



A new observational solar irradiance composite

Micha Schoell (1), Thierry Dudok de Wit (2), Margit Haberreiter (1), Matthieu Kretzschmar (2), Stergios Misios (3), Klairie Tourpali (3), and Werner Schmutz (1)

(1) PMOD/WRC, Solar Physics, Davos Dorf, Switzerland (margit.haberreiter@pmodwrc.ch), (2) CNRS, University of Orleans, France, (3) AUTH, Thessaloniki, Greece

Variations of the spectral solar irradiance (SSI) are an important driver for the chemistry, temperature and dynamics of the Earth's atmosphere and ultimately the Earth's climate. Due to the sparse and scattered SSI data sets it is important to establish tools to derive a consistent SSI dataset, including realistic uncertainties. We present the a new SSI composite based on the face values of SSI observations and applying a probabilistic method that takes into account the uncertainty of the data set scale-wise. We will present the data set and discuss its effects on the Earth's atmosphere in relation to SSI reconstruction models.