

- BIGBOSOR4 collapse (INDIC=0) results from eqellipse.ALL6N, -mode 1 imperfection shape
- STAGS elastic results for -mode 1 imperfection shape; Wimp = -0.2 inch
- △ STAGS -mode 1 imperfection shape + 0.001 n=6 trigger.
- + BIGBOSOR4 INDIC=-2 prediction of nonlinear bifurcation of the IMPERFECT shell (n=6 circ.waves).
- × BIGBOSOR4 INDIC=1 prediction of nonlinear bifurcation of the IMPERFECT shell (n=6 circ.waves).
- ◇ STAGS prediction of nonlinear bifurcation of the IMPERFECT shell (n=6 circ.waves).
- ▽ BIGBOSOR4 prediction of linear bifurcation buckling of the PERFECT shell (n=0 circ.waves).
- ⊠ STAGS prediction of linear bifurcation buckling of the PERFECT shell (n=0 circ.waves).
- × Design pressure = 460 psi
- ◆ Allowable pressure for axisymmetric collapse = 550 psi

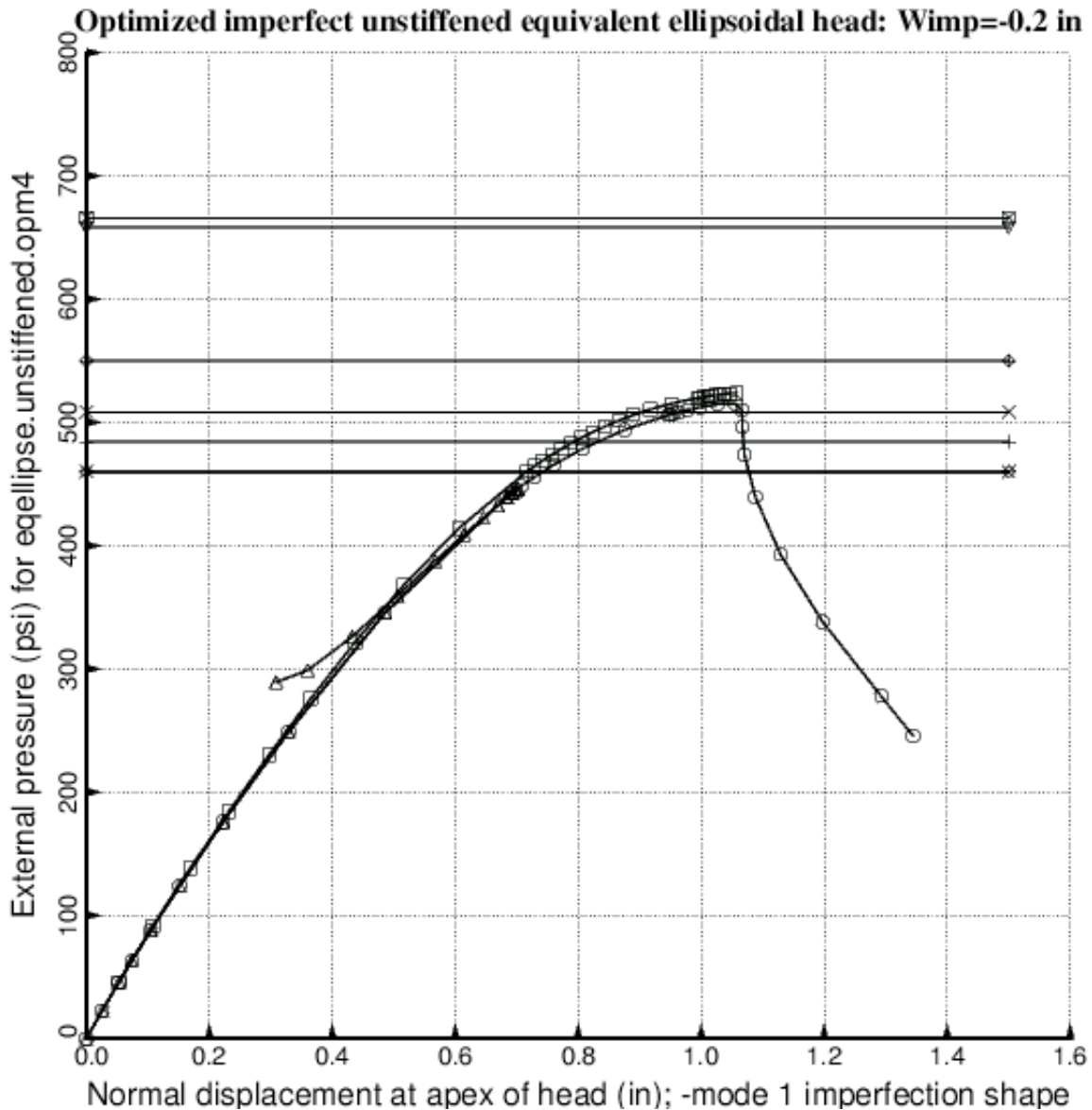


Fig. 84 Linear and nonlinear behavior of the optimized **imperfect unstiffened** equivalent ellipsoidal shell with a **-mode 1** axisymmetric linear buckling modal imperfection with amplitude, Wimp = -0.2 inch. The material is elastic. The nonlinear bifurcation buckling mode from STAGS is displayed in the next figure. That mode is used as a “trigger” (very small amplitude imperfection: Wimp=0.001 inch) in order to obtain the third trace (triangles).