1106-35-1333 **Georg Hetzer*** (hetzege@auburn.edu), Department of Mathematics and Statistics, Auburn University, Auburn, AL 36849-5310. *A Reaction-Diffusion Problem with Hysteresis.* Preliminary report.

Energy balance climate models lead to reaction-diffusion equations with slow diffusion on the 2-sphere. A hysteresis term is introduced in order to account for a frequent repetition of sudden and fast warming followed by much slower cooling as observed from paleoclimate proxy data. Existence of global solutions and of a trajectory attractor will be discussed. (Received September 12, 2014)