

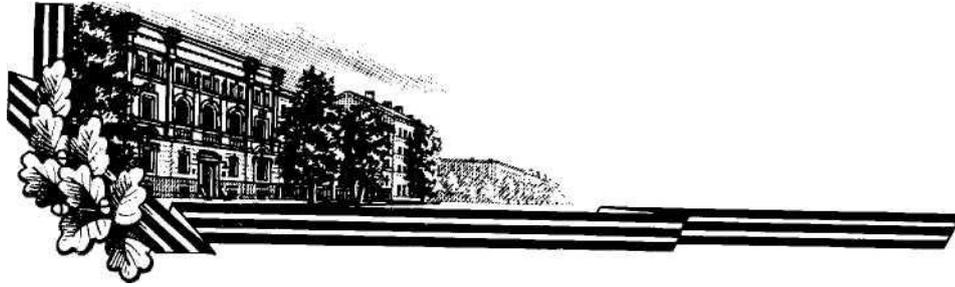
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**IHO Hydrographic Commission on Antarctica (HCA)
9th Meeting, Simon's Town, Cape Town, South Africa, 12-14 October 2009**

**NATIONAL REPORT OF THE
HYDROGRAPHIC SERVICE OF THE
RUSSIAN FEDERATION
NAVY**

St Petersburg

2009



THE HYDROGRAPHIC SERVICE OF THE RUSSIAN FEDERATION NAVY

The Hydrographic Service is one of the important national bodies responsible for the safety of navigation.

Although the Hydrographic Service forms a part of the Navy, it also meets the requirement of merchant and fishing fleets and vessels of other ministries and agencies. The Hydrographic Service is under the direction of the Department of Navigation and Oceanography of the RF MD (DNO of the RF MD), which is traditionally located in St. Petersburg.

The principle functions of the Department of Navigation and Oceanography are:

- to carry out hydrographic works and geophysical and oceanographical investigations of the World Ocean
- to compile and produce Nautical Charts, Publications and Guides to Navigation
- to develop and produce Guides, Instructions, Regulations and Methodical Directions on carrying out the World Ocean investigations and processing of its results
- to equip the coast of the Russian Federation by aids to navigation
- to organize mariner notification about changes in navigational conditions and regime
- to develop navigational instruments and complexes.

To carry out oceanographic surveys some special units have been created as a part of the Hydrographic Service of the Navy, such as expeditions and parties. The investigations are effected by special ships of up to 9000 tons displacement equipped with modern navigational and oceanographic facilities.



The results of the oceanographic surveys are submitted to the Navy Charts Division where they are used for compilation and updating of Nautical Charts and Sailing Directions.

The Hydrographic Service of the Navy provides the operation of over 5000 aids to navigation objects.

The Department of Navigation and Oceanography guides the development of navigational and oceanographic facilities and fitting out with them the naval ships and vessels of other departments, arranges their operation and maintenance as well.



In special aspect the DNO of the RF MD has in its subordination the Hydrographic services of the Fleets. It has in direct subordination:

Lighthouse service of RF, the Navy Charts Division, the Navy Centre for Automatic Acquisition and Processing of Operational Hydro meteorological Information, the Long-Range Radionavigation Centre, the Navy Centre of Navigational, Hydrographic and Hydrometeorological Support (Moscow) and other units.

The Department of Navigation and Oceanology of the RF MD participates in realization of a series of regional projects of IOC UNESCO on charting of oceans. It is due to participation in these projects the DNO of the RF MD obtains new bathymetric data for the World Ocean and uses them for compilation of nautical charts and also takes into account in its work advanced technologies and methods of charting used by leading countries. Within the frameworks of Mediterranean and Black Seas Hydrographic Commission (MBSHC), the DNO of the RF MD participates in the working group on navigational safety in the Black Sea of Azov and solves the problems on carrying out investigations based on standard S-44 for navigable ways in national as well as in international waters.





