



ATMOSPHERIC ICE NUCLEATION CONFERENCE

16TH – 17TH January 2017 - Leeds, UK.

Poster Programme Day 1 – Monday 16th January

1	<p>Supercooled fog as a natural laboratory for studying ice formation in clouds</p> <p><u>Lea Weber</u> & Franz Conen</p> <p>University of Basel, Bernoullistrasse 30, 4056 Basel, Switzerland</p>
2	<p>The Occurrence Frequency and Properties of Geometrically Thin Stratiform Clouds Associated with Precipitating Shallow Convection over the Southern Ocean</p> <p><u>Gerald G. Mace</u>¹, Alain Protat²</p> <p>1. Department of Atmospheric Sciences, University of Utah 2. Center for Australian Weather and Climate Research, Melbourne, Australia</p>
3	<p>Quantifying bioaerosols and proteinaceous ice nuclei that may impact atmospheric processes in the high arctic</p> <p>Tina Šantl-Temkiv^{1,2}, Urška Rauter³, Stephanie Pilgaard¹, Sylvie Tesson⁴, Robert Lange⁵, Nina Gunde-Cimerman³, Sissel Svendsen⁵, Andreas Massling⁵, Kai Finster^{1,2}</p> <p>1 Department of Bioscience, Aarhus University, Denmark 2 Stellar Astrophysics Centre, Department of Physics and Astronomy, Aarhus University, Denmark 3 Department of Biology, University of Ljubljana, Slovenia 4 Department of Biology, Lund University, Sweden 5 Department of Environmental Science, Aarhus University, Denmark</p>
4	<p>Immersion freezing properties of complex biological aerosols derived from plants</p> <p><u>I. Steinke</u>, R. Funk, N. Hiranuma, O. Möhler, H. Saathoff, R. Ullrich, T. Leisner</p> <p>Institute for Meteorology and Climate Research – Atmospheric Aerosol Research, Karlsruhe Institute of Technology, Germany Leibniz Centre for Agricultural Landscape Research, Germany Institute for Environmental Physics, Ruprecht-Karls-University Heidelberg, Germany</p>
5	<p>Measurements of IN with the Spectral Ice Nuclei Counter SPIN at Halley during Antarctic season 2015/16</p> <p><u>Amélie Kirchgassner</u>¹, Michael Flynn², Thomas Lachlan-Cope¹</p> <p>¹ British Antarctic Survey, Madingley Road, Cambridge, CB3 0ET, UK ² School of Earth, Atmospheric and Environmental Sciences, University of Manchester, Manchester, M13 9PL, UK</p>
6	<p>ChAIN: Characterisation of Atmospheric Ice Nuclei Development of an airborne Ice Nuclei chamber</p> <p><u>E Freney</u>¹, M Monier¹, A Nicosia^{1,2}, P Villani¹, D Picard¹, C Verhaege¹, Z A Kanji³</p> <p>1. Laboratoire de Météorologie Physique (LaMP-CNRS), Clermont-Ferrand, 63100, France 2. Institute of Atmospheric Sciences and Climate (ISAC-CNR), Bologna, 40129, Italy 3. Institute for Atmospheric and Climate Science (ETH), Zürich, 8092, Switzerland</p>

