67,100 atmospheres. These were observed by following the cutoff of light with recrystallization at the transition both with rising and decending pressure. These points were noted with various sample thicknesses. The results were correlated with observed CN^- shifts at the same thicknesses and equation (1) given above was developed. All extensions to pressures above 100,000 atmospheres were by means of this relationship and thus involved more or less extrapolation. We have made numerous measurements to 150,000 atmospheres and several to considerably higher pressures. With a sample thickness of 0.0046" using the one half inch pistons we obtained 201,000 atmospheres (with p_A = 52,800 atm.). We have fitted our data empirically with the following relationships:

For the 3/8" diameter piston

$$p_C = p_A \left[1 + \frac{32.4}{p_A^{0.25}\, t_C^{1.25}} \right] \qquad (2)$$

For the 1/2" diameter piston

$$p_C = p_A \left[1 + \frac{51.8}{p_A^{0.25}\, t_C^{1.25}} \right] \qquad (3)$$

Here p_C is the pressure on the center flat and p_A is the average pressure on the piston, both in thousands of atmospheres, while t_C is the thickness in the center in thousandths of an inch (i.e., for a thickness of 0.009" t_C = 9) measured at atmospheric pressure. This is obtained by micrometering each piston and then the assembled apparatus