

DPW-VI: Requested Test Cases

- **Case 1: Verification Study**
 - 2D NACA0012 Airfoil - Turbulence Modeling Resource (TMR)
 - $M=0.15$, $Re=6$ million, $AoA=10$ deg, Farfield BC @ 500 Chords
 - Solution Converged on Adapted or Fixed Sequence Grid Family
- **Case 2: CRM Nacelle-Pylon Drag Increment**
 - $Mach=0.85$, $Re=5$ million, $T=100^{\circ}F$, $CL=0.5 \pm 0.0001$, $\alpha=2.75$ deg
 - Grid Convergence Study on Baseline WB & WBNP Grid Families
 - [CD , CM , AoA , Mass-Flux] .vs. $N^{-(2/3)}$ [or other metric]
- **Case 3: CRM WB Static Aero-Elastic Effect**
 - $Mach=0.85$, $Re=5$ million, $T=100^{\circ}F$
 - AoA Sweep with ETW Deflections
 - $AoA=[2.50, 2.75, 3.00, 3.25, 3.50, 3.75, 4.00]$ degrees
 - Medium Baseline Grids: [7 Solutions on 7 Grids]

DPW-VI: Optional Test Cases

- **Case 4: CRM WB Grid Adaptation**
 - Mach=0.85, Re=5 million, T=100°F, CL=0.5 +/-0.0001, $\alpha=2.75^\circ$
 - Start Adaptation Process from Tiny (or Coarse) Baseline Mesh
 - Participants Document Adaptation Process
- **Case 5: CRM WB Coupled Aero-Structural Simulation**
 - Mach=0.85, Re=5 million, T=100°F, CL=0.5 +/-0.0001
 - Medium Baseline Grid
 - FEM Supplied by NASA via CRM Website (Melissa Rivers)
 - Modal Shapes and Frequencies available
- **Cases 1-5: Participant Generated Grids**
 - Provide Documentation of Their Grid Systems
 - Submit Their Grids to the Public Domain
 - Also Run the Cases on the Baseline Grids