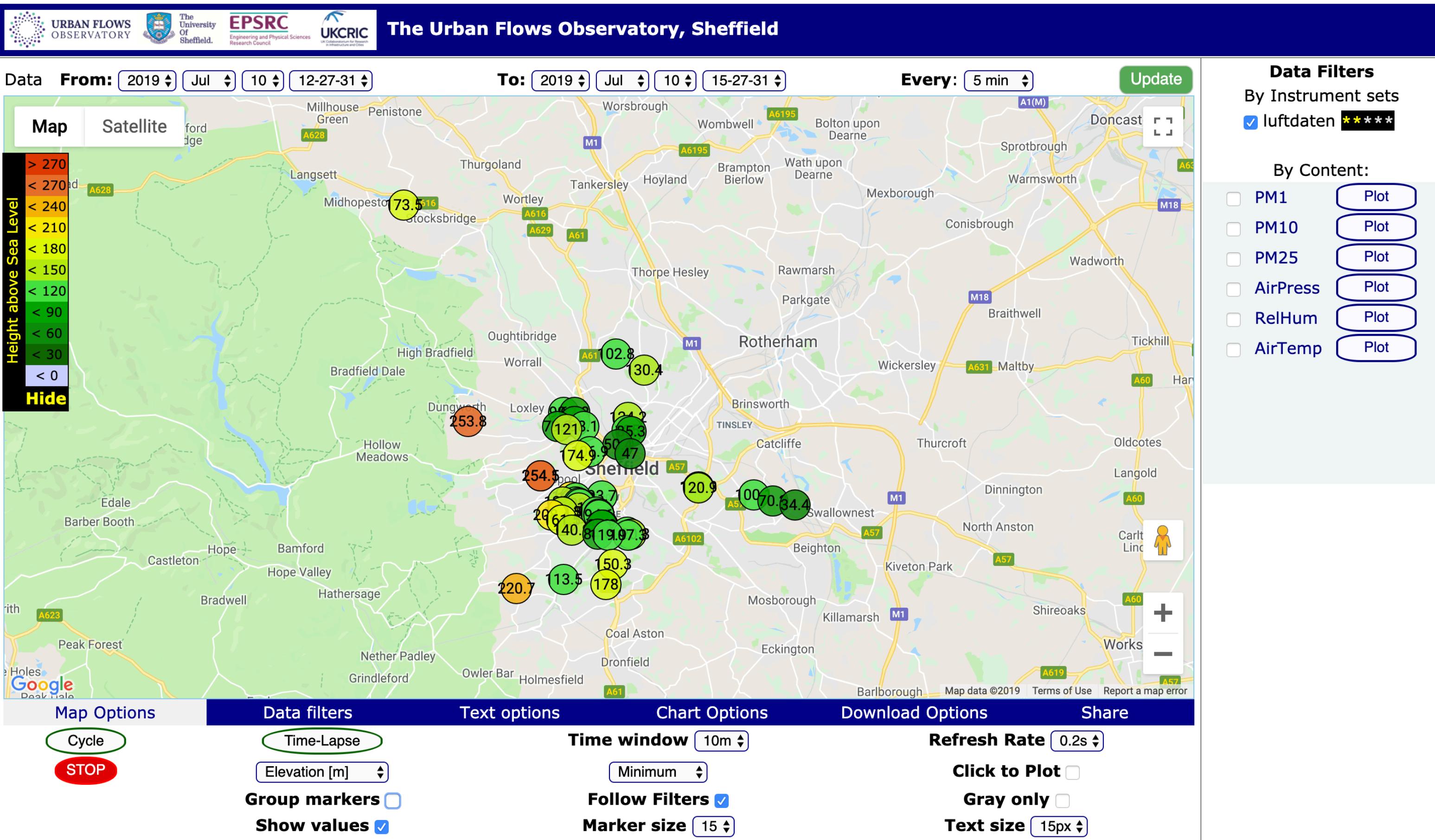


URBAN FLOWS OBSERVATORY SHEFFIELD

WELCOME GUIDE

Or the mystery tour
July, 2019

THE DATA PORTAL PAGE



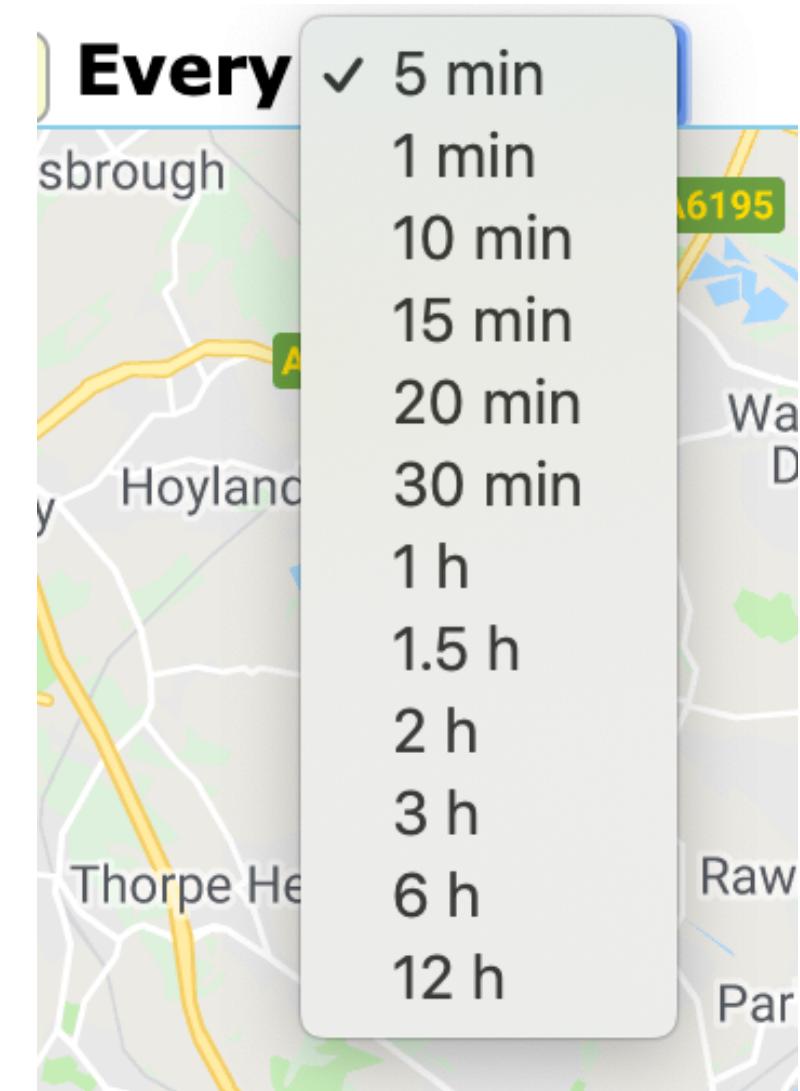
DATA SELECTION TOOL (BY TIME)

You can choose the beginning and end of your period of interest:

From:

To:

How spread the data is :



Warning:

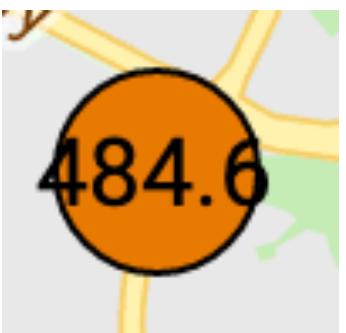
The more data you request, the longer it will take to get it to your browser.

ONCE YOU MAKE A CHOICE

Update

Click the UPDATE button to get a new view once you have picked your choice (or choices)

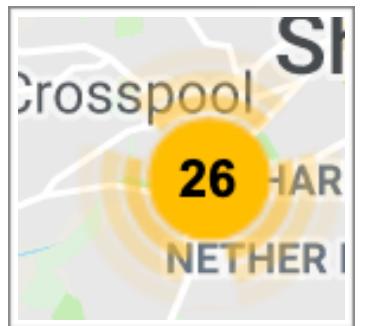
SENSOR MARKS



These symbols indicate a single site.

Click to Plot To see site data

Click to Plot To see plots for the site



These symbols indicate that there are many sites in that location.

Click on them to make the map zoom in.