ANTARCTICANCOVERAGE BY STUDY

Item No	Area of Works	Kind of works	Scale	Year of works fulfilling	Executor
Area of Bellinshauzen Polar Station					
1.	South Shetland Islands. King George (Waterloo) Island, Ardley Cove and Bukhta Gidrografov	Cutter sounding	1:5 000	1968	Arctic and Antarctic Research Institute, Hydrographic Enterprise of Ministry of Marine Fleet
2.	King George (Waterloo) Island, Bukhta Kamenistaya	Cutter sounding	1:2 000	1974	Hydrographic Enterprise of Ministry of Marine Fleet rv "Professor Zubov" boat of type "Krasnoyaretz"
3.	South Shetland Islands. King George (Waterloo) Island, Ardley Cove	Sounding	1:5 000	1975–76	Hydrographic Enterprise of Ministry of Marine Fleet rv "Mikhail Somov"
4.	South Shetland Islands. Approaches to Polar Station	Sounding	1:5 000	1984	6 th Atlantic Oceanographic Expedition ocean survey vessel "Akademik Krylov"
Area of Molodyozhnaya Polar Station					
5.	Approaches to the station	Sounding from ice	1:10 000	1962–64	Arctic and Antarctic Research Institute, Head Department of Northern Sea Route, electrically driven motorship «Ob'»
6.	Area from Mys Tryokh Valunov to Mys Vyvodnoy, Bukhta Sibiryachka, Bukhta Vozrozhdeniya, Bukhta Opasnaya and Mys Granat	Sounding from ice	1:10 000 1:2 000	1965–67	Hydrographic Enterprise of Ministry of Marine Fleet
7.	Bukhta Sibiryachka, Bukhta Vozrozhdeniya, Bukhta Opasnaya and Bukhta Zarya	Sounding from ice	1:2 000	1980–83	6 th Atlantic Oceanographic Expedition
8.	Bukhta Opasnaya	Sounding from ice	1:2 000 1:1 000	1987	6 th Atlantic Oceanographic Expedition
9.	Mys Granat	Sounding from ice	1:1 000	1991–92	6 th Atlantic Oceanographic Expedition
Area of Druzhnaya-4 Polar Station					
10.	Approaches to the station	Sounding	1:1 000	1987	6 th Atlantic Oceanographic Expedition
Area of Progress-2 Polar Station					
11.	Sea Sodruzhestva	Sounding	1:10 000	1987, 88	6 th Atlantic Oceanographic Expedition
12.	Prydz Bay	Sounding from ice	1:2 000	1988–90	6 th Atlantic Oceanographic Expedition
13.		Sounding from ice	1:5 000	2003	Federal State Unitary Enterprise (Ministry of Transport of the RF), Arctic and Antarctic Research Institute
Area of Mirnyy Polar Station					
14.	Davis Sea Roads Mirnyy	Sounding	1:10 000	1956	Academy of Sciences, USSR, electrically driven motorship «Ob'»
15.		Sounding	1:10 000	1956–57	Hydrographic Service of the Navy, electrically driven motorship "Lena"
16.		Sounding from ice	1:10 000	1963	Arctic and Antarctic Research Institute, Head Department of

Item No	Area of Works	Kind of works	Scale	Year of works fulfilling	Executor
					Northern Sea Route, electrically driven motorship «Ob'»
17		Sounding from ice	1:2 000	1963–65	Arctic and Antarctic Research Institute, Hydrographic Enterprise of Ministry of Marine Fleet, electrically driven motorship «Ob'»
18		Sounding	1:2 000 1:500	1956	Arctic and Antarctic Research Institute, Hydrographic Enterprise of Ministry of Marine Fleet
19.	Davis Sea Roads Mirnyy	Sounding from ice	1:5 000 1:2 000 1:500	1984	6 th Atlantic Oceanographic Expedition
Area of Leningradskaya Polar Station					
20.	Sea Somova Approaches to the station	Sounding along track	1:200 000	1969–72 1977–78	Hydrographic Enterprise of Ministry of Marine Fleet, electrically driven motorship «Ob'», rv "Mikhail Somov"
21.	Sea Somova	Sounding	1:100 000	1982–83	23rd Oceanographic Expedition, ocean survey vessel "Admiral Vladimirskiy"
Area of Russkaya Polar Station					
22.	Approaches to the station	Sounding from ice	1:5 000	1985	6 th Atlantic Oceanographic Expedition
23.	Drake Passage	Sounding	1:500 000	1968	23rd Oceanographic Expedition, ocean survey vessel "F. Bellinshauzen", Northern Hydrographic Expedition, ocean survey vessel "B. Davydov"
24.		Sounding	1:500 000	1979–80	6 th Atlantic Oceanographic Expedition, ocean survey vessel "Akademik Krylov"
25.	Southern Part of Atlantic Ocean, Survey of seamount	Sounding	1:250 000	1981	Ministry of Fisheries, fish trawler "Kara-Dag", fish trawler "Patriot"
26.	Scott Island Bank	Sounding	1:250 000	1987	Ministry of Fisheries, fish trawler «Mlechnyy Put'»



