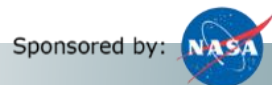




# GLOBE Visualization System "Vis"



# Visualize and Retrieve your Data

- Used for mapping data
- Focus is on one site, or possibly comparing 2-3 sites
- Simple X/Y charts available

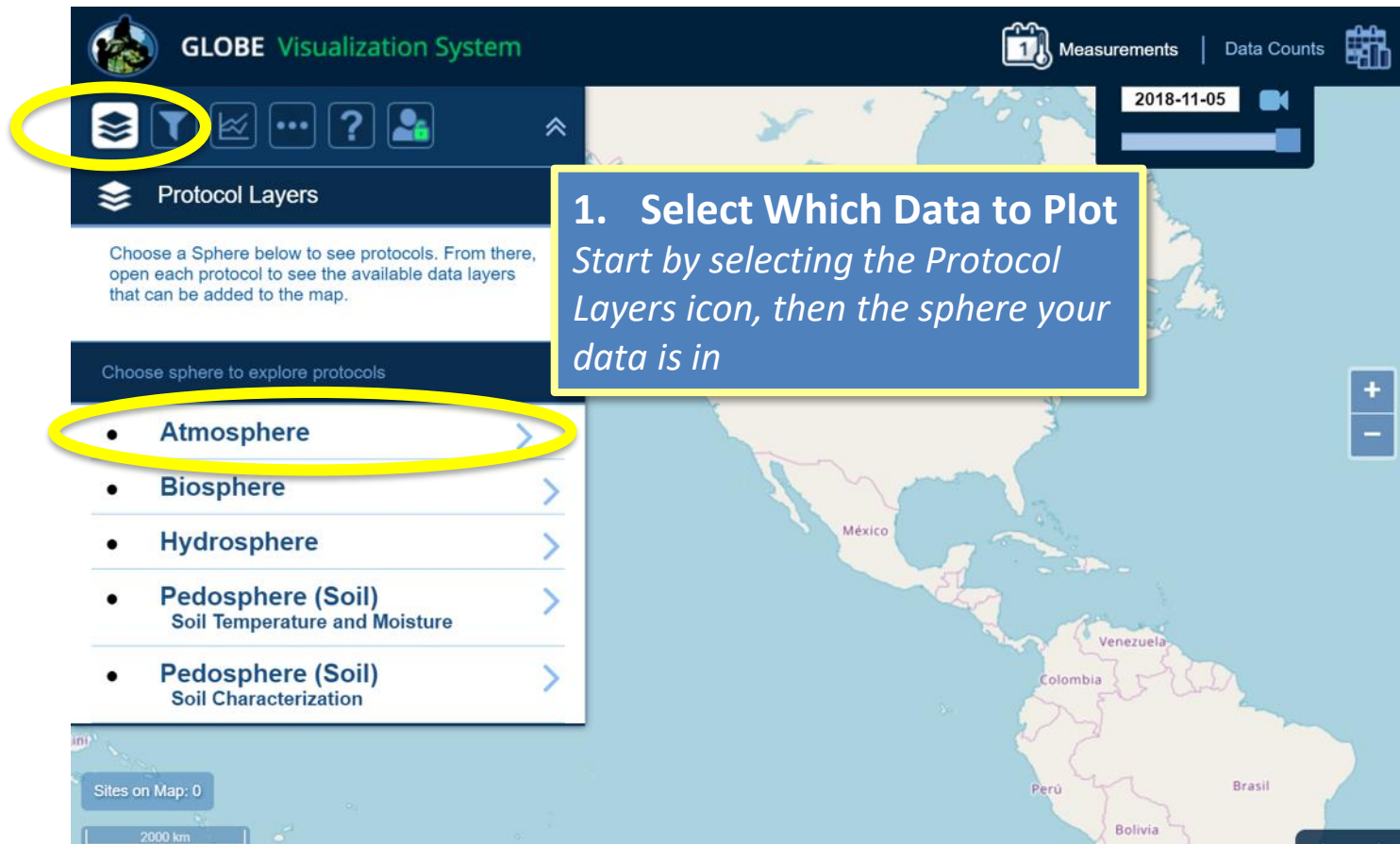
## Demonstration Topics – Visualization – <https://vis.globe.gov>

- Navigate to the visualization system
- The pieces of the visualization system
  - Layers, Dates, Filters, Legend, Graphs
- How to view data from a specific protocol on the map
- How to graph and retrieve data for a specific protocol

# The Basics of the Visualization System

- Select Goto-> from the top and “Visualize Data”
  - Or Go to the homepage and select “Visualize Data”
  - Or <https://vis.globe.gov>
- Three Steps to Visualize your Data:
  1. Select the protocol 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

# Step 1 – Add Data Layers



**GLOBE Visualization System**

Measurements | Data Counts

2018-11-05

**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

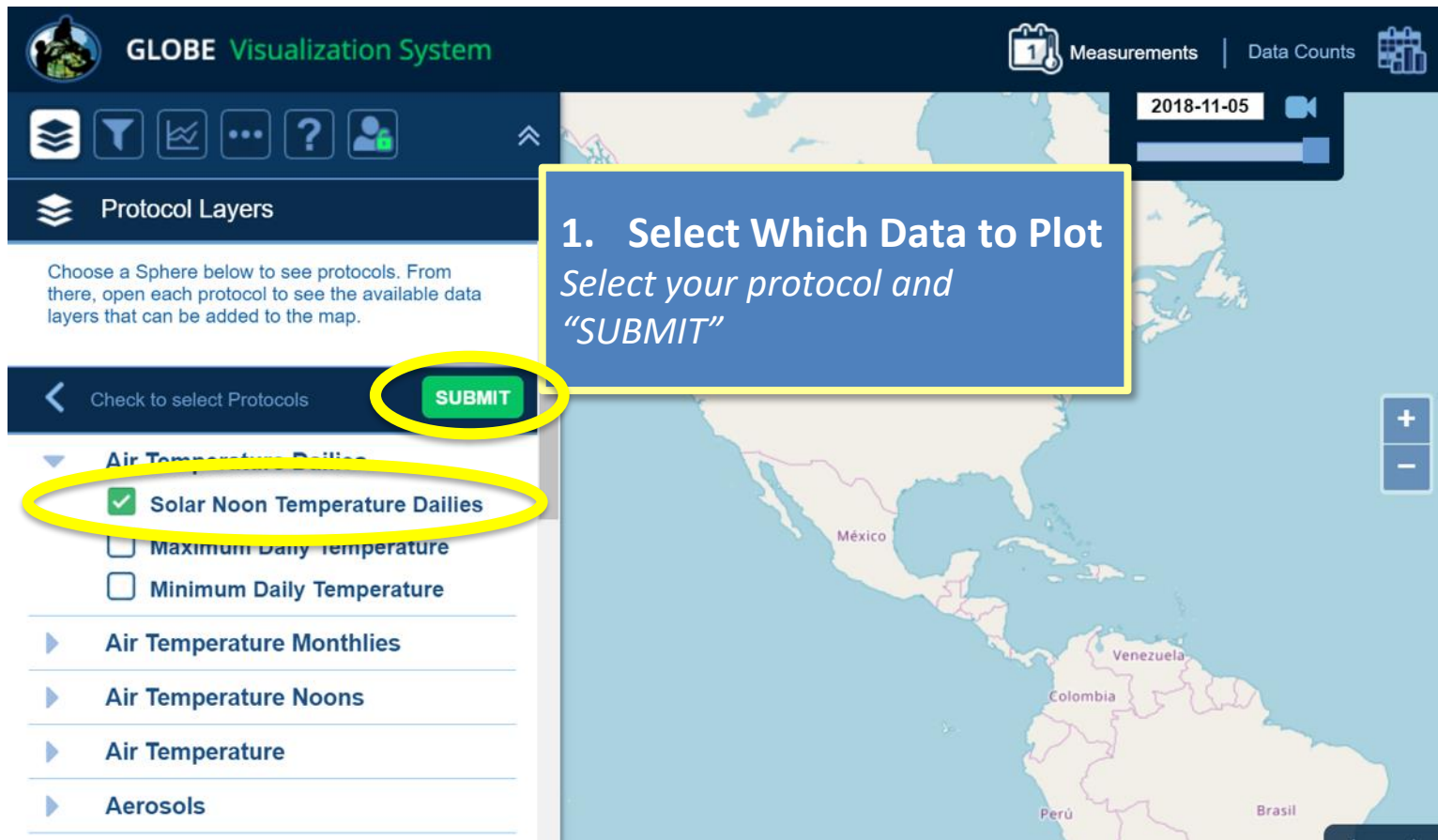
- **Atmosphere**
- Biosphere
- Hydrosphere
- Pedosphere (Soil)  
Soil Temperature and Moisture
- Pedosphere (Soil)  
Soil Characterization

