

MARUM / GLOMAR Specific Knowledge Course

Internal waves and wave attractors - a journey from desk to deep-sea

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Objectives

To understand:

- consequences of density stratification and Earth' rotation
- differences between surface and internal waves
- consequences for ocean circulation and exchange in a stratified environment
- limitations of standard and new idealizations
- requirements for future observations at sea

Topics

- Dead water: Nansen's discovery of internal waves
- Interfacial waves and solitons (lab and field observations)
- Continuously stratified fluids and obliquely propagating internal waves (lab and field observations)
- Anomalous dispersion and implications (math predictions: multi-scale solutions of a linear Equation)
- Ubiquitous appearance of wave attractors (lab observations)
- Potential relevance of wave attractors – enigmatic deep-water corals, bare rock, bedforms
- Spherical ADCP: suggestion for improving deep-sea visualization

Target group

The course may be relevant for physicists and sedimentologists, but also biologists (interested in nutrient, plankton and gas transport in the deep ocean environment) and ocean technology developers (aiming to push the boundaries of what we can 'see' in the deep ocean).

Location and time

MARUM, University of Bremen, Leobener Str., 28359 Bremen, Germany, Room 2060

09.00 – 17.00 hrs.

Registration

To register for this course, please fill in the [registration form](#).

Please note that your registration will be binding.

The registration deadline for this course is **30 April 2015**.

Any enquiries regarding the course should be addressed to glomar-courses@marum.de.