



AARHUS UNIVERSITY
EXTERNAL SEMINAR
DEPARTMENT OF ENVIRONMENTAL SCIENCE
Frederiksborgvej 399, 4000 Roskilde
21 August 2018, 13:00 –14:00
Venue: The Pavilion



Title: Global CCN trends during 2000-2010

Speaker: Risto Makkonen, Research Professor at Finnish Meteorological Institute, also researcher at Institute for Atmospheric and Earth System Research / Physics, University of Helsinki

Abstract: Atmospheric aerosols can influence cloud optical and dynamical processes by acting as cloud condensation nuclei (CCN). Globally, these indirect aerosol effects are significant to the radiative budget as well as a source of high uncertainty in anthropogenic radiative forcing. However, due to scarcity of atmospheric observations simulated global CCN concentrations and potential trends remain poorly constrained. Here we assess global CCN variability with a climate model, and attribute changes during 2000-2010 to emissions and meteorological patterns.

Title: Response of Arctic temperature to changes in emissions of short-lived climate forcers

Speaker: Maria Sand, Researcher, CICERO Center for International Climate Research

Abstract: Over recent decades temperatures in the Arctic have increased at twice the global rate, largely as a result of ice–albedo and temperature feedbacks. Although deep cuts in global CO₂ emissions are required to slow this warming, there is also growing interest in the potential for reducing short-lived climate forcers (SLCFs). Politically, action on SLCFs may be particularly promising because the benefits of mitigation are seen more quickly than for mitigation of CO₂ and there are large co-benefits in terms of improved air quality. Here we systematically quantify the Arctic climate impact of regional SLCFs emissions and their transport processes and transformations in the atmosphere. We find that the largest Arctic warming source is from emissions within the Asian nations owing to the large absolute amount of emissions. However, the Arctic is most sensitive, per unit mass emitted, to SLCFs emissions from a small number of activities within the Arctic nations themselves.

Host: Ulas Im, Scientist, <http://au.dk/da/ulas@envs.au.dk>, Atmospheric modeling, ENVS, AU



External guests interested in attending the presentation should e-mail
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