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**PIC Simulations of Short-Pulse, High-Intensity Light Interacting with Cone Targets**[1] BARBARA F. LASINSKI, A. BRUCE LANGDON, C.H. STILL, MAX TABAK, RICHARD P.J. TOWN, Lawrence Livermore National Laboratory — In present day scenarios of fast ignition, a short-pulse high intensity laser propagates down a cone to produce hot electrons near the compressed core. Here we report on our continuing study of these cone irradiations in PIC simulations with our code, Z3. Previously we have shown[2] that in these PIC simulations, cones lead to increased absorption and higher laser intensities as compared to slab irradiations. Here, we report on the detailed spectra of the generated energetic electrons and in particular the increased hot electron temperature with cone irradiations. We look at the origin of these energetic electrons and their wide angular distribution. We vary the cone shape in both angle and the narrow end. And finally we consider the effect of underdense plasma created by a laser prepulse on these results.

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[2]B. F. Lasinski, *et al*, $9^{th}$ International Fast Ignitor Workshop, Cambridge, Mass. (2006) and B. A. P. S. **51**, 294(2006).

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