relative to each other by correcting for sample geometry only. Below 50 kilobars the resistances are too large to be measured in our apparatus, but must be decreasing by many orders of magnitude. For measurements made in the ac plane, the rapid drop continues to about 230-240 kilobars, where there is a relatively sharp break. Beyond this pressure the resistance decreases at a rate which would be anticipated for a relatively compressible metal.

The broken curve in Figure 4 represents measurements made perpendicular to the ac plane. The curve is qualitatively like the one discussed above, but the break comes at 160 kilobars. In the high pressure region the resistance perpendicular to the ac plane is apparently 5-7 times greater than in the other direction, although corrections for contact resistance could alter this number.

Figure 5 shows the measured optical absorption edge as a function of pressure (black triangles). Compared with this is shown twice the activation energy for electrical conductivity measured in the ac plane (open circles) and perpendicular to the ac plane (black circles). In the pressure region where both optical and electrical measurements could be made the agreement is excellent, confirming that the simple band picture is a reasonable description for iodine. The activation energy measured perpendicular to the ac plane vanishes at 160 kilobars where the break in the resistance-pressure curve occurs. As one would expect, below 160 kilobars the activation energy is independent of direction. Above 160 kilobars the activation energy in the ac plane tails off to zero by about 220 kilobars.

Figure 6 shows a resistance-temperature plot obtained at 240 kilobars and measured perpendicular to the ac plane. It shows the linear