

**APPLICATION FOR OCEANOGRAPHIC MEASUREMENTS IN THE
ECONOMIC ZONE OF ICELAND**

GENERAL

Part A

1. **Name of the ship** "Akademik Sergey Vavilov" Cruise No 50
2. **Dates of cruise** From July 01, 2020 to August 10, 2020
3. **Operation Authority** P.P. Shirshov Institute of Oceanology Russian Academy of Sciences
36, Nakhimovsky prospekt, Moscow 117997, Russia
Telephone (499) 1246196 Telex 411968 OKEAN RU
Fax (499) 124 5983
4. **Owner (if different from para 3)**
5. **Particulars of ship:**

Name	"Akademik Ioffe"
Nationality	RUSSIA
Overall length	117.1 m
Height	41.0 m
Beam	18.2 m
Maximum draught	5.9 m
Net tonnage	6600 t
Propulsion	PIELSTIK 6 ChN 40/46, 2 x 2576 kW
Call sign	UAUO
No IMO	8507729
No MMSI	273414400
External marking:	Yes, according to XI-I, 3 MK SOLAS 74
Radio facilities	«Brig», 1.5 KVt, Frequency 1.6 – 25.8 MHz GMDSS system, region A3 "SEA" radio IW/SW, 300 Vt, 1.6- 25.8 MHz IHMPCAT-C: TLX – 427300469

Satellite communication IHMAPCAT – F77: TLF – 763477116, 763477117, FAX – 63477118
e-mail: PS S.Vavilov <UAUO@mvsmail.com>
6. **Crew**

Name of Master	L.V. Sazonov
Number of crew members	41
7. **Scientific Personnel**

Name and address of Scientist in charge	Dr. A.V. Sokov, Academy of Sciences of Russia, P.P. Shirshov Institute of Oceanology, Nakhimovsky pr., 36, 117997, Moscow, Russia
Tel/telex/Fax	(499) 124 6142/ 411968 OKEAN RU / (499) 124 6142
No. of scientists	25
8. **Geographical area in which ship will operate (with reference in latitude and longitude).**

Three hydrographic section between Shetland Islands and Greenland from 60°25' N, 01°55' W to 67° 24.2' N., 33° 04.0' W.
Hydrographic section from 59°30' N, 04°36' W to 59°57' N, 43°00' W.
Hydrographic section along Reykjanes Ridge from 56°00' N, 30°15' W to 63°36' N, 23°53' W.
9. **Brief description of purpose of cruise**

The cruise is part of the CLIVAR International program, which is the continuation of the International World Ocean Circulation Program. Specific goals of the cruise are to provide the description of thermohaline ocean structure; to monitor the spatiotemporal changes of transatlantic meridional water and heat transport, to investigate and evaluate the exchange in the northern part of the Atlantic Ocean.
10. **Dates and names of planned ports of call.**

Departure:	July 01, 2020	Kaliningrad (Russia)
Arrival:	August 10, 2020	Kaliningrad (Russia)

11. Any special logistic requirements at port of call

NONE

APPLICATION FOR OCEANOGRAPHIC MEASUREMENTS IN THE ECONOMIC ZONE OF ICELAND

GENERAL

Part B

1. **Name of the ship** "Akademik Sergey Vavilov" Cruise No 50
2. **Dates of cruise** From July 01, 2020 to August 10, 2020
3. **Time of work within the exclusive economical zone of Iceland:** from July 14, 2020 to August 05, 2020.

The ship enters the economical zone of Iceland on July 14, 2020 at 00:00 GMT. The ship makes 37 hydrographic stations according to the list of stations. The final station is located at 63°29' N, 10° 49' W. After the final station the ship goes eastward to continue the section.

4. Purpose of research and general operational methods.

The research work will be carried out by the P.P. Shirshov Institute of Oceanology, Russian Academy of Sciences. The cruise is financed by the Russian Ministry of Science and High Education. The cruise is part of the International Climate Variability Program (CLIVAR). Specific goals of the cruise are to provide the description of thermohaline ocean structure; to monitor the spatiotemporal changes of transatlantic and meridional water and heat transport.

