

Abstract Submitted
for the DPP15 Meeting of
The American Physical Society

The MRSt for time-resolved measurements of the neutron spectrum at the NIF¹ J. FRENJE, M. GATU JOHNSON, C. LI, F. SEGUIN, R. PETRASSO, MIT-PSFC, T. HILSABECK, J. KILKENNY, GA, R. BIONTA, C. CERJAN, LLNL — Information about the time evolution of inertial-confinement-fusion fuel assembly and hot-spot formation can be obtained with the next-generation Magnetic Recoil Spectrometer (MRS) for time-resolved measurements of the neutron spectrum. This spectrometer, called MRSt, represents a paradigm shift in our thinking about neutron spectrometers for ICF applications, as it will provide simultaneously information about the burn history and ρR - T_i trajectory during burn. As the peak burn generally occurs before and after peak compression in failed and ignited implosions, respectively, an MRSt measurement of the relative timing of these events will be critical for assessing implosion dynamics.

¹This work was supported in part by the U.S. DOE, LLNL and LLE.

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Date submitted: 24 Jul 2015

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