Contents lists available at ScienceDirect

Atomic Data and Nuclear Data Tables

Energy levels, radiative rates and electron impact excitation rates for transitions in Si III

Kanti M. Aggarwal

Astrophysics Research Centre, School of Mathematics and Physics, Queen's University Belfast, Belfast BT7 1NN, Northern Ireland, UK

A R T I C L E   I N F O

A B S T R A C T

Energy levels and radiative rates (*A*-values) for four types of transitions (E1, E2, M1, and M2) are reported for an astrophysically important Mg-like ion Si III, whose emission lines have been observed in a variety of plasmas. For the calculations, well-known and widely-used GRASP code has been adopted, and results are listed for transitions among the 141 levels of the $3\ell3\ell'$ and $3\ell4\ell$ configurations. Experimental energies are available for only the lowest 58 levels but there is no major discrepancy with theoretical results. Similarly, the *A*-values and lifetimes show a satisfactory agreement with other available results, particularly for strong E1 transitions. Collision strengths are also calculated, with the DARC code, and listed for resonance transitions over a wide energy range, up to 30 Ryd. No similar results are available in the literature for comparisons. However, comparisons are made with the more important parameter, effective collision strength (Υ), for which recent *R*-matrix results are available for a wide range of transitions, and over a large range of temperatures. To determine Υ, resonances have been resolved in a narrow energy mesh, although these are not observed to be as important as for other ions. Unfortunately, large discrepancies in Υ values are noted for about half the transitions. The differences increase with increasing temperature and worsen as the upper level *J* increases. In most cases the earlier results are overestimated, by up to (almost) two orders of magnitude, and this conclusion is consistent with the one observed earlier for Be-like ions.

© 2016 Elsevier Inc. All rights reserved.

Contents

1. Introduction

Emission lines of many Mg-like ions have been observed in a variety of astrophysical plasmas, such as solar, early and late-type stars and planetary nebulae—see for example, work [1] and references therein. Lines from several of these ions (such as Ca IX, Ti XI and Fe XV) are also prominent in fusion plasmas. However, to interpret observations and to model these plasmas atomic data are required for several parameters, including energy levels, radiative rates (A-values) and effective collision strengths (Υ). Generally, energy levels for these ions are fairly well known, and the compilation of assessed experimental data is freely available from the NIST (National Institute of Standards and Technology) website http://www.nist.gov/pml/data/asd.cfm. However, corresponding informations for A- and Υ values are not available from measurements, but over the past few decades several workers have reported theoretical results for many of the Mg-like ions—see for example the data stored in the CHIANTI database at http://www.chiantidatabase.org/ or references in paper [2]. Most of these data, particularly for Υ, are limited to a few levels/transitions, and therefore require extension. More importantly, for some ions (such as P IV, Cl VI and K VIII) no collisional data are available.

Realizing the importance of atomic data for Mg-like ions, recently authors of [2] have reported calculations for a wide range of ions, up to $Z = 36$. They have considered a large number of levels (283 belonging to the $3\ell 3\ell'$, $3\ell 4\ell$ and $3\ell 5\ell$ configurations) and have reported a consistent set of results for energy levels, A-values and Υ. For the determination of atomic structure they have adopted the *AutoStructure* (AS) code [3], and for the collisional calculations the *R*-matrix code [4]. Furthermore, they have resolved resonances in thresholds region and therefore, their data should be the best available to date.

The *R*-matrix code [4], adopted by authors of [2], basically calculates collision strengths (Ω) in *LS* coupling (Russell–Saunders or spin–orbit coupling), and in order to calculate Ω (and Υ) for *fine-structure* transitions, they utilized their *intermediate coupling frame transformation* (ICFT) method [5]. Unfortunately, in the recent literature questions have been raised about the reliability of their approach. For example, we have demonstrated [6,7] that the implementation of such an approach leads to a significant overestimation (of orders of magnitude) of Υ values over a wide range of temperatures for a large number of transitions in Be-like ions. Similar overestimations have also been noted for transitions in Al-like Fe XIV [8] and Ar-like Fe IX [9].

However, in a series of papers [10–12] the overestimation of Υ results with the ICFT methodology has been justified on the basis of the larger calculations performed by the group authors. For example, we included only 98 levels of the $2\ell 2\ell'$, $2\ell 3\ell'$ and

$2\ell 4\ell'$ configurations for most Be-like ions [6,13–15], and only 166 for C III [7], the additional 68 levels belonging to the $2\ell 5\ell'$ configurations, well short of 238 considered by [16]. However, in a recent paper [17] we considered exactly the same 238 levels for N IV and arrived at the same conclusion that the ICFT results for Υ are indeed overestimated, by up to four orders of magnitude for over 40 per cent of the transitions. Moreover, the overestimation of Υ results is over the whole range of temperatures. Therefore, it has become necessary to test the (in)accuracy of the Υ results of [2] for Mg-like ions.

We also note here that large discrepancies in the ICFT calculations of [18] for transitions in Mg-like Fe XV were observed earlier [19]—see also Section 5 and Table E for transitions in Si III. The error in the code was later rectified by [20]. Moreover, in certain circumstances the ICFT approach does lead to the overestimation in the Υ values, as discussed by [21] for transitions in O III, and also explained by [10]. Nevertheless, in this paper we consider the results for Si III, which is not only an important Mg-like ion but its atomic data have recently been 'benchmarked' by [22].

Lines of Si III have been extensively analyzed by many workers—see for example, [1] and [22] and references therein. Of particular interest is the 120.7 nm emission line arising from the $1s^2 \ ^1S_0$–$3s3p \ ^1P_1^o$ transition, which has been extensively observed in both solar and stellar plasmas—see for example, [23]. The early close-coupling calculations for Υ using the *R*-matrix method were undertaken by [24]. They considered only 12 lowest lying *LS* states of the $3s^2$, $3s3p$, $3s3d$, $3p^2$, $3s4s$ and $3s4p$ configurations, and reported results for Υ over the 5×10^3–2.5×10^5 K temperature range, sufficient for analysis of observations because the temperature of maximum abundance in ionization equilibrium for Si III is only ~50 000 K [25]. However, an error was later detected in their work and was rectified by [1], whose collisional data have mostly been utilized for observational analysis—see for example [26], and are also stored in the CHIANTI database. Nevertheless, their data remain for limited transitions among 20 fine-structure levels of the above listed 12 states, and hence are not fully sufficient for observational analysis because some of the strong lines of Si III are associated with higher excited levels, such as 3s4f $^1F_3^o$ [22].

A much larger calculation involving 45 fine-structure levels belonging to 25 *LS* terms ($n \le 4$) of four Mg-like ions, including Si III, was later performed by [18], but they reported results for Υ for only 15 transitions from the ground $3s^2 \ ^1S_0$ to higher excited levels—see their table 3. However, their Υ results for all transitions are now available on the website: http://www.open.adas.ac.uk. Nevertheless, since their similar results for Fe XV were clearly demonstrated to be inaccurate [19], as already stated, we will focus our comparisons with the most recent and relevant results of [2], discussed earlier.

As in our earlier works, we employ the fully relativistic GRASP (General-purpose Relativistic Atomic Structure Package) code for the generation of wavefunctions, i.e. to determine the atomic structure of Si III. This code was originally developed by [27], but has since undergone through multiple revisions. The version adopted here has been significantly revised by Dr. P.H. Norrington, one of the authors. This version is known as GRASP0 and is available at the website: http://amdpp.phys.strath.ac.uk/UK_APAP/codes.html. Similarly, for the scattering calculations we have adopted the relativistic version of the *R*-matrix code, known as DARC (the Dirac atomic *R*-matrix code), and available at the same website. Both these codes have been adopted because of their reliability and our past experience with these for a wide range of ions. Otherwise, it is fair to state that the relativistic effects (included in these codes) are not too important for a moderately heavy Si ion. However, because of the inclusion of fine-structure in the definition of channel coupling, the size of the Hamiltonian (H) matrix increases substantially, and thus makes the calculations computationally more demanding. For this reason, our calculations include only 141 levels of the $3\ell3\ell'$ and $3\ell4\ell$ configurations, 18 in total. Therefore, our calculations are comparatively smaller than those performed by [2], because for practical reasons we are omitting the 142 levels of the $3\ell5\ell$ configurations. Nevertheless, our results should be sufficient to draw the necessary conclusions, as were the cases with our smaller calculations for Al X [6] and C III [7], i.e. the Be-like ions.

2. Energy levels

Our energies obtained with an 'extended average level' (EAL) approximation are listed in Table 1 along with the experimental values compiled by NIST. For the 141 level calculations (GRASP1) energies obtained *with* and *without* the contributions of Breit and QED (quantum electrodynamic) effects are listed, whereas for the 283 levels (GRASP2) only the final (corrected) energies are given for the comparison purpose. This is because the contribution of Breit and QED effects is almost negligible for most levels and is below 0.04 Ryd for a few, such as 43–48, see columns under GRASP1a and GRASP1b. This is quite expected because Si III is a moderately heavy ion. However, the inclusion of Breit and QED effects slightly changes the ordering for a few levels, such as 79–84, 87/89 and 105–111.

Experimental energies are available for only levels below 58, and differences for a few with our (GRASP1b) energies are below 0.04 Ryd, see for example levels 16, 43 and 46–48. Similarly the orderings between theory and measurements are compatible for most levels, although there are minor differences for a few, such as 28/29 and 52/53.

For some ions, such as Si II [28], inclusion of additional CI (configuration interaction) appreciably affects the energy levels. Therefore, to assess its impact we have performed another calculation (GRASP2) which includes the same 283 levels as by [2]. However, for most levels of Si III there is no appreciable discrepancy between the GRASP1 and GRASP2 energies, although differences for a few are up to 0.02 Ryd—see for example, 78–81. Additionally, for two levels the GRASP2 energies differ by 0.05 Ryd (<2%), higher for 86 (3d² ¹G₄) but lower for 141 (3d4d ¹S₀), and therefore there is no consistency. Nevertheless, the energies calculated with the GRASP code are compatible with those obtained with another independent code, i.e. the *Flexible Atomic Code* (FAC) [29]—see energies under column FAC1 in Table 1. FAC is also a relativistic code and generally provides comparable results for energy levels. For Si III also, the GRASP2 and FAC1 energies agree closely within 0.03 Ryd and the orderings are also nearly the same. Although this result was expected, the exercise became desirable in the absence of measurements for higher excited levels of Si III. For the same reason we have performed yet another

calculation, i.e. FAC2, which includes much more CI with 1211 levels of the 3*2 and 3*1 n*1 ($n \le 9$) configurations. Although a few levels in FAC2 (such as 43, 53 and 90) cannot be unambiguously identified, there is no appreciable discrepancy between the FAC1 and FAC2 energies, i.e. there is no clear advantage in including a larger CI as far as the levels of Si III are concerned. However, this calculation leads to another important conclusion and that is the strong intermixing of levels from higher configurations with those of $n \le 4$—see also the energy table of [2] for the levels of Si III. As a result of this if we want to include all 141 levels listed in Table 1 in a collisional calculation then we have to include a further ~500 levels, because resonances arising from the intermixed levels of higher configurations may considerably affect the calculations of Υ—see Section 5. However, with the computational resources available with us such a large calculation (with about ~650 levels) is not feasible and therefore we had to make a compromise, although the levels listed in Table 1 are *not* the lowest.

Finally, in Table 1 we include the energies of [2] calculated with the AS code, because we will be comparing our collisional data with their work. There are some minor differences in level orderings, see for example, 10–12, 43–45 and 51–52. However, there is no significant discrepancy between our GRASP2 and the AS energies (because both calculations include the same CI), and differences for a few (such as 113–115) are below 0.1 Ryd. Therefore, with all comparisons discussed above we may confidently state that determination of energy levels for Si III is not problematic and all results listed in Table 1 are accurate to better than 2%.

3. Radiative rates and lifetimes

For modeling applications the most dominant and important are the *A*-values for electric dipole (E1) transitions. However, for a better accuracy of plasma modeling, similar *A*-values for electric quadrupole (E2), magnetic dipole (M1) and magnetic quadrupole (M2) transitions are also desired. Therefore, we have calculated *A*-values for all four types and note that these are related to the *f*-values (oscillator strengths) as

$$f_{ij} = \frac{mc}{8\pi^2 e^2} \lambda_{ji}^2 \frac{\omega_j}{\omega_i} A_{ji} = 1.49 \times 10^{-16} \lambda_{ji}^2 \frac{\omega_j}{\omega_i} A_{ji}, \tag{1}$$

where m and e are the electron mass and charge, respectively, c the velocity of light, and ω_i and ω_j the statistical weights of the lower (i) and upper (j) levels, respectively. Our calculated results, in the length form, are listed in Table 2 for the energies/wavelengths (λ, in Å), radiative rates (A_{ji}, in s⁻¹), oscillator strengths (f_{ij}, dimensionless), and line strengths (S, in atomic unit = 6.460 × 10⁻³⁶ cm² esu²) for all E1 transitions. However, for the E2, M1 and M2 transitions only the *A*-values are listed in Table 2. Furthermore, for brevity only transitions from the lowest 29 to higher excited levels are listed in Table 2, but full table is available online in the electronic version (see Appendix A).

Several workers in the past have calculated *A*-values (mainly) for E1 transitions of Mg-like ions—see for example [30] and reference therein. These authors have also performed large calculations for transitions among the $3\ell3\ell'$ configurations of all ions with $13 \le Z \le 100$. They have employed their relativistic *many-body perturbation theory* (MBPT), but have reported limited results for most ions, including Si III. Nevertheless, authors of [31] have compiled and critically assessed the *A*-values from many sources (including those from [30]) and their recommendations (of varying inaccuracy A to E or equivalently 3% to 100%) cover the largest number of transitions, but mostly belonging to higher levels of Si III. Among the lowest 38 levels (see Table 1) [32] have determined *A*-values with the *multi-configuration Hartree–Fock* (MCHF) code. Their results are also available on the website: http://nlte.nist.gov/MCHF/view.html. In Table A we compare our

Table A

Comparison of f-values for E1 transitions among the lowest 22 levels of Si III. $a \pm b \equiv a \times 10^{\pm b}$. See Table 1 for level indices.

Transition		GRASP1		GRASP2		FAC1	FAC2	MCHF
I	J	f	R	f	R	f	f	f
1	3	1.820−5	8.9−1	1.929−5	9.1−1	1.645−5	1.854−5	2.816−5
1	5	1.679−0	9.7−1	1.691−0	9.7−1	1.683−0	1.691−0	1.606−0
1	18	4.196−5	4.7−1	3.254−5	7.7−1	2.372−5	2.462−5	7.111−5
1	20	3.579−2	2.7−1	1.775−2	6.5−1	2.062−2	1.659−2	2.241−2
2	8	5.551−1	1.0−0	5.591−1	1.0−0	5.538−1	5.572−1	5.328−1
2	12	8.804−1	9.8−1	8.836−1	9.8−1	8.788−1	8.817−1	8.592−1
2	13	1.182−1	9.0−1	1.186−1	9.2−1	1.281−1	1.267−1	1.189−1
3	6	8.544−5	9.9−1	8.798−5	9.9−1	7.680−5	8.211−5	1.250−4
3	7	1.841−1	1.0−0	1.854−1	1.0−0	1.836−1	1.847−1	1.766−1
3	8	1.386−1	1.0−0	1.396−1	1.0−0	1.383−1	1.390−1	1.329−1
3	9	2.315−1	1.0−0	2.331−1	1.0−0	2.309−1	2.324−1	2.223−1
3	11	6.599−1	9.8−1	6.623−1	9.8−1	6.587−1	6.614−1	6.440−1
3	12	2.201−1	9.8−1	2.209−1	9.8−1	2.197−1	2.206−1	2.148−1
3	13	1.188−1	9.0−1	1.191−1	9.2−1	1.287−1	1.272−1	1.194−1
3	14	7.773−6	9.8−1	8.372−6	9.5−1			1.497−5
3	15	3.526−6	7.4−1	3.325−6	7.7−1	2.335−6	2.462−6	1.397−6
3	16	3.043−5	8.6−1	2.964−5	9.0−1			3.972−5
4	6	8.856−5	1.0−0	9.149−5	1.0−0	7.592−5	7.947−5	1.336−4
4	8	1.375−1	1.0−0	1.385−1	1.0−0	1.372−1	1.380−1	1.319−1
4	9	4.147−1	1.0−0	4.177−1	1.0−0	4.138−1	4.162−1	3.979−1
4	10	7.385−1	9.8−1	7.413−1	9.8−1	7.373−1	7.402−1	7.209−1
4	11	1.320−1	9.8−1	1.325−1	9.8−1	1.318−1	1.323−1	1.289−1
4	12	8.803−3	9.8−1	8.837−3	9.8−1	8.788−3	8.828−3	8.596−3
4	13	1.199−1	9.0−1	1.203−1	9.3−1	1.298−1	1.285−1	1.206−1
4	16	2.967−6	9.8−1	3.168−6	9.6−1			4.452−6
5	6	4.502−2	8.1−1	4.487−2	8.5−1	4.022−2	4.074−2	4.785−2
5	7	1.229−5	1.2−0	1.241−5	1.2−0			1.476−5
5	8	1.374−6	1.0−0	1.470−6	1.0−0			2.153−6
5	9	1.260−5	1.0−0	1.242−5	1.0−0			1.845−5
5	11	1.379−5	1.0−0	1.433−5	1.0−0			1.907−5
5	12	4.068−6	9.4−1	4.315−6	9.3−1			6.200−6
5	13	4.739−6	1.1−0	5.113−6	1.0−0			7.021−6
5	14	3.178−1	1.1−0	3.118−1	1.1−0	2.982−1	2.890−1	2.238−1
5	15	5.822−3	2.6−1	7.979−3	4.3−1	2.852−2	3.379−2	7.637−2
5	16	1.715−0	8.5−1	1.689−0	8.9−1	1.688−0	1.687−0	1.644−0
6	18	5.406−5	9.2−1	6.939−5	9.4−1	4.095−5	5.591−5	1.534−4
6	19	7.683−8	1.5−0	5.446−8	1.5−0			0.409−9
6	20	9.952−2	9.3−1	9.763−2	9.5−1	1.065−1	1.033−1	8.917−2
6	21	1.496−4	9.9−1	1.434−4	9.9−1	1.440−4	1.372−4	1.737−4
6	22	3.152−5	8.1−1	3.627−5	8.5−1	3.376−5	3.900−5	5.625−5

GRASP1: present calculations from the GRASP code for 141 levels.
GRASP2: present calculations from the GRASP code for 283 levels.
FAC1: present calculations from the FAC code for 283 levels.
FAC2: present calculations from the FAC code for 1211 levels.
R: ratio of velocity/length of f-values.
MCHF: calculations of [32] with the MCHF code and available on the website: http://nlte.nist.gov/MCHF/view.html.

f-values with the GRASP (GRASP1 and GRASP2) and FAC (FAC1 and FAC2) codes among the lowest 22 levels. For comparisons the corresponding results with MCHF are also included. For comparatively strong transitions with large f-values (>0.1) all calculations agree within about 20%, which is highly satisfactory. The only exception is the 5–14 (3s3p $^1P^o_1$–3p^2 $^1S_0$, $f \sim 0.3$) transition for which our GRASP1, GRASP2, FAC1 and FAC2 f-values are consistent, but the MCHF result is lower by about 30%, and has been recommended by [31]. Such anomalies for a few transitions are often found and mainly arise with differing amount of CI and/or methodology. For the same reason, variations in the f-values for weaker transitions are up to a factor of three (or even higher) for a few, such as 1–3/18/20, because the additive or cancellation effect of multiple mixing coefficients is much greater on these.

Another way to assess the accuracy of f-values is to compare the ratio (R) of the velocity and length forms. A value closer to unity generally gives an indication about the accuracy of the results, although the length form is normally considered to be more accurate. Therefore, in Table A we have also listed R from our GRASP1 and GRASP2 calculations, but stress here that near unit value of R is only a desirable criterion, not a necessary one because often even for strong transition calculations with differing amount

Table B

Comparison of oscillator strengths (f-values) for some E2, M1 and M2 transitions of Si III. $a \pm b \equiv a \times 10^{\pm b}$. See Table 1 for level indices.

I	J	Type	GRASP1	GRASP2	MCHF
1	4	M2	3.091−11	3.129−11	3.358−11
2	3	M1	9.968−09	9.987−09	1.042−08
2	4	E2	1.331−13	1.355−13	1.464−13
2	5	M1	6.335−11	6.447−11	7.896−11
3	4	E2	3.021−14	3.075−14	3.329−14
3	4	M1	8.478−09	8.495−09	8.881−09
3	5	E2	2.867−12	2.985−12	3.510−12
3	5	M1	1.612−11	1.690−11	2.002−11
4	5	E2	1.255−12	1.270−12	1.407−12
4	5	M1	1.565−11	1.591−11	1.949−11

GRASP1: present calculations from the GRASP code for 141 levels.
GRASP2: present calculations from the GRASP code for 283 levels.
MCHF: calculations of [32] with the MCHF code and available on the website: http://nlte.nist.gov/MCHF/view.html.

of CI may give $R \sim 1$, but completely different results in magnitude [33]. For almost all strong (and many weaker) transitions listed in Table A, R is within 20% of unity and therefore indicates about the reliability of our results listed in Table 2.

Table C
Comparison of lifetimes (τ, s) for the lowest 29 levels of Si III. $a \pm b \equiv a \times 10^{\pm b}$. See Table 1 for level indices.

Index	Configuration	Level	GRASP1	MCHF1	MCHF2	MBPT	Exp.1	Exp2.
1	$3s^2$	$^1S_0$						
2	$3s3p$	$^3P_0^o$						
3	$3s3p$	$^3P_1^o$	$9.448-05$	$5.809-05$	$5.718-05$	$1.01-04$	$(5.99 \pm 0.36)-05^{\text{Expt.3}}$	
4	$3s3p$	$^3P_2^o$	$9.003+01$	$7.846+01$				
5	$3s3p$	$^1P_1^o$	$3.763-10$	$4.050-10$	$4.077-10$	$4.29-10$		
6	$3p^2$	$^1D_2$	$4.359-08$	$3.273-08$	$3.301-08$	$4.57-08$	$(2.60 \pm 0.15)-08$	$(2.6 \pm 0.3)-08$
7	$3p^2$	$^3P_0$	$4.547-10$	$4.779-10$	$4.792-10$	$4.65-10$		
8	$3p^2$	$^3P_1$	$4.535-10$	$4.764-10$	$4.777-10$	$4.74-10$		
9	$3p^2$	$^3P_2$	$4.514-10$	$4.741-10$	$4.753-10$	$4.21-10$		
10	$3s3d$	$^3D_3$	$3.403-10$	$3.506-10$	$3.590-10$	$3.77-10$		
11	$3s3d$	$^3D_2$	$3.387-10$	$3.524-10$	$3.608-10$	$3.74-10$		
12	$3s3d$	$^3D_1$	$3.375-10$	$3.494-10$	$3.577-10$	$3.74-10$		
13	$3s4s$	$^3S_1$	$4.195-10$	$4.441-10$	$4.132-10$		$(5.0 \pm 1.0)-10^{\text{Expt.4}}$	
14	$3p^2$	$^1S_0$	$3.272-10$	$4.068-10$	$4.983-10$	$4.76-10$	$(5.8 \pm 0.4)-10^{\text{Expt.5}}$	
15	$3s4s$	$^1S_0$	$1.514-08$	$1.112-09$	$1.127-09$			
16	$3s3d$	$^1D_2$	$1.980-10$	$2.170-10$	$2.213-10$	$2.32-10$		
17	$3s4p$	$^3P_0^o$	$3.561-09$	$3.409-09$	$3.365-09$		$(3.3 \pm 0.3)-09$	$(4.1 \pm 0.5)-09$
18	$3s4p$	$^3P_1^o$	$3.545-09$	$3.390-09$	$3.347-09$		$(3.6 \pm 0.3)-09$	$(4.5 \pm 0.5)-09$
19	$3s4p$	$^3P_2^o$	$3.525-09$	$3.373-09$	$3.330-09$			
20	$3s4p$	$^1P_1^o$	$1.587-09$	$1.926-09$	$1.939-09$			
21	$3p3d$	$^3F_2^o$	$9.934-07$	$1.124-06$	$1.326-06$	$2.25-08$		
22	$3p3d$	$^3F_3^o$	$1.311-06$	$2.210-06$	$3.010-06$	$2.49-08$		
23	$3p3d$	$^3F_4^o$	$9.585-07$	$2.378-06$	$3.166-06$	$2.57-08$		
24	$3s4d$	$^3D_1$	$3.087-09$	$2.783-09$	$2.840-09$		$(3.3 \pm 0.3)-09$	$(4.0 \pm 0.4)-09$
25	$3s4d$	$^3D_2$	$3.096-09$	$2.797-09$	$2.855-09$		$(3.3 \pm 0.3)-09$	$(4.0 \pm 0.4)-09$
26	$3s4d$	$^3D_3$	$3.110-09$	$2.818-09$	$2.876-09$		$(3.3 \pm 0.3)-09$	$(4.0 \pm 0.4)-09$
27	$3s4f$	$^1F_3^o$	$6.596-10$	$5.979-10$	$6.063-10$			
28	$3p3d$	$^1D_2^o$	$4.102-10$	$4.264-10$	$4.335-10$	$3.80-10$		
29	$3s4d$	$^1D_2$	$1.078-09$	$1.294-09$	$1.323-09$		$(1.25 \pm 0.15)-09$	$(1.9 \pm 0.3)-09$

GRASP1: present calculations from the GRASP code for 141 levels.
MCHF1: *ab initio* calculations of [32] with the MCHF code and available on the website: http://nlte.nist.gov/MCHF/view.html.
MCHF2: *adjusted energy* calculations of [32] with the MCHF code and available on the website: http://nlte.nist.gov/MCHF/view.html.
MBPT: calculations of [30] with the MBPT code.
Expt.1: measurements of [35].
Expt.2: measurements of [34].
Expt.3: measurements of [36].
Expt.4: measurements of [37].
Expt.5: measurements of [38].

For some E2, M1 and M2 transitions the *A*-values are also available from the MCHF calculations (see also [31]) and in Table B we make comparisons with our GRASP1 and GRASP2 results. There is no discrepancy between the three calculations for these transitions. Finally, we compare lifetime ($\tau = 1.0/\sum_i A_{ji}$) in Table C for the lowest 29 levels of Si III. The only τ results available in the literature for the levels of Si III are Refs. [30] and [32] with the MBPT and MCHF codes, respectively. Their results are included in Table C for comparisons. From the MCHF code there are two sets of τ values, i.e. MCHF1 and MCHF2, obtained with *ab initio* and *adjusted* energies, respectively. The two sets of τ mostly agree within 20%, but differences for two levels (22 and 23) are up to 36%. Similarly, for most levels there is no (major) discrepancy between the GRASP and MCHF (and MBPT) results, but for a few the differences are striking. Particularly noteworthy are the 3p3d $^3F_{2,3,4}^o$ (21–23) levels, because for these the differences between the GRASP and MCHF τ are up to a factor of three. These differences directly relate to the corresponding differences in *A*-values of the dominating E1 transitions, which are invariably weak. Unfortunately, discrepancies with the MBPT results of [30] are even larger. However, for degenerating levels of other states (such as ^3P and ^3D), τ values are (nearly) the same in all calculations, but differ for the 22 and 23 levels ($^3F_{3,4}^o$) in the MCHF work.

The accuracy of the *A*-values can (indirectly) be assessed by making comparisons with measurements of lifetimes, which are available for a few levels, listed in Table C. Berry et al. [34] and later Bashkin et al. [35] have measured τ for a few levels by beam foil experiments. For the 3p² $^1D_2$ level the theoretical results are higher by up to (nearly) a factor of two, but the agreement between theory and measurements is satisfactory for the other remaining levels, particularly with the later measurements of [35]. Similarly, [36] have measured τ for the 3s3p $^3P_1^o$ level to be $59.9 \pm 3.6\ \mu$s, which compares well with the MCHF work but is lower by $\sim 40\%$ than our or the MBPT calculations. Finally, authors of [37,38] have measured τ for two levels, namely 3s4s $^3S_1$ and 3p² $^1S_0$, but these are higher (by up to 40%) than all theoretical results, listed in Table C. However, this limited comparison is not sufficient for accuracy assessment of the larger data reported in the paper. Moreover, our emphasis is on the collisional calculations (described in the next section) and hence the determination of atomic structure has scope for improvement.

4. Collision strengths

To calculate Ω the *R*-matrix radius adopted for Si III is 19.2 atomic units, and 45 continuum orbitals have been included for each channel angular momentum in the expansion of the wavefunction. The maximum number of channels generated for a partial wave is 729, which makes the size of the (largest) Hamiltonian (H) matrix to be 32 835. However, this large expansion allows us to compute Ω up to an energy of ~ 30 Ryd. Considering that the highest threshold is at 3.4 Ryd (see Table 1) and the temperature of maximum abundance in ionization equilibrium for Si III is only $\sim 50\,000$ K [25] (i.e. ~ 0.32 Ryd), the energy range included in the calculations is *well above* what may be required, but allows us to calculate values of effective collision strengths (Υ) up to 1.8×10^6 K, without any requirement for the extrapolation of energy range for Ω—see Eq. (3). In contrast,

Table D
Comparison of collision strengths (Ω) for some transitions of Si III.

I	J	Transition	RM	DARC					FAC
Energy (Ryd)			0.7–10	4	6	8	10		10
1	6	$3s^2\ ^1S_0$–$3p^2\ ^1D_2$	1.21	1.3780	1.6062	1.7271	1.8087		1.9381
1	9	$3s^2\ ^1S_0$–$3p^2\ ^3P_2$	0.013	0.0025	0.0015	0.0010	0.0009		0.0006
1	10	$3s^2\ ^1S_0$–$3s3d\ ^3D_3$	0.275	0.1102	0.0569	0.0342	0.0226		0.0141
1	13	$3s^2\ ^1S_0$–$3s4s\ ^3S_1$	0.062	0.0193	0.0083	0.0048	0.0032		0.0027
1	14	$3s^2\ ^1S_0$–$3p^2\ ^1S_0$	0.065	0.3069	0.3386	0.3498	0.3525		0.1805
1	15	$3s^2\ ^1S_0$–$3s4s\ ^1S_0$	0.611	0.5614	0.6180	0.6568	0.6863		1.0634
1	16	$3s^2\ ^1S_0$–$3s3d\ ^1D_2$	1.40	1.1635	1.3106	1.3810	1.4186		1.1485
1	19	$3s^2\ ^1S_0$–$3s3p\ ^3P_2^o$	0.053	0.0232	0.0109	0.0065	0.0043		0.0028
1	20	$3s^2\ ^1S_0$–$3s3p\ ^1P_1^o$	0.295	0.3159	0.3505	0.3712	0.3875		0.4266

RM: *R*-matrix calculations of [1] for 20 levels.
DARC: present calculations with the DARC code for 141 levels.
FAC: present calculations with the FAC code for 141 levels.

Ref. [2] calculated values of Ω only up to 7.4 Ryd (i.e. less than 4 Ryd above thresholds) but reported Υ values up to $T_e = 1.8 \times 10^7$ K, equivalent to 114 Ryd. Therefore, they *extrapolated* values of Ω over a very wide energy range, and this has been a major source of inaccuracy in their results, as discussed earlier on several occasions [6,7,17].

Furthermore, for calculating Ω we have considered all partial waves with angular momentum $J \leq 40.5$, sufficient for convergence for a majority of transitions and at most energies. However, for some allowed transitions and particularly towards the higher end of the energy range, our J range is not fully sufficient for the convergence of Ω. Therefore, to account for the higher neglected partial waves, we have included the contributions through the Coulomb–Bethe [39] and geometric series approximations for allowed and forbidden transitions, respectively.

The electron impact excitation cross section (σ, πa_0^2) is related to dimensionless parameter collision strength (Ω) as

$$\Omega_{ij}(E) = k_i^2 \omega_i \sigma_{ij}(E), \qquad (2)$$

where k_i^2 is the incident energy of the electron and ω_i is the statistical weight of the initial state. The only transitions for which σ have been measured, at energies up to 1.5 Ryd, are $1s^2\ ^1S$–$3s3p\ ^{1,3}P^o$ [40,41], and there is no discrepancy with theoretical results—see figs. 2 and 3 of the former and fig. 4 of the latter, and also fig. 1 of [42], who adopted the earlier version of DARC.

Since very little data for Ω are available in the literature for transitions in Si III, in Table 3 we list our results for all resonance transitions (i.e. from the ground to higher excited levels), at energies above thresholds but over a wide range of 4–30 Ryd. This should be useful for comparisons in future and for assessing the accuracy of our results. Regarding present comparisons, authors of [1] have listed their results for only a few transitions, and in Table D we compare these with our calculations. The Ω of Ref. [1] are nearly constant over a very wide energy range of 0.7–10 Ryd, but as expected Ω does vary with energy, irrespective of the type of transition, as is clear from our results listed in Tables 3 and D. More surprisingly, for half of these (limited) transitions their results differ with ours by over an order of magnitude—see for example, 1–9/10/13/14. In some instances their Ω values are higher and lower for others. Although their calculations (in comparison) are not very accurate, mainly because they included a limited range of partial waves with angular momentum $L \leq 12$, such large differences are not understandable. In the absence of any other results being available for comparisons, we have performed another calculation with FAC by including the same 141 levels as with DARC.

FAC is also a relativistic code, as stated earlier. It calculates collisional data with the *distorted-wave* (DW) method, and as has been demonstrated in several of our earlier papers the results for Ω are often comparable with those with DARC for most of the
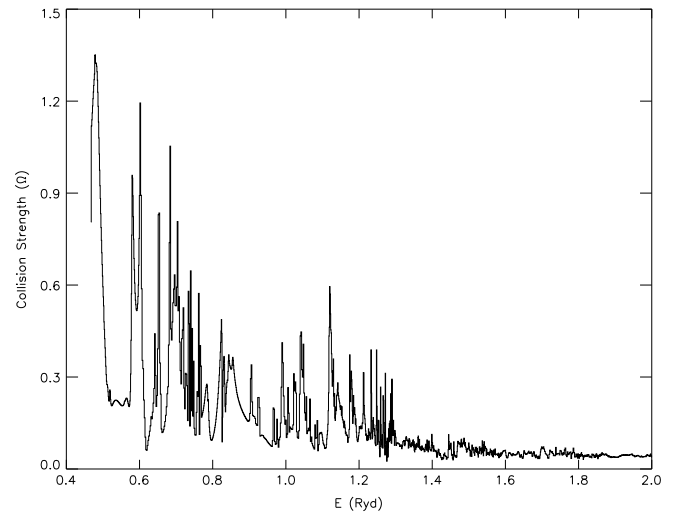
Fig. 1. Collision strengths for the 1–2 ($3s^2\ ^1S_0$–$3s3p\ ^3P_0^o$) transition of Si III.

transitions, particularly at energies above thresholds. Therefore, in Table D we have also listed DW Ω, but at a single energy of $\sim$10 Ryd. Discrepancies between the FAC and DARC Ω are up to 50% (except for 1–14: $1s^2\ ^1S_0$–$3p^2\ ^1S_0$ for which differences are of a factor of two) for several transitions, but the agreement between the two independent calculations is much closer than with the earlier *R*-matrix results [1]. Therefore, the listed Ω in Ref. [1] do not appear to be accurate. However, since it is the effective collision strengths (see next section) which are applied in the modeling of plasmas, it will be more useful to compare the Υ results to draw any meaningful conclusion.

5. Effective collision strengths

In the thresholds region values of Ω do not vary smoothly because of the numerous closed-channel (Feshbach) resonances, and need to be resolved in a fine energy mesh. However, resonances for transitions in Si III are not as prominent as for other ions, and this can be judged from figs. 2 and 3 of [40], figs. 4 and 5 of [41], fig. 1 of [42], and figs. 4–8 of [43]. Nevertheless, in Figs. 1–3 we show resonances for three transitions, namely 1–2 ($3s^2\ ^1S_0$–$3s3p\ ^3P_0^o$), 1–3 ($3s^2\ ^1S_0$–$3s3p\ ^3P_1^o$) and 2–3 ($3s3p\ ^3P_0^o$–$3s3p\ ^3P_1^o$). The 1–2 and 2–3 are forbidden whereas 1–3 is an inter-combination (allowed) transition. Resonances in these figures are shown at energies below 2 Ryd, because Ω varies (almost) smoothly at higher energies. This may be the reason that work [1] provided average values of Ω in the 0.7–10 Ryd energy region—see Table D. We have resolved resonances with an energy mesh of 0.001 Ryd in most of the thresholds region, and have calculated Ω at over 2600 points.
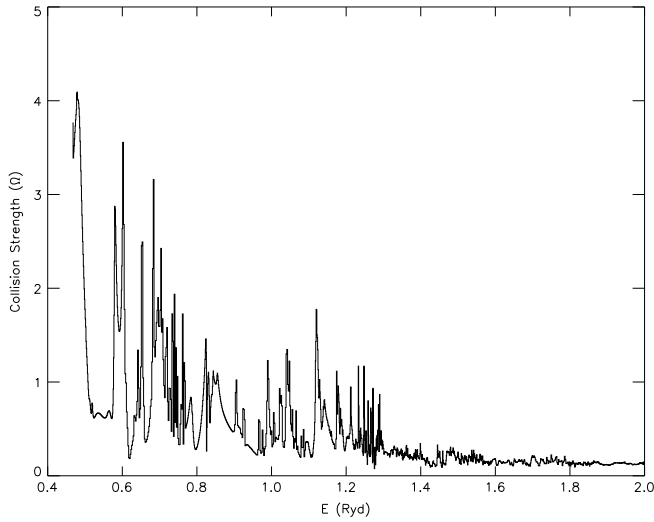
Fig. 2. Collision strengths for the 1–3 (3s² ¹S₀–3s3p ³P₁ᵒ) transition of Si III.
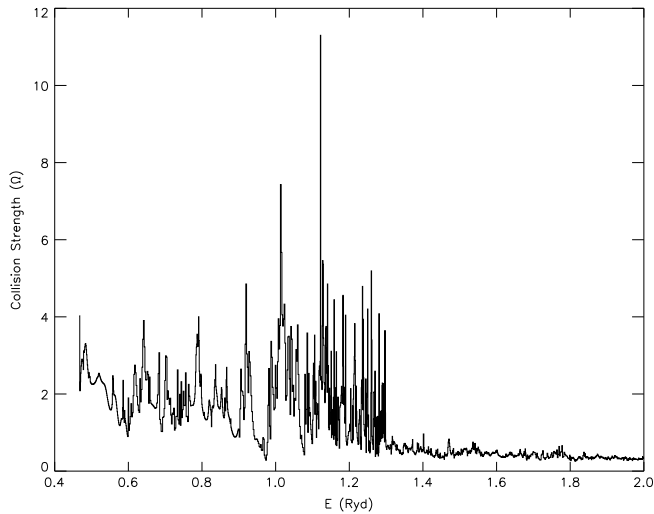
Fig. 3. Collision strengths for the 2–3 (3s3p ³P₀ᵒ–3s3p ³P₁ᵒ) transition of Si III.

Because of the resonances, as shown in Figs. 1–3, values of Ω are averaged over a *Maxwellian* distribution as follows:

$$\Upsilon(T_e) = \int_0^\infty \Omega(E) \, \exp(-E_j/kT_e) \, d(E_j/kT_e), \qquad (3)$$

where k is Boltzmann constant, T_e the electron temperature in K, and E_j the electron energy with respect to the final (excited) state. This value of Υ is related to the excitation $q(i,j)$ and de-excitation $q(j,i)$ rates as follows:

$$q(i,j) = \frac{8.63 \times 10^{-6}}{\omega_i T_e^{1/2}} \Upsilon \, \exp(-E_{ij}/kT_e) \qquad \text{cm}^3 \, \text{s}^{-1} \qquad (4)$$

and

$$q(j,i) = \frac{8.63 \times 10^{-6}}{\omega_j T_e^{1/2}} \Upsilon \qquad \text{cm}^3 \, \text{s}^{-1}, \qquad (5)$$

where ω_i and ω_j are the statistical weights of the initial (i) and final (j) states, respectively, and E_{ij} is the transition energy. Results for these rates are required in the modeling of plasmas.

Our calculated values of Υ are listed in Table 4 at temperatures up to $10^{5.9}$ K, well above the T_e of maximum abundance in ionization equilibrium for Si III, i.e. $10^{4.7}$ K [25]. However, for
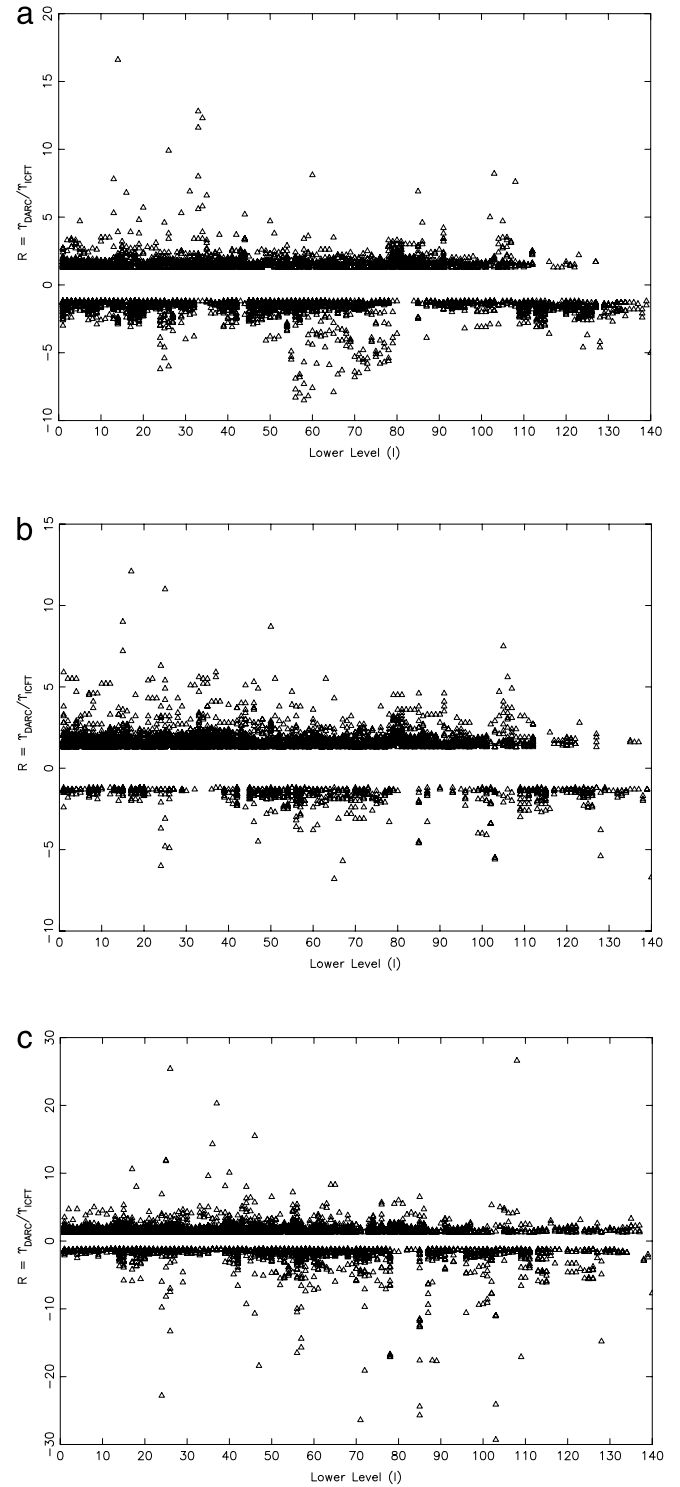
Fig. 4. Comparisons of Υ between our results with DARC and those of [2] with ICFT for transitions of Si III at (a) $T_e = 1.8 \times 10^3$, (b) $T_e = 4.5 \times 10^4$ and (c) $T_e = 1.8 \times 10^6$ K. Negative R values indicate that $\Upsilon_{\text{DARC}} < \Upsilon_{\text{ICFT}}$. Only those transitions are shown which differ by over 20%.

brevity only transitions from the lowest 29 to higher excited levels are listed in Table 4, but full table is available online in the electronic version (see Appendix A). As discussed in Section 1, the most recent, extensive and benchmarked [22] data for Υ are those of [2]. Therefore, we will undertake a detailed comparison with their results, but before that in Table E we make a short comparison with the other available data [1,18] for the same transitions listed in Table D, at the most relevant $T_e = 45\,000$ K. The only transition

Table E
Comparison of effective collision strengths (Υ) for some transitions of Si III at a temperature of 45 000 K. $a \pm b \equiv a \times 10^{\pm b}$.

I	J	Transition	DARC	RM	ICFT1a	ICFT1b	ICFT2
1	6	$3s^2\,^1S_0$–$3p^2\,^1D_2$	8.999−1	1.00−0	9.74−1	9.75−1	9.10−1
1	9	$3s^2\,^1S_0$–$3p^2\,^3P_2$	7.142−2	8.10−2	7.76−2	7.73−2	6.54−2
1	10	$3s^2\,^1S_0$–$3s3d\,^3D_3$	4.080−1	4.55−1	4.06−1	4.06−1	3.95−1
1	13	$3s^2\,^1S_0$–$3s4s\,^3S_1$	2.207−1	1.85−1		2.54−1	2.11−1
1	14	$3s^2\,^1S_0$–$3p^2\,^1S_0$	2.236−1	5.98−2	1.81−1	1.80−1	1.11−1
1	15	$3s^2\,^1S_0$–$3s4s\,^1S_0$	4.498−1	5.10−1	1.28−2	4.46−1	4.49−1
1	16	$3s^2\,^1S_0$–$3s3d\,^1D_2$	7.653−1	1.11−0	1.72−1	9.42−1	8.33−1
1	19	$3s^2\,^1S_0$–$3s3p\,^3P^o_2$	1.235−1	9.41−2		1.06−1	1.02−1
1	20	$3s^2\,^1S_0$–$3s3p\,^1P^o_1$	2.258−1	2.58−1		2.06−1	2.03−1

DARC: present calculations from the DARC code for 141 levels.
RM: *R*-matrix calculations of Dufton and Kingston [1] for 20 levels.
ICFT1a: calculations of Griffin et al. [18] with the ICFT code for 45 levels.
ICFT1b: calculations of Griffin et al. [18] with the ICFT code for 45 levels available at the website: http://www.open.adas.ac.uk.
ICFT2: calculations of [2] with the ICFT code for 283 levels and available on the website: http://amdpp.phys.strath.ac.uk/UK_APAP/DATA/adf04/.

for which the Υ of [1] differs substantially (by a factor of four) with our result is 1–14 ($3s^2\,^1S_0$–$3p^2\,^1S_0$), and this is a direct consequence of their corresponding lower values of Ω as seen in Table D. For other transitions, differences in Υ values are not as noticeable as for Ωs, because $T_e = 45\,000$ K is equivalent to only 0.285 Ryd, whereas the comparisons of Ω shown in Table D are at much higher energies.

The other results of Υ listed in Table E are Refs. [18] and [2], i.e. ICFT1 and ICFT2, respectively. As stated earlier in Section 1, the Υ results of [18] for Mg-like ions were in error (see column ICFT1a in Table E), but were subsequently corrected and stored in the OPEN-ADAS database at http://www.open.adas.ac.uk —see column under ICFT1b. The ICFT1a and ICFT1b Υ differ by up to a factor of 35 for some transitions, such as 1–15 ($3s^2\,^1S_0$–$3s4s\,^1S_0$). However, for the transitions listed in Table E there are no great discrepancies between our DARC and earlier ICFT results, although the ICFT2 Υ of [2] for the 1–14 ($3s^2\,^1S_0$–$3p^2\,^1S_0$) is lower by a factor of two. We discuss comparisons with their results in detail below for a larger number of transitions and over a wider range of temperatures.

In Fig. 4(a–c) we compare our Υ with the ICFT results of work [2]. These are shown in the form of the ratio $R = \Upsilon_{DARC}/\Upsilon_{ICFT}$, with negative values of R representing $\Upsilon_{ICFT}/\Upsilon_{DARC}$, i.e. $\Upsilon_{ICFT} > \Upsilon_{DARC}$. These comparisons of Υ are for all 9870 transitions among the 141 levels, listed in Table 1. Fernández-Menchero et al. [2] have calculated results among 283 levels and therefore we have carefully isolated the common levels/transitions from their work. The comparisons shown in Fig. 4 are at three temperatures of $10^{3.255}$, $10^{4.653}$ and $10^{6.255}$ K. The first and the third are the lowest and the highest common temperatures between the two calculations, whereas the second is the most relevant for applications to astrophysical plasmas.

At $T_e = 10^{3.255}$ K, about half the transitions differ by over 20%, and among these for about half $\Upsilon_{DARC} > \Upsilon_{ICFT}$ and for the other $\Upsilon_{ICFT} > \Upsilon_{DARC}$. Since $10^{3.255}$ K is a very low temperature ($\sim$0.011 Ryd), differences as seen in Fig. 4(a) are common between any two independent calculations, because the position of resonances can significantly affect the magnitudes of Υ. Similar discrepancies (for 55% of transitions) between the two sets of Υ are seen in Fig. 4(b) at $T_e = 10^{4.653}$ K, although a much better agreement is expected.

Unfortunately, discrepancies for about 50% of transitions remain at $T_e = 10^{6.255}$ K, equivalent to $\sim$11.4 Ryd, a temperature well beyond the highest threshold considered in any of the two calculations, and at which the contributions of resonances, if any, are not expected to be significant. In fact, Fernández-Menchero et al. [2] have also concluded that the effect of resonances attached to higher excited levels is not significant. Therefore, the larger calculations performed by authors of [2] cannot be the reason for such large discrepancies. More importantly, the magnitude

of discrepancies is much larger at this temperature, and for a majority of transitions $\Upsilon_{ICFT} > \Upsilon_{DARC}$. Additionally, there are 13 transitions which are out of scale in Fig. 4(c), and these are: 24–33/34/35, 25–33/34, 26–33, 102–109/110 and 103–106 (all allowed), and 70/71/72–141 and 102–111, forbidden. Invariably for all these transitions, $\Upsilon_{ICFT} > \Upsilon_{DARC}$ by up to (almost) two orders of magnitude.

Some differences for a few, particularly allowed and inter-combination transitions, are understandable. For example, for the 24–33, 34, 35 ($3s4d\,^3D_1$–$3p3d\,^3P^o_{2,1,0}$) transitions, our *A*-values are 5.81×10^2 ($f = 5.56 \times 10^{-6}$), 7.70×10^3 ($f = 4.35 \times 10^{-5}$) and 2.33×10^4 ($f = 4.35 \times 10^{-5}$) s^{-1}, respectively, i.e. all such transitions are very *weak*. Subsequently, as expected, our values of Ω for such transitions have fully converged within the adopted J range of $\leq$40.5, and both Ω and Υ decrease with increasing energy/temperature. However, the corresponding *A*-values of [2] from the AS calculations are 1.06×10^5, 2.30×10^6 and 8.69×10^6 s^{-1}, respectively, i.e. higher by up to three orders of magnitude. Consequently, these transitions in their calculations are much stronger and may have higher magnitude of Ω and Υ. Nevertheless, these (and other) transitions remain weak and may not necessarily follow the f-values, because weaker transitions often behave as forbidden.

Therefore, the discrepancies become clearer when we have a closer look at some of the forbidden transitions, such as 70/71/72–141 ($3p4f\,^3G_{3,4,5}$–$3d4d\,^1S_0$), which correspond to 90/92/93–216 in the calculations [2], and for resonances cover a narrow energy region of 0.2 Ryd between their 217 and 283 threshold levels, which cannot be a major source of enhancement in Υ values at higher temperatures. However, for these (and many other) transitions their Υ increase with increasing T_e (up to about 10^6 K and then decrease), whereas our results continuously decrease, as expected. The differences in Υ results can be better appreciated from Fig. 5, in which the behavior of the ICFT Υ is not correct, and this is because of the extrapolation of their Ω over a very large energy range, as stated earlier in the paper.

Finally, we make one more comparison in Fig. 6(a–c) at the same three temperatures as in Fig. 4, but this time replacing the lower levels (I) with upper ones (J), because this provides a clearer picture of the similarities or differences among transitions up to level(s) J. Indeed this figure is more revealing than Fig. 4, because only for transitions among the lowest 29 levels there are no large discrepancies at any temperature between our DARC and the ICFT calculations of [2]. However, discrepancies increase with increasing T_e and become worse as J increases. At the lowest T_e, there is a reasonable agreement between the two calculations for transitions with $J \leq \sim$70, which decreases to $\sim$50 and 30 as T_e increases, as seen in Fig. 6(b and c). Therefore, as discussed earlier the maximum problem is at temperatures towards the higher end, and for a majority of transitions $\Upsilon_{ICFT} > \Upsilon_{DARC}$. This conclusion is consistent with that observed earlier for Be-like ions [6,7,17].
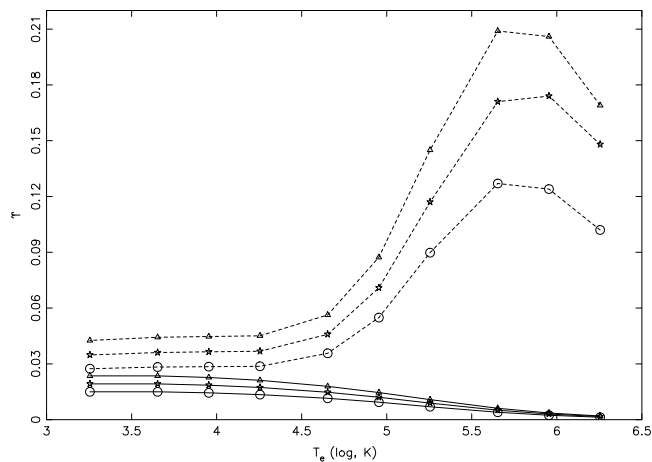
Fig. 5. Comparison of effective collision strengths for the 70–141 (circles: $3p4f\ ^3G_3$–$3d4d\ ^1S_0$), 71–141 (stars: $3p4f\ ^3G_4$–$3d4d\ ^1S_0$) and 72–141 (triangles: $3p4f\ ^3G_5$–$3d4d\ ^1S_0$) forbidden transitions of Si III. Continuous curves: present results with DARC, broken curves: ICFT results of [2].

6. Conclusions

In this paper we have reported energies and lifetimes, calculated with the GRASP code, for the 141 levels of the $3\ell3\ell'$ and $3\ell4\ell$ configurations of Si III. Experimental energies are available for only the lowest 58, but there is no major discrepancy with theoretical results, either in magnitude or orderings. Furthermore, increasing the CI does not make the energy levels more accurate, but levels arising from higher configurations intermix with those considered here. Radiative rates, particularly for E1 transitions, also show a good agreement among various calculations, but only for comparatively strong transitions ($f > 0.1$). For weaker transitions, differences among different calculations are up to a factor of three, mainly because of differing methodologies and CI. For such transitions, it is difficult to assess the accuracy with confidence. However, our lifetimes show a reasonably satisfactory agreement with other available theoretical results as well as the measurements, and therefore provide some confidence in the calculations.

Considering the same 141 levels, as for radiative rates, we have also calculated collision strengths with the fully relativistic DARC code. The calculated results are listed for all resonance transitions over a wide energy range, up to 30 Ryd. These results should be useful for future comparisons, because no similar data are currently available in the literature. Resonances in a narrow energy mesh have also been resolved in the thresholds region to determine Υ values, which are required for the diagnostics and modeling of plasmas. Results are listed over a large range of temperatures up to $10^{5.9}$ K, for all 9870 transitions among the 141 levels. Similar results for a larger range of transitions, among 283 levels, and with the R-matrix code are available [2]. However, the earlier calculations are primarily in the LS coupling and results for fine-structure transitions have been determined through the ICFT approach. More importantly, these earlier calculations for Ω have been performed over a limited energy range (below 7.4 Ryd), and have been extrapolated over a very wide energy range to calculate subsequent results for Υ up to $T_e = 1.8 \times 10^7$ K, which amounts to 114 Ryd. As a result of this discrepancies between the two sets of data are of over 20% for about half the transitions, and at all temperatures. In general, discrepancies increase with increasing temperature and are more prominent for transitions belonging to higher levels ($J > 29$). In a majority of cases the earlier ICFT results of Υ are higher, by up to (almost) two orders of magnitude.

Since [2] have performed larger calculations, some differences with our work are expected and understandable, because for some
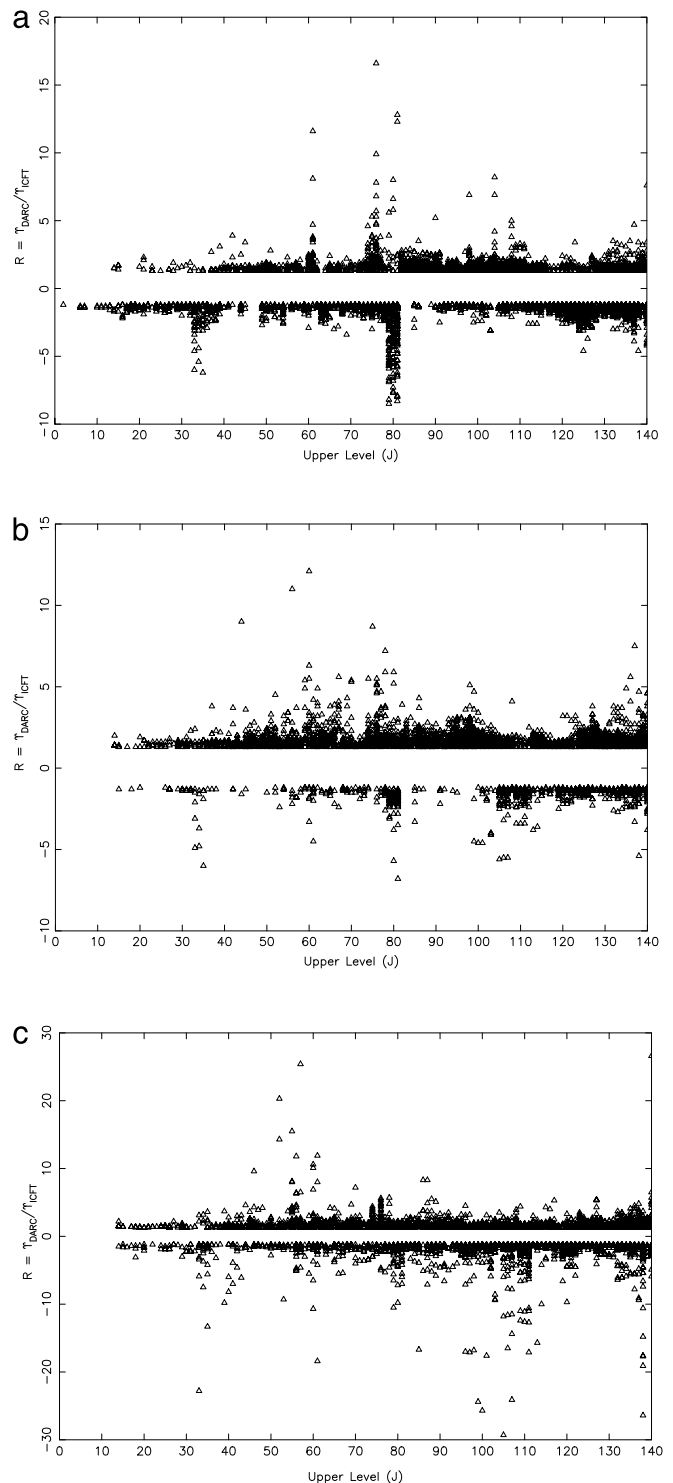
Fig. 6. Comparisons of Υ between our results with DARC and those of [2] with ICFT for transitions of Si III at (a) $T_e = 1.8 \times 10^3$, (b) $T_e = 4.5 \times 10^4$ and (c) $T_e = 1.8 \times 10^6$ K. Negative R values indicate that $\Upsilon_{\text{DARC}} < \Upsilon_{\text{ICFT}}$. Only those transitions are shown which differ by over 20%.

allowed transitions the f-values differ, and for forbidden ones a larger range of resonances has been included. However, resonances for transitions in Si III are not very important, as seen here in Figs. 1–3 and also confirmed earlier by [2] and other workers, and therefore their contribution alone (if any) cannot explain the large discrepancies noted (particularly) for the forbidden transitions, as shown in Fig. 5. Furthermore, the span of energy range for

the additional levels included by them is very small, i.e. only 0.2 Ryd, which may affect the values of Υ at low temperatures, but not the higher ones discussed in the paper. The conclusion that their methodology leads to significant overestimation in the determination of Υ values is consistent with that derived earlier for Be-like ions. Therefore, we believe, the presently reported results of Υ for transitions in Si III are more accurate than currently available in the literature, and hence should be adopted in the modeling of plasmas. Furthermore, since [2] have adopted the same methodology for all Mg-like ions, up to $Z = 36$, it is advisable to perform revised calculations for all ions so that the data can be confidently applied for modeling and/or diagnostics of plasmas.

Our presented results for Υ are assessed to be more accurate than the existing ones, but scope remains for improvement. This is mainly because levels arising from the $n \geq 5$ configurations highly mix with those of $n \leq 4$ considered in the present work, but have been omitted due to practical (computational) reason. Their inclusion may improve the accuracy of the wavefunctions, and will certainly lead to the more accurate determination of Υ results. However, the presently listed results for transitions belonging to the lowest 29 levels of Si III can be confidently applied, because these are likely to be unaffected by the inclusion of levels from higher configurations.

Appendix A. Supplementary data

Supplementary material related to this article can be found online at http://dx.doi.org/10.1016/j.adt.2016.11.001. Owing to space limitations, only parts of Tables 2 and 4 are presented here, but full tables are being made available as supplemental material in conjunction with the electronic publication of this work.

References

[1] P.L. Dufton, A.E. Kingston, Mon. Not. R. Astron. Soc. 241 (1989) 209.
[2] L. Fernández-Menchero, G. Del Zanna, N.R. Badnell, Astron. Astrophys. 572 (2014) A115.
[3] N.R. Badnell, Comput. Phys. Comm. 182 (2011) 1528.
[4] K.A. Berrington, W.B. Eissner, P.H. Norrington, Comput. Phys. Comm. 92 (1995) 290.
[5] D.C. Griffin, N.R. Badnell, M.S. Pindzola, J. Phys. B 31 (1998) 3713.
[6] K.M. Aggarwal, F.P. Keenan, Mon. Not. R. Astron. Soc. 447 (2015) 3849.
[7] K.M. Aggarwal, F.P. Keenan, Mon. Not. R. Astron. Soc. 450 (2015) 1151.
[8] K.M. Aggarwal, F.P. Keenan, Mon. Not. R. Astron. Soc. 445 (2014) 2015.
[9] S.S. Tayal, O. Zatsarriny, Astrophys. J. 812 (2015) 174.
[10] L. Fernández-Menchero, G. Del Zanna, N.R. Badnell, Mon. Not. R. Astron. Soc. 450 (2015) 4174.
[11] G. Del Zanna, N.R. Badnell, L. Fernández-Menchero, G.Y. Liang, H.E. Mason, P.J. Storey, Mon. Not. R. Astron. Soc. 454 (2015) 2909.
[12] N.R. Badnell, G. Del Zanna, L. Fernández-Menchero, A.S. Giunta, G.Y. Liang, H.E. Mason, P.J. Stroey, J. Phys. B 49 (2016) 094001.
[13] K.M. Aggarwal, F.P. Keenan, Phys. Scr. 86 (2012) 055301.
[14] K.M. Aggarwal, F.P. Keenan, Phys. Scr. 89 (2014) 125401.
[15] K.M. Aggarwal, F.P. Keenan, Mon. Not. R. Astron. Soc. 438 (2014) 1223.
[16] L. Fernández-Menchero, G. Del Zanna, N.R. Badnell, Astron. Astrophys. 566 (2014) A104.
[17] K.M. Aggarwal, F.P. Keenan, K.D. Lawson, Mon. Not. R. Astron. Soc. 461 (2016) 3997.
[18] D.C. Griffin, N.R. Badnell, M.S. Pindzola, J.A. Shaw, J. Phys. B 32 (1999) 2139.
[19] K.M. Aggarwal, N.C. Deb, F.P. Keenan, A.Z. Msezane, J. Phys. B 33 (2000) L391.
[20] K.A. Berrington, C.P. Ballance, D.C. Griffin, N.R. Badnell, J. Phys. B 38 (2005) 1667.
[21] P.J. Storey, T. Sochi, N.R. Badnell, Mon. Not. R. Astron. Soc. 441 (2014) 3028.
[22] G. Del Zanna, L. Fernández-Menchero, N.R. Badnell, Astron. Astrophys. 574 (2015) A99.
[23] J.L. Linsky, B.E. Wood, P. Judge, A. Brown, C. Andrulis, T.R. Ayers, Astrophys. J. 442 (2009) 381.
[24] K.L. Baluja, P.G. Burke, A.E. Kingston, J. Phys. B 14 (1981) 1333.
[25] P. Bryans, E. Landi, D.W. Savin, Astrophys. J. 691 (2009) 1540.
[26] J.A. Baldwin, G.J. Ferland, K.T. Korista, R.F. Carswell, F. Hamann, M.M. Phillips, D. Verner, B.J. Wilkes, R.E. Williams, Astrophys. J. 461 (1996) 664.
[27] I.P. Grant, B.J. McKenzie, P.H. Norrington, D.F. Mayers, N.C. Pyper, Comput. Phys. Comm. 21 (1980) 207.
[28] K.M. Aggarwal, F.P. Keenan, Mon. Not. R. Astron. Soc. 442 (2014) 388.
[29] M.F. Gu, Can. J. Phys. 86 (2008) 675.
[30] U.I. Safronova, W.R. Johnson, H.G. Berry, Phys. Rev. A 61 (2000) 052503.
[31] D.E. Kelleher, L.I. Podobedova, J. Phys. Chem. Ref. Data 37 (2008) 1285.
[32] C. Froese Fischer, G. Tachiev, A. Irimia, At. Data Nucl. Data Tables 92 (2006) 607.
[33] K.M. Aggarwal, V. Tayal, G.P. Gupta, F.P. Keenan, At. Data Nucl. Data Tables 93 (2007) 615.
[34] H.G. Berry, J. Bromander, L.J. Curtis, R. Buchta, Phys. Scr. 3 (1971) 125.
[35] S. Bashkin, G. Astner, S. Mannervik, P.S. Ramanujam, M. Scofield, S. Huldt, I. Martinson, Phys. Scr. 21 (1980) 820.
[36] H.S. Kwong, B.C. Johnson, P.L. Smith, W.H. Parkinson, Phys. Rev. A 27 (1983) 3040.
[37] A.E. Livingston, Y. Baudinet-Robinet, H.P. Garnir, P.D. Dumont, J. Opt. Soc. Amer. 66 (1976) 1393.
[38] A.E. Livingston, J.A. Kernahan, D.J.G. Irwin, E.H. Pinnington, J. Phys. B 9 (1976) 389.
[39] A. Burgess, V.B. Sheorey, J. Phys. B 7 (1974) 2403.
[40] B. Wallbank, N. Djurić, O. Woitk, S. Zhou, G.H. Dunn, A.C.H. Smith, M.E. Bannister, Phys. Rev. A 56 (1997) 3714.
[41] D.B. Reisenfeld, L.D. Gardner, P.H. Janzen, D.W. Savin, J.L. Kohl, Phys. Rev. A 60 (1999) 1153.
[42] T. Kai, R. Srivastava, S. Nakazaki, J. Phys. B 37 (2004) 2045.
[43] D.C. Griffin, M.S. Pindzola, N.R. Badnell, Phys. Rev. A 47 (1993) 2871.

Explanation of Tables

Table 1.	**Comparison of energy levels of Si III (in Ryd).**	
	Index	Level index
	Configuration	The configuration to which the level belongs
	Level	The *LSJ* designation of the level
	NIST	Energies compiled by NIST and available on the website: http://www.nist.gov/pml/data/asd.cfm
	GRASP1a	present calculations from the GRASP code for 141 levels *without* Breit and QED effects
	GRASP1b	present calculations from the GRASP code for 141 levels *with* Breit and QED effects
	GRASP2	present calculations from the GRASP code for 283 levels *with* Breit and QED effects
	FAC1	present calculations from the FAC code for 283 levels
	FAC2	present calculations from the FAC code for 1211 levels
	AS	calculations of [2] from the AS code for 283 levels and available on the website: http://amdpp.phys.strath.ac.uk/UK_APAP/DATA/adf04/

Table 2.	**Transition wavelengths (λ_{ij}, in Å), radiative rates (A_{ji}, in s^{-1}), oscillator strengths (f_{ij}, dimensionless), and line strengths (S, in atomic units) for electric dipole (E1), and A_{ji} for E2, M1 and M2 transitions in Si III. $a \pm b \equiv a \times 10^{\pm b}$. See Table 1 for level indices.**	
	i and j	The lower (i) and upper (j) levels of a transition as defined in Table 1
	λ_{ij}	Transition wavelength (in Å)
	A_{ji}^{E1}	Radiative transition probability (in s^{-1}) for the E1 transitions
	f_{ij}^{E1}	Oscillator strength (dimensionless) for the E1 transitions
	S^{E1}	Transition line strength S in atomic unit (a.u.), 1 a.u. $= 6.460 \times 10^{-36}$ cm^2 esu^2 for the E1 transitions
	A_{ji}^{E2}	Radiative transition probability (in s^{-1}) for the E2 transitions
	A_{ji}^{M1}	Radiative transition probability (in s^{-1}) for the M1 transitions
	A_{ji}^{M2}	Radiative transition probability (in s^{-1}) for the M2 transitions

Table 3.	**Collision strengths (Ω) for resonance transitions of Si III. $a \pm b \equiv a \times 10^{\pm b}$. See Table 1 for level indices.**	
	i and j	The lower (i) and upper (j) levels of a transition as defined in Table 1
	Ω	Collision strengths (dimensionless) at 8 energies of 4, 6, 8, 10, 15, 20, 25 and 30 Ryd

Table 4.	**Effective collision strengths (Υ) for transitions in Si III. $a \pm b \equiv a \times 10^{\pm b}$. See Table 1 for level indices.**	
	i and j	The lower (i) and upper (j) levels of a transition as defined in Table 1
	Υ	Effective collision strengths (dimensionless) at 10 electron temperatures of 4.1, 4.3, 4.5, 4.7, 4.9, 5.1, 5.3, 5.5, 5.7, and 5.9 (log, K)

Table 1
Comparison of energy levels of Si III (in Ryd).

Index	Configuration	Level	NIST	GRASP1a	GRASP1b	GRASP2	FAC1	FAC2	AS
1	$3s^2$	$^1S_0$	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2	3s3p	$^3P^o_0$	0.48046	0.46493	0.46491	0.46603	0.47091	0.47174	0.46617
3	3s3p	$^3P^o_1$	0.48163	0.46613	0.46603	0.46715	0.47196	0.47280	0.46718
4	3s3p	$^3P^o_2$	0.48430	0.46855	0.46832	0.46945	0.47411	0.47497	0.46922
5	3s3p	$^1P^o_1$	0.75530	0.76909	0.76885	0.76640	0.76943	0.76733	0.76601
6	$3p^2$	$^1D_2$	1.11370	1.09124	1.09082	1.09210	1.09960	1.10069	1.09529
7	$3p^2$	$^3P_0$	1.18199	1.17041	1.17017	1.17070	1.17941	1.17975	1.17144
8	$3p^2$	$^3P_1$	1.18321	1.17162	1.17133	1.17186	1.18049	1.18085	1.17247
9	$3p^2$	$^3P_2$	1.18556	1.17400	1.17357	1.17411	1.18259	1.18297	1.17450
10	3s3d	$^3D_3$	1.30260	1.30163	1.30103	1.29921	1.29811	1.29742	1.29634
11	3s3d	$^3D_2$	1.30262	1.30163	1.30106	1.29924	1.29817	1.29748	1.29630
12	3s3d	$^3D_1$	1.30264	1.30164	1.30108	1.29927	1.29822	1.29753	1.29626
13	3s4s	$^3S_1$	1.39767	1.37815	1.37767	1.37810	1.39249	1.39361	1.38114
14	$3p^2$	$^1S_0$	1.39829	1.40097	1.40051	1.40136	1.41018	1.41013	1.41341
15	3s4s	$^1S_0$	1.44955	1.45505	1.45466	1.44717	1.46498	1.46081	1.45240
16	3s3d	$^1D_2$	1.51056	1.55112	1.55057	1.53971	1.53518	1.52829	1.53391
17	3s4p	$^3P^o_0$	1.59681	1.57538	1.57494	1.57591	1.59182	1.59243	1.58566
18	3s4p	$^3P^o_1$	1.59711	1.57569	1.57523	1.57620	1.59203	1.59266	1.58594
19	3s4p	$^3P^o_2$	1.59779	1.57635	1.57585	1.57683	1.59248	1.59312	1.58653
20	3s4p	$^1P^o_1$	1.60827	1.59278	1.59231	1.59153	1.60723	1.60643	1.59734
21	3p3d	$^3F^o_2$	1.81272	1.79188	1.79124	1.79020	1.79820	1.79773	1.79591
22	3p3d	$^3F^o_3$	1.81366	1.79279	1.79210	1.79107	1.79902	1.79856	1.79670
23	3p3d	$^3F^o_4$	1.81492	1.79400	1.79323	1.79221	1.80012	1.79967	1.79774
24	3s4d	$^3D_1$	1.83709	1.81677	1.81620	1.81776	1.82199	1.82298	1.82555
25	3s4d	$^3D_2$	1.83710	1.81678	1.81620	1.81777	1.82197	1.82297	1.82557
26	3s4d	$^3D_3$	1.83711	1.81680	1.81621	1.81777	1.82194	1.82294	1.82561
27	3s4f	$^1F^o_3$	1.86653	1.84429	1.84367	1.84361	1.85391	1.85407	1.85111
28	3p3d	$^1D^o_2$	1.86836	1.84843	1.84767	1.84832	1.85357	1.85469	1.85203
29	3s4d	$^1D_2$	1.86200	1.86491	1.86430	1.85842	1.86306	1.85943	1.86439
30	3s4f	$^3F^o_2$	1.90939	1.89340	1.89277	1.89121	1.90018	1.90000	1.90018
31	3s4f	$^3F^o_3$	1.90965	1.89374	1.89309	1.89150	1.90043	1.90023	1.90045
32	3s4f	$^3F^o_4$	1.91001	1.89423	1.89354	1.89191	1.90079	1.90058	1.90082
33	3p3d	$^3P^o_2$	1.97007	1.96414	1.96340	1.96128	1.96510	1.96437	1.96489
34	3p3d	$^3P^o_1$	1.97097	1.96535	1.96458	1.96246	1.96627	1.96552	1.96577
35	3p3d	$^3P^o_0$	1.97153	1.96603	1.96524	1.96313	1.96693	1.96618	1.96628
36	3p3d	$^3D^o_1$	1.98096	1.97845	1.97772	1.97540	1.97767	1.97689	1.97409
37	3p3d	$^3D^o_2$	1.98146	1.97894	1.97817	1.97585	1.97808	1.97731	1.97453
38	3p3d	$^3D^o_3$	1.98191	1.97942	1.97861	1.97629	1.97847	1.97770	1.97495
39	3p4s	$^3P^o_0$	2.06311	2.03985	2.03934	2.04158	2.06339	2.06366	2.05752
40	3p4s	$^3P^o_1$	2.06327	2.04108	2.04051	2.04276	2.06448	2.06469	2.05842
41	3p4s	$^3P^o_2$	2.06694	2.04376	2.04306	2.04526	2.06675	2.06699	2.06027
42	3p4s	$^1P^o_1$	2.08407	2.08464	2.08402	2.09773	2.12747	2.08292	2.12065
43	3p3d	$^1F^o_3$	2.14525	2.18534	2.18457	2.20377	2.20287		2.20702
44	3p3d	$^1P^o_1$	2.15014	2.18598	2.18522	2.17324	2.17197	2.16384	2.17717
45	3p4p	$^1P_1$	2.21333	2.18680	2.18612	2.18693	2.20251	2.20399	2.19865
46	3p4p	$^3D_1$	2.23021	2.20258	2.20199	2.20624	2.22317	2.22090	2.22118
47	3p4p	$^3D_2$	2.23138	2.20410	2.20344	2.20769	2.22459	2.22189	2.22238
48	3p4p	$^3D_3$	2.23339	2.20668	2.20591	2.21010	2.22666	2.22334	2.22428
49	3p4p	$^3P_0$	2.23195	2.23441	2.23387	2.23444	2.26013	2.26000	2.26621
50	3p4p	$^3P_1$	2.23200	2.23518	2.23460	2.23518	2.26015	2.26220	2.26690
51	3p4p	$^3P_2$	2.23209	2.23696	2.23629	2.23688	2.26233	2.26419	2.26799
52	3p4p	$^3S_1$	2.26699	2.24617	2.24546	2.24630	2.26246	2.26591	2.25977
53	3p4p	$^1D_2$	2.25935	2.28199	2.28137	2.28769	2.31315		2.31166
54	3p4p	$^1S_0$	2.36000	2.36378	2.36320	2.34289	2.36962	2.36323	2.37654
55	3p4d	$^1D^o_2$	2.43749	2.44106	2.44031	2.44219	2.45291	2.45470	2.46804
56	3p4d	$^3F^o_2$		2.44839	2.44769	2.44941	2.46175	2.46365	2.48034
57	3p4d	$^3F^o_3$		2.44947	2.44873	2.45045	2.46129	2.46319	2.48123
58	3p4d	$^3F^o_4$	2.43934	2.45155	2.45070	2.45242	2.46429	2.46620	2.48226
59	3p4d	$^3D^o_1$		2.45784	2.45711	2.45864	2.46884	2.47000	2.47729
60	3p4d	$^3D^o_2$		2.45841	2.45764	2.45917	2.46823	2.46940	2.47741
61	3p4d	$^3D^o_3$		2.45920	2.45838	2.45991	2.46962	2.47081	2.47787
62	3p4d	$^3P^o_2$		2.48056	2.47981	2.48031	2.49131	2.49178	2.50453
63	3p4d	$^3P^o_1$		2.48183	2.48103	2.48151	2.49260	2.49306	2.50537
64	3p4d	$^3P^o_0$		2.48247	2.48165	2.48211	2.49262	2.49309	2.50580
65	3p4f	$^3F_4$		2.48375	2.48298	2.48419	2.49923	2.50027	2.50781
66	3p4f	$^3F_2$		2.48414	2.48336	2.48407	2.49886	2.49964	2.50777
67	3p4f	$^3F_3$		2.48443	2.48363	2.48435	2.49944	2.50023	2.50798
68	3p4f	$^1G_4$		2.48610	2.48521	2.48672	2.50105	2.50381	2.50941
69	3p4f	$^1F_3$		2.49180	2.49103	2.49203	2.50706	2.50809	2.51659
70	3p4f	$^3G_3$		2.50475	2.50402	2.50713	2.52138	2.52568	2.53226
71	3p4f	$^3G_4$		2.50610	2.50531	2.50842	2.52314	2.52745	2.53318
72	3p4f	$^3G_5$		2.50768	2.50682	2.50994	2.52404	2.52835	2.53429

Table 1 (*continued*)

Index	Configuration	Level	NIST	GRASP1a	GRASP1b	GRASP2	FAC1	FAC2	AS
73	3p4d	$^1F_3^o$		2.52039	2.51958	2.51535	2.52379	2.52724	2.52616
74	3p4f	$^1D_2$		2.52589	2.52509	2.52479	2.53838	2.53886	2.54964
75	3p4f	$^3D_3$		2.52883	2.52808	2.52720	2.54190	2.54225	2.55412
76	3p4f	$^3D_2$		2.53042	2.52959	2.52870	2.54303	2.54338	2.55508
77	3p4f	$^3D_1$		2.53105	2.53021	2.52925	2.54397	2.54431	2.55557
78	3p4d	$^1P_1^o$		2.56389	2.56313	2.54271	2.55313	2.54705	2.55396
79	3d^2	$^3F_2$		2.68715	2.68601	2.66494	2.67322	2.67008	2.67839
80	3d^2	$^3F_3$		2.68717	2.68601	2.66506	2.67335	2.67021	2.67850
81	3d^2	$^3F_4$		2.68720	2.68601	2.66518	2.67337	2.67023	2.67864
82	3d^2	$^3P_0$		2.75379	2.75263	2.75259	2.75556	2.75716	2.75707
83	3d^2	$^3P_1$		2.75379	2.75263	2.75260	2.75555	2.75716	2.75710
84	3d^2	$^3P_2$		2.75381	2.75262	2.75258	2.75552	2.75715	2.75714
85	3d^2	$^1D_2$		2.77710	2.77599	2.80829	2.81150		2.81063
86	3d^2	$^1G_4$		2.80606	2.80491	2.85366	2.85931		2.87269
87	3d4s	$^3D_1$		2.83872	2.83767	2.84176	2.85939	2.85216	2.87157
88	3d4s	$^3D_2$		2.83873	2.83766	2.84177	2.85934		2.87161
89	3d4s	$^3D_3$		2.83875	2.83765	2.84179	2.85928	2.85359	2.87168
90	3d4s	$^1D_2$		2.88996	2.88887	2.90281	2.93295		2.96197
91	3d^2	$^1S_0$		2.94903	2.94789	2.94408	2.94987	2.95116	2.95683
92	3d4p	$^1D_2^o$		2.99386	2.99275	2.99431	3.00824	3.01031	3.02972
93	3d4p	$^3D_1^o$		3.00925	3.00817	3.01273	3.03227	3.04207	3.05616
94	3d4p	$^3D_2^o$		3.00936	3.00826	3.01282	3.03031	3.03401	3.05629
95	3d4p	$^3D_3^o$		3.00954	3.00842	3.01298	3.02958	3.03335	3.05647
96	3d4p	$^3F_2^o$		3.01719	3.01612	3.01899	3.03172	3.04156	3.04809
97	3d4p	$^3F_3^o$		3.01757	3.01647	3.01934	3.03224	3.04203	3.04843
98	3d4p	$^3F_4^o$		3.01807	3.01693	3.01980	3.03067	3.03439	3.04891
99	3d4p	$^3P_2^o$		3.05145	3.05034	3.05280	3.06787	3.07060	3.08826
100	3d4p	$^3P_1^o$		3.05175	3.05066	3.05312	3.06833	3.07106	3.08850
101	3d4p	$^3P_0^o$		3.05191	3.05082	3.05328	3.06812	3.07085	3.08862
102	3d4p	$^1F_3^o$		3.07416	3.07308	3.08415	3.10993	3.13158	3.13350
103	3d4p	$^1P_1^o$		3.10444	3.10340	3.11166	3.13401	3.15623	3.14704
104	3d4d	$^1F_3$		3.22055	3.21933	3.21952	3.21767	3.21835	3.24330
105	3d4d	$^3D_1$		3.23131	3.23010	3.23101	3.22990	3.23111	3.25538
106	3d4d	$^3D_2$		3.23131	3.23009	3.23101	3.22931	3.23052	3.25541
107	3d4d	$^3D_3$		3.23131	3.23008	3.23100	3.22963	3.23083	3.25545
108	3d4d	$^1P_1$		3.23834	3.23712	3.23840	3.23768	3.23902	3.26374
109	3d4d	$^3G_3$		3.23881	3.23761	3.23882	3.23827	3.23955	3.26406
110	3d4d	$^3G_4$		3.23882	3.23760	3.23881	3.23747	3.23875	3.26411
111	3d4d	$^3G_5$		3.23883	3.23758	3.23879	3.23796	3.23924	3.26418
112	3d4d	$^3S_1$		3.26075	3.25953	3.26169	3.26205	3.26402	3.29012
113	3d4d	$^3F_4$		3.26738	3.26615	3.26799	3.28500	3.28700	3.33364
114	3d4d	$^3F_3$		3.26738	3.26617	3.26801	3.28461	3.28661	3.33367
115	3d4d	$^3F_2$		3.26739	3.26619	3.26803	3.28528	3.28728	3.33371
116	3d4f	$^1G_4^o$		3.27350	3.27227	3.27276	3.27845	3.27871	3.30982
117	3d4f	$^3H_4^o$		3.28202	3.28080	3.28256	3.28532	3.28702	3.31445
118	3d4f	$^3H_5^o$		3.28202	3.28078	3.28256	3.28582	3.28752	3.31449
119	3d4f	$^3H_6^o$		3.28202	3.28077	3.28255	3.28530	3.28702	3.31453
120	3d4f	$^3F_2^o$		3.28752	3.28630	3.28794	3.29414	3.29543	3.32719
121	3d4f	$^3F_3^o$		3.28753	3.28630	3.28794	3.29450	3.29578	3.32721
122	3d4f	$^3F_4^o$		3.28754	3.28630	3.28794	3.29421	3.29549	3.32723
123	3d4f	$^1D_2^o$		3.30258	3.30134	3.30419	3.31125	3.31274	3.34706
124	3d4d	$^3P_0$		3.30652	3.30533	3.30328	3.32200	3.32187	3.36788
125	3d4d	$^3P_1$		3.30652	3.30533	3.30359	3.32126	3.32113	3.36789
126	3d4d	$^3P_2$		3.30653	3.30532	3.30359	3.32150	3.32138	3.36792
127	3d4d	$^1D_2$		3.30703	3.30584	3.30358	3.32238	3.32366	3.36529
128	3d4d	$^1G_4$		3.30785	3.30664	3.30541	3.32341	3.32600	3.37048
129	3d4f	$^3G_3^o$		3.31549	3.31426	3.31694	3.33103	3.33394	3.37398
130	3d4f	$^3G_4^o$		3.31549	3.31425	3.31693	3.33146	3.33438	3.37400
131	3d4f	$^3G_5^o$		3.31549	3.31424	3.31692	3.33105	3.33397	3.37403
132	3d4f	$^3D_1^o$		3.32947	3.32824	3.32884	3.34263	3.34444	3.38580
133	3d4f	$^3D_2^o$		3.32948	3.32824	3.32885	3.34288	3.34469	3.38580
134	3d4f	$^3D_3^o$		3.32948	3.32824	3.32885	3.34273	3.34454	3.38581
135	3d4f	$^3P_2^o$		3.33868	3.33746	3.33883	3.34932	3.35154	3.38935
136	3d4f	$^3P_1^o$		3.33869	3.33746	3.33883	3.34920	3.35143	3.38938
137	3d4f	$^3P_0^o$		3.33870	3.33746	3.33884	3.34943	3.35166	3.38940
138	3d4f	$^1F_3^o$		3.34011	3.33888	3.33677	3.35318	3.35537	3.40009
139	3d4f	$^1H_5^o$		3.36941	3.36816	3.36529	3.38543	3.38772	3.43628
140	3d4f	$^1P_1^o$		3.38789	3.38667	3.36995	3.38510	3.38548	3.42938
141	3d4d	$^1S_0$		3.42671	3.42560	3.37590	3.39343	3.38682	3.43476

Table 2

Transition wavelengths (λ_{ij}, in Å), radiative rates (A_{ji}, in s^{-1}), oscillator strengths (f_{ij}, dimensionless), and line strengths (S, in atomic units) for electric dipole (E1), and A_{ji} for E2, M1 and M2 transitions in Si III. $a \pm b \equiv a \times 10^{\pm b}$. See Explanation of Tables and Table 1 for definition of level indices.

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
1	3	1.955+03	1.058+04	1.820−05	1.172−04	0.000+00	0.000+00	0.000+00
1	4	1.946+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.089−02
1	5	1.185+03	2.658+09	1.679+00	6.552+00	0.000+00	0.000+00	0.000+00
1	6	8.354+02	0.000+00	0.000+00	0.000+00	1.604+04	0.000+00	0.000+00
1	8	7.780+02	0.000+00	0.000+00	0.000+00	0.000+00	2.086−02	0.000+00
1	9	7.765+02	0.000+00	0.000+00	0.000+00	7.321+00	0.000+00	0.000+00
1	11	7.004+02	0.000+00	0.000+00	0.000+00	4.147−03	0.000+00	0.000+00
1	12	7.004+02	0.000+00	0.000+00	0.000+00	0.000+00	1.881−05	0.000+00
1	13	6.615+02	0.000+00	0.000+00	0.000+00	0.000+00	2.300−04	0.000+00
1	16	5.877+02	0.000+00	0.000+00	0.000+00	9.491+04	0.000+00	0.000+00
1	18	5.785+02	2.788+05	4.196−05	7.992−05	0.000+00	0.000+00	0.000+00
1	19	5.783+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.574−02
1	20	5.723+02	2.429+08	3.579−02	6.742−02	0.000+00	0.000+00	0.000+00
1	21	5.087+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.841−05
1	24	5.017+02	0.000+00	0.000+00	0.000+00	0.000+00	1.478−05	0.000+00
1	25	5.017+02	0.000+00	0.000+00	0.000+00	3.837−03	0.000+00	0.000+00
1	28	4.932+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.803−02
1	29	4.888+02	0.000+00	0.000+00	0.000+00	5.588+02	0.000+00	0.000+00
1	30	4.815+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.387−05
1	33	4.641+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.756−02
1	34	4.639+02	2.916+03	2.822−07	4.310−07	0.000+00	0.000+00	0.000+00
1	36	4.608+02	1.687+03	1.611−07	2.444−07	0.000+00	0.000+00	0.000+00
1	37	4.607+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.590−04
1	40	4.466+02	1.220+04	1.094−06	1.609−06	0.000+00	0.000+00	0.000+00
1	41	4.460+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.496−02
1	42	4.373+02	5.831+06	5.014−04	7.218−04	0.000+00	0.000+00	0.000+00
1	44	4.170+02	2.486+06	1.944−04	2.669−04	0.000+00	0.000+00	0.000+00
1	45	4.168+02	0.000+00	0.000+00	0.000+00	0.000+00	3.058−05	0.000+00
1	46	4.138+02	0.000+00	0.000+00	0.000+00	0.000+00	7.435−06	0.000+00
1	47	4.136+02	0.000+00	0.000+00	0.000+00	1.035+00	0.000+00	0.000+00
1	50	4.078+02	0.000+00	0.000+00	0.000+00	0.000+00	1.363−02	0.000+00
1	51	4.075+02	0.000+00	0.000+00	0.000+00	1.970+00	0.000+00	0.000+00
1	52	4.058+02	0.000+00	0.000+00	0.000+00	0.000+00	2.138−04	0.000+00
1	53	3.994+02	0.000+00	0.000+00	0.000+00	2.709+03	0.000+00	0.000+00
1	55	3.734+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.601−02
1	56	3.723+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.703−04
1	59	3.709+02	6.768+03	4.187−07	5.112−07	0.000+00	0.000+00	0.000+00
1	60	3.708+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.944−04
1	62	3.675+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.224−02
1	63	3.673+02	5.122+03	3.108−07	3.758−07	0.000+00	0.000+00	0.000+00
1	66	3.670+02	0.000+00	0.000+00	0.000+00	4.583−02	0.000+00	0.000+00
1	74	3.609+02	0.000+00	0.000+00	0.000+00	1.666+02	0.000+00	0.000+00
1	76	3.602+02	0.000+00	0.000+00	0.000+00	1.053+01	0.000+00	0.000+00
1	77	3.602+02	0.000+00	0.000+00	0.000+00	0.000+00	8.926−07	0.000+00
1	78	3.555+02	3.838+07	2.182−03	2.553−03	0.000+00	0.000+00	0.000+00
1	79	3.393+02	0.000+00	0.000+00	0.000+00	3.096−04	0.000+00	0.000+00
1	83	3.310+02	0.000+00	0.000+00	0.000+00	0.000+00	3.405−04	0.000+00
1	84	3.310+02	0.000+00	0.000+00	0.000+00	3.523−04	0.000+00	0.000+00
1	85	3.283+02	0.000+00	0.000+00	0.000+00	7.779+03	0.000+00	0.000+00
1	87	3.211+02	0.000+00	0.000+00	0.000+00	0.000+00	2.860−07	0.000+00
1	88	3.211+02	0.000+00	0.000+00	0.000+00	1.051−03	0.000+00	0.000+00
1	90	3.154+02	0.000+00	0.000+00	0.000+00	3.479+03	0.000+00	0.000+00
1	92	3.045+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.042−02
1	93	3.029+02	6.270−01	2.588−11	2.581−11	0.000+00	0.000+00	0.000+00
1	94	3.029+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.688−06
1	96	3.021+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.793−06
1	99	2.987+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.352−02
1	100	2.987+02	3.095+01	1.242−09	1.221−09	0.000+00	0.000+00	0.000+00
1	103	2.936+02	2.408+06	9.336−05	9.025−05	0.000+00	0.000+00	0.000+00
1	105	2.821+02	0.000+00	0.000+00	0.000+00	0.000+00	6.403−07	0.000+00
1	106	2.821+02	0.000+00	0.000+00	0.000+00	5.956−04	0.000+00	0.000+00
1	108	2.815+02	0.000+00	0.000+00	0.000+00	0.000+00	2.102−05	0.000+00
1	112	2.796+02	0.000+00	0.000+00	0.000+00	0.000+00	3.569−05	0.000+00
1	115	2.790+02	0.000+00	0.000+00	0.000+00	9.100−03	0.000+00	0.000+00
1	120	2.773+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.053−08
1	123	2.760+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.317−02
1	125	2.757+02	0.000+00	0.000+00	0.000+00	0.000+00	2.286−04	0.000+00
1	126	2.757+02	0.000+00	0.000+00	0.000+00	2.827−02	0.000+00	0.000+00
1	127	2.756+02	0.000+00	0.000+00	0.000+00	4.960+01	0.000+00	0.000+00
1	132	2.738+02	3.154+01	1.063−09	9.585−10	0.000+00	0.000+00	0.000+00
1	133	2.738+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.406−10
1	135	2.730+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.752−03
1	136	2.730+02	2.447+01	8.205−10	7.375−10	0.000+00	0.000+00	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
1	140	2.691+02	6.402+06	2.085−04	1.847−04	0.000+00	0.000+00	0.000+00
2	3	8.113+05	0.000+00	0.000+00	0.000+00	0.000+00	3.367−05	0.000+00
2	4	2.668+05	0.000+00	0.000+00	0.000+00	2.495−09	0.000+00	0.000+00
2	5	2.998+03	0.000+00	0.000+00	0.000+00	0.000+00	1.567−02	0.000+00
2	6	1.456+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.338−02
2	8	1.290+03	7.417+08	5.551−01	2.357+00	0.000+00	0.000+00	0.000+00
2	9	1.286+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.124−02
2	11	1.090+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.881−03
2	12	1.090+03	1.648+09	8.804−01	3.159+00	0.000+00	0.000+00	0.000+00
2	13	9.984+02	2.638+08	1.182−01	3.886−01	0.000+00	0.000+00	0.000+00
2	16	8.394+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.908−03
2	18	8.207+02	0.000+00	0.000+00	0.000+00	0.000+00	8.033−03	0.000+00
2	19	8.203+02	0.000+00	0.000+00	0.000+00	4.331+03	0.000+00	0.000+00
2	20	8.083+02	0.000+00	0.000+00	0.000+00	0.000+00	2.006−02	0.000+00
2	21	6.871+02	0.000+00	0.000+00	0.000+00	4.748+04	0.000+00	0.000+00
2	24	6.744+02	6.310+06	1.291−03	2.865−03	0.000+00	0.000+00	0.000+00
2	25	6.744+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.607−05
2	28	6.590+02	0.000+00	0.000+00	0.000+00	4.123+01	0.000+00	0.000+00
2	29	6.512+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.884−06
2	30	6.382+02	0.000+00	0.000+00	0.000+00	5.623+03	0.000+00	0.000+00
2	33	6.081+02	0.000+00	0.000+00	0.000+00	1.571+04	0.000+00	0.000+00
2	34	6.077+02	0.000+00	0.000+00	0.000+00	0.000+00	7.492−04	0.000+00
2	36	6.024+02	0.000+00	0.000+00	0.000+00	0.000+00	2.550−04	0.000+00
2	37	6.022+02	0.000+00	0.000+00	0.000+00	1.717+04	0.000+00	0.000+00
2	40	5.784+02	0.000+00	0.000+00	0.000+00	0.000+00	4.783−04	0.000+00
2	41	5.774+02	0.000+00	0.000+00	0.000+00	2.169+02	0.000+00	0.000+00
2	42	5.628+02	0.000+00	0.000+00	0.000+00	0.000+00	2.356−04	0.000+00
2	44	5.297+02	0.000+00	0.000+00	0.000+00	0.000+00	2.393−03	0.000+00
2	45	5.294+02	6.848+05	8.633−05	1.505−04	0.000+00	0.000+00	0.000+00
2	46	5.246+02	9.781+07	1.211−02	2.091−02	0.000+00	0.000+00	0.000+00
2	47	5.242+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.776−02
2	50	5.149+02	4.799+07	5.723−03	9.701−03	0.000+00	0.000+00	0.000+00
2	51	5.144+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.941−03
2	52	5.118+02	7.355+06	8.664−04	1.460−03	0.000+00	0.000+00	0.000+00
2	53	5.017+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.947−02
2	55	4.613+02	0.000+00	0.000+00	0.000+00	1.388+01	0.000+00	0.000+00
2	56	4.596+02	0.000+00	0.000+00	0.000+00	6.901+02	0.000+00	0.000+00
2	59	4.574+02	0.000+00	0.000+00	0.000+00	0.000+00	3.599−05	0.000+00
2	60	4.573+02	0.000+00	0.000+00	0.000+00	4.027+02	0.000+00	0.000+00
2	62	4.523+02	0.000+00	0.000+00	0.000+00	1.659+01	0.000+00	0.000+00
2	63	4.520+02	0.000+00	0.000+00	0.000+00	0.000+00	2.145−04	0.000+00
2	66	4.515+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.807−03
2	74	4.423+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.297−03
2	76	4.414+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.474−06
2	77	4.412+02	1.401+04	1.227−06	1.782−06	0.000+00	0.000+00	0.000+00
2	78	4.343+02	0.000+00	0.000+00	0.000+00	0.000+00	2.140−03	0.000+00
2	79	4.103+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.697−02
2	83	3.983+02	8.174+04	5.833−06	7.649−06	0.000+00	0.000+00	0.000+00
2	84	3.983+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.120−03
2	85	3.943+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.524−03
2	87	3.840+02	1.492+04	9.899−07	1.251−06	0.000+00	0.000+00	0.000+00
2	88	3.840+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.800−05
2	90	3.759+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.133−03
2	92	3.605+02	0.000+00	0.000+00	0.000+00	1.366−02	0.000+00	0.000+00
2	93	3.583+02	0.000+00	0.000+00	0.000+00	0.000+00	3.111−04	0.000+00
2	94	3.583+02	0.000+00	0.000+00	0.000+00	6.223+01	0.000+00	0.000+00
2	96	3.572+02	0.000+00	0.000+00	0.000+00	7.374+01	0.000+00	0.000+00
2	99	3.525+02	0.000+00	0.000+00	0.000+00	9.676+01	0.000+00	0.000+00
2	100	3.524+02	0.000+00	0.000+00	0.000+00	0.000+00	1.199−04	0.000+00
2	103	3.454+02	0.000+00	0.000+00	0.000+00	0.000+00	1.675−05	0.000+00
2	105	3.295+02	3.618+06	1.767−04	1.917−04	0.000+00	0.000+00	0.000+00
2	106	3.295+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.100−04
2	108	3.287+02	5.285+01	2.568−09	2.779−09	0.000+00	0.000+00	0.000+00
2	112	3.261+02	4.024+06	1.924−04	2.066−04	0.000+00	0.000+00	0.000+00
2	115	3.253+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.442−02
2	120	3.230+02	0.000+00	0.000+00	0.000+00	6.290+01	0.000+00	0.000+00
2	123	3.213+02	0.000+00	0.000+00	0.000+00	3.697−05	0.000+00	0.000+00
2	125	3.208+02	2.416+05	1.119−05	1.182−05	0.000+00	0.000+00	0.000+00
2	126	3.208+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.332−03
2	127	3.208+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.037−02
2	132	3.182+02	0.000+00	0.000+00	0.000+00	0.000+00	2.612−06	0.000+00
2	133	3.182+02	0.000+00	0.000+00	0.000+00	2.276+01	0.000+00	0.000+00
2	135	3.172+02	0.000+00	0.000+00	0.000+00	4.134+02	0.000+00	0.000+00
2	136	3.172+02	0.000+00	0.000+00	0.000+00	0.000+00	5.067−06	0.000+00
2	140	3.119+02	0.000+00	0.000+00	0.000+00	0.000+00	2.788−04	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
3	4	3.974+05	0.000+00	0.000+00	0.000+00	7.654−10	2.148−04	0.000+00
3	5	3.009+03	0.000+00	0.000+00	0.000+00	2.112−03	1.187−02	0.000+00
3	6	1.458+03	1.607+05	8.544−05	1.231−03	0.000+00	0.000+00	5.103−02
3	7	1.294+03	2.199+09	1.841−01	2.353+00	0.000+00	0.000+00	0.000+00
3	8	1.292+03	5.537+08	1.386−01	1.768+00	0.000+00	0.000+00	5.395−02
3	9	1.288+03	5.585+08	2.315−01	2.945+00	0.000+00	0.000+00	3.147−04
3	10	1.091+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.110−03
3	11	1.091+03	2.217+09	6.599−01	7.112−01	0.000+00	0.000+00	9.946−02
3	12	1.091+03	1.233+09	2.201−01	2.372+00	0.000+00	0.000+00	8.249−03
3	13	9.996+02	7.929+08	1.188−01	1.173+00	0.000+00	0.000+00	2.886−02
3	14	9.752+02	1.636+05	7.773−06	7.486−05	0.000+00	0.000+00	0.000+00
3	15	9.217+02	8.304+04	3.526−06	3.210−05	0.000+00	0.000+00	0.000+00
3	16	8.402+02	1.725+05	3.043−05	2.525−04	0.000+00	0.000+00	1.048−02
3	17	8.218+02	0.000+00	0.000+00	0.000+00	0.000+00	2.362−02	0.000+00
3	18	8.216+02	0.000+00	0.000+00	0.000+00	5.407+03	1.887−04	0.000+00
3	19	8.211+02	0.000+00	0.000+00	0.000+00	9.726+03	2.551−02	0.000+00
3	20	8.091+02	0.000+00	0.000+00	0.000+00	6.261+00	1.426−02	0.000+00
3	21	6.876+02	0.000+00	0.000+00	0.000+00	4.706+04	9.602−06	0.000+00
3	22	6.872+02	0.000+00	0.000+00	0.000+00	6.806+04	0.000+00	0.000+00
3	24	6.749+02	4.556+06	3.111−04	2.074−03	0.000+00	0.000+00	7.369−04
3	25	6.749+02	8.281+06	9.426−04	6.283−03	0.000+00	0.000+00	1.382−03
3	26	6.749+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.399−05
3	27	6.615+02	0.000+00	0.000+00	0.000+00	8.745+00	0.000+00	0.000+00
3	28	6.595+02	0.000+00	0.000+00	0.000+00	4.490+00	5.039−04	0.000+00
3	29	6.517+02	5.376+04	5.706−06	3.673−05	0.000+00	0.000+00	3.632−05
3	30	6.387+02	0.000+00	0.000+00	0.000+00	5.811+03	4.067−07	0.000+00
3	31	6.386+02	0.000+00	0.000+00	0.000+00	7.783+03	0.000+00	0.000+00
3	33	6.086+02	0.000+00	0.000+00	0.000+00	3.058+04	2.249−03	0.000+00
3	34	6.081+02	0.000+00	0.000+00	0.000+00	2.024+04	2.065−05	0.000+00
3	35	6.078+02	0.000+00	0.000+00	0.000+00	0.000+00	1.846−03	0.000+00
3	36	6.028+02	0.000+00	0.000+00	0.000+00	4.138+04	1.296−03	0.000+00
3	37	6.026+02	0.000+00	0.000+00	0.000+00	3.114+03	5.226−05	0.000+00
3	38	6.025+02	0.000+00	0.000+00	0.000+00	2.013+04	0.000+00	0.000+00
3	39	5.792+02	0.000+00	0.000+00	0.000+00	0.000+00	6.231−07	0.000+00
3	40	5.788+02	0.000+00	0.000+00	0.000+00	2.918+02	6.947−05	0.000+00
3	41	5.778+02	0.000+00	0.000+00	0.000+00	4.933+02	6.640−04	0.000+00
3	42	5.632+02	0.000+00	0.000+00	0.000+00	1.833−03	4.131−04	0.000+00
3	43	5.303+02	0.000+00	0.000+00	0.000+00	1.874−01	0.000+00	0.000+00
3	44	5.301+02	0.000+00	0.000+00	0.000+00	2.427−01	1.708−03	0.000+00
3	45	5.298+02	1.338+06	5.628−05	2.945−04	0.000+00	0.000+00	8.726−03
3	46	5.249+02	6.954+07	2.873−03	1.489−02	0.000+00	0.000+00	1.208−02
3	47	5.245+02	1.310+08	9.007−03	4.665−02	0.000+00	0.000+00	1.269−02
3	48	5.238+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.660−02
3	49	5.155+02	1.424+08	1.891−03	9.627−03	0.000+00	0.000+00	0.000+00
3	50	5.153+02	4.475+07	1.781−03	9.064−03	0.000+00	0.000+00	2.315−02
3	51	5.148+02	3.083+07	2.041−03	1.038−02	0.000+00	0.000+00	8.004−05
3	52	5.121+02	2.855+07	1.122−03	5.677−03	0.000+00	0.000+00	2.816−03
3	53	5.020+02	1.048+05	6.598−06	3.271−05	0.000+00	0.000+00	4.510−02
3	54	4.803+02	2.534+02	2.921−09	1.386−08	0.000+00	0.000+00	0.000+00
3	55	4.616+02	0.000+00	0.000+00	0.000+00	1.973+01	9.343−05	0.000+00
3	56	4.599+02	0.000+00	0.000+00	0.000+00	5.086+02	4.271−08	0.000+00
3	57	4.596+02	0.000+00	0.000+00	0.000+00	1.008+03	0.000+00	0.000+00
3	59	4.577+02	0.000+00	0.000+00	0.000+00	1.175+03	1.778−04	0.000+00
3	60	4.575+02	0.000+00	0.000+00	0.000+00	1.886+02	1.758−07	0.000+00
3	61	4.574+02	0.000+00	0.000+00	0.000+00	3.631+02	0.000+00	0.000+00
3	62	4.525+02	0.000+00	0.000+00	0.000+00	2.032+01	8.239−04	0.000+00
3	63	4.522+02	0.000+00	0.000+00	0.000+00	1.993+01	1.058−06	0.000+00
3	64	4.521+02	0.000+00	0.000+00	0.000+00	0.000+00	6.868−04	0.000+00
3	66	4.517+02	1.226+01	6.250−10	2.788−09	0.000+00	0.000+00	7.774−03
3	67	4.517+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.137−02
3	69	4.500+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.802−05
3	70	4.471+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.990−05
3	73	4.438+02	0.000+00	0.000+00	0.000+00	3.674−01	0.000+00	0.000+00
3	74	4.426+02	2.257+02	1.105−08	4.829−08	0.000+00	0.000+00	2.347−03
3	75	4.419+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.548−05
3	76	4.416+02	2.210+04	1.077−06	4.697−06	0.000+00	0.000+00	1.890−04
3	77	4.415+02	1.324+04	3.870−07	1.687−06	0.000+00	0.000+00	6.701−05
3	78	4.345+02	0.000+00	0.000+00	0.000+00	9.759−03	1.575−03	0.000+00
3	79	4.105+02	1.403+02	5.907−09	2.395−08	0.000+00	0.000+00	1.696−02
3	80	4.105+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.420−02
3	82	3.985+02	1.966+05	1.560−06	6.141−06	0.000+00	0.000+00	0.000+00
3	83	3.985+02	5.737+04	1.366−06	5.377−06	0.000+00	0.000+00	1.234−03
3	84	3.985+02	6.358+04	2.523−06	9.931−06	0.000+00	0.000+00	2.834−03
3	85	3.945+02	3.444+03	1.339−07	5.218−07	0.000+00	0.000+00	1.168−02
3	87	3.842+02	1.161+04	2.569−07	9.749−07	0.000+00	0.000+00	2.242−04

Table 2 (continued)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
3	88	3.842+02	1.845+04	6.806−07	2.583−06	0.000+00	0.000+00	4.152−05
3	89	3.842+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.709−05
3	90	3.761+02	6.058+02	2.141−08	7.954−08	0.000+00	0.000+00	4.521−03
3	91	3.672+02	5.579+03	3.759−08	1.363−07	0.000+00	0.000+00	0.000+00
3	92	3.606+02	0.000+00	0.000+00	0.000+00	1.269−01	3.020−04	0.000+00
3	93	3.585+02	0.000+00	0.000+00	0.000+00	1.288+02	1.015−03	0.000+00
3	94	3.585+02	0.000+00	0.000+00	0.000+00	1.106+01	3.086−06	0.000+00
3	95	3.584+02	0.000+00	0.000+00	0.000+00	6.487+01	0.000+00	0.000+00
3	96	3.574+02	0.000+00	0.000+00	0.000+00	8.014+01	1.800−10	0.000+00
3	97	3.573+02	0.000+00	0.000+00	0.000+00	1.051+02	0.000+00	0.000+00
3	99	3.526+02	0.000+00	0.000+00	0.000+00	2.149+02	3.405−04	0.000+00
3	100	3.526+02	0.000+00	0.000+00	0.000+00	1.214+02	4.354−07	0.000+00
3	101	3.525+02	0.000+00	0.000+00	0.000+00	0.000+00	1.881−04	0.000+00
3	102	3.495+02	0.000+00	0.000+00	0.000+00	1.431−01	0.000+00	0.000+00
3	103	3.455+02	0.000+00	0.000+00	0.000+00	1.429−02	7.326−06	0.000+00
3	104	3.310+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.164−08
3	105	3.297+02	2.714+06	4.423−05	1.440−04	0.000+00	0.000+00	1.587−04
3	106	3.297+02	4.876+06	1.324−04	4.312−04	0.000+00	0.000+00	1.610−03
3	107	3.297+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.086−04
3	108	3.289+02	2.739+03	4.441−08	1.442−07	0.000+00	0.000+00	1.443−04
3	109	3.288+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.429−11
3	112	3.262+02	1.210+07	1.930−04	6.217−04	0.000+00	0.000+00	4.141−03
3	114	3.254+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.054−02
3	115	3.254+02	4.150−04	1.098−14	3.529−14	0.000+00	0.000+00	1.439−02
3	120	3.231+02	0.000+00	0.000+00	0.000+00	6.121+01	5.256−08	0.000+00
3	121	3.231+02	0.000+00	0.000+00	0.000+00	9.000+01	0.000+00	0.000+00
3	123	3.214+02	0.000+00	0.000+00	0.000+00	3.539−02	5.854−07	0.000+00
3	124	3.210+02	7.728+05	3.978−06	1.261−05	0.000+00	0.000+00	0.000+00
3	125	3.210+02	1.852+05	2.860−06	9.064−06	0.000+00	0.000+00	1.005−02
3	126	3.210+02	1.774+05	4.566−06	1.447−05	0.000+00	0.000+00	1.189−02
3	127	3.209+02	8.532−01	2.195−11	6.957−11	0.000+00	0.000+00	2.148−02
3	129	3.199+02	0.000+00	0.000+00	0.000+00	7.223−03	0.000+00	0.000+00
3	132	3.184+02	0.000+00	0.000+00	0.000+00	4.996+01	2.241−06	0.000+00
3	133	3.184+02	0.000+00	0.000+00	0.000+00	5.710+00	2.494−06	0.000+00
3	134	3.184+02	0.000+00	0.000+00	0.000+00	2.276+01	0.000+00	0.000+00
3	135	3.174+02	0.000+00	0.000+00	0.000+00	9.278+02	1.427−05	0.000+00
3	136	3.174+02	0.000+00	0.000+00	0.000+00	5.137+02	3.475−06	0.000+00
3	137	3.174+02	0.000+00	0.000+00	0.000+00	0.000+00	1.028−05	0.000+00
3	138	3.172+02	0.000+00	0.000+00	0.000+00	9.048−03	0.000+00	0.000+00
3	140	3.120+02	0.000+00	0.000+00	0.000+00	6.748−03	2.733−04	0.000+00
3	141	3.079+02	2.477+03	1.174−08	3.569−08	0.000+00	0.000+00	0.000+00
4	5	3.032+03	0.000+00	0.000+00	0.000+00	1.518−03	1.892−02	0.000+00
4	6	1.464+03	2.756+05	8.856−05	2.134−03	0.000+00	0.000+00	3.806−02
4	7	1.298+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.598−02
4	8	1.296+03	9.097+08	1.375−01	2.934+00	0.000+00	0.000+00	3.299−04
4	9	1.292+03	1.657+09	4.147−01	8.821+00	0.000+00	0.000+00	6.407−02
4	10	1.094+03	2.938+09	7.385−01	1.330+01	0.000+00	0.000+00	3.139−01
4	11	1.094+03	7.353+08	1.320−01	2.378+00	0.000+00	0.000+00	4.674−02
4	12	1.094+03	8.173+07	8.803−03	1.586−01	0.000+00	0.000+00	5.110−05
4	13	1.002+03	1.327+09	1.199−01	1.978+00	0.000+00	0.000+00	8.732−02
4	14	9.775+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.284−02
4	15	9.239+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.245−01
4	16	8.420+02	2.791+04	2.967−06	4.112−05	0.000+00	0.000+00	8.163−03
4	17	8.235+02	0.000+00	0.000+00	0.000+00	2.159+04	0.000+00	0.000+00
4	18	8.233+02	0.000+00	0.000+00	0.000+00	1.617+04	4.358−02	0.000+00
4	19	8.228+02	0.000+00	0.000+00	0.000+00	7.537+03	2.735−04	0.000+00
4	20	8.108+02	0.000+00	0.000+00	0.000+00	8.734+00	2.789−02	0.000+00
4	21	6.888+02	0.000+00	0.000+00	0.000+00	6.598+03	7.179−06	0.000+00
4	22	6.884+02	0.000+00	0.000+00	0.000+00	3.341+04	9.135−06	0.000+00
4	23	6.878+02	0.000+00	0.000+00	0.000+00	1.019+05	0.000+00	0.000+00
4	24	6.761+02	2.805+05	1.153−05	1.284−04	0.000+00	0.000+00	1.244−04
4	25	6.761+02	2.551+06	1.748−04	1.946−03	0.000+00	0.000+00	1.348−03
4	26	6.761+02	1.036+07	9.941−04	1.106−02	0.000+00	0.000+00	5.031−03
4	27	6.626+02	0.000+00	0.000+00	0.000+00	3.243+00	2.051−06	0.000+00
4	28	6.607+02	0.000+00	0.000+00	0.000+00	6.170+00	1.084−03	0.000+00
4	29	6.528+02	1.231+03	7.866−08	8.452−07	0.000+00	0.000+00	3.263−05
4	30	6.397+02	0.000+00	0.000+00	0.000+00	8.761+02	9.914−08	0.000+00
4	31	6.396+02	0.000+00	0.000+00	0.000+00	4.133+03	1.005−06	0.000+00
4	32	6.394+02	0.000+00	0.000+00	0.000+00	1.137+04	0.000+00	0.000+00
4	33	6.095+02	0.000+00	0.000+00	0.000+00	1.711+04	2.433−06	0.000+00
4	34	6.090+02	0.000+00	0.000+00	0.000+00	4.311+04	3.343−03	0.000+00
4	35	6.088+02	0.000+00	0.000+00	0.000+00	6.332+04	0.000+00	0.000+00
4	36	6.037+02	0.000+00	0.000+00	0.000+00	1.968+04	2.567−04	0.000+00
4	37	6.035+02	0.000+00	0.000+00	0.000+00	4.077+04	8.989−04	0.000+00
4	38	6.034+02	0.000+00	0.000+00	0.000+00	4.089+04	8.189−04	0.000+00

Table 2 (continued)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
4	39	5.800+02	0.000+00	0.000+00	0.000+00	1.230+03	0.000+00	0.000+00
4	40	5.796+02	0.000+00	0.000+00	0.000+00	8.932+02	1.198−04	0.000+00
4	41	5.787+02	0.000+00	0.000+00	0.000+00	3.919+02	1.779−04	0.000+00
4	42	5.640+02	0.000+00	0.000+00	0.000+00	5.667−01	1.440−06	0.000+00
4	43	5.310+02	0.000+00	0.000+00	0.000+00	2.559−01	2.688−06	0.000+00
4	44	5.308+02	0.000+00	0.000+00	0.000+00	1.627−03	3.027−03	0.000+00
4	45	5.305+02	3.063+03	7.753−08	6.770−07	0.000+00	0.000+00	2.582−02
4	46	5.256+02	4.395+06	1.092−04	9.450−04	0.000+00	0.000+00	8.815−03
4	47	5.252+02	4.030+07	1.667−03	1.441−02	0.000+00	0.000+00	3.625−04
4	48	5.245+02	1.684+08	9.719−03	8.390−02	0.000+00	0.000+00	2.113−02
4	49	5.161+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.511−02
4	50	5.159+02	4.803+07	1.150−03	9.766−03	0.000+00	0.000+00	1.143−03
4	51	5.154+02	1.092+08	4.349−03	3.690−02	0.000+00	0.000+00	2.194−02
4	52	5.128+02	7.529+07	1.781−03	1.503−02	0.000+00	0.000+00	1.549−02
4	53	5.026+02	2.988+03	1.132−07	9.362−07	0.000+00	0.000+00	3.715−02
4	54	4.809+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.752−04
4	55	4.621+02	0.000+00	0.000+00	0.000+00	5.670+00	1.177−04	0.000+00
4	56	4.604+02	0.000+00	0.000+00	0.000+00	3.183+01	3.039−06	0.000+00
4	57	4.601+02	0.000+00	0.000+00	0.000+00	2.651+02	1.028−05	0.000+00
4	58	4.597+02	0.000+00	0.000+00	0.000+00	1.276+03	0.000+00	0.000+00
4	59	4.582+02	0.000+00	0.000+00	0.000+00	4.020+02	1.099−04	0.000+00
4	60	4.581+02	0.000+00	0.000+00	0.000+00	9.779+02	1.494−04	0.000+00
4	61	4.579+02	0.000+00	0.000+00	0.000+00	1.218+03	7.484−05	0.000+00
4	62	4.530+02	0.000+00	0.000+00	0.000+00	1.036+00	7.350−08	0.000+00
4	63	4.528+02	0.000+00	0.000+00	0.000+00	1.323+01	1.151−03	0.000+00
4	64	4.526+02	0.000+00	0.000+00	0.000+00	2.871+01	0.000+00	0.000+00
4	65	4.523+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.497−03
4	66	4.522+02	1.028+01	3.153−10	2.347−09	0.000+00	0.000+00	1.071−03
4	67	4.522+02	5.558+01	2.385−09	1.775−08	0.000+00	0.000+00	5.782−03
4	68	4.518+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.679−03
4	69	4.505+02	1.136+02	4.837−09	3.587−08	0.000+00	0.000+00	7.257−06
4	70	4.476+02	8.014−01	3.371−11	2.484−10	0.000+00	0.000+00	1.919−05
4	71	4.474+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.878−05
4	73	4.442+02	0.000+00	0.000+00	0.000+00	2.277−02	7.066−06	0.000+00
4	74	4.431+02	8.824+02	2.597−08	1.894−07	0.000+00	0.000+00	1.688−03
4	75	4.424+02	3.975+04	1.633−06	1.189−05	0.000+00	0.000+00	8.683−05
4	76	4.421+02	1.023+04	2.998−07	2.182−06	0.000+00	0.000+00	3.072−04
4	77	4.420+02	1.319+03	2.318−08	1.686−07	0.000+00	0.000+00	1.910−05
4	78	4.350+02	0.000+00	0.000+00	0.000+00	4.645−02	2.212−03	0.000+00
4	79	4.109+02	4.449+01	1.126−09	7.617−09	0.000+00	0.000+00	2.413−03
4	80	4.109+02	2.531+02	8.968−09	6.066−08	0.000+00	0.000+00	1.212−02
4	81	4.109+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.612−02
4	82	3.989+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.598−03
4	83	3.989+02	6.742+04	9.651−07	6.337−06	0.000+00	0.000+00	5.055−03
4	84	3.989+02	1.572+05	3.751−06	2.463−05	0.000+00	0.000+00	3.266−03
4	85	3.949+02	2.287+03	5.346−08	3.475−07	0.000+00	0.000+00	9.582−03
4	86	3.900+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.251−08
4	87	3.846+02	8.432+02	1.122−08	7.103−08	0.000+00	0.000+00	6.756−05
4	88	3.846+02	6.675+03	1.480−07	9.371−07	0.000+00	0.000+00	1.973−04
4	89	3.846+02	2.186+04	6.787−07	4.297−06	0.000+00	0.000+00	3.086−04
4	90	3.765+02	2.026+01	4.306−10	2.668−09	0.000+00	0.000+00	3.627−03
4	91	3.675+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.601−02
4	92	3.610+02	0.000+00	0.000+00	0.000+00	5.617−02	8.813−04	0.000+00
4	93	3.588+02	0.000+00	0.000+00	0.000+00	4.432+01	2.817−04	0.000+00
4	94	3.588+02	0.000+00	0.000+00	0.000+00	9.888+01	5.911−04	0.000+00
4	95	3.588+02	0.000+00	0.000+00	0.000+00	1.059+02	7.174−04	0.000+00
4	96	3.577+02	0.000+00	0.000+00	0.000+00	1.348+01	1.098−06	0.000+00
4	97	3.576+02	0.000+00	0.000+00	0.000+00	6.176+01	1.489−06	0.000+00
4	98	3.576+02	0.000+00	0.000+00	0.000+00	1.661+02	0.000+00	0.000+00
4	99	3.529+02	0.000+00	0.000+00	0.000+00	1.629+02	2.347−07	0.000+00
4	100	3.529+02	0.000+00	0.000+00	0.000+00	3.550+02	4.362−04	0.000+00
4	101	3.529+02	0.000+00	0.000+00	0.000+00	4.774+02	0.000+00	0.000+00
4	102	3.499+02	0.000+00	0.000+00	0.000+00	1.196−04	7.549−08	0.000+00
4	103	3.458+02	0.000+00	0.000+00	0.000+00	1.210−02	2.511−05	0.000+00
4	104	3.312+02	3.329+01	7.667−10	4.180−09	0.000+00	0.000+00	4.706−10
4	105	3.300+02	1.812+05	1.774−06	9.635−06	0.000+00	0.000+00	2.054−04
4	106	3.300+02	1.628+06	2.657−05	1.443−04	0.000+00	0.000+00	1.017−04
4	107	3.300+02	6.489+06	1.483−04	8.054−04	0.000+00	0.000+00	3.852−03
4	108	3.291+02	6.789−01	6.615−12	3.583−11	0.000+00	0.000+00	3.783−04
4	109	3.291+02	7.659−04	1.741−14	9.428−14	0.000+00	0.000+00	3.781−11
4	110	3.291+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.308−11
4	112	3.265+02	2.026+07	1.942−04	1.044−03	0.000+00	0.000+00	1.252−02
4	113	3.257+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.066−02
4	114	3.257+02	1.252−02	2.787−13	1.494−12	0.000+00	0.000+00	1.023−02
4	115	3.257+02	1.041−05	1.656−16	8.878−16	0.000+00	0.000+00	2.049−03

