Newsletter September 2023

Dear PalMod members and friends,

in this short Newsletter you will find - beside the **final agenda** of the PalMod General Assembly in 2 weeks - the usual overview about the overdue and soon due Miles and Deliverables until the end of PalMod Phase II.

Moreover, I would like to ask all users of **DKRZ compute and storage resources** to think about their requirements for 2024. Please note, that we are currently discussing to adapt the new PalMod Phase III project structure to the DKRZ joint project structure. That means we think about reducing from five DKRZ projects (WG1, WG2, WG3, CC, Data Project) to three (or maybe two) DKRZ projects (two or one for WG1, WG2, WG3 and one for Data management). However, this will be discussed at the GA in more detail.

1. Update on the General Assembly

Date: Wed. 27. Sept. 2023 11:15h to Fri. 29. Sept. 2023 13h

Venue: AWI Bremerhaven, Building H (Klussmannstr.3), new seminar room @ground floor

Statistics (08.09.23):

- 66 participants – 60 in person / 6 online
- 28 posters

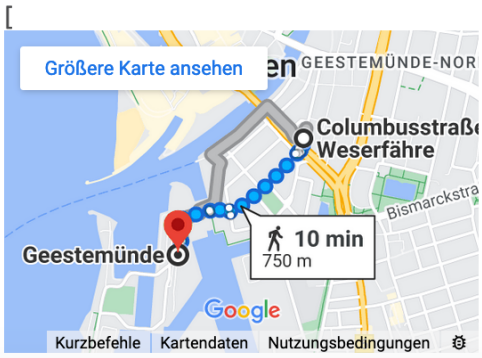
How to get there: https://www.awi.de/en/about-us/sites/bremerhaven.html

Arrival by train

Trains of the Deutschen Bahn and the Elbe Weser railways (EVB) operate at regular intervals from Bremen and Hamburg to Bremerhaven.

To AWI Campus (buildings A, B, C und E) and the Technikum and buildings G & H in Klußmannstraße:
From the central station of Bremerhaven you can take several bus routes:
- bus route 501 up to „Weserfähre"
- bus routes 505, 506 up to „Columbusstraße/Weserfähre"
- bus routes 440, 503, 507, 528, 531, 579 up to „Elbinger Platz"
From here it is a walk of 10-15 minutes. The map on the left shows you the way from the stops „Weserfähre" and „Columbusstraße/Weserfähre", the right one from „Elbinger Platz". You can reach the AWI Campus Bussestraße (building F) at the turning to the Weser ferry in the Bussestraße on the right sight. Take off at "Elbinger Platz" and go to the Kaistraße to reach building G in the Klußmannstraße.

Additionally the bus route 510 goes directly from the central station up to „Doppelschleuse/AWI", but just a few times per day. You can find the exactly timetable on the Website of VBN .



PalMod General Assembly

Wed. 27. 09.2023

11:15 – 13:00	**Talks Session1**		**105 Min**
	Welcome, Introduction of new PalMod members	Latif, Ilyina, Schulz	15 Min
	Comments from Projektträger DLR		20 Min
PII 1.2 /1.3 PIII 1.2	Self-adaptive Laurentide Ice Sheet evolution towards the Last Glacial Maximum by Atlantic subtropical moisture transport	L.Niu (AWI)	20 + 15 Min
PII 1.1 PIII 1.2	A mechanism for reconciling the synchronisation of Heinrich events and Dansgaard-Oeschger cycles	C.Schannwell (MPI)	20 + 15 Min
13:00 – 14:00	***Lunch***		***60 Min***
14:00 – 15:30	**Talks Session2**		**90 Min**
PII 2.1 PIII 2.2	Constraining ocean biogeochemistry in the past: model inter-comparison for LGM and transient simulations in MPI-ESM for the last deglaciation	B. Liu (MPI)	20 + 15 Min
PII 3.3	A global synthesis of benthic foraminiferal d13C: Implications for deglacial changes in ocean circulation and carbon cycle	S. Mulitza (MARUM)	20 + 15 Min
	Discussion / buffer		*20 min*
15:30 – 17:30	***Coffee with Postersession1***		**120 Min**
18:00 - xx	***Social Event with Dinner @Fischkochstudio***		

