A STUDY OF THE INTERMOLECULAR $\nu_5^1$ VIBRATION IN OC-H$^{35}$Cl BASED ON NEAR INFRARED SPECTROSCOPY

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The near infrared $v_2+v_5^1$ combination bands of OC-H$^{35}$Cl and OC-H$^{37}$Cl have been recorded using a high frequency wavelength modulation diode laser supersonic jet spectrometer. In addition, the static gas phase spectra of the associated $v_2+v_5^1-v_5^1$ and $v_2+2v_5^1-2v_5^1$ hot bands in OC-H$^{35}$Cl have been recorded using Fourier transform infrared absorption spectroscopy. The combined results permit evaluation of rovibrational constants for the low frequency intermolecular bending vibration of the OC-H$^{35}$Cl isotopomer (in cm$^{-1}$): $\nu_5^1 = 48.9953(2)$; $B(\nu_5^1) = 0.0565731(6)$, $Dj\nu_5^1 = 1.906 \times 10^{-7}(6)$ and $q\nu_5^1 = 0.0001466(2)$. 