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Bombay, Powai, Mumbai, Mumbai, 400076, India. *Nonlinear wave interaction and evolutionary  
behaviour of a shock in a relaxing gas.* Preliminary report.

Using the small amplitude high frequency formalism, the distortion and attenuation of an initial wave profile and its subsequent culmination into a shock are studied. Asymptotic decay laws influenced by the weak dissipative mechanism on account of relaxation and non planar configuration of the fluid flow are obtained. Evolutionary behaviour of shocks of arbitrary strength is studied through a truncated system of transport equations that hold on the shock front and a comparison is made with the existing results. (Received August 17, 2007)