

Using the GLOBE Visualization System



THE GLOBE PROGRAM

A Worldwide Science and Education Program

SEARCH SIGN IN ENGLISH

- About
- Join
- Get Trained
- Do GLOBE
- GLOBE Data
- Community
- News & Events
- Support



Registration for the 2018 GLE/22nd Annual Meeting is Now Open!

The GLOBE Implementation Office is excited to announce that registration for the 2018 GLOBE Learning Expedition (GLE) and the 22nd Annual Meeting in Ireland is now open! Takes place 1 - 6 July 2018!

[More >](#)

See GLOBE in your Country or Region:

United States of America

Go

RECENT MEASUREMENTS

[Haines School, United States, Clouds, Measured on: 2018-03-01](#) [Haines School, United States, Multi](#)

Enter Data

Visualize Data

Recent Measurements: Last 7 Days

Hold the mouse over the **GLOBE Data** menu, then click on **Visualize Data**. Or, use the quick link shown below.

The screenshot shows the homepage of THE GLOBE PROGRAM. At the top, the logo and name 'THE GLOBE PROGRAM' are displayed, along with the tagline 'A Worldwide Science and Education Program'. Navigation links include 'About', 'Join', 'Get Trained', 'Do GLOBE', 'GLOBE Data', 'Community', 'News & Events', and 'Support'. The 'GLOBE Data' menu is open, showing options for 'Data Entry', 'Visualize Data', 'Retrieve Data', and 'Science Honor Roll'. A red arrow points from the text above to the 'Visualize Data' option in the menu. Below the navigation is a large banner image of students in a field with a rainbow in the background. A white box on the banner contains text about the 2018 GLE/22nd Annual Meeting registration. Below the banner is a search bar for 'See GLOBE in your Country or Region:' with a dropdown menu set to 'United States of America' and a 'Go' button. At the bottom, there is a 'RECENT MEASUREMENTS' section with a breadcrumb trail: '< / Junior High School, United States, Clouds, Measured on: 2018-03-01 | Haines School, United State > ||'. To the right of the breadcrumb are two buttons: 'Enter Data' and 'Visualize Data'. A red arrow points from the text above to the 'Visualize Data' button. At the bottom right, there is a link for 'Recent Measurements: Last 7 Days'.

THE GLOBE PROGRAM
A Worldwide Science and Education Program

Search SIGN IN ENGLISH

About Join Get Trained Do GLOBE GLOBE Data Community News & Events Support

Data Entry
Visualize Data
Retrieve Data
Science Honor Roll

Registration for the 2018 GLE/22nd Annual Meeting is Now Open!
The GLOBE Implementation Office is excited to announce that registration for the 2018 GLOBE Learning Expedition (GLE) and the 22nd Annual Meeting in Ireland is now open! Takes place 1 - 6 July 2018!
[More >](#)

See GLOBE in your Country or Region: United States of America Go

RECENT MEASUREMENTS
< / Junior High School, United States, Clouds, Measured on: 2018-03-01 | Haines School, United State > ||
Enter Data
Visualize Data

Recent Measurements: Last 7 Days

Click on [Enter the Visualization System](#) link. This page also contains a link to this tutorial.



Home > GLOBE Data > Visualize Data

Share

GLOBE Data

[Data Entry](#)

[Visualize Data](#)

[Retrieve Data](#)

[Science Honor Roll](#)

Visualization System

GLOBE provides the ability to view and interact with data measured across the world. Select the [visualization tool](#) to map, graph, filter and export data that have been measured across GLOBE protocols since 1995. Currently the GLOBE Data Visualization Tool supports a subset of protocols. Additional Features and capabilities are continually being added.

[Enter the Visualization System](#)

Tutorials on Using the Visualization System

[PDF version](#)

[PowerPoint version](#)

Long-term Data

Long-term air temperature and precipitation data from the Global Historical Climatology Network (GHCN) version 3 dataset (air temperature) and version 2 dataset (precipitation) managed by the National Climatic Data Center (NCDC). More information about this dataset is available through NCDC at: <http://www.ncdc.noaa.gov/ghcnm>

This data is provided as a [Google Earth KML](#) file, which displays reporting stations of long-term air temperature and precipitation data from the National Climatic Data Center (NCDC).

Download the KML data and use [Google Earth](#) to locate a long-term data record.

From the popup balloons for each city within [Google Earth](#) you can download and view the long-term air temperature and precipitation data record in CSV (comma separated value) format for use in a spreadsheet program. The data are available in monthly or yearly intervals, so if you choose to calculate the yearly averages, you will want to download monthly data to start. Regional averages can be performed on either the monthly or yearly data.

For guidance refer to the [Google Earth Instruction Guide](#) for more detailed instructions on using [Google Earth](#) and the [Viewing Long-term Air Temperature and Precipitation Data Guide](#) for more information about the data format.

This is the GLOBE Visualization Landing Page. The help tab is the default tab when you first come to Vis. There are getting started steps, links to quick demonstrations and this complete tutorial. Check the 'Don't show again' to default to the layer screen for future visits.

GLOBE Visualization System

Measurements | Data Counts

Select Language

Welcome Options

2019-10-22

Welcome

Getting Started:

Three steps to visualizing your data:

1. Select the protocol data you would like to visualize.
2. Select the date
3. Click a measurement to retrieve the data

[See a 20 second demonstration](#)

[See a quick demonstration of additional features](#)

[Download full tutorial](#)

[GLOBE Data User Guide](#)

Don't Show Again

Ocean

0 Sites on Map: 0

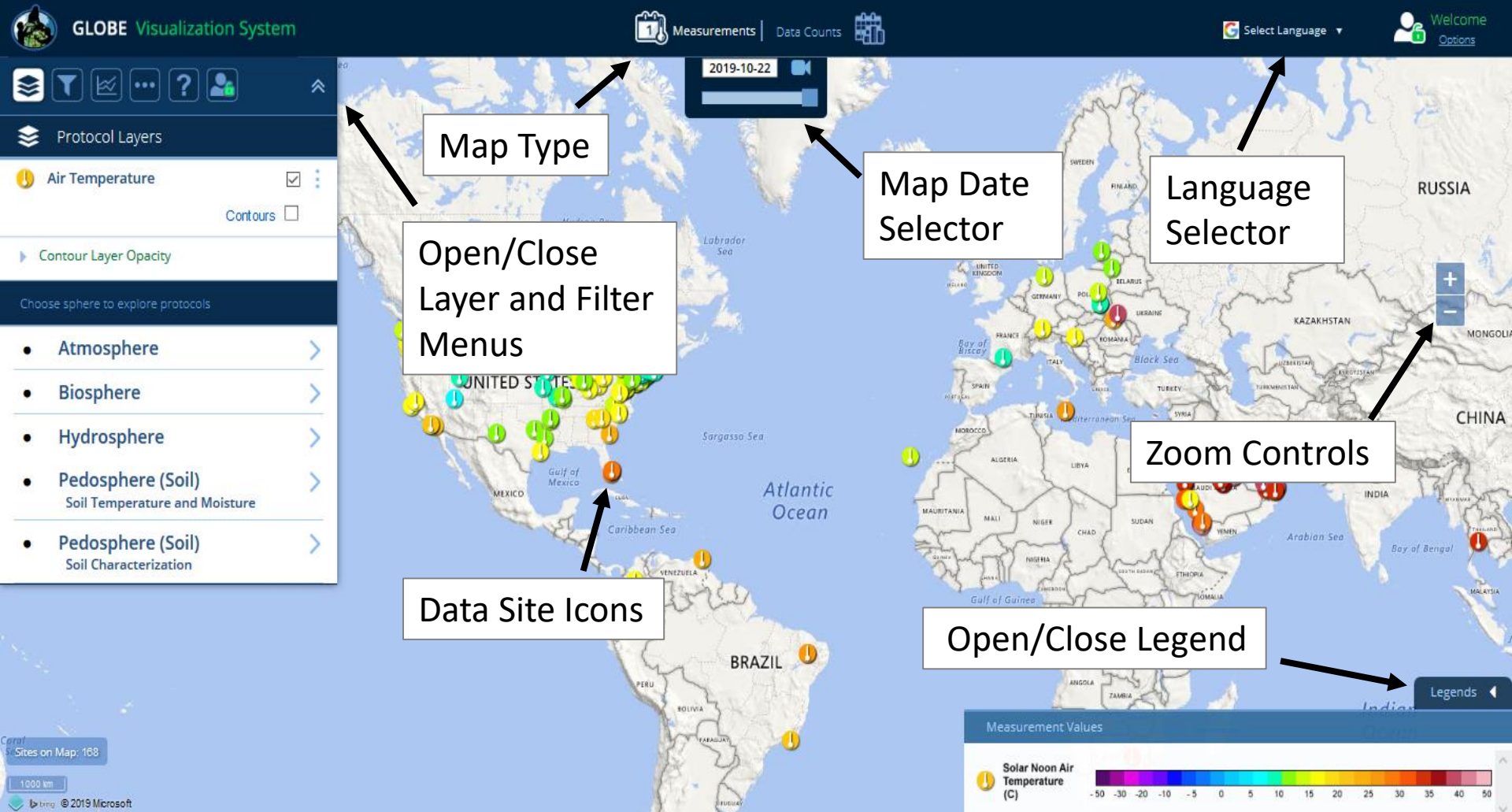
1000 km

© 2019 Microsoft

Legends

Overview of the Visualization Window Features (Desktop view)

Sign-in / Sign-out



Map Type

Open/Close Layer and Filter Menu

Data Site Icons

Map Date Selector

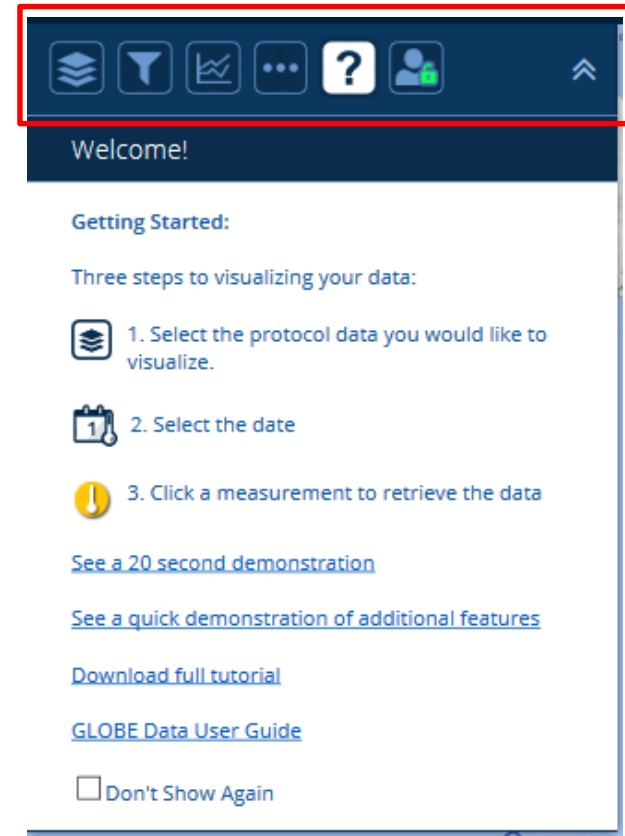
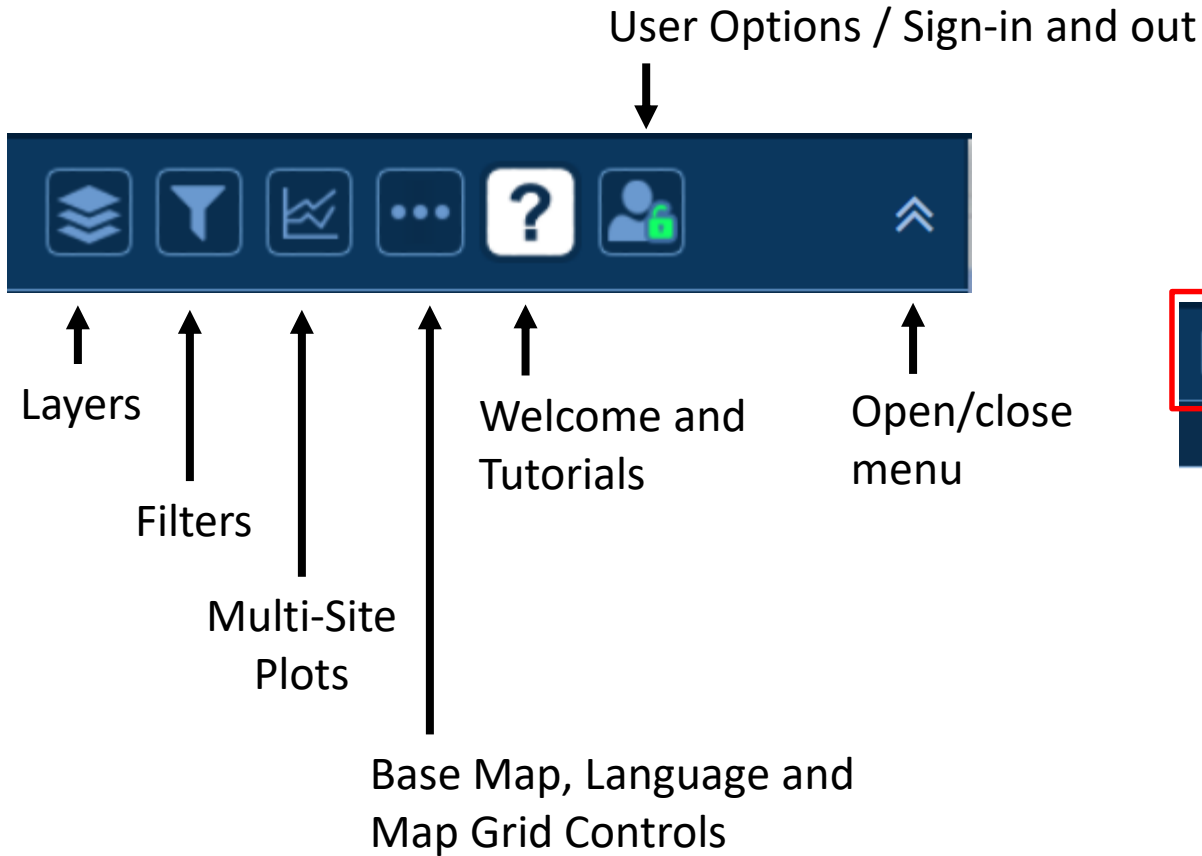
Language Selector

Zoom Controls

Open/Close Legend

Legends

Layer and Filter Menu Icons



The Basics of the Visualization System

Three Steps to Visualize your Data:

1. Select the type of data you want to see (Add Layers)
2. Select the Date you want to see the data for
3. Click on a data point on the map to receive table and graph information

First, make sure you're on the 'Measurements' map (the measurements icon and text should be white). If not, select it.

GLOBE Visualization System
v2 BETA Release

Measurements | Data Counts

2018-04-19

Protocol Layers

Choose a Sphere below to see protocols. From there, open each protocol to see the available data layers that can be added to the map.

Choose sphere to explore protocols

- **Atmosphere** >
- **Biosphere** >
- **Hydrosphere** >
- **Pedosphere (Soil)** >
Soil Temperature and Moisture
- **Pedosphere (Soil)** >
Soil Characterization

Map labels: Beaufort Sea, Gulf of Alaska, CANADA, UNITED STATES, MEXICO, Gulf of Mexico, Caribbean Sea, Philippine Sea, Labrador Sea, Sargasso Sea, Hudson Bay.

Next, click the Protocol Layers icon and then a sphere category. For this tutorial, select Atmosphere.

GLOBE Visualization System
v2 BETA Release

Measurements | Data Counts

2018-04-19

Protocol Layers

Choose a Sphere below to see protocols. From there, open each protocol to see the available data layers that can be added to the map.

Choose sphere to explore protocols

- **Atmosphere**
- Biosphere
- Hydrosphere
- Pedosphere (Soil)
Soil Temperature and Moisture
- Pedosphere (Soil)
Soil Characterization

Beaufort Sea, Hudson Bay, Gulf of Mexico, CANADA, UNITED STATES, MEXICO, Philippines Sea, Caribbean Sea, Sargasso Sea, Labrador Sea, Bering Sea, Gulf of Alaska

Select the protocol layer(s) to add to the map (you can add multiple layers). For the tutorial, select Max Daily Temp and 'Submit'.

The screenshot displays the GLOBE Visualization System v2 BETA Release interface. The top navigation bar includes icons for 'Measurements' (with a '1' badge) and 'Data Counts'. A date selector is set to '2018-04-19'. On the left, a 'Protocol Layers' panel is open, showing a list of protocols. The 'Air Temperature Dailies' section is expanded, and 'Maximum Daily Temperature' is selected with a green checkmark. A green 'SUBMIT' button is highlighted with a red box. The main map area shows a topographic view of North America, with labels for 'CANADA', 'UNITED STATES', 'MEXICO', and 'VENEZUELA'. Various seas and oceans are also labeled, including the Beaufort Sea, Gulf of Alaska, Hudson Bay, Labrador Sea, Sargasso Sea, Gulf of Mexico, Caribbean Sea, and Pacific Ocean.

GLOBE Visualization System
v2 BETA Release

Measurements | Data Counts

2018-04-19

Protocol Layers

Choose a Sphere below to see protocols. From there, open each protocol to see the available data layers that can be added to the map.

