

SU2 3주차 보고서

2019011579 김세형

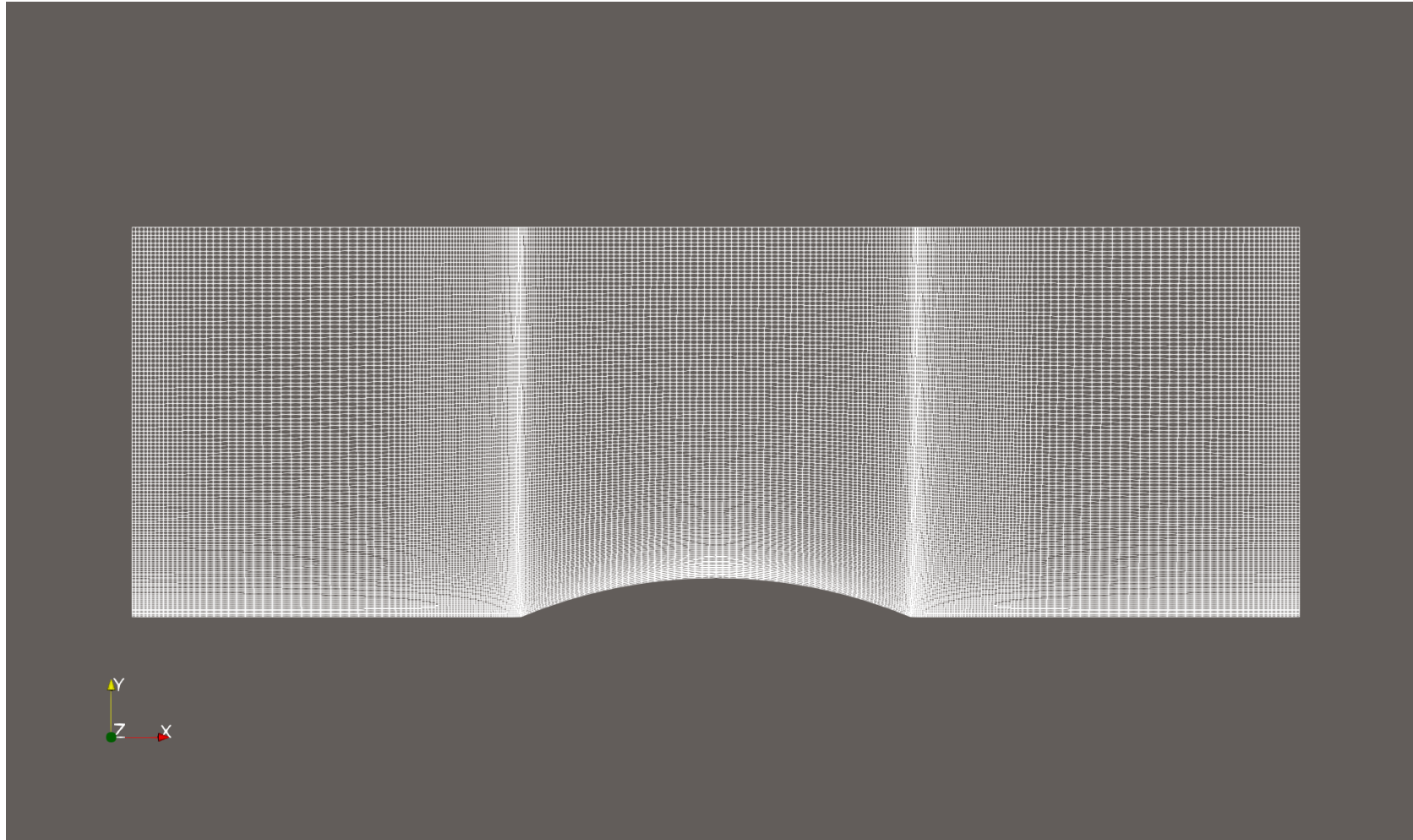
Channel

Channel 해석조건

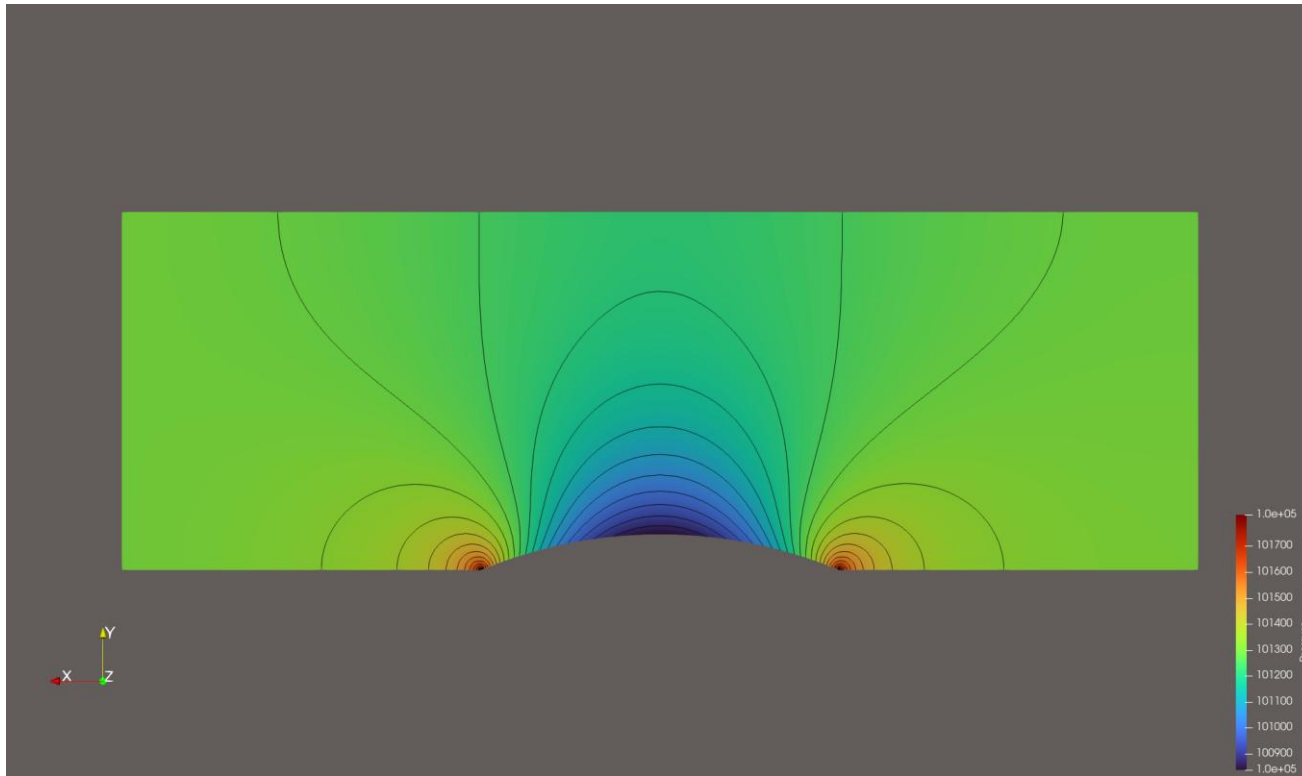


- SOLVER= EULER
- MACH_NUMBER= 0.5
- AOA= 0.0
- FREESTREAM_PRESSURE= 101300.0
