NO.50 MAR.1977

# CSK NEWSLETTER



# JAPAN OCEANOGRAPHIC DATA CENTER

Hydrographic Department, Maritime Safety Agency Tokyo, Japan SETTE IN MEN YOU



JAPAN OCEANOGRAFHIC BATA CENTER
Hydrographic Department, Maritime Sarety Agency
Tologo, Inner

# CONTENTS

I. Extract of Reports relating to CSK from the Summary Report of Seventh Session of the Executive Council of the IOC, Bergen, Norway, 21 - 26 June 1976 (IOC/EC-VII/3).

II. Cruise Reports (ROSCOP)

Japan

(July 19 - August 22, 1974) Hakuho Maru (October 28 - November 26, 1974) Takuyo (March 7 - 27, 1975) Takuyo (May 8 - 25, 1975) Takuyo (August 11 - September 3, 1975) Kaiyo (February 4 - March 4, 1975) Kofu Maru (July 3 - 22, 1975) Kofu Maru (July 3 - August 8, 1975) Shumpu Maru (July 12 - August 12, 1975) Chofu Maru (July 5 - August 12, 1975) Seifu Maru

III. Abstract of the Papers on CSK

IV. Publications

V. Data Received Japan (Takuyo - 2 crs., Shoyo, Kaiyo, Seifu Maru)

- I. Extract of Reports relating to CSK from the Summary Report of Seventh Session of the Executive Council of the IOC, Bergen, Norway, 21 26 June 1976 (IOC/EC-VII/3, Original: in English).
  - 5.7 <u>CO-OPERATIVE STUDY OF THE KUROSHIO AND ADJACENT REGIONS (CSK)</u>

It was noted that the Assembly had requested the Executive Council to consider further the matter of the future of IOC activities in the Western Pacific.

The delegate of Japan introduced the subject by referring to a letter of 24 April 1976 from the International Co-ordinator for CSK, Prof. K. Wadati, (doc. IOC/EC-VII/15 Add.). He also asked the Council to consider the proposal to terminate CSK in December 1976 and replace it by another project. He then informed the Council about a draft resolution that had been prepared jointly by Japan and the Philippines which suggests the establishment of an ad hoc group to work by correspondance on matters related to the formation and work of WESTPAC; this task team will report to the tenth session of the Assembly.

The representative of Unesco stated that Unesco would continue support to the maintenance and study of the plankton collection of the Regional Marine Biological Centre in Singapore but was ceasing support for sorting. He stressed that the plankton collection is an important resource for region.

The delegate from India supported this statement and reported that both the sorted and the unsorted collections at the Centre are in an excellent condition.

The delegate of Australia stated that both WESTPAC and CINCWIO offer the Commission an opportunity to re-examine its philosophy towards co-operative investigations. In regard to both these bodies he suggested a number of basic principles to guide the Commission's attitude to them.

Firstly, the member states of the Co-operative Investigation should establish very carefully the major problems that can only be solved by co-operative study. These problems must relate to the real needs of the region. The assistance of other United Nations agencies such as FAO, WMO and Unesco (Division of Marine Sciences), as well as IOC itself, should be sought to establish these basic problems. Subsidiary bodies of these agencies such as IPFC could also have a role.

Secondly, after the basic problems are establishes a proper scientific formulation of the programme necessary to achieve solutions, either witjin the means and expertise of the Member States or with external assistance, must be arrive at. The newly-formed Scientific Advisory Board could be a means to achieve this clear formulation of a programme. The IOC should then examine the programme in relation to its budget and other considerations before accepting responsibility.

Thirdly, an evaluation of the present state of knowledge of the oceangraphy of the region, particularly as it relates to basic problems, must be an integral part of the programme definition. The use of consultants, or scientific bodies such as SCOR, supervised by the Scientific Advisory Board could be the mechanism to achieve this evaluation.

Finally, the Working Committees for TEMA and IODE and in some circumstances for GIPME and IGOSS should have direct respresentation in the programme design and execution stages of the co-operative investigation. The role of these Working Committees in the success of any co-operative investigation cannot be over-estimated.

Resolution EC-VII.6 was adopted by vote: 11 for, 1 against with 8 abstentions. The Soviet delegate believed that the vote was illegal, because in his opinion the final paragraph of the resolution contravenes resolution IX-22: Regional Cooperation in Marine Science. The Secretary was instructed to check the legality of this resolution before taking any action.

## RESOLUTION EC-VII.6

AD HOC TASK TEAM FOR THE WESTERN PACIFIC (WESTPAC)

The Executive Council,

Noting resolutions IX-12 and IX-22,

Recognizing the need to continue certain activities of CSK along the lines recommended by the ICG-CSK at its tenth session (recommendation CSK-X.1),

Decides to establish an ad hoc Task Team for WESTPAC to be composed of the national co-ordinators of the present countries participating in CSK, with the following terms of reference:

The ad hoc Task Team shall:

- identify those marine scientific problems in the region which require international collaboration for their solution;
- 2. integrate the national scientific programme within the region with a view to giving them greater relevance to IOC activities in the region;
- 3. recommend ways and means by which the above programmes can contribute to the fulfilment of the needs of the countries in the region, as identified by the <u>ad hoc</u> regional TEMA meeting, Manila, 15-19 September 1975 (doc. IOC/TEMA-ASIA-I/3);
- 4. submit to the tenth session of the Assembly its recommendations on WESTPAC(these should be sent to the Secretary IOC by 31 May 1977);

<u>Instructs</u> the Secretary to investigate ways and means of appointing an appropriate scientist to work with the  $\underline{ad\ hoc}$  Task Team for WESTPAC, and act as secretary for IOC activities in the region.

\* \* \* \* \* \* \* \*

(ROSCOP) SCIENTIST IN CHARGE SHIP OR PLATFORM G. Yamamoto Hakuho Maru INSTITUTION OR OPERATING AGENCY Ocean Research Institute, University of Tokyo (ORIUT) COUNTRY EXPEDITION, PROJECT, AND/OR ORIGINATOR'S CRUISE NO. Japan Studies on marine biotic community (CSK), KH-74-3 DATE OF CRUISE TO: 1974 FROM: 1974 19 TYPE OF QUERIES CONCERNING DATA TOTAL NO. PROGRAMS UNDERTAKEN OF  $\triangle$ SHOULD BE ADDRESSED TO: STATIONS DESCRIPTIVE OCEANOGRAPHY D 1 SERIAL STATIONS D 2 STD D 3 OXYGEN 17 a a bPUB PC M D 4 PHOSPHATES D 5 TOTAL-P D 6 NITRATES D 7 NITRITES D & TRACE ELEMENTS D 9 pH D 10 ALKALINITY 17 a a bPUB PC M D 11 SILICATES FINAL DISPOSITION OF DATA D 12 RADIOACTIVITY (NATIONAL REPOSITORY, INSTITUTION, REGIONAL CENTER, OR WORLD DATA CENTERS) D 13 ISOTOPE CHEMISTRY D 14 OTHER DISSOLVED GASES o. ORTUT D 15 BATHYTHERMOGRAPH (XBT) (NO. OF DROPS) D 16 BATHYTHERMOGRAPH (MECH.) (NO. OF DROPS) D 17 TRANSPARENCY (NO. OF OBS.) D 18 SOUND VELOCIMETER DATA D 19 INSTRUMENTED WAVE RECORDING (4) (4) D 20 TIDES a b PC MT (4) D 21 SEA (1) a a RDS D 22 SWELL D 23 ICE D 24 BOTTOM TEMPERATURE ( \$ 10M FROM BOTTOM) (4) D 25 SEA SURFACE TEMPERATURE METEOROLOGY a a b PUB M 1 UPPER AIR OBSERVATIONS M 2 SURFACE METEOROLOGICAL OBS. (4) M 3 INCIDENT RADIATION (4) GEOLOGY AND GEOPHYSICS TOTAL KILOMETERS STEAMED: a ab PUB a ab PUB G 1 DREDGE AND GRAB SAMPLES (NO. OF SAMPLES) 7720Km @ 2 CORES (NO. CORES) 7720 a a b PUB
13 a a b PUB

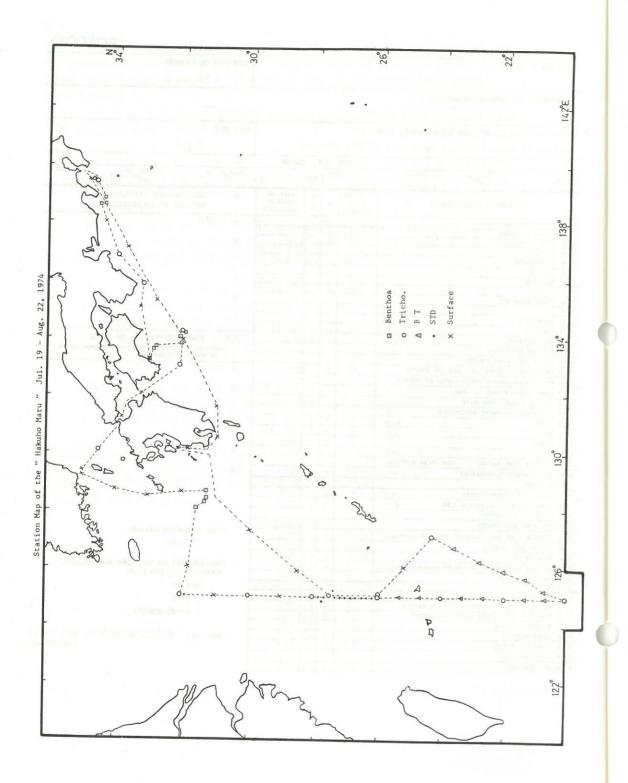
V a a b PUB 0 6 GRAVITY (Km) DATA REPORTED ON THIS FORM ARE DECLARED G 11 BOTTOM PHOTOGRAPHY (NO. OF CAMERA STATIONS) NATIONAL PROGRAM (DNP): @ 12 PALEONTOLOGY (V) YES BIOLOGY B 1 PRIMARY ORGANIC PRODUCTION ( ) NO B 2 PHYTOPLANKTON PIGMENT CONCENTRATION ( ) PART (SPECIFY) a la b PUI B 6 BACTERIA AND OTHER MICROORGANISMS 17 a a b PUB B 7 PHYTOPLANKTON Remarks: Zooplankton Net- ORI -type 30 a a b PUB B B ZOOPLANKTON

la la b PUB

NORPAC-type

B 13 DEMERSAL FISHES

B 14 PHYTOBENTHOS
B 15 ZOOBENTHOS



ROSCOP (2nd edition) DATA CENTRE: J.O.D.C **OCEANOGRAPHY** REFERENCE No : R. 75004 GENERAL CRUISE INVENTORY A - GENERAL INFORMATION ON WORK PERFORMED Special Study of East China Sea YES PART A91 Declared national prog. ? A01 Expedition/Project 74-11 Exchange restricted? Special Study of e East China Sea A02 Ship or platform Takuyo (JDRP) A92 Co-operative programme? 01 Platform type Co-ordinated By whom? internationally? A03 Country A04 Organization A05 Chief scientist(s) I. Noguchi NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS A06 Final disposition of data

