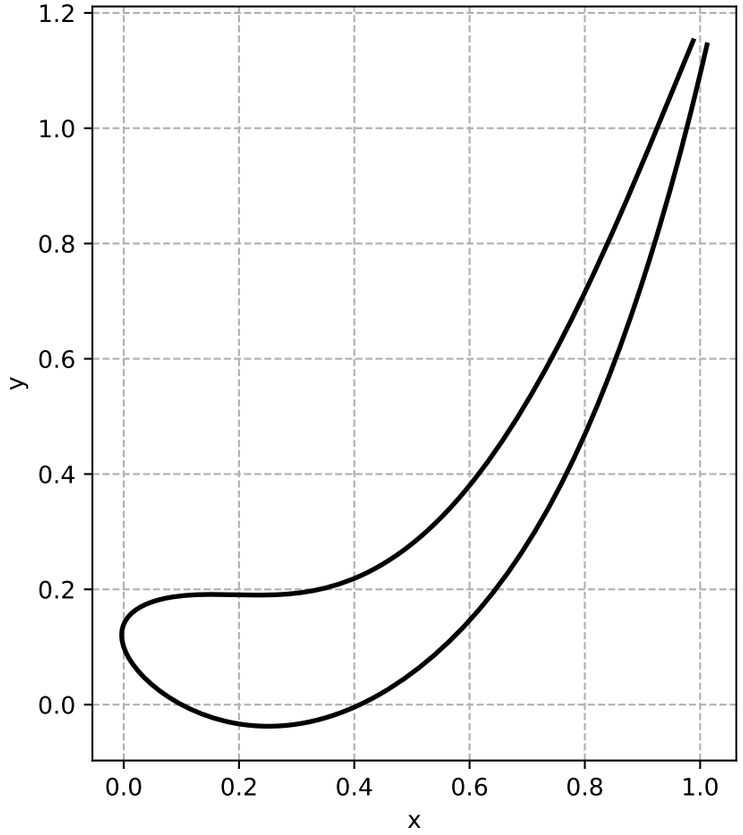
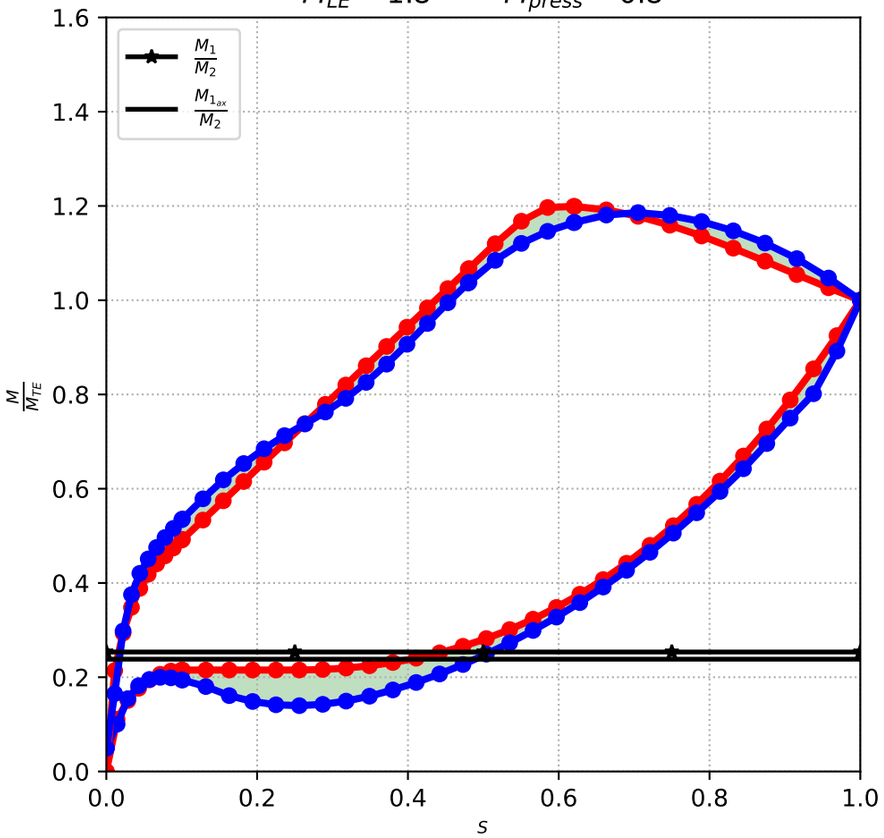
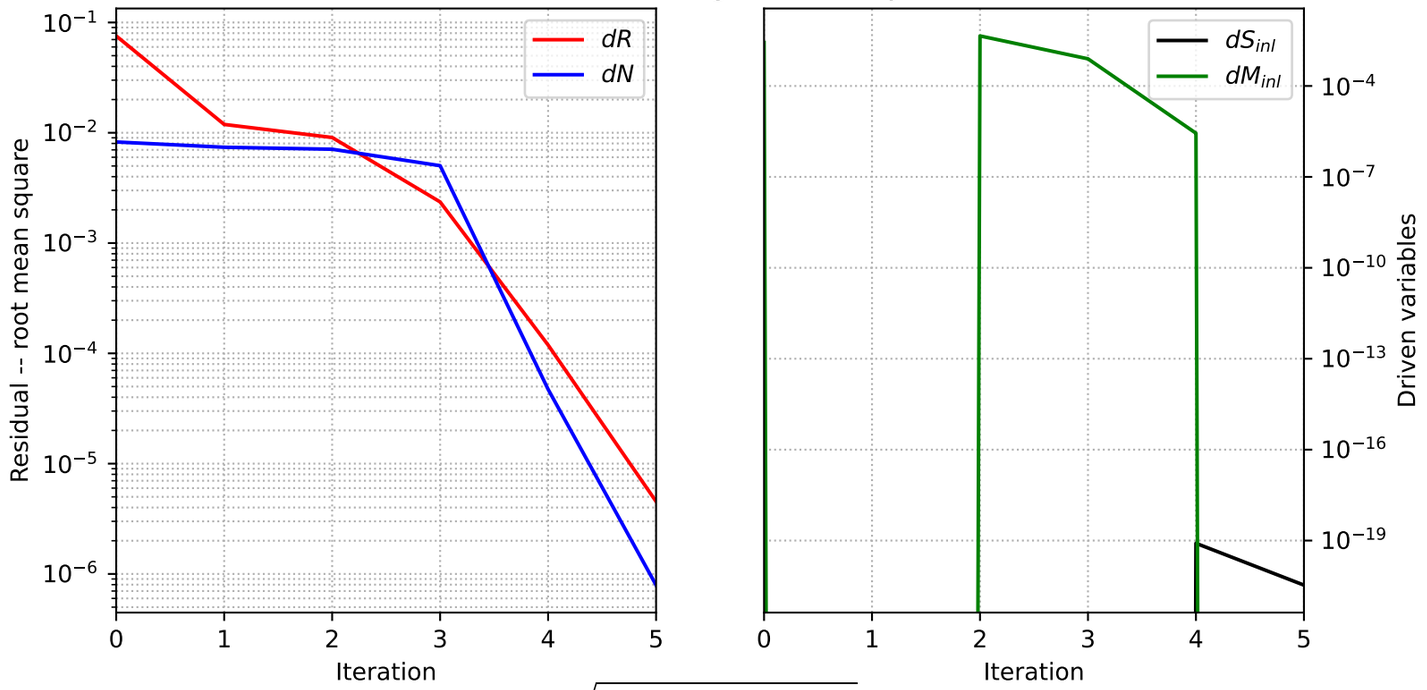
#0122 NAME: VKIblade
α_1 = -20.000° α_2 = KUTTA CONDITION
CHINL = 2.000 CHOUT = 2.000
PITCH = 1.056 β = 44.630°
R_{LE} = 0.051 ζ_{TE} = 0.025



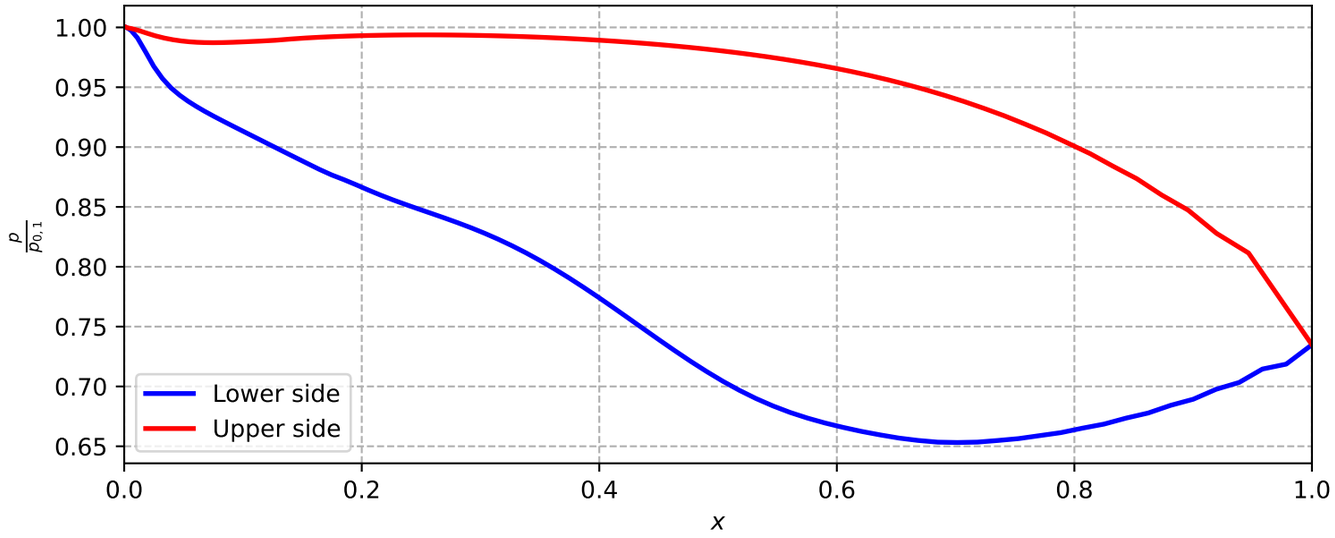
$RMSE = 3.669E-02$
$RMSE_{PS} = 3.960E-02$ $RMSE_{SS} = 3.371E-02$
$\alpha_{2,target} = 72.50°$ $\Delta\alpha_2 = 0.77°$ $\alpha_{2,real} = 71.73°$
$M_{peak} = 1.2$ $L_{peak} = 0.6$
$M_{LE} = 1.8$ $M_{press} = 0.8$

