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Abstract #XXX *(to be filled by the organizers)*
Preferred Topics: AEROFLIPHY / CFDMPS *(3 maximum from the list of topics)*
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Type: Oral / Poster *(select)* ***ORAL***
Status of corresponding author: Regular / Student *(select)*: ***REGULAR Senior Hon Fellow RAeS***

Summary Data from the Seventh CFD Drag Prediction Workshop
(This paper could be a Session Keynote)

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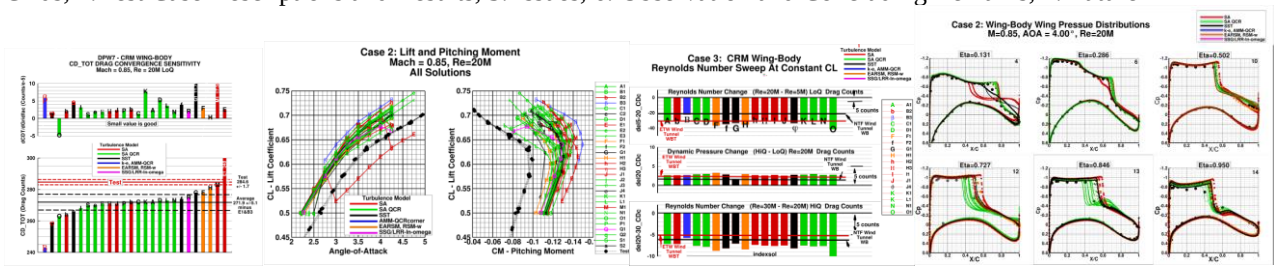
Abstract
Results from the Seventh AIAA CFD Drag Prediction Workshop **Cases 1 to 6** are presented (**specimen Figures here**). These cases focused on force/moment and pressure predictions for the NASA Common Research Model wing-body configuration [1]. The Common Research Model geometry was deformed to the appropriate static aeroelastic twist and deflection at each specified angle-of-attack. The grid refinement study (**Case 1**) used a common set of overset and unstructured grids, as well as user created Multiblock structured, unstructured, and Cartesian based grids. A chord Reynolds number of 20 million was specified for all cases – 5 million optional. Solutions were requested for the wing-body at a fixed Mach number and lift coefficient near buffet onset. The wing-body static aeroelastic/buffet study (**Case 2**) specified an angle-of-attack sweep at finely spaced intervals through the zone where wing separation was expected to begin. **Case 3** requested a Reynolds number/dynamin sweep at a constant lift coefficient. The optional **Case 4** requested grid adaption solutions of the wing-body at a specified flight condition. Optional **Case 5** requested solutions beyond steady RANS. Optional **Case 6** requested coupled aero-structural wing-body solutions. Results from this workshop highlight the progress made since the last workshop, and the continuing need for CFD improvement, particularly for conditions with significant flow separation. These comparisons also suggest the need for improved experimental diagnostics to guide future CFD development. **The Contents** will be:
1. Introduction, 2. Geometry and Experimental Data Description, 3. Gridding Guidelines and Description of Common Grids, 4.Test Case Descriptions and Results, 5. Issues, 6. Observation and Concluding Remarks, 7. Future



References

[1] Rivers, Melissa, B., « NASA Common Research Model: A History and Future Plans". NASA Langley Research Center, Hampton, VA 2368, USA. AIAA Paper, 2019-2088, 2019.