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Radiative properties measurements of photoionized plasmas on Z GUILLAUME LOISEL, JIM BAILEY, TAISUKE NAGAYAMA, STEPHANIE HANSEN, GREG ROCHAU, Sandia National Laboratories, DUANE LIEDAHL, Lawrence Livermore National Laboratory, CHRIS FONTES, Los Alamos National Laboratory, MATT FLAUGH, MARK KOEPKE, TED LANE, West Virginia University, ROBERTO MANCINI, University of Nevada — Physical descriptions of accretion-powered objects such as black holes, x-ray binaries, or AGN are informed through the interpretation of emergent spectra from the photoionized plasmas that surround them. Line formation in photoionized plasmas is dependent on the details of the radiation transport treatment and the so-called Resonant Auger Destruction hypothesis typically required to interpret the relativistically broadened Fe Kα emitted from near the black hole event horizon. The Z facility at Sandia National Laboratories can produced such photoionized plasmas producing 1.6MJ of x-rays from the z-pinch dynamic hohlraum. The extended suite of diagnostics allows for a detailed characterization of plasmas conditions through absorption spectroscopy. present accurate and high-resolution emergent intensity observed from a photoionized silicon plasma for a discrete set of column densities that will help us evaluate understanding for radiation transport in accretion powered objects. Sandia is a multi-program laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy under contract DE-AC04-94AL85000.

Guillaume Loisel
Sandia National Laboratories

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