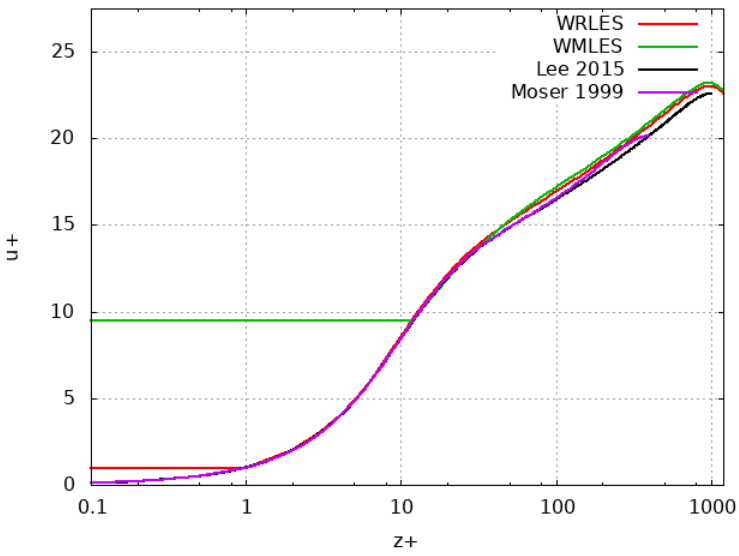


Semi-infinite channel flow at $Re_\tau = 1000$

Flow Parameters

- Bulk Reynolds Number, $Re_b = U_b 2\delta / \nu = 40000$
 - U_b , δ and ρ are unity (same as the previous simulation).
- Theoretical friction Reynolds number, $Re_\tau = u_\tau \delta / \nu = 1000$
- Profiles and spectra can be compared against DNS of Lee [1].
- [Database for comparison against DNS.](#)

	$L_x \times L_y \times L_z$	$N_x \times N_y \times N_z$	Δt	N_{iter}	$Re_{\tau_{numerical}}$
WRLES	$4\pi \times 1.5\pi \times 2$	$640 \times 257 \times 320$	0.004	150000	980.86
WMLES	$4\pi \times 1.5\pi \times 2$	$192 \times 96 \times 96$	0.01	60000	968.55



1. Lee M, Moser RD. Direct numerical simulation of turbulent channel flow up to $Re_\tau \approx 5200$. Journal of Fluid Mechanics. 2015;774:395-415. doi:10.1017/jfm.2015.268.

Planes extracted in WMLES

Wall-parallel planes

- At theoretical z^+ values :
 - At same non-dimensional heights as in $Re_\tau = 395$ case : 151, 199, 251, 302, 392
 - At same z/δ locations as in $Re_\tau = 395$ case : 380.04, 503.63, 638.27, 762.79, 990.67

Planes extracted in WRLES

Wall-parallel planes

- At theoretical z^+ values :
 - At same non-dimensional heights as in $Re_\tau = 395$ case : 20, 40, 98, 151, 199, 251, 302, 392
 - At same z/δ locations as in $Re_\tau = 395$ case : 380.04, 503.63, 638.27, 762.79, 990.67