

NO. 44  
JUN. 1974

# *CSK NEWSLETTER*



**JAPAN OCEANOGRAPHIC DATA CENTER**  
*Hydrographic Department, Maritime Safety Agency*  
Tokyo, Japan

C O N T E N T S

- I. Replacement of the National Co-ordinator for CSK of the Republic of Singapore
- II. Resolution for CSK adopted by the Assembly at the 8th Session of the IOC (Unesco, Paris, 3-17 November 1973 SC/MD/39 Annex II-Page 7)
- III. Cruise Reports
  1. Republic of Korea
    - Suro No. 3 (23 April - 6 May 1973)
  2. Japan
    - Oshoro Maru (14 November - 6 December 1972)
    - Kofu Maru ( 5 - 17 February 1973)
    - Shumpu Maru ( 3 - 13 February 1973)
    - Chofu Maru (26 January - 11 February 1973)
    - Seifu Maru ( 7 February - 16 March 1973)
    - Soyo ( 5 - 19 March 1973)
- IV. USSR CSK Cruises Received during the period 30 April 1973 - 31 May 1974
- V. Publications
  - CSK Atlas, Vol. 6, April 1968 - March 1969. March 1974
  - Data Report of CSK, Nos. 253, 259, 304-307, 310-313, 322, 326, 328, 331-333, 336, 340-342, 344
- VI. Data Received
  - Japan (Kofu Maru, Shumpu Maru, Chofu Maru, Ryofu Maru, Seifu Maru)
  - USSR (Priboy, Priliv, U.M. Schokalsky, A.I. Voeikov, Okean)
  - Singapore (Changi)

I. REPLACEMENT OF THE NATIONAL CO-ORDINATOR FOR CSK OF THE REPUBLIC OF SINGAPORE

The following information of the replacement of the National Coordinator for CSK of the Republic of Singapore from Mr. Devadas Menon, for Secretary-General, Singapore National Commission for Unesco was received by Dr. Kiyoo Wadati, International Coordinator for CSK.

EDUN 6746/59 Vol 9

7 Sept 73

Dr. Kiyoo Wadati  
International Coordinator for CSK  
Japan National Commission for UNESCO  
2-2 Kasumigaseki 3-Chome, Chiyoda-ku,  
Tokyo, 100  
Japan

Dear Sir:

We are in receipt of your letter to Prof. Tham JUSC 331/8 dated 29 June 1973.

The newly appointed National Coordinator for CSK is :-

Professor Chuang Shou-Hwa  
Head  
Department of Zoology  
University of Singapore

and concurrently

Hon Director  
Regional Marine Biological Centre  
University of Singapore

The contents of your letter under reference has been conveyed to Professor Chuang and he would be giving you his comments at his earliest convenience.

Yours faithfully,

( S i g n e d )  
DEVADAS MENON  
for SECRETARY-GENERAL  
SINGAPORE NATIONAL COMMISSION FOR UNESCO

II. RESOLUTION FOR CSK ADOPTED BY THE ASSEMBLY AT THE EIGHTH SESSION OF THE IOC (UNESCO, Paris, 3-17 November 1973, SC/MD/39 Annex II)

RESOLUTION VIII-7

CO-OPERATIVE STUDY OF THE KUROSHIO AND ADJACENT REGIONS (CSK)

The Intergovernmental Oceanographic Commission,

Noting that the International Co-ordination Group(ICG) for CSK held its ninth session in Bangkok, Thailand, from 30 May to 1 June 1973,

Noting also that the Third CSK Symposium was held immediately prior to the ninth session of the International Co-ordination Group from 26 to 29 May 1973,

Expresses its appreciation to the Government of Thailand for hosting the Third CSK Symposium and the ninth session of the International Co-ordination Group;

Adopts the Summary Report of the ninth session of the International Co-ordination Group for the Co-operative Study of the Kuroshio and Adjacent Regions(CSK);

Decides to publish the Proceedings of the Third CSK Symposium;

Decides that the tenth session of the International Co-ordination Group for CSK should be held early in 1975 in conjunction with a Workshop on Marine Pollution in the CSK area;

Requests the International Co-ordination Group at its tenth session to consider in detail the problem of the future activities of CSK in the light of Recommendation 1 of the ninth session of the International Co-ordination Group, so as to come with appropriate proposals before the fifth session of the IOC Executive Council-(EC-V);

Instructs the Secretary to hold discussions with the Secretary of the Indo-Pacific Fisheries Council(IPFC) of FAO, to obtain details of the existing work on marine pollution being carried out by the Council and to determine whether it would be desirable and acceptable to the FAO, to convene the proposed workshop jointly with the IPFC;

Urges Member States of CSK to make every effort in preparation for the Workshop on Marine Pollution in the CSK area;

Requests the International Co-ordinator, with the assistance of the Secretary, to initiate preparation for this Workshop.

\* \* \* \* \*

III. CRUISE REPORTS

1. Republic of Korea

1.1 Suro No. 3

(ROSCOP)

SHIP OR PLATFORM Suro No. 3		SCIENTIST IN CHARGE K. S. Chu
INSTITUTION OR OPERATING AGENCY Hydrographic Office (ROKHO)		
EXPEDITION, PROJECT, AND/OR ORIGINATOR'S CRUISE NO. CSK ROKHO-1-73		COUNTRY Republic of Korea

DATE OF CRUISE  
 FROM: 23 DAY / 4 MONTH / 1973 YEAR TO: 6 DAY / 5 MONTH / 1973 YEAR

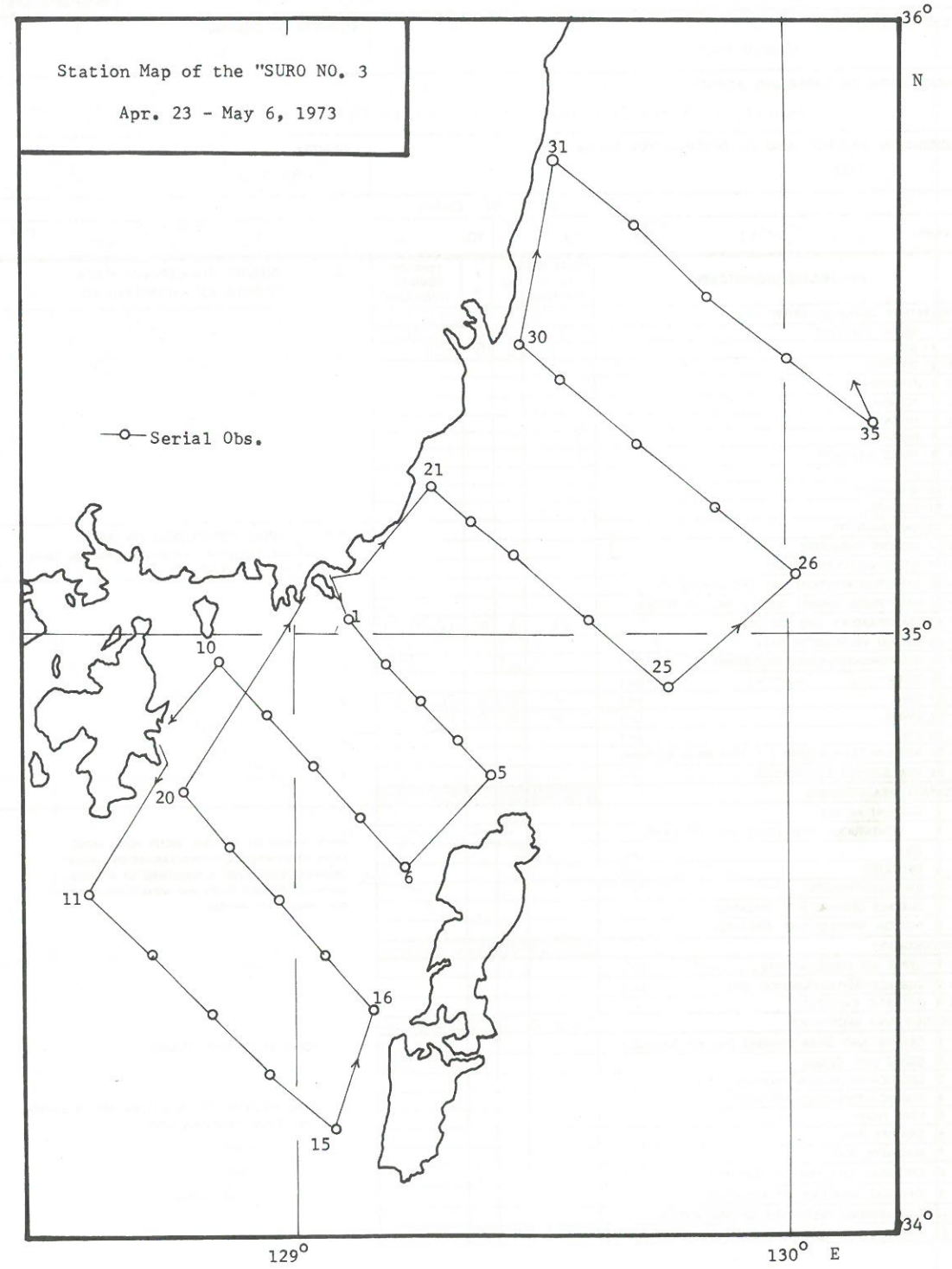
PROGRAMS UNDERTAKEN	TOTAL NO. OF Δ STATIONS	Q	F	D	TYPE OF FORMAT AVAILABLE	Q
<b>DESCRIPTIVE OCEANOGRAPHY</b>						
D 1 SERIAL STATIONS	35	a	a,b		RDC,MT	a. ROKHO
D 2 STD						b.
D 3 OXYGEN	35	a	a,b		PUB,MT	c.
D 4 PHOSPHATES						d.
D 5 TOTAL-P						e.
D 6 NITRATES						f.
D 7 NITRITES						
D 8 TRACE ELEMENTS						
D 9 pH	35	a	a,b		PUB,MT	
D 10 ALKALINITY						
D 11 SILICATES						
D 12 RADIOACTIVITY						
D 13 ISOTOPE CHEMISTRY						
D 14 OTHER DISSOLVED GASES						
D 15 BATHYTHERMOGRAPH (XBT) (NO. OF DROPS)						
D 16 BATHYTHERMOGRAPH (MECH.) (NO. OF DROPS)	35	a	a		PUB	
D 17 TRANSPARENCY (NO. OF OBS.)						
D 18 SOUND VELOCIMETER DATA						
D 19 INSTRUMENTED WAVE RECORDING					(✓)	
D 20 TIDES					(✓)	
D 21 SEA					(✓)	
D 22 SWELL					(✓)	
D 23 ICE					(✓)	
D 24 BOTTOM TEMPERATURE (≤ 10M FROM BOTTOM)	14	a	a,b		RDC,MT	
D 25 SEA SURFACE TEMPERATURE		(✓)	a	a	RDC	
<b>CURRENT MEASUREMENTS</b>						
C 1 CURRENT METERS						
C 1 CONTINUOUS TIME SERIES (NO. OF DAYS)						
C 2 GEK					(✓)	
C 3 DROGUES					(✓)	
C 4 SWALLOW FLOATS					(✓)	
C 5 SURFACE DRIFTERS (NO. RELEASED)						
C 6 BOTTOM DRIFTERS (NO. RELEASED)						
<b>METEOROLOGY</b>						
M 1 UPPER AIR OBSERVATIONS					(✓)	
M 2 SURFACE METEOROLOGICAL OBS.		(✓)	a	a	RDC	
M 3 INCIDENT RADIATION					(✓)	
<b>GEOLOGY AND GEOPHYSICS</b>						
G 1 DREDGE AND GRAB SAMPLES (NO. OF SAMPLES)						
G 2 CORES (NO. CORES)						
G 3 SEISMIC—REFLECTION PROFILES (Km)						
G 4 SEISMIC—REFRACTION PROFILES						
G 5 HEAT FLOW						
G 6 GRAVITY (Km)						
G 7 MAGNETIC (Km)						
G 8 CHEMICAL ANALYSIS OF SEDIMENT					(✓)	
G 9 PHYSICAL ANALYSIS OF SEDIMENT					(✓)	
G 10 ENGINEERING PROPERTIES OF SEA BOTTOM						
G 11 BOTTOM PHOTOGRAPHY (NO. OF CAMERA STATIONS)						

