

PUY station 1871-2024



**Puy de Dôme
Station**

1465 m

Global GAW PUY





PUY NOx Data 2024 (NOx since 2003)

Puy de Dôme (France): current status of station/instrument

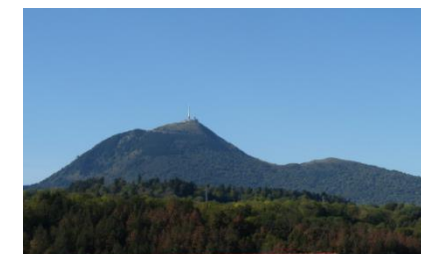
Aurélie Colomb :

aurelie.colomb@uca.fr

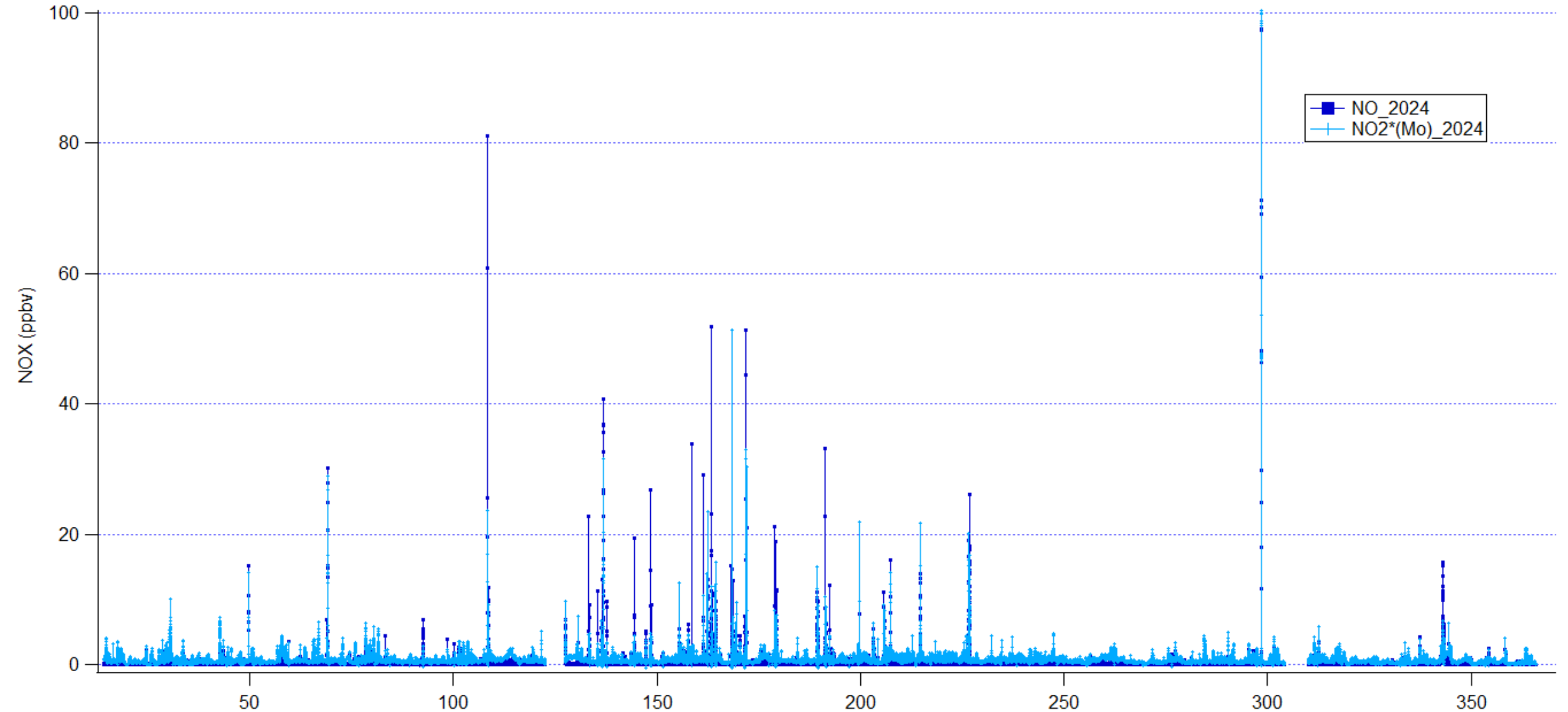
Jean-Marc Pichon :

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	NO	NO2
instrument/ measurement principle	TEI 42 iTL O ₃ chemiluminescence + Teledyne T200 UP O ₃ chemiluminescence	TEI 42 iTL Molybdenum converter + Teledyne T200 UP BLC converter
scale	Messer (5.07 ppm ppm in N2) + dilution to 41 ppbv of NO	
calibration interval (Manual calibration)	1 x / month, 1 blank x /week	1 x / month, 1 blank x /week
quality checks	check of chamber temp, pressure, flow, lab journal (in written form), blank every week	

