Abstract Submitted for the DAMOP06 Meeting of The American Physical Society

Translational spectroscopy of the CO⁺ fragments from collision-induced dissociation of the molecular ions with He at 6 keV¹ CARMEN CISNEROS, Centro de Ciencias Fisicas UNAM Mexico, IGNACIO ALVAREZ, ALFONSO GUERRERO, CCF-UNAM Mexico, GLADYS GARCIA, ENRIQUE MEJIA-OSPINO, U. Industrial de Santander, Colombia — We measured the kinetic energy distribution of C⁺ and O⁺ fragments arising from 6 keV collision induced dissociation of CO⁺ molecular ion in collision with He. With the appropriate transformation from the laboratory energy distribution to the center of mass of the molecular ion it was obtained the spectrum of the energy liberated and shared by the molecular fragments. The process gives rise to fragments with energies as large as \sim 9.9 eV. In the spectrum some of fragment energies observed are in good agreement with the results of Krishnamurthi et al (1) and Caraby (2) et al. Additionally, we have observed fragments with energies corresponding to other available transitions not been observed before. 1. - V. Krishnamurthi et al. Phys. Rev. A. 44, 5460 (1991) 2. - C. Caraby, et al. Eur. Phys. J. D. 2, 53 (1998)

¹Supported by CONACYT and DGAPA UNAM México

Carmen Cisneros Centro de Ciencias Fisicas UNAM Mexico

Date submitted: 27 Jan 2006 Electronic form version 1.4