1044-35-123   **John M. Hong** and **Cheng-hsiung Hsu*** (`chhsu@math.ncu.edu.tw`), Department of Mathematics, National Central University, Chung-Li 32001, Taiwan, Taiwan, and **Liu Weishi**. *Viscous standing asymptotic states of isentropic compressible flows through a nozzle.*

In this work we consider a viscous regularization of a well-known one-dimensional model for isentropic viscous compressible flows through a nozzle. For the existence and multiplicity of standing asymptotic states for a certain type of ducts, a complete analysis in a framework of dynamical systems is provided. As an application of the geometric singular perturbation theory, we show that all standing asymptotic states admit viscous profiles. (Received August 27, 2008)