ROVIBRATIONAL SPECTROSCOPY OF CO_2-CS_2

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The absorption spectrum of the weakly bound cluster CO_2-CS_2 has been observed by probing the v_3 asymmetric stretch of CO_2 near 2350 cm^{-1}. Clusters were formed by supersonic expansion of a mixture of CS_2:CO_2 in a 2:1 ratio, minimizing higher order clusters, in He as the carrier gas. Etalon, reference and signal spectra were recorded simultaneously using a transient digitizer and a 386 PC. Spectral analysis indicates the dimer has a slipped parallel configuration. The structure will be discussed and compared to ab initio results as well as to other CO_2 complexes.