

Abstract Submitted
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Time-dependent radiation drive asymmetry compensation in inertial fusion capsules¹ STEPHEN A. SLUTZ, ROGER A. VESEY, MARK C. HERRMANN, Sandia National Laboratories — A new approach is presented which allows the design of inertial fusion capsules that can correct small time-dependent asymmetries in the radiation drive. The approach uses a mixture of materials within the capsule ablator, which can be adjusted as a function of polar angle to provide constant density, but varied opacity. An example of such a mixture is beryllium with small amounts (<1% atomic fraction) of copper and gold. Thus, given a specific time-dependent radiation asymmetry, fractional doping levels of copper and gold can be determined within the ablator to make the ablation pressure symmetric. In general the doping fractions are a function of both the polar angle and the depth within the ablator.

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