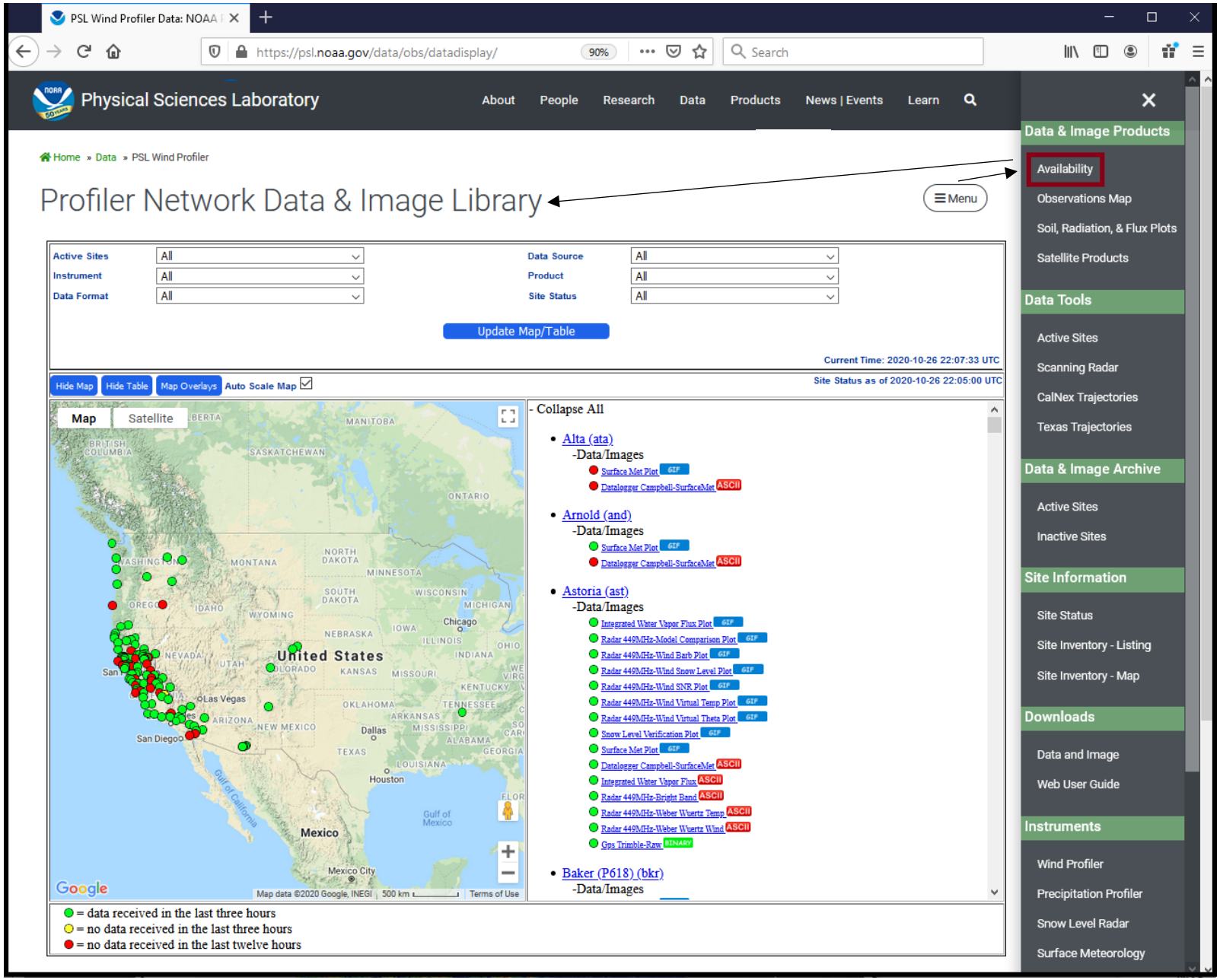
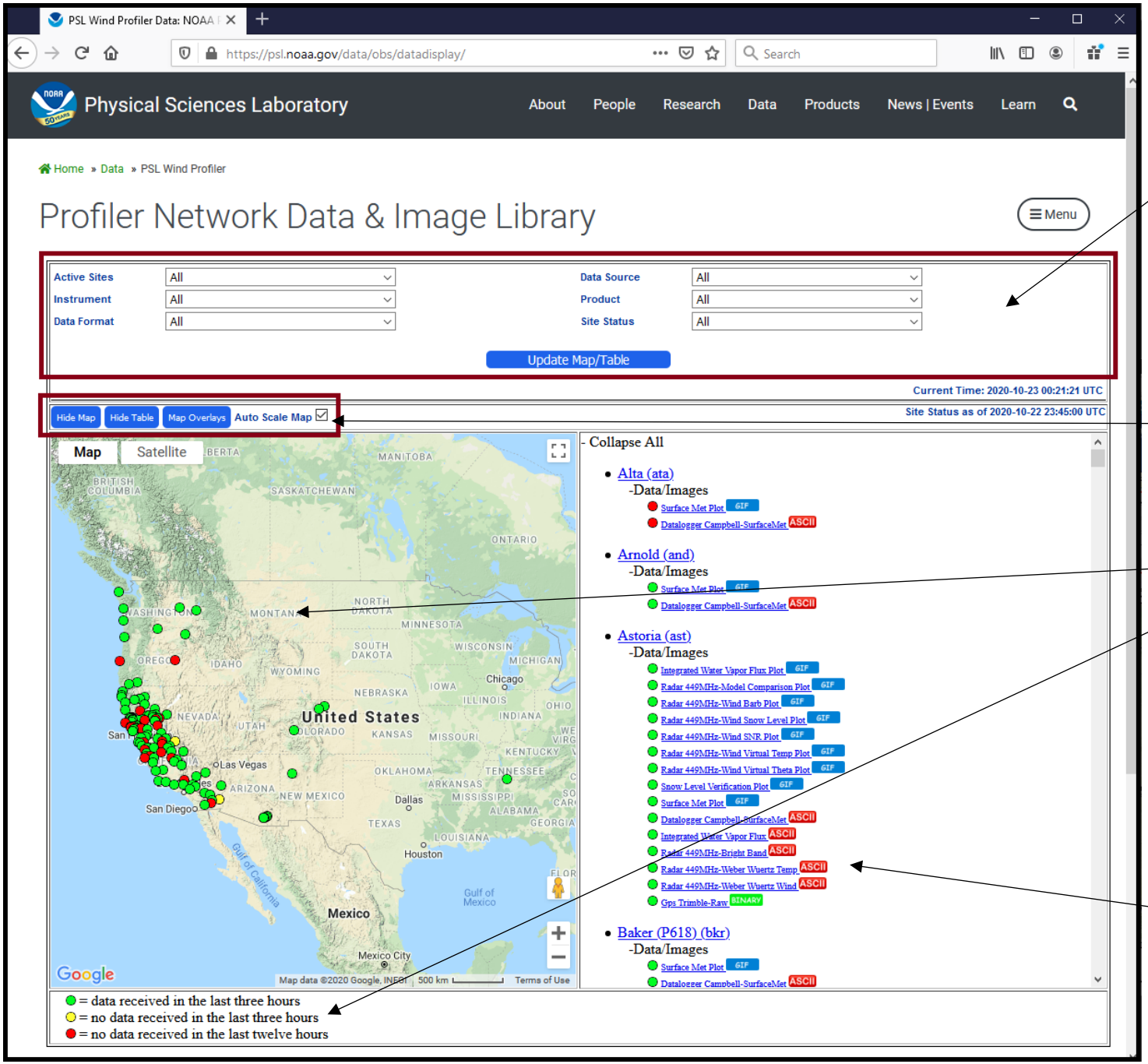
PSL Real-Time Observations

Web Interface User Guide

Data & Image Products - Availability
https://psl.noaa.gov/data/obs/datadisplay/



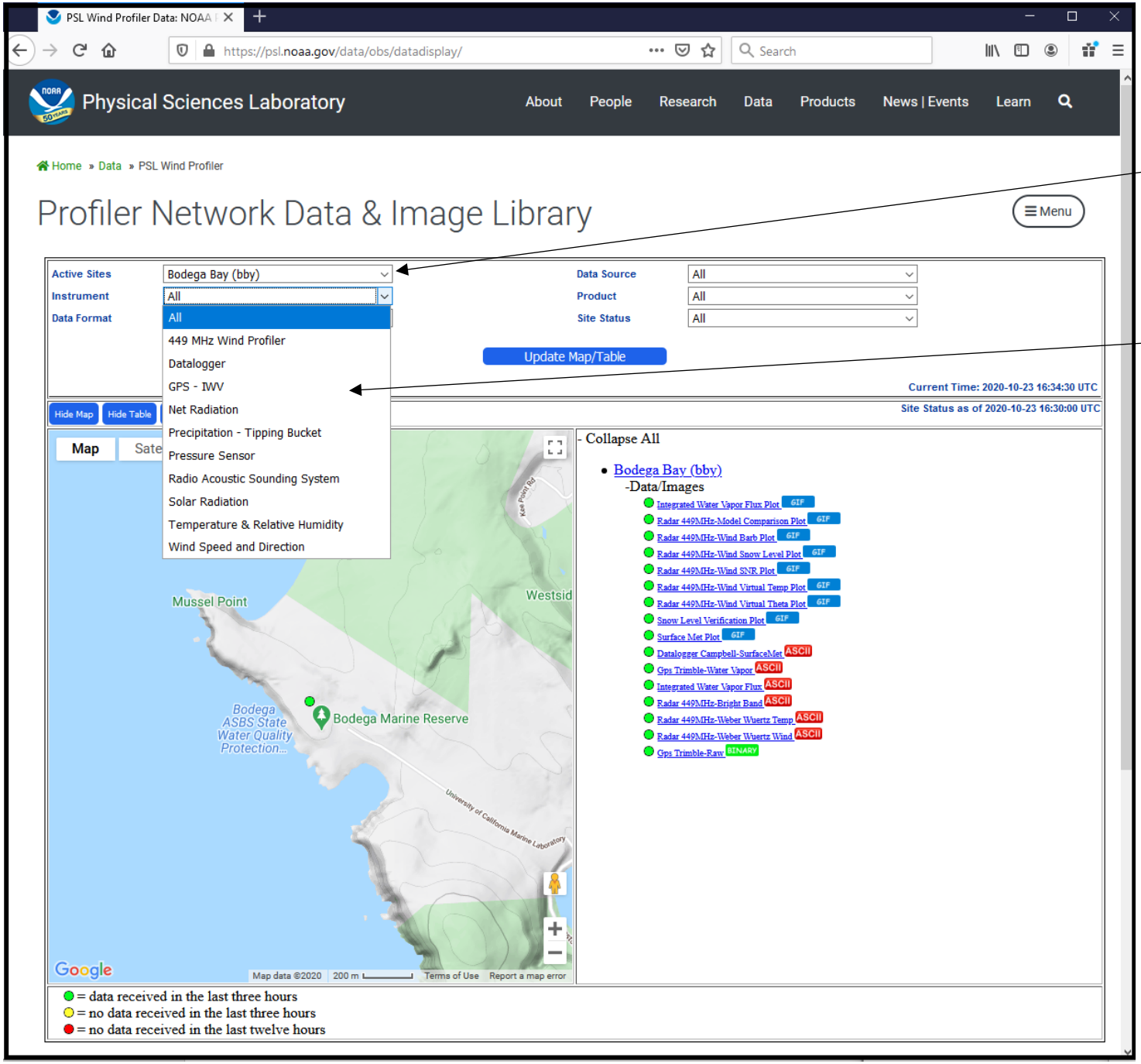


Drop-down menu listing active sites, instrument categories, data formats, data sources, products, and site status. Click the "Update Map/Table" to display the selected options on the map and/or in the table display.

Toggle buttons that hide the map to expand the table, hide the table to expand map, and auto scale the map after updates.

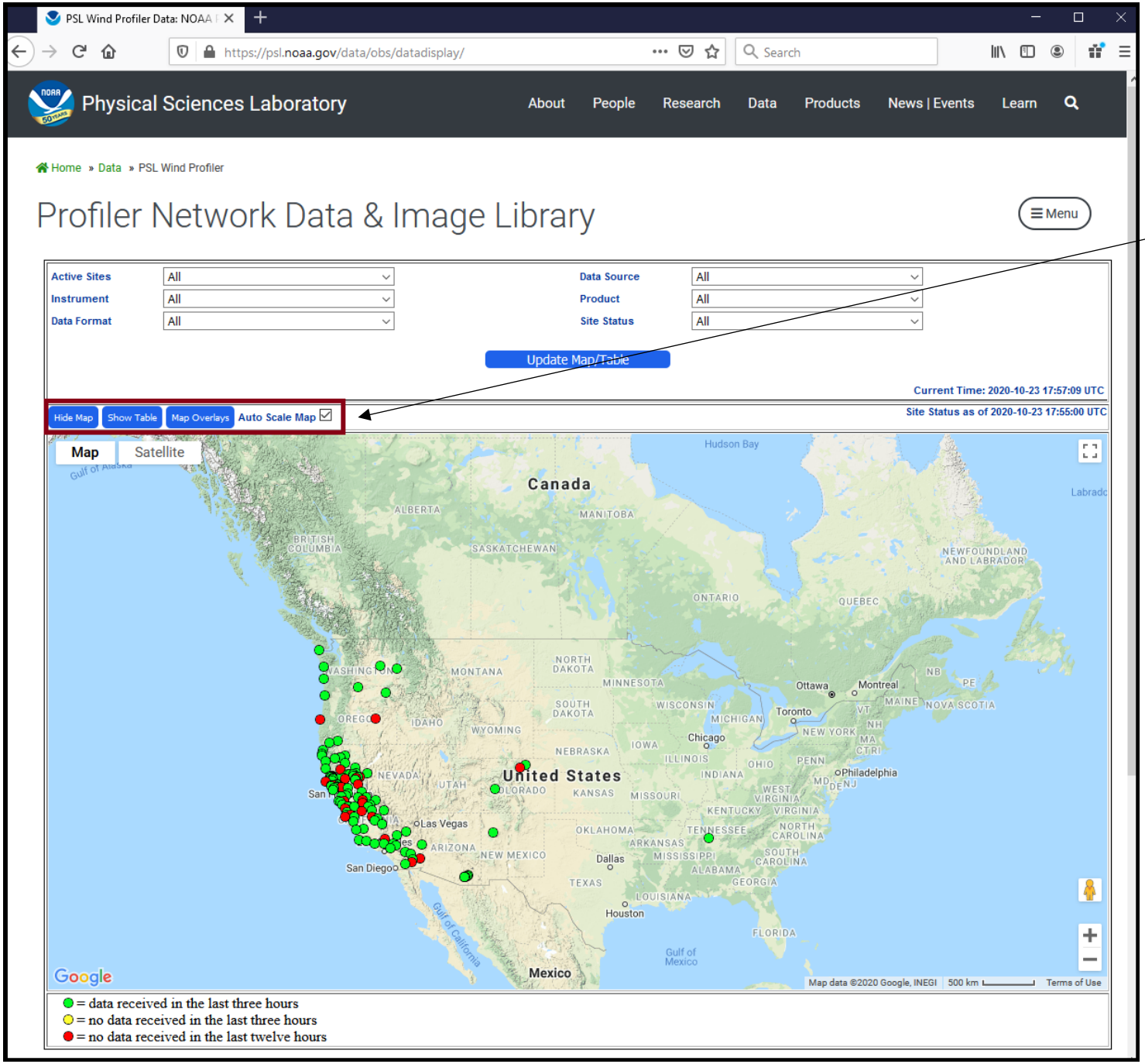
Map showing station locations. The colored dots represent the data latency for the site, with the latency legend shown below the map. Clicking on the dot will open a pop-up menu listing all the data and image products available at each site.

A table form showing list of sites corresponding to the drop-down-menu selections. The table displays a list of data products for each site. A user can click on any of the data products to view.



An example showing the Bodega Bay (bby) selection from Active Sites drop-down menu.

The other drop-down menus are automatically populated with the information relevant to the selected site. In this example, only the instruments for Bodega Bay are shown in the drop-down menu.



Map in expanded view by clicking "Hide Table" button.

