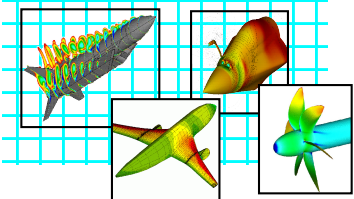


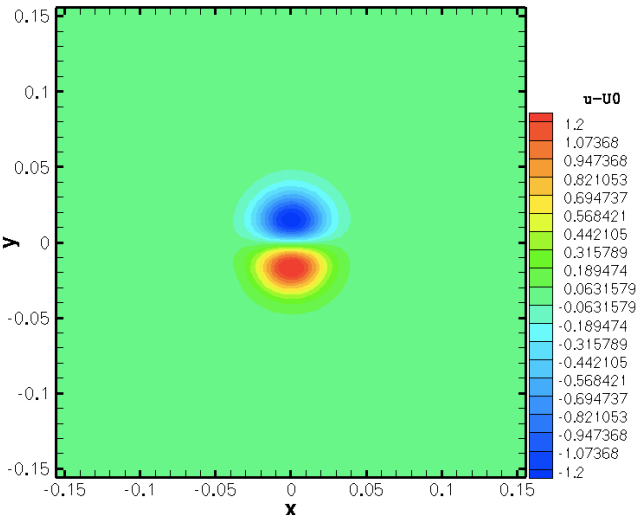
Analysis of precision

Solvers	Spatial scheme	Temporal scheme	Convective CFL	Acoustic CFL	Δt (s) nb_{it}	T_{CPU} (s)	$T_{CPU} / it / pt$ (s)
elsA	6 ^{ième} ordre	2 ^{ième} ordre	X	0.7	$5.0 \cdot 10^{-6}$ 71401	1318	$2.88 \cdot 10^{-6}$
AVBP	3 ^{ième} ordre	3 ^{ième} ordre	X	0.7	$5.17 \cdot 10^{-6}$ 68750	1620	$3.68 \cdot 10^{-6}$
OpenFoam	4 ^{ième} ordre	2 ^{ième} ordre	X	0.7	$7.5 \cdot 10^{-6}$ 23710	1330	$8.76 \cdot 10^{-6}$
YALES	4 ^{ième} ordre	4 ^{ième} ordre	0.3	X	$3.21 \cdot 10^{-5}$ 11080	1202	$1.7 \cdot 10^{-5}$

