

# 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 GLOBE Program website interface. At the top, the logo for 'THE GLOBE PROGRAM' is displayed, along with the tagline 'A Worldwide Science and Education Program'. The navigation menu includes '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 menu, there is a large banner image of a castle and students in a field. A white box on the banner contains text about the 2018 GLE/22nd Annual Meeting registration. Below the banner, there 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 trail 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 text label '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.

The screenshot displays the GLOBE Visualization System interface. At the top left, the logo reads "GLOBE Visualization System v2 BETA Release". Navigation links for "Measurements" and "Data Counts" are visible. A date selector shows "2018-04-19". A "Welcome" message for "Cornell Lewis" is in the top right. A sidebar on the left, outlined in red, contains a "Welcome!" section, a "Getting Started:" heading, and three numbered steps: "1. Select the protocol data you would like to visualize.", "2. Select the date", and "3. Click a measurement to retrieve the data". Below these steps are links for "See a 20 second demonstration" and "See a quick demonstration of additional features", and a "Don't Show Again" checkbox. The main area features a world map with labels for "CANADA", "UNITED STATES", "MEXICO", "BRAZIL", and "AUSTRALIA". A "Show My" dropdown menu is set to "Sites", with "Measurements" also available. Filter sets for "Share", "Load", and "Save" are shown. A "My Vis" button and a "Legends" button are also present.

# Overview of the Visualization Window Features (Desktop view)

Sign-in / Sign-out

The screenshot displays the GLOBE Visualization System v2 BETA Release interface. The main map shows the United States and surrounding regions with data site icons. The interface includes a top navigation bar with 'Measurements' and 'Data Counts' tabs, a user profile section for 'Cornell Lewis', and a left sidebar for protocol layers. A right sidebar contains 'My Vis' controls and filter sets. A bottom legend shows 'Solar Noon Air Temperature (C)' with a color scale from -50 to 50. Callouts identify the following features:

- Map Type**: Points to the map style selection icon in the top left.
- Map Date**: Points to the date selector showing '2018-04-19'.
- Open/Close Layer and Filter Menus**: Points to the left sidebar menu.
- Open/Close My Vis menu**: Points to the 'My Vis' toggle in the right sidebar.
- Zoom Controls**: Points to the '+' and '-' zoom buttons in the right sidebar.
- Data Site Icons**: Points to the colored circular icons on the map representing measurement sites.
- Open/Close Legend**: Points to the 'Legends' toggle in the bottom right.

# Layer and Filter Menu Icons

My Vis / Sign-in and out  
(on phone and small tablets)



↑  
Layers

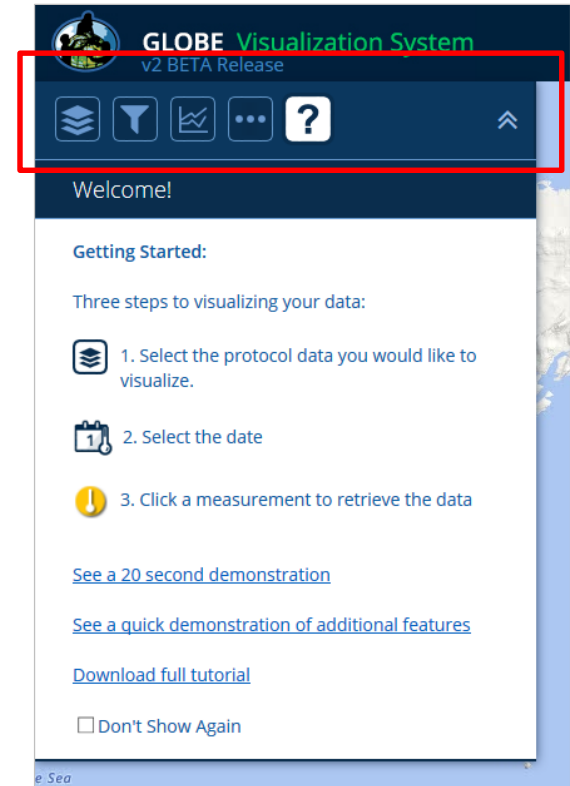
↑  
Filters

↑  
Multi-Site  
Plots

↑  
Base Map, Language and  
Map Grid Controls

↑  
Welcome and  
Tutorials

↑  
Open/close  
menu



# 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, Sargasso Sea, Labrador 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, Caribbean Sea, Philippine Sea, Sargasso Sea, Labrador Sea, Gulf of Alaska, Chukchi Sea, Bering Sea

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), 'Data Counts', and a grid icon. A date selector shows '2018-04-19' with a video camera icon and a progress bar. The left sidebar contains a 'Protocol Layers' section with a list of protocols. The 'Air Temperature Dailies' section is expanded, showing three options: 'Solar Noon Temperature Dailies' (unchecked), 'Maximum Daily Temperature' (checked and circled in red), and 'Minimum Daily Temperature' (unchecked). 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', 'VENEZUELA', and 'COLOMBIA'. 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

COLOMBIA

Beaufort Sea

Hudson Bay

Labrador Sea

Gulf of Alaska

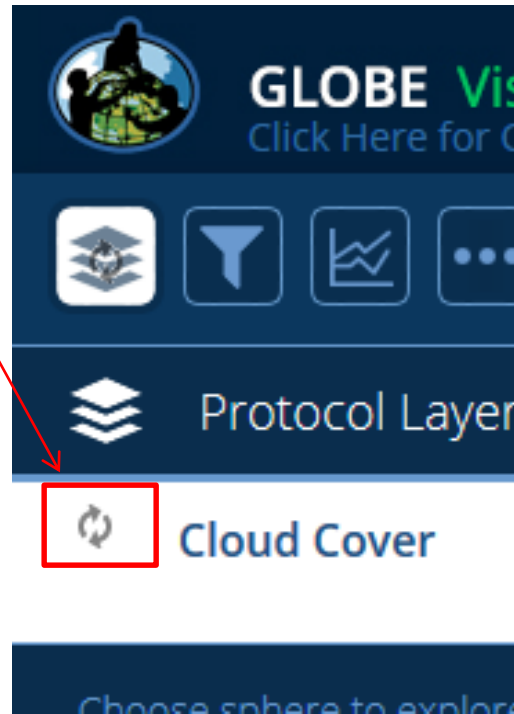
Gulf of Mexico

Caribbean Sea

Pacific Ocean

Sargasso Sea

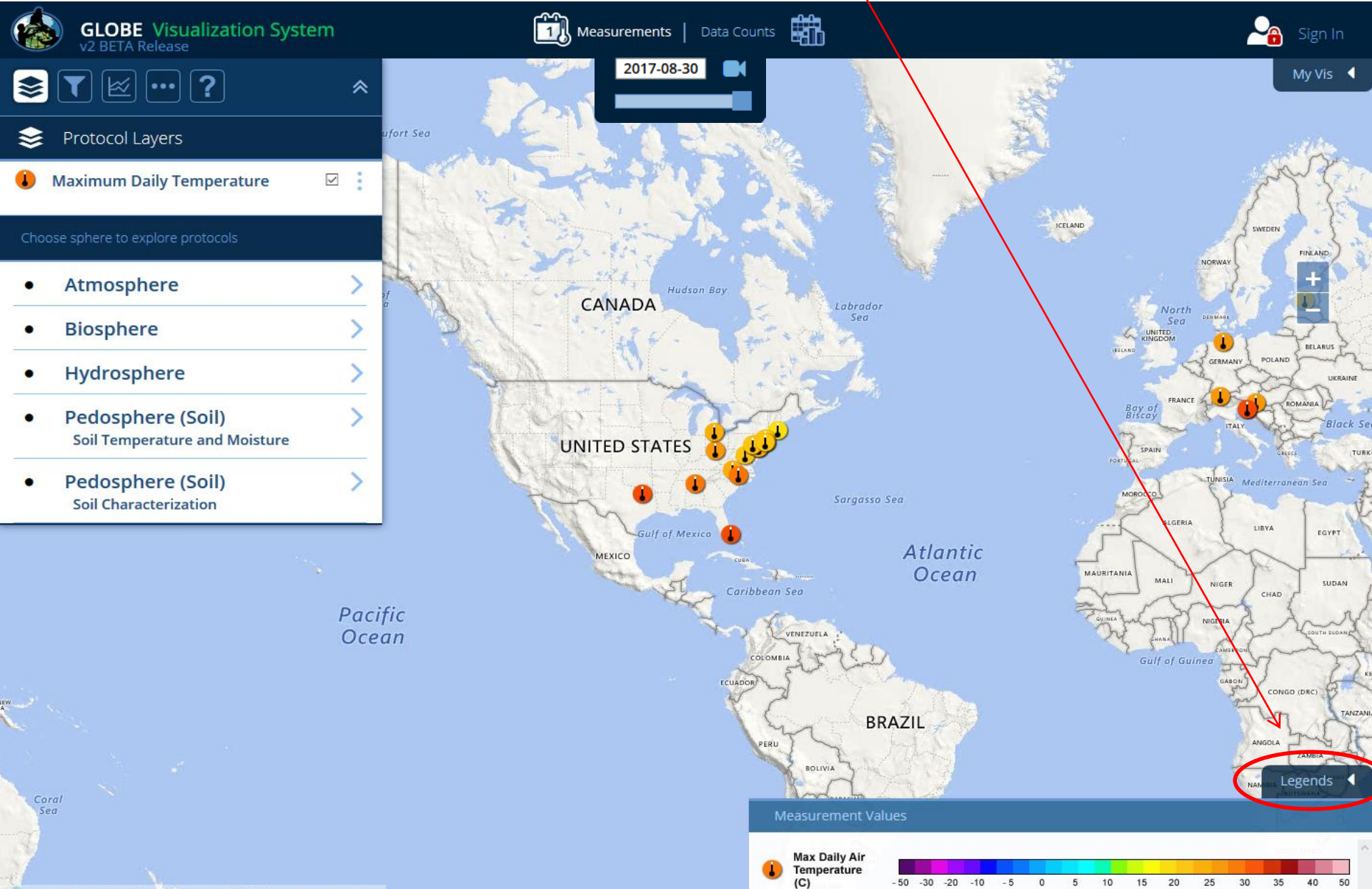
If there's a lot of data, you may get an in-progress icon. Please wait until the system finishes before clicking or performing additional operations.



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 by sphere: Atmosphere, Biosphere, Hydrosphere, Pedosphere (Soil) - Soil Temperature and Moisture, and Pedosphere (Soil) - Soil Characterization. The main map area shows a world map with several orange and yellow pins indicating measurement sites. The pins are concentrated in the eastern United States and parts of Europe. The interface also includes a 'My Vis' button and a 'Legends' button at the bottom right.

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

2013-04-03

Apr

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

Protocol Layers

- Maximum Daily Temperature

Choose sphere to explore protocols

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

Beaufort Sea, Gulf of Alaska, Gulf of Mexico, Caribbean Sea, Atlantic Ocean, Pacific Ocean, Coral Sea, Bay of Biscay, North Sea, Mediterranean Sea, Gulf of Guinea, UNITED STATES, MEXICO, BRAZIL, VENEZUELA, COLOMBIA, ECUADOR, PERU, BOLIVIA, PARAGUAY, MOROCCO, ALGERIA, LIBYA, EGYPT, MAURITANIA, MALI, NIGER, CHAD, SUDAN, NIGERIA, CAMEROON, SOUTH SUDAN, GABON, CONGO (DRC), ANGOLA, ZAMBIA, NAMIBIA, BOTSWANA, ZIMBABWE, TANZANIA, FRANCE, UNITED KINGDOM, DENMARK, ROMANIA, UKRAINE, SWEDEN, NORWAY, ICELAND, PORTUGAL, TUNISIA, MOROCCO, ALGERIA, LIBYA, EGYPT, MAURITANIA, MALI, NIGER, CHAD, SUDAN, NIGERIA, CAMEROON, SOUTH SUDAN, GABON, CONGO (DRC), ANGOLA, ZAMBIA, NAMIBIA, BOTSWANA, ZIMBABWE, TANZANIA

© 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 'Measurements' and 'Data Counts' tabs. A calendar for April 2013 is overlaid on a world map, with a red circle highlighting the date 2013-04-03. The calendar shows measurement icons (small downward arrows) for every day in April. The left sidebar lists protocol layers: 'Maximum Daily Temperature' (checked), 'Atmosphere', 'Biosphere', 'Hydrosphere', 'Pedosphere (Soil) - Soil Temperature and Moisture', and 'Pedosphere (Soil) - Soil Characterization'. The map shows various locations with measurement icons, including the United States, Mexico, and Europe.

