

13th Workshop on Antarctic Meteorology and Climate

The Pyle Center, room 235
Madison, WI, USA
16-18 July, 2018

Agenda

Saturday July 14, 2018

1800-2200 Early Arrivals Dinner with Matthew Lazzara & family

Sunday July 15, 2018

1800-2200 Informal Icebreaker at Memorial Union
800 Langdon St., Madison, WI 53706
Lakeside at the Terrace (weather permitting) or the Rathskeller

Monday July 16, 2018

0800-0900 Arrival and Registration

0900-0920 **Opening Remarks, Introductions, and Logistics**
Dr. Matthew A. Lazzara, UW-Madison and Madison College
Dr. W. Paul Menzel, UW-Madison
Dr. Todd Stebbins, Madison College

Session: **Automatic Weather Station Networks**
Chair: Art Cayette
Space and Naval Warfare Systems Center

0920-0940 Antarctic Peninsula Automatic Weather Station Network
2017-18 Field Season Review
Mairi Simms, Steve Colwell, Dan Rylett
British Antarctic Survey

0940-1000 The Installation of Antarctic Precipitation Systems During the 2017-18 Field Season and the Early Results
Mark W. Seefeldt and Scott D. Landolt
University of Colorado-Boulder

- 1000-1020** Wisconsin AWS Field Season 2017-2018
Dave Mikolajczyk, Carol Costanza, Marian Mateling, Matthew Lazzara,
Andy Kurth, George Hademenos
University of Wisconsin-Madison
- 1020-1030** Future Wisconsin AWS Field Season 2018-2019
Matthew Lazzara, Lee Welhouse, Dave Mikolajczyk, Mike Penn
University of Wisconsin-Madison
- 1030-1050** **BREAK**
- 1050-1100** Presentation: IAMAS/ICPM Stipend Awards
Claudette Zweifel and Matthew Lazzara
Madison College
- 1100-1120** The Madison Polar Climate and Weather Station (PCWS) Project: A Report to
the Community
Matthew Lazzara and PCWS Team
Madison College
- 1120-1140** The JAWS Workflow to harmonize polar Automatic Weather Station data:
Status and Early Results
Charles S. Zender, Wenshan Wang, and Ajay Saini
University of California-Irvine
- 1140-1200** AWS Additions and Modifications to Support Wind Alert Forecasting
Application for McMurdo, Antarctica
B. Vandiver and R. Vehorn
Space and Naval Warfare Systems Center
- 1200-1330** **Lunch**
Recommendations and directions will be provided by organizers
- Session: **Observing Antarctic Weather**
Chair: Jordan Powers
NCAR
- 1330-1350** Ross Island Region Wind Mesonet Proposal
Joey Snarski
DigitaliBiz
- 1350-1410** Late Autumn Boundary Layer Observations in the Ross Sea from the PIPERS
project
John Cassano, Peter Guest, and Kelly Schick

University of Colorado-Boulder

- 1410-1430** Antarctic Extremes: Support for the Next Generation Polar Weather and Climate Station
Taylor Norton and Matthew Lazzara
Madison College
- 1430-1450** Climate Update from the McMurdo Dry Valleys Long Term Ecological Research Project: Surface Air Temperature and Solar Radiation Trends
Maciej Obryk, Andrew Fountain, Peter T. Doran, Luke Winslow
Portland State University
- 1450-1510** **BREAK**
- Session: **Weather Forecasting**
Chair: Matthew Lazzara
Madison College/University of Wisconsin-Madison
- 1510-1530** Aviation Forecasting Past and Future Performance Goals
Arthur Cayette and Chester Clogston
SPAWAR System Center Charleston
- 1530-1550** Medium-range temperature forecasting for South Pole
Michael Johnson
DigitaliBiz
- 1550-1610** Maximum and Minimum Temperature Verification at McMurdo and Palmer Stations
Billy Tate
SPAWAR Systems Center Charleston
- 1610-1630** Australian Bureau of Meteorology Support for the Southern Ocean Clouds Radiation Aerosol Transport Experimental study (SOCRATES) – A Case Study in Science-To-Services
Scott Carpentier, Michelle Hollister, Matthew Thomas and Robert Schaap
Australian Bureau of Meteorology
- 1630-1710** Breakout Sessions (Facilitators)
Topics: A. Automatic Weather Stations (Matthew Lazzara)
B. Observations aiding Numerical Modeling (John Cassano)
C. Observing aiding Forecasting/Logistics (Art Cayette)
D. Observing to support science/research (Dave Bromwich)

1710-1730 Report-back key conclusions/questions

1730 Dinner on your own
Recommendations and directions will be provided by organizers

Tuesday July 17, 2018

0800-0900 Arrival and Registration

0900-0910 **Opening Remarks**

Alex Isern

Office of Polar Programs, National Science Foundation

Session: **Antarctic Meteorological Data**

Chair: David Bromwich

The Ohio State University

0910-0930 Current and planned activities of the SCAR expert group on operational meteorology in the Antarctic (OpMet) and the WMO panel of experts on polar and high mountains observations, research and services (EC-PHORS).