7	<p align="center">What drives emissions of ice nucleating particles from temperate agricultural lands?</p> <p align="center"><u>D. O'Sullivan</u>, M. Adams, M. Holden, A. Harrison, T. Whale, M. Tarn, G. Porter, and B.J. Murray</p> <p align="center">Institute for Climate and Atmospheric Science, University of Leeds, LS29JT, UK</p>
8	<p align="center">Oxidative processing studies on biological ice nucleating particles</p> <p align="center"><u>Ellen Gute</u> & Jonathan P.D. Abbatt</p> <p align="center">Department of Chemistry, University of Toronto, 80 St. George Street, Toronto ON, M5S 3H6, Canada</p>
9	<p align="center">Atmospheric Ice Nuclei Measurements</p> <p align="center"><u>M Rinaldi</u>, A Nicosia, S Decesari, M Paglione, S Sandrini, A Marinoni, P Cristofanelli, G Santachiara, M C Facchini, F Belosi</p> <p align="center">Institute of Atmospheric Sciences and Climate (ISAC-CNR), Via Gobetti 101, Bologna, 40129, Italy</p>
10	<p align="center">The Dynamic Filter Processing Chamber: a measurement technique for the detection of ice nuclei</p> <p align="center"><u>A Nicosia</u>, G Santachiara, F Prodi, F Belosi</p> <p align="center">Institute of Atmospheric Sciences and Climate (ISAC-CNR), Via Gobetti 101, Bologna, 40129, Italy</p>
11	<p align="center">Studies of ice nucleation entities in sea spray aerosol</p> <p align="center"><u>P. J. DeMott</u>¹, C. S. McCluskey¹, T. C. J. Hill¹, F. Malfatti², G. P. Schill¹, O. Laskina, J. Trueblood³, M. V. Santander³, C. M. Beall³, R. H. Mason⁴, A. K. Bertram⁴, V. H. Grassian³ and K. A. Prather³</p> <p align="center">¹Department of Atmospheric Science, Colorado State University, Fort Collins, CO USA 80523-1371 ²National Institute of Oceanography and Experimental Geophysics, Trieste, Italy ³University of California, San Diego, and Scripps Institution, La Jolla, CA ⁴University of British Columbia, Vancouver, BC, Canada</p>
12	<p align="center">Ice nucleation by cellulose aerosol particles</p> <p align="center">A Nicosia, <u>M Piazza</u>, G Santachiara, F Belosi</p> <p align="center">Institute of Atmospheric Sciences and Climate - (ISAC-CNR), Via Gobetti 101, Bologna, 40129, Italy</p>
13	<p align="center">Ice nucleation in the Tropical Tropopause Layer: Does scavenging of heterogeneous ice nuclei result in predominance of homogeneous freezing at the tropical tropopause?</p> <p align="center"><u>Eric Jensen</u>¹ , Bernd Kaercher²</p> <p align="center">¹ NASA ²German Aerospace Center (Deutsches Zentrum f. Luft- u. Raumfahrt)bernd.kaercher@dlr.de</p>



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Poster Programme Day 2 – Tuesday 17th January

1	<p>How important are local sources and long-range transport of aerosol particles for the IN and CCN concentration in the Arctic?</p> <p>L. Ickes^{1,2}, C. Hoose² & A. Ekman¹</p> <p>1: Department of Meteorology, Stockholm University, 10691 Stockholm, Sweden 2: Institute of Meteorology and Climate Research, Karlsruhe Institute of Technology, 76021 Karlsruhe, Germany</p>
2	<p>Direct comparison of immersion and contact freezing under simulated atmospheric conditions</p> <p>Miklós Szakáll¹, Oliver Eppers¹, Karoline Diehl¹, Subir K. Mitra², Stephan Borrmann^{1,2}</p> <p>¹Institute for Atmospheric Physics, University Mainz, Germany ²Particle Chemistry Department, Max Planck Institute for Chemistry, Mainz, Germany</p>
3	<p>Influence of different heterogeneous ice-nucleation parameterizations on the simulation of idealized mixed-phase clouds</p> <p><u>I. Reichardt</u> and C. Hoose</p> <p>Institute of Meteorology and Climate Research - Karlsruhe Institute of Technology</p>
4	<p>The enhancement and suppression of immersion mode heterogeneous ice nucleation by solutes</p> <p><u>T F Whale</u>, T W Wilson, D O'Sullivan, B J Murray</p> <p>School of Earth and Environment, University of Leeds, Leeds, LS2 9JT, UK</p>
5	<p>Developing a calorimeter for ice-nucleation study in sub-microlitre droplets</p> <p><u>F. Cook</u>, G. Sitbon and W. Schwarzacher</p> <p>HH Wills Physics Laboratory University of Bristol Tyndall Avenue Bristol BS8 1TL</p>
6	<p>Microfluidic Devices for the Study of Ice Nucleating Particles</p> <p><u>MD Tarn</u>,^{1,2} SNF Sikora,³ GCE Porter,^{1,2} J-u Shim² & BJ Murray¹</p> <p>¹ School of Earth and Environment, University of Leeds, Leeds, LS2 9JT, UK ² School of Physics and Astronomy, University of Leeds, Leeds, LS2 9JT, UK ³ School of Mechanical Engineering, University of Leeds, Leeds, LS2 9JT, UK</p>
7	<p>Freezing of droplets containing sea salt, pseudomonas syringae and octadecanol</p> <p>Merete Bachmann Jørgensen^{1*}, Tina Šantl-Temkiv^{2,3}, Kai Finster^{2,3}, Merete Bilde¹</p> <p>1Department of Chemistry, Aarhus University, Denmark 2Department of Bioscience, Aarhus University, Denmark 3Stellar Astrophysics Center, Department of Physics and Astronomy, Aarhus University, Denmark</p>

