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*Supplement of*

## **Why do models perform differently on particulate matter over East Asia? A multi-model intercomparison study for MICS-Asia III**

**Jiani Tan et al.**

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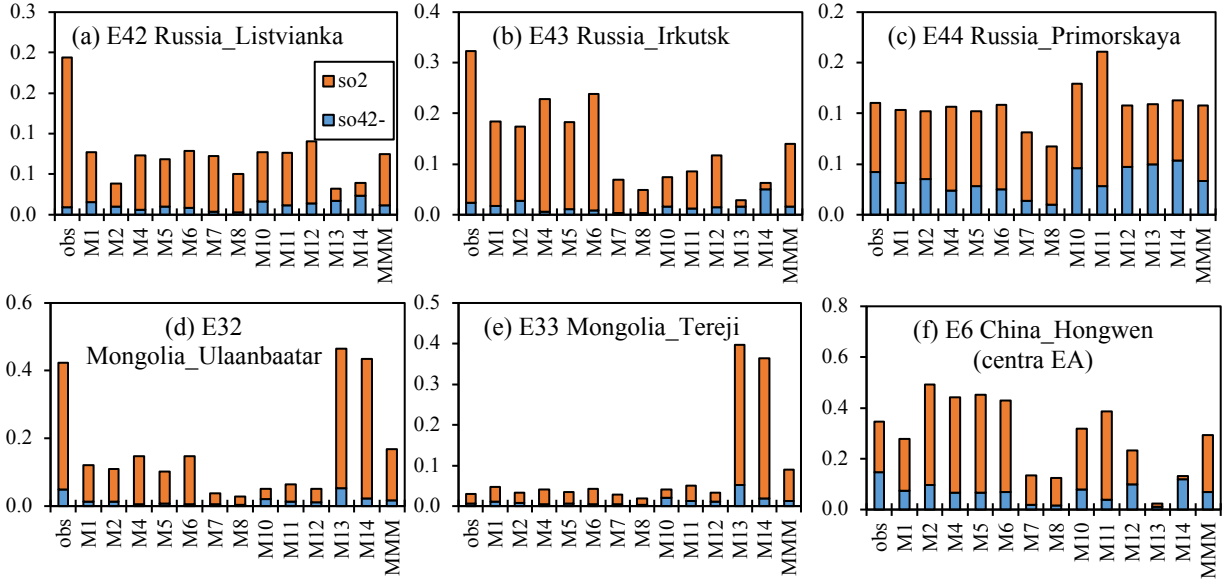
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# Supplementary Material