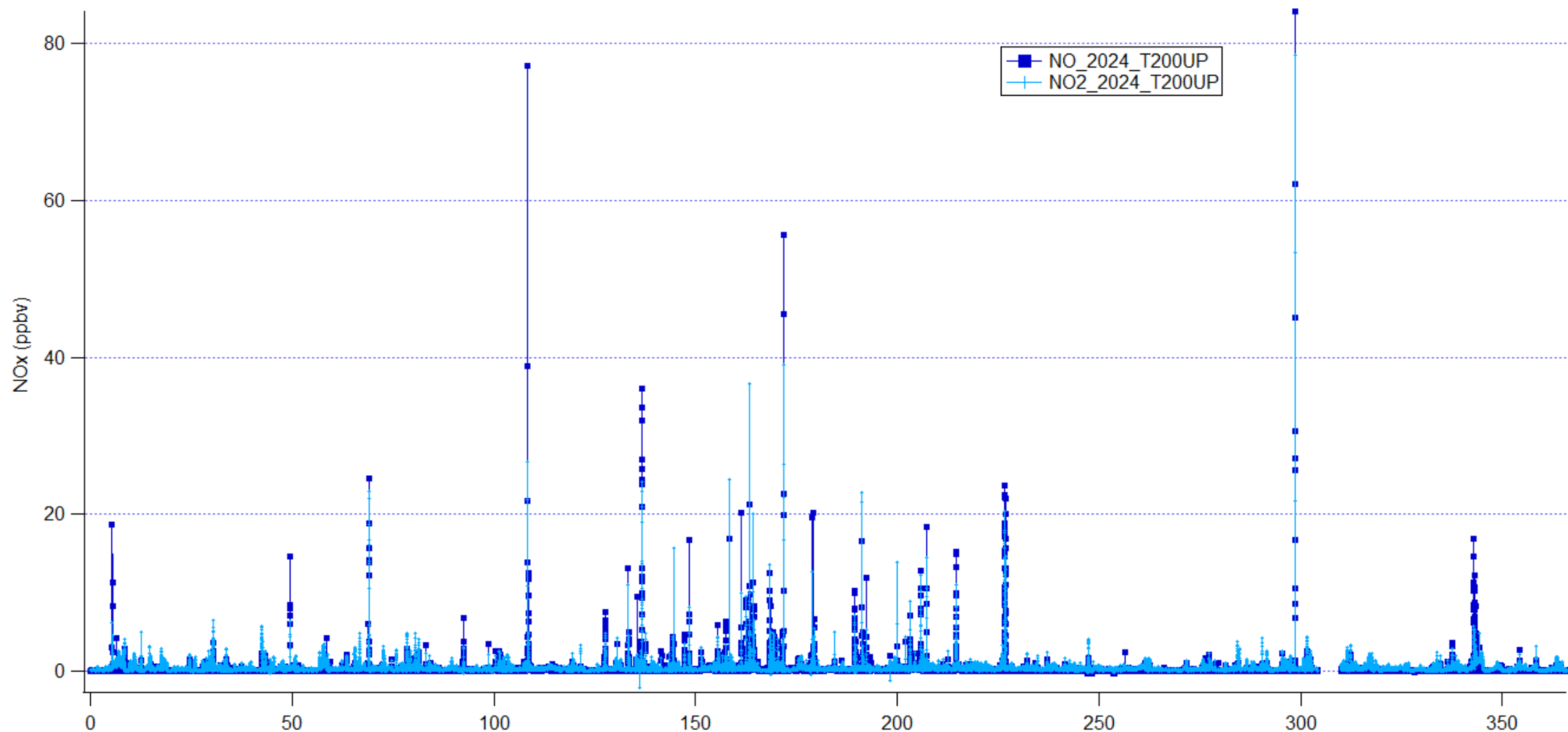


PUY 2024 – NO_x TEI 42iTL with NO₂* (Molybdenum)