HD, MSA, 3-1. Tsuki ji. 5-chome, Chuo-ku, Tokyo a HD, MSA A08 General ocean areas 12,8,1,0,7,4, East China Sea & Pilippine Sea Date: from: DAY MONTH YEAR A09 Type(s) of marine zone(s) to: 12,6,1,1,7,4 N/S Longitude L A10 Geographic area Latitude If all data were collected at a fixed station, fill in the co-ordinates Index 10 x 10 Index 10 x 10 Discipline and type of Discipline and type of 312 HS, HP, HC, D HP,P,O M - METEOROLOGY M04 Ice observations M01 Upper air observations M05 Occasional standard measurements M02 Incident radiation M06 Systematic standard measurements MO3 Air-sea interface studies M90 Other measurements Remarks H - HYDROGRAPHY **NEAR SEA FLOOR** HS SURFACE ( ≤ 10 m) Continuous temperature H01 Continuous temperature recording H05 recording H06 Continuous salinity recording H02 Continuous salinity recording H03 Discrete temperature measurements H07 Discrete temperature 42 measurements 42 H08 Discrete salinity measurements H04 Discrete salinity measurements

HP PHYSICAL

H09 Classical oceanographic stations

42

HC CHEMICAL

H21 Oxygen

42

#### H - HYDROGRAPHY (Continued)

		Number	i	1	Format		Number	1	1	Forma
H10	Vertical profiles (STD/CTD)	11	a	A	1.2.3	H22 Phosphates	42	a	A	1
н11	sub-surface measurements underway					H23 Total · P	42	a	A	1
H12	Mechanical bathythermograph (no. of drops)	24	a	Α	1.8	H24 Nitrates	42	a	A	1
H13	Bathythermograph-expendable (no. of drops)	121	a	A	1.8	H25 Nitrites	42	a	A	1
H14	Sound velocity stations	1 Carry	115	7	northall	H26 Silicates	42	a	A	1
H15	Acoustic stations	II. W	1	-	ar pers	H27 Alkalinity			16	
H16	Transparency					H28 pH	42	a	A	1
H80	Other measurements		T			H31 Radioactivit	y			

#### Remarks

# P - POLLUTION

P01	Suspended solids					PO7 Waste water : BOD					
P02	Heavy metals	23	a	Α	1	P10 Waste water : Other	15	a	A	1	

#### Remarks

## D - DYNAMICS

D01	Current meters (no. of stat.)	מנו ממלי	1			D07	Drift cards (no. released)		
D02	Current meters (average duration of measurement)	1	a	A	1.2	D08	Bottom drifters (no. released)	be yetro	
D03	Currents measured from ship drift		T	П		D09	Tidal observations (duration)		
D04	GEK	133	a	Α	1.2	D10	Sea and swell (no. of observations)		
D05	Drifters (number)		T	П		D90	Other		
D06	Swallow floats (number)		T	П			Van ne	1	

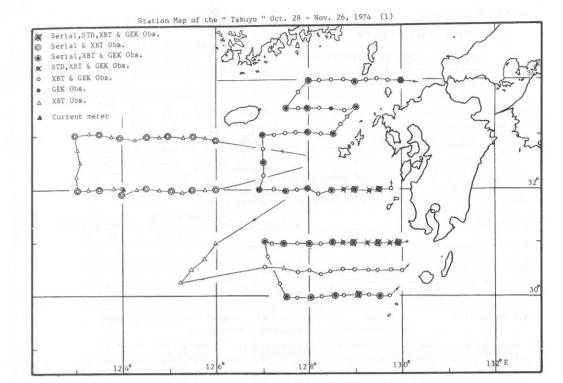
## B - BIOLOGY

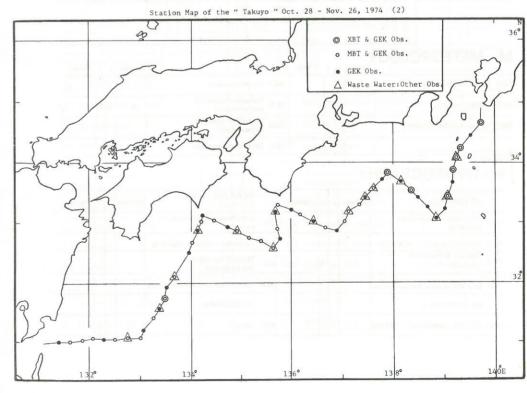
302 Phytoplankton pigments	B21 Commercial benthic crustacean
B08 Phytoplankton	B27 Deep scattering layers
B09 Zooplankton	B28 Acoustical reflections on marine organisms
B10 Neuston	B29 Biologic sounds
B11 Nekton	B30 Bioluminescence
B12 Invertebrate nekton	B31 Vitamin concentrations
B13 Pelagic eggs and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

Remarks		
BS TYPES OF STUDIES	B60 Physiology	Manufacture of the state of the
B51 Identification	B61 Behaviour	185 E F 850

- \* Data Format: 1. Manuscript or publication, 2. Automatic printing 3. Graph recording, 4. Punched card, 5. Punched tape

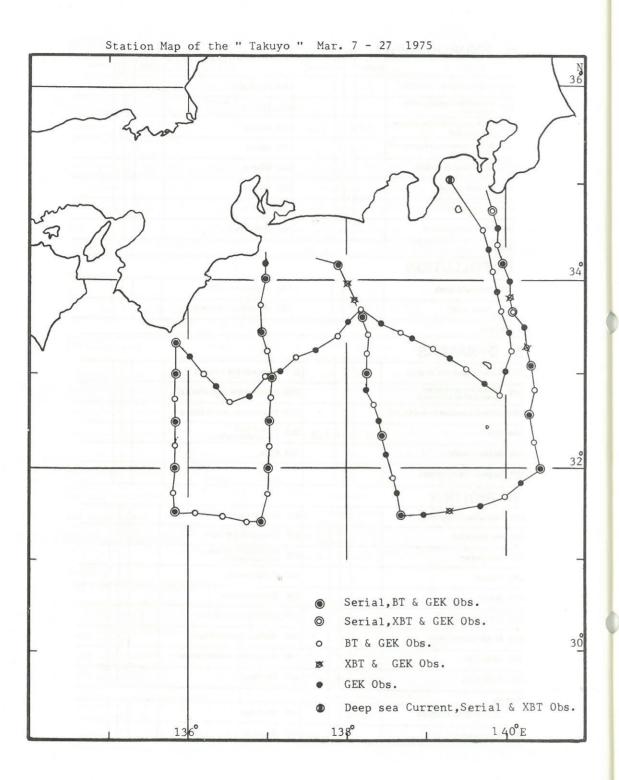
  - 6. Analogue recording on magnetic tape
    7. Digital recording on magnetic tape
    8. Photograph, 9. Samples, 0. Other or unspecified





