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Atmospheric Measurement Techniques Discussions

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 TCCON 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"

Interactive comment on Atmos. Meas. Tech. Discuss., 8, 6179, 2015.