Table 5.3.2a. The lowest 49 fine-structure levels from the 142 levels included in the calculation (95Z1) and their observed energies in rydbergs (85S1) for Fe II. The index i is used in Table 5.3.2b for transition keys; J is the total angular momentum for specifying the fine-structure level.

i	LS Term		J	Energy	i	LS Term		J	Energy
1	$3d^6(^5D)4s$	a^6D	9/2	0.00000	28	$3d^6(^3G)4s$	a^4G	11/2	0.23172
2			7/2	0.00351	29			9/2	0.23516
3			5/2	0.00608	30			7/2	0.23676
4			3/2	0.00786	31			5/2	0.23743
5			1/2	0.00890	32	$3d^6(^3D)4s$	b^4D	7/2	0.28690
6	$3d^7$	a^4F	9/2	0.01706	33			5/2	0.28603
7			7/2	0.02214	34			3/2	0.28581
8			5/2	0.02586	35			1/2	0.28585
9			3/2	0.02841	36	$3d^6(^5D)4p$	z^6D^o	9/2	0.35046
10	$3d^6(^5D)4s$	a^4D	7/2	0.07249	37			7/2	0.35230
11			5/2	0.07647	38			5/2	0.35411
12			3/2	0.07910	39			3/2	0.35551
13			1/2	0.08062	40			1/2	0.35639
14	$3d^7$	a^4P	5/2	0.12279	41	$3d^6(^5D)4p$	z^6F^o	11/2	0.38244
15			3/2	0.12460	42			9/2	0.38378
16			1/2	0.12671	43			7/2	0.38489
17	$3d^6(^3P_2)4s$	b^4P	5/2	0.18982	44			5/2	0.38578
18			3/2	0.19877	45			3/2	0.38639
19			1/2	0.20421	46			1/2	0.38674
20	$3d^6(^3H)4s$	a^4H	13/2	0.19366	47	$3d^6(^5D)4p$	z^6P^o	7/2	0.38873
21			11/2	0.19529	48			5/2	0.39402
22			9/2	0.19667	49			3/2	0.39750
23			7/2	0.19785					
24	$3d^6(^3F_2)4s$	b^4F	9/2	0.20629					
25			7/2	0.20786					
26			5/2	0.20904					
27			3/2	0.20988					

Table 5.3.2b. The effective collision strengths $\Upsilon(i,j)$ as a function of temperature T(K) for the transitions between the first 16 metastable levels and the transitions between the five levels of the ground term $3d^6 5s\ ^6D$ and the higher 33 levels, i = 17-49 as specified in Table 5.3.2a for Fe II (95Z1).

Levels		T(K)							
i	j	1000	3000	5000	10000	15000	20000	30000	40000
1	2	6.97	6.27	5.97	5.52	5.46	5.48	5.40	5.18
1	3	2.02	1.85	1.68	1.49	1.55	1.64	1.73	1.71
1	4	8.65[-1]	8.60[-1]	7.82[-1]	6.75[-1]	6.83[-1]	7.15[-1]	7.50[-1]	7.44[-1]
1	5	3.37[-1]	3.60[-1]	3.30[-1]	2.84[-1]	2.84[-1]	2.95[-1]	3.08[-1]	3.07[-1]
1	6	3.81	4.00	4.05	3.60	3.19	2.89	2.48	2.18
1	7	1.66	1.70	1.71	1.51	1.33	1.21	1.03	9.09[-1]
1	8	5.98[-1]	5.91[-1]	5.85[-1]	4.97[-1]	4.31[-1]	3.85[-1]	3.23[-1]	2.80[-1]
1	9	1.63[-1]	1.65[-1]	1.64[-1]	1.37[-1]	1.17[-1]	1.03[-1]	8.51[-2]	7.30[-2]
1	10	1.74[+1]	1.53[+1]	1.36[+1]	1.10[+1]	9.65	8.77	7.55	6.67
1	11	7.86[-1]	6.21[-1]	5.47[-1]	5.60[-1]	6.16[-1]	6.43[-1]	6.35[-1]	5.94[-1]
1	12	2.40[-1]	2.08[-1]	1.86[-1]	1.91[-1]	2.12[-1]	2.22[-1]	2.22[-1]	2.09[-1]
1	13	6.24[-2]	6.06[-2]	5.63[-2]	6.10[-2]	7.00[-2]	7.51[-2]	7.67[-2]	7.33[-2]
1	14	7.89[-1]	8.64[-1]	9.01[-1]	9.48[-1]	9.52[-1]	9.28[-1]	8.54[-1]	7.79[-1]
1	15	4.06[-1]	4.41[-1]	4.67[-1]	5.02[-1]	5.11[-1]	5.02[-1]	4.67[-1]	4.30[-1]
1	16	7.03[-3]	1.46[-2]	2.10[-2]	3.28[-2]	3.85[-2]	4.01[-2]	3.85[-2]	3.52[-2]
