

The 14th Workshop on Antarctic Meteorology and Climate

Charleston Marriott, 170 Lockwood Boulevard

Charleston, SC, USA

25 June 2019 — 28 June 2019

Monday June 24, 2019

1800-2100 Informal Icebreaker at Marriott, Aqua Terrace Roof-Top Bar, 170 Lockwood, Blvd, Charleston, SC

Tuesday June 25, 2019

0800-0900 Arrival and Registration

0900-0920 **Opening Remarks, Introductions, and Logistics**

Arthur Cayette, SPAWAR Systems Center Atlantic, Charleston

Mr. Matthew Rushing, SPAWAR Systems Center Atlantic, Charleston

WORKSHOP EXERCISE (Part I of IV): Winter flight from Christchurch to McMurdo

09:25-09:40 McMurdo Weather Briefing Schedule of Events and Overview
Michael Johnson, Paul Gulli

09:40-10:00 Break

PROGRAM: Antarctic Environmental Observations

Session 1: Active Weather Observing Stations and Operations
Chair: Arthur Cayette

10:00-10:20 University of Wisconsin-Madison AWS Field Season 2018-2019
Lee J. Welhouse

10:20-10:40 Antarctic Peninsula Automatic Weather Station Network 2018-19 Field Season Review
Steve Colwell

10:40-11:00 USAP Weather Satellite Update
Kathleen Gavahan

11:00-11:20 The Future US Antarctic AWS Field Season Plans
Lee J. Welhouse

WORKSHOP EXERCISE (Part II of IV):

11:20-11:40 Weather Brief Overview - Outlook with Commanders Call and workshop forecasting instructions

11:40-13:00 Lunch

Session 2: Future of Observing and Data Systems
Chair: Dr. Jordan Powers

- 13:00-13:20** Polar Climate and Weather Station: The Next Generation Surface Meteorological Observing System
Matthew A. Lazzara
- 13:20-13:40** 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
- 13:40-14:00** USAF flight issues in support of Antarctic research
Mike Farrar
- 14:00-14:20** Weather patterns dominating Ellsworth Mountains (Union Glacier)
Marc De Keyser

WORKSHOP EXERCISE (Part III of IV):

- 14:20-14:40** Live Weather Brief - With GO/NOGO begin secret ballot construction
(Note: Time may require adjustments to fit actual schedule)
- 14:40-15:00** Break
- 15:00-15:20** Portable Doppler Radar Evaluation Plan at Phoenix Field, Antarctica
- 15:20-15:40** Program Summary with Collaborative Discussion (Led by Session Chairs
Dr. Jordan Powers, Arthur Cayette
- 15:40-16:00** WORKSHOP EXERCISE UPDATES (Observations, Satellite, Prediction Sources, etc)
- 16:00** **Conclusion of Day 1**
- 17:00** **Reception in Courtyard (light plates)**

Wednesday June 26, 2019

- 08:00-09:00** Arrival and Registration
- 09:00-09:10** Opening Remarks - Arthur Cayette

WORKSHOP EXERCISE (Part IV of IV):

- 09:10-09:40** Flight Weather Summary/Discussion of ballots with alternative solutions/tools/reasoning
Michael Johnson, Paul Gulli
- 09:40-10:00** Break

PROGRAM: High-Latitude Environmental Prediction and Services

- Session 1:** Numerical Modeling
Chair: Matthew Lazzara
- 10:00-10:20** AMPS Update - June 2019
Kevin W. Manning and Jordan G. Powers

- 10:20-10:40** Atmospheric Modeling of the High Southern Latitudes with Polar WRF
David H. Bromwich, Jianjun Xue, Lesheng Bai, and Keith M. Hines
- 10:40-11:00** Regional climate model simulations for the Antarctic Peninsula: Comparing and contrasting with observed climate variability
Deniz Bozkurt, Roberto Rondanelli, CR2 and CMM team, Jorge Carrasco
- 11:00-11:20** Microphysics of Summer Clouds in Central West Antarctic Simulated by Polar WRF and AMPS
Keith M. Hines, David H. Bromwich, Sheng-Hung Wang, Israel Silber, Johannes Verlinde, Dan Lubin
- 11:20-11:40** The Antarctic Precipitation Project: A Review of 2018-19 Field Season and an Initial Analysis of In-Situ Precipitation Observations for the Northwest Ross Ice Shelf, Antarctica
Mark W. Seefeldt, Taydra M. Low and Scott D. Landolt
- 11:40-12:00** The AMPS YOPP-SH Data Impact Study: Update
Jordan G. Powers, Kevin W. Manning, David H. Bromwich
- 12:00-13:20** Lunch
WAMC Committee Planning Meeting
- Session 2:** Meteorological Services
Chair: Dr. John Cassano
- 13:20-13:40** An Overview of United States Antarctic Program Weather Forecasting Services
Paul Gulli, Arthur Cayette
- 13:40-14:00** USAP Aviation Forecast Performance
Arthur Cayette
- 14:00-15:00** In whose service? Meteorological and climate research for Antarctic environmental predictions
Daniela Liggett
- 15:00-15:20** Program Summary with Collaborative Discussion (Lead by Session Chairs)
Dr. John Cassano, Dr. Matthew Lazzara
- 15:20-15:40** Break

PROGRAM: Weather and Climate Studies

- Session 1:** Climate Studies
Chair: Steve Colwell
- 15:40-16:00** An Overview of the Year of Polar Prediction in the Southern Hemisphere (YOPP-SH)
David H. Bromwich and Kirstin Werner
- 16:00-16:20** Hercules Dome: Meteorology and Climate for the Next Deep Ice Core Site
David B. Reusch and Eric Steig
- 16:40** Poster Session
- 17:00** **Conclusion of Day 2**
Dinner on own

Thursday June 27, 2019

0800-0900 Arrival and Registration

PROGRAM: Weather and Climate Studies (cont.)

