

# AGENDA - MOSAIC Workshop March 2019

11 March – 15 March, 2019

Alfred Wegener Institute

Potsdam, Germany

## Agenda Overview:

TIME	11. March 2019 MONDAY	12. March 2019 TUESDAY	13. March 2019 WEDNESDAY	14. March 2019 THURSDAY	15. March 2019 FRIDAY
09:00	<b>PLENARY: COUPLED MODELLING</b> Session 1: Forecast and Assimilation	<b>PLENARY: MEETING GOALS</b> • MOSAIC Overview LOGISTIC • Dates for Legs, Deadlines before the Start • Summary of modelling plan (report Monday)  CHAIR: M. Rex, M. Shupe	<b>Parallel Breakout session 2a: Cross-Cutting</b> Polarstern (M. Nicolaus, A. Fong, V. Mohaupt)  Remote sensing (G. Spreen, R. Kwok)	<b>PLENARY: LOGISTIC LEG 1-6</b> • Logistics, Operational forecast informations (DWD) • Installations ice camp and distrib. network • Change of staff and crew • Data revisited (user survey, info Tuesday), Breakout results CHAIRS: Ship coordination	<b>TIME SLOT for individual discussions</b> • Coordination of MOSAIC activity beyond Polarstern (Villum, Ny-Alesund, Aircraft activity apart from Polar 5 + 6) (M. Zanatta, A. Herber) • Coordination of work on the ice (M. Nicolaus, M. Shupe, V. Mohaupt)
10:30	30 min COFFEE + Poster Session (10:30 - 11:00)	COFFEE (10:30 - 11:00)	COFFEE (10:30 - 11:00)	COFFEE (10:30 - 11:00)	COFFEE (10:30 - 11:00)
11:00	20 min 1.2. Couple model forecasts: sea ice & more (A. Solomon, G. Spreen)	<b>PLENARY: DATA</b> • Data Policy, Core concepts • Data Infrastructure on board • Data Management in MOSAIC: Architecture and components of the data flow • Data Repositories: Pangaea and Arctic Data Centre CHAIR: St. Frickenhaus/A. Immerz	<b>Parallel Breakout session 2b: Cross-Cutting</b> Central Observatory (M. Nicolaus, M. Shupe)  Modelling: Forecast (Data and coordination)	<b>PLENARY: LOGISTIC LEG 1-6</b> • Introduction of each cruise leader • Cruise leader guide through the legs with some specifications for each leg  CHAIRS: Ship coordination <i>Implementation of unique experiment/measurements per leg - participant-generated info</i>	<b>PLENARY: MEDIA + OUTREACH</b> Coherent publication policy Media Outreach Education  CHAIRS: K. Weiß, M. Rex, M. Shupe
13:00	60 min LUNCH + Poster Session (13:00 - 14:00)	LUNCH (13:00 - 14:00)	LUNCH (13:00 - 14:00)	LUNCH (13:00 - 14:00)	LUNCH (13:00 - 14:00)
14:00	Session 2: Bridging observations to process/local and larger-scale modeling	<b>Parallel Breakout session 1: Teams</b> Atmosphere (M. Rex, M. Shupe) Sea Ice (M. Nicolaus, D. Perovich) Ocean (B. Rabe, Ch. Provost) Biogeochemistry (E. Damm, B. Loose) Ecosystem (A. Fong, R. Gradinger)	<b>Parallel Breakout session 2c: Cross-Cutting</b> Distributed Network (B. Rabe, O. Person) Aircraft (Polar 5 + 6) (A. Herber, M. Wendisch) Modelling: Post-MOSAIC  Cross-cutting experimental implementation (A. Fong)	<b>Parallel Breakout session 4: Integrated Obs.</b> Snow sampling + ice coring (M. Nicolaus, R. Gradinger) Water column observations (A. Fong, B. Rabe) Surface fluxes (M. Shupe, D. Perovich)	<b>PLENARY: SUMMARY BREAKOUT</b> • Leads/Ridges • Storms • Coordination of work on the ice • Coordination of MOSAIC beyond PS
16:00	30 min COFFEE + Poster Session (16:00 - 16:30)	COFFEE (16:00 - 16:30)	COFFEE (16:00 - 16:30)	COFFEE (16:00 - 16:30)	<b>END</b>
16:30	2.3. BGC (30 min) (E. Damm, B. Loose) 2.4. Eco (40min) (A. Fong, Y. Wang, tbc)	<b>PLENARY: EVENTS</b> • What observations are helpful to modelers from cross-cutting or smaller events? • What are the team-specific events being discussed? (J. Regnery, M. Rex)	<b>TIME SLOT for individual discussions</b>	<b>TIME SLOT for individual discussions</b> Planned based on Tuesday 'Events' results Leads / Ridges (M. Granskog, A. Schulz) Storms (O. Persson, Ch. Polashenski)	
18:30	20 min Posters Session and Ice breaker (17:30 - 20:00)	Snacks + individual discussions (17:30 - 20:00)	Snacks + individual discussions (18:30 - 20:00)	Snacks + individual discussions (18:30 - 20:00)	
90 min					