**GLOBE Visualization System**  
v2 BETA Release

Measurements | Data Counts

2013-04-03

Apr

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

Protocol Layers

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

United States, Mexico, Brazil, Atlantic Ocean, Pacific Ocean, Caribbean Sea, Gulf of Mexico, Mediterranean Sea, Bay of Biscay, North Sea, Black Sea, Sargasso Sea, Gulf of Guinea.

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

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, along with a calendar icon showing the date '2013-04-03'. On the left, a sidebar menu lists protocol layers: 'Maximum Daily Temperature' (selected), '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) placed across different states. The Oregon icon is highlighted with a red circle. The map also shows 'CANADA' and 'MEXICO' with their respective state and city names. The bottom left corner features the Bing logo and copyright information: '© 2010 NAVTEQ © 2017 Microsoft Corporation'. The bottom right corner has a 'Legends' button.



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

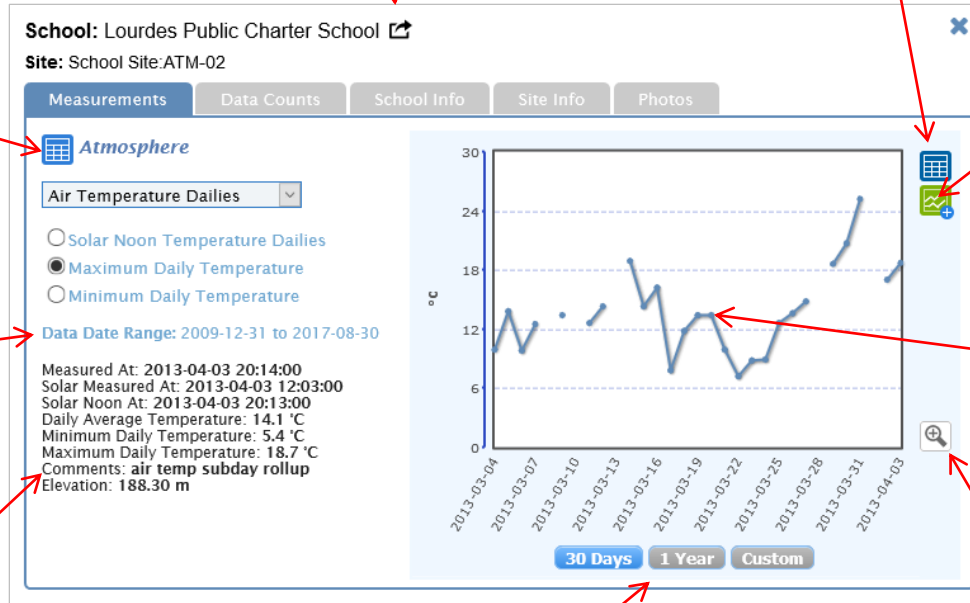
Data at this site can be found in this date range

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

Measurement info for the selected data type

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 Alaska with a data popup window for "School: Lourdes Public Charter School" and "Site: School Site:ATM-02". The popup 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. 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 10:00  
Elevation: 180.96 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

Beaufort Sea | Amundsen Gulf

2013-04-03

Measurements | Data Counts

Sign In | My Vis

**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

© 2010 NAVTEQ © 2017 Microsoft Corporation

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**

**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)".

A table of data is shown with the following columns: School Name, Site Name, Latitude, Longitude, Elevation, Measured At, Solar Measured At, and Solar Noon At. The table contains 45 rows of data, with the last row showing values for 2017-09-13.

A red box highlights a context menu that appears when a column header is right-clicked. The menu lists various data columns with checkboxes next to them, indicating which columns are currently visible in the table. The checked items include: School Name, Site Name, Latitude, Longitude, Elevation, Measured At, Solar Measured At, Solar Noon At, Current Temp, Pressure, Sea Level Pressure, Pressure Method, Aerosol Optical Thickness, Transmission Percent, Sensor Wavelength Nm, Observed Sky Color, and Observed Sky Clarity.

At the bottom of the interface, there is an "Export .csv" button and a date range selector set to "1995-01-01 to 2017-09-13". The page number "1 - 45 of 232137" is also visible.

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. Below the plot are buttons for '30 Days', '1 Year', and 'Custom'. The bottom of the screen shows a map of the United States with various location pins.

**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

Sign In | My Vis | Legends



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 'GLOBE Visualization System', 'Measurements' (with a '1' notification), 'Data Counts', and a user profile icon with 'Sign In' and 'My Vis' options. The left sidebar contains a 'Multi-Site Plots' section with a search bar and a list of sites. The main content area shows a detailed view for the 'Lourdes Public Charter School' site, including a line graph of 'Air Temperature Dailies' and various data fields.

**Multi-Site Plots Configuration:**

- 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
- Options: Single Line Plot, Stacked Plot, Use Auto-Y Axis
- Buttons: Plot All, View Plot Data, Clear List

**Site Details (Lourdes Public Charter School):**

- School: Lourdes Public Charter School
- Site: School Site:ATM-02
- Measurements: Atmosphere
- Plot: Air Temperature Dailies
- Options: Solar Noon Temperature Dailies, Maximum Daily Temperature (selected), Minimum Daily Temperature
- 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
- Time Range: 30 Days, 1 Year, Custom

The background map shows the United States with various site locations marked by colored pins. The bottom of the interface includes a scale bar (500 km) and copyright information: © 2018 Microsoft Corporation © 2018 HERE.

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 'Add Site' icon in the bottom right corner of the window's toolbar. 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 background map shows various sites marked with colored icons across the United States and Europe.

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 shows the configuration for two sites. The second site, **Bernard High School PALISSY** (Site: **Great Court: ATM-01**), is highlighted with a red box. Below the site list, the 'Plot Date Range' is set to 2013-03-04 to 2013-04-03. The 'Use Auto-Yaxis' checkbox is checked and also highlighted with a red box. At the bottom of the sidebar, the **Plot All** button is highlighted with a red box. The main area shows a world map with various site locations marked by colored pins. A detailed view for the selected site, **Lycée Bernard PALISSY** (Site: **Grande-Cour: ATM-01**), is shown on the right. This view includes a time series plot for **Air Temperature Dailies** (Maximum Daily Temperature) from 2013-03-04 to 2013-04-03. The plot shows a temperature range from approximately 3.1°C to 18.9°C. Below the plot, key statistics are provided: 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, and Comments: air temp subday rollup. Elevation: 50.60 m. The interface also includes navigation options like '30 Days', '1 Year', and 'Custom' for the plot.

**Site Configuration:**

- 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

**Plot Options:**  Use Auto-Yaxis

**Buttons:** **Plot All**, **View Plot Data**, **Clear List**

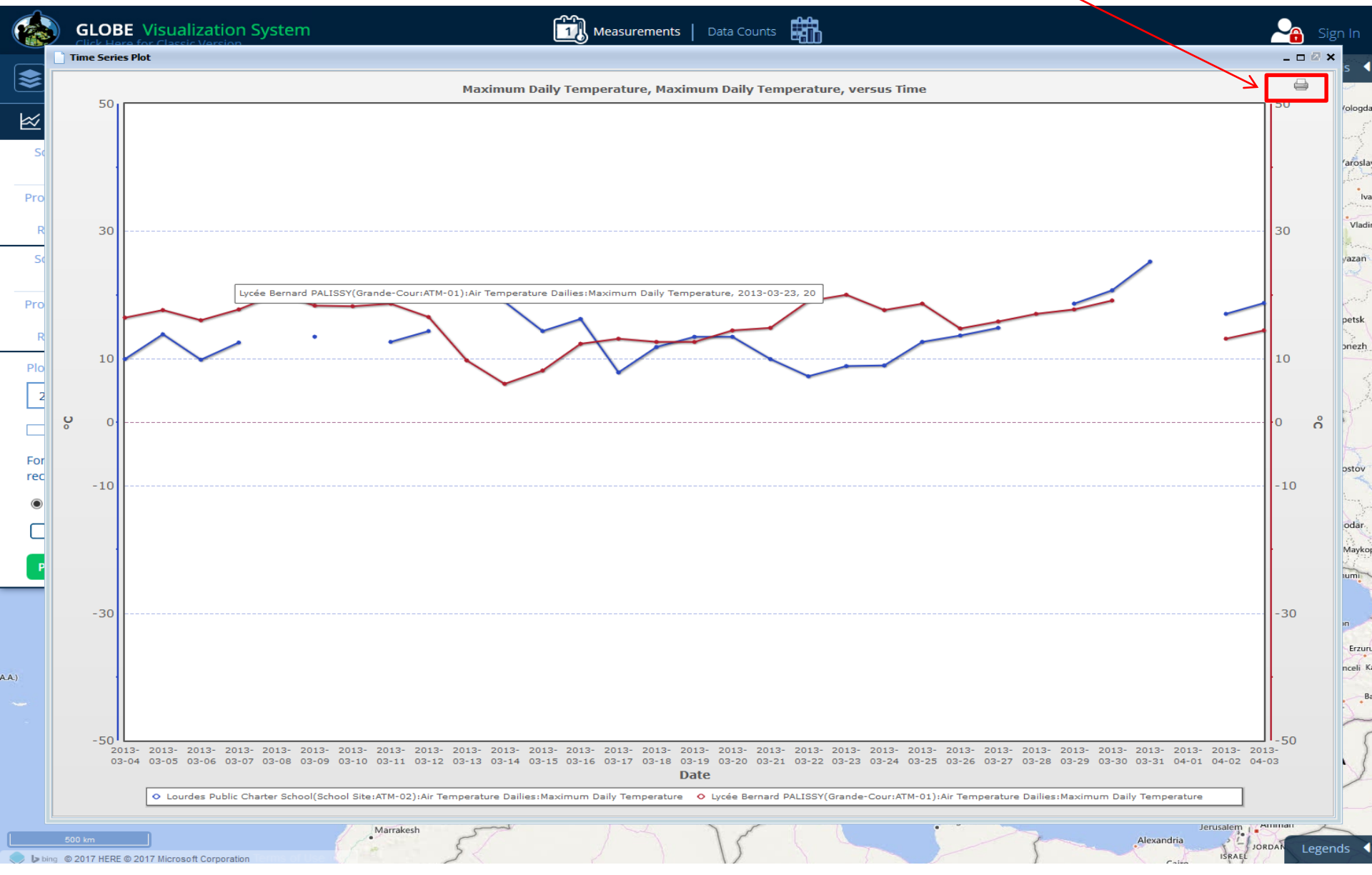
**Site Details (Lycée Bernard PALISSY):**

- Measurements: **Air Temperature Dailies**
- Options:  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

