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Ionization and dissociation of H_2^+ in a laser field X. M. TONG, Z. X. ZHAO, C. D. LIN, Physics Department, Kansas State University, Manhattan, KS 66506 — We studied the dissociation and ionization of H_2^+ which was created from H_2 in an intense laser field. The intensity was chosen such that direct ionization of H_2^+ by the laser is not possible. We evaluated the probabilities of exciting the ground H_2^+ electronic state to the higher excited states by the rescattered electron from where the H_2^+ can be dissociated or further ionized in the laser field. Based on the rescattering model we evaluated the branching ratio of ionization vs dissociation and obtained the expected kinetic energy spectra of the dissociation and ionization products to compare with experiments.

Prefer Oral Session
 Prefer Poster Session

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