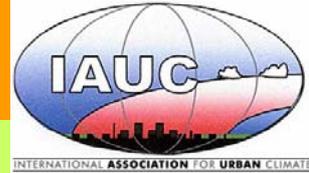


IAUC NEWSLETTER

INTERNATIONAL ASSOCIATION FOR URBAN CLIMATE

www.urban-climate.org/

Issue No. 3
February, 2004.



President's Column

First, I would like to thank all of the contributors to this, the third, IAUC newsletter and particularly Gerald Mills who has done an excellent job on soliciting contributions and producing the newsletter. Also, I would like to thank everyone who submitted entries and also voted on the IAUC "logo competition". It was a close competition, but the membership has selected an official logo for the IAUC and one that we will use on the newsletter (p11). As you may have noticed from recent emails, IAUC has a new web address: www.urban-climate.org. At the moment connections are forwarded to our old site but later in the year we will "move" to the new address.

I would like to urge you to provide input on the location for **ICUC6**, our next conference. The deadline for voting on the location of the next conference is February 15th, 2004.

New members: I would encourage you to pass this newsletter on to your colleagues, graduate students and those in agencies that are working on urban climate issues. As this organization is relatively new there are still many people who are working on urban climate issues and processes that are not familiar with the organization. Membership is free so please do encourage them to join.

Board Members: Soon we will be holding our annual election nomination and election for new Board members of IAUC (see p11). Please consider nominating either a colleague and/or yourself. The Board does most of its business by email and meets at appropriate conferences and at ICUC meetings.

Award Nominations: The Board would like to announce the IAUC Luke Howard Award for outstanding contributions to Urban Climatology (See p10). I encourage you to submit nominations for the person that you think is most appropriate for the inaugural award.

Sue Grimmond
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President, IAUC



Contents

- p1. President's Column; Newsletter contributions.
- p2. WMO Guide on making Urban Observations
- p3. Website Report: STADTKLIMA
- p4. Conference Report: 2003 AGU Fall Meeting: Urbanization effects on climate.
- p5. Conference Report: American Meteorological Society Symposium: Planning, Nowcasting, and Forecasting in the Urban Zone.
- p6-8. Project Report: Joint Urban 2003.
- p9. IAUC Bibliographic Committee Report
- p10. IAUC Awards Committee Report
- p11. IAUC Board membership, Logo competition and Board elections.

Newsletter Contributions

The IAUC Newsletter is published bi-monthly. The next publication will occur in early April. Any items to be considered for the April edition should be received by March 31, 2004.

The content received by the newsletter has tended to fall into certain categories, some of which are associated with existing IAUC sub-committees. Contributions under these headings should be sent to the In the following list are those individuals that will compile submissions in various categories:

Conferences: Jamie Voogt (javoogt@uwo.ca)

Websites: Gerald Mills (gerald.mills@ucd.ie)

Bibliography: Jennifer Salmond (j.salmond@bham.ac.uk)

Urban Projects: Sue Grimmond (grimmon@indiana.edu)

We hope that the format of the newsletter and its content is becoming familiar to members and that some consistency has been established with regard to content. We are always open to new ideas and comments on the newsletter (content or format).

Gerald Mills
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WMO Guide on URBAN OBSERVATIONS

The WMO is preparing a new edition of its Guide to Meteorological Instruments and Methods of Observation. I was asked to submit a chapter that addresses questions on the recommended siting, exposure, methods and documentation for urban climate stations. Part I of the guide covers the case of standard open country sites, this chapter appears in Part II on Urban Observations. A draft of this document is available at the IAUC website as pdf document (www.urban-climate.org).

I am happy to consider any comments that members may wish on this chapter however these must be received before **February 29, 2004**.

The terms of reference restricted coverage to certain basic topics. They were to develop guidelines and recommendations for observations in urban areas for:

- the selection of representative sites for observing stations,
- the choice of suitable instruments,
- the appropriate exposure of instruments and
- special operational needs (e.g. station maintenance and the archiving of metadata, see Figure 2).

In addition to these, I have sketched in some thoughts on other topics that I think will ultimately need to be developed more fully (e.g. profiling and the assessment of urban effects). In some areas, for parallelism with other sections, I have included headings but nothing more.

The chapter is somewhat unconventional by WMO standards. The big issues where difficulties

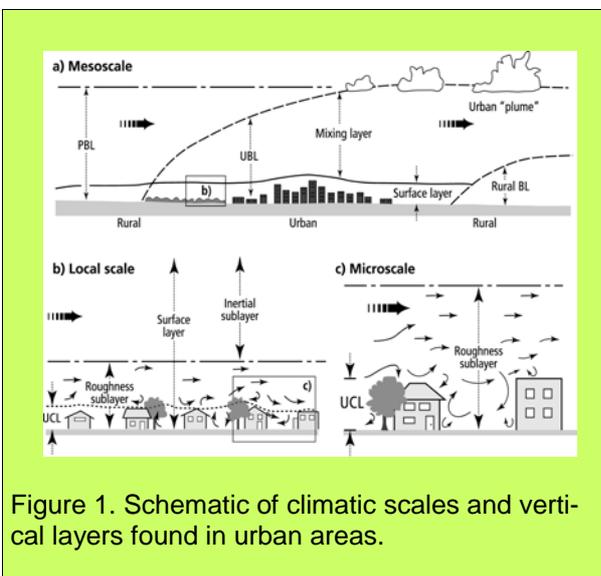


Figure 1. Schematic of climatic scales and vertical layers found in urban areas.

