

DISCRETE  
PARTICLE OR  
MOLECULAR  
MODEL

BOLTZMANN EQUATION

COLLISIONLESS  
BOLTZMANN  
EQUATION

TRANSPORT  
EQUATIONS

EULER  
EQUATIONS

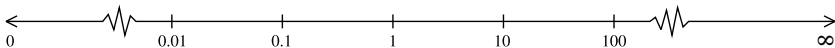
NAVIER-STOKES  
EQUATIONS

EXTENDED  
HYDRODYNAMIC  
EQUATIONS

CONTINUUM  
REGIME

TRANSITIONAL  
REGIME

FREE-MOLECULAR  
REGIME



INVISCID  
LIMIT

FREE-MOLECULAR  
LIMIT

LOCAL KNUDSEN NUMBER