JOINT CACGP / IGAC / WMO SYMPOSIUM

ATMOSPHERIC CHEMISTRY AT THE INTERFACES 2006

17 – 22 SEPTEMBER 2006
CAPE TOWN, SOUTH AFRICA



CACGP

FINAL PROGRAMME

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The Organising Committee would like to thank the following sponsors for their contributions towards making Atmospheric Chemistry at the Interfaces 2006 a great success.

ACCENT

Climatology Research Group

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A WORD OF WELCOME

Dr Stuart Piketh
Chairman, Local Organising Committee

Dear Colleagues and friends

It is a privilege for South Africa to be the host country for the prestigious Joint CACGP/IGAC and WMO symposium.

On behalf of the Local Organizing Committee (LOC) I would like to welcome you to South Africa and the City of Cape Town. The LOC will endeavor to make your visit to South Africa a fruitful experience with regard to scientific interaction with friends and colleagues as well as experiencing our beautiful country.

The theme of the symposium is ATMOSPHERIC CHEMISTRY AT THE INTERFACES, which will highlight the current state of knowledge of the interaction between various components of the Global System.

We invite you to attend and are looking forward to your participation.

Mark G. Lawrence
Chairman, International Programme Commitee

Dear Colleague

On behalf of the international program committee, I would like to invite you to join us in Cape Town in 2006 for a unique conference sponsored by the CACGP, WMO, and IGAC.

The theme - “Atmospheric Chemistry at the Interfaces” - represents the common interests of the three sponsors and several associated organizations, and focuses on the great challenges of interdisciplinary research and effective cross-disciplinary communication in times of ever increasing specialization.

We will highlight several interfaces: interactions between gases, aerosols, and climate; exchanges of the atmosphere with the oceans and with land surfaces; and the relationship between meteorological variability and atmospheric chemistry. An overarching theme which will also be emphasized at the conference is the interface between science, society, and the environment. This is a particularly relevant issue for the conference venue: for instance, particulate matter, brown hazes and reduced visibility resulting from the combination of biomass burning and fossil fuel use have important impacts on human health, tourism, and the regional economies.

We are planning on an exciting program bringing together the research communities represented by the sponsors, and are looking forward to a broad international participation.

See you in Cape Town in 2006!

Mark G. Lawrence and the International Program Committee

COMMITTEES

International Programme Committee

Mark Lawrence (Chair)	CACGP
Anne Thompson	CACGP
Greg Carmichael	WMO/IUGG
Urs Baltensperger	WMO
Laura Gallardo	IGAC
A. Jayaraman	IGAC
Tim Jickells	SOLAS & CACGP
Dileep Kumar	SOLAS
Stuart Piketh	LOC
Mary Scholes	LOC
Sarah Doherty	IGAC Executive Officer

Local Organising Committee

Stuart Piketh (Chair)	University of the Witwatersrand
Harold Annegarn	University of Johannesburg
Ernst Brunke	South African Weather Service
Gerrie Coetzee	South African Weather Service
Roseanne Diab	University of KwaZulu-Natal
Jonas Mphepya	South African Weather Service
Luanne Otter	University of the Witwatersrand
Kobus Pienaar	University of North West
Mathieu Rouault	UCT
Mary Scholes	University of the Witwatersrand
William Froneman	Rhodes University
Greg Scott	CSIR

PROGRAMME AT A GLANCE

PLEASE NOTE: This programme is subject to change should circumstances arise that require this. All posters will be displayed for the duration of the conference.

Sunday 17 September 2006		
14:00 – 18:00	Registration	Registration Foyer
16:00 – 18:00	Poster Set-up	Jasminium and Clivia
18:00 – 22:00	Welcome Cocktail	Ballroom West
Monday 18 September 2006		
07:00 – 18:00	Registration	Registration Foyer
08:00 – 09:00	Welcome / Announcements	Auditorium II
09:00 – 10:00	Keynote Presentation (B. Huebert) - Why don't we already know more about chemistry at interfaces?	Auditorium II
10:00 – 10:30	Tea / Coffee Break	Strelitzia, Jasminium and Clivia
10:30 – 11:30	AMMA Session – African Monsoon Multidisciplinary Analysis [C. Mari]	Auditorium II
11:30 – 12:30	APINA Session – Air Pollution Information Network –Africa [S.Feresu]	Auditorium II
12:30 – 14:00	Lunch, Poster Set-Up and Open Poster Viewing	Strelitzia, Jasminium and Clivia
14:00 – 15:40	Session 1 - Atmospheric chemistry observations and their integration and synthesis [R. Martin, J. Williams, D. Edwards, L. Barrie]	Auditorium II
15:40 – 16:00	Tea / Coffee Break	Strelitzia, Jasminium and Clivia
16:00 – 17:00	Session 1 - Atmospheric chemistry observations and their integration and synthesis [R. Martin, J. Williams, D. Edwards, L. Barrie]	Auditorium II
17:00 – 18:30	Poster Viewing (AMMA, APINA, Session1)	Jasminium and Clivia
Tuesday 19 September 2006		
07:00 – 18:00	Registration	Registration Foyer
08:30 – 10:30	Session 9 – Metro-Agro-Plexes [Y. Kondo, G. Carmichael]	Auditorium II
10:30 – 11:00	Tea / Coffee Break	Strelitzia, Jasminium and Clivia
11:00 – 12:20	Session 2 – Chemical weather on regional to global scales: simulations, analysis and impacts [M. Lawrence, L. Marufu, M. Schultz]	Auditorium II
12:20 – 14:00	Lunch and Open Poster Viewing	Strelitzia, Jasminium and Clivia
14:00 – 14:40	Session 2 – Chemical weather on regional to global scales: simulations, analysis and impacts [M. Lawrence, L. Marufu, M. Schultz]	Auditorium II
14:40 – 15:40	Session 3 – Long-range transport and chemical transformations [O. Wild, A. Stohl, D. Parrish]	Auditorium II
15:40 – 16:00	Tea / Coffee Break	Strelitzia, Jasminium and Clivia
16:00 – 17:20	Session 3 – Long-range transport and chemical transformations [O. Wild, A. Stohl, D. Parrish]	Auditorium II
17:20 – 18:30	Poster Viewing (Session 2, Session 3, Session 9)	Jasminium and Clivia
18:30 – 19:30	Open Poster Viewing & Cocktails	Strelitzia, Jasminium and Clivia

PROGRAMME AT A GLANCE

Wednesday 20 September 2006		
07:00 – 14:00	Registration	Registration Foyer
08:30 – 09:30	DEBITS Session – Deposition of Biogeochemically Important Trace Species [K. Pienaar]	Auditorium II
09:30 – 10:10	Session 7 – Land-atmosphere biogeochemical cycles [A. Guenther, B. Holland, F. Loreto]	Auditorium II
10:10 - 10:30	Tea / Coffee Break	Strelitzia, Jasminium and Clivia
10:30 – 11:50	Session 7 – Land-atmosphere biogeochemical cycles [A. Guenther, B. Holland, F. Loreto]	Auditorium II
11:50 – 13:00	Poster Viewing (Session 7, DEBITS)	Jasminium and Clivia
13:00 – 18:00	Free Time (Posters, Meetings or Local Sightseeing)	
18:00	Buses depart for dinner venue	CTICC
19:00 – 22:00	moyo	moyo
Thursday 21 September 2006		
07:00 – 18:00	Registration	Registration Foyer
09:00 – 11 :00	Session 4 – Aerosol-cloud interactions and climate implications [B. Kaercher, T. Iversen, L. Russel]	Auditorium II
11:00 – 11:20	Tea / Coffee Break	Strelitzia, Jasminium and Clivia
11:20 – 12:40	Session 5 – Aerosol chemistry and the interactions between aerosols and gas phase chemistry [U. Baltensperger, K. Kawamura]	Auditorium II
12:40 – 14:00	Lunch and Open Poster Viewing	Strelitzia, Jasminium and Clivia
14:00 – 14:40	Session 5 – Aerosol chemistry and the interactions between aerosols and gas phase chemistry [U. Baltensperger, K. Kawamura]	Auditorium II
14:40 – 15:20	Session 8 – Biomass burning emissions and impacts on atmospheric chemistry [B. Scholes, S. Piketh, K. Longo]	Auditorium II
15:20 – 15:40	Tea / Coffee Break	Strelitzia, Jasminium and Clivia
15:40 – 17:00	Session 8 – Biomass burning emissions and impacts on atmospheric chemistry [B. Scholes, S. Piketh, K. Longo]	Auditorium II
17:00 – 18:30	Poster Viewing (Session 4, Session 5, Session 8)	Jasminium and Clivia
19:00 – 20:30	Barry Huebert Public Lecture and Discussion	Auditorium II
Friday 22 September 2006		
07:00 – 17:00	Registration	Registration Foyer
08:30 – 10:30	Session 6 – Reactive chemistry and exchanges between the MBL and the ocean mixed layer [T. Jickells, D. Kumar, C. Leck]	Auditorium II
10:30 - 11:00	Tea / Coffee Break	Strelitzia, Jasminium and Clivia
11:00 – 13:00	Session 11 – Chemistry of the polar regions (especially air-snow and air-ice interactions) [J. Bottenheim, H. Beine, P. Matrai, P. Shepson]	Auditorium II
13:00 – 14:00	Lunch and Open Poster Viewing	Strelitzia, Jasminium and Clivia
14:00 – 16:00	Session 10 – Chemistry of the UT/LS region [H. Fischer, A. Gettleman, A. Ravishankara, A. Thompson]	Auditorium II
16:00 – 17:30	Poster Viewing (Session 6, Sesssion 11, Session 10)	Jasminium and Clivia
17:30 – 18:30	Poster Dismantling	Jasminium and Clivia

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10:00 – 10:30	**Tea / Coffee Break**	Strelitzia, Jasminium and Clivia
	AMMA Session – African Monsoon Multidisciplinary Analysis [C. Mari]	Auditorium II
10:30 – 10:50	Luc Sigha-Nkamdjou - The African monsoon multidisciplinary analyses (AMMA) program	
10:50 – 11:10	Hugh Coe - Biomass burning and dust aerosol in West Africa: Highlights from the AMMA SOP0 experiment	
11:10 – 11:30	Adetutu Aghedo - Tropospheric ozone budget over Western Africa: New highlights from models and ozone soundings.	
	APINA Session – Air Pollution Information Network –Africa [S.Feresu]	Auditorium II
11:30 – 11:45	Stephen Simukanga - Activities of the air pollution information network for Africa (APINA)	
11:45 – 12:00	Anna Mieke Van Tienhoven - Ozone impacts to crops - a biomonitoring initiative for southern Africa	
12:00 – 12:15	Lungu Chozi Vincent - Establishing corrosion impacts of air pollution in southern Africa	
12:15 – 12:30	Kenneth Gondwe - Development of regional emissions inventory on air pollutants in southern Africa	
12:30 – 14:00	**Lunch, Poster Set-Up and Open Poster Viewing**	Strelitzia, Jasminium and Clivia
	Session 1 - Atmospheric chemistry observations and their integration and synthesis [R. Martin, J. Williams, D. Edwards, L. Barrie]	Auditorium II
14:00 – 14:05	Introduction	
14:05 – 14:40	Ulrich Platt (Invited Speaker) - New techniques for observing the atmosphere – How can they advance our knowledge on atmospheric chemistry?	
14:40 – 15:00	Dylan Millet - Top-down constraints on emissions of biogenic trace gases from North America	
15:00 – 15:20	Sylvia Generoso - Assimilation of POLDER aerosol optical thickness into the LMDz-INCA model: Implication for the Arctic aerosol burden	
15:20 – 15:40	Hiroshi Tanimoto - Interannual variations and recent trends of surface ozone in East Asia: Standardization and integration of measurements, and chemical transport model analysis	
15:40 – 16:00	**Tea / Coffee Break**	Strelitzia, Jasminium and Clivia
	Session 1 - Atmospheric chemistry observations and their integration and synthesis [R. Martin, J. Williams, D. Edwards, L. Barrie]	Auditorium II
16:00 – 16:20	Detlev Moeller - Diurnal HNO2 variation at different altitudes in a rural environment (Hohenpeissenberg, Germany)	
16:20 – 16:40	William Otieno Ayoma – Insights into the vertical distribution of ozone over Kenya based on ozonesonde observations	
16:40 – 17:00	Bastien Sauvage - Tropospheric ozone budget of the tropical Atlantic region	
17:00 – 18:30	**Poster Viewing (AMMA, APINA, Session1)**	Jasminium and Clivia

DETAILED PROGRAMME

Tuesday 19 September 2006		
07:00 – 18:00	**Registration**	Registration Foyer
	Session 9 – Metro-Agro-Plexes [Y. Kondo, G. Carmichael]	Auditorium II
08:30 – 08:35	Introduction	
08:35 – 09:10	Yuanhang Zhang (Invited Speaker) - The PRD 2004 October campaign: Probing ozone and fine particle pollution in Pearl River Delta region, China	
09:10 – 09:30	Carsten Junker - An emission inventory of carbonaceous aerosol from documented and forecast data of fossil fuel and biofuel consumption for the period 1950 - 2030	
09:30 – 09:50	Tim Butler - Modelling the effects of megacity emissions on global atmospheric chemistry	
09:50 – 10:10	Maria De Fatima Andrade - Vehicular emission inventory based on on-road tunnel measurements for the São Paulo metropolitan area, Brazil	
10:10 – 10:30	Yogu Kanaya - Photochemical oxidant production rates in Tokyo in winter and summer 2004: Estimations from observed OH/HO2 radical concentrations	
10:30 – 11:00	**Tea / Coffee Break**	Strelitzia, Jasminium and Clivia
	Session 2 – Chemical weather on regional to global scales: simulations, analysis and impacts [M. Lawrence, L. Marufu, M. Schultz]	Auditorium II
11:00 – 11:05	Introduction	
11:05 – 11:40	Lisa Emberson (Invited Speaker) - Assessing the risks to forestry, agriculture and biodiversity posed by poor air quality: a flux based approach.	
11:40 – 12:00	Didier Hauglustaine - On the importance of past and future global tropospheric composition changes on regional air quality in Europe: a simulation with a global to regional scale modeling platform	
12:00 – 12:20	Guergana Guerova - Ozone over Europe during the heat wave in August 2003	
12:20 – 14:00	**Lunch and Open Poster Viewing**	Strelitzia, Jasminium and Clivia
	Session 2 – Chemical weather on regional to global scales: simulations, analysis and impacts [M. Lawrence, L. Marufu, M. Schultz]	Auditorium II
14:00 – 14:20	Masayuki Takigawa - Estimation of the contribution of intercontinental transport by using a global chemical weather forecasting system	
14:20 – 14:40	Harald Flentje - Towards an integrated air-quality forecasting system – GEMS: Evaluation of aerosol and chemical-transport models with observation data	
	Session 3 – Long-range transport and chemical transformations [O. Wild, A. Stohl, D. Parrish]	Auditorium II
14:40 – 14:45	Introduction	
14:45 – 15:20	Dorothy Koch (Invited Speaker) - Global impacts of aerosol pollution from particular sources	
15:20 – 15:40	Solene Turquety - Remote sensing of Asian pollution from space: tracking the long range transport from China using a multiplatform analysis (ACE, MOPITT, SCIAMACHY, TES).	
15:40 – 16:00	**Tea / Coffee Break**	Strelitzia, Jasminium and Clivia
	Session 3 – Long-range transport and chemical transformations [O. Wild, A. Stohl, D. Parrish]	Auditorium II
16:00 – 16:20	Roseanne Diab - Tropospheric ozone enhancement in the central and southern African tropics: a 'giant natural photochemical reactor?'	
16:20 – 16:40	Dave Lowe - The influence of meteorological convergence zones on the transport of trace gases in the Western Pacific	
16:40 – 17:00	Michael Fromm - Interhemispheric Transport of Forest Fire Smoke in the Stratosphere	
17:00 – 17:20	Elsa Real - Quantification of mixing in pollutant plumes during long-range transport over the North Atlantic	
17:20 – 18:30	**Poster Viewing (Session 2, Session 3, Session 9)**	Jasminium and Clivia
18:30 – 19:30	**Open Poster Viewing & Cocktails**	Strelitzia, Jasminium and Clivia

DETAILED PROGRAMME

Wednesday 20 September 2006		
07:00 – 14:00	**Registration**	Registration Foyer
	DEBITS Session – Deposition of Biogeochemically Important Trace Species [K. Pienaar]	Auditorium II
08:30 – 08:50	Henning Rodhe - Deposition studies in Asia - Acidification less of a problem?	
08:50 – 09:10	Corinne Galy-Lacaux - DEBITS / IDAF observing network: Atmospheric deposition over African ecosystems	
09:10 – 09:30	Frank Dentener - Nitrogen and sulfur deposition on regional and global scales: a multi-model evaluation	
	Session 7 – Land-atmosphere biogeochemical cycles [A. Guenther, B. Holland, F. Loreto]	Auditorium II
09:30 – 09:35	Introduction	
09:35 – 10:10	Paulo Artaxo (Invited Speaker) – Interactions between aerosols, climate and carbon cycling in Amazonia	
10:10 - 10:30	**Tea / Coffee Break**	Strelitzia, Jasminium and Clivia
	Session 7 – Land-atmosphere biogeochemical cycles [A. Guenther, B. Holland, F. Loreto]	Auditorium II
10:30 – 10:50	Giorgio Matteucci - Carbon cycle of the terrestrial biosphere at multiple scale: from ecosystem to the globe	
10:50 – 11:10	Ian E Galbally - Biosphere-atmosphere trace gas exchange: The role of global drylands and arid zones	
11:10 – 11:30	Josep Penuelas - Global change interactions with vegetation emission of VOCs	
11:30 – 11:50	Luciene L Lara - Wet and dry deposition in Brazil: Biogenic emissions and land use changes	
11:50 – 13:00	**Poster Viewing (Session 7, DEBITS)**	Jasminium and Clivia
13:00 – 18:00	**Free Time (Posters, Meetings or Local Sightseeing)**	
18:00	**Buses depart for dinner venue**	CTICC
19:00 – 22:00	**moyo**	moyo

DETAILED PROGRAMME

Thursday 21 September 2006		
07:00 – 18:00	**Registration**	Registration Foyer
	Session 4 – Aerosol-cloud interactions and climate implications [B. Kaercher, T. Iversen, L. Russel]	Auditorium II
09:00 – 09:05	Introduction	
09:05 – 09:40	Ruprecht Jaenicke (Invited Speaker) - The climate significance of cellular biogenic aerosols	
09:40 – 10:00	William R Cotton - Simulations of aerosol-cloud interactions	
10:00 – 10:20	Trude Storelvmo - Aerosol influence on cold clouds in CAM-Oslo	
10:20 – 10:40	Richard Leaitch - Evidence for an indirect effect of the organic aerosol	
10:40 – 11:00	Cathy Liousse - Global historical emissions of gases and particles from fossil fuel and biofuel consumption for the period 1860-2003	
11:00 – 11:20	**Tea / Coffee Break**	Strelitzia, Jasminium and Clivia
	Session 5 – Aerosol chemistry and the interactions between aerosols and gas phase chemistry [U. Baltensperger, K. Kawamura]	Auditorium II
11:20 – 11:25	Introduction	
11:25 – 12:00	Spyros Pandis (Invited Speaker) - A new modeling framework for the description of the formation and heterogeneous chemistry of organic aerosol: From the laboratory to the workstation	
12:00 – 12:20	Scot Martin - AMS analysis of aerosol chemical composition during the intense ozonolysis of oleic acid.	
12:20 – 12:40	Olga L Mayol-Bracero - Chemical and physical characterization of atmospheric particles in the Carribbean region: Clean marine air Saharan dust and anthropogenic pollution	
12:40 – 14:00	**Lunch and Open Poster Viewing**	Strelitzia, Jasminium and Clivia
	Session 5 – Aerosol chemistry and the interactions between aerosols and gas phase chemistry [U. Baltensperger, K. Kawamura]	Auditorium II
14:00 – 14:20	Jost Heintzenberg - Statistical analysis of long time series of particle nucleation and growth and related trace gas and meteorological data in urban and rural environments	
14:20 – 14:40	Patience Gwaze - Physical, chemical and optical properties of aerosol particles collected over Cape Town during winter haze episodes	
	Session 8 – Biomass burning emissions and impacts on atmospheric chemistry [B. Scholes, S. Piketh, K. Longo]	Auditorium II
14:40 – 14:45	Introduction	
14:45 – 15:20	David P Edwards (Invited Speaker) - Satellite observations of the variability of southern hemisphere CO from biomass burning and the response to climate	
15:20 – 15:40	**Tea / Coffee Break**	Strelitzia, Jasminium and Clivia
	Session 8 – Biomass burning emissions and impacts on atmospheric chemistry [B. Scholes, S. Piketh, K. Longo]	Auditorium II
15:40 – 16:00	Rebecca Matichuk - Modeling the optical properties of biomass burning aerosols: Young smoke aerosols from Savanna fires and comparisons to observations from SAFARI 2000	
16:00 – 16:20	Yuhang Wang - Fire emissions and their impact on air quality in the southeastern United States	
16:20 – 16:40	Charles Ichoku - Biomass-burning emissions estimates from satellite measurements of fire radiative energy	
16:40 – 17:00	Christiane Textor - A global fire assimilation system	
17:00 – 18:30	**Poster Viewing (Session 4, Session 5, Session 8)**	Jasminium and Clivia
19:00 – 20:30	**Barry Huebert Public Lecture and Discussion**	Auditorium II

DETAILED PROGRAMME

Friday 22 September 2006		
07:00 – 17:00	**Registration**	Registration Foyer
	Session 6 – Reactive chemistry and exchanges between the MBL and the ocean mixed layer [T. Jickells, D. Kumar, C. Leck]	Auditorium II
08:30 – 08:35	Introduction	
08:35 – 09:10	Mitsuo Uematsu (Invited Speaker) - Effects of atmospheric deposition of nutrients over the North Pacific Ocean	
09:10 – 09:30	Jean Sciare - Evidence of biogenic marine organic aerosols in the Austral Ocean	
09:30 – 09:50	Laurens Ganzeveld - Biogeochemistry and water-side turbulence dependence of global atmosphere-ocean ozone exchange	
09:50 – 10:10	Maria Andersson - Mercury flux between the sea surface and the atmosphere in the Mediterranean Sea and the North Atlantic	
10:10 – 10:30	Kaliopi Violaki - Organic Nitrogen: A missing piece of the nitrogen cycle in eastern Mediterranean.	
10:30 - 11:00	**Tea / Coffee Break**	Strelitzia, Jasminium and Clivia
	Session 11 – Chemistry of the polar regions (especially air-snow and air-ice interactions) [J. Bottenheim, H. Beine, P. Matrai, P. Shepson]	Auditorium II
11:00 – 11:05	Introduction	
11:05 – 11:40	Caroline Leck (Invited Speaker) - Can marine microorganisms influence the extent of the Arctic sea ice?	
11:40 – 12:00	Douglas Davis - An assessment of the central role of reactive nitrogen on the Antarctic Plateau	
12:00 – 12:20	John Sodeau - The promotion of novel atmospheric chemistry pathways by cooling and freezing	
12:20 – 12:40	Joel Savarino - Surface ozone depletion events and oxygen isotopes in atmospheric inorganic nitrate: Insights from two field campaigns in the high Arctic	
12:40 – 13:00	Eric Wolff - What atmospheric chemistry are we seeing in ice cores?	
13:00 – 14:00	**Lunch and Open Poster Viewing**	Strelitzia, Jasminium and Clivia
	Session 10 – Chemistry of the UT/LS region [H. Fischer, A. Gettleman, A. Ravishankara, A. Thompson]	Auditorium II
14:00 – 14:05	Introduction	
14:05 – 14:25	John Pyle - The tropical tropopause layer and the extratropical UTLS – transport, chemistry and climate change	
14:25 – 15:00	Hanwant Singh (Invited Speaker) - HOx and NOx distributions in the mid-latitude upper troposphere: Results based on INTEX-A and B field experiments	
15:00 – 15:20	Timothy Bertram - Convection signatures and the age of air in the upper troposphere	
15:20 – 15:40	Karen Rosenlof - Tropical UTLS temperature and water vapor changes	
15:40 – 16:00	Tuhin Kumar Mandal - Long term changes in stratospheric and tropospheric ozone over India	
16:00 – 17:30	**Poster Viewing (Session 6, Sesssion 11, Session 10)**	Jasminium and Clivia
17:30 – 18:30	**Poster Dismantling**	Jasminium and Clivia

INVITED SPEAKER ORAL PRESENTATIONS

New techniques for observing the atmosphere – How can they advance our knowledge on Atmospheric Chemistry?

Ulrich Platt
University of Heidelberg

Measurements of trace gas concentrations and other quantities are a crucial tool for the investigation of the processes in the atmosphere. At the same time the deter¬mination of atmospheric trace gas concentrations constitutes a technological challenge, since extreme sensitivity is desired simultaneously with high specificity i.e. the molecule of interest usually must be detected in the presence of a large excess of other species. In addition to that continuing progress in modelling the physics and chemistry of the atmosphere demands meaningful comparison of model results with measurements. This leads to the requirement of observing 2D or even 3D trace gas concentration fields at spatial resolutions matching that of models. Corresponding spatial resolution requirements range from a few 100m for regional observations to a few km for global observations.

