Centrifugal Particle Mass Analyzer

Classifies aerosol particles by their mass: charge ratio.

Forms an aerosol mass standard, (when combined with a unipolar charger and aerosol electrometer):

\[ m_{\text{total}} = \text{mass setpoint} \times \text{indicated electrometer concentration} + \text{zero charge correction} \]

(Symonds et al., Aerosol Science and Technology 47:8 i–iv)

Unipolar Diffusion Aerosol Charger

Places a high level of charge on aerosol particles.

Use in mass standard above.

Electrostatic Precipitator

Use in mass standard above, to quantify uncharged particles.

Includes high voltage supply

www.cambustion.com/aerosol
(+44) 1223 210250
sales@cambustion.com
Welcome to Prague

The 2013 European Aerosol Conference (EAC 2013) will be held in the historical city of Prague, Czech Republic, during the period of 1st-6th September 2013 under the auspices of the European Aerosol Assembly (EAA), a body that now represents 12 national or regional aerosol societies. In the past, the European Aerosol Conference was organized in Prague under the umbrella of the Gesellschaft für Aerosolforschung in 1999 when the Czech Aerosol Society was established. During the EAC 2013 the Czech Aerosol Society will celebrate its 14th anniversary and the 11th year of membership in the European Aerosol Assembly. It is a pleasure and honour for the Czech Aerosol Society to organize such important meeting of scientists from all over the world.

Patronage

The conference will be held under the auspices of:

Prof. Jiří Drahoš
President of The Academy of Sciences of the Czech Republic

Prof. Václav Hampl
Rector, Charles University in Prague, Czech Republic

THE ACADEMY OF SCIENCES OF THE CZECH REPUBLIC
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Maps

Conference Venue

Clarion Congress Hotel Prague

Clarion Congress Hotel Prague representing a four-star comfort hotel with modern congress center is easily accessible by all means of transport - the Old Town can be reached within 10 minutes.
Social Programme Venue

Concert

Bethlehem Chapel / Betlémská kaple
Betlémské náměstí 255/4, 110 00 Prague 1

Take metro line B (yellow) from station “Vysočanská” to station “Můstek” (7 stops). The journey takes approximately 12 minutes.
Conference Dinner

Municipal House / Obecní dům
Náměstí Republiky 1090/5, 110 00 Prague 1

Take metro line B (yellow) from station “Vysočanská” to station “Náměstí Republiky” (6 stops). The journey takes approximately 10 minutes.

The Municipal House is located about 100 metres from the “Náměstí Republiky” metro station.
Committees

Organising Committee

• Martin Braniš (chair)
• Pavel Moravec
• Ludmila Mašková
• Pavel Mikuška
• Jakub Ondráček
• Naděžda Slezačková Zíková
• Petr Vodička

Programme Committee

• Jiří Smolík (chair)
• Vladimír Havránek
• Zdeněk Kožišek
• Jaroslav Schwarz
• Zbyněk Večeřa
• Vladimir Ždímal

International Advisory Committee

• Lucas Alados Arboledas
• Christoph Asbach
• Ari Asmi
• George Biskos
• Andrei Bologa
• David Broday
• Jeroen Buters
• Ian Colbeck
• Aladar Czitrovszky
• Yannis Drossinos
• Ian Ford
• Martin Gysel
• Regina Hitzenberger
• Yoshi Inuma
• Martina Krämer
• Mihalis Lazaridis
• Willy Maenhaut
• Francois-Xavier Ouf
• Manabu Shiraiwa
• Olli Sippula
• Wendelin Stark
• Birgit Wehner
• Sabine Wurtzer
• Caner Yurteri
The European Aerosol Assembly

The European Aerosol Assembly (EAA) is the organisation which has the responsibility to plan for the future hosting of European Aerosol Conferences, as well as to promote the development of the field of aerosol science through its working groups. It consists of 12 national or regional societies across Europe, though membership of these societies is not limited to European nationals, and operates under a formal constitution. The major activity of the EAA and its working groups takes place at the European Aerosol Conference, held in three out of every four years (the missing year being that in which the International Aerosol Conference, an event designed to foster links between research communities in all regions of the world, is held).

The Czech Aerosol Society

The Czech Aerosol Society (CAS) was formed in 1999 from the former Working Group on Aerosol Research of the Czech Society of Chemical Engineering at the occasion of the European Aerosol Conference held in Prague in 1999. As given in its constitution the Society maintains a forum of researchers from various Czech Institutions and Universities in order to:

- promote collaboration in all areas of aerosol research
- promote by means of meetings and publications the spread of information between the members and the public
- support education in aerosol related fields at all levels
- support international co-operation
General Information

Conference Venue

The European Aerosol Conference 2013 is held at the Clarion Congress Hotel Prague represents a four-star comfort hotel with modern congress center and is easily accessible by all means of transport - the Old Town can be reached within 10 minutes.

Transport to the Conference Venue

By taxi

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA Radiotaxi</td>
<td>+420 222 333 222, +420 729 331 133</td>
</tr>
<tr>
<td>CITY taxi</td>
<td>+ 420 257 257 257</td>
</tr>
<tr>
<td>Taxi PRAHA</td>
<td>+ 420 222 111 000</td>
</tr>
</tbody>
</table>

The maximum prices for taxi services in the district of the capital city of Prague:

<table>
<thead>
<tr>
<th>Service</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ride in the district of the capital city of Prague</td>
<td>28,- CZK/km</td>
</tr>
<tr>
<td>Boarding fee</td>
<td>40,- CZK</td>
</tr>
<tr>
<td>Waiting time</td>
<td>6,- CZK/min</td>
</tr>
</tbody>
</table>

A typical taxi fares:

- From the Conference Venue to the city centre: 10-15 EUR
- From the Conference Venue to the Prague airport: 25-30 EUR

By metro

Clarion Congress Hotel is located next door to Vysočanská metro station (yellow line B):

<table>
<thead>
<tr>
<th>Ticket Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic ticket (90 mins)</td>
<td>32,- CZK</td>
</tr>
<tr>
<td>Short-term ticket (30 mins)</td>
<td>24,- CZK</td>
</tr>
<tr>
<td>1 day (24 hrs) ticket</td>
<td>110,- CZK</td>
</tr>
<tr>
<td>3 days (72 hrs) ticket</td>
<td>310,- CZK</td>
</tr>
</tbody>
</table>

Each fully registered participant will obtain FREE PASS FOR PRAGUE PUBLIC TRANSPORTATION valid for the period of September 1 – 6, 2013 together with registration materials at the registration desk.
Name Badges
Upon registration you will receive a name badge which should be worn at all conference sessions including social events.

Lunch, Coffee, Tea and Snacks
Coffee breaks will be served in the foyer of conference rooms (incl. in the registration fee). Lunches will be served in the hotel restaurant (tickets available at the registration desk). There are several other restaurants at the food court of the adjacent shopping mall Pheonix.

Internet
A Wi-Fi internet connection is available throughout the conference rooms.

Currency
The official currency of the Czech Republic is the Czech Crown = Česká koruna (CZK = Kč). Exchange of foreign currency is available at Prague international Airport and at most hotels, banks and exchange offices throughout the city. International credit cards are accepted for payments in hotels, restaurants and shops. Payment in cash in EUR is also available in some restaurants and shops, please ask for details on-site.

Drinking Water
Tap water is of good quality and can be consumed safely throughout the city. Bottled mineral and spring water is available in shops and restaurants.
Conference Information

Registration desk
Registration and information desk will be open at the conference floor of the Clarion Congress Hotel Prague as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday September 1</td>
<td>10:00-21:00</td>
</tr>
<tr>
<td>Monday September 2</td>
<td>08:00-18:00</td>
</tr>
<tr>
<td>Tuesday September 3</td>
<td>08:30-18:00</td>
</tr>
<tr>
<td>Wednesday September 4</td>
<td>08:30-13:30</td>
</tr>
<tr>
<td>Thursday September 5</td>
<td>08:30-17:00</td>
</tr>
<tr>
<td>Friday September 6</td>
<td>08:30-14:00</td>
</tr>
</tbody>
</table>

Contact details

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency number to the registration desk</td>
<td>+420 606 918 277</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:eac2013@cbttravel.cz">eac2013@cbttravel.cz</a></td>
</tr>
</tbody>
</table>

Exhibition
The exhibition is situated in the congress foyer of the Clarion Congress hotel, close to all meeting activities such as scientific sessions, poster exhibition, registration and coffee breaks and will be open to all participants throughout the duration of the conference.
Social Programme

Welcome Reception
Included in the registration fee.

Date: Sunday, September 1
Venue: Foyer of the Clarion Congress hotel
Time: 19:00

Concert
Included in the registration fee.

Date: Monday, September 2
Venue: Bethlehem Chapel / Betlémská kaple
Address: Betlémské náměstí 255/4, 110 00 Prague 1
Time: 19:00

Bethlehem Chapel is located in the heart of Prague, the Old Town district. It was built as a holy place where sermons could be held in Czech. Jan Hus - university professor and Czech religious reformer - preached there between 1402 and 1413. As he was also the Rector of Charles University, it is believed that the Chapel was linked to this institution.

Conference Dinner

Date: Thursday, September 5, 2013
Venue: Municipal House / Obecní dům
Address: Náměstí Republiky 1090/5, 110 00 Prague 1
Time: 19:30
Price: 70€ per person (tickets available at the registration desk)

The dinner will be served in a buffet style.

The Municipal House, a national cultural landmark, is among the most significant Art Nouveau buildings in Prague. It is located in the very centre of Prague, directly neighbouring the Powder Gate.

The most significant Czech painters and sculptors of the time participated in the decoration of the Municipal House. That list included: Jan Preisler, Mikoláš Aleš, Max Švabinský, František Ženíšek, Ladislav Šaloun, Josef Mařatka, Josef Václav Myslbek, Alfons Mucha.
Meetings

Monday, September 2nd

12:50-14:00    GAeF Board Meeting
18:00   Elsevier Board Meeting

Tuesday, September 3rd

12:50-14:00    IARA Meeting
18:00    GAeF General Assembly Meeting
18:00    Working Group Meetings

Wednesday, September 4th

12:50-14:00    EAA Board Meeting
afternoon    HEXACOMM
13:00-18:00    ACTRIS ACSM/AMS meeting

Thursday, September 5th

12:50-14:00    EAA Working Group Chairs Meeting

Friday, September 6th

13:00-18:00    ACTRIS ACSM/AMS meeting
EAA Working Group Meetings

The purpose of these meetings is to discuss general matters within the various topic areas to help plan future events, particularly the next EAC. All delegates are welcome.

Tuesday, September 3rd, 18:00, the following groups will meet at the Meridian Hall.

WG 1 Aerosol-based Nanotechnology
WG 2 Aerosol Chemistry
WG 3 Aerosol Modelling
WG 4 Atmospheric Aerosols - Aerosol Processes and Properties
WG 5 Atmospheric Aerosols - Specific Aerosol Types
WG 6 Electrical Effects
WG 7 Fundamentals
WG 8 Combustion Aerosols
WG 9 Indoor and Working Place Aerosols
WG 10 Instrumentation
WG 11 Particle-Lung Interactions
WG 12 PMx

Assembly

GAeF General Assembly will meet on Tuesday, September 3rd, 18:00, at the Aquarius & Taurus Hall.
Presentation Information

Abstracts
All abstracts will be published in electronic form and distributed to participants on USB memory key.

Instructions for Oral Presentations
Every speaker is entitled to speak for 20 minutes, including questions and answers. Due to the very tight schedule, we kindly ask that you respect these time limitations.

How to upload your oral presentation
All presentations should be brought to the Speaker’s Preview Room /QUADRANT/ any time during the official hours but at the least 2 hours before the section starts (or the day prior when your session is scheduled in the morning) or in the conference room one hour before your presentation.

A qualified technician will help you to upload your presentation to our system. Please use the USB key or CD / DVD-Rom. Speaker Preview Room opening times are the same as operating times of the registration desk.

Speaker's Preview Room opening times:

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday, September 1</td>
<td>10:00-21:00</td>
</tr>
<tr>
<td>Monday, September 2</td>
<td>08:00-18:00</td>
</tr>
<tr>
<td>Tuesday, September 3</td>
<td>08:30-18:00</td>
</tr>
<tr>
<td>Wednesday, September 4</td>
<td>08:30-18:00</td>
</tr>
<tr>
<td>Thursday, September 5</td>
<td>08:30-17:00</td>
</tr>
<tr>
<td>Friday, September 6</td>
<td>08:30-14:00</td>
</tr>
</tbody>
</table>

Instructions for oral reserve presentations
Oral reserve presentations are poster presentations that will also be offered a slot for oral presentation should a vacancy become available. Presenters should check with chairs at the start of the relevant oral session.
Poster Sessions Schedule

Posters will be located at the hall Zenit and Nadir. Participants are kindly asked to display and also take down their poster according to this poster session schedule. For those who will not take down their poster on time please come to Quadrant room where they will be kept for you during the time of the conference. Presenting authors are kindly asked to be available to present their posters during the poster sessions time schedule.

**Poster Session A:**
*Atmospheric Aerosols*

- **Days:** Sunday, September 1 - Monday, September 2
- **Time to display:** Sunday evening
- **Time to uncover:** Monday evening
- **Presentation time:** Monday, 16:00-18:00

**Poster Session B:**
*Aerosol Chemistry, Aerosol Modelling, Aerosol-based Nanotechnology, Combustion Aerosols*

- **Days:** Tuesday, September 3 - Wednesday, September 4
- **Time to display:** Tuesday morning
- **Time to uncover:** Wednesday evening
- **Presentation time:** Tuesday, 16:00-18:00

**Poster Session C**
*Electrical Effects, Fundamentals, Indoor Working Place Aerosols, Instrumentation, Particle-Lung Interactions, PMx*

- **Days:** Thursday, September 5 - Friday, September 6
- **Time to display:** Thursday morning
- **Time to uncover:** Friday up to 12 o’clock
- **Presentation time:** Thursday, 16:00 - 18:00

**Late Posters**

Late posters will be displayed according to their topics and will be located at the poster area (room Zenit and Nadir) as per poster sessions schedule.
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+ High resolution 1% accuracy
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or contact:
AnswersEU@tsi.com
# Programme Overview

## Sunday, September 1\textsuperscript{st}

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00-21:00</td>
<td>Registration</td>
</tr>
<tr>
<td>19:00</td>
<td>Welcome Reception, Exhibition Opening</td>
</tr>
</tbody>
</table>

## Monday, September 2\textsuperscript{nd}

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-18:00</td>
<td>Registration</td>
</tr>
<tr>
<td>8:45-9:00</td>
<td>Opening Ceremony, A (Meridian)</td>
</tr>
<tr>
<td>9:00-10:00</td>
<td>Plenary lecture: Merete Bilde - Aerosol particles in the marine environment, A (Meridian)</td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Coffee break</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30-12:50</td>
<td>Atmospheric Aerosols</td>
</tr>
<tr>
<td>12:50-14:00</td>
<td>Lunch, GAeF Board Meeting</td>
</tr>
<tr>
<td>14:00-16:00</td>
<td>Aerosol Modelling</td>
</tr>
<tr>
<td>16:00-16:30</td>
<td>Coffee break</td>
</tr>
<tr>
<td>16:00-18:00</td>
<td>Poster Session A - Authors' Presentations</td>
</tr>
<tr>
<td>18:00</td>
<td>Elsevier Board Meeting</td>
</tr>
<tr>
<td>19:00</td>
<td>Concert</td>
</tr>
</tbody>
</table>
### Tuesday, September 3rd

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-18:00</td>
<td>Registration</td>
</tr>
<tr>
<td>9:00-10:00</td>
<td>Plenary lecture: Ruprecht Jaenicke - Primary Biological Atmospheric Aerosols, A (Meridian)</td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Coffee break</td>
</tr>
<tr>
<td>10:30-12:50</td>
<td>A: Atmospheric aerosols, B: Atmospheric aerosols, C: Aerosols chemistry, D: Indoor and Working Place Aerosols, E: Instrumentation, F: PMx (Special session)</td>
</tr>
<tr>
<td>12:50-14:00</td>
<td>Lunch, IARA Meeting</td>
</tr>
<tr>
<td>14:00-16:00</td>
<td>A: Aerosol modelling, B: Combustion Aerosols, C: PMx, D: Aerosol-based Nanotechnology, F: –</td>
</tr>
<tr>
<td>16:00-16:30</td>
<td>Coffee break</td>
</tr>
<tr>
<td>16:00-18:00</td>
<td>Poster Session B - Authors' Presentations</td>
</tr>
<tr>
<td>18:00</td>
<td>Working Group Meetings, GAeF General Assembly Meeting</td>
</tr>
</tbody>
</table>

### Wednesday, September 4th

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-13:30</td>
<td>Registration</td>
</tr>
<tr>
<td>8:45-9:45</td>
<td>Plenary lecture: Lidia Morawska - The Dynamics of Indoor Aerosol: what is important, where, when and why?, A (Meridian)</td>
</tr>
<tr>
<td>9:45-10:00</td>
<td>Smoluchowski Award, A (Meridian)</td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Coffee break</td>
</tr>
<tr>
<td>12:50-14:00</td>
<td>Lunch, EAA Board Meeting</td>
</tr>
<tr>
<td>14:00</td>
<td>Free Afternoon</td>
</tr>
</tbody>
</table>
# Thursday, September 5th

