

## STEEL FRAME WITH USING SHELL ELEMENTS STATIC ANALYSIS & BUCKLING

INPUT DATA: Thickness of shell 0.375''; load (one side) = 25,000 lb

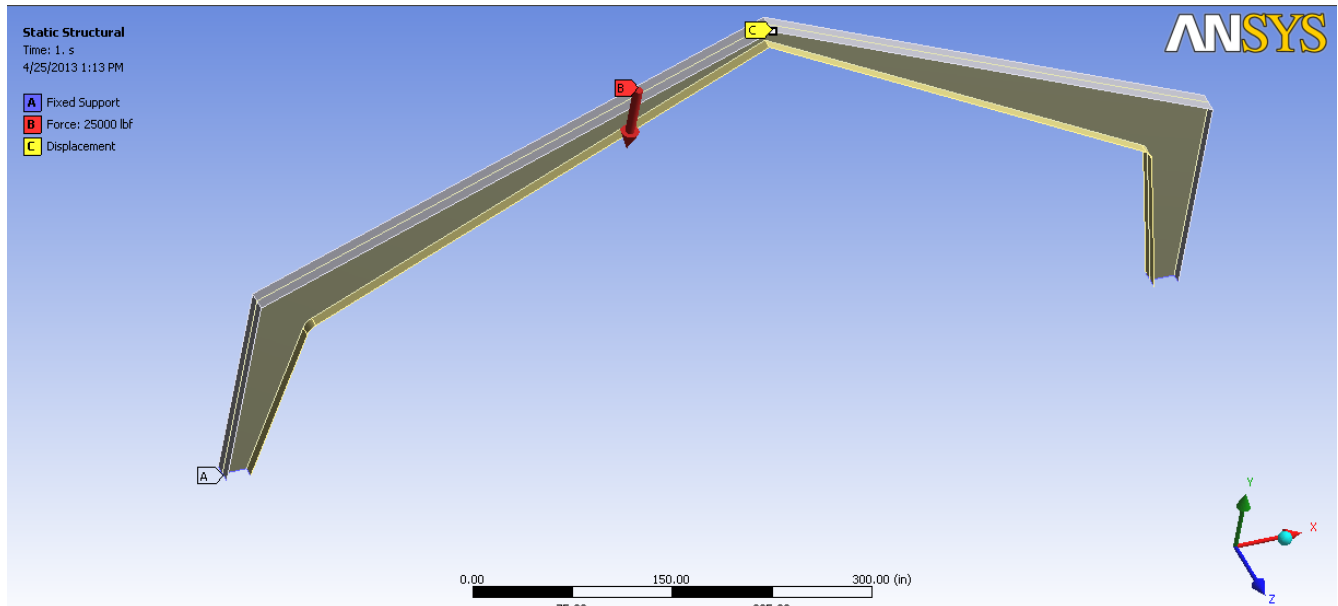


Fig. 1 Loading of the structure

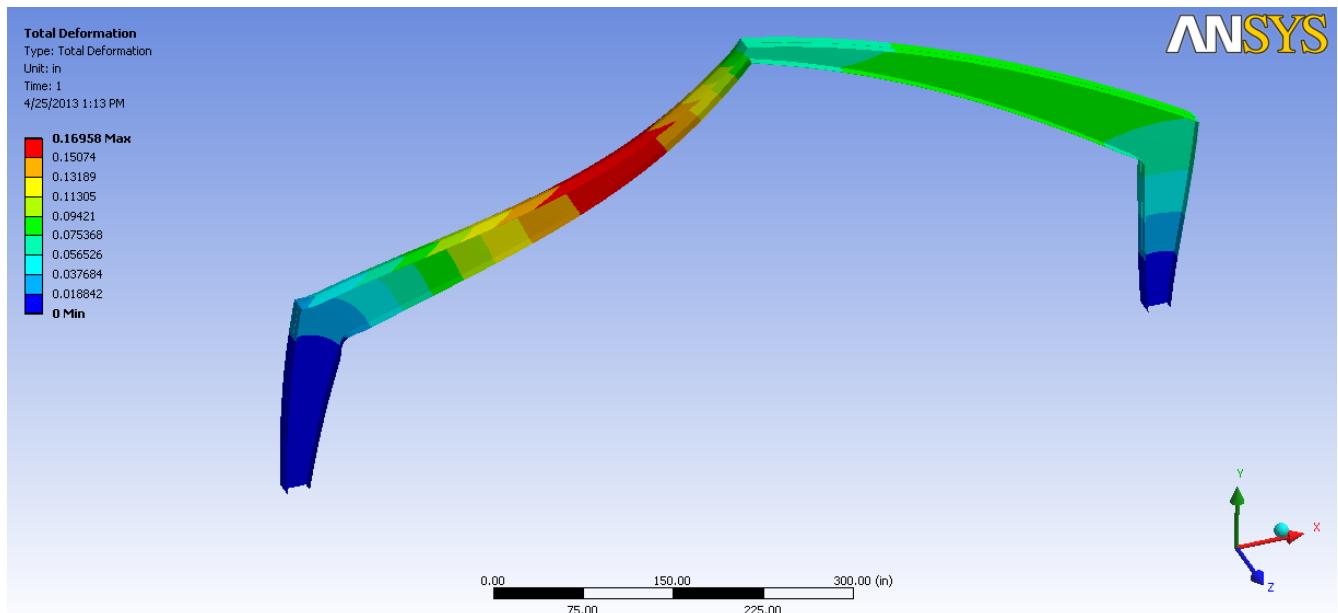


Fig. 2 Displacements (max. 0.17'')

