$^{16}O_3$ Coriolis and Anharmonic Coupling Parameters of the (114), (213), Dark (080) and (321) Interacting States

Natural isotopic abundance: 0.992728.

Reference	[2012Bar]
Method	Fourier transform spectroscopy.
Equations	Equations 14, 15, and 16 in chapter "Introduction".
Statistical errors	One standard deviation in units of the least significant full size digits.
Remarks	All values are given in cm^{-1}. Molecular constants determined in the same fit are given in chapter "$^{16}O_3$ Vibrational Energy and Rotational and Centrifugal Distortion Constants for the (213), (114), (321), and for the Dark (080)* Vibrational States". Calculated constants are purposely given with a supplementary digit, in index form, in order to reproduce the energy levels to experimental accuracy. The perturbing (080) vibrational state is supposed to be a dark state. The isotopic composition of the elements used for the calculation of the natural isotopic abundance is taken from [2007Coh].
Abbreviations	SE: Statistical error.

	Coriolis type coupling parameters				Anharmonic type coupling parameters		
	<114|*H*|213>		<080|*H*|213>			<321|*H*|213>	
	Value	SE	Value	SE		Value	SE
C_{011}	$-0.4786_3 \times 10^{-2}$	31	$-0.102_7 \times 10^{-3}$	19	F_{020}	0.0506_5	16
C_{031}			$-0.313_6 \times 10^{-4}$	18	F_{002}	$0.6550_0 \times 10^{-3}$	76
C_{211}	$-0.2012_6 \times 10^{-5}$	49	$-0.93_6 \times 10^{-6}$	13			

Symbols and abbreviations

Short form	Full form
C_y, C_{yz}	Coriolis coupling parameter
SE	Statistical error

References

[2007Coh] Cohen, E.R., Cvitaš, T., Frey, J.G., Holmström, B., Kuchitsu, K., Marquardt, R., Mills, I., Pavese, F., Quack, M., Stohner, J., Strauss, H.L., Takami, M., Thor, A.J.: Quantities, Units and Symbols in Physical Chemistry. The IUPAC Green Book, 3rd Ed., Cambridge: RSC Publishing, 2007.

[2012Bar] Barbe, A., De Backer, M.R., Starikova, E., Tashkun, S.A., Thomas, X., and Tyuterev, V.G.: FTS high resolution spectra of $^{16}O_3$ in 3500 and 5500 cm^{-1} regions. First example of new theoretical modelling for a polyad of strongly coupled states. J. Quant. Spectrosc. Radiat. Transfer. **113** (2012) 829–839.

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