

Evaluation of Composition-Dependent Collection Efficiencies for the Aerodyne Aerosol Mass Spectrometer using Field Data

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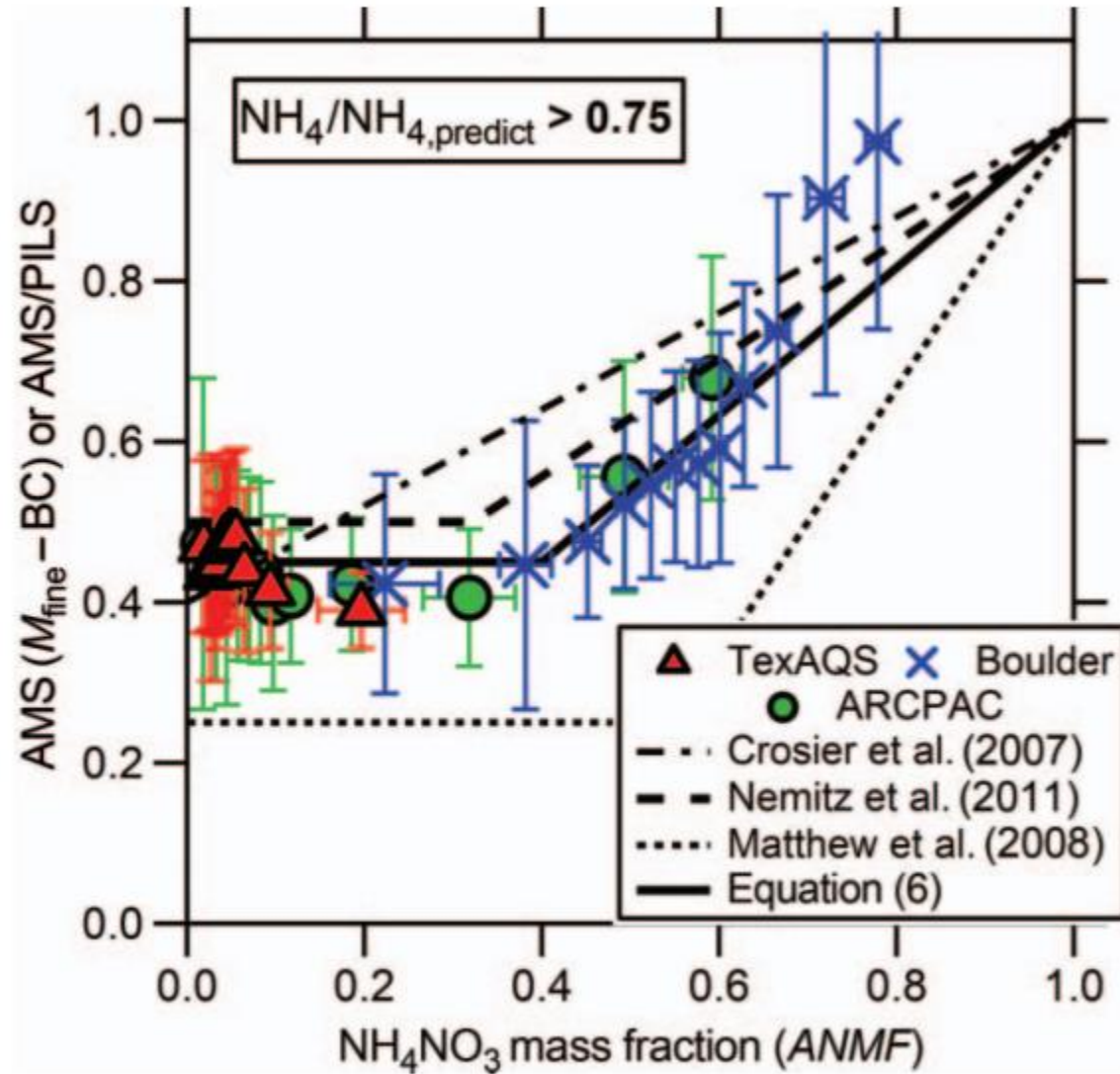
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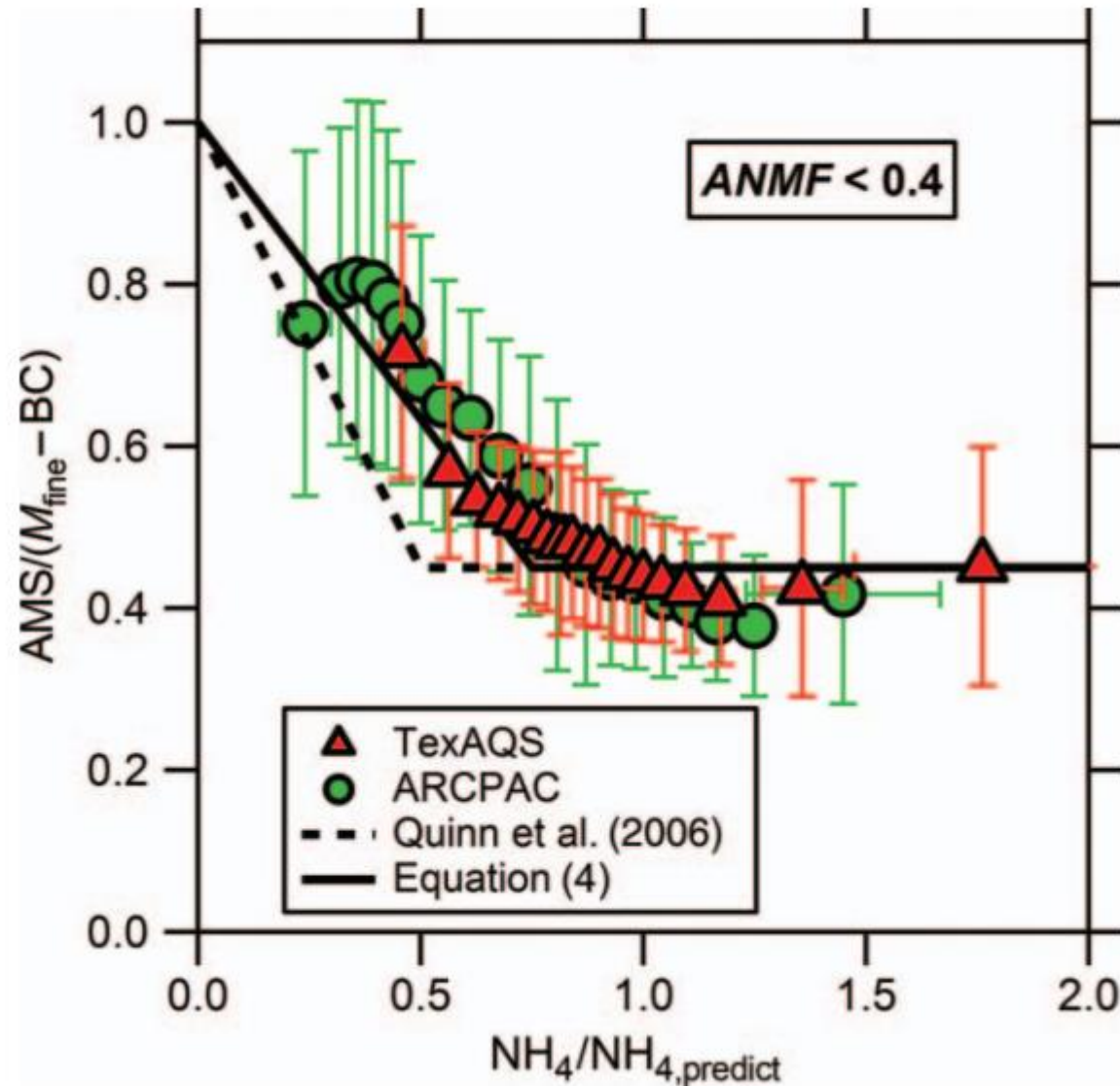
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For neutralized aerosol ($\text{NH}_4/\text{NH}_{4,\text{pred}} > 0.75$), high NH_4NO_3 increases CE. Must be above detection limit for NH_4 ! More difficult for ACSM than AMS



$$CE_{\text{dry}} = \max(0.45, 0.0833 + 0.9167 \times ANMF)$$

For high sulfate aerosol ($ANMF < 0.4$), high acidity increases CE.
Must be above detection limit for NH_4 ! More difficult for ACSM than AMS.



$$CE_{\text{dry}} = \max \left(0.45, 1.0 - 0.73 \times \left(\text{NH}_4 / \text{NH}_{4,\text{predict}} \right) \right)$$

Implementation in Tofware is coming soon!