



**Puy de Dôme
Station**

1465 m

Global GAW PUY





PUY VOC Data 2024

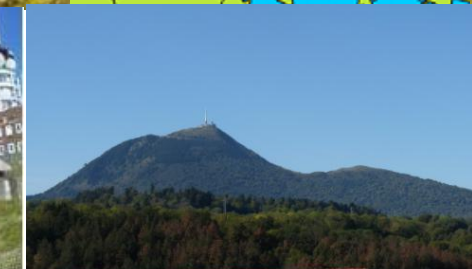
Puy de Dôme (France): current status of station/instrument

Contact :

Aurélie Colomb :
aurelie.colomb@uca.fr

Laetitia BOUVIER
laetitia.bouvier@uca.fr

Agnès Borbon:
agnes.borbon@uca.fr



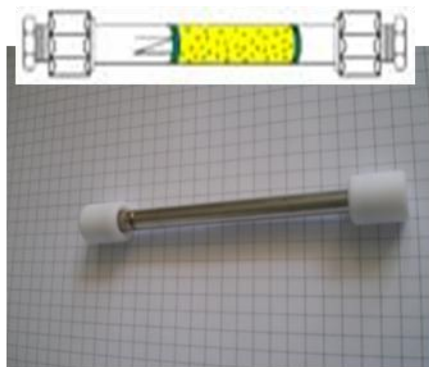
	2011-2023		2019- 2022	New !!!! 2024-
instrument/ measureme nt principle	Sampling on cartridges Tenax TA + ATD-GC-MS analysis (Perkin Elmer)		On-line GC-FID Agilent 6890 2 columns. // Few months per year	On-line GC-FID Chromatotec C2C6 1 chromatogram/30 minutes
scale	NPL 4 ppbv containing mixture of Terpenes.			
Sampling	4x / week 1 blank x /month	1 x / hour To be discussed ?	1 x/ 30 minute	
quality checks	check of chromatograms. / blank /NPL			Zero / Calib (butane, hexane, benzene) 1/day





PUY VOC Data since 2010

VOC ANALYTICAL PROCEDURES



Analyses with an
ATD-GC-MS
(Automatic Thermal
Desorption –
Gas Chromatography
-Mass Spectrometer



ATD (Turbomatrix):

- desorption temperature of 300°C during 25 min,
- cryofocussing on 20 mg Carbosieve/Carbotrap at -10°C
- flash injection from -10°C to 300°C

GC-MS from Perkin Elmer :

Chromatographic separation onto a Optima-5MS column
(60m, 0,25 mm i.d., 0.25 µm film thickness).

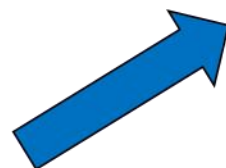
- Temp.program (GC): 40°C during 5 min, 5°C/min rise up to 270 °C
- Mass detection :electronic impact (70 eV, scanning 35 - 350 amu).

PUY VOC Data 2023

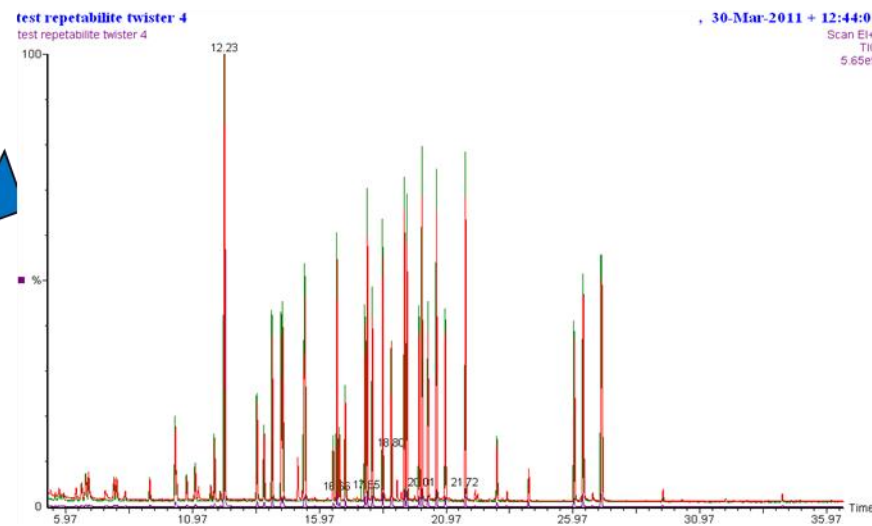
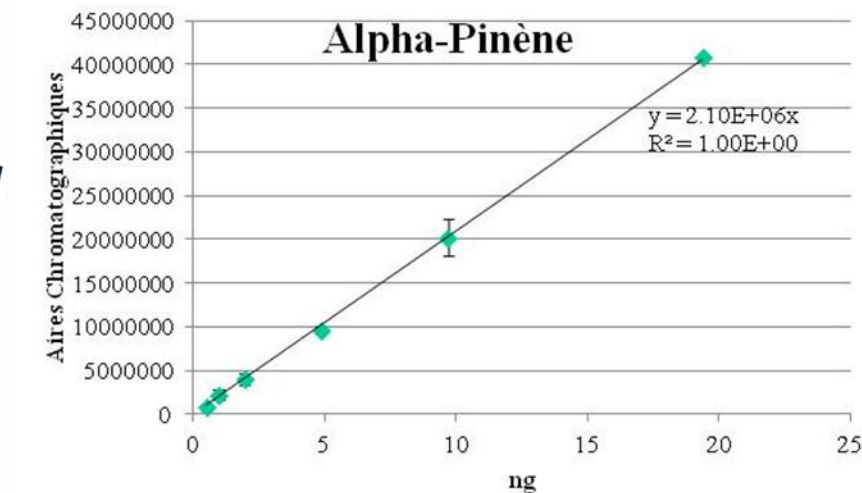
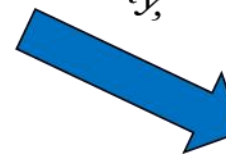
VOC ANALYTICAL PROCEDURES



