DOUBLE DUST STRUCTURES IN A MAGNETIC FIELD [[1]](#footnote-1)\*)

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The dusty plasma created under the conditions of a glow discharge is a volume formation, in contrast to most studies in an RF discharge, for example, those associated with the action of a magnetic field [1–5]. As a rule, dust structures in a glow discharge are studied in a trap in a standing striation, which has a significant inhomogeneity of the main discharge parameters: *Te, ne, Ez* [6–9]. The inhomogeneous conditions in the discharge create a rich set of possibilities for studying dusty plasmas. First of all, in a magnetic field, this leads to a superposition of several rotation mechanisms of the dust structure.

In this paper, we study the possibility of artificially placing dusty plasma under very different conditions in a dust trap in a striation in a magnetic field. For this, the possibility of creating several dust structures simultaneously has been developed: along the discharge axis – two "drop-shaped" dust formations, along the radial coordinate – ring and disk structures.

The first results obtained in a moderate magnetic field are presented; they demonstrate the different dynamics of the behavior of dust structures, both in the longitudinal and in the radial direction.

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1. \*) [abstracts of this report in Russian](http://www.fpl.gpi.ru/Zvenigorod/L/Lt/ru/FJ-Pavlov.docx) [↑](#footnote-ref-1)