PNV5203 – Interação Fluido Estrutura I

Turbulence Buffeting

ESCOLA POLITÉCNICA DA UNIVERSIDADE DE SÃO PAULO
DEPARTAMENTO DE ENGENHARIA NAVAL E OCEÂNICA

Rombudo ou afilado?

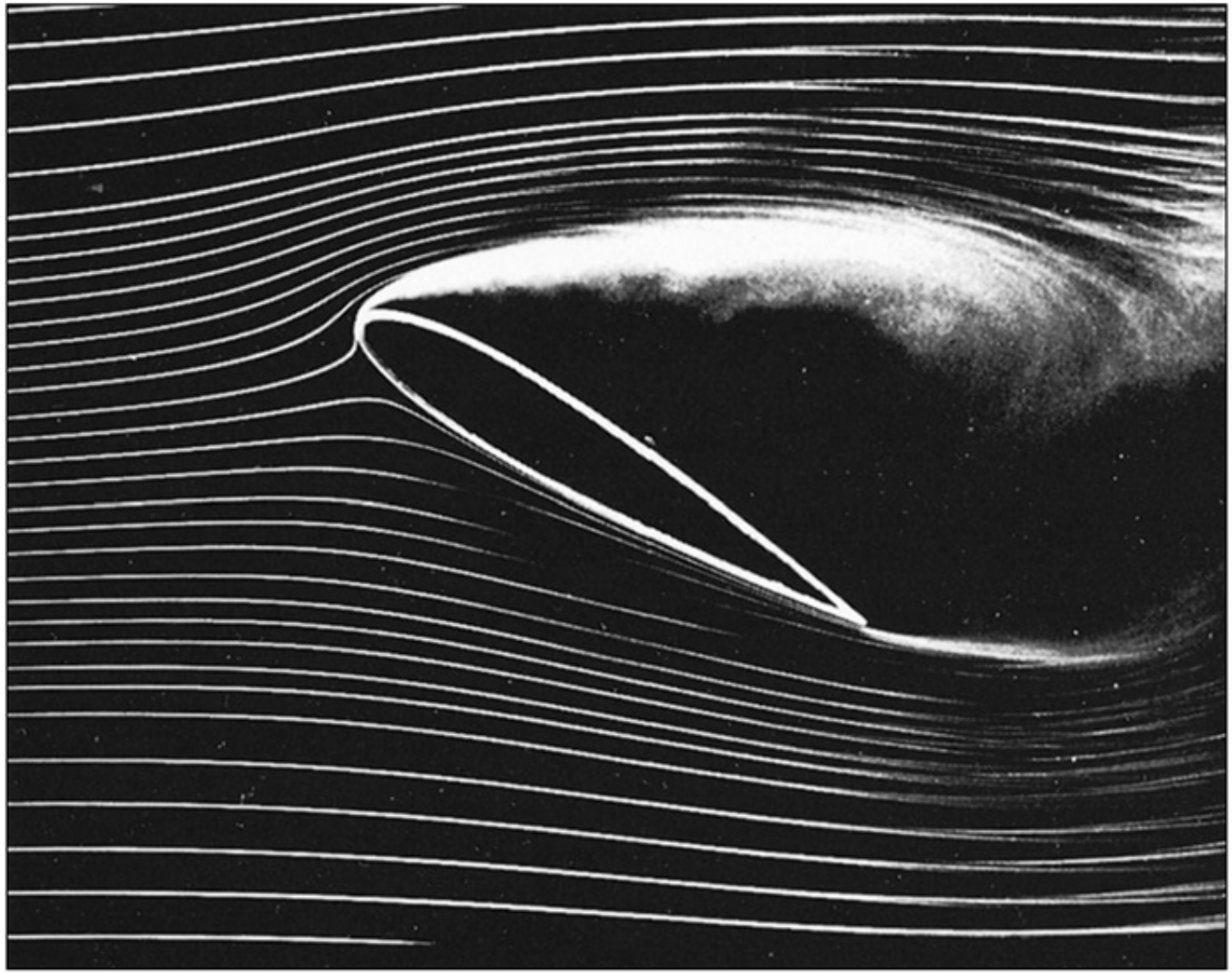
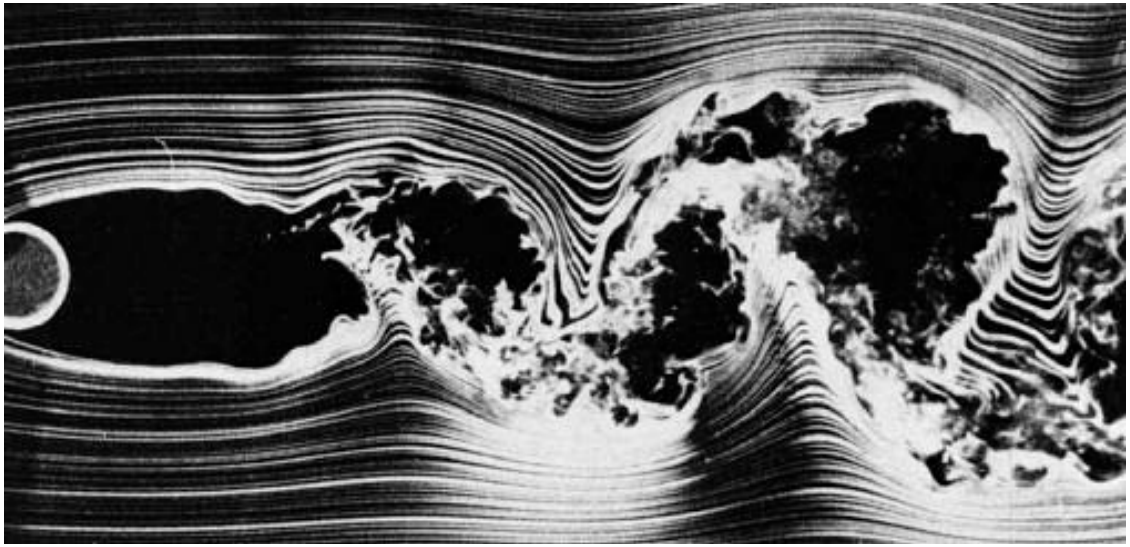