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
4	116	3.250+02	0.000+00	0.000+00	0.000+00	1.415−02	0.000+00	0.000+00
4	117	3.240+02	0.000+00	0.000+00	0.000+00	1.069−06	0.000+00	0.000+00
4	120	3.234+02	0.000+00	0.000+00	0.000+00	8.281+00	4.357−09	0.000+00
4	121	3.234+02	0.000+00	0.000+00	0.000+00	4.265+01	3.011−07	0.000+00
4	122	3.234+02	0.000+00	0.000+00	0.000+00	1.329+02	0.000+00	0.000+00
4	123	3.217+02	0.000+00	0.000+00	0.000+00	9.349−03	2.568−06	0.000+00
4	124	3.212+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.242−02
4	125	3.212+02	3.353+05	3.112−06	1.645−05	0.000+00	0.000+00	2.012−02
4	126	3.212+02	5.625+05	8.701−06	4.601−05	0.000+00	0.000+00	5.835−03
4	127	3.211+02	8.586+02	1.328−08	7.018−08	0.000+00	0.000+00	1.800−02
4	128	3.211+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.766−09
4	129	3.202+02	0.000+00	0.000+00	0.000+00	3.511−03	1.330−14	0.000+00
4	130	3.202+02	0.000+00	0.000+00	0.000+00	1.362−02	0.000+00	0.000+00
4	132	3.186+02	0.000+00	0.000+00	0.000+00	1.605+01	2.334−07	0.000+00
4	133	3.186+02	0.000+00	0.000+00	0.000+00	3.812+01	1.185−06	0.000+00
4	134	3.186+02	0.000+00	0.000+00	0.000+00	4.460+01	1.718−06	0.000+00
4	135	3.176+02	0.000+00	0.000+00	0.000+00	7.183+02	2.183−05	0.000+00
4	136	3.176+02	0.000+00	0.000+00	0.000+00	1.534+03	3.587−05	0.000+00
4	137	3.176+02	0.000+00	0.000+00	0.000+00	2.042+03	0.000+00	0.000+00
4	138	3.175+02	0.000+00	0.000+00	0.000+00	1.012−02	1.595−07	0.000+00
4	140	3.123+02	0.000+00	0.000+00	0.000+00	2.257−03	2.728−04	0.000+00
4	141	3.081+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.078−03
5	6	2.830+03	2.249+07	4.502−02	1.258+00	0.000+00	0.000+00	3.413−04
5	7	2.271+03	4.769+04	1.229−05	2.756−04	0.000+00	0.000+00	0.000+00
5	8	2.264+03	1.788+03	1.374−06	3.073−05	0.000+00	0.000+00	2.341−03
5	9	2.252+03	9.946+03	1.260−05	2.802−04	0.000+00	0.000+00	4.473−03
5	10	1.712+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.833−02
5	11	1.712+03	1.882+04	1.379−05	2.332−04	0.000+00	0.000+00	4.670−03
5	12	1.712+03	9.256+03	4.068−06	6.879−05	0.000+00	0.000+00	5.030−04
5	13	1.497+03	1.411+04	4.739−06	7.006−05	0.000+00	0.000+00	1.386−02
5	14	1.443+03	3.056+09	3.178−01	4.528+00	0.000+00	0.000+00	0.000+00
5	15	1.329+03	6.598+07	5.822−03	7.640−02	0.000+00	0.000+00	0.000+00
5	16	1.166+03	5.050+09	1.715+00	1.974+01	0.000+00	0.000+00	3.590−02
5	17	1.130+03	0.000+00	0.000+00	0.000+00	0.000+00	2.537−02	0.000+00
5	18	1.130+03	0.000+00	0.000+00	0.000+00	7.887+00	6.424−03	0.000+00
5	19	1.129+03	0.000+00	0.000+00	0.000+00	1.334−01	5.231−03	0.000+00
5	20	1.107+03	0.000+00	0.000+00	0.000+00	1.185+04	7.983−05	0.000+00
5	21	8.913+02	0.000+00	0.000+00	0.000+00	2.818+00	4.750−06	0.000+00
5	22	8.906+02	0.000+00	0.000+00	0.000+00	2.062+00	0.000+00	0.000+00
5	24	8.701+02	1.279+03	1.452−07	1.247−06	0.000+00	0.000+00	1.046−04
5	25	8.701+02	3.145+03	5.950−07	5.112−06	0.000+00	0.000+00	9.821−04
5	26	8.701+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.784−03
5	27	8.478+02	0.000+00	0.000+00	0.000+00	3.294+04	0.000+00	0.000+00
5	28	8.447+02	0.000+00	0.000+00	0.000+00	2.429+04	9.346−07	0.000+00
5	29	8.319+02	6.198+08	1.072−01	8.804−01	0.000+00	0.000+00	1.347−04
5	30	8.108+02	0.000+00	0.000+00	0.000+00	3.370+00	8.519−06	0.000+00
5	31	8.106+02	0.000+00	0.000+00	0.000+00	3.060+00	0.000+00	0.000+00
5	33	7.628+02	0.000+00	0.000+00	0.000+00	5.960+00	6.001−04	0.000+00
5	34	7.621+02	0.000+00	0.000+00	0.000+00	6.993−02	1.109−04	0.000+00
5	35	7.617+02	0.000+00	0.000+00	0.000+00	0.000+00	6.358−04	0.000+00
5	36	7.538+02	0.000+00	0.000+00	0.000+00	1.332−01	3.382−03	0.000+00
5	37	7.535+02	0.000+00	0.000+00	0.000+00	6.080−01	5.018−03	0.000+00
5	38	7.533+02	0.000+00	0.000+00	0.000+00	9.965−01	0.000+00	0.000+00
5	39	7.173+02	0.000+00	0.000+00	0.000+00	0.000+00	2.583−03	0.000+00
5	40	7.166+02	0.000+00	0.000+00	0.000+00	1.216+00	9.643−04	0.000+00
5	41	7.152+02	0.000+00	0.000+00	0.000+00	1.296−02	9.901−05	0.000+00
5	42	6.929+02	0.000+00	0.000+00	0.000+00	3.927+02	4.936−07	0.000+00
5	43	6.437+02	0.000+00	0.000+00	0.000+00	8.745+04	0.000+00	0.000+00
5	44	6.434+02	0.000+00	0.000+00	0.000+00	5.069+04	2.324−05	0.000+00
5	45	6.430+02	1.682+08	1.042−02	6.620−02	0.000+00	0.000+00	7.663−03
5	46	6.359+02	1.378+06	8.351−05	5.244−04	0.000+00	0.000+00	9.288−04
5	47	6.352+02	1.962+04	1.978−06	1.241−05	0.000+00	0.000+00	3.865−03
5	48	6.341+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.357−02
5	49	6.220+02	5.413+04	1.047−06	6.430−06	0.000+00	0.000+00	0.000+00
5	50	6.217+02	8.899+04	5.156−06	3.166−05	0.000+00	0.000+00	2.978−02
5	51	6.210+02	2.272+04	2.189−06	1.343−05	0.000+00	0.000+00	5.189−02
5	52	6.171+02	4.611+04	2.632−06	1.604−05	0.000+00	0.000+00	3.767−04
5	53	6.025+02	4.275+07	3.877−03	2.307−02	0.000+00	0.000+00	4.134−03
5	54	5.716+02	2.091+08	3.414−03	1.927−02	0.000+00	0.000+00	0.000+00
5	55	5.452+02	0.000+00	0.000+00	0.000+00	9.802+02	1.310−06	0.000+00
5	56	5.428+02	0.000+00	0.000+00	0.000+00	2.916+01	2.696−05	0.000+00
5	57	5.425+02	0.000+00	0.000+00	0.000+00	2.240+00	0.000+00	0.000+00
5	59	5.398+02	0.000+00	0.000+00	0.000+00	7.105−01	4.764−04	0.000+00
5	60	5.396+02	0.000+00	0.000+00	0.000+00	1.938+00	6.719−04	0.000+00
5	61	5.394+02	0.000+00	0.000+00	0.000+00	5.153−01	0.000+00	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
5	62	5.326+02	0.000+00	0.000+00	0.000+00	9.338−01	1.156−06	0.000+00
5	63	5.322+02	0.000+00	0.000+00	0.000+00	1.598−01	2.570−05	0.000+00
5	64	5.320+02	0.000+00	0.000+00	0.000+00	0.000+00	1.992−07	0.000+00
5	66	5.315+02	3.258+03	2.300−07	1.207−06	0.000+00	0.000+00	4.113−05
5	67	5.314+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.594−05
5	69	5.291+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.406−02
5	70	5.252+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.602−04
5	73	5.205+02	0.000+00	0.000+00	0.000+00	9.250+02	0.000+00	0.000+00
5	74	5.189+02	9.743+05	6.554−05	3.359−04	0.000+00	0.000+00	5.409−02
5	75	5.180+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.404−03
5	76	5.175+02	4.070+04	2.724−06	1.392−05	0.000+00	0.000+00	9.534−03
5	77	5.174+02	5.471+01	2.196−09	1.122−08	0.000+00	0.000+00	1.774−04
5	78	5.079+02	0.000+00	0.000+00	0.000+00	1.867+02	2.151−07	0.000+00
5	79	4.753+02	1.592+03	8.987−08	4.219−07	0.000+00	0.000+00	9.750−07
5	80	4.753+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.661−07
5	82	4.594+02	7.920+03	8.352−08	3.789−07	0.000+00	0.000+00	0.000+00
5	83	4.594+02	1.411+02	4.463−09	2.025−08	0.000+00	0.000+00	5.283−02
5	84	4.594+02	6.741+02	3.554−08	1.613−07	0.000+00	0.000+00	9.495−02
5	85	4.540+02	4.139+07	2.132−03	9.558−03	0.000+00	0.000+00	2.596−01
5	87	4.405+02	1.823+02	5.302−09	2.307−08	0.000+00	0.000+00	8.990−04
5	88	4.405+02	9.179+00	4.450−10	1.936−09	0.000+00	0.000+00	8.104−03
5	89	4.405+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.256−02
5	90	4.298+02	8.648+04	3.992−06	1.695−05	0.000+00	0.000+00	3.872−02
5	91	4.182+02	2.862+07	2.501−04	1.033−03	0.000+00	0.000+00	0.000+00
5	92	4.098+02	0.000+00	0.000+00	0.000+00	2.067+03	7.642−06	0.000+00
5	93	4.069+02	0.000+00	0.000+00	0.000+00	6.667−02	2.204−03	0.000+00
5	94	4.069+02	0.000+00	0.000+00	0.000+00	2.706−01	4.137−03	0.000+00
5	95	4.069+02	0.000+00	0.000+00	0.000+00	1.462−02	0.000+00	0.000+00
5	96	4.055+02	0.000+00	0.000+00	0.000+00	5.378−01	3.828−06	0.000+00
5	97	4.054+02	0.000+00	0.000+00	0.000+00	1.199−01	0.000+00	0.000+00
5	99	3.994+02	0.000+00	0.000+00	0.000+00	1.205−02	8.519−04	0.000+00
5	100	3.994+02	0.000+00	0.000+00	0.000+00	2.727−02	7.483−04	0.000+00
5	101	3.993+02	0.000+00	0.000+00	0.000+00	0.000+00	2.873−03	0.000+00
5	102	3.955+02	0.000+00	0.000+00	0.000+00	1.951+03	0.000+00	0.000+00
5	103	3.903+02	0.000+00	0.000+00	0.000+00	4.021+02	6.302−06	0.000+00
5	104	3.719+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.230−03
5	105	3.702+02	9.053+02	1.860−08	6.803−08	0.000+00	0.000+00	4.163−06
5	106	3.702+02	4.041+02	1.384−08	5.062−08	0.000+00	0.000+00	4.123−05
5	107	3.702+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.418−04
5	108	3.692+02	5.818+07	1.189−03	4.335−03	0.000+00	0.000+00	2.722−02
5	109	3.691+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.333−09
5	112	3.659+02	2.507+02	5.032−09	1.818−08	0.000+00	0.000+00	6.570−03
5	114	3.649+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.918−07
5	115	3.649+02	4.471+00	1.488−10	5.361−10	0.000+00	0.000+00	4.381−07
5	120	3.620+02	0.000+00	0.000+00	0.000+00	1.356−01	1.416−08	0.000+00
5	121	3.620+02	0.000+00	0.000+00	0.000+00	2.363−05	0.000+00	0.000+00
5	123	3.598+02	0.000+00	0.000+00	0.000+00	1.365+02	7.237−06	0.000+00
5	124	3.593+02	3.254+02	2.099−09	7.448−09	0.000+00	0.000+00	0.000+00
5	125	3.593+02	1.673+02	3.237−09	1.149−08	0.000+00	0.000+00	8.716−02
5	126	3.593+02	7.873+02	2.539−08	9.009−08	0.000+00	0.000+00	1.624−01
5	127	3.592+02	3.637+06	1.172−04	4.159−04	0.000+00	0.000+00	2.889−01
5	129	3.580+02	0.000+00	0.000+00	0.000+00	6.315−02	0.000+00	0.000+00
5	132	3.560+02	0.000+00	0.000+00	0.000+00	1.054−01	2.823−10	0.000+00
5	133	3.560+02	0.000+00	0.000+00	0.000+00	7.398−03	3.481−06	0.000+00
5	134	3.560+02	0.000+00	0.000+00	0.000+00	8.345−03	0.000+00	0.000+00
5	135	3.548+02	0.000+00	0.000+00	0.000+00	7.310−02	6.605−06	0.000+00
5	136	3.548+02	0.000+00	0.000+00	0.000+00	1.072−01	1.097−05	0.000+00
5	137	3.548+02	0.000+00	0.000+00	0.000+00	0.000+00	1.392−05	0.000+00
5	138	3.546+02	0.000+00	0.000+00	0.000+00	8.396+01	0.000+00	0.000+00
5	140	3.481+02	0.000+00	0.000+00	0.000+00	1.102+02	2.638−05	0.000+00
5	141	3.430+02	9.803+05	5.763−06	1.952−05	0.000+00	0.000+00	0.000+00
6	7	1.148+04	0.000+00	0.000+00	0.000+00	5.801−05	0.000+00	0.000+00
6	8	1.132+04	0.000+00	0.000+00	0.000+00	1.594−05	3.933−03	0.000+00
6	9	1.101+04	0.000+00	0.000+00	0.000+00	7.230−05	7.645−03	0.000+00
6	10	4.335+03	0.000+00	0.000+00	0.000+00	1.734−05	5.633−06	0.000+00
6	11	4.334+03	0.000+00	0.000+00	0.000+00	1.154−05	3.158−06	0.000+00
6	12	4.334+03	0.000+00	0.000+00	0.000+00	1.051−06	1.965−05	0.000+00
6	13	3.177+03	0.000+00	0.000+00	0.000+00	3.437−05	1.483−07	0.000+00
6	14	2.942+03	0.000+00	0.000+00	0.000+00	9.807+00	0.000+00	0.000+00
6	15	2.504+03	0.000+00	0.000+00	0.000+00	6.802+02	0.000+00	0.000+00
6	16	1.982+03	0.000+00	0.000+00	0.000+00	1.915+01	2.290−05	0.000+00
6	17	1.882+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.616−03
6	18	1.881+03	1.698+05	5.406−05	1.674−03	0.000+00	0.000+00	1.887−03
6	19	1.879+03	1.452+02	7.683−08	2.376−06	0.000+00	0.000+00	9.109−04
6	20	1.817+03	3.351+08	9.952−02	2.977+00	0.000+00	0.000+00	1.097−03

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
6	21	1.301+03	5.895+05	1.496−04	3.203−03	0.000+00	0.000+00	9.058−03
6	22	1.299+03	8.893+04	3.152−05	6.741−04	0.000+00	0.000+00	4.983−02
6	23	1.297+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.443−01
6	24	1.256+03	0.000+00	0.000+00	0.000+00	8.120−03	3.148−04	0.000+00
6	25	1.256+03	0.000+00	0.000+00	0.000+00	1.462−02	3.764−05	0.000+00
6	26	1.256+03	0.000+00	0.000+00	0.000+00	8.334−04	9.827−05	0.000+00
6	27	1.210+03	1.311+09	4.031−01	8.031+00	0.000+00	0.000+00	6.501−02
6	28	1.204+03	2.425+09	5.270−01	1.044+01	0.000+00	0.000+00	3.421−02
6	29	1.178+03	0.000+00	0.000+00	0.000+00	2.383+03	2.820−06	0.000+00
6	30	1.136+03	5.097+05	9.867−05	1.846−03	0.000+00	0.000+00	1.135−03
6	31	1.136+03	8.183+03	2.216−06	4.143−05	0.000+00	0.000+00	5.136−03
6	32	1.135+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.569−02
6	33	1.044+03	1.797+04	2.938−06	5.050−05	0.000+00	0.000+00	1.377−02
6	34	1.043+03	4.460+05	4.363−05	7.491−04	0.000+00	0.000+00	2.275−02
6	35	1.042+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.227−02
6	36	1.028+03	4.032+04	3.829−06	6.475−05	0.000+00	0.000+00	1.982−04
6	37	1.027+03	6.720+05	1.062−04	1.796−03	0.000+00	0.000+00	9.391−04
6	38	1.026+03	1.489+06	3.292−04	5.563−03	0.000+00	0.000+00	2.966−03
6	39	9.607+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.025−01
6	40	9.595+02	3.340+06	2.766−04	4.369−03	0.000+00	0.000+00	7.375−02
6	41	9.570+02	1.874+05	2.572−05	4.052−04	0.000+00	0.000+00	3.372−02
6	42	9.175+02	1.460+09	1.105−01	1.669+00	0.000+00	0.000+00	1.550−03
6	43	8.332+02	1.614+09	2.352−01	3.226+00	0.000+00	0.000+00	1.018−01
6	44	8.327+02	9.888+07	6.167−03	8.452−02	0.000+00	0.000+00	6.453−02
6	45	8.320+02	0.000+00	0.000+00	0.000+00	1.784+04	2.544−04	0.000+00
6	46	8.201+02	0.000+00	0.000+00	0.000+00	1.339+02	4.837−02	0.000+00
6	47	8.190+02	0.000+00	0.000+00	0.000+00	7.833+00	5.271−03	0.000+00
6	48	8.172+02	0.000+00	0.000+00	0.000+00	3.562+00	1.885−02	0.000+00
6	49	7.972+02	0.000+00	0.000+00	0.000+00	1.795+01	0.000+00	0.000+00
6	50	7.967+02	0.000+00	0.000+00	0.000+00	1.036+00	7.448−03	0.000+00
6	51	7.955+02	0.000+00	0.000+00	0.000+00	1.178+00	1.247−02	0.000+00
6	52	7.892+02	0.000+00	0.000+00	0.000+00	9.100+00	5.155−05	0.000+00
6	53	7.654+02	0.000+00	0.000+00	0.000+00	8.151+03	2.313−04	0.000+00
6	54	7.162+02	0.000+00	0.000+00	0.000+00	2.744+04	0.000+00	0.000+00
6	55	6.753+02	3.114+06	2.129−04	2.366−03	0.000+00	0.000+00	8.974−05
6	56	6.716+02	9.958+04	6.734−06	7.444−05	0.000+00	0.000+00	5.675−06
6	57	6.711+02	1.838+05	1.737−05	1.919−04	0.000+00	0.000+00	1.110−05
6	58	6.701+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.731−04
6	59	6.670+02	7.043+04	2.818−06	3.094−05	0.000+00	0.000+00	2.606−05
6	60	6.667+02	3.195+04	2.129−06	2.337−05	0.000+00	0.000+00	1.473−05
6	61	6.663+02	1.473+05	1.373−05	1.506−04	0.000+00	0.000+00	3.204−06
6	62	6.561+02	3.821+02	2.466−08	2.663−07	0.000+00	0.000+00	1.671−05
6	63	6.555+02	6.455+03	2.495−07	2.692−06	0.000+00	0.000+00	2.926−06
6	64	6.552+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.720−05
6	65	6.546+02	0.000+00	0.000+00	0.000+00	7.476+04	0.000+00	0.000+00
6	66	6.544+02	0.000+00	0.000+00	0.000+00	1.415+01	1.352−05	0.000+00
6	67	6.543+02	0.000+00	0.000+00	0.000+00	2.896+01	3.517−05	0.000+00
6	68	6.535+02	0.000+00	0.000+00	0.000+00	7.127+04	0.000+00	0.000+00
6	69	6.508+02	0.000+00	0.000+00	0.000+00	3.197+04	1.208−07	0.000+00
6	70	6.448+02	0.000+00	0.000+00	0.000+00	3.520+02	1.762−06	0.000+00
6	71	6.442+02	0.000+00	0.000+00	0.000+00	6.051+02	0.000+00	0.000+00
6	73	6.378+02	3.225+08	2.753−02	2.891−01	0.000+00	0.000+00	6.252−02
6	74	6.353+02	0.000+00	0.000+00	0.000+00	2.232+04	8.237−07	0.000+00
6	75	6.340+02	0.000+00	0.000+00	0.000+00	8.294+00	4.374−05	0.000+00
6	76	6.334+02	0.000+00	0.000+00	0.000+00	1.051+03	7.249−06	0.000+00
6	77	6.331+02	0.000+00	0.000+00	0.000+00	4.706+00	8.447−05	0.000+00
6	78	6.189+02	1.910+08	6.582−03	6.705−02	0.000+00	0.000+00	1.821−02
6	79	5.713+02	0.000+00	0.000+00	0.000+00	7.836−01	1.135−05	0.000+00
6	80	5.713+02	0.000+00	0.000+00	0.000+00	5.811−01	3.223−07	0.000+00
6	81	5.713+02	0.000+00	0.000+00	0.000+00	2.881−01	0.000+00	0.000+00
6	82	5.484+02	0.000+00	0.000+00	0.000+00	5.145−02	0.000+00	0.000+00
6	83	5.484+02	0.000+00	0.000+00	0.000+00	1.857−02	5.544−04	0.000+00
6	84	5.484+02	0.000+00	0.000+00	0.000+00	1.033−03	1.206−03	0.000+00
6	85	5.408+02	0.000+00	0.000+00	0.000+00	4.152+04	2.471−05	0.000+00
6	86	5.316+02	0.000+00	0.000+00	0.000+00	6.717+03	0.000+00	0.000+00
6	87	5.217+02	0.000+00	0.000+00	0.000+00	5.406−06	9.660−05	0.000+00
6	88	5.217+02	0.000+00	0.000+00	0.000+00	3.791−03	3.262−06	0.000+00
6	89	5.217+02	0.000+00	0.000+00	0.000+00	7.419−05	3.339−04	0.000+00
6	90	5.068+02	0.000+00	0.000+00	0.000+00	6.092+02	2.029−06	0.000+00
6	91	4.907+02	0.000+00	0.000+00	0.000+00	6.154+04	0.000+00	0.000+00
6	92	4.791+02	6.099+07	2.099−03	1.656−02	0.000+00	0.000+00	2.143−05
6	93	4.753+02	6.177+03	1.255−07	9.818−07	0.000+00	0.000+00	1.712−03
6	94	4.752+02	5.287+03	1.790−07	1.401−06	0.000+00	0.000+00	3.648−03
6	95	4.752+02	5.555+03	2.633−07	2.060−06	0.000+00	0.000+00	4.042−03
6	96	4.733+02	4.888+03	1.642−07	1.279−06	0.000+00	0.000+00	1.843−03

Table 2 (continued)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
6	97	4.732+02	1.722+04	8.092−07	6.303−06	0.000+00	0.000+00	8.794−03
6	98	4.731+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.477−02
6	99	4.650+02	1.161+03	3.765−08	2.882−07	0.000+00	0.000+00	1.870−03
6	100	4.650+02	6.438+02	1.252−08	9.583−08	0.000+00	0.000+00	3.708−03
6	101	4.649+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.067−03
6	102	4.597+02	1.626+08	7.214−03	5.459−02	0.000+00	0.000+00	7.437−03
6	103	4.528+02	7.459+04	1.376−06	1.025−05	0.000+00	0.000+00	1.383−04
6	104	4.281+02	0.000+00	0.000+00	0.000+00	1.006+03	5.531−07	0.000+00
6	105	4.260+02	0.000+00	0.000+00	0.000+00	1.476−03	1.225−04	0.000+00
6	106	4.260+02	0.000+00	0.000+00	0.000+00	6.269−03	1.471−05	0.000+00
6	107	4.260+02	0.000+00	0.000+00	0.000+00	7.554−02	9.745−05	0.000+00
6	108	4.246+02	0.000+00	0.000+00	0.000+00	9.397+01	3.605−07	0.000+00
6	109	4.245+02	0.000+00	0.000+00	0.000+00	1.377−02	1.188−06	0.000+00
6	110	4.245+02	0.000+00	0.000+00	0.000+00	5.232−02	0.000+00	0.000+00
6	112	4.202+02	0.000+00	0.000+00	0.000+00	1.369−02	3.299−07	0.000+00
6	113	4.189+02	0.000+00	0.000+00	0.000+00	4.525−01	0.000+00	0.000+00
6	114	4.189+02	0.000+00	0.000+00	0.000+00	2.140−01	6.552−07	0.000+00
6	115	4.189+02	0.000+00	0.000+00	0.000+00	5.237−02	1.920−06	0.000+00
6	116	4.177+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.410−02
6	117	4.161+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.353−08
6	120	4.151+02	6.841+01	1.767−09	1.207−08	0.000+00	0.000+00	4.663−05
6	121	4.151+02	1.095+01	3.960−10	2.706−09	0.000+00	0.000+00	3.360−04
6	122	4.151+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.768−04
6	123	4.122+02	6.139+04	1.564−06	1.061−05	0.000+00	0.000+00	1.663−06
6	124	4.115+02	0.000+00	0.000+00	0.000+00	6.354−01	0.000+00	0.000+00
6	125	4.115+02	0.000+00	0.000+00	0.000+00	5.117−01	2.152−04	0.000+00
6	126	4.115+02	0.000+00	0.000+00	0.000+00	7.215−01	4.359−04	0.000+00
6	127	4.114+02	0.000+00	0.000+00	0.000+00	4.684+02	4.295−06	0.000+00
6	128	4.112+02	0.000+00	0.000+00	0.000+00	1.634+03	0.000+00	0.000+00
6	129	4.098+02	2.402−01	8.469−12	5.714−11	0.000+00	0.000+00	9.141−12
6	130	4.099+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.662−08
6	132	4.073+02	2.148+01	3.205−10	2.149−09	0.000+00	0.000+00	1.799−05
6	133	4.073+02	4.502+02	1.120−08	7.506−08	0.000+00	0.000+00	6.052−05
6	134	4.073+02	6.820+02	2.374−08	1.592−07	0.000+00	0.000+00	4.098−05
6	135	4.056+02	2.168+02	5.347−09	3.570−08	0.000+00	0.000+00	3.049−05
6	136	4.056+02	5.229+02	7.739−09	5.167−08	0.000+00	0.000+00	7.667−05
6	137	4.056+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.215−05
6	138	4.054+02	1.477+07	5.095−04	3.400−03	0.000+00	0.000+00	8.933−03
6	140	3.969+02	1.799+06	2.549−05	1.666−04	0.000+00	0.000+00	1.078−03
6	141	3.903+02	0.000+00	0.000+00	0.000+00	1.686+04	0.000+00	0.000+00
7	8	7.889+05	0.000+00	0.000+00	0.000+00	0.000+00	3.662−05	0.000+00
7	9	2.682+05	0.000+00	0.000+00	0.000+00	2.055−09	0.000+00	0.000+00
7	11	6.962+03	0.000+00	0.000+00	0.000+00	2.383−03	0.000+00	0.000+00
7	12	6.961+03	0.000+00	0.000+00	0.000+00	0.000+00	3.527−07	0.000+00
7	13	4.392+03	0.000+00	0.000+00	0.000+00	0.000+00	1.867−04	0.000+00
7	16	2.396+03	0.000+00	0.000+00	0.000+00	2.099−02	0.000+00	0.000+00
7	18	2.250+03	2.981+05	6.786−04	5.026−03	0.000+00	0.000+00	0.000+00
7	19	2.246+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.002−06
7	20	2.159+03	4.848+03	1.016−05	7.221−05	0.000+00	0.000+00	0.000+00
7	21	1.467+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.300−03
7	24	1.411+03	0.000+00	0.000+00	0.000+00	0.000+00	5.754−05	0.000+00
7	25	1.411+03	0.000+00	0.000+00	0.000+00	3.663+00	0.000+00	0.000+00
7	28	1.345+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.345−02
7	29	1.313+03	0.000+00	0.000+00	0.000+00	1.397−02	0.000+00	0.000+00
7	30	1.261+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.348−03
7	33	1.149+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.485−08
7	34	1.147+03	1.119+09	6.622−01	2.501+00	0.000+00	0.000+00	0.000+00
7	36	1.128+03	2.070+09	1.186+00	4.404+00	0.000+00	0.000+00	0.000+00
7	37	1.128+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.777−02
7	40	1.047+03	3.207+08	1.581−01	5.451−01	0.000+00	0.000+00	0.000+00
7	41	1.044+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.062−02
7	42	9.972+02	2.872+05	1.284−04	4.216−04	0.000+00	0.000+00	0.000+00
7	44	8.978+02	8.158+04	2.957−05	8.741−05	0.000+00	0.000+00	0.000+00
7	45	8.970+02	0.000+00	0.000+00	0.000+00	0.000+00	8.324−03	0.000+00
7	46	8.832+02	0.000+00	0.000+00	0.000+00	0.000+00	8.710−03	0.000+00
7	47	8.819+02	0.000+00	0.000+00	0.000+00	6.091+03	0.000+00	0.000+00
7	50	8.561+02	0.000+00	0.000+00	0.000+00	0.000+00	4.889−03	0.000+00
7	51	8.548+02	0.000+00	0.000+00	0.000+00	1.748+03	0.000+00	0.000+00
7	52	8.475+02	0.000+00	0.000+00	0.000+00	0.000+00	2.425−02	0.000+00
7	53	8.201+02	0.000+00	0.000+00	0.000+00	1.742+00	0.000+00	0.000+00
7	55	7.175+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.759−04
7	56	7.133+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.843−04
7	59	7.081+02	1.544+07	3.482−03	8.116−03	0.000+00	0.000+00	0.000+00
7	60	7.078+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.702−03
7	62	6.958+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.112−05

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
7	63	6.952+02	4.558+06	9.906−04	2.267−03	0.000+00	0.000+00	0.000+00
7	66	6.939+02	0.000+00	0.000+00	0.000+00	4.223+04	0.000+00	0.000+00
7	74	6.726+02	0.000+00	0.000+00	0.000+00	8.091+02	0.000+00	0.000+00
7	76	6.703+02	0.000+00	0.000+00	0.000+00	1.902+04	0.000+00	0.000+00
7	77	6.700+02	0.000+00	0.000+00	0.000+00	0.000+00	2.766−05	0.000+00
7	78	6.542+02	3.670+04	7.064−06	1.521−05	0.000+00	0.000+00	0.000+00
7	79	6.012+02	0.000+00	0.000+00	0.000+00	2.406+03	0.000+00	0.000+00
7	83	5.759+02	0.000+00	0.000+00	0.000+00	0.000+00	3.778−04	0.000+00
7	84	5.759+02	0.000+00	0.000+00	0.000+00	1.723+01	0.000+00	0.000+00
7	85	5.675+02	0.000+00	0.000+00	0.000+00	4.947−04	0.000+00	0.000+00
7	87	5.465+02	0.000+00	0.000+00	0.000+00	0.000+00	4.812−05	0.000+00
7	88	5.465+02	0.000+00	0.000+00	0.000+00	2.836−01	0.000+00	0.000+00
7	90	5.302+02	0.000+00	0.000+00	0.000+00	1.152+00	0.000+00	0.000+00
7	92	5.000+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.261−03
7	93	4.958+02	4.293+05	4.746−05	7.746−05	0.000+00	0.000+00	0.000+00
7	94	4.958+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.023−03
7	96	4.937+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.557−04
7	99	4.847+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.143−05
7	100	4.846+02	1.468+06	1.550−04	2.473−04	0.000+00	0.000+00	0.000+00
7	103	4.714+02	2.635−01	2.633−11	4.086−11	0.000+00	0.000+00	0.000+00
7	105	4.424+02	0.000+00	0.000+00	0.000+00	0.000+00	4.207−05	0.000+00
7	106	4.424+02	0.000+00	0.000+00	0.000+00	3.500+01	0.000+00	0.000+00
7	108	4.409+02	0.000+00	0.000+00	0.000+00	0.000+00	6.906−05	0.000+00
7	112	4.361+02	0.000+00	0.000+00	0.000+00	0.000+00	3.118−04	0.000+00
7	115	4.348+02	0.000+00	0.000+00	0.000+00	7.060+02	0.000+00	0.000+00
7	120	4.306+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.395−02
7	123	4.276+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.017−03
7	125	4.268+02	0.000+00	0.000+00	0.000+00	0.000+00	1.551−04	0.000+00
7	126	4.268+02	0.000+00	0.000+00	0.000+00	5.012+02	0.000+00	0.000+00
7	127	4.267+02	0.000+00	0.000+00	0.000+00	2.001+00	0.000+00	0.000+00
7	132	4.223+02	1.116+06	8.953−05	1.245−04	0.000+00	0.000+00	0.000+00
7	133	4.223+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.990−04
7	135	4.205+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.498−04
7	136	4.205+02	3.536+05	2.812−05	3.892−05	0.000+00	0.000+00	0.000+00
7	140	4.111+02	8.389+03	6.378−07	8.632−07	0.000+00	0.000+00	0.000+00
8	9	4.063+05	0.000+00	0.000+00	0.000+00	5.789−10	2.010−04	0.000+00
8	10	7.026+03	0.000+00	0.000+00	0.000+00	2.410−03	0.000+00	0.000+00
8	11	7.024+03	0.000+00	0.000+00	0.000+00	5.179−04	1.205−07	0.000+00
8	12	7.023+03	0.000+00	0.000+00	0.000+00	4.915−03	1.111−06	0.000+00
8	13	4.416+03	0.000+00	0.000+00	0.000+00	9.527−08	1.388−04	0.000+00
8	14	3.976+03	0.000+00	0.000+00	0.000+00	0.000+00	1.121−01	0.000+00
8	15	3.216+03	0.000+00	0.000+00	0.000+00	0.000+00	3.111−02	0.000+00
8	16	2.403+03	0.000+00	0.000+00	0.000+00	9.383−05	4.265−03	0.000+00
8	17	2.258+03	9.453+05	2.408−04	5.370−03	0.000+00	0.000+00	0.000+00
8	18	2.256+03	2.467+05	1.883−04	4.196−03	0.000+00	0.000+00	7.690−06
8	19	2.253+03	1.940+05	2.460−04	5.473−03	0.000+00	0.000+00	4.224−07
8	20	2.165+03	8.860+02	6.224−07	1.331−05	0.000+00	0.000+00	1.379−04
8	21	1.470+03	3.074+04	1.660−05	2.410−04	0.000+00	0.000+00	4.145−03
8	22	1.468+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.498−03
8	24	1.413+03	0.000+00	0.000+00	0.000+00	9.146+00	1.797−04	0.000+00
8	25	1.413+03	0.000+00	0.000+00	0.000+00	1.143+00	5.352−07	0.000+00
8	26	1.413+03	0.000+00	0.000+00	0.000+00	3.086+00	0.000+00	0.000+00
8	27	1.355+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.661−12
8	28	1.347+03	1.491+05	6.763−05	9.000−04	0.000+00	0.000+00	5.412−02
8	29	1.315+03	0.000+00	0.000+00	0.000+00	1.594−03	4.664−04	0.000+00
8	30	1.263+03	8.321+04	3.317−05	4.138−04	0.000+00	0.000+00	4.530−03
8	31	1.263+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.832−03
8	33	1.150+03	9.392+08	3.106−01	3.530+00	0.000+00	0.000+00	5.550−02
8	34	1.149+03	5.066+08	1.002−01	1.137+00	0.000+00	0.000+00	1.443−02
8	35	1.148+03	2.676+09	1.762−01	1.997+00	0.000+00	0.000+00	0.000+00
8	36	1.130+03	1.890+09	3.619−01	4.039+00	0.000+00	0.000+00	8.941−03
8	37	1.129+03	2.817+09	8.979−01	1.002+01	0.000+00	0.000+00	7.208−02
8	38	1.129+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.741−02
8	39	1.050+03	9.474+08	5.218−02	5.410−01	0.000+00	0.000+00	0.000+00
8	40	1.048+03	2.372+08	3.909−02	4.047−01	0.000+00	0.000+00	4.463−02
8	41	1.045+03	2.475+08	6.759−02	6.978−01	0.000+00	0.000+00	1.104−03
8	42	9.984+02	3.899+05	5.827−05	5.746−04	0.000+00	0.000+00	2.398−02
8	43	8.994+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.766−06
8	44	8.988+02	3.968+04	4.806−06	4.266−05	0.000+00	0.000+00	6.606−02
8	45	8.980+02	0.000+00	0.000+00	0.000+00	1.024+02	3.558−03	0.000+00
8	46	8.842+02	0.000+00	0.000+00	0.000+00	1.336+04	2.436−02	0.000+00
8	47	8.829+02	0.000+00	0.000+00	0.000+00	1.599+03	3.286−05	0.000+00
8	48	8.808+02	0.000+00	0.000+00	0.000+00	5.949+03	0.000+00	0.000+00
8	49	8.576+02	0.000+00	0.000+00	0.000+00	0.000+00	1.190−02	0.000+00
8	50	8.570+02	0.000+00	0.000+00	0.000+00	2.150+03	7.791−04	0.000+00

(*continued on next page*)

Table 2 (continued)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
8	51	8.557+02	0.000+00	0.000+00	0.000+00	4.191+03	9.084−03	0.000+00
8	52	8.484+02	0.000+00	0.000+00	0.000+00	2.675+01	2.155−02	0.000+00
8	53	8.209+02	0.000+00	0.000+00	0.000+00	4.648+00	6.383−03	0.000+00
8	54	7.646+02	0.000+00	0.000+00	0.000+00	0.000+00	8.971−02	0.000+00
8	55	7.181+02	1.656+04	2.133−06	1.513−05	0.000+00	0.000+00	7.662−04
8	56	7.140+02	2.306+05	2.937−05	2.071−04	0.000+00	0.000+00	8.248−04
8	57	7.134+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.692−04
8	59	7.087+02	1.027+07	7.734−04	5.414−03	0.000+00	0.000+00	6.826−04
8	60	7.084+02	2.008+07	2.518−03	1.761−02	0.000+00	0.000+00	1.340−03
8	61	7.080+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.721−03
8	62	6.964+02	2.671+06	3.237−04	2.227−03	0.000+00	0.000+00	5.244−04
8	63	6.958+02	4.865+06	3.531−04	2.426−03	0.000+00	0.000+00	1.581−04
8	64	6.955+02	1.637+07	3.957−04	2.718−03	0.000+00	0.000+00	0.000+00
8	66	6.945+02	0.000+00	0.000+00	0.000+00	3.979+04	1.410−06	0.000+00
8	67	6.944+02	0.000+00	0.000+00	0.000+00	6.007+04	0.000+00	0.000+00
8	69	6.905+02	0.000+00	0.000+00	0.000+00	2.644+01	0.000+00	0.000+00
8	70	6.838+02	0.000+00	0.000+00	0.000+00	1.734+02	0.000+00	0.000+00
8	73	6.759+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.285−06
8	74	6.731+02	0.000+00	0.000+00	0.000+00	6.230+02	5.481−06	0.000+00
8	75	6.717+02	0.000+00	0.000+00	0.000+00	1.905+04	0.000+00	0.000+00
8	76	6.709+02	0.000+00	0.000+00	0.000+00	5.616+03	9.223−07	0.000+00
8	77	6.706+02	0.000+00	0.000+00	0.000+00	4.821+04	1.219−04	0.000+00
8	78	6.547+02	6.393+03	4.109−07	2.657−06	0.000+00	0.000+00	3.558−02
8	79	6.016+02	0.000+00	0.000+00	0.000+00	2.454+03	4.401−09	0.000+00
8	80	6.016+02	0.000+00	0.000+00	0.000+00	3.452+03	0.000+00	0.000+00
8	82	5.763+02	0.000+00	0.000+00	0.000+00	0.000+00	1.069−03	0.000+00
8	83	5.763+02	0.000+00	0.000+00	0.000+00	2.166+01	4.929−07	0.000+00
8	84	5.763+02	0.000+00	0.000+00	0.000+00	3.867+01	9.802−04	0.000+00
8	85	5.679+02	0.000+00	0.000+00	0.000+00	4.714−02	1.308−03	0.000+00
8	87	5.469+02	0.000+00	0.000+00	0.000+00	4.166−01	1.681−04	0.000+00
8	88	5.469+02	0.000+00	0.000+00	0.000+00	3.918−03	2.200−06	0.000+00
8	89	5.469+02	0.000+00	0.000+00	0.000+00	5.674−01	0.000+00	0.000+00
8	90	5.306+02	0.000+00	0.000+00	0.000+00	6.643−03	3.704−05	0.000+00
8	91	5.129+02	0.000+00	0.000+00	0.000+00	0.000+00	5.186−02	0.000+00
8	92	5.003+02	6.681+00	4.178−10	2.065−09	0.000+00	0.000+00	5.519−03
8	93	4.961+02	3.130+05	1.155−05	5.659−05	0.000+00	0.000+00	1.698−03
8	94	4.961+02	5.668+05	3.485−05	1.708−04	0.000+00	0.000+00	1.242−05
8	95	4.960+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.068−03
8	96	4.940+02	9.505+02	5.795−08	2.827−07	0.000+00	0.000+00	3.045−04
8	97	4.939+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.322−04
8	99	4.850+02	1.077+06	6.330−05	3.032−04	0.000+00	0.000+00	7.356−04
8	100	4.849+02	1.138+06	4.012−05	1.921−04	0.000+00	0.000+00	3.128−05
8	101	4.849+02	4.455+06	5.234−05	2.506−04	0.000+00	0.000+00	0.000+00
8	102	4.792+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.833−08
8	103	4.716+02	2.387+00	7.960−11	3.708−10	0.000+00	0.000+00	3.755−03
8	104	4.450+02	0.000+00	0.000+00	0.000+00	2.865−03	0.000+00	0.000+00
8	105	4.426+02	0.000+00	0.000+00	0.000+00	7.526+01	1.190−04	0.000+00
8	106	4.426+02	0.000+00	0.000+00	0.000+00	8.198+00	6.627−07	0.000+00
8	107	4.426+02	0.000+00	0.000+00	0.000+00	3.621+01	0.000+00	0.000+00
8	108	4.411+02	0.000+00	0.000+00	0.000+00	3.847−04	5.693−05	0.000+00
8	109	4.410+02	0.000+00	0.000+00	0.000+00	1.740−02	0.000+00	0.000+00
8	112	4.364+02	0.000+00	0.000+00	0.000+00	6.660−03	2.202−04	0.000+00
8	114	4.350+02	0.000+00	0.000+00	0.000+00	1.004+03	0.000+00	0.000+00
8	115	4.350+02	0.000+00	0.000+00	0.000+00	7.047+02	4.506−11	0.000+00
8	120	4.309+02	1.406+01	6.520−10	2.775−09	0.000+00	0.000+00	1.396−02
8	121	4.309+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.995−02
8	123	4.278+02	2.259+01	1.033−09	4.365−09	0.000+00	0.000+00	2.868−03
8	124	4.270+02	0.000+00	0.000+00	0.000+00	0.000+00	2.961−04	0.000+00
8	125	4.270+02	0.000+00	0.000+00	0.000+00	6.228+02	3.902−06	0.000+00
8	126	4.270+02	0.000+00	0.000+00	0.000+00	1.127+03	3.857−04	0.000+00
8	127	4.269+02	0.000+00	0.000+00	0.000+00	1.305−01	2.704−04	0.000+00
8	129	4.252+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.652−08
8	132	4.225+02	8.381+05	2.243−05	9.359−05	0.000+00	0.000+00	1.164−03
8	133	4.225+02	1.487+06	6.634−05	2.768−04	0.000+00	0.000+00	9.158−04
8	134	4.225+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.031−04
8	135	4.207+02	2.478+05	1.096−05	4.552−05	0.000+00	0.000+00	1.345−03
8	136	4.207+02	2.741+05	7.272−06	3.022−05	0.000+00	0.000+00	1.750−03
8	137	4.207+02	1.078+06	9.530−06	3.960−05	0.000+00	0.000+00	0.000+00
8	138	4.204+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.849−07
8	140	4.113+02	1.344+02	3.411−09	1.386−08	0.000+00	0.000+00	1.211−03
8	141	4.042+02	0.000+00	0.000+00	0.000+00	0.000+00	3.247−02	0.000+00
9	10	7.150+03	0.000+00	0.000+00	0.000+00	4.204−03	1.443−06	0.000+00
9	11	7.148+03	0.000+00	0.000+00	0.000+00	3.621−03	1.539−06	0.000+00
9	12	7.147+03	0.000+00	0.000+00	0.000+00	1.539−03	1.275−06	0.000+00
9	13	4.465+03	0.000+00	0.000+00	0.000+00	6.988−08	2.164−04	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
9	14	4.015+03	0.000+00	0.000+00	0.000+00	2.168−03	0.000+00	0.000+00
9	15	3.242+03	0.000+00	0.000+00	0.000+00	7.775−02	0.000+00	0.000+00
9	16	2.417+03	0.000+00	0.000+00	0.000+00	1.500−02	1.287−02	0.000+00
9	17	2.270+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.992−06
9	18	2.269+03	3.766+05	1.744−04	6.511−03	0.000+00	0.000+00	2.657−06
9	19	2.265+03	6.502+05	5.002−04	1.865−02	0.000+00	0.000+00	8.258−06
9	20	2.176+03	6.498+04	2.768−05	9.917−04	0.000+00	0.000+00	3.680−04
9	21	1.475+03	8.699+03	2.839−06	6.893−05	0.000+00	0.000+00	5.585−04
9	22	1.473+03	5.863+04	2.671−05	6.478−04	0.000+00	0.000+00	2.987−03
9	23	1.471+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.038−02
9	24	1.418+03	0.000+00	0.000+00	0.000+00	2.820+00	3.748−05	0.000+00
9	25	1.418+03	0.000+00	0.000+00	0.000+00	6.375+00	9.930−05	0.000+00
9	26	1.418+03	0.000+00	0.000+00	0.000+00	6.956+00	1.053−04	0.000+00
9	27	1.360+03	2.179+05	8.458−05	1.893−03	0.000+00	0.000+00	1.110−05
9	28	1.352+03	2.050+05	5.616−05	1.250−03	0.000+00	0.000+00	4.008−02
9	29	1.319+03	0.000+00	0.000+00	0.000+00	5.673−01	1.463−03	0.000+00
9	30	1.267+03	2.463+04	5.928−06	1.236−04	0.000+00	0.000+00	7.250−04
9	31	1.266+03	1.441+05	4.853−05	1.012−03	0.000+00	0.000+00	2.983−03
9	32	1.266+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.742−03
9	33	1.154+03	1.699+09	3.391−01	6.440+00	0.000+00	0.000+00	2.491−01
9	34	1.152+03	1.042+09	1.244−01	2.358+00	0.000+00	0.000+00	8.079−02
9	35	1.151+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.891−03
9	36	1.133+03	1.774+08	2.050−02	3.823−01	0.000+00	0.000+00	7.600−03
9	37	1.133+03	1.308+09	2.515−01	4.689+00	0.000+00	0.000+00	1.248−02
9	38	1.132+03	4.124+09	1.109+00	2.067+01	0.000+00	0.000+00	1.979−01
9	39	1.053+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.133−02
9	40	1.051+03	3.982+08	3.958−02	6.848−01	0.000+00	0.000+00	1.468−03
9	41	1.048+03	7.324+08	1.206−01	2.081+00	0.000+00	0.000+00	3.492−02
9	42	1.001+03	2.086+06	1.880−04	3.097−03	0.000+00	0.000+00	8.116−02
9	43	9.013+02	5.232+05	8.922−05	1.324−03	0.000+00	0.000+00	5.066−05
9	44	9.008+02	2.806+04	2.048−06	3.036−05	0.000+00	0.000+00	1.988−01
9	45	9.000+02	0.000+00	0.000+00	0.000+00	2.962+01	1.644−02	0.000+00
9	46	8.861+02	0.000+00	0.000+00	0.000+00	4.161+03	4.386−03	0.000+00
9	47	8.848+02	0.000+00	0.000+00	0.000+00	9.996+03	1.337−02	0.000+00
9	48	8.827+02	0.000+00	0.000+00	0.000+00	1.182+04	1.550−02	0.000+00
9	49	8.594+02	0.000+00	0.000+00	0.000+00	9.567+03	0.000+00	0.000+00
9	50	8.588+02	0.000+00	0.000+00	0.000+00	7.338+03	1.259−02	0.000+00
9	51	8.575+02	0.000+00	0.000+00	0.000+00	3.688+03	5.744−04	0.000+00
9	52	8.502+02	0.000+00	0.000+00	0.000+00	8.346+01	3.159−02	0.000+00
9	53	8.226+02	0.000+00	0.000+00	0.000+00	1.775+00	1.930−02	0.000+00
9	54	7.660+02	0.000+00	0.000+00	0.000+00	1.607+01	0.000+00	0.000+00
9	55	7.194+02	2.365+03	1.835−07	2.173−06	0.000+00	0.000+00	9.027−04
9	56	7.152+02	5.199+04	3.987−06	4.694−05	0.000+00	0.000+00	2.736−04
9	57	7.146+02	3.651+05	3.914−05	4.604−04	0.000+00	0.000+00	3.172−04
9	58	7.135+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.695−03
9	59	7.100+02	5.291+05	2.399−05	2.803−04	0.000+00	0.000+00	3.413−04
9	60	7.097+02	5.244+06	3.960−04	4.625−03	0.000+00	0.000+00	4.086−05
9	61	7.093+02	2.441+07	2.578−03	3.010−02	0.000+00	0.000+00	1.902−03
9	62	6.976+02	1.267+07	9.248−04	1.062−02	0.000+00	0.000+00	3.733−03
9	63	6.970+02	6.652+06	2.907−04	3.335−03	0.000+00	0.000+00	7.236−04
9	64	6.967+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.383−05
9	65	6.959+02	0.000+00	0.000+00	0.000+00	4.135+04	0.000+00	0.000+00
9	66	6.957+02	0.000+00	0.000+00	0.000+00	5.038+03	4.465−07	0.000+00
9	67	6.956+02	0.000+00	0.000+00	0.000+00	2.654+04	2.224−06	0.000+00
9	68	6.948+02	0.000+00	0.000+00	0.000+00	4.526+04	0.000+00	0.000+00
9	69	6.917+02	0.000+00	0.000+00	0.000+00	1.288+02	5.923−07	0.000+00
9	70	6.849+02	0.000+00	0.000+00	0.000+00	9.463+01	2.772−08	0.000+00
9	71	6.843+02	0.000+00	0.000+00	0.000+00	2.610+02	0.000+00	0.000+00
9	73	6.770+02	7.991+04	7.687−06	8.567−05	0.000+00	0.000+00	1.837−05
9	74	6.743+02	0.000+00	0.000+00	0.000+00	2.034+03	8.751−08	0.000+00
9	75	6.728+02	0.000+00	0.000+00	0.000+00	4.482+04	7.932−05	0.000+00
9	76	6.720+02	0.000+00	0.000+00	0.000+00	3.607+04	8.737−05	0.000+00
9	77	6.717+02	0.000+00	0.000+00	0.000+00	1.602+04	3.205−05	0.000+00
9	78	6.558+02	7.387+04	2.858−06	3.085−05	0.000+00	0.000+00	1.058−01
9	79	6.025+02	0.000+00	0.000+00	0.000+00	3.629+02	2.516−07	0.000+00
9	80	6.025+02	0.000+00	0.000+00	0.000+00	1.790+03	1.695−07	0.000+00
9	81	6.025+02	0.000+00	0.000+00	0.000+00	5.269+03	0.000+00	0.000+00
9	82	5.771+02	0.000+00	0.000+00	0.000+00	8.618+01	0.000+00	0.000+00
9	83	5.771+02	0.000+00	0.000+00	0.000+00	6.458+01	1.595−03	0.000+00
9	84	5.771+02	0.000+00	0.000+00	0.000+00	3.007+01	6.032−06	0.000+00
9	85	5.687+02	0.000+00	0.000+00	0.000+00	1.231+01	4.146−03	0.000+00
9	86	5.586+02	0.000+00	0.000+00	0.000+00	1.628+00	0.000+00	0.000+00
9	87	5.476+02	0.000+00	0.000+00	0.000+00	2.953−01	3.549−05	0.000+00
9	88	5.476+02	0.000+00	0.000+00	0.000+00	6.572−01	9.362−05	0.000+00
9	89	5.476+02	0.000+00	0.000+00	0.000+00	6.915−01	1.173−04	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
9	90	5.313+02	0.000+00	0.000+00	0.000+00	1.716−01	9.888−05	0.000+00
9	91	5.136+02	0.000+00	0.000+00	0.000+00	2.089+01	0.000+00	0.000+00
9	92	5.009+02	2.040+04	7.673−07	6.327−06	0.000+00	0.000+00	4.121−03
9	93	4.967+02	1.925+04	4.272−07	3.493−06	0.000+00	0.000+00	6.102−04
9	94	4.967+02	1.771+05	6.551−06	5.356−05	0.000+00	0.000+00	1.153−03
9	95	4.966+02	7.257+05	3.757−05	3.071−04	0.000+00	0.000+00	3.965−04
9	96	4.946+02	2.697+02	9.888−09	8.050−08	0.000+00	0.000+00	7.674−05
9	97	4.945+02	1.509+03	7.746−08	6.305−07	0.000+00	0.000+00	1.675−04
9	98	4.944+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.782−04
9	99	4.855+02	3.341+06	1.181−04	9.437−04	0.000+00	0.000+00	3.002−03
9	100	4.855+02	1.842+06	3.904−05	3.120−04	0.000+00	0.000+00	1.365−03
9	101	4.854+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.828−04
9	102	4.797+02	6.197+04	2.994−06	2.364−05	0.000+00	0.000+00	1.162−03
9	103	4.722+02	9.451+01	1.895−09	1.473−08	0.000+00	0.000+00	1.138−02
9	104	4.454+02	0.000+00	0.000+00	0.000+00	1.609−01	2.080−08	0.000+00
9	105	4.431+02	0.000+00	0.000+00	0.000+00	2.485+01	2.644−05	0.000+00
9	106	4.431+02	0.000+00	0.000+00	0.000+00	5.884+01	7.546−05	0.000+00
9	107	4.431+02	0.000+00	0.000+00	0.000+00	6.872+01	3.655−05	0.000+00
9	108	4.416+02	0.000+00	0.000+00	0.000+00	5.104−02	3.587−05	0.000+00
9	109	4.415+02	0.000+00	0.000+00	0.000+00	8.335−03	5.010−10	0.000+00
9	110	4.415+02	0.000+00	0.000+00	0.000+00	3.222−02	0.000+00	0.000+00
9	112	4.369+02	0.000+00	0.000+00	0.000+00	1.963−02	4.639−04	0.000+00
9	113	4.355+02	0.000+00	0.000+00	0.000+00	1.493+03	0.000+00	0.000+00
9	114	4.355+02	0.000+00	0.000+00	0.000+00	4.998+02	1.960−07	0.000+00
9	115	4.355+02	0.000+00	0.000+00	0.000+00	1.003+02	1.746−07	0.000+00
9	116	4.342+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.223−06
9	117	4.325+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.953−14
9	120	4.313+02	3.690+00	1.029−10	7.306−10	0.000+00	0.000+00	2.002−03
9	121	4.313+02	2.548+01	9.948−10	7.063−09	0.000+00	0.000+00	9.930−03
9	122	4.313+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.008−02
9	123	4.283+02	1.186+00	3.261−11	2.299−10	0.000+00	0.000+00	2.188−03
9	124	4.275+02	0.000+00	0.000+00	0.000+00	2.475+03	0.000+00	0.000+00
9	125	4.275+02	0.000+00	0.000+00	0.000+00	1.861+03	4.423−04	0.000+00
9	126	4.275+02	0.000+00	0.000+00	0.000+00	8.733+02	3.228−06	0.000+00
9	127	4.274+02	0.000+00	0.000+00	0.000+00	1.764−01	9.628−04	0.000+00
9	128	4.272+02	0.000+00	0.000+00	0.000+00	2.464−02	0.000+00	0.000+00
9	129	4.257+02	2.544−04	9.676−15	6.780−14	0.000+00	0.000+00	8.595−09
9	130	4.257+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.256−08
9	132	4.229+02	5.598+04	9.007−07	6.270−06	0.000+00	0.000+00	2.812−04
9	133	4.229+02	4.964+05	1.331−05	9.267−05	0.000+00	0.000+00	1.570−03
9	134	4.229+02	1.944+06	7.298−05	5.081−04	0.000+00	0.000+00	4.081−03
9	135	4.211+02	7.592+05	2.018−05	1.399−04	0.000+00	0.000+00	2.258−04
9	136	4.211+02	4.259+05	6.795−06	4.710−05	0.000+00	0.000+00	2.214−03
9	137	4.211+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.713−03
9	138	4.209+02	2.012+03	7.478−08	5.181−07	0.000+00	0.000+00	1.083−06
9	140	4.118+02	1.327+03	2.024−08	1.372−07	0.000+00	0.000+00	3.546−03
9	141	4.046+02	0.000+00	0.000+00	0.000+00	2.331+00	0.000+00	0.000+00
10	11	3.306+07	0.000+00	0.000+00	0.000+00	3.310−19	6.965−10	0.000+00
10	12	1.728+07	0.000+00	0.000+00	0.000+00	1.414−18	0.000+00	0.000+00
10	13	1.189+04	0.000+00	0.000+00	0.000+00	3.240−01	0.000+00	0.000+00
10	16	3.652+03	0.000+00	0.000+00	0.000+00	2.753−08	1.856−06	0.000+00
10	18	3.323+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.091−05
10	19	3.316+03	1.322+08	1.557−01	1.189+01	0.000+00	0.000+00	1.520−03
10	20	3.128+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.834−04
10	21	1.859+03	8.159+00	3.019−09	1.293−07	0.000+00	0.000+00	2.485−04
10	22	1.856+03	1.978+04	1.021−05	4.366−04	0.000+00	0.000+00	2.294−03
10	23	1.851+03	9.413+05	6.220−04	2.654−02	0.000+00	0.000+00	7.167−03
10	24	1.769+03	0.000+00	0.000+00	0.000+00	1.293+02	0.000+00	0.000+00
10	25	1.769+03	0.000+00	0.000+00	0.000+00	7.758+02	1.404−05	0.000+00
10	26	1.769+03	0.000+00	0.000+00	0.000+00	1.330+03	1.735−05	0.000+00
10	27	1.679+03	1.032+04	4.361−06	1.688−04	0.000+00	0.000+00	1.241−02
10	28	1.667+03	4.761+04	1.417−05	5.443−04	0.000+00	0.000+00	8.841−03
10	29	1.618+03	0.000+00	0.000+00	0.000+00	1.473−03	1.627−06	0.000+00
10	30	1.540+03	1.147+07	2.912−03	1.033−01	0.000+00	0.000+00	2.985−04
10	31	1.539+03	2.811+08	9.984−02	3.541+00	0.000+00	0.000+00	5.796−03
10	32	1.538+03	2.483+09	1.132+00	4.012+01	0.000+00	0.000+00	1.491−01
10	33	1.376+03	9.968+08	2.020−01	6.405+00	0.000+00	0.000+00	1.974−02
10	34	1.373+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.017−02
10	36	1.347+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.614−03
10	37	1.346+03	9.792+07	1.899−02	5.889−01	0.000+00	0.000+00	6.907−03
10	38	1.345+03	9.455+08	2.564−01	7.946+00	0.000+00	0.000+00	2.530−02
10	40	1.232+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.761−04
10	41	1.228+03	3.796+07	6.131−03	1.735−01	0.000+00	0.000+00	2.626−03
10	42	1.164+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.824−03
10	43	1.031+03	8.164+04	1.302−05	3.094−04	0.000+00	0.000+00	1.150−02

Table 2 (continued)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
10	44	1.031+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.015−01
10	45	1.030+03	0.000+00	0.000+00	0.000+00	2.326−01	0.000+00	0.000+00
10	46	1.011+03	0.000+00	0.000+00	0.000+00	4.195−01	0.000+00	0.000+00
10	47	1.010+03	0.000+00	0.000+00	0.000+00	3.588+00	3.966−04	0.000+00
10	48	1.007+03	0.000+00	0.000+00	0.000+00	7.642+00	2.235−06	0.000+00
10	50	9.761+02	0.000+00	0.000+00	0.000+00	1.420+02	0.000+00	0.000+00
10	51	9.743+02	0.000+00	0.000+00	0.000+00	1.267+02	3.902−06	0.000+00
10	52	9.649+02	0.000+00	0.000+00	0.000+00	2.308+02	0.000+00	0.000+00
10	53	9.295+02	0.000+00	0.000+00	0.000+00	6.171−02	3.115−06	0.000+00
10	55	7.999+02	2.335+05	1.600−05	2.949−04	0.000+00	0.000+00	3.338−03
10	56	7.947+02	6.918+01	4.679−09	8.569−08	0.000+00	0.000+00	5.913−04
10	57	7.940+02	1.305+06	1.233−04	2.257−03	0.000+00	0.000+00	2.449−04
10	58	7.926+02	2.725+07	3.301−03	6.029−02	0.000+00	0.000+00	1.841−03
10	59	7.882+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.731−06
10	60	7.879+02	6.681+06	4.441−04	8.063−03	0.000+00	0.000+00	8.477−04
10	61	7.874+02	2.025+07	1.882−03	3.415−02	0.000+00	0.000+00	7.015−03
10	62	7.731+02	1.299+08	8.315−03	1.481−01	0.000+00	0.000+00	3.817−02
10	63	7.723+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.892−06
10	65	7.710+02	0.000+00	0.000+00	0.000+00	2.214+03	1.570−04	0.000+00
10	66	7.707+02	0.000+00	0.000+00	0.000+00	2.204+02	3.294−05	0.000+00
10	67	7.706+02	0.000+00	0.000+00	0.000+00	1.614+03	2.505−04	0.000+00
10	68	7.695+02	0.000+00	0.000+00	0.000+00	2.139+03	1.083−04	0.000+00
10	69	7.658+02	0.000+00	0.000+00	0.000+00	1.339+00	3.368−04	0.000+00
10	70	7.575+02	0.000+00	0.000+00	0.000+00	1.170+01	7.217−07	0.000+00
10	71	7.567+02	0.000+00	0.000+00	0.000+00	2.488+02	1.248−06	0.000+00
10	72	7.558+02	0.000+00	0.000+00	0.000+00	2.400+03	0.000+00	0.000+00
10	73	7.478+02	3.330+03	2.792−07	4.811−06	0.000+00	0.000+00	4.753−03
10	74	7.445+02	0.000+00	0.000+00	0.000+00	2.926+01	1.253−04	0.000+00
10	75	7.427+02	0.000+00	0.000+00	0.000+00	1.111+03	1.172−06	0.000+00
10	76	7.417+02	0.000+00	0.000+00	0.000+00	6.613+02	2.751−04	0.000+00
10	77	7.414+02	0.000+00	0.000+00	0.000+00	1.197+02	0.000+00	0.000+00
10	78	7.220+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.430−03
10	79	6.580+02	0.000+00	0.000+00	0.000+00	3.418+03	1.243−05	0.000+00
10	80	6.580+02	0.000+00	0.000+00	0.000+00	2.560+04	6.845−05	0.000+00
10	81	6.580+02	0.000+00	0.000+00	0.000+00	7.101+04	1.224−05	0.000+00
10	83	6.278+02	0.000+00	0.000+00	0.000+00	5.630+04	0.000+00	0.000+00
10	84	6.278+02	0.000+00	0.000+00	0.000+00	6.754+04	3.325−06	0.000+00
10	85	6.178+02	0.000+00	0.000+00	0.000+00	2.046−03	7.501−05	0.000+00
10	86	6.060+02	0.000+00	0.000+00	0.000+00	8.217−03	9.917−06	0.000+00
10	87	5.930+02	0.000+00	0.000+00	0.000+00	1.066+01	0.000+00	0.000+00
10	88	5.930+02	0.000+00	0.000+00	0.000+00	6.345+01	6.102−05	0.000+00
10	89	5.930+02	0.000+00	0.000+00	0.000+00	1.082+02	1.754−04	0.000+00
10	90	5.739+02	0.000+00	0.000+00	0.000+00	2.195−05	1.559−04	0.000+00
10	92	5.387+02	3.015+04	9.368−07	1.163−05	0.000+00	0.000+00	3.510−02
10	93	5.338+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.774−03
10	94	5.338+02	2.179+07	6.649−04	8.178−03	0.000+00	0.000+00	8.155−03
10	95	5.337+02	1.168+08	4.987−03	6.134−02	0.000+00	0.000+00	8.778−03
10	96	5.313+02	7.344+05	2.220−05	2.719−04	0.000+00	0.000+00	2.508−03
10	97	5.312+02	2.093+07	8.855−04	1.084−02	0.000+00	0.000+00	1.758−03
10	98	5.311+02	2.162+08	1.176−02	1.439−01	0.000+00	0.000+00	2.603−02
10	99	5.209+02	9.142+07	2.657−03	3.189−02	0.000+00	0.000+00	9.418−03
10	100	5.208+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.736−02
10	102	5.142+02	4.011+02	1.590−08	1.884−07	0.000+00	0.000+00	3.420−03
10	103	5.056+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.520−02
10	104	4.750+02	0.000+00	0.000+00	0.000+00	1.143−04	3.885−06	0.000+00
10	105	4.724+02	0.000+00	0.000+00	0.000+00	7.752+00	0.000+00	0.000+00
10	106	4.724+02	0.000+00	0.000+00	0.000+00	4.656+01	1.040−07	0.000+00
10	107	4.724+02	0.000+00	0.000+00	0.000+00	7.997+01	7.984−07	0.000+00
10	108	4.707+02	0.000+00	0.000+00	0.000+00	4.175−04	0.000+00	0.000+00
10	109	4.706+02	0.000+00	0.000+00	0.000+00	1.368+01	3.061−07	0.000+00
10	110	4.706+02	0.000+00	0.000+00	0.000+00	1.596+02	5.849−06	0.000+00
10	111	4.706+02	0.000+00	0.000+00	0.000+00	9.586+02	0.000+00	0.000+00
10	112	4.653+02	0.000+00	0.000+00	0.000+00	1.369+02	0.000+00	0.000+00
10	113	4.637+02	0.000+00	0.000+00	0.000+00	3.565+03	1.592−07	0.000+00
10	114	4.637+02	0.000+00	0.000+00	0.000+00	1.283+03	2.136−06	0.000+00
10	115	4.637+02	0.000+00	0.000+00	0.000+00	1.710+02	7.691−07	0.000+00
10	116	4.623+02	1.997+01	8.228−10	8.765−09	0.000+00	0.000+00	6.849−10
10	117	4.603+02	3.624−03	1.480−13	1.570−12	0.000+00	0.000+00	2.562−10
10	118	4.603+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.477−09
10	120	4.590+02	1.677+04	3.783−07	4.002−06	0.000+00	0.000+00	1.212−03
10	121	4.590+02	4.024+05	1.271−05	1.345−04	0.000+00	0.000+00	6.487−03
10	122	4.590+02	3.430+06	1.393−04	1.474−03	0.000+00	0.000+00	1.031−02
10	123	4.556+02	9.962+01	2.214−09	2.324−08	0.000+00	0.000+00	4.226−03
10	125	4.547+02	0.000+00	0.000+00	0.000+00	6.734+02	0.000+00	0.000+00
10	126	4.547+02	0.000+00	0.000+00	0.000+00	8.100+02	4.538−06	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
10	127	4.545+02	0.000+00	0.000+00	0.000+00	9.225−02	6.382−06	0.000+00
10	128	4.544+02	0.000+00	0.000+00	0.000+00	1.936−04	3.734−06	0.000+00
10	129	4.526+02	4.474+00	1.374−10	1.433−09	0.000+00	0.000+00	8.737−05
10	130	4.526+02	5.251+01	2.074−09	2.163−08	0.000+00	0.000+00	1.014−03
10	131	4.526+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.017−03
10	132	4.495+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.448−04
10	133	4.495+02	1.505+05	3.257−06	3.374−05	0.000+00	0.000+00	1.707−03
10	134	4.495+02	9.023+05	2.733−05	2.832−04	0.000+00	0.000+00	5.980−03
10	135	4.475+02	9.854+05	2.113−05	2.179−04	0.000+00	0.000+00	3.057−03
10	136	4.475+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.246−04
10	138	4.472+02	6.873+01	2.060−09	2.123−08	0.000+00	0.000+00	9.103−04
10	139	4.408+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.582−09
10	140	4.369+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.103−04
11	12	3.621+07	0.000+00	0.000+00	0.000+00	3.065−19	8.522−10	0.000+00
11	13	1.189+04	0.000+00	0.000+00	0.000+00	2.311−01	8.015−09	0.000+00
11	14	9.162+03	0.000+00	0.000+00	0.000+00	6.735−07	0.000+00	0.000+00
11	15	5.932+03	0.000+00	0.000+00	0.000+00	6.763−08	0.000+00	0.000+00
11	16	3.652+03	0.000+00	0.000+00	0.000+00	7.837−06	3.739−06	0.000+00
11	17	3.327+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.847−05
11	18	3.324+03	1.174+08	1.167−01	6.382+00	0.000+00	0.000+00	5.527−04
11	19	3.316+03	2.360+07	3.892−02	2.124+00	0.000+00	0.000+00	1.588−04
11	20	3.129+03	7.218+04	6.356−05	3.273−03	0.000+00	0.000+00	1.949−04
11	21	1.859+03	1.783+04	9.240−06	2.827−04	0.000+00	0.000+00	2.783−03
11	22	1.856+03	4.939+05	3.570−04	1.091−02	0.000+00	0.000+00	4.086−03
11	23	1.852+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.126−03
11	24	1.769+03	0.000+00	0.000+00	0.000+00	1.131+03	1.548−05	0.000+00
11	25	1.769+03	0.000+00	0.000+00	0.000+00	4.849+02	1.094−05	0.000+00
11	26	1.769+03	0.000+00	0.000+00	0.000+00	5.543+02	7.202−06	0.000+00
11	27	1.679+03	2.616+04	1.549−05	4.282−04	0.000+00	0.000+00	2.056−02
11	28	1.667+03	6.685+04	2.786−05	7.644−04	0.000+00	0.000+00	5.764−03
11	29	1.618+03	0.000+00	0.000+00	0.000+00	1.830−03	1.510−08	0.000+00
11	30	1.540+03	3.897+08	1.386−01	3.513+00	0.000+00	0.000+00	3.275−04
11	31	1.539+03	2.196+09	1.092+00	2.767+01	0.000+00	0.000+00	6.225−02
11	32	1.538+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.277−03
11	33	1.376+03	1.088+08	3.087−02	6.990−01	0.000+00	0.000+00	1.220−04
11	34	1.373+03	9.041+08	1.534−01	3.468+00	0.000+00	0.000+00	1.060−02
11	35	1.372+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.038−02
11	36	1.347+03	1.949+08	3.180−02	7.048−01	0.000+00	0.000+00	2.181−02
11	37	1.346+03	7.988+08	2.169−01	4.805+00	0.000+00	0.000+00	9.241−03
11	38	1.345+03	1.280+08	4.859−02	1.076+00	0.000+00	0.000+00	3.327−03
11	39	1.234+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.241−04
11	40	1.232+03	3.588+07	4.902−03	9.944−02	0.000+00	0.000+00	1.165−03
11	41	1.228+03	6.914+06	1.564−03	3.161−02	0.000+00	0.000+00	1.979−04
11	42	1.164+03	1.461+04	1.780−06	3.411−05	0.000+00	0.000+00	4.465−04
11	43	1.031+03	1.440+04	3.216−06	5.461−05	0.000+00	0.000+00	1.904−02
11	44	1.031+03	1.110+05	1.060−05	1.799−04	0.000+00	0.000+00	1.814−02
11	45	1.030+03	0.000+00	0.000+00	0.000+00	1.066−02	2.473−04	0.000+00
11	46	1.012+03	0.000+00	0.000+00	0.000+00	6.590+00	2.422−04	0.000+00
11	47	1.010+03	0.000+00	0.000+00	0.000+00	3.637+00	8.527−07	0.000+00
11	48	1.007+03	0.000+00	0.000+00	0.000+00	3.063+00	2.527−04	0.000+00
11	49	9.769+02	0.000+00	0.000+00	0.000+00	2.216+02	0.000+00	0.000+00
11	50	9.761+02	0.000+00	0.000+00	0.000+00	8.062+00	1.152−07	0.000+00
11	51	9.744+02	0.000+00	0.000+00	0.000+00	7.717+01	4.982−06	0.000+00
11	52	9.649+02	0.000+00	0.000+00	0.000+00	2.045+02	1.445−07	0.000+00
11	53	9.296+02	0.000+00	0.000+00	0.000+00	6.891−02	5.117−06	0.000+00
11	54	8.580+02	0.000+00	0.000+00	0.000+00	8.752−02	0.000+00	0.000+00
11	55	7.999+02	7.723+04	7.408−06	9.753−05	0.000+00	0.000+00	1.384−03
11	56	7.947+02	2.637+06	2.497−04	3.266−03	0.000+00	0.000+00	1.063−03
11	57	7.940+02	2.570+07	3.400−03	4.444−02	0.000+00	0.000+00	7.337−04
11	58	7.927+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.183−03
11	59	7.883+02	7.881+06	4.405−04	5.715−03	0.000+00	0.000+00	3.053−04
11	60	7.879+02	1.355+07	1.261−03	1.635−02	0.000+00	0.000+00	1.799−03
11	61	7.874+02	7.442+05	9.684−05	1.255−03	0.000+00	0.000+00	2.336−04
11	62	7.731+02	2.615+07	2.343−03	2.981−02	0.000+00	0.000+00	6.993−03
11	63	7.723+02	1.164+08	6.246−03	7.940−02	0.000+00	0.000+00	1.321−02
11	64	7.719+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.027−06
11	65	7.710+02	0.000+00	0.000+00	0.000+00	2.807+02	0.000+00	0.000+00
11	66	7.708+02	0.000+00	0.000+00	0.000+00	2.052+03	3.428−04	0.000+00
11	67	7.706+02	0.000+00	0.000+00	0.000+00	2.542+03	1.236−06	0.000+00
11	68	7.695+02	0.000+00	0.000+00	0.000+00	4.371+02	0.000+00	0.000+00
11	69	7.658+02	0.000+00	0.000+00	0.000+00	2.692+01	1.962−04	0.000+00
11	70	7.575+02	0.000+00	0.000+00	0.000+00	3.704+02	1.672−06	0.000+00
11	71	7.567+02	0.000+00	0.000+00	0.000+00	2.148+03	0.000+00	0.000+00
11	73	7.478+02	9.669+03	1.135−06	1.397−05	0.000+00	0.000+00	7.436−03
11	74	7.445+02	0.000+00	0.000+00	0.000+00	6.464+00	4.701−06	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
11	75	7.427+02	0.000+00	0.000+00	0.000+00	6.120+02	1.393−04	0.000+00
11	76	7.418+02	0.000+00	0.000+00	0.000+00	3.823+02	1.220−08	0.000+00
11	77	7.414+02	0.000+00	0.000+00	0.000+00	1.052+03	1.143−04	0.000+00
11	78	7.220+02	3.023+04	1.418−06	1.685−05	0.000+00	0.000+00	7.100−04
11	79	6.580+02	0.000+00	0.000+00	0.000+00	3.412+04	5.081−05	0.000+00
11	80	6.580+02	0.000+00	0.000+00	0.000+00	4.260+04	1.462−06	0.000+00
11	81	6.580+02	0.000+00	0.000+00	0.000+00	1.417+04	0.000+00	0.000+00
11	82	6.278+02	0.000+00	0.000+00	0.000+00	1.206+05	0.000+00	0.000+00
11	83	6.278+02	0.000+00	0.000+00	0.000+00	1.005+04	1.753−06	0.000+00
11	84	6.278+02	0.000+00	0.000+00	0.000+00	4.220+04	3.684−06	0.000+00
11	85	6.178+02	0.000+00	0.000+00	0.000+00	6.602−03	3.184−07	0.000+00
11	86	6.060+02	0.000+00	0.000+00	0.000+00	2.433−02	0.000+00	0.000+00
11	87	5.930+02	0.000+00	0.000+00	0.000+00	9.190+01	1.126−04	0.000+00
11	88	5.930+02	0.000+00	0.000+00	0.000+00	3.900+01	2.126−05	0.000+00
11	89	5.930+02	0.000+00	0.000+00	0.000+00	4.515+01	1.571−04	0.000+00
11	90	5.739+02	0.000+00	0.000+00	0.000+00	8.464−06	1.552−04	0.000+00
11	91	5.533+02	0.000+00	0.000+00	0.000+00	1.983−05	0.000+00	0.000+00
11	92	5.387+02	2.520+03	1.096−07	9.719−07	0.000+00	0.000+00	2.142−02
11	93	5.338+02	3.337+07	8.554−04	7.516−03	0.000+00	0.000+00	2.460−02
11	94	5.338+02	9.094+07	3.884−03	3.413−02	0.000+00	0.000+00	3.096−03
11	95	5.337+02	9.527+06	5.696−04	5.004−03	0.000+00	0.000+00	6.424−03
11	96	5.313+02	3.140+07	1.329−03	1.162−02	0.000+00	0.000+00	1.118−02
11	97	5.312+02	1.987+08	1.177−02	1.029−01	0.000+00	0.000+00	6.063−03
11	98	5.311+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.349−02
11	99	5.209+02	1.634+07	6.649−04	5.701−03	0.000+00	0.000+00	4.168−04
11	100	5.208+02	8.023+07	1.958−03	1.678−02	0.000+00	0.000+00	7.157−03
11	101	5.208+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.798−02
11	102	5.142+02	5.474+02	3.038−08	2.572−07	0.000+00	0.000+00	5.813−03
11	103	5.056+02	3.825+03	8.796−08	7.321−07	0.000+00	0.000+00	6.297−03
11	104	4.750+02	0.000+00	0.000+00	0.000+00	4.786−04	8.629−07	0.000+00
11	105	4.724+02	0.000+00	0.000+00	0.000+00	6.770+01	2.612−07	0.000+00
11	106	4.724+02	0.000+00	0.000+00	0.000+00	2.908+01	1.242−06	0.000+00
11	107	4.724+02	0.000+00	0.000+00	0.000+00	3.320+01	4.382−06	0.000+00
11	108	4.707+02	0.000+00	0.000+00	0.000+00	1.850−04	4.346−08	0.000+00
11	109	4.706+02	0.000+00	0.000+00	0.000+00	2.049+02	3.587−06	0.000+00
11	110	4.706+02	0.000+00	0.000+00	0.000+00	7.970+02	0.000+00	0.000+00
11	112	4.653+02	0.000+00	0.000+00	0.000+00	9.758+01	2.345−06	0.000+00
11	113	4.637+02	0.000+00	0.000+00	0.000+00	7.131+02	0.000+00	0.000+00
11	114	4.637+02	0.000+00	0.000+00	0.000+00	2.139+03	3.730−07	0.000+00
11	115	4.637+02	0.000+00	0.000+00	0.000+00	1.711+03	7.399−08	0.000+00
11	116	4.623+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.159−09
11	117	4.603+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.782−09
11	120	4.590+02	5.573+05	1.760−05	1.330−04	0.000+00	0.000+00	1.030−02
11	121	4.590+02	3.057+06	1.352−04	1.021−03	0.000+00	0.000+00	7.217−03
11	122	4.590+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.121−03
11	123	4.556+02	5.740+01	1.786−09	1.339−08	0.000+00	0.000+00	2.628−03
11	124	4.547+02	0.000+00	0.000+00	0.000+00	1.448+03	0.000+00	0.000+00
11	125	4.547+02	0.000+00	0.000+00	0.000+00	1.211+02	9.297−10	0.000+00
11	126	4.547+02	0.000+00	0.000+00	0.000+00	5.072+02	1.897−07	0.000+00
11	127	4.545+02	0.000+00	0.000+00	0.000+00	8.330−02	2.553−08	0.000+00
11	128	4.544+02	0.000+00	0.000+00	0.000+00	4.368−05	0.000+00	0.000+00
11	129	4.526+02	3.551+01	1.527−09	1.138−08	0.000+00	0.000+00	1.299−03
11	130	4.526+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.015−03
11	132	4.495+02	2.483+05	4.513−06	3.340−05	0.000+00	0.000+00	2.006−03
11	133	4.495+02	7.137+05	2.162−05	1.600−04	0.000+00	0.000+00	2.180−03
11	134	4.495+02	1.160+05	4.921−06	3.641−05	0.000+00	0.000+00	1.210−03
11	135	4.475+02	1.872+05	5.620−06	4.140−05	0.000+00	0.000+00	1.004−03
11	136	4.475+02	9.094+05	1.638−05	1.207−04	0.000+00	0.000+00	7.378−04
11	137	4.475+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.124−03
11	138	4.472+02	8.103−01	3.401−11	2.503−10	0.000+00	0.000+00	1.535−03
11	140	4.369+02	2.665+02	4.577−09	3.292−08	0.000+00	0.000+00	9.252−05
11	141	4.289+02	0.000+00	0.000+00	0.000+00	1.470−03	0.000+00	0.000+00
12	13	1.190+04	0.000+00	0.000+00	0.000+00	1.384−01	1.884−08	0.000+00
12	14	9.165+03	0.000+00	0.000+00	0.000+00	0.000+00	4.945−09	0.000+00
12	15	5.933+03	0.000+00	0.000+00	0.000+00	0.000+00	4.505−09	0.000+00
12	16	3.653+03	0.000+00	0.000+00	0.000+00	1.798−06	7.506−06	0.000+00
12	17	3.328+03	1.562+08	8.644−02	2.841+00	0.000+00	0.000+00	0.000+00
12	18	3.324+03	3.912+07	6.481−02	2.128+00	0.000+00	0.000+00	2.667−05
12	19	3.316+03	1.572+06	4.321−03	1.416−01	0.000+00	0.000+00	5.444−08
12	20	3.129+03	2.622+04	3.848−05	1.189−03	0.000+00	0.000+00	1.093−05
12	21	1.859+03	2.572+05	2.221−04	4.078−03	0.000+00	0.000+00	4.035−03
12	22	1.856+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.306−03
12	24	1.769+03	0.000+00	0.000+00	0.000+00	6.787+02	5.922−06	0.000+00
12	25	1.769+03	0.000+00	0.000+00	0.000+00	6.790+02	5.207−06	0.000+00
12	26	1.769+03	0.000+00	0.000+00	0.000+00	5.541+01	0.000+00	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
12	27	1.680+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.888−02
12	28	1.667+03	3.100+05	2.153−04	3.545−03	0.000+00	0.000+00	1.612−03
12	29	1.618+03	0.000+00	0.000+00	0.000+00	1.276−03	2.209−07	0.000+00
12	30	1.540+03	2.072+09	1.228+00	1.868+01	0.000+00	0.000+00	5.734−03
12	31	1.539+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.868−03
12	33	1.376+03	4.592+06	2.172−03	2.952−02	0.000+00	0.000+00	8.930−04
12	34	1.373+03	2.100+08	5.938−02	8.054−01	0.000+00	0.000+00	3.173−03
12	35	1.372+03	1.117+09	1.051−01	1.424−01	0.000+00	0.000+00	0.000+00
12	36	1.347+03	8.750+08	2.379−01	3.165+00	0.000+00	0.000+00	3.782−03
12	37	1.346+03	1.759+08	7.960−02	1.058+00	0.000+00	0.000+00	1.247−02
12	38	1.345+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.923−03
12	39	1.234+03	4.943+07	3.763−03	4.588−02	0.000+00	0.000+00	0.000+00
12	40	1.232+03	1.212+07	2.759−03	3.358−02	0.000+00	0.000+00	3.648−06
12	41	1.228+03	4.676+05	1.763−04	2.138−03	0.000+00	0.000+00	3.728−06
12	42	1.164+03	2.193+04	4.454−06	5.120−05	0.000+00	0.000+00	3.628−05
12	43	1.031+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.696−02
12	44	1.031+03	3.842+04	6.119−06	6.229−05	0.000+00	0.000+00	1.213−03
12	45	1.030+03	0.000+00	0.000+00	0.000+00	8.951−02	6.260−05	0.000+00
12	46	1.012+03	0.000+00	0.000+00	0.000+00	4.679+00	7.641−07	0.000+00
12	47	1.010+03	0.000+00	0.000+00	0.000+00	4.343+00	1.483−04	0.000+00
12	48	1.007+03	0.000+00	0.000+00	0.000+00	3.015−01	0.000+00	0.000+00
12	49	9.769+02	0.000+00	0.000+00	0.000+00	0.000+00	1.325−05	0.000+00
12	50	9.762+02	0.000+00	0.000+00	0.000+00	7.610+01	1.391−05	0.000+00
12	51	9.744+02	0.000+00	0.000+00	0.000+00	1.954+01	1.587−06	0.000+00
12	52	9.649+02	0.000+00	0.000+00	0.000+00	1.397+02	3.897−08	0.000+00
12	53	9.296+02	0.000+00	0.000+00	0.000+00	2.538−02	2.149−05	0.000+00
12	54	8.580+02	0.000+00	0.000+00	0.000+00	0.000+00	4.144−07	0.000+00
12	55	7.999+02	6.395+05	1.022−04	8.077−04	0.000+00	0.000+00	3.669−04
12	56	7.948+02	2.356+07	3.719−03	2.919−02	0.000+00	0.000+00	2.698−04
12	57	7.940+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.577−03
12	59	7.883+02	1.340+07	1.248−03	9.716−03	0.000+00	0.000+00	3.566−04
12	60	7.879+02	1.341+06	2.081−04	1.619−03	0.000+00	0.000+00	1.083−04
12	61	7.874+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.334−06
12	62	7.731+02	1.867+06	2.788−04	2.129−03	0.000+00	0.000+00	1.811−04
12	63	7.723+02	4.188+07	3.745−03	2.857−02	0.000+00	0.000+00	2.599−03
12	64	7.719+02	1.586+08	4.723−03	3.601−02	0.000+00	0.000+00	0.000+00
12	66	7.708+02	0.000+00	0.000+00	0.000+00	2.736+03	2.509−04	0.000+00
12	67	7.706+02	0.000+00	0.000+00	0.000+00	8.579+02	0.000+00	0.000+00
12	69	7.658+02	0.000+00	0.000+00	0.000+00	8.158+00	0.000+00	0.000+00
12	70	7.575+02	0.000+00	0.000+00	0.000+00	1.991+03	0.000+00	0.000+00
12	73	7.479+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.659−03
12	74	7.445+02	0.000+00	0.000+00	0.000+00	7.269+01	1.762−04	0.000+00
12	75	7.427+02	0.000+00	0.000+00	0.000+00	7.196+01	0.000+00	0.000+00
12	76	7.418+02	0.000+00	0.000+00	0.000+00	6.615+02	3.660−05	0.000+00
12	77	7.414+02	0.000+00	0.000+00	0.000+00	6.319+02	7.737−09	0.000+00
12	78	7.220+02	1.476+01	1.154−09	8.227−09	0.000+00	0.000+00	5.601−05
12	79	6.580+02	0.000+00	0.000+00	0.000+00	4.771+04	1.376−06	0.000+00
12	80	6.580+02	0.000+00	0.000+00	0.000+00	1.701+04	0.000+00	0.000+00
12	82	6.278+02	0.000+00	0.000+00	0.000+00	0.000+00	3.882−05	0.000+00
12	83	6.278+02	0.000+00	0.000+00	0.000+00	5.425+04	3.364−06	0.000+00
12	84	6.278+02	0.000+00	0.000+00	0.000+00	1.085+04	1.926−06	0.000+00
12	85	6.178+02	0.000+00	0.000+00	0.000+00	1.659−02	3.587−06	0.000+00
12	87	5.930+02	0.000+00	0.000+00	0.000+00	5.465+01	7.022−05	0.000+00
12	88	5.930+02	0.000+00	0.000+00	0.000+00	5.493+01	1.966−04	0.000+00
12	89	5.930+02	0.000+00	0.000+00	0.000+00	4.542+00	0.000+00	0.000+00
12	90	5.739+02	0.000+00	0.000+00	0.000+00	1.795−03	8.324−05	0.000+00
12	91	5.533+02	0.000+00	0.000+00	0.000+00	0.000+00	6.910−06	0.000+00
12	92	5.387+02	1.046+05	7.586−06	4.036−05	0.000+00	0.000+00	5.374−03
12	93	5.338+02	9.403+07	4.017−03	2.118−02	0.000+00	0.000+00	6.042−03
12	94	5.338+02	1.436+07	1.022−03	5.388−03	0.000+00	0.000+00	1.436−02
12	95	5.337+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.224−03
12	96	5.313+02	1.902+08	1.342−02	7.042−02	0.000+00	0.000+00	6.333−03
12	97	5.312+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.869−02
12	99	5.209+02	1.091+06	7.397−05	3.806−04	0.000+00	0.000+00	1.859−03
12	100	5.208+02	2.676+07	1.088−03	5.598−03	0.000+00	0.000+00	5.101−03
12	101	5.208+02	1.061+08	1.438−03	7.394−03	0.000+00	0.000+00	0.000+00
12	102	5.143+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.246−03
12	103	5.056+02	1.241+03	4.755−08	2.375−07	0.000+00	0.000+00	4.100−04
12	104	4.750+02	0.000+00	0.000+00	0.000+00	2.199−04	0.000+00	0.000+00
12	105	4.724+02	0.000+00	0.000+00	0.000+00	4.058+01	2.798−06	0.000+00
12	106	4.724+02	0.000+00	0.000+00	0.000+00	4.057+01	1.282−06	0.000+00
12	107	4.724+02	0.000+00	0.000+00	0.000+00	3.309+00	0.000+00	0.000+00
12	108	4.707+02	0.000+00	0.000+00	0.000+00	3.619−04	6.016−06	0.000+00
12	109	4.706+02	0.000+00	0.000+00	0.000+00	7.367+02	0.000+00	0.000+00
12	112	4.653+02	0.000+00	0.000+00	0.000+00	5.847+01	3.637−07	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
12	114	4.637+02	0.000+00	0.000+00	0.000+00	8.558+02	0.000+00	0.000+00
12	115	4.637+02	0.000+00	0.000+00	0.000+00	2.396+03	3.757−06	0.000+00
12	120	4.590+02	2.908+06	1.531−04	6.940−04	0.000+00	0.000+00	1.284−02
12	121	4.590+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.341−03
12	123	4.556+02	3.403+01	1.765−09	7.940−09	0.000+00	0.000+00	6.749−04
12	124	4.547+02	0.000+00	0.000+00	0.000+00	0.000+00	1.728−05	0.000+00
12	125	4.547+02	0.000+00	0.000+00	0.000+00	6.535+02	4.249−06	0.000+00
12	126	4.547+02	0.000+00	0.000+00	0.000+00	1.306+02	3.038−07	0.000+00
12	127	4.545+02	0.000+00	0.000+00	0.000+00	1.632−02	4.154−06	0.000+00
12	129	4.526+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.648−03
12	132	4.495+02	7.739+05	2.344−05	1.041−04	0.000+00	0.000+00	1.553−03
12	133	4.495+02	1.566+05	7.909−06	3.511−05	0.000+00	0.000+00	1.199−03
12	134	4.495+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.229−05
12	135	4.475+02	1.299+04	6.501−07	2.873−06	0.000+00	0.000+00	1.443−04
12	136	4.475+02	3.159+05	9.483−06	4.191−05	0.000+00	0.000+00	8.971−04
12	137	4.475+02	1.245+06	1.246−05	5.508−05	0.000+00	0.000+00	0.000+00
12	138	4.472+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.380−03
12	140	4.369+02	6.089+01	1.743−09	7.521−09	0.000+00	0.000+00	6.013−06
12	141	4.289+02	0.000+00	0.000+00	0.000+00	0.000+00	3.280−06	0.000+00
13	14	3.989+04	0.000+00	0.000+00	0.000+00	0.000+00	6.619−10	0.000+00
13	15	1.184+04	0.000+00	0.000+00	0.000+00	0.000+00	6.804−08	0.000+00
13	16	5.271+03	0.000+00	0.000+00	0.000+00	2.451−06	2.893−09	0.000+00
13	17	4.620+03	1.237+08	1.319−01	6.017+00	0.000+00	0.000+00	0.000+00
13	18	4.613+03	1.242+08	3.960−01	1.804+01	0.000+00	0.000+00	1.980−04
13	19	4.598+03	1.254+08	6.627−01	3.009+01	0.000+00	0.000+00	3.930−04
13	20	4.246+03	8.960+04	2.421−04	1.015−02	0.000+00	0.000+00	8.989−04
13	21	2.203+03	1.154−01	1.400−10	3.047−09	0.000+00	0.000+00	4.664−11
13	22	2.199+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.241−11
13	24	2.078+03	0.000+00	0.000+00	0.000+00	3.057+03	2.344−08	0.000+00
13	25	2.078+03	0.000+00	0.000+00	0.000+00	3.057+03	3.878−08	0.000+00
13	26	2.078+03	0.000+00	0.000+00	0.000+00	3.058+03	0.000+00	0.000+00
13	27	1.956+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.169−10
13	28	1.939+03	5.580+02	5.241−07	1.004−05	0.000+00	0.000+00	2.925−10
13	29	1.873+03	0.000+00	0.000+00	0.000+00	5.778−03	1.225−08	0.000+00
13	30	1.769+03	1.121−02	8.766−12	1.532−10	0.000+00	0.000+00	6.887−11
13	31	1.768+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.867−11
13	33	1.556+03	1.464+07	8.856−03	1.361−01	0.000+00	0.000+00	4.314−04
13	34	1.553+03	1.614+07	5.833−03	8.945−02	0.000+00	0.000+00	2.538−04
13	35	1.551+03	1.706+07	2.051−03	3.142−02	0.000+00	0.000+00	0.000+00
13	36	1.519+03	1.409+05	4.872−05	7.308−04	0.000+00	0.000+00	4.248−05
13	37	1.518+03	1.874+05	1.078−04	1.616−03	0.000+00	0.000+00	3.646−05
13	38	1.516+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.753−05
13	39	1.377+03	1.052+09	9.968−02	1.356+00	0.000+00	0.000+00	0.000+00
13	40	1.375+03	1.055+09	2.990−01	4.060+00	0.000+00	0.000+00	1.915−02
13	41	1.370+03	1.069+09	5.008−01	6.774+00	0.000+00	0.000+00	3.779−02
13	42	1.290+03	2.147+06	5.357−04	6.826−03	0.000+00	0.000+00	2.645−02
13	43	1.129+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.421−10
13	44	1.128+03	5.293+03	1.011−06	1.126−05	0.000+00	0.000+00	3.253−03
13	45	1.127+03	0.000+00	0.000+00	0.000+00	6.082−02	2.332−03	0.000+00
13	46	1.106+03	0.000+00	0.000+00	0.000+00	1.206+01	1.730−05	0.000+00
13	47	1.104+03	0.000+00	0.000+00	0.000+00	1.329+01	2.032−07	0.000+00
13	48	1.100+03	0.000+00	0.000+00	0.000+00	1.520+01	0.000+00	0.000+00
13	49	1.064+03	0.000+00	0.000+00	0.000+00	0.000+00	6.969−05	0.000+00
13	50	1.063+03	0.000+00	0.000+00	0.000+00	1.649−02	9.265−06	0.000+00
13	51	1.061+03	0.000+00	0.000+00	0.000+00	3.082−02	2.521−05	0.000+00
13	52	1.050+03	0.000+00	0.000+00	0.000+00	5.631−05	2.155−06	0.000+00
13	53	1.008+03	0.000+00	0.000+00	0.000+00	4.456−03	7.485−08	0.000+00
13	54	9.247+02	0.000+00	0.000+00	0.000+00	0.000+00	5.512−08	0.000+00
13	55	8.575+02	2.593+04	4.765−06	4.036−05	0.000+00	0.000+00	9.931−06
13	56	8.516+02	3.292+03	5.966−07	5.018−06	0.000+00	0.000+00	8.383−05
13	57	8.508+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.001−04
13	59	8.442+02	5.167+04	5.521−06	4.603−05	0.000+00	0.000+00	6.196−03
13	60	8.438+02	9.639+04	1.715−05	1.429−04	0.000+00	0.000+00	6.457−03
13	61	8.432+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.979−03
13	62	8.268+02	2.396+07	4.093−03	3.342−02	0.000+00	0.000+00	1.835−03
13	63	8.259+02	2.434+07	2.489−03	2.030−02	0.000+00	0.000+00	1.001−03
13	64	8.254+02	2.455+07	8.360−04	6.815−03	0.000+00	0.000+00	0.000+00
13	66	8.242+02	0.000+00	0.000+00	0.000+00	7.923−01	1.192−10	0.000+00
13	67	8.240+02	0.000+00	0.000+00	0.000+00	1.238+00	0.000+00	0.000+00
13	69	8.185+02	0.000+00	0.000+00	0.000+00	1.741+00	0.000+00	0.000+00
13	70	8.090+02	0.000+00	0.000+00	0.000+00	1.013−02	0.000+00	0.000+00
13	73	7.980+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.545−06
13	74	7.942+02	0.000+00	0.000+00	0.000+00	8.354+01	1.047−07	0.000+00
13	75	7.921+02	0.000+00	0.000+00	0.000+00	1.551+03	0.000+00	0.000+00
13	76	7.911+02	0.000+00	0.000+00	0.000+00	1.484+03	5.703−09	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
13	77	7.907+02	0.000+00	0.000+00	0.000+00	1.578+03	2.501−07	0.000+00
13	78	7.687+02	1.249+03	1.107−07	8.402−07	0.000+00	0.000+00	5.345−03
13	79	6.965+02	0.000+00	0.000+00	0.000+00	1.593−02	1.638−12	0.000+00
13	80	6.965+02	0.000+00	0.000+00	0.000+00	2.097−02	0.000+00	0.000+00
13	82	6.628+02	0.000+00	0.000+00	0.000+00	0.000+00	3.236−05	0.000+00
13	83	6.628+02	0.000+00	0.000+00	0.000+00	9.131−04	7.591−06	0.000+00
13	84	6.628+02	0.000+00	0.000+00	0.000+00	1.485−03	8.894−06	0.000+00
13	85	6.517+02	0.000+00	0.000+00	0.000+00	5.856−04	6.177−07	0.000+00
13	87	6.242+02	0.000+00	0.000+00	0.000+00	4.845+04	7.471−06	0.000+00
13	88	6.242+02	0.000+00	0.000+00	0.000+00	4.844+04	1.105−05	0.000+00
13	89	6.242+02	0.000+00	0.000+00	0.000+00	4.842+04	0.000+00	0.000+00
13	90	6.030+02	0.000+00	0.000+00	0.000+00	2.204−02	7.140−06	0.000+00
13	91	5.803+02	0.000+00	0.000+00	0.000+00	0.000+00	2.608−06	0.000+00
13	92	5.642+02	5.045+02	4.013−08	2.236−07	0.000+00	0.000+00	7.002−07
13	93	5.589+02	1.534+01	7.183−10	3.965−09	0.000+00	0.000+00	5.315−03
13	94	5.589+02	1.512+01	1.180−09	6.512−09	0.000+00	0.000+00	5.368−03
13	95	5.588+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.301−03
13	96	5.562+02	1.043−01	8.062−12	4.429−11	0.000+00	0.000+00	7.010−06
13	97	5.561+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.326−06
13	99	5.448+02	1.755+06	1.301−04	7.002−04	0.000+00	0.000+00	3.711−04
13	100	5.447+02	1.868+06	8.309−05	4.470−04	0.000+00	0.000+00	1.962−04
13	101	5.446+02	1.925+06	2.854−05	1.535−04	0.000+00	0.000+00	0.000+00
13	102	5.375+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.963−08
13	103	5.280+02	2.184+03	9.128−08	4.760−07	0.000+00	0.000+00	3.403−03
13	104	4.948+02	0.000+00	0.000+00	0.000+00	8.929−05	0.000+00	0.000+00
13	105	4.919+02	0.000+00	0.000+00	0.000+00	3.747+00	4.978−08	0.000+00
13	106	4.919+02	0.000+00	0.000+00	0.000+00	3.730+00	7.425−08	0.000+00
13	107	4.919+02	0.000+00	0.000+00	0.000+00	3.703+00	0.000+00	0.000+00
13	108	4.901+02	0.000+00	0.000+00	0.000+00	2.686−04	1.823−05	0.000+00
13	109	4.900+02	0.000+00	0.000+00	0.000+00	2.226−07	0.000+00	0.000+00
13	112	4.842+02	0.000+00	0.000+00	0.000+00	1.608−08	1.874−06	0.000+00
13	114	4.825+02	0.000+00	0.000+00	0.000+00	7.286−04	0.000+00	0.000+00
13	115	4.825+02	0.000+00	0.000+00	0.000+00	5.905−04	2.772−15	0.000+00
13	120	4.775+02	1.434−03	8.167−14	3.851−13	0.000+00	0.000+00	6.112−09
13	121	4.775+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.003−08
13	123	4.737+02	1.762+00	9.877−11	4.621−10	0.000+00	0.000+00	1.487−09
13	124	4.727+02	0.000+00	0.000+00	0.000+00	0.000+00	2.319−06	0.000+00
13	125	4.727+02	0.000+00	0.000+00	0.000+00	2.067−05	1.849−06	0.000+00
13	126	4.727+02	0.000+00	0.000+00	0.000+00	5.331−05	1.021−06	0.000+00
13	127	4.726+02	0.000+00	0.000+00	0.000+00	1.021−03	4.027−08	0.000+00
13	129	4.705+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.214−12
13	132	4.672+02	3.325−02	1.088−12	5.020−12	0.000+00	0.000+00	3.133−03
13	133	4.672+02	3.567−02	1.945−12	8.975−12	0.000+00	0.000+00	3.130−03
13	134	4.672+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.142−03
13	135	4.650+02	5.138+04	2.775−06	1.275−05	0.000+00	0.000+00	1.613−05
13	136	4.650+02	5.015+04	1.626−06	7.465−06	0.000+00	0.000+00	9.280−06
13	137	4.650+02	4.947+04	5.345−07	2.454−06	0.000+00	0.000+00	0.000+00
13	138	4.646+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.337−10
13	140	4.536+02	9.670+02	2.983−08	1.336−07	0.000+00	0.000+00	1.873−03
13	141	4.450+02	0.000+00	0.000+00	0.000+00	0.000+00	6.350−08	0.000+00
14	16	6.073+03	0.000+00	0.000+00	0.000+00	3.998+00	0.000+00	0.000+00
14	18	5.216+03	1.147+04	1.403−04	2.409−03	0.000+00	0.000+00	0.000+00
14	19	5.197+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.964−05
14	20	4.751+03	2.708+07	2.749−01	4.300+00	0.000+00	0.000+00	0.000+00
14	21	2.332+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.020−07
14	24	2.192+03	0.000+00	0.000+00	0.000+00	0.000+00	3.398−09	0.000+00
14	25	2.192+03	0.000+00	0.000+00	0.000+00	1.203−03	0.000+00	0.000+00
14	28	2.038+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.174−03
14	29	1.965+03	0.000+00	0.000+00	0.000+00	5.519+02	0.000+00	0.000+00
14	30	1.851+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.139−06
14	33	1.619+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.728−02
14	34	1.616+03	1.941+03	2.278−06	1.212−05	0.000+00	0.000+00	0.000+00
14	36	1.579+03	1.522+04	1.706−05	8.867−05	0.000+00	0.000+00	0.000+00
14	37	1.578+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.927−04
14	40	1.424+03	1.495+06	1.363−03	6.390−03	0.000+00	0.000+00	0.000+00
14	41	1.418+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.748−04
14	42	1.333+03	1.339+09	1.071+00	4.699+00	0.000+00	0.000+00	0.000+00
14	44	1.161+03	1.846+09	1.120+00	4.280+00	0.000+00	0.000+00	0.000+00
14	45	1.160+03	0.000+00	0.000+00	0.000+00	0.000+00	2.781−05	0.000+00
14	46	1.137+03	0.000+00	0.000+00	0.000+00	0.000+00	2.606−06	0.000+00
14	47	1.135+03	0.000+00	0.000+00	0.000+00	2.221−03	0.000+00	0.000+00
14	50	1.092+03	0.000+00	0.000+00	0.000+00	0.000+00	1.496−02	0.000+00
14	51	1.090+03	0.000+00	0.000+00	0.000+00	6.592−01	0.000+00	0.000+00
14	52	1.078+03	0.000+00	0.000+00	0.000+00	0.000+00	4.162−04	0.000+00
14	53	1.034+03	0.000+00	0.000+00	0.000+00	2.536+03	0.000+00	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
14	55	8.764+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.373−05
14	56	8.702+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.182−08
14	59	8.625+02	1.011+05	3.381−05	9.600−05	0.000+00	0.000+00	0.000+00
14	60	8.620+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.125−07
14	62	8.443+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.440−05
14	63	8.434+02	3.243+04	1.037−05	2.880−05	0.000+00	0.000+00	0.000+00
14	66	8.415+02	0.000+00	0.000+00	0.000+00	1.070+01	0.000+00	0.000+00
14	74	8.103+02	0.000+00	0.000+00	0.000+00	2.246+04	0.000+00	0.000+00
14	76	8.071+02	0.000+00	0.000+00	0.000+00	1.380+03	0.000+00	0.000+00
14	77	8.067+02	0.000+00	0.000+00	0.000+00	0.000+00	8.527−07	0.000+00
14	78	7.838+02	2.406+08	6.647−02	1.715−01	0.000+00	0.000+00	0.000+00
14	79	7.089+02	0.000+00	0.000+00	0.000+00	8.227−01	0.000+00	0.000+00
14	83	6.740+02	0.000+00	0.000+00	0.000+00	0.000+00	1.732−03	0.000+00
14	84	6.740+02	0.000+00	0.000+00	0.000+00	1.707−03	0.000+00	0.000+00
14	85	6.625+02	0.000+00	0.000+00	0.000+00	6.284−01	0.000+00	0.000+00
14	87	6.341+02	0.000+00	0.000+00	0.000+00	0.000+00	3.982−06	0.000+00
14	88	6.341+02	0.000+00	0.000+00	0.000+00	5.125−04	0.000+00	0.000+00
14	90	6.123+02	0.000+00	0.000+00	0.000+00	2.554+04	0.000+00	0.000+00
14	92	5.723+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.808−03
14	93	5.668+02	9.794+00	1.415−09	2.641−09	0.000+00	0.000+00	0.000+00
14	94	5.668+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.867−06
14	96	5.640+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.366−06
14	99	5.523+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.049−02
14	100	5.522+02	1.175+03	1.612−07	2.930−07	0.000+00	0.000+00	0.000+00
14	103	5.351+02	6.726+05	8.663−05	1.526−04	0.000+00	0.000+00	0.000+00
14	105	4.981+02	0.000+00	0.000+00	0.000+00	0.000+00	1.186−07	0.000+00
14	106	4.981+02	0.000+00	0.000+00	0.000+00	6.938−04	0.000+00	0.000+00
14	108	4.962+02	0.000+00	0.000+00	0.000+00	0.000+00	2.748−06	0.000+00
14	112	4.902+02	0.000+00	0.000+00	0.000+00	0.000+00	9.457−07	0.000+00
14	115	4.884+02	0.000+00	0.000+00	0.000+00	4.228−02	0.000+00	0.000+00
14	120	4.832+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.285−06
14	123	4.794+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.984−02
14	125	4.784+02	0.000+00	0.000+00	0.000+00	0.000+00	6.830−04	0.000+00
14	126	4.784+02	0.000+00	0.000+00	0.000+00	6.356−01	0.000+00	0.000+00
14	127	4.783+02	0.000+00	0.000+00	0.000+00	3.292+03	0.000+00	0.000+00
14	132	4.727+02	8.790−02	8.834−12	1.375−11	0.000+00	0.000+00	0.000+00
14	133	4.727+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.581−07
14	135	4.705+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.410−02
14	136	4.705+02	1.336+01	1.330−09	2.060−09	0.000+00	0.000+00	0.000+00
14	140	4.588+02	1.125+07	1.065−03	1.608−03	0.000+00	0.000+00	0.000+00
15	16	9.502+03	0.000+00	0.000+00	0.000+00	3.499−01	0.000+00	0.000+00
15	18	7.558+03	9.275+03	2.383−04	5.930−03	0.000+00	0.000+00	0.000+00
15	19	7.519+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.124−05
15	20	6.620+03	2.352+07	4.637−01	1.011+01	0.000+00	0.000+00	0.000+00
15	21	2.707+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.272−08
15	24	2.521+03	0.000+00	0.000+00	0.000+00	0.000+00	2.834−08	0.000+00
15	25	2.521+03	0.000+00	0.000+00	0.000+00	1.015−03	0.000+00	0.000+00
15	28	2.319+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.257−04
15	29	2.225+03	0.000+00	0.000+00	0.000+00	1.265+03	0.000+00	0.000+00
15	30	2.080+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.633−07
15	33	1.791+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.469−03
15	34	1.787+03	1.396+03	2.005−06	1.179−05	0.000+00	0.000+00	0.000+00
15	36	1.742+03	3.295+02	4.498−07	2.580−06	0.000+00	0.000+00	0.000+00
15	37	1.741+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.531−05
15	40	1.556+03	6.290+05	6.845−04	3.505−03	0.000+00	0.000+00	0.000+00
15	41	1.549+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.964−02
15	42	1.448+03	4.239+08	3.997−01	1.905−00	0.000+00	0.000+00	0.000+00
15	44	1.247+03	1.061+09	7.427−01	3.050+00	0.000+00	0.000+00	0.000+00
15	45	1.246+03	0.000+00	0.000+00	0.000+00	0.000+00	8.309−06	0.000+00
15	46	1.219+03	0.000+00	0.000+00	0.000+00	0.000+00	1.398−06	0.000+00
15	47	1.217+03	0.000+00	0.000+00	0.000+00	2.550−02	0.000+00	0.000+00
15	50	1.168+03	0.000+00	0.000+00	0.000+00	0.000+00	5.319−04	0.000+00
15	51	1.166+03	0.000+00	0.000+00	0.000+00	3.829−01	0.000+00	0.000+00
15	52	1.152+03	0.000+00	0.000+00	0.000+00	0.000+00	1.412−06	0.000+00
15	53	1.102+03	0.000+00	0.000+00	0.000+00	1.436+03	0.000+00	0.000+00
15	55	9.245+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.480−03
15	56	9.177+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.587−04
15	59	9.090+02	3.505+04	1.303−05	3.899−05	0.000+00	0.000+00	0.000+00
15	60	9.086+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.319−04
15	62	8.889+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.250−02
15	63	8.879+02	1.132+04	4.012−06	1.173−05	0.000+00	0.000+00	0.000+00
15	66	8.858+02	0.000+00	0.000+00	0.000+00	2.241+01	0.000+00	0.000+00
15	74	8.513+02	0.000+00	0.000+00	0.000+00	2.456+04	0.000+00	0.000+00
15	76	8.478+02	0.000+00	0.000+00	0.000+00	1.436+03	0.000+00	0.000+00
15	77	8.473+02	0.000+00	0.000+00	0.000+00	0.000+00	3.413−08	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
15	78	8.221+02	3.686+07	1.120−02	3.032−02	0.000+00	0.000+00	0.000+00
15	79	7.401+02	0.000+00	0.000+00	0.000+00	3.346−01	0.000+00	0.000+00
15	83	7.021+02	0.000+00	0.000+00	0.000+00	0.000+00	4.535−04	0.000+00
15	84	7.021+02	0.000+00	0.000+00	0.000+00	9.209−04	0.000+00	0.000+00
15	85	6.897+02	0.000+00	0.000+00	0.000+00	8.929+03	0.000+00	0.000+00
15	87	6.589+02	0.000+00	0.000+00	0.000+00	0.000+00	7.772−06	0.000+00
15	88	6.589+02	0.000+00	0.000+00	0.000+00	2.819−02	0.000+00	0.000+00
15	90	6.354+02	0.000+00	0.000+00	0.000+00	1.961+04	0.000+00	0.000+00
15	92	5.925+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.483−02
15	93	5.866+02	2.154+03	3.333−07	6.436−07	0.000+00	0.000+00	0.000+00
15	94	5.865+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.045−05
15	96	5.836+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.636−06
15	99	5.711+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.355−02
15	100	5.710+02	2.446+03	3.586−07	6.741−07	0.000+00	0.000+00	0.000+00
15	103	5.527+02	7.492+06	1.029−03	1.873−03	0.000+00	0.000+00	0.000+00
15	105	5.133+02	0.000+00	0.000+00	0.000+00	0.000+00	8.995−08	0.000+00
15	106	5.133+02	0.000+00	0.000+00	0.000+00	1.246−05	0.000+00	0.000+00
15	108	5.112+02	0.000+00	0.000+00	0.000+00	0.000+00	5.096−06	0.000+00
15	112	5.049+02	0.000+00	0.000+00	0.000+00	0.000+00	5.649−06	0.000+00
15	115	5.030+02	0.000+00	0.000+00	0.000+00	1.141−02	0.000+00	0.000+00
15	120	4.975+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.514−07
15	123	4.935+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.091−03
15	125	4.924+02	0.000+00	0.000+00	0.000+00	0.000+00	1.252−05	0.000+00
15	126	4.924+02	0.000+00	0.000+00	0.000+00	5.153−02	0.000+00	0.000+00
15	127	4.923+02	0.000+00	0.000+00	0.000+00	1.656+02	0.000+00	0.000+00
15	132	4.864+02	4.877+00	5.188−10	8.308−10	0.000+00	0.000+00	0.000+00
15	133	4.864+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.735−08
15	135	4.840+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.189−03
15	136	4.840+02	1.839−01	1.937−11	3.087−11	0.000+00	0.000+00	0.000+00
15	140	4.717+02	7.048+06	7.052−04	1.095−03	0.000+00	0.000+00	0.000+00
16	17	3.739+04	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.590−09
16	18	3.695+04	1.233+02	1.515−05	9.213−03	0.000+00	0.000+00	5.765−09
16	19	3.604+04	8.337−04	1.623−10	9.629−08	0.000+00	0.000+00	3.193−09
16	20	2.183+04	1.034+06	4.433−02	1.593+01	0.000+00	0.000+00	7.876−08
16	21	3.786+03	1.535+03	3.299−06	2.056−04	0.000+00	0.000+00	1.031−05
16	22	3.773+03	2.002+02	5.982−07	3.715−05	0.000+00	0.000+00	5.227−05
16	23	3.755+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.615−04
16	24	3.431+03	0.000+00	0.000+00	0.000+00	5.133−05	6.435−05	0.000+00
16	25	3.431+03	0.000+00	0.000+00	0.000+00	2.450−04	4.889−06	0.000+00
16	26	3.430+03	0.000+00	0.000+00	0.000+00	2.126−05	4.314−05	0.000+00
16	27	3.109+03	2.050+08	4.160−01	2.129+01	0.000+00	0.000+00	2.824−03
16	28	3.067+03	1.236+07	1.743−02	8.802−01	0.000+00	0.000+00	1.832−04
16	29	2.905+03	0.000+00	0.000+00	0.000+00	4.437+02	2.576−06	0.000+00
16	30	2.663+03	3.522+03	3.744−06	1.641−04	0.000+00	0.000+00	2.691−04
16	31	2.660+03	1.924+04	2.858−05	1.252−03	0.000+00	0.000+00	1.316−03
16	32	2.657+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.810−03
16	33	2.207+03	6.776+02	4.949−07	1.798−05	0.000+00	0.000+00	2.103−04
16	34	2.201+03	7.414+03	3.231−06	1.171−04	0.000+00	0.000+00	6.501−04
16	35	2.198+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.098−03
16	36	2.133+03	1.652+04	6.763−06	2.375−04	0.000+00	0.000+00	1.729−03
16	37	2.131+03	3.361+03	2.288−06	8.027−05	0.000+00	0.000+00	3.823−03
16	38	2.129+03	2.713+04	2.581−05	9.044−04	0.000+00	0.000+00	4.182−03
16	39	1.864+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.430−03
16	40	1.860+03	8.344+05	2.596−04	7.950−03	0.000+00	0.000+00	2.731−03
16	41	1.850+03	3.133+03	1.608−06	4.897−05	0.000+00	0.000+00	1.260−03
16	42	1.708+03	5.627+08	1.477−01	4.153+00	0.000+00	0.000+00	8.105−04
16	43	1.437+03	4.683+09	2.031+00	4.804+01	0.000+00	0.000+00	3.287−02
16	44	1.436+03	7.897+08	1.464−01	3.461+00	0.000+00	0.000+00	2.198−03
16	45	1.434+03	0.000+00	0.000+00	0.000+00	2.748+03	6.807−05	0.000+00
16	46	1.399+03	0.000+00	0.000+00	0.000+00	2.700+01	1.392−02	0.000+00
16	47	1.396+03	0.000+00	0.000+00	0.000+00	4.890−01	1.636−03	0.000+00
16	48	1.390+03	0.000+00	0.000+00	0.000+00	2.233−02	5.676−03	0.000+00
16	49	1.334+03	0.000+00	0.000+00	0.000+00	8.779−01	0.000+00	0.000+00
16	50	1.332+03	0.000+00	0.000+00	0.000+00	1.207+00	8.294−04	0.000+00
16	51	1.329+03	0.000+00	0.000+00	0.000+00	2.101+00	1.287−03	0.000+00
16	52	1.311+03	0.000+00	0.000+00	0.000+00	1.481+00	1.151−05	0.000+00
16	53	1.247+03	0.000+00	0.000+00	0.000+00	3.557+03	2.116−05	0.000+00
16	54	1.121+03	0.000+00	0.000+00	0.000+00	4.218+03	0.000+00	0.000+00
16	55	1.024+03	3.334+07	5.243−03	8.839−02	0.000+00	0.000+00	1.576−02
16	56	1.016+03	1.060+06	1.640−04	2.743−03	0.000+00	0.000+00	4.993−04
16	57	1.015+03	8.974+04	1.939−05	3.238−04	0.000+00	0.000+00	6.905−05
16	58	1.012+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.249−03
16	59	1.005+03	4.158+04	3.779−06	6.253−05	0.000+00	0.000+00	3.458−03
16	60	1.005+03	1.091+05	1.650−05	2.729−04	0.000+00	0.000+00	7.365−03
16	61	1.004+03	3.984+04	8.426−06	1.392−04	0.000+00	0.000+00	1.114−02

