

Nitrate Sensors

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Nitrate in the ocean

The major nutrients which control phytoplankton growth in the oceans are nitrate, phosphate and silicate. In most oceans, phytoplankton grow until they have used up all of the nitrate or all of the phosphate. In several oceans HNLC (high nutrient low chlorophyll) conditions occur where nutrients like nitrogen are not completely used up by phytoplankton but rather their growth is limited by chlorophyll.

VPS Water Column Studies

The Vertical Profiler System (VPS) aims to study the variability in physical and chemical properties of the water column at the continental shelf break. Instruments installed on the VPS generate water column profiles of salinity, temperature, dissolved gases, nutrients, dissolved organic matter, chlorophyll, and currents (NEPTUNE Canada: An Invitation to Science, 2012). The Nitrate sensor on the installed on the VPS will contribute to the set of sensors aimed to sample and collect data at various depths in the water column.



(Click the picture to enlarge it.)