Fig. 7.24 At high angle of attack, smoke-flow visualization shows stalled flow on the upper surface of a lifting vane. *[From Ref. 19,* Illustrated Experiments in Fluid Mechanics (*The NCFMF Book of Film Notes*), *National Committee for Fluid Mechanics Films, Education Development Center, Inc., copyright 1972.]*

Esteira de vórtices

Laminar

Turbulento



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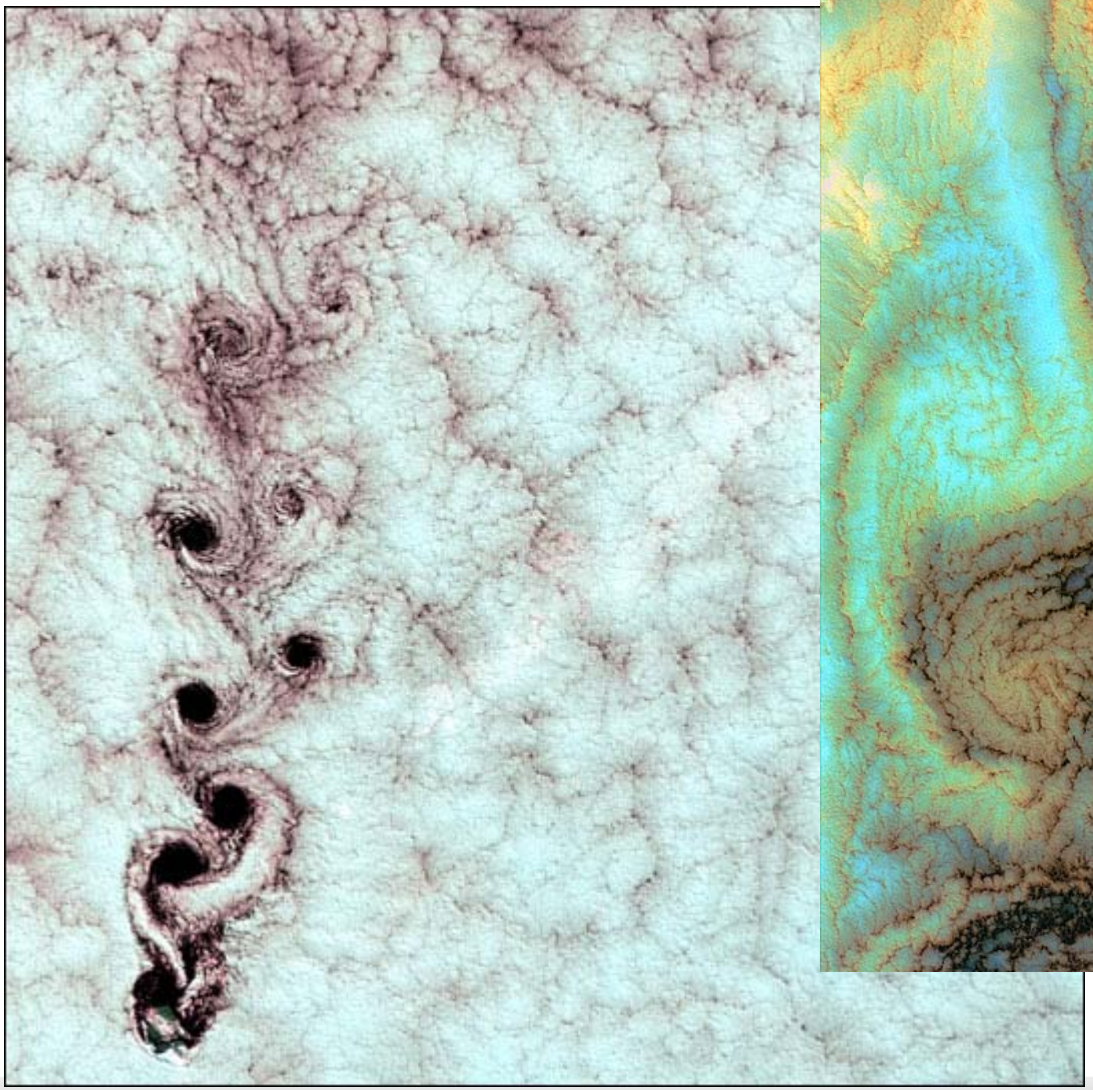
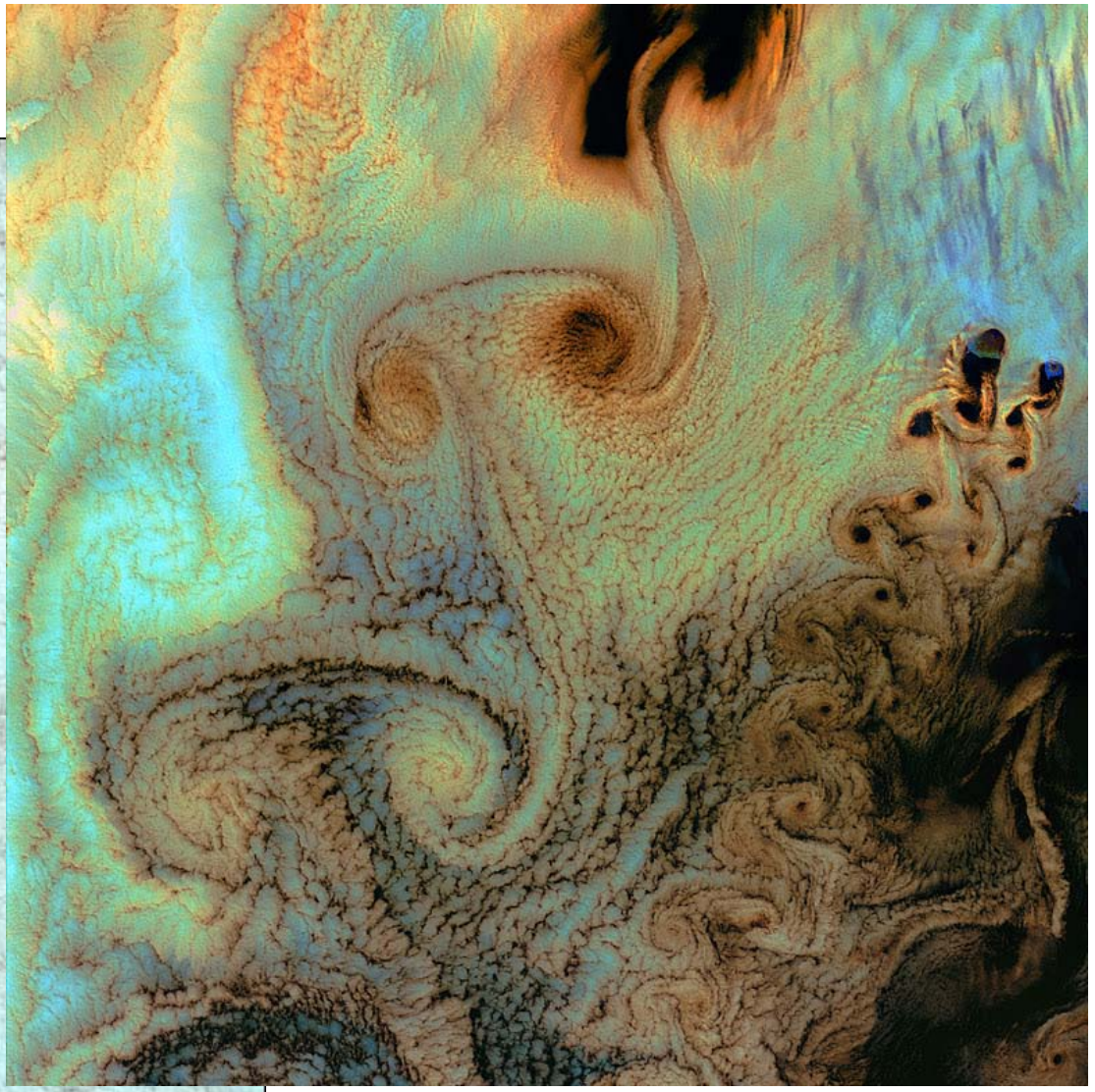
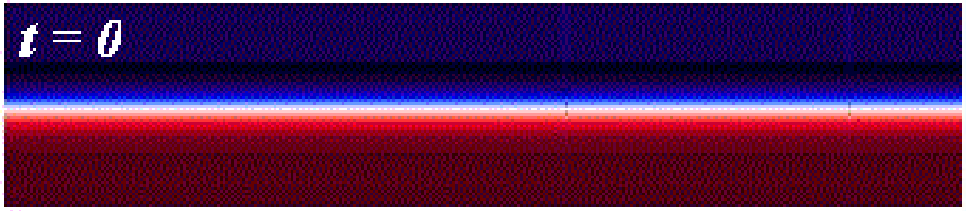
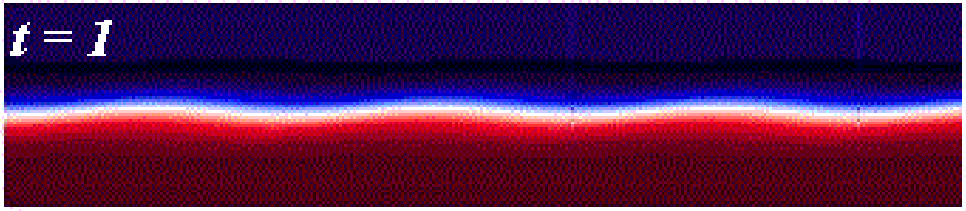


