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Ying Wang* (wang@ou.edu), 601 Elm Ave Rm 423, Norman, OK 73019. *Mean ages for a terrestrial carbon dynamics model.*

In this talk, I will introduce a nine-dimensional non-autonomous compartmental system modeling the terrestrial carbon cycle. I will define a non-autonomous version of transit time as the mean age of mass leaving the compartmental system at a particular time and show that our non-autonomous theory generalizes the autonomous case. I will apply these results to study the nine-dimensional non-autonomous carbon cycle compartmental model. I will demonstrate that the non-autonomous versions of transit time and mean age differ significantly from the autonomous quantities when calculated for that model. This is a joint work with Yiqi Luo et al. (Received July 11, 2017)