Species Tag: 40004  Name: SiC
Version: 1  X $^3\Pi$, v = 1 state
Date: Dec. 1994
Contributor: H. M. Pickett

Lines Listed: 703  Q(300.0)= 1567.7215
Freq. (GHz) < 9999  Q(225.0)= 1105.7351
Max. J: 90  Q(150.0)= 667.1014
LOGSTR0= -7.0  Q(75.00)= 265.0090
LOGSTR1= -9.0  Q(37.50)= 103.4726
Isotope Corr.: 0.0  Q(18.75)= 24.9717
Egy. (cm$^{-1}$) > 950.0  Q(9.375)= 24.9717
$\mu_a = 1.7$  A=
$\mu_b = $  B= 20297.582
$\mu_c = $  C=

The millimeter lines are from R. Mollaaghababa, C. A. Gottlieb, J. M. Vrtilek, and P. Thaddeus, 1990, Astrophys. J. Lett. Ed. 352, L21-23. The dipole moment is a theoretical one. (See ground state species.) The partition functions are based on a sum of states for the ground and first vibrationally excited state. The spectra were fitted to a Hunds case (b) Hamiltonian. The correlation of states in case (b) with those for case (a) are:

\[
\begin{align*}
N &= J & \Omega &= 0 \\
N &= J + 1 & \Omega &= 1 \\
N &= J - 1 & \Omega &= 2
\end{align*}
\]