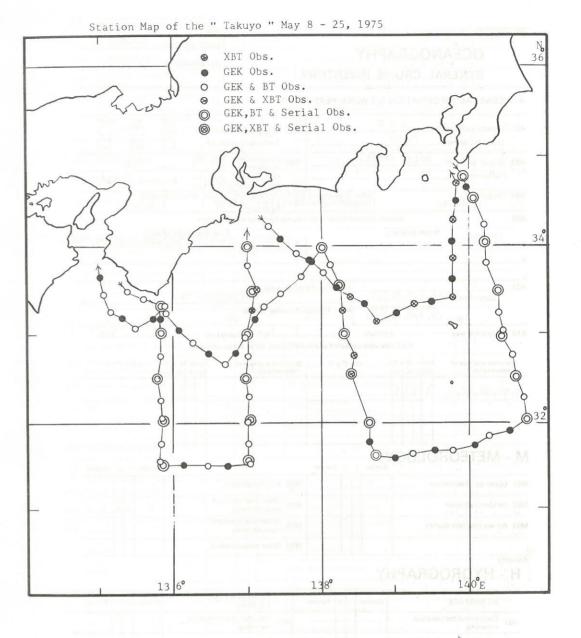
GENERAL CRUISE INVENTORY  A - GENERAL INFORMATION ON WORK PERFORMED  A01 Expedition/Project	ROSCOP (2nd editi	tion)						A00
GENERAL CRUISE INVENTORY  A - GENERAL INFORMATION ON WORK PERFORMED  A01 Expedition/Project	OCEAN	IOGRA	PHY					DATA CENTRE: J.O.D.C
And Expedition/Project C S K					N	TORY	,	REFERENCE No : 10/302/
A01 Expedition/Project C S K Cruise No. or name 74-11  A02 Ship or platform Takuyo(JDRP) Platform type 01  A03 Country A04 Organization Hydrographic Site Co-ordinated internationally D A05 Chief scientist(s) G. Ueno A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS Final disposition of data A HD , MSA 3-1, TSuki ii, 5-chome, Chuo-ku, T B C C C A07  Date: from: DAY MONTH YEAR to: L2.71 0, 31.71.51  DAY MONTH YEAR to: L2.71 0, 31.71.51  Discipline and type of index 10 x 10 index 1" x 1" Discipline and type of measurements  Discipline and type of index 10 x 10 index 1" x 1" Discipline and type of measurements  MO 1 Upper air observations  MO 2 Incident radiation  MO 3 Air-see interface studies  M90 Other measurements	GENERA	L OHOIC	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-				
A01 Expedition/Project Cruise No. or name A02 Ship or platform Platform type  O1.  A92 Co-ordinated Co-ordina	A - GENERAL INFO	RMATION	ON WO	R	K F	PERFO	RMED	
AD2 Ship or platform Takuyo( JDRP) Platform type 01  AD3 Country O1  AD4 Organization Hydrographic Normalization Names And Ad4 Organization Hydrographic Normalization Hydrographic Normalization Hydrographic Normalization Names And Ad4 Organization Hydrographic Normalization Names And Ad4 Organization Hydrographic Normalization Names And Ad4 Organization Hydrographic Names Color Names And Ad4 Organization Hydrographic Names Color Names And Ad4 Organization Hydrographic Names Name Name Name Name Name Name Name Name	A01 Expedition/Project _	C S K	Maria de Arta				A91	
A02 Ship or platform type	Cruise No. or name _	74-11		_				Exchange restricted ?
A03 Country Japan  A04 Organization Hydrographic A05 Chief scientist(s) A06  NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS HD, MSA  Whom to query AD7  Date: from:  L0, 71 (0, 31.7.5) DAY MONTH YEAR to: L2, 71 (0, 31.7.5) A08 General ocean areas Final disposition of data A HD, MSA3-1, Tsuki 11, 5-chome, Chuo-ku, T  B C C A07  Date: from: L0, 71 (0, 31.7.5) DAY MONTH YEAR to: L2, 71 (0, 31.7.5) A08 Type(s) of marine zone(s)  If all date were collected at a fixed station, fill in the co-ordinates  Discipline and type of Index 10 x 10 Index 1° x 1° Index 10	A02 Ship or platform		JDRP)	_	_		A92	
A04 Organization Hydrographic C. Ueno  A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS  Whom to query  HD, MSA  Whom to query  A10, MSA  A10, MSA  A11, MSA  A11, MSA  A12, A13, A13, A14, A15, A15, A15, A15, A15, A15, A15, A15	Platform type	01	-	-	_			nternationally?
Mhom to query  HD, MSA  Whom to query  A HD, MSA  HD, MSA  HD, MSA  A HD, MSA			A04 Depa	oar	rga:	ent Ma	Hydr	ographic A05 Chief scientist(s) G. Ueno
Date: from: L0, 71 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L2, 73 0, 31 7, 5) Lost Month Year Lo: L3, 73 1, 73	A06	NAMI	ES AND A	DD	RES	SES OF	ORGAN	ZATIONS AND PERSONS
Date: from: L0, 71 0, 31 7, 5) Los Month Year Lo: L2, 71 0, 31 7, 5) A08 General ocean areas Philippine Sea A09 Type(s) of marine zone(s) A10 Geographic area  Latitude If all date were collected at a fixed station, fill in the co-ordinates  Discipline and type of Index 10 x 10 Index 10 Index 10 x 10 Index 10 x 10 Index 10 x 10 Index 10 x 10 Index 10 Index 10 x 10 Index 10 x 10 Index 10	HD, MSA W	hom to query				1	A HD	Final disposition of data MSA3-1, Tsuki ji, 5-chome, Chuo-ku, To
Date: from: L0_71_0_31_7_5 DAY MONTH YEAR to: L2_71_0_31_7_5 DAY MONTH YEAR to: L2_71_0_31_7_5 DAY MONTH YEAR to: L2_71_0_31_7_5  A09 Type(s) of marine zone(s) 06  A10 Geographic area  Latitude	,	1 190	100				В	
Date: from: LO_7! O. 3!7.5   Philippine Sea    Latitude   N/S   Longitude   N/S   Longitude   N/S    Discipline and type of   Index 10 x 10   Index 1° x 1°   Discipline and type of   Index 10 x 10   Index 1° x 1°    M, HS, HP, HC, D   1 3 1 3   3   Number   Format   Format   Format    WO1 Upper air observations   M04   Ice observations   M05   Occasional standard   M06   M05   Occasional standard   M06							c	
A09 Type(s) of marine zone(s)  A10 Geographic area  Latitude  If all date were collected at a fixed station, fill in the co-ordinates  Discipline and type of measurements  Discipline and type of measurements  Discipline and type of measurements  M, HS, HP, HC, D  1 31 3  M-HS, HP, HC, D  1 31 3  MO4 Ice observations  MO5 Occasional standard measurements  MO6 Systematic standard measurements  MO7 Air-sea interface studies  A08 Type(s) of marine zone(s)  M/S Longitude  I N/S Longitude  I ndex 10 x 10  Index 10 x		71 0, 31	7,51	A	80	General	ocean	Philippine Sea
A10 Geographic area  Latitude  If all date were collected at a fixed station, fill in the co-ordinates  Discipline and type of measurements  Discipline and type of measurements    National Columber   Nation		2. 71 0. 31	7.51	A	09	Type(s)	of mai	ne zone(s) 06
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°   Discipline and type of measurements   Index 10 x 10   Index 1° x 1°    M, HS, HP, HC, D   1 31 3   3				1	1	. î .	1 ,	N/S Longitude
M- METEOROLOGY Number   Format  M01 Upper air observations  M02 Incident radiation  M03 Air-see interface studies  M00 Other measurements  M00 Other measurements  M00 Other measurements  M00 Other measurements		If all da	ta were c	olle	cte	d at a fix	ed stat	
Number   Format Number   Format Number   Format Number   Format Number   Format   Format Number   Format Numbe	M,HS,HP,HC,D	1 31 3						
Number   Format Number   Format Number   Format Number   Format   Format Number   Format   Format Number   For								
M02 Incident radiation  M05 Occasional standard measurements  X a A 1  M06 Systematic standard measurements  M90 Other measurements  M90 Other measurements	vi - METEOR				1 1	Format		Number i I Format
MO2 Incident radiation MO6 Systematic standard measurements X a A I  MO6 Systematic standard measurements M90 Other measurements	101 Upper air observation	ns					M04	ce observations
M03 Air-sea interface studies M06 Systematic standard measurements M90 Other measurements	MO2 Incident radiation			1	T		M05	
M90 Other measurements  Remarks	103 Air-sea interface stud	lies		1	1		M06	Systematic standard
			-	1	+		M90	
H - HYDROGRAPHY				1	1			
	H - HYDROC	GRAPH	IY					
HS SURFACE Number i I Format NEAR SEA FLOOR ( ≤ 10 m) Number i I Format	HS SURFACE		Number	i	1	Format	1	
H01 Continuous temperature recording H05 Continuous temperature recording		erature					НС	
H02 Continuous salinity recording H06 Continuous salinity recording	H02 Continuous salinity	ty recording					но	Continuous salinity recording
H03 Discrete temperature measurements 86 a A 1 H07 Discrete temperature measurements		ure	86	a	A	1	но	
H04 Discrete salinity measurements H08 Discrete salinity measurements	H04 Discrete salinity m	neasurements			П		но	
HP PHYSICAL HC CHEMICAL				1				HC CHEMICAL
H09 Classical oceanographic stations 31 a A 1 H21 Oxygen 31 a A 1	1100 01	anhic stations	31	a	A	1	H2	Oxygen 31 aA 1

	Number	i	1	Format		Number	i	3	Format
H10 Vertical profiles (STD/CTD)		1			H22 Phosphates	31	a	Α	1
H11 sub-surface measurements underway		T			H23 Total - P				
H12 Mechanical bathythermograph (no. of drops)	52	a	A	1,8	H24 Nitrates		,		
H13 Bathythermograph-expendable	7	a	A	1,3	H25 Nitrites				
(no. of drops) H14 Sound velocity stations		1			H26 Silicates	31	a	Α	1
H15 Acoustic stations		T			H27 Alkalinity				
H16 Transparency		1			H28 pH	31	a	A	1
H80 Other measurements		T	T		H31 Radioactivity	1			1
Remarks			_						1
P - POLLUTION			90		in the second se				
P01 Suspended solids		T	T		PO7 Waste water : BOD		T		
P02 Heavy metals		+	+		PO8 Waste water : Nitrates		T	T	
Remarks		1	_	1			-	-	-
- DYNAMICS		_	_		<u> </u>		Т	Т	1
01 Current meters (no. of stat.)	9	1			D07 Drift cards (no. released)		1	+	
O2 Current meters (average duration of measurement)	1				D08 Bottom drifters (no. released)		1	-	_
03 Currents measured from ship drift					D09 Tidal observations (duration)		1	1	
04 GEK	86	a	A	1,3	D10 Sea and swell (no. of observations)		1	1	
05 Drifters (number)			L		D90 Other		1	1	
06 Swallow floats (number)									
B - BIOLOGY								_	
02 Phytoplankton pigments					B21 Commercial benthic crustacean				
08 Phytoplankton					B27 Deep scattering layers				
09 Zooplankton					B28 Acoustical reflections on marine organisms				
10 Neuston			1		B29 Biologic sounds				
11 Nekton			1		B30 Bioluminescence				
12 Invertebrate nekton			1		B31 Vitamin concentrations				
113 Pelagic eggs and larvae					B32 Aminoacid concentration				
14 Pelagic fish					B33 Hydrocarbon concentrations				
18 Zoobenthos		g			B37 Taggings				
Remarks					1				_
BS TYPES OF STUDIES					B60 Physiology				_
351 Identification					861 Behaviour				



