

Abstract Submitted
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Effect of a momentum-transfer scattering at inelastic collisions on the electron transport II: Case study in Ar NAOHIKO SHIMURA, TAKASHI YAGISAWA, Toshiba Corporation, TOSHIAKI MAKABE, Keio University — In the previous paper, we presented an expression for the inelastic momentum-transfer scattering on the collision integral of the Boltzmann equation, in order to reflect the effect of an inelastic scattering distribution of an electron with a molecule on the electron kinetics in gases and collisional plasmas 1]. In the present paper we will discuss the influence of the anisotropic scattering of the inelastic collisions on the electron velocity distribution in Ar with a scattering distribution of $\cos T$. The numerical procedure is based on our Direct Numerical Procedure of the Boltzmann equation 2]. A comparison of the electron velocity distribution between of the anisotropic scattering and isotropic one in an rf-field will give us a renewed interest in the electron transport in gases and collisional plasmas. 1. T. Makabe and R. White, J. Phys. D: Appl. Phys. 48(2015) 485205. 2. T. Makabe and Z. Petrovic, Plasma Electronics (2nd edn.), CRC Press (2015).

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