Materials on sounding along track in Antarctic Region

Navy Charts Division 280 has a collection of soundings along track made by vessels of civilian agencies before 1992. Now AARI supplies materials on soundings along track, namely, soundings in Antarctic passages of research vessel "Akademik Fyodorov". Beginning from 2000 the following passages have been obtained for data processing.

Vessel name	Work year	Processing stage
R/v "Akademik Fyodorov"	2001	Have been processed
—— "——"	2004–2005	Have been processed
—— "——"	2005–2006	Have been processed
—— "——"	2007	Under work

At the present time the collection is comprised of more than 3,000 passages of sounding along track which are kept in paper form with addition of raster materials in archives of raster images.

Appearance of raster archives gave start to creation of vector base for depths of the World Ocean by digitizing raster originals.

By the present time the following number of vector depths with full semantics was obtained for Southern Ocean.

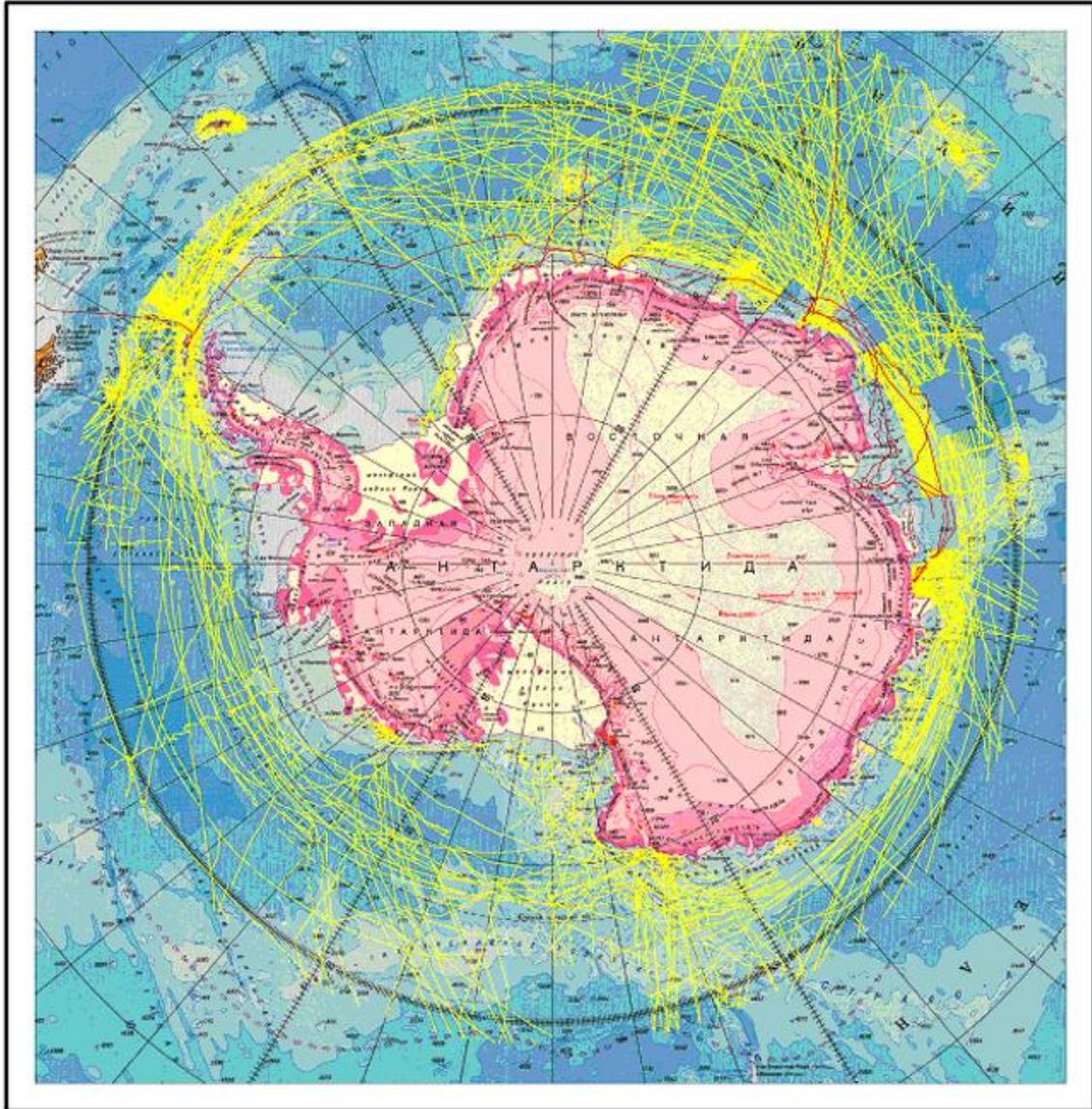
	Lattice chart number	Digitized lattice charts	Depth number	%
SE quarter	193	128	126130	66,3
SW quarter	154	154	98113	100
Total		282	224243	

