

1116-35-2614

Alexis F. Vasseur* (vasseur@math.utexas.edu) and **Marjolaine Puel**
(marjolaine.puel@unice.fr). *Global weak solutions to the inviscid 3D quasi-geostrophic equation.*

We show the existence of global weak solutions to the inviscid three-dimensional quasi-geostrophic system of equations. This system of equations models the evolution of the temperature in the atmosphere. It is widely used in geophysics and meteorology. It involves a coupling between a transport equation in the whole domain, and an other one on the boundary of the domain, at the surface of the earth. (Received September 22, 2015)