VIBRATIONALLY MEDIATED PHOTODISSOCIATION OF HCN

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Recently, the dissociation mechanism of HCN by vibrationally mediated photodissociation has been examined. Exciting the C-H stretch with four quanta and photodissociating the molecule with 220 nm light generates CN in the first excited electronic $\tilde{A}\ ^2\Pi$ state rather than the ground $\tilde{X}\ ^2\Sigma^+$ state. The CN fragment is detected by probing the $\tilde{B}\ ^2\Sigma^+ \leftarrow \tilde{A}\ ^2\Pi$ (1-0) band and monitoring the laser induced fluorescence (LIF) via the $\tilde{B}\ ^2\Sigma^+ \rightarrow \tilde{X}\ ^2\Sigma^+$ (1-1) transition. Progress on the analysis of the LIF spectrum and the nascent product distribution will be presented.