In Navy Charts Division 280 works are in progress in the area of sounding processing by means of computer.

As an example: 2004–2005 passage of R/v "Akademik Fyodorov" was processed in vector form (see scheme).



**LINE SCHEME
of soundings along track
in Southern Ocean**



SYMBOLS:

-  - works of past years;
-  - soundings along track by research vessel "Akademik Fyodorov" carried out in 2004-2005.



CHARTS AND ADJUSTMENTS

Item No	Chart No	National No	Chart title	Scale	Year of print	Notes
1		30055	Atlantic Ocean. Southwestern Part	5 000 000	1995	
2		30057	Atlantic and Indian Oceans. Africa to the Antarctic	5 000 000	1999	
3		30129	Pacific and Atlantic Oceans. Drake Passage	2 000 000	1992	
4		30131	Atlantic Ocean. Coast of Antarctica. Weddell Sea	2 000 000	1996	
5		30132	Atlantic Ocean. Antarctica. Bouve Island to Lazarev Sea	2 000 000	2000	
6		30156	Atlantic Ocean. Southern Part. Vicinity of South Sandwich Islands	2 000 000	1993	
7		30157	Atlantic Ocean. Southern Part. Area of South Orkney Islands	2 000 000	1989	
8		31565	Atlantic Ocean. Approaches to South Orkney Islands	500 000	1988	
9		31567	Atlantic Ocean. Southern Part. Drake Passage. Area N of Southn Shetland Islands	500 000	1985	
10		31140	Atlantic Ocean. Coast of Antarctica. South Shetland Islands and Trinity Peninsula	500 000	1990	
11		31142	Atlantic Ocean. Coast of Antarctica. Cape Framnes to James Ross Island	500 000	1988	
12		31143	Atlantic Ocean. Coast of Antarctica. Weddell Sea. Larsen Ice Shelf	500 000	1987	
13		31144	Atlantic Ocean. Coast of Antarctica. Weddell Sea. Cape Deacon to Steele Island	500 000	1987	
14		31145	Atlantic Ocean. Coast of Antarctica. Weddell Sea. Baie Cincera to Cape Deacon	500 000	1987	
15		31146	Atlantic Ocean. Coast of Antarctica. Weddell Sea. Vahsel Bay to Emperor Point	500 000	1987	
16	INT9060	31147	Atlantic Ocean. Coast of Antarctica. Weddell Sea. Cabo Rol to Vahsel Bay	500 000	2000	
17		31148	Atlantic Ocean. Coast of Antarctica. Weddell Sea. Southwestern Part of RiiserLarsen Ice Shelf	500 000	1985	
18		31149	Atlantic Ocean. Coast of Antarctica. GeorgvonNeumayer Station to Selbukta	500 000	1986	
19		31150	Atlantic Ocean. Coast of Antarctica. Muskegbukta to Atkabukta	500 000	1986	
20		31151	Atlantic Ocean. Coast of Antarctica. More Lazareva. Zaliv Sergeya Kameneva to Zaliv Neupokoyeva	500 000	1984	
21	INT9050	31152	Atlantic and Indian Oceans. Coast of Antarctica. Zaliv Leningradskiy to Erskine Iceport	500 000	1999	
22		32902	Atlantic Ocean. Antarctica. Eastern Part of South Shetland Islands	200 000	1991	
23		32903	Atlantic Ocean. Antarctica. Western Part of South Shetland Islands	200 000	1991	
24		32905	Pacific and Atlantic oceans. Coast of Antarctica.	200 000	1994	