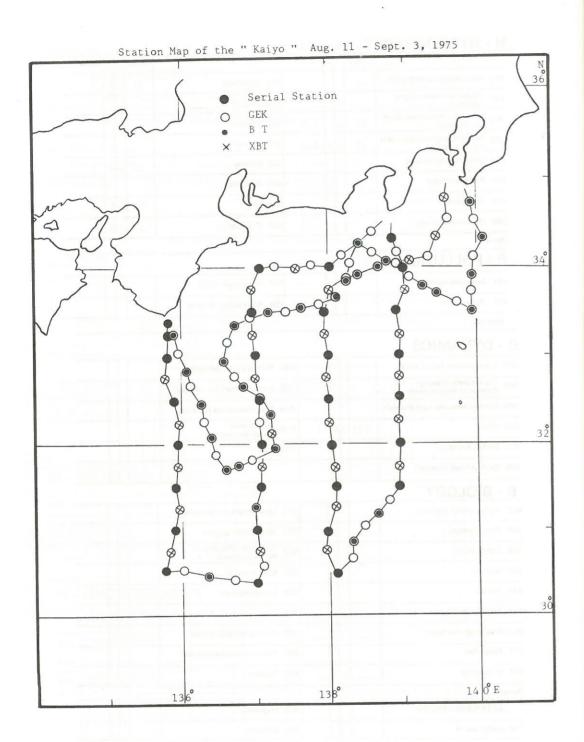
ROSCOP (2nd edition)					DATA CENTRE: J.O.D.C
<b>OCEANOGRA</b>	PHY				REFERENCE No : R. 76002
GENERAL CRUIS	E IN	/E	N <sup>-</sup>	TORY	/
A - GENERAL INFORMATION	ON WO	RK	( P	ERFO	RMED
A01 Expedition/Project Current  Cruise No. or name the 2		re	eme	ent	A91 Declared national prog. ? VES NO PART
Graise No. or maine		7			Exchange restricted?
A02 Ship or platform Takuyo Platform type 01	(JDRP	_	_	_	A92 Co-operative results for the programme? CSK  Co-ordinated internationally? By whom? K. Wadati
A03 Country Japan	A04 Dep	Or	gan	nent .	Hydrographic A05 Chief scientist(s) Maritime K.Nishida
	S AND A	DDF	RES	SES OF	Rency (HD, MSA)
HD, MSA Whom to query					A HD, MSA, 3-1, Final disposition of data Chome, Chuo-ku, Tok
)					В
					c
Date : from: 0, 8, 0, 5, 7	7 5 YEAR	_	_		ocean areas 56 (Philippine Sea)
to: L2, 5, 0, 5,	7,5,		,,,	1 Abe(2)	06
	atitude ta were co	olle	cte	d at a fix	N/S Longitude E/W
Discipline and type of Index 10 x 10 measurements   Qc  L   G   G	Inde	x T	° x 1	19	Discipline and type of Index 10 x 10 Index 1° x 1° measurements   Oc   L   G   G
D,M,HP,HS,HC 1 31 3					
1 3 1 4					
M - METEOROLOGY	Number i	1	F	ormat	Number i I Format
//O1 Upper air observations		1	1		MO4 Ice observations
MQ2 Incident radiation		T	T		M05 Occasional standard measurements X a A 1
MQ3 Air-sea interface studies		1	1	wild .	M06 Systematic standard measurements
		1			M90 Other measurements
Remarks					L
H - HYDROGRAPH	IY				
HS SURFACE	Number	i	ı	Format	NEAR SEA FLOOR ( ≤ 10 m) Number i I Format
H01 Continuous temperature recording					H05 Continuous temperature recording
H02 Continuous salinity recording		T	П		H06 Continuous salinity recording
H03 Discrete temperature measurements	93	a	A	1	H07 Discrete temperature measurements
H04 Discrete salinity measurements					H08 Discrete salinity measurements
HP PHYSICAL					HC CHEMICAL
H09 Classical oceanographic stations	24	a	Α	1,7	H21 Oxygen 24 a A 1
	1	1	1		

	Number	1	1	Format			Number	i	1	Forms
H10 Vertical profiles (STD/CTD)	d line i	T			Н	22 Phosphates	24	a	A	1
H11 sub-surface measurements underway					Н	23 Total · P	A RO			
H12 Mechanical bathythermograph (no. of drops)	55	a	A	1,8	н	24 Nitrates	- 1 - 1   1   1			
H13 Bathythermograph-expendable (no. of drops)	12	a	A	1,3	н	25 Nitrites				
H14 Sound velocity stations				71.1 Pp. 111	H	26 Silicates	24	a	A	1
H15 Acoustic stations				19 11 17	н	27 Alkalinity				wifi
H16 Transparency					H	28 pH	24	a	A	1
H80 Other measurements					Н	31 Radioactivity	2	a	A	1
Remarks				- 1,41		5.72 (85)			deman	
P - POLLUTION	4000		1				41 41 413			
P01 Suspended solids		T	Γ		P	07 Waste water : BOD		Γ	Γ	
P02 Heavy metals		1	T		P	08 Waste water : Nitrates		T	T	
Remarks		-	-						-	
O2 Current meters (average duration of measurement)					D08	Bottom drifters (no. released)	9			
O01 Current meters (no. of stat.)			H			Drift cards (no. released)		-	H	
003 Currents measured from ship drift			H		D09	Tidal observations (duration)		t		
004 GEK	92	a	A	1,3	D10	Sea and swell (no, of observations)		1		
05 Drifters (number)		F			D90	Other		T		
006 Swallow floats (number)			Ħ							
B - BIOLOGY	1								1	
02 Phytoplankton pigments		T	T	100	B21	Commercial benthic crustacean		T		
08 Phytoplankton		T	T		B27	Deep scattering layers		T		10000
09 Zooplankton		T	1	7	B28	Acoustical reflections on marine organisms				
10 Neuston		T	T		B29	Biologic sounds			T	
11 Nekton		T	T		B30	Bioluminescence	MAR			ha
12 Invertebrate nekton	80				B31	Vitamin concentrations			T	
13 Pelagic eggs and larvae		1	1		B32	Aminoacid concentration				
14 Pelagic fish		T	1		B33	Hydrocarbon concentrations				
18 Zoobenthos					B37	Taggings		I	I	
lemarks								_	-	_
BS TYPES OF STUDIES	- iumai	T	1	1995	B60	Physiology	JP - La	1		100 11
	-	+	+	-			-	+	1	



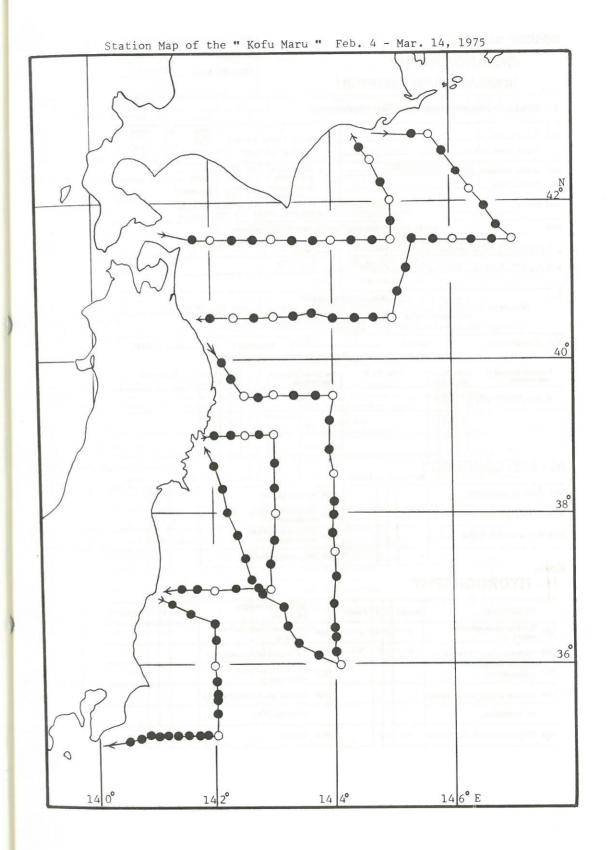
ROSCOP (2nd edition) DATA CENTRE: J.O.D.C **OCEANOGRAPHY** REFERENCE No : R. 76007 GENERAL CRUISE INVENTORY A - GENERAL INFORMATION ON WORK PERFORMED NO PART CSK A91 Declared national prog. ? A01 Expedition/Project . 75-05 Exchange restricted? V Cruise No. or name \_ Kaiyo (8LYK) A92 Co-operative YES NO Programme? A02 Ship or platform \_ CSK internationally? By whom? K. Wadati Platform type \_\_\_ A03 Country Japan A04 Organization Hydrographic A05 Chief scientist(s)
Department Maritime Safety A.Kos A. Kosugi A06 NAMES AND ADDRESSES OF ORGANIZATIONS AND PERSONS Final disposition of data
AHD, MSA3-1, Tsukizi, 5-chome, Chuo-ku, Tokyo HD, MSA A08 General ocean areas A07 Date: from: [1,1,0,8,7,5] Philippine Sea A09 Type(s) of marine zone(s) N/S Longitude L E/W A10 Geographic area If all data were collected at a fixed station, fill in the co-ordinates Index 10 x 10 Index 10 x 10 Index 1° x 1° |Qc|L|G|G| M, HS, HP, HC, D M - METEOROLOGY Number i I Format M01 Upper air observations M04 Ice observations M05 Occasional standard M02 Incident radiation measurements M06 Systematic standard measurements M03 Air-sea interface studies H - HYDROGRAPHY NEAR SEA FLOOR HS SURFACE ( ≤ 10 m) H05 Continuous temperature H01 Continuous temperature recording H06 Continuous salinity recording H02 Continuous salinity recording H03 Discrete temperature measurements H07 Discrete temperature measurements 121 H04 Discrete salinity measurements H08 Discrete salinity measurements HC CHEMICAL HP PHYSICAL H21 Oxygen 31 1 31 H09 Classical oceanographic stations

