LINE SHIFTS IN THE FUNDAMENTAL BAND OF CO: CONFIRMATION OF EXPERIMENTAL RESULTS FOR N_2 AND COMPARISON WITH THEORY

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We have used a three-channel version of a tunable difference laser spectrometer to measure the collisionaly induced line shifts at room temperature for 26 lines of the fundamental band of CO perturbed by nitrogen. Each line shift was obtained directly by comparing the line center position of two simultaneous recordings, one for a pressure-shifted line, and the other for the same line in the pure CO line at very low pressure. The experimental results are found to be in complete agreement with earlier measurements and confirm shifts as small as 3 MHz may be measured in our system. Our results are compared with theoretical calculations. The part of the shifting coefficient antisymmetric with respect to a change in sign of the line number m, is in disagreement with the calculations.