

NATIONAL RECONNAISSANCE OFFICE

WALLOPS

NRO Mission

For 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 of Rocket Lab and NRO



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NROL 123

The National Reconnaissance Office (NRO) is proud to support its third dedicated launch out of NASA's Wallops Flight Facility in Virginia, in partnership with Rocket Lab, NASA Wallops, and Virginia Spaceport Authority.

NROL-123 will carry three collaborative research missions on a Rocket Lab Electron rocket acquired through NRO's Rapid Acquisition of a Small Rocket (RASR) contract.





The dragonfly symbolizes energy, youthful exuberance, and accomplishment—representing the use of new technology. The position of it flying through the hexagon symbolizes a new frontier, new opportunity, and new perspective. The forward movement represents the critical path of the mission.

The bees are based on the idea of "small but impactful" and represent the tremendous impact the program experiments will have on the NRO mission.

The sunfish, or mola, nods toward the program.

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

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Rocket & Launch Facts

Electron is a two-stage to orbit rocket designed and manufactured by Rocket Lab for dedicated access to space of small satellites.

Rutherford Engine(s)

The world's first 3D-printed, electric-pump-fed rocket engine.

First Stage

- 9 Sea-level Rutherford Engines
- -Lift-off Thrust: 190 kN (43,000 lbf)
- Peak Thrust: 224 kN (56,000 lbf)
- ISP: 311 seconds

Interstage

Pneumatic Pusher

Second Stage

- Single Vacuum Rutherford Engine
- Total Thrust: 25.8 kN (5,800 lbf)
- ISP: 343 seconds

Kick Stage

Electron's unique Kick Stage is designed to deliver small satellites to precise and unique orbits, whether flying as dedicated or rideshare.

- Deployment of payloads at multiple planes/inclinations
- Higher altitude deployment
- Hosted payload support
- Multiple trajectory changes
- Sustained low altitude orbits
- Deorbiting payloads to eliminate space debris

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Site Info

Virginia Spaceport Authority's Mid-Atlantic Regional Spaceport (MARS)

NROL-123 will launch from the MARS Pad OC, also known as Rocket Lab Launch Complex 2. The launch complex is co-located on the NASA Wallops Flight Facility on the Eastern Shore of Virginia. In 1997, the Virginia Commercial Space Flight Authority entered into a Reimbursable Space Act Agreement with NASA, which provided for permitted use of land on NASA Wallops Island for the MARS launch pads. Virginia Space Authority also applied for and was granted an FAA license to launch to orbit. This led to the establishment of the Virginia Space Authority Mid-Atlantic Regional Spaceport, located on the southern portion of NASA Wallops Island. The Virginia Spaceport Authority, a political subdivision of the Commonwealth of Virginia, owns and operates MARS. NASA Wallops partners with Virginia Spaceport Authority to provide various support services to MARS launches. For more information: **www.vaspace.org**

NASA's Wallops Flight Facility

The NASA's Goddard Space Flight Center's Wallops Flight Facility, established in 1945, is the agency's premier location for conducting research using suborbital vehicles—aircraft, scientific balloons and sounding rockets. Its partnership with the Virginia Spaceport Authority's Mid-Atlantic Regional Spaceport expands the facility's capabilities to include the launch of orbital vehicles. For more information: **www.nasa.gov/wallops/**



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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 September 2023, NRO launched the NROL-107 Silentbarker mission, a joint NRO and U.S. Space Force (USSF) Space Domain Awareness (SDA) mission to meet Department of Defense and Intelligence Community space protection needs.

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

NROL-107, Sep 10, 2023

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Future Launches

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



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