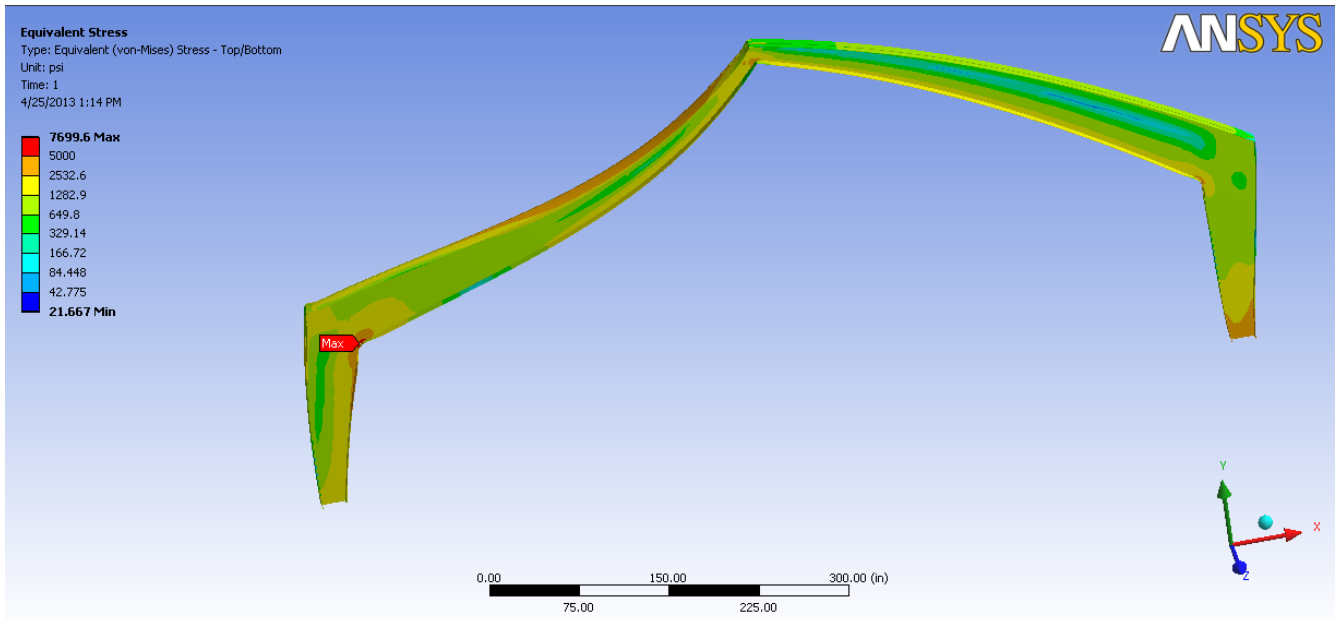


Fig. 3 Von-Mises Stress (max. 7700 psi, localized in the joint)

