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# *CSK NEWSLETTER*



**JAPAN OCEANOGRAPHIC DATA CENTER**

*Hydrographic Department, Maritime Safety Agency*

*Tokyo, Japan*

'79

CSK NEWSLETTER



JAPAN OCEANOGRAPHIC DATA CENTER  
Hydrographic Department, Ministry of Defense  
Tokyo, Japan

C O N T E N T S

- I. Report on the Activities of the Kuroshio Data Center for the CSK at the Ninth Session of the Working Committee on International Oceanographic Data Exchange of the IOC, New York, 15-19 January 1979
  
- II. Cruise Reports (ROSCOP)
  - Japan
    - Ryofu Maru (14 January - 21 February 1977)
    - Kofu Maru ( 8 February - 14 March 1977)
    - Shumpu Maru (29 January - 26 February 1977)
    - Chofu Maru (21 January - 20 February 1977)
    - Seifu Maru ( 3 February - 15 March 1977)
    - Shoyo ( 9 - 23 March 1977)
    - Takuyo (10 - 30 May 1977)
    - Ryofu Maru ( 4 June - 2 August 1977)
    - Kofu Maru (20 July - 15 August 1977)
    - Shumpu Maru ( 1 - 28 July 1977)
    - Chofu Maru (12 July - 13 August 1977)
    - Seifu Maru ( 8 July - 12 August 1977)
    - Takuyo ( 8 - 28 September 1977)
    - Shoyo ( 8 - 28 November 1977)
  
- III. Summary of Data Received and Publications, as of 31 Dec. 1978
  
- IV. Number of Cruise Reports, Serial Oceanographic Stations and Cruises Received
  
- V. Publications
  - Data Report of CSK, Nos. 402, 404, 405, 407, 412, 414, 416, 421, 432, 436, 437, 439, 440, 441, 442, 443, 444, 445
  
- VI. Data Received
  - Japan ( Takuyo - 2 crs., Shumpu Maru, Kofu Maru - 3 crs., Oshoro Maru, Shoyo)
  - U.S.S.R. ( Pelamida - 2 crs.)

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I. REPORT ON THE ACTIVITIES OF THE KUROSHIO DATA CENTER FOR THE CSK AT THE NINTH SESSION OF THE WORKING COMMITTEE ON INTERNATIONAL OCEANOGRAPHIC DATA EXCHANGE OF THE IOC, New York, 15-19 January 1979

Report on the activities of the Kuroshio Data Center for the CSK

submitted by

Hideo Nitani

Since 1965 in which CSK started, the Japan Oceanographic Data Center (JODC) has acted as the Kuroshio Data Center (KDC). Its activity following the submission of our KDC report to the eighth session of IODE and its total activity from 1965 to April 1978 can be summarized as follows:

Data Received	Apr. 1975-Apr. 1978	Apr. 1965-Apr. 1978
Number of CSK Cruises	60	485
Number of Oceanographic Stations	3,031	19,337
Publication (Volumes)		
CSK Newsletter	6	52
Data Report of CSK	83	411
CSK Atlas	1	7

The 11th meeting of CSK/ICG (30 June-4 July 1977, Noumea, New Caledonia) recommended that field work under the CSK Programme should be terminated at the end of 1977, while the full CSK project should end completely by the time of the fourth CSK Symposium which would be held in late 1978 or early 1979. After the termination of CSK, the establishment within the IOC framework of a Western Pacific and Adjacent Waters Program (WESTPAC) concentrating on physical/chemical study relating to long-term variation of oceanic circulation, marine biological study and geological/geophysical study focused on the plate tectonics was recommended. It was also recommended that KDC should continue its activities for two or three years after the termination of CSK to complete the necessary publications such as Data Report of CSK, Atlas and Guide to CSK Data etc. and to investigate further processing of CSK Data. These recommendations were approved at the 10th IOC Assembly. In accordance with these recommendations, JODC will act as the KDC for several years as before.

JODC has prepared the series of the "Marine Environmental Atlas" containing the statistical results for several oceanographic elements such as temperature, salinity, oxygen, ot and dynamic depth anomaly in the various depths in the North Western Pacific including CSK region. The first volume, which included the mean, maximum, minimum and standard deviation of each element mentioned above, was published in December 1975 by the Japan Hydrographic Association, and the second volume containing the seasonal and monthly variation of each element in the depths shallower than 200 meters was published in March 1978. The third volume contains the statistics of oceanic currents observed with the Geomagnetic Electro-Kinetograph (GEK) in the sea adjacent to Japan, and will be issued by March 1979. These atlases may be very useful for the investigations of the Kuroshio and the Western Pacific.

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II. CRUISE REPORTS (ROSCOP)

ROSCOP (2nd edition)

OCEANOGRAPHY  
GENERAL CRUISE INVENTORY

A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 77054

A - GENERAL INFORMATION ON WORK PERFORMED

A01 Expedition/Project C S K, MAPMOPP Cruise No. or name 77-01	A91 Declared national prog.? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> PART Exchange restricted? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PART
A02 Ship or platform Ryofu Maru (JGZK) Platform type 01	A92 Co-operative programme? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Name C S K Co-ordinated internationally? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO By whom? K. Wadati
A03 Country Japan	A04 Organization MD, JMA
A05 Chief scientist(s) Hayato Iida	

A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS

Whom to query: a MD, JMA

Final disposition of data: A Marine Dept, Japan Meteorological Agency; 1-3-4 Ohte-machi, Chiyoda-ku, Tokyo 100, Japan

A07 Date: from: 1.4.10.11.7.7  
DAY MONTH YEAR  
to: 12.11.0.21.7.7

A08 General ocean areas  
NW Pacific & Philippine Sea

A09 Type(s) of marine zone(s)  
06, 07

A10 Geographic area Latitude Longitude

If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10				Index 1° x 1°				Discipline and type of measurements	Index 10 x 10				Index 1° x 1°			
	Oc	L	G	G	Oc	L	G	G		Oc	L	G	G	Oc	L	G	G
M, HS, HP, HC, P, D, B	1	3	1	3					M, HS, HP, HC, P, D, B	1	0	1	3				
M, HS, HP, HC, P, B	1	2	1	3					M, HS, HP, HC, P, D, B	3	0	1	3				
M, HS, HP, HC, P, B	1	1	1	3					M, HS, HP, HC, P, D, B	1	3	1	4				

M - METEOROLOGY

Number       Format				Number       Format			
M01 Upper air observations				M04 Ice observations			
M02 Incident radiation				M05 Occasional standard measurements			
M03 Air-sea interface studies				M06 Systematic standard measurements	X	a	A 1
				M90 Other measurements			

Remarks

H - HYDROGRAPHY

HS SURFACE				NEAR SEA FLOOR (< 10 m)			
Number	i	l	Format	Number	i	l	Format
H01 Continuous temperature recording	6000	miles	a A 3	H05 Continuous temperature recording			
H02 Continuous salinity recording	6000	miles	a A 3	H06 Continuous salinity recording			
H03 Discrete temperature measurements				H07 Discrete temperature measurements			
H04 Discrete salinity measurements				H08 Discrete salinity measurements			
HP PHYSICAL				HC CHEMICAL			
H09 Classical oceanographic stations	62	a	A 4	H21 Oxygen	62	a	A 4

H - HYDROGRAPHY (Continued)

				Number       Format			
H10 Vertical profiles (STD/CTD)				H22 Phosphates	62	a	A 4
H11 sub-surface measurements underway				H23 Total - P			
H12 Mechanical bathythermograph (no. of drops)	14	a	A 3	H24 Nitrates	11	a	A 4
H13 Bathythermograph-expendable (no. of drops)	88	a	A 3	H25 Nitrites	16	a	A 1
H14 Sound velocity stations				H26 Silicates			
H15 Acoustic stations				H27 Alkalinity			
H16 Transparency	29	a	A 4	H28 pH	11	a	A 4
H90 Other measurements (COD) (Ammonia)	11	a	A 1	H31 Radioactivity	10	a	A 1

Remarks

P - POLLUTION

				Number       Format			
P01 Suspended solids				P03 Petroleum residues	13	a	A 1
P02 Heavy metals	10	a	A 1	P11 Discoloured water (miles)	6000	a	A 1
				P90 Other measurements (Hydrocarbon)	19	a	A 1

Remarks

D - DYNAMICS

D01 Current meters (no. of stat.)				D07 Drift cards (no. released)			
D02 Current meters (average duration of measurement) (5min)	19	a	A 1	D08 Bottom drifters (no. released)			
D03 Currents measured from ship drift				D09 Tidal observations (duration)			
D04 GEK	26	a	A 1	D10 Sea and swell (no. of observations)			
D05 Drifters (number)				D90 Other			
D06 Swallow floats (number)							

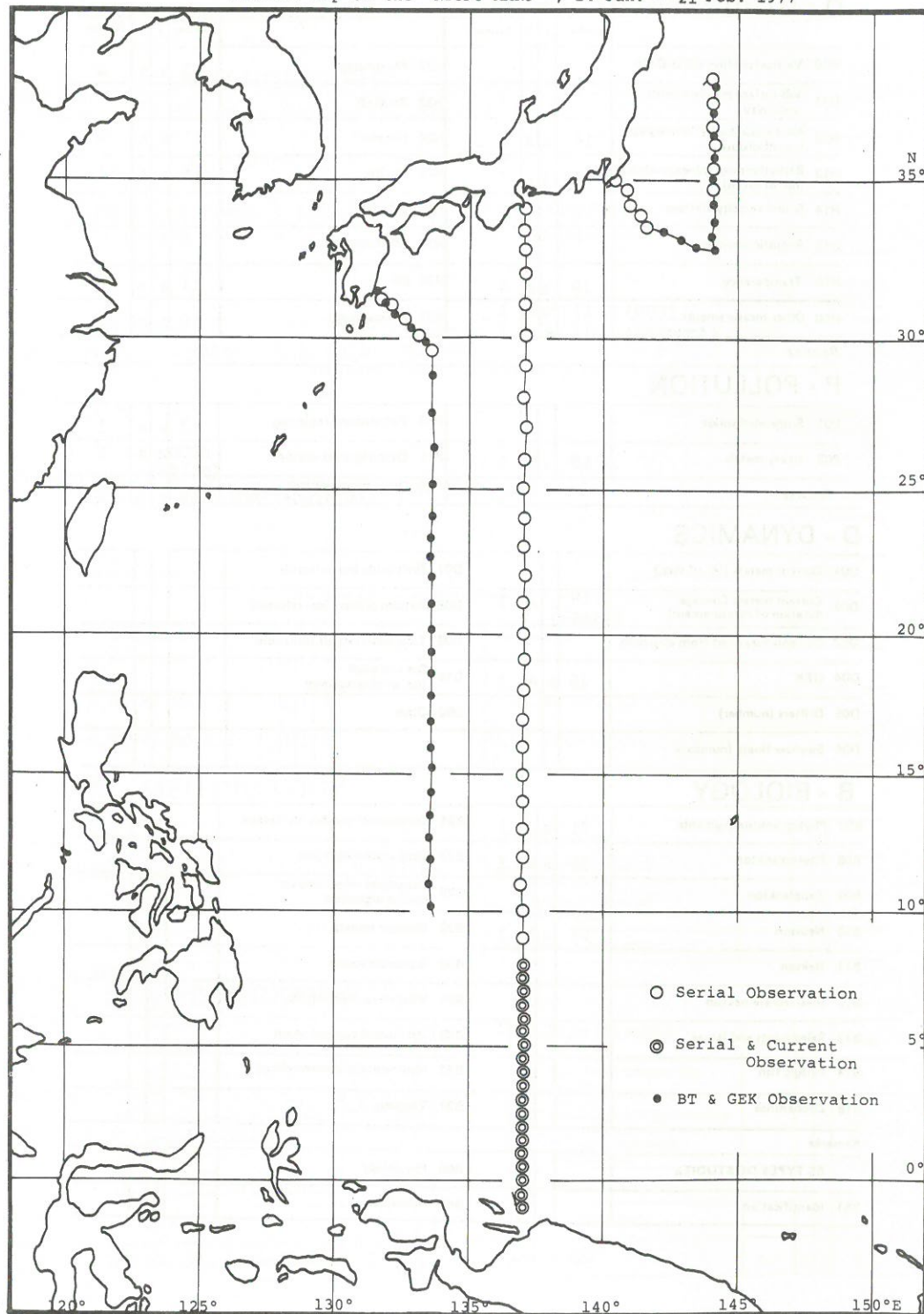
B - BIOLOGY

B02 Phytoplankton pigments	51	a	A 1	B21 Commercial benthic crustacean			
B08 Phytoplankton	51	a	A 1	B27 Deep scattering layers			
B09 Zooplankton				B28 Acoustical reflections on marine organisms			
B10 Neuston	51	a	A 1	B29 Biologic sounds			
B11 Nekton				B30 Bioluminescence			
B12 Invertebrate nekton				B31 Vitamin concentrations			
B13 Pelagic eggs and larvae				B32 Aminoacid concentration			
B14 Pelagic fish				B33 Hydrocarbon concentrations			
B18 Zoobenthos				B37 Taggings			

Remarks

BS TYPES OF STUDIES				Number       Format			
B51 Identification				B60 Physiology			
				B61 Behaviour			

Station Map of the "RYOFU MARU", 14 Jan. - 21 Feb. 1977



179

ROSCOP (2nd edition)

OCEANOGRAPHY  
GENERAL CRUISE INVENTORY

A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 77049

A - GENERAL INFORMATION ON WORK PERFORMED

A01 Expedition/Project C S K  
Cruise No. or name 77-02

A91 Declared national prog. ?  YES  NO  PART  
Exchange restricted?  YES  NO  PART

A02 Ship or platform Kofu Maru (8JNZ)  
Platform type 01

A92 Co-operative programme?  YES  NO Name C S K  
Co-ordinated internationally?  YES  NO By whom? K. Wadati

A03 Country Japan A04 Organization (HMO) Hakodate Mar. Observatory A05 Chief scientist(s) S. Kuronuma

A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS

Whom to query  
a HMO Final disposition of data A HMO; 181 Akagawadoricho, Hakodate  
b MD, JMA B MD, JMA; Otomachi, Chiyoda-ku, Tokyo  
c \_\_\_\_\_ C \_\_\_\_\_

A07 Date: from: 10.8.10.217.7 A08 General ocean areas NW Pacific  
DAY MONTH YEAR  
to: 1.4.10.317.7 A09 Type(s) of marine zone(s) 04, 06

A10 Geographic area Latitude \_\_\_\_\_ N/S Longitude \_\_\_\_\_ E/W  
If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10				Index 1° x 1°	Discipline and type of measurements	Index 10 x 10				Index 1° x 1°
	Oc	L	G	G			Oc	L	G	G	
M, HS, HP, HC, P, D, B	1	3	1	4							
M, HS, HP, HC, P, D, B	1	4	1	4							

M - METEOROLOGY

Number	I	I	Format	Number	I	I	Format
M01 Upper air observations				M04 Ice observations			
M02 Incident radiation				M05 Occasional standard measurements			
M03 Air-sea interface studies				M06 Systematic standard measurements	X	a	A 1
				M90 Other measurements			

Remarks

H - HYDROGRAPHY

HS SURFACE				NEAR SEA FLOOR (< 10 m)			
Number	I	I	Format	Number	I	I	Format
H01 Continuous temperature recording	X	a	A 3	H05 Continuous temperature recording			
H02 Continuous salinity recording	X	a	A 3	H06 Continuous salinity recording			
H03 Discrete temperature measurements				H07 Discrete temperature measurements			
H04 Discrete salinity measurements				H08 Discrete salinity measurements			
HP PHYSICAL				HC CHEMICAL			
H09 Classical oceanographic stations	23	a	A 1	H21 Oxygen	23	a	A 1

H - HYDROGRAPHY (Continued)

	Number	i	l	Format		Number	i	l	Format
H10 Vertical profiles (STD/CTD)					H22 Phosphates	23	a	A	1
H11 sub-surface measurements underway					H23 Total - P	3	a	A	1
H12 Mechanical bathythermograph (no. of drops)	84	a	A	1, 8	H24 Nitrates	3	a	A	1
H13 Bathythermograph-expendable (no. of drops)	2	a	A	1, 3	H25 Nitrites	3	a	A	1
H14 Sound velocity stations					H26 Silicates				
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency					H28 pH	6	a	A	1
H80 Other measurements					H31 Radioactivity				