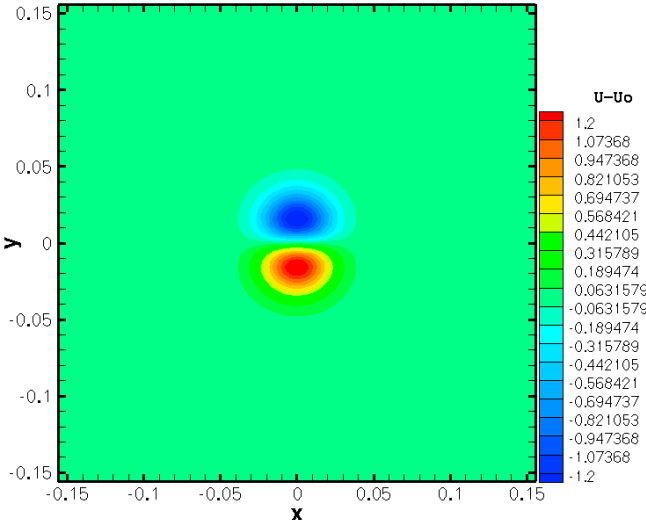


• Contours of $u-U_0$: $t=10*L/U_0$

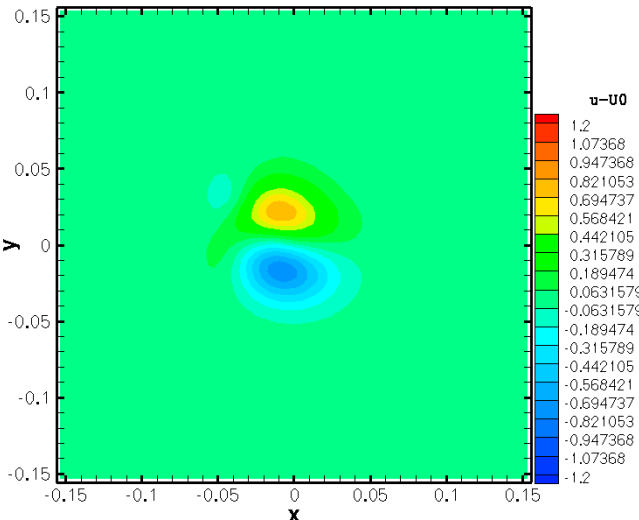
AVBP



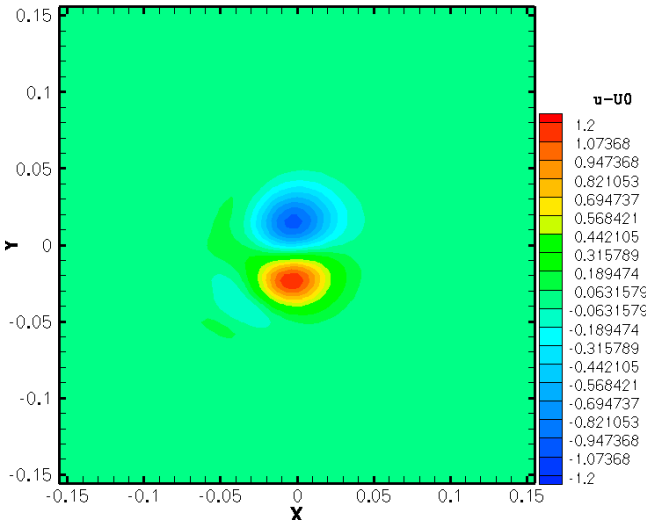
elsA

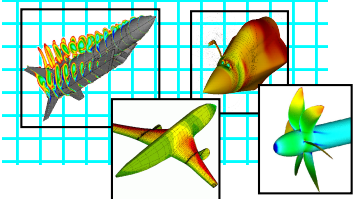


OpenFoam



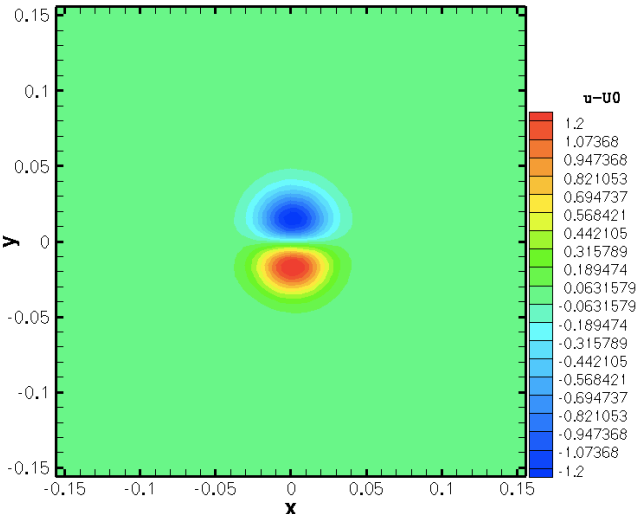
YALES



