

Abstract Submitted  
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**Measured Absolute Cross Section of Charge Transfer in  $H+H_2^+$  at Low Energy: Signature of  $v_i = 2$  and Trajectory Effects<sup>1</sup>** R.A. STROM, K.G. BACANI, R.M. CHI, S.L. HECZKO, B.N. SINGH, J.A. TOBAR, A.K. VASSANTACHART, V.M. ANDRIANARIJAONA, Department of Physics, Pacific Union College, Angwin, CA 94508, D.G. SEELY, Department of Physics, Albion College, Albion, MI 49224, C.C. HAVENER, Physics Division, Oak Ridge National Laboratory, Oak Ridge, TN, 37831 USA — Measurements of absolute cross sections of charge transfer (CT) in  $H + H_2^+ \rightarrow H^+ + H_2$  were conducted at the merged-beam apparatus at Oak Ridge National Laboratory (ORNL) in Oak Ridge, Tennessee, which can reliably create and access collision energies as low as 0.1eV/u. The measured absolute cross section shows evidence of trajectory effects at low energy. Also, the comparison to state-to-state calculations (PRA **67** 022708 (2003)) suggests a strong contribution from  $v_i = 2$  of the  $H_2^+$  that are produced by the electron cyclotron resonance ion source. The data analysis will be presented here.

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