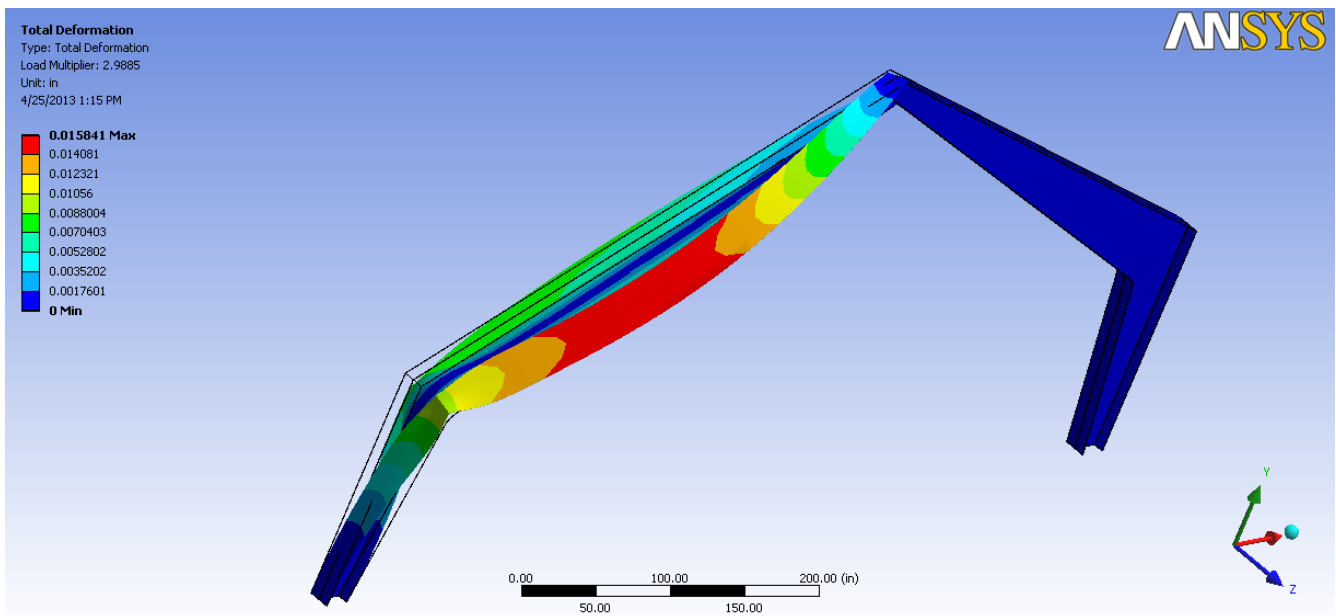


Fig. 4 Buckling (1<sup>st</sup> form) K=2.99

