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Interactive comment on “A high dynamic radiation measurements instrument: the Bolometric Oscillation Sensor (BOS)” by P. Zhu et al.

Anonymous Referee #3

Received and published: 6 January 2015

General comments

The paper aims at presenting the results of high dynamic radiation measurements performed by the bolometric oscillation Sensor instrument. After a quick review about the instrumental methods, the authors presented the laboratory experiment and the flight performances. They finished with a very quick comparison with others TSI data sets. The BOS measurements has only been compared to VIRGO and TIM, but why not also with SOVAP and PREMOS? This should be done in this paper, since the PREMOS and SOVAP data have been already published.

While the results of the BOS instrument are of great importance regarding the solar physics and space weather communities, I have some concerns regarding the quality

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of this paper, especially the English language. Although I am an expert myself, I have found numerous grammatical mistakes and typos. Some of them clearly come from direct translation software issues.

The authors should also be more careful about the references list, for example Measurements, 2005, p631 L9, or even ESA, Labsphere, K&K associate, . . .? I have no idea about the reference politics of this journal, but could the authors also cite conference talks aside refereed papers? Some papers are also not really relevant regarding the scope of some sections, like Schmutz et al, 2013. Schmutz et al 2009 would be better for introducing the Premos instrument.

Except for some very few minor comments stated below, I would recommend to accept this paper for publication.

Minor comments Introduction: The authors do not provide enough details about the science objectives. They should clearly state why the TSI measurement is relevant for solar physics and space weather studies. Section 2. The Fig 2. could be bigger, especially the left part. It is also not very clear to me how sections 4 and 5 are linked together? Could the authors provide an explanation why there is a strong disagreement between space observations and laboratory experiments? That would be an interesting link. I would also suggest adding the definition of a Lambertian detector.

Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., 4, 627, 2014.

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