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 Zweiffel 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
DigitialiBiz

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 Carpenter, 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

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 Cyclogenic 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
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<th>Time</th>
<th>Country</th>
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<tbody>
<tr>
<td>1400-1410</td>
<td>Argentina</td>
<td>Alvaro Scardili</td>
<td>Naval Hydrographic Service - Argentina</td>
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<td>1410-1420</td>
<td>Australia</td>
<td>Scott Carpentier</td>
<td>Australian Bureau of Meteorology</td>
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<td>1420-1430</td>
<td>Chile</td>
<td>Jorge Carrasco</td>
<td>University of Magallanes</td>
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<td>1430-1440</td>
<td>Germany</td>
<td>Günther Heinemann</td>
<td>Trier University</td>
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<td>1440-1450</td>
<td>Italy</td>
<td>Vito Vitale</td>
<td>CNR-ISAC</td>
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<td>1450-1500</td>
<td>Japan</td>
<td>Jun Inoue</td>
<td>National Institute of Polar Research</td>
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<td>1500-1530</td>
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<td><strong>Coffee break and posters</strong></td>
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<td>Korea</td>
<td>Seong-Joong Kim</td>
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<td>1540-1550</td>
<td>South Africa</td>
<td>Tania Williams</td>
<td>South African Weather Service (SAWS)</td>
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<td>1550-1600</td>
<td>United Kingdom</td>
<td>Steve Colwell</td>
<td>British Antarctic Survey</td>
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**Session:** General Discussion  
**Chair:** David Bromwich  
Ohio State University  

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<td>1600-1730</td>
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1730-1745 Wrap up and Closure

End of Meeting