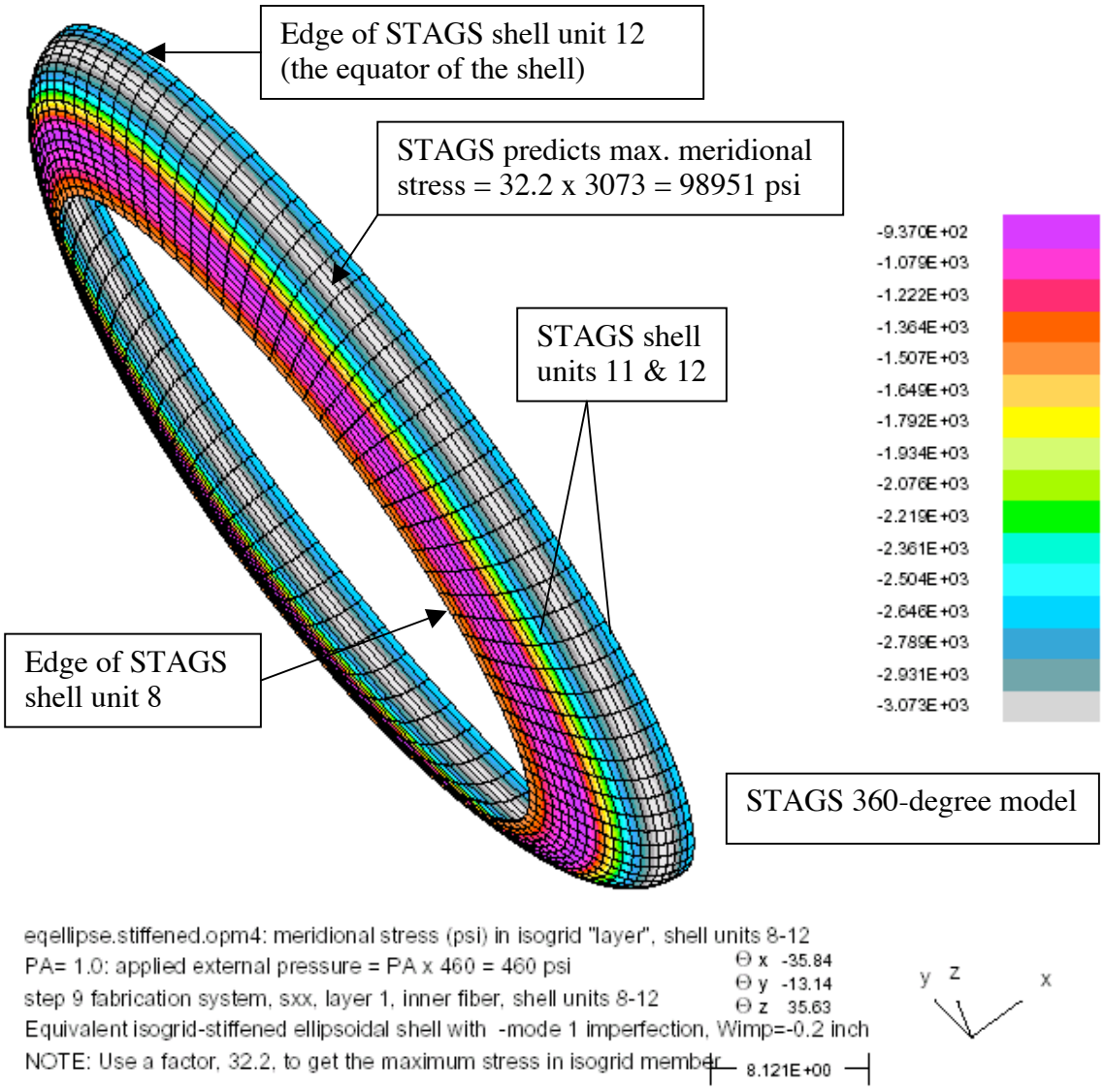

Fig. 29 STAGS prediction of **inner fiber meridional stress sxx (psi) in the isogrid "layer"** of the optimized **imperfect isogrid-stiffened** equivalent ellipsoidal shell with a **–mode 1** axisymmetric initial linear buckling modal imperfection (negative of the mode displayed in Figs. 6 and 11) with amplitude, Wimp = -0.2 inch and subjected to the external design pressure, p = 460 psi. The maximum meridional stress in the region spanned by shell units 8 – 12 occurs at the junction between shell units 11 and 12. In this 360-degree STAGS model (Fig. a1) there are four 410 finite elements spanning the meridional region of each shell unit. (See Fig. a1). Compare this STAGS prediction with STFMXS listed for GENOPT (BIGBOSOR4) shell segment 12 in Table 44: STFMXS=121540 psi. To obtain the STAGS prediction of actual stress in a meridionally oriented isogrid member, multiply the "sxx" values listed in the key by the factor 32.2, which is the ratio of the isogrid spacing to the thickness of an isogrid member in the optimized design.