

Abstract Submitted
for the DFD11 Meeting of
The American Physical Society

Vortex-wave interactions/self-sustained processes in shear layers

PHILIP HALL, Imperial College — It was shown by Hall and Sherwin (2010) that the so-called lower branch self-sustained processes which have been found in the last decade are finite Reynolds numbers versions of the vortex-wave interactions described in a number of papers in the early 1990's by Hall and Smith. Here the corresponding structures are developed in natural convection and a much simplified set of interaction equations are derived. The states are shown to be subharmonic with respect to the spanwise variable and their stability is discussed. The relevance of these states to Couette flow is discussed.

Philip Hall
Imperial College

Date submitted: 29 Jul 2011

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