Check to select Protocols **SUBMIT**

- ▼ Air Temperature Dailies
 - Solar Noon Temperature Dailies
 - Maximum Daily Temperature
 - Minimum Daily Temperature
- ▶ Air Temperature Monthlies
- ▶ Air Temperature Noons
- ▶ Air Temperature
- ▶ Aerosols
- ▶ Barometric Pressure Noons
- ▶ Barometric Pressures
- ▶ Clouds Noons

CANADA

UNITED STATES

MEXICO

VENEZUELA

Beaufort Sea

Hudson Bay

Labrador Sea

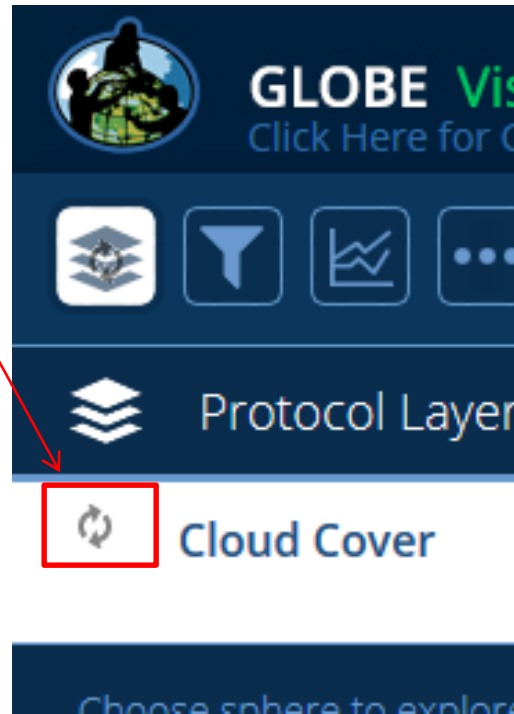
Gulf of Alaska

Gulf of Mexico

Caribbean Sea

Pacific Ocean

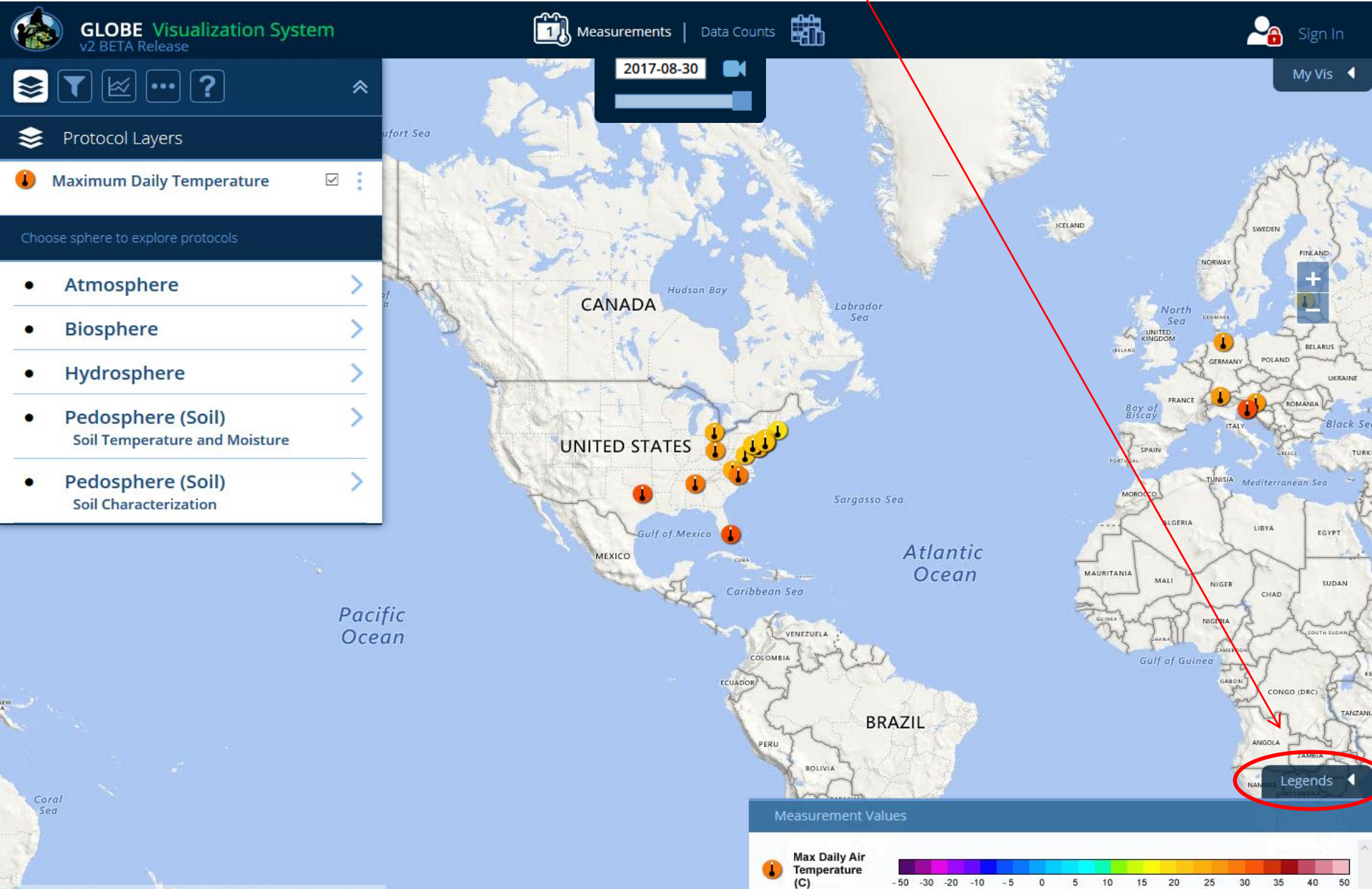
If there's a lot of data, you may get an in-progress icon. Please wait until the system finishes before clicking or performing additional operations.



The Max Daily Temperature layer is added to the map. The map shows sites that have maximum air temperature measurements for the current day.

The screenshot shows the GLOBE Visualization System v2 BETA Release interface. At the top, there are navigation icons for 'Measurements' and 'Data Counts', and a date selector set to '2017-08-30'. The left sidebar contains a 'Protocol Layers' menu where 'Maximum Daily Temperature' is selected and circled in red. Below this menu, there are options to explore protocols in the Atmosphere, Biosphere, Hydrosphere, and Pedosphere (Soil) spheres. The main map area shows a world map with several orange and yellow pins indicating measurement sites, primarily concentrated in the United States and parts of Europe. The bottom of the screen shows the Bing logo and copyright information for NAVTEQ and Microsoft Corporation.

Open the legend to see the measurement values of the site icons. The colors in the scale correspond to the possible data values for that data type.



Click on the date window to change the map date. For the tutorial, change the date to April 4, 2013.

GLOBE Visualization System
v2 BETA Release

Measurements | Data Counts

Sign In

My Vis

Protocol Layers

- Maximum Daily Temperature

Choose sphere to explore protocols

- Atmosphere
- Biosphere
- Hydrosphere
- Pedosphere (Soil)
Soil Temperature and Moisture
- Pedosphere (Soil)
Soil Characterization

Calendar: Apr 2013

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Icons indicate the actual measurement date

Geographic Labels: Beaufort Sea, Gulf of Alaska, Gulf of Mexico, Caribbean Sea, Atlantic Ocean, Pacific Ocean, North Sea, Bay of Biscay, Mediterranean Sea, Gulf of Guinea, Coral Sea.

Country Labels: UNITED STATES, MEXICO, BRAZIL, CANADA, ICELAND, SWEDEN, NORWAY, DENMARK, UNITED KINGDOM, IRELAND, FRANCE, ROMANIA, UKRAINE, PORTUGAL, MOROCCO, ALGERIA, LIBYA, EGYPT, MAURITANIA, MALI, NIGER, CHAD, SUDAN, GUINEA, NIGERIA, CAMEROON, SOUTH SUDAN, GABON, CONGO (DRC), ANGOLA, ZAMBIA, NAMIBIA, BOTSWANA, ZIMBABWE, MOZAMBIQUE.

© 2010 NAV/TEQ © 2010 Intermap © 2017 Microsoft Corporation

A small protocol icon will appear on the calendar indicating which day has measurements. In this example, a max daily temperature measurement occurred everyday in April.

The screenshot displays the GLOBE Visualization System v2 BETA Release interface. The top navigation bar includes a calendar icon, 'Measurements', 'Data Counts', and a 'Sign In' button. The left sidebar features a 'Protocol Layers' section with a checked box for 'Maximum Daily Temperature' and a list of protocols: Atmosphere, Biosphere, Hydrosphere, Pedosphere (Soil) - Soil Temperature and Moisture, and Pedosphere (Soil) - Soil Characterization. The main area shows a world map with various colored pins. A calendar for April 2013 is overlaid, with a red circle highlighting the 2nd of the month. A tooltip above the calendar shows the date '2013-04-03'. A legend at the bottom right is partially visible.

2013-04-03

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Icons indicate the actual measurement date

Legend

Zoom in to the U.S. and then click on the measurement icon in the state of Oregon

The screenshot displays the GLOBE Visualization System v2 BETA Release interface. The top navigation bar includes 'Measurements' and 'Data Counts' tabs, a date filter set to '2013-04-03', and a 'Sign In' button. On the left, a sidebar menu shows 'Protocol Layers' with 'Maximum Daily Temperature' selected. Below this, a 'Choose sphere to explore protocols' section lists: Atmosphere, Biosphere, Hydrosphere, Pedosphere (Soil) - Soil Temperature and Moisture, and Pedosphere (Soil) - Soil Characterization. The main map area shows North America with various measurement icons (yellow and blue) across the United States and Canada. The Oregon icon is highlighted with a red circle. The map also shows parts of Mexico, the Caribbean Sea, and the Atlantic Ocean. The bottom left corner contains the Bing logo and copyright information: '© 2010 NAVTEQ © 2017 Microsoft Corporation'.

The site information window will open showing the measurement data at this site. Note: The layer/filter menu closes but you can open it by clicking on the menu arrow icon at the top left.

GLOBE Visualization System
v2 BETA Release

Measurements | Data Counts

2013-04-03

School: Lourdes Public Charter School
Site: School Site:ATM-02

Measurements | Data Counts | School Info | Site Info | Photos

Atmosphere

Air Temperature Dailies

- Solar Noon Temperature Dailies
- Maximum Daily Temperature
- Minimum Daily Temperature

Data Date Range: 2009-12-31 to 2017-08-30

Measured At: 2013-04-03 20:14:00
Solar Measured At: 2013-04-03 12:03:00
Solar Noon At: 2013-04-03 20:13:00
Daily Average Temperature: 14.1 °C
Minimum Daily Temperature: 5.4 °C
Maximum Daily Temperature: 18.7 °C
Comments: air temp subday rollup
Elevation: 188.30 m

30 Days | 1 Year | Custom

UNITED STATES

© 2010 NAVTEQ © 2017 Microsoft Corporation

Legends

Measurements Site Info Window:

Click this icon to view data tables for all of your data

Click this icon to go to the school page

Click this icon to view the plot data in a table

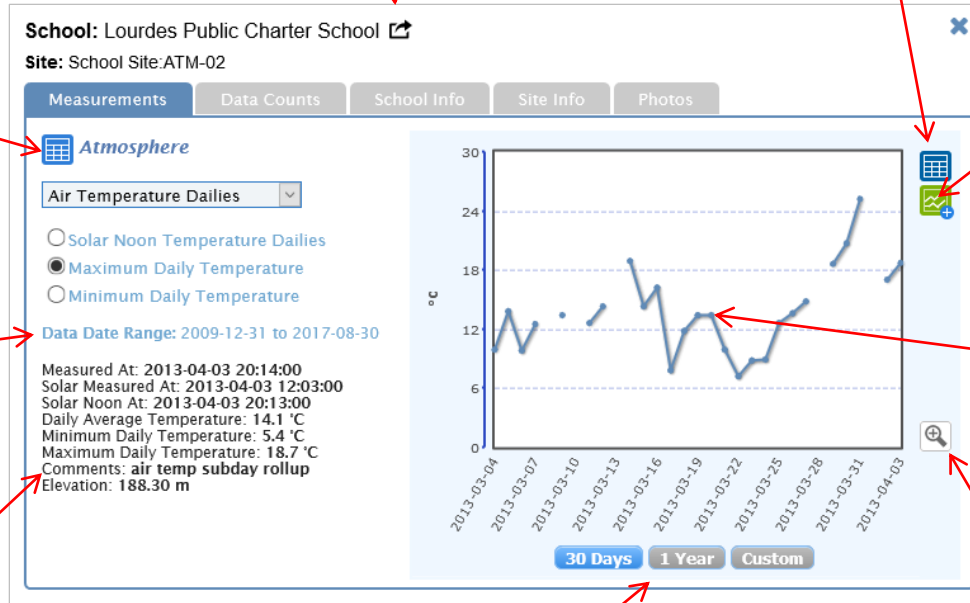
Data at this site can be found in this date range

Measurement info for the selected data type

Click this icon to add the site to a multi-site time series plot

Roll-over a plot point to see measurement value and date

Click the zoom icon for a larger plot view



Change plot time range

You can look at any measurement data at this site by selecting a data type in the drop-down menu.

The screenshot displays the GLOBE Visualization System interface. At the top, the header includes the GLOBE logo, the text "GLOBE Visualization System v2 BETA Release", and navigation links for "Measurements" and "Data Counts". A date selector shows "2013-04-03". The main content area features a map of the United States with a pop-up window for "School: Lourdes Public Charter School" and "Site: School Site:ATM-02". The pop-up window has tabs for "Measurements", "Data Counts", "School Info", "Site Info", and "Photos". Under the "Measurements" tab, a dropdown menu is open, listing various data types under the "Atmosphere" category. A red box highlights this menu, and a red arrow points to the "Air Temperature Dailies" option. To the right of the menu is a line graph showing temperature data from 2013-03-04 to 2013-04-03. The graph's y-axis is labeled "°C" and ranges from 0 to 30. The x-axis shows dates at weekly intervals. Below the graph are buttons for "30 Days", "1 Year", and "Custom".

Measurements | Data Counts | School Info | Site Info | Photos

Atmosphere

- Air Temperature Dailies
- Air Temperature Monthlys
- Air Temperature Noons
- Air Temperature
- Barometric Pressure Noons
- Barometric Pressures
- Precipitation
- Precipitation Monthlys
- Relative Humidities Noons
- Relative Humidities Monthlys
- Relative Humidities

Comments: air temp Sunday round
Elevation: 186.96 m

30 Days | 1 Year | Custom

Click on the table icon next to the Atmosphere title. You can either view data tables for the selected data type (Air Temperature Dailies) or all of the Atmosphere data. Select Air Temperature Dailies.

GLOBE Visualization System
v2 BETA Release

Measurements | Data Counts

2013-04-03

School: Lourdes Public Charter School

Site: School Site: ATM-02

Measurements | Data Counts | School Info | Site Info | Photos

View Data Table:

- Air Temperature Dailies Data
- All Atmosphere Data
- Soil Temperature Dailies
- Maximum Daily Temperature
- Minimum Daily Temperature

Data Date Range: 2009-12-31 to 2017-08-30

Measured At: 2013-04-03 20:14:00
Solar Measured At: 2013-04-03 12:03:00
Solar Noon At: 2013-04-03 20:13:00
Daily Average Temperature: 14.1 °C
Minimum Daily Temperature: 5.4 °C
Maximum Daily Temperature: 18.7 °C
Comments: air temp subday rollup
Elevation: 188.30 m

30 Days | 1 Year | Custom

UNITED STATES

Note that this table gives values for local solar noon and minimum and maximum daily temperature. Clicking the button at the bottom will export the data in a comma delimited format. Close this window.

GLOBE Visualization System
[Click Here for Classic Version](#)

Measurements | Data Counts

Sign In

Lourdes Public Charter School : School Site:ATM-02 Data Table

School Name	Site Name	Userid	Latitude	Longitude	Elevation	Measured At	Solar Measured At	Solar Noon At	Current Temp	Min Temp	Maximum Temp
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-29 20:15:36	2017-04-29 12:08:00	2017-04-29 20:08:00	15.6	1.7	16.8	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-28 19:59:56	2017-04-28 11:52:00	2017-04-28 20:08:00	12.6	2.3	11.9	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-27 20:15:33	2017-04-27 12:07:00	2017-04-27 20:08:00	8	5.7	11.6	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-26 20:15:56	2017-04-26 12:07:00	2017-04-26 20:08:00	9.6	7	13.7	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-25 20:15:51	2017-04-25 12:07:00	2017-04-25 20:08:00	10.8	6.3	12.7	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-24 20:16:00	2017-04-24 12:07:00	2017-04-24 20:08:00	9.3	5.7	11.5	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-23 20:15:57	2017-04-23 12:07:00	2017-04-23 20:09:00	10.3	7.6	15.6	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-22 20:15:30	2017-04-22 12:06:00	2017-04-22 20:09:00	13.1	8.7	20	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-21 20:15:56	2017-04-21 12:06:00	2017-04-21 20:09:00	16	2.5	16.3	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-20 20:15:54	2017-04-20 12:06:00	2017-04-20 20:09:00	12.5	6.3	15.6	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-19 20:15:49	2017-04-19 12:06:00	2017-04-19 20:09:00	15.1	6.2	16.4	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-18 20:15:54	2017-04-18 12:05:00	2017-04-18 20:10:00	14	9	15.6	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-17 20:15:53	2017-04-17 12:05:00	2017-04-17 20:10:00	10.9	6.8	16.2	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-16 20:15:53	2017-04-16 12:05:00	2017-04-16 20:10:00	14.6	3.8	15.6	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-15 20:15:28	2017-04-15 12:04:00	2017-04-15 20:10:00	13.3	0.6	14.4	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-14 20:16:13	2017-04-14 12:05:00	2017-04-14 20:10:00	9	4.6	10.1	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-13 20:15:50	2017-04-13 12:04:00	2017-04-13 20:11:00	9.8	4.6	17.2	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-12 20:15:30	2017-04-12 12:03:00	2017-04-12 20:11:00	15.5	8.2	15.7	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-11 20:16:06	2017-04-11 12:04:00	2017-04-11 20:11:00	10.3	2.1	13.4	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-10 20:16:08	2017-04-10 12:03:00	2017-04-10 20:12:00	11.1	4.8	14.8	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-04 20:15:46	2017-04-04 12:01:00	2017-04-04 20:13:00	15.5	3.8	15.4	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-03 20:15:32	2017-04-03 12:00:00	2017-04-03 20:13:00	11.4	-0.6	14.6	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-02 20:15:32	2017-04-02 12:00:00	2017-04-02 20:14:00	13.4	3.2	15	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-04-01 20:16:00	2017-04-01 12:00:00	2017-04-01 20:14:00	9.3	4.6	15.2	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-31 20:15:35	2017-03-31 11:59:00	2017-03-31 20:14:00	13	0.4	13	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-30 20:15:53	2017-03-30 11:59:00	2017-03-30 20:15:00	8.7	5.3	11.8	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-29 20:15:57	2017-03-29 11:59:00	2017-03-29 20:15:00	10.2	7.9	15.4	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-28 20:15:55	2017-03-28 11:58:00	2017-03-28 20:15:00	14	6.2	14	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-27 20:15:59	2017-03-27 11:58:00	2017-03-27 20:16:00	9.7	5.4	9.7	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-26 20:15:52	2017-03-26 11:58:00	2017-03-26 20:16:00	8.8	4.8	11.7	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-25 20:15:49	2017-03-25 11:57:00	2017-03-25 20:16:00	10	5.8	11.5	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-24 20:15:56	2017-03-24 11:57:00	2017-03-24 20:16:00	11.1	6.7	16	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-23 20:15:38	2017-03-23 11:56:00	2017-03-23 20:17:00	14.2	2.9	15.4	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-22 20:15:34	2017-03-22 11:56:00	2017-03-22 20:17:00	9.2	7.6	18.6	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-21 20:15:23	2017-03-21 11:55:00	2017-03-21 20:17:00	17.1	5.9	17.1	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-20 20:15:49	2017-03-20 11:56:00	2017-03-20 20:18:00	8.9	4.2	13.6	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-19 20:15:50	2017-03-19 11:55:00	2017-03-19 20:18:00	11.2	-0.9	11.2	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-18 20:15:47	2017-03-18 11:55:00	2017-03-18 20:18:00	7.1	6.5	16.1	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-17 20:15:23	2017-03-17 11:54:00	2017-03-17 20:19:00	10.7	1.9	12.5	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-16 20:15:36	2017-03-16 11:54:00	2017-03-16 20:19:00	9.7	4.9	12.7	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-15 20:15:42	2017-03-15 11:54:00	2017-03-15 20:19:00	11.2	9.8	13.7	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-14 20:15:29	2017-03-14 11:53:00	2017-03-14 20:19:00	12.9	11	14.8	
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2017-03-13 20:15:25	2017-03-13 11:53:00	2017-03-13 20:20:00	13.1	7.7	20.2	

Export .csv

2009-12-31 to 2017-09-13
1 - 45 of 1984

1000 km

© 2017 HERE © 2017 Microsoft Corporation

Legends

Next, check the button to see all of the atmosphere data in a table view.

