



# Mountains to the Sea

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## VIEW ABSTRACT

### WHAT GOES WHERE? IDENTIFYING AND VALIDATING SAMPLING SITES TO ENHANCE LAGRANGIAN SAMPLING DURING BIOGEOCHEMICAL CRUISES

The Tropical South Pacific has been identified as a region with potentially decoupled biogeochemical processes involving nitrogen cycling, with likely consequences for the biological carbon pump. In order to test this hypothesis, biogeochemical field campaigns must necessarily choose a location from which to sample; additionally, due to the intense nature of biogeochemical rate measurements these sites must often be occupied for several days. Therefore, great care must be implemented in selecting areas that are both representative of surrounding water masses, as well as coherent for the duration of the measurements. We present the analysis undertaken for site selection and validation as implemented during the OUTPACE (Oligotrophy to UTRa-oligotrophy PACific Experiment, <http://dx.doi.org/10.17600/15000900>) cruise. The selection phase consists of remote sensing data (satellite altimetry, surface Chl-a, and SST; produced by CLS with support from CNES) analysis with indicators such as the O-W criterion and tracer gradients, along with more Lagrangian diagnostics such as FSLE structures. Subsequently, post-cruise validation is undertaken with in situ data (including MVP, SADCP, and SVP floats) collected during OUTPACE. Perspectives are provided regarding the success of this methodology, the possible inclusion of other metrics, and general comments on how different types of flow would impact biogeochemical sampling in future campaigns.

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#### DETAILS

Oral presentation

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Presentation is given by student: No

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