Q QUERIES CONCERNING DATA SHOULD BE ADDRESSED TO:  
 a. ROKHO  
 b.  
 c.  
 d.  
 e.  
 f.

F D FINAL DISPOSITION OF DATA  
 (NATIONAL REPOSITORY, INSTITUTION, REGIONAL CENTER, OR WORLD DATA CENTERS)  
 a. ROKHO  
 b. KDC/JODC (MT)  
 c.  
 d.  
 e.  
 f.

Δ ENTER NUMBER OF STATIONS, EXCEPT WHEN ANNOTATED OTHERWISE FOLLOWING PARAMETER. WHEN OBSERVED PARAMETER IS FOLLOWED BY A CHECK MARK (✓) DO NOT ENTER ANY NUMBER BUT ENTER THE CHECK MARK INSTEAD.

TOTAL KILOMETERS STEAMED:  
 477 n.m.  
 DATA REPORTED ON THIS FORM ARE DECLARED NATIONAL PROGRAM (DNP):  
 (✓) YES  
 ( ) NO  
 ( ) PART (SPECIFY)



2. Japan

2.1 Oshoro Maru

(ROSCOP)

SHIP OR PLATFORM Oshoro Maru		SCIENTIST IN CHARGE T. Fujii	
INSTITUTION OR OPERATING AGENCY Faculty of Fisheries, Hokkaido University (HU)			
EXPEDITION, PROJECT, AND/OR ORIGINATOR'S CRUISE NO. CSK		COUNTRY Japan	
DATE OF CRUISE			
FROM:	14 DAY / 11 MONTH / 1972 YEAR	TO:	6 DAY / 12 MONTH / 1972 YEAR

PROGRAMS UNDERTAKEN	TOTAL NO. OF Δ STATIONS	Q	F D	TYPE OF FORMAT AVAILABLE	Q	QUERIES CONCERNING DATA SHOULD BE ADDRESSED TO:
<b>DESCRIPTIVE OCEANOGRAPHY</b>						
D 1 SERIAL STATIONS	26	a	a	PC,MT	a.	HU
D 2 STD	4	a	b	PUB	b.	
D 3 OXYGEN					c.	
D 4 PHOSPHATES					d.	
D 5 TOTAL-P					e.	
D 6 NITRATES					f.	
D 7 NITRITES						
D 8 TRACE ELEMENTS						
D 9 pH						
D 10 ALKALINITY						
D 11 SILICATES						
D 12 RADIOACTIVITY						
D 13 ISOTOPE CHEMISTRY						
D 14 OTHER DISSOLVED GASES						
D 15 BATHYTHERMOGRAPH (XBT) (NO. OF DROPS)						
D 16 BATHYTHERMOGRAPH (MECH.) (NO. OF DROPS)						
D 17 TRANSPARENCY (NO. OF OBS.)	26	a	a	PC,MT	a.	JODC
D 18 SOUND VELOCIMETER DATA					b.	HU
D 19 INSTRUMENTED WAVE RECORDING (✓)					c.	
D 20 TIDES (✓)					d.	
D 21 SEA (✓)		✓	a	a	e.	
D 22 SWELL (✓)		✓	a	b	f.	
D 23 ICE (✓)						
D 24 BOTTOM TEMPERATURE (≤ 10M FROM BOTTOM)						
D 25 SEA SURFACE TEMPERATURE (✓)						
<b>CURRENT MEASUREMENTS</b>						
C 1 CURRENT METERS						
C 1 CONTINUOUS TIME SERIES (NO. OF DAYS)						
C 2 GEK (✓)						
C 3 DROGUES (✓)						
C 4 SWALLOW FLOATS (✓)						
C 5 SURFACE DRIFTERS (NO. RELEASED)						
C 6 BOTTOM DRIFTERS (NO. RELEASED)						
<b>METEOROLOGY</b>						
M 1 UPPER AIR OBSERVATIONS (✓)						
M 2 SURFACE METEOROLOGICAL OBS. (✓)						
M 3 INCIDENT RADIATION (✓)						
<b>GEOLOGY AND GEOPHYSICS</b>						
G 1 DREDGE AND GRAB SAMPLES (NO. OF SAMPLES)						
G 2 CORES (NO. CORES)						
G 3 SEISMIC—REFLECTION PROFILES (Km)						
G 4 SEISMIC—REFRACTION PROFILES						
G 5 HEAT FLOW						
G 6 GRAVITY (Km)						
G 7 MAGNETIC (Km)						
G 8 CHEMICAL ANALYSIS OF SEDIMENT (✓)						
G 9 PHYSICAL ANALYSIS OF SEDIMENT (✓)						
G 10 ENGINEERING PROPERTIES OF SEA BOTTOM						
G 11 BOTTOM PHOTOGRAPHY (NO. OF CAMERA STATIONS)						

