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**Estimating the Stimulated Backscatter Risks from NIF Ignition Hohlraums with Beryllium and Diamond Ablators**[1] RICHARD BERGER, J.D. MOODY, P. MICHEL, J. MILOVICH, D.E. HINKEL, D.J. STROZZI, R.P. TOWN, A.B. LANGDON, Lawrence Livermore National Laboratory, P.O. Box 808, Livermore, CA 94551, R. OLSON, Sandia National Laboratory, Albuquerque, NM
— Since the beginning of the NIF ignition experiments, CH has been the standard capsule ablator in hohlraums with gold and uranium walls. The optimum laser pulse shape for CH consists of a $\sim$ 16 ns low-power foot followed by 3-4 ns high-power drive pulse with 300-500 TW at peak power. During this high power pulse, $\sim$ 30% of the laser energy is backscattered from the inner 30° and 23° beams primarily as stimulated Raman scatter. New capsules with Beryllium and Diamond ablators, now being designed for NIF experiments, use much shorter pulses with higher foot powers but similar high-power drive pulses. Using plasma conditions from rad-hydro modeling, linear gain calculations, and pF3D simulations for the post-shot CH experiments and the pre-shot Beryllium and Diamond designs, we will present our expectations for SRS and SBS for these new designs.

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