

Interactive comment on “Persistent growth of anthropogenic NMVOC emissions in China during 1990–2017: dynamics, speciation, and ozone formation potentials” by Meng Li et al.

Anonymous Referee #2

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VOCs are key precursors of SOA and O₃, and their emissions are of great uncertainty compared to some other species like SO₂ or NO_x, attributed to complicated sources and relative lack of field measurements. This paper presents a comprehensive analysis on China's national VOC emissions from 1990 to 2017, by source category and chemical component. It provides a very clear picture of the inter-annual trend, speciation variation, and the driving force of VOC emissions for the country. I only have some small concerns on the explanation of specific data and results and detailed comments follow. I suggest its publication subjected to minor revisions.

1. Table S1 in the supplement summarized the emission factors and activity levels by

C1

source category. What are the meanings of the numbers in Column E (source profile)? In Column J, it seems that most of emission factors still came from foreign studies? Does that mean recent progress on local emission factors was very limited? I suggest the authors make some discussions here.

2. It is very interesting to know the control strategy and benefits of VOC emissions, as limited information was reported in previous inventories. I expected the VOC control started later than SO₂ or NO_x control. Relevant information is given in the last part of Section 2.1. Here I suggest the authors highlight the information in, for example, Table S1, thus the audience could understand the control strategy more clearly. Current table include only unabated emission factors.

3. It seems that open biomass burning is not included in the emission estimation. Could it be a potential bias of the estimate? Some review and discussion should be given.

4. More description in Figure 5 should be provided in the caption. What are the meanings of the species indicated for each year? The species contributing most to the variation of emissions/OFP?

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C2