

Twin space probe design phase begins

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The U.S. space agency said design has started on its radiation storm probes -- twin spacecraft that will be launched into the Earth's radiation belts.

Researchers said the National Aeronautics and Space Administration spacecraft are being designed to provide insight into the physical dynamics of near-Earth space, where violent space weather can affect astronauts, satellites and even ground-based technologies.

Researchers and engineers at the Johns Hopkins University Applied Physics Laboratory in Laurel, Md., will build and operate the twin probes, which are scheduled for a 2011 launch and a primary mission of two years.

The radiation belts are two doughnut-shaped regions encircling Earth, where high-energy particles are trapped by the planet's magnetic field, scientists said. Most Earth-orbiting spacecraft pass through the belts, which can affect both astronauts and spacecraft.

Scientists hope the space mission will resolve decades-old scientific mysteries of how such particles become energized to such high levels and how the radiation belts vary so dramatically with changing conditions on the sun.

The instruments will be provided by teams managed by Boston University, the University of Iowa, the University of Minnesota, the New Jersey Institute of Technology and the National Reconnaissance Office.

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