

## STUDY OF THE SPATIAL ENERGY DISTRIBUTION OF A SUBMICROSECOND ELECTRON BEAM WITH A WIDE KINETIC ENERGY SPECTRUM EXTRACTED INTO THE ATMOSPHERE

The paper presents a study of the pulsed electron beam with a wide kinetic energy spectrum propagation in the volume of a reaction chamber filled with air at normal atmospheric pressure. The experiments were carried out on the Astra-M submicrosecond pulsed electron accelerator (up to 450 kV accelerating voltage, up to 0.5 kA beam current, 150 ns beam pulse duration at FWHM) [1]. Diagnostics of the generated beam parameters during its transportation in the reaction chamber was carried out using standard diagnostic equipment (Rogowski coil, dosimetric films, calorimeter, Faraday cup) and an originally developed device [2,3]. The results of the work will provide identification of key factors influencing the propagation of a pulsed electron beam with a wide kinetic energy spectrum in the air environment, which can be used, for example, in the development of air preparation systems. The work was supported by the Russian Science Foundation (project No. 24-29-00695).

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