curve at zero pressure (one atmosphere) to the true melting point at one atmosphere. After k has been determined at t_o and p_o, then the experimental curve can be corrected in its entirety, yielding the melting curve as a function of pressure.

Results:

Four runs have been individually corrected and then averaged together and plotted. Figure 5 is a reproduction of this plot. The melting point of lead increases from 327.3 degrees centigrade at one atmosphere to 730 degrees centigrade at 105,000 atmospheres. The curve seems to rise very smoothly. No transition points appeared.

The results obtained above compare very well with the melting point of lead obtained by Hoffman and Hudson[6] at General Electric at 30,000 kg/cm^2, and is 9.2% below the point obtained by Butuzov and Gonikberg[5] up to 30,000 kg/cm^2. Both of these points have been included in the plot of the melting curve of lead in Figure 5.

Simon's equation was fitted to this experimental curve. The constants a and c are 7,560 atmospheres and 3.38, respectively, with 5.7% maximum deviation between the two curves.