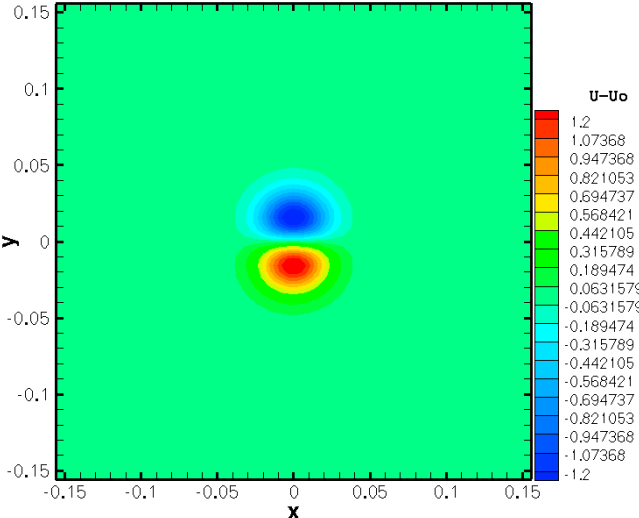


• Contours of $u-U_0$: $t=20*L/U_0$

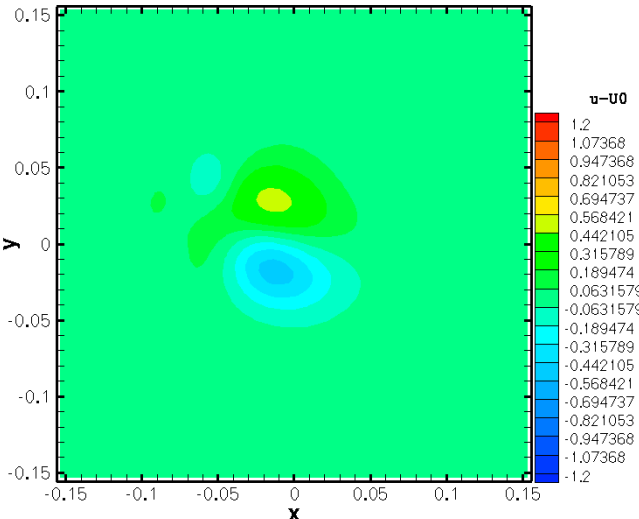
AVBP



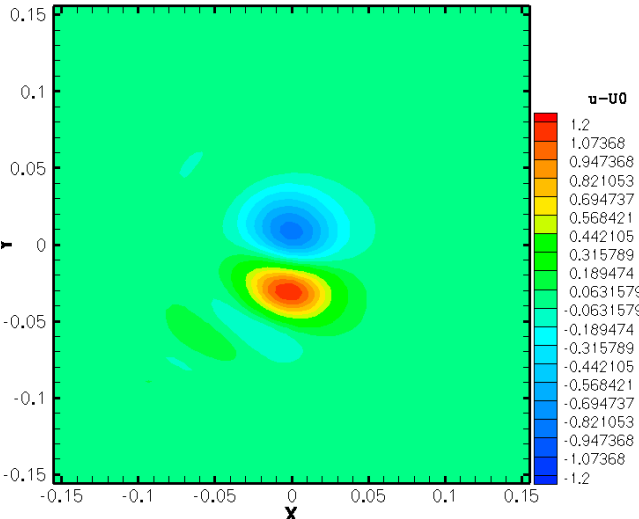
elsA

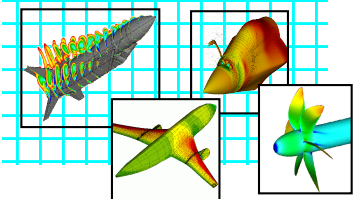


OpenFoam



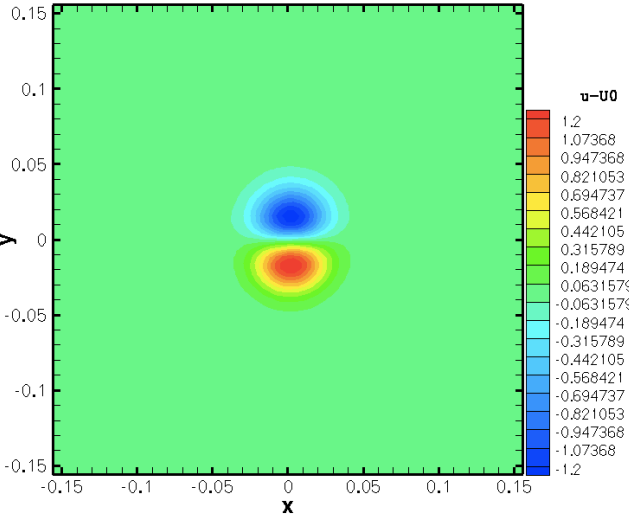
YALES



