

The Observatory

THE ELECTRONIC NEWSLETTER OF THE ST. LAWRENCE OBSERVATORY - FALL 2000



All data from MLI's oceanographic missions are now accessible on line via the Oceanographic Data Management System (ODMS)

The ODMS Internet access interface has been operational and on line since 15 September. The ODMS, the cataloguing and archive system for oceanographic data at the Maurice Lamontagne Institute (MLI), is used for data conservation and distribution. The interface allows a user to selectively retrieve data; the application includes all the appropriate security mechanisms required by such a system. The interface is simple and easy to use—it only requires the installation of a Java module to operate. There are currently more than 10,000 data files in the system, mostly related to physical oceanography. Data will be added to the system as it becomes available and the diversity of data types will increase. The interface and the on-line documentation are available in both official languages. For more information, and to use the system, click on ODMS from the OSL home page. Happy searching!

Bernard Pelchat - Section Head, Oceanographic Data Management, MLI

Local and international recognition!



In July, the Web site (<http://www.osl.gc.ca>) received 1,697 visitors and the bandwidth increased tenfold following the news reports on CFER-TV and several regional radio stations. The St. Lawrence Observatory also was the subject of the program "La bonne nouvelle" on TVA.

In addition, the Observatory has just been classified among the "best sites" in the category *Earth Sciences / Oceanography* on the portal MSN-France:

http://www.msn.fr/leguide/sciences_techniques/sciences_de_la_terre/oceanographie.

Only one other marine science site out of 50 from all over the world was awarded the maximum score of *three stars* by independent researchers. The sites were rated based on the criteria of a "reference site that presents a wide range of detailed, dependable, and varied information as well as a carefully prepared interface".

In this issue

Top story: the ODMS	1
Local and international recognition	1
New products available on the OSL	2
Ongoing collaborations	2
New partners	3
Events	3
Encouraging statistics	3
A word from our partners	4
Of note	4

New products available on the OSL



The St. Lawrence in real time

Thanks to the joint efforts of the research teams connected with MLI's Thermograph Network, the technical support group of the Division of Ocean Sciences and the St. Lawrence Observatory, the oceanographic data measured at the buoy-MLI are now accessible in real time on the Internet. This buoy, moored in the St. Lawrence estuary 1.5 km offshore of the Maurice Lamontagne Institute, is one of the buoys of the thermograph network, which includes 19 stations covering the Gulf of St. Lawrence (<http://eole.qc.dfo.ca/thermo/index.html>). The data diffused by the OSL are seawater temperature, salinity, density anomaly, and *in-situ* fluorescence. The early problems with the electrical system's instability and time drift have now been corrected and the system is functioning perfectly. Data will be available until mid-November, when the buoy will be removed for the winter. This experimental project permitted the development of electronic and computing expertise for transmitting data in real time. If the need arises, this project can be extended to include other network buoys elsewhere in the gulf. The data, along with the technical specifications of the buoy, are available by following the link "**Real-time Buoy**" on the OSL home page.

The first electronic publication presented by the OSL

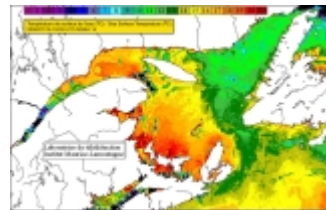
In collaboration with Claude Savenkoff, research scientist in the Division of Ocean Sciences at MLI, the OSL presents an electronic publication concerning carbon flow budgets of the Gulf of St. Lawrence adapted for the Internet. The document currently includes a simplified annual carbon flow budget. The objective of this electronic publication is to improve the public's understanding of the complex interactions of the marine food web. For non-specialists, this will be an occasion to become familiar with scientific terms like photosynthesis, the cold intermediate layer, the food chain, and particle sedimentation. This product will be completed by the addition of seasonal budgets. This document is currently available only in French in the section **Access to data / The St. Lawrence: Models** (the English version will be released soon).

Ongoing collaborations

With the Canadian Hydrographic Service (CHS) and MLI's Physical Modeling Section

The OSL team recently completed the Web interface and the computer graphics for the official Canadian Tide Tables Web site for the CHS. MLI's Physical Modeling Section performs the calculations for tide predictions that are then available dynamically on the Web page following the user's query. This site, the official opening of which was announced by the minister of Fisheries and Oceans on 30 August 2000, regroups more than 700 stations covering all the Canadian coasts. The Web interface allows queries by region (five regions covering the Canadian shorelines), time zone, and the station of interest. The results, presented in graphic form, give the water level changes over a 48-h period as well as the times of high and low tides. The CHS site address is: <http://www.lau.chs-shc.dfo-mpo.gc.ca>; the tide tables for the Gulf of St. Lawrence (six sub-regions) are also accessible from the OSL site.

With MLI's Remote Sensing Laboratory



Since June, the OSL has diffused satellite images of sea-surface temperatures of the gulf produced by MLI's Remote Sensing Laboratory (<http://eole.qc.dfo.ca/tele>).

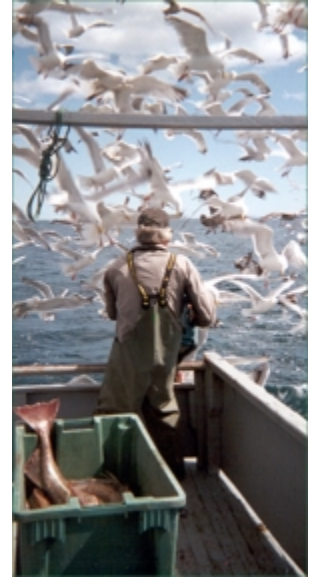
Because of this collaboration, one or two new images will be added to the OSL site each week. These numerically reprocessed images are diffused on the Internet within an average of two to three weeks of receiving the satellite data. To date, the 2000 collection includes 23 surface temperature maps compared to 26 maps for all of 1999. All images are available in the section **Access to data / the St. Lawrence: view from the air**.

