



Ricardo
Energy & Environment

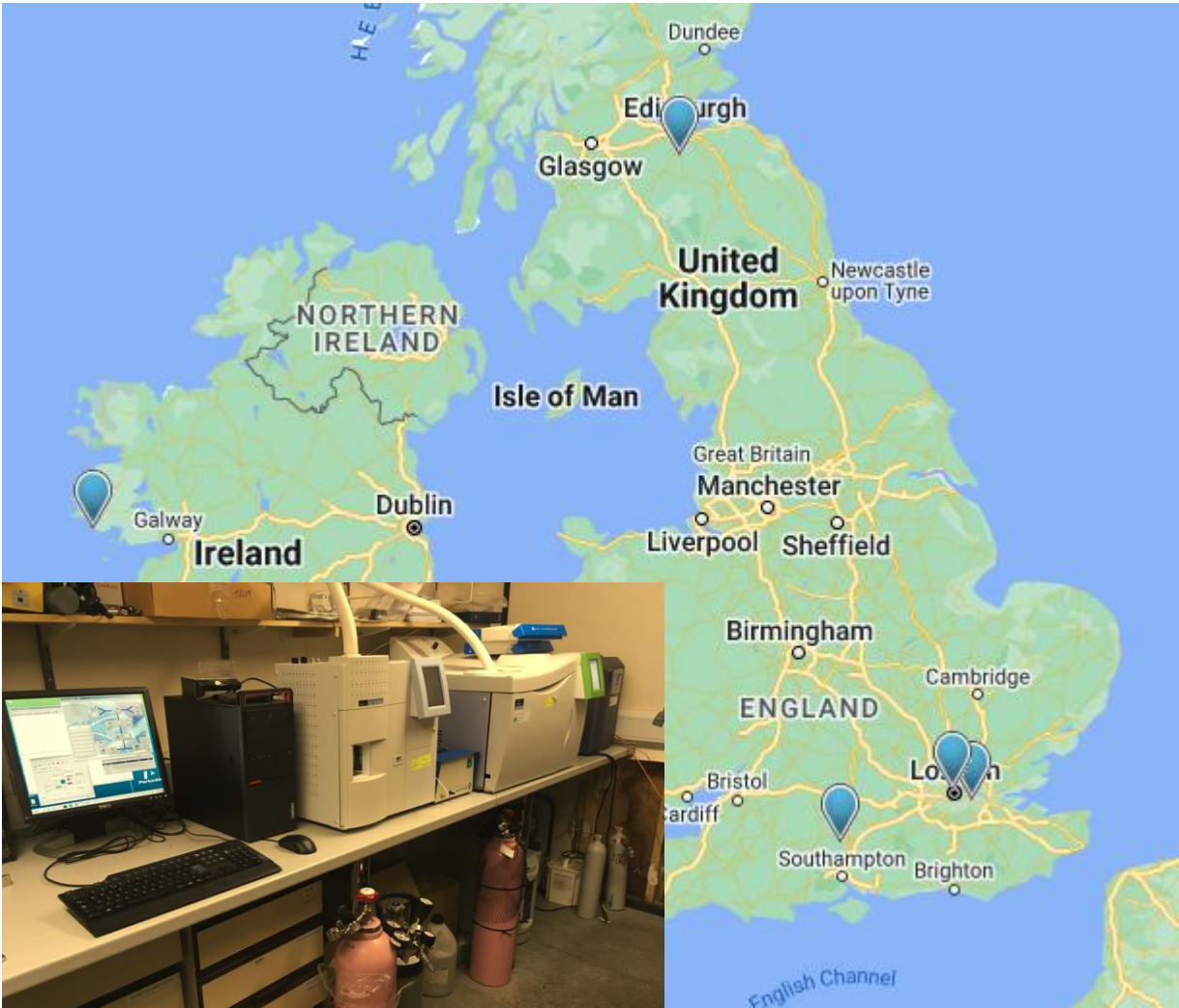
NMVOCs at Chilbolton Observatory 2024

Agnieszka Sanocka
7th April 2024