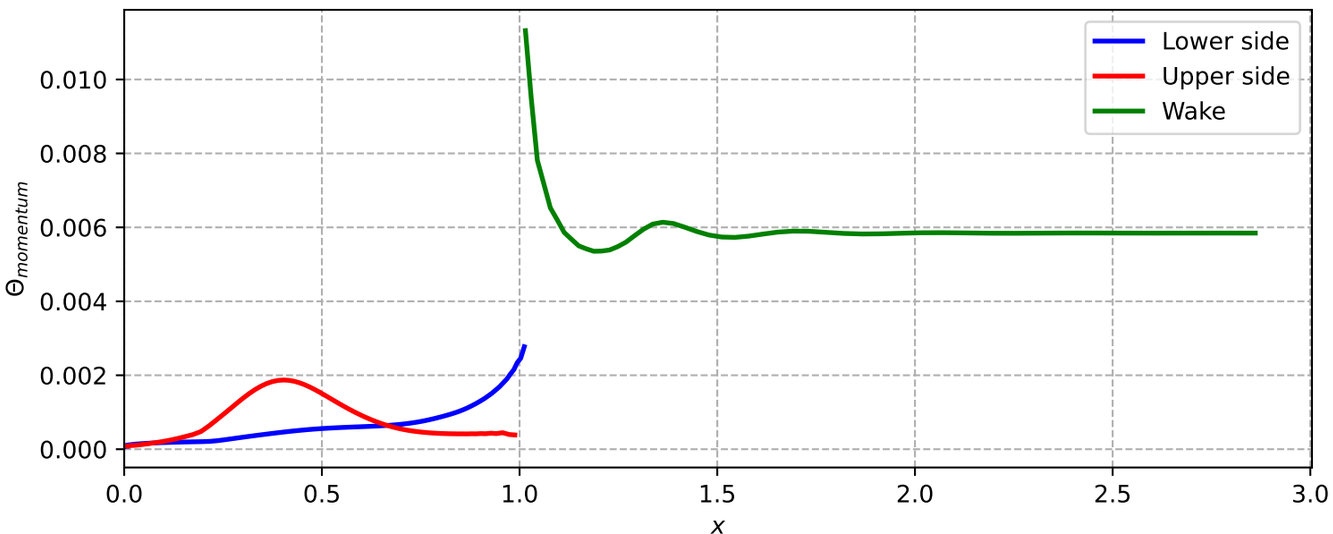


MISES convergence history

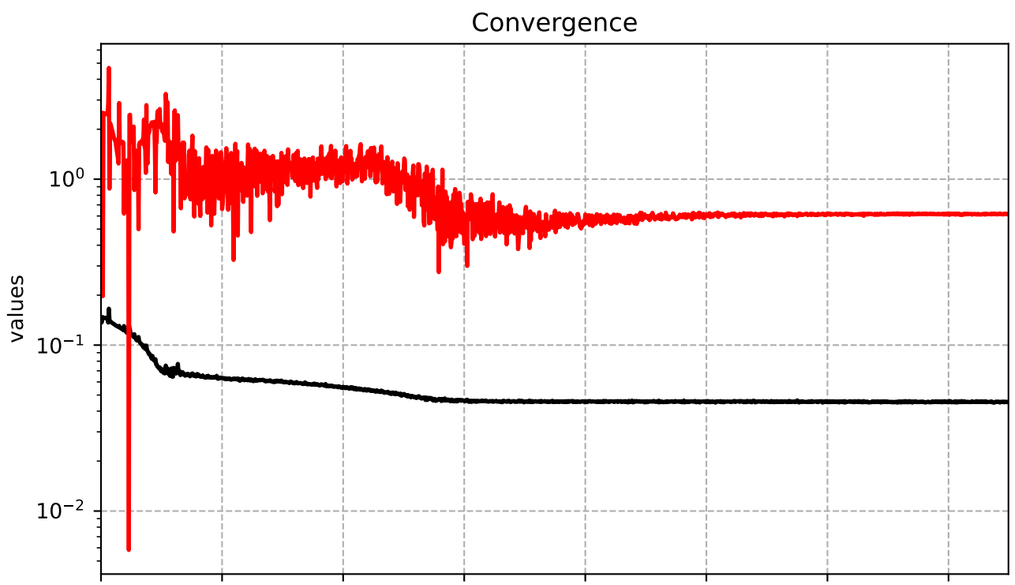


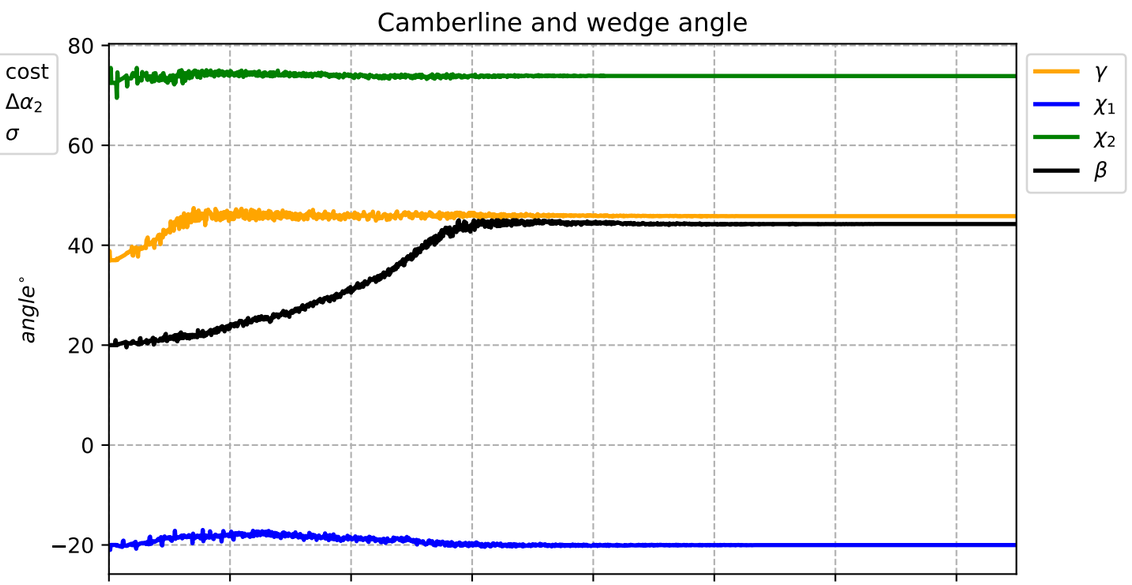
$DF_{Coull} = \sqrt{max(\frac{p_0 - p}{p_0 - p_{SS-TE}}) - 1} = 0.555$

