

海洋調査報告一覽

(CRUISE SUMMARY REPORT)

(国内海洋調査機関の調査報告)

2001年 実施分
(1994年、1997年、1998年、1999年、2000年実施分を一部含む)

2002年3月

日本海洋データセンター

(海上保安庁水路部)

まえがき

海洋の調査には多大な労力と時間、経費を要します。我々を取り巻く広大な海洋について一層の理解を深め、各種活動を行なうためには、関係者がお互いに情報・データを交換することによって、作業の重複を避け、調査を効率的に進めることが必要です。また、ひとたび得られた調査データは共通の財産として、広く一般の利用に供されることが望ましいことです。

海洋調査報告一覧は、海洋データ交換を迅速・確実に行ない、かつ調査終了後データ公表までの空白を埋めるため、どこの機関が、いつ、どこで、どのような調査活動を行ったかを、国際的に統一された書式（航海概要報告）でデータ名、数量、海域、データ保管場所等の概要について記述した調査機関からの報告を取りまとめたものです。

これらの情報の収集にあたり、ご協力いただいた関係調査機関に深謝いたします。

この調査目録が、データ流通の円滑化を通じて、海洋調査活動の効率化と海洋科学の進歩に寄与できれば幸いです。

2002年 3月

日本海洋データセンター
所長 桂 忠彦

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付録3 調査機関略語表

1. 航海概要報告 (CRUISE SUMMARY REPORT) について

この報告書式は、1991年1月のユネスコ政府間海洋学委員会 (IOC) 国際海洋データ・情報交換システム (IODE) 技術委員会第13回会議の決議に基づき、従来から使用してきた「海洋調査報告 (ROSCOP: 第2版)」に替わるもので我が国では1992年1月1日以降に終了した航海から使用しています。

航海概要報告は、海洋における観測成果の概要を記すための統一された書式で、海洋データの全世界にわたる収集目録であり、調査・研究者、計画立案者、データ管理者等にとって、誰が、いつ、どこで、どのような調査をしたかのタイムリーな情報についてアクセスを可能にするものです。

このグローバルな観測成果の概要は、世界データセンター (WDC) および各国の海洋データセンターを通じて、国際的プログラムの計画機関の調査担当者、計画立案者等に利用されることとなります。このため、日本海洋データセンター (JODC) ではIOCおよび各国の海洋データセンターへは我が国の主要な海洋調査計画を、また世界データセンターへは各海洋調査実施機関に提出していただいた航海概要報告を編集した、この「海洋調査報告一覧」を送付しています。

海洋データの迅速な収集と円滑な流通を図るため、海洋調査実施機関におかれましては海洋調査航海終了後は、速やかにJODCあて航海概要報告を送付くださるようお願いいたします。

なお、本報告一覧には、2001年に実施された調査の他、2001年中にJODCが受領した1994年、1997年、1998年及び2000年分も掲載しています。

また、インターネットを通じてJODCが保有する海洋データ・情報を検索・抽出できるシステム、J-DOSS (JODC Data Online Service System) でも本報告一覧と同じ情報を見ることができます。

国内外の海洋調査機関より提出していただいたCSRは、受領次第J-DOSS上へ登録されます。これにより、本報告一覧の刊行時期まで待つことなく常に新しい情報を見ることができるようになり、またJ-DOSS上では、国別、機関別、船名別、海域別等の条件での検索が可能です。

J-DOSS中のCSRのページのアドレスは、http://www.jodc.go.jp/info/csr_j.htmlです。

みなさんのご利用をお待ちしています。

JODCでは、現在の書式のみによるCSR報告方式に加え、オンラインで報告できるシステムを現在開発中であり、近日中に公開することとしています。

なお、公開時期などについては、別途お知らせしたいと考えています。

2. 調査報告の項目説明

海洋調査報告一覧は、JODCで受領した航海概要報告（CSR）を整理、編集したもので、報告に使用されている各項目の概略は次のとおりです。

Reference No.	: CSR情報のJODCにおける照会番号
Restrict Data	: データ交換に制限がある（Yes）か、否（No）か条件付き（In Part）かを示す
Ship Name	: データを収集した船舶のフルネーム
Ship Type	: データを収集した船舶の種類
Cruise No./Name	: 航海の固有番号、名称または略称
Cruise Period	: 出港日と入港日
Port of Departure	: 出港した港の名称
Port of Return	: 帰港した港の名称
Responsible Laboratory	: 航海の観測計画を作成した調査機関の名称
Chief Scientist(s)	: 航海中観測調査を担当した者（観測班長）の氏名と所属機関
General Ocean Area(s)	: 航海中にデータを収集した海洋または海域の名称
Specific Areas	: 調査がある海域の特定区域に集中した場合、その区域のローカルな海域名、海底地名、または地理座標
Geographic Coverage	: MSQ海域番号図による
Project Name	: 航海が共同プロジェクト（または調査、計画）の一部であれば、その名称
Coordinating Body	: 上記プロジェクトの調整機関名
Principal Investigators	: 航海で収集されたデータについて責任を持っている筆頭の調査者

Objectives and Brief Narrative of Cruise : 航海の目的と性格についての情報

Mooring, Bottom Mounted Gear and Drifting Systems : 係留、海底設置機器、漂流機器システム

PI	: Principal Investigators欄を参照
LAT. LONG.	: 観測地点の経緯度
Data Type	: データリストのコード
Description	: 機器の種類、測定のパラメータ、機器数とその深度、設置または回収の日付と位置

Summary of Measurements and Samples Taken : 測定とサンプル採取の概要

PI	: Principal Investigators欄を参照
No Units	: 収集されたデータの量、または推定量
Data Type	: データリストのコード
Description	: データ、使用機器／装置の種類・特性等を記入

3. データタイプのコードリスト

航海概要報告の、「Mooring, Bottom Mounted Gear and Drifting Systems」、および「Summary of Measurements and Samples Taken」のなかのデータタイプは、下記のリストから記入します。

A. 海洋物理学

- H71 航走中表層測定
- H13 BT
- H09 各層観測
- H10 CTD
- H11 航走中表面下測定
- H72 サーミスターチェーン
- H16 透明度 (Transmissometerなど)
- H17 海洋光学 (水面下の照度など)
- H73 地球化学的トレーサー (フロンなど)
- D01 流速計による観測
- D71 カレントプロファイラー (ADCPなど)
- D03 船の偏流による海流測定
- D04 GEK
- D05 漂流ブイ
- D06 中立ブイ
- D09 水位測定 (水圧計や底置型音響測深機含む)
- D72 機器による波浪観測
- D90 その他の海洋物理観測

B. 海洋化学

- H21 溶存酸素
- H74 二酸化炭素
- H33 その他の溶存ガス
- H22 りん酸塩
- H23 全りん
- H24 硝酸塩
- H25 亜硝酸塩
- H75 全窒素
- H76 アンモニア
- H26 けい酸塩
- H27 アルカリ度
- H28 pH
- H30 微量元素
- H31 放射能
- H32 同位元素
- H90 その他の海洋化学観測

C. 汚染

- P01 懸濁物
- P02 微量金属
- P03 石油残渣
- P04 塩素化炭化水素
- P05 その他の溶存物質
- P12 海底沈殿物
- P13 汚染生物
- P90 その他の汚染観測

D. 生物学と漁業

- B01 基礎生産力
- B02 植物プランクトン色素
- B71 粒状有機物
- B06 溶存有機物
- B72 生化学測定 (脂質、アミノ酸)
- B73 セジメントトラップ
- B08 植物プランクトン
- B09 動物プランクトン
- B03 固形浮遊物 (セストン)
- B10 水表生物
- B11 遊泳動物
- B13 卵/稚仔
- B07 浮遊バクテリア/微生物
- B16 底生バクテリア/微生物
- B17 底生植物
- B18 底生動物
- B25 鳥類
- B26 ほ乳類とは虫類
- B14 浮魚
- B19 底魚
- B20 軟体生物
- B21 甲殻類
- B28 海洋生物による音響反射
- B37 標識放流
- B64 漁具測定
- B65 試験漁業
- B90 その他の生物学/漁業観測

E. 気象

- M01 高層気象観測
- M02 入射放射
- M05 臨時標準観測
- M06 定常標準観測
- M90 その他の気象観測

F. 海洋化学

- G01 採泥 (曳航)
- G02 グラブ型採泥
- G03 岩石柱状資料採取
- G04 堆積物資料採取
- G08 海底写真
- G71 海底現場観測
- G72 地球物理学観測 (海底まで)
- G73 音響測深 (シングルビーム)
- G74 音響測深 (マルチビーム)
- G24 サイドスキャンソナー
- G75 反射式音波探査 (シングルチャンネル)
- G76 反射式音波探査 (マルチチャンネル)
- G26 屈折式音波探査
- G27 重力測定
- G28 地磁気測定
- G90 その他の物質/地球物理観測

4. 調査航海一覧表

担当機関*1	船名	調査海域	航海期間	調査項目*2	照会 番号	ページ
ORI, UT	HAKUHO MARU	North Pacific Ocean	1994/05/17-1994/07/07	B,D,H,G	94078	6
ORI, UT	HAKUHO MARU	North Pacific Ocean	1997/05/16-1997/06/18	B,D,H	97058	6
ORI, UT	HAKUHO MARU	North Pacific Ocean	1997/10/24-1997/11/11	B,D,H	97059	7
ORI, UT	HAKUHO MARU	North Pacific Ocean	1998/09/07-1998/10/28	B,D,H	98051	8
MMO, JMA	SEIFU MARU	Japan Sea	1999/11/19-1999/12/01	B,D,H,M	99044	9
ORI, UT	HAKUHO MARU	North Pacific Ocean	1999/05/18-1999/06/10	B,D,H	99045	10
MMO, JMA	SEIFU MARU	Japan Sea	2000/01/18-2000/03/02	B,D,H,G,M,P	00034	11
MMO, JMA	SEIFU MARU	Japan Sea	2000/04/25-2000/05/29	B,D,H,M,P	00035	12
JMA	KEIFU MARU	North Pacific Ocean	2000/10/19-2000/12/01	D,H,G,M,P	00036	14
		Japan Sea				
		East China Sea				
HD, JCG	SHOYO	North Pacific Ocean	2000/08/21-2000/09/14	G	00037	15
HD, JCG	MEIYO	Japan Sea	2000/08/29-2000/09/22	G	00038	16
NIPR	SHIRASE	Indian Ocean	2000/11/14-2001/04/13	G	00039	17
HD, JCG	TENYO	North Pacific Ocean	2000/06/30-2000/07/05	D,H	00040	17
HD, JCG	TENYO	North Pacific Ocean	2000/07/12-2000/07/19	D,H	00041	18
		Philippine Sea				
HD, JCG	TAKUYO	North Pacific Ocean	2000/10/23-2000/11/08	D,H	00042	19
HD, JCG	TENYO	Sea of Okhotsk	2000/05/04-2000/05/06	D,H	00043	20
JMA	RYOFU MARU	North Pacific Ocean	2000/04/20-2000/05/24	B,D,H,G,M,P	00044	20
JMA	RYOFU MARU	North Pacific Ocean	2000/06/20-2000/07/31	B,D,H,G,M,P	00045	22
JMA	RYOFU MARU	North Pacific Ocean	2000/09/20-2000/11/20	B,D,H,G,M,P	00046	23
ORI, UT	TANSEI MARU	North Pacific Ocean	2000/06/15-2000/06/22		00047	25
		Philippine Sea				
ORI, UT	HAKUHO MARU	North Pacific Ocean	2000/09/05-2000/10/19	D,H,M	00048	26
		East China Sea				
ORI, UT	TANSEI MARU	Japan Sea	2000/09/25-2000/10/02	B,G	00049	28
MMO, JMA	SEIFU MARU	Japan Sea	2000/07/05-2000/08/08	B,D,H,G,M,P	00050	29
MMO, JMA	SEIFU MARU	Japan Sea	2000/10/06-2000/11/06	B,D,H,G,M,P	00051	31
MMO, JMA	SEIFU MARU	Japan Sea	2000/11/17-2000/12/07	B,D,H,G,M	00052	33
FF, NU	KAKUYO MARU	North Pacific Ocean	2000/07/19-2000/08/10	B,H	00053	34
HD, JCG	SHIRASE	Indian Ocean	2000/11/14-2001/03/20	D,H,P	00054	35
		South Pacific Ocean				
HMO, JMA	KOFU MARU	North Pacific Ocean	2001/01/12-2001/03/02	B,D,H,M,P	01001	36
KMO, JMA	SHUMPURU MARU	Philippine Sea	2001/01/19-2001/02/02	D,H,G,M	01002	38
JMA	KEIFU MARU	North Pacific Ocean	2001/01/19-2001/03/09	D,H,G,M,P	01003	38

担当機関*1	船名	調査海域	航海期間	調査項目*2	照会 番号	ページ
HD, JCG	TAKUYO	North Pacific Ocean Philippine Sea	2001/02/13-2001/03/09	D,H	01004	40
HD, JCG	KAIYO	North Pacific Ocean	2001/03/05-2001/03/09		01005	41
HMO, JMA	KOFU MARU	North Pacific Ocean	2001/04/20-2001/05/15	B,D,H,M,P	01006	42
FF, NU	KAKUYO MARU	East China Sea	2001/05/16-2001/05/24	B,D,H,P	01007	43
RIAM, KU	KAKUYO MARU	Japan Sea	2001/06/04-2001/06/19	B,D,H	01008	45
JMA	RYOFU MARU	North Pacific Ocean	2001/01/19-2001/02/21	B,D,H,G,M,P	01009	46
ORI, UT	TANSEI MARU	Western North Pacific	2001/03/01-2001/03/07		01010	48
ORI, UT	TANSEI MARU	North Pacific Ocean	2001/05/07-2001/05/12		01011	49
FF, NU	KAKUYO MARU	East China Sea	2001/06/25-2001/07/06	B	01012	50
HD, JCG	TAKUYO	Philippine Sea	2001/05/26-2001/06/25	G	01013	51
HMO, JMA	KOFU MARU	North Pacific Ocean	2001/06/12-2001/07/25	B,D,H,M,P	01014	51
FF, NU	NAGASAKI MARU	East China Sea	2001/05/08-2001/05/16	B,H	01015	53
FF, NU	NAGASAKI MARU	East China Sea	2001/07/18-2001/08/10	B,H	01016	53
HD, JCG	KAIYO	North Pacific Ocean	2001/09/01-2001/09/07	D,H	01017	54
HD, JCG	TAKUYO	North Pacific Ocean	2001/10/03-2001/10/23	D,H	01018	55
FF, NU	NAGASAKI MARU	East China Sea	2001/09/18-2001/10/12	D,H,G	01019	55
FF, NU	NAGASAKI MARU	East China Sea	2001/10/24-2001/11/01	B,H	01020	57
HMO, JMA	KOFU MARU	North Pacific Ocean	2001/09/27-2001/10/30	B,D,H,M,P	01021	57
HMO, JMA	KOFU MARU	North Pacific Ocean	2001/11/16-2001/12/10	B,D,H,M	01022	59

*1 末尾の付録3参照

*2 p3のデータタイプのコードリスト参照

5. 海洋調査報告（航海概要報告）一覽

Reference No. : 94078
 Restrict Data : Yes
 Ship Name : HAKUHO MARU
 Ship Type : Research Vessel
 Cruise No./Name : KH-94-2
 Cruise Period : 1994/5/17 to 1994/7/7
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :
 Ocean Research Institute, Univ. of Tokyo (ORI,UT)
 Chief Scientist(s) : T.Sugimoto / ORI,UT
 General Ocean Area(s) : North Pacific Ocean.
 Geographic Coverage : 22,23,58,59,94,95,130,131
 Project Name : -
 Principal Investigators : A ; T.Sugimoto / ORI,UT

Objectives and Brief Narrative of Cruise :

1. Monitoring of oceanographic structure in the Kuroshio and Oyashio region and the North Equatorial Current area.
2. Study on fish and plankton distributions, and effect of oceanographic change on the distributions.

