

ABSTRACT

Elastic scattering of electrons by hydrogen atoms in a dense semiclassical hydrogen plasma for low impact energies has been studied.

Differential scattering cross sections were calculated within the effective model of electron-atom interaction taking into account the effect of screening as well as the quantum mechanical effect of diffraction. The calculations were carried out on the basis of the phase-function method. The influence of the diffraction effect on the Ramsauer–Townsend effect was studied on the basis of a comparison with results made within the effective polarization model of the Buckingham type.