

Interactive comment on “Exploring the nature of air quality over southwestern Ontario: main findings from the border air quality and meteorology study” by J. R. Brook et al.

Anonymous Referee #3

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This paper presents a nice overview of the Border Air Quality and Meteorology Study (BAQS-Met) field campaign. Main findings from the observations, modeling and data analysis related to BAQS-Met are presented. The paper is organized very well and the language is very clear. I think the paper should be published. A few additions to the paper could further improve its quality:

1) I suggest adding a plot showing a time series of air temperature and other meteorological variables at a surface station (similar to Figure 5). This would help a reader to get an idea how the meteorological conditions evolved during the field campaign. Another option would be including a table to indicate which meteorological conditions

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were prevailing during the course of the field study.

2) Can you provide a short analysis/discussion of a possible weekday versus weekend effect observed in the pollutant concentrations (O₃, OM etc.)? Also, how does the relative contribution of the different emission sectors vary from weekdays to weekends (e.g. diesel versus gasoline traffic) in the region?

3) If possible, can you add two vertical cross-sections from the model output to display the impact of the lake and land breezes on ozone transport across the region? This phenomenon is widely discussed in the paper, therefore I think a nice illustration of the process would be very valuable.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 11111, 2013.

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