NASA launches sun-watching satellite from US

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(AP)—NASA launched a satellite late Thursday on a mission to explore a little-studied region of the sun and to better forecast space weather that can disrupt communications systems on Earth.

Unlike a traditional liftoff, the Iris satellite rode into Earth orbit on a Pegasus rocket dropped from an airplane that took off around sunset from the Vandenberg Air Force Base on California's central coast. About 100 miles (160 kilometers) off the coast and at an altitude of 39,000 feet, the airplane released the rocket, which ignited its engine for the 13-minute climb to space.

Mission controllers clapped after receiving word that Iris separated from the rocket as planned and unfurled its solar panels, ready to begin its two-year mission.

"We're thrilled," NASA launch director Tim Dunn said in a NASA TV interview.

The launch went smoothly, but there were some tense moments when communications signals were temporarily lost. Ground controllers were able to track Iris by relying on other satellites orbiting Earth.

Previous sun-observing spacecraft have yielded a wealth of information about our nearest star and beamed back brilliant pictures of solar flares.

The 7-foot (2.1-meter)-long Iris, weighing 400 pounds (180 kilograms),

carries an ultraviolet telescope that can take high-resolution images every few seconds.

Unlike NASA's Solar Dynamics Observatory, which observes the entire sun, Iris will focus on a little-explored region that lies between the surface and the corona, the glowing white ring that's visible during eclipses.

The goal is to learn more about how this mysterious region drives solar wind—a stream of charged particles spewing from the sun—and to better predict space weather that can disrupt communications signals on Earth.

"This is a very difficult region to understand and observe. We haven't had the technical capabilities before now to really zoom in" and peer at it up close, NASA program scientist Jeffrey Newmark said before the launch.

The mission is cheap by NASA standards, costing $182 million, and is managed by the space agency's Goddard Space Flight Center.

Engineers will spend a month making sure Iris is in perfect health before powering on the telescope to begin observations.

The launch was delayed by a day so that technicians at the Air Force base could restore power to launch range equipment after a weekend outage cut electricity to a swath of the central coast.

The Pegasus, from Orbital Sciences Corp. of Dulles, Virginia, is a winged rocket designed for launching small satellites. First flown in 1990, Pegasus rockets have also been used to accelerate vehicles in hypersonic flight programs.

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