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# Drift-wave transport in the velocity shear layer

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Particle drift driven by electrostatic wave fluctuations is numerically computed to describe the transport in a gradient velocity layer at the tokamak plasma edge. We consider an equilibrium plasma in large aspect ratio approximation with  $\mathbf{E} \times \mathbf{B}$  flow and specified toroidal plasma velocity, electric field, and magnetic field profiles. A symplectic map, previously derived for infinite coherent time modes, is used to describe the transport dependence on the electric, magnetic, and plasma velocity shears. We also show that resonant perturbations and their correspondent islands in the Poincaré maps are much affected by the toroidal velocity profiles. Moreover, shearless transport barriers, identified by extremum values of the perturbed rotation number profiles of the invariant curves, allow chaotic trajectories trapped into the plasma. We investigate the influence of the toroidal plasma velocity profile on these shearless transport barriers.

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