

**ION: INTEGRATED OBSERVATORY NETWORK**

**USER GUIDE**

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## **AN INTRODUCTION TO ION**

The Integrated Observatory Network (ION) is a national infrastructure that makes ocean data from many observing systems available to everyone, from scientists and researchers to teachers, students, and the interested public. You can access the data available in ION through the web interface: [ion.oceanobservatories.org](http://ion.oceanobservatories.org). There you will find tools to help you locate, learn about, evaluate, and download ocean data. You will also find tools to keep you informed of changes to data you are interested in and tools that enable you to share your data with other ION users.

### **SOME HANDY THINGS TO KNOW**

As you explore ION, you may find it helpful to be familiar with just a few basic concepts.

#### **Data Resource**

When set of scientific data is registered in ION, it is called a Data Resource. A data resource consists of scientific data from one or more data sources, along with some metadata that describe either the source, the data, or both.

#### **Data Source**

Data in ION may come directly from some observing systems, such as instruments in or on the water or may come by way of a laboratory or research facility where they data may be processed in some way. In ION, the Data Source simply refers to where the data are from, their source. The source is usually described in the metadata.

#### **Metadata**

The metadata in a Data Resource contains information about data contained in a Data Resource. For example, for a particular Data Resource, you may find a list of its variables and a description of the structure of the data. This type of metadata will help you understand what you are looking at when you examine the data themselves.

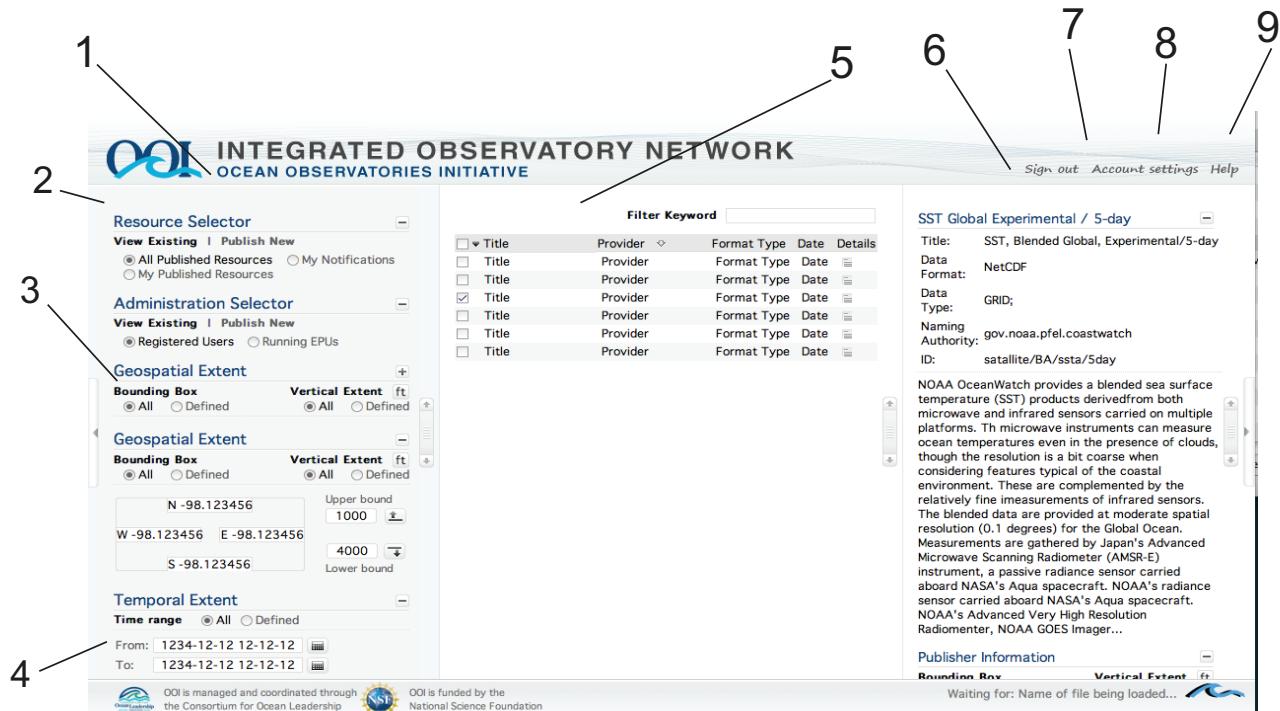
Metadata also may contain information about the source of the data. So, for example, you may find information about what instruments were used to gather the data, the place where they were gathered, and what institutions or individuals are responsible for those data. This type of metadata will help you establish the provenance of the data.

#### **Data and Data Formats**

While Data Resources have data that may come from many different kinds of observing systems, may be raw or processed, and may have different kinds of metadata associated with them, all If the data and metadata are represented in netCDF format. You will need to know about netCDF when want to register your own Data Resources on ION. For more information about netCDF and some useful tools, see  
[www.unidata.ucar.edu/software/netcdf/](http://www.unidata.ucar.edu/software/netcdf/). <is this where we want to refer users?>

## GETTING TO KNOW YOUR WAY AROUND ION

Navigate to ION in your web browser: [ion.oceanobservatories.org](http://ion.oceanobservatories.org) (or enter “integrated observatory network” into your web search engine). The following diagram describes features of ION’s home screen.



1. This column contains tools for finding a data resource by specific location or time frame.
2. View all registered resources or those you've registered for previously.
3. Enter the lat/lon coordinates of the geographic area you are interested in, or choose a specific vertical extent.
4. A time range of interest can be specified here.
5. Browse all of ION's data resources in this panel. Once you've selected a resource, you'll see different views of that resource in this panel.
6. Access more information about each data resource in this panel.
7. Login to your previously created account.
8. Create a new ION account. This will direct you to an externally operated account management system that ensures the security of your personal information. Next time you visit, you can access your account settings here.
9. Access ION help (this document).

## THE BASICS

### Getting Started with the Integrated Observatory Network

#### SIGN INTO ION AS A GUEST

From the ION home page ([ion.oceanobservatories.org](http://ion.oceanobservatories.org)), click on the sign in as a guest option in the right panel. Signing in as a guest allows you to browse ION resources and download data. To set up notifications, register data or save your settings, you will need to create an ION account.

#### CREATE AN ION ACCOUNT

Registering for an ION account allows you to access ION's full suite of features, including setting up notifications about data resources and registering your own data with ION. To register, click on [create account](#) in the right panel of the home page or on the upper right corner of any ION workspace page. This will direct you to an externally operated account management system that will walk you through the steps of setting up a user name and password, after which you will be returned to the ION workspace.

#### FIND THE YOUR WAY AROUND THE ION WORKSPACE

ION's home page provides a brief overview of ION and of the current release, as well as links to the OOI's funding, management and implementation partners. Once you've signed in, you'll enter the ION workspace.

**The left panel** is where you will generally start working in the ION workspace. It includes the [Resource Selector](#), where you decide which tools will be brought into the center and right panels. You can choose to view existing data, including all ION resources. If you're a registered user, you can choose to see just those data resources you've previously registered and you can also access notifications you've previously requested or can choose to publish new data.

