l-UNCOUPLING AND ROTATIONAL STRUCTURE IN VIBRATIONALLY AUTOIONIZING RYDBERG STATES OF HCO CONVERGING TO THE (010) LIMIT

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We have obtained (1+1') double resonance spectra autoionizing high Rydberg states of HCO. Scans originate from $3p\pi\ ^2\Pi\ N = 0 - 5$ intermediate states. These spectra cover Rydberg states of binding energies ranging from 650 to 400 cm^{-1}, converging to the (010) fundamental of HCO^+. Using our highly accurate ionization thresholds and by applying the Rydberg model, simulations which neglect coupling are found to reasonably represent the experimental spectra within a minimal quantum defect basis. Analysis based on Multichannel Quantum Defect Theory, which includes coupling, is underway.