Thu, 28. 09.2023

09:00 – 10:30	**BOG Session1**		**90 Min**
	Dynamics of AMOC during the last glacial-interglacial cycle	*WG1*	60 Min.
	Abrupt changes in carbon cycle during warming episodes	P. Köhler (AWI)	

	Wrap up BOG		30 Min.
10:30 – 11:00	***Coffee***		***30 Min***
11:00 – 12:30	**Talks Session 3**		**90 Min**
PII 1.4	Ice Sheet (in)stability in interaction with the solid Earth and the ocean	M. Bagge (GFZ) T. Albrecht (PIK)	20 + 15 Min
PII 1.1, 1.2, 3.3.	Glacial AMOC variability in CESM	T. Kovács (MARUM)	20 + 15 Min
	Discussion / buffer		*20 Min*
12:30 – 13:30	***Lunch***		***60 Min***
13:30 – 15:30	***Postersession 2***		***120 min***
15:30 – 16:00	***Coffee***		***30 Min***
16:00 – 17:30	**Talks Session4**		**90 Min**
PII 2.2 PIII 2.1	Comparison of simulated and reconstructed biome dynamics	A.Dallmeyer (MPI) U.Herzschuh (AWI)	20 + 15 Min
CC	Dynamic Lake Modelling for Coupled Paleoclimate Runs of the Last Glacial Cycle	T. Riddick (MPI)	20 + 15 Min
	Discussion / buffer		*20 min*
17:30 - xxx	***Fingerfood and quality time @AWI***		

Fri, 29.09.2023

09:00 – 10:30	**BOG Session2**		**90 min**
	Role of Antarctica and the Southern Ocean for glacial / interglacial variability	V. Klemann (GFZ)	60 Min.
	Tipping points and climate variability	T.Kleinen (MPI)	
	Wrap Up BOG		30 Min
10:30 – 11:00	***Coffee***		**30 Min**
11:00 – 13:00	**Concluding discussion**		**120 min**
	Advice from the SAB		
	General discussion, outlook and wrap up		

2. Update on Milestones and Deliverables (@08.09.2023)

It is very possible, and in the case of some severely overdue M&Ds very likely, that they turned out as not being useful. In this case, please let me know and I will remove them from the list.

Deadlines until end of 2022

WP	WG	Due To	DAYS	Responsible	Task
CC	CC2 M11	30.10.22	-313	U Bonn	precipitation evolution in deglaciation simulation against pollen synthesis / macro fossils available
WG2	WP2.2 D3	30.09.22	-343	UNI HH	Manuscript about the role of shelf weathering on land-ocean biogeochemical matter fluxes
WG3	WP3.2 D3	30.09.22	-343	GFZ	Transient experiment MIS3 performed, publication draft
WG3	WP3.2 D6	30.09.22	-343	MUN	Global ice sheet calibration of Termination II and I
WG3	WP3.2 M10	30.09.22	-343	MUN	Global ice sheet calibration for Termination II
WG2	WP2.2 M2	30.06.22	-435	MPI	Biogeophysical and biogeochemical feedbacks between terrestrial biosphere and climate are assessed
WG3	WP3.2 M6	30.06.22	-435	AWI	Vegetation dynamics analysed including model-proxy comparison
WG3	WP3.2 M9	30.06.22	-435	MUN	Inclusion of some of the major last glacial cycle ice caps
WG3	WP3.3 D3	30.06.22	-435	Marum, AWI-B	Transient simulations including water isotopes for last glacial inception
CC	CC2 M18	30.03.22	-527	GEOMAR	Volcanic forcing data files constructed and tested
WG2	WP2.2 M6	30.03.22	-527	UNI HH	Manuscript about the role of shelf weathering on land-ocean biogeochemical matter fluxes
WG3	WP3.2 D2	30.03.22	-527	GFZ	Update of the PALIM data-base to integrate chronological links to the marine data-base
WG3	WP3.2 M1	30.03.22	-527	GFZ	Synchronization of lacustrine and marine data-bases
WG3	WP3.2 M3	30.03.22	-527	GFZ	Improved proxy-system models for key climate proxies including varve thickness data
WG3	WP3.2 M8	30.03.22	-527	MUN	Revised calibrated distribution of last glacial cycle ice sheet chronologies and associated 1D regional Earth models
WG3	WP3.3 M2	30.03.22	-527	Marum, AWI-B	Transient simulations of the Holocene and last glacial inception set up and ready to run
WG2	WP2.2 M5	30.12.21	-617	UNI HH	Mapping of the geochemical and lithological characteristics of the continental shelves
WG1	WP1.2 M3	30.09.22	-343	AWI, Marum, MPI	Data from first asynchronosly coupled MIS3 simulations available to the PalMod community