Table 2 (continued)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
16	62	9.807+02	3.832+04	5.524−06	8.917−05	0.000+00	0.000+00	1.550−02
16	63	9.794+02	2.211+04	1.908−06	3.075−05	0.000+00	0.000+00	2.830−02
16	64	9.787+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.736−02
16	65	9.773+02	0.000+00	0.000+00	0.000+00	1.541+03	0.000+00	0.000+00
16	66	9.769+02	0.000+00	0.000+00	0.000+00	5.259−01	4.481−04	0.000+00
16	67	9.766+02	0.000+00	0.000+00	0.000+00	2.384+01	7.368−04	0.000+00
16	68	9.750+02	0.000+00	0.000+00	0.000+00	1.565+03	0.000+00	0.000+00
16	69	9.690+02	0.000+00	0.000+00	0.000+00	1.016+04	1.019−06	0.000+00
16	70	9.558+02	0.000+00	0.000+00	0.000+00	1.104+02	1.131−07	0.000+00
16	71	9.545+02	0.000+00	0.000+00	0.000+00	9.216+00	0.000+00	0.000+00
16	73	9.404+02	6.269+07	1.164−02	1.801−01	0.000+00	0.000+00	6.380−03
16	74	9.351+02	0.000+00	0.000+00	0.000+00	1.072+03	1.381−05	0.000+00
16	75	9.322+02	0.000+00	0.000+00	0.000+00	1.643+01	4.417−04	0.000+00
16	76	9.308+02	0.000+00	0.000+00	0.000+00	5.922+01	1.550−04	0.000+00
16	77	9.302+02	0.000+00	0.000+00	0.000+00	3.989−02	1.163−03	0.000+00
16	78	9.000+02	1.237+08	9.012−03	1.335−01	0.000+00	0.000+00	3.587−02
16	79	8.026+02	0.000+00	0.000+00	0.000+00	9.138−02	7.729−05	0.000+00
16	80	8.026+02	0.000+00	0.000+00	0.000+00	1.582−04	3.708−05	0.000+00
16	81	8.026+02	0.000+00	0.000+00	0.000+00	8.298−04	0.000+00	0.000+00
16	82	7.581+02	0.000+00	0.000+00	0.000+00	1.642−03	0.000+00	0.000+00
16	83	7.581+02	0.000+00	0.000+00	0.000+00	7.117−04	2.699−04	0.000+00
16	84	7.581+02	0.000+00	0.000+00	0.000+00	2.312−04	3.112−04	0.000+00
16	85	7.436+02	0.000+00	0.000+00	0.000+00	2.640+04	2.270−07	0.000+00
16	86	7.265+02	0.000+00	0.000+00	0.000+00	4.739+04	0.000+00	0.000+00
16	87	7.080+02	0.000+00	0.000+00	0.000+00	1.814−04	3.332−04	0.000+00
16	88	7.080+02	0.000+00	0.000+00	0.000+00	3.968−04	1.398−04	0.000+00
16	89	7.080+02	0.000+00	0.000+00	0.000+00	1.015−03	1.431−06	0.000+00
16	90	6.809+02	0.000+00	0.000+00	0.000+00	3.500+03	3.864−07	0.000+00
16	91	6.522+02	0.000+00	0.000+00	0.000+00	6.803+04	0.000+00	0.000+00
16	92	6.319+02	6.142+07	3.676−03	3.824−02	0.000+00	0.000+00	1.374−05
16	93	6.252+02	1.025+04	3.605−07	3.710−06	0.000+00	0.000+00	1.031−02
16	94	6.251+02	8.040+02	4.710−08	4.847−07	0.000+00	0.000+00	2.435−02
16	95	6.251+02	1.404+04	1.151−06	1.184−05	0.000+00	0.000+00	2.811−02
16	96	6.218+02	9.531+02	5.524−08	5.654−07	0.000+00	0.000+00	1.995−05
16	97	6.216+02	2.258+04	1.831−06	1.874−05	0.000+00	0.000+00	2.548−05
16	98	6.215+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.639−05
16	99	6.076+02	5.838+02	3.231−08	3.232−07	0.000+00	0.000+00	1.993−03
16	100	6.075+02	5.131+03	1.703−07	1.703−06	0.000+00	0.000+00	4.116−03
16	101	6.074+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.263−03
16	102	5.985+02	1.716+08	1.291−02	1.271−01	0.000+00	0.000+00	2.932−04
16	103	5.868+02	3.378+07	1.046−03	1.011−02	0.000+00	0.000+00	4.446−03
16	104	5.461+02	0.000+00	0.000+00	0.000+00	9.691+03	1.275−06	0.000+00
16	105	5.426+02	0.000+00	0.000+00	0.000+00	3.417−03	1.161−04	0.000+00
16	106	5.426+02	0.000+00	0.000+00	0.000+00	3.930−03	1.522−06	0.000+00
16	107	5.426+02	0.000+00	0.000+00	0.000+00	2.513−02	4.237−05	0.000+00
16	108	5.403+02	0.000+00	0.000+00	0.000+00	9.519+03	1.818−06	0.000+00
16	109	5.402+02	0.000+00	0.000+00	0.000+00	1.350−02	4.471−06	0.000+00
16	110	5.402+02	0.000+00	0.000+00	0.000+00	2.260−02	0.000+00	0.000+00
16	112	5.332+02	0.000+00	0.000+00	0.000+00	1.693−02	1.972−06	0.000+00
16	113	5.312+02	0.000+00	0.000+00	0.000+00	5.153−03	0.000+00	0.000+00
16	114	5.312+02	0.000+00	0.000+00	0.000+00	1.766−04	1.192−06	0.000+00
16	115	5.312+02	0.000+00	0.000+00	0.000+00	2.572−03	1.194−06	0.000+00
16	116	5.293+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.081−03
16	117	5.267+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.459−09
16	120	5.250+02	4.849+02	2.004−08	1.732−07	0.000+00	0.000+00	1.390−04
16	121	5.250+02	1.185+02	6.855−09	5.924−08	0.000+00	0.000+00	6.644−04
16	122	5.250+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.071−03
16	123	5.205+02	1.519+05	6.168−06	5.285−05	0.000+00	0.000+00	6.998−02
16	124	5.193+02	0.000+00	0.000+00	0.000+00	8.754−05	0.000+00	0.000+00
16	125	5.193+02	0.000+00	0.000+00	0.000+00	1.838−03	6.350−05	0.000+00
16	126	5.193+02	0.000+00	0.000+00	0.000+00	1.943+00	9.406−05	0.000+00
16	127	5.192+02	0.000+00	0.000+00	0.000+00	1.565+03	4.134−06	0.000+00
16	128	5.189+02	0.000+00	0.000+00	0.000+00	1.468+04	0.000+00	0.000+00
16	129	5.167+02	1.389+02	7.785−09	6.621−08	0.000+00	0.000+00	9.337−09
16	130	5.167+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.236−12
16	132	5.126+02	5.755+02	1.360−08	1.148−07	0.000+00	0.000+00	6.800−03
16	133	5.126+02	7.517+01	2.961−09	2.499−08	0.000+00	0.000+00	1.584−02
16	134	5.126+02	5.320+01	2.934−09	2.476−08	0.000+00	0.000+00	1.812−02
16	135	5.100+02	2.770+02	1.080−08	9.067−08	0.000+00	0.000+00	3.162−03
16	136	5.100+02	1.561+02	3.651−09	3.065−08	0.000+00	0.000+00	6.750−03
16	137	5.100+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.111−03
16	138	5.096+02	1.577+06	8.594−05	7.209−04	0.000+00	0.000+00	6.263−02
16	140	4.963+02	1.941+07	4.300−04	3.513−03	0.000+00	0.000+00	4.874−04
16	141	4.860+02	0.000+00	0.000+00	0.000+00	8.467+03	0.000+00	0.000+00
17	18	3.107+06	0.000+00	0.000+00	0.000+00	0.000+00	5.991−07	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
17	19	9.937+05	0.000+00	0.000+00	0.000+00	7.460−11	0.000+00	0.000+00
17	20	5.245+04	0.000+00	0.000+00	0.000+00	0.000+00	7.209−05	0.000+00
17	21	4.213+03	0.000+00	0.000+00	0.000+00	3.030+01	0.000+00	0.000+00
17	24	3.777+03	1.739+08	1.116+00	1.387+01	0.000+00	0.000+00	0.000+00
17	25	3.777+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.309−05
17	28	3.341+03	0.000+00	0.000+00	0.000+00	1.324−01	0.000+00	0.000+00
17	29	3.149+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.201−04
17	30	2.867+03	0.000+00	0.000+00	0.000+00	4.516+02	0.000+00	0.000+00
17	33	2.346+03	0.000+00	0.000+00	0.000+00	1.417−01	0.000+00	0.000+00
17	34	2.339+03	0.000+00	0.000+00	0.000+00	0.000+00	1.455−06	0.000+00
17	36	2.262+03	0.000+00	0.000+00	0.000+00	0.000+00	3.552−06	0.000+00
17	37	2.260+03	0.000+00	0.000+00	0.000+00	9.462−02	0.000+00	0.000+00
17	40	1.957+03	0.000+00	0.000+00	0.000+00	0.000+00	1.035−04	0.000+00
17	41	1.947+03	0.000+00	0.000+00	0.000+00	5.696−01	0.000+00	0.000+00
17	42	1.790+03	0.000+00	0.000+00	0.000+00	0.000+00	1.524−04	0.000+00
17	44	1.493+03	0.000+00	0.000+00	0.000+00	0.000+00	3.630−04	0.000+00
17	45	1.491+03	4.645+06	4.644−03	2.280−02	0.000+00	0.000+00	0.000+00
17	46	1.453+03	5.325+08	5.058−01	2.420+00	0.000+00	0.000+00	0.000+00
17	47	1.450+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.331−03
17	50	1.381+03	3.304+08	2.835−01	1.289+00	0.000+00	0.000+00	0.000+00
17	51	1.378+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.119−03
17	52	1.359+03	1.608+08	1.335−01	5.974−01	0.000+00	0.000+00	0.000+00
17	53	1.290+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.822−03
17	55	1.053+03	0.000+00	0.000+00	0.000+00	3.987+00	0.000+00	0.000+00
17	56	1.044+03	0.000+00	0.000+00	0.000+00	1.323+02	0.000+00	0.000+00
17	59	1.033+03	0.000+00	0.000+00	0.000+00	0.000+00	1.344−04	0.000+00
17	60	1.032+03	0.000+00	0.000+00	0.000+00	7.806+01	0.000+00	0.000+00
17	62	1.007+03	0.000+00	0.000+00	0.000+00	8.964+01	0.000+00	0.000+00
17	63	1.006+03	0.000+00	0.000+00	0.000+00	0.000+00	7.243−05	0.000+00
17	66	1.003+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.842−04
17	74	9.591+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.076−04
17	76	9.545+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.769−04
17	77	9.539+02	2.586+01	1.058−08	3.324−08	0.000+00	0.000+00	0.000+00
17	78	9.222+02	0.000+00	0.000+00	0.000+00	0.000+00	2.146−05	0.000+00
17	79	8.202+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.381−04
17	83	7.738+02	3.462+05	9.321−05	2.374−04	0.000+00	0.000+00	0.000+00
17	84	7.738+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.394−07
17	85	7.587+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.237−04
17	87	7.217+02	9.615+05	2.252−04	5.351−04	0.000+00	0.000+00	0.000+00
17	88	7.217+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.409−04
17	90	6.935+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.994−05
17	92	6.427+02	0.000+00	0.000+00	0.000+00	2.810−01	0.000+00	0.000+00
17	93	6.358+02	0.000+00	0.000+00	0.000+00	0.000+00	2.269−06	0.000+00
17	94	6.358+02	0.000+00	0.000+00	0.000+00	1.733+04	0.000+00	0.000+00
17	96	6.323+02	0.000+00	0.000+00	0.000+00	2.522+04	0.000+00	0.000+00
17	99	6.176+02	0.000+00	0.000+00	0.000+00	1.117+04	0.000+00	0.000+00
17	100	6.175+02	0.000+00	0.000+00	0.000+00	0.000+00	2.195−06	0.000+00
17	103	5.962+02	0.000+00	0.000+00	0.000+00	0.000+00	1.035−07	0.000+00
17	105	5.506+02	1.289+06	1.757−04	3.185−04	0.000+00	0.000+00	0.000+00
17	106	5.506+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.566−03
17	108	5.482+02	1.282+02	1.733−08	3.129−08	0.000+00	0.000+00	0.000+00
17	112	5.409+02	6.209+05	8.171−05	1.455−04	0.000+00	0.000+00	0.000+00
17	115	5.388+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.109−03
17	120	5.325+02	0.000+00	0.000+00	0.000+00	2.577+02	0.000+00	0.000+00
17	123	5.278+02	0.000+00	0.000+00	0.000+00	2.954−06	0.000+00	0.000+00
17	125	5.266+02	8.988+05	1.121−04	1.944−04	0.000+00	0.000+00	0.000+00
17	126	5.266+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.413−07
17	127	5.265+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.234−04
17	132	5.197+02	0.000+00	0.000+00	0.000+00	0.000+00	8.406−07	0.000+00
17	133	5.197+02	0.000+00	0.000+00	0.000+00	7.212+01	0.000+00	0.000+00
17	135	5.170+02	0.000+00	0.000+00	0.000+00	1.028+01	0.000+00	0.000+00
17	136	5.170+02	0.000+00	0.000+00	0.000+00	0.000+00	2.707−06	0.000+00
17	140	5.030+02	0.000+00	0.000+00	0.000+00	0.000+00	7.278−05	0.000+00
18	19	1.461+06	0.000+00	0.000+00	0.000+00	2.444−11	4.321−06	0.000+00
18	20	5.336+04	0.000+00	0.000+00	0.000+00	9.930−07	5.156−05	0.000+00
18	21	4.218+03	0.000+00	0.000+00	0.000+00	3.010+01	1.199−10	0.000+00
18	22	4.202+03	0.000+00	0.000+00	0.000+00	4.452+01	0.000+00	0.000+00
18	24	3.782+03	1.300+08	2.788−01	1.041+01	0.000+00	0.000+00	7.467−05
18	25	3.782+03	2.341+08	8.366−01	3.125+01	0.000+00	0.000+00	8.587−04
18	26	3.782+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.367−05
18	27	3.395+03	0.000+00	0.000+00	0.000+00	4.690−01	0.000+00	0.000+00
18	28	3.345+03	0.000+00	0.000+00	0.000+00	1.654−01	8.633−07	0.000+00
18	29	3.152+03	2.203+05	5.471−04	1.703−02	0.000+00	0.000+00	1.766−03
18	30	2.870+03	0.000+00	0.000+00	0.000+00	4.498+02	2.255−08	0.000+00
18	31	2.867+03	0.000+00	0.000+00	0.000+00	6.413+02	0.000+00	0.000+00

Table 2 (continued)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
18	33	2.348+03	0.000+00	0.000+00	0.000+00	2.563−01	6.888−06	0.000+00
18	34	2.340+03	0.000+00	0.000+00	0.000+00	1.645−01	4.603−08	0.000+00
18	35	2.336+03	0.000+00	0.000+00	0.000+00	0.000+00	5.645−06	0.000+00
18	36	2.264+03	0.000+00	0.000+00	0.000+00	9.477−02	7.724−06	0.000+00
18	37	2.262+03	0.000+00	0.000+00	0.000+00	2.614−03	1.506−07	0.000+00
18	38	2.259+03	0.000+00	0.000+00	0.000+00	1.564−01	0.000+00	0.000+00
18	39	1.964+03	0.000+00	0.000+00	0.000+00	0.000+00	3.731−04	0.000+00
18	40	1.958+03	0.000+00	0.000+00	0.000+00	7.445−01	3.345−06	0.000+00
18	41	1.948+03	0.000+00	0.000+00	0.000+00	1.290+00	3.140−04	0.000+00
18	42	1.791+03	0.000+00	0.000+00	0.000+00	1.301−01	1.154−04	0.000+00
18	43	1.496+03	0.000+00	0.000+00	0.000+00	5.435−01	0.000+00	0.000+00
18	44	1.494+03	0.000+00	0.000+00	0.000+00	4.936−01	2.710−04	0.000+00
18	45	1.492+03	8.776+06	2.928−03	4.313−02	0.000+00	0.000+00	5.184−03
18	46	1.454+03	4.173+08	1.322−01	1.899+00	0.000+00	0.000+00	2.671−03
18	47	1.451+03	7.277+08	3.826−01	5.481+00	0.000+00	0.000+00	1.230−02
18	48	1.445+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.200−03
18	49	1.384+03	1.064+09	1.018−01	1.391+00	0.000+00	0.000+00	0.000+00
18	50	1.382+03	1.941+08	5.559−02	7.587−01	0.000+00	0.000+00	2.209−02
18	51	1.378+03	2.950+08	1.401−01	1.907+00	0.000+00	0.000+00	4.857−05
18	52	1.360+03	4.035+08	1.118−01	1.502+00	0.000+00	0.000+00	1.004−02
18	53	1.290+03	5.624+05	2.340−04	2.983−03	0.000+00	0.000+00	1.403−02
18	54	1.156+03	1.849+04	1.236−06	1.412−05	0.000+00	0.000+00	0.000+00
18	55	1.053+03	0.000+00	0.000+00	0.000+00	2.569+00	1.303−04	0.000+00
18	56	1.044+03	0.000+00	0.000+00	0.000+00	1.604+02	2.876−06	0.000+00
18	57	1.043+03	0.000+00	0.000+00	0.000+00	1.899+02	0.000+00	0.000+00
18	59	1.033+03	0.000+00	0.000+00	0.000+00	1.357+02	3.928−04	0.000+00
18	60	1.033+03	0.000+00	0.000+00	0.000+00	3.065+00	2.521−08	0.000+00
18	61	1.032+03	0.000+00	0.000+00	0.000+00	1.018+02	0.000+00	0.000+00
18	62	1.007+03	0.000+00	0.000+00	0.000+00	1.841+02	2.405−04	0.000+00
18	63	1.006+03	0.000+00	0.000+00	0.000+00	1.116+02	1.978−06	0.000+00
18	64	1.005+03	0.000+00	0.000+00	0.000+00	0.000+00	2.378−04	0.000+00
18	66	1.004+03	1.215+02	3.057−08	3.029−07	0.000+00	0.000+00	9.071−04
18	67	1.003+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.314−03
18	69	9.950+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.731−06
18	70	9.811+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.981−06
18	73	9.650+02	0.000+00	0.000+00	0.000+00	7.584+00	0.000+00	0.000+00
18	74	9.594+02	1.347+03	3.098−07	2.935−06	0.000+00	0.000+00	8.697−04
18	75	9.564+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.866−04
18	76	9.548+02	1.943+02	4.427−08	4.175−07	0.000+00	0.000+00	2.726−04
18	77	9.542+02	9.389+01	1.282−08	1.208−07	0.000+00	0.000+00	1.033−03
18	78	9.224+02	0.000+00	0.000+00	0.000+00	1.508+00	2.217−05	0.000+00
18	79	8.204+02	4.168+00	7.010−10	5.680−09	0.000+00	0.000+00	1.372−04
18	80	8.204+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.980−04
18	82	7.740+02	1.069+06	3.199−05	2.446−04	0.000+00	0.000+00	0.000+00
18	83	7.740+02	2.619+05	2.352−05	1.798−04	0.000+00	0.000+00	4.941−06
18	84	7.740+02	2.558+05	3.828−05	2.926−04	0.000+00	0.000+00	2.925−05
18	85	7.589+02	7.747+02	1.115−07	8.356−07	0.000+00	0.000+00	4.513−04
18	87	7.218+02	7.299+05	5.701−05	4.065−04	0.000+00	0.000+00	2.238−03
18	88	7.218+02	1.229+06	1.600−04	1.141−03	0.000+00	0.000+00	7.289−04
18	89	7.218+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.612−04
18	90	6.937+02	1.352+04	1.625−06	1.113−05	0.000+00	0.000+00	5.580−05
18	91	6.639+02	1.952+04	4.299−07	2.819−06	0.000+00	0.000+00	0.000+00
18	92	6.429+02	0.000+00	0.000+00	0.000+00	7.956+01	3.188−06	0.000+00
18	93	6.359+02	0.000+00	0.000+00	0.000+00	3.539+04	4.852−06	0.000+00
18	94	6.359+02	0.000+00	0.000+00	0.000+00	3.359+03	5.439−06	0.000+00
18	95	6.358+02	0.000+00	0.000+00	0.000+00	1.765+04	0.000+00	0.000+00
18	96	6.324+02	0.000+00	0.000+00	0.000+00	2.738+04	5.126−06	0.000+00
18	97	6.323+02	0.000+00	0.000+00	0.000+00	3.609+04	0.000+00	0.000+00
18	99	6.178+02	0.000+00	0.000+00	0.000+00	2.549+04	3.512−05	0.000+00
18	100	6.176+02	0.000+00	0.000+00	0.000+00	1.396+04	4.387−06	0.000+00
18	101	6.176+02	0.000+00	0.000+00	0.000+00	0.000+00	6.866−05	0.000+00
18	102	6.084+02	0.000+00	0.000+00	0.000+00	5.606+00	0.000+00	0.000+00
18	103	5.963+02	0.000+00	0.000+00	0.000+00	2.271+01	1.889−05	0.000+00
18	104	5.543+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.362−07
18	105	5.507+02	9.919+05	4.509−05	2.452−04	0.000+00	0.000+00	4.268−03
18	106	5.507+02	1.709+06	1.295−04	7.043−04	0.000+00	0.000+00	3.755−05
18	107	5.507+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.580−03
18	108	5.483+02	7.001+02	3.156−08	1.709−07	0.000+00	0.000+00	5.092−04
18	109	5.482+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.882−09
18	112	5.410+02	1.897+06	8.325−05	4.448−04	0.000+00	0.000+00	2.064−04
18	114	5.389+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.578−03
18	115	5.389+02	5.610+01	4.071−09	2.167−08	0.000+00	0.000+00	1.114−03
18	120	5.326+02	0.000+00	0.000+00	0.000+00	2.583+02	6.079−09	0.000+00
18	121	5.326+02	0.000+00	0.000+00	0.000+00	3.688+02	0.000+00	0.000+00
18	123	5.279+02	0.000+00	0.000+00	0.000+00	1.866−02	6.740−07	0.000+00

Table 2 (continued)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
18	124	5.267+02	2.821+06	3.911−05	2.034−04	0.000+00	0.000+00	0.000+00
18	125	5.267+02	6.808+05	2.832−05	1.473−04	0.000+00	0.000+00	1.389−04
18	126	5.267+02	6.673+05	4.626−05	2.406−04	0.000+00	0.000+00	1.895−04
18	127	5.266+02	6.197+03	4.293−07	2.233−06	0.000+00	0.000+00	1.960−04
18	129	5.240+02	0.000+00	0.000+00	0.000+00	2.046−09	0.000+00	0.000+00
18	132	5.198+02	0.000+00	0.000+00	0.000+00	1.621+02	2.510−06	0.000+00
18	133	5.198+02	0.000+00	0.000+00	0.000+00	1.805+01	5.779−08	0.000+00
18	134	5.198+02	0.000+00	0.000+00	0.000+00	7.212+01	0.000+00	0.000+00
18	135	5.171+02	0.000+00	0.000+00	0.000+00	2.279+01	5.658−06	0.000+00
18	136	5.171+02	0.000+00	0.000+00	0.000+00	1.263+01	3.609−07	0.000+00
18	137	5.171+02	0.000+00	0.000+00	0.000+00	0.000+00	3.896−06	0.000+00
18	138	5.167+02	0.000+00	0.000+00	0.000+00	2.380+00	0.000+00	0.000+00
18	140	5.031+02	0.000+00	0.000+00	0.000+00	5.905−01	5.854−05	0.000+00
18	141	4.925+02	5.263+04	6.378−07	3.102−06	0.000+00	0.000+00	0.000+00
19	20	5.538+04	0.000+00	0.000+00	0.000+00	3.160−07	7.602−05	0.000+00
19	21	4.231+03	0.000+00	0.000+00	0.000+00	4.248+00	2.367−09	0.000+00
19	22	4.214+03	0.000+00	0.000+00	0.000+00	2.201+01	7.285−09	0.000+00
19	23	4.192+03	0.000+00	0.000+00	0.000+00	6.917+01	0.000+00	0.000+00
19	24	3.792+03	8.630+06	1.116−02	6.965−01	0.000+00	0.000+00	4.661−07
19	25	3.792+03	7.770+07	1.675−01	1.045+01	0.000+00	0.000+00	4.140−04
19	26	3.791+03	3.110+08	9.383−01	5.856+01	0.000+00	0.000+00	2.770−03
19	27	3.403+03	0.000+00	0.000+00	0.000+00	9.360−03	5.085−09	0.000+00
19	28	3.352+03	0.000+00	0.000+00	0.000+00	1.873−02	2.672−06	0.000+00
19	29	3.159+03	5.120+02	7.662−07	3.984−05	0.000+00	0.000+00	1.417−03
19	30	2.875+03	0.000+00	0.000+00	0.000+00	6.386+01	9.623−08	0.000+00
19	31	2.872+03	0.000+00	0.000+00	0.000+00	3.187+02	3.635−09	0.000+00
19	32	2.868+03	0.000+00	0.000+00	0.000+00	9.536+02	0.000+00	0.000+00
19	33	2.351+03	0.000+00	0.000+00	0.000+00	1.812−01	7.884−08	0.000+00
19	34	2.344+03	0.000+00	0.000+00	0.000+00	4.084−01	1.087−05	0.000+00
19	35	2.340+03	0.000+00	0.000+00	0.000+00	5.741−01	0.000+00	0.000+00
19	36	2.268+03	0.000+00	0.000+00	0.000+00	6.432−02	2.215−06	0.000+00
19	37	2.265+03	0.000+00	0.000+00	0.000+00	9.267−02	4.474−06	0.000+00
19	38	2.262+03	0.000+00	0.000+00	0.000+00	4.412−02	5.432−06	0.000+00
19	39	1.966+03	0.000+00	0.000+00	0.000+00	2.934+00	0.000+00	0.000+00
19	40	1.961+03	0.000+00	0.000+00	0.000+00	2.197+00	5.825−04	0.000+00
19	41	1.950+03	0.000+00	0.000+00	0.000+00	1.022+00	4.214−07	0.000+00
19	42	1.793+03	0.000+00	0.000+00	0.000+00	2.100−03	1.370−04	0.000+00
19	43	1.497+03	0.000+00	0.000+00	0.000+00	2.926−03	2.322−10	0.000+00
19	44	1.495+03	0.000+00	0.000+00	0.000+00	1.799−03	4.828−04	0.000+00
19	45	1.493+03	5.968+04	1.197−05	2.942−04	0.000+00	0.000+00	1.584−02
19	46	1.455+03	3.261+07	6.214−03	1.488−01	0.000+00	0.000+00	3.516−03
19	47	1.452+03	2.714+08	8.578−02	2.050+00	0.000+00	0.000+00	4.782−04
19	48	1.446+03	1.009+09	4.431−01	1.055+01	0.000+00	0.000+00	2.774−02
19	49	1.385+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.624−02
19	50	1.383+03	5.407+08	9.307−02	2.119+00	0.000+00	0.000+00	6.531−09
19	51	1.380+03	7.780+08	2.221−01	5.044+00	0.000+00	0.000+00	2.408−02
19	52	1.361+03	4.573+08	7.619−02	1.707+00	0.000+00	0.000+00	2.164−02
19	53	1.292+03	1.017+06	2.543−04	5.407−03	0.000+00	0.000+00	1.118−02
19	54	1.157+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.136−02
19	55	1.054+03	0.000+00	0.000+00	0.000+00	3.957−02	3.586−04	0.000+00
19	56	1.045+03	0.000+00	0.000+00	0.000+00	3.478+01	2.087−05	0.000+00
19	57	1.044+03	0.000+00	0.000+00	0.000+00	1.415+02	5.019−06	0.000+00
19	58	1.042+03	0.000+00	0.000+00	0.000+00	3.370+02	0.000+00	0.000+00
19	59	1.034+03	0.000+00	0.000+00	0.000+00	6.067+01	1.260−04	0.000+00
19	60	1.033+03	0.000+00	0.000+00	0.000+00	1.178+02	1.988−04	0.000+00
19	61	1.033+03	0.000+00	0.000+00	0.000+00	9.963+01	2.408−04	0.000+00
19	62	1.008+03	0.000+00	0.000+00	0.000+00	1.178+02	3.453−06	0.000+00
19	63	1.007+03	0.000+00	0.000+00	0.000+00	2.811+02	4.000−04	0.000+00
19	64	1.006+03	0.000+00	0.000+00	0.000+00	3.938+02	0.000+00	0.000+00
19	65	1.005+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.016−03
19	66	1.004+03	3.570+01	5.397−09	8.921−08	0.000+00	0.000+00	1.307−04
19	67	1.004+03	2.421+02	5.120−08	8.461−07	0.000+00	0.000+00	7.261−04
19	68	1.002+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.033−03
19	69	9.957+02	1.349+02	2.806−08	4.600−07	0.000+00	0.000+00	4.735−08
19	70	9.818+02	1.352−01	2.735−11	4.420−10	0.000+00	0.000+00	2.037−06
19	71	9.804+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.648−06
19	73	9.656+02	0.000+00	0.000+00	0.000+00	2.246−01	1.049−07	0.000+00
19	74	9.600+02	2.309+02	3.190−08	5.041−07	0.000+00	0.000+00	4.324−04
19	75	9.570+02	4.907+03	9.433−07	1.486−05	0.000+00	0.000+00	8.098−04
19	76	9.555+02	4.793+00	6.559−10	1.032−08	0.000+00	0.000+00	1.113−03
19	77	9.548+02	1.985+01	1.628−09	2.559−08	0.000+00	0.000+00	3.425−04
19	78	9.230+02	0.000+00	0.000+00	0.000+00	3.338−02	3.030−05	0.000+00
19	79	8.208+02	2.266+02	2.289−10	3.093−09	0.000+00	0.000+00	1.948−05
19	80	8.208+02	1.243+01	1.758−09	2.375−08	0.000+00	0.000+00	9.727−05
19	81	8.208+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.998−04

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
19	82	7.744+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.383−06
19	83	7.744+02	4.524+05	2.441−05	3.111−04	0.000+00	0.000+00	7.277−05
19	84	7.744+02	7.867+05	7.073−05	9.015−04	0.000+00	0.000+00	2.332−04
19	85	7.593+02	1.229+01	1.062−09	1.328−08	0.000+00	0.000+00	3.894−04
19	86	7.414+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.801−08
19	87	7.222+02	5.002+04	2.347−06	2.790−05	0.000+00	0.000+00	6.699−04
19	88	7.222+02	4.238+05	3.313−05	3.939−04	0.000+00	0.000+00	2.177−03
19	89	7.222+02	1.534+06	1.680−04	1.997−03	0.000+00	0.000+00	3.756−03
19	90	6.940+02	1.554+03	1.122−07	1.282−06	0.000+00	0.000+00	8.974−05
19	91	6.642+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.858−03
19	92	6.431+02	0.000+00	0.000+00	0.000+00	3.158+00	5.994−06	0.000+00
19	93	6.362+02	0.000+00	0.000+00	0.000+00	1.139+04	4.472−06	0.000+00
19	94	6.362+02	0.000+00	0.000+00	0.000+00	2.611+04	1.325−05	0.000+00
19	95	6.361+02	0.000+00	0.000+00	0.000+00	2.915+04	9.767−09	0.000+00
19	96	6.327+02	0.000+00	0.000+00	0.000+00	4.573+03	2.782−06	0.000+00
19	97	6.326+02	0.000+00	0.000+00	0.000+00	2.114+04	8.620−06	0.000+00
19	98	6.323+02	0.000+00	0.000+00	0.000+00	5.728+04	0.000+00	0.000+00
19	99	6.180+02	0.000+00	0.000+00	0.000+00	2.044+04	8.392−07	0.000+00
19	100	6.179+02	0.000+00	0.000+00	0.000+00	4.317+04	3.257−05	0.000+00
19	101	6.178+02	0.000+00	0.000+00	0.000+00	5.715+04	0.000+00	0.000+00
19	102	6.086+02	0.000+00	0.000+00	0.000+00	4.699−02	6.812−06	0.000+00
19	103	5.965+02	0.000+00	0.000+00	0.000+00	1.331−01	2.758−06	0.000+00
19	104	5.545+02	4.353+01	2.809−09	2.564−08	0.000+00	0.000+00	3.547−09
19	105	5.509+02	6.944+04	1.895−06	1.719−05	0.000+00	0.000+00	1.625−03
19	106	5.509+02	5.997+05	2.728−05	2.474−04	0.000+00	0.000+00	2.515−03
19	107	5.509+02	2.251+06	1.434−04	1.300−03	0.000+00	0.000+00	1.256−03
19	108	5.485+02	1.753+02	4.745−09	4.285−08	0.000+00	0.000+00	1.439−03
19	109	5.484+02	4.135−03	2.610−13	2.356−12	0.000+00	0.000+00	1.494−09
19	110	5.484+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.425−09
19	112	5.412+02	3.276+06	8.633−05	7.691−04	0.000+00	0.000+00	7.132−04
19	113	5.391+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.367−03
19	114	5.391+02	9.638+01	5.879−09	5.217−08	0.000+00	0.000+00	7.985−04
19	115	5.391+02	1.697+01	7.395−10	6.562−09	0.000+00	0.000+00	1.608−04
19	116	5.372+02	0.000+00	0.000+00	0.000+00	7.991−05	0.000+00	0.000+00
19	117	5.345+02	0.000+00	0.000+00	0.000+00	2.936−07	0.000+00	0.000+00
19	120	5.328+02	0.000+00	0.000+00	0.000+00	3.721+01	1.474−08	0.000+00
19	121	5.328+02	0.000+00	0.000+00	0.000+00	1.858+02	2.766−10	0.000+00
19	122	5.328+02	0.000+00	0.000+00	0.000+00	5.568+02	0.000+00	0.000+00
19	123	5.281+02	0.000+00	0.000+00	0.000+00	1.572−04	2.035−06	0.000+00
19	124	5.269+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.123−06
19	125	5.269+02	1.218+06	3.042−05	2.638−04	0.000+00	0.000+00	2.305−04
19	126	5.269+02	2.085+06	8.677−05	7.525−04	0.000+00	0.000+00	1.091−03
19	127	5.268+02	1.810+03	7.531−08	6.530−07	0.000+00	0.000+00	2.155−04
19	128	5.265+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.656−09
19	129	5.242+02	0.000+00	0.000+00	0.000+00	1.012−06	2.785−14	0.000+00
19	130	5.242+02	0.000+00	0.000+00	0.000+00	8.673−08	0.000+00	0.000+00
19	132	5.200+02	0.000+00	0.000+00	0.000+00	5.403+01	4.006−07	0.000+00
19	133	5.200+02	0.000+00	0.000+00	0.000+00	1.262+02	1.624−06	0.000+00
19	134	5.200+02	0.000+00	0.000+00	0.000+00	1.446+02	1.398−08	0.000+00
19	135	5.173+02	0.000+00	0.000+00	0.000+00	1.721+01	1.582−06	0.000+00
19	136	5.173+02	0.000+00	0.000+00	0.000+00	3.678+01	5.983−06	0.000+00
19	137	5.173+02	0.000+00	0.000+00	0.000+00	4.892+01	0.000+00	0.000+00
19	138	5.169+02	0.000+00	0.000+00	0.000+00	7.956−05	3.701−07	0.000+00
19	140	5.032+02	0.000+00	0.000+00	0.000+00	7.206−03	1.196−04	0.000+00
19	141	4.926+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.251−03
20	21	4.581+03	0.000+00	0.000+00	0.000+00	1.650−02	9.076−09	0.000+00
20	22	4.561+03	0.000+00	0.000+00	0.000+00	3.992−02	0.000+00	0.000+00
20	24	4.070+03	6.692+04	1.662−04	6.681−03	0.000+00	0.000+00	2.118−05
20	25	4.070+03	1.299+05	5.375−04	2.161−02	0.000+00	0.000+00	2.242−04
20	26	4.070+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.135−04
20	27	3.625+03	0.000+00	0.000+00	0.000+00	3.965+02	0.000+00	0.000+00
20	28	3.568+03	0.000+00	0.000+00	0.000+00	3.112+00	1.099−09	0.000+00
20	29	3.350+03	3.074+08	8.622−01	2.853+01	0.000+00	0.000+00	9.437−04
20	30	3.033+03	0.000+00	0.000+00	0.000+00	2.415−01	7.145−10	0.000+00
20	31	3.030+03	0.000+00	0.000+00	0.000+00	4.694−01	0.000+00	0.000+00
20	33	2.456+03	0.000+00	0.000+00	0.000+00	4.317−04	3.882−07	0.000+00
20	34	2.448+03	0.000+00	0.000+00	0.000+00	2.572−04	1.354−05	0.000+00
20	35	2.444+03	0.000+00	0.000+00	0.000+00	0.000+00	3.258−05	0.000+00
20	36	2.364+03	0.000+00	0.000+00	0.000+00	7.419−03	1.409−04	0.000+00
20	37	2.362+03	0.000+00	0.000+00	0.000+00	1.330−04	2.669−04	0.000+00
20	38	2.359+03	0.000+00	0.000+00	0.000+00	2.003−02	0.000+00	0.000+00
20	39	2.038+03	0.000+00	0.000+00	0.000+00	0.000+00	4.827−03	0.000+00
20	40	2.033+03	0.000+00	0.000+00	0.000+00	3.208−01	1.210−03	0.000+00
20	41	2.022+03	0.000+00	0.000+00	0.000+00	6.019−04	1.222−03	0.000+00
20	42	1.853+03	0.000+00	0.000+00	0.000+00	2.480+02	6.636−06	0.000+00

(*continued on next page*)

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
20	43	1.539+03	0.000+00	0.000+00	0.000+00	8.008+02	0.000+00	0.000+00
20	44	1.537+03	0.000+00	0.000+00	0.000+00	6.389+02	5.383−07	0.000+00
20	45	1.535+03	1.373+09	4.848−01	7.348+00	0.000+00	0.000+00	1.480−04
20	46	1.495+03	1.670+07	5.593−03	8.257−02	0.000+00	0.000+00	4.869−04
20	47	1.491+03	9.784+05	5.435−04	8.005−03	0.000+00	0.000+00	4.954−03
20	48	1.485+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.366−02
20	49	1.420+03	1.002+05	1.010−05	1.417−04	0.000+00	0.000+00	0.000+00
20	50	1.419+03	1.499+05	4.524−05	6.339−04	0.000+00	0.000+00	1.451−03
20	51	1.415+03	5.996+04	3.000−05	4.192−04	0.000+00	0.000+00	5.885−03
20	52	1.395+03	1.804+06	5.265−04	7.255−03	0.000+00	0.000+00	1.597−02
20	53	1.322+03	8.937+08	3.905−01	5.101+00	0.000+00	0.000+00	2.244−03
20	54	1.182+03	1.145+09	7.997−02	9.336−01	0.000+00	0.000+00	0.000+00
20	55	1.075+03	0.000+00	0.000+00	0.000+00	1.079+03	5.160−07	0.000+00
20	56	1.065+03	0.000+00	0.000+00	0.000+00	2.759+01	1.037−05	0.000+00
20	57	1.064+03	0.000+00	0.000+00	0.000+00	5.565+00	0.000+00	0.000+00
20	59	1.054+03	0.000+00	0.000+00	0.000+00	6.836−02	2.973−04	0.000+00
20	60	1.053+03	0.000+00	0.000+00	0.000+00	2.196+00	5.983−04	0.000+00
20	61	1.052+03	0.000+00	0.000+00	0.000+00	1.015+00	0.000+00	0.000+00
20	62	1.027+03	0.000+00	0.000+00	0.000+00	5.035−01	1.169−05	0.000+00
20	63	1.025+03	0.000+00	0.000+00	0.000+00	4.469−01	3.846−05	0.000+00
20	64	1.025+03	0.000+00	0.000+00	0.000+00	0.000+00	8.983−05	0.000+00
20	66	1.023+03	3.023+03	7.900−07	7.979−06	0.000+00	0.000+00	1.462−06
20	67	1.022+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.657−06
20	69	1.014+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.755−04
20	70	9.995+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.617−06
20	73	9.827+02	0.000+00	0.000+00	0.000+00	1.051+04	0.000+00	0.000+00
20	74	9.769+02	1.920+06	4.577−04	4.417−03	0.000+00	0.000+00	1.180−04
20	75	9.738+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.558−04
20	76	9.722+02	1.008+05	2.381−05	2.286−04	0.000+00	0.000+00	4.135−05
20	77	9.716+02	7.729+02	1.094−07	1.050−06	0.000+00	0.000+00	4.813−06
20	78	9.387+02	0.000+00	0.000+00	0.000+00	2.990+03	8.483−07	0.000+00
20	79	8.332+02	7.367+02	1.278−07	1.052−06	0.000+00	0.000+00	3.379−09
20	80	8.332+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.394−07
20	82	7.854+02	2.519+03	7.765−08	6.023−07	0.000+00	0.000+00	0.000+00
20	83	7.854+02	2.256+02	2.086−08	1.618−07	0.000+00	0.000+00	1.633−03
20	84	7.854+02	1.570+02	2.419−08	1.877−07	0.000+00	0.000+00	2.931−03
20	85	7.699+02	1.316+06	1.949−04	1.482−03	0.000+00	0.000+00	3.391−03
20	87	7.317+02	3.625+03	2.910−07	2.103−06	0.000+00	0.000+00	3.073−04
20	88	7.317+02	1.438+04	1.924−06	1.391−05	0.000+00	0.000+00	2.254−03
20	89	7.317+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.457−03
20	90	7.028+02	2.903+07	3.583−03	2.487−02	0.000+00	0.000+00	1.731−02
20	91	6.722+02	5.934+07	1.340−03	8.898−03	0.000+00	0.000+00	0.000+00
20	92	6.507+02	0.000+00	0.000+00	0.000+00	4.239+04	4.543−07	0.000+00
20	93	6.436+02	0.000+00	0.000+00	0.000+00	1.135+01	4.643−04	0.000+00
20	94	6.436+02	0.000+00	0.000+00	0.000+00	1.131+01	5.831−04	0.000+00
20	95	6.435+02	0.000+00	0.000+00	0.000+00	4.928+00	0.000+00	0.000+00
20	96	6.400+02	0.000+00	0.000+00	0.000+00	5.057+01	5.657−06	0.000+00
20	97	6.399+02	0.000+00	0.000+00	0.000+00	1.095+01	0.000+00	0.000+00
20	99	6.250+02	0.000+00	0.000+00	0.000+00	2.514+01	2.567−04	0.000+00
20	100	6.249+02	0.000+00	0.000+00	0.000+00	2.872+00	2.496−04	0.000+00
20	101	6.248+02	0.000+00	0.000+00	0.000+00	0.000+00	6.193−04	0.000+00
20	102	6.154+02	0.000+00	0.000+00	0.000+00	3.330+04	0.000+00	0.000+00
20	103	6.030+02	0.000+00	0.000+00	0.000+00	6.532+04	4.645−06	0.000+00
20	104	5.601+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.120−03
20	105	5.564+02	1.423+01	6.607−10	3.631−09	0.000+00	0.000+00	2.539−06
20	106	5.564+02	1.510+03	1.168−07	6.420−07	0.000+00	0.000+00	3.449−07
20	107	5.564+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.828−07
20	108	5.540+02	5.734+05	2.639−05	1.444−04	0.000+00	0.000+00	8.710−04
20	109	5.539+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.069−09
20	112	5.466+02	3.819+01	1.711−09	9.234−09	0.000+00	0.000+00	1.512−03
20	114	5.444+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.451−06
20	115	5.444+02	2.411+02	1.785−08	9.599−08	0.000+00	0.000+00	6.961−07
20	120	5.379+02	0.000+00	0.000+00	0.000+00	2.987−01	1.688−09	0.000+00
20	121	5.379+02	0.000+00	0.000+00	0.000+00	2.419−01	0.000+00	0.000+00
20	123	5.332+02	0.000+00	0.000+00	0.000+00	1.127+02	5.454−07	0.000+00
20	124	5.320+02	1.426+01	2.017−10	1.060−09	0.000+00	0.000+00	0.000+00
20	125	5.320+02	1.207+03	5.120−08	2.690−07	0.000+00	0.000+00	3.634−03
20	126	5.320+02	1.106+03	7.821−08	4.109−07	0.000+00	0.000+00	6.780−03
20	127	5.318+02	4.332+06	3.062−04	1.608−03	0.000+00	0.000+00	1.504−02
20	129	5.292+02	0.000+00	0.000+00	0.000+00	1.617−03	0.000+00	0.000+00
20	132	5.249+02	0.000+00	0.000+00	0.000+00	2.997−02	8.576−07	0.000+00
20	133	5.249+02	0.000+00	0.000+00	0.000+00	1.429−02	4.172−07	0.000+00
20	134	5.249+02	0.000+00	0.000+00	0.000+00	4.764−01	0.000+00	0.000+00
20	135	5.222+02	0.000+00	0.000+00	0.000+00	1.844−04	2.711−06	0.000+00
20	136	5.222+02	0.000+00	0.000+00	0.000+00	2.382−03	1.058−05	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
20	137	5.222+02	0.000+00	0.000+00	0.000+00	0.000+00	2.373−05	0.000+00
20	138	5.218+02	0.000+00	0.000+00	0.000+00	4.628+03	0.000+00	0.000+00
20	140	5.079+02	0.000+00	0.000+00	0.000+00	1.619+03	1.993−06	0.000+00
20	141	4.971+02	5.220+07	6.445−04	3.164−03	0.000+00	0.000+00	0.000+00
21	22	1.066+06	0.000+00	0.000+00	0.000+00	1.649−11	2.118−05	0.000+00
21	23	4.588+05	0.000+00	0.000+00	0.000+00	4.168−11	0.000+00	0.000+00
21	24	3.652+04	2.340+05	2.808−02	1.688+01	0.000+00	0.000+00	3.064−09
21	25	3.652+04	2.599+04	5.196−03	3.123+00	0.000+00	0.000+00	4.234−10
21	26	3.651+04	5.302+02	1.483−04	8.911−02	0.000+00	0.000+00	5.338−13
21	27	1.738+04	0.000+00	0.000+00	0.000+00	9.065−07	1.840−04	0.000+00
21	28	1.615+04	0.000+00	0.000+00	0.000+00	4.360−05	1.262−03	0.000+00
21	29	1.247+04	4.658+00	1.087−07	2.231−05	0.000+00	0.000+00	6.989−08
21	30	8.975+03	0.000+00	0.000+00	0.000+00	5.376−01	1.909−06	0.000+00
21	31	8.947+03	0.000+00	0.000+00	0.000+00	1.682−01	9.854−04	0.000+00
21	32	8.908+03	0.000+00	0.000+00	0.000+00	6.246−03	0.000+00	0.000+00
21	33	5.293+03	0.000+00	0.000+00	0.000+00	6.018−02	4.168−05	0.000+00
21	34	5.257+03	0.000+00	0.000+00	0.000+00	6.178−01	2.363−05	0.000+00
21	35	5.237+03	0.000+00	0.000+00	0.000+00	1.724+00	0.000+00	0.000+00
21	36	4.887+03	0.000+00	0.000+00	0.000+00	5.241−02	6.321−03	0.000+00
21	37	4.875+03	0.000+00	0.000+00	0.000+00	2.918−02	6.398−03	0.000+00
21	38	4.864+03	0.000+00	0.000+00	0.000+00	2.828−03	5.863−04	0.000+00
21	39	3.673+03	0.000+00	0.000+00	0.000+00	5.205+01	0.000+00	0.000+00
21	40	3.656+03	0.000+00	0.000+00	0.000+00	1.749+01	6.129−09	0.000+00
21	41	3.619+03	0.000+00	0.000+00	0.000+00	1.522+00	5.373−09	0.000+00
21	42	3.112+03	0.000+00	0.000+00	0.000+00	1.388−03	4.766−08	0.000+00
21	43	2.317+03	0.000+00	0.000+00	0.000+00	3.037−03	1.602−02	0.000+00
21	44	2.313+03	0.000+00	0.000+00	0.000+00	1.228−01	9.115−07	0.000+00
21	45	2.308+03	2.431+06	1.164−03	4.423−02	0.000+00	0.000+00	1.087−07
21	46	2.219+03	2.033+08	9.002−02	3.287+00	0.000+00	0.000+00	6.281−06
21	47	2.211+03	2.274+07	1.666−02	6.064−01	0.000+00	0.000+00	9.024−05
21	48	2.198+03	4.602+05	4.665−04	1.688−02	0.000+00	0.000+00	2.943−05
21	49	2.059+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.089−03
21	50	2.055+03	5.908+04	2.245−05	7.596−04	0.000+00	0.000+00	3.552−04
21	51	2.048+03	1.063+04	6.684−06	2.253−04	0.000+00	0.000+00	2.828−05
21	52	2.006+03	1.383+02	5.008−08	1.654−06	0.000+00	0.000+00	3.882−06
21	53	1.859+03	2.303+04	1.193−05	3.652−04	0.000+00	0.000+00	1.062−04
21	54	1.593+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.661−07
21	55	1.404+03	0.000+00	0.000+00	0.000+00	3.413+01	3.173−05	0.000+00
21	56	1.388+03	0.000+00	0.000+00	0.000+00	1.305+03	1.108−06	0.000+00
21	57	1.386+03	0.000+00	0.000+00	0.000+00	3.934+02	6.737−05	0.000+00
21	58	1.382+03	0.000+00	0.000+00	0.000+00	1.362+01	0.000+00	0.000+00
21	59	1.368+03	0.000+00	0.000+00	0.000+00	9.183+02	1.307−06	0.000+00
21	60	1.368+03	0.000+00	0.000+00	0.000+00	2.576+02	3.021−09	0.000+00
21	61	1.366+03	0.000+00	0.000+00	0.000+00	7.774+00	8.604−08	0.000+00
21	62	1.323+03	0.000+00	0.000+00	0.000+00	5.631−01	8.247−09	0.000+00
21	63	1.321+03	0.000+00	0.000+00	0.000+00	3.201−02	2.460−08	0.000+00
21	64	1.320+03	0.000+00	0.000+00	0.000+00	6.778+00	0.000+00	0.000+00
21	65	1.317+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.227−02
21	66	1.317+03	1.263+09	3.282−01	7.112+00	0.000+00	0.000+00	3.577−03
21	67	1.316+03	1.417+08	5.153−02	1.116+00	0.000+00	0.000+00	1.603−03
21	68	1.313+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.994−02
21	69	1.302+03	1.333+07	4.745−03	1.017−01	0.000+00	0.000+00	7.017−05
21	70	1.278+03	5.028+08	1.725−01	3.630+00	0.000+00	0.000+00	3.294−02
21	71	1.276+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.453−06
21	73	1.251+03	0.000+00	0.000+00	0.000+00	4.062−02	1.166−03	0.000+00
21	74	1.242+03	5.712+06	1.320−03	2.699−02	0.000+00	0.000+00	1.738−03
21	75	1.237+03	1.393+06	4.472−04	9.104−03	0.000+00	0.000+00	5.715−04
21	76	1.234+03	4.177+07	9.539−03	1.938−01	0.000+00	0.000+00	2.707−03
21	77	1.233+03	3.072+08	4.203−02	8.531−01	0.000+00	0.000+00	4.781−03
21	78	1.181+03	0.000+00	0.000+00	0.000+00	1.891−02	3.625−08	0.000+00
21	79	1.018+03	7.998+08	1.244−01	2.085+00	0.000+00	0.000+00	6.919−03
21	80	1.018+03	6.593+07	1.435−02	2.406−01	0.000+00	0.000+00	1.510−03
21	81	1.018+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.092−03
21	82	9.479+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.339−02
21	83	9.479+02	3.058+04	2.471−06	3.856−05	0.000+00	0.000+00	7.247−03
21	84	9.479+02	7.372+03	9.930−07	1.549−05	0.000+00	0.000+00	5.068−04
21	85	9.254+02	1.319+06	1.694−04	2.580−03	0.000+00	0.000+00	1.070−04
21	86	8.990+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.160−02
21	87	8.708+02	7.333+08	5.002−02	7.170−01	0.000+00	0.000+00	1.039−02
21	88	8.708+02	8.341+07	9.483−03	1.359−01	0.000+00	0.000+00	1.039−02
21	89	8.708+02	1.756+06	2.794−04	4.006−03	0.000+00	0.000+00	1.616−03
21	90	8.302+02	3.623+04	3.744−06	5.116−05	0.000+00	0.000+00	2.568−03
21	91	7.878+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.426−04
21	92	7.584+02	0.000+00	0.000+00	0.000+00	1.166−02	6.754−03	0.000+00
21	93	7.488+02	0.000+00	0.000+00	0.000+00	4.909+03	1.166−02	0.000+00

(*continued on next page*)

Table 2 (continued)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
21	94	7.488+02	0.000+00	0.000+00	0.000+00	1.969+03	1.073−02	0.000+00
21	95	7.487+02	0.000+00	0.000+00	0.000+00	1.276+02	6.515−04	0.000+00
21	96	7.440+02	0.000+00	0.000+00	0.000+00	3.329+03	1.333−04	0.000+00
21	97	7.438+02	0.000+00	0.000+00	0.000+00	1.038+03	1.130−02	0.000+00
21	98	7.435+02	0.000+00	0.000+00	0.000+00	3.844+01	0.000+00	0.000+00
21	99	7.237+02	0.000+00	0.000+00	0.000+00	4.900+02	4.188−06	0.000+00
21	100	7.236+02	0.000+00	0.000+00	0.000+00	5.542+03	2.469−06	0.000+00
21	101	7.235+02	0.000+00	0.000+00	0.000+00	1.636+04	0.000+00	0.000+00
21	102	7.109+02	0.000+00	0.000+00	0.000+00	4.247+00	1.405−02	0.000+00
21	103	6.945+02	0.000+00	0.000+00	0.000+00	2.127+00	3.149−07	0.000+00
21	104	6.381+02	6.475+03	5.533−07	5.812−06	0.000+00	0.000+00	1.630−04
21	105	6.333+02	1.674+07	6.040−04	6.297−03	0.000+00	0.000+00	4.498−04
21	106	6.333+02	1.952+06	1.174−04	1.224−03	0.000+00	0.000+00	4.435−04
21	107	6.333+02	4.302+04	3.622−06	3.776−05	0.000+00	0.000+00	6.305−05
21	108	6.302+02	3.288+03	1.175−07	1.219−06	0.000+00	0.000+00	1.028−06
21	109	6.300+02	3.104+07	2.586−03	2.682−02	0.000+00	0.000+00	3.695−03
21	110	6.300+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.788−04
21	112	6.206+02	1.350−02	4.679−13	4.780−12	0.000+00	0.000+00	7.146−07
21	113	6.178+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.001−05
21	114	6.178+02	8.243+05	6.604−05	6.716−04	0.000+00	0.000+00	3.498−06
21	115	6.178+02	9.322+06	5.334−04	5.425−03	0.000+00	0.000+00	5.721−04
21	116	6.153+02	0.000+00	0.000+00	0.000+00	1.600+01	0.000+00	0.000+00
21	117	6.118+02	0.000+00	0.000+00	0.000+00	1.425+05	0.000+00	0.000+00
21	120	6.095+02	0.000+00	0.000+00	0.000+00	4.105+04	2.004−06	0.000+00
21	121	6.095+02	0.000+00	0.000+00	0.000+00	1.258+04	1.315−04	0.000+00
21	122	6.095+02	0.000+00	0.000+00	0.000+00	4.534+02	0.000+00	0.000+00
21	123	6.035+02	0.000+00	0.000+00	0.000+00	1.172+01	8.211−05	0.000+00
21	124	6.019+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.242−04
21	125	6.019+02	4.735+03	1.543−07	1.528−06	0.000+00	0.000+00	1.740−04
21	126	6.019+02	8.469+02	4.599−08	4.556−07	0.000+00	0.000+00	1.371−05
21	127	6.017+02	8.450+04	4.586−06	4.542−05	0.000+00	0.000+00	1.547−04
21	128	6.013+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.070−03
21	129	5.983+02	0.000+00	0.000+00	0.000+00	1.000+03	1.553−06	0.000+00
21	130	5.983+02	0.000+00	0.000+00	0.000+00	1.393+02	0.000+00	0.000+00
21	132	5.929+02	0.000+00	0.000+00	0.000+00	2.837+03	3.088−05	0.000+00
21	133	5.929+02	0.000+00	0.000+00	0.000+00	1.259+03	5.423−05	0.000+00
21	134	5.929+02	0.000+00	0.000+00	0.000+00	9.491+01	4.831−06	0.000+00
21	135	5.893+02	0.000+00	0.000+00	0.000+00	7.941+02	3.965−07	0.000+00
21	136	5.893+02	0.000+00	0.000+00	0.000+00	9.384+03	1.318−06	0.000+00
21	137	5.893+02	0.000+00	0.000+00	0.000+00	2.829+04	0.000+00	0.000+00
21	138	5.888+02	0.000+00	0.000+00	0.000+00	1.197+01	9.000−05	0.000+00
21	140	5.712+02	0.000+00	0.000+00	0.000+00	6.016+00	2.969−06	0.000+00
21	141	5.576+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.048−05
22	23	8.055+05	0.000+00	0.000+00	0.000+00	5.518−11	3.870−05	0.000+00
22	24	3.782+04	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.224−09
22	25	3.781+04	1.901+05	2.910−02	2.536+01	0.000+00	0.000+00	1.255−08
22	26	3.780+04	1.697+04	3.635−03	3.166+00	0.000+00	0.000+00	1.275−09
22	27	1.767+04	0.000+00	0.000+00	0.000+00	1.152−06	1.476−05	0.000+00
22	28	1.640+04	0.000+00	0.000+00	0.000+00	1.411−05	2.447−03	0.000+00
22	29	1.262+04	4.250+02	7.249−06	2.108−03	0.000+00	0.000+00	4.927−07
22	30	9.052+03	0.000+00	0.000+00	0.000+00	2.317−01	1.200−03	0.000+00
22	31	9.023+03	0.000+00	0.000+00	0.000+00	4.336−01	3.582−08	0.000+00
22	32	8.983+03	0.000+00	0.000+00	0.000+00	1.342−01	1.390−03	0.000+00
22	33	5.320+03	0.000+00	0.000+00	0.000+00	3.709−01	1.251−06	0.000+00
22	34	5.283+03	0.000+00	0.000+00	0.000+00	1.069+00	0.000+00	0.000+00
22	36	4.909+03	0.000+00	0.000+00	0.000+00	9.486−02	0.000+00	0.000+00
22	37	4.897+03	0.000+00	0.000+00	0.000+00	3.647−01	7.434−07	0.000+00
22	38	4.886+03	0.000+00	0.000+00	0.000+00	2.889−02	4.584−03	0.000+00
22	40	3.668+03	0.000+00	0.000+00	0.000+00	3.449+01	0.000+00	0.000+00
22	41	3.631+03	0.000+00	0.000+00	0.000+00	1.054+01	1.577−09	0.000+00
22	42	3.122+03	0.000+00	0.000+00	0.000+00	9.971−02	0.000+00	0.000+00
22	43	2.322+03	0.000+00	0.000+00	0.000+00	5.516−05	1.428−03	0.000+00
22	44	2.318+03	0.000+00	0.000+00	0.000+00	2.183−02	0.000+00	0.000+00
22	45	2.313+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.054−05
22	46	2.223+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.567−03
22	47	2.215+03	1.824+08	9.587−02	4.894+00	0.000+00	0.000+00	1.117−03
22	48	2.202+03	1.615+07	1.174−02	5.960−01	0.000+00	0.000+00	1.786−06
22	50	2.059+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.069−04
22	51	2.052+03	9.442+04	4.255−05	2.012−03	0.000+00	0.000+00	2.248−04
22	52	2.010+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.085−06
22	53	1.862+03	3.634+04	1.350−05	5.793−04	0.000+00	0.000+00	7.760−04
22	55	1.406+03	0.000+00	0.000+00	0.000+00	2.192+01	7.081−05	0.000+00
22	56	1.390+03	0.000+00	0.000+00	0.000+00	3.777+02	3.257−05	0.000+00
22	57	1.388+03	0.000+00	0.000+00	0.000+00	1.112+03	1.378−05	0.000+00
22	58	1.384+03	0.000+00	0.000+00	0.000+00	2.995+02	6.976−05	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
22	59	1.370+03	0.000+00	0.000+00	0.000+00	4.512+02	0.000+00	0.000+00
22	60	1.369+03	0.000+00	0.000+00	0.000+00	8.116+02	4.397−06	0.000+00
22	61	1.368+03	0.000+00	0.000+00	0.000+00	1.692+02	6.669−09	0.000+00
22	62	1.325+03	0.000+00	0.000+00	0.000+00	2.142−01	1.933−07	0.000+00
22	63	1.323+03	0.000+00	0.000+00	0.000+00	9.621+00	0.000+00	0.000+00
22	65	1.319+03	7.560+07	2.535−02	7.706−01	0.000+00	0.000+00	5.139−02
22	66	1.318+03	1.695+08	3.155−02	9.585−01	0.000+00	0.000+00	2.946−03
22	67	1.318+03	1.168+09	3.041−01	9.234+00	0.000+00	0.000+00	4.986−02
22	68	1.315+03	4.595+07	1.531−02	4.638−01	0.000+00	0.000+00	4.818−02
22	69	1.304+03	4.004+05	1.020−04	3.066−03	0.000+00	0.000+00	3.510−04
22	70	1.280+03	7.738+07	1.901−02	5.607−01	0.000+00	0.000+00	6.139−03
22	71	1.278+03	5.129+08	1.614−01	4.752+00	0.000+00	0.000+00	6.476−02
22	72	1.275+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.159−04
22	73	1.253+03	0.000+00	0.000+00	0.000+00	3.684−01	1.134−04	0.000+00
22	74	1.243+03	9.116+06	1.509−03	4.323−02	0.000+00	0.000+00	5.730−03
22	75	1.238+03	3.752+07	8.624−03	2.461−01	0.000+00	0.000+00	6.918−04
22	76	1.236+03	2.560+08	4.185−02	1.192+00	0.000+00	0.000+00	2.162−06
22	77	1.235+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.720−02
22	78	1.182+03	0.000+00	0.000+00	0.000+00	3.185−01	0.000+00	0.000+00
22	79	1.019+03	9.928+07	1.105−02	2.596−01	0.000+00	0.000+00	1.598−03
22	80	1.019+03	7.441+08	1.159−01	2.724+00	0.000+00	0.000+00	6.359−02
22	81	1.019+03	4.942+07	9.900−03	2.326−01	0.000+00	0.000+00	2.175−06
22	83	9.487+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.644−02
22	84	9.487+02	5.266+04	5.076−06	1.110−04	0.000+00	0.000+00	4.463−03
22	85	9.262+02	6.951+01	6.386−09	1.363−07	0.000+00	0.000+00	2.253−04
22	86	8.997+02	1.486+05	2.318−05	4.806−04	0.000+00	0.000+00	6.249−02
22	87	8.715+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.280−02
22	88	8.716+02	6.482+08	5.273−02	1.059+00	0.000+00	0.000+00	6.363−03
22	89	8.716+02	5.994+07	6.826−03	1.371−01	0.000+00	0.000+00	1.800−03
22	90	8.309+02	1.002+04	7.409−07	1.419−05	0.000+00	0.000+00	1.695−02
22	92	7.590+02	0.000+00	0.000+00	0.000+00	5.530−02	1.465−02	0.000+00
22	93	7.494+02	0.000+00	0.000+00	0.000+00	2.564+03	0.000+00	0.000+00
22	94	7.493+02	0.000+00	0.000+00	0.000+00	3.801+03	9.219−07	0.000+00
22	95	7.492+02	0.000+00	0.000+00	0.000+00	1.470+03	7.487−03	0.000+00
22	96	7.445+02	0.000+00	0.000+00	0.000+00	1.216+03	1.594−02	0.000+00
22	97	7.443+02	0.000+00	0.000+00	0.000+00	2.720+03	1.729−04	0.000+00
22	98	7.440+02	0.000+00	0.000+00	0.000+00	8.186+02	1.544−02	0.000+00
22	99	7.242+02	0.000+00	0.000+00	0.000+00	3.335+03	1.374−08	0.000+00
22	100	7.241+02	0.000+00	0.000+00	0.000+00	1.076+04	0.000+00	0.000+00
22	102	7.114+02	0.000+00	0.000+00	0.000+00	1.576−01	1.018−03	0.000+00
22	103	6.949+02	0.000+00	0.000+00	0.000+00	8.135−01	0.000+00	0.000+00
22	104	6.385+02	1.342+03	8.205−08	1.207−06	0.000+00	0.000+00	4.050−04
22	105	6.337+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.856−03
22	106	6.337+02	1.485+07	6.387−04	9.328−03	0.000+00	0.000+00	2.898−04
22	107	6.337+02	1.427+06	8.594−05	1.255−03	0.000+00	0.000+00	7.953−05
22	108	6.306+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.771−08
22	109	6.304+02	2.711+06	1.615−04	2.347−03	0.000+00	0.000+00	3.046−04
22	110	6.304+02	3.129+07	2.397−03	3.483−02	0.000+00	0.000+00	1.152−02
22	111	6.304+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.200−04
22	112	6.210+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.470−06
22	113	6.182+02	6.300+05	4.641−05	6.612−04	0.000+00	0.000+00	2.445−05
22	114	6.182+02	8.581+06	4.916−04	7.004−03	0.000+00	0.000+00	2.850−03
22	115	6.182+02	1.132+06	4.630−05	6.596−04	0.000+00	0.000+00	3.831−06
22	116	6.157+02	0.000+00	0.000+00	0.000+00	5.107+00	2.848−06	0.000+00
22	117	6.121+02	0.000+00	0.000+00	0.000+00	1.992+04	4.662−06	0.000+00
22	118	6.121+02	0.000+00	0.000+00	0.000+00	1.467+05	0.000+00	0.000+00
22	120	6.099+02	0.000+00	0.000+00	0.000+00	1.799+04	1.431−04	0.000+00
22	121	6.099+02	0.000+00	0.000+00	0.000+00	3.386+04	1.188−06	0.000+00
22	122	6.099+02	0.000+00	0.000+00	0.000+00	1.014+04	1.931−04	0.000+00
22	123	6.038+02	0.000+00	0.000+00	0.000+00	1.807+00	1.020−04	0.000+00
22	125	6.022+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.681−04
22	126	6.022+02	7.780+03	3.021−06	4.193−06	0.000+00	0.000+00	1.184−04
22	127	6.020+02	4.795+03	1.861−07	2.582−06	0.000+00	0.000+00	1.667−03
22	128	6.017+02	8.156+02	5.691−08	7.891−07	0.000+00	0.000+00	7.138−03
22	129	5.987+02	0.000+00	0.000+00	0.000+00	2.604+02	1.613−07	0.000+00
22	130	5.987+02	0.000+00	0.000+00	0.000+00	8.399+02	5.711−07	0.000+00
22	131	5.987+02	0.000+00	0.000+00	0.000+00	1.014+02	0.000+00	0.000+00
22	132	5.932+02	0.000+00	0.000+00	0.000+00	1.480+03	0.000+00	0.000+00
22	133	5.932+02	0.000+00	0.000+00	0.000+00	2.218+03	1.889−07	0.000+00
22	134	5.932+02	0.000+00	0.000+00	0.000+00	1.007+03	4.734−05	0.000+00
22	135	5.897+02	0.000+00	0.000+00	0.000+00	5.667+03	1.689−06	0.000+00
22	136	5.897+02	0.000+00	0.000+00	0.000+00	1.910+04	0.000+00	0.000+00
22	138	5.891+02	0.000+00	0.000+00	0.000+00	9.074+01	1.046−06	0.000+00
22	139	5.782+02	0.000+00	0.000+00	0.000+00	1.680−01	0.000+00	0.000+00
22	140	5.715+02	0.000+00	0.000+00	0.000+00	1.807+00	0.000+00	0.000+00

Table 2 (continued)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
23	25	3.968+04	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.960−10
23	26	3.966+04	1.733+05	3.179−02	3.736+01	0.000+00	0.000+00	2.094−08
23	27	1.807+04	0.000+00	0.000+00	0.000+00	1.051−06	1.733−04	0.000+00
23	28	1.674+04	0.000+00	0.000+00	0.000+00	2.095−06	0.000+00	0.000+00
23	29	1.282+04	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.715−06
23	30	9.154+03	0.000+00	0.000+00	0.000+00	1.079−02	0.000+00	0.000+00
23	31	9.125+03	0.000+00	0.000+00	0.000+00	1.687−01	1.700−03	0.000+00
23	32	9.084+03	0.000+00	0.000+00	0.000+00	6.176−01	1.571−07	0.000+00
23	33	5.355+03	0.000+00	0.000+00	0.000+00	1.199+00	0.000+00	0.000+00
23	37	4.927+03	0.000+00	0.000+00	0.000+00	8.522−02	0.000+00	0.000+00
23	38	4.916+03	0.000+00	0.000+00	0.000+00	1.003−01	5.619−03	0.000+00
23	41	3.648+03	0.000+00	0.000+00	0.000+00	4.004+01	0.000+00	0.000+00
23	43	2.329+03	0.000+00	0.000+00	0.000+00	4.452−04	1.588−02	0.000+00
23	47	2.222+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.917−04
23	48	2.208+03	1.878+08	1.068−01	6.987+00	0.000+00	0.000+00	2.803−03
23	51	2.057+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.527−04
23	53	1.867+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.308−03
23	55	1.408+03	0.000+00	0.000+00	0.000+00	1.314+00	0.000+00	0.000+00
23	56	1.392+03	0.000+00	0.000+00	0.000+00	8.907+00	0.000+00	0.000+00
23	57	1.390+03	0.000+00	0.000+00	0.000+00	2.338+02	4.943−05	0.000+00
23	58	1.386+03	0.000+00	0.000+00	0.000+00	1.422+03	2.002−05	0.000+00
23	60	1.372+03	0.000+00	0.000+00	0.000+00	3.014+02	0.000+00	0.000+00
23	61	1.370+03	0.000+00	0.000+00	0.000+00	1.206+03	9.888−06	0.000+00
23	62	1.327+03	0.000+00	0.000+00	0.000+00	1.185+01	0.000+00	0.000+00
23	65	1.321+03	6.436+08	1.684−01	6.593+00	0.000+00	0.000+00	8.691−03
23	66	1.320+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.494−03
23	67	1.320+03	1.259+08	2.557−02	1.000+00	0.000+00	0.000+00	1.214−04
23	68	1.317+03	6.872+08	1.787−01	6.972+00	0.000+00	0.000+00	1.664−01
23	69	1.306+03	2.354+04	4.681−06	1.811−04	0.000+00	0.000+00	3.094−04
23	70	1.282+03	2.069+06	3.965−04	1.506−02	0.000+00	0.000+00	4.033−05
23	71	1.280+03	6.525+07	1.602−02	6.075−01	0.000+00	0.000+00	8.017−03
23	72	1.277+03	5.624+08	1.681−01	6.359+00	0.000+00	0.000+00	1.334−01
23	73	1.255+03	0.000+00	0.000+00	0.000+00	1.811−02	1.019−03	0.000+00
23	74	1.245+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.303−02
23	75	1.240+03	2.772+08	4.971−02	1.827+00	0.000+00	0.000+00	2.691−03
23	76	1.238+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.837−02
23	79	1.021+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.310−03
23	80	1.021+03	7.024+07	8.533−03	2.581−01	0.000+00	0.000+00	2.089−05
23	81	1.021+03	8.056+08	1.258−01	3.806+00	0.000+00	0.000+00	1.489−01
23	84	9.498+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.870−02
23	85	9.272+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.936−04
23	86	9.008+02	1.779+03	2.164−07	5.776−06	0.000+00	0.000+00	3.243−02
23	88	8.725+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.032−02
23	89	8.725+02	6.671+08	5.922−02	1.531+00	0.000+00	0.000+00	2.517−02
23	90	8.317+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.528−02
23	92	7.597+02	0.000+00	0.000+00	0.000+00	9.149−01	0.000+00	0.000+00
23	94	7.500+02	0.000+00	0.000+00	0.000+00	1.704+03	0.000+00	0.000+00
23	95	7.499+02	0.000+00	0.000+00	0.000+00	5.882+03	9.421−03	0.000+00
23	96	7.452+02	0.000+00	0.000+00	0.000+00	4.363+01	0.000+00	0.000+00
23	97	7.450+02	0.000+00	0.000+00	0.000+00	8.233+02	2.018−02	0.000+00
23	98	7.447+02	0.000+00	0.000+00	0.000+00	3.705+03	1.556−04	0.000+00
23	99	7.249+02	0.000+00	0.000+00	0.000+00	1.237+04	0.000+00	0.000+00
23	102	7.120+02	0.000+00	0.000+00	0.000+00	2.197−01	1.622−02	0.000+00
23	104	6.390+02	6.580+01	3.133−09	5.931−08	0.000+00	0.000+00	4.985−04
23	106	6.342+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.799−03
23	107	6.342+02	1.543+07	7.237−04	1.360−02	0.000+00	0.000+00	1.071−03
23	109	6.309+02	4.289+04	1.991−06	3.721−05	0.000+00	0.000+00	5.743−07
23	110	6.309+02	2.080+06	1.241−04	2.321−03	0.000+00	0.000+00	7.773−04
23	111	6.309+02	3.284+07	2.395−03	4.477−02	0.000+00	0.000+00	2.250−02
23	113	6.187+02	9.218+06	5.290−04	9.697−03	0.000+00	0.000+00	5.946−03
23	114	6.187+02	7.880+05	3.517−05	6.446−04	0.000+00	0.000+00	2.913−05
23	115	6.187+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.735−05
23	116	6.161+02	0.000+00	0.000+00	0.000+00	9.147−03	1.537−06	0.000+00
23	117	6.126+02	0.000+00	0.000+00	0.000+00	7.745+02	5.448−07	0.000+00
23	118	6.126+02	0.000+00	0.000+00	0.000+00	1.626+04	5.375−06	0.000+00
23	119	6.126+02	0.000+00	0.000+00	0.000+00	1.626+05	0.000+00	0.000+00
23	120	6.103+02	0.000+00	0.000+00	0.000+00	8.581+02	0.000+00	0.000+00
23	121	6.103+02	0.000+00	0.000+00	0.000+00	1.341+04	1.774−04	0.000+00
23	122	6.103+02	0.000+00	0.000+00	0.000+00	4.918+04	1.081−07	0.000+00
23	123	6.042+02	0.000+00	0.000+00	0.000+00	8.913−04	0.000+00	0.000+00
23	126	6.027+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.216−04
23	127	6.025+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.158−03
23	128	6.021+02	5.813+00	3.159−10	5.637−09	0.000+00	0.000+00	3.655−03
23	129	5.991+02	0.000+00	0.000+00	0.000+00	1.137+01	1.528−08	0.000+00
23	130	5.991+02	0.000+00	0.000+00	0.000+00	1.772+02	5.056−07	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
23	131	5.991+02	0.000+00	0.000+00	0.000+00	9.155+02	9.212−08	0.000+00
23	133	5.937+02	0.000+00	0.000+00	0.000+00	1.012+03	0.000+00	0.000+00
23	134	5.937+02	0.000+00	0.000+00	0.000+00	3.654+03	2.949−05	0.000+00
23	135	5.901+02	0.000+00	0.000+00	0.000+00	2.239+04	0.000+00	0.000+00
23	138	5.896+02	0.000+00	0.000+00	0.000+00	2.066−03	8.192−05	0.000+00
23	139	5.786+02	0.000+00	0.000+00	0.000+00	8.229−04	1.233−06	0.000+00
24	25	3.114+08	0.000+00	0.000+00	0.000+00	7.032−23	8.041−13	0.000+00
24	26	8.520+07	0.000+00	0.000+00	0.000+00	3.742−21	0.000+00	0.000+00
24	27	3.317+04	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.567−08
24	28	2.895+04	3.494+02	7.318−05	2.092−02	0.000+00	0.000+00	9.458−14
24	29	1.894+04	0.000+00	0.000+00	0.000+00	1.048−07	4.297−06	0.000+00
24	30	1.190+04	7.440+06	2.632−01	3.094+01	0.000+00	0.000+00	1.283−06
24	31	1.185+04	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.008−07
24	33	6.190+03	5.806+02	5.560−06	3.399−04	0.000+00	0.000+00	4.992−09
24	34	6.141+03	7.701+03	4.354−05	2.641−03	0.000+00	0.000+00	3.961−08
24	35	6.114+03	2.330+04	4.352−05	2.628−03	0.000+00	0.000+00	0.000+00
24	36	5.642+03	2.365+04	1.129−04	6.288−03	0.000+00	0.000+00	2.020−10
24	37	5.626+03	8.382+03	6.628−05	3.683−03	0.000+00	0.000+00	2.623−09
24	38	5.611+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.343−10
24	39	4.084+03	7.084+04	5.904−05	2.381−03	0.000+00	0.000+00	0.000+00
24	40	4.062+03	1.801+04	4.457−05	1.788−03	0.000+00	0.000+00	3.141−06
24	41	4.017+03	7.442+02	3.000−06	1.190−04	0.000+00	0.000+00	7.435−07
24	42	3.402+03	1.185+01	2.057−08	6.914−07	0.000+00	0.000+00	1.302−06
24	43	2.474+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.502−04
24	44	2.469+03	1.494+02	1.366−07	3.332−06	0.000+00	0.000+00	6.574−06
24	45	2.463+03	0.000+00	0.000+00	0.000+00	5.710−02	1.182−04	0.000+00
24	46	2.362+03	0.000+00	0.000+00	0.000+00	4.522+00	1.956−06	0.000+00
24	47	2.353+03	0.000+00	0.000+00	0.000+00	4.669+00	2.816−04	0.000+00
24	48	2.338+03	0.000+00	0.000+00	0.000+00	3.925−01	0.000+00	0.000+00
24	49	2.182+03	0.000+00	0.000+00	0.000+00	0.000+00	9.051−05	0.000+00
24	50	2.178+03	0.000+00	0.000+00	0.000+00	4.824+00	8.949−05	0.000+00
24	51	2.169+03	0.000+00	0.000+00	0.000+00	9.932−01	2.209−05	0.000+00
24	52	2.123+03	0.000+00	0.000+00	0.000+00	2.603−01	6.313−07	0.000+00
24	53	1.959+03	0.000+00	0.000+00	0.000+00	5.313−04	1.461−04	0.000+00
24	54	1.666+03	0.000+00	0.000+00	0.000+00	0.000+00	2.090−08	0.000+00
24	55	1.460+03	1.660+07	8.842−03	1.275−01	0.000+00	0.000+00	1.393−03
24	56	1.443+03	4.614+08	2.401−01	3.422+00	0.000+00	0.000+00	1.717−03
24	57	1.441+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.111−03
24	59	1.422+03	7.709+08	2.336−01	3.281+00	0.000+00	0.000+00	1.508−03
24	60	1.421+03	2.262+08	1.141−01	1.600+00	0.000+00	0.000+00	8.923−03
24	61	1.419+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.942−03
24	62	1.373+03	1.831+07	8.625−03	1.170−01	0.000+00	0.000+00	2.111−03
24	63	1.371+03	3.345+08	9.420−02	1.275+00	0.000+00	0.000+00	4.181−03
24	64	1.369+03	1.142+09	1.071−01	1.448+00	0.000+00	0.000+00	0.000+00
24	66	1.366+03	0.000+00	0.000+00	0.000+00	4.752+01	2.431−05	0.000+00
24	67	1.365+03	0.000+00	0.000+00	0.000+00	2.921+01	0.000+00	0.000+00
24	69	1.350+03	0.000+00	0.000+00	0.000+00	8.363+00	0.000+00	0.000+00
24	70	1.325+03	0.000+00	0.000+00	0.000+00	6.712+02	0.000+00	0.000+00
24	73	1.296+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.171−02
24	74	1.286+03	0.000+00	0.000+00	0.000+00	3.651−01	1.251−05	0.000+00
24	75	1.280+03	0.000+00	0.000+00	0.000+00	3.102−01	0.000+00	0.000+00
24	76	1.277+03	0.000+00	0.000+00	0.000+00	2.255+00	2.155−06	0.000+00
24	77	1.276+03	0.000+00	0.000+00	0.000+00	1.946+00	3.929−08	0.000+00
24	78	1.220+03	6.065+04	1.353−05	1.631−04	0.000+00	0.000+00	3.227−04
24	79	1.048+03	0.000+00	0.000+00	0.000+00	2.724+01	1.968−06	0.000+00
24	80	1.048+03	0.000+00	0.000+00	0.000+00	1.009+01	0.000+00	0.000+00
24	82	9.731+02	0.000+00	0.000+00	0.000+00	0.000+00	1.025−05	0.000+00
24	83	9.731+02	0.000+00	0.000+00	0.000+00	3.091+01	9.363−06	0.000+00
24	84	9.731+02	0.000+00	0.000+00	0.000+00	6.182+00	6.174−07	0.000+00
24	85	9.494+02	0.000+00	0.000+00	0.000+00	4.314−04	3.647−07	0.000+00
24	87	8.921+02	0.000+00	0.000+00	0.000+00	6.933+01	4.310−07	0.000+00
24	88	8.921+02	0.000+00	0.000+00	0.000+00	6.928+01	1.669−07	0.000+00
24	89	8.921+02	0.000+00	0.000+00	0.000+00	5.653+00	0.000+00	0.000+00
24	90	8.495+02	0.000+00	0.000+00	0.000+00	2.712−06	3.691−05	0.000+00
24	91	8.052+02	0.000+00	0.000+00	0.000+00	0.000+00	4.065−07	0.000+00
24	92	7.745+02	5.463+02	8.188−08	6.263−07	0.000+00	0.000+00	1.483−05
24	93	7.645+02	4.726+06	4.141−04	3.127−03	0.000+00	0.000+00	4.934−04
24	94	7.644+02	7.252+05	1.059−04	7.994−04	0.000+00	0.000+00	2.513−04
24	95	7.643+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.928−06
24	96	7.594+02	7.196+06	1.037−03	7.778−03	0.000+00	0.000+00	3.628−04
24	97	7.592+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.278−04
24	99	7.384+02	6.717+04	9.151−06	6.673−05	0.000+00	0.000+00	4.305−05
24	100	7.382+02	1.571+06	1.284−04	9.357−04	0.000+00	0.000+00	1.241−04
24	101	7.381+02	6.072+06	1.653−04	1.205−03	0.000+00	0.000+00	0.000+00
24	102	7.250+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.423−04

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
24	103	7.079+02	7.379+02	5.544−08	3.877−07	0.000+00	0.000+00	5.515−05
24	104	6.495+02	0.000+00	0.000+00	0.000+00	7.522−04	0.000+00	0.000+00
24	105	6.445+02	0.000+00	0.000+00	0.000+00	2.232+04	7.151−06	0.000+00
24	106	6.445+02	0.000+00	0.000+00	0.000+00	2.232+04	2.008−06	0.000+00
24	107	6.445+02	0.000+00	0.000+00	0.000+00	1.822+03	0.000+00	0.000+00
24	108	6.413+02	0.000+00	0.000+00	0.000+00	5.939−02	1.222−05	0.000+00
24	109	6.411+02	0.000+00	0.000+00	0.000+00	3.914+04	0.000+00	0.000+00
24	112	6.314+02	0.000+00	0.000+00	0.000+00	1.339+04	9.415−07	0.000+00
24	114	6.285+02	0.000+00	0.000+00	0.000+00	7.895+03	0.000+00	0.000+00
24	115	6.285+02	0.000+00	0.000+00	0.000+00	2.212+04	5.754−06	0.000+00
24	120	6.199+02	4.354+06	4.180−04	2.559−03	0.000+00	0.000+00	1.484−03
24	121	6.199+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.318−05
24	123	6.136+02	4.576+01	4.304−09	2.608−08	0.000+00	0.000+00	3.154−05
24	124	6.119+02	0.000+00	0.000+00	0.000+00	0.000+00	1.609−05	0.000+00
24	125	6.119+02	0.000+00	0.000+00	0.000+00	2.313+04	3.630−08	0.000+00
24	126	6.120+02	0.000+00	0.000+00	0.000+00	4.624+03	1.279−06	0.000+00
24	127	6.117+02	0.000+00	0.000+00	0.000+00	5.083−01	7.624−06	0.000+00
24	129	6.083+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.304−04
24	132	6.027+02	1.100+05	5.988−06	3.564−05	0.000+00	0.000+00	4.221−04
24	133	6.027+02	1.966+04	1.784−06	1.062−05	0.000+00	0.000+00	4.782−04
24	134	6.027+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.582−05
24	135	5.990+02	7.737+04	6.937−06	4.104−05	0.000+00	0.000+00	4.511−07
24	136	5.990+02	1.903+06	1.024−04	6.057−04	0.000+00	0.000+00	1.705−05
24	137	5.990+02	7.551+06	1.354−04	8.010−04	0.000+00	0.000+00	0.000+00
24	138	5.985+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.881−03
24	140	5.802+02	3.782+02	1.909−08	1.094−07	0.000+00	0.000+00	7.286−05
24	141	5.662+02	0.000+00	0.000+00	0.000+00	0.000+00	9.586−06	0.000+00
25	26	1.173+08	0.000+00	0.000+00	0.000+00	7.568−21	1.114−11	0.000+00
25	27	3.317+04	1.875+01	4.332−06	2.365−03	0.000+00	0.000+00	1.715−08
25	28	2.895+04	6.379+01	8.017−06	3.821−03	0.000+00	0.000+00	2.480−11
25	29	1.894+04	0.000+00	0.000+00	0.000+00	4.530−08	6.718−07	0.000+00
25	30	1.190+04	1.379+06	2.927−02	5.734+00	0.000+00	0.000+00	3.685−07
25	31	1.185+04	7.915+06	2.333−01	4.552+01	0.000+00	0.000+00	6.086−06
25	32	1.178+04	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.630−07
25	33	6.190+03	5.030+03	2.890−05	2.945−03	0.000+00	0.000+00	5.371−08
25	34	6.142+03	1.564+04	5.307−05	5.365−03	0.000+00	0.000+00	5.430−08
25	35	6.114+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.649−08
25	36	5.642+03	1.108+04	3.171−05	2.945−03	0.000+00	0.000+00	2.883−09
25	37	5.626+03	1.918+04	9.100−05	8.427−03	0.000+00	0.000+00	2.434−08
25	38	5.611+03	7.771+03	5.134−05	4.742−03	0.000+00	0.000+00	2.816−10
25	39	4.084+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.699−06
25	40	4.063+03	5.239+04	7.777−05	5.201−03	0.000+00	0.000+00	2.642−07
25	41	4.017+03	1.092+04	2.641−05	1.746−03	0.000+00	0.000+00	2.219−06
25	42	3.403+03	4.574+02	4.763−07	2.668−05	0.000+00	0.000+00	1.600−05
25	43	2.474+03	2.604+02	3.344−07	1.362−05	0.000+00	0.000+00	1.665−04
25	44	2.469+03	1.855+03	1.017−06	4.136−05	0.000+00	0.000+00	1.003−04
25	45	2.463+03	0.000+00	0.000+00	0.000+00	5.362−02	4.508−04	0.000+00
25	46	2.362+03	0.000+00	0.000+00	0.000+00	7.996+00	3.675−04	0.000+00
25	47	2.353+03	0.000+00	0.000+00	0.000+00	3.255+00	3.589−08	0.000+00
25	48	2.338+03	0.000+00	0.000+00	0.000+00	3.941+00	4.753−04	0.000+00
25	49	2.182+03	0.000+00	0.000+00	0.000+00	9.468+00	0.000+00	0.000+00
25	50	2.178+03	0.000+00	0.000+00	0.000+00	8.704−01	4.267−07	0.000+00
25	51	2.169+03	0.000+00	0.000+00	0.000+00	3.564+00	5.370−05	0.000+00
25	52	2.123+03	0.000+00	0.000+00	0.000+00	7.181−01	1.654−07	0.000+00
25	53	1.959+03	0.000+00	0.000+00	0.000+00	4.112−04	3.036−05	0.000+00
25	54	1.666+03	0.000+00	0.000+00	0.000+00	2.239−03	0.000+00	0.000+00
25	55	1.460+03	1.988+06	6.354−04	1.527−02	0.000+00	0.000+00	5.928−03
25	56	1.443+03	1.621+08	5.060−02	1.202+00	0.000+00	0.000+00	4.215−03
25	57	1.441+03	5.042+08	2.197−01	5.209+00	0.000+00	0.000+00	3.310−03
25	58	1.436+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.441−03
25	59	1.422+03	3.158+08	5.742−02	1.344+00	0.000+00	0.000+00	1.235−02
25	60	1.421+03	6.424+08	1.944−01	4.546+00	0.000+00	0.000+00	1.267−02
25	61	1.419+03	2.007+08	8.483−02	1.981+00	0.000+00	0.000+00	1.258−03
25	62	1.373+03	2.229+08	6.301−02	1.424+00	0.000+00	0.000+00	2.990−06
25	63	1.371+03	8.054+08	1.361−01	3.071+00	0.000+00	0.000+00	1.460−02
25	64	1.369+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.193−02
25	65	1.367+03	0.000+00	0.000+00	0.000+00	2.367+01	0.000+00	0.000+00
25	66	1.366+03	0.000+00	0.000+00	0.000+00	3.450+01	3.992−05	0.000+00
25	67	1.365+03	0.000+00	0.000+00	0.000+00	3.374+01	3.393−08	0.000+00
25	68	1.362+03	0.000+00	0.000+00	0.000+00	6.406+00	0.000+00	0.000+00
25	69	1.350+03	0.000+00	0.000+00	0.000+00	1.281+00	2.241−05	0.000+00
25	70	1.325+03	0.000+00	0.000+00	0.000+00	2.003+02	2.072−07	0.000+00
25	71	1.322+03	0.000+00	0.000+00	0.000+00	7.348+02	0.000+00	0.000+00
25	73	1.296+03	1.264+05	4.454−05	9.498−04	0.000+00	0.000+00	3.540−02
25	74	1.286+03	0.000+00	0.000+00	0.000+00	1.685−04	1.338−06	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
25	75	1.280+03	0.000+00	0.000+00	0.000+00	2.207+00	8.474−06	0.000+00
25	76	1.277+03	0.000+00	0.000+00	0.000+00	1.060+00	1.471−07	0.000+00
25	77	1.276+03	0.000+00	0.000+00	0.000+00	3.263+00	1.115−05	0.000+00
25	78	1.220+03	4.761+05	6.375−05	1.280−03	0.000+00	0.000+00	4.870−03
25	79	1.048+03	0.000+00	0.000+00	0.000+00	1.953+01	2.624−06	0.000+00
25	80	1.048+03	0.000+00	0.000+00	0.000+00	2.398+01	5.646−08	0.000+00
25	81	1.048+03	0.000+00	0.000+00	0.000+00	8.490+00	0.000+00	0.000+00
25	82	9.731+02	0.000+00	0.000+00	0.000+00	6.829+01	0.000+00	0.000+00
25	83	9.731+02	0.000+00	0.000+00	0.000+00	5.721+00	6.907−08	0.000+00
25	84	9.731+02	0.000+00	0.000+00	0.000+00	2.396+01	3.807−06	0.000+00
25	85	9.494+02	0.000+00	0.000+00	0.000+00	2.577−03	1.168−07	0.000+00
25	86	9.217+02	0.000+00	0.000+00	0.000+00	2.500−04	0.000+00	0.000+00
25	87	8.921+02	0.000+00	0.000+00	0.000+00	1.154+02	1.488−05	0.000+00
25	88	8.921+02	0.000+00	0.000+00	0.000+00	4.951+01	1.012−06	0.000+00
25	89	8.921+02	0.000+00	0.000+00	0.000+00	5.651+01	1.992−06	0.000+00
25	90	8.495+02	0.000+00	0.000+00	0.000+00	6.907−05	1.082−05	0.000+00
25	91	8.052+02	0.000+00	0.000+00	0.000+00	3.631−04	0.000+00	0.000+00
25	92	7.745+02	1.844+02	1.658−08	2.114−07	0.000+00	0.000+00	5.609−05
25	93	7.645+02	1.666+06	8.757−03	1.102−03	0.000+00	0.000+00	4.034−04
25	94	7.644+02	4.479+06	3.924−04	4.938−03	0.000+00	0.000+00	1.372−03
25	95	7.643+02	4.666+05	5.721−05	7.198−04	0.000+00	0.000+00	3.452−04
25	96	7.594+02	1.142+06	9.873−05	1.234−03	0.000+00	0.000+00	5.502−04
25	97	7.592+02	7.800+06	9.437−04	1.179−02	0.000+00	0.000+00	1.416−05
25	98	7.589+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.869−04
25	99	7.384+02	9.767+05	7.983−05	9.703−04	0.000+00	0.000+00	5.267−06
25	100	7.382+02	4.561+06	2.236−04	2.717−03	0.000+00	0.000+00	2.052−04
25	101	7.381+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.030−03
25	102	7.250+02	2.807+03	3.097−07	3.696−06	0.000+00	0.000+00	7.526−04
25	103	7.079+02	2.148+03	9.681−08	1.128−06	0.000+00	0.000+00	8.159−04
25	104	6.495+02	0.000+00	0.000+00	0.000+00	1.516−01	3.111−06	0.000+00
25	105	6.445+02	0.000+00	0.000+00	0.000+00	3.720+04	3.462−06	0.000+00
25	106	6.445+02	0.000+00	0.000+00	0.000+00	1.594+04	2.780−06	0.000+00
25	107	6.445+02	0.000+00	0.000+00	0.000+00	1.822+04	8.183−06	0.000+00
25	108	6.413+02	0.000+00	0.000+00	0.000+00	1.783−07	9.563−07	0.000+00
25	109	6.411+02	0.000+00	0.000+00	0.000+00	1.087+04	5.767−06	0.000+00
25	110	6.411+02	0.000+00	0.000+00	0.000+00	4.227+04	0.000+00	0.000+00
25	112	6.314+02	0.000+00	0.000+00	0.000+00	2.231+04	2.912−06	0.000+00
25	113	6.285+02	0.000+00	0.000+00	0.000+00	6.580+03	0.000+00	0.000+00
25	114	6.285+02	0.000+00	0.000+00	0.000+00	1.976+04	1.287−06	0.000+00
25	115	6.285+02	0.000+00	0.000+00	0.000+00	1.582+04	2.828−06	0.000+00
25	116	6.258+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.490−09
25	117	6.222+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.761−10
25	120	6.199+02	7.872+05	4.535−05	4.627−04	0.000+00	0.000+00	7.513−04
25	121	6.199+02	4.636+06	3.739−04	3.815−03	0.000+00	0.000+00	3.212−03
25	122	6.199+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.653−05
25	123	6.136+02	4.515+01	2.548−09	2.574−08	0.000+00	0.000+00	1.226−04
25	124	6.119+02	0.000+00	0.000+00	0.000+00	5.140+04	0.000+00	0.000+00
25	125	6.119+02	0.000+00	0.000+00	0.000+00	4.285+03	3.569−06	0.000+00
25	126	6.120+02	0.000+00	0.000+00	0.000+00	1.799+04	4.596−06	0.000+00
25	127	6.117+02	0.000+00	0.000+00	0.000+00	1.591+00	8.846−06	0.000+00
25	128	6.114+02	0.000+00	0.000+00	0.000+00	6.865−02	0.000+00	0.000+00
25	129	6.083+02	5.073+00	3.940−10	3.945−09	0.000+00	0.000+00	3.698−05
25	130	6.083+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.394−04
25	132	6.027+02	4.260+04	1.392−06	1.381−05	0.000+00	0.000+00	7.977−04
25	133	6.027+02	1.019+05	5.549−06	5.504−05	0.000+00	0.000+00	1.870−04
25	134	6.027+02	1.393+04	1.062−06	1.053−05	0.000+00	0.000+00	3.546−04
25	135	5.990+02	1.137+06	6.116−05	6.030−04	0.000+00	0.000+00	1.808−04
25	136	5.990+02	5.589+06	1.804−04	1.779−03	0.000+00	0.000+00	7.906−04
25	137	5.990+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.105−04
25	138	5.985+02	9.658−02	7.260−12	7.152−11	0.000+00	0.000+00	5.436−03
25	140	5.802+02	9.230+01	2.795−09	2.670−08	0.000+00	0.000+00	1.062−03
25	141	5.662+02	0.000+00	0.000+00	0.000+00	8.502−02	0.000+00	0.000+00
26	27	3.318+04	3.581+00	5.912−07	4.521−04	0.000+00	0.000+00	1.036−08
26	28	2.896+04	2.129+00	1.912−07	1.276−04	0.000+00	0.000+00	6.385−11
26	29	1.895+04	0.000+00	0.000+00	0.000+00	1.372−07	5.257−06	0.000+00
26	30	1.190+04	3.942+04	5.979−04	1.640−01	0.000+00	0.000+00	7.057−10
26	31	1.185+04	9.901+05	2.085−02	5.696+00	0.000+00	0.000+00	9.876−07
26	32	1.178+04	8.969+06	2.400−01	6.518+01	0.000+00	0.000+00	1.382−05
26	33	6.191+03	1.784+04	7.324−05	1.045−02	0.000+00	0.000+00	1.903−07
26	34	6.142+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.645−08
26	36	5.642+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.567−09
26	37	5.626+03	7.612+03	2.580−05	3.346−03	0.000+00	0.000+00	1.534−09
26	38	5.611+03	2.736+04	1.291−04	1.670−02	0.000+00	0.000+00	1.067−07
26	40	4.063+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.285−06
26	41	4.017+03	5.872+04	1.015−04	9.392−03	0.000+00	0.000+00	2.204−06

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
26	42	3.403+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.762−05
26	43	2.474+03	3.914+02	3.591−07	2.047−05	0.000+00	0.000+00	9.996−05
26	44	2.470+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.541−04
26	45	2.463+03	0.000+00	0.000+00	0.000+00	5.341−03	0.000+00	0.000+00
26	46	2.362+03	0.000+00	0.000+00	0.000+00	9.819−01	0.000+00	0.000+00
26	47	2.353+03	0.000+00	0.000+00	0.000+00	5.772+00	6.496−04	0.000+00
26	48	2.338+03	0.000+00	0.000+00	0.000+00	9.511+00	3.849−08	0.000+00
26	50	2.178+03	0.000+00	0.000+00	0.000+00	3.755+00	0.000+00	0.000+00
26	51	2.169+03	0.000+00	0.000+00	0.000+00	5.028+00	6.490−05	0.000+00
26	52	2.123+03	0.000+00	0.000+00	0.000+00	1.747+00	0.000+00	0.000+00
26	53	1.959+03	0.000+00	0.000+00	0.000+00	1.172−02	1.279−04	0.000+00
26	55	1.460+03	8.199+05	1.872−04	6.298−03	0.000+00	0.000+00	1.107−02
26	56	1.443+03	1.180+07	2.630−03	8.748−02	0.000+00	0.000+00	2.987−03
26	57	1.441+03	1.544+08	4.805−02	1.595−00	0.000+00	0.000+00	5.235−06
26	58	1.436+03	6.599+08	2.624−01	8.684+00	0.000+00	0.000+00	1.180−02
26	59	1.422+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.796−03
26	60	1.421+03	2.138+08	4.620−02	1.513+00	0.000+00	0.000+00	1.244−03
26	61	1.419+03	8.851+08	2.672−01	8.738+00	0.000+00	0.000+00	2.877−02
26	62	1.373+03	8.927+08	1.803−01	5.705+00	0.000+00	0.000+00	2.375−02
26	63	1.371+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.817−02
26	65	1.367+03	0.000+00	0.000+00	0.000+00	2.448+01	1.584−05	0.000+00
26	66	1.366+03	0.000+00	0.000+00	0.000+00	3.538+00	4.658−06	0.000+00
26	67	1.365+03	0.000+00	0.000+00	0.000+00	2.428+01	3.159−05	0.000+00
26	68	1.362+03	0.000+00	0.000+00	0.000+00	3.647+01	1.536−05	0.000+00
26	69	1.350+03	0.000+00	0.000+00	0.000+00	4.663−02	3.876−05	0.000+00
26	70	1.325+03	0.000+00	0.000+00	0.000+00	1.475+01	2.025−07	0.000+00
26	71	1.322+03	0.000+00	0.000+00	0.000+00	1.612+02	2.687−08	0.000+00
26	72	1.320+03	0.000+00	0.000+00	0.000+00	9.065+02	0.000+00	0.000+00
26	73	1.296+03	5.512+05	1.387−04	4.141−03	0.000+00	0.000+00	2.146−02
26	74	1.286+03	0.000+00	0.000+00	0.000+00	6.849−02	6.645−06	0.000+00
26	75	1.280+03	0.000+00	0.000+00	0.000+00	3.159+00	2.334−07	0.000+00
26	76	1.277+03	0.000+00	0.000+00	0.000+00	2.021+00	1.959−05	0.000+00
26	77	1.276+03	0.000+00	0.000+00	0.000+00	3.762−01	0.000+00	0.000+00
26	78	1.220+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.794−02
26	79	1.048+03	0.000+00	0.000+00	0.000+00	1.966+00	3.551−08	0.000+00
26	80	1.048+03	0.000+00	0.000+00	0.000+00	1.462+01	1.068−06	0.000+00
26	81	1.048+03	0.000+00	0.000+00	0.000+00	4.012+01	1.804−06	0.000+00
26	83	9.731+02	0.000+00	0.000+00	0.000+00	3.167+01	0.000+00	0.000+00
26	84	9.732+02	0.000+00	0.000+00	0.000+00	3.818+01	5.055−06	0.000+00
26	85	9.495+02	0.000+00	0.000+00	0.000+00	1.968−04	3.516−07	0.000+00
26	86	9.217+02	0.000+00	0.000+00	0.000+00	1.410−03	2.359−08	0.000+00
26	87	8.921+02	0.000+00	0.000+00	0.000+00	1.316+01	0.000+00	0.000+00
26	88	8.921+02	0.000+00	0.000+00	0.000+00	7.901+01	1.906−05	0.000+00
26	89	8.921+02	0.000+00	0.000+00	0.000+00	1.356+02	4.512−06	0.000+00
26	90	8.495+02	0.000+00	0.000+00	0.000+00	9.621−05	1.880−05	0.000+00
26	92	7.745+02	6.043+02	3.882−08	6.929−07	0.000+00	0.000+00	9.812−05
26	93	7.645+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.009−06
26	94	7.645+02	1.065+06	6.664−05	1.174−03	0.000+00	0.000+00	4.990−04
26	95	7.643+02	5.613+06	4.917−04	8.660−03	0.000+00	0.000+00	3.815−03
26	96	7.595+02	2.489+04	1.537−06	2.690−05	0.000+00	0.000+00	1.105−04
26	97	7.592+02	7.803+05	6.743−05	1.180−03	0.000+00	0.000+00	2.089−04
26	98	7.589+02	8.885+06	9.864−04	1.725−02	0.000+00	0.000+00	1.444−04
26	99	7.384+02	5.209+06	3.041−04	5.175−03	0.000+00	0.000+00	2.883−04
26	100	7.382+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.645−04
26	102	7.250+02	6.876+02	5.419−08	9.054−07	0.000+00	0.000+00	4.434−04
26	103	7.080+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.545−03
26	104	6.495+02	0.000+00	0.000+00	0.000+00	3.670−02	3.143−06	0.000+00
26	105	6.445+02	0.000+00	0.000+00	0.000+00	4.250+03	0.000+00	0.000+00
26	106	6.445+02	0.000+00	0.000+00	0.000+00	2.550+04	8.290−07	0.000+00
26	107	6.445+02	0.000+00	0.000+00	0.000+00	4.371+04	8.854−07	0.000+00
26	108	6.413+02	0.000+00	0.000+00	0.000+00	1.602−02	0.000+00	0.000+00
26	109	6.411+02	0.000+00	0.000+00	0.000+00	7.242+02	8.201−07	0.000+00
26	110	6.411+02	0.000+00	0.000+00	0.000+00	8.448+03	8.056−06	0.000+00
26	111	6.411+02	0.000+00	0.000+00	0.000+00	5.071+04	0.000+00	0.000+00
26	112	6.314+02	0.000+00	0.000+00	0.000+00	3.124+04	0.000+00	0.000+00
26	113	6.285+02	0.000+00	0.000+00	0.000+00	3.295+04	1.161−06	0.000+00
26	114	6.285+02	0.000+00	0.000+00	0.000+00	1.187+04	1.024−05	0.000+00
26	115	6.285+02	0.000+00	0.000+00	0.000+00	1.584+03	1.633−06	0.000+00
26	116	6.258+02	2.243+01	1.694−09	2.443−08	0.000+00	0.000+00	9.907−12
26	117	6.222+02	6.785−03	5.063−13	7.259−12	0.000+00	0.000+00	1.390−10
26	118	6.222+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.129−09
26	120	6.199+02	2.171+04	8.934−07	1.276−05	0.000+00	0.000+00	3.900−05
26	121	6.199+02	5.592+05	3.221−05	4.602−04	0.000+00	0.000+00	9.284−04
26	122	6.199+02	5.241+06	3.881−04	5.544−03	0.000+00	0.000+00	6.508−03
26	123	6.136+02	1.473+02	5.938−09	8.396−08	0.000+00	0.000+00	1.995−04

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
26	125	6.120+02	0.000+00	0.000+00	0.000+00	2.400+04	0.000+00	0.000+00
26	126	6.120+02	0.000+00	0.000+00	0.000+00	2.880+04	2.508−07	0.000+00
26	127	6.117+02	0.000+00	0.000+00	0.000+00	3.485+00	2.129−06	0.000+00
26	128	6.114+02	0.000+00	0.000+00	0.000+00	3.180−03	9.491−06	0.000+00
26	129	6.083+02	6.378−01	3.538−11	4.960−10	0.000+00	0.000+00	2.548−06
26	130	6.083+02	6.714+00	4.789−10	6.713−09	0.000+00	0.000+00	2.870−05
26	131	6.083+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.661−04
26	132	6.027+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.094−04
26	133	6.027+02	2.874+04	1.118−06	1.553−05	0.000+00	0.000+00	4.934−04
26	134	6.027+02	1.324+05	7.209−06	1.001−04	0.000+00	0.000+00	5.141−04
26	135	5.990+02	6.164+06	2.369−04	3.270−03	0.000+00	0.000+00	2.012−03
26	136	5.990+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.735−05
26	138	5.985+02	1.828+02	9.818−09	1.354−07	0.000+00	0.000+00	3.254−03
26	139	5.872+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.486−09
26	140	5.802+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.986−03
27	28	2.276+05	0.000+00	0.000+00	0.000+00	8.774−11	6.334−11	0.000+00
27	29	4.417+04	2.952+05	6.167−02	6.277+01	0.000+00	0.000+00	1.056−08
27	30	1.856+04	0.000+00	0.000+00	0.000+00	1.432−06	9.215−05	0.000+00
27	31	1.844+04	0.000+00	0.000+00	0.000+00	2.204−08	5.551−06	0.000+00
27	32	1.827+04	0.000+00	0.000+00	0.000+00	9.360−07	5.439−05	0.000+00
27	33	7.611+03	0.000+00	0.000+00	0.000+00	1.169−06	2.063−06	0.000+00
27	34	7.537+03	0.000+00	0.000+00	0.000+00	1.190−05	0.000+00	0.000+00
27	36	6.798+03	0.000+00	0.000+00	0.000+00	1.667−05	0.000+00	0.000+00
27	37	6.775+03	0.000+00	0.000+00	0.000+00	6.252−07	3.156−04	0.000+00
27	38	6.753+03	0.000+00	0.000+00	0.000+00	1.926−04	4.540−04	0.000+00
27	40	4.630+03	0.000+00	0.000+00	0.000+00	3.054−03	0.000+00	0.000+00
27	41	4.570+03	0.000+00	0.000+00	0.000+00	1.384−04	1.907−10	0.000+00
27	42	3.791+03	0.000+00	0.000+00	0.000+00	3.019+00	0.000+00	0.000+00
27	43	2.673+03	0.000+00	0.000+00	0.000+00	6.308+01	1.816−06	0.000+00
27	44	2.668+03	0.000+00	0.000+00	0.000+00	3.004+01	0.000+00	0.000+00
27	45	2.661+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.110−05
27	46	2.543+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.135−06
27	47	2.533+03	4.869+03	3.345−06	1.953−04	0.000+00	0.000+00	2.264−06
27	48	2.516+03	7.867+02	7.463−07	4.327−05	0.000+00	0.000+00	1.268−06
27	50	2.331+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.310−08
27	51	2.321+03	2.060+01	1.189−08	6.357−07	0.000+00	0.000+00	1.531−07
27	52	2.268+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.544−08
27	53	2.082+03	2.242+05	1.041−04	4.994−03	0.000+00	0.000+00	3.104−04
27	55	1.527+03	0.000+00	0.000+00	0.000+00	2.939+02	6.225−06	0.000+00
27	56	1.509+03	0.000+00	0.000+00	0.000+00	9.016+00	4.211−04	0.000+00
27	57	1.506+03	0.000+00	0.000+00	0.000+00	2.933−01	4.174−05	0.000+00
27	58	1.501+03	0.000+00	0.000+00	0.000+00	1.410−02	2.019−04	0.000+00
27	59	1.486+03	0.000+00	0.000+00	0.000+00	2.362−01	0.000+00	0.000+00
27	60	1.484+03	0.000+00	0.000+00	0.000+00	8.992−01	6.565−05	0.000+00
27	61	1.482+03	0.000+00	0.000+00	0.000+00	1.290−01	1.361−04	0.000+00
27	62	1.432+03	0.000+00	0.000+00	0.000+00	2.226−01	4.696−07	0.000+00
27	63	1.430+03	0.000+00	0.000+00	0.000+00	4.267−02	0.000+00	0.000+00
27	65	1.425+03	1.195+08	4.678−02	1.537+00	0.000+00	0.000+00	1.668−05
27	66	1.424+03	1.557+06	3.383−04	1.111−02	0.000+00	0.000+00	3.891−03
27	67	1.424+03	1.732+06	5.263−04	1.727−02	0.000+00	0.000+00	6.712−03
27	68	1.420+03	1.219+08	4.739−02	1.551+00	0.000+00	0.000+00	1.402−02
27	69	1.408+03	1.240+09	3.684−01	1.195+01	0.000+00	0.000+00	3.890−03
27	70	1.380+03	1.405+07	4.010−03	1.275−01	0.000+00	0.000+00	6.957−03
27	71	1.377+03	1.234+06	4.511−04	1.432−02	0.000+00	0.000+00	2.108−02
27	72	1.374+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.700−02
27	73	1.348+03	0.000+00	0.000+00	0.000+00	1.045+03	5.012−07	0.000+00
27	74	1.337+03	1.240+09	2.374−01	7.315+00	0.000+00	0.000+00	3.401−03
27	75	1.332+03	1.509+06	4.011−04	1.231−02	0.000+00	0.000+00	4.676−03
27	76	1.328+03	6.784+07	1.282−02	3.926−01	0.000+00	0.000+00	8.916−03
27	77	1.327+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.635−02
27	78	1.267+03	0.000+00	0.000+00	0.000+00	9.898+02	0.000+00	0.000+00
27	79	1.082+03	1.537+04	1.926−06	4.802−05	0.000+00	0.000+00	1.788−04
27	80	1.082+03	1.300+03	2.281−07	5.687−06	0.000+00	0.000+00	3.872−04
27	81	1.082+03	4.693+04	1.059−05	2.639−04	0.000+00	0.000+00	4.035−04
27	83	1.002+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.024−07
27	84	1.002+03	7.145+03	7.690−07	1.777−05	0.000+00	0.000+00	1.855−06
27	85	9.774+02	1.020+07	1.043−03	2.350−02	0.000+00	0.000+00	1.315−02
27	86	9.480+02	3.310+08	5.733−02	1.253+00	0.000+00	0.000+00	4.754−02
27	87	9.168+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.594−03
27	88	9.168+02	1.540+04	1.386−06	2.929−05	0.000+00	0.000+00	4.972−03
27	89	9.168+02	1.644+02	2.072−08	4.377−07	0.000+00	0.000+00	2.070−03
27	90	8.719+02	1.178+07	9.593−04	1.927−02	0.000+00	0.000+00	5.072−04
27	92	7.930+02	0.000+00	0.000+00	0.000+00	9.688+02	1.093−06	0.000+00
27	93	7.825+02	0.000+00	0.000+00	0.000+00	1.547−01	0.000+00	0.000+00
27	94	7.825+02	0.000+00	0.000+00	0.000+00	4.383−01	6.675−04	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
27	95	7.824+02	0.000+00	0.000+00	0.000+00	5.399−02	8.302−04	0.000+00
27	96	7.772+02	0.000+00	0.000+00	0.000+00	8.650−02	2.306−03	0.000+00
27	97	7.770+02	0.000+00	0.000+00	0.000+00	8.189−03	1.367−04	0.000+00
27	98	7.767+02	0.000+00	0.000+00	0.000+00	3.219−03	1.079−03	0.000+00
27	99	7.552+02	0.000+00	0.000+00	0.000+00	6.617−05	1.170−08	0.000+00
27	100	7.550+02	0.000+00	0.000+00	0.000+00	2.854−01	0.000+00	0.000+00
27	102	7.412+02	0.000+00	0.000+00	0.000+00	3.792+03	7.204−06	0.000+00
27	103	7.234+02	0.000+00	0.000+00	0.000+00	2.214+02	0.000+00	0.000+00
27	104	6.624+02	2.060+05	1.355−05	2.069−04	0.000+00	0.000+00	1.056−03
27	105	6.573+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.610−06
27	106	6.573+02	6.539+02	3.025−08	4.582−07	0.000+00	0.000+00	3.229−06
27	107	6.573+02	3.058+02	1.981−08	3.000−07	0.000+00	0.000+00	1.839−06
27	108	6.540+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.620−05
27	109	6.537+02	3.043+02	1.950−08	2.938−07	0.000+00	0.000+00	7.309−05
27	110	6.537+02	4.552+00	3.750−10	5.649−09	0.000+00	0.000+00	2.676−04
27	111	6.538+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.811−04
27	112	6.436+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.344−07
27	113	6.406+02	7.736+01	6.120−09	9.034−08	0.000+00	0.000+00	1.052−03
27	114	6.406+02	8.753+01	5.385−09	7.950−08	0.000+00	0.000+00	1.059−03
27	115	6.406+02	1.151+01	5.057−10	7.465−09	0.000+00	0.000+00	5.572−04
27	116	6.379+02	0.000+00	0.000+00	0.000+00	6.965+04	3.915−10	0.000+00
27	117	6.341+02	0.000+00	0.000+00	0.000+00	1.051+00	1.053−05	0.000+00
27	118	6.341+02	0.000+00	0.000+00	0.000+00	5.111+00	0.000+00	0.000+00
27	120	6.317+02	0.000+00	0.000+00	0.000+00	7.877−01	1.999−05	0.000+00
27	121	6.317+02	0.000+00	0.000+00	0.000+00	1.554+00	1.596−05	0.000+00
27	122	6.317+02	0.000+00	0.000+00	0.000+00	1.883+00	2.342−05	0.000+00
27	123	6.252+02	0.000+00	0.000+00	0.000+00	6.055+04	9.280−10	0.000+00
27	125	6.235+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.100−07
27	126	6.235+02	5.153+00	2.145−10	3.081−09	0.000+00	0.000+00	2.984−08
27	127	6.232+02	4.270+06	1.776−04	2.550−03	0.000+00	0.000+00	1.830−03
27	128	6.229+02	3.127+07	2.339−03	3.357−02	0.000+00	0.000+00	1.754−03
27	129	6.197+02	0.000+00	0.000+00	0.000+00	1.785−01	5.208−06	0.000+00
27	130	6.197+02	0.000+00	0.000+00	0.000+00	7.301−01	2.572−06	0.000+00
27	131	6.197+02	0.000+00	0.000+00	0.000+00	1.453−05	0.000+00	0.000+00
27	132	6.138+02	0.000+00	0.000+00	0.000+00	7.851−01	0.000+00	0.000+00
27	133	6.138+02	0.000+00	0.000+00	0.000+00	1.474+00	5.264−08	0.000+00
27	134	6.138+02	0.000+00	0.000+00	0.000+00	6.511−02	1.775−05	0.000+00
27	135	6.100+02	0.000+00	0.000+00	0.000+00	8.559−01	4.844−06	0.000+00
27	136	6.100+02	0.000+00	0.000+00	0.000+00	2.021+00	0.000+00	0.000+00
27	138	6.095+02	0.000+00	0.000+00	0.000+00	4.947+04	2.009−06	0.000+00
27	139	5.978+02	0.000+00	0.000+00	0.000+00	2.402+04	0.000+00	0.000+00
27	140	5.906+02	0.000+00	0.000+00	0.000+00	6.538+04	0.000+00	0.000+00
28	29	5.480+04	1.458+02	6.564−05	5.921−02	0.000+00	0.000+00	2.794−11
28	30	2.020+04	0.000+00	0.000+00	0.000+00	2.067−05	3.903−04	0.000+00
28	31	2.006+04	0.000+00	0.000+00	0.000+00	8.314−06	5.574−04	0.000+00
28	32	1.987+04	0.000+00	0.000+00	0.000+00	6.233−08	0.000+00	0.000+00
28	33	7.874+03	0.000+00	0.000+00	0.000+00	3.698−05	7.853−03	0.000+00
28	34	7.795+03	0.000+00	0.000+00	0.000+00	1.161−06	4.781−03	0.000+00
28	35	7.751+03	0.000+00	0.000+00	0.000+00	6.057−06	0.000+00	0.000+00
28	36	7.007+03	0.000+00	0.000+00	0.000+00	1.214−04	1.344−03	0.000+00
28	37	6.983+03	0.000+00	0.000+00	0.000+00	8.891−05	2.344−05	0.000+00
28	38	6.959+03	0.000+00	0.000+00	0.000+00	1.081−04	8.221−04	0.000+00
28	39	4.754+03	0.000+00	0.000+00	0.000+00	4.984−03	0.000+00	0.000+00
28	40	4.726+03	0.000+00	0.000+00	0.000+00	3.691−02	1.644−05	0.000+00
28	41	4.664+03	0.000+00	0.000+00	0.000+00	1.923−04	2.055−05	0.000+00
28	42	3.856+03	0.000+00	0.000+00	0.000+00	5.007+01	3.289−07	0.000+00
28	43	2.705+03	0.000+00	0.000+00	0.000+00	6.406+00	1.974−09	0.000+00
28	44	2.700+03	0.000+00	0.000+00	0.000+00	2.041+02	1.666−05	0.000+00
28	45	2.692+03	1.712+08	1.116−01	4.947+00	0.000+00	0.000+00	1.066−04
28	46	2.572+03	1.959+06	1.166−03	4.934−02	0.000+00	0.000+00	7.018−05
28	47	2.561+03	1.389+04	1.366−05	5.761−04	0.000+00	0.000+00	2.347−04
28	48	2.544+03	5.464+02	7.421−07	3.108−05	0.000+00	0.000+00	2.793−04
28	49	2.360+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.863−03
28	50	2.355+03	1.650+04	8.235−06	3.192−04	0.000+00	0.000+00	1.447−03
28	51	2.345+03	1.064+05	8.771−05	3.385−03	0.000+00	0.000+00	6.436−04
28	52	2.291+03	4.969+04	2.346−05	8.844−04	0.000+00	0.000+00	1.671−05
28	53	2.101+03	1.444+08	9.556−02	3.305+00	0.000+00	0.000+00	1.045−03
28	54	1.768+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.297−03
28	55	1.538+03	0.000+00	0.000+00	0.000+00	6.017+02	3.623−06	0.000+00
28	56	1.519+03	0.000+00	0.000+00	0.000+00	2.213+01	2.094−05	0.000+00
28	57	1.516+03	0.000+00	0.000+00	0.000+00	3.369−01	2.908−05	0.000+00
28	58	1.511+03	0.000+00	0.000+00	0.000+00	1.425−05	0.000+00	0.000+00
28	59	1.495+03	0.000+00	0.000+00	0.000+00	2.916−03	1.450−07	0.000+00
28	60	1.494+03	0.000+00	0.000+00	0.000+00	3.335−01	4.353−08	0.000+00
28	61	1.492+03	0.000+00	0.000+00	0.000+00	3.728−01	3.387−06	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
28	62	1.442+03	0.000+00	0.000+00	0.000+00	4.367−01	5.480−06	0.000+00
28	63	1.439+03	0.000+00	0.000+00	0.000+00	1.292−01	3.451−06	0.000+00
28	64	1.437+03	0.000+00	0.000+00	0.000+00	1.081−02	0.000+00	0.000+00
28	65	1.434+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.719−03
28	66	1.434+03	4.186+04	1.289−05	3.043−04	0.000+00	0.000+00	2.962−03
28	67	1.433+03	4.612+06	1.988−03	4.688−02	0.000+00	0.000+00	2.113−02
28	68	1.429+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.671−02
28	69	1.416+03	1.600+09	6.737−01	1.571+01	0.000+00	0.000+00	3.444−02
28	70	1.388+03	1.611+07	6.516−03	1.489−01	0.000+00	0.000+00	2.328−04
28	71	1.386+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.613−06
28	73	1.356+03	0.000+00	0.000+00	0.000+00	1.382+03	1.729−06	0.000+00
28	74	1.345+03	7.877+08	2.137−01	4.732+00	0.000+00	0.000+00	3.774−02
28	75	1.339+03	1.176+06	4.427−04	9.761−03	0.000+00	0.000+00	3.384−03
28	76	1.336+03	4.013+07	1.074−02	2.363−01	0.000+00	0.000+00	1.187−02
28	77	1.335+03	5.319+05	8.528−05	1.874−03	0.000+00	0.000+00	1.756−03
28	78	1.274+03	0.000+00	0.000+00	0.000+00	3.389+02	1.365−06	0.000+00
28	79	1.087+03	1.516+03	2.685−07	4.804−06	0.000+00	0.000+00	5.950−03
28	80	1.087+03	5.663+04	1.405−05	2.513−04	0.000+00	0.000+00	3.058−02
28	81	1.087+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	9.022−02
28	82	1.007+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.203−02
28	83	1.007+03	4.016+05	3.663−05	6.071−04	0.000+00	0.000+00	4.882−02
28	84	1.007+03	3.374+05	5.130−05	8.503−04	0.000+00	0.000+00	2.367−02
28	85	9.816+02	3.738+09	5.400−01	8.726+00	0.000+00	0.000+00	2.056−02
28	86	9.520+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.508−02
28	87	9.205+02	5.610+04	4.276−06	6.479−05	0.000+00	0.000+00	1.023−02
28	88	9.205+02	4.102+02	5.211−08	7.895−07	0.000+00	0.000+00	2.358−02
28	89	9.205+02	8.594+04	1.528−05	2.316−04	0.000+00	0.000+00	2.635−02
28	90	8.752+02	1.904+08	2.187−02	3.151−01	0.000+00	0.000+00	3.456−03
28	91	8.283+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.829−01
28	92	7.958+02	0.000+00	0.000+00	0.000+00	5.545+03	3.253−05	0.000+00
28	93	7.852+02	0.000+00	0.000+00	0.000+00	1.002+00	4.601−03	0.000+00
28	94	7.852+02	0.000+00	0.000+00	0.000+00	1.159−01	1.003−03	0.000+00
28	95	7.851+02	0.000+00	0.000+00	0.000+00	9.143−03	9.423−04	0.000+00
28	96	7.799+02	0.000+00	0.000+00	0.000+00	3.868−01	9.795−03	0.000+00
28	97	7.797+02	0.000+00	0.000+00	0.000+00	7.376−01	1.413−02	0.000+00
28	98	7.794+02	0.000+00	0.000+00	0.000+00	8.781−01	0.000+00	0.000+00
28	99	7.577+02	0.000+00	0.000+00	0.000+00	7.989−01	2.116−02	0.000+00
28	100	7.575+02	0.000+00	0.000+00	0.000+00	4.627−03	1.168−02	0.000+00
28	101	7.574+02	0.000+00	0.000+00	0.000+00	1.943+00	0.000+00	0.000+00
28	102	7.437+02	0.000+00	0.000+00	0.000+00	1.140+04	3.769−05	0.000+00
28	103	7.257+02	0.000+00	0.000+00	0.000+00	7.195+03	1.677−04	0.000+00
28	104	6.644+02	5.062+06	4.689−04	5.128−03	0.000+00	0.000+00	1.440−04
28	105	6.592+02	1.583+03	6.186−08	6.712−07	0.000+00	0.000+00	1.211−03
28	106	6.592+02	2.915+03	1.899−07	2.061−06	0.000+00	0.000+00	3.104−03
28	107	6.592+02	1.025+03	9.346−08	1.014−06	0.000+00	0.000+00	3.371−03
28	108	6.558+02	1.954+07	7.560−04	8.162−03	0.000+00	0.000+00	7.967−05
28	109	6.556+02	6.675+03	6.022−07	6.498−06	0.000+00	0.000+00	1.630−06
28	110	6.556+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.638−09
28	112	6.454+02	9.688+01	3.630−09	3.857−08	0.000+00	0.000+00	7.323−07
28	113	6.424+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	5.287−06
28	114	6.424+02	2.285+01	1.979−09	2.093−08	0.000+00	0.000+00	4.818−07
28	115	6.424+02	2.850+02	1.764−08	1.865−07	0.000+00	0.000+00	3.926−07
28	116	6.397+02	0.000+00	0.000+00	0.000+00	5.652+04	0.000+00	0.000+00
28	117	6.359+02	0.000+00	0.000+00	0.000+00	3.516+01	0.000+00	0.000+00
28	120	6.334+02	0.000+00	0.000+00	0.000+00	3.322+01	1.253−04	0.000+00
28	121	6.334+02	0.000+00	0.000+00	0.000+00	9.805−01	1.326−04	0.000+00
28	122	6.334+02	0.000+00	0.000+00	0.000+00	3.832+00	0.000+00	0.000+00
28	123	6.269+02	0.000+00	0.000+00	0.000+00	3.496+04	6.961−07	0.000+00
28	124	6.252+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.985−03
28	125	6.252+02	2.413+04	8.482−07	8.728−06	0.000+00	0.000+00	2.392−03
28	126	6.252+02	4.106+03	2.406−07	2.475−06	0.000+00	0.000+00	9.726−04
28	127	6.249+02	2.165+08	1.267−02	1.304−01	0.000+00	0.000+00	1.950−02
28	128	6.246+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.847−03
28	129	6.213+02	0.000+00	0.000+00	0.000+00	6.637+00	2.664−07	0.000+00
28	130	6.213+02	0.000+00	0.000+00	0.000+00	2.621+00	0.000+00	0.000+00
28	132	6.155+02	0.000+00	0.000+00	0.000+00	6.102+00	2.844−05	0.000+00
28	133	6.155+02	0.000+00	0.000+00	0.000+00	1.581+01	3.463−06	0.000+00
28	134	6.155+02	0.000+00	0.000+00	0.000+00	2.881−02	3.604−06	0.000+00
28	135	6.117+02	0.000+00	0.000+00	0.000+00	6.395+00	4.594−04	0.000+00
28	136	6.117+02	0.000+00	0.000+00	0.000+00	3.844−01	2.530−04	0.000+00
28	137	6.117+02	0.000+00	0.000+00	0.000+00	7.541+01	0.000+00	0.000+00
28	138	6.111+02	0.000+00	0.000+00	0.000+00	3.782+04	1.610−07	0.000+00
28	140	5.921+02	0.000+00	0.000+00	0.000+00	1.849+04	2.300−06	0.000+00
28	141	5.775+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.297−02
29	30	3.200+04	5.491−01	8.431−08	4.441−05	0.000+00	0.000+00	8.729−10

