Sunday, 29.06.2003	
18:00 - 20:00	*Registration*
Monday, 30.06.2003	
09:00 - 10:00	*Registration*
10:00	Sausen: Welcome and Information CHAIR: Paul Madden
Engine emissions and plume processes	
10:20	Gleitsmann G, Somnitz H, Zellner R: Novel rates of OH induced sulfur oxidation implications to the plume chemistry of jet aircraft
10:40	Wahl C, Kapernaum M, Krüger V, Rainer P, Aigner M: Determination of soot mass fraction soot density and soot fractal character in flame exhaust gases
11:00	*Coffee break*
11:20	Anderson B E, Winstead E L, Hudgins C H, Branham S, Plant J V, Thornhill K L: Overview of results from the NASA experiment to characterize aircraft volatile aerosol and trace species emissions (EXCAVATE)
12:00	Miake-Lye R C, Zaccardi V: SAE E-31 committee on aircraft exhaust emission measurements and an aerospace information report on the measurement of non-volatile Particle Emissions
12:20	Sorokin A, Katragkou E, Arnold F, Busen R, Schumann U: SO3 and H2SO4 in exhaust of an aircraft engine: Measurements and implications for fuel sulfur conversion to S(VI) and SO3 to H2SO4
12:40	*Lunch break* CHAIR: Ulrich Schumann
14:00	Schumann U: Welcome, Aeronautic Research at DLR Ghazi A: Welcome, Perspective EU, Environment and Aviation
14:40	Petzold A, Wilson C W, Arnold F, Baltensperger U, Fiebig M, Fritzsche L, Giebl H, Gysel M, Hitzenberger R, Hurley C D, Katragkou E, Kurtenbach R, Madden P, Nyeki S, Puxbaum H, Schumann U, Stein C, Vrchoticky S, Wahl C, Wiesen P: Particle emissions from aircraft engines - An overview of the european project PARTEMIS
15:20	Kurtenbach R, Kapernaum M, Lörzer J, Niedojadlo A, Petrea M, Wahl C, Wiesen P: Emission of non-methane volatile organic compounds (NMVOCs) from a jet engine combustor and a Hot End Simulator (HES) during the PARTEMIS project
15:40	Goos E, Braun-Unkhoff M, Slavinskaya N, Frank P: Modeling of soot precursor formation in laminar premixed flames with C1- C2- and C6-Fuels
16:00	*Coffee break* CHAIR: Karlheinz Haag
16:20	Lee D S, Sun C-G, Cooper M, Snape C, Wilson C: Stable carbon isotope signatures of aircraft particles
16:40	Vancassel X, Sorokin A, Mirabel P: Modelling of volatile particles during PARTEMIS
17:00	Garnier F, Ferreira-Gago C, Brasseur A L, Uthéza F, Paoli R, Cuenot B: Growing and dispersion of particles in a turbulent exhaust plume
17:20	Plumb I, Randeniya L, Vohralik P, Baughcum S L: The effect of plume processes on aircraft impact
17:40	Wilson, C W: Aviation fuels - Where are we going and why?
18:00	*Break*
19:00	*Ice-breaking reception in the Zeppelin museum*

Tuesday, 01.07.2003	
Transport and impact on chemical composition	CHAIR: David S. Lee
09:00	Crowther R, Law K, Pyle J, Nedelec P, Smit H, Volz-Thomas, A: NOy in the UT/LS: A source attribution study utilising MOZAIC measurements
09:20	Isaksen I S A: The TRADEOFF project: Goals and achievements
09:50	Brunner D, Staehelin J, Hauglustaine D, Jourdain L, Rogers H L, Koehler M O, Pyle J A, Berntsen T K, Gauss M, Meijer E, van Velthoven P, Grewe V, Sausen R, Pitari G, Mancini E, Isaksen I S A: On the quality of chemistry-transport simulations in the upper troposphere/lower stratosphere region
10:10	Grewe V: Lightning NOx emissions and the impact on the effect of aircraft emissions - Results from the EU-project TRADEOFF
10:30	*Coffee break* CHAIR: Georgios Amanatidis
10:50	Hauglustaine D, Stordal F, Myhre G, Gauss M, Berntsen T, Isaksen I: Impact of present-day and future subsonic aircraft emissions on tropospheric ozone and associated radiative forcing of climate
11:10	Gauss M, Köhler M, Grewe V: Impact of aircraft NO_x emissions: Effects of changing the flight altitude
11:30	Prather M, Hsu J, Wild O, Sundet J, Isaksen I: CTM Simulation of tropopause ozone: Lessons from TRACE-P
11:50	Meijer E, Van Velthoven P, Bregman B, Seger A, Brunner D: Improved mass fluxes in a global chemistry-transport model: implications for upper tropospheric chemistry
12:10	Rodriguez J M, Logan J A, Rotman D A, Bergmann D, Baughcum S L, Friedl R R, Anderson D E: Activities of NASA's Global Modeling Initiative (GMI) in the assessment of subsonic aircraft impact
12:30	*Lunch break* CHAIR: Ivar Isaksen
13:50	Wuebbles D J, Dutta Mayurakshi P, Kenneth O, Baughcum S L: Parametric study of potential effects of aircraft emissions on stratospheric ozone
14:10	Baughcum S, Plumb I, Vohralik P: Stratospheric ozone sensitivity to aircraft cruise altitudes and NOx emissions
14:30	
14:50	Stubenrauch C: Introduction to Poster Session 1
15:05	*Poster Session 1 with Coffee (Engine emissions and plume processes, Transport and impact on chemical composition)*
17:20	Brenninkmeijer C, Slemr F, Zahn A, Fischer H, Hermann M, Heintzenberg J, Schlager H, Ziereis H: Investigating the global atmosphere by using commercial aircraft: CARIBIC and MOZAIC
17:40	Gossling S: The importance of aviation for tourism: Status and trends
18:00	*end of sessions*
Wednesday, 02.07.2003	CHAIR: Philippe Mirabel
09:00	Dessens O, Rogers H, Pyle J,all SCENIC-project members: The SCENIC project: presentation and first results
09:20	Pitari G, Mancini E, Rogers H, Dessens O, Isaksen I, Rognerud B: A 3D model intercomparison of the effects of future supersonic aircraft on the chemical composition of the stratosphere