**F D FINAL DISPOSITION OF DATA**  
(NATIONAL REPOSITORY, INSTITUTION, REGIONAL CENTER, OR WORLD DATA CENTERS)

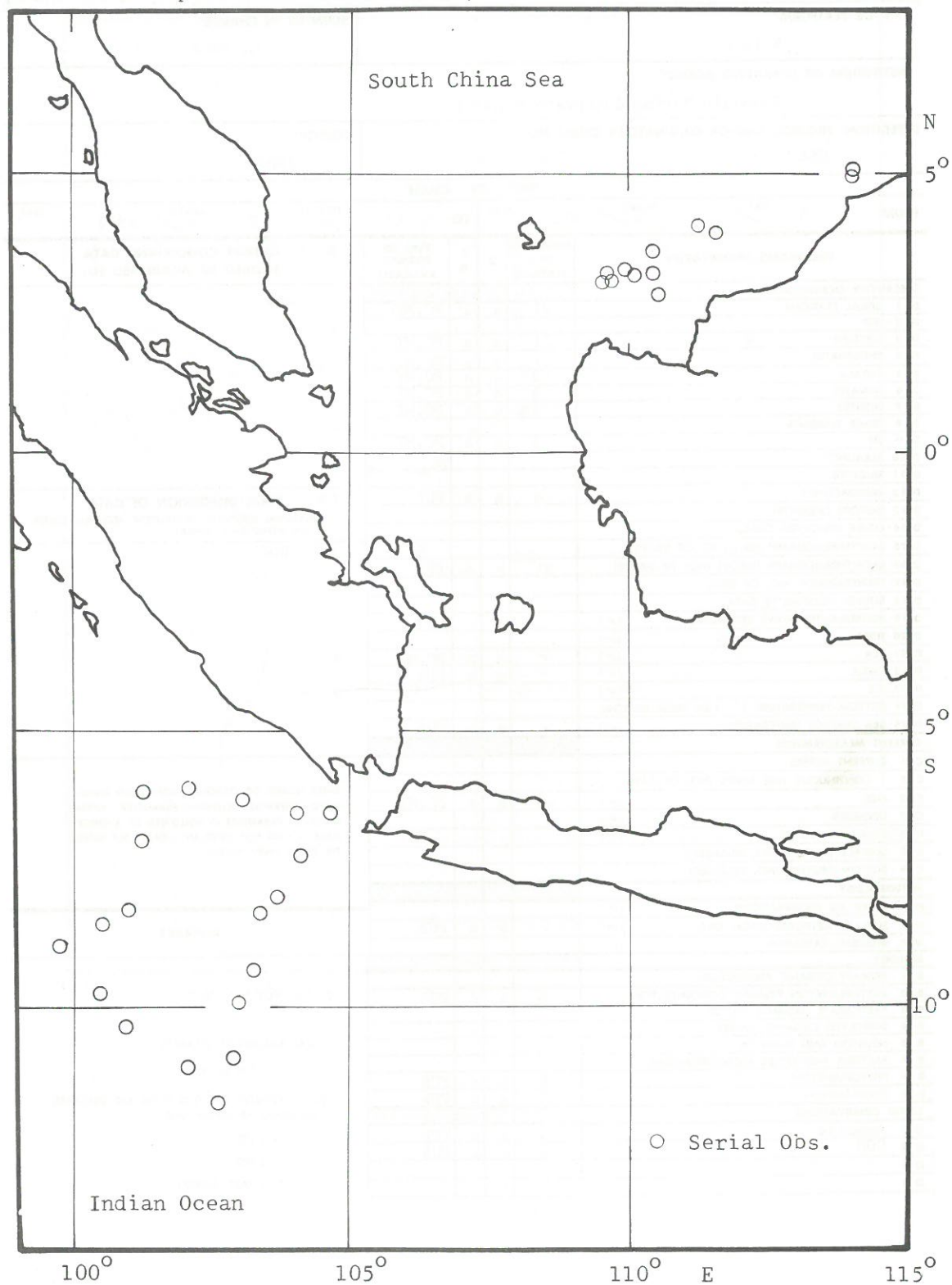
Δ ENTER NUMBER OF STATIONS, EXCEPT WHEN ANNOTATED OTHERWISE FOLLOWING PARAMETER. WHEN OBSERVED PARAMETER IS FOLLOWED BY A CHECK MARK (✓) DO NOT ENTER ANY NUMBER BUT ENTER THE CHECK MARK INSTEAD.

TOTAL KILOMETERS STEAMED:

DATA REPORTED ON THIS FORM ARE DECLARED NATIONAL PROGRAM (DNP):

(✓) YES  
( ) NO  
( ) PART (SPECIFY)

Station Map of the "OSHORO MARU", 14 Nov.-6 Dec. 1972



2.2 Kofu Maru

(ROSCOP)

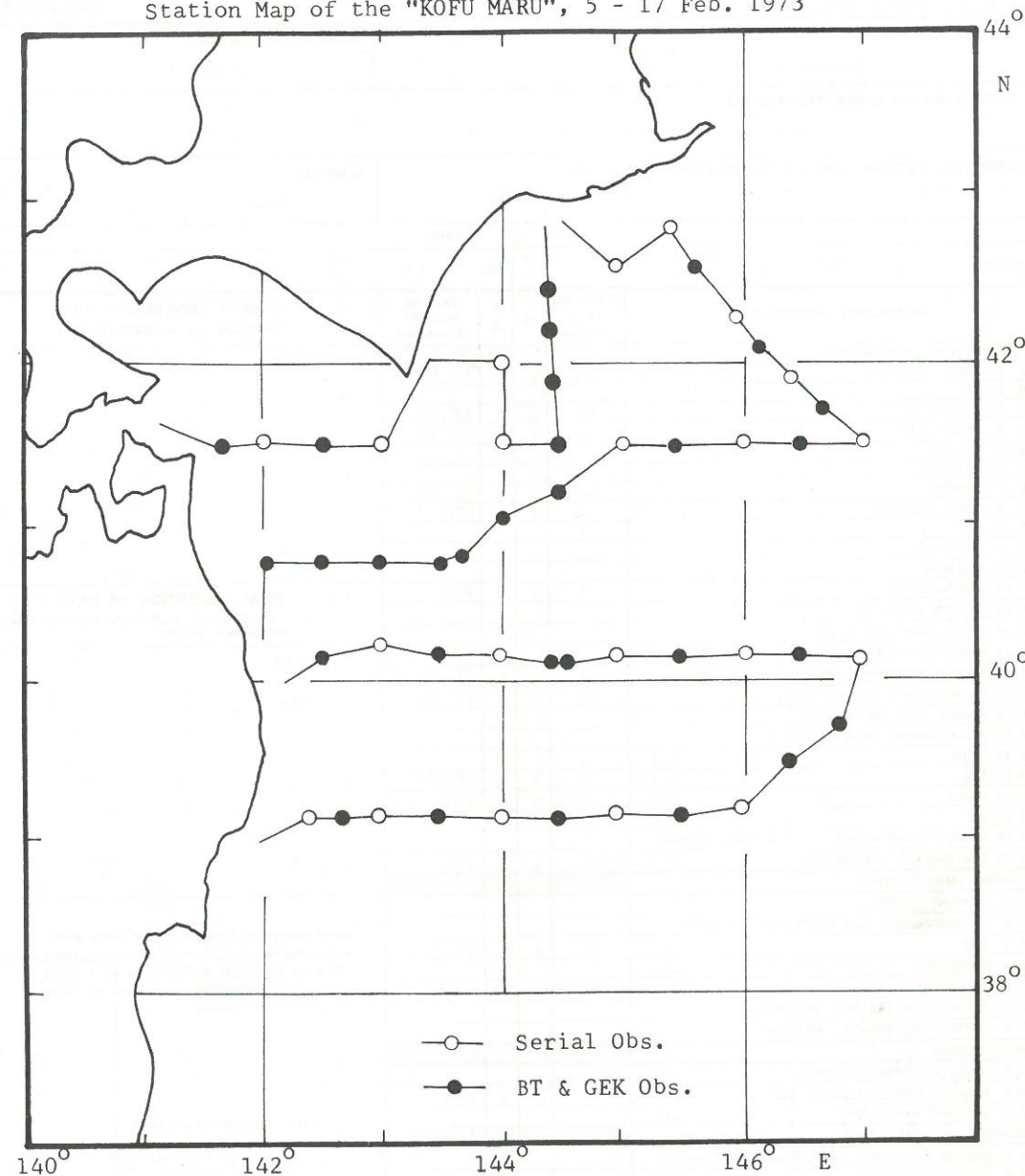
SHIP OR PLATFORM Kofu Maru		SCIENTIST IN CHARGE K. Hata	
INSTITUTION OR OPERATING AGENCY Hakodate Marine Observatory (HMO)			
EXPEDITION, PROJECT, AND/OR ORIGINATOR'S CRUISE NO. CSK		COUNTRY Japan	
DATE OF CRUISE			
FROM:	5 DAY / 2 MONTH / 1973 YEAR	TO:	17 DAY / 2 MONTH / 1973 YEAR

