

normal shock

$\sim \lambda_{\text{eff}}$

effective
mean free
path

upstream conditions
ahead of normal shock



v_1 in shock frame

P_1, T_1, ρ_1

downstream conditions
behind normal shock



v_2 in shock frame

P_2, T_2, ρ_2

viscous effects dissipate kinetic
energy \rightarrow heat & entropy

x

viscous effects small; fluid variables linked by jump conditions