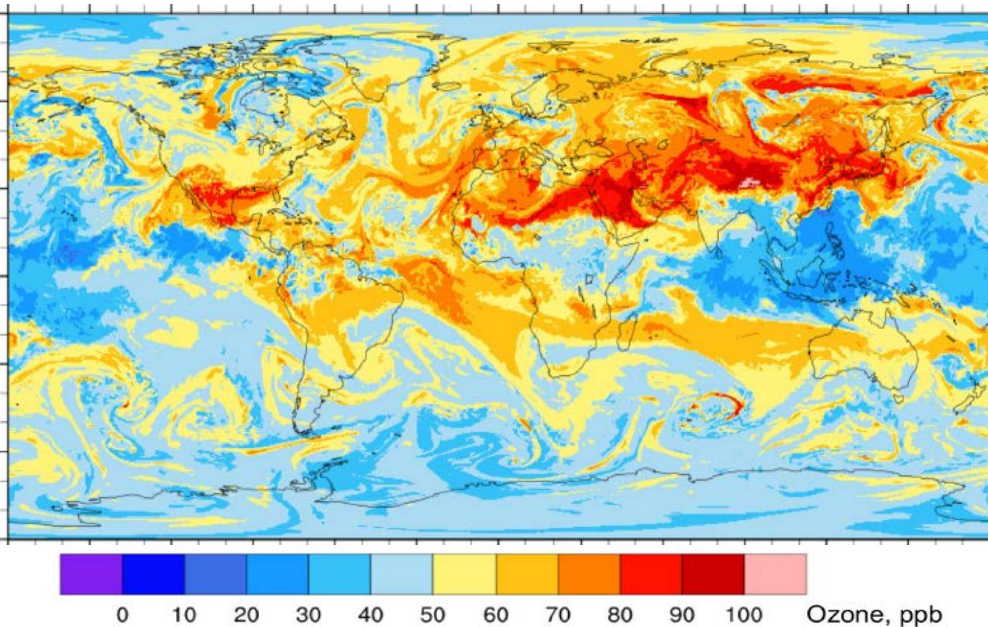


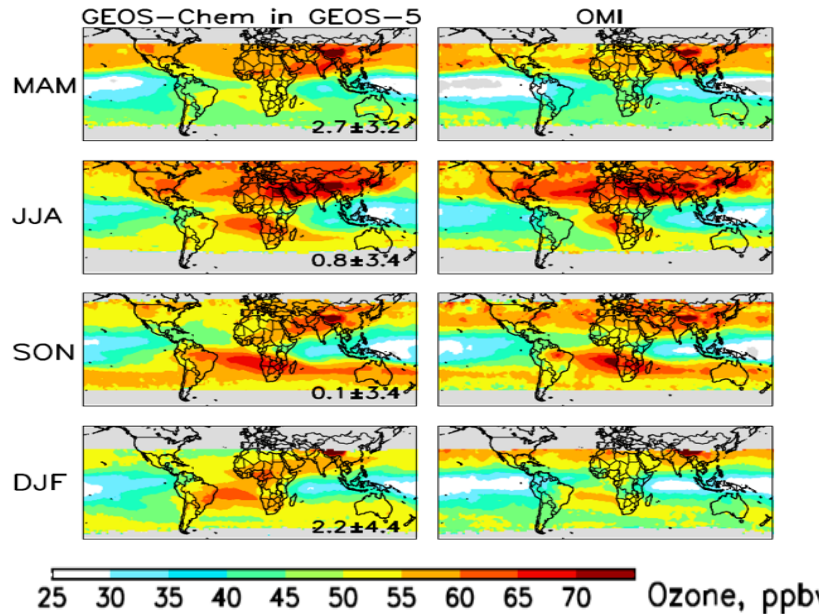
Global simulation of tropospheric chemistry at 12.5 km resolution with the NASA GEOS-5 model including GEOS-Chem chemistry

- A 1-year global simulation of tropospheric chemistry with unprecedented high resolution was achieved in the NASA GEOS system using GEOS-Chem as chemical module
- The simulation required 4707 cores for 31 days (wall time) with 24% of time spent on chemistry
- Results are now used for observation system simulation experiments in support of the geostationary satellite constellation for air quality

500 hPa ozone on August 1, 2013 at 0Z



Evaluation with 700-400 hPa OMI ozone



Hu, L., C.A. Keller, M.S. Long, T. Sherwen, B. Auer, A. Da Silva, J.E. Nielsen, S. Pawson, M.A. Thompson, A.L. Trayanov, K.R. Travis, S.K. Grange, M.J. Evans, and D.J. Jacob, *Geosci. Model Dev.*, **11**, 4603-4620, 2018.

