Efforts at improving modeling and understanding of plasma conditions and capsule drive in ignition scale hohlraums*

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Current modeling of ignition scale hohlraums, including non-LTE detailed atomic modeling, and non-local electron transport, when compared to data, have results that bifurcate: Experiments with long-pulse (> 10 ns), gas filled hohlraums deliver less drive to the capsule than predictions; In contrast, implosions in short pulse (< 10 ns), nearly vacuum hohlraums behave as predicted. We present here our current activities in exploring various hypotheses for this difference, and plans to test them by using intermediate length pulse and intermediate density gas fill platforms.

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