



The Total Solar Irradiance as measured by PREMOS/PICARD

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We present the Total Solar Irradiance (TSI) time series of the PREMOS radiometer, a PMOD/WRC experiment, on board the PICARD satellite from July 2010 to April 2014. Divergent trends among various TSI composites demonstrate the need to have more reliable independent TSI observations. We have assessed radiometer degradation by using either internal calibration, or through statistical methods based on external observations. The two methods lead to different trends with respect to other TSI instruments. Despite various composites that combine TSI observations, sufficient stability of TSI measurements to estimate decadal and centennial trends is still out of reach.