Sites on Map: 0

2000 km

**1. Select Which Data to Plot**  
*Start by selecting the Protocol Layers icon, then the sphere your data is in*

# Step 1 – Add Data Layers



**GLOBE Visualization System**

Measurements | Data Counts

2018-11-05

### Protocol Layers

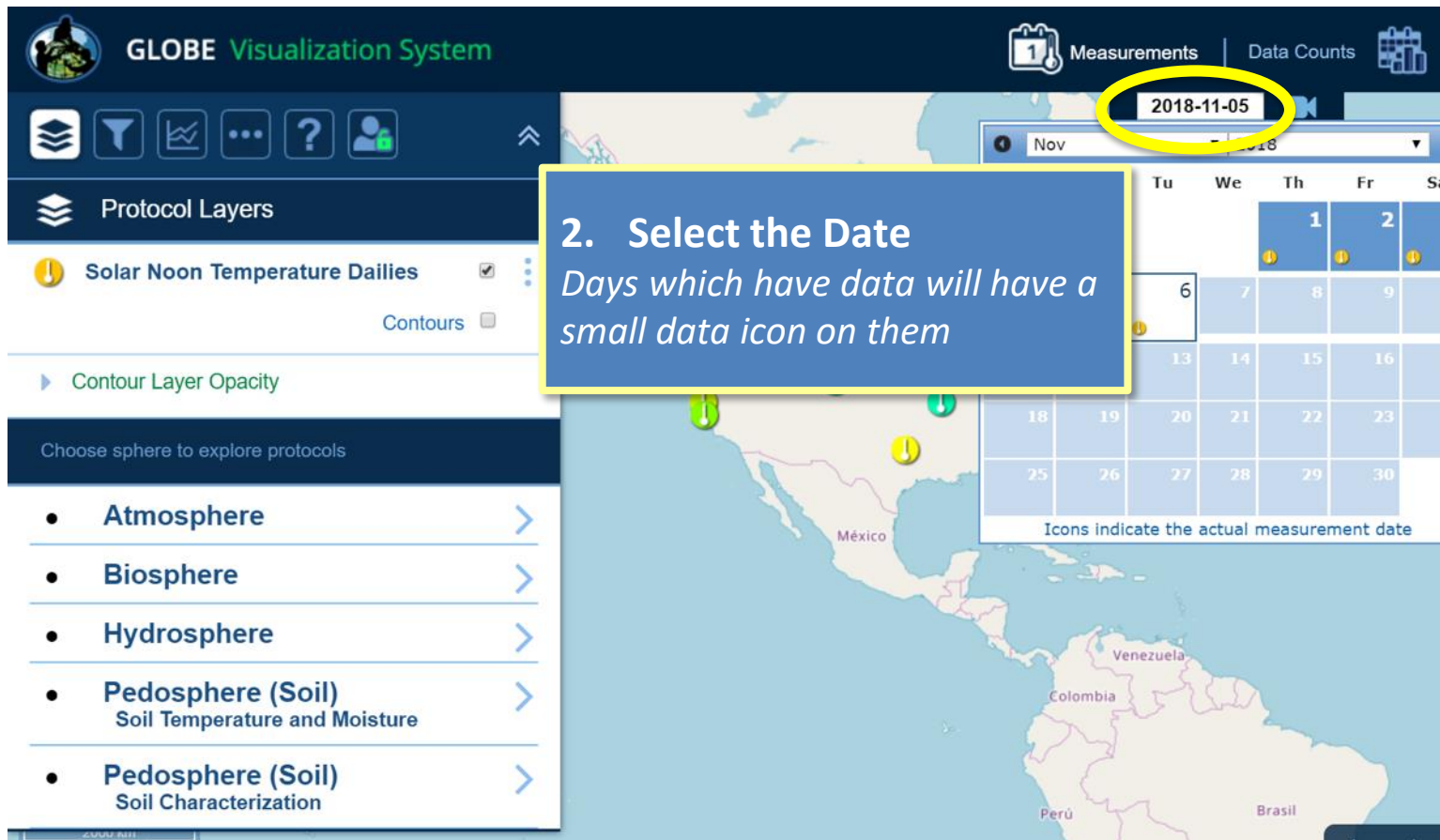
Choose a Sphere below to see protocols. From there, open each protocol to see the available data layers that can be added to the map.

