

Abstract Submitted
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Self-proton/ion radiography from high-intensity laser interactions with thin foil targets¹ Y. PAUDEL, A.YA. FAENOV, PH. NICOLAI, E. D'HUMIERES, V.L. KANTSYREV, A.S. SAFRONOVA, I. SHRESTHA, M.E. WELLER, G.C. OSBORNE, V.V. SHLYAPTSEVA, N. RENARD-LE GALLOUDEC — Protons and multicharged ions generated from high-intensity laser interactions with thin foil targets have been studied at Nevada Terawatt Facility (NTF). Protons/ions with energies up to 10 MeV/u are accelerated either from front or rear surface of the target material. We have observed the proton/ion accelerated from the front surface of the target, opposite to the laser propagation direction, are pulled back to the rear surface, towards laser propagation direction, by the self-generated magnetic field. This proton/ion beam is able to create a radiograph of target and glass stalk holding the target itself on the RCF. Details as a function of material and target thicknesses will be presented and discussed.

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