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LMn and LNn (n $\geq$ 4) dielectronic resonances in the M-shell ions of tungsten N/A DIPTI, National Institute of Standards and Technology, Gaithersburg MD, ALEXANDER BOROVIK, JR., I. Physikalisches Institut, Justus-Liebig-Universitaet, Giessen, Germany, ROSHANI SILWAL, JOAN M. DREILING, ENDRE TAKACS, YURI RALCHENKO, National Institute of Standards and Technology, Gaithersburg MD — The electron beam ion trap (EBIT) at the National Institute of Standards and Technology was used to produce x-ray spectra (E_{ph} = 7 keV to 16 keV) from highly-charged ions of tungsten with the beam energy varying between 7 keV and 11 keV. The spectra recorded with the high-purity Ge solid-state detector are primarily due to stabilizing radiative decays of autoionizing states produced during dielectronic capture of the beam electrons by tungsten ions. The identifications of the spectral features are based on a very good agreement with the large-scale collisional-radiative (CR) simulations of the EBIT plasma performed with the non-Maxwellian code NOMAD. The Flexible Atomic Code, in both relativistic configuration and fine-structure modes, was used to generate extensive atomic data for CR modeling. It was found that the measured spectra contain contributions from a large number of inner-shell dielectronic resonances LMn and LNn (n $\geq$ 4) in Mn-like W^{49+} through Ne-like W^{64+} ions. The interpretation of measurements as well as the details of theoretical simulations will be presented.

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