

Abstract Submitted  
for the DPP11 Meeting of  
The American Physical Society

**Detecting charged fusion products in high-fluence conditions on OMEGA and the NIF** C. WAUGH, M. ROSENBERG, A. ZYLSTRA, H. RINDERKNECHT, N. SINENIAN, M. MANUEL, D. CASEY, M. GATU JOHNSON, C.K. LI, F. SEGUIN, J. FRENJE, R. PETRASSO, MIT, V. GLEBOV, T.C. SANGSTER, LLE, S. PAPE, R. BIONTA, A. MACKINNON, O. LANDEN, LLNL, Y. KIM, H. HERMANN, LANL, J. KILKENNY, A. NIKROO, GA — CR-39 solid state nuclear track plastic, used as charged particle detectors on the “back-end” of OMEGA and NIF diagnostics/spectrometers, is ideally suited to record particle fluences up to  $\sim 3 \times 10^4 / \text{cm}^2$ . However, conditions on OMEGA and the NIF can often result in fluences two orders of magnitude greater. By using shorter etch times than the standard (6 hrs), and cross calibrating to CR39 shot on the MIT accelerator to the equivalent (ICF) fluence, the dynamic range of the CR39 can be significantly extended. Specific examples of this analysis from both OMEGA and the NIF will be presented for the case of  $\text{D}^3\text{He}$  exploding pushers. This work was supported in part by LLE, the NLUF, the FSC, the US DOE, LLNL, and GA.

F. Seguin  
MIT

Date submitted: 21 Jul 2011

Electronic form version 1.4