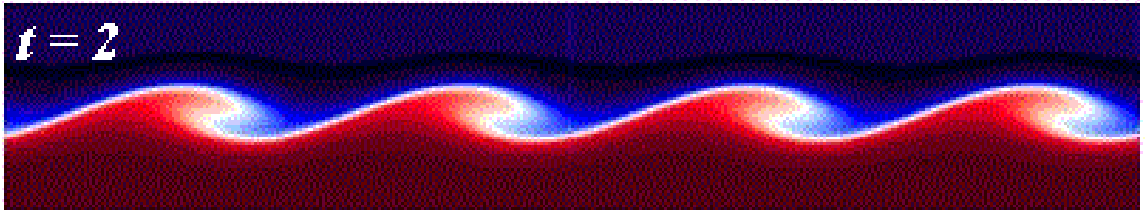


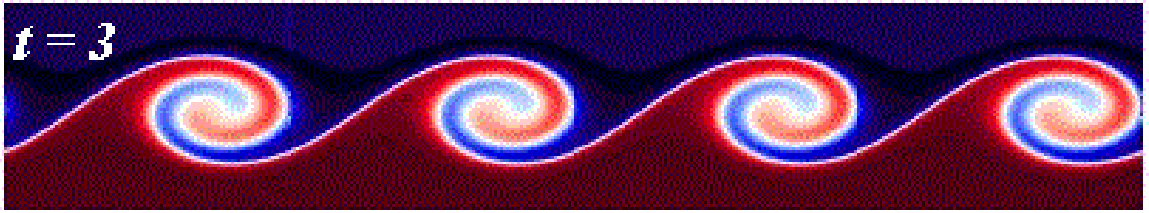
Aletian Islands. Credit: USGS

Instabilidade de Kelvin–Helmholtz

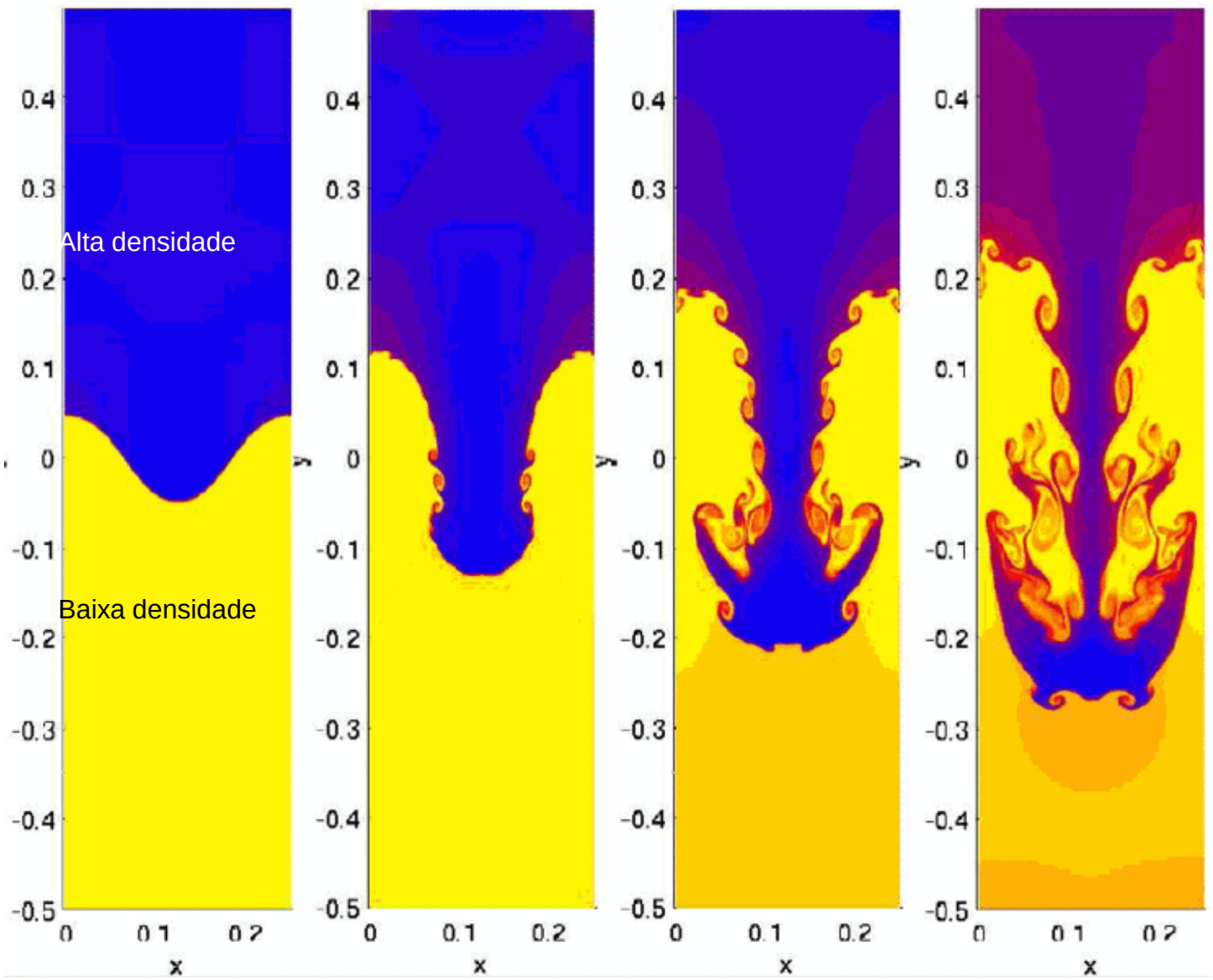


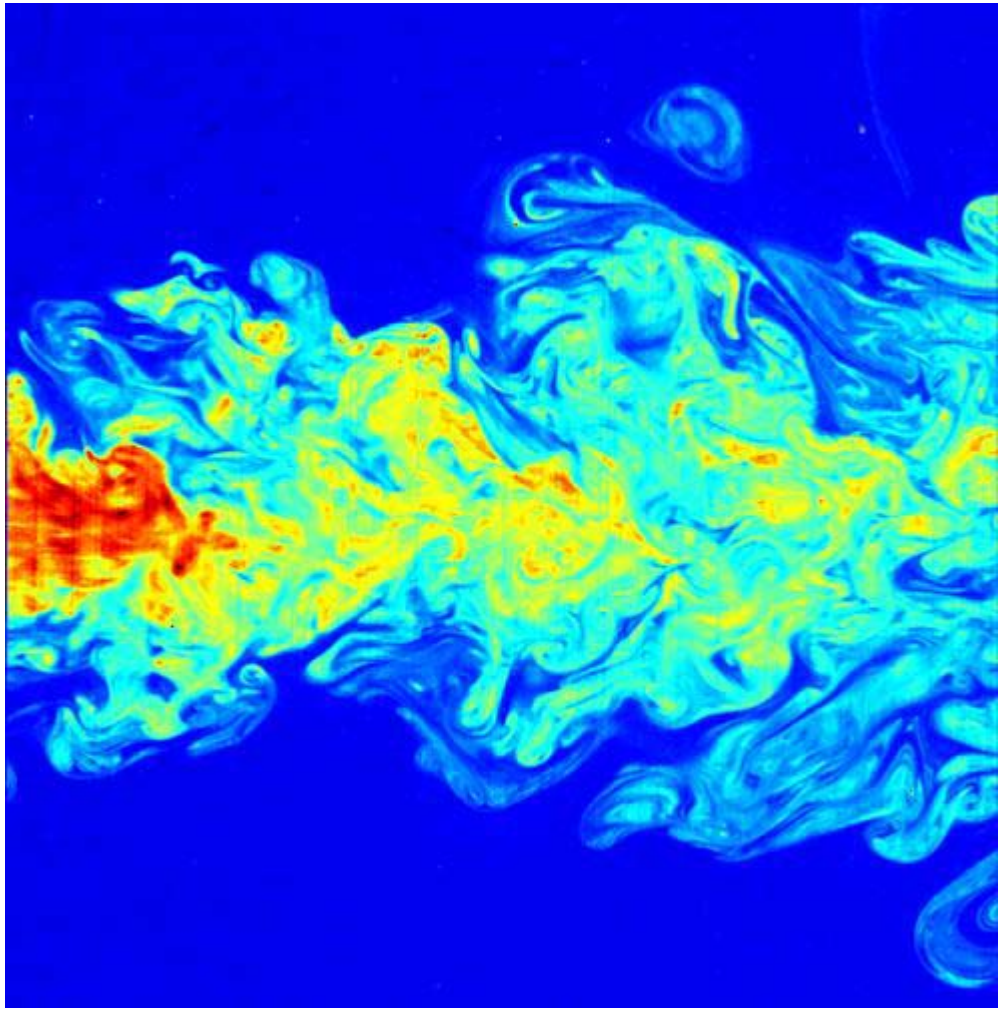






Instabilidade de Rayleigh–Taylor



Hydrodynamics simulation of a single "finger" of the Rayleigh–Taylor instability Note the formation of Kelvin–Helmholtz instabilities, in the second and later snapshots shown (starting initially around the level y = 0), as well as the formation of a "mushroom cap" at a later stage in the third and fourth frame in the sequence.

Li, Shengtai and Hui Li. "Parallel AMR Code for Compressible MHD or HD Equations". Los Alamos National Laboratory.