

# BIOCHEMICAL RESPONSES TO WARM WATER INTRUSION IN THE VICINITY OF WESTERN BOUNDARY OF CANADA BASIN

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Physical and biochemical data were collected from 38 stations along the Northwind Ridge (NwR) and western boundary of Canada Basin (CB) during July-August, 2010. Pacific-origin warm water was identified in the depth of 30-150 m, forming the strong warm eddies (Fig. 1). In particular, warm eddies were found near the peak of NwR and the continental slope of CB. The nutrient distribution and chlorophyll-a concentration generally matched with the location of warm eddies. Nitrate was the limiting factor of phytoplankton growth, and generally small sized cells were mostly dominated. However, warm eddy area was characterized by large sized cells (e.g., diatom).

In the context of warm eddy vs. bloom, during the presentation, the spatial variability in the hydrography (i.e., water mass and T-S structure) and biochemical responses (i.e., nutrient and plankton biomass) will be presented. Furthermore, microscopic observation and pigment analysis for phytoplankton community study will be discussed.

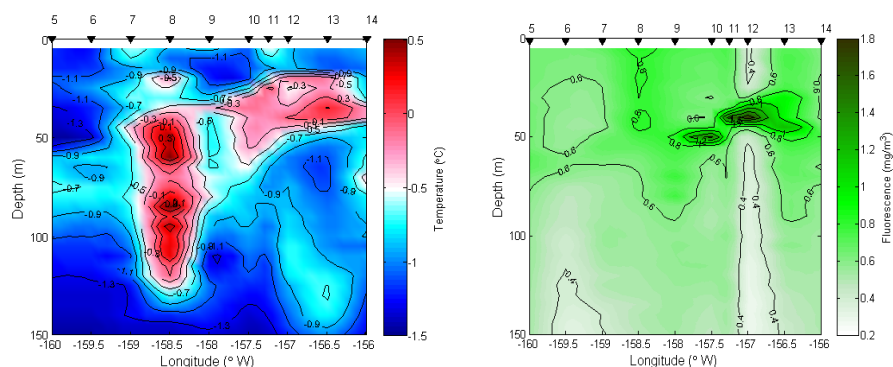


Fig. 1. The spatial distribution of temperature and chlorophyll-a in the vicinity of the Northwind Ridge and western boundary of Canada Basin.