

Abstract Submitted
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Low Velocity Ion Stopping in Binary Ionic Mixtures CLAUDE DEUTSCH, VICTOR CEBAN, LPGP UParis XI, PATRICE FROMY, CRI UParis-Sud, BEKBOLAT TASHEV, Phys KazNu, LIVSD1 COLLABORATION, LIVSD2 COLLABORATION — We investigate the basic features underlying the low ion velocity (V_p) slowing down (LIVSD) in multicomponent and dense target plasmas built of quasi-classical electron fluids neutralizing binary ionic mixtures (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 fiducial concern in the heavy ion beam production of warm dense matter (WDM) at Bragg peak conditions [1]. The target plasma is taken in a multicomponent dielectric Fried-Conte formulation. We also focus attention on so-called critical V_p values featuring same LIVSD on target ions and electrons, respectively. BIM including negative hydrogen are also given attention [2].

[1] B. Tashev, F. Baimbetov, C. Deutsch and P. Fromy, PoP 15, 102701 (2008)

[2] B. Tashev, P. Fromy and C. Deutsch, PRSTAB 13, 10130 (2010)

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