

Interactive comment on “Evidence of ketene emissions from petrochemical industries and implications for ozone production potential” by Chinmoy Sarkar et al.

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I am posting a quick comment for saving some time to the reviewers.

I think the assignment of the m/z 43.018 (CH_3CO^+) signal to ketene is incorrect. We flew our PTR-TOF-MS instrument on the NASA DC-8 during KORUS-AQ, and we also observed a high m/z 43.018 signal over the Daesan petrochemical complex. The signal was highly correlated with the m/z 87.044 ($\text{C}_4\text{H}_7\text{O}_2^+$) signal and a laboratory study confirmed that the signal ratio was the same as for vinyl acetate. Vinyl acetate produces a strong acetylium ion fragment upon protonation in the PTR-MS analyzers, especially under the PTR-MS operating conditions (high E/N) the authors were using.

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Vinyl acetate is expected to be emitted from the ethylene vinyl acetate (EVA) plants at Daesan.

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