

Atmosphere Working Group Meeting

23 April 2015

14.00-17.30

(Lunch 12.30-14.00, Coffee Break 16.10-16.30)

Japan, Toyama
Toyama International Conference Centre

Draft Agenda

Participants:

WG MEMBERS PRESENT:

JIM OVERLAND - USA, CHAIR
MICHAEL TJERNSTRÖM - SWEDEN, VICE CHAIR
KATHY LAW - FRANCE, VICE CHAIR
HIROSHI L. TANAKA - JAPAN, VICE CHAIR
LEOPOLD HAIMBERGER – AUSTRIA
CLAUDE LABINE – CANADA
BIAN LINGEN – CHINA
TIMO VIHMA – FINLAND
EILA LEHMUS – FINLAND
KLAUS DETHLOFF – GERMANY
GÜNTHER HEINEMANN – GERMANY
HALLDOR BJORNSSON – ICELAND
SURESH BABU – INDIA
NUNCIO MURUKESH – INDIA
VITO VITALE – ITALY
JUN INUOE – JAPAN
SEONG JOONG KIM – KOREA
YOUNG JUN YOON – KOREA

THOMAS SPENGLER – NORWAY
KJETIL TØRSETH – NORWAY
RAJMUND PRZYBYLAK – POLAND
EWA LUPIKASZA – POLAND
ANGEL FRUTOS BARAJA – SPAIN
JOHN CASSANO – USA

WG MEMBERS NOT PRESENT:

HARALD RIEDER – AUSTRIA
KAMIL LASKA – CZECH REPUBLIC
HENRIK KOV - DENMARK
GUDRUN NINA PETERSON – ICELAND
PETER VAN VELTHOVEN – NETHERLANDS

GUESTS AND OBSERVERS:

SANDY STARKWEATHER - IAOSA

SECRETARIAT

VOLKER RACHOLD (EXECUTIVE OFFICER)
JO BROWSE (IASC FELLOW)



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1 OPENING AND REPORTING (14.00-14.10)

1.1 WELCOME AND INTRODUCTIONS

JAMES OVERLAND

1.2 REPORT FROM THE CHAIR

JAMES OVERLAND

1.3 APPROVAL OF THE MINUTES FROM THE LAST MEETING

VOLKER RACHOLD

- The minutes of the 2014 meeting is given in ANNEX 1.3.

1.4 ADOPTION OF THE AGENDA

JAMES OVERLAND

2 REPORTS ON CURRENT ACTIVITIES (14.10 – 16.10)

2.1 ARCTIC MIDLATITUDE WEATHER LINKAGES: ICARP III SESSION, WORKSHOP AND PAPER

JAMES OVERLAND, SEONG JOONG KIM, TIMO VIHMA

The potential for ongoing large temperature and other changes in the Arctic to impact mid-latitude extreme weather events has societal, economic, and scientific impacts. The issue is, however, complex and controversial as the time period for observing such linkages is short [<10 years] and involves understanding the direct forcing by Arctic changes on a chaotic climatic system. ICARP III, through support of IASC and CliC have held two workshops. Products are an accepted paper in *Journal of Climate* and an all-day session at the ICARP III *symposium*. There is a general agreement that there will be no net mid-latitude cooling, only a potential for severe events. Progress can be made with the hypothesis that linkages will be regional, episodic, and based on amplification of existing weather patterns, and the result of a combination of internal climate variability, new lower-tropospheric Arctic temperature anomalies, and mid-latitude teleconnections.

2.2 MOSAIC

MATTHEW SHUPE, KLAUS DETHLOFF AND MICHAEL TJERNSTRÖM

Planning for the Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAIC) is proceeding as part of the YOPP (Year of Polar Prediction). The observatory will spend at least one year embedded within the Arctic sea ice to collect the interdisciplinary, process-level observations necessary to evaluate and improve model parameterizations in the central Arctic. There will be a report and discussions on current status, interaction with YOPP and plan for the Sunday workshop.