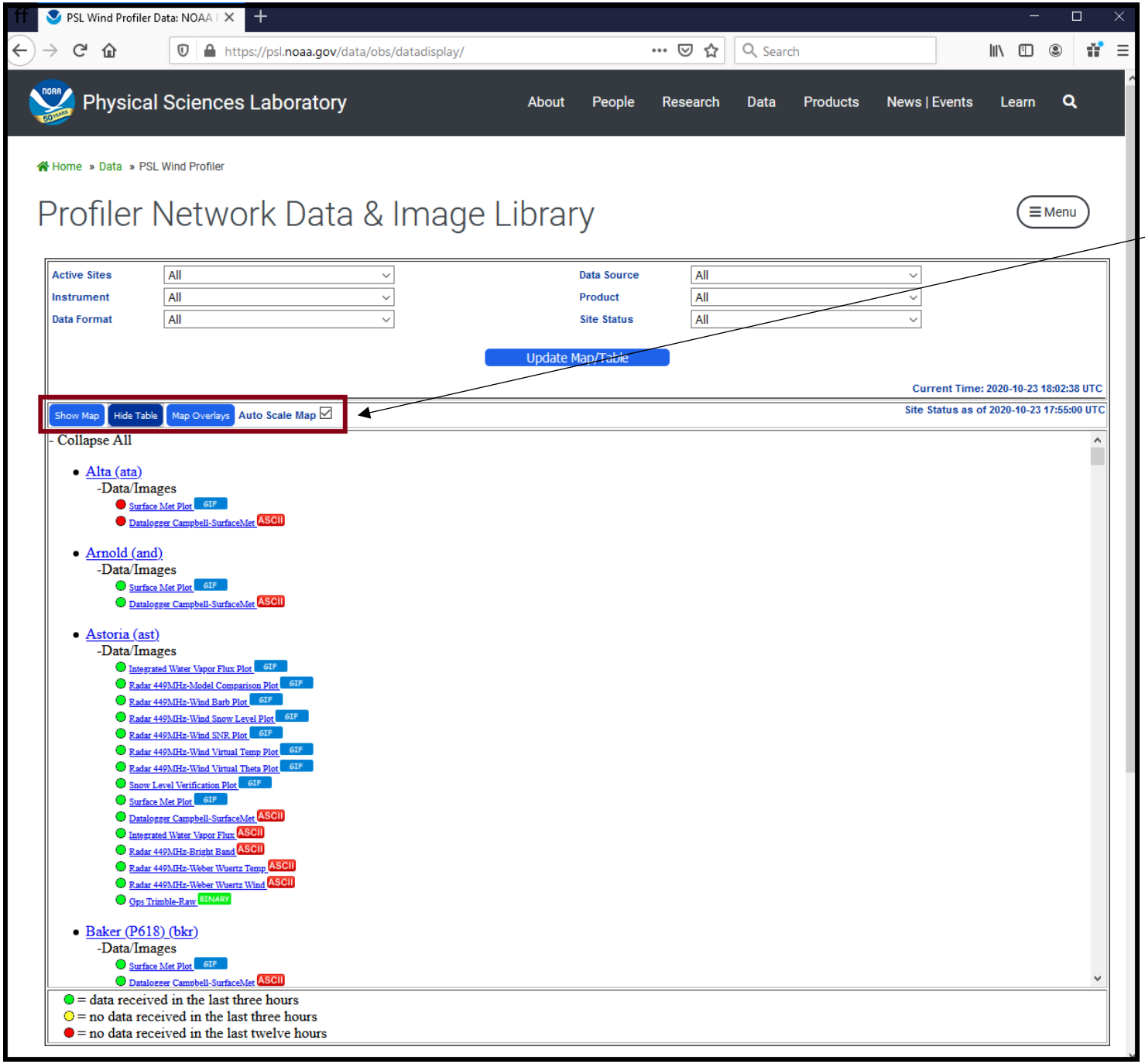
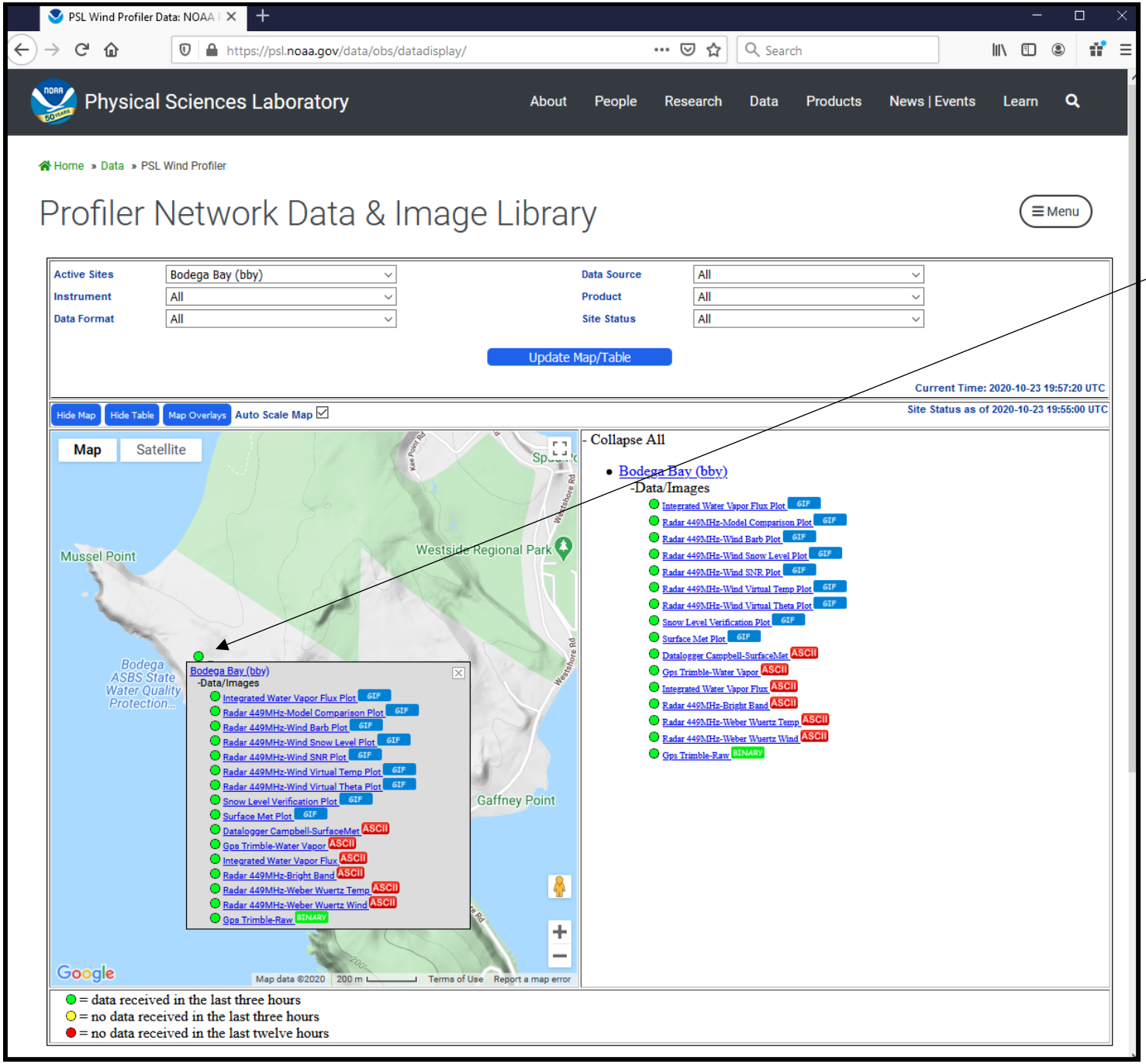
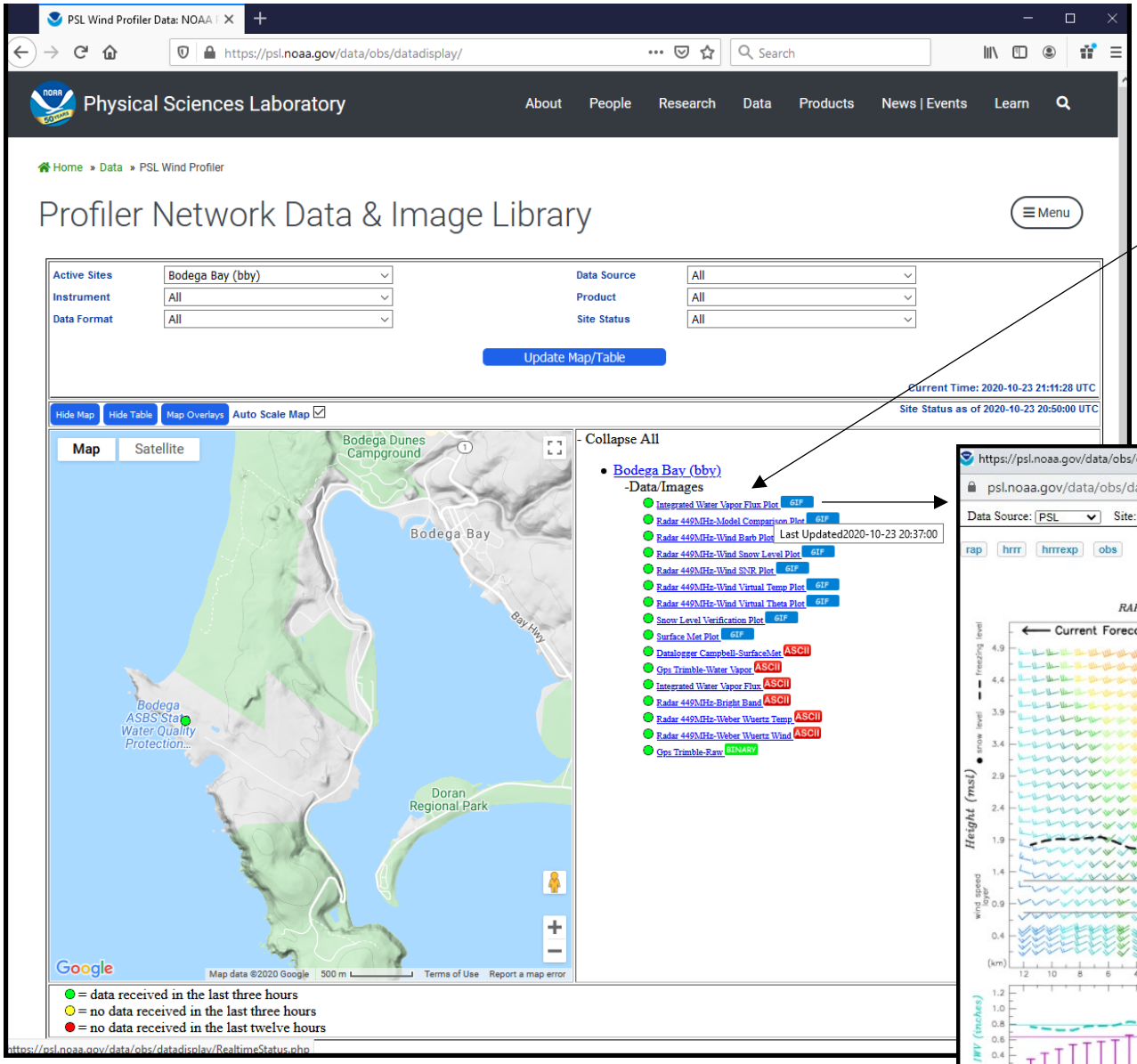


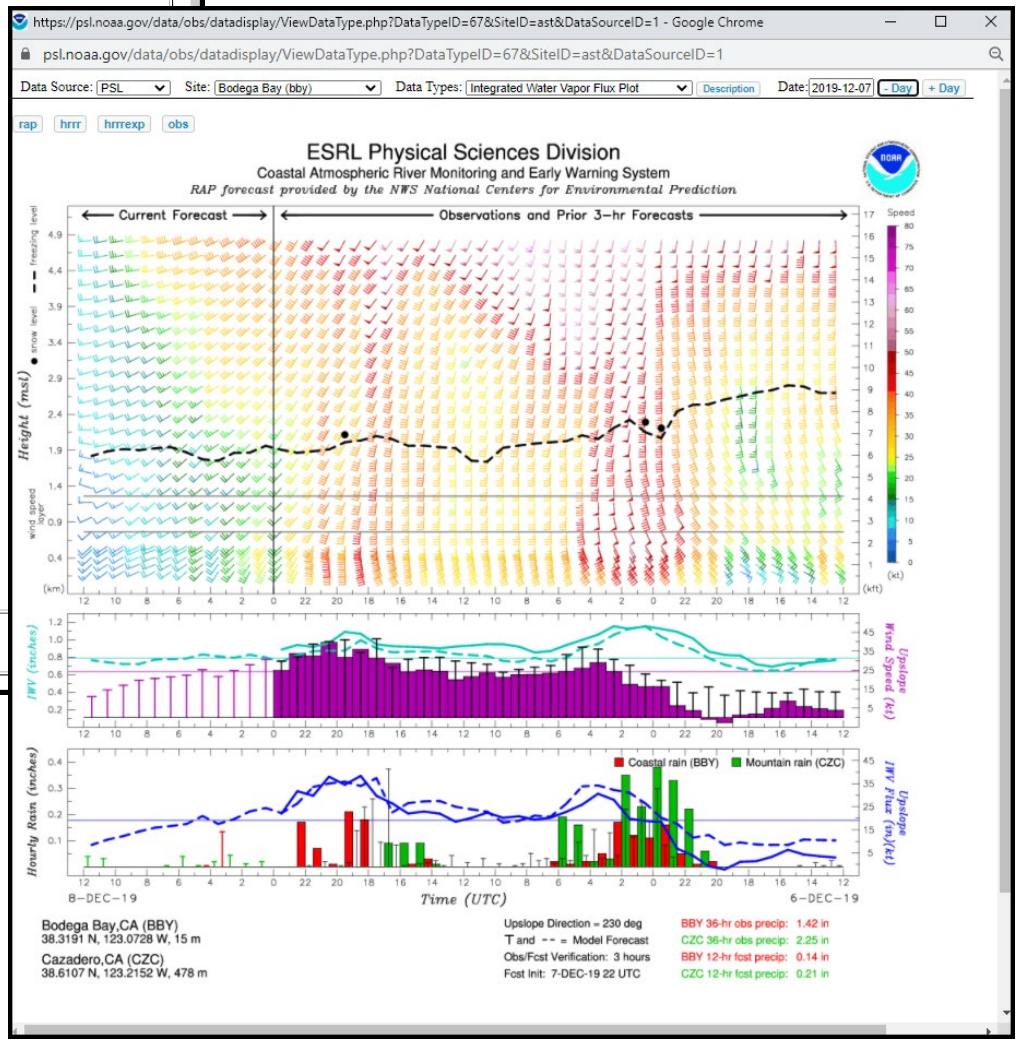
Table in expanded view by clicking "Hide Map" button.

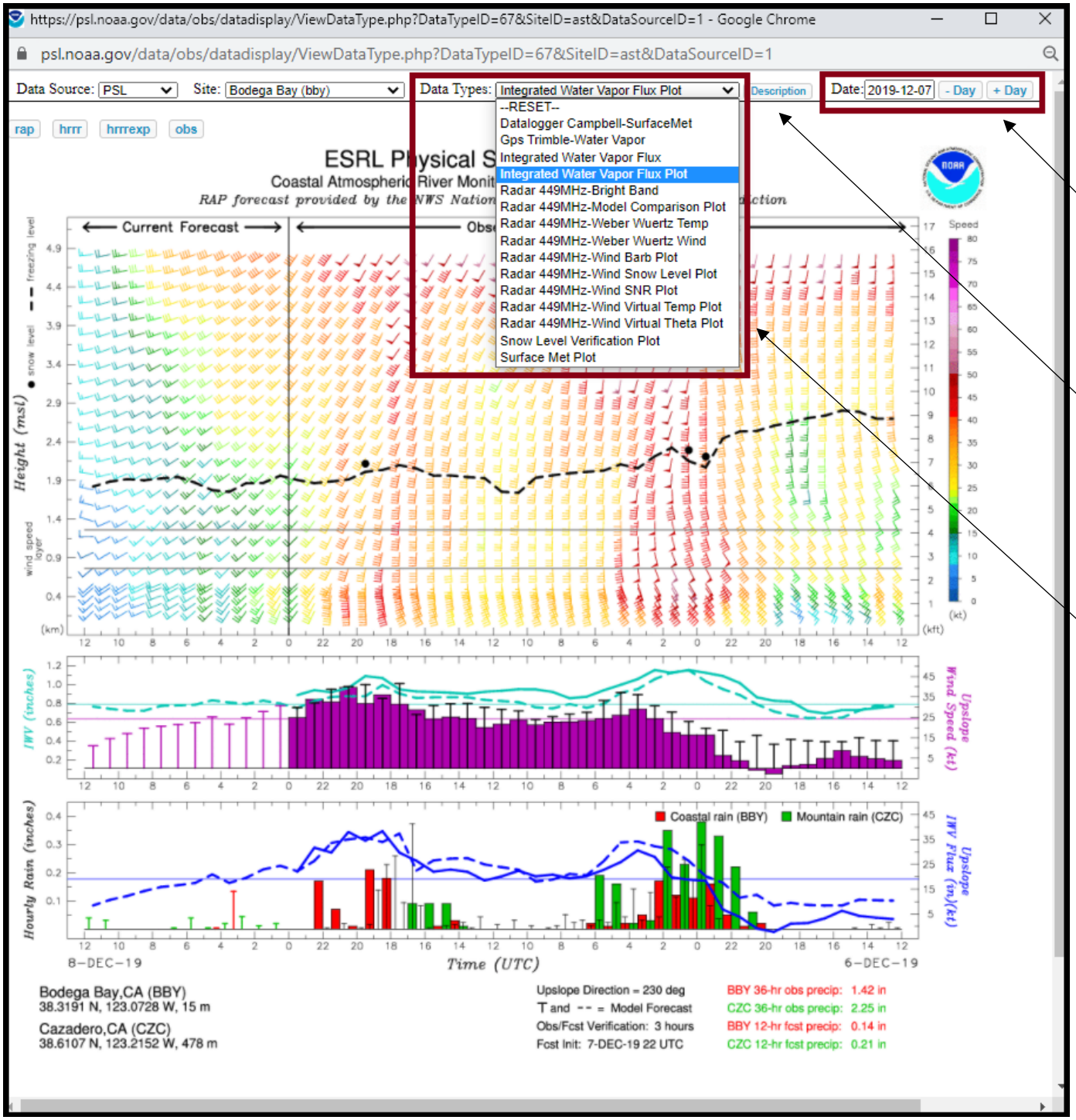


Clicking on the dot on the map will launch the same table display as appears in the table view. Click on any of the links to view data products.



An example of viewing a data product. Clicking on the "Integrated Water Vapor Flux Plot" link launches a new window to view the data product.

