## Abstract Submitted for the DPP10 Meeting of The American Physical Society

Hard X-ray Imaging of a 250 kA Plasma Focus in Inert Gases BRIAN BURES, MAHADEVAN KRISHNAN, ROBERT MADDEN, Alameda Applied Sciences Corporation — The emission of hard x-rays from a plasma focus is well known. High atomic number gases like Ne and Ar produce bremsstrahlung photons at the anode rim and anode base, as well as from the pinch itself. The purpose of this work is to use the hard x-ray emission as a diagnostic for the pinch diameter and pinch length. Visible and soft x-ray images are commonly taken of inert gas pinches to look for pinch structure. The diameter of the pinches' hard x-ray emission is compared with deductions of the dynamical pinch radius from terminal voltage and current measurements, as well as a 1D numerical model that estimates both the pinch radius and pinch length. A step wedge spectrometer is used to examine the hard x-ray emission integrated over many shots.

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