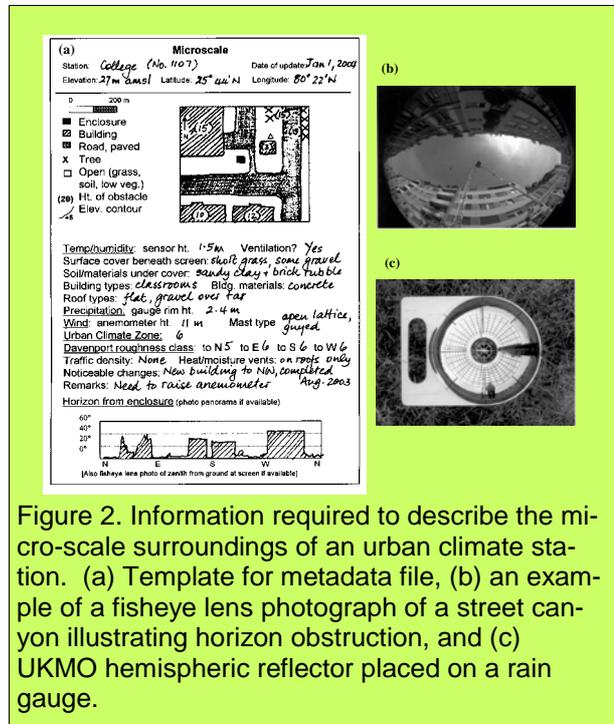


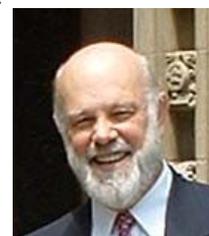
Figure 2. Information required to describe the micro-scale surroundings of an urban climate station. (a) Template for metadata file, (b) an example of a fisheye lens photograph of a street canyon illustrating horizon obstruction, and (c) UKMO hemispheric reflector placed on a rain gauge.

arise are:

- the lack of appreciation/knowledge about micrometeorology within national meteorological and hydrological services that are geared to larger scale concerns,
- the need to fully appreciate the role of scale in urban climates (see Figure 1),
- lack of an agreed way to describe urban environments for climate purposes and
- the need to be flexible in designing a station that meets the special circumstances and realities of urban areas.

There are no precedents, so I established what I think are sensible ideas or principles that, if applied intelligently, can form the basis of decision-making in what is always a messy environment for measurement. Some notions have not received wide review, except that I have given several conference papers and incorporated feedback in the draft. These include the centrality of recognizing two scales, the Urban Climate Zone classification scheme and the metadata documentation.

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Urban Climate Websites



STADTKLIMA / URBAN CLIMATE

www.urbanclimate.net

STADTKLIMA

A tool for Urban Climatology

The Internet is an excellent medium for the provision and rapid exchange of relevant information and is ideally suited to aid the development of a relatively new field of study. The International Urban Climate Website (www.stadtklima.de or www.urbanclimate.net) is a co-operative project developed by the Department of Urban Climatology in the Office of Environmental Protection of the City of Stuttgart, Germany, and the Meteorological Institute at the University of Freiburg, Germany. The origin of the project occurred during the second Japanese-German Meeting on "Climate Analysis in Urban Planning" which took place in Kobe, Japan, in September 1997. It has now been operational for six years and has proven very popular – it receives more than 10,000 hits per month.

The objective of the International Urban Climate Website is to focus on, and to provide information on, urban climate, which comprises both the thermal and the air quality component. Its primary intention is to facilitate information exchange within the Urban Climate community and promote its research.

At present the homepage consists of sections that contain the following:

- City information: A list of cities world-wide for which climate information is available. The website provides general information about these cities, contact persons and institutions that work in the field of urban climate as well as climatic and air pollution data. Also included is information about past, present and future planned investigations and projects in urban climatology for the listed cities.
- Urban climate meetings: An up-to-date list of relevant meetings.
- An urban climatology bibliographic database and a glossary of terms.
- A database of companies and institutions working in the field of urban climatology.
- Sources for information on, and demonstration versions of, urban climate models. These include software and instruments for

investigating urban climates (Figure 1).

- An "Urban Climate Forum" for sharing information and discussing urban climate issues.

We think that the international urban climate website represents appropriate tool for meteorologists, climatologists, urban planners and the urban climate community in general.

