

Year of Polar Prediction (YOPP) Science Workshop 2020

AGENDA

17–18 February 2020

Alfred Wegener Institute

Address: AWI Building F, Bussestrasse 24, 27570 Bremerhaven

Monday 17 February 2020

09:00–10:00 *Registration and Coffee/Tea*

Opening: Welcome and Update

10:00–10:05 *Welcome from AWI* Thomas Jung (Chair PPP Steering Group)

10:05–10:10 *Arrangements* Kirstin Werner

10:10–10:25 *Update on Recent Developments of the Year of Polar Prediction* Thomas Jung (Alfred Wegener Institute)

Session 1: Highlights from Large-Scale Projects (chair: Kirstin Werner)

10:25–10:45 *MOSAIC – The First Leg of the Expedition* Markus Rex (Alfred Wegener Institute)

10:45–11:00 *(AC)³ – Major Results of Phase 1, and Prospects for the Next Phase* Manfred Wendisch (Leipzig University)

11:00–11:15 *APPLICATE – Key Contributions to YOPP* Thomas Jung (Alfred Wegener Institute)

11:15–11:30 *INTAROS – Snow and sea ice thermodynamics in the Arctic Environment: observation and modelling* Bin Cheng (Finnish Meteorological Institute)

Session 2: Observing System Design and Special Observing Periods (chair: Ian Renfrew)

11:30–12:00 *Polar Observing System Experiments - a Multi-Centre Comparison* Irina Sandu (ECMWF, remote presentation)

12:00–12:15 *YOPP Arctic SOP 1 and 2 – Results from MET Norway Observing System Experiments* Roger Randriamampianina (MET Norway)

12:15–12:30 *Observing System Experiments in the Antarctic with AMPS* David Bromwich (BPCRC)

12:30–12:45 *Near-Tropopause Discrepancy in Air Temperature during the Arctic SOPs at Russian Stations* Jun Inoue (Japan NIPR)

12:45–13:00 *Use and Impact of Observation Systems in Polar Regions during YOPP* Alexander Cress (German Weather Service)

13:00–14:15 *Lunch*

Session 2 cont'd: Observing System Design and Special Observing Periods (chair: Jun Inoue)

14:15–14:30 *YOPP Buoy Deployments in the Eurasian Arctic* Vasily Smolyanitsky (AARI)

– Achievements and Statistics

14:30–14:45	Canadian Observations for YOPP	Zen Mariani (ECCC)
Session 3: Satellites		(chair: Jonathan Day)
14:45–15:00	Operational Weather, Climate and Environment Monitoring Satellite Data for Polar and High Latitude Regions	François Montagner (EUMETSAT)
15:00–15:15	Remote Sensing Experiments of Sea Ice and Snow during MOSAiC – towards Improved Sea-Ice Satellite Datasets	Gunnar Spreen (University of Bremen)
15:15–15:30	Sea-Ice Products from NASA's ICESat-2 Laser Altimeter	SiriJodha Khalsa (U. Colorado/CIRES/NSIDC)
15:30–16:00	Coffee & Health Break	
Session 4: User Perspectives		(chair: Daniela Liggett)
16:00–16:15	YOPP's Special Services Projects and Workshops: Overview and Results	Machiel Lamers (Wageningen University)
16:15–16:30	Bridging the Gap between Research and Practice: Services to Support Navigation in Icy Waters	Panagiotis Kountouris (Drift+Noise)
16:30–16:45	Decision Making and Planning by Means of Operation Satellite and Model Products during the MOSAiC Drift Experiment	Thomas Krumpen (Alfred Wegener Institute)

18:30–21:00 Icebreaker in the Polar Lounge, German Maritime Museum

(Address: Deutsches Schifffahrtmuseum Bremerhaven, Hans-Scharoun-Platz 1, 27568 Bremerhaven)

18:15–18:30 Arrival and Welcome Drinks

18:30–18:35 Welcome by **Prof. Dr. Sunhild Kleingärtner** (Director of German Maritime Museum)

18:35–18:45 Welcome and YOPP Overview by **Prof. Dr. Thomas Jung (Chair of Polar Prediction Project Steering Group)**

18:45–19:00 Impressions from 1st MOSAiC Leg by **Prof. Dr. Markus Rex** (MOSAiC Coordinator)

19:00–19:45 Panel Discussion: *Decision-Making and Polar Prediction* with

- **Capt. Thomas Wunderlich** and **Capt. Moritz Langhinrichs** (Polarstern/Laeisz Shipping Company)
- **Dr. Lasse Rabenstein** (Drift+Noise AWI Spin-Off Company)
- **Prof. Dr. Markus Rex** (MOSAiC Coordinator and Chief Scientist of Leg 1)

