

AGENDA

Version 4 (08 May 2018)

Advancing MOSAiC Science

28 May – 1 June, 2018
 Alfred Wegener Institute
 Potsdam, Germany

Meeting Objectives: To strengthen the links between MOSAiC science objectives and the specific plans for observing, modeling, and synthesis activities. This includes focus on: What will be observed; How interdisciplinary observations will be linked; The types of products that will be produced; Plans for how observations and models will be brought together for process understanding, model assessment, and parameterization development; Ideas on how observations can be upscaled; Plans for what activities are needed in preparation for MOSAiC.

Participation and Planning Schedule: Everyone who intends to participate in MOSAiC (observing, modeling, analysis, etc.) should submit a poster presentation. Session chairs may select specific poster submissions to also give oral presentations when appropriate.

Agenda Overview: (Breakout abbreviations are listed below)

Session	Monday	Tuesday	Wednesday	Thursday	Friday
	Thematic WGs: Coordinating Science	MOSAiC Coupled System Science Questions	High-level Science Coordination	Implementing Science	Implementing Science
09:00 – 10:45	Plenary: Open meeting, agenda, objectives	Breakout: Science questions 2,3,4	Plenary: MOSAiC status. WG summaries	Breakouts: PO, DN1, M1	Breakouts: RS, LS, DP
10:45 – 11:15	Coffee Break (Foyer in Building H)				
11:15 – 13:00	Breakout: WGs Breakout: Models	Breakout: Science questions 2,3,4	Plenary: WG summaries; discussion	Breakouts: PO, DN2, M2	Breakouts: RS, EV, CR
13:00 – 14:00	Lunch Break (Foyer in Building H)				
14:00 – 15:45	Breakout: WGs	Breakout: Science questions 1,5,6	Plenary: MOSAiC in Context	Breakouts: IC, AC1, M3	Plenary: Final summaries; Future steps; Close
15:45 – 16:15	Coffee Break (Foyer in Building H)				
16:15 – 18:00	Breakout: WGs	Breakout: Science questions 1,5,6	Plenary: Ideas for Synthesis	Breakouts: IC, AC2	
18:00 – 20:00	Poster session (with snacks and refreshments)	Poster session (with snacks and refreshments)	Meeting Dinner (19:00 – 22:00)	Poster session (with snacks and refreshments)	

MONDAY: MAY 28th: Thematic Working Groups: Coordinating Science

Registration: 8:30 – 9:15

9:15 – 10:45: Plenary session, Lecture Hall Building H

- Opening session: Open meeting, welcome, meeting logistics and objectives (5 min)
- Current status of MOSAiC ([Markus Rex](#)) (15 min)
- Logistical update during MOSAiC ([Uwe Nixdorf](#)) (10 min)
- Russian science contributions ([Alexander Makarov](#)) (12 + 3 min)
- Chinese science contributions ([Dake Chen](#)) 12 + 3 min)
- SPOT, the Pre-MOSAiC campaign ([Thomas Krumpfen](#)) (7 + 3 min)
- YOPP, a third SOP during MOSAiC in early 2020 ([Helge Gössling](#)) (7 + 3 min)
- Data management concept ([Stephan Frickenhaus](#)) (7 + 3 min)

Coffee break: 10:45 – 11:15, Foyer Building H

11:15 – 18:00: Breakout sessions

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

Coffee break: 15:45 – 16:15, Foyer Building H

- ATMOS ([Matthew Shupe](#), [Markus Rex](#)) (Room, responsible person)
- ICE/SNOW ([Donald Perovich](#), [Marcel Nicolaus](#)) (Room, responsible person)
- OCEAN ([Benjamin Rabe](#), [Christine Provost](#)) (Room, responsible person)
- BGC ([Ellen Damm](#), [Brice Loose](#)) (Room, responsible person)
- ECO ([Allison Fong](#), [Anya Waite](#)) (Room, responsible person)
- Modeling ([Annette Rinke](#), [Wieslaw Maslowski](#)) (Room, responsible person)
→ Modeling only during 11:15 – 13:00, but then distribute across the teams.

Objectives:

- Thematic teams work individually on their own priorities, needs, issues, sub-topics; link across all scales and platforms (ship, camp, network, satellites, aircraft, models, partners)
- Data and synthesis products. What products will be produced? What are high-level synthesis data products that will enable broad community science? What is the general approach for data management from the team? Anticipated timing for delivering data products?
- Model integration/synthesis: What are the key parameterizations in need of assessment and development? How can observations be made/package to support parameterization? How can the observations be upscaled appropriately?

