

Abstract Submitted
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Low Velocity Ion Stopping in Dense and Multicomponent Plasmas BEKBOLAT TASHEV, Dpt Physics KazNu Almaty, CLAUDE DEUTSCH, LPGP UParis XI Orsay, PATRICE FROMY, DRI UParis XI Orsay, MULTICOMPONENT PLASMAS 1 COLLABORATION, MULTICOMPONENT PLASMAS 2 COLLABORATION — We focus attention on low velocity ion slowing down (LIVSD) in dense and multicomponent plasmas of ICF and astrophysical interest as well. The target is treated in a dielectric formalism with classical electrons neutralizing binary ionic mixtures (BIM) of any relative proportion. We consider first and mostly charge symmetric BIM such as deuterium-tritium of current fusion interest, proton-heliumlike iron in the solar interior or proton-helium ions considered in planetology as well as other mixtures of relevance to the heavy ion production of warm dense matter at Bragg peak conditions. We single out ion projectile velocities (so-called critical) for which target electron LIVSD matches the sum of target ions one. Proton stopping in the white dwarf crust (carbon-helium BIM) is also considered.

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