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Atmospheric Chemistry and Physics Discussions



# *Interactive comment on* "Remote sensing of methane leakage from natural gas and petroleum systems revisited" *by* Oliver Schneising et al.

**Oliver Schneising et al.**

oliver.schneising@iup.physik.uni-bremen.de

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Thank you for your interest in the details of our method. Since it is an automated processing chain, the (prototype) background region is defined in a generic way upwind of the source (blue box in Figure 2): It has the same position relative to the source for all days and all investigated regions in the transformed coordinate system (zonal direction matches wind direction) with the same meridional extent as the plume region. Whether the selected background is actually suitable to reliably estimate the emissions for a given day is automatically evaluated using certain selection criteria described in Section 2 (Page 7) of the manuscript. This has been made clearer in the revised version when the background region is introduced. We also added a paragraph in Section 3.7 discussing the exclusionary power of the filter criteria including those concerning the



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Discussion paper

background region. The impact of the zonal extent of the background region was not explicitly tested but the effect is considered small due to the implemented automatic "suitability check" on a daily basis.

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