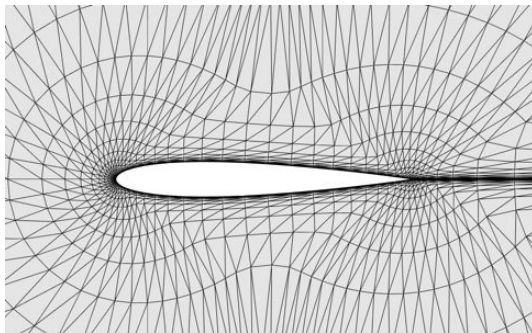


Description des cas test

Réunion MAIDESC - 08/04/2015

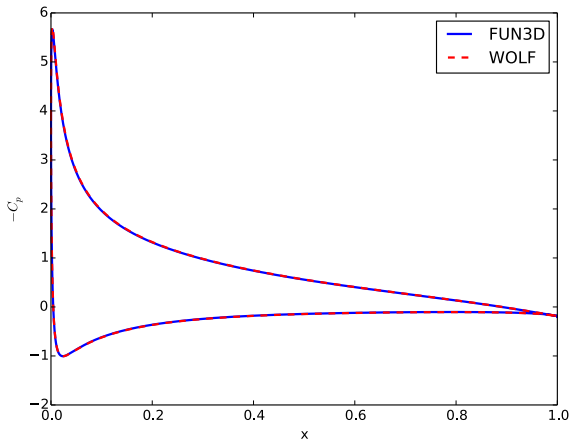
- 2D NACA 0012
- 2D RAE 2822
- 3D Aile M6
- Drag Prediction Workshop 2

- Conditions freestream:
 - Mach 0.15
 - Reynolds 6 Million (basé sur $L = 1$)
 - AoA $0^\circ, 10^\circ, 15^\circ$
 - $T=300K$
- Ref : NASA Turbulence Modeling Resource (TMR)

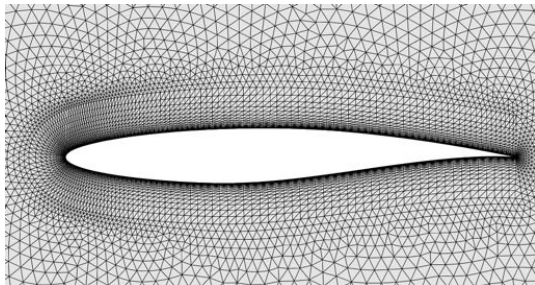


5 grilles triangulées fournies.

- Coefficients de pression (C_p) et de frottement (C_f) pour les 3 AoA.
- Exemple C_p pour $\alpha = 10^\circ$:

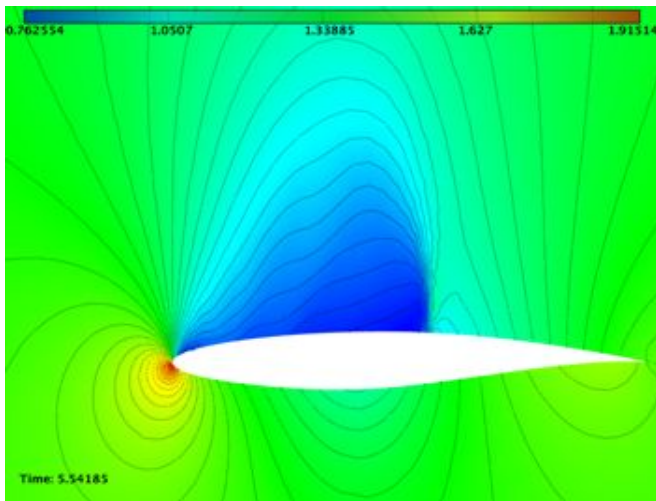


- Conditions freestream (cas 6):
 - Mach 0.729
 - Reynolds 6.5 Million (basé sur $c=1$)
 - AoA 2.92°
 - $T=300K$
- Ref : Cook, P.H., M.A. McDonald, M.C.P. Firmin, "Aerofoil RAE 2822 - Pressure Distributions, and Boundary Layer and Wake Measurements," Experimental Data Base for Computer Program Assessment, AGARD Report AR 138, 1979.

