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Dynamic Plasma Screening Effects on the Elastic Electron-Ion Collision in Turbulent Plasmas YOUNG-DAE JUNG, Department of Applied Physics, Hanyang University, Ansan, Kyunggi-Do 426-791, South Korea — The dynamic plasma screening effects on the elastic electron-ion collision are investigated in turbulent plasmas using the second-order eikonal method. The results show that the dynamic screening effect strongly enhances the eikonal phase shift as well as the cross section. It is also found that the dynamic screening effect decreases with increasing impact parameter. In addition, the influence of the turbulence suppresses the eikonal phase shift and cross section, especially, for small impact parameters. Moreover, it is found that the dynamic screening effect on the eikonal cross section increases with decreasing thermal energy for large impact parameters.

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