The different types of requirements and several established and emerging spectroscopic techniques allowing spatially resolved trace gas measurements are discussed. A series of examples is presented, where ground-based, aircraft, and satellite based measurements allow (or promise to allow) new insight into chemical processes in the atmosphere. These include synergistic use of satellite measurement of tropospheric species, spatially resolved observation of volcanic plumes, as well as airborne and ground based tomographic techniques. Future requirements and promising developments are discussed.

Assessing the risks to forestry, agriculture and biodiversity posed by poor air quality: a flux based approach

Lisa Emberson[1], Miles Sowden[2] & Mark Zunckel[2]
[1]Stockholm Environment Institute, University of York, Heslington, York, U.K., YO10 5DD
[2]CSIR Natural Resources and the Environment, PO Box 17001, Congella 4013, Durban, South Africa

This paper will focus specifically on ground level ozone as a local to hemispheric scale pollutant, inextricably linked to land-cover and meteorological conditions. Ground level ozone is an extremely phyto-toxic air pollutant, impacting forest health, agricultural productivity and biodiversity of semi-natural ecosystems. Evidence suggests global background ozone concentrations to be increasing along with increasing frequency and magnitude of ozone episodes across parts of Asia and southern Africa.

Traditionally, methods developed to assess ecosystem risk from ground level ozone have been based on ambient air ozone concentrations. However, since ozone dose via plant stomates has a far better correlation with plant injury and damage, recent research has focused on developing flux based approaches for ozone risk assessment. These methods are based on the determination of the stomatal ozone flux and hence require estimation of stomatal conductance (gs).

The research described here uses a multiplicative stomatal conductance model to assess cover type specific gs according to relationships with phenology and key meteorological variables (irradiance, temperature, vapour pressure deficit and soil moisture deficit). Since stomatal ozone dose is a key component of total deposition, these models can form the basis of deposition algorithms for use in conjunction with chemical transformation models (e.g. DO3SE, the Deposition of Ozone and Stomatal Exchange model). Such models allow ozone deposition fields to be estimated on consideration of meteorology, cover type and seasonality.

Here, we present a case study application of DO3SE for southern African conditions with a focus on assessing the potential impacts of ozone and drought stress on maize, a staple agricultural crop of the southern Africa region. The model provides output in terms of deposition fields and risk assessments with potential applications including optimising emission reductions and identifying areas at risk on a seasonal basis, for current day, forecasted and future climate change conditions.

Notes

Global impacts of aerosol pollution from particular sources

Dorothy Koch[1], Tami Bond[2], David Streets[3] & Nadine Unger[1]
[1]Columbia University/ NASA GISS
[2]University of Illinois, Urbana
[3]Argonne National Laboratory

In order to address climate impacts of aerosols, policy makers should know the consequences of changing emissions from particular source types within specific regions. Each region has unique impacts due to local source activities and due to regional meteorological effects on aerosol removal and transport. Using a global climate model, we examine the impacts of sulfate and carbonaceous aerosols coming from major source regions (Europe, Southeast Asia, North America, Africa and South America) and from sectors (power generation, industry, transportation, residential, biomass burning and natural), for past, present and future emission scenarios.

The model indicates that Southeast Asia and South America export about half of their aerosols to other regions. Even though African biomass burning is estimated to generate more aerosols than South America, these are scavenged more efficiently so that the larger burden originates from South America. Southeast Asia is presently the largest (non-biomass) source region of black carbon (BC), and our model indicates that a surprising portion is blown over the Arctic and the North Atlantic where it may contribute to melting of polar ice and snow. We will show how Arctic source regions have evolved over the past century, comparing with available observations.

Power and industry sectors have large sources in all major industrialized regions and generate the sulfate scattering blanket over central latitudes of the northern hemisphere. Transport and residential sources have a larger portion of BC and a positive net radiative forcing. Residential sources are weighted toward Asia and are presently the largest sector source of non-biomass BC. According to 2 contrasting (IPCC SRES) future scenarios, by 2050 net aerosol forcing could either increase or decrease, depending primarily on whether power and industry sulfate increases (A1b) or decreases (B2). Both scenarios predict declining residential sources so that transport becomes the largest source of BC.

The climate significance of cellular biogenic aerosols

Ruprecht Jaenicke
Institute for Physics of the Atmosphere, University Mainz / Germany

Background
It has been shown that cellular particles have ice nucleating capabilities, thus they could influence rain formation and climate. Typified sources for atmospheric aerosols are confined to certain areas like minerals to deserts and continents, sea salt to oceans, anthropogenic to continents, and gas-to-particle conversion to the air body. Cellular (or biogenic) particles are produced by all these areas (biosphere, except the air body) and the cryosphere as well. We have estimates about the source strength of all those areas, but almost non for cellular particles from the biosphere.

Methodology
Up to now mostly culture forming units (CFU) have been investigated. But there is much more cellular material: non-CFU bacteria, fungi, broken and dead cellular material, celluloses, not to speak about viruses. The size of those particles covers the same size range as all other aerosol particles. The first step must be to identify cellular material in the aerosol. Thus proteins, as part of living and death cellular material, have been identified and studied.

Results and Conclusions
Measurements in the size range larger than .2 μm radius have been carried out in many parts of the world: continents, oceans, mountains, and aloft. The cellular material makes up about 25% of the total aerosol. Because the lifetime of those cellular particles should not be different from the others, the global source strength can be estimated to about 1000 Tg/yr. That is comparable to deserts, oceans, however much greater than gas-to-particle conversion.

For that reason, climate significance of cellular particles has to be expected. Also secondary effects might play a role. Microorganism are spread worldwide using the aerosol, thus plants are distributed if carried to suitable habitats, pathogens might wipe out certain plant societies (both cases change the albedo), proteins influence cloud and rain formation.

Notes

A new modeling framework for the description of the formation and heterogeneous chemistry of organic aerosol: From the laboratory to the workstation

Spyros Pandis[1] , Neil Donahue[2], Allen Robinson[2]
[1] University of Patras
[2] Carnegie Mellon University

The chemical complexity of organic aerosol (hundreds or thousands of compounds) poses a formidable modeling challenge. The approaches used in current Chemical Transport Models (CTMs) use of a few pseudo-compounds to describe the formation of secondary organic aerosol and one nonvolatile compound for primary organic aerosol.

These models often fail to capture the existence of low-volatility secondary compounds, the heterogeneous reactions in the organic aerosol phase (oligomerization, oxidation by OH, etc.) and the fact that several primary organic aerosol components are also semivolatile. We propose a scheme splitting the different organic aerosol components (primary or secondary) in volatility bins similar to the size bins used for the description of the size distribution. The proposed approach allows the description not only of the wide variety of compounds presents but also the simulation of both oxidation and oligomerization reactions.

The necessary parameters for each secondary organic aerosol precursor can be determined by smog chamber experiments at different temperatures. A dilution sampler is used for obtaining the volatility distribution of the primary organic aerosol components. Results of laboratory experiments from the Carnegie Mellon smog chamber and dilution sampler will be presented. The first applications of the new organic aerosol module in a CTM will be discussed for the Eastern US.

Effects of atmospheric deposition of nutrients over the North Pacific Ocean

Mitsuo Eumatsu
Ocean Research Institute, The University Of Tokyo

Anthropogenic nitrogen oxides (NOx) emissions from Asia, which amounted to only a minor fraction of global emissions during the 1970s, have increased rapidly since then and surpassed that from North America and Europe in the mid-1990s. Approximately 5-fold increase in NOx emissions is predicted between 1990 and 2020. These emissions have made several ecosystems significant recipients of atmospheric nitrogen.

Atmospheric deposition of nitrogen compounds is a means of fertilizing the coastal and oligotrophic oceanic waters. Besides inorganic nitrogen compounds, water soluble organic nitrogen (WSON) contributes more than 10% to total particulate nitrogen in the marine atmosphere of the western North Pacific.

While ammonium particle is mainly formed in fine mode, particulate nitrate tends to be associated with mineral and/or seasalt aerosols in coarse mode. Particulate WSON mainly occurs in fine mode, but found in both fine and coarse modes during the Asian dust events.

Within the marine boundary layer, seasalt particle is expected to be an efficient scavenger of NOx transported from land through upper troposphere. Over the central North Pacific, a good relationship is found between particulate nitrate and beryllium-7 produced by cosmic ray spallation.

It is now well known that iron is an important minor nutrient to increase phytoplankton production in High Nutrient and Lower Chlorophyll-a (HNLC) regions. Recent studies showed enhanced primary production caused by atmospheric deposition of reduced nitrogen emitted from a volcanic eruption over the western North Pacific.

Additional atmospheric input of nitrogen compounds may shift phytoplankton species from nitrogen fixing organisms to normal groups in the oligotrophic waters especially subtropical regions, although stratification of the surface seawater caused by global warming favors the former group of organisms.

Notes

Interactions between aerosols, climate and carbon cycling in Amazonia

Paulo Artaxo, Luciene Lara, Luciana V. Rizzo, Paulo Henrique F. Oliveira, Carlos A. Pires, Melina Paixão & Silvia de Lucca
Institute of Physics, University of São Paulo, Rua do Matão, Travessa R, 187, São Paulo, Brazil. artaxo@if.usp.br

Amazonia is one of the few continental places on Earth were we can still find very low aerosol loading under natural condition, with most of the particles of biogenic origin. In the wet season, aerosol particle number concentration averages 300 part/cc. Particle size is the critical parameter for cloud condensation nuclei activation, and the organic content in both wet and dry season makes chemical composition not as important as size. The picture changes during the dry season because of the large amounts of aerosols emitted during biomass burning. The radiative forcing of these particles can reach instantaneously -380 w/m^2. This large forcing in Amazonia changes the photosynthetic radiation at the ground, affecting carbon uptake by the forest. Aerosol optical thickness up to 3 to 4 at 550 nm is frequently observed in Amazonia during the dry season. Also suppression of low clouds was observed what changes significantly the solar radiation flux. The increase in aerosol changes the ratio of direct to diffuse radiation, and photosynthesis can be enhanced with higher flux of diffuse radiation.

The net ecosystem exchange (NEE) was measured using eddy-correlation techniques. Using a radiative transfer code, and a set of optical properties of biomass burning aerosols, it was developed a methodology to separate the direct aerosol effect from the cloud effect on the radiation balance at the forest canopy and grassland. In two sites it was observed an increase of up to 50% in NEE for a small increase in AOT (up to AOT about 1.6 at 550 nm) due to higher flux of diffuse radiation. Above this aerosol level, NEE sharply decreases with larger AOT. Due to the very large area covered with high aerosol loading, this aerosol effect on enhancing NEE has large impact in the Amazonian carbon flux.

Satellite observations of the variability of Southern hemisphere CO from biomass burning and the response to climate

D. P. Edwards[1], G. Petron[2], P. C. Novelli[2], L. K. Emmons[2], J. C. Gille[1], J. R. Drummond[3]
[1] National Center for Atmospheric Research, Boulder CO, USA,
[2] Earth System Research Laboratory, Global Monitoring Division, National Oceanic &Atmospheric Administration, Boulder CO, USA
[3] University of Toronto, Department of Physics, Toronto, Ontario, Canada. (edwards@ucar.edu, Phone: +1-303-497-1857)

Biomass burning is an annual occurrence in the tropical southern hemisphere (SH) and represents a major source of regional pollution. Vegetation fires emit carbon monoxide (CO), which due to its medium lifetime is an excellent tracer of tropospheric transport. CO is also one of the few tropospheric trace gases currently observed from satellite and this provides long-term global measurements.

In this paper, we use the 5 year CO data record from the Measurement Of Pollution In The Troposphere (MOPITT) instrument to examine the inter-annual variability of the SH CO loading and show how this relates to climate conditions which determine the intensity of fire sources. The MOPITT observations show an annual springtime peak in the SH zonal CO loading each year with dry-season biomass burning emissions in S. America, southern Africa, the Maritime Continent, and northwestern Australia. Although fires in southern Africa and S. America typically produce the greatest amount of CO, the most significant inter-annual variation is due to varying fire activity and emissions from the Maritime Continent and northern Australia.

We find that this variation in turn correlates well with the El Nino Southern Oscillation precipitation index. Between 2000 and 2005, emissions were greatest in late 2002 and an inverse modeling of the MOPITT data using the MOZART chemical transport model estimates the southeast Asia regional fire source for the year August 2002 to September 2003 to be 52 Tg CO. Comparison of the MOPITT retrievals and NOAA surface network measurements indicate that the latter do not fully capture the inter-annual variability or the seasonal range of the CO zonal average concentration due to biases associated with atmospheric and geographic sampling.

Notes

The PRD 2004 October Campaign: Probing ozone and fine particle pollution in Pearl River Delta Region, China

Yuanhang Zhang
College Of Environmental Sciences, Peking University

Pearl River Delta (PRD) is one of areas, which have experienced the fastest economic development in China. Urbanization in PRD is characterized by city clusters with two mega-cities (Guangzhou and Hong Kong) and many medium-small cities linked by dense highways. Economy increases in an impressive speed for decades, fuelled by higher demands for energy, mobility and communications. As consequences, coal smog and traffic exhaust together cause serious photochemical smog and particulate pollution problems from urban to region scale.

To address those problems, an intensive campaign was conducted during October 1 and November 5, 2004 in PRD mainly sponsored by China National Basic Research and Development Program (2002CB410801, 2002CB211605). Totally 12 institutes from mainland China, Taiwan, Hong Kong and Germany were involved in the campaign with assistance of PRD regional air quality monitoring network. Two integrated measurement sites equipped with various real-time measurement techniques were set up, as well as aircraft measurements simultaneously, to characterize temporal and spatial changes of aerosol, oxidant, and their precursors, to understand chemical composition, size distribution, hygroscopic properties, and optical properties of aerosols, to quantify ozone formation by measurements and modelling, and to explore the relationship between species of aerosols and gaseous phase.

The results of campaign are quite interesting and rather unique, ranging from new particle formation phenomenon, closure on radiative forcing of aerosol, HONO enhanced very rapid ozone production, to reactivity of VOCs and its impact on ozone formation, etc. This paper will give an overview of main results obtained in PRD October campaign.

HOx and NOx distributions in the mid-latitude upper troposphere: Results based on INTEX-A and B field experiments

Hanwant Singh
NASA Ames Research Center

The Intercontinental Chemical Transport Experiment (INTEX; http://cloud1.arc.nasa.gov) is a two-phase integrated atmospheric field experiment being performed over North America (NA). Its first phase (INTEX-A) was performed in the summer of 2004 and the second phase (INTEX-B) is currently ongoing and will be completed in May 2006.

The main goal is to understand the transport and transformation of gases and aerosols on transcontinental/intercontinental scales and to assess their impact on air quality and climate. The principal platform in these experiments is an instrumented NASA DC-8 aircraft with a 12 km altitude ceiling that allows observations from the troposphere and occasionally the lowermost stratosphere.

In addition to standard measurements such as O3, H2O, radiation, aerosols a comprehensive group of reactive nitrogen (NO, NO2, HNO3, HO2NO2, PANs, alkyl nitrates, and aerosol-NO3-), reactive hydrogen (OH, HO2, HCHO, peroxides, OVOC), and tracers (CO, HCN, VOC, OVOC, halocarbon) were measured over North America, the Atlantic, and the Pacific. Clean background air as well as air with influences from biogenic emissions, anthropogenic pollution, biomass combustion, and stratosphere was sampled both over land (U. S. and Mexico) and over water (Atlantic and Pacific).

The upper troposphere was frequently impacted by continental surface pollution lofted via convection and transported on intercontinental scales and further perturbed by direct injections of lightning NOx. A first comparison of observed data with simulations from several 3-D and 0-D photochemical models shows significant differences between observations and models as well as among models. In general HOx fields appear to be consistently overestimated by models and these have strong impact on predictions of NOx and O3 as well. We investigate the partitioning and interplay of NOx and HOx radicals and precursors and examine our current understanding of UT photochemistry based on the analysis of data from INTEX-A and preliminary observations from INTEX-B.

Notes

INVITED SPEAKER ORAL PRESENTATIONS

Can marine microorganisms influence the extent of the Arctic sea ice?

Caroline Leck
Department Of Meteorology, Stockholms Universitet

Measurements of trace gas concentrations and other quantities are a crucial tool for the investigation of the processes in the atmosphere. At the same time the deter¬mination of atmospheric trace gas concentrations constitutes a technological challenge, since extreme sensitivity is desired simultaneously with high specificity i.e. the molecule of interest usually must be detected in the presence of a large excess of other species. In addition to that continuing progress in modelling the physics and chemistry of the atmosphere demands meaningful comparison of model results with measurements. This leads to the requirement of observing 2D or even 3D trace gas concentration fields at spatial resolutions matching that of models. Corresponding spatial resolution requirements range from a few 100m for regional observations to a few km for global observations.

The different types of requirements and several established and emerging spectroscopic techniques allowing spatially resolved trace gas measurements are discussed. A series of examples is presented, where ground-based, aircraft, and satellite based measurements allow (or promise to allow) new insight into chemical processes in the atmosphere. These include synergistic use of satellite measurement of tropospheric species, spatially resolved observation of volcanic plumes, as well as airborne and ground based tomographic techniques. Future requirements and promising developments are discussed.

Notes

POSTER PRESENTATIONS: SESSION 1

Atmospheric chemistry observations and their intergration and synthesis

S1P1 **Action plan to air pollution in Matanzas.**
Barbaro V Moya, Citma

S1P2 **The Contribution of Volcanic Plumes to Urban Air Pollution**
Kim Natasha Dirks, The University Of Auckland
Margaret L. Peace, Geoff L. Austin, Alessandro Nanni

S1P3 **Laboratory and modeling studies of aqueous phase reactions of OH radicals with organic compounds of relevance for atmospheric chemistry**
Paolo Barzaghi, Leibniz-Institut Für Troposphärenforschung
Andreas Tilgner, Barbara Weigert, Hartmut Herrmann

S1P4 **Theoretical Determination of Thermodynamic Properties for Gas-Phase and Aqueous-Phase Reactions of Atmospheric Sulphur**
Anselm Igbafe, University Of The Witwatersrand
Linda Jewell, Stuart Piketh

S1P5 **The GEIA/ACCENT database of emissions**
Alex Guenther, National Center for Atmospheric Research, Boulder, USA
Claire Granier, Aude Mieville, Paulette Middleton

S1P6 **ECCAD: a GEIA-ACCENT database of driving variables**
Christelle Michel, Service D'Aéronomie/IPSL
Claire Granier, Cathy Boonne, Francoise Girod, Thierry Phulpin

S1P7 **The CARIBIC Airbus 340-600 as a powerful Global Atmosphere Watch system**
Franz Slemr, Max-Planck-Institute For Chemistry
CARIBIC team

S1P8 **The PREV'AIR system for operational air quality monitoring and forecasting over Europe**
Frederik Meleux, Ineris
Cécile Honor, Bertrand Bessagnet, Laurence Rouil, Robert Vautard, Nathalie Poisson, Vincent-Henri Puech

S1P9 **ACCENT: Highlights from the European Network of Excellence on Atmospheric Composition Change**
Michela Maione, University of Urbino
Sandro Fuzzi, ACCENT Consortium

S1P10 **On use of the chemical composition and climate web-archives for scientific purposes**
Natalia Andronova, Univesity Of Michigan, AOSS

S1P11 **Evaluation of sources and sinks of atmospheric CO2 and CH4 in the Mediterranean through backward airmass trajectory analysis**
Florinda Artuso, Enea Clim-Oss
Alcide di Sarra, Paolo Chamard, Daniela Meloni, Francesco Monteleone, Salvatore Piacentino

S1P12 **EUSAAR (European Supersites for Atmospheric Aerosol Research)**
Paolo Laj, Laboratoire De Météorologie Physique - CNRS - Unversity Of Clermont-Ferrand

S1P13 **Atmospheric Composition Change: Training and Education in a Network of Excellence**
Evi Schuepbach, Cabo3 / Physical Geography / University Of Berne

S1P14 **Integration and Synthesis of Observations: The Annual Greenhouse Gas Index, Ozone Depleting Gas Index and GLOBALVIEW Cooperative Data Integration Project**
David J. Hofmann, NOAA Earth System Research Laboratory
Leonard A. Barrie, James H. Butler, Edward Dlugokencky, James W. Elkins, Kenneth Masarie, Stephen A. Montzka, Pieter P. Tans

S1P15 **Observational Study of í°BBCí ± - Beijing Brown Clouds**
Guang-Yu Shi, State Key Laboratory of Numerical Modeling for Atmospheric Sciences and Geophysics
Bin Chen, Yasunobu Iwasaka, Masahiko Hayashi

S1P16 **Potential Future ESA Atmospheric Chemistry Missions for Research and Operational Applications**
Joerg Langen, Esa-Estec

S1P17 **Uncertainties in Measuring Aerosol Absorption: Advances to the Measurements using Photoacoustic Spectroscopy**
Daniel Lack, National Oceanic And Atmospheric Administration / University Of Colorado - CIRES
Edward Lovejoy, Tahlee Baynard, Anders Pettersson, A.R. Ravishankara

S1P18 **Physical and optical properties of aerosols over an urban location in western India: Seasonal variability and implications for shortwave radiative forcing**
Dilip Ganguly, Physical Research Laboratory
A Jayaraman

POSTER PRESENTATIONS: SESSION 1

Atmospheric chemistry observations and their intergration and synthesis

S1P19 **Factors controlling marine aerosol: Insights from a global aerosol model evaluated against observation statistics**
Dominick Spracklen, Harvard University
Ken Carslaw, Kirsty Pringle, Graham Mann, Paul Manktelow, Hannele Korhonen, Jost Heintzenberg

S1P20 **Interaction of Dust Storm and the Total Water Vapor Column over the Indo-Gangetic basin and its impact on the Weather Condition**
Ramesh Singh, Indian Institute Of Technology
Anup K. Prasad, Shatrughan Singh

S1P21 **Atmospheric Carbon Monoxide and Molecular Hydrogen at Waliguan Baseline Observatory, China**
Lingxi Zhou, Chinese Academy Of Meteorological Sciences
Xiaochun Zhang, Jinlong Li, Paul Novelli

S1P22 **Long-term observation of polycyclic aromatic hydrocarbons, trace metals and ionic constituents in aerosols at Beijing, China from 2001 to 2006**
Tomoaki Okuda, Keio University
Shigeru Tanaka, Kebin He, Yongliang Ma, Yu Lei

S1P23 **Characteristics of reactive nitrogen oxides in urban and rural areas of Korea during May-June, 2004**
Tae-Hoon Kang, Pusan National University
Gangwoong Lee, Meehye Lee, Zang-Ho Shon, Sang-Keun Song

S1P24 **Levels and composition of aerosols, and gaseous pollutants collected at a remote mountainous site in Tropical Region**
Nguyen Thi Kim Oanh, Asian Institute Of Technology
K. Aungsiri, P Prapat, P. Darunat

S1P25 **What about the consistency of spectral parameters when using different atmospheric instruments?**
Jean Marie Flaud, LISACNRS&Univ Paris12
Benedicte Picquet-Varrault, Aline Gratien, Johannes Orphal, Jean Francois Doussin

S1P26 **Combining long-term observations of carbon-13 in methane with global modelling to estimate atomic chlorine concentrations in the marine boundary layer**
William Allan, Niwa
Hamish Struthers, David Lowe

S1P27 **Carbon Monoxide distribution from 5 years in-situ data of the MOZAIC program**
Jean-Pierre Cammas, Laboratoire D'Aerologie - OMP
Valerie Thouret, Philippe Nedelec, Regina Zbinden, Jerome Brioude

S1P28 **Factors controlling the levels of peroxy-acetyl nitrate in the Eastern Mediterranean area**
Mihalis Vrekoussis, University Of Crete
Ludge Lange, Eleftheria Kassotaki, Jonathan Williams, Nikos Mihalopoulos

S1P29 **Nighttime occurrence of peroxy radicals in the marine boundary layer of the Eastern Mediterranean.**
Mihalis Vrekoussis, University Of Crete
Nikos Kalivitis, Stelios Myriokefalitakis, Evangelos Gerasopoulos, Jonathan Williams, Jos Lelieveld, Nikos Mihalopoulos, Maria Kanakidou

S1P30 **On the variability in chemical composition of rain water and other atmospheric variables as measured at a remote site in South-West Nigeria**
Sunday, Etinosa Osaghaede, Nigerian Meteorological Agency (NIMET)
Nadozie, Okonkwo Nnoli, Salimon, Kolawole Muyiolu, Lihwu, Eugene Akeh

S1P31 **Monitoring of atmospheric reduced sulfur compounds and their oxidation in two coastal landfill areas**
Sang-Keun Song, Pusan National University
Zang-ho Shon, Yoo-Keun Kim, Ki-Hyun Kim, Seong Cheon Kim, Jung-Kwon Kim, Tae-Hoon Kang

S1P32 **Field measurements of airport emissions and air pollutants including aerosols at Paris CDG airports. The 'AIRPUR' project**
Richard Ramaroson, ONERA
Céline Puente Lelièvre, Grégory Magnani, Martine Talbaut, Frantz Gouriou, Emeric Fréjafon, Klaus Schaefer, Alexis Copalle

S1P33 **Concentration of PAHs in Atmospheric Particulate Matter at an Industrial Area and a Traffic Intersection at Agra, India**
Nirat Rajput, Dayalbagh Educational Institute
Anita Lakhani, L.D. Khemani