Calibration (using NPL
STD (4 ppbv))



Tests of detection
limit, repeatability,



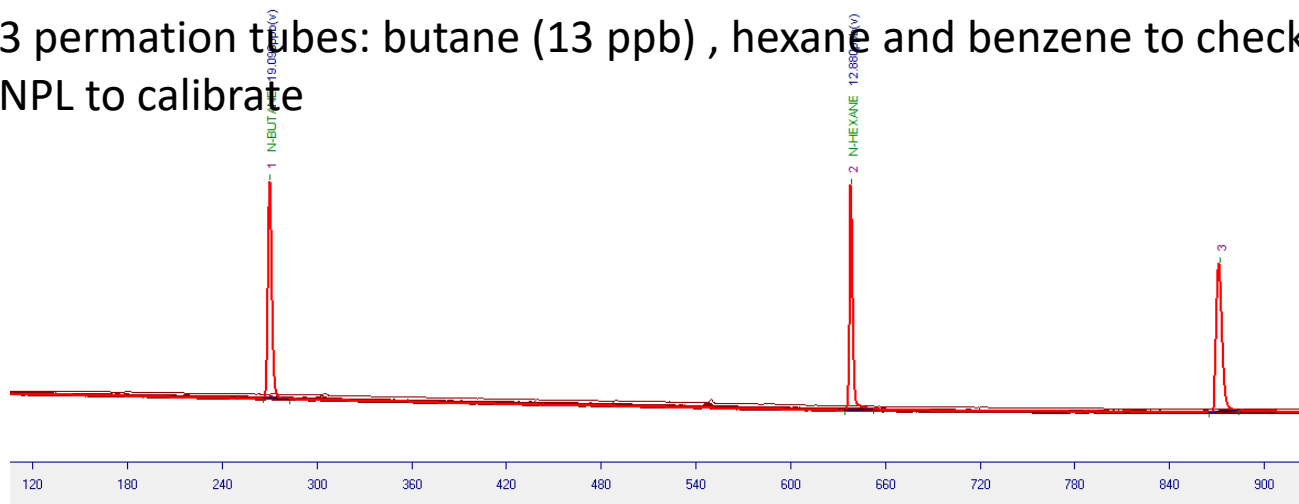


PUY VOC new in 2024 !!!

