

ISIRA Advisory Group Meeting 2018



Russian-German Activities and Projects

Twenty-three ongoing/future activities in report 2018,
with a broad range of topics in research and/or education

→ Three examples:

CATS – The Changing Arctic Transpolar System

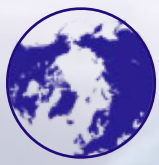
pomor – Master program of Polar and Marine Sciences

MOSAiC – The International Arctic Drift Expedition



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CATS – The Changing Arctic Transpolar System

- Joint Russian-German collaborative project 2017–2020
- Successor of a series of projects starting in 1993
- Consortium of 10 research institutions and universities in Russia and Germany
- Funding bodies: Federal German Ministry of Education and Research (BMBF) and the Ministry of Education and Science of the Russian Federation
- Coordinated by GEOMAR Kiel and AARI St. Petersburg
- **Goal:** Assess how climate change will affect the highly sensitive Arctic environment and to what extent these changes may impact the climate in Europe
- Ship cruises to the Laptev Sea
- Numerous joint workshops and exchange of scientists



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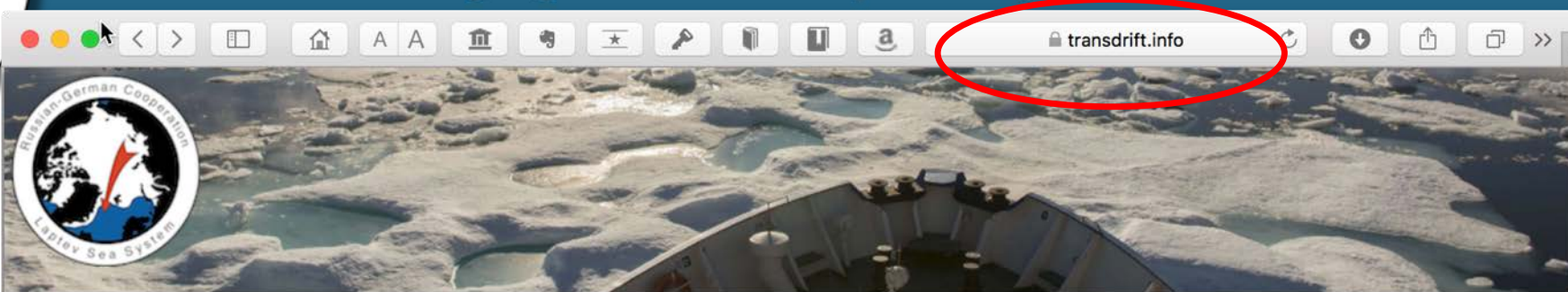
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CATS – The Changing Arctic Transpolar System





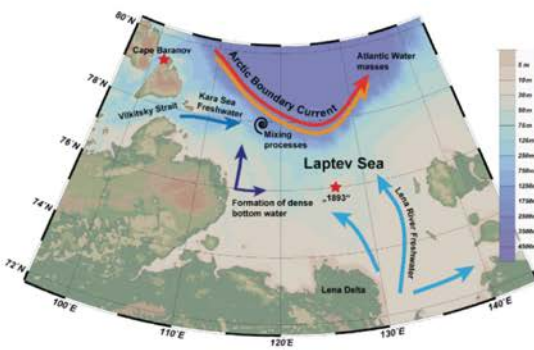
HOME PUBLICATIONS EXPEDITIONS OSIS NEWS FORMER PROJECTS MEMBERS INTERNAL

CATS – The Changing Arctic Transpolar System

With the joint Russian-German research project „CATS – The Changing Arctic Transpolar System“, a consortium of 10 research institutions and universities in Russia and Germany aims to assess how climate change will affect the highly sensitive Arctic environment and to what extent these changes may impact the climate in Europe.

Project duration:
March 1, 2017 – February 29, 2020

Funding bodies:
Germany: Federal Ministry of Education and Research (BMBF)
Russia: Ministry of Education and Science of the Russian Federation



Quick Links

[Contact](#)
[Partner organizations](#)
[Work Packages and Tasks](#)

Calendar events

« June 2018 »

S	M	T	W	T	F	S
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

No events found

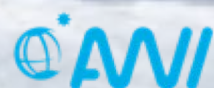
Oceanblogs

[Back from the expedition – a few questions: Vasily\(Opens New Window\)](#)
10/26/14 6:30 PM
systemlapteewsee

News

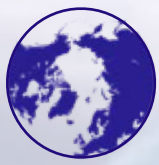
CATS Bilateral Workshop 2018

Our 2018 bilateral Workshop took place on April 23-26, 2018. It was a great pleasure to see the many interesting results obtained within the short time since the project started and we look back on a fruitful workshop.



