



Global existence for the Euler-Maxwell system

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The Euler-Maxwell system describes the evolution of a plasma when the collisions are important enough that each species is in a hydrodynamic equilibrium. In this paper we prove global existence of small solutions to this system set in the whole three-dimensional space, by combining the space-time resonance method, dispersive estimates, localization estimates and energy estimates. An important novelty is that we can prove a very slow growth of high derivatives even with a nonintegrable decay by reiterating the energy estimate.

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