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Radiation characteristics of Al wire arrays on Z* C.A. COVERDALE, D.J. AMPLEFORD, B. JONES, M.E. CUNEO, S. HANSEN, C.A. JENNINGS, N. MOORE, S.C. JONES, C. DEENEY, Sandia National Labs — Analysis of mixed material nested wire array experiments at Z have shown that the inner wire array dominates the hottest regions of the stagnated z pinch. In those experiments, substantial free-bound continuum radiation was observed when Al was fielded on the inner wire array. Experiments with Al (5% Mg) on both wire arrays have also been fielded, with variations in the free-bound continuum observed. These variations appear to be tied to the initial mass and diameter of the wire array. The results presented here will investigate the trends in the measured emission (Al and Mg K-shell and free-bound continuum) and will compare the measured output to more recent Al wire array experimental results on the refurbished Z accelerator. *Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000. $^{+}$current address: NNSA/DOE Headquarters, Washington D.C.

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