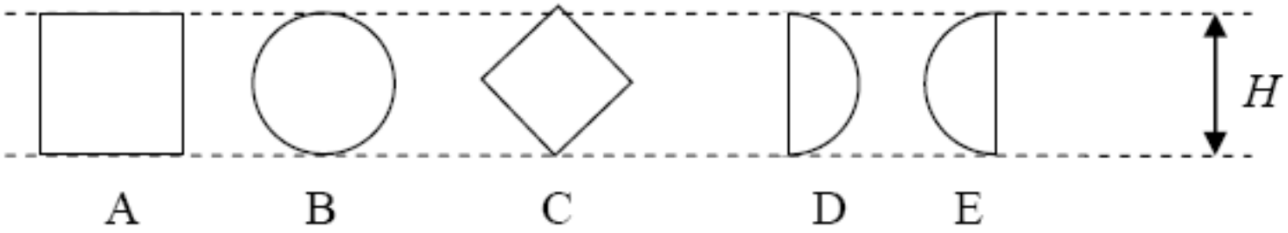
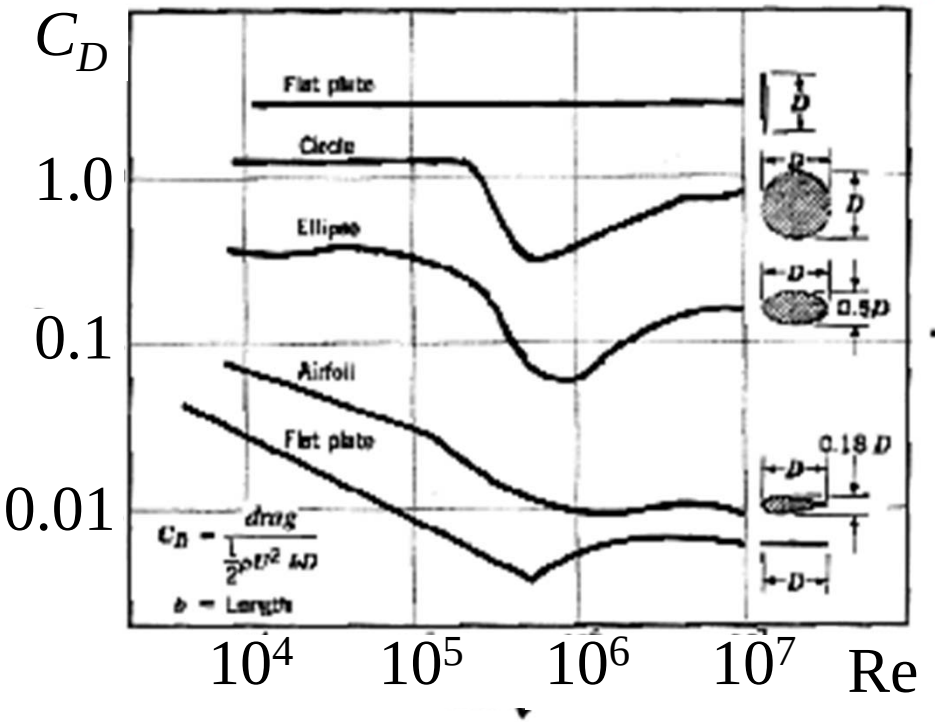
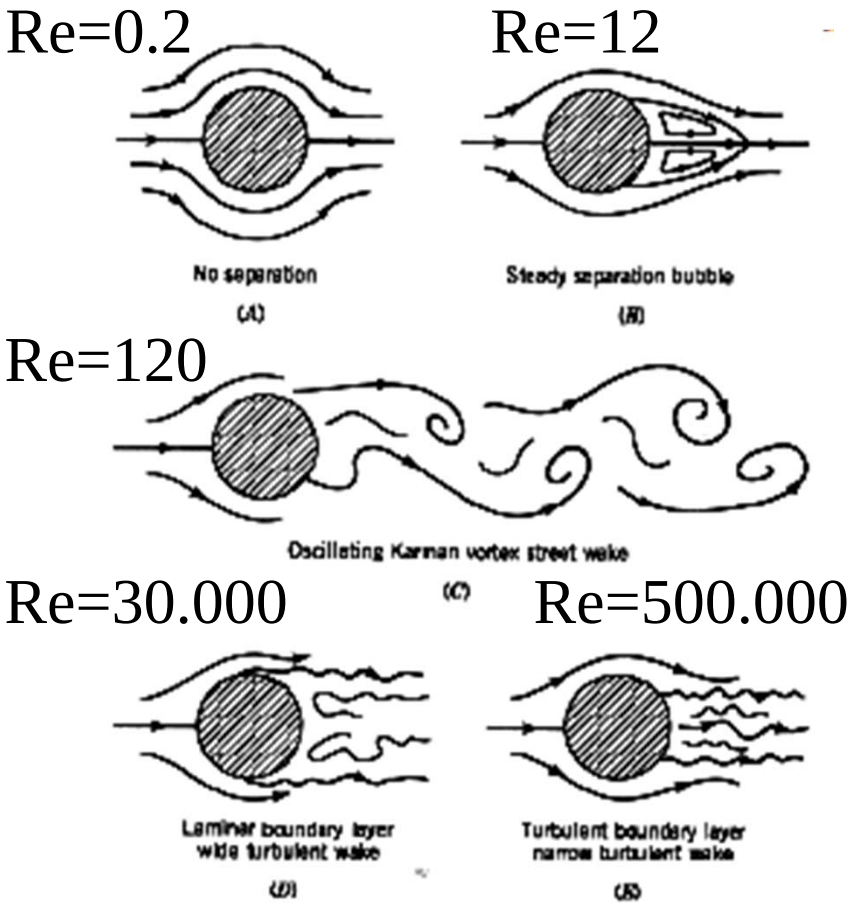
Individual task:

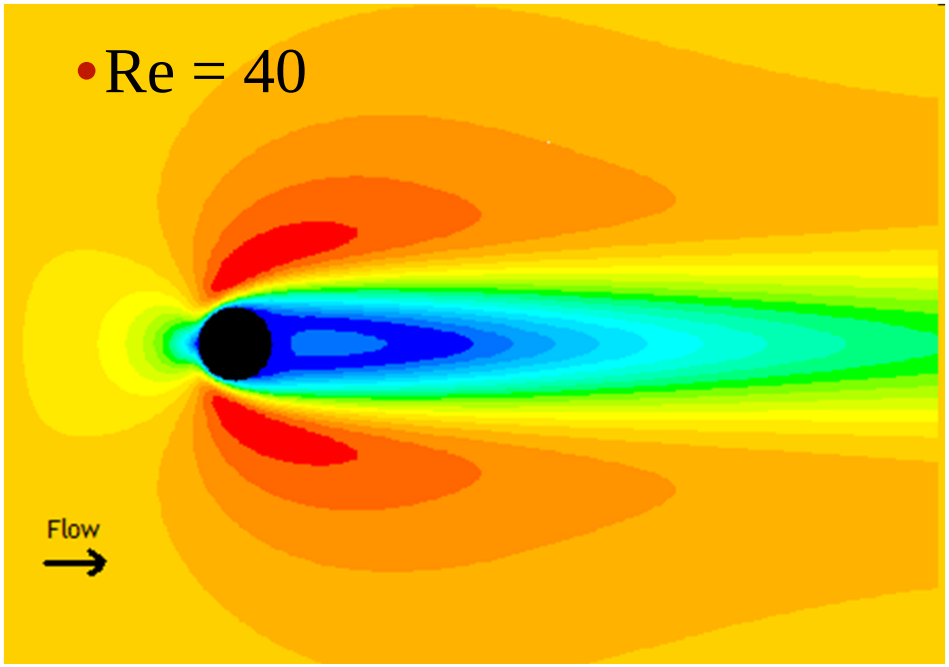
- Drag for a 2D object:

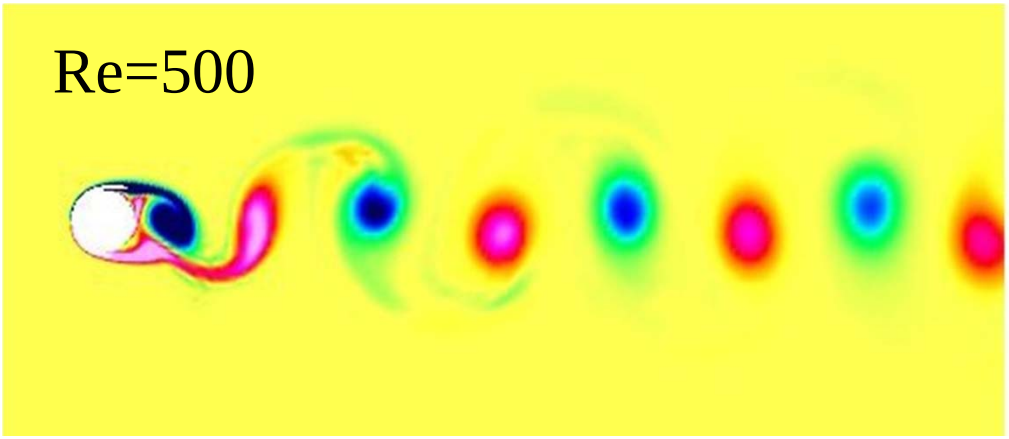


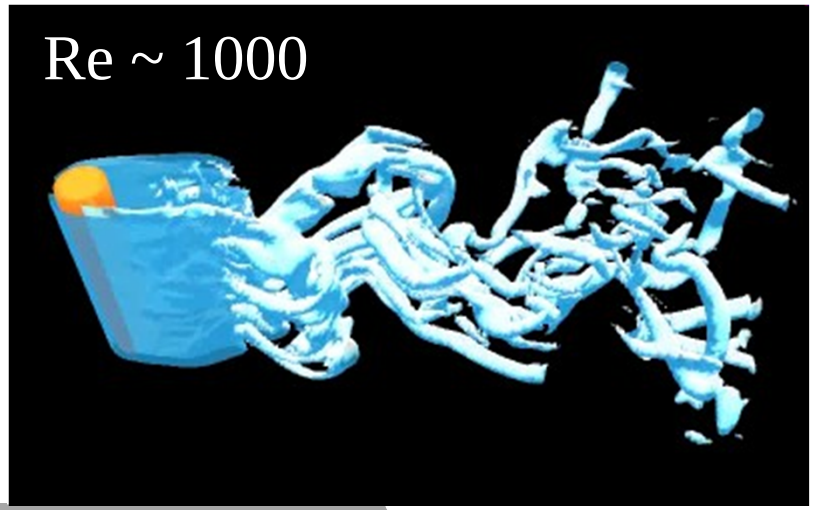
Reynolds no. dependency

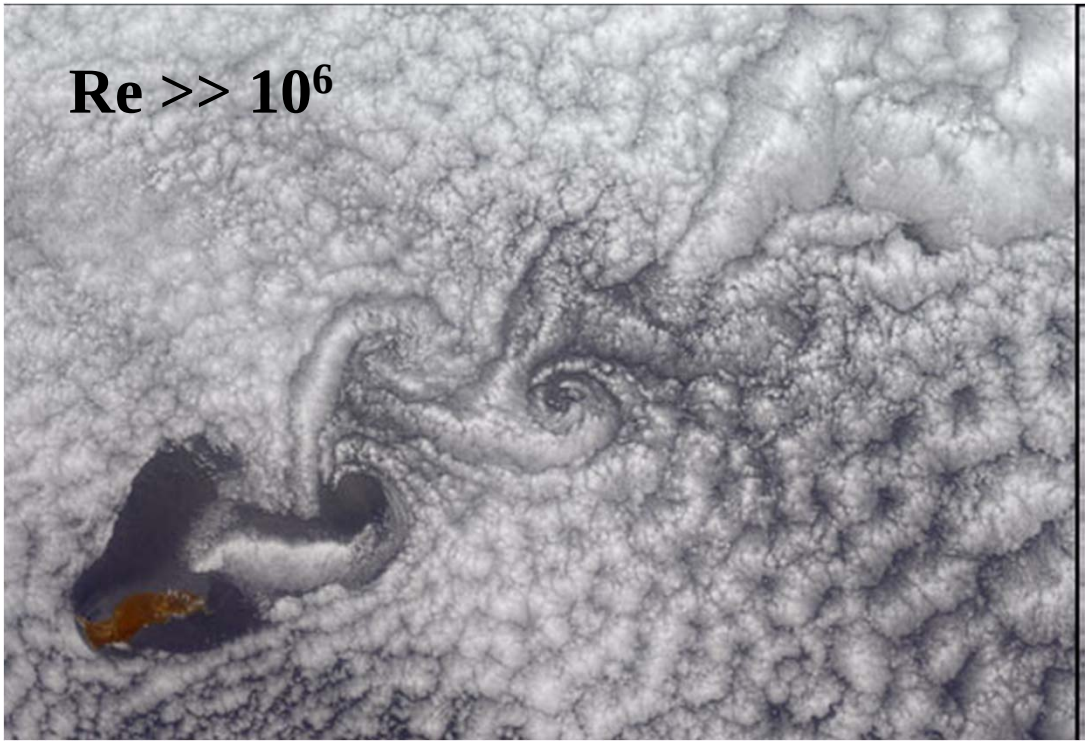





• Re = 40
Flow


Re=500

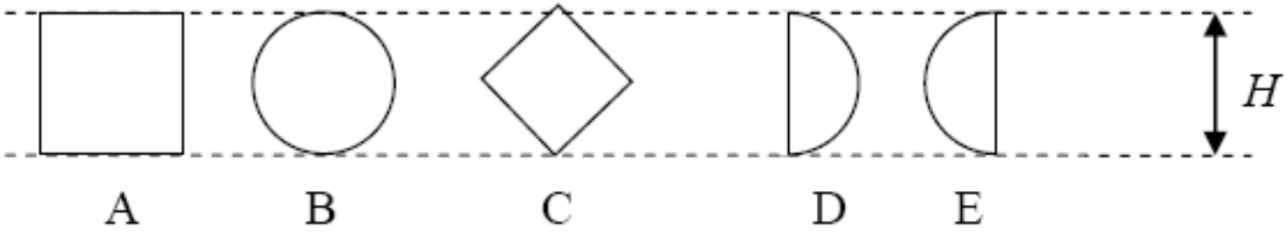

Re ~ 1000


Re >> 10^6

What to do:

- Objective

  To derive the drag coefficient for a 2D object



- Setting
  - Choose object
  - Choose Re=10^4, 10^5 or 10^6
  - Incompressible: Ma<0.1
- Derive
  - Drag coefficient
  - Grid and flow pictures
- Different approximations – no ”correct answer”

When:

- Preparation for lecture 2 (28/3):
  - Sketch, Physical model, Reynolds number
- During lecture 2 (28/3):
  - Determine the grid resolution requirements
- Before 18/4 12:00:
  - Compute the case using Fluent
  - Upload on bilda
- During lecture 5 (23/4):
  - I will compare the different results – feedback