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Andre Prevot

Overview of PM1 Composition and Sources of Organic Mass in Europe

Andre S.H. Prevot (1), Eiko Nemitz (2), Valentin Lanz (1), Peter DeCarlo (1), James Allan (3), Urs Baltensperger (2), Harald Berresheim (5), Manjula Canagaratna (4), Darius Ceburnis (5), Michael Cubison (9), Manuel Dall'Osto (5), Chiara di Marco (2), Neil Donahue (10), Mikael Ehn (6), Axel Eriksson (7), Risto Hillamo (8), Jose-Luis Jimenez (9), Lea Hildebrandt (10), Heiki Junninen (6), Astrid Kiendler-Scharr (11), Evangelia Kostenidou (12), Markku Kulmala (6)Amewu Mensah (11), Claudia Mohr (1), Colin O'Dowd (5), Amber Ortega (9), Jurgita Ovadnevaite (5), Spyros Pandis (10,12), Laurent Poulain (13), Tomi Raatikainen (14), Samara Carbone (8), Sanna Saarikoski (9), Karine Sellegri (15), Donna Sueper (4,9), Erik Swietlicki (7), Petri Tiitta (14), Ingrid Ulbrich (9), Doug Worsnop (4)

(1) Paul Scherrer Institut, Switzerland, (2) Centre for Ecology & Hydrology, Edinburgh, (3) University of Manchester, England (4) Aerodyne Research, Inc., (5) NUI Galway, Ireland, (6) University of Helsinki, Finland, (7) Lund University, Sweden, (8) Finnish Meteorological Insitute, Helsinki, (9) University of Colorado, (10) Carnegie Mellon University, Pittsburgh, (11) Forschungszentrum Jülich, Germany, (12) University of Patras, Greece, (13) Leibniz Insitute for Tropospheric Research, Leipzig, Germany, (14) University of Kuopio, Finland, (15) University of Clermont Ferrand, France

Abstract
Three big field one-month campaigns were performed within the EU project EUCAARI (European Integrated Project on Aerosol Cloud Climate Air Quality Interactions) and EMEP (European Monitoring and Evaluation Programme) in Spring/Autumn 2008 and winter/spring 2009. An unprecedented amount of Aerodyne aerosol mass spectrometers (up to 14 instruments at a time) were set up in various countries across Europe along with many other complementary instrumentation. The sources contributing to organic PM1 are analyzed with positive matrix factorization and other statistical methods like ME-2 (multi-linear engine). We expect to find contributions of traffic, biomass burning, secondary organic aerosols (of varying volatility and degree of oxidation) and possibly other sources. The composition of PM1 including the organic particulate sources as well as ammonium, nitrate and sulfate will be discussed for stations covering all Europe from the south (Greece, Spain) to the North (Sweden, Finland) and from the West (Ireland) to the East (Hungary).

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