To search for particular data in ION by location, you can use the [Geospatial Extent Selector](#) allows you to filter data within a geographic area by entering the coordinates for that region or choosing vertical extent above or below sea level. The [Temporal Extent Selector](#) allows you to specify a time range for the data you would like ION to display in the center panel. You can use these tools separately or in any combination that meets your needs.

**The center panel** in default view lists all of ION's data resources in alphabetical order by title. Here you can view summary or full metadata about a particular resource, as well as view your notification settings and the data resources you have registered with ION.

**The right panel** is where you will find preview information about a selected resource, as well as options to download data resources, set up notifications and edit metadata and notification settings, depending upon what you've selected in the left panel.

## TUNE THE WORKSPACE FOR YOUR SCREEN SIZE AND WORK STYLE

### ADJUSTING THE RIGHT AND LEFT COLUMN SIZE

The left and right columns may be resized or completely closed to make more room to view information in the other columns. Grab the resize handle and move it right or left.

<need illustration>

### EXPANDING AND COLLAPSING PANELS

Each panel in the right and left columns may be collapsed to make more room to view other panels in the column and then reopened again when desired, using the + and – controls in the title area of the panel.

<need illustration>

## KNOW WHO TO CALL WHEN YOU NEED SUPPORT

<need info here>

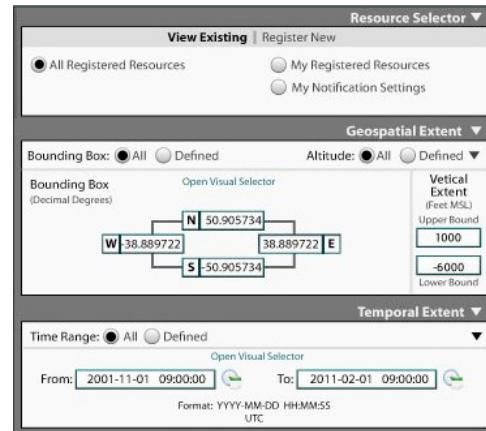
## TEN THINGS YOU CAN DO WITH ION

1. Explore Ocean Data
2. Find Data You Want
3. Examine a Data Resource
4. Download Data to Your Desktop
5. Get Notified
6. Change Your Notification Settings
7. Register a Data Resource
8. Monitor Your Registered Data Resources
9. Register for an ION Account
10. Provide Feedback to the ION Team

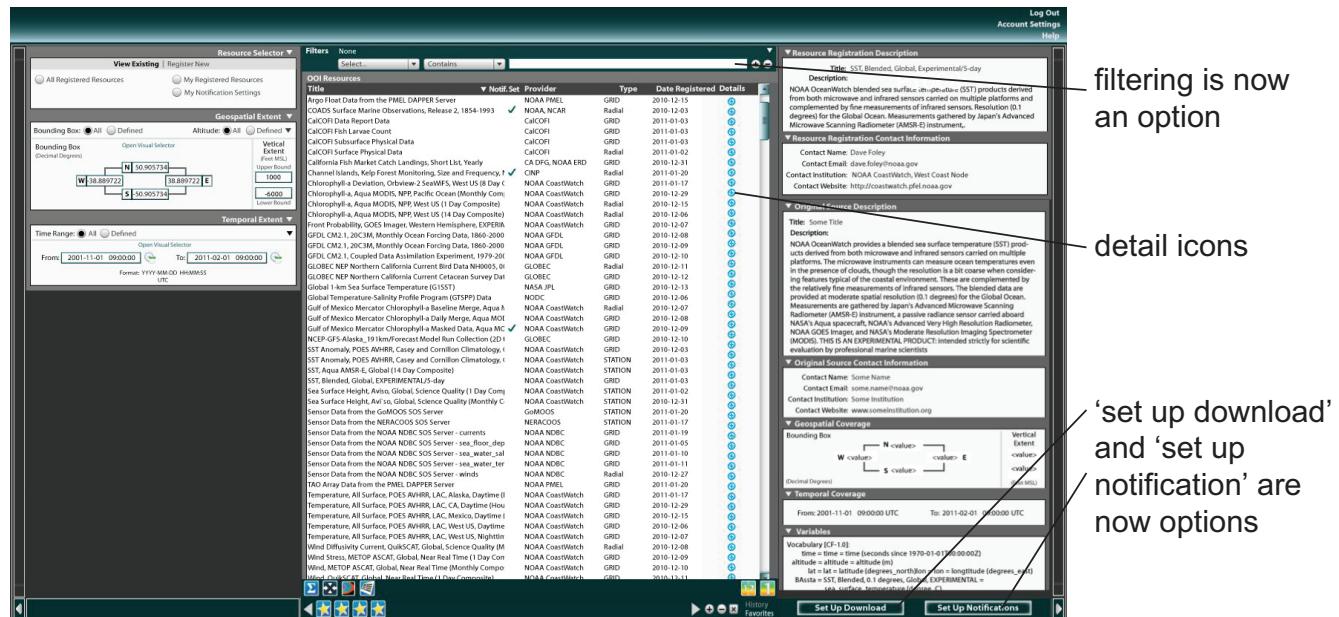
## 1. EXPLORE OCEAN DATA

Browse ION's data resources; here you'll find everything from historical sea-surface temperature time-series, to real-time seismic data, to OOI global buoy data.

1. In the Resource Selector panel (left column):  
Select [View Existing](#) and [All Registered Resources](#)
  2. In Geospatial Extent box:  
Select [Bounding Box All](#) and [Altitude All](#)
  3. In Temporal Extent box:  
Select [Time Range All](#)



4. With these settings in the left column, the center column lists all of the data resources currently available to you in ION. Single click on any data resource in the list to select it and view additional information about it in the right column.



5. To see even more information about a particular data resource, click on its details icon  or simply double-click it in the list. You now view the data resource's metadata in the center panel.
  6. Click in  the upper right of the center panel to return to the full data resource list. Shortcut: If you want to see the same detailed information about

the next resource on the list, instead of going back to the list to select it, simply click the forward button.

## 2. FIND DATA YOU WANT

Search for a data resource in a specific geographic area, vertical extent or collected during a particular time frame. Then choose your specific data resource or resources from the resulting list.

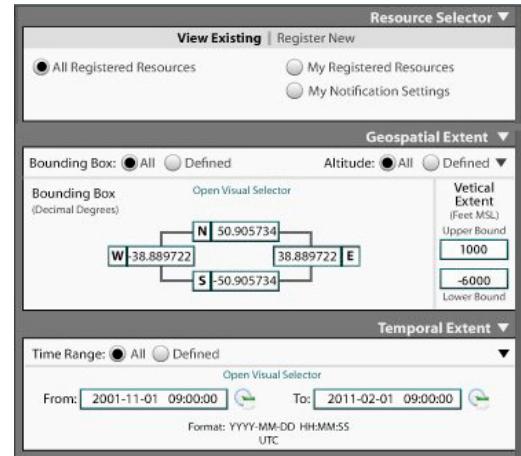
- In the Resource Selector panel:

Select [View Existing](#) and [All Registered Resources](#).