2	3	6.31	5.80	5.69	5.44	5.42	5.43	5.31	5.07
2	4	1.62	1.42	1.30	1.20	1.29	1.39	1.50	1.49
2	5	5.89[-1]	5.27[-1]	4.75[-1]	4.19[-1]	4.38[-1]	4.68[-1]	4.96[-1]	4.92[-1]
2	6	1.79	1.84	1.85	1.63	1.45	1.31	1.12	9.92[-1]
2	7	1.58	1.67	1.69	1.48	1.31	1.18	1.00	8.79[-1]
2	8	1.07	1.12	1.14	1.03	9.21[-1]	8.43[-1]	7.29[-1]	6.49[-1]
2	9	5.37[-1]	5.29[-1]	5.22[-1]	4.46[-1]	3.88[-1]	3.47[-1]	2.92[-1]	2.55[-1]
2	10	3.84	3.31	2.93	2.48	2.29	2.16	1.93	1.74
2	11	1.03[+1]	9.13	8.10	6.54	5.74	5.22	4.50	3.99
2	12	4.97[-1]	3.85[-1]	3.40[-1]	3.55[-1]	3.95[-1]	4.16[-1]	4.13[-1]	3.87[-1]
2	13	1.74[-1]	1.42[-1]	1.24[-1]	1.23[-1]	1.33[-1]	1.38[-1]	1.35[-1]	1.26[-1]
2	14	5.53[-1]	6.08[-1]	6.40[-1]	6.81[-1]	6.87[-1]	6.72[-1]	6.21[-1]	5.69[-1]
2	15	1.69[-1]	1.96[-1]	2.09[-1]	2.28[-1]	2.32[-1]	2.27[-1]	2.08[-1]	1.88[-1]
2	16	2.40[-1]	2.58[-1]	2.70[-1]	2.87[-1]	2.90[-1]	2.84[-1]	2.64[-1]	2.43[-1]
3	4	4.94	4.55	4.50	4.32	4.25	4.20	4.04	3.83
3	5	1.02	8.54[-1]	7.71[-1]	7.25[-1]	8.03[-1]	8.85[-1]	9.67[-1]	9.72[-1]
3	6	7.42[-1]	7.43[-1]	7.40[-1]	6.37[-1]	5.57[-1]	5.01[-1]	4.24[-1]	3.71[-1]
3	7	1.15	1.22	1.24	1.11	9.95[-1]	9.07[-1]	7.82[-1]	6.93[-1]
3	8	1.06	1.10	1.10	9.58[-1]	8.40[-1]	7.55[-1]	6.38[-1]	5.59[-1]
3	9	7.84[-1]	8.13[-1]	8.23[-1]	7.37[-1]	6.60[-1]	6.03[-1]	5.20[-1]	4.62[-1]
3	10	7.19[-1]	6.07[-1]	5.38[-1]	5.03[-1]	5.16[-1]	5.19[-1]	4.96[-1]	4.59[-1]
3	11	4.45	3.90	3.46	2.85	2.56	2.36	2.07	1.85
3	12	5.66	5.00	4.44	3.58	3.15	2.86	2.47	2.18
3	13	2.85[-1]	2.16[-1]	1.89[-1]	1.96[-1]	2.16[-1]	2.26[-1]	2.22[-1]	2.08[-1]
3	14	3.03[-1]	3.35[-1]	3.56[-1]	3.85[-1]	3.92[-1]	3.85[-1]	3.57[-1]	3.28[-1]
3	15	2.13[-1]	2.39[-1]	2.52[-1]	2.68[-1]	2.71[-1]	2.64[-1]	2.43[-1]	2.21[-1]
3	16	2.06[-1]	2.23[-1]	2.33[-1]	2.45[-1]	2.46[-1]	2.40[-1]	2.21[-1]	2.02[-1]
4	5	2.97	2.74	2.73	2.64	2.59	2.55	2.44	2.30
4	6	2.57[-1]	2.54[-1]	2.52[-1]	2.11[-1]	1.81[-1]	1.61[-1]	1.34[-1]	1.16[-1]
4	7	6.65[-1]	6.83[-1]	6.89[-1]	6.08[-1]	5.40[-1]	4.91[-1]	4.21[-1]	3.72[-1]
4	8	8.27[-1]	8.61[-1]	8.68[-1]	7.65[-1]	6.77[-1]	6.12[-1]	5.22[-1]	4.60[-1]
4	9	7.42[-1]	7.86[-1]	7.98[-1]	7.14[-1]	6.37[-1]	5.80[-1]	4.99[-1]	4.42[-1]
4	10	1.80[-1]	1.57[-1]	1.41[-1]	1.47[-1]	1.64[-1]	1.74[-1]	1.74[-1]	1.65[-1]
4	11	9.51[-1]	8.04[-1]	7.11[-1]	6.26[-1]	6.05[-1]	5.87[-1]	5.41[-1]	4.92[-1]
4	12	3.86	3.40	3.01	2.44	2.16	1.97	1.71	1.52

Table 5.3.2b. (continued)

Levels		T(K)							
i	j	1000	3000	5000	10000	15000	20000	30000	40000
4	13	2.42	2.13	1.89	1.53	1.36	1.24	1.08	9.56[-1]
4	14	1.25[-1]	1.41[-1]	1.53[-1]	1.71[-1]	1.76[-1]	1.74[-1]	1.62[-1]	1.49[-1]
4	15	2.47[-1]	2.69[-1]	2.82[-1]	2.97[-1]	2.98[-1]	2.91[-1]	2.69[-1]	2.46[-1]
4	16	1.09[-1]	1.21[-1]	1.26[-1]	1.32[-1]	1.32[-1]	1.28[-1]	1.17[-1]	1.06[-1]
5	6	6.83[-2]	6.97[-2]	6.98[-2]	5.80[-2]	4.92[-2]	4.33[-2]	3.56[-2]	3.04[-2]
