

# WG3.2: Regional modeling

Rokjin Park and Yuxuan Wang 

# Major problems/limitations in the current regional modeling

## Nested version of GEOS-Chem

- GEOS-5 nested version of  $0.5^\circ \times 0.66^\circ$  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,  $\text{CH}_4$ ) with nested version
- Any potential problems with using  $4^\circ \times 5^\circ$  GC for  $0.5^\circ \times 0.66^\circ$  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 Protonotarios, 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)