

- STAGS: 360-degree model; elastic; n=0 buckling modal imperf; Wimp=-0.2 inch; node 1; 410 element
- STAGS: 360-degree model; elastic; n=0 buckling modal imperf; Wimp=-0.2 inch; node 1; 480 element
- △ STAGS: soccerball model; elastic; n=0 buckling modal imperf; Wimp=-0.2 inch; node 1; 410 element
- + STAGS: soccerball model; elastic; n=0 buckling modal imperf; Wimp=-0.2 inch; node 1; 480 element
- × STAGS: soccerball model; plastic; n=0 buckling modal imperf; Wimp=-0.2 inch; node 1; 480 element
- ◇ STAGS: soccerball model; plastic; n=0 buckling modal imperf; Wimp=-0.001 inch; node 1; 480 element
- ▽ STAGS: 360-degree model; elastic; n=1 buckling modal imperf; Wimp=+0.2 inch; node 1; 410 element
- ▽ STAGS: 360-degree model; elastic; n=1 buckling modal imperf; Wimp=+0.2 inch; node 1; 480 element
- × STAGS: soccerball model; elastic; n=1 buckling modal imperf; Wimp=+0.2 inch; node 1; 480
- ◆ STAGS: soccerball model; elastic; n=1 buckling modal imperf; Wimp=-0.2 inch; node 1; 480
- ⊕ STAGS: soccerball model; elastic; n=1 buckling modal imperf; Wimp=-0.2 inch; node 1; 410
- ⊗ STAGS: soccerball model; plastic; n=1 buckling modal imperf; Wimp=-0.2 inch; node 1; 480
- ⊞ STAGS: soccerball model; plastic; 2nd n=1 buckling modal imperf; Wimp=-0.2 inch; node 1171; 480
- ⊠ design pressure (psi)

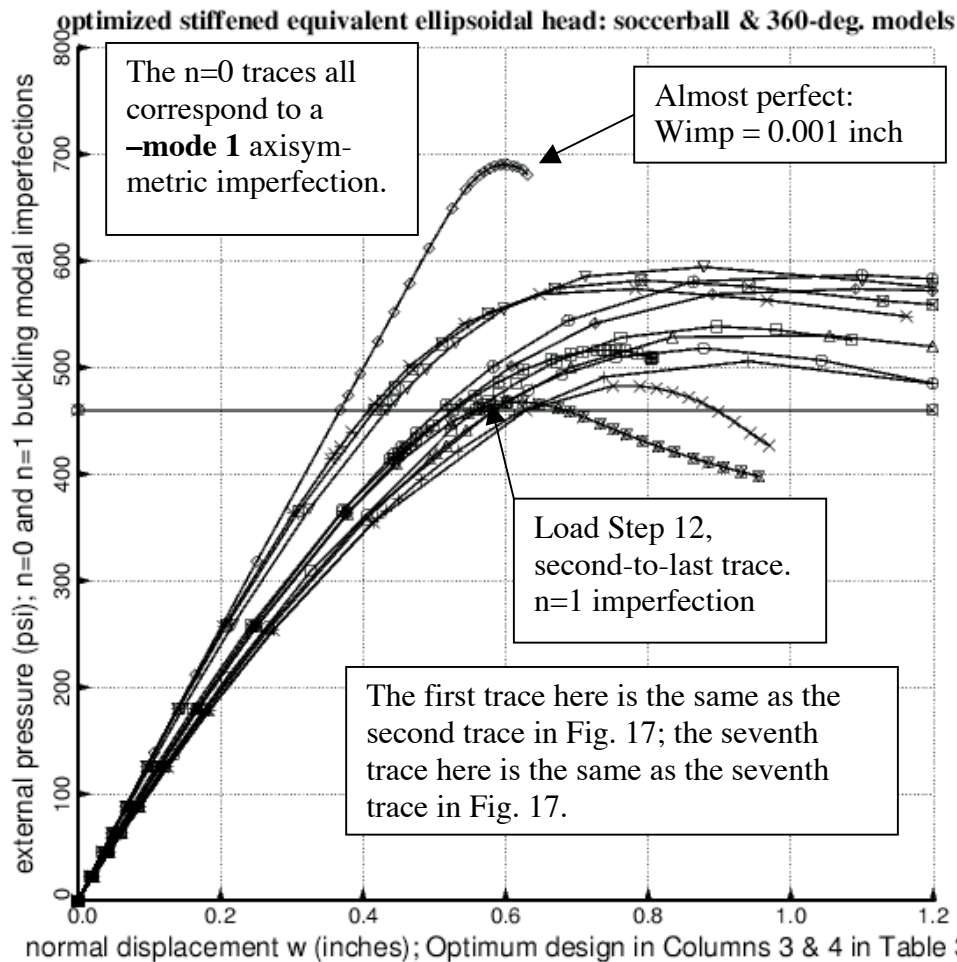


Fig. 254 Axisymmetric and non-axisymmetric collapse of optimized almost perfect (trace 6) and imperfect isogrid-stiffened equivalent ellipsoidal shells. The optimum design, listed in columns 2 and 3 of Table 33, was obtained with linear axisymmetric (n=0) buckling modal imperfections with amplitude, **Wimp = 0.2 inch**. For the 180-degree “soccerball” model the linear bifurcation buckling modal imperfection shape corresponding to axisymmetric (n=0) collapse (the first 6 traces) is shown in Fig. 257. The linear bifurcation buckling modal imperfection shapes corresponding to non-axisymmetric (n=1) collapse (the last 7 traces) are displayed in Figs. 258 and 262. For the 360-degree models the linear bifurcation buckling modal imperfection shapes are shown for n=0 in Fig. 6 and for n=1 in Figs. 7 and 10. Compare this figure with Fig. 17.