PROGRAMS UNDERTAKEN	TOTAL NO. OF Δ STATIONS	Q	F	D	TYPE OF FORMAT AVAILABLE	Q	QUERIES CONCERNING DATA SHOULD BE ADDRESSED TO:
<b>DESCRIPTIVE OCEANOGRAPHY</b>							
D 1 SERIAL STATIONS	21	a	a		PC,MT	a.	HMO
D 2 STD						b.	
D 3 OXYGEN	21	a	a		PC,MT	c.	
D 4 PHOSPHATES	21	a	a		PC,MT	d.	
D 5 TOTAL-P	3	a	a		PC,MT	e.	
D 6 NITRATES	3	a	a		PC,MT	f.	
D 7 NITRITES	3	a	a		PC,MT		
D 8 TRACE ELEMENTS							
D 9 pH	3	a	a		PC,MT		
D 10 ALKALINITY							
D 11 SILICATES							
D 12 RADIOACTIVITY	4	a	a		PUB	<b>FINAL DISPOSITION OF DATA</b> (NATIONAL REPOSITORY, INSTITUTION, REGIONAL CENTER, OR WORLD DATA CENTERS)	
D 13 ISOTOPE CHEMISTRY						a.	JODC
D 14 OTHER DISSOLVED GASES						b.	
D 15 BATHYTHERMOGRAPH (XBT) (NO. OF DROPS)						c.	
D 16 BATHYTHERMOGRAPH (MECH.) (NO. OF DROPS)	51	a	a		PUB	d.	
D 17 TRANSPARENCY (NO. OF OBS.)						e.	
D 18 SOUND VELOCIMETER DATA						f.	
D 19 INSTRUMENTED WAVE RECORDING (✓)							
D 20 TIDES (✓)							
D 21 SEA (✓)		a	a		PC,MT		
D 22 SWELL (✓)		a	a		PUB		
D 23 ICE (✓)							
D 24 BOTTOM TEMPERATURE (≤ 10M FROM BOTTOM)							
D 25 SEA SURFACE TEMPERATURE (✓)		a	a		PUB		
<b>CURRENT MEASUREMENTS</b>							
C 1 CURRENT METERS							
C 1 CONTINUOUS TIME SERIES (NO. OF DAYS)							
C 2 GEK (✓)	45	a	a		PC,MT		
C 3 DROGUES (✓)							
C 4 SWALLOW FLOATS (✓)							
C 5 SURFACE DRIFTERS (NO. RELEASED)							
C 6 BOTTOM DRIFTERS (NO. RELEASED)							
<b>METEOROLOGY</b>							
M 1 UPPER AIR OBSERVATIONS (✓)							
M 2 SURFACE METEOROLOGICAL OBS. (✓)		a	a		PUB		
M 3 INCIDENT RADIATION (✓)							
<b>BIOLOGY</b>							
B 1 PRIMARY ORGANIC PRODUCTION							
B 2 PHYTOPLANKTON PIGMENT CONCENTRATION	6	a	a		PUB		
B 3 PARTICULATE ORGANIC MATTER							
B 4 DISSOLVED ORGANIC MATTER							
B 5 NEUSTON AND PLEUSTON							
B 6 BACTERIA AND OTHER MICROORGANISMS							
B 7 PHYTOPLANKTON	6	a	a		PUB		
B 8 ZOOPLANKTON	4	a	a		PUB		
<b>OTHER OBSERVATIONS</b>							
O 1 Ammonia	3	a	a		PUB		
O 2 COD	3	a	a		PUB		
O 3							
O 4							

B 8: Norpac Net

TOTAL KILOMETERS STEAMED:  
1836 n.m.DATA REPORTED ON THIS FORM ARE DECLARED  
NATIONAL PROGRAM (DNP):(✓) YES  
( ) NO  
( ) PART (SPECIFY)

Station Map of the "KOFU MARU", 5 - 17 Feb. 1973



2.3 Shumpu Maru

(ROSCOP)

SHIP OR PLATFORM Shumpu Maru		SCIENTIST IN CHARGE K. Yamamoto	
INSTITUTION OR OPERATING AGENCY Kobe Marine Observatory (KMO)			
EXPEDITION, PROJECT, AND/OR ORIGINATOR'S CRUISE NO. CSK 731		COUNTRY Japan	
DATE OF CRUISE			
FROM:	3 DAY / 2 MONTH / 1973 YEAR	TO:	13 DAY / 2 MONTH / 1973 YEAR

PROGRAMS UNDERTAKEN	TOTAL NO. OF Δ STATIONS	Q	F	D	TYPE OF FORMAT AVAILABLE	Q	QUERIES CONCERNING DATA SHOULD BE ADDRESSED TO:
<b>DESCRIPTIVE OCEANOGRAPHY</b>							
D 1 SERIAL STATIONS	44	a	a		PC,MT	a.	KMO
D 2 STD						b.	
D 3 OXYGEN	44	a	a		PC,MT	c.	
D 4 PHOSPHATES	44	a	a		PC,MT	d.	
D 5 TOTAL-P						e.	
D 6 NITRATES						f.	
D 7 NITRITES	44	a	a		PC,MT		
D 8 TRACE ELEMENTS	4	a	b		RDS		
D 9 pH							
D 10 ALKALINITY							
D 11 SILICATES							
D 12 RADIOACTIVITY	5	a	b		RDS		
D 13 ISOTOPE CHEMISTRY							
D 14 OTHER DISSOLVED GASES							
D 15 BATHYTHERMOGRAPH (XBT) (NO. OF DROPS)							
D 16 BATHYTHERMOGRAPH (MECH.) (NO. OF DROPS)	61	a	a		PC,MT	a.	JODC
D 17 TRANSPARENCY (NO. OF OBS.)	21	a	a		PC,MT	b.	KMO
D 18 SOUND VELOCIMETER DATA						c.	
D 19 INSTRUMENTED WAVE RECORDING (✓)						d.	
D 20 TIDES (✓)						e.	
D 21 SEA (✓)		✓	a	a	PC,MT	f.	
D 22 SWELL (✓)		✓	a	a	PUB		
D 23 ICE (✓)							
D 24 BOTTOM TEMPERATURE (≤ 10M FROM BOTTOM)							
D 25 SEA SURFACE TEMPERATURE (✓)		✓	a	a	PUB		
<b>CURRENT MEASUREMENTS</b>							
C 1 CURRENT METERS							
C 1 CONTINUOUS TIME SERIES (NO. OF DAYS)							
C 2 GEK (✓)	26	a	a		PC,MT		
C 3 DROGUES (✓)							
C 4 SWALLOW FLOATS (✓)							
C 5 SURFACE DRIFTERS (NO. RELEASED)							
C 6 BOTTOM DRIFTERS (NO. RELEASED)							
<b>METEOROLOGY</b>							
M 1 UPPER AIR OBSERVATIONS (✓)							
M 2 SURFACE METEOROLOGICAL OBS. (✓)		✓	a	a	PUB		
M 3 INCIDENT RADIATION (✓)							
<b>GEOLOGY AND GEOPHYSICS</b>							
G 1 DREDGE AND GRAB SAMPLES (NO. OF SAMPLES)							
G 2 CORES (NO. CORES)							
G 3 SEISMIC—REFLECTION PROFILES (Km)							
G 4 SEISMIC—REFRACTION PROFILES							
G 5 HEAT FLOW							
G 6 GRAVITY (Km)							
G 7 MAGNETIC (Km)							
G 8 CHEMICAL ANALYSIS OF SEDIMENT (✓)							
G 9 PHYSICAL ANALYSIS OF SEDIMENT (✓)							
G 10 ENGINEERING PROPERTIES OF SEA BOTTOM							
G 11 BOTTOM PHOTOGRAPHY (NO. OF CAMERA STATIONS)							

**Q** QUERIES CONCERNING DATA SHOULD BE ADDRESSED TO:

- a. KMO  
b.  
c.  
d.  
e.  
f.

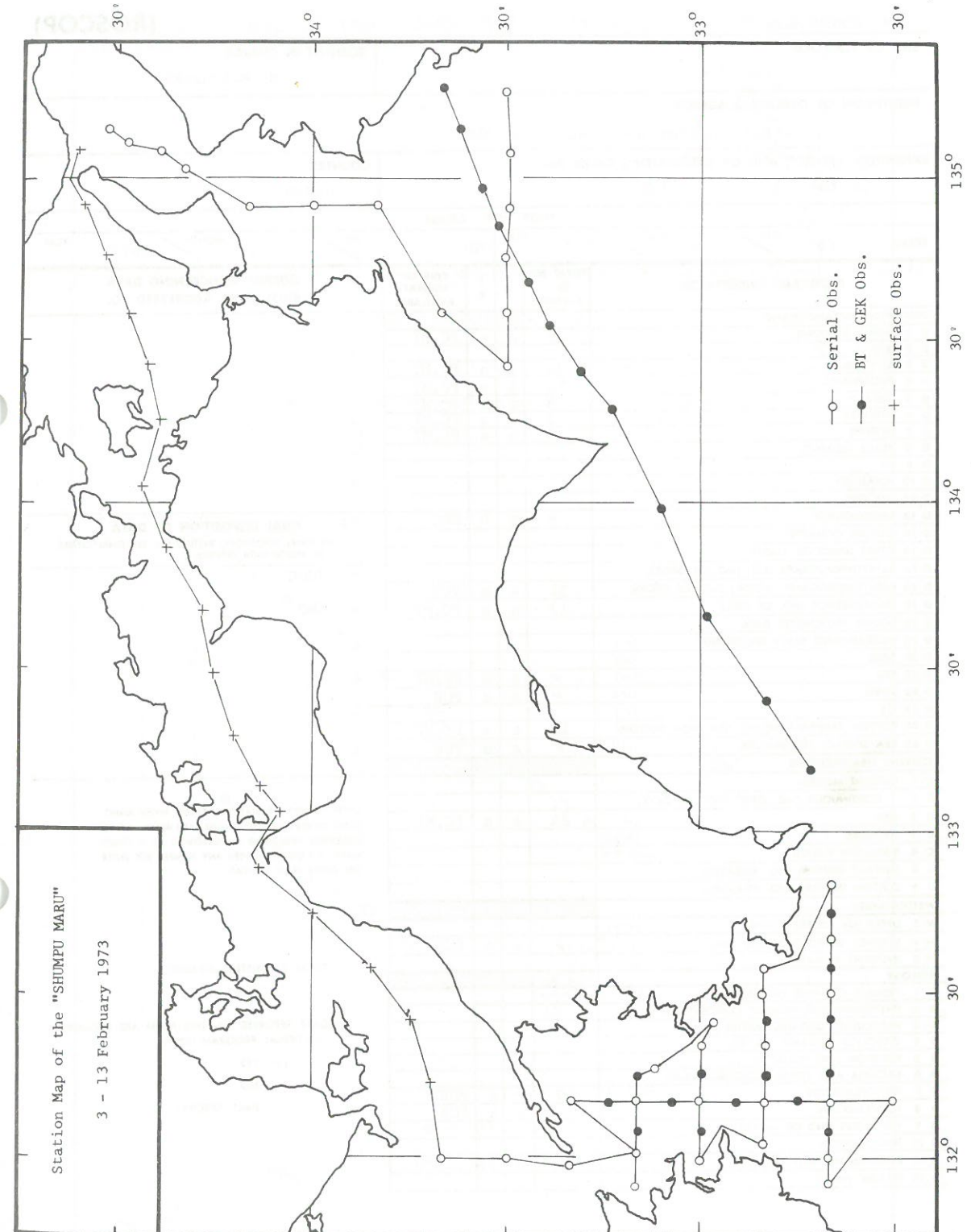
**F D** FINAL DISPOSITION OF DATA  
(NATIONAL REPOSITORY, INSTITUTION, REGIONAL CENTER, OR WORLD DATA CENTERS)

