Springtime Variability of Tropospheric Composition in East and Southeast Asia Simulated by High Resolution Nested-grid GEOS-Chem Model

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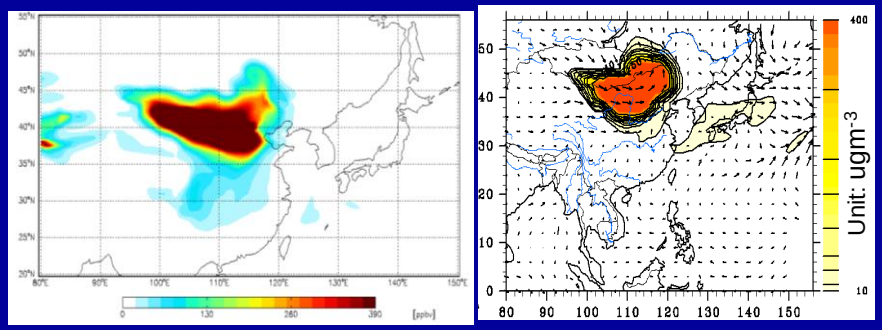
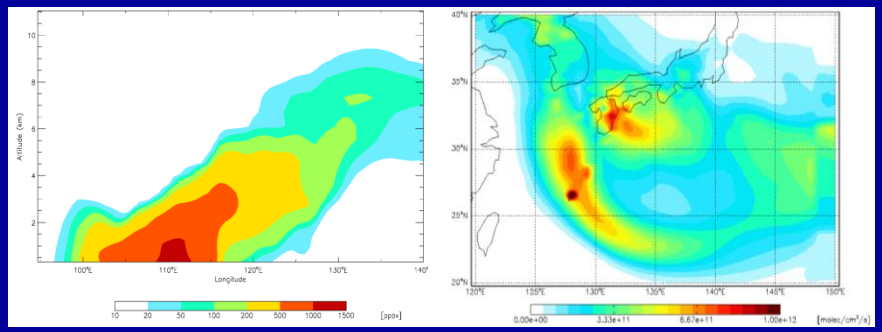
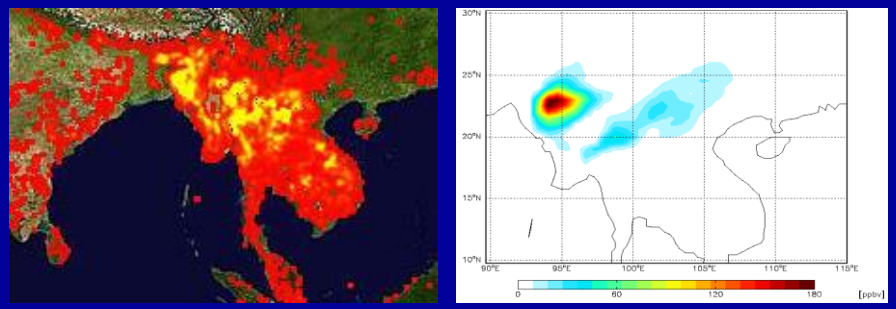


Surface dust concentrations computed by the GC model (left) and a regional CTM (right)



Dust plume lifted to ~ 6km a.s.l. (left); Dust deposited over East China Sea and Western Pacific Ocean (right)



Fire map over SE Asia (left) and corresponding burning-derived CO concentrations in free troposphere (3km a.s.l., right)

- The model reproduces many important observed features of the Asian dust event and biomass burning plume from Southeast Asia.
- It furthers our understanding of the storm onset, structure/transport and its downwind/oceanic impact.
- The burning-derived CO has large impact (> 60%) on the free troposphere.

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