

Solar Dynamics Observatory Begins its Five-Year Mission of Discovery

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This NASA TV video grab shows the Solar Dynamics Observatory (SDO) and its Atlas V rocket at Cape Canaveral, Florida. An Atlas V rocket carrying a US solar observatory into space blasted off from Kennedy Space Center in Florida.

NASA's Solar Dynamics Observatory (SDO) passed a major milestone on May 14, when it completed its post-launch check out and officially began its five-year science mission to study the sun.

During a commissioning ceremony held in the SDO Mission Operations Center at Goddard Space Flight Center in Greenbelt, Md., mission engineers declared that the spacecraft has transitioned fully from engineering operations into science operations. All three of the instruments aboard have successfully passed their on-orbit checkout, have been calibrated, and are now taking science data.

Outgoing SDO Project Manager Liz Citrin led the overall design, engineering, and construction of the SDO mission. "This team has worked together for at least six years, and we're happy because everything has gone so well," said Citrin.

"Now that SDO has begun mission operations, we're doing what the mission was designed to do," said Patrick Crouse, project manager of Space Science Mission Operations at Goddard. "Our job now is to execute the requirements on a daily basis, to fly, operate, and do the day-to-day commanding, to collect the data, and to distribute it to the scientists."

Since SDO's launch on February 11, the spacecraft has maneuvered into an orbit located on the outer edges of Earth's [radiation belt](#). The satellite's inclined geosynchronous orbit, achieved March 16, allows for nearly continuous, high data-rate contact with a dedicated ground station near Las Cruces, New Mexico. NASA has set up a new facility that includes a pair of dedicated Ka-band radio antennas. SDO's geosynchronous orbit will keep the observatory in constant view of the two 18-meter dishes for the duration of the five-year mission.

SDO is the first mission of NASA's Living with a Star Program and a major component of the Heliophysics System Observatory. This fleet of widely deployed solar, heliospheric, and geospace satellites works together to understand the processes at work throughout our space environment. The goal of LWS is to develop the scientific understanding necessary to address those aspects of the sun-earth system that directly affect our lives and society.

Data and images are already beginning to pour in from SDO. "We're at 4 million images already, and counting," said SDO Project Scientist Dean Pesnell. "The end of commissioning means that we're no longer verifying that the satellite works. The instruments are turned on and

checked out. The data paths are carrying the data to the science teams. The observatory is working great, and it's just going to get better."

More information: www.nasa.gov/sdo

Provided by JPL/NASA

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