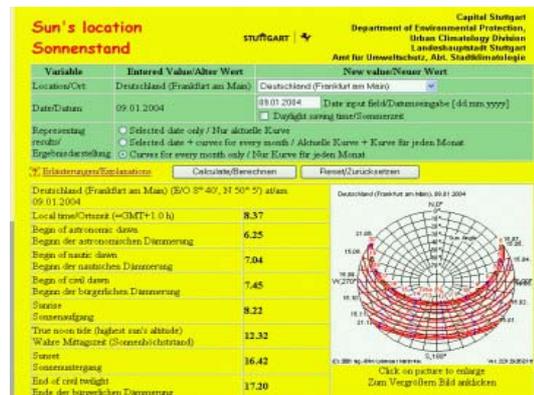


Figure 1: An example of software available at STADTKLIMA

The Website Editors

Andreas Matzarakis,
Freiburg, Germany.



Jürgen Baumüller,
Stuttgart, Germany.

Helmut Mayer,
Freiburg, Germany



Conference Reports



URBANIZATION EFFECTS ON CLIMATE

THE 2003 AMERICAN GEOPHYSICAL UNION FALL MEETING

Nearly 10,000 geoscientists converged onto San Francisco for the annual Fall Meeting of the American Geophysical Union (AGU). Amongst the dizzying array of presentations and posters which spanned every aspect of physical science from the Earth's core to the outer reaches of the solar system, was a Union Session entitled "Human-Induced Climate Variations Linked to Urbanization: From Observations to Modeling." Chaired by J. Marshall Shepherd (NASA) and Menglin Jin (University of Maryland), the session featured twelve paper presentations and four posters on urban topics. In general, papers were divided into those that focused on

- the potential of satellite observations,
- progress and problems in the areas of observation and modeling, and
- observations of urban climate effects, particularly on precipitation.

Michael King (NASA Goddard Space Flight Center) opened the session by highlighting the "promise and capability of NASA's Earth Observing System (EOS) to monitor human-induced climate variations." Particular emphasis was paid to the MODerate resolution Imaging Spectroradiometer (MODIS*), which has 36 spectral bands and a resolution of less than 1 km². Several papers demonstrated the potential for studying urban climates using MODIS either in isolation or in combination with other satellite products. For example, Menglin Jin used MODIS observations in the NCAR Community Land Model to improve simulations of the energy and water cycles. Similarly Allen Chu (NASA) employed MODIS aerosol data to track particulates in areas lacking ground-based monitoring systems. Marc Imhoff (NASA) assessed the impact of urbanization on net primary production using a combination of satellite imagery and a terrestrial carbon model. Cristina Milesi (University of Montana) presented a detailed, continental-scale coverage of impervious surface area based on a combination of satellite resources. Anne-Marie Schneider (Boston University) examined trends of urban growth globally using satellite observations and identified three emerging patterns: clusters outside the city; scattered settlements with little structure; and radial growth along roads.

Numerical modeling issues pertinent to urban climate researchers were also addressed. AGU President Robert Dickinson (Georgia Institute of Technology) gave a talk entitled "Framework for Inclusion of Urbanized Landscapes in a Climate Model" that stressed the importance of resolving urban systems in climate models while recognizing that the heterogeneous nature of the urban surface presents a challenge. IAUC President Sue Grimmond (Indiana University) summarized contemporary urban modeling and observational studies and presented urban land-atmosphere exchange schemes (e.g. TEB and LUMPS-NARP) that are appropriate for use in meso- and global-scale cir-

ulation models. Sarah Roberts (University of British Columbia) utilized the TEB scheme to examine the energy partitioning at a site in Marseille, France. Those factors found to exert a significant impact were variations in wind speed, surface albedo and the plan area of built surfaces.

Results from an assortment of observational campaigns were also presented. Winston Chow (National University of Singapore) presented results from on-going study of Singapore's UHI that indicate its timing and intensity are distinct from those of mid-latitude cities. Lela Prashad's (Arizona State University) study established a relationship between neighborhood-scale microclimates and its socio-economic character – for example, low-income neighborhoods were found to be significantly warmer than their high-income counterparts. Makato Taniguchi (Research Institute for Humanity and Nature, Kyoto) showed that urbanization and climate change together affect subsurface thermal regimes via surface heat conduction and heat advection from groundwater flow. Parastou Hooshalsadat (University of Arkansas) used satellite and rain gauge data to assess the impact of urbanization on rainfall trends around Houston. Bob Bornstein (San Jose State University) also spoke on urbanization effects on precipitation patterns in the Atlanta area where simulations reproduced observed up-wind divergence, a precipitation minimum over the city, and downwind convergence. Daniel Rosenfeld (The Hebrew University of Jerusalem) found that, in tropical and moist subtropical conditions, particulate pollution delayed the onset of convective precipitation but increased storm intensity. More generally, an investigation by Eric Wilcox (Princeton University) into the ability of GCMs to represent precipitation concluded that they are unable to capture present-day rainfall intensity – a crucial element in assessing flood frequencies.

Overall, this session of the AGU Annual Fall Meeting was an excellent opportunity to showcase important work being done in the urban environment. To view complete presentations and posters presented at this meeting, you are invited to visit Dr. Menglin Jin's website: www.atmos.umd.edu/~mjjin/AGU03urban.html

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*Products, software tools and an online visualization and analysis system are accessed from the MODIS website: modis-atmos.gsfc.nasa.gov.

