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The MIT Accelerator Laboratory for Diagnostic Development for OMEGA, Z and the NIF R. PETRASSO, M. GATU JOHNSON, E. ARMSTRONG, D. OROZCO, H.G. RINDERKNECHT, J. ROJAS HERRERA, M. ROSENBERG, H. SIO, A. ZYLSTRA, J. FRENJE, C.K. LI, F.H. SEGUIN, MIT, K. HAHN, B. JONES, C.L. RUIZ, SNL, T.C. SANGSTER, LLE — The MIT Linear Electrostatic Ion Accelerator[1] generates D-D and D-3He fusion products, which are used for development of nuclear diagnostics for OMEGA, Z, and the NIF. Fusion reaction rates around 10^6 s^{-1} are routinely achieved with this accelerator, and fluence and energy of the fusion products are accurately characterized. Diagnostics developed and calibrated at this facility include CR-39 based charged-particle spectrometers, neutron detectors, and the particle Time-Of-Flight (pTOF) CVD-diamond-based bang time detector. The accelerator is also a vital tool in the education of graduate and undergraduate students at MIT. This work was supported in part by SNL, DOE, LLE and LLNL.

[1]Sinenian *et al.* RSI (2012)

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