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
	34-15 N	138-00 E	D 01	Deploy a mooring system at 900 m May 18,1994
	34-03 N	138-00 E	D 01	Deploy a mooring system at 1700 m May 18,1994
	34-15 N	137-31 E	D 01	Deploy a mooring system at 1300 m May 18,1994
	34-57 N	139-24 E	D 01	Collect a mooring system at 1500 m May 22,1994

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	63	Stations	H 10	Using Neil-Brown CTD(upper 1000 m).
A	55	Stations	H 13	XBT drops with T 6 type probes.
A	52	Days	H 11,D 03 B 08,B 09,B 01,B 28 B 19,B 13,G 73	Monitoring of physical and biological data.

Reference No. : 97058
 Restrict Data : Yes
 Ship Name : HAKUHO MARU
 Ship Type : Research Vessel

Cruise No./Name : KH-97-1
Cruise Period : 1997/5/16 to 1997/6/18
Port of Departure : Tokyo
Port of Return : Tokyo
Responsible Laboratory :

Ocean Research Institute, Univ. of Tokyo (ORI,UT)

Chief Scientist(s) : T.Sugimoto / ORI,UT
General Ocean Area(s) : North Pacific Ocean
Geographic Coverage : 130,131
Project Name : -
Principal Investigators : A ; T.Sugimoto / ORI,UT

Objectives and Brief Narrative of Cruise :

1. Monitoring of oceanographic structure in the Kuroshio and Oyashio region.
2. Study on fish and plankton distributions; and effect of oceanographic change on the distributions.

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
	33-30 N	137-25 E	D 05	Deploy four drifting buoys May 18,1997
	34-30 N	140-40 E	D 05	Deploy four drifting buoys May 23,1997
	36-30 N	142-30 E	D 05	Deploy a drifting buoy June 15,1997

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	124	Stations	H 10	Using Neil-Brown CTD (upper 1000 m)
A	106	Stations	H 13	XBT drops with T 6 type probes
A	34	Days	H 11,D 03 B 08,B 09,B 01,B 28 B 19,B 13	Monitoring of physical and biological data.

Reference No. : 97059
Restrict Data : Yes
Ship Name : HAKUHO MARU
Ship Type : Research Vessel
Cruise No./Name : KH-97-3
Cruise Period : 1997/10/24 to 1997/11/11
Port of Departure : Tokyo
Port of Return : Tokyo
Responsible Laboratory :

Ocean Research Institute, Univ. of Tokyo (ORI,UT)

Chief Scientist(s) : T.Sugimoto / ORI,UT
General Ocean Area(s) : North Pacific Ocean

Geographic Coverage : 130,166
 Project Name : -
 Principal Investigators : A ; T.Sugimoto / ORI,UT

Objectives and Brief Narrative of Cruise :

1. Monitoring of oceanographic structure in the Kuroshio and Oyashio region.
2. Study on fish and plankton distributions, and effect of oceanographic change on the distributions.

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
	41 - 30 N	145 - 00 E	D 05	Deploy a drifting buoy Oct 25,1997
	41 - 49 N	145 - 02 E	D 05	Deploy a drifting buoy Oct 28,1997
	41 - 45 N	146 - 40 E	D 05	Deploy a drifting buoy Nov 01,1997

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	98	Stations	H 10	Using Neil - Brown CTD (upper 1000 m)
A	15	Stations	H 13	XBT drops with T 6 type probes
A	19	Days	H 11,D 03 B 08,B 09,B 01,B 28 B 19,B 13	Monitoring of physical and biological data.

Reference No. : 98051
 Restrict Data : Yes
 Ship Name : HAKUHO MARU
 Ship Type : Research Vessel
 Cruise No./Name : KH - 98 - 4
 Cruise Period : 1998/9/7 to 1998/10/28
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :
 Ocean Research Institute, Univ. of Tokyo (ORI,UT)
 Chief Scientist(s) : K.Kawaguchi / ORI,UT
 T.Sugimoto / ORI,UT
 General Ocean Area(s) : North Pacific Ocean
 Specific Areas : Oyashio - Kuroshio Regions
 Geographic Coverage : 130,165,166
 Project Name : -
 Principal Investigators : A ; K.Kawaguchi / ORI,UT
 B ; T.Sugimoto / as above
 C ; M.Takahashi / Tokyo Univ.
 D ; M.Suzuki / Nagoya Univ.

Objectives and Brief Narrative of Cruise :

Studies on the vertical structure of the ecosystem, material transport and biological production in the western North Pacific"

The following studies were conducted in the subarctic, transitional and subtropical waters off Japan.

- 1) spationtemporal structure of ecesystems
- 2) food wel structure and fuction
- 3) dynamics of biological production
- 4) physical environment

Moorings, Bottom Mounted Gear and Drifting Systems :

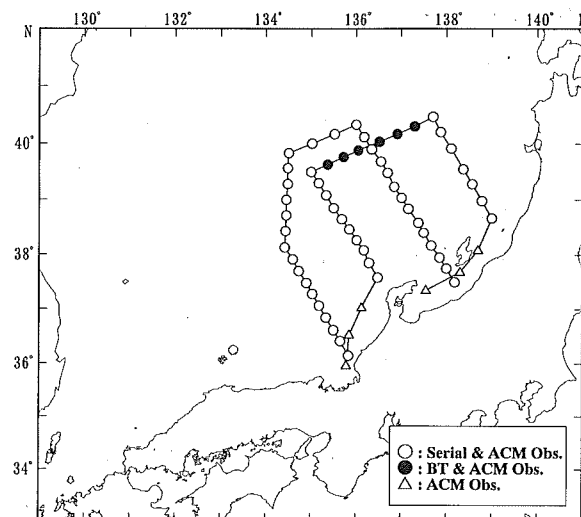
PI	LAT.	LON.	DATA TYPE	DESCRIPTION
D	44-00 N	155-00 E	B 01,B 71	Deployed a drifting buoy.
D	41-30 N	144-00 E	B 01,B 71	Deployed a drifting buoy.
D	38-00 N	144-00 E	B 01,B 71	Deployed a drifting buoy.
D	36-00 N	144-00 E	B 01,B 71	Deployed a drifting buoy.
D	41-00 N	143-30 E	B 01,B 71,B 73	Sediment trap
D	38-00 N	144-00 E	B 01,B 71,B 73	Sediment trap
D	34-30 N	142-25 E	B 01,B 71,B 73	Sediment trap
B	35-00 N	141-00 E	D 05	ARGOS buoy
B	38-00 N	144-00 E	D 05	ARGOS buoy
B	37-45 N	142-15 E	D 09	Mooring of pressure meter

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	50	Stas	B 01,B 02,B 71,B 05,H 10	CTD cast and rosett water sampling.
A	8	Stas	B 09,B 13,B 14,B 21	MOCNESS plankton net multilayer sampling.
A	20	Stas	B 14,B 13	IKMT sampling 0~300 m, 0~1000 m,
D	20	Stas	H 30	NORPAC net sampling, vertical taw 0-100 m.
B	108	Stas	B 01,B 02,B 71,B 05,H 10,H 21,H 22,H 23,H 24	CTD cast and rosett water sampling.
A	11	Stas	B 14,B 13	IKPT sampling
A	42	Stas	B 09	NORPAC net sampling
B	7	Stas	B 09	VMPS net
B	7	Stas	B 09	MTD net

Reference No. : 99044
 Restrict Data : No
 Ship Name : SEIFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 99-11
 Cruise Period : 1999/11/19 to 1999/12/1

Port of Departure : Maizuru
 Port of Return : Maizuru
 Responsible Laboratory :
 Maizuru Marine Observatory,
 Japan Meteorological Agency (MMO,JMA)
 Chief Scientist(s) : K.Kadono / MMO,JMA
 General Ocean Area(s) : Japan Sea
 Geographic Coverage : 131,167
 Project Name : IGOSS, WESTPAC
 Coordinating Body : IOC
 Principal Investigators : A ; S.Kubo / MMO,JMA
 B ; N.Sato / MMO,JMA
 C ; K.Hori / MMO,JMA



Track Chart

Objectives and Brief Narrative of Cruise :

Seasonal observation of marine condition

1. Hydrographyc observation (physical chemical and biological)
2. Inspection of ocean data buoy.

A	49	Station	H 10	Using Neil - Brown CTD.
B	22	Station	H 21	Using Neil - Brown with Rossete Sampler System.
B	17	Station	H 22,H 24,H 25,B 02	Using Neil - Brown ditto
B	3	Station	H 28	Using Neil - Brown ditto
B	9	Station	B 08	Surface water sampling
B	9	Station	B 09	Collected by Norpac Net
A	17	Station	H 16	Using Secchi disk.
A	6	Station	H 13	X - BT drops with T 7 typeprobs
A	1540	NM	D 71	Using Acoustic Current Meteter (FURUNO)
A	1540	NM	H 71	Measurments of near - surface temperature and Salinity using T.S.G
C	262	Times	M 06	Acording to "WMO International codes"
C	6	Ascents	M 01	Using GPS sonde system by VAISALA
C	87	Times	D 72	Using micro wave of Tucker wave gauge

Reference No. : 99045
 Restrict Data : Yes
 Ship Name : HAKUHO MARU
 Ship Type : Research Vessel
 Cruise No./Name : KH - 99 - 2
 Cruise Period : 1999/5/18 to 1999/6/10
 Port of Departure : Tokyo
 Port of Return : Tokyo

Responsible Laboratory :
 Ocean Research Institute, Univ. of Tokyo (ORI,UT)
 Chief Scientist(s) : T.Sugimoto / ORI,UT
 General Ocean Area(s) : North Pacific Ocean
 Geographic Coverage : 130,131
 Project Name : -
 Principal Investigators : A ; T.Sugimoto / ORI,UT

Objectives and Brief Narrative of Cruise :

1. Monitoring of oceanographic structure in the Kuroshio and Oyashio region.
2. Study on fish and plankton distributions, and effect of oceanographic change on the distributions.

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
	36-49 N	141-57 E	D 05	Deploy adrifting buoy, May 22, 1999
	40-00 N	144-29 E	D 05	Deploy adrifting buoy, May 30, 1999
	37-00 N	143-30 E	D 05	Deploy adrifting buoy, June 6, 1999

Summary of Measurements and Sample Taken :

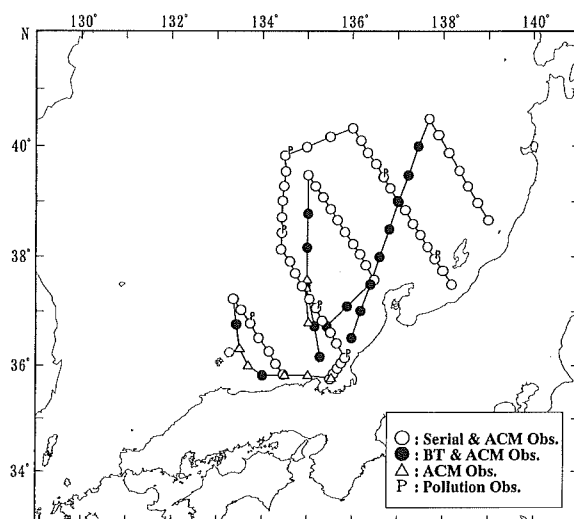
PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	93	Stations	H 10	Using Neil-Brown CTD(upper 1000 m)
A	68	Stations	H 13	XBT drops with T 6 type probes
A	24	Days	H 11,D 03	Monitoring of physical and biological data
			B 08,B 09,B 01,B 28	
			B 19,B 13	

Reference No. : 00034
 Restrict Data : No
 Ship Name : SEIFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 00-01
 Cruise Period : 2000/1/18 to 2000/3/2
 Port of Departure : Maizuru
 Port of Return : Maizuru

Responsible Laboratory :
 Maizuru Marine Observatory,
 Japan Meteorological Agency (MMO,JMA)

Chief Scientist(s) : K.Hori / MMO,JMA
 T.Segawa / MMO,JMA

General Ocean Area(s) : Japan Sea
 Geographic Coverage : 131,167
 Project Name : IGOSS, WESTPAC, MARPOLMoN



Track Chart

Coordinating Body : IOC
 Principal Investigators : A ; N.Kubo / MMO,JMA
 B ; N.Sato / MMO,JMA
 C ; K.Hori / MMO,JMA
 D ; T.Sakai / JMA

Objectives and Brief Narrative of Cruise :

A routine oceanographic observation (physical, chemical and biological)

- a) Seasonal observation of marine condition.
- b) Monitoring background marine pollution

Sea water sampling for radioactivity measurements

Inspection of ocean data buoy.

