides guidance, flight control and vehicle sequencing functions during the booster and Centaur phases of flight.



ATLAS V

Producing more than two and a half million pounds of thrust at liftoff, the Atlas V 551 rocket is the most powerful in the Atlas V fleet. In its 15 years of service, the 551 rocket has launched groundbreaking missions for our nation—from historic science missions including New Horizons, the first mission to Pluto and the Juno mission to critically important national security missions including AEHF-6, the first flight for the U.S. Space Force.

First Launch: Jan. 19, 2006
Launches to Date: 11

Performance to GTO:
19,620 lb (8,900 kg)
Performance to LEO-Reference:
41,570 lb (18,850 kg)

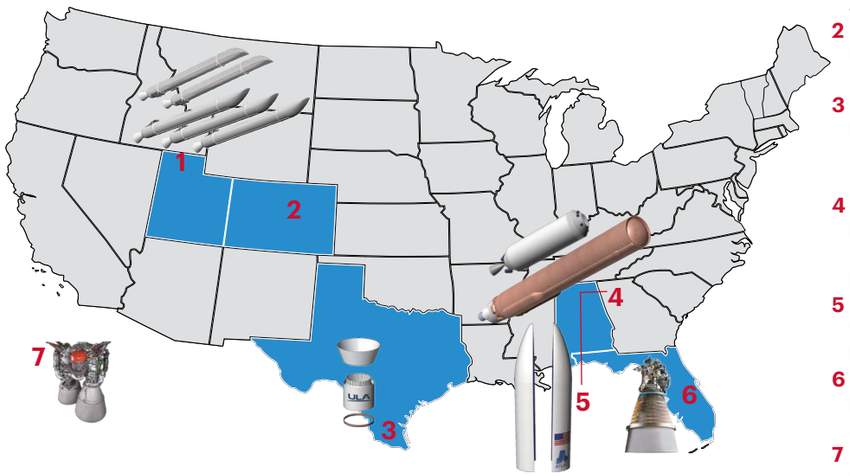
MISSION SUCCESS

With more than a century of combined heritage, ULA is the nation's most experienced and reliable launch service provider. ULA has successfully delivered more than 145 missions to orbit that aid meteorologists in tracking severe weather, unlock the mysteries of our solar system, provide critical capabilities for troops in the field, deliver cutting-edge commercial services and enable GPS navigation.

ulalaunch.com

MISSION OVERVIEW

PRODUCTION



1 Promontory, UT
Solid Rocket Booster Fabrication at Northrop Grumman

2 Denver, CO
ULA Headquarters & Design Center Engineering

3 Harlingen, TX
Payload Adapter, Booster Adapter & Centaur Adapter Fabrication

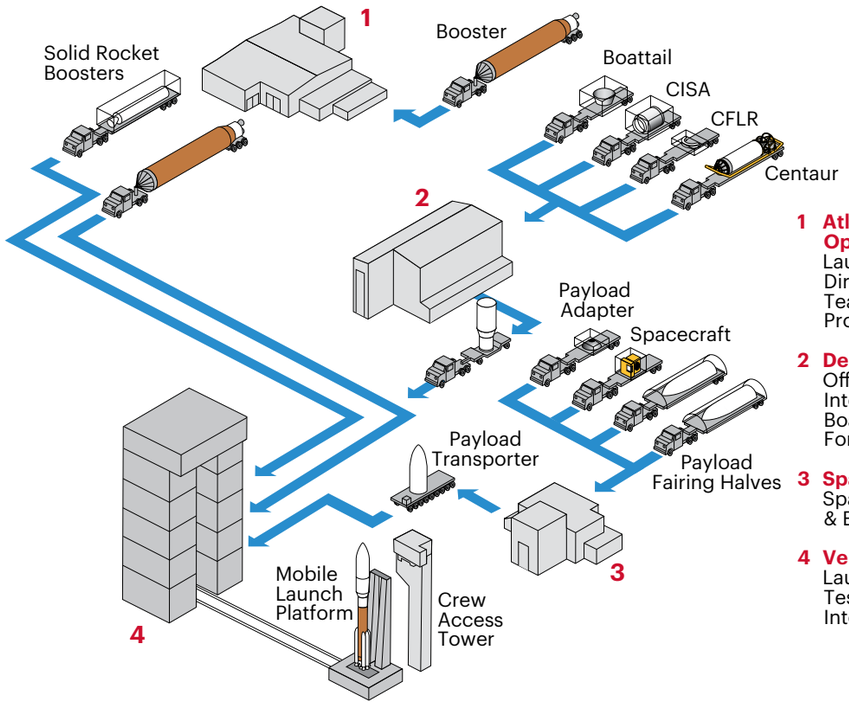
4 Decatur, AL
Booster Fabrication & Final Assembly, Centaur Tank Fabrication & Final Assembly