- To search for a data resource within a specific geographic area, in the Geospatial Extent box, enter your coordinates (in decimal degrees).
- To search for a data resource within a specific vertical extent, in the Geospatial Extent box, enter your range.
- To search for a data resource within a specific time frame, enter the dates of your desired range in the Temporal Extent box. Click on the [calendar icon](#) to the right of the entry field if you prefer to select your dates on the pop-up calendar.

You can search using any combination of options 2, 3 and 4 above.

- Your search return entries appear in the center panel in alphabetical order by title. Here you can sort by provider, type or date registered by clicking on the relevant term in the column header.



This screenshot shows the main search results page. The left side has a 'Filters' section with 'None' selected. The main area lists data resources in a table with columns: Title, Notify Set, Provider, Type, Date Registered, Details, and a 'More' button. Annotations point to several UI elements:

- Column filter text box:** Points to the 'Filters' dropdown.
- Header bar:** Points to the top navigation bar.
- Selection icons:** Points to the 'More' buttons next to each resource entry.
- Details icon:** Points to the 'Details' link in the right sidebar.

The right sidebar contains detailed information for a selected resource (NOAA OceanWatch blended sea surface in-situ and satellite SST products) and provides links for registration, original source contact, and coverage details.

### 3. EXAMINE A DATA RESOURCE

You've found a data resource of interest; now explore the details available to you.

- In the center panel, select the data resource you'd like to examine by clicking once on its listing. The resource is now highlighted, and a summary of its metadata is displayed in the right column.

The screenshot shows the ION Resource Selector interface. On the left, there's a search bar and filters for 'Geospatial Extent' (bounding box, altitude), 'Temporal Extent' (time range), and 'Variables' (vertical extent). The main list displays various data resources, such as 'NOAA PMEL Radiometer Data', 'NOAA COCATS Radiometer Data', and 'NOAA OceanWatch Data'. One resource, 'NOAA OceanWatch Data', is highlighted in blue. On the right, a detailed view of this resource is shown in a modal window:

- brief description of data**: The title 'NOAA OceanWatch Data' and a short description of the product.
- contact information of person who registered the resource with ION**: Fields for 'Contact Name', 'Contact Email', 'Contact Institution', and 'Contact Website'.
- text from original data source**: The 'Description' section, which includes a detailed technical description of the NOAA OceanWatch product.
- contact information of the original data collector**: The 'Original Source Contact Information' section, which includes fields for 'Contact Name', 'Contact Email', 'Contact Institution', and 'Contact Website'.
- coordinates**: The 'Geospatial Coverage' section, which shows a map and input fields for 'W', 'N', 'E', and 'S' coordinates.
- time range**: The 'Temporal Coverage' section, which shows a timeline from 'From: 2001-11-01 090000 UTC' to 'To: 2011-02-01 090000 UTC'.
- data variables**: The 'Variables' section, which lists variables like 'lat', 'lon', 'alt', 'time', and 'temp' with their descriptions.

- To see more information about this data resource, double click on its listing, or click once on the details icon for the listing. The center panel view changes to show resource's metadata.

The screenshot shows the NOAA OceanWatch interface with four panels open:

- Summary view:** Shows basic information like Title: SST, Blended, Global, Experimental/S-day, and a brief description of the blended sea surface temperature product.
- Metadata view:** Shows detailed metadata including spatial coverage (Global), temporal coverage (2002-07-04 to present), and FGDC Metadata.
- Original Source Description:** Shows the original source details for NOAA OceanWatch, mentioning GOES, POES, and AVHRR instruments.
- Original Source Contact Information:** Shows contact information for NOAA OceanWatch, including a contact form and a reference link to <http://ts.pfeg.noaa.gov/oceanWatch/oceanwatch.php>.

## 4. DOWNLOAD DATA TO YOUR DESKTOP

You've found a data resource that interests you and you've decided that you would like to download the data resource to your local system.

1. In the center panel, the data resource you've decided to download is either selected in list view, or you've double clicked the listing for the selected resource (or clicked the details icon and are viewing one of the four views of that resource in the center panel.

**Log Out**  
**Account Settings**  
**Help**

**Summary: SST, Blended, Global, Experimental/5-day**

**Summary**

SST, Blended, Global, Experimental/5-day

**Blended Sea Surface Temperature**

**Program:** NASA Earth Observing System (EOS), NOAA Geostationary Operational Environmental Satellites (GOES), NOAA Polar Operational Environmental Satellites (POES)

**Spacecraft:** Aqua, NOAA GOES-10 and GOES-12, NOAA POES-17 and POES-18

**Sensor:** Moderate Resolution Imaging Spectroradiometer (MODIS) on Aqua, Advanced Very High Resolution Radiometer (AVHRR) on GOES, Advanced Microwave Scanning Radiometer (AMSR-E) on Aqua

**Primary Geophysical Parameter:** Sea Surface Temperature

**Nominal Accuracy:** Unknown

**Spatial grid:** 0.1 degrees longitude by 0.1 degrees latitude, geographic

**Spatial coverage:** Global

**Temporal Coverage:** 2002-07-04 to present

**FGDC Metadata**

**Short Description:**  
NOAA CoastWatch provides a blended sea surface temperature (SST) product derived from both microwave and infrared sensors carried on multiple platforms. The microwave instrument can measure ocean temperatures even in the presence of clouds, though the resolution is a bit coarse when considering features typical of the coastal environment. These are complemented by the relatively fine measurements of the infrared sensor. The blended data are provided at moderate spatial resolution (~ 11 km) for the global oceans. Measurements are gathered by Japan's Advanced Microwave Scanning Radiometer (AMSR-E) instrument, a passive microwave radiometer carried aboard NASA's Aqua spacecraft; the NOAA Advanced Very High Resolution Radiometer (AVHRR) on NOAA's POES satellites; the Imager on NOAA's GOES spacecraft; and the Moderate Resolution Imaging Spectrometer (MODIS) on NASA's Aqua spacecraft.

**Technical Summary:**  
The three SST products used in the Blended SST are also offered through NOAA CoastWatch. AVHRR Global Args, OpenDap SST, GOES SST, MODIS Global SST, and AMSR-E SST are combined in a weighted mean to produce the blended SST product. Further information on the individual SST datasets, including processing information, is available in the respective Dataset Summary pages of the datasets. Weighting coefficients in the blended product are relative to the inverse square of the SST error of the associated dataset.

Data is made available at approximately 11km resolution for the global oceans. The data are mapped to an equal angle grid of 0.1 degrees latitude by 0.1 degrees longitude. The mapping uses simple arithmetic means to produce composite images of 5-day duration.

**Disclaimer:**  
Despite our best efforts, incorrect data may often appear within near real-time data sets. NOAA CoastWatch accepts no liability for use of these data products. It is recommended that these products NOT be used for navigation.