S1P34 **Radiative forcing budget of non-CO2 trace gases at the high-Alpine site Jungfraujoch, Switzerland**
Martin Steinbacher, Empa, Materials Science And Technology, Air Pollution/Environmental Technology
Martin K. Vollmer, Stefan Reimann

S1P35 **H2 observations in the atmosphere: an integration from the exhaust pipe to a remote site**
Martin Steinbacher, Empa, Materials Science And Technology, Air Pollution/Environmental Technology
Martin K. Vollmer, Andrea Fischer, Norbert Heeb, Stefan Reimann

POSTER PRESENTATIONS: SESSION 1

Atmospheric chemistry observations and their intergration and synthesis

S1P36 **Carbon monoxide measurements with four different techniques at the high-alpine site Jungfraujoch, Switzerland.**
Christoph Zellweger, Empa, Materials Science And Technology, Air Pollution/Environmental Technology
Brigitte Buchmann, Jörg Klausen, Martin Steinbacher, Martin K. Vollmer

S1P37 **Analysis and simulation of an O3-sounding campaign at Rapanui (27‖S, 109‖W, 51 m.a.s.l.)**
Isabel Ramos, Center For Mathematical Modeling, University Of Chile
Omar Cuevas, Laura Gallardo, Juan Quintana

S1P38 **Wet and Dry Deposition of Sulphur and Nitrogen in Canada**
Robert Vet, Environment Canada
Michael Shaw, Leiming Zhang, Chul-Un Ro

S1P39 **Photolysis rates from ultraviolet actinic fluxes: Measurement and derivation**
Abdulaziz Seroji, Umm Al-Qura
Ann Webb

S1P40 **Trend in stratospheric water vapour over Indian stations**
Meena Jain, National Physical Laboratory

S1P41 **Thermodynamic functions for bromine oxides**
Ekaterina Yakubovich, Institute Of General And Inorganic Chemistry

S1P42 **Carbon monoxide observations from ground stations over France and long trends in the free troposphere**
Amandine Chevalier, Laboratoire d'aérologie - OMP
Robert Delmas, Frantois Gheusi, Gilles Athier, Jean-Marc Cousin, Jean-Luc Attié, Régina Zbinden

S1P43 **Temporal and Spatial Variations of Tropospheric Carbon Monoxide over Japan**
Hisashi Yashiro, Center For Atmospheric And Oceanic Studies, Graduate School Of Science, Tohoku U
Satoshi Sugawara, Kengo Sudo, Takakiyo Nakazawa, Shuji Aoki

S1P44 **Carbon isotopic fractionation factor of stratospheric CH4 estimated from 13CH4 and 13CO2 measurements**
Satoshi Sugawara, Miyagi University Of Education
Shuji Aoki, Takakiyo Nakazawa, Shigeyuki Ishidoya, Taku Umezawa, Koji Genma, Shinji Morimoto, Hideyuki Honda

S1P45 **Evaluation of ozone monitoring stations in Europe**
Leo Klasinc, Rudjer Boskovic Institute
Nenad Kezele, Matevz Pompe, Marijan Veber

S1P46 **Methyl bromide observations at Mt. Cimone (Italy)**
Michela Maione, University of Urbino
Jgor Arduini, Luca Belfiore, Francesco Furlani, Umberto Giostra, Giovanna Mangani

S1P47 **First appearance and rapid growth of new HFCs (hydrofluorocarbons) in the global atmosphere: Their impact on climate and their potential as interhemispheric transport tracers**
Martin K. Vollmer, Swiss Federal Institute For Environmental Technology And Research
AGAGE TeamSOGE Team

S1P48 **Characteristic distributions of trace gases at a semi-urban site over the Indo-Gangetic plain**
Lokesh Sahu, Indian Institute of Tropical Meteorlogy
Shyam Lal

S1P49 **On the study of formation of the chemical composition of atmospheric precipitation on the urbanized territories.**
Violetta Goryaeva, Research Hydrometeorological Institute (NIGMI),UzHydromet Of Republic Of Uzbekis
Galina Tolkacheva, Evgeniy Beglov, Tatyana Smirnova

S1P50 **Ozone levels and its correlation with other air pollutants in North Central part of India**
Renuka Saini, St. John,S College
Gursumiran Satsangi, Amit Masih, Ajay Taneja

S1P51 **Diel and seasonal variation in atmospheric NO2 concentrations at Agra**
Gursumiran Satsangi, St. John's College, Agra
Renuka Saini, Aditi Kulshrestha, Ajay Taneja

S1P52 **Transport of air pollutants to Chinese background sites**
Wenche Aas, Norwegian Institute for Air Research (NILU)
Caroline Forster, Min Shao, Thorjoern Larssen, Dawei Zhao, Renjun Xiang, Lei Duan

S1P53 **Influence of photochemical influenced ozone on the ozone concentration at the GAW station Tololo (Chile)**
Sonia Montecinos, Center Of Advances Studies In Arid Zones
Ana Maria Cordova, Laura Gallardo, Melitta Fiebig-Wittmark

POSTER PRESENTATIONS: SESSION 1

Atmospheric chemistry observations and their intergration and synthesis

S1P54 **Long term ground-based remote sensing from Australia: past, present and future scientific results and directions**
Nicholas Jones, University Of Wollongong
Stephen Wilson, Clare Murphy, Guergana Guerova, David Griffith

S1P55 **Variations of the atmospheric methane concentration in China**
Tazu Saeki, Research Institute For Humanity And Nature
Sugawara Satoshi, Morimoto Shinji, Aoki Shuji, Nakazawa Takakiyo, Ishidoya Shigeyuki, Hayasaka Tadahiro, Tang Jie

S1P56 **Recent tropical field campaigns in Paramaribo, Suriname**
Ge Verver, Royal Netherlands Meteorological Inst (KNMI)
Cor Becker, Martine De Maziere, Barbara Dix, Hennie Kelder, Justus Notholt, Otto Schrems, Masatomo Fujiwara

S1P57 **Trends in near-surface ozone at Cape Grim 41°s and in the Southern hemisphere troposphere.**
Ian E Galbally, CSIRO Marine and Atmospheric Research
C. P. Meyer, Simon T. Bentley

S1P58 **Results of High Altitude Atmospheric Chemistry Observations: Studying Atmospheric Chemistry of the Free Troposphere**
Leonard Barrie, World Meterorological Organization
Urs Baltensperger, Paolo Bonasoni, Jack Dibb, Wolfgang Fricke, August Kaiser, Jörg Klausen, Josiah Murageh, Stefan Reimann, Ludwig Ries, Russ Schnell, Emilio Cuevas, Stephan Henne, Mohamed Mimouni, Lingxi Zhou

S1P59 **Tropospheric ozone measurements over the South African Highveld**
Agnes Phahlane, South African Weather Service
Stuart Piketh

S1P60 **Volatile Organic in Megacities: Results from Paris(Europe), Beijing (Asia) and Santiago (America)**
Valerie Gros, CNRS
Cecile Gaimoz, Benjamin Guinot, Boucly Gilles, Patricio Moral, Bernard Bonsang, Patrick Chazette, Jean Sciare, Roland Sarda-Esteve, Helene Cachier, Aurelie Colomb, Jonathan Williams

S1P61 **European surface ozone in the extreme summer 2003**
Oystein Hov, Norwegian Meteorological Institute
Sverre Solberg, P. Coddeville, H De Backer, Caroline Forster, Yvan Orsolini, K Uhse

S1P62 **Biomonitoring of tropospheric ozone levels and assessment of its impact on Trifolium repens clones.**
Pieter Rasmus Smit, North-West University
Gert Krüger, Kobus Pienaar, Riekert van Heerden, Patrick Büker

S1P63 **Estimation of scalar source patches for methane emissions from paddy fields by flux footprint technique: Case studies with various kinds of paddy grown in Eastern India.**
Ranjan Mukherjee, Department Of Chemical Engineering, Jadavpur University, Kolkata, India
Ujjaini Sarkar

S1P64 **The effect of SO2 fumigation on growth and photosynthesis of Capsicum annuum and Glycine max under controlled conditions.**
Elmien Heyneke, North-West University
Gert Krüger, Riekert Van Heerden, Kobus Pienaar

S1P65 **Evolution of the trend in atmospheric CH4 concentrations since 1987: Variability in sources and sinks.**
Jerome Drevet, EPFL
Jed Kaplan, Isabelle Bey

S1P66 **Atmospheric metal deposition in a rural area (Vouzon, France): a multi disciplinary approach coupling direct atmospheric fallout measurements with moss bioaccumulation.**
Jean-Louis Colin, LISA, Universités Paris7 et Paris12
Sébastien Leblond, Rémi Losno, Elisabeth Bon-Nguyen, Sylvain Triquet, Sandrine Gombert, Catherine Rausch de Traubenberg

S1P67 **The Polar Environment Atmospheric Research Laboratory (PEARL) and International Polar Year (IPY)**
James Drummond, Dalhousie University

S1P68 **Primary study on the characteristics of trace gas in a clean area of North China**
Jianhui Bai,
Gengchen Wang, Zhaoyang Meng, Xiaobin Xu

S1P69 **Sources affecting chemical composition of particles in the Black Sea atmosphere**
Özlem Isikdemir, Middle East Technical University, Department Of Environmental Engineering
D Karakas, G Dogan, S. G Tuncel, G. Tuncel

S1P70 **Asian ozone pollution database**
Pakpong Pochanart, Frontier Research Center For Global Change, JAMSTEC
Hajime Akimoto

POSTER PRESENTATIONS: SESSION 1

Atmospheric chemistry observations and their intergration and synthesis

S1P71 **Glyoxal observation with airborne DOAS Measurements**
Klaus-Peter Heue, University Of Heidelberg Insitute Of Environemntal Physics
Thomas Wagner, Ulrich Platt, John P. Burrows, Andreas Richter, Ping Wang, Marco Bruns

S1P72 **Concurrent Multi-Axis DOAS measurements of nitrogen dioxide in an urban environment**
Roland Leigh, Space Research Centre, University Of Leicester
Paul Monks, Louisa Kramer, Gary Corlett

S1P73 **Organochlorine pesticides in air and soils in Brazzaville, Congo**
Barnabe Ngabe,

S1P74 **Atmospheric polycyclic aromatic hydrocarbons concentration and related carcinogenic potencies in the central part of India**
Amit Masih, St. John's College
Ajay Taneja

S1P75 **Distribution of benzene in ambient air, rain and water of central India**
Saroj Sharma, School Of Studies In Chemistry

S1P76 **Long term measurements of ozone and Black Carbon along a Mediterranean cruise track; comparison with TM5 model**
Jens Hjorth, European Commission Joint Research Centre Institute of Environment and Sustainab
Krum Velchev, Elisabetta Vignati, Frank Dentener, Frank Raes

S1P77 **Simulation of Atmospheric Nitrous Oxide In The Troposphere-Stratosphere: Importance Of Photochemistry And Emissions**
Kentaro Ishijima, Frontier Research Center For Global Change
Prabir Patra, Masayuki Takigawa, Takakiyo Nakazawa, Shuji Aoki, Toshinobu Machida, Shinji Morimoto, Satoshi Sugawara

S1P78 **Evaluation of the EMEP photooxidant model using ozone and meteorological data from Östad, south-west Sweden, for three growing seasons**
Jenny Sundberg, Göteborg University
Helena Danielsson, David Simpson, Håkan Pleijel

S1P79 **Calculations of equilibrium geometries of different chlorine oxides**
Nino Patiashvili, Moscow Ste University, Chemical Department

S1P80 **A 40-year reanalysis of the tropospheric chemical composition (RETRO): Project summary and main findings**
Martin G. Schultz, ICG-II, Forschungszentrum Jülich

S1P81 **A modelling study on trends and variability of the tropospheric chemical composition over the last 40 years - sensitivity to emission and climate change and insights from multi-model ensembles**
Sebastian Rast, Max Planck Institute For Meteorology, Hamburg
Martin G. Schultz

S1P82 **Variability of the tropospheric mixing and of streamer formation and their impact on the lifetime of observed ozone layers**
Augustin Colette, Service D'Aéronomie, Institut Pierre-Simon Laplace, Centre National De La Recher
Gérard Ancellet

S1P83 **Grid-based inversion of CO and biogenic VOC emissions using MOPITT observations**
Trissevgeni Stavrakou, Belgian Institute For Space Aeronomy
Jean-Francois Muller

S1P84 **Space-based Constraints on Lightning NOx Emissions**
Randall Martin, Dalhousie University
Bastien Sauvage, Aaron van Donkelaar, Ian Folkins, Peter Bernath, Christopher Sioris, Xiong Liu

S1P85 **Estimating lightning produced NOx from satellite**
Steffen Beirle, IUP Heidelberg
Klaus-Peter Heue, Ulrich Platt, Thomas Wagner

S1P86 **Modeling methane emissions from natural wetlands: Sensitivity to satellite-derived observations of inundation dynamics**
Elaine Matthews, NASA Goddard Institute For Space Studies
Catherine Prigent, Kyle McDonald

S1P87 **Satellite observations of formaldehyde from biomass burning: Retrieval and Comparison with Chemistry Transport Models**
Isabelle De Smedt, Bira-Iasb
Michel Van Roozendael, Jean-Frantois Müller, Ronald Van der A, Henk Eskes

S1P88 **Assimilation of Satellite and Suborbital Platform Chemical and Aerosol data into a Climate Model**
Robert Bergstrom, BAER Institute
Howard Houben, Hong Guan, Phillip Russel, Tami Bond

POSTER PRESENTATIONS: SESSION 1

Atmospheric chemistry observations and their intergration and synthesis

S1P89 **The use and usability of the Tropospheric Constituents, retrieved from the measurements of GOME and SCIAMACHY and the potential applications of GeoTROPE.**
John Philip Burrows, Institute Of Environmental Physcs, University Of Bremen
Andreas Richter, Heinrich Bovensmann, Michael Buchwitz, Stefan Noel, Vladimir Rozanov

S1P90 **Organic acids in the troposphere: A global 3-dimensional modelling study**
Stelios Myriokefalitakis, Environmental Chemical Processes Laboratory, Dept Of Chemistry, University Of Cr
Kostas Tsigaridis, Giorgos Kouvarakis, Nikolaos Mihalopoulos, Maria Kanakidou

S1P91 **Atmospheric H2 Cycle in the Troposphere**
Tae Siek Rhee, Korea Polar Research Institute
Carl A. M. Brenninkmeijer, Thomas Röckmann

S1P92 **Satellite Chartography of atmospheric methane from SCIAMACHY onboard ENVISAT**
Christian Frankenberg, Institute Of Environmental Physics Heidelberg
Peter Bergamaschi, Jan Fokker Meirink, Ulrich Platt, Thomas Wagner

S1P93 **Comparison of aerosol optical thickness from POLDER/PARASOL to surface fine particle concentration**
Jean-Franтois Léon, Cnrs-Loa
Meloé Kacenelenbogen, Anthony Hung, Isabelle Chiapello

S1P94 **Global aerosol 3-D distribution and characteristics from Calipso**
David Winker, NASA Langley Research Center

S1P95 **Review of long-term tropospheric ozone trends**
Johannes Staehelin, Institute For Atmospheric Science, ETHZ
Christina Schnadt Poberay

S1P96 **A nine year study of background surface ozone concentrations on the island of Gozo in the Central Mediterranean.**
Raymond Ellul, University Of Malta
Martin Saliba, Hans Güsten, Liberato Camilleri

S1P97 **Ozone and Carbon Monoxide in the Indian Ocean Region Observed from Mt. Kenya and Nairobi (Kenya), and Bukit Koto Tabang (Indonesia)**
Jorg Klausen, Empa, Materials Science and Technology, Air Pollution/Environmental Technology
Stephan Henne, Josiah Murageh Kariuki, Asep Firman Ilahi, Carles Siregar, John Aseyo, Zellweger Christoph, Buchmann Brigitte

S1P98 **Probing stratospheric transport and chemistry with new balloon and aircraft observations of the meridional and vertical N2O isotope distribution**
Thomas Röckmann, University Of East Anglia
Jan Kaiser, Andreas Engel, Reinhard Borchers

S1P99 **Arctic ozone loss and denitrification in 2003 winter observed by ILAS-II onboard the ADEOS-II satellite**
Hideaki Nakajima, National Institute For Environmental Studies
Kosuke Saeki, Takafumi Sugita, Yasuhiro Sasano

S1P100 **A review of the revised Umkehr Network with emphasis on ozone recovery.**
Irina Petropavlovskikh, Noaa/cires
V. Fioletov, E. Hare, S. Kireev, E. Weatherhead, E. Maillard, R. Stube

POSTER PRESENTATIONS: SESSION 2

Chemical weather on regional to global scales

S2P1 **Long-term Trend of Simulated Dust Emission**
Hiroshi Takahashi, Meteorological Research Institute
Kiyotaka Shibata, Masaru Chiba, Taichu Tanaka, Koji Imai

S2P2 **Modeling of vertical turbulent fluctuations on foggy days over New Delhi**
Namita Kundu, National Physical Laboratory
Amit Kesarkar, B S Gera

S2P3 **Regional chemical weather forecast over the central Japan: PBL structure and chemical transport based on a hindcast for July 2-21, 2004**
Masanori Niwano, Frontier Research Center For Global Change, Japan Agency For Marine-Earth Scienc
Masaaki Takigawa, Bin Zhu, Masaaki Takahashi, Michihiro Teshiba, Hajime Akimoto

S2P4 **Effects of emission controls between 1985-2000 on ozone in Switzerland: Modeling and observations**
Sebnem Andreani-Aksoyoglu, Paul Scherrer Institute
Johannes Keller, Carlos Ordonez, Andre S.H. Prevot

S2P5 **Long-term regional air quality modelling with an ensemble of models in Europe: inter-comparison and uncertainty analysis from the CITYDELTA and EURODELTA experiments**
Robert Vautard, Lsce/ipsl
Maarten Van Loon, Philippe Thunis, Kees Cuvelier

S2P6 **Long-term regional and city air quality forecasts with an ensemble of models in Europe: the CityDelta and EuroDelta model inter-comparison exercises**
Philippe Thunis, European Commission
C. Cuvelier, R Vautard, L. Tarrasón, L. Rouil, B. Bessagnet, R. Bergström, P Builtjes, A. Graff, J.E. Jonson, M. Schaap, R. Stern, P. Wind, A. Kerschbaumer, J. Douros, N. Moussiopoulos, G. Pirovano, M. Bedogni

S2P7 **On the importance of meteorological parameters for air pollution over Europe**
Camilla Andersson, ITM, Stockholm University
Joakim Langner

S2P8 **A Numerical system for South America air quality forecast from regional to local scales**
Karla Longo, Cptec/inpe
Saulo Freitas, Laura Gallardo, Ricardo Alcafuz

S2P9 **The Coupled Aerosol and Tracer Transport Model to the Brazilian developments on the Regional Atmospheric Modeling System: model validation using direct and remote sensing observation.**
Saulo Freitas, Cptec/inpe
Karla Longo, Maria Silva Dias, Pedro Silva Dias, Robert Chatfield, Alvaro Fazenda, Luiz Flavio Rodrigues

S2P10 **Using the super-parameterization concept to include the sub-grid plume rise of vegetation fires in low resolution atmospheric chemistry-transport models.**
Saulo Freitas, Cptec/inpe
Karla Longo

S2P11 **Global Operation Forecasting of Tropospheric Aerosols with the Navy Aerosol Analysis and Prediction System (NAAPS)**
Douglas Westphal, Naval Research Laboratory
Jefferey Reid, Timothy Hogan, Cynthia Curtis, Torsten Duffy, Marcin Vitek

S2P12 **Online Simulations and Forecasts of the Global Aerosol Distribution in the NASA GEOS-5 Model**
Peter Colarco, Nasa Gsfc
Arlindo da Silva

S2P13 **Regional chemical weather over the United States: Forecast, simulation evaluations, and dependence on meteorology**
Yuhang Wang, Georgia Institute Of Technology
Yunsoo Choi, Tao Zeng

S2P14 **Chemical weather with GEM-AQ: Evaluation of a five year global simulation**
Lori Neary, York University, Dept Earth And Space Sci And Eng
J.W. Kaminski, J.C. McConnell, A. Lupu, J Jiang, N Livesey, Q Li

S2P15 **Development and verification of a simplified atmospheric chemistry mechanism**
Laura Watson, School Of Chemistry, University Of Bristol, UK
Dudley Shallcross, Michael Jenkin, Steven Utembe

S2P16 **Chemical Data Assimilation in Support of Air Quality Forecasts**
Gregory Carmichael, The University Of Iowa
Tianfeng Chai, Youhua Tang, Adrian Sandu, Dacian Daescu, Marcelo Mena, Emil Constantinescu

S2P17 **Seasonal variation of tropospheric NO2 columns from MOZART simulations and retrieved data from GOME measurements**
Kathy Law, Service D'Aeronomie/IPSL
Fadoua Eddounia, Claire Granier, Christiane Textor, Andreas Richter, John Burrows

POSTER PRESENTATIONS: SESSION 2

Chemical weather on regional to global scales

S2P18 **Changes of Chemical Composition of Precipitation under Influence of Anthropogenic Activities on Tashkent Region Example**
Tatyana Smirnova, Research Hydrometeorological Institute (NIGMI)
Galinae Tolkacheva

S2P19 **Diurnal variation of carbonyls in urban air of Kolkata, India**
C Dutta, Department Of Chemistry, Calcutta University
S Sen, D Som, A Chatterjee, A. K. Mukherjee, T. K. Jana

S2P20 **Dynamically changing ozone formation regimes found by an analysis of the ozone weekend effects**
Akiyoshi Kannari, Independent Researcher

S2P21 **Monitoring of Surfactant in Atmosphere of Central India**
Kavita Agrawal, Raipur Institute Of Technology, Chhatauna, Mandir Hasoud, Raipur
Prasanna Sharma, Amarendra Nath Jha

S2P22 **Ozone and benzene emissions in different lithograhpic printing industrial areas in thailand**
Kanita Thanacharoenchanaphas, Naresuan University
Amornpon Changsuphan, Thepvitool Thongsri, Ratchadawan Nimnual, Surat Phetkasem, Chanin Lertkanawanitchakul

S2P23 **Relationship of Ozone and Carbon monoxide over Bay of Bengal and Arabian Sea during summer and winter Monsoon transitions**
Tuhin Kumar Mandal, RASD, National Physical Laboratory
Y.Nazeer Ahammed

S2P24 **Suppression of the sub-soil fluxes of methane from paddy fields using alternative electron acceptor pool: A case study with waterlogged paddy fields in Eastern India.**
Ranjan Mukherjee, Department Of Chemical Engineering, Jadavpur University, Kolkata, India
Ujjaini Sarkar, Animita Barua

S2P25 **Case-based determination of qualitative relationships between air pollutants and meteorological parameters in Istanbul**
Ali Deniz, Istanbul Technical University
Pakir Kocabab, Hüseyin Toros

S2P26 **Increase in summer European Ozone amounts due to climate change**
Frederik Meleux, Ineris
Fabien Solmon, Filippo Giorgi

S2P27 **Intraction patterns of precursors of photochemical air pollution in Istanbul, Turkey**
Selahattin Incecik, Istanbul Technical University Department Of Meteorology
Sema Topcu, Ulas Im

S2P28 **Size distribution of inorganic water soluble species in the mediterranean suburban background atmospheric aerosol**
Konstantinos Eleftheriadis, N.C.S.R. 'Demokritos'
Klaus Ochsenkuehn, Theopisti Lyberopoulou, Panagiotis Razos, Maria Ochsenkuehn-Petropoulou

S2P29 **Assessement of the regional contribution to the air quality in Buenos Aires City due to the transport of biomass burning products in South Africa by the Low Level Jet east of the Andes**
Ana Ulke, University Of Buenos Aires
Karla Longo, Saulo Freitas, Rodrigo Hierro

S2P30 **The effect of lime industry emissions on the regional environment in the Colombo region, south of Brazil**
Sanja Potgieter-Vermaak, Wits
Darci Braga, Ana Godoi, Ricardo Godoi, Yaroslava Makarovska, Rene Van Grieken, Balint Alfoldy, Sabrina Torok

S2P31 **Impact of Chloroethenes from Industry and Combustion on Atmosphere**
Olga Morozova, Institute Of Chemical Physics
Claus Nielsen, Igor Morozov

POSTER PRESENTATIONS: SESSION 3

Long-range transport and chemical transformation

S3P1 **Global Measurements of Carbon Monoxide Using the MOPITT Instrument**
James Drummond, Dalhousie University
Jay Kar, Jane Liu, Florian Nichitiu, Jason Zou, David Edwards, John Gille

S3P2 **Initial Results from the Canadian Component of the Intercontinental Chemical Transport Experiment**
Randall Martin, Dalhousie University
Aaron van Donkelaar, Richard Leaitch, Tom Duck, Anne Marie Macdonald

S3P3 **Reactive nitrogen photochemistry in urban plumes transported from the United States over the North Atlantic Ocean**
J. Andrew Neuman, Cooperative Institute For Research In Environmental Sciences
David Parrish, Michael Trainer, Thomas Ryerson, John Nowak, John Holloway, Roberto Sommariva, Andreas Stohl

S3P4 **Measurements of peroxy radicals in air masses undergoing long range transport during ITOP**
Alex Parker, University Of Leicester
Paul Monks, Mark Jacob, Timothy Green, Stuart Penkett

