

Species Tag:	36002	Name:	18-O2
Version:	2		Molecular oxygen,
Date:	Mar. 2014		double substituted
Contributor:	Shanshan Yu		¹⁸ O isotope
	Brian Drouin		X ³ Σ _g ⁻ , v = 0
Lines Listed:	246	Q(300.0)=	245.6074
Freq. (GHz) <	9999	Q(225.0)=	184.1223
Max. J:	78	Q(150.0)=	122.8567
LOGSTR0=	-20.0	Q(75.00)=	61.6498
LOGSTR1=	-20.0	Q(37.50)=	31.0876
Isotope Corr.:	-5.391	Q(18.75)=	15.8675
Egy. (cm ⁻¹) >	0.0	Q(9.375)=	8.3676
μ _a =	magnetic	A=	
μ _b =		B=	38313.7
μ _c =		C=	

The measurements are from

1. B.J Drouin et al., 2009, J. Quant. Spectrosc. Radiat. Transf. (in press)
2. Y. Endo and M. Mizushima, 1983, Jpn. J. Appl. Phys. **22**, L534
3. W. Steinbach and W. Gordy, 1973, Phys. Rev. **A8**, 1753

and the Hamiltonian is from S. Yu, C.E. Miller, B.J. Drouin, H.S.P. Mueller, J. Chem. Phys. 136, 2012.

When the same transition was measured by different groups, all measurements were included in the fit with their respective experimental accuracies as weights. Predictions above 3.6 THz should be viewed with caution. Intensities of magnetic dipole transitions have been calculated using the ¹⁶O₂ *g* values obtained from magnetic resonance by K. D. Bowers, R. A. Kamper, and C. D. Lustig, 1959, Proc. Roy. Soc. London **A251**, 565.

The perpendicular *g*-factor has been removed from the intensity file in order to eliminate its excessive contribution to intensities at higher *J* values, catalog version 1 differed significantly from prior catalog versions due to a change in how this parameter is treated in the intensity calculation.