

## ***Interactive comment on “Potential impact of contrails on solar energy gain” by P. Weihs et al.***

### **Anonymous Referee #2**

Received and published: 6 October 2014

The paper covers a technique to examine the impacts of contrails on the energy loss associated with typical photovoltaic arrays used in the solar energy industry. The technique was laid out pretty clearly and plainly. My one concern lies in the discrimination between contrail and cloud. The authors point out that persistent contrail, by their definition, tend to occur in cloudy skies. What is not clear to me is how cloudy? Is there some measure of cloud fraction that could be provided? With enough of a lower cloud layer, higher level clouds could be masked with a visible analysis. This could impact the assumption made about the reduction due to other clouds. Please see the related comment below as well as a couple of other minor details.

The assumption stated in lines 7–9 on page 8931 would benefit from a calculation or citation to back up this choice. I appreciate the clear statement of the assumption, but something to back it up would help. This also makes me wonder if cloud fraction

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was considered as a criteria in the data selection, if even visibly? This could make a difference in the strength of this assumption.

#### Minor comments

p. 8929, line 14: Repeated "at"

p. 8936, line 8-11: I found this sentence is a bit awkward.

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Interactive comment on Atmos. Meas. Tech. Discuss., 7, 8927, 2014.

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