A linear Landau damping effect in Vlasov-Euler system

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The coupling of kinetic equations with macroscopic equations in plasma physics for charged particles has been studied by Claude Bardos in numerous works. A recent observation is that, just like in the Vlasov-Poisson model, a linear Landau effect exists in thick spray models for the coupled dynamics of neutral heavy particles in a compressible fluid. Nevertheless moving from Poisson to Euler is not innocent. Thus the full well-posedness of the system is unclear, which incites to make further comparisons with Bardos-Nouri 2012 contribution.



In honor of Claude Bardos's 85th birthday