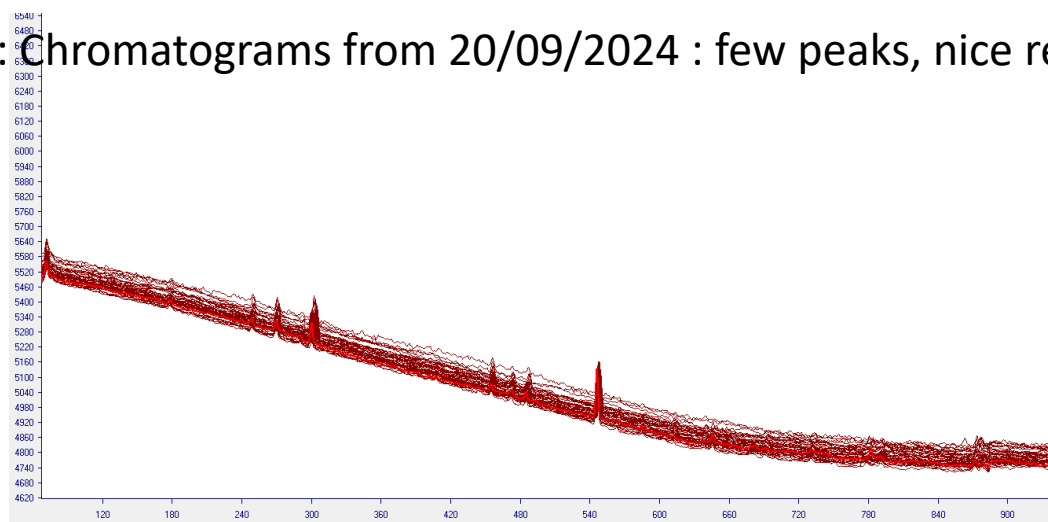
ON-line GC-FID : Chromatotec C2C6

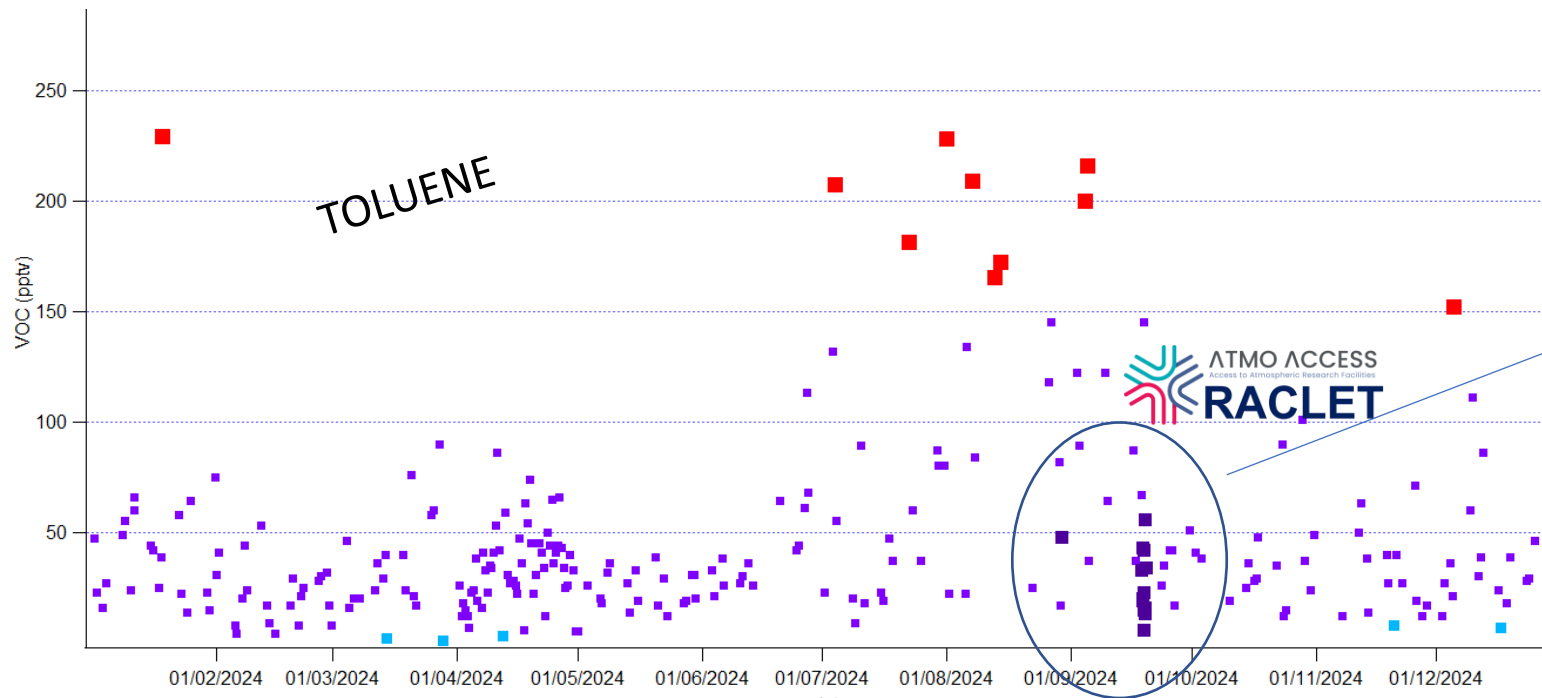
