Kinetic energy gradient induction due to an integral scale inhomogeneoity

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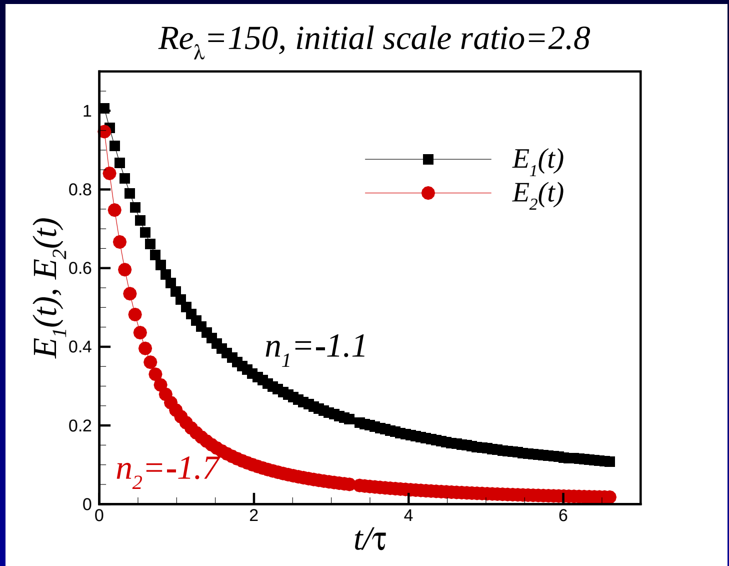
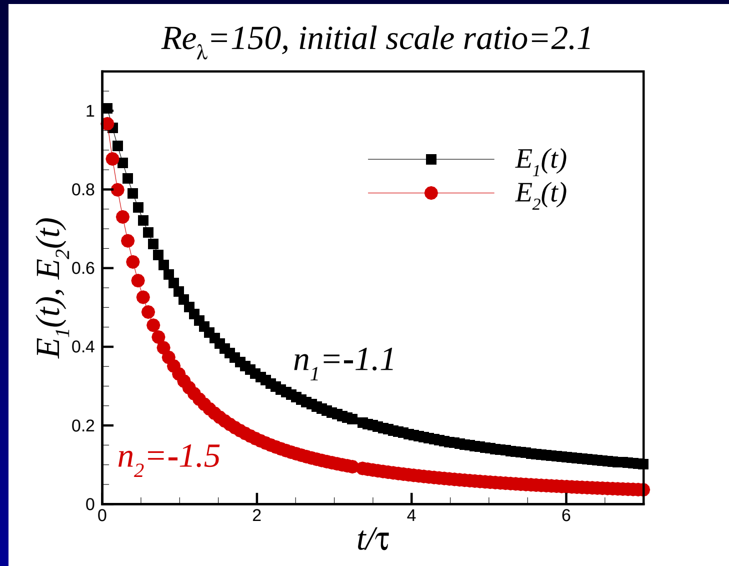
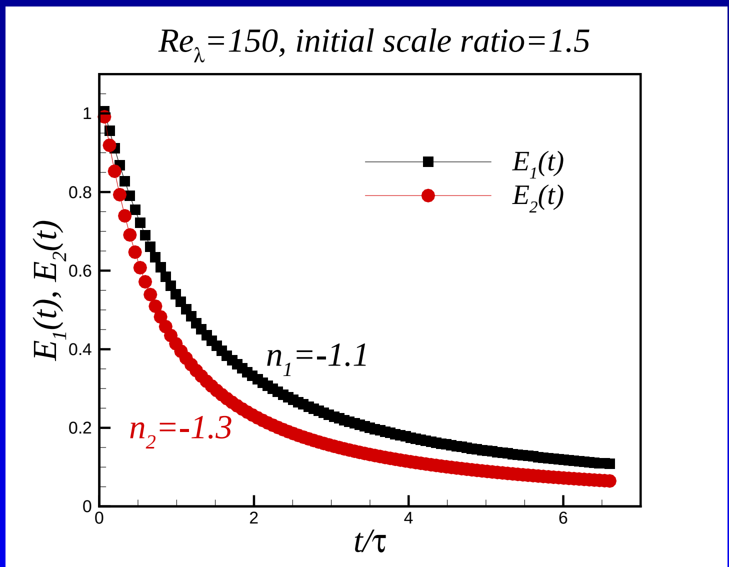
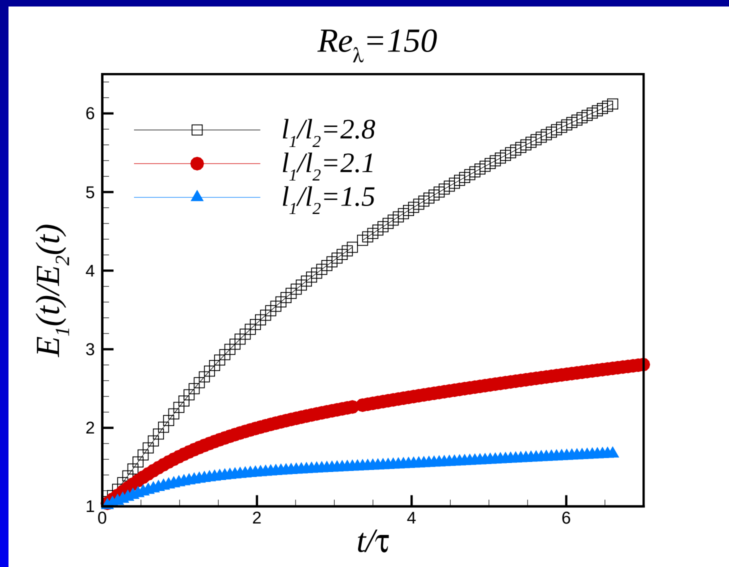
Turbulent kinetic energy decay

