TABLE XVII. DEBYE TEMPERATURES OBTAINED FROM ELECTRICAL RESISTIVITY[a] (θ_m^R), THERMAL EXPANSION[b] (θ_m^D), AND X-RAY INTENSITIES[c] DATA (θ^I)

Element	θ_m^R [a] (°K)	Ref.	θ_m^D [b] (°K)	Ref.	θ_{298}^I [c] (°K)	Ref.
3 Li	356 ±26	1–3	—	—	306	13
6 C(d)	—	—	1860	9	1730 ±220[d]	14[d]
11 Na	205 ±28	1–3	—	—	114	15
12 Mg	357	1	—	—	307	16
13 Al	422 ±17	1, 2	390 ±11	10, 11	383	13
14 Si	—	—	—	—	555 ±39	17, 18
19 K	148 ±34	1, 3	—	—	—	—
21 Sc	275	4	—	—	—	—
22 Ti	342	5	270	12	—	—
23 V	—	—	—	—	337 ±25[e]	19
24 Cr	495	5	—	—	566	20
26 Fe	494 ±25	5, 6	418 ±3	10, 11	404 ±17	20, 21
27 Co	401	5	—	—	—	—
28 Ni	274	5	405 ±5	10, 11	341	20
29 Cu	336 ±19	1–3	320 ±5	9–11	308 ±4	13, 22
32 Ge	—	—	—	—	283 ±5	18
33 As	210	1	—	—	—	—
37 Rb	75 ±10	1, 3	—	—	—	—
38 Sr	171	1	—	—	—	—
39 Y	201 ±14	7, 8	—	—	—	—
40 Zr	281	5	—	—	—	—
42 Mo	—	—	388	10	389	20
44 Ru	426	5	—	—	341	16
45 Rh	394 ±25	2, 5	—	—	—	—
46 Pd	270	5	300	10	—	—
47 Ag	219 ±20	1–3, 9	209 ±12	10–12	211	23
48 Cd	158	1	—	—	—	—
49 In	198	1	—	—	—	—
50 Sn(w)	210	5	—	—	—	—
51 Sb	241	5	—	—	—	—
55 Cs	45	3	—	—	—	—
56 Ba	133	1	—	—	—	—
73 Ta	228	5	252	10	—	—
74 W	359 ±26	2, 5	310	10	—	—
75 Re	310	5	—	—	—	—
77 Ir	316	5	—	—	—	—
78 Pt	235 ±5	5, 6	233 ±3	9, 10	151 ±26	24
79 Au	189 ±14	1–3	183 ±7	9–11	—	—
80 Hg	37[f]	1	—	—	—	—
81 Tl	140	1	—	—	—	—
82 Pb	89 ±3	2, 5	88	10	67.0	13
83 Bi	62	5	—	—	—	—
90 Th	168	5	—	—	—	—

[a] θ_m^R is the Debye temperature determined from electrical resistivity data. These Debye temperatures usually correspond to an average value for a wide range of temperatures.

[b] θ_m^D is the Debye temperature determined from thermal expansion data. These Debye temperatures usually correspond to an average value for a wide range of temperatures.

[c] θ_{298}^I is the Debye temperature at 298°K as determined from X-ray intensity data.

[d] This value was calculated by Herbstein[14] from the data given by Carpenter[25] and Post.[26]

[e] Calculated from neutron diffraction data.

[f] This value corresponds to that for solid mercury.

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