UK Automatic Hydrocarbons Network

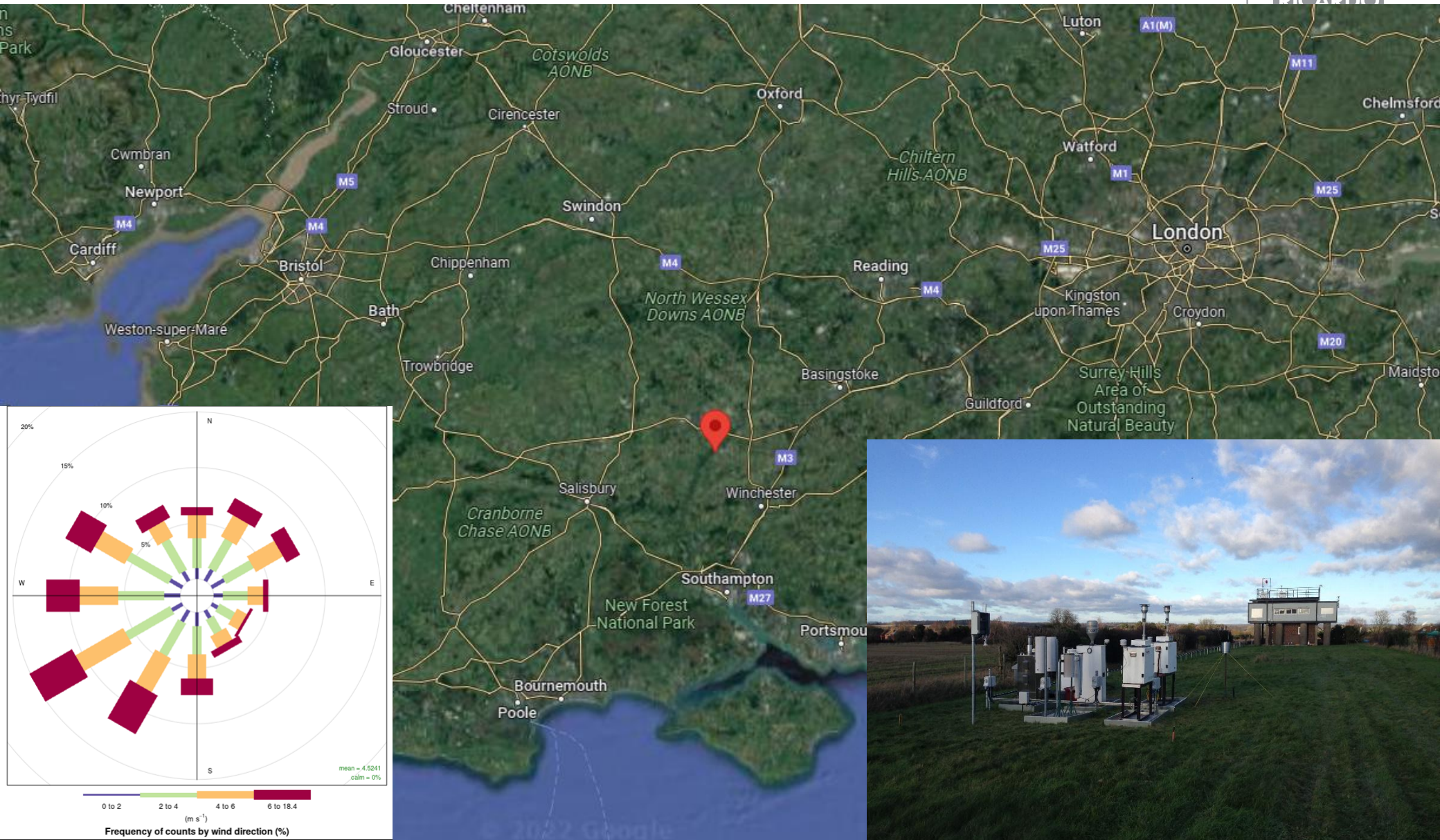


Perkin Elmer Ozone precursor analyser
Used the default configuration recommended by PerkinElmer.