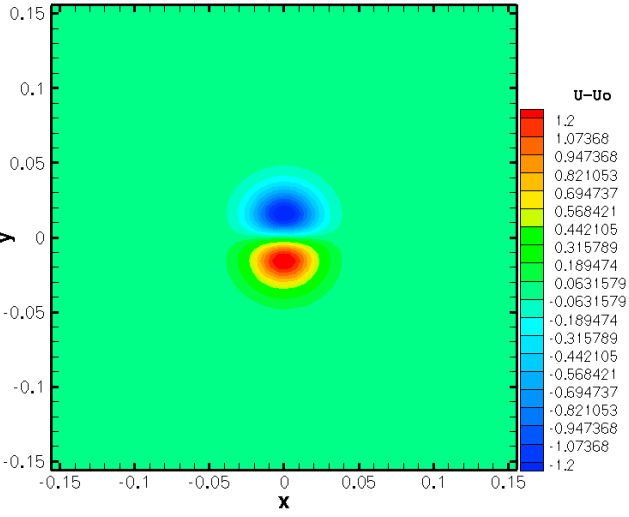


• Contours of $u-U_0$: $t=30 * L/U_0$

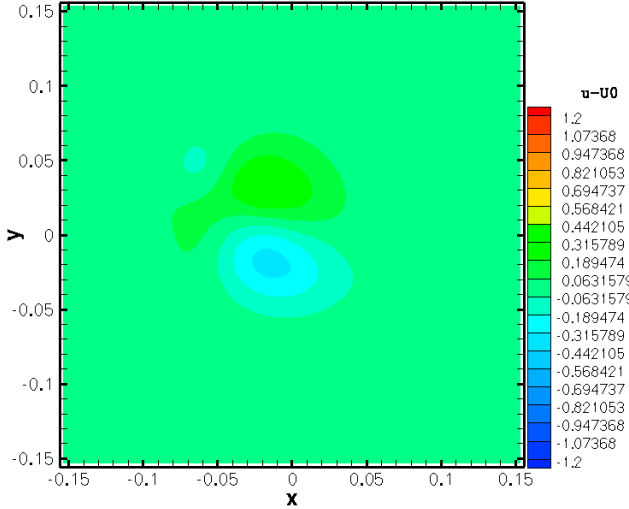
AVBP



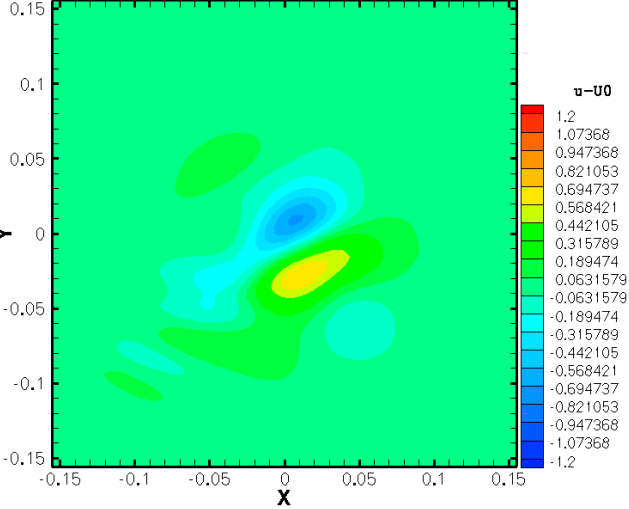
elsA

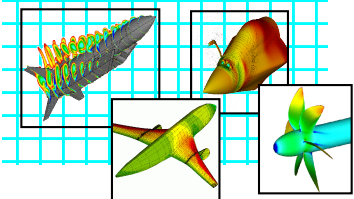


OpenFoam



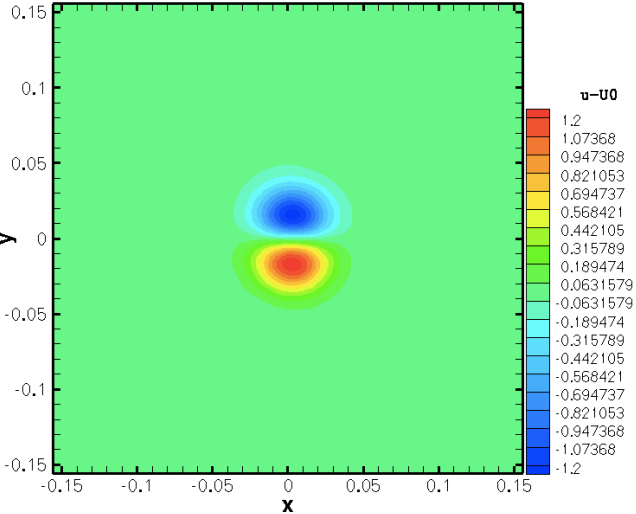
YALES



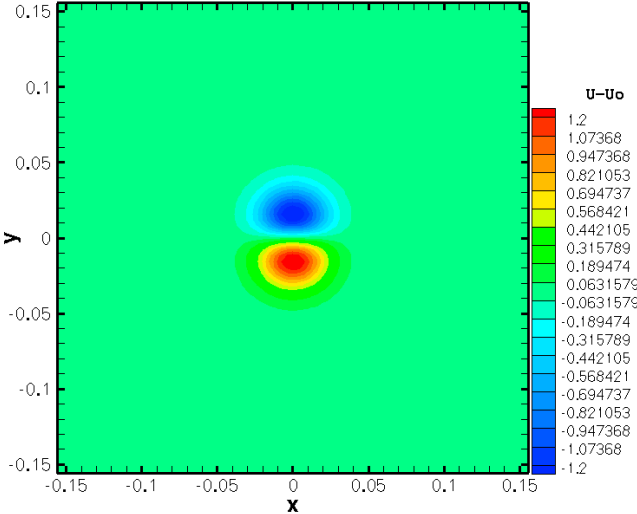


