



Fig. 51 Further optimization of the **imperfect isogrid-stiffened** equivalent ellipsoidal shell, this time with the use of plus and minus **mode 1, mode 2, mode 3, and mode 4** axisymmetric linear buckling modal imperfection shapes. These results were obtained via a SUPEROPT run that was deliberately terminated after running for about 24 hours on the LINUX machine where all this work was done. The starting design at the beginning of the SUPEROPT run is the previous “two-mode” optimum determined with the use of plus and minus axisymmetric mode 1 and mode 2 only, that is, the design listed in Table 33 under the heading “isogrid-stiffened, imperfect”. These results were obtained with the move limit of each decision variable during an optimization cycle restricted to 0.02 (IMOVE = 4) rather than the ordinarily preferred choice of 0.10 (IMOVE = 1). See Items 730 and 740 in Table a24 for more information on IMOVE.