CEA - Saclay 91191 Gif-sur-yvette Cedex
Service de Physique de l'Etat Condensé - UMR 3680

SÉMINAIRE

Mercredi 26 avril 2017 à 11h15

Orme des Merisiers SPEC, Salle Itzykson, Bât.774

Thierry DAUXOIS

Laboratoire de Physique, CNRS, ENS de Lyon

Instabilities of Internal Gravity Wave Beams

Internal gravity waves play a primary role in geophysical fluids: they contribute significantly to mixing in the ocean and they redistribute energy and momentum in the middle atmosphere. Until recently, most of the studies were focused on plane-wave solutions. However, these solutions are not a satisfactory description of most geophysical manifestations of internal gravity waves, and it is now recognized that internal wave beams with a locally confined profile are ubiquitous in the geophysical context.

We will discuss the reason for their ubiquity in stratified fluids, since they are solutions of the nonlinear governing equations. Moreover, in the light of the recent experimental and analytical studies of those internal gravity beams, it is timely to discuss the two main mechanisms of instability for those beams: the triadic resonant instability and the streaming instability.

A coffee break will be served at 11h00. The seminar will be given in English.

Contact : cristian.urbina@cea.fr/basile.gallet@cea.fr - Tel : +33 1 69 08 74 44/41 03
http://iramis.cea.fr/spec