

RING STRUCTURE OF ELECTRON-ION BEAMS EJECTED BY A PICOSECOND HIGH-CURRENT ELECTRON ACCELERATOR*

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The radial structure of electron-ion beams emitted by an electron accelerator with a discharge pulse of 200 ps duration, a voltage amplitude of 280 kV, and a current of about 5 kA was studied. An analysis of the shape of the beam imprints on the anode foil showed that, in addition to an intense central core several micrometers in size, the imprint contains several (3–5) concentric rings up to 150 μm in diameter. The color of the rings, which has an interference origin, was used to estimate the relative intensity of the ion tubes that form the peripheral structure of the beam.

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