Remarks

P - POLLUTION

P01 Suspended solids					P03 Petroleum residues	2	h	B	1
P02 Heavy metals	2	b	B	1	P08 Waste water : Nitrates				

Remarks

D - DYNAMICS

D01 Current meters (no. of stat.)					D07 Drift cards (no. released)				
D02 Current meters (average duration of measurement)					D08 Bottom drifters (no. released)				
D03 Currents measured from ship drift					D09 Tidal observations (duration)				
D04 GEK	85	a	A	1	D10 Sea and swell (no. of observations)				
D05 Drifters (number)					D90 Other				
D06 Swallow floats (number)									

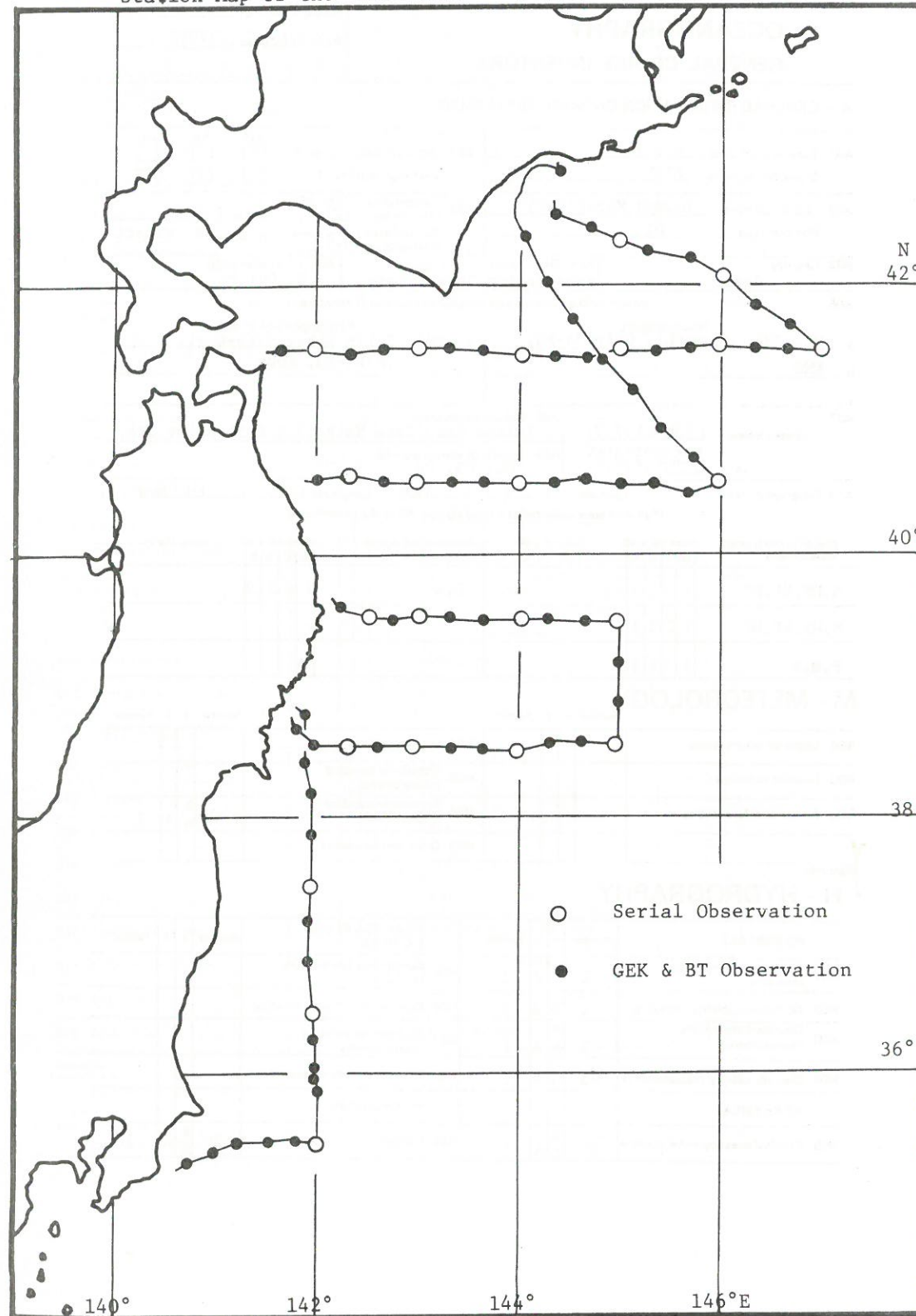
B - BIOLOGY

B02 Phytoplankton pigments	17	a	A	1	B21 Commercial benthic crustacean				
B08 Phytoplankton	5	a	A	1	B27 Deep scattering layers				
B09 Zooplankton	6	a	A	1	B28 Acoustical reflections on marine organisms				
B10 Neuston					B29 Biologic sounds				
B11 Nekton					B30 Bioluminescence				
B12 Invertebrate nekton					B31 Vitamin concentrations				
B13 Pelagic eggs and larvae					B32 Aminoacid concentration				
B14 Pelagic fish					B33 Hydrocarbon concentrations				
B18 Zoobenthos					B37 Taggings				

Remarks

BS TYPES OF STUDIES					B60 Physiology				
B51 Identification					B61 Behaviour				

Station Map of the "KOFU MARU" 8 Feb. - 14 Mar. 1977



○ Serial Observation  
● GEK & BT Observation

OCEANOGRAPHY  
GENERAL CRUISE INVENTORY

A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 77012

A - GENERAL INFORMATION ON WORK PERFORMED

A01 Expedition/Project <u>C S K</u> Cruise No. or name <u>7701</u>	A91 Declared national prog. ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> PART Exchange restricted ? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PART
A02 Ship or platform <u>Shumpu Maru(JFDG)</u> Platform type <u>01</u>	A92 Co-operative programme? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Name <u>C S K</u> Co-ordinated internationally? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO By whom? <u>K. Wadati</u>
A03 Country <u>Japan</u>	A04 Organization <u>(KMO) Kobe Marine Observatory</u>
A05 Chief scientist(s) <u>K. Onishi</u>	

A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS

Whom to query a <u>MD, JMA; Otemachi, Chiyoda-ku,</u> Tokyo	Final disposition of data A <u>KMO; 7-178 Nakayamate-Dori,</u> Ikuta-Ku, Kobe
b <u>KMO</u>	
c	

A07 Date: from: <u>2,9,1977</u> DAY MONTH YEAR to: <u>2,6,1977</u>	A08 General ocean areas <u>Inland Sea (Seto Naikai) &amp; Philippine Sea</u>
	A09 Type(s) of marine zone(s) <u>04, 05, 06</u>

A10 Geographic area Latitude            N/S Longitude            E/W  
If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10				Index 1° x 1°	Discipline and type of measurements	Index 10 x 10				Index 1° x 1°
	Oc	L	G	G			Oc	L	G	G	
M, HS, HP, HC	1	3	1	3		D, B	1	2	1	3	
M, HS, HP, HC	1	2	1	3							
P, D, B.	1	3	1	3							

M - METEOROLOGY

Number	i	l	Format	Number	i	l	Format
M01 Upper air observations				M04 Ice observations			
M02 Incident radiation				M05 Occasional standard measurements			
M03 Air-sea interface studies				M06 Systematic standard measurements	99	a	A 1
				M90 Other measurements			

Remarks

H - HYDROGRAPHY

HS SURFACE				NEAR SEA FLOOR (< 10 m)			
Number	i	l	Format	Number	i	l	Format
H01 Continuous temperature recording	X	b	A 3	H05 Continuous temperature recording			
H02 Continuous salinity recording	X	b	A 3	H06 Continuous salinity recording			
H03 Discrete temperature measurements	83	a	A 1	H07 Discrete temperature measurements			
H04 Discrete salinity measurements	83	a	A 1	H08 Discrete salinity measurements			
HP PHYSICAL				HC CHEMICAL			
H09 Classical oceanographic stations	30	a	A 1	H21 Oxygen	30	a	A 1

H - HYDROGRAPHY (Continued)

Number	i	l	Format	Number	i	l	Format
H10 Vertical profiles (STD/CTD)	8	b	A 3	H22 Phosphates	27	a	A 1
H11 sub-surface measurements underway				H23 Total - P	4	b	A 1
H12 Mechanical bathythermograph (no. of drops)	67	a	A 1, 8	H24 Nitrates	4	a	A 1
H13 Bathythermograph-expendable (no. of drops)	16	a	A 1, 3	H25 Nitrites	32	a	A 1
H14 Sound velocity stations				H26 Silicates			
H15 Acoustic stations				H27 Alkalinity			
H16 Transparency	14	a	A 1	H28 pH	14	a	A 1
H80 Other measurements				H31 Radioactivity			

Remarks

P - POLLUTION

Number	i	l	Format	Number	i	l	Format
P01 Suspended solids				P03 Petroleum residues	2	a	A 1
P02 Heavy metals	4	a	A 1	P08 Waste water : Nitrates			

Remarks

D - DYNAMICS

Number	i	l	Format	Number	i	l	Format
D01 Current meters (no. of stat.)				D07 Drift cards (no. released)			
D02 Current meters (average duration of measurement)				D08 Bottom drifters (no. released)			
D03 Currents measured from ship drift				D09 Tidal observations (duration)			
D04 GEK	78	a	A 1, 3	D10 Sea and swell (no. of observations)			
D05 Drifters (number)				D90 Other			
D06 Swallow floats (number)							

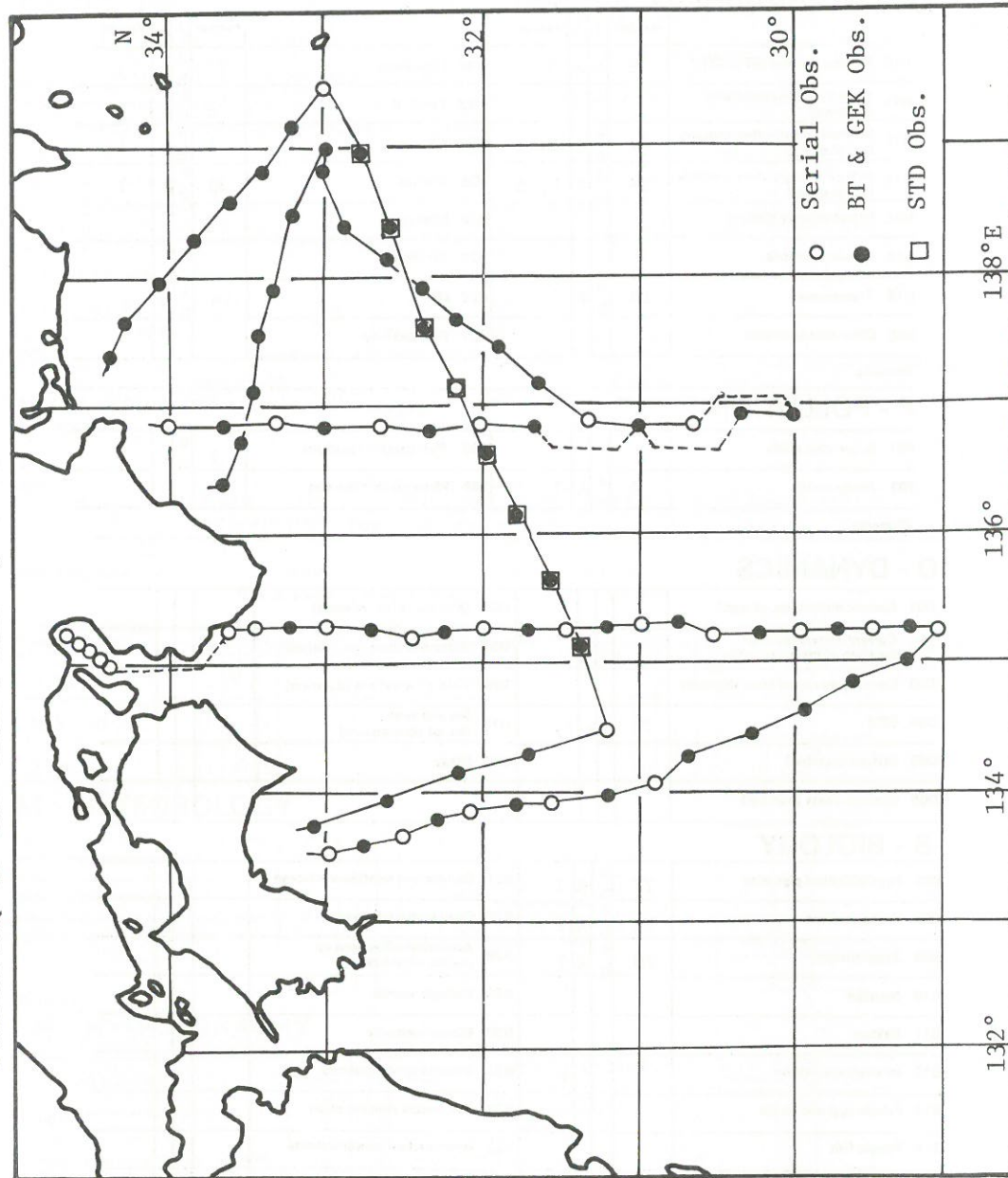
B - BIOLOGY

Number	i	l	Format	Number	i	l	Format
B02 Phytoplankton pigments	27	a	A 1	B21 Commercial benthic crustacean			
B08 Phytoplankton	16	a	A 1	B27 Deep scattering layers			
B09 Zooplankton	26	a	A 1	B28 Acoustical reflections on marine organisms			
B10 Neuston				B29 Biologic sounds			
B11 Nekton				B30 Bioluminescence			
B12 Invertebrate nekton				B31 Vitamin concentrations			
B13 Pelagic eggs and larvae				B32 Aminoacid concentration			
B14 Pelagic fish				B33 Hydrocarbon concentrations			
B18 Zoobenthos				B37 Taggings			

Remarks

BS TYPES OF STUDIES				BS TYPES OF STUDIES			
Number	i	l	Format	Number	i	l	Format
B51 Identification				B60 Physiology			
				B61 Behaviour			

Station Map of the "SHUMPU MARU", 29 Jan. - 26 Feb. 1977



ROSCOP (2nd edition)

OCEANOGRAPHY  
GENERAL CRUISE INVENTORY

A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 77045

A - GENERAL INFORMATION ON WORK PERFORMED

A01 Expedition/Project <u>C S K</u> Cruise No. or name <u>77-01</u>	A91 Declared national prog. ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> PART Exchange restricted ? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PART
A02 Ship or platform <u>Chofu Maru (JPOX)</u> Platform type <u>01</u>	A92 Co-operative programme ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Co-ordinated internationally? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Name <u>C S K</u> By whom? <u>K. Wadati</u>
A03 Country <u>Japan</u>	A04 Organization <u>(NMO) Nagasaki Mar. Observatory</u> A05 Chief scientist(s) <u>Y. Hanzawa</u>

A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS

Whom to query  
a NMO  
b MD, JMA  
c \_\_\_\_\_

Final disposition of data  
A NMO; 11-51 Minamiyamate-cho, Nagasaki  
B MD, JMA; Otemachi, Chiyoda-ku, Tokyo  
C \_\_\_\_\_

A07 Date: from: 2, 1, 0, 1, 7, 7  
DAY MONTH YEAR  
to: 2, 0, 0, 2, 7, 7  
DAY MONTH YEAR

A08 General ocean areas East China Sea (Tung Hai)

A09 Type(s) of marine zone(s) 07

A10 Geographic area Latitude \_\_\_\_\_ N/S Longitude \_\_\_\_\_ E/W  
If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10				Index 1° x 1°				Discipline and type of measurements	Index 10 x 10				Index 1° x 1°			
	Oc	L	G	G						Oc	L	G	G				
M, H, D, B, P	1	2	1	2													
M, H, D	1	3	1	2													

M - METEOROLOGY

	Number	I	I	Format		Number	I	I	Format
M01 Upper air observations					M04 Ice observations				
M02 Incident radiation					M05 Occasional standard measurements				
M03 Air-sea interface studies					M06 Systematic standard measurements	108	a	A	1
					M90 Other measurements				