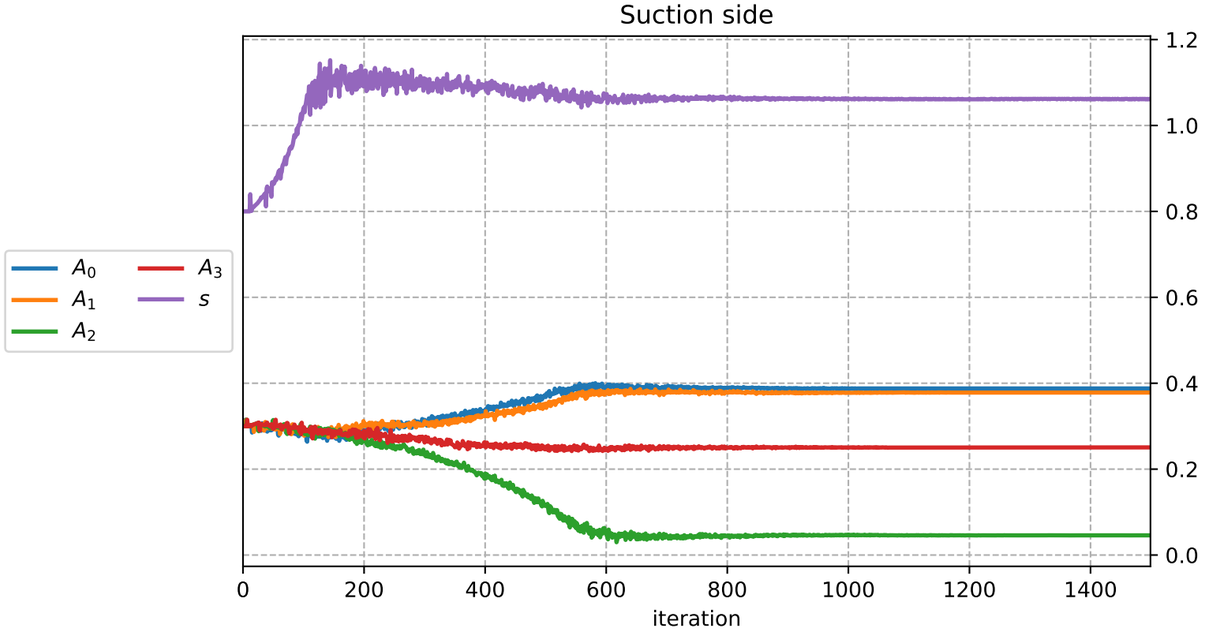


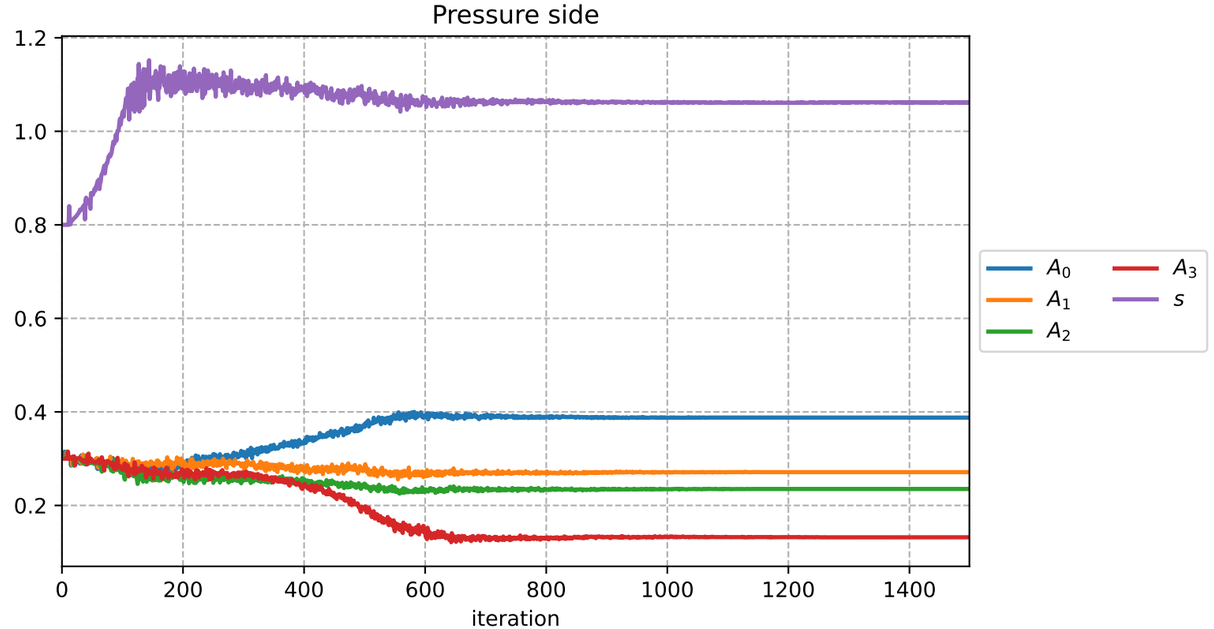


Optimization: 1
Method: Nelder-Mead



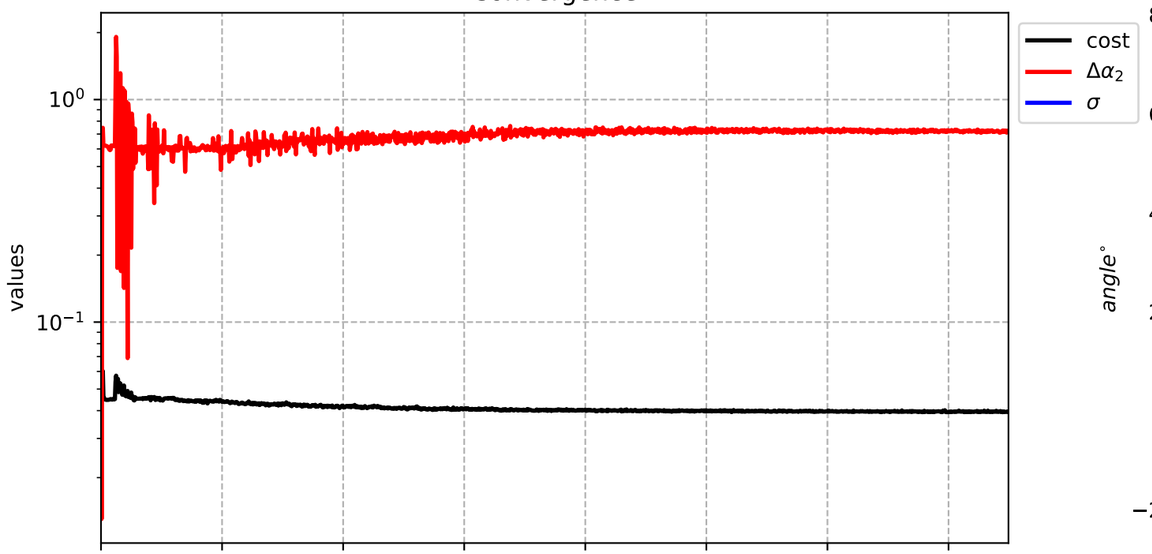




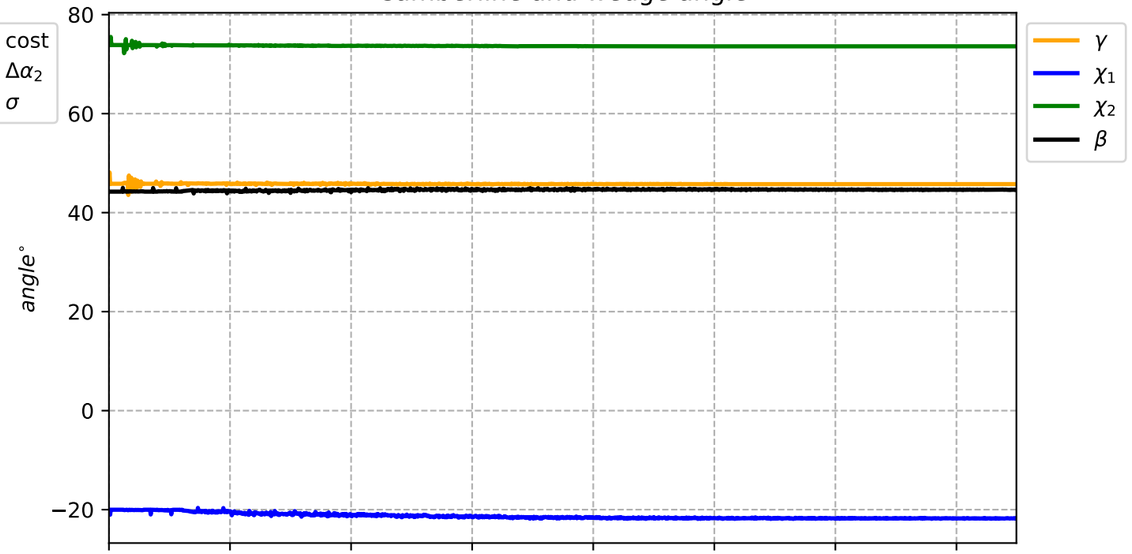


Optimization: 2
Method: Nelder-Mead

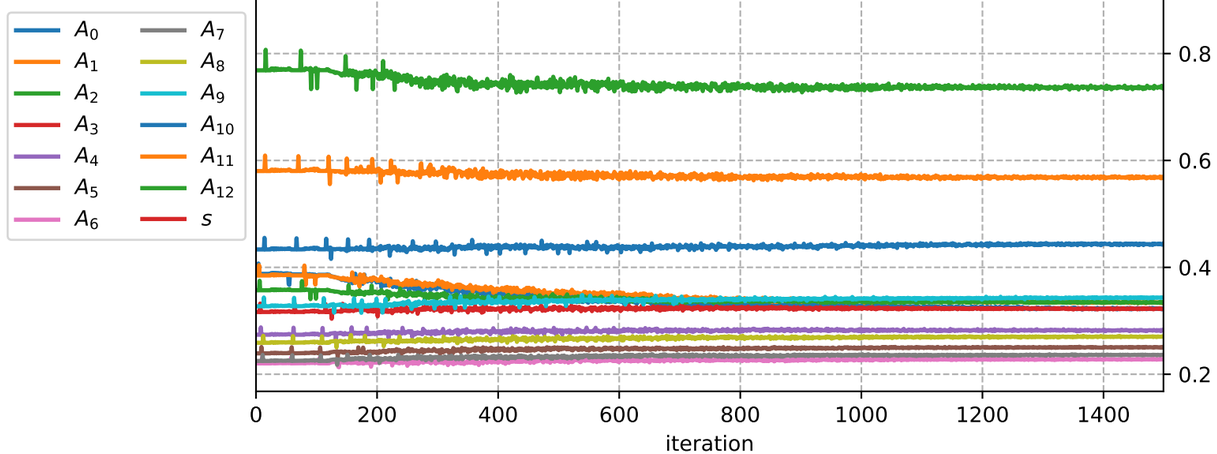
Convergence



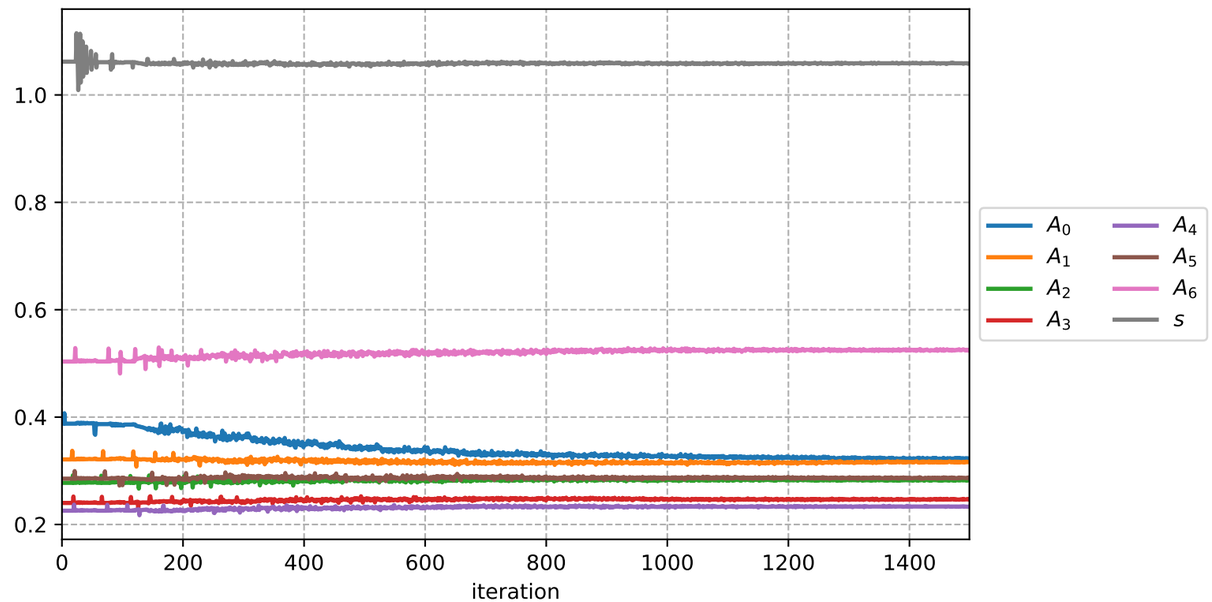
Camberline and wedge angle



