Note on multiple-frequency forcing on mixing layers

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The effect of triple-frequency forcing on the development of a two-dimensional spatially-growing mixing layer is studied numerically by a vortex method. Forcing is prescribed as a superposition of a fundamental frequency with its sub-harmonic frequencies. Results show that triple-frequency forcing as well as double-frequency forcing are effective to control the number of merging vortices, patterns of vortex merging, streamwise locations where regular vortex merging starts, and thus mixing layer growth if forcing frequencies, phase shifts and forcing amplitudes are suitably selected.

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