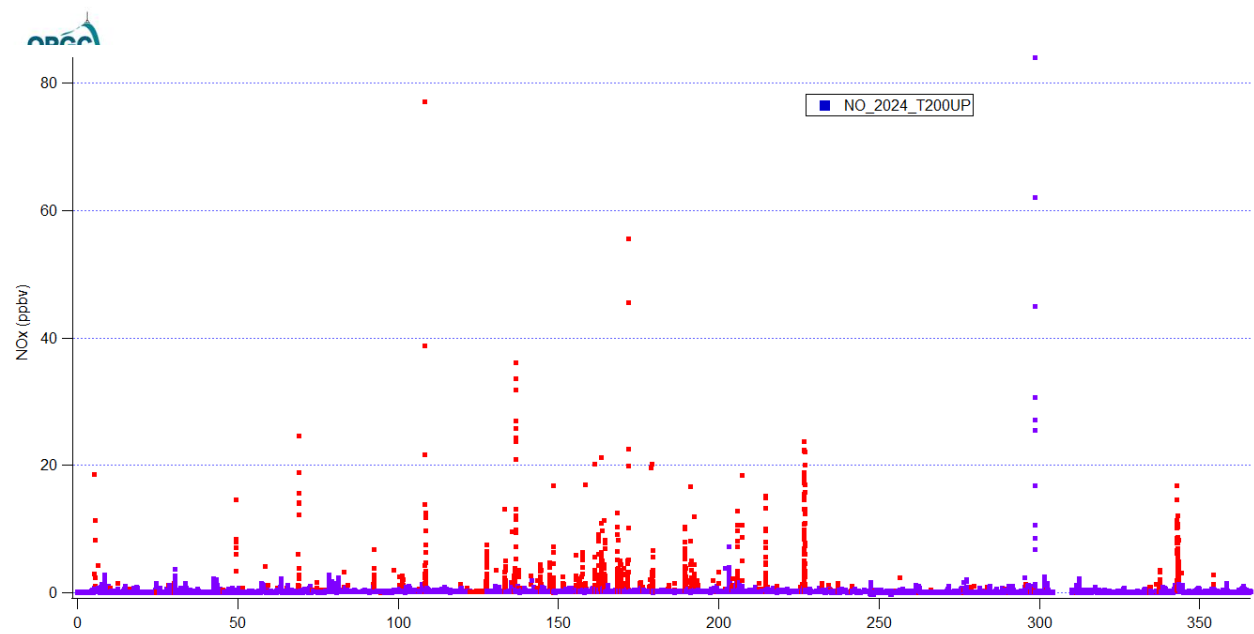




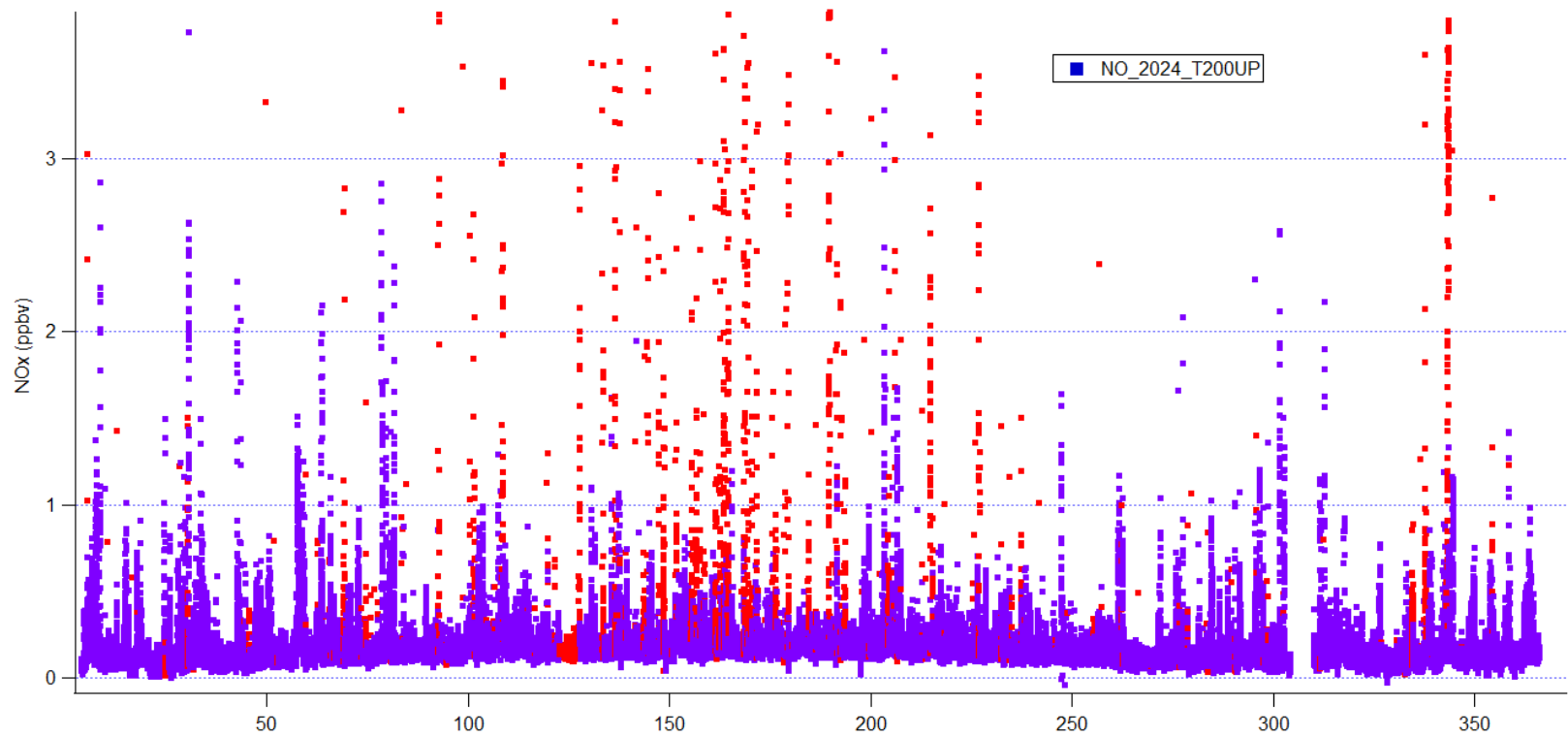
PUY 2024 – NO_x Teledyne T200 UP with NO₂ : BLC



