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**Measurements of plasma conditions in precursor plasmas at the 1-MA Zebra facility** N.D. OUART, University of Nevada, Reno, C.A. COVERDALE, Sandia National Laboratories, A.S. SAFRONOVA, V.L. KANTSYREV, K.M. WILLIAMSON, I. SHRESTHA, G.C. OSBORNE, University of Nevada, Reno, C. DEENEY, NNSA, DOE — Precursor plasmas, both the early time precursor flow of mass and the accumulation of this material on axis, were observed on many z-pinch experiments at various facilities, including low current ($<$ 1MA) and high current ($>$15 MA, Z) facilities. The impact of these precursors on stagnated plasmas, and targets such as those used for ICF experiments, is still under evaluation. Experiments were performed at the UNR 1-MA, 100ns Zebra facility to study these precursor plasmas with Cu wire arrays. Significant precursor radiation at photon energies $>$ 1 keV was observed on filtered PCDs. $T_e$ and $n_e$ of the precursor radiation were obtained from modeling of time-resolved spectroscopy of the Cu L-shell emissions for 6 wires on 12mm diameter loads. The precursor plasma temperatures are consistently $>$250eV. Time resolved pinhole images were also collected, which show bright spots of radiation along the axial length of the pinch. Sandia is a multi-program laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the US DOE under Contract DE-AC04-94AL85000. Work was also supported by the DOE/NNSA Coop. agr. DE-FC52-06NA27616, 06NA27588, 06NA27586, and by fellowship from the NPSC with SNL.

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