**Acknowledgement:**  
If this data is used for presentation or publication, please acknowledge the NOAA CoastWatch Program, NOAA NESDIS Office of Satellite Data Processing and Distribution, and NASA's Goddard Space Flight Center, OceanColor Web.

**Resource Registration Description**

**Description:**  
NOAA CoastWatch blended sea surface temperature (SST) products derived from both microwave and infrared sensors carried on multiple platforms and complemented by fine measurements of infrared sensors. Resolution 0.1 degrees for the Global Ocean. Measurements gathered by Japan's Advanced Microwave Scanning Radiometer (AMSR-E) instrument.

**Contact Information**

Contact Name: Dave Foley  
Contact Email: dave.foley@noaa.gov  
Contact Institution: NOAA CoastWatch, West Coast Node  
Contact Website: http://coastwatch.pfeg.noaa.gov

**Original Source Description**

**Title:** Some Title  
**Description:**  
NOAA OceanWatch provides a blended sea surface temperature (SST) products derived from both microwave and infrared sensors carried on multiple platforms. The microwave instruments can measure ocean temperatures even in the presence of clouds, though the resolution is a bit coarse when considering features typical of the coastal environment. These are complemented by the relatively fine measurements of infrared sensors. The blended data are provided at the relatively fine measurements of infrared sensors. The blended data are provided at moderate spatial resolution (0.1 degrees) for the Global Ocean. Measurements are gathered by Japan's Advanced Microwave Scanning Radiometer (AMSR-E) instrument, a passive microwave radiometer carried aboard NASA's Aqua satellite; the NOAA's Moderate Resolution Imaging Spectrometer (MODIS). THIS IS AN EXPERIMENTAL PRODUCT: Intended strictly for scientific evaluation by professional marine scientists.

**Original Source Contact Information**

Contact Name: Some Name  
Contact Email: some.name@noaa.gov  
Contact Institution: Some Institution  
Contact Website: www.someinstitution.org

**Geospatial Coverage**

Bounding Box

Vertical Extent

(Decimal Degree)

**Temporal Coverage**

From: 2001-11-01 09:00:00 UTC To: 2011-02-01 09:00:00 UTC

**Variables**

Vocabulary (CF-1.0)  
time = time + time (seconds since 1970-01-01T00:00:00Z)  
altitude = altitude + altitude (m)  
lat = lat + latitude (degrees, northbound = lon = longitude (degrees, east))  
BAssa = SST, Blended, 0.1 degrees, Global, EXPERIMENTAL =  
sea surface temperature (identical)

**Set Up Download**

**Set Up Notifications**

**SELECTION ICONS**



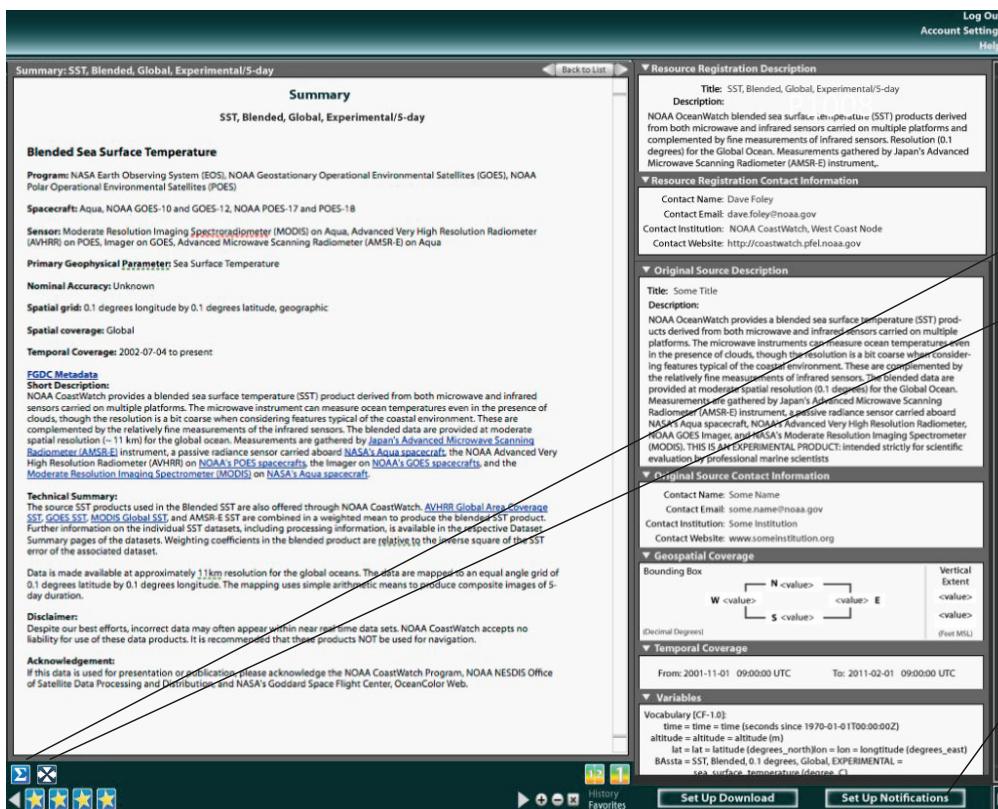
**Set up download**

2. Click on **Set Up Download** in the lower left corner of the right panel. You will have the option to select the data resource from the OpenDap selector in the center panel, and choose download.
3. The data will download according to the choices you make in the OpenDap selector.

## 5. GET NOTIFIED

You've found a data resource that interests you and you want to be notified if anything changes about the resource.

1. In the center panel, the data resource you want to be notified about is either selected in list view, or you've double clicked the listing for the selected resource (or clicked the details icon  ) and are viewing one of the four views of that resource in the center panel.



**Summary: SST, Blended, Global, Experimental/5-day**

**Summary**  
SST, Blended, Global, Experimental/5-day

**Blended Sea Surface Temperature**

**Program:** NASA Earth Observing System (EOS), NOAA Geostationary Operational Environmental Satellites (GOES), NOAA Polar Operational Environmental Satellites (POES)

**Spacecraft:** Aqua, NOAA GOES-10 and GOES-12, NOAA POES-17 and POES-8

**Sensor:** Moderate Resolution Imaging Spectroradiometer (MODIS) on Aqua, Advanced Very High Resolution Radiometer (AVHRR) on POES, Imager on GOES, Advanced Microwave Scanning Radiometer (AMSR-E) on Aqua

**Primary Geophysical Parameter:** Sea Surface Temperature

**Nominal Accuracy:** Unknown

**Spatial grid:** 0.1 degrees longitude by 0.1 degrees latitude, geographic

**Spatial coverage:** Global

**Temporal Coverage:** 2002-07-04 to present

**FGDC Metadata**

**Short Description:** NOAA OceanWatch provides a blended sea surface temperature (SST) product derived from both microwave and infrared sensors carried on multiple platforms. The microwave instrument can measure ocean temperatures even in the presence of clouds, though the resolution is a bit coarse when considering features typical of the coastal environment. These are complemented by the relatively fine measurements of the infrared sensor. The blended data are provided at moderate spatial resolution (~11 km) for the global ocean. Measurements are gathered by Japan's Advanced Microwave Scanning Radiometer (AMSR-E) instrument on the satellite carried by the NASA Aqua spacecraft; the NOAA Advanced Very High Resolution Radiometer (AVHRR) on NOAA's POES spacecraft; the Imager on NOAA's GOES spacecraft; and the Moderate Resolution Imaging Spectrometer (MODIS) on NASA's Aqua spacecraft.

