



**Fig. 257 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 axisymmetric ( $n=0$  circumferential waves) linear buckling modal imperfection shape analogous to the **+mode 1** imperfection shape predicted by BIGBOSOR4 and shown in Fig. 4. The negative of this shape is used as the  $n = 0$  imperfection corresponding to the first six traces in Fig. 254. Compare with the 360-degree STAGS model displayed in Fig. 6. The difference in the eigenvalue, 2.6996 here vs 2.835 in Fig. 6, is caused primarily by the difference in the finite element used in the STAGS model: STAGS Element 480 here vs STAGS Element 410 in Fig. 6.