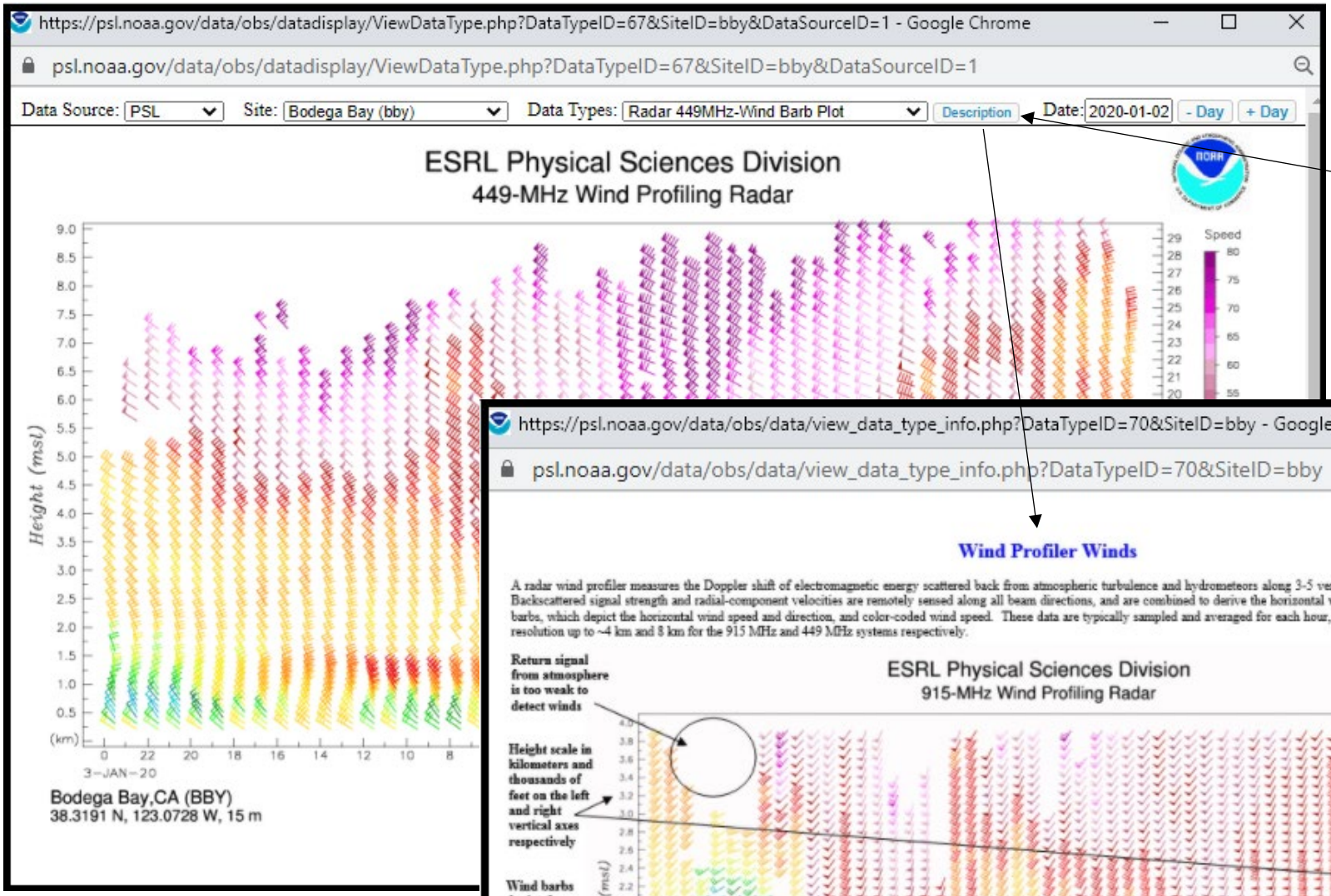




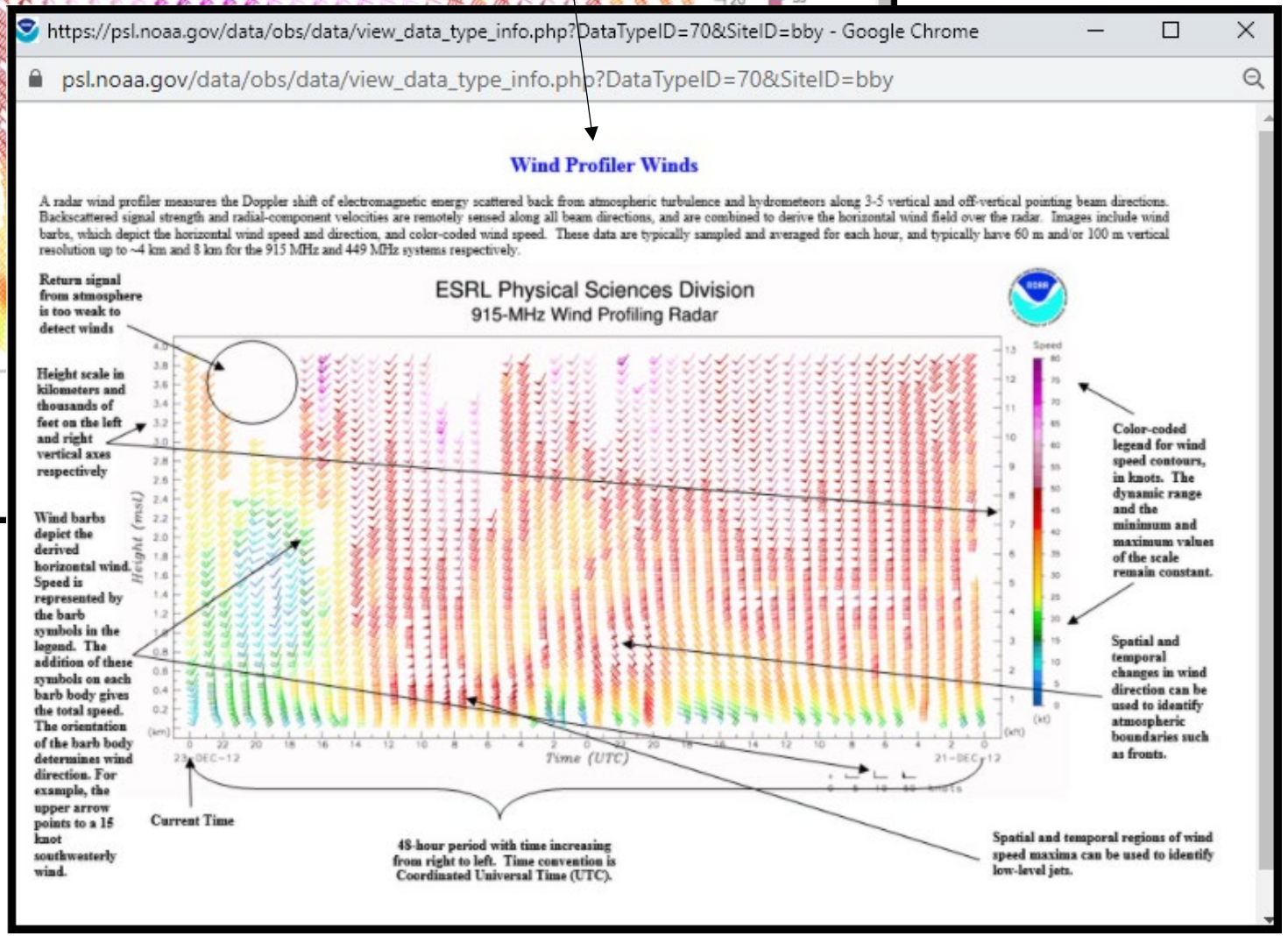
Calendar used to choose a different data period. Buttons that traverse the days from previous to next.

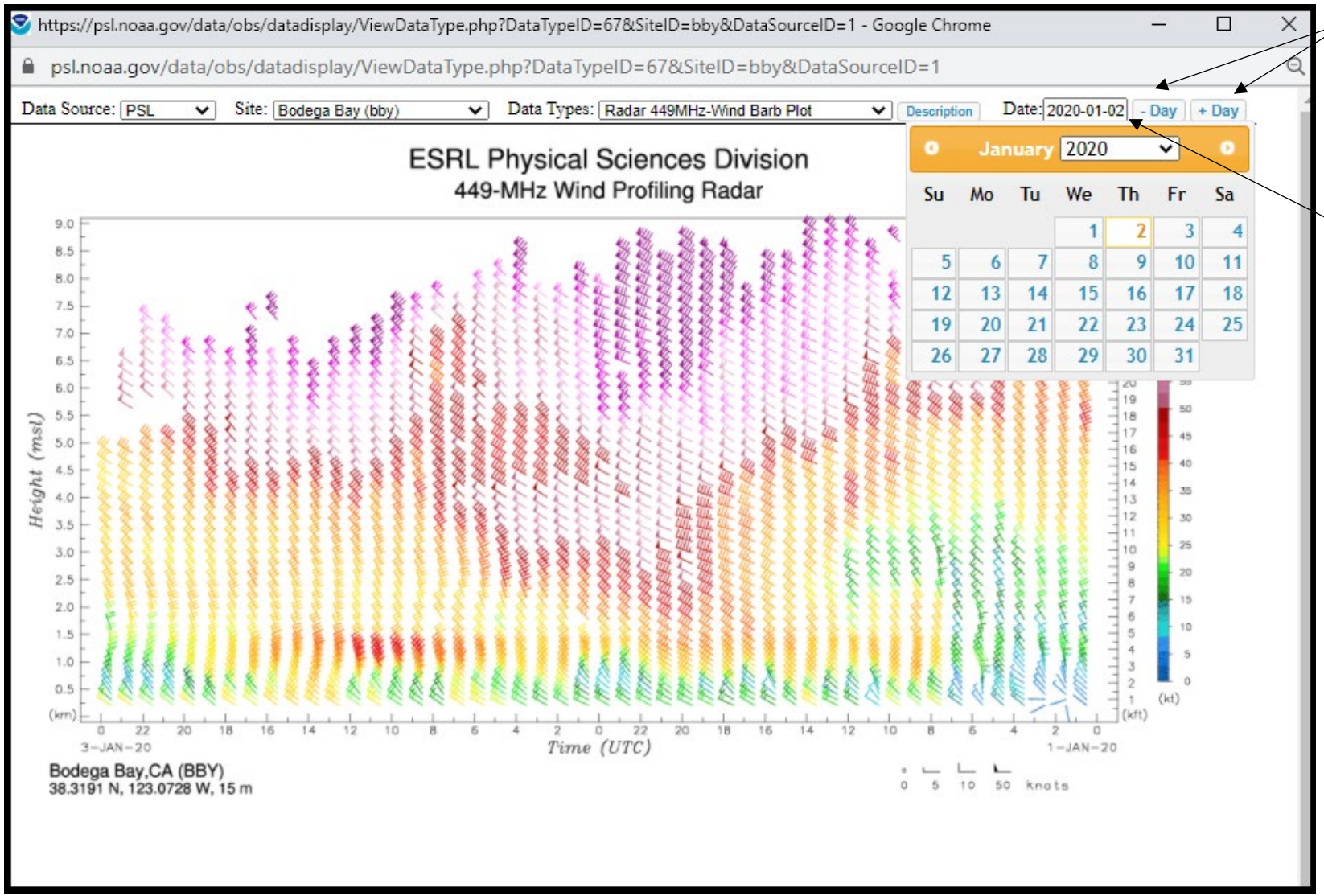
Button to view a detailed description of the selected data product.

A drop-down menu listing all the data products for the selected site, Bodega Bay. Likewise, if a specific data type is selected, all the sites that possess that data type will be dynamically populated in the site drop-down menu.



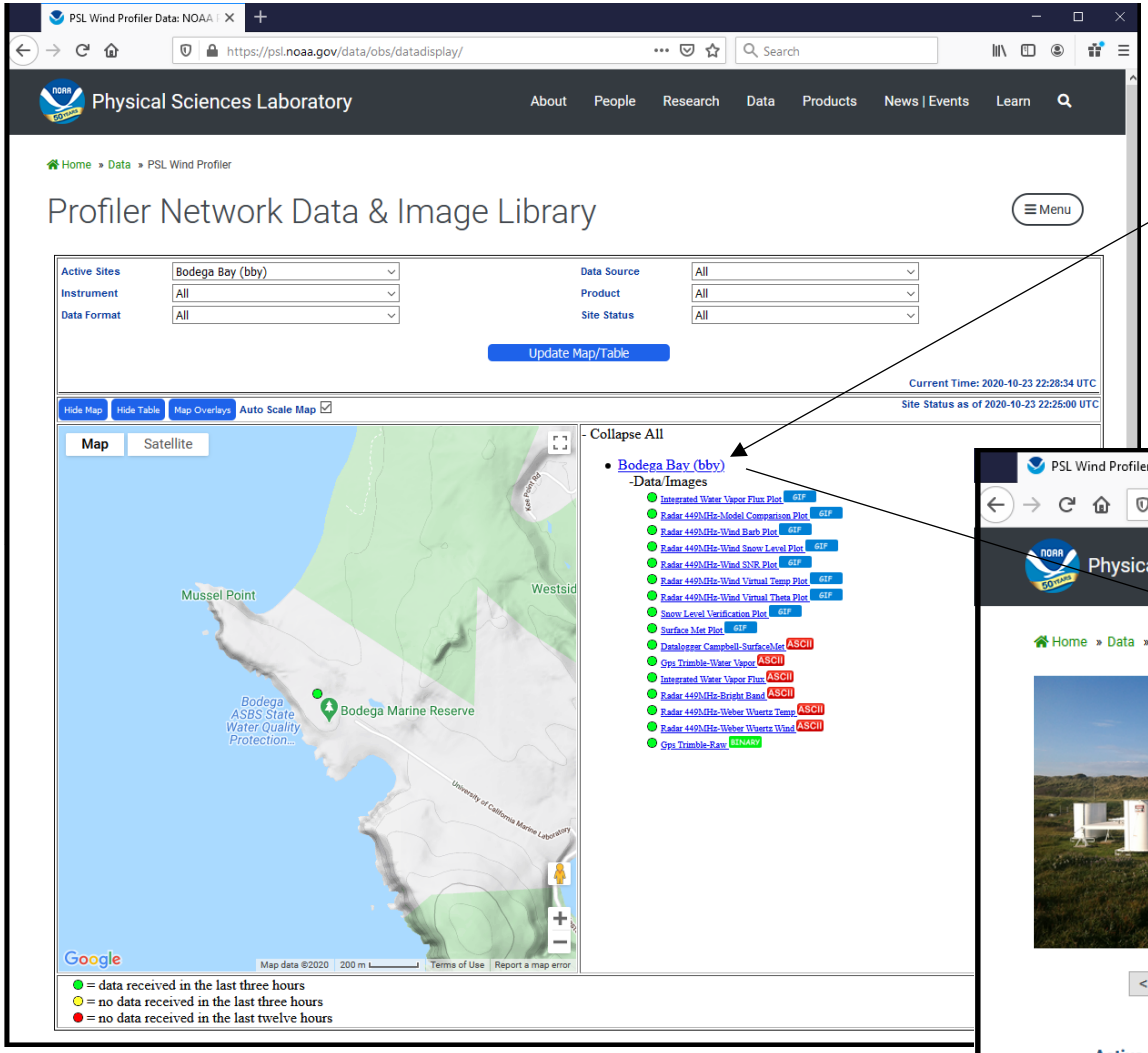
Clicking the "Description" button launches a new window with detailed information about the selected data product.



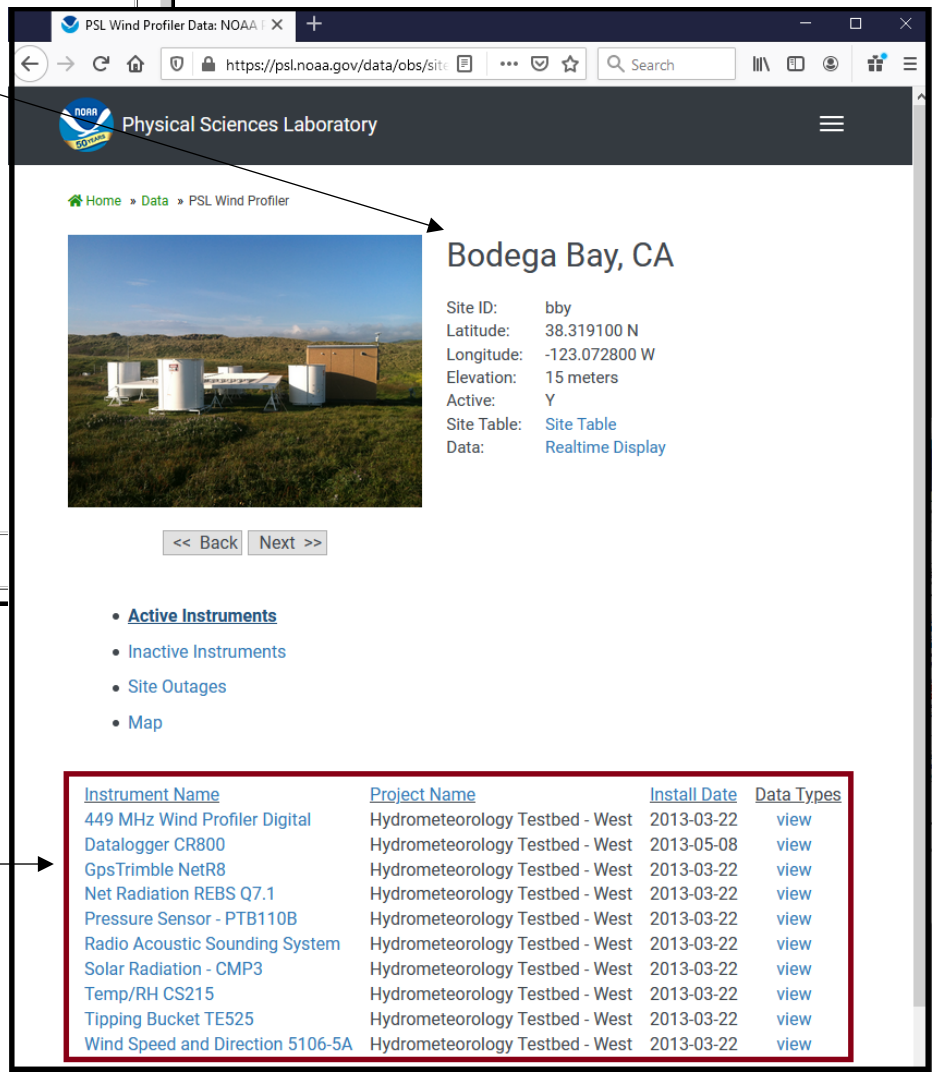


Click the "-Day" and "+Day" buttons to display the previous and next day's plot.

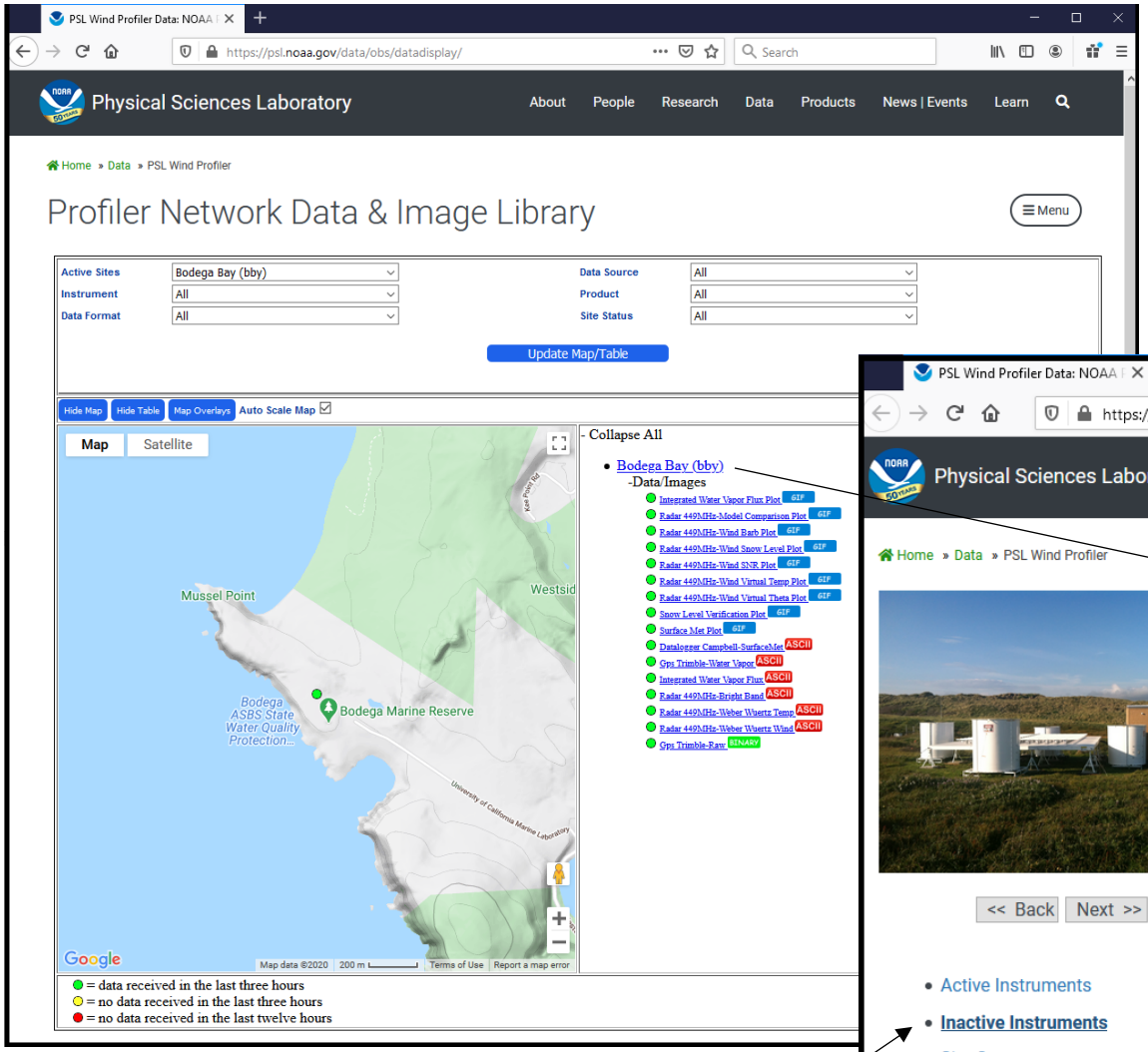
Click the "Date" edit box to explicitly input a new date or select a date using the calendar widget.