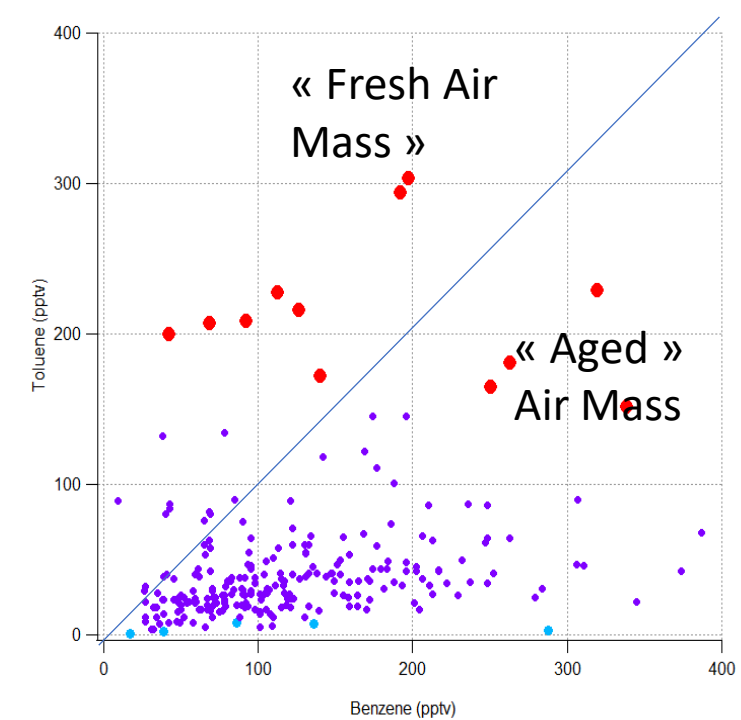
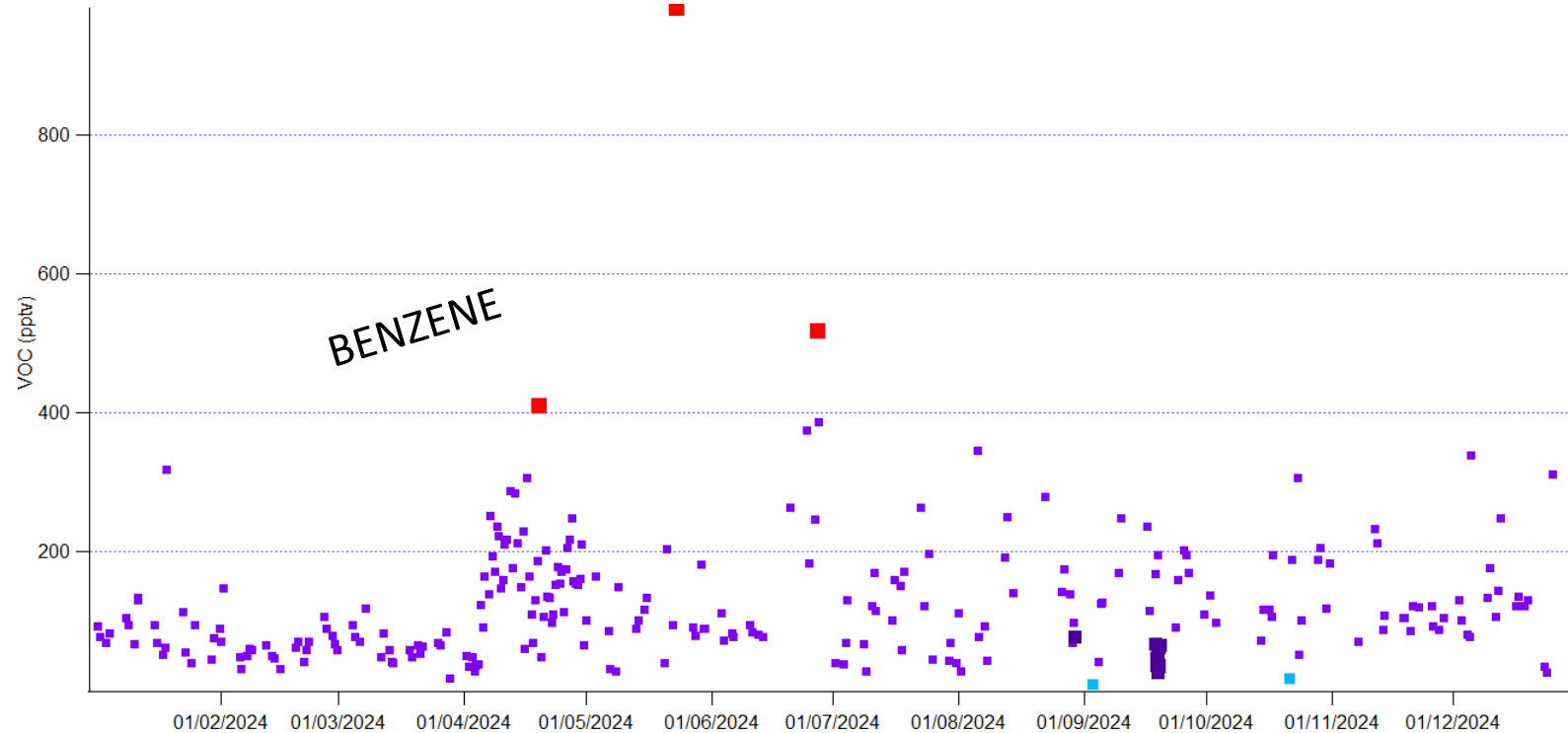
VOC ANALYTICAL PROCEDURES

