



Fig. 246 Elastic-plastic analysis of the **optimized unstiffened equivalent ellipsoidal shell with the thick apex with $t(\text{apex}) = 0.61996$ inch; Wimp=0.2 inch; the optimum design is listed in Table 93.** Collapse of the imperfect shell with **Case 2** residual dents of two depths. The **Case 2** dents are generated by a load set B (PB) cycle. Load Set B consists of a number of normal, inward-directed concentrated loads applied, in **Case 2**, along row 3 of segment 5 (Figs. 2, 169, 232, and 233) that has a $\cos(\theta)$ circumferential distribution from $\theta = 0$ to 90 degrees. This “ $\cos(\theta)$ ” load distribution is used because it generates a dent that **locally** resembles the deformation in Figs. 232 and 233, that is, the linear buckling modal imperfection with $n = 1$ circumferential wave. Compare with Fig. 241.