

Abstract Submitted
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Low energy $C^{6+} + H_2$ scattering: Molecular Close-Coupling Treatment^{*)} \pard\pard¹ BIDHAN SAHA, Department of Physics, Florida AM University, Tallahassee, FL-32307. — h *–abstract–*\pard Collisions of multiply charged ions with molecules are very common in astrophysical plasmas[1]. The ion-molecule calculations are rather more complicated than their atomic counterpart. For multi charged ions in X-ray ionized astronomical environments the charge exchange provides a recombination mechanism. To understand this detailed information on the collision cross sections is essential. In highly charged ion-molecule problem the Coulomb term plays an important role; using a pseudo-diatomic technique the colliding system can be approximated by a model potential for the ionic core of H_2 with encouraging results [2-5]. Freezing the target, H_2 can easily be treated as an atom with appropriate ionization potential (Ip). Our results show good agreement with available experimental findings.\pard[1] B. C. Saha, Atomic Structure and Collision process, Narosa Pub. House (2011).2] B. C. Saha et. al., Phys Rev A 44, R1, (1991).3] B C Saha et. al., J. Mol. Structure 487, 11, (1999).4] A. Kumar et al Phys Rev A 59, 1273, (1999).5] B. C. Saha Phys Rev A 56, 2909, (1997).\-/abstract-\

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