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Neoclassical Transport of Energetic Alpha Particle QI ZHONG, YONG XIAO, Institute for Fusion Theory and Simulation, Zhejiang University — A simulation of neoclassical transport for energetic alpha particle is carried out using the gyrokinetic particle code GTC. A linearized Coulomb collision operator is implemented, including slowing down, pitch angel scattering and energy scattering term. In addition, source and sink are carefully treated in the simulation to ensure conservation properties. Simulation results show good agreement with analytic results on radial particle and heat diffusivity, as well as bootstrap current.

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