

UFIPOLNETnews No. 16; 09-Nov-2007

- 1 UFIPOLNET: Final conference 23 - 24-Oct-2007 proceedings available (EN)**
- 2 Von der Lunge direkt ins Herz (DE)**
- 3 Levels of ultrafine particles in different microenvironments — Implications to children exposure (EN)**
- 4 Low Emission Zone in London (EN)**

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1 UFIPOLNET: Final conference 23 - 24-Oct-2007 proceedings available (EN)

During 30 lectures and with 15 Poster experts from all over Europe have informed about ultrafine particles in urban air. More than 110 participants from 14 nations heard about new results of measurements and health aspects. The UFP 330 was presented during the breaks of the conference. The commercial version (TSI 3031) will be available in the first half of 2008 and will cost about 35.000 EUR.

The confernce evening reception took place at the theater Wechselbad in one of the first "Bauhaus" buildings in the world, build in the late 1920s. Nice atmosphere, good food and piano music was presented to the participants as a break after the first interesting but also long confernce day.

For those who didn't have the chance to participate, the conference proceedings are available on the website. All presentations will be available at the end of November as PDF-documents on the website as well.



Participants with translation cabin; Poster session



UFP 330; Evening reception



Dr. Krzyzanowski talks about WHO Guidelines; Citizens information evening on 22-Oct-2007

The results of the questionnaire distributed on the conference will be presented in the next newsletter.

The day before the conference a public podium discussion with 6 experts and 30 citizens was held to inform the local public about ultrafine particles.

Source: www.ufipolnet.eu - > conference

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2 Von der Lunge direkt ins Herz (DE)

Rußpartikel aus der Luft verschlechtern die Durchblutung des Herzmuskels

Autoabgase führen zu einer schlechteren Durchblutung des Herzens und erhöhen so das Risiko für einen Herzinfarkt. Das schließen britische Forscher aus einer Studie, in der Versuchspersonen Dieselabgase einatmeten und ihre Leistungsfähigkeit auf einem Heimtrainer unter Beweis stellten. Wahrscheinlich aktivieren eingearmte Rußpartikel besondere Zellen in der Lunge, die das Immunsystem antreiben, wodurch das Blut leichter verklumpt, liefert ein amerikanisches Forscherteam eine weitere Erklärung für den Zusammenhang zwischen Abgasen und Herzinfarkten. Die Forscher hatten an Mäusen im Labor den Einfluss von Dieselabgasen untersucht.

(...)

Menschen mit erhöhtem Risiko für Herzinfarkte sollten deshalb bei starker Luftverschmutzung keinen Sport treiben und zu Hause zu bleiben, empfiehlt Mutlu. Wer sich körperlich anstrengt, atme automatisch mehr Rußpartikel ein und verringere so auf gefährliche Weise die Durchblutung seines Herzens. Mutlu möchte nun nicht nur die direkte Wirkung der Dieselabgase untersuchen, sondern in den nächsten Jahren herausfinden, wie die Rußpartikel auf lange Sicht die Gesundheit beeinflussen.

Original Source: Nicholas Mills (Universität Edinburgh) et al.:
 New England Journal of Medicine, Band 3, Nr. 11, Seite 1075
 Gökhan Mutlu (Universität in Chicago) et al.:
 Journal of Clinical Investigation, Online DOI: 10.1172/JCI30639

Source: ddp/wissenschaft.de Anja Basters;
<http://www.wissenschaft.de/wissenschaft/news/283754.html>

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3 Levels of ultrafine particles in different microenvironments — Implications to children exposure (EN)

Indoor and outdoor ultrafine particles (UFPs) (0.01 to greater than 1 µm) concentration levels were examined in the area of Athens during cold period of 2003 and 2004. Seven primary schools, located in areas with different characteristics of urbanization and traffic density, as well as a typical suburban residence, were monitored. Moreover, in-vehicle concentration levels, while driving along major avenues and in the heavy-trafficked centre of Athens, were measured (mean route duration: 45 min).

The highest mean indoor concentrations were observed in a small carpet-covered library and a teachers' office (8-hour mean equal to $52.6 \cdot 10^3$ particles/cm³ and $50.2 \cdot 10^3$ particles/cm³, respectively), at the same school unit. The highest outdoor concentrations (8-hour mean equal to $36.9 \cdot 10^3$ particles/cm³ and $38.8 \cdot 10^3$ particles/cm³) were measured at two schools, both affected by heavy traffic. Finally, the highest in-vehicle concentrations ($148.0 \cdot 10^3$ – $173.0 \cdot 10^3$ particles/cm³) were measured in central commercial areas of Athens.

Indoor-to-outdoor concentration (I/O) ratios were below 1.00 at all sites. Outdoor concentrations diurnal cycles, both outside the schools and the residence, were closely related to traffic. Number concentrations exhibited variability when there were significant changes in room occupancy. Diurnal variation of indoor concentrations at the residence followed the respective outdoor one with a delay of 1 h or less, in the absence of strong indoor sources, indicating the major contribution of outdoor UFPs to the indoor concentration levels.

The obtained concentration data give an insight on the concentration levels to which children may be exposed. They may be also very useful in epidemiological studies.

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Source: E. Diapouli, A. Chaloulakou and N. Spyrellis; Science of The Total Environment Volume 388, Issues 1-3, 15 December 2007, Pages 128-136

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4 Low Emission Zone in London (EN)

The Low Emission Zone (LEZ) will be introduced on 4 February 2008, with a phased introduction through to January 2012.

The aim of LEZ is to improve air quality in London by deterring the most polluting vehicles from being driven in the area. Affected vehicles include older, diesel-engined lorries, buses, coaches, large vans, minibuses and other heavy vehicles that are derived from lorries and vans, such as motor caravans and motorised horse boxes.

Different vehicles will be affected over time and increasingly tougher emissions standards will apply. Cars, motorcycles and small vans will not be affected.

Source: <http://www.tfl.gov.uk/roadusers/lez/default.aspx>

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