Angular momentum transport in cylindrical and spherical Couette flows[1] DANIEL LATHROP, University of Maryland — Cylindrical and spherical Couette flows (flows between differentially rotating cylinders and spheres) are simple geometries for understanding turbulent transport. I'll review experiments at high Reynolds number of turbulent flows in water, glycerin-water solutions, and liquid sodium. Instabilities can occur on top of relatively featureless turbulence due to restoring forces such as Lorentz forces, Coriolis forces or gravity waves on a free surface. The former shares some characteristics with the Magnetorotational instability. The latter cases speak to perhaps a general ability of turbulent shear flows to drive large scale oscillations when there exist near-neutral oscillatory modes.

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