



Figure S1. Meteorology (a), Time series of gases and particles measured at Madrid-Barajas airport during autumn campaign (WP4) of AVIATOR (b) & (c)

Unit	Species	Mean	SD	Min	Max
µgm-3	eBC	1.07	0.7	0.11	2.9
	NO _x	22.7	15.3	<DL	64.3
	SO ₂	4.1	1.3	0.5	7.5
	O ₃	53.9	30.3	0.15	118
	PM _{2.5}	9.35	3.4	4	18.4
	PM ₁₀	16.43	5.6	7	29.4
	SV-OOA	1.6	1.02	0.03	4.3
	AlkOA	0.64	0.27	0.009	1.19
	MO-OOA	2.35	1.09	0.22	4.5
mgm-3	CO	0.23	0.04	0.13	0.36
	THC	2.3	0.09	2.1	2.5
°C	Temperature	19.4	2.4	12	24.8
m/s	WS	1.5	1	0.48	5.4

Table S1. statistical details of meteorology, gases, particles and obtained factors concentrations for the entire campaign.