PUY 2024 – NO_x FLAG 0.559

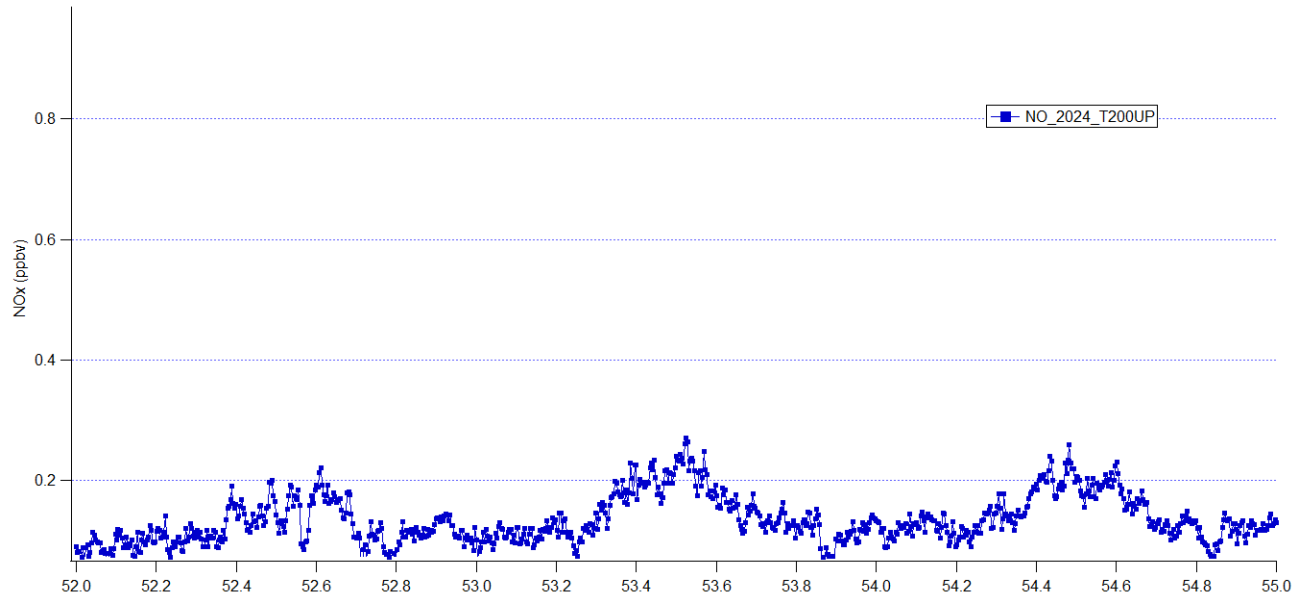


Zoom

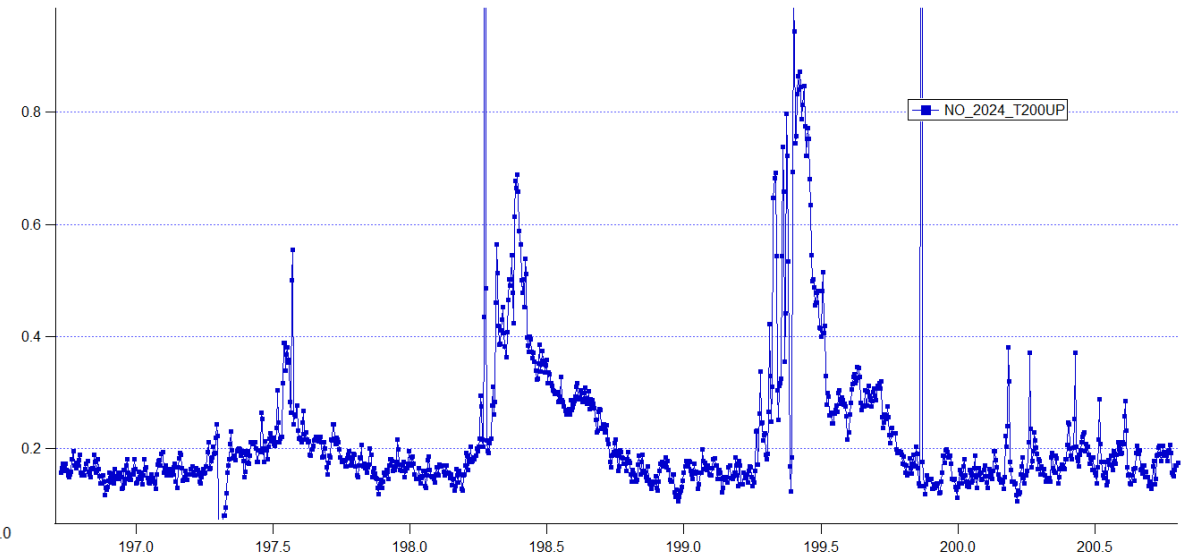


PUY 2024 - NOx

