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Comment

## ***Interactive comment on “The Smithsonian solar constant data revisited: no evidence for cosmic-ray induced aerosol formation in terrestrial insolation data” by G. Feulner***

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First I would like to thank the second referee for his very constructive and helpful report. I really appreciate the effort.

*"Cosmic rays" in the title should be avoided, the paper deals with the relation between solar activity as represented by sunspots and the irradiance observations of the Smithsonian Astrophysical Observatory from mountain stations. It is a comment on a recent paper by Weber published in Annalen der Physik. Normally such a comment should be in the same Journal, but the author obviously believes that this was not really a good place and de-*

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*cided to publish it elsewhere. In principle this acceptable, but it needs some more explanation in the introduction to show which points of Weber will be discussed and which not. This means, it must be clearly stated that only the connection between the observations and solar activity is discussed and criticized, not the connection to cosmic rays and aerosol formation. If the connection between the observations and solar activity fails the latter becomes obsolete. So, the introduction, the abstract and also the conclusion needs to be edited and with the above comments i mind enlarged.*

I agree with the referee that the paper should only discuss the connection between solar activity and the observations. A paragraph explaining the focus of the paper with respect to Weber's work will be added to the introduction, and the title, abstract and conclusions will be changed accordingly.

*A few more editorial comments: "below the atmosphere" should be replaced by "on ground"; line 2 of page 2301: replace "manipulation" by "changes"; line 5 of page 2303: insert after ", at least partly," "due to"; line 9 of page 2305: insert after "trend" at the  $1-\sigma$  level"; line 11 on page 2306: replace "see summary" by "summarized"; Table 1: replace "uncorrected" by "not corrected"; Fig. 1: put a, b, c and d in the plots and then refer in the caption to the letters, makes it easier to read and would also help for the rest of the Figures; it would certainly help to improve the English by a native.*

All these issues will be changed/resolved in the revised version of the paper.

*I recommend to publish the article after some revision - which is needed to make the context and the objective clear.*

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Interactive comment on Atmos. Chem. Phys. Discuss., 11, 2297, 2011.

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