GLOBE Visualization System
v2 BETA Release

Measurements | Data Counts

2013-04-03

School: Lourdes Public Charter School
Site: School Site:ATM-02

Measurements | Data Counts | School Info | Site Info | Photos

View Data Table:

- Air Temperature Dailies Data
- All Atmosphere Data
- Solar Radiation Dailies
- Maximum Daily Temperature
- Minimum Daily Temperature

Data Date Range: 2009-12-31 to 2017-08-30

Measured At: 2013-04-03 20:14:00
Solar Measured At: 2013-04-03 12:03:00
Solar Noon At: 2013-04-03 20:13:00
Daily Average Temperature: 14.1 °C
Minimum Daily Temperature: 5.4 °C
Maximum Daily Temperature: 18.7 °C
Comments: air temp subday rollup
Elevation: 188.30 m

30 Days | 1 Year | Custom

UNITED STATES

Legends

Now, all of your data is displayed in the table (this may take awhile). If you right click any column header (desktop only), a window will open to allow you to filter the data columns.

The screenshot displays the GLOBE Visualization System interface. At the top, there are navigation tabs for 'Measurements' and 'Data Counts'. The main window title is 'Lourdes Public Charter School : School Site:ATM-02 Data Table (Data may be a few hours old)'. Below the title is a data table with columns: School Name, Site Name, Latitude, Longitude, Elevation, Measured At, Solar Measured At, and Solar Noon At. A right-click context menu is open over the table, listing various data columns with checkboxes. A red arrow points from the text above to the context menu. At the bottom of the window, there is an 'Export .csv' button and a date range selector set to '1995-01-01 to 2017-09-13' with '1 - 45 of 232137' rows displayed. The background shows a map of the region.

School Name	Site Name	Latitude	Longitude	Elevation	Measured At	Solar Measured At	Solar Noon At	Pressure	Temperature	Humidity
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-29 21:29:00	2009-12-29 13:18:00	2009-12-29 20:12:00	3.3	990.1	1012.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-29 21:44:00	2009-12-29 13:33:00	2009-12-29 20:12:00	3.3	990.4	1012.5
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-29 03:29:00	2009-12-29 19:18:00	2009-12-30 20:13:00	3.3	990.4	1012.5
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 03:44:00	2009-12-29 19:33:00	2009-12-30 20:13:00	3.3	990.4	1012.5
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 03:59:00	2009-12-29 19:48:00	2009-12-30 20:13:00	3.3	990.7	1012.9
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 04:14:00	2009-12-29 20:03:00	2009-12-30 20:13:00	3.3	990.7	1012.9
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 04:29:00	2009-12-29 20:18:00	2009-12-30 20:13:00	3.3	991.1	1013.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 04:44:00	2009-12-29 20:33:00	2009-12-30 20:13:00	3.3	991.4	1013.5
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 04:59:00	2009-12-29 20:48:00	2009-12-30 20:13:00	3.3	991.7	1013.9
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 05:14:00	2009-12-29 21:03:00	2009-12-30 20:13:00	3.3	991.7	1013.9
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 05:29:00	2009-12-29 21:18:00	2009-12-30 20:13:00	3.3	992.1	1014.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 05:44:00	2009-12-29 21:33:00	2009-12-30 20:13:00	3.3	992.1	1014.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 05:59:00	2009-12-29 21:48:00	2009-12-30 20:13:00	3.3	992.1	1014.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 06:14:00	2009-12-29 22:03:00	2009-12-30 20:13:00	3.3	992.4	1014.6
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 06:30:00	2009-12-29 22:19:00	2009-12-30 20:13:00	3.3	992.7	1014.9
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 06:44:00	2009-12-29 22:33:00	2009-12-30 20:13:00	3.3	992.7	1014.9
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 06:59:00	2009-12-29 22:48:00	2009-12-30 20:13:00	3.3	992.7	1014.9
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 07:14:00	2009-12-29 23:03:00	2009-12-30 20:13:00	3.3	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 07:29:00	2009-12-29 23:18:00	2009-12-30 20:13:00	3.3	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 07:44:00	2009-12-29 23:33:00	2009-12-30 20:13:00	3.3	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 07:59:00	2009-12-29 23:48:00	2009-12-30 20:13:00	3.3	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 08:14:00	2009-12-30 00:03:00	2009-12-30 20:13:00	2.8	992.4	1014.6
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 08:29:00	2009-12-30 00:18:00	2009-12-30 20:13:00	3.3	992.1	1014.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 08:44:00	2009-12-30 00:33:00	2009-12-30 20:13:00	3.3	992.7	1014.9
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 08:59:00	2009-12-30 00:48:00	2009-12-30 20:13:00	3.9	992.7	1014.9
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 09:14:00	2009-12-30 01:03:00	2009-12-30 20:13:00	3.3	992.7	1014.9
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 09:29:00	2009-12-30 01:18:00	2009-12-30 20:13:00	3.3	992.7	1014.9
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 09:44:00	2009-12-30 01:33:00	2009-12-30 20:13:00	3.3	992.7	1014.9
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 09:59:00	2009-12-30 01:48:00	2009-12-30 20:13:00	3.3	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 10:14:00	2009-12-30 02:03:00	2009-12-30 20:13:00	3.3	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 10:29:00	2009-12-30 02:18:00	2009-12-30 20:13:00	3.3	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 10:44:00	2009-12-30 02:33:00	2009-12-30 20:13:00	3.3	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 10:59:00	2009-12-30 02:48:00	2009-12-30 20:13:00	3.3	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 11:14:00	2009-12-30 03:03:00	2009-12-30 20:13:00	3.9	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 11:29:00	2009-12-30 03:18:00	2009-12-30 20:13:00	3.9	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 11:44:00	2009-12-30 03:33:00	2009-12-30 20:13:00	3.9	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 11:59:00	2009-12-30 03:48:00	2009-12-30 20:13:00	3.9	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 12:14:00	2009-12-30 04:03:00	2009-12-30 20:13:00	3.9	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 12:29:00	2009-12-30 04:18:00	2009-12-30 20:13:00	3.9	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 12:44:00	2009-12-30 04:33:00	2009-12-30 20:13:00	3.9	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 12:59:00	2009-12-30 04:48:00	2009-12-30 20:13:00	3.9	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 13:14:00	2009-12-30 05:03:00	2009-12-30 20:13:00	3.9	993.1	1015.2
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2009-12-30 13:29:00	2009-12-30 05:18:00	2009-12-30 20:13:00	4.4	993.1	1015.2

To compare this site data to other sites, you can add the site to a multi-site time series plot by clicking on this button. Keep the plot range at 30 days and then select the button

The screenshot shows the GLOBE Visualization System v2 BETA Release interface. At the top, there are navigation icons for 'Measurements' (with a '1' notification), 'Data Counts', and a calendar icon. A date selector shows '2013-04-03'. The main map displays the Beaufort Sea and Amundsen Gulf. A pop-up window for 'School: Lourdes Public Charter School' is open, showing a time series plot for 'Air Temperature Dailies' from 2013-03-04 to 2013-04-03. The plot shows temperature in degrees Celsius, with a red box highlighting a button with a plus sign and a grid icon. A red arrow points from the top navigation area to this button. The plot includes a legend for 'Atmosphere' with options for 'Air Temperature Dailies', 'Solar Noon Temperature Dailies', 'Maximum Daily Temperature', and 'Minimum Daily Temperature'. The 'Data Date Range' is set to '2009-12-31 to 2017-08-30'. Below the plot, there are buttons for '30 Days', '1 Year', and 'Custom'. The bottom of the screen shows a map of the United States with various location markers.

GLOBE Visualization System
v2 BETA Release

Beaufort Sea | Amundsen Gulf

2013-04-03

School: Lourdes Public Charter School

Site: School Site:ATM-02

Measurements | Data Counts | School Info | Site Info | Photos

Atmosphere

Air Temperature Dailies

- Solar Noon Temperature Dailies
- Maximum Daily Temperature
- Minimum Daily Temperature

Data Date Range: 2009-12-31 to 2017-08-30

Measured At: 2013-04-03 20:14:00
Solar Measured At: 2013-04-03 12:03:00
Solar Noon At: 2013-04-03 20:13:00
Daily Average Temperature: 14.1 °C
Minimum Daily Temperature: 5.4 °C
Maximum Daily Temperature: 18.7 °C
Comments: air temp subday rollup
Elevation: 188.30 m

30 Days | 1 Year | Custom

UNITED STATES

The site is added to the Multi-Site Plots list with the date range from the site plot pre-selected. You can change the dates by clicking on the date fields or by using the slider.

The screenshot displays the GLOBE Visualization System interface. The top navigation bar includes the GLOBE logo, "Visualizations System", and navigation icons for "Measurements" (1), "Data Counts", and "Site Info". A user profile icon and "Sign In" button are in the top right. The left sidebar contains a "Multi-Site Plots" section with a list of sites. The main content area shows a detailed plot for the selected site, "Lourdes Public Charter School", with a line graph of "Air Temperature Dailies" and various data fields.

Multi-Site Plots List:

- School: **Lourdes Public Charter School**
- Site: **School Site:ATM-02**
- Protocol: Air Temperature Dailies
- Plot: Maximum Daily Temperature
- Range: 2009-12-31 to 2018-10-03
- Y-Axis: -50 °C to 50 °C

Plot Date Range:

2013-03-04 to 2013-04-03

Plot Settings:

- Single Line Plot
- Stacked Plot
- Use Auto-Y Axis

Plot Data:

- Plot All
- View Plot Data
- Clear List

Site Details (Lourdes Public Charter School):

- School: Lourdes Public Charter School
- Site: School Site:ATM-02
- Measurements: Air Temperature Dailies
- Data Date Range: 2009-12-31 to 2018-10-03
- Measured At: 2013-04-03 20:14:00
- Solar Measured At: 2013-04-03 12:03:00
- Solar Noon At: 2013-04-03 20:13:00
- Daily Average Temperature: 14.1 °C
- Minimum Daily Temperature: 5.4 °C
- Maximum Daily Temperature: 18.7 °C
- Comments: air temp subday rollup
- Elevation: 188.30 m

Plot Data (Approximate):

Date	Temperature (°C)
2013-03-04	12
2013-03-05	10
2013-03-06	12
2013-03-07	12
2013-03-08	12
2013-03-09	12
2013-03-10	12
2013-03-11	12
2013-03-12	12
2013-03-13	12
2013-03-14	12
2013-03-15	12
2013-03-16	12
2013-03-17	12
2013-03-18	12
2013-03-19	12
2013-03-20	12
2013-03-21	12
2013-03-22	12
2013-03-23	12
2013-03-24	12
2013-03-25	12
2013-03-26	12
2013-03-27	12
2013-03-28	12
2013-03-29	12
2013-03-30	12
2013-03-31	12
2013-04-01	12
2013-04-02	12
2013-04-03	12

Now let's select another site. Close the site info window of the U.S. site and then select one of the sites in France. Again click on the icon to add the site to the multi-site time series plot.

The screenshot displays the GLOBE Visualization System interface. The main map shows the Arctic Ocean and parts of North America and Europe. A site information window is open for 'Lycée Bernard PALISSY' in France. The window includes a title bar with the school name and a 'Next Site' button. Below the title bar are tabs for 'Measurements', 'Data Counts', 'School Info', 'Site Info', and 'Photos'. The 'Measurements' tab is active, showing a dropdown menu for 'Air Temperature Dailies' and radio buttons for 'Solar Noon Temperature Dailies', 'Maximum Daily Temperature', and 'Minimum Daily Temperature'. A line graph displays temperature data from 2013-03-04 to 2013-04-03. The graph shows a peak of approximately 20°C and a trough of approximately 6°C. A red arrow points to a green plus icon in the graph's toolbar, which is used to add the site to the multi-site time series plot. The window also displays measurement details for 2013-04-03 12:00:00, including a daily average temperature of 13.9°C and a maximum daily temperature of 14.4°C. The window has a close button (X) in the top right corner.

School: Lycée Bernard PALISSY
Site: Grande-Cour:ATM-01

Measurements | Data Counts | School Info | Site Info | Photos

Atmosphere

Air Temperature Dailies

Solar Noon Temperature Dailies
 Maximum Daily Temperature
 Minimum Daily Temperature

Data Date Range: 2007-11-08 to 2018-09-30

Measured At: 2013-04-03 12:00:00
Solar Measured At: 2013-04-03 12:00:00
Solar Noon At: 2013-04-03 12:00:00
Daily Average Temperature: 13.9 °C
Minimum Daily Temperature: 3.1 °C
Maximum Daily Temperature: 14.4 °C
Comments: air temp subday rollup
Elevation: 50.60 m

30 Days | 1 Year | Custom

The second site is now added. Now click on the 'Plot All' button to view the time series plot.

The screenshot displays the GLOBE Visualization System interface. On the left, a sidebar lists two sites: Lourdes Public Charter School (Site: School Site:ATM-02) and Bernard High School PALISSY (Site: Great Court: ATM-01). The Bernard High School entry is highlighted with a red box. Below the list, a 'Plot Date Range' section shows dates from 2013-03-04 to 2013-04-03. At the bottom of the sidebar, the 'Plot All' button is also highlighted with a red box. The main area features a world map with colored markers for various sites. A detailed data panel for 'Lycée Bernard PALISSY' is open, showing a line graph of 'Air Temperature Dailies' for the date 2013-04-03. The graph shows a temperature range from approximately 3.1°C to 14.4°C. The panel includes tabs for 'Measurements', 'Data Counts', 'School Info', 'Site Info', and 'Photos'. The 'Measurements' tab is active, displaying the selected plot type and a list of data points for the day.

GLOBE Visualization System

Measurements | Data Counts

2013-04-03

Multi-Site Plots

School: Lourdes Public Charter School
Site: School Site:ATM-02

Protocol: Air Temperature Dailies
Plot: Maximum Daily Temperature
Range: 2009-12-31 to 2018-10-03
Y-Axis: -50 °C to 50 °C

School: **Bernard High School PALISSY**
Site: **Great Court: ATM-01**

Protocol: Air Temperature Dailies
Plot: Maximum Daily Temperature
Range: 2007-11-08 to 2018-09-30
Y-Axis: -50 °C to 50 °C

Plot Date Range:
2013-03-04 to 2013-04-03

For optimum performance, the maximum recommended date range is 5 years

Single Line Plot Stacked Plot

Use Auto-Yaxis

Plot All | View Plot Data | Clear List

Sites on Map: 189

500 km

© 2018 Microsoft Corporation © 2018 IEF2

School: Lycée Bernard PALISSY
Site: Grande-Cour:ATM-01

Next Site 1/3

Measurements | Data Counts | School Info | Site Info | Photos

Atmosphere

Air Temperature Dailies

Solar Noon Temperature Dailies
 Maximum Daily Temperature
 Minimum Daily Temperature

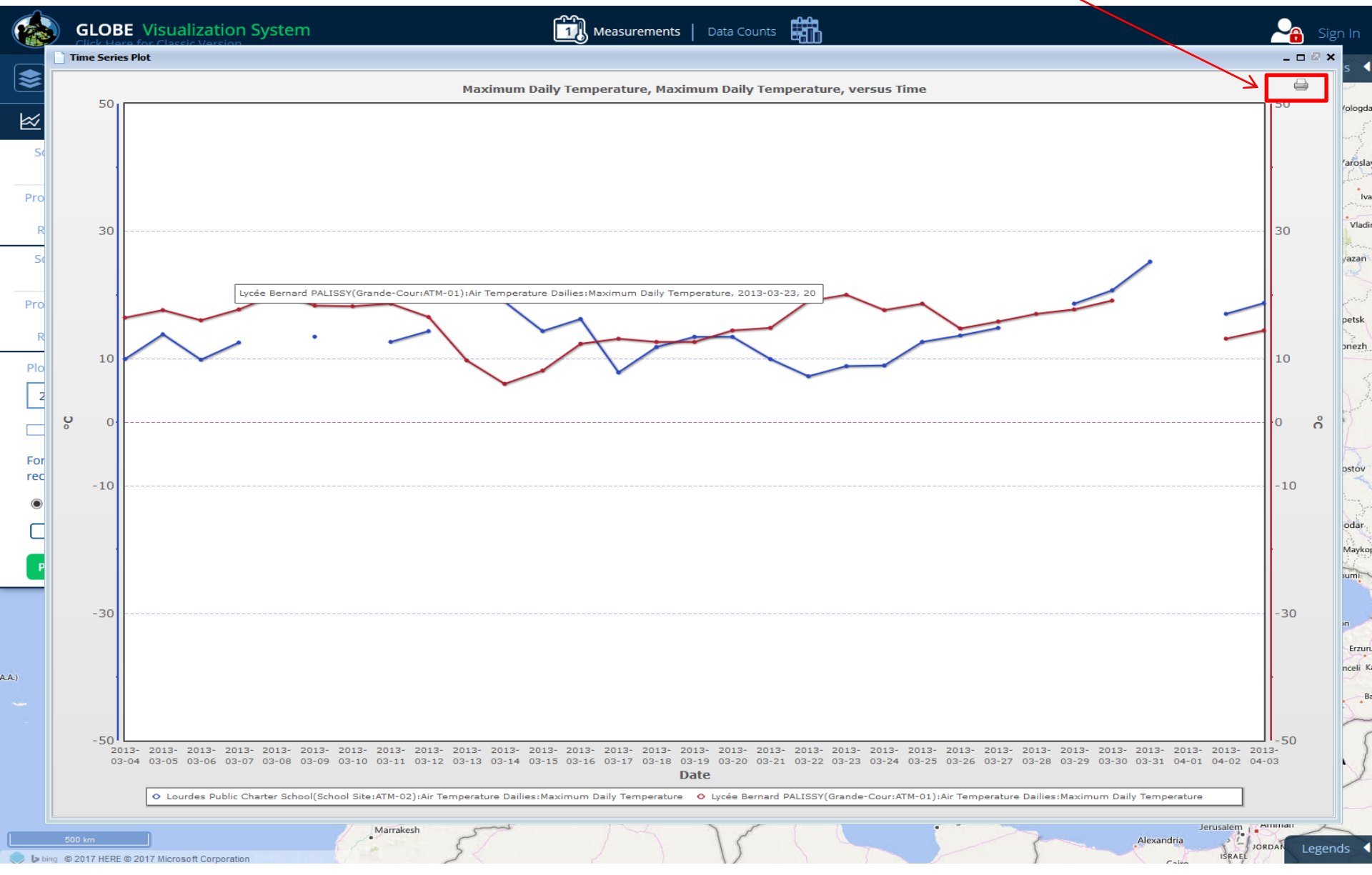
Data Date Range: 2007-11-08 to 2018-09-30

Measured At: 2013-04-03 12:00:00
Solar Measured At: 2013-04-03 12:02:00
Solar Noon At: 2013-04-03 12:00:00
Daily Average Temperature: 13.9 °C
Minimum Daily Temperature: 3.1 °C
Maximum Daily Temperature: 14.4 °C
Comments: air temp subday rollup
Elevation: 50.60 m

30 Days | 1 Year | Custom

Legends

Here is the result. A maximum of 6 datasets can be added to the plot list and the maximum plot date range recommended is 5 years. Clicking the print button will print out a copy of this graph.



