

The PREMOS/PICARD Radiometer: An overview after 3 years of observations
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Total and Spectral Solar Irradiance are key input parameters to atmospheric/oceanic and space weather models. We present here spectral solar irradiance data from the radiometer PREMOS onboard the PICARD satellite successfully working after three years in space. This instrument covers the solar spectrum from the ultraviolet to near-infrared, and provides valuable information, which helps to constrain theoretical models.

An overview of the results involving PREMOS observations will be presented including variability modeling. We will present our code, IMMORTAL which uses radiative transfer code COSI to model the variability of the irradiance, assuming that the latter is determined by the evolution of the solar surface magnetic field as seen with SDO/HMI data. A direct comparison shows a very good correlation for most of channels from PREMOS.