



Ocean Networks Canada Technical Workshop

November 2012 Workbook

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Ocean Networks Canada

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Welcome to Ocean Networks Canada's Technical Workshops.

Oceanographic data collected by Ocean Networks Canada is available on the Internet using Oceans 2.0. Oceans 2.0 web tools provide access to general information about the instruments and technology, and allow users to view, search, and download archived data. Ocean Networks Canada technical workshops will explain how software tools can help scientists, teachers and students to access scientific data so they can use it in their research, labs, experiments, and educational activities. They will summarize the web tools offered by Oceans 2.0, which are accessed through the Ocean Networks Canada website.

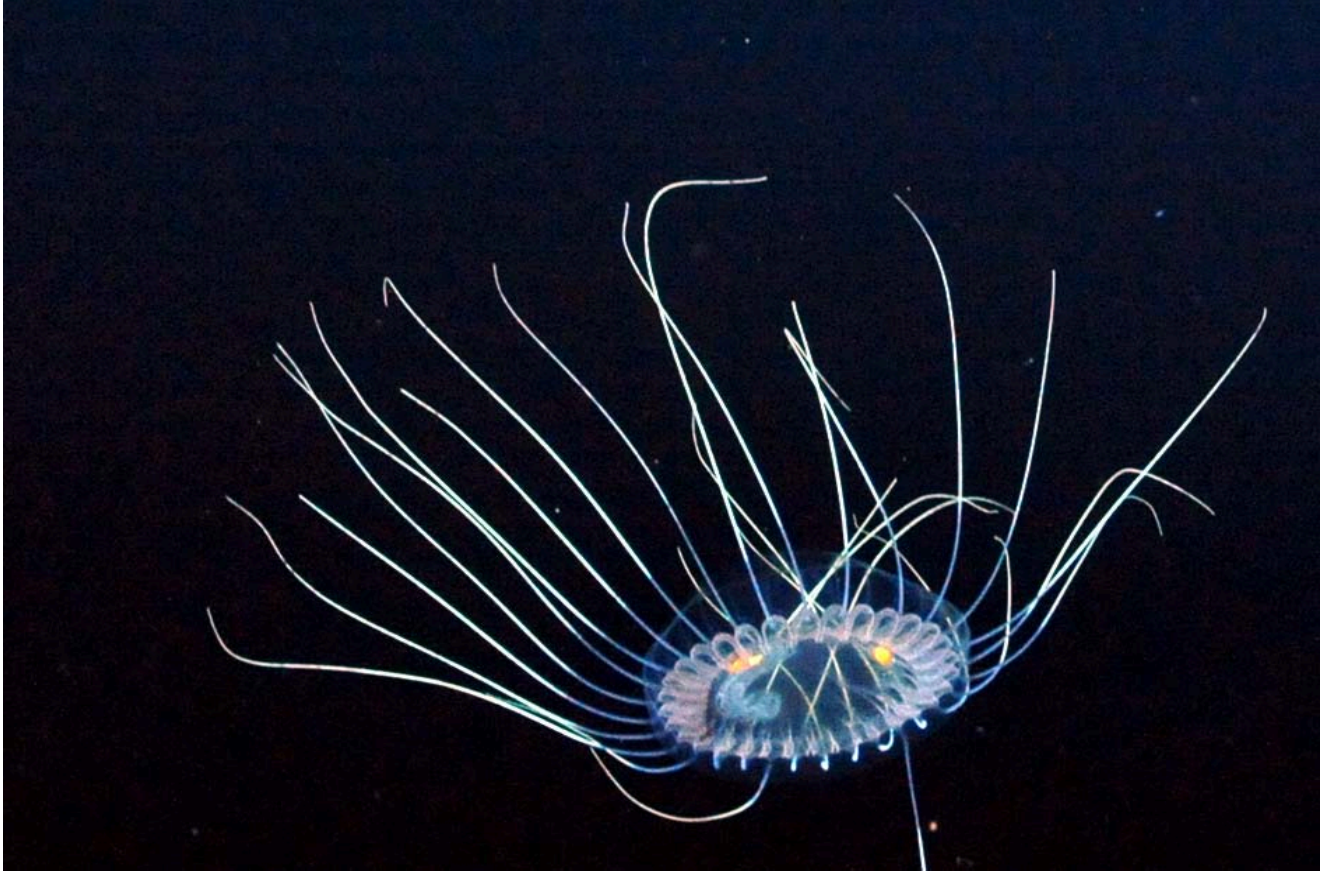


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User Registration

Register an Oceans 2.0 Account.

Please begin by visiting <http://dmas.uvic.ca/Registration> and click “Register” on the login screen to create an account. The link will prompt you to fill in account information, contact information and additional information.

click “Register” to create a new Oceans 2.0 account

To enter Oceans 2.0, please log in. [Register](#) to obtain a username and password.

Email Address:

Password:

Please enter all required fields which are marked by a ‘ * ’. Click “Complete my registration and Sign In” when all fields are complete. Emails will only be delivered to users if they wish to sign up for the Oceans 2.0 newsletter.

Register for a new account
Keep informed, share ideas and collaborate on projects with others.

Account Information | Additional Information | Contact Information

* Email:

* Password:
Passwords must be 6 or more alphanumeric characters.

* Verify Password:

Prefix:

* First Name:

Middle Initial:

* Last Name:

* Discipline:

* Country:

* Yes, I agree to the [Terms of Use](#) and [Privacy Policy](#)

Finally, select “Yes” to agree to *ONC Terms of Use and Privacy Policy*.

Select a Network

Our Networks

Ocean Networks Canada has several undersea observatories. The NEPTUNE observatory located in the North-Eastern Pacific Ocean and the VENUS observatory in the Saanich Inlet on Vancouver Island are the two major observatory networks.

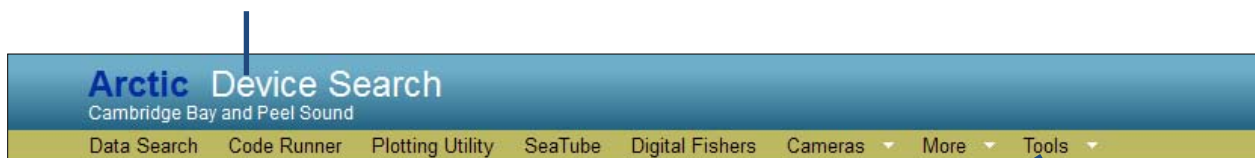
Recently, ONC has installed a mini-observatory at Brentwood College School on Vancouver Island and an arctic mini-observatory in the territory of Nunavut, at Cambridge Bay.

Select Network Preferences

Oceans 2.0 only permits access to one particular observatory at a time. Click the “Tools” menu and select “Network Preference” to choose a network in Oceans 2.0. Use the drop down menu under “Network Preference” in the “Tools” menu to switch to another network.

