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Supplementary Information of

Coastal-SMEAR — introduction to infrastructure and capacity of the atmospheric observatory in Tvärminne, Finland

Thakur et al.

Correspondence to: Roseline C. Thakur (roseline.thakur@helsinki.fi); Mikael Ehn (mikael.ehn@helsinki.fi)

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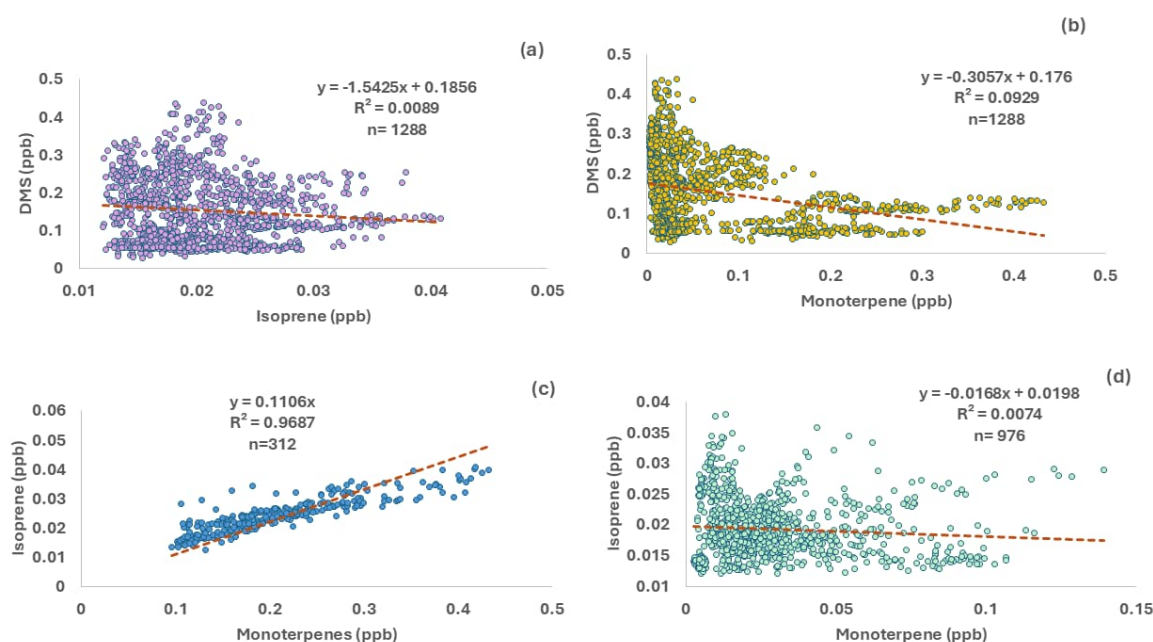


Figure S1. Correlation analysis of the major VOCs detected in ambient air during the study period (a) Correlation analysis between DMS and isoprene concentrations (b) Correlation analysis DMS and monoterpenes (c) Correlation analysis between isoprene and corresponding to monoterpenes concentration >0.1 ppb (d) Correlation analysis between isoprene and corresponding to monoterpenes concentration <0.1 ppb. “n” is the number of data points taken for the analysis.

