

Day 1. (November 27, afternoon): The GEOTRACES Programme.

1	Welcome from local host	<b>Robert Nigmatulin</b> , Director	Shirshov Institute of Oceanology RAS	14:00
2	The GEOTRACES Programme	<b>Gideon Henderson</b> , The GEOTRACES Programme: What? Why? When? How?	University of Oxford	14:15
3		<b>Robert Anderson</b> . Supply and removal of trace elements at ocean boundaries	Lamont-Doherty Earth Laboratory	14:45
4		<b>Gregory Cutter</b> . Clean sampling systems and intercalibration: essential components of the GEOTRACES programme		15:15
	Coffee Break			15:45
5	The GEOTRACES Programme and International collaboration in the Arctic Ocean	<b>Edward Boyle</b> . North Atlantic highlights		16:15
6		<b>Micheal Rutgers van der Loeff</b> . GEOTRACES International Polar Year highlights		16:45
7		<b>Alexey Ostrovskiy, Kathy Crane</b> RUSALCA project - short review	Alliance Group" LLC, _____	17:45
8		<b>Igor Semiletov</b> . Joint Russia-US-Sweden cruises in the East Siberian Arctic seas (2003-2012): selected results and challenges for GEOTRACES.	Pacific Institute of Oceanology, FEB RAS	18:15

Day 2. (November 28): Russian Research Relevant to GEOTRACES.

	Russian Arctic Ocean Research Relevant to GEOTRACES	<b>Alexander Lisitzin</b> . Investigations of the Geospheres.	Shirshov Institute of Oceanology	09:00
		<b>Ludmila Demina</b> . Introduction.	Shirshov Institute of Oceanology	09:30
		<b>Vjacheslav Gordeev</b> . Seasonal and multiannual variations in chemical elements in water and suspended particulate matter in the Northern Dvina River – White Sea mixing zone.	Shirshov Institute of Oceanology RAS	09:50
		<b>Vladimir Shevchenko</b> . Black carbon and trace elements in aerosols and snow of the Russian Arctic.	Shirshov Institute of Oceanology RAS	10:10

		<b>Gennady Ivanov.</b> Methane, homologues of methane in the bottom sediments of the Arctic seas: content, distribution and isotopic composition.	SEVMORGEO, St.-Petersburg	10:30
	Coffee Break			11:00
		<b>Mikhail Kholmansky, Gennady Ivanov, Maxim Vladimirov.</b> Radionuclides in bottom sediments of the Kara Sea and Novaya Zemlya bays: Monitoring Results.	VNIIOkeangeologia, SEVMORGEO, Ministry of natural resources, St.-Peterburg	11:30
		<b>Enver Asadulin, Alexey Miroshnikov,</b> On identification of the Ob' and Yenisei terrigenous material in bottom sediments of Kara Sea using the trace-element fingerprints.	Institute of geology of ore deposits, petrography, mineralogy and geochemistry, RAS, Moscow (IGEM RAS)	11:50
	<b>DISCUSSION</b>	<b>Identifying the basic objectives of collaborative opportunities</b>		12:15
	LUNCH			13:00
		<b>Ivan Semenov, Alexey Miroshnikov.</b> <sup>137</sup> Cs as a tracer of Kara Sea contamination by the Ob' river runoff.	IGEM RAS, Moscow	14:00
		<b>Alexey Klyuvitkin.</b> Trace elements in the aerosols of the Atlantic Ocean.	Shirshov Institute of Oceanology RAS	14:15
		<b>Natalia Gorunova.</b> Cryosols and trace metals in snow and ice in some Arctic areas, 2006-2011.	Shirshov Institute of Oceanology RAS	14:25
	Russian Young Scientists' Research Relevant to GEOTRACES	<b>Nikolay Belyaev, Mikhail Ponyaev.</b> Organic matter in the Kara Sea (input, transformation, burial in the bottom sediments)	Shirshov Institute of Oceanology RAS	14:35
		<b>Morgunova I.P., Petrova V.I., Litvinenko I.V.,</b> Hydrocarbon molecular markers in the bottom sediments of the Arctic Ocean.	Gramberg VNIIOkeangeologia, St.-Peterburg	14:45
		<b>Natalia Shulga, Nikolay Lobus, Valery Peresyphkin.</b> Mercury and biogeochemical tracers of the Kay River – southern China Sea mixing zone.	Shirshov Institute of Oceanology RAS	14:55
		<b>Alexander Polukhin, Stepanova S.V., Makkaveev P.N.,</b> Silicate and inorganic carbon as tracers of Ob and Yenisei waters	Shirshov Institute of Oceanology RAS	15:05

