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Anomalous radial convection and strong toroidal flows in tokamak scrape off layer plasma[1] S.I. KRASHENINNIKOV, A. YU. PIGAROV, G.Q. YU, UCSD — Here we present our results of: i) 2D turbulence modeling of nonlinear evolution of step-like electron temperature profile in the SOL caused by the grad(Te) instability. We study the formation and advection of the coherent structures and investigate their role in the temperature transport; and ii) 2D modeling (with transport code UEDGE) of the macroscopic edge plasma poloidal and parallel velocities. We demonstrate parallel plasma flows with Mach number $\sim$1 in the inner SOL region and show that the B-field variation can be an important ingredient in the formation of such flows.

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