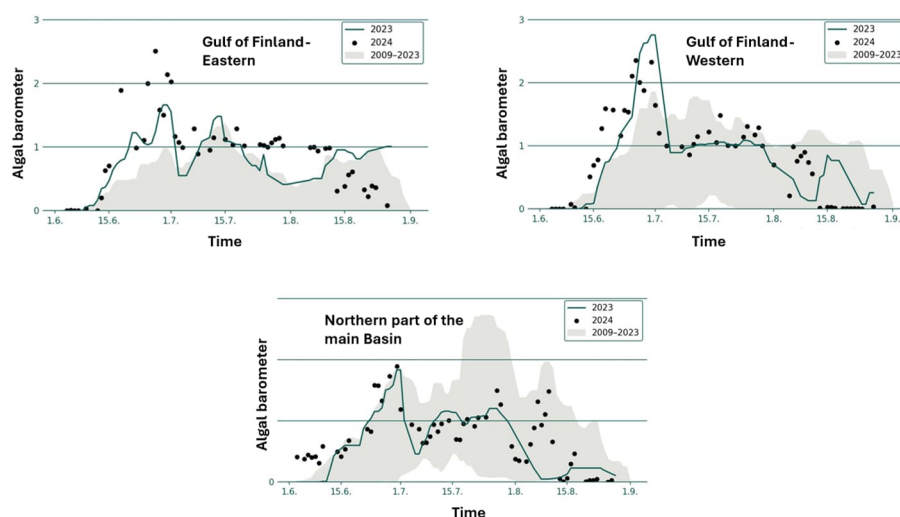


Figure S2. Cyanobacteria barometer for June-August 2024. It is calculated daily from cloud-free observations made by the Sentinel-3 OLCI satellite instrument. The entire range from 2009 to 2023 is shown in light grey (90% of satellite observations). The darker grey line shows the average annual variation (50% of observations).

