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

S. ROBERT, M. HERMAN, *Service de Chimie quantique et Photophysique, CP160/09, Université Libre de Bruxelles (U.L.B.), Ave. F.-D. Roosevelt, 50, B-1050, Bruxelles, Belgium*; A. FAYT, *Laboratoire de Spectroscopie Moléculaire, Université Catholique de Louvain, Chemin du Cyclotron 2, B-1348 Louvain-La-Neuve, Belgium*; G. DI LONARDO, L. FUSINA, and F. TAMASSIA, *Dipartimento di Chimica Fisica e Inorganica, Università di Bologna, Viale Risorgimento, 4, I-40136, Bologna, Italy*.

All known vibration-rotation absorption lines of $^{12}CH^{13}CH$ 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.