Conference Reports



PLANNING, NOWCASTING, AND FORECASTING IN THE URBAN ZONE

AMERICAN METEOROLOGICAL SOCIETY SYMPOSIUM, JAN. 2004.

The theme of the American Meteorological Society's 2004 Annual Meeting in Seattle, Washington, USA, was weather forecasting. Several specialty meetings on this topic took place during the Annual Meeting, including the "Symposium on Planning, Nowcasting, and Forecasting in the Urban Zone" that is reviewed here. Walter Dabberdt and Robert Bornstein were the technical chairmen, and further information on the Urban Symposium and other related AMS meetings can be found at www.ametsoc.org/MEET/index.html. A wide range of topics was covered. In addition to seven oral sessions (with 43 papers) and one poster session (with 15 papers), there were seven oral joint sessions (with 47 papers) and two poster joint sessions (with 6 papers) held with other technical groups that also met during the week of the Annual Meeting. These joint sessions were related to symposia on hydrology, chemistry, applied climatology, global change, and integrated observing systems. A total of 111 papers were given, and all are on the CD distributed to attendees. The CD also contains the papers from all other topical meetings that took place during the Annual Meeting.

Besides the Symposium papers discussed above, urban meteorology was discussed in two of the four presentations at the Presidential Policy Forum on Weather and National Security. These two papers, by Bruce Hicks and Nancy Suski, emphasized the need for improved models for urban transport and dispersion, since one of the expected scenarios for terrorist releases of chemical or biological agents is a point source near the ground in a downtown area. The attendance at the Presidential Policy Forum was over 1000.

Many of the papers at the Symposium dealt with topics that are peripheral to the interests of Urban Climatologists, such as urban tracer studies and urban air quality studies, but many papers were closely connected to urban climatology. Although it is perhaps unwise to mention only a few papers among dozens of relevant papers, the following few papers are examples of those that were especially relevant to urban climatologists. These are not given in any order of priority but are simply representative examples.

San-Ok Han (Texas A&M) discussed the assimilation of GOES-IR satellite data for urban meteorological modeling, including the effects of subgrid inhomogeneities. Xiang-Ao Xia (Chinese Academy of Sciences) gave an overview of aerosol properties and direct radiative forcing in Beijing in Spring of 2001. Jason Ching (USEPA) presented some ideas for urban canopy parameterizations to be used in the mesoscale meteorological model, MM5, to simulate urban meteorology at neighborhood scales. Laurence Kalkstein (University of Delaware) led a session on heat and health warning systems. Sarah Roberts (University of British Columbia) described her analysis of the sensitivity of surface-atmosphere energy exchanges in urban areas derived from simulations.

The session on last July's Joint Urban 2003 experiment in Oklahoma City included several interesting papers. For example, Julie Lundquist (Lawrence Livermore National Laboratory) described analysis of data from a meteorological tower located just downwind of the urban area. She focused on the turbulent kinetic energy dissipation rate and showed how it varied with wind direction, with higher values for trajectories over the downtown area. In the same session, Sue Grimmond (Indiana University) presented data showing the variability of sensible heat fluxes in suburban areas in Oklahoma City.

In addition to the interesting sessions, the participants enjoyed the showery urban microclimate of downtown Seattle, and the urban climatologists calculated the anthropogenic heat flux from the high density of Starbucks Coffee shops.

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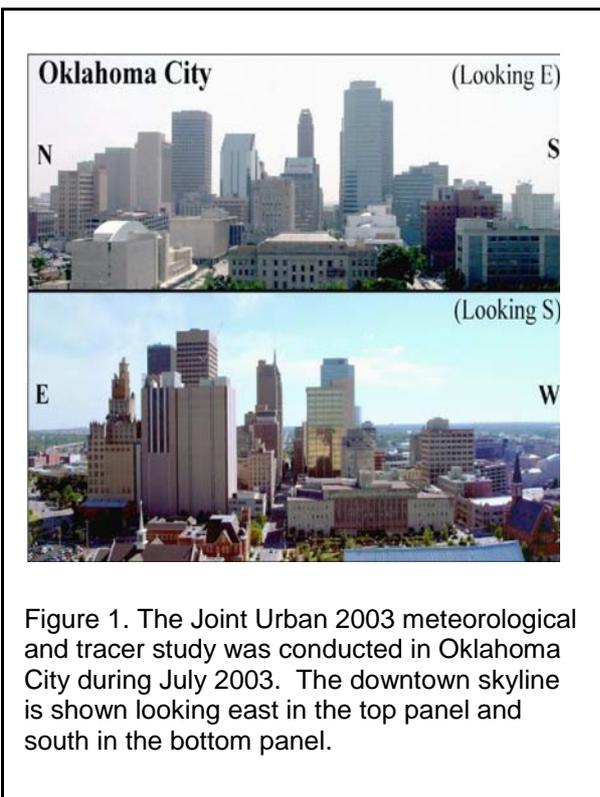


Project Reports

JOINT URBAN 2003

Air motions in and around cities are very complicated and the increasing threat of toxic agents being released into urban atmospheres makes advancing the state-of-science of understanding and modeling atmospheric flows in these circumstances essential. Quality-assured meteorological and tracer data sets are vital for establishing confidence that indoor and outdoor dispersion models used to simulate dispersal of potential toxic agents in urban atmospheres are giving trustworthy results. To provide critically needed high-resolution dispersion data for model evaluations, the U.S. Department of Defense – Defense Threat Reduction Agency (DTRA), the U.S. Department of Energy (DOE) – Chemical Biological National Security Program, and the Department of Homeland Security (DHS) joined in an effort to conduct the Joint Urban 2003 atmospheric dispersion study in Oklahoma City, Oklahoma (Figure 1) during July 2003.

