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Atmospheric Measurement Techniques Discussions

Interactive comment on "Quantification of methane emission rates from coal mine ventilation shafts using airborne remote sensing data" *by* T. Krings et al.

Anonymous Referee #1

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Quantification of methane emission rates from coal mine ventilation shafts using airborne remote sensing data by Krings et al.

This paper analyzes the measurements from the airborne MAMAP spectroradiometer that provides estimate of the methane column concentration. Ventilation shafts from a coal mine are point sources of methane. The high concentration downwind plume can be observed with the instrument and simple atmospheric transport modeling is used to infer the methane emission. The estimate is in surprisingly good agreement with the value reported by the mine operator, with a difference that is much smaller than the

estimate uncertainty. There was therefore some “luck” in this particular inversion.

The paper is rather similar to another oen published last year by the same author that focused on the CO2 emission from a power plant in Germany. It is nevertheless very novel and provides an amazing amount of work and innovative material.

The paper is very well presented; everything is clear and the conclusions do follow from the analysis results. I feel that the paper is suitable for immediate publication in AMT.

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