By default, the **use Auto Y-axis** box is checked so the software adjusts the y-axes individually to spread the data vertically on the graph. You can elect to un-check the Auto Y-axis and manually adjust the Y-axis for each site.

Multi-Site Plots

School: **Lourdes Public Charter School**
Site: **School Site:ATM-02**

Protocol: **Air Temperature Dailies**
Plot: **Maximum Daily Temperature**
Range: **2009-12-31 to 2018-10-03**
Y-Axis: **-50 °C to 50 °C**

School: **Bernard High School PALISSY**
Site: **Great Court: ATM-01**

Protocol: **Air Temperature Dailies**
Plot: **Maximum Daily Temperature**
Range: **2007-11-08 to 2018-09-30**
Y-Axis: **-50 °C to 50 °C**

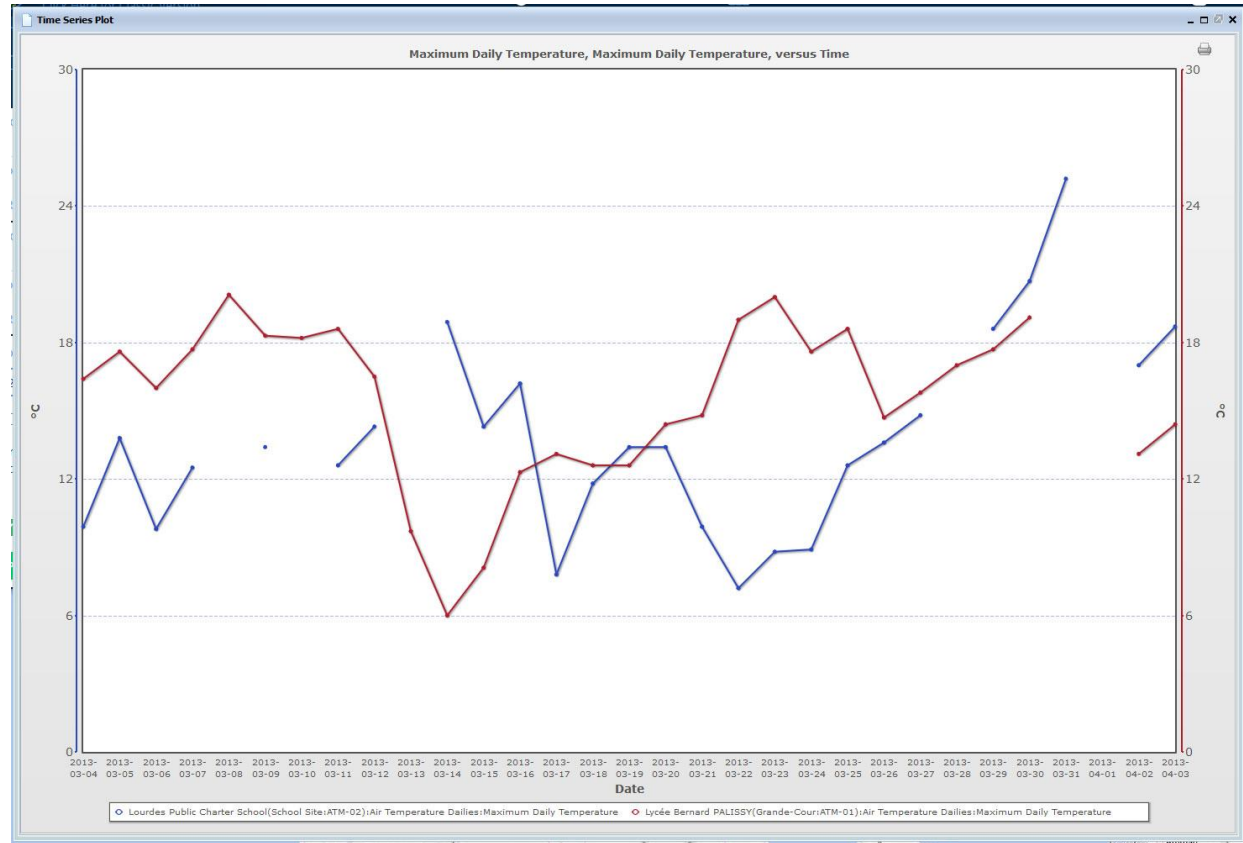
Plot Date Range:
2013-03-04 to 2013-04-03

For optimum performance, the maximum recommended date range is 5 years

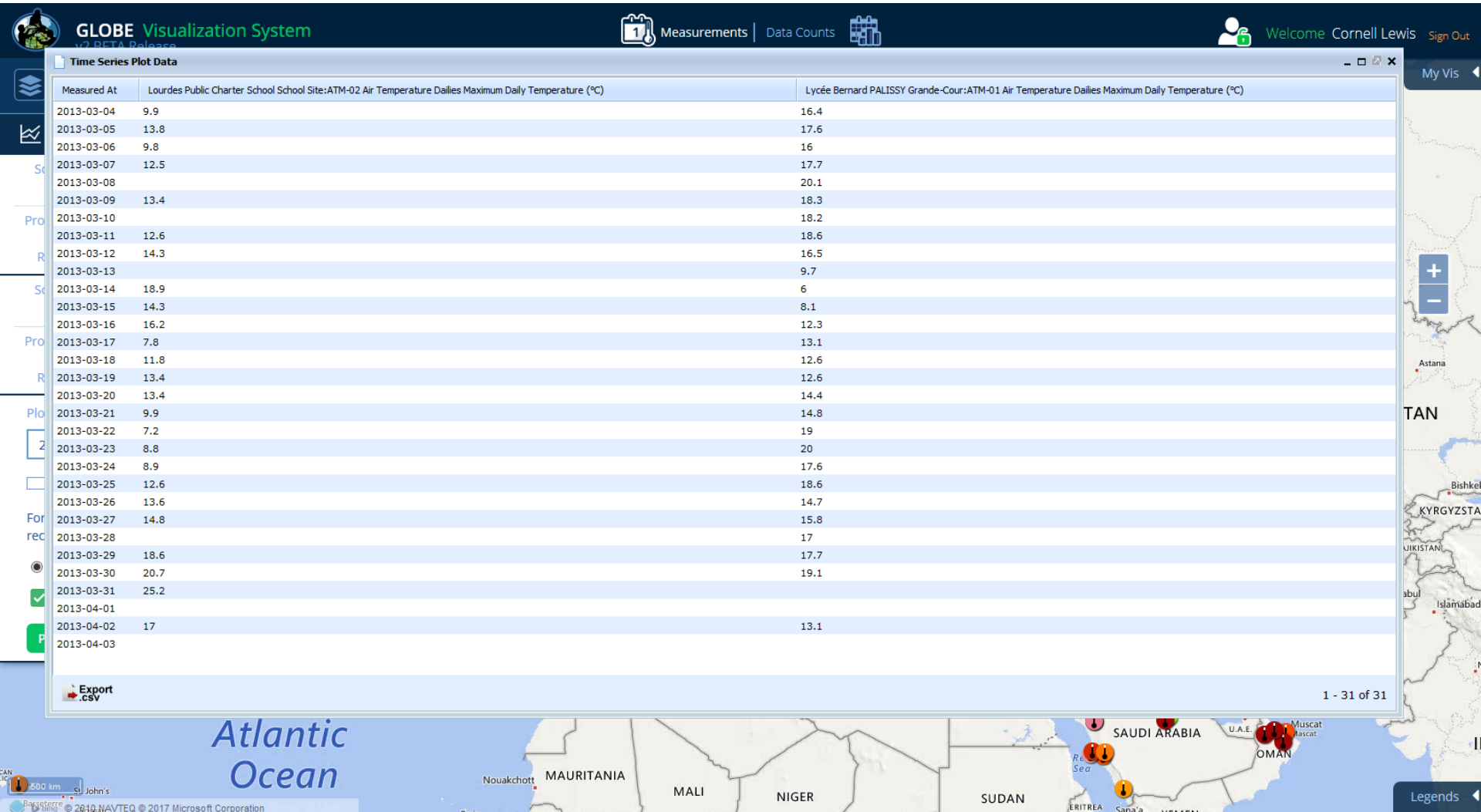
Single Line Plot Stacked Plot

Use Auto-Y Axis

Plot All **View Plot Data** **Clear List**



Here is the data table showing the two sites.



Click 'Stacked Plot' to plot the two sites on separate graphs

Multi-Site Plots

School: [IES Itaca](#)
Site: [Atmosphere Site 07:ATM-07](#)

Protocol: Air Temperature Dailies
Plot: Maximum Daily Temperature
Range: 2005-04-06 to 2017-05-31

School: [Lycée Bernard PALISSY](#)
Site: [Grande-Cour:ATM-01](#)

Protocol: Air Temperature Dailies
Plot: Maximum Daily Temperature
Range: 2007-11-08 to 2017-07-06

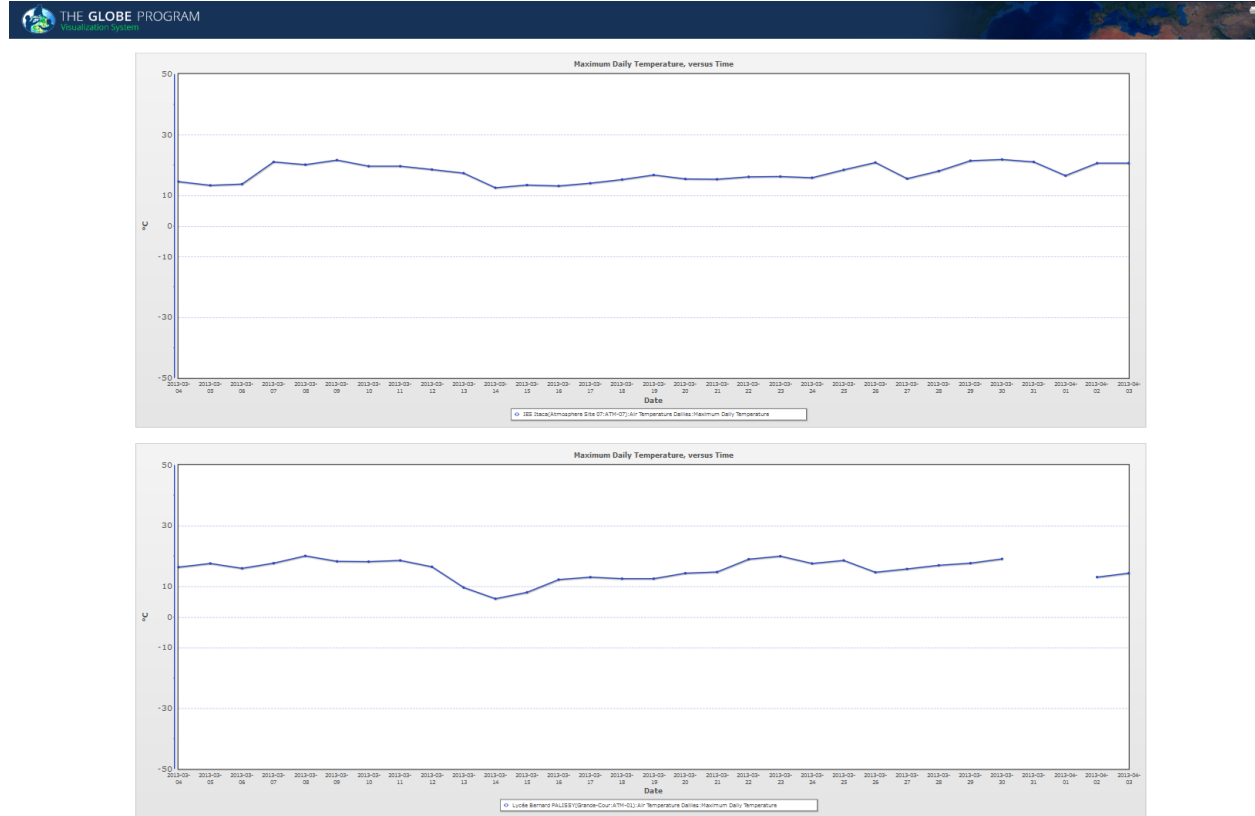
Plot Date Range:
2013-03-04 to 2013-04-03

For optimum performance, the maximum recommended date range is 5 years

Single Line Plot **Stacked Plot**

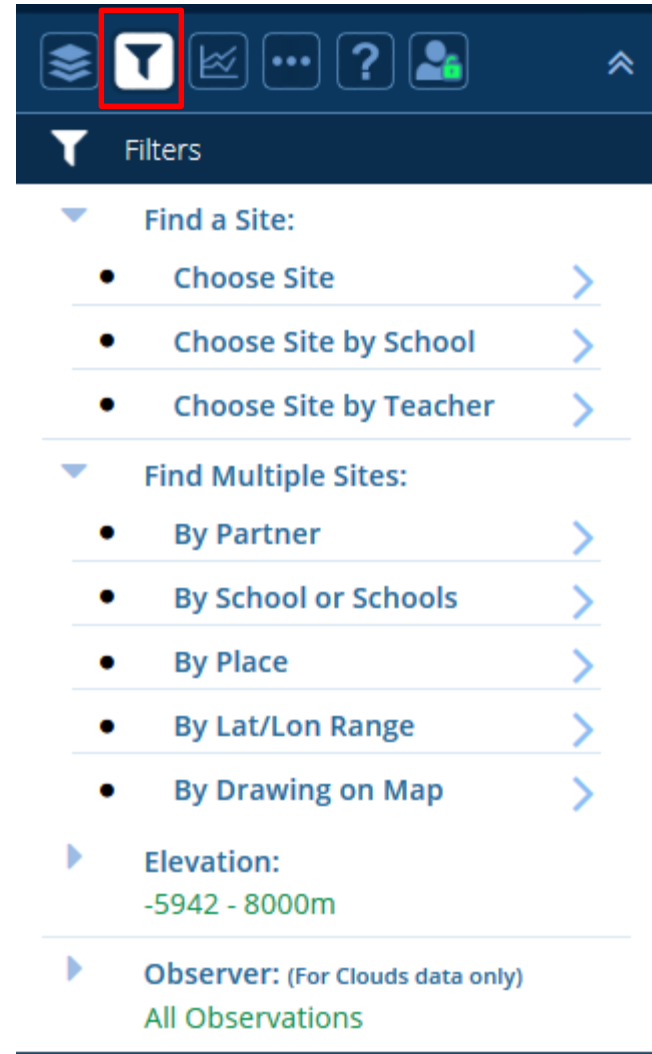
Use Auto-Y Axis

[Plot All](#) [View Plot Data](#) [Clear List](#)

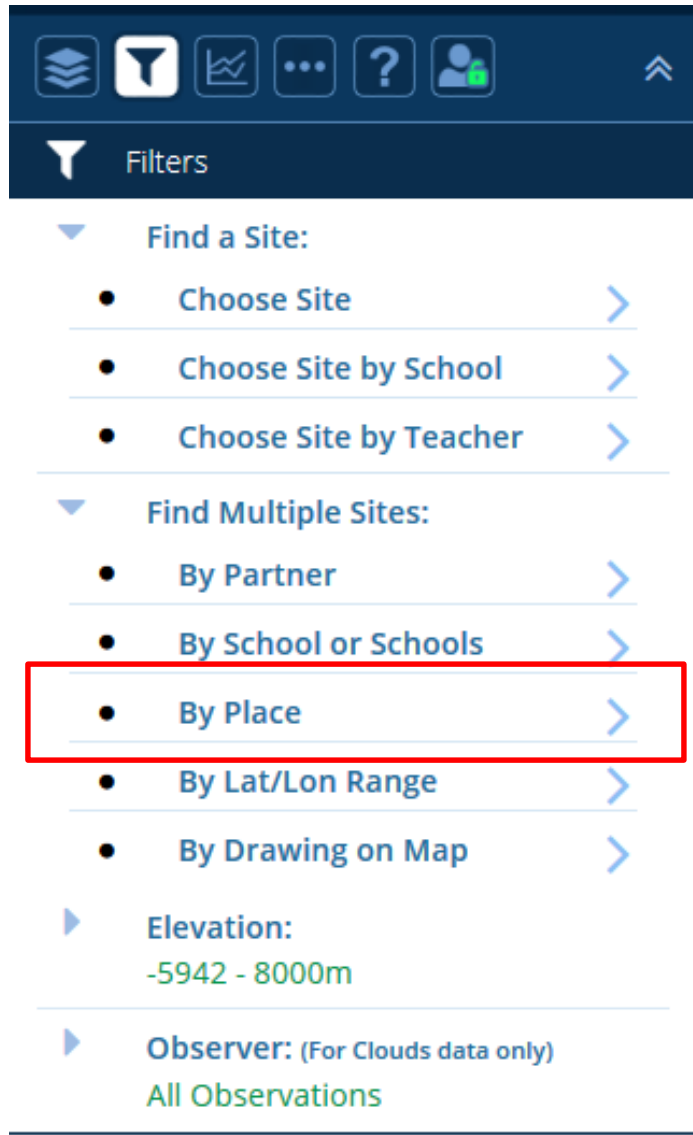


The Filters box is where you refine which data is shown on the map. Click on the filter icon.

You can limit the map to display only data in a specific location, such as a country or filter by specific school, schools, partner, Lat/Lon etc.

