



The unstiffened shell was optimized by GENOPT with Mode 1,2,3,and 4 axisymmetric imperfections.

STAGS linear buckling mode 2, pcr= 1.7661 x 460 psi

BIGBOSOR4 gets 1.770 x 460 psi

Mode 2 axisymmetric linear buckling of perfect shell from STAGS, 10-degree model, 410 elements

Θ x -35.84  
Θ y -13.14  
Θ z 35.63

y z x

Fig. 113 STAGS prediction of linear bifurcation buckling of the 4-mode-optimized **unstiffened, imperfect** equivalent ellipsoidal shell. This STAGS mode is analogous to the linear buckling mode predicted by BIGBOSOR4 called “mode 2” in the GENOPT jargon. Compare with Fig. 99 (BIGBOSOR4 model) and Fig. 105 (360-degree STAGS model). 410 finite elements are used in this refined STAGS model. This STAGS buckling mode shape is much closer to the BIGBOSOR4 prediction than is the “mode 2” buckling mode shape obtained from the 360-degree STAGS model, as seen in Fig. 112.