C	503	Times	M 06	According to "WMO International codes"
C	26	Asconts	M 01	Using VAISALA Digicora MW II system and VAISALA RS 80 - 15 N Radio Sondes
C	167	Times	D 72	Using micro wave or Tucker wave gauge
A	60	Stations	H 10	Using Neil - Brown CTD
B	21	Stations	H 21	Using Neil - Brown CTD with Rossete Sampler System
B	17	Stations	H 22,H 24,H 25, B 02	Using Neil - Brown CTD with Rossete Sampler System
B	3	Stations	H 28	Using Neil - Brown CTD with Rossete Sampler System
B	9	Stations	B 08	Surface water sampling
B	9	Stations	B 09	Collected by Norpac Net
D	2	Stations	P 02	Using Neil - Brown CTD with Rossete Sampler System
D	2	Stations	P 03	Surface water sampling for petroleum Hydrocabons concentrations
A	22	Stations	H 16	Using Secchi Disk
A	17	Drops	H 13	X - BT drops with T 6 and T 7 type probe
B	4	Stations	H 31	Gross bata radioactivity
A	86	Stations	D 71	Using acoustic Current Meter (Furuno)
A	86	Stations	G 73	Using echo sounder (KAIJO)
B	5	Stations	P 03	Floating tarballs sampling using with Neuston net
B	19	Days	P 90	Oil slicks and floating pollutants (Daytime only)
A	2779	NM	H 71	Measurments of near - surface Temperature and Salinity using T.S.G

Reference No. : 00035
 Restrict Data : No
 Ship Name : SEIFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 00 - 04

Cruise Period : 2000/4/25 to 2000/5/29

Port of Departure : Maizuru

Port of Return : Maizuru

Responsible Laboratory :

Maizuru Marine Observatory,

Japan Meteorological Agency (MMO,JMA)

Chief Scientist(s) : N.Kubo / MMO/JMA

M.Tani / MMO/JMA

General Ocean Area(s) : Japan Sea

Geographic Coverage : 131,167

Project Name : IGOSS, WESTPAC,
MARPOLMoN

Coordinating Body : IOC

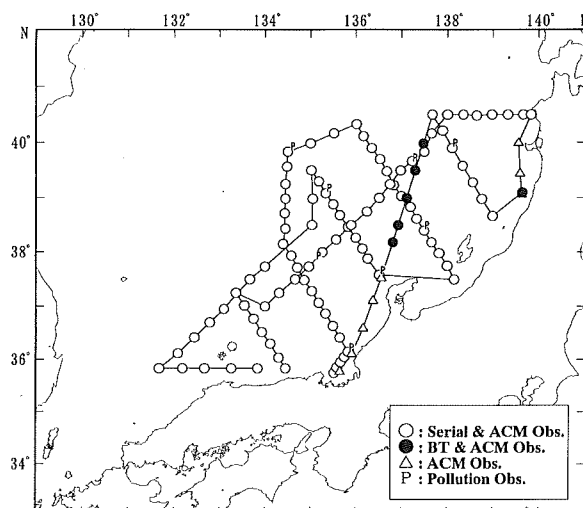
Principal Investigators : A ; N.Kubo / MMO,JMA

B ; K.Hori / MMO,JMA

C ; K.Isa / MMO,JMA

D ; J.Oyama / JMA

E ; T.Uwai / JMA



Track Chart

Objectives and Brief Narrative of Cruise :

A routine oceanographic observation (physical, chemical, and biological)

a) Seasonal observation of marine condition.

b) Monitoring background marine pollution.

Inspection of ocean data buoy.

Moorings, Bottom Mounted Gear and Drifting Systems :

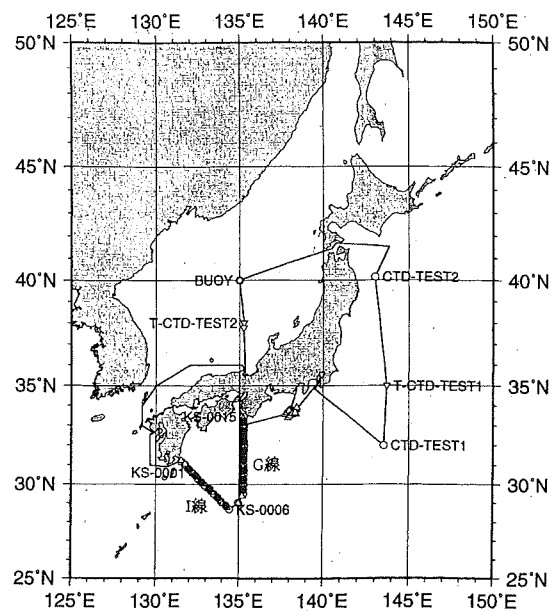
PI	LAT.	LON.	DATA TYPE	DESCRIPTION
E	37-15 N	133-22 E	D 05	Deployed a drifting buoy, May 11, 2000

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
C	515	Times	M 06	According to "WMO International codes"
C	12	Ascents	M 01	Using VAISALA Digicora MW II system and VAISALA RS 80-15 N Radio Sondes
C	285	Times	D 72	Using micro wave or Tucker wave gauge
A	94	Stations	H 10	Using Neil-Brown CTD
B	18	Stations	H 21	Using Neil-Brown CTD with Rossete Sampler System
B	17	Stations	H 22,H 24,H 25, B 02	Using Neil-Brown CTD with Rossete Sampler System
B	3	Stations	H 28	Using Neil-Brown CTD with Rossete Sampler System
B	9	Stations	B 08	Surface water sampling
B	9	Stations	B 09	Collected by Norpac Net
D	2	Stations	P 02	Using Neil-Brown CTD with Rossete Sampler System

D 2	Stations	P 03	Surface water sampling for petroleum Hydrocabons concentrations
A 52	Stations	H 16	Using Secchi Disk
A 5	Drops	H 13	X-BT drops with T 6 and T 7 type probe
A 1	Stations	H 13	Using TSK D-BT
A 108	Stations	D 71	Using acoustic Current Meter (Furuno)
A 108	Stations	D 73	Using echo sounder (KAIJO)
B 6	Stations	P 03	Floating tarballs sampling using with Neuston net
B 17	Days	P 90	Oil slicks and floating pollutants (Daytime only)
A 2617	NM	H 71	Measurements of near-surface Temperature and Salinity using T.S.G

Reference No. : 00036
 Restrict Data : No
 Ship Name : KEIFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 00-10
 Cruise Period : 2000/10/19 to 2000/12/1
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :
 Japan Meteorological Agency (JMA)
 Chief Scientist(s) :
 N.Obata / Maritime meteorological Division,
 CMD,JMA



観測点図
 ○:各層観測点 ●:表層水温観測点
 △:海潮流観測点 ▽:曳航式CTD観測点

General Ocean Area(s) : North Pacific Ocean
 Japan Sea
 East China Sea

Geographic Coverage : 94,95,130,131,132,166

Project Name : IGOSS, WESTPAC, MARPOLMoN

Coordinating Body : IOC

Principal Investigators : A ; T.Yano / Oceanographical Division,CMD,JMA
 B ; J.Oyama / Oceanographical Division,CMD,JMA
 C ; S.Matsuda / Earthquake and Tsunami Observations Division,SVD,
 JMA
 D ; T.Uwai / Oceanographical Division,CMD,JMA
 E ; M.Ishii / MRI

Objectives and Brief Narrative of Cruise :

Oceanographic observations for the research of seasonal change of total inorganic carbon concentration

Deployment of surface drifting buoy

Deployment of ocean bottom seismographs

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
C	33-50 N	138-04 E	G 90	Deployed an Ocean Bottom Seismograph, 1, 3618 m, 26 Nov. 2000
C	33-43 N	137-55 E	G 90	Deployed an Ocean Bottom Seismograph, 1, 3513 m, 26 Nov. 2000
C	33-37 N	137-46 E	G 90	Deployed an Ocean Bottom Seismograph, 1, 3880 m, 26 Nov. 2000
C	33-50 N	137-24 E	G 90	Deployed an Ocean Bottom Seismograph, 1, 3526 m, 27 Nov. 2000
C	33-43 N	138-14 E	G 90	Deployed an Ocean Bottom Seismograph, 1, 3479 m, 28 Nov. 2000
C	33-36 N	138-23 E	G 90	Deployed an Ocean Bottom Seismograph, 1, 2308 m, 28 Nov. 2000
C	33-34 N	138-07 E	G 90	Deployed an Ocean Bottom Seismograph, 1, 2735 m, 28 Nov. 2000
C	33-29 N	137-55 E	G 90	Deployed an Ocean Bottom Seismograph, 1, 3966 m, 28 Nov. 2000
D	40-00 N	135-00 E	D 05	Deployed a drifting buoy, 1, 31 Oct. 2000

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	15	Stations	H 10	Using SBE 9-11 CTD
A	40	Stations	D 71	Using RD instruments Acoustic Doppler Current Profiler
A	15	Stations	G 73	Using NEC echosounder
A	15	Stations	H 21,H 22,H 24, H 25	Using Rosetto Sampler
A	15	Drops	H 13	X-BT drops with T-7 TYPE probe.
B	8	Days	P 90	Oil slicks and floating pollutions (daytime only)
B	3544	NM	H 74,M 71	Continuous sampling of CO 2 concentration in air and sea surface water
A	3544	NM	H 71	Continuous recording of sea surface temperature and salinity
E	3	Stations	H 74	Total inorganic carbon concentration
A	135	Times	M 06	Observed every 3 hours

Reference No. : 00037
Ship Name : SHOYO
Ship Type : Survey Vessel

Cruise No./Name : Ocean Survey of Japan Trench
Cruise Period : 2000/8/21 to 2000/9/14
Port of Departure : Tokyo
Port of Return : Tokyo
Responsible Laboratory :
 Hydrographic Department, Japan Coast Guard (HD,JCG)
Chief Scientist(s) : T.Tozaki / HD,JCG
General Ocean Area(s) : North Pacific Ocean
Specific Areas : 38 – 35 N 143 – 07 E
 36 – 34 N 143 – 48 E
 35 – 18 N 142 – 44 E
 37 – 19 N 142 – 03 E
Geographic Coverage : 130
Principal Investigators : A ; T.Tozaki / HD,JCG
 B ; T.Tozaki / HD,JCG
 C ; K.Onodera / HD,JCG
 D ; T.Tozaki / HD,JCG

Objectives and Brief Narrative of Cruise :

Ocean survey for earthquake prediction

- A : Submarine topography
- B : Submarine geological structure
- C : Geomagnetism
- D : Side – looking sonar image map

A	345	NM	G 74	seabeam 2114
B	235	NM	G 75	airgun
	110	NM	G 76	airgun 120 ch
C	235	NM	G 28	proton precession magnetometer
D	1530	NM	G 24	vector side scan sonar

Reference No. : 00038
Ship Name : MEIYO
Ship Type : Survey Vessel
Cruise No./Name : Ocean Survey of ofting Siane
Cruise Period : 2000/8/29 to 2000/9/22
Responsible Laboratory :
 Hydrographic Department, Japan Coast Guard (HD,JCG)
Chief Scientist(s) : K.Ikeda / HD,JCG
General Ocean Area(s) : Japan Sea
Specific Areas : 36 – 22 N 132 – 25 E
 36 – 22 N 133 – 50 E

35 - 39 N 133 - 50 E

35 - 39 N 132 - 25 E

Geographic Coverage : 131

Principal Investigators : A ; K.Ikeda / HD,JCG

B ; K.Ikeda / HD,JCG

C ; T.Kato / HD,JCG

Objectives and Brief Narrative of Cruise :

Ocean survey for the earthquake prediction

A ; Submarine topography

B ; Submarine geological structure

C ; Gravity

A 1410 NM G 74 Seabeam 2000

B 188 NM G 75 airgun

C 1410 NM G 27 marinegravity meter(KSS - 30)

Reference No. : 00039

Ship Name : SHIRASE

Ship Type : Icebreaker

Cruise No./Name : JARE 42

Cruise Period : 2000/11/14 to 2001/4/13

Port of Departure : Tokyo

Port of Return : Tokyo

Responsible Laboratory :

National Institute of Polar Research (NIPR)

Chief Scientist(s) : W.Takahashi / HD,JCG

General Ocean Area(s) : Indian Ocean

Specific Areas : 66 - 00 S 45 - 00 E

66 - 00 S 48 - 40 E

66 - 28 S 45 - 40 E

67 - 08 S 45 - 00 E

Geographic Coverage : 547

Principal Investigators : A ; W.Takahashi / HD,JCG

Objectives and Brief Narrative of Cruise :

Hydrographic survey

A. sounding

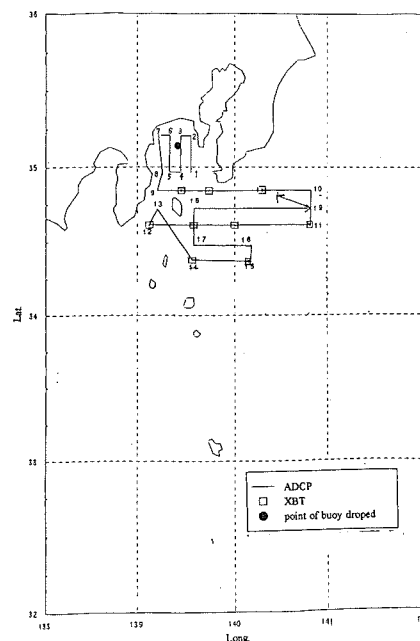
A 573 NM G 73

Reference No. : 00040

Restrict Data : No

Ship Name : TENYO

Ship Type : Survey Vessel
 Cruise No./Name : The drift experiment by the drifting buoy
 Cruise Period : 2000/6/30 to 2000/7/5
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :
 Hydrographic Department, Japan Coast Guard (HD,JCG)
 Chief Scientist(s) : K.Ishimura / HD,JCG
 General Ocean Area(s) : North Pacific Ocean
 Specific Areas : Sagami Bay
 Geographic Coverage : 131



Principal Investigators : A ; H.Nakamura / HD,JCG

Objectives and Brief Narrative of Cruise :

Object : For the support to the research on the upgrading of the technique of the drift prediction, drift experiment by the drifting buoy is carried out, while the current observation of Sagami Bay and nearby sea area is carried out.