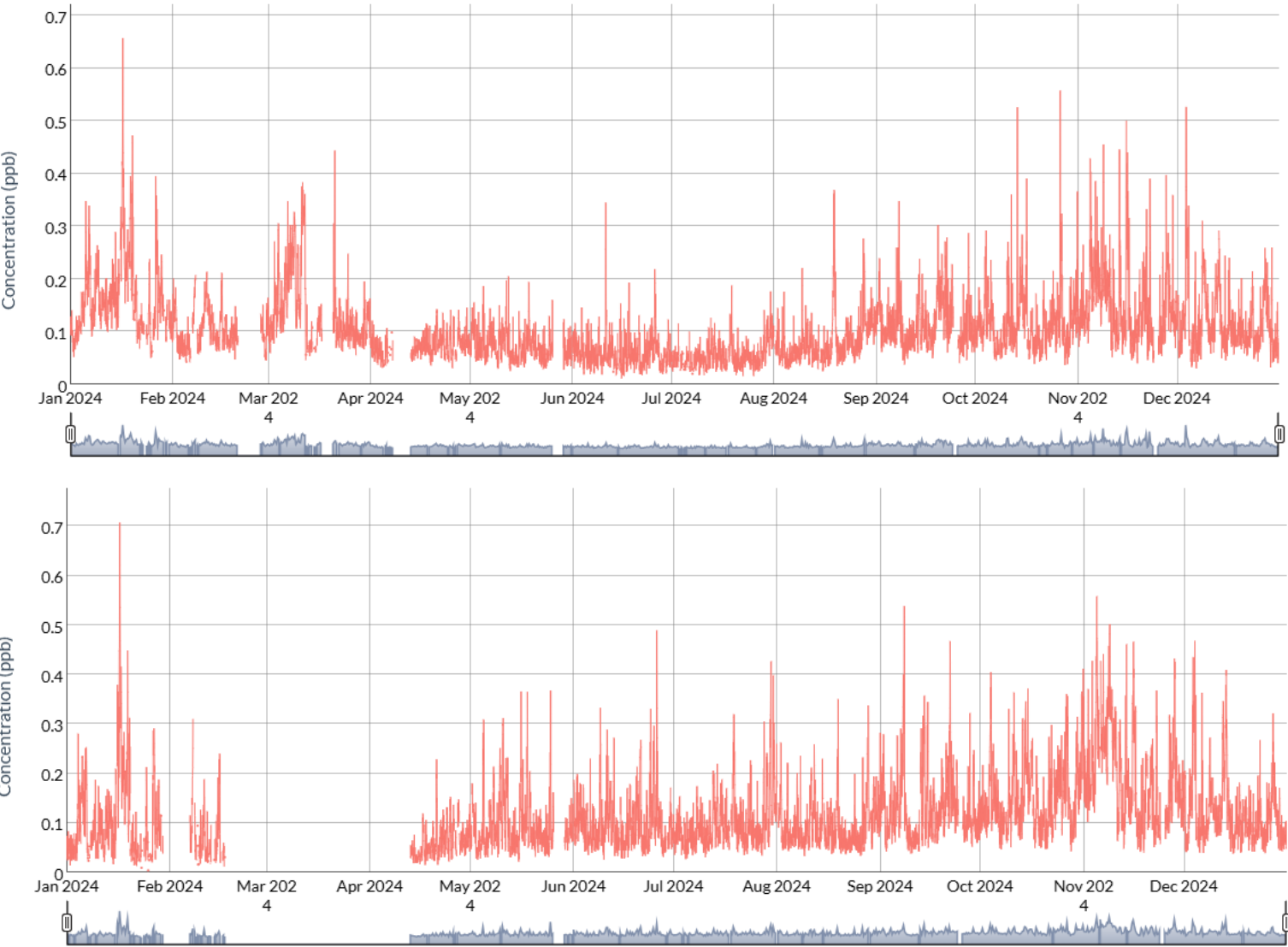


Chromatograph	Clarus 580 GC with heartcut device and Integral LINK
Column	Ozone Precursor Column Set: • 50 m x 0.22 mm x 1 µm dimethyl siloxane column • 50 m x 0.32 mm alumina/Na₂SO₄ PLOT column
Oven	46 °C for 15 minutes, then 5 °C/minute to 170 °C, then 15 °C/minute to 200 °C and hold for 6 minutes (48-minute chromatogram)
Detector	Dual Flame Ionization Detectors at 250 °C
Carrier Gas	48 psig helium at the pre-column inlet 17 psig helium at the heartcut device
Thermal Desorber	TurboMatrix TD with online sampling accessory
Trap	Air Toxics trap packed with carbonaceous adsorbents
Trap Low	-30 °C
Trap High	325 °C
Transfer Line	200 °C
Operating Mode	On Line
Inlet Split	Off
Outlet Split	2 mL/min (~1:1 split ratio)
Data Handling System	TotalChrom and TurboMatrix remote control software
Air Sampling	15 mL/min for 40 min (600 mL total)

