TABLE AI. (*Continued*)

Material	Condition	Transition conditions Stress (GPa)	Compression (%)	Technique	Remarks	References
Bismuth						
Bismuth	Cast and hot pressed	2.72	6.54	E-1	6.6 to 25.2 mm, 3 mm grain size $\rho_0 = 9.80$ Mg/m^3	Duff *et al.* (1957)
Bismuth	Cast and hot pressed	3.13	7.54	E-1	22 mm, $T_0 = 300$ K, 3 mm grain size $\rho_0 = 9.80$ Mg/m^3	Duff *et al.* (1957)
Bismuth	Cast and hot pressed	2.53	6.12	E-1	20 mm, $T_0 = 360$ K, 3 mm grain size $\rho_0 = 9.80$ Mg/m^3	Duff *et al.* (1957)
Bismuth	Cast and hot pressed	1.76	3.83	E-1	20.4 mm, $T_0 = 509$ K, 3 mm grain size $\rho_0 = 9.80$ Mg/m^3	Duff *et al.* (1957)
Bismuth	Cast	2.98–2.27	7.2–5.6	G-7	3 to 6 mm	Hughes *et al.* (1961)
Bismuth	Cast	2.65–2.46	6.1–5.9	E-8	1.6 to 12.7 mm, τ, 21 samples $\rho_0 = 9.80$ Mg/m^3	Larson (1967)
Bismuth	Pressed	2.65–2.45	6.3–5.8	E-8	1.4 to 4.5 mm, τ, 7 samples	Larson (1967)
Bismuth	Crystal, *a* axis	2.46	5.8	E-8	3.1 to 4.4 mm, τ, 3 samples	Larson (1967)
Bismuth	Crystal, *c* axis	2.56	6.1	E-8	1.2 to 4.4 mm, τ, 7 samples	Larson (1967)
Bismuth	Pressed	2.50–2.53	5.8	G-9	$\rho_0 = 9.756$ Mg/m^3, grain size 30 μm	Asay (1974)
Bismuth	···	7.0	···	E	$\rho_0 = 9.80$ Mg/m^3, thermoelectric effect	Romain (1974)
Carbon						
Carbon	Spectroscopically pure artificial graphite	···	···	E-17, 19	Diamonds recovered	DeCarli *et al.* (1961)
Carbon	Natural Ceylon graphite, high purity	40 and 60	···	···	75% to 95% theoretical density, +, ?	Alder *et al.* (1961), see Trunin *et al.* (1969) and Pavlovskii *et al.* (1966)
Carbon	Pyrolytic graphite	···	···	E, P-3	$\rho_0 = 2.2$ Mg/m^3, no transition	Coleburn (1964)
Carbon	Pyrolytic graphite	···	···	E-4	$\rho_0 = 2.18$–2.20 Mg/m^3, optical lever	Doran (1963a)
Carbon	Pyrolytic graphite	···	···	P-2	$\rho_0 = 2.20$ Mg/m^3, possible transition at 40 GPa	McQueen (1964)
Carbon	Pressed graphite	···	···	P-2	$\rho_0 = 2.15$ Mg/m^3, possible transition at 27 GPa	McQueen (1964)
Carbon	Synthetic graphite	···	···	P-1	$\rho_0 = 1.77$ Mg/m^3, +	Pavlovskii *et al.* (1966)
Carbon	Synthetic graphite	···	···	P-1	$\rho_0 = 1.85$ Mg/m^3, +	Pavlovskii *et al.* (1966)
Carbon	Ceylon graphite, ground pressed	···	···	P-1	$\rho_0 = 2.23$ Mg/m^3, +	Pavlovskii *et al.* (1966)
Carbon	Pyrolytic graphite	40	28	P-2	$\rho_0 = 2.20$ Mg/m^3	McQueen *et al.* (1968)
Carbon	Pressed graphite	23	···	P-2	$\rho_0 = 2.13$ Mg/m^3	McQueen *et al.* (1968)
Carbon	Pressed graphite	23	···	P-2	$\rho_0 = 2.03$ Mg/m^3	McQueen *et al.* (1968)
Carbon	ZTA graphite	23	···	P-2	$\rho_0 = 1.95$ Mg/m^3	McQueen *et al.* (1968)
Carbon	Pressed graphite	23	···	P-2	$\rho_0 = 1.88$ Mg/m^3	McQueen *et al.* (1968)
Carbon	ATJ graphite	23	···	P-2	$\rho_0 = 1.79$ Mg/m^3	McQueen *et al.* (1968)
Carbon	PT0178 graphite	23	···	P-2	$\rho_0 = 1.54$ Mg/m^3	McQueen *et al.* (1968)
Carbon	Graphite, chemically pure	···	···	P-1	$\rho_0 = 1.878$ Mg/m^3; found evidence that high pressure metallic phase reported by Alder was in error	Trunin *et al.* (1969)
Carbon	Decalcified natural graphite	25	~31	P-1	$\rho_0 = 2.08$ Mg/m^3, +	Dremin *et al.* (1968)
Carbon	Iron-graphite mixture	···	···	P-19	Electron microscopy, diamonds recovered	Trueb (1968)
Carbon	Copper-graphite mixtures	···	···	E-19	Electron microscopy, diamonds recovered	Trueb (1971)
Carbon	Madagascar graphite	···	···	P-19	$\rho_0 = 2.05$ Mg/m^3, pulse duration 300 ns	Pujols *et al.* (1970)
Carbon	Graphite	···	···	P	Diamonds recovered	Fournier *et al.* (1971)
Carbon	Diamond pressed powder	···	···	P-2	$\rho_0 = 3.20$ Mg/m^3, no transition observed between 43 and 128 GPa	McQueen *et al.* (1968)

