



Fig. 30 STAGS prediction of **inner fiber effective stress seff (psi) in the skin** of the optimized **imperfect isogrid-stiffened** equivalent ellipsoidal shell with an axisymmetric **–mode 1** linear buckling modal imperfection (negative of the mode displayed in Figs. 6 and 11) with amplitude,  $W_{imp} = -0.2$  inch and subjected to the external design pressure,  $p = 460$  psi. Compare with the GENOPT (BIGBOSOR4) prediction of effective stress,  $SKNMAX = 114310$  psi, which occurs at the same meridional location, as listed in Table 44. The maximum effective stress at the **pole** occurs at the outer fiber and is shown in the next figure. NOTE: The BIGBOSOR4 prediction, listed in Table 44 for the **–mode 1** imperfection, only gives the maximum value of the extreme fiber effective stress in each shell segment, not both the maximum **inner** fiber effective stress and maximum **outer** fiber effective stress.