Abstract Submitted
for the GEC16 Meeting of
The American Physical Society

CCC calculated differential cross sections of electron-H_2 scattering[1] DMITRY FURSA, Curtin University, MARK ZAMMIT, Los Alamos National Laboratory, JEREMY SAVAGE, IGOR BRAY, Curtin University — Recently we applied the molecular convergent close-coupling (CCC) method to electron scattering from molecular hydrogen H_2 [1]. Convergence of the major differential cross sections has been explicitly demonstrated in the fixed-nuclei approximation. A large close-coupling expansion that coupled highly excited states and ionization channels proved to be important to obtain convergent results. Here we present benchmark elastic and electronic excitation differential cross sections for $b^3\Sigma_u^+$, $a^3\Sigma_g^+$, $c^3\Pi_u$, $B^1\Sigma_u^+$, $EF^1\Sigma_g^+$, $C^1\Pi_u$, and $e^3\Sigma_u^+$ states and compare with available experiment and previous calculations.
[1] M. C. Zammit et al. Phys. Rev. Lett. accepted (2016)

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Date submitted: 06 Jun 2016   Electronic form version 1.4