holding pressure constant, using an air blast to cool the sample–anvil composite. When room temperature was reached the pressure was released quickly. No shear was used during any of the present experiments. Run times were a minimum of 24 h and a maximum of 150 h.

3. Results

The results obtained depend strongly on which density the non-crystalline Ge had prior to the run. Runs made on low (4.8 ± 0.3 g/cm^3) and average (5.3 ± 0.3 g/cm^4) density non-crystalline Ge yielded similar results. These results are shown in fig. 2. The solid lines are the proposed phase boundaries from ref. [8].

From fig. 2 the following trends are evident. The application of pressure at room temperature was sufficient to produce firstly crystallization of Ge I and subsequently Ge III in increasing yields at higher pressures. However, the yields of Ge III are

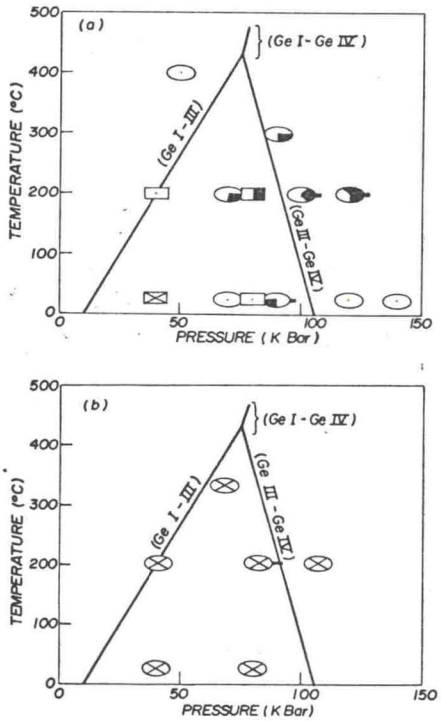

Fig. 2. Present results obtained for non-crystalline Ge of various densities. Phase boundaries from ref. [8]. (a) Average density: ⊙ Ge I; ● Ge III; ○ Ge IV. Low density: ⊡ Ge I; ⊠ starting materials + small growth Ge I; ■ Ge III. (b) High density: ⊗ no change; ⊛ Ge IV + slight amount Ge I + non-crystalline Ge.