



*Supplement of*

## **A drone-based sampling platform for vertically resolved chemical characterization of aerosol particles using chemical ionization mass spectrometry**

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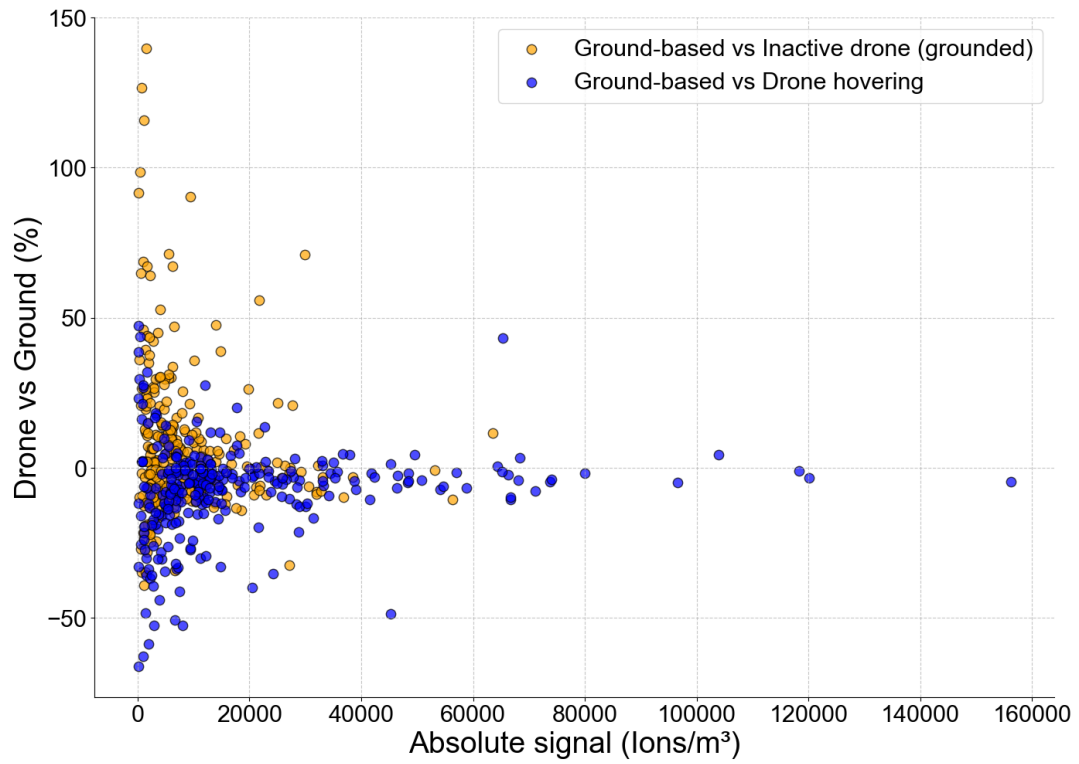
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**Table S1.** Summary of measurements

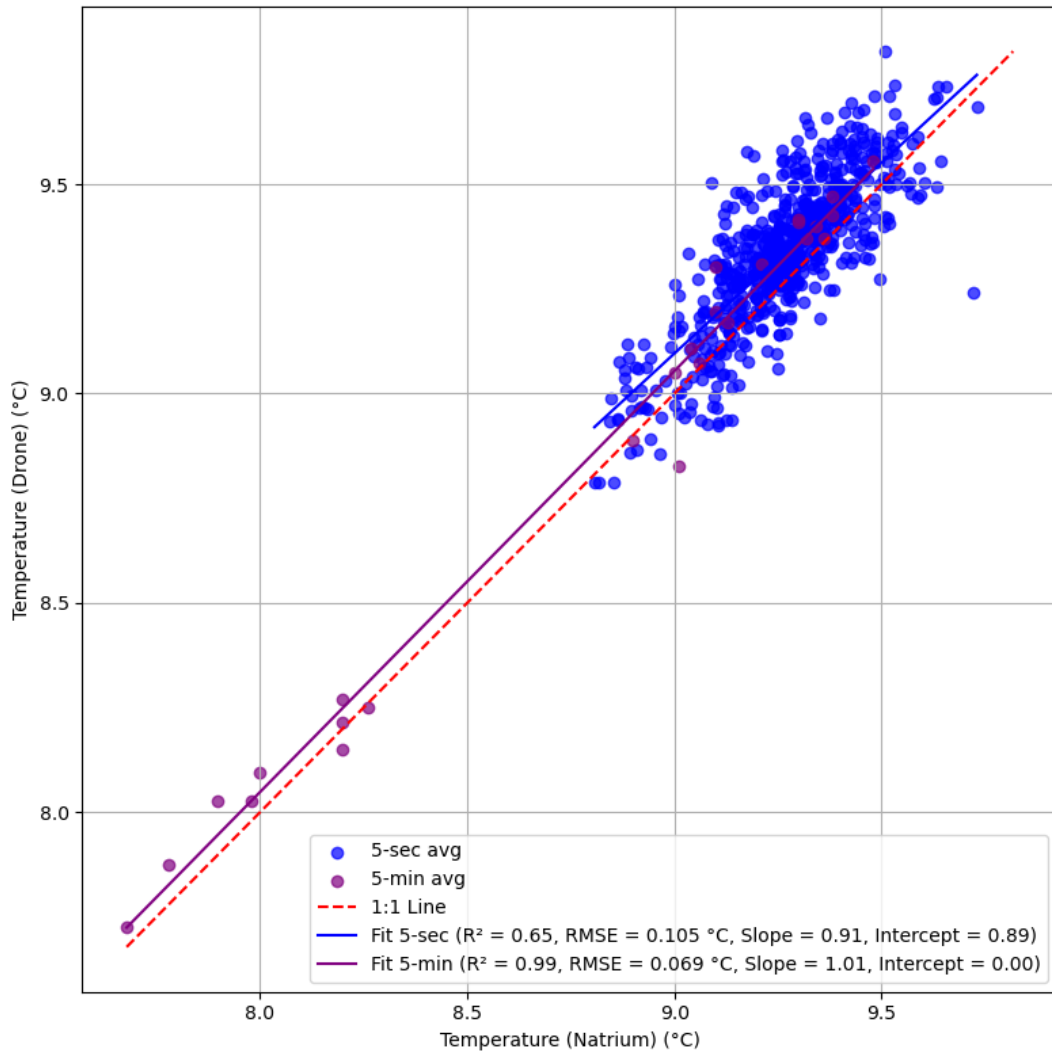
Measurement	Height MAGL	Filter sampling time (h)	Description	Date
Hovering	8	3	Comparison of drone and ground-based while drone is hovering, simultaneous stationary and drone based sensor measurements	11 May 2025
Grounded	2	3	Comparison of drone and ground-based while drone is grounded	10 May 2025
Vertical profile test	2–120	–	Vertical profiles of T, RH, wind speed and direction between 19:30 and 02:30	24 Apr 2024
Nocturnal boundary layer profile	2–120	1.5	Vertical profiles of T, RH, wind speed and direction during the nocturnal boundary layer profiling, simultaneous ground and drone based filter collection	14-15 Apr 2025