- FREESTREAM_TEMPERATURE= 288.6

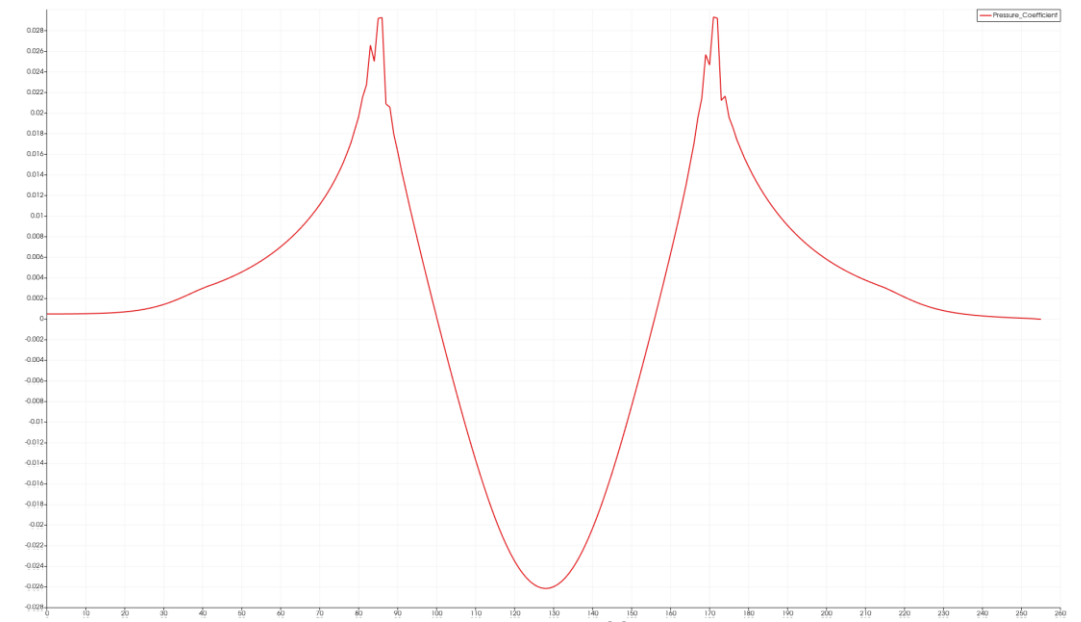
Channel Mesh



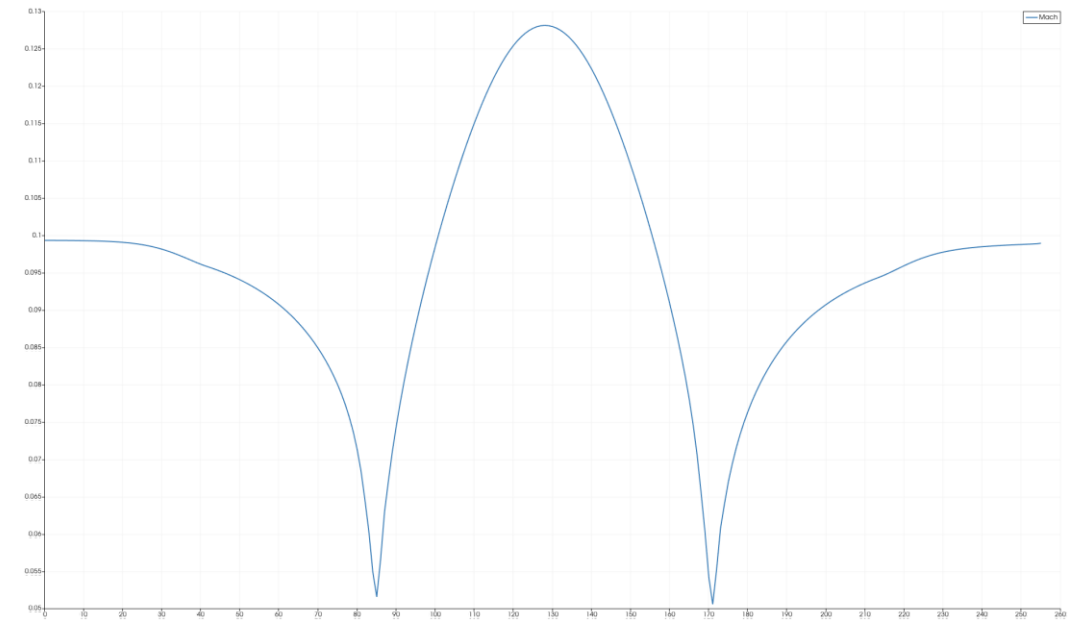
Channel Contour & Graph



Pressure contour



Pressure Coefficient



Mach

Channel Analysis

- 언덕 표면 전후로 압력이 주변보다 높아지는 정체점 (stagnation point) 형성.
- 베르누이 원리에 따라 언덕 중앙 부분이 단면적이 좁고 유속이 빨라져 압력이 가장 낮음.
- 촘촘한 등압선은 해당 부분의 급격한 압력 변화를 의미.
- 넓은 간격의 등압선은 완만한 압력 변화를 의미.