S3P5 **Impacts of anthropogenic and boreal wildfire emissions on nitrogen oxides, ozone and aerosol black carbon levels in the lower FT over the central North Atlantic region**
Maria Val Martin, Civil & Environmental Engineering Department, Michigan Tech
Richard Honrath, Chris Owen, Paulo Fialho, Gabriele Pfister, Kateryna Lapina, Filipe Barata

S3P6 **Evaluation of MOCAGE CTM during ITOP experiment**
Nicolas Bousserez, Laboratoire D'Aerologie
Jean-Luc Attié, V-H Peuch, Martine Michou, G. Pfister, D. Edwards, A. Richter, K. Law

S3P7 **Long range transport of aerosols into Europe: Insights from the ICARTT campaign.**
Isabelle Bey, EPFL
Marion Auvray, Sylvia Generoso, Benoit Laurent

S3P8 **Influence of African air mass Intrusions on the total suspended particulate background levels over the Eastern North Atlantic MBL (Marine Boundary Layer)**
Silvia Alonso-Pérez, Observatorio Atmosférico De Izana (Instituto Nacional De Meteorología. Spain)
Emilio Cuevas, Juan Carlos Guerra, Xavier Querol

S3P9 **Distribution of selected organic trace gases in the Arctic boundary layer and free troposphere: Implications for sources and sinks**
Armin Wisthaler, Institute of Ion Physics
Armin Hansel, Michael L. Jensen, Erik Swietlicki, Michael Tjernström, Caroline Leck

S3P10 **Long-term sulphur observations in the Norwegian Arctic**
Kjetil Tørseth, Norwegian Institute For Air Research
Caroline Forster, Andreas Stohl, Wench Aas

S3P11 **Nitrate trends in different climate zones in Southern Norway: Relation to emissions and climate indices**
Lars Robert Hole, Norwegian Institute For Air Research
Wenche Aas, Heleen de Wit

S3P12 **Assessment of aerosol composition in the Belgian-French border region**
Marianne Stranger, University Of Antwerp
Sanja Potgieter-Vermaak, René Van Grieken

S3P13 **Modelling historic trends of sulfate, ammonium and nitrate in Europe; A comparison with ice core records in the Alps**
Hilde Fagerli, Norwegian Meteorological Institute
Michel Legrand, Susanne Preunkert, David Simpson, Vigdis Vestreng

S3P14 **Sector analysis and long-term trends evaluation of the data from the Czech GAW and EMEP station Kosetice**
Milan Vana, Czech Hydrometeorological Institute
Jaroskav Pekarek

S3P15 **On the influence of Land processes on atmospheric carbon dioxide and ozone concentrations at a mountain site in Italy**
Riccardo Santaguida, Italian Air Force Meteorological Service
P Bonasoni, P Cristofaneli, L Tositti

S3P16 **On the Pathways of Trans-Atlantic Air-pollution Transport**
Thomas Trickl, Forschungszentrum Karlsruhe, IMK-IFU
Caroline Forster, Paul James, Nicole Spichtinger-Rakowsky, Andreas Stohl

S3P17 **Stratospheric Air Intrusions: Still a Major Source of Tropospheric Ozone?**
Thomas Trickl, Forschungszentrum Karlsruhe, IMK-IFU
Hendrik Feldmann, Paul James, Hans-Eckhart Scheel, Andreas Stohl

POSTER PRESENTATIONS: SESSION 3

Long-range transport and chemical transformation

S3P18 **Deep Stratosphere to Troposphere Transport over the Eastern Mediterranean: an extreme case study**
Evangelos Gerasopoulos, Institute Of Environmental Research And Sustainable Development, National Observatory Athens
Prodromos Zanis, Constantin Papastefanou, Christos Zerefos, Alexandra Ioannidou, Heini Wernli

S3P19 **Changes in photochemistry during two solar eclipses at several locations in the Eastern Mediterranean**
Evangelos Gerasopoulos, Institute Of Environmental Research And Sustainable Development, National Observatory Athens
Christos Zerefos, Nikolaos Mihalopoulos, Michael Petrakis, Dimitra Founta, Vassilis Psiloglou, Michael Vrekoussis, Georgios Kouvarakis

S3P20 **Climatological aspects and chemical composition of PM10 over the Eastern Mediterranean**
Evangelos Gerasopoulos, Institute Of Environmental Research And Sustainable Development, National Observatory Athens
Georgios Kouvarakis, Paraskevas Babasakalis, Michael Vrekoussis, Jean-Philippe Putaud, Nikolaos Mihalopoulos

S3P21 **Dust transport over Eastern Mediterranean inferred from remote (TOMS, AERONET) and land based measurements**
Nikolaos Kalivitis, Environmental And Chemical Processes Laboratory, Chemistry Deparrtment, University of Crete
Evangelos Gerasopoulos, Michael Vrekoussis, Georgios Kouvarakis, Nilgun Kubilay, Ilias Vardavas, Nikolaos Hatzianastassiou, Nikolaos Mihalopoulos

S3P22 **Sources of non-methane hydrocarbons (NMHCs) in the Eastern Mediterranean**
Cecilia Arsene, Environmental Chemical Processes Laboratory, Department Of Chemistry, University of Crete
Eleni Liakakou, Aikaterini Bougiatioti, Nikolaos Mihalopoulos

S3P23 **Seasonal variation of C3-C6 NMHCs over the Eastern Mediterranean**
Eleni Liakakou, Environmental Chemical Processes Laboratory, Department Of Chemistry, University of Crete
Bernard Bonsang, Jonathan Williams, Maria Kanakidou, Nikolaos Mihalopoulos

S3P24 **An investigation on the factors influencing the rural surface ozone levels in the Eastern Mediterranean (Malta, Greece, Cyprus)**
Pavlos Kalabokas, Academy Of Athens, Research Center For Atmospheric Physics And Climatology
Raymond Ellul, Evangelos Gerasopoulos, Nikos Mihalopoulos, Savas Kleanthous

S3P25 **Long Range Transport of European Emissions in the Eastern Mediterranean: A case study**
Selahattin Incecik, Istanbul Technical University Department Of Meteorology
Muwaffaq Freiwan, Umit Antepliogluu

S3P26 **Variation of precipitation composition between 1992 and 2000 at the Eastern Mediterranean**
Özlem Isikdemir, Middle East Technical University, Department Of Environmental Engineering
Hakan Pekey, Gürdal Tuncel

S3P27 **Trends of Deposition and Emission Fluxes of Acydifying Compounds on the Territory of Belarus**
Sergey Kakareka, Transboundary Pollution Group, Head Institution For Problems Of Natural Resource

S3P28 **Wet removal over south of Russia and coastal zone of Black Sea - chemical composition and atmospheric transport**
Galina Surkova, Moscow State University, Depart.Of Meteorology And Climatology

S3P29 **TROICA campaigns: trace gases and black carbon in surface air over Russia**
Nikolai Elansky, Obukhov Institute Of Atmospheric Physics
Igor Belikov, Vladimir Kopeikin, Olga Lavrova, Andrei Ralko

S3P30 **Preliminary results from ABC-PYR, the new remote high mountain station in the Himalayas to study the atmospheric composition change and climate**
Paolo Laj, Isac - Cnr
Angela Marinoni, Paolo Bonasoni, Paolo Cristofanelli, Hervé Venzac, Ubaldo Bonafé, Francescopiero Calzolari, Stefano Decesari

S3P31 **Chemical composition of atmospheric aerosols from high and low altitude sites in northern and western India**
Neeraj Rastogi, Physical Research Laboratory
Sudheer Athiyarath, Manmohan Sarin, Rengarajan R

S3P32 **NOx induced O3 chemistry associated with dynamical processes over south Asia and the Indian ocean based on a global CTM and Satellite observations**
Kunhikrishnan Thengumthara, NASA Langley Research Centre
Mark G Lawrence, James H Crawford, Jack Fishman, Richter Andreas, John Burrows

S3P33 **Long term trend of surface ozone observed at Mount Waliguan from 1994 to 2005**
Jie Tang, Chinese Academy Of Meteorological Sciences
Xiangdong Zheng, Xiaobin Xu, Weili Lin

S3P34 **On the Origin of surface ozone and reactive nitrogan at a remote Mount Waliguan in northeastern Qinghai-Tibetan Plateau western China**
Tao Wang, The Hong Kong Polytechnic University
Hok Lai Anson Wong, Aijun Ding, Jie Tang, Wai Shing Wu, Xiao Chung Zhang

POSTER PRESENTATIONS: SESSION 3

Long-range transport and chemical transformation

S3P35 **Spatial-temporal variations of tropospheric ozone over East Asia**
Kazuyo Yamaji, Frontier Research Center For Global Change, Japan Agency For Marine-Earth Science
Toshimasa Ohara, Itsushi Uno, Jun-ich Kurokawa, Hajime Akimoto

S3P36 **Contribution to surface ozone in Japan by different sources, inter- and intra-continental transport, stratospheric intrusion, and in situ formation**
Hajime Akimoto, Frcgc/jamstec
Moeko Yoshitomi, Oliver Wild

S3P37 **Long-range transport of SO2 plume from the continent over Japan: Observation at the summit of Mt. Fuji**
Yasuhito Igarashi, Geochem. Res. Dept., Meteorolo. Res. Inst.
Yosuke Sawa, Katsuhiro Yoshioka, Hiroshi Takahashi, Hidekazu Matsueda

S3P38 **Relation between the high gamma emission phenomenon and atmospheric transportation process at the time of the rain in Japan**
Masaru Chiba, Meteorological Research Institute

S3P39 **Seasonal variation of NOy and gaseous HNO3 in the remote island of Okinawa, Japan: Air pollution by nitrogen compounds originated from Asian continent**
Yasuhiro Sadanaga, Osaka Prefecture University
Jun-ichi Kawakami, Hiroto Masuyama, Minoru Hamana, Norimichi Takenaka, Itsushi Uno, Hiroshi Bandow

S3P40 **Asian continental outflow monitoring at the Shi-Men site in northern Taiwan**
Carsten Junker, Graduate Institute Of Environmental Engineering
Shi-Shang Sheng, Chung-Te Lee

S3P41 **Local and Regional Dust Simulation**
Hsiang-He Lee, Department Of Atmospheric Sciences, National Taiwan University, Taiwan, ROC
Jen-Ping Chen

S3P42 **Interaction of gaseous pollutants with aerosols during long-range transport in Asia**
Soon-Ung Park, School Of Earth And Environmental Sciences Seoul National University
Jae-In Jeong

S3P43 **Influence of meteorological conditions on trans-Pacific transport of Asian dust observed in April 2001**
Sang-Keun Song, Pusan National University
Yoo-Keun Kim, Zang-Ho Shon, Hwa Woon Lee

S3P44 **Increase of tropospheric O3 over the Tropics and Subtropics**
Annette Ladstaetter-Weissenmayer, Institute Of Environmental Physics, University Of Bremen
John P. Burrows, Andreas Richter, Maria Kanakidou, Julian Meyer-Arnek

S3P45 **The influence of African air pollution on regional and global tropospheric chemistry**
Adetutu M. Aghedo, Max Planck Institute for Meteorology
Martin G. Schultz, Sebastian Rast

S3P46 **Trace gas levels at Cape Point (34°S, 18°E) during the advection of continental air**
Ernst-Gunther Brunke, (S.A.W.S) South African Weather Service
Casper Labuschagne, Eckhart Scheel

S3P47 **Long-term monitoring of atmospheric mercury at Cape Point, South Africa**
Ernst-Gunther Brunke, (S.A.W.S) South African Weather Service
Casper Labuschagne, Franz Slemr

S3P48 **Assessment of impact of air pollution on human health and environment in the Durban Industrial Basin**
Peter Vangsbo Madsen, National Environmental Research Institute (NERI)
Ole Hertel, Eva Bogh

S3P49 **Seasonal variations of benzene, toluene, ethylbenzene and xylenes (BTEX) from Cape Town brown haze.**
Kgaugelo Chiloane, CSIR
Stuart Piketh, Luanne Otter, Mark Zunckel

S3P50 **Rainwater organic and inorganic nitrogen in the metropolitan region of Rio de Janeiro, Brazil**
Andréa Rocha-Silva, Universidade Federal Fluminense
William de Mello

S3P51 **Behavior study of the nitrogen oxides and ozone in different monitoring air quality stations in Bogota City**
Emel Enrique Vega, Universidad Nacional De Colombia
Luis Reinaldo Barreto

S3P52 **Calculation of trajectories and modelling of ozone generated from biomass burning transport over Argentina**
Gerardo Carbajal Benítez, Programa De Estudios De Los Procesos Atmosfericos En El Cambio Global-Pontificia
Diana Mielnicki, Pablo Canziani

POSTER PRESENTATIONS: SESSION 3

Long-range transport and chemical transformation

S3P53 **Analysis of offshore transport events of sulfur aerosols over Northern Chile and Southern Peru**
Alejandra Oyanadel, Center For Mathematical Modeling, University Of Chile
Laura Gallardo

S3P54 **Transport of biomass burning pollutants and its impact over ozone concentrations over the Metropolitan Area of Sao Paulo - Brazil**
Edmilson Freitas, Department Of Atmospheric Sciences-IAG - University Of Sao Paulo
Éder Vendrasco, Leila Martins, Jorge Martins, Melissa Itimura, Pedro Silva Dias

S3P55 **How a Pyrocumulus Plume-Rise Parameterization Improves Global Simulations of the Intercontinental Effects Of Vegetation Fires**
Robert B. Chatfield, NASA Ames Research Center
Hong Guan, Saulo R. de Freitas, Karla Longo

S3P56 **The long-range transport of Russian Fires in 2003: A sensitive analysis of emission injection height impacts, with a particular emphasis for the Arctic region**
Sylvia Generoso, Lmca / Epfl
Isabelle Bey, Jean-Luc Attié, Francois-Marie Bréon

S3P57 **Simulation of the chemical climate of the troposphere in the Canadian Middle Atmosphere Model**
David Plummer, Environment Canada
Stephen Beagley, Jean deGrandpre, Jack McConnell

S3P58 **Climate Impacts of Transport Systems: Chemical responses and radiative forcing**
Terje Berntsen, Cicero
Jan Fuglestvedt, Gunnar Myhre, Kristin Rypdal, Ragnhild Skeie

S3P59 **Long-term simulations of tropospheric ozone chemistry using ERA-40 forecast data**
Twan Van Noije, Royal Netherlands Meteorological Institute
Martin Schultz, Sophie Szopa, Didier Hauglustaine, Sebastian Rast, Nick Savage, Stig Dalsoren, Peter van Velthoven

S3P60 **CTM studies of emission induced regional changes in oxidation capacity 1990-2001**
Stig Dalsøren, University Of Oslo, Department Of Geoscience
Ivar S. A. Isaksen, Amund Søvde, Michael Gauss

S3P61 **Intercontinental Transport and Chemical Processing of Pollutants**
Michael Sanderson, Met Office
William Collins, Colin Johnson, Richard Derwent, David Stevenson

S3P62 **Intercontinental formation and transport of ozone to Europe from NOx emissions in Asia and North America**
Richard Derwent, Rdscientific
David Stevenson, Ruth Doherty, William Collins, Michael Sanderson

S3P63 **Variability in Ozone Production and Transport in Springtime**
Oliver Wild, University Of Cambridge

S3P64 **Long-range transport of ozone air pollution: effect of NOx emission controls from world regions**
J. Jason West, Princeton University
Vaishali Naik, Larry Horowitz, Denise Mauzerall

S3P65 **Ozone air quality and radiative forcing consequences of changes in ozone precursor emissions**
J. Jason West, Princeton University
Arlene Fiore, Vaishali Naik, Larry Horowitz, Daniel Schwarzkopf, Denise Mauzerall

S3P66 **Source attribution of global tropospheric O3 and CO: Climatology and interannual variability**
Kengo Sudo, Graduate School of Environmental Studies, Nagoya University
Hajime Akimoto, Michio Hirenzaki, Koki Iwao, Masaaki Takahashi

S3P67 **A hybrid Lagrangian-Eulerian modeling study of the impact of transport and transformation on the tropospheric ozone variability observed by LIDAR during the ESCOMPTE campaign**
Augustin Colette, Service D'Aéronomie, Institut Pierre-Simon Laplace, Centre National De La Recher
Gérard Ancellet, Laurent Menut, Steve Arnold

S3P68 **Climate change induced trends in transport of sulphur, nitrogen and ozone from Europe?**
Camilla Andersson, ITM, Stockholm University
Joakim Langner

S3P69 **A global 3-dimensional model investigation of the reactive nitrogen reservoir over Europe**
Maria Kanakidou, Environmental Chemical Processes Laboratory, Dept Of Chemistry, University Of Crete
Giorgos Kouvarakis, Kostas Tsigaridis

S3P70 **Background Aerosol Levels from Long-range Transports of both Natural and Anthropogenic Sources**
Sunling Gong, Science & Technology Branch, Environment Canada
Tianliang Zhao, David Lavoue, Richard Leaitch, Ping Huang, Xiaoye Zhang, Len Barrie

POSTER PRESENTATIONS: SESSION 3

Long-range transport and chemical transformation

S3P71 **Intercontinental Transport of Aerosols: Implication for Regional Air Quality**
Mian Chin, NASA Goddard Space Flight Center
Thomas Diehl, Paul Ginoux

S3P72 **Evaluating the Global Health Impact of Inter-continental Transport of Aerosols**
Junfeng Liu, Princeton University
Denise Mauzerall, Larry Horowitz

S3P73 **Pre-industrial and Present Mineral Aerosol, Soluble Fe Flux and Ocean Biogeochemistry**
Hiram Levy, GFDL/NOAA
Songmiao Fan, Walter Moxim, John Dunne

S3P74 **Modeling of aerosols in the Oslo version of NCAR-CAM3. Sensitivity to below cloud deposition processes**
Øyvind Seland, Department Of Geosciences
Trond Iversen

S3P75 **Investigating uncertainties in elemental carbon calculations with the EMEP model**
Svetlana Tsyro, Norwegian Meteorological Institute
Leonor Tarrason

S3P76 **Development of fossil fuel carbonaceous aerosol emission inventories at European, National and Regional scales**
Bruno Guillaume, Laboratoire D'Aérologie
Catherine Liousse, Hélène Cachier, Hugo Denier van der Gon

S3P77 **Interface between Atmospheric Chemistry and Technology Choice: Climatic Effects of Aerosols from Individual Sources**
Tami Bond, University Of Illinois At Urbana-Champaign
G. Habib, A. Kanu, C. A. Roden, R. Subramanian, H. Sun, D. Coleman, P. J. Rasch

S3P78 **Sources of Ambient Atmospheric Aerosol in the Eastern US**
Alexander Polissar, New Jersey DEP

S3P79 **Impact of marine emissions on air quality**
Mehrez Samaali, Environment CANADA, Canadian Meteorological Centre,
Sophie Cousineau, Mourad Sassi, Radenko Pavlovic, Véronique Bouchet

S3P80 **The role of past, present and future shipping emissions in European Acidification, Eutrophication and Ozone levels**
Vigdis Vestreng, The Norwegian Meteorological Institute
Hilde Fagerli, Jan Eiof Jonson

S3P81 **Using a coupled atmosphere-ocean 3D model to study the global distribution and fate of Persistent Toxic Substances**
Francesca Guglielmo, Max Planck Institute For Meteorology
Gerhard Lammel

S3P82 **Global distribution and fate of polycyclic aromatic hydrocarbons**
Aissa Mounir Sehili, Meteorological Institute. University of Hamburg
Gerhard Lammel, V.S Semeena, Rainer Lohmann

S3P83 **Modeling of the global destruction of polychlorinated biphenyls by OH radicals in the troposphere**
Euripides G. Stephanou, University Of Crete
Manolis Mandalakis, Kostas Tsigaridis, Örjan Gustafsson

S3P84 **The Formation of Perfluorocarboxylic acids (PFCAs) during the Atmospheric Oxidation of Flurotelomer Alcohols**
Ole John Nielsen, Dept. Chem., University Of Copenhagen
Mads Andersen, J Xia, D J Wuebbles, S Sillman, A Ito, J E Penner, D A Ellis, J Martin, S A Mabary, T J Walllington, M D Hurley, J C Ball

S3P85 **Kinetics and mechanisms of CF3CHFOCH3, CF3CHFOC(O)H, and FC(O)OCH3 reaction with OH radicals**
Liang Chen, National Institute Of Advanced Industrial Science And Technology (AIST)
Shuzo Kutsuna, Kazuaki Tokuhashi, Akira Sekiya

POSTER PRESENTATIONS: SESSION 4

Aeorosol-cloud interactions and climate implications

S4P1 **Aerosol Effects on Cloud Lifetime: Surprises from Large Eddy Simulations**
Graham Feingold, NOAA Earth System Research Laboratory
Hongli Jiang, Huiwen Xue, Amit Teller, Zev Levin

S4P2 **A regional climate chemistry model and its preliminary application on effect of the tropospheric sulfate and ozone on cliamte of China**
Tijian Wang, Dept. Of Atmospheric Science Of Nanjing University
Simei Liu, Dashun Chen, Wenqing Pu, Longshan Jin

S4P3 **Level of atmospheric air pollution with indirect greenhouse gases dependence on synoptic processes.**
Tatiana Gribcova, State Hydrometeorological Service

S4P4 **Aerosol-cloud interactions over southern Africa**
Kristy Ross, Eskom
Stuart Piketh, Deon Terblanche, Siven Naidoo

S4P5 **Study of Aerosol Optical Depth and Precipitable Water Content over a Semi Arid, Region in India**
Sanjoy Saha, Indian Institute Of Tropical Metereology
P.C.S. Devara, Unmesh K. Shinde

S4P6 **Modelling studies on the influence of nitric acid on the cloud processing of aerosol particles**
Sami Romakkaniemi, University Of Manchester
Harri Kokkola, Kari Lehtinen, Ari Laaksonen

S4P7 **An empirical clustering-based approach by Nuclear Magnetic Resonance to identify different sources and chemical fingerprints of aerosols organic particles**
Maria Cristina Facchini, Istituto Di Scienze Dell'Atmosfera E Del Clima CNR
Stefano Decesari, Mihaela Mircea, Sandro Fuzzi, Fabrizia Cavalli, Emilio Tagliavini, Fabio Moretti

S4P8 **The removal and transformation of Mexico Cityæs aerosols by clouds and precipitation**
Darrel Baumgardner, Universidad Nacional Autónoma De México
Graciela Raga, James Allan, Michel Grutter, Mildred Frias, Carlos Ochoa

S4P9 **Review of the role of aerosols in modifying clouds and precipitation.**
Zev Levin, Tel Aviv University

S4P10 **Modeling of aerosols in the Oslo version of NCAR-CAM3. Sensitivity to below cloud deposition processes.**
Øyvind Seland, Department Of Geosciences
Trond Iversen

S4P11 **GCCM simulation of aerosol-climate interactions**
Jen-Ping Chen, Department Of Atmospheric Sciences, National Taiwan University
I-Chun Tsai, Ping-Yu Lin, Wei-Chyung Wang

S4P12 **Deceased occurrence of light precipitation over Taiwan**
Chein-Jung Shiu, Department Of Atmospheric Sciences
Shaw Chen Liu, Jen-Ping Chen

S4P13 **Roles of aerosols on modifying cloud optical and microphysical properties over East Asia**
Kazuaki Kawamoto, Research Institute For Humanity And Nature
Tadahiro Hayasaka, Itsushi Uno, Toshimasa Ohara

S4P14 **Cloud condensation nucleus activity of oleic acid ozonolysis products**
Stephanie King, Harvard University Devision of Engineering and Applied Sciences
John Shilling, Douglas Worsnop, Scot Martin

S4P15 **Atmospheric Aerosols: Cloud Condensation Nucleus Activity of Selected Organic Molecules**
Thomas Rosenoern, Harvard University, DEAS
Silvia Henning, Kara H. Hartz, Gyula Kiss, Spyros Pandis, Merete Bilde

S4P16 **The VOCALS Program-stratocumulus and climate in the Southeast Pacific**
Laura Gallard-Klenner, Center For Mathematical Modeling, University Of Chile
Robert Wood

S4P17 **Aerosol affects on the microphysics of precipitation development in tropical and sub-tropical convective clouds.**
Roelof Bruintjes, National Center For Atmospheric Research
Trudi Semeniuk, Daniel Breed, Vidal Salazar, Tara Jensen, Stuart Piketh, Peter Buseck, Abdullah Al Mandoos

S4P18 **Atmospheric changes in sizes and chemical composition of aerosols that modify their cloud condensation and ice nucleating characteristics.**
Roelof Bruintjes, National Center For Atmospheric Research
Trudi Semeniuk, Daniel Breed, Vidal Salazar, Stuart Piketh, Kristy Ross, Peter Buseck, Abdullah Al Mandoos

POSTER PRESENTATIONS: SESSION 4

Aeorosol-cloud interactions and climate implications

S4P19 **Observations and simulations of high Aerosol Optical Thickness (AOT) over the Mediterranean during dust events.**
Maria Sfakianaki, Department Of Chemistry, University Of Crete, Greece
Maria Kanakidou, Wolfgang von Hoyningen-Huene, John Burrows, Stelios Myriokefalitakis

S4P20 **The size distribution of cloud-processed nitrate during ICARTT 2004**
Katherine Hayden, Environment Canada
Anne Marie Macdonald, Wanmin Gong, Kurt Anlauf, Desiree Toom-Sauntry, Amy Leithead, Shao-Meng Li, Richard Leaitch, Kevin Noone

