

Abstract Submitted
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State-selected predissociation of H₃ VALERY NGASSAM, ANN E. OREL, Department of Applied Science, University of California Davis — Experimental studies of the predissociation of well-defined Rydberg states of H₃ have produced a complex three-body fragmentation pattern that is highly dependent on the initial state and show dramatic isotope effects. We present results of theoretical investigations for the fragmentation of selected Rydberg states of H₃ into three ground state hydrogen atoms as well as two-body predissociation into H + H₂⁺(v,j). The non-adiabatic couplings and the surfaces are taken from previous studies. The dynamics are carried out using a wave packet propagation method in full-dimensionality including the effects of the Jahn-Teller interaction. Work supported by the NSF PHY-02-44911.

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