ONERA M6

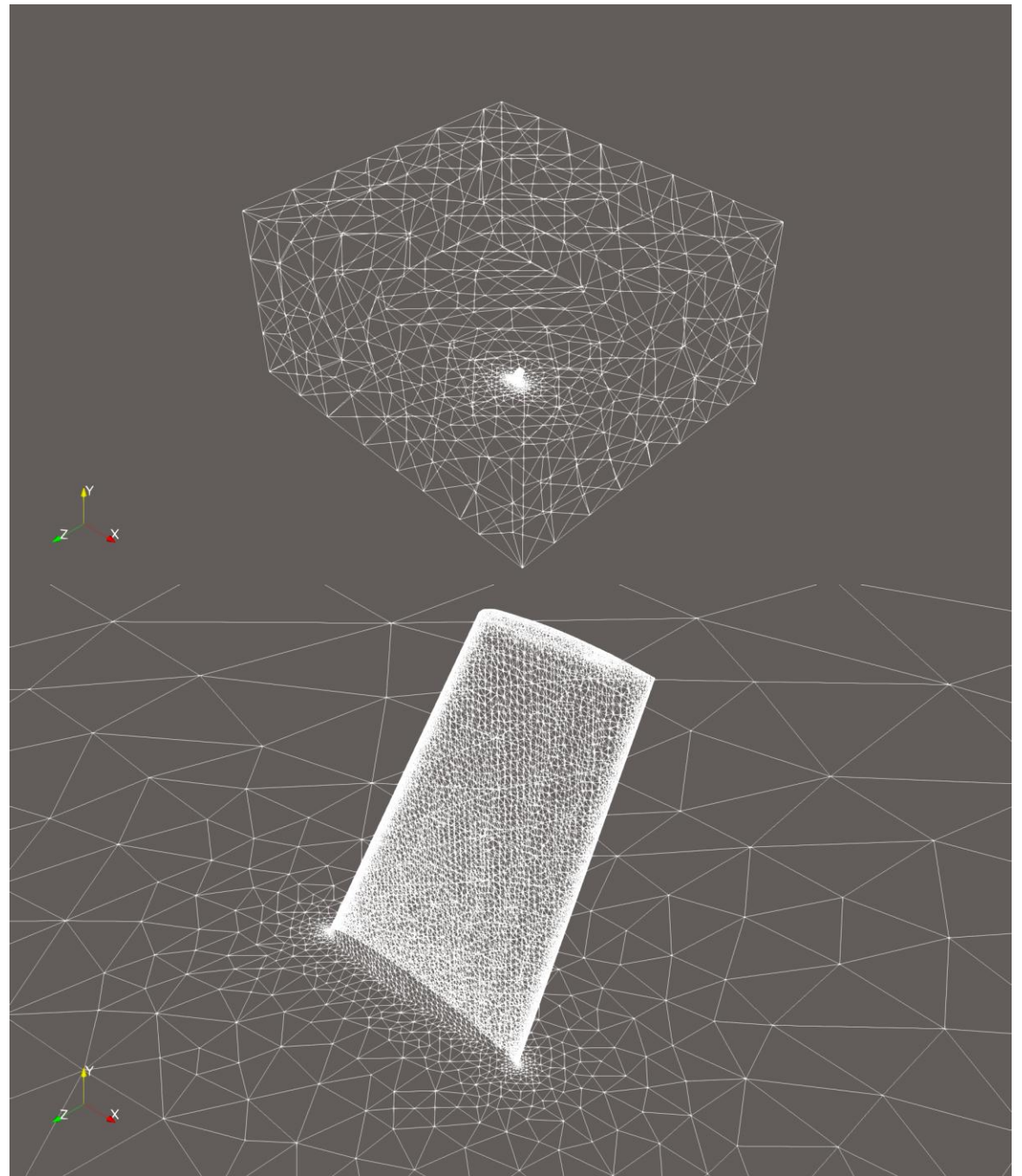
ONERA M6 해석조건



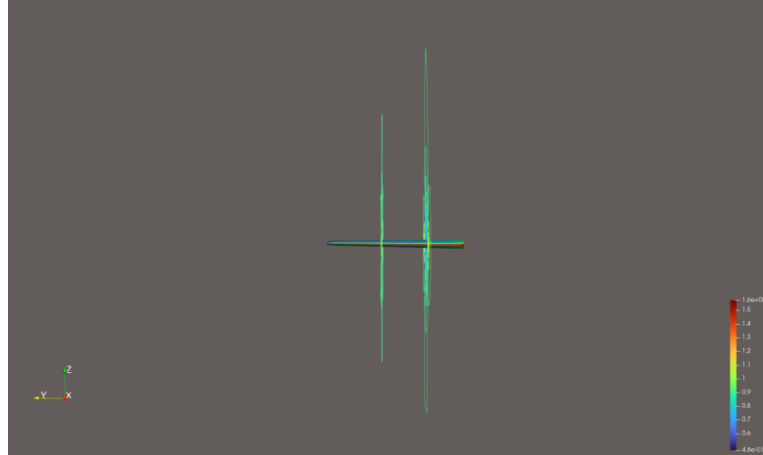
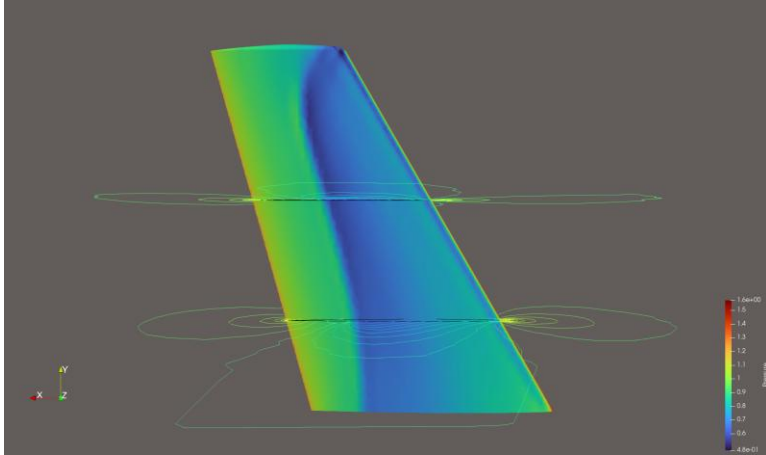
- SOLVER= EULER
- MACH_NUMBER= 0.88
- AOA= 0.2
- FREESTREAM_PRESSURE= 101325.0
- FREESTREAM_TEMPERATURE= 288.15
- CFL_NUMBER= 25.0