Check to select Protocols **SUBMIT**

- Solar Noon Temperature Dailies**
- Maximum Daily Temperature
- Minimum Daily Temperature
- Air Temperature Monthlies
- Air Temperature Noons
- Air Temperature
- Aerosols

1. Select Which Data to Plot  
*Select your protocol and "SUBMIT"*

# Step 2 – Select the Date



**GLOBE Visualization System**

Measurements | Data Counts

2018-11-05

Nov 2018

**2. Select the Date**  
Days which have data will have a small data icon on them

Icons indicate the actual measurement date

Protocol Layers

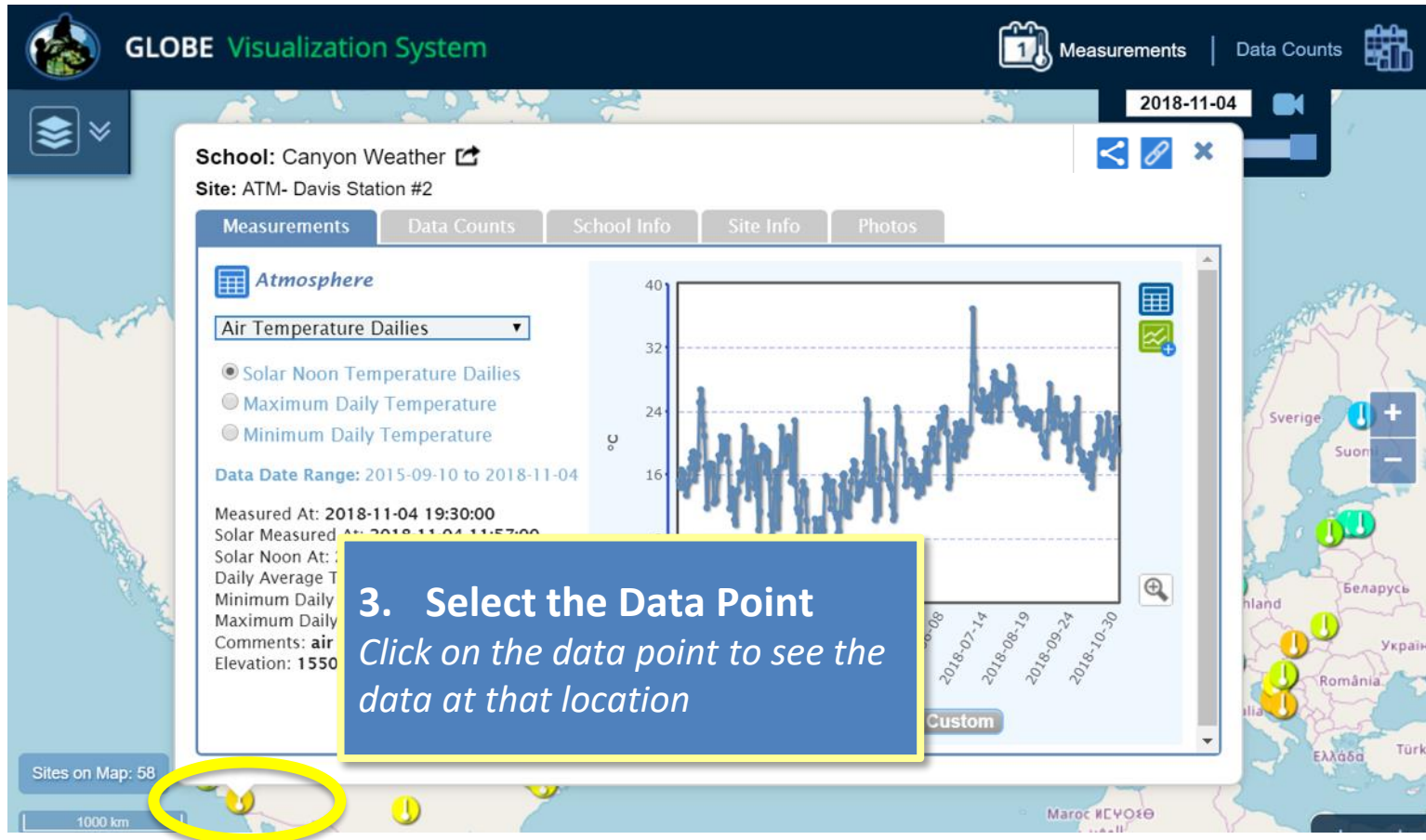
- Solar Noon Temperature Dailies  Contours
- Contour Layer Opacity

Choose sphere to explore protocols

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

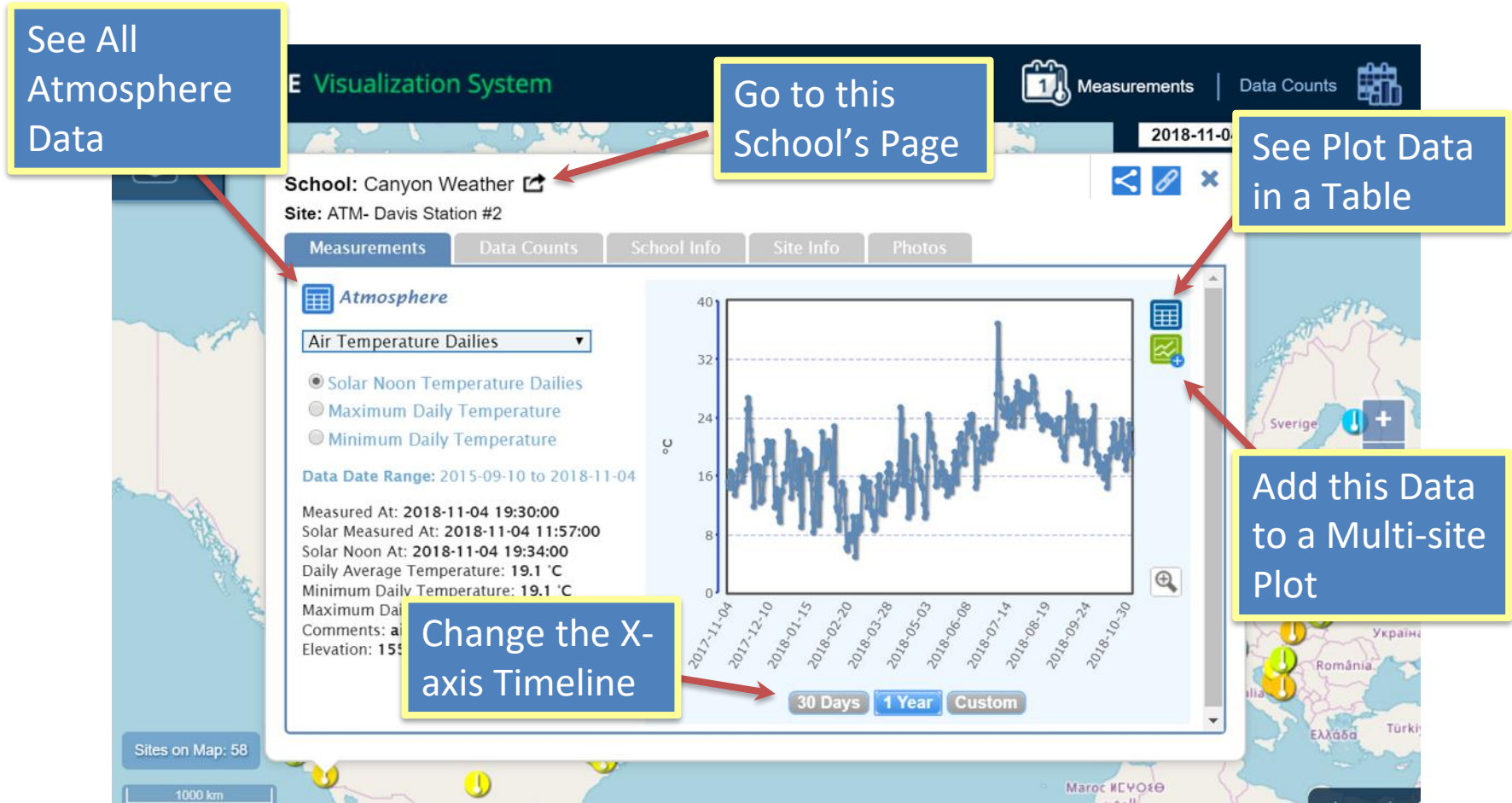
México, Venezuela, Colombia, Perú, Brasil

