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Georg Hetzer* (hetzege@auburn.edu), Department of Math. and Stat., 304 Parker Hall,
Auburn University, Auburn, AL 36849-5310. *Reaction-Diffusion Equations from Energy Balance
Climate Models.*

Energy balance climate models are simple diagnostic models which describe the evolution of a long-term mean of temperature by employing the relevant balance equations for the heat fluxes involved. The mean horizontal heat flux is approximated by a diffusion operator, and important feedback processes appear in the net radiation flux. This talk focuses on incorporating a bio-feedback into the model which leads to a reaction-diffusion equation with memory and a non-local term. (Received September 23, 2012)