



FONA
Forschung für Nachhaltigkeit

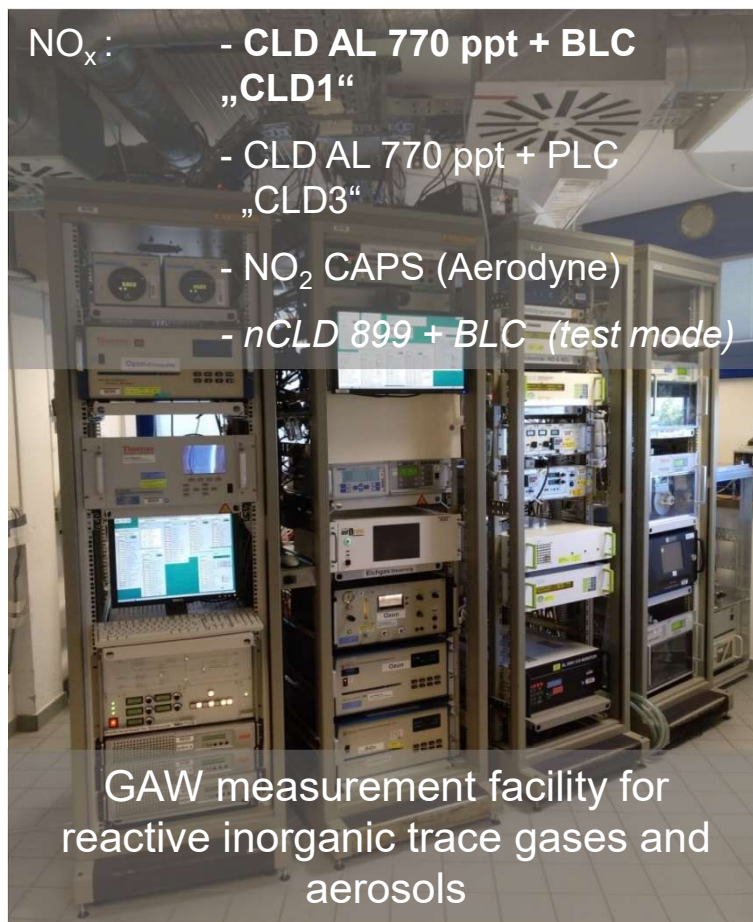
Deutscher Wetterdienst
Wetter und Klima aus einer Hand



NO_x 2023

DWD Hohenpeissenberg

Hohenpeissenberg Site



1781 start of weather (systematic)
observations

Since 1952 Observatory of the
German Meteorological Service
(Deutscher Wetterdienst)

