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Hongjie Dong and **Natasa Pavlovic*** (natasa@math.utexas.edu), Department of Mathematics, University of Texas at Austin, 1 University Station, C 1200, Austin, TX 78712. *A regularity criterion for the dissipative quasi-geostrophic equations.*

In this talk we will present a regularity criterion for weak solutions of the dissipative quasi-geostrophic equations. We remark that the result extends the regularity criterion of Constantin and Wu to scaling invariant spaces.

After we give a short overview of the known results concerning the 2D quasi-geostrophic equations, we will present a sketch of the proof of the regularity criterion. (Received February 04, 2008)