TABLE AI. (*Continued*)

Material	Condition	Transition conditions Stress (GPa)	Compression (%)	Technique	Remarks	References
Carbon (*Continued*)						
Carbon	Diamond crystal	···	···	P-1	No transition observed between 100 and 580 GPa	Pavlovskii (1971)
Carbon	Diamond pressed powder	···	···	P-1	$\rho_0 = 1.90$ Mg/m^3, no transition observed between 40 and 160 GPa	Pavlovskii (1971)
Germanium						
Germanium	[111], [100], and [114] orientations	12.5	···	E-2, 5	···	McQueen (1964)
Germanium	[111] orientation	13.9±0.3	12–13	G-14	Electrical resistance, τ	Graham *et al*. (1966)
Germanium	[111] orientation	14.3	16.0	E-1, 10	τ	Pavlovskii (1968)
Germanium	[111] orientation	···	···	E	Thermoelectric effect, wave velocities	Jacquesson *et al*. (1970)
Silicon						
Silicon	Crystal	···	···	E-4, 5	Wave profiles, ϕ,ψ	McQueen (1964)
Silicon	[111] orientation	11.2	9.9	E-1, 10	τ	Pavlovskii (1968)
Silicon	[100] orientation	14.0±0.4	10.3	E-6	6.4 mm, τ	Gust *et al*. (1971)
Silicon	[110] orientation	10.3±0.7 12.8±0.7	7.2 10.3	E-6	6.4 mm, two successive transitions observed τ	Gust *et al*. (1971)
Silicon	[111] orientation	10.1±0.3 13.7±0.5	6.8 10.7	E-6	6.4 mm, two successive transitions observed, τ	Gust *et al*. (1971)
Iodine						
Iodine	Pressed pellet, commercial grade	<25	···	E-14	Electrical resistance	Alder *et al*. (1956a)
Iodine	Pressed pellet, commercial grade	>8, <13	···	E-14	Electrical resistance	Alder *et al*. (1956b)
Iodine	Crystalline	~70	47	?	?	Alder *et al*. (1960), see also McMahan *et al*. (1975)
Iodine	···	···	···	···	Calculations show no 70 GPa transition	McMahan *et al*. (1975)
Phosphorus						
Phosphorus	Red, pressed pellet	<25	···	E-14	Electrical resistance	Alder *et al*. (1956a)
Phosphorus	Red, pressed pellet	<10	···	E-14	···	Alder *et al*. (1956b)
Phosphorus	Red	~2.5	···	···	···	Grover *et al*. (1958)
Phosphorus	Yellow	~8.0	···	···	···	Grover *et al*. (1958)
Other elements						
Cerium	···	~2.5	~2.5	P-2	···	Carter (1973a)
Gadolinium	···	~38	···	P-2	$T_H \approx 1500$ K	Carter (1973a)
Hafnium	···	~47	~23	P-2	···	Carter (1973a)
Selenium	···	···	···	G-14	Resistance change	Cole *et al*. (1971)
Sulfur	···	···	···	D-14	Resistance change, see also Table VII	David *et al*. (1958)
Tin	···	9.4	···	E-6	···	Duff *et al*. (1968)
Titanium	···	~18	~12	P-2	···	Carter (1973b)
Titanium	···	···	···	D-17	bcc phase recovered for p_x>12 GPa	German *et al*. (1970a)
Zirconium	···	~23	~16	P-2	···	Carter (1973b)
Zirconium	···	···	···	D-17	bcc phase recovered for $p_x = 3.0$ GPa	German *et al*. (1970a)
Uranium	···	~50	20	E-2	$\rho_0 = 19.05$ Mg/m^3	Viard (1962)
Ytterbium	Foil	~3.3	···	G-14	Electrical resistance	Ginsberg *et al*. (1973)
Plutonium	δ phase	~0.6	···	G-8, 11	Reversion on unloading at 0.8 GPa	Kamegai (1975)
C. Compounds						
Alkali halides						
KCl	Crystal	~2.1	···	P-1	3.5 mm, $\rho_0 = 1.99$ Mg/m^3	Al'tshuler *et al*. (1963)
KCl	Crystal	2.0±0.08	···	E-8	···	Larson (1965)
KCl	Pressed	1.89	9.75	E-10	1.6 to 16.5 mm, $\rho_0 = 1.90$ Mg/m^3	Dremin *et al*. (1965)
KCl	[001] crystal	1.9	7.8	E-10	Unloading showed hysteresis of 1.0 GPa	Al'tshuler *et al*. (1967)
KCl	[111], [100] crystal	2.08±0.05	8.6	G-8	Impact surface measurement, rates	Hayes (1974)