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- Established at St. Petersburg State University (SPbU) in 2001
- Internationally accredited at Hamburg University (UH) in 2012
- Four-semester interdisciplinary research-oriented MSc study programme (with English as teaching language)
- Master of Science of SPbU and UH
- Courses at SPbU and UH, as well as at German partner universities in Bremen, Kiel or Potsdam
- Participation in international expeditions to the Arctic for practical training
- Funded by BMBF, DAAD, SPbU and UH, as well as universities of Bremen, Kiel and Potsdam, GEOMAR and AWI



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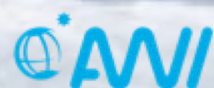
**Otto Schmidt Laboratory
for Polar and Marine Research**



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The screenshot shows the homepage of the POMOR website. At the top, there are navigation links: "О ПРОГРАММЕ", "КАК ПОСТУПИТЬ", and "КОНТАКТЫ". The main header features the "pomor" logo with a globe icon and the text "MASTER PROGRAM for polar and marine sciences". To the right of the logo, there are flags for Russia and the UK, a link "Карта сайта", and a search bar labeled "Поиск по сайту". Below the header is a large group photo of students. At the bottom left, there is a section titled "POMOR@SPBU.RU" with a list of links: "Новости и события", "Общая информация", "Международная аккредитация", "Интернационализация высшего образования", "Обучение", "Приём 2017", and "Партнёры и финансирование". At the bottom right, there is a section titled "РОССИЙСКО-ГЕРМАНСКАЯ МАГИСТЕРСКАЯ ПРОГРАММА «ПОЛЯРНЫЕ И МОРСКИЕ ИССЛЕДОВАНИЯ» («ПОМОР»)" with a paragraph of text describing the program.

О ПРОГРАММЕ **КАК ПОСТУПИТЬ** **КОНТАКТЫ**

pomor
Polar and Marine sciences
MASTER PROGRAM
for polar and marine sciences

Карта сайта
Поиск по сайту

POMOR@SPBU.RU

- Новости и события
- Общая информация
- Международная аккредитация
- Интернационализация высшего образования
- Обучение
- Приём 2017
- Партнёры и финансирование

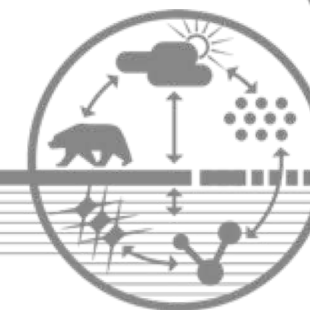
РОССИЙСКО-ГЕРМАНСКАЯ МАГИСТЕРСКАЯ ПРОГРАММА «ПОЛЯРНЫЕ И МОРСКИЕ ИССЛЕДОВАНИЯ» («ПОМОР»)

«ПОМОР» является академически-ориентированной двухлетней программой двух дипломов, реализуемой Санкт-Петербургским государственным университетом и Гамбургским университетом в тесном сотрудничестве с Бременским, Кильским, Потсдамским университетами, Гамбургским технологическим университетом, ГЕОМАР Центром исследований Мирового океана в Объединении им. Гельмгольца в Г. Киле, Институтом им. Альфреда Вегенера Центром полярных и морских исследований в Объединении им. Гельмгольца, Арктическим и Антарктическим научно-исследовательским институтом и Институтом исследования Балтийского моря Варнемюнде им. Лейбница.

В течение первого и второго семестра обучение проводится в Институте наук о Земле Санкт-