**Plot Data (Approximate):**

Date	Temperature (°C)
2013-03-04	15.0
2013-03-05	16.0
2013-03-06	17.0
2013-03-07	18.0
2013-03-08	17.0
2013-03-09	16.0
2013-03-10	15.0
2013-03-11	14.0
2013-03-12	13.0
2013-03-13	12.0
2013-03-14	11.0
2013-03-15	10.0
2013-03-16	11.0
2013-03-17	12.0
2013-03-18	13.0
2013-03-19	14.0
2013-03-20	15.0
2013-03-21	16.0
2013-03-22	17.0
2013-03-23	18.0
2013-03-24	17.0
2013-03-25	16.0
2013-03-26	15.0
2013-03-27	14.0
2013-03-28	13.0
2013-03-29	12.0
2013-03-30	11.0
2013-03-31	10.0
2013-04-01	11.0
2013-04-02	12.0
2013-04-03	13.0

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**

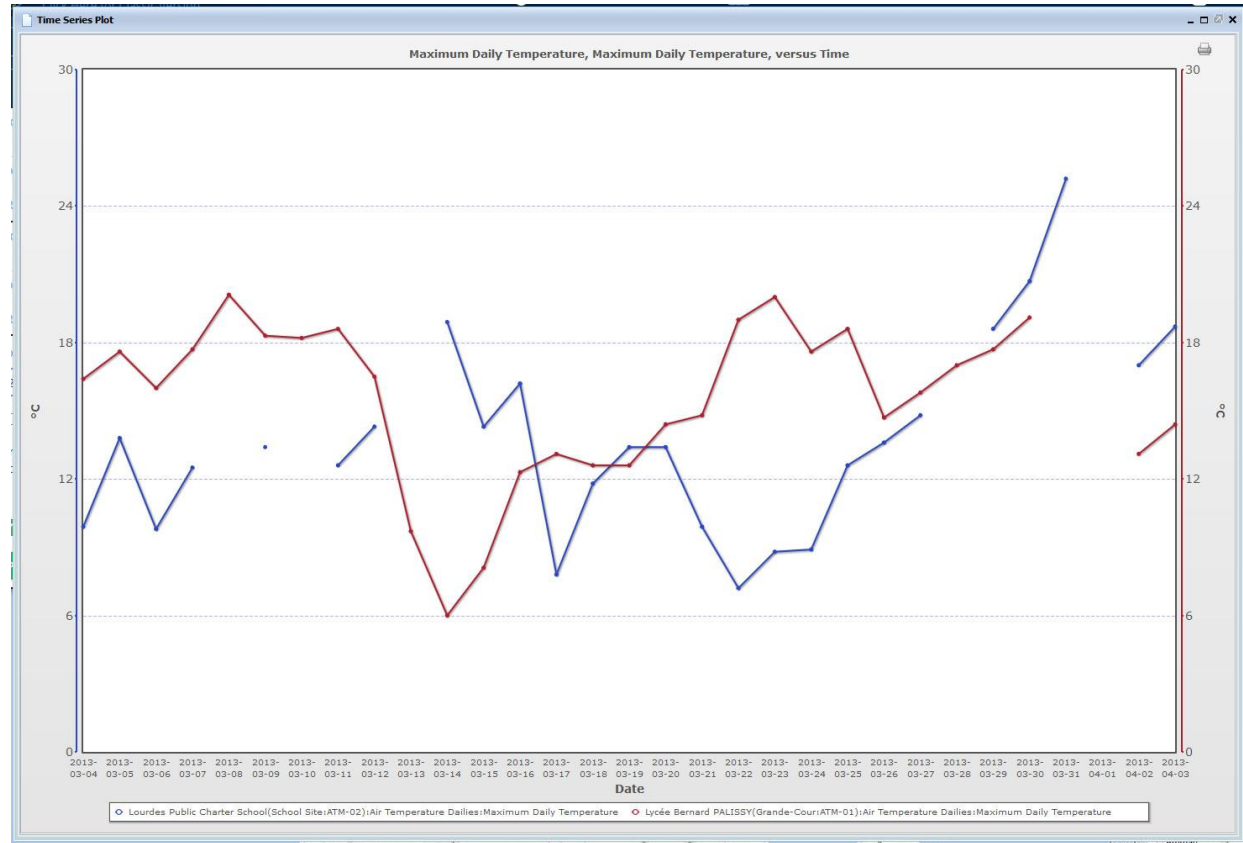
Plot Date Range:  
2013-03-04 to 2013-04-03

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

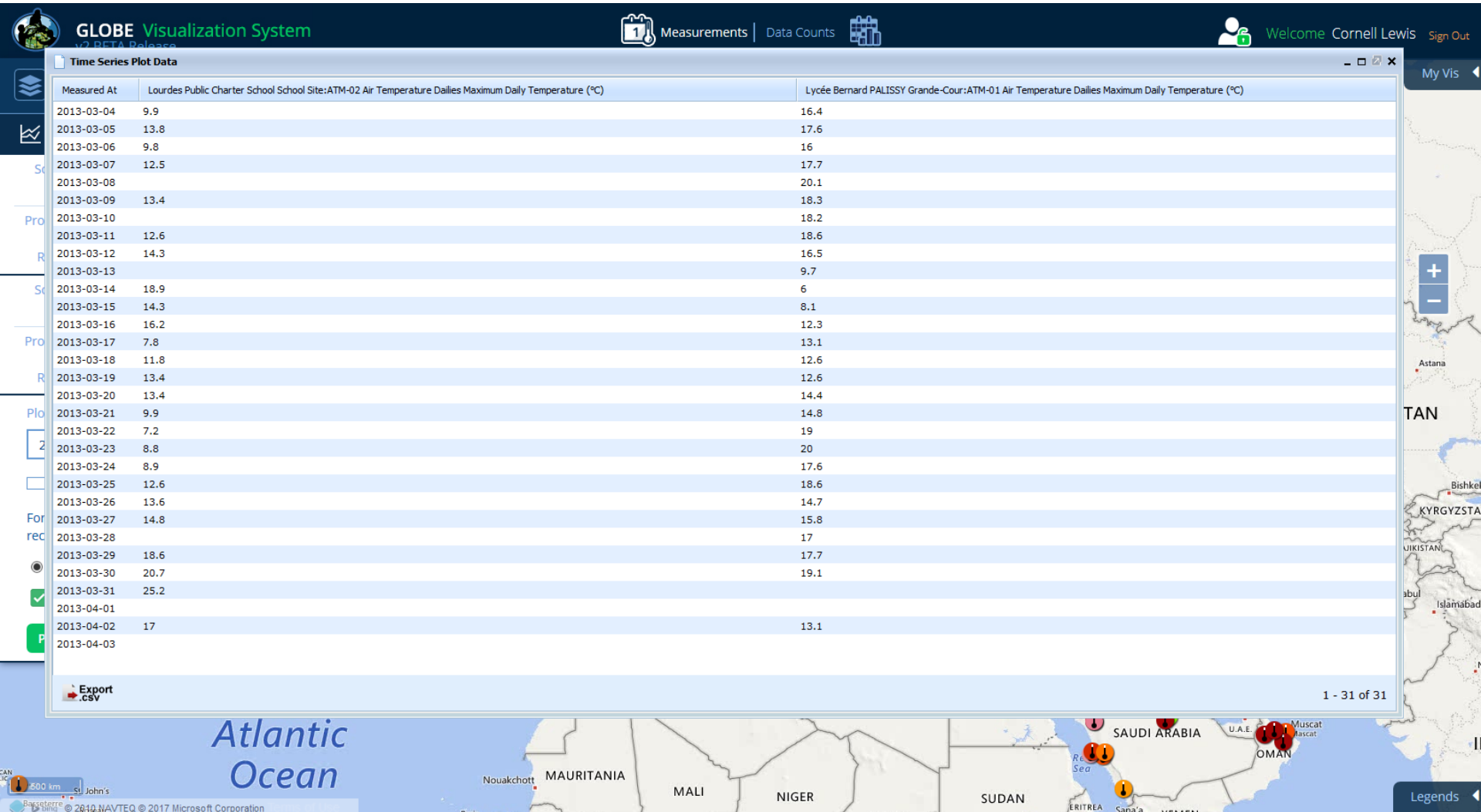
**Single Line Plot**  Stacked Plot

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

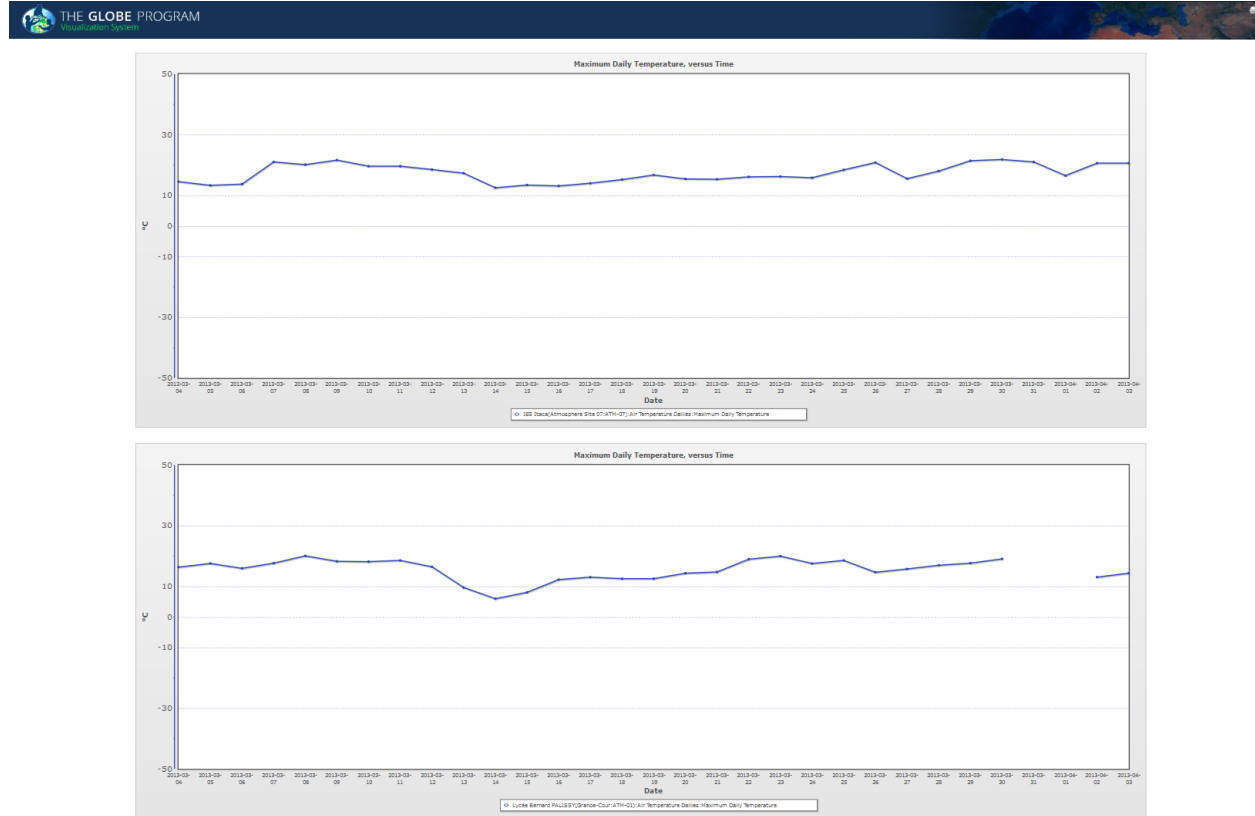
Plot Date Range:  
2013-03-04 to 2013-04-03

