

|              |               |       |                               |
|--------------|---------------|-------|-------------------------------|
| Species Tag: | 40003         | Name: | SiC                           |
| Version:     | 1             |       | X <sup>3</sup> Π, v = 0 state |
| Date:        | Dec. 1994     |       |                               |
| Contributor: | H. M. Pickett |       |                               |

|                            |      |           |           |
|----------------------------|------|-----------|-----------|
| Lines Listed:              | 982  | 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)= | 46.3133   |
| Egy. (cm <sup>-1</sup> ) > | 0.0  | Q(9.375)= | 24.9717   |
| μ <sub>a</sub> =           | 1.7  | A=        |           |
| μ <sub>b</sub> =           |      | B=        | 20297.582 |
| μ <sub>c</sub> =           |      | C=        |           |

The millimeter lines are from J. Cernicharo, C. A. Gottlieb, M. Guelin, P. Thaddeus, and J. M. Vrtilik, 1989, *Astrophys. J. Lett. Ed.* **341**, L25-28. The dipole moment is a theoretical one quoted in this reference. 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:

$$\begin{aligned}
 N &= J & \Omega &= 0 \\
 N &= J + 1 & \Omega &= 1 \\
 N &= J - 1 & \Omega &= 2
 \end{aligned}$$