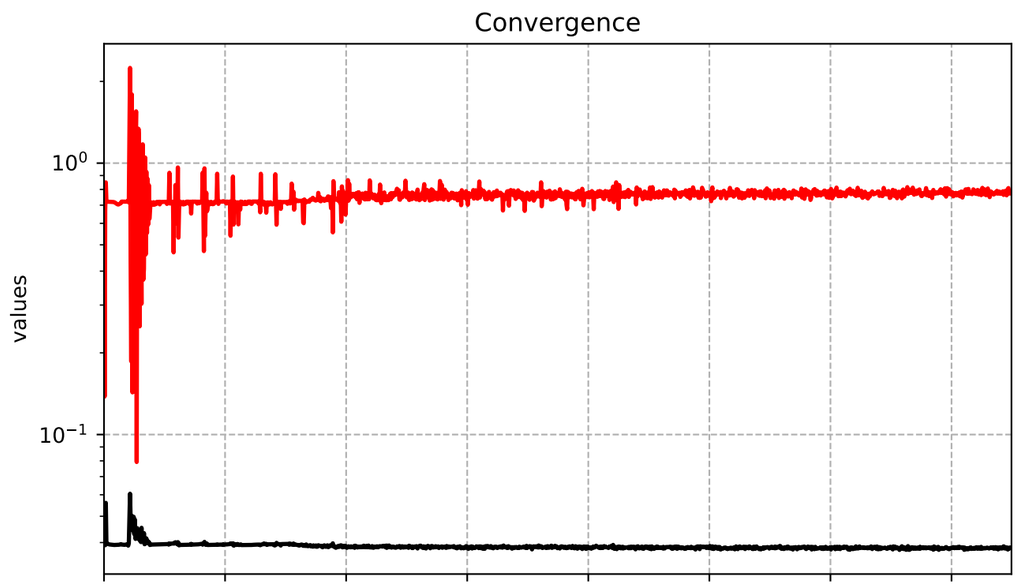
Suction side

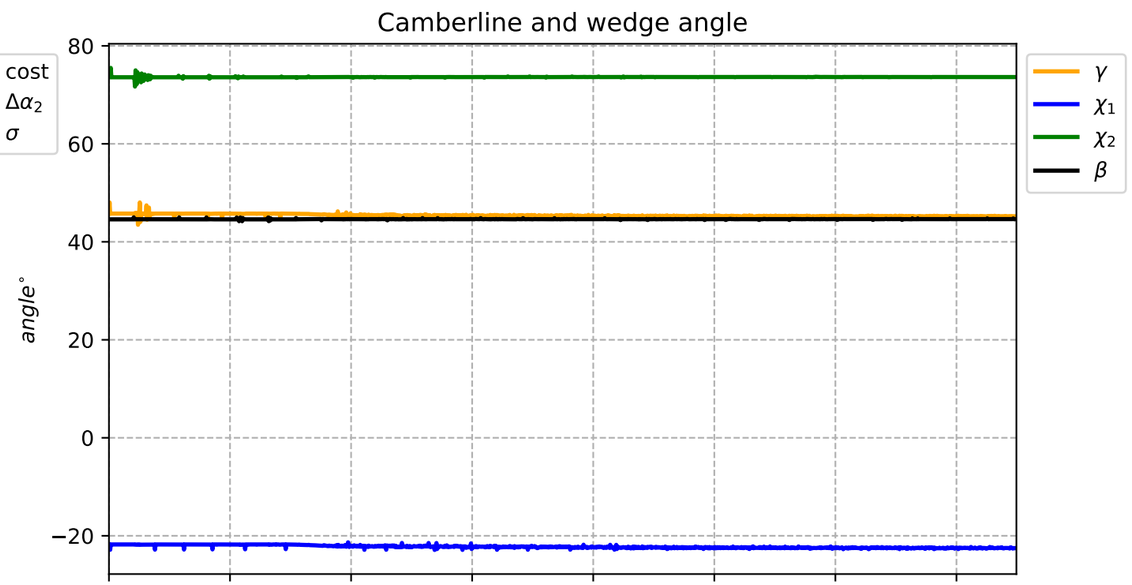


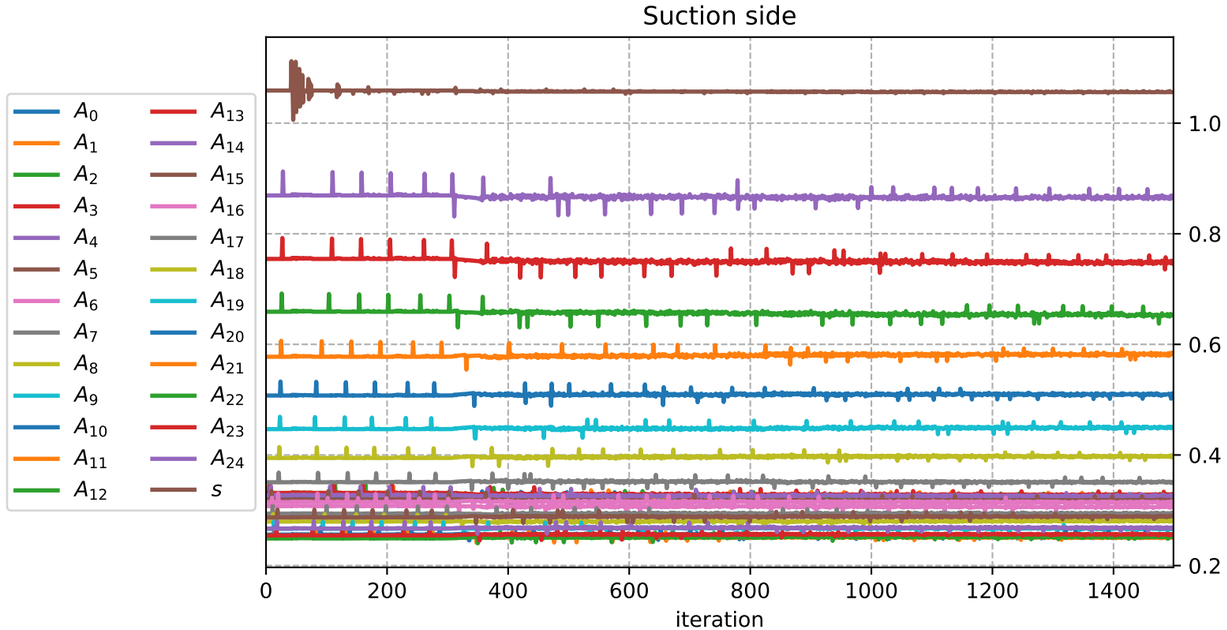
Pressure side

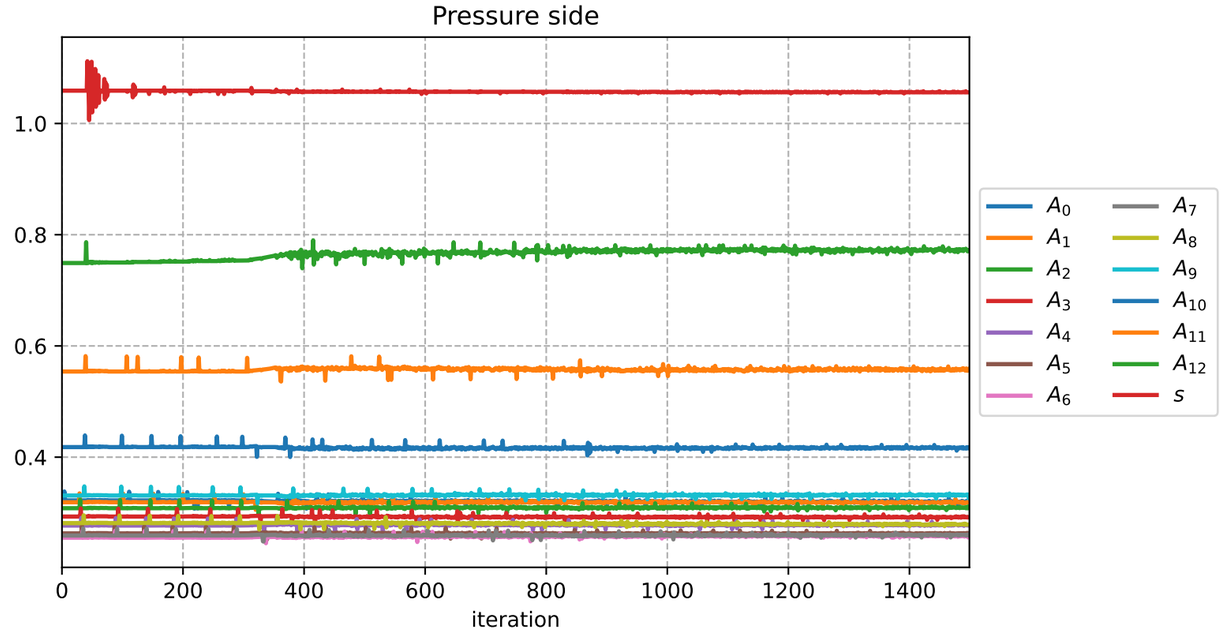


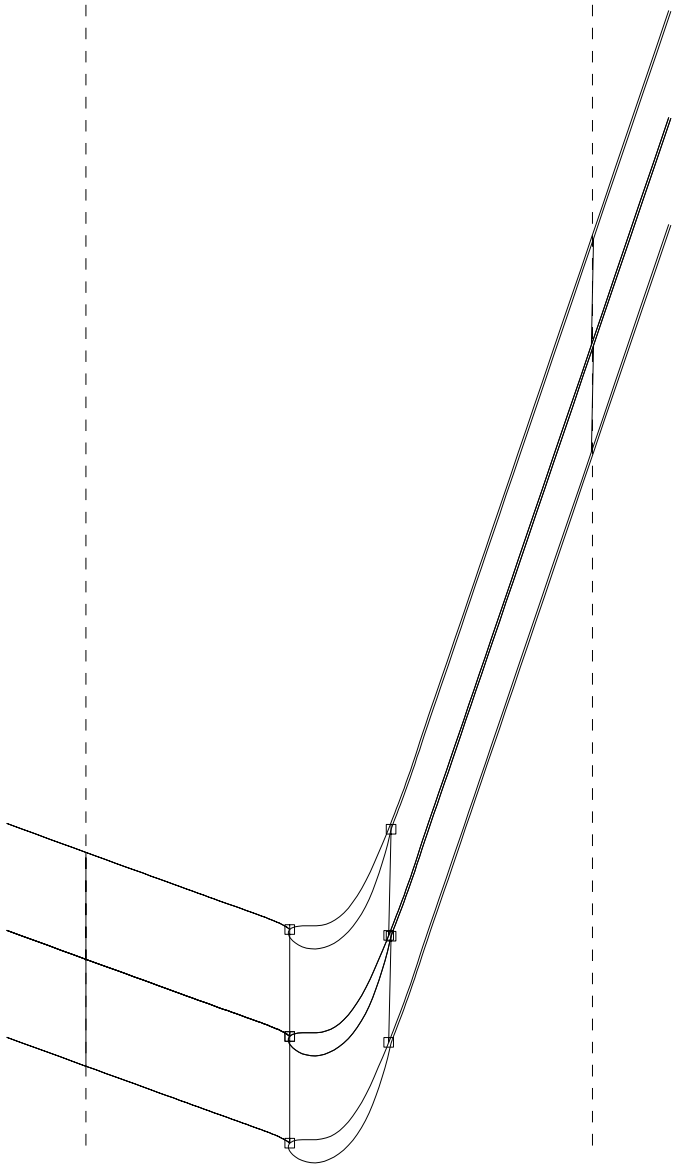
Optimization: 3
Method: Nelder-Mead

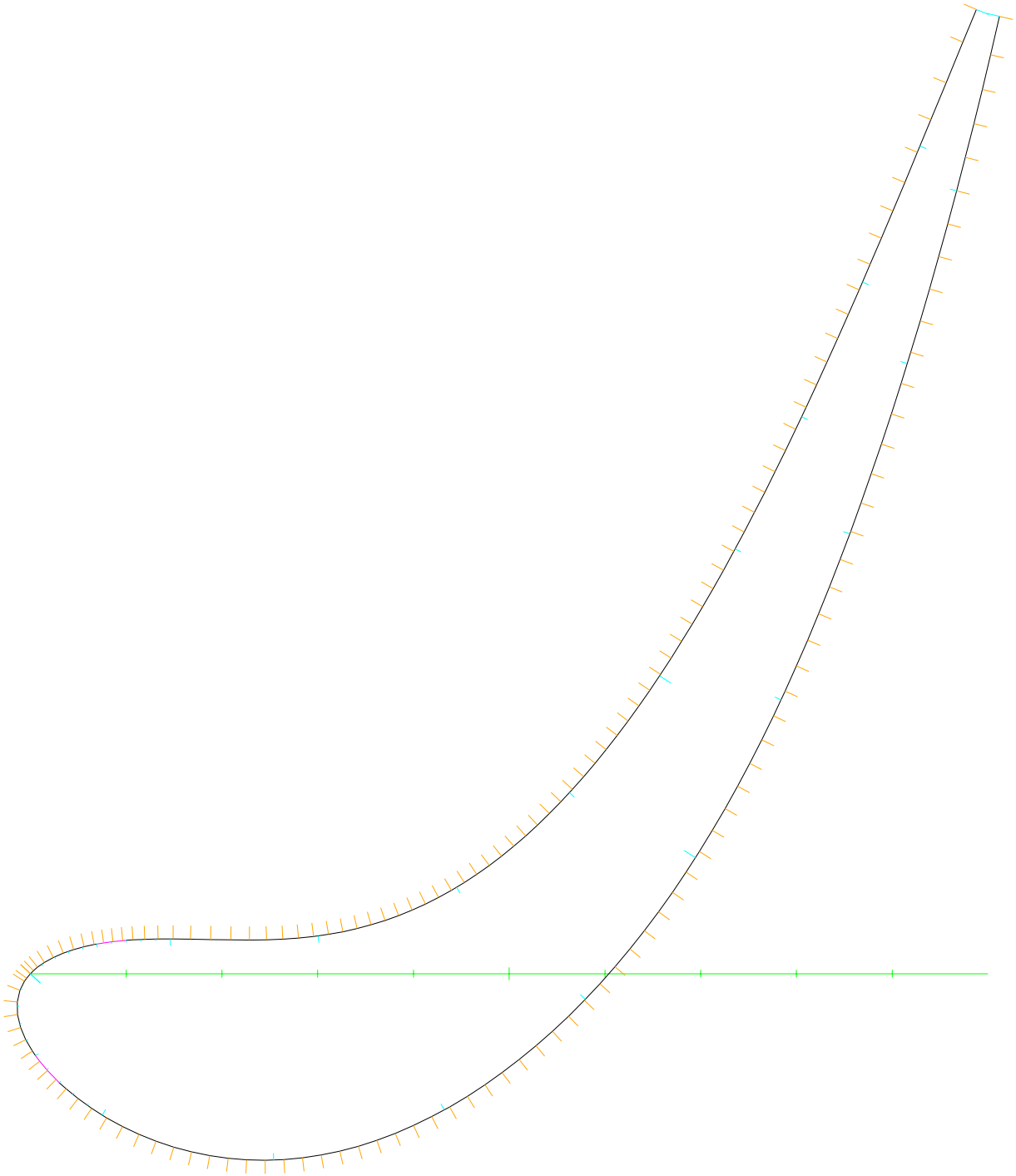


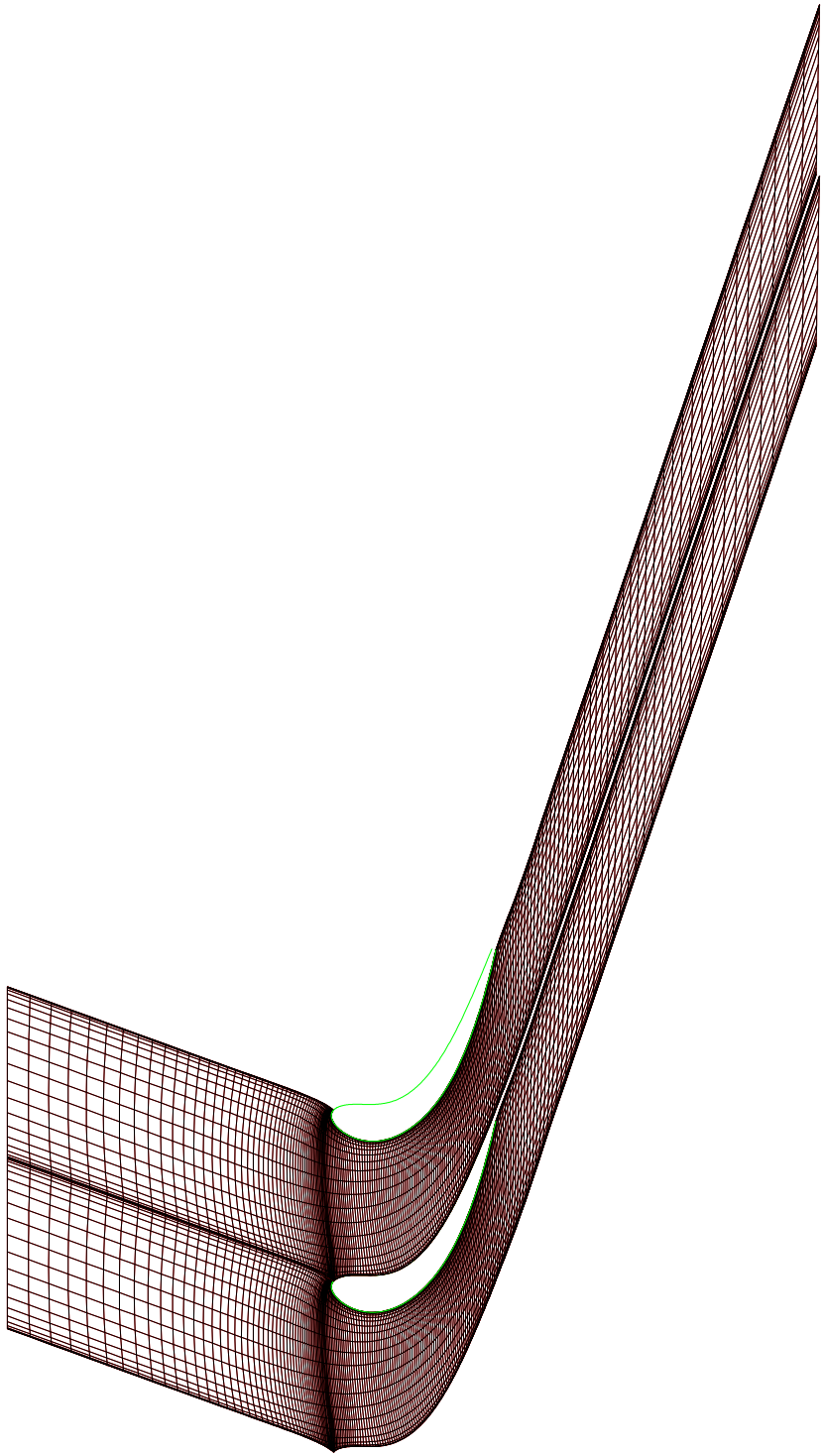