Remarks

H - HYDROGRAPHY

HS SURFACE				NEAR SEA FLOOR (< 10 m)					
	Number	I	I	Format		Number	I	I	Format
H01 Continuous temperature recording	X	a	A	3	H05 Continuous temperature recording				
H02 Continuous salinity recording	X	a	A	3	H06 Continuous salinity recording				
H03 Discrete temperature measurements					H07 Discrete temperature measurements	30	a	A	1
H04 Discrete salinity measurements					H08 Discrete salinity measurements	30	a	A	1
HP PHYSICAL					HC CHEMICAL				
H09 Classical oceanographic stations	55	a	A	1	H21 Oxygen	55	a	A	1



## H - HYDROGRAPHY (Continued)

	Number	i	l	Format		Number	i	l	Format
H10 Vertical profiles (STD/CTD)					H22 Phosphates	9	a	A	1
H11 sub-surface measurements underway					H23 Total - P	3	a	A	1
H12 Mechanical bathythermograph (no. of drops)	93	a	A	8	H24 Nitrates	3	a	A	1
H13 Bathythermograph-expendable (no. of drops)	8	a	A	3	H25 Nitrites	3	a	A	1
H14 Sound velocity stations					H26 Silicates				
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency	22	a	A	1	H28 pH	3	a	A	1
H80 Other measurements					H90 Other measurements (COD)	3	a	A	1
					(NH <sub>3</sub> -N)	3	a	A	1

Remarks

## P - POLLUTION

P01 Suspended solids					P03 Petroleum residues	2	b	B	1
P02 Heavy metals	2	b	B	1	P08 Waste water : Nitrates				

Remarks

## D - DYNAMICS

D01 Current meters (no. of stat.)					D07 Drift cards (no. released)				
D02 Current meters (average duration of measurement)					D08 Bottom drifters (no. released)				
D03 Currents measured from ship drift					D09 Tidal observations (Duration)				
D04 GEK	59	a	A	1	D10 Sea and swell (no. of observations)				
D05 Drifters (number)					D90 Other				
D06 Swallow floats (number)									

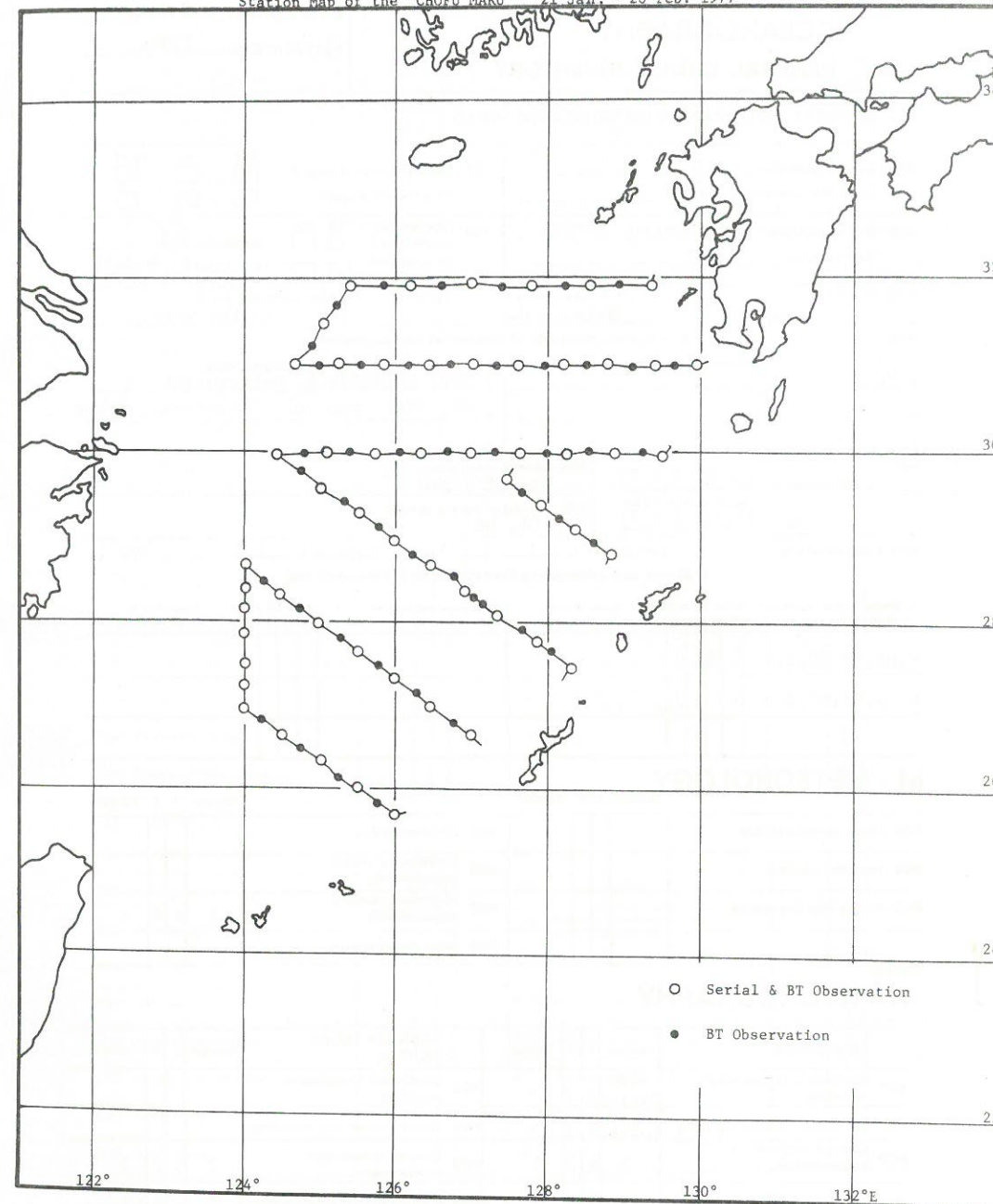
## B - BIOLOGY

B02 Phytoplankton pigments	9	a	A	1	B21 Commercial benthic crustacean				
B08 Phytoplankton	9	a	A	1	B27 Deep scattering layers				
B09 Zooplankton	9	a	A	1	B28 Acoustical reflections on marine organisms				
B10 Neuston					B29 Biologic sounds				
B11 Nekton					B30 Bioluminescence				
B12 Invertebrate nekton					B31 Vitamin concentrations				
B13 Pelagic eggs and larvae					B32 Aminoacid concentration				
B14 Pelagic fish					B33 Hydrocarbon concentrations				
B18 Zoobenthos					B37 Taggings				

Remarks

BS TYPES OF STUDIES					B60 Physiology				
B51 Identification					B61 Behaviour				

Station Map of the "CHOFU MARU" 21 Jan. - 20 Feb. 1977



ROSCOP (2nd edition)

OCEANOGRAPHY  
GENERAL CRUISE INVENTORY

A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 77044

A - GENERAL INFORMATION ON WORK PERFORMED

A01 Expedition/Project C S K Cruise No. or name 77-02	A91 Declared national prog.? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> PART Exchange restricted? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PART
A02 Ship or platform Seifu Maru (JPVB) Platform type 01	A82 Co-operative programme? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Name C S K Co-ordinated internationally? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO By whom? K. Wadati
A03 Country Japan	A04 Organization Maizuru Mar (MMO) A05 Chief scientist(s) I. Fujiwara

A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS

Whom to query a MMO	Final disposition of data A MMO; Shimofukui, Maizuru-shi
b	B MD, JMA; Otemachi, Chiyoda-ku, Tokyo
c	C
A07 Date: from: 0, 30 2, 7, 7 DAY MONTH YEAR to: 1, 5 0, 3, 7, 7	A08 General ocean areas Sea of Japan A09 Type(s) of marine zone(s) 04, 06

A10 Geographic area Latitude Longitude  
If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10  O C L G G	Index 1° x 1°	Discipline and type of measurements	Index 10 x 10  O C L G G	Index 1° x 1°
M, HS, HP, HC, D, B	1 3 1 3				
M, HS, HP, HC, D, B	1 4 1 3				

M - METEOROLOGY

Number	I	I	Format	Number	I	I	Format
M01 Upper air observations				M04 Ice observations			
M02 Incident radiation				M05 Occasional standard measurements			
M03 Air-sea interface studies				M06 Systematic standard measurements	X	a	A 1
				M09 Other measurements			

Remarks

H - HYDROGRAPHY

HS SURFACE	Number	I	I	Format	NEAR SEA FLOOR (< 10 m)	Number	I	I	Format
H01 Continuous temperature recording	3400	a	A	3	H05 Continuous temperature recording				
H02 Continuous salinity recording	3400	a	A	3	H06 Continuous salinity recording				
H03 Discrete temperature measurements	X	a	A	1	H07 Discrete temperature measurements	2	a	B	1
H04 Discrete salinity measurements	X	a	A	1	H08 Discrete salinity measurements	2	a	B	1
HP PHYSICAL					HC CHEMICAL				
H09 Classical oceanographic stations	32	a	A	1	H21 Oxygen	32	a	B	1

H - HYDROGRAPHY (Continued)

	Number	I	I	Format		Number	I	I	Format
H10 Vertical profiles (STD/CTD)					H22 Phosphates	9	a	B	1
H11 sub-surface measurements underway					H23 Total - P	3	a	B	1
H12 Mechanical bathythermograph (no. of drops)	77	a	A	8	H24 Nitrates	3	a	B	1
H13 Bathythermograph-expendable (no. of drops)	4	a	A	8	H25 Nitrites	5	a	B	1
H14 Sound velocity stations					H26 Silicates				
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency	12	a	A		H28 pH	3	a	B	1
H80 Other measurements					H31 Radioactivity				

Remarks

P - POLLUTION

P01 Suspended solids					P03 Petroleum residues	2	a	A	1
P02 Heavy metals	2	a	A	1	P08 Waste water : Nitrates				

Remarks

D - DYNAMICS

D01 Current meters (no. of stat.)					D07 Drift cards (no. released)				
D02 Current meters (average duration of measurement)					D08 Bottom drifters (no. released)				
D03 Currents measured from ship drift					D09 Tidal observations (duration)				
D04 GEK	78	a	A	1	D10 Sea and swell (no. of observations)				
D05 Drifters (number)					D90 Other				
D06 Swallow floats (number)									

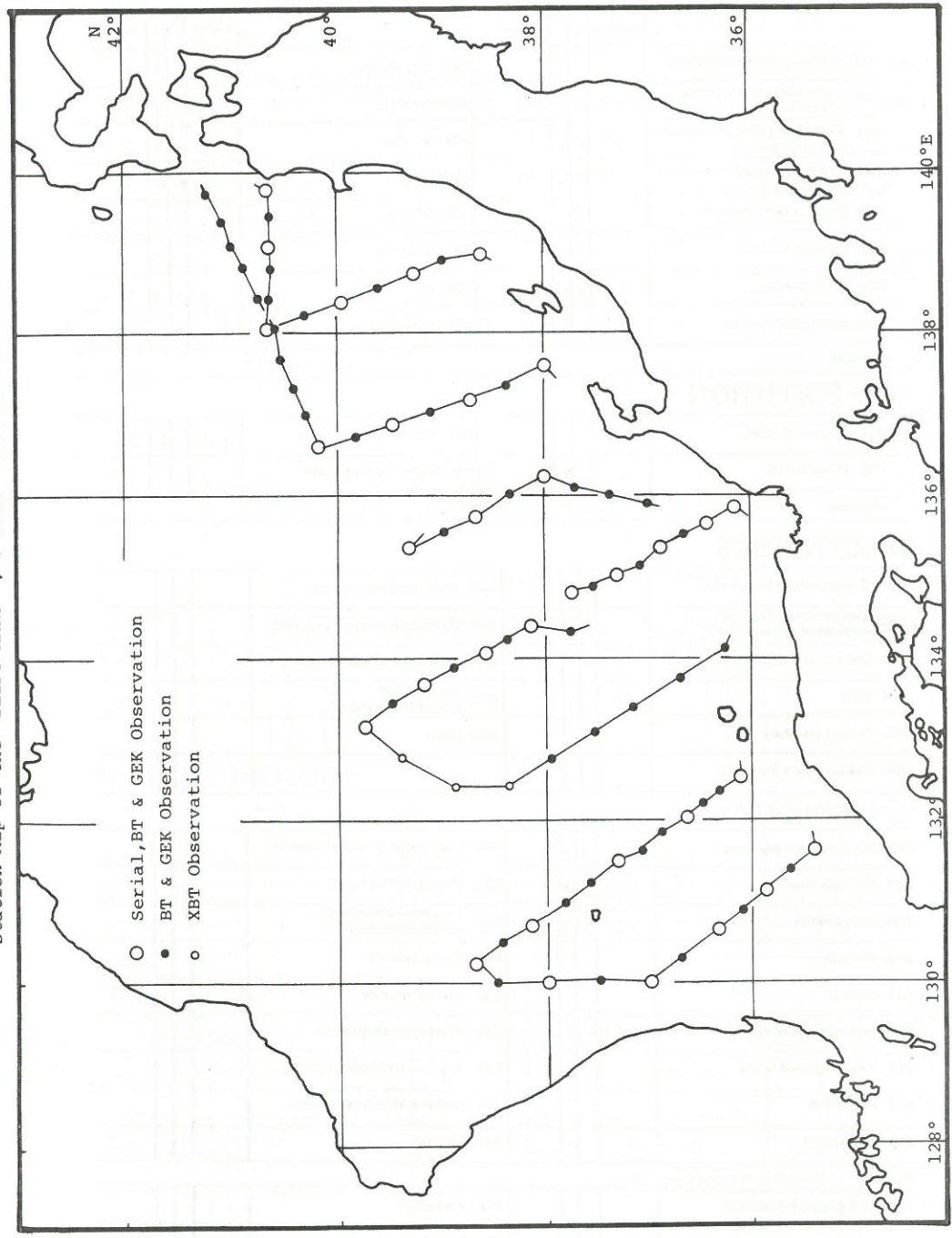
B - BIOLOGY

B02 Phytoplankton pigments	8	a	A	1	B21 Commercial benthic crustacean				
B08 Phytoplankton	8	a	B	1	B27 Deep scattering layers				
B09 Zooplankton	8	a	B	1	B28 Acoustical reflections on marine organisms				
B10 Neuston					B29 Biologic sounds				
B11 Nekton					B30 Bioluminescence				
B12 Invertebrate nekton					B31 Vitamin concentrations				
B13 Pelagic eggs and larvae					B32 Aminoacid concentration				
B14 Pelagic fish					B33 Hydrocarbon concentrations				
B18 Zoobenthos					B37 Taggings				

Remarks Norpac Standard Net

BS TYPES OF STUDIES					B60 Physiology				
B51 Identification					B61 Behaviour				

Station Map of the "SEIFU MARU", 3 Feb. - 15 Mar. 1977



179

ROSCOP (2nd edition) A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 77043

## OCEANOGRAPHY

### GENERAL CRUISE INVENTORY

**A - GENERAL INFORMATION ON WORK PERFORMED**

A01 Expedition/Project <u>C S K</u> Cruise No. or name _____	A91 Declared national prog. ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> PART Exchange restricted ? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PART
A02 Ship or platform <u>Shoyo (JCOD)</u> Platform type <u>01</u>	A92 Co-operative programme ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Co-ordinated internationally? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Name <u>C S K</u> By whom? <u>K. Wadati</u>
A03 Country <u>Japan</u>	A04 Organization <u>Hydrogr. Dept., MSA(HD, MSA)</u> A05 Chief scientist(s) <u>S. Nakabayashi</u>

**A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS**

Whom to query: HD, MSA Final disposition of data  
HD, MSA; 3-1 Tsukiji, 5 Chome, Chuo-ku, Tokyo 100

A07 Date: from: 10,9,10,317,7 A08 General ocean areas  
DAY MONTH YEAR Philippine Sea & NW Pacific  
 to: 2,3,0,3,7,7 A09 Type(s) of marine zone(s)  
06

A10 Geographic area Latitude \_\_\_\_\_ N/S Longitude \_\_\_\_\_ E/W  
*If all data were collected at a fixed station, fill in the co-ordinates*

Discipline and type of measurements	Index 10 x 10				Index 1° x 1°	Discipline and type of measurements	Index 10 x 10				Index 1° x 1°
	Oc	L	G	G			Oc	L	G	G	
HP, HC, P, D	1	3	1	3							
HP, HC, P, D	1	3	1	4							
HP, HC, P, D	1	2	1	3							

