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.


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