5	7	2.79[-1]	2.70[-1]	2.65[-1]	2.23[-1]	1.93[-1]	1.72[-1]	1.43[-1]	1.24[-1]
5	8	4.57[-1]	4.83[-1]	4.93[-1]	4.47[-1]	4.02[-1]	3.69[-1]	3.20[-1]	2.85[-1]
5	9	4.42[-1]	4.72[-1]	4.79[-1]	4.24[-1]	3.75[-1]	3.40[-1]	2.89[-1]	2.55[-1]
5	10	5.91[-2]	5.54[-2]	5.09[-2]	5.43[-2]	6.17[-2]	6.59[-2]	6.68[-2]	6.37[-2]
5	11	1.71[-1]	1.35[-1]	1.18[-1]	1.18[-1]	1.28[-1]	1.32[-1]	1.30[-1]	1.21[-1]
5	12	8.60[-1]	7.34[-1]	6.50[-1]	5.54[-1]	5.16[-1]	4.89[-1]	4.40[-1]	3.97[-1]
5	13	2.62	2.32	2.06	1.65	1.44	1.30	1.11	9.80[-1]
5	14	3.43[-2]	4.07[-2]	4.54[-2]	5.33[-2]	5.63[-2]	5.64[-2]	5.29[-2]	4.86[-2]
5	15	1.68[-1]	1.80[-1]	1.87[-1]	1.97[-1]	1.97[-1]	1.93[-1]	1.78[-1]	1.64[-1]
5	16	3.84[-2]	4.43[-2]	4.59[-2]	4.77[-2]	4.74[-2]	4.57[-2]	4.11[-2]	3.66[-2]
6	7	6.17	8.80	9.51	8.36	7.53	7.54	9.07	1.13[+1]
6	8	1.81	2.36	2.53	2.23	2.04	2.11	2.68	3.46
6	9	4.04[-1]	6.55[-1]	7.62[-1]	7.01[-1]	6.55[-1]	6.96[-1]	9.66[-1]	1.36
6	10	2.92	2.53	2.28	2.11	2.14	2.18	2.19	2.15
6	11	1.04	8.72[-1]	7.77[-1]	7.25[-1]	7.54[-1]	7.83[-1]	7.98[-1]	7.82[-1]
6	12	2.00[-1]	1.67[-1]	1.48[-1]	1.48[-1]	1.67[-1]	1.82[-1]	1.92[-1]	1.88[-1]
6	13	1.87[-2]	1.85[-2]	1.72[-2]	2.12[-2]	2.91[-2]	3.52[-2]	4.08[-2]	4.14[-2]
6	14	9.40[-1]	1.19	1.22	1.23	1.27	1.29	1.31	1.30
6	15	2.36[-1]	3.21[-1]	3.60[-1]	4.11[-1]	4.50[-1]	4.77[-1]	5.03[-1]	5.10[-1]
6	16	8.63[-2]	1.10[-1]	1.23[-1]	1.40[-1]	1.53[-1]	1.62[-1]	1.71[-1]	1.75[-1]
7	8	5.04	7.60	8.31	7.39	6.84	7.20	9.52	1.25[+1]
7	9	1.86	2.28	2.38	2.07	1.91	2.00	2.60	3.38
7	10	1.27	1.07	9.58[-1]	8.91[-1]	9.22[-1]	9.53[-1]	9.70[-1]	9.51[-1]
7	11	1.19	1.03	9.25[-1]	8.51[-1]	8.67[-1]	8.87[-1]	8.93[-1]	8.72[-1]
7	12	7.54[-1]	6.63[-1]	5.99[-1]	5.56[-1]	5.69[-1]	5.84[-1]	5.93[-1]	5.85[-1]
7	13	2.31[-1]	1.81[-1]	1.58[-1]	1.47[-1]	1.56[-1]	1.64[-1]	1.67[-1]	1.60[-1]
7	14	4.70[-1]	6.11[-1]	6.48[-1]	6.88[-1]	7.27[-1]	7.54[-1]	7.79[-1]	7.82[-1]
7	15	4.30[-1]	5.40[-1]	5.53[-1]	5.54[-1]	5.64[-1]	5.71[-1]	5.73[-1]	5.68[-1]
7	16	1.11[-1]	1.55[-1]	1.75[-1]	1.99[-1]	2.17[-1]	2.30[-1]	2.41[-1]	2.41[-1]
8	9	3.97	5.85	6.35	5.63	5.23	5.54	7.43	9.91
8	10	4.49[-1]	3.59[-1]	3.14[-1]	2.94[-1]	3.14[-1]	3.32[-1]	3.43[-1]	3.35[-1]
8	11	9.34[-1]	8.21[-1]	7.41[-1]	6.86[-1]	7.01[-1]	7.19[-1]	7.29[-1]	7.18[-1]
8	12	7.22[-1]	6.09[-1]	5.43[-1]	5.00[-1]	5.11[-1]	5.23[-1]	5.23[-1]	5.06[-1]
8	13	4.89[-1]	4.36[-1]	3.96[-1]	3.67[-1]	3.73[-1]	3.81[-1]	3.84[-1]	3.77[-1]
8	14	2.36[-1]	3.11[-1]	3.40[-1]	3.78[-1]	4.08[-1]	4.28[-1]	4.48[-1]	4.54[-1]
8	15	3.33[-1]	4.27[-1]	4.42[-1]	4.49[-1]	4.61[-1]	4.69[-1]	4.73[-1]	4.67[-1]
8	16	1.89[-1]	2.45[-1]	2.55[-1]	2.60[-1]	2.68[-1]	2.73[-1]	2.75[-1]	2.72[-1]
9	10	7.85[-2]	6.82[-2]	6.13[-2]	6.48[-2]	7.82[-2]	8.87[-2]	9.74[-2]	9.69[-2]
9	11	4.63[-1]	3.82[-1]	3.38[-1]	3.15[-1]	3.28[-1]	3.41[-1]	3.46[-1]	3.36[-1]
9	12	6.97[-1]	6.18[-1]	5.60[-1]	5.18[-1]	5.26[-1]	5.36[-1]	5.41[-1]	5.33[-1]