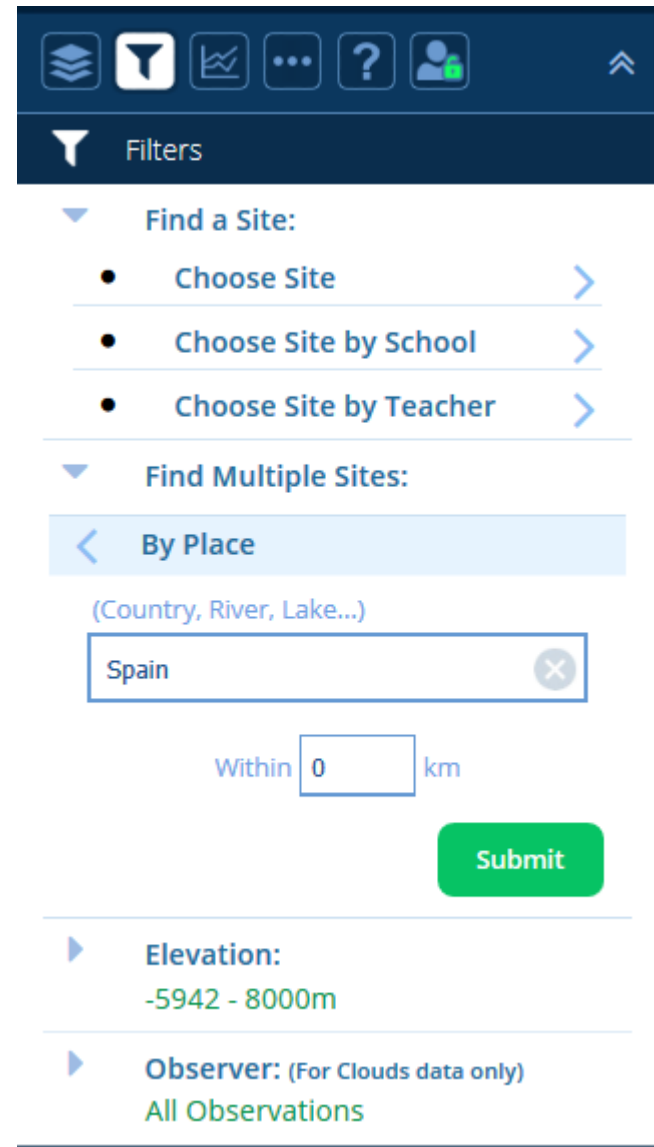


Let's display only schools in a country, select 'Places' in the Location/Site filter and then enter in Spain.



The screenshot shows the 'Filters' menu with the following options:

- Find a Site:
 - Choose Site
 - Choose Site by School
 - Choose Site by Teacher
- Find Multiple Sites:
 - By Partner
 - By School or Schools
 - By Place** (highlighted with a red box)
 - By Lat/Lon Range
 - By Drawing on Map
- Elevation: -5942 - 8000m
- Observer: (For Clouds data only) All Observations



The screenshot shows the 'By Place' filter configuration screen with the following elements:

- Find a Site:
 - Choose Site
 - Choose Site by School
 - Choose Site by Teacher
- Find Multiple Sites:
 - By Place (selected)
- (Country, River, Lake...)
- Spain (entered in the search box)
- Within 0 km
- Submit button
- Elevation: -5942 - 8000m
- Observer: (For Clouds data only) All Observations

The map will zoom into the selected place and only display sites in Spain. Select the back arrow to return to the main Site or Location menu.

The screenshot displays the GLOBE Visualization System interface. At the top left, the logo and name 'GLOBE Visualization System' are visible. Navigation icons for layers, filters, and help are present. The main map shows a view of Spain and surrounding regions, with a date overlay for '2019-10-18'. The left sidebar contains a 'Filters' section with three options: 'Choose Site', 'Choose Site by School', and 'Choose Site by Teacher'. Below these are 'Find Multiple Sites:' options, with 'By Place' highlighted and a back arrow icon. A search box contains 'Spain' and a distance filter is set to '0 km'. The 'Elevation' filter is set to '-5942 - 8000m' and the 'Observer' filter is set to 'All Observations'. The map shows several yellow location markers in Spain. At the bottom left, it indicates 'Sites on Map: 3' and a scale bar for '200 km'. The bottom right corner features a 'Legends' button.

You can also filter data sites using the 'Drawing on Map' option. Click on the 'Drawing on Map' option. Turn on the tool and then draw a polygon around the site you want to isolate.

Filters

- Find a Site:
 - Choose Site
 - Choose Site by School
 - Choose Site by Teacher
- Find Multiple Sites:
 - By Partner
 - By School or Schools
 - By Place
 - By Lat/Lon Range**
 - By Drawing on Map**
- Elevation:
 - 5942 - 8000m
- Observer: (For Clouds data only)
 - All Observations

GLOBE Visualization System

Measurements | Data Counts | Select Language | Welcome Options

2013-04-03

Filters

- Find a Site:
 - Choose Site
 - Choose Site by School
 - Choose Site by Teacher
- Find Multiple Sites:
 - By Drawing on Map**
- Elevation:
 - 5942 - 8000m
- Observer: (For Clouds data only)
 - All Observations

Click the Draw Region Tool to enable, then click on the map to define a polygon area.

Turn Off Tool | Remove Region

Sites on Map: 3

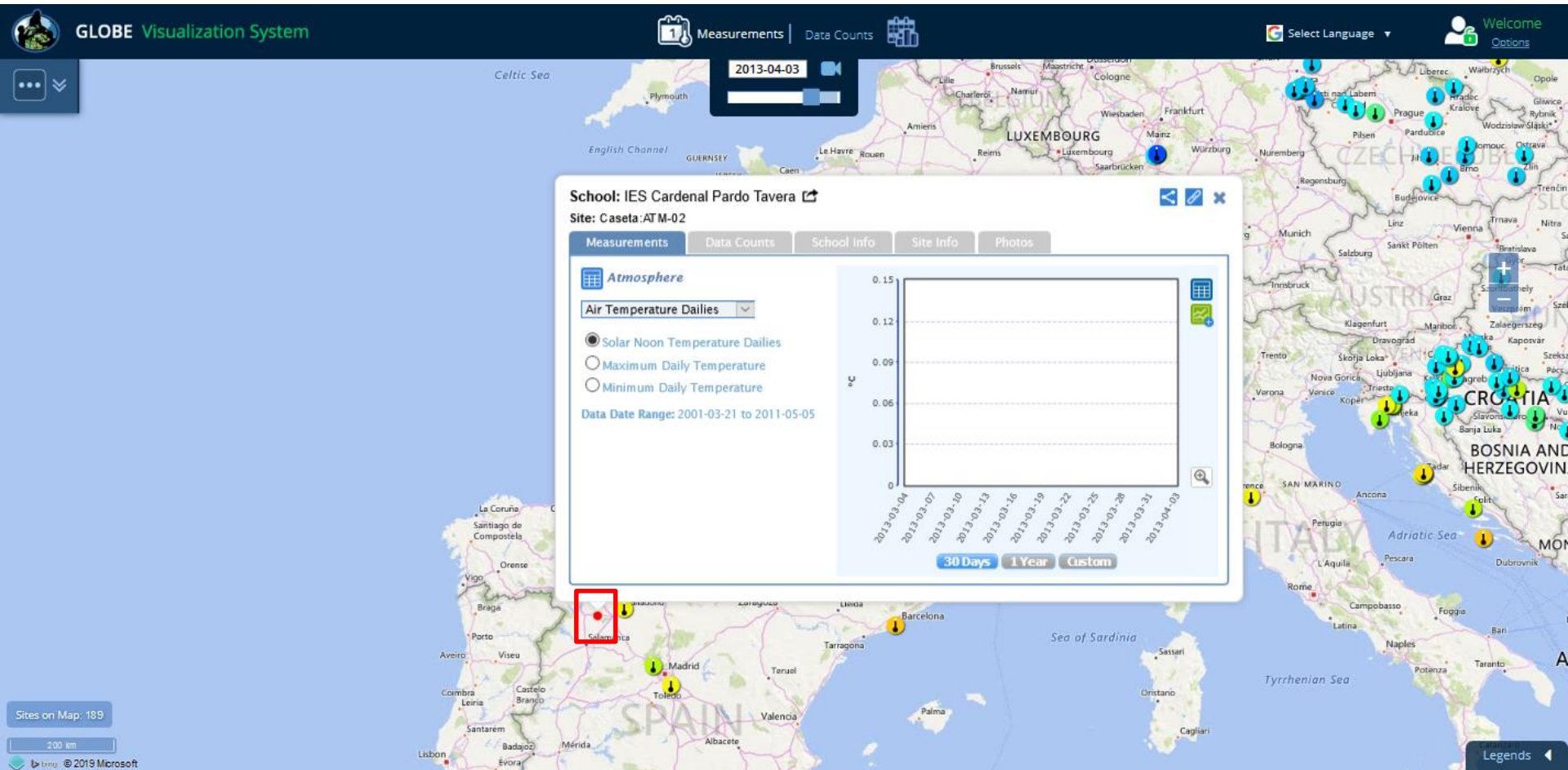
200 km

© 2019 Microsoft

You can also search for a particular site by school name. Select 'Find a Site', then select 'Choose Site by School'. Type in 'IES Cardinal' in the school name field. The system will auto-complete to show a list of schools that have that name in the title. Select 'IEC Cardinal Pardo Tavera' and the site 'Casteta: ATM-02' and Submit.

The screenshot displays the GLOBE Visualization System interface. At the top, the logo and text 'GLOBE Visualization System' are visible. Navigation icons for 'Measurements' and 'Data Counts' are present, along with a 'Select Language' dropdown and a 'Welcome' message with 'Options'. A date selector shows '2013-04-03'. On the left, a 'Filters' sidebar is active, showing 'Find a Site:' with a sub-option 'Choose Site by School'. A search input field contains 'IES Cardinal Pardo Tavera', and a dropdown menu below it shows 'Caseta:ATM-02'. A green 'Submit' button is located below the dropdown. Other filter options include 'Find Multiple Sites: None Selected', 'Elevation: -5475 - 7051m', and 'Observer: (For Clouds data only) All Observations'. The main area is a map of Europe with numerous site markers. A scale bar at the bottom left indicates '500 km', and a 'Legends' button is at the bottom right. The text 'Sites on Map: 189' is visible in the bottom left corner.

The site information window of the selected site will open. Note how the site icon is a small red dot. This indicates that no data for the current protocol layer(s) was entered on the measurement date selected (2013-04-03).



Let's search for another school. Type in 'Itaca' in the school name field select 'IEC Itaca' and then the site 'Atmosphere Site 07: ATM-07'.

The screenshot displays the GLOBE Visualization System interface. On the left, a 'Filters' sidebar is visible with the following sections:

- Find a Site:** Includes a search box containing 'IES Itaca' and a dropdown menu showing 'Atmosphere Site 07: ATM-07'. A green 'Submit' button is located below.
- Find Multiple Sites:** Shows 'None Selected'.
- Elevation:** Shows a range of '-3492 - 7051m'.
- Observer:** Shows 'All Observations'.

The main map area shows a world map with various colored pins indicating data collection sites. A detailed data window is open for the selected site:

School: IES Itaca
Site: Atmosphere Site 07: ATM-07

The data window includes tabs for 'Measurements', 'Data Counts', 'School Info', 'Site Info', and 'Photos'. The 'Measurements' tab is active, showing a line graph of 'Air Temperature Dailies' in degrees Celsius. The graph covers the period from 2013-03-06 to 2013-04-04. Below the graph, the following data is provided:

- Measured At: 2013-04-04 11:45:00
- Solar Measured At: 2013-04-04 11:53:00
- Solar Noon At: 2013-04-04 11:54:00
- Daily Average Temperature: 15.2 °C
- Minimum Daily Temperature: 11.5 °C
- Maximum Daily Temperature: 15.8 °C
- Comments: air temp subday rollup
- Elevation: 11.80 m

Navigation buttons for '30 Days', '1 Year', and 'Custom' are located at the bottom of the graph area. The top of the interface includes a 'GLOBE Visualization System' logo, a 'Measurements | Data Counts' indicator, a 'Select Language' dropdown, and a 'Welcome Options' user profile.

The site info window is now pointing at a Max Daily Temperature icon because temperature data was recorded on the current date.

The screenshot displays the GLOBE Visualization System interface. The top navigation bar includes the GLOBE logo, "Measurements" and "Data Counts" tabs, a "Select Language" dropdown, and a "Welcome Options" user profile. A date range selector at the top center shows "2013-04-04".

On the left, a "Filters" sidebar is visible with sections for "Find a Site:", "Choose Site by School" (with a search box containing "IES Itaca" and a dropdown for "Atmosphere Site 07:ATM-07"), "Find Multiple Sites:" (showing "None Selected"), "Elevation:" (showing "-3492 - 7051m"), and "Observer:" (showing "All Observations").

The main content area features a world map with various site markers. A red box highlights a specific site marker in the Mediterranean region. A site info window is open for "School: IES Itaca" and "Site: Atmosphere Site 07:ATM-07". The window has tabs for "Measurements", "Data Counts", "School Info", "Site Info", and "Photos".

Under the "Measurements" tab, the "Atmosphere" section is active. The "Air Temperature Dailies" dropdown is selected, and the "Maximum Daily Temperature" radio button is chosen. The "Data Date Range" is set to "2005-04-06 to 2018-11-24". The window displays the following data:

- Measured At: 2013-04-04 11:45:00
- Solar Measured At: 2013-04-04 11:53:00
- Solar Noon At: 2013-04-04 11:54:00
- Daily Average Temperature: 15.2 °C
- Minimum Daily Temperature: 11.5 °C
- Maximum Daily Temperature: 15.8 °C
- Comments: air temp subday rollup
- Elevation: 11.80 m

To the right of the text is a line graph showing temperature in °C over time. The x-axis represents dates from 2013-03-06 to 2013-04-04. The y-axis represents temperature in °C, ranging from 0 to 25. The graph shows a fluctuating temperature trend. Below the graph are buttons for "30 Days", "1 Year", and "Custom".

At the bottom left, there is a "Sites on Map: 196" indicator and a "600 km" scale bar. The bottom right corner features a "Legends" button.

Another way to output data is to view all data of a layer in a table. To do so, click on the 'more' icon (the 3 dots).

The screenshot shows the GLOBE Visualization System v2 BETA Release interface. The top navigation bar includes 'Measurements' (with a '1' icon), 'Data Counts', and a 'Sign In' button. A date selector shows '2013-04-03'. The left sidebar contains a 'Protocol Layers' section with a 'Maximum Daily Temperature' layer selected, which has a red box around its 'more' icon (three dots). Below this are 'Contours' and 'Contour Layer Opacity' options. A 'Choose sphere to explore protocols' section lists 'Atmosphere', 'Biosphere', 'Hydrosphere', 'Pedosphere (Soil) - Soil Temperature and Moisture', and 'Pedosphere (Soil) - Soil Characterization'. The main map area displays a world map with data points (orange and yellow icons) over the United States and Europe. A 'My Vis' button is in the top right, and a 'Legends' button is in the bottom right. The footer contains copyright information: 'bing © 2010 NAVTEQ © 2017 Microsoft Corporation'.

A selection pop-up box appears. Click on **View Layer Table**. In this example we used the Place filter to just show U.S. sites.

The screenshot displays the GLOBE Visualization System v2 BETA Release interface. The top navigation bar includes icons for Measurements, Data Counts, and a user profile. The left sidebar shows a 'Protocol Layers' list with 'Maximum Daily Temperature' selected. A red box highlights a context menu for this layer, containing the options: 'View Layer Table', 'Download Layer .kmz', 'Delete Layer', and 'Cancel'. The main map area shows the United States with several orange location markers. A date filter '2013-04-03' is visible at the top of the map. The bottom right corner features a 'Measurement Values' legend for 'Max Daily Air Temperature (C)' with a color scale from -50 to 50 degrees Celsius.

The sites in the U.S. for the layer and measurement date selected are listed in the table and can be sorted by any field name (School Name, Site Name, etc.) and can be exported to a .csv file.

GLOBE Visualization System
[Click Here for Classic Version](#)

Measurements | Data Counts

Sign In

undefined

School Name	Site Name	Latitude	Longitude	Elevation	Measured At	Measured Value
Athens Intermediate School	AIS 2: ATM-02	34.47649	-86.59782	249.2	2013-04-03 17:44:00	27.3
Bay Minette Intermediate	Bay Minette Atmosphere PJ:ATM-02	30.8949	-87.7768	46	2013-04-03 17:00:00	15.7
Bolea Home School	Bolea Home Citizen Scientist:ATM-01	40.8606	-81.4613	332	2013-04-03 17:09:00	6
Daphne Elementary School	Daphne Elementary Project Jubilee:ATM-01	30.6099	-87.9029	45	2013-04-03 18:00:00	24.7
Elizabeth Cashwell Elementary School	5th grade wing:ATM-01	35.0024	-78.5454	129.9	2013-04-03 17:21:00	19.6
Ellis High School	EHS:ATM-01	38.55728	-99.33647	677.6	2013-04-03 18:20:00	8.5
Ellis High School	EHS-2:ATM-02	38.55656	-99.33538	679.6	2013-04-03 18:26:00	8
Fairhope Elementary School (USALSIOM)	East Field Site:ATM-01	30.53	-87.9	72.7	2013-04-03 18:30:00	28
Freedom High School (USVAGZGJ)	AWS WeatherBug:ATM-01	38.9218	-77.5286	111	2013-04-03 17:14:00	7.7
Holmes Middle School	Weather Station, NW of school along chain-link fence:ATM-02	38.8682	-104.8575	1996	2013-04-03 19:30:00	10
John Marshall High School (USWVU59F)	JMHS Min-Max:ATM-39	39.94182	-80.75352	700	2013-04-03 16:37:00	8.6
Littleton Middle School	Weather Station:ATM-01	42.5356	-71.4895	48	2013-04-03 16:45:00	4
Lourdes Public Charter School	School Site:ATM-02	44.7225	-122.6898	188.3	2013-04-03 20:14:00	18.7
Magnolia High School (USWVOGSV)	MAGNOLIA HIGH SCHOOL1:ATM-01	39.646	-80.8617	203	2013-04-03 17:29:00	6.9
Mahopac High School	SEAC-Atm:ATM-01	41.36518	-73.75677	285	2013-04-03 16:59:00	2.9
Main Street Intermediate School	Backyard for instrument shelter:ATM-03	41.23954	-82.63735	251.4	2013-04-03 17:19:00	5.6
Marie Reed Community Learning Center	MARIE REED WEATHER STATION:ATM-02	38.9172	-77.0405	66.2	2013-04-03 17:14:00	8.5
Monroe High School (USMIGE4E)	Bolles Harbor Weatherbug Station:ATM-09	41.87506	-83.39057	209.8	2013-04-03 17:29:00	6
NCAR Foothills Lab	NCAR Foothills Lab weather station:ATM-01	40.035	-105.2431	1625	2013-04-03 18:57:40	10.9
Northland Pines	AWS Weather Station:ATM-02	45.937	-89.255	583.9	2013-04-03 17:59:00	-1.4
O.J.Roberts Middle School	Owen J. Roberts Middle School:ATM-01	40.1752	-75.6583	75	2013-04-03 17:01:00	5.8
Ruth Cherry Intermediate School	Intermediate:ATM-01	32.9858	-96.3219	539	2013-04-03 18:29:00	21.5
St. Joseph School (USWIPZYD)	School Location:ATM-01	44.8756	-91.9192	276	2013-04-03 17:15:00	5
Stone Child College (USMTGCZ3)	yotin:ATM-02	48.2903	-109.8695	1084.6	2013-04-03 19:15:00	20.2
The Morton Arboretum Youth Education Dept.	New weather station:ATM-01	41.82152	-88.07654	261.4	2013-04-03 17:06:00	12.8
Trinity School	Trinity Parking Lot Asphalt and school roof:ATM-02	39.592	-83.0257	281.8	2013-04-03 17:29:00	5.8
Virginia Museum Of Natural History	WeatherBug station on roof, 21 Starling AV:ATM-02	36.6865	-79.86387	348.6	2013-04-03 17:14:00	11.9
WANAKA Field Station	WFS Grass-Pine Overlook:ATM-01	44.67528	-73.10361	142.2	2013-04-03 16:30:00	0.8

Export .csv

1 - 28 of 28

500 km

© 2017 HERE © 2017 Microsoft Corporation

MEXICO
 JALISCO León Querétaro
 Mérida
 Cienfuegos
 CUBA Legends

Let's take a look at Land Cover Classification. Add the Biosphere > Land Cover Classification Layer. The default view shows measurements entered the past year, but you can change the time interval as shown here.