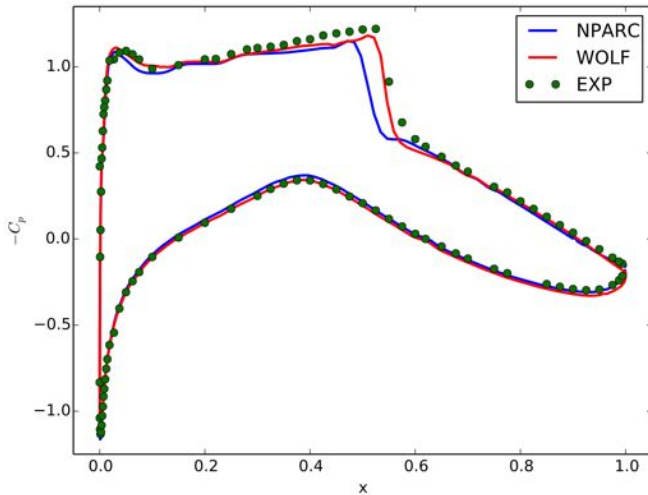


13937 sommets
27642 triangles

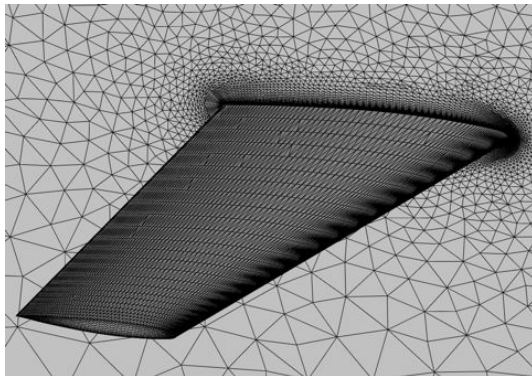
- Solution (pression) :



- Coefficient de pression :



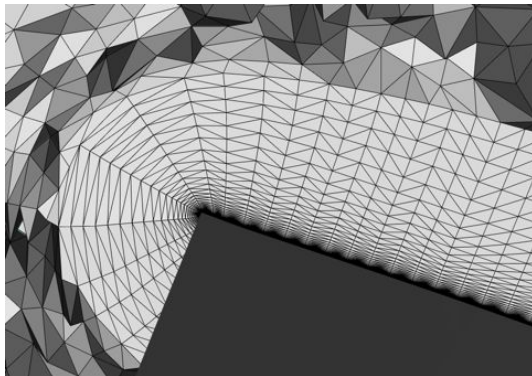
- Conditions freestream :
 - Mach 0.8395
 - Reynolds 11.72 Million (basé sur $c=0.64607$ m)
 - AoA 3.06°
 - $T=300K$
- Ref : <http://www.grc.nasa.gov/WWW/wind/valid/m6wing/m6wing.html>



Un maillage
fourni:

362228 sommets
2122974 tetra
34406 triangles

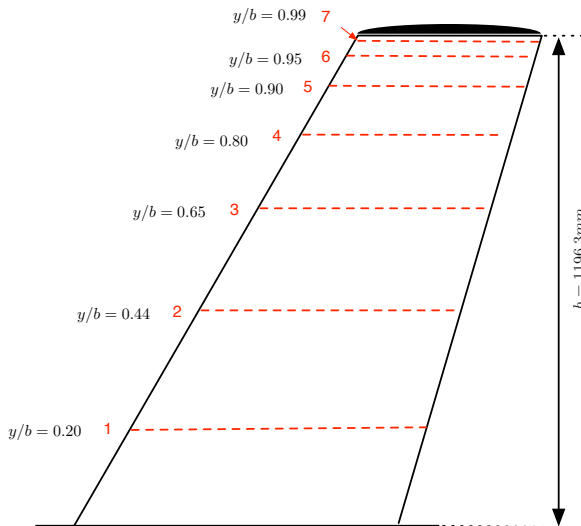
- Conditions freestream :
 - Mach 0.8395
 - Reynolds 11.72 Million (basé sur $c=0.64607$ m)
 - AoA 3.06°
 - $T=300K$
- Ref : <http://www.grc.nasa.gov/WWW/wind/valid/m6wing/m6wing.html>