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
29	31	3.165+04	4.365+00	9.178−07	4.782−04	0.000+00	0.000+00	4.740−09
29	32	3.116+04	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.504−08
29	33	9.195+03	7.784+00	9.867−08	1.493−05	0.000+00	0.000+00	1.595−09
29	34	9.088+03	1.697+01	1.260−07	1.885−05	0.000+00	0.000+00	1.413−08
29	35	9.027+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	3.428−08
29	36	8.034+03	5.175+01	3.005−07	3.974−05	0.000+00	0.000+00	3.961−07
29	37	8.002+03	5.507+00	5.287−08	6.964−06	0.000+00	0.000+00	9.404−07
29	38	7.972+03	1.360+02	1.814−06	2.381−04	0.000+00	0.000+00	1.049−06
29	39	5.206+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.848−06
29	40	5.172+03	5.938+03	1.429−05	1.216−03	0.000+00	0.000+00	6.210−06
29	41	5.098+03	1.656+01	6.454−08	5.415−06	0.000+00	0.000+00	3.374−06
29	42	4.148+03	5.984+06	9.259−03	6.321−01	0.000+00	0.000+00	2.311−05
29	43	2.845+03	2.739+05	4.655−04	2.180−02	0.000+00	0.000+00	1.741−04
29	44	2.840+03	2.187+06	1.586−03	7.413−02	0.000+00	0.000+00	1.520−04
29	45	2.832+03	0.000+00	0.000+00	0.000+00	8.333+01	2.239−05	0.000+00
29	46	2.699+03	0.000+00	0.000+00	0.000+00	8.603−01	4.225−03	0.000+00
29	47	2.687+03	0.000+00	0.000+00	0.000+00	7.270−04	5.078−04	0.000+00
29	48	2.668+03	0.000+00	0.000+00	0.000+00	2.687−04	1.853−03	0.000+00
29	49	2.466+03	0.000+00	0.000+00	0.000+00	1.313−02	0.000+00	0.000+00
29	50	2.461+03	0.000+00	0.000+00	0.000+00	3.326−02	3.188−04	0.000+00
29	51	2.450+03	0.000+00	0.000+00	0.000+00	9.397−04	6.367−04	0.000+00
29	52	2.391+03	0.000+00	0.000+00	0.000+00	5.680−02	3.687−06	0.000+00
29	53	2.185+03	0.000+00	0.000+00	0.000+00	1.014+00	7.580−07	0.000+00
29	54	1.827+03	0.000+00	0.000+00	0.000+00	1.593+02	0.000+00	0.000+00
29	55	1.582+03	1.039+09	3.900−01	1.015+01	0.000+00	0.000+00	1.816−03
29	56	1.562+03	3.036+07	1.111−02	2.855−01	0.000+00	0.000+00	1.790−03
29	57	1.559+03	2.792+04	1.424−05	3.656−04	0.000+00	0.000+00	6.953−03
29	58	1.554+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.512−02
29	59	1.537+03	2.087+05	4.437−05	1.123−03	0.000+00	0.000+00	1.288−03
29	60	1.536+03	2.226+06	7.872−04	1.990−02	0.000+00	0.000+00	4.092−03
29	61	1.534+03	2.659+04	1.313−05	3.316−04	0.000+00	0.000+00	5.839−03
29	62	1.480+03	1.153+06	3.790−04	9.236−03	0.000+00	0.000+00	3.075−03
29	63	1.478+03	1.231+05	2.417−05	5.879−04	0.000+00	0.000+00	6.421−03
29	64	1.476+03	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.089−03
29	65	1.473+03	0.000+00	0.000+00	0.000+00	1.094+03	0.000+00	0.000+00
29	66	1.472+03	0.000+00	0.000+00	0.000+00	1.570−03	1.692−05	0.000+00
29	67	1.471+03	0.000+00	0.000+00	0.000+00	2.581+00	2.941−05	0.000+00
29	68	1.468+03	0.000+00	0.000+00	0.000+00	1.097+03	0.000+00	0.000+00
29	69	1.454+03	0.000+00	0.000+00	0.000+00	1.177+03	2.211−09	0.000+00
29	70	1.424+03	0.000+00	0.000+00	0.000+00	1.284+01	2.495−08	0.000+00
29	71	1.422+03	0.000+00	0.000+00	0.000+00	8.174+01	0.000+00	0.000+00
29	73	1.391+03	2.694+08	1.093−01	2.503+00	0.000+00	0.000+00	2.545−03
29	74	1.379+03	0.000+00	0.000+00	0.000+00	2.302+01	2.237−06	0.000+00
29	75	1.373+03	0.000+00	0.000+00	0.000+00	1.672+00	5.757−05	0.000+00
29	76	1.370+03	0.000+00	0.000+00	0.000+00	1.378+00	1.366−05	0.000+00
29	77	1.368+03	0.000+00	0.000+00	0.000+00	1.179−03	1.278−04	0.000+00
29	78	1.304+03	1.734+09	2.652−01	5.694+00	0.000+00	0.000+00	3.059−03
29	79	1.109+03	0.000+00	0.000+00	0.000+00	1.073−02	3.426−06	0.000+00
29	80	1.109+03	0.000+00	0.000+00	0.000+00	3.103−05	1.084−06	0.000+00
29	81	1.109+03	0.000+00	0.000+00	0.000+00	1.553−04	0.000+00	0.000+00
29	82	1.026+03	0.000+00	0.000+00	0.000+00	8.649−05	0.000+00	0.000+00
29	83	1.026+03	0.000+00	0.000+00	0.000+00	2.453−04	2.110−05	0.000+00
29	84	1.026+03	0.000+00	0.000+00	0.000+00	1.367−05	2.926−05	0.000+00
29	85	9.995+02	0.000+00	0.000+00	0.000+00	4.363+03	9.660−07	0.000+00
29	86	9.688+02	0.000+00	0.000+00	0.000+00	6.437+03	0.000+00	0.000+00
29	87	9.362+02	0.000+00	0.000+00	0.000+00	9.364−06	2.015−04	0.000+00
29	88	9.362+02	0.000+00	0.000+00	0.000+00	3.035−04	4.035−05	0.000+00
29	89	9.362+02	0.000+00	0.000+00	0.000+00	1.158−04	2.651−05	0.000+00
29	90	8.894+02	0.000+00	0.000+00	0.000+00	3.388+01	1.951−07	0.000+00
29	91	8.410+02	0.000+00	0.000+00	0.000+00	2.939+01	0.000+00	0.000+00
29	92	8.075+02	2.383+05	2.330−05	3.097−04	0.000+00	0.000+00	5.816−03
29	93	7.967+02	8.261+02	4.716−08	6.185−07	0.000+00	0.000+00	3.803−03
29	94	7.966+02	4.740+03	4.510−07	5.913−06	0.000+00	0.000+00	8.870−03
29	95	7.965+02	1.550+04	2.064−06	2.706−05	0.000+00	0.000+00	1.082−02
29	96	7.912+02	2.045+03	1.919−07	2.500−06	0.000+00	0.000+00	4.863−04
29	97	7.909+02	6.451+02	8.470−08	1.103−06	0.000+00	0.000+00	2.514−03
29	98	7.906+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	8.950−03
29	99	7.683+02	2.022+00	1.790−10	2.263−09	0.000+00	0.000+00	4.951−06
29	100	7.681+02	4.857−03	2.578−13	3.259−12	0.000+00	0.000+00	6.659−06
29	101	7.680+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	2.533−06
29	102	7.539+02	3.659+08	4.365−02	5.416−01	0.000+00	0.000+00	1.934−02
29	103	7.354+02	1.360+08	6.614−03	8.006−02	0.000+00	0.000+00	6.149−06
29	104	6.725+02	0.000+00	0.000+00	0.000+00	4.410+04	6.438−07	0.000+00
29	105	6.672+02	0.000+00	0.000+00	0.000+00	1.632−02	3.280−05	0.000+00
29	106	6.672+02	0.000+00	0.000+00	0.000+00	1.998−02	1.511−05	0.000+00

Table 2 (*continued*)

i	j	λ_{ij} (Å)	A_{ji}^{E1}	f_{ij}^{E1}	S^{E1}	A_{ji}^{E2}	A_{ji}^{M1}	A_{ji}^{M2}
29	107	6.672+02	0.000+00	0.000+00	0.000+00	1.220−01	3.373−05	0.000+00
29	108	6.638+02	0.000+00	0.000+00	0.000+00	4.960+04	9.972−07	0.000+00
29	109	6.636+02	0.000+00	0.000+00	0.000+00	3.020−02	5.047−06	0.000+00
29	110	6.636+02	0.000+00	0.000+00	0.000+00	4.755−02	0.000+00	0.000+00
29	112	6.531+02	0.000+00	0.000+00	0.000+00	3.558−02	1.308−06	0.000+00
29	113	6.500+02	0.000+00	0.000+00	0.000+00	1.261−02	0.000+00	0.000+00
29	114	6.500+02	0.000+00	0.000+00	0.000+00	1.831−02	4.276−06	0.000+00
29	115	6.500+02	0.000+00	0.000+00	0.000+00	6.814−03	6.711−06	0.000+00
29	116	6.472+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	6.249−03
29	117	6.433+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	7.105−10
29	120	6.408+02	5.841+00	3.596−10	3.794−09	0.000+00	0.000+00	3.135−04
29	121	6.408+02	2.298+02	1.981−08	2.089−07	0.000+00	0.000+00	1.534−03
29	122	6.408+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	4.648−03
29	123	6.341+02	9.983+05	6.018−05	6.282−04	0.000+00	0.000+00	9.281−03
29	124	6.324+02	0.000+00	0.000+00	0.000+00	1.732−01	0.000+00	0.000+00
29	125	6.324+02	0.000+00	0.000+00	0.000+00	7.902−03	2.119−06	0.000+00
29	126	6.324+02	0.000+00	0.000+00	0.000+00	6.017+00	8.881−06	0.000+00
29	127	6.322+02	0.000+00	0.000+00	0.000+00	5.595+04	6.952−07	0.000+00
29	128	6.318+02	0.000+00	0.000+00	0.000+00	3.073+04	0.000+00	0.000+00
29	129	6.285+02	5.452−01	4.520−11	4.676−10	0.000+00	0.000+00	1.163−08
29	130	6.285+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.456−09
29	132	6.225+02	1.612+00	5.617−11	5.755−10	0.000+00	0.000+00	1.007−03
29	133	6.225+02	7.764+01	4.510−09	4.621−08	0.000+00	0.000+00	2.369−03
29	134	6.225+02	1.774+02	1.443−08	1.479−07	0.000+00	0.000+00	2.692−03
29	135	6.186+02	4.903+01	2.813−09	2.864−08	0.000+00	0.000+00	4.013−06
29	136	6.186+02	1.023+01	3.522−10	3.587−09	0.000+00	0.000+00	8.316−06
29	137	6.186+02	0.000+00	0.000+00	0.000+00	0.000+00	0.000+00	1.066−05
29	138	6.180+02	5.919+07	4.745−03	4.826−02	0.000+00	0.000+00	2.547−03
29	140	5.986+02	1.285+07	4.143−04	4.082−03	0.000+00	0.000+00	4.213−03
29	141	5.837+02	0.000+00	0.000+00	0.000+00	5.058+04	0.000+00	0.000+00

Table 3

Collision strengths (Ω) for resonance transitions of Si III. $a \pm b \equiv a \times 10^{\pm b}$. See Explanation of Tables and Table 1 for definition of level indices.

Transition		Energy (Ryd)							
i	j	4	6	8	10	15	20	25	30
1	2	2.389−02	1.367−02	8.809−03	6.093−03	2.959−03	1.729−03	1.131−03	7.978−04
1	3	7.212−02	4.153−02	2.698−02	1.895−02	9.660−03	6.056−03	4.342−03	3.417−03
1	4	1.193−01	6.820−02	4.394−02	3.038−02	1.475−02	8.616−03	5.636−03	3.974−03
1	5	1.636+01	2.034+01	2.292+01	2.583+01	3.017+01	3.351+01	3.637+01	3.898+01
1	6	1.378+00	1.606+00	1.727+00	1.809+00	1.917+00	1.983+00	2.038+00	2.093+00
1	7	4.376−04	2.065−04	1.162−04	7.479−05	3.699−05	2.521−05	2.003−05	1.720−05
1	8	1.251−04	5.518−04	2.808−04	1.588−04	5.254−05	2.333−05	1.241−05	7.371−06
1	9	2.524−03	1.464−03	1.047−03	8.681−04	7.136−04	6.813−04	6.780−04	6.851−04
1	10	1.102−01	5.687−02	3.423−02	2.260−02	1.020−02	5.702−03	3.617−03	2.494−03
1	11	7.874−02	4.063−02	2.445−02	1.614−02	7.289−03	4.073−03	2.584−03	1.781−03
1	12	4.725−02	2.437−02	1.467−02	9.685−03	4.373−03	2.443−03	1.550−03	1.069−03
1	13	1.939−02	8.345−03	4.835−03	3.240−03	1.578−03	9.360−04	6.186−04	4.388−04
1	14	3.069−01	3.386−01	3.498−01	3.525−01	3.476−01	3.398−01	3.331−01	3.277−01
1	15	5.614−01	6.180−01	6.568−01	6.863−01	7.351−01	7.641−01	7.831−01	7.963−01
1	16	1.164+00	1.311+00	1.381+00	1.419+00	1.453+00	1.464+00	1.473+00	1.487+00
1	17	4.646−03	2.180−03	1.301−03	8.616−04	3.915−04	2.204−04	1.411−04	9.812−05
1	18	1.410−02	6.731−03	4.114−03	2.812−03	1.435−03	9.492−04	7.339−04	6.248−04
1	19	2.324−02	1.090−02	6.510−03	4.311−03	1.958−03	1.103−03	7.056−04	4.907−04
1	20	3.157−01	3.505−01	3.712−01	3.875−01	4.187−01	4.423−01	4.616−01	4.780−01
1	21	8.398−03	3.371−03	1.709−03	9.982−04	3.834−04	2.026−04	1.268−04	8.784−05
1	22	1.177−02	4.725−03	2.394−03	1.397−03	5.360−04	2.839−04	1.791−04	1.257−04
1	23	1.513−02	6.077−03	3.073−03	1.787−03	6.762−04	3.508−04	2.154−04	1.462−04
1	24	1.778−02	8.301−03	4.782−03	3.088−03	1.353−03	7.437−04	4.671−04	3.195−04
1	25	2.961−02	1.383−02	7.968−03	5.146−03	2.256−03	1.240−03	7.788−04	5.328−04
1	26	4.144−02	1.935−02	1.115−02	7.201−03	3.157−03	1.735−03	1.089−03	7.452−04
1	27	2.418−01	2.539−01	2.586−01	2.604−01	2.612−01	2.617−01	2.635−01	2.666−01
1	28	3.672−02	4.064−02	4.063−02	3.922−02	3.425−02	2.972−02	2.606−02	2.314−02
1	29	3.914−01	4.576−01	4.904−01	5.087−01	5.294−01	5.372−01	5.409−01	5.429−01
1	30	6.247−03	2.212−03	1.080−03	6.284−04	2.389−04	1.228−04	7.447−05	5.009−05
1	31	8.730−03	3.079−03	1.498−03	8.686−04	3.273−04	1.668−04	1.007−04	6.758−05
1	32	1.120−02	3.930−03	1.907−03	1.102−03	4.109−04	2.065−04	1.223−04	8.029−05
1	33	2.226−03	1.083−03	5.732−04	3.362−04	1.208−04	5.830−05	3.368−05	2.184−05
1	34	1.333−03	6.480−04	3.423−04	2.004−04	7.171−05	3.471−05	2.030−05	1.348−05
1	35	4.451−04	2.160−04	1.138−04	6.632−05	2.331−05	1.094−05	6.116−06	3.826−06
1	36	4.357−04	1.763−04	8.456−05	4.643−05	1.494−05	6.756−06	3.839−06	2.574−06
1	37	7.305−04	2.949−04	1.407−04	7.664−05	2.377−05	1.005−05	5.144−06	2.992−06
1	38	1.008−03	4.060−04	1.940−04	1.060−04	3.352−05	1.475−05	8.055−06	5.137−06
1	39	3.631−04	1.502−04	7.177−05	3.966−05	1.333−05	6.167−06	3.418−06	2.123−06
1	40	1.303−03	6.372−04	3.804−04	2.675−04	1.609−04	1.229−04	1.039−04	9.249−05
1	41	1.793−03	7.411−04	3.537−04	1.953−04	6.555−05	3.031−05	1.679−05	1.043−05
1	42	1.251−01	1.064−01	9.277−02	8.263−02	6.591−02	5.600−02	4.954−02	4.505−02
1	43	9.107−02	8.179−02	6.916−02	5.854−02	4.084−02	3.092−02	2.487−02	2.091−02
1	44	1.364−02	1.858−02	1.928−02	1.870−02	1.643−02	1.471−02	1.357−02	1.282−02
1	45	6.487−03	5.424−03	4.540−03	3.833−03	2.649−03	1.964−03	1.530−03	1.236−03
1	46	6.668−04	2.156−04	1.180−04	7.696−05	3.802−05	2.436−05	1.757−05	1.355−05
1	47	1.040−03	2.973−04	1.462−04	8.775−05	3.985−05	2.695−05	2.189−05	1.941−05
1	48	1.428−03	3.889−04	1.787−04	9.757−05	3.181−05	1.459−05	8.086−06	5.031−06
1	49	7.126−05	2.969−05	1.461−05	8.528−06	3.714−06	2.406−06	1.870−06	1.593−06
1	50	2.134−04	8.630−05	4.042−05	2.190−05	7.414−06	3.631−06	2.170−06	1.460−06
1	51	3.751−04	1.648−04	8.863−05	5.836−05	3.561−05	3.010−05	2.808−05	2.715−05
1	52	3.458−04	1.262−04	6.500−05	3.776−05	1.358−05	6.678−06	3.928−06	2.580−06
1	53	4.209−02	3.921−02	3.775−02	3.694−02	3.589−02	3.529−02	3.487−02	3.460−02
1	54	4.526−03	6.324−03	6.885−03	6.999−03	6.741−03	6.381−03	6.076−03	5.839−03
1	55	5.730−03	4.903−03	4.132−03	3.524−03	2.539−03	1.964−03	1.592−03	1.333−03
1	56	2.168−03	6.989−04	3.620−04	2.327−04	1.182−04	7.944−05	6.012−05	4.841−05
1	57	2.889−03	8.091−04	3.555−04	1.938−04	6.874−05	3.623−05	2.358−05	1.737−05
1	58	3.740−03	1.023−03	4.363−04	2.294−04	7.290−05	3.397−05	1.953−05	1.274−05
1	59	2.454−04	1.016−04	5.032−05	2.917−05	1.148−05	6.580−06	4.641−06	3.685−06
1	60	4.356−04	1.759−04	8.569−05	4.858−05	1.770−05	9.248−06	5.927−06	4.280−06
1	61	6.141−04	2.418−04	1.150−04	6.349−05	2.146−05	1.044−05	6.371−06	4.501−06
1	62	8.990−04	4.195−04	2.250−04	1.324−04	4.682−05	2.219−05	1.264−05	8.126−06
1	63	5.388−04	2.514−04	1.349−04	7.949−05	2.833−05	1.366−05	8.000−06	5.350−06
1	64	1.794−04	8.322−05	4.427−05	2.580−05	8.835−06	4.021−06	2.188−06	1.341−06
1	65	6.587−03	4.251−03	3.267−03	2.696−03	1.954−03	1.595−03	1.383−03	1.243−03
1	66	1.443−04	5.680−05	2.876−05	1.798−05	9.075−06	6.396−06	5.209−06	4.558−06
1	67	2.078−04	8.204−05	4.135−05	2.534−05	1.158−05	7.164−06	5.121−06	3.974−06
1	68	6.677−03	4.305−03	3.309−03	2.731−03	1.978−03	1.614−03	1.398−03	1.256−03
1	69	4.988−03	4.418−03	3.840−03	3.356−03	2.496−03	1.962−03	1.606−03	1.356−03
1	70	1.119−03	3.310−04	1.548−04	9.338−05	4.567−05	3.067−05	2.325−05	1.876−05
1	71	1.430−03	3.976−04	1.701−04	9.310−05	3.803−05	2.359−05	1.748−05	1.420−05
1	72	1.692−03	4.461−04	1.761−04	8.705−05	2.682−05	1.275−05	7.470−06	4.921−06
1	73	3.850−02	3.558−02	3.088−02	2.672−02	1.967−02	1.573−02	1.335−02	1.181−02
1	74	3.921−03	3.782−03	3.659−03	3.547−03	3.290−03	3.072−03	2.893−03	2.746−03

Table 3 (*continued*)

Transition		Energy (Ryd)							
i	j	4	6	8	10	15	20	25	30
1	75	5.750−04	1.916−04	8.378−05	4.559−05	1.659−05	8.762−06	5.586−06	3.977−06
1	76	6.207−04	3.523−04	2.723−04	2.404−04	2.063−04	1.886−04	1.761−04	1.665−04
1	77	2.450−04	8.003−05	3.390−05	1.771−05	5.695−06	2.628−06	1.467−06	9.203−07
1	78	1.151−02	1.632−02	1.681−02	1.610−02	1.366−02	1.177−02	1.047−02	9.573−03
1	79	2.804−04	8.456−05	3.330−05	1.842−05	6.965−06	3.486−06	2.026−06	1.294−06
1	80	3.926−04	1.182−04	4.643−05	2.560−05	9.596−06	4.725−06	2.679−06	1.668−06
1	81	5.050−04	1.519−04	5.962−05	3.286−05	1.232−05	6.074−06	3.448−06	2.151−06
1	82	1.323−05	9.122−06	4.310−06	2.232−06	6.351−07	2.637−07	1.381−07	8.482−08
1	83	3.969−05	2.734−05	1.288−05	6.653−06	1.859−06	7.428−07	3.662−07	2.070−07
1	84	6.606−05	4.574−05	2.162−05	1.130−05	3.205−06	1.400−06	8.548−07	5.816−07
1	85	4.623−03	8.064−03	9.866−03	1.095−02	1.232−02	1.290−02	1.318−02	1.335−02
1	86	7.845−03	6.143−03	5.310−03	4.784−03	3.915−03	3.377−03	3.009−03	2.740−03
1	87	1.546−03	4.524−04	1.918−04	9.825−05	2.855−05	1.180−05	5.958−06	3.427−06
1	88	2.574−03	7.534−04	3.194−04	1.637−04	4.757−05	1.967−05	9.939−06	5.722−06
1	89	3.598−03	1.053−03	4.466−04	2.289−04	6.654−05	2.750−05	1.389−05	7.991−06
1	90	1.079−02	1.202−02	1.173−02	1.105−02	9.351−03	8.067−03	7.134−03	6.438−03
1	91	8.991−04	1.355−03	1.561−03	1.691−03	1.832−03	1.852−03	1.829−03	1.793−03
1	92	7.300−04	9.381−04	9.982−04	9.878−04	8.672−04	7.418−04	6.402−04	5.603−04
1	93	1.194−04	1.789−05	4.663−06	2.080−06	6.231−07	2.827−07	1.572−07	9.852−08
1	94	1.991−04	2.986−05	7.832−06	3.530−06	1.103−06	5.289−07	3.121−07	2.078−07
1	95	2.786−04	4.173−05	1.088−05	4.858−06	1.469−06	6.777−07	3.843−07	2.462−07
1	96	4.339−04	8.911−05	2.952−05	1.287−05	3.244−06	1.428−06	8.255−07	5.533−07
1	97	6.079−04	1.244−04	4.103−05	1.772−05	4.279−06	1.773−06	9.601−07	6.044−07
1	98	7.830−04	1.600−04	5.258−05	2.262−05	5.372−06	2.172−06	1.141−06	6.926−07
1	99	2.623−04	8.923−05	3.618−05	1.853−05	5.851−06	2.727−06	1.546−06	9.843−07
1	100	1.580−04	5.365−05	2.175−05	1.113−05	3.504−06	1.624−06	9.145−07	5.780−07
1	101	5.276−05	1.789−05	7.248−06	3.708−06	1.166−06	5.398−07	3.035−07	1.914−07
1	102	5.610−03	4.668−03	4.125−03	3.631−03	2.756−03	2.264−03	1.968−03	1.776−03
1	103	1.817−03	2.277−03	2.214−03	2.058−03	1.733−03	1.538−03	1.420−03	1.345−03
1	104	3.288−04	2.385−04	1.877−04	1.559−04	1.144−04	9.346−05	8.016−05	7.065−05
1	105	2.992−05	8.670−06	3.722−06	1.991−06	6.639−07	3.091−07	1.714−07	1.060−07
1	106	4.986−05	1.445−05	6.201−06	3.316−06	1.105−06	5.147−07	2.853−07	1.764−07
1	107	6.979−05	2.022−05	8.678−06	4.639−06	1.546−06	7.198−07	3.989−07	2.465−07
1	108	1.027−04	9.182−05	7.285−05	6.040−05	4.363−05	3.454−05	2.856−05	2.428−05
1	109	1.255−04	1.856−05	6.572−06	3.231−06	9.764−07	4.336−07	2.329−07	1.409−07
1	110	1.613−04	2.385−05	8.443−06	4.152−06	1.255−06	5.575−07	2.997−07	1.813−07
1	111	1.970−04	2.911−05	1.030−05	5.068−06	1.532−06	6.808−07	3.658−07	2.213−07
1	112	2.005−05	1.151−05	5.649−06	2.955−06	8.543−07	3.576−07	1.860−07	1.104−07
1	113	3.799−04	9.867−05	2.974−05	1.388−05	4.427−06	2.039−06	1.110−06	6.712−07
1	114	2.950−04	7.671−05	2.315−05	1.081−05	3.450−06	1.590−06	8.655−07	5.235−07
1	115	2.105−04	5.479−05	1.655−05	7.740−06	2.476−06	1.143−06	6.243−07	3.789−07
1	116	5.590−04	4.345−04	3.751−04	3.310−04	2.566−04	2.097−04	1.772−04	1.534−04
1	117	1.981−04	3.630−05	1.171−05	5.234−06	1.395−06	5.892−07	3.104−07	1.865−07
1	118	2.421−04	4.436−05	1.431−05	6.395−06	1.705−06	7.201−07	3.794−07	2.281−07
1	119	2.861−04	5.242−05	1.691−05	7.555−06	2.014−06	8.507−07	4.483−07	2.695−07
1	120	8.275−05	1.430−05	4.913−06	2.232−06	5.624−07	2.181−07	1.065−07	6.031−08
1	121	1.158−04	2.001−05	6.874−06	3.123−06	7.860−07	3.042−07	1.482−07	8.357−08
1	122	1.488−04	2.571−05	8.833−06	4.011−06	1.009−06	3.906−07	1.902−07	1.073−07
1	123	6.740−05	1.048−04	1.101−04	1.051−04	8.714−05	7.172−05	6.006−05	5.134−05
1	124	2.149−05	9.465−06	3.096−06	1.304−06	2.960−07	1.160−07	6.171−08	3.975−08
1	125	6.445−05	2.837−05	9.265−06	3.886−06	8.574−07	3.160−07	1.524−07	8.587−08
1	126	1.074−04	4.745−05	1.566−05	6.712−06	1.686−06	7.875−07	5.250−07	4.297−07
1	127	9.344−04	1.290−03	1.482−03	1.599−03	1.752−03	1.818−03	1.849−03	1.866−03
1	128	2.353−03	1.017−03	9.061−04	8.707−04	7.448−04	6.345−04	5.500−04	4.854−04
1	129	7.508−05	9.825−06	3.443−06	1.824−06	5.949−07	2.625−07	1.376−07	8.073−08
1	130	9.663−05	1.264−05	4.425−06	2.344−06	7.629−07	3.359−07	1.756−07	1.028−07
1	131	1.183−04	1.546−05	5.408−06	2.863−06	9.319−07	4.102−07	2.145−07	1.255−07
1	132	1.409−05	2.425−06	7.670−07	3.362−07	8.377−08	3.296−08	1.638−08	9.407−09
1	133	2.347−05	4.042−06	1.277−06	5.592−07	1.387−07	5.413−08	2.658−08	1.500−08
1	134	3.285−05	5.661−06	1.790−06	7.838−07	1.946−07	7.619−08	3.757−08	2.131−08
1	135	4.677−05	1.140−05	4.392−06	2.259−06	8.514−07	4.619−07	2.889−07	1.960−07
1	136	2.814−05	6.875−06	2.650−06	1.364−06	5.143−07	2.795−07	1.752−07	1.192−07
1	137	9.392−06	2.296−06	8.850−07	4.552−07	1.713−07	9.287−08	5.804−08	3.935−08
1	138	1.322−03	1.016−03	7.895−04	6.298−04	4.037−04	2.989−04	2.422−04	2.067−04
1	139	9.768−04	4.668−04	3.533−04	2.909−04	2.009−04	1.525−04	1.228−04	1.030−04
1	140	2.995−04	3.452−04	3.866−04	4.054−04	3.909−04	3.555−04	3.244−04	3.006−04
1	141	5.470−04	1.071−03	1.346−03	1.555−03	1.954−03	2.242−03	2.454−03	2.618−03

Table 4

Effective collision strengths (Υ) for transitions of Si III. $a \pm b \equiv a \times 10^{\pm b}$. See Explanation of Tables and Table 1 for definition of level indices.

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
1	2	5.720−01	4.905−01	4.174−01	3.474−01	2.798−01	2.176−01	1.643−01	1.212−01	8.748−02	6.194−02
1	3	1.765+00	1.501+00	1.270+00	1.053+00	8.461−01	6.569−01	4.952−01	3.645−01	2.629−01	1.862−01
1	4	2.899+00	2.465+00	2.089+00	1.736+00	1.397+00	1.086+00	8.195−01	6.034−01	4.353−01	3.080−01
1	5	5.925+00	6.415+00	6.924+00	7.528+00	8.472+00	9.919+00	1.172+01	1.372+01	1.598+01	1.862+01
1	6	7.875−01	8.377−01	8.773−01	9.052−01	9.363−01	9.879−01	1.067+00	1.173+00	1.298+00	1.431+00
1	7	2.222−02	1.975−02	1.658−02	1.321−02	1.006−02	7.372−03	5.245−03	3.650−03	2.497−03	1.683−03
1	8	6.780−02	5.993−02	5.012−02	3.985−02	3.029−02	2.221−02	1.584−02	1.104−02	7.555−03	5.085−03
1	9	1.159−01	1.018−01	8.490−02	6.738−02	5.117−02	3.748−02	2.671−02	1.867−02	1.289−02	8.838−03
1	10	4.833−01	4.649−01	4.363−01	3.984−01	3.541−01	3.064−01	2.576−01	2.094−01	1.642−01	1.241−01
1	11	3.444−01	3.313−01	3.109−01	2.838−01	2.522−01	2.183−01	1.835−01	1.492−01	1.170−01	8.847−02
1	12	2.061−01	1.981−01	1.858−01	1.697−01	1.509−01	1.309−01	1.103−01	8.979−02	7.048−02	5.330−02
1	13	3.283−01	2.970−01	2.551−01	2.103−01	1.676−01	1.300−01	9.830−02	7.254−02	5.226−02	3.679−02
1	14	2.307−01	2.282−01	2.247−01	2.238−01	2.285−01	2.393−01	2.546−01	2.726−01	2.908−01	3.062−01
1	15	4.601−01	4.514−01	4.465−01	4.529−01	4.787−01	5.162−01	5.503−01	5.768−01	6.003−01	6.250−01
1	16	7.080−01	7.267−01	7.455−01	7.731−01	8.182−01	8.812−01	9.567−01	1.039+00	1.123+00	1.202+00
1	17	2.898−02	2.824−02	2.627−02	2.345−02	2.025−02	1.694−02	1.371−02	1.072−02	8.107−03	5.940−03
1	18	8.786−02	8.557−02	7.953−02	7.079−02	6.076−02	5.051−02	4.070−02	3.179−02	2.406−02	1.769−02
1	19	1.494−01	1.453−01	1.348−01	1.197−01	1.025−01	8.494−02	6.826−02	5.315−02	4.011−02	2.936−02
1	20	2.091−01	2.170−01	2.220−01	2.272−01	2.355−01	2.482−01	2.649−01	2.848−01	3.069−01	3.306−01
1	21	5.064−02	4.433−02	3.876−02	3.382−02	2.918−02	2.463−02	2.014−02	1.587−02	1.203−02	8.790−03
1	22	7.475−02	6.484−02	5.630−02	4.892−02	4.211−02	3.546−02	2.893−02	2.274−02	1.720−02	1.254−02
1	23	9.696−02	8.375−02	7.273−02	6.344−02	5.487−02	4.636−02	3.787−02	2.976−02	2.249−02	1.638−02
1	24	5.804−02	5.532−02	5.238−02	4.895−02	4.472−02	3.961−02	3.377−02	2.764−02	2.169−02	1.636−02
1	25	9.736−02	9.262−02	8.759−02	8.176−02	7.464−02	6.605−02	5.630−02	4.606−02	3.615−02	2.727−02
1	26	1.387−01	1.314−01	1.241−01	1.159−01	1.060−01	9.381−02	7.991−02	6.529−02	5.117−02	3.856−02
1	27	2.431−01	2.381−01	2.347−01	2.319−01	2.299−01	2.298−01	2.320−01	2.361−01	2.411−01	2.459−01
1	28	3.054−02	3.083−02	3.051−02	3.005−02	2.998−02	3.062−02	3.195−02	3.362−02	3.508−02	3.569−02
1	29	1.941−01	2.036−01	2.221−01	2.586−01	3.090−01	3.553−01	3.885−01	4.125−01	4.334−01	4.535−01
1	30	3.362−02	3.142−02	2.877−02	2.581−02	2.257−02	1.909−02	1.553−02	1.213−02	9.093−03	6.571−03
1	31	4.750−02	4.437−02	4.066−02	3.656−02	3.202−02	2.710−02	2.204−02	1.719−02	1.287−02	9.291−03
1	32	6.131−02	5.722−02	5.266−02	4.774−02	4.214−02	3.582−02	2.916−02	2.272−02	1.698−02	1.223−02
1	33	7.330−03	7.019−03	6.481−03	5.806−03	5.071−03	4.337−03	3.633−03	2.961−03	2.330−03	1.764−03
1	34	4.412−03	4.218−03	3.877−03	3.452−03	2.998−03	2.557−03	2.140−03	1.746−03	1.376−03	1.043−03
1	35	1.530−03	1.448−03	1.320−03	1.168−03	1.011−03	8.598−04	7.186−04	5.854−04	4.608−04	3.489−04
1	36	2.890−03	2.659−03	2.370−03	2.052−03	1.727−03	1.412−03	1.120−03	8.609−04	6.404−04	4.611−04
1	37	4.949−03	4.556−03	4.074−03	3.548−03	2.999−03	2.455−03	1.946−03	1.493−03	1.107−03	7.951−04
1	38	7.204−03	6.635−03	5.967−03	5.228−03	4.431−03	3.623−03	2.860−03	2.182−03	1.611−03	1.152−03
1	39	6.178−03	5.363−03	4.418−03	3.504−03	2.699−03	2.030−03	1.496−03	1.082−03	7.669−04	5.326−04
1	40	1.923−02	1.675−02	1.389−02	1.111−02	8.635−03	6.557−03	4.885−03	3.580−03	2.583−03	1.837−03
1	41	3.180−02	2.738−02	2.251−02	1.788−02	1.381−02	1.041−02	7.668−03	5.538−03	3.919−03	2.717−03
1	42	1.151−01	1.201−01	1.240−01	1.268−01	1.284−01	1.283−01	1.262−01	1.216−01	1.145−01	1.051−01
1	43	8.489−02	8.599−02	8.651−02	8.688−02	8.735−02	8.779−02	8.752−02	8.563−02	8.132−02	7.439−02
1	44	9.319−03	9.198−03	9.022−03	8.933−03	9.153−03	9.875−03	1.112−02	1.267−02	1.414−02	1.516−02
1	45	9.786−03	9.484−03	9.155−03	8.785−03	8.380−03	7.939−03	7.450−03	6.890−03	6.239−03	5.495−03
1	46	6.246−03	6.138−03	5.716−03	5.046−03	4.232−03	3.385−03	2.592−03	1.912−03	1.367−03	9.530−04
1	47	1.046−02	1.038−02	9.699−03	8.559−03	7.163−03	5.707−03	4.348−03	3.187−03	2.261−03	1.562−03
1	48	1.478−02	1.484−02	1.403−02	1.248−02	1.047−02	8.331−03	6.327−03	4.618−03	3.260−03	2.240−03
1	49	6.770−04	6.229−04	5.521−04	4.673−04	3.791−04	2.970−04	2.261−04	1.676−04	1.212−04	8.562−05
1	50	1.998−03	1.791−03	1.548−03	1.290−03	1.040−03	8.156−04	6.238−04	4.651−04	3.378−04	2.389−04
1	51	3.592−03	3.288−03	2.886−03	2.418−03	1.948−03	1.521−03	1.157−03	8.605−04	6.261−04	4.466−04
1	52	4.010−03	3.976−03	3.675−03	3.185−03	2.608−03	2.035−03	1.526−03	1.108−03	7.834−04	5.410−04
1	53	5.000−02	4.902−02	4.813−02	4.712−02	4.603−02	4.490−02	4.375−02	4.253−02	4.126−02	3.996−02
1	54	3.314−03	4.881−03	6.321−03	6.893−03	6.713−03	6.280−03	5.965−03	5.887−03	5.989−03	6.140−03
1	55	7.946−03	7.307−03	6.788−03	6.425−03	6.186−03	6.004−03	5.803−03	5.525−03	5.134−03	4.627−03
1	56	8.096−03	7.553−03	6.925−03	6.229−03	5.462−03	4.630−03	3.773−03	2.952−03	2.223−03	1.619−03
1	57	1.341−02	1.239−02	1.112−02	9.751−03	8.341−03	6.915−03	5.523−03	4.238−03	3.129−03	2.231−03
1	58	1.835−02	1.694−02	1.512−02	1.316−02	1.116−02	9.194−03	7.303−03	5.580−03	4.103−03	2.915−03
1	59	8.798−04	7.858−04	6.970−04	6.157−04	5.381−04	4.607−04	3.827−04	3.066−04	2.362−04	1.752−04
1	60	2.068−03	1.835−03	1.584−03	1.348−03	1.135−03	9.399−04	7.599−04	5.958−04	4.514−04	3.304−04
1	61	5.295−03	4.361−03	3.494−03	2.762−03	2.171−03	1.696−03	1.308−03	9.897−04	7.298−04	5.234−04
1	62	2.171−03	1.990−03	1.811−03	1.639−03	1.472−03	1.302−03	1.123−03	9.337−04	7.449−04	5.690−04
1	63	1.385−03	1.272−03	1.151−03	1.032−03	9.187−04	8.060−04	6.902−04	5.713−04	4.541−04	3.460−04
1	64	4.287−04	3.969−04	3.626−04	3.283−04	2.945−04	2.602−04	2.241−04	1.862−04	1.484−04	1.132−04
1	65	2.473−02	2.232−02	1.944−02	1.666−02	1.416−02	1.196−02	1.003−02	8.325−03	6.834−03	5.541−03
1	66	7.861−04	7.270−04	6.589−04	5.801−04	4.930−04	4.038−04	3.192−04	2.440−04	1.809−04	1.304−04
1	67	1.099−03	1.021−03	9.289−04	8.207−04	6.997−04	5.747−04	4.553−04	3.486−04	2.586−04	1.863−04
1	68	4.794−02	4.135−02	3.365−02	2.665−02	2.094−02	1.646−02	1.297−02	1.024−02	8.073−03	6.344−03
1	69	2.314−02	1.949−02	1.561−02	1.237−02	9.940−03	8.217−03	6.997−03	6.088−03	5.339−03	4.653−03
1	70	7.593−03	6.647−03	5.721−03	4.843−03	4.010−03	3.225−03	2.510−03	1.888−03	1.375−03	9.738−04
1	71	7.719−03	7.029−03	6.309−03	5.542−03	4.721−03	3.874−03	3.054−03	2.314−03	1.689−03	1.194−03
1	72	7.054−03	6.768−03	6.391−03	5.844−03	5.124−03	4.289−03	3.424−03	2.612−03	1.913−03	1.351−03
1	73	3.329−02	3.412−02	3.485−02	3.552−02	3.615−02	3.663−02	3.673−02	3.613−02	3.457−02	3.198−02
1	74	8.197−03	6.967−03	6.050−03	5.386−03	4.911−03	4.572−03	4.327−03	4.138−03	3.975−03	3.810−03

(*continued on next page*)

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
1	75	1.021−03	1.053−03	1.052−03	1.016−03	9.462−04	8.469−04	7.238−04	5.884−04	4.554−04	3.370−04
1	76	9.831−04	9.936−04	9.829−04	9.492−04	8.942−04	8.201−04	7.307−04	6.332−04	5.369−04	4.494−04
1	77	8.923−04	7.546−04	6.487−04	5.623−04	4.861−04	4.135−04	3.415−04	2.713−04	2.066−04	1.510−04
1	78	1.700−02	1.847−02	1.740−02	1.540−02	1.368−02	1.279−02	1.274−02	1.323−02	1.382−02	1.410−02
1	79	1.030−03	9.602−04	8.639−04	7.540−04	6.404−04	5.292−04	4.237−04	3.274−04	2.437−04	1.752−04
1	80	1.444−03	1.350−03	1.218−03	1.066−03	9.067−04	7.491−04	5.994−04	4.626−04	3.440−04	2.471−04
1	81	1.855−03	1.731−03	1.561−03	1.365−03	1.162−03	9.607−04	7.693−04	5.940−04	4.419−04	3.175−04
1	82	9.290−05	8.121−05	6.854−05	5.584−05	4.434−05	3.481−05	2.721−05	2.109−05	1.602−05	1.181−05
1	83	2.786−04	2.438−04	2.061−04	1.681−04	1.336−04	1.049−04	8.197−05	6.349−05	4.819−05	3.552−05
1	84	4.681−04	4.113−04	3.493−04	2.860−04	2.277−04	1.788−04	1.395−04	1.079−04	8.174−05	6.019−05
1	85	3.875−03	3.730−03	3.607−03	3.575−03	3.716−03	4.105−03	4.777−03	5.713−03	6.845−03	8.051−03
1	86	9.505−03	9.291−03	9.050−03	8.791−03	8.512−03	8.187−03	7.786−03	7.296−03	6.727−03	6.094−03
1	87	4.041−03	3.862−03	3.613−03	3.294−03	2.911−03	2.479−03	2.025−03	1.584−03	1.188−03	8.582−04
1	88	6.747−03	6.450−03	6.034−03	5.501−03	4.860−03	4.138−03	3.379−03	2.643−03	1.982−03	1.431−03
1	89	9.433−03	9.010−03	8.427−03	7.686−03	6.794−03	5.786−03	4.726−03	3.697−03	2.773−03	2.002−03
1	90	1.081−02	1.061−02	1.037−02	1.020−02	1.021−02	1.038−02	1.065−02	1.090−02	1.100−02	1.081−02
1	91	7.019−04	7.095−04	7.131−04	7.259−04	7.622−04	8.302−04	9.306−04	1.057−03	1.200−03	1.342−03
1	92	9.054−04	8.608−04	8.089−04	7.650−04	7.423−04	7.456−04	7.718−04	8.108−04	8.473−04	8.643−04
1	93	3.748−04	3.529−04	3.228−04	2.854−04	2.430−04	1.984−04	1.549−04	1.157−04	8.293−05	5.749−05
1	94	6.344−04	5.962−04	5.448−04	4.812−04	4.092−04	3.338−04	2.603−04	1.942−04	1.392−04	9.647−05
1	95	8.677−04	8.228−04	7.566−04	6.709−04	5.719−04	4.670−04	3.645−04	2.720−04	1.949−04	1.351−04
1	96	1.099−03	1.066−03	1.002−03	9.083−04	7.917−04	6.611−04	5.274−04	4.020−04	2.939−04	2.071−04
1	97	1.628−03	1.555−03	1.446−03	1.303−03	1.131−03	9.410−04	7.488−04	5.697−04	4.158−04	2.927−04
1	98	2.263−03	2.120−03	1.950−03	1.743−03	1.504−03	1.246−03	9.881−04	7.496−04	5.459−04	3.836−04
1	99	5.613−04	5.202−04	4.722−04	4.217−04	3.712−04	3.199−04	2.672−04	2.143−04	1.646−04	1.212−04
1	100	3.284−04	3.040−04	2.763−04	2.476−04	2.189−04	1.895−04	1.588−04	1.277−04	9.822−05	7.241−05
1	101	1.088−04	1.007−04	9.160−05	8.218−05	7.276−05	6.306−05	5.288−05	4.255−05	3.273−05	2.414−05
1	102	7.539−03	7.451−03	7.245−03	6.952−03	6.605−03	6.232−03	5.843−03	5.435−03	4.990−03	4.497−03
1	103	1.656−03	1.646−03	1.636−03	1.646−03	1.691−03	1.770−03	1.867−03	1.953−03	1.998−03	1.983−03
1	104	8.191−04	7.036−04	6.029−04	5.210−04	4.559−04	4.031−04	3.573−04	3.151−04	2.745−04	2.352−04
1	105	9.779−05	8.183−05	6.826−05	5.705−05	4.752−05	3.903−05	3.126−05	2.423−05	1.814−05	1.313−05
1	106	1.710−04	1.444−04	1.207−04	1.004−04	8.295−05	6.759−05	5.377−05	4.148−05	3.094−05	2.233−05
1	107	2.657−04	2.300−04	1.934−04	1.596−04	1.299−04	1.040−04	8.152−05	6.213−05	4.593−05	3.293−05
1	108	1.839−04	1.643−04	1.470−04	1.334−04	1.233−04	1.157−04	1.087−04	1.010−04	9.188−05	8.132−05
1	109	4.373−04	3.922−04	3.449−04	2.954−04	2.448−04	1.952−04	1.495−04	1.102−04	7.840−05	5.419−05
1	110	5.815−04	5.230−04	4.590−04	3.914−04	3.228−04	2.563−04	1.957−04	1.438−04	1.022−04	7.057−05
1	111	7.808−04	7.049−04	6.142−04	5.176−04	4.216−04	3.313−04	2.509−04	1.833−04	1.297−04	8.929−05
1	112	7.834−05	6.495−05	5.284−05	4.298−05	3.531−05	2.928−05	2.422−05	1.965−05	1.543−05	1.165−05
1	113	4.754−04	4.591−04	4.389−04	4.163−04	3.869−04	3.462−04	2.945−04	2.369−04	1.806−04	1.315−04
1	114	3.242−04	3.156−04	3.084−04	2.999−04	2.845−04	2.584−04	2.219−04	1.797−04	1.376−04	1.004−04
1	115	2.237−04	2.177−04	2.140−04	2.096−04	2.001−04	1.825−04	1.572−04	1.275−04	9.773−05	7.139−05
1	116	8.231−04	7.947−04	7.517−04	7.035−04	6.554−04	6.087−04	5.631−04	5.172−04	4.697−04	4.196−04
1	117	3.909−04	3.728−04	3.476−04	3.150−04	2.752−04	2.303−04	1.840−04	1.403−04	1.026−04	7.233−05
1	118	4.873−04	4.627−04	4.297−04	3.882−04	3.385−04	2.829−04	2.257−04	1.721−04	1.257−04	8.863−05
1	119	6.103−04	5.749−04	5.288−04	4.736−04	4.101−04	3.410−04	2.711−04	2.061−04	1.504−04	1.059−04
1	120	1.578−04	1.506−04	1.408−04	1.279−04	1.121−04	9.386−05	7.495−05	5.712−05	4.174−05	2.942−05
1	121	2.656−04	2.497−04	2.272−04	2.008−04	1.718−04	1.413−04	1.114−04	8.414−05	6.110−05	4.288−05
1	122	5.692−04	5.190−04	4.454−04	3.683−04	2.962−04	2.318−04	1.759−04	1.292−04	9.200−05	6.368−05
1	123	2.083−04	1.826−04	1.540−04	1.293−04	1.117−04	1.018−04	9.801−05	9.779−05	9.825−05	9.688−05
1	124	1.330−05	1.391−05	1.487−05	1.597−05	1.676−05	1.674−05	1.564−05	1.357−05	1.096−05	8.311−06
1	125	4.151−05	4.273−05	4.519−05	4.826−05	5.048−05	5.033−05	4.697−05	4.072−05	3.287−05	2.492−05
1	126	8.672−05	8.360−05	8.369−05	8.592−05	8.769−05	8.617−05	7.977−05	6.887−05	5.548−05	4.206−05
1	127	9.515−04	9.289−04	9.151−04	9.157−04	9.355−04	9.781−04	1.045−03	1.134−03	1.241−03	1.354−03
1	128	3.085−03	3.015−03	2.915−03	2.771−03	2.565−03	2.302−03	2.011−03	1.729−03	1.479−03	1.267−03
1	129	1.485−04	1.386−04	1.270−04	1.136−04	9.832−05	8.142−05	6.426−05	4.841−05	3.502−05	2.450−05
1	130	2.038−04	1.849−04	1.669−04	1.483−04	1.278−04	1.056−04	8.325−05	6.266−05	4.530−05	3.168−05
1	131	3.931−04	3.384−04	2.855−04	2.376−04	1.940−04	1.540−04	1.179−04	8.697−05	6.200−05	4.293−05
1	132	2.123−05	1.979−05	1.854−05	1.721−05	1.550−05	1.333−05	1.088−05	8.428−06	6.226−06	4.419−06
1	133	8.486−05	6.759−05	5.425−05	4.405−05	3.579−05	2.861−05	2.221−05	1.663−05	1.201−05	8.400−06
1	134	1.264−04	1.023−04	8.208−05	6.610−05	5.313−05	4.205−05	3.238−05	2.411−05	1.735−05	1.210−05
1	135	7.512−05	7.202−05	6.817−05	6.308−05	5.648−05	4.853−05	3.985−05	3.124−05	2.347−05	1.697−05
1	136	5.532−05	5.039−05	4.576−05	4.108−05	3.601−05	3.051−05	2.482−05	1.934−05	1.447−05	1.043−05
1	137	1.455−05	1.406−05	1.341−05	1.248−05	1.122−05	9.674−06	7.959−06	6.250−06	4.698−06	3.400−06
1	138	1.266−03	1.271−03	1.278−03	1.282−03	1.277−03	1.252−03	1.201−03	1.121−03	1.013−03	8.825−04
1	139	1.163−03	1.156−03	1.135−03	1.094−03	1.026−03	9.347−04	8.272−04	7.140−04	6.031−04	4.994−04
1	140	2.505−04	2.538−04	2.600−04	2.683−04	2.777−04	2.887−04	3.025−04	3.193−04	3.368−04	3.500−04
1	141	3.218−04	3.450−04	3.796−04	4.301−04	5.007−04	5.939−04	7.115−04	8.555−04	1.029−03	1.232−03
2	3	2.235+00	2.118+00	2.014+00	1.874+00	1.660+00	1.386+00	1.097+00	8.328−01	6.122−01	4.380−01
2	4	3.437+00	3.293+00	3.105+00	2.848+00	2.510+00	2.138+00	1.795+00	1.523+00	1.331+00	1.206+00
2	5	8.858−01	8.546−01	7.990−01	7.041−01	5.806−01	4.519−01	3.366−01	2.424−01	1.700−01	1.167−01
2	6	9.479−01	8.838−01	7.836−01	6.662−01	5.478−01	4.387−01	3.431−01	2.616−01	1.941−01	1.402−01
2	7	1.075−01	9.972−02	9.053−02	8.024−02	6.906−02	5.769−02	4.688−02	3.707−02	2.849−02	2.124−02
2	8	2.508+00	2.623+00	2.769+00	2.967+00	3.249+00	3.657+00	4.231+00	4.987+00	5.930+00	7.048+00
2	9	3.522−01	3.304−01	3.027−01	2.712−01	2.372−01	2.024−01	1.682−01	1.362−01	1.078−01	8.362−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
2	10	4.562−01	4.404−01	4.158−01	3.812−01	3.419−01	3.051−01	2.755−01	2.545−01	2.413−01	2.340−01
2	11	3.844−01	3.814−01	3.696−01	3.419−01	3.007−01	2.529−01	2.048−01	1.603−01	1.218−01	9.024−02
2	12	2.249+00	2.361+00	2.504+00	2.707+00	3.014+00	3.480+00	4.142+00	5.016+00	6.109+00	7.405+00
2	13	3.135−01	3.142−01	3.080−01	2.980−01	2.912−01	2.965−01	3.215−01	3.717−01	4.507−01	5.593−01
2	14	8.235−02	7.700−02	6.838−02	5.784−02	4.680−02	3.650−02	2.765−02	2.045−02	1.480−02	1.049−02
2	15	1.161−01	9.976−02	8.286−02	6.662−02	5.187−02	3.917−02	2.877−02	2.059−02	1.439−02	9.851−03
2	16	2.215−01	2.109−01	1.906−01	1.627−01	1.320−01	1.028−01	7.737−02	5.660−02	4.035−02	2.811−02
2	17	3.224−01	3.485−01	3.698−01	3.900−01	4.140−01	4.448−01	4.828−01	5.263−01	5.720−01	6.161−01
2	18	1.924−01	1.843−01	1.671−01	1.437−01	1.184−01	9.404−02	7.251−02	5.447−02	3.998−02	2.874−02
2	19	2.375−01	2.314−01	2.141−01	1.906−01	1.663−01	1.452−01	1.293−01	1.193−01	1.149−01	1.152−01
2	20	1.384−01	1.282−01	1.140−01	9.761−02	8.071−02	6.461−02	5.013−02	3.772−02	2.756−02	1.959−02
2	21	4.331−01	4.432−01	4.589−01	4.852−01	5.265−01	5.857−01	6.640−01	7.595−01	8.677−01	9.804−01
2	22	1.991−01	1.830−01	1.658−01	1.479−01	1.294−01	1.104−01	9.157−02	7.341−02	5.680−02	4.244−02
2	23	1.017−01	8.696−02	7.259−02	5.942−02	4.792−02	3.834−02	3.080−02	2.520−02	2.129−02	1.870−02
2	24	2.626−01	2.654−01	2.680−01	2.718−01	2.781−01	2.876−01	3.000−01	3.144−01	3.297−01	3.442−01
2	25	1.169−01	1.089−01	1.000−01	9.084−02	8.093−02	6.983−02	5.793−02	4.619−02	3.553−02	2.650−02
2	26	1.053−01	9.940−02	9.437−02	9.126−02	8.887−02	8.429−02	7.657−02	6.710−02	5.769−02	4.948−02
2	27	1.107−01	9.950−02	8.812−02	7.647−02	6.458−02	5.283−02	4.180−02	3.198−02	2.368−02	1.701−02
2	28	8.677−02	8.011−02	7.211−02	6.346−02	5.479−02	4.640−02	3.841−02	3.093−02	2.415−02	1.829−02
2	29	8.631−02	8.523−02	8.307−02	7.974−02	7.448−02	6.646−02	5.610−02	4.483−02	3.415−02	2.497−02
2	30	1.582−01	1.587−01	1.592−01	1.592−01	1.583−01	1.564−01	1.535−01	1.498−01	1.450−01	1.388−01
2	31	6.878−02	6.380−02	5.804−02	5.184−02	4.528−02	3.826−02	3.105−02	2.420−02	1.820−02	1.327−02
2	32	6.694−02	6.296−02	5.810−02	5.262−02	4.687−02	4.138−02	3.661−02	3.283−02	3.003−02	2.806−02
2	33	1.229−01	1.222−01	1.245−01	1.329−01	1.472−01	1.646−01	1.845−01	2.077−01	2.344−01	2.626−01
2	34	2.633−02	2.432−02	2.228−02	2.020−02	1.802−02	1.575−02	1.344−02	1.115−02	8.962−03	6.963−03
2	35	2.578−02	2.454−02	2.375−02	2.366−02	2.439−02	2.601−02	2.844−02	3.134−02	3.412−02	3.609−02
2	36	3.473−02	3.358−02	3.247−02	3.151−02	3.021−02	2.791−02	2.455−02	2.057−02	1.651−02	1.274−02
2	37	2.845−01	2.901−01	3.034−01	3.242−01	3.479−01	3.712−01	3.934−01	4.144−01	4.326−01	4.459−01
2	38	5.540−02	5.333−02	5.079−02	4.761−02	4.381−02	3.950−02	3.478−02	2.976−02	2.467−02	1.977−02
2	39	1.754−01	1.848−01	1.941−01	2.048−01	2.177−01	2.333−01	2.511−01	2.702−01	2.901−01	3.094−01
2	40	5.438−02	5.213−02	4.869−02	4.439−02	3.927−02	3.358−02	2.776−02	2.224−02	1.728−02	1.306−02
2	41	5.031−02	4.857−02	4.836−02	4.923−02	4.870−02	4.594−02	4.201−02	3.802−02	3.443−02	3.117−02
2	42	4.966−02	4.649−02	4.210−02	3.695−02	3.130−02	2.543−02	1.981−02	1.482−02	1.070−02	7.506−03
2	43	4.946−02	4.867−02	4.643−02	4.293−02	3.828−02	3.273−02	2.682−02	2.111−02	1.601−02	1.174−02
2	44	1.932−02	1.859−02	1.767−02	1.635−02	1.447−02	1.218−02	9.802−03	7.573−03	5.644−03	4.075−03
2	45	2.349−02	2.187−02	1.986−02	1.744−02	1.478−02	1.211−02	9.611−03	7.423−03	5.604−03	4.163−03
2	46	5.163−02	5.519−02	6.498−02	7.788−02	8.611−02	8.664−02	8.217−02	7.670−02	7.279−02	7.137−02
2	47	4.356−02	4.149−02	3.814−02	3.381−02	2.895−02	2.395−02	1.918−02	1.490−02	1.125−02	8.278−03
2	48	2.621−02	2.489−02	2.276−02	2.004−02	1.711−02	1.426−02	1.164−02	9.356−03	7.408−03	5.785−03
2	49	9.714−03	9.329−03	8.715−03	7.934−03	7.041−03	6.070−03	5.057−03	4.056−03	3.128−03	2.323−03
2	50	7.518−02	8.144−02	9.079−02	1.010−01	1.081−01	1.107−01	1.100−01	1.071−01	1.030−01	9.801−02
2	51	2.769−02	2.602−02	2.362−02	2.072−02	1.764−02	1.465−02	1.188−02	9.399−03	7.255−03	5.467−03
2	52	1.964−02	1.955−02	1.947−02	1.891−02	1.768−02	1.604−02	1.435−02	1.288−02	1.174−02	1.094−02
2	53	4.180−02	3.990−02	3.742−02	3.381−02	2.916−02	2.401−02	1.895−02	1.440−02	1.057−02	7.530−03
2	54	6.080−03	5.644−03	5.115−03	4.509−03	3.854−03	3.190−03	2.555−03	1.977−03	1.480−03	1.073−03
2	55	2.413−02	2.295−02	2.163−02	1.999−02	1.802−02	1.580−02	1.343−02	1.104−02	8.803−03	6.845−03
2	56	4.802−02	5.647−02	6.165−02	6.224−02	6.021−02	5.792−02	5.665−02	5.669−02	5.775−02	5.929−02
2	57	3.641−02	3.430−02	3.192−02	2.928−02	2.629−02	2.293−02	1.932−02	1.566−02	1.220−02	9.160−03
2	58	1.465−02	1.280−02	1.079−02	8.847−03	7.093−03	5.569−03	4.294−03	3.262−03	2.450−03	1.827−03
2	59	1.170−02	1.191−02	1.257−02	1.294−02	1.248−02	1.127−02	9.651−03	7.906−03	6.233−03	4.747−03
2	60	4.924−02	5.165−02	5.398−02	5.506−02	5.491−02	5.414−02	5.328−02	5.249−02	5.174−02	5.086−02
2	61	1.471−02	1.339−02	1.225−02	1.117−02	1.008−02	8.919−03	7.685−03	6.412−03	5.166−03	4.018−03
2	62	2.043−02	2.121−02	2.282−02	2.395−02	2.384−02	2.288−02	2.177−02	2.097−02	2.062−02	2.063−02
2	63	6.171−03	5.753−03	5.248−03	4.711−03	4.162−03	3.608−03	3.057−03	2.521−03	2.020−03	1.572−03
2	64	2.676−03	2.700−03	2.758−03	2.823−03	2.889−03	2.981−03	3.111−03	3.263−03	3.395−03	3.458−03
2	65	2.605−02	2.424−02	2.204−02	1.960−02	1.703−02	1.439−02	1.179−02	9.354−03	7.178−03	5.339−03
2	66	8.518−03	8.327−03	8.135−03	7.874−03	7.517−03	7.119−03	6.752−03	6.452−03	6.199−03	5.937−03
2	67	4.718−02	5.224−02	5.541−02	5.558−02	5.335−02	5.013−02	4.706−02	4.464−02	4.291−02	4.166−02
2	68	1.242−02	1.072−02	8.887−03	7.147−03	5.600−03	4.286−03	3.217−03	2.380−03	1.745−03	1.276−03
2	69	1.194−02	1.182−02	1.117−02	1.008−02	8.763−03	7.379−03	6.048−03	4.841−03	3.801−03	2.949−03
2	70	2.697−02	2.788−02	2.928−02	3.056−02	3.146−02	3.224−02	3.320−02	3.450−02	3.609−02	3.775−02
2	71	1.894−02	1.699−02	1.496−02	1.292−02	1.090−02	8.947−03	7.117−03	5.482−03	4.088−03	2.957−03
2	72	7.740−03	6.787−03	5.882−03	5.029−03	4.219−03	3.462−03	2.782−03	2.197−03	1.712−03	1.321−03
2	73	3.814−02	3.642−02	3.447−02	3.209−02	2.914−02	2.560−02	2.165−02	1.758−02	1.370−02	1.029−02
2	74	9.174−03	8.334−03	7.416−03	6.440−03	5.442−03	4.467−03	3.558−03	2.749−03	2.061−03	1.503−03
2	75	1.701−02	1.676−02	1.672−02	1.686−02	1.715−02	1.758−02	1.815−02	1.881−02	1.950−02	2.008−02
2	76	2.999−03	2.916−03	2.869−03	2.723−03	2.439−03	2.075−03	1.702−03	1.365−03	1.082−03	8.532−04
2	77	3.341−03	3.256−03	3.174−03	3.093−03	3.039−03	3.033−03	3.071−03	3.122−03	3.138−03	3.076−03
2	78	1.190−02	1.199−02	1.149−02	1.059−02	9.454−03	8.181−03	6.838−03	5.504−03	4.264−03	3.183−03
2	79	1.021−02	1.017−02	9.956−03	9.625−03	9.311−03	9.091−03	8.950−03	8.818−03	8.611−03	8.252−03
2	80	3.928−02	4.823−02	5.283−02	5.190−02	4.773−02	4.267−02	3.782−02	3.335−02	2.907−02	2.486−02
2	81	7.652−03	7.302−03	6.820−03	6.274−03	5.699−03	5.088−03	4.426−03	3.724−03	3.021−03	2.364−03
2	82	9.498−04	9.863−04	9.248−04	8.008−04	6.663−04	5.495−04	4.534−04	3.704−04	2.947−04	2.258−04
2	83	4.331−03	4.145−03	3.975−03	3.905−03	4.039−03	4.424−03	5.002−03	5.611−03	6.058−03	6.194−03

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
2	84	3.318−03	3.106−03	2.828−03	2.536−03	2.293−03	2.124−03	2.007−03	1.905−03	1.786−03	1.636−03
2	85	7.401−03	6.552−03	5.704−03	4.870−03	4.067−03	3.312−03	2.619−03	2.004−03	1.482−03	1.061−03
2	86	1.346−02	1.302−02	1.239−02	1.147−02	1.027−02	8.834−03	7.249−03	5.664−03	4.224−03	3.025−03
2	87	3.249−02	3.288−02	3.322−02	3.352−02	3.371−02	3.359−02	3.293−02	3.154−02	2.935−02	2.643−02
2	88	1.184−02	1.150−02	1.084−02	9.926−03	8.813−03	7.568−03	6.275−03	5.028−03	3.906−03	2.956−03
2	89	9.536−03	9.291−03	8.812−03	8.228−03	7.635−03	7.068−03	6.514−03	5.936−03	5.307−03	4.621−03
2	90	1.059−02	9.913−03	8.902−03	7.706−03	6.443−03	5.197−03	4.036−03	3.019−03	2.179−03	1.524−03
2	91	6.657−03	6.235−03	5.600−04	4.856−04	4.108−04	3.406−04	2.759−04	2.167−04	1.641−04	1.198−04
2	92	3.703−03	3.447−03	3.124−03	2.745−03	2.330−03	1.905−03	1.496−03	1.130−03	8.219−04	5.787−04
2	93	3.736−03	3.659−03	3.515−03	3.310−03	3.049−03	2.741−03	2.399−03	2.046−03	1.702−03	1.382−03
2	94	1.078−02	1.070−02	1.051−02	1.026−02	9.979−03	9.635−03	9.197−03	8.630−03	7.914−03	7.056−03
2	95	4.407−03	4.220−03	3.928−03	3.563−03	3.142−03	2.682−03	2.205−03	1.742−03	1.323−03	9.693−04
2	96	5.948−03	5.918−03	5.836−03	5.719−03	5.573−03	5.386−03	5.140−03	4.831−03	4.470−03	4.072−03
2	97	3.844−03	3.655−03	3.352−03	2.975−03	2.564−03	2.146−03	1.741−03	1.367−03	1.041−03	7.712−04
2	98	4.747−03	4.199−03	3.633−03	3.086−03	2.588−03	2.147−03	1.758−03	1.417−03	1.120−03	8.666−04
2	99	4.602−03	4.298−03	3.916−03	3.531−03	3.170−03	2.834−03	2.518−03	2.218−03	1.933−03	1.662−03
2	100	1.682−03	1.610−03	1.519−03	1.416−03	1.303−03	1.175−03	1.030−03	8.737−04	7.151−04	5.656−04
2	101	1.005−03	1.019−03	1.046−03	1.101−03	1.196−03	1.329−03	1.487−03	1.641−03	1.762−03	1.826−03
2	102	1.197−02	1.158−02	1.087−02	9.864−03	8.627−03	7.229−03	5.785−03	4.423−03	3.244−03	2.296−03
2	103	3.831−03	3.639−03	3.367−03	3.025−03	2.622−03	2.177−03	1.724−03	1.303−03	9.440−04	6.601−04
2	104	1.459−03	1.192−03	9.543−04	7.541−04	5.884−04	4.518−04	3.397−04	2.492−04	1.781−04	1.241−04
2	105	4.303−04	3.571−04	2.993−04	2.580−04	2.303−04	2.124−04	2.005−04	1.915−04	1.829−04	1.737−04
2	106	8.454−04	7.201−04	6.163−04	5.342−04	4.683−04	4.119−04	3.601−04	3.105−04	2.624−04	2.163−04
2	107	8.161−04	6.843−04	5.714−04	4.788−04	4.023−04	3.369−04	2.794−04	2.286−04	1.848−04	1.481−04
2	108	4.040−04	3.344−04	2.742−04	2.236−04	1.804−04	1.427−04	1.097−04	8.174−05	5.903−05	4.141−05
2	109	2.011−03	1.877−03	1.773−03	1.690−03	1.616−03	1.535−03	1.437−03	1.319−03	1.184−03	1.039−03
2	110	1.218−03	1.070−03	9.425−04	8.287−04	7.197−04	6.101−04	5.001−04	3.943−04	2.991−04	2.189−04
2	111	8.232−04	7.045−04	6.056−04	5.243−04	4.554−04	3.936−04	3.356−04	2.806−04	2.290−04	1.821−04
2	112	2.595−04	2.253−04	1.969−04	1.735−04	1.532−04	1.344−04	1.163−04	9.920−05	8.399−05	7.201−05
2	113	1.976−03	1.933−03	1.877−03	1.790−03	1.656−03	1.470−03	1.243−03	1.002−03	7.732−04	5.743−04
2	114	5.005−03	4.920−03	4.831−03	4.718−03	4.556−03	4.321−03	4.002−03	3.604−03	3.146−03	2.659−03
2	115	2.357−03	2.363−03	2.372−03	2.370−03	2.343−03	2.279−03	2.178−03	2.046−03	1.888−03	1.709−03
2	116	1.183−03	1.057−03	9.101−04	7.582−04	6.129−04	4.808−04	3.655−04	2.692−04	1.924−04	1.339−04
2	117	1.205−03	1.182−03	1.166−03	1.160−03	1.165−03	1.178−03	1.194−03	1.201−03	1.189−03	1.147−03
2	118	7.898−04	7.337−04	6.726−04	6.061−04	5.342−04	4.581−04	3.803−04	3.045−04	2.347−04	1.743−04
2	119	3.765−04	3.373−04	2.977−04	2.591−04	2.223−04	1.887−04	1.593−04	1.350−04	1.153−04	9.922−05
2	120	7.435−04	7.378−04	7.358−04	7.343−04	7.292−04	7.174−04	6.979−04	6.707−04	6.367−04	5.960−04
2	121	8.641−04	8.416−04	8.201−04	7.968−04	7.692−04	7.348−04	6.925−04	6.421−04	5.842−04	5.201−04
2	122	1.023−03	9.815−04	9.326−04	8.753−04	8.070−04	7.267−04	6.367−04	5.420−04	4.486−04	3.619−04
2	123	3.217−04	2.872−04	2.511−04	2.149−04	1.795−04	1.457−04	1.144−04	8.681−05	6.363−05	4.516−05
2	124	1.267−04	1.327−04	1.403−04	1.484−04	1.539−04	1.536−04	1.454−04	1.293−04	1.080−04	8.491−05
2	125	1.113−03	1.169−03	1.249−03	1.362−03	1.506−03	1.666−03	1.814−03	1.914−03	1.937−03	1.869−03
2	126	4.633−04	4.768−04	4.949−04	5.141−04	5.279−04	5.287−04	5.115−04	4.756−04	4.247−04	3.654−04
2	127	1.745−03	1.711−03	1.651−03	1.553−03	1.409−03	1.221−03	1.006−03	7.885−04	5.900−04	4.244−04
2	128	7.710−03	7.564−03	7.295−03	6.847−03	6.178−03	5.307−03	4.320−03	3.337−03	2.458−03	1.741−03
2	129	8.418−04	8.430−04	8.403−04	8.285−04	8.023−04	7.592−04	7.000−04	6.287−04	5.499−04	4.682−04
2	130	3.035−03	3.034−03	3.010−03	2.951−03	2.841−03	2.671−03	2.443−03	2.167−03	1.860−03	1.547−03
2	131	6.207−04	6.077−04	5.903−04	5.642−04	5.247−04	4.705−04	4.047−04	3.333−04	2.630−04	1.997−04
2	132	1.464−04	1.472−04	1.477−04	1.462−04	1.410−04	1.310−04	1.166−04	9.901−05	8.035−05	6.252−05
2	133	8.456−04	8.689−04	8.981−04	9.279−04	9.494−04	9.527−04	9.299−04	8.775−04	7.976−04	6.975−04
2	134	4.262−04	4.260−04	4.228−04	4.145−04	3.989−04	3.744−04	3.411−04	3.006−04	2.561−04	2.113−04
2	135	3.280−04	3.336−04	3.415−04	3.498−04	3.554−04	3.545−04	3.443−04	3.239−04	2.950−04	2.609−04
2	136	1.193−04	1.171−04	1.145−04	1.108−04	1.051−04	9.713−05	8.660−05	7.404−05	6.049−05	4.726−05
2	137	1.717−04	1.772−04	1.840−04	1.916−04	1.996−04	2.078−04	2.160−04	2.241−04	2.320−04	2.392−04
2	138	1.187−03	1.068−03	9.424−04	8.108−04	6.745−04	5.392−04	4.135−04	3.048−04	2.172−04	1.505−04
2	139	1.277−03	1.222−03	1.143−03	1.036−03	9.029−04	7.532−04	6.004−04	4.577−04	3.350−04	2.366−04
2	140	2.525−04	2.460−04	2.371−04	2.233−04	2.030−04	1.765−04	1.460−04	1.150−04	8.639−05	6.239−05
2	141	3.611−04	3.703−04	3.767−04	3.752−04	3.600−04	3.288−04	2.838−04	2.311−04	1.780−04	1.307−04
3	4	1.053+01	1.007+01	9.518+00	8.768+00	7.743+00	6.563+00	5.432+00	4.488+00	3.776+00	3.274+00
3	5	2.659+00	2.566+00	2.398+00	2.113+00	1.740+00	1.348+00	9.973−01	7.130−01	4.970−01	3.397−01
3	6	2.827+00	2.636+00	2.339+00	1.991+00	1.638+00	1.311+00	1.024+00	7.804−01	5.795−01	4.198−01
3	7	2.478+00	2.606+00	2.762+00	2.989+00	3.372+00	3.939+00	4.631+00	5.409+00	6.299+00	7.334+00
3	8	2.485+00	2.527+00	2.586+00	2.683+00	2.856+00	3.136+00	3.534+00	4.052+00	4.701+00	5.481+00
3	9	3.898+00	4.004+00	4.134+00	4.344+00	4.705+00	5.237+00	5.930+00	6.794+00	7.862+00	9.147+00
3	10	1.458+00	1.422+00	1.357+00	1.247+00	1.109+00	9.660−01	8.378−01	7.329−01	6.525−01	5.939−01
3	11	5.623+00	5.860+00	6.163+00	6.651+00	7.521+00	8.815+00	1.044+01	1.237+01	1.469+01	1.744+01
3	12	2.209+00	2.289+00	2.384+00	2.531+00	2.820+00	3.264+00	3.798+00	4.401+00	5.109+00	5.956+00
3	13	9.550−01	9.579−01	9.423−01	9.359−01	9.696−01	1.039+00	1.135+00	1.274+00	1.483+00	1.779+00
3	14	2.504−01	2.345−01	2.087−01	1.768−01	1.432−01	1.118−01	8.475−02	6.274−02	4.549−02	3.235−02
3	15	3.507−01	3.014−01	2.505−01	2.015−01	1.569−01	1.185−01	8.695−02	6.222−02	4.350−02	2.979−02
3	16	6.426−01	6.201−01	5.655−01	4.854−01	3.953−01	3.086−01	2.327−01	1.705−01	1.217−01	8.501−02
3	17	1.917−01	1.839−01	1.667−01	1.434−01	1.180−01	9.376−02	7.229−02	5.432−02	3.988−02	2.868−02
3	18	1.292+00	1.356+00	1.394+00	1.430+00	1.482+00	1.554+00	1.643+00	1.748+00	1.862+00	1.978+00
3	19	7.946−01	7.673−01	7.028−01	6.166−01	5.264−01	4.455−01	3.810−01	3.354−01	3.076−01	2.945−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
3	20	4.173−01	3.873−01	3.448−01	2.952−01	2.441−01	1.954−01	1.517−01	1.143−01	8.377−02	5.985−02
3	21	7.107−01	7.010−01	7.061−01	7.403−01	7.921−01	8.420−01	8.883−01	9.400−01	1.004+00	1.078+00
3	22	1.018+00	1.017+00	1.057+00	1.165+00	1.314+00	1.458+00	1.592+00	1.735+00	1.900+00	2.081+00
3	23	4.786−01	4.263−01	3.741−01	3.239−01	2.761−01	2.311−01	1.897−01	1.530−01	1.216−01	9.601−02
3	24	3.576−01	3.478−01	3.370−01	3.264−01	3.165−01	3.077−01	3.006−01	2.957−01	2.931−01	2.921−01
3	25	7.218−01	7.203−01	7.182−01	7.175−01	7.210−01	7.310−01	7.481−01	7.707−01	7.962−01	8.214−01
3	26	3.752−01	3.525−01	3.290−01	3.034−01	2.738−01	2.410−01	2.073−01	1.753−01	1.469−01	1.230−01
3	27	3.336−01	2.998−01	2.657−01	2.308−01	1.951−01	1.598−01	1.265−01	9.679−02	7.172−02	5.157−02
3	28	2.617−01	2.418−01	2.174−01	1.908−01	1.641−01	1.383−01	1.140−01	9.127−02	7.074−02	5.299−02
3	29	2.592−01	2.558−01	2.477−01	2.328−01	2.104−01	1.823−01	1.512−01	1.201−01	9.151−02	6.721−02
3	30	2.571−01	2.521−01	2.533−01	2.617−01	2.668−01	2.598−01	2.424−01	2.204−01	1.980−01	1.772−01
3	31	4.019−01	3.978−01	3.932−01	3.864−01	3.768−01	3.654−01	3.531−01	3.405−01	3.270−01	3.117−01
3	32	2.280−01	2.132−01	1.955−01	1.756−01	1.540−01	1.323−01	1.124−01	9.531−02	8.160−02	7.106−02
3	33	2.693−01	2.653−01	2.636−01	2.671−01	2.788−01	3.015−01	3.367−01	3.834−01	4.387−01	4.972−01
3	34	1.850−01	1.835−01	1.944−01	2.184−01	2.432−01	2.614−01	2.759−01	2.917−01	3.106−01	3.302−01
3	35	2.739−02	2.504−02	2.261−02	2.032−02	1.801−02	1.562−02	1.318−02	1.082−02	8.620−03	6.660−03
3	36	4.164−01	4.236−01	4.366−01	4.553−01	4.799−01	5.099−01	5.437−01	5.778−01	6.086−01	6.319−01
3	37	1.979−01	1.933−01	1.883−01	1.824−01	1.757−01	1.684−01	1.606−01	1.520−01	1.428−01	1.329−01
3	38	5.501−01	5.577−01	5.699−01	5.844−01	6.028−01	6.268−01	6.555−01	6.856−01	7.128−01	7.326−01
3	39	5.177−02	5.018−02	4.729−02	4.343−02	3.861−02	3.312−02	2.742−02	2.198−02	1.709−02	1.291−02
3	40	6.145−01	6.376−01	6.588−01	6.828−01	7.136−01	7.527−01	7.993−01	8.511−01	9.057−01	9.593−01
3	41	1.824−01	1.734−01	1.606−01	1.459−01	1.309−01	1.169−01	1.050−01	9.483−02	8.591−02	7.753−02
3	42	1.506−01	1.404−01	1.258−01	1.086−01	9.048−02	7.282−02	5.663−02	4.264−02	3.122−02	2.235−02
3	43	1.502−01	1.480−01	1.402−01	1.272−01	1.109−01	9.340−02	7.603−02	5.983−02	4.552−02	3.353−02
3	44	5.808−02	5.545−02	5.123−02	4.550−02	3.892−02	3.221−02	2.584−02	2.008−02	1.511−02	1.101−02
3	45	6.541−02	6.036−02	5.388−02	4.659−02	3.909−02	3.187−02	2.526−02	1.949−02	1.469−02	1.088−02
3	46	9.408−02	9.109−02	8.615−02	7.993−02	7.330−02	6.697−02	6.148−02	5.720−02	5.443−02	5.324−02
3	47	1.591−01	1.569−01	1.521−01	1.461−01	1.405−01	1.364−01	1.344−01	1.349−01	1.383−01	1.445−01
3	48	1.129−01	1.090−01	1.017−01	9.100−02	7.813−02	6.472−02	5.203−02	4.080−02	3.133−02	2.362−02
3	49	8.380−02	9.569−02	1.140−01	1.286−01	1.335−01	1.306−01	1.240−01	1.164−01	1.087−01	1.012−01
3	50	1.105−01	1.096−01	1.077−01	1.053−01	1.025−01	9.974−02	9.668−02	9.309−02	8.888−02	8.421−02
3	51	3.315−01	2.806−01	2.397−01	2.089−01	1.866−01	1.706−01	1.585−01	1.483−01	1.384−01	1.285−01
3	52	6.004−02	5.801−02	5.480−02	5.068−02	4.623−02	4.204−02	3.847−02	3.573−02	3.394−02	3.307−02
3	53	1.242−01	1.140−01	1.019−01	8.895−02	7.566−02	6.247−02	4.986−02	3.841−02	2.857−02	2.059−02
3	54	1.829−02	1.681−02	1.515−02	1.335−02	1.145−02	9.520−03	7.657−03	5.949−03	4.467−03	3.248−03
3	55	6.584−02	6.083−02	5.579−02	5.069−02	4.536−02	3.966−02	3.369−02	2.771−02	2.213−02	1.727−02
3	56	8.370−02	8.099−02	7.803−02	7.496−02	7.180−02	6.852−02	6.517−02	6.187−02	5.878−02	5.599−02
3	57	1.098−01	1.070−01	1.048−01	1.035−01	1.036−01	1.050−01	1.077−01	1.114−01	1.155−01	1.196−01
3	58	9.254−02	8.573−02	7.571−02	6.487−02	5.437−02	4.463−02	3.578−02	2.794−02	2.123−02	1.571−02
3	59	6.968−02	6.914−02	6.938−02	7.017−02	7.133−02	7.274−02	7.420−02	7.549−02	7.642−02	7.679−02
3	60	5.387−02	5.153−02	4.948−02	4.754−02	4.550−02	4.327−02	4.080−02	3.817−02	3.553−02	3.301−02
3	61	9.652−02	9.228−02	8.930−02	8.703−02	8.502−02	8.291−02	8.045−02	7.750−02	7.406−02	7.023−02
3	62	5.753−02	5.528−02	5.278−02	5.059−02	4.895−02	4.802−02	4.782−02	4.832−02	4.938−02	5.074−02
3	63	2.781−02	2.714−02	2.638−02	2.569−02	2.521−02	2.502−02	2.515−02	2.552−02	2.598−02	2.632−02
3	64	6.096−03	5.715−03	5.268−03	4.780−03	4.262−03	3.721−03	3.167−03	2.619−03	2.099−03	1.630−03
3	65	8.396−02	7.978−02	7.507−02	7.003−02	6.478−02	5.949−02	5.441−02	4.978−02	4.576−02	4.239−02
3	66	6.363−02	6.259−02	6.146−02	6.040−02	5.946−02	5.866−02	5.804−02	5.755−02	5.712−02	5.655−02
3	67	4.041−02	3.783−02	3.476−02	3.170−02	2.885−02	2.627−02	2.401−02	2.208−02	2.042−02	1.890−02
3	68	7.130−02	6.536−02	5.881−02	5.252−02	4.684−02	4.186−02	3.765−02	3.417−02	3.137−02	2.912−02
3	69	5.014−02	4.477−02	3.846−02	3.229−02	2.664−02	2.159−02	1.717−02	1.337−02	1.020−02	7.655−03
3	70	5.316−02	5.246−02	5.161−02	5.066−02	4.975−02	4.908−02	4.883−02	4.909−02	4.982−02	5.082−02
3	71	6.331−02	6.205−02	6.111−02	6.073−02	6.100−02	6.204−02	6.388−02	6.645−02	6.952−02	7.267−02
3	72	5.774−02	4.962−02	4.191−02	3.497−02	2.874−02	2.318−02	1.827−02	1.406−02	1.056−02	7.766−03
3	73	1.142−01	1.095−01	1.040−01	9.715−02	8.844−02	7.787−02	6.597−02	5.363−02	4.187−02	3.148−02
3	74	6.505−02	5.058−02	3.918−02	3.036−02	2.352−02	1.815−02	1.392−02	1.058−02	7.990−03	6.002−03
3	75	6.465−02	5.619−02	5.033−02	4.654−02	4.428−02	4.316−02	4.292−02	4.327−02	4.394−02	4.460−02
3	76	2.633−02	2.474−02	2.376−02	2.329−02	2.324−02	2.354−02	2.413−02	2.486−02	2.554−02	2.597−02
3	77	9.341−03	8.234−03	7.351−03	6.612−03	5.966−03	5.398−03	4.904−03	4.466−03	4.059−03	3.655−03
3	78	3.021−02	2.988−02	2.896−02	2.740−02	2.521−02	2.241−02	1.915−02	1.567−02	1.229−02	9.254−03
3	79	5.094−02	5.048−02	4.978−02	4.922−02	4.893−02	4.869−02	4.799−02	4.636−02	4.351−02	3.948−02
3	80	3.183−02	3.083−02	2.961−02	2.843−02	2.742−02	2.657−02	2.573−02	2.472−02	2.341−02	2.172−02
3	81	5.598−02	5.528−02	5.414−02	5.291−02	5.171−02	5.032−02	4.833−02	4.534−02	4.124−02	3.621−02
3	82	4.207−03	3.969−03	3.793−03	3.751−03	3.925−03	4.350−03	4.958−03	5.590−03	6.052−03	6.196−03
3	83	7.302−03	6.657−03	6.099−03	5.715−03	5.591−03	5.739−03	6.062−03	6.385−03	6.536−03	6.406−03
3	84	1.204−02	1.104−02	1.018−02	9.614−03	9.469−03	9.784−03	1.041−02	1.106−02	1.143−02	1.132−02
3	85	2.219−02	1.965−02	1.711−02	1.461−02	1.220−02	9.941−03	7.863−03	6.017−03	4.450−03	3.188−03
3	86	4.043−02	3.916−02	3.728−02	3.454−02	3.092−02	2.658−02	2.180−02	1.703−02	1.270−02	9.096−03
3	87	4.033−02	4.018−02	3.957−02	3.858−02	3.722−02	3.545−02	3.321−02	3.049−02	2.733−02	2.385−02
3	88	8.525−02	8.578−02	8.596−02	8.592−02	8.555−02	8.447−02	8.214−02	7.815−02	7.233−02	6.484−02
3	89	3.580−02	3.486−02	3.300−02	3.054−02	2.777−02	2.487−02	2.193−02	1.900−02	1.615−02	1.344−02
3	90	3.180−02	2.977−02	2.673−02	2.314−02	1.935−02	1.560−02	1.212−02	9.063−03	6.543−03	4.578−03
3	91	2.010−03	1.881−03	1.688−03	1.462−03	1.236−03	1.025−03	8.301−04	6.522−04	4.941−04	3.609−04
3	92	1.134−02	1.049−02	9.455−03	8.272−03	6.999−03	5.708−03	4.476−03	3.376−03	2.454−03	1.727−03
3	93	1.740−02	1.719−02	1.683−02	1.639−02	1.584−02	1.515−02	1.430−02	1.324−02	1.198−02	1.055−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
3	94	1.572−02	1.524−02	1.454−02	1.364−02	1.256−02	1.132−02	9.955−03	8.543−03	7.155−03	5.850−03
3	95	2.385−02	2.318−02	2.229−02	2.123−02	2.003−02	1.866−02	1.712−02	1.543−02	1.362−02	1.174−02
3	96	1.083−02	1.057−02	1.011−02	9.523−03	8.855−03	8.134−03	7.375−03	6.601−03	5.840−03	5.116−03
3	97	1.947−02	1.821−02	1.700−02	1.585−02	1.478−02	1.374−02	1.268−02	1.157−02	1.043−02	9.285−03
3	98	1.598−02	1.392−02	1.202−02	1.026−02	8.641−03	7.164−03	5.828−03	4.640−03	3.609−03	2.742−03
3	99	1.085−02	1.039−02	9.782−03	9.099−03	8.382−03	7.632−03	6.849−03	6.048−03	5.250−03	4.475−03
3	100	7.044−03	6.934−03	6.811−03	6.738−03	6.762−03	6.881−03	7.051−03	7.198−03	7.245−03	7.131−03
3	101	1.649−03	1.581−03	1.495−03	1.398−03	1.288−03	1.163−03	1.021−03	8.661−04	7.088−04	5.603−04
3	102	3.598−02	3.482−02	3.266−02	2.965−02	2.592−02	2.172−02	1.739−02	1.329−02	9.751−03	6.901−03
3	103	1.157−02	1.101−02	1.019−02	9.160−03	7.939−03	6.590−03	5.218−03	3.942−03	2.856−03	1.997−03
3	104	4.434−03	3.631−03	2.912−03	2.301−03	1.794−03	1.376−03	1.033−03	7.571−04	5.406−04	3.763−04
3	105	1.460−03	1.238−03	1.056−03	9.149−04	8.056−04	7.163−04	6.377−04	5.639−04	4.925−04	4.234−04
3	106	2.052−03	1.725−03	1.447−03	1.229−03	1.064−03	9.359−04	8.333−04	7.462−04	6.686−04	5.979−04
3	107	2.836−03	2.396−03	2.023−03	1.720−03	1.472−03	1.259−03	1.070−03	8.971−04	7.409−04	6.020−04
3	108	1.229−03	1.019−03	8.361−04	6.813−04	5.488−04	4.334−04	3.329−04	2.478−04	1.788−04	1.254−04
3	109	4.031−03	3.669−03	3.370−03	3.115−03	2.873−03	2.623−03	2.354−03	2.067−03	1.775−03	1.494−03
3	110	4.862−03	4.468−03	4.146−03	3.883−03	3.648−03	3.410−03	3.146−03	2.849−03	2.525−03	2.190−03
3	111	3.296−03	2.872−03	2.504−03	2.184−03	1.894−03	1.616−03	1.346−03	1.089−03	8.546−04	6.513−04
3	112	8.275−04	7.186−04	6.234−04	5.437−04	4.755−04	4.138−04	3.559−04	3.022−04	2.552−04	2.184−04
3	113	1.118−02	1.094−02	1.065−02	1.028−02	9.755−03	9.039−03	8.138−03	7.101−03	6.003−03	4.922−03
3	114	7.582−03	7.529−03	7.469−03	7.351−03	7.122−03	6.754−03	6.257−03	5.671−03	5.040−03	4.397−03
3	115	9.523−03	9.410−03	9.291−03	9.126−03	8.863−03	8.462−03	7.904−03	7.201−03	6.388−03	5.511−03
3	116	3.523−03	3.143−03	2.705−03	2.257−03	1.827−03	1.436−03	1.093−03	8.053−04	5.760−04	4.009−04
3	117	2.623−03	2.514−03	2.404−03	2.298−03	2.197−03	2.100−03	2.002−03	1.898−03	1.778−03	1.637−03
3	118	2.838−03	2.718−03	2.605−03	2.514−03	2.451−03	2.414−03	2.391−03	2.363−03	2.307−03	2.205−03
3	119	2.118−03	1.904−03	1.680−03	1.460−03	1.250−03	1.052−03	8.681−04	7.026−04	5.585−04	4.371−04
3	120	1.967−03	1.930−03	1.900−03	1.868−03	1.827−03	1.767−03	1.689−03	1.590−03	1.473−03	1.341−03
3	121	2.782−03	2.712−03	2.643−03	2.568−03	2.474−03	2.353−03	2.206−03	2.037−03	1.856−03	1.668−03
3	122	3.366−03	3.223−03	3.061−03	2.885−03	2.689−03	2.469−03	2.225−03	1.965−03	1.699−03	1.440−03
3	123	9.661−04	8.636−04	7.555−04	6.465−04	5.399−04	4.380−04	3.440−04	2.610−04	1.913−04	1.358−04
3	124	1.116−03	1.171−03	1.251−03	1.363−03	1.506−03	1.666−03	1.814−03	1.914−03	1.936−03	1.868−03
3	125	1.559−03	1.628−03	1.725−03	1.848−03	1.984−03	2.104−03	2.178−03	2.178−03	2.093−03	1.929−03
3	126	2.417−03	2.517−03	2.660−03	2.847−03	3.059−03	3.263−03	3.410−03	3.456−03	3.371−03	3.154−03
3	127	5.224−03	5.125−03	4.949−03	4.659−03	4.230−03	3.668−03	3.024−03	2.370−03	1.774−03	1.276−03
3	128	2.324−02	2.278−02	2.195−02	2.059−02	1.857−02	1.595−02	1.298−02	1.002−02	7.384−03	5.228−03
3	129	5.361−03	5.364−03	5.333−03	5.239−03	5.052−03	4.758−03	4.358−03	3.874−03	3.337−03	2.787−03
3	130	2.677−03	2.632−03	2.577−03	2.498−03	2.378−03	2.209−03	1.995−03	1.750−03	1.492−03	1.237−03
3	131	6.080−03	5.889−03	5.708−03	5.497−03	5.214−03	4.834−03	4.358−03	3.809−03	3.223−03	2.643−03
3	132	1.239−03	1.273−03	1.316−03	1.358−03	1.386−03	1.384−03	1.343−03	1.259−03	1.138−03	9.891−04
3	133	9.812−04	9.835−04	9.854−04	9.793−04	9.562−04	9.095−04	8.374−04	7.439−04	6.371−04	5.270−04
3	134	2.090−03	2.103−03	2.124−03	2.141−03	2.134−03	2.087−03	1.987−03	1.832−03	1.631−03	1.401−03
3	135	8.971−04	9.057−04	9.189−04	9.322−04	9.370−04	9.242−04	8.872−04	8.249−04	7.424−04	6.484−04
3	136	8.464−04	8.673−04	8.929−04	9.200−04	9.444−04	9.625−04	9.718−04	9.717−04	9.638−04	9.499−04
3	137	1.163−04	1.150−04	1.131−04	1.098−04	1.045−04	9.670−05	8.631−05	7.385−05	6.037−05	4.718−05
3	138	3.048−03	2.841−03	2.583−03	2.272−03	1.920−03	1.552−03	1.199−03	8.880−04	6.351−04	4.413−04
3	139	3.824−03	3.664−03	3.426−03	3.104−03	2.705−03	2.257−03	1.799−03	1.372−03	1.004−03	7.095−04
3	140	7.587−04	7.390−04	7.123−04	6.710−04	6.102−04	5.306−04	4.390−04	3.456−04	2.598−04	1.876−04
3	141	1.084−03	1.111−03	1.131−03	1.126−03	1.080−03	9.869−04	8.520−04	6.938−04	5.347−04	3.927−04
4	5	4.470+00	4.311+00	4.029+00	3.548+00	2.920+00	2.262+00	1.672+00	1.195+00	8.328−01	5.691−01
4	6	4.806+00	4.457+00	3.937+00	3.335+00	2.726+00	2.162+00	1.673+00	1.265+00	9.349−01	6.758−01
4	7	3.532−01	3.319−01	3.043−01	2.722−01	2.364−01	1.991−01	1.633−01	1.312−01	1.035−01	8.039−02
4	8	3.964+00	4.052+00	4.170+00	4.371+00	4.746+00	5.327+00	6.069+00	6.952+00	8.008+00	9.267+00
4	9	1.047+01	1.086+01	1.134+01	1.201+01	1.303+01	1.453+01	1.662+01	1.934+01	2.275+01	2.681+01
4	10	1.115+01	1.161+01	1.217+01	1.295+01	1.418+01	1.607+01	1.873+01	2.225+01	2.669+01	3.200+01
4	11	3.295+00	3.344+00	3.383+00	3.430+00	3.542+00	3.770+00	4.141+00	4.675+00	5.388+00	6.276+00
4	12	1.111+00	1.086+00	1.043+00	9.809−01	9.141−01	8.584−01	8.215−01	8.071−01	8.171−01	8.502−01
4	13	1.642+00	1.650+00	1.616+00	1.557+00	1.511+00	1.528+00	1.649+00	1.903+00	2.307+00	2.864+00
4	14	4.236−01	3.967−01	3.533−01	2.996−01	2.429−01	1.896−01	1.437−01	1.063−01	7.701−02	5.464−02
4	15	5.935−01	5.106−01	4.247−01	3.418−01	2.663−01	2.011−01	1.476−01	1.055−01	7.373−02	5.043−02
4	16	1.065+00	1.035+00	9.475−01	8.147−01	6.636−01	5.176−01	3.900−01	2.854−01	2.035−01	1.418−01
4	17	2.339−01	2.284−01	2.120−01	1.899−01	1.675−01	1.480−01	1.329−01	1.229−01	1.183−01	1.183−01
4	18	7.804−01	7.551−01	6.933−01	6.097−01	5.215−01	4.423−01	3.793−01	3.349−01	3.081−01	2.959−01
4	19	2.868+00	2.947+00	2.990+00	3.159+00	3.474+00	3.749+00	3.868+00	3.875+00	3.854+00	3.853+00
4	20	6.888−01	6.388−01	5.687−01	4.870−01	4.026−01	3.223−01	2.500−01	1.881−01	1.374−01	9.769−02
4	21	4.008−01	3.636−01	3.263−01	2.918−01	2.619−01	2.379−01	2.204−01	2.098−01	2.055−01	2.061−01
4	22	9.906−01	9.469−01	9.414−01	1.006+00	1.099+00	1.156+00	1.170+00	1.169+00	1.178+00	1.206+00
4	23	2.428+00	2.345+00	2.305+00	2.320+00	2.402+00	2.562+00	2.804+00	3.121+00	3.494+00	3.893+00
4	24	2.508+00	2.383+00	2.284+00	2.235+00	2.175+00	2.039+00	1.832+00	1.598+00	1.377+00	1.189+00
4	25	6.122−01	5.883−01	5.620−01	5.334−01	5.031−01	4.728−01	4.450−01	4.210−01	4.015−01	3.863−01
4	26	1.555+00	1.538+00	1.518+00	1.498+00	1.483+00	1.478+00	1.485+00	1.504+00	1.530+00	1.560+00
4	27	5.608−01	5.035−01	4.456−01	3.868−01	3.268−01	2.675−01	2.118−01	1.621−01	1.201−01	8.636−02
4	28	4.417−01	4.096−01	3.686−01	3.233−01	2.776−01	2.338−01	1.924−01	1.539−01	1.192−01	8.930−02
4	29	4.345−01	4.275−01	4.125−01	3.861−01	3.481−01	3.011−01	2.495−01	1.982−01	1.510−01	1.109−01
4	30	2.126−01	2.017−01	1.880−01	1.720−01	1.548−01	1.379−01	1.225−01	1.095−01	9.909−02	9.086−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
4	31	4.179−01	4.031−01	3.847−01	3.625−01	3.372−01	3.108−01	2.854−01	2.620−01	2.411−01	2.221−01
4	32	8.654−01	8.517−01	8.355−01	8.136−01	7.849−01	7.516−01	7.164−01	6.808−01	6.445−01	6.058−01
4	33	3.447−01	3.328−01	3.228−01	3.175−01	3.196−01	3.316−01	3.550−01	3.877−01	4.257−01	4.628−01
4	34	2.440−01	2.364−01	2.309−01	2.300−01	2.364−01	2.526−01	2.799−01	3.178−01	3.637−01	4.130−01
4	35	1.193−01	1.147−01	1.151−01	1.267−01	1.454−01	1.623−01	1.753−01	1.876−01	2.024−01	2.196−01
4	36	2.536−01	2.561−01	2.663−01	2.832−01	2.987−01	3.081−01	3.126−01	3.153−01	3.173−01	3.184−01
4	37	7.273−01	7.286−01	7.375−01	7.557−01	7.847−01	8.246−01	8.726−01	9.233−01	9.710−01	1.009+00
4	38	1.092+00	1.094+00	1.109+00	1.135+00	1.175+00	1.229+00	1.293+00	1.360+00	1.420+00	1.467+00
4	39	5.184−02	4.892−02	4.550−02	4.207−02	3.879−02	3.587−02	3.352−02	3.169−02	3.011−02	2.845−02
4	40	1.859−01	1.765−01	1.630−01	1.473−01	1.315−01	1.172−01	1.050−01	9.493−02	8.613−02	7.792−02
4	41	1.191+00	1.218+00	1.239+00	1.265+00	1.301+00	1.352+00	1.415+00	1.489+00	1.569+00	1.648+00
4	42	2.539−01	2.366−01	2.119−01	1.830−01	1.525−01	1.226−01	9.517−02	7.135−02	5.180−02	3.654−02
4	43	2.526−01	2.496−01	2.371−01	2.157−01	1.885−01	1.588−01	1.294−01	1.018−01	7.747−02	5.707−02
4	44	9.960−02	9.513−02	8.805−02	7.833−02	6.707−02	5.554−02	4.456−02	3.462−02	2.604−02	1.898−02
4	45	9.725−02	8.968−02	7.992−02	6.880−02	5.726−02	4.616−02	3.608−02	2.738−02	2.019−02	1.451−02
4	46	7.449−02	7.085−02	6.508−02	5.769−02	4.961−02	4.163−02	3.427−02	2.780−02	2.232−02	1.786−02
4	47	1.928−01	1.824−01	1.667−01	1.483−01	1.297−01	1.124−01	9.733−02	8.499−02	7.556−02	6.893−02
4	48	3.835−01	3.753−01	3.598−01	3.399−01	3.194−01	3.013−01	2.873−01	2.789−01	2.769−01	2.815−01
4	49	2.679−02	2.500−02	2.261−02	1.982−02	1.690−02	1.406−02	1.142−02	9.057−03	7.008−03	5.295−03
4	50	1.560−01	1.565−01	1.547−01	1.515−01	1.479−01	1.441−01	1.399−01	1.345−01	1.275−01	1.190−01
4	51	4.085−01	4.103−01	4.100−01	4.086−01	4.072−01	4.059−01	4.028−01	3.959−01	3.839−01	3.670−01
4	52	1.049−01	1.012−01	9.562−02	8.900−02	8.236−02	7.647−02	7.191−02	6.907−02	6.820−02	6.923−02
4	53	2.112−01	1.958−01	1.766−01	1.550−01	1.322−01	1.093−01	8.725−02	6.722−02	5.003−02	3.607−02
4	54	3.169−02	2.924−02	2.642−02	2.330−02	1.997−02	1.659−02	1.333−02	1.036−02	7.771−03	5.645−03
4	55	8.560−02	7.751−02	6.954−02	6.175−02	5.399−02	4.611−02	3.819−02	3.051−02	2.350−02	1.749−02
4	56	6.168−02	5.657−02	5.146−02	4.633−02	4.111−02	3.578−02	3.045−02	2.532−02	2.063−02	1.656−02
4	57	1.247−01	1.161−01	1.081−01	1.006−01	9.309−02	8.539−02	7.759−02	7.001−02	6.296−02	5.669−02
4	58	2.603−01	2.522−01	2.454−01	2.403−01	2.359−01	2.318−01	2.279−01	2.249−01	2.227−01	2.210−01
4	59	4.670−02	4.465−02	4.298−02	4.145−02	3.986−02	3.809−02	3.610−02	3.391−02	3.162−02	2.933−02
4	60	1.170−01	1.136−01	1.114−01	1.100−01	1.089−01	1.077−01	1.064−01	1.047−01	1.026−01	1.001−01
4	61	2.021−01	1.956−01	1.919−01	1.899−01	1.887−01	1.878−01	1.869−01	1.856−01	1.839−01	1.815−01
4	62	1.022−01	9.686−02	9.113−02	8.631−02	8.230−02	7.898−02	7.653−02	7.501−02	7.424−02	7.379−02
4	63	5.981−02	5.826−02	5.647−02	5.488−02	5.376−02	5.324−02	5.342−02	5.427−02	5.567−02	5.734−02
4	64	3.467−02	4.179−02	4.394−02	4.152−02	3.706−02	3.265−02	2.928−02	2.714−02	2.605−02	2.568−02
4	65	1.041−01	9.947−02	9.935−02	1.017−01	1.007−01	9.431−02	8.479−02	7.498−02	6.644−02	5.949−02
4	66	4.511−02	4.358−02	4.185−02	3.998−02	3.798−02	3.590−02	3.382−02	3.185−02	3.006−02	2.844−02
4	67	9.528−02	9.280−02	9.125−02	9.035−02	8.862−02	8.555−02	8.172−02	7.789−02	7.445−02	7.135−02
4	68	1.660−01	1.564−01	1.509−01	1.483−01	1.421−01	1.304−01	1.154−01	1.005−01	8.754−02	7.693−02
4	69	3.947−02	3.792−02	3.553−02	3.228−02	2.834−02	2.399−02	1.956−02	1.538−02	1.165−02	8.532−03
4	70	4.183−02	3.928−02	3.652−02	3.352−02	3.037−02	2.722−02	2.427−02	2.168−02	1.956−02	1.788−02
4	71	7.909−02	7.763−02	7.574−02	7.335−02	7.054−02	6.765−02	6.513−02	6.328−02	6.220−02	6.174−02
4	72	1.600−01	1.559−01	1.530−01	1.514−01	1.503−01	1.499−01	1.506−01	1.528−01	1.565−01	1.609−01
4	73	1.955−01	1.876−01	1.784−01	1.669−01	1.521−01	1.341−01	1.138−01	9.262−02	7.239−02	5.445−02
4	74	3.831−02	3.570−02	3.244−02	2.873−02	2.479−02	2.087−02	1.722−02	1.398−02	1.126−02	9.069−03
4	75	8.034−02	6.889−02	6.160−02	5.722−02	5.416−02	5.172−02	4.983−02	4.848−02	4.743−02	4.636−02
4	76	6.914−02	6.132−02	5.583−02	5.211−02	4.967−02	4.821−02	4.751−02	4.737−02	4.752−02	4.765−02
4	77	3.822−02	3.663−02	3.577−02	3.547−02	3.561−02	3.611−02	3.694−02	3.800−02	3.912−02	4.008−02
4	78	5.182−02	5.127−02	4.971−02	4.707−02	4.333−02	3.856−02	3.297−02	2.700−02	2.118−02	1.596−02
4	79	3.808−02	3.731−02	3.615−02	3.487−02	3.360−02	3.221−02	3.046−02	2.816−02	2.528−02	2.197−02
4	80	7.821−02	7.729−02	7.583−02	7.430−02	7.289−02	7.136−02	6.910−02	6.555−02	6.046−02	5.397−02
4	81	1.155−01	1.150−01	1.146−01	1.138−01	1.125−01	1.106−01	1.077−01	1.032−01	9.659−02	8.789−02
4	82	3.015−03	2.708−03	2.429−03	2.201−03	2.041−03	1.946−03	1.887−03	1.826−03	1.734−03	1.603−03
4	83	2.330−02	2.654−02	2.624−02	2.352−02	2.021−02	1.750−02	1.571−02	1.460−02	1.376−02	1.284−02
4	84	2.417−02	2.252−02	2.122−02	2.049−02	2.063−02	2.182−02	2.376−02	2.577−02	2.707−02	2.711−02
4	85	3.703−02	3.281−02	2.860−02	2.444−02	2.043−02	1.665−02	1.317−02	1.007−02	7.448−03	5.333−03
4	86	6.806−02	6.638−02	6.364−02	5.916−02	5.295−02	4.540−02	3.714−02	2.894−02	2.154−02	1.540−02
4	87	2.532−02	2.618−02	2.608−02	2.479−02	2.275−02	2.043−02	1.811−02	1.587−02	1.371−02	1.161−02
4	88	6.592−02	6.707−02	6.664−02	6.433−02	6.066−02	5.625−02	5.141−02	4.625−02	4.081−02	3.517−02
4	89	1.836−01	1.868−01	1.878−01	1.862−01	1.822−01	1.760−01	1.676−01	1.564−01	1.425−01	1.261−01
4	90	5.319−02	4.981−02	4.473−02	3.871−02	3.236−02	2.609−02	2.026−02	1.515−02	1.093−02	7.648−03
4	91	3.389−03	3.163−03	2.833−03	2.453−03	2.072−03	1.716−03	1.390−03	1.091−03	8.267−04	6.035−04
4	92	1.945−02	1.804−02	1.620−02	1.407−02	1.182−02	9.581−03	7.480−03	5.621−03	4.076−03	2.862−03
4	93	2.511−02	2.454−02	2.198−02	1.874−02	1.563−02	1.290−02	1.059−02	8.629−03	6.970−03	5.563−03
4	94	3.075−02	2.990−02	2.881−02	2.752−02	2.601−02	2.427−02	2.228−02	2.005−02	1.765−02	1.516−02
4	95	5.121−02	5.029−02	4.889−02	4.703−02	4.472−02	4.192−02	3.864−02	3.492−02	3.085−02	2.657−02
4	96	1.455−02	1.387−02	1.240−02	1.067−02	8.968−03	7.437−03	6.096−03	4.936−03	3.944−03	3.110−03
4	97	2.719−02	2.363−02	2.060−02	1.797−02	1.564−02	1.358−02	1.172−02	1.004−02	8.535−03	7.200−03
4	98	8.751−02	8.244−02	7.178−02	5.998−02	4.947−02	4.093−02	3.416−02	2.877−02	2.438−02	2.073−02
4	99	1.067−01	9.046−02	7.142−02	5.472−02	4.195−02	3.292−02	2.675−02	2.253−02	1.951−02	1.716−02
4	100	1.225−02	1.157−02	1.070−02	9.784−03	8.885−03	8.001−03	7.123−03	6.254−03	5.408−03	4.598−03
4	101	5.686−03	5.193−03	4.600−03	4.032−03	3.533−03	3.098−03	2.713−03	2.365−03	2.047−03	1.751−03
4	102	6.064−02	5.860−02	5.489−02	4.976−02	4.348−02	3.641−02	2.912−02	2.226−02	1.633−02	1.156−02
4	103	1.950−02	1.854−02	1.717−02	1.543−02	1.338−02	1.111−02	8.796−03	6.647−03	4.815−03	3.367−03
4	104	7.584−03	6.219−03	4.985−03	3.932−03	3.058−03	2.340−03	1.754−03	1.283−03	9.148−04	6.362−04

