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Discussions

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Interactive comment on "Sources of volatile organic compounds and policy implications for regional ozone pollution control in an urban location of Nanjing, East China" *by* Qiuyue Zhao et al.

Anonymous Referee #2

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In this study, the authors conducted one-year VOC observation at an urban site in Nanjing. They analyzed the seasonal and diurnal characteristics of 56 VOCs as well as their sources using the PMF model. A box model together with a Master Chemical Mechanism (MCM) was used to identify the relationships between the contributions of VOC sources and the O3 formation. The results were also compared with VOCs data from other Chinese megacities like Beijing, Guangzhou, and Shanghai. VOC have been well recognized to be responsible for the swift development of air pollution events since volatile organic compounds (VOCs) are key precursors of O3 and secondary

organic aerosols (SOA). However, the speciation and emission strength of these VOC have been demonstrated to be hard to acquire due to the fact that VOC can be emitted from a diversity of domestic and industrial activities. Therefore, ïňĄeld measurements of VOC emissions are critically needed in China. This work can be a signiïïňĄcant contribution to the atmospheric research community. Overall, the manuscript is fairly well written and I would recommend the manuscript for publication after minor revisions.

Specific concerns: 1. Line 61: what's "photochemical industry"? 2. Sample location: there is always an asphalt waterproof layer on the rooftop of an office building. How to avoid the interference of this emission? 3. Aromatics are important of gasoline. So, source 5 could be also identified as gasoline cars. Thus, the identification of source 5 to industrious emissions maybe need more relevant tracers. 4. Why the diurnal trend of fuel evaporation showed a decrease at noon time since this source is temperature dependent?