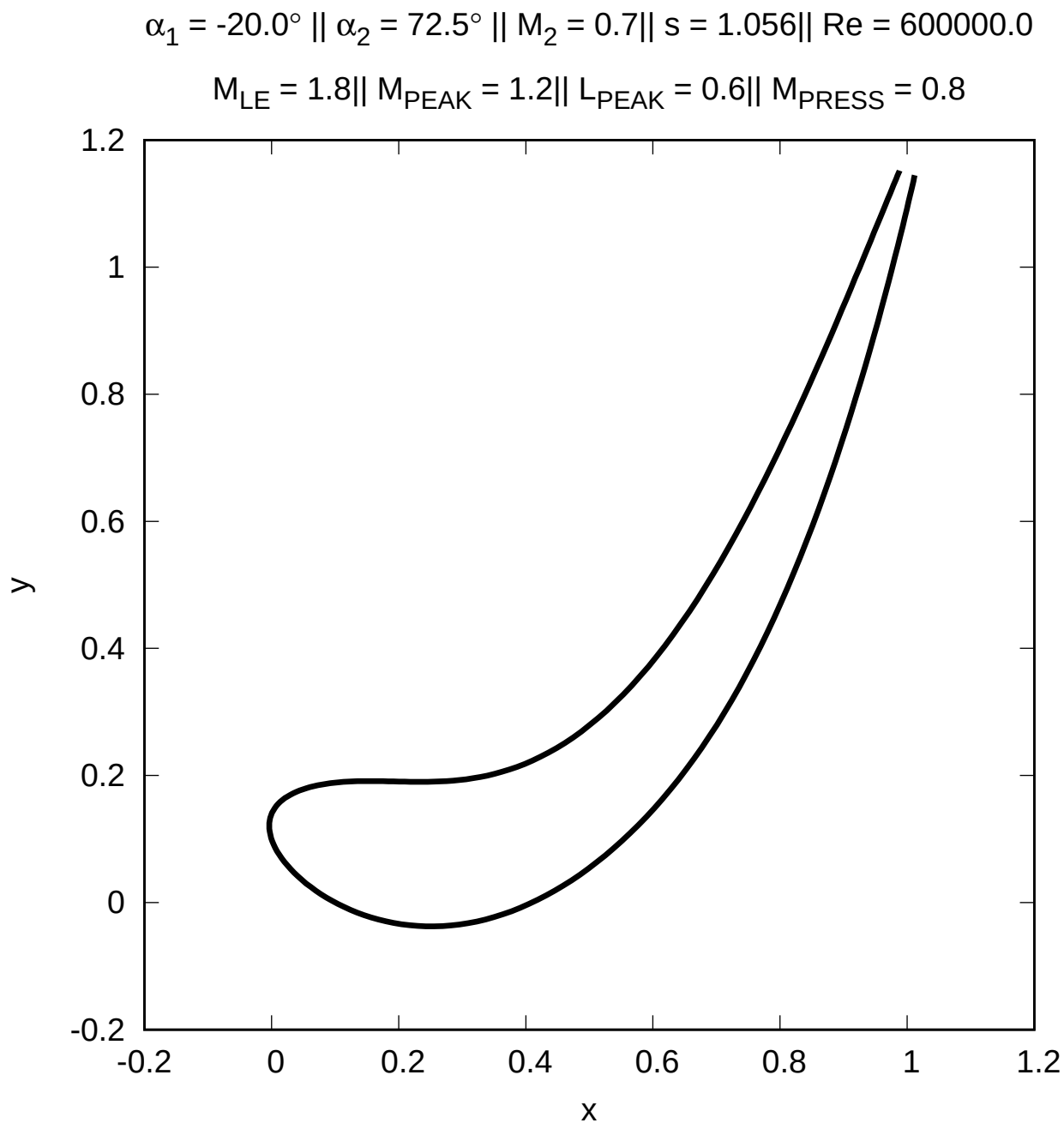






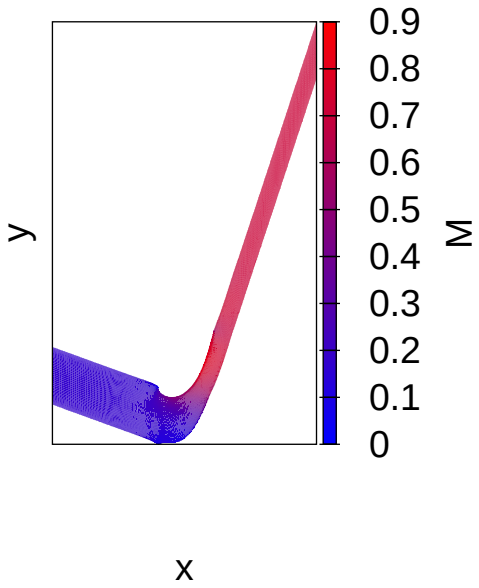


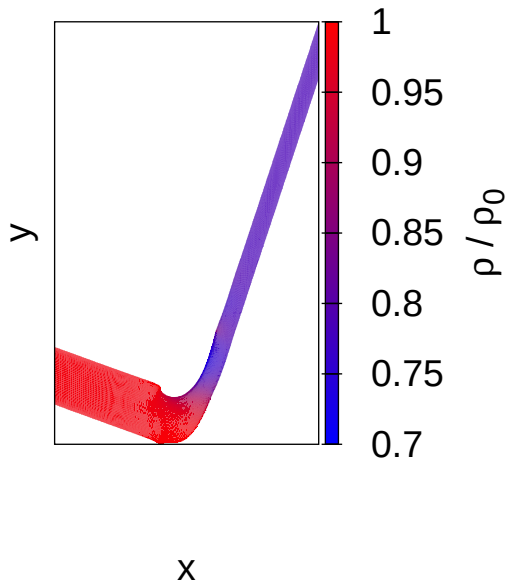


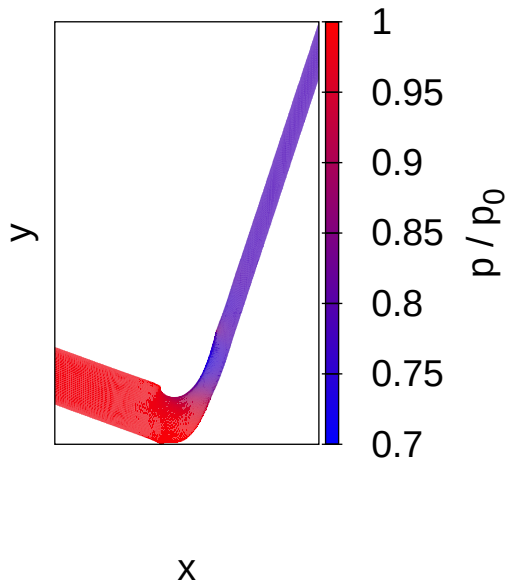

α_1 = -20.0° || α_2 = 72.5° || M_2 = 0.7|| s = 1.056|| Re = 600000.0
M_{LE} = 1.8|| M_{PEAK} = 1.2|| L_{PEAK} = 0.6|| M_{PRESS} = 0.8
1.2
1
0.8
0.6
0.4
0.2
0
-0.2
y
-0.2
0
0.2
0.4
0.6
0.8
1
1.2
x

