

Atmos. Meas. Tech. Discuss., referee comment RC1  
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## Comment on amt-2022-277

Anonymous Referee #2

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Referee comment on "Development of multi-channel whole-air sampling equipment onboard an unmanned aerial vehicle for investigating volatile organic compounds' vertical distribution in the planetary boundary layer" by Suding Yang et al., Atmos. Meas. Tech. Discuss., <https://doi.org/10.5194/amt-2022-277-RC1>, 2022

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Yang et al developed multi-channel whole-air sampling equipment onboard an unmanned aerial vehicle (UAV) platform, which is essential for measuring vertical concentrations of VOCs in the planetary boundary layer. The UAV platform is well designed and have been tested in field campaign in Chengdu city. The newly designed UAV successfully "capture" the characteristics of VOCs at different heights, demonstrating the capability of UAV for vertical VOC measurement. The manuscript is very well written. I recommend that the manuscript is published after some minor revisions.

1. Line 220, The impact of ozone on VOC concentration can be quantified for certain alkenes, if you have the reaction rate constant for a given alkene, the reaction time (7 days) and ozone concentration.
2. Line 292, Did you mean no significant emission sources are around the sampling site?
3. Line 62, 119, and 163, O3, NO2, SO2 -> O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>