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
4	105	1.881−03	1.579−03	1.324−03	1.118−03	9.491−04	8.055−04	6.783−04	5.643−04	4.632−04	3.756−04
4	106	3.691−03	3.148−03	2.657−03	2.248−03	1.915−03	1.637−03	1.397−03	1.185−03	9.945−04	8.253−04
4	107	5.800−03	4.909−03	4.126−03	3.495−03	3.004−03	2.619−03	2.303−03	2.030−03	1.783−03	1.555−03
4	108	2.354−03	1.993−03	1.637−03	1.319−03	1.044−03	8.107−04	6.136−04	4.515−04	3.229−04	2.250−04
4	109	3.405−03	2.981−03	2.621−03	2.316−03	2.044−03	1.785−03	1.533−03	1.286−03	1.053−03	8.411−04
4	110	6.347−03	5.693−03	5.115−03	4.610−03	4.150−03	3.703−03	3.253−03	2.800−03	2.359−03	1.948−03
4	111	1.160−02	1.054−02	9.632−03	8.868−03	8.182−03	7.508−03	6.801−03	6.051−03	5.275−03	4.509−03
4	112	1.403−03	1.219−03	1.055−03	9.173−04	7.998−04	6.946−04	5.969−04	5.067−04	4.280−04	3.667−04
4	113	2.402−02	2.365−02	2.321−02	2.267−02	2.190−02	2.080−02	1.936−02	1.761−02	1.565−02	1.358−02
4	114	1.566−02	1.540−02	1.509−02	1.468−02	1.406−02	1.319−02	1.205−02	1.070−02	9.248−03	7.777−03
4	115	8.152−03	8.002−03	7.822−03	7.557−03	7.150−03	6.572−03	5.843−03	5.021−03	4.178−03	3.377−03
4	116	5.677−03	5.030−03	4.330−03	3.628−03	2.955−03	2.334−03	1.784−03	1.319−03	9.454−04	6.591−04
4	117	1.982−03	1.832−03	1.677−03	1.521−03	1.365−03	1.214−03	1.070−03	9.385−04	8.185−04	7.089−04
4	118	4.142−03	3.841−03	3.530−03	3.238−03	2.973−03	2.735−03	2.519−03	2.316−03	2.116−03	1.911−03
4	119	7.776−03	7.238−03	6.693−03	6.225−03	5.855−03	5.573−03	5.346−03	5.130−03	4.882−03	4.567−03
4	120	2.819−03	2.723−03	2.624−03	2.506−03	2.356−03	2.170−03	1.951−03	1.713−03	1.469−03	1.233−03
4	121	4.628−03	4.435−03	4.231−03	4.021−03	3.792−03	3.534−03	3.244−03	2.930−03	2.602−03	2.271−03
4	122	7.085−03	6.764−03	6.428−03	6.113−03	5.808−03	5.493−03	5.152−03	4.782−03	4.386−03	3.967−03
4	123	2.829−03	2.333−03	1.881−03	1.495−03	1.174−03	9.080−04	6.876−04	5.079−04	3.651−04	2.556−04
4	124	4.540−04	4.677−04	4.858−04	5.052−04	5.193−04	5.208−04	5.045−04	4.697−04	4.200−04	3.618−04
4	125	2.443−03	2.533−03	2.668−03	2.848−03	3.056−03	3.257−03	3.403−03	3.448−03	3.364−03	3.147−03
4	126	5.692−03	5.924−03	6.274−03	6.757−03	7.338−03	7.932−03	8.410−03	8.639−03	8.528−03	8.055−03
4	127	9.672−03	9.239−03	8.733−03	8.099−03	7.278−03	6.269−03	5.146−03	4.023−03	3.007−03	2.161−03
4	128	3.896−02	3.816−02	3.675−02	3.445−02	3.105−02	2.665−02	2.168−02	1.674−02	1.233−02	8.726−03
4	129	4.314−03	4.270−03	4.204−03	4.087−03	3.892−03	3.608−03	3.242−03	2.816−03	2.366−03	1.925−03
4	130	8.220−03	8.113−03	7.972−03	7.753−03	7.409−03	6.914−03	6.272−03	5.518−03	4.703−03	3.886−03
4	131	1.130−02	1.099−02	1.070−02	1.036−02	9.884−03	9.235−03	8.409−03	7.442−03	6.394−03	5.332−03
4	132	1.185−03	1.184−03	1.185−03	1.179−03	1.158−03	1.113−03	1.041−03	9.432−04	8.257−04	6.987−04
4	133	2.561−03	2.560−03	2.579−03	2.597−03	2.589−03	2.532−03	2.410−03	2.221−03	1.976−03	1.696−03
4	134	3.584−03	3.625−03	3.685−03	3.739−03	3.750−03	3.683−03	3.516−03	3.245−03	2.888−03	2.478−03
4	135	1.988−03	1.990−03	2.007−03	2.030−03	2.049−03	2.051−03	2.030−03	1.984−03	1.920−03	1.844−03
4	136	8.942−04	9.045−04	9.195−04	9.341−04	9.397−04	9.272−04	8.902−04	8.276−04	7.448−04	6.504−04
4	137	3.295−04	3.354−04	3.436−04	3.523−04	3.580−04	3.570−04	3.465−04	3.259−04	2.967−04	2.622−04
4	138	5.304−03	4.908−03	4.430−03	3.873−03	3.259−03	2.625−03	2.023−03	1.497−03	1.069−03	7.427−04
4	139	6.436−03	6.151−03	5.736−03	5.184−03	4.511−03	3.760−03	2.997−03	2.285−03	1.673−03	1.182−03
4	140	1.269−03	1.236−03	1.191−03	1.123−03	1.021−03	8.877−04	7.345−04	5.782−04	4.346−04	3.138−04
4	141	1.810−03	1.855−03	1.887−03	1.879−03	1.803−03	1.647−03	1.421−03	1.158−03	8.921−04	6.551−04
5	6	5.892+00	6.053+00	6.039+00	5.946+00	6.002+00	6.316+00	6.730+00	7.102+00	7.485+00	8.017+00
5	7	5.216−01	4.614−01	3.909−01	3.186−01	2.514−01	1.937−01	1.464−01	1.088−01	7.947−02	5.708−02
5	8	1.590+00	1.398+00	1.180+00	9.591−01	7.526−01	5.737−01	4.278−01	3.136−01	2.264−01	1.609−01
5	9	2.660+00	2.334+00	1.968+00	1.598+00	1.254+00	9.560−01	7.134−01	5.236−01	3.787−01	2.697−01
5	10	2.477+00	2.464+00	2.275+00	1.971+00	1.625+00	1.291+00	9.968−01	7.497−01	5.496−01	3.928−01
5	11	1.770+00	1.762+00	1.628+00	1.411+00	1.164+00	9.250−01	7.141−01	5.373−01	3.941−01	2.820−01
5	12	1.062+00	1.058+00	9.777−01	8.488−01	7.028−01	5.620−01	4.365−01	3.297−01	2.424−01	1.735−01
5	13	1.427+00	1.360+00	1.202+00	9.958−01	7.821−01	5.885−01	4.275−01	3.015−01	2.075−01	1.400−01
5	14	3.812+00	3.923+00	4.128+00	4.614+00	5.508+00	6.629+00	7.784+00	8.995+00	1.041+01	1.216+01
5	15	1.096+00	9.465−01	8.130−01	7.030−01	6.187−01	5.622−01	5.336−01	5.292−01	5.435−01	5.706−01
5	16	1.286+01	1.322+01	1.391+01	1.602+01	2.050+01	2.616+01	3.135+01	3.603+01	4.118+01	4.759+01
5	17	1.922−01	1.758−01	1.545−01	1.302−01	1.055−01	8.247−02	6.241−02	4.581−02	3.271−02	2.278−02
5	18	5.782−01	5.271−01	4.621−01	3.889−01	3.149−01	2.464−01	1.867−01	1.374−01	9.855−02	6.912−02
5	19	9.757−01	8.875−01	7.767−01	6.525−01	5.278−01	4.123−01	3.119−01	2.290−01	1.635−01	1.139−01
5	20	1.797+00	1.864+00	1.895+00	1.902+00	1.915+00	1.957+00	2.041+00	2.170+00	2.338+00	2.531+00
5	21	3.529−01	3.005−01	2.527−01	2.105−01	1.735−01	1.410−01	1.125−01	8.778−02	6.667−02	4.923−02
5	22	5.113−01	4.335−01	3.630−01	3.011−01	2.472−01	2.002−01	1.592−01	1.238−01	9.376−02	6.900−02
5	23	6.712−01	5.637−01	4.699−01	3.899−01	3.208−01	2.603−01	2.072−01	1.611−01	1.218−01	8.945−02
5	24	2.416−01	2.141−01	1.881−01	1.625−01	1.372−01	1.127−01	8.980−02	6.933−02	5.180−02	3.750−02
5	25	4.091−01	3.615−01	3.171−01	2.743−01	2.320−01	1.909−01	1.522−01	1.174−01	8.765−02	6.340−02
5	26	5.833−01	5.137−01	4.494−01	3.883−01	3.284−01	2.700−01	2.152−01	1.659−01	1.237−01	8.942−02
5	27	1.531+00	1.457+00	1.387+00	1.319+00	1.260+00	1.225+00	1.222+00	1.253+00	1.312+00	1.391+00
5	28	8.954−01	9.312−01	9.995−01	1.164+00	1.416+00	1.653+00	1.826+00	1.956+00	2.084+00	2.224+00
5	29	2.205+00	2.307+00	2.475+00	2.820+00	3.316+00	3.792+00	4.172+00	4.518+00	4.915+00	5.398+00
5	30	2.809−01	2.661−01	2.457−01	2.212−01	1.937−01	1.645−01	1.350−01	1.070−01	8.179−02	6.041−02
5	31	3.944−01	3.734−01	3.451−01	3.113−01	2.731−01	2.322−01	1.907−01	1.511−01	1.154−01	8.508−02
5	32	5.095−01	4.819−01	4.455−01	4.024−01	3.535−01	3.009−01	2.473−01	1.960−01	1.497−01	1.103−01
5	33	2.007−01	1.927−01	1.805−01	1.652−01	1.479−01	1.292−01	1.094−01	8.934−02	7.016−02	5.301−02
5	34	1.237−01	1.179−01	1.102−01	1.011−01	9.058−02	7.907−02	6.686−02	5.449−02	4.268−02	3.215−02
5	35	4.195−02	3.983−02	3.707−02	3.383−02	3.023−02	2.634−02	2.227−02	1.815−02	1.422−02	1.071−02
5	36	1.071−01	1.008−01	9.362−02	8.528−02	7.589−02	6.581−02	5.543−02	4.518−02	3.551−02	2.690−02
5	37	1.793−01	1.686−01	1.565−01	1.426−01	1.269−01	1.100−01	9.268−02	7.554−02	5.938−02	4.499−02
5	38	2.517−01	2.364−01	2.196−01	2.004−01	1.785−01	1.548−01	1.304−01	1.062−01	8.346−02	6.321−02
5	39	6.201−02	5.465−02	4.621−02	3.788−02	3.028−02	2.364−02	1.800−02	1.336−02	9.665−03	6.824−03
5	40	1.895−01	1.672−01	1.418−01	1.167−01	9.388−02	7.394−02	5.706−02	4.321−02	3.223−02	2.383−02
5	41	3.095−01	2.718−01	2.298−01	1.887−01	1.512−01	1.183−01	9.032−02	6.714−02	4.862−02	3.436−02
5	42	1.204+00	1.254+00	1.348+00	1.516+00	1.706+00	1.853+00	1.949+00	2.021+00	2.091+00	2.165+00

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
5	43	1.863+00	1.924+00	1.988+00	2.070+00	2.180+00	2.319+00	2.477+00	2.635+00	2.769+00	2.859+00
5	44	4.072−01	4.163−01	4.239−01	4.341−01	4.528−01	4.844−01	5.304−01	5.889−01	6.556−01	7.228−01
5	45	1.824−01	1.823−01	1.818−01	1.818−01	1.833−01	1.871−01	1.935−01	2.027−01	2.152−01	2.309−01
5	46	7.508−02	7.120−02	6.501−02	5.729−02	4.894−02	4.063−02	3.284−02	2.591−02	2.005−02	1.534−02
5	47	1.239−01	1.185−01	1.084−01	9.529−02	8.091−02	6.654−02	5.304−02	4.100−02	3.077−02	2.247−02
5	48	1.731−01	1.658−01	1.521−01	1.339−01	1.138−01	9.353−02	7.446−02	5.745−02	4.299−02	3.126−02
5	49	2.317−02	2.245−02	2.067−02	1.817−02	1.534−02	1.251−02	9.881−03	7.559−03	5.610−03	4.047−03
5	50	7.022−02	6.776−02	6.227−02	5.466−02	4.614−02	3.762−02	2.971−02	2.273−02	1.688−02	1.218−02
5	51	1.196−01	1.163−01	1.073−01	9.429−02	7.953−02	6.476−02	5.106−02	3.905−02	2.901−02	2.098−02
5	52	5.724−02	5.641−02	5.276−02	4.724−02	4.080−02	3.406−02	2.749−02	2.144−02	1.619−02	1.187−02
5	53	6.141−01	6.239−01	6.358−01	6.515−01	6.725−01	6.979−01	7.245−01	7.477−01	7.636−01	7.692−01
5	54	1.052−01	1.095−01	1.157−01	1.229−01	1.297−01	1.352−01	1.390−01	1.410−01	1.408−01	1.386−01
5	55	1.420−01	1.335−01	1.273−01	1.235−01	1.222−01	1.231−01	1.255−01	1.287−01	1.321−01	1.349−01
5	56	7.333−02	6.838−02	6.304−02	5.727−02	5.105−02	4.443−02	3.760−02	3.092−02	2.480−02	1.953−02
5	57	1.063−01	9.736−02	8.844−02	7.934−02	6.981−02	5.979−02	4.952−02	3.952−02	3.037−02	2.252−02
5	58	1.399−01	1.284−01	1.164−01	1.041−01	9.121−02	7.785−02	6.429−02	5.114−02	3.916−02	2.891−02
5	59	3.613−02	3.410−02	3.179−02	2.913−02	2.609−02	2.273−02	1.917−02	1.560−02	1.224−02	9.259−03
5	60	6.286−02	5.883−02	5.449−02	4.967−02	4.433−02	3.853−02	3.246−02	2.641−02	2.073−02	1.571−02
5	61	1.106−01	9.799−02	8.680−02	7.645−02	6.650−02	5.672−02	4.712−02	3.794−02	2.952−02	2.218−02
5	62	7.398−02	6.947−02	6.403−02	5.818−02	5.197−02	4.528−02	3.816−02	3.092−02	2.405−02	1.800−02
5	63	3.988−02	3.803−02	3.571−02	3.303−02	2.993−02	2.635−02	2.237−02	1.821−02	1.420−02	1.064−02
5	64	1.289−02	1.253−02	1.215−02	1.156−02	1.063−02	9.383−03	7.930−03	6.413−03	4.968−03	3.699−03
5	65	2.543−01	2.394−01	2.223−01	2.051−01	1.888−01	1.737−01	1.597−01	1.468−01	1.347−01	1.238−01
5	66	2.777−02	2.632−02	2.459−02	2.248−02	1.997−02	1.715−02	1.421−02	1.132−02	8.692−03	6.440−03
5	67	4.321−02	4.039−02	3.707−02	3.335−02	2.925−02	2.490−02	2.050−02	1.630−02	1.251−02	9.307−03
5	68	2.690−01	2.519−01	2.325−01	2.132−01	1.953−01	1.790−01	1.641−01	1.506−01	1.381−01	1.268−01
5	69	1.497−01	1.414−01	1.332−01	1.279−01	1.265−01	1.288−01	1.343−01	1.420−01	1.507−01	1.589−01
5	70	5.552−02	5.328−02	5.013−02	4.580−02	4.038−02	3.425−02	2.796−02	2.205−02	1.691−02	1.273−02
5	71	8.036−02	7.542−02	6.945−02	6.234−02	5.416−02	4.532−02	3.648−02	2.826−02	2.114−02	1.537−02
5	72	1.004−01	9.321−02	8.510−02	7.589−02	6.557−02	5.457−02	4.363−02	3.350−02	2.477−02	1.770−02
5	73	3.820−01	3.862−01	3.927−01	4.014−01	4.130−01	4.274−01	4.435−01	4.592−01	4.720−01	4.791−01
5	74	2.328−01	1.971−01	1.709−01	1.530−01	1.415−01	1.347−01	1.306−01	1.279−01	1.251−01	1.216−01
5	75	5.214−02	4.545−02	3.981−02	3.472−02	2.983−02	2.500−02	2.030−02	1.592−02	1.205−02	8.836−03
5	76	6.003−02	4.965−02	4.176−02	3.559−02	3.053−02	2.617−02	2.232−02	1.892−02	1.597−02	1.346−02
5	77	1.722−02	1.599−02	1.474−02	1.335−02	1.177−02	1.004−02	8.245−03	6.504−03	4.930−03	3.600−03
5	78	1.421−01	2.153−01	2.984−01	3.462−01	3.517−01	3.352−01	3.174−01	3.089−01	3.117−01	3.230−01
5	79	2.727−02	2.488−02	2.217−02	1.938−02	1.659−02	1.380−02	1.107−02	8.536−03	6.322−03	4.514−03
5	80	3.824−02	3.489−02	3.111−02	2.721−02	2.330−02	1.939−02	1.556−02	1.200−02	8.884−03	6.343−03
5	81	4.928−02	4.494−02	4.005−02	3.503−02	2.999−02	2.496−02	2.004−02	1.545−02	1.144−02	8.171−03
5	82	3.119−03	2.753−03	2.395−03	2.064−03	1.773−03	1.518−03	1.285−03	1.060−03	8.430−04	6.437−04
5	83	9.353−03	8.252−03	7.175−03	6.180−03	5.306−03	4.544−03	3.845−03	3.172−03	2.524−03	1.927−03
5	84	1.562−02	1.379−02	1.200−02	1.035−02	8.890−03	7.614−03	6.444−03	5.315−03	4.228−03	3.228−03
5	85	9.833−02	9.867−02	9.945−02	1.018−01	1.066−01	1.140−01	1.233−01	1.327−01	1.402−01	1.441−01
5	86	2.481−01	2.478−01	2.481−01	2.501−01	2.548−01	2.610−01	2.657−01	2.648−01	2.550−01	2.355−01
5	87	2.026−02	1.866−02	1.663−02	1.434−02	1.195−02	9.626−03	7.473−03	5.590−03	4.037−03	2.825−03
5	88	3.382−02	3.114−02	2.774−02	2.390−02	1.992−02	1.604−02	1.245−02	9.313−03	6.726−03	4.707−03
5	89	4.724−02	4.340−02	3.864−02	3.332−02	2.781−02	2.241−02	1.741−02	1.303−02	9.408−03	6.585−03
5	90	1.641−01	1.616−01	1.576−01	1.531−01	1.481−01	1.424−01	1.352−01	1.261−01	1.149−01	1.020−01
5	91	7.604−03	7.648−03	7.798−03	8.251−03	9.271−03	1.102−02	1.339−02	1.597−02	1.819−02	1.952−02
5	92	3.172−02	3.142−02	3.099−02	3.053−02	3.019−02	3.003−02	2.997−02	2.984−02	2.943−02	2.857−02
5	93	1.202−02	1.153−02	1.077−02	9.744−03	8.500−03	7.114−03	5.696−03	4.366−03	3.215−03	2.286−03
5	94	2.037−02	1.956−02	1.824−02	1.647−02	1.433−02	1.197−02	9.566−03	7.325−03	5.390−03	3.830−03
5	95	2.891−02	2.773−02	2.583−02	2.328−02	2.023−02	1.687−02	1.347−02	1.031−02	7.582−03	5.386−03
5	96	1.116−02	1.044−02	9.418−03	8.207−03	6.939−03	5.697−03	4.531−03	3.481−03	2.581−03	1.852−03
5	97	1.598−02	1.488−02	1.338−02	1.163−02	9.816−03	8.046−03	6.390−03	4.902−03	3.631−03	2.600−03
5	98	2.215−02	2.028−02	1.806−02	1.560−02	1.309−02	1.068−02	8.441−03	6.451−03	4.763−03	3.404−03
5	99	1.550−02	1.481−02	1.380−02	1.254−02	1.106−02	9.425−03	7.703−03	6.027−03	4.519−03	3.261−03
5	100	9.009−03	8.629−03	8.078−03	7.376−03	6.538−03	5.588−03	4.579−03	3.589−03	2.694−03	1.946−03
5	101	3.001−03	2.872−03	2.689−03	2.455−03	2.177−03	1.862−03	1.526−03	1.196−03	8.980−04	6.486−04
5	102	1.009−01	1.018−01	1.015−01	1.007−01	9.974−02	9.836−02	9.614−02	9.247−02	8.687−02	7.919−02
5	103	1.665−02	1.678−02	1.704−02	1.780−02	1.932−02	2.163−02	2.450−02	2.745−02	2.988−02	3.126−02
5	104	1.571−02	1.352−02	1.161−02	1.004−02	8.820−03	7.856−03	7.039−03	6.276−03	5.514−03	4.741−03
5	105	1.855−03	1.559−03	1.302−03	1.084−03	8.961−04	7.299−04	5.800−04	4.466−04	3.323−04	2.390−04
5	106	3.195−03	2.705−03	2.263−03	1.879−03	1.547−03	1.254−03	9.920−04	7.612−04	5.649−04	4.056−04
5	107	4.446−03	3.751−03	3.134−03	2.605−03	2.149−03	1.746−03	1.384−03	1.063−03	7.895−04	5.672−04
5	108	3.083−03	2.667−03	2.326−03	2.079−03	1.916−03	1.808−03	1.727−03	1.661−03	1.620−03	1.635−03
5	109	6.872−03	6.036−03	5.227−03	4.440−03	3.674−03	2.945−03	2.280−03	1.704−03	1.231−03	8.638−04
5	110	9.053−03	8.000−03	6.938−03	5.881−03	4.850−03	3.874−03	2.990−03	2.229−03	1.609−03	1.127−03
5	111	1.153−02	1.023−02	8.857−03	7.471−03	6.125−03	4.868−03	3.742−03	2.782−03	2.004−03	1.402−03
5	112	1.152−03	1.005−03	8.757−04	7.699−04	6.783−04	5.894−04	4.971−04	4.027−04	3.121−04	2.317−04
5	113	1.462−02	1.405−02	1.329−02	1.225−02	1.091−02	9.293−03	7.533−03	5.815−03	4.293−03	3.051−03
5	114	1.126−02	1.083−02	1.026−02	9.482−03	8.457−03	7.210−03	5.849−03	4.516−03	3.335−03	2.370−03
5	115	7.917−03	7.615−03	7.227−03	6.699−03	5.991−03	5.118−03	4.157−03	3.212−03	2.373−03	1.687−03
5	116	1.517−02	1.472−02	1.388−02	1.297−02	1.213−02	1.136−02	1.062−02	9.850−03	9.016−03	8.099−03

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
5	117	6.936−03	6.536−03	6.028−03	5.405−03	4.677−03	3.884−03	3.086−03	2.346−03	1.713−03	1.208−03
5	118	8.934−03	8.386−03	7.680−03	6.835−03	5.878−03	4.857−03	3.845−03	2.916−03	2.125−03	1.497−03
5	119	1.111−02	1.038−02	9.431−03	8.333−03	7.123−03	5.860−03	4.624−03	3.499−03	2.546−03	1.791−03
5	120	2.026−03	1.917−03	1.788−03	1.630−03	1.439−03	1.221−03	9.907−04	7.679−04	5.703−04	4.080−04
5	121	3.470−03	3.246−03	2.945−03	2.604−03	2.238−03	1.860−03	1.486−03	1.139−03	8.396−04	5.975−04
5	122	4.647−03	4.335−03	3.913−03	3.442−03	2.945−03	2.437−03	1.941−03	1.485−03	1.093−03	7.769−04
5	123	4.783−03	4.643−03	4.450−03	4.270−03	4.136−03	4.062−03	4.060−03	4.132−03	4.267−03	4.428−03
5	124	6.287−04	6.355−04	6.395−04	6.356−04	6.149−04	5.708−04	5.039−04	4.216−04	3.346−04	2.531−04
5	125	1.913−03	1.928−03	1.935−03	1.920−03	1.854−03	1.720−03	1.517−03	1.269−03	1.007−03	7.611−04
5	126	3.268−03	3.271−03	3.269−03	3.233−03	3.117−03	2.888−03	2.546−03	2.128−03	1.688−03	1.277−03
5	127	1.397−02	1.427−02	1.476−02	1.554−02	1.667−02	1.807−02	1.954−02	2.076−02	2.142−02	2.132−02
5	128	4.536−02	4.513−02	4.492−02	4.465−02	4.414−02	4.326−02	4.189−02	3.992−02	3.723−02	3.384−02
5	129	3.002−03	2.821−03	2.592−03	2.315−03	1.997−03	1.654−03	1.310−03	9.942−04	7.249−04	5.107−04
5	130	5.909−03	5.214−03	4.476−03	3.765−03	3.096−03	2.473−03	1.909−03	1.423−03	1.024−03	7.152−04
5	131	5.380−03	4.917−03	4.417−03	3.881−03	3.308−03	2.715−03	2.138−03	1.615−03	1.173−03	8.247−04
5	132	7.685−04	7.302−04	6.871−04	6.345−04	5.681−04	4.886−04	4.016−04	3.151−04	2.366−04	1.708−04
5	133	1.329−03	1.249−03	1.167−03	1.071−03	9.554−04	8.198−04	6.728−04	5.275−04	3.958−04	2.856−04
5	134	2.109−03	1.947−03	1.777−03	1.598−03	1.403−03	1.191−03	9.700−04	7.566−04	5.659−04	4.074−04
5	135	1.502−03	1.390−03	1.295−03	1.203−03	1.099−03	9.707−04	8.217−04	6.632−04	5.103−04	3.758−04
5	136	7.415−04	7.226−04	7.026−04	6.741−04	6.289−04	5.637−04	4.817−04	3.910−04	3.020−04	2.230−04
5	137	2.386−04	2.347−04	2.300−04	2.220−04	2.080−04	1.869−04	1.600−04	1.300−04	1.005−04	7.422−05
5	138	1.149−02	1.143−02	1.154−02	1.180−02	1.214−02	1.245−02	1.256−02	1.234−02	1.170−02	1.065−02
5	139	3.256−02	3.291−02	3.313−02	3.308−02	3.258−02	3.147−02	2.967−02	2.721−02	2.423−02	2.095−02
5	140	3.940−03	4.101−03	4.342−03	4.653−03	5.008−03	5.367−03	5.684−03	5.925−03	6.076−03	6.140−03
5	141	1.920−03	2.210−03	2.668−03	3.365−03	4.346−03	5.594−03	6.993−03	8.332−03	9.365−03	9.894−03
6	7	9.052−01	8.013−01	6.931−01	5.856−01	4.798−01	3.798−01	2.913−01	2.175−01	1.586−01	1.131−01
6	8	2.765+00	2.432+00	2.092+00	1.760+00	1.437+00	1.135+00	8.691−01	6.477−01	4.711−01	3.348−01
6	9	4.465+00	3.958+00	3.424+00	2.890+00	2.364+00	1.868+00	1.429+00	1.065+00	7.742−01	5.505−01
6	10	4.753+00	4.305+00	3.805+00	3.225+00	2.604+00	2.009+00	1.491+00	1.071+00	7.487−01	5.114−01
6	11	3.393+00	3.078+00	2.724+00	2.312+00	1.868+00	1.442+00	1.070+00	7.689−01	5.374−01	3.670−01
6	12	2.035+00	1.848+00	1.637+00	1.391+00	1.125+00	8.683−01	6.445−01	4.629−01	3.235−01	2.209−01
6	13	1.898+00	1.850+00	1.689+00	1.439+00	1.149+00	8.700−01	6.305−01	4.413−01	3.006−01	2.005−01
6	14	2.191+00	1.829+00	1.503+00	1.236+00	1.037+00	8.993−01	8.044−01	7.408−01	7.038−01	6.881−01
6	15	1.758+00	1.658+00	1.534+00	1.419+00	1.336+00	1.302+00	1.318+00	1.375+00	1.463+00	1.576+00
6	16	4.717+00	4.496+00	4.099+00	3.534+00	2.908+00	2.329+00	1.859+00	1.508+00	1.259+00	1.085+00
6	17	3.401−01	3.253−01	2.907−01	2.432−01	1.923−01	1.452−01	1.055−01	7.421−02	5.088−02	3.418−02
6	18	1.031+00	9.847−01	8.789−01	7.346−01	5.807−01	4.387−01	3.195−01	2.260−01	1.566−01	1.072−01
6	19	1.743+00	1.655+00	1.470+00	1.225+00	9.656−01	7.273−01	5.276−01	3.709−01	2.542−01	1.707−01
6	20	3.087+00	3.158+00	3.190+00	3.356+00	3.806+00	4.449+00	5.129+00	5.831+00	6.656+00	7.708+00
6	21	1.543+00	1.348+00	1.165+00	9.992−01	8.477−01	7.079−01	5.783−01	4.598−01	3.552−01	2.669−01
6	22	2.166+00	1.884+00	1.623+00	1.389+00	1.175+00	9.788−01	7.968−01	6.303−01	4.828−01	3.582−01
6	23	2.810+00	2.424+00	2.079+00	1.773+00	1.499+00	1.247+00	1.014+00	8.014−01	6.131−01	4.538−01
6	24	4.562−01	3.919−01	3.344−01	2.795−01	2.260−01	1.762−01	1.325−01	9.645−02	6.821−02	4.705−02
6	25	7.581−01	6.512−01	5.559−01	4.648−01	3.763−01	2.936−01	2.210−01	1.609−01	1.138−01	7.849−02
6	26	1.058+00	9.079−01	7.758−01	6.503−01	5.280−01	4.130−01	3.113−01	2.268−01	1.605−01	1.107−01
6	27	6.183−01	6.289−01	6.511−01	6.892−01	7.504−01	8.436−01	9.759+00	1.151+01	1.375+01	1.647+01
6	28	9.645+00	9.951+00	1.050+01	1.149+01	1.304+01	1.511+01	1.773+01	2.098+01	2.493+01	2.955+01
6	29	1.820+00	1.900+00	1.990+00	2.094+00	2.212+00	2.344+00	2.487+00	2.631+00	2.761+00	2.868+00
6	30	4.431−01	4.220−01	3.902−01	3.483−01	2.996−01	2.489−01	2.005−01	1.568−01	1.196−01	8.926−02
6	31	6.177−01	5.886−01	5.451−01	4.877−01	4.200−01	3.488−01	2.799−01	2.174−01	1.635−01	1.193−01
6	32	7.866−01	7.495−01	6.954−01	6.241−01	5.395−01	4.495−01	3.617−01	2.815−01	2.120−01	1.548−01
6	33	6.603−01	6.186−01	5.661−01	5.064−01	4.423−01	3.761−01	3.103−01	2.475−01	1.905−01	1.415−01
6	34	4.002−01	3.729−01	3.404−01	3.041−01	2.655−01	2.257−01	1.864−01	1.489−01	1.150−01	8.598−02
6	35	1.359−01	1.260−01	1.145−01	1.020−01	8.877−02	7.529−02	6.198−02	4.935−02	3.792−02	2.814−02
6	36	3.235−01	2.976−01	2.688−01	2.377−01	2.047−01	1.713−01	1.390−01	1.090−01	8.264−02	6.060−02
6	37	5.412−01	4.965−01	4.476−01	3.953−01	3.404−01	2.851−01	2.317−01	1.826−01	1.395−01	1.038−01
6	38	7.528−01	6.897−01	6.223−01	5.505−01	4.749−01	3.984−01	3.248−01	2.573−01	1.985−01	1.503−01
6	39	1.093−01	1.013−01	9.049−02	7.813−02	6.514−02	5.235−02	4.053−02	3.026−02	2.185−02	1.533−02
6	40	3.359−01	3.109−01	2.773−01	2.386−01	1.983−01	1.593−01	1.240−01	9.399−02	6.997−02	5.196−02
6	41	5.340−01	4.908−01	4.365−01	3.756−01	3.122−01	2.504−01	1.937−01	1.447−01	1.047−01	7.368−02
6	42	9.384−01	8.992−01	8.683−01	8.598−01	8.908−01	9.811−01	1.150+00	1.413+00	1.785+00	2.265+00
6	43	1.939+00	1.951+00	1.979+00	2.051+00	2.208+00	2.489+00	2.930+00	3.557+00	4.393+00	5.434+00
6	44	4.552−01	4.705−01	4.764−01	4.762−01	4.785−01	4.918−01	5.210−01	5.663−01	6.247−01	6.906−01
6	45	5.840−01	5.771−01	5.578−01	5.313−01	5.043−01	4.824−01	4.679−01	4.605−01	4.579−01	4.575−01
6	46	1.875−01	1.794−01	1.647−01	1.447−01	1.222−01	9.973−02	7.883−02	6.058−02	4.545−02	3.349−02
6	47	3.111−01	3.025−01	2.801−01	2.462−01	2.069−01	1.672−01	1.305−01	9.870−02	7.250−02	5.193−02
6	48	4.300−01	4.184−01	3.894−01	3.440−01	2.897−01	2.341−01	1.824−01	1.375−01	1.005−01	7.152−02
6	49	5.663−02	5.580−02	5.237−02	4.694−02	4.042−02	3.351−02	2.676−02	2.058−02	1.529−02	1.100−02
6	50	1.706−01	1.674−01	1.567−01	1.403−01	1.207−01	9.996−02	7.974−02	6.126−02	4.541−02	3.260−02
6	51	2.912−01	2.891−01	2.725−01	2.445−01	2.104−01	1.744−01	1.397−01	1.085−01	8.212−02	6.100−02
6	52	1.551−01	1.504−01	1.382−01	1.210−01	1.016−01	8.206−02	6.400−02	4.829−02	3.536−02	2.521−02
6	53	1.990+00	2.038+00	2.088+00	2.158+00	2.265+00	2.416+00	2.608+00	2.828+00	3.064+00	3.295+00
6	54	9.178−02	8.441−02	7.685−02	7.035−02	6.583−02	6.373−02	6.398−02	6.607−02	6.938−02	7.326−02
6	55	7.201−01	6.828−01	6.560−01	6.379−01	6.265−01	6.192−01	6.125−01	6.026−01	5.872−01	5.661−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
6	56	1.971−01	1.760−01	1.574−01	1.404−01	1.241−01	1.080−01	9.194−02	7.651−02	6.236−02	5.004−02
6	57	2.842−01	2.468−01	2.144−01	1.859−01	1.596−01	1.343−01	1.100−01	8.728−02	6.701−02	4.993−02
6	58	3.704−01	3.247−01	2.820−01	2.430−01	2.069−01	1.727−01	1.404−01	1.104−01	8.394−02	6.167−02
6	59	1.013−01	9.140−02	8.196−02	7.278−02	6.345−02	5.383−02	4.419−02	3.497−02	2.667−02	1.964−02
6	60	1.773−01	1.580−01	1.405−01	1.240−01	1.078−01	9.138−02	7.513−02	5.971−02	4.587−02	3.416−02
6	61	2.913−01	2.489−01	2.137−01	1.837−01	1.565−01	1.307−01	1.063−01	8.388−02	6.412−02	4.765−02
6	62	1.613−01	1.486−01	1.354−01	1.218−01	1.072−01	9.172−02	7.572−02	6.015−02	4.597−02	3.387−02
6	63	8.963−02	8.367−02	7.722−02	7.020−02	6.232−02	5.361−02	4.443−02	3.539−02	2.709−02	1.998−02
6	64	2.871−02	2.694−02	2.502−02	2.287−02	2.039−02	1.760−02	1.462−02	1.166−02	8.931−03	6.589−03
6	65	7.007−01	6.797−01	6.688−01	6.766−01	7.110−01	7.786−01	8.822−01	1.020+00	1.186+00	1.367+00
6	66	8.728−02	7.991−02	7.280−02	6.560−02	5.789−02	4.960−02	4.102−02	3.268−02	2.509−02	1.861−02
6	67	1.242−01	1.137−01	1.035−01	9.335−02	8.247−02	7.077−02	5.867−02	4.688−02	3.614−02	2.697−02
6	68	6.829−01	6.618−01	6.501−01	6.564−01	6.886−01	7.529−01	8.523−01	9.852−01	1.145+00	1.320+00
6	69	9.051−01	9.089−01	9.084−01	9.060−01	9.029−01	8.997−01	8.969−01	8.946−01	8.921−01	8.874−01
6	70	1.130−01	1.094−01	1.052−01	9.870−02	8.941−02	7.794−02	6.554−02	5.346−02	4.267−02	3.365−02
6	71	1.584−01	1.489−01	1.390−01	1.273−01	1.131−01	9.715−02	8.087−02	6.571−02	5.272−02	4.237−02
6	72	2.260−01	2.040−01	1.831−01	1.621−01	1.398−01	1.165−01	9.352−02	7.226−02	5.385−02	3.882−02
6	73	1.106+00	1.159+00	1.227+00	1.314+00	1.426+00	1.570+00	1.753+00	1.976+00	2.239+00	2.527+00
6	74	3.334−01	3.020−01	2.761−01	2.568−01	2.455−01	2.433−01	2.512−01	2.691−01	2.955−01	3.267−01
6	75	9.774−02	8.804−02	7.963−02	7.141−02	6.254−02	5.295−02	4.314−02	3.379−02	2.550−02	1.861−02
6	76	1.150−01	9.614−02	8.172−02	7.021−02	6.040−02	5.177−02	4.430−02	3.817−02	3.350−02	3.022−02
6	77	3.895−02	3.542−02	3.232−02	2.916−02	2.565−02	2.177−02	1.775−02	1.390−02	1.047−02	7.613−03
6	78	1.608−01	1.616−01	1.607−01	1.591−01	1.579−01	1.584−01	1.611−01	1.662−01	1.737−01	1.832−01
6	79	9.996−02	9.376−02	8.614−02	7.789−02	6.938−02	6.061−02	5.152−02	4.230−02	3.341−02	2.538−02
6	80	1.398−01	1.311−01	1.205−01	1.090−01	9.709−02	8.482−02	7.209−02	5.917−02	4.673−02	3.551−02
6	81	1.796−01	1.684−01	1.547−01	1.399−01	1.246−01	1.088−01	9.250−02	7.596−02	6.003−02	4.565−02
6	82	1.529−02	1.427−02	1.316−02	1.197−02	1.073−02	9.409−03	8.021−03	6.608−03	5.242−03	4.002−03
6	83	4.569−02	4.262−02	3.927−02	3.573−02	3.201−02	2.807−02	2.393−02	1.972−02	1.565−02	1.195−02
6	84	7.587−02	7.077−02	6.524−02	5.937−02	5.318−02	4.664−02	3.977−02	3.277−02	2.600−02	1.987−02
6	85	4.352−01	4.284−01	4.244−01	4.281−01	4.438−01	4.728−01	5.133−01	5.609−01	6.098−01	6.531−01
6	86	5.271−01	5.251−01	5.236−01	5.272−01	5.418−01	5.713−01	6.147−01	6.665−01	7.189−01	7.631−01
6	87	3.670−02	3.413−02	3.056−02	2.635−02	2.196−02	1.773−02	1.388−02	1.053−02	7.732−03	5.515−03
6	88	6.121−02	5.693−02	5.096−02	4.394−02	3.661−02	2.956−02	2.313−02	1.754−02	1.288−02	9.191−03
6	89	8.540−02	7.933−02	7.100−02	6.124−02	5.104−02	4.122−02	3.226−02	2.445−02	1.796−02	1.281−02
6	90	3.761−01	3.673−01	3.597−01	3.554−01	3.553−01	3.589−01	3.644−01	3.702−01	3.750−01	3.781−01
6	91	1.374−02	1.350−02	1.326−02	1.339−02	1.444−02	1.696−02	2.135−02	2.767−02	3.561−02	4.444−02
6	92	2.313−01	2.352−01	2.379−01	2.399−01	2.411−01	2.404−01	2.365−01	2.282−01	2.153−01	1.987−01
6	93	2.809−02	2.653−02	2.451−02	2.206−02	1.926−02	1.624−02	1.317−02	1.025−02	7.678−03	5.547−03
6	94	4.766−02	4.511−02	4.163−02	3.736−02	3.253−02	2.736−02	2.214−02	1.721−02	1.288−02	9.307−03
6	95	6.505−02	6.146−02	5.683−02	5.117−02	4.468−02	3.767−02	3.054−02	2.378−02	1.782−02	1.289−02
6	96	3.694−02	3.556−02	3.299−02	2.953−02	2.555−02	2.134−02	1.716−02	1.327−02	9.901−03	7.145−03
6	97	5.443−02	5.166−02	4.750−02	4.225−02	3.636−02	3.023−02	2.422−02	1.868−02	1.390−02	1.001−02
6	98	6.870−02	6.562−02	6.054−02	5.393−02	4.644−02	3.863−02	3.095−02	2.387−02	1.776−02	1.278−02
6	99	3.898−02	3.663−02	3.330−02	2.941−02	2.523−02	2.096−02	1.680−02	1.298−02	9.677−03	6.979−03
6	100	2.207−02	2.084−02	1.910−02	1.701−02	1.471−02	1.229−02	9.899−03	7.673−03	5.733−03	4.142−03
6	101	7.344−03	6.931−03	6.353−03	5.660−03	4.894−03	4.091−03	3.295−03	2.554−03	1.908−03	1.378−03
6	102	2.077−01	2.053−01	1.986−01	1.905−01	1.832−01	1.775−01	1.733−01	1.702−01	1.676−01	1.653−01
6	103	5.987−02	5.796−02	5.547−02	5.327−02	5.179−02	5.109−02	5.093−02	5.098−02	5.098−02	5.073−02
6	104	6.748−02	5.958−02	5.319−02	4.858−02	4.562−02	4.394−02	4.315−02	4.291−02	4.294−02	4.300−02
6	105	7.329−03	6.311−03	5.427−03	4.676−03	4.016−03	3.410−03	2.835−03	2.291−03	1.792−03	1.354−03
6	106	1.229−02	1.058−02	9.088−03	7.819−03	6.708−03	5.690−03	4.728−03	3.820−03	2.988−03	2.258−03
6	107	1.767−02	1.529−02	1.314−02	1.126−02	9.611−03	8.112−03	6.714−03	5.409−03	4.222−03	3.186−03
6	108	1.561−02	1.375−02	1.238−02	1.152−02	1.109−02	1.100−02	1.116−02	1.151−02	1.197−02	1.249−02
6	109	2.009−02	1.762−02	1.540−02	1.339−02	1.153−02	9.752−03	8.057−03	6.465−03	5.022−03	3.775−03
6	110	2.612−02	2.293−02	2.002−02	1.738−02	1.494−02	1.262−02	1.041−02	8.345−03	6.478−03	4.867−03
6	111	3.217−02	2.823−02	2.464−02	2.137−02	1.834−02	1.548−02	1.276−02	1.022−02	7.930−03	5.956−03
6	112	4.579−03	4.050−03	3.547−03	3.094−03	2.686−03	2.304−03	1.937−03	1.585−03	1.256−03	9.623−04
6	113	4.717−02	4.557−02	4.348−02	4.074−02	3.713−02	3.262−02	2.746−02	2.210−02	1.703−02	1.261−02
6	114	3.528−02	3.412−02	3.275−02	3.092−02	2.837−02	2.506−02	2.117−02	1.708−02	1.318−02	9.770−03
6	115	2.522−02	2.438−02	2.341−02	2.211−02	2.030−02	1.793−02	1.515−02	1.223−02	9.437−03	6.995−03
6	116	6.114−02	5.965−02	5.787−02	5.651−02	5.591−02	5.614−02	5.705−02	5.834−02	5.959−02	6.032−02
6	117	1.944−02	1.826−02	1.697−02	1.547−02	1.372−02	1.175−02	9.661−03	7.619−03	5.767−03	4.204−03
6	118	2.440−02	2.283−02	2.111−02	1.915−02	1.692−02	1.445−02	1.187−02	9.346−03	7.069−03	5.150−03
6	119	3.071−02	2.860−02	2.618−02	2.351−02	2.059−02	1.746−02	1.426−02	1.120−02	8.449−03	6.145−03
6	120	5.219−03	4.811−03	4.414−03	4.014−03	3.587−03	3.123−03	2.628−03	2.126−03	1.652−03	1.233−03
6	121	9.950−03	9.094−03	8.036−03	6.968−03	5.955−03	4.997−03	4.090−03	3.244−03	2.484−03	1.837−03
6	122	1.228−02	1.121−02	9.952−03	8.686−03	7.472−03	6.307−03	5.185−03	4.126−03	3.168−03	2.346−03
6	123	3.079−02	3.046−02	3.024−02	3.019−02	3.035−02	3.076−02	3.135−02	3.196−02	3.237−02	3.230−02
6	124	2.916−03	2.896−03	2.838−03	2.725−03	2.539−03	2.276−03	1.954−03	1.601−03	1.255−03	9.436−04
6	125	8.754−03	8.686−03	8.506−03	8.162−03	7.604−03	6.818−03	5.851−03	4.796−03	3.759−03	2.826−03
6	126	1.456−02	1.443−02	1.412−02	1.355−02	1.263−02	1.133−02	9.736−03	7.991−03	6.273−03	4.726−03
6	127	7.281−02	7.360−02	7.487−02	7.662−02	7.865−02	8.073−02	8.264−02	8.409−02	8.478−02	8.441−02
6	128	1.787−01	1.803−01	1.818−01	1.837−01	1.859−01	1.887−01	1.916−01	1.943−01	1.961−01	1.960−01
6	129	1.063−02	1.018−02	9.601−03	8.853−03	7.921−03	6.831−03	5.654−03	4.484−03	3.411−03	2.497−03

Table 4 (*continued*)

Transition		Temperature (log K)								
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
6	130	1.707−02	1.576−02	1.428−02	1.272−02	1.108−02	9.364−03	7.643−03	6.002−03	4.536−03	3.305−03
6	131	2.158−02	1.970−02	1.771−02	1.570−02	1.364−02	1.151−02	9.379−03	7.360−03	5.559−03	4.050−03
6	132	5.001−03	4.517−03	4.028−03	3.537−03	3.037−03	2.528−03	2.030−03	1.569−03	1.169−03	8.413−04
6	133	7.538−03	6.947−03	6.307−03	5.620−03	4.876−03	4.091−03	3.302−03	2.562−03	1.913−03	1.380−03
6	134	1.051−02	9.675−03	8.782−03	7.824−03	6.788−03	5.694−03	4.597−03	3.568−03	2.665−03	1.923−03
6	135	3.982−03	3.587−03	3.231−03	2.898−03	2.565−03	2.218−03	1.859−03	1.501−03	1.165−03	8.704−04
6	136	1.891−03	1.803−03	1.704−03	1.586−03	1.441−03	1.268−03	1.075−03	8.744−04	6.821−04	5.110−04
6	137	5.996−04	5.791−04	5.532−04	5.189−04	4.739−04	4.186−04	3.555−04	2.896−04	2.260−04	1.693−04
6	138	8.379−02	7.901−02	7.527−02	7.231−02	6.969−02	6.708−02	6.430−02	6.131−02	5.815−02	5.488−02
6	139	4.705−02	4.790−02	4.889−02	5.001−02	5.122−02	5.255−02	5.397−02	5.542−02	5.676−02	5.777−02
6	140	5.819−03	5.943−03	6.102−03	6.295−03	6.524−03	6.787−03	7.078−03	7.370−03	7.621−03	7.779−03
6	141	3.774−03	3.919−03	4.114−03	4.374−03	4.725−03	5.196−03	5.815−03	6.590−03	7.490−03	8.435−03
7	8	1.537+00	1.510+00	1.464+00	1.377+00	1.238+00	1.061+00	8.724−01	6.941−01	5.371−01	4.052−01
7	9	1.176+00	1.185+00	1.168+00	1.127+00	1.069+00	1.002+00	9.360−01	8.830−01	8.498−01	8.350−01
7	10	4.808−01	4.511−01	4.133−01	3.602−01	2.939−01	2.250−01	1.640−01	1.156−01	7.976−02	5.440−02
7	11	6.667−01	6.476−01	6.217−01	5.763−01	5.082−01	4.284−01	3.505−01	2.833−01	2.295−01	1.877−01
7	12	4.630−01	4.599−01	4.512−01	4.277−01	3.858−01	3.332−01	2.794−01	2.299−01	1.869−01	1.498−01
7	13	1.591−01	1.529−01	1.394−01	1.213−01	1.007−01	8.039−02	6.302−02	4.942−02	3.920−02	3.147−02
7	14	1.871−01	1.629−01	1.368−01	1.114−01	8.772−02	6.680−02	4.928−02	3.529−02	2.461−02	1.675−02
7	15	7.573−02	6.630−02	5.734−02	4.786−02	3.802−02	2.878−02	2.092−02	1.473−02	1.011−02	6.799−03
7	16	2.442−01	2.553−01	2.460−01	2.182−01	1.805−01	1.417−01	1.072−01	7.893−02	5.688−02	4.019−02
7	17	5.345−02	4.935−02	4.354−02	3.637−02	2.875−02	2.165−02	1.567−02	1.098−02	7.505−03	5.024−03
7	18	2.786−01	2.617−01	2.378−01	2.097−01	1.806−01	1.541−01	1.321−01	1.142−01	9.956−02	8.724−02
7	19	2.868−01	2.664−01	2.318−01	1.900−01	1.472−01	1.089−01	7.761−02	5.390−02	3.679−02	2.485−02
7	20	1.287−01	1.176−01	1.025−01	8.469−02	6.633−02	4.955−02	3.560−02	2.481−02	1.689−02	1.132−02
7	21	4.022−01	3.627−01	3.163−01	2.681−01	2.218−01	1.794−01	1.418−01	1.094−01	8.230−02	6.042−02
7	22	4.292−01	3.984−01	3.534−01	3.039−01	2.599−01	2.273−01	2.081−01	2.010−01	2.029−01	2.101−01
7	23	3.507−01	3.097−01	2.628−01	2.155−01	1.721−01	1.347−01	1.033−01	7.765−02	5.706−02	4.096−02
7	24	1.073−01	9.308−02	7.964−02	6.678−02	5.435−02	4.290−02	3.306−02	2.502−02	1.867−02	1.374−02
7	25	1.737−01	1.514−01	1.287−01	1.068−01	8.622−02	6.804−02	5.293−02	4.096−02	3.172−02	2.466−02
7	26	1.432−01	1.211−01	9.920−02	7.868−02	5.999−02	4.397−02	3.117−02	2.155−02	1.465−02	9.849−03
7	27	1.247−01	1.061−01	8.766−02	7.028−02	5.430−02	4.041−02	2.909−02	2.039−02	1.400−02	9.451−03
7	28	4.362−01	3.988−01	3.555−01	3.158−01	2.798−01	2.421−01	2.011−01	1.595−01	1.213−01	8.876−02
7	29	8.098−02	7.243−02	6.340−02	5.368−02	4.347−02	3.361−02	2.495−02	1.792−02	1.254−02	8.585−03
7	30	2.268−01	1.974−01	1.666−01	1.375−01	1.109−01	8.712−02	6.662−02	4.963−02	3.609−02	2.567−02
7	31	2.804−01	2.431−01	2.064−01	1.737−01	1.460−01	1.243−01	1.090−01	9.973−02	9.522−02	9.409−02
7	32	1.899−01	1.593−01	1.313−01	1.065−01	8.485−02	6.631−02	5.078−02	3.807−02	2.789−02	1.998−02
7	33	2.055−01	1.920−01	1.781−01	1.635−01	1.477−01	1.306−01	1.126−01	9.445−02	7.689−02	6.079−02
7	34	1.544+00	1.616+00	1.728+00	1.909+00	2.186+00	2.588+00	3.138+00	3.853+00	4.745+00	5.801+00
7	35	3.269−02	3.071−02	2.968−02	2.948−02	2.896−02	2.698−02	2.353−02	1.929−02	1.500−02	1.115−02
7	36	2.530+00	2.680+00	2.915+00	3.290+00	3.835+00	4.563+00	5.516+00	6.744+00	8.284+00	1.012+01
7	37	2.630−01	2.561−01	2.491−01	2.407−01	2.255−01	2.017−01	1.719−01	1.404−01	1.104−01	8.404−02
7	38	2.112−01	2.006−01	1.873−01	1.726−01	1.586−01	1.473−01	1.398−01	1.361−01	1.353−01	1.364−01
7	39	4.471−02	4.304−02	3.959−02	3.496−02	2.972−02	2.429−02	1.908−02	1.443−02	1.055−02	7.475−03
7	40	2.418−01	2.329−01	2.291−01	2.339−01	2.525−01	2.912−01	3.558−01	4.510−01	5.814−01	7.479−01
7	41	1.379−01	1.251−01	1.088−01	9.085−02	7.307−02	5.679−02	4.281−02	3.143−02	2.257−02	1.590−02
7	42	9.823−02	9.069−02	8.081−02	6.958−02	5.790−02	4.654−02	3.616−02	2.720−02	1.991−02	1.428−02
7	43	1.349−01	1.315−01	1.229−01	1.102−01	9.508−02	7.941−02	6.427−02	5.034−02	3.810−02	2.788−02
7	44	6.583−02	6.266−02	5.709−02	4.981−02	4.194−02	3.423−02	2.710−02	2.078−02	1.542−02	1.111−02
7	45	8.679−02	8.117−02	7.383−02	6.519−02	5.578−02	4.610−02	3.672−02	2.819−02	2.091−02	1.504−02
7	46	9.133−02	8.766−02	8.112−02	7.232−02	6.224−02	5.175−02	4.164−02	3.249−02	2.466−02	1.825−02
7	47	1.704−01	1.611−01	1.493−01	1.377−01	1.290−01	1.252−01	1.277−01	1.368−01	1.517−01	1.711−01
7	48	1.024−01	9.587−02	8.558−02	7.301−02	5.982−02	4.724−02	3.606−02	2.669−02	1.922−02	1.351−02
7	49	5.149−01	5.879−01	6.872−01	7.773−01	8.397−01	8.867−01	9.369−01	9.996−01	1.074+00	1.153+00
7	50	1.381−01	1.361−01	1.290−01	1.184−01	1.053−01	9.035−02	7.464−02	5.932−02	4.542−02	3.363−02
7	51	1.226−01	1.195−01	1.126−01	1.038−01	9.484−02	8.711−02	8.113−02	7.688−02	7.413−02	7.259−02
7	52	4.423−02	4.410−02	4.138−02	3.683−02	3.140−02	2.580−02	2.057−02	1.599−02	1.218−02	9.115−03
7	53	9.959−02	9.413−02	8.580−02	7.582−02	6.504−02	5.406−02	4.336−02	3.350−02	2.494−02	1.796−02
7	54	1.807−02	1.683−02	1.518−02	1.333−02	1.139−02	9.429−03	7.511−03	5.735−03	4.200−03	2.963−03
7	55	8.228−02	7.500−02	6.817−02	6.132−02	5.409−02	4.638−02	3.839−02	3.056−02	2.340−02	1.726−02
7	56	6.606−02	6.086−02	5.569−02	5.018−02	4.411−02	3.754−02	3.080−02	2.433−02	1.853−02	1.365−02
7	57	7.966−02	7.321−02	6.751−02	6.252−02	5.816−02	5.442−02	5.136−02	4.899−02	4.723−02	4.595−02
7	58	6.236−02	5.608−02	4.949−02	4.295−02	3.655−02	3.031−02	2.436−02	1.893−02	1.421−02	1.032−02
7	59	3.081−01	3.539−01	4.207−01	4.772−01	5.062−01	5.160−01	5.225−01	5.346−01	5.540−01	5.777−01
7	60	9.330−02	8.415−02	7.510−02	6.622−02	5.750−02	4.895−02	4.064−02	3.275−02	2.552−02	1.923−02
7	61	5.867−02	5.299−02	4.791−02	4.321−02	3.875−02	3.447−02	3.047−02	2.682−02	2.363−02	2.095−02
7	62	4.745−02	4.465−02	4.109−02	3.701−02	3.252−02	2.778−02	2.301−02	1.848−02	1.442−02	1.097−02
7	63	8.544−02	8.797−02	9.126−02	9.556−02	1.011−01	1.081−01	1.163−01	1.251−01	1.339−01	1.420−01
7	64	7.640−03	7.621−03	7.276−03	6.636−03	5.832−03	4.977−03	4.130−03	3.321−03	2.578−03	1.930−03
7	65	7.862−02	7.262−02	6.626−02	5.969−02	5.299−02	4.635−02	4.011−02	3.464−02	3.018−02	2.681−02
7	66	3.461−01	4.562−01	5.930−01	6.854−01	7.035−01	6.732−01	6.327−01	6.061−01	6.010−01	6.147−01
7	67	5.366−02	5.213−02	4.988−02	4.657−02	4.204−02	3.647−02	3.032−02	2.416−02	1.851−02	1.369−02
7	68	3.720−02	3.311−02	2.887−02	2.474−02	2.097−02	1.780−02	1.538−02	1.375−02	1.283−02	1.246−02
7	69	5.953−02	5.604−02	5.141−02	4.591−02	3.975−02	3.325−02	2.681−02	2.083−02	1.561−02	1.131−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
7	70	3.755−02	3.573−02	3.316−02	2.972−02	2.559−02	2.117−02	1.685−02	1.296−02	9.666−03	7.029−03
7	71	3.629−02	3.423−02	3.214−02	3.008−02	2.828−02	2.714−02	2.698−02	2.793−02	2.984−02	3.233−02
7	72	4.847−02	4.128−02	3.459−02	2.865−02	2.338−02	1.868−02	1.456−02	1.104−02	8.134−03	5.826−03
7	73	6.212−02	6.044−02	5.783−02	5.410−02	4.924−02	4.339−02	3.684−02	3.001−02	2.342−02	1.756−02
7	74	3.147−02	2.949−02	2.723−02	2.480−02	2.229−02	1.988−02	1.774−02	1.604−02	1.484−02	1.410−02
7	75	3.624−02	3.377−02	3.122−02	2.825−02	2.477−02	2.094−02	1.706−02	1.342−02	1.022−02	7.575−03
7	76	3.175−01	3.709−01	3.684−01	3.327−01	2.902−01	2.560−01	2.353−01	2.276−01	2.301−01	2.393−01
7	77	9.637−03	9.737−03	9.552−03	9.037−03	8.213−03	7.156−03	5.978−03	4.794−03	3.698−03	2.752−03
7	78	2.725−02	2.696−02	2.624−02	2.492−02	2.290−02	2.025−02	1.712−02	1.381−02	1.064−02	7.858−03
7	79	3.060−01	3.557−01	3.842−01	3.862−01	3.742−01	3.600−01	3.475−01	3.345−01	3.174−01	2.938−01
7	80	4.370−02	4.199−02	3.944−02	3.637−02	3.305−02	2.953−02	2.583−02	2.204−02	1.833−02	1.488−02
7	81	2.885−02	2.687−02	2.450−02	2.195−02	1.946−02	1.719−02	1.515−02	1.328−02	1.151−02	9.821−03
7	82	2.301−02	2.303−02	2.301−02	2.316−02	2.374−02	2.499−02	2.700−02	2.958−02	3.229−02	3.448−02
7	83	1.304−02	1.219−02	1.093−02	9.430−03	7.924−03	6.562−03	5.367−03	4.307−03	3.360−03	2.532−03
7	84	5.923−02	6.560−02	6.555−02	6.111−02	5.539−02	5.016−02	4.573−02	4.171−02	3.763−02	3.324−02
7	85	1.199−02	1.097−02	9.718−03	8.325−03	6.932−03	5.635−03	4.475−03	3.461−03	2.599−03	1.893−03
7	86	4.568−02	4.342−02	4.035−02	3.650−02	3.201−02	2.705−02	2.189−02	1.691−02	1.250−02	8.890−03
7	87	2.596−02	2.421−02	2.175−02	1.904−02	1.640−02	1.394−02	1.166−02	9.574−03	7.686−03	6.021−03
7	88	5.022−02	4.951−02	4.860−02	4.806−02	4.815−02	4.875−02	4.936−02	4.936−02	4.822−02	4.563−02
7	89	1.361−02	1.269−02	1.122−02	9.487−03	7.768−03	6.208−03	4.861−03	3.734−03	2.818−03	2.091−03
7	90	2.278−02	2.094−02	1.845−02	1.563−02	1.276−02	1.004−02	7.594−03	5.536−03	3.904−03	2.679−03
7	91	1.624−03	1.442−03	1.224−03	9.977−04	7.896−04	6.129−04	4.684−04	3.516−04	2.584−04	1.858−04
7	92	1.322−02	1.202−02	1.066−02	9.186−03	7.683−03	6.212−03	4.841−03	3.632−03	2.627−03	1.839−03
7	93	6.338−02	6.503−02	6.701−02	6.949−02	7.234−02	7.490−02	7.623−02	7.541−02	7.195−02	6.590−02
7	94	2.386−02	2.297−02	2.164−02	1.986−02	1.767−02	1.517−02	1.252−02	9.935−03	7.621−03	5.689−03
7	95	1.634−02	1.510−02	1.368−02	1.215−02	1.058−02	9.033−03	7.541−03	6.154−03	4.913−03	3.842−03
7	96	1.104−02	1.046−02	9.470−03	8.252−03	6.979−03	5.757−03	4.637−03	3.650−03	2.813−03	2.130−03
7	97	2.350−02	2.243−02	2.108−02	1.961−02	1.812−02	1.665−02	1.518−02	1.368−02	1.214−02	1.057−02
7	98	1.166−02	1.009−02	8.544−03	7.057−03	5.689−03	4.478−03	3.436−03	2.566−03	1.866−03	1.324−03
7	99	9.466−03	9.081−03	8.417−03	7.544−03	6.538−03	5.468−03	4.405−03	3.420−03	2.569−03	1.878−03
7	100	3.032−02	3.080−02	3.131−02	3.186−02	3.231−02	3.240−02	3.188−02	3.053−02	2.833−02	2.537−02
7	101	2.592−03	2.497−03	2.368−03	2.199−03	1.986−03	1.727−03	1.437−03	1.140−03	8.653−04	6.302−04
7	102	2.952−02	2.881−02	2.724−02	2.494−02	2.199−02	1.856−02	1.492−02	1.144−02	8.398−03	5.937−03
7	103	9.979−03	9.633−03	9.038−03	8.219−03	7.193−03	6.012−03	4.779−03	3.615−03	2.616−03	1.826−03
7	104	5.358−03	4.319−03	3.406−03	2.644−03	2.023−03	1.521−03	1.121−03	8.061−04	5.659−04	3.882−04
7	105	3.984−03	3.655−03	3.388−03	3.188−03	3.030−03	2.882−03	2.715−03	2.511−03	2.265−03	1.982−03
7	106	3.085−03	2.493−03	2.009−03	1.633−03	1.338−03	1.098−03	8.992−04	7.334−04	5.986−04	4.918−04
7	107	2.397−03	1.863−03	1.427−03	1.092−03	8.407−04	6.516−04	5.060−04	3.915−04	3.004−04	2.280−04
7	108	1.283−03	1.006−03	7.837−04	6.130−04	4.805−04	3.735−04	2.846−04	2.110−04	1.519−04	1.064−04
7	109	4.828−03	3.940−03	3.194−03	2.580−03	2.070−03	1.638−03	1.272−03	9.658−04	7.158−04	5.184−04
7	110	6.038−03	5.188−03	4.487−03	3.930−03	3.480−03	3.088−03	2.721−03	2.360−03	2.005−03	1.664−03
7	111	3.043−03	2.512−03	2.061−03	1.681−03	1.357−03	1.075−03	8.310−04	6.239−04	4.549−04	3.227−04
7	112	1.317−03	1.186−03	1.080−03	9.938−04	9.174−04	8.401−04	7.566−04	6.665−04	5.727−04	4.793−04
7	113	6.735−03	6.418−03	6.064−03	5.634−03	5.101−03	4.469−03	3.778−03	3.086−03	2.443−03	1.882−03
7	114	1.083−02	1.052−02	1.014−02	9.597−03	8.805−03	7.761−03	6.549−03	5.297−03	4.126−03	3.117−03
7	115	3.249−02	3.255−02	3.277−02	3.301−02	3.306−02	3.261−02	3.141−02	2.935−02	2.647−02	2.302−02
7	116	3.836−03	3.381−03	2.922−03	2.474−03	2.042−03	1.635−03	1.264−03	9.431−04	6.796−04	4.750−04
7	117	3.756−03	3.405−03	3.034−03	2.641−03	2.232−03	1.823−03	1.437−03	1.095−03	8.107−04	5.867−04
7	118	5.045−03	4.720−03	4.327−03	3.872−03	3.378−03	2.883−03	2.419−03	2.009−03	1.661−03	1.369−03
7	119	1.615−03	1.434−03	1.258−03	1.090−03	9.271−04	7.672−04	6.141−04	4.738−04	3.527−04	2.540−04
7	120	2.240−03	2.175−03	2.170−03	2.233−03	2.380−03	2.623−03	2.952−03	3.330−03	3.688−03	3.945−03
7	121	3.688−03	3.535−03	3.363−03	3.163−03	2.925−03	2.649−03	2.338−03	2.006−03	1.669−03	1.346−03
7	122	1.800−03	1.635−03	1.472−03	1.312−03	1.154−03	1.001−03	8.576−04	7.283−04	6.159−04	5.189−04
7	123	1.100−03	1.006−03	9.048−04	7.957−04	6.790−04	5.588−04	4.418−04	3.355−04	2.455−04	1.738−04
7	124	3.162−03	3.322−03	3.559−03	3.911−03	4.406−03	5.045−03	5.782−03	6.526−03	7.173−03	7.631−03
7	125	1.968−03	1.991−03	2.009−03	2.007−03	1.961−03	1.850−03	1.667−03	1.427−03	1.158−03	8.935−04
7	126	6.818−03	6.979−03	7.125−03	7.229−03	7.241−03	7.109−03	6.792−03	6.285−03	5.616−03	4.845−03
7	127	4.013−03	3.966−03	3.844−03	3.621−03	3.279−03	2.830−03	2.321−03	1.810−03	1.350−03	9.688−04
7	128	2.318−02	2.283−02	2.203−02	2.060−02	1.846−02	1.572−02	1.266−02	9.684−03	7.069−03	4.965−03
7	129	2.537−02	2.591−02	2.640−02	2.671−02	2.663−02	2.600−02	2.473−02	2.279−02	2.030−02	1.745−02
7	130	4.376−03	4.288−03	4.152−03	3.943−03	3.649−03	3.272−03	2.839−03	2.384−03	1.943−03	1.539−03
7	131	3.201−03	3.086−03	2.952−03	2.784−03	2.572−03	2.317−03	2.030−03	1.730−03	1.436−03	1.164−03
7	132	2.467−03	2.607−03	2.804−03	3.069−03	3.398−03	3.767−03	4.129−03	4.414−03	4.555−03	4.502−03
7	133	1.103−03	1.113−03	1.124−03	1.127−03	1.112−03	1.070−03	9.999−04	9.066−04	8.001−04	6.905−04
7	134	4.000−03	4.009−03	3.989−03	3.923−03	3.790−03	3.582−03	3.300−03	2.957−03	2.573−03	2.173−03
7	135	6.628−04	6.553−04	6.545−04	6.582−04	6.618−04	6.607−04	6.511−04	6.306−04	5.985−04	5.552−04
7	136	1.634−03	1.731−03	1.870−03	2.058−03	2.292−03	2.554−03	2.808−03	3.006−03	3.100−03	3.057−03
7	137	1.101−04	1.143−04	1.198−04	1.250−04	1.271−04	1.237−04	1.137−04	9.809−05	7.940−05	6.067−05
7	138	1.283−03	1.145−03	1.015−03	8.870−04	7.588−04	6.300−04	5.048−04	3.896−04	2.899−04	2.088−04
7	139	4.199−03	4.082−03	3.879−03	3.575−03	3.173−03	2.694−03	2.181−03	1.683−03	1.241−03	8.806−04
7	140	5.250−04	5.154−04	4.997−04	4.739−04	4.350−04	3.831−04	3.216−04	2.568−04	1.956−04	1.428−04
7	141	4.943−04	5.051−04	5.131−04	5.115−04	4.931−04	4.537−04	3.952−04	3.251−04	2.533−04	1.885−04
8	9	4.608+00	4.600+00	4.505+00	4.298+00	3.980+00	3.594+00	3.202+00	2.858+00	2.589+00	2.393+00
8	10	1.878+00	1.791+00	1.678+00	1.504+00	1.270+00	1.016+00	7.859−01	6.000−01	4.597−01	3.567−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
8	11	1.691+00	1.650+00	1.585+00	1.467+00	1.296+00	1.100+00	9.070−01	7.321−01	5.822−01	4.575−01
8	12	1.250+00	1.224+00	1.179+00	1.093+00	9.600−01	8.052−01	6.571−01	5.316−01	4.313−01	3.519−01
8	13	4.753−01	4.600−01	4.240−01	3.736−01	3.133−01	2.518−01	1.978−01	1.548−01	1.223−01	9.764−02
8	14	5.652−01	4.916−01	4.119−01	3.341−01	2.613−01	1.971−01	1.440−01	1.023−01	7.094−02	4.814−02
8	15	2.281−01	1.985−01	1.705−01	1.416−01	1.122−01	8.477−02	6.159−02	4.337−02	2.976−02	2.000−02
8	16	7.417−01	7.743−01	7.458−01	6.617−01	5.474−01	4.295−01	3.246−01	2.386−01	1.715−01	1.207−01
8	17	2.705−01	2.555−01	2.340−01	2.091−01	1.839−01	1.605−01	1.395−01	1.212−01	1.054−01	9.200−02
8	18	5.815−01	5.442−01	4.857−01	4.147−01	3.426−01	2.770−01	2.207−01	1.743−01	1.373−01	1.089−01
8	19	9.854−01	9.212−01	8.171−01	6.907−01	5.594−01	4.398−01	3.410−01	2.643−01	2.065−01	1.633−01
8	20	3.857−01	3.530−01	3.083−01	2.551−01	2.000−01	1.494−01	1.072−01	7.458−02	5.061−02	3.371−02
8	21	9.469−01	8.605−01	7.694−01	7.031−01	6.597−01	6.145−01	5.587−01	5.015−01	4.538−01	4.200−01
8	22	1.257+00	1.138+00	9.946−01	8.402−01	6.899−01	5.538−01	4.362−01	3.380−01	2.585−01	1.960−01
8	23	1.269+00	1.160+00	1.020+00	8.653−01	7.196−01	5.980−01	5.064−01	4.433−01	4.035−01	3.807−01
8	24	3.006−01	2.585−01	2.191−01	1.826−01	1.486−01	1.181−01	9.239−02	7.163−02	5.537−02	4.277−02
8	25	4.265−01	3.686−01	3.122−01	2.579−01	2.060−01	1.593−01	1.201−01	8.907−02	6.527−02	4.739−02
8	26	5.277−01	4.545−01	3.816−01	3.113−01	2.455−01	1.874−01	1.397−01	1.027−01	7.514−02	5.505−02
8	27	3.798−01	3.235−01	2.672−01	2.138−01	1.649−01	1.225−01	8.811−02	6.171−02	4.232−02	2.854−02
8	28	1.287+00	1.176+00	1.047+00	9.226−01	8.051−01	6.864−01	5.651−01	4.475−01	3.411−01	2.512−01
8	29	2.470−01	2.207−01	1.921−01	1.612−01	1.292−01	9.903−02	7.309−02	5.231−02	3.651−02	2.496−02
8	30	5.454−01	4.795−01	4.142−01	3.558−01	3.053−01	2.616−01	2.248−01	1.959−01	1.754−01	1.622−01
8	31	6.781−01	5.997−01	5.121−01	4.244−01	3.421−01	2.689−01	2.070−01	1.566−01	1.169−01	8.670−02
8	32	8.232−01	7.363−01	6.313−01	5.243−01	4.266−01	3.449−01	2.815−01	2.353−01	2.036−01	1.830−01
8	33	2.588+00	2.693+00	2.909+00	3.280+00	3.766+00	4.339+00	5.046+00	5.953+00	7.109+00	8.515+00
8	34	1.069+00	1.076+00	1.138+00	1.270+00	1.434+00	1.602+00	1.789+00	2.029+00	2.349+00	2.752+00
8	35	1.481+00	1.491+00	1.526+00	1.616+00	1.791+00	2.079+00	2.496+00	3.054+00	3.755+00	4.587+00
8	36	2.689+00	2.816+00	3.016+00	3.339+00	3.808+00	4.443+00	5.287+00	6.387+00	7.777+00	9.447+00
8	37	6.365+00	6.648+00	7.251+00	8.312+00	9.730+00	1.141+01	1.347+01	1.609+01	1.943+01	2.349+01
8	38	1.054+00	9.646−01	8.670−01	7.709−01	6.809−01	6.006−01	5.322−01	4.758−01	4.305−01	3.949−01
8	39	2.393−01	2.307−01	2.267−01	2.318−01	2.509−01	2.898−01	3.541−01	4.488−01	5.784−01	7.438−01
8	40	4.346−01	4.088−01	3.796−01	3.530−01	3.357−01	3.346−01	3.555−01	4.031−01	4.813−01	5.904−01
8	41	6.006−01	5.643−01	5.259−01	4.944−01	4.805−01	4.954−01	5.483−01	6.460−01	7.940−01	9.930−01
8	42	3.011−01	2.780−01	2.478−01	2.134−01	1.777−01	1.428−01	1.108−01	8.314−02	6.051−02	4.297−02
8	43	4.042−01	3.946−01	3.695−01	3.316−01	2.864−01	2.393−01	1.937−01	1.518−01	1.149−01	8.404−02
8	44	1.982−01	1.881−01	1.710−01	1.491−01	1.256−01	1.025−01	8.124−02	6.230−02	4.622−02	3.323−02
8	45	2.555−01	2.385−01	2.168−01	1.912−01	1.635−01	1.352−01	1.079−01	8.325−02	6.241−02	4.577−02
8	46	2.862−01	2.749−01	2.570−01	2.363−01	2.177−01	2.052−01	2.013−01	2.069−01	2.213−01	2.428−01
8	47	3.521−01	3.373−01	3.109−01	2.766−01	2.389−01	2.017−01	1.680−01	1.397−01	1.178−01	1.021−01
8	48	4.046−01	3.873−01	3.586−01	3.234−01	2.888−01	2.608−01	2.432−01	2.375−01	2.433−01	2.586−01
8	49	1.352−01	1.338−01	1.265−01	1.150−01	1.011−01	8.606−02	7.079−02	5.615−02	4.295−02	3.176−02
8	50	1.717+00	1.861+00	2.057+00	2.272+00	2.463+00	2.631+00	2.807+00	3.009+00	3.239+00	3.476+00
8	51	4.771−01	4.688−01	4.406−01	4.008−01	3.580−01	3.178−01	2.826−01	2.531−01	2.298−01	2.123−01
8	52	1.562−01	1.563−01	1.487−01	1.359−01	1.209−01	1.062−01	9.301−02	8.225−02	7.401−02	6.795−02
8	53	3.012−01	2.849−01	2.598−01	2.296−01	1.971−01	1.639−01	1.316−01	1.017−01	7.578−02	5.458−02
8	54	5.207−02	4.882−02	4.438−02	3.921−02	3.366−02	2.795−02	2.232−02	1.707−02	1.251−02	8.821−03
8	55	2.273−01	2.074−01	1.885−01	1.695−01	1.496−01	1.284−01	1.067−01	8.545−02	6.611−02	4.960−02
8	56	1.769−01	1.628−01	1.500−01	1.382−01	1.273−01	1.172−01	1.083−01	1.008−01	9.478−02	9.018−02
8	57	2.326−01	2.113−01	1.918−01	1.726−01	1.521−01	1.303−01	1.081−01	8.683−02	6.794−02	5.214−02
8	58	2.197−01	1.968−01	1.761−01	1.574−01	1.400−01	1.238−01	1.090−01	9.590−02	8.485−02	7.591−02
8	59	4.119−01	5.009−01	5.800−01	6.124−01	5.950−01	5.516−01	5.068−01	4.731−01	4.532−01	4.445−01
8	60	8.722−01	9.765−01	1.040+00	1.054+00	1.049+00	1.053+00	1.080+00	1.129+00	1.193+00	1.261+00
8	61	2.668−01	2.369−01	2.107−01	1.870−01	1.650−01	1.443−01	1.247−01	1.067−01	9.050−02	7.669−02
8	62	2.037−01	1.994−01	1.948−01	1.901−01	1.856−01	1.816−01	1.787−01	1.766−01	1.756−01	1.752−01
8	63	1.352−01	1.362−01	1.373−01	1.386−01	1.405−01	1.435−01	1.475−01	1.523−01	1.575−01	1.625−01
8	64	9.837−02	1.016−01	1.059−01	1.114−01	1.184−01	1.271−01	1.372−01	1.481−01	1.591−01	1.693−01
8	65	2.066−01	1.911−01	1.746−01	1.570−01	1.382−01	1.189−01	1.001−01	8.298−02	6.838−02	5.675−02
8	66	3.485−01	4.070−01	4.987−01	5.706−01	5.943−01	5.832−01	5.635−01	5.527−01	5.572−01	5.756−01
8	67	1.204+00	1.607+00	1.837+00	1.845+00	1.707+00	1.526+00	1.375+00	1.285+00	1.256+00	1.273+00
8	68	1.567−01	1.422−01	1.266−01	1.108−01	9.522−02	8.046−02	6.721−02	5.603−02	4.718−02	4.059−02
8	69	1.626−01	1.547−01	1.435−01	1.294−01	1.130−01	9.516−02	7.725−02	6.048−02	4.580−02	3.371−02
8	70	1.005−01	9.484−02	8.849−02	8.135−02	7.392−02	6.718−02	6.208−02	5.913−02	5.831−02	5.913−02
8	71	1.170−01	1.098−01	1.011−01	9.043−02	7.808−02	6.495−02	5.214−02	4.056−02	3.074−02	2.286−02
8	72	1.566−01	1.375−01	1.198−01	1.041−01	9.059−02	7.955−02	7.137−02	6.618−02	6.372−02	6.332−02
8	73	1.896−01	1.842−01	1.761−01	1.646−01	1.498−01	1.320−01	1.120−01	9.125−02	7.122−02	5.337−02
8	74	1.048−01	9.274−02	8.114−02	6.995−02	5.915−02	4.893−02	3.967−02	3.176−02	2.543−02	2.067−02
8	75	2.134−01	2.173−01	2.227−01	2.295−01	2.379−01	2.486−01	2.627−01	2.808−01	3.027−01	3.265−01
8	76	9.242−02	9.090−02	8.920−02	8.698−02	8.423−02	8.134−02	7.893−02	7.757−02	7.753−02	7.867−02
8	77	2.711−01	3.442−01	4.049−01	4.295−01	4.194−01	3.939−01	3.710−01	3.596−01	3.611−01	3.724−01
8	78	8.238−02	8.150−02	7.931−02	7.530−02	6.922−02	6.119−02	5.175−02	4.174−02	3.214−02	2.373−02
8	79	3.634−01	4.060−01	4.283−01	4.263−01	4.118−01	3.953−01	3.798−01	3.632−01	3.421−01	3.144−01
8	80	5.420−01	5.457−01	5.498−01	5.582−01	5.732−01	5.927−01	6.098−01	6.158−01	6.038−01	5.710−01
8	81	1.190−01	1.122−01	1.037−01	9.427−02	8.464−02	7.519−02	6.595−02	5.691−02	4.821−02	4.003−02
8	82	1.218−02	1.101−02	9.717−03	8.389−03	7.130−03	5.997−03	4.984−03	4.054−03	3.196−03	2.427−03
8	83	1.096−01	1.088−01	1.073−01	1.060−01	1.062−01	1.086−01	1.132−01	1.193−01	1.250−01	1.287−01
8	84	1.041−01	1.008−01	9.753−02	9.478−02	9.285−02	9.139−02	8.943−02	8.592−02	8.024−02	7.242−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
8	85	3.604−02	3.297−02	2.918−02	2.498−02	2.078−02	1.687−02	1.338−02	1.032−02	7.726−03	5.606−03
8	86	1.374−01	1.306−01	1.213−01	1.097−01	9.616−02	8.124−02	6.573−02	5.079−02	3.754−02	2.668−02
8	87	9.073−02	8.829−02	8.470−02	8.135−02	7.900−02	7.757−02	7.641−02	7.466−02	7.156−02	6.671−02
8	88	8.164−02	7.698−02	7.036−02	6.301−02	5.584−02	4.922−02	4.312−02	3.744−02	3.208−02	2.701−02
8	89	9.894−02	9.683−02	9.304−02	8.875−02	8.505−02	8.226−02	7.996−02	7.734−02	7.364−02	6.837−02
8	90	6.836−02	6.284−02	5.537−02	4.691−02	3.828−02	3.009−02	2.274−02	1.655−02	1.165−02	7.965−03
8	91	4.881−03	4.333−03	3.674−03	2.992−03	2.365−03	1.832−03	1.395−03	1.042−03	7.596−04	5.389−04
8	92	3.954−02	3.599−02	3.197−02	2.759−02	2.309−02	1.867−02	1.454−02	1.090−02	7.887−03	5.524−03
8	93	7.965−02	7.945−02	7.895−02	7.827−02	7.734−02	7.582−02	7.320−02	6.912−02	6.345−02	5.638−02
8	94	1.665−01	1.688−01	1.713−01	1.745−01	1.784−01	1.817−01	1.824−01	1.784−01	1.687−01	1.535−01
8	95	6.961−02	6.607−02	6.094−02	5.472−02	4.786−02	4.069−02	3.355−02	2.683−02	2.088−02	1.587−02
8	96	4.422−02	4.236−02	3.961−02	3.639−02	3.306−02	2.978−02	2.658−02	2.347−02	2.042−02	1.748−02
8	97	3.872−02	3.645−02	3.270−02	2.822−02	2.366−02	1.940−02	1.558−02	1.227−02	9.494−03	7.234−03
8	98	6.786−02	5.943−02	5.184−02	4.503−02	3.905−02	3.383−02	2.923−02	2.512−02	2.139−02	1.800−02
8	99	6.515−02	6.376−02	6.154−02	5.905−02	5.640−02	5.344−02	4.993−02	4.575−02	4.091−02	3.558−02
8	100	3.847−02	3.828−02	3.782−02	3.712−02	3.611−02	3.464−02	3.259−02	2.994−02	2.676−02	2.323−02
8	101	3.089−02	3.137−02	3.189−02	3.246−02	3.294−02	3.306−02	3.254−02	3.119−02	2.895−02	2.594−02
8	102	8.890−02	8.678−02	8.209−02	7.515−02	6.626−02	5.589−02	4.493−02	3.444−02	2.527−02	1.786−02
8	103	3.014−02	2.908−02	2.727−02	2.478−02	2.167−02	1.810−02	1.438−02	1.087−02	7.861−03	5.479−03
8	104	1.597−02	1.280−02	1.006−02	7.799−03	5.970−03	4.497−03	3.317−03	2.389−03	1.679−03	1.153−03
8	105	7.092−03	6.060−03	5.221−03	4.574−03	4.066−03	3.637−03	3.246−03	2.871−03	2.506−03	2.150−03
8	106	1.211−02	1.070−02	9.548−03	8.674−03	7.997−03	7.416−03	6.846−03	6.231−03	5.552−03	4.815−03
8	107	9.245−03	7.341−03	5.770−03	4.549−03	3.613−03	2.883−03	2.301−03	1.832−03	1.455−03	1.156−03
8	108	3.830−03	2.997−03	2.333−03	1.824−03	1.431−03	1.112−03	8.475−04	6.281−04	4.517−04	3.158−04
8	109	1.416−02	1.193−02	1.008−02	8.594−03	7.373−03	6.327−03	5.387−03	4.522−03	3.727−03	3.011−03
8	110	1.319−02	1.081−02	8.812−03	7.156−03	5.771−03	4.593−03	3.585−03	2.735−03	2.037−03	1.484−03
8	111	1.474−02	1.244−02	1.052−02	8.955−03	7.664−03	6.549−03	5.545−03	4.625−03	3.787−03	3.040−03
8	112	3.941−03	3.551−03	3.235−03	2.979−03	2.751−03	2.520−03	2.270−03	2.000−03	1.719−03	1.439−03
8	113	2.842−02	2.738−02	2.615−02	2.452−02	2.235−02	1.964−02	1.658−02	1.346−02	1.056−02	8.043−03
8	114	7.410−02	7.378−02	7.375−02	7.368−02	7.306−02	7.130−02	6.797−02	6.288−02	5.624−02	4.857−02
8	115	4.789−02	4.753−02	4.723−02	4.671−02	4.562−02	4.368−02	4.075−02	3.690−02	3.235−02	2.746−02
8	116	1.230−02	1.093−02	9.432−03	7.925−03	6.484−03	5.148−03	3.954−03	2.934−03	2.106−03	1.468−03
8	117	1.184−02	1.096−02	9.947−03	8.817−03	7.610−03	6.400−03	5.262−03	4.256−03	3.408−03	2.714−03
8	118	9.004−03	8.140−03	7.241−03	6.306−03	5.343−03	4.383−03	3.475−03	2.664−03	1.983−03	1.442−03
8	119	1.050−02	9.679−03	8.762−03	7.765−03	6.723−03	5.687−03	4.712−03	3.844−03	3.103−03	2.488−03
8	120	7.281−03	7.035−03	6.833−03	6.656−03	6.499−03	6.370−03	6.272−03	6.186−03	6.071−03	5.870−03
8	121	6.966−03	6.633−03	6.418−03	6.341−03	6.430−03	6.710−03	7.172−03	7.746−03	8.298−03	8.664−03
8	122	8.711−03	8.189−03	7.635−03	7.043−03	6.403−03	5.714−03	4.995−03	4.272−03	3.574−03	2.926−03
8	123	3.229−03	2.972−03	2.687−03	2.370−03	2.026−03	1.669−03	1.320−03	1.002−03	7.319−04	5.171−04
8	124	1.966−03	1.988−03	2.007−03	2.005−03	1.958−03	1.847−03	1.665−03	1.426−03	1.157−03	8.926−04
8	125	1.610−02	1.671−02	1.755−02	1.867−02	2.013−02	2.186−02	2.370−02	2.537−02	2.661−02	2.720−02
8	126	1.785−02	1.823−02	1.857−02	1.879−02	1.875−02	1.830−02	1.736−02	1.591−02	1.407−02	1.201−02
8	127	1.211−02	1.196−02	1.158−02	1.090−02	9.860−03	8.505−03	6.971−03	5.435−03	4.052−03	2.905−03
8	128	6.961−02	6.853−02	6.613−02	6.185−02	5.542−02	4.716−02	3.800−02	2.905−02	2.121−02	1.489−02
8	129	3.492−02	3.542−02	3.578−02	3.582−02	3.531−02	3.406−02	3.199−02	2.915−02	2.571−02	2.191−02
8	130	5.175−02	5.264−02	5.341−02	5.376−02	5.334−02	5.185−02	4.909−02	4.508−02	4.002−02	3.432−02
8	131	1.274−02	1.230−02	1.174−02	1.103−02	1.014−02	9.081−03	7.893−03	6.663−03	5.469−03	4.376−03
8	132	3.323−03	3.445−03	3.613−03	3.820−03	4.049−03	4.270−03	4.447−03	4.535−03	4.497−03	4.308−03
8	133	9.861−03	1.018−02	1.061−02	1.113−02	1.174−02	1.235−02	1.287−02	1.314−02	1.305−02	1.250−02
8	134	9.693−03	9.692−03	9.640−03	9.490−03	9.187−03	8.701−03	8.031−03	7.209−03	6.288−03	5.332−03
8	135	3.592−03	3.676−03	3.831−03	4.062−03	4.356−03	4.679−03	4.977−03	5.181−03	5.229−03	5.079−03
8	136	2.058−03	2.140−03	2.262−03	2.423−03	2.609−03	2.795−03	2.948−03	3.033−03	3.021−03	2.898−03
8	137	1.646−03	1.742−03	1.881−03	2.069−03	2.303−03	2.565−03	2.819−03	3.017−03	3.109−03	3.064−03
8	138	4.800−03	4.114−03	3.506−03	2.966−03	2.472−03	2.012−03	1.589−03	1.212−03	8.943−04	6.392−04
8	139	1.268−02	1.231−02	1.168−02	1.076−02	9.544−03	8.101−03	6.555−03	5.056−03	3.729−03	2.644−03
8	140	1.577−03	1.546−03	1.497−03	1.419−03	1.301−03	1.144−03	9.588−04	7.637−04	5.794−04	4.208−04
8	141	1.482−03	1.515−03	1.538−03	1.533−03	1.476−03	1.357−03	1.180−03	9.672−04	7.495−04	5.524−04
9	10	4.355+00	4.251+00	4.088+00	3.784+00	3.317+00	2.771+00	2.249+00	1.806+00	1.451+00	1.167+00
9	11	2.445+00	2.358+00	2.236+00	2.036+00	1.751+00	1.428+00	1.125+00	8.748−01	6.810−01	5.344−01
9	12	1.170+00	1.114+00	1.036+00	9.189−01	7.651−01	6.018−01	4.548−01	3.368−01	2.484−01	1.843−01
9	13	7.892−01	7.652−01	7.012−01	6.101−01	5.048−01	4.021−01	3.148−01	2.470−01	1.962−01	1.578−01
9	14	9.603−01	8.357−01	7.002−01	5.675−01	4.435−01	3.343−01	2.443−01	1.740−01	1.211−01	8.274−02
9	15	3.884−01	3.366−01	2.878−01	2.382−01	1.884−01	1.425−01	1.038−01	7.345−02	5.077−02	3.448−02
9	16	1.260+00	1.312+00	1.263+00	1.120+00	9.268−01	7.270−01	5.490−01	4.034−01	2.898−01	2.040−01
9	17	2.672−01	2.513−01	2.219−01	1.844−01	1.444−01	1.075−01	7.694−02	5.356−02	3.661−02	2.475−02
9	18	9.517−01	9.012−01	8.122−01	6.973−01	5.716−01	4.530−01	3.529−01	2.742−01	2.147−01	1.704−01
9	19	1.813+00	1.700+00	1.530+00	1.324+00	1.104+00	8.999−01	7.281−01	5.913−01	4.848−01	4.021−01
9	20	6.503−01	5.961−01	5.211−01	4.315−01	3.386−01	2.534−01	1.826−01	1.278−01	8.777−02	5.970−02
9	21	1.055+00	9.675−01	8.503−01	7.192−01	5.926−01	4.830−01	3.951−01	3.287−01	2.806−01	2.471−01
9	22	1.989+00	1.976+00	1.847+00	1.614+00	1.342+00	1.091+00	8.890−01	7.413−01	6.408−01	5.763−01
9	23	3.164+00	3.101+00	2.886+00	2.522+00	2.101+00	1.706+00	1.382+00	1.135+00	9.590−01	8.386−01
9	24	3.187−01	2.725−01	2.275−01	1.847−01	1.444−01	1.089−01	7.982−02	5.744−02	4.097−02	2.915−02
9	25	6.622−01	5.860−01	5.044−01	4.188−01	3.339−01	2.569−01	1.927−01	1.425−01	1.049−01	7.715−02
9	26	1.122+00	1.021+00	9.165−01	7.945−01	6.557−01	5.168−01	3.940−01	2.944−01	2.176−01	1.601−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
9	27	6.310−01	5.385−01	4.462−01	3.589−01	2.786−01	2.084−01	1.512−01	1.072−01	7.510−02	5.249−02
9	28	2.140+00	1.956+00	1.726+00	1.485+00	1.255+00	1.042+00	8.461−01	6.681−01	5.109−01	3.784−01
9	29	4.133−01	3.696−01	3.221−01	2.708−01	2.176−01	1.672−01	1.238−01	8.898−02	6.247−02	4.308−02
9	30	6.321−01	5.694−01	4.905−01	4.081−01	3.310−01	2.644−01	2.105−01	1.690−01	1.382−01	1.163−01
9	31	1.416+00	1.341+00	1.174+00	9.696−01	7.719−01	6.041−01	4.737−01	3.785−01	3.124−01	2.685−01
9	32	1.596+00	1.385+00	1.181+00	9.936−01	8.231−01	6.751−01	5.539−01	4.602−01	3.914−01	3.435−01
9	33	4.941+00	5.102+00	5.573+00	6.418+00	7.398+00	8.397+00	9.546+00	1.103+01	1.298+01	1.541+01
9	34	2.815+00	2.696+00	2.608+00	2.621+00	2.746+00	2.994+00	3.389+00	3.955+00	4.702+00	5.619+00
9	35	1.909−01	1.775−01	1.650−01	1.521−01	1.380−01	1.224−01	1.059−01	8.915−02	7.302−02	5.821−02
9	36	1.011+00	9.405−01	8.765−01	8.336−01	8.134−01	8.190−01	8.568−01	9.315−01	1.044+00	1.191+00
9	37	6.711+00	6.212+00	6.038+00	6.296+00	6.733+00	7.207+00	7.823+00	8.738+00	1.006+01	1.178+01
9	38	1.561+01	1.583+01	1.696+01	1.915+01	2.187+01	2.497+01	2.883+01	3.397+01	4.067+01	4.892+01
9	39	1.444−01	1.307−01	1.135−01	9.486−02	7.643−02	5.946−02	4.480−02	3.285−02	2.353−02	1.654−02
9	40	6.400−01	6.083−01	5.683−01	5.295−01	5.056−01	5.107−01	5.551−01	6.459−01	7.881−01	9.816−01
9	41	1.372+00	1.310+00	1.252+00	1.217+00	1.232+00	1.327+00	1.525+00	1.848+00	2.314+00	2.926+00
9	42	5.128−01	4.749−01	4.247−01	3.672−01	3.068−01	2.476−01	1.932−01	1.460−01	1.075−01	7.785−02
9	43	6.929−01	6.823−01	6.421−01	5.767−01	4.974−01	4.147−01	3.351−01	2.623−01	1.990−01	1.465−01
9	44	3.284−01	3.120−01	2.840−01	2.481−01	2.093−01	1.713−01	1.359−01	1.044−01	7.759−02	5.586−02
9	45	3.900−01	3.660−01	3.331−01	2.937−01	2.506−01	2.064−01	1.638−01	1.254−01	9.277−02	6.667−02
9	46	2.617−01	2.481−01	2.258−01	1.982−01	1.701−01	1.448−01	1.245−01	1.103−01	1.020−01	9.895−02
9	47	7.063−01	6.709−01	6.049−01	5.264−01	4.520−01	3.918−01	3.507−01	3.297−01	3.269−01	3.387−01
9	48	1.197+00	1.114+00	9.995−01	8.763−01	7.623−01	6.690−01	6.028−01	5.659−01	5.566−01	5.703−01
9	49	1.272−01	1.236−01	1.164−01	1.073−01	9.824−02	9.061−02	8.492−02	8.113−02	7.901−02	7.818−02
9	50	4.625−01	4.496−01	4.211−01	3.839−01	3.448−01	3.083−01	2.766−01	2.504−01	2.299−01	2.149−01
9	51	3.529+00	3.607+00	3.678+00	3.777+00	3.943+00	4.196+00	4.537+00	4.945+00	5.393+00	5.839+00
9	52	2.575−01	2.521−01	2.348−01	2.095−01	1.800−01	1.497−01	1.211−01	9.564−02	7.410−02	5.652−02
9	53	5.207−01	4.949−01	4.523−01	4.004−01	3.442−01	2.871−01	2.317−01	1.807−01	1.366−01	1.007−01
9	54	8.527−02	7.999−02	7.291−02	6.467−02	5.575−02	4.648−02	3.723−02	2.855−02	2.096−02	1.482−02
9	55	3.283−01	2.962−01	2.663−01	2.371−01	2.072−01	1.763−01	1.451−01	1.151−01	8.790−02	6.486−02
9	56	1.973−01	1.786−01	1.614−01	1.449−01	1.283−01	1.115−01	9.493−02	7.947−02	6.584−02	5.449−02
9	57	3.354−01	3.012−01	2.718−01	2.458−01	2.218−01	1.992−01	1.786−01	1.608−01	1.461−01	1.347−01
9	58	5.087−01	4.664−01	4.252−01	3.842−01	3.425−01	3.002−01	2.591−01	2.213−01	1.885−01	1.615−01
9	59	1.524−01	1.423−01	1.325−01	1.228−01	1.133−01	1.041−01	9.548−02	8.770−02	8.098−02	7.541−02
9	60	4.629−01	4.412−01	4.234−01	4.095−01	3.998−01	3.946−01	3.939−01	3.971−01	4.032−01	4.108−01
9	61	1.563+00	1.529+00	1.523+00	1.547+00	1.602+00	1.688+00	1.803+00	1.936+00	2.078+00	2.215+00
9	62	5.538−01	5.550−01	5.591−01	5.680−01	5.830−01	6.051−01	6.336−01	6.659−01	6.995−01	7.315−01
9	63	2.300−01	2.305−01	2.305−01	2.302−01	2.302−01	2.310−01	2.332−01	2.364−01	2.406−01	2.451−01
9	64	4.623−02	4.422−02	4.159−02	3.825−02	3.420−02	2.960−02	2.476−02	2.002−02	1.568−02	1.194−02
9	65	7.059−01	6.986−01	6.945−01	6.981−01	7.126−01	7.408−01	7.843−01	8.439−01	9.180−01	1.001+00
9	66	1.623−01	1.580−01	1.528−01	1.468−01	1.402−01	1.341−01	1.294−01	1.271−01	1.275−01	1.302−01
9	67	4.232−01	4.215−01	4.208−01	4.220−01	4.263−01	4.355−01	4.515−01	4.755−01	5.075−01	5.452−01
9	68	8.183−01	8.067−01	8.001−01	8.017−01	8.139−01	8.392−01	8.801−01	9.381−01	1.012+00	1.097+00
9	69	2.525−01	2.406−01	2.235−01	2.018−01	1.762−01	1.484−01	1.204−01	9.417−02	7.124−02	5.240−02
9	70	1.270−01	1.190−01	1.104−01	1.007−01	9.029−02	7.994−02	7.064−02	6.312−02	5.766−02	5.413−02
9	71	1.918−01	1.804−01	1.679−01	1.541−01	1.395−01	1.255−01	1.139−01	1.057−01	1.011−01	9.956−02
9	72	3.067−01	2.817−01	2.557−01	2.286−01	2.010−01	1.747−01	1.520−01	1.344−01	1.221−01	1.146−01
9	73	3.226−01	3.138−01	3.004−01	2.813−01	2.564−01	2.263−01	1.925−01	1.573−01	1.233−01	9.309−02
9	74	2.166−01	1.883−01	1.630−01	1.404−01	1.196−01	1.007−01	8.398−02	6.997−02	5.898−02	5.091−02
9	75	4.221−01	4.375−01	4.562−01	4.789−01	5.063−01	5.401−01	5.820−01	6.330−01	6.919−01	7.546−01
9	76	2.773−01	2.812−01	2.875−01	2.964−01	3.081−01	3.236−01	3.440−01	3.701−01	4.012−01	4.351−01
9	77	1.100−01	1.112−01	1.122−01	1.125−01	1.123−01	1.123−01	1.132−01	1.158−01	1.201−01	1.258−01
9	78	1.392−01	1.377−01	1.340−01	1.272−01	1.169−01	1.034−01	8.742−02	7.051−02	5.430−02	4.010−02
9	79	1.279−01	1.232−01	1.170−01	1.104−01	1.041−01	9.844−02	9.294−02	8.693−02	7.990−02	7.170−02
9	80	3.911−01	3.868−01	3.809−01	3.760−01	3.741−01	3.744−01	3.735−01	3.671−01	3.521−01	3.271−01
9	81	1.119+00	1.122+00	1.126+00	1.138+00	1.161+00	1.194+00	1.221+00	1.226+00	1.196+00	1.127+00
9	82	3.951−02	3.868−02	3.793−02	3.744−02	3.729−02	3.727−02	3.697−02	3.593−02	3.389−02	3.085−02
9	83	1.044−01	1.010−01	9.761−02	9.482−02	9.288−02	9.142−02	8.946−02	8.596−02	8.029−02	7.247−02
9	84	2.287−01	2.222−01	2.159−01	2.113−01	2.097−01	2.122−01	2.183−01	2.262−01	2.331−01	2.360−01
9	85	6.068−02	5.550−02	4.912−02	4.206−02	3.501−02	2.846−02	2.261−02	1.751−02	1.318−02	9.652−03
9	86	2.298−01	2.183−01	2.028−01	1.834−01	1.608−01	1.359−01	1.099−01	8.500−02	6.289−02	4.477−02
9	87	4.839−02	4.636−02	4.325−02	3.983−02	3.672−02	3.410−02	3.187−02	2.975−02	2.749−02	2.492−02
9	88	1.351−01	1.311−01	1.250−01	1.188−01	1.135−01	1.096−01	1.062−01	1.023−01	9.698−02	8.964−02
9	89	2.652−01	2.563−01	2.431−01	2.288−01	2.160−01	2.052−01	1.953−01	1.849−01	1.723−01	1.569−01
9	90	1.145−01	1.053−01	9.285−02	7.867−02	6.422−02	5.049−02	3.819−02	2.784−02	1.963−02	1.348−02
9	91	8.233−03	7.302−03	6.186−03	5.034−03	3.977−03	3.081−03	2.350−03	1.760−03	1.289−03	9.230−04
9	92	6.675−02	6.051−02	5.359−02	4.614−02	3.852−02	3.107−02	2.415−02	1.808−02	1.306−02	9.147−03
9	93	4.338−02	4.110−02	3.807−02	3.456−02	3.078−02	2.687−02	2.296−02	1.920−02	1.571−02	1.260−02
9	94	1.448−01	1.417−01	1.342−01	1.250−01	1.156−01	1.065−01	9.732−02	8.770−02	7.749−02	6.682−02
9	95	3.830−01	3.852−01	3.830−01	3.802−01	3.782−01	3.754−01	3.684−01	3.538−01	3.299−01	2.970−01
9	96	3.849−02	3.625−02	3.306−02	2.936−02	2.561−02	2.205−02	1.878−02	1.581−02	1.316−02	1.082−02
9	97	7.670−02	7.273−02	6.680−02	5.995−02	5.308−02	4.659−02	4.059−02	3.504−02	2.991−02	2.517−02
9	98	1.471−01	1.307−01	1.144−01	9.885−02	8.481−02	7.243−02	6.157−02	5.200−02	4.352−02	3.602−02
9	99	1.736−01	1.698−01	1.645−01	1.595−01	1.547−01	1.494−01	1.422−01	1.327−01	1.204−01	1.061−01
9	100	6.056−02	6.029−02	5.941−02	5.811−02	5.639−02	5.407−02	5.098−02	4.702−02	4.224−02	3.687−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
9	101	9.551−03	9.144−03	8.468−03	7.590−03	6.582−03	5.508−03	4.440−03	3.448−03	2.591−03	1.893−03
9	102	1.491−01	1.454−01	1.374−01	1.257−01	1.108−01	9.345−02	7.514−02	5.761−02	4.230−02	2.992−02
9	103	5.094−02	4.911−02	4.598−02	4.173−02	3.647−02	3.044−02	2.417−02	1.826−02	1.321−02	9.213−03
9	104	2.675−02	2.142−02	1.683−02	1.306−02	1.000−02	7.537−03	5.565−03	4.013−03	2.826−03	1.947−03
9	105	5.856−03	4.619−03	3.610−03	2.836−03	2.251−03	1.801−03	1.446−03	1.158−03	9.234−04	7.320−04
9	106	1.324−02	1.089−02	8.957−03	7.469−03	6.325−03	5.412−03	4.643−03	3.968−03	3.364−03	2.817−03
9	107	2.873−02	2.505−02	2.199−02	1.962−02	1.775−02	1.617−02	1.469−02	1.319−02	1.164−02	1.004−02
9	108	6.456−03	5.061−03	3.943−03	3.084−03	2.417−03	1.878−03	1.431−03	1.061−03	7.644−04	5.362−04
9	109	1.327−02	1.116−02	9.372−03	7.895−03	6.652−03	5.571−03	4.606−03	3.743−03	2.983−03	2.333−03
9	110	2.267−02	1.907−02	1.606−02	1.359−02	1.155−02	9.791−03	8.220−03	6.797−03	5.519−03	4.397−03
9	111	3.445−02	2.870−02	2.386−02	1.992−02	1.666−02	1.390−02	1.148−02	9.351−03	7.483−03	5.880−03
9	112	6.682−03	6.015−03	5.465−03	5.019−03	4.624−03	4.228−03	3.804−03	3.348−03	2.875−03	2.406−03
9	113	1.592−01	1.582−01	1.577−01	1.568−01	1.544−01	1.494−01	1.410−01	1.292−01	1.146−01	9.819−02
9	114	6.532−02	6.423−02	6.309−02	6.151−02	5.906−02	5.547−02	5.071−02	4.499−02	3.872−02	3.233−02
9	115	2.653−02	2.566−02	2.469−02	2.345−02	2.177−02	1.963−02	1.714−02	1.450−02	1.189−02	9.495−03
9	116	1.925−02	1.696−02	1.467−02	1.242−02	1.026−02	8.217−03	6.359−03	4.749−03	3.429−03	2.403−03
9	117	9.529−03	8.777−03	7.961−03	7.074−03	6.133−03	5.178−03	4.262−03	3.434−03	2.722−03	2.133−03
9	118	1.717−02	1.583−02	1.433−02	1.268−02	1.095−02	9.206−03	7.563−03	6.100−03	4.860−03	3.842−03
9	119	2.567−02	2.350−02	2.111−02	1.853−02	1.584−02	1.318−02	1.068−02	8.477−03	6.631−03	5.141−03
9	120	6.372−03	5.964−03	5.582−03	5.192−03	4.775−03	4.334−03	3.885−03	3.446−03	3.029−03	2.635−03
9	121	1.252−02	1.188−02	1.126−02	1.066−02	1.007−02	9.507−03	8.984−03	8.497−03	8.012−03	7.480−03
9	122	2.112−02	2.013−02	1.920−02	1.847−02	1.804−02	1.797−02	1.822−02	1.867−02	1.908−02	1.916−02
9	123	5.775−03	5.292−03	4.740−03	4.141−03	3.511−03	2.875−03	2.265−03	1.717−03	1.255−03	8.888−04
9	124	6.818−03	6.981−03	7.133−03	7.242−03	7.256−03	7.120−03	6.799−03	6.287−03	5.614−03	4.841−03
9	125	1.786−02	1.823−02	1.857−02	1.880−02	1.876−02	1.831−02	1.736−02	1.591−02	1.407−02	1.200−02
9	126	3.549−02	3.657−02	3.799−02	3.985−02	4.212−02	4.463−02	4.706−02	4.898−02	5.002−02	4.995−02
9	127	2.027−02	2.000−02	1.936−02	1.822−02	1.649−02	1.423−02	1.168−02	9.121−03	6.812−03	4.899−03
9	128	1.160−01	1.142−01	1.103−01	1.031−01	9.241−02	7.864−02	6.337−02	4.846−02	3.538−02	2.486−02
9	129	1.609−02	1.600−02	1.579−02	1.537−02	1.466−02	1.365−02	1.236−02	1.087−02	9.289−03	7.710−03
9	130	4.283−02	4.308−02	4.314−02	4.278−02	4.175−02	3.986−02	3.707−02	3.347−02	2.928−02	2.479−02
9	131	1.064−01	1.080−01	1.093−01	1.097−01	1.085−01	1.051−01	9.922−02	9.083−02	8.042−02	6.878−02
9	132	7.766−03	7.809−03	7.798−03	7.699−03	7.476−03	7.109−03	6.595−03	5.954−03	5.226−03	4.455−03
9	133	1.185−02	1.198−02	1.210−02	1.217−02	1.212−02	1.190−02	1.149−02	1.085−02	9.998−03	8.963−03
9	134	1.930−02	1.969−02	2.032−02	2.121−02	2.229−02	2.340−02	2.434−02	2.484−02	2.464−02	2.361−02
9	135	8.050−03	8.377−03	8.889−03	9.602−03	1.048−02	1.144−02	1.233−02	1.296−02	1.316−02	1.282−02
9	136	3.473−03	3.599−03	3.786−03	4.041−03	4.350−03	4.683−03	4.987−03	5.194−03	5.242−03	5.092−03
9	137	6.181−04	6.218−04	6.302−04	6.409−04	6.493−04	6.517−04	6.447−04	6.263−04	5.959−04	5.539−04
9	138	5.432−03	5.069−03	4.653−03	4.176−03	3.638−03	3.057−03	2.470−03	1.917−03	1.433−03	1.036−03
9	139	2.118−02	2.057−02	1.954−02	1.801−02	1.597−02	1.356−02	1.098−02	8.472−03	6.252−03	4.439−03
9	140	2.650−03	2.594−03	2.509−03	2.375−03	2.177−03	1.915−03	1.605−03	1.279−03	9.713−04	7.066−04
9	141	2.478−03	2.532−03	2.570−03	2.561−03	2.467−03	2.267−03	1.971−03	1.617−03	1.254−03	9.258−04
10	11	1.049+01	1.036+01	9.915+00	9.038+00	7.851+00	6.601+00	5.479+00	4.571+00	3.884+00	3.384+00
10	12	3.973+00	3.962+00	3.782+00	3.407+00	2.910+00	2.386+00	1.900+00	1.491+00	1.173+00	9.406−01
10	13	6.982+00	6.760+00	6.270+00	5.635+00	5.006+00	4.499+00	4.157+00	3.970+00	3.898+00	3.891+00
10	14	1.053+00	9.376−01	8.007−01	6.544−01	5.121−01	3.849−01	2.793−01	1.967−01	1.352−01	9.104−02
10	15	1.410−01	1.271+00	1.088+00	8.885−01	6.948−01	5.232−01	3.810−01	2.696−01	1.862−01	1.259−01
10	16	5.457+00	5.096+00	4.561+00	3.879+00	3.144+00	2.441+00	1.826+00	1.323+00	9.326−01	6.417−01
10	17	8.809−01	8.529−01	7.776−01	6.769−01	5.747−01	4.862−01	4.177−01	3.692−01	3.386−01	3.243−01
10	18	2.904+00	2.790+00	2.521+00	2.166+00	1.799+00	1.472+00	1.207+00	1.008+00	8.676−01	7.810−01
10	19	1.678+01	1.739+01	1.844+01	2.135+01	2.615+01	3.101+01	3.470+01	3.741+01	4.035+01	4.482+01
10	20	2.694+00	2.440+00	2.100+00	1.720+00	1.351+00	1.021+00	7.476−01	5.315−01	3.686−01	2.503−01
10	21	1.920+00	1.626+00	1.343+00	1.085+00	8.586−01	6.663−01	5.099−01	3.887−01	2.991−01	2.358−01
10	22	3.772+00	3.215+00	2.691+00	2.222+00	1.820+00	1.490+00	1.234+00	1.046+00	9.172−01	8.341−01
10	23	1.056+01	9.044+00	7.684+00	6.556+00	5.681+00	5.060+00	4.677+00	4.500+00	4.483+00	4.572+00
10	24	1.142+00	1.003+00	8.789−01	7.695−01	6.698−01	5.782−01	4.962−01	4.258−01	3.685−01	3.254−01
10	25	2.755+00	2.406+00	2.105+00	1.850+00	1.632+00	1.443+00	1.285+00	1.156+00	1.059+00	9.945−01
10	26	1.584+01	1.505+01	1.442+01	1.406+01	1.397+01	1.413+01	1.447+01	1.492+01	1.543+01	1.592+01
10	27	3.276+00	2.865+00	2.472+00	2.088+00	1.711+00	1.352+00	1.028+00	7.551−01	5.372−01	3.722−01
10	28	1.076+00	9.682−01	8.499−01	7.247−01	5.974−01	4.761−01	3.685−01	2.783−01	2.058−01	1.491−01
10	29	1.962+00	1.799+00	1.627+00	1.436+00	1.225+00	1.006+00	7.945−01	6.041−01	4.435−01	3.154−01
10	30	1.236+00	1.173+00	1.087+00	9.829−01	8.695−01	7.616−01	6.717−01	6.069−01	5.695−01	5.583−01
10	31	4.168+00	4.243+00	4.327+00	4.453+00	4.673+00	5.049+00	5.629+00	6.438+00	7.503+00	8.840+00
10	32	2.566+01	2.862+01	3.782+01	5.493+01	7.220+01	8.290+01	8.783+01	9.129+01	9.697+01	1.067+02
10	33	6.406+00	6.970+00	8.735+00	1.166+01	1.435+01	1.598+01	1.693+01	1.794+01	1.953+01	2.185+01
10	34	5.390−01	5.022−01	4.551−01	4.024−01	3.472−01	2.937−01	2.448−01	2.016−01	1.637−01	1.304−01
10	35	9.046−02	8.597−02	7.965−02	7.112−02	6.059−02	4.935−02	3.888−02	3.005−02	2.305−02	1.762−02
10	36	2.408−01	2.317−01	2.147−01	1.911−01	1.631−01	1.345−01	1.086−01	8.683−02	6.914−02	5.474−02
10	37	1.454+00	1.380+00	1.299+00	1.231+00	1.190+00	1.195+00	1.258+00	1.387+00	1.580+00	1.829+00
10	38	7.977+00	8.176+00	8.500+00	9.023+00	9.868+00	1.120+01	1.317+01	1.583+01	1.922+01	2.325+01
10	39	1.369−01	1.275−01	1.161−01	1.037−01	9.108−02	7.880−02	6.731−02	5.680−02	4.725−02	3.862−02
10	40	4.987−01	4.631−01	4.168−01	3.659−01	3.139−01	2.641−01	2.193−01	1.802−01	1.467−01	1.179−01
10	41	1.182+00	1.099+00	9.974−01	8.898−01	7.860−01	6.966−01	6.309−01	5.929−01	5.820−01	5.950−01
10	42	8.638−01	7.708−01	6.601−01	5.454−01	4.348−01	3.340−01	2.472−01	1.767−01	1.225−01	8.281−02
10	43	1.435+00	1.339+00	1.194+00	1.017+00	8.280−01	6.495−01	4.941−01	3.664−01	2.657−01	1.886−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	*j*	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
10	44	3.698−01	3.507−01	3.196−01	2.775−01	2.292−01	1.814−01	1.390−01	1.037−01	7.577−02	5.417−02
10	45	2.296−01	2.062−01	1.778−01	1.454−01	1.126−01	8.304−02	5.881−02	4.037−02	2.708−02	1.786−02
10	46	2.002−01	1.957−01	1.805−01	1.568−01	1.299−01	1.042−01	8.217−02	6.435−02	5.028−02	3.917−02
10	47	4.819−01	4.789−01	4.477−01	3.955−01	3.355−01	2.780−01	2.283−01	1.874−01	1.540−01	1.260−01
10	48	1.050+00	1.082+00	1.040+00	9.404−01	8.191−01	7.042−01	6.093−01	5.358−01	4.784−01	4.300−01
10	49	6.036−02	5.793−02	5.210−02	4.423−02	3.586−02	2.808−02	2.145−02	1.609−02	1.189−02	8.692−03
10	50	3.766−01	3.740−01	3.556−01	3.283−01	2.986−01	2.700−01	2.431−01	2.168−01	1.903−01	1.634−01
10	51	8.252−01	8.073−01	7.541−01	6.829−01	6.089−01	5.390−01	4.742−01	4.130−01	3.539−01	2.972−01
10	52	3.961−01	3.898−01	3.702−01	3.427−01	3.122−01	2.819−01	2.533−01	2.263−01	1.997−01	1.730−01
10	53	7.458−01	6.817−01	5.951−01	4.974−01	3.996−01	3.094−01	2.314−01	1.674−01	1.176−01	8.051−02
10	54	5.832−02	5.200−02	4.478−02	3.736−02	3.019−02	2.364−02	1.796−02	1.327−02	9.543−03	6.698−03
10	55	2.471−01	2.059−01	1.688−01	1.358−01	1.064−01	8.095−02	5.972−02	4.286−02	3.005−02	2.070−02
10	56	2.168−01	1.900−01	1.645−01	1.403−01	1.174−01	9.603−02	7.683−02	6.021−02	4.631−02	3.506−02
10	57	5.363−01	4.733−01	4.182−01	3.697−01	3.252−01	2.835−01	2.447−01	2.089−01	1.762−01	1.468−01
10	58	1.313+00	1.176+00	1.067+00	9.791−01	9.046−01	8.380−01	7.762−01	7.171−01	6.608−01	6.086−01
10	59	7.589−02	6.552−02	5.608−02	4.749−02	3.960−02	3.245−02	2.615−02	2.076−02	1.625−02	1.255−02
10	60	2.943−01	2.654−01	2.407−01	2.195−01	2.006−01	1.830−01	1.662−01	1.496−01	1.329−01	1.161−01
10	61	9.951−01	9.013−01	8.302−01	7.757−01	7.325−01	6.957−01	6.592−01	6.174−01	5.672−01	5.090−01
10	62	6.986−01	6.749−01	6.509−01	6.272−01	6.047−01	5.839−01	5.638−01	5.424−01	5.189−01	4.944−01
10	63	1.115−01	9.992−02	8.821−02	7.693−02	6.607−02	5.576−02	4.623−02	3.761−02	3.002−02	2.352−02
10	64	2.338−02	2.101−02	1.863−02	1.627−02	1.398−02	1.182−02	9.882−03	8.190−03	6.733−03	5.490−03
10	65	7.272−01	6.892−01	6.538−01	6.216−01	5.805−01	5.279−01	4.716−01	4.197−01	3.762−01	3.417−01
10	66	1.014−01	9.337−02	8.409−02	7.416−02	6.405−02	5.434−02	4.564−02	3.829−02	3.235−02	2.767−02
10	67	3.395−01	3.217−01	3.005−01	2.779−01	2.547−01	2.316−01	2.106−01	1.928−01	1.786−01	1.675−01
10	68	7.240−01	6.806−01	6.383−01	5.975−01	5.503−01	4.958−01	4.406−01	3.912−01	3.505−01	3.186−01
10	69	1.728−01	1.561−01	1.367−01	1.155−01	9.363−02	7.251−02	5.385−02	3.861−02	2.694−02	1.843−02
10	70	2.156−01	1.974−01	1.781−01	1.570−01	1.345−01	1.117−01	9.036−02	7.152−02	5.568−02	4.281−02
10	71	5.229−01	5.031−01	4.814−01	4.562−01	4.257−01	3.904−01	3.524−01	3.131−01	2.736−01	2.345−01
10	72	2.034+00	2.046+00	2.089+00	2.140+00	2.156+00	2.118+00	2.032+00	1.904+00	1.743+00	1.554+00
10	73	5.436−01	4.964−01	4.420−01	3.836−01	3.231−01	2.626−01	2.052−01	1.541−01	1.114−01	7.797−02
10	74	3.134−01	2.527−01	2.012−01	1.585−01	1.235−01	9.498−02	7.204−02	5.383−02	3.957−02	2.859−02
10	75	5.903−01	5.698−01	5.587−01	5.497−01	5.333−01	5.077−01	4.774−01	4.480−01	4.226−01	4.012−01
10	76	3.080−01	2.565−01	2.166−01	1.850−01	1.585−01	1.354−01	1.151−01	9.708−02	8.115−02	6.707−02
10	77	7.005−02	6.103−02	5.312−02	4.594−02	3.916−02	3.279−02	2.700−02	2.195−02	1.764−02	1.404−02
10	78	9.677−02	9.080−02	8.223−02	7.201−02	6.101−02	5.002−02	3.965−02	3.034−02	2.239−02	1.596−02
10	79	1.742−01	1.663−01	1.575−01	1.490−01	1.422−01	1.375−01	1.350−01	1.342−01	1.344−01	1.350−01
10	80	7.229−01	7.222−01	7.217−01	7.295−01	7.533−01	7.976−01	8.623−01	9.425−01	1.031+00	1.117+00
10	81	2.020+00	2.053+00	2.093+00	2.165+00	2.293+00	2.495+00	2.770+00	3.102+00	3.463+00	3.817+00
10	82	4.543−02	4.208−02	3.874−02	3.543−02	3.218−02	2.896−02	2.562−02	2.204−02	1.828−02	1.455−02
10	83	8.215−01	9.919−01	1.011+00	9.268−01	8.153−01	7.280−01	6.840−01	6.816−01	7.105−01	7.565−01
10	84	7.112−01	7.060−01	7.081−01	7.253−01	7.674−01	8.425−01	9.518−01	1.089+00	1.244+00	1.400+00
10	85	3.201−01	3.007−01	2.792−01	2.551−01	2.287−01	2.002−01	1.701−01	1.394−01	1.099−01	8.331−02
10	86	5.775−01	5.632−01	5.421−01	5.090−01	4.642−01	4.107−01	3.513−01	2.894−01	2.292−01	1.746−01
10	87	7.814−02	7.508−02	6.893−02	6.064−02	5.159−02	4.291−02	3.520−02	2.860−02	2.306−02	1.844−02
10	88	2.267−01	2.159−01	1.990−01	1.781−01	1.554−01	1.329−01	1.113−01	9.145−02	7.367−02	5.822−02
10	89	1.555+00	1.598+00	1.652+00	1.722+00	1.816+00	1.938+00	2.083+00	2.243+00	2.411+00	2.575+00
10	90	2.983−01	2.836−01	2.591−01	2.280−01	1.938−01	1.591−01	1.260−01	9.631−02	7.112−02	5.091−02
10	91	4.647−02	4.473−02	4.206−02	3.872−02	3.504−02	3.112−02	2.688−02	2.238−02	1.787−02	1.369−02
10	92	1.292−01	1.237−01	1.122−01	9.691−02	8.051−02	6.473−02	5.050−02	3.827−02	2.822−02	2.027−02
10	93	4.464−02	4.277−02	3.829−02	3.267−02	2.714−02	2.221−02	1.798−02	1.436−02	1.129−02	8.718−03
10	94	1.142−01	1.128−01	1.079−01	1.009−01	9.360−02	8.674−02	8.041−02	7.452−02	6.912−02	6.433−02
10	95	3.092−01	3.148−01	3.148−01	3.129−01	3.129−01	3.159−01	3.212−01	3.274−01	3.336−01	3.395−01
10	96	6.015−02	5.728−02	5.130−02	4.366−02	3.591−02	2.890−02	2.291−02	1.793−02	1.386−02	1.058−02
10	97	1.826−01	1.719−01	1.561−01	1.375−01	1.190−01	1.022−01	8.743−02	7.476−02	6.420−02	5.577−02
10	98	7.859−01	7.582−01	6.869−01	6.058−01	5.363−01	4.854−01	4.518−01	4.318−01	4.225−01	4.223−01
10	99	2.109−01	2.113−01	2.084−01	2.057−01	2.058−01	2.090−01	2.141−01	2.200−01	2.255−01	2.301−01
10	100	6.634−02	6.336−02	5.841−02	5.280−02	4.737−02	4.228−02	3.732−02	3.229−02	2.719−02	2.218−02
10	101	3.724−02	3.310−02	2.796−02	2.320−02	1.938−02	1.644−02	1.412−02	1.211−02	1.022−02	8.420−03
10	102	2.930−01	2.787−01	2.540−01	2.237−01	1.910−01	1.577−01	1.255−01	9.620−02	7.118−02	5.103−02
10	103	8.743−02	8.055−02	7.158−02	6.197−02	5.249−02	4.339−02	3.482−02	2.703−02	2.028−02	1.472−02
10	104	1.289−01	1.125−01	9.803−02	8.528−02	7.368−02	6.265−02	5.196−02	4.178−02	3.247−02	2.438−02
10	105	2.855−02	2.502−02	2.204−02	1.962−02	1.760−02	1.581−02	1.417−02	1.264−02	1.126−02	1.005−02
10	106	7.328−02	6.720−02	6.241−02	5.904−02	5.689−02	5.568−02	5.519−02	5.524−02	5.574−02	5.650−02
10	107	1.486−01	1.383−01	1.307−01	1.259−01	1.236−01	1.235−01	1.249−01	1.276−01	1.314−01	1.356−01
10	108	4.443−02	3.936−02	3.489−02	3.092−02	2.719−02	2.348−02	1.973−02	1.603−02	1.257−02	9.497−03
10	109	3.899−02	3.311−02	2.809−02	2.389−02	2.033−02	1.722−02	1.446−02	1.203−02	9.927−03	8.178−03
10	110	1.134−01	1.038−01	9.534−02	8.792−02	8.112−02	7.466−02	6.853−02	6.292−02	5.807−02	5.410−02
10	111	2.573−01	2.432−01	2.331−01	2.271−01	2.249−01	2.262−01	2.309−01	2.388−01	2.495−01	2.616−01
10	112	4.158−02	3.974−02	3.829−02	3.721−02	3.640−02	3.580−02	3.544−02	3.542−02	3.581−02	3.654−02
10	113	2.436−01	2.377−01	2.339−01	2.320−01	2.311−01	2.298−01	2.271−01	2.220−01	2.140−01	2.033−01
10	114	1.005−01	9.692−02	9.430−02	9.224−02	9.010−02	8.729−02	8.348−02	7.865−02	7.300−02	6.687−02
10	115	3.108−02	2.894−02	2.719−02	2.565−02	2.404−02	2.213−02	1.986−02	1.733−02	1.473−02	1.228−02
10	116	7.053−02	6.368−02	5.688−02	5.009−02	4.324−02	3.635−02	2.959−02	2.324−02	1.760−02	1.287−02
10	117	2.522−02	2.297−02	2.085−02	1.878−02	1.670−02	1.461−02	1.256−02	1.066−02	8.972−03	7.554−03