### M - METEOROLOGY

Number	i	i	Format	Number	i	i	Format
M01				M04			
M02				M05	X	aA	1
M03				M06			
				M09			

Remarks \_\_\_\_\_

### H - HYDROGRAPHY

HS SURFACE				NEAR SEA FLOOR (< 10 m)			
Number	i	i	Format	Number	i	i	Format
H01				H05			
H02				H06			
H03				H07			
H04				H08			
<b>HP PHYSICAL</b>				<b>HC CHEMICAL</b>			
H09	24	aA	1	H21	24	aA	1

179

H - HYDROGRAPHY (Continued)

	Number	i	l	Format		Number	i	l	Format
H10 Vertical profiles (STD/CTD)					H22 Phosphates				
H11 sub-surface measurements underway					H23 Total - P	24	a	A	1
H12 Mechanical bathythermograph (no. of drops)	27	a	A	1, 8	H24 Nitrates				
H13 Bathythermograph-expendable (no. of drops)	34	a	A	1, 2, 3	H25 Nitrites				
H14 Sound velocity stations					H26 Silicates	24	a	A	1
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency					H28 pH	24	a	A	1
H80 Other measurements					H31 Radioactivity	2	a	A	1

Remarks

P - POLLUTION

P01 Suspended solids					P03 Petroleum residues	5	a	A	1
P02 Heavy metals	6	a	A	1	P08 Waste water : Nitrates				

Remarks

D - DYNAMICS

D01 Current meters (no. of stat.)					D07 Drift cards (no. released)				
D02 Current meters (average duration of measurement)					D08 Bottom drifters (no. released)				
D03 Currents measured from ship drift					D09 Tidal observations (duration)				
D04 GEK	63	a	A	1, 2	D10 Sea and swell (no. of observations)				
D05 Drifters (number)					D90 Other				
D06 Swallow floats (number)									

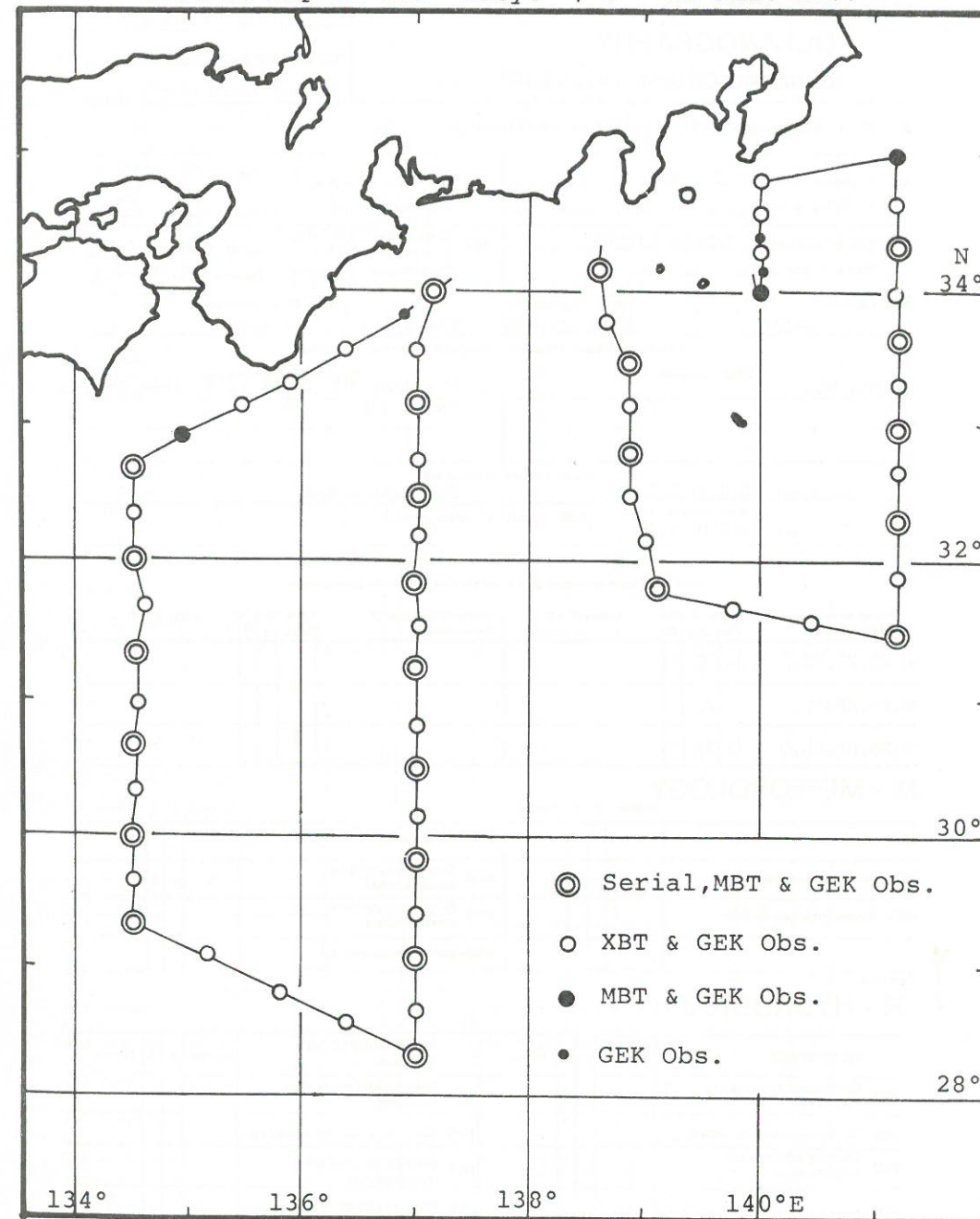
B - BIOLOGY

B02 Phytoplankton pigments					B21 Commercial benthic crustacean				
B08 Phytoplankton					B27 Deep scattering layers				
B09 Zooplankton					B28 Acoustical reflections on marine organisms				
B10 Neuston					B29 Biologic sounds				
B11 Nekton					B30 Bioluminescence				
B12 Invertebrate nekton					B31 Vitamin concentrations				
B13 Pelagic eggs and larvae					B32 Aminoacid concentration				
B14 Pelagic fish					B33 Hydrocarbon concentrations				
B18 Zoobenthos					B37 Taggings				

Remarks

BS TYPES OF STUDIES					B60 Physiology				
B51 Identification					B61 Behaviour				

Station Map of the "Shoyo" , 9 - 23 Mar. 1977



ROSCOP (2nd edition)

OCEANOGRAPHY  
GENERAL CRUISE INVENTORY

A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 77143

A - GENERAL INFORMATION ON WORK PERFORMED

A01 Expedition/Project C S K Cruise No. or name 77-5	A91 Declared national prog.? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> PART Exchange restricted? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PART
A02 Ship or platform Takuyo (JDRP) Platform type 01	A92 Co-operative programme? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Co-ordinated internationally? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Name C S K By whom? K. Wadati
A03 Country Japan	A04 Organization Hydrogr. Dept., MSA(HD,MSA) A05 Chief scientist(s) A. Kosugi

A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS

Whom to query  
a HD, MSA  
b  
c  
Final disposition of data  
A HD, MSA; 3-1 Tsukiji, 5 Chome, Chuo-ku  
Tokyo 100

A07 Date: from: [1,0,10,5,17,7]  
DAY MONTH YEAR  
to: [3,0,10,5,17,7]

A08 General ocean areas  
Philippine Sea

A09 Type(s) of marine zone(s)  
06

A10 Geographic area Latitude Longitude

If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10				Discipline and type of measurements	Index 10 x 10			
	Qc	L	G	G		Qc	L	G	G
M, HS, HP, HC, D	1	3	1	4					
M, HS, HP, HC, D	1	2	1	3					
M, HS, HP, HC, D	1	3	1	3					

M - METEOROLOGY

Number	i	l	Format	Number	i	l	Format
M01 Upper air observations				M04 Ice observations			
M02 Incident radiation				M05 Occasional standard measurements	X	a	A 1
M03 Air-sea interface studies				M06 Systematic standard measurements			
				M90 Other measurements			

Remarks

H - HYDROGRAPHY

HS SURFACE	Number	i	l	Format	NEAR SEA FLOOR (< 10 m)	Number	i	l	Format
H01 Continuous temperature recording					H05 Continuous temperature recording				
H02 Continuous salinity recording					H06 Continuous salinity recording				
H03 Discrete temperature measurements	X	a	A	1	H07 Discrete temperature measurements				
H04 Discrete salinity measurements	30	a	A	1	H08 Discrete salinity measurements				
HP PHYSICAL					HC CHEMICAL				
H09 Classical oceanographic stations	30	a	A	1	H21 Oxygen	30	a	A	1

H - HYDROGRAPHY (Continued)

	Number	i	l	Format		Number	i	l	Format
H10 Vertical profiles (STD/CTD)					H22 Phosphates				
H11 sub-surface measurements underway					H23 Total - P				
H12 Mechanical bathythermograph (no. of drops)	11	a	A	1,8	H24 Nitrates				
H13 Bathythermograph-expendable (no. of drops)	56	a	A	1,2,3	H25 Nitrites				
H14 Sound velocity stations					H26 Silicates	30	a	A	1
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency					H28 pH	30	a	A	1
H80 Other measurements					H31 Radioactivity				

Remarks

P - POLLUTION

P01 Suspended solids					P03 Petroleum residues				
P02 Heavy metals					P08 Waste water : Nitrates				

Remarks

D - DYNAMICS

D01 Current meters (no. of stat.)					D07 Drift cards (no. released)				
D02 Current meters (average duration of measurement)					D08 Bottom drifters (no. released)				
D03 Currents measured from ship drift					D09 Tidal observations (duration)				
D04 GEK	108	a	A	1,2	D10 Sea and swell (no. of observations)				
D05 Drifters (number)					D90 Other				
D06 Swallow floats (number)									

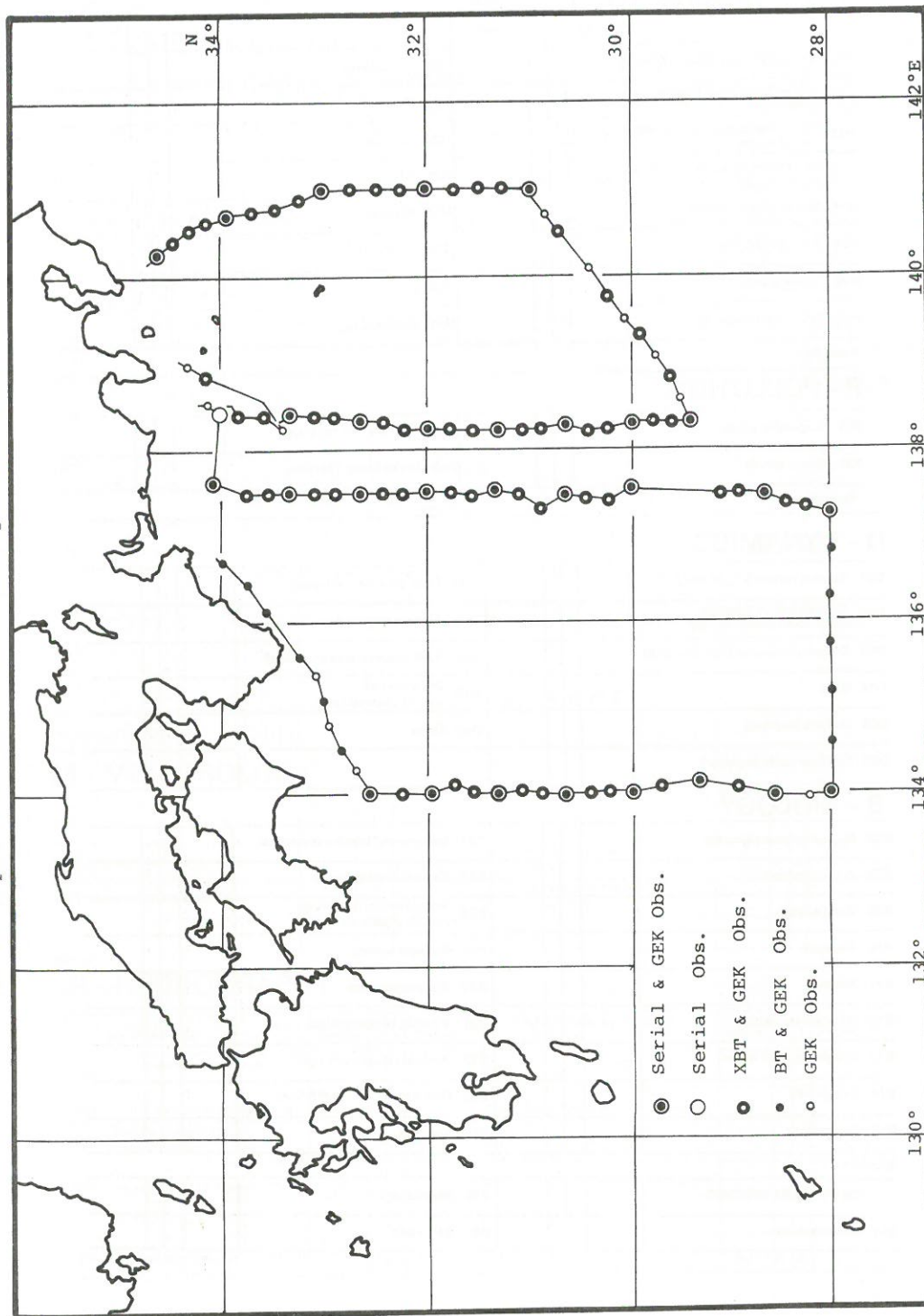
B - BIOLOGY

B02 Phytoplankton pigments					B21 Commercial benthic crustacean				
B08 Phytoplankton					B27 Deep scattering layers				
B09 Zooplankton					B28 Acoustical reflections on marine organisms				
B10 Neuston					B29 Biologic sounds				
B11 Nekton					B30 Bioluminescence				
B12 Invertebrate nekton					B31 Vitamin concentrations				
B13 Pelagic eggs and larvae					B32 Aminoacid concentration				
B14 Pelagic fish					B33 Hydrocarbon concentrations				
B18 Zoobenthos					B37 Taggings				

Remarks

BS TYPES OF STUDIES		Number	i	l	Format
B51 Identification					
B60 Physiology					
B61 Behaviour					

Station Map of the "TAKUYO" 10 - 30 May 1977



179

ROSCOP (2nd edition)

## OCEANOGRAPHY GENERAL CRUISE INVENTORY

A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 77174

### A - GENERAL INFORMATION ON WORK PERFORMED

A01 Expedition/Project <u>C S K, MAPMOPP</u> Cruise No. or name <u>77-06</u>		A91 Declared national prog. ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> PART Exchange restricted? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PART	
A02 Ship or platform <u>Ryofu Maru (JGZK)</u> Platform type <u>01</u>		A92 Co-operative programme? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Co-ordinated internationally? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Name <u>C S K</u> By whom? <u>K. Wadati</u>	
A03 Country <u>Japan</u>		A04 Organization <u>Marine Dept., JMA(MD, JMA)</u>	
A05 Chief scientist(s) <u>Hayato Iida</u>			
A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS			
a MD, JMA Whom to query		Final disposition of data	
b		A MD, JMA; 1-3-4 Ohote-Machi, Chiyoda-ku	
c		Tokyo 100	
A07 Date: from: <u>0,4,0,6,17,7</u> to: <u>0,2,10,8,7,7</u>		A08 General ocean areas <u>NW Pacific &amp; Philippine Sea</u>	
		A09 Type(s) of marine zone(s) <u>06, 07</u>	

A10 Geographic area Latitude 30°N Longitude 130°E  
If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10				Index 1° x 1°	Discipline and type of measurements	Index 10 x 10				Index 1° x 1°
	Oc	L	G	G			Oc	L	G	G	
M, HS, HP, HC, P, D, B	1	3	1	5		M, H	3	0	1	4	
M, HS, HP, HC, P, B	1	2	1	5		M, HS, HP, HC, P, D, B	3	0	1	3	
M, HS, HP, HC, P, B	1	1	1	5		M, HS, HP, HC, P, D, B	1	0	1	3	
M, HS, HP, HC, P, B	1	1	0	5		M, HS, HP, HC, P, B	1	1	1	3	
M, HS, HP, HC, P, B, D	3	0	1	5		M, HS	1	1	1	2	
M, HS, HP, HC, P, B	3	1	1	5		M, HS, HP, HC, P, B	1	2	1	3	
						M, HS, HP, HC, P, D, B	1	3	1	3	

