Table 2. *Transition pressure* (P_{tr}, kb) *for the* Fm3m ⇌ Pm3m *phase change in the potassium and rubidium halides at* 25°C

Salt	Bridgman 1945[25]	Daniels. et al. 1966[31]	Kennedy and LaMori, 1962[18]	Knof and Maisch, 1963[26]	Larson, 1965[29]	Piermarini and Weir, 1962[4]	Pistorius, 1964[11, 12]	Pistorius and Snyman, 1964[13]	This work	Average Value
KF						35		14·6 ± 1·3	None observed	
KCl	19·7		18·28 ± 0·21		20·0		19·27 ± 0·08		19·55 ± 0·13	19·4 ± 0·3
KBr	18·0		17·88 ± 0·06		18·5		17·43 ± 0·07		17·99 ± 0·28	18·0 ± 0·2
KI	17·8		17·48 ± 0·24				17·34 ± 0·05		18·27 ± 0·19	17·7 ± 0·3
RbF				33		12		6·1	34·47 ± 0·38	33·8 ± 0·8
RbCl	4·90						5·28		5·68 ± 0·14	5·32 ± 0·24
RbBr	4·50						4·20 ± 0·2		4·92 ± 0·06	4·57 ± 0·35
RbI	3·96	3·54					3·59 ± 0·16		3·68 ± 0·05	3·69 ± 0·11

Table 3. *Transition volume* $(-\Delta V_{tr}, \text{cm}^3/\text{mole})$ *for the* Fm3m → Pm3m *phase change in the potassium and rubidium halides at* 25°C

| Salt	Adams and Davis, 1962[8]	Bridgman, 1945[25]	Genshaft et al., 1967[30]	Jacobs, 1938[6]	Jamison, 1957[7]	Nagasaki and Minomura, 1964[9]	Pistorius and Snyman, 1964[13]	Weir and Piermarini, 1964[5]	This work	Average value
KF							1·0	2·49	None Obs.	
KCl		4·20				3·85		6·85	4·11 ± 0·10	4·05 ± 0·17
KBr		4·55						8·35	4·17 ± 0·11	4·36 ± 0·19
KI		4·50			4·50			11·8	4·41 ± 0·15	4·47 ± 0·13
RbF								3·70	1·83 ± 0·29	
RbCl	6·55	6·00	6·30					5·76	6·95 ± 0·11	6·30 ± 0·35
RbBr		6·55						6·60	7·43 ± 0·18	6·86 ± 0·39
RbI	9·65	7·50		7·9				8·26	8·10 ± 0·10	8·28 ± 0·31
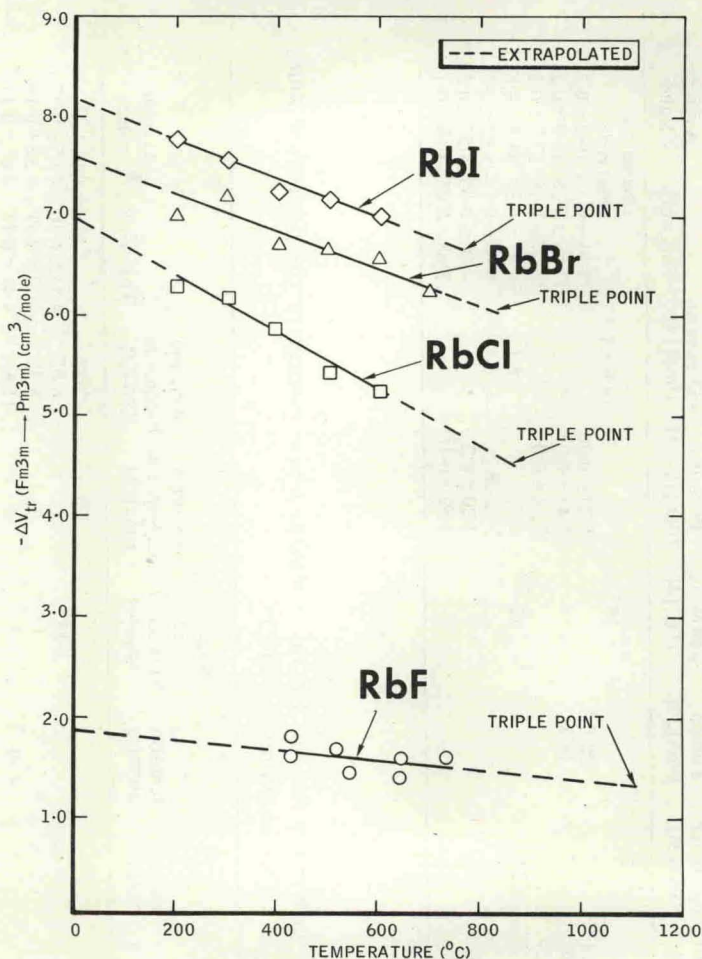
Fig. 4. $\Delta V(\text{Fm3m} \rightarrow \text{Pm3m})$ vs. T for the rubidium halides.

perature data by use of equation (2). The pressure-temperature coordinates of the Fm3m $\rightleftarrows$ liquid $\rightleftarrows$ Pm3m triple point for these salts were determined from the intersection of the melting curves of the Fm3m and Pm3m phases at the Fm3m $\rightleftarrows$ Pm3m phase boundary. The melting curves of the Fm3m and Pm3m phases were drawn through the data points of Clark[22] and of Pistorius [23] in order that the intersection of these two curves would fall on the Fm3m $\rightleftarrows$ Pm3m phase boundry obtained in this work. Triple point coordinates obtained for the salts KCl, KBr and KI are shown in Fig. 1; coordinates for the rubidium halides are shown in Fig. 2.

These triple point P–T coordinates are compared with the P–T coordinates given by Clark[22] and by Pistorius[23] in Table 4.

Potassium halides

Potassium fluoride was examined at pressures up to 45 kb at approx. 100° intervals from room temperature up to 800°C. However, we fail to find the phase transition reported by Weir and Piermarini[5] and by Pistorius and Snyman[13]. Pistorius *et al.* found the volume change of this transition to be small, i.e. 0·5 per cent. The sensitivity of the method used here is more than adequate to detect a phase transition with such a small