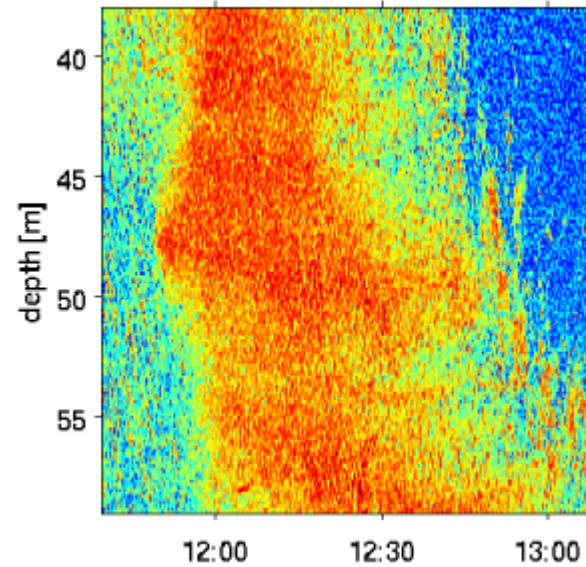
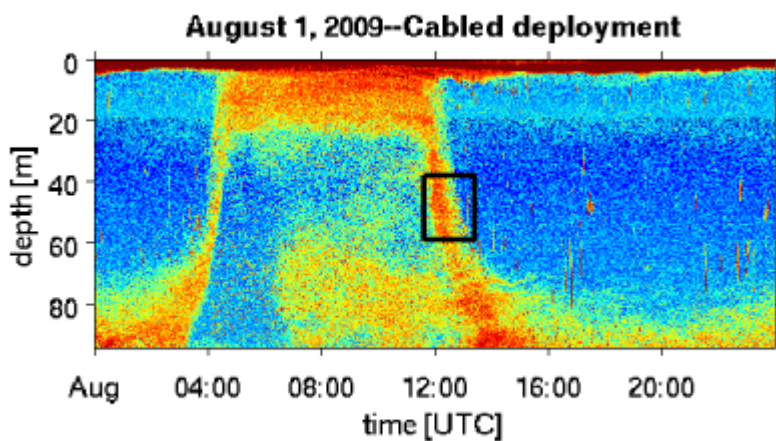
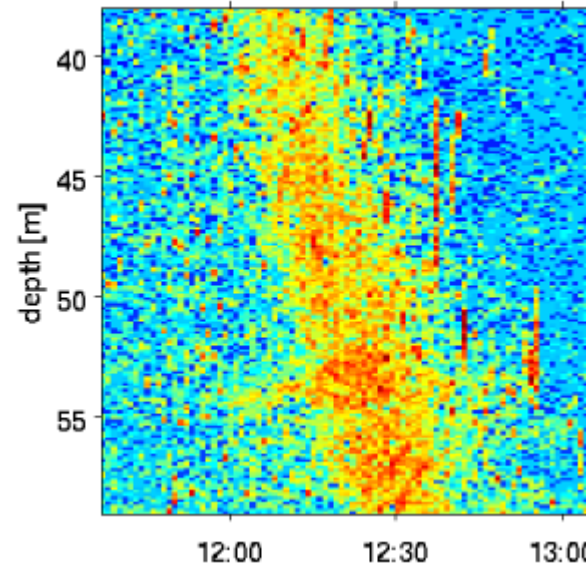
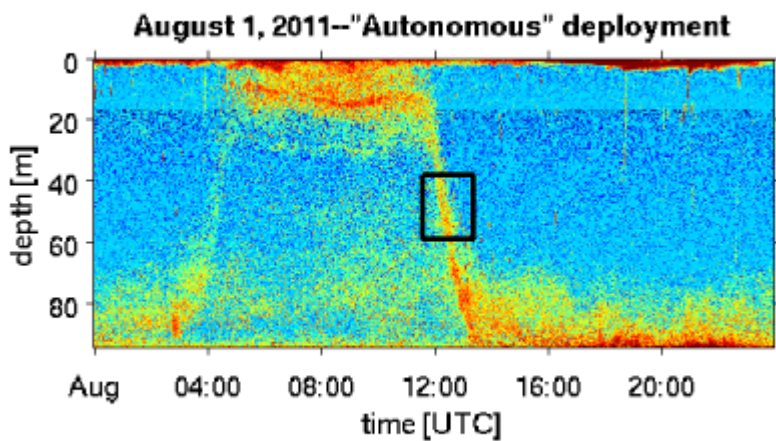


## Autonomous vs. Cabled: See the Difference? <sup>[1]</sup>

Submitted by Rory Lattimer Mon, 2011-12-12 00:00

An upward-looking echosounder was deployed in [Saanich Inlet](#) <sup>[2]</sup> on 3 July 2011. The instrument was part of an 'autonomous' (i.e., battery-powered, internally-recording) package of instruments that filled in for the usual cabled instruments while the Saanich communications node was out of the water for three months for a scheduled upgrade.



[3]

A plot of the newly-available autonomous echosounder [4] data illustrates the advantages of cabled ocean observatories like VENUS and NEPTUNE. The upper-left axes show a day's worth of echosounder data. The surface of Saanich Inlet is visible as a dark line of high backscatter strength along the top of the image. The inverted 'U' shape in the image is the backscatter produced by zooplankton as they migrate upwards at sunset to feed at the surface and downwards at sunrise to avoid predators. The upper-right axes show a cropped version of the same day's data, corresponding to the rectangular box visible in the first axes.

The lower half of the figure shows a similar pair of plots for a comparable period of cabled data from 2009. Without the constraints of battery life or memory capacity, the cabled echosounder was able to sample much more frequently than the autonomous echosounder (every 2 seconds, rather than every 60 seconds). As a result, there is much more detail visible in the cabled instrument's data.

The advantages of cabled oceanographic observatories over conventional oceanographic instrument deployments are clear: not only does the data delivered by Ocean Networks Canada arrive in real time, it can also be of much higher quality than would otherwise be

practical.

## Tags:

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- [echosounder](#) [6]
- [realtime data](#) [7]

## Categories:

- [Data Highlights](#) [8]

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**Source URL:** <http://www.oceannetworks.ca/autonomous-vs-cabled-see-difference>

### Links:

- [1] <http://www.oceannetworks.ca/autonomous-vs-cabled-see-difference>
- [2] <http://www.oceannetworks.ca/installations/observatories/salish-sea/saanich-inlet>
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- [4] <http://www.oceannetworks.ca/installations/infrastructure/instrument-info/16>
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