- (A) Surface current observation by ADCP
- (B) Measurement of water temperature at surface layer by XBT.
- (C) Deployment of Orbcum buoy(Drifting buoy)

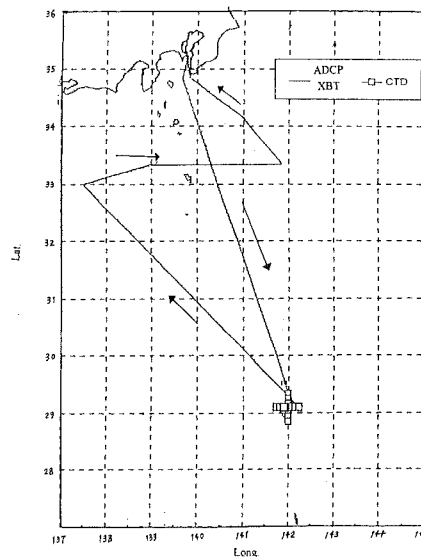
Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
A	35-05 N	139-25 E	D 05	Deployed a drifting buoy, July 3

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	Continuos		D 71	Surface current observation by ADCP
A	9		H 13	XBT drops with T-6 type probes

Reference No. : 00041
 Restrict Data : No
 Ship Name : TENYO
 Ship Type : Survey Vessel
 Cruise No./Name : ARGO Observation
 Cruise Period : 2000/7/12 to 2000/7/19
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :
 Hydrographic Department, Japan Coast Guard (HD,JCG)
 Chief Scientist(s) : H.Nakamura / HD,JCG
 General Ocean Area(s) : North Pacific Ocean, Philippine Sea



Geographic Coverage : 94,130
 Principal Investigators : A ; H.Nakamura / HD,JCG

Objectives and Brief Narrative of Cruise :

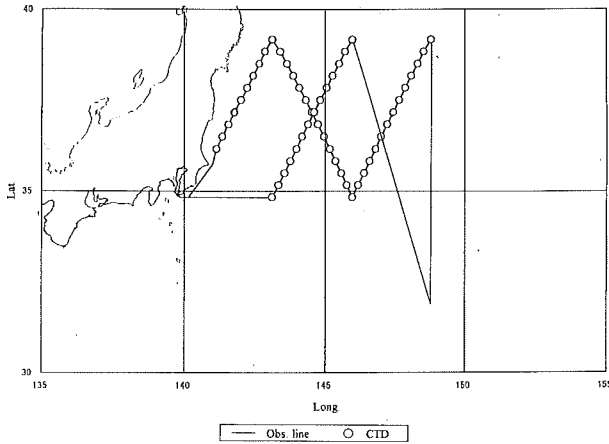
Object : As the part of the ARGO plan, the Kuroshio fluctuation grasp observation is carried out, while verification observation of the Argofloat which JAMSTEC discharged is carried out.

- (A) Surface current observation by ADCP.
- (B) Measurement of water temperature at surface layer by XBT.
- (C) Measurement of water temperature and salinity by using CTD.

A	Continuos	D 71	Surface current observation by ADCP
A	22	H 13	XBT drops with T - 6 type probes
A	14	H 10	Using Sea Bird SBE 19 CTD

Reference No. : 00042
 Restrict Data : No
 Ship Name : TAKUYO
 Ship Type : Survey Vessel
 Cruise Period : 2000/10/23 to 2000/11/8
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :

Hydrographic Department,
 Japan Coast Guard (HD,JCG)



Chief Scientist(s) : H.Nakamura / HD,JCG
 General Ocean Area(s) : North Pacific Ocean
 Geographic Coverage : 130
 Principal Investigators : A ; H.Nakamura / HD,JCG

Objectives and Brief Narrative of Cruise :

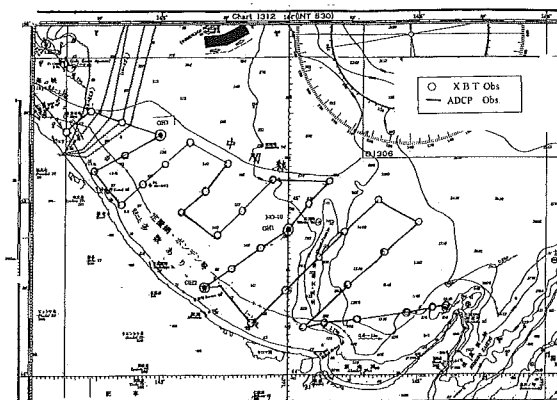
Object : It wakes oceanographic observation in order to establish the height - precise, geoid right under geoid right under TOPEX/POSEIDON satellite orbit carbon dioxide partial pressure of surface layer sea water and atmosphere is observed in order to promote international joint research on North Pacific Ocean subfrigid zones circulation and climatic variation.

- (A) Surface current observation by ADCP.
- (B) Measurement of the density of carbonic acid gas.
- (C) Measurement of water temperature at surface layer by XBT.
- (D) Measurement of water temperature and salinity by using CTD.
- (E) Wave observation by shipbone analyzer.

A	Continuos	D 71	Surface current observation by ADCP
A	Continuos	H 74	Measurement of the dencity of carbonic acid gas by using Bines 4 - 1
A	16	H 13	XBT drops with T - 6 type probes

A 50 H 10 Using Sea Bird SBE 9 plus CTD
 A 41 D 72 Wave observation using shipbone wave analyzer

Reference No. : 00043
 Restrict Data : No
 Ship Name : TENYO
 Ship Type : Survey Vessel
 Cruise No./Name : Current Observation
 Cruise Period : 2000/5/4 to 2000/5/6
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :



Hydrographic Department, Japan Coast Guard (HD,JCG)

Chief Scientist(s) : M.Nobukuni / HD,JCG
 General Ocean Area(s) : Sea of Okhotsk
 Specific Areas : South of Sea of Okhotsk
 Geographic Coverage : 166
 Principal Investigators : A ; Y.Tani / HD,JCG

Objectives and Brief Narrative of Cruise :

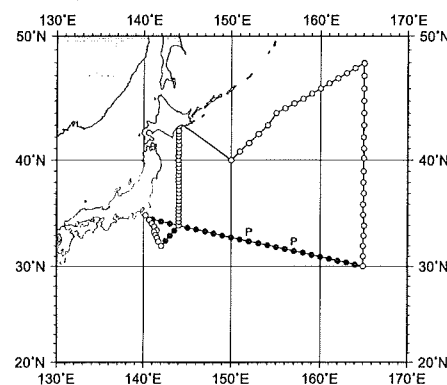
Object : Hydrographic condition grasp of the Sea of Okhotsk south.

(A) Surface current observation by ADCP.

(B) Measurement of water temperature at surface layer by XBT.

A Continuous 460 Mile D 71 Surface current observation by ADCP
 A 35 H 13 XBT drops with T-6 type probes

Reference No. : 00044
 Restrict Data : No
 Ship Name : RYOFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 00-04
 Cruise Period : 2000/4/20 to 2000/5/24
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :



Track chart
 R/V Ryofu Maru, Cruise 00-04

○ Serial(CTD) Observation
 ● BT Observation
 P Pollution Observation

Japan Meteorological Agency (JMA)

Chief Scientist(s) : N.Nagai / Oceanographical Division,CMD,JMA
 General Ocean Area(s) : North Pacific Ocean
 Geographic Coverage : 128,129,130,164,165,166
 Project Name : IGOSS, WESTPAC, MARPOLMoN, SAGE

Coordinating Body : IOC
 Principal Investigators : A ; T.Yano / Oceanographical Division,CMD,JMA
 B ; J.Oyama / Oceanographical Division,CMD,JMA
 C ; J.Kotani / Ryofu Maru,CMD,JMA
 D ; T.Tokieda / MRI

Objectives and Brief Narrative of Cruise :

A routine oceanographical observation(physical,chemical and biological)

a. Seasonal observation of marine condition

b. Monitoring background marine pollution

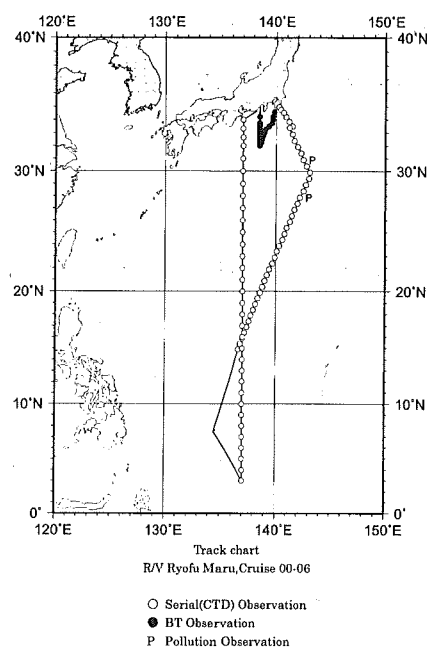
Sea water sampling for radioactivity measurement

Sea water sampling for stable carbon isotope(¹³C) measurement

Foraminifera sampling

A	4953	NM	H 71	Continuous recording of sea temperature and salinity
A	55	Stations	H 10	Using FSI-ICTD
A	88	Stations	D 71	Using RD instrument Acoustic Doppler Current Profiler
A	88	Stations	G 73	Using NEC echosounder
A	26	Stations	H 16	Using Secchi disk
A	6	Drops	H 13	X-BT drops with T-7 type probe
A	21	Stations	H 13	Using Tsurumi Seiki MICOM-BT Type-2
A	16	Drops	H 13	X-CTD drops with Tsurumi Seiki X-CTD probe
A	36	Stations	H 09,H 21,H 22, H 24,H 25,H 26	Using Rosette sampler
A	17	Stations	H 09,B 02	Using Rosette sampler
A	7	Stations	B 08,B 09	Using bucket(B 08) and Norpac net(B 09)
A	2	Stations	H 31	Cross beta radioactivity
B	4953	NM	H 74,M 71	Continuous sampling of CO ₂ concentration in air and sea surface water, and CH ₄ concentration in air
B	6	Stations	P 02,P 03	Heavy metals(P 02) and Dissolved hydrocarbons (P 03)
B	2	Stations	P 03	Floating Tar balls sampling(Using Neuston net)
B	15	Stations	H 09,H 74	Total inorganic carbon concentration
B	24	Days	P 90	Oil slicks and floating pollutants(Daytime only)
C	190	Times	M 06	Observed every 3 hours
C	36	Ascents	M 01	Using shipboard automatic radio-sonde system
D	28	Days	B 09	Foraminifera sampling

Reference No. : 00045
 Restrict Data : No
 Ship Name : RYOFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 00-06
 Cruise Period : 2000/6/20 to 2000/7/31
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :
 Japan Meteorological Agency (JMA)
 Chief Scientist(s) : H.Kamiya and J.Oyama /
 Oceanographical Division,CMD,JMA
 General Ocean Area(s) : North Pacific Ocean
 Geographic Coverage : 23,59,94,95,130,131
 Project Name : IGOSS, WESTPAC, MARPOLMoN
 Coordinating Body : IOC
 Principal Investigators : A ; T.Yano / Oceanographical Division,CMD,JMA
 B ; J.Oyama / Oceanographical Division,CMD,JMA
 C ; J.Kotani / Ryofu Maru,CMD,JMA
 D ; T.Tokieda / MRI



Objectives and Brief Narrative of Cruise :

A routine oceanographical observation(physical, chemical and biological)

a.Seasonal observation of marine condition

b.Monitoring background marine pollution

Sea water sampling for radioactivity measurement

Sea water sampling for stable carbon isotope(¹³C) measurement

Sea water sampling for measurement of chlorofluorocarbon(CFC) concentration in sea water

Foraminifera sampling

A	4994	NM	H 71	Continuous recording of sea surface temperature and salinity
A	77	Stations	H 10	Using FSI-ICTD
A	96	Stations	D 71	Using RD instrument Acoustic Doppler Current Profiler
A	96	Stations	G 73	Using NEC echosounder
A	44	Stations	H 16	Using Secchi disk
A	6	Drops	H 13	X-BT drops with T-6 type probe
A	13	Drops	H 13	X-BT drops with T-7 type probe
A	24	Stations	H 09,H 21,H 22, H 24,H 25,H 26	Using Rosette sampler
A	8	Stations	H 09,H 28	Using Rosette sampler

A 11	Stations	H 09,B 02	Using Rosette sampler
A 10	Stations	B 08,B 09	Using bucket(B 08) and Norpac net(B 09)
A 7	Stations	H 31	Gross beta radioactivity
B 4994	NM	H 74,M 71	Continuous sampling of CO ₂ concentration in air and sea surface water, and CH ₄ concentration in air
B 10	Stations	P 02,P 03	Heavy metals(P 02) and Dissolved hydrocarbons (P 03)
B 2	Stations	P 03	Floating Tar balls sampling(Using Neuston net)
B 17	Stations	H 09,H 74	Total inorganic carbon concentration
B 22	Days	P 90	Oil slicks and floating pollutants(Daytime only)
C 196	Times	M 06	Observed every 3 hours
C 30	Ascents	M 01	Using shipboard automatic radio – sonde system
D 25	Days	B 09	Foraminifera sampling
D 16	Stations	H 33	Chlorofluorocarbon(CFC) concentrations in sea water
D 16	Stations	H 32	Stable carbon isotope(¹³ C)

Reference No. : 00046
 Ship Name : RYOFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 00-09
 Cruise Period : 2000/9/20 to 2000/11/20
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :

Japan Meteorological Agency (JMA)

Chief Scientist(s) :

