SILENTBARKER

NROL-107

NATIONAL RECONNAISSANCE OFFICE

CAPE CANAVERAL

NRO Mission

For more than sixty years, the NRO has developed, acquired, launched and operated the satellites that are the foundation for America's advantage and strength in space. Using a diversified and resilient architecture of spacecraft, NRO collects and delivers the best space-based intelligence, surveillance, and reconnaissance content on the planet. NRO data supports the National Security Agency, National Geospatial-Intelligence Agency, and other NRO mission partners to produce intelligence products for the President, Congress, national policymakers, warfighters, and civil users. The NRO's hybrid overhead architecture is designed to provide global coverage against a wide range of intelligence requirements, carry out research and development efforts, and assist emergency and disaster-relief efforts in the U.S. and around the world.

Photos Courtesy ULA

SILENTBARKER

NRO and the U.S. Space Force (USSF) have a shared interest to strengthen the nation's Space Domain Awareness (SDA) and Indications & Warning (I&W) capabilities. Strengthening these capabilities will be vital to defend Department of Defense (DoD) and Intelligence Community (IC) critical capabilities against current and projected threats.

SILENTBARKER is a joint NRO and USSF SDA mission to meet DoD and IC space protection needs and is designed to detect and maintain custody of space objects. This capability enables I&W of threats against high-value assets in geosynchronous orbit.

NRO and USSF have been collaborating on SDA to enable effective defense of space capabilities. By working together, NRO can leverage its Intelligence, Surveillance, and Reconnaissance acquisition capabilities while USSF can provide SDA mission expertise, which increases overall mission capability and leverages opportunities for cost efficiency. Additionally, SILENTBARKER shows the flexibility inherent in the acquisition approaches NRO uses to deliver timely capabilities to our users by launching this mission three years from Critical Design Review.

For future missions, NRO and USSF are working hand-in-hand to shape the future of space-based Ground Moving Target Indicators, which will provide day, night, all-weather detection and tracking of ground and maritime targets for the warfighter.

The SILENTBARKER/NROL-107 patch: The Delta shape is pointing the way to better space domain knowledge. The fox represents the cunning nature of the IC and DoD that gives our warfighters the edge against America's adversaries. The fox in motion represents agile operations in the space domain. The combined moon and stars represent the commitment of the IC and DoD to be always on guard to protect American interests and freedom. The moon is a waxing crescent, symbolizing we are not done and there is still work ahead of us. The two deltas symbolize the partnership between the U.S. Space Force and NRO.

To read more about NRO launches and previous patches, visit **www.NRO.gov**

Rocket & Launch Facts

United Launch Alliance's Atlas V rockets have delivered vital national security missions across the globe since 2002. The Atlas V configuration is comprised of a booster, a Centaur upper stage, and a 5.4 meter diameter short payload fairing (PLF). This Atlas employs five additional solid rocket boosters to augment the first-stage booster.

Payload Fairing (PLF)

The 5.4 m diameter short 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 upper stage and the spacecraft, which separates using a debris-free pyrotechnic actuating system.