19:45–21:00 Food, drinks, networking

Chair: **Dr. Kirstin Werner** (Director of International Coordination Office, Polar Prediction Project)

Tuesday 18 February 2020

Session 5: Processes including sea ice, ocean and atmosphere coupling (chair: Helge Goessling)

09:00–09:30	YOPPsiteMIP and TOPs during MOSAiC	Gunilla Svensson (Stockholm University)
09:30–09:45	Overview of the Planned Aircraft Campaigns during MOSAiC	Manfred Wendisch (Leipzig University) and Andreas Herber (Alfred Wegener Institute)
09:45–10:00	An Evaluation of ERA5 and Met Office Analyses in the Iceland Sea: the Impacts of Sea-Ice Representation	Ian Renfrew (University of East Anglia)
10:00–10:15	Measuring Model Improvement Using Surface Energy Budget Process Relationships: the Impact of a New Snow Model	Jonathan Day (ECMWF)
10:15–10:45	Group Photo and Morning Break	

Session 5 cont'd: Processes including sea ice, ocean and atmosphere coupling (chair: Amy Solomon)

10:45–11:00	Ice conditions at the Start of the MOSAiC Experiment	Frank Kauker (Alfred Wegener Institute)
11:00–11:15	CAWS Supersite Wind Evaluation	Zen Mariani (ECCC)

Session 6: Polar mid-latitude linkages (chair: David Bromwich)

11:15–11:30	Linkages from a Prediction Perspective	Thomas Jung (Alfred Wegener Institute)
11:30–11:45	The Polar Amplification Model Intercomparison Project PAMIP - Emerging Results and Lessons Learned	Tido Semmler (Alfred Wegener Institute)

Session 6: Model Development (chair: Jørn Kristiansen)

11:45–12:00	Using an Atmosphere-Ocean Single Column Model (AOSCM) to Understand Processes in the Coupled System	Gunilla Svensson (Stockholm University)
12:00–12:15	The Météo-France Modelling Contribution for YOPP: Preliminary Results and Feedback	Eric Bazile (Météo France)

Session 7: Verification (chair: Irina Sandu)

12:15–12:30	Performance of the Canadian Deterministic Prediction Systems during YOPP	Barbara Casati (ECCC)
12:30–12:45	The Role of Arctic Forecast Errors in the Evolution of Northern Hemispheric Forecast Skill	Thomas Haiden (ECMWF)
12:45–13:00	Verification of Solid Precipitation	Morten Koltzøw (MET Norway)

13:00-14:15 **Lunch**

Session 7 cont'd: Verification (chair: Machiel Lamers)

14:15–14:30	Near-Real Time Validation of Coupled Forecast Systems at the MOSAiC Site	Amy Solomon (NOAA)
14:30–14:45	Fog and Cloudiness in the European Arctic during YOPP	Teresa Valkonen (MET Norway)

Session 8: Data Assimilation		(chair: Barbara Casati)
14:45-15:00	<i>Data Assimilation in AROME Arctic and Copernicus Arctic Regional ReAnalysis</i>	Jørn Kristiansen (MET Norway)
15:00-15:15	<i>YOPP endorsed ESA Arctic+ project A+5: Arctic Mission Benefit Analysis - Impact of Sea-Ice Thickness, Freeboard, and Snow Depth Products on Sea-Ice Forecast Performance</i>	Frank Kauker (Alfred Wegener Institute & O.A.Sys Ocean Atmosphere Systems GmbH)
Session 9: Sea Ice Prediction		(chair: Gunilla Svensson)
15:15-15:30	<i>Reaping the Fruit of the Sea Ice Drift Forecast Experiment</i>	Helge Goessling (Alfred Wegener Institute)
15:30-15:45	<i>Predictability of Sea Ice on Sub-Seasonal Time Scales</i>	Lorenzo Zampieri (Alfred Wegener Institute)
15:45-16:00	<i>Verification of the Sea-Ice with the Distance Metrics</i>	Barbara Casati (ECCC)
16:00-16:30	<i>Coffee break</i>	
Session 9 cont'd: Sea Ice Prediction		(chair: Kirstin Werner)
16:30-16:45	<i>SIPN South 2017-2019: Three Years of Seasonal Sea-Ice Predictions in the Southern Ocean</i>	François Massonnet (UC Louvain, remotely)
16:45-17:00	<i>ECCC Sea-Ice Prediction Efforts in support of YOPP</i>	Greg Smith (ECCC, remotely)
Session 10: Conclusion		(chair: Thomas Jung)
17:00-17:45	<i>General Discussion</i>	
17:45-18:00	<i>Wrap up and Closure</i>	