1100-35-240   **Igor Kukavica**, **Walter Rusin*** (`walter.rusin@okstate.edu`) and **Mohammed (Nabil) Ziane**. *Higher regularity for the primitive equations with Dirichlet boundary conditions.*

We consider the primitive equations of the ocean. The well-posedness in the case of H^1 initial data has been shown by Cao and Titi in the case of boundary conditions that are physically motivated. In later work, Kukavica and Ziane proved an analogous result in case of Dirichlet boundary conditions. In this talk, we will be concerned with higher regularity of these equations, in particular we will analyze the case of Dirichlet conditions. (Received February 09, 2014)