



## **Properties of methane and ethane clouds using a Titan GCM**

**E.L. Barth** (1), S.C.R. Rafkin (1) and C.P. McKay (2)

(1) Southwest Research Institute, (2) NASA Ames Research Center

A general circulation model has been developed to explore the formation mechanisms of various cloud types observed in Titan's atmosphere. The model covers the troposphere and stratosphere, including microphysical processes for haze (production, coagulation with charging, sedimentation) and methane/ethane clouds (nucleation, condensation, coalescence, precipitation, evaporation). The microphysics equations have been recast in terms of moments; particles are represented by a three-moment scheme, carrying number, area and mass. We will present results on seasonal haze transport with atmospheric circulation and discuss the role of dynamics in forming Titan's clouds.