



## NATIONAL RECONNAISSANCE OFFICE

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**FOR IMMEDIATE RELEASE**  
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### **NRO Participates in NASA Radiation Belt Storm Probes Launch**

Two Radiation Belt Storm Probes launched from Cape Canaveral, Florida, aboard a United Launch Alliance Atlas V rocket for NASA at 4:05 a.m. contained two Relativistic Proton Spectrometers (RPS) developed by the National Reconnaissance Office (NRO) as part of its payload.

The RPS instrument focuses on the inner radiation belt, an area that houses some of the highest energy protons in Earth's magnetic environment. These protons move fast enough that no shielding can stop them. To study these particles, the RPS instrument measures the protons' energy and how their intensity varies over time. This will help scientists understand how the inner belt changes in response to solar activity.

Also the NRO, working with the Air Force Research Laboratory, Aerospace Corporation, Los Alamos Laboratory, and Naval Research Laboratory, has produced a next-generation radiation belt model, AP (E)-9. Currently, the standard space environment specification used by the engineering community is the NASA AE-8 and AP-8 trapped radiation belt models. The AE (P)-9 offers improvements in terms of radiation hazards specified, accuracy and uncertainty qualification, spectral and spatial coverage, and time-correlated probability of occurrence statistics.

“Having a new way to look at the radiation belt will be a great tool for the NRO, as well as other members of the space community, to better protect our current satellite systems, help in the design of new systems, and expand orbit options, all of which will help NRO’s mission and be cost effective,” said Dr. David Byers, Program Manager for the NRO Proton Spectrometer Belt Research program.

Data from the probes will be shared with the public on the Radiation Belt Storm Probes website at <http://rbsp.jhuapl.edu/index.php>.

The NRO is a joint Department of Defense-Intelligence Community organization responsible for developing, launching, and operating America’s signals, imagery, and communications intelligence satellites to meet the national security needs of our nation.

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