Deadlines 31/12/2022

WG2	WP2.2 D1	30.12.22	-252	MPI	Manuscript on feedbacks between terrestrial biosphere and climate for the deglaciation, glacial inception, and MIS3
WG2	WP2.2 D2	30.12.22	-252	PIK	Transient simulation of the last glacial cycle with CLIMBER-X driven only by orbital forcing (jointly with WP1.X).
WG3	WP3.2 D4	30.12.22	-252	AWI	Proxy-Model-comparison of global palaeotemperatures reconstructed from oxygen isotopes in lake sediment cores
WG3	WP3.2 D5	30.12.22	-252	AWI	Pollen-based biome and climate reconstruction globally available for 130 – 0 ka
WG3	WP3.2 M4	30.12.22	-252	AWI	Synthesis of terrestrial palaeoclimate reconstructions by carbonate and silica oxygen isotopes, focusing on lake sediment cores with a regional focus on the Arctic
WG3	WP3.2 M7	30.12.22	-252	AWI	Drivers of vegetation dynamics investigated
WG3	WP3.3 D6	30.12.22	-252	AWI-P	Publication describing the results for MIS3 and the full glacial cycle
WG3	WP3.3 M5	30.12.22	-252	AWI	Global synthesis and comparison of the spectrum of water isotope variability for MIS3 and full glacial cycle finished
CC	CC2 D6	31.12.22	-251	HZG	Final PalMod phase II paleo-data metadata table
CC	CC2 D7	31.12.22	-251	HZG	Documentation of ensemble model-data comparison of deglacial simulation ensemble from PalMod phase II
CC	CC2 M7	31.12.22	-251	HZG	Standardization of paleo data finished (documentation contained in DMP)
CC	CC2 M8	31.12.22	-251	HZG	Publication of quality checked paleo data and enabling of version control workflow for future updates incl. persistent identifiers
CC	CC1 M8	31.12.22	-251	CAU	Parareal version with biogeochemistry coupled; Software, documentation of convergence and efficiency results
CC	CC1 M9	31.12.22	-251	CAU	Report of possible and promising extensions of parareal methods towards to additional model components and full ESM configurations
CC	CC2 D12	31.12.22	-251	UHD, Uni Bonn, HZG	Release of v1 of the toolbox and presentation of the results for all publicly released PalMod simulations on a dedicated website
CC	CC2 M9	31.12.22	-251	HZG	Application of ensemble tools to PalMod phase II simulations and PalMod phase II marine paleo data synthesis
CC	CC1 M6	31.12.22	-251	CAU	Asymptotic method realized and evaluated; Software, documentation of convergence and efficiency results
CC	CC1 M7	31.12.22	-251	CAU	Micro-macro parareal version running for ocean component, documentation of convergence and efficiency results
WG1	WP1.3 D1	31.12.22	-251	PIK	Providing early diagnostics in the ice sheet-climate system based on full glacial cycle CLIMBER-X simulations
WG2	WP2.2 M3	31.12.22	-251	PIK	Quantification of carbon cycle feedbacks operating through shelf processes during glacial inception and deglaciation with CLIMBER-X

