

TABLE IV

Summary of Piezometric Data on Monobromoacetic Acid for Transition C III to C II

Experiment (a)	Temperature °C	P kg/cm ²	Transition Time min.	ΔV cm ³ /g $\times 10^{-3}$
2	15.2	1650	16	3.2
3	15.2	1650	16	3.2
6	30.1	1000	16	3.3
7	30.2	1000	16	3.3
8	30.1	990	15	3.1
9	30.1	980	(10) (b)	—
10	30.1	980	(12)	—
11	30.0	990	(12)	—
12	30.0	980	16	3.3
13	30.0	(990)	(10)	—
14	30.0	(1000)	(8)	—
15	45.1	495	15	3.1
16	45.0	505	(8)	—

(a) In experiment 1, the recording camera failed in the transition region; extrapolation from higher and lower pressures gives values in agreement with those from experiments 2 and 3.

(b) Values in parentheses have larger uncertainties because of erratic pressure pattern.

The solid-solid transitions showed small volume changes. A larger number of experiments were performed to prove that such changes were real and not due to malfunctioning of the apparatus. The agreement among the results of the replicate experiments at the same temperature (table 4) is satisfactory. The phase diagram derived from these measurements is shown in figure 3.

Values for the impurity N₂ were calculated from the time-pressure curves with equation 1. The small impurity (0.22 mole percent) found for experiment 17 indicates that little reaction had taken place during the preceding experiments. However, the amount of impurity progressively increased during experiments 18, 19, and 20, in which the sample was melted at higher temperatures.