		<b>Dina Starodymova.</b> Elemental composition of lichens of the White Sea coastal zone and its catchment area as indicator of atmospheric input.	Shirshov Institute of Oceanology, RAS	15:15
		<b>Maria Pisareva.</b> Observed variability of the Chukchi Sea water masses on the basis of RUSALCA data.	Shirshov Institute of Oceanology RAS	15:25
	Coffee Break			15:30
	<b>DISCUSSION</b>	<b>Practical ways of collaboration of Russian researchers and GEOTRACES Programme</b>		16:00

Day 3. (November 29)

	Some results of Russian Investigation in the Arctic Ocean	<b>Igor Ashik.</b> Recent Russian Marine Research Activities in the Arctic Ocean.	Arctic and Antarctic Research Institute, St.-Petersburg	9:00
		<b>Michael Flint.</b> Natural ecological boundaries in the Kara Sea - as they can be seen from phyto- and zooplankton distribution.	Shirshov Institute of Oceanology RAS	9:20
		<b>Sergey Pisarev.</b> Annual SIO observations within the North Pole part of the Amundsen Basin –one more source to evaluate the upper Arctic water masses variability.	Shirshov Institute of Oceanology RAS	9:40
	Plans for Arctic work in 2015	<b>Rutgers van der Loeff.</b> Germany		10:00
		<b>Per Anderson.</b> Sweden		10:20
		<b>Bob Anderson for Roger Francois.</b> Canada		10:40
		<b>David Kadko.</b> USA		10:40
		Coffee Break		11:00
	Plans for Arctic work in 2015	<b>Don Porcelli.</b> UK		11:30
		<b>Rob Spencer.</b> Great Rivers Programme		11:50
	<b>DISCUSSION</b>	Intercalibration, SRM, clean sampling, sampling platforms, land-ocean interactions		12:10
	LUNCH			13:00
	POSTER SESSION			14:00

	<b>DISCUSSION</b>	Development of a Russian GEOTRACES Programme. Steps to implement a unified Arctic GEOTRACES programme in 2015.		15:00
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**In the presence of free time, the distinguished professor Gleb N. Baturin (an author of scientific discovery of formation mechanisms of the oceanic phosphorites) will talk about:** Comparable distribution of trace elements in carbonaceous and phosphorite deposits of the World Ocean.

**Poster Presentations:**

- 1) **Alexander Charkin**, Igor Semiletov et al. (Il'ichev Pacific Oceanological Institute FEB RAS). Interannual and interseasonal variability of isotopic composition of particulate organic carbon in the Buor Khaya Bay, Laptev sea - the main acceptor of the Lena River Delta geochemical signal.
- 2) **Vladimir Goryachev** (Il'ichev Pacific Oceanological Institute, RAS, Vladivostok). Artificial radionuclides ( $^{134}\text{Cs}$ ,  $^{137}\text{Cs}$ ,  $^{60}\text{Co}$ ,  $^3\text{H}$ ) in the western North Pacific and the coastal waters of the Russian Arctic.
- 3) **Marina Kravchishina**, Alexey Klyuvitkin, Alexander Novigatsky, Nadezhda Politova, Vladimir Shevchenko (Shirshov Institute of Oceanology RAS). Distribution and main composition of SPM in the White Sea: biogenic and terrigenous material.
- 4) **Oleg Dudarev**, Igor Semiletov (Il'ichev Pacific Oceanological Institute FEB RAS). Interannual variability of isotopic composition of particulate organic carbon in the East Siberian Arctic seas.
- 5) **Svetlana Stepanova**, Alexander Polukhin, Alexander Popov (Shirshov Institute of Oceanology RAS). Nutrients as proxies of the river runoff impact on coastal ecosystems of the Black Sea.
- 6) **Dmitry Budko**, Ludmila Demina, Darja Martynova (Shirshov Institute of Oceanology RAS). Trace metal distribution in the trophic chains of the White Sea ecosystem.
- 7) **Yekaterina Novichkova** (Shirshov Institute of Oceanology RAS). New paleoproxies in the high-resolution Holocene sediments of the White Sea (Western Arctic).
- 8) **Zylikha Redzhepova, Inna Nemirovskaya** (Shirshov Institute of Oceanology RAS). Peculiarities in distribution of hydrocarbon's markers in the waters and bottom sediments of the southeastern part of the Baltic Sea (the Kravtsovskoe offshore oilfield).

**In addition, posters of the young scientists of Shirshov Institute of Oceanology will be presented.**