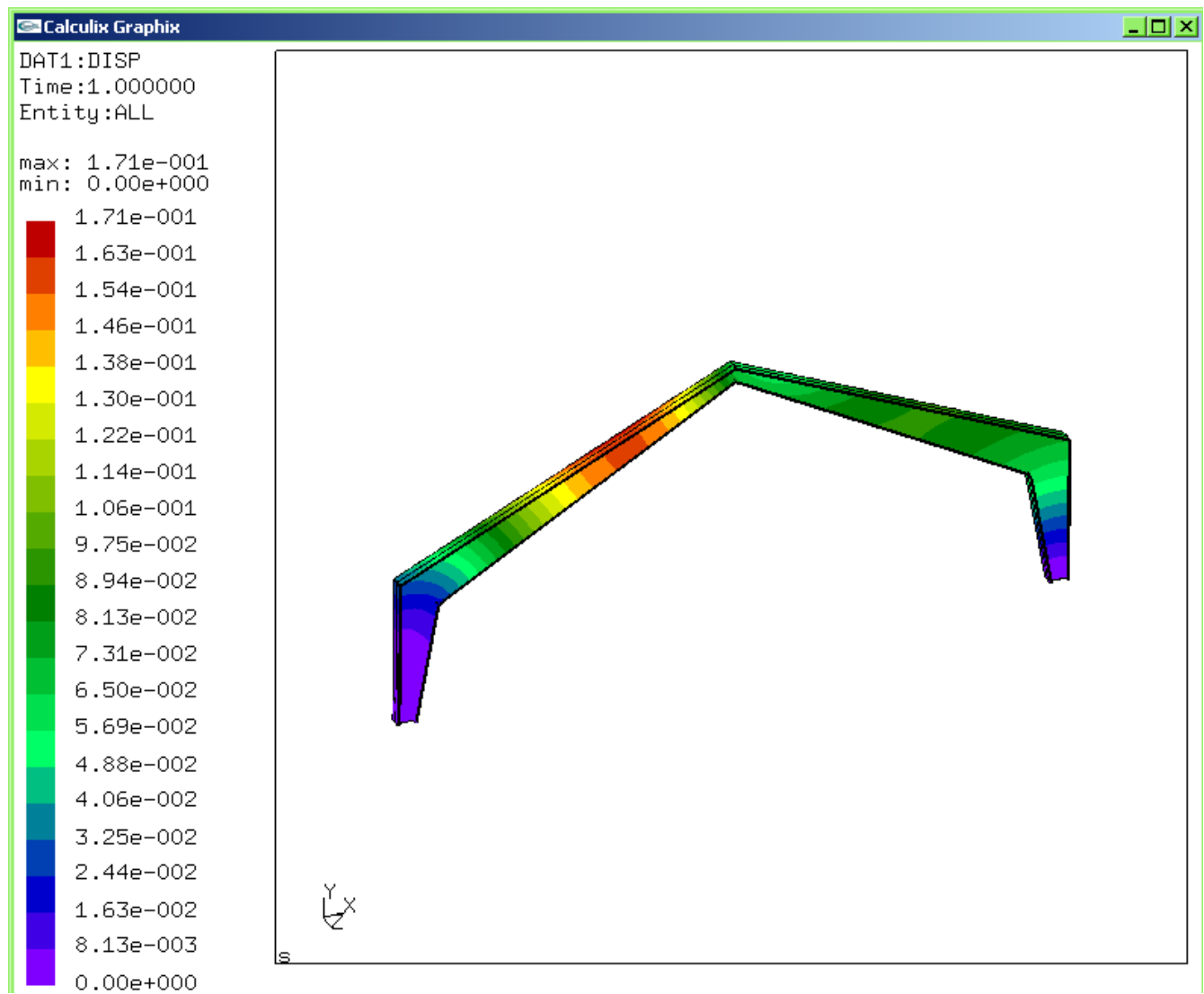


Fig. 5 Displacements in CalculiX (max. 0.171'')

