PolarPredictNews

www.polarprediction.net

NEWSLETTER #01 - 06 OCTOBER 2016

Dear Colleagues,

Welcome to the first issue of the ***PolarPredictNews***!

Carrying out successful international research activities requires an effective way of communication. Communication is needed, for example, to keep people up-to-date on developments, involve the community in the planning and to ensure that existing synergies are identified and exploited. As part of the Polar Prediction Project, thus far, communication was mainly achieved through meetings, a mailing list (with more than 500 subscribers as of this month), an endorsement process (see this issue), and various publications.

Following recommendations from last year's YOPP Summit in Geneva, Switzerland, it was decided to further strengthen communication through a newsletter dedicated to the Year of Polar Prediction. ***PolarPredictNews***, as this newsletter is called, will be available every other month. It is edited by the International Coordination Office for Polar Prediction (ICO), based at the Alfred Wegener Institute in Bremerhaven, Germany.

For ***PolarPredictNews*** to be successful, we need your help in actively contributing to upcoming issues! So, in case you would like to share relevant topics with your colleagues, please contact the ICO at office@polarprediction.net.

Happy reading,

Thomas Jung

PolarPredictNews

Content

01 YOPP Implementation Plan version 2.0
02 Russian Aircraft Laboratory
03 New members in PPP Steering Group
04 WMO Certificates of Appreciation
05 Polar Prediction Workshop 2017
06 YOPP in the Southern Hemisphere
07 Online request for YOPP endorsement
08 Planning of the Year of Polar Prediction
09 YOPP endorsed! – AWARE
10 Upcoming Events

01 Year of Polar Prediction Implementation Plan version 2.0 | A revised version of the Implementation Plan for the Year of Polar Prediction (YOPP) has just been released by the World Meteorological Organization (WMO). It is available here. In the new Implementation Plan, among others, parts regarding the socio-economic component of the YOPP initiative have been added by the Societal and Economic Research and Applications (PPP-SERA) working group of the Polar Prediction Project (PPP). The human dimension during YOPP encompasses a strong engagement with users and providers of weather and sea-ice forecasts in the polar regions.

02 Russian Aircraft Lab available for Environmental Studies in the Arctic | The Russian Central Aerological Observatory (CAO) Roshydromet announces the possibility for international scientists to use their aircraft laboratory for various investigations of atmospheric environmental parameters during the Year of Polar Prediction. The aircraft was already deployed in scientific campaigns above the Kara Sea and Polar Ural. Additional to the crew with three members, up to 14 scientists can operate aboard the Yak-42D. Scientific facilities of the "flying" lab include systems to measure thermodynamics and electrical characteristics of the atmosphere, gas and particulate pollutants, radiation, radioactive pollution and microphysical cloud parameters. Further information on the use of the aircraft lab can be found at www.polarprediction.net. For particular queries, please contact the head of CAO's Laboratory of Atmospheric Thermodynamics, Mikhail Strunin (Mikhail_strunin@mail.ru).

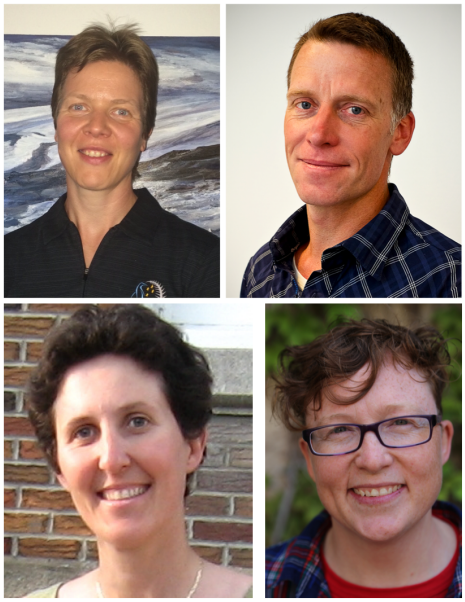
Onboard the Russian aircraft "Roshydromet", scientists can study atmospheric parameters above the Arctic. (Pic.: Evgeniya Kukanova)

03 Welcome to new members of the PPP Steering Group | Four new members have joined the Steering Group of the Polar Prediction Project this summer. Barbara Casati, Jackie Dawson, Daniela Liggett, and Steffen M. Olsen were elected new members during the 7th Steering Group meeting held this May in Beijing, China.

Barbara Casati is a research scientist working for *Environmental and Climate Change Canada*. She will support the Steering Group with her expertise in forecast verification. In polar regions, verification poses particular challenges that will be addressed within YOPP.

Steffen M. Olsen is a lead scientist in coupled model systems and oceanography at the *Danish Meteorological Institute* (DMI) in Copenhagen, Denmark. Regionally focussed on the North Atlantic and Arctic, his expertise includes modelling of thermohaline processes and climate predictability studies. Steffen coordinates the new Arctic Horizon 2020 program *Blue-Action* and is involved in several YOPP-relevant EU-FP7 projects.