Chilbolton Observatory Alt 78m, inlet height 5m

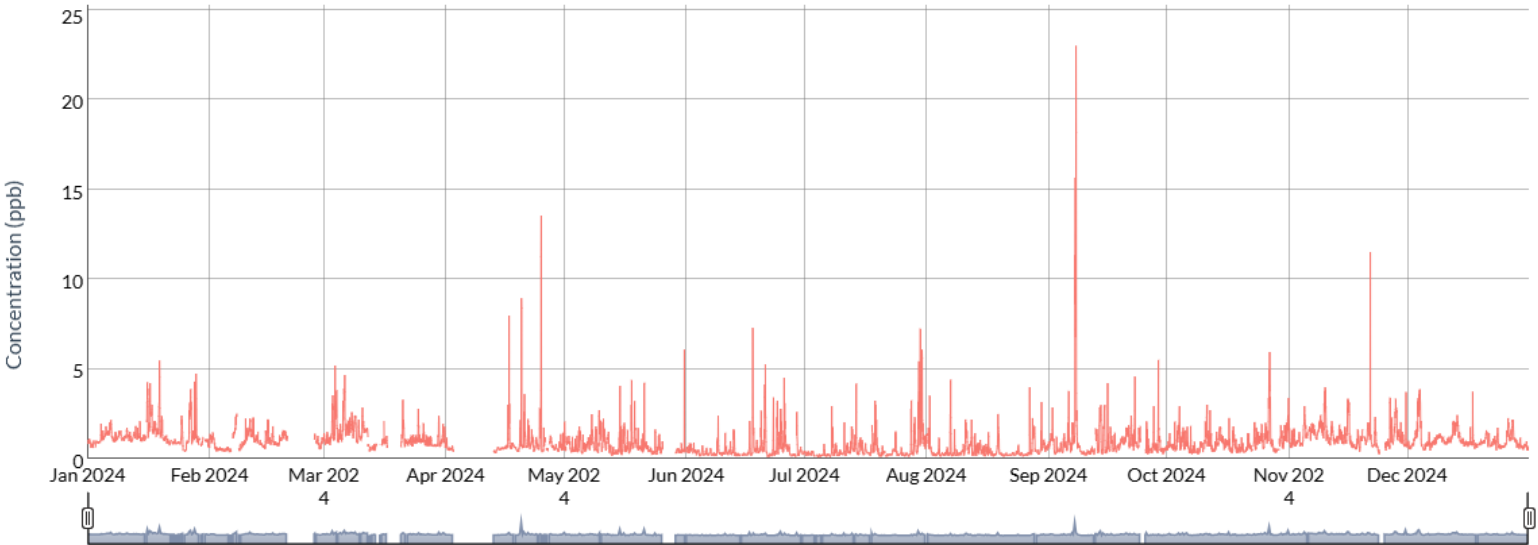
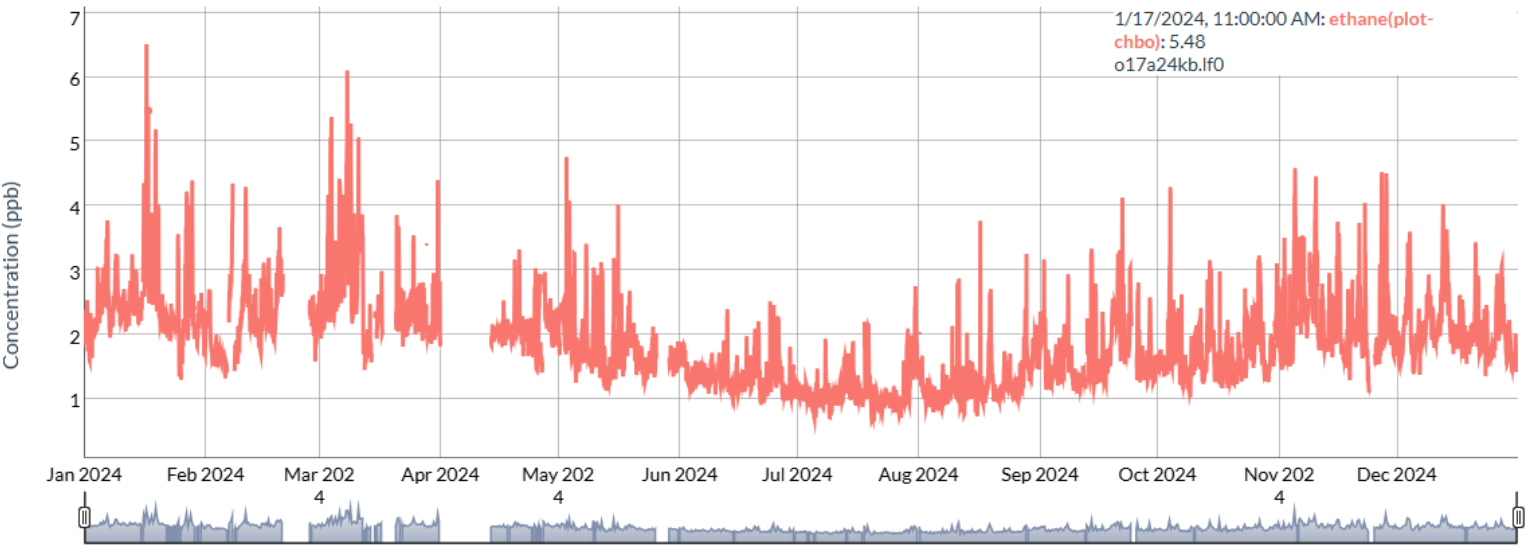