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

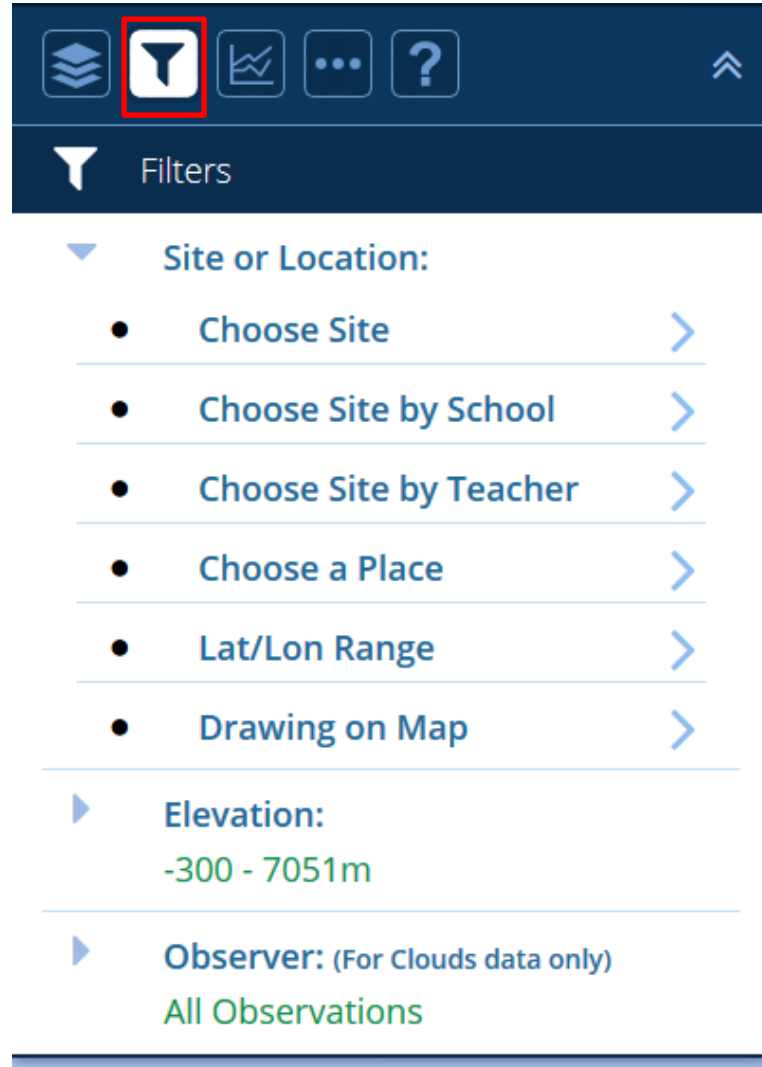
Single Line Plot  **Stacked Plot**

Use Auto-Y Axis

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

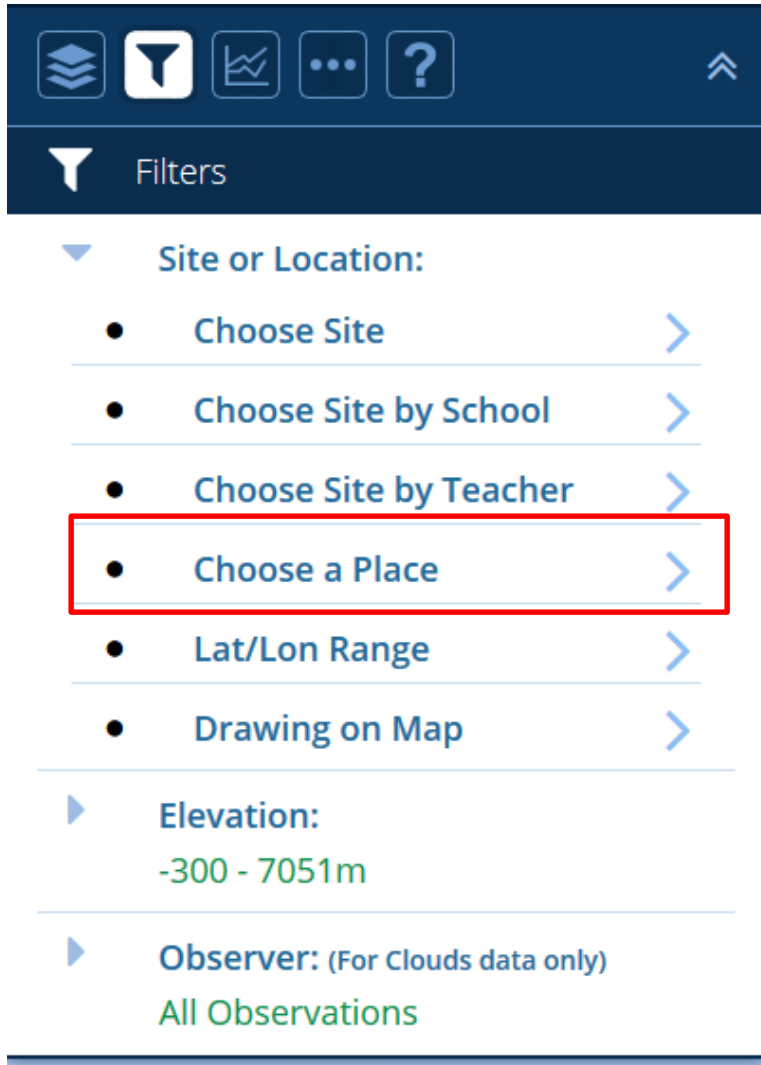


The Filters box is where you refine which data is shown on the map. Click on the filter icon at the left. You can limit the map to display only data at a specific location (such as a country) or at a specific elevation range.

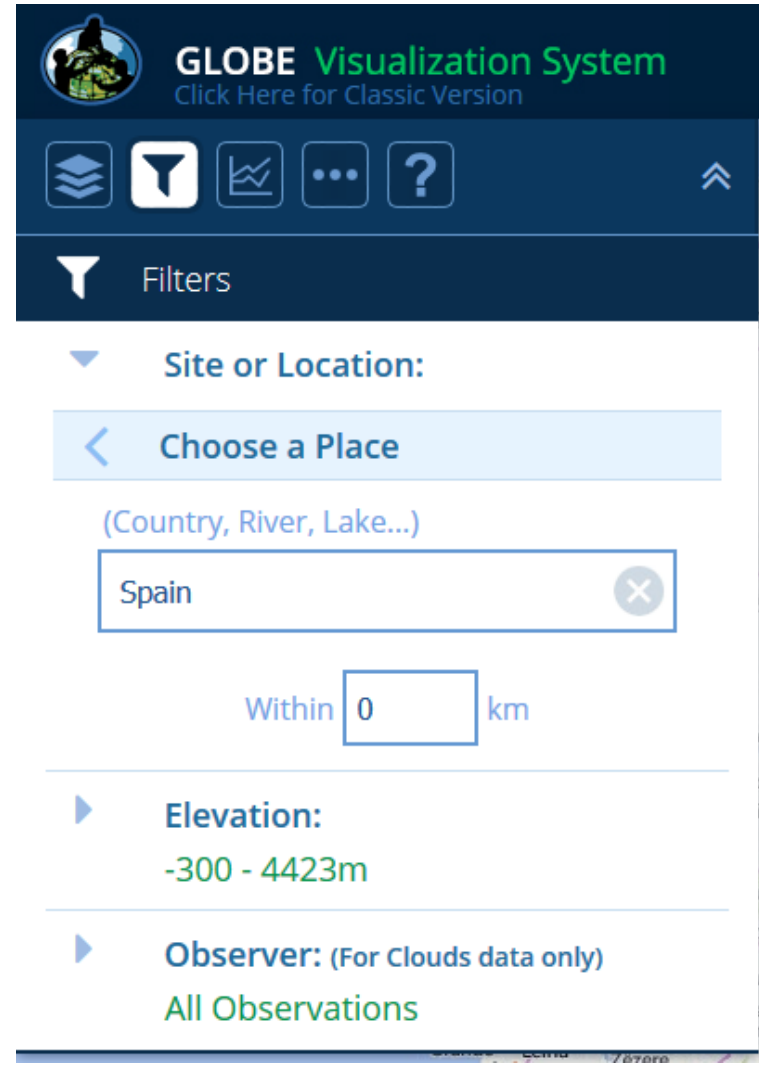




Let's first display only schools in a country, select 'Places' in the Location/Site filter and then enter in Spain.



The screenshot shows the top navigation bar with icons for layers, filters, charts, and help. Below it is a 'Filters' section with a dropdown arrow. The 'Site or Location:' category is expanded, showing a list of options: 'Choose Site', 'Choose Site by School', 'Choose Site by Teacher', 'Choose a Place' (highlighted with a red box), 'Lat/Lon Range', and 'Drawing on Map'. Below this are 'Elevation:' (-300 - 7051m) and 'Observer:' (For Clouds data only) (All Observations).



The screenshot shows the 'GLOBE Visualization System' header with a logo and a link to the 'Classic Version'. Below it is the 'Filters' section with a dropdown arrow. The 'Site or Location:' category is expanded, and 'Choose a Place' is selected, highlighted with a light blue background. Below this is a search input field with the text 'Spain' and a clear button. Below the search field is a distance filter: 'Within 0 km'. Below this are 'Elevation:' (-300 - 4423m) and '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.

**GLOBE Visualization System**  
Click Here for Classic Version

Measurements | Data Counts

2013-04-03

Filters

Site or Location:  
Choose a Place  
(Country, River, Lake...)  
Spain  
Within 0 km

Elevation:  
-300 - 4423m

Observer: (For Clouds data only)  
All Observations

200 km

© 2017 HERE © 2017 Microsoft Corporation

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.

**GLOBE Visualization System**  
v2 BETA Release

Filters

- Site or Location:
  - Choose Site
  - Choose Site by School
  - Choose Site by Teacher
  - Choose a Place
  - Lat/Lon Range
  - Drawing on Map**
- Elevation:  
-300 - 7051m
- Observer: (For Clouds data only)  
All Observations

**GLOBE Visualization System**  
v2 BETA Release

Measurements | Data Counts

2013-04-03

Filters

- Site or Location:
  - Drawing on Map**
- Elevation:  
-300 - 7051m
- Observer: (For Clouds data only)  
All Observations

907377.35 km<sup>2</sup>

Spain

You can also search for a particular school by name. Return to the Site or Location menu and 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 v2 BETA Release interface. At the top, the navigation bar includes 'Measurements' and 'Data Counts' menus. A date selector shows '2013-04-03'. The left sidebar contains a 'Filters' section with the following options:

- Site or Location:**
  - Choose Site by School
  - Search field: IES Cardinal Pardo Tavera
  - Select Site: Caseta:ATM-02
  - Submit button
- Elevation:** -300 - 7051m
- Observer:** (For Clouds data only) All Observations

The main area shows a map of Europe with numerous data points represented by colored arrows (green, blue, yellow) pointing downwards, indicating measurement locations. The map includes labels for various countries such as DENMARK, GERMANY, POLAND, ITALY, and SPAIN. A 'My Vis' button is visible in the top right corner, and a 'Legends' button is in the bottom right corner. The footer contains the text: 'bing © 2010 NAVTEQ © 2017 Microsoft Corporation'.

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 added protocol layer(s) was entered on the measurement date selected (2013-04-03).