S4P21 **Enhanced Understanding of Aerosol Climate-Forcing Properties through Global Monitoring**
Patrick Sheridan, NOAA Earth System Research Laboratory
John Ogren, Betsy Andrews, Anne Jefferson, Sharon Lewis, Alison McComiskey, Jun-Ying Sun, Ernst Brunke, Casper Labuscagne, Bhawoodien Parker, Olga Mayol-Bracero, Sangeeta Sharma

S4P22 **Factors controlling the CCN number concentrations at north of East China Sea in spring 2005**
Makoto Koike, Department Of Earth And Planetary Science, University Of Tokyo
M Kuwata, Y Kondo, Y Miyazaki, D Kodama, S. S. Yum, H Tanimoto, H Matsueda

S4P23 **Aerosol properties over the eastern Mediterranean based on the AERONET station at Crete**
Angeliki Fotiadi, Department Of Physics, University Of Crete, Greece
N. Hatzianastassiou, C. Papadimas, E. Drakakis, C. Matsoukas, I. Vardavas

S4P24 **Determination of particulate soot in precipitation using Nuclepore filters and photometric detection**
Erik Engström, Stockholm University, Dep. Of Meteorology
Lennart Granat, Caroline Leck, Jost Heintzenberg

S4P25 **Physical and Chemical Properties of Aerosol Particles and Cloud Droplets During the Second Pallas Cloud Experiment (Second PaCE)**
Heikki Lihavainen, Finnish Meteorological Institute
Mika Komppula, Antti-Pekka Hyvärinen, Veli-Matti Kerminen, Veijo Aaltonen, Christa Engler, Niku Kivekäs, Ari Leskinen, Petri Vaattovaara, Jukka Rautiainen, Pasi Miettinen, Petri Tiitta, Riikka Sorjamaa, Risto Hillamo, Ulla Makkonen, Yrjö Viisanen, Ari Laaksonen

S4P26 **Modeling nitric acid condensation in mixed phase clouds**
Joni-Pekka Pietikäinen, University Of Kuopio, Department Of Physics
Jukka Hienola, Harri Kokkola, Sami Romakkaniemi, Ari Laaksonen

S4P27 **Consistent modeling of aerosol direct and indirect effects in the Oslo version of NCAR CAM3, CAM-Oslo - Climate response to anthropogenic aerosols.**
Alf Kirkevåg, Department Of Geosciences, University Of Oslo
Trond Iversen, Øyvind Seland, Jon Egill Kristjansson, Jens Boldingh Debernard

S4P28 **3-D simulations of effects of aerosol concentration and composition on convective cloud development**
Annica Ekman, Department Of Meteorology, Stockholm University
Chien Wang

S4P29 **Chemical Characterization and Single Scattering Albedo of Atmospheric Aerosols measured at Amami-Oshima, Southwest Japan in Spring Seasons**
Haruo Tsuruta, Center For Climate System Research, The University Of Tokyo
Shigeto Sudo, Seiichiro Yonemura, Tamio Takamura, Masanori Yabuki, Shuichiro Katagiri, Tadahiro Hayasaka, Teruyuki Nakajima

S4P30 **Variability in cloud droplet number concentrations offshore Northern Chile and Southern Peru since the 1990's: assessing the potential impact of sulfur aerosols on cloud optical properties**
David Painemal, Center For Mathematical Modeling, University Of Chile
Laura Gallardo, Robert Wood

POSTER PRESENTATIONS: SESSION 5

Aerosol chemistry and interactions between aerosol and gas phase chemistry

S5P1 **A quantum chemistry study of atmospheric radical reactions on clay surfaces**
Cristina Iuga, Area De Química Cuántica Depto de Química
Annik Vivier-Bunge

S5P2 **Atmospheric Reactions Halogen Containing Radicals on the Sea Salt Surface**
Igor Morozov, Semenov Institute Of Chemical Physics
Evgenii Vasiliev, Walter Hack

S5P3 **Henry's law constants and dissociation constants of trifluoroacetic acid at 278-298 K**
Shuzo 1 Kutsuna, National Institute Of Advanced Industrial Science And Technology (AIST)
Hisao Hori

S5P4 **Halogen chemistry in volcanic plumes - the importance of multiphase processes**
Roland Von Glasow, Institute Of Environmental Physics, University Of Heidelberg

S5P5 **Heterogeneous reactions of SO2 and NO2 at the surface of mineral dust particles**
Tong Zhu, Peking University
Hongjun Li, Lei Li, Qi Chen, Zhongming Chen, Jing Shang

S5P6 **Investigation of the heterogeneous reaction between Ammonia and Sulfuric / Oxalic Acid aerosols**
Thomas Townsend, University College Cork

S5P7 **Measurements of the reactions of organic gases and OH radicals with aerosols**
James Sloan, University Of Waterloo
Rodion Remorov, Max Bardwell, Lucas Neil

S5P8 **Photoenhanced conversion of NO2 on dust**
Christian George, Cnrs-Insu-Lace
Marieme NDour, Jörg Kleffmann, Konrad Stemmler, Markus Ammann

S5P9 **Reaction of HNO3 and NO2 with organic aerosol in flow tube experiments**
Konrad Stemmler, Paul Scherrer Institute
Jörg Kleffmann, Markus Ammann, Alexandre Vlasenko, Christian George, Marieme NDour

S5P10 **Scavenging of SO4- radicals by carboxylic acids in Mn(II)-catalyzed S(IV) oxidation in tropospheric aqueous phase**
Irena Grgic, National Institute Of Chemistry, Slovenia
Bostjan Podkrajsek, Paolo Barzaghi, Hartmut Herrmann

S5P11 **Solvation of small atmospherically relevant molecules, radicals and ions at the air/liquid interfaces**
Martina Roeselova, Czech Academy Of Sciences, Institute Of Organic Chemistry And Biochemistry

S5P12 **Theoretical studies of the water-soot interactions**
Sylvain Picaud, Laboratoire De Physique Moleculaire
Paul N.M. Hoang, Barbara Collignon, Franck Moulin, Pal Jedlovszky, Livia Partay, Jean-Claude Rayez

S5P13 **Uptake and reactivity of organic compounds in sulfate and sea-salt aerosols: Exploring the interface between atmospheric and organic chemistry**
Barbara Noziere, Stockholm University, Department of Meteorology
Armando Cordova, Caroline Leck

S5P14 **Uptake studies of acetone one surfaces with a Knudsen reactor**
Panos Papagiannakopoulos, University Of Crete, Department Of Chemistry, Laser Photochemistry And Kinetics
Vassileios Papadimitriou, Vassileios Stefanopoulos, Manolis Romanias

S5P15 **Water uptake by aerosol: calculating deliquescence for multicomponent particles containing hydrates**
James Kelly, Department Of Mechanical & Aeronautical Engineering
Anthony Wexler

S5P16 **Size-Resolved Measurements of the Oxidation and Reduction of Iron in Atmospheric Aerosols**
James Jay Schauer, University Of Wisconsin Madison
Brian Majestic, Martin Shafer

S5P17 **The Impact of Aerosol Composition and Temperature on the Gas to Particle Partitioning of Reactive Mercury**
James Jay Schauer, University Of Wisconsin Madison
Andrew Rutter

S5P18 **Importance of mineral cations and organics in gas-aerosol partitioning of reactive nitrogen compounds: case study based on MINOS results**
Swen Metzger, Max Planck Institute For Chemistry, Air Chemistry Department, Mainz, Germany
Nikos Mihalopoulos, Jos Lelieveld

S5P19 **Characterization of Secondary Organic Aerosol: Highlights from Collaborative Experiments at the PSI Smog Chamber**
Urs Baltensperger, Paul Scherrer Institut

POSTER PRESENTATIONS: SESSION 5

Aerosol chemistry and interactions between aerosol and gas phase chemistry

S5P20 **Detection of the high mass, gas phase oxidation products of trimethyl benzene, á-pinene and isoprene during Aerosol Chamber studies and their potential role in aerosol formation**
Kevin Paul Wyche, University Of Leicester
Alex Parker, Andrew Ellis, Paul Monks, Josef Dommen, Axel Metzger, Urs Baltensperger

S5P21 **Polymerization of monoterpenes and sesquiterpenes in acidic sulphate aerosols**
John Liggio, Air Quality Research Division, Science And Technology Branch, Environment Canada
Shao-Meng Li

S5P22 **Product study of methylene-cyclohexane, cyclohexene, beta-pinene and limonene ozonolysis**
Yoshiteru Iinuma, Leibniz-Institut Für Troposphärenforschung
Conny Müller, Olaf Böge, Hartmut Herrmann

S5P23 **Chemical composition of secondary organic aerosol formed from the photooxidatiom of isoprene**
Magda Claeys-Maenhaut, University Of Antwerp Department Of Pharmeceutical Sciences
Jason D Surrat, Shane M Murphy, Jesse H Kroll, Nga L Ng, Lea Hildebrandt, Armin Sorooshian, Rafal Szimigielski, R Vermeylen, W. Maenhaut, R.C. Flagan, J.H. Seinfeld

S5P24 **Secondary organic aerosol formation and chemical composition from the oxidation of anthropogenic and biogenic precursors.**
Laura Chiappini, LISA (Laboratoire Interuniversitaire Des Systèmes Atmosphériques)
Emilie Perraudin, Annaick Le Person, Abdelwahid Mellouki, Jean-Frantois Doussin

S5P25 **Real-time Analysis of Secondary Organic Aerosol Formation with Vacuum UltraViolet Aerosol Mass Spectrometry**
Erin Mysak, University Of North Carolina At Chapel Hill
Eric Gloaguen, Kevin Wilson, Musahid Ahmed, Tomas Baer

S5P26 **Thermal Desorption Aerosol GC/MS-FID (TAG) Measurements of Speciated Organic Aerosol Composition during SOAR 2005**
Brent Williams, University Of California At Berkeley
Allen Goldstein, Nathan Kreisberg, Susanne Hering

S5P27 **Influence of Photochemically Formed Fractions on Hygroscopicity of Urban Aerosols**
Shankar Aggarwal, Institute Of Low Temperature Science
Kimitaka Kawamura, Michihiro Mochida, Yasuyuki Kitamori

S5P28 **Modeling Organic Films on Atmospheric Aerosol Particles and their Influence on Chemistry**
Roland von Glasow, Institute Of Environmental Physics, University of Heidelberg
Linda Smoydzin

S5P29 **Is CCN activation driven by aerosol surface properties ?**
Paolo Laj, Laboratoire De Météorologie Physique - CNRS - Unversity Of Clermont-Ferrand
Paolo Villani, Karine Sellegri

S5P30 **Photo- verso bio-chemistry of cloud droplets**
Pierre Amato, Laboratoire De Météorologie Physique - CNRS - Unversity Of Clermont-Ferrand
Paolo Laj, Marius Parazols, Gilles Mailhot, Angela Marinoni, Anne Marie Delort, Paolo Laj

S5P31 **Chemistry and scavenging efficiencies of ionic species in cloud water and aerosol**
Adriana Gioda, Institute for Tropical Ecosystem Studies (ITES), University of Puerto Rico
O.L. Mayol-Bracero, A Rodríguez, F Morales, J Collett, L Emblico, R Morales, S Decesari

S5P32 **Effect of Drying Process of droplets on the Atmospheric Chemistry**
Norimichi Takenaka, Osaka Prefecture University
Kayoko Takayama, Naofumi OJIRO, Yasuhiro Sadanaga, Hiroshi Bandow

S5P33 **Organic aerosols as surfaces for heterogeneous reactions: a study with the LMDz-INCA chemistry-climate model**
Kostas Tsigaridis, Lsce
Yves Balkanski, Michael Schultz, Anne Cozic

S5P34 **Change in global aerosol composition since preindustrial times**
Kostas Tsigaridis, Lsce
Maarten Krol, Frank Dentener, Yves Balkanski, Juliette Lathière, Swen Metzger, Didier Hauglustaine, Maria Kanakidou

S5P35 **Cross influences of ozone and sulfate precursor emissions changes on air quality and climate**
Nadine Unger, NASA Goddard Institute For Space Studies
Drew Shindell, Dorothy Koch, David Streets

S5P36 **Linking urban air field measurements of particulate matter to their chemical analysis and potential effects on health**
David Healy, University College Cork
John Sodeau, John Wenger, Andrew Whittaker, Jose Sebastian

POSTER PRESENTATIONS: SESSION 5

Aerosol chemistry and interactions between aerosol and gas phase chemistry

S5P37 **Modeling Study of the Formation of secondary aerosols over Ontario, Impact of local and transported emissions**
Seyed Mohammad Taghavi, Waterloo Centre for Atmospheric Sciences (WCAS)
Surandokht Nikzad, James Sloan

S5P38 **ORISAM-TM4: global modelling of aerosols with a sectional aerosol model including Secondary Organic Aerosol formation - focus on carbonaceous aerosols BC and OC**
Bruno Guillaume, Laboratoire D'Aérologie
Catherine Liousse, Robert Rosset, Bertrand Bessagnet, Peter Van Velthoven, Marc Mallet

S5P39 **Secondary aerosols in the north and the south of the Alps: A modeling study**
Sebnem Andreani-Aksoyoglu, Paul Scherrer Institute
Johannes Keller, Andre Prevot, Urs Baltensperger

S5P40 **Quantifying the contributions of natural and anthropogenic sulfur compounds to new particle formation in a global atmospheric model**
Donald Lucas, Frontier Research Center For Global Change
Hajime Akimoto

S5P41 **New Particle Formation at Cape Grim, Tasmania**
Jill Cainey, Cape Grim Baseline Air Pollution Station

S5P42 **Determination of ultra fine particulate matter PM2.5 And fine particulate matter PM10 at heavy traffic areas in Bangkok**
Chumpol Sripraparkorn,
Wanida Jinsart, Saranee Treerattanapan

S5P43 **Aerosol processing in an urban atmosphere: case study from Lahore, Pakistan**
Biswas Karabi Farhana, Wadsworth Center
Badar M Ghauri, A J Khan, Vince A Duktiewicz, Liaquat Husain

S5P44 **Aerosol radiative properties modelling by ORISAM-RAD at regional scale during ESCOMPTE 2001. Estimation of the direct radiative forcing.**
Marc Mallet, Laboratoire Of Aerologie
Veronique Pont, Cathy Liousse, Jean-Claude Roger, Philippe Dubuisson

S5P45 **Airborne measurements of aerosols and photolysis frequencies south and southeast of Mexico City during the MILAGRO campaign 2006. Biomass burning aerosols and windblown dust as main components of background aerosol in rural Mexico**
Junkermann Wolfgang, Research Center Karlsruhe, Institute For Meteorology And Climate Research

S5P46 **Aircraft observations of water-soluble dicarboxylic acids in the aerosols over china**
Kimitaka Kawamura, Institute Of Low Temperature Science, Hokkaido Univ.
Tomomi Watanabe, Michilhiro Mochida, Shiro Hatakeyama, Akinori Takami, Wei Wang

S5P47 **Analysis of chemical composition of precipitation and wet deposition in Thailand**
Sarawut Thepanondh, Pollution Control Department Of Thailand

S5P48 **Atmospheric aerosol characterisation and Aerosol Optical Depth during 2006 at Uccle, Belgium**
Willy Maenhaut, Ghent University, Dept. Analytical Chemistry
Wan Wang, Nico Raes, Xuguang Chi, Anne Cheymol, Hugo De Backer

S5P49 **Austral summer Antarctic aerosol properties observed at the King Sejong Station**
Young Jun Yoon, Kopri
B.Y. Lee, T.J. Choi, T. Seo, S.S. Yum

S5P50 **Case-based determination of qualitative relationships between air pollutants and meteorological parameters in Istanbul**
Ali Deniz, Istanbul Technical University
Pakir Kocabab, Hüseyin Toros

S5P51 **Chemical composition of size segregated aerosols in an industrial workplace**
Nikolaos Mihalopoulos, Environmental Chemical Processes Laboratory, Department Of Chemistry, University of Crete
Aggeliki Karanasiou, Kostas Eleftheriadis, Stelios Vratolis, Constantina Mitsakou, Pavlos Zarbas, Mihalis Lazaridis, Jiri Ondracek

S5P52 **Distribution of atmospheric particulates and sulfate in Central India**
Sapana Gupta, School Of Studies In Chemistry
Khageshwar Singh Patel

S5P53 **Distribution of black carbons in atmospheric particles of Central India**
Nitin Kumar Jaiswal, Pt. Ravishankar Shukla University
K. S. Patel, S. Sharma, H. Saathoff, U. U. Schurath

POSTER PRESENTATIONS: SESSION 5

Aerosol chemistry and interactions between aerosol and gas phase chemistry

S5P54 **EC and OC transported from northern China accompanied by Asian yellow sand dust**
Shiro Hatakeyama, National Institute For Environmental Studies
Takanori Imai, Takao Miyoshi, Akinori Takami

S5P55 **First aerosol optical measurements at Cape Point (34°S, 18°E), South Africa**
Casper Labuschagne, (S.A.W.S) South African Weather Service
Ernst-Gunther Brunke, Elisabeth Andrews, John Ogren

S5P56 **Interactions between tropospheric aerosols and gas-phase chemistry during the Spring 2001 TRACE-P experiment**
Martin Schultz, Max Planck Institute for Meteorology
Luca Pozzoli, Isabelle Bey, Sebastian Rast

S5P57 **Kerbside measured concentrations of urban CO, PM10 and NOX at selected sites in Kenya,**
David M. Maina, University Of Nairobi, Kenya
Michael J Gatari, Peter Bundi, Harun Muturi

S5P58 **Measurement of SO2, NO2, HNO3 and NH3 and related particulate matter at a sub-urban site in sub-tropical region**
Ranjit Kumar, Dayalbagh Educational Institute, Dayalbagh, Agra-2825 (India
S.S. Srivastava, K. Maharaj Kumari

S5P59 **On Site Determination of Selenium in Particulates**
Kavita Agrawal, Raipur Institute Of Technology, Chhatauna, Mandir Hasoud, Raipur
Prasanna Sharma

S5P60 **PM10 Aerosols of Urban Coimbatore, India and the impacting micro meteorological factors with emphasis on elemental and ionic constituents**
R Mohanraj, Institute

S5P61 **Particulate pollution in megacities: Beijing case study**
Hélène Cachier, Laboratoire Des Sciences Du Climat Et Del'Environnement (CEA-CNRS)
Benjamin Guinot, Jean Sciare, Olivier Favez, Tong Yu

S5P62 **Scanning and baseline assessments of environmental impacts at Matimba power station**
Ron Rorich, Eskom
Neil Snow, Eric Lynch, Stuart Piketh

S5P63 **Size segregated aerosol chemical composition during nucleation events. Results of the QUEST experiments**
Maria Cristina Facchini, Istituto Di Scienze Dell'Atmosfera E Del Clima CNR
Fabrizia Cavalli, Stefano Decesari, Sandro Fuzzi, Ari Laaksonen

S5P64 **Source Attribution Study in the Southeastern USA using Fine Particle-phase Organic Compounds as Tracers**
Johann Pieter Engelbrecht, Desert Research Institute
Barbara Zielinska, Eric Fujita, Dave Campbell

S5P65 **n-Alkanes, PAHs and total carbon in atmospheric aerosol samples collected at urban sites with different traffic exposure.**
Alessandra Cincinelli, University Of Florence- Deparment Of Chemistry
Tania Martellini, Francesco Barzagli, Martina Giannoni, Dario Vannucchi, Luciano Lepri

S5P66 **ôBlack Cloudö in Cairo (Egypt): an exhaustive characterization of multi-source carbonaceous aerosols**
Olivier Favez, Lsce
Jean Sciare, Stephane Alfaro, Magdy Abdel Wahab, Mohammed Darwish, Annie Gaudichet, Helene Cachier, Konstantina Oikonomou

S5P67 **Seasonal variation of aerosol optical depth and solar radiation depletion by aerosols in the tropics: A case study of Bangkok, Thailand**
Serm Janjai, Silpakorn University
Sudarath Suntaropas, Pipat Chaiwiatworakul, Samrith Sudhibrabha, Manuel Nunez

POSTER PRESENTATIONS: SESSION 6

Exchanges between marine boundary layer and the ocean

S6P1 **Seasonal variation of marine aerosol cemical and physical properties over the North Atlantic**
Maria Cristina Facchini, Istituto Di Scienze Dell'Atmosfera E Del Clima CNR
Fabrizia Cavalli, Stefano Decesari, Sandro Fuzzi, J. Yoon Young, Colin O'Dowd, Darius Ceburnis, Robero Danovaro

S6P2 **Atmospheric input of nutrients to the south-eastern Arabian Sea**
Busnur Manjunatha, Mangalore University
Tim Jickells, Alex Baker

S6P3 **Profile of the inorganic n-containing atmospheric input to coastal eutrophication of the Belgian North Sea**
Sanja Potgieter-Vermaak, Wits
Ricardo H.M. Godoi, Ana FL Godoi, Alin Dirtu, Katleen Van Meel, Laszlo Bencs, Rene Van Grieken, Rob Wuyts

S6P4 **Atmospheric Inputs to the Atlantic Ocean**
Tim Jickells, School Of Environmental Sciences
Alex Baker, Karabi Biswas, Megan French, Timothy Lesworth

S6P6 **Project AEROTRACE : An atmospheric network for Aerosols and Tracers in the Austral Ocean**
Jean Sciare, Lsce / Cnrs-Cea
Roland Sarda-Estève, Konstantina Oikonomou, Hélène Cachier, Valérie Gros

S6P7 **Marine secondary organic contribution to ultrafine particles**
Petri Vaattovaara, University Of Kuopio
Piia Huttunen, Jun Young Yoon, Jorma Joutsensaari, Kari Lehtinen, Colin O'Dowd, Ari Laaksonen

S6P8 **Biogeochemical processes of carbon exchange at the land-ocean-atmosphere interfaces**
Prabir Patra, Frontier Research Center for Global Change
J. Keith Moore, Natalie Mahowald, Mitsuo Uematsu, Scott C. Doney, Takakiyo Nakazawa

S6P9 **Real time aerosol size-resolved physical and chemical properties in the subtropical and tropical West Atlantic**
Manuel Dall'osto, University Of Bimingham
Roy Harrison, Eric Achterberg, Micha Rijkenberg, Polly Hill, Claire Powell, E Highwood, H Coe

S6P10 **Inorganic Halogen Cycle in Aerosols over the Atlantic Ocean**
Biswas Karabi Farhana, Wadsworth Center
Tim Jickells, Alex Baker, Melanie Witt

S6P11 **Carbon monoxide and non-methane hydrocarbons emissions by phytoplankton: preliminary results from laboratory and field experiments**
Valerie Gros, CNRS
Bernard Bonsang, Roland Sarda Esteve, Vincent Teutsch, Katrin Bluhm, Eckart Zoellner, Ilka Peeken

S6P12 **Emissions of NH3 from Guanabara Bay (Southeastern Brazil) to atmosphere**
Giselle Guimaraes, Universidade Federal Fluminense
William de Mello

S6P13 **Potencial emissions of N20 from Guanabara Bay (RJ, Brazil) to atmosphere**
Giselle Guimaraes, Universidade Federal Fluminense
William de Mello

S6P14 **Gas phase alkyl nitrates in the ambient air of a coastal region of Belgium**
Sanja Potgieter-Vermaak, University Of Antwerp, Wits
Alin Constantin Dirtu, Rodrigo Favoreto, Ana FL Godoi, Ricardo HM Godoi, Laszlo Bencs, Luck Van Vaeck, Rene Van Grieken

S6P15 **The Chemistry of Mercury in the Marine Boundary Layer and Surface Ocean**
Robert 1 Mason, Dept Marine Sciences
Fabien J.G. Laurier, Lindsay M. Whalin

S6P16 **Use of two-parametrical phase diagrams for research of heat - moisture transport processes between an atmosphere and ocean in a diurnal cycle**
Victor Arkhipkin, Moscow State University

S6P17 **Using a coupled ocean/atmospheric boundary layer model to simulate the transport and destruction of reactive volatile chemical species during a storm**
Anthony Kettle, University Of East Anglia
Suzanne Turner, Wendy Broadgate, Tim Jickells, Peter Liss

S6P18 **West African Weather Systems in the Development of Tropical Cyclones**
Oluseun Samuel Idowu, University Of Pretoria, Pretoria, South Africa
Salami Tairu, C.J.deW. (Hannes) Rautenbach

POSTER PRESENTATIONS: SESSION 7

Land-atmosphere biogeochemical cycles (a joint session with the international programmes iLEAPS - VOCABS)

S7P1 **Observational and numerical studies on atmospheric sulfur and nitrogen deposition onto typical farmland in east China**
Tijian Wang, Dept. Of Atmospheric Science Of Nanjing University
Ling Zhang, Jing Zhou, Zhengyi Hu

S7P2 **Concentrations of O3 within and above crop canopies in the ambient air compared to NO, NO2 and CO2 and to the situation in open-top chambers**
Håkan Pleijel, Göteborg University, Environmental Science And Conservation

S7P3 **Promoting Sustainable Human Settlements and Eco-City Planning Approach: Southeastern Anatolia Region and Southeastern Anatolia Project(GAP) in Turkey As a Case Study**
Bulent Acma, Anadolu University

S7P4 **NITROGEN DEPOSITION VIA ATMOSPHERA IN RURAL ZONES IN CUBA**
Osvaldo Cuesta _ Santos, Atmospheric Environment Research Center, Meteorological Institute,
Maria González, Arnaldo Collazo, Antonio Wallo

S7P5 **Stable Carbon Isotope Ratio Analysis of Methanol and Acetaldehyde from Live and Dead Vegetation**
Kolby Jardine, Institute For Terrestrial And Planetary Atmospheres, Stony Brook University
Alex Guenther, Manuel Lerdeau, John Mak

S7P6 **Nation wide observation of urban organic aerosols from China**
Gehui Wang, Institute Of Low Temperature Science, Hokkaido University
Kimitaka Kawamura

S7P7 **Impact of forest canopy on the tropospheric ozone concentration observed in India.**
Nandita Ganguly, St. Xavier's College,Ahmedabad-380009,India.

