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**Measurement of ion-electron equilibration rates in hot-spot relevant conditions at OMEGA** P. J. ADRIAN, J. A. FRENJE, N. V. KABADI, G. D. SUTCLIFFE, R. SIMPSON, H. SIO, A. BOSE, M. GATU JOHNSON, F. H. SEGUIN, C. K. LI, R. D. PETRASSO, MIT, P. E. GRABOWSKI, B. BACHMANN, LLNL, S. P. REGAN, V. GLEBOV, C. STOECKL, LLE, R. FLORIDO, Universidad de Las Palmas de Gran Canaria — During the thermonuclear-burn phase of an inertial confinement fusion (ICF) implosion, alpha particles primarily deposit energy to the electron which drive the electrons out of thermal equilibrium with the ions. Since the fusion rate is sensitive to the ion temperature, accurate models for ion-electron equilibration are required to capture the thermal evolution of both species. Currently, there are numerous theoretical studies which model the equilibration process in conditions relevant to the hot spot of an ICF implosion. However, there is a lack of experimental data to constrain these models. Here we present precision measurements of ion-electron equilibration rates in the core of exploding pusher implosions at OMEGA. This is indirectly done by measuring the stopping power at low velocities, which is dictated by the same transport coefficient as ion-electron equilibration. The work was supported by DOE, NLUF, CoE and LLE.

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