5 Decatur, AL
5-m Payload Fairing Fabrication at RUAG Space

6 West Palm Beach, FL
RL10C-1 Engine Fabrication at Aerojet Rocketdyne

7 Khimki, Russia
RD-180 Engine Fabrication at NPO Energomash

SPACE LAUNCH COMPLEX-41 PROCESSING



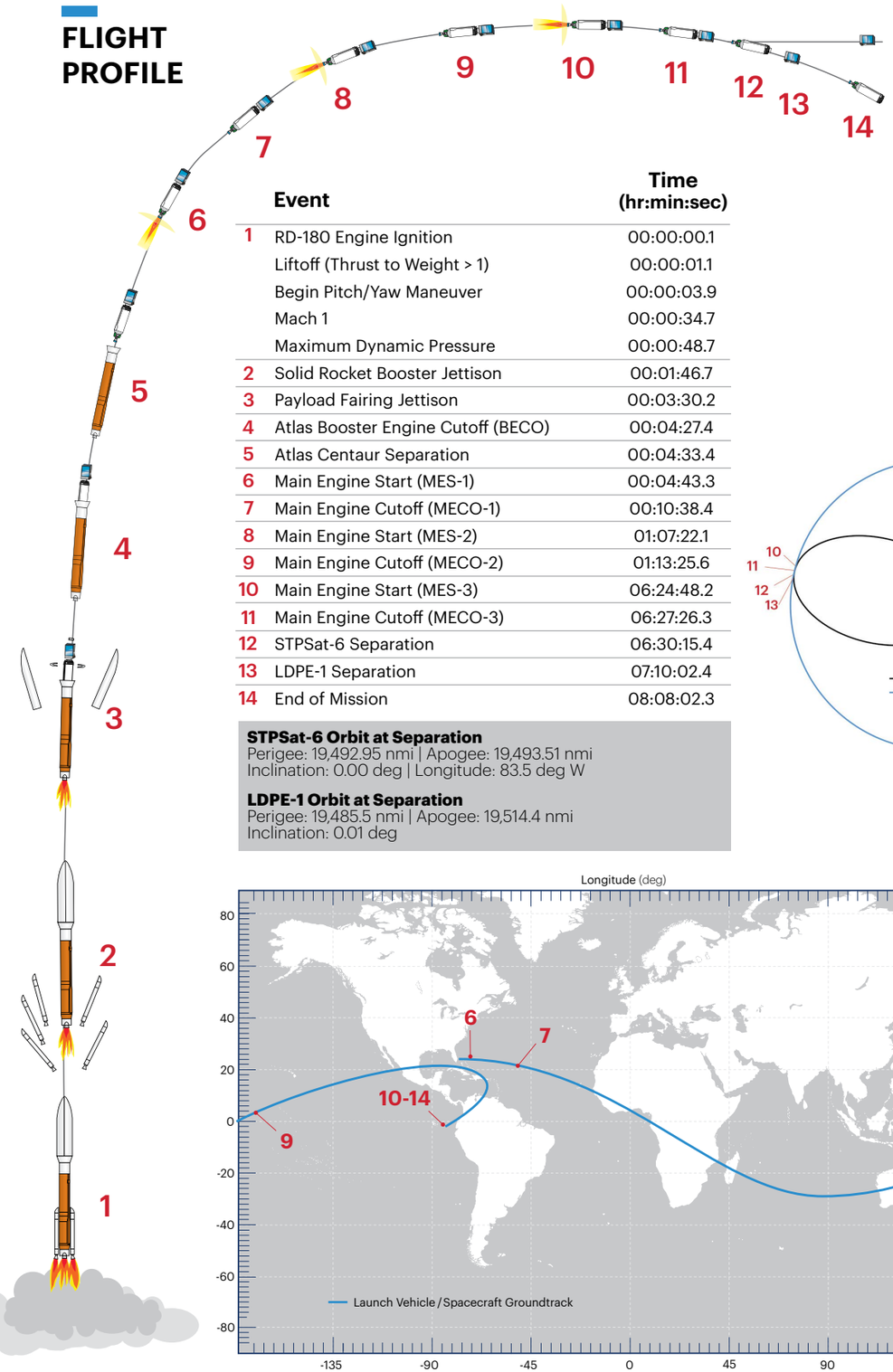
1 Atlas Spaceflight Operations Center (ASOC)
Launch Control Center, Mission Director's Center, Mission Support Teams, Launch Vehicle Horizontal Processing & Ordnance Installation