Group markers

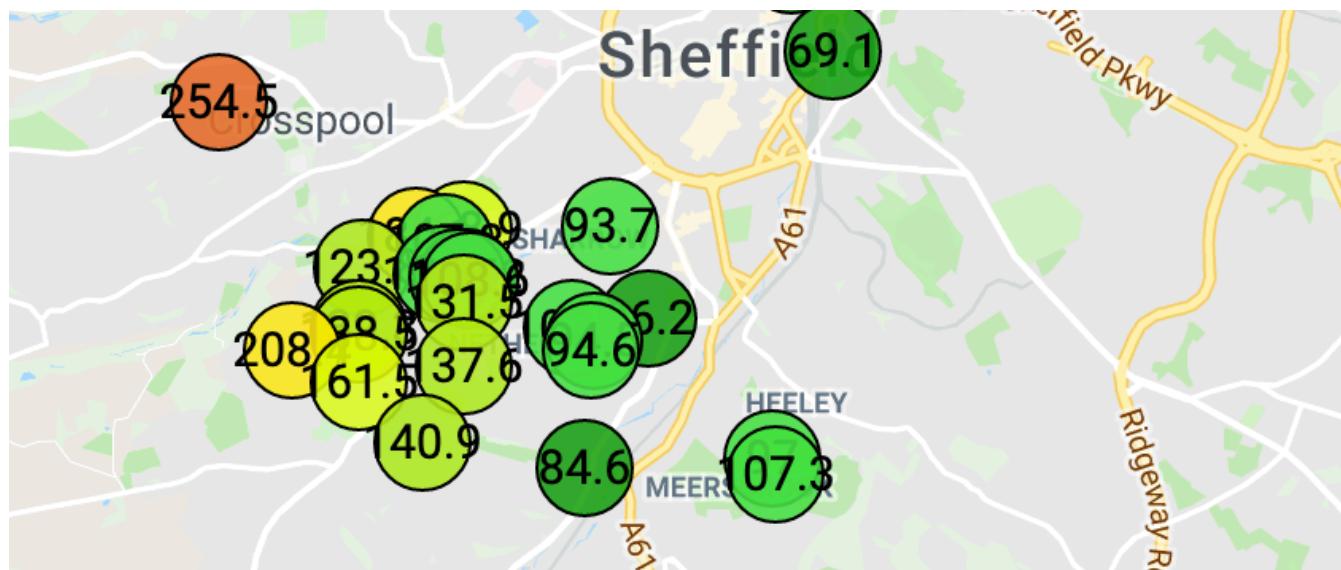
To use group markers

Group markers

To show all markers

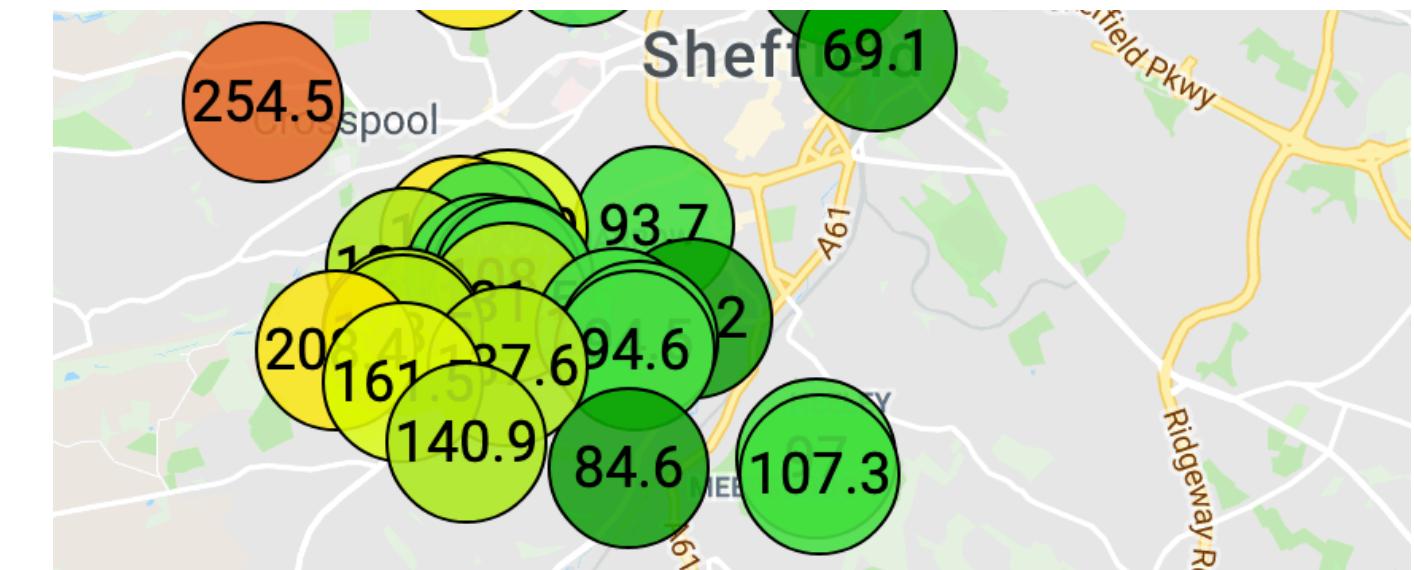
SENSOR MARKS CHOICES

Change the size of the markers and their text at will.



Marker size 15

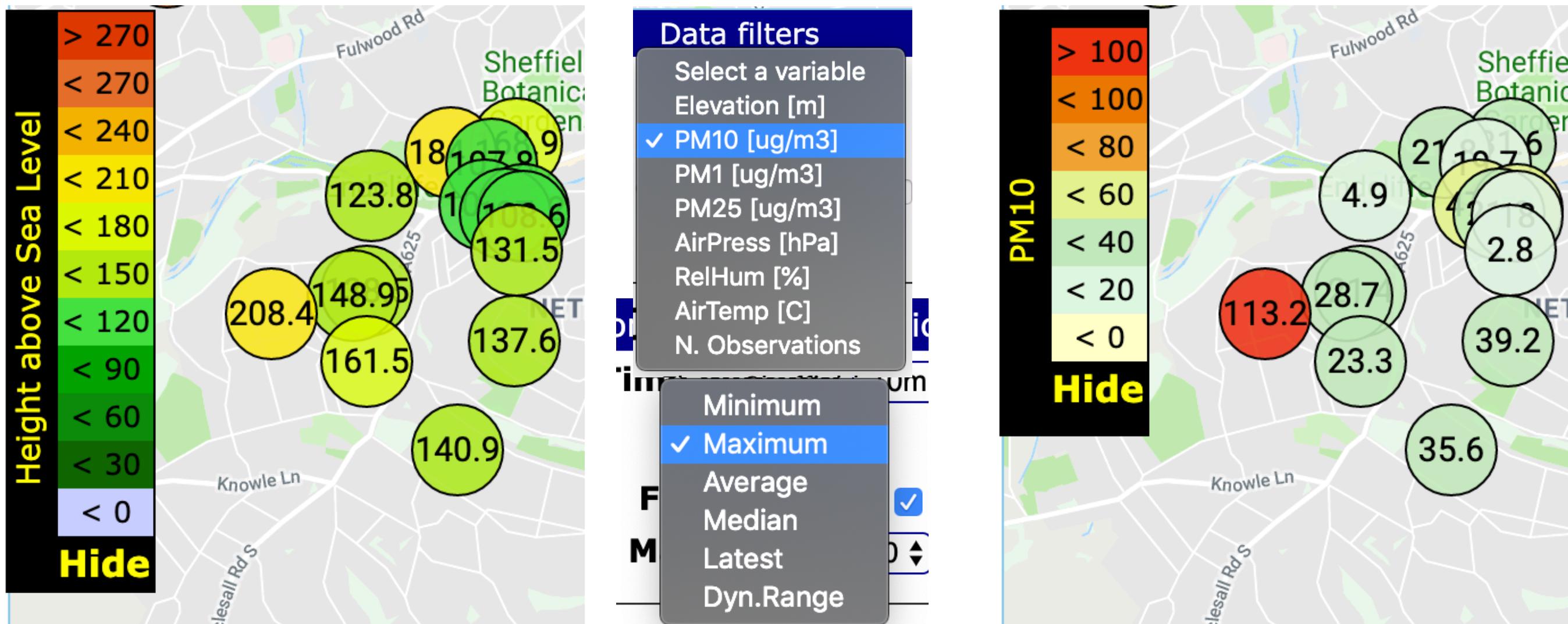
Text size 15px



Marker size 25

Text size 18px

SENSOR MARKS DISPLAY



Markers can display properties of any of the measured quantities for an individual site. Different colour scales are used for different quantities.

Gray only

Uses a grey scale instead of colours.

