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Parallel Momentum Transport Induced by RF Waves and by Plasma Turbulence

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Generation of plasma toroidal flow without or with low momentum input has been attracted much attention due to the key issue of plasma rotation on MHD stabilization and turbulence regulation. The general momentum equation is reached with a generalized ponderomotive force and then the drive and transport of parallel momentum are discussed in the case of rf injection and/or in the drift-wave turbulence background.

With the injection of rf waves, a generalized ponderomotive force exerts on the plasma, which includes three pa

The inhomogeneity of plasma profile can be integrated in the theory. For rf-driven case, this only contributes

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