	Number	i	i	Format		Number	1	1	Forma
H10 Vertical profiles (STD/CTD)					H22 Phosphates	31	а	A	1
H11 sub-surface measurements underway					H23 Total - P				
H12 Mechanical bathythermograph (no. of drops)	60	a	Α	1,8	H24 Nitrates				
H13 Bathythermograph-expendable	29	a	A	1,3	H25 Nitrites				1
(no. of drops) H14 Sound velocity stations					H26 Silicates	31	a	A	1
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency					H28 pH	31	a	Α	1
H80 Other measurements					H29 Chloronity	31	a	A	1
Remarks		_	_	L			1		
P - POLLUTION								Т	
P01 Suspended solids	T	T	T	T	PO7 Waste water : BOD	1	T	T	
P02 Heavy metals		+	1		PO8 Waste water : Nitrates		+	t	
Remarks		_	1				1	-	-
		7.7							
) - DYNAMICS						T	Т	Т	
01 Current meters (no. of stat.)		L	Ц		D07 Drift cards (no. released)		1	L	
O2 Current meters (average duration of measurement)					D08 Bottom drifters (no. released)		L		
03 Currents measured from ship drift					D09 Tidal observations (duration)				
04 GEK	121	a	Α	1	D10 Sea and swell (no. of observations)				
05 Drifters (number)					D90 Other				
06 Swallow floats (number)					8 6 6				
B - BIOLOGY									
02 Phytoplankton pigments		T	T		B21 Commercial benthic crustacean				
08 Phytoplankton					B27 Deep scattering layers				
09 Zooplankton		T	1		B28 Acoustical reflections on marine organisms				
10 Neuston			1		B29 Biologic sounds				
11 Nekton		T	1		B30 Bioluminescence			T	
12 Invertebrate nekton		1	1		B31 Vitamin concentrations				
13 Pelagic eggs and larvae		†	1		B32 Aminoacid concentration				
14 Pelagic fish		+	1		B33 Hydrocarbon concentrations		1	T	
18 Zoobenthos		+	+		B37 Taggings				
emarks		1	_					_	
BS TYPES OF STUDIES		T			B60 Physiology		1	1	
351 Identification	T	T	1		B61 Behaviour				



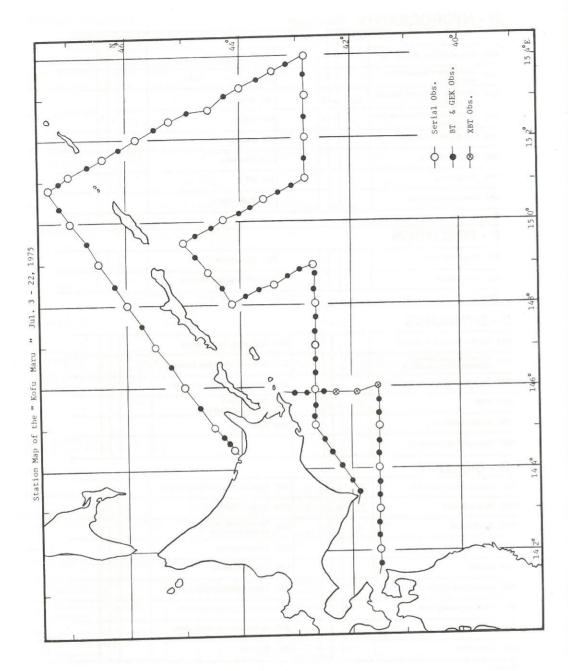
ROSCOP (2nd edition)						DATA CENTRE:	T C	) [	) . (	
OCEANOGRA	PHY					REFERENCE No				
GENERAL CRUIS	E INV	Æ	N	ORY		REFERENCE NO				
A - GENERAL INFORMATION	ON WO	RK	P	ERFOR	RMED					
A01 Expedition/Project C S K				-	A91 Declared natio	nal prog. ?	ŇO	j	P.A	RT
Cruise No. or name 75-02					Exchange restr				[	
02 Ship or platform Kofu Ma Platform type 01	ru(8J1	NZ	)	_	A92 Co-operative programme? Co-ordinated internationally	VES NO Nam	e	SK Wa	da	ti
03 Country Japan				ization Obser	Hakodate rvatory(H.M.C	A05 Chief scien				
NAME	S AND A	DDF	RES	SES OF C	RGANIZATIONS AND	PERSONS				
Whom to query H.M.O. 181Akagawadoric	hyo H	ak	od	ate	A_H.M.O	Final disposition of	data			
	Hokka				B M.D. JMA					
					C					
Date: from: 0 4 0 2 7	5 1	AC	8 N	General	ocean areas Pacific Ocea	n				
to: 14 10 3 17	EAR 5	AC	-		of marine zone(s)					
10 Geographic area La	titude	1		î.	N/S Lo	ngitude L			_ie	/W
Discipline and type of measurements   Index 10 x 10   Qc L   G   G   H, Hs, Hp, Hc, P, D,   1 3 1 4	Inde	1 x 1	* x 1	•	Discipline and type of measurements	Index 10 x 10	Inc	dex '	1° x	1.
H,Hs,Hp,Hc,P,D, 1 4 1 4			_							
M - METEOROLOGY	Vumber i	,	F	ormat			Number	í	1	Format
101 Upper air observations		T	T		M04 Ice observatio	ns			П	
102 Incident radiation					M05 Occasional sta					
MO3 Air-sea interface studies		T			M06 Systematic sta measurements		X	a	A	1
		T	T		M90 Other measure	ements				
Remarks H - HYDROGRAPH	Y									
HS SURFACE	Number	i	1	Format	NEAR SE/ ( ≤ 10 m)	A FLOOR	Number	i	1	Format
H01 Continuous temperature recording	х	a	Α	3	H05 Continuou recording	s temperature		-	-	
H02 Continuous salinity recording	X	a	A	3	H06 Continuou	s salinity recording		-	1	
H03 Discrete temperature measurements					H07 Discrete te					
H04 Discrete salinity measurements					H08 Discrete sa	linity measurements		1		
HP PHYSICAL					HC CHEM	ICAL				
H09 Classical oceanographic stations	26	a	A	1	H21 Oxygen		26	a	A	1

6	a a	$\vdash$	8	H22 Phosphates H23 Total - P H24 Nitrates H25 Nitrites	26 3 3	a	A	1
	-	$\vdash$		H24 Nitrates H25 Nitrites	3	a	Α	
	-	$\vdash$		H25 Nitrites	-			
6	a	A	3		3			1
						a	A	1
				H26 Silicates				
				H27 Alkalinity				
	$\vdash$			H28 pH	3	a	A	1
				H31 Radioactivity	4	a	В	1
		-					-	
	T			P07 Waste water : BOD		T		
2	b	В	1	PO8 Waste water : Nitrates		T	T	
7000	1					-	-	-
	_							
						_	_	
				D07 Drift cards (no, released)	N .			
				D08 Bottom drifters (no. release	ed)			
				D09 Tidal observations (duration	on)	1		
95	a	A		D10 Sea and swell (no. of observations)				
				D90 Other		1	L	
6	Ta	A	1	B21 Commercial benthic crusta	cean			
6	а	A	1	B27 Deep scattering layers				
4	a	A	1	B28 Acoustical reflections on marine organisms	i Carta			
	1	T		B29 Biologic sounds				
	1			B30 Bioluminescence				
	1	1		B31 Vitamin concentrations				
	1	1		B32 Aminoacid concentration				
	1	1		B33 Hydrocarbon concentration	ons			
	1	1		B37 Taggings				
		-						
	T	1		B60 Physiology				
	+	+	1	B61 Behaviour			1	
	6	6 a	6 a A	6 a A 1	6 a A 1 B21 Commercial benthic crusta 6 a A 1 B27 Deep scattering layers 4 a A 1 B28 Acoustical reflections on marine organisms  B29 Biologic sounds  B30 Bioluminescence  B31 Vitamin concentrations  B32 Aminoacid concentration  B33 Hydrocarbon concentration  B37 Taggings	6 a A 1 B21 Commercial benthic crustacean 6 a A 1 B27 Deep scattering layers 4 a A 1 B28 Acoustical reflections on marine organisms  B29 Biologic sounds  B30 Bioluminescence  B31 Vitamin concentrations  B32 Aminoacid concentration  B33 Hydrocarbon concentrations  B37 Taggings	6 a A 1 B21 Commercial benthic crustacean 6 a A 1 B27 Deep scattering layers 4 a A 1 B28 Acoustical reflections on marine organisms  B29 Biologic sounds  B30 Bioluminescence  B31 Vitamin concentrations  B32 Aminoacid concentration  B33 Hydrocarbon concentrations  B37 Taggings	6 a A 1 B21 Commercial benthic crustacean 6 a A 1 B27 Deep scattering layers 4 a A 1 B28 Acoustical reflections on marine organisms  B29 Biologic sounds  B30 Bioluminescence  B31 Vitamin concentrations  B32 Aminoacid concentration  B33 Hydrocarbon concentrations  B37 Taggings



