

Abstract Submitted  
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**Assessing the effect of asymmetry during the foot of the NIF laser pulse on capsule margin**<sup>1</sup> JOSE MILOVICH, MICHAEL EDWARDS, HARRY ROBEY, LLNL — Capsule margin is the ratio of capsule energy at ignition time relative to the minimum energy required for ignition. Margin can be determined by four parameters, peak velocity, the amount of instability growth between the DT fuel and ablator, fuel entropy, and hot spot shape. Drive asymmetry during the foot of the laser pulse is typically thought of as introducing distortion in the hot spot shape at ignition time thus impacting margin. A more subtle effect that has not previously been considered is that it leads to asymmetry in shock velocity and timing, increasing entropy above the ideal case. This effect is particularly important during the first 2ns of the laser pulse which largely sets the arrival time of the first shock at the inner surface of the DT ice. In this paper we use post processed results of 2D rad hydro simulations to show how drive asymmetry affects margin during the first 2ns of the laser pulse and use the results to set early time symmetry requirements. [1] D. Clark, S. Haan J. Salmonson, Physics of Plasmas 15,056305 (2008)

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