**Technical Summary:** The blended SST products used in the Blended SST are also offered through NOAA CoastWatch. AVHRR Global Area Coverage SST, GOES SST, MODIS Global SST, and AMSR-E SST are combined in a weighted mean to produce the blended SST product. Further information on the individual SST datasets, including processing information, is available in the respective Dataset Summary pages of the datasets. Weighting coefficients in the blended product are relative to the inverse square of the SST error of the associated dataset.

Data is made available at approximately 11km resolution for the global oceans. The data are mapped to an equal angle grid of 0.1 degrees latitude by 0.1 degrees longitude. The mapping uses simple arithmetic means to produce composite images of 5-day duration.

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**Acknowledgement:** If this data is used for presentation or publication, please acknowledge the NOAA CoastWatch Program, NOAA NESDIS Office of Satellite Data Processing and Distribution, and NASA's Goddard Space Flight Center, OceanColor Web.

**Resource Registration Description**

**Title:** SST, Blended, Global, Experimental/5-day  
**Description:** NOAA OceanWatch blended sea surface, -in-situ- (SST) products derived from both microwave and infrared sensors carried on multiple platforms and complemented by fine measurements of infrared sensors. Resolution (0.1 degrees) for the Global Ocean. Measurements gathered by Japan's Advanced Microwave Scanning Radiometer (AMSR-E) instrument.

**Contact Name:** Dave Foley  
**Contact Email:** dave.foley@noaa.gov  
**Contact Institution:** NOAA CoastWatch, West Coast Node  
**Contact Website:** http://coastwatch.pfel.noaa.gov

**Original Source Description**

**Title:** NOAA OceanWatch provides a blended sea surface temperature (SST) products derived from both microwave and infrared sensors carried on multiple platforms. The microwave instruments can measure ocean temperatures even in the presence of clouds, though the resolution is a bit coarse when considering features typical of the coastal environment. These are complemented by the relatively fine measurements of infrared sensors. The blended data are provided at moderate spatial resolution (0.1 degrees) for the Global Ocean. Measurements are gathered by Japan's Advanced Microwave Scanning Radiometer (AMSR-E) instrument on the satellite carried by the NASA Aqua spacecraft; the NOAA Advanced Very High Resolution Radiometer (AVHRR) on NOAA's POES spacecraft; the Imager on NOAA's GOES spacecraft; and the Moderate Resolution Imaging Spectrometer (MODIS) on NASA's Aqua spacecraft.

**Original Source Contact Information**

**Contact Name:** Some Name  
**Contact Email:** some.name@noaa.gov  
**Contact Institution:** Some Institution  
**Contact Website:** www.someinstitution.org

**Geospatial Coverage**

**Bounding Box:** N <value>, E <value>, S <value>, W <value>

**Vertical Extent:** <value>, <value>, <value>, <value>

**Temporal Coverage**

From: 2001-11-01 09:00:00 UTC To: 2011-02-01 09:00:00 UTC

**Variables**

Vocabulary (CF-1.0):  
time = time = time (seconds since 1970-01-01T00:00:00Z)  
altitude = altitude = altitude (m)  
lat = lat = latitude (degrees\_north)lon = lon = longitude (degrees\_east)  
BAssa = SST, Blended, 0.1 degrees, Global, EXPERIMENTAL = sea surface temperature (degree\_C)

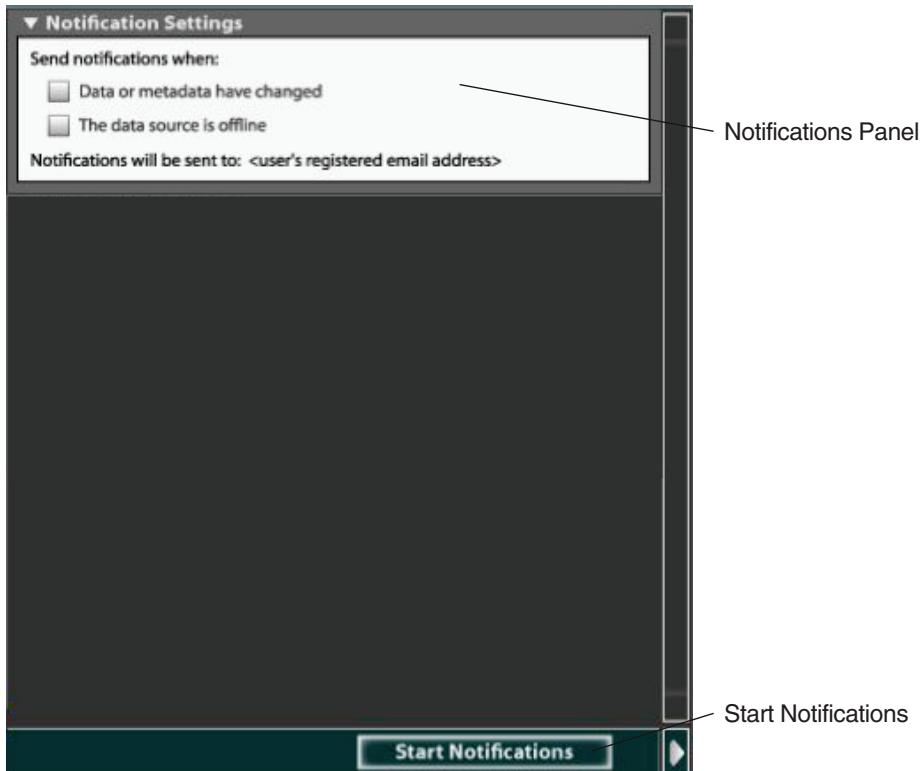
**Set Up Download** **Set Up Notifications**

**SELECTION ICONS**

 **Summary view**  
 **Metadata view**

**Set up Notifications**

2. Click on **Set Up Notifications** in the lower left corner of the right panel. The right panel view now shows a notification settings panel.

