$^{16}O^{17}O^{17}O$ Dipole Transition Moment Operator Constants, Integrated Intensity for the ν_1 and ν_3 Bands

Natural isotopic abundance: 2.88×10^{-7}.

Reference	[]
Method	Fourier transform spectroscopy.
Equations	Equations 47, 52, and 53 in chapter "Introduction".
Remarks	The first order term moment operator constants, practically do not vary for the *A*- and *B*-type ν_1 and ν_3 bands with the isotopomer. The calculations of the line intensities have then been performed using the $^{16}O_3$ values given in [87Fla2]. The integrated intensities are given in units of cm^{-1}/molecule.cm^{-2} at 296 K. Their values correspond to the sum of their individual line intensities, calculated with a cut-off equal to 0.5×10^{-22} cm^{-1}/molecule.cm^{-2} at 296 K. Band centers and vibrational energy and rotational and centrifugal distortion constants are given in chapter "$^{16}O^{17}O^{17}O$ Vibrational Energy and Rotational and Centrifugal Distortion Constants. Band Center for the ν_1 and ν_3 Bands". The isotopic composition of the elements used for the calculation of the natural isotopic abundance is taken from [2007Coh].

Band	Integrated intensity	Transformed dipole transition moment operators	Parameters
ν_3	0.135×10^{-16}		
A-type band		φ_Z	−0.188232
ν_1			
B-type band	0.384×10^{-18}	φ_X	−0.0154509
A-type band	0.179×10^{-18}		

Symbols and abbreviations

Short form	Full form
v_1 v_2 v_3	Upper vibrational level in normal mode notation
SE	Statistical error

References

[87Fla2] Flaud, J.M., Camy-Peyret, C., Devi, V.M., Rinsland, C.P., and Smith, M.A.H.: The ν_1 and ν_3 bands of $^{16}O_3$: Line positions and intensities. J. Mol. Spectrosc. **124** (1987) 209–217.

[2000Per2] Perrin, A., Flaud, J.M., Valentin, A., Camy-Peyret, C., Gbaguidi, N., and N'Gom, A.: The ν_1 and ν_3 bands of the $^{16}O^{17}O^{17}O$ isotopomer of ozone. J. Mol. Struct. **517–518** (2000) 157–163.

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