Particles and clouds	CHAIR: Philippe Mirabel
09:40	Kärcher B, Schumann U, Aigner M, Schurath U, Schrems O, Sausen R, Kruse H, Schiller C, Borrmann S, Arnold F, Feichter J, Lohmann U, Ström J, Rother T, Brinkop S, Busen R, Flentje H, Gierens K, Graf J, Haag W, Hendricks J, Mannstein H, Petzold A, Wendling P, Frank P, Gerlinger P, Noll B, Stricker W, Wahl C, Möhler O, Schaefers S, Stetzer S, Immler F, Döpelheuer A, Krämer M, Mangold A, Wollny A, Schneider J, Wilhelm S, Aufmhoff H, Timmreck C: Particles and cirrus clouds (PAZI) - Overview of results 2000-2003
10:20	*Coffee break*
10:40	Arnold F: Upper tropospheric aerosol formation inside and outside aircraft wakes: new findings from mass spectrometric measurements of gaseous and ionic aerosol precursors and very small aerosols
11:10	Baumgardner D, Kok G, Raga G, Diskin G, Sachse G: Single particle black carbon measurements in the UT/LS
11:30	Suzanne J, Ferry D, Popovicheva O B, Shonija N K: Ice-nucleating ability of soot particles in UT/LS
11:50	Möhler O, Schnaiter M, Wagner R, Schurath U, Mangold A, Krämer M: Experimental investigation of homogeneous and heterogeneous freezing processes at simulated UTLS conditions
12:10	Monier M, Wobrock W, Flossmann A: Detailed modelling of cirrus cloud - An intercomparison of different approaches for homogeneous nucleation
12:30	*Lunch break* CHAIR: Corinne Marizy
13:50	Friedl R, WB-57 CRYSTAL-FACE science team: Overview of contrail and cirrus cloud measurements from the WB-57 aircraft in the CRYSTAL-FACE mission
14:10	Minnis P, Garber D P, Nguyen L, Duda D P, Palikonda R: Simulation of contrail coverage over the USA missed during the air traffic shutdown
14:40	Duda D P, Minnis P Costulis P K Palikonda R: CONUS contrail frequency estimated from RUC and flight track data
15:00	Danilin M Y, Baughcum S L, Read W G: Contrail properties derived from UARS MLS measurements
15:20	*Poster Session 2 with Coffee (Particles and Clouds, Mitigation),* Introduction: Stubenrauch C
16:30	Mannstein H: Observations of contrails and cirrus over Europe
17:00	Zerefos C, Eleftheratos K, Zanis P, Balis D, Stordal F, Myhre G: Updated perturbations on cirrus and contrail cirrus
17:20	Penner J, Liu X: Potential alteration of ice clouds by aircraft soot
17:40	*Break*
19:30	*boarding: Ship Cruise on Lake Constance with Dinner*
Thursday, 03.07.2003	CHAIR: Winfried Dewes
09:00	Hendricks J, Kärcher B, Döpelheuer A, Feichter J, Lohmann U: Potential impact of aviation-induced black carbon on cirrus clouds: Global model studies with the ECHAM GCM
09:20	Marquart S, Ponater M, Mager F, Sausen R: Future development of contrail cover optical depth and radiative forcing: Impacts of increasing air traffic and climate change
09:40	Guldberg A: A studie of contrails in a general circulation model
10:00	*Coffee break*