Jackie Dawson and *Daniela Liggett* are strengthening the socio-economic component of PPP and YOPP. Both are part of the PPP subcommittee on Societal and Economic Research and Applications (PPP-SERA). Jackie Dawson is a professor at the *University of Ottawa*, Canada, and the director of the *Environment, Society and Policy Group* studying the human and political dimensions of environmental change. Daniela Liggett is a lecturer at the *University of Canterbury*, New Zealand, focussing on environmental management and tourism regulation in polar environments.



Upper row from left: Daniela Liggett, Steffen M. Olsen; lower row from left: Barbara Casati, Jackie Dawson. (Pic.: private)

04 WMO Certificates of Appreciation | Congratulations to Renee Tatusko and Randy Dole from the United States National Oceanic and Atmospheric Administration who received Certificates of Appreciation by the WMO's World Weather Research Programme for their outstanding support of the Polar Prediction Project.

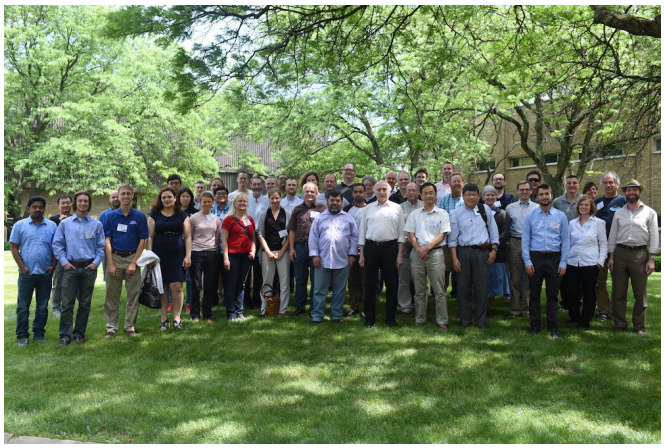
05 SAVE THE DATE – Polar Prediction Workshop 27-30 March 2017 in Bremerhaven, Germany | Jointly organised by the Polar Climate Predictability Initiative (WCRP-PCPI), the Polar Prediction Project (WWRP-PPP), the Sea Ice Prediction Network (SIPN), and the Sea Ice Model Intercomparison Project (SIMIP) leadership, the 4th Polar Prediction Workshop and 2nd SIMIP Workshop will be hosted by the ICO in Bremerhaven.

As in previous years, the focus will be on environmental prediction in the polar regions on a wide range of timescales, thereby helping to build a "seamless" polar prediction community. Sea ice will again play a central role, with one desired outcome being a set of recommendations for the 2017 Sea-Ice Outlook season. Furthermore, the workshop aims at stimulating discussions on other relevant predictands of the polar weather and climate system. Workshop organisers will be: Cecilia Bitz, Helge Goessling, Kirstin Werner, Ed Blanchard-Wrigglesworth, Ed Hawkins, John Fyfe, Alexandra Iahn and Dirk Notz.

View from above: Sea ice and melt ponds close to Eastern Greenland. (Pic.: Kirstin Werner, AWI)

06 YOPP in the Southern Hemisphere Planning Meeting in Columbus, Ohio, USA | To push forward the Southern Hemisphere part of the YOPP initiative, the first planning meeting for the Year of Polar Prediction in the Southern Hemisphere (YOPP-SH) took place on June 6th, 2016, in Columbus, Ohio, USA. It was part of the Polar Climate and Weather Week at the Byrd Polar and Climate Research Center (BPCRC). The YOPP-SH sub-committee has been initiated by PPP Steering Group member David Bromwich, leader of the Polar Meteorology Group at BPCRC. About 50

international scientists and representatives of forecasting centres discussed possible research activities during YOPP in Antarctica and the Southern Ocean. Resulting from the meeting's discussion, it was agreed that the Special Observing Period in the Southern Hemisphere will take place between Austral Spring 2018 and Austral Fall 2019.



Participants of the YOPP-SH Planning Meeting. (Pic.: Wesley Haines, BPCRC)

The report of the YOPP-SH Planning Meeting is available at www.polarprediction.net. For more information on YOPP-SH activities, please also visit the Polar Meteorology Group's website http://polarmet.osu.edu// at the Ohio State University.

07 Online Request for YOPP Endorsement Launched | The new online submission tool for requesting YOPP endorsement is up and running. PIs of projects, programs and initiatives that plan to contribute to the aims of the Year of Polar Prediction are invited to submit their requests online here.

After submission, the ICO sends out the request to members of the PPP Steering Group who review the project's quality and relevance for YOPP and provide their recommendation to officially endorse the project. Since October 2015, more than thirty projects aiming at improving polar prediction skills by various scientific approaches have been already endorsed by YOPP.

New to the online submission is that, if applicable, information on data management, geographic specification, and societal relevance can now be added to the online form. The latter in particular addresses projects in the field of societal and economic research. For any question, please contact the ICO at office@polarprediction.net.