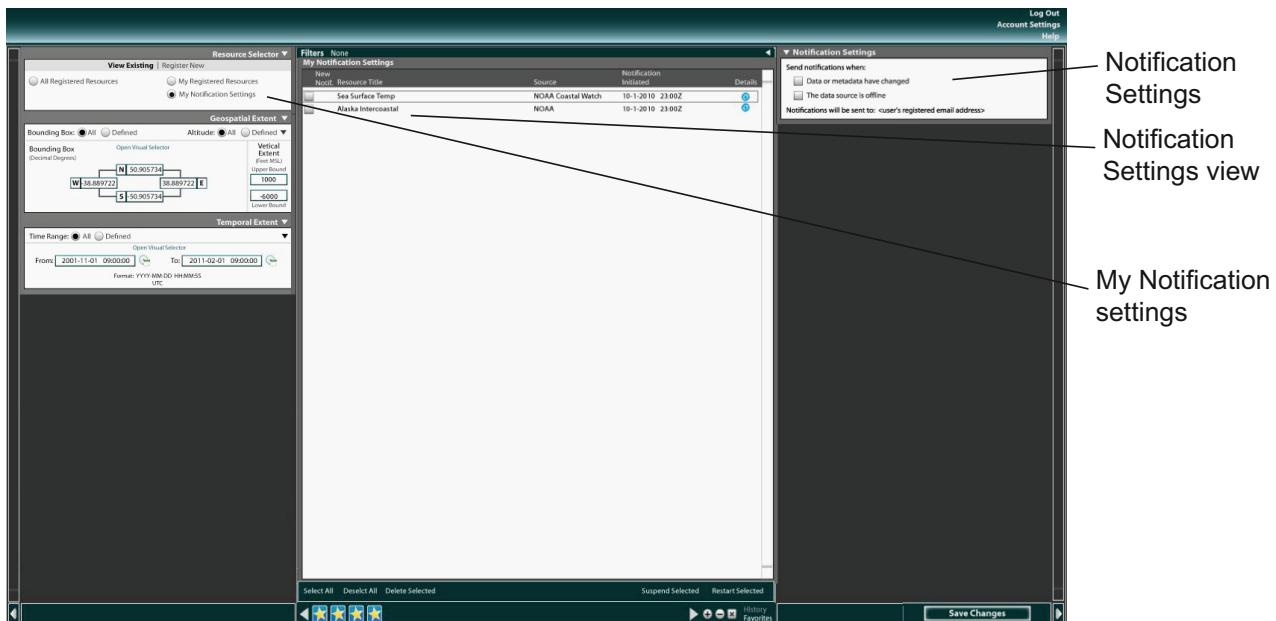


3. In Release 1 of ION, you can choose to be notified when data or metadata have changed, or when the data source or sources go offline.
4. Check the box or boxes for the notifications you would like to receive. To save your settings, click on the **Start Notifications** option at the bottom right of the right panel. The notification will be sent to your registered email address. (For registration, see "9. Register for an OOI Account" in this User Guide.)

## 6. CHANGE YOUR NOTIFICATION SETTINGS

You've set up notifications about a data resource or resources, and you want to view or modify them.

1. In the left column in the resource selector, choose **My Notification Settings**. The center panel now lists notifications you have previously set up.
2. To view or modify a notification, select it. The setting details for that resource are now shown in the right panel.



3. If you want to make changes to specific settings for that notification, make them in the right panel and click **Save Changes** in the lower right corner.

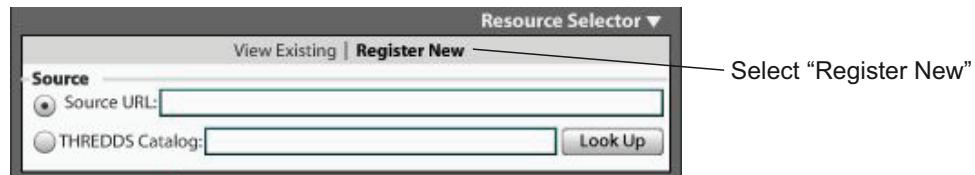
<The following will be in a dropdown on in the label area of the list above the check boxes.>

4. If you want to delete a notification setting, select it in the center panel and click **Delete Selected** at the bottom left of the center panel. Note that you can **Select All** and **Deselect All** here as well.
5. If you want to suspend or restart a notification, select it in the center panel and click **Suspend Selected** or **Restart Selected** at the bottom right of the center panel. Note that you can **Select All** on the bottom left of the panel as well.

## 7. REGISTER A DATA RESOURCE

You can register an existing netCDF-compliant data source to make it available in ION. You can also register an associated visualization and edit, review or enter metadata and other information about your resource.

1. In the resource selector in the left column, click on **Register New**. This brings up a panel with three options:



2. Put the source URL of the data resource you want to register in the **Source URL** box. When you click **Validate Data Resource** at the bottom of the left column, ION will check that your data resource is netCDF compliant.
3. Your validated netCDF-compliant data resource's metadata now appears in the center panel, and summary metadata associated with your resource appears in the right panel.

*If you want to register a data resource that is already in THREDDS, see 5 below.*

4. Enter, review or edit the information in the right panel, including data resource title, description, your contact information, data availability (private or public), polling options and provenance information. When finished, click on **Save Changes** in the lower right corner.

**Resource Registration Description**

Title:

Description:

**Resource Registration Contact Information**

Contact Name:

Contact Email:

Institution:

Website:

**Resource Availability Settings**

Resource is private and available to me only  
 Resource is publicly available

**Resource Polling Settings**

Poll the resource every:  DD:HH:MM  
 Do not poll the resource

**Original Source Description**

Title: Some Title  
Description:  
NOAA OceanWatch provides a blended sea surface temperature (SST) products derived from both microwave and infrared sensors carried on NOAA polar-orbiting satellites. These sensors can measure ocean surface temperature even in the presence of clouds, though the resolution is coarser when considering features typical of the coastal environment. These are complemented by the relatively fine measurements of infrared sensors. The blended data are provided at moderate resolution (approximately 1 degree) over the global Ocean. Measurements are gathered by Japan's Advanced Microwave Scanning Radiometer (AMSR-E) instrument, a passive radiance sensor carried aboard NASA's Aqua spacecraft; NOAA's Advanced Very High Resolution Radiometer, NOAA GOES-12 and NOAA GOES-13 satellite Infrared Imaging Spectrometer (IIRS); and ISAN (INTEGRATED SATELLITE PRODUCT), intended strictly for scientific evaluation by professional marine scientists

**Original Source Contact Information**

Contact Name: Some Name  
Contact Email: some.name@noaa.gov  
Contact Institution: Some Institution  
Contact Website: www.someinstitution.org

**Geospatial Coverage**

Bounding Box  
  
Vertical Extent  
<value> <value>  
(Feet MSL)

(Decimal Degrees)

