CURVATURE EFFECTS IN LASER PLASMA INTERACTIONS

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Abstract.- In laser plasma interactions, the strong self-generated magnetic field usually has a curvature which is of the same order as the temperature and density gradients. This curvature, together with the anisotropy in the electron temperature, are shown to result in a further reduction of the already inhibited electron heat transport across the magnetic field. We show that this situation leads to hot spot formation, occurrence of Weibel type instabilities, and eventual magnetic field break-up.