By means of measurements of the Debye Θ-values of ^{4}He along the melting curve Dugdale and Simon (1953) were able to show that the degree of degeneracy steadily increased as the melting temperatures and pressures increased, and there are also theoretical reasons for expecting this type of behaviour (Salter 1954). One might, therefore, expect that sufficiently far along the melting curve classical theory is valid, and the curves for ^{4}He and ^{3}He become identical. It is difficult to assess how much reliance can be placed on extrapolations based on the formulae of Mills and Grilly (1955), but it is interesting to note that despite the initial apparent parallelism of the melting curves, these formulae do lead to an intersection at a temperature of 55° and a pressure of 9000 atmospheres.

For the hydrogen isotopes H_2, D_2 and T_2 the structure of the molecule is to some extent dependent on the isotopic mass, and it is, therefore, no longer rigorously true to say that in the region where melting is classical the melting curves would be identical (except at much higher pressures where the substance becomes monatomic). Nevertheless, it is worth pointing out that despite the initial parallelism noted by Chester and Dugdale (1954) subsequent measurements by Mills and Grilly (1956) indicate that the melting curves are approaching one another at higher temperatures and pressures.

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