

Abstract Submitted  
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**Ionization of neutral W and  $W^+$  ion by electron impact**<sup>1</sup> DUCH-HEE KWON, YONG-JOO RHEE, KAERI, Daejeon, Korea, YONG-KI KIM, NIST, Gaithersburg, MD — Ionization cross sections for the neutral W and  $W^+$  ion by electron impact are being calculated using binary-encounter- Bethe (BEB) model for the direct ionization and scaled Born cross sections for excitation-autoionization as was done successfully for the ionization of C, N, and O.<sup>2</sup> Two sets of experimental data for  $W^+$  are available in the literature, while there are no experimental data for the neutral W. Both sets of the experimental data indicate the presence of metastable  $W^+$  ions in their target beams, but the magnitude and shape are comparable to our preliminary results for  $W^+$  ion in the ground level. Theoretical results that include cross sections for both direct ionization and excitation-autoionization of W and  $W^+$  will be reported at the conference.

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<sup>2</sup>Y.-K. Kim and J. P. Desclaux, Phys. Rev. A **66**, 012708 (2002).

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