• Contours of $u-U_0$: $t=40 * L/U_0$

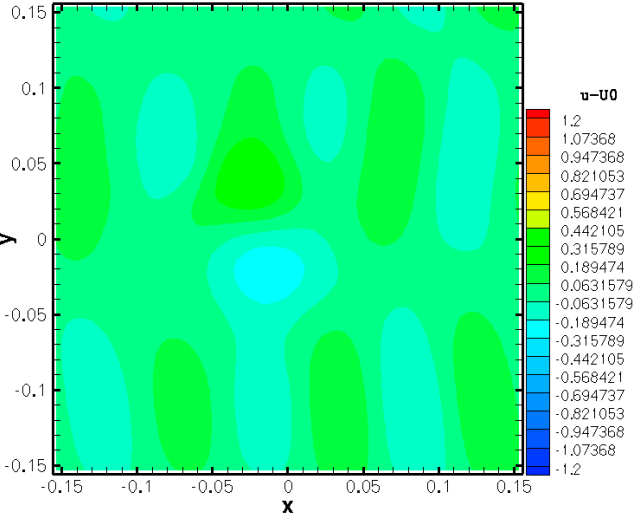
AVBP



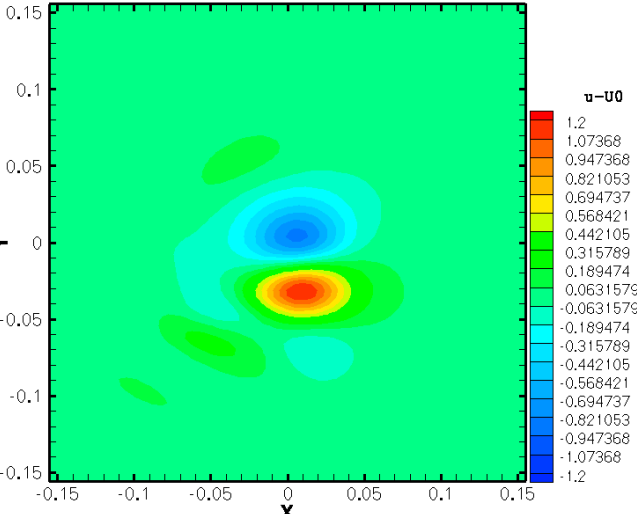
elsA

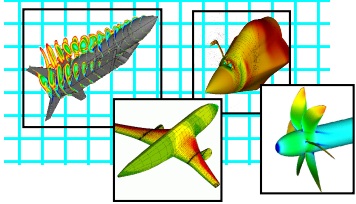


OpenFoam

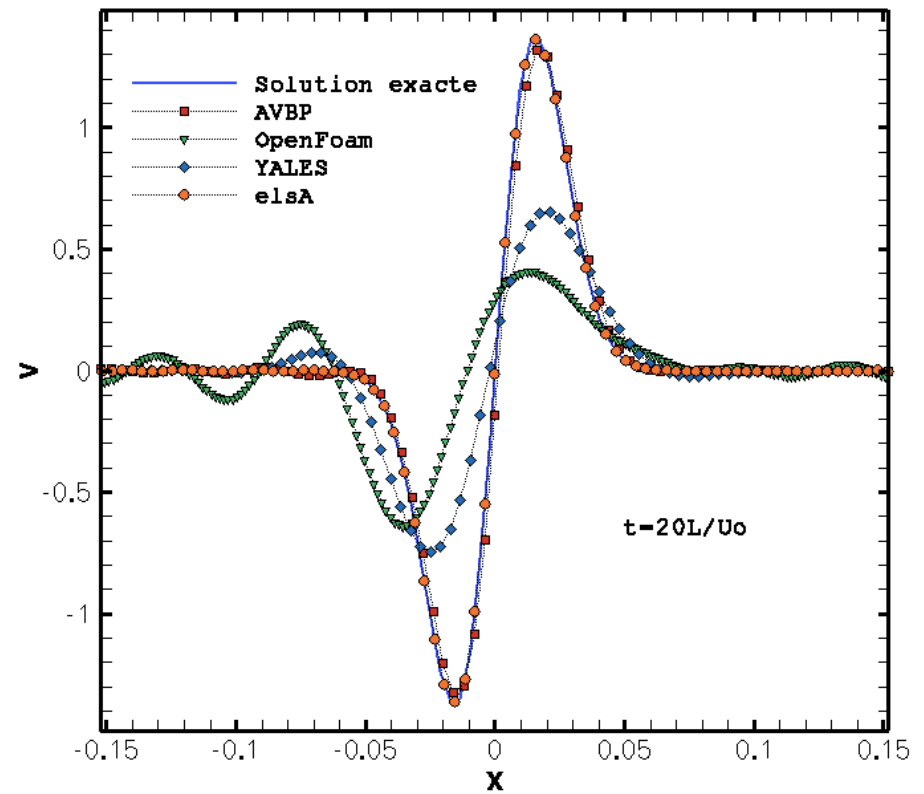
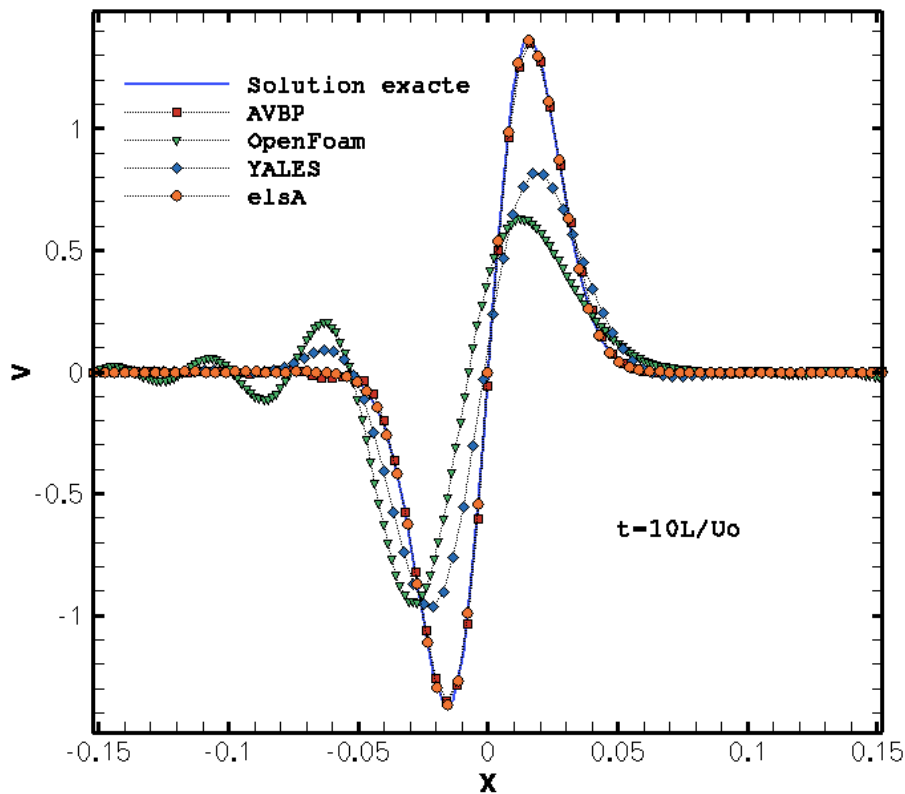