2.3 DYNAMICS OF ATMOSPHERE-ICE-OCEAN INTERACTIONS IN HIGH LATITUDES
THOMAS SPLENGER

Building on results from WWRP-THORPEX and in an effort to contribute to the WWRP Polar Prediction Project a workshop on the Dynamics of Atmosphere – Ice – Ocean Interactions in High Latitudes was held in the spring of 2015 outside of Bergen, Norway. The main objective of the workshop is to bring together international scientists to explore the connections between their areas of expertise, encompassing operational forecasting, observational and theoretical research, climate dynamics, predictability and the impact of severe weather events in the Polar Regions.

2.4 EGU SESSION: ARCTIC CLIMATE CHANGE AND ARCTIC – MIDLATITUDE WEATHER PHENOMENA
HALLDOR BJORNSSON

A major theme of the AWG is understanding polar prediction. Fall of last year, AWG held a workshop in Iceland. The workshop met the core international science objectives (IASC, CliC and WCRP) of Polar Prediction and potential global impacts of Arctic change. The Iceland Workshop was held in Reykjavik, Iceland in November 2013. It was successful with 33 scientists who had recently worked on jet stream and Arctic linkages issues. A series of presentations based on recent scientific work was held, finishing with a matrix laying out current understanding based on geographic location and relevant dynamics: for example direct forcing, stratospheric control, or amplification of a downstream jet stream pattern. Further modelling statistical and dynamic analyses of recent and future jet stream and storminess changes were recommended.

2.5 WORKSHOP ON ARCTIC AIR POLLUTION
KATHY LAW AND SANDY STARKWEATHER

The Arctic Air Pollution workshop was held in Boulder, Colorado, 3 – 5 February 2015. More than 30 members of the research community gathered in Boulder to discuss future directions for internationally coordinated Arctic air pollution research over the next 10 years. Participants represented research institutes from Asia, Europe and North America; their science interests included both aerosols and trace gases with research expertise in campaign and long-term observations, global and regional modelling, and community-based observing.

- The workshop report is given in ANNEX 2.5

2.6 DATA RESCUE ACTIVITY
RAJMUND PRZBYLAK

3 REVIEW OF IASC ACTIVITIES RELATED TO THE AWG

3.1 CLIMATE ACTIVITIES OF CLIC
JENNY BASEMAN

3.2 YOPP (YEAR OF POLAR PREDICTION)
TBD

4. UPCOMING AWG ACTIVITIES FOR 2015 AND 2016

4.1 REVIEW OF WG FOCI
JAMES OVERLAND

The Scientific Foci of the Working Group had been discussed and agreed upon at the first WG meeting in Potsdam (Germany) in January 2011. Under this agenda item, the WG is asked to revisit these foci and to discuss possible changes or additions.

4.2 THE 2ND INTERNATIONAL CONFERENCE 'POLAR CLIMATE AND ENVIRONMENTAL CHANGE IN THE LAST MILLENNIUM'

RAJMUND PRZYBYLAK

The 1st International Conference 'Polar climate and environmental change in the last millennium' was organized in Toruń 1-3 February 2010. The success of this Conference influenced on the decision that this kind of conference should be cyclical, every 5 years. Therefore the preparation for, the 2nd International Conference, 'Polar climate and environmental change in the last millennium,' which is scheduled for 24-26 August 2015, has started.

- The workshop proposal is given in ANNEX 4.2.

4.3 LUNAR PHOTOMETRY IN THE ARCTIC
VITO VITALE

- The proposal is given in ANNEX 4.3.

4.4 ADDITIONAL PROPOSED AWG ACTIVITIES FOR 2015 AND 2016
NEW ACTIVITIES/TASKS BROUGHT FORWARD BY THE MEMBERS

Under this agenda item, new suggestions and proposals on WG activities will be brought forward by members of the Working Groups. This will include short presentations followed by a discussion. **Please submit topic ideas before the meeting if possible.**

4.4.1 ADVANCING INTEGRATED, CROSS-CUTTING PRACTICES FOR ARCTIC FLUX
OBSERVATIONS
CLAUDE LABINE

- The proposal is given in ANNEX 4.4.1.

4.4.2 ARCTIC AIR POLLUTION
KATHY LAW

- The proposal is given in ANNEX 4.4.2.

4.4.3 SUPPORT FOR POLAR PREDICTION PROGRAM (PPP)
THOMAS SPENGLER