Abstract Submitted
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Anomalous Divergence of Laser-Generated Hot Electrons Generated in a Cone Geometry[1] R.B. STEPHENS, K.U. AKLI, E.M. GIRALDEZ, GA, T. MA, M.S. WEI, T. YABUUCHI, F.N. BEG, UCSD, H.S. MCLEAN, A.G. MACPHEE, M.H. KEY, L. DIVOL, D. HEY, A.J. KEMP, D. LASON, S. LE PAPE, A.J. MACKINNON, P.K. PATEL, S.C. WILKS, LLNL, V.M. OVCHINNIKOV, R.R. FREEMAN, L.D. VAN WOERKOM, Ohio State U., C.D. CHEN, MIT, Y.Y. TSUI, R. FEDOSEJEVS, U. Alberta — Short pulse, lasers generate hot electrons at the cone tip in a Fast Ignition (FI) target. Previous flat foil studies suggest they propagate forward, diverging by $\sim 40^\circ$ [1]. Those experiments used thin-walled cones in vacuum, allowing electrostatic fields on the outside surface of the cone to redirect errant electrons. In an FI target the cone will be embedded in blow-off plasma, removing those fields. We have emulated such conditions with thick-walled cones. Initial results suggest that electrons produced in such geometry diverge much more widely than seen in flat foils. The size of this effect and its dependence on tip size will be discussed.

[1] R.B. Stephens, *et al.*, *Phys. Rev. E* **69**, 066414 (2004).

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