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-17:00</td>
<td>Registration</td>
</tr>
<tr>
<td>9:00-10:00</td>
<td>Plenary lecture: Paul E. Wagner - Nucleation of vapours - molecular content of critical clusters and activation of nanoparticles, A (Meridian)</td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Coffee break</td>
</tr>
</tbody>
</table>
| 10:30-12:50  | **A** (Meridian): Atmospheric aerosols  
**B** (Leo + Virgo): Atmospheric aerosols  
**C** (Aquarius + Taurus): Combustion Aerosols  
**D** (Kepler): Electrical Effects  
**E** (Tycho): Fundamentals  
**F** (Stella): — |
| 12:50-14:00  | Lunch, EAA Working Group Chairs Meeting                               |
| 14:00-16:00  | **A** (Meridian): Atmospheric aerosols  
**B** (Leo + Virgo): Aerosol chemistry  
**C** (Aquarius + Taurus): PM10  
**D** (Kepler): Combustion Aerosols  
**E** (Tycho): Aerosol modeling, Atmospheric aerosols (Special session)  
**F** (Stella): Particle-Lung Interactions |
| 16:00-16:30  | Coffee break                                                          |
| 16:00-18:00  | Poster Session C - Authors’ Presentations                             |
| 19:30        | Conference Dinner                                                    |

# Friday, September 6th

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-14:00</td>
<td>Registration</td>
</tr>
<tr>
<td>9:00-10:00</td>
<td>Plenary lecture: Imre Salma - Urban aerosol: tendencies and challenges, A (Meridian)</td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Coffee break</td>
</tr>
</tbody>
</table>
| 10:30-12:50  | **A** (Meridian): Atmospheric aerosols  
**B** (Leo + Virgo): Atmospheric aerosols  
**C** (Aquarius + Taurus): Aerosols chemistry  
**D** (Kepler): Fundamentals  
**E** (Tycho): Particle-Lung Interactions  
**F** (Stella): — |
| 12:50-14:00  | Lunch                                                                 |
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contact@grimm-aerosol.com

www.GRIMM-aerosol.com
Programme

Sunday, September 1st

10:00-21:00 Registration
Room: Conference foyer

19.00 Welcome Reception, Exhibition Opening
Room: Conference foyer
Monday, September 2nd

8:45-9:00 Opening Ceremony
Room: A (Meridian)

9:00-10:00 Plenary lecture: Aerosol particles in the marine environment
Plenary speaker: Merete Bilde
Plenary chairs: Regina Hitzenberger, Ilona Riipinen
Room: A (Meridian)

10:00-10:30 Coffee break
Room: Conference foyer

10:30-12:50 Session: Atmospheric Aerosols
Remote sensing and optical properties of aerosols
Chairs: Lucas Alados Arboledas, Arnaud Apituley
Room: A (Meridian)

10:30-10:50 Relationship between oxidation level and optical properties of secondary organic aerosol
A. T. Lambe, C. D. Cappa, P. Massoli, T. B. Onasch, S. D. Fierstien, A. T. Martin, M. J. Cummings,
D. R. Coe, D. W. Brune, D. R. Worsnop, P. Davidovits

10:50-11:10 Satellite and ground-based retrievals of aerosol optical properties in Arctic (2003-2011)

11:10-11:30 iSPEX: First Results of Aerosols Measured by Smartphones in The Netherlands
A. Apituley, iSPEX team

11:30-11:50 Operational boundary layer height determination with in-situ and ground-based remote sensing instruments: validation and first climatology on the Swiss plateau
C. Praz, M. Collaud Coen, A. Haeffele, D. Ruffieux

11:50-12:10 Assessment of parameterizations of optical properties and hygroscopic growth of aerosols
A. R. Esteve, E. J. Highwood, W. T. Morgan, H. Coe, R. G. Grainger, P. Brown, C. L. Ryder,
K. Szpek, J. A. Martinez-Lozano

12:10-12:30 The optical properties of aerosols in Amazonia: from natural biogenic to biomass burning particles
Paulo Artaxo, Xuguang Chi, Henrique M. J. Barbosa, Luciana V. Rizzo, Andrea Anana, Joel F. Brito,
Elisa T. Seira, Joel Schoefer, Meinrat O. Andreae

12:30-12:50 In-situ absorption measurement of HULIS and mineral dust components as well as winter time ambient aerosol using multi-wavelength photoacoustic instrument. A laboratory and a field study
T. Atai, N. Utmy, A. Filep, Z. Bozoki, G. Szabó

Reserve paper Black carbon aerosol concentrations and mixing state in Pallas, Finland
T. Roatikainen, D. Brus, A.-P. Hyvärinen, J. Svensson, H. Liljaveinen
10:30-12:50  **Session: Atmospheric Aerosols**  
**SOA and aerosol hygroscopicity**  
Chairs: U. Baltensperger, M.R. Alfarra  
Room: B (Leo+Virgo)

10:30-10:50  **Vapour pressures of substituted polycarboxylic acids are much lower than previously reported**  
A. J. Huisman, U. K. Krieger, A. Zuend, C. Marcolli, Th. Peter

10:50-11:10  **Investigation of the effects of chemical and physical factors on the phase state of SOA particles**  

11:10-11:30  **Impact of semi-volatiles on hygroscopic growth and CCN activity of secondary organic aerosol**  

11:30-11:50  **A new inlet for simultaneous gas and particle phase measurements coupled to a chemical ionisation high-resolution time-of-flight mass spectrometer**  
C. Mohr, F. Lopez-Hilliker, B. H. Lee, D. S. Covert, D. R. Worsnop, J. A. Thornton

11:50-12:10  **Gas and Particle Phase Acids in a Ponderosa Pine Forest**  

12:10-12:30  **Hygroscopic Properties and Mixing state of Ultrafine Aerosol Particles over two Urban Background Sites**  
S. Bezantakos, E. Konstenidou, K. Florou, A. Bougiatioti, K. Eleftheriadis, N. Mihalopoulos, A. Nenes, S. Pandis, G. Biskos

12:30-12:50  **Profiling of hygroscopic properties during the Po-Valley PEGASOS campaign 2012**  
B. Rosati, E. Weingartner, P. Zieger, M. Gyulai, G. Wohlrle, U. Baltensperger

**Reserve paper**  
**Observations on atmospheric electricity and aerosol-cloud interactions**  
Hanna E. Manninen, Hannes Tammet, Antti Mäkelä, Jussi Haapalaisten, Sander Mirme, Tuomo Nieminen, Alessandro Franchin, Toukko Petäjä, Maskku Kulmala, Umas Hõrrak

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10:30-12:50  **Session: Aerosol Chemistry**  
**Chemistry of organic aerosols 1**  
Chairs: Ivan Kourtchev, Yoshi Iinuma  
Room: D (Kepler)

10:30-10:50  **Revisiting the formation of secondary organic aerosol from the photooxidation of anthropogenic precursors**  

P. Chhabra, A. Lambe, M. Canagaratna, H. Stark, P. Massoli, J. Kimmel, J. Jayne, D. Worsnop

11:10-11:30  **Time-resolved chemical composition of chamber generated SOA originated from monoterpene oxidation**  
A. Mutzel, O. Böge, A. Kahnt, Y. Iinuma, H. Herrmann

11:30-11:50  **Dependence of α-pinene secondary organic aerosol formation on relative humidity and aerosol surface distribution**  
11:50-12:10 **Characterization of secondary organic aerosol from ozonolysis of β-pinene**
Ågot K. Watne, Eva U. Emanuelsson, Anna Lutz, Evert Ljungström, Mattias Hallquist

12:10-12:30 **Formation of anthropogenic secondary organic aerosol (SOA) and its influence on biogenic SOA properties**

12:30-12:50 **Effect of Nucleation Precursors on the Atmospheric Oxidation of Organic Compounds**
J. Elm, M. Bilde, K. V. Mikkelsen

Reserve paper **Secondary organic aerosol formation in the ozonolysis of biogenic volatile organic compounds performed in a laminar flow reactor**
T. Braure, V. Riffault, A. Tomas, M. Duncianu, Y. Bedjanian, P. Coddeville

**Session: Indoor and Working Place Aerosols**

Indoor environment
Chairs: Ian Colbeck, Martin Braniš
Room: E (Tycho)

10:30-10:50 **Number concentration and modal Structure of indoor/outdoor fine particles in four European Cities**

10:50-11:10 **Spatial variation of air pollutants in a multilevel office building**
C. He, L. Moawska

11:10-11:30 **Effect of Anti-idling Campaign on the Outdoor and Indoor Aerosol Exposure at Schools**
S. A. Grinshpun, M. Yermakov, J. Y. Kim, T. Reponen, C. Shaffer, P. Ryan

11:30-11:50 **Exposure assessment to air pollutants in Elderly Care Centers**
Almeida-Silva, S. M. Almeida, H. T. Wolterbeek

11:50-12:10 **Exposure to ultrafine particles in indoor and outdoor school environments across Barcelona (Spain)**
M. Viana, I. Rivas, J. Sunyer, L. Baso, M. Álvarez, C. Siouras, X. Querol, A. Alastuey

12:10-12:30 **Sources, sinks, chemical composition and transport of aerosol particles in a university lecture hall**
I. Salma, K. Doszatsky, T. Borós, T. Weidinger, G. Kristof, N. Pöte, Zs. Kertész

12:30-12:50 **The effect of size, location, occupancy and microclimatic factors on air quality of university lecture rooms**
M. Branis, K. Stupkova

Reserve paper **Particulate Matter in Indoor Air in two Schools in Vienna, Austria**
A. Kasper-Giebl, N. Jankowski, K. Kassin, E. Can Cetintas, H. Bauer, H. Grothe

**Session: Instrumentation**

New techniques
Chairs: Martin Fierz, Christof Asbach
Room: F (Stella)

10:30-10:50 **A fast-scanning DMA train for the precision quantification of nanoparticle dynamics**
P. M. Winkler, J. Ortega, P. H. McMurry, J. N. Smith
10:50-11:10 **Fast scanning mobility particle sizing system and classifier**  
J. Farnsworth, F. Quant, H-G. Horn, B. Osmondson, R. Caldow

11:10-11:30 **A Drift Tube Ion Mobility Spectrometer (DT-IMS) combined with a Condensation Particle Counter for Analysis of Sub 10 nm Aerosol Particles**  
Derek R. Oberreit, Peter H. McMurry, Christopher J. Hogan Jr.

11:30-11:50 **A new version of the Particle Size Magnifier for detection of airborne molecular clusters and nano-particles as small as 1 nm**  
K. Lehtipalo, A. Franchin, J. Mikkila, J. Vanhanen, J. Kangasluoma, T. Petaja, M. Kulmala

11:50-12:10 **First results of a new Gas Aerosol Nucleation Spectrometer: GANS**  
P. Dohányosová, E. Montoya, E. Romiro, S. López-Vidal

12:10-12:30 **The versatile Size Analyzing Nuclei Counter (vSANC)**  
T. Pinterich, P. M. Winkler, P. E. Wagner, M. Kulmala, A. Vrtala

12:30-12:50 **Charging efficiency of the single-wire corona unipolar charger with radial sheath flow**  
V. Wattanamekhinkul, C.L. Chein, C.J. Tsai

Reserve paper **Application of broadband optical cavity methods to studying the optical properties of aerosols at short wavelengths**  
E. M. Wilson, J. C. Wenger, D. S. Venables

**Special Session: PMx**

**Source apportionment-AMS and carbon based**  
Chairs: André S. H. Prévôt, Regina Hitzenberger  
Room: C (Aquarius+Taurus)

10:30-10:50 **ME-2 analysis of long-term on-line mass spectrometric data of non-refractory submicron aerosol in the city of Zurich**  

10:50-11:10 **A Year-long C-TOF-AMS Dataset in London: Investigating Chemical Composition, Seasonal Trends and Sources of Aerosols**  
D. E. Young, J. D. Allen, D. C. Green, P. I. Williams, H. Coe

11:10-11:30 **Primary and secondary organic aerosol origin by combined gas-particle phase source apportionment**  

11:30-11:50 **Long-term monitoring, chemical composition and source apportionment study of PM2.5 in Augsburg, Germany**  

11:50-12:10 **Composition and Source Identification of Ambient Single Particles during the NANO-INDUS 2012 Campaign in Dunkirk, France**  

12:10-12:30 **Radiocarbon-based source apportionment of elemental carbon and organic carbon at a regional background site on Hainan Island, South China**  
Y. L. Zhang, J. Li, G. Zhang, A. S. H. Prévôt, S. Szidat

12:30-12:50 **Wood-burning emissions within a continuous-flow photooxidation reactor: Soot-Particle Aerosol Mass Spectrometer characterization**  
J. C. Corbin, A. Keller, H. Burtscher, B. Sierau, U. Lohmann, A. A. Mensah

Reserve paper **Micromarkers of source-specific combustion aerosols**  
O. B. Popovicheva, E. D. Kineva, H. M. Persiander
14:00-16:00 **Session: Instrumentation**  
*Combustion aerosol and chemical measurements*

**Chairs:** Markus Pesch, Michal Vojtíšek-Lom  
**Room:** B (Leo+Virgo)

**14:00-14:20**  
*Measurement of chemisorption on metallic nanoparticles using aerosol photoemission spectroscopy*  
S. Onel, M. Seipenbusch

**14:20-14:40**  
*Validation of an online, real-time, soft photon ionisation (SPI) time of flight mass spectrometer for mainstream tobacco smoke analysis*  
J. Hawke, M. Bente Von Frowein

**14:40-15:00**  
*An accurate, real-time and low-cost method to measure biomass smoke*  
Yungang Wang, Daniel L. Wilson, Philip K. Hopke, Ashok J. Gadgil

**15:00-15:20**  
*Multi-wavelength characterization of carbonaceous aerosol*  
P. Prati, V. Ariola, V. Bernardoni, M.C. Bove, G. Calzolai, M. Chirri, F. Lucarelli, D. Massabò, S. Nova,  
A. Piazzalunga, G. Valli, R. Vecchi

**15:20-15:40**  
*Characterization of Black Carbon concentration, sources and age using an Aethalometer AE33*  

**15:40-16:00**  
*Hyphenation of a Thermal/Optical Carbon Analyzer to photo-ionization mass spectrometry for determination of the organic content of aerosol particles*  
T. Streibel, J. Grabowsky, J. C. Chow, J. G. Watson, R. Zimmermann

**Reserve paper**  
*Organic aerosol speciation with in-situ thermal desorption gas chromatography: a brief history of the TAG instrument*  
N. M. Kreisberg, S. V. Hering, A. P. Teng, G. Isaacman, Y. Zhao, D. R. Worton, A. W. H. Chan, B. J. Williams,  
D. R. Worsnop, A. H. Goldstein

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14:00-16:00 **Session: Aerosol Modelling**  
*Models for aerosol emission and nucleation*

**Chairs:** Sabine Wurzler, Michael Bay  
**Room:** A (Meridian)

**14:00-14:20**  
*Contribution of ion-assisted nucleation to new particle formation in a tropical boundary layer*  

**14:20-14:40**  
*The role of sulphuric acid in the formation of atmospheric particles based on a long-term explicit modelling approach*  
M. Bay, L. Zhou, D. Mogensen, A. Sagachev, S. Smolander

**14:40-15:00**  
*Hydration of Sulfuric Acid Clusters and the Impact of Bases*  
H. Henschel, I. K. Ortega, O. Kupiainen, T. Olenius, T. Kurten, H. Vehkamäki

**15:00-15:20**  
*Simulations of SOA formation from alpha-pinene ozonolysis and photo-oxidation in chamber experiments*  
G. Capes, D. Lowe, G. McFiggans

**15:20-15:40**  
*Effects of electric vehicles on air quality in street canyons*  
T. Schollhammer, F. Lommes, T. Schulz, H. Hebbinghaus, S. Wurzler
15:40-16:00 Remapping of aerosol emissions in a modal models as a source of error

Reserve paper Impact of biogenic emissions on PM2.5 concentration over Europe
E. Tanganis, R. E. P. Satinopoulou, N. Goumaris, S. Andronopoulou, D. Vlachogiannis

14:00-16:00 Session: Combustion Aerosols
Characterization methods of combustion aerosols
Chairs: F.X. Ouf, N. Ivleva
Room: C (Aquarius+Taurus)

14:00-14:20 Automatized determination of the primary particles size of soot aggregates by TEM image analysis
A. Bescond, I. Yon, C. Rozé, F. X. Ouf

14:20-14:40 Electrical Conductivity Measurements in Combination with Raman Microspectroscopy and Temperature Programmed Oxidation for Analysis of Microstructure and Reactivity of Soot
B. Grob, F. Knoller, N. P. Ivleva, R. Niessner

14:40-15:00 Aerosol mass spectrometry of refractory black carbon containing particles


15:20-15:40 Carbonaceous aerosols and variations in their light absorbing properties
C. Linke, I. Ibrahim, R. Hitzenberger, M. Schnaiter

15:40-16:00 Effective density of particles from different combustion conditions and engineered TiO2 nanoparticles

Reserve paper Dilution affects particle properties originating from residential biomass combustion

14:00-16:00 Session: PMx
Urban PMx
Chairs: Regina Hitzenberger, M. Van Poppel
Room: D (Kepler)

14:00-14:20 Road surface dust load is dependent on road surface macro texture
G. Blomqvist, M. Gustafsson, T. Lundberg

14:20-14:40 Evaluating the use of dust suppressant to control local PM10 concentrations
G. W. Fuller, B. Barratt, D. Carslaw, D. Green, A. H. Tremper

