

Program

Monday, 10 June 2013

17:00 – 21:00 Registration

from 18:30 *BUFFET SUPPER / Welcome reception, Informal get together*

Tuesday, 11 June 2013

7:30 *BREAKFAST*

8:30 – 8:40 Christiane Voigt **Welcome and opening**
Stephan Borrmann
Ottmar Möhler

8:40 – 8:55 Ernst Dreisigacker **About the Wilhelm and Else Heraeus Foundation**

SESSION 1 - Water vapor observations

Rapporteur: Eric Jensen

Convenor: Ottmar Möhler

8:55 – 9:25 Markus Zondlo **Measuring water vapor in the UT/LS:
Challenges, advances, and
outstanding issues**

9:25 – 9:40 **Discussion**

9:40 – 10:00 Andrew Rollins **On the accuracy of UT/LS water vapor
measurements**

10:00 – 10:10 **Discussion**

10:10 – 10:30 Jessica Smith **In situ water vapor observations in the
UTLS: Measurement advancements
and new results**

10:30 – 10:40 **Discussion**

10:40 – 11:10 *COFFEE BREAK*

11:10 – 11:30 Elisabeth Moyer **Uses for the isotopic composition of
water vapor in cirrus and cloud
physics**

11:30 – 11:40 **Discussion**

Program

Tuesday, 11 June 2013

11:40 – 12:00 Andreas Zahn **Humidity and ice cloud observations in the UTLS on board the IAGOS-CARIBIC passenger aircraft between 2005 and 2013**

12:00 – 12:10 **Discussion**

12:10 – 12:30 Martin Riese **Impact of the asian monsoon on the water vapor budget in the extra-tropical lowermost stratosphere**

12:30 – 12:40 **Discussion**

12:40 **Conference photo** (in front of the Physikzentrum)

12:45 *LUNCH*

SESSION 2a – Stratospheric water vapor

Rapporteur (Session 2): Klaus Gierens

Convenor: Elisabeth Moyer

14:00 – 14:20 Troy Thornberry **Dehydration in the pacific TTL inferred from water vapor measurements during ATTREX 2013**

14:20 – 14:30 **Discussion**

14:30 – 14:40 Martina Krämer **Antarctic stratospheric dehydration/rehydration observations during the HALO-ESMVal mission**

14:40 – 14:45 **Discussion**

14:45 – 14:55 Volker Ebert **Multi-phase water detection on HALO using the HAI-TDLAS-hygrometer**

14:55 – 15:00 **Discussion**

15:00 – 15:20 Harald Saathoff **Intercomparison of atmospheric hygrometers at the AIDA simulation chamber (AquaVIT 2)**

15:20 – 15:30 **Discussion**

15:30 – 16:15 *COFFEE BREAK*

Program

Tuesday, 11 June 2013

Convenor: Stefan Borrmann

16:15 – 16:45 Karen Rosenlof

Stratospheric water vapor: Trends and climate impacts

16:45 – 17:00 **Discussion**

SESSION 2b – Contrails and humidity

Convenor: Stephan Borrmann

17:00 – 17:20 Ulrich Schumann

Sensitivity of contrail cirrus to ambient water vapor concentration

17:20 – 17:30 **Discussion**

17:30 – 17:50 Christiane Voigt

Microphysics and humidity in contrails – Recent progress and future challenges

17:50 – 18:00 **Discussion**

19:00 *HERAEUS DINNER, Informal get together (cold & warm buffet, free beverages)*

Program

Wednesday, 12 June 2013

7:30 *BREAKFAST*

SESSION 3a – Cirrus observations – In situ

Rapporteur (Session 3): Martin Wirth
Convenor: Jessica Meyer

8:30 – 9:00 Eric Jensen **Cirrus microphysical measurements**

9:00 – 9:15 **Discussion**

9:15 – 9.35 Martin Schnaiter **The nature of small ice particles (<50 μm): Pristine prisms or highly distorted crystals?**

9:35 – 9:45 **Discussion**

9:45 – 10:05 Martina Krämer **Cirrus microphysics viewed from the temperature - ice water parameter space**

10:05 – 10:15 **Discussion**

10:15 – 11:00 *COFFEE BREAK*

SESSION 3b – Cirrus observations – Remote sensing

Convenor: Andrew Gettleman

11:00 – 11:20 Manfred Wendisch **Remote sensing of cirrus: Selected problems and potential solutions**

11:20 – 11:30 **Discussion**

11:30 – 11:50 Ping Yang **Recent progress in light scattering and radiative transfer capabilities developed for studying cirrus clouds**

11:50 – 12:00 **Discussion**

12:00 – 12:20 Markus Rapp **Polar mesospheric cloud microphysics: Review and future perspectives**

