

INVESTIGATION
OF TRANSILLUMINATION OF PLASMA
BARRIERS FOR ELECTROMAGNETIC WAVES
BY ELECTRON BEAMS.
4. ELECTROMAGNETIC WAVES IN A PLASMA
SYSTEM AND BARRIER TRANSPARENCY

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S u m m a r y

The origins and peculiarities of realization of the electromagnetic field in a beam-plasma system, bounded by conductive walls and containing a plasma barrier for electromagnetic waves transilluminated with the aid of a fast electron beam, are analyzed and studied experimentally. The relations between the barrier transparency and parameters of the beam-plasma system are determined. The role of nonlinear beam-plasma interaction processes in the barrier, inevitably accompanying such a transillumination, in formation of these relations is shown to be essential.