Annex S1: atmospheric temperature and PBLH (Planetary Boundary Layer Height) plot on IASI and miniDOAS correlations

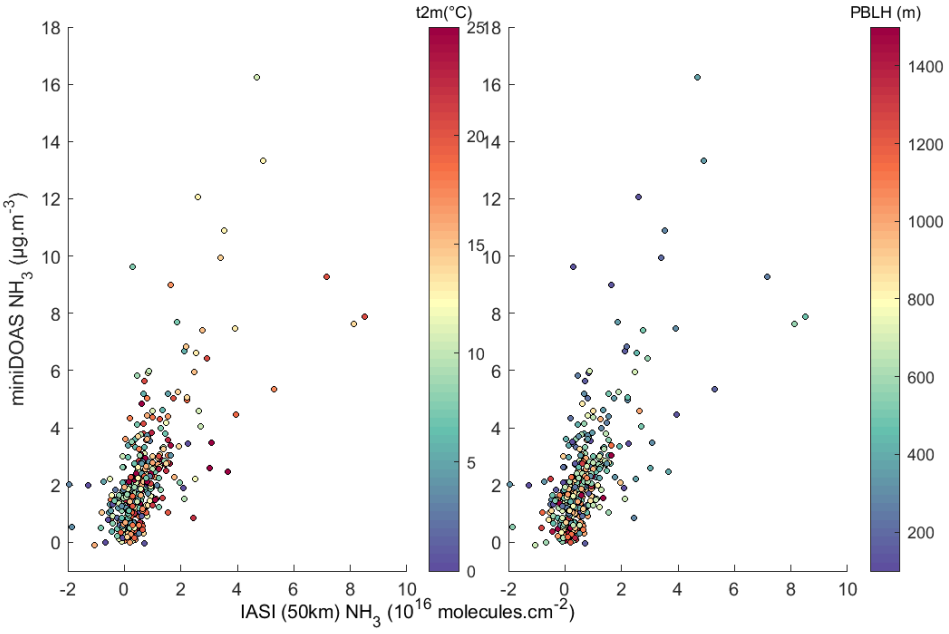

Figure S1: miniDOAS ground-based NH_3 concentrations ($\mu g.m^{-3}$) versus IASI NH_3 column concentrations ($molecules.cm^{-2}$) measured in a 50km box centered in Paris from January 1st 2020 to May 31st 2022, color coded by atmospheric temperature at 2 meters (in °C, left panel) and PBLH (in m, right panel).

Annex S2: influence of meteorological condition on seasonal and monthly NH_3 variabilities

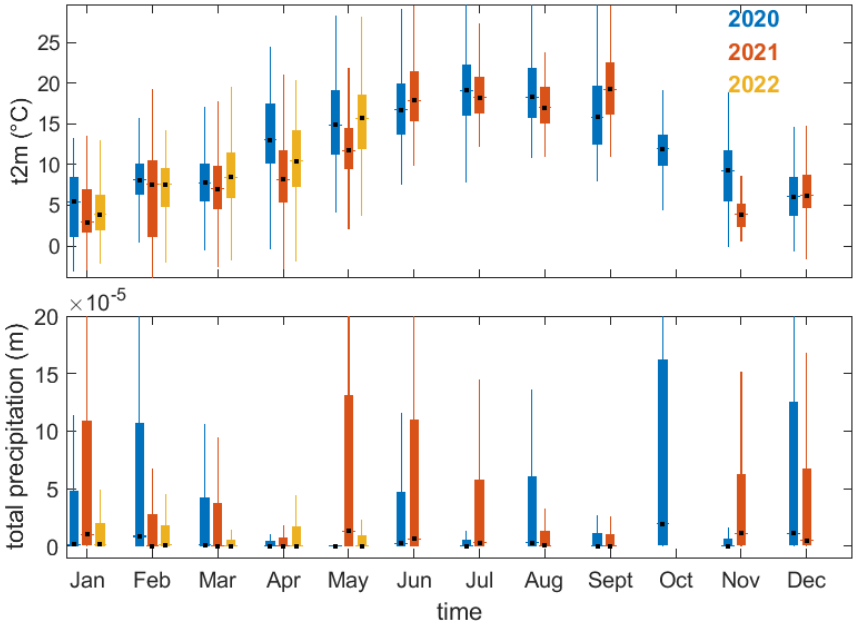

Figure S2: Box plot of monthly temperature at 2 meters (t2m, in °C, top panel) and total precipitation (in m, bottom panel) color coded by the year of measurements (2020 in blue, 2021 in orange, and 2022 in yellow) derived from ERA-5 around Paris.

