

On the compressible Navier-Stokes equations in the whole space: well-posedness, stability and asymptotic analysis



We are concerned with the global well-posedness, stability and asymptotics on the compressible Navier-Stokes equations in the whole space. By exploring the structures of the equations, we prove the global large solutions which correspond to the well-constructed initial data. We also give a rigorous proof for the derivation of the isentropic flow from the non-isentropic flow.

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