



Fig. 10 Seventh linear bifurcation buckling mode of the optimized **isogrid-stiffened** equivalent ellipsoidal shell according to the STAGS program. This STAGS linear bifurcation buckling mode is used as an initial imperfection shape with amplitude,  $W_{imp} = 0.2$  inch, to compute the nonlinear load-apex-deflection curve plotted as the last trace in Fig. 17. Compare with the 180-degree STAGS “soccerball” model in Fig. 262. **Shells of revolution with imperfections with this non-axisymmetric shape cannot be handled by BIGBOSOR4.** Therefore, GENOPT optimization occurs in the presence of only axisymmetric buckling modal imperfections.