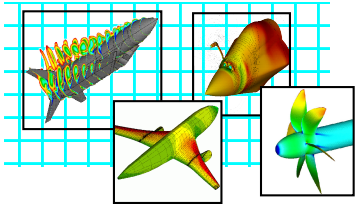
YALES



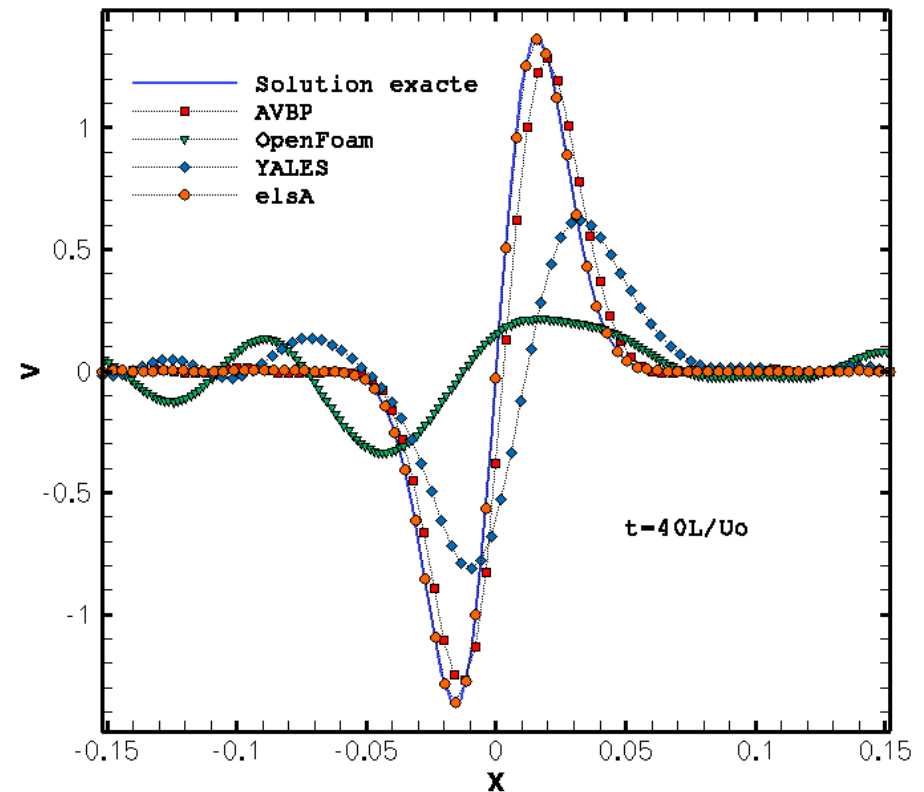
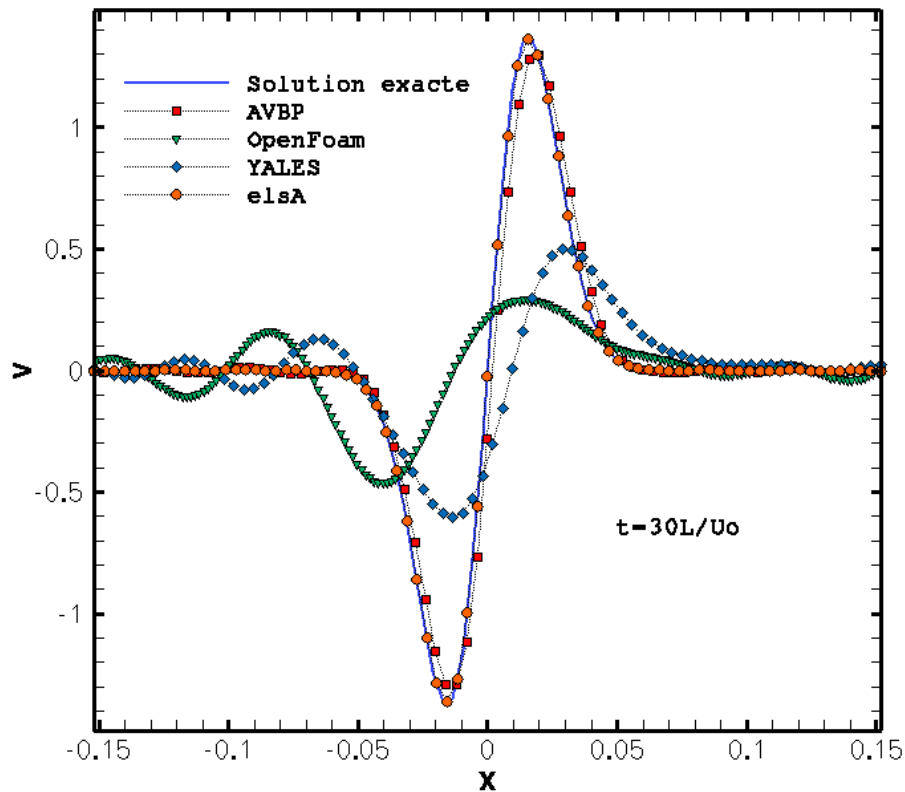


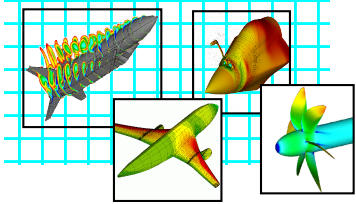
- Profiles of v at $y=0$: $t=10*L/U_0$ and $t=20*L/U_0$