Example of diurnal Variation of NO depending of the PBL, slope wind and wind direction

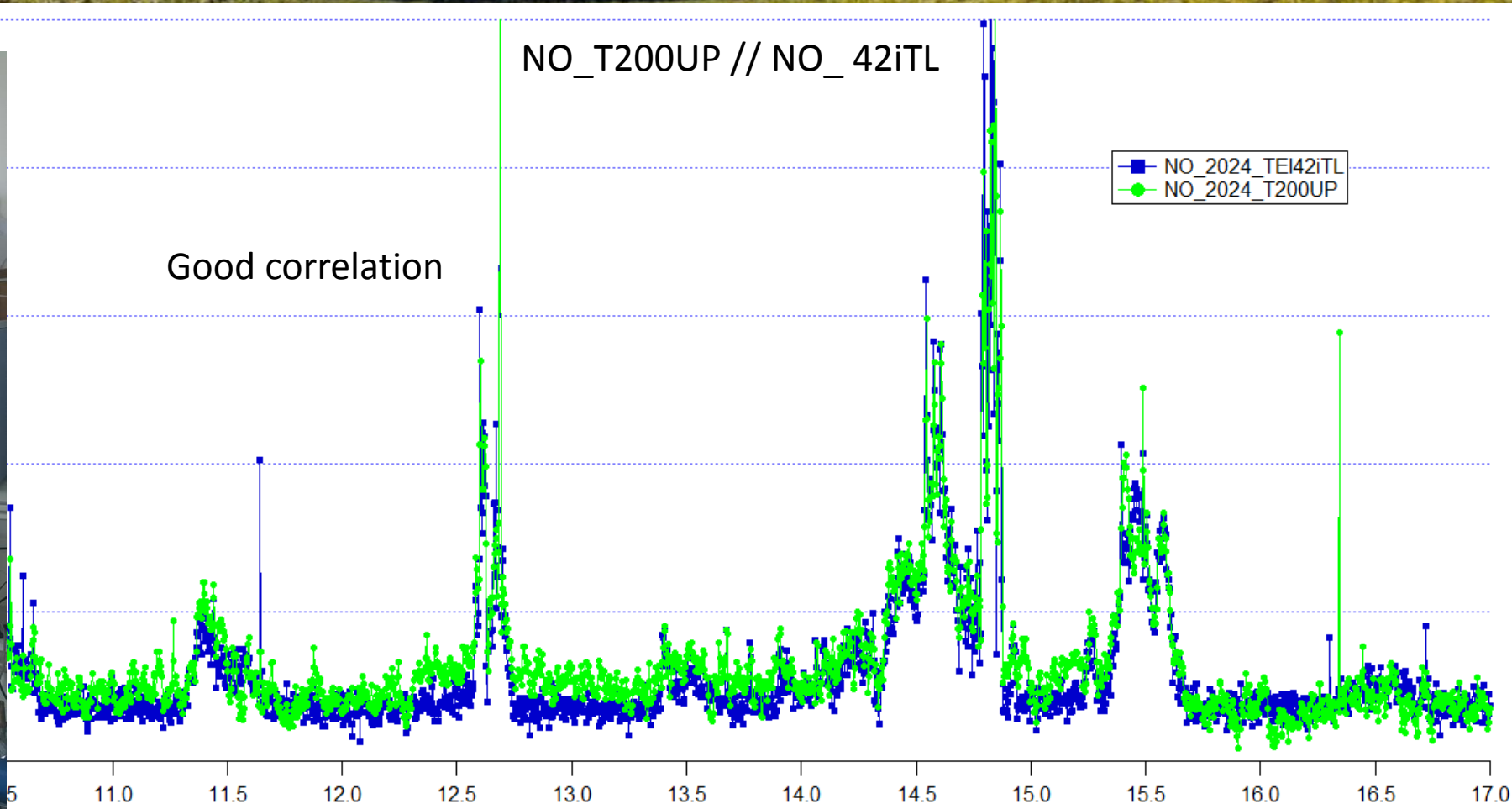
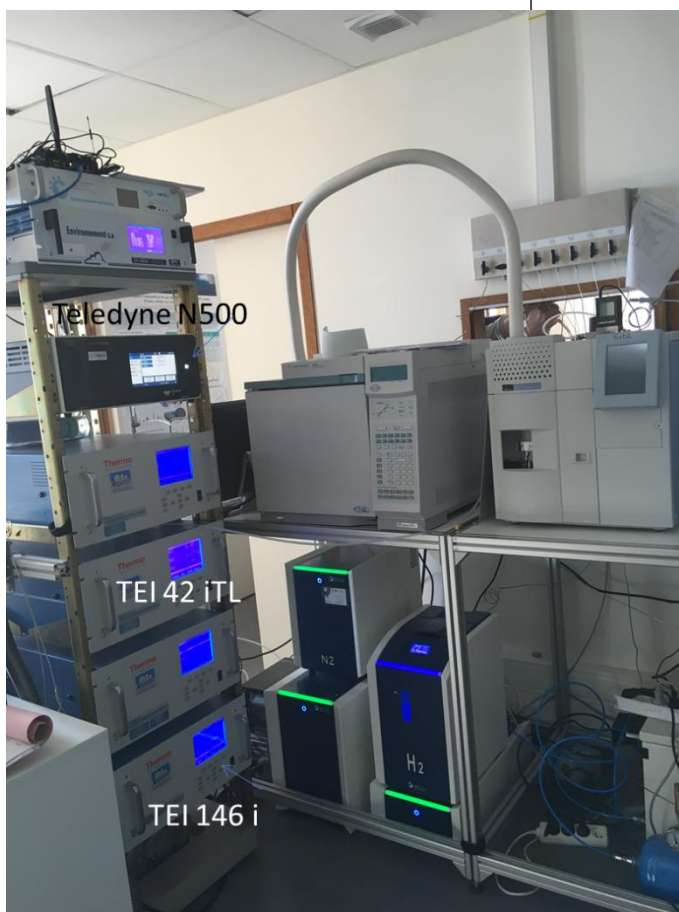