The screenshot displays the GLOBE Visualization System interface. The top navigation bar includes 'Measurements' and 'Data Counts'. The left sidebar shows the 'Protocol Layers' menu with 'Land Cover Classification' selected. Underneath, the 'Land Cover Interval' dropdown is open, showing options: 'All', '5 Years' (checked), '1 Year', '1 Month', and '1 Day'. A red arrow points to the '5 Years' option. Below the interval settings, there is a section to 'Choose sphere to explore protocols' with options for Atmosphere, Biosphere, Hydrosphere, Pedosphere (Soil) - Soil Temperature and Moisture, and Pedosphere (Soil) - Soil Characterization. The main map area shows a world map with numerous colored measurement points. A date selector at the top center shows '2018-10-03'. At the bottom right, there is a 'Measurement Values' legend for 'Land Cover Classification (MUC Code)' with a color scale from 0 to 9.

Land Cover Interval

- All
- 5 Years
- 1 Year
- 1 Month
- 1 Day

Measurement Values

Land Cover Classification (MUC Code)

0	1	2	3	4	5	6	7	8	9
01-03	11-13	21-23	31-34	41-44	51-56	61-64	71-72	81-82	91-94

Now, click on a measurement icon and click on the Photo tabs to view available photos. Click on a photo to see a larger view.

The screenshot displays the GLOBE Visualization System v2 BETA Release interface. The top navigation bar includes a search icon, the text "GLOBE Visualization System v2 BETA Release", and buttons for "Measurements" (with a calendar icon and a "1" notification) and "Data Counts" (with a bar chart icon). On the right, there is a user profile icon and a "Sign In" button. A date selector shows "2013-04-03" with a video camera icon and a progress bar below it. A "My Vis" button is also present.

The main area features a world map with numerous measurement icons (colored squares with a camera icon) placed across various locations. A pop-up window is centered over the map, titled "School: Munising High School" with an external link icon. Below the title is "Site: Football Practice Field:LCS-01". The window has tabs for "Measurements", "Data Counts", "School Info", "Site Info", and "Photos", with "Photos" currently selected. In the top right corner of the pop-up, it says "Next Site" and "2/6".

Inside the "Photos" tab, there are two dropdown menus: "Select Photos:" set to "Site Photos" and "Select Date:" set to "2000-09-11". Below these are three photo thumbnails labeled "West", "East", and "South". The "East" photo is the largest and most prominent, showing a green field with a blue sky and mountains in the background. The "West" photo shows a white structure, and the "South" photo shows a building. Navigation arrows are visible on the left and right sides of the photo gallery.

The background map shows parts of North America, Europe, and Africa, with labels for "Arctic Ocean", "Pacific Ocean", "Atlantic Ocean", "Caribbean Sea", "Mediterranean", "Black Sea", and "Arabian Sea". Country names like "CANADA", "MEXICO", "FRANCE", "ITALY", "TURKEY", "IRAN", "INDIA", and "CHINA" are visible. A "Legends" button is in the bottom right corner.

At the bottom left, there is a copyright notice: "© 2010 NAVTEQ © 2017 Microsoft Corporation".

Three protocols (Land Cover, Cloud cover and Mosquito Habitat Mapper) have a photo layer that shows sites with photo observations. Add the Land Cover Photos layer and click a site to see all of the photos.

The screenshot displays the GLOBE Visualization System interface. At the top, the header includes the GLOBE logo, the text "GLOBE Visualization System", and navigation icons for "Measurements" and "Data Counts". A date selector shows "2018-10-03". On the right, there are "Sign In" and "My Vis" options.

The left sidebar contains a "Protocol Layers" section with a "Land Cover Photos" layer checked. Below this, the "Land Cover Interval" is set to "1 Year". A "Choose sphere to explore protocols" section lists several categories with expandable arrows:

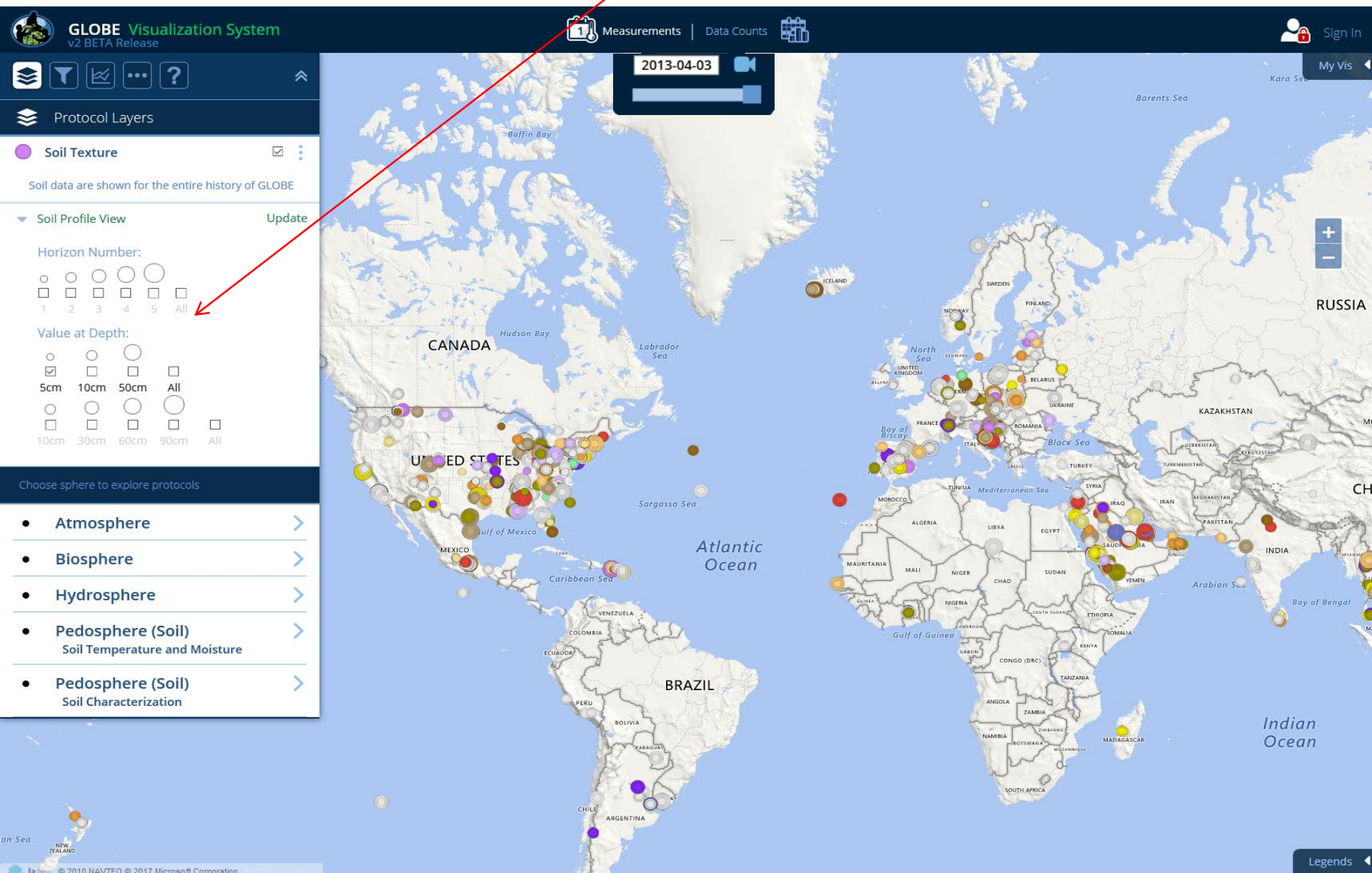
- Atmosphere
- Biosphere
- Hydrosphere
- Pedosphere (Soil) - Soil Temperature and Moisture
- Pedosphere (Soil) - Soil Characterization

The main area is a world map with numerous small photo thumbnails overlaid on various geographical locations, primarily in North America, Europe, and Africa. The map includes labels for major bodies of water like the Pacific Ocean, Atlantic Ocean, and Indian Ocean, and various countries and regions. A scale bar at the bottom left indicates "2000 km". The footer contains the copyright notice "© 2018 Microsoft Corporation © 2018 HERE".

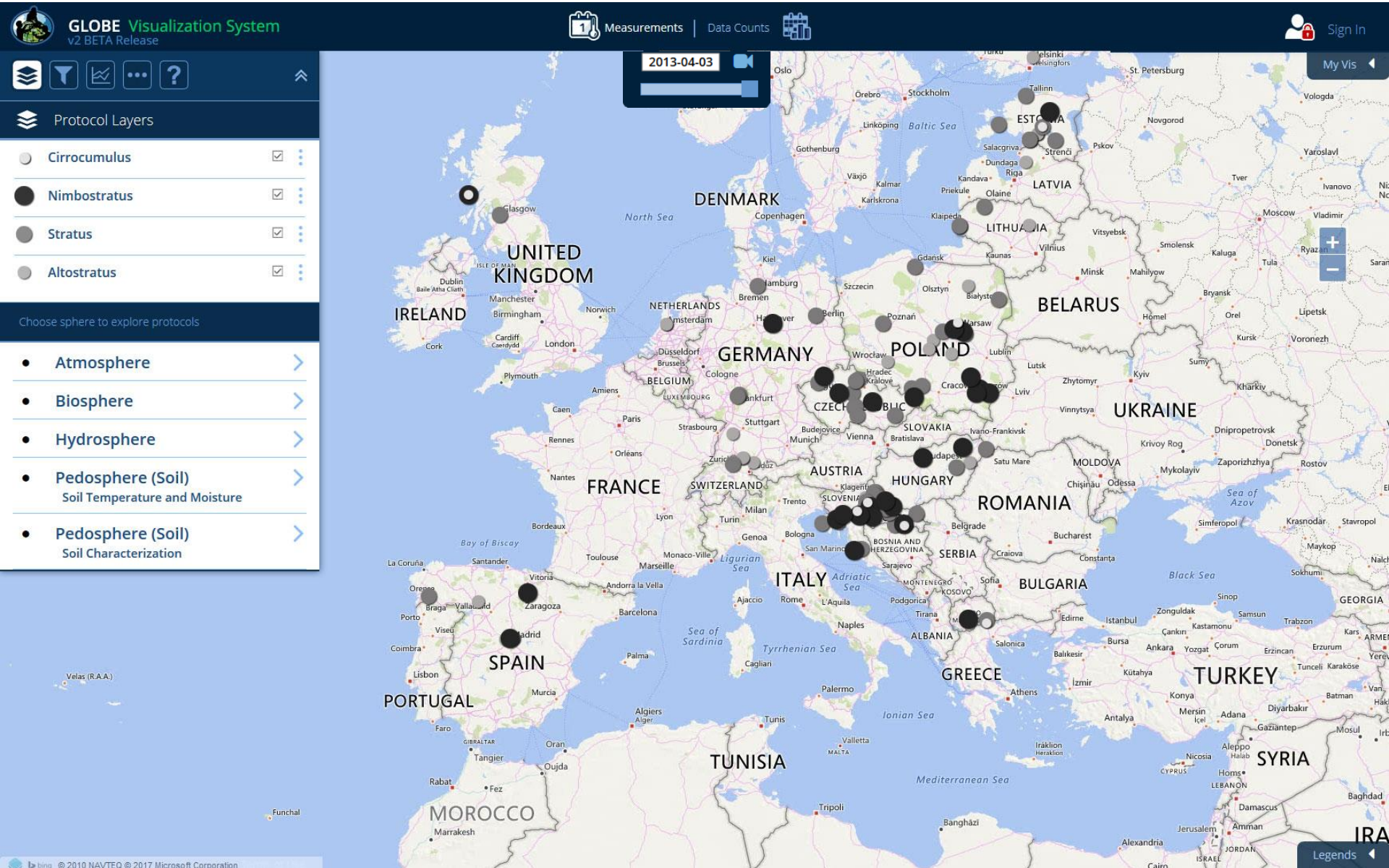
Some protocol layers have sub-layers to further filter the data. Tree/Shrub Date of Budburst, for example, can be filtered by species.

The screenshot displays the GLOBE Visualization System v2 BETA Release interface. The top navigation bar includes 'Measurements' and 'Data Counts' tabs, a date selector set to '2013-04-03', and a 'Sign In' button. The left sidebar contains a 'Protocol Layers' menu with 'Tree/Shrub Date of Budburst' selected. Below this, a 'Greenings Species' list is shown with checkboxes for 'All', 'Oak (Quercus robur)', 'Beech (Fagus sylvatica)', 'Birch (Betula pendula)', 'Hazel (Corylus avellana)', 'Small-leaved lime (Tilia cordata)', and 'Sour cherry (Prunus cerasus)'. A red arrow points from the text above to the 'Birch (Betula pendula)' checkbox. The main map area shows a world map with various colored circular markers representing data points across different continents, including North America, Europe, and Africa. The bottom left corner features a 'Choose sphere to explore protocols' section with options for Atmosphere, Biosphere, Hydrosphere, and Pedosphere (Soil).

Soil characterization layers such as Soil Texture can be filtered by Horizon Number and Value at Depth



Cloud Observations and other measurement types (Soil Properties, etc.) utilizes different layer sizes and colors so one can see up to 5 layers at a single site. Since different Cloud Observations can be made at the same site on the same day, layer icons can be hidden.



To re-order a layer, click and hold a layer name. Now drag the layer to the new position

The screenshot displays the GLOBE Visualization System V2 BETA Release interface. The main map shows Europe with various weather layers overlaid as semi-transparent spheres of different sizes and colors. A date and time display at the top center shows '2013-04-03'. The left sidebar contains a 'Protocol Layers' section with a list of layers: Cirrocumulus, Nimbostratus, Stratus, and Altostratus. Below this is a 'Choose sphere to explore protocols' section with options for Atmosphere, Biosphere, Hydrosphere, Pedosphere (Soil) - Soil Temperature and Moisture, and Pedosphere (Soil) - Soil Characterization. A red arrow points from the text above to the 'Nimbostratus' layer name in the 'Protocol Layers' list. The bottom of the interface includes a Bing logo and copyright information for NAVTEQ and Microsoft Corporation.

On the **Layers** menu, contours of some data sets may be shown by clicking the **Contours** box. The contour opacity can be adjusted by clicking on the opacity link.

GLOBE Visualization System
v2 BETA Release

Measurements | Data Counts

2013-04-03

Protocol Layers

- Maximum Daily Temperature **Contours**
- Contour Layer Opacity

Choose sphere to explore protocols

- Atmosphere >
- Biosphere >
- Hydrosphere >
- Pedosphere (Soil) >
Soil Temperature and Moisture
- Pedosphere (Soil) >
Soil Characterization

