

mode 9, pcr(STAGS) = 4.2435 x 460 = 1952.01 psi; BIGBOSOR4 gets 1959.60 psi STAGS prediction for shell optimized with the use of modes 1, 2, 3, 4 Θ x -35.84 Θ y -13.14 Θ y z step 0 eigenvector deformed geometry Θ z 35.63 linear buckling of perfect shell: isogrid-stiffened equivalent ellipsoid: eqellipse.stiffened.4loadsets.opm

Fig. 63 n = 0 circumferential waves (axisymmetric) linear buckling mode shape from STAGS for the optimum design of the **isogrid-stiffened** equivalent ellipsoidal shell listed in Table 52. The optimum design was obtained with BIGBOSOR4 with the use of plus and minus axisymmetric **mode 1, mode 2, mode 3, and mode 4** imperfection shapes with amplitude, Wimp = 0.2 inch. This STAGS buckling mode is analogous to the axisymmetric buckling mode from BIGBOSOR4 shown in Fig. 56, which in GENOPT jargon is called "**mode 3**". It corresponds to eigenvalue no. 9 in the STAGS model. Compare with the 2nd axisymmetric buckling mode for the "2-mode" optimized isogrid-stiffened shell shown in Fig. 9.