### M - METEOROLOGY

Number       Format				Number       Format			
M01 Upper air observations							
M02 Incident radiation				M04 Ice observations			
M03 Air-sea interface studies				M05 Occasional standard measurements			
				M06 Systematic standard measurements	X	a	A 1
				M09 Other measurements			

Remarks

### H - HYDROGRAPHY

HS SURFACE				NEAR SEA FLOOR (< 10 m)			
Number			Format	Number			Format
H01 Continuous temperature recording	8000	a	A 3	H05 Continuous temperature recording			
H02 Continuous salinity recording	8000	a	A 3	H06 Continuous salinity recording			
H03 Discrete temperature measurements				H07 Discrete temperature measurements			
H04 Discrete salinity measurements				H08 Discrete salinity measurements			
HP PHYSICAL				HC CHEMICAL			
H09 Classical oceanographic stations	107	a	A 4	H21 Oxygen	107	a	A 4

### H - HYDROGRAPHY (Continued)

	Number	i	l	Format		Number	i	l	Format
H10 Vertical profiles (STD/CTD)					H22 Phosphates	84	a	A	4
H11 sub-surface measurements underway					H23 Total - P				
H12 Mechanical bathythermograph (no. of drops)					H24 Nitrates	15	a	A	4
H13 Bathythermograph-expendable (no. of drops)	115	a	A	3	H25 Nitrites	20	a	A	1
H14 Sound velocity stations					H26 Silicates				
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency	56	a	A	4	H28 pH	20	a	A	4
H90 Other measurements (TOC)	20	a	A	1	H30 Trace elements	19	a	A	1
(Ammonia)	20	a	A	1					

Remarks

### P - POLLUTION

P01 Suspended solids					P03 Petroleum residues	44	a	A	1
P02 Heavy metals	19	a	A	1	P90 Other measurements (Petrol, Hydrocarbon, Oil Slicks & other floating pollutants)	8000	a	A	1

Remarks

### D - DYNAMICS

D01 Current meters (no. of stat.)	28 (5 min)	a	A	1	D07 Drift cards (no. released)				
D02 Current meters (average duration of measurement)					D08 Bottom drifters (no. released)				
D03 Currents measured from ship drift					D09 Tidal observations (duration)				
D04 GEK	13	a	A	1	D10 Sea and swell (no. of observations)				
D05 Drifters (number)					D90 Other				
D06 Swallow floats (number)									

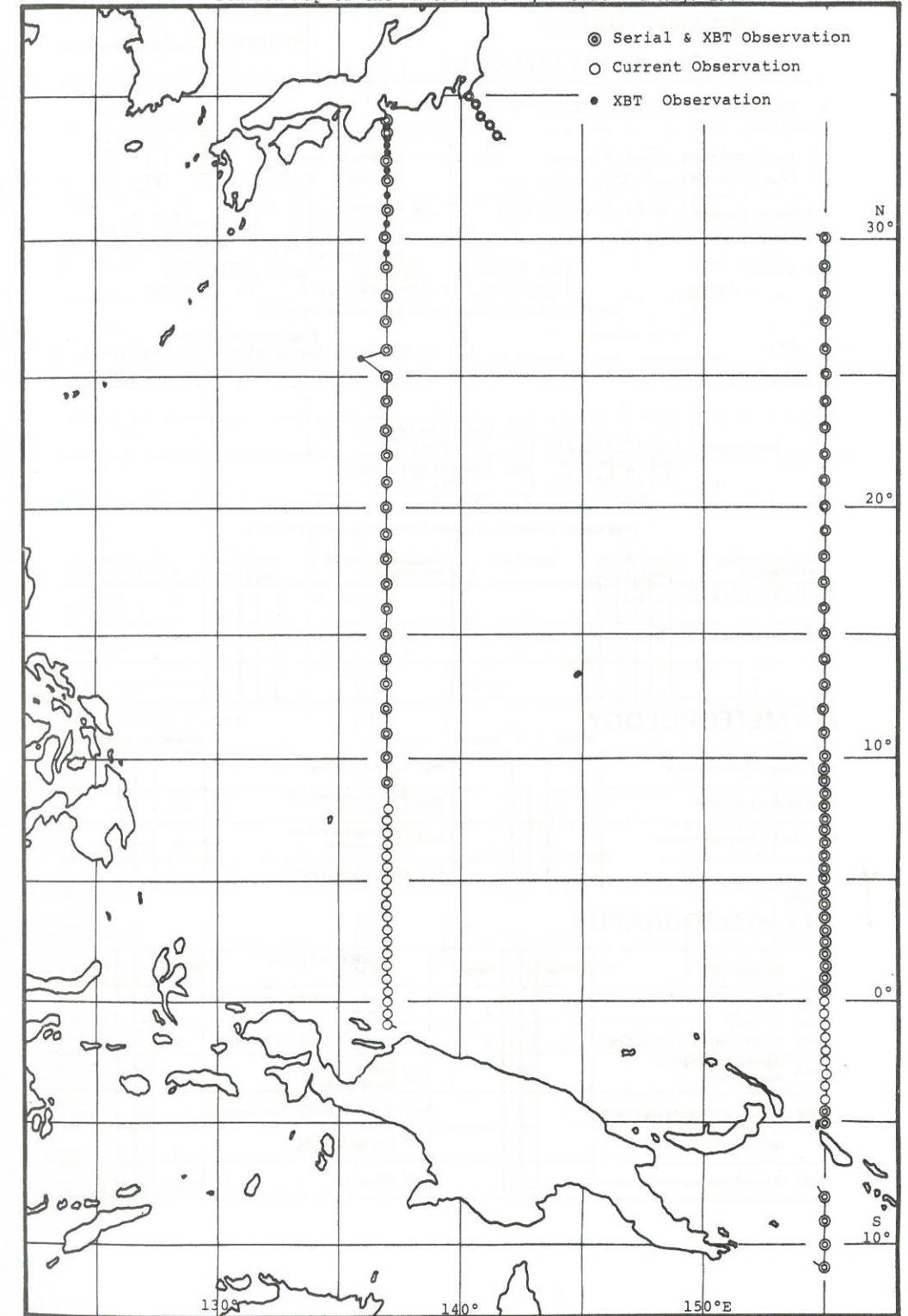
### B - BIOLOGY

B02 Phytoplankton pigments	92	a	A	1	B21 Commercial benthic crustacean				
B08 Phytoplankton	107	a	A	1	B27 Deep scattering layers				
B09 Zooplankton	92	a	A	1	B28 Acoustical reflections on marine organisms				
B10 Neuston					B29 Biologic sounds				
B11 Nekton					B30 Bioluminescence				
B12 Invertebrate nekton					B31 Vitamin concentrations				
B13 Pelagic eggs and larvae					B32 Aminoacid concentration				
B14 Pelagic fish					B33 Hydrocarbon concentrations				
B18 Zoobenthos					B37 Taggings				

Remarks

BS TYPES OF STUDIES					B60 Physiology				
B61 Identification					B61 Behaviour				

Station Map of the "RYOFU MARU", 4 Jun. - 2 Aug. 1977



OCEANOGRAPHY  
GENERAL CRUISE INVENTORY

A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 77175

A - GENERAL INFORMATION ON WORK PERFORMED

A01 Expedition/Project <u>C S K</u> Cruise No. or name <u>77-06</u>	A91 Declared national prog. ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> PART Exchange restricted ? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PART
A02 Ship or platform <u>Kofu Maru (8JNZ)</u> Platform type <u>01</u>	A92 Co-operative programme ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Co-ordinated internationally? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Name <u>C S K</u> By whom? <u>K. Wadati</u>
A03 Country <u>Japan</u>	A04 Organization (HMO) <u>Hakodate Mar. Observatory</u> A05 Chief scientist(s) <u>S. Kuronuma</u>

A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS

Whom to query	Final disposition of data
a HMO	A HMO; 181 Akagawadoricho, Hakodate
b MD, JMA	B MD, JMA; Otemachi, Chiyoda-ku, Tokyo
c	C

A07 Date: from: <u>20 07 77</u> DAY MONTH YEAR to: <u>15 08 77</u>	A08 General ocean areas <u>NW Pacific</u>	A09 Type(s) of marine zone(s) <u>04, 06</u>
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A10 Geographic area Latitude            N/S Longitude            E/W  
If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10 Qc L G G	Index 1° x 1°	Discipline and type of measurements	Index 10 x 10 Qc L G G	Index 1° x 1°
M, HS, HP, HC, P, D, B	1 4 1 4				
M, HS, HP, HC, P, D, B	1 3 1 4				

M - METEOROLOGY

Number	i	l	Format	Number	i	l	Format
M01 Upper air observations				M04 Ice observations			
M02 Incident radiation				M05 Occasional standard measurements			
M03 Air-sea interface studies				M06 Systematic standard measurements	X	a	A 1
				M90 Other measurements			

Remarks

H - HYDROGRAPHY

HS SURFACE	Number	i	l	Format	NEAR SEA FLOOR (< 10 m)	Number	i	l	Format
H01 Continuous temperature recording	X	a	A	3	H05 Continuous temperature recording				
H02 Continuous salinity recording	X	a	A	3	H06 Continuous salinity recording				
H03 Discrete temperature measurements					H07 Discrete temperature measurements				
H04 Discrete salinity measurements					H08 Discrete salinity measurements				
HP PHYSICAL					HC CHEMICAL				
H09 Classical oceanographic stations	34	a	A	1	H21 Oxygen	34	a	A	1

H - HYDROGRAPHY (Continued)

	Number	i	l	Format		Number	i	l	Format
H10 Vertical profiles (STD/CTD)					H22 Phosphates	34	a	A	1
H11 sub-surface measurements underway					H23 Total - P	3	a	A	1
H12 Mechanical bathythermograph (no. of drops)	117	a	A	1, 8	H24 Nitrates	3	a	A	1
H13 Bathythermograph-expendable (no. of drops)	10	a	A	1, 3	H25 Nitrites	3	a	A	1
H14 Sound velocity stations					H26 Silicates				
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency					H28 pH	6	a	A	1
H80 Other measurements					H31 Radioactivity				

Remarks

P - POLLUTION

P01 Suspended solids					P03 Petroleum residues	2	b	B	1
P02 Heavy metals	2	b	B	1	P08 Waste water : Nitrates				

Remarks

D - DYNAMICS

D01 Current meters (no. of stat.)					D07 Drift cards (no. released)				
D02 Current meters (average duration of measurement)					D08 Bottom drifters (no. released)				
D03 Currents measured from ship drift					D09 Tidal observations (duration)				
D04 GEK	124	a	A	1	D10 Sea and swell (no. of observations)				
D05 Drifters (number)					D90 Other				
D06 Swallow floats (number)									

B - BIOLOGY

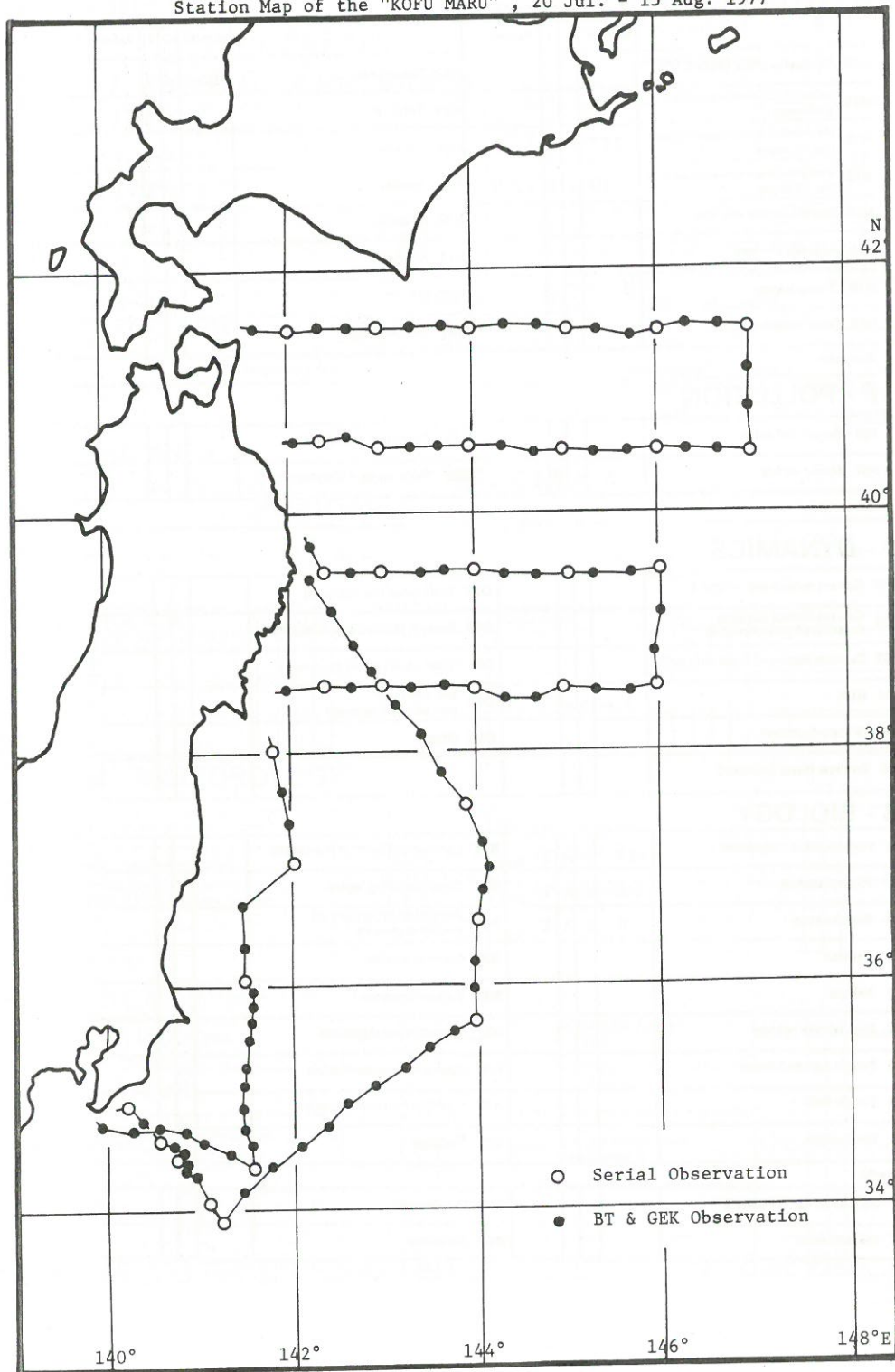
B02 Phytoplankton pigments	17	a	A	1	B21 Commercial benthic crustacean				
B08 Phytoplankton	6	a	A	1	B27 Deep scattering layers				
B09 Zooplankton	6	a	A	1	B28 Acoustical reflections on marine organisms				
B10 Neuston					B29 Biologic sounds				
B11 Nekton					B30 Bioluminescence				
B12 Invertebrate nekton					B31 Vitamin concentrations				
B13 Pelagic eggs and larvae					B32 Aminoacid concentration				
B14 Pelagic fish					B33 Hydrocarbon concentrations				
B18 Zoobenthos					B37 Taggings				

Remarks

BS TYPES OF STUDIES		Number	i	l	Format
B50 Physiology					
B51 Identification					
B60 Physiology					
B61 Behaviour					



Station Map of the "KOFU MARU", 20 Jul. - 15 Aug. 1977



179

ROSCOP (2nd edition)

OCEANOGRAPHY  
GENERAL CRUISE INVENTORY

A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 77176

A - GENERAL INFORMATION ON WORK PERFORMED

A01 Expedition/Project C S K  
Cruise No. or name 7707

A02 Ship or platform Shumpu Maru (JFDG)  
Platform type 01

A03 Country Japan

A04 Organization (KMO) Kobe Marine Observatory

A05 Chief scientist(s) K. Onishi

A09 Co-operative programme?  YES  NO  
Co-ordinated internationally?  YES  NO  
Name C S K  
By whom? K. Wadati

A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS

Whom to query  
a MD, JMA; Otemachi, Chiyoda-ku, Tokyo  
b KMO; 7-178 Nakayamate-Dori, Ikuta-ku, Kobe

