

Supplementary Information to

Reliable VOC Monitoring in Industrial Coastal Areas: Uncertainty

Quantification and Variability in the Berre Basin

Zahra Benmouhoub^{1,2}, Liselotte Tinel¹, Grégory Gille², Céline Cancedda², Stéphane Sauvage³, Nadine Locoge¹

1: IMT Nord Europe, Institut Mines-Télécom, University of Lille, Centre for Energy and Environment, 59000 Lille5

2: AtmoSud, Regional Network for Air Quality Monitoring of Provence-Alpes-Côte-d'Azur, Marseille, France

3: Université Grenoble Alpes, CNRS, IRD, INP-G, IGE (UMR 5001), 38000 Grenoble, France

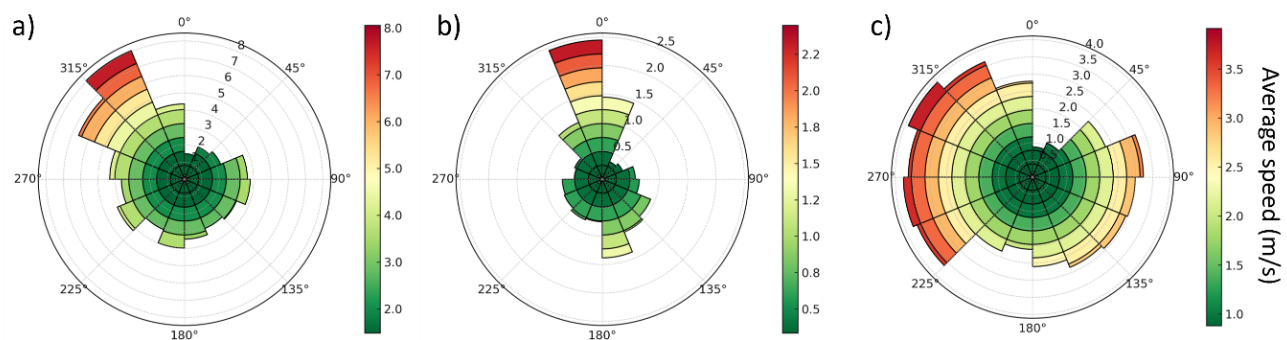


Figure S1: Annual wind roses for 2022 measured at (a) Marignane, (b) Berre-l'Étang, and (c) Martigues-La Gâtasse.