Steve Colwell

British Antarctic Survey

0930-0950 US Antarctic Program and WIGOS

Matthew Lazzara and US WIGOS team

University of Wisconsin-Madison

0950-1020 2018 Evaluation of Meteorological and Oceanographic Support for Joint Task Force – Support Forces Antarctica and Operation DEEP FREEZE

Capt. Lauren Hogg

USAF

1020-1040 The Antarctic Meteorological Research & Data Center: A Proposal

Matthew Lazzara

University of Wisconsin-Madison

1040-1100 **BREAK**

Session: **Numerical Modeling**

Chair: Steve Colwell

British Antarctic Survey

1100-1120 AMPS Update – July 2018

Kevin W. Manning and Jordan G. Powers

NCAR

- 1120-1140** Antarctic Clouds Simulated by Polar MRF and AMPS
David H. Bromwich, Keith M. Hines and Sheng-hung Wang
The Ohio State University
- 1140-1200** A model-based study of foehn effect impacts on the near-surface climate over the Larsen ice shelf at the Antarctic Peninsula
Günther Heinemann, R. Zentek, and L. Knopp
Trier University
- 1200-1330** **Lunch**
Recommendations and directions will be provided by organizers
WAMC Committee Lunch Meeting
- 1330-1350** AMPS Contributions to the Year of Polar Prediction-Southern Hemisphere (YOPP-SH) Effort
Jordan G. Powers and Dave Bromwich
NCAR
- 1350-1410** Year of Polar Prediction – Few months left until the YOPP Southern Hemisphere (YOPP-SH) Special Observing Period Commences
Kirstin Werner, Dave Bromwich, Thomas Jung, Helge Goessling, Katharina Kirchhoff
International Coordination Office for Polar Prediction, Alfred Wegener Institute
- 1410-1510** **BREAK
& Poster Session**
- Study of Three Cases of Mesoscale Cyclogenetic Events in the North of the Antarctic Peninsula
Alvaro Scardilli and Alejandro Godoy
Naval Hydrographic Service, Argentina
- Improved reanalysis and prediction of atmospheric fields over the Southern Ocean by campaign-based radiosonde observations
Kazutoshi Sato, Jun Inou, Simon Alexander, Greg McFarquhar, Akira Yamazaki
Kitami Institute of Technology
- Using AWS and MERRA-2 data to estimate the climatology and impact of polar night foehn wind on Larsen C Ice Shelf
Matthew Laffin, Charles Zender
University of California-Irvine

- 1510-1610** Breakout Sessions (Facilitators)
Topics: A. The Antarctic Internet Data Distribution/Data Issues
(Matthew Lazzara)
B. Antarctic Operational and Model Forecasting Discussion
(Art Cayette/Jordan Powers)
C. SCAR Operational Meteorology Group and the planned Antarctic
Regional Climate Center (Steve Colwell/Scott Carpentier)
- 1610-1630** Report-back key conclusions/questions
- 1730** Informal Group Dinner at Porta Bella Restaurant
425 N Frances Street, Madison, WI 53715

Wednesday July 18, 2018

0800-0900 Arrival and Registration

0900-0910 Announcement of 14th WAMC in 2019

Session: **Weather Research**

Chair: Scott Carpentier
Australian Bureau of Meteorology

0910-0930 Antarctic Warming Events in Winter Observed by Automatic Weather Stations: An Analysis of Extreme Temperature Increases
David E. Mikolajczyk, Linda M. Keller, Matthew A. Lazzara, and John J. Cassano
University of Wisconsin-Madison

0930-0950 Quantification and Analysis of Mechanisms for the Foehn Effect in the January 2016 West Antarctic melt event
Jerry (Xun) Zou, David H. Bromwich, Julien P. Nicolas, and Sheng-Hung Wang
The Ohio State University

0950-1010 Antarctic Meteorology and Climate Research Activity of Korea Polar Research Institute
Seong-Joong Kim, Taejin Choi, Sang-Yoon Jun, Sang-Jong Park, Hataek Kwon, Joo-Hong Kim, Baek-Min Kim
KOPRI

