

Fig. 7 (left) Optical gap vs pressure
— Th Cl — — — Th Br ····· Th I

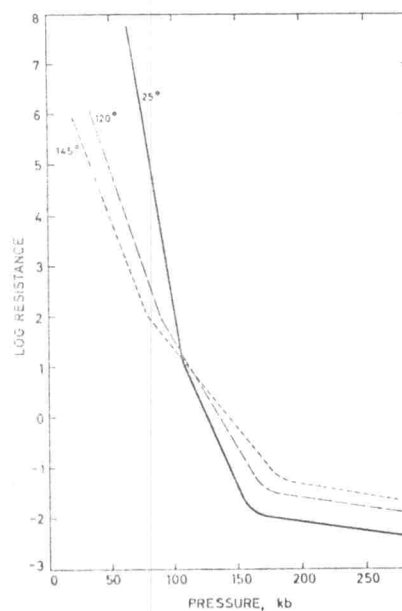
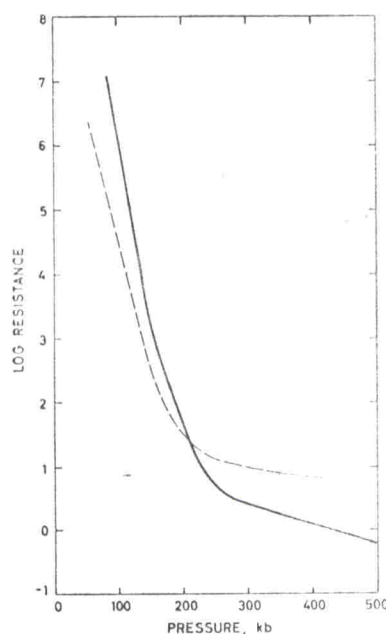
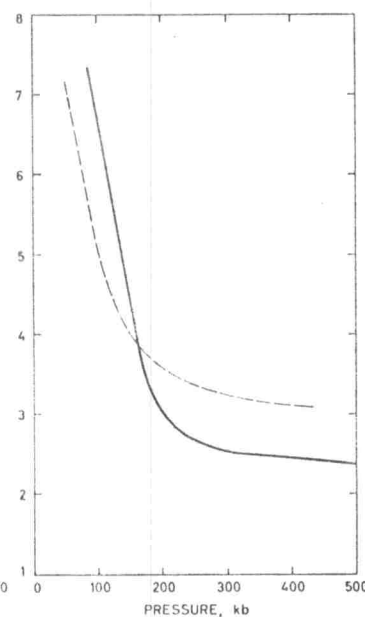


Fig. 8 (right) Resistance vs pressure for thallium iodide
— 25° — — — 120° ····· 145°



Resistance vs pressure for Fig. 9 (left) thallium bromide, (Fig. 10, right) thallium chloride
— 25° — — — 120°



considers a T^{-n} relationship, $n = 1-2$ about as expected for lattice scattering. Also the difference in resistivity among the three halides at high pressure is considerably larger than one would anticipate intuitively from differences in band structure. This may well be an impurity effect, which could be modified by zone refining of the material.

It should also be pointed out that the results can be 'explained qualitatively' in terms of Holstein's polaron model mentioned earlier. The low-pressure region of 'activated resistance' would correspond to Holstein's high-temperature regime of 'hopping motion' of polarons. The