

## CLARREO Overview

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The Climate Absolute Radiance and Refractivity Observatory (CLARREO) Mission has been recommended in the NRC Decadal Survey as a key component of the future climate observing system. NASA and NOAA share responsibility for CLARREO. The NOAA component involves the continuity of measurements of incident solar irradiance and Earth energy budget by flying the TSIS and CERES sensors that were removed from NPOESS. The NASA portion involves the measurement of spectrally resolved thermal IR and reflected solar radiation at high absolute accuracy. Coupled with measurements from on-board GPS radio occultation receivers, these measurements will provide a long-term benchmarking data record for the detection, projection, and attribution of changes in the climate system. In addition, the SI traceable radiances will provide a source of absolute calibration for a wide range of visible and IR Earth observing sensors, greatly increasing their value for climate monitoring.

We will review the scientific objectives of CLARREO, possible mission configurations, and the potential impacts on climate science that the CLARREO data will provide. A summary of initial NASA preparations for implementation of this mission will also be presented.