

TABLE VI. LINEAR COEFFICIENT OF THERMAL EXPANSION

Element	$\alpha \times 10^6$ ($^{\circ}\text{C}^{-1}$)	Ref.
3 Li	45	1
4 Be	11.5	2, 3
5 B	8.3	3, 4, 5
6 C(g)	3.8 ± 3.1	4, 5, 6
6 C(d)	1.19 ± 0.01	5, 6
11 Na	70.6 ± 0.6	1, 4, 5
12 Mg	25.7 ± 0.7	1, 5, 6
13 Al	23.1 ± 0.5	1, 7, 8, 9
14 Si	3.07 ± 0.07^a	10, 11
15 P(w)	124.5 ± 0.5	4, 6
15 P(r)	$(66.5)^b$	—
16 S(r)	64.1 ± 0.1	4, 6
16 S(m)	$(63)^b$	—
19 K	83.0	1, 4
20 Ca	22.4 ± 0.1	1, 4
21 Sc	10.0^a	12
22 Ti	8.35 ± 0.15	13
23 V	8.3	14
24 Cr	8.4^a	15
25 Mn	22.6 ± 0.3	16
26 Fe	11.7	1, 4, 8
27 Co	12.4	1, 5, 6
28 Ni	12.7 ± 0.2	1, 6, 8
29 Cu	16.7 ± 0.3	1, 4, 5, 6, 8
30 Zn	29.7	1
31 Ga	18.1 ± 0.2	1, 3, 4
32 Ge	5.75	7
33 As	4.28 ± 0.42	4, 6
34 Se	36.9 ± 0.1	4, 6
37 Rb	88.1 ± 1.9	4, 6
38 Sr	20	17
39 Y	12.0^a	12
40 Zr	5.78 ± 0.07	18, 19
41 Nb	7.07 ± 0.05	1, 20, 21
42 Mo	4.98 ± 0.15	1, 4, 6, 22
43 Tc	$(8.06)^b$	—
44 Ru	9.36 ± 0.27	4, 6
45 Rh	8.40 ± 0.10	1, 4, 6
46 Pd	11.5 ± 0.4	1, 4, 6
47 Ag	19.2 ± 0.4	1, 4, 5, 6, 8
48 Cd	30.6 ± 1.3	1, 4, 5, 6
49 In	31.4 ± 1.4	1, 4, 5
50 Sn(g)	5.3^d	23
50 Sn(w)	21.2^a	24
51 Sb	10.9	1, 6

TABLE VI. LINEAR COEFFICIENT OF THERMAL EXPANSION—Continued

Element	$\alpha \times 10^6$ ($^{\circ}\text{C}^{-1}$)	Ref.
52 Te	16.77 ± 0.03	4, 5, 6
55 Cs	97	1, 3, 4
56 Ba	18.8 ± 0.8	5, 25
57 La	10.4^a	12
58 Ce(γ)	8.5	26
59 Pr	6.79^a	12
60 Nd	9.98^a	12
61 Pm	$(9.0)^b$	—
62 Sm	10.4	27
63 Eu	33.1^a	12
64 Gd	$8.28^{a,c}$	12
65 Tb	10.3^a	12
66 Dy	10.0^a	12
67 Ho	10.7^a	12
68 Er	12.3^a	12
69 Tm	13.3^a	12
70 Yb	24.96 ± 0.04	12, 26
71 Lu	8.12^a	12
72 Hf	6.01 ± 0.16	3, 19, 28, 29
73 Ta	6.55 ± 0.05	1, 4, 20, 29
74 W	4.59 ± 0.03	1, 4, 29, 30
75 Re	6.63 ± 0.06	1, 4, 31
76 Os	4.7 ± 0.1	1, 4
77 Ir	6.63 ± 0.12	1, 4, 5
78 Pt	8.95 ± 0.05	1, 4, 6, 25
79 Au	14.1 ± 0.1	1, 4, 5, 25, 32
80 Hg	61^f	1, 25
81 Tl	29.4 ± 1.0	1, 4, 5, 6
82 Pb	29.0 ± 0.3	1, 4, 5, 25, 33
83 Bi	13.41 ± 0.09	4, 5, 6, 25
84 Po	23.0 ± 1.5	34
87 Fr	$(102.)^b$	—
88 Ra	$(20.2)^b$	—
89 Ac	$(14.9)^b$	—
90 Th	11.2 ± 0.4	35
91 Pa	$(7.3)^b$	—
92 U	12.6 ± 0.4	1, 36
93 Np	27.5	37
94 Pu	55	38

^a X-ray data.

^b Estimated value; see text for further discussion.

^c See text for details concerning the derivation of this value.

^d Value at 215°K.

^e Value at 361°K; see text for more details.

^f Value for solid mercury at its melting point, 234°K.