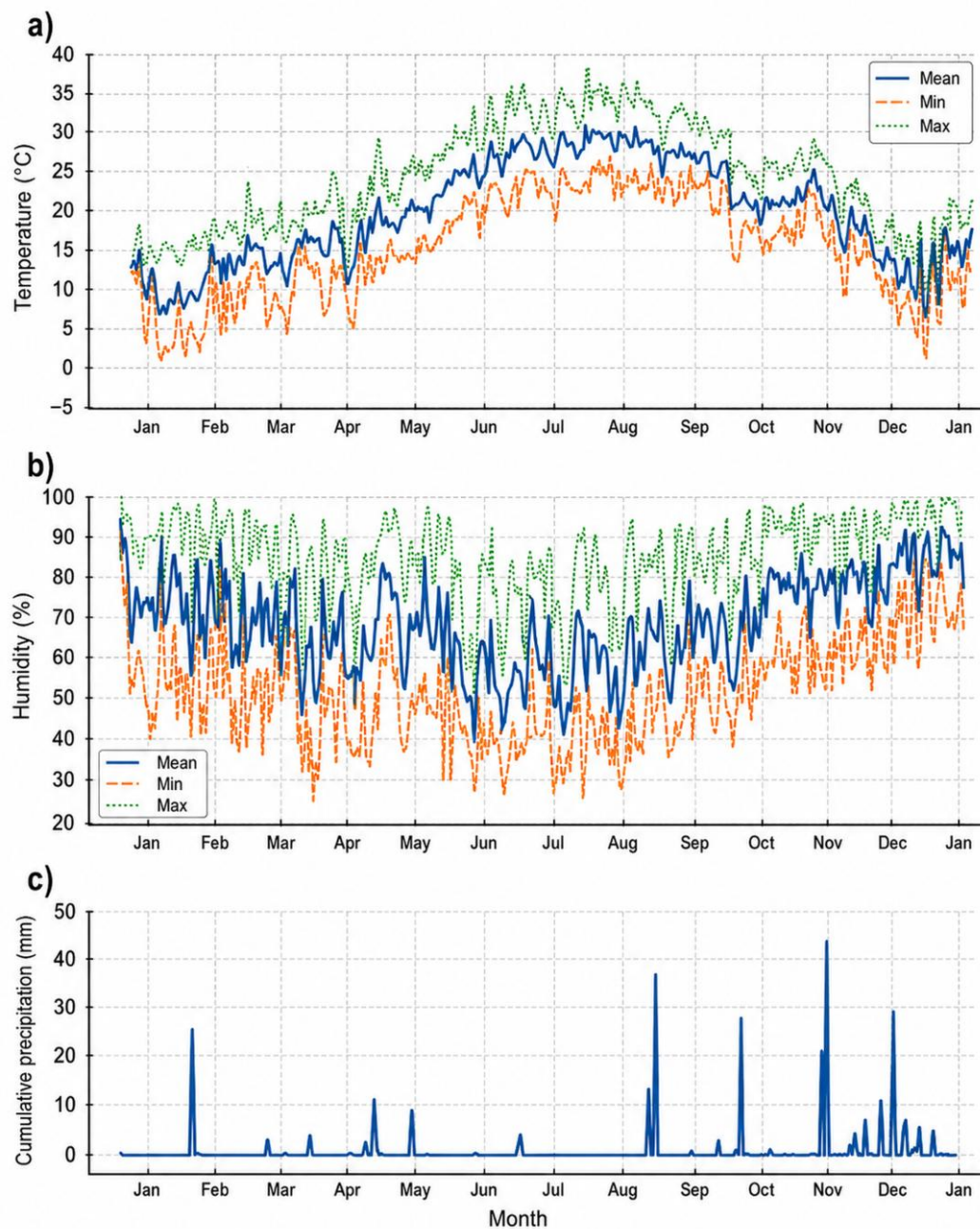


Figure S2: (a) Temperature, (b) relative humidity, and (c) cumulative precipitation at the Météo-France station in Marignane during 2022. For panels (a) and (b), the solid blue, dashed orange, and dotted green lines represent the daily mean, minimum, and maximum, respectively.

