



2nd International
Indian Ocean
Expedition
2015-2020

Newsletter

(A basin-wide research program co-sponsored by IOC-UNESCO, SCOR and IOGOOS)

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To advance our understanding of interactions between geologic, oceanic and atmospheric processes that give rise to the complex physical dynamics of the Indian Ocean region, and to determine how those dynamics affect climate, extreme events, marine biogeochemical cycles, ecosystems and human populations.

RUSSIAN SCIENTIFIC EXPEDITION TO THE INDIAN OCEAN

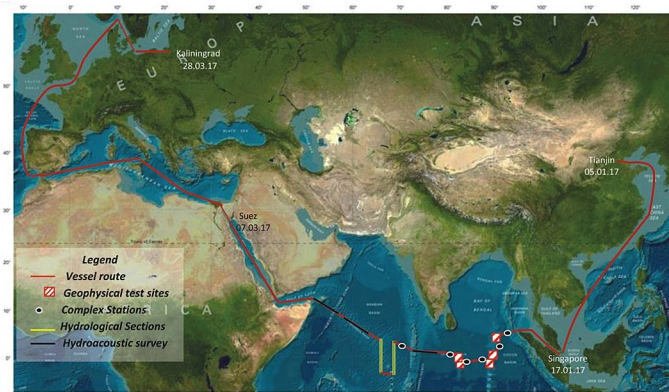
The first Russian Scientific Expedition to the Indian Ocean endorsed by IIOE-2 has successfully been completed, informs Dr. Sergey Shapovalov, Head of the Center for Coordination of Ocean Research, Moscow. The Expedition, on board “Akademik Boris Petrov”, which set sail from Tianjin on the 5th January 2017 with a complement of scientists from Moscow, Kaliningrad, Vladivostok, Sevastopol and Tomsk, had two primary objectives: (a) geophysical and geological investigations in the northern (oldest) part of the Ninety East Ridge, and in the area of intraplate lithospheric deformation in the Central Basin characterized by high seismicity and heat flow; and (b) study of equatorial counter currents in the western part of the Indian Ocean, with CTD and ADCP measurements between 3°S and 3°N along two meridional transects (65°E and 68°E). In addition, samples were collected along the expedition route for determination of the concentration of polychlorinated biphenyls (PCBs), organochlorine chemical pesticides (DDT and metabolites), mercury, synthetic radionuclides ⁹⁰Sr, ¹³⁷Cs, ^{239,240}Pu etc. in the water, hydrobionts and sediments, aimed at assessing the state of the ecosystem in the study area. Cytometric and bioluminescent studies of micro-, nano-, pico, and femtoplankton in the surface water column constituted another component of the work programme. Samples were also collected for measurements of the concentration of greenhouse gases and hydrogen in the water column, marine sediments and atmospheric surface layer.

On the 28 March, on completion of the expedition, Akademik Boris Petrov docked at its home port Kaliningrad.

Please visit http://www.iioe-2.incois.gov.in/IIOE-2/Endorsed_Projects.jsp for details of the two projects endorsed by IIOE-2; also see Koshlyakov et al. Geosci. Lett. (2016) 3:19 (DOI 10.1186/s40562-016-0051-6) for an informative review article “Historical findings of the Russian physical Oceanographers in the Indian Ocean”.



R/V “Akademik Boris Petrov”



Expedition Route and work areas in the Indian Ocean

IIOE-2 ENDORSES THE FIRST CRUISE UNDER EARLY CAREER SCIENTISTS NETWORK

A proposal titled “Dust stimulated Nitrogen fixation in the Arabian Sea: an assessment of HNLC-Region hypothesis” by Arvind Singh of the Physical Research Laboratory, Ahmedabad, India has been endorsed by IIOE-2 as an Early Career Scientists Network programme. The proposal aims at a comprehensive study of N_2 fixation rates, chemical characterization of the dust and sea water, primary production and community structure analysis along three transects in the Arabian Sea during April 2017 onboard FORV Sagar Sampada and on a couple of cruises in coming years.

