

## Draft agenda – MPI-M retreat 2024

When: Wednesday 20.11. – Friday 22.11.

Where: [Hotel Eurostrand](#), Fintel

Time	Topic	Speaker/Room
WEDNESDAY, 20 NOV		
8:30	Bus MPI-M -> Fintel	
10:30 – 11:00	Registration / Welcome Coffee	Reception/Beer bar Restaurant
<b>SESSION 1</b>	<b>Welcome, Department presentations</b> <i>Chair: T. Kleinen, Minutes: M. Botzet, S. Rast</i>	<b>Tropical Hall</b>
11:00 – 11:30	Welcome, goals of the 2024 retreat, MPI in a nutshell (state of and plans for the institute)	J. Marotzke
11:30 – 12:10	Report from and vision for CDY (25+15')	S. Kang
12:10 – 12:50	Report from and vision for CPH (25+15')	B. Stevens
<i>12:50 – 14:20</i>	<i>Lunch</i>	
14:20 – 15:00	Report from and vision for CVR (25+15')	J. Marotzke
<i>15:00 – 15:10</i>	<i>Transfer to different rooms</i>	

AFTERNOON WEDNESDAY, 20 NOV		
SESSION 2	Science Pitch	Several rooms
15:10 – 18:30	<p>Science Pitch (Engaging presentations from scientific teams showcasing innovative research in a creative format) - (6 groups in parallel, speed talk a 5+5' per person, moderated by 1 group leader) <i>*for detailed instructions see last page</i></p> <p><b>Parallel: Strategic discussion</b> - Review of the modelling activities and where we stand: a critical presentation of the status of the modelling (2x30' on ICON Sapphire, ICON XPP)</p>	<p>D. Matei, D. Müller-Dum, F. Mundt, U. Niemeier, D. Olonscheck, S. Wilkenskjeld</p> <p><b>Bernkastel-Kues</b>  Directors, C. Hohenegger, V. Brovkin, J.S. von Storch, N. Brüggemann, J. Jungclaus, P. Korn, D. Klocke, W. Müller, D. Putrasahan, H. Schmidt, H. Segura</p>
16:00 – 16:30	Coffee Break	Tropical Hall + Restaurant
18:30	Dinner	

MORNING THURSDAY, 21 NOVEMBER		
<b>SESSION 3</b>	<b>Plenary presentations on Modelling</b> <i>Chair: C. Timmreck, Minutes: V. Gayler, J. Kröger</i>	<b>Tropical Hall</b>
09:00 – 09:20	Overview about modelling activities at MPI-M (what runs and what is being run) (15+5')	1 of BG2 leaders
09:20 – 09:40	Terra DT (15+5')	H. Schmidt
09:40 – 10:00	Ocean carbon cycle modeling in the Earth system – recent progress and future steps (UHH) (15+5')	T. Ilyina
<b>SESSION 4</b>	<b>Breakout Groups</b>	<b>Several rooms</b>
10:00 – 12:30	<b>BG1: - Artificial Intelligence and Machine Learning as Support Tools</b> (30% of participants) <i>**for more information see last page</i>	R. Weigle, P. Korn
	<b>BG2: Low-Hanging Fruits from ICON Simulations</b> (60% of participants) <i>**for more information see last page</i>	N. Brüggemann, E. Moreno-Chamarro, S. Ortega
	<b>Parallel: Strategic discussion</b> of the situation with model development, and other aspects of strategy	<b>Bernkastel-Kues</b> Directors, V. Brovkin, J.S. von Storch, C. Hohenegger, H. Schmidt, J. Jungclaus, D. Klocke, U. Kirchner, C. Guo
10:30 – 11:00	<i>Coffee Break</i>	<b>Tropical Hall + Restaurant</b>
12:30 – 14:00	<i>Lunch</i>	

AFTERNOON THURSDAY, 21 NOVEMBER		
<b>SESSION 5</b>	<b>To be used according to needs!</b> <b>Take this time to e.g., address your own topic / find the people you want to talk with, for example about →</b>	<b>Several rooms</b>
14:00 – 18:30	ORCESTR: Post-Campaign Data Review and Publication Planning	J. Windmiller
	Infrastructure program TerraDT “Digital Twin of Earth system for Cryosphere, Land surface and related interactions”	H. Schmidt
	Others could be: MPI-M remodelling? ...?	
	<b>Parallel:</b> If required: Continued BG session and preparation of summary	
15:00 – 15:30	<i>Coffee Break</i>	<b>Tropical Hall</b>
18:30	<i>Dinner</i>	

FRIDAY, 22 NOVEMBER		
<b>SESSION 6</b>	<b>Internal information</b> <i>Chair: P. De-Vrese, Minutes: L. Kornblueh, H. Pohlmann</i>	<b>Tropical Hall</b>
09:00 – 09:30	Plenary Presentation on IT Security	R. Weigle
09:30 – 09:45	Plenary Presentation by the Works council	S. Rast
<b>SESSION 7</b>	<b>Reports from Breakout group work</b> <i>Chair: M.L. Kapsch, Minutes: T. Raddatz, K. Six</i>	<b>Tropical Hall</b>
09:45 – 10:45	Presentation BG's / Reflection on Science Pitch	BG leaders / 1 moderator of science pitch sessions
<i>10:45 – 11:00</i>	<i>Coffee break</i>	<b>Tropical Hall</b>
11:00 – 12:00	General discussion	Plenum
12:00 – 12:30	<b>Conclusions, Next steps</b>	J. Marotzke
<i>12:30 – 13:30</i>	<i>Lunch</i>	
13:30	Bus Fintel -> MPI-M	

## I. SCIENCE PITCH SESSION: proposed format/instructions

The purpose of that session is that scientifically working people at MPI-M (including scientific programmers) present and explain in a simple and understandable way to the audience in their group what they are after. This could be a scientific idea, or a scientific hypothesis someone is testing, or a technical solution someone is trying to develop.

The overall goal is to get people talking about science, reflect on their work/ideas while preparing themselves for the session, getting feedback and exchanging (new) ideas during and after the sessions.

This format would be as following:

- 4 min talk, 4 min discussion
- no slides, only drawing/writing on whiteboard allowed
- BG leader is there to keep the time
- both scientists and scientific programmers have to present
- as direct feedback: could ask the participants of the group to summarize in one sentence the main idea that was presented for each presentation

## II. Breakout Groups

### **BG1: Artificial Intelligence and Machine Learning as Support Tools**

(30% of participants)

This breakout group will focus on two distinct areas: the use of AI tools, such as ChatGPT, to enhance tasks in programming, communication, and other services, and the application of machine learning (ML) in climate and weather models. Participants will discuss how these technologies can be safely and effectively integrated into various domains, addressing both their potential and the associated risks.

### **BG2: Low-Hanging Fruits from ICON Simulations**

(60% of participants)

The BG group will isolate potential questions that could easily be answered with our existing ICON simulations, focusing on "easy to answer" or low-hanging fruits, i.e., questions that could lead to a well-defined paper within approximately six months of collaborative analysis. These questions might stem from initial expectations tied to a simulation—expectations that didn't materialize but could spark broader interest within the institute. The group

can be divided into several smaller sub-groups based on how many “fruits” they decide to tackle. The BG and its sub-groups should allocate part of the time to start analysis on the simulations, such as documenting the identified question or problem during hands-on sessions within these smaller groups. Some of the questions could be new, while already ongoing initiatives—like the representation of El Niño or waves and convective organization in ICON—could use this time to refine their analysis further.