HIGH RESOLUTION INFRARED EMISSION SPECTROSCOPY OF DICHLOROBORANE $BHCl_2$

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The absorption spectrum of dichloroborane $BHCl_2$ was accidentally recorded during Fourier transform emission measurements of HBO. Gaseous dichloroborane was generated by the reaction of amorphous boron powder with $CaCl_2$ at 1400 C. The bands centred near 2617, 1089 and 892 cm^{-1} were assigned as the ν_1 (B-H stretch), the ν_5 (HBCl bend), and the ν_6 (BCl_2 antisymmetric stretch) fundamental modes, respectively. Molecular constants were determined from rotational analyses of these bands. This is a first analysis of the rotational structure of the ν_5 and ν_6 modes.