Sounding rocket to calibrate NASA's SDO instrument

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A sounding rocket carrying an experiment to help calibrate the EVE instrument on NASA's Solar Dynamics Observatory launched on May 6, 2010. These calibrations occur approximately once a year and another occurs on Oct. 21, 2013. Credit: NASA

NASA will conduct a sounding rocket launch at 2 p.m. EDT, Monday, Oct. 21, 2013, from the White Sands Missile Range in New Mexico carrying an experiment to support the calibration of the EUV Variability Experiment, or EVE, aboard the Solar Dynamics Observatory, or SDO, satellite. EVE measures the total extreme ultraviolet output of the sun, called its irradiance.

As part of the planned SDO/EVE program, the rocket calibration flight occurs about once a year to accurately determine the long-term variations of the solar extreme ultraviolet irradiance. This kind of calibration is known as an under-flight. It uses a near-replica of the SDO/EVE instrument to gather a calibrated sounding rocket observation in coordination with the orbital satellite's observations. Comparison of the two data sets then validates the accuracy of the SDO/EVE data, providing crucial calibration of any long-term changes in the orbital instrumentation. This will be the fourth under-flight calibration for the EVE instrument. The previous flight was successfully conducted on June 23, 2012.

The EVE calibration instrument will fly on a NASA two-stage Black Brant IX sounding rocket. It is projected to fly to an altitude of about 173 miles during a 15-minute flight. The payload will descend via a parachute and land at White Sands for recovery and use on future suborbital flights.

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Provided by NASA's Goddard Space Flight Center