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Remarks on the global regularity of two-dimensional Boussinesq equations.

The Boussinesq equations is a system of non-linear partial differential equations which model thermal convection and geostrophic flows. The 2D Boussinesq equations have received significant attentions in recent years because of their close connections to 3D hydrodynamics equations. Numerous studies have been done on a global regularity of the 2D Boussinesq equations with partial dissipations or no dissipations. This talk presents some of the recent results on these equations with partial dissipation in horizontal or vertical direction. (Received September 26, 2017)