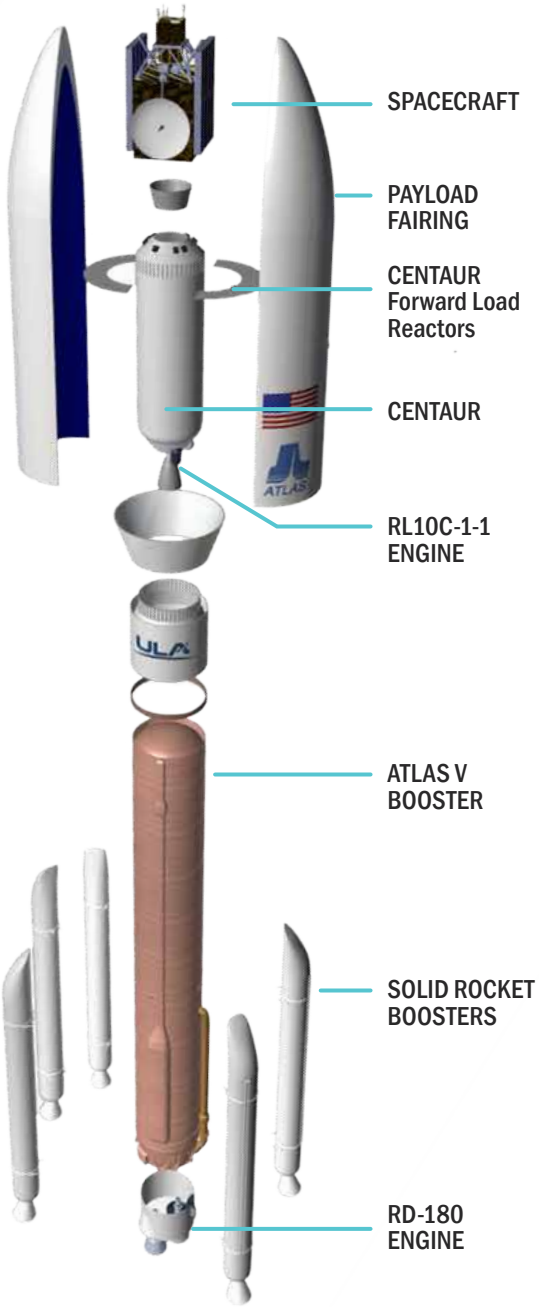
Centaur

The Centaur upper stage is 3 m (10 ft) in diameter and 12.6 m (41.5 ft) long. Centaur is a liquid hydrogen/liquid oxygen-fueled vehicle. It uses a single RL10 engine producing 106 kilo-Newtons (23,825 lbf) of thrust.

Booster

The Atlas V booster is 3.8 m (12.5 ft) in diameter and 32.5 m (106.5 ft) long. 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. It delivers 3.83 mega-Newtons (860,200 lbf) of thrust at sea level.

The solid rocket boosters (SRBs), with a diameter of 160 cm (63 in) and a length of 20.1 m (66 ft), are constructed of a graphite-epoxy composite with the throttle profile designed into the propellant grain. The SRBs are jettisoned by thrusters following a burn lasting approximately a minute and a half.



LAUNCH HISTORY

The first Atlas was developed as an ICBM and was launched December 1957. SILENTBARKER/NROL-107 is NRO's last Atlas V launching under the National Security Space Launch phase-1A contract.

Site Info

Space Launch Complex-41

SILENTBARKER/NROL-107 will launch from Space Launch Complex-41 (SLC-41) at Cape Canaveral Space Force Station, Florida. SLC-41's first launch was in 1965 for TITAN III and TITAN IV launches and retrofitted to support Atlas V launches begininning in 2002. SILENTBARKER/NROL-107 will be the 18th and final NRO Atlas V launching from Cape Canaveral.

Recent Success

The NRO is the best in the world at providing overhead intelligence, surveillance, and reconnaissance to more than **half a million government users** —including every member of the Intelligence Community, two dozen domestic agencies, our nation's military, lawmakers, and decision makers.

In June 2023, NRO launched the NROL-68 mission, the penultimate Delta IV Heavy rocket, from Cape Canaveral Space Force Station, FL.

Visit **www.NRO.gov** to view launch press releases.

NROL-68, June 22, 2023

Future Launches

Additional information on upcoming launches will be made available at **www.NRO.gov.**

WWW.NRO.GOV

MEDIA@NRO.MIL

703.808.1198

@NATIONALRECONNAISSANCEOFFICE

@NATRECONOFC

@NATRECONOFC
FOLLOW ON TWITTER FOR LIVE UPDATES ON LAUNCH DAY

NATIONALRECONNAISSANCEOFFICE

NRO/OPA [10210] ID 4.23