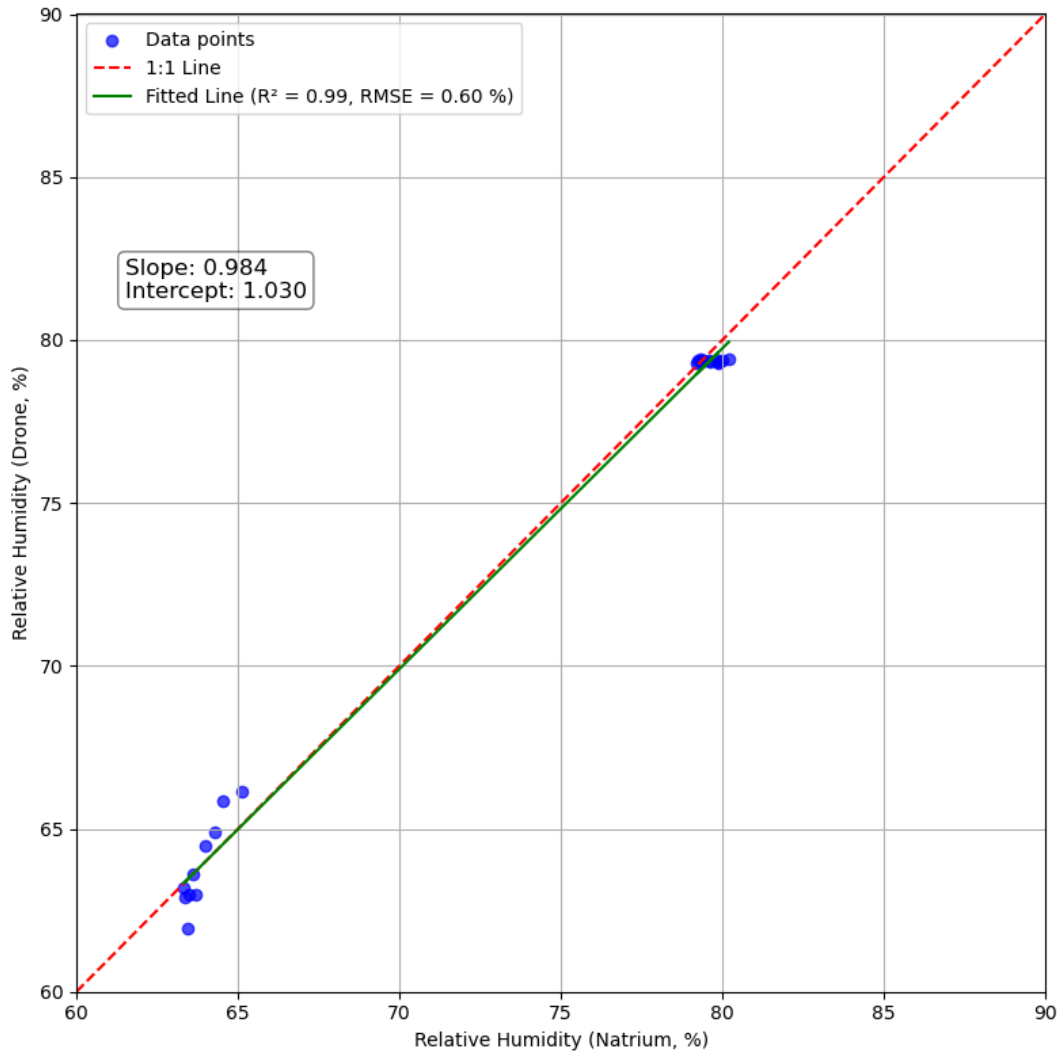
**Figure S1.** Drone setup used in comparison measurements. On the left: Natrium Atmospheric and climate measurement tower.



**Figure S2.** Distribution of relative difference between drone and ground-based measurements  $((\text{drone-ground})/\text{ground})$  as a function of absolute signal of ground-based measurements.



**Figure S3.** Temperature correlation plot between drone and ground-based (Natrium) measurements.



**Figure S4.** Relative humidity (RH) correlation plot between drone and ground-based (Natrium) measurements.