14:40-15:00 CHEMKAR PM10: A year-long chemical characterization of PM10 in Flanders (Belgium) in 4 major cities and 3 types of locations
J. Vercauteren, D. Roet, C. Matheeussen, E. Roekens, R. Vermeulen, W. Moenhout, M. Claesys
15:00-15:20 Non-exhaust PMx emissions from road traffic
M. Maasikmets, E. Teinemaa, T. Arumäe, V. Kimmel

15:20-15:40 Atmospheric particulate mercury in the megacity Beijing – spatio-temporal variations, sources, and efficiency of mitigation measures
N. J. Schleicher, J. Schäfer, G. Blanc, Y. Chen, F. Chai, S. Wang, S. Norra

15:40-16:00 Air Quality Study within Steel Works Town in the UK

Reserve paper Blue sky over the Ruhr – a review of the effectiveness of more than 50 years of air quality measures in Germany

14:00-16:00 Session: Aerosol-based Nanotechnology
Applications of engineered nanoparticles
Chairs: J. Davis, G. Biskos
Room: F (Stella)

14:00-14:20 Nanostructural engineering of Pt/C catalyst via spray drying for electrocatalyst applications
R. Balgis, G. M. Anilkumar, S. Sago, T. Ogi, K. Okuyama

14:20-14:40 Gas sensors by flame aerosol deposition: Correlations between blood glucose and breath components from portable gas sensors and mass spectrometry
M. Righetto, A. Schmid, A. Amann, S. E. Pratsinis

14:40-15:00 Aerosol synthesis of porous Particles for structured layers as catalyst support for Fischer-Tropsch reaction
I. Zeng, A. P. Weber

15:00-15:20 Optical heating of nanorods in a laser tweezers
P. B. Roder, B. E. Smith, P. J. Pauzauskie, E. J. Davis

15:20-15:40 Correlation between Catalytic Activity and Production of Reactive Oxygen Species for Airborne Engineered Palladium Nanoparticles
N. Neubauer, J. Palomaeki, H. Alenius, G. Kasper

15:40-16:00 Substance release kinetics of spherical and non-spherical hybrid nanoparticles generated by aerosol-photopolymerization
E. Akgün, M. Vranceanu, B. Sachweh, J. Hubbuch, M. Wörner

Reserve paper Industrial by-products as precursors for gas-phase nanoparticle synthesis
T. Karhunen, A. Löhde, T. Torvela, J. Jokiniemi

14:00-16:00 Special Session: Aerosol Chemistry
Radical chemistry and aerosol formation
Chairs: Thorsten Hoffman, Thomas Zeuch
Room: E (Tycho)

14:00-14:20 Partially oxidized radicals – crucial intermediates during atmospheric aerosol formation
J. Ahrens, P. M. Carlsson, C. Keenecke, M.-C. Maas, J. L. Wolf, T. Zeuch

14:20-14:40 Formation of organosulfates from the sulfate radical induced oxidation of methacrolein and methyl vinyl ketone
I. Schindelka, Y. Inuma, D. Hoffmann, H. Herrmann
14:40-15:00  **The oxidation of alpha-pinene and limonene in a flow tube, investigated using the CI-APi-TOF**  

15:00-15:20  **Ozonolysis of shikimic acid particles caught in the act**  

15:20-15:40  **Aerosol particles in molecular beams: pickup of molecules, chemistry and photochemistry**  
M. Fárník, V. Potrya, A. Pysanenko, J. Lengyel, J. Kočiček, J. Fedor

15:40-16:00  **Photoionization and infrared excitation of clusters with radical sites: Probing size and structure of neutral, sodium doped water clusters**  
C. C. Pradzynski, U. Buck, R. M. Forck, F. Zurheide, T. Zeuch

**Reserve paper** **Pressure dependency of ozonolysis product formation of α-pinene focusing on low volatile compounds such as organic acids and dimeric compounds**  
M. Beck, C. Keunecke, T. Zeuch, T. Hoffmann

16:00-16:30  **Coffee break**  
Room: Conference foyer

16:00-18:00  **Poster Session A - authors' presentations**

19:00  **Concert**  
Venue: Bethlehem Chapel
Tuesday, September 3rd

9:00-10:00 **Plenary lecture: Primary Biological Atmospheric Aerosols**  
Plenary speaker: Ruprecht Jaenicke  
Plenary chairs: Ian Colbeck, Andrei Bologa  
Room: A (Meridian)

10:00-10:30 **Coffee break**  
Room: Conference foyer

10:30-12:50 **Session: Atmospheric Aerosols**  
**Carbonaceous aerosols**  
Chairs: A. Petzold, U. Dusek  
Room: A (Meridian)

10:30-10:50 **Recommendations for the interpretation of “black carbon” measurements**  
A. Petzold, John A. Ogren

10:50-11:10 **Comparability of methods to measure black and elemental carbon in two European urban areas - site and seasonal similarities and differences**  

11:10-11:30 **Seasonal variations of black carbon physical properties influenced by different sources in London urban environment**  
Dantong Liu, James Allan, Michael Flynn, Dominique Young, Hugh Coe, Martin Gallagher

11:30-11:50 **Influence of vertical transport on the mixing state of black carbon at the high-alpine Jungfraujoch site**  
M. Gysel, M. Laborde, N. Bukowiecki, E. Hammer, P. Zieger, U. Baltensperger, E. Weingartner

11:50-12:10 **Fossil and non-fossil sources of OC and EC in Switzerland for winter-smog episodes**  

12:10-12:30 **Long-term variability of elemental and organic carbon in aerosols over Athens, Greece**  
D. Paraskevopoulos, E. Laskakou, E. Gerasopoulos, N. Mihalopoulos

12:30-12:50 **Influence of the traffic on the black carbon particle mass concentration and particle number size distribution in La Paz, Bolivia**  
A. Wiedensohler, K. Weinhold, M. Andrade, F. Yelarde, I. Moreno, F. Avila

**Reserve paper**  
**Long-term observations of carbonaceous aerosols and related gaseous emissions near a crude-oil plant in South Italy**  
M. Calvello, M. Lavoil, F. Esposto, L. Mangiamele, G. Pavese
10:30-12:50 Session: Atmospheric Aerosols

**New particle formation between ground and free troposphere**

*Chairs: Birgit Wehner, Michael Boy*

*Room: B (Leo+Virgo)*

10:30-10:50 **Secondary particle formation in Arctic Russia**
E. Asmi, V. Kondratyev, D. Brus, H. Lihavainen, T. Laurila, M. Aurela, T. Utro, V. Ivakhov, A. Makhtas

10:50-11:10 **New Aerosol Particle formation in Amazonia**

11:10-11:30 **Formation and chemical properties of nano-sized particles in the lower free troposphere**

11:30-11:50 **Enhancement in CCN concentrations during new particle formation events**

11:50-12:10 **NanoShip: Are there any new particle formation events over the North Sea?**

12:10-12:30 **Onset of new particle formation in boundary layer**

12:30-12:50 **Events of increased particle number concentrations around trade wind cumuli near Barbados**
B. Wehner, F. Ditas, A. Wiedensohler, H. Siebert

**Reserve paper**

**Characteristics of new particle formation events in Hungarian background air at K-puszta, 2008-2012**
Zs. Bécsi, Á. Molnár, K. Imre, P. P. Aalto

10:30-12:50 Session: Aerosol Chemistry

**Chemistry of organic aerosols 2**

*Chairs: Magda Claeys, Josef Dommen*

*Room: C (Aquarius+Taurus)*

10:30-10:50 **Novel smog chamber studies of wood burning emissions at low temperatures**

10:50-11:10 **Atmospheric reactivity of biomass burning emitted compounds: methoxyphenols OH rate constants and Secondary Organic Aerosol formation**

11:10-11:30 **Particle-bound Methoxyphenols and their atmospheric nitration products as wood combustion tracers**

11:30-11:50 **Aqueous-phase photochemical oxidation and direct photolysis of vanillin as a model compound of methoxy-phenols from biomass burning**
11:50-12:10  **Secondary organic aerosol formation through aqueous phase photooxidation of aromatic compounds**  Z. Kitanovski, I. Grgić, A. Čusak, M. Claeys

12:10-12:30  **Photosensitized reactions at the air-sea interface: a potential source of aerosol**  R. Ciuraru, F. Bernard, S. Rossignal, L. Fine, C. George


Reserve paper  **Contribution of Inorganic aerosols and trace gases due to biomass burning during cooking hours at a rural site in India**  Sudha Singh, Gyan Prakash Gupta, Bablu Kumar, U. C. Kulshrestha

10:30-12:50  **Session: Indoor and Working Place Aerosols**

**Workplace exposure**

Chairs: Congrong He, Kaarle Hameri
Room: D (Kepler)

10:30-10:50  **Nanoparticle Release from Dental Composites during Restoration Grinding and Polishing**  C. Asbach, B. Hellack, B. Von Meerbeek, M. Peumans, P. Hoet, M. Wiemann, T. A. J. Kuhlbusch, K. L. Van Landuyt

10:50-11:10  **Micro and nanoparticles released from the thermal cutting of polystyrene foams and the associated isomerization of hexabromocyclododecane (HBCD) diastereomers**  Y.-Y. Kuo, H. Zhang, A. C. Gerecke, J. Wang

11:10-11:30  **Mixed dust exposure and health risk assessment in the ceramics industry**  B. Mononi, D. Cappelletti, F. Scardazzo, S. Becagli, R. Traversi, R. Udisti


11:50-12:10  **Occupational exposure to ultrafine particles – work place measurements**  A.-K. Vittinen, A. J. Koivisto, T. Kanerva, K. Hämni

12:10-12:30  **The Use of Nuclepore Filter for Ambient and Workplace Nanoparticle Exposure Assessment**  Sheng-Chieh Chen, Jing Wang, Heinz Fissan, David Y.H. Pui

12:30-12:50  **Characterization and emission measurements of multi-walled carbon nanotube release during production**  L. Ludvigsson, C. Isaxon, P. T. Nilsson, M. Hedin, H. Tinnerberg, M. E. Messing, J. Risel, V. Skauig, A. Gudmundsson, M. Bohgard, J. Pagels

Reserve paper  **Particle characterization during abrasive treatment of composite material containing fibres by Cryo HRTEM**  K. I. Lieke, M. Levin, K. A. Jensen, I. K. Koponen
10:30-12:50 **Session: Instrumentation**

**Ambient aerosol instrumentation**

**Chairs:** Oliver Bischof, Wladyslaw Szymanski

**Room:** E (Tycho)

**10:30-10:50 Urban particulate matter monitoring on a mobile platform: a real time experiment on a long term scale**

B. Moroni, E. Scocchera, A. Piazzalunga, M. G. Ranalli, S. Castellini, D. Cappelletti

**10:50-11:10 A new aerosol conditioning system - Characterisation and first application**

M. Laborde, B. Rosati, P. Zieger, E. Petäjä, G. Kassell, D. Logan, E. Weingartner

**11:10-11:30 Particle number concentration monitor for atmospheric aerosols**

L. Hillemann, A. Zschoppe

**11:30-11:50 A new visual expansion-type Condensation Particle Counter**

B. Bühner, A. Wagner, A. Kürten, J. Curtius

**11:50-12:10 Development of a high volume air-into-liquid aerosol collector for PM2.5 and ultrafine particulate matter**

Dongbin Wang, Payam Pakbin, Arian Saffari, James Schauer, Constantinos Sioutas

**12:10-12:30 Online Method for Size-Resolved Chemical Speciation of Nano-Particles**

A. Wagner, A. Kürten, C. Fuchs, J. Hoker, J. Curtius

**12:30-12:50 Development of an automated total carbon analyzer for atmospheric aerosols**

Y. Komazaki, Y. Kanaya

Reserve paper **Remotely operated PLUS-octocopter used as an aerosol measurement platform**

P. Madl, C. Oberauer, F. Steinhäuser

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10:30-12:50 **Special Session: PMx**

**Source apportionment-intercomparisons and trends**

**Chairs:** Thomas Kuhlbusch, Willy Maenhaut

**Room:** F (Stella)

**10:30-10:50 European Intercomparison for Receptor Models Using a Synthetic Database**


**10:50-11:10 Ten-year study of fine aerosol at Sde Boker, Israel: time trends, seasonal variation, correlations, and source areas for anthropogenic elements**

W. Maenhaut, A. Karnieli, M. O. Andreae

**11:10-11:30 Impact of international shipping on European air quality**

M. Viana, A. Colette, J. van Aardenne, X. Querol, B. Degraeuwe, P. Hammingh, I. de Vlieger

**11:30-11:50 Hourly elemental composition and source identification of fine and coarse particulate matter in the high polluted industrial area of Taranto (Italy)**

F. Lucarelli, G. Calzolai, M. Chiari, S. Nova

**11:50-12:10 Source apportionment of size resolved particulate matter in European air pollution hot spot**

P. Pokorná, J. Hovorka, P. K. Hopke
Programme | Tuesday, September 3rd

12:10-12:30  A mass closure and source apportionment study on PM1 in Milan (Italy)
R. Vecchi, V. Bernardoni, M. Bonetti, M. Elser, P. Fermo, A. Piazzalunga, R. Gonzalez Turrion, G. Valli

12:30-12:50  Performance of the Chemical Mass Balance Model with Various Traffic Profiles
Pallavi Pant, Jianxin Yin, Roy M. Harrison

Reserve paper PMF source apportionment for fine and coarse PM in Athens, Greece: Evolution of source contributions over the last decade

12:50-14:00  Lunch break

14:00-16:00  Atmospheric Aerosols
New particle formation
Chairs: Amar Hamed, Vladimír Ždímal
Room: A (Meridian)

14:00-14:20  Role of organics in particle nucleation as viewed from a positive ion spectrometer
F. Bianchi, J. Dommen, J. Tröstl, S. Schobesberger, H. Junninen, D. R. Worsnop, E. Weingartner, U. Baltensperger, the CLOUD collaboration

14:20-14:40  Particle formation above natural and simulated salt lakes

14:40-15:00  Secondary aerosol formation from stress-induced biogenic emissions and possible climate feedbacks

15:00-15:20  Nanoparticle Growth Mechanisms During New Particle Formation
M. V. Johnston, B. R. Bzdek, A. J. Horan, J. W. DePalma

15:20-15:40  Comparative study of atmospheric particle formation using laboratory tools - COMPASS
T.S. Sun, B. Bonn

15:40-16:00  Estimating pre-existing aerosol effects on tropospheric aerosol production
M. Dal Maso, L. Liao, H. Vehkamäki, H.Korhonen, K. E. J. Lehtinen

Reserve paper Intercomparison of sulphuric acid measurements and neutral cluster composition in the lower free troposphere

14:00-16:00  Session: Aerosol Modelling
Modelling aerosols in different environments
Chairs: David Topping, Svetlana Tsyro
Room: B (Leo+Virgo)

14:00-14:20  CFD prediction of the spatial distribution of particulate matter deposition indoors
J. Grau-Bové , L. Mazzei , M. Stilić

14:20-14:40  Correction of approximation errors with random forests applied to modelling of aerosol first indirect effect
A. Lipponen, V. Kolehmainen, S. Römköniemi, H. Kokkola
14:40-15:00  A simplified model to predict partitioning between the vapour and multiple condensed phases in mixed inorganic-organic aerosol particles
D. Topping, G. McFiggans, M. Barley

15:00-15:20  Wall losses of vapours distort yield calculations in SOA chamber experiments

F. Couvidat, K. Sartelet

15:40-16:00 Numerical studies of aerosol activation behaviour in warm clouds compared to in-situ measurements at the high-alpine site Jungfraujoch

Reserve paper Dependence of Aircraft Smoke Number on Black Carbon Size Distribution
M. E. J. Stettler, J. J. Swanson, A. M. Boies

14:00-16:00 Session: Combustion Aerosols
Combustion and industrial aerosols
Chairs: A. Bologa, S. Grinshpun
Room: C (Aquarius+Taurus)

14:00-14:20 Sulphuric Acid Aerosol Formation in Industrial Processes – Simulation and CPC measurement at a Pilot Plant
L. Brachert, S. Sinanis, K. Schaber

14:20-14:40 Inactivation of Aerosolized Spores in Combustion Environments Using Filled Nano-composite Materials: Study with Two Surrogates of Bacillus Anthracis

14:40-15:00 Size distribution and light scattering properties of standard test fire aerosols

15:00-15:20 On-site estimation of secondary organic aerosol production potential from wood burning appliances
A. Keller, J. K. Carbin, A. A. Mensah, B. Sierau, H. Burtscher

15:20-15:40 Reference particles for toxicology studies of biomass combustion generated ash particles
T. Torvela, O. Uski, A. Lähde, J. Grigonyte, T. Karhunen, T. Koponen, M.-R. Hirvonen, J. Jakiniemi

15:40-16:00 Study of fine particle emissions from small scale wood chips combustion boiler
A. Bologa, M. Ecker, H.-P. Rheinheimer, K. Woletz, H.-R. Pour

Reserve paper Effects of severe congestion on PAH emissions from a heavy vehicle diesel engine
M. Vojtisek-Lom, M. Pechout, M. Mazač, J. Topinka

14:00-16:00 Session: Combustion Aerosols
Combustion and industrial aerosols
Chairs: A. Bologa, S. Grinshpun
Room: C (Aquarius+Taurus)
14:00-16:00  **Session: PMx**  
**Urban and regional PMx**  
Chairs: Willy Maenhaut, Roberta Vecchi  
Room: D (Kepler)