S.Takatani / Oceanographical Division,CMD,JMA

General Ocean Area(s) : North Pacific Ocean

Geographic Coverage : 20,21,22,23,56,59,92,95,128,129,130,131,319,321

Project Name : IGOSS, WESTPAC, MARPOLMoN

Coordinating Body : IOC

Principal Investigators : A ; T.Yano / Oceanographical Division,CMD,JMA

B ; J.Oyama / Oceanographical Division,CMD,JMA

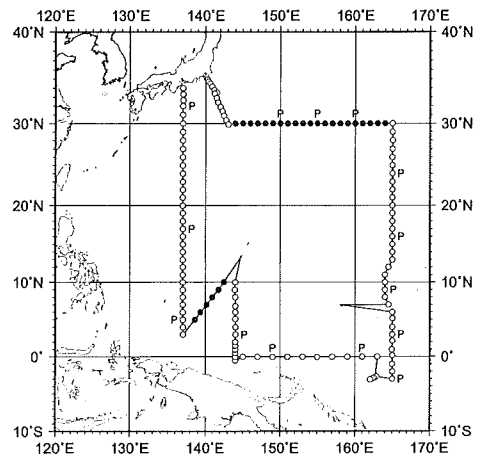
C ; J.Kotani / CMD,JMA

D ; N.Shikama / MRI

E ; T.Tokieda / MRI

Objectives and Brief Narrative of Cruise :

A routine oceanographical observation(physical, chemical and biological)



Track chart
 R/V Ryofu Maru, Cruise 00-09
 O Serial (CTD) Observation
 ● BT Observation
 P Pollution Observation

- a. Seasonal observation of marine condition
- b. Monitoring background marine pollution
- Sea water sampling for radioactivity measurement
- Sea water sampling for stable carbon isotope(¹³C) measurement
- Deployment of mooring current meter systems
- Foraminifera sampling

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
D	3-01 S	162-12 E	D 01	Deployed a current mooring system, 1, 3261 m, 19 Oct. 2000 Current Meter is set at 2000, 2250, 2500, 2750, 3000 and 3250 m depth
D	2-44 S	162-45 E	D 01	Deployed a current mooring system, 1, 3702 m, 20 Oct. 2000 Current Meter is set at 2000, 2250, 2500, 2750, 3000, 3250, 3500 and 3650 m depth

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	10335	NM	H 71	Continuous recording of sea surface temperature and salinity
A	109	Stations	H 10	Using FSI-ICTD
A	134	Stations	D 71	Using RD instrument Acoustic Doppler Current Profiler
A	114	Stations	G 73	Using NEC echosounder
A	47	Stations	H 16	Using Secchi disk
A	6	Drops	H 13	X-BT drops with T-7 type probe
A	21	Stations	H 13	Using Tsurumi Seiki MICOM-BT Type-2
A	41	Stations	H 09,H 21,H 22, H 24,H 25,H 26	Using Rosette sampler
A	41	Stations	H 09,B 02	Using Rosette sampler
A	16	Stations	B 08,B 09	Using Buclet(B 08) and Norpac net(B 09)
A	4	Stations	H 31	Gross beta radioactivity
B	10335	NM	H 74,M 71	Continuous sampling of CO ₂ concentration in air and sea surface water, and CH ₄ concentration in air
B	44	Stations	H 09,H 33	CH ₄ concentration in sea water (Using Rosette Sampler)
B	34	Stations	H 09,H 33	Dissolved nitrous oxide(Using Rosette Sampler)
B	45	Stations	H 09,H 74	Total inorganic carbon concentration (Using Rosette Sampler)

B	14	Stations	P 03	Dissolved hydrocarbons
B	9	Stations	P 02	Heavy metals
B	14	Stations	P 03	Floating Tar balls sampling(Using Neuston net)
B	33	Days	P 90	Oil slicks and floating pollutants(Daytime only)
C	374	Times	M 06	Observed every 3 hours
C	46	Ascents	M 01	Using shipboard automatic radio – sonde system
E	11	Stations	H 32	Stable carbon isotope(13 C)

Reference No. : 00047
 Ship Name : TANSEI MARU
 Ship Type : Research Ship
 Cruise No./Name : KT-00-7
 Cruise Period : 2000/6/15 to 2000/6/22
 Port of Departure : Tokyo
 Port of Return : Kochi
 Responsible Laboratory :

Ocean Research Institute,
 University of Tokyo (ORI,UT)

Chief Scientist(s) :
 Toshitaka Gamo / Div. Earth Planet. Sa,
 Hokkaido Univ.

General Ocean Area(s) :
 North Pacific Ocean,Philippine Sea

Specific Areas :
 Kumano Trough, Western Nankai Trough,
 Tosa Basin

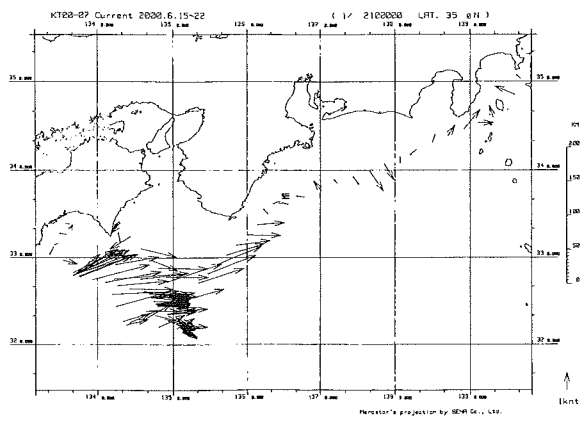
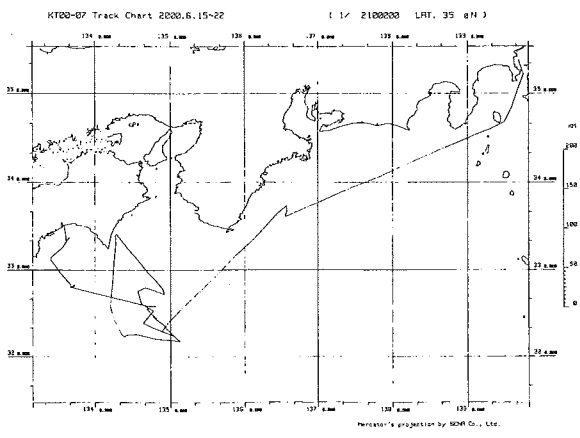
Geographic Coverage : 131

Principal Investigators : A ; Makoto Yamano / ORI,UT
 B ; Urumu Tsunogai / Div. Earth Planet Sa,Hokkaido Univ.
 C ; Kimihiro Mochizuki / ORI,UT
 D ; Masafumi Murayama / Marine Core Res. Center,Kochi Univ.

Objectives and Brief Narrative of Cruise :

Main purposes of this cruise are :

- 1) Estimation of heat and geochemical fluxes from the Nankai Trough accretionary prism off Muroto.Heat flow measurement and pure fluid chemical analyses using sediment core samples taken with a piston cover were successfully conducted.
- 2) Bottom seawater sampling in Kumano Trough as well as in the Nankai Trough were performed for the purpose of detecting any chemical anomalies due to cold seepage.
- 3) Ocean Bottom Seismometers were deployed in Nankai Trough off Muroto.



Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
C	32-49.7 N	134-33.1 E		Ocean Bottom Seismometer deployed on 17 June, 2000
C	32-52.9 N	134-47.7 E		Ocean Bottom Seismometer deployed on 17 June, 2000
C	32-42.2 N	134-57.7 E		Ocean Bottom Seismometer deployed on 17 June, 2000
C	32-37.1 N	134-36.5 E		Ocean Bottom Seismometer deployed on 17 June, 2000
C	32-32.1 N	134-46.3 E		Ocean Bottom Seismometer deployed on 17 June, 2000
C	32-23.0 N	134-38.0 E		Ocean Bottom Seismometer deployed on 17 June, 2000
C	32-18.0 N	134-51.5 E		Ocean Bottom Seismometer deployed on 17 June, 2000
C	32-14.0 N	134-22.0 E		Ocean Bottom Seismometer deployed on 18 June, 2000
C	32-32.0 N	134-12.0 E		Ocean Bottom Seismometer deployed on 18 June, 2000
A	32-48 N	133-41 E		Ocean Bottom Seismometer deployed on 21 June, 2000

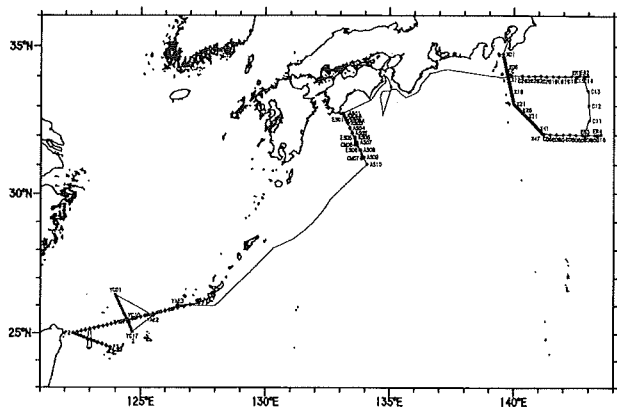
Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A				Heat flow data with a heat flow probe at ~10 locations
B				CTD vertical profiles at 12 stations (5 deep probes just above bottom (2000-3500 m) and 9 shallow probes (<100 m))
B				Seawater samples taken with NISKIN (10 l) bottles (~50 deep samples and ~100 surface samples for chemical analyses)
D				Piston core samples at 3 locations. Samples were used for pore fluid extraction for chemical analysis, and for micropaleontological studies.

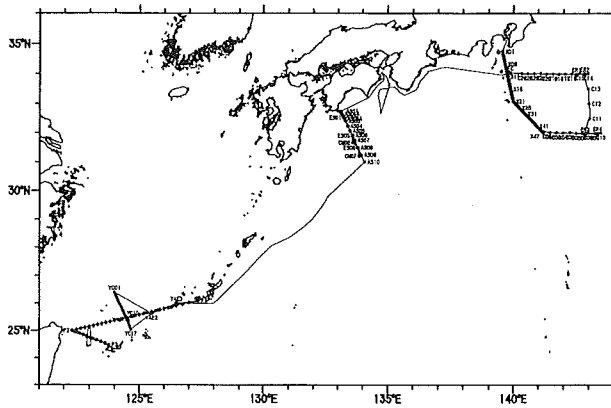
Reference No. : 00048
 Restrict Data : No
 Ship Name : HAKUHO MARU

Chart

Leg-1 (Tokyo-Naha)



Leg-2 (Naha-Tokyo)



Ship Type : Research Vessel

Cruise No./Name : KH-00-4

Cruise Period : 2000/9/5 to 2000/10/19

Port of Departure : Tokyo

Port of Return : Tokyo

Responsible Laboratory :

Ocean Research Institute, University of Tokyo (ORI,UT)

Chief Scientist(s) : K.Taira / ORI,UT

General Ocean Area(s) : North Pacific Ocean
East China Sea

Geographic Coverage : 95,96,130,131,132

Principal Investigators : A ; K.Taira / ORI,UT

B ; T.Takeuchi / University of Electro - Communications

C ; H.Uchida / Research Institute for Applied Physics, KU

D ; T.Ichikawa / Faculty of Science, Kagoshima Univ.

E ; J.Ishizaka / FF, NU

Objectives and Brief Narrative of Cruise :

The major objectives of the cruise is observational studies on the water variation in the East China Sea and the deep circulation east of Japan.

- (1) High - precision measurements of the transport and the density structure of the Kuroshio,
- (2) Measurement of the deep currents east of Japan, (3) Study on the monitoring of ocean condition in the East China Sea, (4) Chemical and microbiological analysis of the water masses in the East China Sea, and (5) Study on the optical environment and primary production in the marginal seas.

Moorings, Bottom Mounted Gear and Drifting Systems :

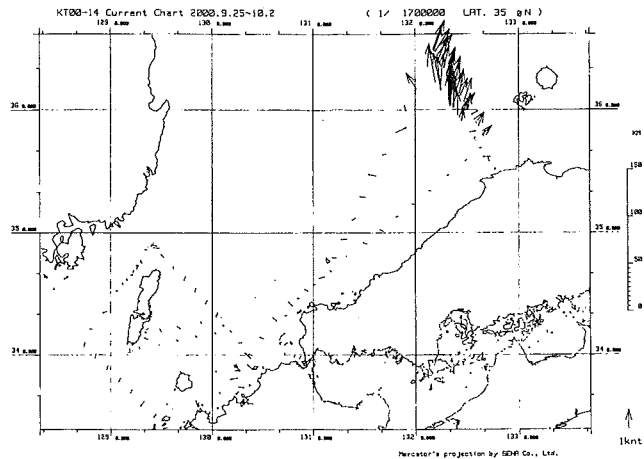
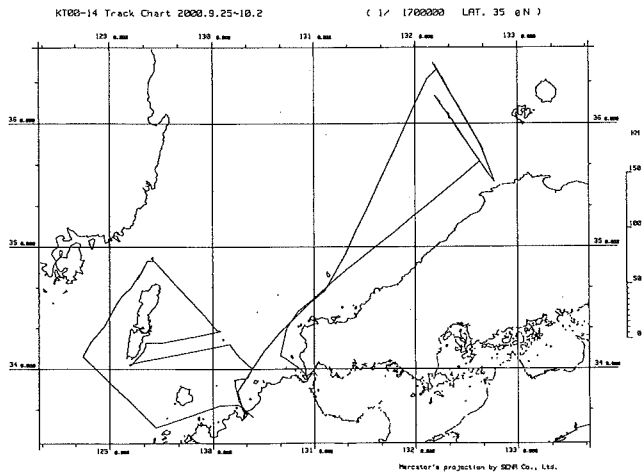
PI	LAT.	LON.	DATA TYPE	DESCRIPTION
A	31 - 59.8 N	143 - 20.4 E	D 01	deployed 3 current meters on Sep 8, 2000
A	31 - 58.8 N	142 - 51.0 E	D 01	deployed 3 current meters on Sep 8, 2000
A	33 - 59.7 N	142 - 50.0 E	D 01	deployed 3 current meters on Sep 8, 2000