Final disposition of data  
A KMO  
B  
C

A07 Date: from: 0, 11, 0, 7, 1, 7, 7  
DAY MONTH YEAR  
to: 2, 8, 10, 7, 1, 7, 7

A08 General ocean areas  
Inland Sea (Seto Naikai) & Philippine Sea

A09 Type(s) of marine zone(s)  
04, 05, 06

A10 Geographic area Latitude            N/S Longitude            E/W  
If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10				Index 1° x 1°	Discipline and type of measurements	Index 10 x 10				Index 1° x 1°
	Qc	L	G	G			Qc	L	G	G	
M, HS, HP, HC	1	3	1	3		D, B	1	2	1	3	
M, HS, HP, HC	1	2	1	3							
P, D, B	1	3	1	3							

M - METEOROLOGY

	Number	i	l	Format		Number	i	l	Format
M01 Upper air observations					M04 Ice observations				
M02 Incident radiation					M05 Occasional standard measurements				
M03 Air-sea interface studies					M06 Systematic standard measurements	93	a	A	1
					M09 Other measurements				

Remarks

H - HYDROGRAPHY

HS SURFACE				NEAR SEA FLOOR (< 10 m)							
	Number	i	l	Format		Number	i	l	Format		
H01 Continuous temperature recording	X	b	A	3	H05 Continuous temperature recording						
H02 Continuous salinity recording	X	b	A	3	H06 Continuous salinity recording						
H03 Discrete temperature measurements	138	a	b	A	1	H07 Discrete temperature measurements					
H04 Discrete salinity measurements	138	a	b	A	1	H08 Discrete salinity measurements					
HP PHYSICAL				HC CHEMICAL							
H09 Classical oceanographic stations	39	a	b	A	1	H21 Oxygen	39	a	b	A	1

179

H - HYDROGRAPHY (Continued)

	Number	i	l	Format		Number	i	l	Format
H10 Vertical profiles (STD/CTD)					H22 Phosphates	29	a	A	1
H11 sub-surface measurements underway					H23 Total - P	6	a	A	1
H12 Mechanical bathythermograph (no. of drops)	99	a	A	1, 8	H24 Nitrates	3	a	A	1
H13 Bathythermograph-expendable (no. of drops)	39	a	A	1, 3	H25 Nitrites	18	a	A	1
H14 Sound velocity stations					H26 Silicates				
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency	22	a	A	1	H28 pH	16	a	A	1
H80 Other measurements					H31 Radioactivity				

Remarks

P - POLLUTION

P01 Suspended solids					P03 Petroleum residues	2	a	A	1
P02 Heavy metals	2	a	A	1	P08 Waste water : Nitrates				

Remarks

D - DYNAMICS

D01 Current meters (no. of stat.)					D07 Drift cards (no. released)				
D02 Current meters (average duration of measurement)					D08 Bottom drifters (no. released)				
D03 Currents measured from ship drift					D09 Tidal observations (duration)				
D04 GEK	113	a	A	1, 3	D10 Sea and swell (no. of observations)				
D05 Drifters (number)					D90 Other				
D06 Swallow floats (number)									

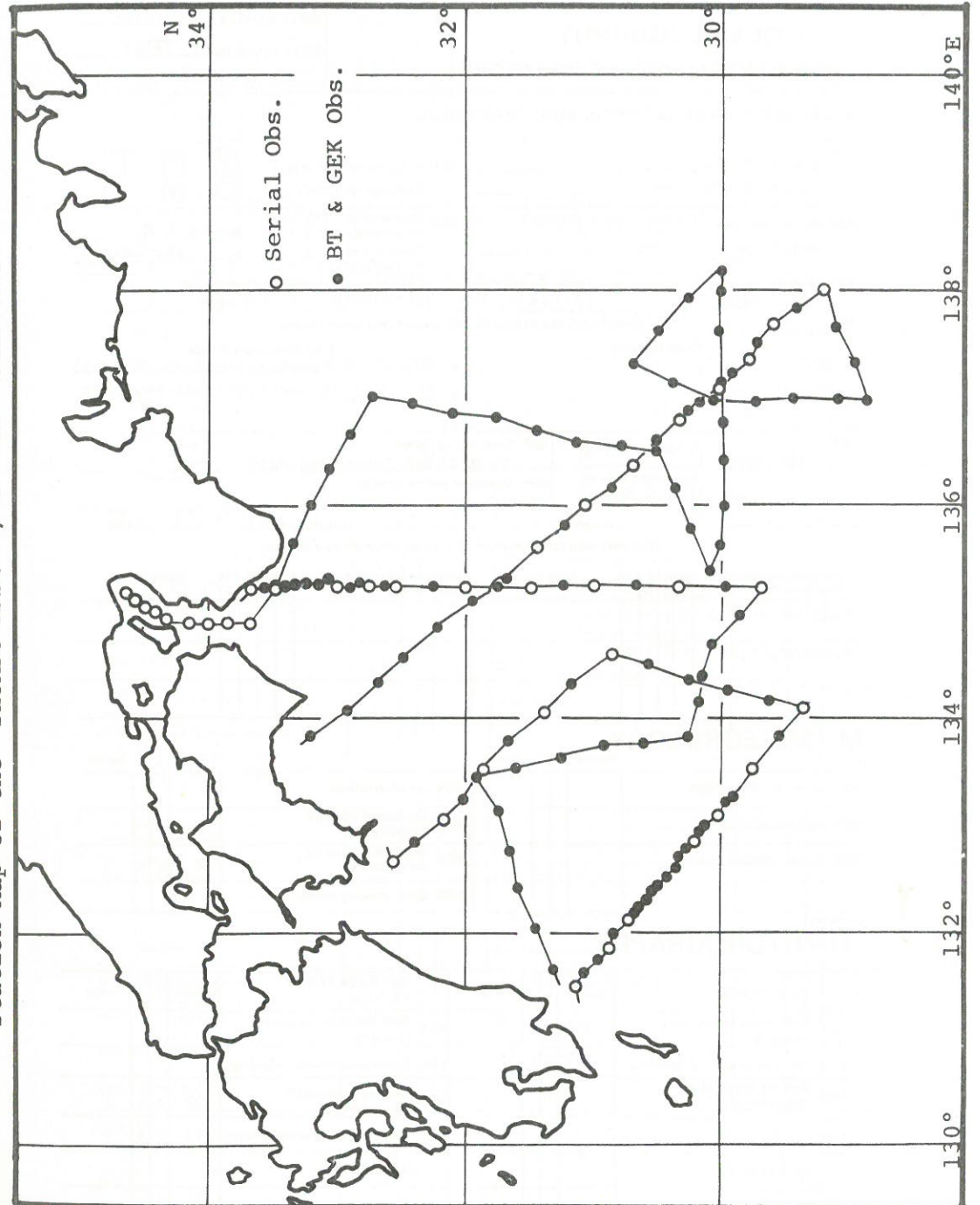
B - BIOLOGY

B02 Phytoplankton pigments	29	a	A	1	B21 Commercial benthic crustacean				
B08 Phytoplankton	29	a	A	1	B27 Deep scattering layers				
B09 Zooplankton	29	a	A	1	B28 Acoustical reflections on marine organisms				
B10 Neuston					B29 Biologic sounds				
B11 Nekton					B30 Bioluminescence				
B12 Invertebrate nekton					B31 Vitamin concentrations				
B13 Pelagic eggs and larvae					B32 Aminoacid concentration				
B14 Pelagic fish					B33 Hydrocarbon concentrations				
B18 Zoobenthos					B37 Taggings				

Remarks

BS TYPES OF STUDIES					B60 Physiology				
B51 Identification					B61 Behaviour				

Station Map of the "SHUMPU MARU", 1 - 28 Jul. 1977



ROSCOP (2nd edition)

**OCEANOGRAPHY  
GENERAL CRUISE INVENTORY**

A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 77181

**A - GENERAL INFORMATION ON WORK PERFORMED**

A01 Expedition/Project <u>C S K</u> Cruise No. or name <u>77-07</u>	A91 Declared national prog. ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> PART Exchange restricted ? <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
A02 Ship or platform <u>Chofu Maru (JPQX)</u> Platform type <u>01</u>	A92 Co-operative programme ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Name <u>C S K</u> Co-ordinated internationally? <input checked="" type="checkbox"/> <input type="checkbox"/> By whom? <u>K. Wadati</u>
A03 Country <u>Japan</u>	A04 Organization <u>Nagasaki Mar. Observatory</u> (NMO)
A05 Chief scientist(s) <u>Y. Hanzawa</u>	

A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS

Whom to query	Final disposition of data
a <u>NMO</u>	A <u>NMO; 11-51 Minamiyamate-cho, Nagasaki</u>
b <u>MD, JMA</u>	B <u>MD, JMA; Otemachi, Chiyoda-ku, Tokyo</u>
c _____	C _____

A07 Date: from: 1 2 0 7 7 7 to: 1 3 0 8 7 7  
DAY MONTH YEAR

A08 General ocean areas East China Sea (Tung Hai)

A09 Type(s) of marine zone(s) \_\_\_\_\_

A10 Geographic area Latitude \_\_\_\_\_ N/S Longitude \_\_\_\_\_ E/W  
If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10			Index 1° x 1°			Discipline and type of measurements	Index 10 x 10			Index 1° x 1°		
	Oc	L	G	Oc	L	G		Oc	L	G	Oc	L	G
M, HS, HP, HC, P, D	1	2	1 2										
B													
M, HS, HP, HC, D	1	3	1 2										

**M - METEOROLOGY**

Number       Format				Number       Format			
M01 Upper air observations				M04 Ice observations			
M02 Incident radiation				M05 Occasional standard measurements			
M03 Air-sea interface studies				M06 Systematic standard measurements	X	a	A 1
				M90 Other measurements			

Remarks

**H - HYDROGRAPHY**

HS SURFACE				NEAR SEA FLOOR (< 10 m)			
Number	i	l	Format	Number	i	l	Format
H01 Continuous temperature recording	X	a	A 3	H05 Continuous temperature recording			
H02 Continuous salinity recording	X	a	A 3	H06 Continuous salinity recording			
H03 Discrete temperature measurements				H07 Discrete temperature measurements	32	a	A 1
H04 Discrete salinity measurements				H08 Discrete salinity measurements	32	a	A 1
<b>HP PHYSICAL</b>				<b>HC CHEMICAL</b>			
H09 Classical oceanographic stations	63	a	A 1	H21 Oxygen	63	a	A 1

**H - HYDROGRAPHY (Continued)**

Number       Format				Number       Format			
H10 Vertical profiles (STD/CTD)				H22 Phosphates	9	a	A 1
H11 sub-surface measurements underway				H23 Total - P	9	a	A 1
H12 Mechanical bathythermograph (no. of drops)	98	a	A 8	H24 Nitrates	9	a	A 1
H13 Bathythermograph-expendable (no. of drops)	30	a	A 3	H25 Nitrites	9	a	A 1
H14 Sound velocity stations				H26 Silicates			
H15 Acoustic stations				H27 Alkalinity			
H16 Transparency	31	a	A 1	H28 pH	3	a	A 1
H80 Other measurements				H31 Radioactivity (COD) (NH <sub>3</sub> -N)	3	a	A 1

Remarks

**P - POLLUTION**

Number       Format				Number       Format			
P01 Suspended solids				P03 Petroleum residues	2	b	B 1
P02 Heavy metals	2	b	B 1	P08 Waste water : Nitrates			

Remarks

**D - DYNAMICS**

Number       Format				Number       Format			
D01 Current meters (no. of stat.)				D07 Drift cards (no. released)			
D02 Current meters (average duration of measurement)				D08 Bottom drifters (no. released)			
D03 Currents measured from ship drift				D09 Tidal observations (duration)			
D04 GEK	82	a	A 1	D10 Sea and swell (no. of observations)			
D05 Drifters (number)				D90 Other			
D06 Swallow floats (number)							

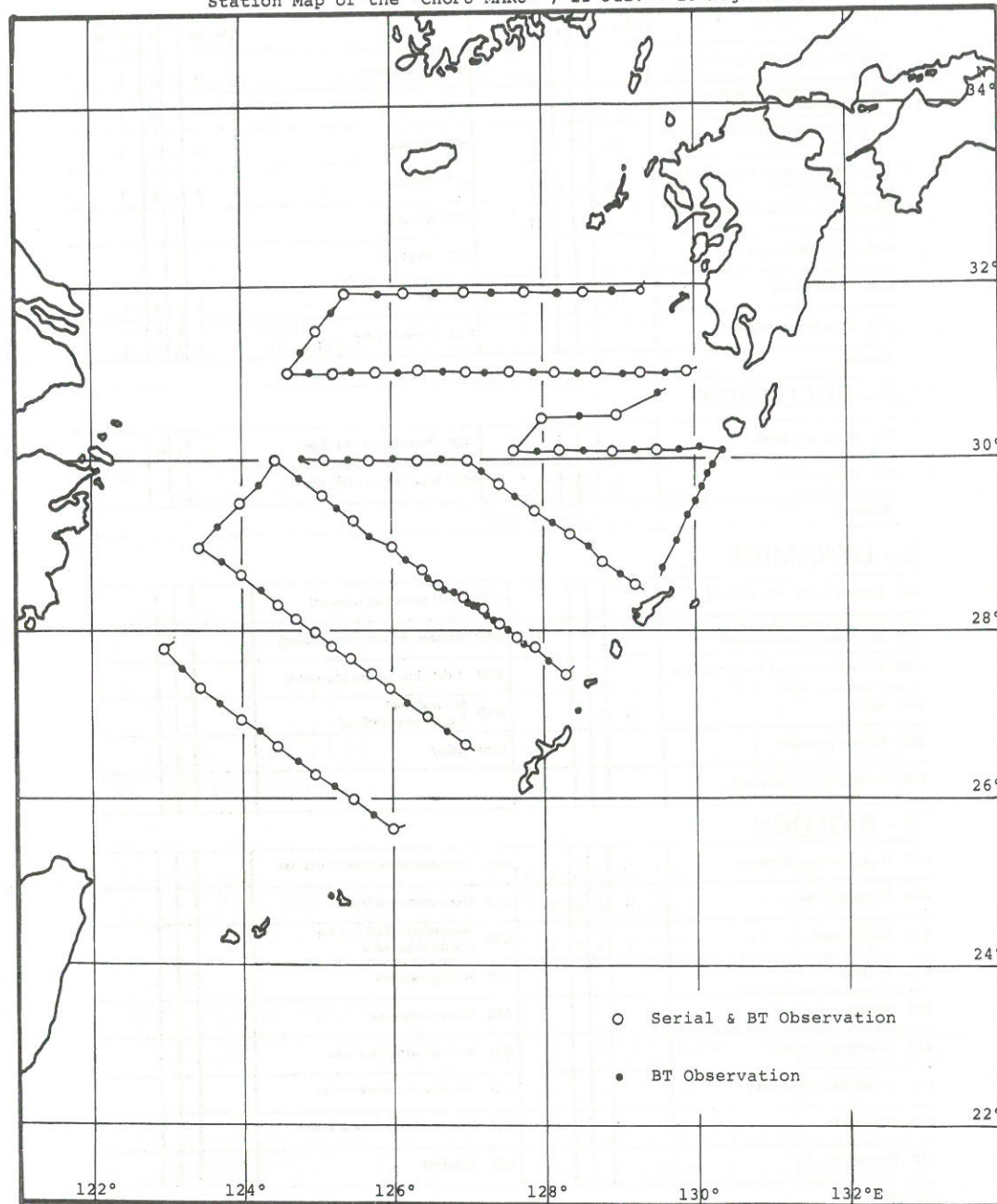
**B - BIOLOGY**

Number       Format				Number       Format			
B02 Phytoplankton pigments	9	a	A 1	B21 Commercial benthic crustacean			
B08 Phytoplankton	9	a	A 1	B27 Deep scattering layers			
B09 Zooplankton	9	a	A 1	B28 Acoustical reflections on marine organisms			
B10 Neuston				B29 Biologic sounds			
B11 Nekton				B30 Bioluminescence			
B12 Invertebrate nekton				B31 Vitamin concentrations			
B13 Pelagic eggs and larvae				B32 Aminoacid concentration			
B14 Pelagic fish				B33 Hydrocarbon concentrations			
B18 Zoobenthos				B37 Taggings			

Remarks

BS TYPES OF STUDIES				Number       Format			
B51 Identification				B60 Physiology			
				B61 Behaviour			