- a. JODC  
b. KMO  
c.  
d.  
e.  
f.

Δ ENTER NUMBER OF STATIONS, EXCEPT WHEN ANNOTATED OTHERWISE FOLLOWING PARAMETER. WHEN OBSERVED PARAMETER IS FOLLOWED BY A CHECK MARK (✓) DO NOT ENTER ANY NUMBER BUT ENTER THE CHECK MARK INSTEAD.

TOTAL KILOMETERS STEAMED:  
846.5 n.m.

DATA REPORTED ON THIS FORM ARE DECLARED NATIONAL PROGRAM (DNP):  
(✓) YES  
( ) NO  
( ) PART (SPECIFY)



2.4 Chofu Maru

(ROSCOP)

<b>SHIP OR PLATFORM</b> Chofu Maru		<b>SCIENTIST IN CHARGE</b> M. Matsuzaki	
<b>INSTITUTION OR OPERATING AGENCY</b> Nagasaki Marine Observatory (NMO)			
<b>EXPEDITION, PROJECT, AND/OR ORIGINATOR'S CRUISE NO.</b> CSK 73-01		<b>COUNTRY</b> Japan	
<b>DATE OF CRUISE</b>			
<b>FROM:</b> 26 DAY / 1 MONTH / 1973 YEAR	<b>TO:</b> 11 DAY / 2 MONTH / 1973 YEAR		

PROGRAMS UNDERTAKEN	TOTAL NO. OF $\Delta$ STATIONS	Q	F	D	TYPE OF FORMAT AVAILABLE	Q	QUERIES CONCERNING DATA SHOULD BE ADDRESSED TO:
<b>DESCRIPTIVE OCEANOGRAPHY</b>							
D 1 SERIAL STATIONS	29	a	a		PC, MT	a.	NMO
D 2 STD						b.	
D 3 OXYGEN	29	a	a		PC, MT	c.	
D 4 PHOSPHATES	16	a	a		PC, MT	d.	
D 5 TOTAL-P	3	a	a		PC, MT	e.	
D 6 NITRATES	3	a	a		PC, MT	f.	
D 7 NITRITES	3	a	a		PC, MT		
D 8 TRACE ELEMENTS							
D 9 pH							
D 10 ALKALINITY							
D 11 SILICATES							
D 12 RADIOACTIVITY	9	a	b		RDC	<b>F D</b>	<b>FINAL DISPOSITION OF DATA</b> (NATIONAL REPOSITORY, INSTITUTION, REGIONAL CENTER, OR WORLD DATA CENTERS)
D 13 ISOTOPE CHEMISTRY						a.	JODC
D 14 OTHER DISSOLVED GASES						b.	NMO
D 15 BATHYTHERMOGRAPH (XBT) (NO. OF DROPS)						c.	
D 16 BATHYTHERMOGRAPH (MECH.) (NO. OF DROPS)	51	a	a		PUB	d.	
D 17 TRANSPARENCY (NO. OF OBS.)	12	a	a		PC, MT	e.	
D 18 SOUND VELOCIMETER DATA						f.	
D 19 INSTRUMENTED WAVE RECORDING (✓)							
D 20 TIDES (✓)							
D 21 SEA (✓)	✓	a	a		PC, MT		
D 22 SWELL (✓)	✓	a	a		PUB		
D 23 ICE (✓)							
D 24 BOTTOM TEMPERATURE ( $\leq 10M$ FROM BOTTOM)	12	a	a		PC, MT		
D 25 SEA SURFACE TEMPERATURE (✓)	✓	a	a		PUB		
<b>CURRENT MEASUREMENTS</b>							
C 1 CURRENT METERS							
C 2 CONTINUOUS TIME SERIES (NO. OF DAYS)							
C 3 GEK (✓)	24	a	a		PC, MT		
C 4 DROGUES (✓)							
C 5 SWALLOW FLOATS (✓)							
C 6 SURFACE DRIFTERS (NO. RELEASED)							
C 7 BOTTOM DRIFTERS (NO. RELEASED)							
<b>METEOROLOGY</b>							
M 1 UPPER AIR OBSERVATIONS (✓)							
M 2 SURFACE METEOROLOGICAL OBS. (✓)	✓	a	a		PUB		
M 3 INCIDENT RADIATION (✓)							
<b>BIOLOGY</b>							
B 1 PRIMARY ORGANIC PRODUCTION							
B 2 PHYTOPLANKTON PIGMENT CONCENTRATION							
B 3 PARTICULATE ORGANIC MATTER							
B 4 DISSOLVED ORGANIC MATTER							
B 5 NEUSTON AND PLEUSTON							
B 6 BACTERIA AND OTHER MICROORGANISMS							
B 7 PHYTOPLANKTON	9	a	a		PUB		
B 8 ZOOPLANKTON	17	a	a		PUB		
B 9 FISH EGGS AND/OR LARVAE							
B 10 MICRONEKTON							
B 11 INVERTEBRATE NEKTON							
B 12 PELAGIC FISHES							

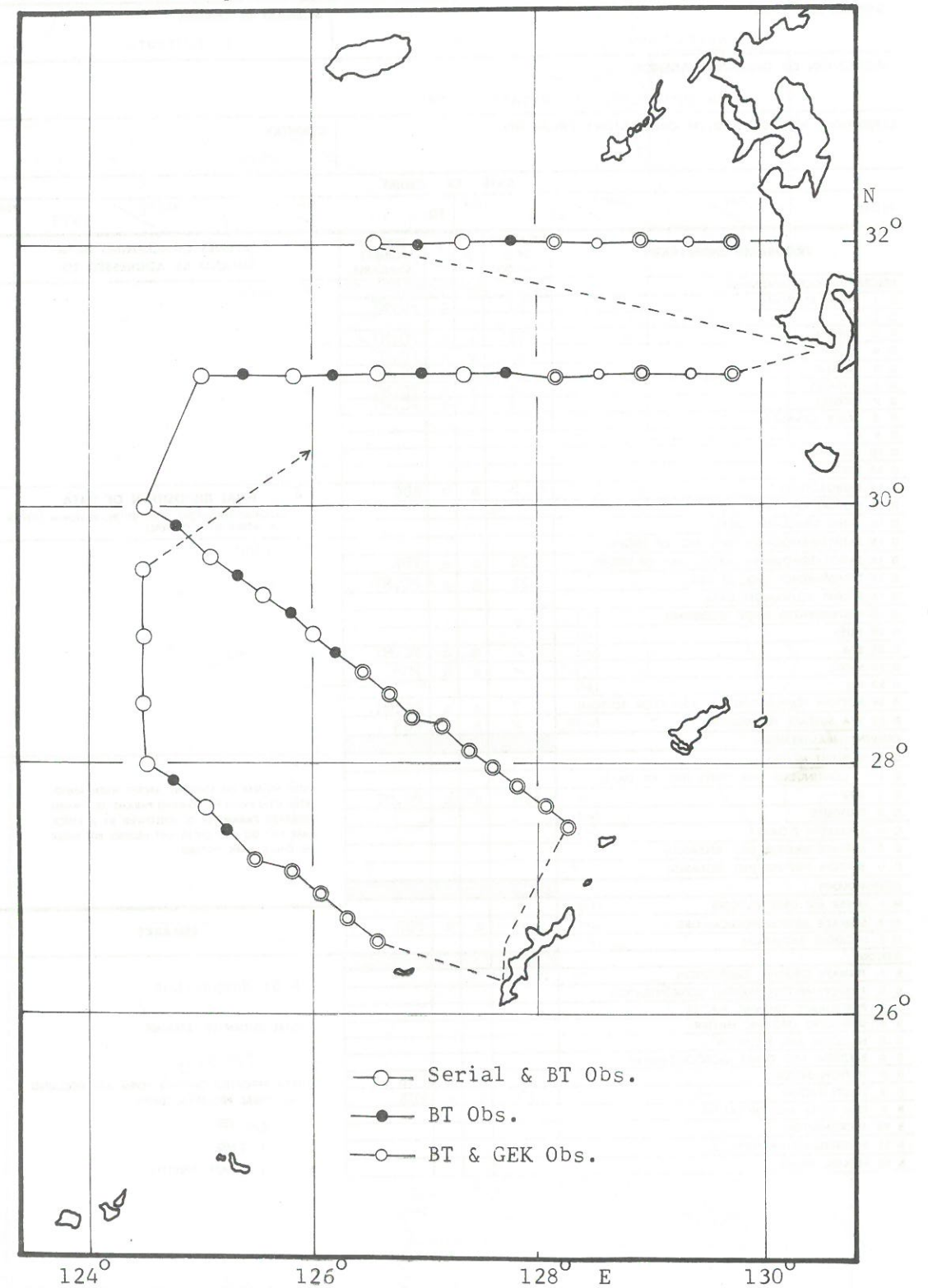
$\Delta$  ENTER NUMBER OF STATIONS, EXCEPT WHEN ANNOTATED OTHERWISE FOLLOWING PARAMETER. WHEN OBSERVED PARAMETER IS FOLLOWED BY A CHECK MARK (✓) DO NOT ENTER ANY NUMBER BUT ENTER THE CHECK MARK INSTEAD.