The operational methods to be used for the research include measurements of ocean water physical (temperature, salinity, currents) and chemical (oxygen, nutrients) properties at hydrographic stations. The full depth vertical profiles of temperature, salinity and currents will be obtained by profiling with oceanographic CTD/LADCP (conductivity/temperature/depth – lowered acoustic current profiler) instruments. The chemical properties will result from on board analyses of water samples collected at specified levels by deployment of a 24-bottle rosette. The measurements will be done without touching the bottom.

5. A chart showing (on an appropriate scale) the geographical area of the work and position of planned stations is attached.

The navigation is performed by means of the GPS satellite navigation system.

The position of hydrographic stations within the exclusive economical zone of Iceland:

N	Latitude	Longitude
1	61° 00 N	28° 00 W
2	61° 12 N	27° 41 W
3	61° 24 N	27° 22 W
4	61° 36 N	27° 03 W
5	61° 48 N	26° 44 W
6	62° 00 N	26° 25 W
7	62° 12 N	26° 06 W
8	62° 24 N	25° 47 W
9	62° 36 N	25° 28 W
10	62° 48 N	25° 09 W
11	63° 00 N	24° 50 W
12	63° 12 N	24° 31 W
13	63° 24 N	24° 12 W
14	63° 36 N	23° 53 W
15	65° 35 N	24° 55 W
16	65° 40 N	25° 16 W
17	65° 45 N	25° 39 W
18	65° 50 N	26° 00 W
19	65° 56 N	26° 29 W

20	66° 01 N	26° 48 W
21	66° 05 N	27° 03 W
22	66° 09 N	27° 15 W
23	66° 12 N	27° 30 W
24	66° 15 N	27° 45 W
25	66° 20 N	28° 08 W
26	66° 25 N	28° 31 W
27	64° 24 N	14° 03 W
28	64° 17 N	13° 36 W
29	64° 14 N	13° 21 W
30	64° 08 N	13° 03 W
31	64° 05 N	12° 52 W
32	64° 01 N	12° 38 W
33	63° 57 N	12° 20 W
34	63° 50 N	12° 00 W
35	63° 44 N	11° 40 W
36	63° 36 N	11° 15 W
37	63° 29 N	10° 49 W

The measurements at these stations will be carried out from July 14, 2020 to August 05, 2020. After carrying out the last station the ship is following eastward to continue the section.

6. Type of samples required, and methods by which samples will be obtained.

Only seawater samples are required for salinity, dissolved oxygen, and nutrients analysis. The water samples will be taken at selected pressure levels using 5-12 L bottles mounted on a rosette. The measurements will be done without touching the sea bottom.

7. Details of moored equipment.

No equipment will be moored during the cruise.

8. Explosives. NONE

9. Radioactive compounds. NONE

10.State:

(a) Whether visits to the ship in port by scientists of the coastal state concerned will be acceptable.

YES

(b) Whether it will be acceptable to carry on board an observer from the coastal state for any part of the cruise and dates and ports of embarkation/disembarkation.

YES. Any ports and dates mentioned in para 10 of Part A are acceptable.

(c) When research data from intended cruise is likely to be available to the coastal state and if so by what means.

The raw data will be available after the end of the cruise from the chief scientist by means of the INTERNET.

SCIENTIFIC EQUIPMENT.

11. Complete the following table - SEPARATELY COPY FOR EACH COASTAL STATE.
(INDICATE "YES" OR "NO")

List of all Major Marine equipment planned to use and indicate waters in which it will be deployed	Within Fishing Limits	On Continental Shelf	DISTANCE FROM COAST			
			Within 3 NM	Between 3-12 NM	Between 12-50 NM	Between 50-200 NM
SBE 911 plus CTD	YES	YES	NO	YES	YES	YES

<i>SBE 32 rosette system 24 bottles – 5 L</i>	YES	YES	NO	YES	YES	YES
<i>300 kHz Workhorse Monitor ADCP</i>	YES	YES	NO	YES	YES	YES
<i>TRDI OS 75 kHz ship mounted current profiler</i>	YES	YES	NO	YES	YES	YES

Director



[Handwritten signature]

A.V.Sokov

R/V Akademik Sergey Vavilov station location in July - August 2020