3 permeation tubes: butane (13 ppb) , hexane and benzene to check NPL to calibrate

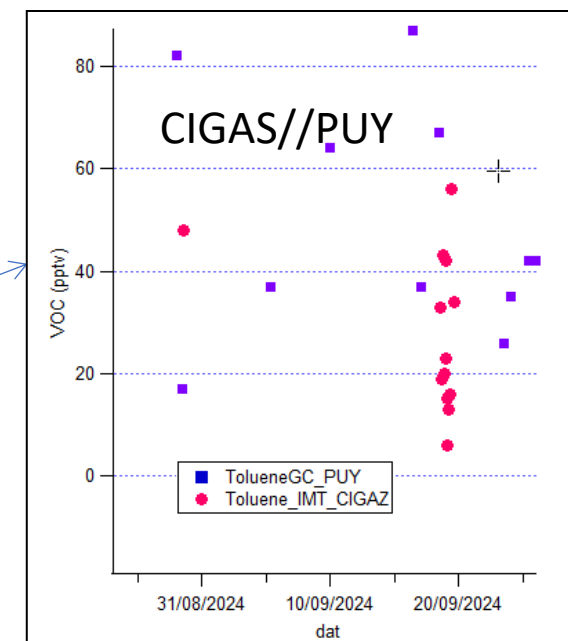


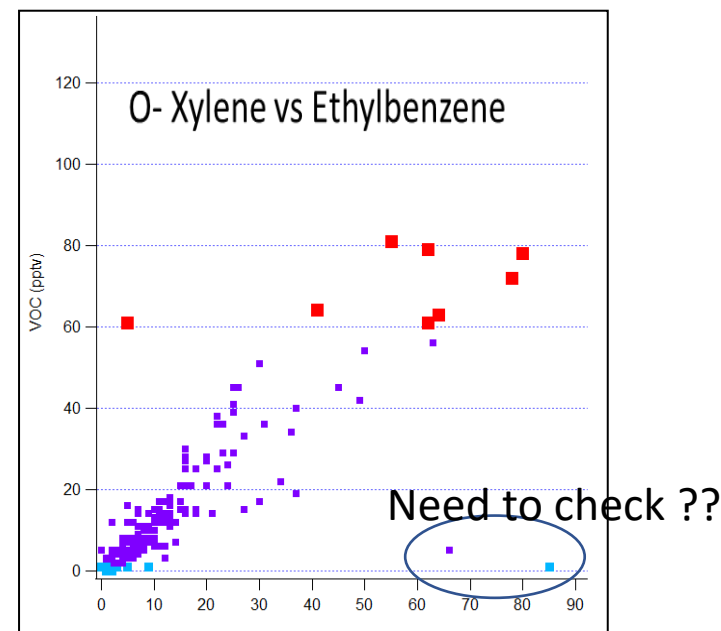
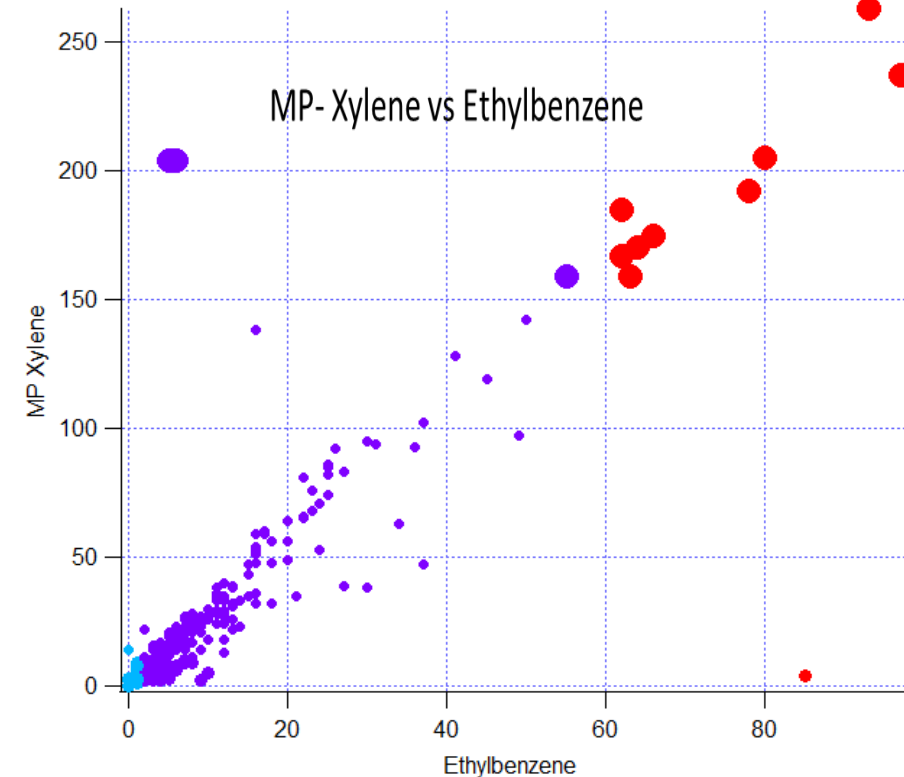
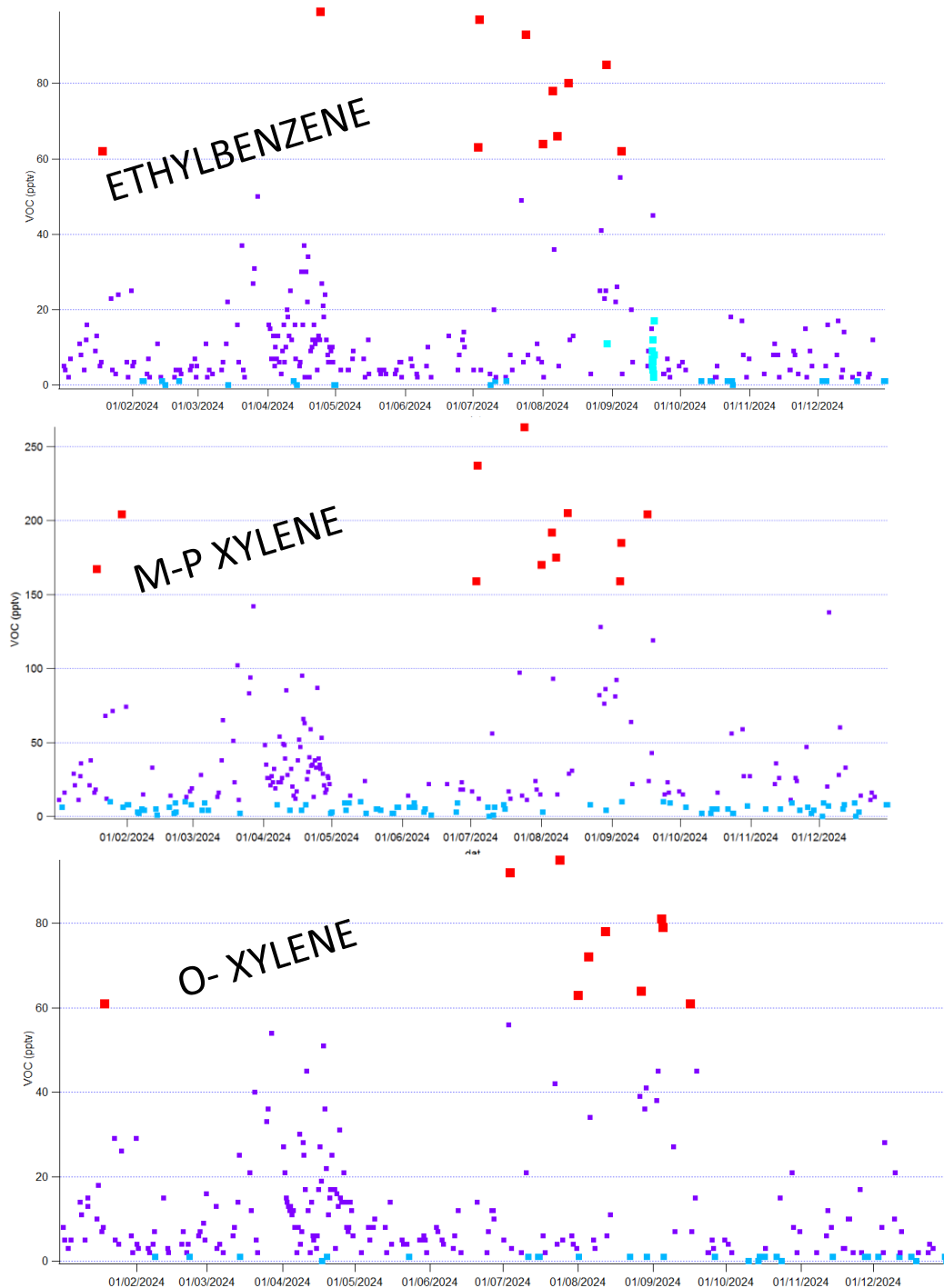
Ex: Chromatograms from 20/09/2024 : few peaks, nice repeatability

