Abstract Submitted for the DPP09 Meeting of The American Physical Society

What measurements of proton self emission tell us about hohlraum fields and yield anomalies¹ R. PETRASSO, C. LI, F. SEGUIN, J. FRENJE, M. ROSENBERG, H. RINDERKNECHT, MIT, F. PHILIPPE, A. CAS-NER, T. CAILLAUD, O. LANDOAS, J.-L. BOURGADE, CEA, P. AMENDT, N. IZUMI, J. KOCH, O. LANDEN, J. MILOVICH, H. PARK, H. ROBEY, R. ROBEY, R. TOWN, LLNL, A. NIKROO, J. KILKENNY, GA — Measurements have been made of 14.7-MeV self-emission protons, from reactions of D-3He fuel, for a variety of hohlraums - scale 1 and scale 3/3, gold and cocktail hohlraums, vacuum and gasfilled hohlraums, cylindrical and rugby geometries, drive with and without phase plates, drive with different numbers of beams, and implosions with different capsule parameters. The picture that emerges is quite consistent: large anisotropies in the proton fluence pattern are generally observed out the LEH but little if any variations through the hohlraum equator. In addition, we examine whether the scaling of yields from pure D2 to D-3He mixtures is found to deviate from the expected density scaling (i.e. the Rygg Effect), as reported recently for directly driven capsules (1). (1) H. Herrmann et al., PoP 16, 056312(2009)

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