

Abstract Submitted
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X-ray Measurements in the Princeton FRC A.H. ROACH, S.A. COHEN, PPPL, A.H. GLASSER, LANL — Two Si-PIN X-ray detectors with electronics for pulse height analysis have been installed on the RMF_o-heated Princeton FRC (PFRC) to measure X-ray emission from about 800 eV to several keV. The lower limit is partially set by 0.5 or 1 mil Be windows that maintain vacuum between the detectors and the plasma. The energy dispersion of the detector systems have been calibrated using known X-ray fluorescence lines of several elements excited by a radioactive Fe-55 source. Gating of the multichannel analyzer allows time-resolved spectra to be obtained, normally with a resolution of 0.5 ms during a typical 2-3 ms shot. Spectra obtained from the PFRC will be presented with a discussion of the characteristics of the electron energy distribution and a comparison of the predicted electron energy distribution based on RMF_o heating.

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