

RANS, DNS et LES

- $N_x \Delta \sim l_0, \quad \Delta \sim \eta \sim l_0 Re^{-3/4}$

$$\Rightarrow N_x^3 \sim Re^{9/4}, \quad \left(\frac{\eta}{l_0}\right)^3 = Re^{-9/4}$$

- $\Delta t \sim \frac{\Delta}{w_0}, \quad T \sim \ell/w_0$

$$\Rightarrow N_t = \frac{T}{\Delta t} \propto \frac{l_0 w_0}{w_0 \Delta} \sim \frac{l_0}{\eta} \sim Re^{3/4}$$

$$N_x^3 N_t \propto Re^3$$

