C_{44} against T shows evidence for the anomaly and the other two elastic constants have small discontinuities at the same temperature. No anomaly could be discerned in the ultrasonic attenuation but due to bond effects the accuracy of the measurement was not high.

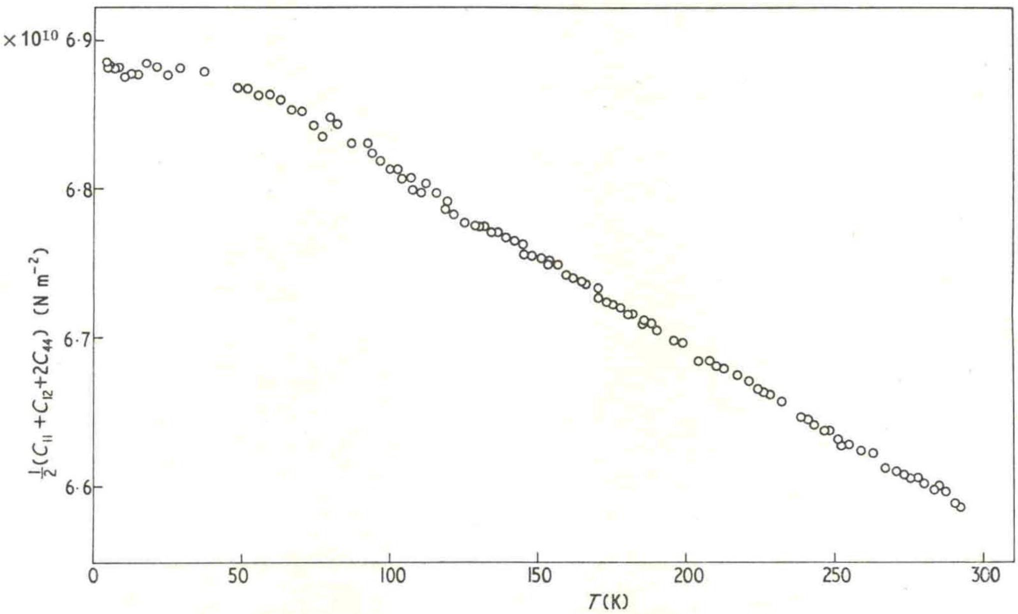

Figure 1. Variation of $\frac{1}{2}(C_{11}+C_{12}+2C_{44})$ with temperature.

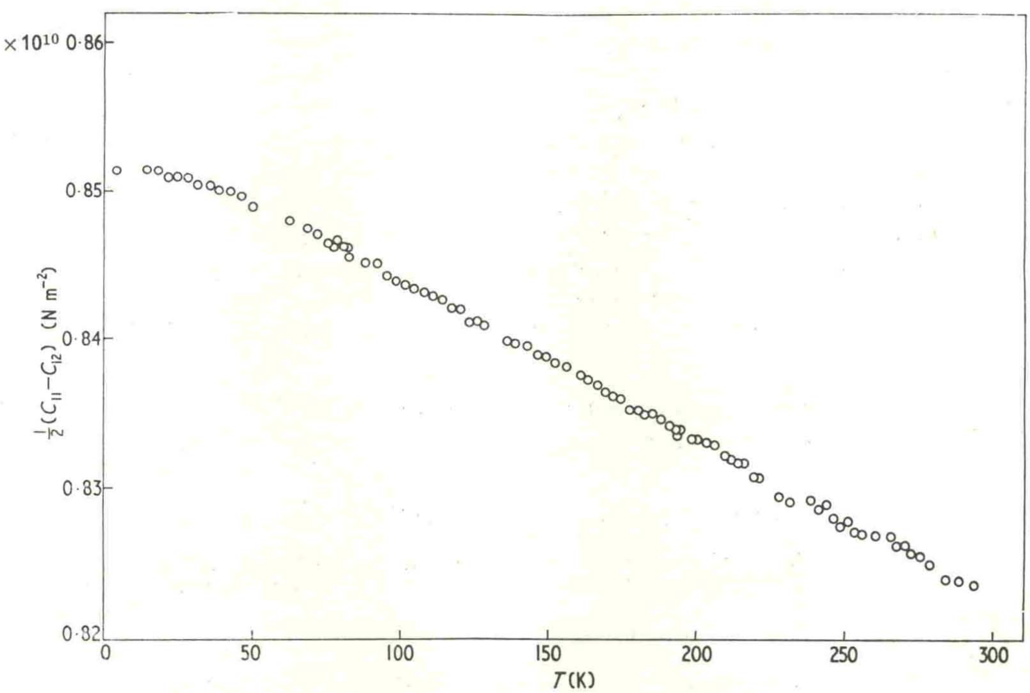

Figure 2. Variation of $\frac{1}{2}(C_{11}-C_{12})$ with temperature.

