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Jiahong Wu* (jiahong.wu@okstate.edu), Department of Mathematics, 401 Mathematical Sciences, Oklahoma State University, Stillwater, OK 74078. *PDEs related to fluids with partial or fractional dissipation.*

There have been substantial recent developments on several partial differential equations from fluid dynamics with partial or fractional dissipation. This talk summarizes results on the global existence and regularity problem for the 3D Navier-Stokes equations with partial hyperdissipation, the surface quasi-geostrophic equation, the 2D Boussinesq equations with partial or fractional dissipation and the 2D magnetohydrodynamic equations with partial or fractional dissipation. (Received July 07, 2017)