February 2024



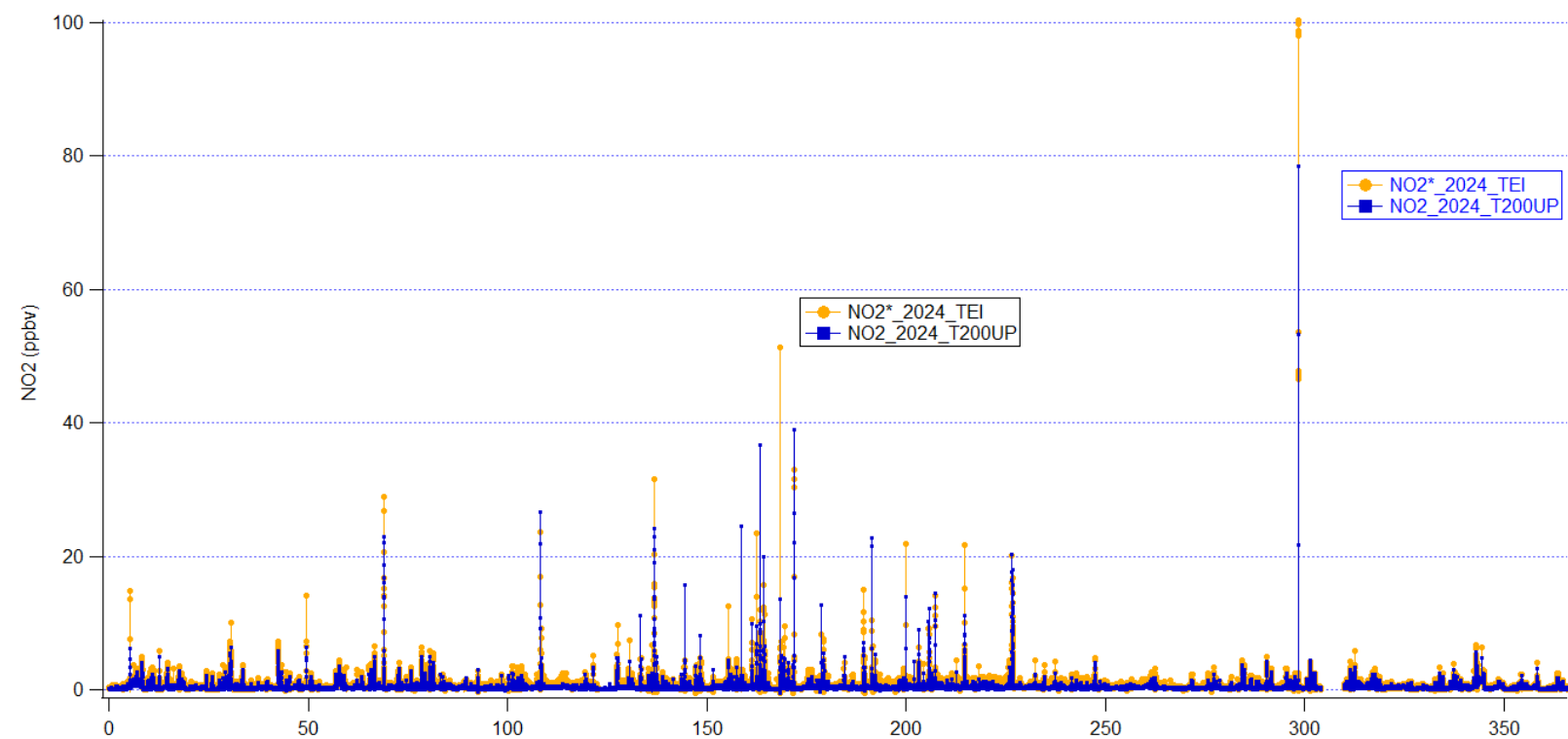
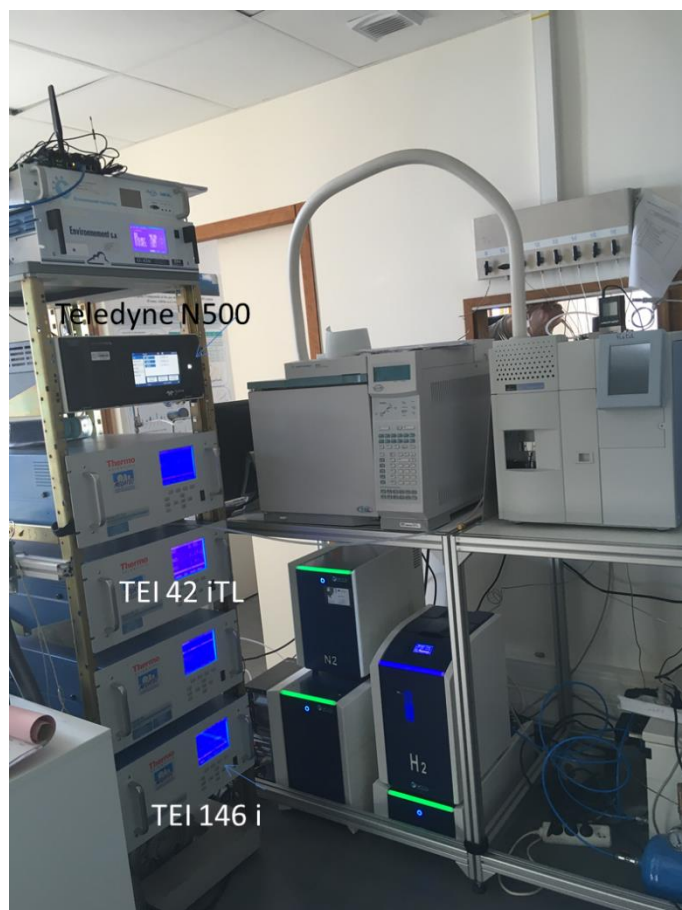
July 2024



