Atmos. Meas. Tech. Discuss.,
doi:10.5194/amt-2016-218-RC3, 2016

Atmospheric Measurement Techniques Discussions
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Interactive comment on "In-operation Field of view Retrieval (IFR) for satellite and ground-based DOAS-type instruments applying coincident high-resolution imager data" *by* Holger Sihler et al.

Anonymous Referee #3

Received and published: 24 October 2016

This paper presents a method to in-operation retrieve the Filed of View (FOVs) of an instrument based on the correlation of a high resolution instrument. The authors applied their method on GOME2 and AVHHR, OMI and OMI and MAX-DOAS and a SO2 camera.

This paper is well-written and interesting. These results will be helpful for the remote sensing retrieval and validation communities. I recommend to publish after the authors have some minor revisions.

General comments.

1, OMI pixels influenced by the row anomaly were included in the FOV retrievals. I was

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wondering whether and how the row anomaly influences the FOV retrievals.

2, I agree with Reviewer 1. There is no error analysis for the regularized solution used for OMI and the SO2 camera. The error analysis for the regularized problem should be included in the conclusion.

Specific comments:

P2, L12-15. It would be better to include de Graff's paper in this introduction.

P3,L30. Please move this paragraph to Introduction section.

P12, L10. Again, what if the LR radiance is influenced by the row anomaly?

P19,L5. Would 20m/s wind-speed threshold work?

Technical comments:

P15, Figure 7. Please use the same color bar.

P22, Figure 16. Please use the same color bar.

Reference:

de Graaf, M., Sihler, H., Tilstra, L. G., and Stammes, P.: How big is an OMI pixel?, Atmos. Meas. Tech., 9, 3607-3618, doi:10.5194/amt-9-3607-2016, 2016.

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