A	33-59.0 N	142-30.3 E	D 01	deployed 3 current meters on Sep 9, 2000
B	34-02.7 N	139-49.3 E	D 01	deployed 1 current meter and IES on Sep 11, and recovered them on Oct 16, 2000
B	34-04.2 N	139-55.4 E	D 01	deployed 1 current meter and IES on Sep 11, and recovered them on Oct 16, 2000
B	35-58.9 N	139-54.0 E	D 01	deployed 1 current meter and IES on Sep 11, and recovered them on Oct 16, 2000
B	34-01.9 N	139-52.9 E	D 01	deployed pop-up XBT system on Sep 11, and recovered it on Oct 16
C	31-13.0 N	133-51.4 E	D 01	deployed 1 current meter on Sep 14, 2000
C	31-30.1 N	133-48.0 E	D 01	deployed 1 IES on Sep 15, 2000
C	31-40.7 N	133-35.9 E	D 01	deployed 1 current meter on Sep 15, 2000
C	31-54.9 N	133-34.1 E	D 01	deployed 1 IES on Sep 15, 2000
C	25-59.8 N	126-30.0 E	D 01	deployed 3 current meters on Sep 17, 2000
C	25-38.0 N	125-29.9 E	D 01	deployed 3 current meters on Sep 17, 2000

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	202	Stations	H 10,H 21	Deep casts using Seabird CTDO 2 system
A	107	Stations	H 09,H 21	Measurement of salinity, dissolved oxygen using Niskin bottles
D	53	Stations	H 09,H 22,H 24, H 25,H 26	Measurement of nutrients using Niskin bottles
A	40	Stations	H 09,H 17	Measurement of underwater radiation and water samples for primary production
A	185	Stations	D 71	Current measurement using RDI Lowered ADCP at deep CTD casts
A	175	Drops	D 90	XBT drops with TSK T-7, T-6, T-7 and Sparton XBT-7 probes
A	6	Drops	D 90	XCTD drops with TSK probes
A	8000	Miles	D 71	Current velocity measurement using a ship-board ADCP (Furuno and RDI 38 kHz broadband)
A	8000	Miles	H 71	Continuous measurement of surface water temperature and salinity by intake
A	8000	Miles	M 06	Continuous measurement of meteorological parameters such as air temperature, humidity, surface wind

Reference No. : 00049
 Restrict Data : No



Ship Name : TANSEI MARU
Ship Type : Research Vessel
Cruise No./Name : KT-00-14
Cruise Period : 2000/9/25 to 2000/10/2
Port of Departure : Hakata
Port of Return : Shimonoseki
Responsible Laboratory :

Ocean Research Institute, University of Tokyo (ORI,UT)

Chief Scientist(s) : S.Kojima / ORI,UT
General Ocean Area(s) : Japan Sea
Specific Areas : Tsushima Strait, off Shimane Prefecture
Geographic Coverage : 131
Principal Investigators : A ; S.Kojima / ORI,UT
 B ; S.Tsukawaki / Dept. of Civil Engineering Fact of Engineering,
 Kanazawa Univ.

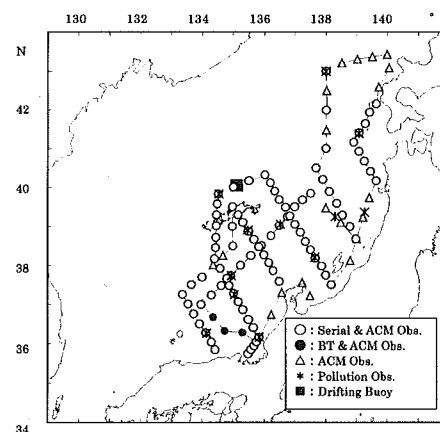
Objectives and Brief Narrative of Cruise :

- A. Sampling megabenthos, macrobenthos and demersal fish in the Tsushima Strait
- B. Collecting bottom sediments and core samples in the western part of the Sea of Japan
- C. Analysing bottom structure of the area off Shimane Prefecture

A	3	Stations	B 18,B 19,B 20,B 21	3 m Beam Trawl
A	7	Stations	B 18,B 20,B 21	Biological Dredge
A	32	Stations	G 02	Okean Grab sample
A	2	Stations	G 04	Piston Cover

Reference No. : 00050
Restrict Data : In part
Ship Name : SEIFU MARU

Ship Type : Research Vessel
 Cruise No./Name : 00-07
 Cruise Period : 2000/7/5 to 2000/8/8
 Port of Departure : Maizuru
 Port of Return : Maizuru
 Responsible Laboratory :
 Maizuru Marine Observatory,
 Japan Meteorological Agency (MMO,JMA)
 Chief Scientist(s) : T.Segawa / MMO,JMA
 General Ocean Area(s) : Japan Sea
 Geographic Coverage : 131,167
 Project Name : IGOSS, WESTPAC, MARPOLMoN
 Coordinating Body : IOC
 Principal Investigators : A ; N.Kubo / MMO,JMA
 B ; K.Hori / MMO,JMA
 C ; K.Isa / MMO,JMA
D ; J.Oyama / JMA
 E ; T.Uwai / JMA
 F ; M.Aoyama / MRI



Track Chart

Objectives and Brief Narrative of Cruise :

A routine oceanographic observation (physical, chemical, and biological).

- a) Seasonal observation of marine condition.
- b) Monitoring background marine pollution.

Sea water sampling for radioactivity measurements.

Development of data assimilation system of ocean observation.

Deploy surface drifting buoy at 40° 03'N, 135° 08'E

Large volume sampling (only surface water) and small volume sampling.

for bio-geochemical study of artificial radioactivity (by Meteorological Research Institute (MRI),JMA)

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
E	40-03 N	135-08 E	D 05	Deployed a drifting buoy, July 23, 2000

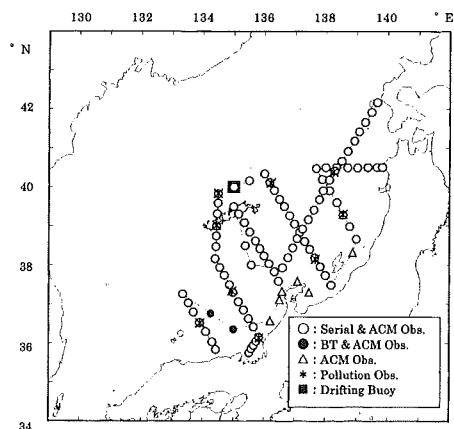
Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
B	10	Stations	P 03	Floating Tar balls sampling (Using with Neuston net)
B	20	Days	P 90	Oil slicks and floating pollutants(Daytime only)
A	2969	N.M	H 71	Measurements of near-surface temperature and salinity using T.S.G.
C	502	Times	M 06	According to "WMO International codes"
C	17	Ascents	M 01	Using and VAISACA RS 80-15 N Radio son-

			des VAISALA digicora MW II system	
C	168	Times	D 72	Using micro wave or Tucken wave gange
B	33	Stations	H 21	Using Neil-Brown CTD with Rosette Sampler System
A	89	Stations	H 10	Using Neil-Brown CTD
B	32	Stations	H 22,H 24,H 25	Using Neil-Brown CTD with Rosette Sampler System
B	3	Stations	H 28	Using Neil-Brown CTD with Rosette Sampler System
B	17	Stations	B 02	Using Neil-Brown CTD with Rosette Sampler System
B	9	Stations	B 08	Surface water sampling
B	9	Stations	B 09	Collected by Norpac Net
D	2	Stations	P 02	Using Neil-Brown CTD with Rosette Sampler System
D	2	Stations	P 03	Surface water sampling for petroleum Hydrocabons concentrations.
A	53	Stations	H 16	Using Secchi Disk
F	5	Stations	H 32	Sea water sampling for radioactivity measurements 137 Cs
F	5	Stations	H 32	Sea water sampling for radioactivity measurements 90 Sr
F	5	Stations	H 32	Sea water sampling for radioactivity measurements 239+240 Pu
A	3	Drops	H 13	X-BT drops with T 6 and T 7 type probe.
B	4	Stations	H 31	Gross beta radioactivity
A	112	Stations	D 71	Using Acoustic Current Meter (Furuno)
A	112	Stations	G 73	Using echo sounder (KAIJO) (count.)

Reference No. : 00051
 Restrict Data : No
 Ship Name : SEIFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 00-10
 Cruise Period : 2000/10/6 to 2000/11/6
 Port of Departure : Maizuru
 Port of Return : Maizuru
 Responsible Laboratory :

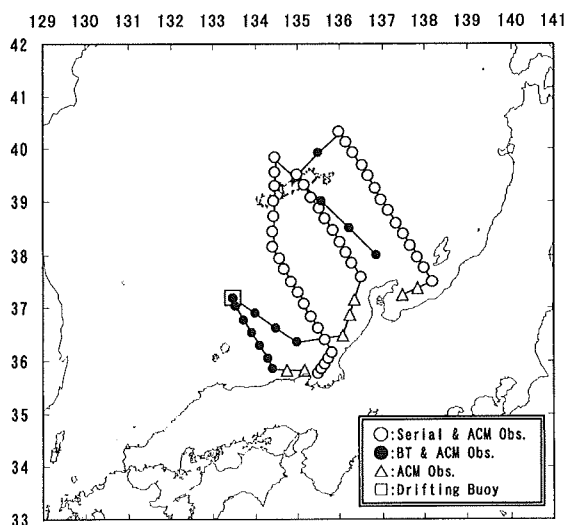
Maizuru Marine Observatory,
 Japan Meteorological Agency (MMO,JMA)



Track Chart

A 39	Stations	H 16	Using Secchi Disk
A 2	Stations	H 13	X - BT drops with T 6 and T 7 type probe.
A 51	Stations	D 71	Using Acoustic Current Meter (Furuno)
A 95	Stations	G 73	Using echo sounder (KAIJO)
D 7	Stations	P 03	Floating tarballs sampling using with Neuston Net
B 14	Days	P 90	Oil slicks and floating pollutants(Daytime only)
A 2458	N.M	H 71	Measurments of near - surface temperature and salinity (using T.S.G)

Reference No. : 00052
 Restrict Data : No
 Ship Name : SEIFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 00 - 11
 Cruise Period : 2000/11/17 to 2000/12/7
 Port of Departure : Maizuru
 Port of Return : Maizuru
 Responsible Laboratory :
 Maizuru Marine Observatory,
 Japan Meteorological Agency (MMO,JMA)
 Chief Scientist(s) : K.Sakurai / MMO,JMA
 General Ocean Area(s) : Japan Sea
 Geographic Coverage : 131,167
 Project Name : IGOSS, WASTPAC
 Coordinating Body : IOC
 Principal Investigators : N.Kubo / MMO,JMA
 B ; K.Hori / MMO,JMA
 C ; K.Isa / MMO,JMA
 D ; T.Uwai / JMA



Track Chart

Objectives and Brief Narrative of Cruise :

A routine oceanographic observation (physical, chemical and biological)

a) Seasonal observation of marine condition

Development of data assimilation system ocean observation

Deploy surface drifting buoy at 37° 11'N,133° 28'E

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
D	37 - 11 N	133 - 28 E	D 05	Deployed a drifting buoy, Dec. 4, 2000

Summary of Measurements and Sample Taken :

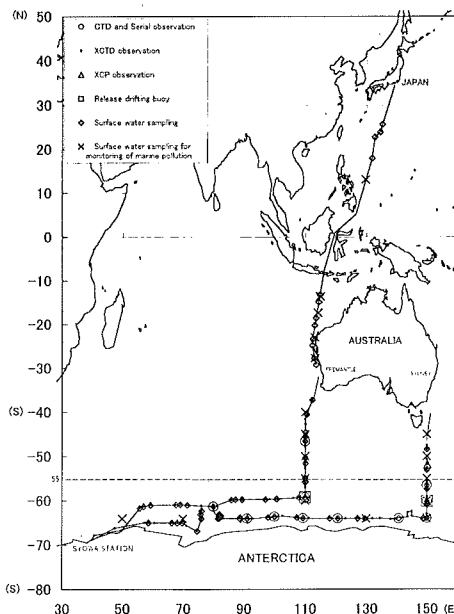
PI	NO	UNITS	DATA TYPE	DESCRIPTION
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A 3 Stations H 10 Using Sea-Bird SBE 9 Plus CTD with DO Sensor, Wet Labs Transmissometer, Seapoint Chlorophyll Fluorometer(Upper 1000 m)

A 2 Stations B 08,B 09,B 10, Horizontal towing Larvae net(20 min.)
B 13

Reference No. : 00054
 Restrict Data : No
 Ship Name : SHIRASE
 Ship Type : Ice breaker
 Cruise No./Name : JARE 42
 Cruise Period : 2000/11/14 to 2001/3/20
 Port of Departure : Tokyo
 Port of Return : Sydney
 Responsible Laboratory :
 National Institute of Polar Research (NIPR)
 Chief Scientist(s) : W.Takahashi / HD,JMA
 General Ocean Area(s) : Indian Ocean
 : South Pacific Ocean
 Geographic Coverage :

Fig. Track of the icebreaker "Shirase" and oceanographic stations



396,397,432,433,464,465,468,469,500,501,504,505,536,537,538,539,540,541,542,543,544,545,546,547,548

Principal Investigators : A ; Mr.Takahashi / HD,JCG
 B ; Mr.Kojima / HD,JCG

Objectives and Brief Narrative of Cruise :

One of a routine oceanographic observation (physical and chemical) on the 42th summer mission of Japanese Antarctic Research Expedition

- A. Monitoring the position of Subtropical and Antarctic Convergence
- B. Trace of the Antarctic Circumpolar Current
- C. Marine pollution analysis

Main task

1. Deploy surface drifting buoy at 59° 16.5'S, 110° 01.0 E and 60° 06.8 S, 150° 06.7 E
2. Surface water sampling for temperature measurement and chemical analysis
3. Hydrographic measurement in Southern Ocean on route from Fremantle to Sydney

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
A	59-16.5 S	110-01.0 E	D 05	Deployed a drifting buoy, Dec.9 th, 2000
A	60-06.8 S	150-06.7 E	D 05	Deployed a drifting buoy, Mar.14 th, 2001
A	69-00.1 S	39-37.4 E	D 01	Set Acoustic Doppler Current Profiler type WH from Jan.5 th to Jan.21 th, 2001
A	69-28.3 S	39-36.6 E	D 09	Set Pressure meter type Aanderaa from Jan.8

th to Feb.8 th,2001

Summary of Measurements and Sample Taken :