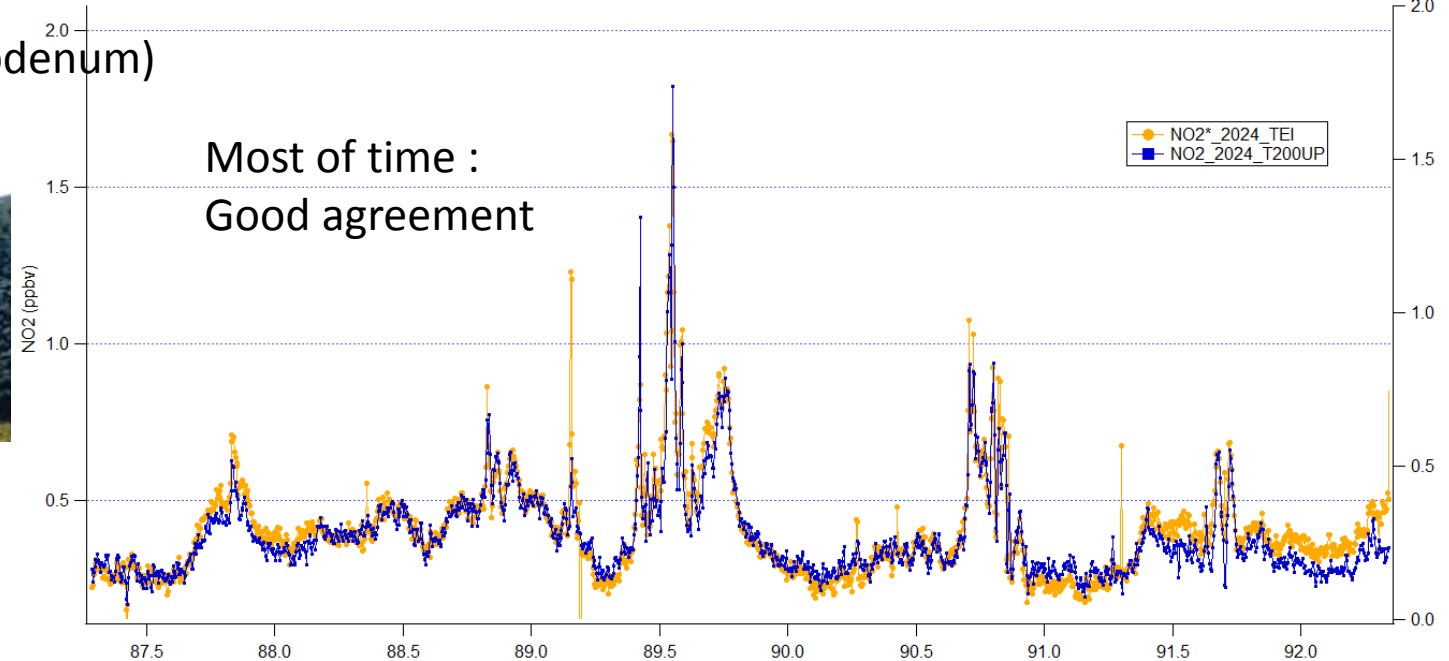




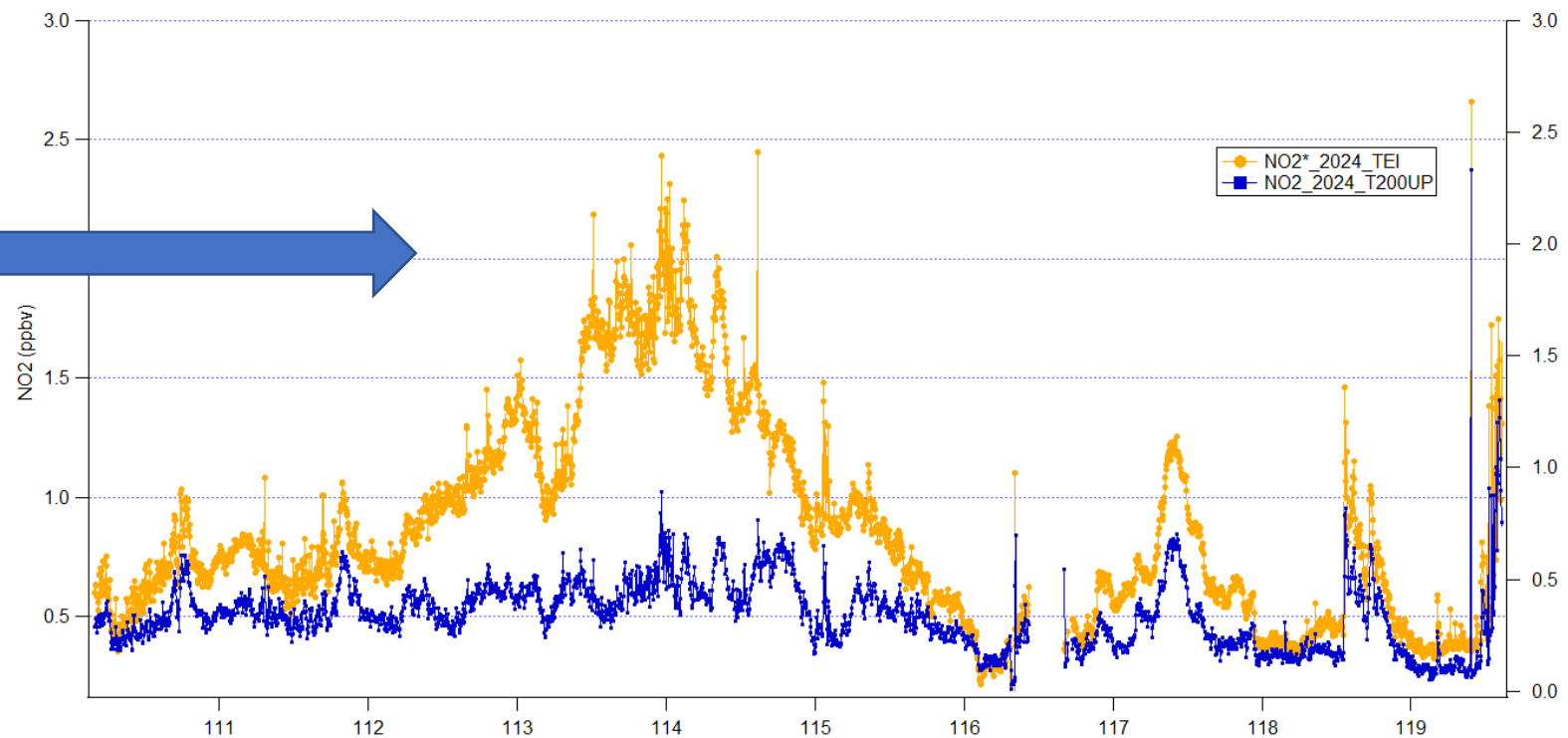
NO2_T200UP (BLC) // NO2_42iTL (molybdenum)



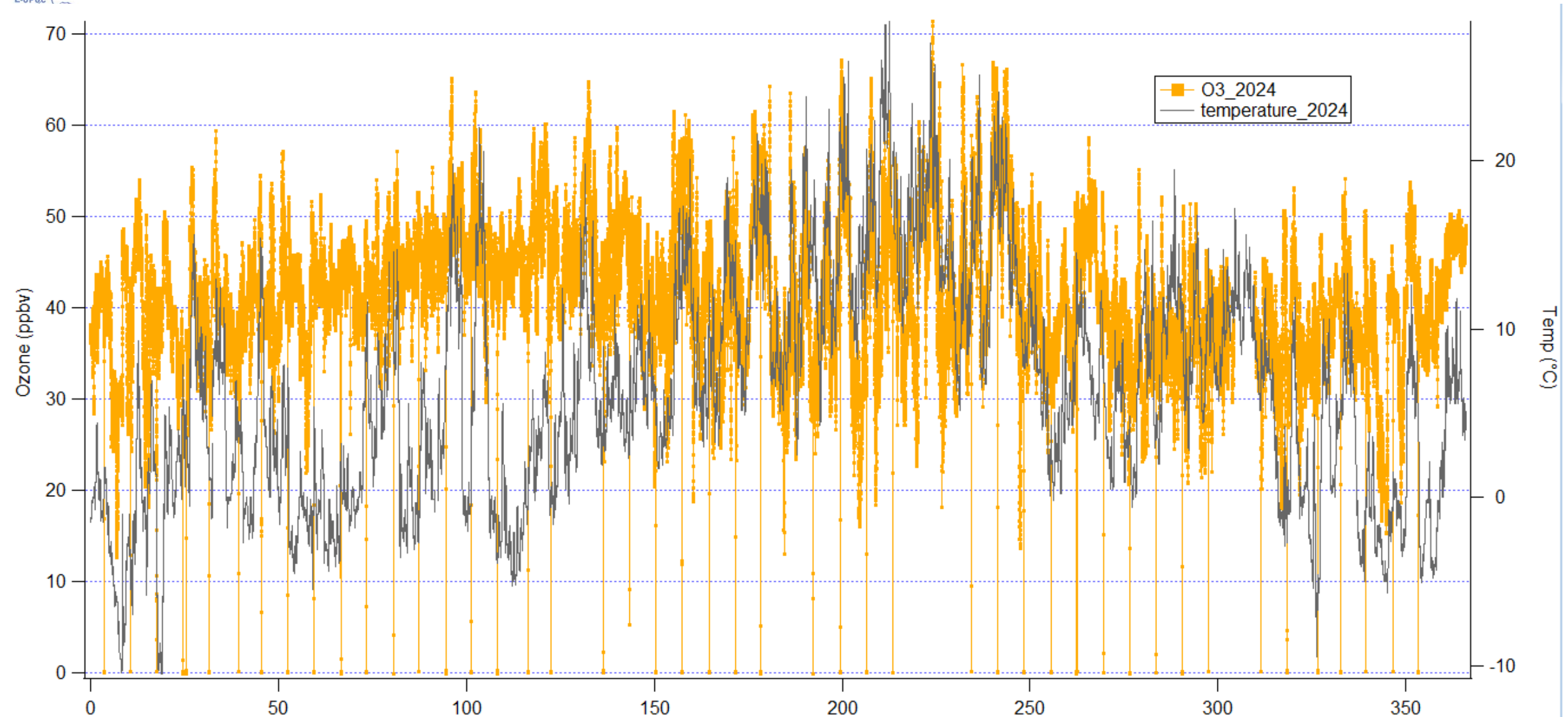
NO₂_T200UP (BLC) // NO₂_42iTL (molybdenum)



