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Experimental and Theoretical Fully Differential Cross Sections for Ionization of H2 by 75 keV Proton Impact[1] UTTAM CHOWDHURY, JASON ALEXANDER, AARON LAFORGE, Missouri Science & Technology, AHMAD HASAN, UAE University, MICHAEL SCHULZ, DON MADISON, Missouri Science & Technology — We have performed fully differential experimental and theoretical studies of single ionization of H2 by 75 keV proton impact. In the scattering angle dependence of the measured cross sections for fixed electron energies, pronounced structures were observed at relatively large angles. These structures have been interpreted as an interference resulting from the two-center potential of the molecule. Previously, we have developed the three-body distorted-wave (3DW) model for electron-impact ionization of molecules and have used this model to investigate interference effects for electron collisions. We have now generalized the 3DW model to proton-impact ionization and we will use the model to investigate possible interference effects for heavy particle ionization.

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