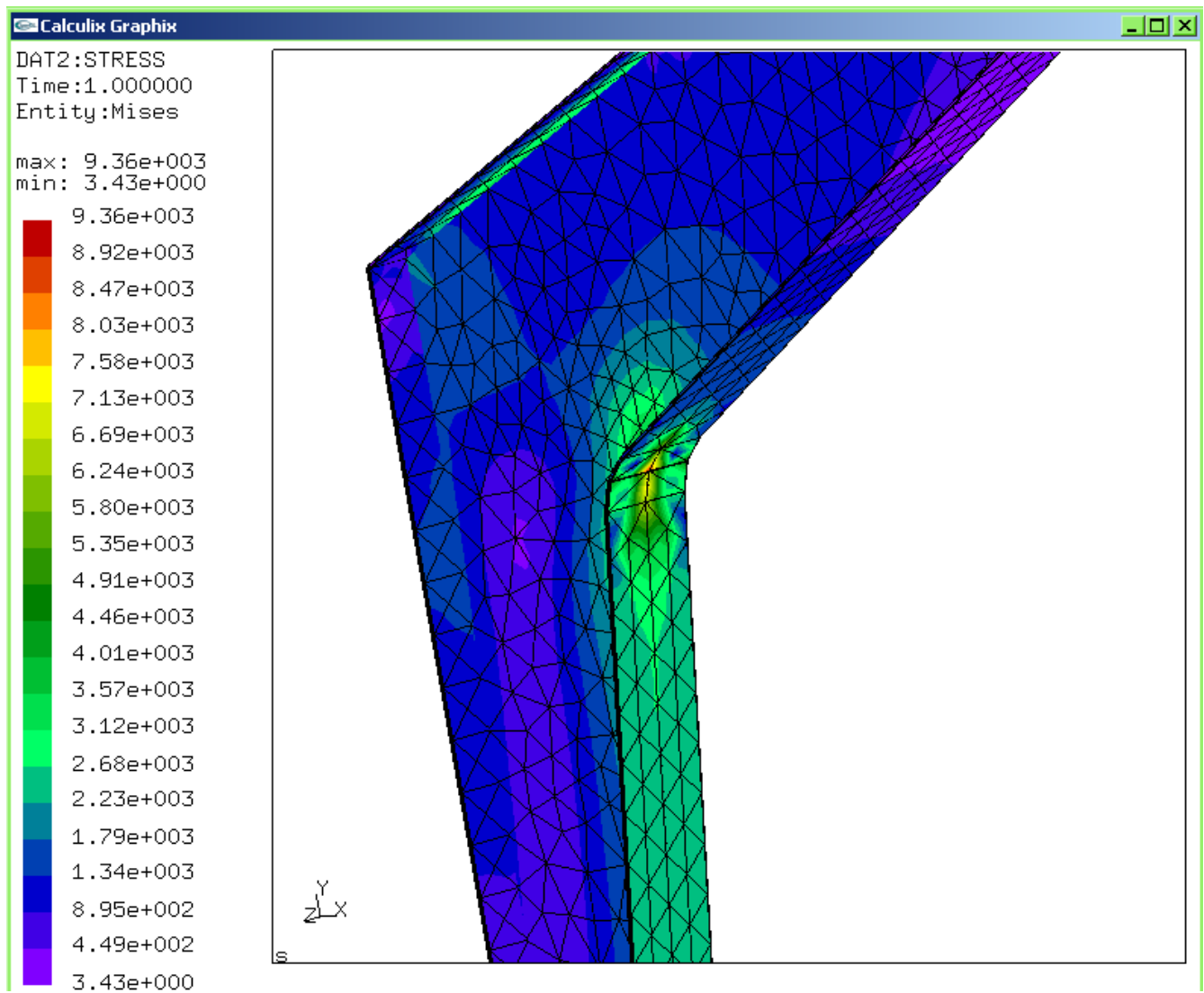


Fig. 6 Von Mises Stress in CalculiX are localized (very dependent on mesh quality),  
max 9360 psi