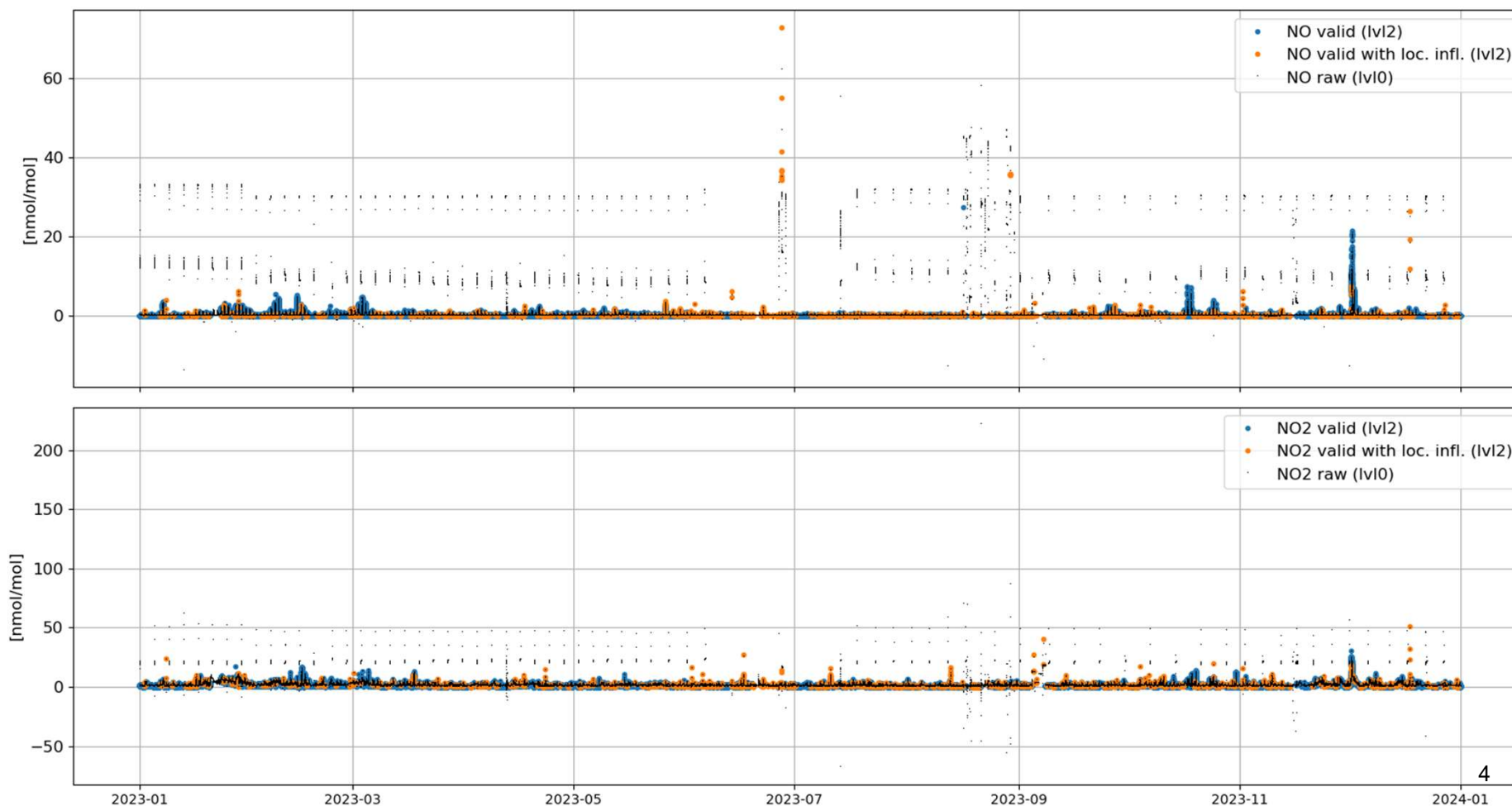
Since 1994 WMO GAW site

47°48' N
11°01' O
985 m NN

