

ACCELERATION OF IONS IN A HIGH-CURRENT
RELATIVISTIC ELECTRON BEAM AT EXTERNAL
INJECTION OF PLASMA

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S u m m a r y

Collective acceleration of ions and low-frequency modulation of a high-current relativistic electron beam (REB) at the plasma injection into the virtual cathode region has been studied experimentally. Ions were accelerated in the electrical field of an evolutionary virtual cathode. A REB current modulation needed for the excitation of a space charge wave and the further acceleration of ions is caused by the periodic compensation of the virtual cathode field by plasma ions.