Each network has its own color scheme and banner to help users distinguish between each of the ONC networks available in Oceans 2.0.

the selected network will be displayed on the banner at the top of the screen in Oceans 2.0 and will have its own colours



select “Network Preference” under the “Tools” menu to select a network including VENUS, NEPTUNE, BRENTWOOD and the ARCTIC

Introduction to VENUS

The Coastal Network of ONC

The VENUS network has resources in two coastal environments of the Salish Sea (British Columbia). In Saanich Inlet, a cabled array with a central Node and instruments at 100m depth was deployed in 2006 and is now complimented by a dedicated Ocean Technology Test-Bed platform in 80m of water. Under development for deployment by mid-2013 is a Buoy Profiling Station to be located at a central site south of the VENUS Node near the 210 meter isobath. In the Strait of Georgia, a 40km cable array was deployed in 2008, with Nodes and instruments at 300m (Central) and 170m (Eastern). An extension cable runs from the Eastern Node northward to the mouth of the Fraser River where a mini-Node resides at 120m serving our Delta Dynamic Laboratory instrument platforms at 100m. New in 2012 are sensor packages on BC Ferries, at the West Shore Coal Port, and two CODAR HF Radar stations for mapping surface currents throughout the southern Strait. Coming soon are Gliders and AUVs for spatial surveys.

Coastal Research

VENUS supports a wide range of research initiatives, utilizing a suite of diverse instruments and sensor systems: Cameras are used to study benthic ecology and conduct forensic experiments. Water property sensors monitor seawater temperature, salinity, dissolved gases (i.e. Oxygen), and turbidity levels. Passive hydrophones listen to ambient sounds from both marine mammals and anthropogenic sources, while active acoustic systems are used to echo-locate zooplankton and fish, and measure ocean currents. Some example research projects include:

Benthic Ecology:

How do benthic communities adapt and change in response to variations in the concentration of dissolved oxygen?

Zooplankton Dynamics:

What cause the temporal and spatial variations in the distribution of zooplankton over time scales of hours, days, months, and seasons?



Sediment Transport:

What is the fate of the season sediment loads brought by the Fraser River into the marine environment of the Strait of Georgia?



Deep Water Renewal:

How do variations in tidal mixing of the stratified estuarine circulation modify the nutrient water masses occupying the deep inland basins.

Fish Tracking:

What are the patterns of salmon migration in relation to the ocean currents as derived from Acoustic Doppler Current Profilers data?

Mammal Vocalizations:

How are increases in marine traffic affecting the echo-location and social vocalizations of Orca whales?

Data Collection

Data from VENUS is easy to browse and explore for signals, and free to download for analysis. Visit the VENUS web site and follow the links to "Data".

Explore VENUS Data

Data Plots: Includes galleries of most live data types, which are plotted automatically for browsing. These include data plots from the last 24 hours, week, month, or year. For core sites, the entire record is available (State of the Ocean).

About the Data: Information about the data formats, plot layout, metadata structures, and data QA/QC procedures.

Download Data: After registering and logging-in (free), a user can select a time interval and either a water property or instrument to request a specific data product (plot, numerical, etc.).

Key search fields in Download Data may include:

1. **Moving Systems** (Ferry, Glider), **Stationary Platform** (most oceanographic sensors), **Multimedia** (camera products and audio)
2. Select by specific **instrument** (i.e. CTD, ADCP) or by **water property** (i.e. Temperature)
3. Select a desired **time range** (all times are in UTC)

The screenshot shows the 'Download Data' page on the VENUS website. The page has a dark red navigation bar at the top with links for HOME, DISCOVER VENUS, NEWS & MEDIA, DATA, RESEARCH, MULTIMEDIA FEATURES, and SYSTEM STATUS. Below the navigation bar is a breadcrumb trail: Data / Download Data. On the left side, there is a dark blue sidebar with a 'QUICK LINKS' section containing various navigation options like Dashboard, Edit Profile, Change Password, Tickets, VENUS Users Advisory Committee (Protected), Projects, Log out, Contact Us, Glossary, Home, Instruments, Job Opportunities, Notice to Mariners, Sitemap, and User Guide (PDF). Below the sidebar is a 'RELATED PROJECTS' section listing MARS, NANOOS, NEPTUNE Canada, Ocean Networks Canada, ONCCEE, OTTB, and US Initiative (OOI). The main content area is titled 'Download Data' and features a yellow banner with three news items: 'DMAS File Archiver Problems...', 'BC Ferries' Queen of Alberni docked for maintenance Oct 10 – November 9, 2012...', and 'UPDATED – SeaBird 16+ CTD 7128 in Saanich Inlet at 103m has been shut down...'. Below the banner, the user is logged in as 'jeffries@uvic.ca' and has links to 'Report an Issue', 'Edit Profile or Change Password', and 'My Data'. A paragraph explains that VENUS maintains records on how data streams are used. The search interface includes a 'Search Type' dropdown menu with three options: 'Moving Systems', 'Stationary Platform' (selected), and 'Multimedia'. Below this is a 'Stationary Platform Data' section with two radio buttons: 'Search by Instrument' (selected) and 'Search by Water Property'. The 'Time Range' section provides instructions on the format (DD-MMM-YYYY HH:MM:SS) and includes 'From' and 'To' input fields with UTC time zone indicators. A 'Search Active Locations' button is also present.

Search by Instrument:

The screenshot shows a web form titled "Search by Instrument" with several sections and a search button. The sections are:

- Location** (Callout 4): Region (Saanch Inlet), Location (Central Node), Site (VIP-17).
- Instrument** (Callout 5): * active instrument, Select (* SeaBird CTD 16 plus 6536).
- Sensor(s)** (Callout 6): Select (Conductivity, Density, Pressure, Salinity, SigmaT, Sound Velocity, Temperature).
- Processing** (Callout 7): Averaging (No Averaging).
- Data Format** (Callout 8): Select (PNG Data Plot).
- Metadata** (Callout 9): Select (FGDC HTML).
- Quality Control** (Callout 10): Select (Raw).

