Species Tag:	46008	Name:	CH3OCH3
Version:	1		Dimethyl Ether
Date:	Oct. 1992		ground state,
Contributor:	H. M. Pickett		AA, EE, EA, AE
Lines Listed:	21735	Q(300.0)=	228016.
Freq. (GHz) <	9999	Q(225.0)=	152698.
Max. J:	50	Q(150.0)=	84188.
LOGSTR0=	-9.0	Q(75.00)=	29828.
LOGSTR1=	-7.0	Q(37.50)=	10563.
Isotope Corr.:	0.0	Q(18.75)=	3748.
Egy. (cm^{-1}) >	0.0	Q(9.375)=	1334.
μ_a =		A=	38788.2
μ_b =	1.302	B=	10056.5
μ_c =		C=	8886.8

The data set used is referenced by F. J. Lovas, H. Lutz, and H. Dreizler, 1979, J. Phys. Chem. Ref. Data **8**, 1051 and W. Neustock, A. Guarnieri, J. Demaison, and G. Wlodarczak, 1990, Z. Naturforsch. **45a**, 702. The v designations of 0, 1, 2, 3 represent the AA, EE, EA, and AE states, respectively. In order to keep the degeneracies within bounds, the standard spin degeneracies were reduced by 2 and the partition function was also reduced by 2. The weights used are 3, 8, 2, 1 for the ee and oo rotational states, and 5, 8, 2, 3 for the oe and eo states. Note that there are numerous errors or inconsistencies in the literature. The convention used here follows that of R. Myers and E. B. Wilson, Jr., 1960, J. Chem. Phys. **33**, 186. The lines were fit to a Hamiltonian that included terms up to the sixth power in angular momentum as well as appropriate odd powers of angular momentum. Dependence on K expected from an IAM treatment was incorporated using sine and cosine terms in $2\pi\rho_a K/3$. The quality of the fit was, on the average, twice the experimental uncertainty. The EE and EA states have both b and c type lines, while the AA and AE states have only b type lines.