We have recently observed transitions to the predissociated, quasilinear $B^1A'$ state of CHF using a fluorescence dip detected optical-optical double resonance technique. By exciting selected rovibronic states in intermediate $A' A''$ levels belonging to the progressions $2^2, 1^2, 2^3, 3^3$, a variety of $B^1A'$ state levels were observed, extending to an energy of 7000 cm$^{-1}$ above the $B^1A'$ state origin. In this talk, we will focus on the spectroscopy of the $B^1A'$ state and the excited state barrier to linearity. Experimental data will be compared with ab initio predictions.

---