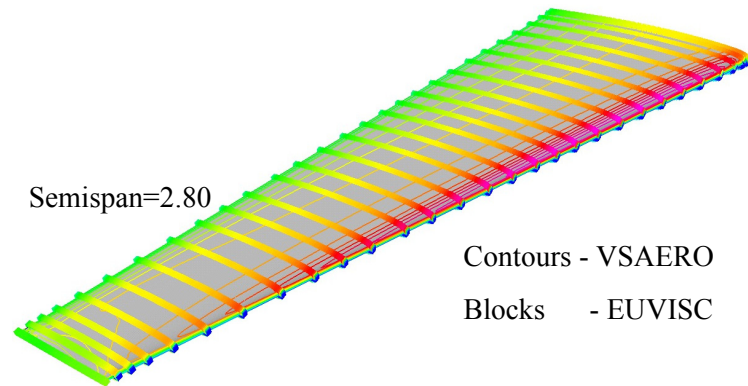
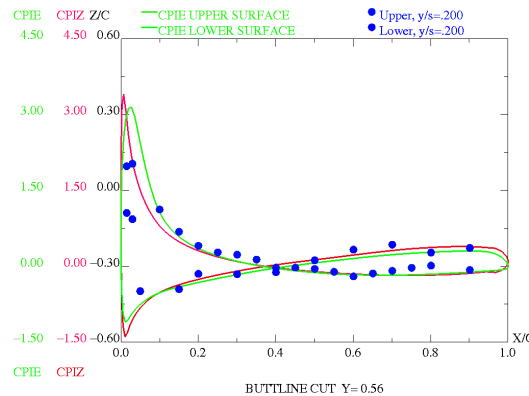
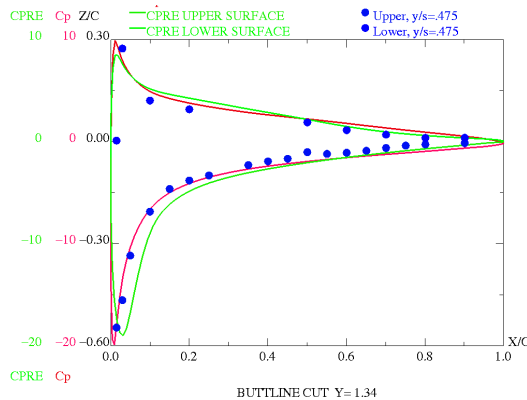


VSAERO – ELASTICAIC

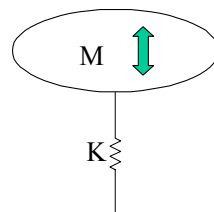
An oscillatory option to VSAERO has been developed along with AMIDEMO, a program to generate an external aerodynamic database for Nastran. Aeroelastic calculations of divergence and flutter are possible. ElasticAIC generates the aerodynamic influence coefficients suitable for calculating pressures on a body undergoing arbitrary oscillation.



VSAERO and Euler results for steady pressure on LANN wing.