# Step 3 – Select the Data Point



The screenshot displays the GLOBE Visualization System interface. At the top, the header reads "GLOBE Visualization System" with navigation options for "Measurements" and "Data Counts". The main content area shows a data window for "School: Canyon Weather" and "Site: ATM- Davis Station #2". The "Measurements" tab is active, displaying "Atmosphere" data. A dropdown menu is set to "Air Temperature Dailies", with other options for "Solar Noon Temperature Dailies", "Maximum Daily Temperature", and "Minimum Daily Temperature". The "Data Date Range" is specified as "2015-09-10 to 2018-11-04". A line graph shows temperature data in degrees Celsius over time. A blue callout box with a yellow border is overlaid on the graph, containing the text: "3. Select the Data Point" and "Click on the data point to see the data at that location". A yellow circle highlights a specific data point on the map below the graph. The map shows various locations with pins, and a scale bar indicates "1000 km".

# Vis system popup window



**See All Atmosphere Data**

**Go to this School's Page**

**See Plot Data in a Table**

**Add this Data to a Multi-site Plot**

**Change the X-axis Timeline**

**Visualizations System**

**School: Canyon Weather**

**Site: ATM- Davis Station #2**

**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: 2015-09-10 to 2018-11-04

Measured At: 2018-11-04 19:30:00  
 Solar Measured At: 2018-11-04 11:57:00  
 Solar Noon At: 2018-11-04 19:34:00  
 Daily Average Temperature: 19.1 °C  
 Minimum Daily Temperature: 19.1 °C

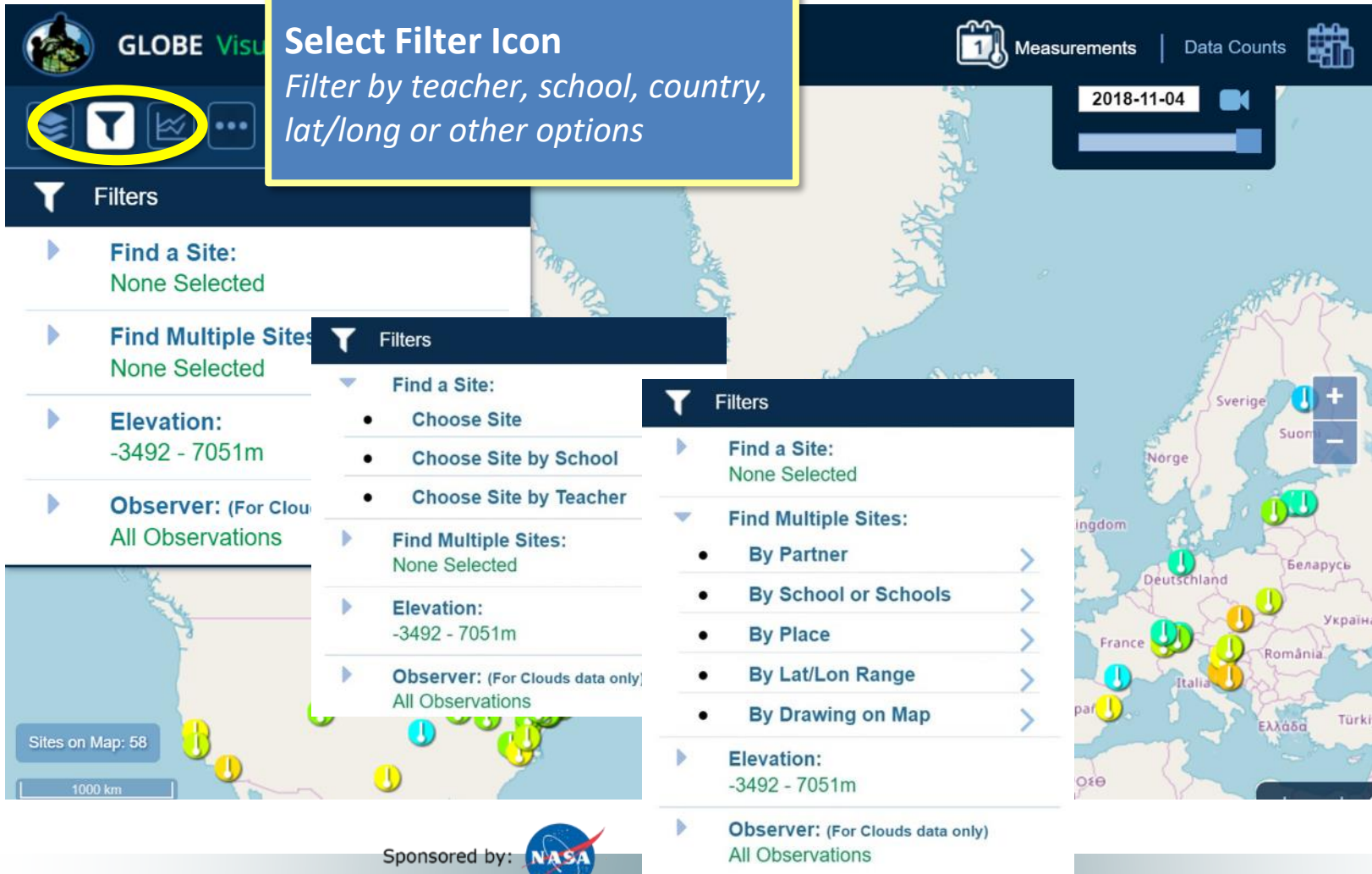
30 Days | 1 Year | Custom



# Advanced Features

- Use Filters - Location/Site/Elevation to find specific locations – school, country, city etc.
- Create an animation
- Use the graph with the + icon to select multiple data sets to graph
  - Allows you to overlay data from multiple sites
- Export layers to KMZ format for using with Google Earth and other similar tools

# Filter your results



**Select Filter Icon**  
*Filter by teacher, school, country, lat/long or other options*

**Filters**

- Find a Site: None Selected
- Find Multiple Sites: None Selected
- Elevation: -3492 - 7051m
- Observer: (For Clouds data only) All Observations

**Filters**

- Find a Site:
  - Choose Site
  - Choose Site by School
  - Choose Site by Teacher
- Find Multiple Sites: None Selected
- Elevation: -3492 - 7051m
- Observer: (For Clouds data only) All Observations

**Filters**


- Find a Site: None Selected
- Find Multiple Sites:
  - By Partner
  - By School or Schools
  - By Place
  - By Lat/Lon Range
  - By Drawing on Map
- Elevation: -3492 - 7051m
- Observer: (For Clouds data only) All Observations

