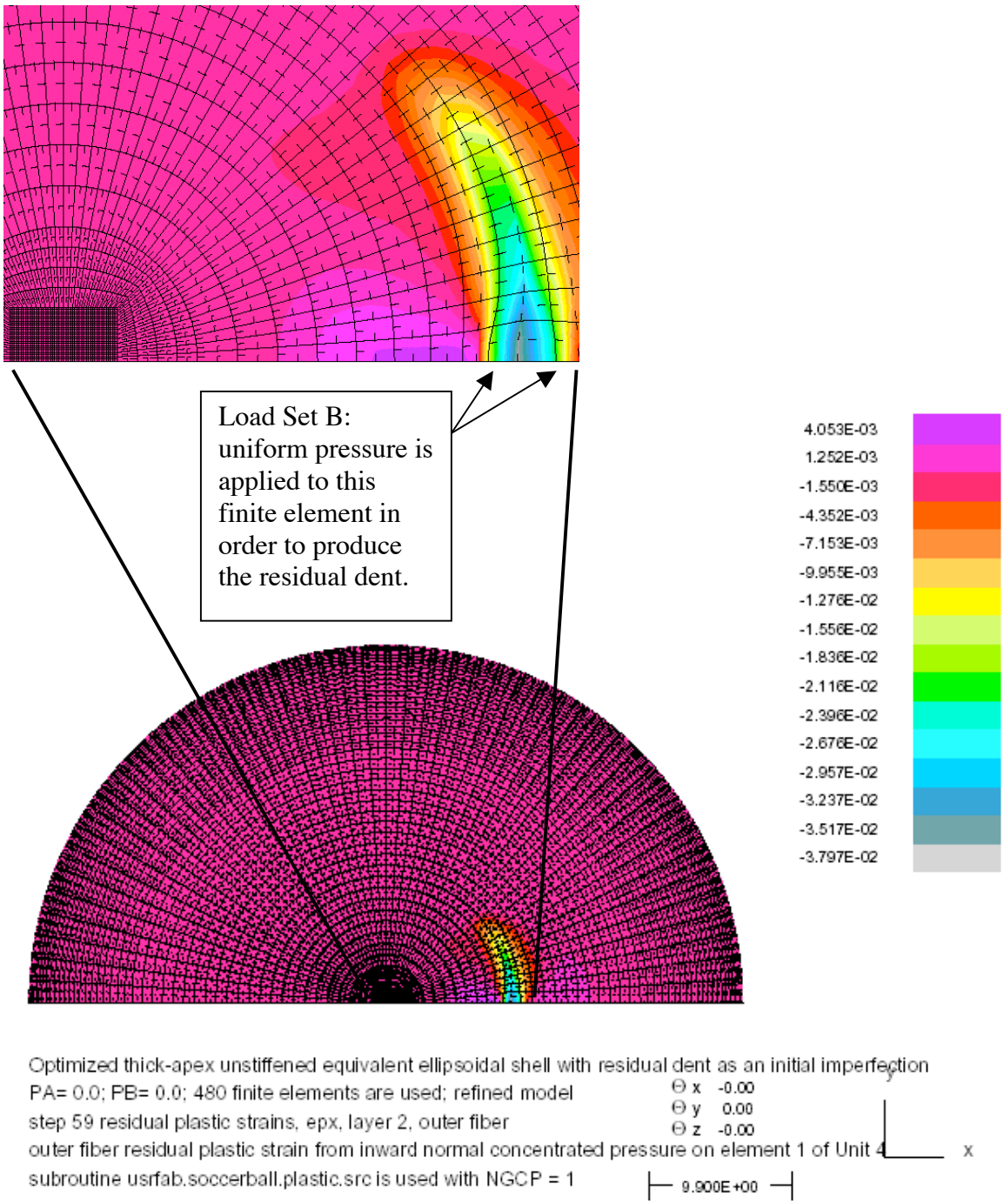

Fig. 172 Elastic-plastic analysis of the **optimized unstiffened equivalent ellipsoidal shell with thick apex, t(apex)=0.4 inch; Wimp=0.2 inch; the optimum design is listed in Table 78.** Shown here is the residual meridional **outer fiber** plastic strain, epx, in the unloaded shell with the residual dent. Here the residual dent is produced by the application and removal of pressure on a **single finite element** (like a single normal, inward-directed concentrated load). Compare with Fig. 187, for which the residual dent is produced by the application and removal of a cos(theta) distribution of normal, inward-directed concentrated loads along a circumferential line from theta = 0 to 90 degrees.