

Abstract Submitted
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Omega Dante Soft X-Ray Spectrometer Upgrade and Component Calibrations to 20 keV¹ K.M. CAMPBELL, J. SCHEIN, F.W. WEBER, D. HARGROVE, LLNL, D. PELLINEN, Bechtel Nevada, C. SORCE, V. REKOW, LLNL — One key parameter in the design and optimization of ICF indirect drive experiments is the measurement of the absolute radiation drive flux inside the hohlraum. The Dante x-ray spectrometer is the core diagnostic for this measurement on Omega and a new version capable of measuring photon energies up to 10 keV will be installed. The upgrade will extend the spectral range and allow researchers to adjust their channel selection to better fit their experimental parameters. Each channel has a characteristic spectral response depending on the transmission of the filters, the reflectivity of the mirrors and the response of the x-ray diodes. Periodic calibrations of these three elements from 60 eV up to 6 keV have been performed at the National Synchrotron Light Source at Brookhaven National Lab. Now, we have performed calibrations on the x-ray diodes and filters up to 20 keV. This will allow Dante to more accurately measure the x-ray drive for higher hohlraum temperatures. The expanded capabilities will allow better comparison between our Omega hohlraum experiments and the NIF campaigns.

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