



*Supplement of*

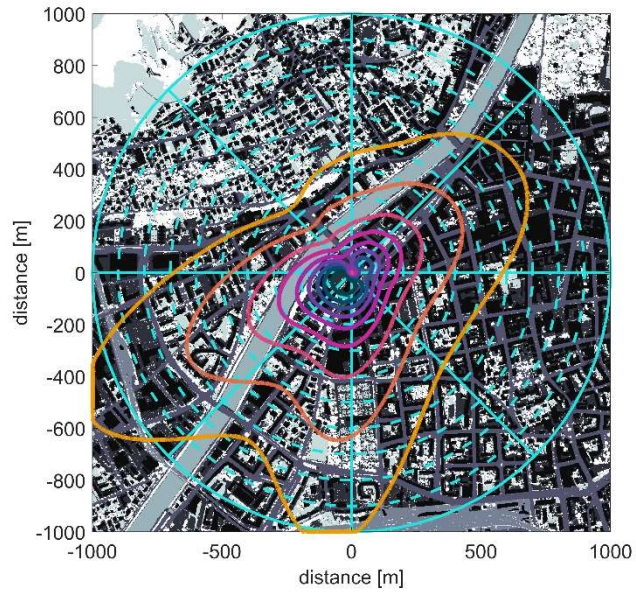
## **Deciphering anthropogenic and biogenic contributions to selected non-methane volatile organic compound emissions in an urban area**

**Arianna Peron et al.**

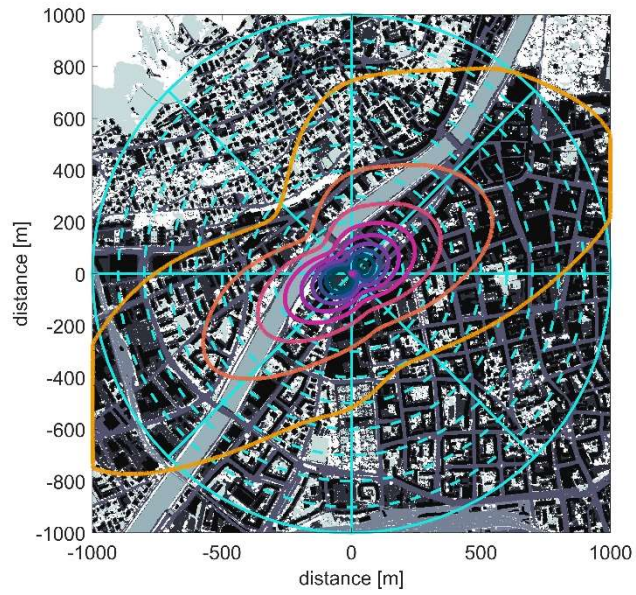
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**Supplemental Information:**



**10 Figure S1: Footprint of Spring 2018**



**Figure S2: Footprint of Summer 2018**

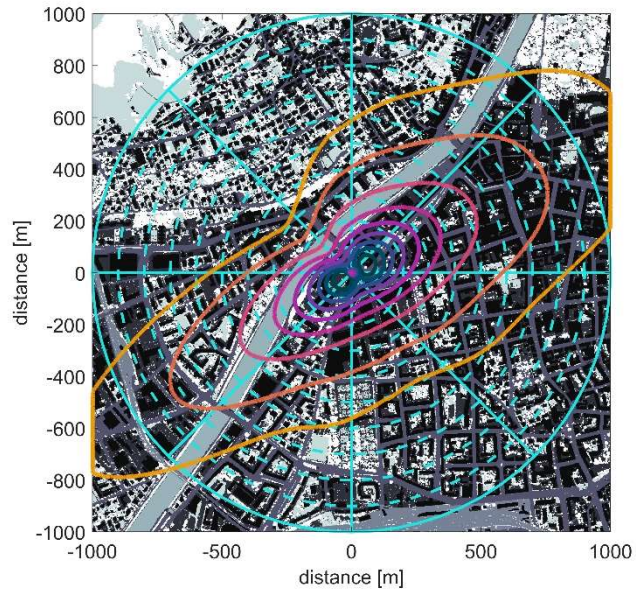
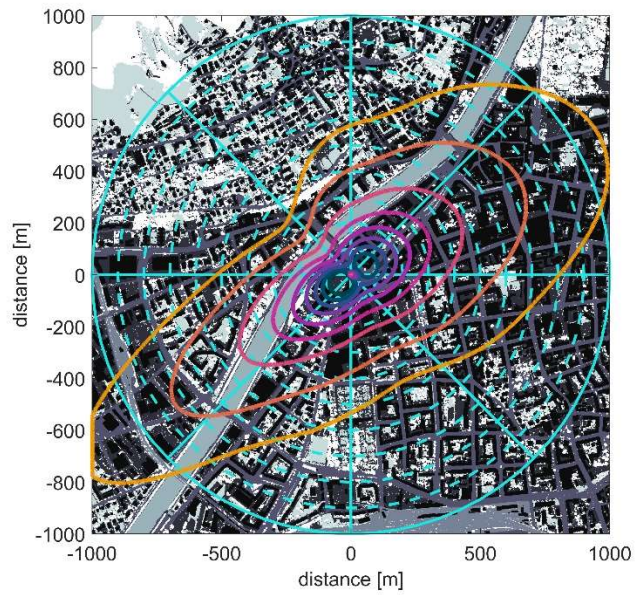
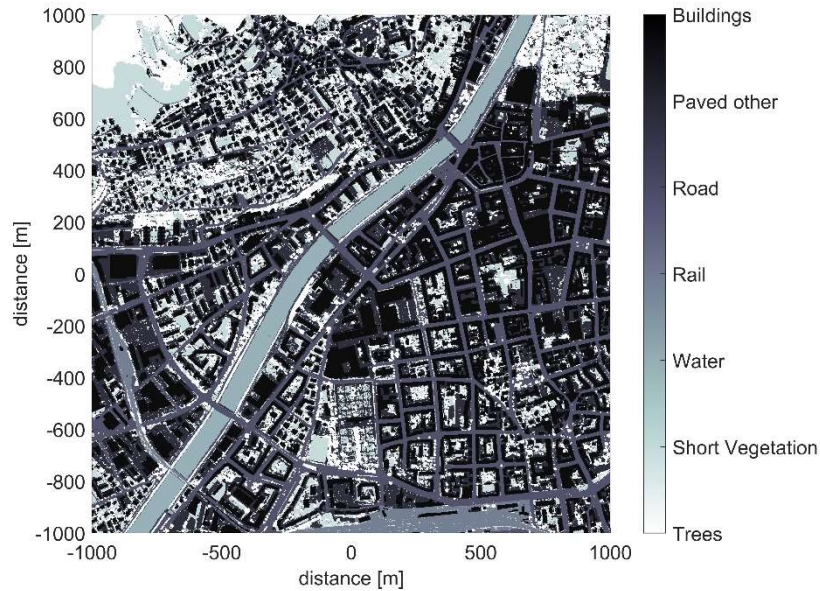


