Abstract Submitted
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Study of Hard X-rays and Electron Beams on 1.7 MA Z-pinch and Laser Plasma Experiments[1] I. SHRESTHA, V.L. KANTSYREV, A.S. SAFRONOVA, V.V. SHLYAPTSEVA, K.A. SCHULTZ, M.E. WELLER, A. STAFFORD, E.E. PETKOV, M.C. COOPER, P. WIEWIOR, University of Nevada, Reno, NV — The studies of Hard X-ray (HXR) emission and electron beam generation in Z-pinch and laser plasmas are very important for development of sources of K-shell and L-shell radiation and Inertial Confinement Fusion (ICF) research. The configuration as well as elemental composition of Z-pinch loads (planar and cylindrical wire arrays) or laser targets (gas-puff) is an important feature for both total hard x-ray radiation (HXR) and electron beam generation. There is variation of HXR and electron beam generations when testing different wire loads on Z-pinch generator and in the interaction of laser with different gases (Ar, Kr and mixture of Ar/Kr). Also for laser plasma experiments, the HXR yield and electron beam depends on anisotropy with respect to laser beam polarization. The comparative study of HXR yield and electron beam generation in both experiments will be discussed.

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