9	13	4.48[-1]	3.94[-1]	3.56[-1]	3.27[-1]	3.30[-1]	3.35[-1]	3.35[-1]	3.26[-1]
9	14	1.20[-1]	1.56[-1]	1.73[-1]	1.97[-1]	2.15[-1]	2.27[-1]	2.39[-1]	2.43[-1]
9	15	1.82[-1]	2.45[-1]	2.62[-1]	2.81[-1]	2.97[-1]	3.08[-1]	3.17[-1]	3.19[-1]
9	16	2.04[-1]	2.57[-1]	2.57[-1]	2.48[-1]	2.46[-1]	2.46[-1]	2.42[-1]	2.36[-1]
10	11	3.07	2.62	2.33	2.23	2.52	3.00	4.51	6.58

Table 5.3.2b. (continued)

Levels		T(K)							
i	j	1000	3000	5000	10000	15000	20000	30000	40000
10	12	1.02	8.98[-1]	8.26[-1]	8.18[-1]	9.24[-1]	1.08	1.52	2.11
10	13	4.52[-1]	4.12[-1]	3.82[-1]	3.69[-1]	4.00[-1]	4.51[-1]	6.19[-1]	8.57[-1]
10	14	8.10[-1]	8.92[-1]	8.97[-1]	1.01	1.14	1.22	1.25	1.22
10	15	4.04[-1]	4.20[-1]	4.26[-1]	4.69[-1]	5.18[-1]	5.48[-1]	5.64[-1]	5.56[-1]
10	16	5.90[-2]	6.22[-2]	6.55[-2]	7.63[-2]	8.56[-2]	9.00[-2]	8.93[-2]	8.41[-2]
11	12	2.51	2.13	1.88	1.75	2.01	2.53	4.22	6.44
11	13	4.88[-1]	4.07[-1]	3.67[-1]	3.78[-1]	4.61[-1]	5.84[-1]	9.28[-1]	1.33
11	14	4.89[-1]	5.20[-1]	5.26[-1]	5.87[-1]	6.56[-1]	6.97[-1]	7.19[-1]	7.06[-1]
11	15	2.24[-1]	2.51[-1]	2.52[-1]	2.90[-1]	3.35[-1]	3.58[-1]	3.62[-1]	3.43[-1]
11	16	2.47[-1]	2.61[-1]	2.63[-1]	2.88[-1]	3.17[-1]	3.35[-1]	3.47[-1]	3.45[-1]
12	13	1.50	1.27	1.10	1.01	1.17	1.50	2.62	4.11
12	14	2.18[-1]	2.25[-1]	2.29[-1]	2.56[-1]	2.86[-1]	3.03[-1]	3.10[-1]	3.03[-1]
12	15	2.59[-1]	2.83[-1]	2.84[-1]	3.18[-1]	3.58[-1]	3.81[-1]	3.91[-1]	3.82[-1]
12	16	1.63[-1]	1.81[-1]	1.82[-1]	2.03[-1]	2.29[-1]	2.44[-1]	2.51[-1]	2.45[-1]
13	14	6.70[-2]	6.63[-2]	6.80[-2]	7.69[-2]	8.57[-2]	9.03[-2]	9.09[-2]	8.71[-2]
13	15	1.91[-1]	2.04[-1]	2.06[-1]	2.26[-1]	2.50[-1]	2.66[-1]	2.76[-1]	2.74[-1]
13	16	6.30[-2]	7.45[-2]	7.42[-2]	8.60[-2]	1.00[-1]	1.08[-1]	1.09[-1]	1.04[-1]
14	15	1.42	1.47	1.41	1.28	1.21	1.16	1.08	1.01
14	16	5.23[-1]	5.35[-1]	5.16[-1]	4.84[-1]	4.69[-1]	4.56[-1]	4.32[-1]	4.11[-1]
15	16	7.01[-1]	7.40[-1]	7.07[-1]	6.29[-1]	5.83[-1]	5.49[-1]	4.97[-1]	4.56[-1]
1	17	3.66[-1]	3.49[-1]	3.30[-1]	3.08[-1]	2.98[-1]	2.92[-1]	2.83[-1]	2.77[-1]
1	18	1.14[-1]	1.14[-1]	1.08[-1]	9.92[-2]	9.43[-2]	9.08[-2]	8.57[-2]	8.19[-2]
1	19	5.02[-3]	6.72[-3]	7.43[-3]	7.99[-3]	8.14[-3]	8.07[-3]	7.59[-3]	6.98[-3]
1	20	6.64[-1]	6.68[-1]	6.49[-1]	6.31[-1]	6.32[-1]	6.37[-1]	6.47[-1]	6.54[-1]
1	21	3.22[-1]	3.26[-1]	3.19[-1]	3.11[-1]	3.12[-1]	3.14[-1]	3.19[-1]	3.22[-1]
1	22	9.59[-2]	9.81[-2]	9.62[-2]	9.51[-2]	9.59[-2]	9.69[-2]	9.81[-2]	9.87[-2]
1	23	1.52[-2]	1.61[-2]	1.61[-2]	1.65[-2]	1.69[-2]	1.71[-2]	1.73[-2]	1.72[-2]
1	24	2.55[-1]	3.32[-1]	3.65[-1]	4.02[-1]	4.18[-1]	4.27[-1]	4.35[-1]	4.36[-1]
1	25	1.96[-1]	2.13[-1]	2.15[-1]	2.15[-1]	2.16[-1]	2.17[-1]	2.16[-1]	2.16[-1]
1	26	9.89[-2]	1.09[-1]	1.11[-1]	1.12[-1]	1.13[-1]	1.14[-1]	1.14[-1]	1.14[-1]
1	27	3.21[-2]	3.57[-2]	3.70[-2]	3.82[-2]	3.87[-2]	3.88[-2]	3.89[-2]	3.89[-2]
1	28	9.81[-2]	1.77[-1]	2.44[-1]	3.44[-1]	3.99[-1]	4.32[-1]	4.70[-1]	4.90[-1]