14:00-14:20  **EC/OC comparison exercise with same thermal protocols after temperature offsets correction**  
P. Panteliadis, T. Hafkenscheid, B. Cary, W. Maenhaut

14:20-14:40  **The fossil fraction of carbon in PM2.5: Variations on seasonal and diurnal time scales**  
U. Dusek, M. Monaco, A. Kappetijn, H. A. J. Meijer, S. Szidat, T. Röckmann

14:40-15:00  **Ultrafine particles at eight urban sites in Antwerp: instrument comparison and spatiotemporal variation in particle number concentration and size distribution**  

15:00-15:20  **Long term trend and weekly cycles of PM10 in the Po valley**  
A. Bigi, G. Ghermandi

15:20-15:40  **Fugitive particle emissions from steel making: source characteristics and local air quality impact investigated with a mobile laboratory**  
F. Drewnick, F. Freutel, S.-L. von der Weiden-Reinmüller, J. Fachinger, S. Bornmann

15:40-16:00  **Elemental composition and potential toxicity of airborne particles at some urban schools**  
L. R. Crilley, G. A. Ayoko, E. Stelcer, D. D. Cohen, L. Morawaska

Reserve paper **Characterisation of the aerosol sources in Brindisi (Italy) harbour area within the CESAPO project: an overview of the experimental results**  

14:00-16:00  **Session: Aerosol-based Nanotechnology**  
**Fabrication of nanostructured materials with aerosol nanoparticles**  
Chairs: E. Kruis, J. Rosell-Llompart  
Room: E (Tycho)

14:00-14:20  **Rapid synthesis of multi-layered & multi-functional polymer nanocomposite films**  
C. O. Blattmann, G. A. Sahriotis, S. E. Pratsinis

14:20-14:40  **Electrostatic charging during electrospray deposition of polymer granular coatings**  
E. Bodnár, N. Sochorakis, J. Grifoll, J. Rosell-Llompart

14:40-15:00  **Towards deposition of single layer graphene by an electrospray ion-assisted method**  

15:00-15:20  **Large-Area Patterning of Three-dimensional Nanoparticle Structure Arrays via Ion Assisted Aerosol Lithography (IAAL) and Multi-tip Spark Discharge**  
K.-Y. Ho, H.-S. Choi, K.-N. Jung, K.-H. Han, J.-K. Lee, M. Choi

15:20-15:40  **Silver-decorated silica nanoparticles in a multilayered plasmonic structure**  
J. Harra, M. Zdanowicz, M. Vinkki, A. Rantamäki, M. Hunkanen, G. Gentry, M. Kauvanen, J. M. Makela
15:40-16:00 **Aerosol synthesis of semiconductor nanowires**
M. Heurlin, M. H. Magnusson, D. Lindgren, M. Ek, L. R. Wallenberg, L. Samuelson, K. Deppert

Reserve paper **Dry deposition of electrosprayed liquid suspensions**
S. Martin, B. Martinez-Vazquez, P. L. Garcia-Ybarra, J. L. Castillo

16:00-16:30 **Coffee break**
Room: Conference foyer

16:00-18:00 **Poster Session B - authors' presentations**
Wednesday, September 4th

8:45-9:45  Plenary lecture: The Dynamics of Indoor Aerosol: what is important, where, when and why?
Plenary speaker: Lidia Morawska
Plenary chairs: Mihalis Lazaridis, Erik Swietlicki
Room: A (Meridian)

9:45-10:00  Smoluchowski Award
Room: A (Meridian)

10:00-10:30  Coffee break
Room: Conference foyer

10:30-12:50  Session: Atmospheric Aerosols
Physico-chemical properties and transport
Chairs: J. Ström, E. Weingartner
Room: A (Meridian)

10:30-10:50  Unmanned Aircraft Aerosol Sampling: Improvements in Capabilities and Sample Analyses
C. F. Cahill, G. W. Walker, T. A. Cahill, C. R. Iceman, D. E. Barnes

10:50-11:10  Aerosol mass spectrometry on a Zeppelin NT in the planetary boundary layer
F. Rubach, A. Trimborn T. F. Mentel, A. Wahner, PEGASOS O Zeppelin Team

11:10-11:30  Classification of aerosol size distributions observed at a tropical high altitude station
T. Hamburger, M. Matisans, J. Ström, P. Tunved, G. Hoschild, J. Gross, S. Calderon, P. Hoffmann,
T. Schmeissner, R. Krejci,

11:30-11:50  Chemical composition (ions and selected metals) of size-segregated aerosol samples collected at Ny Alesund (Svalbard Island - Norway) during the 2010 and 2011 summer campaigns
S. Becagli, M. Busetto, G. Calzolai, D. Cappelletti, D. Frosini, F. Lucarelli, A. Lupi, M. Mazzola, B. Moroni,
S. Nova, M. Severi, R. Traversi, A. Viola, V. Vitale, R. Udisti

11:50-12:10  Sub-micrometer non-refractory aerosol composition and their sources at Welgegund in the southern African grassland region
P. Tibbo, V. Valkari, M. Josipovic, P. Croteau, P. Brukes, P. Van Zyl, A. Venter, K. Joos, J. Piennar, S. Ng,
M. Canagaratna, J. Jayne, V. Kerminen, M. Kulmala, A. Lauronen, J. Jokiniemi, D. Worsnop, L. Laakso

12:10-12:30  Chemical composition of the 300°C refractory fraction of the atmospheric aerosol at the Central European station Melpitz, Germany/Leibniz Institute for Tropospheric Research
L. Poulain, W. Birmili, M. Crippa, Z. J. Wu, S. Nordmann, G. Spindler, A. S. H. Prévôt,
A. Wiedensohler, H. Herrmann

12:30-12:50  Seasonal and spatial variation of PM1 organic tracers in densely populated Mediterranean urban areas: Barcelona vs. Madrid
Reserve paper Winter particulate matter (PM10) sources for an Austrian-Slovenian border region  
M. Kralj, E. C. Cetintas, H. Bauer, A. Kasper-Giebl

10:30-12:50 Session: Atmospheric Aerosols

Urban aerosols-from particle counts to chemical composition  
Chairs: Gary Fuller, Thomas Kuhlbusch  
Room: B (Leo+Virgo)

10:30-10:50 Nanoparticle emissions from road vehicles in Asian and European cities and allied health implications  
Prashant Kumar, Roy M. Harrison,  
10:50-11:10 Long-term Variations of Particle Sources in Beijing, China  
J. Gu, S. Breitner, A. Schneider, M. Hui, Z. J. Wu, Z. B. Wang, A. Windenstaller, B. Wehner, U. Franck,  
J. Soentgen, A. Peters, J. Gyrys  
11:10-11:30 Road tunnels - particle properties, wet and dry conditions  
S. Jonhall, M. Gustafsson, S. Abbassi, G. Blomqvist, A. Godsmundsson, C. Johansson, M. Norman, U. Olufsson,  
B. Sjövall

11:30-11:50 Particle Number Size Distribution Statistics at Urban and Suburban Background and Remote Sites in Greece during Summer  
S. Vratolis, M. Gini, B. Siokouvaras, S. Beazey, G. Gevrekis, E. Kostanioudi, E. Louvaris,  
G. Briskas, N. Mihalopoulou, N. Pandis, C. Pilinis, K. Eleftheriadis

11:50-12:10 Highly time- and size-resolved measurements of trace elements in London during ClearfLo  
A. S. H. Prevot, U. Baltensperger

12:10-12:30 Exposure of schoolchildren to traffic-related air pollution: the HEAPS study  
Martine Van Poppel, Evi Dons, Luc Int Panis, S. De Prins, G. Koppen, Christina Matheeussen,  
Patrick Berghmans

12:30-12:50 Aerosol particles from smoking, cooking, and various pyrotechnical devices: laboratory characterization and detection in a football stadium  
P. Faber, F. Drewnick, S. Bormann

Reserve paper Exposure of air pollutants inside vehicles while driving in road tunnels  
S. Silvergren, M. Norman, C. Johansson, B. Sjövall

10:30-12:50 Session: Aerosol Modelling

Modelling atmospheric aerosols  
Chairs: Risto Makkonen, Ari Asmi  
Room: C (Aquarius+Taurus)

10:30-10:50 Linking climate change and air quality over Europe: Effects on aerosol concentrations  
A. G. Megaritis, C. Fountoukis, S. N. Pandis

10:50-11:10 Particle Number Concentrations over Europe in 2030: The Role of Emissions and New Particle Formation  
L. Ahlm, J. Julin, C. Fountoukis, S. N. Pandis, I. Rippin

11:10-11:30 Predictions of aerosol extinction coefficients over Greece by means of a new modular software system  
P. E. Charalampidis Haralabidis, C. Pilinis, C. Fountoukis, A. Panagiotopoulou, S. N. Pandis
11:30-11:50 Mitigation of Arctic warming by controlling European black carbon emissions (MACEB): modelling results

11:50-12:10 Modeling biogenic secondary organic aerosol formation in the subarctic

12:10-12:30 Taking the step from bulk to size-segregated aerosol description: Modelling of size distributions with the EMEP/MSC-W model
M. Karl, S. Tsyro

12:30-12:50 Contribution of primary emissions, secondary organic aerosol and nucleation on global aerosol number concentrations in NorESM
R. Makkonen, B. Soland, A. Kirkevåg, T. Iversen, J. E. Kristjánsson

Reserve paper Climate and biofuels in Brazil
H. Vuollekoski, R. Makkonen, A. Asmi, R. Hillamo, T. Petäjä, M. Kulmala

10:30-12:50 Session: Indoor and Working Place Aerosols

10:30-10:50 The Effects of Mainstream and Sidestream Environmental Tobacco Smoke Composition for Enhanced Condensational Droplet Growth by Water Vapor
X. Tang, Z. Zheng, H. S. Jung, A. Asa-Awuku

10:50-11:10 A study on SVOC aerosol evaporation and its possible implications on workplace sampling

11:10-11:30 Household products and indoor air quality: emission, reactivity and by-products in both gaseous and particulate phases

11:30-11:50 Personal monitor for engineered nanoparticles using a MEMS cantilever balance
S. Merzsch, H. S. Wasisto, I. Kirsch, A. Woog, E. Peiner, E. Uhde

11:50-12:10 Test of indoor air cleaners
B. Mølgaard, A. J. Koivisto, T. Hussein, K. Hämeri

12:10-12:30 Use of portable particle counters for the assessment of residential exposure to indoor-generated particles
A. Wierzbicka, G. Bekö, J. Toftum, G. Clausen

12:30-12:50 Chemical composition of hookah smoke derived aerosol measured with an Aerosol Chemical Speciation Monitor
P. L. Croteau, J. T. Jayne, D. R. Worsnop, T. Oh, C. DeForest Hauser

Reserve paper An experimental approach to measure particle deposition in large circular ventilation ducts
G. Da, E. Géhin, M. Ben-Othmane, M. Hovet, C. Solliec, C. Motzkus
**10:30-12:50 Session: Aerosol-based Nanotechnology**  
*Nanoparticle synthesis in the gas phase*  
Chairs: A. Schmidt-Ott, S. Pratsinis  
Room: E (Tycho)

**10:30-10:50**

**“Anti-agglomeration of spark discharge generated aerosols via unipolar air ions”**  
Kyu-Tae Park, Massoud Massoudi Farid, Jungho Hwang

**10:50-11:10**

**A Controlled Spark Generator for Increased Nanoparticle Production**  
T. V. Pfeiffer, P. Keijzer, A. Schmidt-Ott

**11:10-11:30**

**Experimental study on the transition from spark to arc discharge with respect to nanoparticle production**  

**11:30-11:50**

**Enclosed Flame Spray Pyrolysis: Control of Product Particle Characteristics by the Air Entrainment**  
O. Waser, S. E. Pratsinis

**11:50-12:10**

**Flame spray synthesis of amorphous Indium-Zinc Oxide (IZO) nanoparticles and their electrical and optical properties - towards an application in field effect transistors**  
D. Kilian, S. Polster, M.P.M. Jong, L. Frey, W. Peukert

**12:10-12:30**

**Parametric study of iron and iron-oxide nanoparticle synthesis via Aerosol Spray Pyrolysis**  
G. Kastrinaki, S. Lorentzou, G. Karagiannakis, A. G. Konstandopoulos

**12:30-12:50**

**Aerosol synthesis of silicon germanium hybrid and alloy nanoparticles**  
C. Mehringer, B. Butz, E. Spiecker, W. Peukert

**Reserve paper**  
**Synthesis of tailored organic-inorganic nanostructures by charge controlled coagulation**  
S. Sigmund, E. Akgün, J. Meyer, M. Wärmer, G. Kaspar

**10:30-12:50 Special Session: Particle-Lung Interactions**  
*Bioaerosols and health*  
Chairs: Jeroen Buters, Otto Hanninen  
Room: F (Stella)

**10:30-10:50**

**Daily values of bio-aerosols relevant in allergy: the biological exposome**  

**10:50-11:10**

**Association of fungal tracers with biomass burning activity in northern Vietnam**  
S. H. Chen, G. Engling

**11:10-11:30**

**Airborne influenza virus survival in the air environment**  
O. Pyankov, O. Pyankova, E. V. Usachev, I. E. Agranovski

**11:30-11:50**

**Toxicological effects of the particulate emissions from diesel engines and wood combustion are affected by used technology**  

**11:50-12:10**

**Long-term effects of repeated exposure to fine and ultrafine particles on lung epithelial cells and fibroblasts**  
L. Boublil, M. C. Bonot, L. Martinon, J. Sciare, A. Baeza-Squiban
12:10-12:30 Exposure and harm to combustion-derived particles: searching for biomarkers
K. A. BeruBe, I. A. Guschina, A. J. Wlodarcyzk, Z. Prytherch, T. Jones, E. Karg, O. Sippula

12:30-12:50 Studying the causes of health effects of combustion-derived aerosol in the framework of the HICE-Virtual Helmholtz Institute: First results on ship diesel and wood combustion aerosols

Reserve paper Aerosol Deposition Measurement in the Model of Human Lungs
F. Lizal, J. Jedelsky, J. Adam, M. Belka, M. Jicha

12:50-14:00 Lunch break
14:00 Free afternoon
Thursday, September 5th

9:00-10:00 Plenary lecture: Nucleation of vapours-molecular content of critical clusters and activation of nanoparticles
Plenary speaker: Paul E. Wagner
Plenary chairs: Ian Ford, Vladimír Ždímal
Room: A (Meridian)

10:00-10:30 Coffee break
Room: Conference foyer

10:30-10:50 Session: Atmospheric Aerosols
Aerosol cloud interaction
Chairs: Martin Gysel, Martina Krämer
Room: A (Meridian)

10:30-10:50 Evaporation and condensation of semivolatile aerosol compounds in the DMT-CCN counter
S. Romakkaniemi, A. Jaatinen, A. Laaksonen, A. Nenes, T. Raatikainen

10:50-11:10 Long-term hygroscopic properties of ambient aerosol in a boreal environment, as measured by the size-resolved Cloud Condensation Nuclei counter (CCNc)
M. Paramonov, M. Aijälä, P. P. Aalto, A. Asmi, H. Prisle, V.-M. Kerminen, M. Kulmala, T. Petäjä

11:10-11:30 Mass spectrometric analysis of cloud droplet residuals in different orographic clouds
J. Schneider, S. Mertes

11:30-11:50 What controls cloud droplet number concentration of trade wind cumuli?
F. Ditas, B. Wehner, H. Siebert, T. Schmeißner, M. Simmel, H. Wex, A. Wiedensohler

11:50-12:10 Size-dependent aerosol activation properties measured in radiation and stratus lowering fog during the ParisFog 2012/13 field campaign

12:10-12:30 Assessment of cloud maximum supersaturation by size-resolved CCN measurements

12:30-12:50 Comprehensive Investigations on the Ice Nucleation Efficiency of Natural Soil Dust Samples

Reserve paper
Effect of local pollutant sources on aerosol-cloud interactions at Puijo measurement station
10:30-10:50 Session: Atmospheric Aerosols
Turbulent exchange, transport and transformation
Chairs: Andreas Held, Birgit Wehner
Room: B (Leo+Virgo)

10:30-10:50 Natural surfactants promote the uptake of soot-particles in aerosols
T. Hede, C. Leck, L. Sun, Y. Tu, H. Ågren

10:50-11:10 Annual cycle of Background Aerosol at Troll Station, Antarctica
M. Fleibig, D. Hindman, C. R. Lunder, J. A. Ogren, A. Stohl

11:10-11:30 Monitoring ship emissions with continuous onshore SMPS measurements
N. Kivekäs, R. Lange, A. Massling, Q. T. Nguyen M. Glaccum, A. Kristensson

11:30-11:50 Analysis of particle size distribution changes between three measurement sites in Northern Scandinavia
Y. Visan, B. Svenningsson, T. Holst, A. Arneth, P. P. Aalto, M. Kulmu, V.-M. Kemminen

11:50-12:10 Airborne measurements of aerosol particle physical, optical and chemical properties in Finland
E. Asmi, D. Brus, S. Carbone, R. Hillamo, J. Hatakka, T. Lounila, H. Lihavainen, E. Rouhe,
S. Sannikaski, Y. Visanen

12:10-12:30 Annual measurement of size resolved particle fluxes in an urban environment
M. J. Deventer, O. Klemm, F. Gleibbaum

