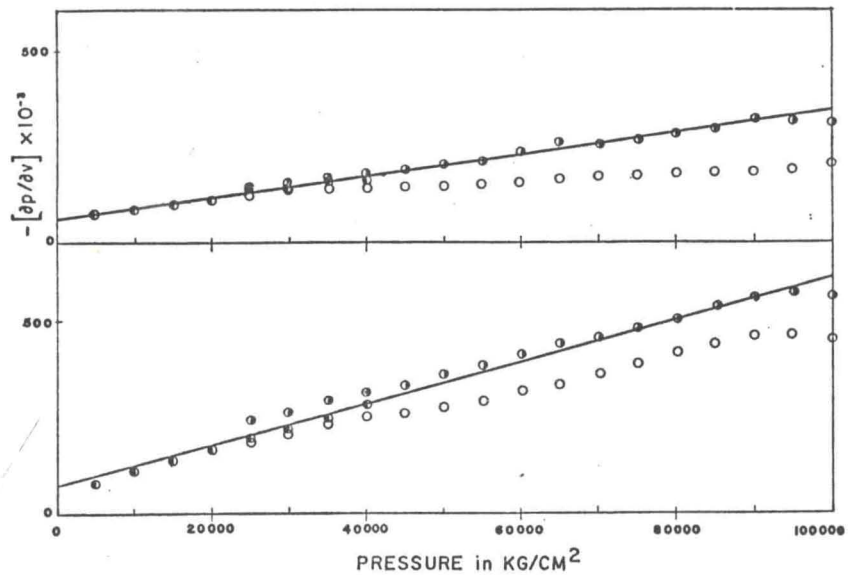


FIG. 1a. Graph of $-(\partial p/\partial v)_T$ vs. pressure in kg/cm$^2$ for lithium data of Bridgman at room temperature. ◑ Bridgman III experimental points, ◐ Bridgman II experimental points and ○ Bridgman I experimental points. —— represents the least squares line obtained using the Br II and Br III data. 1b. Graph of $-(\partial p/\partial v)_T$ vs. in kg/cm$^2$ for sodium data of Bridgman at room temperature. ◑ Bridgman III experimental points, ◐ Bridgman II experimental points at ○ Bridgman I experimental points. —— represents the least squares line obtained using the BrII and Br III data.

these sets of data may be attributed partly to the fact that an aluminum sheath was used in performing the Br III measurements, while no such encasement was used in the Br II data.

Also shown on Fig. 1a, although not used to determine the best straight line, is the Br I data. It is quite evident that these points do not fit the same straight line. Similar disagreement is found with all the metals considered except Cesium for which there is no Br I data. Factors responsible probably are: (1) the values reported as Br I were 'corrected' by Bridgman so as to agree with an earlier set of measurements which he believed to be superior; (2) a copper sheath was used around the sample. The fact that the copper is harder than the aluminum sheath used in the Br III determinations may partially account for this discrepancy. An indication that the copper sheath is at least partly responsible for the discrepancy is given by the one run of lithium without this sheath in the Br I set of measurements, where the compression was much smaller.

Using the individual data of Br II and Br III leads to an excellent fit of the points to a least squares line, but we considered the combined Br II, Br III line a better compromise.

Figure 2 presents the Swenson data at 4·2°K. Here the derivative scale is eight times greater, and the pressure scale is ten times greater than in the graphs of the Bridgman data. This same scale is used to present all sets of Swenson data. In this instance the lowest three reported values of Swenson have been omitted. Inclusion of these points lead to a rather poor fit of the points to the straight line. The omission of these points is justified on the grounds that they were not measured values but obtained by extrapolation, and were admittedly rather poor. These three lowest points were discarded for each case of Swenson data presented.

Table 1 gives the coefficients of the best straight lines through the various sets of data.

*The sodium data*

Figure 1b shows the combined data for Br II