Item No	Chart No	National No	Chart title	Scale	Year of print	Notes
			Antarctic peninsula. Trinity island to Anvers island			
25	INT9051	32934	Atlantic Ocean. Antarctic Coast. More Lazareva. Zaliv Leningradskiy and Approaches	200 000	1998	
26		33900	Atlantic Ocean. Antarctica. South Orkney Islands	150 000 - 12 500	1989	
27		35902	Atlantic Ocean. South Shetland Islands. King George Island (Waterloo). Maxwell Bay (Guardia Nacional)	40 000 20 000	2000	
28		35903	Atlantic Ocean. South Shetland Islands. Deception (Tejija) Island	50 000 12 500	1995	
29		38902	Atlantic Ocean. Antarctica. Islands and Bays of South Shetland Islands	50 000 - 15 000	1997	
30		40063	Indian Ocean. Prince Edward and Crozet Islands to Antarctica	5 000 000	1984	
31		40064	Indian Ocean. Kerguelen Island to Antarctica	5 000 000	1983	
32		40065	Indian Ocean. Australia to Antarctica	5 000 000	1982	
33		40112	Indian Ocean. Great Australian Bight	2 000 000	1999	
34	INT903	40123	Indian Ocean. Coast of Antarctica. More Cooperation Sea and Kosmonauts Sea	2 000 000	2001	
35	INT902	40124	Indian Ocean. Coast of Antarctica. Mawson and Davis Seas	2 000 000	2000	
36		40125	Indian Ocean. Coast of Antarctica. Dumont d'Urville Sea to Mawson Sea	2 000 000	1997	
37		41140	Indian Ocean. Coast of Antarctica. Oser Larsen Sea. Brekilen Bay to Erskine Bay	500 000	2008	
38		41141	Indian Ocean. Coast of Antarctica. Vestvika	500 000	1980	
39		41142	Indian ocean. Coast of Antarctica. Kosmonauts Sea. Otzow-Holmbukta	500 000	1998	
40	INT9040	41143	Indian ocean. Coast of Antarctica. Cape Ann to Zaliv Alasheyeva	500 000	2000	
41		41144	Indian Ocean. Coast of Antarctica. Amundsen (Ice) Bay to Hobbs Islands	500 000	1988	
42		41145	Indian Ocean. Coast of Antarctica. Broka Island to Williams Point	500 000	1983	
43		41146	Indian Ocean. Coast of Antarctica. Sandefjord Bay to Point Williams	500 000	2005	
44		41147	Indian Ocean. Coast of Antarctica. Bogepunten Cape to Sandefjord Bay	500 000 30 000	2005	
45		41148	Indian Ocean. Coast of Antarctica. Davis Sea to Prydz Bay	500 000	1980	
46	INT9025	41149	Coast of Antarctica. Davis Sea	500 000	1999	
47		41150	Indian Ocean. Coast of Antarctica. Bowman Island to Masson Island	500 000	1982	
48		41151	Indian Ocean. Coast of Antarctica. Mawson Sea. Cape Poinsett to Bowman Island	500 000	1997	
49		41152	Indian Ocean. Coast of Antarctica. Cape Poinsett to Cape Southard	500 000	1998	
50		41153	Indian Ocean. Coast of Antarctica. Cape Southard to Cape Mose	500 000	2000	
51		41154	Indian Ocean. Coast of Antarctica. Morse Point to Pointe Ebba	500 000	2004	
52		41155	Indian Ocean. Coast of Antarctica. Pointe Ebba to Ninnis Glacier	500 000	1998	
53		41639	Southern Part. Banzare Bank	500 000	1996	
54	INT9026	42900	Coast of Antarctica. Davis Sea. Approaches to Scientific Station Mirnyy	200 000	1999	
55		43915	Indian Ocean. Coast of Antarctica. Tottsiku Point to Skjegget	100 000	1984	
56	INT9041	43920	Indian Ocean. Coast of Antarctica. Kosmonauts Sea. Zaliv Alasheyeva	100 000	1999	