With MLI's Toxic Algae Research Group

All of the raw data from the toxic algae monitoring program are now available via the OSL. Phytoplankton cell concentrations from samples collected from 1995 to 1999 at the 11 stations of this program are presented in Excel files. These annual updates complete the 1989-1994 summary data report available on line in the section **Publications** (*In French only*).

New partners

The OSL has come to an agreement with the northern gulf cod Sentinel Fisheries Program (SFP) for the development of a Web site to diffuse the program's results. At first the site will offer an electronic version of the annual fixed-gear coastal fisheries surveys. MLI's Sentinel Fisheries team is currently examining the model of the future SFP-OSL site. The SFP is a partnership between the Canadian Department of Fisheries and Oceans-Laurentian Region and several fishers associations from Québec and Newfoundland. The program's most recent preliminary reports for fixed and mobile gear surveys are already available on the OSL, in the section **Publications**.



Events

From 15 to 19 May 2000, more than 450 participants attended the Canadian Hydrographic Conference (CHC-2000) in Montréal. Robert Siron made a presentation entitled *L'Observatoire du Saint-Laurent: un outil pour la diffusion des données hydrographiques* ("The St. Lawrence Observatory: a tool for the diffusion of hydrographic data"). Also on the program were a poster and Internet session, which increased the OSL's visibility within the community of those interested in the St. Lawrence. The proceedings of this presentation are available in the section **OSL Overview** (*In French only*).

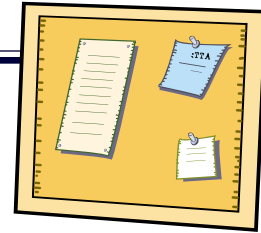


Encouraging statistics

Since its opening on the Internet last January, site visits have continued to increase, from 145 visitors in February to nearly 1,700 for the month of July alone. As of 15 September 2000, the site had received visits from 3,925 different visitors, 798 of whom returned. This represents a total of 8,923 sessions. The main group of OSL users are from the Canadian Department of Fisheries and Oceans network (40% of the sessions), Internet access providers (25%), and other government organizations (7%). Most visits originated from Canada (81%); there were also visits from the US (740 sessions), France (348), the UK (81), Japan (35), Belgium (14), Germany (14), Norway (14), Australia (14), and Greece (10). The statistic that is most encouraging of all is the average session length, which is about 15 minutes—proof that the visitors find something to hold their interest!

The monthly statistics on site visits are now available in the section **What's New**.

A word from our partners



The “real-time” buoy—a popular initiative

Here are the comments of Réal Gagnon, biologist in MLI's Division of Ocean Sciences, Toxic algae research group, concerning this project:

I am very pleased that this data is available. The information it provides will be very useful for our monitoring activities on toxic algae blooms. These blooms generally occur when environmental conditions in the seawater are favorable: low salinity (<26) and relatively high water temperature (>12°C). The salinity of the water is presently favorable but not the temperature. Thank you telling us about this new service which is indeed something to celebrate! [Translation]

A clientele eager for scientific information

The comments received so far on the Web site have been favorable and encourage us to continue our work in the same vein. We regularly receive requests from school groups, associations, and university students looking for information to complete reports, investigations, and literature searches. We will keep in mind the interest for the diffusion of this kind of information when planning the future developments of the site.

We invite scientists to adapt and diffuse some of their results or publications on the Internet for the benefit of these groups. The OSL offers its expertise in non-technical writing and scientific visualization.

Think about it!

Of note



A new tool to visualize oceanographic data

For the past several months, the OSL has been working on the development of a Java applet for the visualization of oceanographic data sets. We reported this in the first issue of this newsletter; a demo of this product is now available on the site in the **Toolbox** section. Currently, this project allows us to test the possibility of using Java to diffuse data like water temperature or surface currents on the Web. The surface current data used in the demo are provided by MLI's Numerical Forecast Laboratory; the water temperature data originate from several hundred (non-permanent) sampling stations that are archived in the gulf's Thermograph Network database.

Two new sections have appeared on the OSL's Home Page:

Publications: This section will henceforth regroup the publications and scientific reports available on line. In addition to the report on the state of the physical oceanographic conditions of the Gulf of St. Lawrence, the most recent preliminary reports for the northern gulf cod Sentinel Fisheries Program have recently been added. We welcome all those interested in diffusing their publications on the Internet, via the OSL Web site.

What's new: This section will regularly inform you of new items in the OSL: updates, newly available products, and projects under development.

Access to data:

To improve the presentation of data available via the OSL, we have made some modifications to this section. A new theme, **The St. Lawrence: Monitoring**, groups data that have been collected by the different monitoring programs. The data on modeling and numerical forecasting are now presented within a single theme, **The St. Lawrence: Models**.

Monthly Highlights are now available on line by clicking on **Information Kiosk / Newsroom**.

Finally, we would like to inform you that we have abandoned the project for visualizing water level data from the Sineco network. These data are available elsewhere. Further information can be obtained from the Canadian Hydrographic Service at the Maurice Lamontagne Institute (CHS-MLI):
<http://www.qc.dfo.ca/iml/en/hydro/hydro.htm>.

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All comments concerning this newsletter may be addressed to sironr@dfo-mpo.gc.ca

Aussi disponible en français