Abstract Submitted for the DAMOP06 Meeting of The American Physical Society

Fragmentation of Hydrocarbon Molecules following Ionization by 1 MeV/u C⁵⁺ Projectiles J.M. SANDERS, J.B. WILLIAMS, University of South Alabama, J.C. THOMPSON, E.J. CLOTHIAUX, A.L. LANDERS, Auburn University — Cold Target Recoil Ion Momentum Spectroscopy (COLTRIMS) has been used to identify fragmentation channels for breakup of CH₄, C₂H₂, C₂H₄, C₂H₆, C₃H₆, and C₃H₈ following ionization by 1 MeV/u C⁵⁺ projectiles. Those channels for which the molecule dissociates into at least two ion fragments are identified through an ion time-of-flight coincidence map. Relative probabilities for each of these dissociative reaction channels are then determined.

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