

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

Anne Perring (Editor)

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Editor comment on "Statistical and machine learning methods for evaluating trends in air quality under changing meteorological conditions" by Minghao Qiu et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2022-232-EC1>, 2022

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Dr. Wells clarifies that the originally truncated point should read:

-One of my biggest concerns is that the time period (7 years for U.S., 5 years for China) is too short to calculate meaningful trend estimates, and because of this, the trend estimates themselves may be a source of additional uncertainty. I fully understand the time and resource constraints of running chemical transport models, therefore, I'm not suggesting that this must be done, but merely that this is addressed as a limitation in the discussion. As a potential future research application, one could expand this type of analysis to a set of model runs evaluated over a longer time period, such as EPA's EQUATES series for 2002-2017 (<https://www.epa.gov/cmaq/equates>). The emissions and meteorology inputs for the EQUATES model runs are available from this website.