ANIMATIONS I

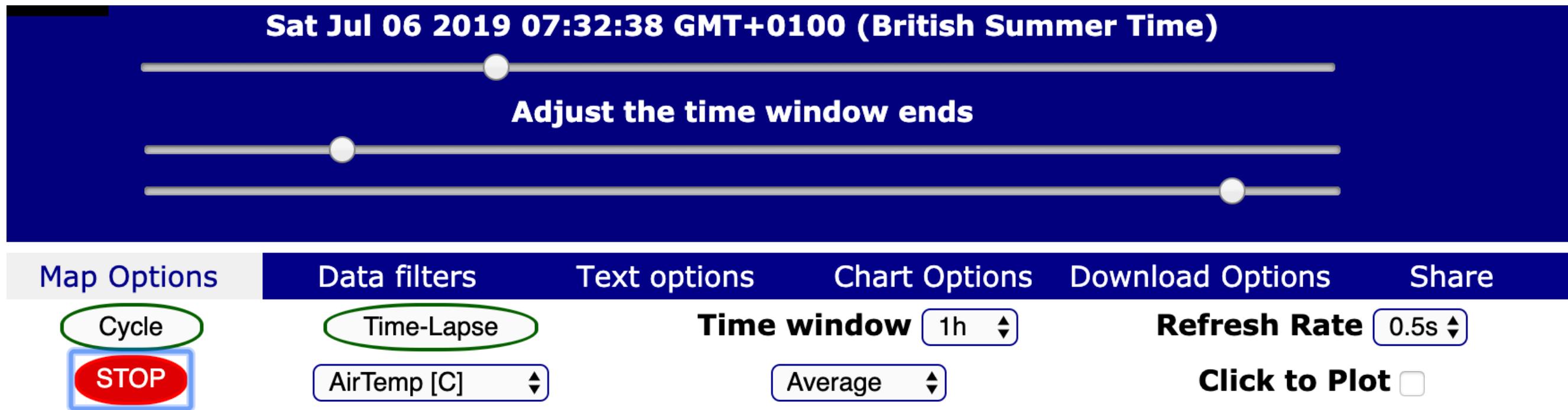


Cycling through all variables

- Click Cycle to show the values of quantities and properties across the map.
- Click Stop to finish the animation whenever you want.
- Use Refresh Rate to alter the period between one view and the next one

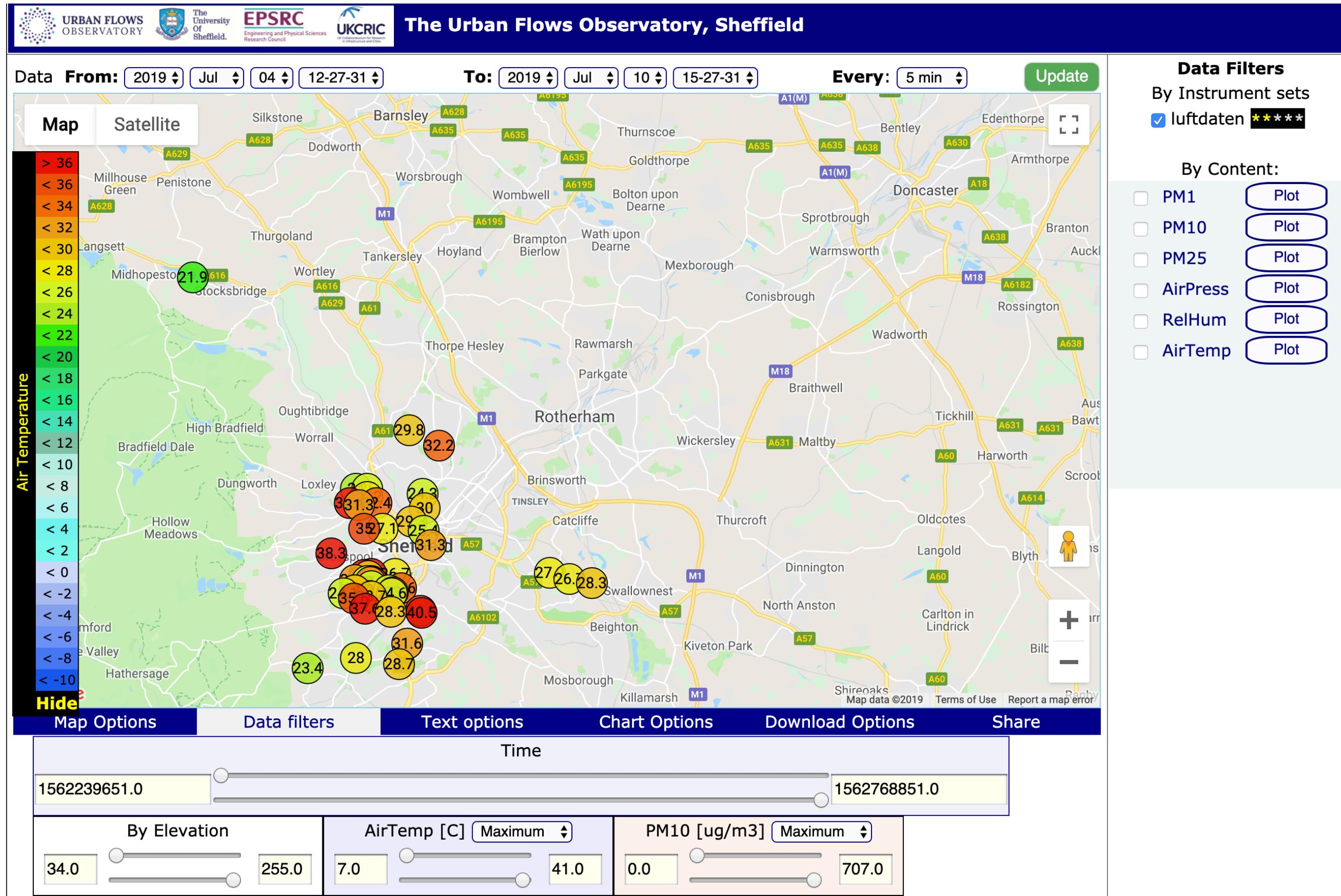
ANIMATIONS 2

View data as time progresses



- “Select a variable” to display in the site markers
- Choose a value for the time window (from 1m to 1 day)
- Choose a Refresh Rate (from 0.1s to 5.0s)
- Click “Time-Lapse” to start view
- Click Stop to interrupt the animation at any point.
- Use the upper slider to pick any given time.
- Adjust the time to begin and end if necessary by using the lowest two sliders

DATA EXPLORATION FILTERS



INSTRUMENT SELECTION I

We collect information from several sets of instruments. Some collect meteorological data, others air quality data of various types, as well as other quantities.

By Instrument sets

luftdaten 

These buttons let you see sites which belong to a set as soon as you select/deselect them.
Some sets (or families) are more reliable than others, etc.
We use an arbitrary system of "stars" to show the quality of the data acquired by those sensors

INSTRUMENT SELECTION II

By Content:

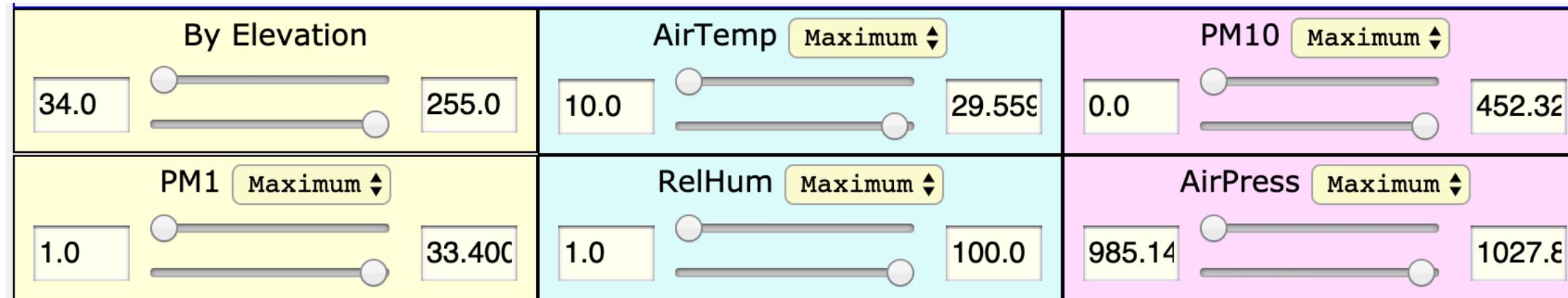
<input type="checkbox"/> AirTemp	Plot
<input checked="" type="checkbox"/> PM10	Plot
<input checked="" type="checkbox"/> PM25	Plot
<input checked="" type="checkbox"/> PM1	Plot
<input type="checkbox"/> RelHum	Plot
<input type="checkbox"/> AirPress	Plot

You may be interested in specific quantities only.