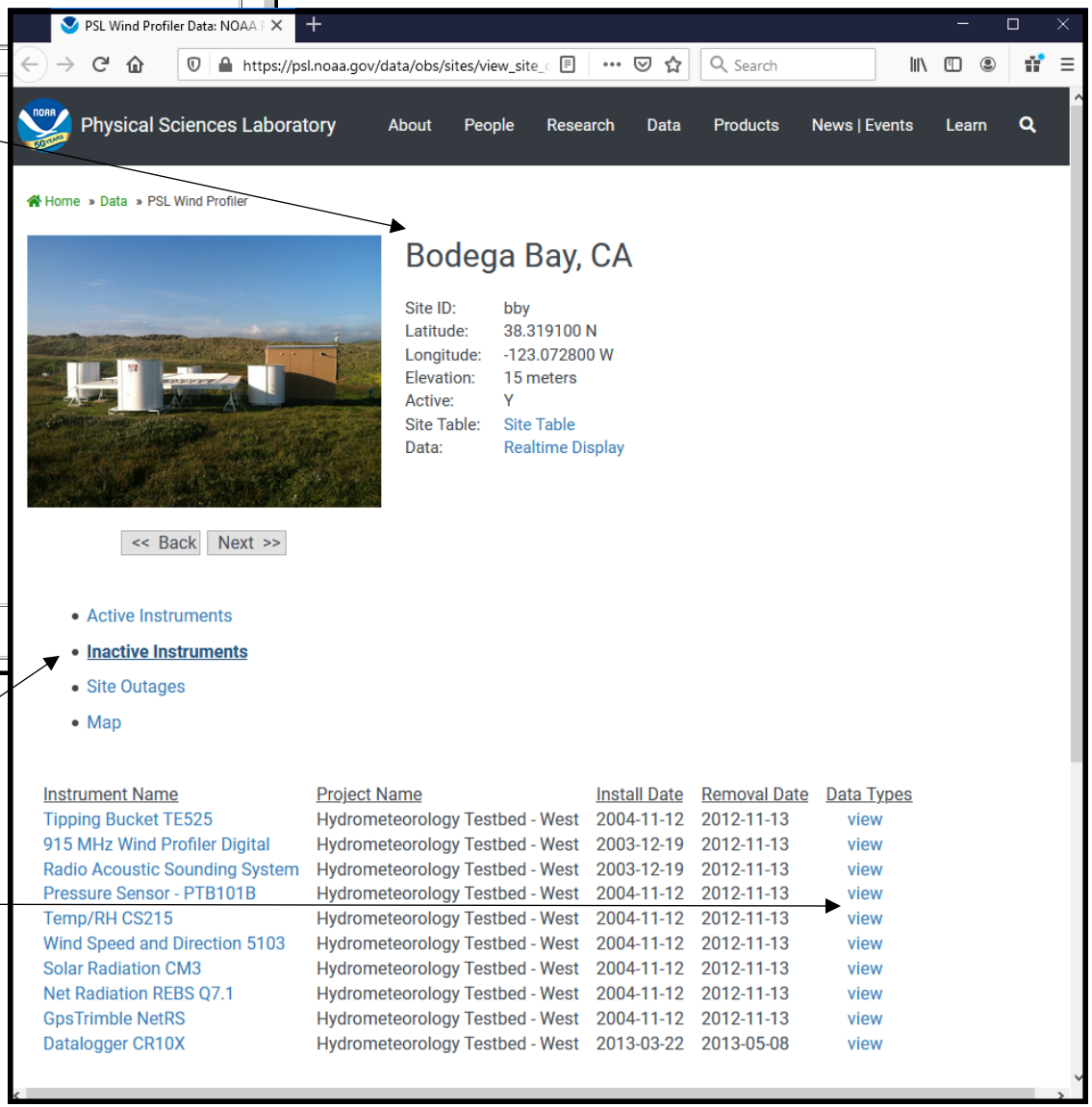


Click on the site name to launch the site information page in a separate tab.



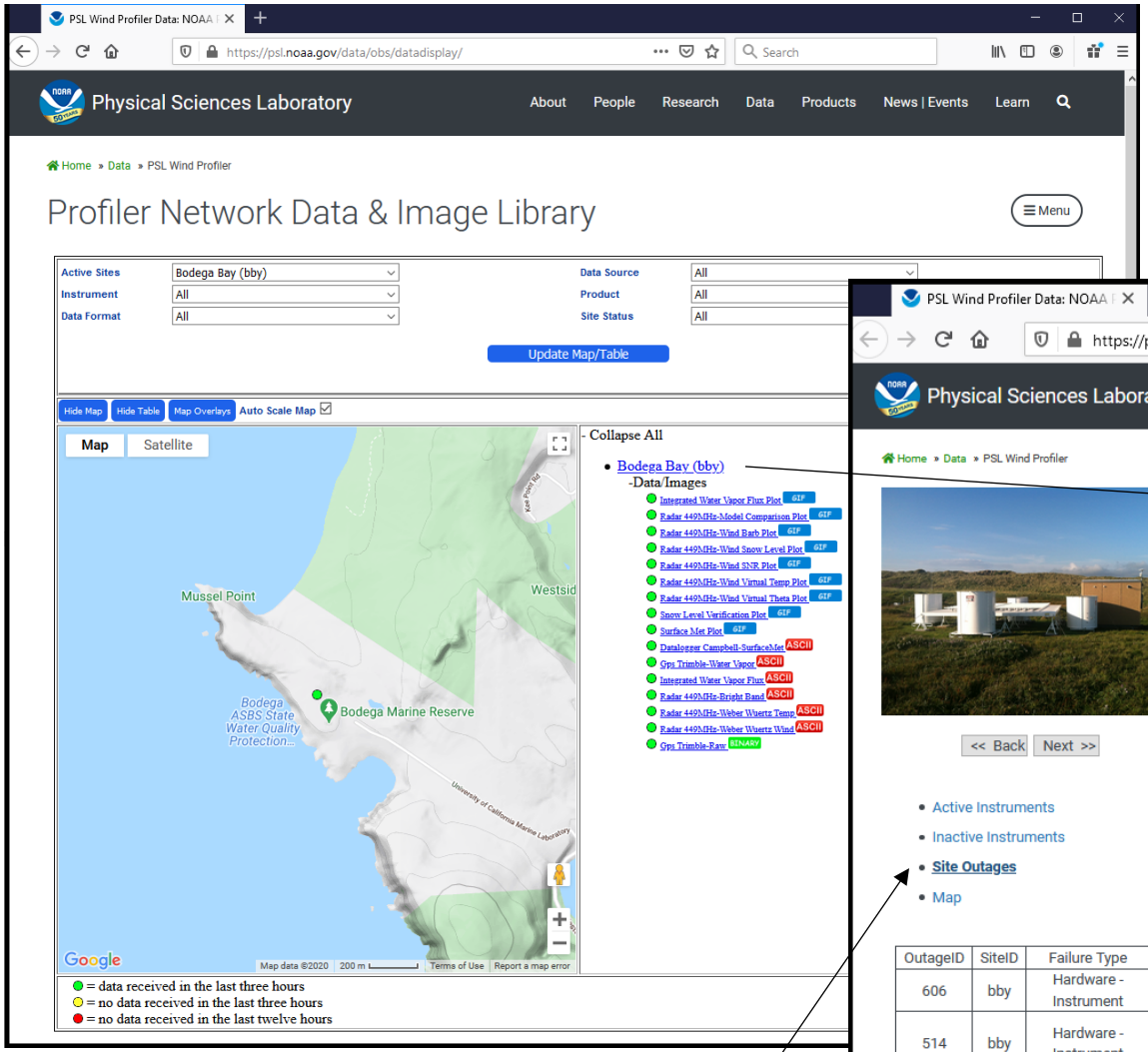
The default view will show all active instruments running at the selected site.

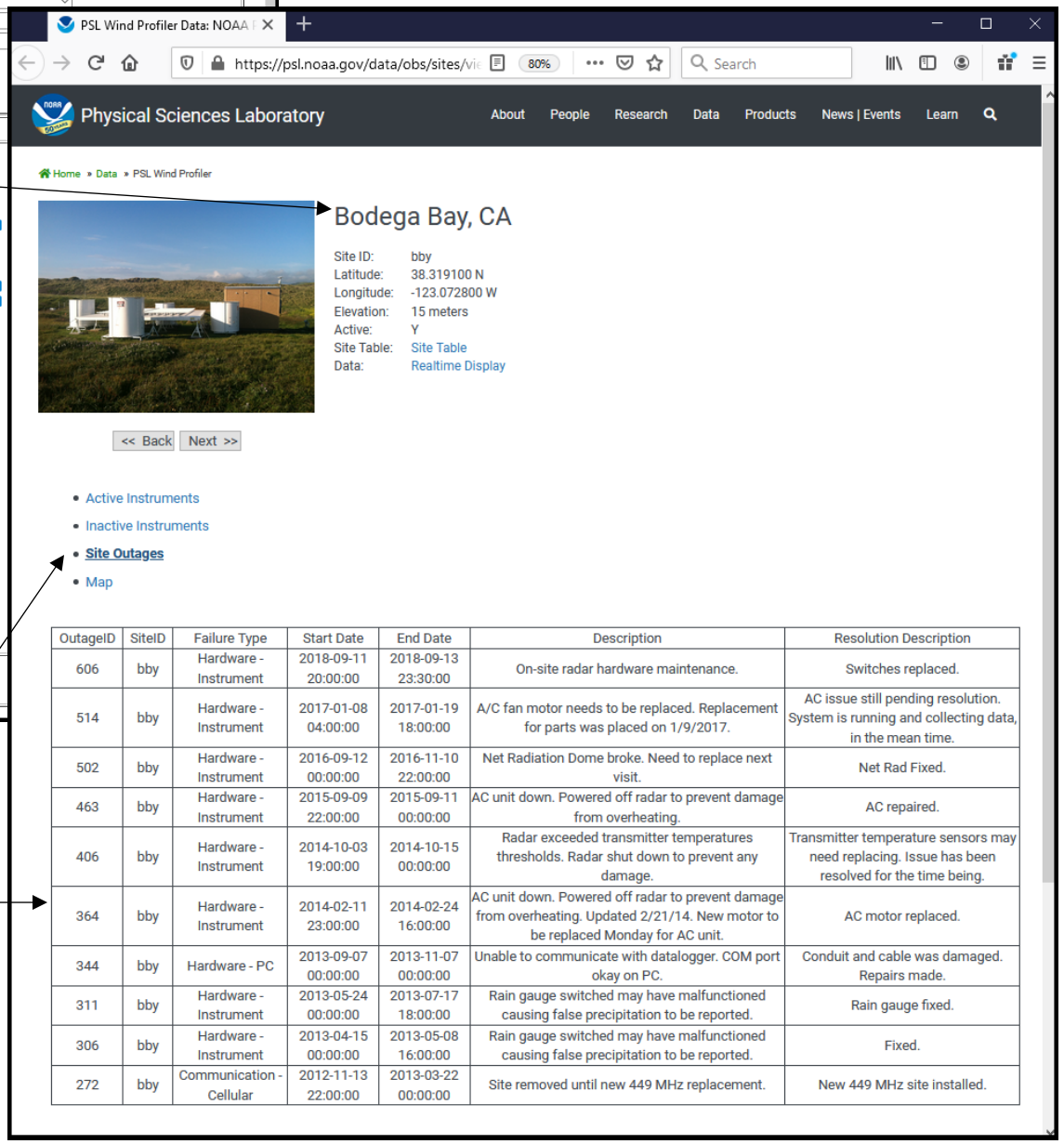




Displays all Inactive Instruments for the selected site.

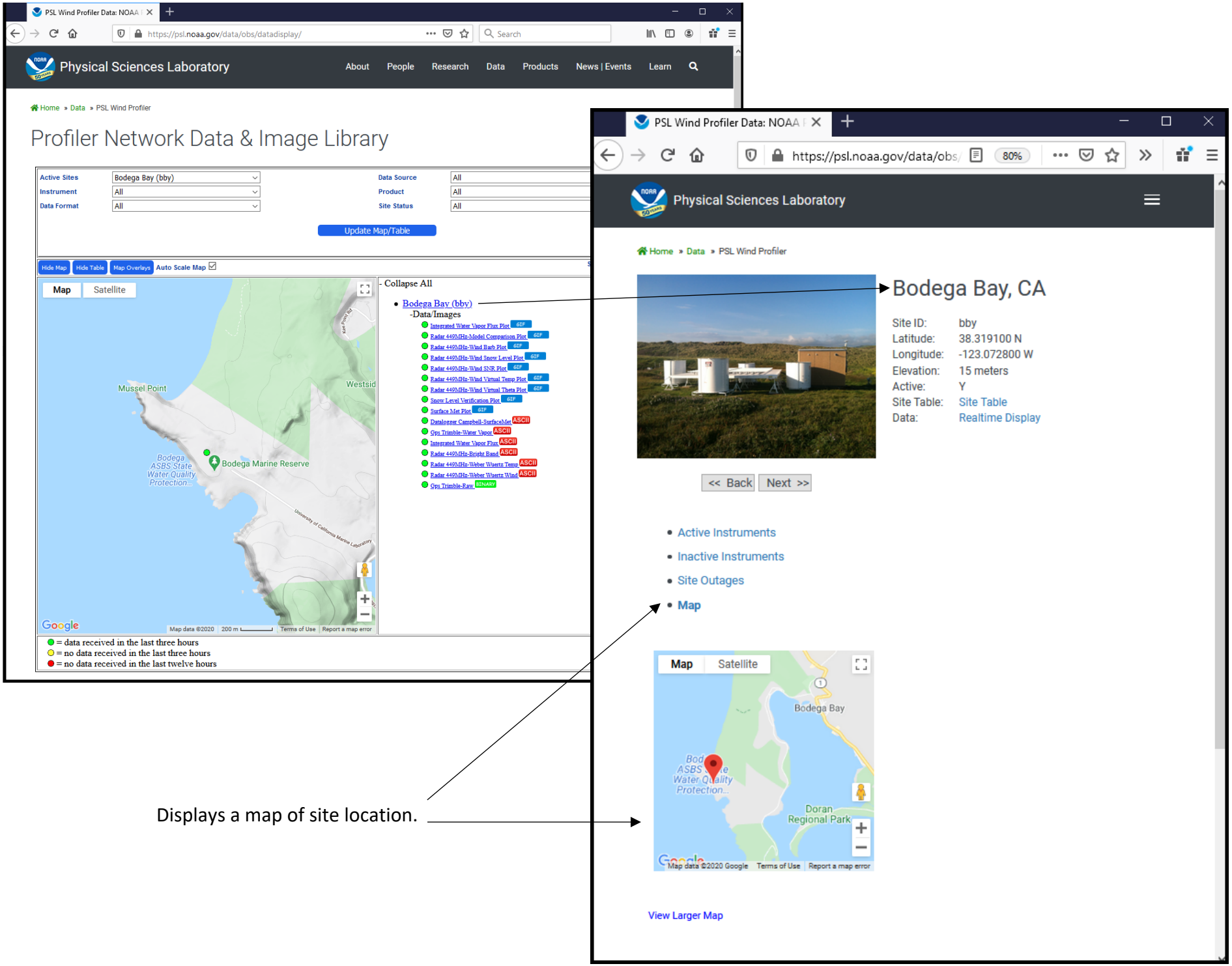
All historical instruments and data are accessed by clicking on "view" for an instrument.





OutageID	SiteID	Failure Type	Start Date	End Date	Description	Resolution Description
606	bby	Hardware - Instrument	2018-09-11 20:00:00	2018-09-13 23:30:00	On-site radar hardware maintenance.	Switches replaced.
514	bby	Hardware - Instrument	2017-01-08 04:00:00	2017-01-19 18:00:00	A/C fan motor needs to be replaced. Replacement for parts was placed on 1/9/2017.	AC issue still pending resolution. System is running and collecting data, in the mean time.
502	bby	Hardware - Instrument	2016-09-12 00:00:00	2016-11-10 22:00:00	Net Radiation Dome broke. Need to replace next visit.	Net Rad Fixed.
463	bby	Hardware - Instrument	2015-09-09 22:00:00	2015-09-11 00:00:00	AC unit down. Powered off radar to prevent damage from overheating.	AC repaired.
406	bby	Hardware - Instrument	2014-10-03 19:00:00	2014-10-15 00:00:00	Radar exceeded transmitter temperatures thresholds. Radar shut down to prevent any damage.	Transmitter temperature sensors may need replacing. Issue has been resolved for the time being.
364	bby	Hardware - Instrument	2014-02-11 23:00:00	2014-02-24 16:00:00	AC unit down. Powered off radar to prevent damage from overheating. Updated 2/21/14. New motor to be replaced Monday for AC unit.	AC motor replaced.
344	bby	Hardware - PC	2013-09-07 00:00:00	2013-11-07 00:00:00	Unable to communicate with datalogger. COM port okay on PC.	Conduit and cable was damaged. Repairs made.
311	bby	Hardware - Instrument	2013-05-24 00:00:00	2013-07-17 18:00:00	Rain gauge switched may have malfunctioned causing false precipitation to be reported.	Rain gauge fixed.
306	bby	Hardware - Instrument	2013-04-15 00:00:00	2013-05-08 16:00:00	Rain gauge switched may have malfunctioned causing false precipitation to be reported.	Fixed.
272	bby	Communication - Cellular	2012-11-13 22:00:00	2013-03-22 00:00:00	Site removed until new 449 MHz replacement.	New 449 MHz site installed.

Displays all previous and current site outage information related to the selected site.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https://psl.noaa.gov/data/obs/datadisplay/
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Data Source
All
Product
All
Site Status
All
Update Map/Table
Hide Map
Hide Table
Map Overlays
Auto Scale Map
Map
Satellite
Mussel Point
Bodega Marine Reserve
Google
Collapse All
Bodega Bay (bby)
-Data/Images
= data received in the last three hours
= no data received in the last three hours
= no data received in the last twelve hours
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https://psl.noaa.gov/data/obs/
80%
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Bodega Bay, CA
Site ID: bby
Latitude: 38.319100 N
Longitude: -123.072800 W
Elevation: 15 meters
Active: Y
Site Table: Site Table
Data: Realtime Display
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Satellite
Bodega Bay
Doran Regional Park
Map data ©2020 Google
Terms of Use
Report a map error
View Larger Map
Displays a map of site location.

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Bodega Bay, CA

Site ID: bby
Latitude: 38.319100 N
Longitude: -123.072800 W
Elevation: 15 meters
Active: Y
Site Table: Site Table
Data: Realtime Display

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Instrument Name	Project Name	Install Date	Data Types
449 MHz Wind Profiler Digital	Hydrometeorology Testbed - West	2013-03-22	view
Datalogger CR800	Hydrometeorology Testbed - West	2013-05-08	view
GpsTrimble NetR8	Hydrometeorology Testbed - West	2013-03-22	view
Net Radiation REBS Q7.1	Hydrometeorology Testbed - West	2013-03-22	view
Pressure Sensor - PTB110B	Hydrometeorology Testbed - West	2013-03-22	view
Radio Acoustic Sounding System	Hydrometeorology Testbed - West	2013-03-22	view
Solar Radiation - CMP3	Hydrometeorology Testbed - West	2013-03-22	view
Temp/RH CS215	Hydrometeorology Testbed - West	2013-03-22	view
Tipping Bucket TE525	Hydrometeorology Testbed - West	2013-03-22	view
Wind Speed and Direction 5106-5A	Hydrometeorology Testbed - West	2013-03-22	view

Link to a site table displaying basic meta information for active and inactive sites.