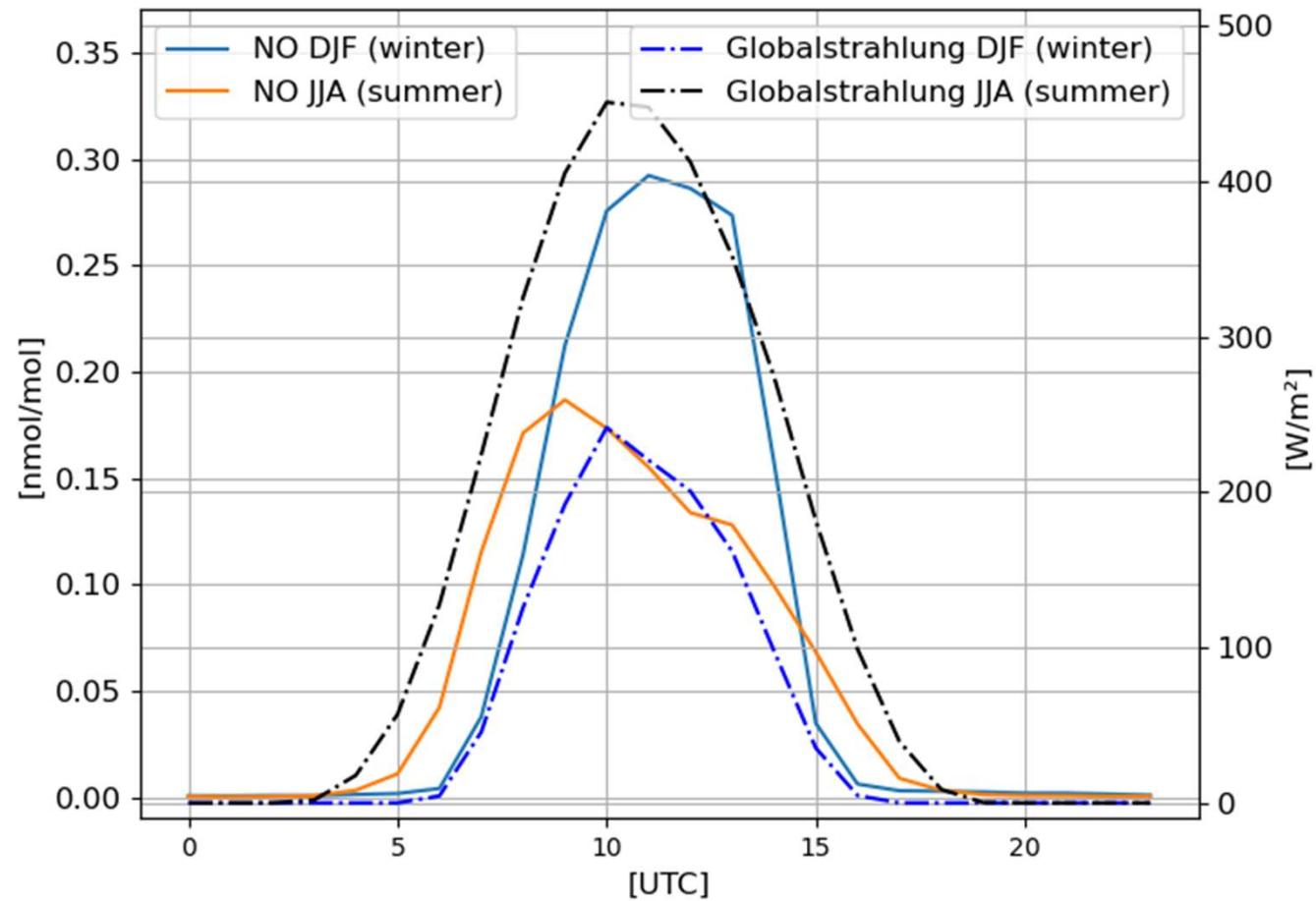
65km SW of Munich, Southern Germany

NOx data („CLD1“ Ecophysics CLD AL 770 ppt with BLC)

