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Comment on acp-2021-369

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Community comment on "Response of atmospheric composition to COVID-19 lockdown measures during spring in the Paris region (France)" by Jean-Eudes Petit et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2021-369-CC2>, 2021

Petit et al. present an interesting analysis on changes of air pollutants near Paris during the lockdown. The authors report changes on SOA, which largely depend on VOC precursors and their photochemical activity. We have reported direct emission changes of CO₂, NO_x, and selected NMVOCs based on direct urban eddy covariance measurements in Europe during the 2020 lockdown (<https://doi.org/10.5194/acp-21-3091-2021>). Reductions in NO_x and combustion specific NMVOC emissions were comparable (e.g. on the order of 50-60%) during the hard lockdown in Austria. We would therefore argue that NMVOC reductions from the mobility sector should have occurred in similar quantities compared to NO_x. With other NMVOC (e.g. biogenic) mostly being unaffected by lockdown measures (and depending on weather) it should be possible to rationalize changes in SOA (i.e. OOA).