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Electron Capture by B^{5+} from H_2 At E < 1.0 keV/amu[1] DWAYNE
C. JOSEPH, BIDHAN C. SAHA, Department of Physics, Florida A&M University,
FL-32307. — The capture of electrons from molecular targets has considerable
influence on the charge state balance of astrophysical as well as magnetically confined
fusion plasmas. Molecular targets are in general more complicated than their atomic
counterparts. A suitable method by freezing the molecular details of the targets is
applied with a core potential [1] that represents the ionic core of the target. The
molecular orbital method, including the electron translation factor [2], in the impact
parameter formalism [3] is employed to evaluate the state selective cross sections.
The motion of the nuclei is treated classically and that due to electron is considered
quantum mechanically [4]. Details will be presented at the conference. [1] J. N.
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At. Mol. Opt. Phys.* **26**, 79 (1990). [3] B. C. Saha and A. Kumar, *J. Mol. Struct.
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