



ISIRA Advisory Group Meeting 2016



Russian-German Bilateral Activities and Projects

Nineteen ongoing/future activities in report 2016,
with a broad range of topics in research and/or education

→ Three examples:

Research Station "Samoylov Island"

PLOT – Paleolimnological Transect

MOSAiC – The 2019/20 Arctic Drift Experiment



Dieter Piepenburg

dieter.piepenburg@awi.de



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Research Station "Samoylov Island"



- Located on the southern coast of **Samoylov Island** (N 72°22', E 126°29') in the central Lena Delta
- Modern research base **since 2013**, operated by the *Trofimuk Institute for Petroleum Geology and Geophysics, Siberian Branch, RAS*
- Offers the possibility to examine the **permafrost** in the Lena Delta and to draw conclusions in regard to past and current climate events
- For more information visit www.awi.de/en/expedition/stations/island-samoylov.html



Dieter Piepenburg
dieter.piepenburg@awi.de



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Research Station "Samoylov Island"

HOME // EXPEDITION // STATIONS // ISLAND SAMOYLOV

Research Station "Samoylov Island"

A base for Russian-German permafrost research in siberia

The research station island Samoylov offers Russian and German researchers the possibility to examine the permafrost in the Lena Delta and to draw conclusions in regard to past and current climate events.

Since 1998, a partnership with Russian scientific institutes has opened the door to fieldwork in the Siberian tundra. Up until mid 2013, AWI researchers and their Russian colleagues still did so at an old research base on Samoylov Island with the rustic charm of a remote summer camp.

Since 2013, the island has been home to a modern research base operated by the Trofimuk

- Offers the possibility to draw conclusions
- For more information






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PLOT – Paleolimnological Transect



- Russian-German project 2015 - 2018  Bundesministerium für Bildung und Forschung
- Successor of a series of projects focussing on individual Eurasian lakes (e.g., Elgygytgyn, since 1998)
- Coordinated by Cologne University and AARI St. Petersburg
- **Goal:** Detailed reconstruction of the Late Quaternary environmental and climatic history along a >6000 km long transect crossing northern Eurasia, with special focus on the hitherto poorly known preglacial history



Dieter Piepenburg
dieter.piepenburg@awi.de



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The screenshot shows the website of the University of Cologne, Faculty of Mathematics and Natural Sciences, Institute of Geology and Mineralogy. The browser address bar shows geologie.uni-koeln.de. The page title is "PLOT – Paleolimnological Transect". The text describes the Russian-German PLOT Project, funded by the German Ministry for Education and Research (BMBF) and coordinated by the University of Cologne. The project aims at providing a detailed reconstruction of the Late Quaternary environmental and climatic history along a more than 6000 km long transect crossing northern Eurasia, with special focus on the hitherto poorly known preglacial history. The text continues: "For this purpose, the potentially very old lakes Ladoga, Bolshoye Shuchye, Levinson-Lessing, Taymyr und Emanda (see map) are investigated by shallow and deep seismic surveys and cored down to 30 m using a new coring device. Consistent stratigraphical, sedimentological, chemical and biological analysis are carried out on the sediment cores, supported by numerical ice sheet and climate modelling, in order to decipher the climatic and environmental development along the transect beyond the Last Glacial Maximum. The sediment succession from Lake El'gygytyn, which was recovered within the scope of an international deep drilling project, functions as reference." A map shows the locations of the lakes to be investigated in the PLOT project: Ladoga, Shuchye, Levinson-L., Taymyr, and Emanda. The map also shows the Arctic Ocean and surrounding regions. The page includes a "Project Staff" section with a list of names: Martin Melles, Bernd Wagner, Andrei Andreev, and Dorothea Klinghardt. It also includes a "Collaborators" section with a list of names: Grigoriy Fedorov, Sebastian Krastel, Hanno Meyer, Pavel Minyuk, Dmitri Nazarov, Liudmila Pestriakova, Dimitri Subetto, and Martin Werner.

