



Biogeochemical and physical glider observations in the tropical Atlantic and Pacific

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In 2011 to 2013 GEOMAR deployed 3 groups of gliders in the tropical Atlantic and Pacific Oceans. All gliders were equipped with CTD, oxygen, fluorescence and turbidity sensors. During the several week long deployments, which were targeted to study particular regional aspects of the tropical circulation and its effects on biogeochemical properties, the gliders collected an extensive set of biogeochemical and physical data.

With the gliders we observed temporal and spatial variability on various scales. In the equatorial Atlantic a group of 7 gliders surveyed the development of the equatorial cold tongue with a rapid cooling by several degrees. A smaller group of 3 gliders was deployed south of the Atlantic's NECC. Over six weeks these gliders encountered a highly variable current field. Subsurface eddies in this region are thought to be one of the supply paths of oxygen into the oxygen minimum zone off Westafrica. A third group of gliders was recently deployed for 2 months off Peru in the coastal upwelling regime. Several of these gliders covered parallel sections perpendicular to the coastline. There the spatial and temporal extent of filamental structures were at the center of the observations.

Examples of the biogeochemical and physical data collected during these deployments are shown and put into the local context.