Station Map of the "CHOFU MARU", 12 Jul. - 13 Aug. 1977



179

ROSCOP (2nd edition)

OCEANOGRAPHY  
 GENERAL CRUISE INVENTORY

A00  
 DATA CENTRE: J.O.D.C.  
 REFERENCE No: 77177

A - GENERAL INFORMATION ON WORK PERFORMED

A01 Expedition/Project C S K  
 Cruise No. or name 77-07

A02 Ship or platform Seifu Maru (JPVB)  
 Platform type 01

A03 Country Japan

A04 Organization (MMO) Maizuru Mar. Observatory

A05 Chief scientist(s) K. Hori

A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS

Whom to query: a MMO  
 b MD, JMA  
 c

Final disposition of data: A MMO; Shimofukui, Maizuru, Kyoto  
 B MD, JMA; Otemachi, Chiyodaku, Tokyo  
 C

A07 Date: from: 0, 8, 0, 7, 7, 7  
 DAY MONTH YEAR  
 to: 1, 2, 0, 8, 7, 7

A08 General ocean areas Sea of Japan

A09 Type(s) of marine zone(s) 04, 06

A10 Geographic area Latitude            N/S Longitude            E/W  
 If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10			Index 1° x 1°	Discipline and type of measurements	Index 10 x 10			Index 1° x 1°
	Oc	L	G			Oc	L	G	
M, HS, HP, HC, P, D	1	3	1	3					
B									
M, HS, HP, HC, P, D	1	4	1	3					
B									

M - METEOROLOGY

Number	I	I	Format	Number	I	I	Format
M01				M04			
M02				M05			
M03				M06	X	aA	1
				M90			

Remarks

H - HYDROGRAPHY

HS SURFACE				NEAR SEA FLOOR (< 10 m)				
Number	I	I	Format	Number	I	I	Format	
H01				H05				
H02				H06				
H03	X	a	A	1	2	a	A	
H04	X	a	A	1	1	a	A	
HP PHYSICAL				HC CHEMICAL				
H09	38	a	A	1	H21	68	a	A

179

H - HYDROGRAPHY (Continued)

	Number	i	l	Format		Number	i	l	Format
H10 Vertical profiles (STD/CTD)					H22 Phosphates	11	a	A	1
H11 sub-surface measurements underway					H23 Total - P	3	a	A	1
H12 Mechanical bathythermograph (no. of drops)	83	a	A	8	H24 Nitrates	6	a	A	1
H13 Bathythermograph-expendable (no. of drops)					H25 Nitrites	10	a	A	1
H14 Sound-velocity stations					H26 Silicates				
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency	22	a	A	1	H28 pH	3	a	A	1
H80 Other measurements					H31 Radioactivity				

Remarks

P - POLLUTION

P01 Suspended solids					P03 Petroleum residues	2	b	B	1
P02 Heavy metals	2	b	B	1	P08 Waste water : Nitrates				

Remarks

D - DYNAMICS

D01 Current meters (no. of stat.)					D07 Drift cards (no. released)				
D02 Current meters (average duration of measurement)					D08 Bottom drifters (no. released)				
D03 Currents measured from ship drift					D09 Tidal observations (duration)				
D04 GEK	84	a	A	1	D10 Sea and swell (no. of observations)				
D05 Drifters (number)					D90 Other				
D06 Swallow floats (number)									

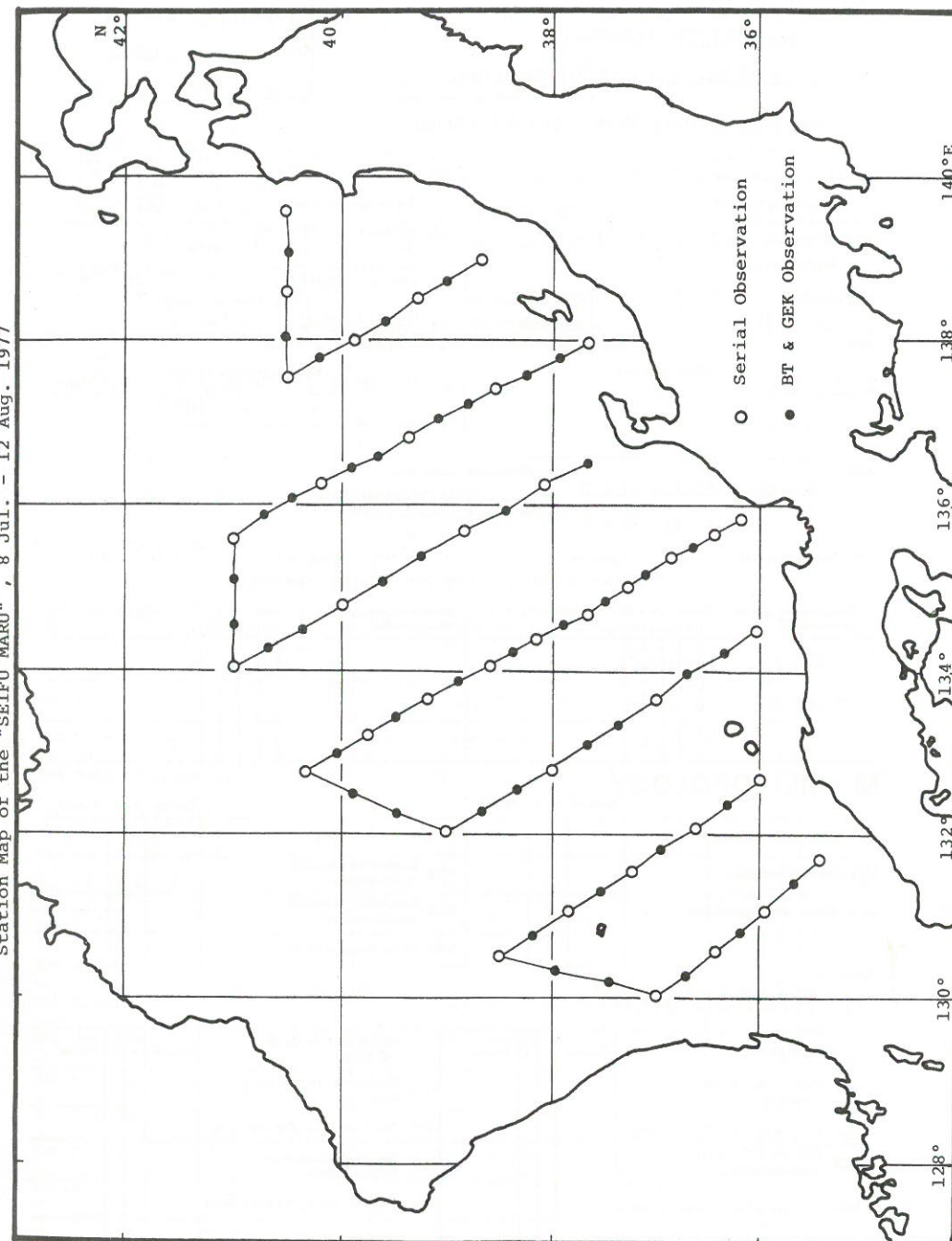
B - BIOLOGY

B02 Phytoplankton pigments	10	a	A	1	B21 Commercial benthic crustacean				
B08 Phytoplankton	10	a	B	1	B27 Deep scattering layers				
B09 Zooplankton	10	a	B	1	B28 Acoustical reflections on marine organisms				
B10 Neuston					B29 Biologic sounds				
B11 Nekton					B30 Bioluminescence				
B12 Invertebrate nekton					B31 Vitamin concentrations				
B13 Pelagic eggs and larvae					B32 Amino acid concentration				
B14 Pelagic fish					B33 Hydrocarbon concentrations				
B18 Zoobenthos					B37 Taggings				

Remarks Norpac Standard Net

B51 Identification					B60 Physiology				
					B61 Behaviour				

Station Map of the "SEIFU MARU", 8 Jul. - 12 Aug. 1977



ROSCOP (2nd edition)

OCEANOGRAPHY  
GENERAL CRUISE INVENTORY

A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 77182

A - GENERAL INFORMATION ON WORK PERFORMED

A01 Expedition/Project C S K  
Cruise No. or name \_\_\_\_\_

A02 Ship or platform Takuyo (JDRP)  
Platform type 01

A03 Country Japan  
A04 Organization Hydrogr. Dept., MSA(HD,MSA)  
A05 Chief scientist(s) A. Kosugi

A91 Declared national prog. ?  YES  NO  PART  
Exchange restricted?

A92 Co-operative programme?  YES  NO  
Co-ordinated internationally?   Name C S K  
By whom? K. Wadati

A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS

Whom to query  
a HD, MSA  
b \_\_\_\_\_  
c \_\_\_\_\_

A HD, MSA; 3-1 Tsukiji, 5Chome, Chuo-ku, Tokyo 100  
Final disposition of data \_\_\_\_\_

A07 Date: from: 10.8.10.91 7.7  
DAY MONTH YEAR  
to: 12.8.10.91 7.7

A08 General ocean areas Philippine Sea

A09 Type(s) of marine zone(s) 06

A10 Geographic area Latitude \_\_\_\_\_ N/S Longitude \_\_\_\_\_ E/W  
If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10				Index 1° x 1°	Discipline and type of measurements	Index 10 x 10				Index 1° x 1°
	Oc	L	G	G			Oc	L	G	G	
HP, HC, D	1	2	1	3							
HP, HC, D	1	3	1	3							

M - METEOROLOGY

Number       Format				Number       Format							
M01 Upper air observations								M04 Ice observations			
M02 Incident radiation								M05 Occasional standard measurements	X	a	A 1
M03 Air-sea interface studies								M06 Systematic standard measurements			
								M90 Other measurements			

Remarks

H - HYDROGRAPHY

HS SURFACE				NEAR SEA FLOOR (< 10 m)			
Number			Format	Number			Format
H01				H05			
H02				H06			
H03				H07			
H04				H08			
HP PHYSICAL				HC CHEMICAL			
H09	30	a	A 1	H21	30	a	A 1

H - HYDROGRAPHY (Continued)

Number       Format				Number       Format			
H10				H22	30	a	A 1
H11				H23			
H12	16	a	A 1,8	H24			
H13	45	a	A 1,2,3	H25			
H14				H26	30	a	A 1,3
H15				H27			
H16				H28	30	a	A 1,2
H80	30	a	A 1,2	H31			

Remarks

P - POLLUTION

P01				P03			
P02				P08			

Remarks

D - DYNAMICS

D01				D07			
D02				D08			
D03				D09			
D04	88	a	A 1,2	D10			
D05				D90			
D06							

B - BIOLOGY

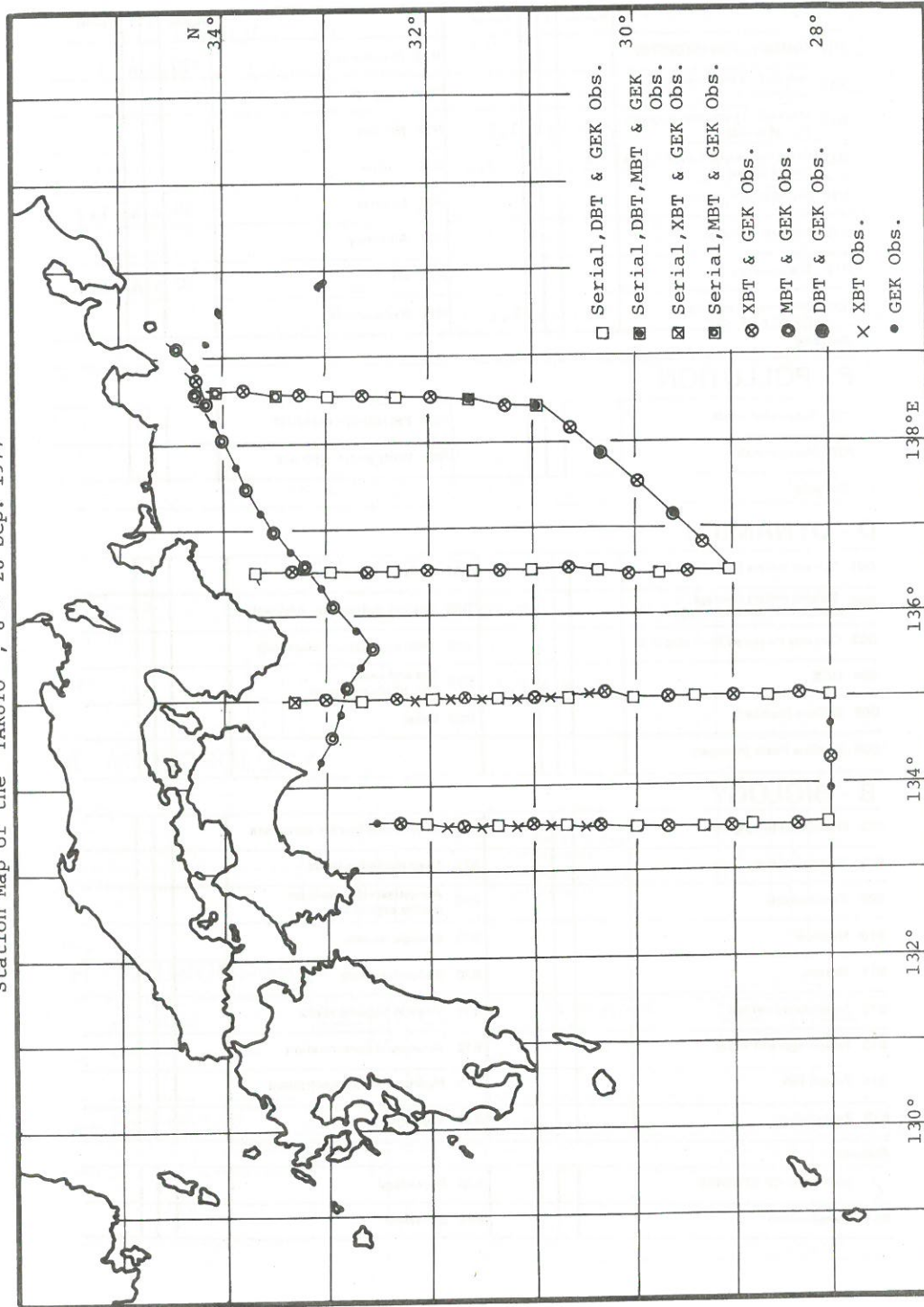
B02				B21			
B08				B27			
B09				B28			
B10				B29			
B11				B30			
B12				B31			
B13				B32			
B14				B33			
B18				B37			

Remarks

BS TYPES OF STUDIES				Number       Format			
B51				B60			
				B61			

79

Station Map of the "TAKUYO", 8 - 28 Sep. 1977



ROSCOP (2nd edition)

OCEANOGRAPHY  
GENERAL CRUISE INVENTORY

A00  
DATA CENTRE: J.O.D.C.  
REFERENCE No: 78008

A - GENERAL INFORMATION ON WORK PERFORMED

A01 Expedition/Project C S K  
Cruise No. or name 77-11

A91 Declared national prog. ?  YES  NO  PART  
Exchange restricted?  YES  NO  PART

A02 Ship or platform Shoyo (JCOD)  
Platform type 01

A92 Co-operative programme ?  YES  NO  
Co-ordinated internationally?  YES  NO  
Name C S K  
By whom? K. Wadati

A03 Country Japan  
A04 Organization Hydrogr. Dept., MSA(HD,MSA)  
A05 Chief scientist(s) A. Kosugi

A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS  
Whom to query HD, MSA  
Final disposition of data A HD, MSA; 3-1 Tsukiji, 5 Chome, Chuo-ku Tokyo 100

A07 Date: from: 08/11/77  
to: 28/11/77  
A08 General ocean areas Philippine Sea & NW Pacific  
A09 Type(s) of marine zone(s) 06

A10 Geographic area Latitude            N/S Longitude            E/W  
If all data were collected at a fixed station, fill in the co-ordinates

Discipline and type of measurements	Index 10 x 10				Index 1° x 1°		Discipline and type of measurements	Index 10 x 10				Index 1° x 1°	
	Oc	L	G	G				Oc	L	G	G		
HS, HP, HC, D	1	3	1	3									
HS, HP, HC, D	1	2	1	3									

M - METEOROLOGY

	Number	I	I	Format		Number	I	I	Format
M01 Upper air observations					M04 Ice observations				
M02 Incident radiation					M05 Occasional standard measurements	X	a	A	1
M03 Air-sea interface studies					M06 Systematic standard measurements				
					M09 Other measurements				