S7P8 **Atmospheric deposition on the South African Highveld**
Kristy Ross, Eskom
Clive Turner, Jonas Mphepya, Kobus Pienaar, Gerhardt De Beer, Micky Josipovic, Stuart Piketh, Harold Annegarn, Siven Naidoo

S7P9 **Possible feedbacks of climate changes on forest soil NO and N2O Possible feedbacks of climate changes on forest soil NO and N2O emissions in Europe**
Klaus Butterbach-Bahl, Institute For Meteorology And Climate Research, Forschungszentrum Karlsruhe
Magda Kesik, Nicolas Brüggemann, Ralf Kiese, Changsheng Li

S7P10 **Nitrogen Input to Coastal Region of Thailand Eastern Seaboard**
Vanisa Surapipith, Pollution Control Department

S7P11 **Impact of opencast coal mining on the air environment**
Chandra Sekhar Matli, National Institute Of Technology

S7P12 **Leaves litter as an important VOC source in the atmosphere**
Valery Isidorov, Institute Of Chemistry, Bialystok University
Agnieszka Purzynska-Pugacewicz

S7P13 **Volatile organic compounds emitted into the atmosphere from leaf litter-destroying fungi**
Valery Isidorov, Institute Of Chemistry, Bialystok University
Zofia Tyszkiewecz, Agnieczka Purzynska

S7P14 **Volatile organic compounds emitted into the atmosphere from some hydrothermal systems of Kamchatka**
Vera Vinogorova, Ecological Laboratory, ECOTON Inc.
Valery Isidorov, Gennady Karpov, Katarzyna Bielawska, Dmitrii Kuzmin

S7P15 **The role of BVOCs in southern African atmospheric chemistry**
Mark Zunckel, Csir
Miles Sowden, Colin Everson, Aletta Karsten, Brian Cowan

S7P16 **The 20th century atmospheric budget for 14CH4 and the fossil fraction in the global methane source**
Keith Lassey, Niwa
David Lowe

S7P17 **Seasonal change of ozone dry deposition above a tropical forest in northern Thailand**
Kazuhide Matsuda, Meisei University
Ichiro Watanabe, Vitsanu Wingpud, Phunsak Theramongkol, Tsuyoshi Ohizumi

S7P18 **Isoprene emissions from boreal peatland microcosms and a natural arctic peatland; effects of elevated ozone concentration and UV-B radiation**
Päivi Tiiva, Dpt. Of Ecology And Env. Science, University Of Kuopio

POSTER PRESENTATIONS: SESSION 7

Land-atmosphere biogeochemical cycles (a joint session with the international programmes iLEAPS - VOCABS)

S7P19 **Uptake of Nitrous acid (HONO) by plants**
Marco Miebach, University of Wuppertal
Einhard Kleist, Jörg Kleffmann, Jürgen Wildt, Ralf Schimang

S7P20 **Uptake of Volatile Organic Compounds by Sunflower**
Marco Miebach, University of Wuppertal

S7P21 **Isoprene emission occurs independently of photosynthesis in drought stressed leaves**
Federico Brilli, Institute For Agro-Environmental And Forest Biology (IBAF), National Research Centre
Csengele Barta, Alessio Fortunati, Mauro Centritto, Francesco Loreto

S7P22 **The interaction of isoprene emission with water fluxes from plants to the atmosphere: isoprene proxies a pool of leaf abscisic acid (ABA) which regulates stomatal opening.**
Csengele Barta, Consiglio Nazionale Delle Ricerche, Istituto Di Biologia Agroambientale E Forest
Violeta Velikova, Francesco Loreto

S7P23 **Biogenic VOC emissions response to climate and land-use change and the potential impacts on regional air quality**
Alex Brian Guenther, Ncar
Jeremy Avise, Jack Chen, Brian Lamb, Christine Wiedinmyer

S7P24 **A Re-evaluation of Mercury Emissions to the Atmosphere from Point and Area Sources within Southern Africa**
Robert Mason, Dept Marine Sciences
Joy Leaner, Mark Zunckel, Greg Scott, Jozef Pacyna

S7P25 **Surface exchange and interconversion of soluble reactive nitrogen compounds at a rural grassland site (Hohenpeissenberg, Germany)**
Ivonne Trebs, Max Planck Institute For Chemistry
Michael Kortner, Franz X. Meixner

S7P26 **Global Modelling of new particle formation and the role of organics**
Dominick Spracklen, Harvard University
Ken Carslaw, Markuu Kulmala, V-M. Kerminen, Graham Mann, H. Sihto

S7P27 **The role of isoprene oxidation in the formation of regional ozone episodes in the southern UK during the 2003 heatwave**
Paul Monks, Department Of Chemistry, University Of Leicester
Alastair Lewis, Mark Jacob, James Lee, Lisa Whalley

S7P28 **Biosphere-atmosphere-exchange of the NO-NO2-O3-triad during SALSA 2005: a study of fluxes and related processes at a sloped rural grassland site in complex topography**
Michael Kortner, Max Planck Institute For Chemistry, Biogeochemistry Department
Jens-C. Mayer, Ivonne Trebs, Thomas Foken, Franz X. Meixner

S7P29 **Impact of model parameterizations for leaf temperature calculation and various environmental factors on isoprene emission**
Sabine Wallens, Belgian Institute For Space Aeronomy
Jean-Franτois Müller, Alex Guenther

S7P30 **Accumulating evidence for methane emissions from vegetation**
Thomas Röckmann, Institute for Marine and Atmospheric research Utrecht
Frank Keppler, Sander Houweling

S7P31 **The impact of high wind shear on the nocturnal surface-atmosphere exchange of trace gases**
Jens-Christopher Mayer, Max Planck Institute For Chemistry, Biogeochemistry Department
Michael Kortner, Thomas Foken, Franz X. Meixner

S7P32 **Isoprene emission by transformed Arabidopsis plants with Isoprene Synthase gene influences emission of other reactive volatile organic compounds in the atmosphere**
Alessio Fortunati, Ibaf-Cnr
Csengele Barta, Federico Brilli, Francesco Loreto

S7P33 **Determination of Pb and Zn in rainwater from an urbanized area in Mauritius.**
Roshan Teewary Ramessur, University of Mauritius

S7P34 **Radiocarbon and stable carbon isotopic analysis for carbon cycle estimation in forest canopy and soil of a Japanese larch forest**
Jun Moriizumi, Graduate School Of Engineering, Nagoya University
Wei Liu, Hiromi Yamazawa, Hitoshi Kobayashi, Shintaro Kawai, Takao Iida

S7P35 **Dynamics of monoterpene emissions and pool sizes of Mediterranean evergreen Holm oak (Quercus ilex L.) leaves.**
Steffen M. Noe, Department Of Plant Physiology, University Of Tartu, Estonia
Ulo Niinemets, Joerg-Peter Schnitzler

POSTER PRESENTATIONS: SESSION 7

Land-atmosphere biogeochemical cycles (a joint session with the international programmes iLEAPS - VOCABS)

S7P36 **Modeling the impact of NO emissions from agricultural soils on the tropospheric chemistry in Europe.**
Marie-Noδlle Rolland, Institut National De La Recherche Agronomique/Unité Environnement Et Grandes Cul

S7P37 **Vegetation emissions of CH4 and the evolution of d13C-CH4 over the last millennium**
Sander Houweling, SRON/IMAU
Kees Klein Goldewijk, Guido van der Werf, Thomas Roeckmann, Ilse Aben

S7P38 **Multi-decadal variations in solar irradiance and possible implication for the carbon cycle**
Beate Liepert, Lamont-Doherty Earth Observatory Of Columbia University

S7P39 **Turbulent exchange of heat, water vapour and CO2 at King Sejong Station in West Antarctica during four austral summer seasons**
Taejin Choi, Korea Polar Intitute, KORDI
Bang-Yong Lee, Young Jun Yun

S7P40 **Consequences of isoprene - nitric oxide interaction in vitro and in planta**
Violeta Velikova, Bulgarian Academy Of Sciences / Institute Of Plant Physiology
Federico Brilli, Francesco Loreto

S7P41 **Atmospheric deposition and marine sedimentation fluxes of polycyclic aromatic hydrocarbons in the Eastern Mediterranean Basin**
Euripides G. Stephanou, University Of Crete
Manolis Tsapakis, Maria Apostolaki

S7P42 **Mass budget and dynamics of polychlorinated biphenyls in the eastern Mediterranean Sea**
Euripides G. Stephanou, University Of Crete
Manolis Mandalakis, Maria Apostolaki

S7P43 **Photochemical Reactions of Nitrogen Dioxide with Humic Matter and Soil: A new Source of Nitrous Acid**
Konrad Stemmler, Paul Scherrer Institute
Jörg Kleffman, Markus Ammann, Chantal Donders, Christian George

S7P44 **Variations of inorganic ions in wet deposition at three regional GAW stations in China**
Xiaobin Xu, Chinese Academy Of Meteorological Sciences
Xiaolan Yu, Hongbing Cheng, Jie Tang, Shufeng Wang, Zhonghua Zhang, Xiangming Yu, Huaigang Zhou

S7P45 **The water-soluble organic acids in PM2.5 at Atlantic tropical forest reserves in Southeast, Brazil**
Luciene L Lara, Instituto de Fisica/Universidade de Sτo Paulo
Vanessa PS Almeida, Plinio B Camargo, Alexandra Montebelo, Fabiana Fracassi, Luiz A Martinelli

S7P46 **Direct CO2 effect on leaf isoprene production offset effects of increasing temperatures on global emissions from terrestrial vegetation**
Almut Arneth, Department of Physical Geography and Ecosystems Analysis (INES) Lund University,
U Niinemets, T Hickler, A Wolf, B Smith, Shelley Pressley

S7P47 **Components of land-atmosphere exchange of reactive nitrogen oxides in a pre-alpine landscape**
Franz X. Meixner, Biogeochemistry Department, Max Planck Institute For Chemistry
Faraidon Ashuri, Harald Berresheim, Gregor Feig, Stefan Gilge, Michael Kortner, Bulhaqem Mamtimin, Jens C. Mayer, Monika Scheibe, Uwe Sievers, Ivonne Trebs, Junbao Yu

S7P48 **Isoprene and a-pinene oxidation products in boreal forest aerosols from Hyytiala Finland during a 2005 period**
Magda Claeys-Maenhaut, University Of Antwerp Department Of Pharmeceutical Sciences
I. Kourtchev, T. Ruuskanen, P. Keronen, M. Dal Maso, A. Reissell, X Chi, M. Kulmala, W. Maenhaut

S7P49 **Measuring atmospheric C02 from space using full spectral initiation (FSI) WFM-DOAS**
Michael Barkley, University Of Leichester
Paul Monks, Udo Frieb, Richard Mittermeier, Hans Fast, Stefan Körner, Martin Heimann

S7P50 **Modelling of CO and CH emissions by a tropical reservoir (Petit-Saut, French Guiana**
Frédéric Guérin, Laboratoire D'Aérologie UMR 5560 UPS OMP
Robert Delmas, Marie Paule Bonnet, Rachel Baile, Patrick Marsaleix, Claire Delon, Sandrine Richard, Gwenael Abril

S7P51 **Seasonal variations of carbon isotopic ratios of methane from Indian paddy fields**
D.K Rao, Physical Research Laboratory
S.K Bhattacharya, R.A Jani, Shyam Lal, S Venkataramani

S7P52 **C1/C2 chlorinated hydrocarbons and Trichloroacetic acid - their potential for desertification processes**
Erich Putz, University of Graz
Ludwig Weissflog, Nikolai Elansky, Bruno Nava, Gerd Krueger

S7P53 **Dissolved organic nitrogen deposition on land in the northeastern part of Romania**
Cecilia Arsene, Environmental Chemical Processes Laboratory, Department Of Chemistry, University
Romeo-Iulian Olariu, Kalliopi Violaki, Nikolaos Mihalopoulos

POSTER PRESENTATIONS: SESSION 7

Land-atmosphere biogeochemical cycles (a joint session with the international programmes iLEAPS - VOCABS)

S7P54 **Uptake of Volatile Organic Compounds by Sunflower**
Marco Miebach, Research Centre Juelich
Achim Folkers, Einhard Kleist, Jurgen Wildt

S7P55 **Variations in emissions of carbon dioxide, nitrous oxide and methane from an estuarine sediment (Poster**
Ann Mills, Centre For Atmospheric Chemistry, Department Of Chemistry, University Of Wollong
Stephen R Wilson, Dianne Jolley

S7P56 **The effect of different nitrogen fertilizer types on ammonia volatilization**
Su Fang, University Of Beijing
Huang Bin-xiang, Ding Xin-quan, Gao Zhi-ling, Chen Xin-ping, Zhang Fu-suo, Martin Kogge, Volker Römheld

S7P57 **Ozone uptake and BVOC emission by plants: the case of Quercus ilex and Populus nigra**
Silvano Fares, Cnr-Ibaf
Juergen Wildt, Francesco Loreto

S7P58 **Absorption properties of atmospheric ammonia by Japanese cropland soils**
Kentaro Hayashi, National Institute for Agro-Environmental Sciences
Seiichi Nishimura, Sadao Eguchi

S7P59 **Biological diversity of ozone sensitivity among Arabidopsis ecotypes collected throughout the world**
Hannes Kollist, University Of Helsinki Plant Biology, Department of Biological and Environmental
Jaakko Kangasjärvi

S7P60 **The phytotoxic effect of C1/C2 -halocarbons and trichloroacetic acid on the steppe plant Artemisia lerchiana**
Gert Krüger, North-West University
Ludwig Weissflog, Cristiaan Lange, Karsten Kotte, Erich Putz, Nikolai Elansky, Andrea Pfenningsdorff

S7P61 **Effects of Trifluoroacetic acid, a degradation product of fluorinated hydrocarbons, on photosynthesis of C3 and C4 crop plants**
Martin Francis Smit, North-West University
Gert Krüger, Riekert van Heerden, Kobus Pienaar, Ludwig Weissflog, Reto Strasser

S7P62 **Emissions of volatile organic compounds from boreal ecosystems measured by micrometeorological techniques**
Janne Rinne, University Of Helsinki
Risto Taipale, Sami Haapanala, Taina Ruuskanen, Heidi Hellén

S7P63 **Reactive halogen and trace gas emissions from the biosphere: results from aircraft samples and a plant enclosure experiment.**
Deborah Antoinette O'Sullivan, University Of East Anglia
Frank Keppler, William Sturges, David Oram, Thomas Röckmann

S7P64 **Greenhouse gas (CH4, CO2, N2O) emissions from estuarine tidal and wetland by using enclosure technique, and their characteristics**
Deug-Soo Kim, Kunsan National University

S7P65 **Vertical Concentration Profiles of Ozone and Sulfur Dioxide in A Forest Canopy**
Akira Takahashi, Central Research Institute Of Electric Power Industry
Takashi Wakamatsu, Kazuo Sato, Shin-ichi Fujita

S7P66 **Laboratory measurements and modelled fluxes of nitric oxide from a semi-arid savanna in South Africa**
Gregor Feig, Max Planck Institute For Chemistry
Franz X. Meixner

S7P67 **The effect of climate change on land-atmosphere exchange, and surface ozone concentrations.**
William Collins, Hadley Centre, Met Office
Michael Sanderson

S7P68 **Effects of Land-Use Change on Greenhouse Gas emissions in Tropical Asia**
Haruo Tsuruta, Center For Climate System Research, The University Of Tokyo
Shigehiro Ishizuka, Yasuhiro Nakajima, Seiichiro Yonemura, Shigeto Sudo, Kazuyuki Inubushi, Daniel Murdiyarso, Iswandi Anas

POSTER PRESENTATIONS: SESSION 8

Biomass burning emissions and impacts on atmospheric chemistry

S8P1 **Modeling the Optical Properties of Biomass Burning Aerosols Over Southern Africa and South America and Comparisons to Remote Sensing Observations**
Rebecca Matichuk, LASP-Univ. Of Colorado At Boulder
Peter Colarco, Jamison Smith, Owen Toon

S8P2 **Forecasting Smoke Emissions, Dispersion, and Impact on Air Quality Using Real-Time MODIS Data and Meteorology**
Wei Min Hao, USDA Forest Service, Fire Sciences Laboratory
Shawn Urbanski, Bryce Nordgren, Meghan Salmon, Alexander Petkov

S8P3 **A Model Study on the Size Distribution and Chemical Composition of Smoke Aerosols from Peat Fires in Indonesia**
Baerbel Langmann, Max-Planck-Institute For Meteorology
Elina Marmer, Melissa Pfeffer, Angelika heil

S8P4 **Emission of aromatic hydrocarbons from biodiesel blends used at Brazil**
Sergio Correa, State University Of Rio De Janeiro
Graciela Arbilla

S8P5 **A novel screening method for atmospheric PAHs arising from biomass burning**
Patricia Forbes, CSIR
Bonita Dryden-Schofield, Yvette Naude, Egmont Rohwer

S8P6 **Inorganic and organic chemical composition and hygroscopic properties of biomass burning aerosol during the SMOCC field experiment in Rondônia, Brazil.**
Sandro Fuzzi, Istituto Di Scienze Dell'Atmosfera E Del Clima, C.N.R., Bologna, Italy
S. Decesari, M. Mircea, M.C. Facchini, L. Emblico, E. Tagliavini, F. Moretti, M.O. Andreae

S8P7 **Impact of Biomass Burning Emission on Tropospheric Ozone Change and Radiative Forcing**
Akinori Ito, Frcgc, Jamstec
Kengo Sudo, Hajime Akimoto, Sanford Sillman, Joyce Penner

S8P8 **Multi-year estimates of CO emissions from open biomass burning in Southern Africa**
Akinori Ito, Frcgc, Jamstec
Akihiko Ito, Hajime Akimoto

S8P9 **Domestic Biofuel Emissions in Southern Africa**
Gabsile Mkhatshwa, Eskom
Stuart Piketh, Luanne Otter, Silas Mulaudzi, Philip Tshikalanke

S8P10 **Atmospheric concentrations of EC, OC and WSOC during wintertime over an urban site in North India**
Ramabadran Rengarajan, Physical Reseach Laboratory
Manmohan Sarin, A. K. Sudheer, Ashwini Kumar

S8P11 **Atmospheric concentrations of EC,OC and WSOC during wintertime over an urban site in North India**
Ramabadran Rengarajan, Physical Reseach Laboratory
Man Mohan Sarin, A.K Sudheer, Ashwini Kumar

S8P12 **Forest Fires, Climate Change and Air Quality in the United States**
Dominick Spracklen, Harvard University
Jennifer Logan, Loretta Mickley, Mike Flannigan, Tony Westerling

S8P13 **Evaluation of different biomass burning inventories with in situ observations**
Ernst Meijer, Royal Netherlands Meteorological Institute (KNMI)
Twan van Noije, Jos de Laat

S8P14 **Satellite observations of Glyoxal from biomass burning**
Steffen Beirle, IUP Heidelberg
Klaus-Peter Heue, Rainer Volkamer, Folkard Wittrock, Andreas Richter, John Burrows, Ulrich Platt, Thomas Wagner

S8P15 **Biomass burning emissions from satellite observations using combined HCHO and NO2 results**
Thierry Marbach, Environmental Physics Heidelberg
Steffen Beirle, Ulrich Platt, Thomas Wagner

S8P16 **Fire Locating and Modeling of Burning Emissions (FLAMBE): 7 Years of Progress and Prospects**
Jeffrey Reid, Naval Research Laboratory
Elaine Prins, Douglas Westphal, Sundar Christopher, Edward Hyer, Christopher Schmidt, Jun Wang, Jianglong Zhang

S8P17 **Atmospheric Chemistry in forested Amazonia landscape : The impact of the direct radiative effect of biomass burning aerosol particles.**
Leila Maria Merce De Albuquerque, Ufms
Karla Maria Longo, Edson Kassar, Maria L·cia Ribeiro, Carlos A. Nobre, Saulo Freitas

POSTER PRESENTATIONS: SESSION 8

Biomass burning emissions and impacts on atmospheric chemistry

S8P18 **Thermal Separation of Organic Carbon in Biomass and Pollution Plumes over North America: Mixing States, Spectral Absorption and Humidification Response**
Antony Clarke, University Of Hawaii
Cameron McNaughton, Vladimir Kapustin, Yohei Shinozuka, Jack Dibb, Jingchuan Zhou, Vera Brekofskiyeh, Mitchel Pinkerton

S8P19 **Aerosol properties by satellite remote sensing over Amazon Basin, Brazil**
Alexandre Correia, Cptec/inpe
Karla Longo, Saulo Freitas

S8P20 **Long range transport of biomass burning products over Southern South America: assessment of observations 2000-2005 using satellite data.**
Diana Matilde Mielnicki, Programa de Estudios de los Procesos Atmosféricos en el Cambio Global - Pontific
Pablo Osvaldo Canziani, James Drummond

S8P21 **Biomass Burning Emissions from Australian Savannahs**
Clare Paton-Walsh, University Of Wollongong
Guergana Guerova, Nicholas Jones, Stephen Wilson, Glen Bryant, Nicholas Deutscher, David Grifith, Bruce Forgan

S8P22 **Aircraft observations of the physical and optical properties of biomass burning and mineral dust aerosols during DABEX/AMMA SOP-0.**
Simon Robert Osborne, Met Office
Jim Haywood, Ellie Highwood, Hugh Coe, Tony Slingo

S8P23 **Examination of long-term aerosol data sets for Rukomechi, Zimbabwe, with three receptor models**
Nico Raes, Ghent University, Department Of Analytical Chemistry
Willy Maenhaut, Daniel Nyanganyura, Franz X Meixner

S8P24 **Test Study of POPs Emission from the Open Burning of Wastes**
Sergey Kakareka, Transboundary Pollution Group, Head Institution For Problems Of Natural Resource

S8P25 **Emissions from biomass burning due to shifting cultivation practices - A study using multi-satelite data sets**
Kiran Chand, National Remote Sensing Agency

S8P26 **Model studies of CH2O from biomass burning**
Tore Flatlandsmo Berglen, Dep. Of Geosciences, University Of Oslo
Ivar S.A. Isaksen, Stig Bjørløw Dalsøren

S8P27 **Pan-Arctic enhancements of light absorbing aerosol concentrations due to North American boreal forest fires during summer 2004**
Andreas Stohl, Norwegian Institute For Air Research
Elizabeth Andrews, John F. Burkhart, Caroline Forster, Dan Kowal

S8P28 **Impact of South American biomass-burning emissions on CO columns over Australia**
Annemieke Gloudemans, SRON Netherlands Institute For Space Research
Maarten Krol, Jan Fokke Meirink, Guido van der Werf, Jos de Laat, Hans Schrijver, Miranda van den Broek, Ilse Aben

S8P29 **Aerosol chemistry and chemical mass closure at two sites in Tanzania**
Willy Maenhaut, Ghent University, Dept. Analytical Chemistry
Stelyus Mkoma, Wan Wang, Xuguang Chi, Nico Raes

S8P30 **How to access global and regional burnt biomass from satellite observations to derive gases and particle emission inventories?**
Cathy Liousse, Laboratoire D'Aérologie CNRS/UPS
Carsten Junker, Jean-Marie Gregoire, Claire Granier, Aude Mieville

S8P31 **High Resolution In Situ Measurements of Fine Particle Size Distributions in Biomass Burning Plumes**
Marsha Fisher, University Of Colorado At Boulder
Darin Toohey, Robert Yokelson, Kouji Adachi, Shawn Urbanski

S8P32 **Characterization of PM2.5 in Southeast Asia during smoke haze episodes**
Rajasekhar Balasubramanian, National University Of Singapore
Siao Wei See, Elisabeth Rianawati, Sathrugnan Karthikeyan, David Streets

POSTER PRESENTATIONS: SESSION 9

Metro-Agro-Plexes

S9P1 **Impact of Chinese Megacities on Regional Air Quality: a Comparative Study of Beijing, Shanghai and Guangzhou**
Tao Wang, The Hong Kong Polytechnic University
Aijun Ding, Chun Nam Poon, Jian Gao, Wai Shing Wu, Xue Hua Zhou, Hing Cho Cheung, Hok Lai Anson Wong

S9P2 **Development of vehicular emission inventories from satellite imagery to be used in pollution dispersion models**
Jorge Alberto Martins, University Of Sao Paulo
Leila Droprinchinski Martins, Edmilson Dias Freitas, Maria de Fatima Andrade, Maria Assunçáo Faus Silva Dias

