

Abstract Submitted
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Experimental characterization of NIF hohlraum emission in the Rayleigh-Jeans limit (1 eV to 5 eV)¹ J. D. MOODY, C. E. GOYON, J. S. ROSS, G. F. SWADLING, A. S. MOORE, K. L. BAKER, C. A. THOMAS, M. B. SCHNEIDER, O. L. LANDEN, P. A. MICHEL, D. J. STROZZI, L. DIVOL, K. WIDMANN, Lawrence Livermore National Lab — We use several measurements to estimate NIF hohlraum emission in the Rayleigh-Jeans limit where $h\nu \ll kT_R$ and T_R is the hohlraum radiation temperature which is typically ≈ 260 to 300 eV. The measurements are primarily optical, consisting of hohlraum emission which transmits through the capsule and is collected by an optical photodiode, optical emission emitted from the laser-entrance hole in the 4 eV range, and various other optical measurements. These measurements can help quantify the laser-plasma interaction processes occurring in the hohlraum and may provide insight into the atomic physics of the Au wall at long wavelength. We describe our findings and discuss interpretations.

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John D. Moody
Lawrence Livermore National Lab

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