1010-1030 Sixty Years of Widespread Warming in the Southern Mid- and High-Latitudes (1957-2016)
Megan E. Jones, David H. Bromwich, Julien Nicolas, and Jorge Carrasco
The Ohio State University

1030-1050 **BREAK**

Chair: Dave Mikolajczyk
University of Wisconsin-Madison

1050-1110 A satellite-based climatology of wind-induced surface temperature anomalies for the Antarctic
Günther Heinemann, L. Glaw
Trier University

- 1110-1130** A Warming Greenland Ice Sheet: Temperature Uncertainties in Low (1.5 °C) and High (RCP 8.5) Warming Worlds
David B. Reusch
New Mexico Tech.
- 1130-1150** Foehn event triggered by an atmospheric river underlies record temperature
Along continental Antarctica
Deniz Bozhurt
University of Chile
- 1200-1330** **Lunch**
Recommendations and directions will be provided by organizers
- 1330-1530** Tour of Space Science and Engineering Center
Meet at the Pyle Center to walk over
- 1530-1730** Additional discussions on Antarctic Meteorology and Climate
Reconvene at the Pyle Center for those interested
- 1730** Dinner on your own
Recommendations and directions will be provided by organizers

End of Meeting

Year of Polar Prediction in the Southern Hemisphere (YOPP-SH#03)

The Pyle Center
Madison, WI, USA
19 July 2018

Thursday July 19, 2018

- 0900-0910** **Welcome and Introduction**
Dr. David Bromwich, Ohio State University
Dr. Matthew Lazzara, University of Wisconsin-Madison and Madison College
- 0910-0925** Preparing for the YOPP Special Observing Period in the Southern Hemisphere
Kirstin Werner
International Coordination Office for Polar Prediction/Alfred Wegener Institute
- Session: **YOPP-SH Observations and Data**
Chair: David Bromwich
 Ohio State University
- 0925-0935** Shipborne observations during YOPP-SH
Isabella Rosso
Scripps Institution of Oceanography, UCSD
- 0935-0945** Buoy Deployments in the Southern Ocean
Ignatius Rigor (remote)
- 0945-0955** AWS Wisconsin and Antarctic stations
Matthew Lazzara
University of Wisconsin-Madison and Madison College
- 0955-1005** Extra Radio soundings during YOPP-SH SOP
Kirstin Werner
International Coordination Office for Polar Prediction/Alfred Wegener Institute
- 1005-1025** Discussion
- 1025-1035** The YOPP Data Portal
Siri Jodha Khalsa (tbc, remote)

1035-1045 Discussion

1045-1115 **Group photo, Coffee break and Posters**

Session: **Numerical Weather Prediction and Data Denial Experiments**

Chair: David Bromwich
Ohio State University

1115-1125 French plans for Observing System Experiments and Numerical Weather
Prediction in the Southern Ocean
Matthieu Chevallier (remote)

1125-1135 The AMPS YOPP-SH SOP Data Impact Study
Jordan Powers
NCAR

1135-1145 Japan Data Denial of ships observations and NWP contributions to YOPP-SH
Jun Inoue

1145-1155 SIPN South Update
François Massonnet (pre-recorded)

1155-1230 Discussion

1230-1315 **Lunch**
Recommendations and directions will be provided by organizers

Session: **User Engagement**

Chair: Kirstin Werner

1315-1325 PPP-SERA in the Southern Hemisphere
Daniela Liggett
University of Canterbury

1325-1335 Australia BOM User Engagement
Scott Carpentier
Australian Bureau of Meteorology

1335-1400 Discussion

Session: **National Contributions to Special Observing Period**

Chair: Kirstin Werner
International Coordination Office for Polar Prediction/Alfred Wegener Institute

1400-1410 Argentina
Alvaro Scardili
Naval Hydrographic Service - Argentina

1410-1420 Australia
Scott Carpentier
Australian Bureau of Meteorology

1420-1430 Chile
Jorge Carrasco
University of Magallanes

1430-1440 Germany
Günther Heinemann
Trier University

1440-1450 Italy
Vito Vitale
CNR-ISAC

1450-1500 Japan
Jun Inoue
National Institute of Polar Research

1500-1530 **Coffee break and posters**

1530-1540 Korea
Seong-Joong Kim
KOPRI

1540-1550 South Africa
Tania Williams
South African Weather Service (SAWS)

1550-1600 United Kingdom
Steve Colwell
British Antarctic Survey

Session: **General Discussion**
Chair: David Bromwich
Ohio State University

1600-1730 Discussion

1730-1745 Wrap up and Closure

End of Meeting