

Abstract Submitted
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Collisional-Radiative Modeling of EBIT Spectra from Highly-Charged High-Z Ions¹ YURI RALCHENKO, ILIJA N. DRAGANIC, JOHN D. GILLASPY, JOSEPH N. TAN, JOSHUA M. POMEROY, JOSEPH READER, National Institute of Standards and Technology — We present results of collisional-radiative modeling of line spectra from highly-ionized (ion charge $z > 35$) Hf, Ta, W, and Au in the region 4-20 nm. The spectra were measured with the NIST EBIT and grazing incidence spectrograph. Good experimental resolution along with the non-Maxwellian nature of the low-density EBIT plasma require both a detailed account of ion level structure and a large amount of collisional data. The atomic data generated with the Flexible Atomic Code [1] were used in simulations with the non-Maxwellian code NOMAD [2]. Good quantitative agreement between the simulated spectra and the observations allowed reliable identification of tens of new spectral lines which can be used for diagnostic purposes for fusion reactors. [1]. M.F.Gu, *Astroph. J.* 582, 1241 (2003). [2]. Yu.V. Ralchenko and Y. Maron, *JQSRT* 71, 609 (2001).

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