

On the Chapman-Enskog approximations convergence for plasma

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The semi-quantum model of electron transport in plasma is used. This model is free from so-called Coulomb divergences. So the mathematical accuracy of this model is restricted only by number of accounted Chapman-Enskog approximations. The approximations from 0th to 4th were constructed and the estimation of their convergence was made. The estimation shows that the input of higher approximations is about 0.5%. It is quite satisfactory for practice.