Abstract Submitted
for the DPP07 Meeting of
The American Physical Society

The Trident 250TW Short-Pulse Laser Upgrade at LANL: System and Initial Results[1] J.C. FERNANDEZ, K.A. FLIPPO, C. GAUTIER, B.M. HEGELICH, R.P. JOHNSON, T. SHIMADA, J.B. WORKMAN, Los Alamos National Laboratory — The Trident laser-facility at Los Alamos has served for more than 20 years as an important tool in ICF and Material Dynamics research [1,2,3] An energy / power upgrade of the short pulse beam line to 150J / 250 TW and a new short pulse front end has been installed. Moreover, a third target area dedicated to combined short pulse / long pulse experiments is being built. The combination of this powerful new short-pulse beam line with the two flexible long pulse beams and a total of three different target areas, makes Trident a highly flexible and versatile research tool for high energy density laboratory plasma research. In this presentation, the upgraded capabilities are described, and results from initial operation are summarized.

[1] N. K. Moncur et al., Appl. Opt. **23**, 4274 (1995)
[2] D. S. Montgomery et al., PRL **87**, 155001 (2001)
[3] Swift, Damian C., et al., Phys Rev E **69**, 036406 (2004)

[1]This work is sponsored by the US DOE/NNSA and the LANL LDRD program.

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Date submitted: 24 Jul 2007 Electronic form version 1.4