Below the form is a "Search now" button and a "Data" section containing two links:

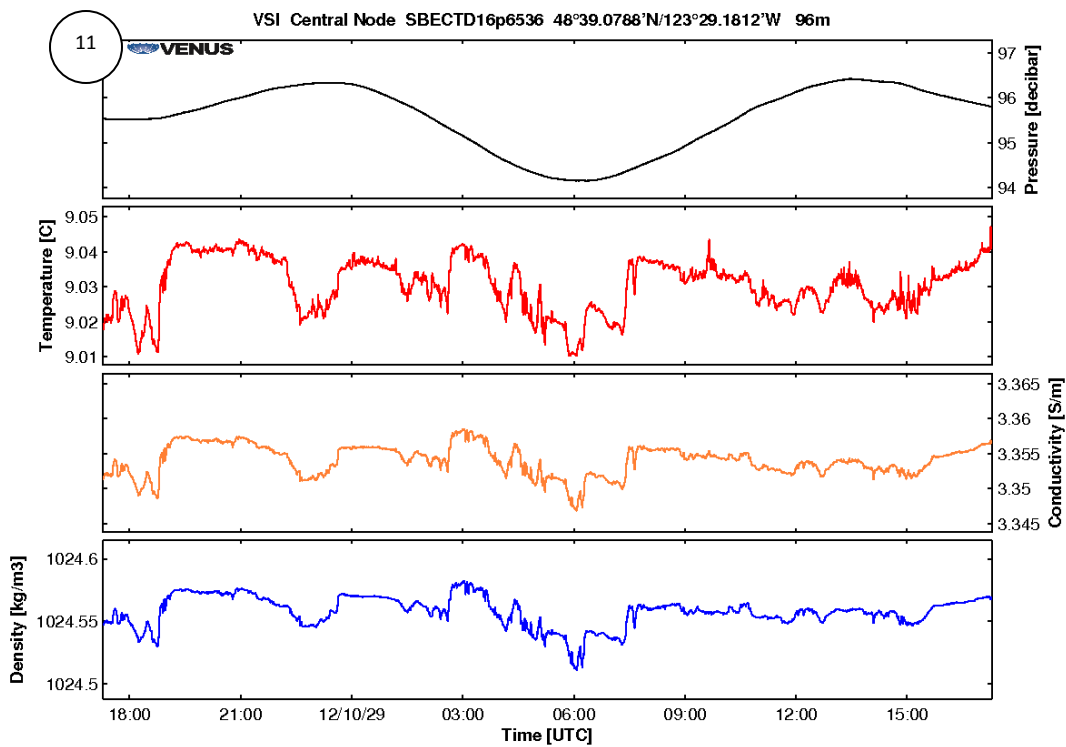
- [VSI-SBECTD16p6536-Multi-Variable-F2B6.png](#)
- [VSI-SBECTD16p6536-Multi-Variable-F2B6-metadata.html](#)

4. Select a **region, location and site** (i.e. Saanich Inlet or Strait of Georgia)
5. Select an **instrument** (i.e. CTD, Fluorometer)
6. Select **sensors** (i.e. Conductivity, Density, Temperature)
7. Select data **processing** (No averaging, 10 minute or 60 minute averaging)
8. Select the desired **data format** (plot, numerical, etc.)
9. Select **metadata**
10. Select **quality control** (Clean/Raw only applicable to plots)

Once search fields are completed, select "Search now" to download data products. Under "Data" files will appear as attachments on the VENUS Download Data page.

Some Data Downloads may include:

11. PNG Plots
12. Metadata Reports



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VENUS

Metadata for VSI-SBECTD16p6536-Multi-Variable-F2B6.png

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Information](#)

Identification Information

Citation

Citation Information

Origin: Victoria Experimental Network Under the Sea (VENUS)
Publication Date: 20121029
Title: VSI-SBECTD16p6536-Multi-Variable-F2B6.png
Geospatial Data Presentation Form: PNG Data Plot
Other Citation: [See Data Policy](#)
Online Link: <http://www.venus.uvic.ca/>

Search by Water Property:

13. Select a **water property** (i.e. conductivity, salinity)
14. Select a **region, location and site** (i.e. Saanich Inlet or Strait of Georgia)
15. Select data **processing** (No averaging, 10 minute or 60 minute averaging)
16. Select the desired **data format** (plot, numerical, etc.)
18. Select **metadata**
19. Select **quality control** (Clean/Raw only applicable to plots)

Water Property
Select: Conductivity

Location
Region: Saanich Inlet
Location: Central Node
Study Area: *VIP

Processing
Averaging is only available when "Quality Control" is set to "Clean" or "Quality Control" is disabled.
Select: No Averaging

Data Format
Select: PNG Data Plot

Metadata
Select: FGDC HTML

Quality Control
Select: Raw

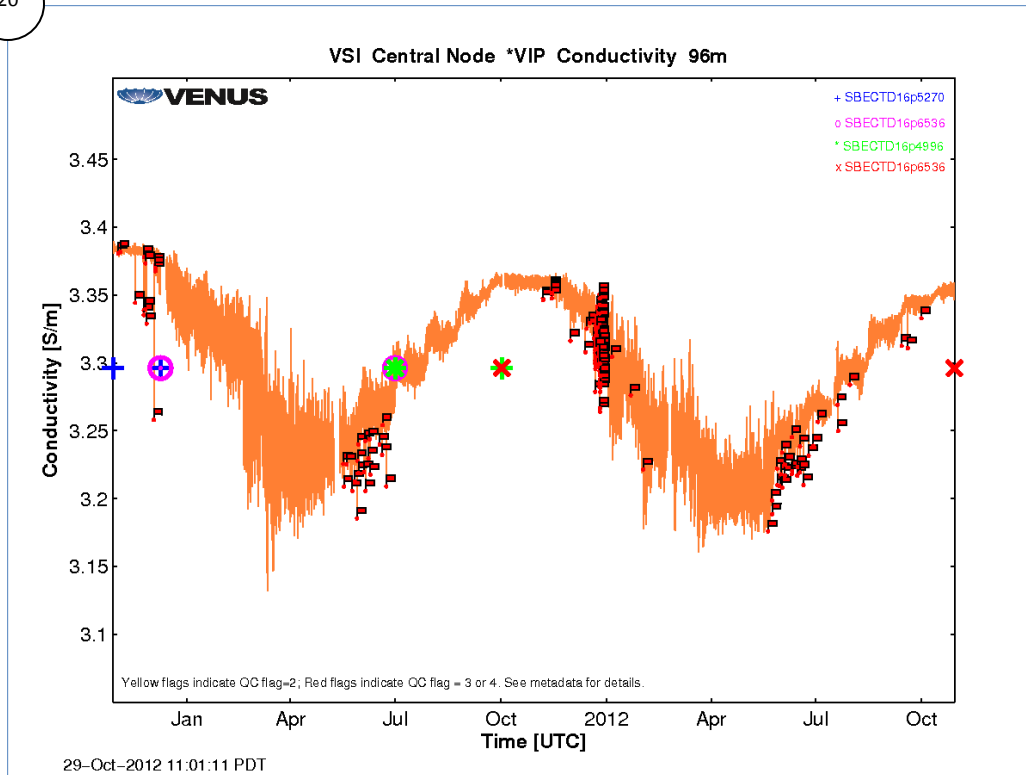
[Search now!](#)

Data
[VSI-Central-VIP-Conductivity-F2C2.png](#)
[VSI-Central-VIP-Conductivity-F2C2-metadata.html](#)

Once search fields are completed, select “Search now” to download data products. Under “Data” files will appear as attachments on the VENUS Download Data page.

