

Abstract Submitted
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Spaceresolved determination the features and parameters of plasmoids obtained by gyromagnetic autoresonance. DENIS CHUPROV, VICTOR ANDREEV, ANATOLIY UMNOV, ANDREY NOVITSKII, PFUR — Experiment and computer simulation with relativistic plasma obtained under gyromagnetic autoresonance (GA) condition are described. X-ray spectrometry, radiometry and imaging methods were applied to investigate obtained plasmoids. Energies of measured bremsstrahlung spectrums up to 0,5 MeV were observed. Investigation of the spatial anisotropy of produced X-ray radiation gave information about the plasmoid shape, localization and movement. The complex motion of the belt shaped relativistic plasmoid can be presented as rotation of the driving center around trap symmetry axis. Obtained experimental results are in good quantitative agreement with numerical simulations of GA process by particles-in-cell model.

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