Geologie & Mineralogie › Arbeitsgruppen › Quartärgeologie › Forschung

PLOT – Paleolimnological Transect

The Russian-German PLOT Project is funded by the German Ministry for Education and Research (BMBF) and coordinated by the University of Cologne. The project aims at providing a detailed reconstruction of the Late Quaternary environmental and climatic history along a more than 6000 km long transect crossing northern Eurasia, with special focus on the hitherto poorly known preglacial history.

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Lakes to be investigated in the PLOT project

Project Staff

- [Martin Melles](#)
- [Bernd Wagner](#)
- [Andrei Andreev](#)
- [Dorothea Klinghardt](#)

Collaborators

- Grigoriy Fedorov
AARI St Petersburg, Russia
- [Sebastian Krastel](#)
University Kiel
- [Hanno Meyer](#)
AWI Potsdam
- Pavel Minyuk
NEISRI, Magadan, Russia
- [Dmitri Nazarov](#)
St Petersburg State University
- [Liudmila Pestriakova](#)
North-East Federal University of Yakutsk, Russia
- Dimitri Subetto
INWP RAS, Petrozavodsk
- [Martin Werner](#)
AWI Bremerhaven



Dieter Piepenburg
dieter.piepenburg@awi.de

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3 March 2016



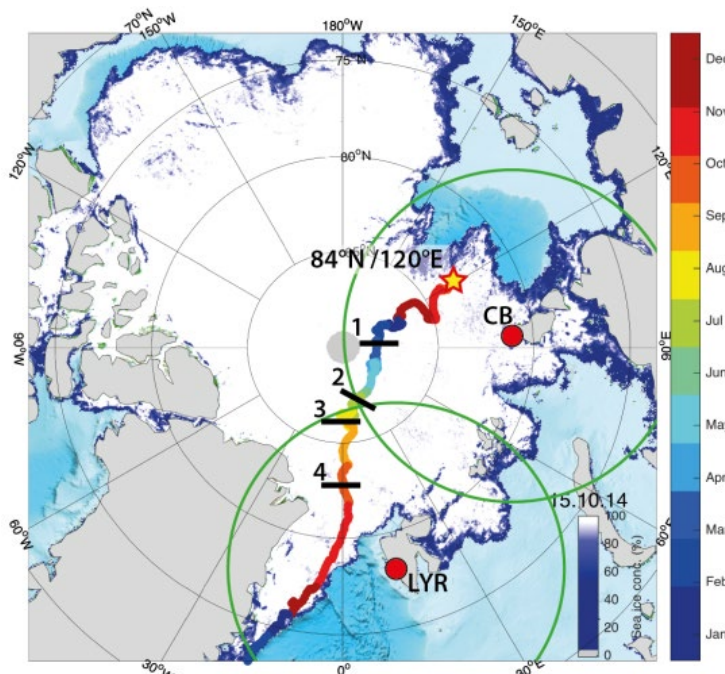
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MOSAIC

Multidisciplinary drifting Observatory for the Study of Arctic Climate

<http://www.mosaicobservatory.org>



What?

- 12 months Transpolar drift: Oct 2019-Oct 2020 => full annual cycle
- Polarstern as Central Observatory
- Distributed network
- Remote sensing & numerical models

Who?

- International community
- 40 scientists on board
- IASC initiative



Dieter Piepenburg
dieter.piepenburg@awi.de



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MOSAIC

• The 2019/20 Arctic drift experiment •



How? => Implementation Plan

- 5 Teams: atmosphere, sea ice and snow, ocean, ecosystem, geochemistry
- 6 legs of 2 months

Get involved / contacts

Team		AWI	International
Lead	Project leader	M. Rex	M. Shupe (U Colorado)
	Assistance	TBD	V. Rachold (IASC)
Atmos	Atmosphere	M. Rex	M. Shupe (U Colorado)
Ice	Sea ice & snow	M. Nicolaus	D. Perovich (CRREL)
Ocean	Ocean	B. Rabe	C. Provost (UPMC)
BGC	Bio-geo-chemistry	E. Damm	B. Loose (URI)
Eco	Ecosystem	A. M. Waite	TBD



Dieter Piepenburg
dieter.piepenburg@awi.de