

THE FIRST INVESTIGATIONS OF SPARK
DISCHARGE IN UKRAINE

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S u m m a r y

The paper presents the first detailed investigation of the original experimental research of the effect of radioactive radiation on spark discharge made by Professor of Kharkov University A.P.Gruzintsev in 1901 - 1902. It also gives a detailed account of the first quantitative theory of self-maintained gaseous discharge elaborated by F.N.Shvedov, Professor of Novorossiisk University, in 1903 - 1905. This theory, though fully neglected nowadays, is of great interest for historic-scientific analysis due to its simplicity and clearness, its close correspondence with experimental data, and to some important consequences related to electronic theory. One of such consequences is the planetary model of the structure of particles suggested by F.N.Shvedov six years before E.Rutherford.