

Species Tag:	44005	Name:	CH3CHO-e
Version:	1		Acetaldehyde
Date:	Dec. 1980		ground torsional state,
Contributor:	H. M. Pickett		E state

Lines Listed:	691	Q(300.0)=	12111.557
Freq. (GHz) <	2995	Q(225.0)=	7866.836
Max. J:	15	Q(150.0)=	4282.526
LOGSTR0=	-9.0	Q(75.00)=	1513.910
LOGSTR1=	-10.8	Q(37.50)=	535.303
Isotope Corr.:	0.0	Q(18.75)=	189.452
Egy. (cm <sup>-1</sup> ) >	0.069	Q(9.375)=	67.298
$\mu_a$ =	2.55	A=	56448.5
$\mu_b$ =	0.87	B=	10160.1
$\mu_c$ =		C=	9101.3

The data set used is referenced by A. Bauder, F. J. Lovas, and D. R. Johnson, 1976, *J. Phys. Chem. Ref. Data* **5**, 53. The lines were fit to a Hamiltonian that included terms up to the sixth power in angular momentum as well as  $P_a$ ,  $P_a P^2$ ,  $P_a P^4$ ,  $P_a^3$ ,  $P_a^3 P^2$ , and  $P_a^5$  terms. The fit produced observed-calculated frequencies that were 3.5 times the experimental uncertainties in an RMS sense. The calculated line strengths agree with those of Bauder *et al.*