RYDBERG STATES CONVERGING TO HIGHER VIBRATIONALLY EXCITED STATES OF HCO^+.

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Single rotational levels photoselected in the strongest bent $B\,^2A'$ state of HCO serve as intermediate states in double resonance transitions to Rydberg states built on higher vibrationally excited levels of the linear HCO^+ core. Frank-Condon factors for the bent-to-linear transitions discriminate against resonances converging to lower lying vibrational states. Widths and intensities of multiple quantum vibrational autoionization resonances are affected by the level of core excitation.