Measurements | Data Counts

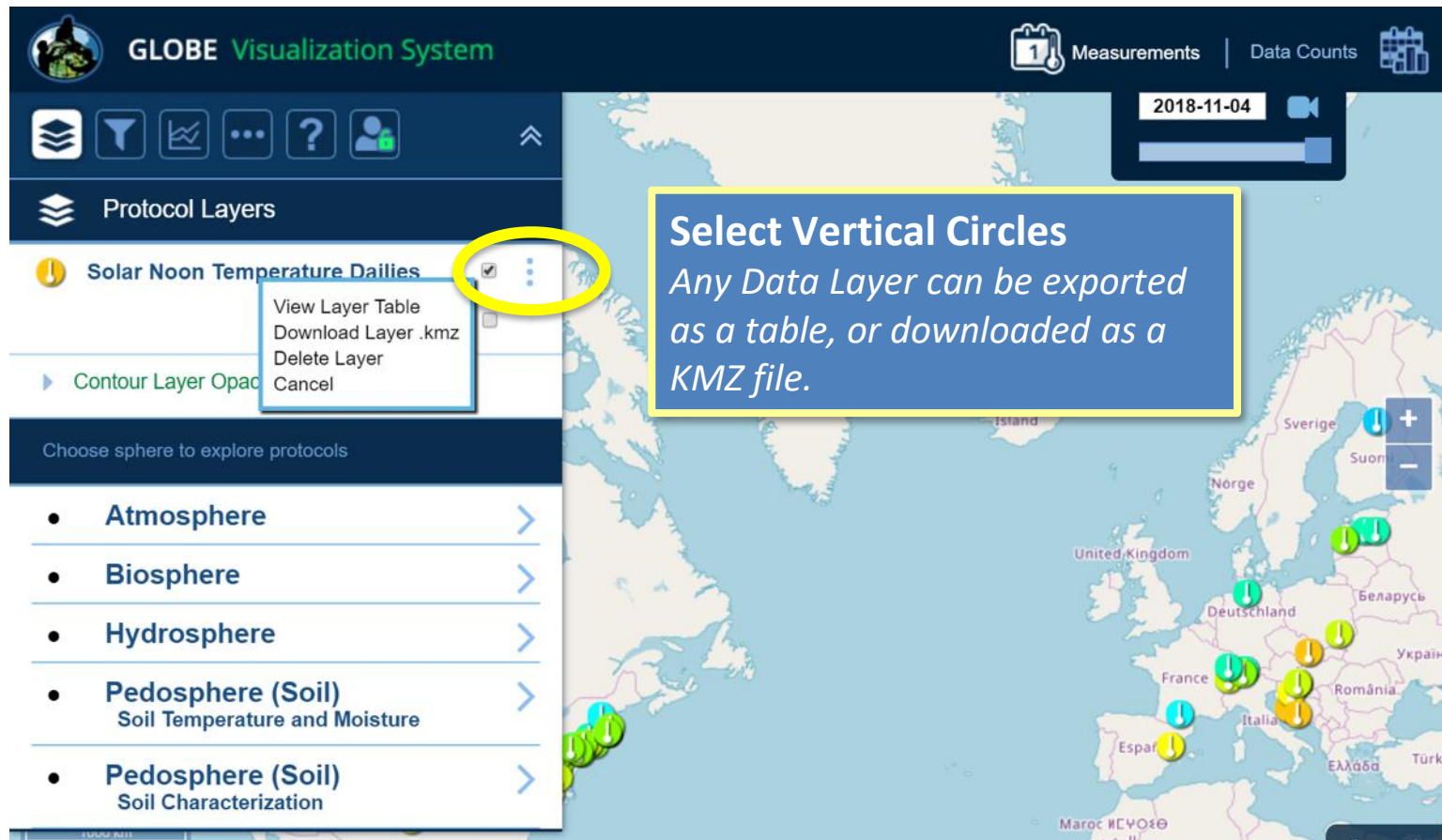
2018-11-04

Sites on Map: 58

1000 km

Sponsored by: 

# Export Layer



**GLOBE Visualization System**

Measurements | Data Counts

2018-11-04

**Protocol Layers**

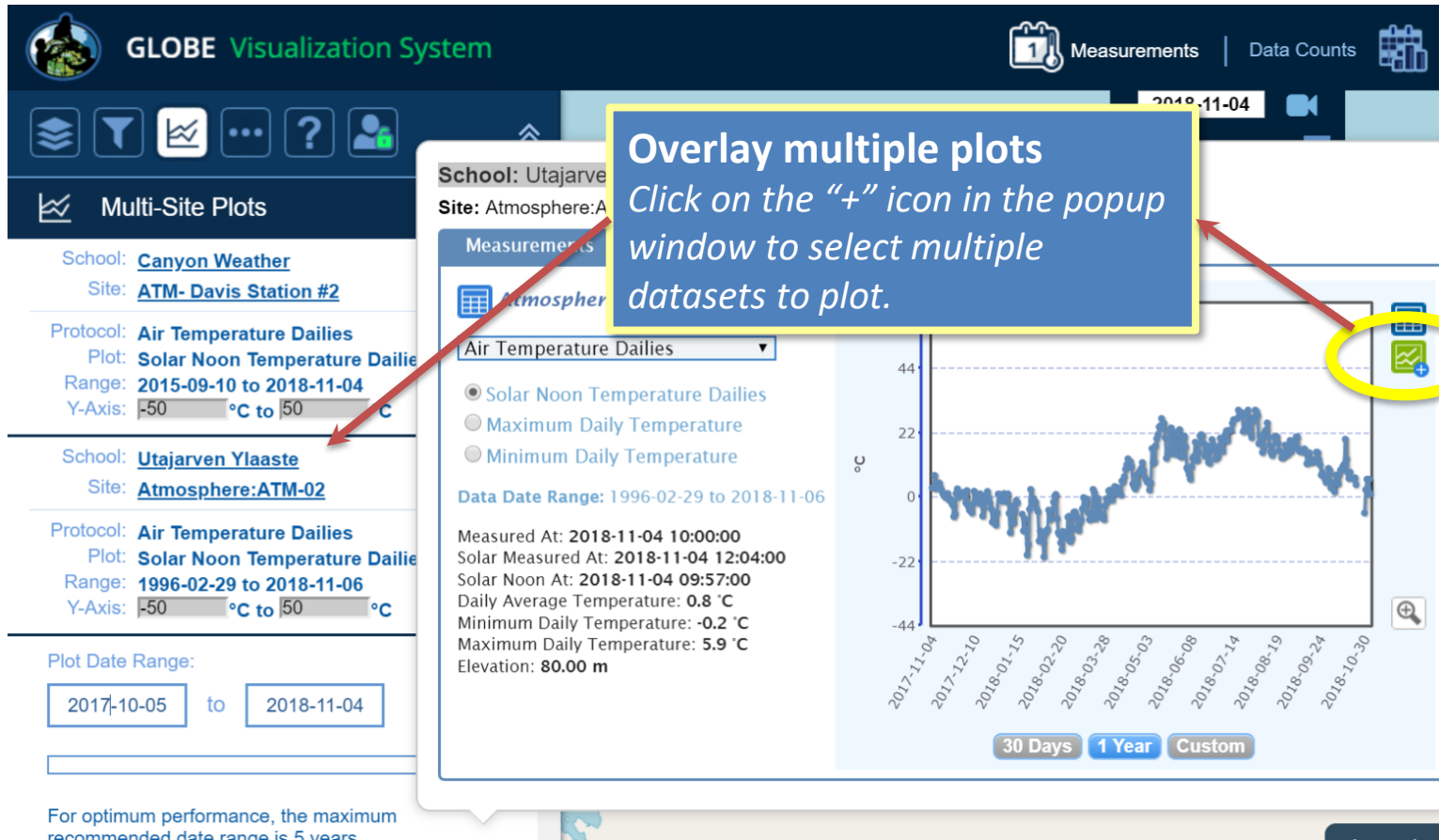
- Solar Noon Temperature Dailies**
  - View Layer Table
  - Download Layer .kmz
  - Delete Layer
  - Cancel
- Contour Layer Opac

