Characterization of a Portable, Light-Weight, Low-Power Chemical Ionization Time-of-Flight Mass Spectrometer

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Supplementary Info.

Table S1: 13-Component VOC mixture in nitrogen

Standard (ppb)	Compound CAS#	Concentration
Methanol	67-56-1	1000
Acetonitrile	70-05-8	1000
Acetaldehyde	75-07-0	1000
Acrylonitrile	107-13-1	1000
Acetone	67-64-1	1000
Isoprene	78-79-5	1000
Methyl Ethyl Ketone	78-93-3	1000
Benzene	71-43-2	1000
Toluene	108-88-3	1000
m-Xylene	108-38-3	1000
1,2,4-Trimethylbenzene	95-63-6	1000
α-Pinene	80-56-8	1000
β-Caryophyllene	87-44-5	100

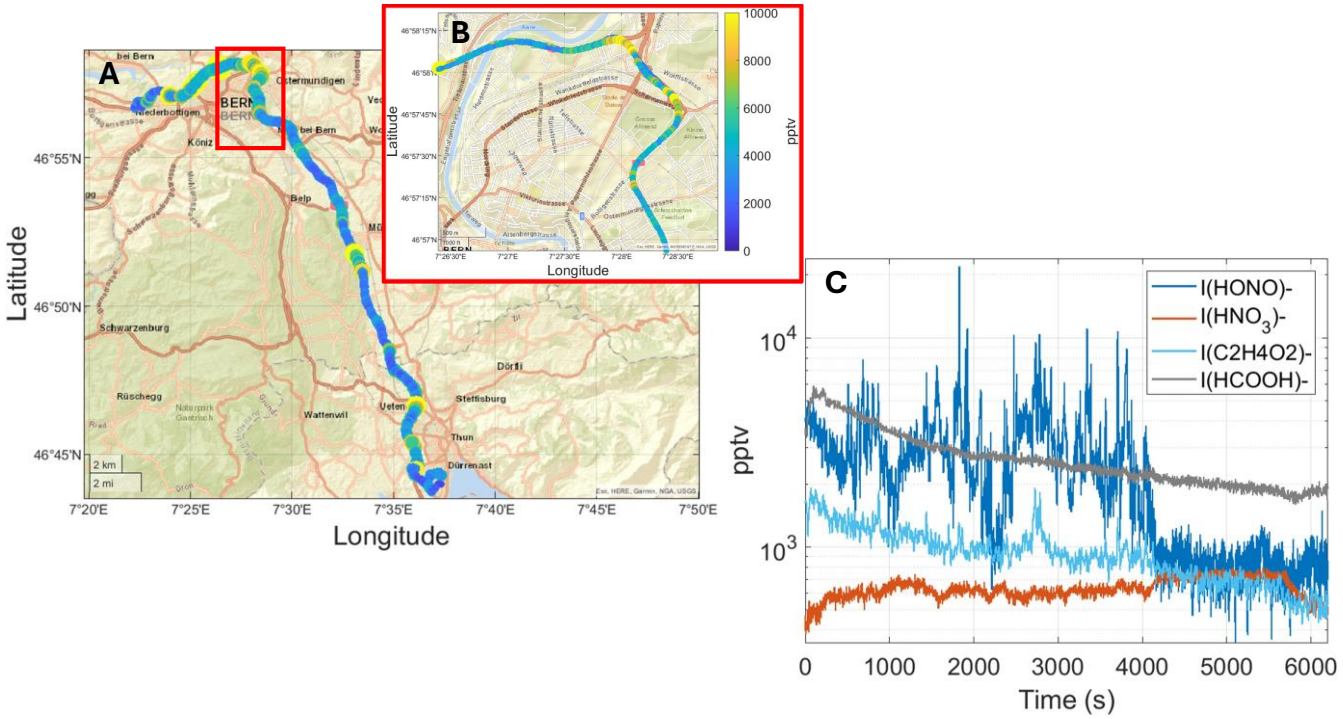

Figure S1: (a) Mobile driving measurements of HONO using iodide chemical ionization detection. (b) Zoom in on area of higher anthropogenic activity tracing HONO. (c) Representative timeseries of different analyte traces during the driving measurements.

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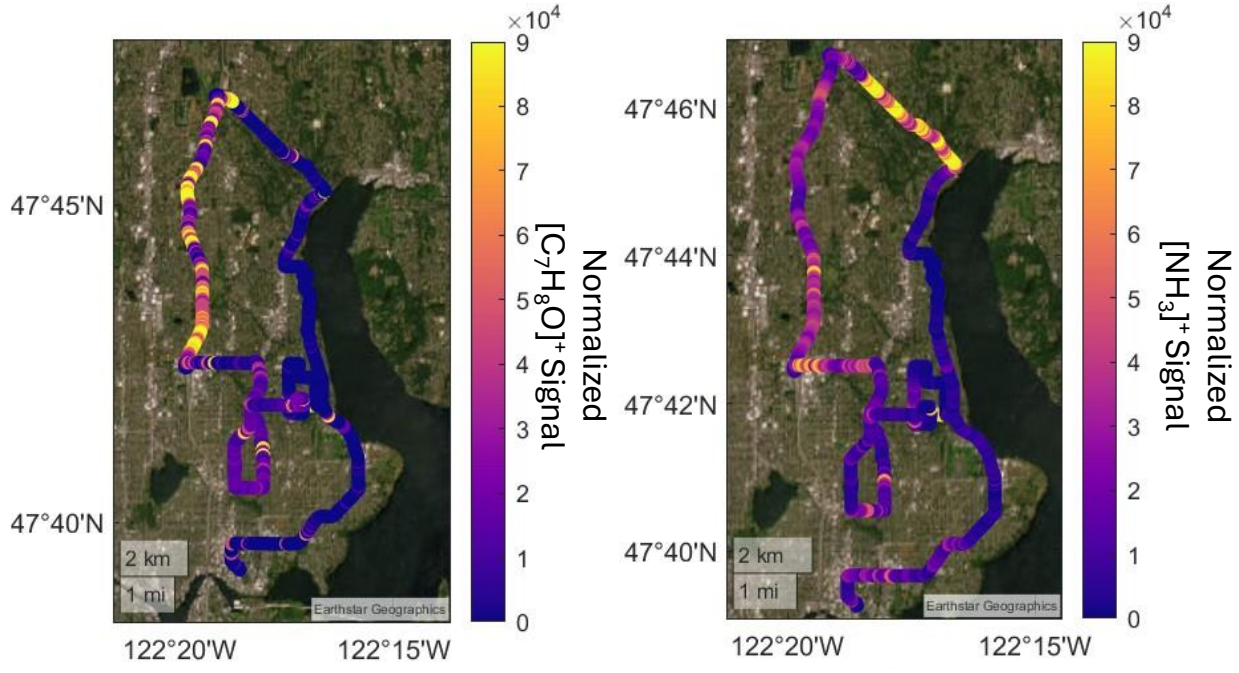

Figure S2: (a) Mobile driving measurements of *m/z* consistent with $C_7H_8O^+$, a suspect woodsmoke tracer using benzene ion chemical ionization detection. (b) Mobile driving measurements of *m/z* consistent with $[NH_3C_6H_6]^+$ the adduct of benzene with ammonia.

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