**GLOBE Visualization System**  
v2 BETA Release

Measurements | Data Counts

2013-04-03

**School:** IES Cardinal Pardo Tavera  
**Site:** Caseta-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: 2001-03-21 to 2011-05-05

0.15  
0.12  
0.09  
0.06  
0.03  
0

2013-03-04 2013-03-07 2013-03-10 2013-03-13 2013-03-16 2013-03-19 2013-03-22 2013-03-25 2013-03-28 2013-04-03

30 Days 1 Year Custom

Spain

Portugal

TUNISIA

GREECE

ALBANIA

UKRAINE

MOLDOVA

LATVIA

DENMARK

IRELAND

ESTONIA

PORTUGAL

SPAIN

TUNISIA

GREECE

ALBANIA

UKRAINE

MOLDOVA

LATVIA

DENMARK

IRELAND

ESTONIA

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 v2 BETA Release interface. The top navigation bar includes 'Measurements', 'Data Counts', and 'Sign In'. A search filter on the left shows 'Site or Location: Choose Site by School' with 'IES Itaca' entered and 'Atmosphere Site 07: ATM-07' selected. The main map shows a location in France, with a date selector for '2013-04-03'. A data visualization window is open, showing a line graph of 'Air Temperature Dailies' for the selected date. The graph shows a peak of approximately 22°C and a low of about 12°C. Below the graph, the data date range is '2005-04-06 to 2017-05-31'. The measured data for 2013-04-03 is as follows:

Measurement	Value
Measured At	2013-04-03 11:45:00
Solar Measured At	2013-04-03 11:53:00
Solar Noon At	2013-04-03 11:55:00
Daily Average Temperature	15.5 °C
Minimum Daily Temperature	7.9 °C
Maximum Daily Temperature	20.7 °C
Comments	air temp subday rollup
Elevation	11.80 m

The interface also includes a 'Filters' panel on the left with options for 'Elevation: -300 - 7051m' and 'Observer: (For Clouds data only) All Observations'. The bottom of the screen shows a map of Europe and the Balearic Sea, with a 'Legends' button in the bottom right corner.

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

**GLOBE Visualization System**  
v2 BETA Release

Measurements | Data Counts

2013-04-03

**Filters**

- Site or Location:
  - Choose Site
  - Choose Site by School
  - Choose Site by Teacher
  - Choose a Place
  - Lat/Lon Range
  - Drawing on Map
- Elevation:  
-300 - 7051m
- Observer: (For Clouds data only)  
All Observations

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

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: 2005-04-06 to 2017-05-31

Measured At: 2013-04-03 11:45:00  
Solar Measured At: 2013-04-03 11:53:00  
Solar Noon At: 2013-04-03 11:55:00  
Daily Average Temperature: 15.5 °C  
Minimum Daily Temperature: 7.9 °C  
Maximum Daily Temperature: 20.7 °C  
Comments: air temp subday rollup  
Elevation: 11.80 m

30 Days | 1 Year | Custom

Legend

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 displays the GLOBE Visualization System v2 BETA Release interface. At the top, there are navigation icons for 'Measurements' (1), 'Data Counts', and a user profile icon with 'Sign In'. A date selector shows '2013-04-03'. The main map area shows a 3D topographic view of the United States and parts of Europe, with several yellow location markers. A red arrow points from the text above to a red box in the left sidebar, which highlights the 'more' icon (three dots) next to the 'Maximum Daily Temperature' layer. Below this, there are options for 'Contours' and 'Contour Layer Opacity'. Further down, a section titled 'Choose sphere to explore protocols' lists several categories: Atmosphere, Biosphere, Hydrosphere, Pedosphere (Soil) - Soil Temperature and Moisture, and Pedosphere (Soil) - Soil Characterization.



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. Note – data can also be downloaded to a .kmz file

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-bordered pop-up menu is open over this layer, containing the following options: 'View Layer Table', 'Download Layer .kmz', 'Delete Layer', and 'Cancel'. Below the layers list, there are categories for 'Atmosphere', 'Biosphere', 'Hydrosphere', and 'Pedosphere (Soil)'. The main map area shows a geographical view of North America with several orange location markers in the United States. A date filter '2013-04-03' is visible at the top of the map. At the bottom right, a 'Measurement Values' legend for 'Max Daily Air Temperature (C)' is shown 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' tabs, along with a date selector set to '2018-10-03'. The left sidebar shows the 'Protocol Layers' menu with 'Land Cover Classification' selected. Underneath, the 'Land Cover Interval' dropdown is expanded, 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 legend at the bottom right, titled 'Measurement Values', shows a color scale for 'Land Cover Classification (MUC Code)' ranging from 0 (dark green) to 9 (dark red), with intermediate values: 1, 11-13, 2, 21-23, 3, 31-34, 4, 41-44, 5, 51-59, 6, 61-64, 7, 71-72, 8, 81-82, and 9, 91-94. The map also shows geographical labels like 'CANADA', 'UNITED STATES', 'MEXICO', 'BRAZIL', 'EUROPE', and 'AFRICA', along with various seas and oceans.

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. At the top, there is a navigation bar with a search icon, the text "GLOBE Visualization System v2 BETA Release", and buttons for "Measurements" (with a calendar icon) and "Data Counts" (with a bar chart icon). On the right side of the navigation bar, there is a user profile icon and the text "Sign In". Below the navigation bar, a date selector shows "2013-04-03" with a calendar icon and a range slider. The main area features a world map with numerous measurement icons (colored squares with a camera icon) scattered across the continents. A pop-up window is centered over the map, titled "School: Munising High School" and "Site: Football Practice Field:LCS-01". The pop-up has tabs for "Measurements", "Data Counts", "School Info", "Site Info", and "Photos", with "Photos" currently selected. Inside the "Photos" tab, there are dropdown menus for "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", each showing a different view of a green field. Navigation arrows are present on the left and right sides of the photo gallery. The bottom of the screen shows a Bing logo and copyright information: "© 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. 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, navigation icons for Measurements and Data Counts, and a Sign In button. A date selector is set to 2018-10-03. The left sidebar contains a 'Protocol Layers' menu with 'Land Cover Photos' checked. Below this, the 'Land Cover Interval' is set to '1 Year'. 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 a world map with numerous photo thumbnails overlaid on land cover data. The map includes labels for major oceans (Pacific, Atlantic, Indian) and seas (Gulf of Alaska, Hudson Bay, Labrador Sea, Bay of Biscay, Mediterranean Sea, Arabian Sea, Bay of Bengal, Gulf of Guinea). Country names like CANADA, BRAZIL, and RUSSIA are visible. A scale bar at the bottom left indicates 2000 km, and a 'Legends' button is at the bottom right. A copyright notice at the bottom left reads '© 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' section with the following items:

- Tree/Shrub Date of Budburst (checked)
- Greenings Species (Update button)
- All (checkbox)
- European Phenology Campaign (checkbox)
- Oak (Quercus robur) (checkbox)
- Beech (Fagus sylvatica) (checkbox)
- Birch (Betula pendula) (checked)
- Hazel (Corylus avellana) (checkbox)
- Small-leaved lime (Tilia cordata) (checkbox)
- Sour cherry (Prunus cerasus) (checkbox)

Below the protocol layers is a 'Choose sphere to explore protocols' section with the following options:

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

The main map area shows a world map with data points represented by colored circles with smiley faces. A red arrow points from the 'Birch (Betula pendula)' checkbox in the sidebar to a green circle with a smiley face on the map, indicating that the data is filtered by this species. The map also shows a date range slider for '2013-04-03' and a 'My Vis' button. The bottom right corner features a 'Legends' button.

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

**GLOBE Visualization System**  
v2 BETA Release

Measurements | Data Counts

2013-04-03

Protocol Layers

- Soil Texture

Soil data are shown for the entire history of GLOBE

Soil Profile View Update

Horizon Number:

1  2  3  4  5  All

Value at Depth:

5cm  10cm  50cm  All

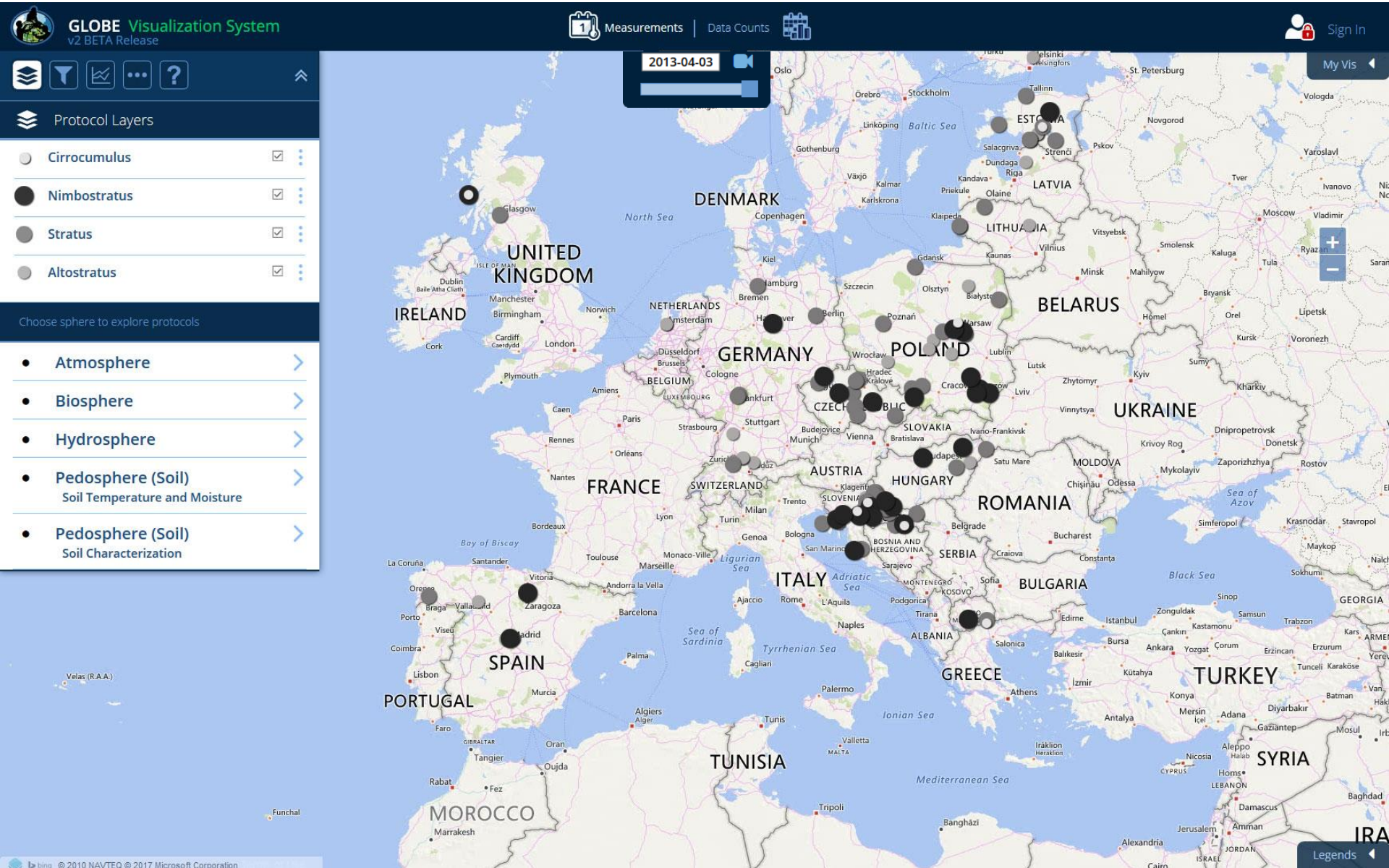
10cm  30cm  60cm  90cm  All

Choose sphere to explore protocols

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

© 2010 NAVTEQ © 2017 Microsoft Corporation

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 overlay 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 categories: 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.

