

A c k n o w l e d g m e n t

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3.16 Time-resolved spectroscopy of a pulsed discharge in a magnetic field

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3.17 Spectroscopic observations of D₂T — tube plasma behind reflected shock front

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3.18 Optical spectrum of the pulsed gas magnetron discharge

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Low density plasmas are strongly influenced by external fields. This is also the case with the cylindrical magnetron diode at low pressure, in which the axial magnetic field set above a critical value, increases enormously the electron paths and probability for ionization. According to the equivalent pressure conception, the system consisting of crossed electric and magnetic fields can be replaced with a system without the magnetic field, where instead of the existing pressure p the equivalent pressure is used $p_{\text{eq}} = p (1 + (\omega_c/\nu_c)^2)^{1/2}$, where ω_c is the cyclotron frequency and ν_c collision frequency. For example, at the magnetic field of the order