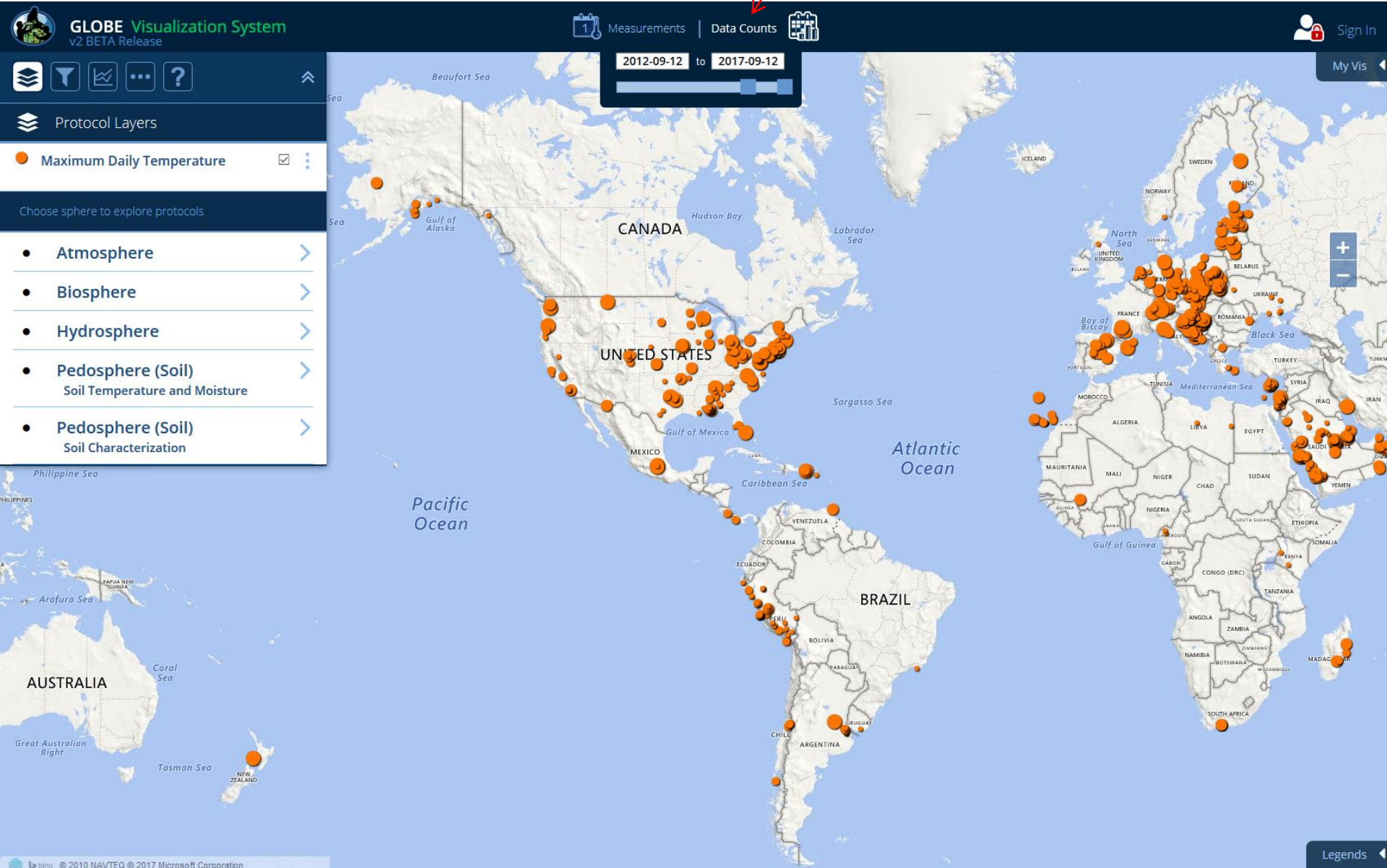
Pacific Ocean

Atlantic Ocean

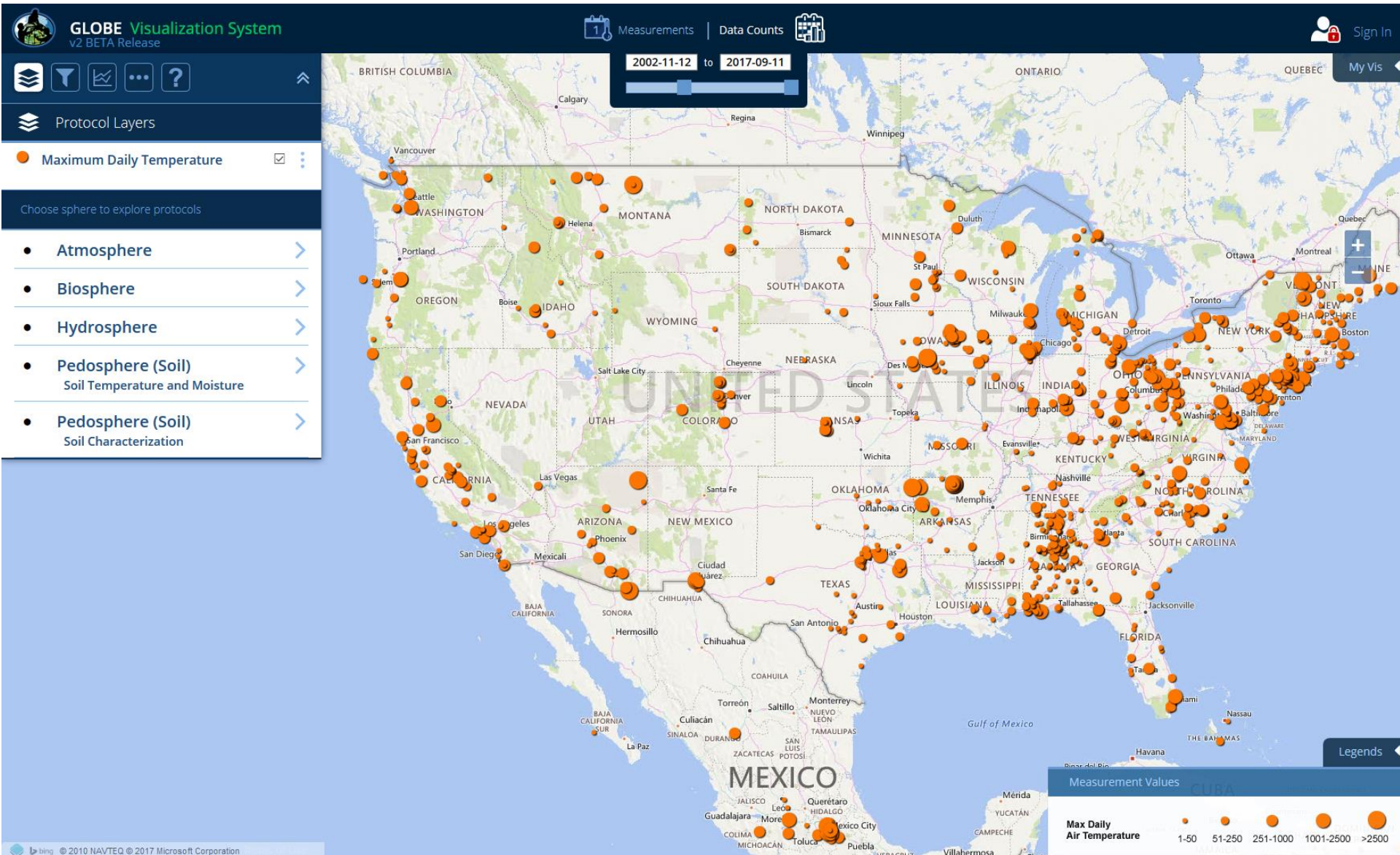
Legends

bing © 2010 NAVTEQ © 2017 Microsoft Corporation

Data can also be viewed by looking at data counts – How many measurements were recorded at a site in a given time frame? Click on ‘Data Counts’ at the top to switch the map view. The default date range is 5 years.



The larger the circle icon, the greater number of measurements reported. These sites offer better possibilities for study in research projects.

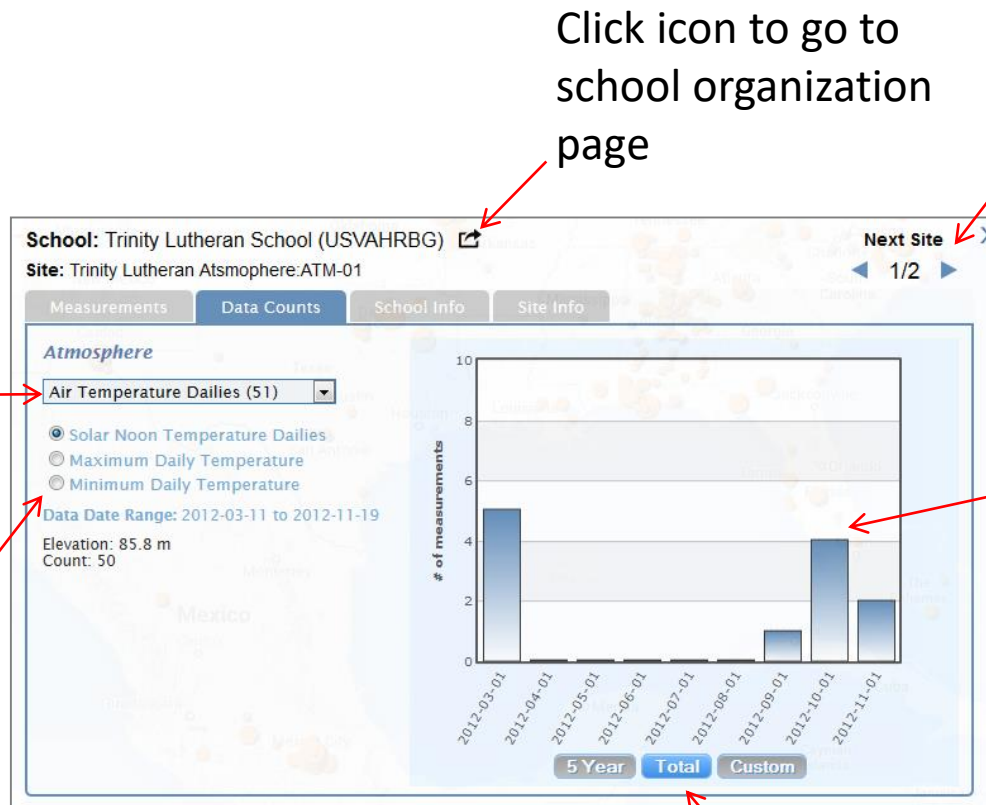


Clicking on an icon on the map opens a site info window. Since the map type is Data Counts, that is the default selection. A plot of the selected data type is displayed showing data counts for the last 5 years for the selected site. You can also select total years or a custom date range.

The screenshot displays the GLOBE Visualization System interface. At the top, the logo and name 'GLOBE Visualization System' are visible, along with a link to the classic version. The main navigation bar includes 'Measurements' and 'Data Counts' (the active tab), and a 'Sign In' button. A date range selector at the top center shows '2002-11-12 to 2017-09-13'. The map shows North America with numerous orange circular icons representing data sites. A site info window is open for 'School: Many Farms High School' and 'Site: MFHS Ag weather station ATM-02'. The window has tabs for 'Measurements', 'Data Counts' (highlighted with a red box), 'School Info', 'Site Info', and 'Photos'. Under the 'Data Counts' tab, the 'Atmosphere' section is active, with 'Air Temperature Dailies' selected in a dropdown menu. Below this, there are radio buttons for 'Solar Noon Temperature Dailies' (selected), 'Maximum Daily Temperature', and 'Minimum Daily Temperature'. The 'Data Date Range' is set to '1998-07-04 to 2012-07-31', and the site's 'Elevation' is '1658.0 m' and 'Count' is '2939'. A bar chart shows the number of measurements over time, with the y-axis labeled '# of measurements' ranging from 0 to 100. The x-axis shows dates from 1998-07-01 to 2012-07-01. At the bottom of the window, there is a 'Quarterly' dropdown menu, a date range selector '1998-07-04 to 2012-07-31', and 'Plot' and 'X' buttons (the 'Plot' button is highlighted with a red box). The bottom of the screen shows a scale bar for 500 km and copyright information: '© 2017 HERE © 2017 Microsoft Corporation'.

Data Counts Site Info Window:

This site info window gives information about the site and is the gateway to creating tables and plots of site data.



Data Type and (total # of measurements)

Datasets (select a dataset to change the plot view)

Click icon to go to school organization page

Cycle through sites whose icons are on top of each other

Roll-over bar graph to see the total # of measurements for each interval

Change plot time range

Share your layer and filter parameters with others by sending them a URL. When the URL is entered, the system will load your filter sets automatically. To get the URL, click on the 'User option' tab and click 'Share'. A popup will appear with the URL.

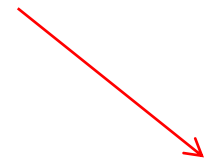
The screenshot displays the GLOBE Visualization System interface. At the top, the header includes the GLOBE logo, the text "GLOBE Visualization System", and navigation links for "Measurements" and "Data Counts". A date selector shows "2019-10-22". On the right, there are options for "Select Language" and a "Welcome" message with a user profile icon.

The left sidebar contains the "User Options" menu, which is currently expanded. It shows a "Sign Out" link and a "Welcome Cornell Lewis" message. Below this is a "Show My" dropdown menu. Two checkboxes are visible: "Sites" (unchecked) and "Measurements" (checked). At the bottom of the sidebar, there are three buttons: "Share", "Load", and "Save". The "Share" button is highlighted with a red box, and a red arrow points from the text above to it.

The main area of the interface is a world map with various colored markers (green, yellow, orange, red) placed across different continents. A "Share with URL:" popup window is centered over the map, displaying the URL: `https://vis.globe.gov/GLOBE/?load_`. The popup has a close button (X) in the top right corner.

At the bottom left, there is a scale bar for "1000 km" and a copyright notice for "© 2019 Microsoft". At the bottom right, there is a "Legends" button.

If you'd like to save your filter sets, make sure you are logged-in using your GLOBE.gov username and password



GLOBE Visualization System

Measurements | Data Counts

Select Language

Sign In

2019-10-22

Chukchi Sea, Beaufort Sea, Bering Sea, Gulf of Alaska, Hudson Bay, Labrador Sea, CANADA, UNITED STATES, MEXICO, Gulf of Mexico, Caribbean Sea, Atlantic Ocean, Pacific Ocean, Sargasso Sea, North Sea, Bay of Biscay, Mediterranean Sea, Black Sea, Gulf of Guinea, AUSTRALIA, Indonesia, Arafura Sea, Timor Sea, Coral Sea, SOUTH AFRICA, MOZAMBIQUE, MALI, THAI, CHAD, SUDAN, SAUDI ARABIA, YEMEN, ETHIOPIA, TANZANIA, ZAMBIA, ANGOLA, BOTSWANA, ZIMBABWE, SOUTH AFRICA, MADAGASCAR

Getting Started:

Three steps to visualizing your data:

1. Select the protocol data you would like to visualize.
2. Select the date
3. Click a measurement to retrieve the data

[See a 20 second demonstration](#)

[See a quick demonstration of additional features](#)

[Download full tutorial](#)

[GLOBE Data User Guide](#)

Don't Show Again

Sites on Map: 0

1000 km

© 2019 Microsoft

Legends

Once logged-in, click 'Save' to save your current filters. Enter a filter name and submit.

The screenshot displays the GLOBE Visualization System interface. At the top, the header includes the GLOBE logo, navigation tabs for 'Measurements' and 'Data Counts', a language selection dropdown, and a user profile for 'Cornell Lewis'. A left sidebar contains 'User Options' with a 'Sign Out' link, a 'Show My' dropdown menu, checkboxes for 'Sites' and 'Measurements', and a 'Filter Sets' section with 'Share', 'Load', and 'Save' buttons. The 'Save' button is highlighted with a red box. A red arrow points from the text above to this button. The main area features a world map with numerous colored data points. A modal dialog box titled 'Save Current Filter Settings' is open, containing a text input field with the text 'Air Temperature - 19/10/22' and a green 'Save Filter' button. The bottom left corner shows '181 Sites on Map' and a scale bar, while the bottom right corner has a 'Legends' button.

To load a filter set, click the 'Load' link.

The screenshot displays the GLOBE Visualization System interface. At the top, the header includes the GLOBE logo, the text "GLOBE Visualization System", and navigation links for "Measurements" and "Data Counts". A date selector shows "2019-10-22". On the right, there is a "Select Language" dropdown and a "Welcome" message with an "Options" link.

The main area features a world map with numerous colored data points (yellow, green, blue, red) scattered across the continents. A "User Options" panel is open on the left side, containing a "Sign Out" link, a "Welcome Cornell Lewis" message, a "Show My" dropdown menu, and two checkboxes: "Sites" and "Measurements". Below these are "Filter Sets" with three links: "Share", "Load", and "Save". A red box highlights the "Load" link, and a red arrow points from the text above to it.

At the bottom left, there is a "Sites on Map" indicator showing "1377" and a "2000 km" scale bar. The bottom right corner contains a "Legends" button.

A pop-up window will display where you can load, edit, delete and copy the URL of the saved filter set

GLOBE Visualization System | Measurements | Data Counts | Select Language | Welcome Options

Saved Filter Sets

Load **air temp** [edit](#)
[delete](#)

Map Type: Measurements
Protocol: Air Temperature Measurements
Observer: Observer
Date: 2018-10-26
Elevation Range: -5475.1m to 7051m

Load **air temp clouds** [edit](#)
[delete](#)

Map Type: Data Counts
Protocol: Air Temperature Data Count
Data Counts: 0 to 3640720
Observer: null
Date: 2012-11-08 to 2017-11-08
Elevation Range: -5942m to 7051m

Left Panel: User Options | Welcome Cornell Lewis | Show My | Sites Measurement | Filter Sets: [Share](#) [Load](#) [Save](#)

Map: Philippines Sea, Philippines, Indonesia, Arafura Sea, Timor Sea, Australia, Coral Sea, Arabian Sea, Yemen, Ethiopia, Somalia, Madagascar, Mozambique, India, Pakistan, Iran, Iraq, Syria, Turkey, Kazakhstan, Uzbekistan, Turkmenistan, Afghanistan, Bangladesh, Nepal, China, Japan, Korea, North Korea, South Korea, Taiwan, Hong Kong, Macau, Singapore, Malaysia, Brunei, Indonesia, East Timor, Papua New Guinea, Vanuatu, Solomon Islands, Fiji, Tonga, Samoa, Tokelau, New Zealand, Australia, New Guinea, Indonesia, Philippines, Japan, Korea, North Korea, South Korea, Taiwan, Hong Kong, Macau, Singapore, Malaysia, Brunei, Indonesia, East Timor, Papua New Guinea, Vanuatu, Solomon Islands, Fiji, Tonga, Samoa, Tokelau, New Zealand.

When logged-in, you can display just the sites where you have entered data. On the User Options tab, click the 'Sites' checkbox and make sure 'Show My' is selected in the drop down menu. All of your sites will be identified with a red circle on the map. Changing the drop down to 'Show My Organization's' will display all sites where anyone in your organization(s) has entered data.

The screenshot displays the GLOBE Visualization System interface. At the top, the header includes the GLOBE logo, navigation tabs for 'Measurements' and 'Data Counts', a language selection dropdown, and a user welcome message for 'Cornell Lewis'. The main area features a world map with several red circular markers indicating data sites, primarily located in the United States and Mexico. A 'User Options' sidebar is open on the left, showing a 'Show My' dropdown menu set to 'My' and a 'Sites' checkbox that is checked and highlighted with a red box. Below the sidebar, a 'Filter Sets' section contains 'Share', 'Load', and 'Save' buttons. The bottom of the map shows a scale bar for 2000 km and a copyright notice for 2019 Microsoft.

To see just your sites that have measurements of the active protocol layer(s) for the current map date, click the 'Measurements' check box on the User Options tab. In the example below, only the user's cloud cover measurements are shown on the map.

The screenshot displays the GLOBE Visualization System interface. The top navigation bar includes the GLOBE logo, the text "GLOBE Visualization System", and a "Measurements" tab with a "1" indicator. To the right, there are "Data Counts" and "Select Language" options, along with a "Welcome" message and "Options" link. The left sidebar contains "User Options" with a "Sign Out" button. Below this, a "Welcome Cornell Lewis" message is shown. A "Show My" dropdown menu is open, with the "Measurements" checkbox checked and highlighted by a red rectangle. The "Sites" checkbox is unchecked. Below the menu, there are "Filter Sets: Share Load Save" options. The main map area shows a geographical view of the United States and Mexico, with a date selector set to "2017-03-20". A red rectangle highlights a blue circular marker on the map near Los Angeles, California. The bottom left corner shows "Sites on Map: 1" and a "200 km" scale bar. The bottom right corner has a "Legends" button. The footer includes a copyright notice: "© 2019 Microsoft".

Under the 'More' menu are additional options – Base maps, map grid and a lat/long cursor position.

The screenshot displays the GLOBE Visualization System interface. At the top, the header includes the GLOBE logo, the text "GLOBE Visualization System", and navigation links for "Measurements", "Data Counts", "Select Language", and "Welcome Options". A date selector shows "2019-10-22".