2 Delta Operations Center
Offline Vertical Integration (OVI): Interstage Adapters, Centaur, Boatail, Base Module & Centaur Forward Load Reactor Deck

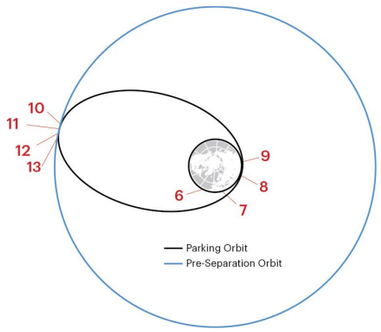
3 Spacecraft Processing Facility
Spacecraft Processing, Testing & Encapsulation

4 Vertical Integration Facility
Launch Vehicle Integration & Testing, Spacecraft Mate & Integrated Operations

FLIGHT PROFILE



	Event	Time (hr:min:sec)
1	RD-180 Engine Ignition	00:00:00.1
	Liftoff (Thrust to Weight > 1)	00:00:01.1
	Begin Pitch/Yaw Maneuver	00:00:03.9
	Mach 1	00:00:34.7
	Maximum Dynamic Pressure	00:00:48.7
2	Solid Rocket Booster Jettison	00:01:46.7
3	Payload Fairing Jettison	00:03:30.2
4	Atlas Booster Engine Cutoff (BECO)	00:04:27.4
5	Atlas Centaur Separation	00:04:33.4
6	Main Engine Start (MES-1)	00:04:43.3
7	Main Engine Cutoff (MECO-1)	00:10:38.4
8	Main Engine Start (MES-2)	01:07:22.1
9	Main Engine Cutoff (MECO-2)	01:13:25.6
10	Main Engine Start (MES-3)	06:24:48.2
11	Main Engine Cutoff (MECO-3)	06:27:26.3
12	STPSat-6 Separation	06:30:15.4
13	LDPE-1 Separation	07:10:02.4
14	End of Mission	08:08:02.3



STPSat-6 Orbit at Separation
Perigee: 19,492.95 nmi | Apogee: 19,493.51 nmi
Inclination: 0.00 deg | Longitude: 83.5 deg W

LDPE-1 Orbit at Separation
Perigee: 19,485.5 nmi | Apogee: 19,514.4 nmi
Inclination: 0.01 deg

All Values Approximate