This panel lets you pick sites which measure specific quantities. In the example, particulate matter in the categories:

- PM1 (less than 1 micron in size)
- PM25 (less than 2.5 microns)
- PM10 (less than 10 microns)

DATA EXPLORATION FILTERS

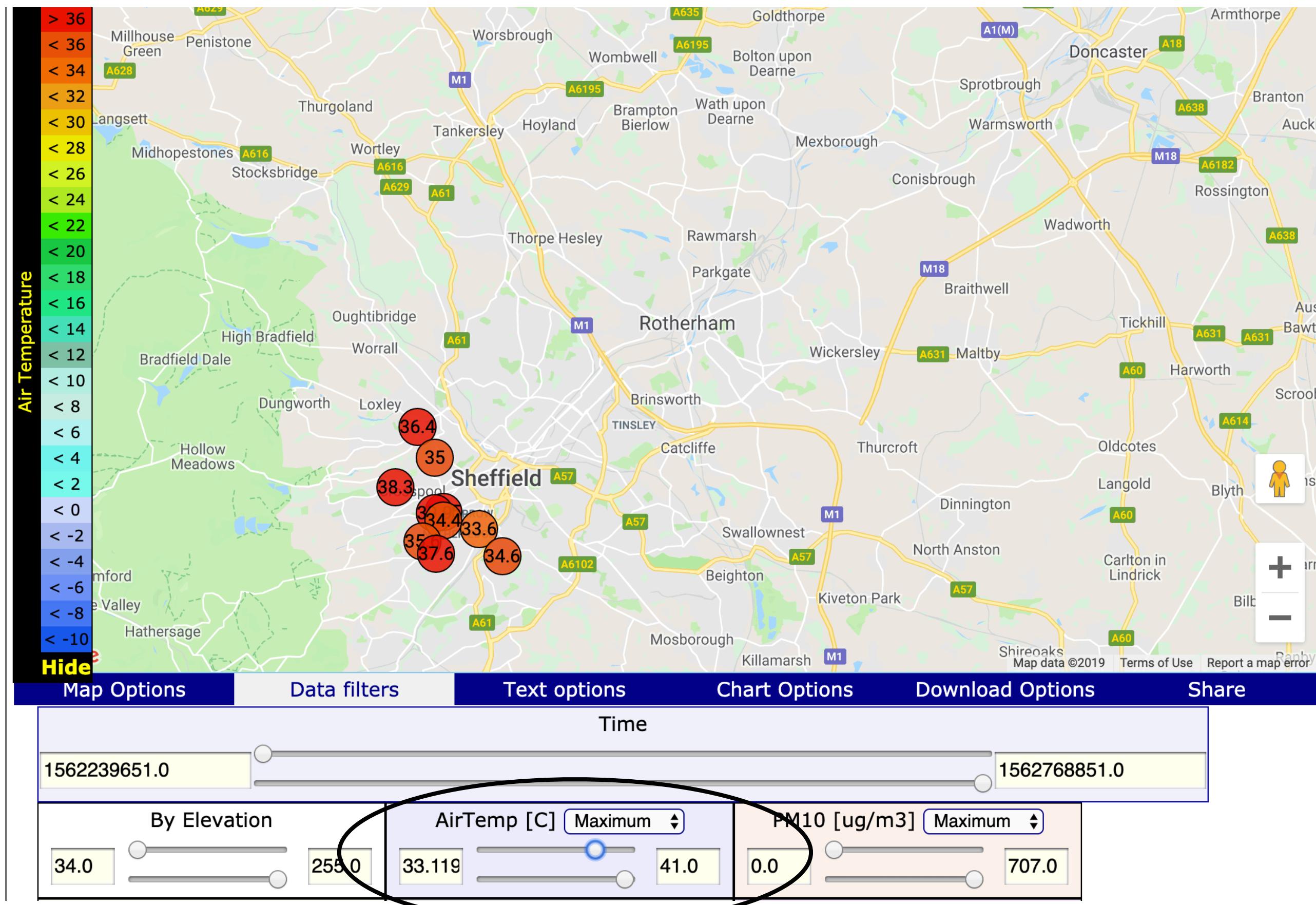


These filters allow you to choose map markers for sites whose chosen quantity fall within the desired range of values.

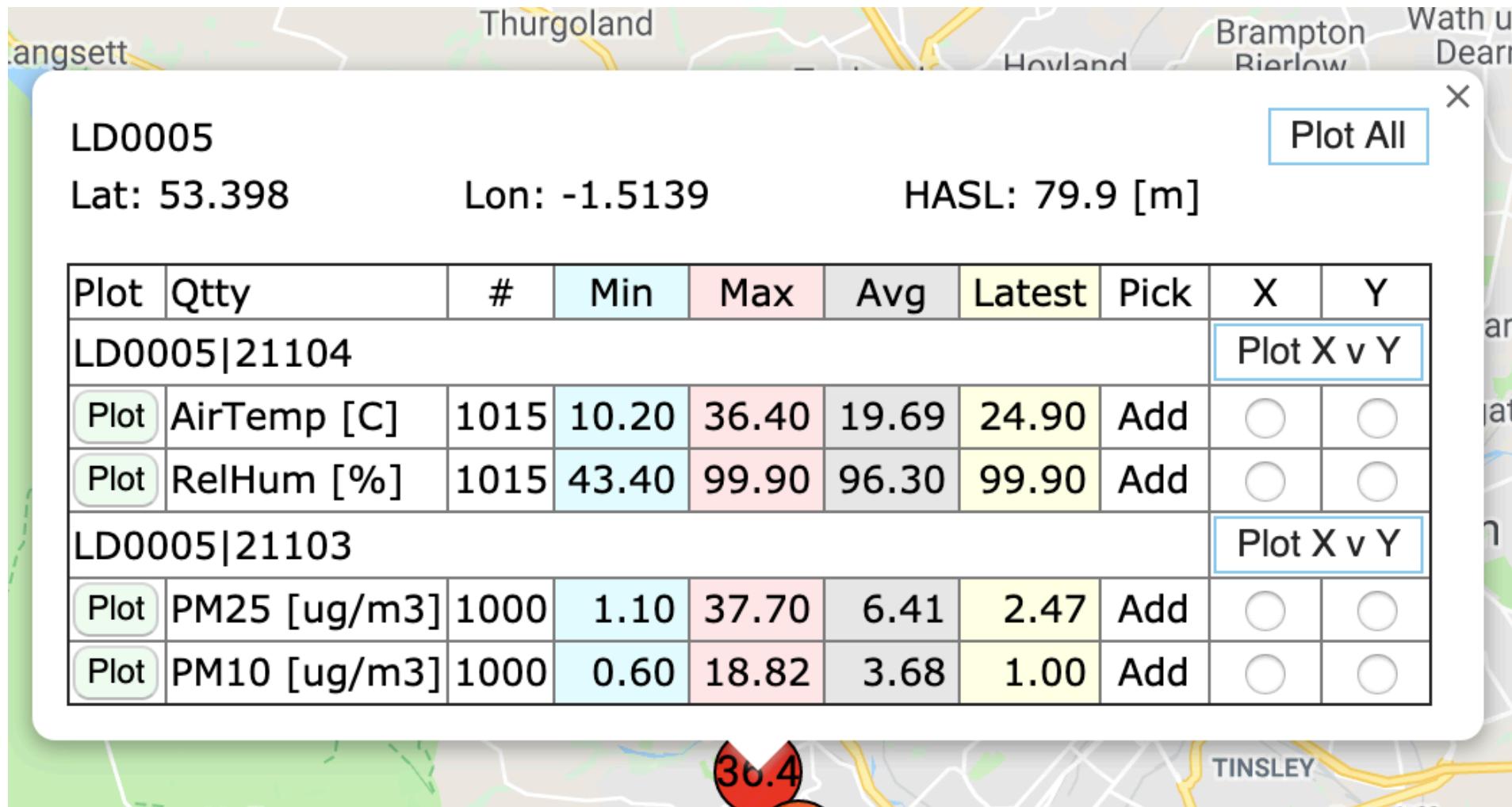
The minimum and maximum values shown in the boxes, is adjusted according to the property being examined. These values can be changed with the sliders.

The **minimum**, **maximum**, **average**, **median**, **latest-value**, and **dynamic range** can be used to filter.