12:30-12:50 New methods to quantify the contributions of rainout, washout and dry deposition to the total deposition flux of atmospheric aerosol on horizontal urban surfaces
P. Lague, D. Aaro, P. Rousset, S. Perot, L. Solier, V. Ruban, M. Razet, D. Hébert, O. Connan

Reserve paper
Air mass back trajectories and dry atmospheric aerosol mass size distributions in Prague
J. Schwarz, L. Štefancová, W. Maenhaut, J. Smolík, V. Ždímal

10:30-10:50 Session: Combustion Aerosols
Engines related emissions
Chairs: J. Pagels, T. Rönkkö
Room: C (Aquarius+Taurus)

10:30-10:50 Oxidation reactivity of (bio)diesel generated soot
H. Bladt, N. P. Nono, R. Niessner

10:50-11:10 Can scooter emissions dominate urban organic aerosol?
I. El Haddad, S. M. Platt, A. A. Zardini, J. G. Slowik, M. Clairotte, C. Astorga, P. Barmet, R. Chirico,
J. Dommun, U. Baltensperger, A. S. H. Prévôt

11:10-11:30 Transformation of Black Carbon Aerosol in the Atmosphere – Observations from Smog Chamber Studies and Ambient Air
B. Svenningsson, E. Swietlicki

11:30-11:50 Effect of atmospheric ageing on volatility and ROS of biodiesel exhaust nano-particles
Almohammad Pourkhealian

11:50-12:10 Real-world nanoparticle emissions of passenger cars and heavy duty diesel vehicles
T. Rönkkö, L. Pirjo, P. Karjalainen, S. Saari, J. Keskinen
12:10-12:30 Chemical composition of particulate and gas emissions from a 4-stroke marine diesel engine operated with heavy and distillate fuel oils

12:30-12:50 Effects of secondary organic aerosols from gasoline exhaust on healthy and diseased respiratory epithelia

Reserve paper Characterisation of solid and semi-volatile gas-turbine particulate matter using a catalytic stripper
J. J. Swanson, T. J. Johnson, J. S. Offert, M. P. Johnson, P. I. Williams, G. J. Smallwood, A. M. Boies

10:30-10:50 Session: Electrical Effects

Electrical effects
Chairs: Andrei Bologa, Caner Yurteri
Room: D (Kepler)

10:30-10:50 Effects of induced gas flow on electrospray dynamics
A. K. Arumugham, Jordi Grifoll, Joan Rosell-Llompart

10:50-11:10 Reduction of fine particle emissions from small scale wood chips combustion boiler by use of compact electrostatic precipitator
A. Bologa, M. Ecker, H.-P. Rheinheimer, K. Woletz, H.-R. Pour

11:10-11:30 The formation of solid charged aerosol particles at the destruction of metal bodies and bodies of other materials
A. B. Vatazhin, D. A. Golentsov, V. A. Likhter

11:30-11:50 Generation of negative ion mobility standards using tetra-alkyl ammonium halide salts
G. Steiner, J. Kangasluoma, M. Breitenlechner, E. Canaval, M. Sipilä, A. Hansel, M. Kulmala

11:50-12:10 A New Effective Unipolar Charger for Calibration and Validation of Commercial Particle Number Measurement Systems
B. Grob, R. Niessner

12:10-12:30 The Unipolar Charging Rate and Bipolar Charge Distribution for Nonspherical Particles
Ranganathan Gopalakrishnan, Christopher J. Hogan Jr.

12:30-12:50 Bipolar diffusion charging of aerosol nanoparticles by means of AC-corona discharge and soft X-ray devices
P. Kallinger, W. W. Szymanski

Reserve paper Diurnal variation of small and large ion concentrations in an urban location
E. R. Jayaratne, X. Ling, L. Morawska

10:30-10:50 Session: Fundamentals

Nucleation theory and experiments
Chairs: Paul M. Wikler, Yannis Drossinos
Room: E (Tycho)

10:30-10:50 Nucleation in the Presence of Background Aerosol
Charles Clement

10:50-11:10 Numerical Investigation of the Effect of Hydrodynamic Mixing on Droplet Nucleation and Growth
A. O. Alshaarawi, G. Scribano, K. Zhou, A. Antil, F. Bisetti
11:10-11:30 Effect of Surface Energy Evolution on Particle Nucleation under GASP Conditions  
D. E. Rosner, M. Arias-Zugasti

11:30-11:50 A heterogeneous nucleation theory with explicit account of vapor adsorption  
A. Laaksonen

11:50-12:10 Heterogeneous Nucleation on Nanometer and Sub-Nanometer Sized Charged Atomic Clusters  
K. Barmpounis, A. Maisser, M. B. Attoui, G. Biskas, A. Schmidt-Ott

12:10-12:30 Heterogeneous nucleation of sulfur vapor on tungsten oxide and NaCl nanoparticles: Determination of the radius and the contact angle of critical nucleus  
S. V. Valiulin, V. V. Karasev, S. V. Vosel, A. A. Onischuk, A. M. Baklanov

12:30-12:50 A 19m deep well – a downward thermal diffusion cloud chamber?  
R. F. Holub, P. K. Hołpe, J. Hovorka, P. Otahal, V. Ždímal

Reserve paper Free energy barrier in the growth of sulfuric acid clusters  
T. Olenius, O. Kupiainen, J. K. Ortega, H. Vehkamäki

12:50-14:00 Lunch break

14:00-16:00 Session: Aerosol Chemistry  
Heterogeneous chemistry of aerosol  
Chairs: Manabu Shiraiwa, Barbara D'Anna  
Room: B (Leo+Virgo)

14:00-14:20 Heterogeneous reaction of sulphur dioxide on Eyjafjallajökull’s volcanic ash from the 2010 eruption  
Yoan Dupart, Laurence Burel, Pierre Delichere, Christian Geauge, Barbara D’Anna

14:20-14:40 Estimating amorphous deliquescence time scales of SOA from biogenic and anthropogenic precursors: Implications for heterogeneous ice nucleation on glassy aerosols.  
T. Berkemeier, M. Shiraiwa, U. Pöschl, T. Koop

14:40-15:00 Surfactants in cloud activation: do they matter?  
B. Mølgaard, J. Hong, M. Paramonov, T. Yli-Juuti, N. L. Prisle

15:00-15:20 Gas-particle partitioning of atmospheric aerosols: Interplay of physical state, non-ideal mixing and morphology  
Manabu Shiraiwa, Andreas Zuend, Allan K. Bertram, John H. Seinfeld

15:20-15:40 Role of organic and inorganic salts in atmospheric nanoparticle growth: a modelling study  

15:40-16:00 Secondary organic aerosol production potential from diesel and gasoline vehicle exhaust under different ambient conditions  

Reserve paper Uptake of N2O5 to citric acid aerosol particles  
G. Gržinić, T. Bartels-Rausch, A. Türler, M. Ammann
14:00-16:00 **Session: PMx**  
*Source-specific emissions of carbonaceous aerosol from combustion processes*  
Chairs: Willy Maenhaut, Heinz Burtscher  
Room: C (Aquarius+Taurus)

14:00-14:20 **Thermal/Optical Analysis of Major Elements (C, H, N, S, and O) for Particles from Different Emission Sources**  

14:20-14:40 **Assessing the Wintertime Contribution of Biomass Smoke to Organic Aerosol at 15 Sites in Switzerland by Analysing Filter Samples Using Aerosol Mass Spectrometry**  

14:40-15:00 **Carbonaceous Aerosols Emitted from Light-Duty Vehicles Operating on Ethanol Fuel Blends**  
M. D. Hays, R. Beldauf, B. J. George, J. Schmid, R. Snow, T. Long, W. Preston

15:00-15:20 **Emissions of a GDI vehicle with different composition engine oils**  
L. Pirjola, T. Lahto, A. Malinen, J. Heikkila, P. Kajjalainen, T. Rönkkö, K. Kulmala, J. Keskinen

15:20-15:40 **Biodiesel with controlled physicochemical properties, a means to further reduce diesel engine particle emissions**  

15:40-16:00 **Preliminary measurement results on aerosol emission from materials combustion**  
M. Targosz, C. Chivas-Joly, L. Saragoza, C. Matzku, F. Gnei-Level

--- Reserve paper ---

14:00-16:00 **Session: Particle-Lung Interactions**  
*Exposure and dosimetry*  
Chairs: Werner Hofmann, George Ferron  
Room: F (Stella)

14:00-14:20 **Hygroscopic Particle Deposition Model for Rat Lungs**  
G. A. Ferron, S. Upadhyay, R. Zimmermann, E. Karg

14:20-14:40 **Uptake of PM2.5 mass by respiratory tract region and particle size: Hypothetical estimates for the FINRISK Cohort, Helsinki, Finland**  
O. Hanninnen, R. Sarjamaa, P. Lipponen, L. Kangas, A. Karpinen, T. Yli-Tuomi

14:40-15:00 **Exposure to Particulate Matter and Pulmonary Function Status of Traffic wardens in Two Selected Local Government Areas in South-Western Nigeria**  
Godson R.E.E Ana, Oluseye J. Olamijulo

15:00-15:20 **Dynamics of highly concentrated, fresh aerosols during inhalation**  
L. Pichelstorfer, W. Hofmann

15:20-15:40 **Mechanistic exposure assessment of ultrafine PM**  
D. A. Sanjigianii, Z. Somaras, E. Vountis, S. Karakitsos, V. Kalaitzis

15:40-16:00 **Using cloud motion for fast, efficient and realistic in vitro delivery of inhaled drugs to pulmonary cells**  
14:00-16:00 **Special Session: Combustion Aerosols**  
**Composition and health effects**  
Chairs: Ralf Zimmermann, Olli Sippula  
Room: D (Kepler)  

**14:00-14:20**  
**Chemical Properties of Combustion Aerosols: An Overview**  
M. D. Hays

**14:20-14:40**  
**Chemical, physical and toxicological properties of biomass combustion aerosols**  
M.-R. Hirvonen, J. Jokiniemi

**14:40-15:00**  
**Biological effects of ship diesel exposure on human bronchial epithelial cells – effects of gas phase vs. particle phase of different fuels at the air liquid interface**  

**15:00-15:20**  
**Health relevant compounds in wood combustion and ship diesel aerosols: Evaluation of the toxicity due to polycyclic aromatic hydrocarbons**  

**15:20-15:40**  
**Air-liquid interface exposure systems for the assessment of toxicity of combustion aerosols**  

**15:40-16:00**  
**Oxidative potential of particulate matter in a major urban environment**  
Frank J. Kelly, Ben Barratt, Cathryn Tonne, Ian Mudway

Reserve paper  
**A novel set-up for source characterization and human exposures of biomass combustion aerosols**  

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14:00-16:00 **Session: Atmospheric Aerosols**  
**Biomass burning and bioaerosols**  
Chairs: J. Schneider, M. R. Alfarra  
Room: A (Meridian)

**14:00-14:20**  
**Particle characterisation during biomass burning events in Tasmania, Australia**  
F. Reisen, C. P. Meyer, M. D. Keywood, S. Crumeyrolle

**14:20-14:40**  
**Biomass burning layers measured during the Deep Convective Clouds and Chemistry experiment (DC3) with an airborne Single Particle Soot Photometer (SP2)**  

**14:40-15:00**  
**Airborne lidar observations of mineral dust and biomass burning aerosols**  
F. Marenco, K. Turnbull, B. Johnson, J. Haywood, P. Rosenberg, L. Garcia-Carreras, J. B. McQuaid, V. Amiridis, E. Marinou, A. Tsokar

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Reserve paper  
**Release of fine particles from birch pollen grains following impaction**  
N. Visez, M. Choël, G. Loubert, G. Chassard, D. Petitprez
15:00-15:20 Primary particles and marker compounds from wood combustion in household stoves
M. Maasikmets, E. Teinemaa, K. Vainumäe, L. Parts, L. Lehes, T. Arumäe, V. Kimmel

15:20-15:40 The comparison of long-term changes in the bioerosol components in Southwestern Siberia in the near-ground atmospheric layer and at the altitudes of 500 - 7000 m

15:40-16:00 Filtration and inactivation of aerosolized bacteriophage MS2 with air ions and electric field
J. Hyun, Y.-H. Joe, J. Hwang

Reserve paper Measurements During The South American Biomass Burning Analysis (SAMBBA) Field Experiment

14:00-16:00 Special Session: Aerosol Modelling, Atmospheric Aerosols
European Year of Air Quality 2013
Chairs: Alexander Schladitz, Markus Pesch, Sabine Wurzler
Room: E (Tycho)

14:00-14:20 Experimental and modeling analyses of emission measurements for a heavy-duty diesel bus: the comparison between on-road and in-lab methods
Y. J. Wang, Z. Tong, T. Rönkkö, J. Keskinen, L. Pirjola, K. M. Zhang

14:20-14:40 Source apportionment of sub-micron particles in the urban background by Positive Matrix Factorization
H. Yu, U. Quass, H. Kaminski, T. A. J. Kuhlbusch

14:40-15:00 Air quality in a Mediterranean city-port: Particulate matter source apportionment using the WRF-CAMx modeling system
A. Poupkou, N. Liara, A. Karagiannidis, T. Giannaros, D. Melas, A. Arigou

15:00-15:20 Size specific distribution of the atmospheric particulate persistent organic pollutants (POPs) on a seasonal scale
Céline Degrendele, Krzysztof Okonski, Lisa Melymuk, Linda Landlová, Petr Kukučka, Jana Klánová

15:20-15:40 Modelling multiphase night-time processes with WRF-Chem
D. Lowe, S. Archer-Nicholls, W. Morgan, S. Utembe, G. McFiggans

15:40-16:00 Air quality modeling of mega cities in Yangtze River Delta region
L. L. Tang, B. Zhu, Y. J. Zhang, L. Tang

Reserve paper Characterising the influence of anthropogenic emissions on regional background aerosols at the puy de Dome station in France
E. J. Freney, E. Asmi, M. Hervo, C. Rose, A. Calomb, K. Sellegri

16:00-16:30 Coffee break
Room: Conference foyer

16:00-18:00 Poster Session C - authors' presentations

19:30 Conference Dinner
Venue: Municipal House
Friday, September 6th

9:00-10:00 Plenary lecture: Urban aerosol: tendencies and challenges
Plenary speaker: Imre Salma
Plenary chairs: Willy Maenhaut, Kostas Eleftheriadis
Room: A (Meridian)

10:00-10:30 Coffee break
Room: Conference foyer

10:30-12:50 Session: Atmospheric Aerosols
Aerosol-cloud interaction and climate effects of aerosols
Chairs: Helmut Horvath, Martin Gysel
Room: A (Meridian)

10:30-10:50 Simplifying the water-affinity and CCN activation of complex organic aerosols: A model study
I. Riipinen, N. Rastak, S. N. Pandis

10:50-11:10 Marine Cloud Brightening - do implementation assumptions change its effectiveness?
A. K. L. Jenkins, P. M. Forster

11:10-11:30 The importance of organic compounds for the first aerosol indirect effect: sensitivity to cloud formation parameterizations and meteorological fields
R. E. P. Sotiropoulou, E. Tagaris

11:30-11:50 Local geological topsoil dust in the area of Rome: linking mineral composition, aerodynamic size and optical properties
A. Pietrodangelo, R. Salzano, C. Bassani, S. Panzani, C. Perrino

11:50-12:10 Modeling aerosol water uptake in the Arctic and its direct effect on climate

12:10-12:30 Pre-Industrial Atmospheric Black Carbon Concentrations in North America
Liaquat Husain, Tanveer Ahmed

12:30-12:50 Global model simulations of the impact of transport sectors emissions on atmospheric aerosol and climate
M. Righi, J. Hendricks, R. Sausen

Reserve paper Variations of levels of atmospheric electrical and meteorological parameters and natural radioactivity in response to heavy smog due to forest fires
Session: Atmospheric Aerosols

Mineral dust, marine aerosols and others

Chairs: Alfred Wiedensohler, Francisco Jose Olmo
Room: B (Leo+Virgo)

10:30-10:50 Below-cloud scavenging by snow and mixed precipitation events calculated from high temporal resolution in situ measurements
G. Depuydt, O. Masson, J. L. Brenguier, C. Piot, J. L. Jaffrezo

10:50-11:10 Diurnal and seasonal variations of (nano)aerosols in the Škocjan Caves, Slovenia, a natural treasure of planet Earth
I. Grgić, I. Iskra, B. Podkrajšek, V. Debevec Gerjevič

11:10-11:30 Aerosol Processes in PAH Infiltration and Population Exposure in Rome
P. Lipponen, O. Hänninen, R. Sorjamaa, M. Gherardi, M. P. Gatto, A. Gordiani, A. Cecinato, P. Romagnoli, C. Gariazzo

11:30-11:50 Two years of measured vertical profiles in the Arctic (Svalbard Islands): results from 2011-2012 spring-summer campaigns

11:50-12:10 EMEP intensive measurements on mineral dust in PM10, summer 2012 and winter 2013

12:10-12:30 The effect of hexanoic acid on the hygroscopic properties of sodium halide aerosols
Lorena Miñambres, Estíbaliz Méndez, María N. Sánchez, Fernando Castaño, Francisco J. Basterrechea

12:30-12:50 Marine Aerosol Hygroscopicity and Volatility, Measured on the Chatham Rise (New Zealand)
J. Cravign, M. Muller, Z. D. Ristovski, P. Vahtto, S. Talbot, G. Olivier, M. Harvey, C. Law

Reserve paper
Assessment of emission sources in an industrial area using instrumental and biomonitoring techniques

10:30-12:50 Session: Fundamentals

Aerosol properties and dynamics

Chairs: Christopher J. Hogan Jr., Charles Clement
Room: D (Kepler)

10:30-10:50 Evolution of the charge state z and the cross section W of mobility-selected protein ions held for tens of ms at temperatures from 25 to 100° C
J. Fernandez de la Mora, M. Attoui

10:50-11:10 Evaluation of the role played by multiple scattering on the radiative properties of soot fractal aggregates
J. Yon, F. Liu, A. Bescond, C. Caumont-Prim, C. Rosé, F.-X. Ouf, A. Coppolino

11:10-11:30 The role of the scaling-law prefactor in the morphology of fractal aggregates
A. D. Mulas, A. G. Konstandopoulos, L. Isella, Y. Dressinios
11:30-11:50 The Collision Frequency of Fractal-like Aerosols in the Free Molecular Regime
M. L. Eggersdorfer, S. E. Pratsinis

11:50-12:10 Collision Cross Section Calculation and Differential Mobility Analysis-Mass Spectrometry (DMA-MS) of Po-210 and Electrospray Generated Ions
Carlos Larriba-Andaluz, Hui Ouyang, Mark J. Meredith, Derek R. Oberreit, Christopher J. Hogan Jr.