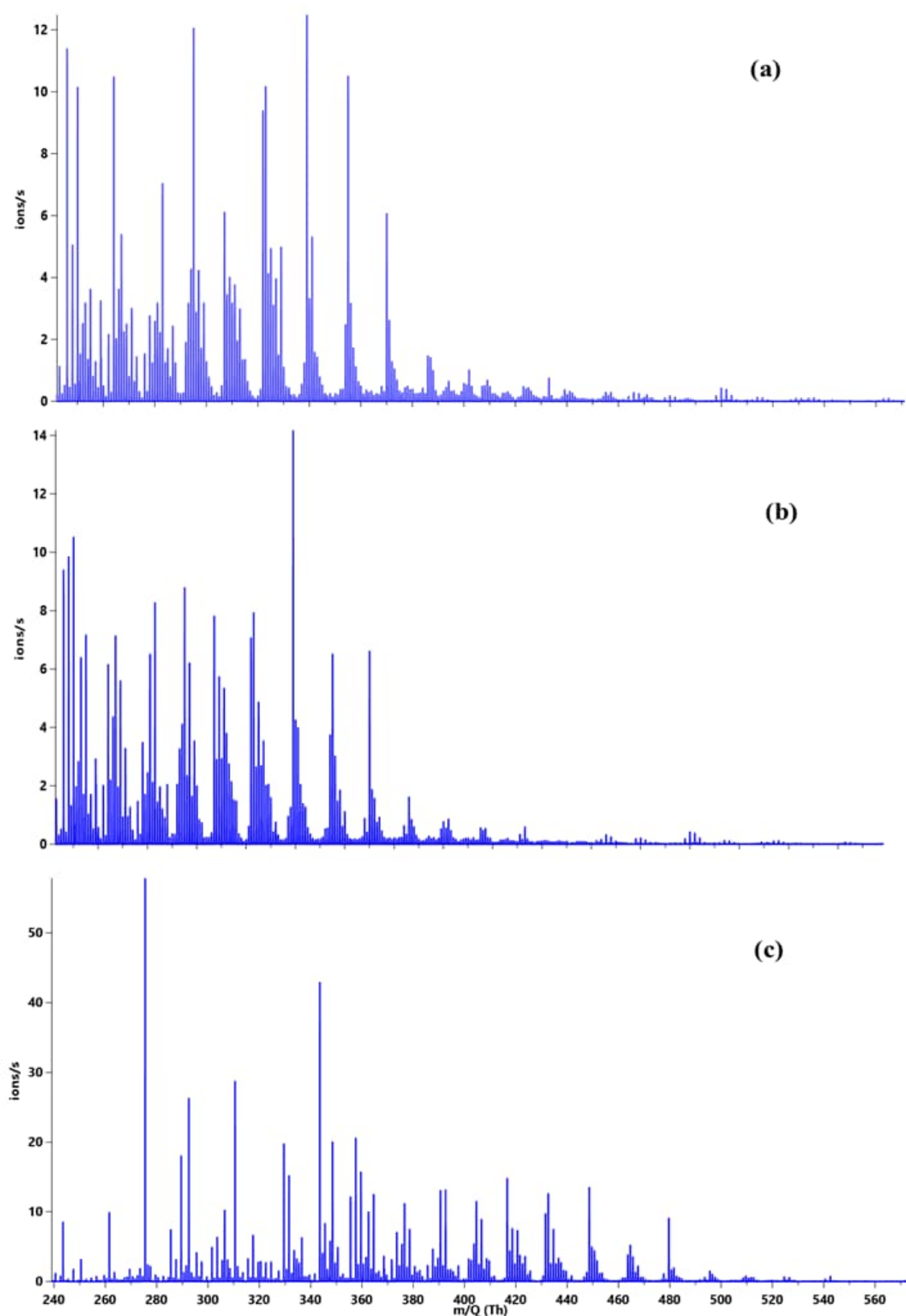


Figure S3. Spectrum for different times of the day for the Burst event day, 16.05.2024 recorded from NO₃⁻ mode of MION-APi-TOF (a) Spectrum signals of m/z 250-550 between 7:00 hrs- 9:00 hrs- no clustering was observed. (b) Spectrum signals of m/z 250-550 between 12- 13:30 hrs, NPF. (c) Spectrum signals of m/z 250-550 between 15:00-18:00 hrs, second burst.

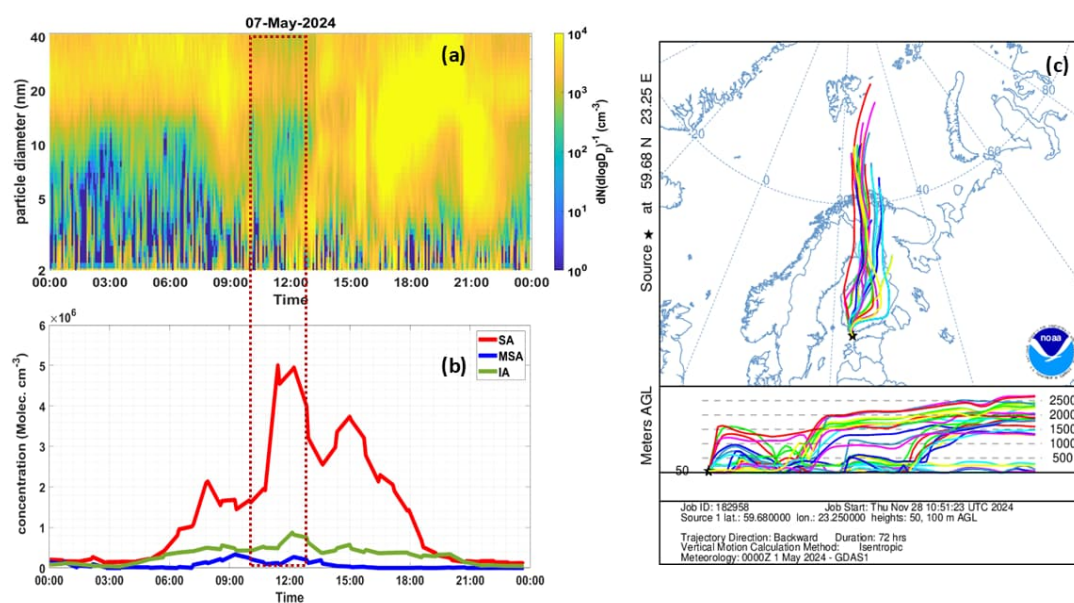


Figure S4. (a) Regional event, number size distribution data recorded by NAIS (b) Diurnal plot for concentrations of SA, MSA, IA for the event (c) 5 day back trajectory analysis done by HYSPLIT.