

National Reconnaissance Office Satellite Successfully Launched

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VANDENBERG AIR FORCE BASE, Calif. -- The National Reconnaissance Office's Space Technology Experiment satellite was successfully launched aboard an Orbital Science Corporation Taurus booster from SLC-576E here today.

The Space Technology Experiment (STEX) satellite will test lightweight, high performance spacecraft technologies that have been proven in the laboratory aboard an experimental satellite. The experiment helps the NRO decide if the technology under testing is right, if it can be effectively incorporated into an operational spacecraft system, and if it can be operated in space.

STEX was built by Lockheed-Martin Astronautics Corporation and takes advantage of the NRO's partnerships with industry and the Air Force and Naval Research Labs.

SPACE TECHNOLOGY EXPERIMENT

The Space Technology Experiment (STEX) is a National Reconnaissance Office (NRO) program undertaken to meet a national need to improve the performance of overhead intelligence collection systems while reducing costs.

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The experiments are not stand-alone technology. They are components of the spacecraft on which they are flying and actually perform the tasks they were designed to do. STEX has 20 experiments onboard including:

- High-density nickel-hydrogen batteries designed to last longer and provide more energy with less weight
- High efficiency solar cells and a solid state data recorder employing the most dense memory in production today
- Light weight precision star tracker that helps determine the satellite's position by referencing the locations of preselected stars
- Hall-Effect electric propulsion system
- Low/no shock release mechanisms for studying the effects of when a payload is released from the platform that carried it into space
- Advanced Tether Experiment designed to increase knowledge about both the control and survivability of tethered space systems

- High performance computer with high density data storage
- Lightweight composite structures with integrated thermal control

The STEX satellite weighs 1,540 pounds and has a design life of two years and its cost was less than \$90 million which includes its booster, launch costs and ground support. STEX takes advantage of the NRO's partnerships with industry and other Department of Defense agencies, such as the Air Force Research Lab and the Naval Research Lab, to optimize the use of their unique talents and resources. STEX was built by Lockheed Martin in partnership with the NRO's Advanced Systems and Technology Directorate and Lockheed Martin Astronautics Corporation and will be launched on board Orbital Science Corporation's Taurus booster.

SPACE TECHNOLOGY EXPERIMENT (STEX) PHOTOS