Item No	Chart No	National No	Chart title	Scale	Year of print	Notes
57		48918	Cosmonauts Sea. Lutzow-Holmbukta. Ongul Island	15 000	1984	
58		48918	Cosmonauts Sea. Lutzow-Holmbukta.	10 000	1998	
59	INT9042	48920	Indian Ocean. Coast of Antarctica. Cosmonauts Sea. Zaliv Alasheyeva. Scientific Station Molodyozhnaya and Approaches	12 500	1999	
60		48922	Cosmonauts Sea. Zaliv Alasheyeva. Mys Tryokh Valunov to Mys Vyvodnoy	10 000	2008	
61		48956	Indian Ocean. Coast of Antarctica. Holmevika. Approaches to Scientific Station Mawson	25 000 5 000	1990	
62		48960	Indian Ocean. Coast of Antarctica. Cooperation Sea. Prydz Bay. Scientific Station Progress 2 and Approaches	10 000	2005	
63	INT9027	49900	Indian Ocean. Coast of Antarctica. Davis sea. Roads Mirnyy	10 000	1999	
64		51080	Pacific Ocean. Coast of Antarctica. Glacier Ninnis to Glacier Matushevicha	500000	1994	
65	INT9010	51081	Pacific Ocean. Coast of Antarctica. Cape North to Lednik Matushevicha	500000	2000	
66		51082	Pacific Ocean. Coast of Antarctica. Moubray Bay to Cape North	500000	1984	
67		51083	Pacific Ocean. Coast of Antarctica. Terra Nova Bay to Moubray Bay	500000	1985	
68		51084	Pacific Ocean. Coast of Antarctica. Approaches to McMurdo Sound	500000	1985	
69		51085	Pacific Ocean. Coast of Antarctica. Ross Sea. 75°59'S to 78°36'S, 177°15'E to 166°30'W	500000	1985	
70		51086	Pacific Ocean. Coast of Antarctica. Sulzberger Bay to Bay of Whales	500000	1984	
71		51087	Pacific Ocean. Coast of Antarctica. Cruzen Island to Sulzberger Bay	500000	1985	
72		51090	Pacific Ocean. Coast of Antarctica. Cape Dart to Cape Burks	500000	1985	
73		51091	Coast of Antarctica. Amundsen Sea. Bear Peninsula to Cape Dart	500000	1985	
74		51092	Pacific Ocean. Coast of Antarctica. Noville Peninsula to Bear Peninsula	500000	1985	
75		51093	Coast of Antarctica. Bellingshausen Sea. Bryan Coast to Noville Peninsula	500000	1986	
76		51094	Pacific Ocean. Coast of Antarctica. Bellingshausen Sea. Zemlya Aleksandra I to Bryan Coast	500000	1986	
77	INT9172	51098	Coast of Antarctica. Lavoisier (Nansen) Island to Zemlya Aleksandra I	500000	1999	
78		51099	Pacific and Atlantic Oceans. Coast of Antarctica. Antarctic Peninsula. South Shetland Islands to Biscoe Islands	500000	1992	
79		51777	Pacific Ocean. Southern Part. 60°15'S to 63°05'S, 162°20'E to 170°45'E	500000	1996	
80		51778	Pacific Ocean. Southern Part. 60°15'S to 63°05'S, 170°15'E to 178°40'E	500000	1996	
81		51797	Pacific Ocean. Southern Part. 62°55'S to 65°35'S, 163°00'E to 171°25'E	500000	1995	
82		51798	Pacific Ocean. Southern Part. 62°55'S to 65°35'S, 170°55'E to 179°20'E	500000	1995	
83		51815	Southern Part. Balleny Islands	500000	1996	
84		51816	Pacific Ocean. Southern Part 65°25'S to 69°40'S, 165°45'E to 174°25'E	500000	1994	

