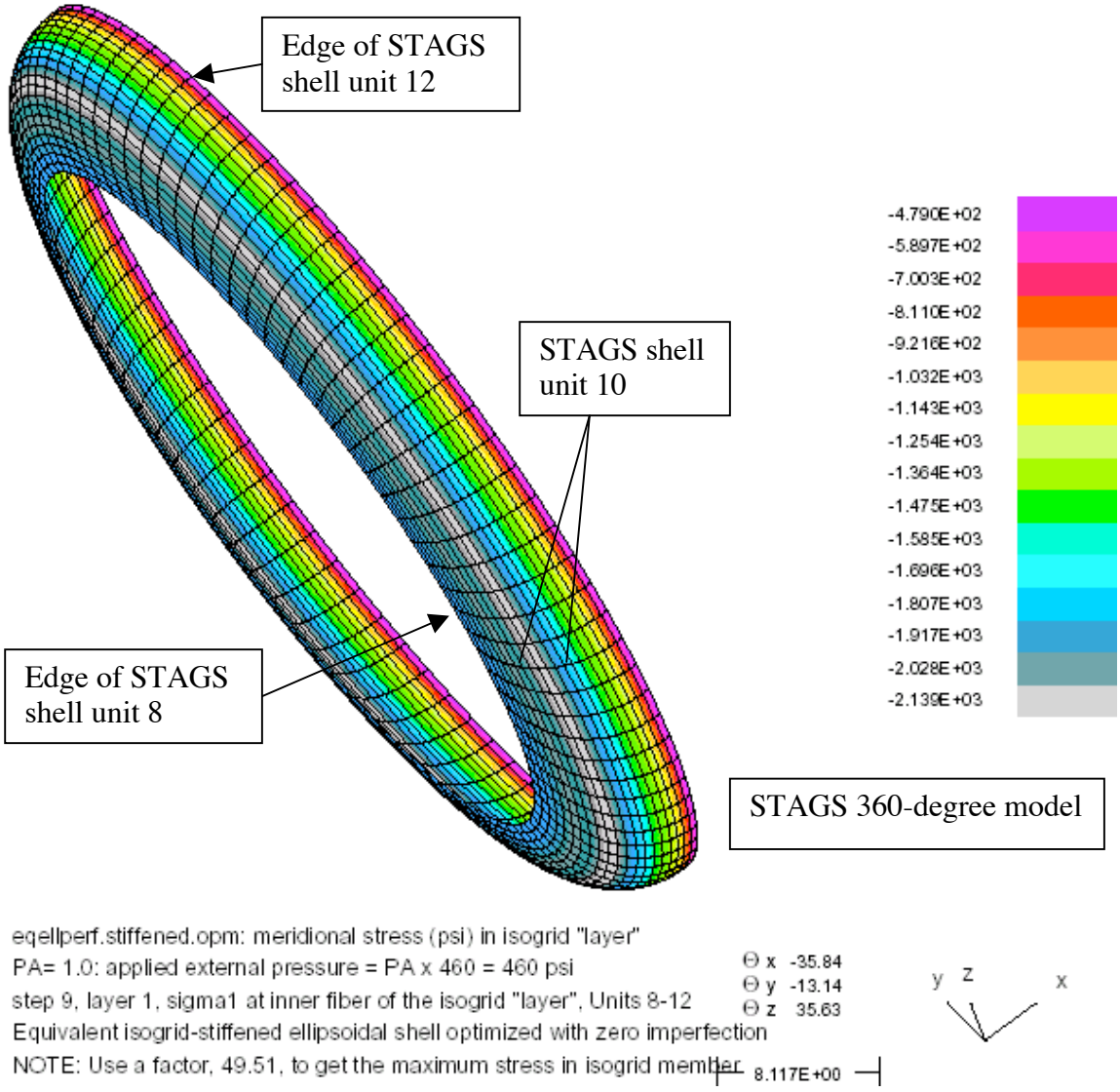

Fig. 126 STAGS prediction of **inner fiber meridional stress sigma1 (psi) in the isogrid "layer"** of the optimized "**perfect" isogrid-stiffened** equivalent ellipsoidal subjected to the external design pressure, p = 460 psi. The maximum meridional stress in the region spanned by shell units 8 – 12 occurs in shell unit 10. STAGS shell unit 10 is the same as BIGBOSOR4 shell segment no. 10 in Fig. 2. In this STAGS model there are four 410 finite elements spanning the meridional region of each shell unit. (See Fig. a1 in the appendix). Compare this STAGS prediction with STFMXS listed for each GENOPT (BIGBOSOR4) shell segment in Table 71. To obtain the STAGS prediction of actual stress in a meridionally oriented isogrid member, multiply the "sigma1" values listed in the key by the factor 49.51, which is the ratio of the isogrid spacing to the thickness of an isogrid member in the optimized design. (See the part of Table 33 with the heading, "isogrid-stiffened, perfect", for the optimum design). NOTE: The BIGBOSOR4 prediction listed in Table 71 only gives the maximum absolute value of the extreme fiber stress in each shell segment, not both the maximum **inner** fiber stress and maximum **outer** fiber stress.