Link to data accessibility home page.

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https://psl.noaa.gov/data/

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Site Inventory

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State: * Active: Y Search SiteName:

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Site ID	SiteName	State	Latitude	Longitude	Elevation (m)	Start Date	Active	RealTimeDisplay
acv	McKinleyville	CA	40.972000	-124.110000	56	2015-11-18	Y	Y
and	Arnold	CA	38.235000	-120.364000	1184	2011-04-18	Y	Y
ast	Astoria	OR	46.156900	-123.883000	3	2015-09-03	Y	Y
ata	Alta	CA	39.198300	-120.815500	1048	2005-11-16	Y	Y
bbd	Big Bend	CA	39.309000	-120.518000	1754	2006-11-16	Y	Y
bbl	Black Butte Lake	CA	39.813100	-122.369300	160	2012-11-14	Y	Y
bby	Bodega Bay	CA	38.319100	-123.072800	15	2003-12-19	Y	Y
bcc	Boyes Creek Canyon	CA	39.340530	-123.163490	317	2019-10-31	Y	Y
bdh	BodegaHead (P183)	CA	38.313700	-123.068900	10	2014-05-16	Y	Y
bht	Brush Mountain	CA	40.913800	-123.668300	1192	2018-02-01	Y	N
bkr	Baker (P618)	CA	35.141998	-116.103996	257.8	2011-11-07	Y	Y
blu	Blue Canyon	CA	39.275900	-120.709000	1604	2004-11-11	Y	Y
bnf	Burnt Mountain	OR	43.219200	-123.842800	673	2018-02-01	Y	N
boc	Black Oak	AZ	31.556800	-110.544200	1566	2008-05-21	Y	Y
brg	Burnt Ridge (P188)	CA	38.669998	-123.230003	240	2009-12-04	Y	Y
brn	Burns Junction	OR	42.779500	-117.843530	1181	2012-05-16	Y	Y
bsr	Barstow	CA	34.918600	-117.012000	645.204	2015-05-08	Y	Y
bve	Bridgeville	CA	40.473869	-123.792820	205	2014-08-27	Y	Y
ccy	CedarCyn (P298)	CA	36.015800	-120.293999	50	2010-12-10	Y	Y
cdt	CoDeTierra (P177)	CA	37.528200	-122.495000	72	2014-05-16	Y	Y
cfc	Colfax	CA	39.079500	-120.937900	643	2007-11-13	Y	Y

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Profiler Network Data & Image Library

Menu

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Data Format: All | Site Status: All

Update Map/Table

Current Time: 2020-10-26 17:19:28 UTC

Site Status as of 2020-10-26 17:15:00 UTC

Hide Map | Hide Table | Map Overlays | Auto Scale Map

Map | Satellite

- Collapse All
- Alta (ata)
  -Data/Images
  Surface Met Plot | Datalogger Campbell-SurfaceMet
- Arnold (and)
  -Data/Images
  Surface Met Plot | Datalogger Campbell-SurfaceMet
- Astoria (ast)
  -Data/Images

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Bodega Bay, CA

Site ID: bby
Latitude: 38.319100 N
Longitude: -123.072800 W
Elevation: 15 meters
Active: Y
Site Table: Site Table
Data: Realtime Display

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Clicking an instrument link will launch a page to detailed information about the selected instrument.

Instrument Name	Project Name	Install D
449 MHz Wind Profiler Digital	Hydrometeorology Testbed - West	2013-03
Datalogger CR800	Hydrometeorology Testbed - West	2013-05
GpsTrimble NetR8	Hydrometeorology Testbed - West	2013-03
Net Radiation REBS Q7.1	Hydrometeorology Testbed - West	2013-03
Pressure Sensor - PTB110B	Hydrometeorology Testbed - West	2013-03
Radio Acoustic Sounding System	Hydrometeorology Testbed - West	2013-03
Solar Radiation - CMP3	Hydrometeorology Testbed - West	2013-03
Temp/RH CS215	Hydrometeorology Testbed - West	2013-03
Tipping Bucket TE525	Hydrometeorology Testbed - West	2013-03
Wind Speed and Direction 5106-5A	Hydrometeorology Testbed - West	2013-03-22

PSL Wind Profiling Instruments

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Wind Profilers

449 MHz 1/4-scale phased array wind profiler

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Wind profilers are Doppler radars that most often operate in the VHF (30-300 MHz) or UHF (300-1000 MHz) frequency bands. There are three primary types of radar wind profilers in operation in the U.S. today. The NOAA Profiler Network (NPN) profiler operates at a frequency of 404 MHz (Table 1, Fig. 1a). The second type of profiler that is used by NOAA research and outside agencies is the 915-MHz boundary-layer profiler (Table 1, Fig. 1b). The 404-MHz profilers are more expensive to build and operate, but they provide the deepest coverage of the atmosphere. The 915-MHz profilers are smaller and cheaper to build and operate, but they lack height coverage much above the boundary layer. A third type of profiler that operates at 449 MHz (the so-called 1/4-scale 449-MHz profilers) combines the best sampling attributes of the other two systems (Table 1, Fig. 1c).

Table 1. Physical, operating, and sampling characteristics of wind profilers.

	404-MHz (NPN)	915-MHz (boundary layer)	449-MHz (quarter- scale)
Antenna type	Coaxial-colinear phased array	Flat rectangular microstrip patch	Coaxial-colinear phased array
Antenna diameter (m)	13	2	6
Beamwidth (deg.)	4	10	10
Peak transmit power (W)	6000	500	2000
Transmit pulse width (μs)	3.3[p], 20[p]	0.417*, 0.708*[p]	0.708*, 2.833
Height coverage (m)	500** – 16,000	120 – 4,000	180[+] – 8,000
Vertical resolution (m)	320[+], 900[+]	63, 106*	106, 212*,[+]
Temporal resolution (min)	60	60	60

* These settings reflect how the profilers were operated during typical deployments. Other degraded transmit and sampling resolutions are possible.

[p] Pulse-coding was used in selected operating modes to boost signal power and increase

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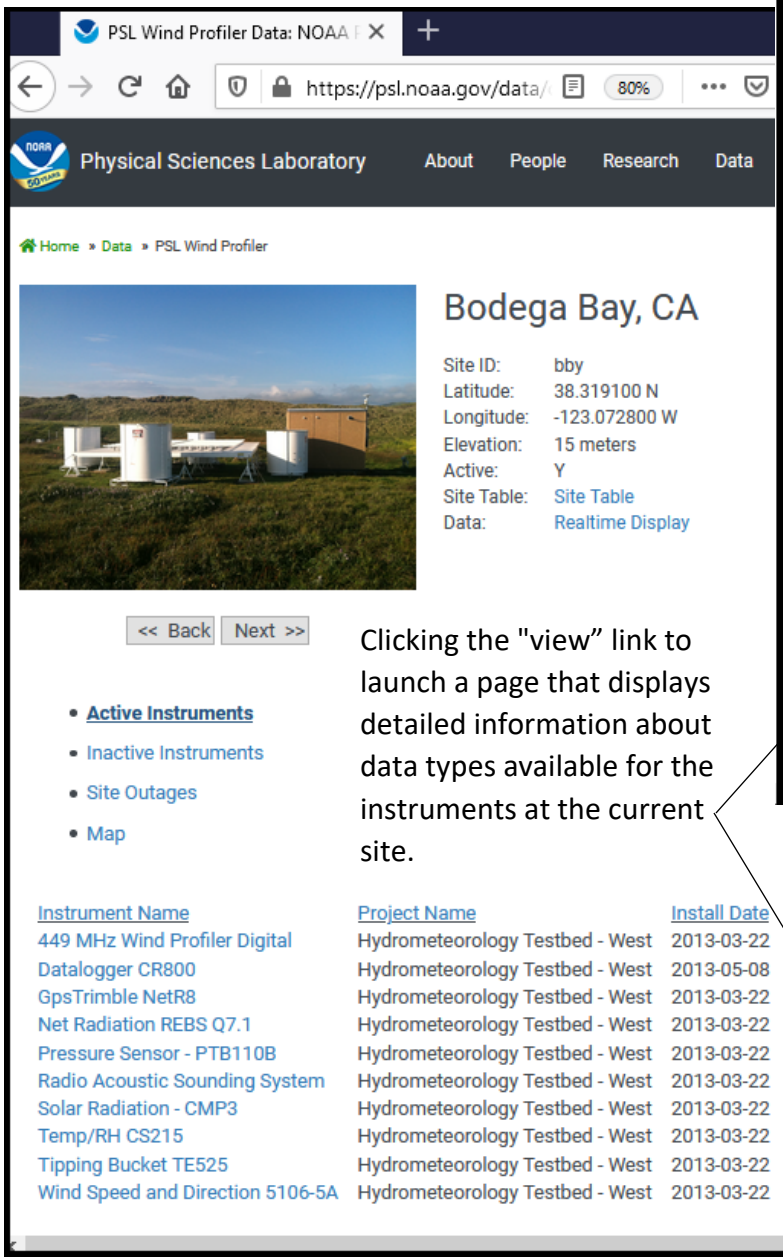
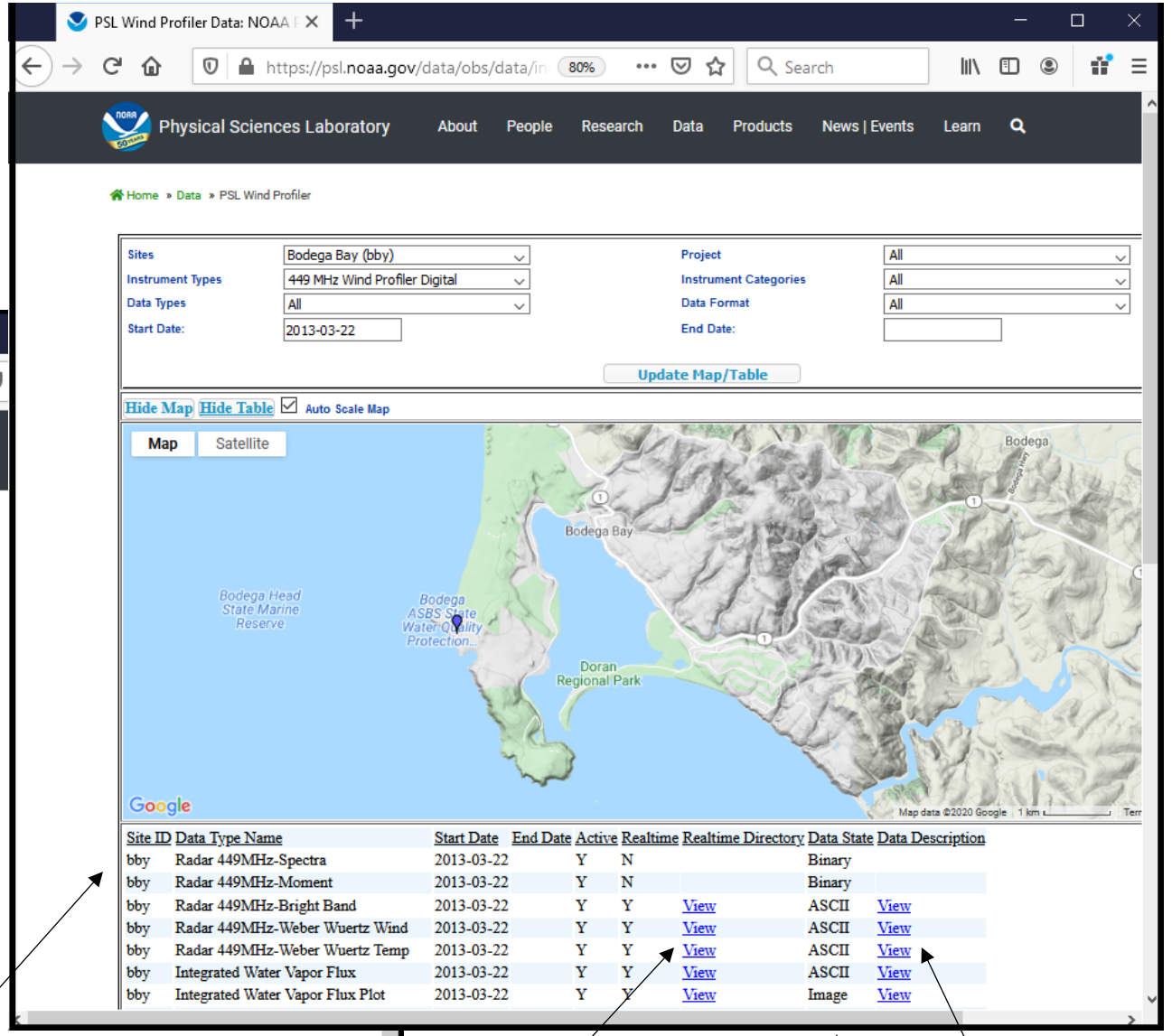
Instruments



Clicking the "view" link to launch a page that displays detailed information about data types available for the instruments at the current site.

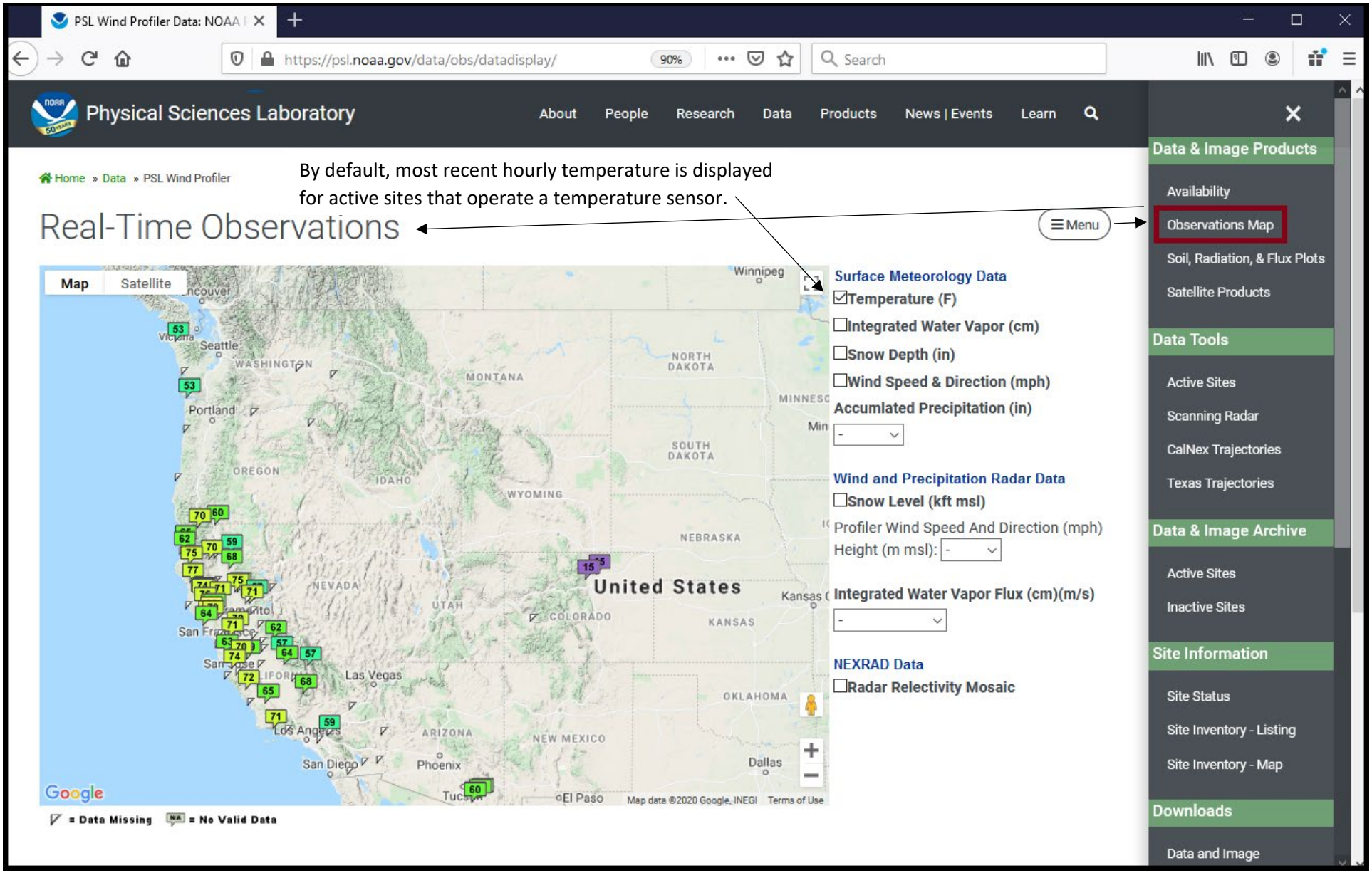


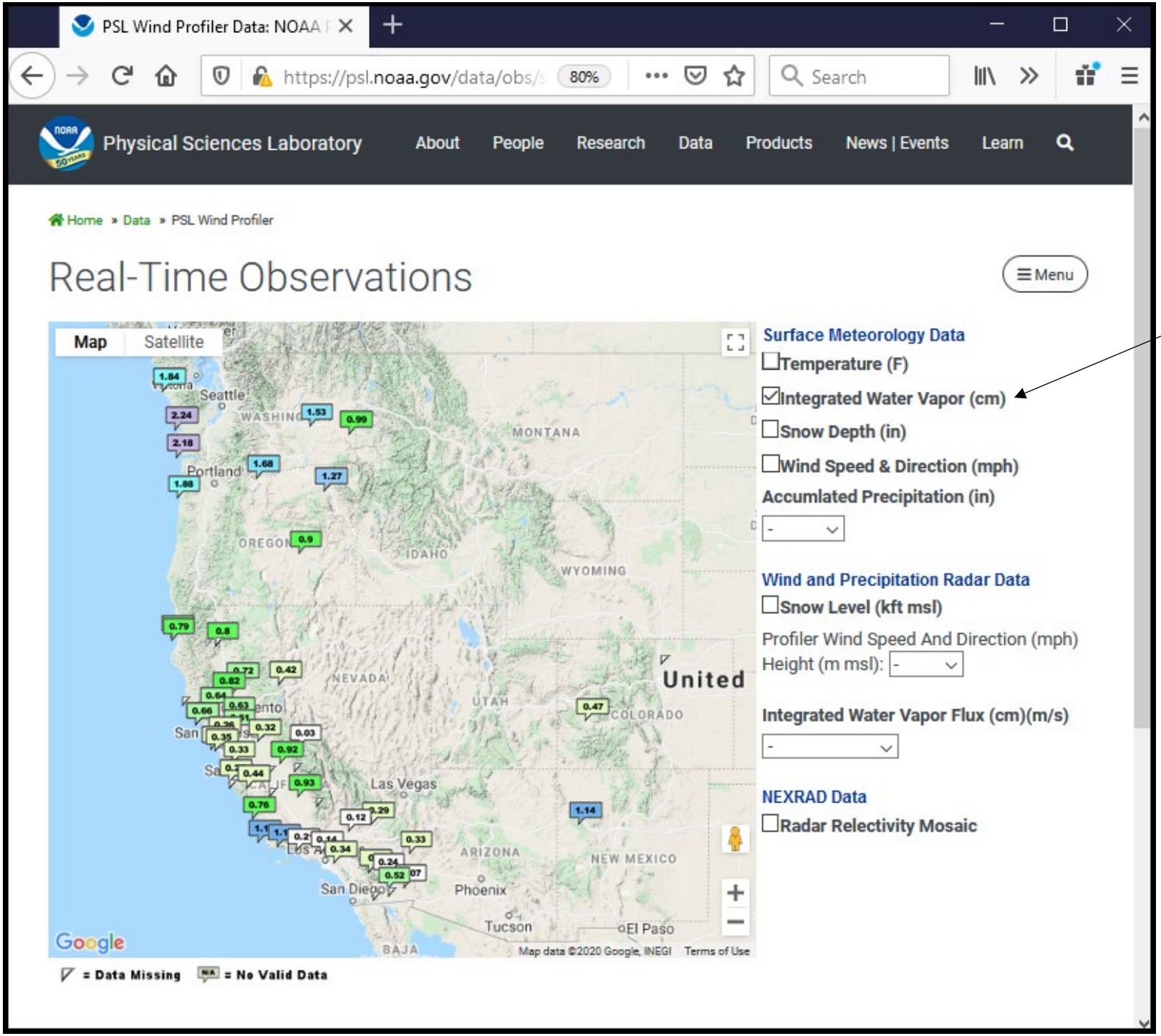
Clicking the "view" under the “Realtime Directory” column will open the FTP directory where you can access the data currently being collected.

