

Optimized thick-apex unstiffened equivalent ellipsoidal shell. Refined model with 480 elements

eig. 3,  $\text{pcr}(\text{STAGS}) = 2.8265 \times 460 = 1300.2 \text{ psi}$ ;  $n=1$  circumferential wave

step 0 eigenvector deformed geometry

linear buckling of perfect unstiffened 180-degree "soccerball" shell from STAGS

$\Theta_x = -35.84$   
 $\Theta_y = -13.14$   
 $\Theta_z = 35.63$

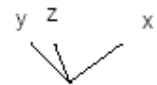


Fig. 179 Linear buckling mode from STAGS that corresponds to the third eigenvalue for the **optimized unstiffened equivalent ellipsoidal shell with the thick apex with  $t(\text{apex}) = 0.4$  inch; the optimum design is listed in Table 78.** Compare this "refined" 180-degree "soccerball" model with the 360-degree STAGS model displayed in Fig. 148 and with the "crude" 180-degree "soccerball" model shown in Figs. 190 and 191.