

elastic properties has recently been studied as a function of temperature by Garland Silverman⁽⁸⁾. It was felt that a study of the effect of pressure, besides being intrinsically useful, would provide a particularly severe test of the simple model in view of the anomalous (c/a) ratio. This feeling has been confirmed; we have not been able to fit the simple model even to the elastic constants themselves, much less to go on to the interpretation of the effect of pressure.

A further, but minor, reason for the pressure study lay in the possibility of a phase transformation in the accessible pressure range. Long ago Bridgman⁽⁹⁾ reported anomalies in the linear compressibility and electrical resistance of cadmium single crystals. Jamieson⁽¹⁰⁾ failed, however, to find X-ray evidence for a transformation at pressures up to 16,000 bars. A phase transformation would be expected to produce catastrophic effects in the elastic property of single crystals, but none have been observed in experiments carried to 9000 bars, thus confirming the X-ray evidence.