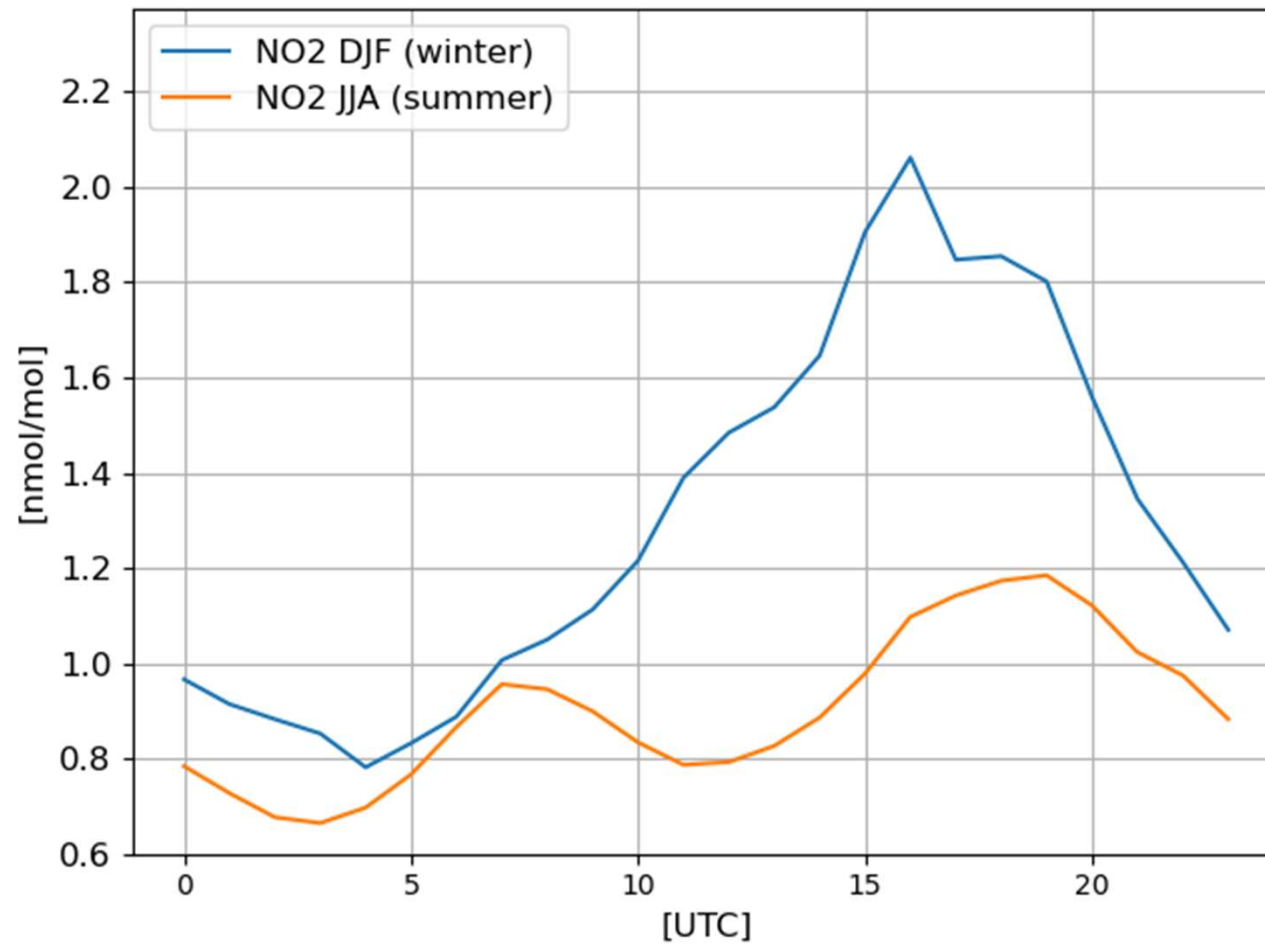
- ➔ lvl0 (**submitted**): **NO raw**, **NO2 raw**, both calibrated, but uncorrected for 1) H₂O, 2) O₃, 3) noct. offset
- ➔ lvl2 (**not submitted**): **NO/NO2 valid**, **NO/NO2 valid with local influence** lvl1: **not submitted** yet -> #4754