**Registration: 8:30 – 9:00**

## **MONDAY: MARCH 11<sup>th</sup>: Coupled Modelling**

**9:00 – 17:30: Plenary sessions, Lecture Hall Building H**

This session is available online: <https://global.gotomeeting.com/join/595540285>

### **Session 1. Forecast & Assimilation**

Questions to be covered: Which modeling tools will be applied for which purpose? What are the modeling/forecast needs for scientific operations? What information do they need to operate the helicopter, the tether sonde? What info do they need at the ice camps for potential ice break-up or wind/synoptic events? What are the best diagnostics to provide to the Polarstern for guidance? How models can/should guide scientific operations? Who needs the forecast data in real-time or later? What kind of real time observations can contribute to improving model initial fields/near real time forecast? How to develop the observing network with other stations & ships? How do we organize observing system experiments? What is link to YOPP?

- 9:00 – 9:05 Introduction and review of meeting objectives (A. Rinke, W. Maslowski)
- 9:05 – 10:35 Session 1.1 Operational weather forecast (discussion leaders: A. Cress, O. Persson)  
5 talks @10min (8 min talk + 2 min questions) plus 35 min discussion  
DWD-ICON (H. Frank), NMEFC (NN), NIPR/JAMSTEC-NICAM (J. Inoue), ECC-CAPS (F. Roy), YOPP-ECMWF (G. Svensson)

*Coffee break: 10:30 – 11:00, Foyer Building H*

- 11:00 – 13:00 Session 1.2 Sea ice and coupled forecast (discussion leaders: A. Solomon, G. Spreen)  
8 talks @10min (8 min talk + 2 min questions) plus 35min discussion  
YOPP Impact studies by DWD (A. Cress), RASM (W. Maslowski), CAFS (A. Solomon), NERSC (T. Williams), NMEFC (NN), ECC-CAPS (F. Roy), SIDFEx (H. Goessling), AARI (O. Folomeev)

*Lunch break: 13:00 – 14:00, Foyer Building H*

### **Session 2. Bridging observations-column/process and link to larger-scale modeling**

Key questions for linking obs-model and linking across the model hierarchy: For column/process modelers: which data will you use? will you develop parameterizations to be used in larger-scale models? If so, which parameterizations and for which larger-scale model? For larger-scale modelers: Which parameterizations are most critical for you to improve? Do you have any link to process modelers or parameterization developers?

Which modeling tools will be applied for which purpose? Which are the parameterizations to improve? What are the final products? Can they be implemented in other models? Which data are required as input for the models? How can the modeling support or synthesize observations? How can derived improved process understanding help large-scale modeling? Any common interests among different groups? Plans for coordinated cross-cutting activity?

- 14:00 – 15:00 Session 2.1 Atmosphere (discussion leaders: G. Svensson, G. Heinemann, A. Rinke)  
Few selected short talks plus 30min discussion
- 15:00 – 16:00 Session 2.2 Sea ice & Ocean (discussion leaders: W. Maslowski, D. Perovich, B. Rabe)  
2 talks @10min (8 min talk + 2 min questions) on obs. process overview relevant for models (sea ice: D. Perovich, ocean: B. Rabe) plus 35min discussion

*Coffee break: 16:00 – 16:30, Foyer Building H*

- 16:30 – 17:00 Session 2.3 BGC (discussion leaders: [E. Damm](#), [B. Loose](#))  
5min Intro-talk on aspects for process modelling & obs. link (E. Damm) plus 25min discussion
- 17:00 – 17:00 Session 2.4 Eco (discussion leaders: L. Tedesco, Y. Wang, A. Fong, N. Aberle-Malzahn)  
Few selected short talks plus 30min discussion

**17:40 – 20:00: Poster session, Foyer and breakout rooms Building H**

*Ice breaker*

## **TUESDAY: MARCH 12<sup>th</sup>:**

### **09:00 – 13:00: Plenary Session, Lecture Hall Building H**

This session is available online: <https://global.gotomeeting.com/join/396571565>

