SUB-DOPPLER SPECTROSCOPY OF THE $\tilde{A}^1B_1$ - $\tilde{X}^1A_1$ ELECTRONIC TRANSITION OF CBr_2

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Sub-Doppler spectra of selected bands of the $\tilde{A}^1B_1$ - $\tilde{X}^1A_1$ transition of CBr_2 are presented[a] allowing all three rotational constants to be determined for the zero point level of the ground state for the first time. Refined rotational constants are presented for various $\tilde{A}$ state vibrational levels, and an additional progression is identified in the $\tilde{A}$-$\tilde{X}$ absorption spectrum. The assignment of this progresion was assisted by modelling Franck-Condon factors with the PGOPHER[b] program.

[a] E.H. Al-Samra and C.M. Western, J. Mol. Spectrosc. (2010), In Press, doi:10.1016/j.jms.2010.02.001

[b] PGOPHER, a Program for Simulating Rotational Structure, C. M. Western, University of Bristol, http://pgopher.chm.bris.ac.uk