

RADIATION FROM A MOVING SOURCE IN A PLASMA: ALL-FORWARD
ENERGY FLOW AND ENHANCED FIELD-ALIGNED RADIATION.

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The electromagnetic far field and radiation caused by a source **moving** in a plasma is studied in terms of the Doppler-shifted wave-vector surface¹⁾. In the isotropic case and when the velocity of the source exceeds a certain critical value, **all** the radiation energy is found to flow within a **forward** cone and there occurs the complex Doppler effect. In the magnetoplasma case, depending on the velocity, **enhanced** radiation flux (which is inversely proportional to the distance) is found along the field direction, forward or backward.

1. H.M. Lai and P.K. Chan, Phys. Fluids 29, 1881 (1986).