**GLOBE Visualization System**  
V2 BETA Release

Measurements | Data Counts

2013-04-03

**Protocol Layers**

- Cirrocumulus
- Nimbostratus**
- Stratus
- Altostratus

Choose sphere to explore protocols

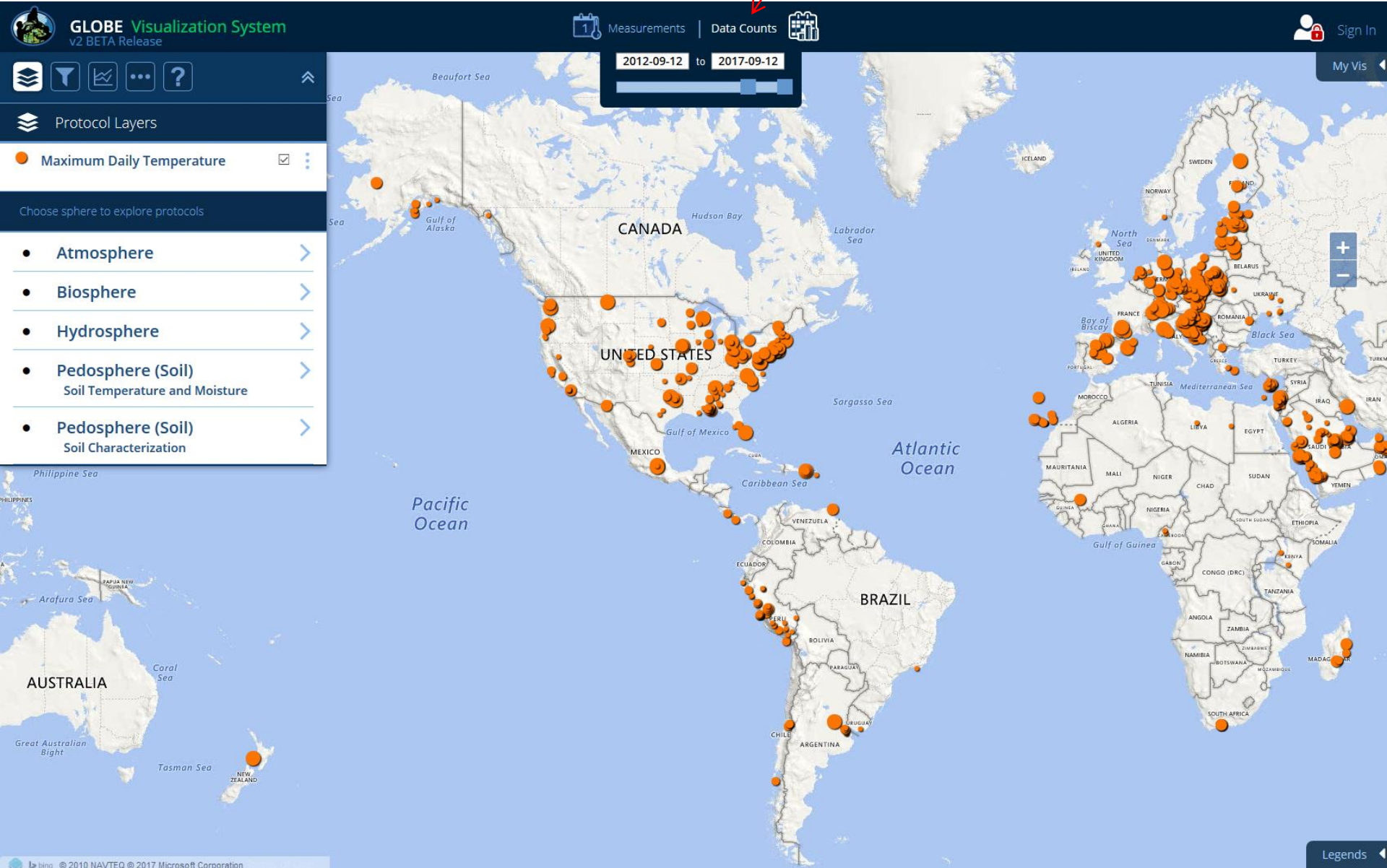
- Atmosphere
- Biosphere
- Hydrosphere
- Pedosphere (Soil)  
Soil Temperature and Moisture
- Pedosphere (Soil)  
Soil Characterization

Map labels: IRELAND, UNITED KINGDOM, DENMARK, NETHERLANDS, GERMANY, POLAND, BELARUS, UKRAINE, ROMANIA, HUNGARY, AUSTRIA, SWITZERLAND, FRANCE, ITALY, SPAIN, PORTUGAL, MOROCCO, TUNISIA, GREECE, BULGARIA, SERBIA, BOSNIA AND HERZEGOVINA, ALBANIA, TURKEY, SYRIA, IRAQ.

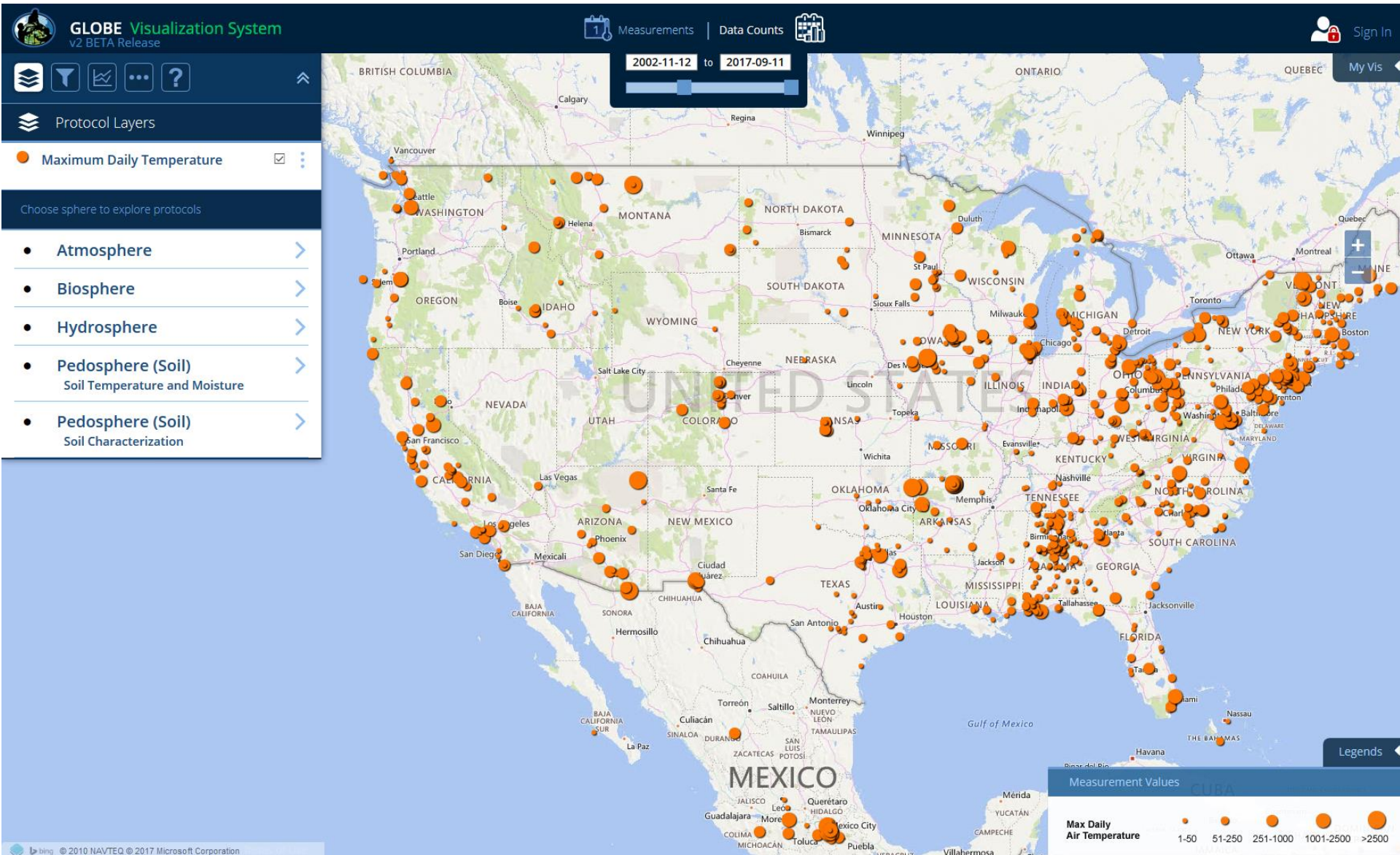
On the **Layers** menu, contours of some data sets may be shown by clicking the **Contours** box. The contour opacity can be adjusted by clicking on the opacity link.

The screenshot displays the GLOBE Visualization System v2 BETA Release interface. The top navigation bar includes 'Measurements' (with a '1' notification) and 'Data Counts'. The left sidebar shows 'Protocol Layers' with a list of categories: Atmosphere, Biosphere, Hydrosphere, Pedosphere (Soil) - Soil Temperature and Moisture, and Pedosphere (Soil) - Soil Characterization. The 'Maximum Daily Temperature' layer is selected, and its 'Contours' checkbox is checked. A red box highlights the 'Contour Layer Opacity' slider, which is currently set to approximately 50%. The main map area shows a map of North America with a temperature contour overlay. The date '2013-04-03' is displayed in a central box. The map shows a color gradient from blue (cooler) to red (warmer), with yellow and orange contours. A red arrow points from the text above to the 'Contours' checkbox. The bottom of the interface shows the Bing logo and copyright information: '© 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.

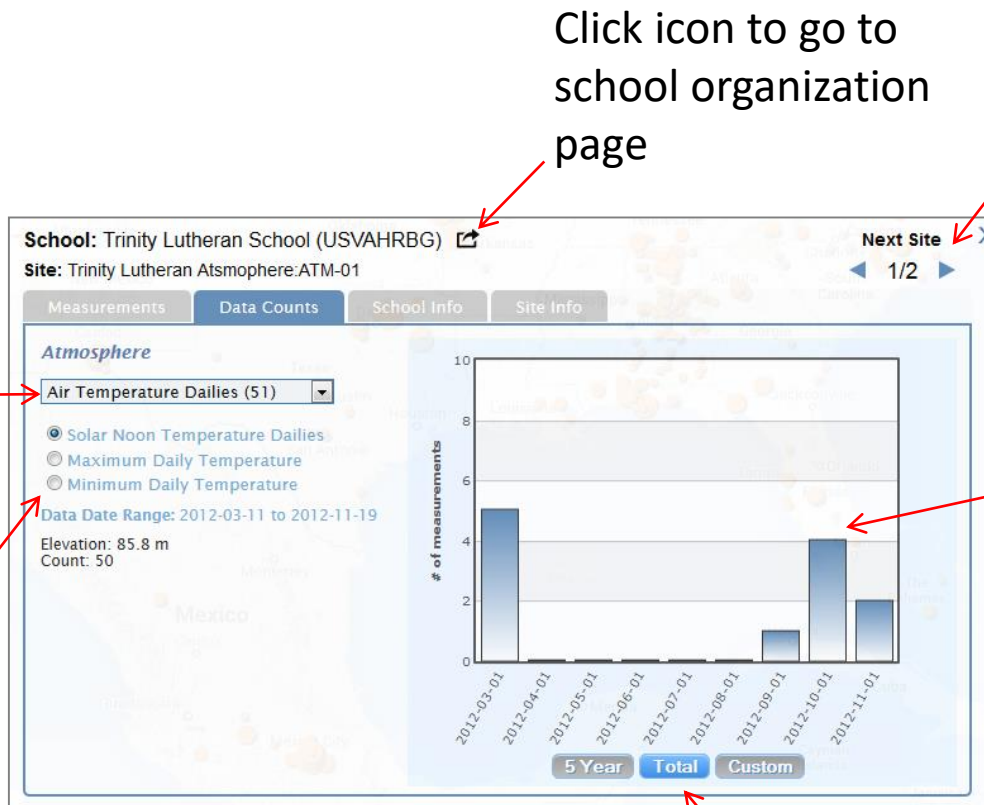


Clicking on an icon on the map opens a site info window. Since the map type is Data Counts, that is the default selection. A plot of the selected data type is displayed showing data counts for the last 5 years for the selected site. You can also select total years or a custom date range.