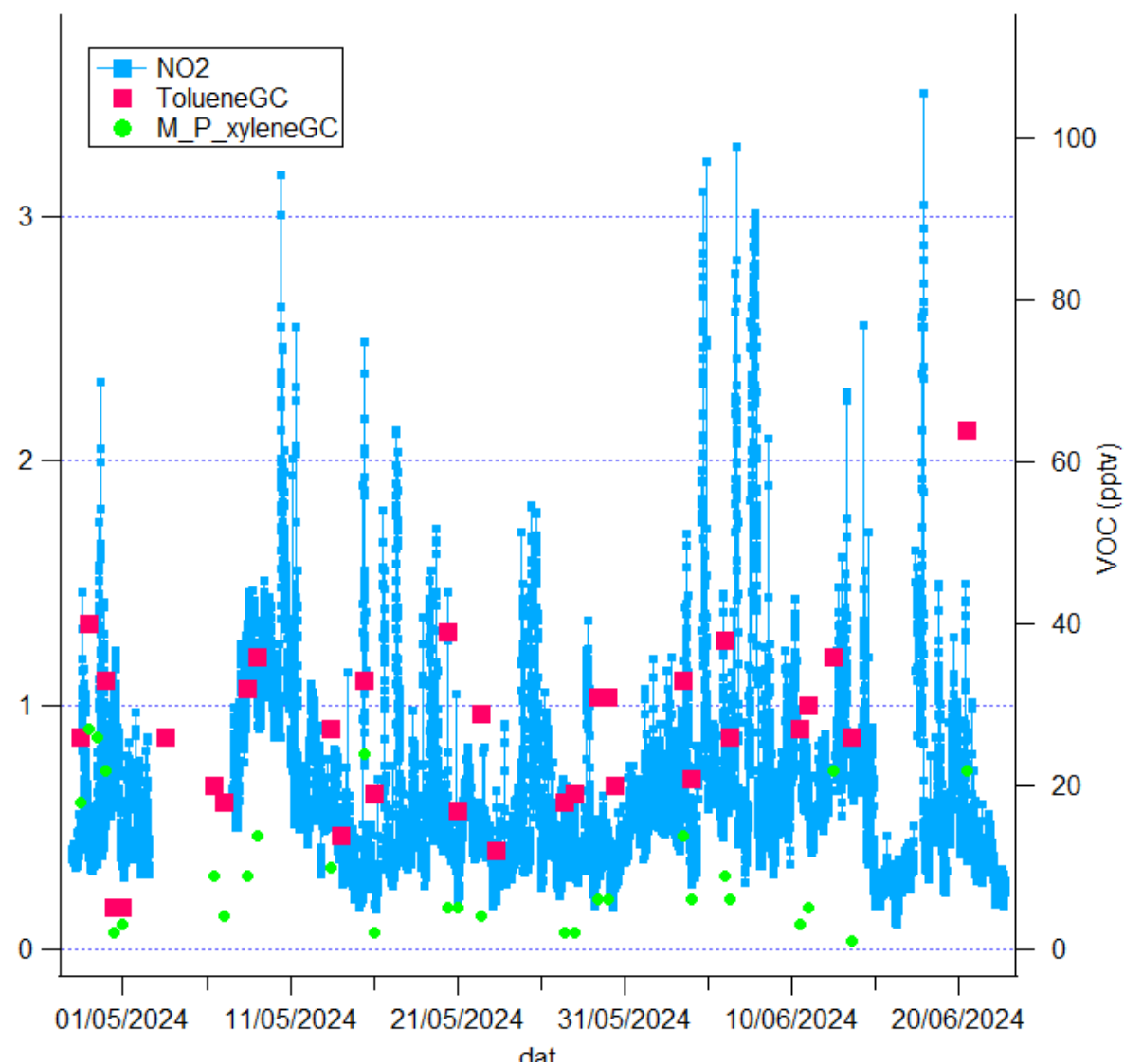
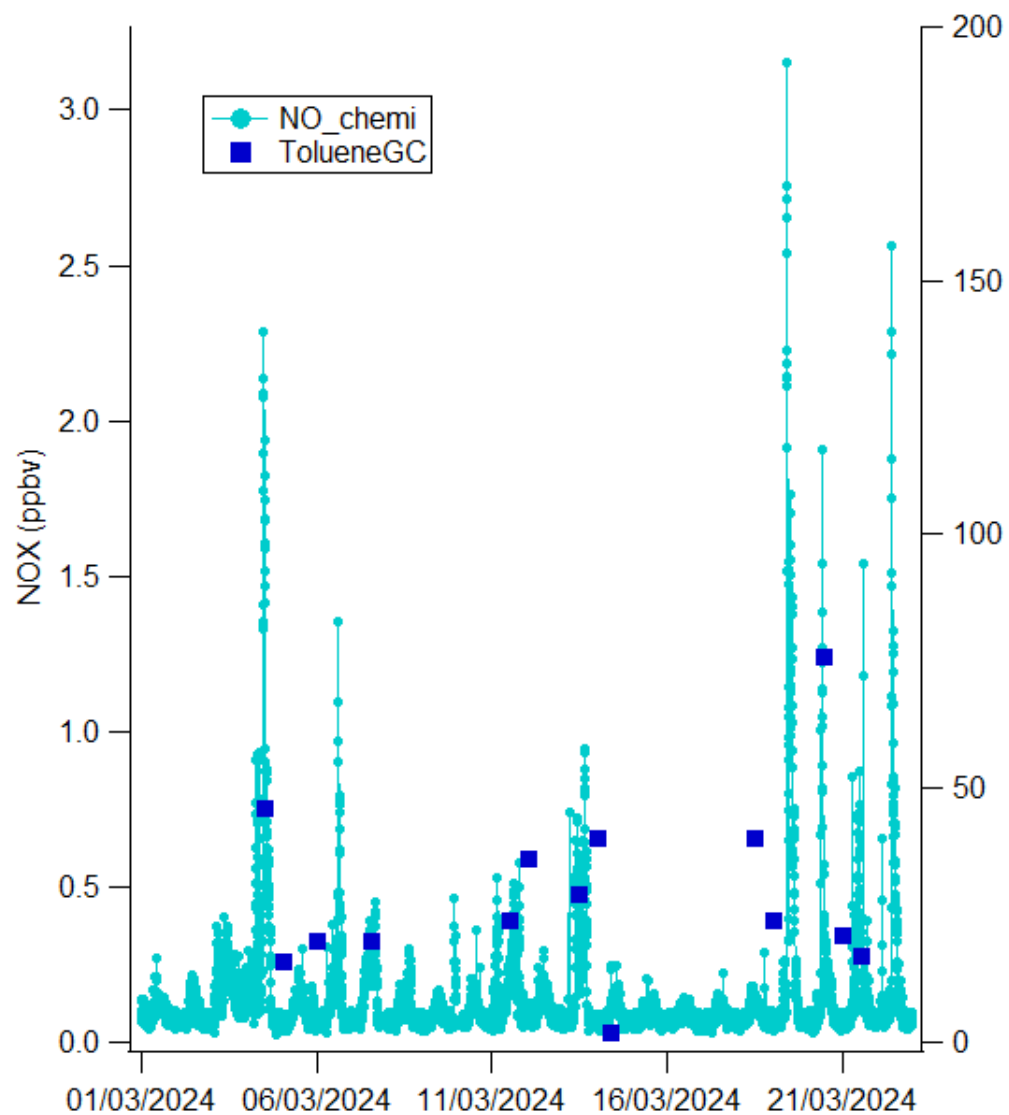




