1056-35-1390   **Dhanapati Adhikari*** (`dadhika@math.okstate.edu`), Department of Mathematics, Oklahoma State University, Stillwater, OK 74078, and **Chongsheng Cao** and **Jiahong Wu**. *The 2D Boussinesq Equations with vertical viscosity and vertical diffusivity.* Preliminary report.

A fundamental issue concerning Boussinesq equations is whether or not their classical solutions are always global in time. In this talk, we consider the 2D Boussinesq equations with vertical viscosity and vertical diffusivity. We prove conditional global in time regularity results. (Received September 21, 2009)