Some Data Downloads may include:

20. PNG Plots
21. Metadata Reports



VENUS

Metadata for VSI-Central-VIP-Conductivity-F2C2.png

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Information](#)

Identification Information

Citation

Citation Information

Origin: Victoria Experimental Network Under the Sea (VENUS)
 Publication Date: 20121029
 Title: VSI-Central-VIP-Conductivity-F2C2.png
 Geospatial Data Presentation Form: PNG Data Plot
 Other Citation: [See Data Policy](#)
 Online Link: <http://www.venus.uvic.ca/>

Multimedia Archive: Audio and imagery (images and video) files can be selected here.

Live Video: Takes you to a page with live video feeds from our cameras

Live Audio: Takes you to a page listing our active hydrophone sources.

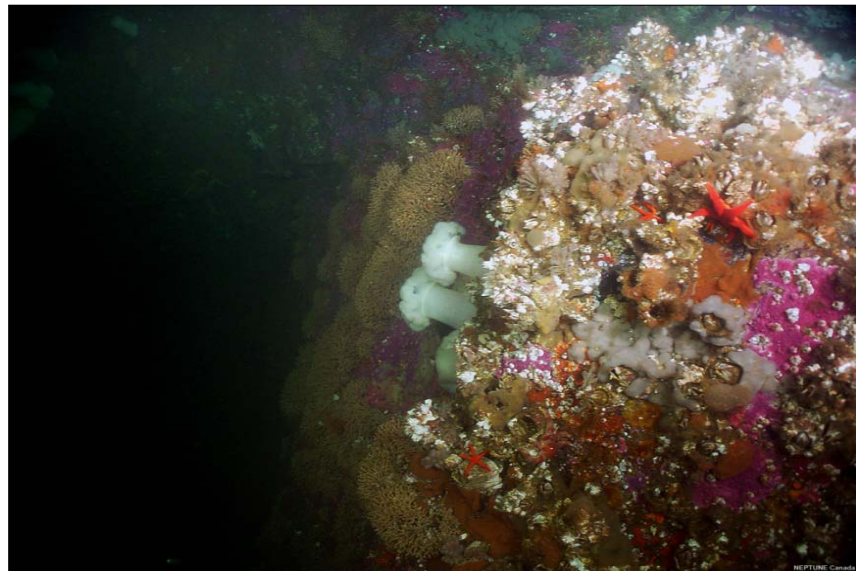
Note: Long scalar time series may be constructed from multiple deployments of the same type of instrument (i.e. SBE CTD). In this case the plot and metadata will indicate when each instrument was active and contributing to the time series. QA/QC analysis is included in all numerical data and can be used to screen suspect data values.



Introduction to NEPTUNE

The North East Pacific Network of ONC

The NEPTUNE Canada ocean network is located in the Northeast Pacific Ocean off the west coast of Vancouver Island, British Columbia. The 800 km subsea cable loop begins at the shore station in Port Alberni, passes through Barkley Sound, crosses the continental margin, and extends across the abyssal plain of the Juan de Fuca Plate to a mid-ocean ridge. The Juan de Fuca Plate is bounded by the Pacific Plate to the south and west and the North American Plate to the east. Along its eastern boundary, the Juan de Fuca Plate subducts beneath the North American Plate to the east. Subduction zones generate some of the world's largest earthquakes, often associated with devastating tsunamis.



Oceanic Observations

Off southwestern Vancouver Island, upwelling plays a critical role in primary productivity and, consequently, the life cycles of several important fish stocks, including Pacific salmon. Seafloor ecosystems and those in the overlying water column can be studied in detail by the network. The acoustic and optical sensor support real-time observations of physical, chemical, and biological processes in the water column. Gathering long time-series of data for these and other parameters will enable scientists to monitor effects of large-scale, complex processes such as climate change.

Research Themes

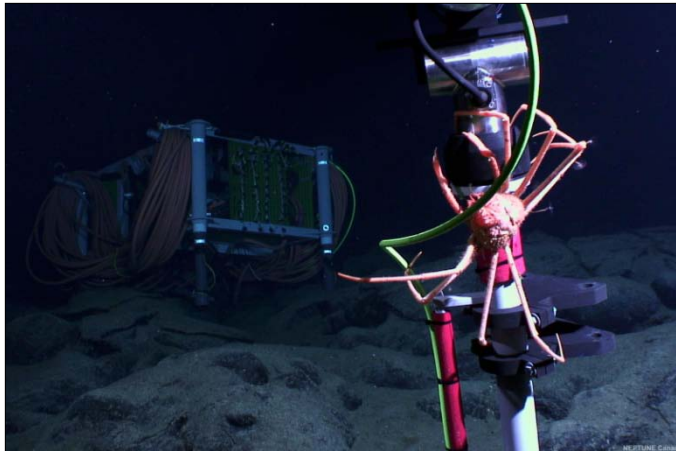
The scientific activities at NEPTUNE Canada cross five broad themes:

- ❖ earthquakes and plate tectonics
- ❖ fluid flow in the seabed
- ❖ marine processes and climate change
- ❖ deep-sea ecosystems
- ❖ engineering and data management

Data Collection

There are presently over 150 sensors actively collecting data on the network. These sensors are hosted on stationary and mobile platforms. The instrument types include:

- ❖ Conductivity-temperature-depth sensors (CTD)
- ❖ Acoustic current meters (ACM)
- ❖ Acoustic Doppler Current Profilers (ADCP)
- ❖ Hydrophones, sonars, echosounders
- ❖ Chemical and gas sensors for measuring dissolved gases
- ❖ Bottom pressure recorders (BPR)
- ❖ Seismometers, gravimeters and accelerometers
- ❖ Video cameras with lights
- ❖ Turbidity sensors and sediment traps



Free and open data access will promote international and interdisciplinary collaboration, which will enable researchers to tackle some of the most of complex and pressing questions of ocean and earth science today.

Plotting Utility

The Plotting Utility is the main scalar data visualization tool. It facilitates comparisons and cross-correlations by plotting data from multiple sensors. Users can build their own graphs and customize various aspects of the plot such as color and graph type, to make each one look unique.

