

Interactive comment on “Using wavelet transform to analyse on-road mobile measurements of air pollutants: a case study to evaluate vehicle emission control policies during the 2014 APEC summit” by Yingruo Li et al.

Anonymous Referee #2

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This work evaluates the control effect for vehicle emissions during the 2014 APEC summit by using on-road mobile measurements in combination with a newly developed wavelet transform method (WTM). The WTM successfully distinguishes the signals of air pollutant emitted by vehicle exhausts from those existing in ambient air and thus provides a good reference for similar data analysis. The results confirm the control policies on vehicle emissions were effective. The manuscript is generally well written with clear logic and full discussion. It is recommended to be accepted after addressing the following minor comments.

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1. Line 15 on Page 3, sampling inlet is very important for the data quality in an on-road mobile measurements. Elaborate the detailed configuration of the inlet including material, size, shape, direction, and the retention time of the air flow.
2. Line 40 on Page 6 and Line 8 and 18 on Page 7, what are the major reasons for the elevated values of NO_x, BC and ozone in the southern part of the Ring Road, busy traffic, concentrated industries, or both?
3. Line 4 on Page 7, point out the criteria of the selected three days, for example similar meteorological conditions and/or pollution levels.
4. Line 28-31 on Page 9, in addition to the missing nighttime data and the gradually implemented control policies in the pre-APEC period, do the less favorable meteorological conditions (see Line 5 on Page 6) and the increased energy consumption due to household heating also contribute to the higher decrease in C_{veh} relative to the post-APEC period?

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