The main area features a world map with a red dashed grid. Numerous data points are plotted across the map, represented by colored circles with arrows pointing downwards. The points are concentrated in North America, Europe, and Africa. A red box highlights the "More Options" menu icon in the top-left corner of the map area.

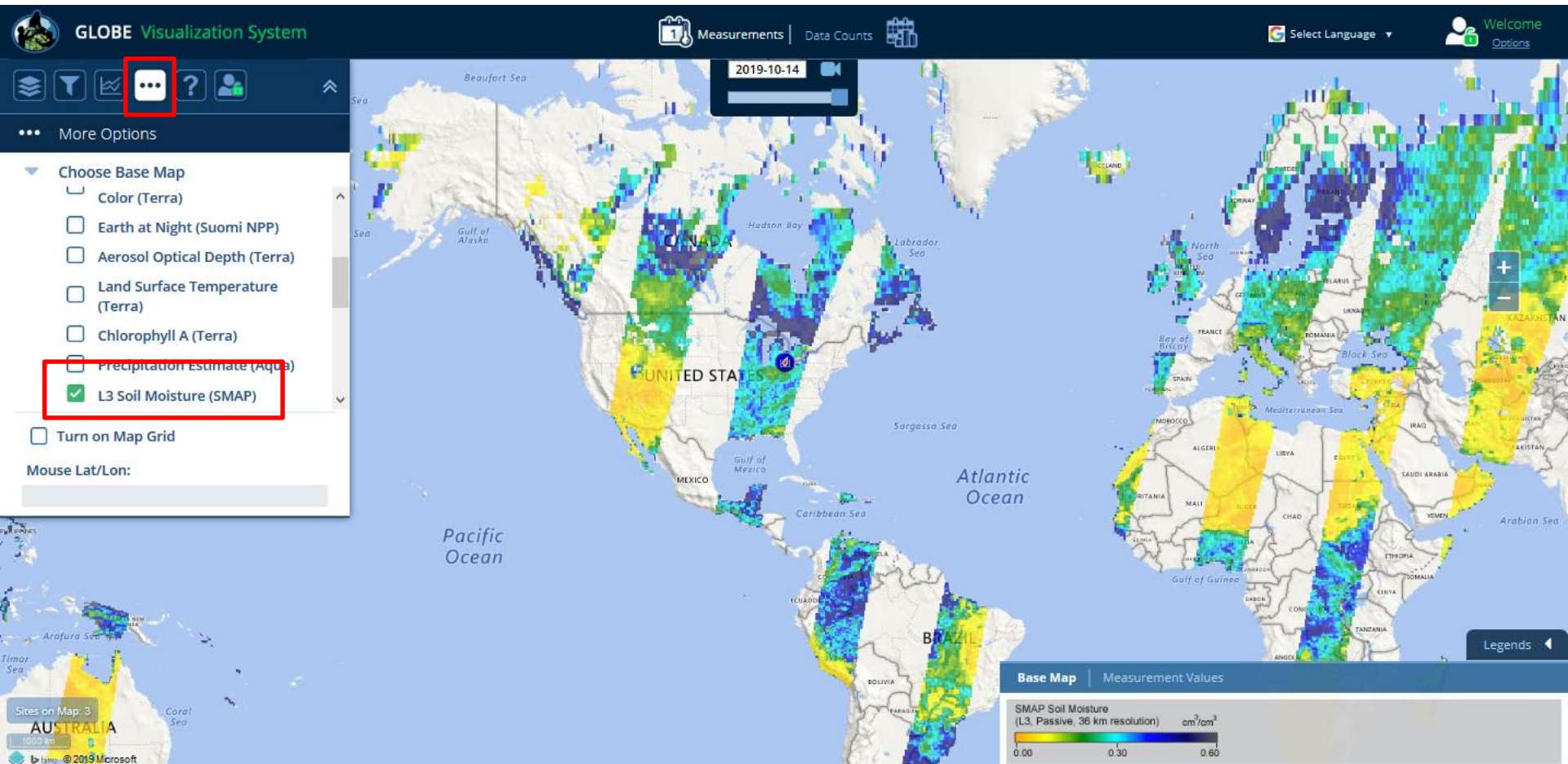
The "More Options" menu is open, showing the following settings:

- Choose Base Map**
 - Open Street
 - Streets
 - Satellite
 - Hybrid
- NASA Satellite Data Options**
 - Corrected Reflectance - True Color (Terra)
 - Earth at Night (Suomi NPP)
- Turn on Map Grid

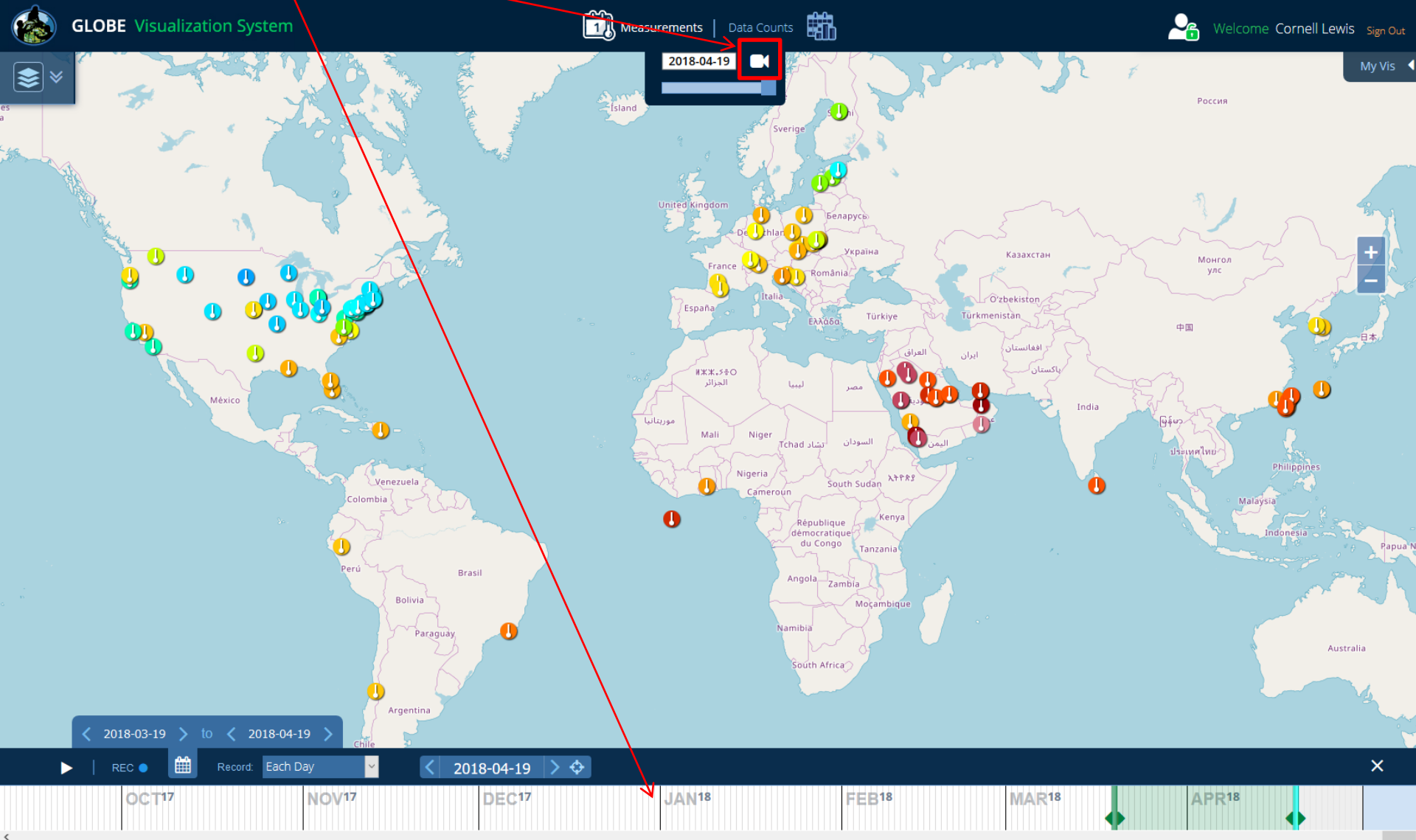
Below the menu, the "Mouse Lat/Lon:" field displays "Lat: 33.225645°, Lon: -117.750509°".

At the bottom left, there is a scale bar for "1000 km" and a note "© OpenStreetMap contributors". At the bottom right, there is a "Legends" button.

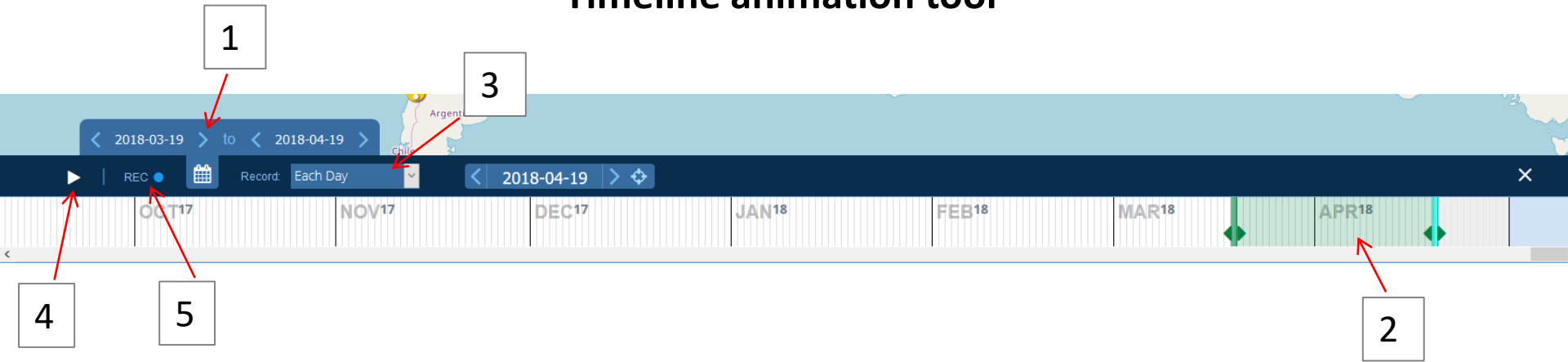
Under the 'More' menu, you can also display NASA Satellite Data Base maps to overlay under your measurements



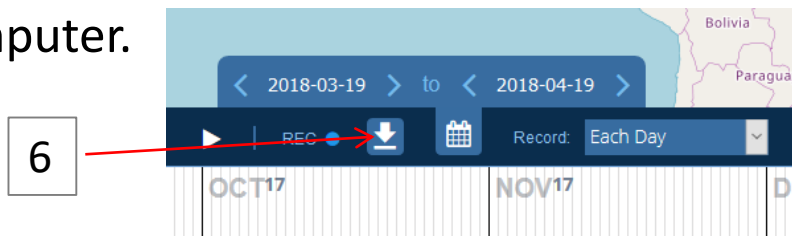
Want to see your measurements over time? Click on the movie icon to open the timeline animation tool



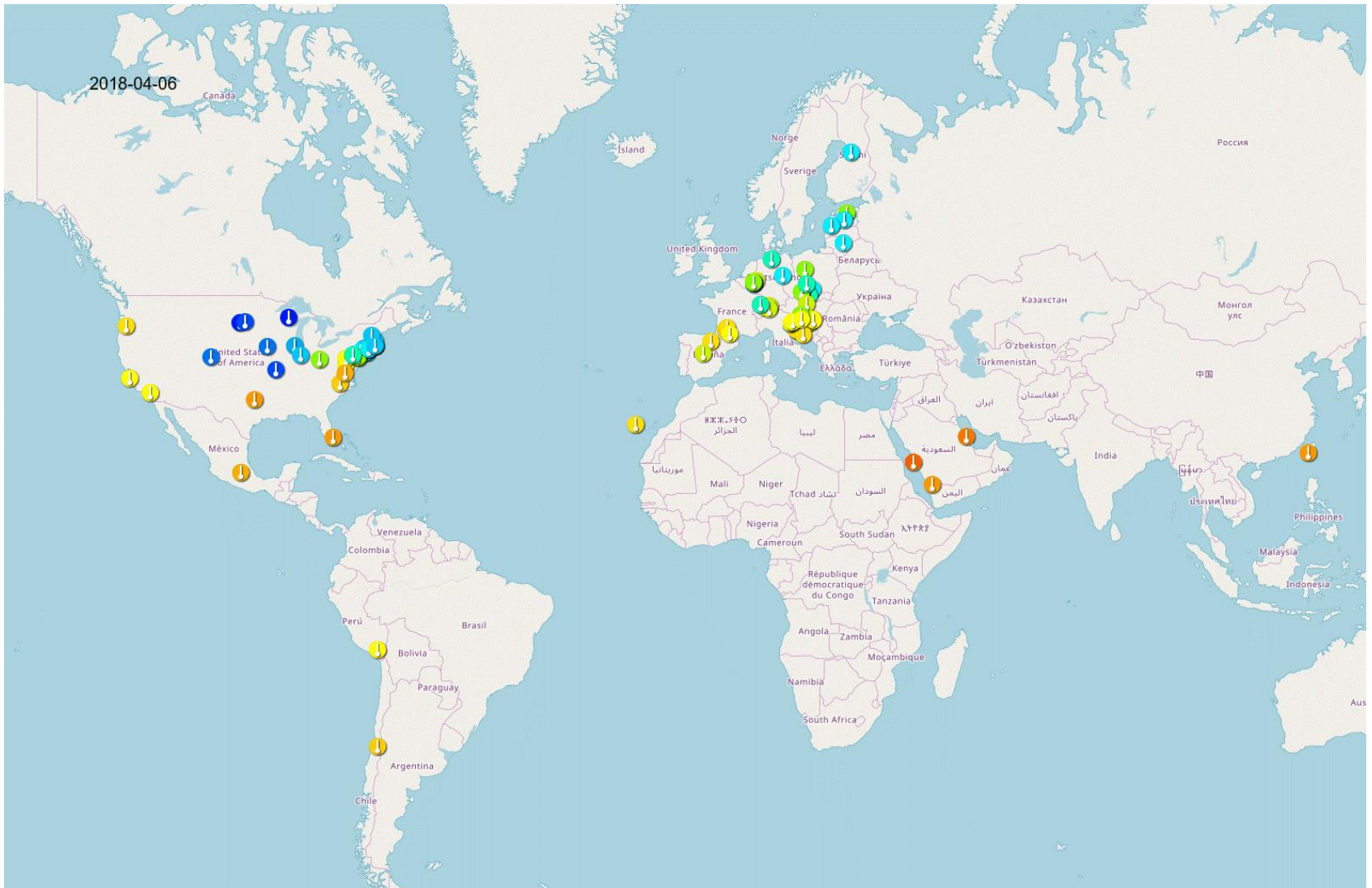
Timeline animation tool



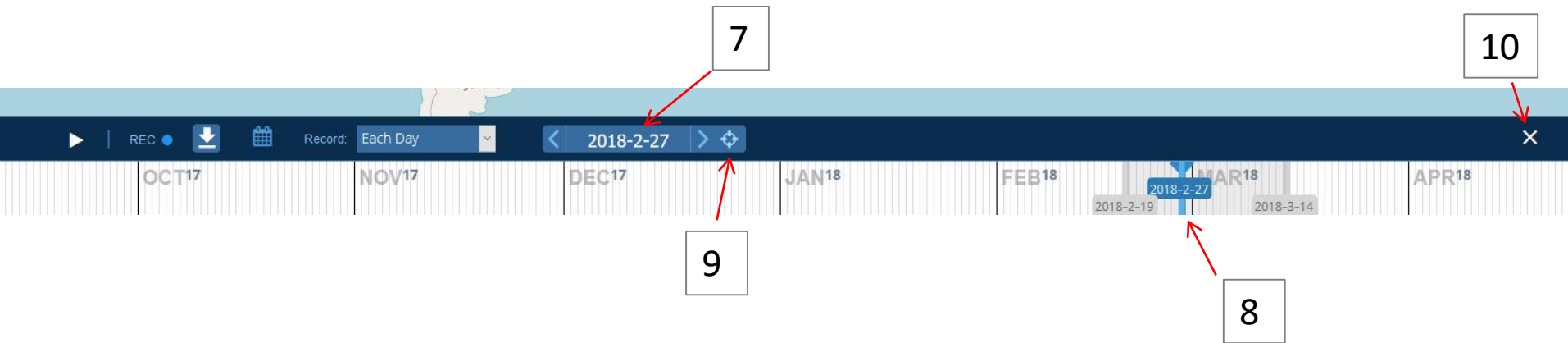
1. Select a date range (make sure you have already added the desired protocol layers). Click a date to open the calendar interface.
2. You can also select a date range by moving the date range slider on the timeline.
3. Determine the time interval (each day, 1 day per month or 1 day per year).
4. Press the play button to preview the animation.
5. Press record to create an animation to save to a file.
6. Once recorded, press the download icon to save an animated gif to your computer.




Timeline animation tool – sample animated gif file



Timeline animation tool - continue



7. Change the current map date by clicking the arrows to go to the next or previous day or click the current day to open a calendar interface.
8. You can also change the map date by adjusting the current date slider bar on the timeline (to see the current date slider bar, click the calendar icon  to close the date range selector).
9. Click the center icon to re-center the map date to the center of the timeline.
10. Press X to close the timeline.

Your Assignment

1. On April 7, 2004, how many schools in the Czech Republic reported a water pH reading less than 5?
2. Which measurement technique did the school(s) use?
3. What was the range of pH values reported for this site in 2003 and 2004?
4. Pick one Czech school with a pH value less than 5 and another nearby school reporting water pH on April 7, 2004 and plot the data from the two schools for January to May 2004. What does the graph illustrate?
5. Which school in Poland has reported the most water pH data?
6. Plot water pH, conductivity, and alkalinity for this site for January to May 2004. What does this graph illustrate?



Answers

1. One (Filtered by Czech Republic using the place filter and date and then used the 'View Table Layer' tool).
2. Paper (Clicked on the site on the map, it's the lightest color icon. Value found in site info window).
3. 3 – 6 pH units in 2003, 3-6.5 in 2004 (Opened the site information window and clicked on the 'View data table' icon to view the data table. Then selected the data date range from Jan-Dec 2003 and then for 2004).
4. The pH level for the school with the higher pH lever on April 7th on was consistently higher from Jan to May
5. [School: XI Liceum St. Konarskiego in Wrocław, Site: Opatowicki weir:SWS-02](#) (Filtered by Poland, switched to Data Counts map. View the Layer table and sort by the count column).
6. The pH remains fairly constant despite significant changes in alkalinity and conductivity (Added each dataset to the plot list by selecting each one in the site info window. Stack plot probably works best).

