

Abstract Submitted
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Low velocity ion stopping of relevance to the US beam-target program CLAUDE DEUTSCH, ROMAIN POPOFF, LPGP UParis XI, DEUTSCH COLLABORATION — We focus attention on the stopping mechanisms involved in the recently proposed US beam-target program devoted to the production of warm dense matter through pulsed ion beams linearly accelerated and impacting thin solid foils in Bragg peak conditions. We concentrate on moderate or low ion projectile velocities $V_p < V_{th}$, target thermal electron velocity. Ion projectile energy loss in the very low and V_p -linear regime is investigated in a novel and statistical physics approach in terms of particle diffusion coefficients. Beam target interaction in the presence of an arbitrarily strong magnetic field is also considered.

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