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**Electron stopping powers in $H_2$**[1] MARK ZAMMIT, Los Alamos National Laboratory, DMITRY FURSA, ROBERT THRELFALL, JEREMY SAVAGE, IGOR BRAY, Curtin University — Electron stopping power (STP) is an important parameter of interest in medical and environmental applications. Accurate evaluation of the electron STP in molecules requires a complete set of electron impact cross sections for all important reaction channels including excitation, ionization and dissociation. These data have recently been calculated for electron scattering on the ground state of molecular hydrogen with the convergent close-coupling (CCC) method [1,2], for incident electron energies up to 300 eV. Here we extend the CCC calculations to 2000 eV and apply the CCC collision data to calculate the electron STP in molecular hydrogen. At high energies our results are in good agreement with the Born-Bethe theory available from the NIST database [3]. Comparison with the mean excitation energy that was directly measured by Muńoz *et al.* [4] showed excellent agreement. [1] M. C. Zammit *et al. Phys. Rev. Lett.* **116**, 233201 (2016), [2] M. C. Zammit *et al. Phys. Rev. A* **95**, 022708 (2017), [3] Stopping power and range tables for electrons *http://physics.nist.gov/PhysRefData/Star/Text/method.html*, [4] A. Muńoz *et al. Chem. Phys. Lett.* **433**, 2614 (2007

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