12:20 – 12:30 **Discussion**

12:30 *LUNCH*

Program

Wednesday, 12 June 2013

SESSION 4a – Ice nucleation – Field studies

Rapporteur (Session 4): Diana Rose / Tamsin Leanne Malkin

Convenor: Martina Krämer

- 14:00 – 14:20 Paul DeMott **Studies of the diversity and influence of atmospheric aerosols as ice nuclei**
- 14:20 – 14:30 **Discussion**
- 14:30 – 14:50 Joachim Curtius **Field studies of atmospheric ice nuclei**
- 14:50 – 15:00 **Discussion**

SESSION 4b – Ice nucleation – Laboratory

Convenor: Johannes Hendricks

- 15:00 – 15:30 Ottmar Möhler **Laboratory studies of ice nucleation and related parameterization approaches**
- 15:30 – 15:45 **Discussion**
- 15:45 – 16:30 *COFFEE BREAK*
- 16:30 – 16:50 Thomas Koop **Glass formation and ice nucleation: Competitors or collaborators?**
- 16:50 – 17:00 **Discussion**
- 17:00 – 17:20 Thomas Leisner **Laboratory studies on cloud ice processes**
- 17:20 – 17:30 **Discussion**
- 17:30 – 17:50 Stephan Borrmann **Ice related processes in convective clouds: Experiments on collection kernels and retention during riming**
- 17:50 – 18:00 **Discussion**
- 18:00 – 18:20 Corinna Hoose **Transferring laboratory ice nucleation results into models**
- 18:20 – 18:30 **Discussion**
- 19:00 *DINNER, Informal get together*

Program

Thursday, 13 June 2013

7:00 *BREAKFAST*

SESSION 5a – Theory – Microphysics/Dynamics

Rapporteur (Session 5): Simon Unterstrasser

Convenor: Paul DeMott

8:00 – 8:20	Bernd Kärcher	The impact of supersaturation fluctuations on cirrus ice crystal size distributions
8:20 – 8:30	Discussion	
8:30 – 8:50	Beiping Luo	Controlling factors on formation of ice clouds: Small scale temperature fluctuation and heterogeneous ice nuclei
8:50 – 9:00	Discussion	
9:00 – 9:20	Klaus Gierens	Origin, evolution and dynamics of ice supersaturated regions in midlatitudes
9:20 – 9:30	Discussion	
9:30 – 9:50	Peter Spichtinger	Cirrus clouds and dynamics
9:50 – 10:00	Discussion	
10:00 – 10:30	<i>COFFEE BREAK</i>	

SESSION 5b – Theory – Global Modeling

Convenor: Jens-Uwe Groß

10:30 – 10:50	Johannes Hendricks	Global simulations of ice nuclei effects on cirrus clouds and climate
10:50 – 11:00	Discussion	
11:00 – 11:20	Andrew Gettleman	Understanding climate impacts of clouds and humidity in the UTLS
11:20 – 11:30	Discussion	
11:30 – 11:50	Ulrike Burkhardt	Global modeling of cirrus and contrail cirrus
11:50 – 12:00	Discussion	
12:00 – 12:20	Heini Wernli	Warm conveyor belts: Concept, dynamical relevance & impact on upper-tropospheric ice cloud formation
12:20 – 12:30	Discussion	
12:30	<i>LUNCH</i>	

Program

Thursday, 13 June 2013

SESSION 6 – Heraeus discussion

14:00 – 15:00 **10-min summaries of the rapporteurs from each session**

15:00 – 15:30 Ottmar Möhler **Final discussion – Workshop come out**
Stephan Borrmann **Summary**
Christiane Voigt

15:30 – 16:00 *COFFEE BREAK*

SESSION 7 – ML-CIRRUS Symposium SPP1294-HALO

Organization: Andreas Minikin, Christiane Voigt

16:00 – 16:15 Christiane Voigt **ML-CIRRUS Scope**
Andreas Minikin
Ulrich Schumann

16:15 – 16:30 Peter Spichtinger **Flight strategy natural cirrus**
Philipp Reutter

16:30 – 16:45 Ulrich Schumann **Flight strategy contrails cirrus**

16:45 – 18:00 **Forecast tools and flight planning**

(10 min each) Jens-Uwe Groß **Cirrus forecast**

Andreas Dörnbrack **Flight planing tool**
Andreas Schäfler

Maxi Böttcher **WCB forecast**
Andreas Schäfler

Kaspar Graf **Satellite information**
Ulrich Schumann

Ulrich Schumann **CoCip forecast**
Kaspar Graf

18:00 – 18:30 Martina Hierle **ML-CIRRUS status project
planning/logistics and discussion**

19:00 *DINNER, Informal get together*