1	29	1.70[-1]	2.00[-1]	2.07[-1]	2.15[-1]	2.22[-1]	2.26[-1]	2.32[-1]	2.34[-1]
1	30	6.56[-2]	7.64[-2]	7.78[-2]	7.98[-2]	8.16[-2]	8.31[-2]	8.47[-2]	8.56[-2]
1	31	1.69[-2]	1.99[-2]	1.99[-2]	1.98[-2]	1.98[-2]	1.97[-2]	1.96[-2]	1.94[-2]
1	32	2.71[-1]	2.56[-1]	2.62[-1]	2.76[-1]	2.84[-1]	2.88[-1]	2.92[-1]	2.92[-1]
1	33	1.46[-1]	1.46[-1]	1.50[-1]	1.54[-1]	1.57[-1]	1.59[-1]	1.61[-1]	1.62[-1]
1	34	6.66[-2]	6.79[-2]	7.01[-2]	7.31[-2]	7.48[-2]	7.60[-2]	7.75[-2]	7.85[-2]
1	35	3.42[-2]	3.46[-2]	3.55[-2]	3.69[-2]	3.78[-2]	3.86[-2]	3.96[-2]	4.03[-2]
1	36	1.67[+1]	1.98[+1]	2.13[+1]	2.30[+1]	2.44[+1]	2.57[+1]	2.84[+1]	3.10[+1]
1	37	1.08[+1]	8.53	7.81	7.06	6.90	6.95	7.33	7.83
1	38	4.11	2.11	1.54	9.60[-1]	7.18[-1]	5.84[-1]	4.38[-1]	3.59[-1]
1	39	2.31	1.03	7.08[-1]	4.08[-1]	2.89[-1]	2.26[-1]	1.58[-1]	1.23[-1]
1	40	9.91[-1]	4.14[-1]	2.76[-1]	1.55[-1]	1.08[-1]	8.39[-2]	5.81[-2]	4.48[-2]
1	41	3.21[+1]	3.00[+1]	2.94[+1]	2.96[+1]	3.05[+1]	3.17[+1]	3.42[+1]	3.66[+1]
1	42	5.93	5.38	5.19	5.13	5.27	5.47	5.93	6.40
1	43	8.81[-1]	7.17[-1]	6.53[-1]	6.00[-1]	5.91[-1]	5.97[-1]	6.23[-1]	6.58[-1]
1	44	1.74[-1]	1.16[-1]	9.37[-2]	7.27[-2]	6.43[-2]	5.97[-2]	5.47[-2]	5.20[-2]
1	45	6.95[-2]	4.58[-2]	3.73[-2]	2.94[-2]	2.63[-2]	2.46[-2]	2.31[-2]	2.24[-2]
1	46	2.98[-2]	1.97[-2]	1.63[-2]	1.32[-2]	1.20[-2]	1.13[-2]	1.08[-2]	1.06[-2]

Table 5.3.2b. (continued)

Levels		T(K)							
i	j	1000	3000	5000	10000	15000	20000	30000	40000
1	47	1.13[+1]	1.16[+1]	1.18[+1]	1.24[+1]	1.32[+1]	1.41[+1]	1.58[+1]	1.75[+1]
1	48	2.53[-1]	2.26[-1]	2.11[-1]	1.93[-1]	1.84[-1]	1.78[-1]	1.68[-1]	1.61[-1]
1	49	6.21[-2]	5.35[-2]	4.95[-2]	4.55[-2]	4.37[-2]	4.25[-2]	4.06[-2]	3.93[-2]
2	17	2.09[-1]	2.03[-1]	1.92[-1]	1.78[-1]	1.71[-1]	1.66[-1]	1.60[-1]	1.55[-1]
2	18	1.14[-1]	1.09[-1]	1.04[-1]	9.91[-2]	9.71[-2]	9.57[-2]	9.36[-2]	9.19[-2]
2	19	6.65[-2]	6.60[-2]	6.20[-2]	5.64[-2]	5.34[-2]	5.14[-2]	4.85[-2]	4.65[-2]
2	20	2.88[-1]	2.92[-1]	2.85[-1]	2.79[-1]	2.80[-1]	2.83[-1]	2.87[-1]	2.90[-1]
2	21	2.45[-1]	2.46[-1]	2.37[-1]	2.28[-1]	2.28[-1]	2.29[-1]	2.31[-1]	2.32[-1]
2	22	2.54[-1]	2.56[-1]	2.49[-1]	2.42[-1]	2.42[-1]	2.44[-1]	2.47[-1]	2.49[-1]
2	23	1.01[-1]	1.03[-1]	1.01[-1]	9.90[-2]	9.97[-2]	1.01[-1]	1.02[-1]	1.03[-1]
2	24	1.49[-1]	1.87[-1]	2.00[-1]	2.13[-1]	2.19[-1]	2.22[-1]	2.25[-1]	2.26[-1]
2	25	2.10[-1]	2.21[-1]	2.23[-1]	2.26[-1]	2.28[-1]	2.30[-1]	2.30[-1]	2.29[-1]
2	26	9.48[-2]	1.03[-1]	1.03[-1]	1.03[-1]	1.03[-1]	1.03[-1]	1.02[-1]	1.00[-1]
2	27	8.40[-2]	9.18[-2]	9.30[-2]	9.39[-2]	9.45[-2]	9.49[-2]	9.53[-2]	9.54[-2]
2	28	6.70[-2]	9.66[-2]	1.19[-1]	1.55[-1]	1.76[-1]	1.89[-1]	2.03[-1]	2.11[-1]
2	29	1.56[-1]	1.94[-1]	2.06[-1]	2.18[-1]	2.24[-1]	2.27[-1]	2.30[-1]	2.32[-1]
2	30	1.11[-1]	1.33[-1]	1.39[-1]	1.46[-1]	1.50[-1]	1.53[-1]	1.56[-1]	1.57[-1]
2	31	6.33[-2]	7.36[-2]	7.52[-2]	7.75[-2]	7.97[-2]	8.13[-2]	8.33[-2]	8.44[-2]
