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Semi-volatile organic aerosols in a suburban area of Greater Paris (France)

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An exhaustive and fast chemical characterization of fine aerosols (<2.5 μ m A.D.) has been performed in a suburban area of Greater Paris (France) for a 2-week period during winter. Measurements of the major inorganic salts (ammonium nitrate, ammonium sulfate) were obtained from a Particle-Into-Liquid-Sampler and Ion Chromatography (PILS-IC), Black carbon (BC) concentrations were obtained every 5 min from a 7wavelength Aethalometer (Magee Scientific). Semi-continuous measurements of organic carbon (OC) and black carbon (BC) were performed every 1h using a Sunset lab EC-OC Field Instrument (equipped with a VOC denuder).

Diurnal variations of carbonaceous aerosols (BC, OC, POM) and related key parameters (BC/OC ratio and OC-to-POM conversion factor) have shown contrasted daytime / nighttime behaviors which are discussed here from the diurnal variations of fossil fuel combustion tracers measured in gas phase.