HYDRATED HCl COMPLEXES, $(HCl)_m(H_2O)_n$, IN HELIUM NANODROPLETS: HCl STRETCHING MODES

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$(HCl)_m(H_2O)_n$ complexes have been formed in helium nanodroplets and studied via infrared laser spectroscopy in the H-Cl vibrational stretching mode region of 2300 – 2900 cm^{-1}. Bands of small complexes up to m=3 and n=2 have been identified, and the assignment was confirmed via measurements of the pickup pressure dependence of the bands intensity. Bands of larger complexes have not been identified, indicating they contribute to a broad unresolved band in the range of 2500–2800 cm^{-1}. Structure of the $(HCl)_m(H_2O)_n$ complexes is discussed.