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Elasto-Rotational Instability in Couette-Taylor Flows of Visco-Elastic Fluids[1] STANISLAV BOLDYREV, DON HUYNH, UW-Madison — We discuss the so-called "elasto-rotational" instability of visco-elastic polymer fluids in a Couette-Taylor geometry. We study under what conditions (viscosity and relaxation time of the polymer fluid, velocity profile of the Couette-Taylor flow) this instability is analogous to the magnetorotational instability that plays a fundamental role in astrophysical accretion disks.

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