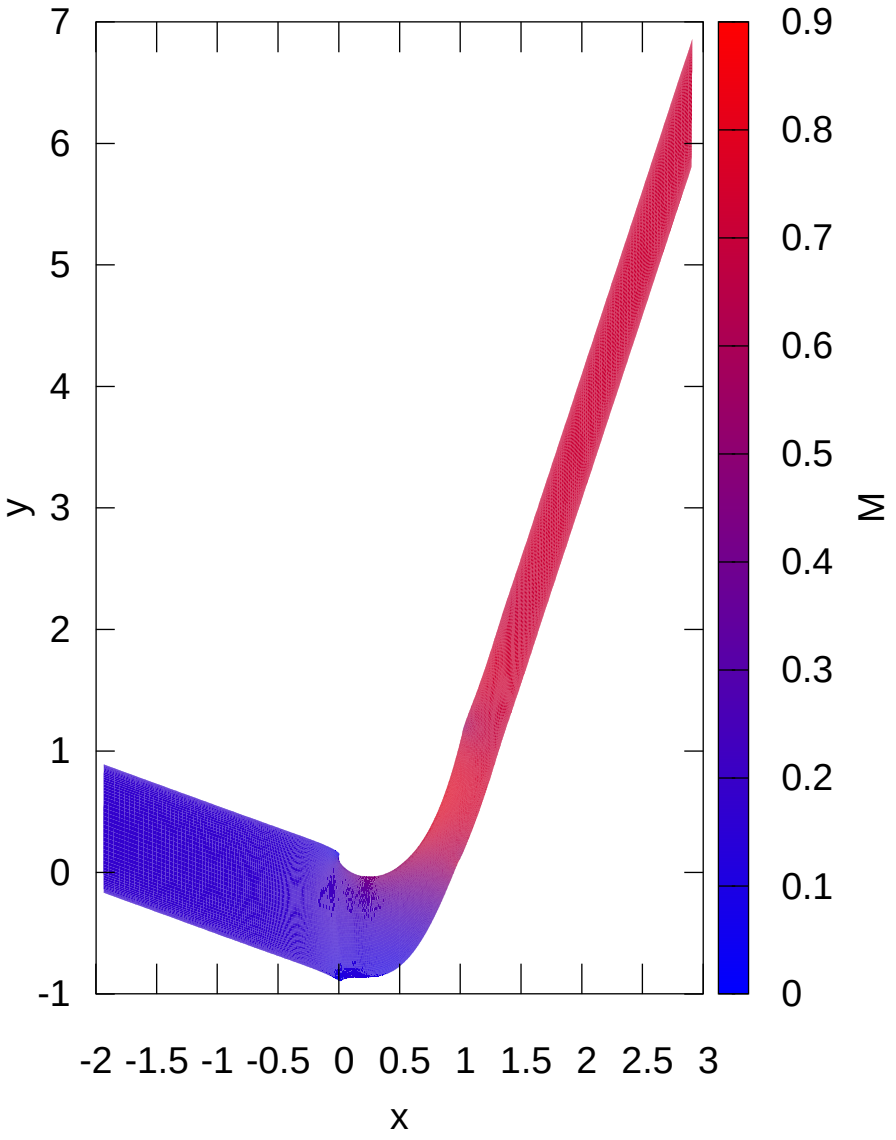
α_1 = -20.0° || α_2 = 72.5° || M_2 = 0.7|| s = 1.056|| Re = 600000.0

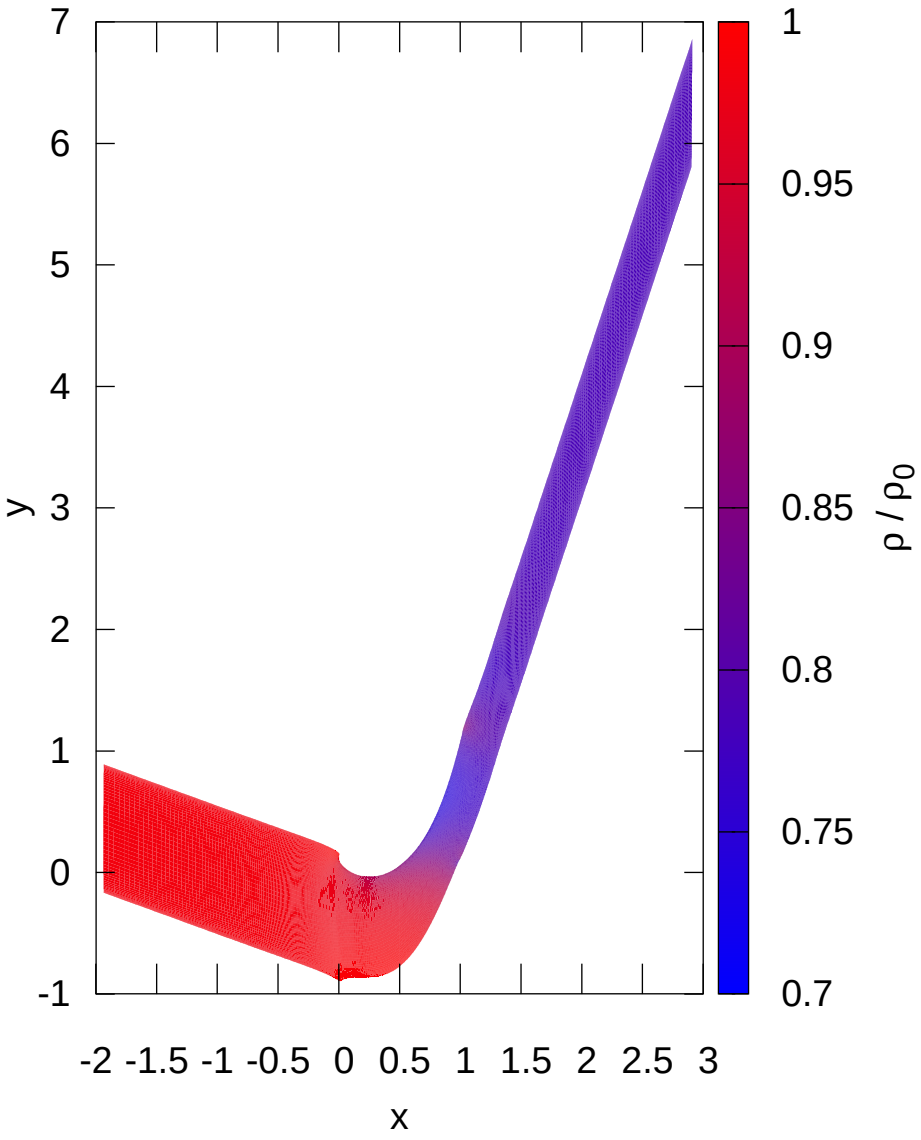
M_{LE} = 1.8|| M_{PEAK} = 1.2|| L_{PEAK} = 0.6|| M_{PRESS} = 0.8

