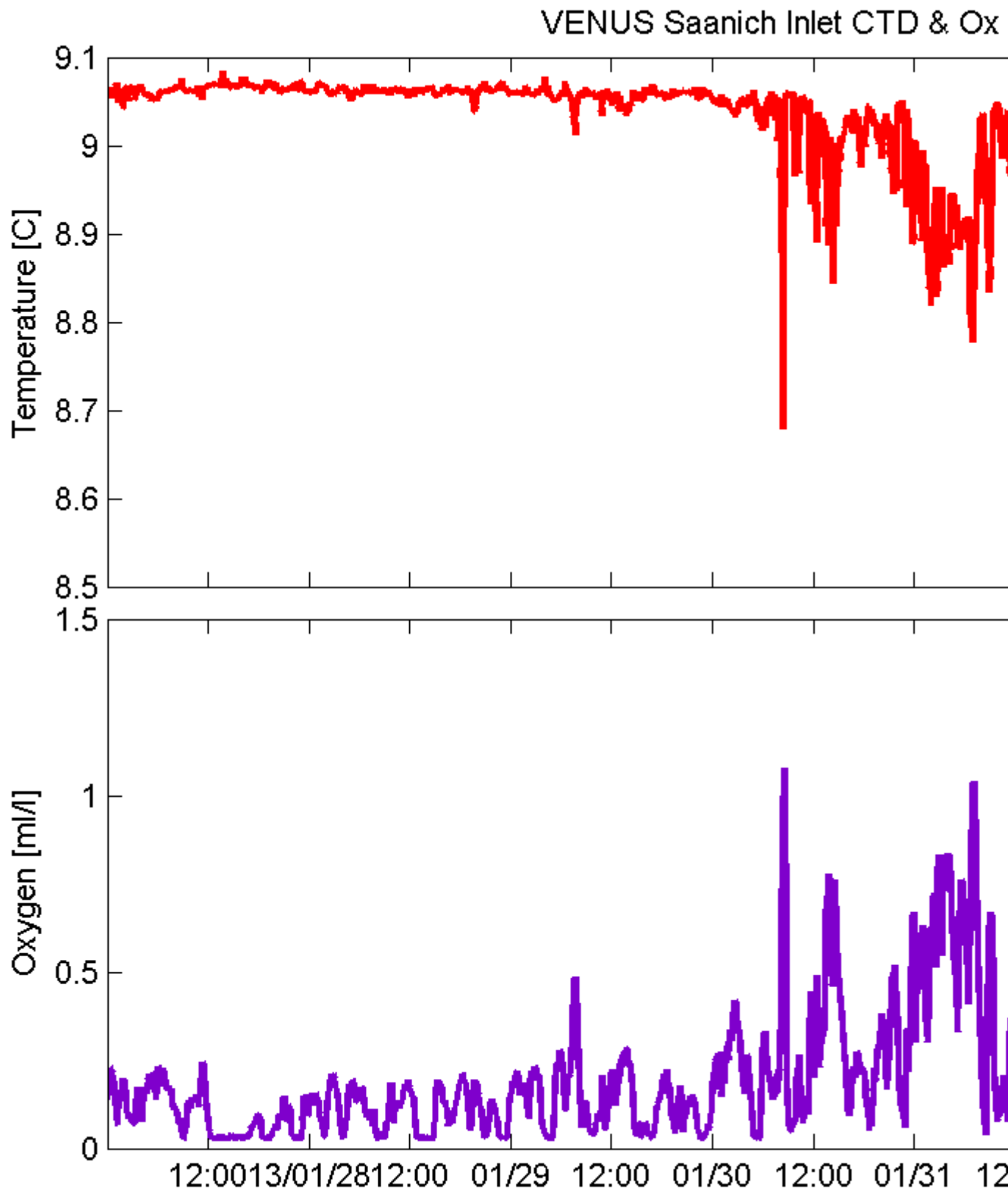


# Oxygen Up, Temperature Down in Saanich Inlet <sup>[1]</sup>

Submitted by Rory Lattimer Tue, 2013-02-05 00:00



[2]

The figure shows the temperature and dissolved oxygen concentration from instrumentation in Saanich Inlet located at approximately 97 metres depth, for the period of 28 January-3

February 2013. The temperature decreases and the oxygen increases, a sign that top-down and lateral mixing have finally penetrated our study area to bring upper water-column conditions down to our sensors and experiments at 97 m. In the late summer and early fall (August-October), dense salty water enters Saanich Inlet and flows to the deepest portions of the basin, displacing upward the very low oxygen (hypoxic) water residing there.

This displacement causes the mid-depth waters (where VENUS sensors are located) to become hypoxic, a condition that has now persisted for over four months (since late September 2012). Surface cooling and tidal exchanges gradually mix down higher oxygen and lower temperature water from nearer the ocean surface, where cold atmospheric weather cools the oxygen-rich surface waters.

This ?ventilation? of higher oxygen water is particularly late this year (2013). Previously (2007-2012), the low oxygen conditions at this depth/study area persisted just into the new year, with transition to lower temperatures and higher oxygen levels occurring in early January. The ?State of the Ocean? plot suggests the 2012-13 fall/winter exhibited both the coolest and most sustained low oxygen conditions in 7 years of monitoring on the VENUS Observatory.

## Tags:

- [saanich inlet](#) [3]
- [oxygen](#) [4]
- [Temperature](#) [5]
- [mixing. hypoxia](#) [6]
- [seasonal transitions](#) [7]

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- [Data Highlights](#) [8]

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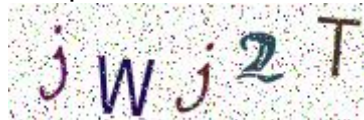
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**Source URL:** <https://www.oceannetworks.ca/oxygen-temperature-down-saanich-inlet>

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