The screenshot displays the GLOBE Visualization System interface. At the top, there is a navigation bar with icons for 'Measurements' and 'Data Counts', and a date range selector set to '2002-11-12 to 2017-09-13'. The main area shows a map of the United States with numerous orange circular markers representing data sites. A site info window is open for 'Many Farms High School' (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, showing 'Air Temperature Dailies' selected from a dropdown menu. Below this, there are radio buttons for 'Solar Noon Temperature Dailies', '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 displays 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.



Click icon to go to school organization page

Cycle through sites whose icons are on top of each other

Data Type and (total # of measurements)

Datasets (select a dataset to change the plot view )

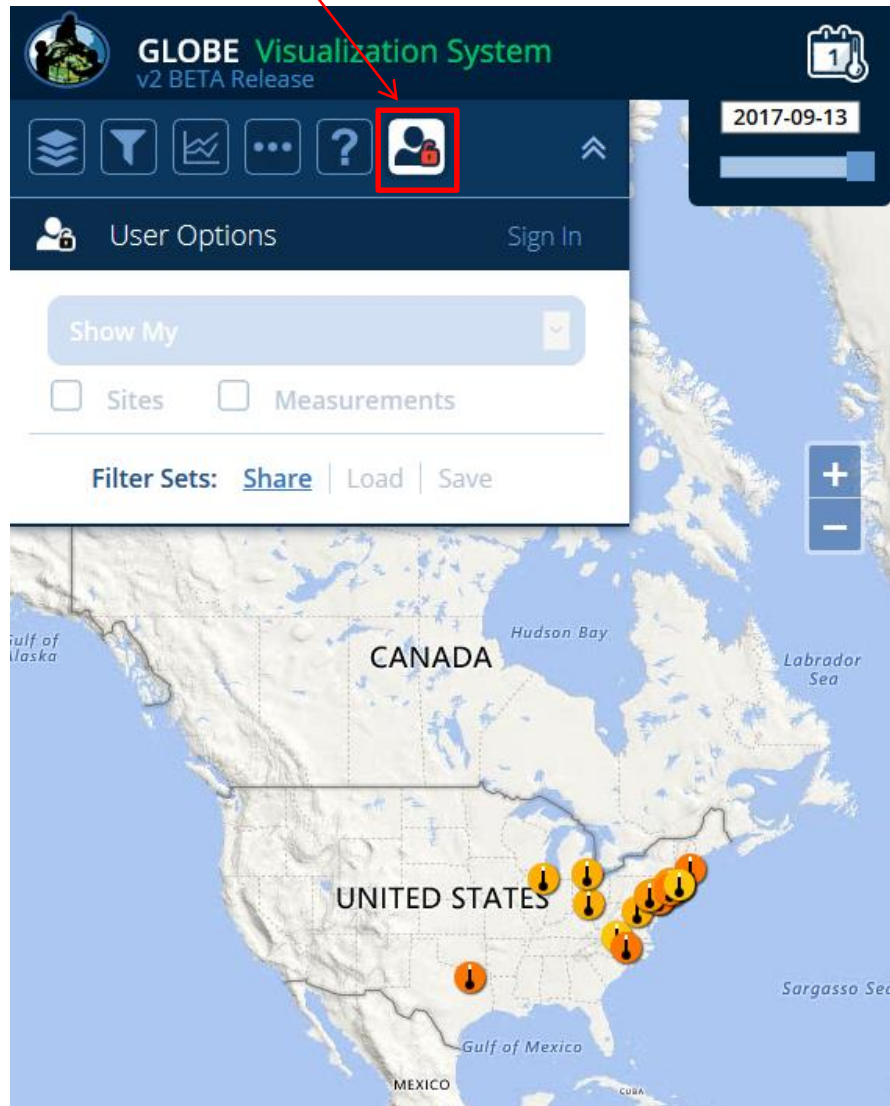
Roll-over bar graph to see the total # of measurements for each interval

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, open the 'My Vis' tab and click 'Share'. A popup will appear with the URL.

The screenshot displays the GLOBE Visualization System v2 BETA Release interface. The main map shows North America with various data points and layers. A date selector at the top center is set to 2017-09-13. On the left, the 'Protocol Layers' panel is open, showing 'Air Temperature' selected with 'Contours' and 'Contour Layer Opacity' options. Below this, a list of spheres is visible: Atmosphere, Biosphere, Hydrosphere, Pedosphere (Soil) - Soil Temperature and Moisture, and Pedosphere (Soil) - Soil Characterization. On the right, the 'Filter Sets' panel is open, with the 'Share' button highlighted in red. Below it, the 'My Vis' tab is also highlighted in red. A white popup box in the center of the map contains the text 'Share with URL:' followed by the URL <https://visbeta.globe.gov/GLOBE/>. A red arrow points from the 'Share' button to the popup. The bottom of the screen shows the footer with copyright information: '© 2017 HERE © 2017 Microsoft Corporation'.

On your phone and small tablets, click on the My Vis icon in the menu bar to see the share link





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



**GLOBE Visualization System**  
v2 BETA Release

Measurements | Data Counts

2013-04-03

Sign In

Show My  
 Sites  Measurements

Filter Sets: [Share](#) | [Load](#) | [Save](#)

My Vis

Protocol Layers

- Air Temperature  Contours
- Contour Layer Opacity

Choose sphere to explore protocols

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

bing © 2017 HERE © 2017 Microsoft Corporation

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

The screenshot displays the GLOBE Visualization System v2.0 BETA Release interface. The top navigation bar includes 'Measurements' and 'Data Counts' tabs, and a user profile for 'Cornell Lewis'. The left sidebar shows 'Protocol Layers' with 'Air Temperature' selected. The main map area shows North America with a date filter set to '2017-09-13'. A 'Filter Sets' dropdown menu is open, showing 'Share', 'Load', and 'Save' options, with 'Save' highlighted. A dialog box titled 'Save Current Filter Settings' is centered on the screen, containing a text input field with the text 'U.S. Air Temperature - 2017/09/13' and a 'Save Filter Set' button. A red arrow points from the 'Save' button in the dropdown menu to the 'Save' button in the dialog box.

**Save Current Filter Settings**

Enter a Filter Set Name, then click 'Save Filter Set'

U.S. Air Temperature - 2017/09/13

Save Filter Set

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

The screenshot displays the GLOBE Visualization System v2 BETA Release interface. At the top left, the logo and version information are shown. The top navigation bar includes 'Measurements' and 'Data Counts' links. A date selector shows '2013-04-03'. On the right, a user profile for 'Cornell Lewis' is visible with a 'Sign Out' link. Below the navigation, there are icons for layers, filters, and help. The left sidebar contains 'Protocol Layers' with a list of categories: Atmosphere, Biosphere, Hydrosphere, Pedosphere (Soil) - Soil Temperature and Moisture, and Pedosphere (Soil) - Soil Characterization. The main map area shows a world map with several orange and yellow data points, primarily concentrated in North America. A red arrow points from the text above to the 'Load' link in the 'Filter Sets' section of the top right panel. Other links in this section include 'Share' and 'Save'. The bottom of the interface shows a Bing logo and copyright information for NAVTEQ and Microsoft Corporation.

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

The screenshot displays the GLOBE Visualization System v2 BETA Release interface. At the top, navigation links for 'Measurements' and 'Data Counts' are visible, along with a user profile for 'Cornell Lewis' and a 'Sign Out' option. The main content area is a 'Saved Filter Sets' pop-up window. It features a 'Load' button and a list of filter sets. The selected filter set is 'U.S. Air Temperature - 2017/09/13', with an 'edit' link and a 'delete' link. A text box contains the URL: [https://visbeta.globe.gov/GLOBE/?load\\_filter=232136227147442476](https://visbeta.globe.gov/GLOBE/?load_filter=232136227147442476). Below the URL, the filter set details are listed: 'Map Type: Measurements', 'Protocol: Air Temperature Measurements', 'Places: Within 0km of United States', 'Observer: null', 'Date: 2017-09-13', and 'Elevation Range: -5475m to 7051m'. The interface also shows a sidebar with 'Protocol Layers' and 'Maximum Daily Temperature' options, and a map of the United States with various measurement points. The bottom of the screen shows a Bing map of Australia and the Great Australian Bight.

When logged-in, you can display just the sites where you have entered data. On the My Vis 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 is your organization(s) has entered data.

The screenshot displays the GLOBE Visualization System v2 BETA Release interface. The top navigation bar includes 'Measurements' and 'Data Counts' tabs, a user profile for 'Cornell Lewis', and a 'Sign Out' option. A date selector is set to '2013-04-03'. The main map shows a world view with red circular markers indicating data sites, primarily concentrated in North America and Europe. On the left, a 'Getting Started' sidebar provides a three-step guide to visualizing data, with links to a 20-second demonstration, a quick demonstration of additional features, and a full tutorial. A 'Don't Show Again' checkbox is also present. On the right, a control panel features a 'Show My' dropdown menu with 'Sites' selected and highlighted by a red box, and 'Measurements' as an alternative option. Below this, 'Filter Sets' are listed as 'Share', 'Load', and 'Save'. A 'My Vis' tab is visible at the top right of the map area. The bottom left corner shows the Bing logo and copyright information for NAVTEQ and Microsoft Corporation.

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 My Vis 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. At the top, the header includes the GLOBE logo, the text "GLOBE Visualization System Click Here for Classic Version", a "Measurements" tab with a "1" notification, "Data Counts", and a user profile for "Cornell Lewis" with a "Sign Out" link. The left sidebar contains navigation icons and a "Protocol Layers" menu where "Cloud Cover" is selected and highlighted with a red box. Below this is a list of protocol layers: Atmosphere, Biosphere, Hydrosphere, Pedosphere (Soil) - Soil Temperature and Moisture, and Pedosphere (Soil) - Soil Characterization. The main map area shows a map of California with a date selector set to "2013-04-03" and a blue camera icon. A red box highlights a blue dot representing a measurement near Los Angeles. On the right, a "Show My" dropdown menu has "Measurements" selected and highlighted with a red box, while "Sites" is unselected. Below this are "Filter Sets" for "Share", "Load", and "Save". The map includes a scale bar for 50 km and a "Legends" button at the bottom right.