18:00 – 20:00: Poster session, Foyer Building H

Snacks and refreshments

TUESDAY: MAY 29th: MOSAiC Coupled System Science Questions

09:00 – 13:00: Breakout sessions

Coffee breach: 10:45 – 11:15, Foyer Building H

- 2) Coupling of ice formation, drift, and deformation (**Christian Haas, Donald Perovich, Gunnar Spreen**); (Room, responsible person)
- 3) Clouds, precipitation, aerosols and links to fluxes (**Julia Schmale, Ina Tegen, Matthew Shupe**); (Room, responsible person)
- 4) Interfacial gas exchanges (**Tsuyoshi Wakamatsu, Jennie Thomas, Ellen Damm**); (Room, responsible person)

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

14:00 – 18:00: Breakout sessions

Coffee breach: 15:45 – 16:15, Foyer Building H

- 1) Heat & momentum budgets (**Ola Persson, Christof Lüpkes, Wieslaw Maslowski**); (Room, responsible person)
- 5) Ecosystem responses to ice change (**Letizia Tedesco, Giulia Castellani, Allison Fong**); (Room, responsible person)
- 6) Large-scale transports/feedbacks (**Jun Inoue, Detlev Majewski, Klaus Dethloff**); (Room, responsible person)

Objectives:

Determine how we collectively address MOSAiC science questions. Address the following points:

- How will the contributions be coordinated to address the science questions?
- Do we have the needed observations and observational design to address the questions?
- How will models contribute to, and benefit from, this research? What are the cross-cutting data/products that are needed?
- How can information from MOSAiC be upscaled and/or contribute to parameterization development?
- What preparatory analyses/activities are needed to support MOSAiC?

18:00 – 20:00: Poster session, Foyer Building H

Snacks and refreshments

WEDNESDAY: MAY 30th: High-level Science Coordination

09:00 – 10:45: Plenary session, Lecture Hall Building H

- Summary from Monday's breakout sessions (Chair: Markus Rex)
 - ATMOS (Matthew Shupe, Markus Rex) (10 min)
 - ICE/SNOW (Donald Perovich, Marcel Nicolaus) (10 min)
 - OCEAN (Benjamin Rabe, Christine Provost) (10 min)
 - BGC (Ellen Damm, Brice Loose) (10 min)
 - ECO (Allison Fong, Anya Waite) (10 min)
 - Modeling (Annette Rinke, Wieslaw Maslowski) (10 min)
- Weekly schedule overview (Marcel Nicolaus) (10 min)
- Discussion

Coffee breach: 10:45 – 11:15, Foyer Building H

11:15 – 13:00: Plenary session, Lecture Hall Building H

- Summary from Tuesday's breakout sessions (Chair: Matthew Shupe)
 - 1) Heat & momentum budgets (Ola Persson, Christof Lüpkes, Wieslaw Maslowski) (10 min)
 - 2) Coupling of ice formation, drift, and deformation (Christian Haas, Donald Perovich, Gunnar Spreen) (10 min)
 - 3) Clouds, precipitation, aerosols and links to fluxes (Julia Schmale, Ina Tegen, Matthew Shupe) (10 min)
 - 4) Interfacial gas exchanges (Tsuyoshi Wakamatsu, Jennie Thomas, Ellen Damm) (10 min)
 - 5) Ecosystem responses to ice change (Letizia Tedesco, Giulia Castellani, Allison Fong) (10 min)
 - 6) Large-scale transports/feedbacks (Jun Inoue, Detlev Majewski, Klaus Dethloff) (10 min)
- Discussion

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

14:00 – 15:45: Plenary session, Lecture Hall Building H

"MOSAiC in context: Synergies with collaborating activities." Presentations and/or discussion focused on links with collaborating activities (Chair: Markus Rex)

- SPOT/Pre-MOSAiC campaign (Thomas Krumpfen) (15 min)
- YOPP and model verification along the MOSAiC drift (Helge Gösling) (15 min)
- Nansen Legacy (Sebastian Gerland) (15 min)
- Lessons learned from N-ICE (Mats Granskog) (15 min)
- Lessons learned from PASCAL (Andreas Macke) (15 min)
- Discussions (30 min)

Coffee breach: 15:45 – 16:15, Foyer Building H

16:15 – 18:00: Plenary session, Lecture Hall Building H

Ideas for Synthesis”: Presentations on high-level concepts for guiding synthesis towards Science goals, communicating findings, and enabling broad community involvement/engagement. (Chair: [Matthew Shupe](#))

- NWP modeling and MOSAiC ([Detlev Majewski](#)) (20 min)
- Radiosondes and data assimilations studies ([Jun Inoue](#)) (20 min)
- Integration of observations and models on climate scales ([Johannes Quaas](#)) (20 min)

Discussion about modeling (15 min)

- MOSAiC data legacy / publishing data ([Stephan Frickenhaus](#)) (15 min)
- A vision for MOSAiC communications and outreach ([Ralf Roechert](#)) (15 min)

19:00 – 22:00: Dinner on the ship SANSSOUCI

- *Meeting at 18:45 pier, next to Mercure-Hotel*
- *Boat trip through Potsdam starts at 19:00*
- *Dinner is served as a buffet*
- *Back at the pier at 22:00*

THURSDAY, MAY 31st: Implementing Science

09:00 – 10:45: Breakout sessions

- **PO: Onboard Polarstern:** (Marcel Nicolaus, Allison Fong); (Room, responsible person)
Detailed planning for work and space onboard
- **DN1: Distributed network:** Starting location, ice conditions, layout of DN (Benjamin Rabe, Ola Persson); (Room, responsible person)
- **M1: Modeling activities:** Model Overview Session (Annette Rinke, Wieslaw Maslowski); (Room, responsible person)
General breakout to outline various modeling activities and science questions.
Participants give short presentations addressing
 - > *What models?*
 - > What can you contribute to MOSAiC? Science questions?
 - > Relevant processes, parameterizations, coupling feedbacks? Ideas for linking observations and models?
 - > What is needed from MOSAiC? Discussion topics could cover approaches for upscaling and synthesis, preparatory model studies, etc.