2	32	1.60[-1]	1.59[-1]	1.64[-1]	1.72[-1]	1.77[-1]	1.80[-1]	1.84[-1]	1.85[-1]
2	33	1.45[-1]	1.34[-1]	1.35[-1]	1.37[-1]	1.38[-1]	1.38[-1]	1.38[-1]	1.38[-1]
2	34	1.02[-1]	1.00[-1]	1.02[-1]	1.05[-1]	1.07[-1]	1.08[-1]	1.10[-1]	1.10[-1]
2	35	2.55[-2]	2.62[-2]	2.72[-2]	2.82[-2]	2.87[-2]	2.90[-2]	2.93[-2]	2.94[-2]
2	36	6.26	6.13	6.14	6.10	6.18	6.35	6.76	7.20
2	37	1.15[+1]	1.11[+1]	1.10[+1]	1.11[+1]	1.14[+1]	1.18[+1]	1.29[+1]	1.40[+1]
2	38	9.51	8.81	8.55	8.30	8.41	8.68	9.41	1.02[+1]
2	39	2.84	1.70	1.31	8.72[-1]	6.77[-1]	5.67[-1]	4.44[-1]	3.77[-1]
2	40	1.34	6.75[-1]	4.85[-1]	2.91[-1]	2.10[-1]	1.65[-1]	1.17[-1]	9.18[-2]
2	41	1.14	8.62[-1]	7.41[-1]	6.14[-1]	5.57[-1]	5.23[-1]	4.79[-1]	4.51[-1]
2	42	2.08[+1]	1.95[+1]	1.92[+1]	1.95[+1]	2.03[+1]	2.13[+1]	2.33[+1]	2.53[+1]
2	43	7.70	7.12	6.94	6.98	7.25	7.59	8.34	9.09
2	44	1.46	1.26	1.18	1.14	1.15	1.18	1.26	1.35
2	45	2.13[-1]	1.45[-1]	1.18[-1]	9.13[-2]	8.04[-2]	7.42[-2]	6.71[-2]	6.29[-2]
2	46	4.65[-2]	2.95[-2]	2.29[-2]	1.69[-2]	1.46[-2]	1.33[-2]	1.19[-2]	1.12[-2]
2	47	3.39	3.45	3.50	3.68	3.89	4.12	4.59	5.03
2	48	5.71	5.86	5.97	6.32	6.74	7.18	8.06	8.93
2	49	1.56[-1]	1.39[-1]	1.30[-1]	1.20[-1]	1.14[-1]	1.10[-1]	1.04[-1]	1.00[-1]
3	17	1.02[-1]	1.01[-1]	9.62[-2]	8.92[-2]	8.56[-2]	8.31[-2]	7.92[-2]	7.63[-2]
3	18	1.13[-1]	1.08[-1]	1.02[-1]	9.63[-2]	9.36[-2]	9.18[-2]	8.93[-2]	8.75[-2]
3	19	7.77[-2]	7.50[-2]	7.06[-2]	6.50[-2]	6.23[-2]	6.06[-2]	5.82[-2]	5.65[-2]
3	20	7.95[-2]	8.14[-2]	8.00[-2]	7.94[-2]	8.02[-2]	8.11[-2]	8.22[-2]	8.27[-2]
3	21	2.21[-1]	2.22[-1]	2.16[-1]	2.10[-1]	2.10[-1]	2.11[-1]	2.14[-1]	2.16[-1]
3	22	1.66[-1]	1.66[-1]	1.60[-1]	1.55[-1]	1.54[-1]	1.55[-1]	1.56[-1]	1.57[-1]
3	23	2.03[-1]	2.05[-1]	1.99[-1]	1.94[-1]	1.94[-1]	1.96[-1]	1.98[-1]	2.00[-1]
3	24	1.01[-1]	1.14[-1]	1.18[-1]	1.21[-1]	1.22[-1]	1.23[-1]	1.23[-1]	1.24[-1]
3	25	1.14[-1]	1.21[-1]	1.22[-1]	1.22[-1]	1.23[-1]	1.23[-1]	1.22[-1]	1.21[-1]
3	26	1.51[-1]	1.60[-1]	1.61[-1]	1.63[-1]	1.65[-1]	1.66[-1]	1.67[-1]	1.67[-1]
3	27	7.51[-2]	8.12[-2]	8.13[-2]	8.09[-2]	8.09[-2]	8.08[-2]	8.02[-2]	7.95[-2]
3	28	5.11[-2]	6.16[-2]	6.52[-2]	7.08[-2]	7.46[-2]	7.71[-2]	8.01[-2]	8.16[-2]
3	29	1.07[-1]	1.30[-1]	1.36[-1]	1.42[-1]	1.46[-1]	1.49[-1]	1.52[-1]	1.54[-1]
3	30	1.10[-1]	1.35[-1]	1.43[-1]	1.51[-1]	1.55[-1]	1.58[-1]	1.60[-1]	1.61[-1]

Table 5.3.2b. (continued)

Levels		T(K)							
i	j	1000	3000	5000	10000	15000	20000	30000	40000
3	31	9.11[-2]	1.08[-1]	1.12[-1]	1.18[-1]	1.21[-1]	1.24[-1]	1.27[-1]	1.28[-1]
3	32	9.36[-2]	9.48[-2]	9.80[-2]	1.03[-1]	1.05[-1]	1.07[-1]	1.09[-1]	1.10[-1]
3	33	1.23[-1]	1.17[-1]	1.19[-1]	1.21[-1]	1.23[-1]	1.23[-1]	1.24[-1]	1.24[-1]
3	34	6.84[-2]	6.32[-2]	6.37[-2]	6.44[-2]	6.45[-2]	6.44[-2]	6.38[-2]	6.31[-2]
3	35	4.78[-2]	4.68[-2]	4.74[-2]	4.83[-2]	4.90[-2]	4.95[-2]	5.01[-2]	5.04[-2]