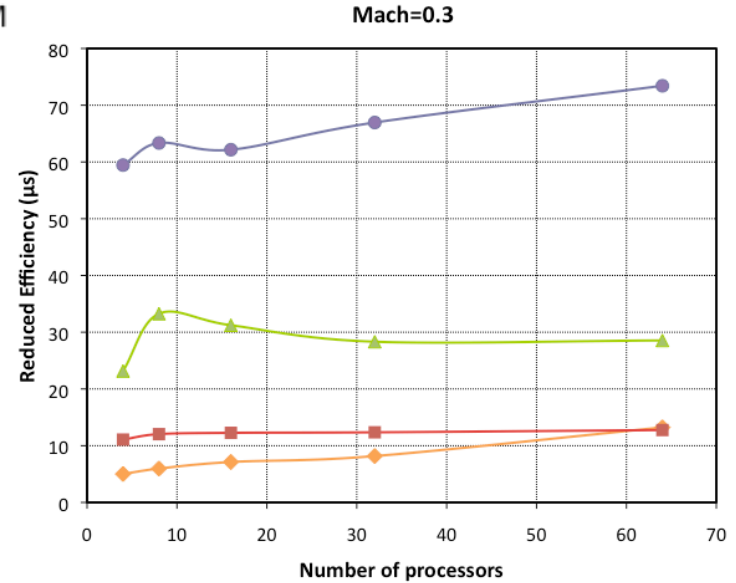
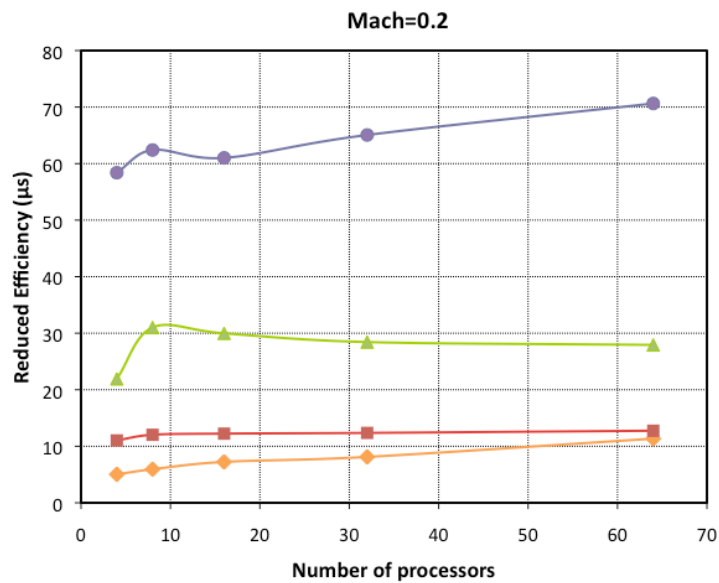
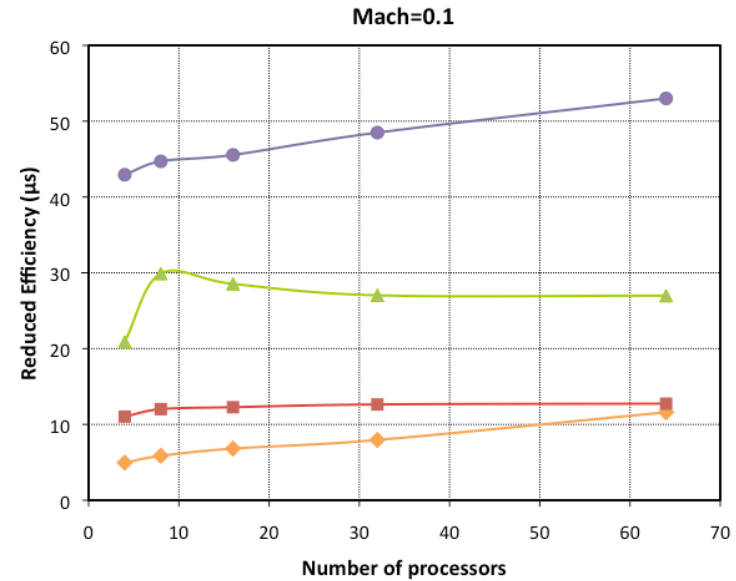
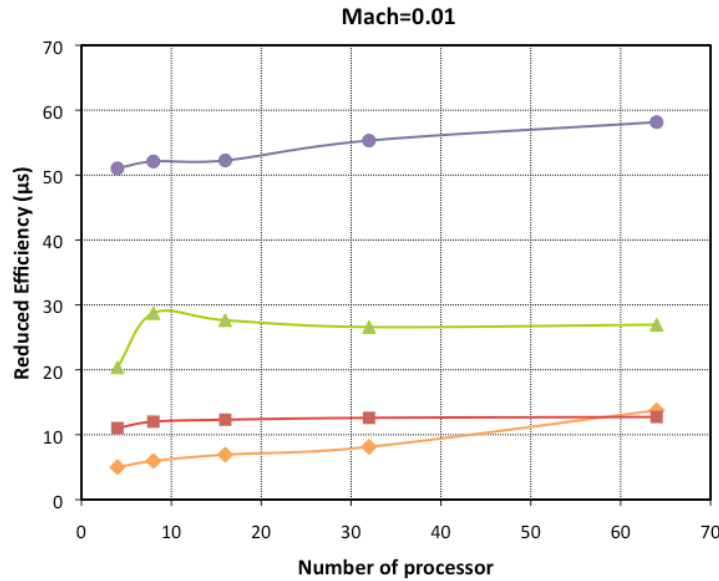


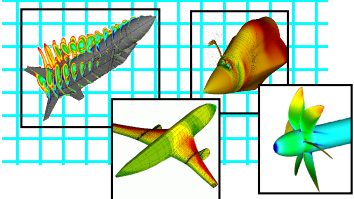
- Profiles of v at $y=0$: $t=30*L/U_0$ et $t=40*L/U_0$





