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# Propagation of radiation in a plasma situated in a gravitational field - II. Electromagnetic waves in the limit of geometrical optics

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## Abstract

Maxwell' s equations for a plasma situated in a gravitational field are analyzed in the limit of geometrical optics. The case of a nonrelativistic plasma is considered. It is shown that the appearance of instability in the plasma in a gravitational field is a general property of an extremely broad class of stationary gravitational fields. It is shown that the effect of the build-up of oscillations in a plasma situated in the field of a rotating star (this field is described by the Kerr metric) is a maximum in the direction of the axis of rotation and is a minimum in the perpendicular direction. © 1977 Plenum Publishing Corporation.

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