DATA EXPLORATION: EXAMPLE

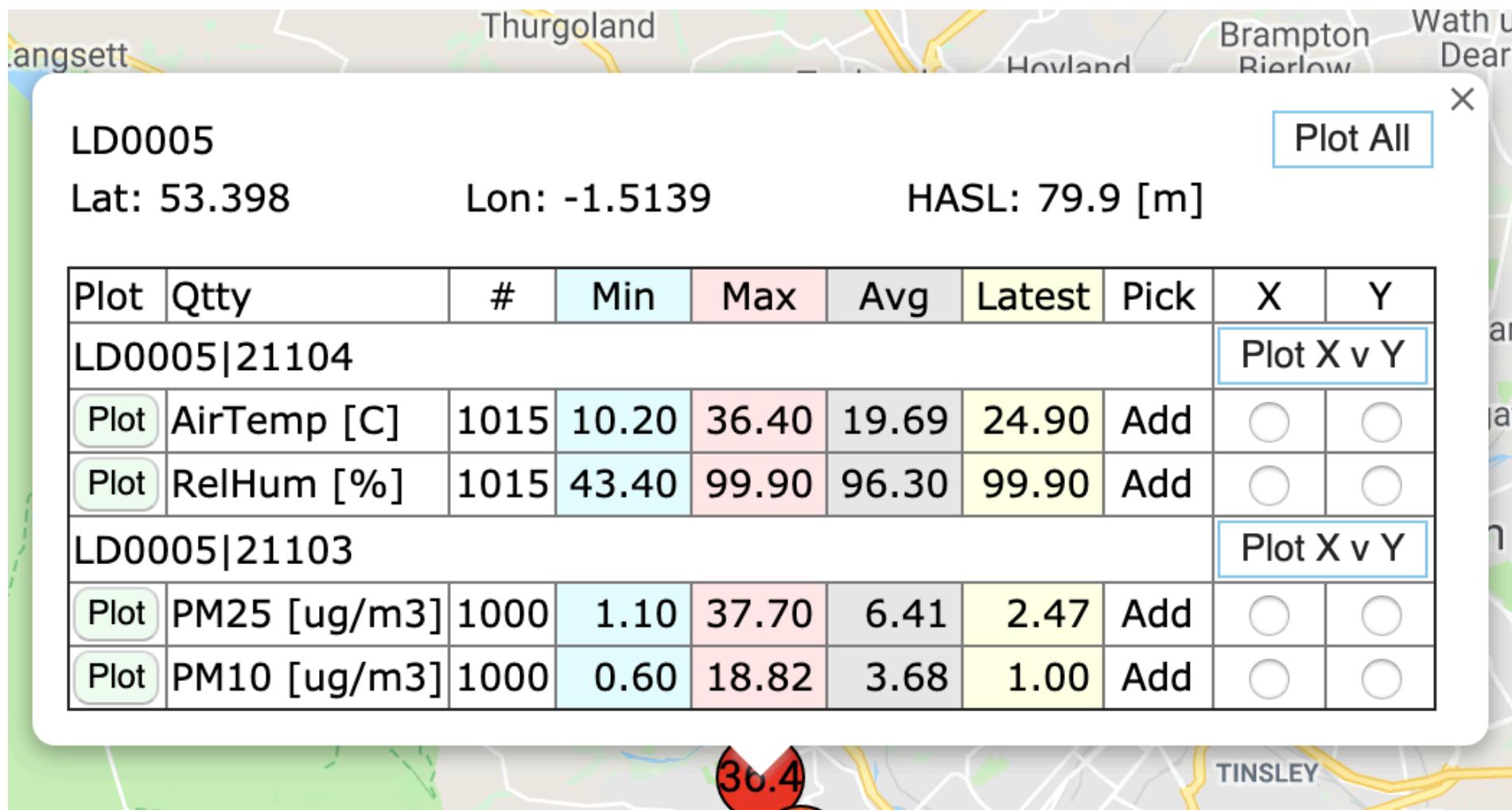


INFO ABOUT INSTRUMENTS I



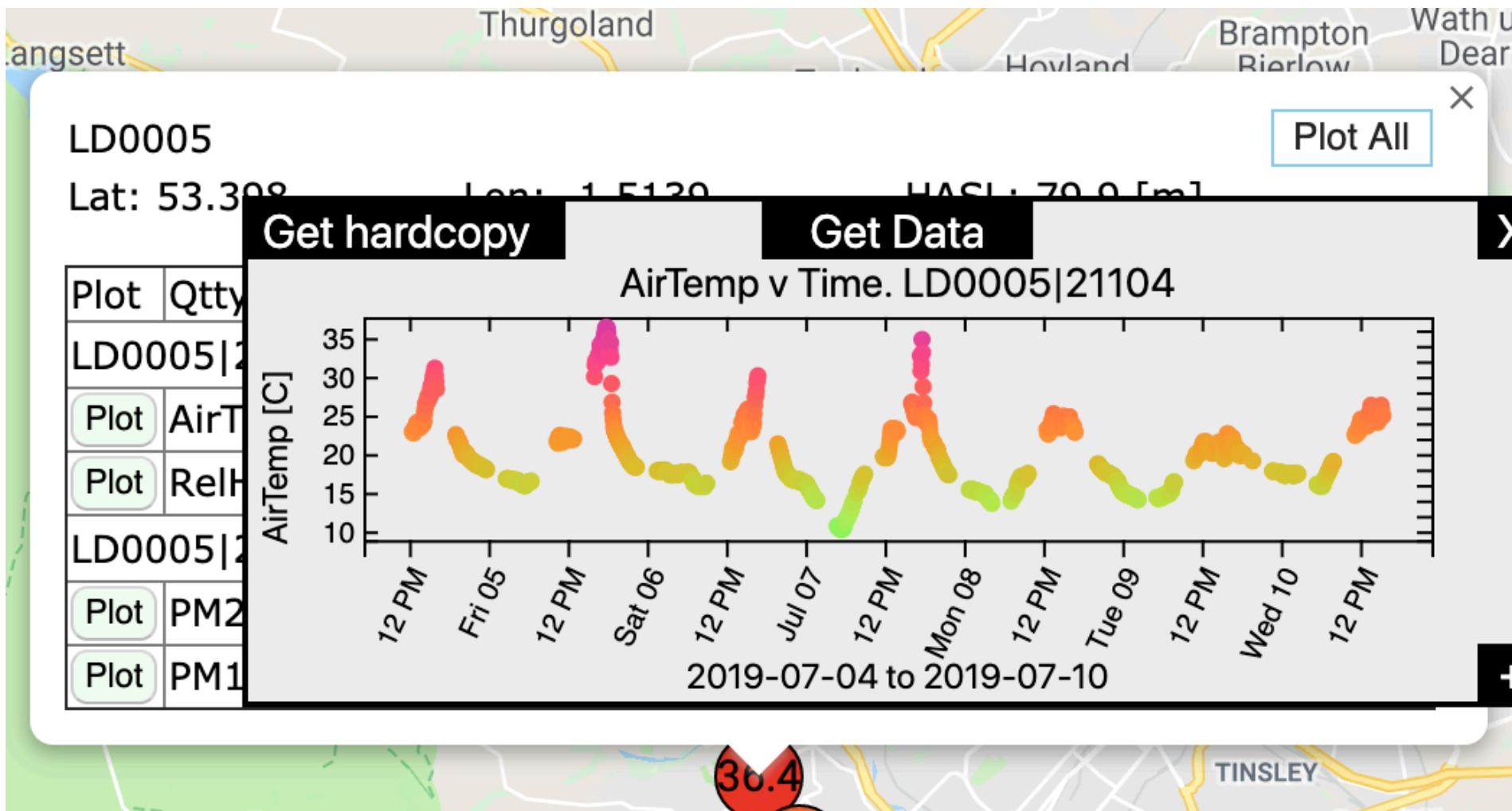
This is what you get when you click on a site symbol:
Information about the location of the site:
Longitude, Latitude and Height above Sea level, plus
information about the quantities measured during your time
of interest and the number of data points.