Session 2: Weather Studies
Chair: Dr. David Bromwich

- 09:00-09:20** Observing the Antarctic Atmosphere with the SUMO UAS: From the Ross Sea to the Dry Valleys
John J Cassano, Mark W Seefeldt, Kelly Schick, Melissa Nigro, Marwan Katurji
- 09:20-09:40** Preliminary results of AWSs recently installed on traverse route from Syowa Station to Dome Fuji Station
Naohiko Hirasawa
- 09:40-10:20** McMurdo events during the 2018-19 Operating Season
Michael Johnson
- 10:20-10:40** Marble Point Area Study for Aviation Support
Matthew Rushing, James, Frodge, A.M. Cayette, Gregory Thomas
- 10:40-11:00** Program Summary with Collaborative Discussion (Led by Session Chairs)
Dr. David Bromwich, Steve Colwell
- 11:00-11:10** WAMC Conclusion - Final Discussions, action items, announcements
- 11:10** End of WAMC. Thank you for your combined effort!
- 11:10-13:00** Lunch
All YOPP-SH Participants Please return at 13:00

YOPP-SH

- 13:00-13:10** Welcome and Introduction
Art Cayeet and David Bromwich
- 13:10-13:25** An Overview of the Year of Polar Prediction in the Southern Hemisphere (YOPP-SH)
David Bromwich
- 13:25-13:35** Update from the YOPP International Coordination Office
Kirstin Werner
- Session 1:** SOP Observatons
Chair: David Bromwich
- 13:35-13:45** Chile
Paola Uribe
- 13:45-13:55** Radiosonde observations at Chinese Antarctic stations during YOPP-SH
Qizhen Sun
- 13:55-14:05** Additional Sounding Observations at Dumont-D'Urville
Eric Bazile
- 14:05-14:15** German Contributions to YOPP-SH SOP
Kirstin Werner
- 14:15-14:25** Japanese Activities in Observation during the YOPP Period
Naohiko Hirasawa
- 14:25-14:35** Italy
Vito Vitale
- 14:35-14:45** YOPP-SH Activities of the Korean Antarctic Stations during First SOP
Sang-Jong Park
- 14:45-14:55** UK contribution to YOPP-SH AND YOPP-SH SOP Radisonde Ascents Collected at BAS ftp Site
Steve Colwell

- 14:55-15:05** A U.S. Contribution to the Year of Polar Prediction
Matthew Lazzara
- 15:05-15:20** Japan Data Denial of ships observations and NWP contributions to YOPP-SH
Jun Inoue
- 15:20-15:35** Characteristics of Atmospheric Boundary Layer at the Jang Bogo Station, Terra Nova Bay, East Antarctica during YOPP-SH
Wonseok Seo
- 15:35-16:05** Discussion (Observations YOPP-SH SOP)
- Session II** Chair: Kirstin Werner
- 16:30-16:45** The PPP Societal and Economic Research and Applications (PPP-SERA) task team: Recent developments and future plans
Daniela Liggett
- 16:45-17:00** Chile Weather Service
Paola Uribe
- 17:00-17:15** PPP-YOPP Special Services Projects
Scott Carpentier (remote)
- 17:15-17:25** Potential research activities toward the SSPs
Jun Inoue
- 17:25-18:00** Discussion (Users Engagement and SSPs)
- 19:00** Dinner in Town

Friday June 28, 2019

Session III Special Efforts in NWP and Data Denial Experiments Chair: David Bromwich

- 08:30-08:50** Developments in the YOPP-SH OSU-NCAR Data Impact Study and SOP Data Acquisition
Jordan Powers and Kevin Manning
- 08:50-09:05** Preliminary results of the numerical experiment done with the global model ARPEGE-SH for YOPP-SH
Eric Bazil
- 09:05-09:20** SIPN South: two years of coordinated seasonal sea ice predictions in the Southern Ocean
François Massonnet
- 09:20-09:40** Verification and YOPPSiteMIP in Southern Hemisphere
Taneil Uttal (remote)
- 09:40-09:55** Leveraging YOPP observations and modeling to enhance long-term characterization of the Eastern Antarctic Plateau
Dana Veron
- 09:55-10:05** CAPIRE-YOPP
Vito Vitale
- 10:05-10:30** Coffee Break
- 10:30-11:30** Discussion (NWP and Winter YOPP-SH SOP)

General Discussion and Wrap Up **Chair: David Bromwich**

11:30-12:15 General Discussion

12:15-12:30 Wrap up and Closure