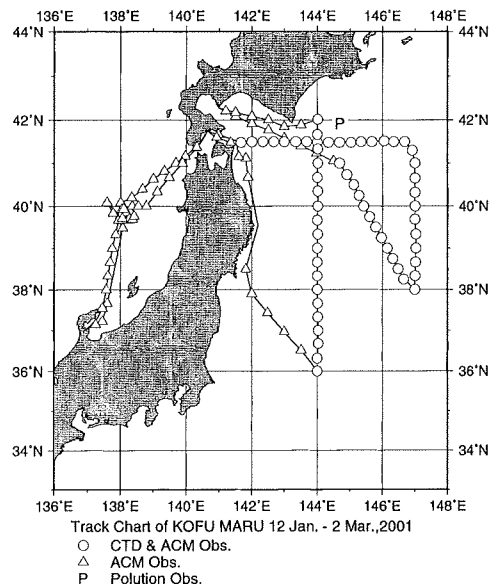
PI NO	UNITS	DATA TYPE	DESCRIPTION
A 13	Stations	H 09,H 21,H 22, H 24,H 25,H 76, H 26,H 28	Deep cast using Niskin bottles with reversing thermometer
A 13	Stations	H 10	Using FSI – CTD(uper 4,000 m)
A 98	Drops	H 10	XCTD Drops with Tsurumi Co.(uper 1000 m)
B 57	Samples	H 71,H 21,H 22, H 24,H 25,H 76, H 26,H 28	Surface temperature measurement and surface water sampling for Chemical analysis were made twice or three times a day (once a day as Shirase stayed in ice – covered area).
B 16	Samples	P 02,P 03	16 samples of surface water for trace meters (Cadmiums, Mercury, Copper and Zinc)
A 10	Casts	H 10	Using SeaBird 19(CTD) at the ADCP station for ADCP sampling(ADCP station : 69° 00.1'S, 39° 37.4'E)(uper 200 m)
A 2	Stations	D 01	XCP(Expendable Current,Profiler) Drops with Tsurumi Co.(uper 1500 m)

Reference No. : 01001
 Restrict Data : No
 Ship Name : KOFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 01 – 01
 Cruise Period : 2001/1/12 to 2001/3/2
 Port of Departure : Hakodate
 Port of Return : Hakodate

Responsible Laboratory :
 Hakodate Marine Observatory,
 Japan Meteorological Agency (HMO,JMA)

Chief Scientist(s) :
 M.Inagawa / Oceanographical Division,HMO,JMA

General Ocean Area(s) : North Pacific Ocean
 Geographic Coverage : 130,131,166,167
 Project Name : IGOSS, WESTPAC, MARPOLMoN, SAGE
 Coordinating Body : WMO, IOC
 Principal Investigators : A ; T.Miyao / Oceanographical Division,HMO,JMA
 B ; T.Aizawa / Maritime Meteorological Division,HMO,JMA



C ; J.Oyama / Pollutants Chemical Analysis Center, Marine Division,
 CMD, JMA

D ; N.Shikama / MRI

Objectives and Brief Narrative of Cruise :

1. Studies on structures of mesoscale disturbance over the Japan Sea in winter.
2. Regular observation of oceanography and marine meteorology.
3. Background marine pollution monitoring.
4. Observations for the Subarctic Gyre Experiment.
- 4-1. Observations for the study of North Pacific Intermediate Water subarctic North Pacific.
- 4-2. Observations of the pCO₂ in air and sea surface water in the Western Subarctic North Pacific.
5. Observations for development of the ocean data assimilation system (COMPASS-K).
6. Deployment PALACE floats.

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
D	37-01 N	144-03 E	D 05	Deployment PALACE float on 23 February 2001
D	36-41 N	144-03 E	D 05	Deployment PALACE float on 23 February 2001

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
C	44	Stations	H 74	Sampling for analysis of total inorganic carbons.
A	2031	NM	H 71	Continuous sea surface temperature & salinity recording.
A	45	Stations	H 10	Using Neil Brown CTD.
A	17	Stations	H 09, H 21, H 22, H 24, H 25, B 02	Using Neil Brown CTD with Rosette sampler.
A	6	Stations	H 28	Using Neil Brown CTD with Rosette sampler.
A	6	Stations	B 08	Using bucket.
A	6	Stations	B 09	Using NORPAC net.
A	13	Drops	H 10	Using Tsurumi-Seiki XCTD.
A	122	Stations	D 71	Using FURUNO Co. Acoustic Current Meter at 0,50,100 m in depth.
A	2031	NM	H 74, M 71	CO ₂ concentrations in air and sea surface water.
B	221	Times	M 06	Observed every three hours.
B	440	Times	M 90	Hourly Weather report except M 06.
B	77	Ascents	M 01	Using VAISALA system.
B	221	Times	D 72	Using Micro-wave & Tucker wave gauge.

C 11	Days	P 90	Oil slicks and floating pollutants observed visually(Daytime only).
C 2	Samples	P 02	Sampling for analysis of heavy metals.
C 2	Samples	P 03	Sampling for measurement of dissolved hydrocarbons.
C 1	Stations	P 03	Using Neuston net.

Reference No. : 01002
 Ship Name : SHUMPU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 01-01
 Cruise Period :
 Leg 1 : 2001/1/19(Kobe) - 2001/1/25(Kochi)
 Leg 2 : 2001/1/29(Kochi) - 2001/2/2(Kobe)

Responsible Laboratory :
 Kobe Marine Observatory,
 Japan Meteorological Agency (KMO,JMA)

Chief Scientist(s) : N.Ishikawa
 K.Hayashi

General Ocean Area(s) : Philippine Sea

Specific Areas : South of Honshu

Geographic Coverage : 131

Project Name : IGOSS, WESTPAC

Coordinating Body : IOC, WMO

Principal Investigators : A ; K.Kimura / Oceanographical Division,KMO,JMA

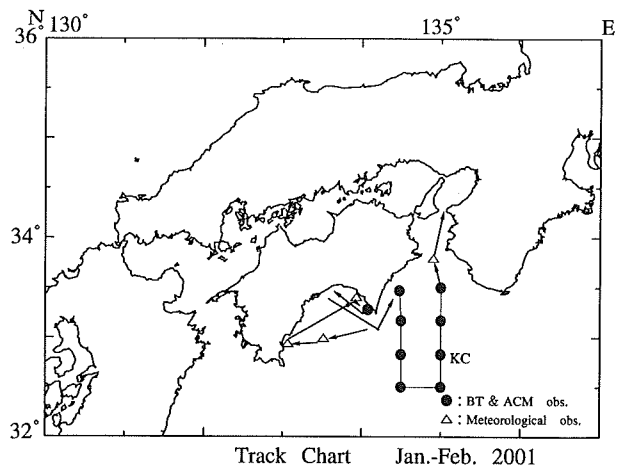
B ; N.Ishikawa / Marine Meteorological Division,KMO,JMA

Objectives and Brief Narrative of Cruise :

1. Seasonal observation of marine condition.
2. Ocean wave sampling for the data of coastal wave recorders.

A 9	Stations	H 13	D - BT
A 9	Stations	D 71	Current of 3 Layers depth
A 9	Stations	G 73	single - beam echosounding
A 666	NM	H 71	Surface measurements underway (Temperature)
B 68	Times	M 06	Routine standard measurements
B 68	Times	D 72	Wave measurements

Reference No. : 01003
 Restrict Data : No
 Ship Name : KEIFU MARU



Ship Type : Research Vessel
Cruise No./Name : 01-01
Cruise Period : 2001/1/19 to 2001/3/9
Port of Departure : Tokyo
Port of Return : Tokyo
Responsible Laboratory :
 Japan Meteorological Agency (JMA)
Chief Scientist(s) :
 T.Nakamura / Marine Division,CMD,JMA
General Ocean Area(s) : North Pacific Ocean
Geographic Coverage : 20,21,22,56,58,92,93,94,95,130,131,319
Project Name : IGOSS, WESTPAC, MARPOLMoN
Coordinating Body : IOC

Principal Investigators :
 A ; T.Yano / Marine Division,CMD,JMA
 B ; J.Oyama / Marine Division,CMD,JMA
 C ; T.Uwai / Marine Division,CMD,JMA

Objectives and Brief Narrative of Cruise :

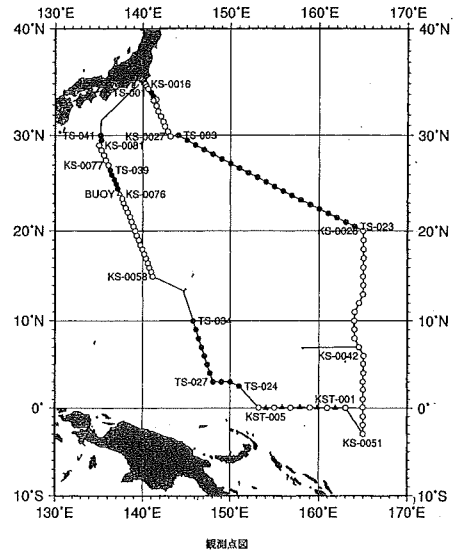
- Routine oceanographical observation
(physical and chemical elements)
- a. Seasonal observations of marine condition
- b. Monitoring background marine pollution
- Sea water sampling for radioactivity measurement
- Observations for development of the ocean data assimilation system
- Deployment of surface drifting buoy

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
C	23-58 N	137-28 E	D 05	Deployed a drifting buoy, 1, 02 Mar. 2001

Summary of Measurements and Sample Taken :

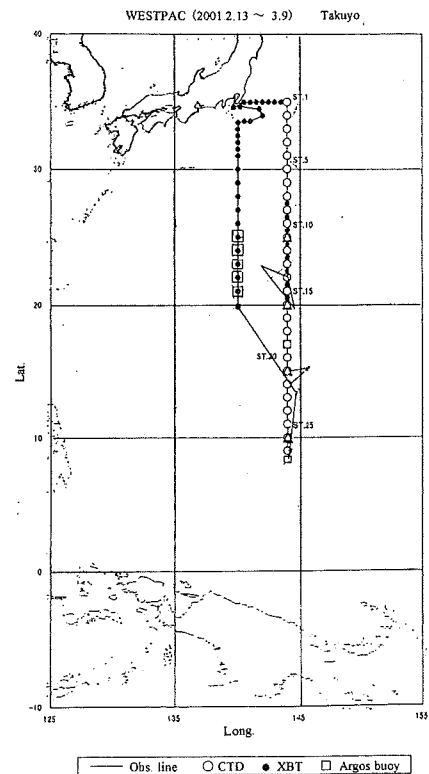
PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	66	Stations	H 10	Using SBE 9-11 CTD
A	300	NM	H 10	Using SBE 9-11 CTD and SEASOAR Mk II
A	126	Stations	D 71	Using RD Instruments Acoustic Doppler Current Profiler
A	13	Stations	H 21,H 22,H 24, H 25	Using Rosetto Sampler
A	41	Drops	H 13	X-BT drops with T-7 TYPE probe
A	126	Stations	G 73	Using NEC echosounder
A	6	Stations	H 31	Gross Beta Radioactivity in seawater
B	8	Stations	PO 2	Mercury concentrations in seawater



○ : 各層観測点
 ● : 表層観測点
 ▲ : 曳網式CTD測点
 ▽ : 漂流型海洋気象ブイ放流地点

B	8	Stations	PO 3	Cadmium concentration in seawater
B	50	Days	P 90	Dissolved Hydrocarbons in seawater
B	7519	NM	H 71,H 74	Oil slicks and floating pollutions (daytime only)
				Continuous sampling of CO 2 concentration in air and sea surface water
A	7519	NM	H 71	Continuous recording of sea surface temperature and salinity
A	270	Times	M 06	Observed every 3 hours

Reference No. : 01004
 Restrict Data : No
 Ship Name : TAKUYO
 Ship Type : Survey Vessel
 Cruise No./Name : WESTPAC
 Cruise Period : 2001/2/13 to 2001/3/9
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :
 Hydrographic Department, Japan Coast Guard (HD,JCG)
 Chief Scientist(s) : H.Nakamura / HD,JCG
 General Ocean Area(s) : North Pacific Ocean, Philippine Sea
 Specific Areas : Nil
 Geographic Coverage : 22,58,94,130
 Project Name : WESTPAC
 Coordinating Body : IOC of UNESCO
 Principal Investigators : A ; H.Nakamura / HD,JCG
 B ; / JAMSTEC



Objectives and Brief Narrative of Cruise :

Object : The oceanographic observation as the part of joint surveys of the Pacific Ocean region(WESTPAC) which is the region program(IOC of UNESCO) for clarifying the fluctuation mechanism of oceanic structure of western Pacific ocean area.