INFO ABOUT INSTRUMENTS 2



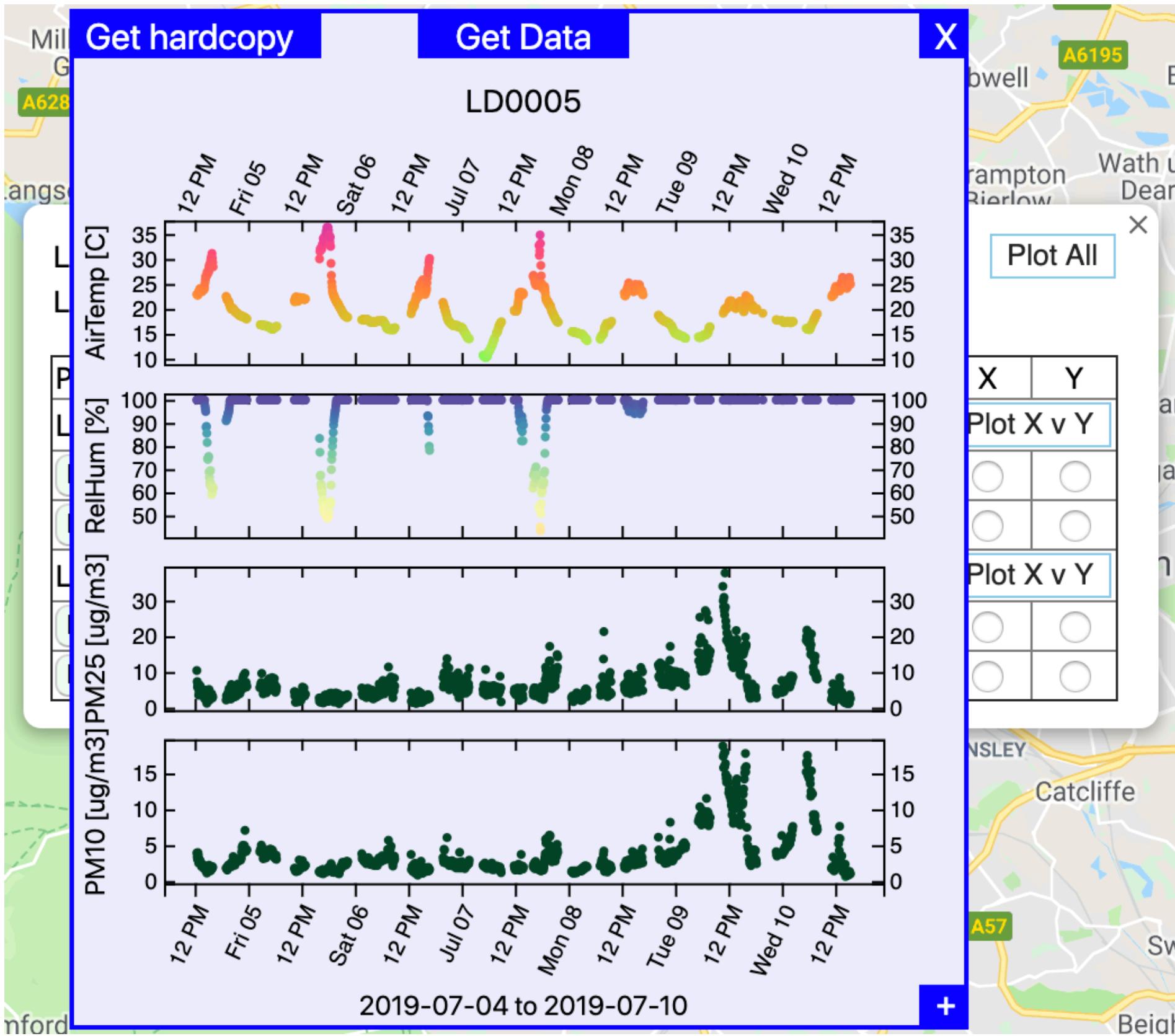
There are several "Plot" buttons to let you see how the data looks like using scatter plots of the quantity vs time.

INFO ABOUT INSTRUMENTS 3



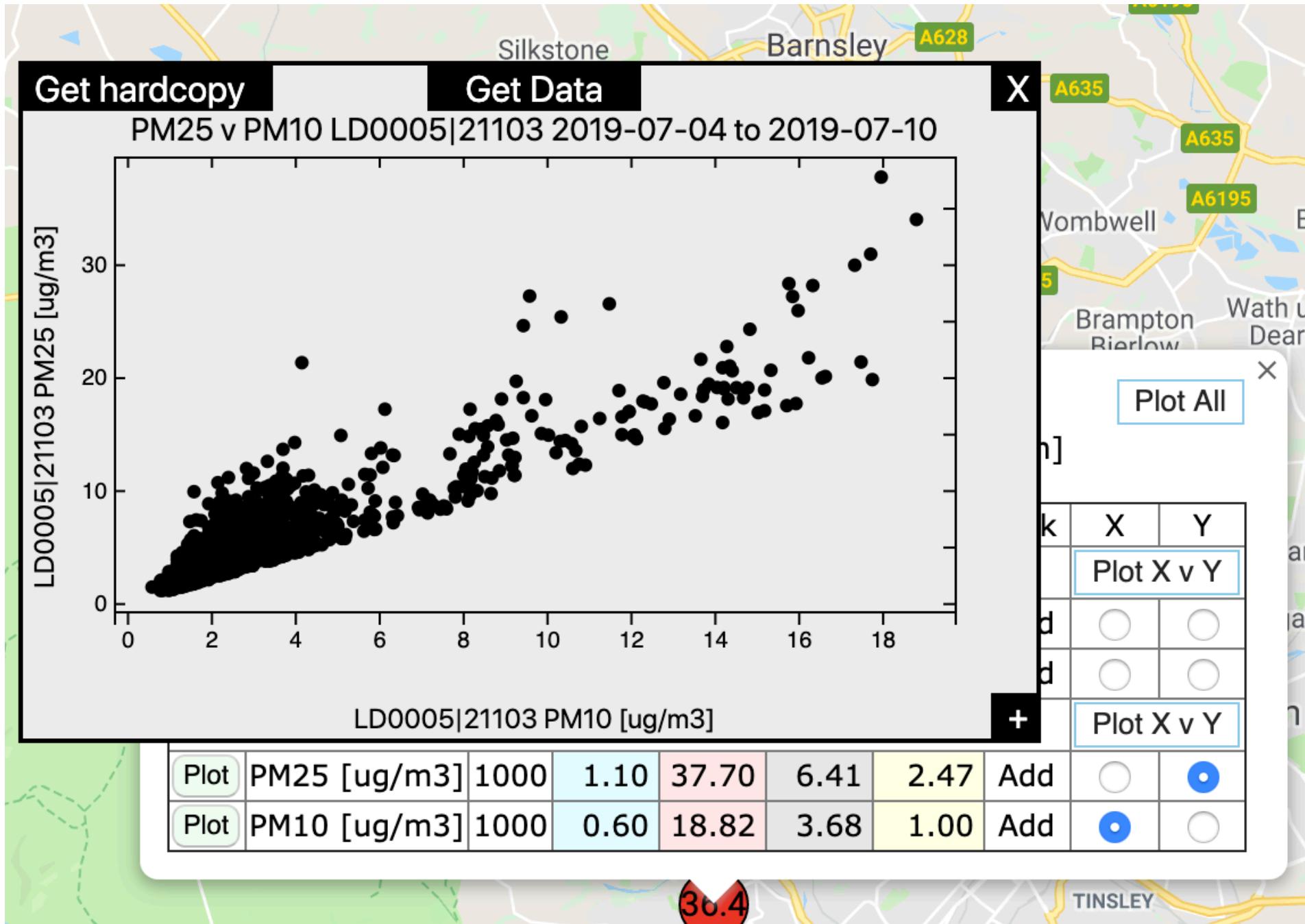
This is obtained by clicking the green buttons

INFO ABOUT INSTRUMENTS 4



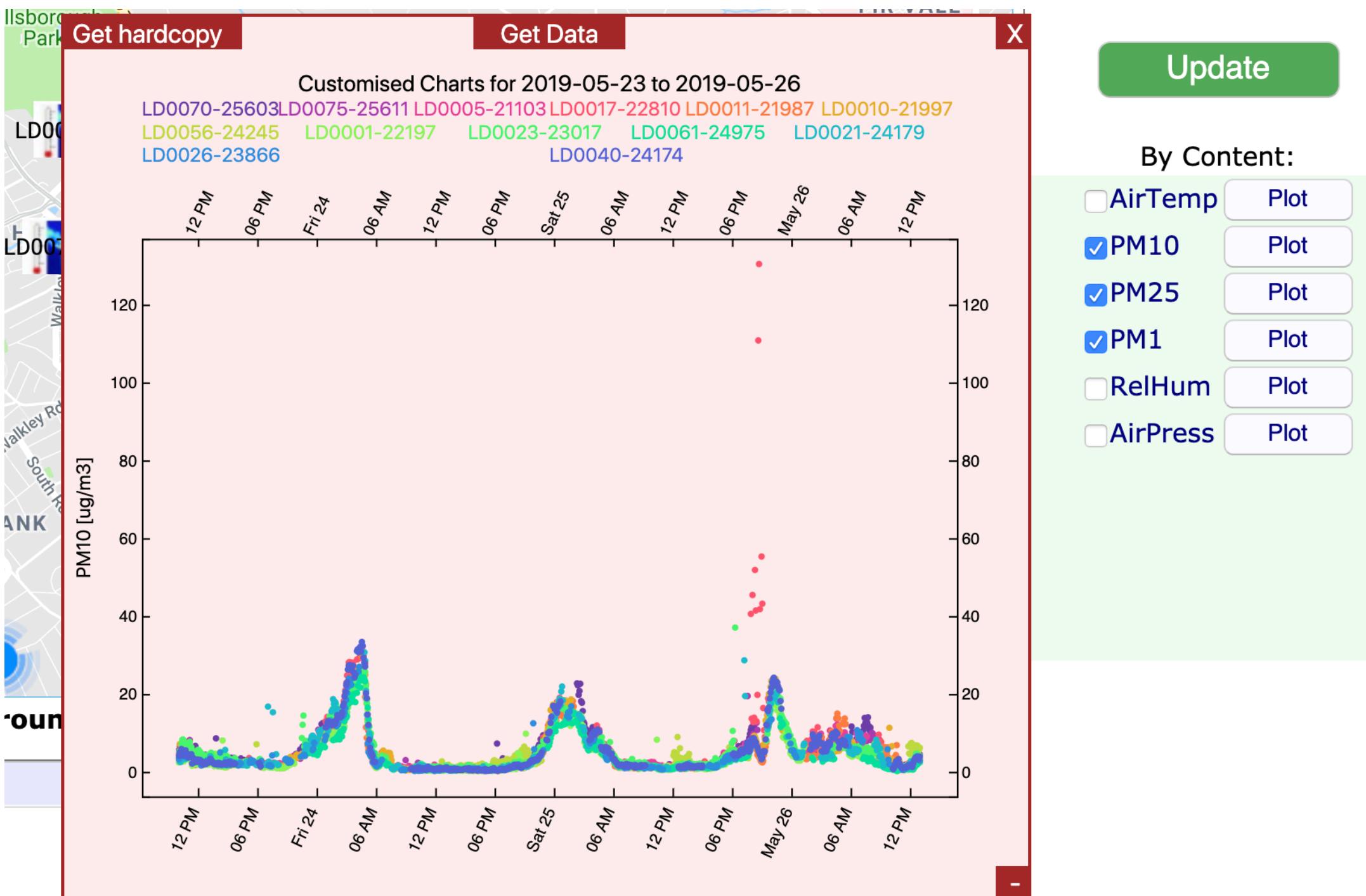
This is obtained clicking the white button on top

