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Properties of the Blowoff Plasma Emitted from the Ends of a Cylindrical Dynamic Hohlraum[1] J.P. APRUZESE, R.W. CLARK, J. DAVIS, Plasma Physics Division, Naval Research Laboratory, T.W.L. SANFORD, T.J. NASH, R.C. MOCK, Sandia National Laboratories, D.L. PETERSON, Los Alamos National Laboratory — A Dynamic Hohlraum[2] is created when arrays of tungsten wires imploded by Sandia National Laboratories' Z generator impact and heat an on-axis cylindrical foam target. The resulting radiation, confined by the tungsten wire plasma, is nearly Planckian and is characterized by temperatures of $\sim$ 200-250 eV. The internal radiation field can be used to implode a capsule containing fusionable material. Radiation emitted from the ends of the cylindrical target can be employed for radiation flow and material interaction studies. This external radiation is accompanied by an expanding blowoff plasma. To diagnose this blowoff plasma, Al and/or Mg bearing tracer layers have been placed at the ends of some of the Dynamic Hohlraum targets. Deep absorption lines of the K-shell stages of Al and Mg are seen in the spectra of these tracers. In the present work, these spectra are analyzed to obtain the properties of the blowoff plasma, the radiation field backlighting it, and to compare it with the hohlraum interior.

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[2]T. W. L. Sanford *et al.,* Phys. Plasmas **13,** 012701 (2006); J. P. Apruzese *et al.,* Phys. Plasmas **12**, 012705 (2005).

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