S9P3 **Effect of reactive trace gases like O3 and NO2 on growth, yeild arbuscular mycorrhizal associations and nitrogen fixation in soybean in a mega city of Pakistan.**
Ghazala Nasim, University of the Punjab
Rukhsana Bajwa

S9P4 **Evaluation of ozone sensitivity in the metropolitan area of Sao Paulo**
Leila Droprinchinski Martins, Department Of Atmospheric Sciences, Institute of Astronomy, Geophysics and Atmospheric Sciences, University of São Paulo
Maria de Fátima Andrade

S9P5 **Behavior análisis of tropospheric ozone and its relation with the total solar radiation in Lima, Ica and Arequipa Peruvian Cities, 2004**
José Segundo Juan Silva Cotrina, National Meteorological And Hydrological Service
Zarela Herminia Montoya Cabrera

S9P6 **Weekday-weekend difference of ozone and its precursors in Osaka and Tokyo, Japan: Current condition and factors**
Yasuhiro Sadanaga, Osaka Prefecture University
Minoru Hamana, Norimichi Takenaka, Hiroshi Bandow

S9P7 **Ozone air quality management by reducing methane emissions: global health benefits**
J. Jason West, Princeton University
Arlene Fiore, Larry Horowitz, Denise Mauzerall

S9P8 **Measurement of ambient carbon monoxide at the Asuncion City**
Nilda Carolina Recalde Acosta, Facultad De Ciencias Exactas Y Naturales - Universidad Nacional de Asuncion
Genaro Coronel Martinez

S9P9 **Development of a PTR-TOFMS instrument for real-time measurements of volatile organic compounds in air**
Hiroshi Tanimoto, National Institute For Environmental Studies
Satoshi Inomata, Nobuyuki Aoki, Yasuhiro Sadanaga, Jun Hirokawa

S9P10 **Removal of sulfur dioxide and formation of sulfate aerosol in Tokyo**
Takuma Miyakawa, Research Center For Advanced Science And Technology, University Of Tokyo
Nobuyuki Takegawa, Yutaka Kondo

S9P11 **Oxygenated and water-soluble organic aerosols in Tokyo**
Yutaka Kondo, Research Center For Advanced Science And Technology The University Of Tokyo
Yuzo Miyazaki, Nobuyuki Takegawa, Takuma Miyakawa, R.J. Weber, J.L. Jimenez, Q. Zhang, D.R. Worsnop

S9P12 **An Introduction to the NSFC Key Project "C Impact of Air Pollution on Aerosols and Cloud Microphysics in North China**
Jianzhong Ma, Chinese Academy Of Meteorological Sciences
Wei Wang

S9P13 **Evaluation of International policies for climate changes in mega cities to reduce GHG emissions**
Lalitkumar Chaudhari, ISDR ,India
Suresh Yavalkar, Mahesh Shivankar, Anand Bhole, Satish Mahajan

S9P14 **Improvement of air quality forecast tools for an urban area in Chile by means of data assimilation**
Jaime H. Ortega, Centro De Modelamiento Matemático-U. De Chile & U. Del Bío-Bío
Axel Osses, Gabrielle Petron, Germán Torres

S9P15 **GURME:WMO GAW Urban Research Meteorology and Environment Project**
Liisa Jalkanen, World Meteorological Organization

S9P16 **First Ozone Campaign Over the UAE Using Ballon-Borne ECC Soundings**
Tariq Majeed, Department Of Physics American University of Sharjah
A. Sajwani, D.W. Tarasick, J J Davies, M.A.H Al-Mualla, S.K.M. Zaidi, P. Rogers, J.C McConnell

POSTER PRESENTATIONS: SESSION 10

Chemistry Of The UT/LS Region

S10P1 **Information about stratospheric dehydration processes from satellite based HDO measurements with the MPIAS instrument**
Thomas Röckmann, Institute for Marine and Atmospheric research Utrecht
Jörg Steinwagner, Stephan Füglistaler, Thomas von Clarmann, Gabriele Stiller, Mathias Milz

S10P2 **A Global Modeling Initiative Study of the Long-Range Cross-Tropopause Transport of Pollution using Carbon Monoxide Measurements from AURA**
Bryan Duncan, NASA GSFC/GEST UMBC
Susan Strahan, Jose Rodriguez, Mark Schoeberl

S10P3 **A comparison of AURA/MLS and MOPITT CO with 2 global chemical models**
Lori Neary, York University, Dept Earth And Space Sci And Eng
J Kaminski, Jonathan Jiang, J McConnell

S10P4 **Aircraft measurements of short lived reactive halogenated compounds and other trace gases in the UT/LS region from the CARIBIC and SCOUT projects.**
Deborah Antoinette O'Sullivan, University Of East Anglia
David Oram, Carl Brenninkmeijer, Thomas Röckmann, Franz Slemr, Peter Van Velthoven, Adreas Zahn, Claire Reeves

S10P5 **An offline climate chemistry study using CAM3/OsloCTM2**
Line Gulstad, Section Of Meteorology And Oceanography Department of Geosciences
B. Rognerud, M. Gauss, F. Stordal, I.S.A. Isaksen

S10P6 **Contribution of Short-Lived Bromo-Organic Source Gases to Total Stratospheric Bromine and Their Influence on UT/LS Chemistry**
Marcel Dorf, University Of Heidelberg
Andre Butz, Claude Camy-Peyret, Martyn Chipperfield, Andreas Engel, Bill Sturges, Ingeborg Levin, Klaus Pfeilsticker

S10P7 **Convective Cloud Processing and Transport of Chemical Species and Upper Tropospheric Chemistry**
Chien Wang, MIT

S10P8 **Global scale aerosol measurements in the upper troposphere/lower stratosphere obtained by the civil aircraft based project CARIBIC**
Jost Heintzenberg, Leibniz Institute For Tropospheric Research
Markus Hermann, Bengt G. Martinsson, Claudia Timmreck, Andreas Zahn

S10P9 **Transport and chemical processes in the UTLS region - a global CTM modeling study**
Amund Søvde, Department Of Geosciences, University Of Oslo
Michael Gauss, Ivar S. A. Isaksen

S10P10 **Satellite remote sensing of clouds and aerosols in the UTLS**
James Sloan, University Of Waterloo
Irina Galkina, Maxim Eremenko, Alexandre Zasetsky

S10P11 **An interhemisphere comparison of the variability of the annual cycle of ERA 40 height**
Patricia Del Valle Repossi, Universidad Catolica Argentina

S10P12 **Absolute Rates and Mechanism for the Reactions of OH radicals and Cl atoms with Acetone**
Panos Papagiannakopoulos, University Of Crete, Department Of Chemistry, Laser Photochemistry And Kinetics
Vassileios Papadimitriou, Dimitrios Papanastasiou

S10P13 **High Resolution Measurements of the Tropical Tropopause Region by HIRDLS**
John Gille, University Of Colorado And NCAR
John Barnett, Thomas Eden, Gene Francis, Chris Hepplewhite, Hyunah Lee, Rashid Khosravi, Bruno Nardi

S10P14 **Ice Supersaturation in the UT/LS region and its coupled climate and chemical impact**
Andrew Gettelman, National Center For Atmospheric Research

S10P15 **Insights into UT/LS Processes form Ozone Sounding Networks: An Overview**
Anne M. Thompson, Pennsylvania State University
J.C Witte, F.J. Schmidlin, S.J. Oltmans, G.J.R. Coetzee, D.W. Tarasick

S10P16 **Relative impact of horizontal transport and convection on ozone, water vapour, and NOx in the tropical UTLS from HIBISCUS circumnavigating long duration balloons**
Jean-Pierre Pommereau, CNRS Service D'Aeronomie
Anne Garnier, Francois Borchi, Manuel Pinharanda

S10P17 **Seasonal and QBO variations of background aerosols in the upper troposphere and lower stratosphere (UT/LS) from the Stratospheric Aerosol and Gas Experiment (SAGE II)**
Masanori Niwano, Frontier Research Center For Global Change, Japan Agency For Marine-Earth Science
Nozomi Furuya, Hideharu Akiyoshi, Masaaki Takahashi, Sachiko Hayashida

S10P18 **Likely stratospheric contributions to the observed seasonal trend in tropospheric ozone at Suva Fiji**
Anand Chandra, University Of The South Pacific
Kanayathu Koshy, Matakite Maata, Sitaram Garimella

POSTER PRESENTATIONS: SESSION 10

Chemistry Of The UT/LS Region

S10P19 **Changes in Aircraft NOx Emissions: Impacts on Ozone and Methane and Sensitivity to Cruise Altitude**
Marcus O Koehler, Centre For Atmospheric Science, University Of Cambridge
Olivier Dessens, Oliver Wild, Helen L Rogers, John A Pyle

S10P20 **Characteristics of the NH and SH extratropical tropopause mixing layer based on O3, CO, H2O, acetone, and aerosol observations onboard the CARIBIC passenger aircraft**
Andreas Zahn, Institute Of Meteorology And Climate Research, Research Centre Karlsruhe
Detlev Sprung, Markus Hermann, Franz Slemr, Carl A.M. Brenninkmeijer

S10P21 **Comparison of tropopause definitions with in-situ trace gas measurements during SPURT**
Peter Hoor, Max-Plank Institute For Chemistry
Horst Fischer, Christian Gurk, Dominik Brunner, Michaela Hegglin, Heini Wernli, Cornelius Schiller, Marc Krebsbach

S10P22 **Cross-Tropopause Mass and Trace Gas Transport for the ERA40 period derived from Lagrangian Calculations**
Markus Erik Jonas, Institute For Atmospheric Physics, University Of Mainz
Heini Wernli

S10P23 **Detection and analysis of ozone anomalies in the subtropical UTLS and isentropic transport as derived from radiosondes over Irene (25.5°S, 28.1°E), South Africa**
Hassan Bencherif, Reunion Island University, CNRS
Béatrice Morel, Noureddine Semane, Alain Hauchecorne, Roseanne Diab

S10P24 **Impact of Dynamics on UTLS Chemical Distribution Observed During START**
Laura Pan, National Center For Atmospheric Research
Kenneth Bowman, Mel Shapiro, William Randel, Ru-shan Gao, Teresa Campos, Chris Davis, Sue Schauffler

S10P25 **Nitrogen oxides in the UTLS - First results of the NO and NOy measurements during CARIBIC**
Helmut Ziereis, DLR Oberpfaffenhofen Institut Fuer Physik Der Atmosphaere
Hans Schlager, Paul Stock, Ulrich Schumann, Carl Brenninkmeijer

S10P26 **Ozone Minimum over the East-Asia Pacific in the winter of 2005/06**
Kohji Kawahira, Fukui Prefectural University

S10P27 **An interpretation of exceptionally high values of upper troposphere-lower stratosphere ozone recorded at the Canadian Arctic during the summer of 2003**
Hassan Bencherif, Laboratoire de l'Atmosphère et des Cyclones, Université de La Réunion, France
Noureddine Semane, Vincent-Henri Peuch, Laaziz El Amraoui, Sébastien Massart, Daniel Cariolle

S10P28 **Analysis of ƒÂ13C and ƒÂD of stratospheric methane using online analytical system**
Taku Umezawa, Center For Atmospheric And Oceanic Studies, Tohoku University
Shuji Aoki, Shinji Morimoto, Satoshi Sugawara, Takakiyo Nakazawa

S10P29 **Examination of the 2002 major warming in the SH using ground-based and Odin/SMR assimilated data: stratospheric ozone distributions and tropic/mid-latitude exchange**
Hassan Bencherif, Reunion Island University, CNRS
Laaziz El Amraoui, Béatrice Morel, Noureddine Semane, D. Vidya Acharyulu, Vincent-Henry Peuch, Sebastien Massart, Daniel Cariolle

S10P30 **Interaction of CH3Cl, CH2Cl2 and CH3Br with ozone on the ice surface under stratospheric conditions**
Serguei V. Savilov, Moscow State University, Chemistry Dept.
Tatiana A. Vysokikh, Tatiana V. Yagodovskaya, Valeriy V. Lunin

S10P31 **Mid- and High- Latitude Lower Stratospheric N2O Distributions Related to the Arctic Vortex Breakup**
Libo Zhou, Institute Of Atmospheric Physics, Chinese Academy Of Sciences
Akiyoshi Hideharu

S10P32 **Stratosphere-troposphere exchange at high latitudes: impacts of vertical coordinate system and horizontal resolution**
Lori Neary, York University, Dept Earth And Space Sci And Eng
K Semeniuk, J Kaminski, J McConnell

S10P33 **The Role of Frost Flowers in the Depletion of Ozone at Polar Sunrise - A Model Study**
Matthias Piot, Institut Fuer Umweltphysik
Roland von Glasow

S10P34 **The isotopic composition of water vapor in the UT/LS: Observations and Modeling**
Peter Franz, NIWA Wellington
Thomas Röckmann, Andreas Zahn

POSTER PRESENTATIONS: SESSION 11

Interface processes in polar regions

S11P1 **Microlayer organic composition in the high Arctic: Marine biogenic precursors of atmospheric primary particles?**
Caroline Leck, Department of Meteorology, Stockholm University
Patricia Matrai, Lars Tranvik, Johan Knulst, Keith Bigg

S11P2 **Evidence of a surface source of ultrafine aerosol particles in the Arctic Ocean pack ice during summer**
Caroline Leck, Department Of Meteorology
Caroline Leck, Erik Swietlicki, Michael Tjernström, Keith Bigg

S11P3 **Temporal and Spatial Distribution of DMS in the High Arctic Atmosphere during the Arctic Ocean Experiment 2001 - A model study**
Jenny Lunden, Department Of Meteorology, Stockholm University
Gunilla Svensson, Caroline Leck

S11P4 **New evidence of fog-related aerosol sources over the Arctic pack ice in summer**
Jost Heintzenberg, Leibniz-Institute For Tropospheric Research
Caroline Leck, Wolfram Birmili, Michael Tjernström

S11P5 **The Role of Black Carbon Soot on Shrinkage of Arctic Sea Ice and Alaska Glacier Regime**
Yongwon Kim, International Arctic Research Center, University of Alaska Fairbanks
Hiroaki Hatsushika, Reginald Muskett, Koji Yamazaki

S11P6 **Winter Emissions of CO2 and CH4 along Latitudinal Alaska Transect**
Yongwon Kim, International Arctic Research Center, University of Alaska Fairbanks
Yoshi Saitoh, Tomo Tanikawa, Hiroshi Enomoto, Gaku Kadosaki

S11P7 **Airborne lidar observations and numerical simulations of orography effects of Svalbard Archipelago on variability of different type of aerosol**
Iwona Sylwia Stachlewska, LEOSPHERE Lidar Environmental Observations
Andreas Doernbrack

S11P8 **A longwave aerosol indirect effect in the Arctic from long-range pollutant transport**
Tim Garrett, University Of Utah
Zhao Chuanfeng

S11P9 **Trends in nitrogen and sulphur compounds in the Arctic: Past and future**
Lars Robert Hole, Norwegian Institute For Air Research
Jesper Christensen

S11P10 **Negative trends in summer ice albedo over the Western Arctic Ocean derived from 1-km AVHRR satellite imagery during the 1985-2005 period**
Alexander Trishchenko, Canada Centre For Remote Sensing
Yi Luo, Konstantin Khlopenkov, Shusen Wang

S11P11 **The Relationship of Snow Surface Nitrous Acid Emissions and Snow Temperature Variations**
Harry Beine, C.N.R. - Iia
Antonio Amoroso, Giulio Esposito, Antonietta Ianniello, Marianna Nardino, Florent Dominé, Mauro Montagnoli, Ivo Allegrini

S11P12 **Relationship Between NO2 and HONO Fluxes Above Snow Surfaces in the Marine Arctic at Ny-Ålesund, Svalbard.**
Harry Beine, C.N.R. - IIA
Antonio Amoroso, Esposito Giulio, Marianna Nardino, Florent Dominé

S11P13 **Betrayed by its isotopes: Origin of inorganic nitrate in the coastal Antarctic troposphere**
Joel Savarino, Laboratoire De Glaciologie/CNRS/UJF
Samuel Morin, Jan Kaisier, Mark H Thiemens

S11P14 **Studies of Halogen Atom Chemistry above the Arctic Snowpack**
Paul Shepson, Purdue University
Adam Keil, Aubrey Cavender, Phil Tackett, Tom Biesenthal, Jan Bottenheim, Sandy Steffen, John Deary

S11P15 **The marine snowpack, a dynamic interface between the atmosphere and the Arctic ocean**
Florent Domine, CNRS, Glaciology Laboratory
Frederic Parrenin, Gerhard Krinner, William R. Simpson, Thomas A. Douglas, Matthew Sturm

S11P16 **Springtime, Aircraft Measurements of Tropospheric O3 and BrO over Hudson's Bay, Canada**
Jan Bottenheim, Environment Canada
Tom McElroy, Chris McLinden, Walter Strapp, Chris Derksen

S11P17 **Transfer of sea salt from the Arctic ocean to the atmosphere, and its impact on bromine activation**
Florent Domine, CNRS, Glaciology Laboratory
Antonietta Ianiello, Antonio Amoroso, Harald J. Beine

S11P18 **The role of ozone atmosphere-cryosphere exchange on the Artic tropospheric ozone burden**
Laurens Ganzeveld, Max Planck Institute For Chemistry
Detlev Helmig, Tim Butler, Samuel Oltmans

POSTER PRESENTATIONS: SESSION 11

Interface processes in polar regions

S11P19 **Impact of reactive bromine outflow from the Arctic boundary layer to subpolar latitudes: GEM-AQ simulations**
Kenjiro Toyota, York University, Dept Earth And Space Sci And Eng
John C. McConnell, Alexandru Lupu, Lori Neary, Andreas Richter, Jacek Kaminski, Sunling Gong, Kirill Semeniuk, Stephen Beagley, Margarita Iudin, Jerzy Jarosz, Tom Sobieraj

S11P20 **Modelling of Mercury with the Danish Eulerian hemispheric model during the polar sunrise**
Jesper H Christensen, National Environmental Research Institute
Jorgan Brandt, Lisa M Frohn, Camila Geels, kaj M Hansen, Carsten A Skjoth, Henrick Skov

S11P21 **Mercury cycling in the Arctic Ocean**
Maria Andersson, Department Of Chemistry, Göteborg University
Jonas Sommar, Katarina Gårdfeldt, Oliver Lindqvist

S11P22 **The snowpacks, a sink and a source of gaseous mercury: an overview of oxidation and reduction mechanisms involved in Arctic and Alpine areas**
Xavier Fain, Laboratoire De Glaciologie Et Géophysique De L'Environnement
Christophe Ferrari, Enno Balhmann, Aurélien Dommergue, Pierre-Alexis Gauchard, Claude Boutron

S11P23 **Transfer of semi volatile organic species between atmosphere, snow and sea ice**
Alessandra Cincinelli, University Of Florence- Deparment Of Chemistry
Elodie Bonnaud, Tania Martellini, Florent Domine

S11P24 **Persistent Organic Pollutants (POPs) in the atmosphere and hydrosphere of Terra Nova Bay (Antarctica)**
Alessandra Cincinelli, University Of Florence- Deparment Of Chemistry
Tania Martellini, Lorenza Misuri, Alessio Valentino, Luciano Lepri, Rebecca Dickhut

S11P25 **Photochemical production of HCHO and CO in Antarctic Snow: A laboratory study**
Alexandra Thompson, British Antarctic Survey
Manuel Hutterli, Stephane Baguitte, Anna Jones

S11P26 **Sinks and sources of atmospheric hydroperoxides (H2O2 and CH3OOH) in Greenland (Summit) and Antarctica (South Pole): towards constraining atmospheric oxidation capacity**
Markus Frey, UC Merced
Manuel Hutterli, Donna Friel, Gao Chen

S11P27 **Ice-gas and liquid-gas partitioning for formaldehyde solutions at subfreezing temperatures**
David Tan, Georgia Institute Of Technology
Anne Case

S11P28 **Diffusion of Formaldehyde and Methanol in Ice: a Molecular Dynamics Study**
Vincent Ballenegger, Université De Franche-Comté
Paul Hoang, Sylvain Picaud, Céline Toubin

S11P29 **Observations of organic iodine, bromine, and nitrate gases in snowpack and ambient air at Halley, Antarctica**
Bill William Sturges,
Graham Mills, David A Worton, Stephen Humphrey, Rhian Salmon, Robert Mulvaney, Anna Jones

S11P30 **The coastal Antarctic NOy budget: year-round evolution, links to surface snow and hence ice cores**
Anna Jones, British Antarctic Survey
David Ames, Stephane Bauguitte, Kevin Clemitshaw, Graham Mills, Alfonso Saiz-Lopez, Rhian Salmon, William T Sturges, Eric W Wolf, David Worton

S11P31 **Using 4D-variational data assimilation to understand the photochemical processes observed during the CHABLIS measurement campaign at Halley Bay, Antarctica**
Paul Hamer, School Of Chemistry,University Of Bristol UK
Dudley Shallcross, David Larry

S11P32 **Boundary layer structure in the polar atmosphere: Its effects on halogen chemistry in the Arctic spring and snow NOx emissions in Antarctic spring**
Yuhang Wang, Georgia Institute Of Technology
Tao Zeng, Yunsoo Choi

S11P33 **Episodes of High Surface Ozone Amounts at South Pole During Summer and Their Impact on the Long-term Surface Ozone Variation**
Samuel Oltmans, NOAA/ESRL Global Monitoring Division
Bryan Johnson, Detlev Helmig

S11P34 **VOC Distributions Over Antarctica During ANTCI 2005**
Andreas Beyersdorf, University Of California, Irvine
Nicola Blake, Simone Meinardi, F.S. Rowland, Donald Blake

S11P35 **Measurement of atmospheric 14CH4 in Antarctic ice over the agro-industrial period: a status report.**
Andrew Smith, Australian Nuclear Science & Technology Organisation

POSTER PRESENTATIONS: SPECIAL PROGRAMME SESSION 1

AMMA - African Monsoon Multidisciplinary Analysis

PS1P1 **The African Monsoon Multidisciplinary Analyses (AMMA) program**
Celine Mari, Laboratoire D'Aerologie - OMP
Luc Sigha Nkamdjoufor the AMMA ISSC

PS1P2 **Aerosol optical properties retrieved from a lidar onboard an ULA in the frame of AMMA**
Patrick Chazette, Cea/dsm/Isce
Joseph Sanak, Francois Dulac

PS1P3 **Deep Blue monitoring and analysis of Saharan dust over source regions**
N. Christina Hsu, Nasa Goddard Space Flight Center
Si-Chee Tsay, Michael King

PS1P4 **Desert dust optical/microphysical and vertical distribution characterization, in the Saharan heat low region, for radiative forcing assessment during the AMMA SOP**
Juan Cuesta, Laboratoire De Météorologie Dynamique
Cyrille Flamant, Pierre H. Flamant, Dimitri Edouart

PS1P5 **Dust Outflow and Deposition to the Ocean (DODO): first results from AMMA SOP-0**
Eleanor Highwood, University Of Reading
Claire McConnell, Hugh Coe, Paul Williams, Gerard Capes, Manuel Dall'osto, Jim Haywood, Simon Osborne

PS1P6 **SMART-COMMIT Supersite Observations and Analyses for NASA African Monsoon Multidisciplinary Activities-2006**
Si-Chee Tsay, NASA
Q. Jack Ji, Myeong-Jae Jeong

PS1P7 **Mineral dust in Sahelian Africa during the AMMA field experiment**
Paola Formenti, Lisa/cnrs
Beatrice Marticorena, Jean Louis Rajot, Karine Desboeufs, Francesco Cairo, Federico Fierli, Guido Di Donfrancesco, Birgit Heese, Jim Haywood, Ellie Highwood

PS1P8 **African fire plumes during the AMMA experiment with the GIRAFE model: forecasts and first validation**
Grégory Cailley, SILOGIC / ETHER
Lola Corre, Céline Mari, Valérie Thouret, Armand Mariscal, Philippe Nédelec

PS1P9 **Direct radiative forcing of mixed aerosols on Djougou (Benin) during the dry season (AMMA program).**
Marc Mallet, Laboratoire Of Aerologie
Veronique Pont, Cathy Liousse, Laurent Gomes, Jacques Pelon, Armand Mariscal, Yves Meyerfield, Veronique Yoboué

PS1P10 **Regional and global aspects of aerosols in western Africa: From air quality to climate**
Mian Chin, NASA Goddard Space Flight Center
Thomas Diehl, Tom Kucsera, James Spinhirne, Stephen Palm, Brent Holben, Paul Ginoux

PS1P11 **Impact of african anthropogenic emissions on combustion aerosol burdentransport deposition and radiative impact**
Abdourahamane Konare, Laboratoire De Physique De L'Atmosphère
Cathérine Liousse, Fabien Solmon, Bruno Guillaume, Carsten Junker, Robert Rosset

PS1P12 **Biomass burning seen in altitude in first half of 2006 seen by MOZAIC flights between Europe and Namibia**
Philippe Nedelec, CNRS - Laboratoire D'Aérologie
Jean Pierre Cammas, Valerie Thouret, Jean Luc Attie

PS1P13 **An idealized two-dimensional model approach to study the impact of West African monsoon on the tropospheric ozone latitudinal gradient**
Marielle Saunois, Laboratoire D'Aérologie
Céline Mari, Valérie Thouret, Philippe Peyrillé, Jean-Philippe Lafore, Jean-Luc Redelsperger, Bastien Sauvage, Philippe Nédélec

