was shocked and calculates a release isentrope from that state (see Figs. 5 and 6). Then the velocity given to a dural mass element by the rarefaction wave is calculated and added to the particle velocity associated with the measured shock velocity. The calculation terminates when the release isentrope and the line of slope $\rho_0 U_s$ of the sample intersect. At this point, the particle velocity of the sample is the sum of the particle velocity associated with the shocked state of the dural and the velocity given to the dural mass element by the rarefaction wave. The pressure in the sample is then found from Eq. (8).

The program also calculates the precision index σ_p for the sample particle velocity from the relation

$$\sigma_p = \sqrt{(\sigma_p')^2 + (\sigma_p'')^2}.$$

Here σ_p' is the change in the particle velocity from the calculated value when the sample shock velocity is changed one standard deviation while leaving the dural shock velocity unchanged. σ_p'' represents the difference between a new particle velocity and the mean when the dural shock velocity is changed one standard deviation and the shock velocity of the sample remains unaltered. This same procedure is followed to obtain the precision index for the sample pressure. The expression to calculate the error for the relative volume σ_V of the sample is

$$\sigma_V = \frac{V}{V_0}\sqrt{\left(\frac{\sigma_s}{U_s}\right)^2 + \left(\frac{\sigma_p}{U_p}\right)^2}$$

where U_s, σ_s, U_p, and σ_p are the appropriate velocities and their associated errors. Normally, the statistical error in the particle