Mathematics > Analysis of PDEs

Global Stability of Steady Transonic Euler Shocks in Quasi-One-Dimensional Nozzles

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We prove global in time dynamical stability of steady transonic shock solutions in divergent quasi-one-dimensional nozzles. We assume neither the smallness of the relative slope of the nozzle nor the weakness of the shock. Key ingredients of the proof are an exponentially decaying energy estimate for a linearized problem together with methods from \cite{LRXX}.

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