The Rotational Spectrum of Ketene Isotopomers with ^{18}O and ^{13}C Revisited

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Z. Naturforsch. **58a,** 275 – 279 (2003); received February 19, 2003

The pure rotational spectra of [^{18}O]ketene, $H_2C{=}C^{18}O$, [1-^{13}C]ketene, $H_2C{=}^{13}CO$, and [2-^{13}C]ketene, $H_2{}^{13}C{=}CO$, have been revisited in the frequency region 200 – 350 GHz in the ground vibrational state.

From more than 100 *R*-branch transitions for each isotopomer a set of rotational and centrifugal distortion constants could be derived using the Watson *S*-reduction formalism. The values obtained for the rotational constants *B* and *C* agree very well with results of former investigations. The agreement is worse with respect to the *A* constants, but our newly determined *A* values agree well with the corresponding values of the main species and the ^{17}O isotopomer.

Key words: Rotational Spectra; Ketene; Isotopomers; Structure.