WRF-GC model (v1.0)

WRF-GC input
Including meteorology and chemical initial/boundary conditions and emissions input files

WRF v3.9.1.1
(ARW Core, in distributed memory)

- Initialization
  - Clock, grid, initial/boundary conditions

WRF grid
- Dynamics
- Physics

WRF-to-chemistry interface
Chemistry initialization and time-stepping

WRF time step loop

WRF-GC chemistry component
In distributed memory

- GEOS-Chem v12.2.1
  (Grid-Independent, MPI-Enabled)
  - Convection
  - Deposition
  - Emissions (HEMCO)
  - Boundary layer mixing
  - Chemistry

State conversion module
State variables in WRF Format

State management module
State variables in GEOS-Chem Format

WRF-GC output
Finalization
Diagnostics and output

Emissions (HEMCO)
Deposition
Boundary layer mixing
Chemistry