

3rd International Workshop on Mineral Dust

September 15-17, Leipzig, Germany

Monday, 15th

Welcome 09:00 - 09:10

Session 1: Measurements and modeling of dust emission and deposition

Chairs: B. Marticorena (France) and Y. Shao (Germany)

1. Y. Shao 09:10 - 09:30

Progress and remaining challenges in dust emission theory and schemes

2. J. L. Rajot 09:30 - 09:50

New techniques and experimental strategies for dust-emission and deposition measurements

3. K. Darmenova 09:50 - 10:10

Dust emission and deposition in regional models

4. Y. Tanaka 10:10 - 10:30

Dust emission and deposition in global models

Coffee Break 10:30 - 11:00

5. K. Schepanski 11:00 - 11:20

Characterization of dust source activation from satellite remote sensing

6. G. Bergametti 11:20 - 11:40

Progress and remaining challenges in dust deposition theory and schemes

Discussion Session 1 11:40 - 12:40

Lunch 12:40 - 14:00

Session 2: Chemical and physical properties of dust aerosol

Chairs: P. Formenti (France) and K. Kandler (Germany)

1. P. Formenti 14:00 - 14:20

Recent progress in understanding the regional characteristics of mineral dust composition

2. A. Petzold 14:20 - 14:40

Particle size distributions of airborne dust: Facts, gaps and constraints by instrumentation and observation

3. K. Kandler	14:40 - 15:00
<i>Capabilities and needs of mineral dust composition measurements for characterization of direct and indirect effects</i>	
4. Y. Balkanski	15:00 - 15:20
<i>Heterogeneous reactions on dust: Results and uncertainties from the laboratory, field work and modeling</i>	
Coffee Break	15:20 - 15:50
5. K. Desboeufs	15:50 - 16:10
<i>Water soluble fraction of dust: A critical chemical property to estimate dust impacts</i>	
6. D. Zhang	16:10 - 16:30
<i>Aging and mixing of dust during transport</i>	
Discussion Session 2	16:30 - 17:30

Tuesday, 16th

Session 3: Optical properties, remote sensing and radiative effects of dust aerosol

Chairs: I. Sokolik (USA) and M. Wendisch (Germany)

1. M. Schnaiter	09:00 - 09:20
<i>Recent progress in laboratory investigations on the spectral optical properties of mineral dust aerosol</i>	
2. J. Reid	09:20 - 09:40
<i>Spatiotemporal dynamics of optical and radiative properties of dust aerosol: Lessons learned from PRIDE and UAE field experiments</i>	
3. D. Müller	09:40 - 10:00
<i>Capabilities and limitations of ground-based remote sensing of dust: Lessons learned from SAMUM</i>	
4. O. Kalashnikova (Presentation given by R. Kahn)	10:00 - 10:20
<i>Capabilities and limitations of space-borne passive remote sensing of dust</i>	
Coffee Break	10:20 - 10:50
5. C. Hsu	10:50 - 11:10
<i>Recent progress in characterization of dust over land surfaces with space-borne passive remote sensing</i>	
6. J. Redemann	11:10 - 11:30
<i>Synergy of airborne and space-borne passive remote sensing of dust</i>	

7. M. Wendisch <i>Major factors influencing local dust radiative forcing</i>	11:30 - 11:50
8. I. Sokolik <i>Progress and challenges in dust radiative modeling for passive/active remote sensing and climate models</i>	11:50 - 12:10
Discussion Session 3	12:10 - 13:10
<i>Lunch</i>	13:10 - 14:30
L. Barrie and S. Nickovic <i>The WMO Sand and Dust Storm Warning and Assessment System (SDS-WAS): A global consortium helping society reduce risk through research, assessments and forecasts</i>	14:30 - 15:00

Session 4: Poster presentations (including coffee)

Chairs: J. Heintzenberg (Germany), G. Bergametti (France), and
M. Mikami (Japan)

15:00 – open end

Wednesday, 17th

Session 5: Integration of models and remote sensing data for characterization of 3D spatiotemporal distribution of dust aerosol

Chairs: I. Tegen (Germany) and D. Winker (USA)

1. D. Winker <i>Capabilities of CALIPSO for 3D characterization of global atmospheric dust</i>	09:00 - 09:20
2. A. Ansmann <i>3D characterization of dust from a network of ground-based lidars: Capabilities and limitations</i>	09:20 - 09:40
3. K. Yumimoto <i>Assimilation of CALIPSO and ground-based lidar data into the regional models</i>	09:40 - 10:00
4. O. Torres <i>Absorption estimates of desert dust aerosols from observations by the OMI sensor</i>	10:00 - 10:20

<i>Coffee Break</i>	10:20 - 10:50
5. P. Ginoux <i>Using satellite data in global modeling of 3D dust fields</i>	10:50 - 11:10
6. D. Westphal <i>Using satellite data for dust forecast modeling from regional to global scales</i>	11:10 - 11:30
Discussion Session 5 11:30 - 12:30	

Lunch 12:30 - 14:00

Session 6: Impacts of dust aerosol on clouds and atmospheric dynamics

Chairs: R. Miller (USA) and A. Nenes (USA)

1. A. Nenes <i>Progress in cloud droplet formation parameterization for dust particles</i>	14:00 - 14:20
2. P. DeMott <i>Dust impacts on ice formation: Insights from laboratory and field studies</i>	14:20 - 14:40
3. C. Perez <i>Dust feedbacks on atmospheric dynamics: Insights from a regional model</i>	14:40 - 15:00
4. C. Hoose <i>Dust impacts on warm and cold clouds: Insights from global models</i>	15:00 - 15:20
<i>Coffee Break</i>	15:20 - 15:50
5. R. Miller <i>Dust impacts on atmospheric dynamics and precipitation</i>	15:50 - 16:10
6. P. Knippertz <i>Dust and hurricanes linkages</i>	16:10 - 16:30
Discussion Session 6	16:30 - 17:30

End of meeting