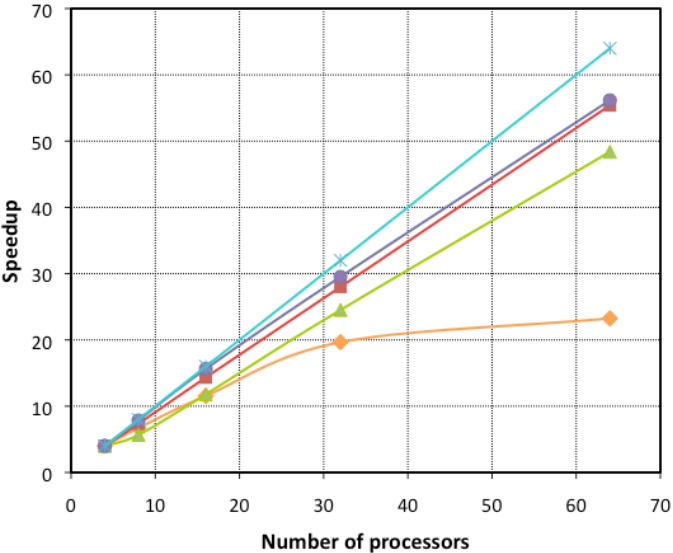
Analysis of performances: Reduced Efficiency



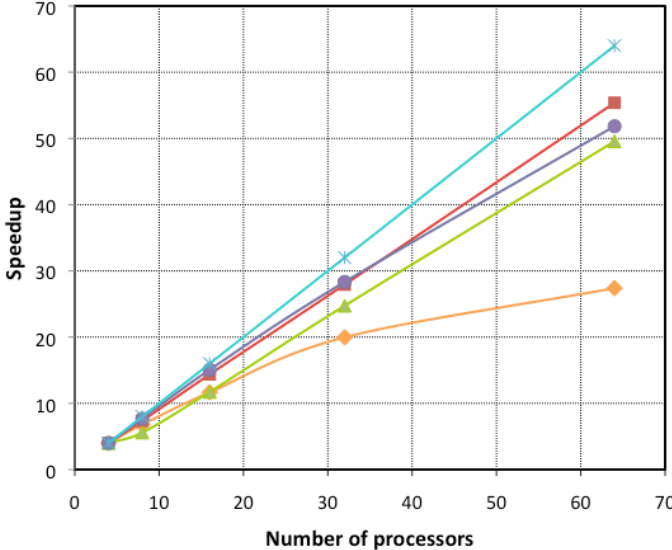


Analysis of performances: Speedup

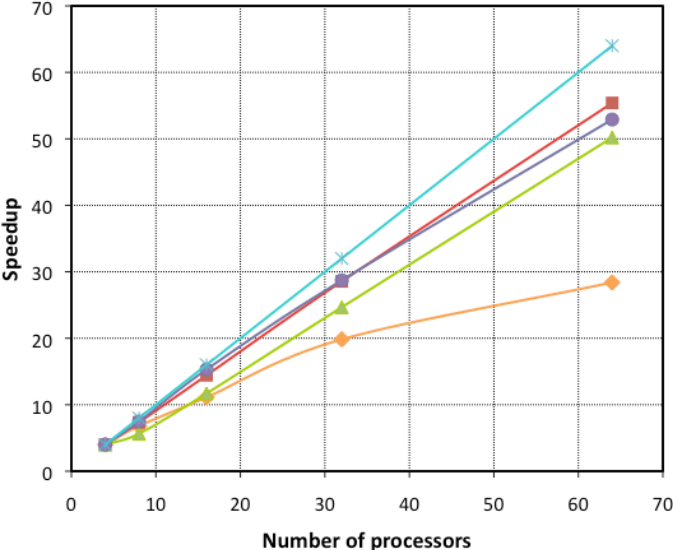
Mach=0.01



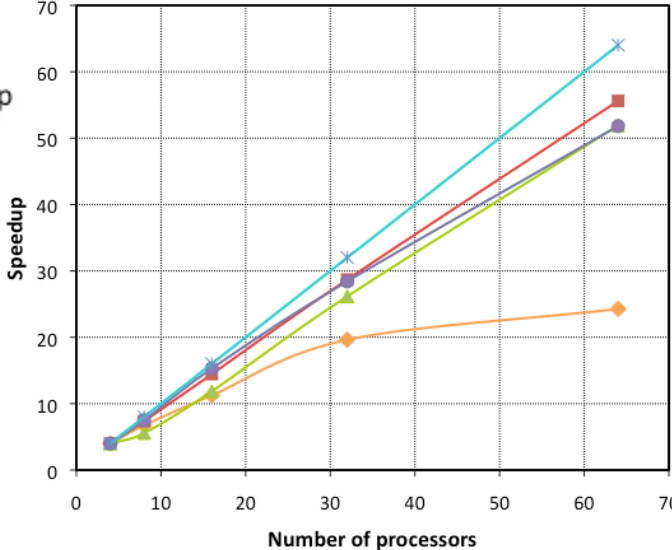
Mach=0.1



Mach=0.2



Mach=0.3



- ◇— Elsa
- AVBP
- ▲— OpenFOAM
- YALES2
- ×— LINEAR Speedup

