

be tentative. With this reservation we would draw the following conclusions from our experiments. As far as the close-packed phases are concerned, solid helium in both isotopic forms appears to behave normally, i.e. it can be understood at least semi-quantitatively in terms of existing theories and concepts. For example, the zero-point energy can be estimated roughly by means of a crude cell model due to London, or by means of a quasi-harmonic model of the vibrations of the solids. Likewise the temperature dependence of the specific heats appears to be similar to that of a quasi-harmonic close-packed solid and the magnitude of the characteristic temperature at each density agrees with what is known about the mechanical properties of the solids.

The specific heat of the fluid isotopes can be understood qualitatively; at present there appears to be no possibility of a detailed comparison with fundamental theory.

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