1015-35-164 **chongsheng cao*** (caoc@fiu.edu), deptartment of Mathematics, Florida International University, miami, FL 33199, and **edriss S titi** (etiti@math.uci.edu), deptartment of Mathematics, University of California, Irvine, Irvine, CA 92697. *Global Well-posedness of Primitive Equations for Atmospheric and Oceanic Dynamics.*

The primitive equations describe hydrodynamical flows in thin layers of fluid (such as the atmosphere and the oceans). Due to the shallowness of the fluid layer the vertical motion is much smaller than the horizontal one and hence the former is modeled, in the primitive equations, by the hydrostatic balance. The primitive equations are considered to be a very good model for large scale ocean circulations and for global atmospheric flows. As a result they are used in most global climate models. In this talk we will show the global well posedness of primitive equations. (Received February 03, 2006)