

PRESSURE-PRODUCED IONIZATION OF NON-IDEAL DEGENERATE PLASMAS AND ELECTRICAL CONDUCTIVITY

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New experimental facilities allow to explore plasmas at high densities and moderate temperatures where degeneracy effects become relevant [1]. Ionization degree and optical conductivity are interesting physical properties of the plasma in this warm dense matter regime. Quantum statistical calculations [2] and DFT-MD simulations [3] are used to describe these systems. The effect of degeneracy on ionization potential depression [4] and collision frequency [1,2] is discussed. Problems in calculating the electrical conductivity are indicated.

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