Topics of the Day

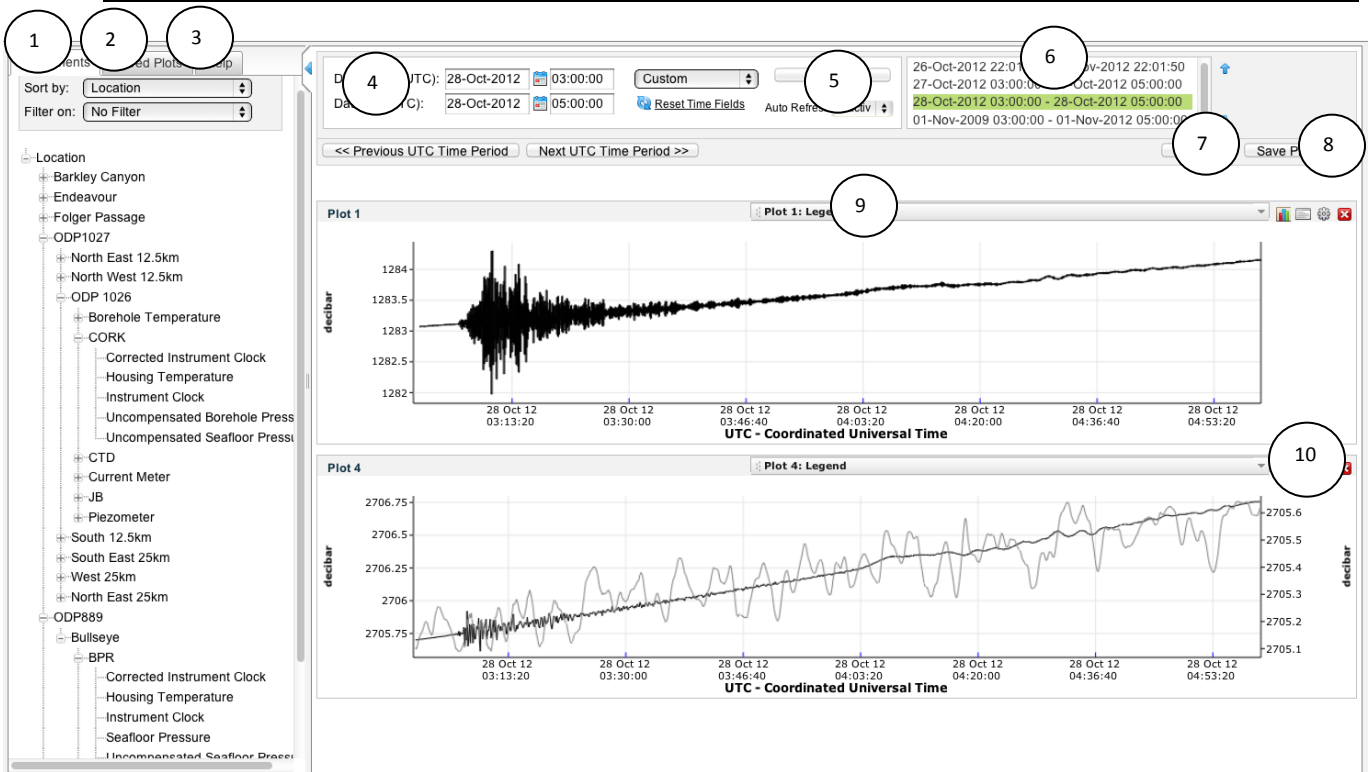
1. Overview Of Plotting Utility and screen layout
2. Explain “Sort By”; examine different trees
3. Explain “Filter on”; try different filters

Haida Gwaii earthquake on October 28th at 8pm PDT

- a. Choose sort by location, navigate to ODP889 and find the BPR at Bullseye
- b. Create a 2 hours plot of seafloor pressure from October 27th 3am UTC to 5am UTC
- c. Adjust plot time period by selecting new dates
- d. Zoom into plot; return to original plot
- e. Plot multiple variables
 - i. Plot the seafloor pressure from the ODP1026 CORK at the ODP1027 location
 - ii. Plot the seafloor pressure and borehole pressure on the same plot
- f. Examine the plot legend
- g. Customize the plot
 - i. Settings – Plot, Axis, Curve (choose High-Low)
 - ii. Plotted values
 - iii. Image plot

Time-series of oxygen in Folger Passage

- a. Choose sort by location, navigate to Folger Passage and find the oxygen sensor at Folger Deep
- b. Create a 3 years plot of Oxygen Concentration Uncorrected From November 2009 to 2012
- c. Save plots
 - iv. Save sample plot
 - v. Delete plot
 - vi. Published plots
- d. E-mail plots



1. Search instruments/sensors
2. Saved Plots
3. Help
4. Time Period Selection Area
5. Update Plots
6. Plot History Record
7. Clear All Plots
9. Plot Legend
10. Plot Tools

Data Search

The Data Search tool is used to search and download data from observatory instruments.

Topics of the Day

1. Overview Of Data Search and main sections on screen
2. Explain “Sort By”; examine different trees
3. Explain “Filter on”; try different filters
4. Let’s explore the Haida Gwaii earthquake on October 28th at 8pm PDT
 - a. Step 1- Choose your Data source:
 - i. Choose sort by location, navigate to ODP889 and find the BPR at Bullseye
 - ii. Examine the map
 - b. Step 2 – Select Data Product: go to ‘select data product’ or click the ‘next’ button
 - i. Examine Documentation and Metadata (Device details)
 - ii. View the data availability graph
 - iii. Select a time period
 - iv. Select a subsampling (scalar data)
 - v. Select a Data Product Type; view data product documentation
 - vi. View instruments annotations
 - vii. Click the ‘Add to cart’ button
 - c. Step 3 – View Cart
 - i. Examine cart; note the request help option
 - ii. Request data by clicking the ‘Checkout’ button
 - iii. Download the data
 - iv. View the metadata File
 - v. Cancel a search in progress
 - vi. Delete your search for the cart

Step 1. Choose Data Source

Sort by:

Filter:

- Location
 - Barkley Canyon
 - Endeavour
 - Folger Passage
 - ODP1027
 - ODP889
 - Bullseye
 - BPR**
 - Broadband Seismometer
 - CSEM
 - CTD
 - Current Meter
 - Gravimeter
 - JB
 - Long Range Rotary Sonar
 - Port Alberni

Step 2. Select Data Product

BPR
NRCan Bottom Pressure Recorder 88 (22503) [Details](#) | [Documentation](#)

Date From (UTC):

Date To (UTC):

[Reset Time Fields](#)

Subsample Type: Period:

Data Availability

Green bars mark periods of available data. Click-drag to zoom; double-click to see full history.

	Time Series	Data	Time Series Scalar Plot	Log File	CSV NaN
BPR 22 Annotations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corrected Instrument Clock (7569)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Housing Temperature (4190)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instrument Clock (4189)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seafloor Pressure (4191)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uncompensated Seafloor Pressure (7715)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTE: Most data products have additional [Metadata](#) automatically generated and added to the Cart.