**Temporal Coverage**

From: 2001-11-01 09:00:00 UTC To: 2011-02-01 09:00:00 UTC

**Variables**

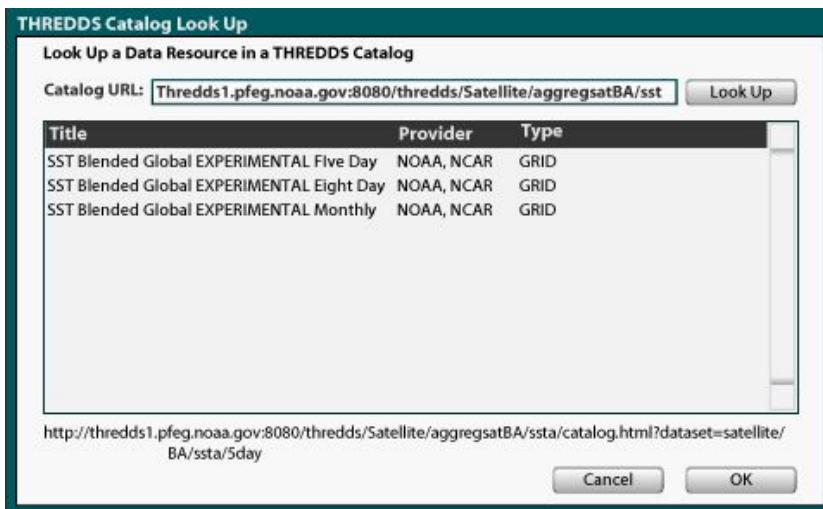
Vocabulary [CF-1.0]:  
time = time (seconds since 1970-01-01T00:00:00Z)  
altitude = altitude (m)  
lat = lat = latitude (degrees\_north) lon = longitude (degrees\_east)  
BAssta = SST, Blended, 0.1 degrees, Global, EXPERIMENTAL = sea\_surface\_temperature (degree\_C)

**References**

<http://fas.pfeg.noaa.gov/oceanWatch/oceanwatch.php>

**Buttons:** Save Changes | Back

5. If your resource is already in the THREDDS catalogue, enter the THREDDS locator URL and click **Look Up**. Your selection brings up a THREDDS catalogue look up dialogue box.

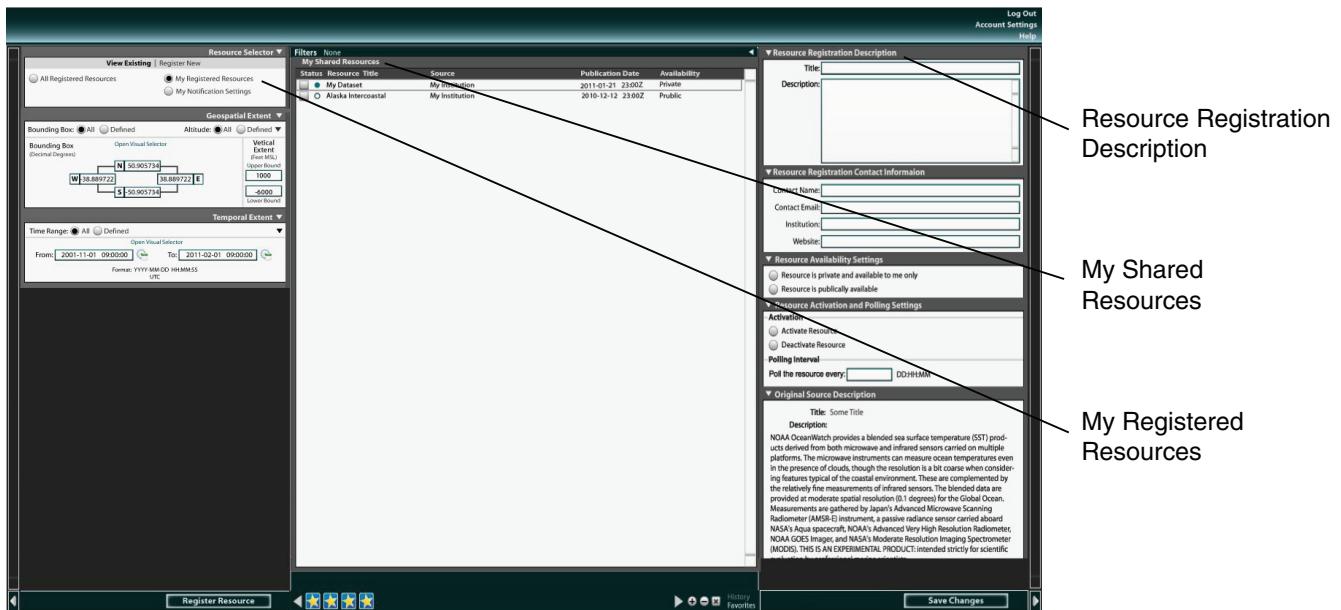


6. Once you've located your THREDDS data resource, click OK and return to 3 above.

## 8. MONITOR OR MODIFY YOUR REGISTERED DATA RESOURCES

You've registered a data resource or resources, and you want to view or modify them.

1. In the left panel in the resource selector, choose  My Registered Resources. The center panel now lists resources you have previously registered. Note that the Geospatial and Temporal Extent settings apply to all the resource types you can select in the Resource Selector, so set them to All to be sure that all the resources that you registered will be displayed in the center column.
2. To view or modify a data resource, select it. The information associated with that resource is now shown in the right panel.



3. If you want to make changes to specific settings for a data resource, make them in the right panel and click **Save Changes** in the lower right corner.

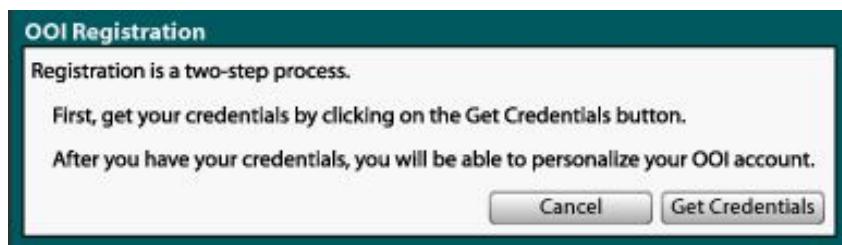
<The following will be in a dropdown on in the label area of the list above the check boxes.>

4. If you want to remove a registered resource from ION, select it in the center panel and click **Delete Selected** at the bottom left of the center panel. Note that you can **Select All** and **Deselect All** here as well.
5. If you want to suspend or restart registration of a resource, select it in the center panel and click **Suspend Selected** or **Restart Selected** at the bottom right of the center panel. Note that you can **Select All** on the bottom left of the panel as well.

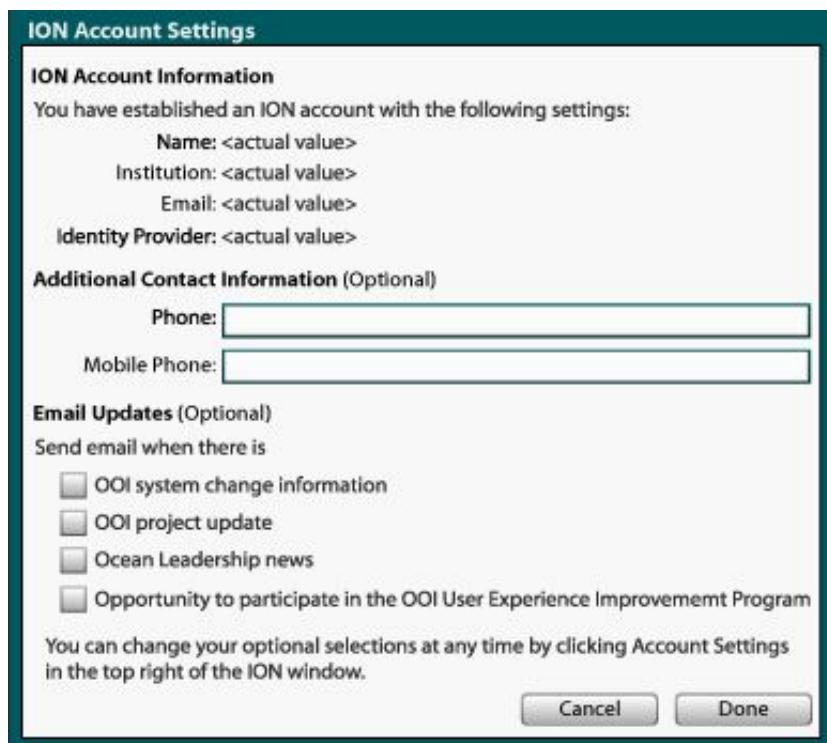
## 9. REGISTER FOR AN ION ACCOUNT

You'd like to register for an ION account.