TOTAL KILOMETERS STEAMED:  
2300 n.m.

DATA REPORTED ON THIS FORM ARE DECLARED NATIONAL PROGRAM (DNP):

(✓) YES  
( ) NO  
( ) PART (SPECIFY)

Station Map of the "CHOFU MARU", 26 Jan. - 11 Feb. 1973





SHIP OR PLATFORM Seifu Maru		SCIENTIST IN CHARGE I. Fujiwara	
INSTITUTION OR OPERATING AGENCY Maizuru Marine Observatory (MMO)			
EXPEDITION, PROJECT, AND/OR ORIGINATOR'S CRUISE NO. CSK 73-01		COUNTRY Japan	
DATE OF CRUISE			
FROM:	7 DAY / 2 MONTH / 1973 YEAR	TO:	16 DAY / 3 MONTH / 1973 YEAR

PROGRAMS UNDERTAKEN	TOTAL NO. OF Δ STATIONS	Q	F	D	TYPE OF FORMAT AVAILABLE	Q	QUERIES CONCERNING DATA SHOULD BE ADDRESSED TO:
<b>DESCRIPTIVE OCEANOGRAPHY</b>							
D 1 SERIAL STATIONS	52	a	a		PC, MT	a.	MMO
D 2 STD						b.	
D 3 OXYGEN	52	a	a		PC, MT	c.	
D 4 PHOSPHATES	23	a	a		PC, MT	d.	
D 5 TOTAL-P	3	a	a		PC, MT	e.	
D 6 NITRATES	3	a	a		PC, MT	f.	
D 7 NITRITES	3	a	a		PC, MT		
D 8 TRACE ELEMENTS							
D 9 pH							
D 10 ALKALINITY							
D 11 SILICATES							
D 12 RADIOACTIVITY	8	a	b		RDC		
<b>F D FINAL DISPOSITION OF DATA</b> (NATIONAL REPOSITORY, INSTITUTION, REGIONAL CENTER, OR WORLD DATA CENTERS)							
D 15 BATHYTHERMOGRAPH (XBT) (NO. OF DROPS)						a.	JODC
D 16 BATHYTHERMOGRAPH (MECH.) (NO. OF DROPS)	124	a	a		PUB	b.	MMO
D 17 TRANSPARENCY (NO. OF OBS.)	21	a	a		PC, MT	c.	
D 18 SOUND VELOCIMETER DATA						d.	
D 19 INSTRUMENTED WAVE RECORDING (✓)						e.	
D 20 TIDES (✓)						f.	
D 21 SEA (✓)	✓	a	a		PC, MT		
D 22 SWELL (✓)	✓	a	a		PUB		
D 23 ICE (✓)							
D 24 BOTTOM TEMPERATURE (≤ 10M FROM BOTTOM)	7	a	a		PC, MT		
D 25 SEA SURFACE TEMPERATURE (✓)	✓	a	a		PUB		
<b>CURRENT MEASUREMENTS</b>							
C 1 CURRENT METERS							
C 1 CONTINUOUS TIME SERIES (NO. OF DAYS)							
C 2 GEK (✓)	120	a	a		PC, MT		
C 3 DROGUES (✓)							
C 4 SWALLOW FLOATS (✓)							
C 5 SURFACE DRIFTERS (NO. RELEASED)							
C 6 BOTTOM DRIFTERS (NO. RELEASED)							
<b>METEOROLOGY</b>							
M 1 UPPER AIR OBSERVATIONS (✓)							
M 2 SURFACE METEOROLOGICAL OBS. (✓)	✓	a	a		PUB		
M 3 INCIDENT RADIATION (✓)							
<b>BIOLOGY</b>							
B 1 PRIMARY ORGANIC PRODUCTION							
B 2 PHYTOPLANKTON PIGMENT CONCENTRATION							
B 3 PARTICULATE ORGANIC MATTER							
B 4 DISSOLVED ORGANIC MATTER							
B 5 NEUSTON AND PLEUSTON							
B 6 BACTERIA AND OTHER MICROORGANISMS							
B 7 PHYTOPLANKTON	10	a	a		PUB		
B 8 ZOOPLANKTON	10	a	a		PUB		
B 9 FISH EGGS AND/OR LARVAE							
B 10 MICRONEKTON							
B 11 INVERTEBRATE NEKTON							
B 12 PELAGIC FISHES							

ENTER NUMBER OF STATIONS, EXCEPT WHEN ANNOTATED OTHERWISE FOLLOWING PARAMETER. WHEN OBSERVED PARAMETER IS FOLLOWED BY A CHECK MARK (✓) DO NOT ENTER ANY NUMBER BUT ENTER THE CHECK MARK INSTEAD.

## REMARKS

B 8: Norpac Net

TOTAL KILOMETERS STEAMED:

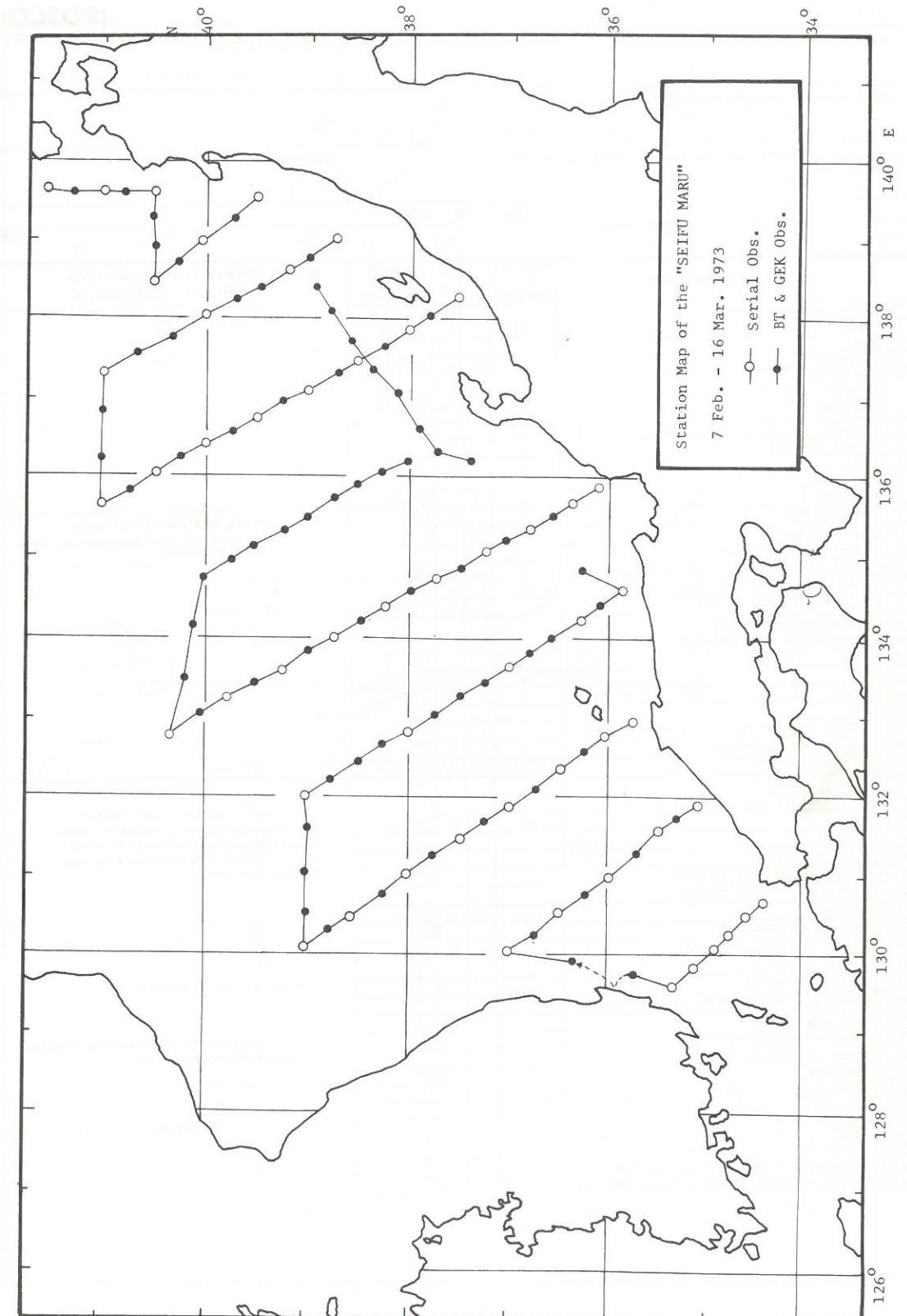
3750 n.m.