Mitigation	
10:20	Ponater M, Marquart S, Ström L, Sausen R, Gierens K, Hüttig G: On the potential of the cryoplane option to reduce aircraft climate impact
10:40	Lee D S, Sausen R, Marquart S, Fichter C, Norman P: Tradeoffs in contrail and CO_2 radiative forcing by altered cruise altitudes
11:00	Noland R, Toumi R, Williams V: Policies for mitigating contrail formation from aircraft
11:20	Green, J: Greener by Design
11:50	*Lunch break* CHAIR: Robert Sausen
13:30	Schumann, U: What did we learn?
14:10	Discussion
14:40	Sausen: Homework and Good Bye
15:00	*end of conference*

Poster Session 1 (Tuesday, 01.07.2003, 15:05 - 17:20)

Engine emissions and plume processes

1. Hitzenberger R, Giebl H, Petzold A, Gysel M, Nyeki S, Weingartner E, Baltensperger U, Wilson C W: CCN activation of jet engine combustion particles during PARTEMIS

2. Worsnop D R, Miake-Lye R, Boudries H, Wormhoudt J, Anderson B: Gas and aerosol chemistry of commercial aircraft emissions measured in the NASA EXCAVATE experiment

3. Katragkou E, Wilhelm S, Arnold F, Wilson C W: Sulfur (VI) in the simulated internal flow of an aircraft gas turbine engine: first measurements during the PARTEMIS project

4. Fiebig M, Fritzsche L, Stein C, Nyeki S, Petzold A: Emission of volatile and non-volatile ultrafine particles from a combustion source during PARTEMIS

5. Sorokin A, Vancassel X, Mirabel P: Kinetics of binary nucleation in aircraft exhaust plume

6. Garber D P, Minnis P, Costulis P K: A USA commercial flight track database for upper tropospheric aircraft emission studies

7. Hayashi S, Yamada, H, Takazawa K, Makida M, Kurosawa Y: Interaction of NO and ice crystals produced from combustion generated water vapor in a simulated jet engine exhaust gas plume

8. Geigle K P, Schneider-Kühnle Y, Krüger V, Tsurikov M, Lückerath R, Braun-Unkhoff M, Slavinskaya N, Frank P, Stricker W, Aigner M: Validation of the kinetic soot model: An experimental and theoretical study on soot formation using LII and shifted vibrational CARS

9. Gysel M, Nyeki S, Weingartner E, Baltensperger U, Giebl H, Hitzenberger R, Petzold A, Wilson C W: Jet engine combustion particle hygroscopicity under subsaturated conditions during PARTEMIS

10. Bukovnik M, Kalivoda M: AvioMEET inventory tool and its applications

Transport and impact on chemical composition

11. Leigh P, MacKenzie R, Borrman S: Air parcel trajectories in the south european UTLS: implications for the impact of air traffic emissions

12. Gauss M, Isaksen I, Lee D: The impact of aircraft on the chemical composition of the atmosphere and options for reducing the impact A 3D CTM model study

13. Köhler M O, Rogers H L, Pyle J A: Modelling the impact of subsonic aircraft emissions on ozone

14. Krämer M, Beuermann J, Schiller C, Grimm F, Arnold F, Peter T, Meilinger S, Meier A, Hendricks J, Petzold A, Schlager H: Uptake of nitric acid in cirrus clouds

15. Wuebbles D J, Dutta M, Jain A, Baughcum S L: Radiative forcing on climate from aircraft emissions in the stratosphere

16. Berntsen T, Gauss M, Grewe V, Hauglustaine D, Isaksen I, Mancini E, Meijer E, Pitari G, Sausen R: Sources of NOx at cruise altitudes, implications for predictions of ozone and methane perturbations due to NOx emissions from aircraft

Poster Session 2 (Wednesday, 02.07.2003, 15:20 - 16:30)

Particles and clouds

1. Minikin A, Petzold A, Fiebig M, Hendricks J, Schröder F: Aerosol properties measured in situ in the free troposphere and tropopause region at midlatitudes

2. Popovicheva O, Persiantseva N M, Shonia N K: Hygroscopicity and wetting of aircraft engine soot and its surrogates: CCN formation in UT

3. Mangold A, Büttner S, Ebert V, Giesemann C, Krämer M, Möhler O, Saathoff H, Schurath U, Stetzer O, Teichert H and Wagner R: Ice water content of cirrus clouds and its dependency on different types of aerosols

4. Nielsen J K: 3D simulation of cirrus formation from airplane contrails

5. Gierens K, Brinkop S: Heterogeneous nucleation effects on cirrus cloud coverage

6. Palikonda R, Phan D, Minnis P: Contrail coverage over the USA derived from MODIS and AVHRR data

7. Minnis P, Palikonda R, Ayers J K: Contrail coverage over the North Pacific from MODIS and AVHRR Data

8. Stubenrauch C, Meerkoetter R: Survey of cirrus properties from satellite retrievals using TOVS and AVHRR observations

9. Immler F, Schrems O: Comparison of cirrus cloud properties in the northern and southern hemisphere on the basis of lidar measurements

10. Tripathi S, Vancassel X, Grainger R, Rogers H: A Fast Stratospheric Aerosol Microphysical Model (SAMM)

Mitigation

11. Lee D S, Sausen R: Climate responses of aviation NO_x and CO_2 emissions scenarios