Some cases :
NO₂ Mo >> NO₂ BLC :
Probably aged NO_y in the air



PUY 2024 – Ozone and Temperature





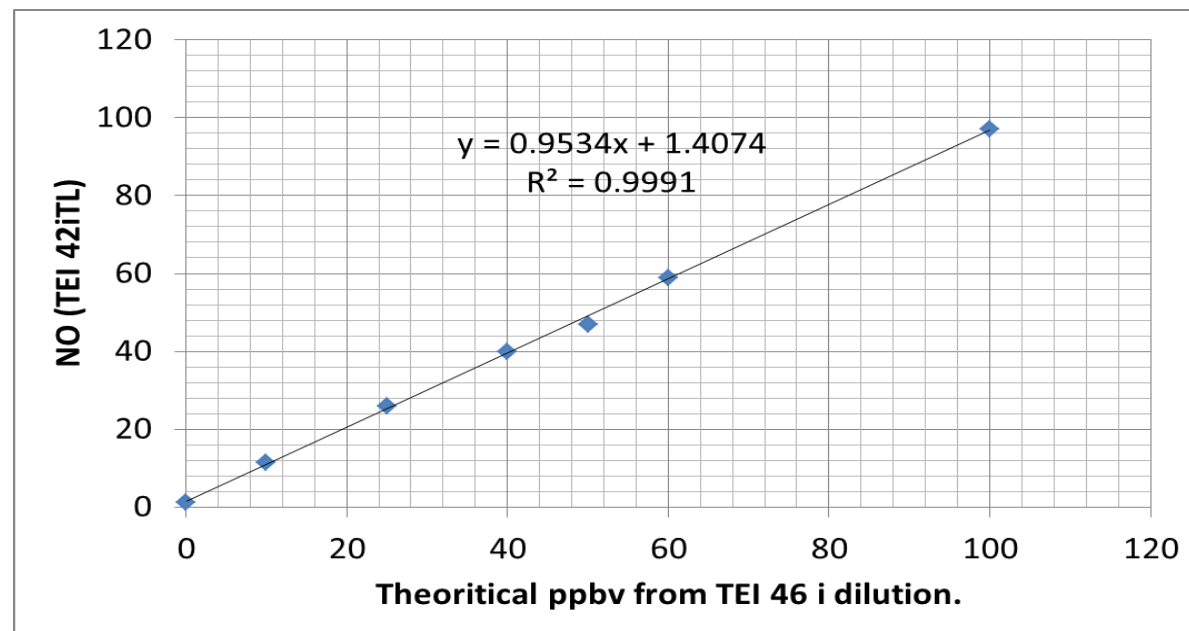
Teledyne N500

TEI 42 iTL

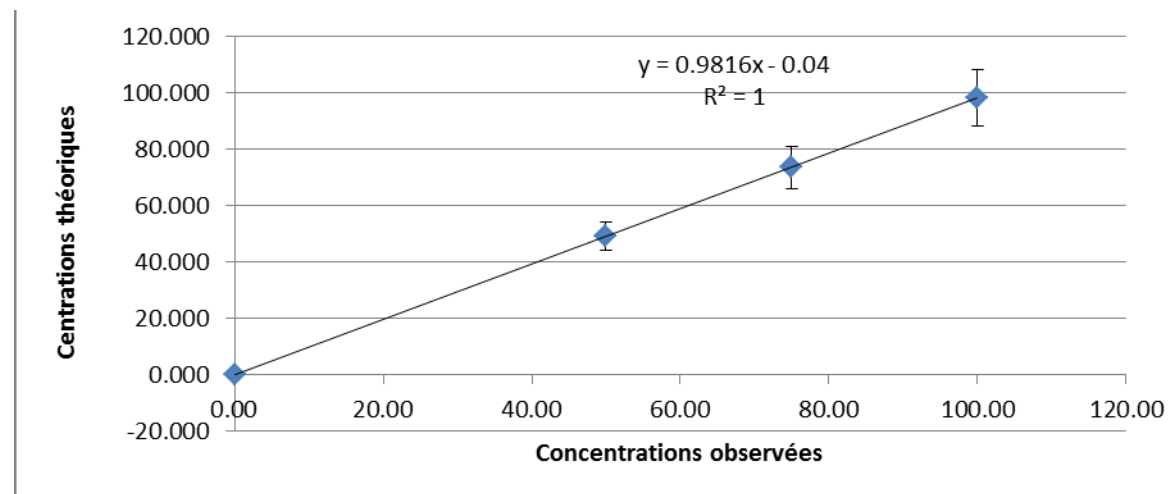
TEI 146 i

Calibration using TEI 146 i and a bottle of 5 ppm containing NO.

Example of NO calibration with TEI 42 iTL (25/10/2024)



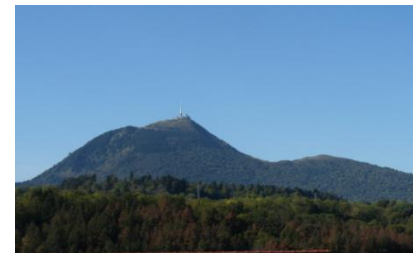
Example of NO calibration with T 200 UP





News for 2025 nitrogen reactive gases:

- Automatisisation of calibration and zero
- Continuously NH_3 from Obs4clim





THANK YOU !

