Abstract Submitted
for the DPP11 Meeting of
The American Physical Society

Multiple Scattering of Slow Ions in a Partially Degenerate Electron Fluid GILLES MAYNARD, ROMAIN POPOFF, CLAUDE DEUTSCH, LPGP UParis-Sud, MULTISCATT COLLABORATION — We extend former investigations to a partially degenerate electron fluid at any temperature for multiples slow ion scattering initially worked out at T=0. We implement an analytic and mean-field interpolation of the target electron dielectric function between T=0(Lindhard) and T→Infinity (Fried-Conte). A specific attention is given to multiple scattering of proton projectiles in the keV energy range, stopped in a hot electron plasma at solid density [1].

[1]. R. Popoff, G. Maynard and C.Deutsch, Phys.Rev.E80, 046408 [2009]

Claude Deutsch
LPGP UParis-Sud

Date submitted: 15 Jul 2011 Electronic form version 1.4