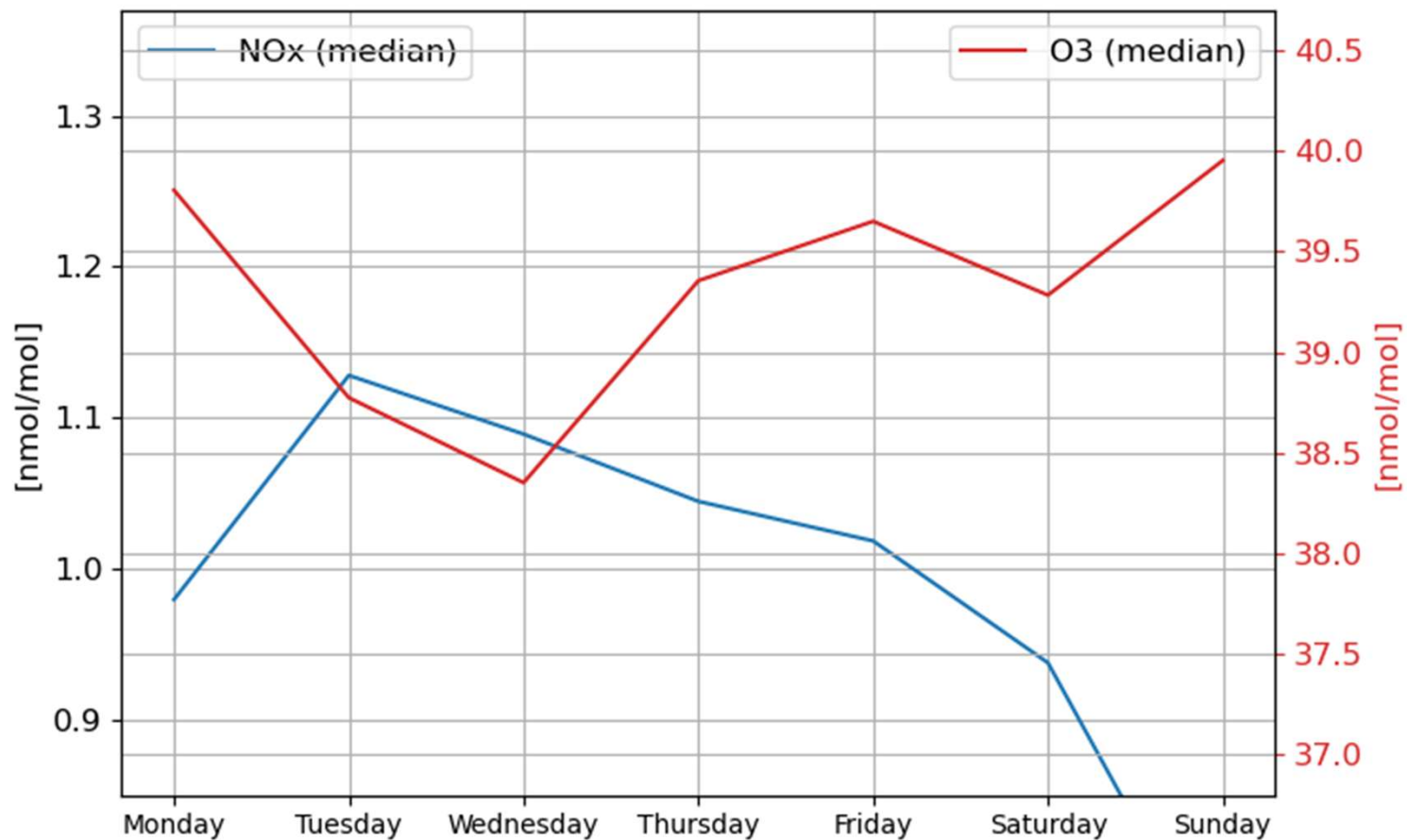
median diurnal variation NO 2023



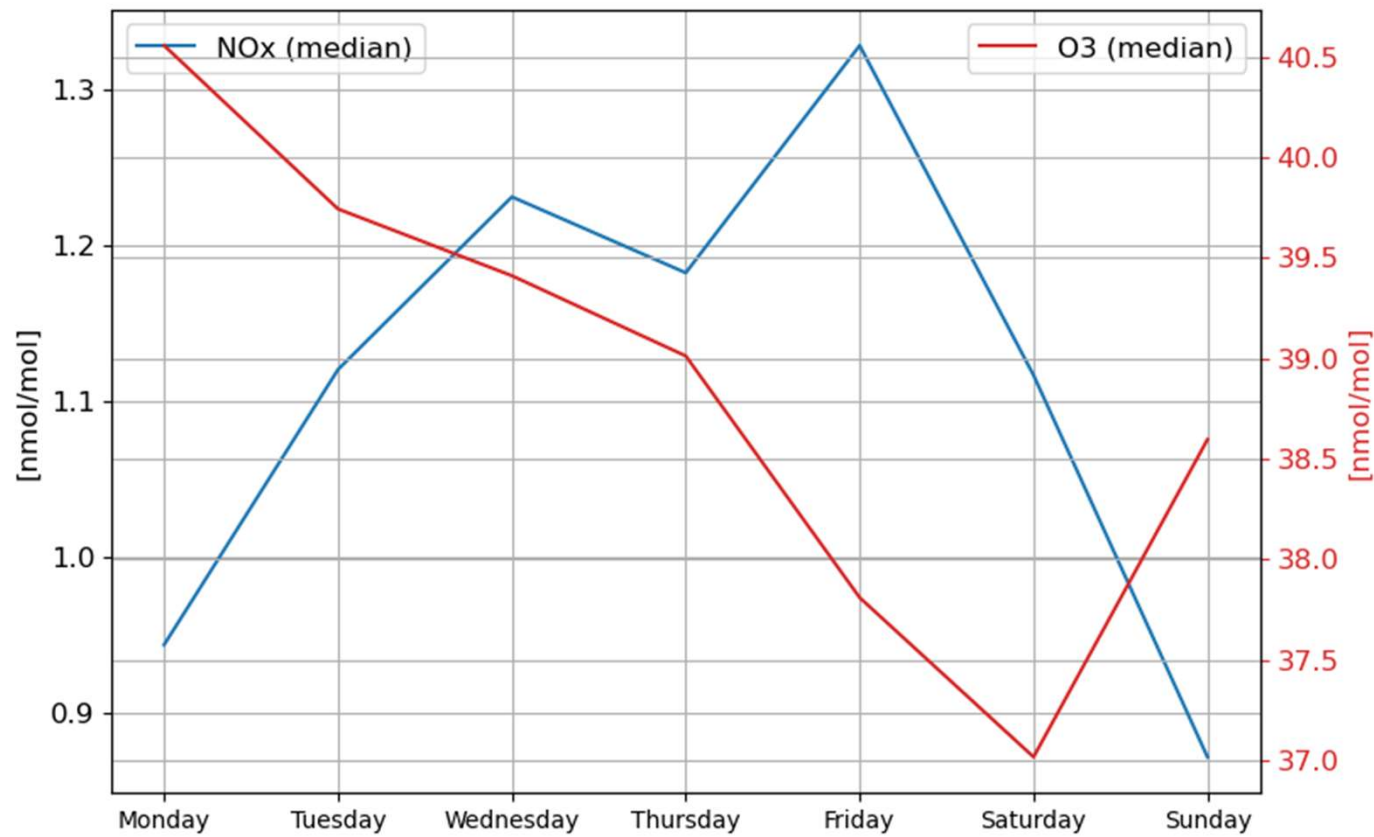
median diurnal variation NO₂ 2023



