

Species Tag:	72001	Name:	CaS
Version:	1		Calcium sulfide,
Date:	Mar 2008		$\nu = 0, 1$
Contributor:	S. Yu		
	B. Drouin		
Lines Listed:	382	Q(300.0)=	1333.5686
Freq. (GHz) <	1933	Q(225.0)=	938.7517
Max. J:	191	Q(150.0)=	599.6279
LOGSTR0=	-36.5	Q(75.00)=	296.2207
LOGSTR1=	-36.5	Q(37.50)=	148.2292
Isotope Corr.:	0.0	Q(18.75)=	74.2755
Egy. (cm^{-1}) >	0.0	Q(9.375)=	37.3042
$\mu_a =$	6	A=	
$\mu_b =$		B=	5284.1897
$\mu_c =$		C=	

The rotational line frequencies were taken from: Takano, Yamamoto, and Saito, 1989, Chem. Phys. Lett. **159**, 563,

The visible line frequencies used in the analysis were taken from: Melville and Coxon, 2002, J. Phys.Chem. A **106**, 8271.

The frequency analysis includes electronic states from A $^1\Sigma^+$ $v = 0-3$ to X $^1\Sigma^+$ $v = 0-3$. The ground state and the A state were fitted using equilibrium parameters. The A $^1\Sigma^+$ $v = 3$ was fitted with perturbation from two dark states included.

The dipole moment was estimated from similar species.