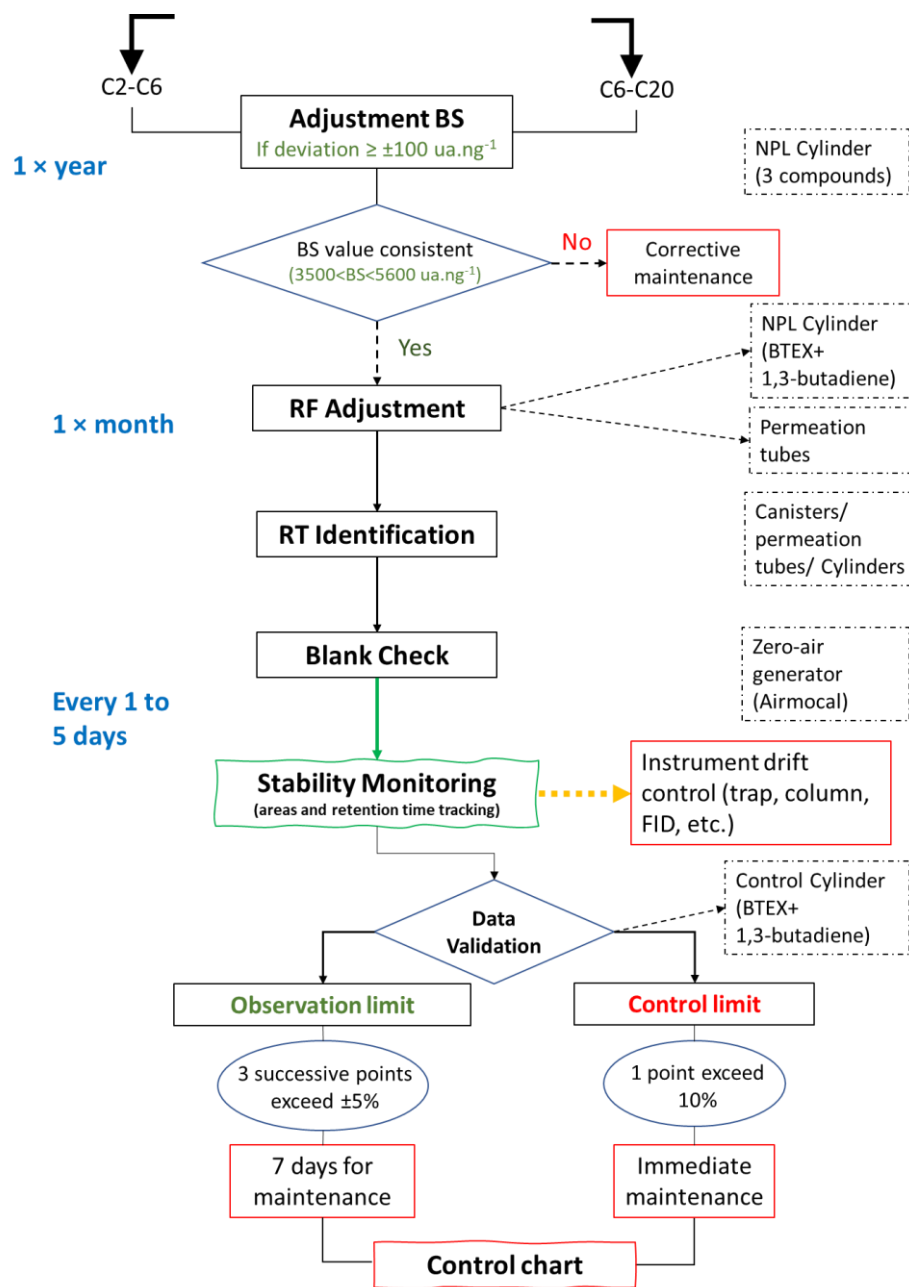


Figure S3: Schematic presentation of the quality-control procedure (RT: retention time; BS: base sensitivity; RF: response factor).

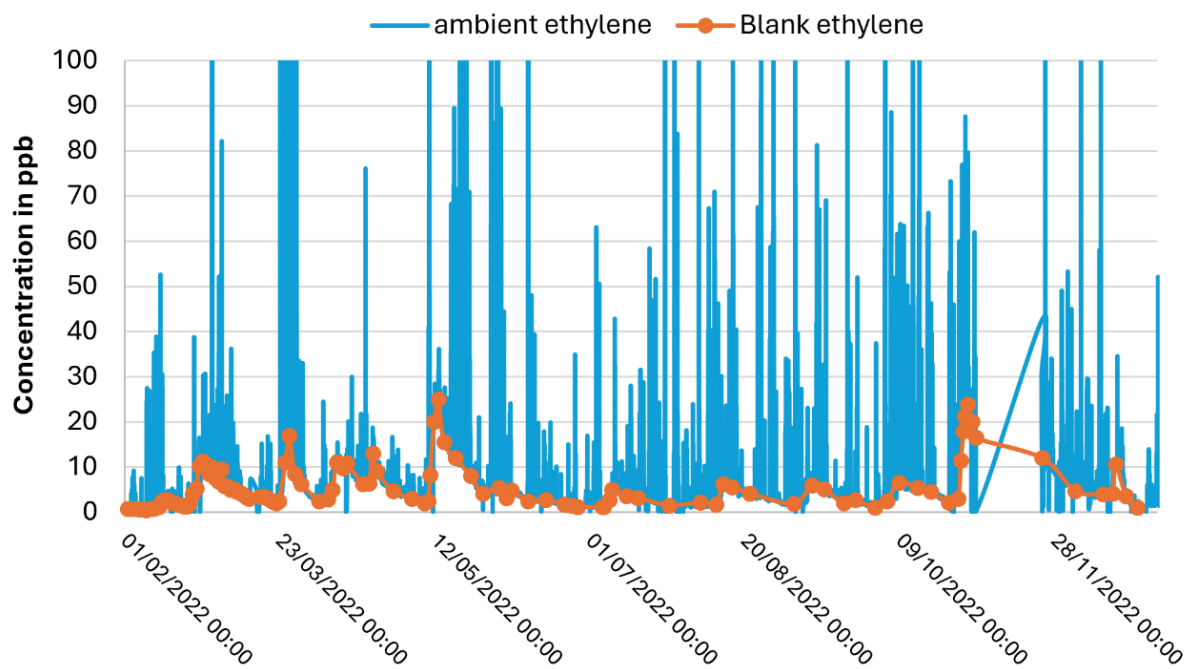


Figure S4: Time series of ethylene concentrations in ambient air and in the blank, as measured by the C2-C6 analyzer.

