

Abstract Submitted
for the DPP14 Meeting of
The American Physical Society

A novel laser plasma interaction geometry to generate a convergent fast-electron beam ROBBIE SCOTT, STFC Rutherford Appleton Laboratory — A simple, novel, geometry for the laser-plasma interaction is presented that generates a convergent fast-electron beam. The fast-electron beam focuses within the target, with the focal length determined by the interaction geometry. As the fast electron beam's intensity peaks within the target (i.e. within the Deuterium-Tritium fuel region), this scheme may offer a route to achieving fast-ignition with reduced laser energy. Particle-in-cell simulations are used to demonstrate the potential efficacy of this scheme.

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Date submitted: 11 Jul 2014

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