DATA REPORTED ON THIS FORM ARE DECLARED NATIONAL PROGRAM (DNP):

(✓) YES

( ) NO

( ) PART (SPECIFY)



SHIP OR PLATFORM Shoyo	SCIENTIST IN CHARGE M. Shiozaki
INSTITUTION OR OPERATING AGENCY Hydrographic Department, Maritime Safety Agency (HD, MSA)	
EXPEDITION, PROJECT, AND/OR ORIGINATOR'S CRUISE NO. CSK	COUNTRY Japan

DATE OF CRUISE	
FROM: 5 DAY / 3 MONTH / 1973 YEAR	TO: 19 DAY / 3 MONTH / 1973 YEAR

PROGRAMS UNDERTAKEN	TOTAL NO. OF Δ STATIONS	Q	F D	TYPE OF FORMAT AVAILABLE	Q	QUERIES CONCERNING DATA SHOULD BE ADDRESSED TO:
<b>DESCRIPTIVE OCEANOGRAPHY</b>						
D 1 SERIAL STATIONS	32	a	a	PC,MT	a.	HD, MSA
D 2 STD					b.	
D 3 OXYGEN	32	a	a	PC,MT	c.	
D 4 PHOSPHATES					d.	
D 5 TOTAL-P	32	a	a	PC,MT	e.	
D 6 NITRATES					f.	
D 7 NITRITES						
D 8 TRACE ELEMENTS						
D 9 pH	32	a	a	PC,MT		
D 10 ALKALINITY						
D 11 SILICATES	32	a	a	PC,MT		
D 12 RADIOACTIVITY	2	a	b	RDC	F D	<b>FINAL DISPOSITION OF DATA</b> (NATIONAL REPOSITORY, INSTITUTION, REGIONAL CENTER, OR WORLD DATA CENTERS)
D 13 ISOTOPE CHEMISTRY					a.	JODC
D 14 OTHER DISSOLVED GASES					b.	HD, MSA
D 15 BATHYTHERMOGRAPH (XBT) (NO. OF DROPS)	25	a	b	RDS	c.	
D 16 BATHYTHERMOGRAPH (MECH.) (NO. OF DROPS)	66	a	a	PUB	d.	
D 17 TRANSPARENCY (NO. OF OBS.)	1	a	a	PC,MT	e.	
D 18 SOUND VELOCIMETER DATA					f.	
D 19 INSTRUMENTED WAVE RECORDING (✓)						
D 20 TIDES (✓)						
D 21 SEA (✓) ✓ a a				PC,MT		
D 22 SWELL (✓) ✓ a a				PUB		
D 23 ICE (✓)						
D 24 BOTTOM TEMPERATURE (≤ 10M FROM BOTTOM)						
D 25 SEA SURFACE TEMPERATURE (✓) ✓ a b				RDS		
<b>CURRENT MEASUREMENTS</b>						
C 1 CURRENT METERS						
C 1 CONTINUOUS TIME SERIES (NO. OF DAYS)						
C 2 GEK (✓) 108 a a				PC,MT		
C 3 DROGUES (✓)						
C 4 SWALLOW FLOATS (✓)						
C 5 SURFACE DRIFTERS (NO. RELEASED)						
C 6 BOTTOM DRIFTERS (NO. RELEASED)						
<b>METEOROLOGY</b>						
M 1 UPPER AIR OBSERVATIONS (✓)						
M 2 SURFACE METEOROLOGICAL OBS. (✓) ✓ a b				RDS		
M 3 INCIDENT RADIATION (✓)						
<b>GEOLOGY AND GEOPHYSICS</b>						
G 1 DREDGE AND GRAB SAMPLES (NO. OF SAMPLES)						
G 2 CORES (NO. CORES)						
G 3 SEISMIC—REFLECTION PROFILES (Km)						
G 4 SEISMIC—REFRACTION PROFILES						
G 5 HEAT FLOW						
G 6 GRAVITY (Km)						
G 7 MAGNETIC (Km)						
G 8 CHEMICAL ANALYSIS OF SEDIMENT (✓)						
G 9 PHYSICAL ANALYSIS OF SEDIMENT (✓)						
G 10 ENGINEERING PROPERTIES OF SEA BOTTOM						
G 11 BOTTOM PHOTOGRAPHY (NO. OF CAMERA STATIONS)						

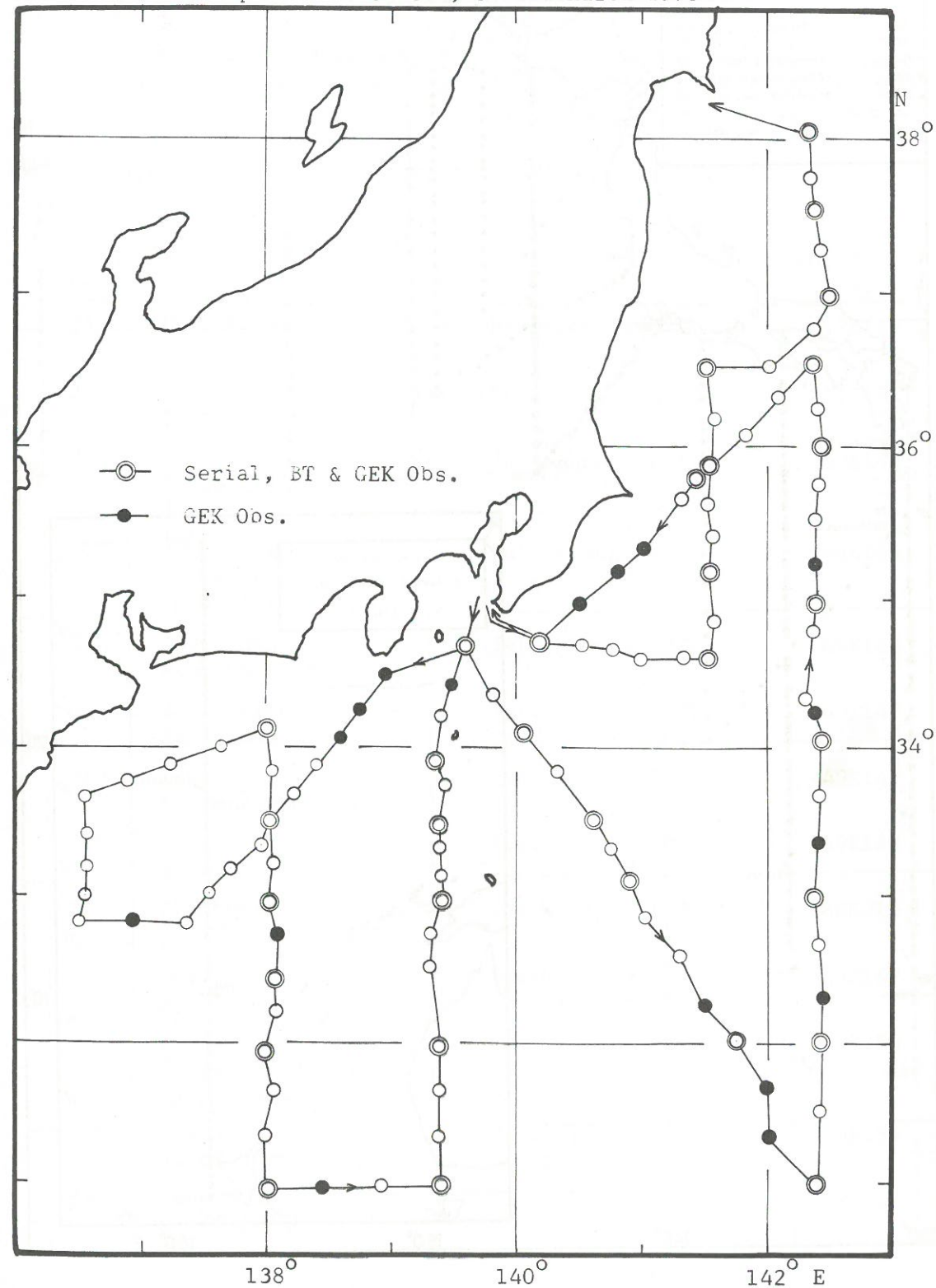
Δ ENTER NUMBER OF STATIONS, EXCEPT WHEN ANNOTATED OTHERWISE FOLLOWING PARAMETER. WHEN OBSERVED PARAMETER IS FOLLOWED BY A CHECK MARK (✓) DO NOT ENTER ANY NUMBER BUT ENTER THE CHECK MARK INSTEAD.

