PRESSURE EFFECTS

The isothermal change in resistance with pressure was measured in the neighborhood of room temperature on samples 1 and 2. As might be expected with such a fine capillary the change in resistance of sample 1 for a given pressure was appreciably lower than that in sample 2. Even with sample 2 the resistivity change at 2500 atm. was about 10% smaller than that deduced from Bridgman's measurements (Bridgman 1946) at higher pressures. (Bridgman's measurements refer to relative *resistance* changes of a given sample and have to be transformed into *resistivity* changes using the compressibility.) This difference is presumably due to the fact that we are using specimens melted into capillaries. The present experiments serve nevertheless to demonstrate that the general method is convenient and to give at least a qualitative picture of the pressure dependence of resistance down to very low temperatures.

In describing these results, it is convenient to divide the temperature range as follows:

(1) measurements between 50° K. and room temperature,

(2) measurements between 4° K. and 50° K.,

(3) measurement of the residual resistance.

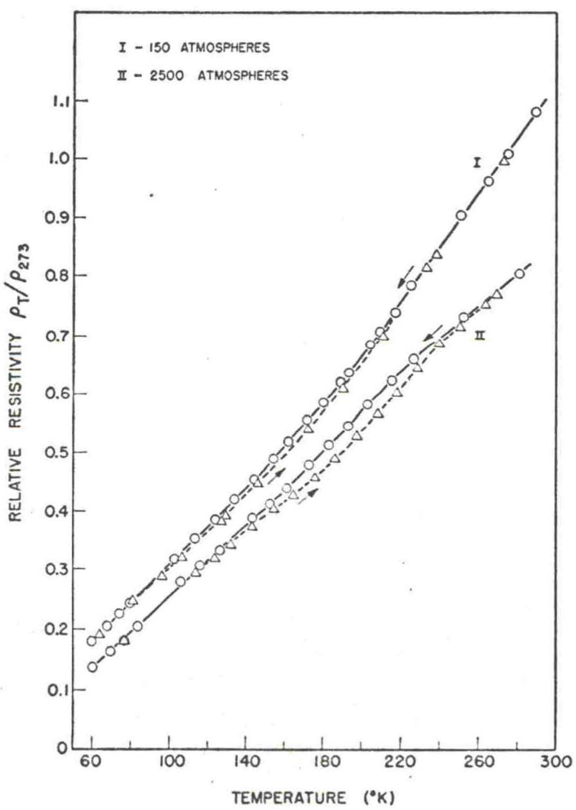

FIG. 3. The resistivity of a rubidium sample (sample 2) at two pressures in the higher temperature range.