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SRS Reflectivity in National Ignition Campaign Targets* D.E. HINKEL, R.L. BERGER, E.A. WILLIAMS, A.B. LANGDON, Lawrence Livermore National Laboratory — In National Ignition Campaign targets, stimulated Raman backscatter (SRS) occurs during peak power, and acts to limit laser energy coupling to the target. SRS occurs when incident laser light reflects off self-generated Langmuir waves. A detailed understanding of SRS in these targets encompasses pF3D simulations [1] that model the correct geometry, include transverse and axial gradients in the plasma conditions as derived from radiation-hydrodynamics simulations, and laser beam input that incorporates the effect of spatially non-uniform cross-beam energy transfer [2]. Simulations presented here explore reflectivity of a 30° quad in a target driven with 1.3 MJ of laser energy at peak power. Such simulations show pump depletion oscillations in the reflectivity as well as the impact of spatially non-uniform cross-beam energy transfer. The effects of a frequency shift and damping decrement (such as caused by electron trapping) on density fluctuations is also modeled [3]. The impact of such non-linearity in the presence of pump depletion oscillations will be investigated and presented. *This work was performed under the auspices of the U.S. DOE by LLNL under contract DE-AC52-07NA27344.

[1] R. L. Berger *et al.*, PoP **5**, 4337 (1998); C. H. Still *et al.*, PoP **7**, 2023 (2000).
[2] P. A. Michel *et al.*, PoP **17**, 056305 (2010). [3] H. A. Rose *et al.*, private communication.

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