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
10	118	7.102−02	6.831−02	6.595−02	6.386−02	6.179−02	5.951−02	5.694−02	5.414−02	5.128−02	4.852−02
10	119	1.842−01	1.840−01	1.860−01	1.907−01	1.975−01	2.055−01	2.135−01	2.205−01	2.259−01	2.290−01
10	120	2.077−02	1.981−02	1.911−02	1.854−02	1.799−02	1.739−02	1.671−02	1.599−02	1.528−02	1.461−02
10	121	5.241−02	5.153−02	5.130−02	5.162−02	5.232−02	5.321−02	5.417−02	5.507−02	5.579−02	5.619−02
10	122	1.047−01	1.032−01	1.026−01	1.030−01	1.042−01	1.059−01	1.077−01	1.092−01	1.099−01	1.095−01
10	123	4.405−02	3.946−02	3.504−02	3.071−02	2.640−02	2.208−02	1.788−02	1.397−02	1.053−02	7.665−03
10	124	1.003−02	1.005−02	1.002−02	9.856−03	9.455−03	8.737−03	7.711−03	6.471−03	5.164−03	3.933−03
10	125	5.283−02	5.413−02	5.590−02	5.808−02	6.037−02	6.235−02	6.353−02	6.354−02	6.225−02	5.970−02
10	126	1.120−01	1.146−01	1.181−01	1.222−01	1.265−01	1.300−01	1.317−01	1.310−01	1.275−01	1.217−01
10	127	9.630−02	9.408−02	9.130−02	8.717−02	8.078−02	7.183−02	6.086−02	4.907−02	3.774−02	2.782−02
10	128	2.104−01	2.043−01	1.966−01	1.860−01	1.708−01	1.507−01	1.268−01	1.016−01	7.785−02	5.724−02
10	129	3.061−02	3.025−02	2.986−02	2.927−02	2.831−02	2.689−02	2.501−02	2.279−02	2.038−02	1.795−02
10	130	1.172−01	1.177−01	1.184−01	1.188−01	1.183−01	1.164−01	1.128−01	1.075−01	1.008−01	9.297−02
10	131	2.841−01	2.856−01	2.884−01	2.912−01	2.926−01	2.911−01	2.857−01	2.760−01	2.621−01	2.446−01
10	132	2.616−02	2.642−02	2.662−02	2.666−02	2.644−02	2.589−02	2.502−02	2.388−02	2.255−02	2.113−02
10	133	6.371−02	6.479−02	6.597−02	6.705−02	6.779−02	6.799−02	6.752−02	6.630−02	6.437−02	6.180−02
10	134	8.805−02	8.920−02	9.058−02	9.201−02	9.329−02	9.415−02	9.426−02	9.329−02	9.096−02	8.714−02
10	135	3.328−02	3.412−02	3.540−02	3.723−02	3.959−02	4.230−02	4.498−02	4.706−02	4.799−02	4.740−02
10	136	2.203−02	2.280−02	2.378−02	2.492−02	2.615−02	2.738−02	2.852−02	2.947−02	3.014−02	3.044−02
10	137	9.028−03	9.410−03	9.910−03	1.052−02	1.121−02	1.195−02	1.270−02	1.338−02	1.394−02	1.432−02
10	138	7.164−02	6.849−02	6.404−02	5.813−02	5.088−02	4.273−02	3.437−02	2.649−02	1.964−02	1.406−02
10	139	1.114−01	1.073−01	1.012−01	9.271−02	8.192−02	6.946−02	5.638−02	4.382−02	3.270−02	2.353−02
10	140	2.394−02	2.296−02	2.162−02	1.984−02	1.760−02	1.501−02	1.226−02	9.581−03	7.182−03	5.186−03
10	141	2.559−02	2.612−02	2.643−02	2.614−02	2.489−02	2.255−02	1.934−02	1.570−02	1.211−02	8.935−03
11	12	6.578+00	6.453+00	6.184+00	5.711+00	5.138+00	4.569+00	4.022+00	3.510+00	3.063+00	2.699+00
11	13	4.926+00	4.780+00	4.463+00	4.152+00	4.027+00	4.010+00	3.928+00	3.745+00	3.526+00	3.329+00
11	14	7.447−01	6.639−01	5.683−01	4.659−01	3.658−01	2.759−01	2.009−01	1.419−01	9.770−02	6.587−02
11	15	9.983−01	9.003−01	7.717−01	6.306−01	4.936−01	3.719−01	2.710−01	1.918−01	1.325−01	8.964−02
11	16	3.950+00	3.684+00	3.294+00	2.798+00	2.265+00	1.756+00	1.313+00	9.505−01	6.694−01	4.604−01
11	17	8.206−01	7.855−01	7.031−01	5.916−01	4.732−01	3.634−01	2.699−01	1.951−01	1.379−01	9.580−02
11	18	8.194+00	8.561+00	8.984+00	9.676+00	1.078+01	1.232+01	1.419+01	1.627+01	1.875+01	2.201+01
11	19	5.611+00	5.611+00	5.462+00	5.274+00	5.181+00	5.292+00	5.629+00	6.140+00	6.857+00	7.889+00
11	20	1.922+00	1.745+00	1.505+00	1.235+00	9.721−01	7.376−01	5.426−01	3.891−01	2.738−01	1.909−01
11	21	2.397+00	2.047+00	1.721+00	1.437+00	1.202+00	1.014+00	8.730−01	7.746−01	7.114−01	6.749−01
11	22	5.771+00	5.021+00	4.332+00	3.757+00	3.317+00	3.017+00	2.855+00	2.813+00	2.865+00	2.975+00
11	23	3.242+00	2.719+00	2.235+00	1.805+00	1.434+00	1.124+00	8.744−01	6.819−01	5.389−01	4.366−01
11	24	1.539+00	1.355+00	1.206+00	1.098+00	1.013+00	9.337−01	8.557−01	7.852−01	7.296−01	6.950−01
11	25	8.884+00	8.691+00	8.594+00	8.624+00	8.785+00	9.062+00	9.426+00	9.834+00	1.025+01	1.063+01
11	26	2.690+00	2.359+00	2.073+00	1.831+00	1.621+00	1.438+00	1.283+00	1.156+00	1.058+00	9.947−01
11	27	2.343+00	2.050+00	1.769+00	1.493+00	1.223+00	9.663−01	7.352−01	5.399−01	3.842−01	2.664−01
11	28	8.024−01	7.246−01	6.355−01	5.401−01	4.435−01	3.521−01	2.716−01	2.045−01	1.508−01	1.091−01
11	29	1.419+00	1.298+00	1.173+00	1.034+00	8.812−01	7.231−01	5.707−01	4.338−01	3.183−01	2.263−01
11	30	3.296+00	3.442+00	3.793+00	4.602+00	5.701+00	6.644+00	7.293+00	7.832+00	8.511+00	9.483+00
11	31	1.671+01	1.797+01	1.993+01	2.291+01	2.678+01	3.148+01	3.723+01	4.435+01	5.319+01	6.399+01
11	32	1.998+00	1.925+00	1.808+00	1.648+00	1.457+00	1.257+00	1.071+00	9.102−01	7.810−01	6.828−01
11	33	1.137+00	1.149+00	1.163+00	1.186+00	1.233+00	1.321+00	1.464+00	1.667+00	1.932+00	2.254+00
11	34	3.297+00	3.433+00	3.677+00	4.065+00	4.590+00	5.281+00	6.199+00	7.393+00	8.887+00	1.066+01
11	35	3.232−01	2.919−01	2.544−01	2.189−01	1.869−01	1.582−01	1.327−01	1.101−01	8.976−02	7.165−02
11	36	9.807−01	1.004+00	1.046+00	1.110+00	1.184+00	1.273+00	1.401+00	1.586+00	1.837+00	2.152+00
11	37	4.537+00	4.789+00	5.630+00	7.318+00	9.233+00	1.067+01	1.163+01	1.256+01	1.383+01	1.561+01
11	38	1.663+00	1.653+00	1.645+00	1.656+00	1.706+00	1.823+00	2.033+00	2.344+00	2.760+00	3.269+00
11	39	1.494−01	1.375−01	1.235−01	1.095−01	9.454−02	7.876−02	6.362−02	5.035−02	3.938−02	3.056−02
11	40	5.012−01	4.688−01	4.288−01	3.870−01	3.481−01	3.168−01	2.968−01	2.897−01	2.953−01	3.121−01
11	41	6.457−01	5.970−01	5.387−01	4.767−01	4.144−01	3.563−01	3.062−01	2.658−01	2.349−01	2.123−01
11	42	6.143−01	5.487−01	4.704−01	3.888−01	3.101−01	2.382−01	1.763−01	1.260−01	8.740−02	5.913−02
11	43	1.024+00	9.528−01	8.477−01	7.203−01	5.863−01	4.599−01	3.500−01	2.597−01	1.884−01	1.337−01
11	44	2.634−01	2.504−01	2.286−01	1.986−01	1.640−01	1.298−01	9.936−02	7.420−02	5.428−02	3.896−02
11	45	1.711−01	1.540−01	1.333−01	1.094−01	8.501−02	6.297−02	4.488−02	3.109−02	2.113−02	1.418−02
11	46	2.554−01	2.498−01	2.331−01	2.076−01	1.790−01	1.518−01	1.284−01	1.090−01	9.264−02	7.820−02
11	47	4.679−01	4.801−01	4.586−01	4.124−01	3.584−01	3.099−01	2.726−01	2.462−01	2.272−01	2.116−01
11	48	4.719−01	4.759−01	4.502−01	3.991−01	3.369−01	2.764−01	2.244−01	1.821−01	1.482−01	1.204−01
11	49	1.511−01	1.514−01	1.472−01	1.404−01	1.328−01	1.250−01	1.167−01	1.074−01	9.660−02	8.452−02
11	50	2.424−01	2.333−01	2.119−01	1.838−01	1.544−01	1.270−01	1.028−01	8.183−02	6.399−02	4.910−02
11	51	4.898−01	4.915−01	4.651−01	4.219−01	3.744−01	3.295−01	2.889−01	2.517−01	2.165−01	1.829−01
11	52	3.160−01	3.123−01	2.989−01	2.793−01	2.572−01	2.352−01	2.144−01	1.942−01	1.734−01	1.515−01
11	53	5.359−01	4.917−01	4.303−01	3.601−01	2.892−01	2.237−01	1.671−01	1.207−01	8.470−02	5.794−02
11	54	4.271−01	3.852−02	3.337−02	2.786−02	2.246−02	1.753−02	1.328−02	9.782−03	7.023−03	4.923−03
11	55	1.897−01	1.577−01	1.292−01	1.039−01	8.168−02	6.249−02	4.655−02	3.384−02	2.410−02	1.690−02
11	56	3.293−01	2.919−01	2.588−01	2.296−01	2.034−01	1.797−01	1.580−01	1.379−01	1.191−01	1.018−01
11	57	6.863−01	6.145−01	5.581−01	5.138−01	4.781−01	4.482−01	4.218−01	3.974−01	3.746−01	3.539−01
11	58	3.749−01	3.245−01	2.767−01	2.324−01	1.920−01	1.556−01	1.235−01	9.614−02	7.340−02	5.506−02
11	59	1.905−01	1.778−01	1.661−01	1.552−01	1.452−01	1.356−01	1.260−01	1.156−01	1.042−01	9.199−02
11	60	4.016−01	3.821−01	3.660−01	3.523−01	3.407−01	3.298−01	3.173−01	3.007−01	2.786−01	2.515−01
11	61	3.370−01	3.016−01	2.723−01	2.475−01	2.260−01	2.068−01	1.885−01	1.698−01	1.500−01	1.292−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
11	62	2.565−01	2.406−01	2.248−01	2.096−01	1.954−01	1.824−01	1.703−01	1.583−01	1.462−01	1.343−01
11	63	3.214−01	3.164−01	3.099−01	3.026−01	2.955−01	2.891−01	2.828−01	2.754−01	2.664−01	2.564−01
11	64	3.940−02	3.587−02	3.226−02	2.864−02	2.503−02	2.147−02	1.799−02	1.464−02	1.155−02	8.824−03
11	65	3.388−01	3.034−01	2.625−01	2.208−01	1.813−01	1.462−01	1.168−01	9.356−02	7.595−02	6.314−02
11	66	2.484−01	2.376−01	2.234−01	2.078−01	1.920−01	1.774−01	1.648−01	1.546−01	1.468−01	1.410−01
11	67	3.889−01	3.797−01	3.661−01	3.505−01	3.343−01	3.183−01	3.034−01	2.898−01	2.776−01	2.666−01
11	68	3.434−01	3.096−01	2.707−01	2.309−01	1.931−01	1.595−01	1.313−01	1.088−01	9.162−02	7.882−02
11	69	1.378−01	1.248−01	1.100−01	9.387−02	7.723−02	6.119−02	4.693−02	3.514−02	2.590−02	1.892−02
11	70	4.064−01	3.986−01	3.890−01	3.761−01	3.588−01	3.372−01	3.119−01	2.837−01	2.529−01	2.205−01
11	71	1.270+00	1.283+00	1.299+00	1.312+00	1.317+00	1.307+00	1.275+00	1.218+00	1.133+00	1.024+00
11	72	3.605−01	3.201−01	2.795−01	2.393−01	1.997−01	1.618−01	1.273−01	9.756−02	7.320−02	5.400−02
11	73	3.824−01	3.506−01	3.129−01	2.719−01	2.292−01	1.865−01	1.459−01	1.096−01	7.932−02	5.553−02
11	74	2.327−01	1.910−01	1.549−01	1.246−01	9.920−02	7.828−02	6.140−02	4.813−02	3.796−02	3.033−02
11	75	1.889−01	1.774−01	1.659−01	1.539−01	1.408−01	1.269−01	1.126−01	9.843−02	8.472−02	7.176−02
11	76	2.782−01	2.674−01	2.595−01	2.524−01	2.443−01	2.349−01	2.256−01	2.181−01	2.131−01	2.102−01
11	77	1.248−01	1.176−01	1.106−01	1.035−01	9.584−02	8.758−02	7.886−02	6.986−02	6.080−02	5.192−02
11	78	6.859−02	6.437−02	5.826−02	5.097−02	4.313−02	3.533−02	2.799−02	2.141−02	1.581−02	1.129−02
11	79	6.114−01	6.163−01	6.219−01	6.359−01	6.654−01	7.144−01	7.826−01	8.655−01	9.557−01	1.044+00
11	80	9.011−01	9.163−01	9.351−01	9.694−01	1.031+00	1.128+00	1.261+00	1.420+00	1.594+00	1.763+00
11	81	5.710−01	5.659−01	5.608−01	5.620−01	5.749−01	6.027−01	6.449−01	6.981−01	7.568−01	8.145−01
11	82	2.291−01	2.482−01	2.549−01	2.566−01	2.638−01	2.838−01	3.189−01	3.671−01	4.239−01	4.825−01
11	83	2.176−01	2.279−01	2.221−01	2.060−01	1.883−01	1.746−01	1.663−01	1.628−01	1.627−01	1.645−01
11	84	4.371−01	4.327−01	4.329−01	4.433−01	4.702−01	5.182−01	5.877−01	6.750−01	7.729−01	8.715−01
11	85	2.282−01	2.143−01	1.989−01	1.817−01	1.629−01	1.426−01	1.212−01	9.932−02	7.828−02	5.935−02
11	86	4.108−01	3.984−01	3.814−01	3.571−01	3.258−01	2.887−01	2.475−01	2.044−01	1.621−01	1.237−01
11	87	1.485−01	1.408−01	1.300−01	1.173−01	1.036−01	8.963−02	7.581−02	6.258−02	5.041−02	3.966−02
11	88	9.398−01	9.670−01	1.008+00	1.070+00	1.156+00	1.264+00	1.389+00	1.523+00	1.660+00	1.791+00
11	89	2.265−01	2.149−01	1.975−01	1.764−01	1.540−01	1.317−01	1.105−01	9.090−02	7.330−02	5.798−02
11	90	2.123−01	2.018−01	1.843−01	1.622−01	1.379−01	1.132−01	8.973−02	6.859−02	5.066−02	3.626−02
11	91	3.333−02	3.207−02	3.013−02	2.772−02	2.507−02	2.225−02	1.921−02	1.599−02	1.277−02	9.776−03
11	92	8.650−02	8.266−02	7.532−02	6.555−02	5.490−02	4.446−02	3.489−02	2.657−02	1.966−02	1.416−02
11	93	7.406−02	7.458−02	7.302−02	7.032−02	6.738−02	6.455−02	6.179−02	5.902−02	5.632−02	5.380−02
11	94	1.354−01	1.393−01	1.407−01	1.417−01	1.443−01	1.489−01	1.552−01	1.621−01	1.690−01	1.756−01
11	95	1.226−01	1.213−01	1.143−01	1.046−01	9.460−02	8.544−02	7.722−02	6.979−02	6.310−02	5.718−02
11	96	1.222−01	1.195−01	1.121−01	1.022−01	9.158−02	8.140−02	7.202−02	6.366−02	5.652−02	5.079−02
11	97	2.411−01	2.396−01	2.343−01	2.289−01	2.268−01	2.290−01	2.348−01	2.433−01	2.539−01	2.668−01
11	98	1.511−01	1.442−01	1.300−01	1.120−01	9.364−02	7.667−02	6.162−02	4.859−02	3.754−02	2.840−02
11	99	1.063−01	1.022−01	9.553−02	8.857−02	8.269−02	7.804−02	7.414−02	7.047−02	6.681−02	6.315−02
11	100	9.445−02	9.518−02	9.509−02	9.568−02	9.793−02	1.019−01	1.068−01	1.119−01	1.165−01	1.204−01
11	101	1.837−02	1.757−02	1.624−02	1.463−02	1.292−02	1.116−02	9.373−03	7.624−03	5.995−03	4.563−03
11	102	2.058−01	1.965−01	1.797−01	1.587−01	1.358−01	1.124−01	8.957−02	6.874−02	5.090−02	3.651−02
11	103	6.163−02	5.679−02	5.048−02	4.372−02	3.704−02	3.062−02	2.458−02	1.908−02	1.432−02	1.040−02
11	104	9.197−02	8.040−02	7.008−02	6.099−02	5.270−02	4.481−02	3.716−02	2.988−02	2.322−02	1.743−02
11	105	4.481−02	4.211−02	4.021−02	3.921−02	3.901−02	3.949−02	4.050−02	4.194−02	4.367−02	4.548−02
11	106	6.012−02	5.492−02	5.075−02	4.768−02	4.554−02	4.407−02	4.310−02	4.255−02	4.237−02	4.248−02
11	107	7.337−02	6.718−02	6.232−02	5.892−02	5.676−02	5.553−02	5.502−02	5.507−02	5.558−02	5.634−02
11	108	3.175−02	2.813−02	2.493−02	2.210−02	1.943−02	1.678−02	1.410−02	1.146−02	8.979−03	6.785−03
11	109	9.318−02	8.692−02	8.138−02	7.634−02	7.154−02	6.682−02	6.222−02	5.795−02	5.425−02	5.123−02
11	110	1.136−01	1.080−01	1.050−01	1.050−01	1.080−01	1.141−01	1.231−01	1.345−01	1.475−01	1.610−01
11	111	8.276−02	7.446−02	6.689−02	5.983−02	5.293−02	4.591−02	3.877−02	3.173−02	2.511−02	1.923−02
11	112	2.979−02	2.846−02	2.740−02	2.661−02	2.602−02	2.557−02	2.530−02	2.528−02	2.555−02	2.608−02
11	113	8.246−02	7.921−02	7.671−02	7.462−02	7.239−02	6.955−02	6.584−02	6.130−02	5.619−02	5.082−02
11	114	1.023−01	9.983−02	9.857−02	9.834−02	9.868−02	9.906−02	9.891−02	9.775−02	9.529−02	9.142−02
11	115	7.977−02	7.774−02	7.642−02	7.552−02	7.458−02	7.314−02	7.092−02	6.782−02	6.393−02	5.944−02
11	116	4.947−02	4.465−02	3.994−02	3.524−02	3.049−02	2.568−02	2.094−02	1.647−02	1.249−02	9.139−03
11	117	5.743−02	5.647−02	5.584−02	5.537−02	5.477−02	5.383−02	5.246−02	5.070−02	4.871−02	4.666−02
11	118	9.547−02	9.675−02	9.974−02	1.046−01	1.113−01	1.191−01	1.273−01	1.351−01	1.417−01	1.465−01
11	119	4.435−02	4.101−02	3.763−02	3.417−02	3.047−02	2.644−02	2.216−02	1.788−02	1.386−02	1.036−02
11	120	3.751−02	3.751−02	3.801−02	3.895−02	4.021−02	4.166−02	4.320−02	4.468−02	4.595−02	4.685−02
11	121	4.015−02	3.930−02	3.879−02	3.851−02	3.830−02	3.798−02	3.743−02	3.653−02	3.523−02	3.349−02
11	122	4.587−02	4.492−02	4.451−02	4.460−02	4.505−02	4.572−02	4.648−02	4.724−02	4.790−02	4.832−02
11	123	2.863−02	2.613−02	2.361−02	2.098−02	1.822−02	1.536−02	1.250−02	9.804−03	7.408−03	5.405−03
11	124	2.318−02	2.415−02	2.550−02	2.731−02	2.953−02	3.198−02	3.429−02	3.608−02	3.703−02	3.698−02
11	125	3.433−02	3.473−02	3.506−02	3.510−02	3.452−02	3.307−02	3.070−02	2.757−02	2.404−02	2.049−02
11	126	6.742−02	6.908−02	7.129−02	7.398−02	7.677−02	7.912−02	8.043−02	8.026−02	7.845−02	7.509−02
11	127	6.656−02	6.540−02	6.375−02	6.104−02	5.667−02	5.045−02	4.277−02	3.449−02	2.652−02	1.955−02
11	128	1.497−01	1.455−01	1.402−01	1.327−01	1.219−01	1.075−01	9.049−02	7.256−02	5.557−02	4.086−02
11	129	1.010−01	1.023−01	1.037−01	1.048−01	1.051−01	1.041−01	1.016−01	9.760−02	9.214−02	8.557−02
11	130	1.183−01	1.201−01	1.221−01	1.240−01	1.251−01	1.249−01	1.229−01	1.190−01	1.132−01	1.058−01
11	131	8.362−02	8.342−02	8.341−02	8.321−02	8.234−02	8.046−02	7.740−02	7.322−02	6.814−02	6.246−02
11	132	3.777−02	3.866−02	3.968−02	4.073−02	4.168−02	4.239−02	4.273−02	4.259−02	4.193−02	4.072−02
11	133	2.532−02	2.521−02	2.504−02	2.477−02	2.438−02	2.386−02	2.313−02	2.211−02	2.073−02	1.894−02
11	134	6.370−02	6.479−02	6.597−02	6.705−02	6.779−02	6.800−02	6.752−02	6.631−02	6.439−02	6.181−02
11	135	2.574−02	2.654−02	2.762−02	2.894−02	3.045−02	3.203−02	3.352−02	3.474−02	3.550−02	3.567−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
11	136	1.727−02	1.792−02	1.887−02	2.017−02	2.184−02	2.381−02	2.583−02	2.756−02	2.867−02	2.889−02
11	137	2.826−03	2.827−03	2.811−03	2.757−03	2.646−03	2.468−03	2.222−03	1.925−03	1.602−03	1.284−03
11	138	5.136−02	4.905−02	4.583−02	4.158−02	3.638−02	3.055−02	2.457−02	1.894−02	1.404−02	1.005−02
11	139	7.950−02	7.662−02	7.226−02	6.619−02	5.849−02	4.959−02	4.025−02	3.128−02	2.335−02	1.680−02
11	140	1.712−02	1.641−02	1.546−02	1.418−02	1.258−02	1.073−02	8.759−03	6.846−03	5.132−03	3.706−03
11	141	1.828−02	1.866−02	1.888−02	1.868−02	1.778−02	1.611−02	1.382−02	1.122−02	8.654−03	6.383−03
12	13	2.938+00	2.855+00	2.659+00	2.404+00	2.160+00	1.968+00	1.834+00	1.753+00	1.713+00	1.699+00
12	14	4.428−01	3.947−01	3.379−01	2.768−01	2.169−01	1.632−01	1.184−01	8.344−02	5.735−02	3.863−02
12	15	5.900−01	5.318−01	4.558−01	3.726−01	2.917−01	2.199−01	1.604−01	1.136−01	7.853−02	5.316−02
12	16	2.392+00	2.227+00	1.987+00	1.685+00	1.362+00	1.055+00	7.881−01	5.704−01	4.017−01	2.763−01
12	17	3.154+00	3.335+00	3.550+00	3.846+00	4.287+00	4.939+00	5.799+00	6.795+00	7.975+00	9.495+00
12	18	3.470+00	3.552+00	3.621+00	3.792+00	4.134+00	4.613+00	5.164+00	5.753+00	6.467+00	7.458+00
12	19	2.142+00	2.085+00	1.919+00	1.708+00	1.513+00	1.359+00	1.245+00	1.166+00	1.128+00	1.143+00
12	20	1.146+00	1.041+00	8.979−01	7.370−01	5.797−01	4.396−01	3.228−01	2.308−01	1.615−01	1.115−01
12	21	3.605+00	3.146+00	2.728+00	2.394+00	2.153+00	2.000+00	1.926+00	1.921+00	1.971+00	2.056+00
12	22	1.725+00	1.451+00	1.194+00	9.684−01	7.766−01	6.185−01	4.925−01	3.953−01	3.223−01	2.694−01
12	23	1.532+00	1.276+00	1.040+00	8.306−01	6.501−01	4.985−01	3.761−01	2.817−01	2.122−01	1.631−01
12	24	5.010+00	4.982+00	4.983+00	5.048+00	5.184+00	5.383+00	5.626+00	5.888+00	6.149+00	6.388+00
12	25	1.517+00	1.338+00	1.205+00	1.148+00	1.139+00	1.113+00	1.045+00	9.496−01	8.567−01	7.862−01
12	26	1.126+00	9.918−01	8.728−01	7.675−01	6.705−01	5.803−01	4.986−01	4.279−01	3.701−01	3.267−01
12	27	1.417+00	1.237+00	1.065+00	8.977−01	7.341−01	5.792−01	4.403−01	3.231−01	2.298−01	1.591−01
12	28	4.953−01	4.458−01	3.904−01	3.324−01	2.746−01	2.201−01	1.717−01	1.312−01	9.888−02	7.412−02
12	29	8.290−01	7.629−01	6.923−01	6.125−01	5.234−01	4.302−01	3.400−01	2.587−01	1.899−01	1.351−01
12	30	1.104+01	1.187+01	1.297+01	1.453+01	1.673+01	1.978+01	2.383+01	2.891+01	3.517+01	4.269+01
12	31	1.122+00	1.094+00	1.047+00	9.754−01	8.833−01	7.821−01	6.836−01	5.956−01	5.221−01	4.645−01
12	32	8.435−01	7.905−01	7.214−01	6.376−01	5.450−01	4.534−01	3.713−01	3.037−01	2.518−01	2.140−01
12	33	2.566−01	2.521−01	2.528−01	2.578−01	2.545−01	2.378−01	2.139−01	1.911−01	1.743−01	1.649−01
12	34	9.851−01	1.010+00	1.067+00	1.186+00	1.354+00	1.535+00	1.730+00	1.961+00	2.252+00	2.609+00
12	35	1.312+00	1.361+00	1.440+00	1.565+00	1.756+00	2.039+00	2.432+00	2.944+00	3.578+00	4.321+00
12	36	2.800+00	2.928+00	3.117+00	3.400+00	3.811+00	4.397+00	5.212+00	6.293+00	7.653+00	9.269+00
12	37	1.281+00	1.313+00	1.370+00	1.467+00	1.602+00	1.776+00	2.008+00	2.319+00	2.724+00	3.221+00
12	38	2.337−01	2.271−01	2.124−01	1.905−01	1.638−01	1.363−01	1.111−01	8.957−02	7.170−02	5.689−02
12	39	1.431−01	1.345−01	1.237−01	1.131−01	1.043−01	9.867−02	9.734−02	1.009−01	1.095−01	1.225−01
12	40	3.127−01	2.873−01	2.562−01	2.242−01	1.938−01	1.677−01	1.477−01	1.346−01	1.281−01	1.273−01
12	41	3.200−01	2.957−01	2.672−01	2.370−01	2.066−01	1.773−01	1.506−01	1.268−01	1.059−01	8.765−02
12	42	3.665−01	3.270−01	2.795−01	2.303−01	1.832−01	1.406−01	1.040−01	7.438−02	5.161−02	3.496−02
12	43	6.110−01	5.652−01	5.006−01	4.244−01	3.453−01	2.711−01	2.067−01	1.536−01	1.115−01	7.921−02
12	44	1.579−01	1.497−01	1.363−01	1.181−01	9.739−02	7.697−02	5.888−02	4.393−02	3.208−02	2.297−02
12	45	1.052−01	9.473−02	8.194−02	6.720−02	5.223−02	3.874−02	2.771−02	1.935−02	1.333−02	9.144−03
12	46	2.341−01	2.423−01	2.450−01	2.375−01	2.193−01	1.963−01	1.749−01	1.579−01	1.448−01	1.338−01
12	47	2.491−01	2.422−01	2.250−01	1.999−01	1.721−01	1.458−01	1.233−01	1.046−01	8.889−02	7.504−02
12	48	1.965−01	1.906−01	1.746−01	1.511−01	1.249−01	1.001−01	7.884−02	6.164−02	4.807−02	3.738−02
12	49	6.470−02	6.140−02	5.546−02	4.824−02	4.083−02	3.383−02	2.746−02	2.176−02	1.681−02	1.263−02
12	50	2.381−01	2.391−01	2.358−01	2.267−01	2.116−01	1.930−01	1.731−01	1.529−01	1.326−01	1.125−01
12	51	1.932−01	1.899−01	1.761−01	1.564−01	1.352−01	1.154−01	9.793−02	8.269−02	6.921−02	5.714−02
12	52	2.068−01	2.135−01	2.234−01	2.301−01	2.255−01	2.095−01	1.874−01	1.637−01	1.407−01	1.190−01
12	53	3.124−01	2.833−01	2.461−01	2.054−01	1.652−01	1.281−01	9.601−02	6.958−02	4.893−02	3.353−02
12	54	2.602−02	2.357−02	2.049−02	1.712−02	1.379−02	1.074−02	8.115−03	5.965−03	4.274−03	2.990−03
12	55	1.186−01	1.002−01	8.385−02	6.931−02	5.642−02	4.519−02	3.575−02	2.807−02	2.204−02	1.743−02
12	56	5.478−01	6.182−01	6.507−01	6.229−01	5.560−01	4.788−01	4.084−01	3.507−01	3.056−01	2.715−01
12	57	2.183−01	1.866−01	1.581−01	1.326−01	1.098−01	8.955−02	7.174−02	5.643−02	4.356−02	3.301−02
12	58	1.481−01	1.286−01	1.100−01	9.235−02	7.580−02	6.065−02	4.731−02	3.605−02	2.693−02	1.980−02
12	59	2.729−01	2.916−01	3.104−01	3.171−01	3.086−01	2.903−01	2.676−01	2.431−01	2.173−01	1.905−01
12	60	2.094−01	1.939−01	1.806−01	1.689−01	1.582−01	1.481−01	1.376−01	1.260−01	1.128−01	9.822−02
12	61	9.816−02	8.222−02	6.871−02	5.714−02	4.708−02	3.832−02	3.078−02	2.438−02	1.904−02	1.467−02
12	62	7.997−02	7.187−02	6.390−02	5.633−02	4.930−02	4.290−02	3.713−02	3.194−02	2.726−02	2.312−02
12	63	2.551−01	3.040−01	3.172−01	2.968−01	2.607−01	2.232−01	1.908−01	1.647−01	1.438−01	1.271−01
12	64	1.523−01	1.644−01	1.688−01	1.650−01	1.569−01	1.481−01	1.401−01	1.329−01	1.262−01	1.199−01
12	65	1.761−01	1.570−01	1.351−01	1.127−01	9.127−02	7.194−02	5.536−02	4.172−02	3.085−02	2.239−02
12	66	3.714−01	4.291−01	4.472−01	4.258−01	3.826−01	3.351−01	2.931−01	2.599−01	2.350−01	2.168−01
12	67	1.617−01	1.516−01	1.392−01	1.259−01	1.130−01	1.014−01	9.197−02	8.507−02	8.059−02	7.805−02
12	68	1.426−01	1.260−01	1.074−01	8.842−02	7.035−02	5.420−02	4.061−02	2.975−02	2.142−02	1.521−02
12	69	1.208−01	1.067−01	9.082−02	7.528−02	6.083−02	4.799−02	3.715−02	2.838−02	2.152−02	1.623−02
12	70	1.257+00	1.465+00	1.559+00	1.533+00	1.433+00	1.305+00	1.174+00	1.050+00	9.299−01	8.112−01
12	71	1.782−01	1.675−01	1.540−01	1.376−01	1.187−01	9.865−02	7.925−02	6.181−02	4.705−02	3.511−02
12	72	1.331−01	1.192−01	1.049−01	9.021−02	7.518−02	6.055−02	4.722−02	3.584−02	2.662−02	1.947−02
12	73	2.249−01	2.072−01	1.857−01	1.619−01	1.367−01	1.114−01	8.728−02	6.564−02	4.751−02	3.326−02
12	74	1.039−01	9.061−02	7.727−02	6.449−02	5.265−02	4.211−02	3.308−02	2.560−02	1.953−02	1.474−02
12	75	6.655−02	5.928−02	5.243−02	4.586−02	3.946−02	3.334−02	2.772−02	2.276−02	1.849−02	1.489−02
12	76	1.067−01	1.041−01	1.007−01	9.622−02	9.055−02	8.376−02	7.612−02	6.791−02	5.944−02	5.101−02
12	77	1.731−01	1.893−01	2.022−01	2.057−01	1.993−01	1.870−01	1.734−01	1.616−01	1.529−01	1.469−01
12	78	4.090−02	3.838−02	3.473−02	3.036−02	2.566−02	2.099−02	1.661−02	1.269−02	9.353−03	6.667−03
12	79	7.440−01	7.984−01	8.374−01	8.645−01	8.991−01	9.579−01	1.047+00	1.162+00	1.291+00	1.421+00
12	80	5.581−01	6.466−01	6.951−01	6.959−01	6.754−01	6.605−01	6.642−01	6.877−01	7.255−01	7.693−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
12	81	9.560−02	8.789−02	7.946−02	7.090−02	6.254−02	5.453−02	4.680−02	3.925−02	3.195−02	2.517−02
12	82	3.843−02	3.782−02	3.560−02	3.230−02	2.865−02	2.506−02	2.158−02	1.814−02	1.475−02	1.154−02
12	83	2.763−01	2.793−01	2.844−01	2.963−01	3.206−01	3.611−01	4.186−01	4.905−01	5.709−01	6.520−01
12	84	1.663−01	1.611−01	1.571−01	1.558−01	1.589−01	1.674−01	1.813−01	1.996−01	2.203−01	2.413−01
12	85	1.365−01	1.282−01	1.190−01	1.087−01	9.748−02	8.537−02	7.255−02	5.947−02	4.687−02	3.554−02
12	86	2.467−01	2.390−01	2.287−01	2.141−01	1.953−01	1.731−01	1.484−01	1.226−01	9.722−02	7.415−02
12	87	5.649−01	5.813−01	6.062−01	6.436−01	6.955−01	7.606−01	8.353−01	9.154−01	9.971−01	1.075+00
12	88	1.488−01	1.409−01	1.301−01	1.172−01	1.035−01	8.953−02	7.574−02	6.253−02	5.037−02	3.963−02
12	89	7.776−02	7.377−02	6.694−02	5.848−02	4.967−02	4.141−02	3.410−02	2.784−02	2.255−02	1.810−02
12	90	1.272−01	1.208−01	1.104−01	9.712−02	8.256−02	6.780−02	5.374−02	4.108−02	3.034−02	2.172−02
12	91	1.988−02	1.914−02	1.800−02	1.657−02	1.500−02	1.332−02	1.151−02	9.581−03	7.651−03	5.859−03
12	92	5.178−02	4.949−02	4.511−02	3.928−02	3.291−02	2.667−02	2.095−02	1.597−02	1.183−02	8.546−03
12	93	7.839−02	8.139−02	8.343−02	8.548−02	8.840−02	9.239−02	9.706−02	1.019−01	1.065−01	1.107−01
12	94	7.400−02	7.438−02	7.238−02	6.907−02	6.545−02	6.193−02	5.849−02	5.509−02	5.177−02	4.866−02
12	95	4.044−02	3.894−02	3.514−02	3.029−02	2.542−02	2.103−02	1.720−02	1.388−02	1.102−02	8.593−03
12	96	1.607−01	1.605−01	1.585−01	1.565−01	1.563−01	1.585−01	1.626−01	1.680−01	1.747−01	1.829−01
12	97	9.108−02	8.845−02	8.174−02	7.261−02	6.267−02	5.283−02	4.352−02	3.499−02	2.741−02	2.094−02
12	98	4.458−02	4.184−02	3.666−02	3.041−02	2.430−02	1.897−02	1.459−02	1.108−02	8.317−03	6.160−03
12	99	4.628−02	4.412−02	4.076−02	3.713−02	3.382−02	3.089−02	2.808−02	2.517−02	2.207−02	1.888−02
12	100	4.872−02	4.827−02	4.708−02	4.584−02	4.499−02	4.459−02	4.449−02	4.451−02	4.457−02	4.462−02
12	101	3.119−02	3.191−02	3.266−02	3.385−02	3.576−02	3.834−02	4.134−02	4.444−02	4.737−02	4.996−02
12	102	1.234−01	1.179−01	1.078−01	9.530−02	8.159−02	6.753−02	5.384−02	4.133−02	3.062−02	2.196−02
12	103	3.660−02	3.369−02	2.993−02	2.591−02	2.196−02	1.816−02	1.458−02	1.132−02	8.497−03	6.170−03
12	104	5.491−02	4.801−02	4.186−02	3.646−02	3.153−02	2.683−02	2.226−02	1.790−02	1.392−02	1.045−02
12	105	3.316−02	3.102−02	2.945−02	2.851−02	2.811−02	2.815−02	2.854−02	2.921−02	3.011−02	3.112−02
12	106	4.509−02	4.227−02	4.028−02	3.921−02	3.896−02	3.940−02	4.040−02	4.183−02	4.356−02	4.538−02
12	107	2.850−02	2.499−02	2.201−02	1.957−02	1.755−02	1.577−02	1.413−02	1.261−02	1.123−02	1.002−02
12	108	1.895−02	1.680−02	1.490−02	1.321−02	1.163−02	1.005−02	8.449−03	6.867−03	5.382−03	4.068−03
12	109	9.245−02	8.901−02	8.716−02	8.707−02	8.879−02	9.232−02	9.759−02	1.044−01	1.124−01	1.208−01
12	110	6.263−02	5.768−02	5.298−02	4.830−02	4.339−02	3.810−02	3.248−02	2.677−02	2.129−02	1.635−02
12	111	1.840−02	1.471−02	1.163−02	9.149−03	7.182−03	5.610−03	4.341−03	3.316−03	2.496−03	1.852−03
12	112	1.752−02	1.676−02	1.619−02	1.578−02	1.548−02	1.525−02	1.511−02	1.512−02	1.529−02	1.562−02
12	113	1.889−02	1.729−02	1.595−02	1.476−02	1.350−02	1.206−02	1.038−02	8.574−03	6.780−03	5.148−03
12	114	6.188−02	6.015−02	5.895−02	5.803−02	5.701−02	5.552−02	5.338−02	5.057−02	4.719−02	4.345−02
12	115	7.757−02	7.630−02	7.587−02	7.614−02	7.679−02	7.742−02	7.761−02	7.697−02	7.527−02	7.241−02
12	116	2.940−02	2.654−02	2.376−02	2.099−02	1.817−02	1.532−02	1.251−02	9.844−03	7.467−03	5.467−03
12	117	7.438−02	7.606−02	7.897−02	8.312−02	8.829−02	9.403−02	9.980−02	1.050−01	1.093−01	1.122−01
12	118	3.005−02	2.860−02	2.710−02	2.538−02	2.323−02	2.060−02	1.758−02	1.437−02	1.126−02	8.472−03
12	119	1.118−02	9.713−03	8.318−03	6.994−03	5.737−03	4.569−03	3.525−03	2.636−03	1.918−03	1.363−03
12	120	2.832−02	2.828−02	2.853−02	2.900−02	2.959−02	3.018−02	3.067−02	3.094−02	3.087−02	3.037−02
12	121	3.054−02	3.055−02	3.097−02	3.177−02	3.284−02	3.411−02	3.547−02	3.682−02	3.804−02	3.897−02
12	122	1.405−02	1.321−02	1.255−02	1.196−02	1.137−02	1.070−02	9.977−03	9.219−03	8.486−03	7.819−03
12	123	1.532−02	1.434−02	1.324−02	1.197−02	1.053−02	8.949−03	7.329−03	5.772−03	4.374−03	3.198−03
12	124	8.253−03	8.314−03	8.320−03	8.202−03	7.873−03	7.274−03	6.415−03	5.378−03	4.285−03	3.257−03
12	125	3.737−02	3.872−02	4.055−02	4.292−02	4.569−02	4.855−02	5.103−02	5.268−02	5.315−02	5.231−02
12	126	2.941−02	2.987−02	3.042−02	3.094−02	3.118−02	3.091−02	3.000−02	2.845−02	2.640−02	2.405−02
12	127	3.935−02	3.872−02	3.779−02	3.622−02	3.364−02	2.995−02	2.540−02	2.048−02	1.575−02	1.161−02
12	128	8.970−02	8.726−02	8.411−02	7.964−02	7.317−02	6.454−02	5.431−02	4.355−02	3.336−02	2.452−02
12	129	1.021−01	1.040−01	1.061−01	1.081−01	1.093−01	1.095−01	1.081−01	1.050−01	1.001−01	9.385−02
12	130	6.712−02	6.786−02	6.863−02	6.915−02	6.909−02	6.818−02	6.625−02	6.332−02	5.951−02	5.506−02
12	131	1.096−02	1.053−02	1.007−02	9.505−03	8.758−03	7.811−03	6.704−03	5.521−03	4.367−03	3.328−03
12	132	1.190−02	1.193−02	1.198−02	1.205−02	1.214−02	1.223−02	1.225−02	1.212−02	1.173−02	1.101−02
12	133	3.782−02	3.871−02	3.972−02	4.076−02	4.170−02	4.241−02	4.274−02	4.260−02	4.194−02	4.073−02
12	134	2.615−02	2.642−02	2.661−02	2.665−02	2.642−02	2.588−02	2.501−02	2.388−02	2.255−02	2.113−02
12	135	1.772−02	1.841−02	1.931−02	2.039−02	2.160−02	2.288−02	2.414−02	2.526−02	2.614−02	2.667−02
12	136	6.343−03	6.434−03	6.560−03	6.721−03	6.909−03	7.089−03	7.203−03	7.177−03	6.949−03	6.494−03
12	137	3.359−03	3.479−03	3.678−03	3.991−03	4.440−03	5.001−03	5.595−03	6.096−03	6.374−03	6.339−03
12	138	3.055−02	2.925−02	2.738−02	2.487−02	2.178−02	1.830−02	1.472−02	1.135−02	8.416−03	6.026−03
12	139	4.760−02	4.589−02	4.329−02	3.966−02	3.506−02	2.973−02	2.413−02	1.876−02	1.400−02	1.008−02
12	140	1.027−02	9.848−03	9.275−03	8.511−03	7.551−03	6.438−03	5.257−03	4.109−03	3.080−03	2.224−03
12	141	1.097−02	1.120−02	1.134−02	1.121−02	1.068−02	9.674−03	8.298−03	6.735−03	5.195−03	3.831−03
13	14	1.194+00	1.087+00	9.269−01	7.472−01	5.733−01	4.214−01	2.991−01	2.068−01	1.400−01	9.342−02
13	15	2.129+00	1.834+00	1.505+00	1.183+00	8.944−01	6.533−01	4.640−01	3.223−01	2.200−01	1.480−01
13	16	3.288+00	2.917+00	2.515+00	2.075+00	1.632+00	1.229+00	8.906−01	6.251−01	4.274−01	2.863−01
13	17	6.132+00	6.585+00	7.176+00	8.016+00	9.223+00	1.088+01	1.288+01	1.497+01	1.694+01	1.863+01
13	18	1.845+01	1.982+01	2.220+01	2.744+01	3.579+01	4.457+01	5.151+01	5.625+01	5.962+01	6.220+01
13	19	3.101+01	3.314+01	3.617+01	4.117+01	4.872+01	5.822+01	6.846+01	7.820+01	8.696+01	9.440+01
13	20	1.029+00	9.866−01	9.045−01	7.887−01	6.573−01	5.275−01	4.108−01	3.133−01	2.374−01	1.828−01
13	21	1.549+00	1.380+00	1.217+00	1.074+00	9.551−01	8.541−01	7.698−01	7.036−01	6.572−01	6.320−01
13	22	2.269+00	2.155+00	1.986+00	1.764+00	1.531+00	1.322+00	1.156+00	1.035+00	9.535−01	9.098−01
13	23	3.182+00	3.014+00	2.772+00	2.452+00	2.113+00	1.811+00	1.569+00	1.393+00	1.275+00	1.210+00
13	24	2.144+00	2.187+00	2.372+00	2.791+00	3.322+00	3.749+00	3.993+00	4.103+00	4.171+00	4.282+00
13	25	3.689+00	3.719+00	3.837+00	4.053+00	4.364+00	4.756+00	5.190+00	5.616+00	6.031+00	6.490+00
13	26	5.212+00	5.265+00	5.433+00	5.729+00	6.155+00	6.694+00	7.293+00	7.881+00	8.457+00	9.097+00

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
13	27	1.833+00	1.659+00	1.454+00	1.227+00	9.950−01	7.739−01	5.784−01	4.171−01	2.918−01	1.991−01
13	28	3.312−01	3.073−01	2.657−01	2.149−01	1.641−01	1.195−01	8.396−02	5.737−02	3.847−02	2.551−02
13	29	9.407−01	8.235−01	7.066−01	5.922−01	4.818−01	3.785−01	2.866−01	2.094−01	1.483−01	1.022−01
13	30	1.397+00	1.406+00	1.400+00	1.419+00	1.460+00	1.485+00	1.473+00	1.436+00	1.393+00	1.363+00
13	31	2.235+00	2.275+00	2.218+00	2.117+00	2.014+00	1.932+00	1.872+00	1.831+00	1.805+00	1.799+00
13	32	3.477+00	3.594+00	3.457+00	3.201+00	2.938+00	2.721+00	2.560+00	2.447+00	2.374+00	2.340+00
13	33	1.576+00	1.328+00	1.065+00	8.428−01	6.768−01	5.642−01	4.967−01	4.656−01	4.645−01	4.882−01
13	34	4.366−01	3.769−01	3.267−01	2.890−01	2.635−01	2.493−01	2.461−01	2.533−01	2.711−01	2.989−01
13	35	1.397−01	1.231−01	1.185−01	1.286−01	1.416−01	1.457−01	1.407−01	1.327−01	1.274−01	1.274−01
13	36	2.014−01	1.782−01	1.553−01	1.344−01	1.167−01	1.021−01	9.013−02	7.968−02	6.984−02	6.018−02
13	37	3.744−01	3.281−01	2.824−01	2.413−01	2.067−01	1.787−01	1.561−01	1.369−01	1.195−01	1.027−01
13	38	5.839−01	5.052−01	4.288−01	3.609−01	3.043−01	2.590−01	2.227−01	1.924−01	1.652−01	1.395−01
13	39	1.237+00	1.293+00	1.372+00	1.488+00	1.653+00	1.887+00	2.213+00	2.647+00	3.200+00	3.866+00
13	40	3.780+00	3.947+00	4.351+00	5.186+00	6.243+00	7.220+00	8.123+00	9.149+00	1.049+01	1.221+01
13	41	6.410+00	6.627+00	6.913+00	7.361+00	8.090+00	9.226+00	1.086+01	1.306+01	1.585+01	1.920+01
13	42	6.106−01	5.647−01	5.141−01	4.587−01	3.988−01	3.376−01	2.788−01	2.254−01	1.792−01	1.413−01
13	43	4.768−01	4.411−01	3.909−01	3.295−01	2.638−01	2.013−01	1.473−01	1.040−01	7.129−02	4.779−02
13	44	1.188−01	1.112−01	1.001−01	8.551−02	6.892−02	5.253−02	3.818−02	2.674−02	1.821−02	1.214−02
13	45	8.788−02	8.562−02	8.054−02	7.218−02	6.141−02	4.992−02	3.923−02	3.014−02	2.285−02	1.719−02
13	46	7.814−01	7.836−01	7.811−01	7.775−01	7.749−01	7.724−01	7.645−01	7.437−01	7.043−01	6.456−01
13	47	1.314+00	1.319+00	1.316+00	1.309+00	1.304+00	1.299+00	1.285+00	1.249+00	1.183+00	1.084+00
13	48	1.878+00	1.880+00	1.869+00	1.853+00	1.839+00	1.827+00	1.803+00	1.750+00	1.656+00	1.517+00
13	49	4.512−02	4.646−02	4.593−02	4.356−02	3.981−02	3.520−02	3.020−02	2.517−02	2.040−02	1.610−02
13	50	1.442−01	1.497−01	1.479−01	1.398−01	1.271−01	1.121−01	9.617−02	8.051−02	6.585−02	5.276−02
13	51	2.411−01	2.461−01	2.411−01	2.268−01	2.058−01	1.810−01	1.547−01	1.285−01	1.040−01	8.201−02
13	52	3.584−01	3.707−01	3.725−01	3.659−01	3.558−01	3.475−01	3.446−01	3.470−01	3.512−01	3.518−01
13	53	2.676−01	2.461−01	2.155−01	1.796−01	1.429−01	1.092−01	8.072−02	5.812−02	4.094−02	2.831−02
13	54	4.044−02	3.459−02	2.965−02	2.480−02	1.987−02	1.522−02	1.122−02	8.033−03	5.613−03	3.840−03
13	55	6.797−02	5.859−02	4.864−02	3.903−02	3.038−02	2.309−02	1.728−02	1.283−02	9.482−03	6.990−03
13	56	1.791−01	1.662−01	1.548−01	1.452−01	1.372−01	1.297−01	1.214−01	1.114−01	9.954−02	8.618−02
13	57	2.743−01	2.519−01	2.323−01	2.163−01	2.030−01	1.906−01	1.775−01	1.622−01	1.445−01	1.248−01
13	58	3.653−01	3.361−01	3.089−01	2.856−01	2.661−01	2.486−01	2.306−01	2.103−01	1.870−01	1.613−01
13	59	4.112−02	3.765−02	3.517−02	3.369−02	3.317−02	3.344−02	3.412−02	3.471−02	3.469−02	3.370−02
13	60	7.518−02	6.788−02	6.259−02	5.928−02	5.776−02	5.768−02	5.837−02	5.898−02	5.864−02	5.672−02
13	61	1.217−01	1.068−01	9.578−02	8.853−02	8.462−02	8.333−02	8.354−02	8.389−02	8.305−02	8.010−02
13	62	1.049−01	9.582−02	8.639−02	7.842−02	7.282−02	6.975−02	6.865−02	6.860−02	6.882−02	6.899−02
13	63	5.699−02	5.291−02	4.851−02	4.473−02	4.213−02	4.083−02	4.055−02	4.078−02	4.110−02	4.134−02
13	64	1.695−02	1.591−02	1.486−02	1.399−02	1.342−02	1.320−02	1.326−02	1.343−02	1.361−02	1.373−02
13	65	1.978−01	1.826−01	1.611−01	1.370−01	1.131−01	9.111−02	7.206−02	5.626−02	4.351−02	3.337−02
13	66	5.466−02	5.439−02	5.303−02	5.058−02	4.720−02	4.312−02	3.856−02	3.373−02	2.883−02	2.407−02
13	67	9.460−02	9.131−02	8.602−02	7.971−02	7.269−02	6.515−02	5.734−02	4.950−02	4.189−02	3.471−02
13	68	2.085−01	1.908−01	1.664−01	1.398−01	1.140−01	9.097−02	7.142−02	5.546−02	4.271−02	3.266−02
13	69	5.281−02	4.897−02	4.324−02	3.635−02	2.912−02	2.234−02	1.652−02	1.187−02	8.344−03	5.778−03
13	70	2.501−01	2.269−01	2.038−01	1.816−01	1.608−01	1.412−01	1.226−01	1.049−01	8.809−02	7.250−02
13	71	3.411−01	3.069−01	2.733−01	2.418−01	2.128−01	1.859−01	1.609−01	1.372−01	1.149−01	9.443−02
13	72	4.498−01	3.983−01	3.497−01	3.060−01	2.670−01	2.319−01	1.997−01	1.699−01	1.420−01	1.165−01
13	73	3.273−01	2.822−01	2.367−01	1.923−01	1.511−01	1.146−01	8.390−02	5.943−02	4.088−02	2.746−02
13	74	4.880−02	4.675−02	4.236−02	3.627−02	2.955−02	2.315−02	1.764−02	1.323−02	9.881−03	7.426−03
13	75	1.708−01	1.373−01	1.130−01	9.562−02	8.321−02	7.434−02	6.813−02	6.382−02	6.072−02	5.821−02
13	76	1.526−01	1.179−01	9.293−02	7.528−02	6.291−02	5.437−02	4.858−02	4.468−02	4.197−02	3.990−02
13	77	4.466−02	3.936−02	3.533−02	3.220−02	2.976−02	2.792−02	2.658−02	2.564−02	2.492−02	2.425−02
13	78	2.851−02	2.835−02	2.620−02	2.259−02	1.835−02	1.418−02	1.052−02	7.549−03	5.268−03	3.594−03
13	79	5.452−02	5.091−02	4.563−02	4.003−02	3.497−02	3.064−02	2.684−02	2.329−02	1.983−02	1.645−02
13	80	7.795−02	7.318−02	6.575−02	5.766−02	5.021−02	4.380−02	3.819−02	3.301−02	2.802−02	2.320−02
13	81	1.014−01	9.520−02	8.551−02	7.492−02	6.516−02	5.675−02	4.940−02	4.263−02	3.614−02	2.989−02
13	82	7.466−03	6.431−03	5.422−03	4.511−03	3.725−03	3.056−03	2.480−03	1.977−03	1.537−03	1.163−03
13	83	2.369−02	2.043−02	1.718−02	1.423−02	1.168−02	9.515−03	7.673−03	6.083−03	4.711−03	3.551−03
13	84	3.865−02	3.329−02	2.803−02	2.326−02	1.914−02	1.563−02	1.264−02	1.004−02	7.783−03	5.873−03
13	85	9.887−02	8.594−02	7.298−02	6.072−02	4.945−02	3.930−02	3.041−02	2.289−02	1.675−02	1.195−02
13	86	1.058−01	9.216−02	7.831−02	6.451−02	5.129−02	3.927−02	2.896−02	2.062−02	1.424−02	9.599−03
13	87	4.759−01	4.764−01	4.718−01	4.721−01	4.839−01	5.104−01	5.523−01	6.080−01	6.735−01	7.419−01
13	88	6.709−01	6.806−01	6.945−01	7.188−01	7.587−01	8.183−01	8.990−01	9.992−01	1.113+00	1.230+00
13	89	9.399−01	9.533−01	9.726−01	1.006+00	1.062+00	1.145+00	1.258+00	1.398+00	1.557+00	1.721+00
13	90	3.218−01	3.149−01	3.042−01	2.891−01	2.686−01	2.421−01	2.103−01	1.754−01	1.402−01	1.076−01
13	91	8.523−03	7.413−03	6.324−03	5.254−03	4.233−03	3.299−03	2.484−03	1.809−03	1.277−03	8.784−04
13	92	3.898−02	3.586−02	3.214−02	2.798−02	2.360−02	1.922−02	1.506−02	1.135−02	8.235−03	5.778−03
13	93	2.486−02	2.421−02	2.326−02	2.200−02	2.049−02	1.879−02	1.695−02	1.504−02	1.313−02	1.128−02
13	94	6.263−02	6.162−02	5.677−02	5.038−02	4.393−02	3.801−02	3.273−02	2.802−02	2.382−02	2.006−02
13	95	1.285−01	1.266−01	1.133−01	9.615−02	7.966−02	6.559−02	5.403−02	4.459−02	3.681−02	3.031−02
13	96	1.260−01	1.253−01	1.238−01	1.225−01	1.211−01	1.188−01	1.144−01	1.071−01	9.669−02	8.390−02
13	97	1.952−01	1.922−01	1.868−01	1.813−01	1.763−01	1.707−01	1.630−01	1.517−01	1.364−01	1.181−01
13	98	2.989−01	2.898−01	2.740−01	2.579−01	2.438−01	2.310−01	2.170−01	1.998−01	1.785−01	1.538−01
13	99	3.574−02	3.574−02	3.572−02	3.642−02	3.835−02	4.147−02	4.519−02	4.847−02	5.017−02	4.952−02
13	100	2.021−02	2.039−02	2.061−02	2.126−02	2.261−02	2.463−02	2.696−02	2.900−02	3.007−02	2.972−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
13	101	6.634−03	6.694−03	6.783−03	7.021−03	7.489−03	8.176−03	8.965−03	9.653−03	1.002−02	9.906−03
13	102	3.173−02	2.916−02	2.613−02	2.309−02	2.022−02	1.743−02	1.463−02	1.182−02	9.128−03	6.745−03
13	103	1.467−02	1.347−02	1.186−02	1.012−02	8.450−03	6.936−03	5.587−03	4.388−03	3.339−03	2.455−03
13	104	1.124−02	8.957−03	7.125−03	5.701−03	4.586−03	3.677−03	2.906−03	2.240−03	1.676−03	1.215−03
13	105	6.501−03	6.133−03	5.890−03	5.777−03	5.767−03	5.802−03	5.809−03	5.720−03	5.498−03	5.141−03
13	106	1.083−02	1.023−02	9.829−03	9.641−03	9.623−03	9.679−03	9.688−03	9.539−03	9.169−03	8.573−03
13	107	1.542−02	1.455−02	1.395−02	1.364−02	1.358−02	1.363−02	1.362−02	1.339−02	1.287−02	1.202−02
13	108	2.554−02	2.083−02	1.695−02	1.385−02	1.131−03	9.124−04	7.191−04	5.489−04	4.043−04	2.876−04
13	109	1.767−02	1.674−02	1.604−02	1.556−02	1.516−02	1.467−02	1.395−02	1.294−02	1.167−02	1.021−02
13	110	2.283−02	2.161−02	2.069−02	2.005−02	1.951−02	1.886−02	1.793−02	1.663−02	1.500−02	1.312−02
13	111	2.815−02	2.661−02	2.542−02	2.458−02	2.389−02	2.308−02	2.193−02	2.033−02	1.833−02	1.604−02
13	112	7.810−03	7.494−03	7.299−03	7.247−03	7.321−03	7.465−03	7.603−03	7.665−03	7.607−03	7.416−03
13	113	9.258−03	8.922−03	8.699−03	8.588−03	8.530−03	8.433−03	8.203−03	7.775−03	7.135−03	6.319−03
13	114	7.160−03	6.895−03	6.733−03	6.661−03	6.628−03	6.558−03	6.381−03	6.048−03	5.549−03	4.914−03
13	115	5.123−03	4.929−03	4.813−03	4.764−03	4.742−03	4.691−03	4.562−03	4.322−03	3.965−03	3.510−03
13	116	6.255−03	5.459−03	4.606−03	3.758−03	2.967−03	2.266−03	1.676−03	1.203−03	8.393−04	5.717−04
13	117	1.457−02	1.446−02	1.414−02	1.354−02	1.263−02	1.142−02	9.996−03	8.454−03	6.906−03	5.455−03
13	118	1.790−02	1.775−02	1.733−02	1.657−02	1.543−02	1.395−02	1.221−02	1.032−02	8.431−03	6.658−03
13	119	2.123−02	2.101−02	2.049−02	1.957−02	1.822−02	1.647−02	1.440−02	1.218−02	9.947−03	7.855−03
13	120	3.295−03	3.254−03	3.237−03	3.206−03	3.120−03	2.951−03	2.698−03	2.378−03	2.021−03	1.659−03
13	121	4.682−03	4.617−03	4.580−03	4.524−03	4.392−03	4.149−03	3.789−03	3.338−03	2.835−03	2.326−03
13	122	7.496−03	7.252−03	6.922−03	6.564−03	6.162−03	5.677−03	5.096−03	4.437−03	3.739−03	3.051−03
13	123	3.171−03	2.859−03	2.532−03	2.180−03	1.806−03	1.432−03	1.085−03	7.894−04	5.551−04	3.799−04
13	124	2.520−04	2.528−04	2.597−04	2.723−04	2.865−04	2.957−04	2.936−04	2.768−04	2.465−04	2.074−04
13	125	7.648−04	7.639−04	7.834−04	8.205−04	8.626−04	8.897−04	8.828−04	8.321−04	7.409−04	6.230−04
13	126	1.280−03	1.279−03	1.311−03	1.373−03	1.443−03	1.487−03	1.475−03	1.389−03	1.237−03	1.040−03
13	127	4.244−03	3.841−03	3.448−03	3.052−03	2.642−03	2.220−03	1.802−03	1.413−03	1.071−03	7.867−04
13	128	2.351−02	2.192−02	1.990−02	1.745−02	1.469−02	1.179−02	9.017−03	6.590−03	4.634−03	3.160−03
13	129	1.018−02	1.040−02	1.056−02	1.054−02	1.025−02	9.649−03	8.755−03	7.654−03	6.458−03	5.275−03
13	130	1.311−02	1.339−02	1.358−02	1.355−02	1.318−02	1.240−02	1.125−02	9.837−03	8.299−03	6.777−03
13	131	1.646−02	1.666−02	1.680−02	1.670−02	1.620−02	1.522−02	1.379−02	1.204−02	1.015−02	8.286−03
13	132	8.229−04	8.286−04	8.438−04	8.586−04	8.638−04	8.567−04	8.382−04	8.076−04	7.602−04	6.919−04
13	133	1.429−03	1.421−03	1.432−03	1.447−03	1.449−03	1.433−03	1.400−03	1.348−03	1.268−03	1.154−03
13	134	2.346−03	2.245−03	2.182−03	2.143−03	2.104−03	2.054−03	1.990−03	1.906−03	1.787−03	1.623−03
13	135	3.407−03	3.428−03	3.453−03	3.456−03	3.409−03	3.298−03	3.121−03	2.886−03	2.605−03	2.301−03
13	136	1.925−03	1.974−03	2.017−03	2.038−03	2.023−03	1.965−03	1.864−03	1.726−03	1.560−03	1.379−03
13	137	6.566−04	6.686−04	6.796−04	6.842−04	6.776−04	6.571−04	6.229−04	5.764−04	5.207−04	4.600−04
13	138	1.228−02	1.146−02	1.040−02	9.100−03	7.631−03	6.109−03	4.669−03	3.420−03	2.416−03	1.658−03
13	139	8.683−03	8.081−03	7.257−03	6.242−03	5.125−03	4.019−03	3.020−03	2.186−03	1.534−03	1.049−03
13	140	2.068−03	1.998−03	1.884−03	1.716−03	1.498−03	1.248−03	9.924−04	7.566−04	5.563−04	3.966−04
13	141	1.143−03	1.126−03	1.088−03	1.019−03	9.156−04	7.822−04	6.333−04	4.867−04	3.569−04	2.516−04
14	15	3.483+00	3.216+00	2.907+00	2.605+00	2.331+00	2.070+00	1.812+00	1.573+00	1.371+00	1.212+00
14	16	2.437+00	2.332+00	2.267+00	2.238+00	2.257+00	2.335+00	2.469+00	2.645+00	2.842+00	3.028+00
14	17	7.635−02	7.217−02	6.498−02	5.527−02	4.445−02	3.402−02	2.497−02	1.771−02	1.222−02	8.245−03
14	18	2.331−01	2.204−01	1.989−01	1.706−01	1.399−01	1.104−01	8.454−02	6.334−02	4.701−02	3.507−02
14	19	3.883−01	3.662−01	3.293−01	2.800−01	2.254−01	1.727−01	1.268−01	9.000−02	6.210−02	4.191−02
14	20	4.457+00	4.802+00	5.266+00	5.938+00	6.883+00	8.106+00	9.512+00	1.092+01	1.222+01	1.333+01
14	21	2.091−01	1.894−01	1.665−01	1.419−01	1.172−01	9.407−02	7.344−02	5.583−02	4.133−02	2.979−02
14	22	3.031−01	2.736−01	2.400−01	2.044−01	1.691−01	1.358−01	1.060−01	8.054−02	5.956−02	4.290−02
14	23	3.936−01	3.526−01	3.085−01	2.629−01	2.178−01	1.753−01	1.372−01	1.044−01	7.724−02	5.565−02
14	24	1.514−01	1.338−01	1.136−01	9.261−02	7.258−02	5.477−02	3.995−02	2.827−02	1.949−02	1.315−02
14	25	2.567−01	2.261−01	1.913−01	1.557−01	1.218−01	9.185−02	6.694−02	4.735−02	3.264−02	2.202−02
14	26	3.678−01	3.228−01	2.723−01	2.210−01	1.725−01	1.298−01	9.450−02	6.679−02	4.601−02	3.103−02
14	27	7.857−01	7.354−01	6.895−01	6.582−01	6.435−01	6.359−01	6.288−01	6.222−01	6.198−01	6.265−01
14	28	4.045−01	3.602−01	3.125−01	2.625−01	2.149−01	1.736−01	1.398−01	1.128−01	9.082−02	7.257−02
14	29	7.627−01	7.531−01	7.572−01	7.722−01	7.954−01	8.238−01	8.515−01	8.722−01	8.871−01	9.057−01
14	30	2.316−01	2.110−01	1.857−01	1.581−01	1.302−01	1.039−01	8.041−02	6.041−02	4.410−02	3.133−02
14	31	3.308−01	3.013−01	2.660−01	2.277−01	1.887−01	1.513−01	1.173−01	8.815−02	6.431−02	4.565−02
14	32	4.367−01	3.961−01	3.472−01	2.942−01	2.414−01	1.922−01	1.487−01	1.118−01	8.167−02	5.809−02
14	33	2.994−01	2.874−01	2.629−01	2.330−01	2.020−01	1.720−01	1.431−01	1.157−01	9.040−02	6.816−02
14	34	1.906−01	1.814−01	1.652−01	1.461−01	1.266−01	1.076−01	8.934−02	7.209−02	5.624−02	4.237−02
14	35	6.348−02	6.061−02	5.592−02	5.074−02	4.519−02	3.912−02	3.271−02	2.636−02	2.046−02	1.532−02
14	36	9.771−02	8.619−02	7.282−02	5.900−02	4.603−02	3.478−02	2.558−02	1.837−02	1.293−02	8.952−03
14	37	1.619−01	1.429−01	1.208−01	9.794−02	7.648−02	5.781−02	4.250−02	3.046−02	2.130−02	1.457−02
14	38	2.218−01	1.949−01	1.643−01	1.327−01	1.032−01	7.773−02	5.689−02	4.058−02	2.825−02	1.923−02
14	39	7.184−02	6.333−02	5.424−02	4.546−02	3.724−02	2.971−02	2.302−02	1.732−02	1.267−02	9.032−03
14	40	2.276−01	2.013−01	1.735−01	1.469−01	1.222−01	9.974−02	8.025−02	6.429−02	5.218−02	4.380−02
14	41	3.864−01	3.397−01	2.901−01	2.422−01	1.976−01	1.569−01	1.212−01	9.089−02	6.635−02	4.724−02
14	42	2.596+00	2.693+00	2.993+00	3.455+00	3.990+00	4.625+00	5.466+00	6.611+00	8.125+00	1.001+01
14	43	4.216−01	4.206−01	4.202−01	4.244−01	4.326−01	4.440−01	4.585−01	4.745−01	4.892−01	4.998−01
14	44	2.316+00	2.445+00	2.632+00	2.897+00	3.281+00	3.858+00	4.698+00	5.846+00	7.330+00	9.130+00
14	45	1.082−01	1.014−01	9.264−02	8.122−02	6.790−02	5.438−02	4.215−02	3.202−02	2.407−02	1.805−02
14	46	5.635−02	5.336−02	4.882−02	4.287−02	3.606−02	2.906−02	2.249−02	1.678−02	1.211−02	8.500−03
14	47	9.485−02	9.176−02	8.580−02	7.650−02	6.478−02	5.224−02	4.033−02	2.996−02	2.153−02	1.506−02

Table 4 (continued)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
14	48	1.352−01	1.289−01	1.184−01	1.042−01	8.767−02	7.061−02	5.457−02	4.063−02	2.927−02	2.049−02
14	49	1.207−02	1.245−02	1.185−02	1.050−02	8.810−03	7.077−03	5.473−03	4.080−03	2.939−03	2.054−03
14	50	3.750−02	3.795−02	3.572−02	3.151−02	2.641−02	2.124−02	1.645−02	1.228−02	8.844−03	6.168−03
14	51	6.337−02	6.426−02	6.052−02	5.335−02	4.467−02	3.590−02	2.781−02	2.079−02	1.502−02	1.053−02
14	52	1.463−01	1.345−01	1.198−01	1.035−01	8.672−02	7.038−02	5.521−02	4.188−02	3.077−02	2.198−02
14	53	6.788−01	6.859−01	7.013−01	7.228−01	7.395−01	7.448−01	7.373−01	7.166−01	6.829−01	6.384−01
14	54	5.266−01	5.574−01	5.874−01	6.177−01	6.545−01	7.042−01	7.695−01	8.476−01	9.326−01	1.016+00
14	55	9.748−02	8.413−02	7.243−02	6.300−02	5.556−02	4.955−02	4.451−02	4.003−02	3.582−02	3.167−02
14	56	5.438−02	5.177−02	4.740−02	4.144−02	3.477−02	2.822−02	2.226−02	1.712−02	1.283−02	9.402−03
14	57	6.796−02	5.940−02	5.172−02	4.463−02	3.786−02	3.135−02	2.522−02	1.965−02	1.481−02	1.081−02
14	58	8.702−02	7.631−02	6.675−02	5.786−02	4.928−02	4.096−02	3.306−02	2.582−02	1.950−02	1.424−02
14	59	2.225−02	1.901−02	1.581−02	1.288−02	1.027−02	7.989−03	6.059−03	4.482−03	3.249−03	2.332−03
14	60	4.115−02	3.492−02	2.881−02	2.327−02	1.840−02	1.420−02	1.068−02	7.799−03	5.537−03	3.831−03
14	61	5.858−02	4.827−02	3.924−02	3.150−02	2.487−02	1.922−02	1.446−02	1.057−02	7.501−03	5.180−03
14	62	1.495−01	1.314−01	1.097−01	8.933−02	7.188−02	5.728−02	4.500−02	3.464−02	2.600−02	1.897−02
14	63	5.759−02	5.634−02	5.241−02	4.639−02	3.949−02	3.260−02	2.618−02	2.044−02	1.548−02	1.139−02
14	64	1.346−02	1.270−02	1.188−02	1.091−02	9.782−03	8.504−03	7.138−03	5.766−03	4.479−03	3.349−03
14	65	1.221−01	1.095−01	9.555−02	8.253−02	7.128−02	6.197−02	5.449−02	4.862−02	4.407−02	4.054−02
14	66	2.380−02	2.117−02	1.817−02	1.514−02	1.222−02	9.550−03	7.236−03	5.340−03	3.873−03	2.795−03
14	67	2.919−02	2.598−02	2.255−02	1.902−02	1.551−02	1.216−02	9.167−03	6.654−03	4.671−03	3.189−03
14	68	1.577−01	1.386−01	1.174−01	9.815−02	8.218−02	6.956−02	5.985−02	5.253−02	4.707−02	4.298−02
14	69	6.146−02	5.636−02	5.066−02	4.442−02	3.786−02	3.137−02	2.539−02	2.022−02	1.598−02	1.261−02
14	70	5.419−02	4.940−02	4.416−02	3.851−02	3.252−02	2.644−02	2.069−02	1.558−02	1.135−02	8.018−03
14	71	5.603−02	5.345−02	4.989−02	4.507−02	3.909−02	3.242−02	2.575−02	1.964−02	1.447−02	1.036−02
14	72	1.115−01	9.732−02	8.340−02	7.024−02	5.778−02	4.612−02	3.560−02	2.657−02	1.920−02	1.349−02
14	73	2.625−01	2.342−01	2.082−01	1.852−01	1.647−01	1.461−01	1.290−01	1.136−01	1.002−01	8.892−02
14	74	7.026−01	6.232−01	5.666−01	5.315−01	5.166−01	5.198−01	5.389−01	5.710−01	6.131−01	6.612−01
14	75	5.062−02	5.296−02	5.377−02	5.204−02	4.765−02	4.123−02	3.382−02	2.640−02	1.974−02	1.422−02
14	76	2.439−01	1.858−01	1.446−01	1.156−01	9.497−02	8.008−02	6.941−02	6.208−02	5.750−02	5.508−02
14	77	2.269−02	2.357−02	2.385−02	2.304−02	2.107−02	1.821−02	1.492−02	1.165−02	8.704−03	6.268−03
14	78	5.712−01	6.158−01	6.325−01	6.449−01	6.732−01	7.293−01	8.170−01	9.349−01	1.078+00	1.237+00
14	79	1.634−02	1.457−02	1.249−02	1.033−02	8.286−03	6.453−03	4.877−03	3.576−03	2.547−03	1.769−03
14	80	2.277−02	2.030−02	1.739−02	1.437−02	1.151−02	8.945−03	6.739−03	4.917−03	3.479−03	2.395−03
14	81	2.923−02	2.602−02	2.226−02	1.838−02	1.471−02	1.142−02	8.603−03	6.277−03	4.441−03	3.056−03
14	82	2.628−03	2.382−03	2.079−03	1.745−03	1.409−03	1.099−03	8.318−04	6.125−04	4.401−04	3.093−04
14	83	7.889−03	7.138−03	6.222−03	5.214−03	4.205−03	3.275−03	2.473−03	1.816−03	1.299−03	9.061−04
14	84	1.321−02	1.196−02	1.044−02	8.752−03	7.061−03	5.500−03	4.154−03	3.051−03	2.183−03	1.524−03
14	85	1.973−01	1.946−01	1.909−01	1.885−01	1.890−01	1.917−01	1.945−01	1.944−01	1.885−01	1.759−01
14	86	9.608−02	8.926−02	8.129−02	7.427−02	6.941−02	6.689−02	6.588−02	6.493−02	6.264−02	5.826−02
14	87	3.456−02	3.201−02	2.919−02	2.629−02	2.336−02	2.036−02	1.727−02	1.417−02	1.120−02	8.524−03
14	88	5.577−02	5.167−02	4.732−02	4.287−02	3.830−02	3.352−02	2.853−02	2.346−02	1.857−02	1.415−02
14	89	7.818−02	7.236−02	6.621−02	5.996−02	5.356−02	4.687−02	3.988−02	3.280−02	2.597−02	1.979−02
14	90	6.986−01	6.254−01	5.705−01	5.403−01	5.333−01	5.448−01	5.681−01	5.962−01	6.223−01	6.406−01
14	91	3.045−02	2.948−02	2.838−02	2.739−02	2.685−02	2.720−02	2.882−02	3.186−02	3.600−02	4.042−02
14	92	1.578−02	1.477−02	1.338−02	1.178−02	1.019−02	8.707−03	7.351−03	6.120−03	5.008−03	4.017−03
14	93	7.634−03	6.970−03	6.219−03	5.394−03	4.525−03	3.654−03	2.830−03	2.104−03	1.505−03	1.043−03
14	94	1.267−02	1.159−02	1.034−02	8.977−03	7.533−03	6.082−03	4.709−03	3.497−03	2.500−03	1.730−03
14	95	1.784−02	1.630−02	1.455−02	1.262−02	1.058−02	8.544−03	6.614−03	4.912−03	3.511−03	2.429−03
14	96	8.658−03	7.814−03	6.748−03	5.593−03	4.479−03	3.484−03	2.637−03	1.945−03	1.399−03	9.808−04
14	97	1.226−02	1.106−02	9.554−03	7.925−03	6.353−03	4.946−03	3.748−03	2.767−03	1.991−03	1.398−03
14	98	1.754−02	1.546−02	1.317−02	1.083−02	8.622−03	6.674−03	5.032−03	3.697−03	2.649−03	1.853−03
14	99	1.561−02	1.450−02	1.308−02	1.141−02	9.588−03	7.740−03	5.992−03	4.457−03	3.199−03	2.227−03
14	100	9.404−03	8.728−03	7.873−03	6.870−03	5.777−03	4.665−03	3.613−03	2.688−03	1.930−03	1.344−03
14	101	3.142−03	2.915−03	2.630−03	2.295−03	1.930−03	1.559−03	1.208−03	8.985−04	6.449−04	4.490−04
14	102	8.625−02	8.506−02	8.269−02	7.971−02	7.632−02	7.234−02	6.742−02	6.131−02	5.411−02	4.620−02
14	103	8.740−02	8.888−02	9.047−02	9.247−02	9.467−02	9.648−02	9.710−02	9.581−02	9.218−02	8.616−02
14	104	1.293−02	1.080−02	9.056−03	7.710−03	6.700−03	5.936−03	5.327−03	4.796−03	4.289−03	3.776−03
14	105	2.440−03	2.088−03	1.758−03	1.460−03	1.192−03	9.525−04	7.405−04	5.577−04	4.065−04	2.871−04
14	106	4.261−03	3.674−03	3.099−03	2.564−03	2.081−03	1.652−03	1.277−03	9.578−04	6.957−04	4.901−04
14	107	5.867−03	5.036−03	4.242−03	3.513−03	2.859−03	2.277−03	1.765−03	1.326−03	9.649−04	6.806−04
14	108	8.596−03	8.268−03	8.103−03	8.115−03	8.229−03	8.334−03	8.314−03	8.073−03	7.565−03	6.801−03
14	109	6.090−03	5.224−03	4.407−03	3.651−03	2.962−03	2.347−03	1.809−03	1.353−03	9.818−04	6.918−04
14	110	7.966−03	6.842−03	5.771−03	4.775−03	3.869−03	3.061−03	2.357−03	1.762−03	1.278−03	8.999−04
14	111	9.871−03	8.453−03	7.114−03	5.879−03	4.761−03	3.765−03	2.899−03	2.168−03	1.572−03	1.107−03
14	112	1.757−03	1.434−03	1.173−03	9.764−04	8.275−04	7.024−04	5.857−04	4.727−04	3.665−04	2.727−04
14	113	4.418−03	4.031−03	3.655−03	3.265−03	2.837−03	2.368−03	1.887−03	1.434−03	1.044−03	7.335−04
14	114	3.509−03	3.210−03	2.907−03	2.590−03	2.244−03	1.868−03	1.485−03	1.126−03	8.190−04	5.746−04
14	115	2.404−03	2.190−03	1.991−03	1.787−03	1.559−03	1.306−03	1.043−03	7.939−04	5.789−04	4.071−04
14	116	5.620−03	4.955−03	4.335−03	3.820−03	3.423−03	3.121−03	2.875−03	2.647−03	2.408−03	2.144−03
14	117	7.094−03	6.640−03	6.067−03	5.370−03	4.572−03	3.725−03	2.899−03	2.160−03	1.548−03	1.075−03
14	118	9.014−03	8.401−03	7.636−03	6.729−03	5.709−03	4.640−03	3.605−03	2.683−03	1.922−03	1.334−03
14	119	1.120−02	1.037−02	9.358−03	8.199−03	6.926−03	5.612−03	4.351−03	3.234−03	2.315−03	1.606−03
14	120	2.377−03	2.217−03	2.032−03	1.814−03	1.562−03	1.289−03	1.017−03	7.680−04	5.573−04	3.910−04
14	121	3.693−03	3.416−03	3.084−03	2.708−03	2.301−03	1.880−03	1.472−03	1.105−03	7.987−04	5.586−04

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
14	122	5.346−03	4.881−03	4.326−03	3.734−03	3.127−03	2.526−03	1.962−03	1.465−03	1.055−03	7.356−04
14	123	6.523−03	6.505−03	6.640−03	6.940−03	7.398−03	7.981−03	8.621−03	9.210−03	9.615−03	9.708−03
14	124	1.595−04	1.552−04	1.524−04	1.494−04	1.430−04	1.310−04	1.138−04	9.210−05	7.259−05	5.388−05
14	125	4.812−04	4.674−04	4.582−04	4.485−04	4.287−04	3.923−04	3.399−04	2.781−04	2.154−04	1.590−04
14	126	8.463−04	8.125−04	7.885−04	7.659−04	7.284−04	6.647−04	5.752−04	4.704−04	3.647−04	2.695−04
14	127	3.119−02	3.164−02	3.216−02	3.276−02	3.332−02	3.365−02	3.348−02	3.259−02	3.089−02	2.845−02
14	128	2.295−02	2.185−02	2.063−02	1.924−02	1.762−02	1.583−02	1.395−02	1.211−02	1.036−02	8.757−03
14	129	1.636−03	1.536−03	1.427−03	1.296−03	1.134−03	9.464−04	7.501−04	5.658−04	4.086−04	2.847−04
14	130	2.321−03	2.136−03	1.946−03	1.738−03	1.502−03	1.242−03	9.780−04	7.340−04	5.278−04	3.663−04
14	131	3.828−03	3.382−03	2.931−03	2.501−03	2.084−03	1.679−03	1.298−03	9.619−04	6.859−04	4.734−04
14	132	4.948−04	4.577−04	4.202−04	3.783−04	3.291−04	2.740−04	2.174−04	1.647−04	1.199−04	8.439−05
14	133	9.832−04	8.788−04	7.804−04	6.836−04	5.828−04	4.782−04	3.754−04	2.823−04	2.041−04	1.428−04
14	134	1.085−03	1.016−03	9.436−04	8.569−04	7.501−04	6.268−04	4.983−04	3.778−04	2.748−04	1.931−04
14	135	2.274−03	2.024−03	1.817−03	1.638−03	1.458−03	1.261−03	1.047−03	8.307−04	6.298−04	4.584−04
14	136	9.353−04	9.157−04	8.929−04	8.570−04	7.975−04	7.106−04	6.020−04	4.840−04	3.702−04	2.711−04
14	137	3.555−04	3.366−04	3.195−04	3.007−04	2.762−04	2.441−04	2.057−04	1.648−04	1.257−04	9.188−05
14	138	3.094−02	3.156−02	3.233−02	3.314−02	3.378−02	3.392−02	3.327−02	3.160−02	2.892−02	2.542−02
14	139	1.767−02	1.732−02	1.685−02	1.629−02	1.566−02	1.496−02	1.415−02	1.316−02	1.197−02	1.057−02
14	140	1.078−02	1.143−02	1.235−02	1.355−02	1.504−02	1.673−02	1.845−02	1.993−02	2.088−02	2.111−02
14	141	4.405−03	4.722−03	5.163−03	5.773−03	6.615−03	7.755−03	9.227−03	1.099−02	1.291−02	1.476−02
15	16	3.320+00	2.856+00	2.495+00	2.212+00	2.001+00	1.860+00	1.781+00	1.742+00	1.725+00	1.710+00
15	17	1.285−01	1.174−01	1.041−01	8.858−02	7.220−02	5.652−02	4.260−02	3.103−02	2.194−02	1.513−02
15	18	3.988−01	3.645−01	3.245−01	2.782−01	2.300−01	1.846−01	1.449−01	1.123−01	8.683−02	6.784−02
15	19	6.662−01	6.058−01	5.351−01	4.532−01	3.676−01	2.864−01	2.150−01	1.560−01	1.101−01	7.559−02
15	20	1.320+01	1.416+01	1.564+01	1.819+01	2.190+01	2.601+01	2.970+01	3.254+01	3.461+01	3.607+01
15	21	3.472−01	3.149−01	2.765−01	2.342−01	1.910−01	1.498−01	1.133−01	8.272−02	5.860−02	4.046−02
15	22	5.022−01	4.536−01	3.968−01	3.347−01	2.719−01	2.127−01	1.604−01	1.170−01	8.279−02	5.714−02
15	23	6.760−01	6.044−01	5.256−01	4.426−01	3.596−01	2.816−01	2.125−01	1.549−01	1.096−01	7.558−02
15	24	2.153−01	1.841−01	1.535−01	1.254−01	1.000−01	7.765−02	5.850−02	4.276−02	3.037−02	2.102−02
15	25	3.734−01	3.169−01	2.630−01	2.145−01	1.712−01	1.330−01	1.002−01	7.322−02	5.196−02	3.593−02
15	26	5.363−01	4.543−01	3.767−01	3.076−01	2.462−01	1.918−01	1.447−01	1.057−01	7.496−02	5.178−02
15	27	1.391+00	1.361+00	1.344+00	1.341+00	1.355+00	1.383+00	1.419+00	1.460+00	1.506+00	1.567+00
15	28	3.590−01	3.428−01	3.126−01	2.727−01	2.307−01	1.920−01	1.586−01	1.302−01	1.061−01	8.537−02
15	29	1.976+00	2.102+00	2.269+00	2.514+00	2.826+00	3.139+00	3.407+00	3.622+00	3.818+00	4.051+00
15	30	2.214−01	1.961−01	1.695−01	1.419−01	1.144−01	8.883−02	6.654−02	4.829−02	3.409−02	2.351−02
15	31	3.119−01	2.760−01	2.385−01	1.998−01	1.613−01	1.254−01	9.396−02	6.821−02	4.817−02	3.324−02
15	32	4.049−01	3.571−01	3.079−01	2.576−01	2.080−01	1.617−01	1.213−01	8.805−02	6.219−02	4.290−02
15	33	1.927−01	1.842−01	1.652−01	1.407−01	1.155−01	9.212−02	7.174−02	5.447−02	4.024−02	2.891−02
15	34	1.197−01	1.136−01	1.013−01	8.579−02	7.007−02	5.573−02	4.331−02	3.285−02	2.426−02	1.745−02
15	35	4.191−02	3.943−02	3.512−02	3.019−02	2.531−02	2.064−02	1.629−02	1.242−02	9.157−03	6.550−03
15	36	7.180−02	6.415−02	5.447−02	4.416−02	3.435−02	2.576−02	1.869−02	1.317−02	9.048−03	6.083−03
15	37	1.203−01	1.072−01	9.097−02	7.376−02	5.742−02	4.310−02	3.130−02	2.208−02	1.517−02	1.020−02
15	38	1.697−01	1.500−01	1.266−01	1.023−01	7.943−02	5.949−02	4.313−02	3.037−02	2.083−02	1.399−02
15	39	9.120−02	8.626−02	7.852−02	6.963−02	6.005−02	4.995−02	3.997−02	3.081−02	2.298−02	1.664−02
15	40	2.858−01	2.698−01	2.437−01	2.122−01	1.790−01	1.469−01	1.180−01	9.336−02	7.337−02	5.796−02
15	41	4.759−01	4.466−01	4.013−01	3.474−01	2.907−01	2.356−01	1.855−01	1.420−01	1.058−01	7.672−02
15	42	2.557+00	2.528+00	2.657+00	2.923+00	3.245+00	3.599+00	4.030+00	4.595+00	5.334+00	6.249+00
15	43	1.834−01	1.763−01	1.645−01	1.489−01	1.317−01	1.147−01	9.926−02	8.589−02	7.460−02	6.525−02
15	44	1.400+00	2.037+00	3.268+00	4.464+00	5.082+00	5.200+00	5.185+00	5.334+00	5.794+00	6.590+00
15	45	2.150−01	2.133−01	2.070−01	1.952−01	1.780−01	1.566−01	1.333−01	1.100−01	8.842−02	6.959−02
15	46	4.704−02	4.620−02	4.298−02	3.781−02	3.164−02	2.538−02	1.967−02	1.480−02	1.085−02	7.779−03
15	47	7.614−02	7.572−02	7.107−02	6.274−02	5.244−02	4.189−02	3.227−02	2.412−02	1.757−02	1.251−02
15	48	1.075−01	1.064−01	9.935−02	8.733−02	7.279−02	5.807−02	4.468−02	3.337−02	2.428−02	1.725−02
15	49	1.064−02	9.696−03	8.408−03	6.940−03	5.475−03	4.147−03	3.032−03	2.154−03	1.497−03	1.027−03
15	50	3.239−02	2.942−02	2.557−02	2.121−02	1.681−02	1.277−02	9.347−03	6.622−03	4.562−03	3.073−03
15	51	5.594−02	5.017−02	4.315−02	3.551−02	2.799−02	2.123−02	1.555−02	1.108−02	7.715−03	5.290−03
15	52	7.541−02	8.194−02	8.054−02	7.321−02	6.277−02	5.137−02	4.041−02	3.067−02	2.254−02	1.609−02
15	53	5.388−01	5.326−01	5.282−01	5.284−01	5.368−01	5.550−01	5.790−01	6.016−01	6.154−01	6.156−01
15	54	2.217−01	2.616−01	3.410−01	4.299−01	4.885−01	5.124−01	5.209−01	5.324−01	5.554−01	5.893−01
15	55	9.563−02	8.578−02	7.789−02	7.234−02	6.893−02	6.701−02	6.567−02	6.392−02	6.101−02	5.660−02
15	56	4.727−02	4.354−02	3.906−02	3.400−02	2.871−02	2.351−02	1.868−02	1.445−02	1.092−02	8.097−03
15	57	6.987−02	6.304−02	5.558−02	4.763−02	3.955−02	3.175−02	2.459−02	1.839−02	1.330−02	9.346−03
15	58	1.046−01	9.581−02	8.396−02	7.080−02	5.771−02	4.555−02	3.480−02	2.574−02	1.847−02	1.289−02
15	59	1.521−02	1.286−02	1.077−02	8.888−03	7.184−03	5.663−03	4.345−03	3.247−03	2.378−03	1.726−03
15	60	2.881−02	2.418−02	2.002−02	1.631−02	1.301−02	1.013−02	7.676−03	5.645−03	4.035−03	2.812−03
15	61	4.468−02	3.692−02	3.010−02	2.418−02	1.906−02	1.468−02	1.101−02	8.010−03	5.661−03	3.897−03
15	62	4.580−02	4.137−02	3.653−02	3.176−02	2.721−02	2.289−02	1.874−02	1.485−02	1.134−02	8.351−03
15	63	2.874−02	2.579−02	2.263−02	1.957−02	1.671−02	1.402−02	1.147−02	9.088−03	6.953−03	5.144−03
15	64	8.426−03	7.731−03	6.934−03	6.110−03	5.295−03	4.494−03	3.705−03	2.948−03	2.257−03	1.664−03
15	65	6.525−02	6.167−02	5.671−02	5.133−02	4.647−02	4.273−02	4.024−02	3.880−02	3.807−02	3.774−02
15	66	1.571−02	1.411−02	1.234−02	1.048−02	8.612−03	6.837−03	5.276−03	4.002−03	3.035−03	2.345−03
15	67	2.086−02	1.863−02	1.629−02	1.383−02	1.130−02	8.857−03	6.656−03	4.814−03	3.370−03	2.298−03
15	68	7.243−02	6.756−02	6.117−02	5.455−02	4.876−02	4.438−02	4.148−02	3.980−02	3.894−02	3.855−02
15	69	6.687−02	6.144−02	5.590−02	5.081−02	4.627−02	4.211−02	3.805−02	3.389−02	2.956−02	2.515−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
15	70	3.908−02	3.490−02	3.064−02	2.614−02	2.152−02	1.708−02	1.309−02	9.710−03	7.007−03	4.936−03
15	71	5.491−02	4.843−02	4.191−02	3.530−02	2.877−02	2.264−02	1.724−02	1.274−02	9.184−03	6.490−03
15	72	6.813−02	5.978−02	5.154−02	4.329−02	3.519−02	2.761−02	2.094−02	1.538−02	1.097−02	7.634−03
15	73	1.403−01	1.361−01	1.331−01	1.308−01	1.292−01	1.280−01	1.266−01	1.243−01	1.206−01	1.157−01
15	74	4.247−01	4.003−01	3.846−01	3.802−01	3.897−01	4.145−01	4.545−01	5.077−01	5.709−01	6.390−01
15	75	2.631−02	2.654−02	2.613−02	2.473−02	2.231−02	1.912−02	1.556−02	1.207−02	8.963−03	6.419−03
15	76	5.217−02	4.810−02	4.498−02	4.250−02	4.061−02	3.941−02	3.909−02	3.975−02	4.137−02	4.371−02
15	77	1.445−02	1.353−02	1.264−02	1.155−02	1.019−02	8.609−03	6.942−03	5.350−03	3.956−03	2.824−03
15	78	6.862−01	7.629−01	7.695−01	7.357−01	6.934−01	6.649−01	6.601−01	6.796−01	7.192−01	7.719−01
15	79	1.135−02	9.663−03	7.837−03	6.097−03	4.589−03	3.364−03	2.411−03	1.690−03	1.161−03	7.842−04
15	80	1.588−02	1.353−02	1.098−02	8.541−03	6.428−03	4.710−03	3.371−03	2.359−03	1.615−03	1.085−03
15	81	2.045−02	1.742−02	1.413−02	1.100−02	8.283−03	6.073−03	4.348−03	3.043−03	2.085−03	1.400−03
15	82	1.633−03	1.377−03	1.123−03	8.852−04	6.762−04	5.025−04	3.645−04	2.585−04	1.794−04	1.222−04
15	83	4.902−03	4.126−03	3.361−03	2.648−03	2.022−03	1.503−03	1.090−03	7.723−04	5.355−04	3.640−04
15	84	8.212−03	6.913−03	5.630−03	4.433−03	3.384−03	2.513−03	1.822−03	1.292−03	8.961−04	6.095−04
15	85	1.504−01	1.475−01	1.456−01	1.462−01	1.505−01	1.587−01	1.698−01	1.819−01	1.925−01	1.995−01
15	86	4.778−02	4.365−02	3.893−02	3.407−02	2.941−02	2.517−02	2.150−02	1.847−02	1.607−02	1.416−02
15	87	7.344−02	6.998−02	6.537−02	5.983−02	5.345−02	4.636−02	3.887−02	3.144−02	2.450−02	1.844−02
15	88	1.170−01	1.116−01	1.049−01	9.674−02	8.699−02	7.586−02	6.385−02	5.178−02	4.044−02	3.047−02
15	89	1.636−01	1.560−01	1.466−01	1.351−01	1.215−01	1.060−01	8.920−02	7.234−02	5.652−02	4.259−02
15	90	2.215−01	2.300−01	2.408−01	2.577−01	2.838−01	3.215−01	3.718−01	4.341−01	5.056−01	5.807−01
15	91	1.812−02	1.801−02	1.752−02	1.682−02	1.613−02	1.562−02	1.541−02	1.555−02	1.599−02	1.657−02
15	92	2.415−02	2.327−02	2.221−02	2.110−02	2.001−02	1.894−02	1.784−02	1.670−02	1.549−02	1.417−02
15	93	4.442−03	4.234−03	3.957−03	3.603−03	3.176−03	2.691−03	2.176−03	1.678−03	1.237−03	8.772−04
15	94	7.391−03	7.052−03	6.596−03	6.010−03	5.301−03	4.492−03	3.634−03	2.802−03	2.065−03	1.463−03
15	95	1.042−02	9.937−03	9.286−03	8.457−03	7.458−03	6.318−03	5.110−03	3.939−03	2.902−03	2.056−03
15	96	1.115−02	1.050−02	9.680−03	8.744−03	7.718−03	6.620−03	5.476−03	4.344−03	3.300−03	2.405−03
15	97	1.576−02	1.481−02	1.364−02	1.232−02	1.088−02	9.329−03	7.714−03	6.117−03	4.643−03	3.383−03
15	98	2.080−02	1.940−02	1.778−02	1.602−02	1.413−02	1.211−02	1.001−02	7.930−03	6.015−03	4.380−03
15	99	1.003−02	9.333−03	8.616−03	7.884−03	7.115−03	6.269−03	5.334−03	4.347−03	3.381−03	2.515−03
15	100	6.044−03	5.615−03	5.179−03	4.738−03	4.278−03	3.772−03	3.211−03	2.618−03	2.037−03	1.516−03
15	101	2.019−03	1.876−03	1.730−03	1.583−03	1.429−03	1.260−03	1.073−03	8.744−04	6.803−04	5.061−04
15	102	8.793−02	8.711−02	8.562−02	8.387−02	8.199−02	7.981−02	7.692−02	7.279−02	6.712−02	5.999−02
15	103	5.876−02	6.177−02	6.600−02	7.209−02	8.011−02	8.929−02	9.802−02	1.043−01	1.063−01	1.031−01
15	104	8.403−03	7.528−03	6.907−03	6.566−03	6.440−03	6.402−03	6.310−03	6.063−03	5.618−03	4.996−03
15	105	1.039−03	8.398−04	6.710−04	5.324−04	4.197−04	3.283−04	2.539−04	1.934−04	1.446−04	1.057−04
15	106	1.798−03	1.461−03	1.168−03	9.241−04	7.251−04	5.641−04	4.342−04	3.295−04	2.456−04	1.791−04
15	107	2.761−03	2.313−03	1.876−03	1.484−03	1.153−03	8.850−04	6.714−04	5.028−04	3.706−04	2.679−04
15	108	5.087−03	4.706−03	4.357−03	4.055−03	3.781−03	3.501−03	3.188−03	2.838−03	2.459−03	2.074−03
15	109	2.583−03	2.275−03	1.991−03	1.724−03	1.460−03	1.196−03	9.407−04	7.107−04	5.172−04	3.644−04
15	110	3.392−03	2.991−03	2.613−03	2.254−03	1.901−03	1.552−03	1.219−03	9.199−04	6.689−04	4.710−04
15	111	4.207−03	3.709−03	3.233−03	2.780−03	2.337−03	1.904−03	1.493−03	1.126−03	8.185−04	5.763−04
15	112	1.288−03	1.091−03	9.262−04	7.905−04	6.756−04	5.722−04	4.741−04	3.798−04	2.924−04	2.162−04
15	113	4.868−03	4.684−03	4.496−03	4.257−03	3.900−03	3.401−03	2.801−03	2.179−03	1.610−03	1.141−03
15	114	3.668−03	3.552−03	3.436−03	3.275−03	3.016−03	2.638−03	2.176−03	1.694−03	1.252−03	8.875−04
15	115	2.581−03	2.502−03	2.429−03	2.324−03	2.146−03	1.881−03	1.553−03	1.210−03	8.951−04	6.344−04
15	116	5.600−03	5.209−03	4.614−03	4.000−03	3.463−03	3.027−03	2.683−03	2.409−03	2.178−03	1.966−03
15	117	2.737−03	2.500−03	2.227−03	1.929−03	1.622−03	1.320−03	1.037−03	7.858−04	5.743−04	4.060−04
15	118	3.460−03	3.151−03	2.798−03	2.416−03	2.025−03	1.645−03	1.291−03	9.764−04	7.128−04	5.036−04
15	119	4.217−03	3.825−03	3.383−03	2.914−03	2.438−03	1.977−03	1.550−03	1.171−03	8.544−04	6.033−04
15	120	1.043−03	9.851−04	9.155−04	8.287−04	7.247−04	6.083−04	4.884−04	3.750−04	2.764−04	1.965−04
15	121	1.626−03	1.525−03	1.396−03	1.244−03	1.074−03	8.919−04	7.105−04	5.425−04	3.982−04	2.823−04
15	122	1.879−03	1.771−03	1.647−03	1.495−03	1.311−03	1.102−03	8.850−04	6.796−04	5.007−04	3.558−04
15	123	4.381−03	4.330−03	4.313−03	4.336−03	4.395−03	4.482−03	4.582−03	4.659−03	4.669−03	4.563−03
15	124	2.215−04	2.246−04	2.275−04	2.265−04	2.171−04	1.968−04	1.675−04	1.337−04	1.008−04	7.245−05
15	125	6.771−04	6.833−04	6.890−04	6.839−04	6.540−04	5.920−04	5.031−04	4.013−04	3.023−04	2.170−04
15	126	1.153−03	1.158−03	1.162−03	1.150−03	1.098−03	9.929−04	8.436−04	6.730−04	5.071−04	3.644−04
15	127	2.433−02	2.470−02	2.506−02	2.541−02	2.566−02	2.561−02	2.500−02	2.365−02	2.151−02	1.873−02
15	128	2.722−02	2.682−02	2.602−02	2.467−02	2.268−02	2.015−02	1.736−02	1.462−02	1.212−02	9.932−03
15	129	7.773−04	7.357−04	6.779−04	6.033−04	5.148−04	4.187−04	3.241−04	2.396−04	1.702−04	1.172−04
15	130	1.373−03	1.230−03	1.076−03	9.177−04	7.583−04	6.025−04	4.586−04	3.350−04	2.361−04	1.615−04
15	131	2.274−03	1.923−03	1.602−03	1.316−03	1.057−03	8.225−04	6.170−04	4.460−04	3.120−04	2.125−04
15	132	2.658−04	2.529−04	2.370−04	2.158−04	1.889−04	1.580−04	1.259−04	9.589−05	7.009−05	4.947−05
15	133	6.744−04	5.917−04	5.132−04	4.389−04	3.668−04	2.968−04	2.314−04	1.735−04	1.254−04	8.783−05
15	134	1.005−03	8.735−04	7.501−04	6.359−04	5.277−04	4.249−04	3.300−04	2.468−04	1.782−04	1.247−04
15	135	1.110−03	1.032−03	9.476−04	8.527−04	7.467−04	6.322−04	5.147−04	4.018−04	3.010−04	2.170−04
15	136	6.432−04	6.044−04	5.597−04	5.073−04	4.465−04	3.794−04	3.096−04	2.421−04	1.815−04	1.310−04
15	137	1.997−04	1.912−04	1.798−04	1.649−04	1.463−04	1.250−04	1.024−04	8.023−05	6.025−05	4.352−05
15	138	1.118−02	1.097−02	1.070−02	1.033−02	9.827−03	9.160−03	8.340−03	7.408−03	6.418−03	5.433−03
15	139	5.441−03	5.310−03	5.076−03	4.714−03	4.228−03	3.658−03	3.068−03	2.520−03	2.050−03	1.667−03
15	140	3.923−03	4.085−03	4.280−03	4.487−03	4.672−03	4.802−03	4.850−03	4.799−03	4.644−03	4.388−03
15	141	2.518−03	2.842−03	3.355−03	4.148−03	5.314−03	6.919−03	8.981−03	1.146−02	1.427−02	1.722−02
16	17	1.088+00	9.782−01	8.337−01	6.731−01	5.175−01	3.817−01	2.720−01	1.884−01	1.276−01	8.485−02
16	18	3.312+00	2.974+00	2.536+00	2.055+00	1.590+00	1.184+00	8.569−01	6.068−01	4.242−01	2.955−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
16	19	5.537+00	4.943+00	4.190+00	3.368+00	2.582+00	1.901+00	1.354+00	9.373−01	6.345−01	4.219−01
16	20	5.512+01	5.833+01	6.135+01	6.468+01	6.886+01	7.275+01	7.471+01	7.424+01	7.225+01	6.974+01
16	21	2.442+00	2.022+00	1.633+00	1.287+00	9.855−01	7.314−01	5.265−01	3.687−01	2.524−01	1.698−01
16	22	3.479+00	2.875+00	2.320+00	1.826+00	1.397+00	1.036+00	7.448−01	5.209−01	3.559−01	2.386−01
16	23	4.620+00	3.781+00	3.033+00	2.382+00	1.821+00	1.350+00	9.712−01	6.792−01	4.638−01	3.107−01
16	24	1.681+00	1.398+00	1.145+00	9.184−01	7.164−01	5.425−01	3.992−01	2.860−01	2.001−01	1.371−01
16	25	2.886+00	2.388+00	1.948+00	1.556+00	1.211+00	9.156−01	6.728−01	4.816−01	3.366−01	2.305−01
16	26	4.065+00	3.367+00	2.746+00	2.194+00	1.707+00	1.290+00	9.478−01	6.783−01	4.740−01	3.244−01
16	27	2.523+01	2.635+01	2.787+01	2.984+01	3.258+01	3.657+01	4.171+01	4.756+01	5.465+01	6.411+01
16	28	2.786+00	2.850+00	2.923+00	2.990+00	3.080+00	3.250+00	3.531+00	3.922+00	4.439+00	5.099+00
16	29	1.206+01	1.262+01	1.323+01	1.391+01	1.470+01	1.562+01	1.664+01	1.773+01	1.885+01	2.005+01
16	30	1.557+00	1.469+00	1.336+00	1.157+00	9.523−01	7.472−01	5.626−01	4.089−01	2.885−01	1.986−01
16	31	2.201+00	2.079+00	1.893+00	1.641+00	1.351+00	1.061+00	7.989−01	5.810−01	4.106−01	2.836−01
16	32	2.843+00	2.688+00	2.453+00	2.133+00	1.761+00	1.384+00	1.043+00	7.572−01	5.333−01	3.661−01
16	33	7.291−01	7.204−01	6.724−01	5.946−01	5.003−01	4.031−01	3.132−01	2.360−01	1.730−01	1.236−01
16	34	4.399−01	4.321−01	4.011−01	3.527−01	2.954−01	2.374−01	1.843−01	1.390−01	1.020−01	7.310−02
16	35	1.478−01	1.450−01	1.350−01	1.195−01	1.007−01	8.122−02	6.311−02	4.752−02	3.479−02	2.482−02
16	36	6.814−01	6.250−01	5.509−01	4.667−01	3.815−01	3.029−01	2.350−01	1.789−01	1.334−01	9.745−02
16	37	1.155+00	1.054+00	9.259−01	7.819−01	6.375−01	5.052−01	3.915−01	2.973−01	2.213−01	1.611−01
16	38	1.641+00	1.497+00	1.317+00	1.116+00	9.120−01	7.236−01	5.608−01	4.259−01	3.171−01	2.313−01
16	39	2.860−01	2.582−01	2.193−01	1.771−01	1.369−01	1.020−01	7.357−02	5.161−02	3.535−02	2.375−02
16	40	8.815−01	7.904−01	6.712−01	5.440−01	4.237−01	3.192−01	2.347−01	1.701−01	1.235−01	9.167−02
16	41	1.410+00	1.254+00	1.062+00	8.594−01	6.677−01	4.997−01	3.616−01	2.543−01	1.745−01	1.174−01
16	42	5.992+00	5.388+00	4.778+00	4.380+00	4.300+00	4.575+00	5.189+00	6.111+00	7.342+00	8.892+00
16	43	2.373+01	2.520+01	2.717+01	3.015+01	3.485+01	4.207+01	5.237+01	6.609+01	8.357+01	1.048+02
16	44	3.342+00	3.551+00	3.768+00	4.055+00	4.503+00	5.208+00	6.237+00	7.620+00	9.365+00	1.143+01
16	45	7.784−01	7.345−01	6.727−01	6.002−01	5.300−01	4.742−01	4.400−01	4.293−01	4.407−01	4.707−01
16	46	3.760−01	3.618−01	3.293−01	2.824−01	2.297−01	1.788−01	1.342−01	9.792−02	7.004−02	4.961−02
16	47	6.371−01	6.245−01	5.740−01	4.936−01	4.010−01	3.108−01	2.317−01	1.673−01	1.177−01	8.112−02
16	48	9.076−01	8.931−01	8.231−01	7.078−01	5.737−01	4.432−01	3.290−01	2.364−01	1.653−01	1.130−01
16	49	9.086−02	8.613−02	7.705−02	6.509−02	5.232−02	4.032−02	2.997−02	2.159−02	1.514−02	1.038−02
16	50	2.733−01	2.553−01	2.251−01	1.881−01	1.504−01	1.156−01	8.588−02	6.185−02	4.334−02	2.968−02
16	51	4.784−01	4.568−01	4.090−01	3.443−01	2.756−01	2.116−01	1.571−01	1.133−01	7.995−02	5.551−02
16	52	2.966−01	2.835−01	2.568−01	2.208−01	1.811−01	1.426−01	1.080−01	7.913−02	5.624−02	3.897−02
16	53	3.231+00	3.313+00	3.365+00	3.431+00	3.552+00	3.749+00	4.022+00	4.349+00	4.706+00	5.059+00
16	54	5.681−01	5.664−01	5.648−01	5.664−01	5.715−01	5.764−01	5.754−01	5.635−01	5.384−01	5.018−01
16	55	1.365+00	1.315+00	1.283+00	1.270+00	1.283+00	1.324+00	1.391+00	1.483+00	1.594+00	1.715+00
16	56	4.099−01	3.645−01	3.203−01	2.776−01	2.373−01	2.006−01	1.686−01	1.419−01	1.209−01	1.051−01
16	57	6.106−01	5.278−01	4.491−01	3.756−01	3.075−01	2.460−01	1.919−01	1.461−01	1.085−01	7.869−02
16	58	8.010−01	6.981−01	5.945−01	4.954−01	4.036−01	3.212−01	2.493−01	1.886−01	1.390−01	9.975−02
16	59	1.675−01	1.490−01	1.296−01	1.100−01	9.090−02	7.288−02	5.663−02	4.261−02	3.108−02	2.205−02
16	60	2.991−01	2.635−01	2.275−01	1.922−01	1.584−01	1.271−01	9.920−02	7.535−02	5.590−02	4.080−02
16	61	5.863−01	4.854−01	3.968−01	3.200−01	2.539−01	1.974−01	1.499−01	1.109−01	7.993−02	5.622−02
16	62	3.239−01	2.880−01	2.490−01	2.110−01	1.752−01	1.425−01	1.131−01	8.746−02	6.581−02	4.828−02
16	63	1.799−01	1.614−01	1.409−01	1.204−01	1.007−01	8.233−02	6.551−02	5.063−02	3.793−02	2.757−02
16	64	5.028−02	4.584−02	4.102−02	3.596−02	3.074−02	2.556−02	2.060−02	1.607−02	1.211−02	8.841−03
16	65	1.932+00	1.923+00	1.883+00	1.822+00	1.742+00	1.645+00	1.530+00	1.398+00	1.252+00	1.099+00
16	66	1.392−01	1.284−01	1.154−01	9.992−02	8.278−02	6.565−02	5.011−02	3.704−02	2.669−02	1.885−02
16	67	1.932−01	1.787−01	1.612−01	1.400−01	1.164−01	9.264−02	7.103−02	5.284−02	3.845−02	2.758−02
16	68	2.020+00	1.997+00	1.942+00	1.867+00	1.777+00	1.671+00	1.551+00	1.414+00	1.265+00	1.110+00
16	69	1.152+00	1.125+00	1.090+00	1.054+00	1.023+00	1.002+00	9.927−01	9.933−01	1.003+00	1.020+00
16	70	3.193−01	3.008−01	2.755−01	2.431−01	2.057−01	1.670−01	1.308−01	9.958−02	7.448−02	5.541−02
16	71	4.781−01	4.391−01	3.922−01	3.388−01	2.819−01	2.256−01	1.739−01	1.298−01	9.422−02	6.696−02
16	72	4.600−01	4.387−01	4.053−01	3.590−01	3.034−01	2.444−01	1.882−01	1.394−01	9.974−02	6.939−02
16	73	2.272+00	2.315+00	2.360+00	2.416+00	2.488+00	2.575+00	2.666+00	2.744+00	2.797+00	2.817+00
16	74	1.216+00	1.123+00	1.047+00	9.793−01	9.154−01	8.542−01	7.984−01	7.508−01	7.129−01	6.837−01
16	75	1.500−01	1.529−01	1.487−01	1.370−01	1.193−01	9.855−02	7.762−02	5.874−02	4.300−02	3.068−02
16	76	4.428−01	3.500−01	2.803−01	2.264−01	1.832−01	1.477−01	1.189−01	9.603−02	7.854−02	6.555−02
16	77	1.078−01	9.436−02	8.234−02	7.045−02	5.838−02	4.659−02	3.579−02	2.655−02	1.907−02	1.332−02
16	78	6.177−01	6.442−01	6.711−01	7.002−01	7.326−01	7.668−01	7.986−01	8.221−01	8.331−01	8.301−01
16	79	2.053−01	1.916−01	1.748−01	1.569−01	1.392−01	1.220−01	1.048−01	8.751−02	7.049−02	5.459−02
16	80	2.876−01	2.683−01	2.448−01	2.198−01	1.951−01	1.709−01	1.468−01	1.226−01	9.874−02	7.646−02
16	81	3.698−01	3.448−01	3.145−01	2.825−01	2.507−01	2.196−01	1.887−01	1.576−01	1.269−01	9.831−02
16	82	3.458−02	3.179−02	2.881−02	2.576−02	2.276−02	1.987−02	1.704−02	1.420−02	1.141−02	8.805−03
16	83	1.036−01	9.528−02	8.636−02	7.721−02	6.822−02	5.955−02	5.105−02	4.255−02	3.418−02	2.639−02
16	84	1.728−01	1.590−01	1.442−01	1.290−01	1.140−01	9.950−02	8.529−02	7.107−02	5.709−02	4.407−02
16	85	1.041+00	1.054+00	1.071+00	1.105+00	1.173+00	1.289+00	1.461+00	1.686+00	1.953+00	2.237+00
16	86	3.514+00	3.575+00	3.658+00	3.783+00	3.967+00	4.220+00	4.524+00	4.834+00	5.101+00	5.276+00
16	87	1.159−01	1.060−01	9.292−02	7.815−02	6.330−02	4.959−02	3.766−02	2.776−02	1.990−02	1.391−02
16	88	1.939−01	1.773−01	1.555−01	1.309−01	1.060−01	8.303−02	6.305−02	4.646−02	3.330−02	2.327−02
16	89	2.704−01	2.467−01	2.162−01	1.820−01	1.476−01	1.158−01	8.797−02	6.488−02	4.651−02	3.251−02
16	90	1.025+00	1.037+00	1.053+00	1.085+00	1.140+00	1.217+00	1.313+00	1.419+00	1.524+00	1.617+00
16	91	1.482−01	1.491−01	1.516−01	1.576−01	1.697−01	1.894−01	2.169−01	2.506−01	2.881−01	3.261−01
16	92	2.546−01	2.479−01	2.334−01	2.158−01	2.004−01	1.901−01	1.853−01	1.855−01	1.899−01	1.972−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
16	93	6.093−02	5.785−02	5.273−02	4.625−02	3.916−02	3.203−02	2.526−02	1.922−02	1.412−02	1.006−02
16	94	1.084−01	1.034−01	9.386−02	8.168−02	6.857−02	5.564−02	4.361−02	3.301−02	2.418−02	1.719−02
16	95	1.632−01	1.560−01	1.409−01	1.216−01	1.012−01	8.143−02	6.339−02	4.773−02	3.481−02	2.467−02
16	96	9.318−02	8.698−02	7.680−02	6.447−02	5.203−02	4.073−02	3.108−02	2.316−02	1.687−02	1.203−02
16	97	1.320−01	1.231−01	1.087−01	9.121−02	7.357−02	5.754−02	4.386−02	3.264−02	2.375−02	1.691−02
16	98	1.926−01	1.740−01	1.502−01	1.242−01	9.906−02	7.686−02	5.823−02	4.314−02	3.128−02	2.220−02
16	99	9.994−02	9.058−02	7.818−02	6.514−02	5.286−02	4.189−02	3.237−02	2.433−02	1.778−02	1.264−02
16	100	4.945−02	4.562−02	4.036−02	3.447−02	2.860−02	2.308−02	1.808−02	1.373−02	1.011−02	7.233−03
16	101	1.642−02	1.514−02	1.340−02	1.145−02	9.503−03	7.672−03	6.013−03	4.568−03	3.364−03	2.406−03
16	102	6.276−01	6.300−01	6.184−01	6.038−01	5.928−01	5.859−01	5.793−01	5.688−01	5.520−01	5.293−01
16	103	2.163−01	2.117−01	2.075−01	2.060−01	2.080−01	2.123−01	2.171−01	2.204−01	2.209−01	2.181−01
16	104	3.625−01	3.416−01	3.292−01	3.270−01	3.350−01	3.525−01	3.783−01	4.103−01	4.460−01	4.816−01
16	105	4.173−01	3.838−01	3.535−01	3.250−01	2.956−01	2.632−01	2.272−01	1.890−01	1.510−01	1.159−01
16	106	7.068−02	6.519−02	6.001−02	5.502−02	4.988−02	4.427−02	3.813−02	3.167−02	2.527−02	1.938−02
16	107	9.840−02	9.069−02	8.350−02	7.662−02	6.953−02	6.177−02	5.324−02	4.423−02	3.531−02	2.709−02
16	108	1.117−01	1.086−01	1.085−01	1.117−01	1.186−01	1.291−01	1.429−01	1.596−01	1.785−01	1.978−01
16	109	1.084−01	1.002−01	9.172−02	8.302−02	7.391−02	6.430−02	5.433−02	4.436−02	3.493−02	2.651−02
16	110	1.398−01	1.292−01	1.183−01	1.071−01	9.526−02	8.284−02	6.996−02	5.711−02	4.495−02	3.411−02
16	111	1.717−01	1.589−01	1.455−01	1.316−01	1.170−01	1.017−01	8.579−02	6.998−02	5.505−02	4.176−02
16	112	3.378−02	3.245−02	3.096−02	2.921−02	2.706−02	2.439−02	2.121−02	1.771−02	1.418−02	1.088−02
16	113	1.009−01	9.502−02	8.874−02	8.152−02	7.278−02	6.247−02	5.119−02	4.000−02	2.988−02	2.146−02
16	114	7.819−02	7.371−02	6.893−02	6.338−02	5.663−02	4.862−02	3.985−02	3.115−02	2.327−02	1.671−02
16	115	5.559−02	5.238−02	4.900−02	4.511−02	4.034−02	3.467−02	2.843−02	2.223−02	1.661−02	1.193−02
16	116	1.559−01	1.496−01	1.436−01	1.386−01	1.345−01	1.313−01	1.289−01	1.270−01	1.253−01	1.238−01
16	117	4.163−02	3.811−02	3.437−02	3.038−02	2.616−02	2.182−02	1.756−02	1.362−02	1.020−02	7.386−03
16	118	5.144−02	4.704−02	4.233−02	3.735−02	3.211−02	2.675−02	2.151−02	1.668−02	1.248−02	9.039−03
16	119	6.252−02	5.725−02	5.139−02	4.515−02	3.864−02	3.207−02	2.572−02	1.991−02	1.488−02	1.076−02
16	120	2.504−02	2.358−02	2.189−02	1.991−02	1.761−02	1.503−02	1.232−02	9.690−03	7.318−03	5.326−03
16	121	3.760−02	3.521−02	3.233−02	2.907−02	2.545−02	2.157−02	1.759−02	1.378−02	1.038−02	7.544−03
16	122	5.629−02	5.243−02	4.721−02	4.146−02	3.553−02	2.959−02	2.383−02	1.850−02	1.385−02	1.002−02
16	123	7.637−02	7.577−02	7.516−02	7.498−02	7.536−02	7.609−02	7.679−02	7.698−02	7.622−02	7.419−02
16	124	1.127−02	1.120−02	1.099−02	1.058−02	9.855−03	8.777−03	7.424−03	5.953−03	4.537−03	3.306−03
16	125	3.381−02	3.360−02	3.301−02	3.178−02	2.959−02	2.635−02	2.229−02	1.787−02	1.362−02	9.926−03
16	126	5.652−02	5.616−02	5.516−02	5.309−02	4.943−02	4.402−02	3.723−02	2.985−02	2.275−02	1.658−02
16	127	9.381−02	9.306−02	9.411−02	9.743−02	1.030−01	1.103−01	1.184−01	1.262−01	1.324−01	1.362−01
16	128	3.656−01	3.584−01	3.546−01	3.543−01	3.562−01	3.580−01	3.571−01	3.511−01	3.383−01	3.187−01
16	129	4.068−02	3.861−02	3.613−02	3.311−02	2.947−02	2.527−02	2.077−02	1.632−02	1.229−02	8.897−03
16	130	5.452−02	5.138−02	4.773−02	4.347−02	3.850−02	3.290−02	2.697−02	2.116−02	1.591−02	1.151−02
16	131	6.872−02	6.433−02	5.941−02	5.387−02	4.756−02	4.054−02	3.318−02	2.600−02	1.954−02	1.413−02
16	132	1.408−02	1.355−02	1.289−02	1.203−02	1.091−02	9.528−03	7.973−03	6.375−03	4.873−03	3.574−03
16	133	2.362−02	2.271−02	2.157−02	2.011−02	1.821−02	1.590−02	1.330−02	1.063−02	8.125−03	5.959−03
16	134	3.540−02	3.353−02	3.142−02	2.895−02	2.602−02	2.259−02	1.883−02	1.501−02	1.146−02	8.395−03
16	135	1.834−02	1.730−02	1.627−02	1.515−02	1.382−02	1.222−02	1.038−02	8.425−03	6.533−03	4.850−03
16	136	1.011−02	9.742−03	9.331−03	8.809−03	8.112−03	7.215−03	6.153−03	5.009−03	3.891−03	2.891−03
16	137	3.279−03	3.182−03	3.065−03	2.907−03	2.685−03	2.393−03	2.044−03	1.665−03	1.294−03	9.617−04
16	138	1.797−01	1.823−01	1.869−01	1.937−01	2.021−01	2.114−01	2.201−01	2.257−01	2.264−01	2.206−01
16	139	5.581−01	5.762−01	5.966−01	6.172−01	6.342−01	6.420−01	6.352−01	6.094−01	5.638−01	5.015−01
16	140	5.898−02	6.151−02	6.517−02	6.997−02	7.580−02	8.224−02	8.850−02	9.338−02	9.567−02	9.459−02
16	141	3.328−02	3.587−02	3.939−02	4.390−02	4.921−02	5.480−02	5.984−02	6.335−02	6.452−02	6.298−02
17	18	2.800+00	2.722+00	2.528+00	2.276+00	2.014+00	1.751+00	1.487+00	1.226+00	9.808−01	7.612−01
17	19	4.653+00	4.591+00	4.455+00	4.319+00	4.242+00	4.233+00	4.272+00	4.332+00	4.392+00	4.428+00
17	20	6.799−01	6.311−01	5.569−01	4.681−01	3.758−01	2.895−01	2.153−01	1.554−01	1.094−01	7.532−02
17	21	3.439+00	2.812+00	2.370+00	2.092+00	1.945+00	1.896+00	1.911+00	1.966+00	2.070+00	2.267+00
17	22	7.552−01	6.295−01	5.169−01	4.142−01	3.220−01	2.424−01	1.772−01	1.262−01	8.802−02	6.037−02
17	23	8.359−01	7.033−01	5.921−01	4.981−01	4.201−01	3.575−01	3.091−01	2.730−01	2.477−01	2.338−01
17	24	8.280+00	9.144+00	1.045+01	1.236+01	1.513+01	1.903+01	2.387+01	2.916+01	3.535+01	4.341+01
17	25	9.476−01	8.614−01	7.735−01	6.834−01	5.910−01	4.982−01	4.087−01	3.263−01	2.539−01	1.937−01
17	26	1.048+00	1.028+00	1.012+00	1.007+00	1.013+00	1.031+00	1.059+00	1.092+00	1.140+00	1.227+00
17	27	6.169−01	5.574−01	4.845−01	4.048−01	3.251−01	2.510−01	1.868−01	1.345−01	9.409−02	6.425−02
17	28	1.343−01	1.267−01	1.129−01	9.448−02	7.455−02	5.602−02	4.065−02	2.891−02	2.048−02	1.478−02
17	29	4.356−01	3.955−01	3.508−01	3.014−01	2.493−01	1.977−01	1.504−01	1.100−01	7.786−02	5.364−02
17	30	1.940+00	2.015+00	2.152+00	2.359+00	2.633+00	2.962+00	3.319+00	3.677+00	4.050+00	4.505+00
17	31	5.783−01	5.277−01	4.667−01	3.977−01	3.265−01	2.591−01	1.995−01	1.496−01	1.097−01	7.886−02
17	32	5.980−01	5.657−01	5.337−01	5.165−01	5.132−01	5.085−01	4.946−01	4.751−01	4.571−01	4.479−01
17	33	1.307−01	1.262−01	1.131−01	9.505−02	7.596−02	5.862−02	4.431−02	3.320−02	2.487−02	1.871−02
17	34	1.242−01	1.155−01	1.069−01	9.922−02	9.095−02	8.114−02	7.047−02	5.995−02	5.009−02	4.110−02
17	35	1.222−01	1.106−01	9.802−02	8.662−02	7.707−02	6.919−02	6.245−02	5.626−02	5.015−02	4.398−02
17	36	1.468−01	1.416−01	1.316−01	1.191−01	1.067−01	9.578−02	8.624−02	7.736−02	6.841−02	5.918−02
17	37	2.049−01	1.905−01	1.681−01	1.425−01	1.170−01	9.385−02	7.394−02	5.757−02	4.450−02	3.430−02
17	38	1.681−01	1.538−01	1.319−01	1.066−01	8.227−02	6.130−02	4.461−02	3.199−02	2.278−02	1.617−02
17	39	4.859−01	4.418−01	3.884−01	3.376−01	2.970−01	2.678−01	2.471−01	2.300−01	2.129−01	1.936−01
17	40	4.276−01	4.069−01	3.792−01	3.511−01	3.201−01	2.855−01	2.499−01	2.154−01	1.826−01	1.519−01
17	41	4.734−01	4.256−01	3.750−01	3.258−01	2.819−01	2.457−01	2.172−01	1.949−01	1.764−01	1.599−01
17	42	1.412−01	1.273−01	1.086−01	8.814−02	6.830−02	5.075−02	3.641−02	2.539−02	1.732−02	1.162−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
17	43	1.949−01	1.748−01	1.507−01	1.242−01	9.769−02	7.358−02	5.330−02	3.734−02	2.546−02	1.700−02
17	44	5.598−02	4.913−02	4.168−02	3.395−02	2.644−02	1.972−02	1.416−02	9.852−03	6.687−03	4.453−03
17	45	2.036−01	1.898−01	1.852−01	1.823−01	1.717−01	1.533−01	1.332−01	1.168−01	1.066−01	1.030−01
17	46	1.743+00	1.855+00	2.033+00	2.292+00	2.622+00	3.040+00	3.590+00	4.319+00	5.259+00	6.409+00
17	47	3.328−01	2.997−01	2.624−01	2.250−01	1.899−01	1.580−01	1.295−01	1.046−01	8.312−02	6.490−02
17	48	2.231−01	2.115−01	1.984−01	1.839−01	1.686−01	1.533−01	1.380−01	1.227−01	1.072−01	9.156−02
17	49	4.586−02	4.185−02	3.762−02	3.330−02	2.898−02	2.472−02	2.059−02	1.668−02	1.309−02	9.933−03
17	50	1.082+00	1.167+00	1.270+00	1.404+00	1.587+00	1.844+00	2.193+00	2.644+00	3.202+00	3.857+00
17	51	2.104−01	2.044−01	1.940−01	1.801−01	1.638−01	1.467−01	1.298−01	1.132−01	9.720−02	8.182−02
17	52	5.711−01	6.173−01	6.805−01	7.509−01	8.293−01	9.305−01	1.071+00	1.259+00	1.502+00	1.796+00
17	53	1.575−01	1.496−01	1.381−01	1.238−01	1.070−01	8.884−02	7.103−02	5.492−02	4.118−02	3.002−02
17	54	1.772−02	1.686−02	1.582−02	1.443−02	1.268−02	1.074−02	8.807−03	6.999−03	5.392−03	4.026−03
17	55	5.406−02	4.829−02	4.302−02	3.826−02	3.399−02	3.026−02	2.707−02	2.426−02	2.161−02	1.899−02
17	56	4.388−01	4.742−01	5.293−01	5.757−01	5.929−01	5.846−01	5.615−01	5.299−01	4.909−01	4.444−01
17	57	7.379−02	6.482−02	5.607−02	4.731−02	3.868−02	3.066−02	2.368−02	1.791−02	1.331−02	9.755−03
17	58	6.564−02	5.974−02	5.465−02	5.002−02	4.557−02	4.133−02	3.731−02	3.341−02	2.946−02	2.543−02
17	59	5.205−02	5.634−02	5.743−02	5.453−02	4.899−02	4.234−02	3.556−02	2.910−02	2.321−02	1.804−02
17	60	2.685−01	3.634−01	4.113−01	4.022−01	3.598−01	3.094−01	2.639−01	2.262−01	1.947−01	1.669−01
17	61	4.143−01	3.677−01	3.249−01	2.826−01	2.410−01	2.023−01	1.685−01	1.399−01	1.157−01	9.517−03
17	62	5.080−02	4.881−02	4.598−02	4.270−02	3.940−02	3.639−02	3.372−02	3.122−02	2.865−02	2.585−02
17	63	3.255−02	3.069−02	2.842−02	2.579−02	2.287−02	1.975−02	1.658−02	1.353−02	1.072−02	8.259−03
17	64	5.218−02	5.519−02	5.614−02	5.543−02	5.400−02	5.286−02	5.279−02	5.399−02	5.604−02	5.808−02
17	65	4.203−02	3.912−02	3.529−02	3.072−02	2.583−02	2.113−02	1.699−02	1.353−02	1.072−02	8.438−03
17	66	1.356−01	1.751−01	1.903−01	1.824−01	1.632−01	1.426−01	1.245−01	1.095−01	9.653−02	8.453−02
17	67	3.987−02	3.841−02	3.612−02	3.293−02	2.902−02	2.478−02	2.061−02	1.675−02	1.335−02	1.046−02
17	68	4.165−02	3.961−02	3.624−02	3.172−02	2.663−02	2.166−02	1.727−02	1.362−02	1.069−02	8.348−03
17	69	2.319−02	2.118−02	1.896−02	1.640−02	1.358−02	1.077−02	8.240−03	6.138−03	4.486−03	3.237−03
17	70	1.901−01	1.977−01	2.089−01	2.140−01	2.088−01	1.956−01	1.780−01	1.584−01	1.379−01	1.175−01
17	71	5.770−02	5.540−02	5.075−02	4.416−02	3.651−02	2.879−02	2.177−02	1.587−02	1.123−02	7.745−03
17	72	4.281−02	4.326−02	4.226−02	3.972−02	3.615−02	3.215−02	2.808−02	2.408−02	2.024−02	1.664−02
17	73	5.675−02	5.662−02	5.371−02	4.797−02	4.031−02	3.202−02	2.422−02	1.758−02	1.234−02	8.428−03
17	74	2.015−02	1.860−02	1.688−02	1.468−02	1.216−02	9.684−03	7.500−03	5.717−03	4.325−03	3.262−03
17	75	5.202−02	4.227−02	3.525−02	3.012−02	2.622−02	2.315−02	2.058−02	1.823−02	1.592−02	1.359−02
17	76	3.403−02	3.046−02	2.763−02	2.517−02	2.295−02	2.091−02	1.901−02	1.718−02	1.532−02	1.340−02
17	77	2.768−02	2.949−02	3.188−02	3.444−02	3.697−02	3.932−02	4.114−02	4.196−02	4.141−02	3.950−02
17	78	1.002−02	1.032−02	9.991−03	8.983−03	7.536−03	5.980−03	4.549−03	3.349−03	2.401−03	1.682−03
17	79	3.509−02	3.115−02	2.715−02	2.331−02	1.998−02	1.733−02	1.526−02	1.350−02	1.183−02	1.014−02
17	80	3.237−02	3.002−02	2.671−02	2.271−02	1.864−02	1.499−02	1.196−02	9.540−03	7.610−03	6.050−03
17	81	2.949−02	2.642−02	2.248−02	1.816−02	1.405−02	1.055−02	7.785−03	5.694−03	4.149−03	3.018−03
17	82	2.792−02	2.539−03	2.185−02	1.779−03	1.388−02	1.050−02	7.760−04	5.608−04	3.961−04	2.735−04
17	83	2.587−02	2.412−02	2.231−02	2.057−02	1.907−02	1.779−02	1.656−02	1.519−02	1.360−02	1.182−02
17	84	2.374−02	2.065−02	1.739−02	1.419−02	1.134−02	8.985−03	7.098−03	5.581−03	4.341−03	3.317−03
17	85	3.741−02	3.229−02	2.630−02	2.030−02	1.499−02	1.069−02	7.423−03	5.051−03	3.381−03	2.233−03
17	86	5.447−02	4.951−02	4.295−02	3.554−02	2.812−02	2.137−02	1.564−02	1.108−02	7.618−03	5.119−03
17	87	8.601−02	8.048−02	7.167−02	6.208−02	5.340−02	4.612−02	4.001−02	3.459−02	2.952−02	2.468−02
17	88	9.313−02	8.422−02	7.280−02	6.112−02	5.064−02	4.179−02	3.434−02	2.797−02	2.245−02	1.768−02
17	89	7.487−02	6.785−02	5.895−02	4.993−02	4.203−02	3.573−02	3.091−02	2.715−02	2.395−02	2.096−02
17	90	5.632−02	4.725−02	3.757−02	2.867−02	2.125−02	1.544−02	1.105−02	7.790−03	5.400−03	3.678−03
17	91	4.413−03	3.795−03	3.120−03	2.462−03	1.878−03	1.391−03	1.004−03	7.084−04	4.891−04	3.312−04
17	92	6.095−02	5.782−02	5.411−02	4.977−02	4.476−02	3.913−02	3.308−02	2.695−02	2.116−02	1.601−02
17	93	3.330−02	3.233−02	3.098−02	2.924−02	2.707−02	2.446−02	2.142−02	1.807−02	1.465−02	1.141−02
17	94	2.097−01	2.149−01	2.222−01	2.345−01	2.537−01	2.812−01	3.170−01	3.600−01	4.073−01	4.547−01
17	95	5.583−02	5.367−02	5.072−02	4.731−02	4.353−02	3.932−02	3.463−02	2.956−02	2.437−02	1.937−02
17	96	2.092−01	2.159−01	2.246−01	2.377−01	2.580−01	2.880−01	3.291−01	3.810−01	4.411−01	5.040−01
17	97	8.158−02	7.965−02	7.624−02	7.147−02	6.546−02	5.835−02	5.039−02	4.202−02	3.378−02	2.619−02
17	98	3.085−02	2.705−02	2.358−02	2.054−02	1.795−02	1.573−02	1.378−02	1.201−02	1.035−02	8.782−03
17	99	1.196−01	1.223−01	1.263−01	1.324−01	1.412−01	1.535−01	1.694−01	1.889−01	2.110−01	2.339−01
17	100	1.584−02	1.531−02	1.447−02	1.340−02	1.218−02	1.082−02	9.358−03	7.833−03	6.329−03	4.931−03
17	101	2.354−03	2.207−03	1.982−03	1.754−03	1.580−03	1.479−03	1.440−03	1.435−03	1.429−03	1.398−03
17	102	5.924−02	5.760−02	5.478−02	5.102−02	4.642−02	4.103−02	3.507−02	2.888−02	2.289−02	1.746−02
17	103	2.334−02	2.260−02	2.156−02	2.024−02	1.859−02	1.657−02	1.425−02	1.177−02	9.327−03	7.109−03
17	104	8.483−03	7.232−03	6.120−03	5.137−03	4.248−03	3.431−03	2.686−03	2.029−03	1.480−03	1.044−03
17	105	4.804−03	4.404−03	4.195−03	4.222−03	4.500−03	4.997−03	5.626−03	6.241−03	6.675−03	6.801−03
17	106	7.148−03	6.519−03	5.986−03	5.567−03	5.238−03	4.952−03	4.662−03	4.330−03	3.945−03	3.511−03
17	107	8.622−03	8.169−03	7.792−03	7.468−03	7.157−03	6.802−03	6.354−03	5.779−03	5.080−03	4.295−03
17	108	2.424−03	2.126−03	1.842−03	1.580−03	1.336−03	1.105−03	8.893−04	6.932−04	5.220−04	3.796−04
17	109	5.562−02	5.609−02	5.712−02	5.865−02	6.034−02	6.153−02	6.140−02	5.930−02	5.499−02	4.875−02
17	110	8.693−03	7.774−03	6.987−03	6.289−03	5.618−03	4.924−03	4.186−03	3.426−03	2.689−03	2.028−03
17	111	5.157−03	4.599−03	4.197−03	3.948−03	3.809−03	3.712−03	3.585−03	3.373−03	3.057−03	2.652−03
17	112	3.992−03	3.797−03	3.668−03	3.628−03	3.690−03	3.842−03	4.041−03	4.209−03	4.263−03	4.145−03
17	113	3.190−03	2.988−03	2.826−03	2.693−03	2.559−03	2.394−03	2.184−03	1.932−03	1.655−03	1.377−03
17	114	1.755−02	1.743−02	1.736−02	1.731−02	1.719−02	1.688−02	1.624−02	1.519−02	1.371−02	1.191−02
17	115	7.622−03	7.298−03	7.053−03	6.880−03	6.737−03	6.569−03	6.329−03	5.986−03	5.531−03	4.980−03
17	116	4.205−03	3.746−03	3.257−03	2.754−03	2.259−03	1.793−03	1.376−03	1.021−03	7.336−04	5.124−04

