

Interactive comment on “Determination of NO_x emissions from Frankfurt Airport by optical spectroscopy (DOAS) — A feasibility study” by Erna Frins et al.

Anonymous Referee #2

Received and published: 26 August 2016

General comments

The paper is in general well written and provides new insights regarding the application of optical remote sensing, specifically the DOAS technique, to quantify emissions from an airport. Determining the pollution burden of airports pose a challenge due to the variability of emissions, either due to timing of taxiing and take off as well as differences inherent to types of aircrafts and airport operation. The contribution of this paper is valuable since it provides a clear example of the application of a measurement technique that can help to overcome these challenges.

Specific comments

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Please comment about the advantage of using an off-axis measurement geometry instead of a zenith-viewing geometry.

Please provide more information regarding the used Fraunhofer reference. When and in which elevation angle was taken?

Please comment about the validity of using a geometrical factor to convert from SCDs to VCDs.

For correlation analysis purposes it would have been advisable to have more measurement points, however it is comprehensible that this was a feasibility study and few measurements were conducted in order to demonstrate the measurement methodology.

Technical comments

Page 11. “Summary” instead of “Summery” Page 18. “Boeing” instead of “Boing”

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2016-255, 2016.

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