



**International Symposium**  
**The Arctic Climate System, its Present Status, Future Evolution and Potential**  
**Impacts**  
**organised by the Damocles Steering Committee**  
**in Brussels, on November 10-12, 2009**

**Madou Tower**  
**Place Madou, 1 1210 - Saint-Josse-Ten-Noode (Metro: Madou)**

**Tuesday, November 10, 2009**

**9.00 - 9.30 Registration**

**9.30 - 10.00 Welcoming addresses**

**Dr Jean Claude Gascard** Scientific Coordinator of Damocles

**Manuela Soares** European Commission DG Research Director Directorate I

**Pr Jean-Charles Pomerol** President of the UPMC Coordinator of Damocles

**10:00 - 10h30 Michel Rocard** Former Prime Minister, Ambassador of France for International Negotiations on the Arctic and the Antarctic will make a presentation regarding the Arctic Governance.

**10.30 – 12.30. Session 1. The Arctic Cryosphere**

*Conveners Jean Claude Gascard and Peter Wadhams*

Invited speakers:

**Jean-Claude Gascard.** The Arctic Ocean, Atmosphere, Sea Ice. Extreme Events During IPY and Before.

**Humfrey Melling.** Musings on the Future of Thick Multi-Year Ice in the Arctic.

**Michiel Van Den Broeke.** Greenland Mass Balance and Dynamic Changes.

**Fiamma Straneo.** Ice Sheet-Ocean Interactions around Greenland: Did Ocean Warming Accelerate the Outlet Glaciers?

**Charlie Koven.** Modelling Build-up & Decay of the Permafrost Carbon Pool.

**12.30- 14.00 Lunch**

**14.00 – 16.00. Session 2. Circulation, Energy and Fresh Water Budgets in the Atmosphere and the Ocean.**

*Conveners Cecilie Mauritzen, Timo Vihma, Ursula Schauer.*

Invited speakers:

**Klaus Detlhoff et al.,** Arctic Feedbacks and Atmospheric Teleconnections.

**Timo Vihma.** Atmospheric Moisture Budget in the Arctic.

**Burghard Brümmner.** Cyclones and their Effect on Sea Ice.

**Bert Rudels.** Linking the Small Scales to the Large Scale.

**Rebecca Woodgate.** Pacific Influences in the Western Arctic.

**Ursula Schauer.** Recent Heat and Fresh Water Changes in the Arctic Ocean.

**16.00 -18.00 Poster session (drinks)**

**19: 30: Conference Dinner (La Manufacture)**

Rue Notre Dame du Sommeil 12-20, 1000 Brussels



Wednesday November 11, 2009

**8.30 – 10.30. Session 3. Small Scale Physical Processes and their Representation in Climate Models** *Conveners Timo Vihma and Jean Claude Gascard*

Invited Speakers:

**Michael Tjernström.** Small-Scale Scale Processes in Arctic Modelling: Confronting Models with Reality.

**Christof Lüpkes.** Turbulent Mixing in the Arctic Atmosphere.

**Sebastian Gerland.** Ice and Snow Albedo, Melt Ponds and Feedbacks Mechanisms.

**Jerome Weiss.** Sea Ice Dynamics and Fracturing.

**John Toole.** Influences of the Ocean Surface Mixed Layer and Thermohaline Stratification on Arctic Sea-Ice.

**Annette Rinke.** Impact of Small Scale Process Parameterizations on Climate Models.

**10.30 – 11.00 Coffee Break**

**11.00 – 12.45 Session 4. Operational Forecasting and Reanalysis in the Arctic**  
*Convener Oystein Godoy*

Invited speakers:

**Jun Inoue.** Impact of Observations from Arctic Drifting Buoys on Reanalysis of Surface Fields.

**Laurent Bertino.** Ocean and Sea-Ice Forecast and Reanalysis, the Assimilation of DAMOCLES Data into the MyOcean Core Services .

