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Conductivity of plasma produced from cluster explosions¹ MICHAEL J. HAY, NATHANIEL J. FISCH, Princeton University — After ionization but before local thermal equilibrium (LTE), plasma characteristic parameters can deviate strongly from homogeneous Maxwellian estimates. This is especially true for dusty plasmas or plasmas formed from structured materials, such as aerogels and aerosols, which retain inhomogeneities on the scale length of the material structures. Plasma collective effects and bulk plasma characteristics, such as conductivity or transport, might then deviate from the those calculated on a near-LTE basis. We consider as an example plasma conductivity effects in plasma produced from the Coulomb explosion of small clusters.

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