INVESTIGATION OF DOUBLE DUST STRUCTURES IN A MAGNETIC FIELD

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Dust plasma is studied both in an RF discharge and in a DC glow discharge. The dust plasma created under conditions of a glow discharge is a volumetric formation, in contrast to most studies in RF discharges. Volumetric dust structures have a number of advantages over two-dimensional layers or one-dimensional chains when studying dusty plasma. As a rule, in a glow discharge, dust structures are studied in a trap in a standing stratum, which has a significant heterogeneity of the main discharge parameters: T_e, n_e, E_z. This makes it possible to create a double dust structure in the glow discharge stratum: two separate structures formed from particles of different sizes and located one under the other (in different phases of the striation).

This paper presents the results of creating a double plasma-dust structure in a standing stratum. And also a study of the dynamics of rotation of dust structures and their geometric parameters depending on the magnetic field induction.

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