Clicking the "view" under the “Data Description” column will display a data description for the selected product.

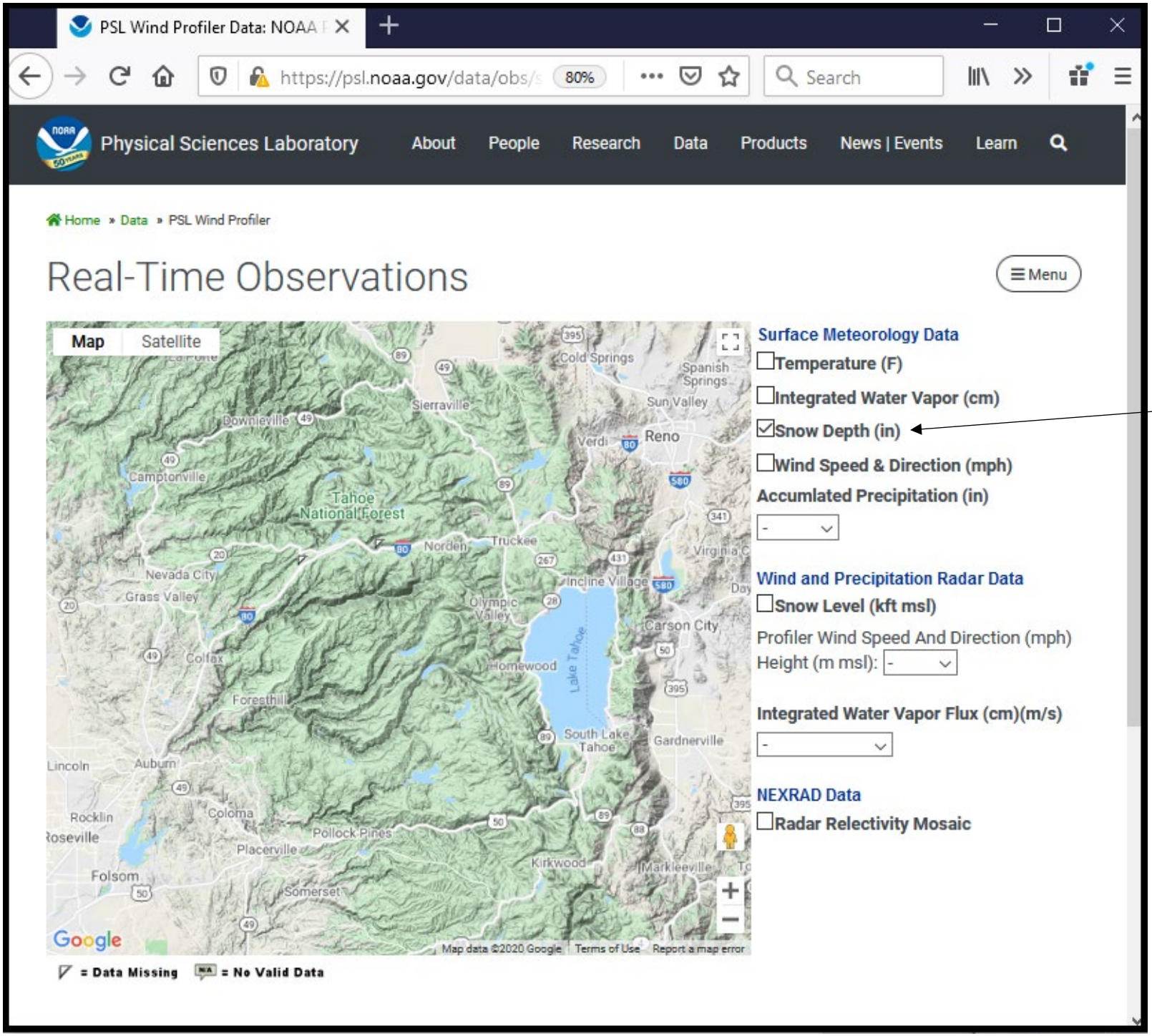
This page can also be used to independently display instrument information and data at other sites.

Data & Image Products – Observations Map
https://psl.noaa.gov/data/obs/sitemap/psdmapdata/mapdata.php

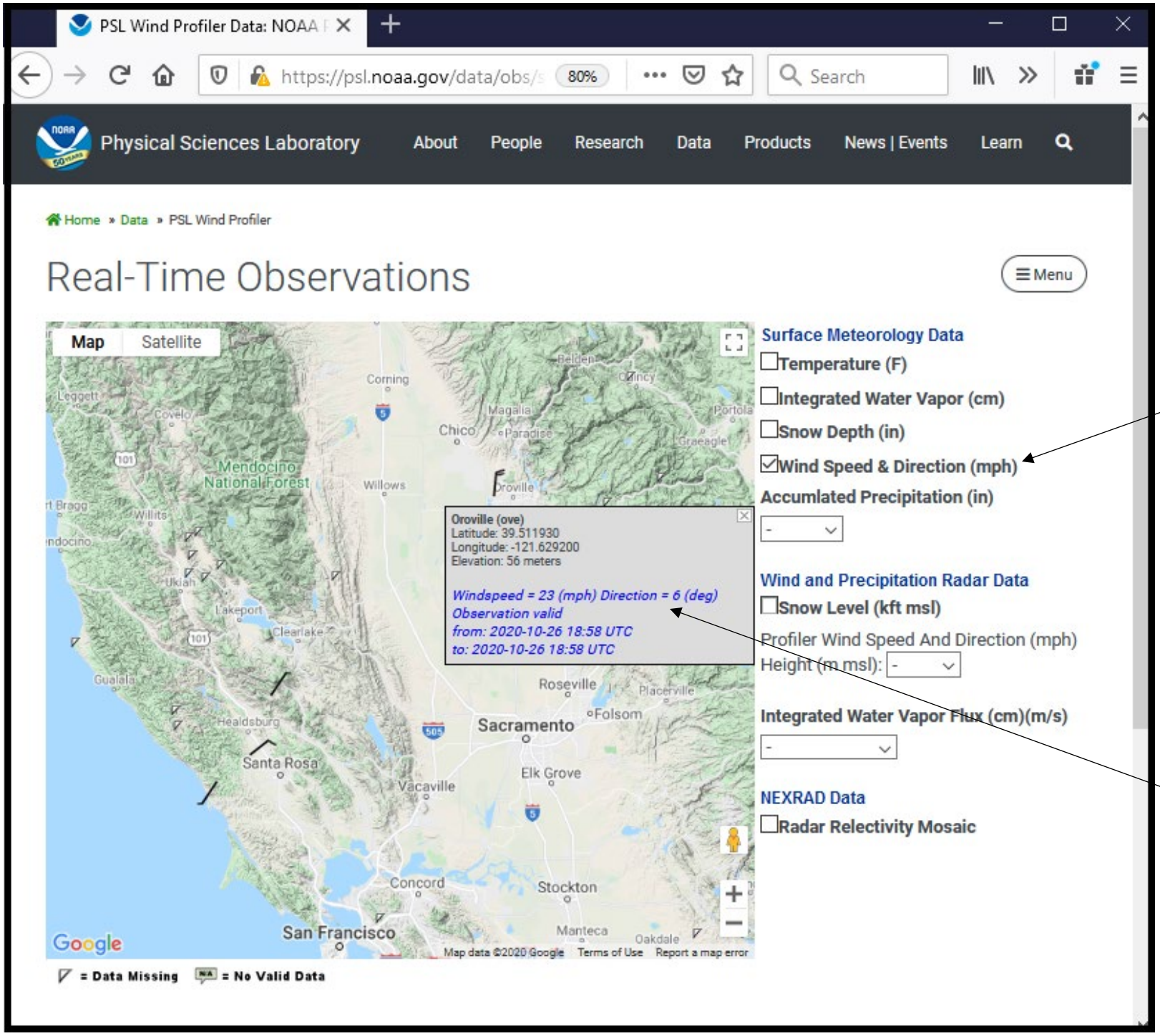




Displays integrated water vapor (IWV) for active sites that have an IWV/GPS sensor.

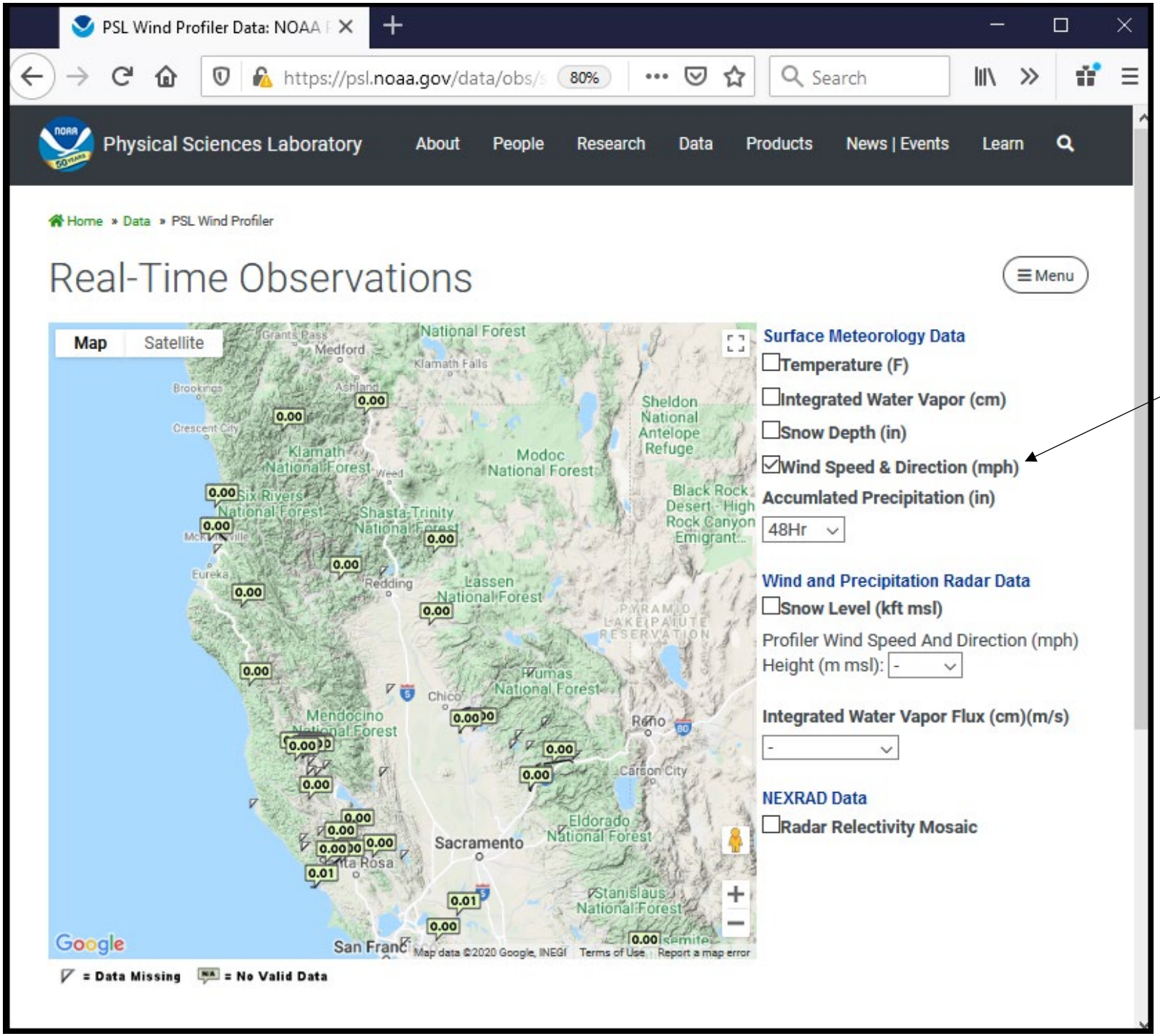


Displays hourly snow depth for active sites with a snow depth sensor.

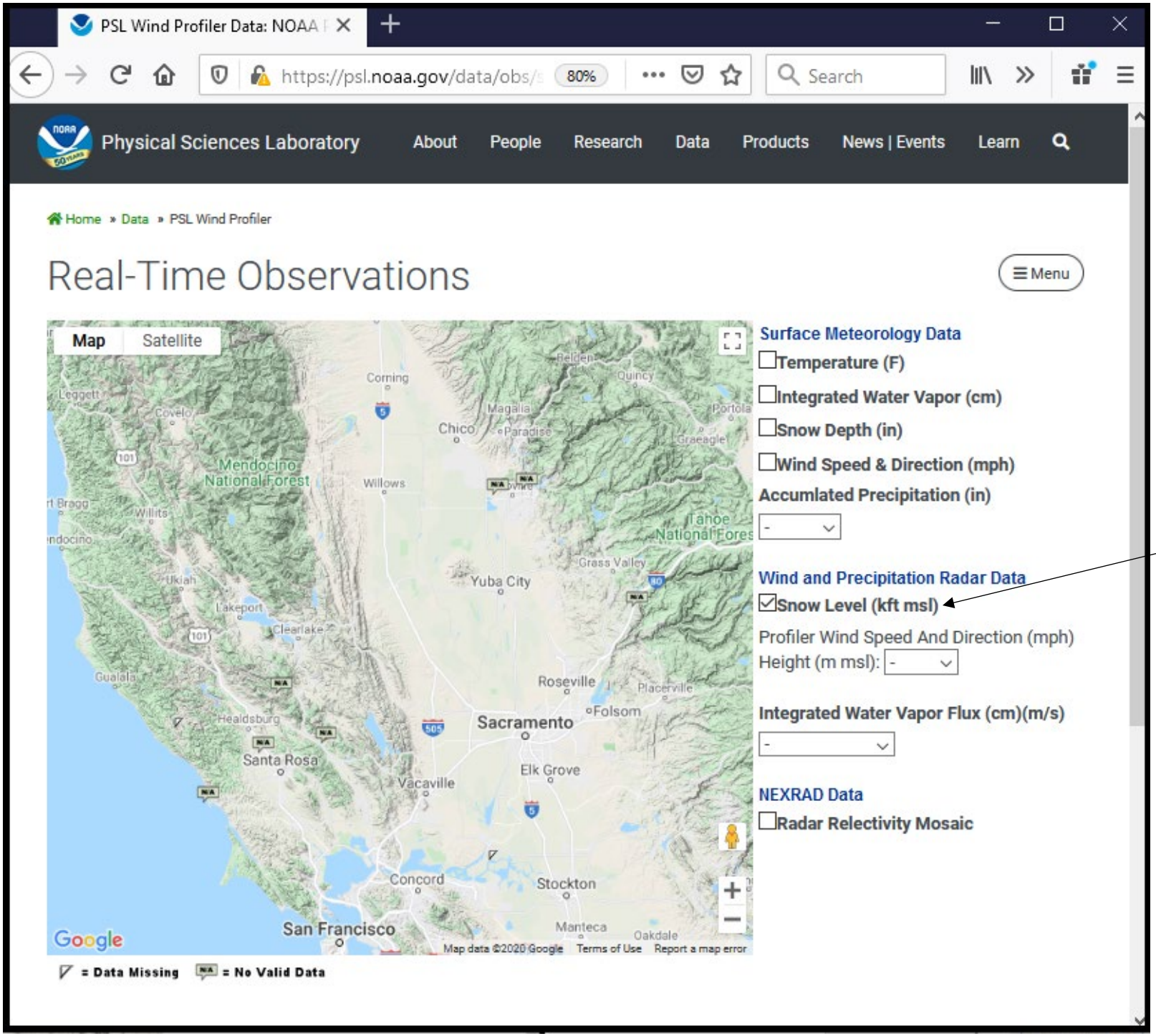


Displays hourly surface wind speed and direction in the form of wind barbs for active sites that operate an anemometer.

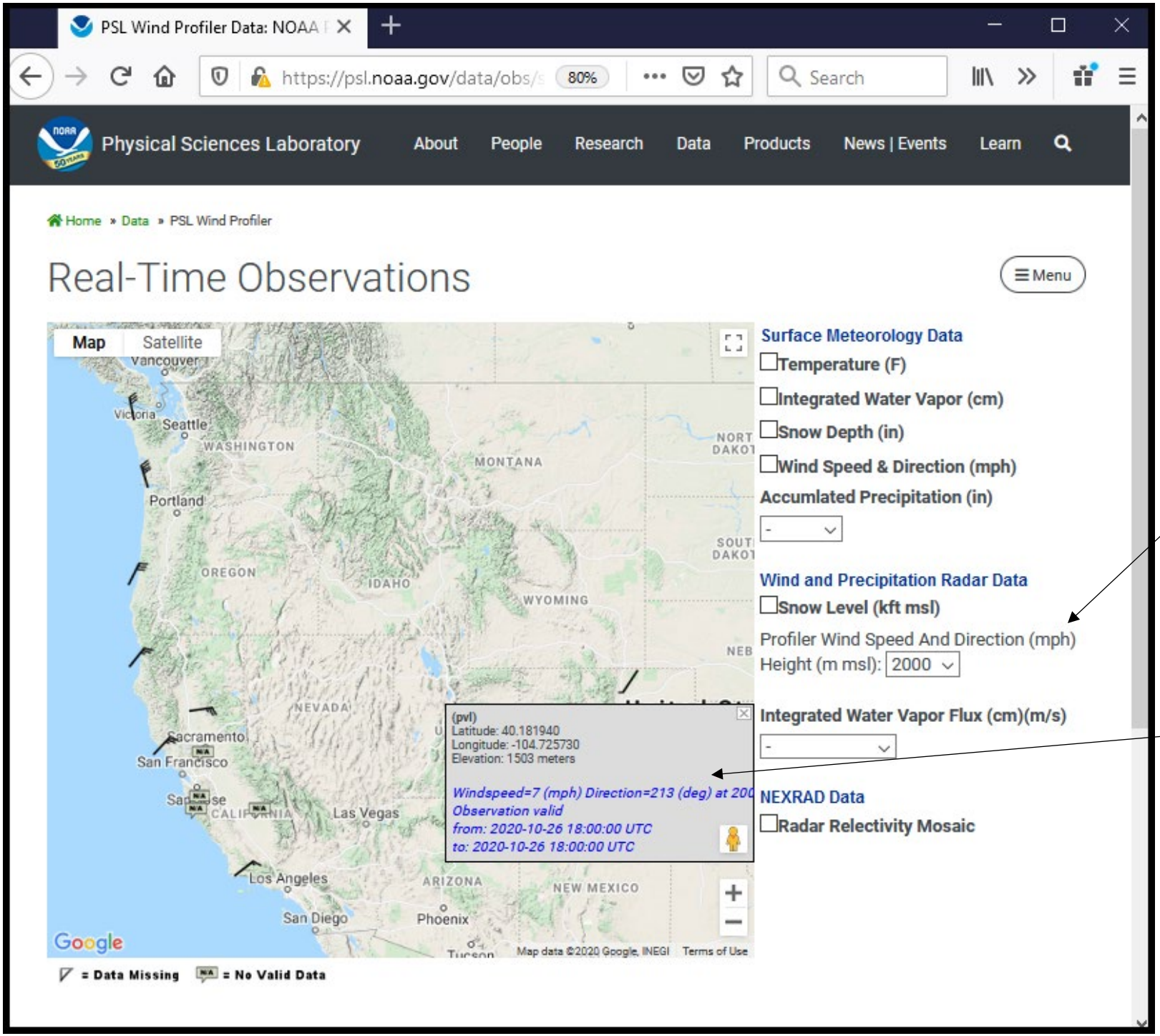
Drop-down menu at wind barb location displays the wind speed and direction values.



