Abstract Submitted
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Optical backscatter measurements from laser plasma interactions in NIF targets[1] J.D. MOODY, P. DATTE, R. HIBBARD, E. BOND, P. MICHEL, B.J. MACGOWAN, S.H. GLENZER, L. SUTER, N. MEEZAN, R. LONDON, R.L. BERGER, E.A. WILLIAMS, D. HINKEL, K. WIDMANN, L. DIVOL, J. JACKSON, J. NELSON, S. VERNON, LLNL, J.L. KLINE, LANL, C. NIEMANN, UCLA — Backscattered light from NIF targets is detected using a full aperture backscatter system (FABS) and a near backscatter imager (NBI). These measurements allow quantification of the coupling efficiency of the NIF laser to the target. Backscatter measurements in ignition scale hohlraum targets are made on two separate groups of 4 beams (a quad) at 30 ° and 50 ° from the hohlraum axis and show primarily SRS with a lower level of SBS. We have added a new capability to the scope of the instrument which now includes backscatter measurements on a 23.5 ° quad. This new measurement will provide greater precision in quantifying the overall laser coupling to the hohlraum. In addition, it will improve our understanding of the cross-beam coupling in ignition targets. We will describe measurements and simulations of backscattered light from NIF targets.

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