

Atmos. Chem. Phys. Discuss., editor comment EC1
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Reply on AC1

Thomas Karl (Editor)

Editor comment on "Declines and peaks in NO₂ pollution during the multiple waves of the COVID-19 pandemic in the New York metropolitan area" by Maria Tzortziou et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2021-592-EC1>, 2021

It is a common misconception that concentration data below zero should always be removed because they are by definition non-physical. As pointed out in this review this procedure will inevitably result in biases of constructed averages. The bias here likely seems low if the prescribed data filter criterion truly only pertained to 1% of the data. In this context however it would be valuable to know whether errors reported here are mostly due to random or systematic errors, often referred to independent, structured or common errors in remote sensing, and how these translate to the reported filtering criteria and estimation of LOD.

e.g. <https://iopscience.iop.org/article/10.1088/1681-7575/ab1705>