

Atmos. Chem. Phys. Discuss., community comment CC1  
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## Comment on acp-2022-416

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Community comment on "Airborne glyoxal measurements in the marine and continental atmosphere: comparison with TROPOMI observations and EMAC simulations" by Flora Kluge et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2022-416-CC1>, 2022

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Q1. L165-173: (a). The authors have used single NO<sub>2</sub> absorption cross-sections in the DOAS analysis instead of two NO<sub>2</sub> absorption cross-sections, citing that mini MAX-DOAS measurements were not affected by NO<sub>2</sub> concentration variations. However, no supporting analysis was provided in the manuscript. Because the study reports observations from the pristine environment affected by biomass burning and anthropogenic pollution, how do the authors justify reporting that mini MAX-DOAS measurements were not "significantly affected by changing NO<sub>2</sub> concentrations."?

(b). The authors have used a continuous wavelength range of 430 nm – 465 nm (or a subset of the mentioned range) for CHOCHO analysis instead of the previously reported 420 - 465 nm with a gap of 439 – 447 nm, citing that it "yields an improvement in the spectral residuum and signal to noise ratio". However, no supporting analysis is provided in the manuscript.

Q2. Fig. 6 and Fig. 7c:- The dual histogram plots for MAX-DOAS and TROPOMI CHOCHO VCD distribution are difficult to interpret as the plots on the background are blocked by the plots in the foreground.