

X-ray Observations of Ne-like Xe from C-Mod Tokamak Plasmas

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X-ray spectra in the wavelength range from 2.70 to 2.76 Å from xenon in near neon-like charge states have been observed in Alcator C-Mod tokamak plasmas with a spatially imaging high resolution spectrometer. The 3D line ($2p^6 - (2p^5)_{3/2}3d_{5/2}$) ~2.72 Å has been identified, along with nearby Na- and Mg-like satellites. The intensity ratio of 3D to the Mg-like line satellites near 2.74 Å increases strongly with electron temperature in the range from 3 to 4 keV. Wavelength calibration was obtained from nearby He-like $K\beta$ calcium transitions. Implications for the ITER x-ray spectrometer will be discussed.