The Joint Urban 2003 study was a multi-million dollar effort bringing together over 150 scientists, engineers, technicians and students from over 20 U.S. and foreign organizations to accomplish the study objectives. Organizations participating included six from the U.S. Department of Defense, five U.S. Department of Energy and Homeland



Security national laboratories, two U.S. National Oceanic and Atmospheric Administration laboratories, eight U.S. universities, and other U.S. federal agencies and private companies. The foreign participants were the United Kingdom Defence Science and Technology Laboratory and the Defence Research and Development Canada who participated in Joint Urban 2003 under the auspices of the U.S. Department of Defense Technical Panel 9 (TP9) of The Technical Cooperation Program (TTCP) Chemical, Biological and Radiological Defense (CBD) Group. During the planning stages of the study, refinement of the tracer sampling network was accomplished using results from wind tunnel studies performed by the Meteorological Institute, University of Hamburg and from preliminary modeling studies performed by CFD Research Corporation, Huntsville, Alabama.

This major urban study was conducted beginning June 28 and ending July 31, 2003. It included several integrated scientific components necessary to describe and understand the physical processes governing dispersion within and surrounding an urban area and into and within building environments. The components included characterizing:

- 1) the urban boundary layer and the development of the urban boundary layer within the atmospheric boundary layer,
- 2) the flows within and downwind of the tall-building core,
- 3) the flows within a street canyon including the effects of traffic on turbulence,
- 4) the surface energy balance within an urban area,
- 5) the dispersion of tracer into, out of and within buildings, and
- 6) the dispersion of tracer throughout the tall-building core and out to 4 km downwind from the release.

The scientific elements of the study were accomplished using state-of-the-art meteorological and tracer instruments including lidars, sodars, radars, sonic anemometers, airplane-based meteorological sensors, fast-response tracer analyzers and helicopter-based remote tracer detectors. Winds and other meteorological quantities were measured continuously at nearly 200 locations in and around downtown Oklahoma City.

Project Reports

JOINT URBAN 2003

Ten intensive operation periods (IOPs) of eight hours each were completed during the 34-day study period where detailed meteorological, turbulence and tracer measurements were made. Sulfur hexafluoride tracer was released in downtown Oklahoma City and sampled in and around downtown and as far as 4 km downwind. During four of the ten IOPs the infiltration of tracer into four downtown buildings was studied with detailed measurements of tracer and flows within and surrounding some buildings. Tracer was sampled using over 200 integrated samplers and 25 fast response analyzers. Vertical measurements of tracer were made by placing samplers on the tops of nearly 20 buildings and by sampling tracer at 7 levels on a 90 m crane.

Most of the meteorological instruments operated continuously throughout the entire study period, with a subset of the instruments operating only during IOPs. The majority of the meteorological and tracer instruments were sited within or near the central business district (CBD) with some tracer and meteorological measurements extending out to approximately 6 km from the CBD. Figure 2 (overleaf) shows some of the meteorological instruments covering the study region.

Sulfur hexafluoride tracer was released from one of three release locations (Figure 3) during all ten IOPs. The release location was chosen based on the wind direction and building configuration. The "Westin" release was used when the winds were expected from the S through SSE and the "Botanical" release was used when the winds were expected from the S through SSW. The "Park" release was used when studying the Park Avenue urban street canyon effects in more detail. The first six IOPs occurred during daylight hours typically beginning at 0800 CST and ending 8 hours later at 1600 CST. The last four IOPs occurred during the night beginning at typically 2200 CST and ending at 0600 CST. During each IOP typically seven near ground-level point releases occurred – three continuous releases of ½ hour duration and four instantaneous releases where balloons filled with tracer were popped.

The data from Joint Urban 2003 is being archived on a data server and should be in final form during Spring 2004. Analysis of the data and model comparison studies will begin in earnest after completion of the archive.

ACKNOWLEDGEMENTS

The success of Joint Urban 2003 was critically dependent on many individuals, not the least of which was the scientists, engineers, technicians, students and contractors from the participating organizations and companies. DTRA, DOE and DHS staff were important in the overall planning and public affairs support for the study. The individuals on the management and scientific teams responsible for the overall success of Joint Urban 2003 were Jim Bowers (Dugway Proving Ground), Ray Hosker (National Oceanic and Atmospheric Administration), Marty Leach (Lawrence Livermore National Laboratory), Teresa Lustig (DHS), John Pace (DTRA), Jennifer Reichert (DOE), Joe Shinn (Lawrence Livermore National Laboratory), and Leo Stockham (Northrop Grumman Information Technology).