<< Previous Next >>

Step 3. View Cart (0 items)

9

Note: Zip files must be opened using software that supports 64-bit format

Open Cart

<input type="checkbox"/>	Device	Sensor	Date From (UTC)	Date To (UTC)	Subsample Type	Data Product	Status	Download	Metadata	Action
<input type="checkbox"/>	Location > ODP889 > Bullseye > BPR	Seafloor Pressure (4191)	28-Oct-2012 03:00:00	28-Oct-2012 05:00:00	none	Time Series Scalar Data (csv)				
<input type="checkbox"/>	Location > ODP889 > Bullseye > BPR	Seafloor Pressure (4191)	28-Oct-2012 03:00:00	28-Oct-2012 05:00:00	none	Time Series Scalar Plot (png)				

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11

12

Processing Cart

<input type="checkbox"/>	Device	Sensor	Date From (UTC)	Date To (UTC)	Subsample Type	Data Product	Status	Download	Metadata	Action
<input type="checkbox"/>	Location > ODP889 > Bullseye > BPR	Seafloor Pressure (4191)	28-Oct-2012 03:00:00	28-Oct-2012 05:00:00	none	Time Series Scalar Data (csv)	Completed	ODP889_Bullseye_...csv	ODP889_Bullseye_...pdf	
<input type="checkbox"/>	Location > ODP889 > Bullseye > BPR	Seafloor Pressure (4191)	28-Oct-2012 03:00:00	28-Oct-2012 05:00:00	none	Time Series Scalar Plot (png)	Running... working on query 1 of 1.			

13

15

Completed Cart

<input type="checkbox"/>	Device	Sensor	Date From (UTC)	Date To (UTC)	Subsample Type	Data Product	Status	Download	Metadata	Action
<input type="checkbox"/>	Location > ODP889 > Bullseye > BPR	Seafloor Pressure (4191)	04-Nov-2012 18:12:56	05-Nov-2012 18:12:56	none	Time Series Scalar Data (csv)	Completed	ODP889_Bullseye_...csv	ODP889_Bullseye_...pdf	
<input type="checkbox"/>	Location > ODP889 > Bullseye > BPR	Seafloor Pressure (4191)	04-Nov-2012 18:12:56	05-Nov-2012 18:12:56	none	Time Series Scalar Plot (png)	Completed	ODP889-Bullseye_...png	ODP889_...pdf	

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16

14

18

NEPTUNE Canada

Metadata for BarkleyCanyon_BCAxisPOD1_ADCP_75_kHz_Temperature

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Information](#)

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Identification Information

Citation

Citation Information

Origin: North-East Pacific Timeseries Underwater Networked Experiments (NEPTUNE Canada)

Publication Date: 2012-Oct-30

Publication Time: 21:48:04 UTC

Title: BarkleyCanyon_BCAxisPOD1_ADCP_75_kHz_Temperature

Geospatial Data Presentation Form: Time Series Scalar Data - CSV

Publication Information: [See Data Policy](#)

Online Link: <http://www.neptunecanada.ca/>

Other Citation: [See How to Cite Us](#)

Description

Abstract: NEPTUNE Canada regional cabled [ocean network](#), located in the Northeast Pacific, is part of the [Ocean Networks Canada](#) Observatory. This network provides online access for the international research community to conduct oceanographic experiments. The subsea infrastructure, linked by an 812km cabled network off the coast of Vancouver Island, enables scientists and the public a unique way of monitoring the ocean environment. Data are transmitted via high-speed fibre optic communications from the seafloor to a data management and archive system at the University of Victoria.

Purpose: To support scientific study of the northeast Pacific Ocean through web-accessible real-time measurements and high temporal resolution long-term observations.

Supplemental Information: DMAS Search ID: 716036 Search Type: Multi-Device/Sensor Search

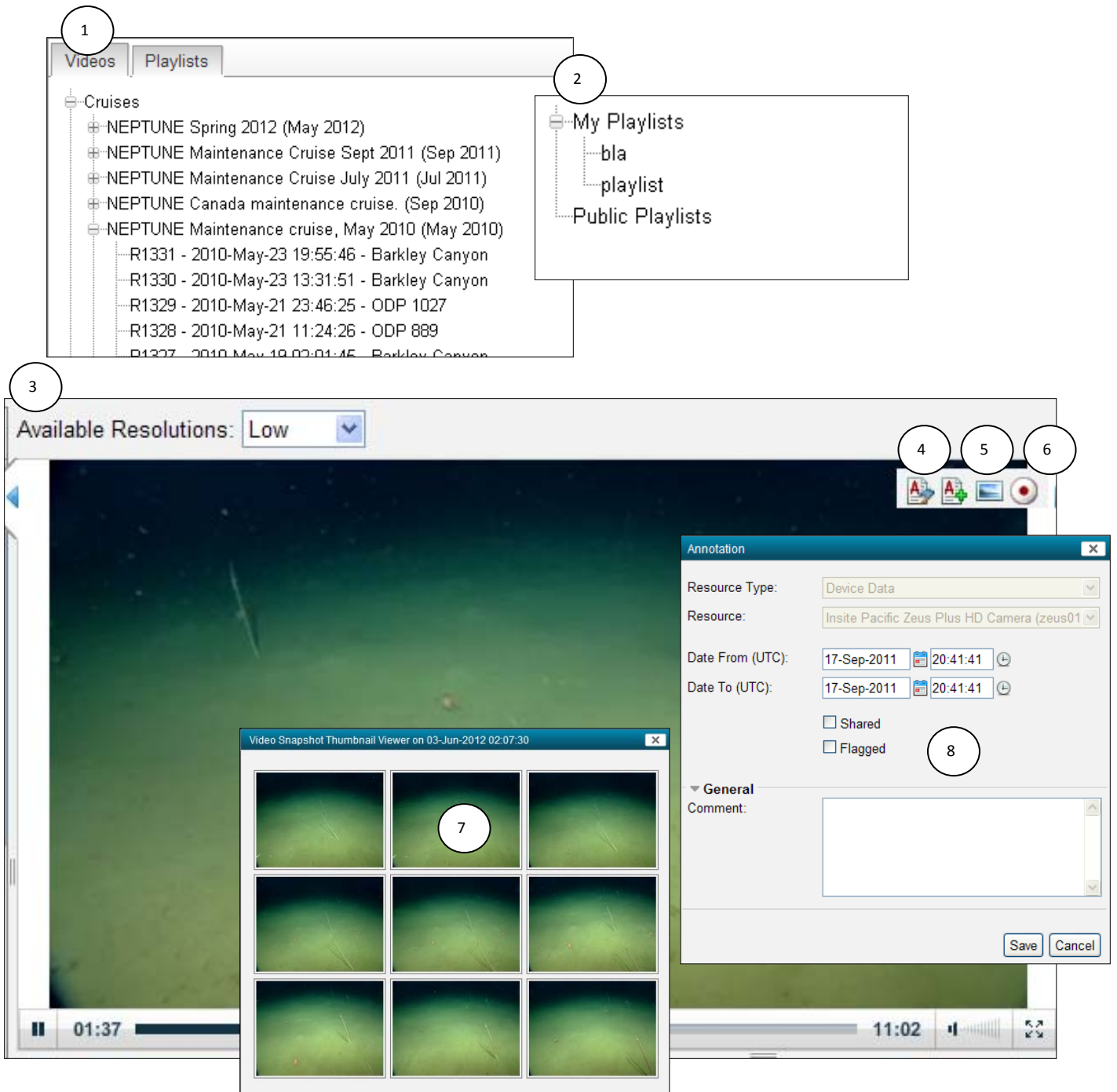
1. Search instruments/sensors
2. Instrument Documentation and Details
3. Data time period selection area
4. Sub-sampling options
5. Data Availability Graph
6. Data product selection panel
7. Data product documentation
8. Add to Cart button
9. Open Cart panel
10. Checkout button
11. Delete button
12. Processing Cart panel
13. Status column
14. Action column
15. Completed Cart panel
16. Metadata file column
17. Download file column
18. Download button
19. Metadata Report

