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Vahagn Manukian* (manukive@muohio.edu), Miami University Hamilton, 1601 University Blvd, Hamilton, OH 45011. *Global analysis of a planar vector field.*

We analyze a nonlinear planar system with three parameters near a normal form with nilpotent singularity that captures the bifurcation structure of the vector field generated by the equations of chemical kinetics of the Gray-Scott model. (Received September 04, 2012)