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Nitrate observations with autonomous gliders

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Abstract (Oral Presentation)

In 2014 and 2016 GEOMAR acquired two Satlantic SUNA Nitrate sensors to be attached to autonomous gliders. The sensors have since been used to investigate the nutrient distribution in the upper ocean in particular in eastern boundary upwelling regions. During eight deployments the gliders covered a distance of some 3090 km on 128 days and collected a total of 4500 nitrate profiles. A Matlab toolbox for SUNA-on-Glider processing has been developed based on original code from Kenneth Johnson and Joshua Plant of the Monterey Bay Aquarium Research Institute where the sensor was originally developed. Here we present example results from our deployments as well as lessons learned for the usage of SUNA sensors on gliders.