For details visit http://www.iioe-2.incois.gov.in/IIOE-2/Endorsed_Projects.jsp

For an interesting recent (2017) study on the record of evolution of denitrification in the Eastern Arabian Sea since the Late Miocene (~ 10.2 Ma), see Tripathi, S. et al. First evidence of denitrification vis-à-vis monsoon in the Arabian Sea since Late Miocene. Sci. Rep. 7, 43056; doi: 10.1038/srep43056 (2017).

NOMINATIONS TO THE MEMBERSHIP OF THE IIOE-2 SCIENCE THEMES AND WORKING GROUPS

The invitations extended by IIOE-2 for nominations to the membership of one or any of the Six Science Themes and seven Working Groups as specified in the IIOE-2 Implementation Strategy

(<http://www.iioe-2.incois.gov.in/IIOE-2/pdfviewer.jsp?docname=ImplementationStrategy-IIOE-2-4Dec-2015.pdf>) have elicited an overwhelming response. As many as 86 nominations from 54 applicants across 16 nationalities have been received by the Joint Project Offices of IIOE-2 at Perth and Hyderabad. The final composition of the membership to the various Operational Groups is to be announced shortly by the Steering Committee.

ENDORSE YOUR PROJECTS IN IIOE-2

Don't miss the opportunity to network, collaborate, flesh out your research project and participate in IIOE-2 cruises!!

The endorsement of your scientific proposal or a scientific activity focusing on the Indian Ocean region is a recognition of the proposal's or activity's alignment with the mission and objectives of IIOE-2, of its potential for contributing to an increased multi-disciplinary understanding of the dynamics of the Indian Ocean, and of its contribution to the achievement of societal objectives within the Indian Ocean region. Over 18 international, multi-disciplinary scientific projects have already been endorsed to date by the IIOE-2. Yours could be the next one!

Visit <http://www.iioe-2.incois.gov.in/IIOE-2/EndorsementForm.jsp> for further details and for projects already endorsed by IIOE-2.

SOME UPCOMING EVENTS

- ☞ The 10th WESTPAC International Scientific Conference entitled “Advancing Ocean Knowledge, fostering sustainable development: from the Indo-Pacific to the Globe” organised by the First Institute of Oceanography, China and the IOC Sub-Commission for the Western Pacific will be held in Qingdao, China, 17-20 April 2017.
Visit www.iocwestpac10.com for further details.
- ☞ UNESCO/IOC-ODC Training Course on Development of Coupled Regional Ocean Models will be organized in Qingdao, China, from 12 - 23 June, 2017. The training will cover topics related to regional surface wave model, tide model, ocean circulation model and their coupling. Application deadline: 10 April, 2017.
For more details, visit: http://www.fio.org.cn/en/training_center/training_courses/training.htm
- ☞ The first GEOTRACES Summer School will be held in Brest, France, between 20 and 26 August 2017. The School aims to teach the skills and knowledge necessary for a good understanding of the biogeochemical cycles of trace metals in the ocean. It will allow Ph.D students and early-career researchers to learn how their work fits within the international community of GEOTRACES.
For details visit <https://geotraceschool.sciencesconf.org/>
- ☞ The Second International Indian Ocean Expedition (IIOE-2) and related Oceanic and Coupled Atmospheric Research in the Indian Ocean (IAPSO, IAMAS): International Symposium, 27 August to 1 September 2017 in Cape Town, South Africa.
Please visit <http://www.iapso-iamas-iaga2017.com/index.php> for details.
- ☞ The 2017 SCOR Annual Meeting will take place in Cape Town, South Africa from Monday, 4 September through Wednesday, 6 September 2017. The SCOR Secretariat will accept proposals for new working groups from now until 15 April 2017.
Registration deadline: 1 July, 2017.
Visit <http://scor-int.org> for details.

CALL FOR PAPERS- SPECIAL IIOE-2 ISSUE DEEP SEA RESEARCH- PART II

Do you have a manuscript you are working on, or planning, that you would consider submitting for publication in this Special issue?

Topics: Interdisciplinary– Physical, Chemical, Biological and paleo-oceanography, Marine Geology & Geophysics.

Tentative Deadline November 01, 2017

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