MICROWAVE SPECTRA AND STRUCTURE OF $CF_3I\cdots CO$

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A Chirped Pulse Fourier transform Microwave spectrometer has been used to measure the pure rotational spectrum of $CF_3I\cdots CO$. This complex is generated by supersonic expansion of a gas sample containing a small percentage of CF_3I, and CO in argon. The rotational constant B_0, centrifugal distortion constants, Δ_J and Δ_{JK}, and nuclear quadrupole coupling constant for iodine, χ_{aa}(I), have been determined for each of $CF_3I\cdots{}^{12}C^{16}O$, $CF_3I\cdots{}^{13}C^{16}O$ and $CF_3I\cdots{}^{12}C^{18}O$ allowing determination of the distance between the two sub-units. The complex is a prolate symmetric top with C_{3v} symmetry.