

Abstract Submitted  
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**A CVD-diamond based proton-bang-time detector for OMEGA and the NIF** H. RINDERKNECHT, A. ZYLSTRA, M. ROSENBERG, C. WAUGH, J. FRENJE, C. LI, F. SEGUIN, R. PETRASSO, MIT, V. GLEBOV, C. STOECKL, D. EDGELL, P. MCKENTY, C. SANGSTER, R. BETTI, LLE, A. MACPHEE, D. HICKS, A. MACKINNON, O. LANDEN, J. RYGG, N. MEEZAN, LLNL, R. OLSON, G. CHANDLER, R. LEEPER, SNL, D. WILSON, H. HERMANN, LANL — J.KILKENNY, A.NIKROO, *GA* – A chemical vapor deposition (CVD) diamond detector has been used for the first time to measure  $\sim 15$  MeV protons generated by  $D^3He$ -fusion reactions in exploding-pusher implosions on OMEGA. The results indicate that a proton-bang time can be measured accurately. The CVD response has also been characterized using  $D^3He$  implosions on OMEGA and  $\sim 10$  ps x-ray pulses on LLE's Multi-Terawatt Laser facility (MTW). The motivation for this work is that measurements of the shock-proton-bang time in upcoming SymCap and ConvAbl campaigns at the NIF will provide information that will constrain LASNEX modeling of the implosions and possibly address effects such as preheat. The results from the measurements at OMEGA, MTW and the NIF will be presented. Some modeling of these measurements will be presented as well. This work was performed in part at the NLUF, and was supported in part by US DOE, LLNL, LLE and FSC.

Chikang Li  
MIT PSFC

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