

Abstract Submitted  
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**M-shell x-ray production cross sections from 75-300 keV proton impact on Hf, Re, and Au** SAM CIPOLLA, Creighton University — M x-ray spectra from 75-300 keV proton bombardment of thick elemental targets of Hf, Re, and Au were measured using a ultra-thin window Si(Li) detector. Spectral analysis yielded x-ray production cross sections of the major x-ray transitions  $M_\alpha$ ,  $M_\beta$ ,  $M_\gamma$ ,  $M_2N_4$ ,  $M_1O_3$  representative of vacancy filling of the five M sub-shells. Results are compared with predictions from non-relativistic ECPSSR and relativistic RPWBA-BC theories.

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