VSAERO, Euler and experimental real and imaginary unsteady pressure



Vacuum

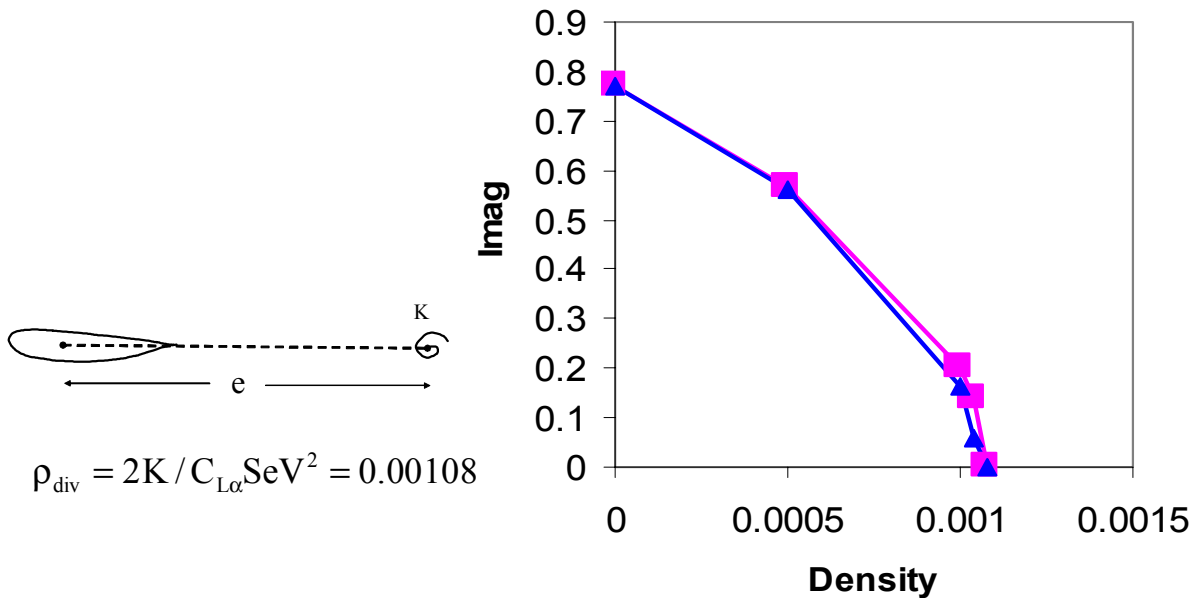
$$\sqrt{\frac{K}{M}} = \text{Frequency} = 1.09 /s$$

Air

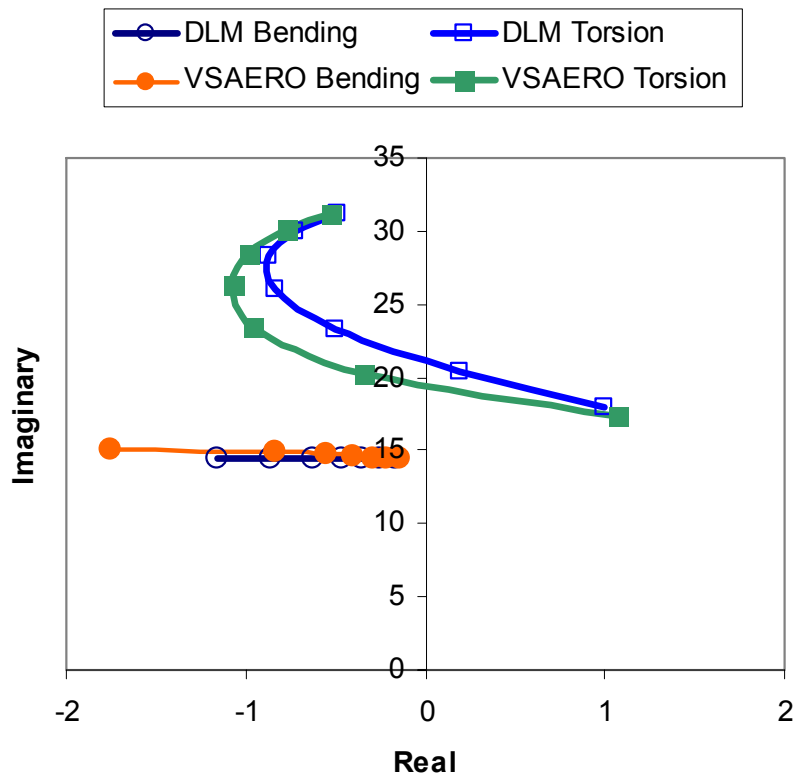
$$\sqrt{\frac{K}{M + M_{AIR}}} = \text{Exact} = 0.83 /s$$

$$\text{VSAERO/Nastran} = 0.82 /s$$

Nastran calculated Frequency of Vibrating Body



VSAERO and DLM Frequency vs. Density for Wing Divergence



Flutter Locus of Goland and Luke Wing