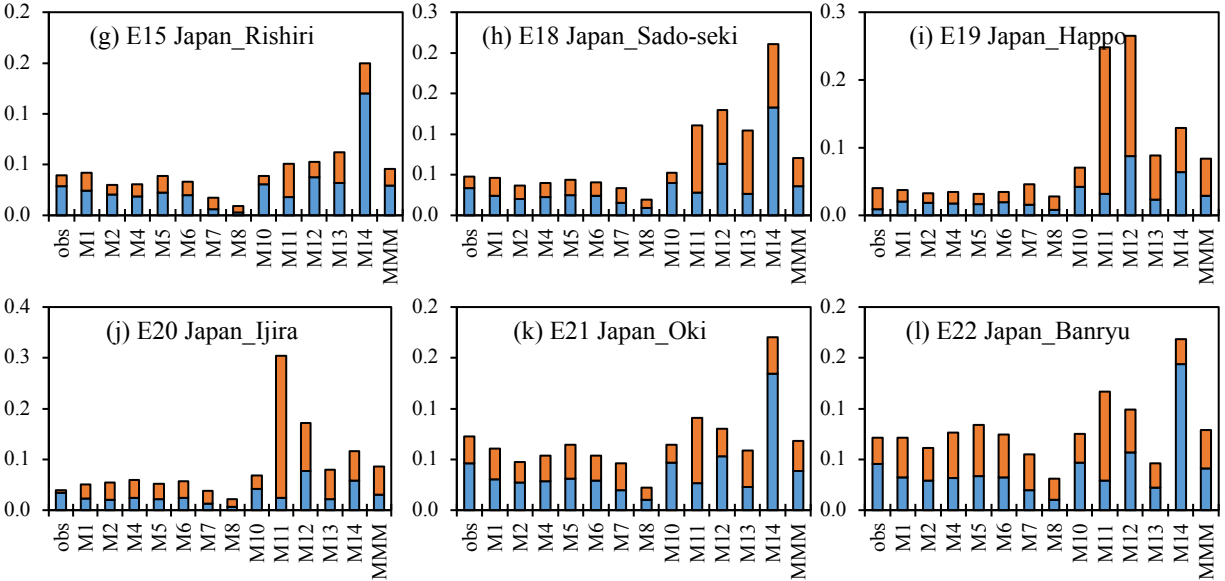
## Figures

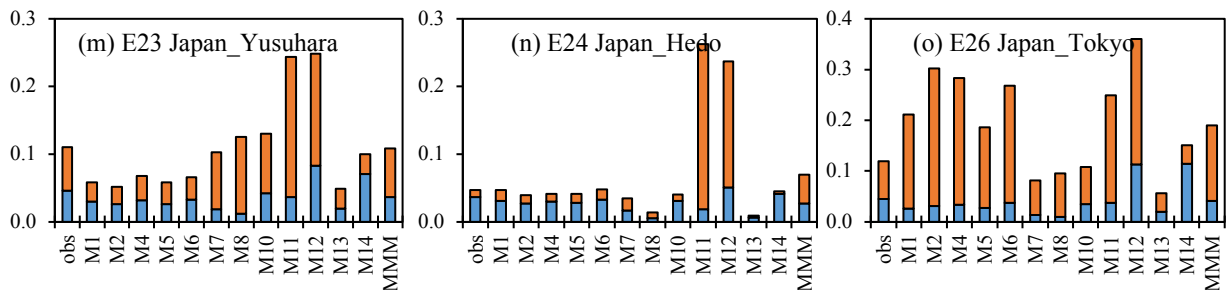
### Figure S1

#### Gas-aerosol partitioning of S in northern EA and central EA



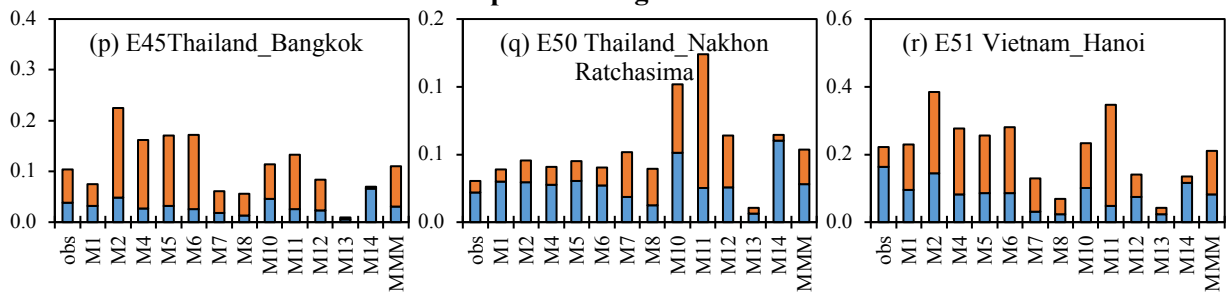
#### Gas-aerosol partitioning of S in eastern EA



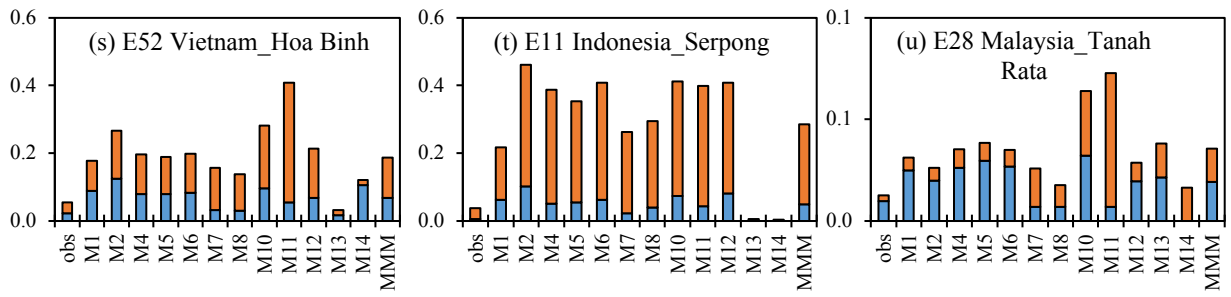


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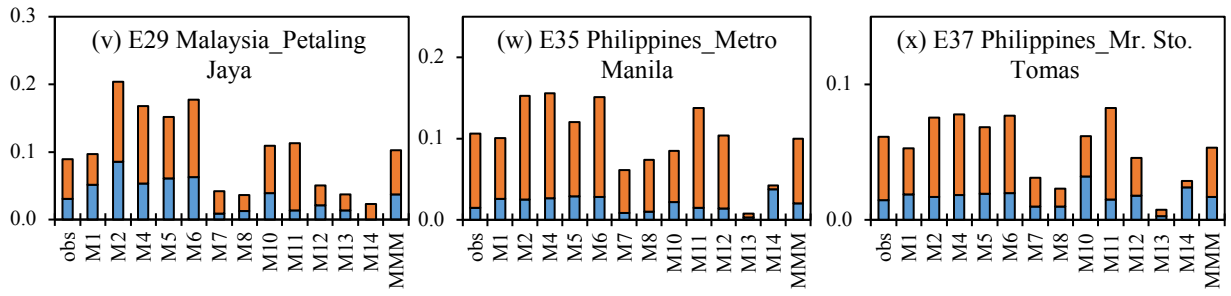
**Gas-aerosol partitioning of S in southern EA**