Choose sphere to explore protocols

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

**Select Vertical Circles**  
Any Data Layer can be exported as a table, or downloaded as a KMZ file.

# Setup Multi-Site Plot



**GLOBE Visualization System**

Measurements | Data Counts

2018-11-04

**Multi-Site Plots**

School: [Canyon Weather](#)  
Site: [ATM-Davis Station #2](#)

Protocol: [Air Temperature Dailies](#)  
Plot: [Solar Noon Temperature Dailies](#)  
Range: [2015-09-10 to 2018-11-04](#)  
Y-Axis: [-50 °C to 50 °C](#)

School: [Utajarven Ylaaste](#)  
Site: [Atmosphere:ATM-02](#)

Protocol: [Air Temperature Dailies](#)  
Plot: [Solar Noon Temperature Dailies](#)  
Range: [1996-02-29 to 2018-11-06](#)  
Y-Axis: [-50 °C to 50 °C](#)

Plot Date Range:  
 to

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

**Overlay multiple plots**  
*Click on the "+" icon in the popup window to select multiple datasets to plot.*

School: [Utajarven Ylaaste](#)  
Site: [Atmosphere:ATM-02](#)

Measurements

[Atmosphere](#)

[Air Temperature Dailies](#)

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

Data Date Range: 1996-02-29 to 2018-11-06

Measured At: 2018-11-04 10:00:00  
Solar Measured At: 2018-11-04 12:04:00  
Solar Noon At: 2018-11-04 09:57:00  
Daily Average Temperature: 0.8 °C  
Minimum Daily Temperature: -0.2 °C  
Maximum Daily Temperature: 5.9 °C  
Elevation: 80.00 m

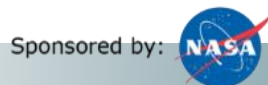
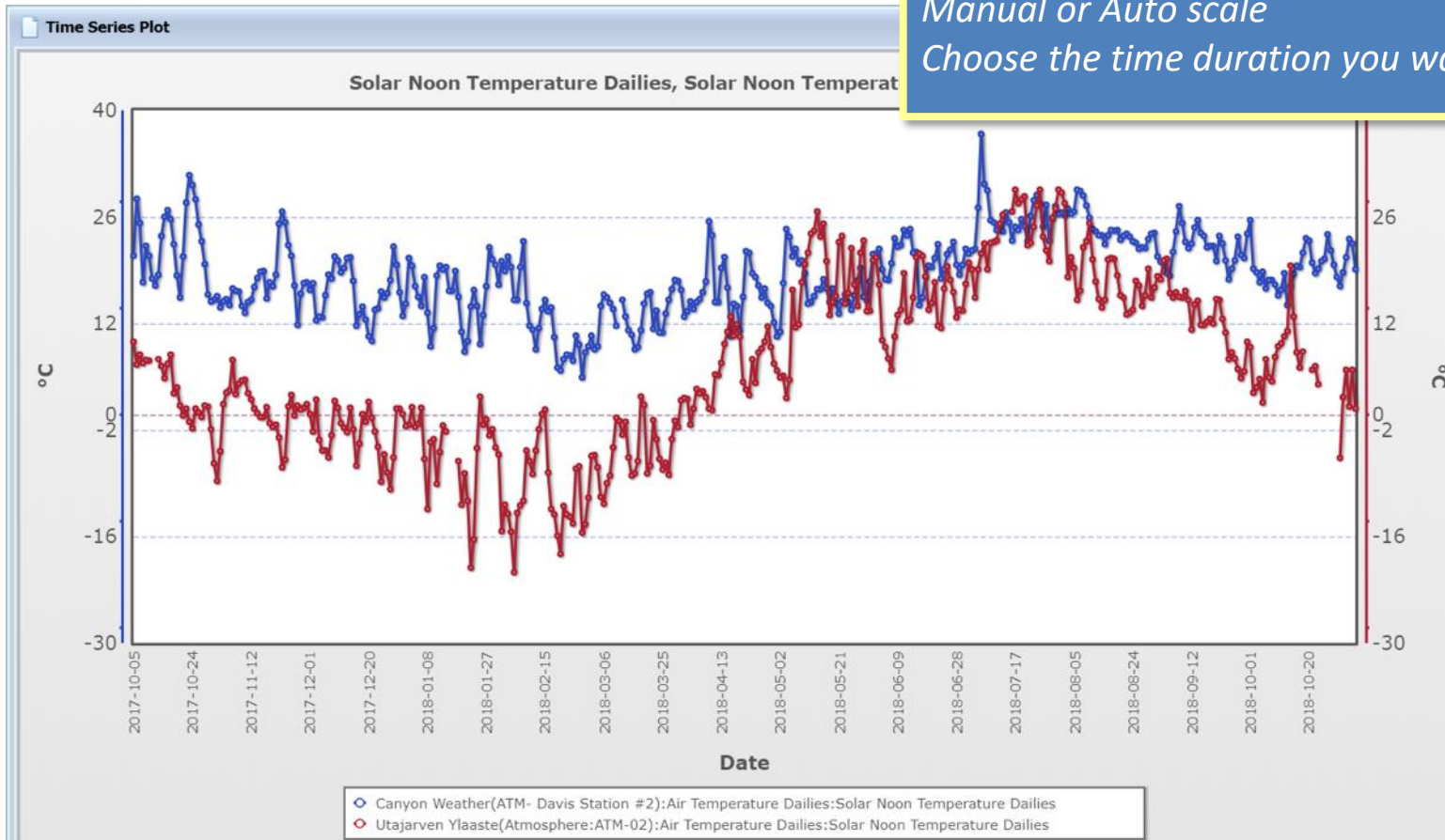
°C

2017-11-04 2017-12-10 2018-01-15 2018-02-20 2018-03-28 2018-05-03 2018-06-08 2018-07-14 2018-08-19 2018-09-24 2018-10-30