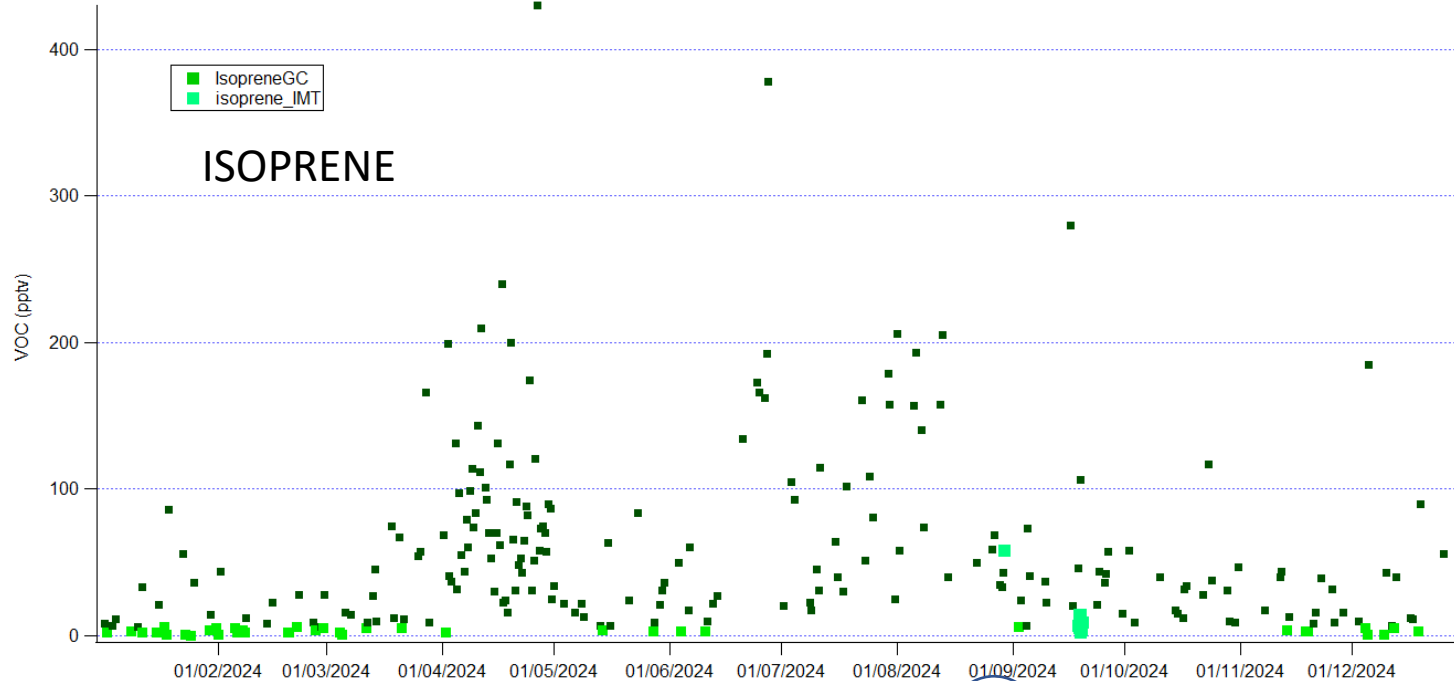
ATMO ACCESS
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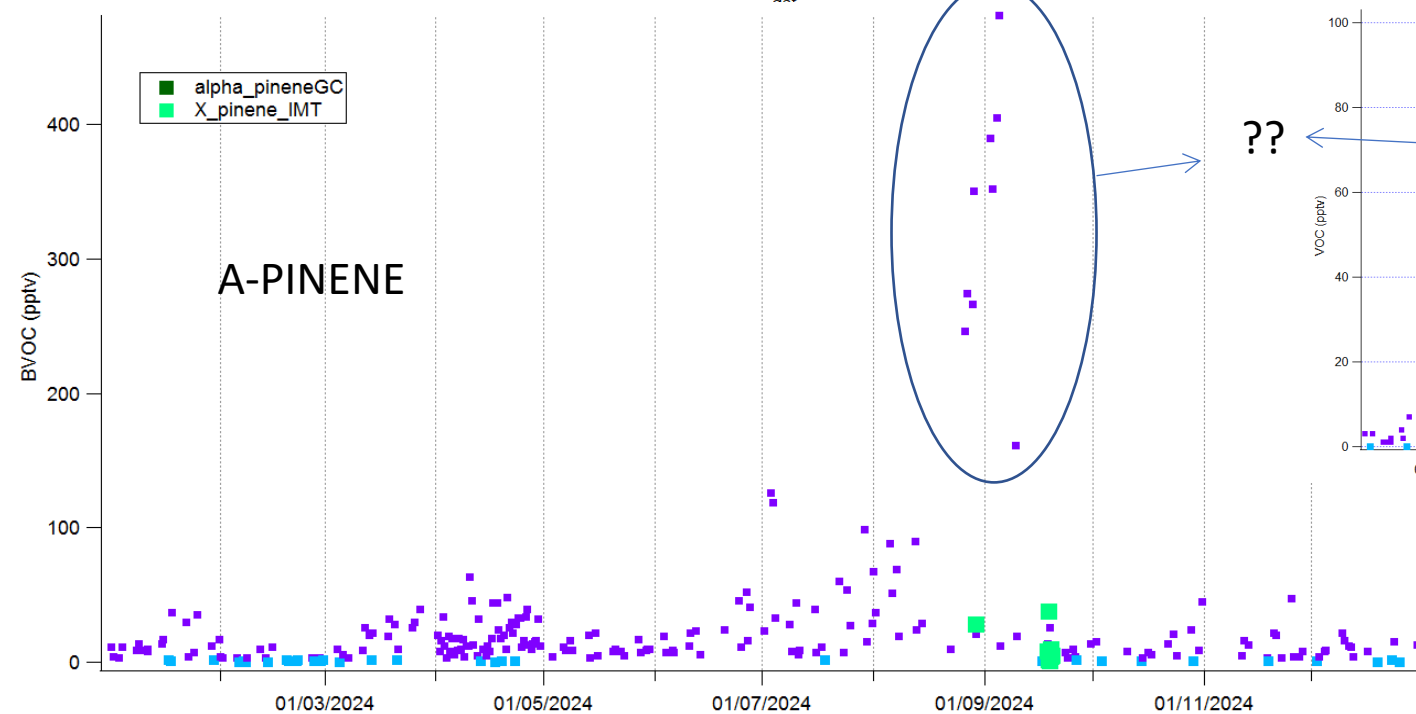