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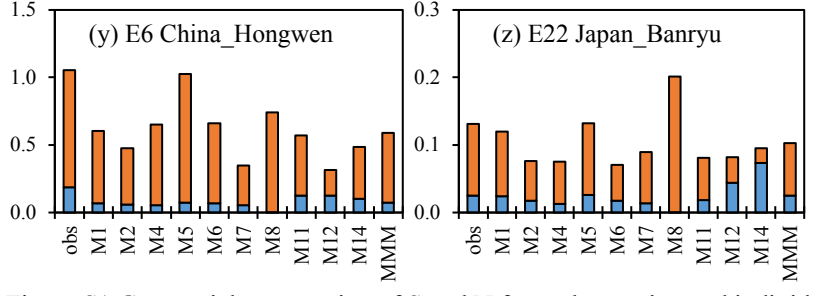


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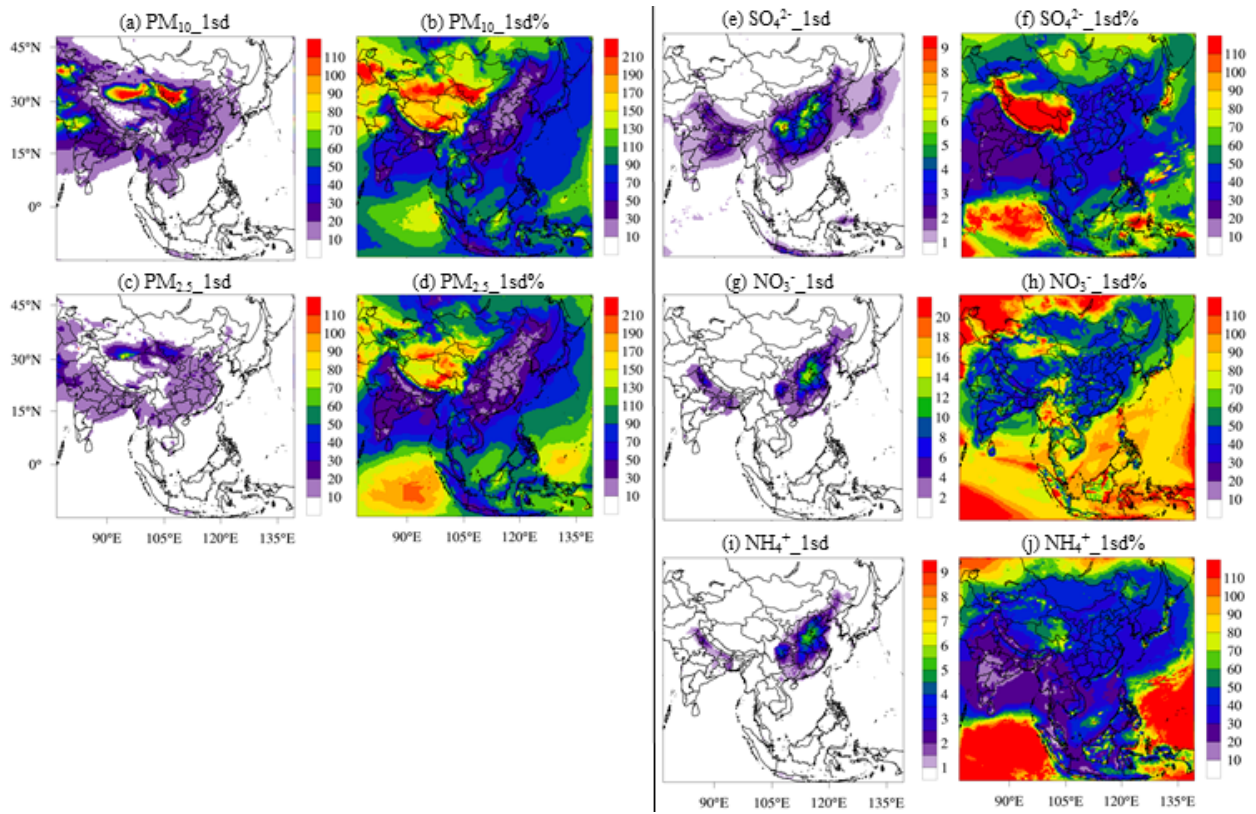
**Gas-aerosol partitioning of N**



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Figure S1 Gas-particle conversion of S and N from observation and individual models at EANET sites. The unit is  $\mu\text{mole (S or N) m}^{-3}$ . Values are calculated by annual average data.

## Figure S2



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Figure S2 The inter-model variations of PM and components among models. The 1sd is the 1 standard deviation among models ( $\mu g m^{-3}$ ). The 1sd% is calculated by dividing 1sd by MMM (%).