

Species Tag:	37002	Name:	C3H
Version:	1		2-Propynyldiyne
Date:	Apr. 1995		ground $^2\Pi$ state
Contributor:	H. M. Pickett		and $\nu_4 = 1$ $^2\Sigma^u$ state
	M. L. Delitsky		
Lines Listed:	4990	Q(300.0)=	6283.6523
Freq. (GHz) <	3438.1	Q(225.0)=	4622.2113
Max. J:	60	Q(150.0)=	2960.9861
LOGSTR0=	-10.	Q(75.00)=	1323.4710
LOGSTR1=	-100	Q(37.50)=	546.9895
Isotope Corr.:		Q(18.75)=	210.2441
Egy. (cm^{-1}) >	0.0,20.3	Q(9.375)=	84.0073
$\mu_a =$	3.10	A=	
$\mu_b =$		B=	11189.059
$\mu_c =$		C=	

The observed lines and dipole moment are from: S. Yamamoto, S. Saito and M. Ohishi, 1990, *Astrophys. J.* **348**,363. C. A. Gottlieb, E. W. Gottlieb, P. Thaddeus and J. M. Vrtilik, 1986, *Astrophys. J.* **303**, 446.

The $\nu_4 = 1$ state is only 610 GHz above the ground state and is strongly coupled with the ground state. The form of the interaction is given in J. T. Hougen, 1962, *J. Chem. Phys.* **36**, 519. The dipole moment for the $\nu_4 = 1$ state is assumed to be the same as the ground state. There is a 0.5 Debye b symmetry moment between the ground state and $\nu_4 = 1$.