CONFLUENCES IMFT

Institut de Mécanique des Fluides

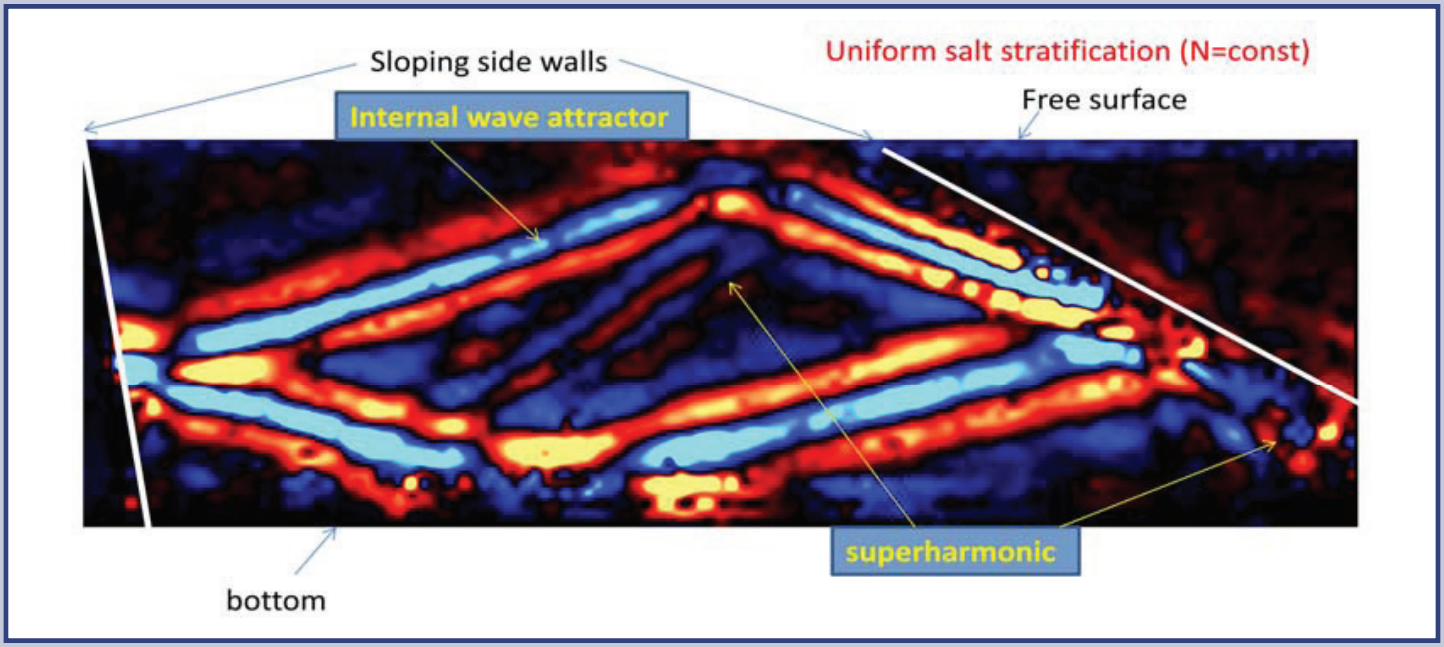
Amphithéâtre Nougaro (Entrée A) - 2 Allée du Pr Camille Soula, Toulouse

Mercredi 3 Mai - 10 h 30

Leo Maas

IMAU (Institute for Marine and Atmospheric research Utrecht, Utrecht University) and NIOZ (Royal Netherlands Institute for Sea Research, Texel, the Netherlands)

Wave attractors



Student experiment : internal gravity waves excited by weak horizontal sloshing showing appearance wave attractor and higher harmonic in density perturbation field (color)

In dynamical systems, an attractor is a subset of phase space towards which a system evolves, regardless of its initial conditions. In geophysical and astrophysical fluids, rotation and density stratification create anisotropic equilibria. Perturbations to these equilibrium states are present as internal waves. Internal waves, reflecting at boundaries that are sloping with respect to the direction of gravity or rotation axis, are focused, and propagate towards a subset of real space at so-called wave attractors. Theory and experiments elucidate the nature and ubiquity of wave attractors.

Service communication IMFT

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