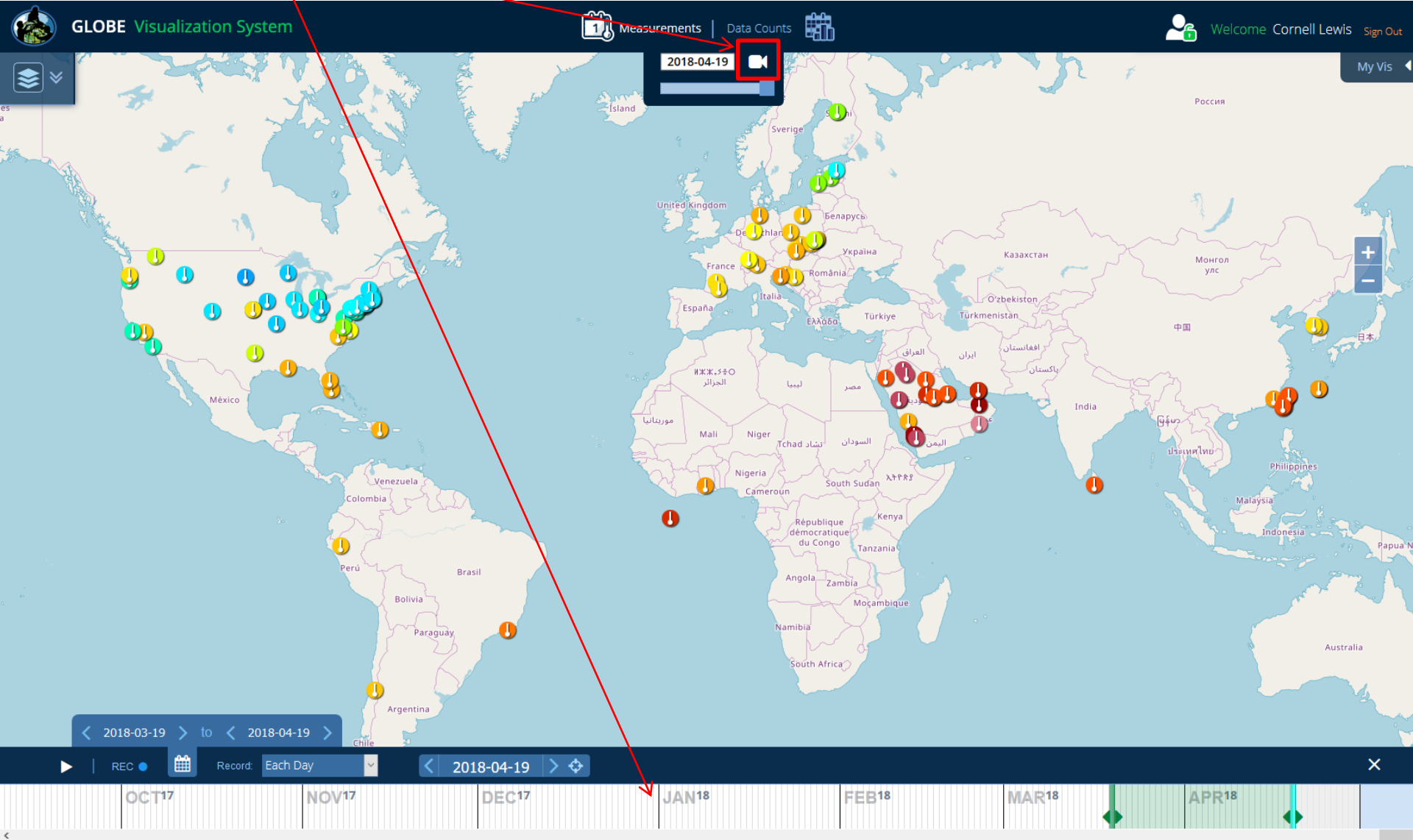
Under the 'More' menu are additional options – Base maps, language selector (English and Spanish, with more to come), map grid and a lat/long cursor position.

The screenshot displays the GLOBE Visualization System interface. At the top left, the logo and text "GLOBE Visualization System" are visible, along with a link to the "Classic Version". The top navigation bar includes "Measurements" and "Data Counts" sections. On the right, a user profile for "Cornell Lewis" is shown with a "Sign Out" option. The main map area shows a satellite view of the world with a red dashed grid overlay. A date selector at the top center is set to "2016-08-25". A "More Options" menu is open on the left side, containing the following sections:

- Choose Base Map**
  - Streets
  - Satellite
  - Hybrid
- NASA Satellite Data Options**
  - Corrected Reflectance – True Color (Terra)
  - Earth at Night (Suomi NPP)
- Language**: English (Powered by Google Translate)
- Turn on Map Grid
- Lat: 35.902670°, Lon: -75.769841°

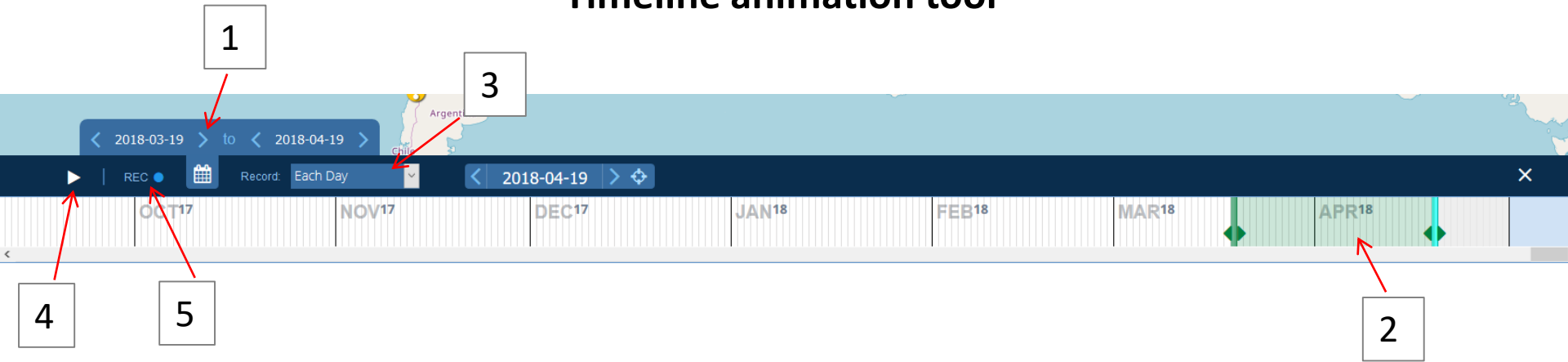
At the bottom left, there is a scale bar for 1000 km and a copyright notice: "Earthstar Geographics, SID © 2017 Microsoft". At the bottom right, there is a "Legends" button.

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

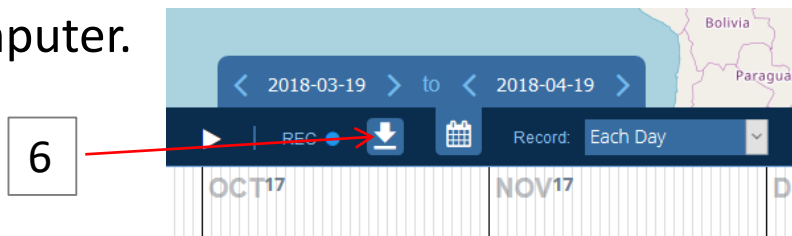




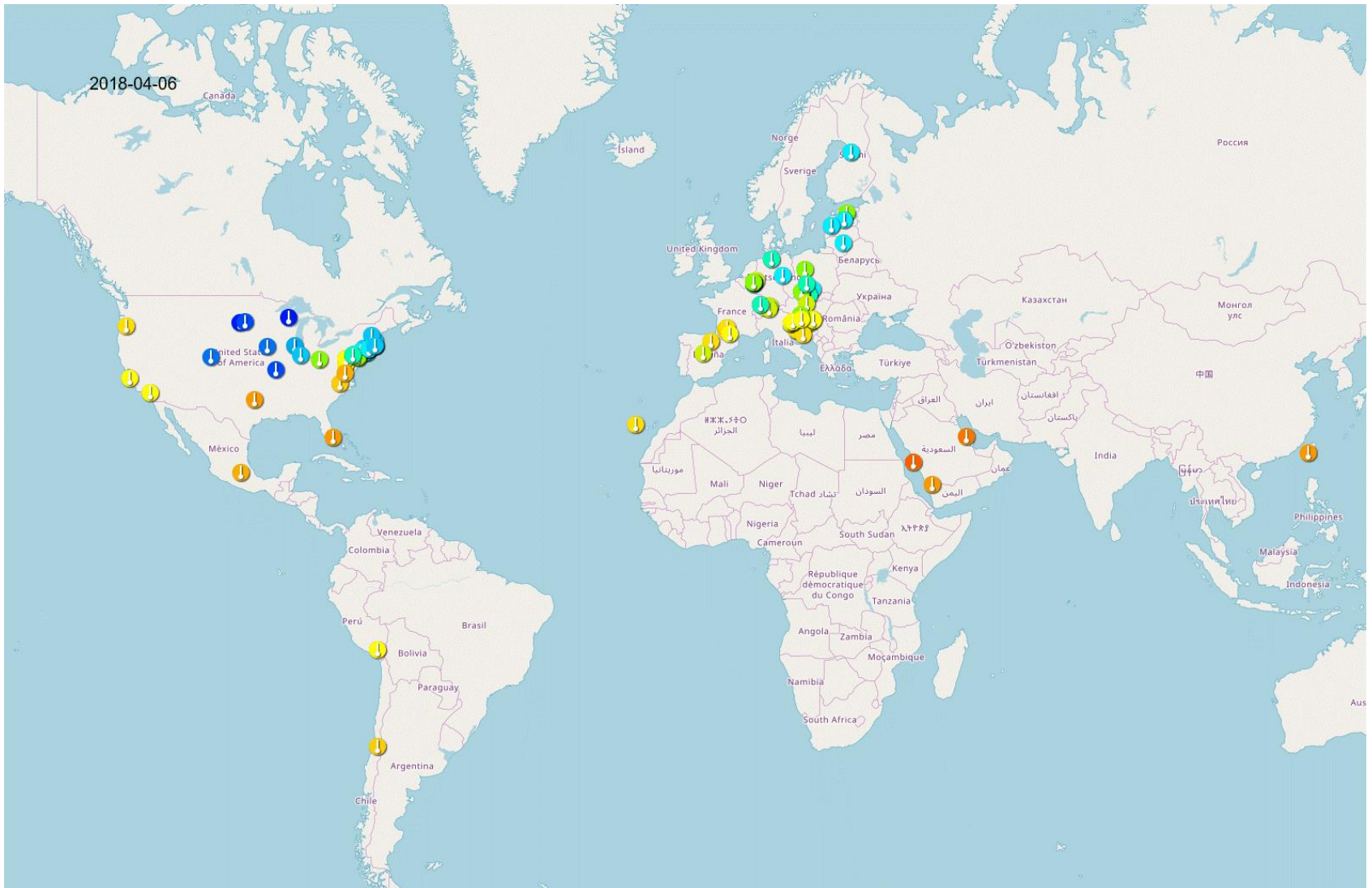
# Timeline animation tool



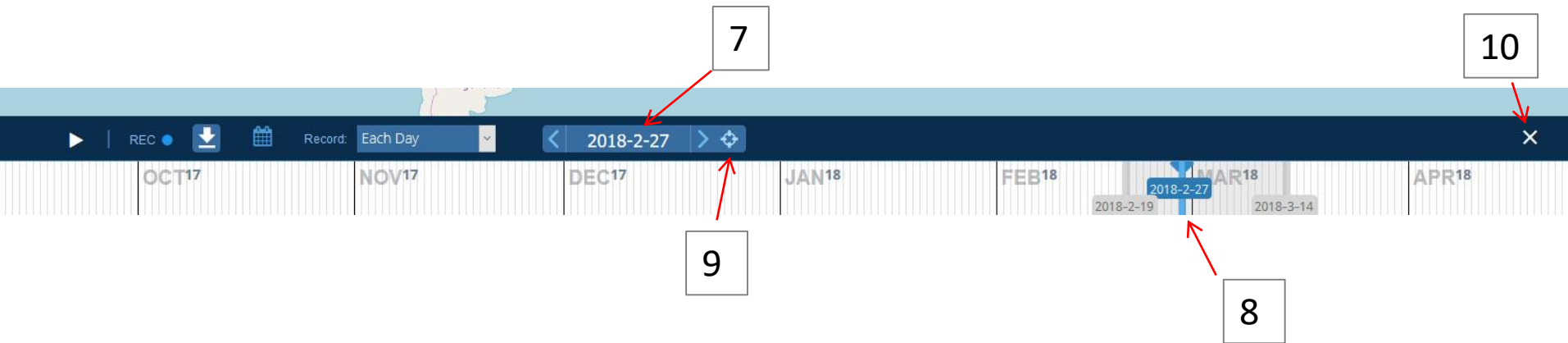
1. Select a date range (make sure you have already added the desired protocol layers). Click a date to open the calendar interface.
2. You can also select a date range by moving the date range slider on the timeline.
3. Determine the time interval (each day, 1 day per month or 1 day per year).
4. Press 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 level on April 7<sup>th</sup> on was consistently higher from Jan to May
5. [XI Liceum St. Konarskiego in Wrocław](#) (Filtered by Poland, switched to Data Counts map. It has the largest circle)
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)