Deadline between 01/23 – 08/23

CC	CC2 M12	31.08.23	-8	U Bonn	Probabilistic evaluation of temperature and precipitation trend patterns and abrupt changes in PalMod phase II deglaciation simulation ensemble against pollen synthesis from PalMod phase I
CC	CC2 D3	28.02.23	-192	DKRZ, HZG	Final release of DMP
CC	CC2 M2	28.02.23	-192	DKRZ	CMORization finished (documentation contained in DMP)
CC	CC2 M3	28.02.23	-192	DKRZ	Quality checks of model output and publication in ESGF and long-term archiving in WDCC incl. DataCite DOI assignment (documentation contained in DMP)
WG1	WP1.3 D3	30.08.23	-9	AWI, Marum, MPI	Non- Accelerated simulations of the last glacial inception with GCM-based ice sheet - solid earth - climate models
CC	CC1 D4	31.07.23	-39	MPI	Study on the outburst flood and African Humid Period lake feedback hypotheses
CC	CC1 D5	31.07.23	-39	MPI	glacial timescales
CC	CC2 D9	30.04.23	-131	Uni Bonn	Plugin for Bayesian framework of spatio-temporal evaluations documented and ready for integration in toolbox
WG1	WP1.1 M2	31.03.23	-161	AWI, Marum, MPI	Analysis of control factors for the sequence of deglaciation key events
WG1	WP1.1 M3	30.06.23	-70	AWI, Marum, MPI	Benchmarked state conditions of LGM and deglacial key intervals via element cycles
WG1	WP1.2 D1	30.06.23	-70	AWI, Marum, MPI	Reports on the interplay between DO cycles and HE based on fully coupled transient simulations
WG1	WP1.3 D2	30.03.23	-162	AWI, Marum, MPI	Accelerated ice sheet - solid earth - MIS 5.2climate simulations towards
WG1	WP1.3 D4	31.08.23	-8	AWI, Marum, MPI, PIK	Model - data evaluation
WG2	WP2.3 D2	30.04.23	-131	MPI-M	Publications on methane during MIS 3 and glacial inception submitted
WG2	WP2.3 M2	30.04.23	-131	MPI-M	Transient experiment MIS3 performed, publication draft
WG1	WP1.2 M4	30.06.23	-70	AWI, Marum, MPI	Data from first synchronosly coupled simulations available to the PalMod community (prescribed CO2)
WG1	WP1.4 D4	31.07.23	-39	GEOMAR	Sensitivity of Southern Ocean circulation and deep convection to eddy and diffusion parameterisation yielding paramerisation suggestions for WP1.1 - 1.3
WG2	WP2.1 M1	30.03.23	-162	AWI	Adjust REcoM model for simulating prognostic atmospheric CO2 concentrations, including fluxes from weathering, and volcanism.
WG2	WP2.1 M2	30.03.23	-162	AWI	Include iron sources from marine shelves, rivers, hydrothermal activity and sea ice in REcoM

Upcoming until end of PalMod Phase II

WG1	WP1.4 D6	31.01.24	145	GEOMAR	Study on eddy effects in the Southern ocean including uptake of heat and carbon as well as cross-frontal signal
CC	CC1 D7	31.10.23	53	PIK	Study on simulating the last glacial cycle with PISM using the PICO "pop-up" model
WG1	WP1.1 M4	31.12.23	114	AWI, Marum, MPI	Deglaciatial mechanisms using insolation as a single forcing
WG2	WP2.1 D1	31.12.23	114	AWI, CAU, MPI, Marum	Transient simulations without interactive carbon cycle for Termination I
WG2	WP2.1 D2	31.12.23	114	AWI, MPI, Marum	Transient simulations without interactive carbon cycle for the last glacial inception
WG2	WP2.1 D3	31.12.23	114	AWI, Marum	Perform transient simulations without interactive carbon cycle for abrupt climate changes during MIS3
WG1	WP1.1 D3	31.12.23	114	AWI, Marum, MPI	Deglaciation simulations for comparison with proxy data, partly including element cycle
WG1	WP1.1 D4	31.12.23	114	AWI, Marum, MPI	Stability analysis for future climate change with interactive ice sheet
WG1	WP1.4 M6	31.10.23	53	GEOMAR	Run FOCI with biogeochemistry component (TRACY-MOPS) and Nest 2
WG1	WP1.3 M4	30.10.23	52	PIK	Analysis of climate and carbon cycle feedbacks

If you meet a M or D, please let me know (kfieg@geomar.de), so I can remove it from the list!