Figure S3: Footprint of Summer 2020



**Figure S4: Footprint of Spring 2021**



**Figure S5: Land-use map derived from various spatial datasets from Land Tirol, <https://data.tirol.gv.at>**

Footprint analysis for all individual IOPs.

- 20 The colored footprint depicts 10 isolines up to the 90% isoline, which is the outermost isoline. The cyan spider lines show the distance from the center (IAO) to the outer domain (+/- 1km) in 100 m increments. The underlying landuse map shows the main urban landcover types, with (1) 'Trees', (2) 'Short vegetation', (3) 'Water bodies', (4) 'Rail', (5) 'Road', (6) 'Paved', and (7) 'Buildings'. The footprint is characterized by the easterly and westerly flow directions at the site. During all IOPs most of the footprint (<80%) was contained within a domain extending about 1km to the East and 1 km to the West. During the 2018
- 25 spring IOP, we see a slightly higher influence of Föhn conditions, that increases the footprint contribution from the south sector, compared to spring 2020 and 2021. Overall the footprint distribution for all IOPs is generally quite comparable.

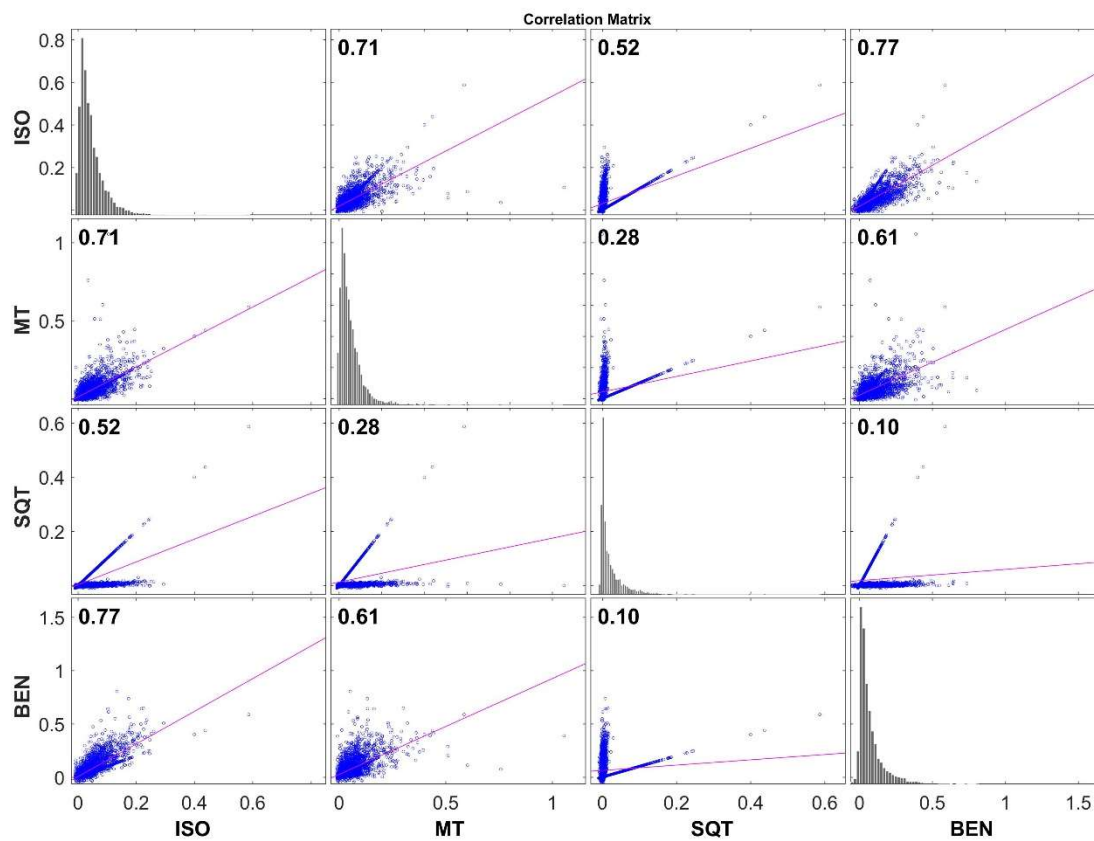
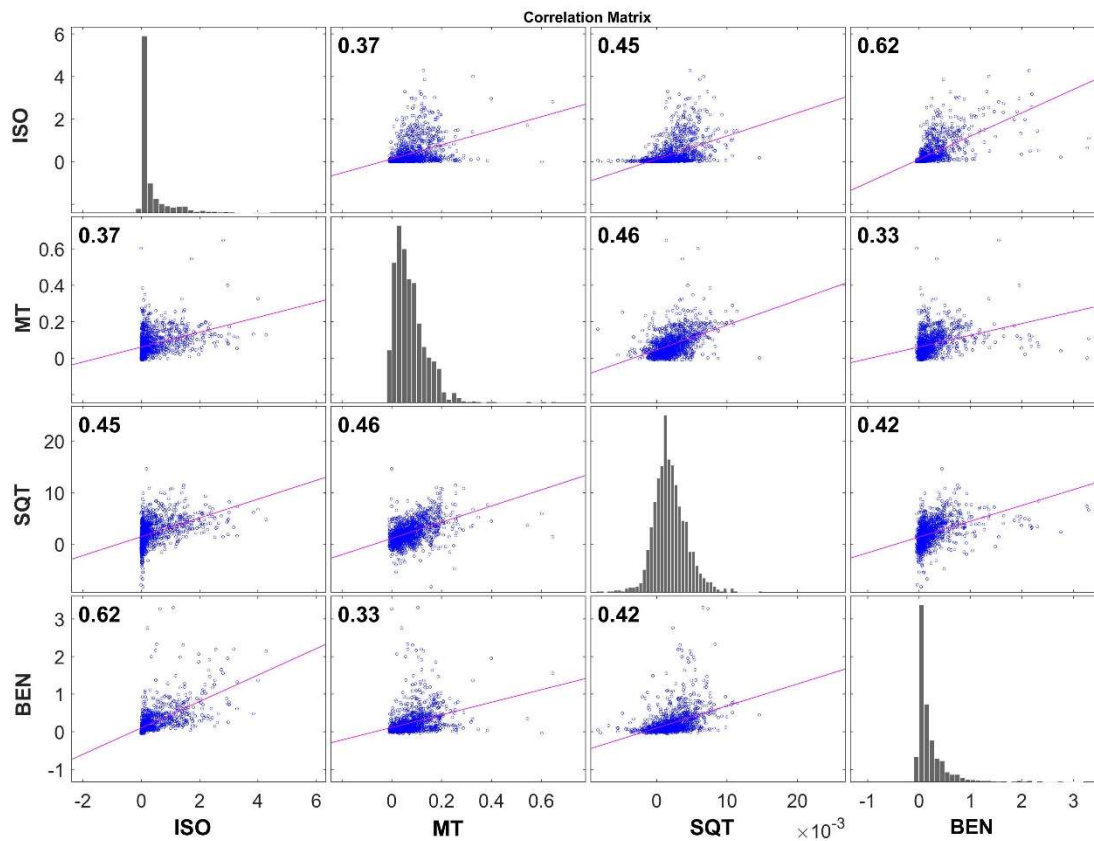


Figure S6: Correlation matrix for the spring campaigns for the fluxes [ $\text{nmol m}^{-2} \text{s}^{-1}$ ] of Isoprene (ISO), sum of Monoterpenes (MT), sum of Sesquiterpenes (SQT) and Benzene (BEN). The  $R^2$  value is shown in bold in each plot.



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Figure S7: Correlation matrix for the spring campaigns for the fluxes [ $\text{nmol m}^{-2} \text{s}^{-1}$ ] of Isoprene (ISO), sum of Monoterpenes (MT), sum of Sesquiterpenes (SQT) and Benzene (BEN). The  $R^2$  value is shown in bold in each plot.