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Intermittent and equilibrium puffs in transitional pipe flow DWIGHT BARKLEY, DAVID MOXEY, University of Warwick — We report on numerical simulations of flow in pipes at Reynolds numbers 1800 to 3000 - near the minimum Reynolds numbers that supports turbulence. The computational domains are periodic in the streamwise direction with lengths up to 150 pipe diameters. We find both intermittent and equilibrium puffs. More particularly we find that, just as with other shear flows near the transition to turbulence, there are well defined transitions between uniform turbulence, intermittent states of turbulent and laminar flow, and spatially periodic states of turbulent and laminar flow.

> Dwight Barkley University of Warwick

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