12:10-12:30 A new approach to the theory of Brownian coagulation
M. S. Veshchunov, I. B. Azarov

12:30-12:50 Oblique Impact Fragmentation of Nanoparticle Agglomerates
M. Gensch, A. P. Weber

10:30-12:50 Session: Aerosol Chemistry

Chemical characterisation techniques for aerosols
Chairs: Markus Kalberer, Rami Alfarra
Room: C (Aquarius + Taurus)

10:30-10:50 Novel Viscosity Measurement Technique for Atmospheric Aerosols using Fluorescence Lifetime Imaging Microscopy (FLIM)
C. Fitzgerald, N. Hosny, M. Kalberer, M. Kuimova, F. Pope

10:50-11:10 Extractive electrospray ionisation: A novel mass spectrometry technique for the online characterisation of organic aerosol composition and reactivity
P.J. Gallimore, M. Kalberer

11:10-11:30 A Unique On-line Method to Infer Water-Insoluble Particulate Mass-Fractions
Daniel Short, Michael Giordano, Yifang Zhu, Phillip Fine, Andrea Polidori, Akua Asa-Awuku

11:30-11:50 Surface site density versus nucleation rate approaches of formulating ice formation in clouds – a comprehensive analysis based on AIDA cloud simulation experiments

11:50-12:10 X-ray study of freshly emitted carbonaceous nano-aerosols by synchrotron radiation

12:10-12:30 Micro-Raman monitoring of photoevolution and hygroscopicity of single particles by using an environmental acoustic levitation cell
Y. A. Tobon, M. Moreau, S. Sobanska, J. Barbillat

12:30-12:50 Measurements of Oxidized Organic Compounds using Nitrate Chemical Ionization Time-of-Flight Mass Spectrometry coupled to an Atmospheric Pressure interface (NO3-CI-API-ToF)
P. Massoli, A. Lambe, T. Hohaus, M. Coniglio, P. Chaoobra, H. Stark, J. Kimmel, J. Jayne, D. Worsnop

10:30-12:50 Reserve paper
Quantitative single particle mass spectrometry with the Aerodyne aerosol mass spectrometer: development of a new classification algorithm and application to field data
F. Freutel, F. Drewnick, J. Schneider, T. Klimach, S. Borrmann
10:30-12:50 **Session: Particle-Lung Interactions**  
*PM toxicity*

Chairs: Otmar Schmid, Jenny Rissler  
Room: E (Tycho)

10:30-10:50 Translocation of fluorescently labelled SiO2 nanoparticles across human bronchial epithelial monolayers  
I. George, S. Vranic, S. Boland, A. Boeza-Squiban

10:50-11:10 Air-liquid interface exposure system for in vitro toxicological studies of wood combustion aerosols  

11:10-11:30 Effect of flue gas scrubber on the toxicological effects of particulate samples from a recovery boiler  
S. Kasurinen, O. Uski, P. Jalava, M. Happo, I. Nuutinen, M. Kortelainen, H. Koponen, J. Tirkkonen,  
K. Kuuspalo, A. Leskinen, K. Lehtinen, J. Jokiinen, M.-R. Hirvonen

11:30-11:50 Nanotoxicological studies in the Air-Liquid Interface using engineered metal NPs – Protein corona, gene analysis and dose response  
C. R. Svensson, S. Ameer, J. H. Pagels, T. Cedervall, M. Kåredal, L. Ludvigsson, K. Breborg, B. O. Meuller,  
M. E. Messing, J. Rissler

11:50-12:10 Aerosol characterisation of e-cigarettes  
R. Cabot, A. Koc, C. U. Yurteri, J. J. McAughey

12:10-12:30 Ecotoxicity of various types of urban particulate matter  
B. Jancsek-Turóczi, A. Hoffer, Á. Tóth, N. Kováts, A. Ács, A. Gelencsér

12:30-12:50 The respiratory toxicity of coal fly ash  
T. P. Jones, P. Brown, K. A. BeruBe

Reserve paper Trace elements bioaccessibility in fine and ultrafine particles from the industrial area of Dunkirk (France) during the NANO-INDUS project  
S. Mbengue, L. Alleman, P. Flament

12:50-14:00 Lunch break
**Skypost PM HV**
Sequential outdoor sampler for:
- PM10, PM2.5, PM1
- Total Particulate Matter
- Heavy metals

**Delta MK2**
Battery and electricity supply sampler, with built-in battery pack and integrated dry gas meter

**Bravo Plus**
Portable constant flowrate sampler, suitable for dust and gas sampling, both in stack and in ambient

**Echo PM**
PM10/PM2.5 low volume sampler, available for single filter or 2 lines sequential sampling

**Echo Hi Vol**
High Volume sampler for:
- IPA
- Heavy Metals
- Particulate matter

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Poster Session A

Monday, September 2nd
Room: Zenit + Nadir

16:00-18:00 Authors' Presentations
Room: Zenit + Nadir

Atmospheric Aerosols

A001 Effective density measurements of different fresh soot types
M. Abegglen, B. Sierau, A. A. Mensah, J. Wang, L. Durdina, M. Gysel, U. Lohmann

A002 Atmospheric aerosol size distribution during winter period in Ostrava-Radvanice
A. Baranova, J. Hovorka

A003 Aerosol source analysis approach for a rural background site – identifying the chemical fingerprints of anthropogenic and biogenic aerosols

A004 Monitoring of transatlantic particles over São Paulo (Brazil) by sun-photometry, ground-based lidar and CALIOP
J. L. Guerrero-Rascado, F. J. S. Lopes, E. Landulfo, L. Alados-Arboledas

A005 Measurements of aerosol light-scattering enhancement factors at the urban environment of Granada (Spain)

A006 Relating the wavelength dependency of the absorption coefficient and the aerosol type
A. Cazorla, G. Titos, H. Lyamani, L. Alados-Arboledas

A007 Evaluation of AERONET precipitable water vapour versus microwave radiometry, GPS and balloon-borne radiosondes at ARM sites
Daniel Pérez-Ramírez, Alexander Smirnov, Hassan Lyamani, David Whiteman, Brent Holben, Lucas Alados-Arboledas

A008 Aerosol Impact on cloud properties in Pakistan
K. Alam, R. Khan

A009 Remote Sensing of Aerosol optical property Over the Arabian Gulf
F. M. Al-Kandari, H. K. Al-Jassar, K. S. Rao

A010 Organic Fraction of Laboratory Generated Primary Marine Aerosol
A. C. Butcher, S. M. King, T. Rosenoern, M. Bilde

A011 Contribution of Fugitive Emissions in an Industrial Area of Portugal
S. M. Almeida, A. V. Silva, S. M. Garcia, A. I. Miranda

A012 Saharan dust contribution to PM10 levels and composition in Cape Verde

A013 Homologous series of organic compounds in aerosols impacted by sugar cane burning in São Paulo State, Brazil
A014  Emissions of carbonaceous aerosols and volatile organic compounds by light-duty vehicles on a chassis dynamometer  

A015  Hydrocarbons in smoke samples from wildfire events in central Portugal in summer 2010  

A016  Evaluation of CMA as dust suppressant in Barcelona: Preliminary results from the AIRUSE LIFE+ Project  
F. Amato, A. Karanasiou, A. Alastuey, T. Moreno, F. Lucarelli, S. Nova, G. Calzolai, M. Chieri, M. Kouwen, X. Querol

A017  Temporal variation of urban atmospheric aerosol during smog episodes in Debrecen, Hungary  
A. Angyal, Zs. Kantész, Z. Forenczi, E. Fenyő, Z. Szabószlói, Zs. Török, Z. Szikszi

A018  Aerosol profile retrieval algorithm development and validation for Sentinel-4  
A. Apituley, O. Vieitez, B. Sanders, P. Stammes, B. Veihelmann, Y. Meijer, R. Koopman

A019  Modelling and impact of aerosols on climate variability over central Africa  
A. J. M. Kamkoua, C. Tchawoua

A020  Subgrid variability of CCN sized aerosol  
A. Asmi, R. Viisanen, R. Kredji, A. Minikin

A021  Multi-criteria ranking and source apportionment of airborne particles  
G. A. Ayoko, A. J. Friend

A022  A study of aerosol production at the cloud edge with direct numerical simulations  
N. Babkovskaia, M. Boy, S. Smolander, S. Romakkaniemi, M. Kulmala

A023  The effect of cloudiness on new particle formation: investigation of radiation levels  
E. Baranizadeh, A. Arola, A. Hamed, T. Nieminen, A. Virtanen, M. Kulmala, A. Lanksæn

A024  Influence of Mineral Dust Transport from North Africa in the Concentration and Size Distribution of Aerosol in León (Spain)  
E. Alonso-Blanco, A. I. Calvo, A. Castro, C. Alves, R. Fraile

A025  UFIREG-Ultrafine particles and health  

A026  Influence of stable weather on aerosol concentration and size distribution at K-puszta, Hungary  
A. Molnár, Zs. Bécsi

A027  Wintertime distribution of PAH with aerosol particle size in two cities in the Czech Republic  
J. Bednář, J. Hovorka, J. Topinka

A028  Hygroscopic Properties and Mixing State of Ultrafine Aerosol Particles over the Eastern Mediterranean Background Site of Finokalia  
S. Bezantakos, A. Bougiatioti, I. Stavroulas, K. Eleftheriades, N. Mihalopoulos, A. Nenes, G. Biskos

A029  Climatology of dust events at Mt. Cimone (2165 m a.s.l.), Italy  

A030  2011 Observations of Stratospheric Aerosol over Hampton, VA related to the Nabro volcanic Eruption in Africa  
N. Boyouk, P. M. McCormick, M. Hill, K. Leavor

A031  Size-Resolved Source Apportionment of PM10 Organic Aerosol Measured with Aerosol Mass Spectrometry  

A032  CANCELLED
A033  Lidar depolarization evolution during the CHARMEX intensive field campaign  

A034  Ground-based observations of aerosol and cloud properties at sub-arctic Pallas GAW-station  

A035  The concentrations of organic/elemental carbon and total protein in atmospheric aerosol of the near-ground atmospheric layer of Southwestern Siberia in the summer of 2012  

A036  Identification and characterization of black carbon aerosol sources in Lithuania  
S. Byčienė, V. Ulvicius, V. Dudaitytė, J. Andriopauskiene

A037  Influence of humidity on aerosol concentrations in a subtropical region  
L. Caetano-Silva, A. G. Allen, M. Lima-Souza, A. A. Cardoso

A038  CANCELLED

A039  Sugar markers in biomass burning particles from a Brazilian agro-industrial region  

A040  Long-term time series of daily PM10 chemical composition in the area of Rome, Italy  
M. Catrambone, S. Dalla Torre, E. Rantica, T. Sargolini, T. Perrino, the Med-Particles Study Group

A041  Organic characterization of particulate material from a Brazilian agro-industrial region impacted by biomass burning  

A042  Thermal-optical analysis of elemental carbon (EC) in environmental samples – differences observed when using various protocols  
E. C. Cetintas, M. Kistler, C. Schmidl, H. Bauer, A. Kasper-Giebl

A043  Coupling optical and chemical properties of primary and secondary carbonaceous aerosols  
F. Costabile, S. Gilardoni, F. Barnaba, M. Rinaldi, S. Ferrari, V. Poluzzi, G. P. Gobbi

A044  Black carbon contribution to the particle matter in Madrid City during a local winter episode  

A045  Major ions particle size distribution from Baia de Todos os Santos, Northeastern Brazil  

A046  Extreme dust storms in Iceland  
P. Dagsson-Waldhauserova, H. Olafsson, O. Arnalds

A047  Measurements of particulate matter hygroscopicity in Aerosol Exposure Chamber to prevent atmospheric corrosion in Data Center  
L. D’Angelo, G. Rovelli, L. Ferrero

A048  Effect of the extensive use of fireplaces on carbonaceous particle concentration levels in Athens, Greece  

A049  Distribution of aerosol over coal strip mine  
V. Dociakalova, J. Hovorka, F. Kabza, P. Marecek

A050  Spatial-temporal variability of particle number concentrations between a busy street canyon and the urban background  
V. Dos Santos-Juusela, T. Petjäj, A. Kousa, K. Hämmer
A051 Airborne Aldehydes as Altitude-Distributed Source of Particulate Matter in the Troposphere
S. N. Dubtsov, T. A. Maksimova, G. G. Dultseva

A052 The comparison of the light scattering coefficient measured in urban and coastal environments
V. Dudoitis, V. Ulevicius, K. Plauškaitė, G. Mordas

A053 Variations of PM10 and its relationship with 7Be and 210Pb measurements at Malaga (Southeastern coast of Spain)
C. Duñias, M. C. Fernández, E. Gordo, E. Liger, S. Cañete, M. Pérez

A054 Atmospheric fluxes of radionuclides on monthly time-scale in Malaga (Spain)
C. Duñias, M. C. Fernández, E. Gordo, S. Cañete, E. Liger, M. Pérez

A055 The comparative analysis of variations of background radiation components and atmospheric electrical parameters
M. S. Cheepeev, I. I. Ippolitov, M. V. Kabanov, P. M. Nagorsky, S. V. Smirnov, A. V. Vukolov, V. S. Yakovleva

A056 13C measurements on organic aerosol – ambient samples versus source studies
U. Dusek, C. Meusinger, B. Oyama, W. Ramon, P. A. de Wilde, R. Holzinger, T. Röckmann

A057 Road Pavement Abrasion as the Source of Particulate Matter
Dušan Jandačka, Daniela Dvorska

A058 Time-resolved organic speciation at the Theodore Roosevelt National Park, North Dakota, USA
A. Eiguren, G. Lewis, N. Kreisberg, D. R. Worton, A. H. Goldstein, S. V. Hering

A059 Water activity measurement of pure and mixed organic/inorganic solutions
M. M. Fard, and M. Bilde

A060 Can lung-deposited surface area measurements serve as surrogate for black carbon?
M. Fierz, D. Meier, C. Hüglin, H. Burtscher

A061 Regional-scale modeling of organic aerosol composition in Europe: Insights from comparison with aerosol mass spectrometer factor analysis
C. Fountoukis, A. G. Megaritis, K. Skyllakou, P. E. Charalampidis, C. Pilinis, S. N. Pandis

A062 CANCELLED

A063 Year-round measurement of PM1 aerosol and its chemical composition in the Swiss high Alps using the Time-of-Flight Aerosol Chemical Speciation Monitor (ToF-ACSM)

A064 Aerosol Activation and Scavenging during the Cloudy Test Campaign at the CERN CLOUD chamber
C. Fuchs, J. Tröstl, J. Duplissy, E. Weingartner, U. Baltensperger, the CLOUD collaboration

A065 The effect of the tramway track building on the aerosol pollution in Debrecen, Hungary
E. Furu, I. Katona-Szabo, A. Angyal, Z. Szoboszlei, Zs. Torok, Zs. Kertész

A066 Contribution of fossil and modern carbon to PM2.5 and CO2 in the atmosphere of Debrecen, Hungary
I. Major, E. Furu, I. Hajdus, Zs. Kertész, M. Mihály

A067 The impact of extreme weather events on air quality in Budapest, Hungary
V. Gácser, A. Molnár

A068 Seasonal variation of urban aerosols in a sub-Saharan city: case study of Nairobi, Kenya
S. M. Gaita, J. Boman, J. B. C. Pettersson, M. J. Gatari, S. Janhäll
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<tr>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<td>A069</td>
<td>Stable carbon isotopic values (δ¹³C) of biofuel in Lithuania</td>
<td>A. Garbaras, A. Lipovec, A. Masalaite, V. Remeikis</td>
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<td>A070</td>
<td>Atmospheric aerosol episodes over Lithuania after the May 2011 volcano eruption at Grímsvötn, Iceland</td>
<td>K. Kvietkus, J. Šakalys, J. Didžbalis, I. Garbariene, N. Špirkauskaite, V. Remeikis</td>
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<tr>
<td>A071</td>
<td>Quantifying the relative contribution of different aerosol types over Eastern Mediterranean: A decadal high resolution satellite view</td>
<td>A. K. Georgoulas, K. A. Koutridis, G. Alexandris, P. Zonis, U. Pöschl</td>
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<td>A073</td>
<td>The UPUPA project: Ultrafine Particles in the Urban Piacenza Area, Italy</td>
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A086  Measurement of atmospheric organic nitrate aerosols and its application in cloud events