Remarks

H - HYDROGRAPHY

HS SURFACE				NEAR SEA FLOOR (< 10 m)					
	Number	I	I	Format		Number	I	I	Format
H01 Continuous temperature recording					H05 Continuous temperature recording				
H02 Continuous salinity recording					H06 Continuous salinity recording				
H03 Discrete temperature measurements	86	a	A	1	H07 Discrete temperature measurements				
H04 Discrete salinity measurements					H08 Discrete salinity measurements				
HP PHYSICAL					HC CHEMICAL				
H09 Classical oceanographic stations	28	a	A	1	H21 Oxygen	28	a	A	1

'79

### H - HYDROGRAPHY (Continued)

	Number	i	l	Format		Number	i	l	Format
H10 Vertical profiles (STD/CTD)					H22 Phosphates	28	a	A	1
H11 sub-surface measurements underway					H23 Total - P				
H12 Mechanical bathythermograph (no. of drops)	35	a	A	1	H24 Nitrates				
H13 Bathythermograph-expendable (no. of drops)	41	a	A	1, 3	H25 Nitrites				
H14 Sound velocity stations					H26 Silicates	28	a	A	1
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency					H28 pH	28	a	A	1
H80 Other measurements					H31 Radioactivity	2	a	A	1

Remarks

### P - POLLUTION

P01 Suspended solids					P03 Petroleum residues				
P02 Heavy metals					P08 Waste water : Nitrates				

Remarks

### D - DYNAMICS

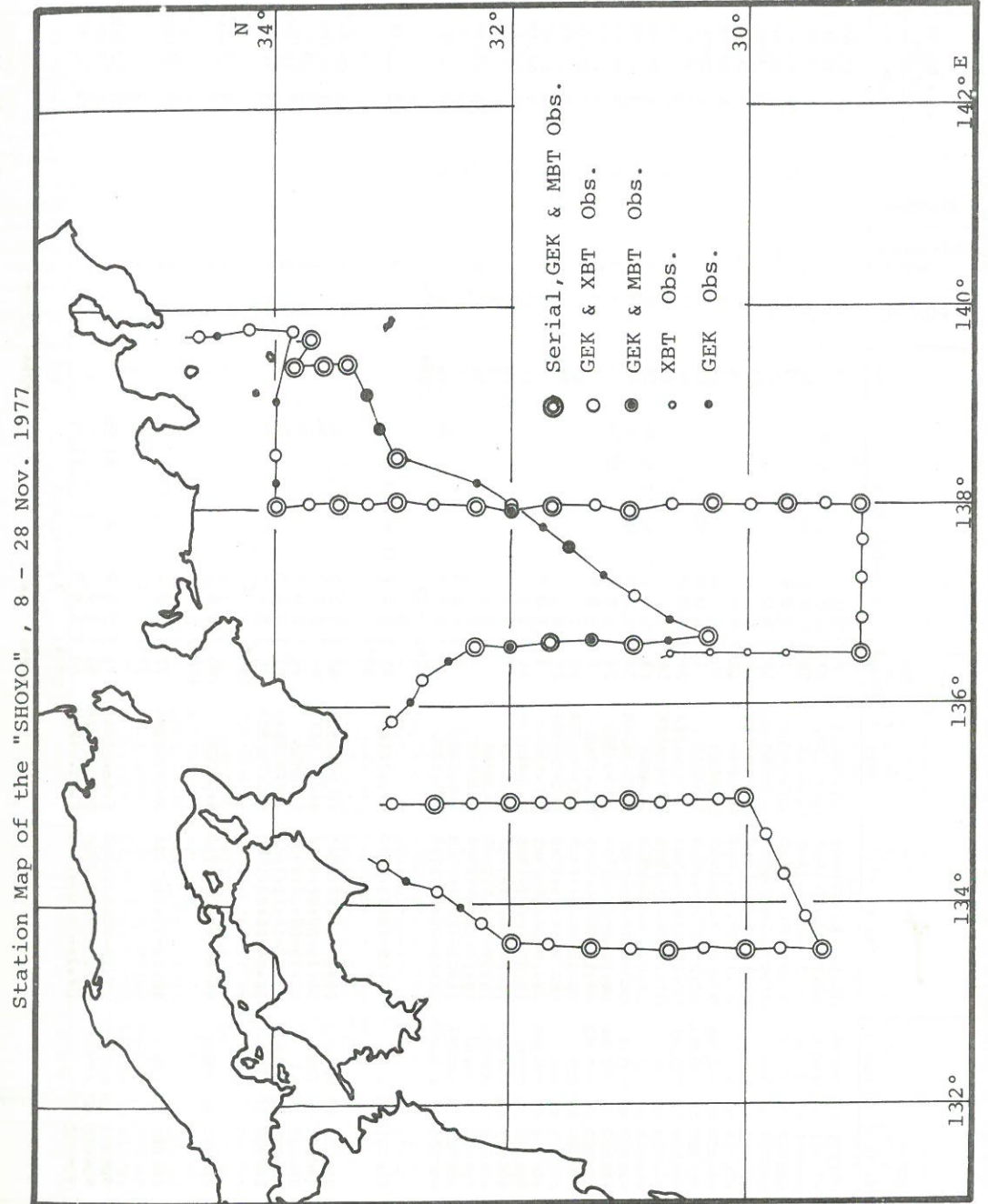
D01 Current meters (no. of stat.)	1	a	A	6	D07 Drift cards (no. released)				
D02 Current meters (average duration of measurement)					D08 Bottom drifters (no. released)				
D03 Currents measured from ship drift					D09 Tidal observations (duration)				
D04 GEK	79	a	A	1, 3	D10 Sea and swell (no. of observations)				
D05 Drifters (number)					D90 Other				
D06 Swallow floats (number)									

### B - BIOLOGY

B02 Phytoplankton pigments					B21 Commercial benthic crustacean				
B08 Phytoplankton					B27 Deep scattering layers				
B09 Zooplankton					B28 Acoustical reflections on marine organisms				
B10 Neuston					B29 Biologic sounds				
B11 Nekton					B30 Bioluminescence				
B12 Invertebrate nekton					B31 Vitamin concentrations				
B13 Pelagic eggs and larvae					B32 Aminoacid concentration				
B14 Pelagic fish					B33 Hydrocarbon concentrations				
B18 Zoobenthos					B37 Taggings				

Remarks

BS TYPES OF STUDIES									
B60 Physiology									
B61 Behaviour									



Station Map of the "SHOYO", 8 - 28 Nov. 1977

01\*50199 64050 CH 060704 01\*50199 01\*50199 01\*50199 01\*50199 01\*50199 01\*50199 01\*50199 01\*50199 01\*50199 01\*50199  
 02\*50199 02\*50199 02\*50199 02\*50199 02\*50199 02\*50199 02\*50199 02\*50199 02\*50199 02\*50199  
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 04\*50199 04\*50199 04\*50199 04\*50199 04\*50199 04\*50199 04\*50199 04\*50199 04\*50199 04\*50199







Table with columns: Date Received, KDC, Ref. No., Agency, Ship Code, Period, Area, No. of Stas., Serial Data, BTs, Currents, Topography, Sediments, Biological, Data Report of CSK. Includes entries for various dates from 05/15/68 to 09/29/70, covering areas like GULF THAI and W.NORPAC.

Table with columns: Date Received, KDC, Ref. No., Agency, Ship Code, Period, Area, No. of Stas., Serial Data, BTs, Currents, Topography, Sediments, Biological, Data Report of CSK. Includes entries for various dates from 09/29/69 to 09/29/70, covering areas like E.CHIN\*SEA and W.NORPAC.

Date Received	KDC	Ref. No.	Agency	Period	Area	No. of Stas.	Serial Data	BTs	Currents	Bottom Topography	Sediments	Biological	Data Report of CSK	
													Pub. No.	Mo./Yr.
01.23/70	49K100	KO	HMOJMA	02.03-02.22,1969	E. JAPAN	16	T S O P			D			224	09/70
04.10/69	49K101	SH	KMOJMA	02.06-02.08,1969	S. JAPAN	8	T S O P	117	100	D			213	09/69
04.10/69	49K102	CH	HMOJMA	02.06-02.07,1969	E. CHIN. SEA	7	T S O P			D			214	09/69
06.30/69	49K103	SI	HMOJMA	02.08-02.26,1969	JAPAN SEA	10	T S O P			D			215	12/69
05.21/69	49K098	TA	HDMSA	02.18-03.13,1969	S. E. JAPAN	28	T S O P		66	D			210	09/69
10.19/70	49K109	KE	KU	04.23-05.12,1969	E. CHIN. SEA	15	T S			D			247	06/71
10.08/69	49K106	RY	MDJMA	04.26-05.30,1969	N. W. NORPAC	45	T S O P			D			223	05/70
12.10/70	49K107	SI	HMOJMA	05.07-06.14,1969	S. W. JAPAN	7	T S O			D			242	06/71
08.01/69	49K105	TA	HDMSA	05.09-05.30,1969	S. JAPAN	29	T S O P		58	D			222	01/70
11.26/70	49K108	TE	SUF	06.13-06.30,1969	JAPAN SEA	42	T S		30	D			243	06/71
01.23/70	49K110	KO	HMOJMA	07.12-08.20,1969	E. JAPAN	18	T S O P		17	D			228	05/70
11.27/69	49K111	SH	HMOJMA	07.18-08.14,1969	S. JAPAN	9	T S O P			D			231	01/70
09.08/69	49K114	CH	HMOJMA	07.24-07.31,1969	W. JAPAN	24	T S O			D			232	01/70
10.27/69	49K115	SI	HMOJMA	08.07-08.10,1969	JAPAN SEA	12	T S O P			D			229	05/70
11.10/69	49K112	TA	HDMSA	08.11-09.02,1969	S. E. JAPAN	37	T S O P		71	D			229	05/70
06.29/70	49K461	TN	ORIUT	09.16-09.24,1969	E. JAPAN	9	T S O		59	D			255	09/70
03.02/70	49K462	TA	HDMSA	10.02-10.19,1969	S. JAPAN	27	T S O			D			257	12/70
03.11/70	49K116	KA	HDMSA	11.07-11.29,1969	S. JAPAN	16	T S O P		83	D			253	03/74
08.21/73	49K169	UM	TUF	11.16-11.20,1969	S. CHIN. SEA	6	T S		10	D			261	02/72
04.15/71	49K117	KY	SUF	10.25-01.24,1969	S. E. PACIF.	40	T S			D			262	09/70
03.23/70	49K119	OS	HU	11.01-01.15,1969	S. CHIN. SEA	21	T S	511*	527*	D			244	03/71
04.04/70	21K008	YM		04.12-05.12,1969	ADJ. TAIWAN	38	T S O P			D			248	03/71
						38*/	1							
07.22/69	24K029	HA	FRDA	02.03-02.14,1969	YELLOW SEA	61	T S O P			D			234	01/70
07.22/69	24K028	BA	FRDA	02.08-03.13,1969	JAPAN SEA	63	T S O P			D			233	01/70
07.22/69	24K030	J1	FRDA	02.08-02.28,1969	S. KOREA	52	T S O P			D			235	01/70
07.22/69	24K031	SU	HO	04.11-05.02,1969	S. KOREA	64	T S O			D			236	01/70
12.25/69	24K035	SR	HO	07.23-08.19,1969	S. KOREA	68	T S O			D			240	05/70
11.25/69	24K034	J1	FRDA	08.07-08.29,1969	S. KOREA	53	T S O P			D			239	05/70
11.25/69	24K032	BA	FRDA	08.09-09.06,1969	JAPAN SEA	53	T S O P			D			250	09/70
11.25/69	24K033	HA	FRDA	08.09-08.21,1969	YELLOW SEA	68	T S O P			D			238	05/70
						482*/	8							
06.03/70	31K008	HU	NAVOCO	06.15-08.22,1969	S. CHIN. SEA	49	T S			D			248	03/71
						49*/	1							
12.09/69	68K002	RE	PFC	01.25-04.01,1969	N. E. PHIL.	101	T S O			D			237	09/70
						101*/	1							
04.07/70	74K012	CM	FRS	01.14-01.23,1969	S. CHIN. SEA	41	T S O			D			225	09/70
04.07/70	74K013	CM	FRS	03.28-03.31,1969	S. CHIN. SEA	20	T S P			D			226	09/70
04.07/70	74K014	CM	FRS	09.22-09.25,1969	S. CHIN. SEA	20	T S			D			260	09/70
						81*/	3							
02.23/70	86K012	F2	DF	06.28- , 1969	S. CHIN. SEA	1	T S O P			D			249	03/71
02.23/70	86K013	F2	DF	07.26- , 1969	S. CHIN. SEA	1	T S O P			D			249	03/71
02.23/70	86K014	F2	DF	08.13- , 1969	S. CHIN. SEA	1	T S O P			D			249	03/71
						3*/	3							

79





179

Main data table with columns: Date Received, KDC Ref. No., Agency, Shp Code, Period, Area, No. of Stas., Serial Data, BTs, Currents, Bottom Topography, Sediments, Biological, Data Report of CSK. Includes various station numbers and dates.

Total No. of Serial Stas./Cruises----- 19408#/ 488 # BTs & Cur.-- 13115# 1258#

The symbols of the types of data available used on the table are as follows:

- Serial: T - Temperature of the water sample; S - Salinity; O - Dissolved oxygen content; P - Inorganic phosphate-phosphorus; TP - Total phosphorus; AL - Alkalinity; N3 - Nitrate-nitrogen; SI - Inorganic silicate-silicon; PH - Hydrogen ion concentration; NH - Ammonia-nitrogen; Bot. Topography: D - Soundings at oceanographic stations; P - Profiles of bottom relief; T - Table of Depths; R - Plotting sheets with depths recorded; Sediments: C - Core sampling data

Summary table with columns: CC, COUNTRY, SC, SHIP, ABBREVIATION, AGENCY. Lists various countries and their respective marine research institutions.





Book No.	Ship & Area	Period	KDC Ref. No.
443	Seifu Maru Japan Sea	8 Jul. - 12 Aug. 1977	49K235
444	Takuyo South of Japan	8 - 28 Sep. 1977	49K237
445	Shoyo South of Japan	8 - 28 Nov. 1977	49K243

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VI. DATA RECEIVED

Catalogu of Data Received by KDC (JODC), 1 March - 31 December 1978

Mo. Dy/Yr.	KDC Ref. No.	* Ship Code	Agency	Period	Area	No. of Stas.	Serial	BTs	Currents	Bottom Topography	Biological
JAPAN											
03.23/78	49K236	TA	HDMSA	05.10-05.30,1977	South of Japan	30	T S O P	Si PH	67 108	D	D
03.23/78	49K237	TA	HDMSA	09.08-09.28,1977	South of Japan	30	T S O P	Si PH	61 88	D	D
04.22/78	49K238	SH	KMOJMA	07.01-07.28,1977	Osaka Bay, Kii Chan. & South of Japan	39	T S O P TP N2 N3 NH PH COD	NH PH COD	138 163	D	Phaeo. Chl.a
04.26/78	49K239	KO	HMOJMA	07.20-08.15,1977	East of Japan	34	T S O P TP N2 N3 NH PH COD	NH PH COD		D	Phaeo. Chl.a
04.26/78	49K240	KO	HMOJMA	07.31-08.26,1975	East of Japan	64	T S O P TP N2 N3	PH COD	214 205	D	Phaeo. Chl.a
06.21/78	49K241	OS	HU	10.17-12.25,1975	South China Sea & Indian Ocean	19	T S O			D	
06.21/78	49K242	KO	HMOJMA	02.10-03.05,1976	East of Japan	23	T S O P TP N2 N3	PH	177 82	D	D
07.25/78	49K243	YY	HDMSA	11.08-11.28,1977	South of Japan	28	T S O P	Si PH	76 79	D	D
U.S.S.R.											
04.07/78	90K057	PL	TINRO	07.24-09.14,1976	NW of Pacific	133	T S O P	Si		D	D
04.07/78	90K058	PL	TINRO	04.26-06.20,1977	NW of Pacific	134	T S O P	Si		D	D

JAPAN  
TA: Takuyo  
SH: Shumpu Maru  
KO: Kofu Maru  
OS: Oshoro Maru  
YY: Shoyo

U.S.S.R.  
PL: Pelamida

Ship Code\*