

Abstract Submitted  
for the DPP11 Meeting of  
The American Physical Society

**Low Ion Velocity Slowing Down in a Demixing Binary Ionic Mixture** CLAUDE DEUTSCH, LPGP UParis XI, DANIEL LEGER, MECAN UVa-lenciennes, BEKBOLAT TASHEV, Dpt Phys KazNu, DEMIXION1 COLLABORATION — we pay attention to ion projectile slowing down at low velocity  $V_p < V_{the}$ , target thermal electron velocity, in a strongly coupled and demixing H-He ionic mixture. It is investigated in terms of quasi-static and critical charge-charge structure factors [1]. Non-polarizable as well as polarizable and partially degenerate electron backgrounds are given attention. The low velocity ion slowing down can turn negative in the presence of long wavelength and low frequency hydromodes, signaling a first order critical demixion. Such a process is shown to document a superelastic energy transfer from target plasma ions to the incoming and slow ion projectile [2].

[1] D. Leger and C. Deutsch, Phys.Rev. A37, 4916, 4930 (1988)

[2] C. Deutsch, D. Leger and B. Tashev, Laser Part.Beams 29, 121 (2011)

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Date submitted: 02 Aug 2011

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