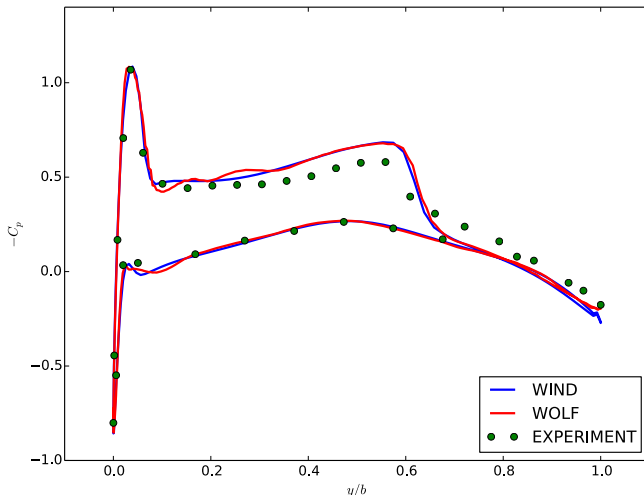
Un maillage
fourni:

362228 sommets
2122974 tetra
34406 triangles

- 7 extractions du coefficient de pression:

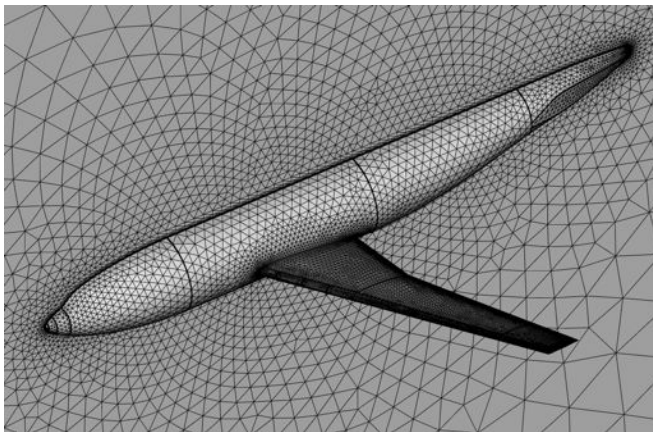


- Exemple section 1 ($y/b = 0.2$)

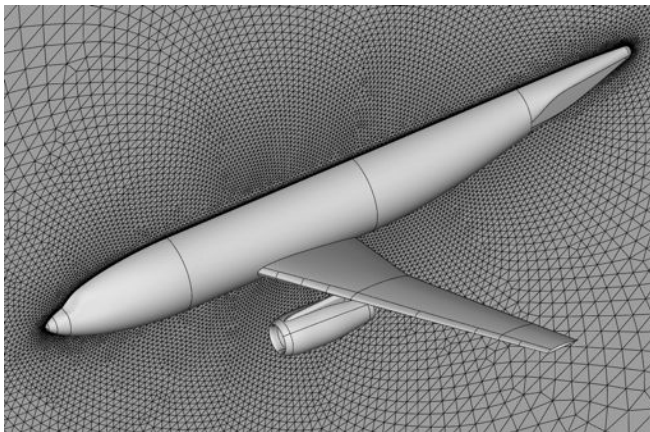


- Conditions freestream :
 - Mach 0.75
 - Reynolds 3 Million (basé sur $c=0.1412$ m)
 - AoA : $-3^\circ, -2^\circ, -1.5^\circ, -1^\circ, 0^\circ, 1^\circ, 1.5^\circ$
 - $T=288.15K$
- Ref : <http://aaac.larc.nasa.gov/tsab/cfdlarc/aiaa-dpw/Workshop2/>
- 5 maillages fournis: avec nacelle (coarse/medium/fine), et sans nacelle (coarse/medium).

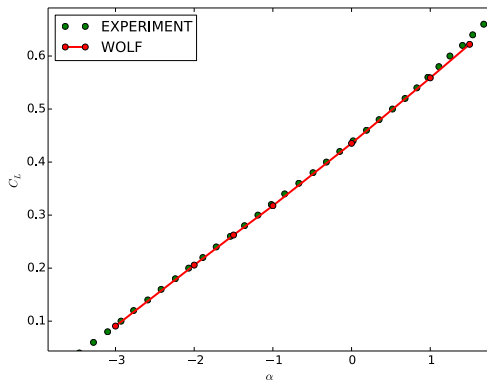
- Maillage sans nacelle : Wing Body
 - Nombre sommets : 246k (coarse), 675k (medium), 2M (fine)



- Maillage avec nacelle : Wing Body Nacelle
 - Nombre sommets : 1M827k (coarse), 4M751k (medium)



- Résultats à fournir:
 - Drag polar sur maillage medium:
 $\text{AoA} = -3^\circ, -2^\circ, -1.5^\circ, -1^\circ, 0^\circ, 1^\circ, 1.5^\circ$
 - Calcul à isolift $C_L = 0.5$: 6 extractions sur le maillage le plus fin.



- Exemple solution:

