

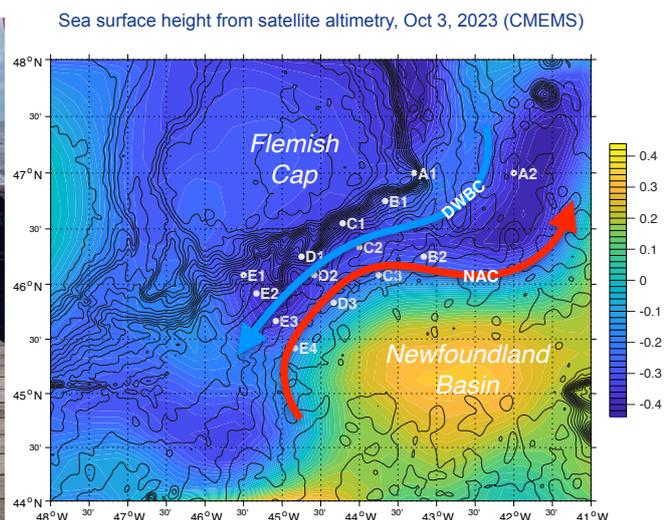
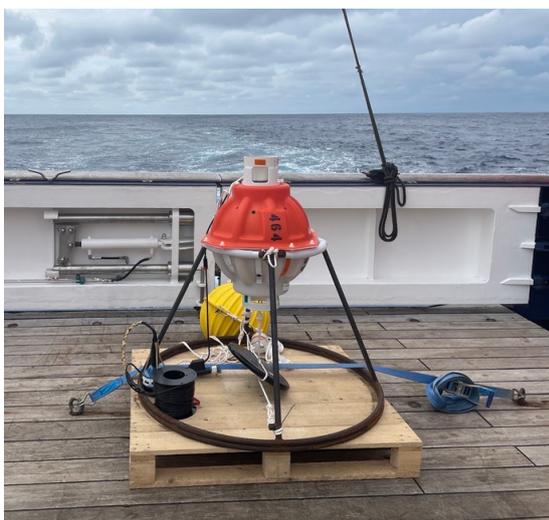


## New Master Thesis Topic

### **Title: Temporal variability of bottom currents in the North Atlantic Deep Western Boundary Current**

Short description (with picture if possible):

The Atlantic Meridional Overturning Circulation (AMOC) is an integral component of the Earth's climate system, and ocean models show a breakdown of its meridional coherence at key latitudes in the Atlantic, often associated with sharp changes in topography. These include locations where the Deep Western Boundary Current (DWBC) breaks away from the continental slope e.g., Flemish Cap of Newfoundland. In summer 2023 we have deployed an array of landers along the steeply sloping bathymetry south of Flemish Cap. The thesis project will deal with the provide time-varying estimates of the surface and bottom currents in the area and study the coherency of along- and cross-slope currents. The instruments will be recovered during a research expedition in August 2025. Participation in the expedition may be possible, but is not required.



Skills needed:

Good programming in Matlab or Python, strong interest in working with observational data, experience in time series analysis is an advantage

Name of the IUP research group incl. two-line description of the research area:  
Physical Oceanography; Dynamics of ocean currents, time series observations  
in the ocean

Topic for students of

M.Sc. Environmental Physics

M.Sc. Space Sciences and Technologies

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