TOTAL KILOMETERS STEAMED:

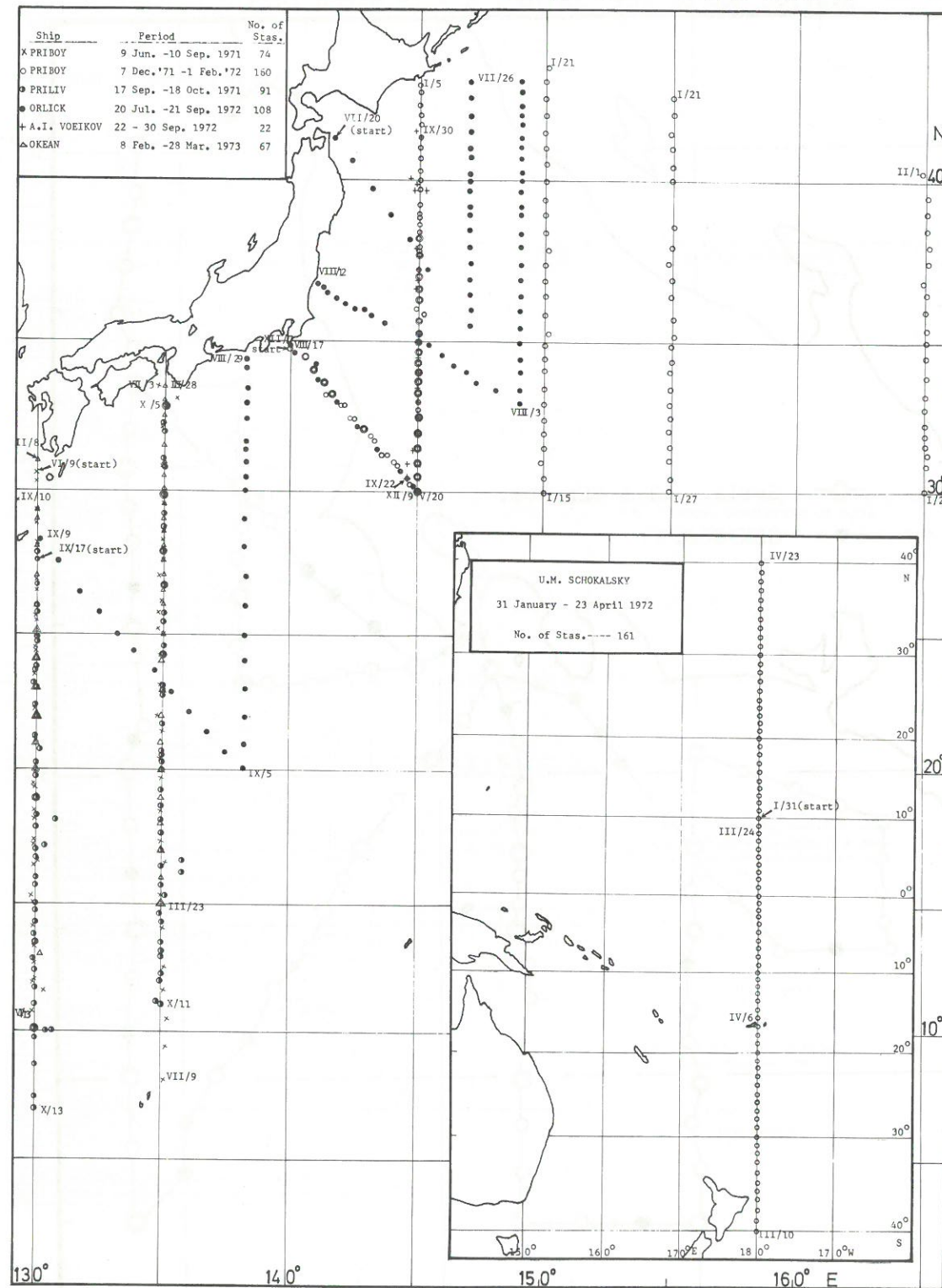
DATA REPORTED ON THIS FORM ARE DECLARED NATIONAL PROGRAM (DNP):

- (✓) YES  
( ) NO  
( ) PART (SPECIFY)

Station Map of the "SHOYO", 5 - 19 March 1973



IV. USSR CSK CRUISES RECEIVED during the period 30 Apr.'73 - 31 May '74



V. PUBLICATIONS

The following the "CSK Atlas" and 21 volumes of the "Data Report of CSK" series were published by KDC (JODC) from February to May 1974.

CSK Atlas, Vol. 6, April 1968 - March 1969. March 1974

No.	Ship & Area	Period	KDC Ref. No.
253	Umitaka Maru South China Sea	November 1969	49K169
259	Kaiyo Maru South China Sea	Oct. - Nov. 1970	49K166
304	Kofu Maru E. of Japan & Okhotsk Sea	Jul. - Aug. 1971	49K144
305	Shumpu Maru S. of Japan, Bungo Chan. & Osaka Wan	Jul. - Aug. 1971	49K145
306	Chofu Maru East China Sea	Jul. - Aug. 1971	49K146
307	Seifu Maru Japan Sea	Jul. - Aug. 1971	49K147
310	Takuyo E. of Japan	Aug. - Sep. 1971	49K142
311	Kaiyo S. of Japan	Aug. - Sep. 1971	49K148
312	Chanthara Gulf of Thailand	Jul. - Aug. 1971	86K015
313	Meiyo S. of Japan	November 1971	49K167
322	Ryofu Maru W. of North Pacific & S. of Japan	Jan. - Mar. 1972	49K154
326	Takuyo S. of Japan	March 1972	49K150
328	Takuyo S. of Japan	May 1972	49K151

No.	Ship & Area	Period	KDC Ref. No.
331	Ryofu Maru W. of North Pacific & S. of Japan	Jun. - Jul. 1972	49K158
332	Suro No. 3 S. of Korea	May 1972	24K044
333	Suro No. 3 S. of Korea	May 1972	24K045
336	Takuyo S. & E. of Japan	Aug. - Sep. 1972	49K152
340	Seifu Maru Japan Sea	Jul. - Aug. 1972	49K159
341	Suro No. 3 S. of Korea	August 1972	24K046
342	Suro No. 3 S. of Korea	September 1972	24K047
344	Takuyo S. of Japan	Oct. - Nov. 1972	49K153

\* \* \* \* \*

VI. DATA RECEIVED

Catalogue of Data Received by KDC(JODC), 28 February - 30 June 1974

Date Received Mo. Day / Yr.	KDC Ref. No.	Ship Code*	Agency	Period	Area	No. of Stas.	Serial Data	Bts	Currents	Bottom Topography	Biological
<u>JAPAN</u>											
04.15/74	49K177	KO	HMOJMA	07.18-08.17,1973	E. of Japan	51	T S O P	131	135	D	Phaeo. Chl.a
05.13/74	49K178	SH	KMOJMA	07.12-08.07,1973	S. of Japan & Kii Channel	65	T S O P TP N2 N3 NH	120	88	D	Phaeo. Chl.a
05.13/74	49K179	CH	NMOJMA	01.28-02.28,1974	E. China Sea	55	T S O P TP N2 N3 NH	90	68	D	Phaeo. Chl.a
06.07/74	49K180	RY	MDJMA	01.14-03.03,1974	E. China Sea	51	T S O P TP N3	PH		D	
06.12/74	49K181	SI	NMOJMA	02.02-03.09,1974	Japan Sea	36	T S O P TP N2 N3 NH	131	131	D	Phaeo. Chl.a
<u>USSR</u>											
04.15/74	90K043	PI		06.09-09.10,1971	W. of Norpac	74	T S O P AL N2				Si pH
04.15/74	90K044	PR		09.17-10.18,1971	W. of Norpac	91	T S O P AL N2				Si pH
04.15/74	90K045	SH		01.31-04.23,1972	Pacific Ocean	161	T S O P AL N2				Si pH
05.23/74	90K046	VO		09.22-09.30,1972	E. of Japan	22	T S O P AL N2				Si pH
05.23/74	90K047	OK		02.08-03.28,1973	W. of Norpac	67	T S O P AL N2				Si pH
<u>SINGAPORE</u>											
02.07/74	SIK022	CH	SEAFDEC	01.05-01.15,1974	Andaman Sea	23	T				F
<u>JAPAN</u>											
<u>USSR</u>											
Ship Code*	KO: Kofu Maru	PI: Priboy	CH: Changi								
	SH: Shumpu Maru	PR: Priliv									
	CH: Chofu Maru	SH: U.M. Schokalsky									
	RY: Ryofu Maru	VO: A.I. Voeikov									
	SI: Seifu Maru	OK: Okean									
<u>SINGAPORE</u>											