30 Days 1 Year Custom

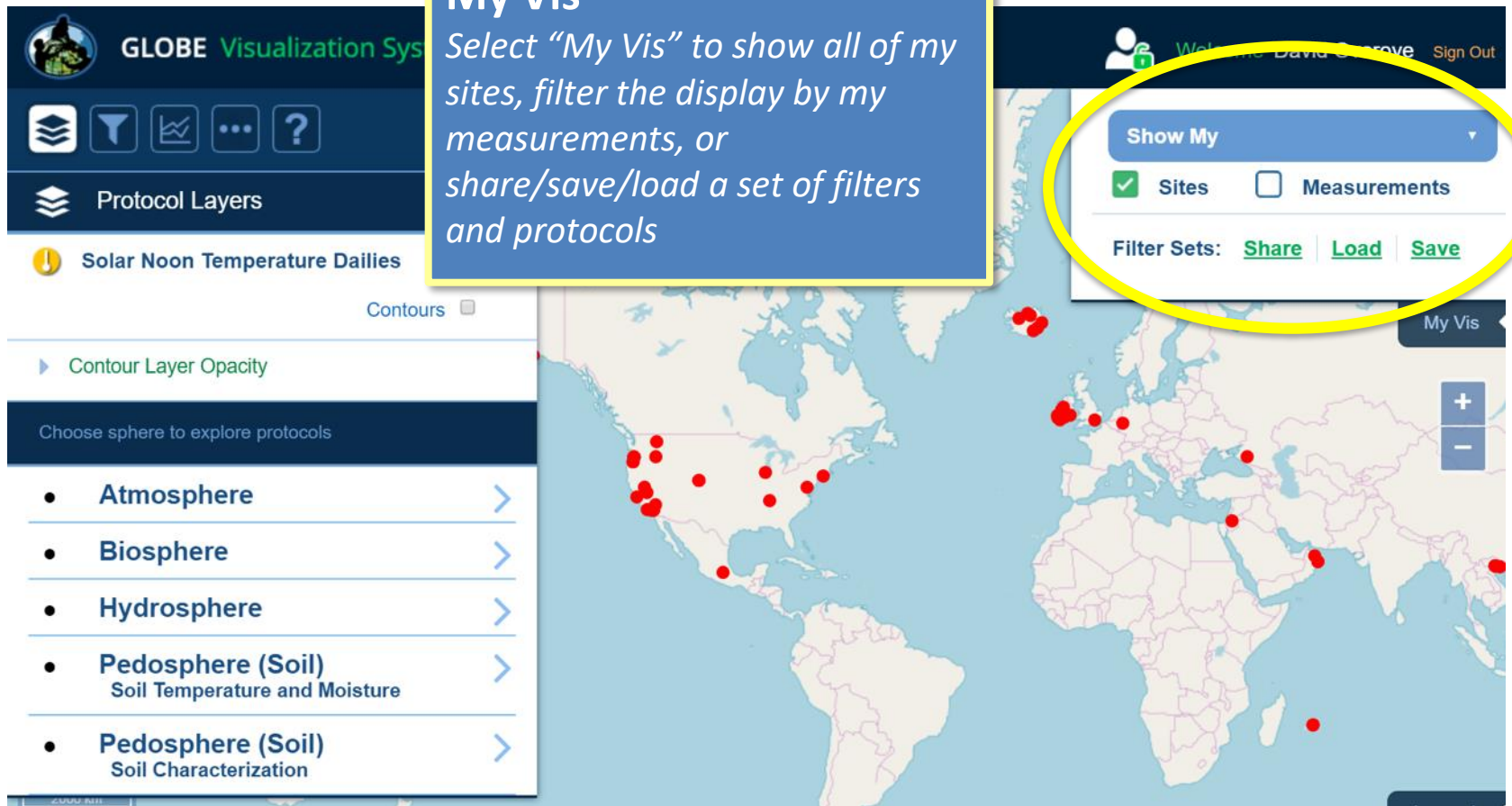
# Setup Multi-Site Plot

**Multiplot up to 6 data sets**  
*Manual or Auto scale*  
*Choose the time duration you want*



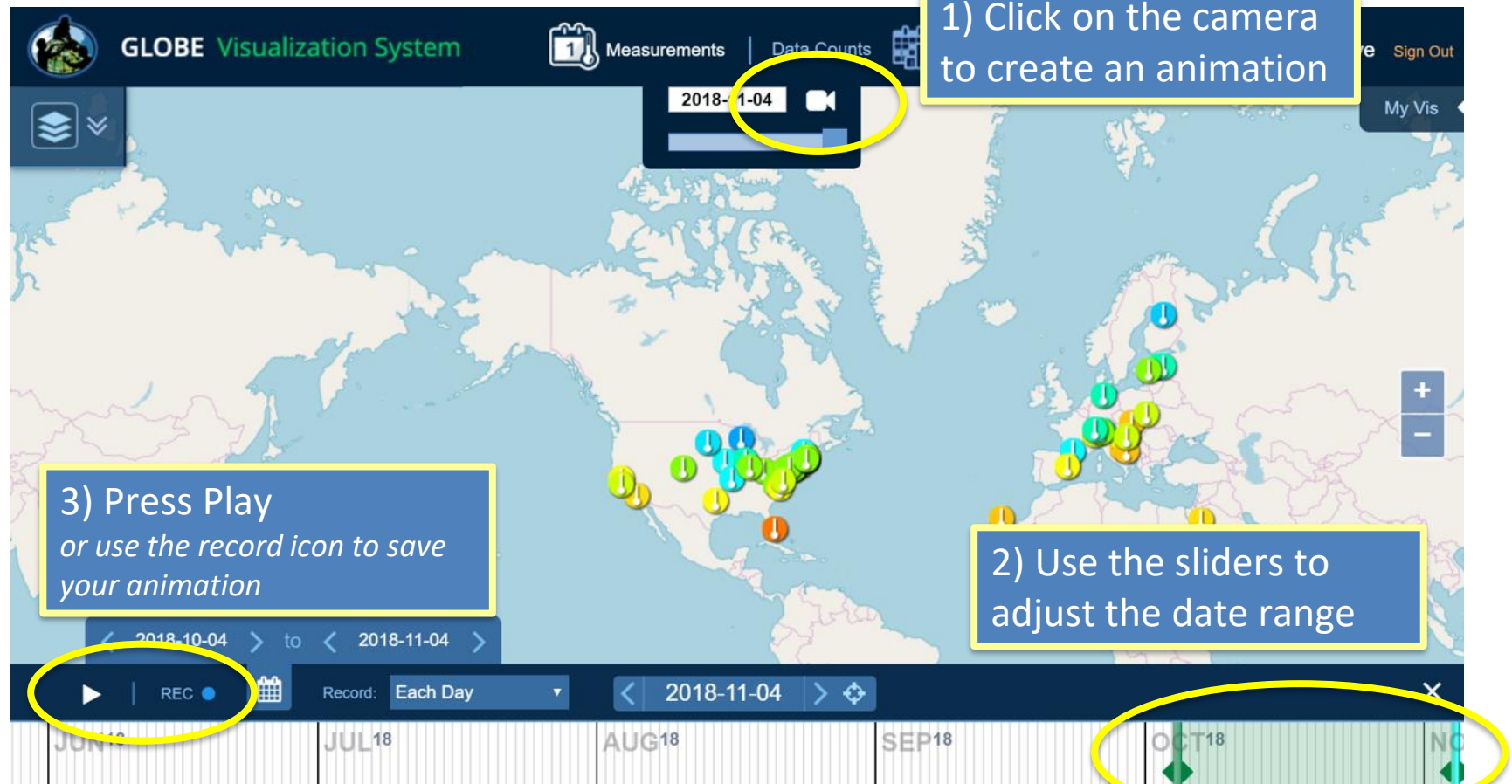
## My Vis

Select "My Vis" to show all of my sites, filter the display by my measurements, or share/save/load a set of filters and protocols