1. In the upper right corner of any ION screen, click on **Register**. The ION Registration box pops up in the center panel.



2. Note that by clicking on **Get Credentials**, you will be leaving the ION workspace for an outside credentialing provider. Follow the instructions there, and return to ION.
3. Welcome back! An ION Account Settings panel is now available as a pop-up window in the center panel of the ION screen. Enter your information and click **Done**.



4. When you return to ION after setting up an account and want to modify your account, click on **Account Settings** in the upper right corner of any ION screen.

## **10. PROVIDE FEEDBACK TO THE ION TEAM**

You've done a few things in ION, now let us know how we're doing!

<We can have any of the following here:

- An email
- If on the web, a feedback form
- If on the web, a survey
- Any combination of the above.>

## ION QUICK GUIDE

How to do things in ION.

<b>Browse ION data resources</b>	In the left panel, select “view existing” in the Resource Selector. Set options for all selectors in the left panel to “all.” All ION resources appear in list view in the center panel. Use the scroll bar on the right of the center panel, your mouse or your keyboard up/down keys to browse the list.
<b>Contact ION help desk</b>	Email <a href="mailto:xyz@oceanobservatories.org">xyz@oceanobservatories.org</a> , or call (858) 822-####. Email and phone help are available [?]
<b>Data, browse</b>	See “Browse ION data resources” above.
<b>Data, download</b>	Select a data resource in the center panel by either clicking on it once or by clicking on the detail icon to the right of the resource. In the lower right corner of the right panel, click on “set up download.” The data downloads to the folder on your local system that you have specified in your browser’s preferences settings.
<b>Data, find by location</b>	To search for data within a specific geographic location, enter coordinates into the N, W, E, S boxes in the “geospatial extent” section of the left panel. To narrow by vertical extent, enter the upper and lower bounds under “vertical extent.” The results return in the center panel.
<b>Data, find by time</b>	To search for data within a specific time frame, enter the time range of interest in the “temporal extent” box in the left panel. The results return in the center panel.
<b>Data, metadata view</b>	Double clicking a resource in the center panel returns a summary view of that resource in the center panel. View the metadata view of this resource by clicking on the view metadata icon at the bottom of this panel. The metadata view icon is the right of the two icons there.
<b>Data, notifications</b>	Select a data resource in the center panel by either clicking on it once or by clicking on the detail icon to the right of the resource. In the lower right corner of the right panel, click on “set up notifications.” Select desired notification settings that

	appear in the right panel and click “start notifications.” <i>Login required.</i>
<b>Data, polling options</b>	Polling (the frequency that ION polls a data resource for changes) can be set by the registrant when registering a new resource or when modifying the settings of a resource previously registered. For setting polling when registering a new resource, see “Data, register a data resource” below. For setting polling for an already registered resource, choose “view existing” in the left panel, select the resource in the center panel, and then set polling options in the right panel.
<b>Data, register a data resource</b>	In the “resource selector” in the right panel, select “register new.” Choose “source URL” and enter the URL of the source data and click “validate dataset.” ION will check that the data resource is netCDF compliant. The validated netCDF-compliant data resource’s metadata now appears in the center panel, and summary metadata associated with the resource appears in the right panel. Fill out the information in the right panel, and click “save changes” in the lower right corner. <i>Login required.</i>
<b>Data, register a data resource using THREDDS catalogue</b>	In the “resource selector” in the right panel, select “register new.” Choose “THREDDS catalogue” and enter the THREDDS catalogue number of the relevant data source and click “look up.” Results return in center panel; select the relevant data source and click “ok.” The relevant data resource now appears in the center panel, and summary metadata associated with the resource appears in the right panel. Fill out the information in the right panel, and click “save changes” in the lower right corner. <i>Login required.</i>
<b>Data, summary view</b>	Double clicking a resource in the center panel returns a summary view of that resource in the center panel. If the center panel view is the metadata view (see “Data, metadata view” above), return to summary view by clicking the summary view icon at the bottom of the center panel. The summary view icon is the left of the two icons there.
<b>Data, view all resources in ION</b>	See “Browse ION data” above.
<b>Geospatial selector</b>	Use this selector tool in the right panel to limit the data resources shown in the center panel to a specific geographic

	area or vertical extent, or a combination of the two.
<b>ION account, modify existing</b>	After creating an ION account, access account settings in the upper right corner of the workspace.
<b>ION account, register</b>	Click on “create account” in upper right corner of workspace to obtain an ION account. An externally operated account management system manages ION accounts, ensuring security of personal information.
<b>Login</b>	Login and logout of ION in the upper right corner of the workspace.
<b>Metadata, enter</b>	When registering a new data resource or returning to edit a data resource previously entered, metadata fields are available in the right panel when that resource is selected. These include publisher information, creator information, polling options, geographic boundaries, temporal extent and title and description. <i>Login required.</i>
<b>Metadata, view</b>	See “Data, metadata view” above.
<b>Notifications, modify</b>	Choose “view existing” and “my notification settings” in the Resource Selector at the top of the left panel. Data resources previously set up with notifications appear in the center panel. Click on a particular resource to modify notification settings in the right panel. <i>Login required.</i>
<b>Notifications, monitor</b>	See “Notifications, modify” above.
<b>Notifications, set up</b>	With the data resource of interest selected in the center panel, click on the “set up notifications” button in the lower right of the right panel. Notification options appear in the right panel; select desired options and click “save changes” in lower right. <i>Login required.</i>
<b>Register new data</b>	See “Data, register a data resource” above.
<b>Register, data resource</b>	See “Data, register a data resource” above.
<b>Register, ION account</b>	See “ION account, register” above.
<b>Set up download</b>	See “Data, download” above.

<b>Summary, view of data</b>	See “Data, summary view” above.
<b>Temporal extent</b>	Use this selector tool in the right panel to limit the data resources shown in the center panel to a specific time series.
<b>THREDDS catalogue, using to register new data</b>	See “Data, register a data resource using THREDDS catalogue” above.
<b>Troubleshoot ION</b>	Access help topics in the upper right corner of the ION workspace, or contact ION help. See “Contact ION help desk” above.
<b>Vertical extent</b>	Use this selector tool in the right panel to limit the data resources shown in the center panel to a specific, vertical range.