1112-92-461 **James D Brunner*** (jdbrunner@math.wisc.edu), UW Madison Department of Mathematics, Van Vleck Hall, 480 Lincoln Drive, Madison, WI 53706, and **Gheorghe Craciun**. *Permanence of power law systems.* Preliminary report.

Permanence of an ODE model of a chemical reaction network may informally be considered equivalent to the existence of compact attracting subset of $\mathbb{R}^d_{\geq 0}$. Permanence of power law systems has not been fully characterized, even in two dimensions. Inspired by chemical reaction networks, we use the geometrical properties of a power law system with non-constant coefficient functions to investigate permanence. Using the *geometrically embedded graph* of a power law system, have characterized a robust type of permanence in $\mathbb{R}^2$, and seek to extend this to higher dimensions. (Received August 10, 2015)