

## ***Interactive comment on “Recent variability of the solar spectral irradiance and its impact on climate modelling” by I. Ermolli et al.***

**I. Ermolli et al.**

ermolli@oaroma.inaf.it

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Thank you for the comment which has fostered a private discussion on the definition of technical and theoretical aspects of the science of solar irradiance measurements and of assessment of their uncertainty. We believe that the clarification of these contents is beyond the scope of our manuscript. Nevertheless, we agree in highlighting the role of the work carried out by the international committees in recent years while revising the manuscript. The key issue in irradiance measurements is the traceability of the instruments, which is necessary to meet metrological requirements. The various instruments have undergone increasingly precise post-launch corrections to meet such requirements and PREMOS was the first to achieve complete traceability. We will put attention also to consider the most recent results achieved by the instrument teams

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while revising the manuscript. Finally, we thank you for having called our attention to the use of the term "solar constant". In our manuscript this term is correctly used in the discussion of differences measurements larger than the variation of the measured quantity. We acknowledge however that the use of this term could refer to concepts misleading with respect to modern knowledge of solar variability, especially in the context of a multidisciplinary discussion of the results presented in our paper, as its primary aim.

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