K. Jerry Allwine
Pacific Northwest National
Laboratory.



Figure 3. Three sulfur hexafluoride release locations in downtown Oklahoma City used during Joint Urban 2003. Proceeding from south to north the release locations are identified as "Botanical," "Westin," and "Park."

Project Reports

JOINT URBAN 2003

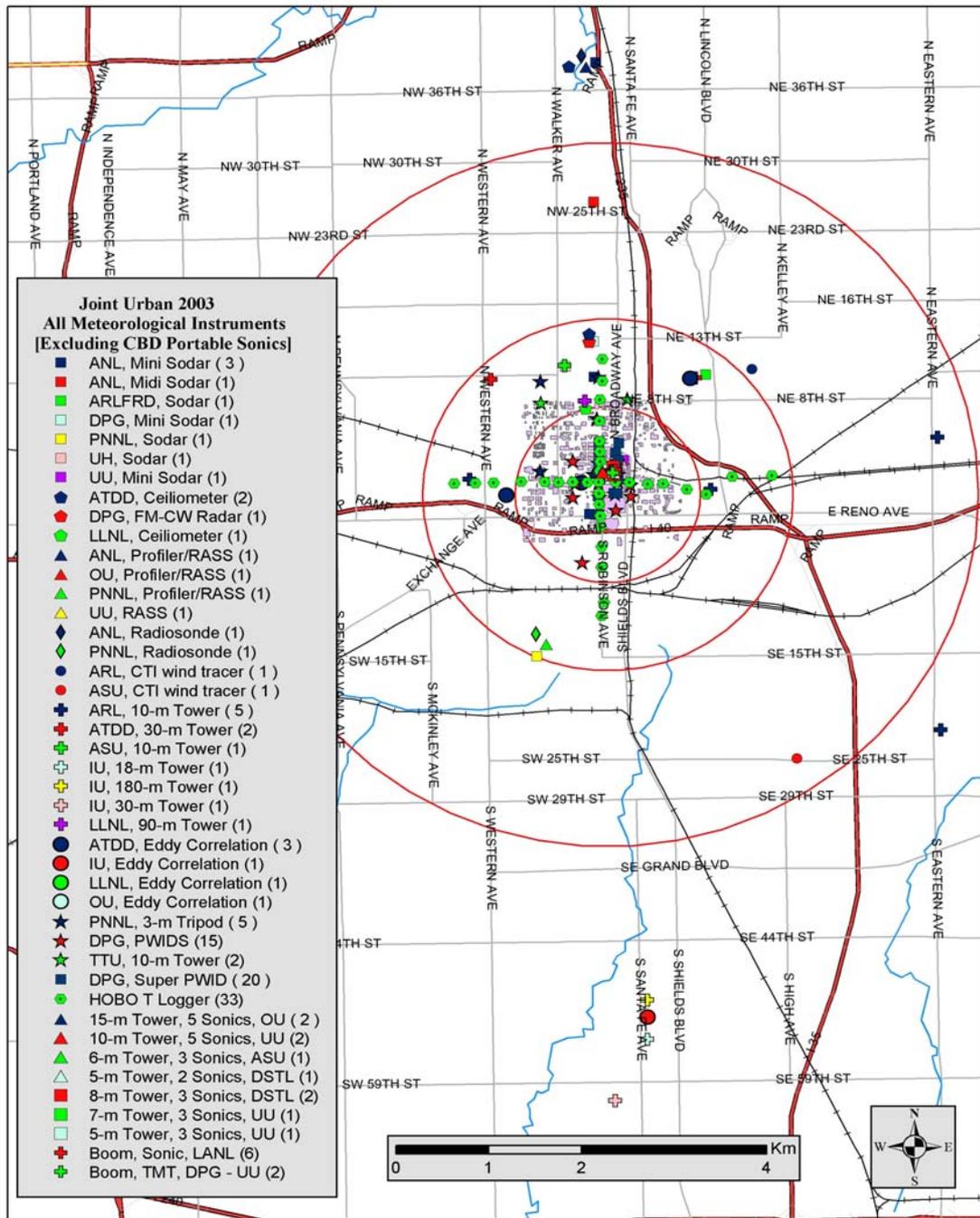


Figure 2. All meteorological instruments deployed in the Oklahoma City area for Joint Urban 2003. Many symbols in the legend are not unique. Plot intended to simply show coverage. Additionally, some instrument locations may not be correct because the final coordinates are being developed and plots will be updated in the future. The "red" arcs are at 1, 2 and 4 km from the south-central point in the central business district near the southern release locations.

IAUC Committee Reports

Bibliographic Committee

Thanks to everyone who sent in references for their recent papers. These are listed below along with a selection of other papers spotted by the bibliographic committee. We are still putting together the complete 'Urban Climate' bibliography for 2003, so it is not too late to send any references you would like included. This will be published on the IAUC website soon.