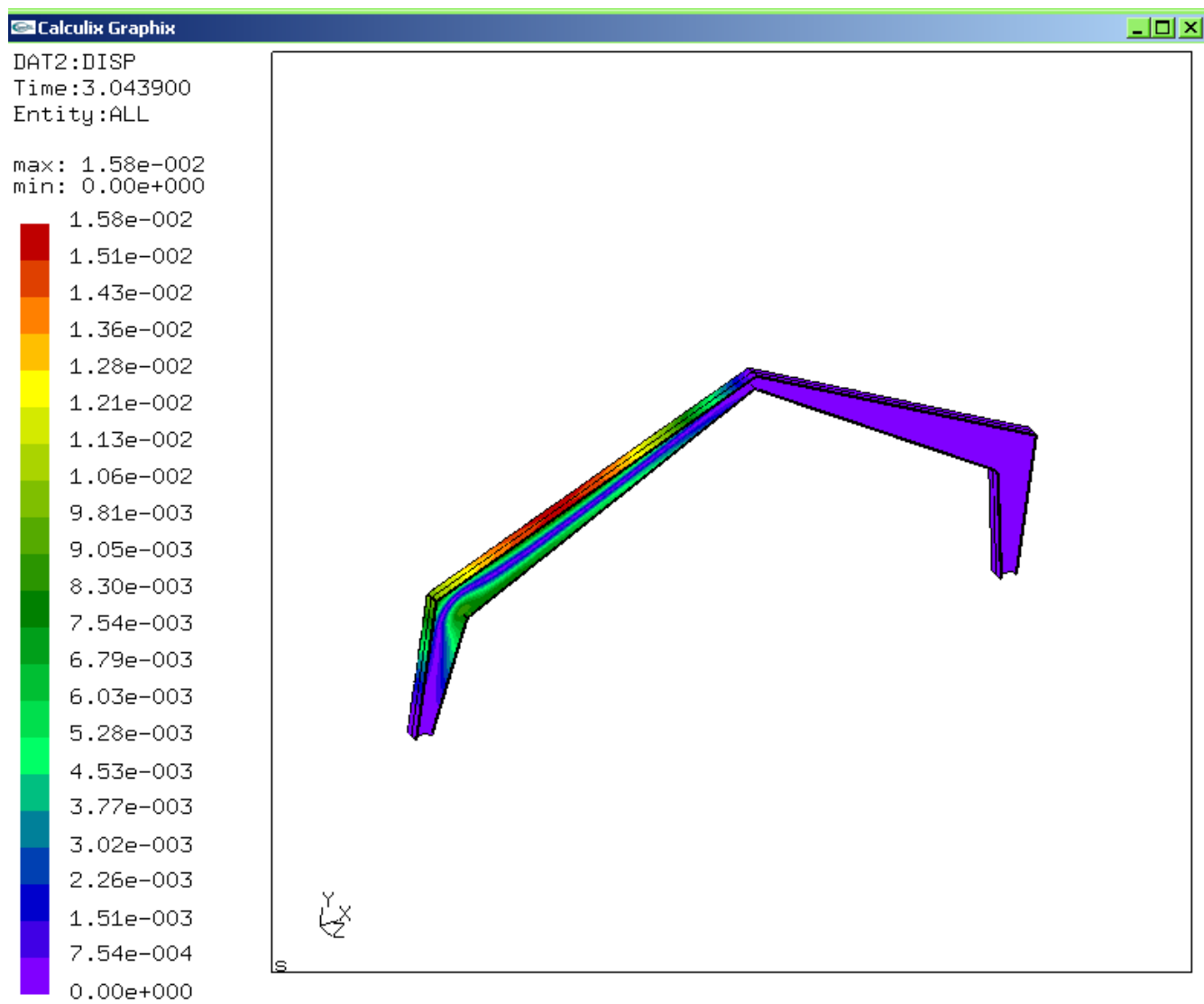


Fig. 7 Buckling (1<sup>st</sup> form) K=3.0