OSCOP (2nd edition)					DATA CENTRE: J.O.D.C
<b>OCEANOGRA</b>	PHY				REFERENCE No : R. 76011
GENERAL CRUIS	E IN	/E	NT	ΓORY	
- GENERAL INFORMATION	ON WO	RK	P	ERFOR	RMED
O1 Expedition/Project				9	A91 Declared national prog.? YES NO PART  Exchange restricted?
O2 Ship or platform Kofu-Maru Platform type 01	(8JNZ	)			A92 Co-operative YES NO programme? [V] Name
03 Country Japan	A04 Hak	Or	gan	ization eMari	neObservatory S. Kuronuma
					RGANIZATIONS AND PERSONS
H.M.O.181 Akagawadoric					A. H.M.O. Final disposition of data
M.D.JMA 1-3-4 Ohte Ma	ifY, H	ok hi	ka	ido daku,	M.D.JMA
T	okyo,				C
07  Date: from: 0,3,0,7,7	5.	AO	8	General	ocean areas
DAY MONTH Y	EAR	_			of marine zone(s)
to: 12,210,71	7, 51		_	04,06	
Discipline and type of measurements   Index 10 x 10 measurements   Oct L   G   G   M, Hs, Hp, Hc, D, E 1   4   1   4	Inde	8x 1	x 1		Discipline and type of measurements
1 41 5					
			_		
/ - METEOROLOGY	r Number i	1	F	ormat	Number i I Format
01 Upper air observations			I		M04 Ice observations
02 Incident radiation					M05 Occasional standard measurements
03 Air-sea interface studies			1		M06 Systematic standard measurements X a A 1
			L		M90 Other measurements
emarks	V				
H - HYDROGRAPH			-		
H - HYDROGRAPH	Number	i	1	Format	NEAR SEA FLOOR ( ≤ 10 m) Number i I Forma
		i a	-	Format 3	
HS SURFACE H01 Continuous temperature	Number	H	A		( ≤ 10 m) Number i   Forma
HS SURFACE  H01 Continuous temperature recording	Number	a	A	3	( ≤ 10 m) Number i I Forma  H05 Continuous temperature recording
HS SURFACE H01 Continuous temperature recording H02 Continuous salinity recording Discrete temperature	Number	a	A	3	( ≤ 10 m) Number i I Forms  H05 Continuous temperature recording  H06 Continuous salinity recording  H07 Discrete temperature
HS SURFACE  H01 Continuous temperature recording  H02 Continuous salinity recording  H03 Discrete temperature measurements	Number	a	A	3	( ≤ 10 m) Number i I Forms  H05 Continuous temperature recording  H06 Continuous salinity recording  H07 Discrete temperature measurements

	Number	1	1	Format		Number	i	1	Format
H10 Vertical profiles (STD/CTD)			П		H22 Phosphates	34	a	Α	1
H11 sub-surface measurements underway			П	-	H23 Total - P				
H12 Mechanical bathythermograph (no. of drops)	90	a	Α	8	H24 Nitrates				
H13 Bathythermograph-expendable (no. of drops)	3	a	A	3	H25 Nitrites	2	a	Α	1
H14 Sound velocity stations		1			H26 Silicates				
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency			П	0.	H28 pH				
H80 Other measurements			П		H31 Radioactivity				
Remarks		-							
P - POLLUTION									5
P01 Suspended solids		T	Г		P07 Waste water : BOD				
P02 Heavy metals		+	T		PO8 Waste water : Nitrates				
Remarks		-	-				-	1	
D - DYNAMICS				3					
001 Current meters (no. of stat.)	Г	Г	П		007 Drift cards (no, released)		Г		
Current meters (average	-	$\vdash$	Н	8	008 Bottom drifters (no. released)		+	$\vdash$	
duration of measurement)	-	H	H		009 Tidal observations (duration)		$\vdash$	H	
DO3 Currents measured from ship drift  DO4 GEK	96	-		1	O10 Sea and swell		H	H	
Property designation	86	a	A	1	(no. of observations)		$\vdash$	+	
DOS Orifters (number)		$\vdash$	H		090 Other	-	+	+	
006 Swallow floats (number)		L					L		
B - BIOLOGY	T	_	_				_	_	
02 Phytoplankton pigments	13	a	A	1	321 Commercial benthic crustacean		1	1	
808 Phytoplankton	13	a	A	1	327 Deep scattering layers				
309 Zooplankton	9	a	A	1	Acoustical reflections on marine organisms				
310 Neuston		I			329 Biologic sounds		1		
311 Nekton		T			330 Bioluminescence				
312 Invertebrate nekton					331 Vitamin concentrations				
313 Pelagic eggs and larvae	- 1	T	1		B32 Aminoacid concentration				
314 Pelagic fish		T			B33 Hydrocarbon concentrations				
318 Zoobenthos		T			B37 Taggings		I		
Remarks		_	_				_	_	_
BS TYPES OF STUDIES					B60 Physiology		1		
351 Identification	1	1	1		B61 Behaviour				



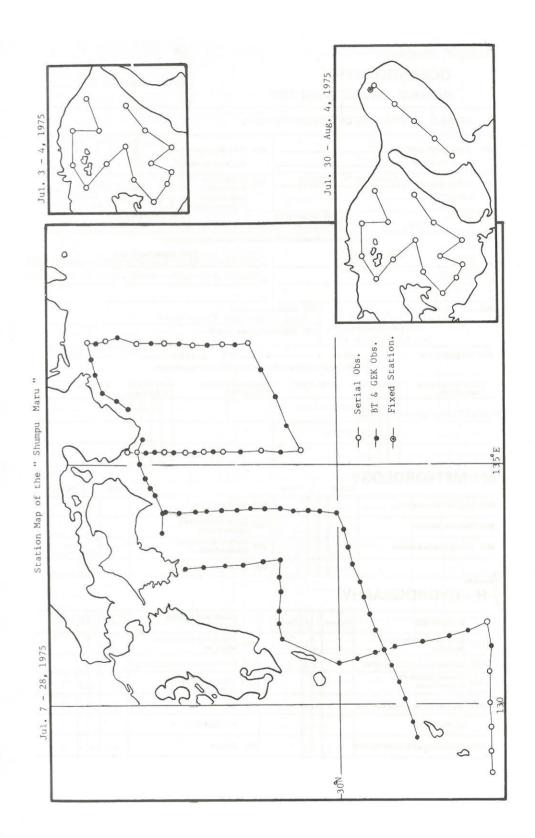
ROSCOP (2nd edition)

#### **OCEANOGRAPHY** GENERAL CRITISE INVENTORY

DATA CENTRE: J.O.D.C REFERENCE No : R. 75030

GENERA	\L	-	-R	UIS	E IIA	/ C	IA	IUNI										
A - GENERAL INF	OR	M	ATI	ON	ON WO	Rk	( P	ERFO	RME	ED								
NO1 Expedition/Project Cruise No. or name		_	C.S						A9		lared national		g. ?	VES	NO V	]	P	AAT
.00 81: 1.7	_	5	Shu	mpi	Maru				A9:	, Co-c			NO					
NO2 Ship or platform	_		-	01		_	_		A9.	prog	gramme ? ordinated rnationally?			Nam By v		Wa	da	ti
VO3 Country Japan				-	A04 Kob	Or e	gar Ma	nization arine	ОЪ		atory	A05	Chi enz	ef scier	tist(s) huto			IG E
NO6				NAMI	ES AND A	DDF	RES	SES OF C	ORGA	ANIZAT	TIONS AND P	ERSO	NS					1000
J.M.A Otemach	Who	om Cl	to q	uery	aku To	ky	0	Јарар	nA	K.M	1.0 F	inal d	isposi	tion of	data			
K.M.O 178 Nak								-	В									
		Ko	obe	Ja	apan				C_			100000						
07	0,	3	101	717	7,5,	A	P <sub>l</sub>	General nilip	oces	an area 1e Se	s ea & Inl	and	Se	a.				
to l					7 5 J	A	9	Type(s) 04,0			zone(s)							
10 Geographic area				L	atitude	1				اتــــ	N/S Lon	gitude					_ie	/W
			If &	ell da	ta were co	olle	cte	d at a fix	ed s	tation,	fill in the co	o-ordi	nates					
Discipline and type of measurements			( 10 L   G		Inde	9× 1	×	1*		cipline a asureme	and type of nts			10 × 10	In	dex	1° x	10
,Hs,Hp,Hc,P,B,	D	1	3 1	3														
	1	1 2	2 1	3														
	1		2 1	2														
л - METEOR	0	L	0.	GY	/ Number i			Format							Number	-	1	Format
01 Upper air ohservation	ons					T	T		MO	)4 Ice	observations						П	
02 Incident radiation						T	T		МО		asional stand	dard						7
103 Air-sea interface stu	die	s				T	T		МО		tematic stand	dard			96	a b	A	1
						T	T		M9	0 Oth	er measuren	nents						
H - HYDRO	G	R	1A	PH	IY	1	_											
HS SURFACE					Number	i	,	Format			NEAR SEA ( ≤ 10 m)	FLOC	R		Number	i	ı	Forma
H01 Continuous tem	pera	atu	re		Х	ь	Α	3			Continuous trecording	empe	rature	2	1 116			
H02 Continuous salin	ity	rec	cord	ing	Х	b	A	3		H06 (	Continuous s	alinit	у гесс	ording				
H03 Discrete tempera	atur	re			130	a b	Α	1			Discrete tem measuremen		ıre		44	a b	A	1
H04 Discrete salinity	me	eası	uren	nents	130	a	Α	1		H08 I	Discrete salir	nity m	easur	ements	44	a b	A	1
HP PHYSICAL										1	HC CHEMIC	AL				T		
H09 Classical oceano	grap	phi	c sta	tions	65	a	A	1		H21 (	Oxygen				65	a	A	1
					1	10	4	1							4		4-	