A087  Ultrafine particle concentrations: importance of local sources and new particle formation in two central European cities

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A094  Estimation of emission rates of resuspended road dust using a mobile monitoring system
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A095  One-year monitoring of nitro-organic compounds in biomass burning PM10 filter samples

A096  A case of CCN formation associated with atmospheric nucleation in eastern Mediterranean
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A132  **Rotational Spectra and ab initio modeling of dicarboxylic acids: Succinic Acid**  
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A133  **The influence of the Sahara storm on the aerosol optical properties in Lithuania**  
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A134  **Measurements of the aerosol particle physical properties and particle chemical composition in Vilnius city**  
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A135  **Exploring the effect of deep-convective cloud systems on particle mass and number: source or sink?**  
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A136  **Total sulphate vs. sulphuric acid monomer in nucleation studies**  

A137  **Air mass history on 1-year long new aerosol particle formation dataset in Budapest**  
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A139  Enhancement of the collision efficiency between basidiospores and cloud droplets by electrostatic charges carried on freshly emitted basidiospores  
M. Saar, M. Noppel, J. Salin

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J. A. G. Orza, A. Cabelló, E. Doménech, L. Pérez

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M. Pozo, T. Müller, S. Pfeifer, A. Wiedensohler

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A. Pajunoja, J. Maaila, L. Hao, K. E. J. Lehtinen, A. Virtanen

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A148  Hygroscopic properties of the anthropogenic aerosol in the Po-Valley, Italy  
I. Pop, J. Geiß, A. Hamed, W. Birmili, A. Wiedensohler

A149  Rainout, washout and dry deposition contributions to the total deposition flux of heavy metal aerosol onto surfaces of a small urban catchment (Pin Sec, Nantes)  
S. Percot, V. Ruban, P. Laguionie, D. Mano, P. Roupsard, D. Demare

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A151  Mobile FINE DUST Aerosol Spectrometer  
M. Pesch, H. Grimm, M. Richter

A152  Primary Biological DNA Database  

A153  Studying Atmospheric Aerosols by Acoustic Levitation: Linking Headspace Solid-Phase Microextraction (HS-SPME) with Gas Chromatography-Mass Spectrometry (GC-MS)  
S. Almabrok, G. Marston, C. Pfrang

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K. Plauškaitė, N. Špirkauskaitė, T. Zieliński, T. Petelski, V. Ulevičius

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R. Merrouchi, J. Piazza, M. Chagdali, S. Moudane

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T. Rautiainen, D. Brus, A.-P. Hyvärinen, J. Svensson, H. Lihavainen

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F. Reisen, M. Bhujel, P. Selleck

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A. M. J. Rickards, R. E. H. Miles, J. F. Davies, F. H. Marshall, J. P. Reid

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**A165**
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Classification of Dust/Non-dust Particle from the Asian Dust Plumes and Retrieval of Microphysical Properties using Multiwavelength Raman Lidar System  
S. K. Shin, Detolf Muller, Y. M. Noh, D. H. Shin, K. H. Lee

**A169**
Improvements to harmonize different soot measurement techniques in air quality monitoring networks  
A. Schladitz, G. Löschau, H. G. Kath

**A170**
Single particle analysis of cloud residuals sampled at the research station Schneefernerhaus (2650 m) during ACRIDICON-Zugspitze 2012  
S. Schmidt, J. Schneider, T. Klimach, S. Mertes, L. Schenk, S. Bormann

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**A172**
New Homogeneous Ice Nucleation Results from Measurements at a Large Atmospheric Simulation Chamber  

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A174  Comparison of mass size distribution of PM and ions in Prague and Vienna in winter and summer  

A175  Characteristics of Local and Regional Nucleation Events at an Urban Background Site during Summer Period in Thessaloniki, Greece  
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A176  Exposure of air pollutants inside vehicles while driving in road tunnels  
S. Silvergren, M. Norman, C. Johansson, B. Sjövall

A177  Measurement capabilities of the Poland-AOD network  

A178  Aerosol characteristics during dust storm in Middle East and South-Western Asia  
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A180  Assessment of air pollution sources and implications for human health  
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A183  Estimating PM2.5 in the Stockholm region from spaceborne AOT measurements  
M. Tesche, P. Glantz

A184  Reconciling aerosol light extinction from ground-based in-situ measurements and active satellite remote sensing  
M. Tesche, R. Rastak, P. Glantz, H.-C. Hansson, I. Riipinen, R. Charleston

A185  Investigating the Formation of H2SO4 from ion-induced Oxidation of SO2  
N. T. Tsong, N. Bork, H. Vehkamäki

A186  Chemical characterization of aerosol particles in Évora: comparison between summer and winter campaigns  
L. C. Tobias, N. Schirov, K. Kandler, J. Mirão, F. Wagner

A187  „Aerosol-fingerprint” of Europe in the atmosphere of Debrecen, Hungary  
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A188  Measurements of black carbon using the Transmissometer  
A. H. Tremper, D. C. Green, G. Fuller

A189  Effect of organics and their hygroscopicity on cloud condensation nuclei (CCN) activity  
Deepika Bhattu, Sachchida Nand Tripathi

A190  Estimation of source apportionment using the UNMIX model of ambient PM2.5 in Seoul area, Korea  
Yeong-Jin Jeong, Tae-Ho Lee and InJo Hwang

A191  Ionic composition and metal content of PM10 samples collected along longitudinal and latitudinal transects in the Norwegian and Greenland Seas during the AREX 2011 cruise  
A192  Project AEROLIT (Aerosol in Lithuania): Investigation of primary-secondary and regional-local contributions to particulate matter in the south-eastern Baltic region

A193  Air masses types over the remote Alborán Island

A194  A LUR model for NO2 and BC to assess exposure of schoolchildren to traffic-related air pollution at their home address
Martine Van Poppel, Evi Dons, Luc Int Panis

A195  Košetice Observatory – The Czech Background Aerosol Supersite

A196  Source apportionment of carbonaceous PM2.5 with 14C analysis in Nagoya, Japan
Fumikazu Ikemori, Koji Honjo, Makiko Yamagami, Toshio Nakamura

A197  Biomass burning in the Amazon Region: Characterization of airborne particle-phase Polycyclic Aromatic Hydrocarbons
P. C. Vasconcellos, Nilmaro da Oliveira Alves, Sofia Ellen da Silva Caumo, Paulo Anta, Sandra de Souza Hacon, Silva Regina Batistuzzo de Medeiros

A198  Optical and chemical characterization of biomass burning aerosols
J. Vasilescu, L. Maimunee, A. Nemuc, C. Talianu, L. Belegante

A199  Chemical composition and hygroscopic properties of aerosol particles from Siberian boreal area

A200  Interpretation of Urban Particle-bound Polycyclic Aromatic Hydrocarbons Source Profiles of PMF with Known Site Specific Emission Characteristics
E. H. Jang, M. S. Alam, R. M. Harrison

A201  Water soluble ionic species of particulate matter in an urban road tunnel
M. S. Vieira-Filho, R. Astolfi, J. J. Pedrotti, A. Fornara

A202  Determination of alkyl phenols in atmospheric aerosols by gas chromatography–ion trap mass spectrometry
M. Visentin, M. C. Pietrogrande

A203  Seasonal variations of organic carbon with different volatility at suburban site
Petr Vodička and Jaroslav Schwarz

A204  Ionic composition of PM10 and PM2.5 in the area of Thessaloniki, Northern Greece—Estimation of secondary inorganic aerosols and sea spray contribution
D. Voutsa, C. Samara, E. Manoli, E. Gounari, D. Lazarou, P. Tzoumaka

A205  One year analysis of sedimentation samples at Évora, Portugal
F. Wagner, L. Tobias, K. Kandler, N. Schiavon, J. Mirão

A206  Identification of parameters influencing the variability of particle number size distributions in Europe—a multi-site study
C. von Bismarck-Osten, S. Weber

A207  Vertical aerosol stratification above the Caribbean Sea near Barbados
B. Wehner, F. Ditos, H. Weh, S. F. Serikov, A. Wiedensohler, H. Siebert

A208  Methods and limits of unipolar charged aerosol inversion
Z. N. Wei, L. Knobel, H.-J. Schmid

A209  Alpha radioactive aerosols behavior in the ground atmosphere
V. S. Yakovleva, M. S. Cherepnev, I. I. Ipapolitov, P. M. Nagorsky, S. V. Smirnov, A. V. Vukolov
A210  The role of condensable vapours in atmospheric new particle growth and shrinkage  

A211  Evolution of n-Alkanes in PM samples collected in São Paulo, Brazil (2000-2010)  
P. C. Vasconcellos, Sofia Caumo, J. B. De Andrade

A212  Comparison of particle number size distributions in three Central European capital cities  

A213  CCN activation of insoluble silica aerosols mixed with soluble pollutants  
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A215  Measurements During The South American Biomass Burning Analysis (SAMBA) Field Experiment  

A216  Characteristics of new particle formation events in Hungarian background air at K-puszta, 2008-2012  
Zs. Bécsi, A. Molnár, K. Imre, P. P. Aalto

A217  Long-term observations of carbonaceous aerosols and related gaseous emissions near a crude-oil plant in South Italy  
M. Calvello, M. Lovallo, F. Esposito, L. Mangiamele, G. Pavese

A218  Wood-burning emissions within a continuous-flow photooxidation reactor: Soot-Particle Aerosol Mass Spectrometer characterization  
J. C. Corbin, A. Keller, H. Burtscher, B. Sierau, U. Lohmann, A. A. Mensah  
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A219  Characterising the influence of anthropogenic emissions on regional background aerosols at the puy de Dome station in France  
E. J. Freney, E. Arni, M. Hervo, C. Rose, A. Colomb, K. Sellegri

A220  Variations of levels of atmospheric electrical and meteorological parameters and natural radioactivity in response to heavy smog due to forest fires  

A221  Road tunnels-particle properties, wet and dry conditions  
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A222  Winter particulate matter (PM10) sources for an Austrian-Slovenian border region  
M. Kistler, E. C. Carintin, H. Bauer, A. Kasper-Giebl

A223  Assessment of emission sources in an industrial area using instrumental and biomonitoring techniques  

A224  Relationship between oxidation level and optical properties of secondary organic aerosol  
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A225  Observations on atmospheric electricity and aerosol-cloud interactions
   Hanna E. Manninen, Hannes Tammet, Antti Mäkelä, Jussi Haapolainen, Sander Mirme, Tuomo Nieminen, Alessandro Franchin,
   Tuukka Petäjä, Markku Kulmala, Urmas Hõrrak

A226  Effect of local pollutant sources on aerosol-cloud interactions at Puijo
       measurement station

A227  Intercomparison of sulphuric acid measurements and neutral cluster
       composition in the lower free troposphere
   U. Baltensperger, M. Kulmala, J. Curtius

A228  Air mass back trajectories and dry atmospheric aerosol mass size
       distributions in Prague
   J. Schwarz, L. Štefancová, W. Maenhaut, J. Smolík, W. Ždímal

A229  Blue sky over the Ruhr – a review of the effectiveness of more than 50 years
       of air quality measures in Germany
Poster Session B

Tuesday, September 3rd
Room: Zenit + Nadir

16:00-18:00 Authors' Presentations
Room: Zenit + Nadir

Aerosol Chemistry

B001 Organic Aerosol Formation Photoenhanced by the Formation of Secondary Photo-sensitizers in ageing Aerosols
Kifle Z. Aregahegn, Barbara Nozière, Christian George

B002 H2SO4 formation from olefin ozonolysis in the presence of SO2: Influence of water vapour content and temperature

B003 Development of a method to measure the δ13C for OC and EC in PM
L. Bourcier, B. Geypens

B004 Secondary organic aerosol formation in the ozonolysis of biogenic volatile organic compounds performed in a laminar flow reactor
T. Braure, V. Riffault, A. Tomas, M. Dunciano, Y. Bedjanian, P. Coddeville

B005 Geochemical anomalies in aerosol induced by mining and metallurgical activities in SW Spain
J. de la Rosa, A. M. Sánchez de la Campa, Y. González-Castanedo, R. Fernández Camacho, J. C. Fernández Caliani, A. Alastuey, X. Querol

B006 Synthesis and glass formation properties of compounds representative of low-volatility secondary organic aerosol particles
H. P. Dette, M. Qi, D. C. Schroeder, A. Godt, T. Koop

B007 PM formation processes in the urban atmosphere: comparison between South and North Italy
P. R. Dambroso, G. de Gennaro, A. Di Gilio, P. Ferma, R. Gonzalez Turion, A. Piazzalunga

B008 Formation mechanism and important implications of highly oxidized molecules (HOM) in the gas phase

B009 Noise as an indicator of traffic and ultrafine particles in Huelva city
I. M. Britu Cabeza, R. Fernández-Camacho, J. D. de la Rosa

B010 Chemical characterization of PM2.5 belonging to a port city
A. Genga

B011 Temperature dependence of nopinone partitioning coefficient in organic aerosol
B. Steitz, I. Gensch, T. Hohaus, H. Saathoff, A. Kiendler-Scharr

B012 How did chemical composition of the Po Valley radiation fog change in the last twenty years?
L. Giulianelli, M. C. Facchini, S. Gilardoni, S. Decesari, M. Rinaldi, C. Carbone, M. Paglione, S. Fuzzi

B013 Speciation of metals in refinery emissions particles
Y. González-Castanedo, D. A. Sánchez Rodas, C. Ferro, J. de la Rosa
B014 Thermal properties of secondary organic aerosols  
A. Lutz, E. U. Emanuelsson, Å. K. Watne, M. Hallquist

B015 Diurnal variation of C2-C5 organosulfates detected during PEGASOS field campaign  
Yoshiteru Inumaa, Laurent Poullain, Dominik van Pinxteren, Hartmut Hermann

B016 Reactivity of chlorine radical on palmitic acid particles: kinetic measurements  
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**Penetration of Combustion Aerosol Particles through an N95 FFR Respirator Filter**

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**Selective catalytic reduction nitrogen oxides with methane over nanosized CuO supported on Al2O3. Part 1. Materials structural characterization**

Chang-Mao Hung, Mu-Hsing Kuo, Shui-Jen Chen, Wei-Bang Lin, Wen-Liang Lai

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Chang-Mao Hung, Mu-Hsing Kuo, Shui-Jen Chen, Wei-Bang Lin, Wen-Liang Lai

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**Selective catalytic reduction nitrogen oxides with methane over nanosized CuO supported on Al2O3. Part 3. Reaction kinetic behavior study**

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B225  **Dry deposition of electrospayed liquid suspensions**  
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B226  **Effect of Nucleation Precursors on the Atmospheric Oxidation of Organic Compounds**  
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B230  **Dilution affects particle properties originating from residential biomass combustion**  
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B232  **Synthesis of tailored organic-inorganic nanostructures by charge controlled coagulation**  
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B233  **Contribution of Inorganic aerosols and trace gases due to biomass burning during cooking hours at a rural site in India**  
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B234  **Dependence of Aircraft Smoke Number on Black Carbon Size Distribution**  
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B235  **Characterisation of solid and semi-volatile gas-turbine particulate matter using a catalytic stripper**  
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Thursday, September 5th
Room: Zenit + Nadir

16:00-18:00 Authors' Presentations
Room: Zenit + Nadir

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C002 Manipulation of aerosol particles with nonlinear polarizability
K. V. Generalov, D. V. Korneev, V. M. Generalov, M. V. Kruchinina, B. N. Zaycav

C003 An ESP nanoparticle generator
C. W. Lin, W. Y. Lin, T. C. Hisao, Y. M. Kuo, C. C. Chen

C004 Experimental study of a louvered electrostatic precipitator
Hso-Chi Chaung, Tsai-Yun Wu

C005 Open Channel Electrospay System
J. S. Kang, J. H. Jung, G.-N. Bae

C006 Effect of aperture rate on improving collection efficiency in hole-type electrostatic precipitator
H. Kawakami, A. Osako, Y. Watanebe, Y. Ehara, Y. Nitta, A. Zukeran, T. Inui

C007 The Effect of Surface Charge on Characteristics of Fibrous Membrane

C008 Characterization of an ion jet unipolar electrical aerosol diffusion charger
Wen-Yinn Lin, Ken-Hui Chang, Chih-Chieh Chen, Shao-Hao Lu, Yuan-Yi Chang, Jin-Yuan Syu

C009 SO2 Reduction by water condensation for marine diesel
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C010 Modifications to the bipolar charging theory for spherical particles
J. L. de la Verpillière, J. J. Swanson, A. M. Boies

C011 Restructuring of Aggregates and their Primary Particle Size Distribution during Sintering
M. L. Eggersdorfer, S. E. Pratsinis

C012 Acoustic waves in vapour-gas mixtures with polydispersed particles and droplets
Yu. V. Fedorov, D. A. Gubaidullin, D. D. Gubaidullina

