

Zeppelin observatory, Ny-Ålesund, Svalbard

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78°5' N, 11°5' E, 474 m.a.s.l.



NOx measurements at Zeppelin Observatory



- **Analyzer:** Teledyne API T200UP (CLD and BLC), no dryer
- **Calibration unit:** Teledyne API T700U (GPT and dilution)
- **Zero air source:** Teledyne 701H



- **Sample inlet:** 15m above station level, stainless steel and teflon, residence time from inlet head to monitor inlet: 11 s



Status and calibrations

Calibration gas:

Air Liquid NO working standard (800 ppb), calibrated against NPL, diluted to 10 ppb

Measurements:

2019-2022:

Zero/span check, weekly (manually)

Linearity check, converter test and calibrations 2-4 times per year

2023 no measurements due to calibrator problems

So far, no data submitted to ebas

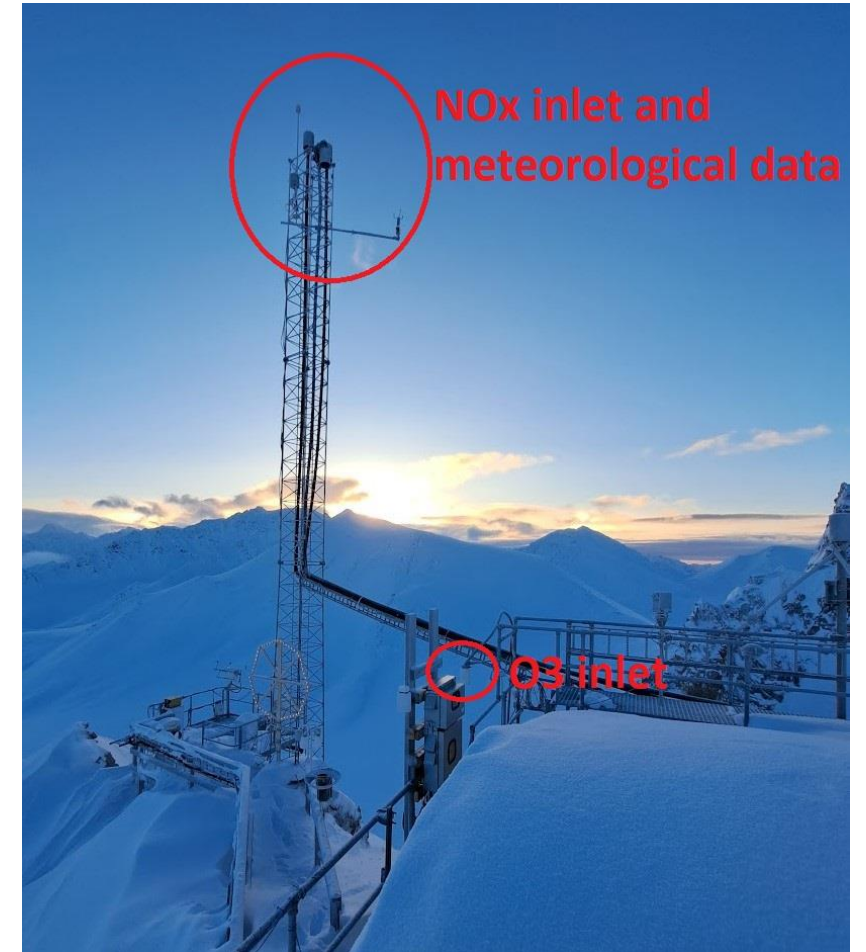
Plans for 2024:

- automatic calibration system
- New NPL standard

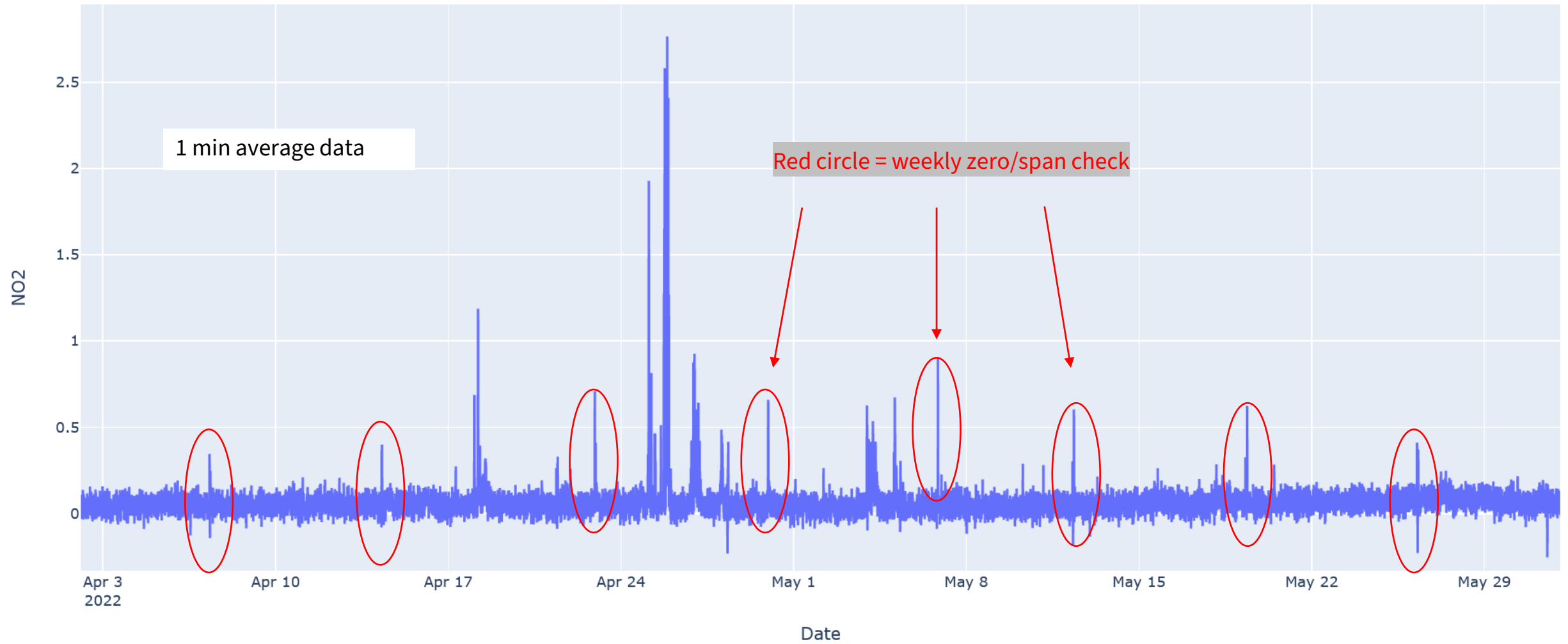
Ancillary data

Ambient ozone concentration: Teledyne API 400 (different inlet height)

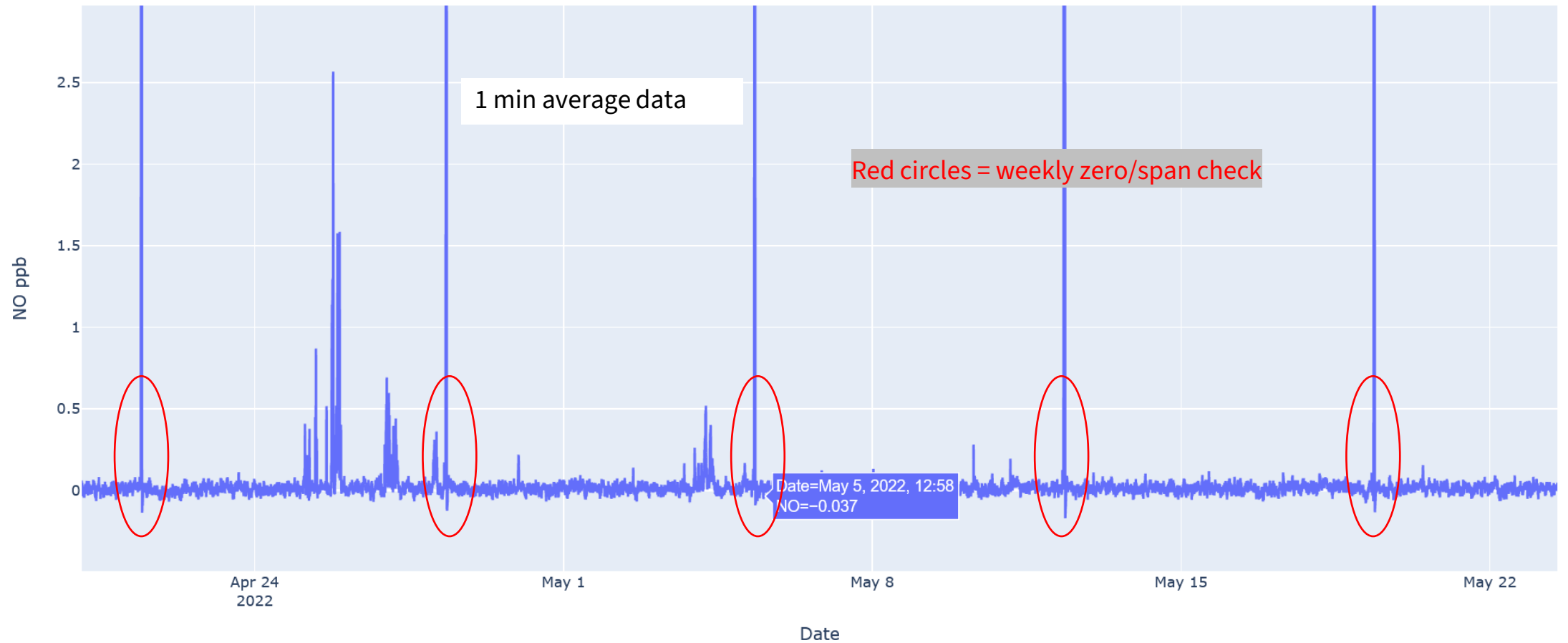
Meteorological data: Vaisala HMP155, VMT700, PTB210



Zeppelin NO2 (nmol/mol) unflagged 2022 1.April – 31.May



Zeppelin NO (nmol/mol) unflagged 22.April – 23.May 2022



Zeppelin NOx measurements + wind dir and wind speed

