

Absolute Radiometers on Upcoming TSI and Future EO Missions

Wolfgang Finsterle [wolfgang@pmodwrc.ch], Margit Haberreiter, Benjamin Walter, Alberto Remesal Oliva, and Silvio Koller; *Physikalisch-Meteorologisches Observatorium / World Radiation Center (PMOD/WRC), Davos Dorf, Switzerland*

Even though the TSI is an essential climate variable it is often difficult to find suitable space missions for ensuring the continuity of the TSI data record. Solar research missions nowadays focus on high-resolution imaging. With the Davos Digital Absolute Radiometer (DARA) PMOD/WRC has developed a TSI radiometer to be used in wider range of mission environments. Thanks to its versatile design DARA-type radiometers have been selected to fly on such diverse missions like the ship-tracking micro-satellite NORSAT-1 (Norwegian Space Centre, launched July 2017), the FY-3E meteorological observatory (China Meteorological Administration, 2019) and the PROBA-3 occulter spacecraft (ESA) with its highly eccentric orbit and tight attitude stability requirements. Additionally, a modified version of the DARA will be part of the EAGER mission proposal to ESA's Earth Explorer program to measure the Earth's radiation imbalance. We will present the mission concepts and how the DARA can meet the different science requirements, including the long-term continuation of the TSI data record.