Annex S3: road traffic in Paris

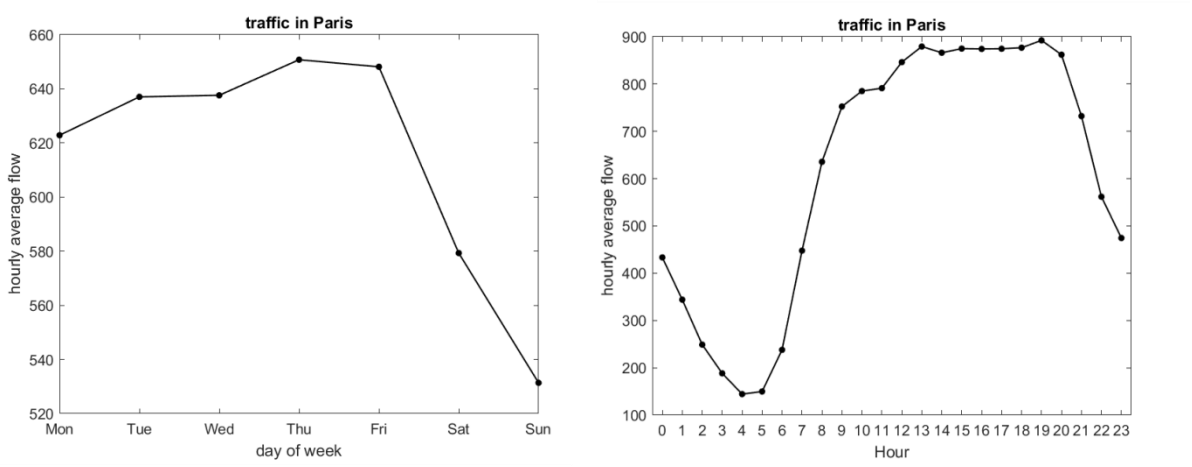

Figure S3: weekly (left panel) and diurnal (right panel) cycles of hourly mean flow of vehicles observed in Paris in 2020 and 2021.

Annex S4: PBLH (Planetary Boundary Layer Height) on surface measurements

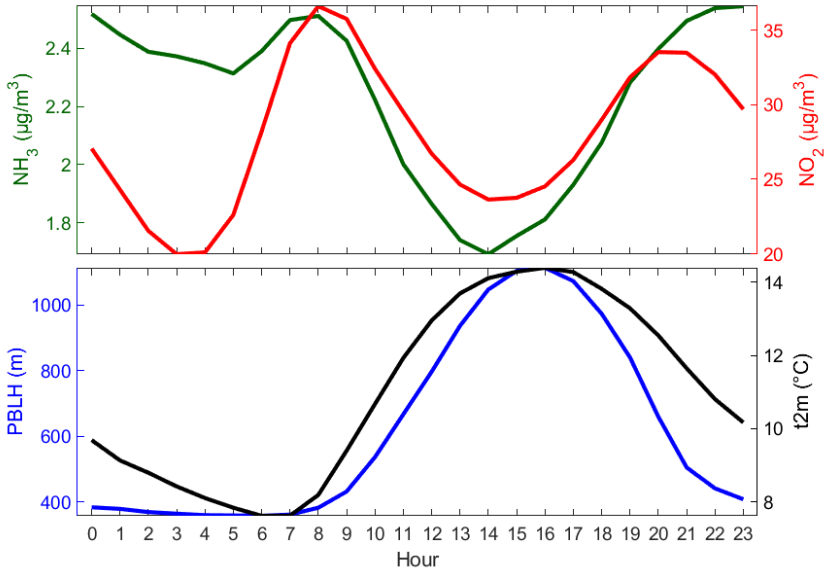

Figure S4: mean diurnal cycle of atmospheric NH_3 and NO_2 ($\mu g.m^{-3}$, green and red lines in upper panel) and PBLH (m, in blue, lower panel) and atmospheric temperature (°C, in black, lower panel) measured in Paris between January 2020 and June 2022.