SeaTube

SeaTube Pro is a viewer and annotation interface for deep-sea videos collected on installation and maintenance cruises by ROPOS and by deep-water cameras connected to the subsea networks. SeaTube Pro allows the user to watch, search and annotate videos for their own purposes. In the spirit of Oceans 2.0 applications, annotations can also be shared with all.

Topics of the Day

1. Overview of SeaTube purpose and screen layout
2. Selection tree organization: Cruises vs. Locations
3. Select a dive from the Cruise list: choose dive R1451 as an example
 - a. Try pause/play, time slider, and full screen options
 - b. Examine content map, Profile and Details tab
 - c. Cruise log tab:
 - i. Explain fields
 - ii. Navigate through video by clicking entry
 - d. Searching comments: search for keyword/Device ID
 - e. Search all videos
4. Select from the Locations List: choose Pinnacle IP at Folger passage location on October 23
 - a. Examine content map, Profile and Details tab
 - b. Viewing options full screen
5. Annotations
 - a. Create an annotation
 - b. Viewing annotations in “My annotations” tab
 - c. Navigate through video by clicking annotations
 - d. Edit/Delete an annotation
6. Frame grabs/Playlist
 - a. Take a frame grab
 - b. Record and save a playlist
 - c. Watch saved playlist
 - d. Add more video to the same playlist
7. Switching between VENUS and NEPTUNE videos



10

Search All Dive Videos

9

Map Profile Detail

Dive: R1554

PI: Moran, Kate

Area: ODP889

Start Date: 02-Jun-2012 22:20:15

End Date: 03-Jun-2012 03:58:08

Dive Plan: 1. Connect to CORK, conduct 1 Hz test and download data. 2. Sample 1m long core.

11

Search Comments Find Next

12

Dive Viewer Search

Search for: cod Search

Time	Dive	Comment
14-Aug-2006 15:22:43	1006	Ling cod.
25-Aug-2009 11:49:43	1241	following cable. lots of squid and black cod.
25-Aug-2009 11:50:35	1241	black cod
25-Aug-2009 12:19:01	1241	Black cod
25-Aug-2009 13:07:33	1241	ray, squid, cod

13

Map Profile Detail

Map Satellite Hybrid

14

Map Profile Detail

Depth m

Time

Imagery ©2012 TerraMetrics - Terms of Use

15

16

Start Date (UTC)	End Date (UTC)	Comment	Img	Latitude	Longitude	Depth	Origin	Action
03-Jun-2012 02:42:51	03-Jun-2012 02:42:51	closer		48.70264	-126.86189	1312.55	IRLS	
03-Jun-2012 02:43:38	03-Jun-2012 02:43:38	Nudging it looser.		48.70264	-126.86188	1312.71	IRLS	
03-Jun-2012 02:44:58	03-Jun-2012 02:44:58	ROPOS has it in his arm.		48.70264	-126.86189	1312.63	IRLS	
03-Jun-2012 02:46:58	03-Jun-2012 02:46:58	Trying to place the sea pen in the crate.		48.70264	-126.86189	1312.7	IRLS	
03-Jun-2012 02:48:10	03-Jun-2012 02:48:10	Cnidarian: Sea pen sample in is basket.		48.70264	-126.86189	1312.68	IRLS	

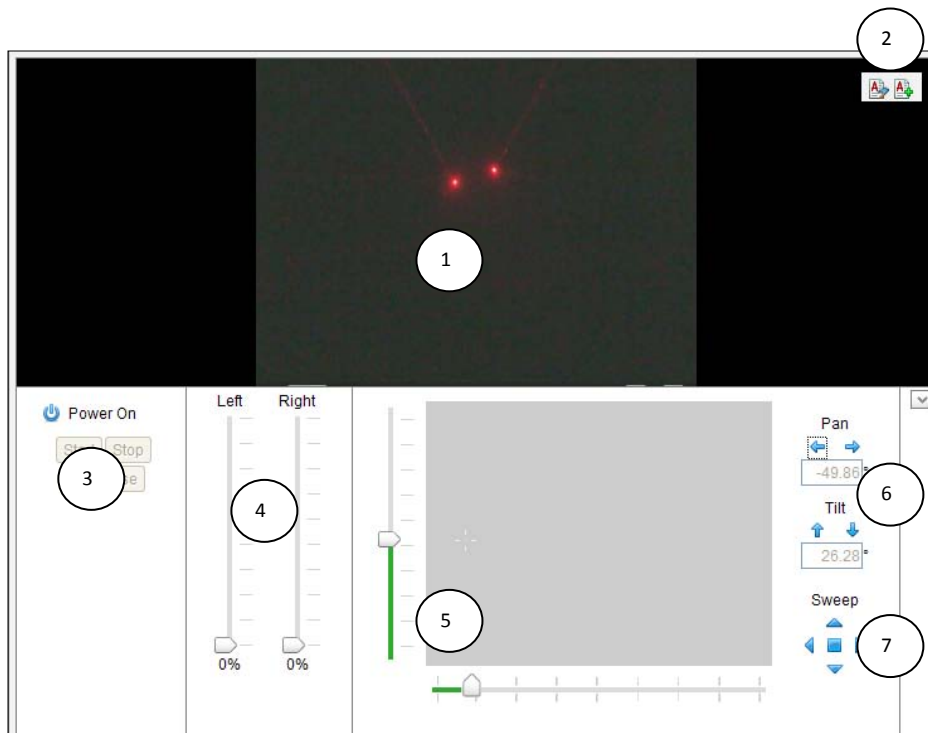
1. Search videos by "Cruises" or "Location"
2. My Playlists
3. Video quality options
4. Add/Flag annotations icons
5. Frame Grab icon
6. Record video playlists icon
7. Frame grabs
8. Add annotation window
9. Detail View
10. Search All Dive videos
11. Search Dive comments
12. Dive Viewer Search window
13. Map View
14. Profile View
15. Dive Log Entries
16. My Annotations

