

# First look at Offline chemistry at 8.4 using GA4.0

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The following plots compare The offline chemistry model (**anqbp, vn8.5**) with the full strattrop chemistry (**amtjq, vn8.4**). Both of these experiments has the gravitational settling bug corrected. The offline chemistry does only the tropospheric sulphur chemistry using monthly mean oxidants, transporting 7 tracers. The ancillary fields are: O<sub>3</sub>, OH, HO<sub>2</sub>, NO<sub>3</sub>, and H<sub>2</sub>O<sub>2</sub>. H<sub>2</sub>O<sub>2</sub> is also a tracer, and it is washed out from the model and repleted from HO<sub>2</sub> + HO<sub>2</sub>. An artificial diurnal time profile is computed. The plots below are a first look at the chemical species, aerosol number concentration, and aerosol mass distributions.











