1035-86-1422   **Dale R Durran*** (`durrand@atmos.washington.edu`), Atmospheric Sciences, Box 351640, University of Washington, Seattle, WA 98195-1640. *Mathematics and Climate Change: Two Examples.*

Mathematics obviously underlies any attempt to simulate the earth's climate and its response to changes in climate forcing. As we attempt to formulate ever more complete and accurate models of the processes influencing climate change, the focus often shifts away from mathematical elegance toward empirically engineered representations of factors that defy simple mathematical representation. Nevertheless, there remain highly mathematical problems relevant to advancing our understanding of climate and atmospheric processes. This presentation will focus on two such areas with potential for further fruitful investigation: (1) the use of the ensemble Kalman filter to link dynamical models of climate change with paleoclimate data and (2) the specification of boundary conditions in atmospheric models. (Received September 19, 2007)