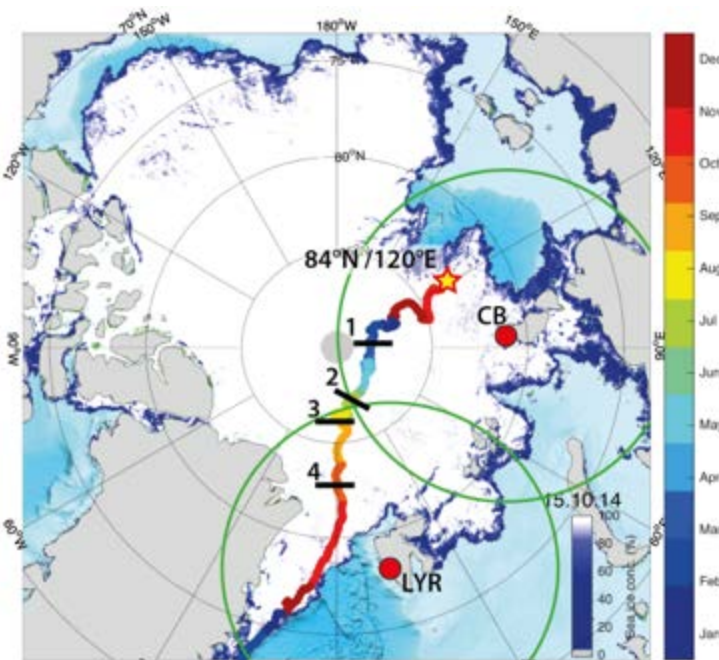


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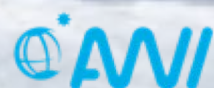


Multidisciplinary drifting Observatory for the Study of Arctic Climate

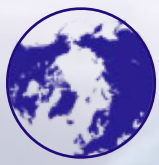
<http://www.mosaicobservatory.org>



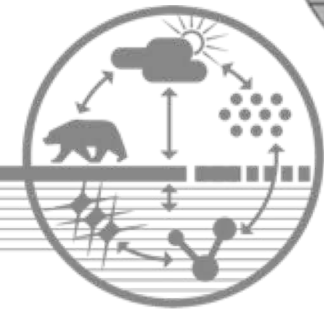
- First year-round expedition into the central Arctic exploring the Arctic climate system
- Total budget exceeding 60 million €
- Designed by an international consortium of leading polar research institutions
- Under the umbrella of the International Arctic Science Committee (IASC)
- Led by AWI, AARI and the University of Colorado, Cooperative Institute for Research in Environmental Sciences (CIRES)



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Multidisciplinary drifting Observatory for the Study of Arctic Climate

<http://www.mosaicobservatory.org>



- 12 months Transpolar drift:
Oct 2019 - Oct 2020 => Full annual cycle
- 6 legs of 2 months each
- 5 Teams: atmosphere, sea ice, ocean, ecosystem, bio-geochemistry
- Polarstern as Central Observatory
- Distributed network
- Remote sensing & numerical models



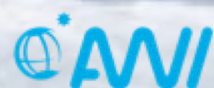
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mosaicobservatory.org

MOSAiC - MOSAiC

MOSAiC
International Arctic Drift Expedition

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The **M**ultidisciplinary drifting **O**bservatory for the **S**tudy of **A**rctic **C**limate (MOSAiC) will be the first year-round expedition into the central Arctic exploring the Arctic climate system. The project with a total budget exceeding 60 Million € has been designed by an international consortium of leading polar research institutions, under the umbrella of the [International Arctic Science Committee \(IASC\)](#), led by the [Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research \(AWI\)](#), [Arctic and Antarctic Research Institute \(AARI\)](#) and the [University of Colorado, Cooperative Institute for Research in Environmental Sciences \(CIRES\)](#).

The results of MOSAiC will contribute to enhance understanding of the regional and global consequences of Arctic climate change and sea-ice loss and improve weather and climate predictions. As such it will support safer maritime and offshore operations, contribute to an improved scientific basis for future fishery and traffic along northern sea routes, increase coastal-community resilience, and support science-informed decision-making and policy development. Improved understanding of the impact of Arctic climate change on conditions world-wide will provide stakeholders and decision-makers with improved knowledge for adapting to climate change and develop target oriented mitigation strategies.

- **The Arctic is a key area of global climate change**, with warming rates exceeding twice the global average (Figure 1).
- **The observed rate of climate change in the Arctic is not well reproduced in climate models** (e.g. they largely underestimate sea ice retreat, Figure 2).
- **Many processes in the Arctic climate system are poorly represented in climate models** because they are not sufficiently understood.

Fig. 1: Near surface temperature changes derived from observations
(http://data.giss.nasa.gov/gistemp/time_series.html)

A Year on Ice
Why scientists are preparing to freeze the research vessel Polarstern in sea ice near the North Pole (*The Atlantic*)

"Advancing MOSAiC Science" Workshop
May 28th - June 1st, Potsdam Germany.

Arctic Frontiers
21st - 26th January 2018, in Tromsø, Norway
Session about "The New Arctic in the Global Context"

BBC News
Prof. Markus Rex: "Ice-locked ship to drift over North Pole"

BBC World News
Dr. Marcel Nicolaus: "Why scientists want their boat to get stuck in Arctic ice"

cycle