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**Richard P. McGehee\*** (mcgehee@umn.edu), School of Mathematics, University of Minnesota, Minneapolis, MN 55455. *An Ice-Albedo Feedback Model of Paleoclimate.*

The Earth undergoes long-term temperature cycles alternating between glacial and interglacial episodes. It is widely accepted that changes in the Earth's orbit and rotation axis cause variations in solar input which drive the glacial cycles. However, discrepancies between analysis of orbital forcing and analysis of the climate data imply the existence of nonlinear feedback mechanisms. One of these mechanisms is ice-albedo feedback which can be modeled as a dynamical system and which, when combined with the cycles in the orbital elements, resolves some of the discrepancies. (Received December 15, 2010)