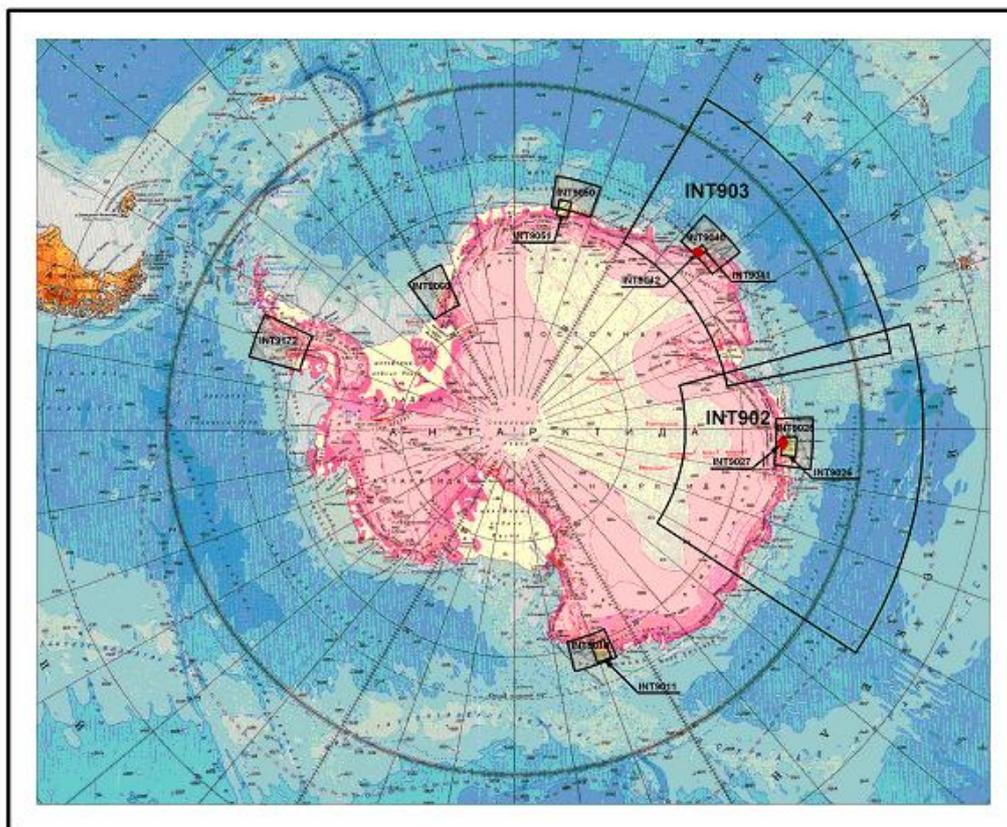
Item No	Chart No	National No	Chart title	Scale	Year of print	Notes
85		51817	Pacific Ocean. Southern Part. 65°25'S to 69°40'S, 173°50'E to 177°30'W	500000	1994	
86		52914	Pacific Ocean. Coast of Antarctica. Ross Sea. Approaches to McMurdo Sound	250000	1991	
87		52915	Pacific Ocean. Coast of Antarctica. Ross Sea. McMurdo Sound	250000	1991	

Guides and Publications for navigation in Antarctic Waters AND

Item No	Title, guide or publication No	Year of edition
1	The Antarctic Pilot. Part 1 (Admiralty No 1011)	1986
2	The Antarctic Pilot. Part 2 (Admiralty No 1012)	2001
3	List of Lights of the Western Coast of Africa (Admiralty No 2211)	2005
4	List of Lights of the Eastern Coast of South America (Admiralty No 2216)	2006
5	List of Lights of the Indian Ocean. Part II(Admiralty No 2302)	2006
6	List of Lights of the Western Coast of North and South Americas. Part III (Admiralty No 2406)	2005
7	List of Lights of Oceania and the Eastern Coast of Australia (Admiralty No 2408)	2001
8	List of Radio Signals of Pacific and Indian Oceans (Admiralty No 3002)	2005



SCHEME
of the Antarctic territory
INT charts reserved for Russia



SYMBOLS:

- charts at 1 : 10 000 and 1 : 12500;
- chart at 1 : 100 000 and 1 : 200 000;
- chart at 1 : 500 000;
- chart at 1 : 2 000 000.

phone:+7 812 323 75 48 fax:+7 812 323 72 60

e-mail: gunio@homepage.ru

8, 11 liniya, B 34

St. Petersburg, 199034