3	36	1.88	1.14	8.98[-1]	6.09[-1]	4.75[-1]	3.98[-1]	3.12[-1]	2.64[-1]
3	37	8.71	8.23	8.11	8.02	8.19	8.46	9.14	9.84
3	38	5.08	4.37	4.14	3.88	3.85	3.91	4.14	4.41
3	39	7.60	7.40	7.32	7.27	7.46	7.76	8.50	9.30
3	40	1.45	1.01	8.20[-1]	5.74[-1]	4.60[-1]	3.93[-1]	3.18[-1]	2.75[-1]
3	41	2.27[-1]	1.42[-1]	1.11[-1]	8.07[-2]	6.91[-2]	6.28[-2]	5.62[-2]	5.30[-2]
3	42	1.01	8.16[-1]	7.23[-1]	6.20[-1]	5.71[-1]	5.40[-1]	5.00[-1]	4.72[-1]
3	43	1.30[+1]	1.21[+1]	1.19[+1]	1.22[+1]	1.27[+1]	1.34[+1]	1.48[+1]	1.62[+1]
3	44	7.40	6.89	6.75	6.85	7.16	7.53	8.33	9.14
3	45	1.69	1.52	1.45	1.43	1.46	1.52	1.64	1.78
3	46	2.02[-1]	1.41[-1]	1.16[-1]	9.05[-2]	8.00[-2]	7.39[-2]	6.66[-2]	6.22[-2]
3	47	6.82[-1]	6.78[-1]	6.80[-1]	7.01[-1]	7.32[-1]	7.66[-1]	8.35[-1]	9.00[-1]
3	48	4.10	4.20	4.28	4.52	4.81	5.12	5.73	6.31
3	49	2.16	2.21	2.24	2.37	2.51	2.67	2.99	3.30
4	17	4.00[-2]	4.08[-2]	3.93[-2]	3.69[-2]	3.55[-2]	3.45[-2]	3.27[-2]	3.12[-2]
4	18	9.35[-2]	9.05[-2]	8.53[-2]	7.86[-2]	7.54[-2]	7.33[-2]	7.04[-2]	6.84[-2]
4	19	6.18[-2]	5.81[-2]	5.49[-2]	5.14[-2]	4.99[-2]	4.91[-2]	4.79[-2]	4.71[-2]
4	20	1.07[-2]	1.15[-2]	1.15[-2]	1.19[-2]	1.23[-2]	1.25[-2]	1.25[-2]	1.24[-2]
4	21	1.05[-1]	1.07[-1]	1.05[-1]	1.03[-1]	1.03[-1]	1.04[-1]	1.05[-1]	1.06[-1]
4	22	1.42[-1]	1.43[-1]	1.39[-1]	1.35[-1]	1.35[-1]	1.36[-1]	1.37[-1]	1.38[-1]
4	23	1.87[-1]	1.88[-1]	1.82[-1]	1.76[-1]	1.76[-1]	1.76[-1]	1.79[-1]	1.80[-1]
4	24	4.73[-2]	5.21[-2]	5.35[-2]	5.48[-2]	5.53[-2]	5.55[-2]	5.57[-2]	5.58[-2]
4	25	7.46[-2]	8.14[-2]	8.21[-2]	8.22[-2]	8.23[-2]	8.24[-2]	8.21[-2]	8.18[-2]
4	26	1.02[-1]	1.08[-1]	1.08[-1]	1.09[-1]	1.10[-1]	1.10[-1]	1.11[-1]	1.10[-1]
4	27	7.59[-2]	7.97[-2]	7.99[-2]	8.00[-2]	8.04[-2]	8.06[-2]	8.05[-2]	8.00[-2]
4	28	1.93[-2]	2.25[-2]	2.26[-2]	2.26[-2]	2.29[-2]	2.30[-2]	2.32[-2]	2.32[-2]
4	29	5.91[-2]	6.91[-2]	7.10[-2]	7.36[-2]	7.57[-2]	7.72[-2]	7.92[-2]	8.02[-2]
4	30	8.30[-2]	1.01[-1]	1.06[-1]	1.11[-1]	1.14[-1]	1.16[-1]	1.19[-1]	1.20[-1]
4	31	8.66[-2]	1.06[-1]	1.12[-1]	1.18[-1]	1.22[-1]	1.24[-1]	1.26[-1]	1.28[-1]
4	32	5.54[-2]	5.63[-2]	5.81[-2]	6.07[-2]	6.22[-2]	6.32[-2]	6.46[-2]	6.55[-2]
4	33	6.88[-2]	6.77[-2]	6.90[-2]	7.10[-2]	7.21[-2]	7.27[-2]	7.34[-2]	7.37[-2]
4	34	5.91[-2]	5.49[-2]	5.52[-2]	5.58[-2]	5.60[-2]	5.60[-2]	5.57[-2]	5.53[-2]
4	35	4.10[-2]	3.79[-2]	3.78[-2]	3.80[-2]	3.82[-2]	3.82[-2]	3.81[-2]	3.79[-2]
4	36	8.25[-1]	4.49[-1]	3.34[-1]	2.07[-1]	1.52[-1]	1.21[-1]	8.74[-2]	6.93[-2]
4	37	2.58	1.52	1.17	7.87[-1]	6.16[-1]	5.19[-1]	4.11[-1]	3.51[-1]
4	38	7.09	6.99	7.01	7.08	7.31	7.62	8.34	9.07
4	39	1.82	1.41	1.21	9.52[-1]	8.29[-1]	7.58[-1]	6.82[-1]	6.41[-1]
4	40	4.34	4.53	4.56	4.61	4.76	4.98	5.47	5.99
4	41	7.71[-2]	5.13[-2]	4.21[-2]	3.35[-2]	3.02[-2]	2.84[-2]	2.67[-2]	2.60[-2]
4	42	2.20[-1]	1.33[-1]	1.01[-1]	6.98[-2]	5.78[-2]	5.13[-2]	4.44[-2]	4.09[-2]
4	43	6.84[-1]	5.70[-1]	5.13[-1]	4.49[-1]	4.17[-1]	3.97[-1]	3.70[-1]	3.50[-1]
