The Simulation on Plasma Physics of EAST Tokamak with BOUT++Code

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Abstract:
The heat flux on the divertor region has become a crucial factor in influencing the tokamaks' performance. The large edge localized modes (ELMs), driven by the free energy in the pedestal region, can constrain material lifetimes. Accurately predicting the ELM behavior in tokamaks is an essential element of prediction and optimization of fusion performance. The simulations on ELMs in EAST tokamak with six-field peeling–ballooning (P–B) modes using the BOUT++ code are reported. Radial heat flux of ions and electronsand the heat flux on the divertor region have been presented.