ONERA M6 Mesh

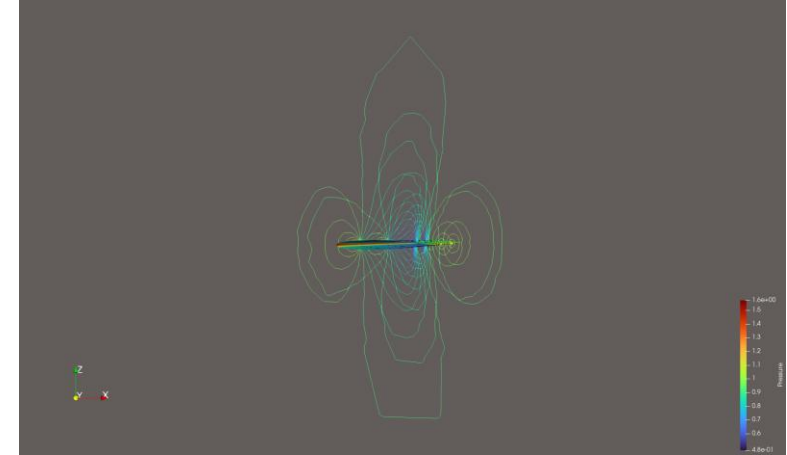
- 582,752 Cells
- 108,396 Points



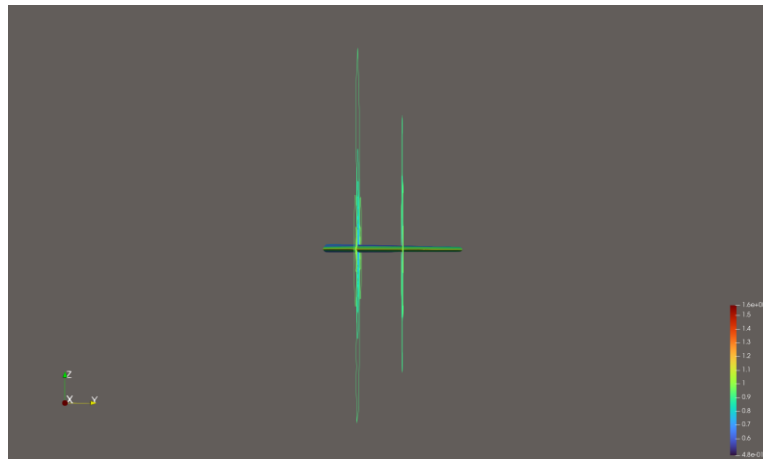
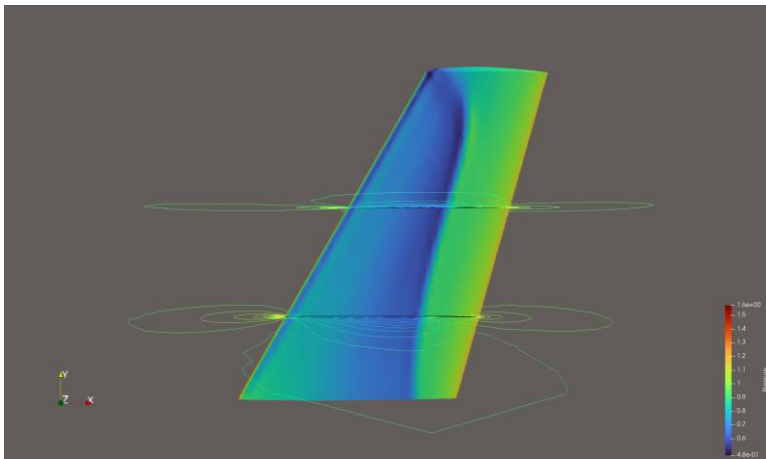
ONERA M6 Contour



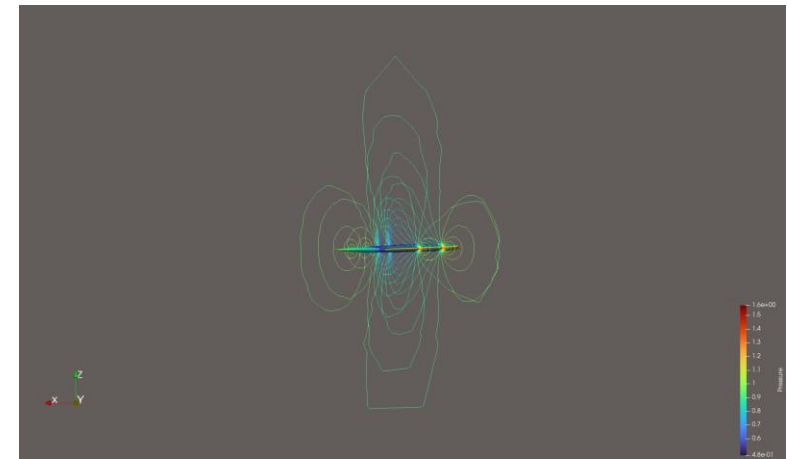
Front View



Root View



Back View



Tip View

ONERA M6 Analysis

- 날개 앞전에는 높은 압력의 정체점(stagnation point) 형성.
- 뒷전 부근의 압력이 앞전 부근의 압력보다 높게 형성.
- 날개 표면에서 충격파가 발생하는 부분 확인.
- wing tip 부근에서 등압선이 휘어짐을 통해 wingtip vortex 생성 확인.