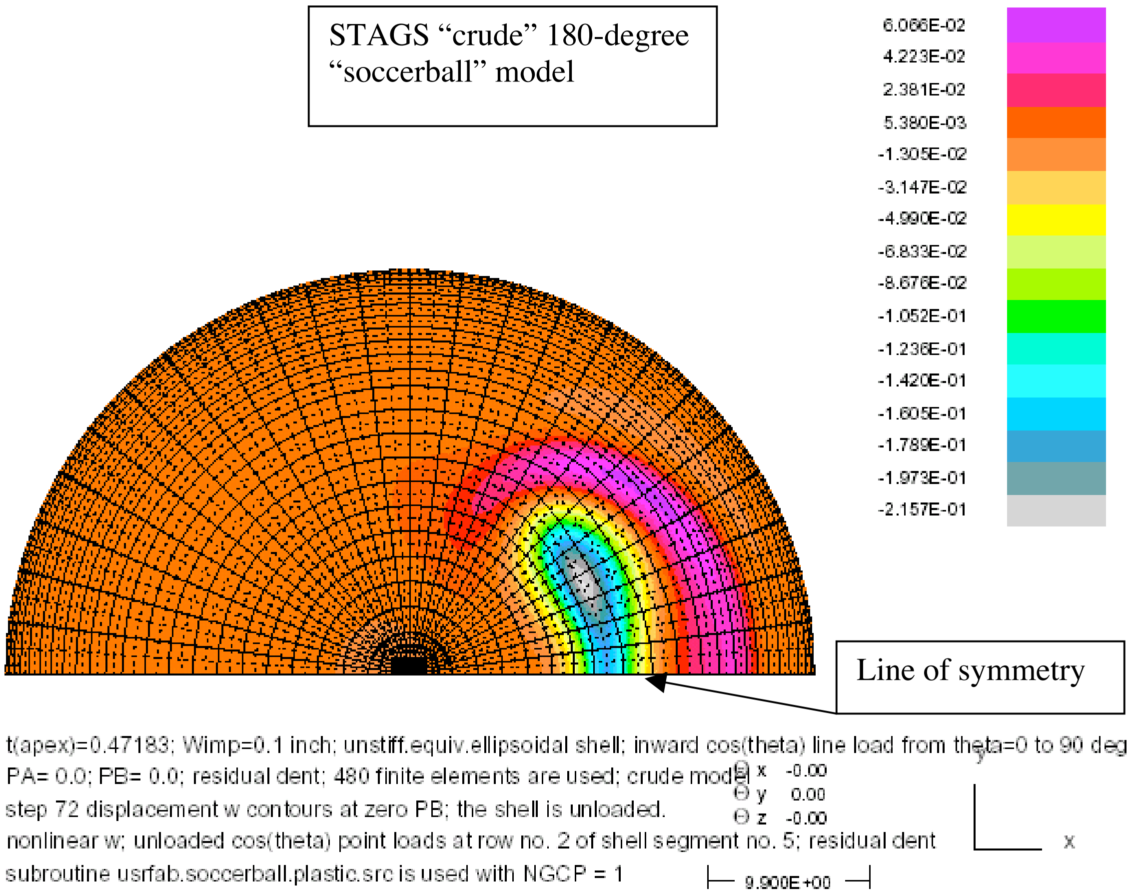

Fig. 219 Elastic-plastic analysis of the **optimized unstiffened equivalent ellipsoidal shell with the thick apex with t(apex) = 0.47183 inch; Wimp=0.1 inch**, half the amplitude, Wimp = 0.2 inch, that pertains to the results in Figs. 145 – 200 and Tables 78 – 88**; the optimum design is listed in Table 89.** State of the shell at load set B (PB) at the end of Run 3. This is the **residual dent** at the end of Run 3. (See Fig. 216). Load set B consists of a number of concentrated inward-directed normal **loads** applied along Row 2 of Shell Segment 5 (Figs. 2, 169, 205) distributed as cos(theta) from theta = 0 to 90 degrees in the circumferential coordinate. This load distribution is used because it generates a dent that **locally** resembles the negative of the deformation in Fig. 205, that is, the negative of the linear buckling modal imperfection with n = 1 circumferential wave. Note the unusual situation that the maximum depth of the **residual dent** lies above the line of symmetry even though the maximum applied "cos(theta)" load lies on the line of symmetry. This unexpected state is related to the non-monotonic nature of the unloading curve in Fig. 216 labeled "Run 3". There is a bifurcation on or near this unloading curve. Note that, unlike Run 3, Run 2 continues through its bifurcation point, which occurs in the gap between the two curve segments with circles and triangles. Compare this figure with Fig. 186, which applies to a different optimum design: that listed in Table 78, for which Wimp = 0.2 inch.