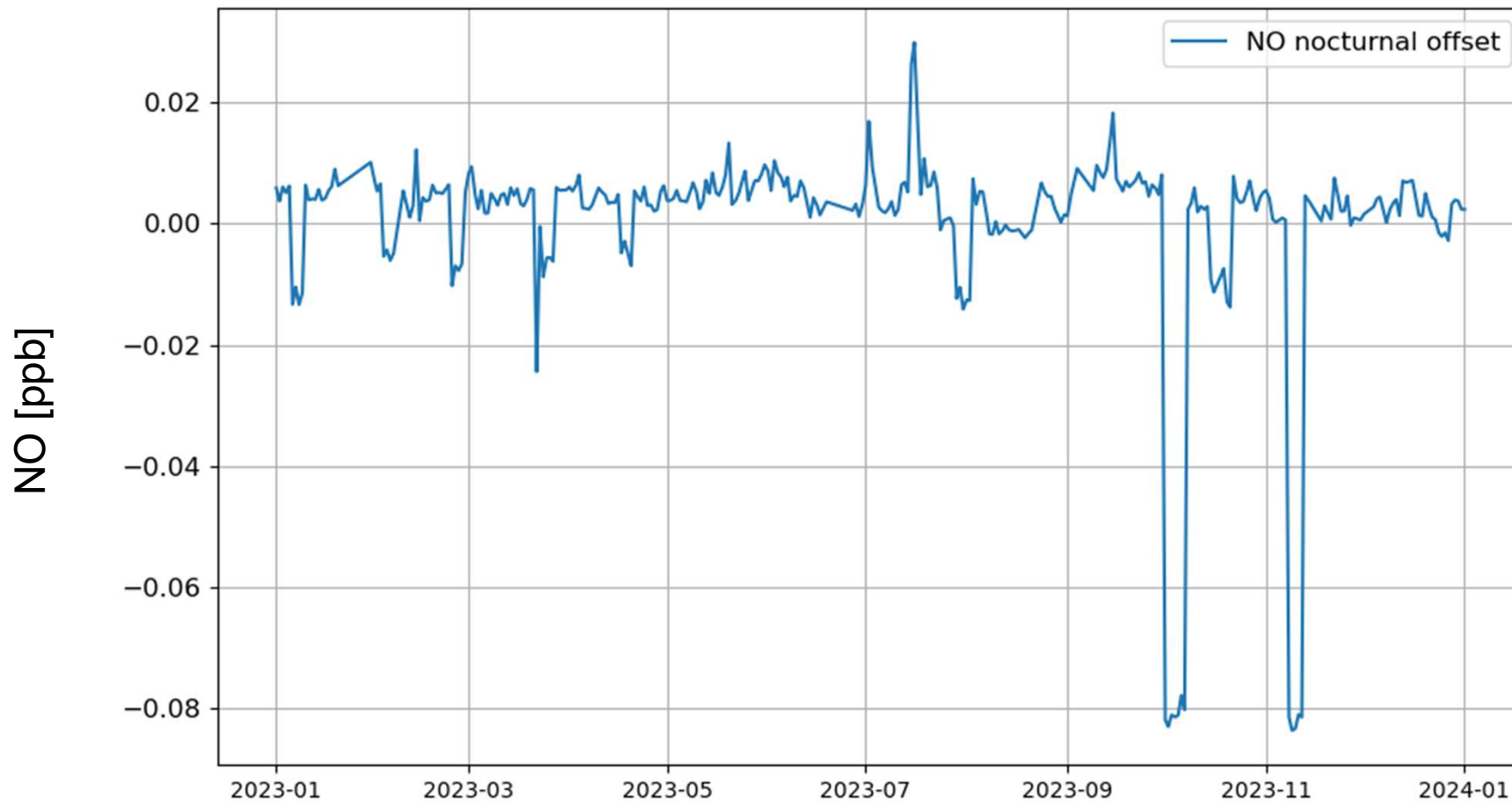
median weekly variation 2023



median weekly variation NO_x, 2022



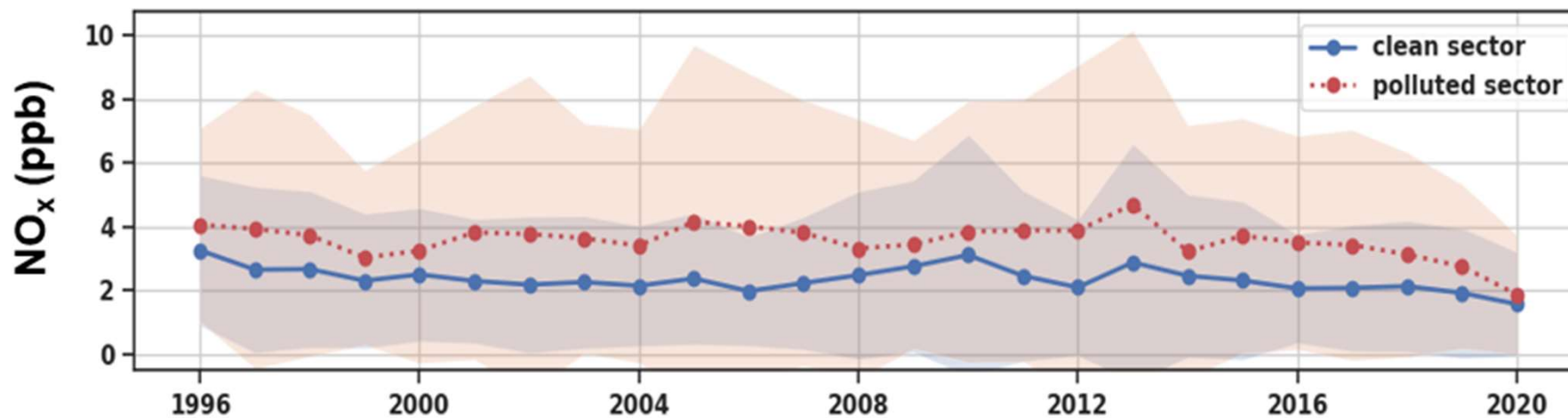
NO nocturnal offset 2023



comparison to previous year

year	NOx annual median	NOx annual mean
2021	1.2 ppb	1.9 ppb
2022	1.1 ppb	1.7 ppb
2023	1.0 ppb	1.4 ppb