	Number	i	ı	Format		Number	i	1	Format
H10 Vertical profiles (STD/CTD)					H22 Phosphates	65	a	Α	1
H11 sub-surface measurements underway					H23 Total - P	47	_	A	1
H12 Mechanical bathythermograph (no. of drops)	95	a	Α	1,8	H24 Nitrates	17	a	A	1
H13 Bathythermograph-expendable (no. of drops)				181	H25 Nitrites	35	a b	A	1
H14 Sound velocity stations					H26 Silicates				
H15 Acoustic stations					H27 Alkalinity				
H16 Transparency	48	a b	A	1	H28 pH	3	a	A	1
H80 Other measurements					H31 Radioactivity				
Remarks								_	
P - POLLUTION							_		1
P01 Suspended solids		T			PO7 Waste water : BOD		1		
P02 Heavy metals	2	Ê	A	1	PO8 Waste water : Nitrates				
Remarks							_	_	
O - DYNAMICS									
001 Current meters (no. of stat.)	1	a		1	D07 Drift cards (no. released)				
Current meters (average duration of measurement)	lday	ta	A	-	D08 Bottom drifters (no. released)				
003 Currents measured from ship drif	t	-	1		D09 Tidal observations (duration)				
004 GEK	94	a	A P	1	D10 Sea and swell (no. of observations)	96		a b	1
005 Drifters (number)		1			D90 Other				
006 Swallow floats (number)		1			Note that				
B - BIOLOGY			_						
302 Phytoplankton pigments	57		a l	A 1	B21 Commercial benthic crustacean				
BO8 Phytoplankton	57		2	A 1	B27 Deep scattering layers				
B09 Zooplankton	56		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			1	
B18 Zoobenthos					B37 Taggings			1	11_
Remarks								T	П
			1		B60 Physiology			1	1 1



ROSCOP (2nd edition)

A00	
DATA CENTRE:	J.O.D.C
REFERENCE No	R.75038
HEI EHEROE NO	

	OCEAN GENERA						Έľ	TV	ORY			REI	ERE	ICE No	. R. 75	03	8	
-	GENERAL INFO					-				MED								П
01	Expedition/Project Cruise No. or name	-	CS I 75-							A91 Declared national prog. ? VES NO PART  Exchange restricted ? VES NO PART								AT ]
02	Ship or platform _ Platform type	Cho	fu 01		cu (	JP(	QX	)_		732 p	rog	pperative YES varianme?	NO	Name By w		Wa	dat	i
03	Country Japan	1			No.	aga	Org	ak	ization i Mar			servatory	5 Ch	ief scien M.M.	tist(s) atsuz	ak	i	
-	NMO MD,JMA	Whom				AD	OR	ESS		▲ NMC	, ]	Final 1-51, Mina 1A, 1-3-4, O	dispos m1 y a	tion of nmate	data -cho, ,Chiy	Na od	ga a-	saki- ku,To
)7		DAY	MO	NTH '	7,5, YEAR 7,5			Ea	General of St Cl	hina	Sene	ea (Tung H	lai)					
Dir	Geographic area		x 10	× 10		nde:					ne a	fill in the co-ord and type of ints	Index	10 x 10	Ind	ex 1	*x	ļ•
1	- METEOF	ROL		1 2 GY	Number	r i		F	Format						Number	,	1	Format
01	Upper air observati	ons					L					observations					1	
	Incident radiation  Air-sea interface str	urlies		-		+	+	+		MOS	Sys	casional standard asurements tematic standard asurements			X	a	Α	1
	All sea Internace at			-		+	+	+		-		ner measurement	s		Λ	a	-	
	- HYDRO	GF	RA	\PF	ΗY							NEAD OF A SI	NO.					
	HS SURFACE				Numl	ber	i	1	Format			NEAR SEA FLO ( ≤ 10 m)			Number	i	1	Format
Н	Continuous tem	perat	ure		X		a	Α	3	но		Continuous tem recording	peratu	re		-		
Н	02 Continuous sali			ding	Х		a	A	3	но	6	Continuous salir	ity re	cording				
Н	Discrete temper measurements	rature								но		Discrete tempera measurements	ature		21	a	A	1
Н	04 Discrete salinity	y mea	sure	ment	s					но	_	Discrete salinity	measu	rements	21	a	A	1
_	HP PHYSICAL											HC CHEMICAL			-	1	-	
_	09 Classical oceano				1		1	1		H2							A	1

The state of	Number	i	1	Format		Number	i	1	Format
H10 Vertical profiles (STD/CTD)					H22 Phosphates	9	a	Α	1
H11 sub-surface measurements underway			-		H23 Total · P	3	a	Α	1
H12 Mechanical bathythermograph (no. of drops)	75	a	A	8	H24 Nitrates	3	a	Α	1
H13 Bathythermograph-expendable (no. of drops)	11	a	A	3	H25 Nitrites	3	a	Α	1
H14 Sound velocity stations			T		H26 Silicates				
H15 Acoustic stations	-				H27 Alkalinity				
H16 Transparency	22	a	A	1	H28 pH	3	a	Α	1
H80 Other measurements		T			H90 Other measurements	3	a	A	1
Remarks		_							
P - POLLUTION									
P01 Suspended solids		T	T		P07 Waste water : BOD		T	T	
PO2 Heavy metals	2	b	I	3 1	PO8 Waste water : Nitrates		+	1	
	1 -	1	1,	1			-	-	-
Remarks		-	-	Par I			25.0		
- DYNAMICS					0-1-0-1-1		_	_	1
01 Current meters (no. of stat.)		T			D07 Drift cards (no. released)		1	1	
Current meters (average duration of measurement)		1			D08 Bottom drifters (no. released)		1	1	
03 Currents measured from ship drif	t	T			D09 Tidal observations (duration)		1	1	
004 GEK	59	1	a A	1	D10 Sea and swell (no. of observations)		1	1	-
005 Drifters (number)					D90 Other	-	1	+	-
006 Swallow floats (number)									
B - BIOLOGY							_		
02 Phytoplankton pigments	9		a	A 1	B21 Commercial benthic crustacean			1	1
308 Phytoplankton	9		a	A 1	B27 Deep scattering layers				-
309 Zooplankton	9		a	A 1	B28 Acoustical reflections on marine organisms				-
310 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							-	T	П
BS TYPES OF STUDIES					B60 Physiology			-	1
B51 Identification	$\top$	_	T		B61 Behaviour				

Station Map of the " Chofu Maru " Jul. 12 - Aug. 12, 1975 122° 124° 130°E —34°N Serial & BT 0-04 91 BT 75-380 X ch-0485 0456 Q 75-310 75-320 -0460 -0464 00 75-330 -0470 -0473 75-350 75-340 ch-0466 75-360 -0485 75-370 ch-0482 - 26°-8. 28

ROSCOP (2nd edition)					A00						
OCEANOGRA	PHY	,			DATA CENTRE: J.O.D.C						
GENERAL CRUI			EN	ITOP	REFERENCE No : R. 75036						
GENERAL CROI	SE IIV	-	CI	TON							
- GENERAL INFORMATION	ON W	OF	K	PERFO	RMED						
11 Expedition/Project C S K Cruise No. or name 75-06					A91 Declared national prog. ? VES NO PART Exchange restricted ?						
2 Ship or platform Seifu-Ma Platform type01	ru (JI	PV	B)		A92 Co-operative YES NO programme?   Name CSK   Name CSK   Name						
3 Country Japan				nization	internationally?   By whom?   N. Waddat1						
		_			ORGANIZATIONS AND PERSONS						
MMO Whom to query	/				Final disposition of data <u>AMMO, Shimofukui Maizuru-shi</u> , Japan						
					В						
					C						
7 Date: from: 0,5,0,7	7,5,	1	108	General	ocean areas Sea of Japan						
DAY MONTH		A	109	Type(s)	of marine zone(s)						
	atitude	L	L	•	04, 06						
Discipline and type of Index 10 x 10 nessurements			1° x		ced station, fill in the co-ordinates  Discipline and type of Index 10 x 10 Index 1° x 1° measurements  Qc L G G						
нѕ,нр,нс,р,в 1 3 12	MISI				80						
1 3 1 3											
1 4 13											
- METEOROLOGY	,										
	Number i	_	1	Format	Number i 1 Format						
Upper air observations					M04 Ice observations						
2 Incident radiation					M05 Occasional standard measurements						
Air-sea interface studies		I	T	i I I poliča	M06 Systematic standard measurements X a A 1						
		1			M90 Other measurements						
arks 1 - HYDROGRAPH	IV										
I - HYDROGRAPH	11				The state of the s						
HS SURFACE	Number	i	1	Format	NEAR SEA FLOOR ( ≤ 10 m) Number i I Format						
01 Continuous temperature recording	3800 miles	a	A	3	H05 Continuous temperature recording						
02 Continuous salinity recording	3800 miles		А	3	H06 Continuous salinity recording						
Discrete temperature measurements	Х		Α	1	H07 Discrete temperature 7 a A 1						
04 Discrete salinity measurements	Х	a	A	1	H08 Discrete salinity measurements 7 a A 1						
HP PHYSICAL			П		HC CHEMICAL						
109 Classical oceanographic stations	68	a	A	1	H21 Oxygen 68 a A 1						
	0.00	_									

1.1	LIVERGERABLIV	
H -	HYDROGRAPHY	(Continue

		Number	i	1	Format		Number	i	1	Format
H10	Vertical profiles (STD/CTD)	2111				H22 Phosphates	36	a	A	1
H11	sub-surface measurements underway					H23 Total - P	3	а	A	1
H12	Mechanical bathythermograph (no. of drops)	146	a	A	8	H24 Nitrates	3	a	A	1
H13	Bathythermograph-expendable (no. of drops)	and the				H25 Nitrites	3	a	A	1
H14	Sound velocity stations	Y. Davids				H26 Silicates		L		
H15	Acoustic stations			100		H27 Alkalinity				
H16	Transparency	33	a	A	1	H28 pH	3	a	A	1
H80	Other measurements					H31 Radioactivity				

# P - POLLUTION

P01 Suspended solids	P07 Waste water : BOD	
PO2 Heavy metals	P08 Waste water : Nitrates	

