Abstract Submitted
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Spectra of W^{39+}-W^{46+} in the 12-14 nm region observed with an EBIT light source[1] JOSEPH READER, YURI RALCHENKO, JOSHUA POMEROY, JOHN D. GILLASPY, National Institute of Standards and Technology — We observed spectra of highly-ionized W in the EUV region with the EBIT light source and a grazing incidence spectrograph at NIST. Stages of ionization could be distinguished unambiguously by varying the electron beam energy in small steps between 2.1 and 4.3 keV. The spectra were calibrated by separate spectra of highly ionized iron. We also carried out collisional-radiative modeling of the EBIT plasma emission and found good qualitative agreement between theoretical spectra and our observations. Our results complement recent line identifications for W^{40+}-W^{45+} observed in a tokamak [1]. For most lines we agree with their ionization stage assignments. New identifications include lines of W^{39+}, W^{46+}, and a strong magnetic-dipole transition of the Zn-like ion W^{44+} at 13.48 nm. [1] T. Puterich et al., J. Phys. B. 38, 3071 (2005).

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