Displays 1, 3, 6, 12, 24, and 48 hour accumulated precipitation for active sites that operate a rain gauge.

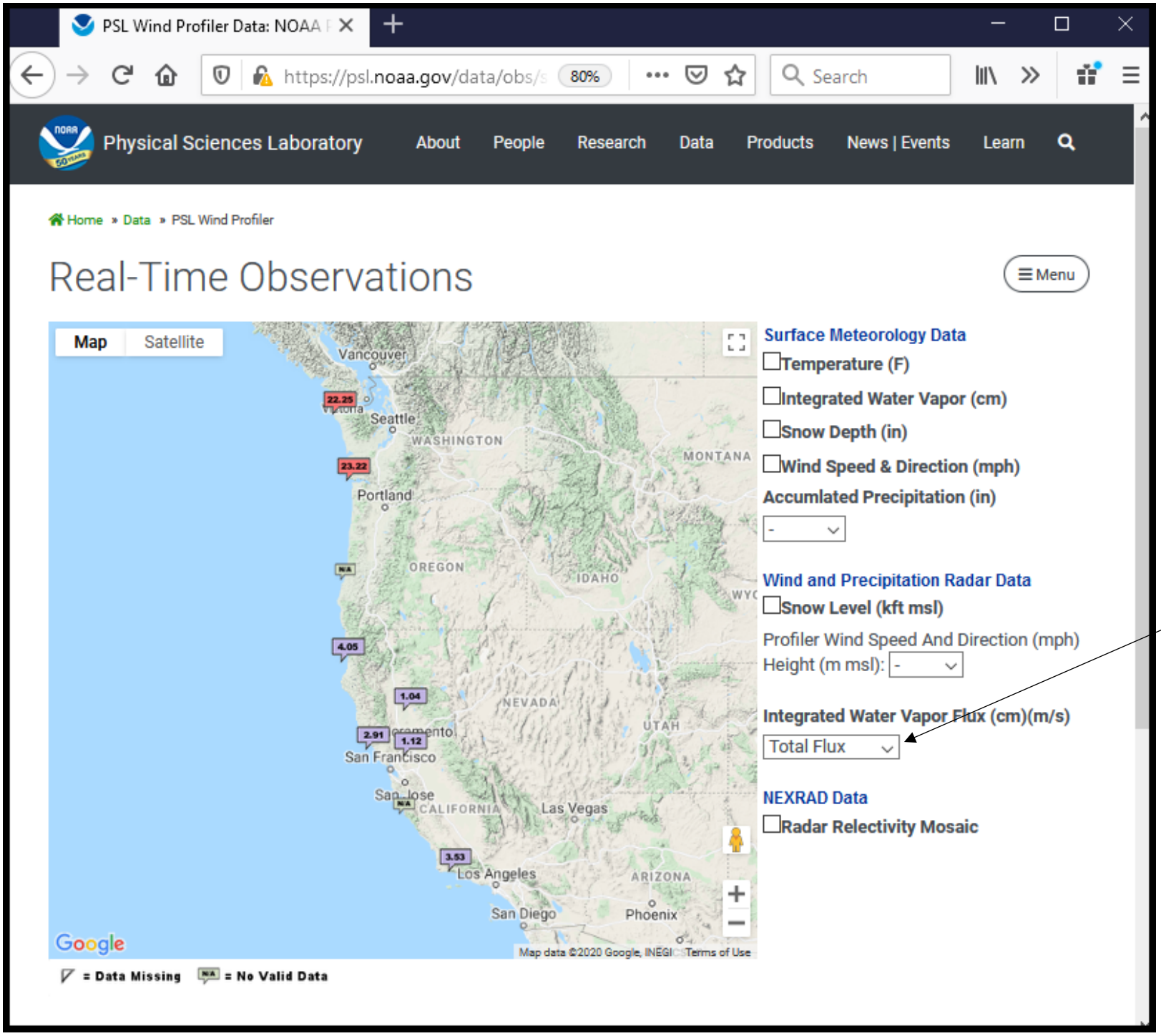


Displays current radar-derived snow level for all active sites that operate a wind profiler, S-band, or FMCW radar.

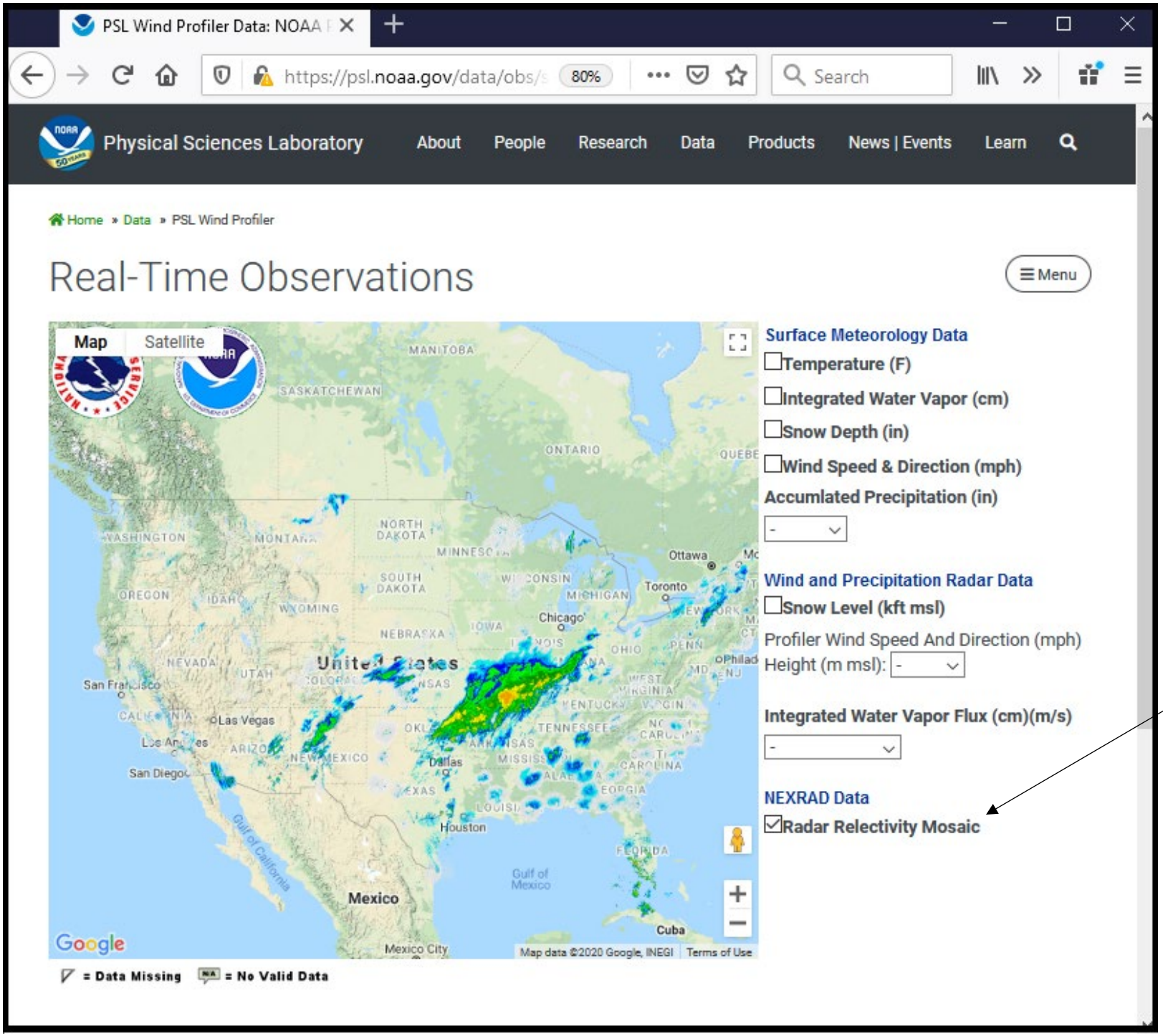


Displays hourly wind speed and direction, in the form of wind barbs, at a multitude of altitudes for active sites that operate a wind profiler.

Drop-down menu at wind barb location displays the wind speed and direction values.

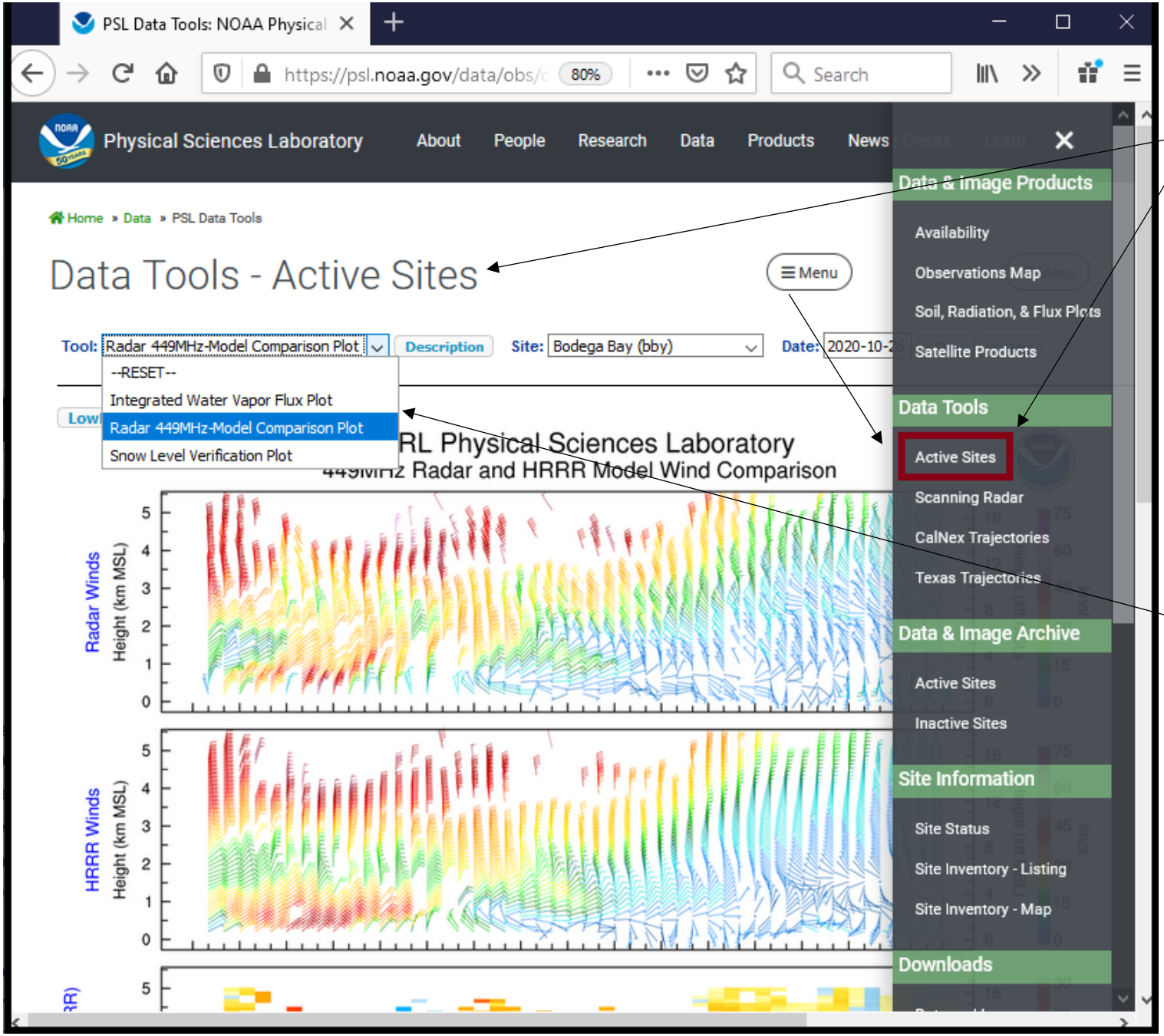


Displays hourly total water vapor flux or upslope water vapor flux for active sites that operate a wind profiler and integrated water vapor (IWV) GPS sensor.



Displays current NWS radar reflectivity mosaic.

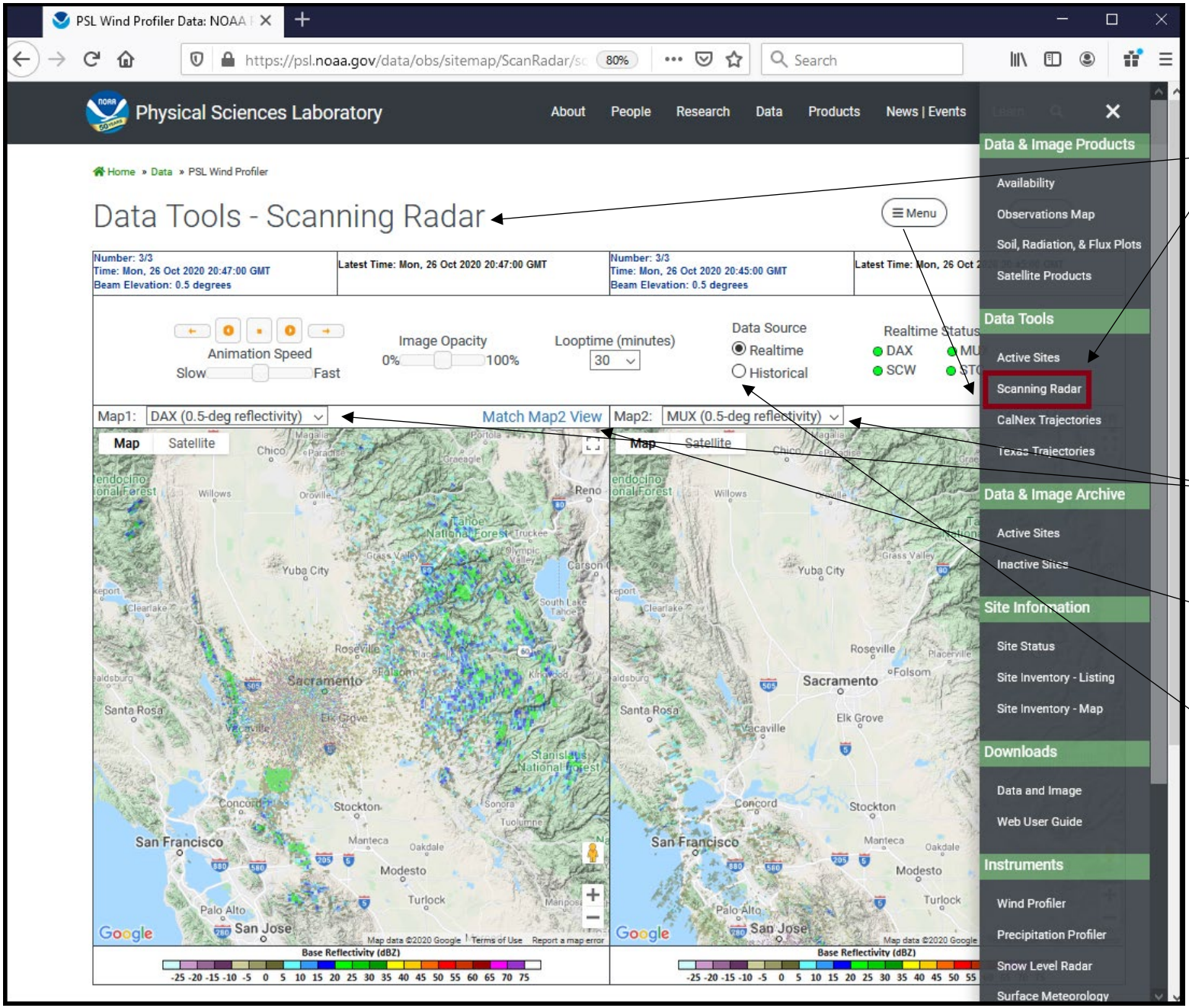
Data Tools – Active Sites
https://psl.noaa.gov/data/obs/datadisplay/tools/ActiveSites.html



Data tools are image products derived from a multitude of instrument measurements and sites that are used for research analysis, hydrometeorological forecasting, and decision support.