# D - DYNAMICS

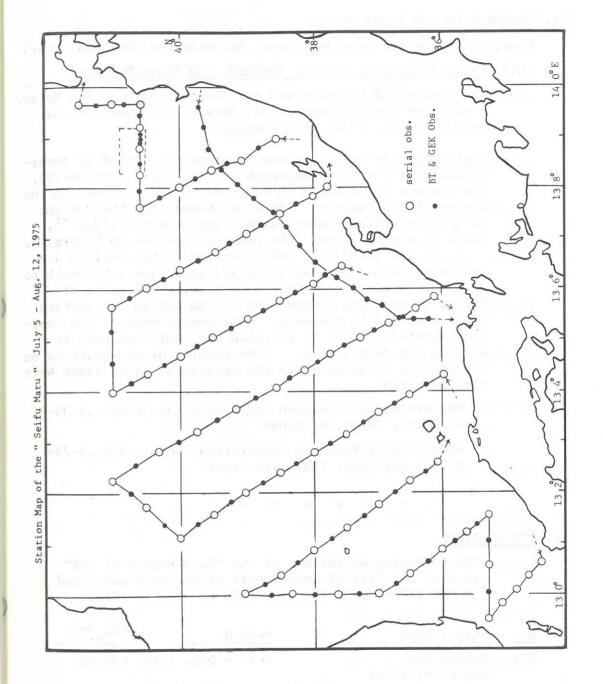
D01	Current meters (no. of stat.)				110	D07 Drift cards (no. released)
D02	Current meters (average duration of measurement)	,		T		D08 Bottom drifters (no. released)
D03	Currents measured from ship drift		Г			D09 Tidal observations (duration)
D04	GEK	127	a	Α	1	D10 Sea and swell (no. of observations)
D05	Drifters (number)					D90 Other
D06	Swallow floats (number)		Γ			The second secon

## B - BIOLOGY

BS TYPES OF STUDIES

**B51** Identification

D - DIOLOGI					
302 Phytoplankton pigments	11	a	A	1	B21 Commercial benthic crustacean
308 Phytoplankton	11	a	A	1	B27 Deep scattering layers
B09 Zooplankton	11	a	A	1	B28 Acoustical reflections on marine organisms
B10 Neuston		T			B29 Biologic sounds
B11 Nekton		T			B30 Bioluminescence
B12 Invertebrate nekton	1000	1	1	A A	B31 Vitamin concentrations
B13 Pelagic eggs and larvae		1	T		B32 Aminoacid concentration
B14 Pelagic fish		1			B33 Hydrocarbon concentrations
B18 Zoobenthos		1	1		B37 Taggings
Remarks Norpac Stand	ard Net				
BS TYPES OF STUDIES		T			B60 Physiology



#### III. ABSTRACT OF THE PAPER ON CSK

(Continued from the previous issue, No. 49 of the CSK Newsletter)

#### (94) Yukio Sugimura\*, Yoshimi Suzuki\*, and Yasuo Miyake\*\*

The Content of Selenium and its Chemical Form in Sea Water. Journal of the Oceanographical Society of Japan Vol. 32, pp.235 to 241, 1976. (in English)

Abstract: By using the new fluorometric method of determination of the total selenium ( $\Sigma$ Se), Se(IV) and Se(VI), the content of selenium in sea water was determined in the western North Pacific. Results showed that the content of  $\Sigma$ Se in surface water ranged from 0.06 to 0.12 $\mu$ gl<sup>-1</sup>, while in deeper layers, the content increase to 0.20 $\mu$ gl<sup>-1</sup>.

It was found that Se(IV) showed rather uniform distribution with depth, while Se(VI) increased with depth to about three times that in the surface. The ratio of Se(IV) to the  $\Sigma$ Se ranged from 0.5 to 0.8 in the surface and 0.4 to 0.6 in the deep. The coexistence of the hexa-and tetravalent ions of selenium was confirmed both in surface and deep layers. Some results of observations on the content of selenium in the coastal areas of Japan were also reported.

- \* Meteorological Research Institute, Koenji-kita,4-35-8, Suginami, Tokyo,166 Japan
- \*\*\* Geochemistry Research Association, Koenji-kita,4-29-2-217, Suginami, Tokyo,166 Japan

\* \* \* \* \* \* \* \* \*

#### IV. PUBLICATIONS

The following 44 volumes of the "Data Report of CSK" series, and List of Data Report of CSK were published by KDC (JODC) from February 1975 to October 1976.

No.	Ship & Area	Period	KDC Ref.		
259	Oshoro Maru South China Sea	Nov Dec. 1970	49K160		
309	Orlick N. W. of the North Pacific	Jul Sep. 1971	90K035		
315	Priboy W. of North Pacific	Jun Sep. 1971	90K043		

No.	Ship & Area	Period	Later	KDC Ref.
316	Priliv W. of North Pacific	Sep Oct. 19	971	90K044
317	Jalanidhi South China Sea & Seribu Islands	December 19	971	42K005
319	Priboy N. W. of North Pacific	Dec. 1971 - Feb. 19		90K041
320	Priliv East of Japan	February 1	972	90K036
321	A.I.Voeikov N. W. of North Pacific	Jan Feb. 19	972	90K038
323	Chofu Maru East China Sea	Jan Feb. 10	072	49K149
324	Kofu Maru East of Japan	Feb Mar. 1	972	49K155
325	Shumpu Maru Osaka Wan , Kii Channel & South of Japan	Feb Mar. 1	972	49K156
327	Seifu Maru Japan Sea	Feb Mar. 1	972	49K157
329	Keledkeo Andaman Sea	Jan May. 1	972	86K016
330	U.M. Schokalsky Pacific Ocean	Jan Apr. 1	972	90K045
338	Kofu Maru Okhotsk Sea & E. of Japan	Jul Sep. 1	972	49K164
339	Shumpu Maru Bungo Channel, Kii Channel & South of Japan	Jul Aug. 1	972	49K162
343	Chofu Maru East China Sea	Jul Aug. 1	972	49K166

No.	Ship & Area	Period		KDC Ref.
347	Samudera South China Sea & around Seribu Islands	Jul Aug	. 197	2 42K006
348	Orlick N. W. of North Pacific	Jul Sep	. 1972	90K042
350	Oshoro Maru South China Sea & Indian Ocean	Nov Dec	. 1972	2 49K175
351	Ryofu Maru W. of North Pacific & South of Japan	Jan Feb	. 1973	49K163
352	Kofu Maru East of Japan	February	1973	49K174
353	Shumpu Maru Bungo Channel, Kii Channel & South of Japan		1973	49K170
354	Chofu Maru East China Sea	Jan Feb.	1973	49K161
355	Seifu Maru Japan Sea	Feb Mar.		
356	Shoyo S. E. of Japan	March	1973	49K168
358	Suro No. 3 South of Korea	Apr May	1973	24K048
	Takuyo South of Japan	May		49K171
23 1.10	Samudera Djakarta Bay & South China Sea	Jun Jul.		42K007
	Ryofu Maru West of Pacific	Jun Aug.		49K172
	Kofu Maru East of Japan	Jul Aug.	1973	49K177

No.	Ship & Area	Period	KDC Ref.
363	Shumpu Maru Osaka Wan, Kii Channel	Jul Aug. 197	3 49K178
	& South of Japan		
364	Chofu Maru East of Japan	Jul Aug. 197	3 49K173
365	Seifu Maru Japan Sea	Jul Aug. 197	3 49K176
366	Kaiyo South of Japan	August 1973	3 49K193
367	Suro No. 3 South of Korea	Aug Sep. 197	3 24K049
369	Takuyo East China Sea	Oct Nov. 197	3 49K185
373	Chofu Maru East China Sea	Jan Feb. 197	4 49K179
374	Ryofu Maru West of Pacific	Jan Mar. 197	4 49K180
375	Seifu Maru Japan Sea	Feb Mar. 197	4 49K181
376	Keifu Maru Kii Channel & S. of Japan	Jan Feb. 1976	4 49K187
377	Kofu Maru East of Japan	Feb Mar. 197	4 49K186
378	Takuyo South of Japan	May 197	4 49K188
379	Suro No. 3 South of Korea	May Jun. 1974	24K050
List	of Data Report of CSK,	March 197	6

DATA RECEIVED

		7									4	
ical	mottom ragodol golois		anti-				Dhaoa	Chl.a				
			Q		9 0	Ω Ω				20 8		
1	uəzzng						119	)				
-	U	5	77 - 4-				-	3				
	R T S	1					33	)				
				1		-		,				
			L PH	PH		PH	PH				. relia	
			Si	Si	Si	Si						
MP.	1						. N3					
	Serial						N2					
	Se		Д	Д			TP					
			0	0	0 P	0 P	0 P					
			S	S	S	S	S					
			Z 92	18 T	41 T	23 T	50 T					
	of Stas.		, V		4	2	5					
2	of of Stas											
19.3	100		, ro	_	100			_				
	8 1 1		Sean	Japan	pan	pan	Э	Wan				
			China Sea	Ja	of Japan	of Japan	Se	sa				
14.0	Area			of			Japan Sea	& Wakasa		ıru		
			लं छ	S	S	s.	Ja	S	0	M		
			75	94	9/	92	92		Kaiyo	Seifu Maru		
(2)			,19	,19	,19	,19	,19		X	S		
	P		.16	.24	.04	.25	.14		K	SI		
	Period		-1	-03	90-	-08	-08		_	0,1		
	Pe		10,18-11,16,1975	03.10-03.24,1976	05.12-06.04,1976	08.09-08.25,1976	07.08-08.14,1976					
			10	03	05	08	07		iyo	02		
	7						⟨d¹		Takuyo	Shoyo		
	Agency		HDMSA	HDMSA	HDMSA	HDMSA	ММОЈМА			U)	. No usy	
	Ag		丑	且	HD	Ð	MW		TA	SY		
epoo	did2		TA	SY	TA	KA	SI					
						1	<b>(</b> )	de				
	KDC Ref. No.		217	218	49K219	220	221	Ship Code				
	Ref		49K217	49K218	49K	49K220	49K221	hip				
			30.30	7	7	7	7	S				
	Mo.Day/Yr.		9	9	9	S	10					
	ay/		11.29/76	11.29/76	11.29/76	11.29/76	01.10/76					
	0.D		1.2	1.2	1.2	1.29	.10					
	Σ		_	1	Н	IJ	0.1					

Maru

Brail Torrest - 211