

- STAGS elastic-plastic; n=0 +mode 1 buckling modal imperfection; Wimp=0.10 inch; node 1
- STAGS elastic-plastic; n=0 +mode 2 buckling modal imperfection; Wimp=0.10 inch; node 1
- △ STAGS elastic-plastic; n=0 -mode 1 buckling modal imperfection; Wimp=0.10 inch; node 1
- + STAGS elastic-plastic; n=0 -mode 2 buckling modal imperfection; Wimp=0.10 inch; node 1
- × STAGS "crude" soccerball; elastic-plastic; n=1 mode imperf; Wimp=0.100 inch; node 1392
- ◇ STAGS elastic-plastic; n=0 +mode 1 buckling modal imperfection; Wimp=0.10 inch +0.001 n=3 "trigger"
- ▽ STAGS elastic-plastic; n=0 +mode 2 buckling modal imperfection; Wimp=0.10 inch +0.001 n=5 "trigger"
- ⊠ STAGS elastic-plastic; n=0 -mode 1 buckling modal imperfection; Wimp=0.10 inch +0.001 n=6 "trigger"
- × STAGS elastic-plastic; n=0 -mode 2 buckling modal imperfection; Wimp=0.10 inch +0.001 n=7 "trigger"
- ◆ design pressure (psi)
- ⊕ plasticity begins at this load for +mode 1,+mode 2,-mode 2 axisym.(n=0) buckling modal imperf
- ⊗ plasticity begins at this load for -mode 1 axisymmetric (n=0) buckling modal imperfection
- ⊞ plasticity begins at this load for n = 1 non-axisymmetric buckling modal imperfection

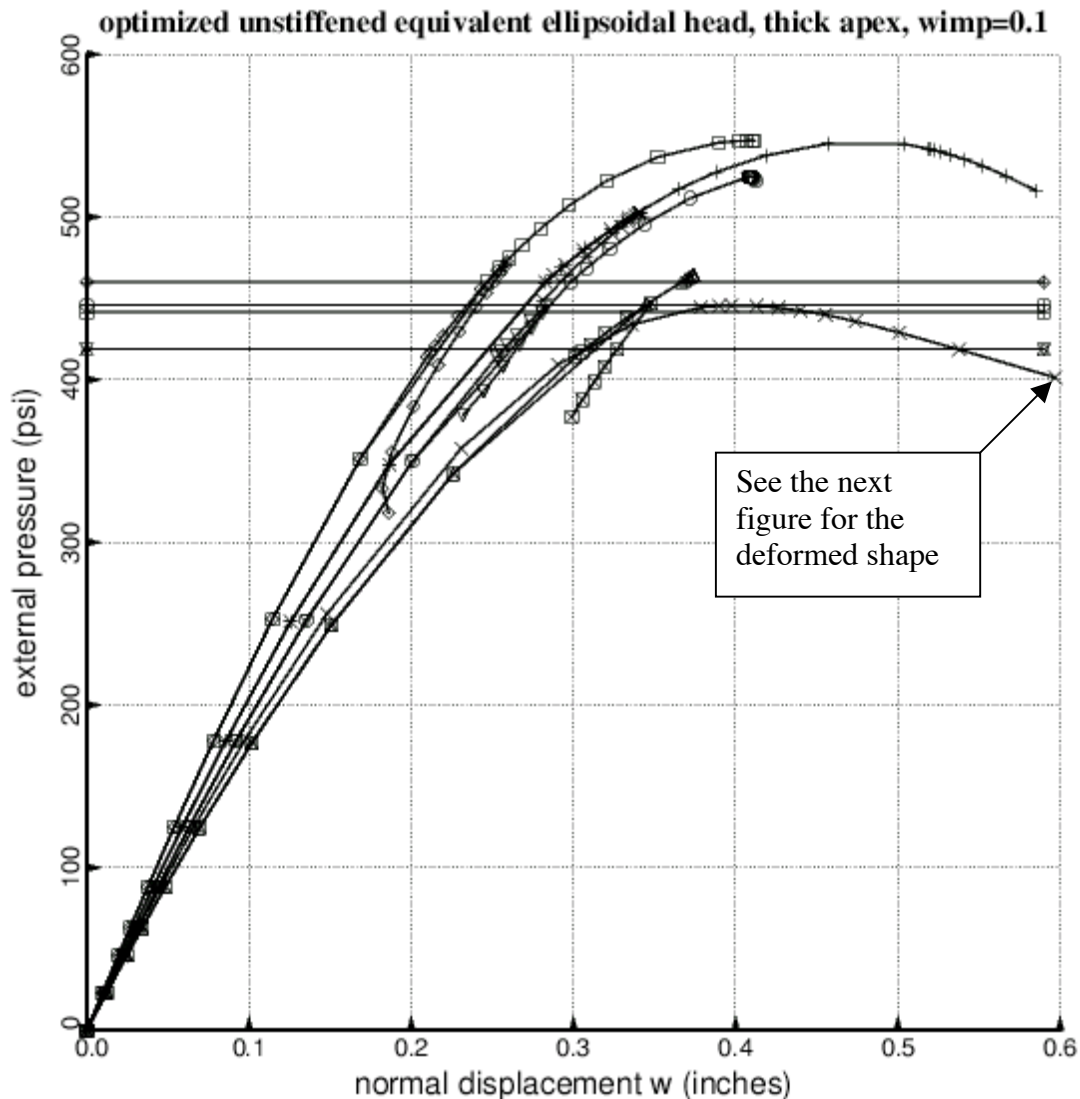


Fig. 209 **Optimized unstiffened equivalent ellipsoidal shell with thick apex, $t(\text{apex})=0.47183$ inch; $W_{\text{imp}}=0.1$ inch, half the amplitude, $W_{\text{imp}} = 0.2$ inch, that pertains to the results in Figs. 145 – 200 and Tables 78 – 88; the optimum design is listed in Table 89.** Load-displacement curves for various buckling modal imperfection shapes. This figure is analogous to Fig. 161. All failure pressures are close to or exceed the design pressure, 460 psi. See Fig. 211 for a “zoomed” version of most traces.