C013 Multiscale design of aerosol synthesis of materials: Effect of structure on TiO2 & SiO2 particle growth by coagulation and sintering
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C033  **Linking Neutral and Charged Sulfuric Acid - Ammonia and Sulfuric Acid - Dimethylamine Clusters**  
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C034  **Determination of Nanoparticles Surface Tension from Experimental Data on Homogeneous Nucleation of Ibuprofen Vapors**  
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C035  **Development of an Experimental Flow Configuration for the Study of the Effects of Mixing on the Nucleation and Growth of Liquid Droplets**  
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C036  **Systematic correlation between aerodynamic shape factor and optical properties**  
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C038  **Experiments on neutral cluster generation and detection below 2 nm size**  
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C039  **A method to determine the size distribution of recombination products from atmospheric measurements**  
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C052  A real-time analyzing and weighing system
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C055  UFP measurement: comparison of commercial equipments using different measuring principles
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C059  Validating SMPS-measured size distribution of double-mode spherical Silica nanoparticles by Transmission Electron Microscope (TEM)
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C061  Description of the aerosol size distribution of the atmosphere during a Saharan dust intrusion over South Spain with airborne and ground based instrumentation: AMISOC
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C072 Assessment of Voltage Shift in Tandem DMAs by Brownian Particle Trajectory Simulation  
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C073 Instrumental optimization of the compact laser mass spectrometer LAMPAS 3 for on-line single particle analysis under various field conditions  
K.-P. Hinz, A. Feindt, B. Spengler

C074 Multi-Element Scanning Thermal Analysis (MESTA) of Aerosols and Nano-Carbon Particles  
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C075 Study on particle capture characteristics and numerical analysis for impaction sizer  
C-H Huang, C-J Wu, Y-Y Chang

C076 Consistency of Long-term Black Carbon Trends from Thermal and Optical Measurements in the U.S. IMPROVE Network  
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C077 Black Carbon in Dust and Geological Material: Reconciling Thermal/Optical and Spectral Quantification Methods  
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C078 Airspace Dimension Test (ADT) – A novel technique for diagnosis of chronic obstructive pulmonary disease with nanoparticles  
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C079 Remotely operated PLUS-octocopter used as an aerosol measurement platform  
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C080 A CAPS-Based Single Scattering Albedo Monitor  
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C081 Performance Enhancements to TSI Water-based Condensation Particle Counters  
J. H. Scheckman, S. Morrell and F. Quant

C082 Evaluation and development of Scanning Flow CCN Analysis  
C. Wittbom, B. Svenningsson, S. Sjogren, E. Swietlicki

C083 Generation and growth of aerosol particles on nucleus of radioactive decays  
Particle-Lung Interactions

C084 Biological response in lung cells by brake dust from a novel set-up to generate one source wear particles

C085 A multiculture cell exposure chamber for the assessment of airborne and engineered nanoparticles effects on health
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C086 Effect of flow rate on fiber deposition in the model of human lungs
M. Bělka, F. Lízal, M. Jicha, J. Jedelsky

C087 A portable device to measure puffing behaviour and tobacco smoke exposure
C. Graham, S. Slayford

C088 In vivo measurements of nanometer-sized particle deposition in the nasal cavities of Taiwanese adults
D. J. Hu and C. W. Lee

C089 Role of size and composition of traffic and wood burning aerosols in the molecular responses induced in airway epithelial and pulmonary artery endothelial cells

C090 In vitro efficiency measurements of the deposition of pMDI generated aerosols in a realistic central airway geometry
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C091 Aerosol Deposition Measurement in the Model of Human Lungs
F. Lízal, J. Jedelský, J. Adam, M. Bělka, M. Jicha

C092 Airspace dimension test (ADT) with nanoparticles for identification of patients with respiratory disease
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C094 Experimental investigation of the transport and deposition of ambient aerosols in the human airways
A. Nagy, A. Kerekes, A. Czitrovszky

C095 Coincidental study of inhalation and intratracheal instillation for hazard assessment of nanoparticles
T. Oyabu, Y. Morimoto, M. Hino, Y. Yoshiura, M. Shimade, M. Kubo, B. W. Lee, T. Okada, T. Myojo

C096 HEAPS study design: Health Effects of Air Pollution in Antwerp Schools
E. Dons, M. Van Poppel, S. De Prins, L. I. Prins, G. Koppen

C097 Differential uptake kinetics of nitrogen dioxide on various pollen grains
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Comde-Derenda GmbH was originally founded under the name of Norbert Derenda Engineering Office in Berlin in the year of 1972. Today the company is located in Stahnsdorf near Berlin where new facilities were erected in the year of 2007. The firm’s products are being used to an ever increasing extent within the European Union to monitor outdoor air quality.

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Ecotech PTY Ltd.

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Ecotech’s tailored and innovative monitoring solutions assist our customers in quantifying environmental impacts all around the world. From our range of gas analysers through to our particulate instrumentation and also our sophisticated data software, Ecotech provides solutions that ensure air quality and climate data are accessible to everyone.

Our series of integrating nephelometers ranges from single to multiple wavelength versions and incorporates both polar and particle correlating options. Ecotech’s Aurora range of integrating nephelometers are gaining a world-wide reputation for quality and reliability.

The newest addition to our aerosol family is the Aerosol Conditioning System (ACS1000). By exposing the aerosol to different relative humidity, the system enables their hygroscopic properties to be measured and analysed by a wide range of instrumentation. The dual channel provides real-time comparison between humid and dry samples.

Visit our booth at the EAC to view both our polar nephelometers and ACS1000. We will also be conducting an open workshop on Saturday 7th September at the Clarion Congress Hotel to discuss these instruments and much more. Register your interest at our booth today.

Grimm Aerosol Technik GmbH & Co. KG

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D – Germany

Phone: +49 (0)8654 / 578-0
Fax: +49 (0)8654 / 578-35
Website: www.grimm-aerosol.com

The company GRIMM Aerosol Technik has been established 30 years ago by Hans Grimm in Bavaria/Germany. Meanwhile, GRIMM Aerosol Technik is one of the worldwide leading companies in the field of particle sizing and counting down to a few nanometers due to its innovative developments and manufacturing.

The company offers a product range of portable and stationary solutions for the continuous measurement of fine and ultrafine aerosols, for applications such as Environmental Dust Monitors, Aerosol Spectrometers, Particle Counters and Sizers, Filter and Motor Testers, as well as appropriate Aerosol Generators. Our products and technologies are of newest technology, such as wireless data transfer and logging, remote control, automatic operation. Specialists in-house will advise about the correct instruments for particular applications, e.g. for ambient air, emission, occupational health, filter efficiency and exhaust gas measurements, for quality control and for pharmaceutical, atmospheric or epidemiological studies.

Worldwide direct customer support and service is offered through our subsidiaries in the US, Canada, UK, Middle East and Asia, Australia, etc. and supplemented by our strong network of international representatives.

GRIMM Aerosol Technik:

- Environmental Dust Monitors
- Portable Dust Monitors and Aerosol Spectrometers
- Nanoparticle measuring systems (portable, mobile, stationary)
IONER®
a trademark of RAMEM S.A.

Address:  C/ Sambara, 33
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Spain

Phone:  +34 91 404 45 75
Fax: +34 91 403 45 96
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RAMEM-IONER® is a Spanish company devoted to the development of innovative aerosol instruments. RAMEM-IONER has a main goal: taking the DMA technology and applications to the smaller particles possible. RAMEM-IONER develops DMAs based on patented parallel plate technology and with different chargers and ion sources. Very high resolutions are reached with high sheath flows. Complete DMAs with sheath flow and aerosol flow control, chargers and electrometers are commercialised. Also, separate modules like ElectroSpray sources, Corona discharge sources, High Voltage sources or modules for flow control are sold.

RAMEM, the main branch of the company, designs and manufactures special needs of prototypes in scientific instrumentation or scientific installation. Short series or even single prototypes can be considered.

The latest RAMEM-IONER project is GANS: A DMA for early stage of nucleation studies. In this project, RAMEM-IONER ion sources for organic compounds and for inorganic compounds are coupled to a high resolution DMA (or HRIMS) for ions. The detection stage is done coupling a Particle Size Magnifier (PSM) with a Condensation Particle Counter (CPC) developed by Airmodus. Further information about GANS project and RAMEM-IONER can be found in: http://www.gans-project.eu/

Matter Aerosol

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Phone:  +41 (0)56 618 66 30
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Website:  www.matter-aerosol.ch

Matter Aerosol continues its successful specialization in the measurement and characterization of nanoparticles from combustion processes and nanoparticles in ambient air.

Matter Aerosol combines over 50 years experience in instrument design and development with latest research results about nanoparticles, for application in laboratories to real-world problems.

Matter Aerosol’s NanoMet3 is a new Portable Emissions Measurement System – PEMS for nanoparticle counting and classification. Come and see yourself!
MCV, S.A.

Address: Highway A-2, km 575
ES08293 Collbató (Barcelona)
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Email: cial@mcvsa.com,
Website: www.mcvsa.com

MCV is a company established for more than 30 years in order to design and develop instrumentation, equipment and systems related to the environment, especially in the areas of air quality control and meteorology. The main field of activity of the company includes the design of equipments, management, control and monitoring systems, data acquisition systems, software and civil works.

MCV due to its experience and leadership in the environmental engineering field offers their clients the development of customize solutions to their needs.

The facilities of the company allow us to face any kind of project as the construction of mobile units, monitoring stations for automatic networks, radars and meteorological towers, production of equipments for the sampling of gases and particles or data acquisition systems.

MCV has the certifications for quality and environmental management systems ISO9001, ISO 14001 and EMAS.

MCV develops, manufactures and distributes equipment to measure and control the air quality as: HVS (PM10, PM2.5, PM1, HAP, TSP heads), VOC’s samplers, Calibration systems with aire zero generator and automatic analysers for SO2, NOx, O3, CO, H2S, BTX…

MCV carries out tasks of maintenance, repairmen, verification and calibration of the measurement instruments either on site or in the company features. Our team possesses the means and technical resources to give and effective response to the customer requirements and incorporates the last updates and innovations. MCV supports their customers with its features and technical assistance in order to give an integral service.

This company will not be present at the Conference.

Met One Instruments, Inc.

Address: Met One Instruments Inc
1600 Washington Blvd
Grants Pass, Oregon, 97526
United States of America
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Email: sales@metone.com
Website: www.metone.com

Met One Instruments, Inc. located in Oregon, USA designs and manufactures meteorological instruments, handheld/portable particle counters, aerosol monitors, and regulatory particulate matter (PM) samplers/monitors. Our BAM-1020 Monitor is the first continuous PM measurement method to receive both PM2.5 and PMcoarse U.S. EPA Federal Equivalence Method designation. It also passed the newest European Equivalency testing for PM10 and PM2.5 and is certified to EN 15267 the highest EU quality standard for ambient monitors.

We are committed to meet the needs of our worldwide customers for ambient and indoor monitoring requirements and offer specialized solutions for various applications including data logging and software instruments. We are in business since more than 20 years and bring our experience to work for you.

See the new additions to our aerosol instrumentation product line at www.metone.com.
Metrohm Applikon B.V.

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Website: www.metrohm-applikon.com

Metrohm Applikon, headquartered in Schiedam, the Netherlands has more than 35 years experience in delivering solutions for laboratory, at-line and on-line wet chemical analysis. Part of the worldwide Metrohm AG group, Metrohm Applikon has access to Metrohm’s know-how and expertise in ion analysis.

MARGA (Monitor for AeRosols and Gases in ambient Air) is an on-line ion chromatograph that measures the concentration of soluble inorganic species in aerosols and their related gas phase components in ambient air. Hourly simultaneous results for gases and aerosols can be accessed from a remote workstation, with result quality being maintained by an internal standard and detailed system diagnostics.

Jointly developed with ECN, The Netherlands, MARGA is distributed world-wide through Metrohm Applikon’s distributor network; most members of which belong to the Metrohm group of companies.

Naneos Particle Solutions GmbH

Address: Dorfstrasse 69, CH-5210 Windisch
Phone: +41 56 560 20 70
Website: www.naneos.ch

Naneos builds nanoparticle detectors that are easy to use, small and reliable. They can be used in workplace safety, for ambient monitoring and health studies.
Palas® GmbH

Address: Greschbachstr. 3b
76229 Karlsruhe
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Email:  mail@palas.de
Website: www.palas.de

With more than 60 submitted patents, the Palas® GmbH has effectively set standards in the aerosol technology since 1983. Today, Palas® offers a complete product range for the continuous aerosol generation and measurement from 5 nm to 100 μm.

Our innovations result in superior quality and durability of the products that lead to unique technical and economic advantages for our customers.

Our core competencies are:

- Particle generation
- Particle measurement systems (for high pressures up to 10 bar, temperatures from -120°C up to 470°C, processes, environment and workplace, inhalation)
- Nanoparticle measurement systems (U-SMPS, UF-CPC etc.)
- Filter test and filter media test systems
- Continuous fine dust monitoring systems
- Dilution systems
- Cleanroom particle technology
- Calibration systems

Well-known industrial enterprises and research institutions worldwide have decided in favour of Palas® products and have thus established Palas® as a worldwide market leader.

Sunset Laboratory Inc.

Address: 10180 SW Nimbus Avenue
Suite J/5
Tigard, OR 97223-4341
Phone:  503-624-100
Fax:  503-620-3505
Website: www.sunlab.com

Sunset Laboratory Inc. has specialized in the analysis of air pollution for carbon aerosols since 1984. As well as performing the OCEC analysis, Sunset Laboratory also provides instrumentation for carbon aerosol analysis. Our equipment is suitable for the laboratory or in the field, and ready for use with the NIOSH method 5040, IMPROVE-A, and EUSAAR 2 protocols.

Clients include researchers working for government regulatory agencies, private companies, commercial laboratories, and universities.
Topas GmbH

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Topas GmbH Dresden is a specialist company in the field of aerosol and particle technology.

Our standard product range comprises:

- aerosol generators (mono- and polydisperse, solid and liquid particles)
- particle size measuring instruments for aerosols and liquids
- aerosol dilution systems
- electrostatic aerosol neutralizers
- process aerosol monitors
- filter testing technology and instruments
- clean room measuring equipment
- pore size measuring instruments

Topas also provides solutions for special applications like the dispersion of complex powders, test systems for particle filters and for adsorptive filters, filter media testing, blow-by measuring etc. Our corporate philosophy allows us to meet a variety of customer needs. Many years of experience, our know-how as well as close cooperation with universities, research centres and industrial partners is the ideal basis for the development of new and innovative solutions. Our reliable measuring and testing equipment has proven successful worldwide.
TSI GmbH Germany

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Fax: +49 241-52303-49
Email: answersEU@tsi.com
Website: www.tsi.com

As an international leader in measurement technology for over 50 years, TSI Incorporated (www.tsi.com) designs and manufactures precision instruments used for aerosol research, contamination control, indoor air quality and serves the needs of industry, governments, research institutions and academia. TSI researchers and engineers have developed instruments that are recognized worldwide. During EAC 2013 in Prague TSI’s team will show new products like the Model 3938 which is the 3rd generation of the SMPS; trusted by researchers for over 30 years. The new generation has an improved accuracy, does not require an external computer, and offers new features like fast size measurements with scan times below 10s.

Stop by our booth and learn more about the new.

Multi-Instrument-Software (MIM), Highlights of Sizing Nanoparticles with NanoScan SMPS and OPS Combination System Model 3914 and our 30 % CPC Trade-In offer for selected CPCs.

We look forward to seeing you at our booth.

ECM ECO Monitoring

Address: Nevádžová 5
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ECM is a TSI company operating in area of Central/Eastern Europe and CIS countries. Besides of TSI particle monitoring products also OC/EC, carbon black and complex analytic solutions for monitoring of gases, liquids and particles are provided.

For detailed information in different languages refer to www.ecomonitoring.com
URG Corporation

Adress:  116 South Merritt Mill Rd.
Chapel Hill,
North Carolina
27516 USA

Phone:   919-942-2753
Email:    info@urgcorp.com
Website:  www.urgcorp.com

URG Corporation manufactures the Ambient Ion Monitor (AIM) System for the continuous direct measurement of particulate Cl-, NO3-, SO42-, NH4+, NA+, K+, CA2+, MG2+ in PM2.5 plus gas measurements of HCl, HNO3, HNO2, SO2, NH3. The AIM System analyzes particles, gases and organics. The AIM System incorporates Thermo Scientific Dionex Reagent-Free Ion Chromatographs. The AIM System has detection limits of 0.05μg/m3 for each of the required analytes. The multi-pollutant data is instantly available on an hourly basis and with the option of every 15-30 minutes.

URG provides a wide variety of instruments for indoor and outdoor air sampling. Our Annular Denuder System (ADS) collect both acidic and basic gases and is designed to meet USEPA's Compendium Method IO-4.2. URG’s complete collection of aluminum cyclone inlets are Teflon® coated, a patented process that minimizes the losses of reactive gases such as HNO3 and NH3 to the internal surfaces of the cyclone. URG provides stainless steel cyclones and filter holders for diesel emissions.

URG air sampling instrumentation is used in Europe, Asia, North America, Australia, Antarctica, Africa and South America.
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Exhibition Plan

Clarion Congress Hotel - Congress floor
Sponsors and Exhibitors
E.A.C. Essentials

VISIT

The Ecotech booth to see our:
- ACS 1000 Aerosol Conditioning System
- Aurora 4000 Polar Integrating Nephelometer

LISTEN

Tuesday morning September 3, 2013
Session 5 - Instrumentation
A new aerosol conditioning system - Characterisation and first application
M. Laborde, B. Rosati, P. Zieger, T. Petäjä, G. Kassell, D. Logan, E. Weingartner

ATTEND

Ecotech’s Nephelometer Workshop
Saturday 7th September,
Clarion Congress Hotel
Visit our booth to register

www.ecotech-research.com
info@ecotech.com