

Abstract Submitted
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Spectroscopy on tokamaks in support of x-ray astronomy¹ P. BEIERSDORFER, V. SOUKHANOVSKII, E. TRABERT, M. E. WELLER, LLNL, J. K. LEPSON, UC Berkeley, M. L. REINKE, ORNL — Tokamaks operate in a density and temperature regime close to that of stellar coronae and in particular that of solar flares. Spectra recorded on tokamaks are, therefore, very similar to many astrophysical spectra and can be used for line identification and the calibration of spectral diagnostics essential for x-ray astronomy. We have installed a total of eight grating spectrometers on four US tokamaks to observe x-ray line emission in the range from 8 Å to 450 Å. Here we give some recent results, including the calibration of density-sensitive line ratios of iron on the NSTX-U spherical torus and line identifications in spectra of calcium from the Alcator C-mod tokamak.

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