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
17	117	2.240−02	2.235−02	2.195−02	2.111−02	1.982−02	1.814−02	1.617−02	1.406−02	1.195−02	9.946−03
17	118	5.457−03	5.204−03	4.859−03	4.414−03	3.874−03	3.266−03	2.636−03	2.037−03	1.511−03	1.082−03
17	119	4.154−03	3.899−03	3.610−03	3.291−03	2.944−03	2.579−03	2.211−03	1.856−03	1.529−03	1.237−03
17	120	5.521−03	5.654−03	5.855−03	6.092−03	6.317−03	6.483−03	6.546−03	6.481−03	6.278−03	5.949−03
17	121	4.698−03	4.732−03	4.747−03	4.701−03	4.554−03	4.288−03	3.911−03	3.456−03	2.964−03	2.473−03
17	122	3.094−03	3.027−03	2.959−03	2.880−03	2.770−03	2.610−03	2.393−03	2.128−03	1.833−03	1.530−03
17	123	1.715−03	1.550−03	1.349−03	1.135−03	9.257−04	7.325−04	5.623−04	4.185−04	3.022−04	2.121−04
17	124	2.777−04	2.708−04	2.636−04	2.555−04	2.443−04	2.277−04	2.041−04	1.745−04	1.415−04	1.089−04
17	125	1.959−03	2.079−03	2.282−03	2.600−03	3.048−03	3.610−03	4.221−03	4.774−03	5.148−03	5.252−03
17	126	1.767−03	1.679−03	1.586−03	1.492−03	1.402−03	1.314−03	1.224−03	1.124−03	1.009−03	8.796−04
17	127	2.731−03	2.577−03	2.403−03	2.202−03	1.962−03	1.687−03	1.389−03	1.093−03	8.232−04	5.953−04
17	128	1.120−02	1.065−02	9.922−03	8.987−03	7.849−03	6.565−03	5.239−03	3.992−03	2.917−03	2.056−03
17	129	9.682−03	9.903−03	1.010−02	1.022−02	1.016−02	9.878−03	9.334−03	8.543−03	7.559−03	6.464−03
17	130	4.893−03	4.885−03	4.812−03	4.640−03	4.348−03	3.946−03	3.466−03	2.957−03	2.462−03	2.008−03
17	131	2.480−03	2.415−03	2.339−03	2.238−03	2.095−03	1.901−03	1.666−03	1.409−03	1.152−03	9.133−04
17	132	2.099−03	2.167−03	2.238−03	2.293−03	2.311−03	2.265−03	2.140−03	1.936−03	1.670−03	1.372−03
17	133	2.382−03	2.502−03	2.650−03	2.801−03	2.924−03	2.990−03	2.988−03	2.922−03	2.811−03	2.678−03
17	134	2.022−03	2.057−03	2.111−03	2.162−03	2.179−03	2.134−03	2.012−03	1.816−03	1.567−03	1.292−03
17	135	8.965−04	9.105−04	9.330−04	9.581−04	9.757−04	9.749−04	9.481−04	8.924−04	8.115−04	7.135−04
17	136	1.161−03	1.203−03	1.251−03	1.293−03	1.313−03	1.294−03	1.225−03	1.105−03	9.473−04	7.715−04
17	137	1.559−03	1.615−03	1.683−03	1.754−03	1.818−03	1.861−03	1.872−03	1.841−03	1.766−03	1.651−03
17	138	3.148−03	2.923−03	2.640−03	2.314−03	1.963−03	1.611−03	1.277−03	9.793−04	7.285−04	5.266−04
17	139	5.538−03	5.185−03	4.691−03	4.084−03	3.413−03	2.736−03	2.103−03	1.555−03	1.111−03	7.700−04
17	140	7.555−04	7.253−04	6.827−04	6.269−04	5.594−04	4.833−04	4.034−04	3.247−04	2.519−04	1.885−04
17	141	5.105−04	5.045−04	4.916−04	4.676−04	4.294−04	3.771−04	3.150−04	2.499−04	1.888−04	1.367−04
18	19	1.400+01	1.376+01	1.322+01	1.275+01	1.267+01	1.278+01	1.276+01	1.250+01	1.210+01	1.165+01
18	20	2.074+00	1.930+00	1.705+00	1.434+00	1.152+00	8.903−01	6.658−01	4.852−01	3.466−01	2.442−01
18	21	5.449+00	4.340+00	3.536+00	3.007+00	2.680+00	2.479+00	2.355+00	2.289+00	2.297+00	2.422+00
18	22	5.154+00	4.626+00	4.246+00	4.006+00	3.895+00	3.900+00	3.993+00	4.142+00	4.378+00	4.800+00
18	23	2.689+00	2.259+00	1.887+00	1.559+00	1.274+00	1.037+00	8.477−01	7.027−01	5.974−01	5.296−01
18	24	7.477+00	8.026+00	8.978+00	1.057+01	1.288+01	1.591+01	1.943+01	2.317+01	2.754+01	3.334+01
18	25	2.129+01	2.303+01	2.745+01	3.611+01	4.732+01	5.857+01	6.878+01	7.819+01	8.924+01	1.049+02
18	26	3.547+00	3.357+00	3.179+00	3.022+00	2.888+00	2.781+00	2.701+00	2.649+00	2.641+00	2.732+00
18	27	1.878+00	1.697+00	1.474+00	1.232+00	9.911−01	7.681−01	5.755−01	4.190−01	2.988−01	2.109−01
18	28	3.802−01	3.585−01	3.199−01	2.678−01	2.109−01	1.576−01	1.133−01	7.928−02	5.473−02	3.786−02
18	29	1.305+00	1.189+00	1.057+00	9.097−01	7.536−01	6.018−01	4.660−01	3.538−01	2.678−01	2.074−01
18	30	2.805+00	2.808+00	2.983+00	3.504+00	4.231+00	4.806+00	5.078+00	5.136+00	5.153+00	5.289+00
18	31	4.698+00	4.782+00	4.969+00	5.281+00	5.735+00	6.333+00	7.020+00	7.728+00	8.478+00	9.399+00
18	32	2.014+00	1.876+00	1.707+00	1.527+00	1.357+00	1.209+00	1.090+00	9.976−01	9.312−01	8.936−01
18	33	4.638−01	4.376−01	3.890−01	3.291−01	2.686−01	2.142−01	1.691−01	1.330−01	1.046−01	8.200−02
18	34	6.198−01	5.692−01	5.029−01	4.354−01	3.752−01	3.249−01	2.834−01	2.478−01	2.156−01	1.852−01
18	35	2.094−01	1.860−01	1.630−01	1.449−01	1.290−01	1.125−01	9.587−02	8.010−02	6.590−02	5.340−02
18	36	3.861−01	3.642−01	3.248−01	2.768−01	2.290−01	1.868−01	1.516−01	1.230−01	9.945−02	8.002−02
18	37	7.397−01	6.692−01	5.775−01	4.832−01	3.988−01	3.293−01	2.742−01	2.299−01	1.925−01	1.598−01
18	38	7.193−01	6.532−01	5.585−01	4.538−01	3.548−01	2.704−01	2.032−01	1.515−01	1.128−01	8.417−02
18	39	4.082−01	3.921−01	3.643−01	3.334−01	3.011−01	2.680−01	2.357−01	2.048−01	1.753−01	1.470−01
18	40	2.086+00	1.892+00	1.668+00	1.456+00	1.280+00	1.147+00	1.048+00	9.648−01	8.838−01	7.976−01
18	41	1.617+00	1.477+00	1.310+00	1.141+00	9.886−01	8.614−01	7.593−01	6.756−01	6.024−01	5.342−01
18	42	4.190−01	3.775−01	3.223−01	2.620−01	2.035−01	1.519−01	1.096−01	7.704−02	5.314−02	3.616−02
18	43	5.965−01	5.374−01	4.647−01	3.836−01	3.021−01	2.276−01	1.649−01	1.157−01	7.910−02	5.302−02
18	44	1.646−01	1.456−01	1.243−01	1.017−01	7.948−02	5.943−02	4.278−02	2.987−02	2.038−02	1.368−02
18	45	5.465−01	4.858−01	4.217−01	3.604−01	3.057−01	2.600−01	2.252−01	2.019−01	1.899−01	1.884−01
18	46	1.835+00	1.929+00	2.094+00	2.284+00	2.480+00	2.727+00	3.086+00	3.600+00	4.295+00	5.165+00
18	47	4.302+00	4.510+00	4.774+00	5.151+00	5.733+00	6.625+00	7.904+00	9.621+00	1.181+01	1.447+01
18	48	9.537−01	8.753−01	7.879−01	6.988−01	6.129−01	5.328−01	4.594−01	3.921−01	3.299−01	2.726−01
18	49	1.164+00	1.369+00	1.863+00	2.569+00	3.157+00	3.481+00	3.654+00	3.847+00	4.172+00	4.660+00
18	50	9.549−01	1.071+00	1.250+00	1.412+00	1.517+00	1.599+00	1.708+00	1.880+00	2.129+00	2.451+00
18	51	2.037+00	2.139+00	2.259+00	2.420+00	2.655+00	3.003+00	3.490+00	4.129+00	4.926+00	5.870+00
18	52	1.668+00	2.517+00	3.970+00	5.278+00	5.845+00	5.753+00	5.410+00	5.155+00	5.153+00	5.434+00
18	53	4.774−01	4.535−01	4.150−01	3.656−01	3.108−01	2.560−01	2.052−01	1.607−01	1.235−01	9.373−02
18	54	5.765−02	5.619−02	5.316−02	4.828−02	4.201−02	3.522−02	2.861−02	2.258−02	1.731−02	1.289−02
18	55	1.382−01	1.193−01	1.024−01	8.714−02	7.335−02	6.125−02	5.102−02	4.253−02	3.543−02	2.938−02
18	56	5.815−01	5.791−01	5.761−01	5.735−01	5.722−01	5.710−01	5.663−01	5.531−01	5.270−01	4.870−01
18	57	9.617−01	9.639−01	9.695−01	9.785−01	9.901−01	1.001+00	1.003+00	9.869−01	9.457−01	8.776−01
18	58	2.286−01	2.056−01	1.840−01	1.630−01	1.422−01	1.224−01	1.045−01	8.855−02	7.426−02	6.137−02
18	59	1.821−01	1.810−01	1.795−01	1.775−01	1.751−01	1.720−01	1.675−01	1.603−01	1.498−01	1.358−01
18	60	1.532−01	1.441−01	1.351−01	1.253−01	1.142−01	1.020−01	8.908−02	7.588−02	6.298−02	5.093−02
18	61	3.408−01	3.309−01	3.230−01	3.164−01	3.112−01	3.068−01	3.013−01	2.920−01	2.764−01	2.541−01
18	62	1.477−01	1.404−01	1.312−01	1.208−01	1.098−01	9.913−02	8.911−02	7.968−02	7.057−02	6.163−02
18	63	2.034−01	2.062−01	2.047−01	2.004−01	1.949−01	1.903−01	1.884−01	1.899−01	1.936−01	1.969−01
18	64	3.119−02	2.924−02	2.689−02	2.423−02	2.131−02	1.825−02	1.520−02	1.231−02	9.691−03	7.424−03
18	65	1.453−01	1.355−01	1.220−01	1.055−01	8.789−02	7.086−02	5.581−02	4.329−02	3.324−02	2.533−02
18	66	1.313−01	1.321−01	1.322−01	1.310−01	1.285−01	1.246−01	1.195−01	1.127−01	1.041−01	9.372−02
18	67	1.789−01	1.820−01	1.846−01	1.867−01	1.882−01	1.887−01	1.872−01	1.823−01	1.731−01	1.596−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
18	68	1.490−01	1.402−01	1.273−01	1.111−01	9.322−02	7.578−02	6.023−02	4.718−02	3.660−02	2.816−02
18	69	8.393−02	7.530−02	6.570−02	5.551−02	4.518−02	3.546−02	2.703−02	2.017−02	1.484−02	1.080−02
18	70	2.835−01	2.785−01	2.688−01	2.547−01	2.373−01	2.178−01	1.969−01	1.749−01	1.522−01	1.296−01
18	71	4.145−01	4.103−01	4.020−01	3.892−01	3.721−01	3.513−01	3.263−01	2.968−01	2.633−01	2.276−01
18	72	1.757−01	1.690−01	1.568−01	1.401−01	1.208−01	1.013−01	8.317−02	6.704−02	5.316−02	4.150−02
18	73	1.913−01	1.849−01	1.715−01	1.510−01	1.258−01	9.962−02	7.540−02	5.497−02	3.893−02	2.699−02
18	74	1.177−01	9.510−02	7.700−02	6.171−02	4.860−02	3.771−02	2.907−02	2.245−02	1.745−02	1.369−02
18	75	1.260−01	1.106−01	9.901−02	8.963−02	8.156−02	7.443−02	6.786−02	6.135−02	5.456−02	4.740−02
18	76	1.021−01	9.963−02	9.938−02	1.006−01	1.028−01	1.054−01	1.073−01	1.071−01	1.039−01	9.767−02
18	77	6.977−02	6.492−02	6.179−02	5.968−02	5.821−02	5.709−02	5.589−02	5.404−02	5.116−02	4.717−02
18	78	3.029−02	3.117−02	3.019−02	2.718−02	2.284−02	1.816−02	1.385−02	1.022−02	7.349−03	5.170−03
18	79	8.144−02	7.396−02	6.517−02	5.565−02	4.654−02	3.870−02	3.231−02	2.710−02	2.266−02	1.873−02
18	80	1.073−01	9.562−02	8.277−02	6.981−02	5.809−02	4.844−02	4.081−02	3.464−02	2.932−02	2.444−02
18	81	1.013−01	9.303−02	8.182−02	6.849−02	5.494−02	4.284−02	3.293−02	2.519−02	1.926−02	1.472−02
18	82	2.574−02	2.409−02	2.239−02	2.070−02	1.921−02	1.791−02	1.665−02	1.526−02	1.365−02	1.186−02
18	83	4.533−02	4.085−02	3.599−02	3.114−02	2.678−02	2.310−02	1.998−02	1.720−02	1.460−02	1.215−02
18	84	8.588−02	7.666−02	6.703−02	5.764−02	4.934−02	4.243−02	3.663−02	3.150−02	2.671−02	2.218−02
18	85	1.119−01	9.672−02	7.891−02	6.101−02	4.510−02	3.220−02	2.239−02	1.526−02	1.023−02	6.775−03
18	86	1.642−01	1.495−01	1.298−01	1.075−01	8.505−02	6.462−02	4.730−02	3.349−02	2.305−02	1.550−02
18	87	2.194−01	2.008−01	1.735−01	1.449−01	1.194−01	9.840−02	8.122−02	6.684−02	5.445−02	4.366−02
18	88	2.928−01	2.719−01	2.407−01	2.070−01	1.765−01	1.511−01	1.302−01	1.123−01	9.609−02	8.087−02
18	89	2.814−01	2.553−01	2.218−01	1.872−01	1.564−01	1.310−01	1.106−01	9.387−02	7.959−02	6.681−02
18	90	1.699−01	1.426−01	1.135−01	8.662−02	6.426−02	4.675−02	3.351−02	2.366−02	1.645−02	1.125−02
18	91	1.344−02	1.156−02	9.491−03	7.484−03	5.703−03	4.222−03	3.049−03	2.152−03	1.488−03	1.010−03
18	92	1.826−01	1.727−01	1.614−01	1.483−01	1.334−01	1.168−01	9.901−02	8.114−02	6.428−02	4.935−02
18	93	2.796−01	2.851−01	2.948−01	3.108−01	3.349−01	3.683−01	4.110−01	4.617−01	5.174−01	5.730−01
18	94	1.859−01	1.825−01	1.762−01	1.690−01	1.620−01	1.556−01	1.499−01	1.448−01	1.405−01	1.369−01
18	95	4.168−01	4.170−01	4.190−01	4.275−01	4.459−01	4.757−01	5.171−01	5.683−01	6.257−01	6.838−01
18	96	3.450−01	3.504−01	3.557−01	3.639−01	3.781−01	4.013−01	4.353−01	4.803−01	5.343−01	5.921−01
18	97	4.863−01	4.904−01	4.995−01	5.185−01	5.530−01	6.077−01	6.855−01	7.853−01	9.018−01	1.024+00
18	98	1.941−01	1.775−01	1.614−01	1.457−01	1.301−01	1.143−01	9.839−02	8.260−02	6.746−02	5.359−02
18	99	3.014−01	3.060−01	3.126−01	3.238−01	3.415−01	3.669−01	4.008−01	4.429−01	4.912−01	5.415−01
18	100	1.099−01	1.111−01	1.126−01	1.154−01	1.204−01	1.281−01	1.387−01	1.520−01	1.674−01	1.834−01
18	101	1.533−02	1.480−02	1.395−02	1.289−02	1.169−02	1.038−02	8.965−03	7.501−03	6.061−03	4.723−03
18	102	1.795−01	1.746−01	1.662−01	1.548−01	1.408−01	1.245−01	1.065−01	8.776−02	6.963−02	5.324−02
18	103	7.064−02	6.841−02	6.529−02	6.131−02	5.633−02	5.024−02	4.322−02	3.574−02	2.840−02	2.172−02
18	104	2.562−02	2.184−02	1.847−02	1.550−02	1.282−02	1.036−02	8.118−03	6.144−03	4.490−03	3.176−03
18	105	1.329−02	1.216−02	1.129−02	1.074−02	1.050−02	1.049−02	1.057−02	1.058−02	1.038−02	9.886−03
18	106	2.118−02	1.972−02	1.877−02	1.841−02	1.863−02	1.932−02	2.021−02	2.092−02	2.109−02	2.047−02
18	107	2.744−02	2.568−02	2.415−02	2.287−02	2.174−02	2.059−02	1.926−02	1.763−02	1.569−02	1.351−02
18	108	7.393−03	6.480−03	5.610−03	4.805−03	4.055−03	3.353−03	2.699−03	2.107−03	1.590−03	1.160−03
18	109	7.549−02	7.470−02	7.472−02	7.544−02	7.636−02	7.667−02	7.543−02	7.192−02	6.595−02	5.793−02
18	110	1.116−01	1.117−01	1.130−01	1.155−01	1.183−01	1.203−01	1.198−01	1.155−01	1.070−01	9.476−02
18	111	2.177−02	1.950−02	1.764−02	1.615−02	1.490−02	1.370−02	1.240−02	1.093−02	9.312−03	7.645−03
18	112	1.209−02	1.150−02	1.109−02	1.095−02	1.112−02	1.157−02	1.216−02	1.265−02	1.281−02	1.246−02
18	113	3.196−02	3.133−02	3.080−02	3.035−02	2.982−02	2.898−02	2.761−02	2.558−02	2.292−02	1.979−02
18	114	2.158−02	2.067−02	1.991−02	1.930−02	1.876−02	1.813−02	1.728−02	1.614−02	1.471−02	1.304−02
18	115	3.285−02	3.235−02	3.200−02	3.176−02	3.144−02	3.082−02	2.965−02	2.778−02	2.520−02	2.206−02
18	116	1.387−02	1.244−02	1.076−02	9.007−03	7.308−03	5.746−03	4.376−03	3.229−03	2.313−03	1.612−03
18	117	3.515−02	3.475−02	3.377−02	3.210−02	2.973−02	2.678−02	2.345−02	2.000−02	1.666−02	1.360−02
18	118	4.640−02	4.590−02	4.468−02	4.265−02	3.979−02	3.621−02	3.212−02	2.781−02	2.355−02	1.955−02
18	119	1.627−02	1.528−02	1.404−02	1.262−02	1.106−02	9.425−03	7.790−03	6.253−03	4.892−03	3.748−03
18	120	1.222−02	1.241−02	1.264−02	1.282−02	1.285−02	1.264−02	1.216−02	1.144−02	1.053−02	9.499−03
18	121	1.548−02	1.558−02	1.583−02	1.615−02	1.641−02	1.650−02	1.632−02	1.582−02	1.501−02	1.395−02
18	122	1.395−02	1.358−02	1.317−02	1.270−02	1.209−02	1.128−02	1.025−02	9.046−03	7.754−03	6.460−03
18	123	5.921−03	5.115−03	4.317−03	3.562−03	2.871−03	2.257−03	1.726−03	1.282−03	9.259−04	6.505−04
18	124	1.973−02	2.092−02	2.295−02	2.612−02	3.060−02	3.620−02	4.229−02	4.782−02	5.156−02	5.261−02
18	125	3.779−03	3.741−03	3.770−03	3.892−03	4.112−03	4.406−03	4.718−03	4.963−03	5.054−03	4.934−03
18	126	6.558−03	6.458−03	6.460−03	6.618−03	6.958−03	7.454−03	8.011−03	8.478−03	8.690−03	8.531−03
18	127	8.735−03	8.155−03	7.525−03	6.832−03	6.049−03	5.177−03	4.254−03	3.345−03	2.520−03	1.826−03
18	128	3.381−02	3.212−02	2.989−02	2.707−02	2.364−02	1.978−02	1.579−02	1.204−02	8.811−03	6.219−03
18	129	1.822−02	1.843−02	1.853−02	1.839−02	1.789−02	1.697−02	1.564−02	1.399−02	1.215−02	1.024−02
18	130	2.267−02	2.264−02	2.265−02	2.255−02	2.213−02	2.126−02	1.987−02	1.800−02	1.579−02	1.340−02
18	131	1.360−02	1.283−02	1.211−02	1.134−02	1.043−02	9.356−03	8.150−03	6.898−03	5.689−03	4.586−03
18	132	4.800−03	5.009−03	5.258−03	5.503−03	5.680−03	5.735−03	5.638−03	5.396−03	5.047−03	4.643−03
18	133	7.277−03	7.509−03	7.773−03	7.998−03	8.093−03	7.967−03	7.569−03	6.901−03	6.026−03	5.047−03
18	134	7.992−03	8.028−03	8.198−03	8.412−03	8.551−03	8.512−03	8.239−03	7.741−03	7.079−03	6.337−03
18	135	3.509−03	3.574−03	3.668−03	3.765−03	3.822−03	3.793−03	3.646−03	3.373−03	2.996−03	2.559−03
18	136	6.272−03	6.466−03	6.705−03	6.958−03	7.171−03	7.283−03	7.242−03	7.017−03	6.613−03	6.063−03
18	137	1.168−03	1.209−03	1.257−03	1.298−03	1.318−03	1.299−03	1.230−03	1.110−03	9.513−04	7.746−04
18	138	1.009−02	9.263−03	8.273−03	7.187−03	6.059−03	4.948−03	3.914−03	3.001−03	2.236−03	1.623−03
18	139	1.672−02	1.564−02	1.414−02	1.231−02	1.029−02	8.247−03	6.342−03	4.691−03	3.352−03	2.326−03
18	140	2.268−03	2.179−03	2.053−03	1.886−03	1.684−03	1.457−03	1.218−03	9.828−04	7.655−04	5.765−04
18	141	1.532−03	1.513−03	1.474−03	1.403−03	1.289−03	1.132−03	9.469−04	7.524−04	5.699−04	4.140−04

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
19	20	3.495+00	3.242+00	2.853+00	2.391+00	1.917+00	1.477+00	1.101+00	7.976−01	5.645−01	3.918−01
19	21	3.330+00	2.702+00	2.195+00	1.793+00	1.482+00	1.249+00	1.080+00	9.612−01	8.870−01	8.610−01
19	22	5.057+00	4.385+00	3.842+00	3.412+00	3.088+00	2.865+00	2.729+00	2.663+00	2.678+00	2.821+00
19	23	1.202+01	1.045+01	9.308+00	8.543+00	8.101+00	7.940+00	7.989+00	8.184+00	8.577+00	9.356+00
19	24	2.649+00	2.662+00	2.872+00	3.421+00	4.087+00	4.551+00	4.741+00	4.775+00	4.842+00	5.114+00
19	25	1.038+01	1.073+01	1.145+01	1.267+01	1.457+01	1.736+01	2.090+01	2.482+01	2.947+01	3.564+01
19	26	4.028+01	4.385+01	5.192+01	6.693+01	8.607+01	1.058+02	1.245+02	1.426+02	1.640+02	1.942+02
19	27	3.063+00	2.776+00	2.416+00	2.019+00	1.622+00	1.254+00	9.337−01	6.727−01	4.708−01	3.218−01
19	28	5.740−01	5.446−01	4.884−01	4.107−01	3.243−01	2.425−01	1.735−01	1.200−01	8.110−02	5.394−02
19	29	2.185+00	1.981+00	1.753+00	1.500+00	1.232+00	9.699−01	7.331−01	5.342−01	3.774−01	2.598−01
19	30	2.000+00	1.884+00	1.767+00	1.664+00	1.587+00	1.541+00	1.523+00	1.524+00	1.546+00	1.602+00
19	31	4.270+00	4.149+00	4.064+00	4.039+00	4.098+00	4.247+00	4.464+00	4.714+00	5.011+00	5.421+00
19	32	9.814+00	9.868+00	1.010+01	1.056+01	1.128+01	1.228+01	1.346+01	1.469+01	1.603+01	1.772+01
19	33	1.178+00	1.120+00	1.029+00	9.227−01	8.174−01	7.219−01	6.379−01	5.619−01	4.900−01	4.203−01
19	34	5.795−01	5.362−01	4.669−01	3.889−01	3.146−01	2.505−01	1.984−01	1.573−01	1.248−01	9.867−02
19	35	1.192−01	1.151−01	1.037−01	8.776−02	7.064−02	5.476−02	4.142−02	3.093−02	2.300−02	1.713−02
19	36	3.749−01	3.505−01	3.056−01	2.513−01	1.975−01	1.506−01	1.127−01	8.353−02	6.167−02	4.552−02
19	37	9.579−01	8.700−01	7.437−01	6.060−01	4.776−01	3.692−01	2.830−01	2.164−01	1.656−01	1.268−01
19	38	1.479+00	1.385+00	1.230+00	1.050+00	8.753−01	7.240−01	5.992−01	4.967−01	4.107−01	3.368−01
19	39	5.061−01	4.506−01	3.972−01	3.501−01	3.086−01	2.714−01	2.389−01	2.115−01	1.883−01	1.680−01
19	40	1.693+00	1.540+00	1.360+00	1.178+00	1.016+00	8.810−01	7.730−01	6.848−01	6.084−01	5.379−01
19	41	5.270+00	4.914+00	4.360+00	3.768+00	3.247+00	2.834+00	2.517+00	2.258+00	2.022+00	1.790+00
19	42	6.821−01	6.127−01	5.225−01	4.247−01	3.296−01	2.454−01	1.762−01	1.230−01	8.401−02	5.641−02
19	43	9.506−01	8.702−01	7.621−01	6.346−01	5.024−01	3.796−01	2.753−01	1.929−01	1.315−01	8.777−02
19	44	2.746−01	2.423−01	2.062−01	1.682−01	1.312−01	9.788−02	7.030−02	4.894−02	3.323−02	2.213−02
19	45	7.581−01	6.659−01	5.693−01	4.746−01	3.854−01	3.046−01	2.350−01	1.773−01	1.310−01	9.485−02
19	46	7.223−01	6.856−01	6.445−01	6.045−01	5.711−01	5.486−01	5.396−01	5.450−01	5.653−01	6.002−01
19	47	2.753+00	2.727+00	2.710+00	2.743+00	2.863+00	3.106+00	3.502+00	4.070+00	4.826+00	5.762+00
19	48	9.026+00	9.374+00	9.811+00	1.046+01	1.149+01	1.313+01	1.552+01	1.876+01	2.293+01	2.800+01
19	49	1.922−01	1.843−01	1.750−01	1.641−01	1.515−01	1.377−01	1.234−01	1.089−01	9.443−02	8.017−02
19	50	2.365+00	2.866+00	3.616+00	4.258+00	4.606+00	4.785+00	5.006+00	5.409+00	6.052+00	6.927+00
19	51	4.864+00	5.149+00	5.491+00	5.946+00	6.608+00	7.572+00	8.906+00	1.064+01	1.280+01	1.534+01
19	52	1.823+00	1.893+00	1.976+00	2.098+00	2.288+00	2.579+00	2.993+00	3.546+00	4.247+00	5.086+00
19	53	7.958−01	7.563−01	6.918−01	6.091−01	5.178−01	4.268−01	3.427−01	2.690−01	2.075−01	1.583−01
19	54	9.393−02	8.890−02	8.315−02	7.577−02	6.666−02	5.662−02	4.656−02	3.712−02	2.867−02	2.146−02
19	55	1.994−01	1.670−01	1.379−01	1.115−01	8.771−02	6.685−02	4.952−02	3.585−02	2.552−02	1.797−02
19	56	2.792−01	2.653−01	2.528−01	2.408−01	2.282−01	2.153−01	2.019−01	1.876−01	1.713−01	1.527−01
19	57	8.448−01	8.343−01	8.355−01	8.410−01	8.385−01	8.244−01	7.993−01	7.625−01	7.121−01	6.476−01
19	58	2.172+00	2.169+00	2.168+00	2.173+00	2.184+00	2.194+00	2.187+00	2.144+00	2.048+00	1.897+00
19	59	1.122−01	1.084−01	1.044−01	9.971−02	9.436−02	8.880−02	8.322−02	7.733−02	7.074−02	6.329−02
19	60	2.949−01	2.862−01	2.785−01	2.705−01	2.609−01	2.498−01	2.371−01	2.222−01	2.042−01	1.830−01
19	61	5.415−01	5.065−01	4.764−01	4.488−01	4.217−01	3.940−01	3.648−01	3.329−01	2.975−01	2.596−01
19	62	4.492−01	4.424−01	4.304−01	4.150−01	3.966−01	3.778−01	3.631−01	3.546−01	3.512−01	3.489−01
19	63	1.227−01	1.191−01	1.136−01	1.061−01	9.723−02	8.785−02	7.873−02	7.010−02	6.186−02	5.390−02
19	64	3.565−02	3.559−02	3.485−02	3.336−02	3.139−02	2.928−02	2.725−02	2.526−02	2.319−02	2.094−02
19	65	3.877−02	3.757−02	3.570−02	3.337−02	3.082−02	2.828−02	2.585−02	2.349−02	2.111−02	1.865−02
19	66	9.563−02	9.489−02	9.260−02	8.841−02	8.259−02	7.582−02	6.861−02	6.120−02	5.365−02	4.607−02
19	67	2.176−01	2.157−01	2.116−01	2.050−01	1.960−01	1.853−01	1.731−01	1.595−01	1.442−01	1.275−01
19	68	4.140−01	3.927−01	3.658−01	3.367−01	3.073−01	2.792−01	2.532−01	2.288−01	2.050−01	1.808−01
19	69	8.388−02	7.939−02	7.370−02	6.534−02	5.461−02	4.311−02	3.243−02	2.351−02	1.657−02	1.145−02
19	70	2.047−01	1.979−01	1.863−01	1.705−01	1.521−01	1.330−01	1.146−01	9.724−02	8.114−02	6.650−02
19	71	5.251−01	4.887−01	4.522−01	4.148−01	3.738−01	3.302−01	2.868−01	2.453−01	2.066−01	1.712−01
19	72	8.692−01	8.513−01	8.270−01	7.943−01	7.517−01	7.002−01	6.409−01	5.752−01	5.046−01	4.325−01
19	73	3.409−01	3.242−01	2.986−01	2.625−01	2.187−01	1.727−01	1.301−01	9.411−02	6.591−02	4.499−02
19	74	8.386−02	7.981−02	7.398−02	6.512−02	5.412−02	4.279−02	3.262−02	2.428−02	1.782−02	1.299−02
19	75	4.010−01	3.433−01	3.055−01	2.820−01	2.683−01	2.603−01	2.544−01	2.468−01	2.348−01	2.180−01
19	76	2.507−01	2.032−01	1.701−01	1.467−01	1.293−01	1.161−01	1.053−01	9.571−02	8.611−02	7.611−02
19	77	6.304−02	5.904−02	5.605−02	5.313−02	4.996−02	4.665−02	4.319−02	3.946−02	3.529−02	3.074−02
19	78	5.120−02	5.264−02	5.100−02	4.593−02	3.861−02	3.069−02	2.338−02	1.723−02	1.236−02	8.666−03
19	79	9.099−02	8.289−02	7.229−02	6.003−02	4.781−02	3.704−02	2.832−02	2.156−02	1.640−02	1.247−02
19	80	1.506−01	1.372−01	1.205−01	1.016−01	8.296−02	6.661−02	5.328−02	4.271−02	3.425−02	2.732−02
19	81	2.426−01	2.199−01	1.943−01	1.667−01	1.400−01	1.169−01	9.799−02	8.250−02	6.925−02	5.738−02
19	82	2.407−02	2.112−02	1.795−02	1.474−02	1.180−02	9.330−03	7.338−03	5.740−03	4.443−03	3.382−03
19	83	1.185−01	1.213−01	1.132−01	9.754−02	8.009−02	6.446−02	5.172−02	4.154−02	3.329−02	2.645−02
19	84	1.541−01	1.428−01	1.301−01	1.164−01	1.031−01	9.140−02	8.104−02	7.132−02	6.173−02	5.223−02
19	85	1.846−01	1.601−01	1.312−01	1.018−01	7.539−02	5.388−02	3.747−02	2.551−02	1.708−02	1.128−02
19	86	2.767−01	2.536−01	2.214−01	1.839−01	1.456−01	1.106−01	8.082−02	5.713−02	3.924−02	2.634−02
19	87	2.214−01	2.013−01	1.723−01	1.424−01	1.163−01	9.556−02	7.971−02	6.742−02	5.738−02	4.859−02
19	88	4.017−01	3.841−01	3.491−01	3.023−01	2.537−01	2.101−01	1.737−01	1.439−01	1.190−01	9.759−02
19	89	7.286−01	6.767−01	5.993−01	5.139−01	4.344−01	3.667−01	3.101−01	2.617−01	2.188−01	1.800−01
19	90	2.871−01	2.421−01	1.932−01	1.477−01	1.095−01	7.957−02	5.687−02	4.002−02	2.769−02	1.883−02
19	91	2.244−02	1.922−02	1.576−02	1.242−02	9.463−03	7.004−03	5.054−03	3.563−03	2.459−03	1.664−03
19	92	3.086−01	2.883−01	2.661−01	2.421−01	2.158−01	1.874−01	1.576−01	1.280−01	1.002−01	7.570−02
19	93	1.985−01	1.908−01	1.844−01	1.805−01	1.799−01	1.826−01	1.882−01	1.962−01	2.059−01	2.159−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
19	94	1.047+00	1.037+00	9.463−01	8.381−01	7.517−01	7.009−01	6.852−01	6.981−01	7.307−01	7.731−01
19	95	8.175−01	8.031−01	7.913−01	7.915−01	8.102−01	8.499−01	9.100−01	9.874−01	1.076+00	1.166+00
19	96	1.966−01	1.843−01	1.710−01	1.585−01	1.483−01	1.408−01	1.360−01	1.339−01	1.340−01	1.355−01
19	97	5.459−01	5.368−01	5.203−01	5.061−01	5.012−01	5.097−01	5.332−01	5.713−01	6.209−01	6.762−01
19	98	1.551+00	1.424+00	1.346+00	1.314+00	1.333+00	1.405+00	1.532+00	1.710+00	1.927+00	2.159+00
19	99	3.192−01	3.188−01	3.171−01	3.180−01	3.246−01	3.382−01	3.595−01	3.879−01	4.217−01	4.577−01
19	100	2.991−01	3.047−01	3.127−01	3.254−01	3.444−01	3.712−01	4.065−01	4.499−01	4.995−01	5.510−01
19	101	1.231−01	1.257−01	1.297−01	1.359−01	1.451−01	1.577−01	1.741−01	1.941−01	2.168−01	2.403−01
19	102	3.056−01	2.977−01	2.835−01	2.642−01	2.403−01	2.124−01	1.815−01	1.494−01	1.184−01	9.035−02
19	103	1.196−01	1.159−01	1.106−01	1.038−01	9.537−02	8.501−02	7.307−02	6.036−02	4.786−02	3.648−02
19	104	4.594−02	3.981−02	3.380−02	2.819−02	2.307−02	1.842−02	1.428−02	1.071−02	7.766−03	5.457−03
19	105	1.884−02	1.777−02	1.688−02	1.614−02	1.547−02	1.474−02	1.384−02	1.269−02	1.128−02	9.682−03
19	106	3.364−02	3.141−02	2.956−02	2.816−02	2.712−02	2.624−02	2.527−02	2.398−02	2.221−02	1.996−02
19	107	5.193−02	4.807−02	4.511−02	4.342−02	4.304−02	4.369−02	4.481−02	4.564−02	4.545−02	4.374−02
19	108	1.264−02	1.107−02	9.565−03	8.163−03	6.863−03	5.652−03	4.533−03	3.523−03	2.648−03	1.923−03
19	109	3.067−02	2.886−02	2.760−02	2.684−02	2.635−02	2.581−02	2.487−02	2.329−02	2.101−02	1.818−02
19	110	8.927−02	8.711−02	8.599−02	8.583−02	8.609−02	8.582−02	8.397−02	7.970−02	7.280−02	6.374−02
19	111	2.309−01	2.298−01	2.310−01	2.343−01	2.385−01	2.408−01	2.384−01	2.286−01	2.107−01	1.860−01
19	112	2.011−02	1.913−02	1.848−02	1.828−02	1.859−02	1.935−02	2.034−02	2.118−02	2.145−02	2.085−02
19	113	7.780−02	7.574−02	7.393−02	7.248−02	7.108−02	6.920−02	6.631−02	6.204−02	5.634−02	4.952−02
19	114	4.756−02	4.653−02	4.568−02	4.500−02	4.425−02	4.309−02	4.118−02	3.832−02	3.453−02	3.004−02
19	115	2.060−02	2.003−02	1.960−02	1.925−02	1.885−02	1.824−02	1.729−02	1.593−02	1.421−02	1.223−02
19	116	2.344−02	2.088−02	1.798−02	1.501−02	1.216−02	9.557−03	7.272−03	5.360−03	3.834−03	2.669−03
19	117	2.097−02	2.017−02	1.910−02	1.771−02	1.604−02	1.414−02	1.213−02	1.014−02	8.284−03	6.638−03
19	118	4.800−02	4.640−02	4.409−02	4.112−02	3.750−02	3.336−02	2.890−02	2.443−02	2.019−02	1.637−02
19	119	1.042−01	1.011−01	9.668−02	9.083−02	8.360−02	7.517−02	6.594−02	5.649−02	4.735−02	3.892−02
19	120	1.047−02	1.040−02	1.035−02	1.024−02	9.986−03	9.514−03	8.816−03	7.931−03	6.930−03	5.890−03
19	121	2.253−02	2.227−02	2.190−02	2.146−02	2.084−02	1.995−02	1.872−02	1.719−02	1.544−02	1.357−02
19	122	4.565−02	4.474−02	4.351−02	4.237−02	4.130−02	4.007−02	3.847−02	3.637−02	3.380−02	3.085−02
19	123	8.809−03	7.812−03	6.730−03	5.637−03	4.591−03	3.633−03	2.791−03	2.079−03	1.502−03	1.055−03
19	124	1.807−03	1.708−03	1.606−03	1.507−03	1.413−03	1.322−03	1.229−03	1.127−03	1.011−03	8.811−04
19	125	6.522−03	6.444−03	6.466−03	6.638−03	6.984−03	7.480−03	8.035−03	8.501−03	8.714−03	8.559−03
19	126	1.264−02	1.264−02	1.299−02	1.384−02	1.521−02	1.703−02	1.901−02	2.075−02	2.179−02	2.180−02
19	127	1.468−02	1.368−02	1.261−02	1.144−02	1.013−02	8.670−03	7.122−03	5.597−03	4.211−03	3.044−03
19	128	5.771−02	5.447−02	5.046−02	4.554−02	3.968−02	3.314−02	2.641−02	2.011−02	1.469−02	1.035−02
19	129	1.158−02	1.157−02	1.147−02	1.120−02	1.068−02	9.864−03	8.817−03	7.629−03	6.404−03	5.230−03
19	130	2.739−02	2.673−02	2.609−02	2.530−02	2.414−02	2.252−02	2.044−02	1.802−02	1.545−02	1.287−02
19	131	5.980−02	5.694−02	5.486−02	5.303−02	5.089−02	4.803−02	4.427−02	3.971−02	3.458−02	2.921−02
19	132	4.711−03	4.852−03	5.040−03	5.221−03	5.321−03	5.278−03	5.060−03	4.674−03	4.166−03	3.597−03
19	133	1.037−02	1.049−02	1.077−02	1.108−02	1.129−02	1.125−02	1.089−02	1.022−02	9.320−03	8.308−03
19	134	1.937−02	1.959−02	2.002−02	2.050−02	2.078−02	2.062−02	1.988−02	1.857−02	1.682−02	1.485−02
19	135	1.431−02	1.459−02	1.498−02	1.541−02	1.577−02	1.587−02	1.560−02	1.489−02	1.378−02	1.238−02
19	136	3.497−03	3.569−03	3.669−03	3.771−03	3.832−03	3.806−03	3.660−03	3.386−03	3.008−03	2.568−03
19	137	8.744−04	8.936−04	9.205−04	9.490−04	9.692−04	9.705−04	9.450−04	8.904−04	8.102−04	7.126−04
19	138	1.722−02	1.574−02	1.399−02	1.210−02	1.016−02	8.270−03	6.520−03	4.981−03	3.695−03	2.665−03
19	139	2.837−02	2.643−02	2.385−02	2.074−02	1.732−02	1.387−02	1.066−02	7.873−03	5.618−03	3.893−03
19	140	3.783−03	3.632−03	3.420−03	3.142−03	2.803−03	2.421−03	2.019−03	1.624−03	1.259−03	9.421−04
19	141	2.550−03	2.519−03	2.451−03	2.330−03	2.140−03	1.880−03	1.571−03	1.247−03	9.430−04	6.829−04
20	21	9.944−01	8.835−01	7.618−01	6.339−01	5.066−01	3.883−01	2.864−01	2.043−01	1.419−01	9.657−02
20	22	1.427+00	1.260+00	1.081+00	8.960−01	7.142−01	5.469−01	4.035−01	2.885−01	2.013−01	1.380−01
20	23	1.902+00	1.659+00	1.410+00	1.161+00	9.196−01	7.003−01	5.139−01	3.649−01	2.521−01	1.703−01
20	24	8.065−01	7.262−01	6.388−01	5.448−01	4.480−01	3.553−01	2.729−01	2.049−01	1.525−01	1.154−01
20	25	1.405+00	1.254+00	1.097+00	9.367−01	7.749−01	6.211−01	4.852−01	3.736−01	2.894−01	2.327−01
20	26	1.965+00	1.744+00	1.517+00	1.283+00	1.048+00	8.218−01	6.194−01	4.503−01	3.176−01	2.186−01
20	27	9.905+00	9.652+00	9.779+00	1.031+01	1.123+01	1.251+01	1.400+01	1.555+01	1.726+01	1.947+01
20	28	1.470+00	1.395+00	1.322+00	1.273+00	1.225+00	1.147+00	1.041+00	9.273−01	8.215−01	7.318−01
20	29	1.564+01	1.785+01	2.274+01	3.145+01	4.174+01	5.123+01	5.946+01	6.711+01	7.628+01	8.932+01
20	30	8.712−01	7.890−01	6.847−01	5.691−01	4.538−01	3.485−01	2.587−01	1.866−01	1.315−01	9.112−02
20	31	1.223+00	1.106+00	9.595−01	7.992−01	6.396−01	4.930−01	3.676−01	2.665−01	1.892−01	1.327−01
20	32	1.563+00	1.409+00	1.220+00	1.014+00	8.089−01	6.209−01	4.600−01	3.302−01	2.307−01	1.576−01
20	33	2.842−01	2.662−01	2.371−01	2.003−01	1.606−01	1.229−01	9.024−02	6.400−02	4.411−02	2.972−02
20	34	1.743−01	1.614−01	1.422−01	1.189−01	9.465−02	7.202−02	5.272−02	3.734−02	2.573−02	1.734−02
20	35	6.156−02	5.637−02	4.924−02	4.093−02	3.243−02	2.461−02	1.798−02	1.272−02	8.754−03	5.896−03
20	36	1.868−01	1.749−01	1.546−01	1.285−01	1.012−01	7.607−02	5.500−02	3.852−02	2.628−02	1.757−02
20	37	3.093−01	2.886−01	2.545−01	2.114−01	1.664−01	1.251−01	9.050−02	6.340−02	4.327−02	2.892−02
20	38	4.274−01	3.996−01	3.537−01	2.953−01	2.336−01	1.764−01	1.279−01	8.981−02	6.137−02	4.107−02
20	39	1.372−01	1.242−01	1.054−01	8.487−02	6.528−02	4.832−02	3.466−02	2.424−02	1.662−02	1.121−02
20	40	4.251−01	3.842−01	3.267−01	2.639−01	2.040−01	1.520−01	1.100−01	7.791−02	5.430−02	3.744−02
20	41	6.419−01	5.752−01	4.877−01	3.939−01	3.047−01	2.268−01	1.635−01	1.148−01	7.900−02	5.343−02
20	42	3.019+00	2.706+00	2.385+00	2.096+00	1.861+00	1.679+00	1.538+00	1.420+00	1.310+00	1.201+00
20	43	1.673+00	1.625+00	1.573+00	1.527+00	1.493+00	1.469+00	1.443+00	1.407+00	1.356+00	1.296+00
20	44	6.652−01	6.487−01	6.245−01	6.005−01	5.825−01	5.728−01	5.691−01	5.659−01	5.586−01	5.451−01
20	45	5.790+00	7.397+00	1.037+01	1.332+01	1.506+01	1.577+01	1.628+01	1.726+01	1.903+01	2.167+01
20	46	3.570−01	3.440−01	3.249−01	3.023−01	2.802−01	2.628−01	2.535−01	2.543−01	2.664−01	2.897−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
20	47	5.015−01	4.773−01	4.392−01	3.901−01	3.347−01	2.787−01	2.264−01	1.808−01	1.434−01	1.143−01
20	48	7.224−01	6.829−01	6.247−01	5.516−01	4.700−01	3.871−01	3.089−01	2.391−01	1.798−01	1.315−01
20	49	7.228−02	6.969−02	6.579−02	5.983−02	5.216−02	4.380−02	3.562−02	2.817−02	2.168−02	1.629−02
20	50	2.209−01	2.078−01	1.915−01	1.716−01	1.490−01	1.256−01	1.029−01	8.201−02	6.364−02	4.817−02
20	51	3.787−01	3.575−01	3.305−01	2.966−01	2.573−01	2.164−01	1.767−01	1.403−01	1.084−01	8.135−02
20	52	2.700−01	2.490−01	2.227−01	1.937−01	1.643−01	1.368−01	1.125−01	9.226−02	7.624−02	6.437−02
20	53	4.747+00	4.965+00	5.246+00	5.640+00	6.229+00	7.107+00	8.343+00	9.983+00	1.206+01	1.453+01
20	54	9.153−01	1.111+00	1.541+00	2.027+00	2.331+00	2.436+00	2.467+00	2.549+00	2.746+00	3.066+00
20	55	8.125−01	7.904−01	7.750−01	7.666−01	7.622−01	7.574−01	7.469−01	7.251−01	6.888−01	6.381−01
20	56	1.426−01	1.283−01	1.138−01	9.922−02	8.483−02	7.145−02	5.971−02	4.979−02	4.149−02	3.449−02
20	57	1.879−01	1.642−01	1.394−01	1.145−01	9.058−02	6.900−02	5.085−02	3.652−02	2.575−02	1.796−02
20	58	2.374−01	2.075−01	1.762−01	1.448−01	1.145−01	8.688−02	6.351−02	4.494−02	3.096−02	2.088−02
20	59	3.775−02	3.473−02	3.117−02	2.691−02	2.220−02	1.750−02	1.322−02	9.631−03	6.801−03	4.682−03
20	60	7.050−02	6.405−02	5.687−02	4.879−02	4.018−02	3.174−02	2.417−02	1.784−02	1.286−02	9.107−03
20	61	1.183−01	1.011−01	8.599−02	7.161−02	5.770−02	4.477−02	3.347−02	2.419−02	1.698−02	1.164−02
20	62	6.675−02	6.158−02	5.568−02	4.854−02	4.045−02	3.223−02	2.468−02	1.826−02	1.314−02	9.244−03
20	63	3.742−02	3.498−02	3.187−02	2.786−02	2.319−02	1.840−02	1.399−02	1.025−02	7.274−03	5.034−03
20	64	1.269−02	1.187−02	1.077−02	9.380−03	7.778−03	6.150−03	4.658−03	3.399−03	2.401−03	1.651−03
20	65	2.546−01	2.460−01	2.347−01	2.221−01	2.100−01	1.996−01	1.906−01	1.821−01	1.732−01	1.634−01
20	66	5.605−02	5.175−02	4.554−02	3.826−02	3.074−02	2.373−02	1.769−02	1.280−02	9.055−03	6.289−03
20	67	6.173−02	5.890−02	5.403−02	4.721−02	3.926−02	3.122−02	2.392−02	1.779−02	1.294−02	9.261−03
20	68	4.182−01	3.811−01	3.367−01	2.951−01	2.607−01	2.343−01	2.144−01	1.985−01	1.845−01	1.713−01
20	69	4.951−01	4.884−01	4.807−01	4.731−01	4.657−01	4.578−01	4.478−01	4.331−01	4.119−01	3.836−01
20	70	1.032−01	9.686−02	8.730−02	7.495−02	6.129−02	4.811−02	3.663−02	2.734−02	2.018−02	1.485−02
20	71	1.364−01	1.260−01	1.118−01	9.429−02	7.552−02	5.769−02	4.236−02	3.015−02	2.096−02	1.434−02
20	72	1.371−01	1.312−01	1.200−01	1.035−01	8.404−02	6.470−02	4.764−02	3.383−02	2.334−02	1.574−02
20	73	7.848−01	7.893−01	8.073−01	8.405−01	8.899−01	9.542−01	1.027+00	1.097+00	1.155+00	1.194+00
20	74	3.599−01	3.036−01	2.637−01	2.372−01	2.215−01	2.138−01	2.112−01	2.102−01	2.082−01	2.037−01
20	75	3.984−02	4.145−02	4.051−02	3.662−02	3.079−02	2.441−02	1.850−02	1.354−02	9.666−03	6.771−03
20	76	1.338−01	1.032−01	8.050−02	6.311−02	4.963−02	3.935−02	3.169−02	2.606−02	2.190−02	1.877−02
20	77	1.702−02	1.759−02	1.709−02	1.536−02	1.283−02	1.008−02	7.558−03	5.458−03	3.827−03	2.621−03
20	78	1.296−01	1.337−01	1.373−01	1.402−01	1.435−01	1.488−01	1.574−01	1.689−01	1.814−01	1.922−01
20	79	5.096−02	4.551−02	3.900−02	3.194−02	2.508−02	1.898−02	1.391−02	9.906−03	6.874−03	4.666−03
20	80	7.205−02	6.449−02	5.543−02	4.553−02	3.584−02	2.717−02	1.992−02	1.419−02	9.843−03	6.677−03
20	81	9.376−02	8.374−02	7.177−02	5.880−02	4.620−02	3.498−02	2.565−02	1.826−02	1.267−02	8.596−03
20	82	6.905−03	6.232−03	5.305−03	4.270−03	3.280−03	2.433−03	1.758−03	1.244−03	8.645−04	5.911−04
20	83	2.064−02	1.864−02	1.588−02	1.280−02	9.835−03	7.295−03	5.268−03	3.723−03	2.582−03	1.761−03
20	84	3.429−02	3.099−02	2.644−02	2.132−02	1.641−02	1.218−02	8.803−03	6.225−03	4.319−03	2.945−03
20	85	2.775−01	2.546−01	2.258−01	1.974−01	1.736−01	1.554−01	1.416−01	1.301−01	1.192−01	1.079−01
20	86	2.574−01	2.421−01	2.224−01	2.007−01	1.797−01	1.606−01	1.436−01	1.279−01	1.129−01	9.825−02
20	87	9.105−02	8.076−02	6.865−02	5.638−02	4.506−02	3.514−02	2.674−02	1.981−02	1.427−02	1.002−02
20	88	1.556−01	1.389−01	1.185−01	9.728−02	7.757−02	6.032−02	4.576−02	3.382−02	2.433−02	1.705−02
20	89	2.201−01	1.957−01	1.665−01	1.365−01	1.087−01	8.451−02	6.408−02	4.734−02	3.403−02	2.383−02
20	90	4.655−01	4.390−01	4.099−01	3.856−01	3.696−01	3.605−01	3.545−01	3.471−01	3.351−01	3.176−01
20	91	2.778−02	2.595−02	2.364−02	2.141−02	1.957−02	1.821−02	1.730−02	1.691−02	1.716−02	1.816−02
20	92	6.750−01	6.892−01	7.124−01	7.498−01	8.057−01	8.821−01	9.787−01	1.091+00	1.213+00	1.331+00
20	93	6.389−02	6.123−02	5.832−02	5.500−02	5.103−02	4.618−02	4.043−02	3.405−02	2.752−02	2.135−02
20	94	1.077−01	1.036−01	9.910−02	9.370−02	8.695−02	7.858−02	6.866−02	5.772−02	4.658−02	3.609−02
20	95	1.525−01	1.464−01	1.396−01	1.318−01	1.223−01	1.106−01	9.678−02	8.141−02	6.570−02	5.087−02
20	96	1.307−01	1.273−01	1.219−01	1.143−01	1.046−01	9.287−02	7.968−02	6.591−02	5.257−02	4.052−02
20	97	1.916−01	1.857−01	1.772−01	1.658−01	1.514−01	1.340−01	1.146−01	9.441−02	7.484−02	5.715−02
20	98	2.596−01	2.503−01	2.380−01	2.222−01	2.025−01	1.792−01	1.531−01	1.260−01	9.983−02	7.611−02
20	99	1.115−01	1.084−01	1.041−01	9.828−02	9.080−02	8.147−02	7.055−02	5.875−02	4.701−02	3.622−02
20	100	6.873−02	6.676−02	6.406−02	6.052−02	5.593−02	5.018−02	4.343−02	3.611−02	2.882−02	2.211−02
20	101	2.327−02	2.259−02	2.167−02	2.048−02	1.893−02	1.698−02	1.470−02	1.222−02	9.752−03	7.476−03
20	102	4.598−01	4.759−01	4.996−01	5.368−01	5.939−01	6.761−01	7.860−01	9.221−01	1.078+00	1.239+00
20	103	2.700−01	2.796−01	2.934−01	3.142−01	3.443−01	3.856−01	4.388−01	5.030−01	5.750−01	6.488−01
20	104	9.720−02	9.101−02	8.617−02	8.286−02	8.080−02	7.925−02	7.732−02	7.416−02	6.925−02	6.256−02
20	105	5.717−03	5.089−03	4.491−03	3.929−03	3.387−03	2.853−03	2.327−03	1.827−03	1.378−03	9.996−04
20	106	1.026−02	9.267−03	8.191−03	7.114−03	6.068−03	5.058−03	4.092−03	3.193−03	2.399−03	1.736−03
20	107	1.451−02	1.302−02	1.146−02	9.955−03	8.507−03	7.108−03	5.762−03	4.504−03	3.386−03	2.451−03
20	108	1.948−02	1.872−02	1.856−02	1.912−02	2.042−02	2.228−02	2.433−02	2.600−02	2.672−02	2.615−02
20	109	1.384−02	1.238−02	1.100−02	9.706−03	8.457−03	7.209−03	5.959−03	4.741−03	3.619−03	2.653−03
20	110	1.856−02	1.669−02	1.485−02	1.309−02	1.137−02	9.677−03	7.987−03	6.351−03	4.847−03	3.554−03
20	111	2.357−02	2.124−02	1.890−02	1.662−02	1.442−02	1.224−02	1.008−02	7.996−03	6.088−03	4.451−03
20	112	7.651−03	6.926−03	6.183−03	5.437−03	4.687−03	3.934−03	3.196−03	2.501−03	1.883−03	1.365−03
20	113	1.656−02	1.549−02	1.417−02	1.271−02	1.114−02	9.439−03	7.677−03	5.974−03	4.453−03	3.194−03
20	114	1.162−02	1.095−02	1.016−02	9.249−03	8.197−03	7.003−03	5.727−03	4.472−03	3.341−03	2.399−03
20	115	7.752−03	7.250−03	6.746−03	6.199−03	5.551−03	4.783−03	3.936−03	3.088−03	2.315−03	1.667−03
20	116	5.438−02	5.278−02	4.995−02	4.662−02	4.311−02	3.950−02	3.570−02	3.167−02	2.742−02	2.312−02
20	117	1.017−02	9.454−03	8.590−03	7.587−03	6.480−03	5.327−03	4.204−03	3.184−03	2.322−03	1.637−03
20	118	1.328−02	1.228−02	1.109−02	9.745−03	8.293−03	6.800−03	5.356−03	4.053−03	2.953−03	2.081−03
20	119	1.719−02	1.590−02	1.426−02	1.243−02	1.050−02	8.557−03	6.708−03	5.056−03	3.674−03	2.583−03
20	120	3.642−03	3.384−03	3.100−03	2.781−03	2.423−03	2.038−03	1.648−03	1.281−03	9.579−04	6.920−04

Table 4 (*continued*)