→ decreasing trend continues



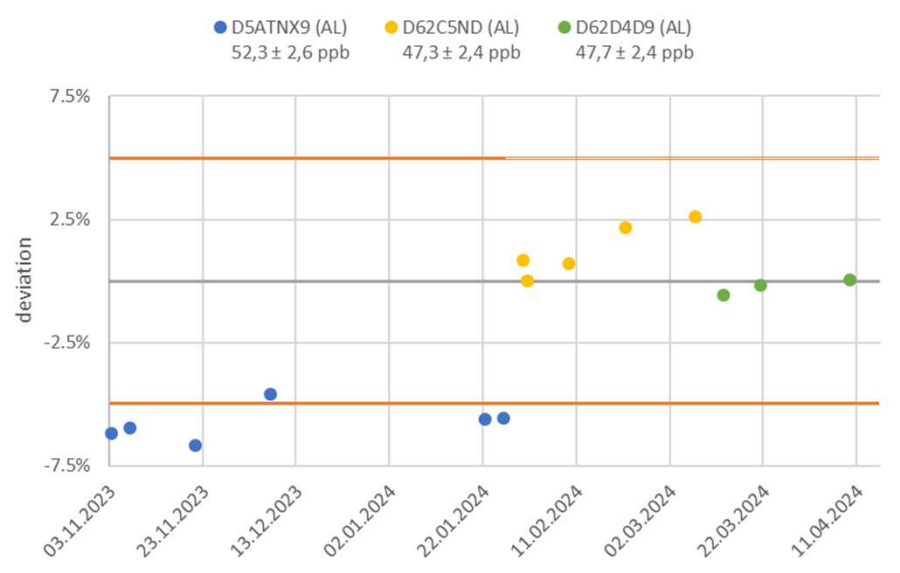
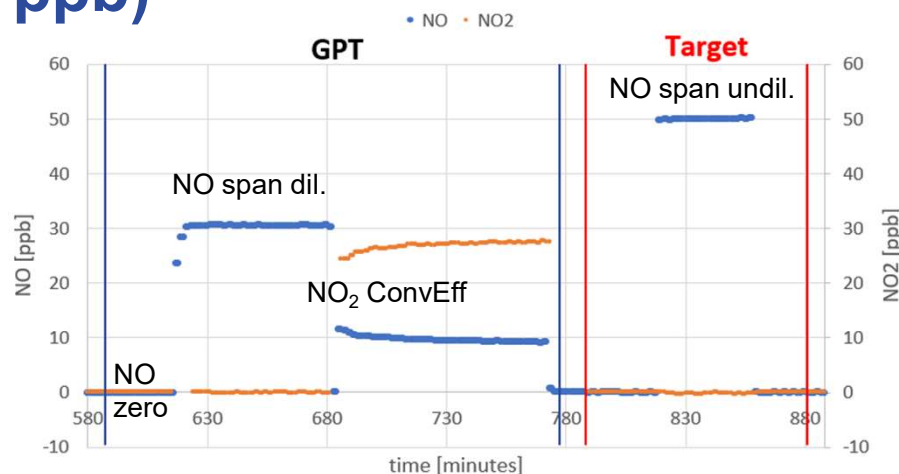
[GAWTec Kubistin, 2021]

NO target measurements (50 ppb)

Annika Kuss

- motivation:
 - cancel out dilution effects
 - additional, operational reference measurements
 - detect deviations to primary/transfer standards on short- and long-terms
- first target meas. in Nov 2023
- 3 cylinders, 15 single measurements so far
- relative deviations to calibrated CLD3 with $\pm 5\%$ margins →
- collecting statistics and experience

CLD 3 Messung 22.01.2024





**Thanks for
your
attention!**

