



Fig. 255 STAGS "soccerball" model of the optimized imperfect isogrid-stiffened equivalent ellipsoidal shell. The optimum design, listed in columns 2 and 3 of Table 33, was obtained with plus and minus axisymmetric ($n=0$) mode 1 and mode 2 linear buckling modal imperfection shapes with amplitude, $W_{imp} = 0.2$ inch. This is the deformed state at Load Step 12 of the shell with the $n=1$ imperfection shape shown in Figs. 258 and 259. (See the second-to-last trace in the previous figure). Displayed here is the **inner fiber** meridional plastic strain, epx, in layer 1 (the isogrid layer) at an external pressure very close to the design pressure, 460 psi, for which the load factor, PA = 1.0.