

The First Principle Formula of the Relativistic Heat Conductivity of Coulomb Electronic Plasmas

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Abstract: Making use of the relativistic BBGKY technique, the relativistic generalization of Landau collision integral is obtained. Furthermore, we calculate the relativistic hydrodynamic modes up to the second order in the hydrodynamic wave number. Combining Résibois' method, we present the first principle formula of the relativistic heat conductivity of Coulomb electronic plasmas for low-order corrections.

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Key words: relativistic Landau collision integral, relativistic correction of heat conductivity, Coulomb electronic plasmas

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