



## **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 for three years. This instrument covers the solar spectrum from the Ultraviolet to near-infrared, and provide valuable information, which helps to constrain theoretical models.

An overview of the results involving PREMOS result will be presented including observations and modelling. We use the radiative transfer code COSI to model the variability of the irradiance. We will then introduce the COCOSIS model (for Combination of COSI Spectra) which assumes that the variability 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. Those data could also been used for reconstructing the whole solar spectrum using then the PREMOS radiometer as a spectrometer.