WG3.2: Regional modeling

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Major problems/limitations in the current regional modeling

Nested version of GEOS-Chem

• GEOS-5 nested version of 0.5° x 0.66° is only available for East Asia (2004-present) any interests for other regions – met field availability?

• Asian emissions for the GEOS-5 nested version (1x1 Streets et al inventory, 1x1 GFED2 biomass burning, vegetation, etc…)

• Evaluation of other simulations (Aerosol, Mercury, CH₄) with nested version

• Any potential problems with using 4°x5° GC for 0.5° x 0.66° BC? OK for now, any comments?
Major problems/limitations in the current regional modeling (cont.)

Regional modeling using BC from GC

• Different meteorology in the boundary between GEOS vs. MM5 - Running the regional model with GEOS meteorology?

• Chemical mapping for GC – CB5, GC – SPRAC99

• Conservation of carbon in VOCs mapping in GC-CMAQ?

• Friendlier format of GC for BC

• Consistent linkage tool for GC – regional model

• Any needs for archiving GC data for regional modeling?
Ongoing developments

• Nested version in Europe by Ana Protonotarious, Nat’l Observ. of Athens

• Species vs. species mapping by Tao Zeng, Georgia EPD

• Aerosol microphysics in the nested model by Fangqun Yu, Suny Albany
Priorities and Plans

• Developing a consistent linkage tool for GC and CMAQ (?)

• Evaluation of aerosol simulations of the nested GEOS-Chem over East Asia (Rokjin)

• Wiki page including introduction for the nested GC (Yuxuan)