Transition		Temperature (log K)									
i	*j*	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
20	121	5.589−03	5.184−03	4.708−03	4.177−03	3.604−03	3.008−03	2.419−03	1.873−03	1.398−03	1.008−03
20	122	7.602−03	7.024−03	6.347−03	5.605−03	4.818−03	4.010−03	3.219−03	2.488−03	1.854−03	1.335−03
20	123	1.699−02	1.671−02	1.653−02	1.651−02	1.661−02	1.663−02	1.637−02	1.567−02	1.446−02	1.284−02
20	124	6.462−04	6.135−04	5.803−04	5.476−04	5.103−04	4.634−04	4.055−04	3.395−04	2.713−04	2.071−04
20	125	1.778−03	1.706−03	1.639−03	1.570−03	1.481−03	1.357−03	1.195−03	1.004−03	8.029−04	6.125−04
20	126	3.393−03	3.162−03	2.956−03	2.771−03	2.577−03	2.342−03	2.051−03	1.718−03	1.372−03	1.046−03
20	127	2.874−02	2.877−02	2.909−02	2.991−02	3.132−02	3.317−02	3.513−02	3.671−02	3.743−02	3.701−02
20	128	1.025−01	1.029−01	1.034−01	1.040−01	1.042−01	1.032−01	1.004−01	9.519−02	8.732−02	7.723−02
20	129	5.196−03	4.982−03	4.683−03	4.282−03	3.775−03	3.187−03	2.570−03	1.980−03	1.463−03	1.042−03
20	130	9.847−03	8.884−03	7.837−03	6.785−03	5.737−03	4.701−03	3.712−03	2.820−03	2.064−03	1.461−03
20	131	1.645−02	1.398−02	1.173−02	9.763−03	8.013−03	6.426−03	4.999−03	3.758−03	2.730−03	1.923−03
20	132	1.270−03	1.197−03	1.122−03	1.037−03	9.339−04	8.103−04	6.744−04	5.379−04	4.120−04	3.041−04
20	133	3.311−03	2.868−03	2.478−03	2.139−03	1.829−03	1.530−03	1.242−03	9.731−04	7.363−04	5.386−04
20	134	5.572−03	4.718−03	3.971−03	3.343−03	2.799−03	2.304−03	1.848−03	1.437−03	1.081−03	7.883−04
20	135	2.763−03	2.454−03	2.180−03	1.931−03	1.690−03	1.447−03	1.200−03	9.587−04	7.349−04	5.413−04
20	136	1.409−03	1.293−03	1.182−03	1.070−03	9.506−04	8.218−04	6.858−04	5.499−04	4.228−04	3.123−04
20	137	4.001−04	3.808−04	3.585−04	3.318−04	2.993−04	2.612−04	2.192−04	1.763−04	1.357−04	1.001−04
20	138	4.713−02	4.383−02	4.177−02	4.094−02	4.111−02	4.202−02	4.342−02	4.515−02	4.706−02	4.896−02
20	139	2.035−02	2.000−02	1.961−02	1.925−02	1.896−02	1.873−02	1.842−02	1.788−02	1.702−02	1.578−02
20	140	8.384−03	8.671−03	9.116−03	9.769−03	1.068−02	1.186−02	1.331−02	1.497−02	1.674−02	1.844−02
20	141	2.765−03	2.920−03	3.141−03	3.445−03	3.836−03	4.292−03	4.765−03	5.189−03	5.504−03	5.673−03
21	22	1.178+01	1.008+01	8.795+00	7.913+00	7.245+00	6.598+00	5.932+00	5.296+00	4.741+00	4.281+00
21	23	5.755+00	4.605+00	3.678+00	2.909+00	2.260+00	1.721+00	1.293+00	9.691−01	7.331−01	5.662−01
21	24	5.941+00	6.279+01	6.598+01	6.857+01	7.037+01	7.140+01	7.144+01	7.025+01	6.838+01	6.665+01
21	25	1.404+01	1.428+01	1.467+01	1.523+01	1.569+01	1.579+01	1.549+01	1.486+01	1.411+01	1.343+01
21	26	2.821+00	2.497+00	2.208+00	1.944+00	1.698+00	1.476+00	1.284+00	1.126+00	9.997−01	8.983−01
21	27	3.317+00	2.896+00	2.495+00	2.094+00	1.689+00	1.303+00	9.643−01	6.890−01	4.786−01	3.251−01
21	28	1.360+00	1.327+00	1.251+00	1.132+00	9.801−01	8.142−01	6.513−01	5.033−01	3.769−01	2.747−01
21	29	1.024+00	9.395−01	8.544−01	7.513−01	6.273−01	4.953−01	3.717−01	2.673−01	1.859−01	1.260−01
21	30	1.409+01	1.443+01	1.468+01	1.483+01	1.490+01	1.494+01	1.497+01	1.500+01	1.501+01	1.499+01
21	31	3.429+00	3.301+00	3.152+00	2.955+00	2.697+00	2.401+00	2.100+00	1.818+00	1.568+00	1.355+00
21	32	2.301+00	2.140+00	1.934+00	1.689+00	1.418+00	1.147+00	9.039−01	7.038−01	5.487−01	4.330−01
21	33	1.240+00	1.158+00	1.062+00	9.458−01	8.126−01	6.786−01	5.584−01	4.598−01	3.845−01	3.300−01
21	34	1.076+00	1.045+00	1.008+00	9.593−01	8.901−01	8.064−01	7.244−01	6.571−01	6.094−01	5.785−01
21	35	8.615−01	7.959−01	7.161−01	6.485−01	5.969−01	5.547−01	5.209−01	4.991−01	4.905−01	4.918−01
21	36	1.017+00	9.914−01	9.377−01	8.450−01	7.203−01	5.848−01	4.592−01	3.544−01	2.729−01	2.123−01
21	37	1.504+00	1.376+00	1.225+00	1.051+00	8.606−01	6.762−01	5.168−01	3.914−01	2.991−01	2.342−01
21	38	1.356+00	1.246+00	1.105+00	9.432−01	7.710−01	6.065−01	4.637−01	3.487−01	2.613−01	1.978−01
21	39	5.677−01	5.642−01	5.543−01	5.514−01	5.593−01	5.758−01	5.989−01	6.281−01	6.656−01	7.165−01
21	40	1.099+00	1.096+00	1.068+00	1.011+00	9.368−01	8.652−01	8.101−01	7.763−01	7.658−01	7.813−01
21	41	9.005−01	8.591−01	7.852−01	6.811−01	5.610−01	4.450−01	3.470−01	2.722−01	2.194−01	1.856−01
21	42	6.715−01	6.084−01	5.273−01	4.376−01	3.479−01	2.655−01	1.952−01	1.389−01	9.611−02	6.503−02
21	43	8.906−01	8.744−01	8.091−01	7.006−01	5.711−01	4.420−01	3.276−01	2.344−01	1.629−01	1.106−01
21	44	4.663−01	4.658−01	4.403−01	3.906−01	3.275−01	2.620−01	2.017−01	1.502−01	1.087−01	7.664−02
21	45	4.909−01	4.734−01	4.358−01	3.800−01	3.188−01	2.642−01	2.225−01	1.952−01	1.823−01	1.826−01
21	46	3.132+00	3.738+00	4.545+00	5.265+00	5.752+00	6.146+00	6.634+00	7.329+00	8.320+00	9.663+00
21	47	1.523+00	1.673+00	1.706+00	1.637+00	1.539+00	1.476+00	1.476+00	1.543+00	1.683+00	1.901+00
21	48	7.049−01	6.958−01	6.324−01	5.329−01	4.242−01	3.266−01	2.489−01	1.921−01	1.537−01	1.302−01
21	49	2.608−01	2.569−01	2.338−01	2.001−01	1.642−01	1.310−01	1.024−01	7.894−02	6.022−02	4.559−02
21	50	9.315−01	1.039+00	1.008+00	8.810−01	7.230−01	5.776−01	4.616−01	3.764−01	3.167−01	2.767−01
21	51	8.350−01	8.392−01	7.599−01	6.361−01	5.065−01	3.930−01	3.029−01	2.354−01	1.868−01	1.531−01
21	52	4.873−01	4.724−01	4.213−01	3.523−01	2.821−01	2.207−01	1.717−01	1.349−01	1.084−01	9.005−02
21	53	6.843−01	6.571−01	5.883−01	4.974−01	4.015−01	3.115−01	2.333−01	1.693−01	1.195−01	8.255−02
21	54	1.212−01	1.078−01	9.223−02	7.654−02	6.171−02	4.829−02	3.661−02	2.690−02	1.920−02	1.335−02
21	55	6.344−01	5.554−01	4.873−01	4.280−01	3.756−01	3.299−01	2.920−01	2.628−01	2.420−01	2.283−01
21	56	4.343+00	5.347+00	5.911+00	5.879+00	5.508+00	5.085+00	4.769+00	4.601+00	4.562+00	4.610+00
21	57	8.219−01	7.148−01	6.256−01	5.483−01	4.773−01	4.115−01	3.527−01	3.028−01	2.633−01	2.346−01
21	58	4.303−01	3.517−01	2.821−01	2.234−01	1.743−01	1.337−01	1.011−01	7.576−02	5.666−02	4.273−02
21	59	1.230+00	1.316+00	1.323+00	1.231+00	1.087+00	9.360−01	8.039−01	6.952−01	6.064−01	5.327−01
21	60	9.112−01	8.145−01	7.329−01	6.607−01	5.962−01	5.397−01	4.908−01	4.482−01	4.099−01	3.748−01
21	61	5.251−01	4.350−01	3.616−01	3.008−01	2.491−01	2.048−01	1.671−01	1.357−01	1.100−01	8.932−02
21	62	4.106−01	3.709−01	3.312−01	2.924−01	2.541−01	2.168−01	1.820−01	1.509−01	1.243−01	1.025−01
21	63	4.010−01	3.770−01	3.476−01	3.148−01	2.808−01	2.477−01	2.166−01	1.876−01	1.603−01	1.347−01
21	64	2.284−01	2.284−01	2.286−01	2.225−01	2.080−01	1.881−01	1.666−01	1.454−01	1.251−01	1.059−01
21	65	1.112+00	1.030+00	9.355−01	8.311−01	7.186−01	6.029−01	4.906−01	3.882−01	3.001−01	2.283−01
21	66	6.022+00	7.029+00	8.170+00	9.155+00	9.965+00	1.085+01	1.206+01	1.376+01	1.601+01	1.880+01
21	67	3.085+00	3.992+00	4.311+00	4.094+00	3.655+00	3.249+00	2.996+00	2.927+00	3.035+00	3.295+00
21	68	6.281−01	5.676−01	5.001−01	4.299−01	3.603−01	2.942−01	2.345−01	1.832−01	1.410−01	1.075−01
21	69	5.167−01	4.742−01	4.319−01	3.896−01	3.469−01	3.068−01	2.735−01	2.509−01	2.418−01	2.470−01
21	70	6.935+00	9.144+00	9.631+00	8.798+00	7.498+00	6.343+00	5.598+00	5.326+00	5.513+00	6.113+00
21	71	5.006−01	4.762−01	4.538−01	4.270−01	3.907−01	3.469−01	3.017−01	2.605−01	2.263−01	1.998−01
21	72	2.912−01	2.487−01	2.092−01	1.736−01	1.408−01	1.111−01	8.550−02	6.481−02	4.896−02	3.734−02
21	73	3.783−01	3.556−01	3.271−01	2.925−01	2.519−01	2.080−01	1.647−01	1.253−01	9.185−02	6.521−02
21	74	4.658−01	4.238−01	3.810−01	3.377−01	2.942−01	2.526−01	2.156−01	1.856−01	1.638−01	1.505−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
21	75	4.664−01	4.063−01	3.554−01	3.100−01	2.670−01	2.268−01	1.914−01	1.626−01	1.410−01	1.261−01
21	76	4.764−01	4.547−01	4.415−01	4.359−01	4.381−01	4.504−01	4.754−01	5.152−01	5.712−01	6.424−01
21	77	1.248+00	1.473+00	1.671+00	1.783+00	1.819+00	1.845+00	1.918+00	2.072+00	2.317+00	2.644+00
21	78	1.536−01	1.460−01	1.357−01	1.224−01	1.065−01	8.910−02	7.159−02	5.529−02	4.113−02	2.958−02
21	79	2.741+00	3.367+00	3.735+00	3.788+00	3.707+00	3.692+00	3.855+00	4.232+00	4.821+00	5.586+00
21	80	5.737−01	5.672−01	5.575−01	5.470−01	5.427−01	5.522−01	5.804−01	6.292−01	6.985−01	7.858−01
21	81	2.019−01	1.903−01	1.760−01	1.579−01	1.370−01	1.157−01	9.605−02	7.888−02	6.455−02	5.302−02
21	82	8.263−02	8.189−02	7.756−02	7.040−02	6.194−02	5.333−02	4.506−02	3.729−02	3.013−02	2.373−02
21	83	2.039−01	2.045−01	1.987−01	1.881−01	1.770−01	1.690−01	1.657−01	1.667−01	1.707−01	1.761−01
21	84	1.993−01	1.939−01	1.848−01	1.722−01	1.581−01	1.446−01	1.333−01	1.242−01	1.173−01	1.122−01
21	85	2.315−01	2.228−01	2.070−01	1.850−01	1.597−01	1.340−01	1.096−01	8.741−02	6.821−02	5.245−02
21	86	3.602−01	3.618−01	3.508−01	3.240−01	2.857−01	2.423−01	1.986−01	1.573−01	1.204−01	8.909−02
21	87	5.192−01	5.012−01	4.811−01	4.701−01	4.796−01	5.187−01	5.937−01	7.093−01	8.692−01	1.072+00
21	88	3.019−01	2.878−01	2.667−01	2.420−01	2.191−01	2.029−01	1.960−01	1.997−01	2.149−01	2.412−01
21	89	1.599−01	1.465−01	1.278−01	1.056−01	8.344−02	6.389−02	4.819−02	3.641−02	2.806−02	2.246−02
21	90	2.725−01	2.433−01	2.094−01	1.731−01	1.378−01	1.061−01	7.921−02	5.748−02	4.067−02	2.815−02
21	91	4.866−02	4.525−02	4.023−02	3.453−02	2.889−02	2.369−02	1.903−02	1.489−02	1.130−02	8.310−03
21	92	1.312−01	1.247−01	1.121−01	9.558−02	7.819−02	6.197−02	4.786−02	3.614−02	2.680−02	1.965−02
21	93	1.869−01	1.874−01	1.816−01	1.725−01	1.628−01	1.540−01	1.463−01	1.392−01	1.326−01	1.260−01
21	94	1.928−01	1.904−01	1.794−01	1.643−01	1.494−01	1.365−01	1.259−01	1.170−01	1.091−01	1.018−01
21	95	1.301−01	1.262−01	1.122−01	9.385−02	7.577−02	6.020−02	4.759−02	3.764−02	2.987−02	2.382−02
21	96	1.124+00	1.165+00	1.191+00	1.219+00	1.265+00	1.335+00	1.424+00	1.527+00	1.633+00	1.734+00
21	97	3.215−01	3.191−01	2.936−01	2.555−01	2.150−01	1.777−01	1.453−01	1.181−01	9.588−02	7.829−02
21	98	1.174−01	1.126−01	9.858−02	8.000−02	6.163−02	4.597−02	3.365−02	2.440−02	1.762−02	1.274−02
21	99	1.164−01	1.069−01	9.179−02	7.541−02	6.043−02	4.784−02	3.765−02	2.959−02	2.336−02	1.871−02
21	100	1.081−01	1.034−01	9.385−02	8.253−02	7.175−02	6.263−02	5.552−02	5.050−02	4.753−02	4.635−02
21	101	5.272−02	5.114−02	4.758−02	4.337−02	3.957−02	3.673−02	3.507−02	3.466−02	3.548−02	3.732−02
21	102	2.369−01	2.181−01	1.865−01	1.513−01	1.186−01	9.055−02	6.758−02	4.927−02	3.510−02	2.445−02
21	103	8.268−02	7.457−02	6.460−02	5.440−02	4.475−02	3.587−02	2.789−02	2.098−02	1.526−02	1.078−02
21	104	1.290−01	1.056−01	8.567−02	6.926−02	5.568−02	4.425−02	3.452−02	2.627−02	1.947−02	1.405−02
21	105	1.046−01	9.061−02	7.890−02	6.929−02	6.131−02	5.446−02	4.842−02	4.307−02	3.843−02	3.457−02
21	106	1.233−01	1.073−01	9.398−02	8.314−02	7.422−02	6.659−02	5.975−02	5.340−02	4.743−02	4.183−02
21	107	7.895−02	6.663−02	5.616−02	4.753−02	4.036−02	3.424−02	2.887−02	2.413−02	1.996−02	1.637−02
21	108	4.510−02	3.785−02	3.140−02	2.582−02	2.102−02	1.684−02	1.321−02	1.010−02	7.502−03	5.422−03
21	109	4.739−01	4.526−01	4.425−01	4.446−01	4.592−01	4.854−01	5.215−01	5.643−01	6.105−01	6.559−01
21	110	1.674−01	1.439−01	1.238−01	1.067−01	9.159−02	7.791−02	6.521−02	5.344−02	4.280−02	3.357−02
21	111	4.609−02	3.537−02	2.675−02	2.017−02	1.525−02	1.158−02	8.820−03	6.708−03	5.072−03	3.803−03
21	112	3.040−02	2.662−02	2.345−02	2.090−02	1.891−02	1.733−02	1.605−02	1.493−02	1.387−02	1.281−02
21	113	6.498−02	5.887−02	5.312−02	4.744−02	4.157−02	3.550−02	2.939−02	2.359−02	1.841−02	1.403−02
21	114	1.490−01	1.410−01	1.341−01	1.276−01	1.208−01	1.133−01	1.048−01	9.552−02	8.591−02	7.642−02
21	115	3.382−01	3.387−01	3.425−01	3.490−01	3.567−01	3.635−01	3.668−01	3.647−01	3.564−01	3.423−01
21	116	1.367−01	1.272−01	1.178−01	1.079−01	9.697−02	8.485−02	7.182−02	5.857−02	4.596−02	3.475−02
21	117	8.394−01	8.809−01	9.429−01	1.033+00	1.159+00	1.326+00	1.539+00	1.796+00	2.088+00	2.393+00
21	118	2.148−01	2.084−01	1.999−01	1.884−01	1.733−01	1.544−01	1.328−01	1.101−01	8.817−02	6.847−02
21	119	2.117−02	1.793−02	1.496−02	1.229−02	9.932−03	7.883−03	6.144−03	4.719−03	3.597−03	2.743−03
21	120	3.658−01	3.768−01	3.924−01	4.130−01	4.388−01	4.701−01	5.068−01	5.481−01	5.920−01	6.343−01
21	121	2.023−01	2.048−01	2.088−01	2.147−01	2.226−01	2.327−01	2.449−01	2.590−01	2.744−01	2.894−01
21	122	4.996−02	4.730−02	4.484−02	4.249−02	4.011−02	3.763−02	3.508−02	3.260−02	3.036−02	2.842−02
21	123	5.042−02	4.775−02	4.484−02	4.149−02	3.753−02	3.296−02	2.795−02	2.282−02	1.793−02	1.357−02
21	124	1.861−02	1.846−02	1.808−02	1.736−02	1.619−02	1.456−02	1.256−02	1.038−02	8.227−03	6.274−03
21	125	5.498−02	5.454−02	5.361−02	5.209−02	4.990−02	4.702−02	4.345−02	3.932−02	3.484−02	3.031−02
21	126	5.603−02	5.518−02	5.366−02	5.131−02	4.799−02	4.370−02	3.865−02	3.321−02	2.780−02	2.279−02
21	127	7.239−02	7.063−02	6.787−02	6.370−02	5.779−02	5.025−02	4.169−02	3.300−02	2.502−02	1.827−02
21	128	1.566−01	1.493−01	1.396−01	1.274−01	1.127−01	9.616−02	7.874−02	6.184−02	4.667−02	3.398−02
21	129	1.597−01	1.607−01	1.612−01	1.605−01	1.579−01	1.534−01	1.473−01	1.404−01	1.334−01	1.268−01
21	130	8.529−02	8.409−02	8.223−02	7.929−02	7.504−02	6.963−02	6.353−02	5.737−02	5.167−02	4.671−02
21	131	2.907−02	2.745−02	2.559−02	2.343−02	2.093−02	1.817−02	1.531−02	1.258−02	1.013−02	8.085−03
21	132	8.287−02	8.468−02	8.685−02	8.924−02	9.171−02	9.422−02	9.683−02	9.960−02	1.025−01	1.051−01
21	133	9.233−02	9.358−02	9.488−02	9.600−02	9.675−02	9.710−02	9.721−02	9.728−02	9.742−02	9.749−02
21	134	4.120−02	4.093−02	4.039−02	3.940−02	3.781−02	3.568−02	3.321−02	3.066−02	2.829−02	2.621−02
21	135	2.958−02	2.917−02	2.865−02	2.800−02	2.730−02	2.672−02	2.644−02	2.663−02	2.730−02	2.830−02
21	136	4.182−02	4.281−02	4.417−02	4.602−02	4.854−02	5.195−02	5.646−02	6.211−02	6.869−02	7.556−02
21	137	2.501−02	2.632−02	2.822−02	3.091−02	3.460−02	3.954−02	4.584−02	5.340−02	6.186−02	7.045−02
21	138	6.271−02	6.020−02	5.692−02	5.260−02	4.715−02	4.077−02	3.393−02	2.716−02	2.096−02	1.564−02
21	139	7.262−02	6.997−02	6.592−02	6.028−02	5.315−02	4.497−02	3.647−02	2.840−02	2.132−02	1.550−02
21	140	2.928−02	2.833−02	2.686−02	2.478−02	2.212−02	1.902−02	1.572−02	1.250−02	9.582−03	7.096−03
21	141	1.543−02	1.552−02	1.539−02	1.486−02	1.380−02	1.221−02	1.025−02	8.168−03	6.211−03	4.531−03
22	23	1.576+01	1.366+01	1.190+01	1.030+01	8.837+00	7.564+00	6.513+00	5.678+00	5.029+00	4.527+00
22	24	2.873+00	2.499+00	2.164+00	1.864+00	1.593+00	1.355+00	1.158+00	1.001+00	8.796−01	7.870−01
22	25	9.281+01	9.749+01	1.042+02	1.136+02	1.222+02	1.262+02	1.249+02	1.197+02	1.132+02	1.075+02
22	26	1.668+01	1.657+01	1.647+01	1.629+01	1.600+01	1.565+01	1.521+01	1.465+01	1.404+01	1.347+01
22	27	4.652+00	4.067+00	3.508+00	2.947+00	2.379+00	1.837+00	1.360+00	9.724−01	6.756−01	4.589−01
22	28	1.867+00	1.815+00	1.706+00	1.541+00	1.334+00	1.107+00	8.838−01	6.801−01	5.058−01	3.645−01
22	29	1.453+00	1.333+00	1.212+00	1.067+00	8.933−01	7.079−01	5.339−01	3.866−01	2.716−01	1.868−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
22	30	3.522+00	3.390+00	3.211+00	2.976+00	2.694+00	2.392+00	2.096+00	1.823+00	1.581+00	1.373+00
22	31	2.028+01	2.077+01	2.102+01	2.103+01	2.090+01	2.076+01	2.069+01	2.068+01	2.071+01	2.071+01
22	32	6.293+00	6.235+00	5.796+00	5.128+00	4.381+00	3.661+00	3.028+00	2.499+00	2.073+00	1.734+00
22	33	2.412+00	2.242+00	2.030+00	1.789+00	1.540+00	1.307+00	1.111+00	9.603−01	8.525−01	7.792−01
22	34	2.327+00	2.136+00	1.899+00	1.661+00	1.445+00	1.272+00	1.150+00	1.081+00	1.054+00	1.054+00
22	35	3.389−01	3.226−01	3.020−01	2.715−01	2.325−01	1.904−01	1.500−01	1.144−01	8.471−02	6.102−02
22	36	9.399−01	8.935−01	8.283−01	7.356−01	6.192−01	4.971−01	3.868−01	2.974−01	2.300−01	1.816−01
22	37	1.688+00	1.656+00	1.575+00	1.424+00	1.217+00	9.889−01	7.748−01	5.939−01	4.513−01	3.443−01
22	38	1.605+00	1.590+00	1.521+00	1.377+00	1.173+00	9.513−01	7.460−01	5.766−01	4.472−01	3.534−01
22	39	3.608−01	3.483−01	3.202−01	2.795−01	2.318−01	1.833−01	1.391−01	1.017−01	7.218−02	4.999−02
22	40	1.483+00	1.459+00	1.401+00	1.330+00	1.269+00	1.237+00	1.240+00	1.273+00	1.334+00	1.428+00
22	41	1.747+00	1.674+00	1.543+00	1.377+00	1.205+00	1.055+00	9.387−01	8.600−01	8.170−01	8.095−01
22	42	9.330−01	8.469−01	7.367−01	6.146−01	4.914−01	3.770−01	2.786−01	1.992−01	1.387−01	9.454−02
22	43	1.272+00	1.279+00	1.202+00	1.048+00	8.553−01	6.605−01	4.880−01	3.479−01	2.410−01	1.632−01
22	44	6.461−01	6.474−01	6.141−01	5.465−01	4.592−01	3.679−01	2.833−01	2.110−01	1.524−01	1.073−01
22	45	5.797−01	5.379−01	4.763−01	3.985−01	3.158−01	2.388−01	1.737−01	1.225−01	8.430−02	5.701−02
22	46	8.397−01	8.617−01	8.107−01	7.054−01	5.787−01	4.558−01	3.498−01	2.650−01	2.004−01	1.529−01
22	47	4.567+00	4.931+00	5.233+00	5.575+00	6.110+00	6.963+00	8.155+00	9.658+00	1.152+01	1.381+01
22	48	1.878+00	1.931+00	1.875+00	1.748+00	1.613+00	1.525+00	1.506+00	1.559+00	1.686+00	1.892+00
22	49	2.697−01	2.708−01	2.520−01	2.225−01	1.924−01	1.673−01	1.488−01	1.364−01	1.286−01	1.242−01
22	50	9.726−01	9.963−01	9.161−01	7.748−01	6.199−01	4.793−01	3.636−01	2.735−01	2.057−01	1.559−01
22	51	1.376+00	1.404+00	1.296+00	1.107+00	9.030−01	7.226−01	5.794−01	4.725−01	3.961−01	3.434−01
22	52	7.024−01	6.810−01	6.103−01	5.141−01	4.153−01	3.281−01	2.582−01	2.059−01	1.684−01	1.428−01
22	53	9.785−01	9.418−01	8.443−01	7.143−01	5.766−01	4.473−01	3.349−01	2.429−01	1.715−01	1.185−01
22	54	1.623−01	1.446−01	1.243−01	1.037−01	8.409−02	6.616−02	5.039−02	3.716−02	2.659−02	1.853−02
22	55	8.105−01	6.785−01	5.586−01	4.525−01	3.591−01	2.778−01	2.093−01	1.537−01	1.105−01	7.842−02
22	56	8.353−01	7.240−01	6.290−01	5.453−01	4.678−01	3.961−01	3.319−01	2.771−01	2.329−01	1.994−01
22	57	4.552+00	4.447+00	4.422+00	4.476+00	4.602+00	4.799+00	5.060+00	5.369+00	5.707+00	6.043+00
22	58	1.166+00	9.986−01	8.496−01	7.198−01	6.052−01	5.045−01	4.185−01	3.480−01	2.933−01	2.535−01
22	59	5.826−01	5.334−01	4.886−01	4.468−01	4.081−01	3.733−01	3.427−01	3.154−01	2.902−01	2.666−01
22	60	1.575+00	1.425+00	1.291+00	1.167+00	1.053+00	9.527−01	8.658−01	7.893−01	7.199−01	6.555−01
22	61	1.659+00	1.380+00	1.168+00	1.001+00	8.669−01	7.582−01	6.702−01	5.982−01	5.380−01	4.866−01
22	62	8.042−01	7.329−01	6.566−01	5.804−01	5.065−01	4.370−01	3.734−01	3.164−01	2.659−01	2.218−01
22	63	6.203−01	5.898−01	5.496−01	5.032−01	4.540−01	4.051−01	3.582−01	3.134−01	2.706−01	2.302−01
22	64	1.025−01	9.160−02	8.077−02	6.985−02	5.879−02	4.796−02	3.793−02	2.913−02	2.179−02	1.592−02
22	65	2.032+00	1.936+00	1.837+00	1.747+00	1.680+00	1.649+00	1.665+00	1.737+00	1.875+00	2.081+00
22	66	1.452+00	1.456+00	1.475+00	1.518+00	1.594+00	1.717+00	1.895+00	2.135+00	2.441+00	2.813+00
22	67	7.012+00	7.464+00	8.073+00	8.918+00	1.011+01	1.175+01	1.393+01	1.667+01	2.002+01	2.394+01
22	68	1.796+00	1.693+00	1.585+00	1.484+00	1.401+00	1.347+00	1.329+00	1.353+00	1.424+00	1.542+00
22	69	6.966−01	6.231−01	5.472−01	4.715−01	3.955−01	3.214−01	2.535−01	1.953−01	1.485−01	1.129−01
22	70	8.085−01	7.832−01	7.705−01	7.656−01	7.658−01	7.771−01	8.096−01	8.730−01	9.752−01	1.119+00
22	71	2.427+00	2.463+00	2.556+00	2.720+00	2.977+00	3.366+00	3.921+00	4.680+00	5.693+00	6.991+00
22	72	1.028+00	8.910−01	7.713−01	6.676−01	5.718−01	4.821−01	4.019−01	3.348−01	2.821−01	2.428−01
22	73	7.184−01	6.315−01	5.497−01	4.714−01	3.942−01	3.191−01	2.493−01	1.881−01	1.373−01	9.737−02
22	74	7.239−01	6.310−01	5.480−01	4.737−01	4.064−01	3.470−01	2.978−01	2.608−01	2.369−01	2.253−01
22	75	1.047+00	9.391−01	8.595−01	8.022−01	7.620−01	7.396−01	7.385−01	7.623−01	8.129−01	8.884−01
22	76	6.694+00	8.073+00	7.973+00	6.979+00	5.782+00	4.788+00	4.142+00	3.845+00	3.850+00	4.089+00
22	77	3.139−01	2.806−01	2.530−01	2.282−01	2.036−01	1.786−01	1.539−01	1.303−01	1.088−01	8.980−02
22	78	2.176−01	2.068−01	1.921−01	1.734−01	1.509−01	1.263−01	1.015−01	7.844−02	5.839−02	4.201−02
22	79	5.816−01	5.756−01	5.667−01	5.576−01	5.552−01	5.678−01	6.005−01	6.551−01	7.318−01	8.277−01
22	80	2.664−01	2.718+00	2.792+00	2.923+00	3.161+00	3.555+00	4.132+00	4.904+00	5.870+00	7.004+00
22	81	6.996−01	6.854−01	6.668−01	6.450−01	6.268−01	6.215−01	6.351−01	6.701−01	7.269−01	8.030−01
22	82	1.385−01	1.593−01	1.602−01	1.470−01	1.300−01	1.160−01	1.081−01	1.059−01	1.080−01	1.125−01
22	83	2.300−01	2.218−01	2.088−01	1.911−01	1.708−01	1.499−01	1.294−01	1.098−01	9.167−02	7.543−02
22	84	3.433−01	3.360−01	3.228−01	3.045−01	2.850−01	2.686−01	2.574−01	2.516−01	2.499−01	2.507−01
22	85	3.223−01	3.102−01	2.880−01	2.570−01	2.212−01	1.844−01	1.493−01	1.171−01	8.884−02	6.521−02
22	86	5.035−01	5.064−01	4.913−01	4.537−01	3.997−01	3.387−01	2.773−01	2.197−01	1.682−01	1.247−01
22	87	2.039−01	1.924−01	1.738−01	1.503−01	1.252−01	1.016−01	8.076−02	6.308−02	4.848−02	3.670−02
22	88	6.845−01	6.642−01	6.488−01	6.466−01	6.715−01	7.374−01	8.545−01	1.031+00	1.271+00	1.575+00
22	89	4.116−01	3.896−01	3.569−01	3.174−01	2.788−01	2.482−01	2.294−01	2.241−01	2.327−01	2.544−01
22	90	3.837−01	3.428−01	2.950−01	2.439−01	1.941−01	1.493−01	1.113−01	8.067−02	5.698−02	3.935−02
22	91	6.865−02	6.375−02	5.661−02	4.851−02	4.052−02	3.318−02	2.661−02	2.079−02	1.576−02	1.158−02
22	92	1.896−01	1.782−01	1.587−01	1.342−01	1.088−01	8.523−02	6.484−02	4.796−02	3.453−02	2.424−02
22	93	1.406−01	1.379−01	1.295−01	1.182−01	1.070−01	9.727−02	8.926−02	8.260−02	7.685−02	7.168−02
22	94	2.742−01	2.746−01	2.635−01	2.460−01	2.274−01	2.104−01	1.958−01	1.830−01	1.718−01	1.617−01
22	95	2.903−01	2.850−01	2.635−01	2.345−01	2.057−01	1.809−01	1.608−01	1.445−01	1.311−01	1.196−01
22	96	3.196−01	3.199−01	2.958−01	2.580−01	2.173−01	1.796−01	1.468−01	1.192−01	9.656−02	7.837−02
22	97	1.508+00	1.563+00	1.597+00	1.636+00	1.702+00	1.802+00	1.931+00	2.079+00	2.233+00	2.379+00
22	98	4.389−01	4.347−01	3.955−01	3.378−01	2.776−01	2.236−01	1.782−01	1.414−01	1.123−01	8.979−02
22	99	3.467−01	3.105−01	2.589−01	2.071−01	1.628−01	1.280−01	1.021−01	8.347−02	7.073−02	6.260−02
22	100	1.524−01	1.481−01	1.356−01	1.200−01	1.051−01	9.318−02	8.475−02	7.991−02	7.841−02	7.971−02
22	101	3.838−02	3.602−02	3.174−02	2.670−02	2.179−02	1.738−02	1.357−02	1.034−02	7.681−03	5.562−03
22	102	3.338−01	3.071−01	2.623−01	2.125−01	1.663−01	1.268−01	9.450−02	6.880−02	4.893−02	3.403−02
22	103	1.177−01	1.060−01	9.168−02	7.705−02	6.325−02	5.061−02	3.929−02	2.951−02	2.145−02	1.513−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
22	104	1.845−01	1.514−01	1.229−01	9.913−02	7.941−02	6.285−02	4.881−02	3.698−02	2.726−02	1.954−02
22	105	9.762−02	8.505−02	7.457−02	6.613−02	5.923−02	5.333−02	4.801−02	4.302−02	3.823−02	3.364−02
22	106	1.578−01	1.352−01	1.159−01	9.993−02	8.662−02	7.523−02	6.532−02	5.675−02	4.955−02	4.381−02
22	107	1.793−01	1.548−01	1.339−01	1.167−01	1.025−01	9.036−02	7.961−02	6.985−02	6.091−02	5.277−02
22	108	6.368−02	5.339−02	4.424−02	3.634−02	2.954−02	2.364−02	1.851−02	1.413−02	1.048−02	7.557−03
22	109	2.104−01	1.848−01	1.636−01	1.465−01	1.325−01	1.210−01	1.113−01	1.032−01	9.643−02	9.103−02
22	110	5.539−01	5.314−01	5.233−01	5.311−01	5.554−01	5.951−01	6.476−01	7.090−01	7.743−01	8.378−01
22	111	2.031−01	1.720−01	1.457−01	1.236−01	1.048−01	8.824−02	7.324−02	5.963−02	4.753−02	3.713−02
22	112	4.289−02	3.755−02	3.307−02	2.948−02	2.666−02	2.444−02	2.263−02	2.105−02	1.955−02	1.804−02
22	113	1.922−01	1.802−01	1.694−01	1.590−01	1.482−01	1.366−01	1.240−01	1.108−01	9.771−02	8.532−02
22	114	4.306−01	4.312−01	4.360−01	4.443−01	4.543−01	4.634−01	4.683−01	4.664−01	4.565−01	4.391−01
22	115	1.483−01	1.405−01	1.338−01	1.275−01	1.210−01	1.136−01	1.053−01	9.624−02	8.674−02	7.732−02
22	116	2.145−01	1.993−01	1.821−01	1.639−01	1.449−01	1.251−01	1.048−01	8.478−02	6.612−02	4.972−02
22	117	3.385−01	3.377−01	3.376−01	3.385−01	3.406−01	3.448−01	3.526−01	3.655−01	3.840−01	4.068−01
22	118	9.441−01	9.962−01	1.076+00	1.194+00	1.359+00	1.581+00	1.864+00	2.203+00	2.585+00	2.985+00
22	119	2.579−01	2.451−01	2.303−01	2.132−01	1.933−01	1.705−01	1.456−01	1.201−01	9.584−02	7.426−02
22	120	2.000−01	2.029−01	2.078−01	2.147−01	2.235−01	2.344−01	2.474−01	2.622−01	2.783−01	2.940−01
22	121	4.332−01	4.446−01	4.615−01	4.844−01	5.136−01	5.494−01	5.916−01	6.392−01	6.898−01	7.388−01
22	122	2.438−01	2.435−01	2.449−01	2.484−01	2.541−01	2.621−01	2.725−01	2.849−01	2.989−01	3.127−01
22	123	7.455−02	6.982−02	6.493−02	5.963−02	5.364−02	4.692−02	3.967−02	3.231−02	2.532−02	1.911−02
22	124	2.548−02	2.526−02	2.482−02	2.420−02	2.346−02	2.258−02	2.150−02	2.015−02	1.854−02	1.675−02
22	125	5.812−02	5.742−02	5.598−02	5.351−02	4.973−02	4.461−02	3.846−02	3.184−02	2.536−02	1.951−02
22	126	9.764−02	9.632−02	9.398−02	9.044−02	8.553−02	7.922−02	7.169−02	6.335−02	5.473−02	4.640−02
22	127	1.031−01	1.002−01	9.601−02	8.985−02	8.132−02	7.055−02	5.838−02	4.606−02	3.476−02	2.522−02
22	128	2.213−01	2.100−01	1.957−01	1.782−01	1.575−01	1.341−01	1.098−01	8.615−02	6.499−02	4.731−02
22	129	1.013−01	1.002−01	9.838−02	9.537−02	9.087−02	8.502−02	7.833−02	7.148−02	6.508−02	5.945−02
22	130	1.802−01	1.803−01	1.802−01	1.791−01	1.762−01	1.715−01	1.652−01	1.581−01	1.510−01	1.442−01
22	131	1.155−01	1.103−01	1.049−01	9.892−02	9.191−02	8.395−02	7.552−02	6.727−02	5.978−02	5.337−02
22	132	7.274−02	7.367−02	7.460−02	7.532−02	7.566−02	7.561−02	7.531−02	7.494−02	7.461−02	7.424−02
22	133	1.119−01	1.140−01	1.164−01	1.191−01	1.216−01	1.241−01	1.267−01	1.295−01	1.326−01	1.355−01
22	134	1.226−01	1.233−01	1.240−01	1.243−01	1.238−01	1.226−01	1.210−01	1.193−01	1.178−01	1.165−01
22	135	6.311−02	6.365−02	6.442−02	6.550−02	6.712−02	6.963−02	7.340−02	7.857−02	8.498−02	9.194−02
22	136	6.161−02	6.396−02	6.746−02	7.251−02	7.962−02	8.930−02	1.019−01	1.172−01	1.345−01	1.522−01
22	137	1.179−02	1.160−02	1.126−02	1.072−02	9.928−03	8.900−03	7.686−03	6.380−03	5.088−03	3.904−03
22	138	8.651−02	8.348−02	7.922−02	7.340−02	6.589−02	5.702−02	4.745−02	3.796−02	2.924−02	2.174−02
22	139	1.019−01	9.822−02	9.259−02	8.473−02	7.475−02	6.330−02	5.138−02	4.005−02	3.010−02	2.191−02
22	140	4.113−02	3.981−02	3.774−02	3.483−02	3.111−02	2.676−02	2.214−02	1.761−02	1.351−02	1.001−02
22	141	2.149−02	2.160−02	2.142−02	2.068−02	1.919−02	1.697−02	1.424−02	1.135−02	8.631−03	6.295−03
23	24	1.831+00	1.571+00	1.345+00	1.144+00	9.605−01	7.967−01	6.591−01	5.503−01	4.684−01	4.082−01
23	25	4.876+00	4.223+00	3.638+00	3.111+00	2.631+00	2.209+00	1.858+00	1.582+00	1.371+00	1.213+00
23	26	1.394+02	1.465+02	1.529+02	1.576+02	1.603+02	1.614+02	1.607+02	1.575+02	1.530+02	1.490+02
23	27	5.960+00	5.229+00	4.529+00	3.823+00	3.101+00	2.402+00	1.782+00	1.275+00	8.863−01	6.020−01
23	28	2.362+00	2.299+00	2.161+00	1.952+00	1.689+00	1.402+00	1.119+00	8.615−01	6.406−01	4.615−01
23	29	1.804+00	1.668+00	1.524+00	1.342+00	1.121+00	8.851−01	6.643−01	4.779−01	3.323−01	2.251−01
23	30	2.354+00	2.188+00	1.964+00	1.700+00	1.417+00	1.143+00	9.031−01	7.071−01	5.555−01	4.421−01
23	31	5.833+00	5.700+00	5.319+00	4.771+00	4.146+00	3.523+00	2.958+00	2.474+00	2.075+00	1.753+00
23	32	3.177+01	3.249+01	3.252+01	3.205+01	3.131+01	3.057+01	2.997+01	2.952+01	2.918+01	2.887+01
23	33	3.699+00	3.544+00	3.312+00	3.027+00	2.724+00	2.448+00	2.236+00	2.101+00	2.037+00	2.021+00
23	34	1.201+00	1.120+00	1.031+00	9.189−01	7.860−01	6.469−01	5.173−01	4.068−01	3.184−01	2.510−01
23	35	3.997−01	3.647−01	3.304−01	2.924−01	2.499−01	2.068−01	1.677−01	1.354−01	1.106−01	9.271−02
23	36	9.964−01	9.212−01	8.195−01	7.006−01	5.745−01	4.541−01	3.494−01	2.647−01	2.001−01	1.529−01
23	37	1.347+00	1.346+00	1.297+00	1.184+00	1.020+00	8.364−01	6.641−01	5.199−01	4.082−01	3.259−01
23	38	3.127+00	3.077+00	2.942+00	2.671+00	2.285+00	1.858+00	1.457+00	1.122+00	8.613−01	6.677−01
23	39	2.424−01	2.272−01	1.988−01	1.627−01	1.252−01	9.155−02	6.455−02	4.452−02	3.046−02	2.093−02
23	40	9.936−01	9.505−01	8.612−01	7.347−01	5.911−01	4.522−01	3.322−01	2.368−01	1.651−01	1.136−01
23	41	3.693+00	3.646+00	3.461+00	3.207+00	2.957+00	2.768+00	2.661+00	2.631+00	2.674+00	2.797+00
23	42	1.204+00	1.099+00	9.663−01	8.154−01	6.578−01	5.075−01	3.760−01	2.688−01	1.866−01	1.265−01
23	43	1.671+00	1.707+00	1.626+00	1.429+00	1.169+00	9.026−01	6.657−01	4.735−01	3.273−01	2.211−01
23	44	8.304−01	8.363−01	7.993−01	7.163−01	6.044−01	4.851−01	3.737−01	2.780−01	2.007−01	1.410−01
23	45	6.998−01	6.448−01	5.665−01	4.704−01	3.703−01	2.783−01	2.013−01	1.411−01	9.649−02	6.472−02
23	46	4.891−01	4.904−01	4.467−01	3.725−01	2.904−01	2.158−01	1.557−01	1.105−01	7.807−02	5.553−02
23	47	1.334+00	1.352+00	1.255+00	1.075+00	8.672−01	6.706−01	5.049−01	3.752−01	2.782−01	2.079−01
23	48	7.928+00	8.771+00	9.298+00	9.636+00	1.011+01	1.101+01	1.243+01	1.435+01	1.684+01	1.999+01
23	49	2.198−01	2.093−01	1.838−01	1.510−01	1.180−01	8.885−02	6.503−02	4.651−02	3.267−02	2.263−02
23	50	9.642−01	9.872−01	9.055−01	7.656−01	6.163−01	4.856−01	3.830−01	3.073−01	2.536−01	2.167−01
23	51	2.410+00	2.494+00	2.305+00	1.962+00	1.590+00	1.260+00	9.949−01	7.952−01	6.495−01	5.459−01
23	52	9.509−01	9.241−01	8.323−01	7.060−01	5.755−01	4.599−01	3.673−01	2.981−01	2.494−01	2.169−01
23	53	1.257+00	1.202+00	1.072+00	9.044−01	7.297−01	5.665−01	4.246−01	3.081−01	2.172−01	1.494−01
23	54	1.929−01	1.710−01	1.473−01	1.239−01	1.015−01	8.072−02	6.203−02	4.605−02	3.312−02	2.317−02
23	55	8.935−01	7.394−01	6.027−01	4.837−01	3.803−01	2.910−01	2.163−01	1.562−01	1.098−01	7.553−02
23	56	4.935−01	4.064−01	3.303−01	2.656−01	2.104−01	1.634−01	1.244−01	9.302−02	6.863−02	5.022−02
23	57	1.331+00	1.122+00	9.413−01	7.857−01	6.500−01	5.314−01	4.303−01	3.470−01	2.809−01	2.307−01
23	58	6.917+00	6.680+00	6.563+00	6.560+00	6.642+00	6.801+00	7.040+00	7.351+00	7.714+00	8.093+00
23	59	2.978−01	2.535−01	2.149−01	1.811−01	1.506−01	1.231−01	9.891−02	7.841−02	6.170−02	4.856−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
23	60	9.752−01	8.571−01	7.565−01	6.693−01	5.926−01	5.258−01	4.683−01	4.189−01	3.757−01	3.376−01
23	61	4.072+00	3.475+00	3.004+00	2.623+00	2.311+00	2.059+00	1.856+00	1.686+00	1.538+00	1.404+00
23	62	1.587+00	1.461+00	1.314+00	1.164+00	1.019+00	8.857−01	7.646−01	6.550−01	5.552−01	4.644−01
23	63	4.365−01	3.949−01	3.502−01	3.058−01	2.619−01	2.195−01	1.801−01	1.456−01	1.167−01	9.386−02
23	64	1.218−01	1.127−01	1.033−01	9.356−02	8.300−02	7.188−02	6.089−02	5.081−02	4.217−02	3.521−02
23	65	6.672+00	6.859+00	7.140+00	7.594+00	8.303+00	9.349+00	1.079+01	1.265+01	1.497+01	1.773+01
23	66	4.378−01	3.947−01	3.498−01	3.057−01	2.625−01	2.211−01	1.832−01	1.503−01	1.233−01	1.020−01
23	67	1.913+00	1.865+00	1.831+00	1.828+00	1.866+00	1.957+00	2.111+00	2.335+00	2.635+00	3.008+00
23	68	7.207+00	7.396+00	7.693+00	8.159+00	8.868+00	9.904+00	1.133+01	1.320+01	1.555+01	1.835+01
23	69	6.415−01	5.850−01	5.280−01	4.663−01	3.974−01	3.244−01	2.537−01	1.910−01	1.390−01	9.847−02
23	70	4.839−01	4.164−01	3.539−01	2.981−01	2.476−01	2.026−01	1.646−01	1.349−01	1.135−01	9.967−02
23	71	1.282+00	1.176+00	1.090+00	1.026+00	9.797−01	9.559−01	9.638−01	1.013+00	1.110+00	1.257+00
23	72	4.108+00	4.058+00	4.113+00	4.277+00	4.565+00	5.024+00	5.705+00	6.666+00	7.978+00	9.682+00
23	73	1.050+00	9.028−01	7.702−01	6.498−01	5.368−01	4.306−01	3.342−01	2.507−01	1.821−01	1.285−01
23	74	5.121−01	4.784−01	4.345−01	3.826−01	3.248−01	2.652−01	2.089−01	1.592−01	1.180−01	8.553−02
23	75	3.444+00	3.208+00	3.095+00	3.092+00	3.190+00	3.398+00	3.735+00	4.218+00	4.856+00	5.633+00
23	76	9.753−01	8.121−01	6.847−01	5.812−01	4.914−01	4.106−01	3.386−01	2.763−01	2.243−01	1.822−01
23	77	3.464−01	3.005−01	2.618−01	2.269−01	1.932−01	1.612−01	1.325−01	1.085−01	8.983−02	7.598−02
23	78	2.841−01	2.698−01	2.505−01	2.260−01	1.966−01	1.645−01	1.321−01	1.020−01	7.589−02	5.454−02
23	79	2.016−01	1.903−01	1.762−01	1.582−01	1.373−01	1.159−01	9.610−02	7.877−02	6.427−02	5.258−02
23	80	7.101−01	6.978−01	6.812−01	6.615−01	6.460−01	6.443−01	6.633−01	7.059−01	7.723−01	8.597−01
23	81	4.116+00	4.183+00	4.274+00	4.439+00	4.749+00	5.276+00	6.061+00	7.121+00	8.455+00	1.003+01
23	82	6.043−02	5.827−02	5.484−02	4.998−02	4.412−02	3.785−02	3.156−02	2.552−02	1.997−02	1.510−02
23	83	2.309−01	2.266−01	2.186−01	2.071−01	1.947−01	1.846−01	1.785−01	1.765−01	1.776−01	1.804−01
23	84	5.452−01	5.325−01	5.098−01	4.782−01	4.440−01	4.134−01	3.897−01	3.729−01	3.618−01	3.544−01
23	85	4.145−01	3.989−01	3.708−01	3.313−01	2.853−01	2.379−01	1.924−01	1.508−01	1.143−01	8.379−02
23	86	6.443−01	6.482−01	6.291−01	5.806−01	5.110−01	4.324−01	3.536−01	2.795−01	2.135−01	1.577−01
23	87	1.123−01	1.022−01	8.826−02	7.197−02	5.566−02	4.129−02	2.974−02	2.100−02	1.466−02	1.017−02
23	88	3.271−01	3.224−01	3.024−01	2.650−01	2.185−01	1.724−01	1.321−01	9.922−02	7.346−02	5.379−02
23	89	1.259+00	1.221+00	1.181+00	1.151+00	1.155+00	1.218+00	1.358+00	1.588+00	1.914+00	2.336+00
23	90	4.968−01	4.440−01	3.823−01	3.161−01	2.515−01	1.932−01	1.439−01	1.042−01	7.355−02	5.074−02
23	91	8.767−02	8.153−02	7.247−02	6.214−02	5.190−02	4.249−02	3.405−02	2.659−02	2.015−02	1.479−02
23	92	2.398−01	2.275−01	2.037−01	1.725−01	1.398−01	1.094−01	8.313−02	6.139−02	4.414−02	3.096−02
23	93	6.955−02	6.683−02	5.988−02	5.055−02	4.096−02	3.230−02	2.498−02	1.900−02	1.422−02	1.048−02
23	94	4.062−01	4.009−01	3.554−01	2.953−01	2.384−01	1.919−01	1.566−01	1.305−01	1.111−01	9.653−02
23	95	1.351+00	1.347+00	1.201+00	1.007+00	8.250−01	6.790−01	5.699−01	4.905−01	4.325−01	3.890−01
23	96	1.130−01	1.105−01	9.804−02	8.039−02	6.245−02	4.691−02	3.455−02	2.517−02	1.822−02	1.317−02
23	97	5.775−01	5.699−01	5.077−01	4.220−01	3.372−01	2.642−01	2.053−01	1.592−01	1.237−01	9.667−02
23	98	3.066+00	3.105+00	2.998+00	2.859+00	2.766+00	2.749+00	2.804+00	2.909+00	3.045+00	3.185+00
23	99	6.137−01	5.592−01	4.756−01	3.896−01	3.158−01	2.589−01	2.183−01	1.918−01	1.769−01	1.711−01
23	100	1.275−01	1.182−01	1.022−01	8.398−02	6.689−02	5.219−02	4.003−02	3.014−02	2.225−02	1.609−02
23	101	3.029−02	2.805−02	2.428−02	2.000−02	1.596−02	1.249−02	9.622−03	7.291−03	5.426−03	3.967−03
23	102	4.337−01	3.993−01	3.413−01	2.766−01	2.162−01	1.645−01	1.223−01	8.885−02	6.305−02	4.377−02
23	103	1.549−01	1.395−01	1.205−01	1.011−01	8.280−02	6.609−02	5.119−02	3.837−02	2.785−02	1.962−02
23	104	2.406−01	1.971−01	1.596−01	1.284−01	1.027−01	8.111−02	6.289−02	4.759−02	3.504−02	2.509−02
23	105	5.613−01	4.700−01	3.922−01	3.280−01	2.746−01	2.290−01	1.894−01	1.547−01	1.247−01	9.940−02
23	106	1.544−01	1.329−01	1.147−01	9.983−02	8.761−02	7.720−02	6.798−02	5.957−02	5.182−02	4.469−02
23	107	3.601−01	3.133−01	2.725−01	2.383−01	2.097−01	1.853−01	1.639−01	1.449−01	1.281−01	1.136−01
23	108	8.278−02	6.933−02	5.737−02	4.707−02	3.821−02	3.053−02	2.389−02	1.821−02	1.349−02	9.721−03
23	109	6.341−02	4.991−02	3.898−02	3.050−02	2.401−02	1.902−02	1.511−02	1.199−02	9.476−03	7.471−03
23	110	2.442−01	2.112−01	1.842−01	1.626−01	1.451−01	1.308−01	1.189−01	1.089−01	1.007−01	9.407−02
23	111	9.526−01	8.928−01	8.557−01	8.426−01	8.530−01	8.850−01	9.345−01	9.963−01	1.065+00	1.132+00
23	112	5.612−02	4.914−02	4.326−02	3.852−02	3.478−02	3.185−02	2.946−02	2.737−02	2.539−02	2.341−02
23	113	7.368−01	7.288−01	7.269−01	7.301−01	7.356−01	7.391−01	7.362−01	7.233−01	6.994−01	6.657−01
23	114	1.914−01	1.796−01	1.691−01	1.589−01	1.484−01	1.371−01	1.247−01	1.118−01	9.885−02	8.653−02
23	115	6.483−02	5.889−02	5.330−02	4.772−02	4.192−02	3.584−02	2.971−02	2.386−02	1.861−02	1.418−02
23	116	2.627−01	2.449−01	2.255−01	2.049−01	1.827−01	1.588−01	1.337−01	1.085−01	8.484−02	6.389−02
23	117	5.584−02	5.134−02	4.696−02	4.275−02	3.872−02	3.490−02	3.141−02	2.843−02	2.610−02	2.444−02
23	118	3.815−01	3.747−01	3.685−01	3.639−01	3.613−01	3.617−01	3.665−01	3.768−01	3.933−01	4.145−01
23	119	1.591+00	1.645+00	1.730+00	1.863+00	2.056+00	2.319+00	2.658+00	3.072+00	3.544+00	4.043+00
23	120	4.856−02	4.610−02	4.396−02	4.195−02	3.987−02	3.761−02	3.523−02	3.288−02	3.073−02	2.887−02
23	121	2.433−01	2.436−01	2.456−01	2.498−01	2.563−01	2.651−01	2.763−01	2.897−01	3.045−01	3.191−01
23	122	9.173−01	9.296−01	9.461−01	9.736−01	1.015+00	1.072+00	1.143+00	1.227+00	1.317+00	1.406+00
23	123	1.001−01	9.337−02	8.636−02	7.891−02	7.071−02	6.166−02	5.202−02	4.230−02	3.311−02	2.496−02
23	124	1.613−02	1.581−02	1.527−02	1.442−02	1.319−02	1.160−02	9.763−03	7.849−03	6.040−03	4.468−03
23	125	6.795−02	6.686−02	6.508−02	6.248−02	5.903−02	5.471−02	4.964−02	4.406−02	3.830−02	3.272−02
23	126	1.501−01	1.478−01	1.441−01	1.385−01	1.307−01	1.207−01	1.087−01	9.533−02	8.158−02	6.836−02
23	127	1.373−01	1.325−01	1.262−01	1.176−01	1.061−01	9.185−02	7.590−02	5.983−02	4.512−02	3.272−02
23	128	2.903−01	2.742−01	2.542−01	2.304−01	2.028−01	1.723−01	1.407−01	1.103−01	8.309−02	6.042−02
23	129	3.777−02	3.606−02	3.405−02	3.159−02	2.863−02	2.524−02	2.167−02	1.819−02	1.506−02	1.241−02
23	130	1.319−01	1.268−01	1.215−01	1.154−01	1.081−01	9.975−02	9.073−02	8.180−02	7.362−02	6.653−02
23	131	3.689−01	3.601−01	3.520−01	3.432−01	3.322−01	3.184−01	3.027−01	2.863−01	2.707−01	2.565−01
23	132	2.684−02	2.635−02	2.566−02	2.462−02	2.317−02	2.131−02	1.921−02	1.705−02	1.503−02	1.326−02
23	133	1.034−01	1.036−01	1.037−01	1.034−01	1.025−01	1.008−01	9.875−02	9.657−02	9.458−02	9.277−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
23	134	2.890−01	2.893−01	2.912−01	2.944−01	2.982−01	3.025−01	3.072−01	3.126−01	3.185−01	3.240−01
23	135	1.379−01	1.422−01	1.485−01	1.576−01	1.701−01	1.872−01	2.094−01	2.366−01	2.675−01	2.993−01
23	136	3.245−02	3.183−02	3.091−02	2.960−02	2.791−02	2.595−02	2.393−02	2.206−02	2.052−02	1.932−02
23	137	8.085−03	7.883−03	7.640−03	7.356−03	7.060−03	6.815−03	6.688−03	6.721−03	6.912−03	7.208−03
23	138	1.323−01	1.224−01	1.123−01	1.015−01	8.961−02	7.666−02	6.330−02	5.039−02	3.868−02	2.869−02
23	139	1.314−01	1.267−01	1.195−01	1.094−01	9.662−02	8.187−02	6.650−02	5.187−02	3.901−02	2.840−02
23	140	5.313−02	5.142−02	4.877−02	4.502−02	4.022−02	3.462−02	2.866−02	2.282−02	1.751−02	1.297−02
23	141	2.742−02	2.757−02	2.732−02	2.637−02	2.447−02	2.163−02	1.815−02	1.446−02	1.099−02	8.019−03
24	25	1.192+01	1.105+01	1.065+01	1.086+01	1.131+01	1.150+01	1.128+01	1.080+01	1.021+01	9.623+00
24	26	4.128+00	3.739+00	3.450+00	3.231+00	3.052+00	2.905+00	2.789+00	2.697+00	2.622+00	2.552+00
24	27	2.406+00	2.093+00	1.793+00	1.491+00	1.191+00	9.115−01	6.701−01	4.757−01	3.281−01	2.211−01
24	28	3.624−01	3.423−01	3.278−01	3.119−01	2.889−01	2.576−01	2.216−01	1.859−01	1.553−01	1.319−01
24	29	1.728+00	1.600+00	1.460+00	1.283+00	1.075+00	8.562−01	6.524−01	4.785−01	3.401−01	2.355−01
24	30	5.738+01	6.180+01	6.737+01	7.414+01	8.197+01	9.040+01	9.794+01	1.031+02	1.062+02	1.087+02
24	31	3.069+00	2.957+00	2.814+00	2.627+00	2.407+00	2.181+00	1.974+00	1.797+00	1.652+00	1.534+00
24	32	1.704+00	1.622+00	1.519+00	1.390+00	1.245+00	1.101+00	9.749−01	8.729−01	7.950−01	7.361−01
24	33	2.303−01	2.512−01	2.544−01	2.356−01	2.004−01	1.594−01	1.209−01	8.916−02	6.470−02	4.666−02
24	34	2.626−01	2.862−01	2.997−01	2.980−01	2.791−01	2.475−01	2.113−01	1.764−01	1.456−01	1.193−01
24	35	1.713−01	1.865−01	1.945−01	1.941−01	1.872−01	1.767−01	1.648−01	1.520−01	1.379−01	1.226−01
24	36	4.169−01	4.649−01	5.048−01	5.302−01	5.275−01	4.961−01	4.470−01	3.914−01	3.356−01	2.821−01
24	37	3.744−01	4.084−01	4.174−01	3.964−01	3.526−01	2.997−01	2.482−01	2.029−01	1.647−01	1.329−01
24	38	2.458−01	2.769−01	2.832−01	2.608−01	2.185−01	1.700−01	1.255−01	8.960−02	6.264−02	4.329−02
24	39	5.648−01	4.939−01	4.094−01	3.285−01	2.595−01	2.049−01	1.638−01	1.333−01	1.107−01	9.406−02
24	40	8.817−01	7.991−01	6.815−01	5.556−01	4.391−01	3.418−01	2.659−01	2.090−01	1.670−01	1.359−01
24	41	7.282−01	6.815−01	5.908−01	4.818−01	3.749−01	2.837−01	2.130−01	1.613−01	1.247−01	9.890−02
24	42	5.280−01	4.450−01	3.625−01	2.855−01	2.168−01	1.589−01	1.126−01	7.763−02	5.231−02	3.463−02
24	43	6.813−01	6.349−01	5.644−01	4.746−01	3.785−01	2.881−01	2.109−01	1.494−01	1.030−01	6.951−02
24	44	2.185−01	2.139−01	1.968−01	1.686−01	1.358−01	1.040−01	7.669−02	5.483−02	3.823−02	2.612−02
24	45	1.994−01	1.947−01	1.767−01	1.490−01	1.180−01	8.929−02	6.555−02	4.734−02	3.399−02	2.447−02
24	46	1.215+00	1.344+00	1.490+00	1.618+00	1.647+00	1.557+00	1.395+00	1.213+00	1.041+00	8.873−01
24	47	7.977−01	8.043−01	7.517−01	6.620−01	5.622−01	4.701−01	3.928−01	3.300−01	2.788−01	2.365−01
24	48	5.885−01	5.778−01	5.173−01	4.281−01	3.347−01	2.531−01	1.889−01	1.417−01	1.082−01	8.485−02
24	49	2.611−01	2.598−01	2.423−01	2.151−01	1.858−01	1.592−01	1.363−01	1.166−01	9.904−02	8.293−02
24	50	6.776−01	7.194−01	6.924−01	6.192−01	5.289−01	4.427−01	3.701−01	3.121−01	2.657−01	2.278−01
24	51	4.966−01	4.857−01	4.376−01	3.688−01	2.977−01	2.355−01	1.860−01	1.485−01	1.203−01	9.892−02
24	52	4.374−01	4.463−01	4.260−01	3.857−01	3.379−01	2.915−01	2.507−01	2.163−01	1.874−01	1.629−01
24	53	3.652−01	3.439−01	3.054−01	2.573−01	2.062−01	1.577−01	1.157−01	8.194−02	5.638−02	3.791−02
24	54	5.939−02	5.044−02	4.081−02	3.189−02	2.419−02	1.783−02	1.280−02	8.985−03	6.184−03	4.188−03
24	55	6.184−01	6.575−01	6.962−01	6.961−01	6.553−01	5.986−01	5.518−01	5.289−01	5.346−01	5.663−01
24	56	4.007+00	4.462+00	4.960+00	5.406+00	5.838+00	6.394+00	7.202+00	8.334+00	9.817+00	1.161+01
24	57	6.927−01	6.207−01	5.624−01	5.114−01	4.623−01	4.124−01	3.611−01	3.089−01	2.575−01	2.089−01
24	58	3.697−01	3.086−01	2.587−01	2.177−01	1.826−01	1.518−01	1.247−01	1.012−01	8.105−02	6.389−02
24	59	2.924+00	3.284+00	3.658+00	4.019+00	4.424+00	4.970+00	5.738+00	6.768+00	8.079+00	9.646+00
24	60	2.081+00	2.500+00	2.874+00	3.095+00	3.197+00	3.297+00	3.499+00	3.857+00	4.391+00	5.086+00
24	61	3.197−01	2.702−01	2.346−01	2.076−01	1.848−01	1.636−01	1.431−01	1.230−01	1.036−01	8.515−02
24	62	6.322−01	8.121−01	8.748−01	8.245−01	7.218−01	6.186−01	5.404−01	4.940−01	4.776−01	4.862−01
24	63	1.397+00	1.662+00	1.907+00	2.081+00	2.205+00	2.348+00	2.570+00	2.904+00	3.359+00	3.926+00
24	64	1.141+00	1.237+00	1.350+00	1.498+00	1.707+00	2.001+00	2.398+00	2.902+00	3.519+00	4.236+00
24	65	1.874−01	1.673−01	1.457−01	1.232−01	1.005−01	7.884−02	5.986−02	4.436−02	3.236−02	2.338−02
24	66	8.198−01	9.481−01	1.018+00	1.002+00	9.191−01	8.054−01	6.898−01	5.850−01	4.935−01	4.138−01
24	67	2.210−01	2.124−01	2.017−01	1.886−01	1.738−01	1.588−01	1.448−01	1.317−01	1.191−01	1.066−01
24	68	1.951−01	1.708−01	1.452−01	1.199−01	9.580−02	7.385−02	5.526−02	4.051−02	2.934−02	2.113−02
24	69	1.688−01	1.514−01	1.323−01	1.125−01	9.251−02	7.365−02	5.723−02	4.386−02	3.350−02	2.570−02
24	70	2.194+00	2.779+00	3.132+00	3.158+00	2.930+00	2.593+00	2.249+00	1.941+00	1.674+00	1.441+00
24	71	2.763−01	2.620−01	2.426−01	2.173−01	1.872−01	1.553−01	1.250−01	9.832−02	7.603−02	5.808−02
24	72	2.470−01	2.163−01	1.862−01	1.570−01	1.289−01	1.028−01	8.008−02	6.130−02	4.632−02	3.467−02
24	73	4.238−01	3.878−01	3.479−01	3.038−01	2.572−01	2.110−01	1.680−01	1.300−01	9.780−02	7.163−02
24	74	1.487−01	1.350−01	1.216−01	1.063−01	8.909−02	7.166−02	5.565−02	4.208−02	3.121−02	2.284−02
24	75	1.177−01	1.020−01	8.972−02	7.911−02	6.889−02	5.905−02	5.005−02	4.208−02	3.510−02	2.894−02
24	76	2.914−01	2.616−01	2.365−01	2.132−01	1.904−01	1.681−01	1.467−01	1.265−01	1.075−01	9.002−02
24	77	7.590−01	8.457−01	9.008−01	8.986−01	8.461−01	7.699−01	6.920−01	6.217−01	5.594−01	5.022−01
24	78	1.251−01	1.259−01	1.165−01	1.011−01	8.356−02	6.659−02	5.169−02	3.928−02	2.929−02	2.144−02
24	79	1.327−01	1.345−01	1.339−01	1.292−01	1.206−01	1.100−01	9.864−02	8.731−02	7.624−02	6.562−02
24	80	9.671−02	9.817−02	9.731−02	9.204−02	8.278−02	7.157−02	6.031−02	5.008−02	4.127−02	3.390−02
24	81	5.171−02	5.129−02	4.961−02	4.523−02	3.851−02	3.094−02	2.380−02	1.775−02	1.296−02	9.310−03
24	82	1.544−02	1.572−02	1.541−02	1.432−02	1.260−02	1.055−02	8.459−03	6.514−03	4.833−03	3.469−03
24	83	5.633−02	5.994−02	6.043−02	5.797−02	5.393−02	4.960−02	4.549−02	4.151−02	3.739−02	3.299−02
24	84	5.654−02	5.736−02	5.622−02	5.238−02	4.660−02	4.011−02	3.377−02	2.798−02	2.286−02	1.842−02
24	85	7.881−02	8.193−02	7.959−02	7.187−02	6.065−02	4.837−02	3.683−02	2.697−02	1.910−02	1.315−02
24	86	1.721−01	1.699−01	1.587−01	1.390−01	1.145−01	8.968−02	6.725−02	4.861−02	3.404−02	2.321−02
24	87	2.936−01	2.684−01	2.362−01	2.034−01	1.750−01	1.527−01	1.360−01	1.234−01	1.132−01	1.045−01
24	88	2.061−01	1.855−01	1.576−01	1.269−01	9.792−02	7.346−02	5.428−02	3.992−02	2.946−02	2.195−02
24	89	1.312−01	1.191−01	1.007−01	8.017−02	6.094−02	4.505−02	3.296−02	2.419−02	1.796−02	1.352−02
24	90	1.694−01	1.498−01	1.252−01	9.915−02	7.496−02	5.459−02	3.858−02	2.660−02	1.797−02	1.194−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
24	91	1.529−02	1.486−02	1.375−02	1.207−02	1.010−02	8.110−03	6.260−03	4.655−03	3.345−03	2.333−03
24	92	9.013−02	8.141−02	6.873−02	5.466−02	4.153−02	3.053−02	2.190−02	1.538−02	1.059−02	7.171−03
24	93	9.977−02	9.669−02	8.826−02	7.712−02	6.576−02	5.550−02	4.668−02	3.928−02	3.316−02	2.824−02
24	94	1.248−01	1.208−01	1.108−01	9.768−02	8.438−02	7.232−02	6.182−02	5.267−02	4.461−02	3.744−02
24	95	8.305−02	7.861−02	6.991−02	5.921−02	4.863−02	3.930−02	3.153−02	2.521−02	2.010−02	1.596−02
24	96	2.949−01	2.799−01	2.592−01	2.369−01	2.165−01	1.983−01	1.812−01	1.638−01	1.455−01	1.266−01
24	97	1.372−01	1.291−01	1.138−01	9.531−02	7.733−02	6.176−02	4.896−02	3.861−02	3.026−02	2.351−02
24	98	8.255−02	7.566−02	6.441−02	5.148−02	3.939−02	2.939−02	2.170−02	1.600−02	1.186−02	8.836−03
24	99	8.529−02	8.033−02	7.173−02	6.168−02	5.204−02	4.370−02	3.684−02	3.122−02	2.649−02	2.233−02
24	100	7.278−02	6.732−02	5.878−02	4.937−02	4.071−02	3.341−02	2.742−02	2.249−02	1.839−02	1.500−02
24	101	3.024−02	2.825−02	2.498−02	2.142−02	1.829−02	1.583−02	1.393−02	1.239−02	1.106−02	9.915−03
24	102	1.701−01	1.523−01	1.287−01	1.036−01	8.035−02	6.034−02	4.400−02	3.122−02	2.162−02	1.465−02
24	103	6.115−02	5.224−02	4.211−02	3.249−02	2.429−02	1.775−02	1.272−02	8.946−03	6.185−03	4.206−03
24	104	1.381−01	1.214−01	1.070−01	9.435−02	8.266−02	7.129−02	6.002−02	4.902−02	3.870−02	2.949−02
24	105	1.608−01	1.598−01	1.621−01	1.681−01	1.780−01	1.922−01	2.104−01	2.321−01	2.561−01	2.803−01
24	106	2.268−01	2.286−01	2.355−01	2.484−01	2.681−01	2.950−01	3.289−01	3.687−01	4.122−01	4.555−01
24	107	8.181−02	7.641−02	7.243−02	6.987−02	6.840−02	6.768−02	6.750−02	6.773−02	6.830−02	6.903−02
24	108	4.640−02	4.265−02	3.917−02	3.580−02	3.229−02	2.846−02	2.433−02	2.007−02	1.595−02	1.220−02
24	109	4.877−01	4.977−01	5.192−01	5.556−01	6.107−01	6.873−01	7.872−01	9.084−01	1.045+00	1.186+00
24	110	1.579−01	1.491−01	1.409−01	1.324−01	1.226−01	1.110−01	9.755−02	8.285−02	6.786−02	5.362−02
24	111	3.783−02	3.063−02	2.487−02	2.037−02	1.682−02	1.391−02	1.144−02	9.303−03	7.462−03	5.896−03
24	112	7.852−02	7.957−02	8.225−02	8.682−02	9.343−02	1.021−01	1.128−01	1.253−01	1.389−01	1.526−01
24	113	4.379−02	4.137−02	3.937−02	3.749−02	3.532−02	3.254−02	2.904−02	2.497−02	2.064−02	1.641−02
24	114	2.272−01	2.311−01	2.381−01	2.488−01	2.637−01	2.828−01	3.060−01	3.324−01	3.607−01	3.884−01
24	115	3.434−01	3.540−01	3.708−01	3.956−01	4.301−01	4.753−01	5.309−01	5.948−01	6.633−01	7.304−01
24	116	3.983−02	3.492−02	3.011−02	2.543−02	2.091−02	1.668−02	1.287−02	9.594−03	6.913−03	4.829−03
24	117	1.361−01	1.363−01	1.354−01	1.330−01	1.291−01	1.233−01	1.153−01	1.051−01	9.309−02	7.983−02
24	118	3.830−02	3.599−02	3.327−02	3.009−02	2.650−02	2.263−02	1.867−02	1.484−02	1.138−02	8.432−03
24	119	2.122−02	1.867−02	1.615−02	1.367−02	1.130−02	9.107−03	7.154−03	5.489−03	4.124−03	3.041−03
24	120	5.412−02	5.284−02	5.127−02	4.917−02	4.640−02	4.294−02	3.888−02	3.441−02	2.975−02	2.519−02
24	121	5.339−02	5.172−02	4.984−02	4.746−02	4.443−02	4.074−02	3.651−02	3.196−02	2.736−02	2.294−02
24	122	2.010−02	1.826−02	1.661−02	1.503−02	1.342−02	1.174−02	1.004−02	8.389−03	6.853−03	5.491−03
24	123	1.745−02	1.609−02	1.447−02	1.260−02	1.059−02	8.570−03	6.673−03	5.002−03	3.616−03	2.532−03
24	124	1.469−02	1.474−02	1.474−02	1.462−02	1.427−02	1.355−02	1.240−02	1.086−02	9.073−03	7.229−03
24	125	1.480−01	1.562−01	1.671−01	1.819−01	2.015−01	2.261−01	2.556−01	2.887−01	3.237−01	3.575−01
24	126	8.299−02	8.573−02	8.928−02	9.386−02	9.949−02	1.060−01	1.132−01	1.208−01	1.285−01	1.358−01
24	127	6.842−02	6.788−02	6.676−02	6.460−02	6.091−02	5.547−02	4.851−02	4.062−02	3.257−02	2.505−02
24	128	1.574−01	1.541−01	1.491−01	1.416−01	1.311−01	1.174−01	1.011−01	8.358−02	6.634−02	5.063−02
24	129	6.370−02	6.402−02	6.362−02	6.221−02	5.955−02	5.555−02	5.037−02	4.436−02	3.801−02	3.179−02
24	130	3.371−02	3.355−02	3.297−02	3.181−02	2.996−02	2.745−02	2.442−02	2.111−02	1.776−02	1.461−02
24	131	9.596−03	9.279−03	8.863−03	8.281−03	7.506−03	6.566−03	5.538−03	4.515−03	3.574−03	2.760−03
24	132	1.916−02	1.895−02	1.856−02	1.796−02	1.720−02	1.633−02	1.538−02	1.433−02	1.313−02	1.174−02
24	133	2.308−02	2.263−02	2.184−02	2.066−02	1.913−02	1.736−02	1.549−02	1.361−02	1.181−02	1.012−02
24	134	1.013−02	9.736−03	9.206−03	8.520−03	7.699−03	6.791−03	5.859−03	4.963−03	4.143−03	3.423−03
24	135	1.393−02	1.358−02	1.305−02	1.229−02	1.130−02	1.014−02	8.910−03	7.702−03	6.588−03	5.608−03
24	136	1.757−02	1.742−02	1.707−02	1.641−02	1.543−02	1.416−02	1.269−02	1.113−02	9.544−03	7.999−03
24	137	1.078−02	1.080−02	1.074−02	1.058−02	1.030−02	9.901−03	9.390−03	8.752−03	7.973−03	7.062−03
24	138	2.393−02	2.221−02	2.004−02	1.746−02	1.466−02	1.181−02	9.143−03	6.804−03	4.886−03	3.401−03
24	139	4.030−02	3.735−02	3.342−02	2.876−02	2.380−02	1.894−02	1.450−02	1.070−02	7.627−03	5.280−03
24	140	8.218−03	7.786−03	7.225−03	6.509−03	5.652−03	4.703−03	3.740−03	2.847−03	2.080−03	1.468−03
24	141	1.183−02	1.191−02	1.189−02	1.164−02	1.106−02	1.011−02	8.845−03	7.387−03	5.896−03	4.510−03
25	26	2.074+01	1.809+01	1.657+01	1.625+01	1.641+01	1.623+01	1.557+01	1.464+01	1.367+01	1.277+01
25	27	4.048+00	3.517+00	3.011+00	2.506+00	2.005+00	1.538+00	1.134+00	8.077−01	5.599−01	3.803−01
25	28	4.985−01	4.568−01	4.227−01	3.814−01	3.254−01	2.610−01	1.989−01	1.463−01	1.055−01	7.578−02
25	29	2.885+00	2.668+00	2.432+00	2.140+00	1.794+00	1.431+00	1.091+00	8.004−01	5.689−01	3.940−01
25	30	1.383+01	1.460+01	1.580+01	1.750+01	1.934+01	2.091+01	2.196+01	2.241+01	2.244+01	2.236+01
25	31	8.454+01	9.158+01	1.049+02	1.298+02	1.604+02	1.841+02	1.945+02	1.936+02	1.878+02	1.821+02
25	32	4.818+00	4.644+00	4.400+00	4.078+00	3.701+00	3.317+00	2.968+00	2.677+00	2.444+00	2.260+00
25	33	5.194−01	5.574−01	5.629−01	5.280−01	4.619−01	3.835−01	3.084−01	2.442−01	1.924−01	1.514−01
25	34	5.920−01	6.248−01	6.307−01	6.082−01	5.646−01	5.121−01	4.597−01	4.099−01	3.619−01	3.147−01
25	35	1.072−01	1.152−01	1.165−01	1.087−01	9.367−02	7.580−02	5.859−02	4.383−02	3.202−02	2.297−02
25	36	3.552−01	3.848−01	3.891−01	3.651−01	3.205−01	2.680−01	2.178−01	1.745−01	1.389−01	1.101−01
25	37	1.072+00	1.075+00	1.034+00	9.560−01	8.557−01	7.515−01	6.545−01	5.666−01	4.858−01	4.102−01
25	38	8.684−01	8.903−01	8.644−01	7.837−01	6.650−01	5.368−01	4.205−01	3.248−01	2.497−01	1.919−01
25	39	3.471−01	3.266−01	2.865−01	2.374−01	1.881−01	1.448−01	1.101−01	8.372−02	6.424−02	4.984−02
25	40	1.676+00	1.501+00	1.271+00	1.032+00	8.150−01	6.359−01	4.982−01	3.962−01	3.215−01	2.674−01
25	41	1.643+00	1.509+00	1.295+00	1.055+00	8.263−01	6.337−01	4.841−01	3.735−01	2.934−01	2.358−01
25	42	8.782−01	7.400−01	6.016−01	4.726−01	3.581−01	2.620−01	1.856−01	1.279−01	8.623−02	5.715−02
25	43	1.145+00	1.085+00	9.800−01	8.328−01	6.676−01	5.088−01	3.721−01	2.632−01	1.812−01	1.221−01
25	44	3.602−01	3.561−01	3.314−01	2.869−01	2.324−01	1.787−01	1.319−01	9.428−02	6.573−02	4.491−02
25	45	2.969−01	2.902−01	2.630−01	2.203−01	1.726−01	1.283−01	9.154−02	6.350−02	4.320−02	2.905−02
25	46	8.249−01	8.363−01	7.846−01	6.923−01	5.883−01	4.921−01	4.112−01	3.456−01	2.921−01	2.479−01
25	47	2.753+00	2.852+00	2.726+00	2.464+00	2.171+00	1.910+00	1.696+00	1.520+00	1.365+00	1.219+00
25	48	1.501+00	1.511+00	1.397+00	1.202+00	9.865−01	7.909−01	6.313−01	5.076−01	4.130−01	3.405−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
25	49	2.678−01	2.896−01	3.070−01	3.073−01	2.860−01	2.521−01	2.163−01	1.845−01	1.583−01	1.371−01
25	50	9.894−01	1.006+00	9.273−01	7.944−01	6.528−01	5.281−01	4.275−01	3.481−01	2.842−01	2.314−01
25	51	1.282+00	1.280+00	1.177+00	1.014+00	8.415−01	6.894−01	5.674−01	4.729−01	3.992−01	3.402−01
25	52	6.904−01	7.017−01	6.674−01	6.017−01	5.243−01	4.495−01	3.840−01	3.292−01	2.835−01	2.451−01
25	53	6.429−01	6.123−01	5.447−01	4.570−01	3.641−01	2.769−01	2.023−01	1.427−01	9.798−02	6.580−02
25	54	9.932−02	8.393−02	6.763−02	5.272−02	3.994−02	2.944−02	2.114−02	1.484−02	1.022−02	6.924−03
25	55	7.214−01	6.089−01	5.132−01	4.313−01	3.602−01	2.990−01	2.478−01	2.065−01	1.749−01	1.521−01
25	56	4.213+00	6.164+00	7.226+00	7.123+00	6.358+00	5.494+00	4.849+00	4.526+00	4.521+00	4.780+00
25	57	5.713+00	5.885+00	6.187+00	6.673+00	7.423+00	8.529+00	1.006+01	1.204+01	1.451+01	1.740+01
25	58	1.189+00	1.055+00	9.342−01	8.258−01	7.259−01	6.319−01	5.422−01	4.565−01	3.758−01	3.021−01
25	59	3.317+00	5.243+00	6.891+00	7.569+00	7.268+00	6.475+00	5.676+00	5.139+00	4.944+00	5.066+00
25	60	6.790+00	9.969+00	1.287+01	1.433+01	1.428+01	1.351+01	1.286+01	1.280+01	1.346+01	1.481+01
25	61	2.366+00	2.360+00	2.417+00	2.552+00	2.791+00	3.159+00	3.674+00	4.346+00	5.181+00	6.165+00
25	62	4.181+00	5.765+00	6.380+00	6.082+00	5.389+00	4.737+00	4.335+00	4.235+00	4.418+00	4.832+00
25	63	3.817+00	4.719+00	5.185+00	5.283+00	5.302+00	5.488+00	5.960+00	6.753+00	7.864+00	9.248+00
25	64	1.355−01	1.287−01	1.231−01	1.178−01	1.117−01	1.042−01	9.531−02	8.503−02	7.383−02	6.233−02
25	65	4.269−01	3.829−01	3.342−01	2.845−01	2.358−01	1.906−01	1.518−01	1.204−01	9.603−02	7.745−02
25	66	3.994−01	3.919−01	3.792−01	3.610−01	3.389−01	3.152−01	2.911−01	2.665−01	2.407−01	2.136−01
25	67	1.017+00	9.946−01	9.547−01	9.024−01	8.422−01	7.785−01	7.129−01	6.451−01	5.748−01	5.028−01
25	68	5.391−01	4.805−01	4.146−01	3.499−01	2.901−01	2.376−01	1.937−01	1.582−01	1.295−01	1.062−01
25	69	1.718−01	1.615−01	1.499−01	1.341−01	1.138−01	9.169−02	7.075−02	5.298−02	3.895−02	2.836−02
25	70	6.277−01	6.147−01	5.951−01	5.692−01	5.390−01	5.069−01	4.731−01	4.368−01	3.977−01	3.567−01
25	71	1.893+00	1.916+00	1.924+00	1.926+00	1.931+00	1.934+00	1.918+00	1.866+00	1.771+00	1.640+00
25	72	6.984−01	6.033−01	5.114−01	4.260−01	3.470−01	2.760−01	2.150−01	1.649−01	1.250−01	9.395−02
25	73	8.197−01	7.251−01	6.320−01	5.399−01	4.498−01	3.648−01	2.883−01	2.222−01	1.673−01	1.233−01
25	74	5.964−01	4.657−01	3.661−01	2.888−01	2.271−01	1.776−01	1.387−01	1.088−01	8.625−02	6.919−02
25	75	4.529−01	4.062−01	3.667−01	3.298−01	2.930−01	2.566−01	2.219−01	1.895−01	1.598−01	1.329−01
25	76	1.072+00	1.028+00	9.951−01	9.612−01	9.235−01	8.843−01	8.454−01	8.050−01	7.599−01	7.079−01
25	77	2.905−01	2.669−01	2.453−01	2.231−01	1.999−01	1.763−01	1.533−01	1.315−01	1.111−01	9.249−02
25	78	1.439−01	1.399−01	1.324−01	1.207−01	1.054−01	8.849−02	7.207−02	5.732−02	4.476−02	3.451−02
25	79	1.262−01	1.281−01	1.271−01	1.207−01	1.094−01	9.565−02	8.169−02	6.881−02	5.748−02	4.775−02
25	80	1.947−01	1.963−01	1.947−01	1.868−01	1.729−01	1.560−01	1.383−01	1.211−01	1.047−01	8.925−02
25	81	1.470−01	1.483−01	1.462−01	1.372−01	1.218−01	1.034−01	8.518−02	6.898−02	5.537−02	4.432−02
25	82	2.976−02	3.108−02	3.150−02	3.096−02	2.988−02	2.870−02	2.752−02	2.616−02	2.438−02	2.211−02
25	83	6.570−02	6.678−02	6.547−02	6.093−02	5.389−02	4.572−02	3.754−02	3.001−02	2.343−02	1.793−02
25	84	1.110−01	1.137−01	1.128−01	1.072−01	9.821−02	8.805−02	7.802−02	6.848−02	5.936−02	5.060−02
25	85	1.315−01	1.367−01	1.329−01	1.200−01	1.013−01	8.080−02	6.153−02	4.505−02	3.191−02	2.197−02
25	86	2.874−01	2.838−01	2.651−01	2.322−01	1.914−01	1.498−01	1.124−01	8.120−02	5.685−02	3.876−02
25	87	2.574−01	2.325−01	1.952−01	1.544−01	1.171−01	8.630−02	6.269−02	4.535−02	3.294−02	2.416−02
25	88	4.596−01	4.217−01	3.753−01	3.273−01	2.845−01	2.503−01	2.244−01	2.046−01	1.885−01	1.744−01
25	89	3.376−01	3.055−01	2.599−01	2.089−01	1.606−01	1.199−01	8.827−02	6.479−02	4.784−02	3.570−02
25	90	2.835−01	2.508−01	2.097−01	1.661−01	1.255−01	9.142−02	6.459−02	4.452−02	3.007−02	1.998−02
25	91	2.544−02	2.474−02	2.291−02	2.012−02	1.685−02	1.353−02	1.044−02	7.766−03	5.580−03	3.892−03
25	92	1.488−01	1.348−01	1.141−01	9.082−02	6.902−02	5.073−02	3.635−02	2.550−02	1.754−02	1.186−02
25	93	1.225−01	1.186−01	1.085−01	9.532−02	8.193−02	6.987−02	5.947−02	5.055−02	4.279−02	3.599−02
25	94	1.840−01	1.776−01	1.605−01	1.380−01	1.154−01	9.520−02	7.821−02	6.434−02	5.326−02	4.467−02
25	95	2.240−01	2.159−01	1.948−01	1.677−01	1.407−01	1.168−01	9.677−02	8.006−02	6.606−02	5.419−02
25	96	1.980−01	1.880−01	1.692−01	1.463−01	1.241−01	1.045−01	8.777−02	7.343−02	6.091−02	4.991−02
25	97	4.625−01	4.384−01	4.028−01	3.637−01	3.277−01	2.965−01	2.682−01	2.407−01	2.128−01	1.847−01
25	98	2.302−01	2.156−01	1.882−01	1.552−01	1.235−01	9.647−02	7.478−02	5.780−02	4.456−02	3.422−02
25	99	1.689−01	1.583−01	1.400−01	1.188−01	9.893−02	8.196−02	6.808−02	5.677−02	4.738−02	3.939−02
25	100	1.199−01	1.130−01	1.004−01	8.591−02	7.254−02	6.154−02	5.281−02	4.577−02	3.986−02	3.476−02
25	101	3.729−02	3.432−02	2.978−02	2.476−02	2.007−02	1.602−02	1.262−02	9.809−03	7.490−03	5.605−03
25	102	2.852−01	2.553−01	2.157−01	1.736−01	1.346−01	1.010−01	7.369−02	5.230−02	3.621−02	2.455−02
25	103	1.034−01	8.829−02	7.114−02	5.486−02	4.100−02	2.994−02	2.144−02	1.508−02	1.043−02	7.089−03
25	104	2.325−01	2.039−01	1.794−01	1.580−01	1.383−01	1.191−01	1.002−01	8.182−02	6.457−02	4.920−02
25	105	2.267−01	2.287−01	2.355−01	2.485−01	2.682−01	2.952−01	3.291−01	3.690−01	4.125−01	4.558−01
25	106	2.441−01	2.381−01	2.365−01	2.397−01	2.479−01	2.610−01	2.787−01	3.004−01	3.247−01	3.494−01
25	107	3.114−01	3.084−01	3.118−01	3.227−01	3.417−01	3.688−01	4.038−01	4.452−01	4.908−01	5.364−01
25	108	7.751−02	7.123−02	6.539−02	5.974−02	5.385−02	4.746−02	4.056−02	3.347−02	2.659−02	2.035−02
25	109	3.059−01	2.993−01	2.963−01	2.973−01	3.021−01	3.108−01	3.241−01	3.419−01	3.637−01	3.874−01
25	110	6.334−01	6.449−01	6.733−01	7.240−01	8.019−01	9.116−01	1.055+00	1.229+00	1.424+00	1.625+00
25	111	2.023−01	1.870−01	1.733−01	1.603−01	1.467−01	1.316−01	1.150−01	9.736−02	7.963−02	6.292−02
25	112	1.311−01	1.328−01	1.373−01	1.449−01	1.559−01	1.704−01	1.882−01	2.090−01	2.317−01	2.546−01
25	113	2.821−01	2.840−01	2.894−01	2.989−01	3.127−01	3.306−01	3.524−01	3.772−01	4.038−01	4.299−01
25	114	4.398−01	4.518−01	4.717−01	5.019−01	5.444−01	6.002−01	6.689−01	7.479−01	8.328−01	9.159−01
25	115	3.046−01	3.105−01	3.210−01	3.369−01	3.590−01	3.877−01	4.225−01	4.623−01	5.050−01	5.467−01
25	116	6.696−02	5.870−02	5.058−02	4.264−02	3.502−02	2.790−02	2.151−02	1.602−02	1.154−02	8.060−03
25	117	8.719−02	8.470−02	8.141−02	7.716−02	7.194−02	6.578−02	5.880−02	5.124−02	4.345−02	3.581−02
25	118	1.812−01	1.804−01	1.783−01	1.746−01	1.690−01	1.611−01	1.507−01	1.375−01	1.220−01	1.048−01
25	119	5.928−02	5.455−02	4.937−02	4.378−02	3.788−02	3.186−02	2.597−02	2.047−02	1.561−02	1.155−02
25	120	6.631−02	6.434−02	6.210−02	5.925−02	5.557−02	5.105−02	4.584−02	4.021−02	3.448−02	2.895−02
25	121	7.227−02	6.966−02	6.684−02	6.350−02	5.943−02	5.460−02	4.911−02	4.320−02	3.714−02	3.128−02
25	122	7.413−02	7.081−02	6.739−02	6.349−02	5.887−02	5.350−02	4.753−02	4.127−02	3.505−02	2.917−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
25	123	2.941−02	2.712−02	2.435−02	2.118−02	1.777−02	1.437−02	1.118−02	8.373−03	6.051−03	4.236−03
25	124	1.012−01	1.073−01	1.155−01	1.266−01	1.413−01	1.601−01	1.825−01	2.080−01	2.349−01	2.609−01
25	125	7.816−02	7.977−02	8.174−02	8.404−02	8.642−02	8.851−02	9.004−02	9.094−02	9.133−02	9.132−02
25	126	2.289−01	2.395−01	2.536−01	2.724−01	2.967−01	3.268−01	3.621−01	4.013−01	4.423−01	4.817−01
25	127	1.169−01	1.155−01	1.132−01	1.093−01	1.029−01	9.360−02	8.183−02	6.852−02	5.495−02	4.228−02
25	128	2.628−01	2.571−01	2.486−01	2.362−01	2.187−01	1.957−01	1.686−01	1.394−01	1.106−01	8.443−02
25	129	5.439−02	5.424−02	5.345−02	5.177−02	4.902−02	4.518−02	4.046−02	3.519−02	2.981−02	2.466−02
25	130	8.135−02	8.119−02	8.029−02	7.822−02	7.463−02	6.941−02	6.274−02	5.511−02	4.710−02	3.930−02
25	131	4.836−02	4.664−02	4.472−02	4.231−02	3.924−02	3.547−02	3.118−02	2.665−02	2.220−02	1.810−02
25	132	2.314−02	2.267−02	2.187−02	2.069−02	1.916−02	1.739−02	1.551−02	1.364−02	1.184−02	1.014−02
25	133	3.102−02	3.051−02	2.973−02	2.865−02	2.733−02	2.585−02	2.426−02	2.254−02	2.059−02	1.837−02
25	134	3.391−02	3.290−02	3.147−02	2.953−02	2.713−02	2.441−02	2.156−02	1.876−02	1.612−02	1.368−02
25	135	3.195−02	3.137−02	3.040−02	2.892−02	2.689−02	2.441−02	2.168−02	1.888−02	1.617−02	1.365−02
25	136	3.167−02	3.154−02	3.114−02	3.037−02	2.921−02	2.768−02	2.586−02	2.377−02	2.141−02	1.884−02
25	137	7.004−03	6.884−03	6.652−03	6.261−03	5.693−03	4.976−03	4.177−03	3.375−03	2.637−03	1.999−03
25	138	3.996−02	3.708−02	3.343−02	2.912−02	2.442−02	1.968−02	1.523−02	1.133−02	8.137−03	5.664−03
25	139	6.725−02	6.233−02	5.576−02	4.800−02	3.972−02	3.161−02	2.420−02	1.785−02	1.273−02	8.810−03
25	140	1.373−02	1.301−02	1.207−02	1.087−02	9.442−03	7.855−03	6.247−03	4.754−03	3.474−03	2.451−03
25	141	1.971−02	1.985−02	1.981−02	1.940−02	1.843−02	1.685−02	1.474−02	1.231−02	9.825−03	7.517−03
26	27	5.832+00	5.028+00	4.282+00	3.552+00	2.837+00	2.172+00	1.598+00	1.135+00	7.830−01	5.281−01
26	28	6.670−01	6.094−01	5.620−01	5.045−01	4.270−01	3.381−01	2.523−01	1.799−01	1.240−01	8.344−02
26	29	4.071+00	3.756+00	3.418+00	3.001+00	2.513+00	2.002+00	1.526+00	1.119+00	7.951−01	5.506−01
26	30	2.733+00	2.661+00	2.559+00	2.425+00	2.268+00	2.111+00	1.970+00	1.847+00	1.740+00	1.643+00
26	31	1.549+01	1.614+01	1.693+01	1.787+01	1.894+01	2.011+01	2.116+01	2.181+01	2.208+01	2.214+01
26	32	1.253+02	1.375+02	1.671+02	2.177+02	2.671+02	2.954+02	3.008+02	2.914+02	2.773+02	2.657+02
26	33	1.168+00	1.267+00	1.312+00	1.289+00	1.206+00	1.090+00	9.673−01	8.493−01	7.378−01	6.321−01
26	34	3.291−01	3.587−01	3.666−01	3.441−01	2.967−01	2.385−01	1.821−01	1.341−01	9.648−02	6.832−02
26	35	9.332−02	1.017−01	1.031−01	9.522−02	8.055−02	6.349−02	4.756−02	3.445−02	2.445−02	1.718−02
26	36	2.523−01	2.782−01	2.804−01	2.563−01	2.141−01	1.664−01	1.229−01	8.772−02	6.134−02	4.242−02
26	37	5.203−01	5.964−01	6.263−01	5.971−01	5.218−01	4.272−01	3.354−01	2.576−01	1.959−01	1.487−01
26	38	2.197+00	2.204+00	2.124+00	1.959+00	1.738+00	1.503+00	1.283+00	1.087+00	9.131−01	7.586−01
26	39	2.746−01	2.612−01	2.294−01	1.885−01	1.472−01	1.114−01	8.362−02	6.343−02	4.923−02	3.933−02
26	40	1.102+00	1.075+00	9.670−01	8.084−01	6.378−01	4.848−01	3.627−01	2.719−01	2.066−01	1.602−01
26	41	3.986+00	3.603+00	3.077+00	2.512+00	1.984+00	1.539+00	1.192+00	9.328−01	7.426−01	6.047−01
26	42	1.234+00	1.039+00	8.441−01	6.627−01	5.020−01	3.671−01	2.599−01	1.790−01	1.205−01	7.972−02
26	43	1.612+00	1.541+00	1.401+00	1.195+00	9.595−01	7.317−01	5.350−01	3.782−01	2.603−01	1.753−01
26	44	4.879−01	4.774−01	4.390−01	3.765−01	3.037−01	2.334−01	1.725−01	1.236−01	8.640−02	5.911−02
26	45	3.879−01	3.772−01	3.407−01	2.848−01	2.227−01	1.649−01	1.171−01	8.054−02	5.417−02	3.585−02
26	46	6.198−01	6.200−01	5.602−01	4.650−01	3.635−01	2.742−01	2.039−01	1.523−01	1.157−01	9.024−02
26	47	2.332+00	2.229+00	1.956+00	1.611+00	1.274+00	9.905−01	7.695−01	6.041−01	4.815−01	3.900−01
26	48	5.322+00	5.703+00	5.582+00	5.078+00	4.428+00	3.808+00	3.288+00	2.864+00	2.506+00	2.194+00
26	49	1.854−01	1.735−01	1.515−01	1.237−01	9.590−02	7.164−02	5.235−02	3.785−02	2.730−02	1.971−02
26	50	1.247+00	1.316+00	1.227+00	1.045+00	8.432−01	6.646−01	5.234−01	4.177−01	3.397−01	2.814−01
26	51	4.119+00	3.847+00	3.355+00	2.769+00	2.216+00	1.760+00	1.408+00	1.143+00	9.399−01	7.793−01
26	52	8.952−01	8.985−01	8.449−01	7.553−01	6.539−01	5.566−01	4.713−01	3.999−01	3.408−01	2.919−01
26	53	8.781−01	8.311−01	7.379−01	6.197−01	4.949−01	3.774−01	2.764−01	1.955−01	1.345−01	9.050−02
26	54	1.375−01	1.151−01	9.230−02	7.185−02	5.446−02	4.018−02	2.889−02	2.030−02	1.398−02	9.474−03
26	55	9.248−01	7.747−01	6.451−01	5.326−01	4.337−01	3.476−01	2.747−01	2.146−01	1.665−01	1.293−01
26	56	6.952−01	6.157−01	5.498−01	4.972−01	4.557−01	4.248−01	4.048−01	3.960−01	3.988−01	4.129−01
26	57	2.758+00	2.696+00	2.687+00	2.747+00	2.891+00	3.144+00	3.523+00	4.040+00	4.701+00	5.494+00
26	58	1.048+01	1.072+01	1.115+01	1.189+01	1.306+01	1.481+01	1.725+01	2.045+01	2.445+01	2.916+01
26	59	2.394−01	2.089−01	1.857−01	1.671−01	1.502−01	1.337−01	1.174−01	1.014−01	8.591−02	7.123−02
26	60	1.827+00	1.824+00	1.865+00	1.965+00	2.140+00	2.409+00	2.787+00	3.280+00	3.894+00	4.617+00
26	61	8.341+00	8.516+00	8.903+00	9.592+00	1.070+01	1.236+01	1.464+01	1.758+01	2.120+01	2.545+01
26	62	5.154+00	5.366+00	5.698+00	6.224+00	7.023+00	8.171+00	9.714+00	1.168+01	1.408+01	1.687+01
26	63	3.665−01	3.429−01	3.204−01	2.984−01	2.748−01	2.488−01	2.208−01	1.917−01	1.624−01	1.342−01
26	64	7.101−02	6.753−02	6.464−02	6.138−02	5.692−02	5.122−02	4.475−02	3.800−02	3.139−02	2.527−02
26	65	1.671+00	1.556+00	1.406+00	1.251+00	1.103+00	9.685−01	8.481−01	7.403−01	6.416−01	5.499−01
26	66	1.648−01	1.497−01	1.348−01	1.200−01	1.050−01	9.026−02	7.678−02	6.493−02	5.465−02	4.568−02
26	67	7.493−01	6.944−01	6.275−01	5.603−01	4.972−01	4.401−01	3.895−01	3.441−01	3.022−01	2.624−01
26	68	1.496+00	1.398+00	1.285+00	1.171+00	1.053+00	9.316−01	8.142−01	7.053−01	6.059−01	5.155−01
26	69	2.021−01	1.911−01	1.783−01	1.596−01	1.345−01	1.064−01	7.968−02	5.726−02	3.994−02	2.731−02
26	70	4.611−01	4.018−01	3.445−01	2.904−01	2.399−01	1.942−01	1.549−01	1.224−01	9.613−02	7.533−02
26	71	1.029+00	9.416−01	8.536−01	7.700−01	6.921−01	6.208−01	5.558−01	4.957−01	4.390−01	3.857−01
26	72	3.466+00	3.364+00	3.262+00	3.176+00	3.109+00	3.047+00	2.966+00	2.843+00	2.669+00	2.452+00
26	73	1.328+00	1.140+00	9.673−01	8.086−01	6.628−01	5.315−01	4.172−01	3.210−01	2.427−01	1.812−01
26	74	1.481−01	1.496−01	1.463−01	1.353−01	1.169−01	9.483−02	7.306−02	5.418−02	3.909−02	2.768−02
26	75	3.047+00	2.630+00	2.328+00	2.099+00	1.909+00	1.745+00	1.601+00	1.472+00	1.349+00	1.226+00
26	76	1.335+00	9.965−01	7.526−01	5.768−01	4.474−01	3.502−01	2.760−01	2.184−01	1.732−01	1.370−01
26	77	2.094−01	1.620−01	1.281−01	1.031−01	8.348−02	6.763−02	5.481−02	4.449−02	3.608−02	2.912−02
26	78	2.039−01	1.981−01	1.874−01	1.707−01	1.487−01	1.245−01	1.007−01	7.913−02	6.041−02	4.482−02
26	79	7.447−02	7.432−02	7.247−02	6.676−02	5.759−02	4.702−02	3.692−02	2.827−02	2.130−02	1.590−02
26	80	1.764−01	1.787−01	1.772−01	1.674−01	1.498−01	1.286−01	1.073−01	8.820−02	7.188−02	5.833−02
26	81	4.043−01	4.115−01	4.122−01	3.977−01	3.678−01	3.293−01	2.887−01	2.497−01	2.137−01	1.809−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
26	82	2.348−02	2.371−02	2.306−02	2.113−02	1.822−02	1.493−02	1.173−02	8.881−03	6.508−03	4.632−03
26	83	8.892−02	9.128−02	9.071−02	8.617−02	7.881−02	7.048−02	6.232−02	5.463−02	4.733−02	4.034−02
26	84	1.766−01	1.820−01	1.817−01	1.736−01	1.598−01	1.438−01	1.276−01	1.119−01	9.684−02	8.235−02
26	85	1.844−01	1.918−01	1.865−01	1.685−01	1.423−01	1.135−01	8.645−02	6.330−02	4.483−02	3.087−02
26	86	4.042−01	3.998−01	3.741−01	3.280−01	2.704−01	2.117−01	1.587−01	1.146−01	8.023−02	5.469−02
26	87	1.322−01	1.202−01	1.018−01	8.108−02	6.165−02	4.557−02	3.332−02	2.444−02	1.812−02	1.362−02
26	88	3.489−01	3.264−01	2.873−01	2.366−01	1.842−01	1.379−01	1.011−01	7.350−02	5.360−02	3.944−02
26	89	9.519−01	8.806−01	7.856−01	6.766−01	5.710−01	4.812−01	4.105−01	3.564−01	3.146−01	2.811−01
26	90	3.984−01	3.527−01	2.950−01	2.337−01	1.767−01	1.286−01	9.087−02	6.262−02	4.229−02	2.809−02
26	91	3.555−02	3.461−02	3.209−02	2.820−02	2.362−02	1.897−02	1.464−02	1.089−02	7.822−03	5.456−03
26	92	2.085−01	1.890−01	1.599−01	1.273−01	9.661−02	7.091−02	5.073−02	3.553−02	2.441−02	1.648−02
26	93	8.146−02	7.672−02	6.800−02	5.739−02	4.694−02	3.776−02	3.014−02	2.397−02	1.902−02	1.503−02
26	94	2.033−01	1.949−01	1.763−01	1.524−01	1.284−01	1.070−01	8.895−02	7.386−02	6.121−02	5.051−02
26	95	5.620−01	5.485−01	4.908−01	4.146−01	3.399−01	2.757−01	2.237−01	1.824−01	1.497−01	1.239−01
26	96	1.127−01	1.056−01	9.180−02	7.500−02	5.879−02	4.506−02	3.424−02	2.600−02	1.978−02	1.508−02
26	97	2.876−01	2.717−01	2.420−01	2.058−01	1.706−01	1.400−01	1.147−01	9.377−02	7.629−02	6.153−02
26	98	2.158+00	2.053+00	1.759+00	1.421+00	1.119+00	8.801−01	6.991−01	5.613−01	4.535−01	3.666−01
26	99	3.020−01	2.838−01	2.500−01	2.110−01	1.748−01	1.448−01	1.207−01	1.013−01	8.536−02	7.206−02
26	100	1.326−01	1.242−01	1.100−01	9.350−02	7.783−02	6.433−02	5.322−02	4.414−02	3.659−02	3.012−02
26	101	4.077−02	3.826−02	3.405−02	2.922−02	2.466−02	2.077−02	1.761−02	1.507−02	1.293−02	1.104−02
26	102	4.032−01	3.608−01	3.046−01	2.451−01	1.899−01	1.425−01	1.039−01	7.370−02	5.101−02	3.457−02
26	103	1.481−01	1.264−01	1.018−01	7.850−02	5.864−02	4.280−02	3.063−02	2.153−02	1.487−02	1.011−02
26	104	3.296−01	2.882−01	2.530−01	2.224−01	1.943−01	1.673−01	1.406−01	1.147−01	9.052−02	6.895−02
26	105	8.169−02	7.627−02	7.231−02	6.977−02	6.834−02	6.766−02	6.752−02	6.777−02	6.836−02	6.910−02
26	106	3.108−01	3.080−01	3.116−01	3.227−01	3.418−01	3.691−01	4.042−01	4.457−01	4.913−01	5.369−01
26	107	7.030−01	7.016−01	7.142−01	7.436−01	7.915−01	8.589−01	9.452−01	1.048+00	1.160+00	1.273+00
26	108	1.094−01	1.005−01	9.214−02	8.406−02	7.568−02	6.662−02	5.690−02	4.692−02	3.727−02	2.851−02
26	109	9.182−02	8.090−02	7.214−02	6.521−02	5.955−02	5.472−02	5.048−02	4.679−02	4.371−02	4.121−02
26	110	3.519−01	3.384−01	3.296−01	3.257−01	3.264−01	3.316−01	3.416−01	3.565−01	3.755−01	3.968−01
26	111	1.211+00	1.204+00	1.225+00	1.280+00	1.375+00	1.515+00	1.702+00	1.933+00	2.196+00	2.468+00
26	112	1.839−01	1.863−01	1.924−01	2.030−01	2.184−01	2.388−01	2.638−01	2.929−01	3.247−01	3.568−01
26	113	9.954−01	1.021+00	1.064+00	1.127+00	1.216+00	1.332+00	1.475+00	1.639+00	1.814+00	1.987+00
26	114	3.584−01	3.625−01	3.716−01	3.865−01	4.078−01	4.354−01	4.689−01	5.072−01	5.482−01	5.883−01
26	115	8.418−02	8.183−02	8.045−02	7.977−02	7.935−02	7.881−02	7.800−02	7.698−02	7.592−02	7.489−02
26	116	9.368−02	8.207−02	7.068−02	5.957−02	4.890−02	3.896−02	3.004−02	2.238−02	1.612−02	1.126−02
26	117	4.284−02	3.891−02	3.484−02	3.064−02	2.639−02	2.222−02	1.828−02	1.468−02	1.153−02	8.853−03
26	118	1.076−01	1.028−01	9.723−02	9.069−02	8.322−02	7.495−02	6.605−02	5.683−02	4.765−02	3.890−02
26	119	3.121−01	3.088−01	3.030−01	2.943−01	2.821−01	2.660−01	2.458−01	2.217−01	1.943−01	1.653−01
26	120	3.020−02	2.798−02	2.597−02	2.396−02	2.177−02	1.939−02	1.686−02	1.431−02	1.188−02	9.672−03
26	121	8.724−02	8.354−02	7.972−02	7.531−02	7.003−02	6.382−02	5.687−02	4.952−02	4.217−02	3.518−02
26	122	1.862−01	1.800−01	1.728−01	1.640−01	1.534−01	1.408−01	1.266−01	1.112−01	9.565−02	8.055−02
26	123	4.822−02	4.308−02	3.762−02	3.201−02	2.643−02	2.112−02	1.630−02	1.214−02	8.736−03	6.098−03
26	124	1.977−02	1.976−02	1.970−02	1.950−02	1.899−02	1.803−02	1.652−02	1.452−02	1.221−02	9.826−03
26	125	1.815−01	1.900−01	2.012−01	2.164−01	2.360−01	2.602−01	2.887−01	3.203−01	3.533−01	3.851−01
26	126	3.689−01	3.858−01	4.083−01	4.384−01	4.775−01	5.257−01	5.820−01	6.444−01	7.096−01	7.721−01
26	127	1.637−01	1.623−01	1.595−01	1.543−01	1.455−01	1.326−01	1.160−01	9.722−02	7.800−02	6.004−02
26	128	3.676−01	3.598−01	3.481−01	3.309−01	3.063−01	2.742−01	2.362−01	1.953−01	1.550−01	1.182−01
26	129	2.072−02	2.033−02	1.972−02	1.874−02	1.732−02	1.550−02	1.342−02	1.126−02	9.197−03	7.341−03
26	130	6.841−02	6.688−02	6.492−02	6.212−02	5.822−02	5.317−02	4.720−02	4.073−02	3.425−02	2.815−02
26	131	1.696−01	1.685−01	1.659−01	1.610−01	1.530−01	1.418−01	1.277−01	1.119−01	9.538−02	7.942−02
26	132	1.033−02	9.880−03	9.307−03	8.592−03	7.749−03	6.826−03	5.883−03	4.978−03	4.152−03	3.428−03
26	133	3.418−02	3.308−02	3.160−02	2.964−02	2.722−02	2.449−02	2.163−02	1.882−02	1.617−02	1.373−02
26	134	8.160−02	7.956−02	7.683−02	7.325−02	6.888−02	6.397−02	5.877−02	5.341−02	4.786−02	4.208−02
26	135	7.204−02	7.152−02	7.034−02	6.818−02	6.493−02	6.068−02	5.570−02	5.021−02	4.434−02	3.827−02
26	136	2.116−02	2.066−02	1.985−02	1.865−02	1.705−02	1.515−02	1.310−02	1.109−02	9.236−03	7.630−03
26	137	5.677−03	5.513−03	5.270−03	4.942−03	4.542−03	4.094−03	3.629−03	3.181−03	2.773−03	2.416−03
26	138	5.705−02	5.270−02	4.731−02	4.108−02	3.437−02	2.765−02	2.137−02	1.589−02	1.141−02	7.939−03
26	139	9.419−02	8.730−02	7.813−02	6.728−02	5.569−02	4.432−02	3.393−02	2.503−02	1.784−02	1.235−02
26	140	1.930−02	1.827−02	1.695−02	1.528−02	1.326−02	1.103−02	8.773−03	6.675−03	4.877−03	3.440−03
26	141	2.757−02	2.776−02	2.770−02	2.713−02	2.578−02	2.357−02	2.062−02	1.722−02	1.375−02	1.052−02
27	28	2.208+00	2.095+00	2.030+00	1.932+00	1.762+00	1.541+00	1.309+00	1.092+00	9.003−01	7.360−01
27	29	2.238+02	2.369+02	2.496+02	2.628+02	2.748+02	2.821+02	2.818+02	2.743+02	2.636+02	2.540+02
27	30	3.590+00	3.293+00	2.942+00	2.530+00	2.076+00	1.625+00	1.219+00	8.827−01	6.204−01	4.257−01
27	31	5.008+00	4.592+00	4.111+00	3.547+00	2.920+00	2.290+00	1.720+00	1.245+00	8.751−01	6.002−01
27	32	6.386+00	5.848+00	5.231+00	4.512+00	3.713+00	2.912+00	2.187+00	1.584+00	1.113+00	7.630−01
27	33	4.341−01	4.709−01	4.866−01	4.613−01	3.982−01	3.169−01	2.370−01	1.694−01	1.172−01	7.929−02
27	34	2.667−01	2.858−01	2.934−01	2.773−01	2.391−01	1.903−01	1.423−01	1.018−01	7.051−02	4.773−02
27	35	9.185−02	9.710−02	9.840−02	9.213−02	7.897−02	6.262−02	4.676−02	3.341−02	2.314−02	1.566−02
27	36	3.012−01	3.181−01	3.209−01	2.983−01	2.541−01	2.009−01	1.500−01	1.075−01	7.471−02	5.079−02
27	37	5.077−01	5.339−01	5.363−01	4.970−01	4.225−01	3.337−01	2.490−01	1.783−01	1.239−01	8.423−02
27	38	7.133−01	7.569−01	7.706−01	7.228−01	6.194−01	4.913−01	3.674−01	2.633−01	1.831−01	1.245−01
27	39	2.243−01	2.188−01	1.971−01	1.645−01	1.281−01	9.420−02	6.625−02	4.510−02	2.999−02	1.962−02
27	40	6.898−01	6.734−01	6.085−01	5.094−01	3.977−01	2.929−01	2.063−01	1.406−01	9.369−02	6.143−02
27	41	1.091+00	1.060+00	9.559−01	8.004−01	6.253−01	4.610−01	3.249−01	2.215−01	1.475−01	9.656−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
27	42	2.374+00	2.107+00	1.791+00	1.471+00	1.176+00	9.262−01	7.268−01	5.745−01	4.621−01	3.830−01
27	43	6.897+00	6.550+00	6.089+00	5.557+00	5.050+00	4.641+00	4.357+00	4.190+00	4.119+00	4.124+00
27	44	2.396+00	2.182+00	1.976+00	1.766+00	1.561+00	1.368+00	1.194+00	1.040+00	9.099−01	8.066−01
27	45	1.309+00	1.275+00	1.164+00	1.004+00	8.387−01	6.977−01	5.901−01	5.108−01	4.500−01	3.997−01
27	46	5.045−01	4.993−01	4.492−01	3.699−01	2.840−01	2.070−01	1.454−01	9.971−02	6.729−02	4.503−02
27	47	8.203−01	8.153−01	7.343−01	6.044−01	4.633−01	3.368−01	2.354−01	1.600−01	1.066−01	7.011−02
27	48	1.122+00	1.124+00	1.019+00	8.422−01	6.472−01	4.711−01	3.294−01	2.238−01	1.490−01	9.768−02
27	49	1.469−01	1.384−01	1.192−01	9.498−02	7.124−02	5.108−02	3.543−02	2.399−02	1.594−02	1.046−02
27	50	4.476−01	4.230−01	3.648−01	2.907−01	2.180−01	1.562−01	1.083−01	7.328−02	4.869−02	3.192−02
27	51	7.369−01	7.174−01	6.322−01	5.106−01	3.857−01	2.774−01	1.927−01	1.304−01	8.672−02	5.691−02
27	52	3.424−01	3.448−01	3.102−01	2.543−01	1.944−01	1.411−01	9.867−02	6.711−02	4.472−02	2.937−02
27	53	2.312+00	2.166+00	1.907+00	1.611+00	1.337+00	1.113+00	9.404−01	8.088−01	7.049−01	6.187−01
27	54	2.898+00	2.638+00	2.354+00	2.092+00	1.866+00	1.672−01	1.496−01	1.325−01	1.152−01	9.776−01
27	55	3.380+00	3.038+00	2.729+00	2.452+00	2.203+00	1.982+00	1.785+00	1.605+00	1.435+00	1.272+00
27	56	6.846−01	5.574−01	4.480−01	3.566−01	2.804−01	2.174−01	1.667−01	1.271−01	9.697−02	7.434−02
27	57	1.015+00	7.964−01	6.132−01	4.655−01	3.470−01	2.527−01	1.795−01	1.247−01	8.492−02	5.700−02
27	58	1.219+00	9.578−01	7.408−01	5.658−01	4.245−01	3.107−01	2.214−01	1.539−01	1.047−01	6.995−02
27	59	2.516−01	1.967−01	1.535−01	1.195−01	9.179−02	6.889−02	5.031−02	3.576−02	2.481−02	1.686−02
27	60	4.713−01	3.648−01	2.819−01	2.177−01	1.663−01	1.246−01	9.122−02	6.530−02	4.587−02	3.176−02
27	61	9.562−01	7.081−01	5.226−01	3.857−01	2.830−01	2.047−01	1.454−01	1.013−01	6.925−02	4.666−02
27	62	3.730−01	3.053−01	2.463−01	1.960−01	1.527−01	1.156−01	8.487−02	6.061−02	4.226−02	2.889−02
27	63	2.044−01	1.682−01	1.367−01	1.098−01	8.619−02	6.561−02	4.836−02	3.459−02	2.410−02	1.642−02
27	64	5.723−02	4.797−02	3.991−02	3.277−02	2.620−02	2.022−02	1.505−02	1.083−02	7.576−03	5.171−03
27	65	4.949+00	4.995+00	5.088+00	5.250+00	5.521+00	5.943+00	6.543+00	7.328+00	8.289+00	9.391+00
27	66	5.154−01	4.496−01	3.942−01	3.446−01	2.975−01	2.523−01	2.104−01	1.734−01	1.426−01	1.185−01
27	67	7.208−01	6.307−01	5.540−01	4.851−01	4.195−01	3.568−01	2.986−01	2.475−01	2.052−01	1.725−01
27	68	4.963+00	5.021+00	5.124+00	5.294+00	5.572+00	6.003+00	6.614+00	7.412+00	8.389+00	9.509+00
27	69	1.023+01	1.093+01	1.186+01	1.312+01	1.485+01	1.721+01	2.032+01	2.422+01	2.898+01	3.454+01
27	70	9.296−01	8.864−01	8.376−01	7.791−01	7.133−01	6.483−01	5.938−01	5.565−01	5.407−01	5.468−01
27	71	1.100+00	1.038+00	9.619−01	8.690−01	7.606−01	6.457−01	5.350−01	4.369−01	3.557−01	2.926−01
27	72	1.325+00	1.236+00	1.134+00	1.014+00	8.756−01	7.277−01	5.828−01	4.512−01	3.384−01	2.466−01
27	73	1.717+00	1.734+00	1.769+00	1.817+00	1.876+00	1.953+00	2.052+00	2.169+00	2.294+00	2.414+00
27	74	5.794+00	6.135+00	6.603+00	7.259+00	8.198+00	9.523+00	1.131+01	1.360+01	1.644+01	1.978+01
27	75	5.286−01	4.859−01	4.451−01	4.021−01	3.550−01	3.054−01	2.566−01	2.118−01	1.735−01	1.428−01
27	76	6.738−01	6.656−01	6.653−01	6.735−01	6.943−01	7.347−01	8.012−01	8.987−01	1.031+00	1.196+00
27	77	2.078−01	1.942−01	1.798−01	1.632−01	1.436−01	1.222−01	1.004−01	7.971−02	6.120−02	4.550−02
27	78	7.308−01	7.335−01	7.382−01	7.459−01	7.590−01	7.774−01	7.941−01	7.989−01	7.836−01	7.462−01
27	79	1.241−01	1.176−01	1.112−01	1.006−01	8.531−02	6.802−02	5.166−02	3.779−02	2.684−02	1.862−02
27	80	1.729−01	1.639−01	1.551−01	1.405−01	1.191−01	9.496−02	7.207−02	5.266−02	3.733−02	2.582−02
27	81	2.212−01	2.093−01	1.981−01	1.796−01	1.525−01	1.218−01	9.255−02	6.778−02	4.825−02	3.363−02
27	82	2.122−02	2.117−02	2.056−02	1.874−02	1.594−02	1.280−02	9.839−03	7.319−03	5.298−03	3.743−03
27	83	6.355−02	6.343−02	6.166−02	5.626−02	4.789−02	3.846−02	2.957−02	2.199−02	1.591−02	1.123−02
27	84	1.056−01	1.054−01	1.026−01	9.369−02	7.980−02	6.411−02	4.929−02	3.665−02	2.651−02	1.872−02
27	85	4.676−01	4.824−01	4.874−01	4.780−01	4.592−01	4.403−01	4.275−01	4.222−01	4.232−01	4.278−01
27	86	1.139+00	1.170+00	1.187+00	1.177+00	1.157+00	1.161+00	1.215+00	1.336+00	1.534+00	1.810+00
27	87	9.460−02	9.194−02	8.414−02	7.143−02	5.650−02	4.222−02	3.022−02	2.096−02	1.419−02	9.430−03
27	88	1.577−01	1.535−01	1.407−01	1.196−01	9.472−02	7.084−02	5.074−02	3.520−02	2.384−02	1.587−02
27	89	2.191−01	2.132−01	1.959−01	1.672−01	1.329−01	9.963−02	7.146−02	4.958−02	3.357−02	2.231−02
27	90	7.939−01	6.980−01	5.940−01	4.883−01	3.916−01	3.119−01	2.516−01	2.090−01	1.804−01	1.622−01
27	91	9.780−02	9.010−02	8.008−02	6.913−02	5.867−02	4.965−02	4.241−02	3.681−02	3.251−02	2.916−02
27	92	4.001−01	3.852−01	3.413−01	2.815−01	2.221−01	1.725−01	1.349−01	1.078−01	8.847−02	7.432−02
27	93	6.985−02	6.509−02	5.622−02	4.528−02	3.454−02	2.534−02	1.806−02	1.257−02	8.577−03	5.754−03
27	94	1.170−01	1.090−01	9.423−02	7.592−02	5.794−02	4.250−02	3.027−02	2.106−02	1.437−02	9.633−03
27	95	1.656−01	1.546−01	1.341−01	1.085−01	8.296−02	6.092−02	4.340−02	3.019−02	2.059−02	1.381−02
27	96	1.318−01	1.225−01	1.044−01	8.271−02	6.208−02	4.488−02	3.163−02	2.186−02	1.489−02	9.999−03
27	97	1.860−01	1.727−01	1.472−01	1.166−01	8.754−02	6.327−02	4.455−02	3.078−02	2.094−02	1.406−02
27	98	2.442−01	2.268−01	1.936−01	1.536−01	1.153−01	8.332−02	5.861−02	4.043−02	2.746−02	1.840−02
27	99	1.205−01	1.090−01	9.122−02	7.165−02	5.379−02	3.915−02	2.787−02	1.948−02	1.339−02	9.061−03
27	100	7.175−02	6.460−02	5.382−02	4.213−02	3.156−02	2.296−02	1.636−02	1.145−02	7.884−03	5.344−03
27	101	2.361−02	2.125−02	1.771−02	1.386−02	1.039−02	7.567−03	5.395−03	3.779−03	2.603−03	1.765−03
27	102	8.855−01	8.403−01	7.532−01	6.597−01	5.852−01	5.405−01	5.255−01	5.348−01	5.610−01	5.958−01
27	103	2.596−01	2.277−01	1.891−01	1.526−01	1.232−01	1.015−01	8.616−02	7.507−02	6.651−02	5.934−02
27	104	6.798−01	5.725−01	4.843−01	4.157−01	3.638−01	3.239−01	2.913−01	2.622−01	2.340−01	2.058−01
27	105	6.087−02	5.021−02	4.080−02	3.276−02	2.595−02	2.017−02	1.530−02	1.129−02	8.090−03	5.640−03
27	106	1.033−01	8.530−02	6.928−02	5.553−02	4.388−02	3.402−02	2.576−02	1.897−02	1.358−02	9.454−03
27	107	1.465−01	1.217−01	9.917−02	7.949−02	6.271−02	4.850−02	3.663−02	2.691−02	1.922−02	1.336−02
27	108	2.317−01	2.011−01	1.744−01	1.523−01	1.342−01	1.192−01	1.061−01	9.406−02	8.227−02	7.052−02
27	109	1.457−01	1.191−01	9.647−02	7.758−02	6.186−02	4.866−02	3.752−02	2.818−02	2.055−02	1.455−02
27	110	1.888−01	1.546−01	1.252−01	1.006−01	8.004−02	6.283−02	4.834−02	3.625−02	2.640−02	1.868−02
27	111	2.369−01	1.945−01	1.574−01	1.260−01	9.987−02	7.804−02	5.979−02	4.467−02	3.244−02	2.289−02
27	112	4.856−02	4.114−02	3.446−02	2.853−02	2.323−02	1.851−02	1.436−02	1.080−02	7.879−03	5.574−03
27	113	1.222−01	1.072−01	9.300−02	7.946−02	6.636−02	5.375−02	4.197−02	3.153−02	2.282−02	1.598−02
27	114	9.511−02	8.315−02	7.213−02	6.172−02	5.164−02	4.191−02	3.277−02	2.465−02	1.785−02	1.251−02
27	115	6.728−02	5.887−02	5.117−02	4.390−02	3.683−02	2.994−02	2.345−02	1.765−02	1.280−02	8.970−03

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
27	116	1.281+00	1.304+00	1.352+00	1.435+00	1.560+00	1.731+00	1.947+00	2.200+00	2.477+00	2.751+00
27	117	2.865−01	2.758−01	2.625−01	2.459−01	2.252−01	2.003−01	1.720−01	1.421−01	1.127−01	8.603−02
27	118	3.648−01	3.481−01	3.281−01	3.047−01	2.771−01	2.452−01	2.099−01	1.730−01	1.371−01	1.045−01
27	119	4.536−01	4.284−01	3.989−01	3.665−01	3.305−01	2.906−01	2.475−01	2.033−01	1.608−01	1.223−01
27	120	1.305−01	1.253−01	1.198−01	1.133−01	1.049−01	9.432−02	8.181−02	6.818−02	5.451−02	4.185−02
27	121	1.876−01	1.793−01	1.703−01	1.600−01	1.474−01	1.321−01	1.143−01	9.514−02	7.598−02	5.829−02
27	122	2.865−01	2.702−01	2.495−01	2.271−01	2.037−01	1.787−01	1.523−01	1.254−01	9.941−02	7.587−02
27	123	6.304−01	6.525−01	6.895−01	7.441−01	8.177−01	9.105−01	1.021+00	1.145+00	1.274+00	1.397+00
27	124	9.244−03	8.644−03	7.959−03	7.178−03	6.302−03	5.348−03	4.362−03	3.408−03	2.552−03	1.837−03
27	125	2.791−02	2.605−02	2.392−02	2.151−02	1.885−02	1.597−02	1.302−02	1.017−02	7.613−03	5.480−03
27	126	4.765−02	4.417−02	4.026−02	3.597−02	3.135−02	2.649−02	2.156−02	1.683−02	1.260−02	9.072−03
27	127	1.716−01	1.595−01	1.476−01	1.365−01	1.265−01	1.177−01	1.092−01	1.003−01	9.049−02	7.952−02
27	128	4.018−01	3.771−01	3.556−01	3.397−01	3.295−01	3.232−01	3.175−01	3.086−01	2.938−01	2.726−01
27	129	1.366−01	1.328−01	1.284−01	1.227−01	1.147−01	1.040−01	9.086−02	7.619−02	6.124−02	4.724−02
27	130	1.849−01	1.770−01	1.690−01	1.599−01	1.484−01	1.339−01	1.166−01	9.759−02	7.835−02	6.038−02
27	131	2.443−01	2.288−01	2.143−01	1.998−01	1.835−01	1.644−01	1.425−01	1.188−01	9.519−02	7.324−02
27	132	6.250−02	6.144−02	5.993−02	5.755−02	5.389−02	4.882−02	4.255−02	3.556−02	2.848−02	2.190−02
27	133	1.070−01	1.043−01	1.010−01	9.648−02	9.001−02	8.133−02	7.074−02	5.905−02	4.726−02	3.631−02
27	134	1.529−01	1.479−01	1.423−01	1.353−01	1.257−01	1.133−01	9.839−02	8.201−02	6.556−02	5.033−02
27	135	1.129−01	1.107−01	1.075−01	1.027−01	9.558−02	8.605−02	7.454−02	6.196−02	4.939−02	3.782−02
27	136	7.085−02	6.890−02	6.649−02	6.320−02	5.864−02	5.268−02	4.557−02	3.785−02	3.016−02	2.309−02
27	137	2.273−02	2.239−02	2.182−02	2.089−02	1.947−02	1.754−02	1.521−02	1.265−02	1.008−02	7.722−03
27	138	7.304−01	7.478−01	7.774−01	8.220−01	8.842−01	9.656−01	1.067+00	1.185+00	1.312+00	1.439+00
27	139	6.512−01	6.727−01	7.046−01	7.518−01	8.198−01	9.134−01	1.035+00	1.184+00	1.351+00	1.524+00
27	140	2.666−01	2.814−01	3.015−01	3.285−01	3.638−01	4.084−01	4.623−01	5.241−01	5.902−01	6.548−01
27	141	1.305−02	1.342−02	1.397−02	1.475−02	1.572−02	1.669−02	1.738−02	1.750−02	1.689−02	1.558−02
28	29	1.374+00	1.433+00	1.505+00	1.555+00	1.568+00	1.540+00	1.481+00	1.408+00	1.333+00	1.261+00
28	30	9.808−01	9.292−01	8.625−01	7.778−01	6.751−01	5.610−01	4.466−01	3.427−01	2.556−01	1.871−01
28	31	1.310+00	1.235+00	1.140+00	1.016+00	8.668−01	7.057−01	5.509−01	4.145−01	3.020−01	2.140−01
28	32	1.652+00	1.553+00	1.428+00	1.270+00	1.081+00	8.798−01	6.874−01	5.178−01	3.774−01	2.672−01
28	33	1.570+00	1.456+00	1.307+00	1.133+00	9.444−01	7.541−01	5.775−01	4.254−01	3.027−01	2.092−01
28	34	9.510−01	8.741−01	7.805−01	6.751−01	5.620−01	4.485−01	3.434−01	2.529−01	1.799−01	1.243−01
28	35	3.131−01	2.882−01	2.578−01	2.242−01	1.882−01	1.516−01	1.168−01	8.639−02	6.159−02	4.258−02
28	36	1.245+00	1.194+00	1.104+00	9.781−01	8.311−01	6.789−01	5.349−01	4.073−01	3.004−01	2.150−01
28	37	2.072+00	1.982+00	1.828+00	1.619+00	1.375+00	1.124+00	8.859−01	6.749−01	4.979−01	3.564−01
28	38	2.895+00	2.763+00	2.546+00	2.254+00	1.916+00	1.566+00	1.235+00	9.421−01	6.955−01	4.983−01
28	39	3.514−01	3.239−01	2.850−01	2.399−01	1.930−01	1.487−01	1.101−01	7.864−02	5.455−02	3.698−02
28	40	1.052+00	9.636−01	8.437−01	7.068−01	5.669−01	4.363−01	3.232−01	2.317−01	1.619−01	1.109−01
28	41	1.660+00	1.506+00	1.314+00	1.101+00	8.857−01	6.832−01	5.067−01	3.628−01	2.520−01	1.709−01
28	42	2.460+00	2.236+00	2.018+00	1.837+00	1.717+00	1.672+00	1.694+00	1.769+00	1.892+00	2.076+00
28	43	2.464+00	2.295+00	2.072+00	1.821+00	1.555+00	1.289+00	1.051+00	8.599−01	7.216−01	6.294−01
28	44	1.849+00	1.889+00	1.916+00	1.917+00	1.909+00	1.923+00	1.972+00	2.055+00	2.164+00	2.298+00
28	45	5.336+00	6.743+00	9.315+00	1.180+01	1.316+01	1.357+01	1.369+01	1.402+01	1.491+01	1.656+01
28	46	5.093−01	5.130−01	4.844−01	4.308−01	3.680−01	3.098−01	2.636−01	2.318−01	2.155−01	2.144−01
28	47	7.423−01	7.465−01	6.970−01	6.043−01	4.920−01	3.801−01	2.815−01	2.014−01	1.403−01	9.588−02
28	48	9.940−01	9.948−01	9.274−01	8.045−01	6.558−01	5.074−01	3.759−01	2.687−01	1.866−01	1.266−01
28	49	2.300−01	2.246−01	2.055−01	1.774−01	1.459−01	1.149−01	8.692−02	6.340−02	4.479−02	3.081−02
28	50	6.980−01	6.814−01	6.218−01	5.353−01	4.390−01	3.451−01	2.608−01	1.903−01	1.348−01	9.314−02
28	51	1.157+00	1.136+00	1.041+00	8.984−01	7.384−01	5.819−01	4.417−01	3.246−01	2.327−01	1.645−01
28	52	3.324−01	3.302−01	2.999−01	2.515−01	1.977−01	1.477−01	1.060−01	7.394−02	5.071−02	3.465−02
28	53	3.628+00	3.741+00	3.820+00	3.962+00	4.267+00	4.805+00	5.582+00	6.573+00	7.805+00	9.317+00
28	54	2.804−01	2.493−01	2.149−01	1.809−01	1.481−01	1.173−01	9.018−02	6.745−02	4.929−02	3.532−02
28	55	8.980+00	1.170+01	1.339+01	1.343+01	1.238+01	1.102+01	9.852+00	9.024+00	8.518+00	8.239+00
28	56	7.131−01	6.259−01	5.508−01	4.863−01	4.310−01	3.848−01	3.481−01	3.207−01	3.017−01	2.893−01
28	57	8.478−01	7.031−01	5.782−01	4.700−01	3.747−01	2.910−01	2.193−01	1.603−01	1.138−01	7.881−02
28	58	9.951−01	8.386−01	6.984−01	5.727−01	4.593−01	3.580−01	2.705−01	1.979−01	1.406−01	9.726−02
28	59	4.138−01	3.613−01	3.129−01	2.662−01	2.205−01	1.768−01	1.370−01	1.026−01	7.448−02	5.254−02
28	60	7.444−01	6.405−01	5.486−01	4.637−01	3.833−01	3.081−01	2.405−01	1.828−01	1.359−01	9.958−02
28	61	1.086+00	9.203−01	7.783−01	6.507−01	5.322−01	4.230−01	3.256−01	2.428−01	1.755−01	1.235−01
28	62	4.031−01	3.538−01	3.057−01	2.583−01	2.119−01	1.682−01	1.291−01	9.595−02	6.944−02	4.925−02
28	63	2.328−01	2.057−01	1.783−01	1.508−01	1.236−01	9.788−02	7.474−02	5.511−02	3.937−02	2.736−02
28	64	7.055−02	6.367−02	5.655−02	4.889−02	4.073−02	3.256−02	2.499−02	1.847−02	1.321−02	9.178−03
28	65	1.013+00	9.183−01	8.268−01	7.368−01	6.509−01	5.752−01	5.150−01	4.732−01	4.488−01	4.389−01
28	66	5.166−01	4.782−01	4.364−01	3.889−01	3.354−01	2.779−01	2.209−01	1.688−01	1.243−01	8.886−02
28	67	7.493−01	6.956−01	6.386−01	5.755−01	5.059−01	4.332−01	3.636−01	3.034−01	2.571−01	2.263−01
28	68	9.733−01	8.965−01	8.165−01	7.334−01	6.515−01	5.779−01	5.188−01	4.774−01	4.532−01	4.431−01
28	69	2.275+01	3.093+01	3.396+01	3.260+01	2.960+01	2.714+01	2.623+01	2.711+01	2.978+01	3.409+01
28	70	4.826−01	4.637−01	4.379−01	4.060−01	3.720−01	3.420−01	3.219−01	3.161−01	3.275−01	3.568−01
28	71	5.095−01	4.838−01	4.440−01	3.910−01	3.289−01	2.640−01	2.027−01	1.497−01	1.072−01	7.507−02
28	72	6.589−01	6.155−01	5.573−01	4.859−01	4.056−01	3.234−01	2.468−01	1.809−01	1.282−01	8.828−02
28	73	1.135+00	1.124+00	1.090+00	1.041+00	9.846−01	9.252−01	8.667−01	8.113−01	7.625−01	7.244−01
28	74	3.476+00	3.675+00	3.941+00	4.297+00	4.798+00	5.507+00	6.471+00	7.714+00	9.261+00	1.110+01
28	75	3.301−01	3.156−01	2.937−01	2.641−01	2.279−01	1.883−01	1.500−01	1.168−01	9.055−02	7.175−02
28	76	4.239−01	4.171−01	4.101−01	4.045−01	4.037−01	4.130−01	4.368−01	4.787−01	5.409−01	6.232−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
28	77	1.364−01	1.305−01	1.215−01	1.091−01	9.382−02	7.710−02	6.084−02	4.659−02	3.518−02	2.675−02
28	78	6.929−01	6.792−01	6.559−01	6.237−01	5.869−01	5.507−01	5.177−01	4.873−01	4.577−01	4.278−01
28	79	5.865−01	5.420−01	4.938−01	4.442−01	3.946−01	3.447−01	2.935−01	2.415−01	1.909−01	1.449−01
28	80	8.225−01	7.602−01	6.927−01	6.232−01	5.537−01	4.838−01	4.121−01	3.392−01	2.684−01	2.039−01
28	81	1.060+00	9.792−01	8.921−01	8.027−01	7.134−01	6.234−01	5.311−01	4.371−01	3.456−01	2.625−01
28	82	6.181−02	5.845−02	5.359−02	4.748−02	4.075−02	3.395−02	2.744−02	2.145−02	1.619−02	1.182−02
28	83	2.036−01	1.999−01	1.860−01	1.642−01	1.392−01	1.143−01	9.126−02	7.080−02	5.342−02	3.932−02
28	84	3.018−01	2.810−01	2.564−01	2.281−01	1.975−01	1.664−01	1.361−01	1.077−01	8.254−02	6.145−02
28	85	6.604+00	6.915+00	7.065+00	7.271+00	7.792+00	8.823+00	1.048+01	1.280+01	1.580+01	1.939+01
28	86	6.048−01	5.933−01	5.691−01	5.355−01	5.016−01	4.759−01	4.624−01	4.610−01	4.688−01	4.814−01
28	87	1.316−01	1.231−01	1.106−01	9.530−02	7.901−02	6.318−02	4.878−02	3.642−02	2.637−02	1.859−02
28	88	2.166−01	2.027−01	1.824−01	1.575−01	1.308−01	1.047−01	8.089−02	6.039−02	4.367−02	3.070−02
28	89	3.029−01	2.829−01	2.543−01	2.197−01	1.826−01	1.463−01	1.132−01	8.464−02	6.136−02	4.331−02
28	90	1.670+00	1.341+00	1.058+00	8.417−01	6.912−01	5.982−01	5.513−01	5.410−01	5.610−01	6.069−01
28	91	1.092−01	1.066−01	1.024−01	9.753−02	9.326−02	8.999−02	8.698−02	8.306−02	7.729−02	6.947−02
28	92	1.677+00	1.743+00	1.820+00	1.923+00	2.062+00	2.233+00	2.426+00	2.624+00	2.812+00	2.977+00
28	93	1.005−01	9.745−02	9.139−02	8.289−02	7.275−02	6.162−02	5.020−02	3.928−02	2.956−02	2.148−02
28	94	1.693−01	1.645−01	1.541−01	1.396−01	1.223−01	1.035−01	8.424−02	6.588−02	4.957−02	3.602−02
28	95	2.349−01	2.281−01	2.142−01	1.945−01	1.707−01	1.446−01	1.178−01	9.218−02	6.936−02	5.038−02
28	96	1.068−01	1.032−01	9.454−02	8.272−02	6.974−02	5.693−02	4.505−02	3.461−02	2.588−02	1.894−02
28	97	1.479−01	1.431−01	1.311−01	1.145−01	9.626−02	7.820−02	6.143−02	4.665−02	3.429−02	2.446−02
28	98	2.052−01	1.943−01	1.755−01	1.518−01	1.267−01	1.024−01	8.010−02	6.066−02	4.451−02	3.170−02
28	99	1.064−01	9.817−02	8.619−02	7.253−02	5.900−02	4.654−02	3.559−02	2.636−02	1.894−02	1.323−02
28	100	6.223−02	5.748−02	5.055−02	4.263−02	3.474−02	2.745−02	2.102−02	1.559−02	1.120−02	7.827−03
28	101	2.071−02	1.912−02	1.680−02	1.416−02	1.154−02	9.112−03	6.974−03	5.168−03	3.713−03	2.593−03
28	102	4.079−01	3.805−01	3.396−01	2.950−01	2.546−01	2.228−01	2.026−01	1.952−01	2.005−01	2.164−01
28	103	3.204−01	3.027−01	2.785−01	2.537−01	2.313−01	2.116−01	1.936−01	1.761−01	1.588−01	1.416−01
28	104	6.187−01	5.624−01	5.241−01	5.055−01	5.049−01	5.197−01	5.468−01	5.829−01	6.247−01	6.678−01
28	105	5.050−02	4.379−02	3.779−02	3.251−02	2.771−02	2.319−02	1.891−02	1.494−02	1.140−02	8.405−03
28	106	8.441−02	7.331−02	6.334−02	5.452−02	4.649−02	3.893−02	3.176−02	2.509−02	1.915−02	1.413−02
28	107	1.185−01	1.030−01	8.911−02	7.678−02	6.553−02	5.491−02	4.481−02	3.541−02	2.704−02	1.995−02
28	108	1.641−01	1.412−01	1.230−01	1.098−01	1.006−01	9.477−02	9.142−02	9.007−02	9.038−02	9.193−02
28	109	9.038−02	7.803−02	6.682−02	5.672−02	4.747−02	3.889−02	3.100−02	2.396−02	1.793−02	1.302−02
28	110	1.163−01	1.004−01	8.592−02	7.287−02	6.093−02	4.986−02	3.970−02	3.063−02	2.289−02	1.658−02
28	111	1.426−01	1.229−01	1.051−01	8.909−02	7.445−02	6.090−02	4.848−02	3.740−02	2.795−02	2.024−02
28	112	1.683−02	1.328−02	1.038−02	8.081−03	6.275−03	4.843−03	3.688−03	2.752−03	2.004−03	1.424−03
28	113	2.045−01	1.947−01	1.847−01	1.729−01	1.578−01	1.390−01	1.171−01	9.429−02	7.254−02	5.356−02
28	114	1.579−01	1.504−01	1.426−01	1.336−01	1.220−01	1.075−01	9.062−02	7.295−02	5.613−02	4.145−02
28	115	1.124−01	1.070−01	1.015−01	9.510−02	8.688−02	7.654−02	6.455−02	5.198−02	4.000−02	2.954−02
28	116	5.392−01	5.440−01	5.594−01	5.868−01	6.267−01	6.790−01	7.431−01	8.171−01	8.983−01	9.811−01
28	117	6.562−02	6.034−02	5.482−02	4.886−02	4.237−02	3.553−02	2.874−02	2.245−02	1.705−02	1.269−02
28	118	8.043−02	7.373−02	6.673−02	5.922−02	5.109−02	4.255−02	3.407−02	2.621−02	1.940−02	1.388−02
28	119	9.618−02	8.786−02	7.922−02	7.008−02	6.031−02	5.014−02	4.010−02	3.081−02	2.279−02	1.630−02
28	120	3.589−02	3.310−02	3.073−02	2.841−02	2.581−02	2.277−02	1.934−02	1.579−02	1.240−02	9.425−03
28	121	5.109−02	4.692−02	4.330−02	3.979−02	3.593−02	3.149−02	2.656−02	2.148−02	1.665−02	1.241−02
28	122	6.683−02	6.128−02	5.628−02	5.141−02	4.616−02	4.025−02	3.380−02	2.722−02	2.101−02	1.559−02
28	123	4.647−01	4.765−01	4.882−01	4.986−01	5.070−01	5.134−01	5.190−01	5.248−01	5.315−01	5.380−01
28	124	1.084−02	1.065−02	1.030−02	9.690−03	8.785−03	7.606−03	6.263−03	4.908−03	3.675−03	2.644−03
28	125	3.276−02	3.221−02	3.114−02	2.932−02	2.660−02	2.305−02	1.901−02	1.492−02	1.120−02	8.082−03
28	126	5.562−02	5.468−02	5.288−02	4.983−02	4.525−02	3.929−02	3.249−02	2.561−02	1.933−02	1.408−02
28	127	7.906−01	8.242−01	8.696−01	9.284−01	9.983−01	1.073+00	1.145+00	1.205+00	1.251+00	1.280+00
28	128	2.278−01	2.208−01	2.123−01	2.014−01	1.875−01	1.711−01	1.534−01	1.361−01	1.204−01	1.069−01
28	129	7.605−02	7.354−02	7.012−02	6.529−02	5.882−02	5.090−02	4.214−02	3.338−02	2.537−02	1.860−02
28	130	9.816−02	9.493−02	9.056−02	8.437−02	7.604−02	6.580−02	5.445−02	4.308−02	3.267−02	2.385−02
28	131	1.252−01	1.199−01	1.136−01	1.053−01	9.456−02	8.165−02	6.746−02	5.330−02	4.035−02	2.939−02
28	132	1.374−02	1.312−02	1.234−02	1.132−02	1.005−02	8.589−03	7.039−03	5.538−03	4.198−03	3.084−03
28	133	2.372−02	2.263−02	2.126−02	1.951−02	1.734−02	1.486−02	1.222−02	9.670−03	7.382−03	5.473−03
28	134	3.424−02	3.263−02	3.060−02	2.802−02	2.486−02	2.124−02	1.741−02	1.367−02	1.032−02	7.504−03
28	135	1.771−02	1.687−02	1.575−02	1.427−02	1.244−02	1.038−02	8.262−03	6.297−03	4.619−03	3.285−03
28	136	1.036−02	9.973−03	9.399−03	8.585−03	7.532−03	6.314−03	5.051−03	3.866−03	2.847−03	2.031−03
28	137	3.534−03	3.406−03	3.219−03	2.956−03	2.617−03	2.225−03	1.822−03	1.447−03	1.129−03	8.782−04
28	138	6.728−01	6.968−01	7.242−01	7.536−01	7.830−01	8.111−01	8.366−01	8.580−01	8.737−01	8.812−01
28	139	1.266−01	1.247−01	1.213−01	1.162−01	1.096−01	1.022−01	9.467−02	8.786−02	8.220−02	7.774−02
28	140	4.475−02	4.463−02	4.420−02	4.336−02	4.212−02	4.080−02	3.988−02	3.991−02	4.123−02	4.375−02
28	141	2.731−02	2.847−02	2.975−02	3.083−02	3.135−02	3.097−02	2.956−02	2.715−02	2.399−02	2.040−02
29	30	1.561+00	1.480+00	1.362+00	1.194+00	9.874−01	7.733−01	5.774−01	4.144−01	2.881−01	1.953−01
29	31	2.188+00	2.075+00	1.911+00	1.677+00	1.390+00	1.090+00	8.153−01	5.858−01	4.077−01	2.768−01
29	32	2.803+00	2.654+00	2.442+00	2.142+00	1.776+00	1.393+00	1.041+00	7.476−01	5.197−01	3.521−01
29	33	3.298−01	3.555−01	3.656−01	3.488−01	3.065−01	2.504−01	1.929−01	1.421−01	1.010−01	6.971−02
29	34	2.024−01	2.166−01	2.209−01	2.088−01	1.821−01	1.480−01	1.138−01	8.370−02	5.945−02	4.106−02
29	35	7.196−02	7.596−02	7.639−02	7.141−02	6.176−02	4.992−02	3.822−02	2.804−02	1.988−02	1.370−02
29	36	2.254−01	2.390−01	2.390−01	2.215−01	1.905−01	1.537−01	1.180−01	8.701−02	6.210−02	4.314−02
29	37	3.819−01	4.018−01	3.990−01	3.678−01	3.150−01	2.536−01	1.944−01	1.432−01	1.021−01	7.088−02
29	38	5.298−01	5.587−01	5.574−01	5.166−01	4.445−01	3.590−01	2.757−01	2.035−01	1.453−01	1.011−01

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
29	39	2.372−01	2.181−01	1.861−01	1.490−01	1.131−01	8.209−02	5.752−02	3.921−02	2.617−02	1.720−02
29	40	7.037−01	6.524−01	5.621−01	4.549−01	3.489−01	2.561−01	1.820−01	1.265−01	8.698−02	5.977−02
29	41	1.059+00	9.793−01	8.424−01	6.804−01	5.204−01	3.801−01	2.677−01	1.832−01	1.226−01	8.075−02
29	42	2.961+00	2.797+00	2.747+00	2.893+00	3.124+00	3.308+00	3.422+00	3.514+00	3.673+00	3.977+00
29	43	3.324+00	3.335+00	3.279+00	3.172+00	3.057+00	2.961+00	2.883+00	2.806+00	2.712+00	2.591+00
29	44	1.173+00	1.166+00	1.138+00	1.091+00	1.044+00	1.013+00	9.995−01	9.950−01	9.916−01	9.861−01
29	45	1.890+00	1.919+00	1.956+00	2.024+00	2.052+00	1.989+00	1.856+00	1.699+00	1.551+00	1.432+00
29	46	4.451−01	4.241−01	3.765−01	3.121−01	2.448−01	1.843−01	1.349−01	9.720−02	6.962−02	5.011−02
29	47	7.161−01	6.936−01	6.227−01	5.185−01	4.054−01	3.016−01	2.161−01	1.505−01	1.026−01	6.882−02
29	48	9.552−01	9.114−01	8.083−01	6.676−01	5.199−01	3.866−01	2.774−01	1.936−01	1.322−01	8.875−02
29	49	1.237−01	1.184−01	1.063−01	8.962−02	7.153−02	5.455−02	4.004−02	2.847−02	1.971−02	1.336−02
29	50	3.764−01	3.605−01	3.245−01	2.742−01	2.190−01	1.670−01	1.225−01	8.706−02	6.026−02	4.084−02
29	51	6.281−01	6.083−01	5.504−01	4.657−01	3.719−01	2.835−01	2.078−01	1.476−01	1.022−01	6.923−02
29	52	3.067−01	2.898−01	2.532−01	2.064−01	1.593−01	1.181−01	8.498−02	5.982−02	4.141−02	2.829−02
29	53	2.394+00	2.453+00	2.368+00	2.198+00	2.005+00	1.824+00	1.669+00	1.538+00	1.426+00	1.329+00
29	54	3.436−01	3.207−01	2.940−01	2.691−01	2.494−01	2.360−01	2.278−01	2.225−01	2.180−01	2.131−01
29	55	7.523+00	8.311+00	9.560+00	1.101+01	1.249+01	1.421+01	1.642+01	1.930+01	2.298+01	2.747+01
29	56	7.772−01	7.113−01	6.598−01	6.242−01	6.065−01	6.107−01	6.400−01	6.967−01	7.833−01	8.992−01
29	57	8.850−01	7.459−01	6.247−01	5.191−01	4.251−01	3.411−01	2.676−01	2.054−01	1.544−01	1.142−01
29	58	1.247+00	1.072+00	8.989−01	7.387−01	5.950−01	4.690−01	3.615−01	2.722−01	2.003−01	1.440−01
29	59	2.338−01	2.033−01	1.763−01	1.521−01	1.297−01	1.089−01	8.988−02	7.270−02	5.756−02	4.469−02
29	60	4.497−01	3.901−01	3.368−01	2.902−01	2.494−01	2.140−01	1.842−01	1.597−01	1.408−01	1.275−01
29	61	7.460−01	6.091−01	4.999−01	4.119−01	3.388−01	2.766−01	2.229−01	1.765−01	1.367−01	1.034−01
29	62	5.159−01	4.505−01	3.808−01	3.156−01	2.576−01	2.077−01	1.662−01	1.330−01	1.073−01	8.841−02
29	63	2.638−01	2.331−01	1.998−01	1.677−01	1.379−01	1.109−01	8.740−02	6.755−02	5.124−02	3.821−02
29	64	6.963−02	6.241−02	5.504−02	4.765−02	4.024−02	3.306−02	2.644−02	2.060−02	1.563−02	1.155−02
29	65	1.216+00	1.125+00	1.028+00	9.341−01	8.547−01	7.986−01	7.694−01	7.644−01	7.787−01	8.078−01
29	66	1.343−01	1.195−01	1.055−01	9.093−02	7.538−02	5.972−02	4.538−02	3.333−02	2.385−02	1.677−02
29	67	2.243−01	1.978−01	1.709−01	1.440−01	1.172−01	9.166−02	6.912−02	5.062−02	3.631−02	2.574−02
29	68	1.272+00	1.174+00	1.069+00	9.680−01	8.815−01	8.195−01	7.855−01	7.767−01	7.879−01	8.144−01
29	69	1.720+00	1.665+00	1.610+00	1.562+00	1.528+00	1.507+00	1.495+00	1.478+00	1.452+00	1.414+00
29	70	3.391−01	3.050−01	2.704−01	2.340−01	1.954−01	1.570−01	1.221−01	9.273−02	6.951−02	5.205−02
29	71	5.011−01	4.385−01	3.773−01	3.173−01	2.579−01	2.016−01	1.519−01	1.110−01	7.930−02	5.602−02
29	72	4.593−01	4.176−01	3.748−01	3.266−01	2.724−01	2.161−01	1.636−01	1.189−01	8.354−02	5.709−02
29	73	7.647+00	7.977+00	8.413+00	9.000+00	9.807+00	1.090+01	1.233+01	1.408+01	1.613+01	1.839+01
29	74	1.656+00	1.837+00	2.150+00	2.330+00	2.284+00	2.095+00	1.868+00	1.657+00	1.475+00	1.317+00
29	75	1.255−01	1.256−01	1.227−01	1.143−01	1.002−01	8.262−02	6.461−02	4.839−02	3.503−02	2.474−02
29	76	4.584−01	3.577−01	2.849−01	2.313−01	1.903−01	1.585−01	1.338−01	1.145−01	9.903−02	8.623−02
29	77	7.543−02	6.800−02	6.161−02	5.455−02	4.619−02	3.718−02	2.852−02	2.099−02	1.491−02	1.029−02
29	78	1.093+01	1.188+01	1.144+01	1.044+01	9.557+00	9.200+00	9.514+00	1.052+01	1.219+01	1.443+01
29	79	1.347−01	1.282−01	1.205−01	1.105−01	9.794−02	8.358−02	6.852−02	5.392−02	4.077−02	2.972−02
29	80	1.887−01	1.797−01	1.691−01	1.551−01	1.375−01	1.173−01	9.612−02	7.562−02	5.716−02	4.165−02
29	81	2.427−01	2.310−01	2.173−01	1.992−01	1.766−01	1.507−01	1.235−01	9.717−02	7.346−02	5.353−02
29	82	2.536−02	2.382−02	2.233−02	2.053−02	1.831−02	1.573−02	1.295−02	1.019−02	7.666−03	5.535−03
29	83	7.562−02	7.083−02	6.637−02	6.107−02	5.453−02	4.691−02	3.867−02	3.045−02	2.291−02	1.655−02
29	84	1.261−01	1.181−01	1.107−01	1.019−01	9.103−02	7.831−02	6.455−02	5.082−02	3.824−02	2.761−02
29	85	4.204−01	4.273−01	4.232−01	4.134−01	4.054−01	4.060−01	4.183−01	4.413−01	4.717−01	5.050−01
29	86	6.215−01	6.321−01	6.336−01	6.313−01	6.368−01	6.598−01	7.023−01	7.588−01	8.206−01	8.788−01
29	87	1.372−01	1.224−01	1.037−01	8.361−02	6.461−02	4.817−02	3.484−02	2.455−02	1.691−02	1.143−02
29	88	2.310−01	2.066−01	1.753−01	1.414−01	1.092−01	8.137−02	5.881−02	4.141−02	2.851−02	1.926−02
29	89	3.237−01	2.886−01	2.445−01	1.971−01	1.523−01	1.135−01	8.203−02	5.778−02	3.979−02	2.688−02
29	90	8.978−01	8.495−01	7.937−01	7.411−01	6.996−01	6.708−01	6.518−01	6.377−01	6.242−01	6.080−01
29	91	7.551−02	7.366−02	7.139−02	6.993−02	7.029−02	7.243−02	7.514−02	7.666−02	7.550−02	7.106−02
29	92	4.528−01	4.348−01	4.079−01	3.795−01	3.559−01	3.390−01	3.273−01	3.177−01	3.080−01	2.968−01
29	93	8.218−02	7.705−02	6.913−02	5.949−02	4.932−02	3.943−02	3.042−02	2.265−02	1.632−02	1.142−02
29	94	1.376−01	1.291−01	1.160−01	9.983−02	8.275−02	6.615−02	5.101−02	3.798−02	2.737−02	1.917−02
29	95	1.939−01	1.820−01	1.637−01	1.411−01	1.170−01	9.347−02	7.201−02	5.355−02	3.855−02	2.697−02
29	96	1.207−01	1.127−01	9.954−02	8.392−02	6.835−02	5.422−02	4.196−02	3.164−02	2.322−02	1.659−02
29	97	1.730−01	1.609−01	1.418−01	1.194−01	9.706−02	7.685−02	5.937−02	4.468−02	3.272−02	2.332−02
29	98	2.386−01	2.177−01	1.895−01	1.582−01	1.279−01	1.009−01	7.769−02	5.834−02	4.265−02	3.036−02
29	99	1.248−01	1.158−01	1.020−01	8.637−02	7.078−02	5.631−02	4.345−02	3.248−02	2.354−02	1.657−02
29	100	7.310−02	6.790−02	6.001−02	5.095−02	4.187−02	3.340−02	2.582−02	1.933−02	1.402−02	9.880−03
29	101	2.438−02	2.263−02	2.000−02	1.698−02	1.396−02	1.113−02	8.607−03	6.444−03	4.674−03	3.294−03
29	102	8.038−01	7.878−01	7.520−01	7.090−01	6.696−01	6.400−01	6.242−01	6.263−01	6.516−01	7.041−01
29	103	2.349−01	2.201−01	2.018−01	1.863−01	1.777−01	1.775−01	1.854−01	2.005−01	2.218−01	2.479−01
29	104	7.395−01	7.290−01	7.388−01	7.730−01	8.341−01	9.232−01	1.039+00	1.177+00	1.328+00	1.479+00
29	105	5.677−02	5.145−02	4.664−02	4.216−02	3.770−02	3.305−02	2.817−02	2.322−02	1.844−02	1.411−02
29	106	9.492−02	8.600−02	7.792−02	7.039−02	6.292−02	5.513−02	4.698−02	3.870−02	3.074−02	2.352−02
29	107	1.330−01	1.206−01	1.093−01	9.870−02	8.818−02	7.723−02	6.577−02	5.417−02	4.301−02	3.289−02
29	108	3.217−01	3.254−01	3.363−01	3.559−01	3.850−01	4.240−01	4.724−01	5.282−01	5.879−01	6.460−01
29	109	1.335−01	1.230−01	1.129−01	1.029−01	9.223−02	8.068−02	6.844−02	5.610−02	4.434−02	3.381−02
29	110	1.729−01	1.592−01	1.459−01	1.327−01	1.188−01	1.038−01	8.796−02	7.206−02	5.694−02	4.341−02
29	111	2.139−01	1.970−01	1.803−01	1.635−01	1.459−01	1.272−01	1.076−01	8.807−02	6.954−02	5.299−02
29	112	4.839−02	4.527−02	4.228−02	3.920−02	3.579−02	3.187−02	2.748−02	2.283−02	1.824−02	1.402−02

Table 4 (*continued*)

Transition		Temperature (log K)									
i	j	4.10	4.30	4.50	4.70	4.90	5.10	5.30	5.50	5.70	5.90
29	113	2.103−01	2.056−01	2.007−01	1.942−01	1.845−01	1.705−01	1.517−01	1.294−01	1.054−01	8.222−02
29	114	1.628−01	1.594−01	1.558−01	1.511−01	1.437−01	1.329−01	1.183−01	1.009−01	8.221−02	6.410−02
29	115	1.161−01	1.138−01	1.113−01	1.080−01	1.028−01	9.506−02	8.465−02	7.219−02	5.884−02	4.587−02
29	116	2.321−01	2.227−01	2.133−01	2.037−01	1.941−01	1.845−01	1.745−01	1.640−01	1.527−01	1.404−01
29	117	5.592−02	5.098−02	4.576−02	4.026−02	3.455−02	2.876−02	2.310−02	1.785−02	1.326−02	9.493−03
29	118	7.026−02	6.382−02	5.703−02	4.998−02	4.276−02	3.550−02	2.846−02	2.196−02	1.629−02	1.166−02
29	119	8.764−02	7.905−02	7.005−02	6.092−02	5.179−02	4.279−02	3.418−02	2.629−02	1.947−02	1.391−02
29	120	2.615−02	2.393−02	2.163−02	1.916−02	1.652−02	1.378−02	1.106−02	8.527−03	6.319−03	4.516−03
29	121	3.671−02	3.358−02	3.033−02	2.686−02	2.316−02	1.931−02	1.550−02	1.195−02	8.852−03	6.325−03
29	122	5.072−02	4.624−02	4.139−02	3.627−02	3.097−02	2.562−02	2.045−02	1.570−02	1.159−02	8.267−03
29	123	1.169−01	1.150−01	1.123−01	1.094−01	1.063−01	1.028−01	9.854−02	9.302−02	8.595−02	7.749−02
29	124	1.644−02	1.655−02	1.656−02	1.635−02	1.579−02	1.476−02	1.326−02	1.137−02	9.308−03	7.277−03
29	125	4.927−02	4.964−02	4.967−02	4.906−02	4.738−02	4.430−02	3.978−02	3.412−02	2.792−02	2.183−02
29	126	8.302−02	8.348−02	8.340−02	8.227−02	7.939−02	7.418−02	6.659−02	5.714−02	4.679−02	3.664−02
29	127	6.076−01	6.406−01	6.844−01	7.429−01	8.195−01	9.156−01	1.030+00	1.159+00	1.296+00	1.429+00
29	128	7.694−01	8.069−01	8.569−01	9.247−01	1.016+00	1.136+00	1.288+00	1.470+00	1.676+00	1.888+00
29	129	2.356−02	2.227−02	2.054−02	1.838−02	1.584−02	1.308−02	1.033−02	7.801−03	5.662−03	3.971−03
29	130	3.163−02	2.961−02	2.709−02	2.409−02	2.066−02	1.701−02	1.340−02	1.011−02	7.327−03	5.136−03
29	131	4.019−02	3.722−02	3.379−02	2.988−02	2.554−02	2.097−02	1.649−02	1.242−02	8.997−03	6.303−03
29	132	1.055−02	9.958−03	9.209−03	8.279−03	7.183−03	5.979−03	4.762−03	3.631−03	2.660−03	1.882−03
29	133	1.767−02	1.668−02	1.540−02	1.383−02	1.198−02	9.962−03	7.931−03	6.047−03	4.429−03	3.134−03
29	134	2.706−02	2.487−02	2.253−02	1.995−02	1.713−02	1.416−02	1.123−02	8.540−03	6.246−03	4.414−03
29	135	2.385−02	2.256−02	2.089−02	1.878−02	1.630−02	1.357−02	1.081−02	8.244−03	6.034−03	4.262−03
29	136	1.395−02	1.329−02	1.237−02	1.117−02	9.723−03	8.112−03	6.471−03	4.938−03	3.616−03	2.555−03
29	137	4.636−03	4.418−03	4.117−03	3.721−03	3.241−03	2.704−03	2.158−03	1.647−03	1.206−03	8.521−04
29	138	8.539−02	8.224−02	7.867−02	7.484−02	7.096−02	6.741−02	6.482−02	6.395−02	6.558−02	7.018−02
29	139	7.847−02	7.678−02	7.450−02	7.153−02	6.775−02	6.307−02	5.755−02	5.142−02	4.504−02	3.882−02
29	140	5.242−02	5.140−02	5.037−02	4.913−02	4.741−02	4.501−02	4.185−02	3.808−02	3.394−02	2.980−02
29	141	8.927−02	9.617−02	1.058−01	1.186−01	1.352−01	1.555−01	1.792−01	2.052−01	2.319−01	2.572−01