When no sites are selected, all available tools are shown within the “Tool” drop-down list. Once a site is selected, only the tools that are available for the selected site are shown in the “Tool” drop-down menu

Data Tools – Scanning Radar
https://psl.noaa.gov/data/obs/sitemap/ScanRadar/scan_radar_dual.php



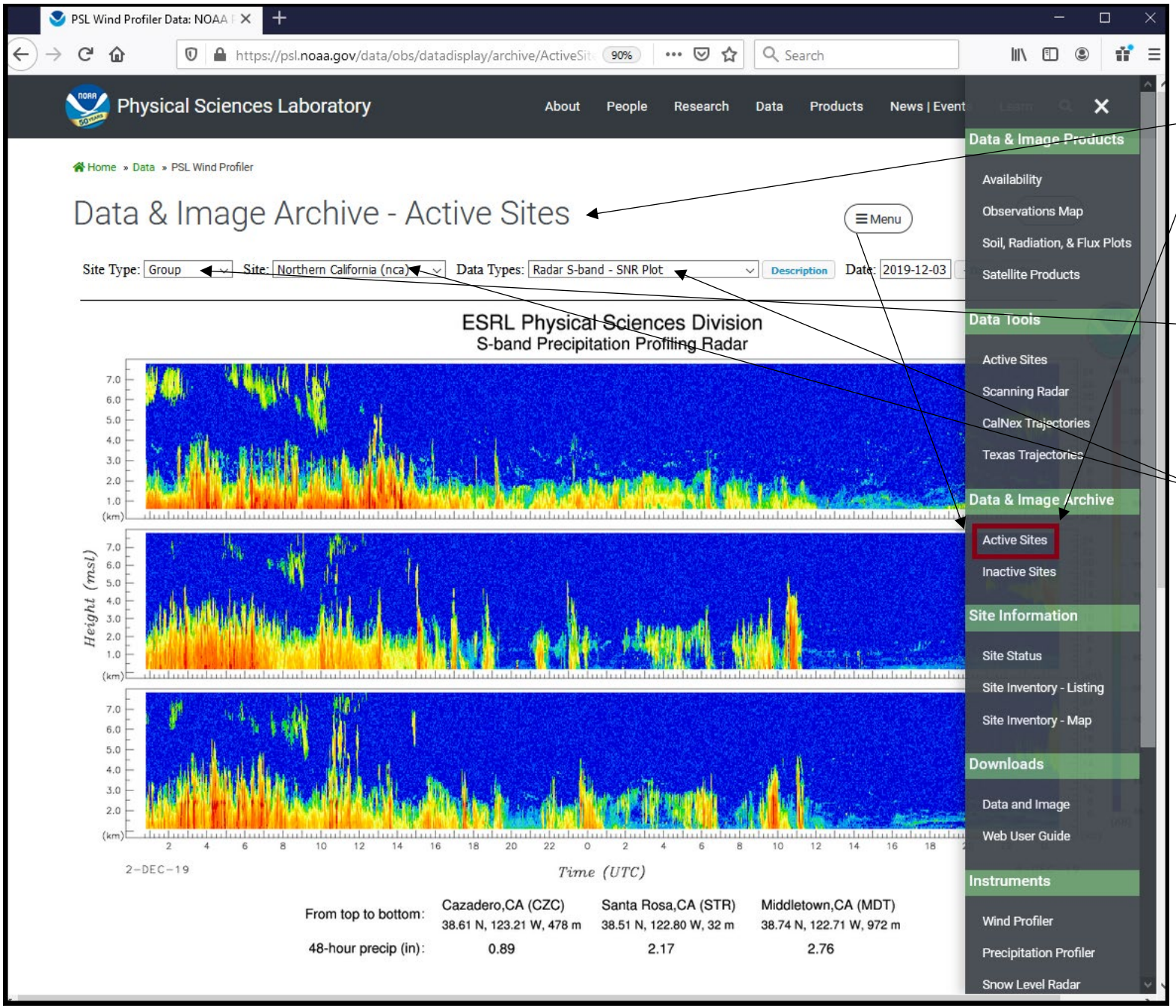
The scanning radar tool allows for side-by-side comparisons of PPI radar scans acquired by NWS WSR 88-D radars and the Advanced Quantitative Precipitation Information (AQPI) X-band radars sited in the San Francisco Bay Area to support more precise rainfall forecasting of atmospheric rivers.

Radar comparison products are selected for each map in the drop-down menus.

Display domains can be made identical by clicking on the match links above each map.

Historical radar products for past years are available for display by selecting the historical data source.

Data & Image Archive – Active Sites
https://psl.noaa.gov/data/obs/datadisplay/archive/ActiveSites.html

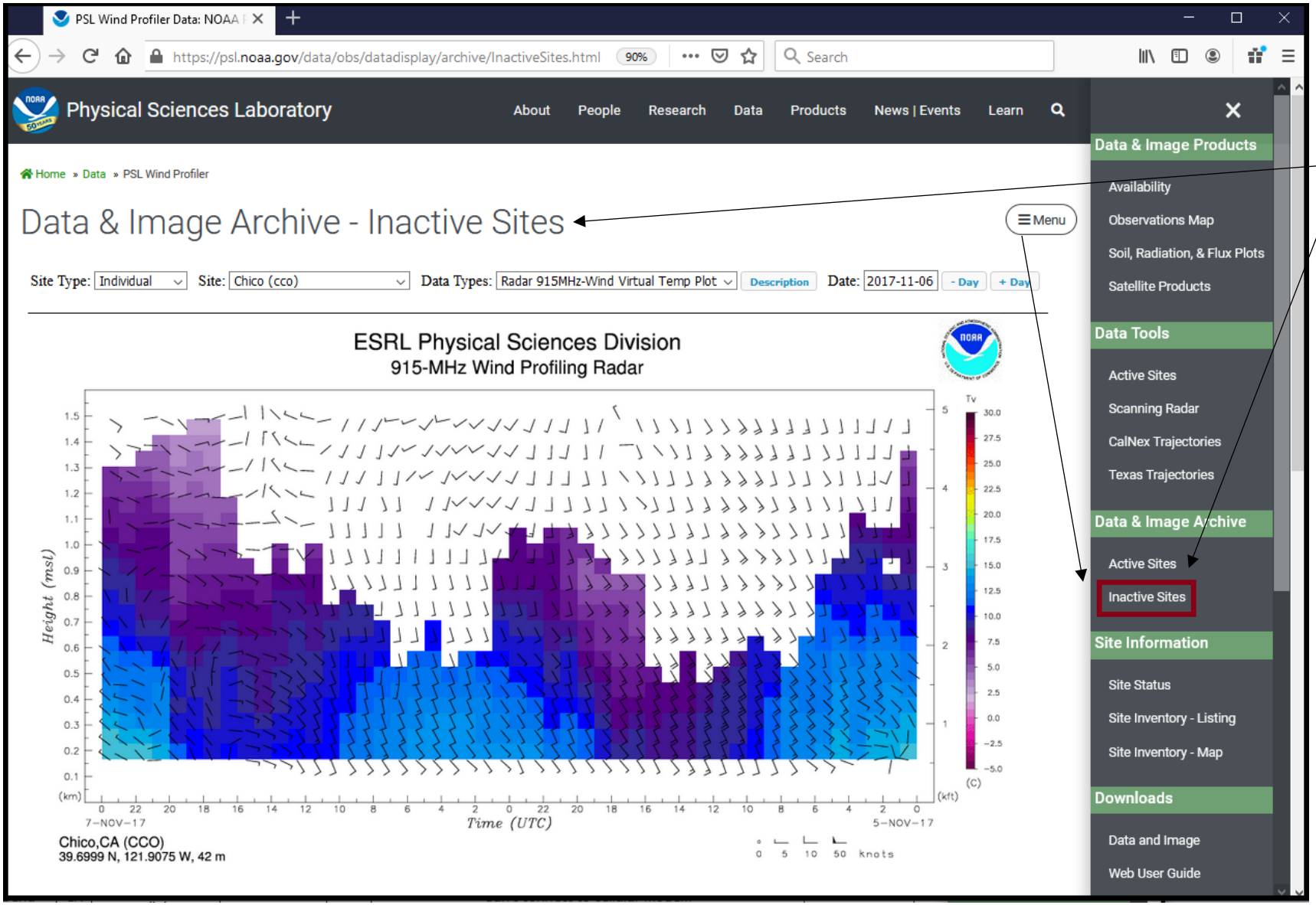


The data and image archive provides a browser interface for viewing current and historical products for currently active sites.

Products for individual sites and groups of sites are selected using the “Site Type” drop-down menu.

The “Site” and “Data Types” menus are dynamically populated based on the items selected in the other menus.

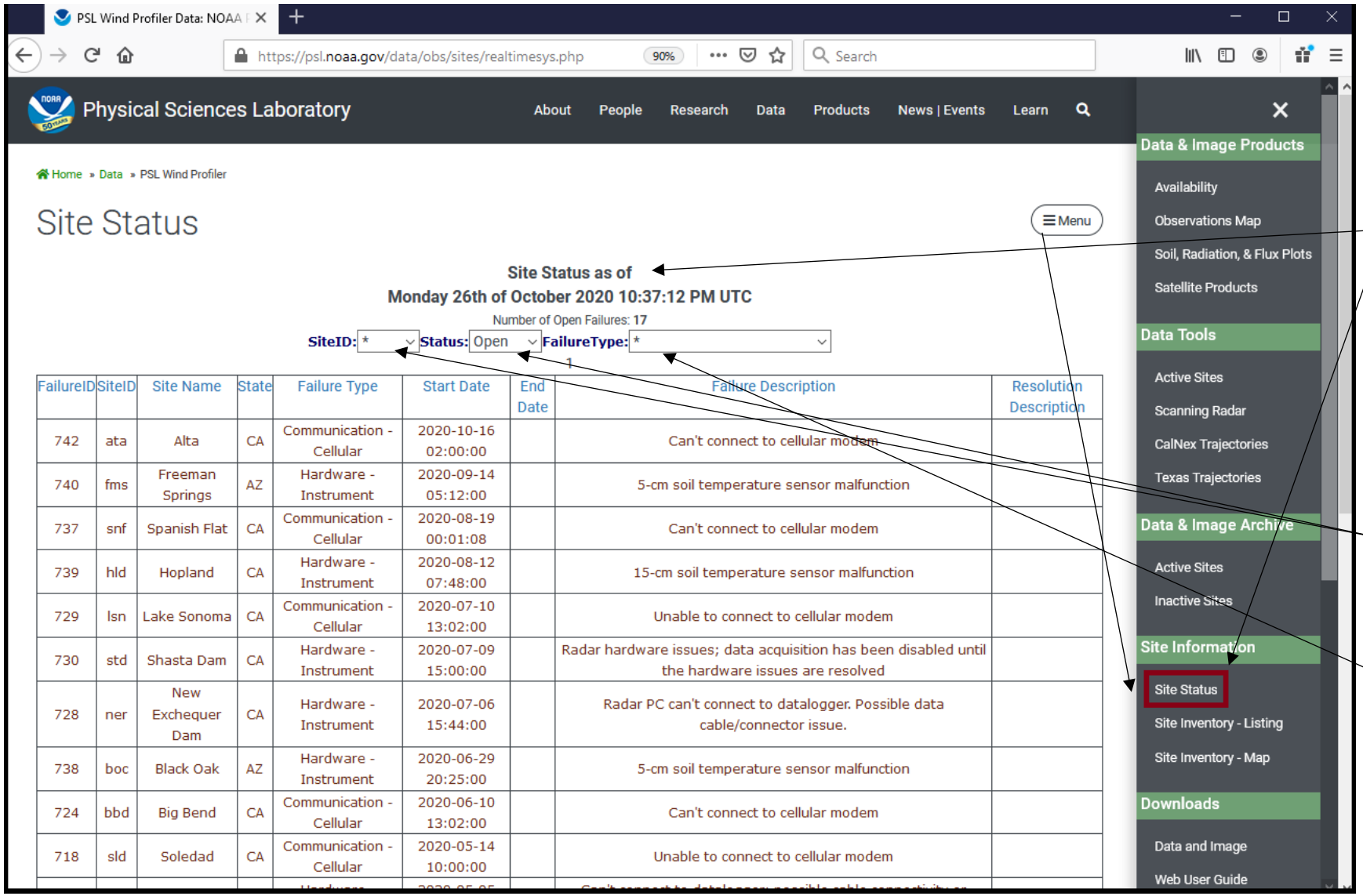
Data & Image Archive – Inactive Sites
https://psl.noaa.gov/data/obs/datadisplay/archive/InactiveSites.html



The data and image archive provides a browser interface for viewing historical products for sites that are no longer active.

Functionality is the same as the Data and Image Archive – Active Sites.

Site Information – Site Status
https://psl.noaa.gov/data/obs/sites/realtimesys.php

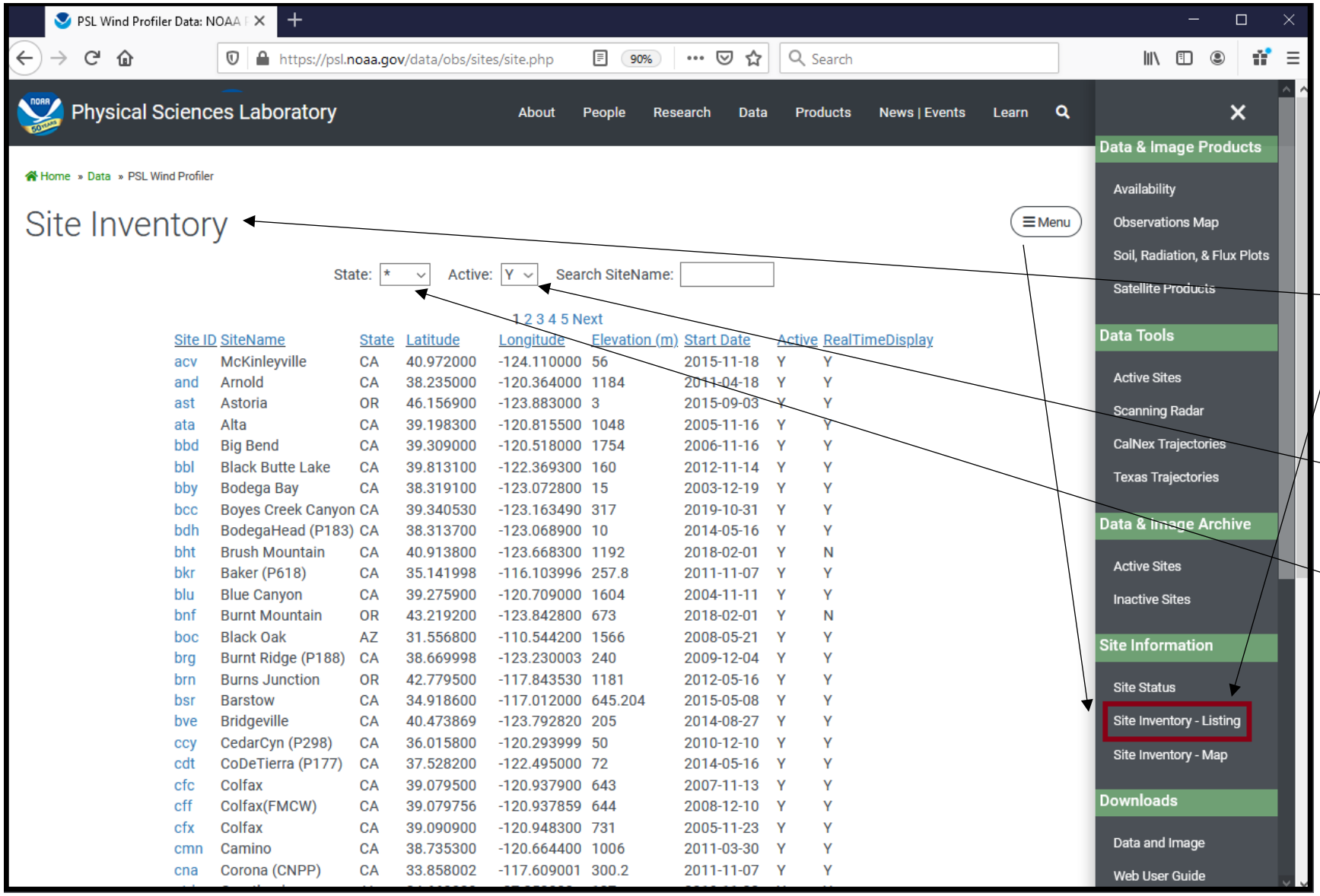


The site status page lists the current technical issues occurring at active sites.

Past resolved issues can be selected and viewed for both current and past sites using the “SiteID” and “Status” drop-down menus.

Entries may also be filtered based on failure type.

Site Information – Site Inventory - Listing
https://psl.noaa.gov/data/obs/sites/site.php

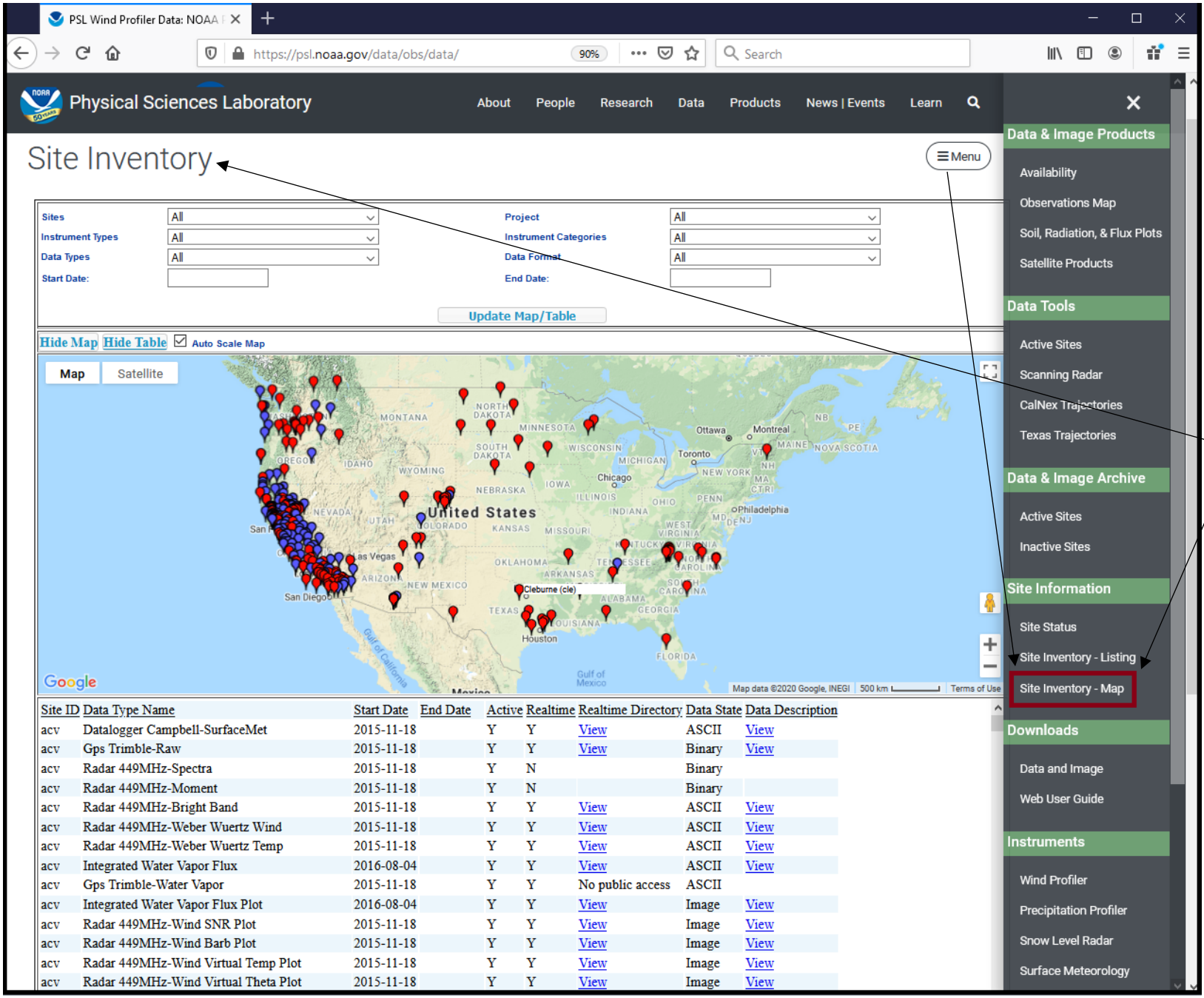


The site inventory page lists the site attributes for active sites.

The “Active” menu may be used to list site information for inactive sites as well.

Use the “State” menu to filter sites by state within the U.S.

Site Information – Site Inventory - Map
https://psl.noaa.gov/data/obs/data/



The site inventory map provides a combination of numerous menus, maps, and tables to browse site, instrument, and data type information for both active and inactive sites.