INFO ABOUT INSTRUMENTS 5



Pick the X and Y axis and click "Plot X v Y"

INFO ABOUT INSTRUMENTS 6



Buttons for a given measured quantity show data for all sensors within the map limits. Zoom in to get fewer.

TIME ZOOMING



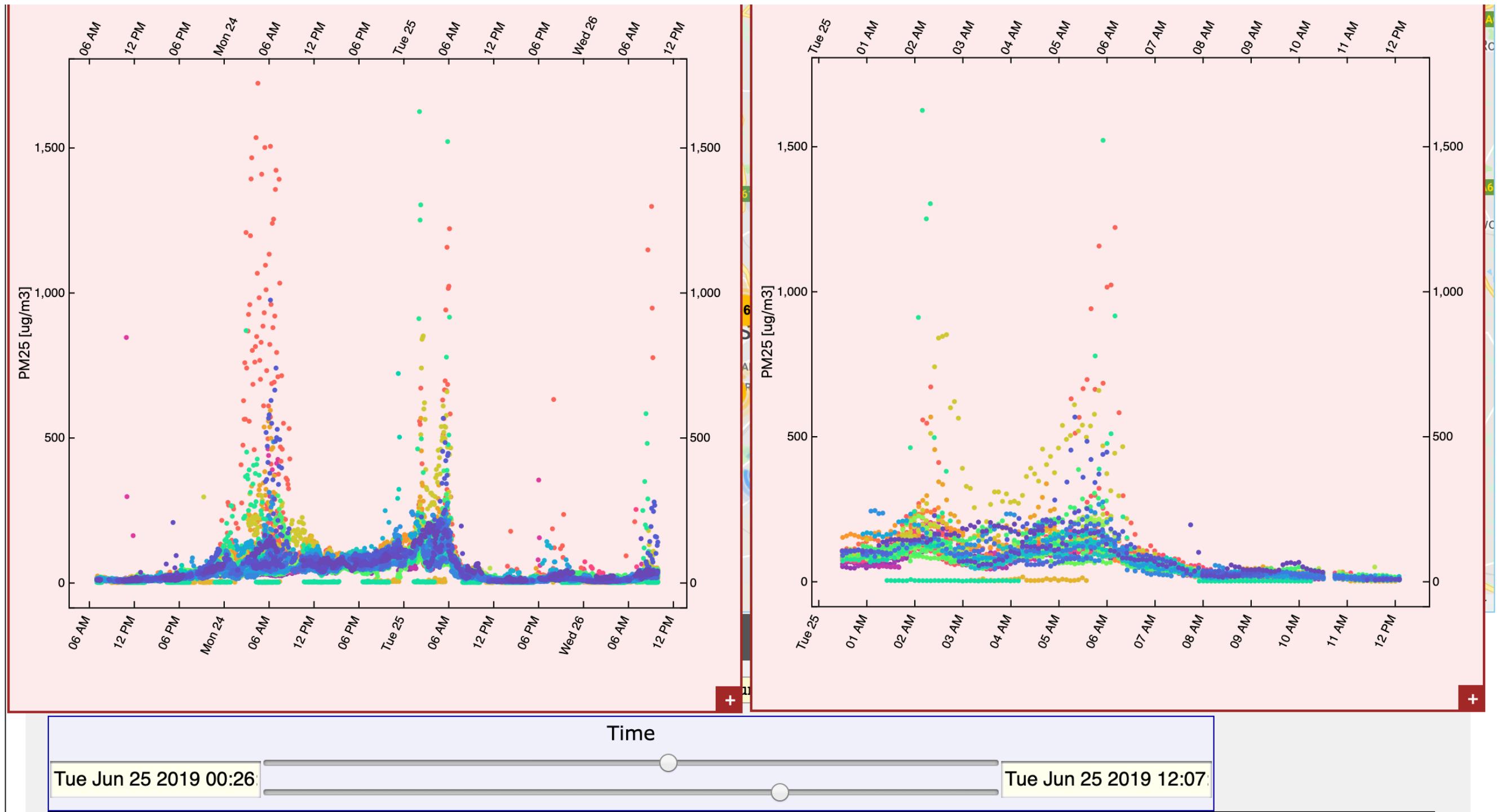
You chose the end-points for extracting the data using the fields located above the map.

However, sometimes a plot shows you a period particularly interesting. To zoom into that particular interval, you can use the time selection tool by using its sliders instead of re-submitting the form

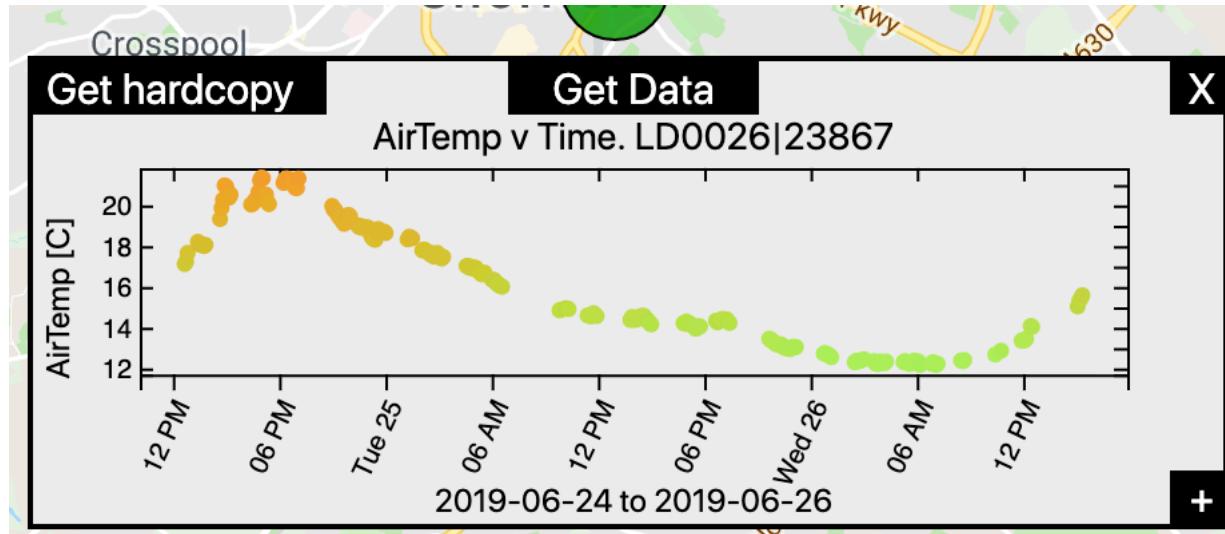
Next time you generate a plot it will only use points measured during the zoom-in interval.

TIME ZOOMING

Original period (left), zoomed-in period (right)



RETRIEVING DATA OR PLOTS



Click **Get Data** to retrieve the data represented in any plot. You can save that data-set to your machine.

