Species Tag:	44004	Name:	N2O
Version:	3		Nitrous oxide
Date:	Aug. 2014		
Contributor:	B. J. Drouin		

Lines Listed:	1926	Q(300.0)=	563.5097
Freq. (GHz) <	68111	Q(225.0)=	391.6242
Max. J:	99	Q(150.0)=	250.9566
LOGSTR0=	-12.0	Q(75.00)=	124.7560
LOGSTR1=	-12.0	Q(37.50)=	62.5407
Isotope Corr.:	0.	Q(18.75)=	31.4378
Egy. (cm^{-1}) >	0.0	Q(9.375)=	15.8886
$\mu_a =$	0.16083	A=	
$\mu_b =$		B=	12561.6343439
$\mu_c =$		C=	

The experimental data were taken from: 1) W. Ting, et al. J. Opt. Soc. Am. A, in press 2014. 2) M. Tachikawa, K. M. Evenson, L. R. Zink, and A. G. Maki, IEEE J. Quant. Electron. 32, 1732-1736 (1996). 3) V.-M. Horneman, J. Mol. Spectrosc. 241, 45-50 (2007). 4) B. J. Drouin and F. W. Maiwald, J. Mol. Spec. 236, 260-262 (2006). 5) I. Morino, M. Fabian, H. Takeo, and K. M. T. Yamada, (1997) *J. Mol. Spectrosc.* 185, 142-146. 6) B. A. Andreev, A. V. Burenin, E. N. Karylakin, A. F. Krupnov, S. Shapin, (1976) *J. Mol. Spectrosc.* 62, 125-148. 7) R. Pearson, T. Sullivan, L. Frenkel, (1970) *J. Mol. Spectrosc.* 34, 440-449. 8) C. A. Burrus, W. G. Gordy, (1956) *Phys. Rev.* 101, 599-602. 9) L. H. Scharpen, J. S. Muenter, V. W. Laurie, (1970) *J. Chem. Phys.* 53, 2513-2519. 10) K. H. Casleton, S. G. Kukolich, (1975) *J. Chem. Phys.* 62, 2696-2699.

The rotational dipole moment was measured by Scharpen *et. al*, infrared transition intensities were matched to R. A. Toth, "N2O Vibration-rotation parameters derived from measurements in the 9001090 cm-1 and 15802380 cm-1 regions," J. Opt. Soc. Am. B 4, 357-374 (1987).

This entry replaces catalog entries for the bending mode (ν_2) and its overtone ($2\nu_2$) which were previously curated separately as entries c044009 and c044012, respectively. In addition to these states, the other fundamental modes are also part of this entry. This table describes the state identifiers for the various vibrational quanta.

state identifier (v)	mode	l
0	ground state	0
1	ν_1	0
2	ν_2	± 1
3	ν_3	0
4	$2\nu_2$	0
5	$2\nu_2$	± 2