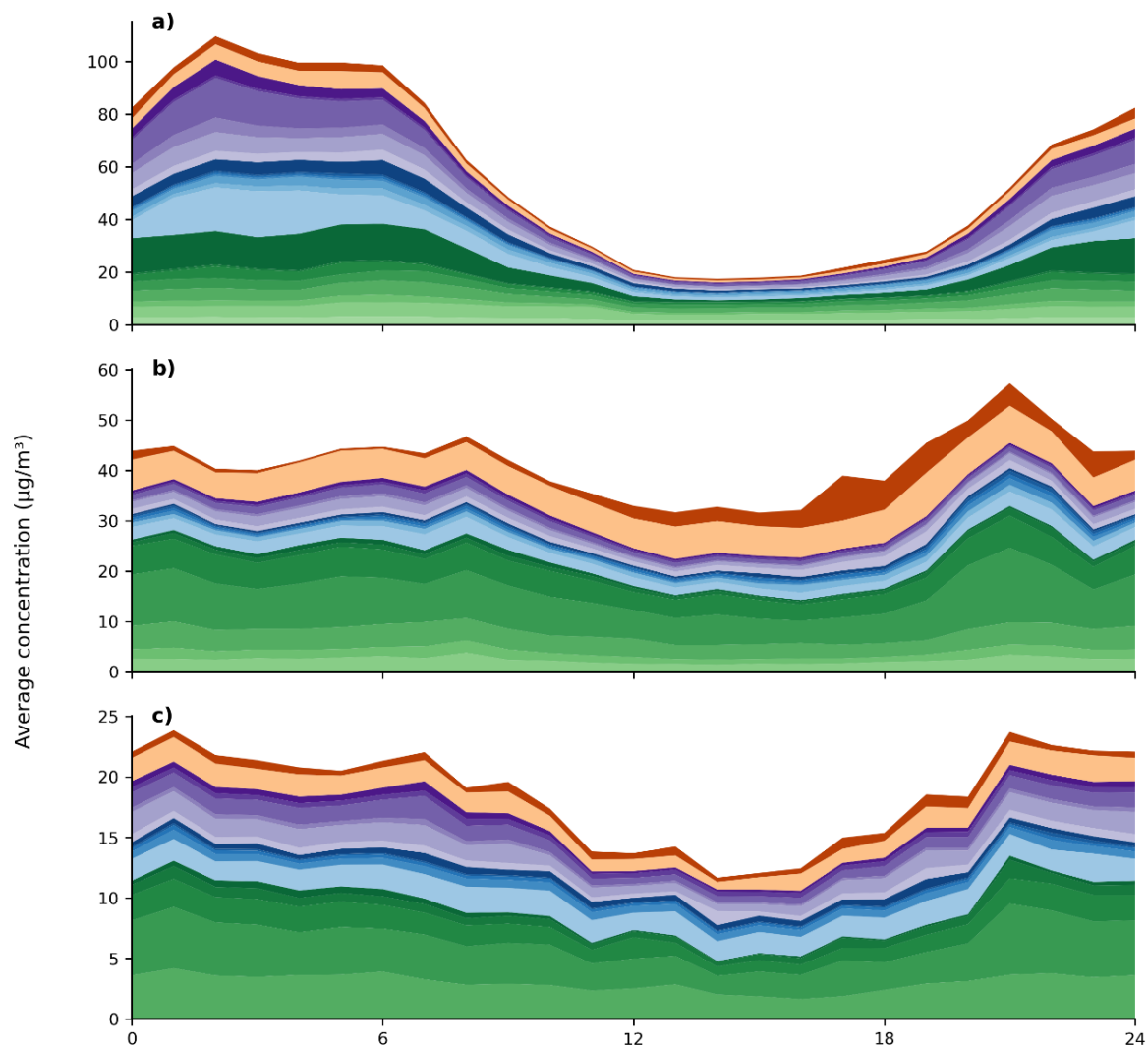


Figure S5: Diurnal profiles of summed average VOC composition at (a) Berre-l'Étang (2022), (b) Martigues-Lavéra (2022), and (c) Port-de-Bouc (2023).