E_1 = the larger scale region, E_2 = smaller scale region



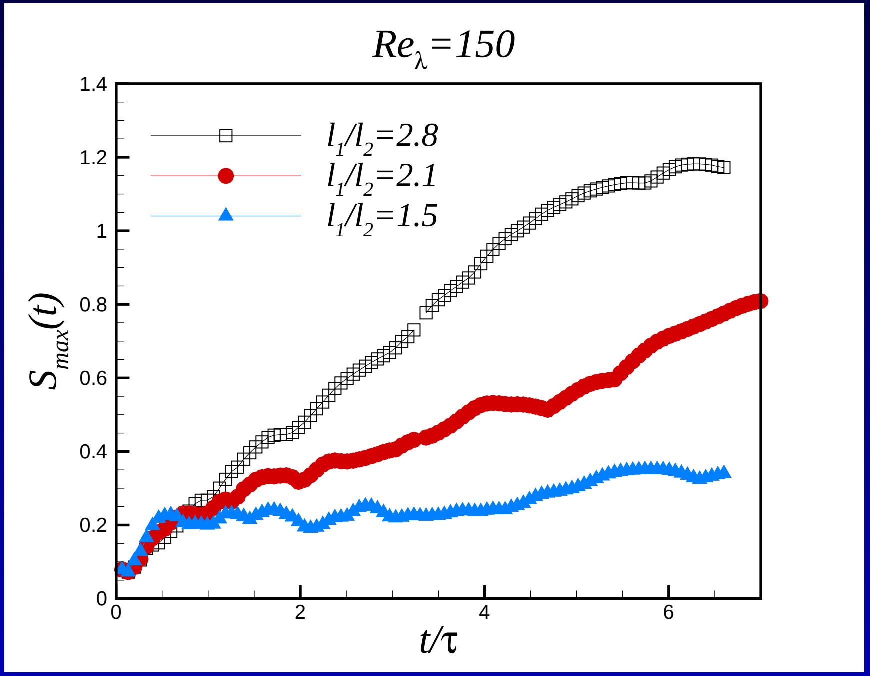


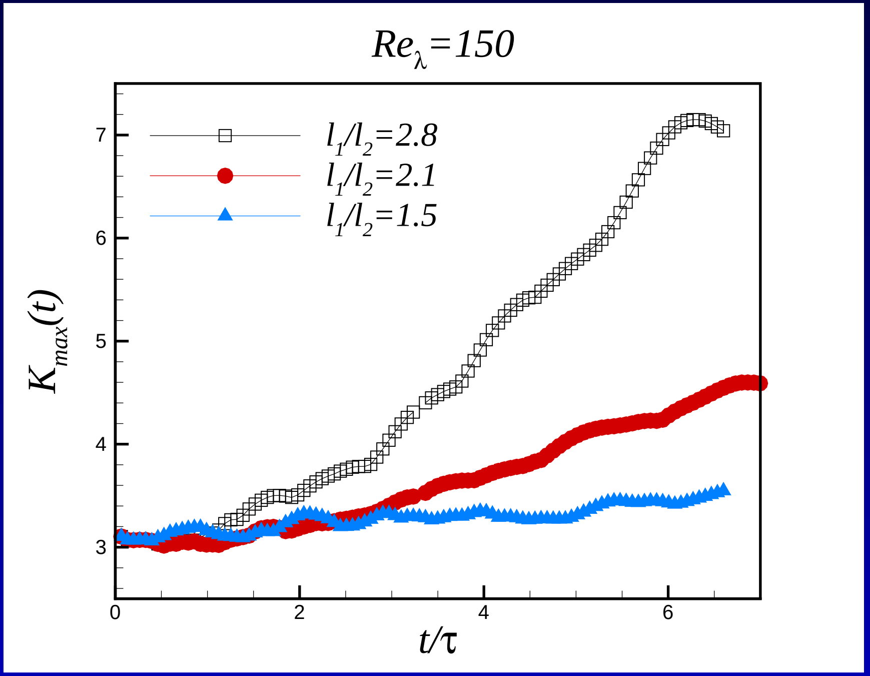




Mixing layer intermittency

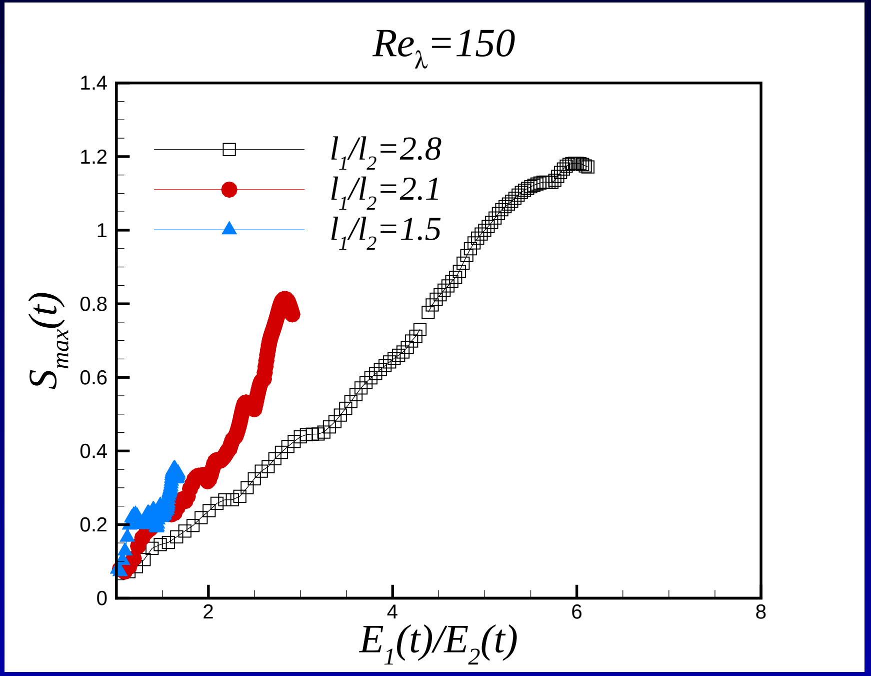
Velocity skewness and kurtosis, component in the mixing direction: maximum in the mixing layer

