STAGS 180-degree "soccerball" model of the optimized isogrid-stiffened shell

axisymmetric mode 2, pcr(STAGS)=3.4678 x 460 = 1595.2 psi; BIGBOSOR4 gets 1622.1 psi
mode 3, pcr = 0.34678E+01

Θ x -35.84
Θ y -13.14
Θ z   35.63

step   0   eigenvector deformed geometry

linear buckling of perfect optimized stiffened equivalent ellipsoidal shell (design listed in Table 33)

Fig. 260 **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, Wimp = 0.2 inch.** This is the axisymmetric (n=0 circumferential waves) linear buckling modal imperfection shape analogous to the **+mode 2** imperfection shape predicted by BIGBOSOR4 and shown in Fig. 5. This "+mode 2 imperfection shape" corresponds to eigenvalue no. 3 in the STAGS output file, soccerball.out2. Compare with the 360-degree STAGS model displayed in Fig. 9. The difference in the eigenvalue, 3.4678 here vs 3.5055 in Fig. 9, is caused by both the difference in discretization and in the difference in the finite element used in the STAGS model: STAGS Element 480 here vs STAGS Element 410 in Fig. 9.