

Interactive comment on “Analysis of passive-sampler monitored atmospheric ammonia at 74 sites across southern Ontario, Canada” by X. H. Yao and L. Zhang

Anonymous Referee #1

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General comments:

The paper titled “Analysis of passive-sampler monitored atmospheric ammonia at 74 sites across southern Ontario, Canada” by authors X. H. Yao and L. Zhang presents the ammonia measurements made at 74 sites obtain by passive samplers across southern Ontario, Canada. This is clearly a useful dataset and the analysis shown here appears sound.

As a conclusion the manuscript may become acceptable for publication after minor revisions.

Specific comments

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1. Section 2 Experiments: Contamination is constantly a problem with ammonia passive samplers. The description about Quality Assurance and Quality Control of the passive sampling and analyses in the measurement campaigns should be given as such information is important for determining valid data.

2. Section 4 Discussion: The manuscript would benefit from a detailed analysis to provide more supportive evidences for the assumption, e.g. difference in ambient conditions between source and receptor regions and its impact on the transport of NH₃ in the cold seasons.

Technical correction:

Some references are used in the text, but are not in the reference list. For example: (1) Page 12775, line 14: “von Bobrutski et al., 2012”. (2) Page 12780, line 4: “Sommer et al., 1991”. (3) Page 12780, line 5: “Misselbrook et al., 2005”. (4) Page 12781, line 1: “Misselbrook et al., 2001”. (5) Page 12785, line 16: “Grunditz and Dalhammar et al., 2001”. (6) Page 12785, line 17: “Pagans et al., 2006”.

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