Species Tag:	17002	Name:	NH_3
Version:	5		Ammonia gs inversion
Date:	Spetember 2010		
Contributor:	Shanshan Yu		
	Brian Drouin		
	John Pearson		
Lines Listed:	1716	Q(300.0)=	588.7816
Freq. (GHz) <	20547	Q(225.0)=	380.3263
Max. J:	35	Q(150.0)=	207.9221
LOGSTR0=	-20	Q(75.00)=	75.1383
LOGSTR1=	-20	Q(37.50)=	28.0322
Isotope Corr.:	0.	Q(18.75)=	11.5992
Egy. (cm^{-1}) >	0.0	Q(9.375)=	5.7365
μ_a =	0	A=	B
μ_b =	0	B=	298192.92
μ_c =	1.4719	C=	186695.86

v	state		transition	μ_c
0	gs(s)		gs(a)-gs(s)	1.471932
1	gs(a)		$\nu_2(a)$-$\nu_2(s)$	1.24478
2	$\nu_2(s)$		$\nu_2(s)$-gs(a)	0.24725
3	$\nu_2(a)$		$\nu_2(a)$-gs(s)	0.2363

The Hamiltonian is described in

(1) Yu et al. (J. Chem. Phys. in press)

This entry is a prediction of the ground state inversion transitions only, and the analysis includes hyperfine-free frequencies involving the ground and the $\nu_2 = 1$ inversion states. A prediction of the $\nu_2 = 1$ inversion transitions and the ν_2 fundamental band is given in Entry 17004. The intensities for ΔK=3 transitions should be viewed with caution, as some ΔK=3 forbidden transitions were predicted to about 100 times stronger than observed. The ΔK=3 line intensity has never been studied; the ΔK=3 Herman-Wallis terms are not known and not included in the intensity calculations. The ΔK=3 line intensity problem is still under investigation. To avoid confusion, all the unobserved ΔK=3 transitions were manually removed.

Additional Microwave transitions were taken from

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The partition function includes contributions from the ground and $\nu_2 = 1$ states and J up to 35.