If you want a hard copy of the current plot (PDF or JPG), click the **Get hardcopy** button and a plot will be made



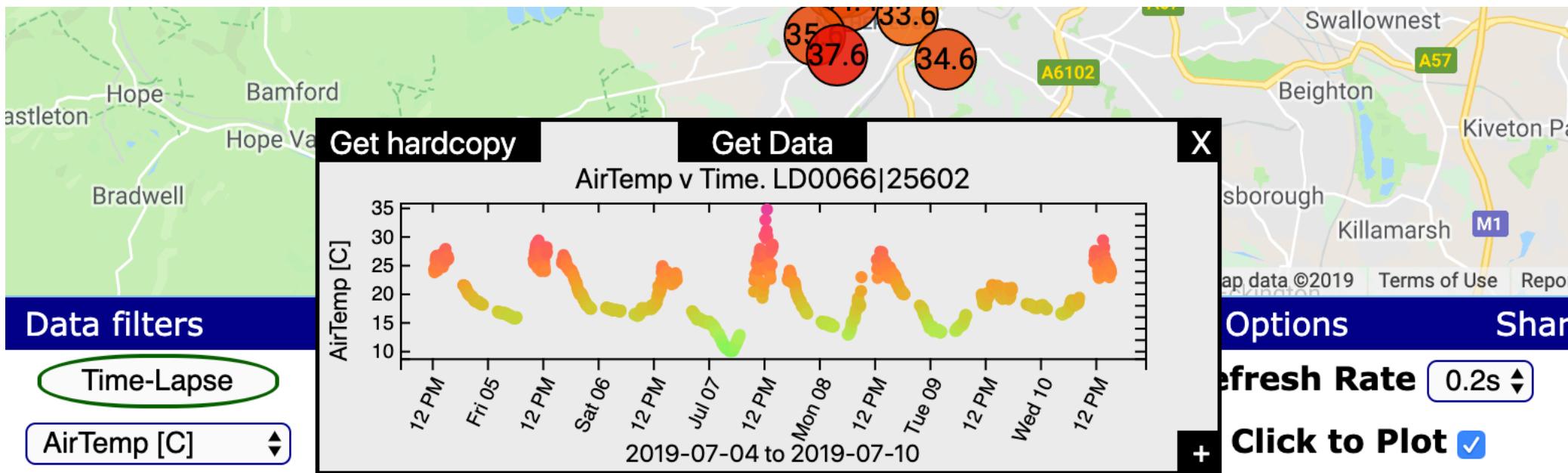
Paper-size: A4 ▾

Plot-as: PDF (show) ▾



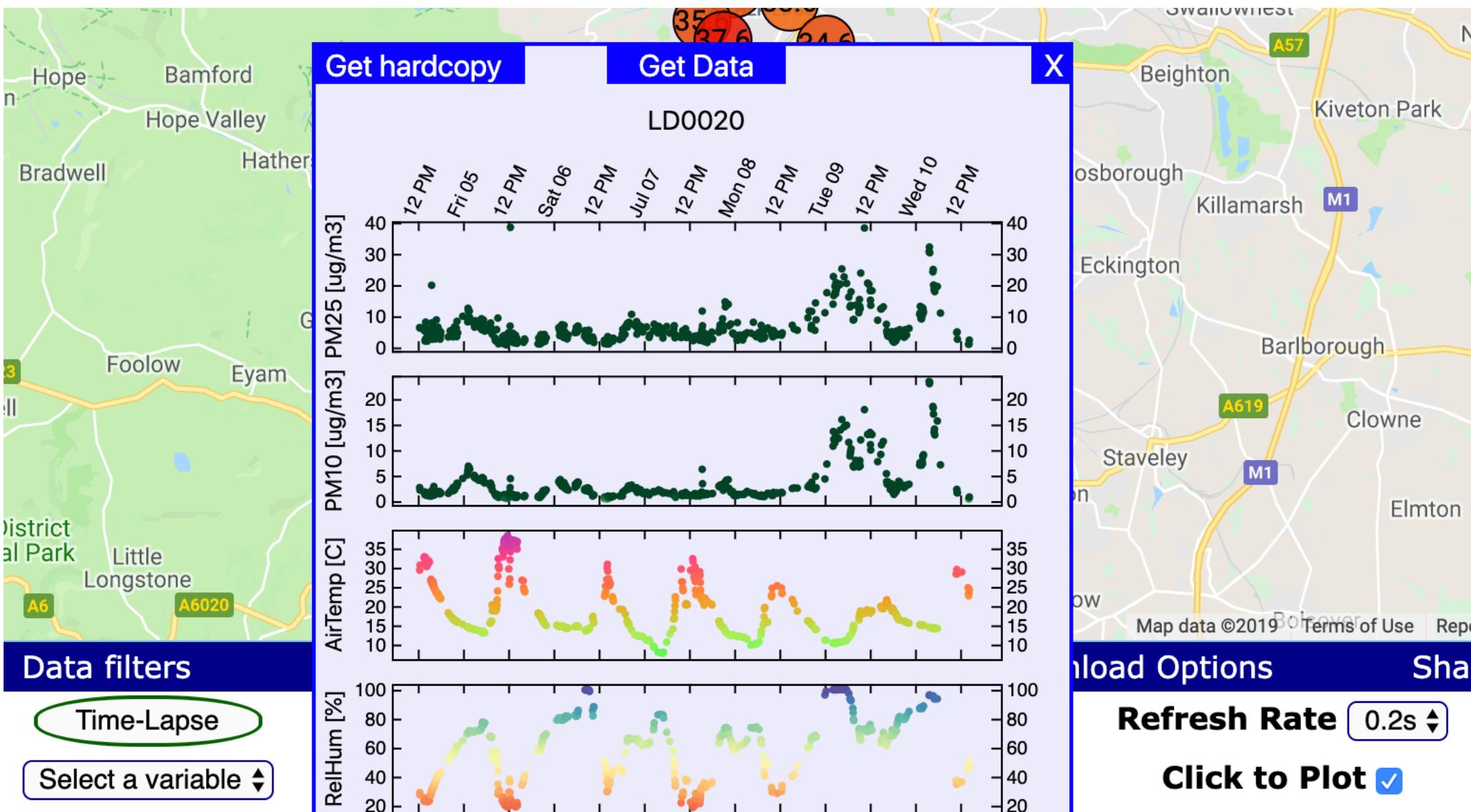
Download-as: CSV (show) ▾

QUICK PLOTTING |



- Activate “click to plot”
- Select a variable of your interest
- Every time you click on a marker a plot will be generated

QUICK PLOTTING 2



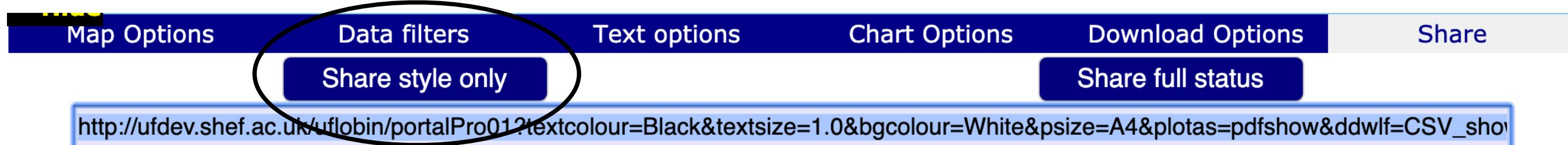
- Activate “click to plot”
- Choose “Select a variable”
- Every time you click on a marker a plot for all measurements in that site will be generated

ACCESSIBILITY



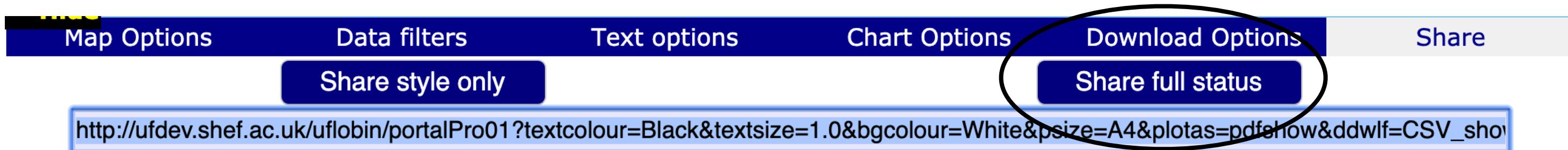
The text size, text colour and page background can be customised to your taste.

To recover those settings later, click “Share style only” and use that web address (URL) next time you want to connect to the portal.



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ACKNOWLEDGEMENTS

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 - * Department of Civil & Structural Engineering
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(hosting these pages and the observatory data)
- EPSRC: The Engineering and Physical Sciences Research Council
- UKCRIC: UK Collaboratorium for Research on Infrastructure and Cities

SCROLL DOWN TO SEE
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