

# GLOBAL EXISTENCE AND DECAY ESTIMATE FOR THE 2 - D COMPRESSIBLE NAVIER-STOKES EQUATIONS WITHOUT HEAT CONDUCTIVITY

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## Abstract

In this paper, we consider an initial value problem for the 2 - D compressible Navier-Stokes equations without heat conductivity. We prove the global existence of strong solution when the initial perturbation is small in  $H^2$  and its  $L^1$  norm is bounded. Moreover, we derive some decay estimate for such a solution.

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