PS1P14 **Seasonal and interannual characteristics of the ozone distribution in the Monsoon and Harmattan layers over West Africa**
Alexis Minga, Université Marien Ngouabi/Faculté Des Sciences
Valérie Thouret, Armand Mariscal, Dominique Serra, Philippe Nédelec, Aristide Akpo, Basile Kounouhewa, Bernard Cros

POSTER PRESENTATIONS: SPECIAL PROGRAMME SESSION 2

DEBITS - Deposition Of Biogeochemically Important Trace Species

PS2P1 **A regional scale passive monitoring study of SO2, NOX and O3 in South Africa**
Miroslav (Micky) Josipovic, Department Of Geography, Environmental Management & Energy Studies, University of JHB
Harold John Annegarn, Melanie Anne Kneen, Stuart John Piketh, J.J. Pienaar

PS2P2 **Precipitation chemistry studies in India at a glance - Atmospheric deposition measurements vs. model calculations**
Umesh Kulshrestha, Indian Institute Of Chemical Technology
Lennart Granat, Magnuz Engardt, Henning Rodhe

PS2P3 **Regional climate chemistry modeling in IDAF/DEBITS**
Abdourahamane Konare, Laboratoire De Physique De L'Atmosphère
Fabian Solmon, Cathèrine Liousse, Corinne Galy-Lacaux, Vèronique Yobouè, Laouali Dungall, Luc Sigha, Kobus Pienaar

PS2P4 **Emission and mitigation of greenhouse gases from rice productions.**
Kruamas Smakgahn, National Iinstitute Of Agro-Environmental Sciences
Tamon Fumoto, Kazuyuki Yagi

PS2P5 **Rainwater Chemistry and Wet Deposition over the Wet Savanna Ecosystem of Lamto (Côte d'Ivoire)**
Yobouè Vèronique, University Of Cocody/Abidjan
Corinne Galy-Lacaux, Jean-Pierre Lacaux, Siluè Siè

PS2P6 **Aerosol Chemistry and dry Deposition over the Wet Savanna Ecosystem of Lamto (Côte d'Ivoire)**
Yobouè Vèronique, University Of Cocody/Abidjan
Corinne Galy-Lacaux, Konarè Aboudrahaman, Jean-Pierre Lacaux

PS2P7 **Rainwater chemistry and wet deposition over the equatorial forested ecosystem of Zoétélé (Cameroon)**
Luc Sigha, Centre De Recherche Hydrologique
Corinne Galy-lacaux, Vèronique Pont, Sandrine Richard, Daniel Sighomnou, Jean-Pierre Lacaux

PS2P8 **Precipitation chemistry and wet deposition in the dry savanna ecosystem of Banizoumbou (Niger)**
Dungall Laouali, Université Abdou Moumouni
Corinne Galy-lacaux, Vèronique Yobouè, Issa Modi, Luc Decroix

PS2P9 **Organic acids in rainwater deposition over Atlantic tropical forests in Brazil: biogenic and anthropogenic contribution**
Luciene L Lara, Instituto De Fisica/Universidade De Sao Paulo
Vanessa P S Almeida, Plinio B Camargo, Marion Glausius, Camila P Oliveira, Fabiana Fracassi, Luiz A Martinelli

PS2P10 **A mobile laboratory for long-term air pollution measurements in Southern Africa**
Lauri Laakso, Department Of Physical Sciences, University Of Helsinki, Finland
Markku Kulmala, Toivo Pohja, Erkki Siivola, Nnenesi Kgabi, Kobus Pienaar, Colin Read, Erik Sjoberg

PS2P11 **Precipitation Chemistry and Relation to Air-mass Transport at Mount Tai in Central-eastern China**
Tao Wang, The Hong Kong Polytechnic University
Yan Wang, Jian Gao, Wen-Xing Wang

PS2P12 **Spatial and temporal variability of inorganic nitrogen species in gas, aerosol, wet and dry deposition samples in the Mediterranean.**
Zambia Markaki, Environmental Chemical Processes Laboratory, Department Of Chemistry, University of Crete
Marie-Do Loye-Pilot, Nikolaos Mihalopoulos

PS2P13 **Iron speciation, solubility and temporal variability in wet and dry deposition in the East Mediterranean.**
Zambia Markaki, Environmental Chemical Processes Laboratory, Department Of Chemistry, University of Crete
Christina Theodosi, Spiros Pergantis, Nikolaos Mihalopoulos

PS2P14 **Trace Metal concentration in South African coal and ambient aerosols the Vaal Triangle**
Elne Kleynhans, North-West University (Potchefstroom Campus)
Kobus Pienaar, Colin Read

PS2P15 **Water soluble organics in South African coal and ambient aerosols in the Vaal Triangle**
Anke Van Heerden, North-West University (Potchefstroom Campus)
Kobus Pienaar, Colin Read

PS2P16 **Monitoring and characterization of industrial aerosols in south africa using mini volume samplers**
Kobus Martins, North-West University (Potchefstroom Campus)
Kobus Pienaar

PS2P17 **Monitoring regional air quality in southern Africa using diffusive samplers**
Kobus Martins, North-West University (Potchefstroom Campus)
J.J Pienaar

PS2P18 **Seasonal and diurnal variations of surface ozone on the Mpumalanga Highveld**
Beauty Mokgatlhe, North-West University (Potchefstroom Campus)
Kobus Pienaar, Ron Rorich, Andy Bogopane

POSTER PRESENTATIONS: SPECIAL PROGRAMME SESSION 2

DEBITS - Deposition Of Biogeochemically Important Trace Species

PS2P19 **Dry and Wet Atmospheric Nitrogen Deposition in Africa**
Corinne Galy-Lacaux, Laboratoire D'Aérologie - CNRS-UPS
Hamoud AL Ourabi, Kobus Pienaar, Jonas Mphepya, Jean-Pierre Lacaux, Vèronique Yobouè, Eric Gardrat

PS2P20 **Acid wet deposition in the tropics: two case studies using debits measurements**
Jean-Pierre Lacaux, Médias-France
Corinne Galy-lacaux, Luc Sigha, Jonas Mphepya

PS2P21 **Atmospheric Deposition of Nutrients in Southeast Asia**
Rajasekhar Balasubramanian, National University Of Singapore
Sundarambal Palani, Sathrugnan Karthikeyan, Pavel Tkalich

POSTER PRESENTATIONS: SPECIAL PROGRAMME SESSION 3

APINA - Air Pollution Information Network-Africa

PS3P1 **Activities of the Air Pollution Information Network for Africa (APINA)**
Stephen Simukanga, Departmant Of Metallurgy And Mineral Processing, School Of Mines
Sara Feresu, Kevin Hicks

PS3P2 **Ozone impacts to crops - a biomonitoring initiative for southern Africa**
Anna Mieke Van Tienhoven, Air Pollution Information Network for Africa (APINA)
Esmeraldo Arone, Patrick Büker, Lisa Emberson, Gert Krüger, Abel Kaaya, Ab Mashingaidze, Victor Shitumbanuma, Mark Zunckel

PS3P3 **Establishing Corrosion Impacts of air Pollution in southern Africa**
Lungu Chozi Vincent, University Of Zambia
Mainford Toga, Ramharakh Govish

PS3P4 **Development of regional emissions inventory on air pollutants in southern Africa**
Kenneth Gondwe, University Of Malawi- The Polytechnic

PS3P5 **A regional scale passive monitoring study of SO2, NOX and O3 in South Africa**
Miroslav (Micky) Josipovic, Department Of Geography, Environmental Management & Energy Studies, University of JHB
Harold John Annegarn, Melanie Anne Kneen, Stuart John Piketh, J. J. Pienaar

PS3P6 **Air Pollution Health Impacts - APINA**
Tariro P Charakupa-Chingono, Institute Of Environmental Studies - University Of Zimbabwe
Mamopeli Matooane, Michael Musonda

PS3P7 **Experimental set up to investigate the effect of marine atmosphere on construction materials from Dar es Salaam coast towards inland Tanzania**
Albert Geoffrey Mmari, University Of Dar es Salaam
S. S. Potgieter-Vermaak, C.B.S. Uiso, I.N. Makundi, R. Van Grieken

PS3P8 **Corrosive marine atmosphere investigations in Tanzania: exposure sites and preliminary results**
Albert Geoffrey Mmari, University Of Dar Es Salaam
Sanja Potgieter-Vermaak, Christian Uiso, Ismael Makundi, Johannes Potgieter, Rene Van Grieken

CONFERENCE INFORMATION

Airport Transfers

Airport transfers can be confirmed with the Transport Desk, and additional bookings can be made a day in advance.

ATM

An ATM is located on the lower ground floor within the CTICC.

Badges

Please wear your badge at all times during the conference. All delegates are required to wear identification badges when attending sessions and social events.

Dates of the conference

Sunday 17th September – Friday 22nd September 2006.

Disclaimer

The Organisers and the Cape Town International Convention Centre accept no liability for any injuries / loss incurred by delegates and or suppliers, nor loss of or damage to any personal belongings.

Emergency Telephone Numbers

Cape Town International Airport	021 937 1200
Ambulance	10177
Police	10111
Mountain Rescue Services	021 948 9900
Conference Secretariat	021 410 5171

Conference Hotels

Arabella Sheraton	021 412 9999
Fountains Hotel	021 425 0056
Holiday Inn Waterfront	021 409 4000
City Lodge Waterfront	021 419 9450
Protea Hotel Pier Place	021 421 7580
Protea Breakwater Lodge	021 406 1911

Taxi Service

Sea Point Radio Taxis	021 434 4444

Restaurants

Africa Cafe	021 422 0221
City Grill	021 421 9820
Mortons on the Wharf	021 418 3633
Quay Four	021 419 2008

Internet Café

An Internet Café will be available to all delegates for the duration of the conference in Meeting Room 1.53. We ask that you limit your time to 15 minutes to allow everyone the opportunity to make use of the facility.

Language

The official language of the conference is English.

Lunches and Refreshments

Coffee and tea will be served during the official breaks in the restaurants on the ground level of the CTICC. Lunch will also be served daily in the restaurants. A boxed lunch will be provided on Wednesday.

Mobile Phones

As a courtesy to speakers and delegates, all mobile phones and pagers must be switched off before entering the sessions.

Pre / Post Conference Tours

Southern Africa has much to offer and we have an exciting selection of tours for delegates and accompanying persons. For a full description of what is included in tours and what extras are available along with a detailed itinerary, please visit the Travel & Tours Desk.

Registration Desk

Registration will take place in the Registration Foyer, ground level of the CTICC from Sunday 17th September – Friday 22nd September 2006.

The registration desk will operate during the following times:

Sunday 17th September 2006	14:00 – 18:00
Monday 18th September 2006	07:00 – 18:00
Tuesday 19th September 2006	07:00 – 18:00
Wednesday 20th September 2006	07:00 – 14:00
Thursday 21st September 2006	07:00 – 18:00
Friday 22nd September 2006	07:00 – 17:00

Speaker Preview Room

The Speaker Preview Room is located on the first floor of the CTICC in room 1.52 and will be operational from the 17th September 14:00 – 22nd September 2006. If you are presenting, please ensure that you check in with the audio visual technician the day before your presentation.

Venue

The conference will be held at the Cape Town International Convention Centre:

CTICC
Convention Square
1 Lower Long Street
Cape Town 8001
Tel: +27 (0) 21 410 5000 / Fax: +27 (0) 21 410 5001
Website: www.ctconvention.co.za

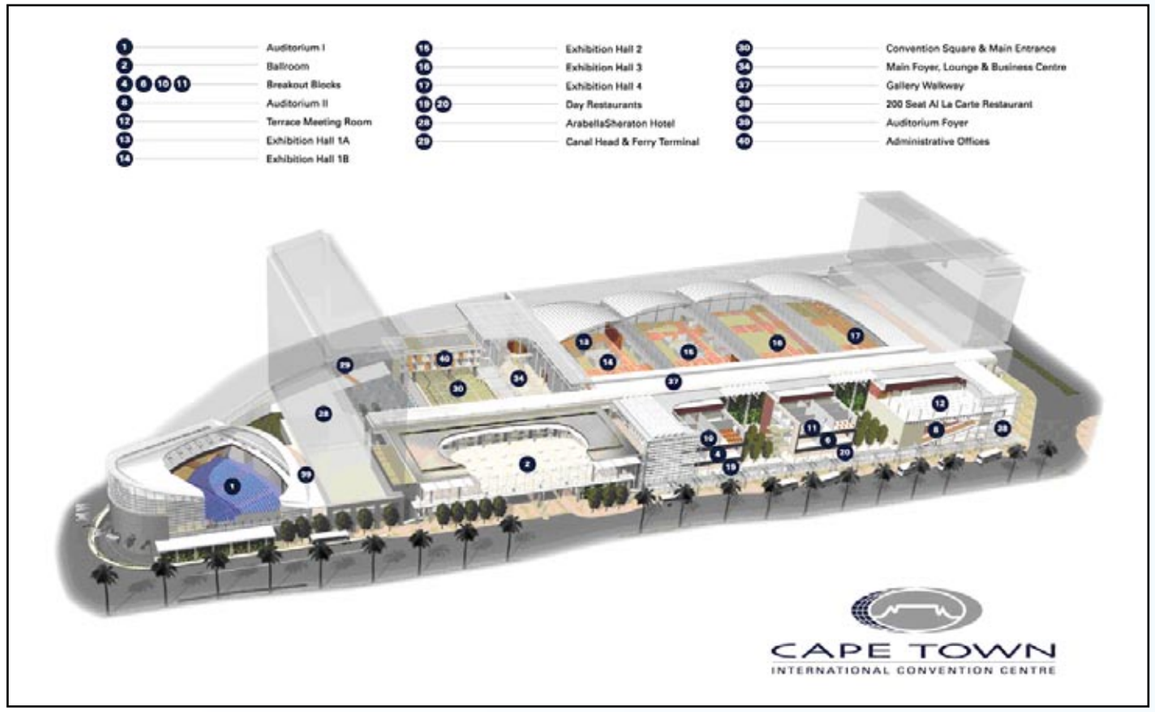
CTICC

The CTICC is supported by the qualified expertise of professional, preferred suppliers who complement the core services of the centre ensuring the smooth execution of any conference or event.

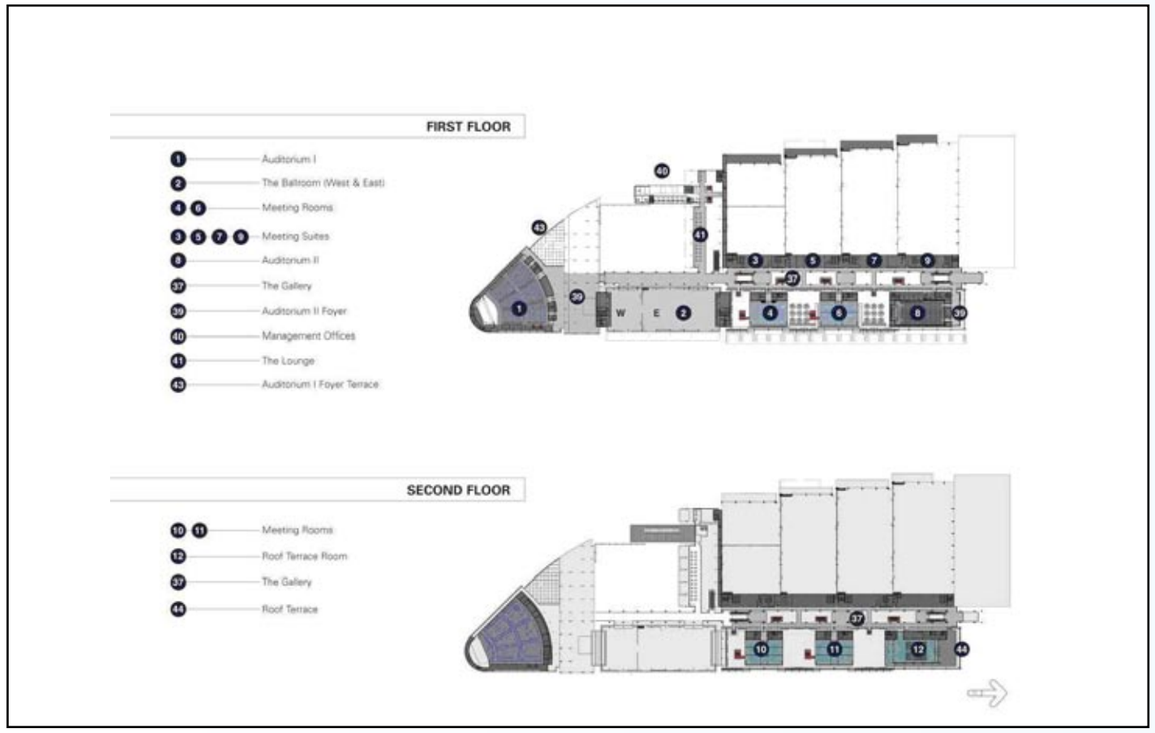
For the convenience of it's delegates and visitors, the Cape Town International Convention Centre has various facilities located on-site:

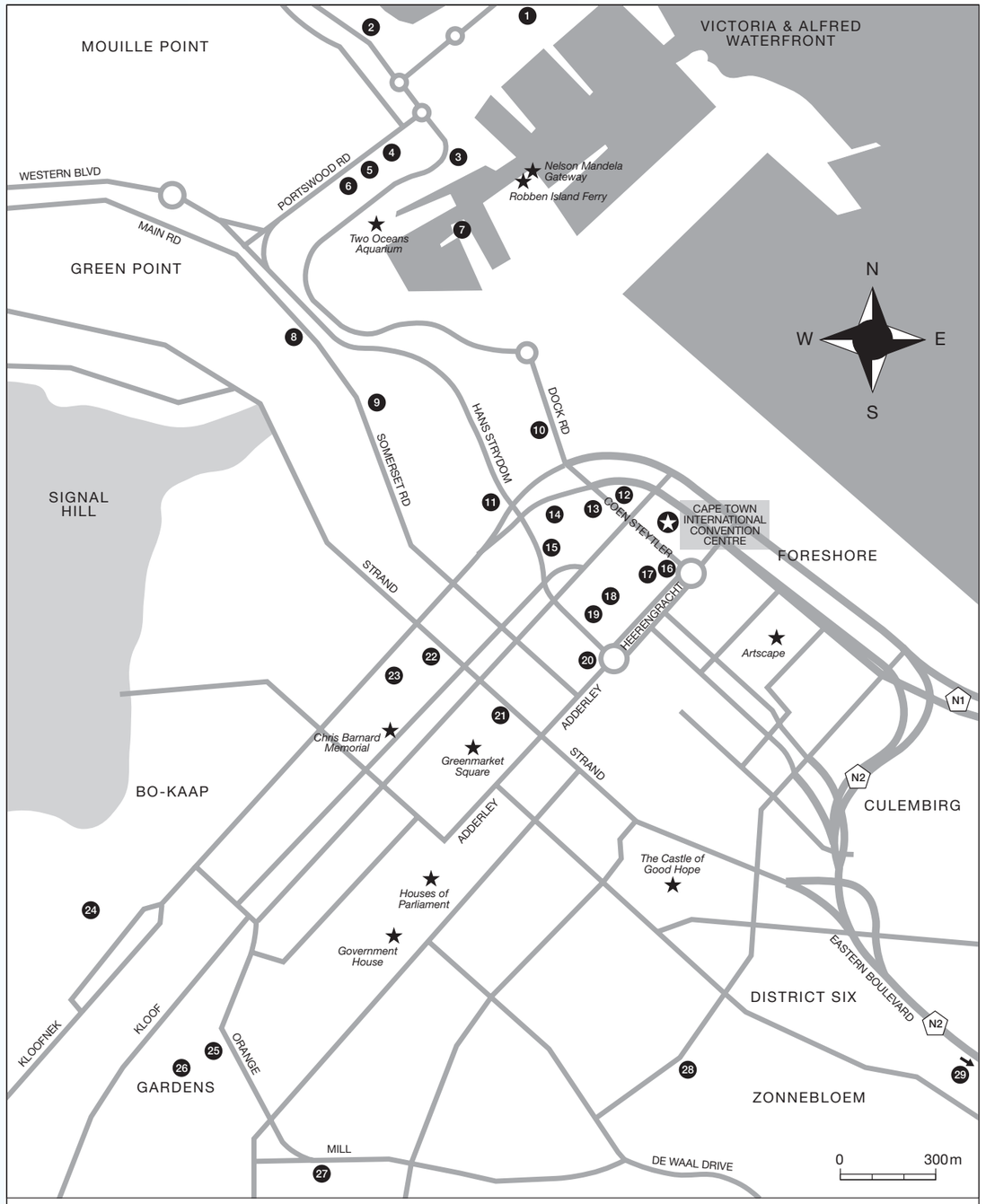
- Afrique Convenience Store – with retail products
- Imali Express – offers foreign exchange services
- Mahisha Business Centre – full business services
- Medi-clinic – for first aid assistance

CONVENTION CENTRE



FIRST FLOOR & SECOND FLOOR





KEY TO HOTELS

1 The Table Bay Hotel ⋆
2 The Radisson ⋆
3 Victoria & Alfred Hotel ⋆
4 The Portswood Hotel ⋆
5 The Commodore Hotel ⋆
6 Protea Breakwater Lodge ⋆
7 Cape Grace ⋆
8 Protea Cape Castle Hotel ⋆
9 Protea Hotel Victoria Junction ⋆
10 City Lodge Waterfront ⋆
11 Harbour Edge ⋆
12 Arabella Sheraton Grand Hotel ⋆
13 Southern Sun Cullinan ⋆
14 Holiday Inn Waterfront ⋆
15 Protea North Wharf ⋆
16 The Capetonian ⋆
17 Protea Hotel Pier Place ⋆
18 The Tulbagh Hotel ⋆
19 The St Georges Hotel ⋆
20 Fountains Hotel ⋆
21 Southern Sun Cape Sun ⋆
22 Tulip Inn ⋆
23 Cape Town Lodge ⋆
24 The Cape Milner Hotel •
25 Mount Nelson •
26 Lady Hamilton Hotel •
27 Holiday Inn Garden Court De Waal •
28 Cape Suites Hotel •
29 Holiday Inn Garden Court Eastern Blvd. •
30-51 please see Peninsula map

⋆ Walking distance to CTICC
• 5-10 minutes driving distance to CTICC

SOCIAL PROGRAMME

Welcome Cocktails
Sunday 17th September 2006
18:00 – 20:00

The Welcome Cocktails will take place in Ballroom West in the CTICC.
All delegates are invited to join us for drinks and snacks in the ballroom to mark the official opening of the Atmospheric Chemistry at the Interfaces 2006 Conference. The cost of this function is included in your registration fee.
Transfers: A shuttle service between the CTICC, Breakwater Lodge and Pier Place will run until 21:00.

Open Poster Viewing and Cocktail Reception
Tuesday 19th September 2006
18:30 – 19:30

All delegates are invited to join us for drinks and snacks in the restaurants to view the poster display. The cost of this function is included in your registration fee.
Transfers: A shuttle service between the CTICC, Breakwater Lodge and Pier Place will run until 21:00.

Conference Dinner at moyo, Spier Estate
Wednesday 20th September 2006
18:30 – 23:00

Fine wines, beautifully prepared local produce, a unique, sophisticated Cape ambiance combine to produce an evening that will linger long in the memory. moyo on Spier Wine Estate is the casually elegant setting for the highlight of our social programme. You will indulge in renowned traditional local delicacies, excellent wines, cosmopolitan cuisine and contemporary African dishes.

The cost of this function is included in your registration fee. Additional tickets can be purchased from the Payments desks located in the registration area until Tuesday 19th September at a cost of R400 per person.

Dress Code: Smart casual. Please note that the floor is cobbled and not best suited to high heels.
Transfers: A shuttle service will operate between the CTICC and all conference hotels after the conference sessions to give delegates the opportunity to freshen up. All coaches will depart from the CTICC for the 45 minute trip to moyo and delegates must ensure they return to the CTICC by 18:00 promptly for departure.

Barry Huebert Public Lecture and Discussion
Thursday 21st September 2006
19:00 – 22:00

This lecture and discussion is open to the public and free of charge. It will take place in Auditorium II at CTICC.
Transfers: A shuttle service between the CTICC, Breakwater Lodge and Pier Place will run until 22:00.

ACCOMPANYING PERSONS

The best way to see our City! Join in for a 2-hour guided, open-top bus trip around the Mother City. The tour includes the Waterfront and city centre in detail, then stops at Table Mountain for a panoramic view and concludes with a coastal drive back through Camps Bay. This is a “Hop on, Hop off” service, which allows you to use this tour as a convenient way to access all major highlights in Cape Town (including a visit to Camps Bay beach) during the day.

Highlights of the full day tour includes: Kirstenbosch Botanical Gardens; Cape of Good Hope Nature Reserve; the funicular (optional extra) to reach the hillcrest at Cape of Good Hope; the penguin colony at Boulders Beach; Chapman’s Peak (subject to the road being open); Hout Bay stop at the harbour; Sea Point; city of Cape Town drive.

The tour is available on Tuesday, the 19th of September and departs from the Arabella Sheraton Hotel at 08h45.

Notes

THE **EXECUTIVE** CONNECTION
Project Management and Production Services

Tel/Fax: 021 671 4297 Cell: 082 224 1222

www.atmosphericinterfaces2006.co.za