The screenshot displays the GLOBE Visualization System interface. At the top left, the logo and text "GLOBE Visualization System" are visible. Below this is a navigation bar with icons for layers, filters, charts, and help. The main content area shows a "Protocol Layers" section with a list of layers: "Solar Noon Temperature Dailies", "Contours", "Contour Layer Opacity", and a "Choose sphere to explore protocols" section. This section lists five categories: "Atmosphere", "Biosphere", "Hydrosphere", "Pedosphere (Soil) Soil Temperature and Moisture", and "Pedosphere (Soil) Soil Characterization". On the right side, a "My Vis" menu is highlighted with a yellow circle, containing a "Show My" dropdown, checkboxes for "Sites" (checked) and "Measurements", and "Filter Sets" with links for "Share", "Load", and "Save". The background features a world map with red dots representing data points.

# Animating Vis



1) Click on the camera icon to create an animation

2) Use the sliders to adjust the date range

3) Press Play or use the record icon to save your animation

The interface includes a top navigation bar with 'GLOBE Visualization System', 'Measurements', and 'Data Counts'. A date range '2018-11-04' is displayed above the map. The map shows data points across North America and Europe. A bottom control bar features a play button, a 'REC' button, a 'Record: Each Day' dropdown, and a date range '2018-11-04'. A timeline at the bottom shows months from June to November, with a green diamond marker on the 'OCT 18' date.

# Why use Data Counts?

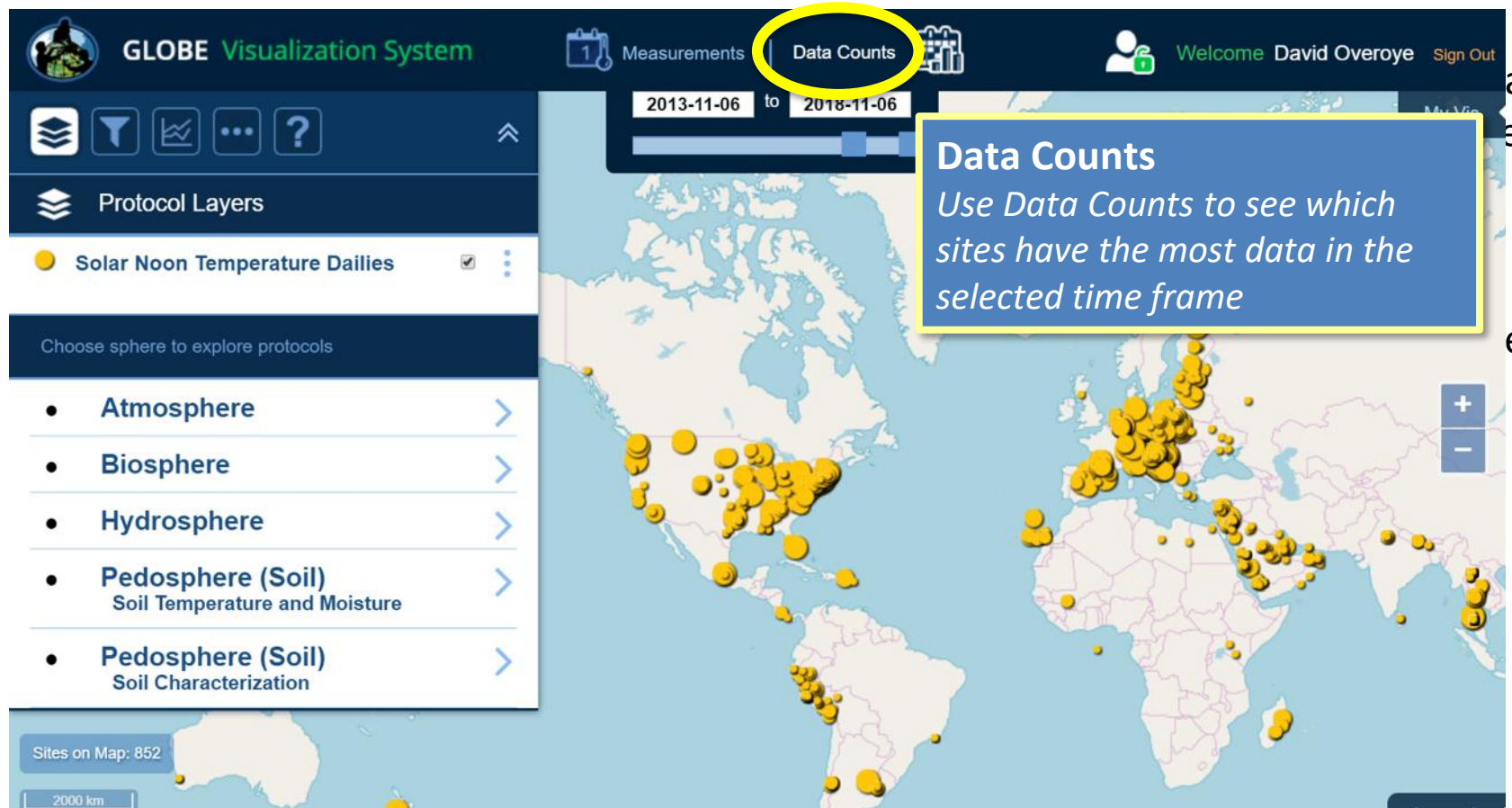
- The Data Counts tab tells you how much data a given location has entered in a particular period of time for a given protocol.
- Looking for someone to collaborate with? Looking for the most current data? Use Data Counts.



# How to Use Data Counts

- Select Data Counts on the top menu of the vis system
- Select the protocol(s) you are interested in (ie Solar Noon Temperature Dailies)
- The map will show the total number of measurements which have occurred at any location since the beginning of the GLOBE program.
- Use the Date Range Filter to adjust the date range
- Select a site which has data
  - You can find the school and teacher if you are interested in collaborating.

# Data Counts



# Hands on...

Walkthrough of the GLOBE Visualization System

<https://bit.ly/4h51tAQ>

Walkthrough of comparing cloud photos with satellite data

<https://bit.ly/4dOPXqi>

## Reminder – Tutorials are on the website!

- Vis System Tutorials – under Training – Tutorial Center – Data Access, Analysis and Reporting

<https://www.globe.gov/get-trained/tutorial-center/data-access/-/tutorials/104432049/introduction-to-the-vis-system>

- Questions?

