

Abstract Submitted
for the DFD10 Meeting of
The American Physical Society

Self-induced shear instabilities by large amplitude internal waves¹

CLAUDIO VIOTTI, University of North Carolina, ROBERTO CAMASSA, ROXANA TIRON, University of Southern California, UNC NSF CMG WAVE GROUP COLLABORATION — Large amplitude internal waves in sharply stratified fluids can generate large shear flows supporting Kelvin-Helmholtz instabilities. This talk will present a combined theoretical and numerical study of this instability. Spectral analysis of the corresponding non-self adjoint Taylor-Goldstein type equation will be outlined and illustrated on a specific model of internal wave structure. Subsequently, we will focus upon the asymmetric intensification of the instability by weakly non-parallel shear perturbations along long wave shear profiles.

¹NSF

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Date submitted: 10 Aug 2010

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