8	<p style="text-align: center;">The Weizmann Supercooled Droplets Observation on Microarray (WISDOM)</p> <p style="text-align: center;"><u>N. Reicher</u>, L. Segev and Y .Rudich</p> <p style="text-align: center;">Department of Earth and Planetary Sciences, The Weizmann Institute of Science, Rehovot, 7610001, Israel Presenting author email: Naama.Reicher@weizmann.ac.il</p>
9	<p style="text-align: center;">Application of a new parametrization framework for heterogeneous ice nucleation in a regional- scale model</p> <p style="text-align: center;"><u>R Ullrich</u>¹ & C Hoose^{1,*} & B Vogel¹ & H Vogel¹ & D Rieger¹ & K Deetz¹ & D Cziczo² & K Froyd³ & J Schwarz³ & O Moehler¹</p> <p style="text-align: center;">¹ Karlsruhe Institute of Technology, Institute of Meteorology and Climate Research, Karlsruhe, Germany ² Massachusetts Institute of Technology, Earth, Atmospheric and Planetary Science, Cambridge/ MA, U.S. ³ NOAA, Earth System Research Laboratory – Chemical Science Division, Boulder/ CO, U.S. * presenting author</p>
10	<p style="text-align: center;">New insights into the ice nucleating abilities of alkali feldspars</p> <p style="text-align: center;"><u>M A Holden</u>,¹ T F Whale,¹ B J Murray,¹ D O’Sullivan,¹ A N Kulak,² F C Meldrum,² G Burnell³ & H K Christenson³</p> <p style="text-align: center;">School of Earth and Environment,¹ School of Chemistry² and School of Physics,³ University of Leeds, Leeds, LS2 9JT, UK</p>
11	<p style="text-align: center;">Heterogeneous ice nucleation ability of NaCl and sea salt aerosol particles at cirrus temperatures</p> <p style="text-align: center;"><u>R Wagner</u>, J Kaufmann, O Möhler, H Saathoff, M Schnaiter & T Leisner</p> <p style="text-align: center;">Karlsruhe Institute of Technology (KIT), Institute for Meteorology and Climate Research (IMK-AAF), Hermann-von-Helmholtz-Platz 1, D-76344 Eggenstein-Leopoldshafen, Germany</p>
12	<p style="text-align: center;">Contribution of feldspar and marine organic aerosols to global ice nucleating particles concentrations</p> <p style="text-align: center;"><u>Jesús Vergara-Temprado</u>¹, Theodore W. Wilson¹, Daniel O’Sullivan¹, Jo Browse^{1,2}, Kirsty J. Pringle¹, Karin Ardon-Dryer³, Allan K. Bertram⁴, Susannah M. Burrows⁵, Darius Ceburnis⁶, Paul J. DeMott⁷, Ryan H. Mason⁴, Colin D. O’Dowd⁶, Matteo Rinaldi⁸, Benjamin J. Murray¹, and Ken S. Carslaw¹</p> <p>1Institute for Climate and Atmospheric Science, School of Earth and Environment, University of Leeds, Woodhouse Lane, Leeds, LS2 9JT, UK 2College of Life and Environmental Sciences, University of Exeter, Penryn, TR10 9EZ, UK 3Department of System Biology, Harvard University, Harvard Medical School, Boston, USA 4Department of Chemistry, University of British Columbia, Vancouver, BC, V6T1Z1, Canada 5Pacific Northwest National Laboratory, Atmospheric Sciences and Global Change Division, P.O. Box 999 MS K-24, Richland, WA 99352, USA 6School of Physics and Centre for Climate and Air Pollution Studies, Ryan Institute, National University of Ireland Galway, Galway, Ireland. 7Department of Atmospheric Science, Colorado State University, Fort Collins, CO 80523-1371 8Italian National Research Council (CNR) - Institute of Environmental Sciences and Climate (ISAC), via P. Gobetti 101, 40129 Bologna, Italy</p>
13	<p style="text-align: center;">Not all feldspars are equal: A survey of ice nucleating properties across the feldspar group of minerals</p> <p style="text-align: center;">Alexander D. Harrison (1)*, Thomas F. Whale (1), Michael A. Carpenter (2), Mark A. Holden (1), Lesley Neve (1), Daniel O’Sullivan (1), Jesus Vergara Temprado (1), Benjamin J. Murray (1)</p> <p style="text-align: center;">(1)School of Earth and Environment, University of Leeds, Leeds, LS2 9JT, UK, (2) Department of Earth Sciences, University of Cambridge, Downing Street, Cambridge CB2 3EQ, UK</p>