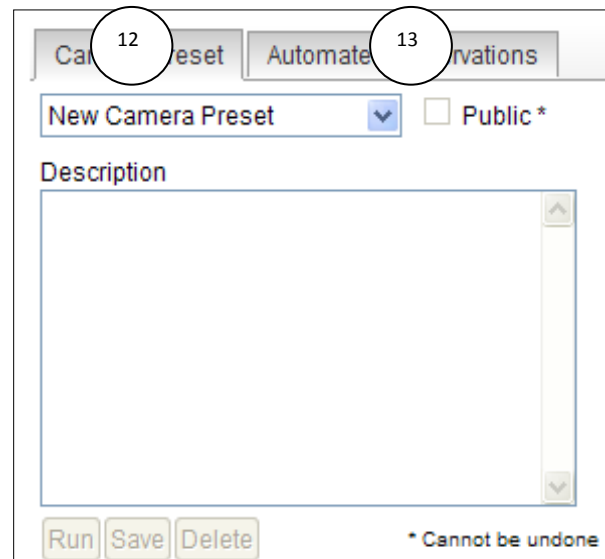
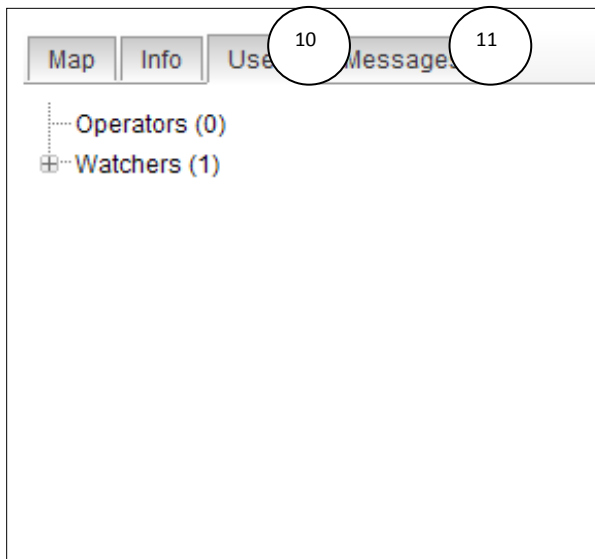
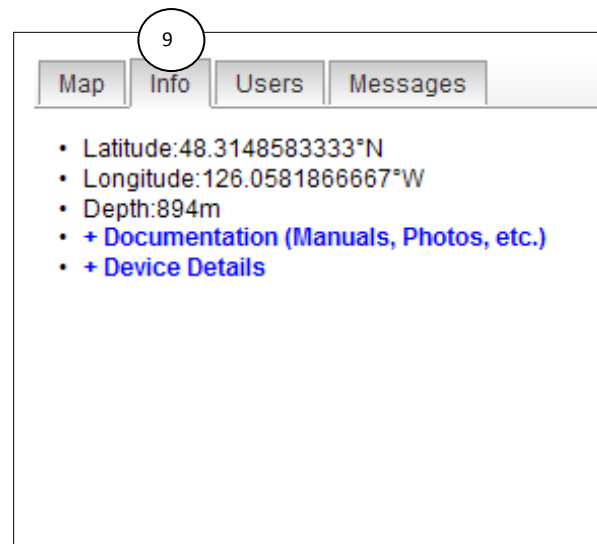
Camera Control

The Camera Control tool gives access to live video footage from underwater cameras and allows camera functions such as pan, tilt and zoom to be manipulated by an operator.

Topics of the Day

1. Overview of Camera Control and main sections on screen
2. Explain Map, Info, Users, Messages tabs
3. Camera operations: Lights, Pan, Tilt, Zoom, Focus
4. Explain automated scheduling and scientific sampling with cameras
5. Show public live video page





1. Camera video screen
2. Add/Flag Annotations icons
3. Camera lights on/off
4. Camera lights settings
5. Pan/Tilt slider
6. Pan/Tilt settings
7. Sweep functions
8. Map View
9. Info View
10. Users View
11. Messages View
12. Camera Presets
13. Automated Observations

Digital Fishers

The Digital Fishers project, developed by NEPTUNE Canada with the University of Victoria's [Centre for Global Studies](#) (CfGS) and funded by CANARIE Inc., encourages scientists, students, and the public to make observations and comment on large volumes of scientific data. The Digital Fishers tool works by applying the principle of '*crowdsourcing*'. This crowdsourcing project invites a large number of individuals, including non-specialists, to use the Internet-based platform, make observations, annotations, and verifications of data gathered from underwater video. This type of crowdsourcing Digital Fishers calls "Web 2.0 enabled citizen-science."

Previous campaign: THE SABLEFISH

The sablefish campaign was a competition between the crowd (DF), the expert, the student, and a new automated detection system to investigate how each compares. In Barkley Canyon, 1-minute video clips were recorded every half hour to study the behavior and activity rhythms of the sablefish.

Current campaign: Geo Mapping Endeavour

In the current campaign, the crowd is asked to participate to a science seafloor mapping expedition of a mid-ocean ridge. Details of the seafloor geology through video will be used to enhance current bathymetric data sets and enable better planning of the NEPTUNE Canada network installation. Also, scientists will be able to use this data to better understand the link between the ridge geological features and species distribution

Topics of the Day

1. Intro "Data from the Deep, Judgement by the Crowd" project
2. What is the current campaign?
3. Overview of Digital Fishers game and screen layout
4. View video information
 - a. Maps
 - b. Depth, coordinates and date of video
5. Make Annotations
 - a. Create an annotation (sediment, sea life)
 - b. Making annotations at higher levels
 - c. Tutorials and help
6. Overview of levels and "Creature Cards" rewards
7. Overview of game statistics and high scores
8. Overview of Digital Fishers Blog
9. Citizen Science and future projects
10. Search Annotations
 - a. Select "Device Data" for resource type
 - b. Select date (optional)
 - c. Filter level, type of annotation
 - d. Origin – select "crowd"



1. Video information
2. Video location
3. Video date
4. Video screen
5. Annotations panel
6. Game progress panel
7. Game statistics
8. Game high scores
9. Help and Tutorials
10. Digital Fishers missions/projects
