

# Aerosols WG Update

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# Soon to be incorporated

- TOMAS updates
  - Functionality in GCHP (patch sent)
  - Full integration with aqueous sulfate in KPP (patch sent)
  - Blowing-snow sea-spray (patch sent)
- DMS chemistry updates
- Loretta: Future dust and biomass burning emissions (patches sent)
- Bug fixes on the calculation of sea salt alkalinity and pH-dependent heterogeneous reactions on sea salt
- Luo wet deposition fixes (paper in prep, updated code ready within 3 months)

# Planned work

- From Bob Y (ongoing, 1-1.5 years)
  - Cleaning up aerosol\_mod.F90 (to reduce complexity and improve performance)
  - Pulling out kinetic reactions from carbon\_mod.F90 etc. and porting those into KPP
- Jingqiu Mao: Brown carbon chemistry
  - Implemented in 12.7.2
- Dan Westervelt: Automated reduction in isoprene scheme
  - From 52 species and 188 reactions to 9 species and 21 reactions
- Many items listed for >6 mo on development page.

# Steering committee notes for discussion

- Directions for SOA scheme development  
(Isoprene, MT, new scheme evaluation)
- Future of thermodynamic models in GEOS-Chem