precise determination of the shock velocity in the sample and the standard.

Once the time-distance data have been obtained for an experiment, a computer code is used to make a linear least squares fit to this information. The input data required for this program includes the pin pulse time t_i, the pin setbacks or depths z_i, and the pin coordinates x_i and y_i. These data are then fitted by the equation

$$t_i = P_1 + P_2\, z_i + P_3\, x_i + P_4\, y_i$$

where the P coefficients are to be determined. The constants P_3 and P_4 are a measure of the tilt of the shock wave with respect to the plane of the pin circle. The time t_{ci} which represents the time the pins would have discharged had there been no tilt is written as

$$t_{ci} = t_i - P_3\, x_i - P_4\, y_i = P_1 + P_2\, z_i$$

where P_1 represents the intercept on the corrected time axis t_c and P_2 is the slope of the z, t_c points. The reciprocal of this slope is the measured shock velocity. In addition, the computer program calculates the standard deviation associated with the reciprocal of P_2. This is the error quoted in the tables for the measured shock velocities. An additional correction for the dural shock velocities in Table II was made for linear contraction of the dural plate and the coaxial pins when cooled to 75°K. This amounted to about a 0.4% reduction in the originally measured shock velocity. The statistical error varies from 0.1 to 1.2% and generally the larger errors are associated with shots in which thick attenuator plates were used and with flying plate systems in which the flyer plate was relatively thin. It is not the presence of attenuator plates