

Subgrid-Scale Modeling of Anisotropic MHD Turbulence

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We perform high-resolution direct numerical simulations of MHD turbulence at low magnetic Reynolds number. A forced flow in a three-dimensional box with periodic boundary conditions is considered. The purpose of our simulations is to investigate fundamental properties of turbulent fluctuations affected by an imposed steady uniform magnetic field and to develop an SGS (subgrid-scale) closure capable of accurate and physically adequate representation of anisotropic and intermittent MHD turbulence.

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