Please also send references for any urban climate related papers which have been published since January 1 2004 for inclusion in the next newsletter to j.salmond@bham.ac.uk. As before, please mark the header of your email with 'IAUC Publications 2004'. In order to facilitate entering the information into the data base please use the following format:

Author:

Title:

Journal:

Volume:

Pages:

Dates:

Keywords:

Language:

Jennifer Salmond
University of Birmingham
j.salmond@bham.ac.uk



RECENT PUBLICATIONS

Baumgardner, D., G. B. Raga, et al. (2004). "Evidence for the formation of CCN by photochemical processes in Mexico City." Atmospheric Environment **38**(3): 357-367.

Kadyrov, E. N., G. N. Shur, et al. (2003). "Investigation of atmospheric boundary layer temperature, turbulence, and wind parameters on the basis of passive microwave remote sensing." Radio Science **38**(3): 13.1-13.12.

Ketzler, G. (2002). "Untersuchungen an Kaltluftströmen in kleinen stadtnahen Tälern" Aachener Geographische Arbeiten **36**: 21-64. (In German)

Kossmann, M. and A. Sturman (2004). "The surface wind field during winter smog nights in Christchurch and coastal Canterbury, New Zealand." International Journal of Climatology **24**: 93-108.

Lin, J. J. and L. C. Lee (2004). "Characterization of the concentration and distribution of urban sub-micron (PM1) aerosol particles." Atmospheric Environment **38**(3): 469-475.

Longley, I. D., M. W. Gallagher, et al. (2004). "Short-term measurements of airflow and turbulence in two street canyons in Manchester." Atmospheric Environment **38**(1): 69-79.

Mayer, H. and A. Matzarakis (2003). "Perspectives of environmental meteorology in the future." Promet **30**: 57-66.

Mayer, H., A. Matzarakis, et al. (2003). "Spatio-temporal variability of moisture conditions within the Urban Canopy Layer." Theoretical and Applied Climatology **76**: 165-179.

Mayer, H., A. Matzarakis, et al. (2003). "Human-biometeorological assessment of the air pollution component of the urban climate by the index DAQx." EURASAP Newsletter **50**: 18-25.

Salma, I., X. Chi, et al. (2004). "Elemental and organic carbon in urban canyon and background environments in Budapest, Hungary." Atmospheric Environment **38**(1): 27-36.

Viazankin, A. S., E. N. Kadyrov, et al. (2003). "Microwave passive method for investigation of structure of the atmospheric boundary layer." Meteorology and Hydrology **8**: 60-64. (In Russian, English version in: Russian Meteorology and Hydrology)

Vyazankin, A. S., S. A. Vyazankin, et al. (2003). "Vertical distribution of air temperature in the atmospheric boundary layer in suburb and megapolis." Meteorology and Hydrology **7**: 5-12. (In Russian, English version in: Russian Meteorology and Hydrology)

Can't spot your paper? Send the reference to me for inclusion in the next newsletter!

IAUC Committee Reports

Awards Committee

An Awards Committee is to be formed consisting of five persons, with no more than one person from any country (based on their current or last professional affiliation). The five members will include both the current and next chairs, the latter a Committee member who will have served one full year before their term as chair will begin. Members will normally serve a 3-year term and cannot serve two consecutive terms. While Chairs must be members of the IAUC Board, the remaining members need only be IAUC members. The IAUC Board will select new members each year to replace those rotated off. Depending on the year, one to three new members will be needed.

Initially the IAUC Board will establish the Awards Committee by designating the first and second chairs (each of whom will serve 3- year terms), one member to serve a term of 1-year and two members to serve terms of 2-years each. This will allow new members to rotate onto the Committee in a timely manner.

The Awards Committee will recommend to the IAUC Board up to one person to receive the annual IAUC Luke Howard* Award for continued significant contributions to the field of urban climatology. It will also organize a committee to run a student competition at ICUC meetings, prepare a section on the IAUC web page summarizing its activities, and report to the Board on its activities.

Bob Bornstein
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* Preliminary discussions have occurred with the Howard family to determine that they are agreeable to this award being named after Luke Howard. This still needs to be formalized.

Student Paper Awards

The Committee Chair will select and chair a committee of five IAUC members who will review all (oral and poster) student presentations at a given ICUC meeting. The committee will then select first, second, and third place winners, regardless of whether they have presented oral or poster papers. The winning three names will be announced at the end of the meeting and each winner will receive a certificate describing their achievement.

Luke Howard Award

The Luke Howard Award will be given annually to an individual who has made outstanding contributions to the field of urban climatology in a combination of research, teaching, and/or service to the international community of urban climatologists.



Portrait of Luke Howard (circa 1807)

Nomination Process

Nomination materials will be collected and coordinated by a person that is not on the Awards Committee. All contact with the IAUC Awards Committee occurs through the nomination-coordinator who notifies the Chair of the Committee that a particular person is to be nominated. Any further expressed interest in that nominee will be referred to the coordinator. Posthumous awards will not be made, no self-nominations are permitted, and current Awards Committee members cannot be nominated.