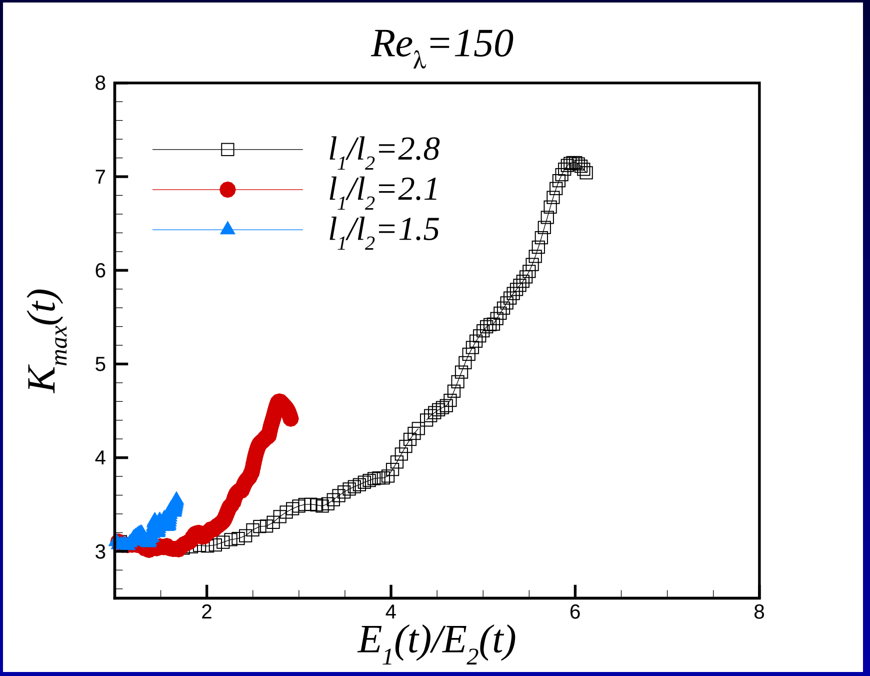




Mixing layer intermittency

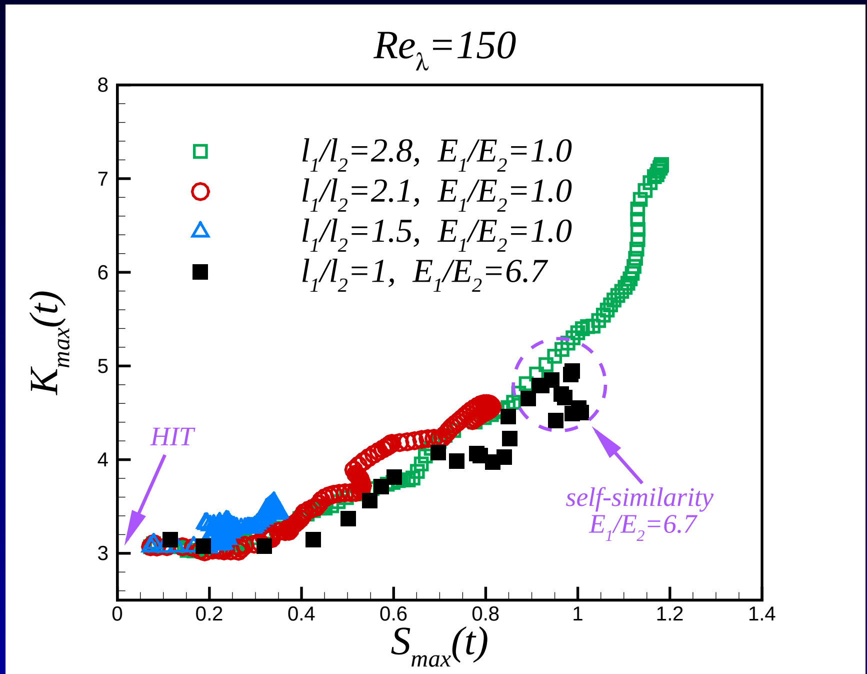
Intermittency vs. instantaneous kinetic energy ratio

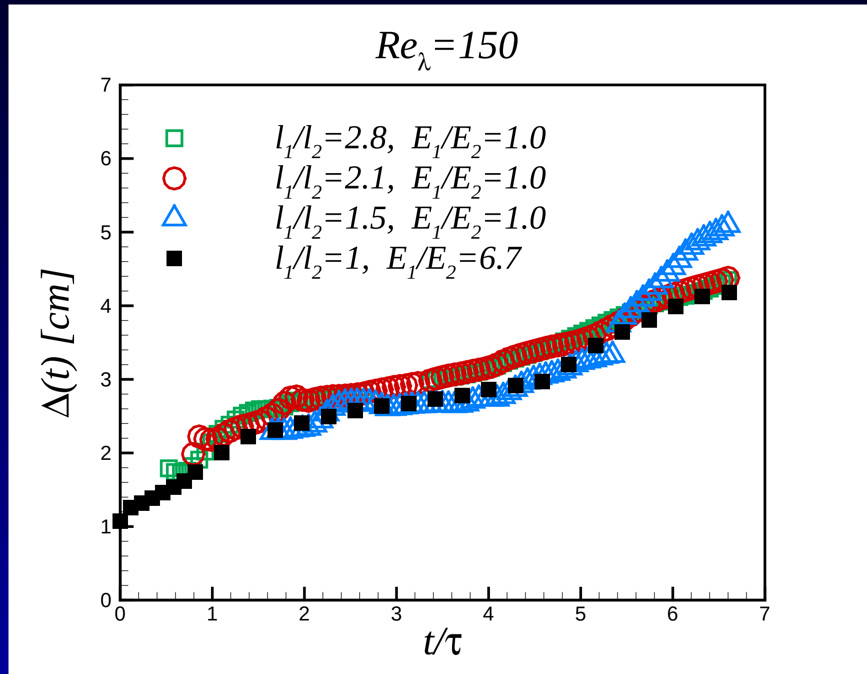




Each point represents a different instant

Mixing layer intermittency





$\Delta(t)$ is the mixing layer thickness
domain length $L = 41.4$ cm in the mixing direction

Note: each point corresponds to one instant, but the time step in the data with $E_1/E_2 = 6.7$ is larger.