

Interactive comment on “Pointing errors in solar absorption spectrometry – correction scheme and its validation” by A. Reichert et al.

Anonymous Referee #2

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This paper describes the possibility of a post-correction of a common systematic type of solar tracker errors. These occur to a variable extend in solar absorption spectroscopy measurements using direct solar radiation, e.g. as performed in the NDACC and TC-CON measurement networks. Correcting these errors result in a significant increase of trace gas retrieval accuracy, which is presented for the example of CH₄. This paper is suited for publication in AMT after some minor comments have been addressed.

Comments:

Page 6182 Line 4: with "apertures", do you mean "field stops"?

Page 6183 Line 4: Here it would be nice to read a bit about possible types of set-ups which can be used for maintaining the alignment with the solar direction and their
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advantages/disadvantages.

Page 6183 Lines 8 - 14: The same information already appeared on the previous page around line 15. Please reduce the amount of duplication.

Page 6186 Line 3: You state, a line shift value constrains the mispointing on a line with constant angular velocity. Is this correct? I would say, that it constrains the mispointing to a line on the sun with constant perpendicular velocity component. The lines with angular velocities are parallel to the solar equator, and comprise all possible line shift values, therefore a measured line shift can't constrain the mispointing to lie on this line. Please clarify.

Page 6189 Lines 5-13: Why was the configuration changed in September 2012, and why did this cause such a significant degradation of tracking accuracy?

Technical corrections/suggestions:

Page 6182 Line 16: "constrain" should read "contain"

Page 6184 Line 11: remove duplicate word "in"

Page 6199 Line 16-17: a word is missing in the sentence, e.g. "for"

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