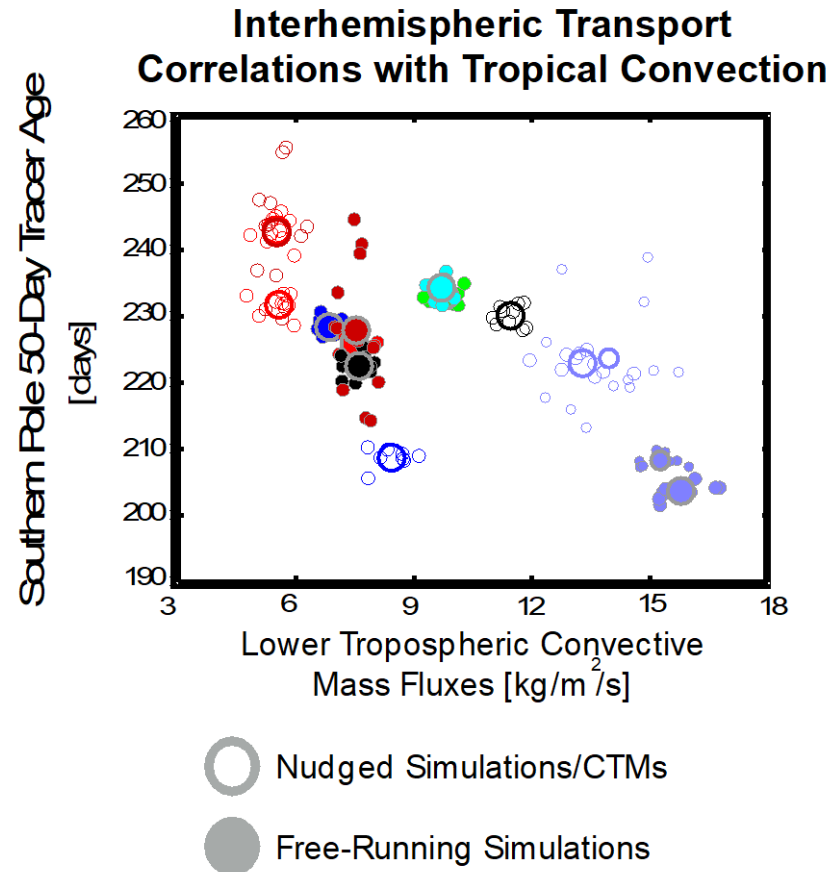


Understanding Large-Scale Tropospheric Transport Differences in Chemistry Climate Models



- Orbe *et al.* (2018) show that there are large differences (up to 40%) in interhemispheric transport times among models participating in the IGAC SPARC Chemistry-Climate Model Initiative (CCMI). They also show that these differences are largely related to differences in parameterized tropical convection among models (LEFT).
- One important conclusion from this study is that the *differences among simulations constrained with reanalysis fields (open circles, LEFT) are as large as the differences among free-running simulations (closed circles)*. This suggests that care must be taken when using simulations constrained with analyzed winds to interpret the influence of meteorology on tropospheric composition.

*Orbe, C., et al (2018). "Large Scale Tropospheric Transport in the Chemistry Climate Model Initiative (CCMI) Simulations," *Atmospheric Chemistry and Physics*, 7217-7235.