**Lars Axell.** A Coupled Atmosphere-Ice-Ocean Reanalysis for the Arctic.

**Per Kållberg.** Arctic Reanalysis, Gaps to Be Covered.

**Nick Hughes.** Operational Sea-Ice Forecasting. Status and Needs for the Future.

**12.45 – 14.15 Lunch**

**14.15 – 16.45 Session 5. New Observational Techniques** *Convener Stein Sandven*

Invited speakers:

**Ola Persson.** Observing Methods for the Arctic Atmosphere.

**Craig Lee.** Physical Observation Methods for the Arctic Ocean.

**Eduard Bauerfeind.** Biological Observations of the Deep Arctic Ocean.

**Stein Sandven.** Integrated Acoustic Observing System for the Arctic.

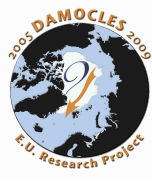
**Peter Wadhams.** Arctic Sea-Ice Observing Methods.

**Georg Heygster.** New Satellite Remote Sensing Methods for the Arctic.

**Alexander Makshtas and Vladimir Sokolov.** Russian Drifting Stations during IPY.

**16.45 – 18.00 Poster session (drinks)**

**20:00 : Evening Event: Screening of the Award-Winning Film “Tara, Journey to the Heart of the Climate Machine” and Contact with the General Public in Brussels**



Thursday November 12, 2009

**8.30 – 10.40. Session 6. From Expeditions to a Network. How to Integrate Field Work into a Sustainable Focused Network? *Convener Eberhard Fahrback and Thomas Kaminski***

Invited speakers:

**Bob Dickson.** Designing an Ocean Observing System for the 'Legacy Phase' of the IPY: What Questions Should we Be Testing?

**Peter Rayner.** Optimizing Observations through Quantitative Network Design.

**Peter Schlosser.** Architecture and Implementation of an Integrated Sustained Arctic Observing System

**Oystein Godoy.** From Sensors to Products, Bridging the Gap (Data Flow).

**Harald Schyberg.** From Sensors to Products, Bridging the Gap (Meteorology).

**Ole Martin Smedstad.** From Sensors to Products, Bridging the Gap (Oceanography).

**10.40 – 11.10 Coffee Break**

**11.10 – 12.50 Session 7. Predictability on Synoptic, Seasonal, Decadal and Climatic Scales**

*Convener Michael Karcher*

Invited speakers:

**Mojib Latif.** Decadal-Multi Decadal Predictions in the North Atlantic.

**Torben Koenigk.** Interannual Climate Predictability in High Northern Latitudes.

**Detlef Quadfasel.** THOR: Long Term Observations of MOC Variability in the North Atlantic.

**Wieslaw Maslowski.** An Assessment of Model Predictability of Arctic Climate Change.

**Frank Kauker.** Seasonal Predictability of Sea Ice Minimum Extent.

**12.50 – 14.10 Lunch and Press Conference**

**14.10 – 16.30 Session 8. Projections of the Arctic Future Climate and its Consequences for the Carbon Cycle, Ecosystems and for Human Society**

*Conveners. Ralf Döscher and Grete Hovelsrud*

Invited speakers:

**Vladimir Kattsov.** Performances of GCMs in the Arctic, Recent Results, Expectations to the Upcoming CMIP.

**Ralf Döscher.** Regional Arctic Future Climate Projections.

**Leif Anderson.** Use of Arctic Climate Change Scenarios for Estimates of Biogeochemistry.

**Paul Wassmann.** Marine Ecosystems and Arctic Change Projections.

**Grete Hovelsrud.** Vulnerability and Adaptation to Climate Variability and Change in the Coastal Fisheries (Finnmark).

**Michael Karcher.** Linking Modelling Data with Societal Impacts: a Case Fishery Landings and SST.

**Jacqueline McGlade.** Assessment of Economic, Ecological and Social Consequences of Arctic Changes: an Overview.

**16.30 – 18.30 Wrap up Session Based on Oral and Poster Presentations. Conclusions**

*Conveners: Damocles scientific committee (Jean-Claude Gascard), DG Research (Elisabeth Lipiatou)*