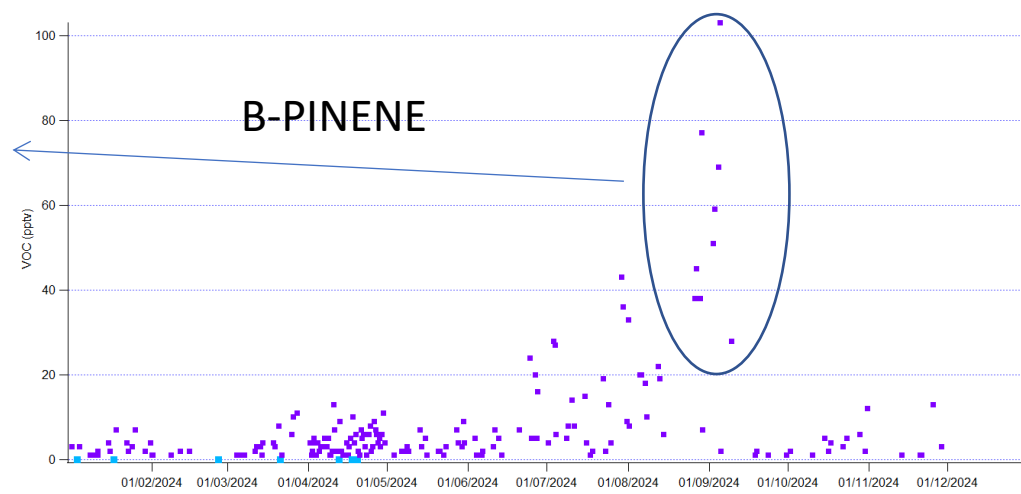
→ Cross check data with other reactive gases, with in situ aerosol ...> local or not?



BVOC



??



B-pinene calibration needs to be check versus 2023?



PUY in 2024

- Discussion on Flag 559 with Zoé . : when it is local pollution or not?
- Response to EMPA (this week) and revised version for previous datasets. (B-pinene?).
- NEW GC-FID on line – since Summer 2024 : ata in ACTRIS in 2025





**THANK YOU !
(Sorry I can't be
online today 😊)**