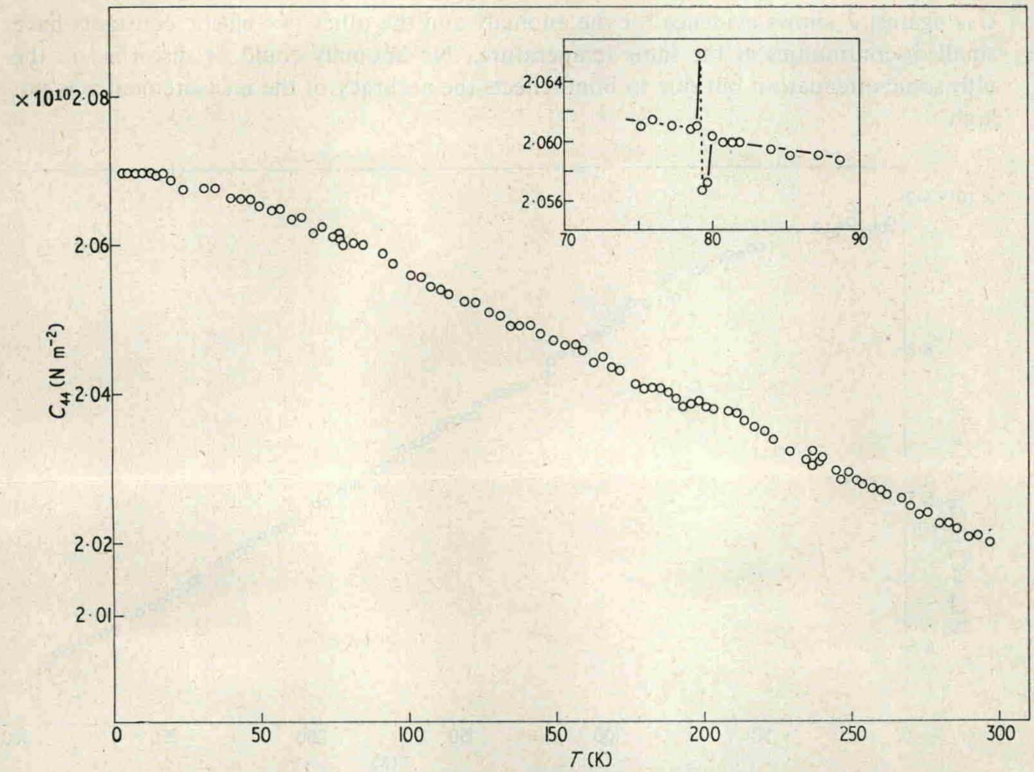

Figure 3. Variation of C_{44} with temperature. The inset shows the detail in a separate run through the anomaly with temperature decreasing.

The temperature variation of the linear expansion coefficient, measured along a [100] axis, is shown in figure 4. The fractional change in lattice parameter, relative to 90 K, is shown in figure 5. No thermal expansion coefficient has been measured previously for single-crystal CdTe, but measurements of Novikova (1961) and Browder and Ballard (1969) on polycrystalline CdTe are shown for comparison in figure 4. In the present work α passes through zero at 63·7 K, compared with 71·5 K and about 60 K in previous investigations. The peak in the expansion anomaly occurs at $79{\cdot}0 \pm 0{\cdot}1$ K.

Observations were made of the thermal expansion anomaly in another sample, cleaved from a different boule, on several occasions. The peak in α occurred at the same temperature, although data above and below this temperature sometimes displayed hysteresis.

Table 1. Elastic constants of CdTe in units of 10^{10} N m^{-2}

Experimenters	C_{11}	C_{44}	C_{12}	T (K)
McSkimin and Thomas (1962)	5·351	1·994	3·681	298
Vekilov and Rusakov (1971)	5·33	2·044	3·65	300
	5·57	2·095	3·84	77
Berlincour, *et al* (1963)	6·15	1·96	4·30	77
Present work	5·38	2·018	3·74	298
	5·62	2·061	3·93	77