Coffee breach: 10:45 – 11:15, Foyer Building H

11:15 – 13:00: Breakout sessions

- **PO: Onboard Polarstern:** (Marcel Nicolaus, Allison Fong); (Room, responsible person)
Detailed planning for work and space onboard
- **DN2: Distributed network:** Buoy types, data, link observational procedure to science, including autonomous measurements and calibration (Christine Provost, Benjamin Rabe); (Room, responsible person)
- **M2: Modeling activities:** Operational models / Assimilation (Jun Inoue, Tsuyoshi Wakamatsu); (Room, responsible person)
Model activities in support of field operations, and field data in support of operational models, include link with YOPP

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

14:00 – 15:45: Breakout sessions

- **IC: Planning the ice camp:** (Marcel Nicolaus, Matthew Shupe); (Room, responsible person)
Organizing camp activities, schedules on ice
- **AC1: Aircraft activities:** Science Overview (Manfred Wendisch, Andreas Herber); (Room, responsible person)
Focus on 6 Science topic areas
- **M3: Modeling activities:** Process models (Christof Lüpkes, Detlev Majewski); (Room, responsible person)
How to combine observations and models towards process synthesis. Coordination of modeling activities, working with data from MOSAiC and partners, representativeness of observations, scale dependencies, etc.

Coffee breach: 15:45 – 16:15, Foyer Building H

16:15 – 18:00: Breakout sessions

- **IC: Planning the ice camp**: (Marcel Nicolaus, Matthew Shupe); (Room, responsible person)
Organizing camp activities, schedules on ice
- **AC2: Aircraft activities**: Status of MOSAiC-accompanying aircraft campaigns (Manfred Wendisch, Andreas Herber); (Room, responsible person)

18:00 – 20:00: Poster session, Foyer Building H

Snacks and refreshments

FRIDAY, JUNE 1st: Implementing Science

09:00 – 10:45: Breakout sessions

- **RS: Remote sensing:** (Gunnar Spreen, Ronald Kwok); (Room, responsible person)
Coordinating activities and products (field, airborne, and satellite observations and products)
- **LS: Logistics and Safety:** (Marcel Nicolaus, Verena Mohaupt, Bjela König); (Room, responsible person)
General discussion of on-site logistics and safety planning, including traveling on the ice and to the distributed network
- **DP: Data Publication Policies:** (Stephan Frickenhaus); (Room, responsible person)
Synthesis of information from WG data meetings; central archival, publication policies

Coffee break: 10:45 – 11:15, Foyer Building H

11:15 – 13:00: Breakout sessions

- **RS: Remote sensing:** (Gunnar Spreen, Ronald Kwok); (Room, responsible person)
Coordinating activities and products (field, airborne, and satellite observations and products)
- **EV: Scientific Events:** (Benjamin Rabe, Ellen Damm, Wieslaw Maslowski); (Room, responsible person)
Measurement strategies to address specific, high-interest events such as lead/ridge formation, melt onset, etc.

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

14:00 – 16:00: Plenary session, Lecture Hall Building H

- Summary from Thursday's and Friday's breakout sessions (Chair: Markus Rex)
 - **PO:** Onboard Polarstern (Marcel Nicolaus, Allison Fong) (10 min)
 - **DN:** Distributed network (Benjamin Rabe, Ola Persson, Christine Provost) (10 min)
 - **IC:** Planning the ice camp (Marcel Nicolaus, Matthew Shupe) (10 min)
 - **EV:** Scientific Events (Benjamin Rabe, Ellen Damm, Wieslaw Maslowski) (10 min)
 - **M:** Modeling activities (Annette Rinke, Wieslaw Maslowski, Jun Inoue, Tsuyoshi Wakamatsu, Christof Lüpkes, Detlev Majewski) (10 min)
 - **AC:** Aircraft activities (Manfred Wendisch, Andreas Herber) (10 min)
 - **RS:** Remote sensing (Gunnar Spreen, Ronald Kwok) (10 min)
 - **LS:** Logistics and Safety (Marcel Nicolaus, Verena Mohaupt, Bjela König) (10 min)
 - **DP:** Data Publication Policies (Stephan Frickenhaus) (10 min)
- Discussion (15 min)
- Future steps (Markus Rex) (10 min)
- Closure (Markus Rex) (5 min)