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NON-LINEAR FAR-FIELD THEORIES IN RELAXING GAS FLOWS

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Summary

In the introduction the small amplitude non-linear far-field theory for one-dimensional isentropic wave propagation is briefly reviewed. The extension to non-equilibrium situations is then discussed for both high frequency and low frequency disturbances and the limitations of these classical theories are examined. It is shown that a suitable small-energy approach can be used both to remove these limitations and to provide a simplified description over the whole frequency range.