The coordinator will thus collect the following documentation:

- A 3-page candidate-CV
- Three, 2-page, letters of recommendation from IAUC members from at least two different countries.

Award Schedule

- 1 April: Complete nomination packets (single electronic submission) due to Committee chair
- 1 May: Committee votes and Chair forwards all of the nominees' packets (electronically) to Board
- 1 June: Board makes decision and announces winner.
- Next appropriate conference: Award is presented.

IAUC Committee Reports

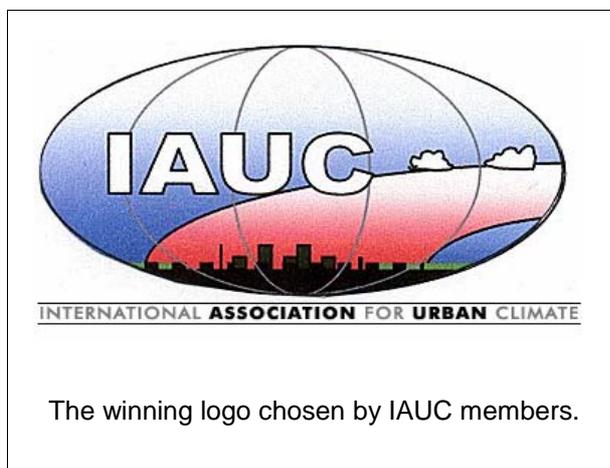
Board Information

Board elections

According to the IAUC Board Procedures and Terms, one board member will rotate off in August 2004 and needs to be replaced. An official announcement regarding the nomination of candidates will follow in March. The objective of this note is to alert any members who are thinking about standing for the Board or would like to nominate a candidate about this upcoming opportunity. Please note that only persons who are members of IAUC can stand for the Board and only IAUC members at the time of nomination will be eligible to vote. The membership database will therefore be closed at the start of the nomination period for the duration of the nomination and voting periods. If you would like to be part of this process please ensure that you are an IAUC member before the nomination period begins (sometime in March)

Please also remember the following rules:

- The person nominating a candidate should name **two** other members who also support the nomination. In the case of self-nomination **three** other members need to support the nomination. All persons should e-mail the Secretary to confirm their support within the nomination period.
- At the completion of the nomination period, if the number of nominations exceeds the number of available positions, an election is held. If not, the nominees are considered to have been elected.



IAUC LOGO Competition

Many thanks to everyone who participated in the vote to select the official IAUC logo. 187 votes were submitted which corresponds to about 25% of the IAUC membership.

The majority of the voting members chose No. 2 on the voting webpage and the Board has decided to adopt this design as the official logo. The Board will produce multiple versions for different uses (web sites and letterheads; colour and b&w) and you will start seeing the logo on official IAUC communications such as this newsletter and on the top page of the IAUC website (www.urban-climate.org).

Matthias Roth,
Secretary IAUC
geomr@nus.edu.sg



Board Members

President:
Sue Grimmond (grimmon@indiana.edu)

Secretary:
Matthias Roth (geomr@nus.edu.sg)

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Chair Bibliography Committee: Jennifer Salmond
Chair Membership Committee: Janet Barlow
Chair Teaching Resources: Gerald Mills
Chair Membership: Janet Barlow
Chair Awards Committee: Bob Bornstein
WebMasters: John Arnfield and James Voogt

Upcoming Conferences

2nd INTERNATIONAL WORKSHOP ON CLIMATE, TOURISM AND RECREATION



8 -12 June 2004 (modified)

To be held at Orthodox Academy of Crete, Kolimbari, Crete, Greece. Organised by the International Society of Biometeorology, Commission on Climate, Tourism and Recreation. The deadline for abstracts is **20 January 2004**. Further information can be found at STADKLIMA www.mif.uni-freiburg.de/isb/ws2/ws.htm

27th NATO/CCMS

INTERNATIONAL TECHNICAL MEETING ON

AIR POLLUTION MODELLING AND ITS APPLICATION



**October 25 Oct- 29, 2004.
Banff, Canada.**

Abstracts are required to be sent to itm@ua.pt NO LATER THAN **12 January 2004**

Further information available at www.dao.ua.pt/itm/



16th Symposium on Boundary Layers and Turbulence



9-13 August 2004, Portland, Maine

The 16th Symposium on Boundary Layers and Turbulence, sponsored by the American Meteorological Society and organized by the AMS Committee on Boundary Layers and Turbulence, is scheduled to be held in Portland, Maine, 9-13 August 2004. Information about the hotel will be posted on the AMS Web site (www.ametsoc.org) by mid-January.



The 5th Symposium on The Urban Environment



23 -27 August 2004, Vancouver, Canada

The symposium is being held in conjunction with the 26th Conference on Agricultural and Forest Meteorology, the 13th Joint Conference on the Applications of Air Pollution Meteorology with the Air and Waste Management Association, and the 16th Conference on Biometeorology and Aerobiology. Please submit your abstract electronically via the Web by 7 April 2004 (refer to the AMS Web page at <http://www.ametsoc.org/AMS> for instructions.)