



The Measurement of the Solar Spectral Irradiance during the Solar Cycle 24 using SOLAR/SOLSPEC on ISS

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Between April 2008 and February 2017, the Solar Spectral Irradiance (SSI) was measured by the SOLAR/SOLSPEC from 166 nm to 3088 nm. The instrument was a part of the Solar Monitoring Observatory (SOLAR) payload, externally mounted on the Columbus module of the International Space Station. As the SSI is a key input for the validation of solar physics models, together with playing a role in the climate system and photochemistry of the Earth atmosphere, SOLAR/SOLSPEC spectral measurements becomes important.

In this study, the in-flight operations and performances of the instrument -including the engineering corrections- will be presented for the nine years of the SOLAR mission. Using an accurate absolute calibration, the SSI as measured by SOLAR/SOLSPEC in the course of the solar cycle 24 will be presented and compared to other instruments and ground-based measurements. The accuracy of these measurements will be also discussed here.