08 Year of of Polar Prediction Planning Meetings "Arctic Observations" and "Modelling" | About 75 international invitees from operational centres, research institutes, universities, and other initiatives convened from September 5-9 at the European Centre for Medium-Range Weather Forecasts (ECMWF) in Reading, UK, in order to prepare for the Year of Polar Prediction. The meetings' participants discussed numerous national and international efforts providing additional observations in the Arctic (September 5-7, 2016) and performing numerical experimentation (September 7-9, 2016)

Participants of the YOPP Planning Meetings at ECMWF. (Pic.: Simon Witter, ECMWF)

towards a concerted YOPP observation and modelling implementation. A report summarising the main points discussed during the meetings will follow during the coming weeks.

09 YOPP endorsed! – AWARE | In each issue of the ***PolarPredictNews***, we are going to introduce one of the YOPP-endorsed projects. This time, we have asked Dave Bromwich a few questions about the Atmospheric Radiation Measurement (ARM) West Antarctic Radia-

David Bromwich. (Pic.: http://bpcrc.osu.edu)

tion Experiment (AWARE).

Dear Prof. Bromwich, what are you going to find out with AWARE?

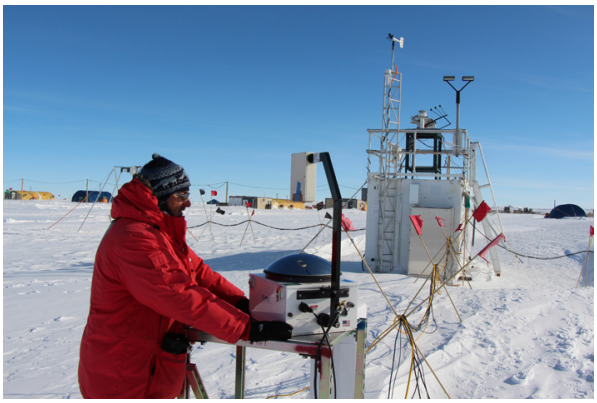
D.B.: AWARE aims to gain insight into the factors behind recent climate change in West Antarctica by quantifying the role of changing air masses on the surface energy balance. The field campaign will use some of the most advanced atmospheric research instrumentation to collect unprecedented cloud, radiative, and aerosol observations. The project is co-sponsored by the U.S. Department of Energy's Office of Science and the National Science Foundation.

Who is working with you in the project?

D.B.: I work together with Dan Lubin and Lynn Russell from the Scripps Institution of Oceanography, University of California, San Diego, USA, Johannes Verlinde from the Pennsylvania State University, USA, and Andrew Vogelmann from the Brookhaven National Laboratory, USA.

When does AWARE start and how long will it take?

D.B.: From the fall of 2015 to early 2017, the AWARE campaign will gather data from *McMurdo Station* on the northwestern tip of Antarctica's Ross Ice Shelf. Using an ARM Mobile Facility, researchers will measure clouds, aerosols, and energy coming from the sun and Earth. An additional smaller suite of instruments was transported to the *West Antarctic Ice Sheet Divide field camp*, in central West Antarctica, for an intensive observational period of about 1.5 months between December 2015 and January 2016. The analysis to follow will take until the middle of 2018.



In late 2015 the second ARM Mobile Facility was installed at McMurdo Station. Mike Ryczek from the Australian Bureau of Meteorology that provides operational-technical support to the project installs the Total Sky Imager, a system that monitors daytime sky conditions, at the facility. (Pic.: https://scripps.ucsd.edu/expeditions/aware/)

How does AWARE help to improve polar prediction skills?

D.B.: It tackles the prediction of clouds and their interaction with solar and terrestrial radiation as represented in atmospheric numerical models. These topics are key factors limiting the predictive performance of all types of atmospheric models over the Southern Ocean and Antarctica.

What else would you like the polar prediction community to know about your project?

D.B.: There is a great video showing AWARE in action on the project main web-site: https://scripps.ucsd.edu/expeditions/aware/.

10 Upcoming Events

07th to 09th October 2016	Arctic Circle 2016, Reykjavik, Iceland.
17th to 18th October 2016	MEOPAR Expert Forum on Implementation of the Year of Polar Prediction, Ottawa, Canada.
18th to 21st October 2016	International Workshop on Coupled Data Assimilation, Toulouse, France.
24th to 28th October 2016	17th Meeting of the International Ice Charting Working Group (IICWG), Ottawa, Canada.
01st to 04th November 2016	5th Annual FAMOS School and Meeting.
10th to 11th November 2016	Planning Meeting on the YOPP Data Component, Oslo, Norway.
12th to 16th December 2016	AGU Fall Meeting, San Francisco, USA
01st to 03rd February 2017	Arctic Change and Its Influence on Mid-Latitude Climate and Weather, Washington, DC, USA.
27th to 30th March 2017	4th Polar Prediction Workshop and 2nd SIMIP Workshop, Bremerhaven, Germany.
May 2017	Launch of the Year of Polar Prediction.

Contact

International Coordination Office of the Polar Prediction Project

mail: office@polarprediction.net

tel: +49 471 4831 1760

address: Alfred Wegener Institute, Bussestrasse 24, 27570 Bremerhaven, Germany

Follow us on Twitter @polarprediction

Signing up for the PolarPrediction Mailing List, a mailing list for anyone interested in polar weather and climate predictability and prediction, please send an email to office@polarprediction.net.