

10-bay flat panel: Input for the PANDA2 processor, STAGSUNIT, is listed in Table 23

PA= 1.00000E+01 PB= 0.00000E+00 PX= 0.00000E+00

step 448 displacement w contours

Fig.66 nonlinear w same view as linear buckling mode; case=allflat3; Compare Fig.51

Minimum value = -5.67421E-02, Maximum value = 5.53874E-02

Θ x -35.84

Θ y -13.14

Θ z 35.63

4.388E+00

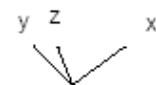


Fig. 66 STAGS prediction of deformation in the 10-stringer-bay flat panel at the design load, PA = 10.0 (Nx = -1000 lb/in). Compare with Fig. 50 for the 5-stringer-bay panel. Also, compare with the previous figure. Now there are downward buckles adjacent to the edges at x = 0 and at x = 9.7793 inches in nine of the ten stringer bays, allowing the ring at x = 0 and the ring at x = 9.7793 inches to roll uniformly along most of their lengths. This type of post-buckling deformation pattern cannot be predicted by the PANDA2 local post-buckling model [3,22], which is based on the single discretized module model shown in Fig. 7, for example.