Chilbolton Observatory 2024



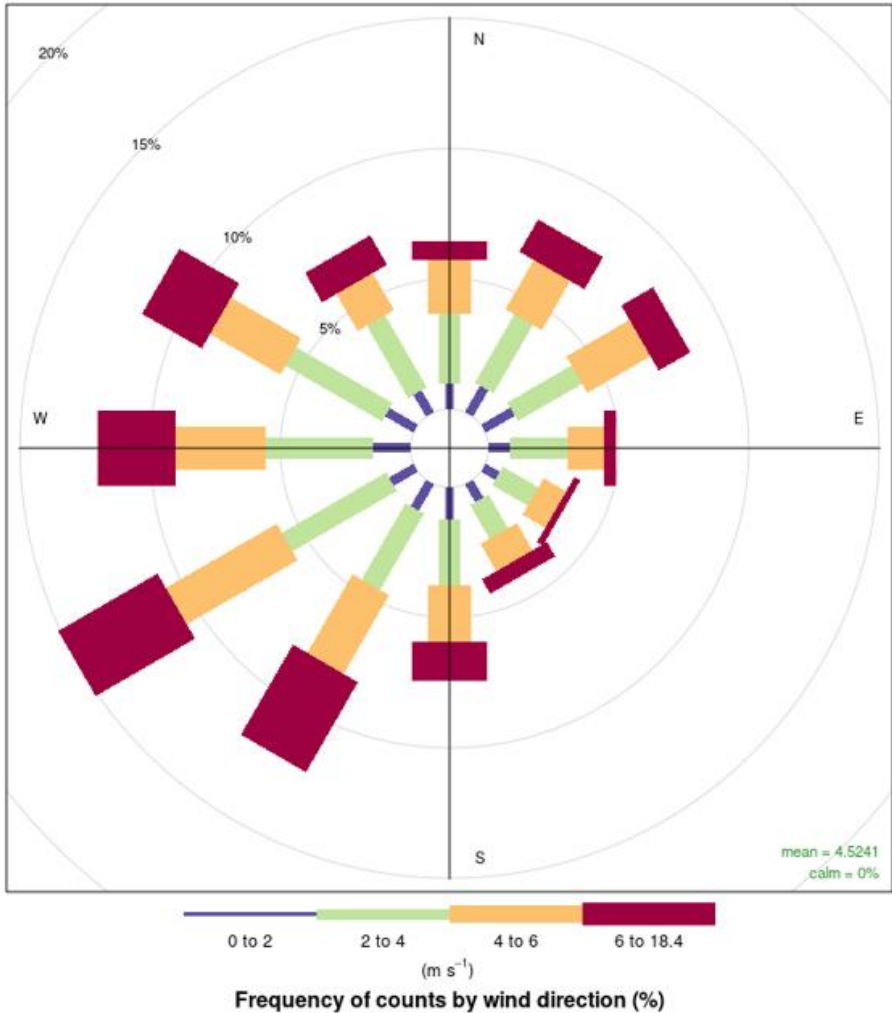
Data trends for Benzene and Toluene
Mar –Apr gap in Toluene due to Baseline noise on BP1 column.
April new BP1 column.

Chilbolton Observatory 2024



- Data trends for Ethane and Propane

Chilbolton_Observatory_2024_Wind rose.png



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Download UK Data here: <https://uk-air.defra.gov.uk/>