#### **MEETING GOAL** (Chairs: M. Rex, M. Shupe)

- 09:00 – 09:20 MOSAiC Overview (M. Rex/U. Nixdorf)
- 09:20 – 09:50 Logistics and Safety (V. Mohaupt/B. König)
- 09:50 – 10:10 Discussion
- 10:10 – 10:30 Modelling Strategy, Report Monday (A. Rinke)

*Coffee break: 10:30 – 11:00, Foyer Building H*

#### **DATA** (Chairs: St. Frickenhaus, A. Immerz)

- 11:00 – 11:20 Data Policy: Core concepts
- 11:20 – 11:50 Data Infrastructure on board
- 11:50 – 12:30 Data Management in MOSAiC: Architecture and components of the data flow
- 12:30 – 12:45 Ice Floe Navigation App
- 12:45 – 13:00 Data Repositories: Pangaea and Arctic Data Centre

*Lunch break: 13:00 – 14:00, Foyer Building H*

### **14:00 – 16:00: Breakout sessions**

- 1) Atmosphere  
(M. Rex, M. Shupe); (Building H – Room 2/3, **Holger**)
- 2) Sea Ice  
(M. Nicolaus, D. Perovich); (Building H – Lecture Hall, **Aleksandr**)
- 3) Ocean  
(B. Rabe, NN); (Building H – Room 1, **Hélène**)
- 4) Bio-Geochemistry  
(E. Damm, B. Loose); (Building A45-S – Seminar Room, **Lukas**)
- 5) Ecosystem  
(A. Fong, R. Gradinger); (Building A45-S – Lecture Hall, **Hanna**)

*Coffee break: 16:00 – 16:30, Foyer Building H*

### **16:30 – 17:30: Plenary Session, Lecture Hall Building H**

This session is available online: <https://global.gotomeeting.com/join/981672933>

#### **EVENTS** (Chairs: J. Regnery, M. Rex)

Objectives:

What observations are helpful for modelers from cross-cutting or smaller events?

What are the team-specific events being discussed?

### **17:30 – 20:00: individual discussions, Foyer Building H**

*Snacks and refreshments*

## **WEDNESDAY: MARCH 13<sup>th</sup>:**

### **09:00 – 10:30 Breakout sessions**

- 1) Polarstern  
(M. Nicolaus, A. Fong, V. Mohaupt); (Building H – Lecture Hall, **Oskar**)
  
- 2) Remote Sensing  
(G. Spreen, R. Kwok); (Building H – Room 2/3, **Lukas**)
  - Satellite Remote Sensing Datasets for MOSAiC
    - What datasets will be available (a) on land and (b) on the ship
    - What are the RS needs of the different Teams? What datasets need to be available on board?
    - Who takes responsibility to provide derived datasets like sea ice drift or ice type from SAR in near-real time?
    - Define persons responsible for the different satellites/sensors
  - Remote sensing instruments on the ice and Polarstern
    - Measurement setup at the remote sensing site
      - \* Which instruments, how to set them up together
      - \* Observational plan (e.g. avoid RFI)
      - \* Movement of instruments between different RS sites: when, how often? (only one site has power, measurements during moving the instruments?)
    - RS measurements during the snow/ice transects
    - RS measurements onboard Polarstern

*Coffee break: 10:30 – 11:00, Foyer Building H*

### **11:00 – 13:00: Breakout sessions**

- 1) Central Observatory  
(M. Nicolaus, M. Shupe); (Building H – Lecture Hall, **Oskar**)
  
- 2) Modelling: Forecast (Data and coordination); (Building H – Room 2/3, **Hélène**)

*Lunch break: 13:00 – 14:00, Foyer Building H*

### **14:00 – 16:00: Breakout sessions**

- 1) Distributed Network  
(B. Rabe, O. Persson); (Building H – Lecture Hall, **Oskar**)
  
- 2) Aircraft (Polar 5 + 6)  
(A. Herber, M. Wendisch); (Building A43 – Lecture Hall, **Hanna**)
  
- 3) Modelling: Post-MOSAiC (Modell evaluation); (Building H – Room 2/3, **Hélène**)
  
- 4) Cross-cutting experimental implementation  
(A. Fong); (Building A45-S – Lecture Hall, **Lukas**)

*Coffee break: 16:00 – 16:30, Foyer Building H*

### **16:30 – 18:30: individual discussions**

### **18:30 – 20:00: individual discussions, Foyer Building H**

*Snacks and refreshments*

## **THURSDAY, MARCH 14<sup>th</sup>:**

### **09:00 – 10:30: Plenary Session, Lecture Hall Building H**

This session is available online: <https://global.gotomeeting.com/join/890387117>