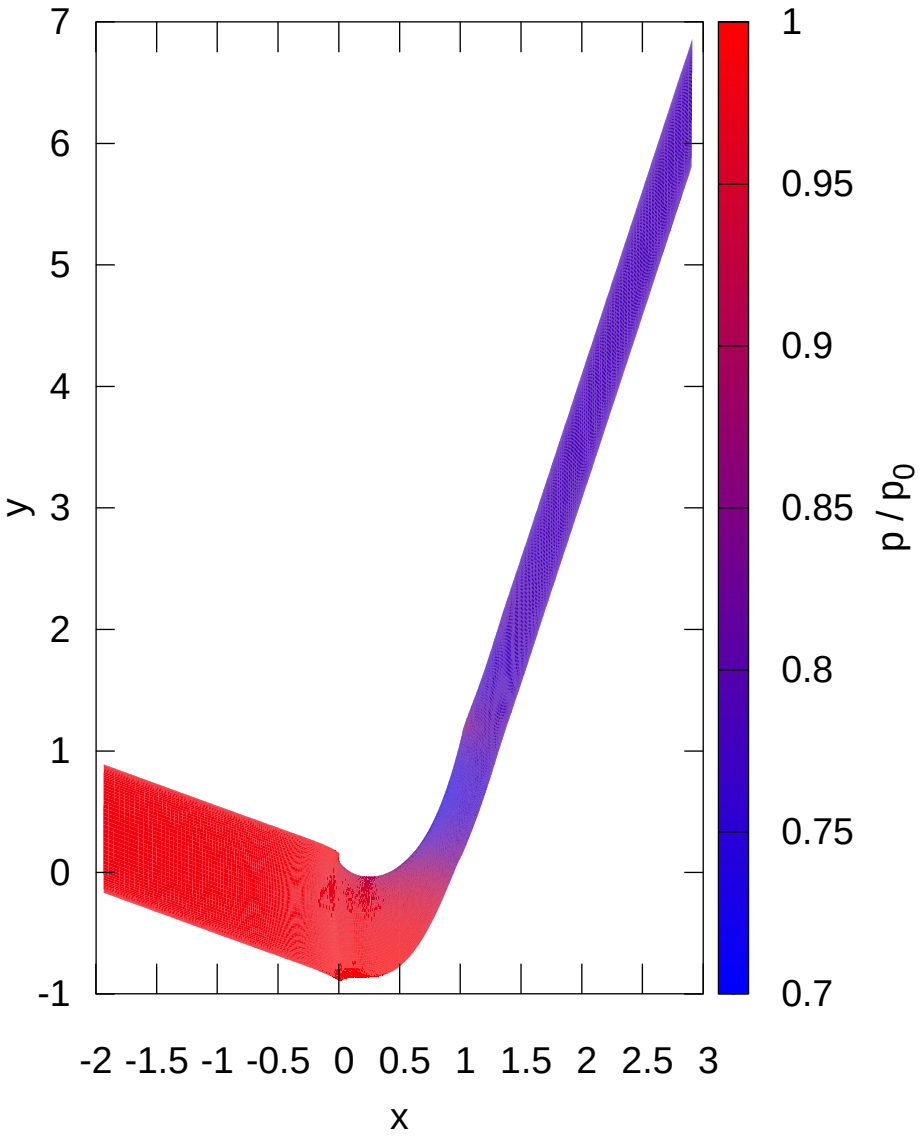


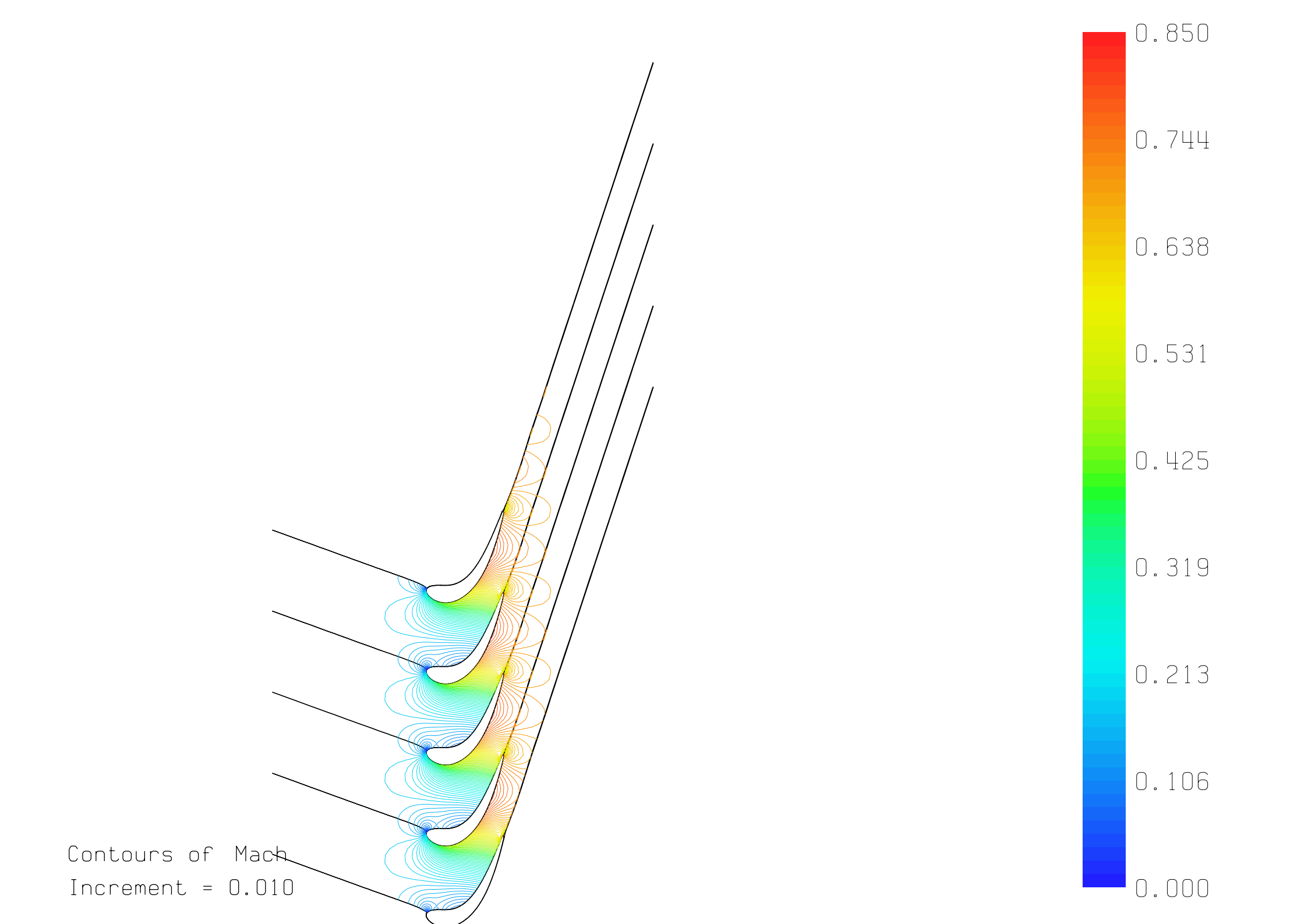


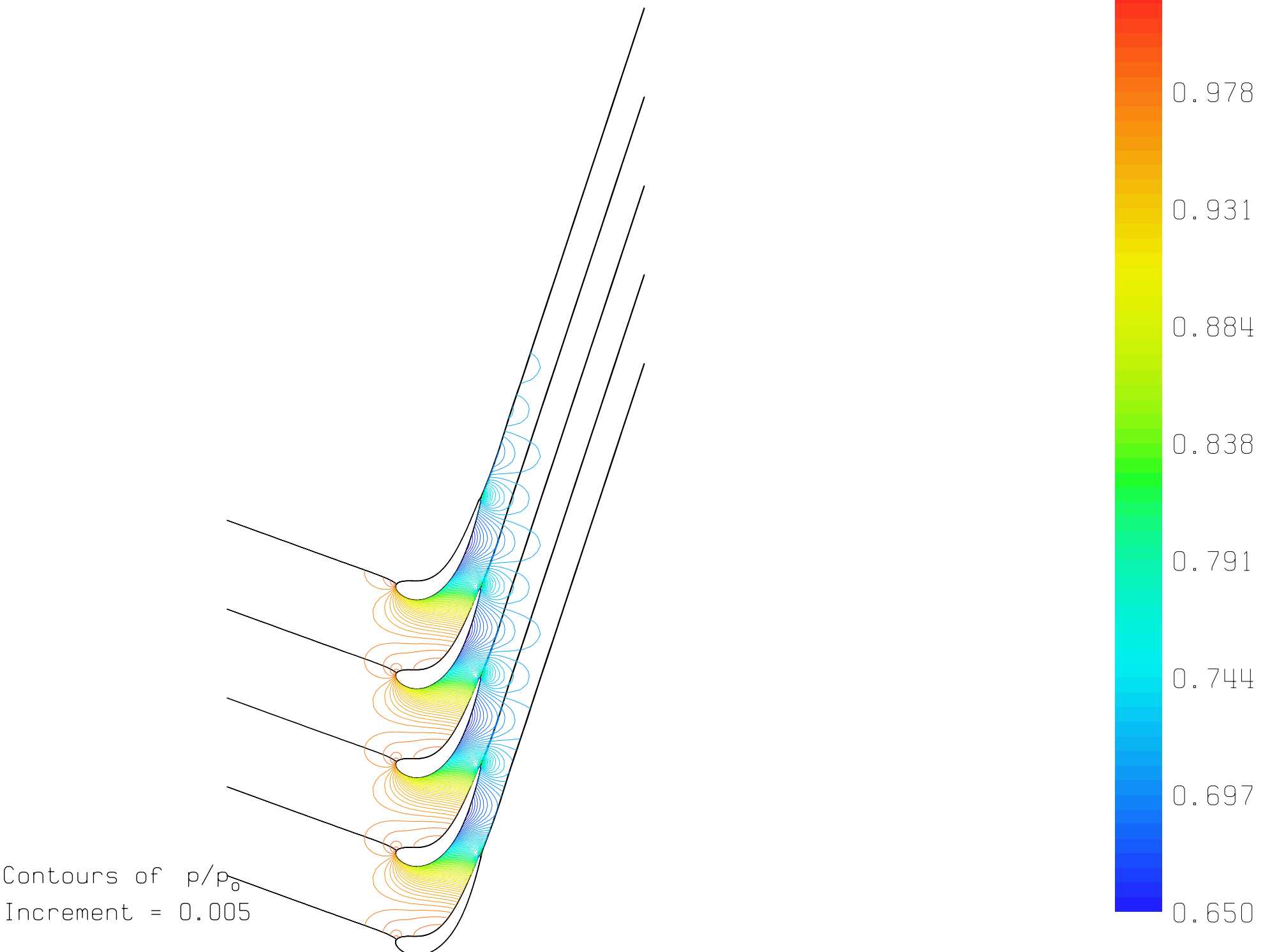


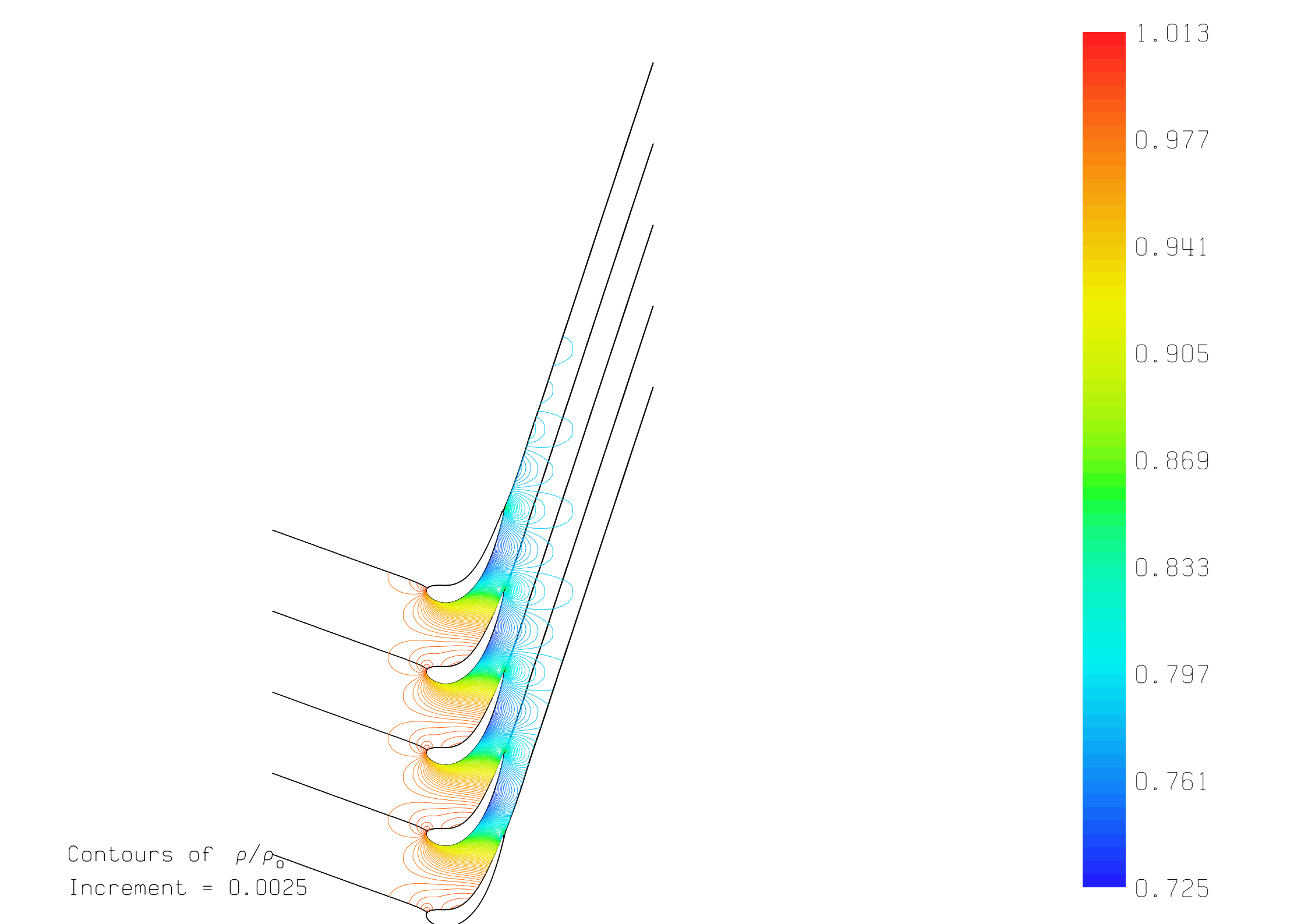

7
6
5
4
3
2
1
0
-1
y
-2 -1.5 -1 -0.5 0 0.5 1 1.5 2 2.5 3
x
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
M

