

GLOBAL VIBRATION-ROTATION ANALYSIS IN ACETYLENE: $^{12}\text{CH}^{13}\text{CH}$

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All known vibration-rotation absorption lines of $^{12}\text{CH}^{13}\text{CH}$ accessing levels up to 6750 cm^{-1} were gathered from the literature. They were fitted simultaneously to J -dependent Hamiltonian matrices exploiting the well known vibrational polyad or cluster block-diagonalization, in terms of the pseudo quantum numbers $N_s = v_1 + v_2 + v_3$ and $N_r = 5v_1 + 3v_2 + 5v_3 + v_4 + v_5$, and accounting also for l -parity and e/f symmetry properties. The anharmonic interaction coupling terms known to occur from a pure vibrational fit in this acetylene isotopologue were included in the model. The results will be presented and discussed.