Multi-model comparison of O3, CO, PM2.5, and BC with cargo ship observations in Asia and Oceania

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Long-term monitoring using commercial cargo ships: **O3, CO, PM2.5, & BC**

Comparison of seasonal variations at different latitudes with GEOS-Chem and CMAQ

Japan-Southeast Asia

M/V FUJITRANS WORLD

M/V TRANS FUTURE 5

Japan-Australia/New Zealand

Obs

GEOS-Chem

CMAQ