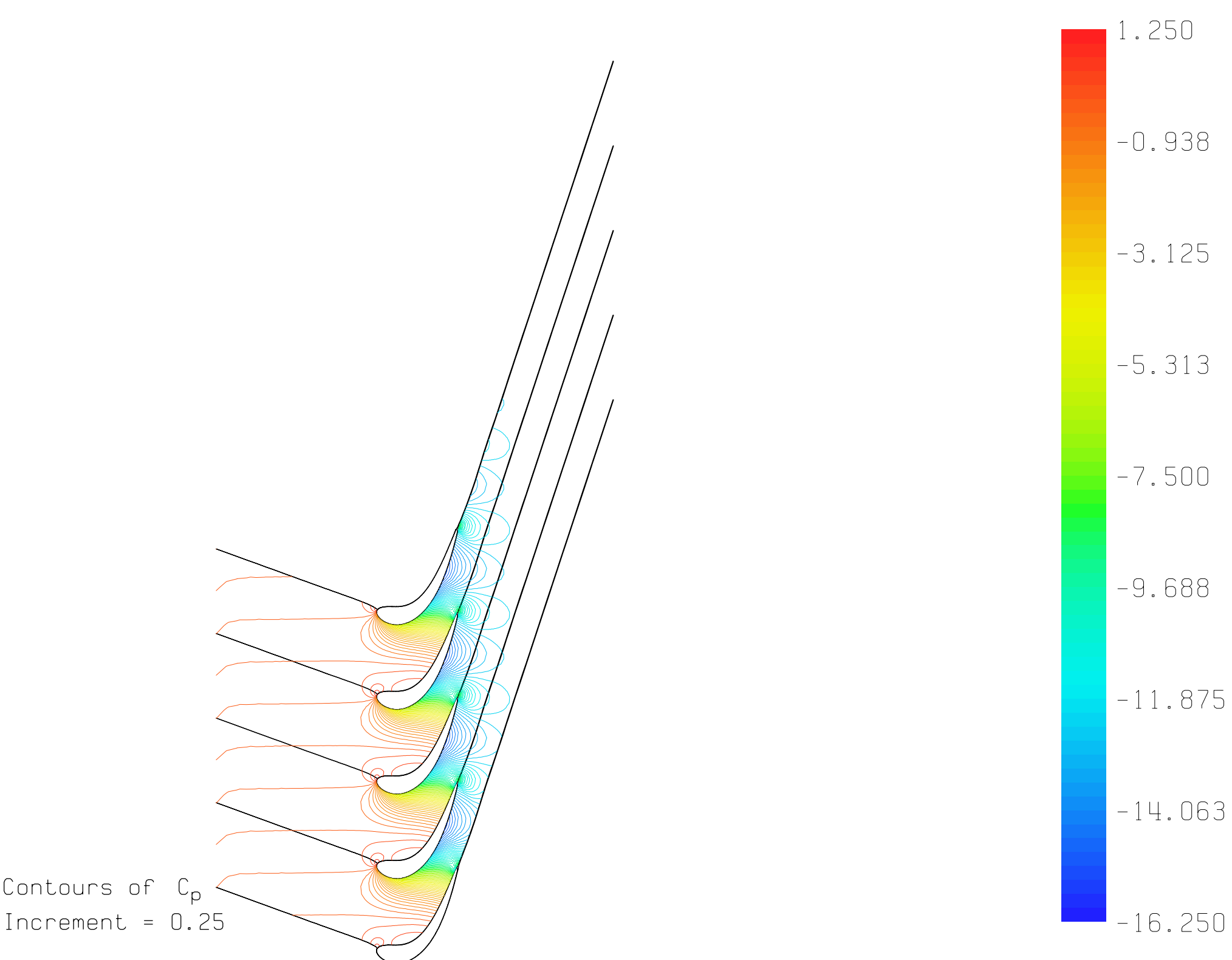

7
6
5
4
3
2
1
0
-1
y
-2 -1.5 -1 -0.5 0 0.5 1 1.5 2 2.5 3
x
1
0.95
0.9
0.85
0.8
0.75
0.7
ρ / ρ0

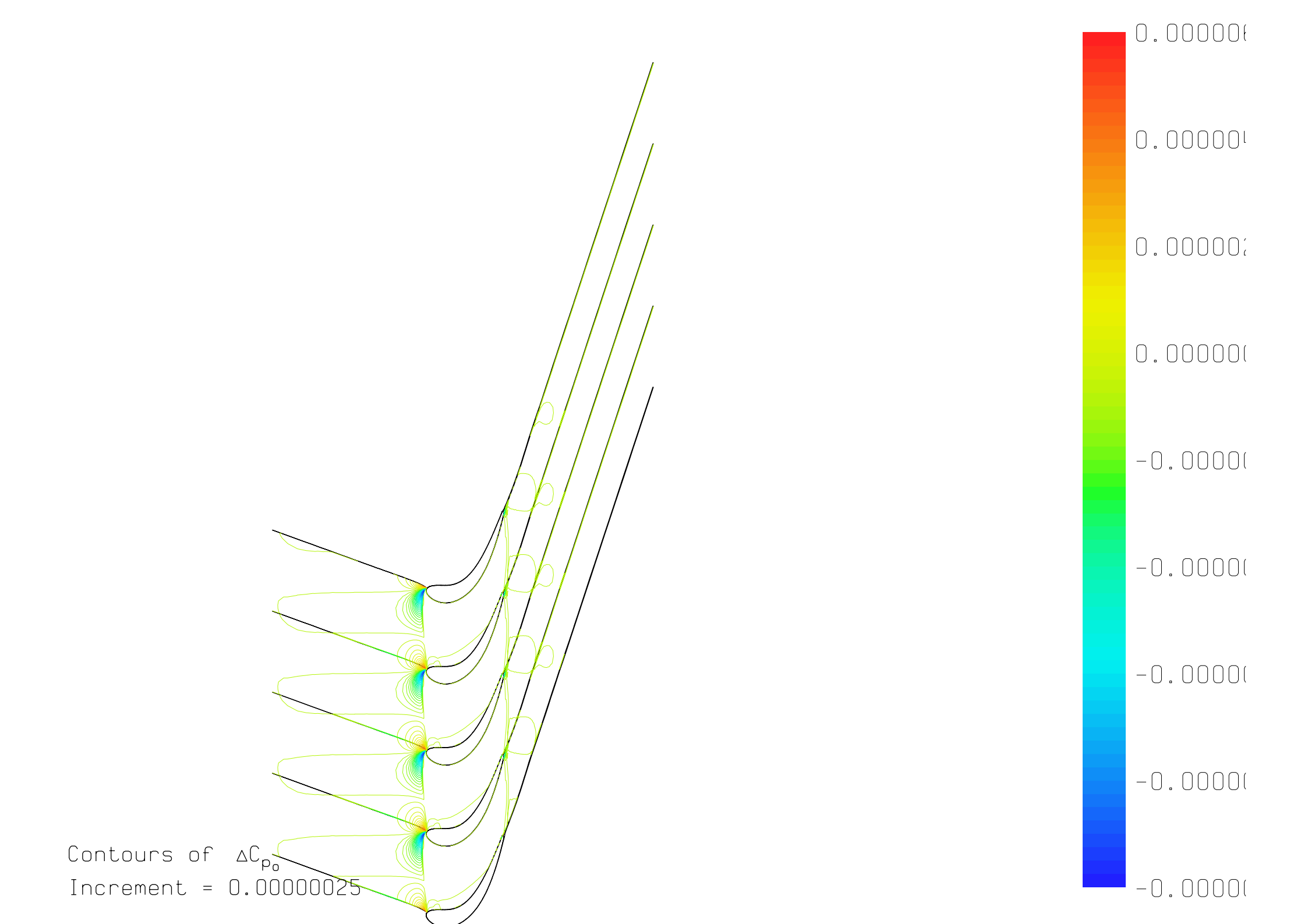

7
6
5
4
3
2
1
0
-1
y
-2 -1.5 -1 -0.5 0 0.5 1 1.5 2 2.5 3
x
1
0.95
0.9
0.85
0.8
0.75
0.7
p / p0

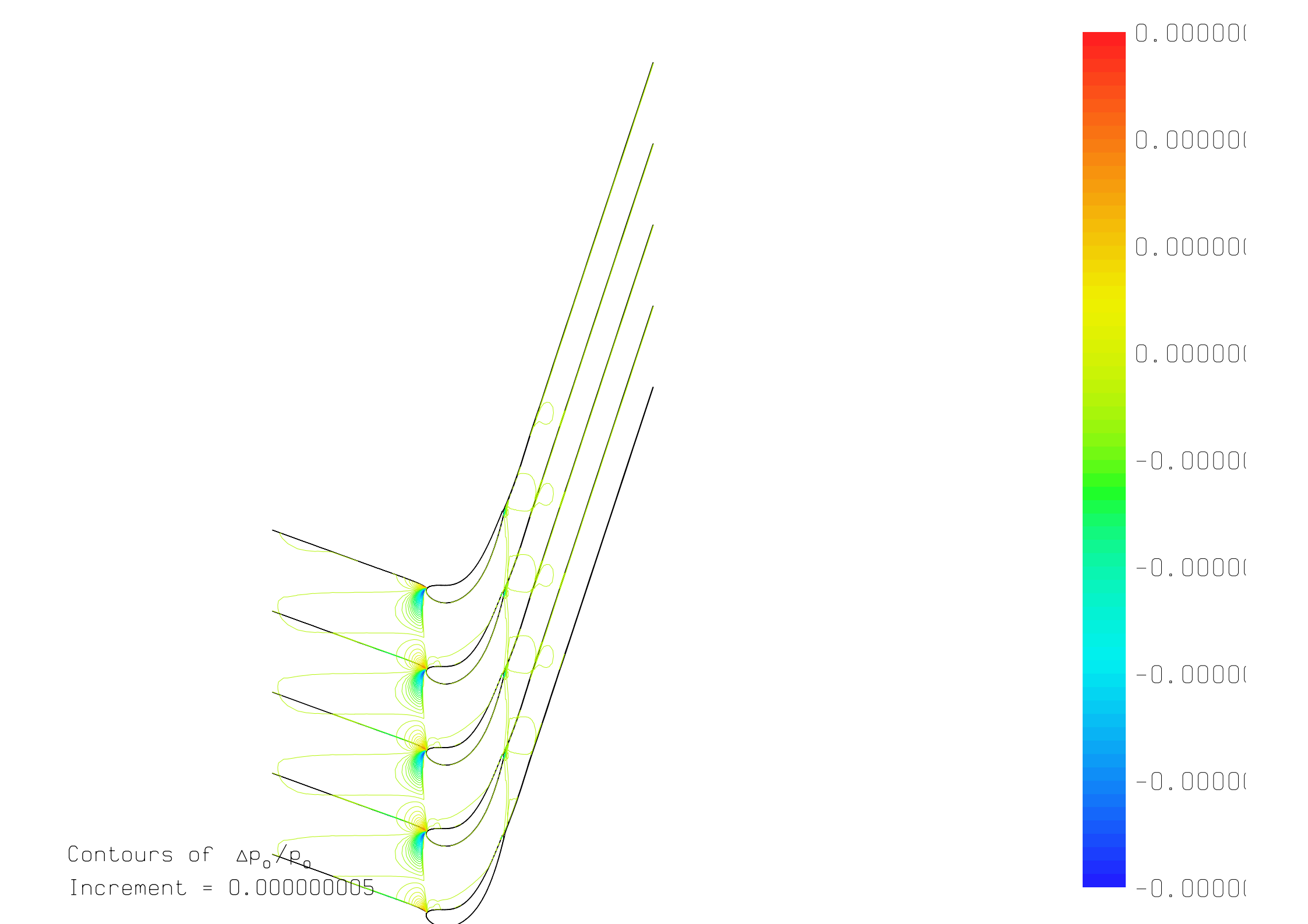

0.850
0.744
0.638
0.531
0.425
0.319
0.213
0.106
0.000
Contours of Mach
Increment = 0.010


1.025
0.978
0.931
0.884
0.838
0.791
0.744
0.697
0.650
Contours of p/p0
Increment = 0.005


1.013
0.977
0.941
0.905
0.869
0.833
0.797
0.761
0.725
Contours of ρ/ρ0
Increment = 0.0025


1.250
-0.938
-3.125
-5.313
-7.500
-9.688
-11.875
-14.063
-16.250
Contours of Cp
Increment = 0.25


0.000000
0.000001
0.000002
0.000000
-0.00000
-0.00000
-0.00000
-0.00000
-0.00000
Contours of ΔCpo
Increment = 0.00000025


0.000000(
0.000000(
0.000000(
0.000000(
-0.00000(
-0.00000(
-0.00000(
-0.00000(
-0.00000(
Contours of Δp0/p0
Increment = 0.000000005