

MARUM / GLOMAR Expert Course:

Paleo sea level changes: eustasy, tectonics, isostasy

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MARUM – Center for Marine Environmental Sciences

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Objectives

The general aim of the course is to give a first overview on different aspects of the study of paleo sea level changes.

The course is aimed at students with a general interest in understanding paleo sea levels and use them as keys to understand tectonic histories or future sea level rise. While part of the course will be directed to explain the theories related to the study of paleo sea levels, another part will be aimed at describing the meaning of field data with original examples from different areas worldwide. The practical part aims at teaching the students how to read critically a manuscript containing sea level data, and in particular it is aimed at teaching how to discern between measured data and interpretations.

Topics

- (1) Causes of sea level changes: steric sea-level rise, water density, melting ice caps, gravitational effects etc. Definition of 'eustatic' sea level.
- (2) Relative land/sea level changes: tectonics, coseismic uplift, isostasy, sediment compaction, dynamic topography.
- (3) Relative sea level markers measured in the field: archeological, sedimentological, biological, geomorphological.
- (4) Sea level changes at different times and implications for the future: Holocene, Last Interglacial, MIS 11, Pliocene.

Location and time

MARUM, University of Bremen, Leobener Str., 28359 Bremen, Germany, Room 2070

09.00 – 17.00

To subscribe

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