4	44	7.36	6.86	6.73	6.86	7.18	7.57	8.39	9.19
4	45	5.89	5.49	5.38	5.48	5.74	6.05	6.72	7.39
4	46	1.44	1.32	1.28	1.27	1.31	1.36	1.49	1.61
4	47	7.50[-2]	6.58[-2]	6.12[-2]	5.62[-2]	5.38[-2]	5.21[-2]	4.96[-2]	4.78[-2]

Table 5.3.2b. (continued)

Levels		T(K)							
i	j	1000	3000	5000	10000	15000	20000	30000	40000
4	48	1.43	1.45	1.48	1.55	1.64	1.74	1.93	2.11
4	49	3.13	3.20	3.27	3.45	3.68	3.91	4.39	4.84
5	17	1.13[-2]	1.20[-2]	1.18[-2]	1.14[-2]	1.11[-2]	1.08[-2]	1.02[-2]	9.65[-3]
5	18	5.30[-2]	5.17[-2]	4.85[-2]	4.42[-2]	4.20[-2]	4.06[-2]	3.86[-2]	3.74[-2]
5	19	3.34[-2]	3.08[-2]	2.92[-2]	2.76[-2]	2.71[-2]	2.69[-2]	2.65[-2]	2.63[-2]
5	20	3.19[-4]	4.90[-4]	5.95[-4]	8.08[-4]	9.19[-4]	9.57[-4]	9.35[-4]	8.70[-4]
5	21	1.78[-2]	1.85[-2]	1.84[-2]	1.85[-2]	1.88[-2]	1.91[-2]	1.93[-2]	1.93[-2]
5	22	1.03[-1]	1.04[-1]	1.01[-1]	9.86[-2]	9.88[-2]	9.96[-2]	1.01[-1]	1.02[-1]
5	23	1.02[-1]	1.02[-1]	9.85[-2]	9.47[-2]	9.43[-2]	9.47[-2]	9.57[-2]	9.64[-2]
5	24	1.39[-2]	1.55[-2]	1.61[-2]	1.68[-2]	1.69[-2]	1.70[-2]	1.70[-2]	1.70[-2]
5	25	4.75[-2]	5.19[-2]	5.26[-2]	5.31[-2]	5.35[-2]	5.38[-2]	5.40[-2]	5.42[-2]
5	26	3.46[-2]	3.76[-2]	3.74[-2]	3.68[-2]	3.65[-2]	3.63[-2]	3.58[-2]	3.52[-2]
5	27	5.37[-2]	5.56[-2]	5.58[-2]	5.65[-2]	5.70[-2]	5.74[-2]	5.76[-2]	5.75[-2]
5	28	3.68[-3]	4.42[-3]	4.33[-3]	4.13[-3]	3.99[-3]	3.88[-3]	3.69[-3]	3.55[-3]
5	29	2.43[-2]	2.80[-2]	2.83[-2]	2.90[-2]	2.98[-2]	3.04[-2]	3.12[-2]	3.17[-2]
5	30	4.39[-2]	5.16[-2]	5.34[-2]	5.58[-2]	5.75[-2]	5.88[-2]	6.04[-2]	6.13[-2]
5	31	5.21[-2]	6.51[-2]	6.96[-2]	7.39[-2]	7.59[-2]	7.71[-2]	7.83[-2]	7.88[-2]
5	32	2.72[-2]	2.76[-2]	2.84[-2]	2.96[-2]	3.04[-2]	3.09[-2]	3.16[-2]	3.21[-2]
5	33	2.36[-2]	2.40[-2]	2.48[-2]	2.57[-2]	2.61[-2]	2.63[-2]	2.65[-2]	2.66[-2]
5	34	4.14[-2]	3.96[-2]	4.00[-2]	4.07[-2]	4.11[-2]	4.14[-2]	4.17[-2]	4.18[-2]
5	35	2.02[-2]	1.74[-2]	1.71[-2]	1.69[-2]	1.67[-2]	1.65[-2]	1.61[-2]	1.57[-2]
5	36	2.11[-1]	1.21[-1]	9.15[-2]	5.73[-2]	4.21[-2]	3.35[-2]	2.42[-2]	1.91[-2]
5	37	1.34	6.75[-1]	4.84[-1]	2.90[-1]	2.10[-1]	1.65[-1]	1.17[-1]	9.17[-2]
5	38	1.45	1.01	8.19[-1]	5.73[-1]	4.59[-1]	3.93[-1]	3.17[-1]	2.75[-1]
5	39	4.33	4.52	4.55	4.60	4.76	4.96	5.44	5.93
5	40	1.34	1.41	1.42	1.43	1.47	1.53	1.66	1.80
5	41	3.52[-2]	2.33[-2]	1.93[-2]	1.56[-2]	1.42[-2]	1.35[-2]	1.28[-2]	1.26[-2]
5	42	3.67[-2]	2.44[-2]	1.97[-2]	1.54[-2]	1.37[-2]	1.28[-2]	1.19[-2]	1.14[-2]
5	43	1.46[-1]	8.66[-2]	6.42[-2]	4.32[-2]	3.51[-2]	3.06[-2]	2.58[-2]	2.33[-2]
5	44	4.06[-1]	3.29[-1]	2.92[-1]	2.52[-1]	2.33[-1]	2.20[-1]	2.04[-1]	1.93[-1]
5	45	3.34	3.11	3.05	3.09	3.22	3.39	3.75	4.10
5	46	3.88	3.64	3.58	3.66	3.85	4.07	4.54	5.01
5	47	2.48[-2]	2.14[-2]	1.98[-2]	1.82[-2]	1.75[-2]	1.70[-2]	1.62[-2]	1.57[-2]
5	48	8.07[-2]	7.24[-2]	6.77[-2]	6.22[-2]	5.92[-2]	5.71[-2]	5.40[-2]	5.15[-2]
5	49	2.21	2.27	2.31	2.45	2.61	2.78	3.11	3.43