#### **LOGISTICS LEG 1 – 6 (Chairs: Ship coordination)**

- 09:00 – 09:20 Operational forecast information (DWD)
- 09:20 – 10:05 Logistics leg 1-6 (V. Mohaupt)
  - Practical information for participants
  - The MOSAIC Handbook
  - EIS revisited
  - Polarclothing – what will we provide, what is required
  - Safety equipment what will be covered by Logistics, what has to be brought by participants?
  - Logistic equipment– what will be covered by Logistics, what has to be brought by participants
  - Work safety – training and certificates on certain devices, safety gear has to be organized by groups (chainsaws)
  - Freight & samples on supply cruises
- 10:05 – 10:20 Data revisited: user survey, info Tuesday, Breakout results (A. Immerz)
- 10:20 – 10:30 Discussion

#### **Coffee breach: 10:30 – 11:00, Foyer Building H**

- 11:00 – 11:10 Central Observatory / Ice Camp: results from breakout session; set up, logistic infrastructure (shelter, power & data lines) (M. Nicolaus)
- 11:10 – 11:20 Polarstern – results from breakout session (M. Shupe)
- 11:20 – 11:30 Distributed Network – results from breakout session (B. Rabe)
- 11:30 – 12:00 Introduction of each Cruise Leader
- 12:00 – 12:30 Specifications of each Leg
- 12:30 – 13:00 Implementation of unique experiments/measurements and standard measurements on Polarstern

#### **Lunch break: 13:00 – 14:00, Foyer Building H**

### **14:00 – 16:00: Breakout sessions**

- 1) Snow sampling + Ice coring  
(M. Nicolaus, R. Gradinger); (Building H – Lecture Hall, Aleksandre)
- 2) Water Column Observations  
(A. Fong, B. Rabe); (Building A45-S – Lecture Hall, Johannes)
- 3) Surface fluxes  
(M. Shupe, D. Perovich); (Building H – Room 2/3, Lukas)

#### **Coffee break: 16:00 – 16:30, Foyer Building H**

### **16:30 – 18:30: individual discussions**

- 1) Leads / Ridges  
(M. Granskog, A. Schulz); (Building H – Lecture Hall, Aleksandre)
  - Update of status tables (presented by Julia on Tuesday)
  - Final specifications of lead/ridge events
  - Prioritization of measurements in accordance to the restricting safety regulations

- General coordination (on board decision protocol) and coordination of collaboration (e.g. teams should bundle their activities: “avoid single players”)

## 2) Storms

(O. Persson, Ch. Polashenski); (Building H – Room 2/3, **Lukas**)

**18:30 – 20:00: individual discussions, Foyer Building H**

*Snacks and refreshments*

## **FRIDAY, MARCH 15<sup>th</sup>:**

### **09:00 – 10:30: individual discussions**

- 1) Coordination of MOSAiC activity beyond Polarstern (Villum, Ny-Alesund, Aircraft activities) (M. Zanatta, A. Herber); (Building H – Room 2/3, Marco)
- 2) Coordination of work on the ice (M. Nicolaus, M. Shupe, V. Mohaupt); (Building H – Lecture Hall, Oskar)

*Coffee break: 10:30 – 11:00 Foyer Building H*

### **11:00 – 13:00: Plenary Session, Lecture Hall Building H**

*This session is available online: <https://global.gotomeeting.com/join/778298341>*

#### **MEDIA + OUTREACH** (Chairs: K. Weiß, M. Rex, M. Shupe)

- 11:00 – 11:30 Communicating MOSAiC: Presentation Media Concept (K. Weiß/E. Horvath/F. Mehrstens)
- 11:30 – 11:40 Team Play: Collaboration with MOSAiC Participants and Partner Institutions (K. Weiß)
- 11:40 – 12:00 (Social) Media Policy (F. Mehrstens/K. Weiß)
- 12:00 – 12:30 MOSAiC Education Concept (M. Shupe)
- 12:30 – 13:00 MOSAiC School 2019 (J. Lenz)

*Lunch break: 13:00 – 14:00, Foyer Building H*

### **14:00 – 16:00: Plenary Session, Lecture Hall Building H**

*This session is available online: <https://global.gotomeeting.com/join/506582101>*

#### **SUMMARY BREAKOUTS** (Chairs: M. Shupe, M. Rex)

Each presentation 15 minutes + 15 minutes of discussion

- 14:00 – 14:30 Leads/Ridges (M. Granskog, A. Schulz)
- 14:30 – 15:00 Storms (O. Persson, Ch. Polashenski)
- 15:00 – 15:30 Coordination on the ice (M. Nicolaus, M. Shupe, V. Mohaupt)
- 15:30 – 16:00 Coordination of MOSAiC activity beyond MOSAiC (M. Zanatta, A. Herber)