written such that the output from the coefficients program is directly adapted for input data. The output of the force program is in terms of the applied force and the radius ratio, or containing ring strain ϵ_{oc}; if the wafer is confined. The data obtained from the coefficients program is also used in Figure 23, which is the required computer program for determining the normal and shearing stresses as given in equations (38), (39), (40), and (41). The stress distributions are determined for two distinct values of radial deformation in order to illustrate the effect of increased load on the stress gradients. The axial variations of the stresses are shown by comparing the results obtained at the mid-meridian plane (Z=0) with those at the top surface. Since the pressure is defined herein as the average of the orthogonal stress state at a point, it is recorded concurrently with the documenting of the normal stresses.

In order to illustrate more clearly the operation of the computer programs just described, the information entered and recieved in the evaluation of the compression of an unconfined 303 stainless steel wafer is shown in Figures 24, 25, and 26. The interpretation of the location and meaning of the input and output data is best described by referring to the appropriate written program, and cross examining the "read" and "punch" statements, respectively. The output of Figure 24 is used in computing applied force in Figure 25, and the desired stress distributions in Figure 26. The results of Figures 25 and 26 were employed in the construction of