- (A) Surface current observation by ADCP
- (B) Measurement of the density of carbonic acid gas.
- (C) Measurement of water temperature at surface layer by XBT
- (D) Measurement of water temperature and salinity by using CTD and chemical analysis of sea water for nutrient water.
- (E) Wave observation by shipborne analyzer
- (F) Deployment of ARGOS buoys (Drifting buoys)

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
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A	16-59 N	144-00 E	D 05	Deployed a drifting buoy, Feb. 22
A	8-32 N	143-55 E	D 05	Deployed a drifting buoy, Mar. 1
B	21-00 N	140-00 E	D 05	Deployed a drifting buoy, Mar. 4
B	21-59 N	140-00 E	D 05	Deployed a drifting buoy, Mar. 4
B	23-00 N	140-00 E	D 05	Deployed a drifting buoy, Mar. 4
B	24-00 N	140-00 E	D 05	Deployed a drifting buoy, Mar. 5
B	25-00 N	140-00 E	D 05	Deployed a drifting buoy, Mar. 5

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	Continuos	4051 Mile	D 71	Surface current observation by ADCP
A	Continuos	4051 Mile	H 74	measurement of the dencity of Carbonicacid gas by using Bines 41
A	38		H 13	XBT Drops with T-6 type probes
A	23		H 09,H 21,H 22, H 24,H 25,H 26, H 28	Deep cas using Posette Sampler with reversing thermometers party
A	23		H 10	Using Sea Bird SBE 9 plus CTD
A	23		H 21,H 22,H 24, H 25,H 26,H 28	Surface temperature mesurement and surface water Sampling for chemical analysis
A	23		D 72	Wave observation using shipborne wave analyzer
A	4		H 10	Using Tsurumi-Seiki XCTD

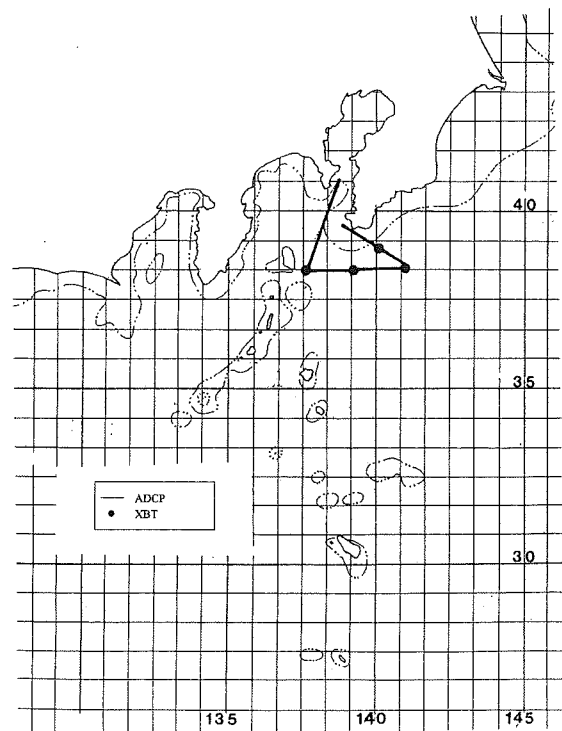
Reference No. : 01005
 Restrict Data : No
 Ship Name : KAIYO
 Ship Type : Survey Vessel
 Cruise No./Name : Current Observation
 Cruise Period : 2001/3/5 to 2001/3/9
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :

Hydrographic Department,
 Japan Coast Guard (HD,JCG)

Chief Scientist(s) : M.Nanba / HD,JCG
 General Ocean Area(s) : North Pacific Ocean
 Geographic Coverage : 130
 Principal Investigators : A ; Y.Tani / HD,JCG

Objectives and Brief Narrative of Cruise :

Object : Confirmation of the Kuroshio meander and cold water vortex of the Enshunada open



sea are grasped, and Quick Bulletin of Ocean Conditions and Ocean current Forecasting reflect it, and it is made to be speculation material of future Kuroshio fluctuation.

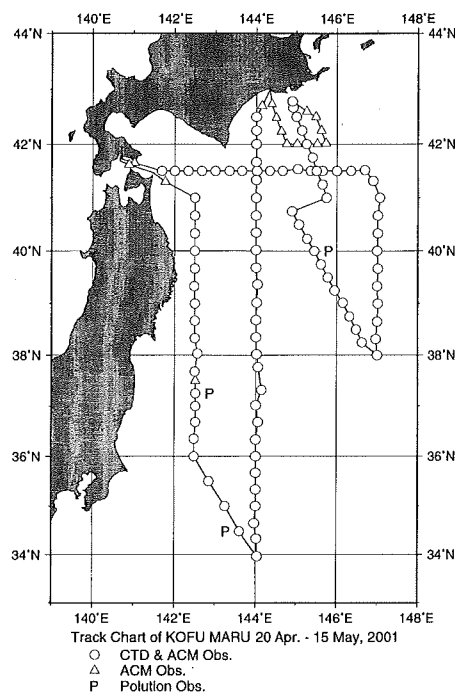
(A) Surface current observation by ADCP.

(B) Measurement of water temperature at surface layer by XBT.

A Continuous 80 Mile Surface current observation by ADCP

A 4 XBT drops with T-6 type probes

Reference No. : 01006
 Restrict Data : No
 Ship Name : KOFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 01-04
 Cruise Period : 2001/4/20 to 2001/5/15
 Port of Departure : Hakodate
 Port of Return : Hakodate
 Responsible Laboratory :
 Hakodate Marine Observatory,
 Japan Meteorological Agency (HMO,JMA)
 Chief Scientist(s) :
 M.Inagawa / Oceanographical Division,HMO,JMA
 General Ocean Area(s) : North Pacific Ocean
 Geographic Coverage : 130,166
 Project Name : JCOMM, WESTPAC, MARPOLMoN, SAGE
 Coordinating Body : WMO, IOC
 Principal Investigators : A ; T.Miyao / Oceanographical Division,HMO,JMA
 B ; J.Nakagawa / Maritime Meteorological Division,HMO,JMA
 C ; T.Asou / Pollutants Chemical Analysis Center,Marine Division,
 CMD,JMA



Objectives and Brief Narrative of Cruise :

1. Regular observation of oceanography and marine meteorology.
2. Background marine pollution monitoring.
3. Observations for the Subarctic Gyre Experiment.
 - 3-1. Observations for the study of North Pacific Intermediate Water.
 - 3-2. Observations of the pCO₂ in air and sea surface water.
4. Observations for development of the ocean data assimilation system (COMPASS-K).
5. Ocean wave sampling for the data of coastal wave recorders.

A 2368 NM H 71 Continuous sea surface temperature & salinity recording.
 A 90 Stations H 10 Using Neil Brown CTD.
 A 25 Stations H 09,H 21,H 22,

			H 24,H 25,B 02	Using Neil Brown CTD with Rosette sampler.
A	9	Stations	H 28	Using Neil Brown CTD with Rosette sampler.
A	6	Stations	B 08	Using bucket.
A	6	Stations	B 09	Using NORPAC net.
A	3	Drops	H 10	Using Tsurumi – Seiki XCTD.
A	54	Stations	H 16	Using Secchi Disk(Daytime only).
A	108	Stations	D 71	Using FURUNO Co. Acoustic Current Meter at 0,50,100 m in depth.
A	2368	NM	H 74,M 71	CO 2 concentrations in air and sea surface water.
B	129	Times	M 06	Observed every three hours.
B	256	Times	M 90	Hourly Weather report except M 06.
B	24	Ascents	M 01	Using VAISALA system.
B	128	Times	D 72	Using Micro – wave & Tucker wave gauge.
C	2	Samples	P 02	Sampling for analysis of heavy metals.
C	2	Samples	P 03	Sampling for measurement of dissolved hydrocarbons.
C	3	Stations	P 03	Using Neuston net.
C	15	Days	P 90	Oil slicks and floating pollutants observed visually(Daytime only).
C	67	Stations	H 74	Sampling for analysis of total inorganic carbons.

Reference No. : 01007
 Restrict Data : In part
 Ship Name : KAKUYO MARU
 Ship Type : Training Ship
 Cruise No./Name : Voy. No.155
 Cruise Period : 2001/5/16 to 2001/5/24
 Port of Departure : Nagasaki
 Port of Return : Nagasaki
 Responsible Laboratory :
 Faculty of Fisheries, Nagasaki University (FF,NU)
 Chief Scientist(s) : T.Matsuno / RIAM,KU
 General Ocean Area(s) : East China Sea
 Specific Areas :

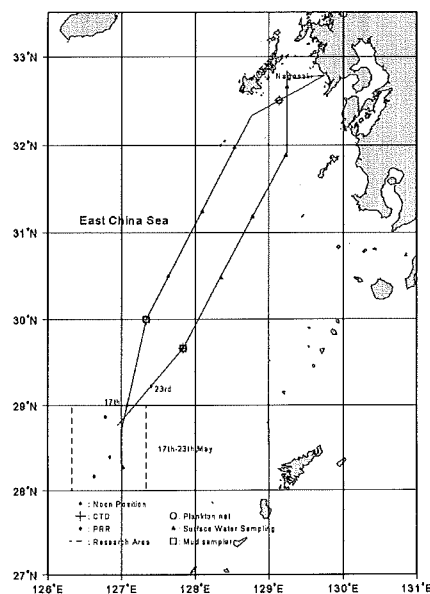


Fig.1. Track of Cruise 155, 2001 & oceanographic stations in the East China Sea.

Around the continental shelf break in the East China Sea
 Geographic Coverage : 96
 Principal Investigators : A ; T.Matsuno / RIAM,KU

B ; A.Isobe / Interdisciplinary Graduate School of Engineering Sci-

ences,KU
 C ; T.Kurataya / FF,NU
 D ; T.Suzuki / FF,NU
 E ; H.Nakata / FF,NU

Objectives and Brief Narrative of Cruise :

Main task

- 1 : Training of navigation.
- 2 : Oceanographic observations.
- 2-1 Survey of low salinity water intrusion into the Kuroshio
- 2-2 Observation of frontal eddies
- 2-3 Physical and biological processes around the Kuroshio front

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
A	28-45.87 N	126-56.78 E	D 01	Aanderaa RCM 8(53, 93, 133, 173, 213 m) Aanderaa RCM 7(233 m) MDS thermometer(63, 73, 83, 103, 113, 123, 143, 153, 163, 183, 193, 203, 223 m) Moored on May 17, 2001 Recovered on May 23, 2001
A	28-22.85 N	126-51.98 E	D 01	Aanderaa RCM 8(55, 95, 235 m) Acoustic Doppler Current Profiler(upward at 215 m) MDS thermometer(65, 75, 85, 105, 115, 125, 135, 145, 155, 165, 175, 185, 195, 205, 215, 225 m) Moored on May 17, 2001 Recovered on May 23, 2001

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	91	Stations	H 10	Using Sea - bird 9 PLUS CTD(Upper 500 m)
B	690	NM	D 71	Towing ADCP
B	104	Stations	H 13	Casting XBT(upper 450 m)
C	6	Stations	H 17	Using Radio - spectrometer(upper 100 m)
C	44	Stations	H 22,H 24,B 01,B 02,B 06,B 08,B 72, P 01	Water samling with Rosset - sampler
D	5	Stations	B 07,B 08	Plankton Sampling with Norpac - Net
E	3	Stations	B 13	Larvae sampling with Bongo - net

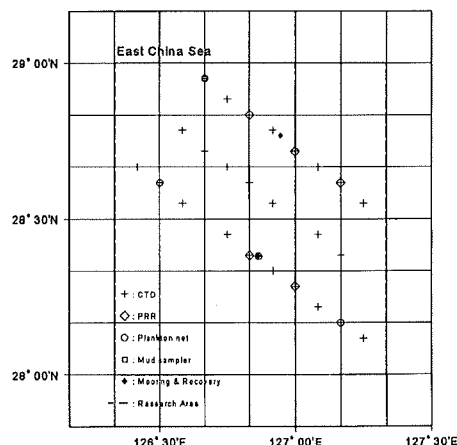


Fig.2. Oceanographic stations in the East China Sea.

Reference No. : 01008
 Restrict Data : In part
 Ship Name : KAKUYO MARU
 Ship Type : Training Ship
 Cruise No./Name : Voy. No.157
 Cruise Period : 2001/6/4 to 2001/6/19
 Port of Departure : Nagasaki
 Port of Return : Nagasaki
 Responsible Laboratory :
 Research Institute for Applied Mechanics,
 Kyushu University (RIAM,KU)
 Chief Scientist(s) : T.Matsuno / RIAM,KU
 T.Senjyu / RIAM,KU

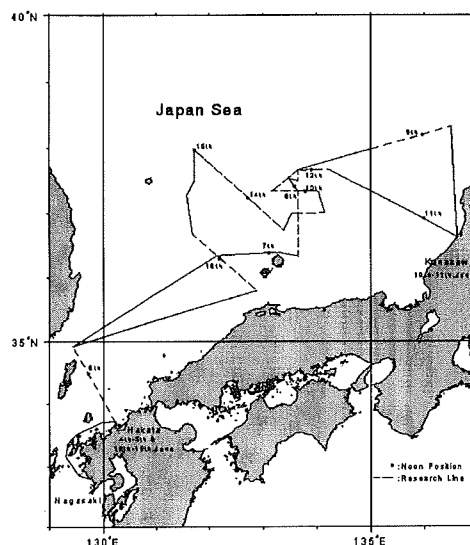


Fig.1. Track of Cruise 157, 2001 in the Japan Sea.

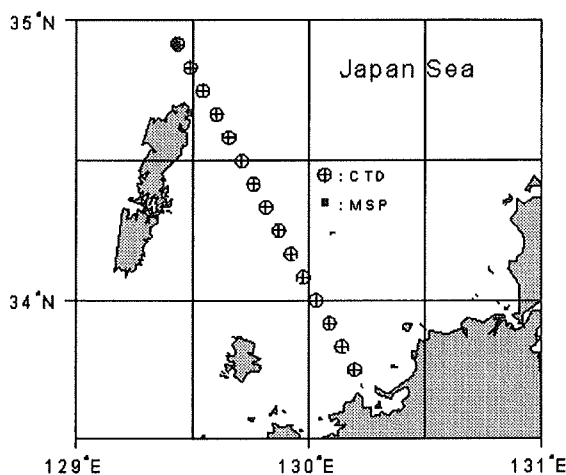


Fig.2. Oceanographic stations in the Japan Sea.

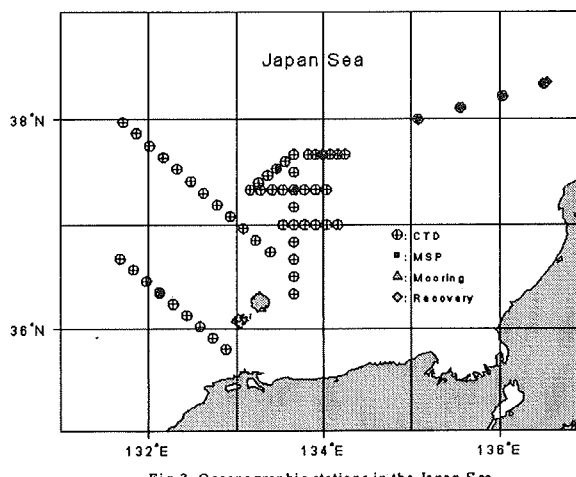


Fig.3. Oceanographic stations in the Japan Sea.

General Ocean Area(s) : Japan Sea
 Specific Areas :
 The Tsushima Straits and southern part of the Japan Sea

Geographic Coverage : 131,132
 Project Name : CREAMS(Circulation Research of the East Asian Marginal Seas)
 Coordinating Body : RIAM,Kyushu University
 Principal Investigators : A ; T.Matsuno / RIAM,KU
 B ; T.Senjyu / RIAM,KU
 C ; H.R.Shin / Kongju National University
 D ; J.Ishizaka / Nagasaki Univ.

Objectives and Brief Narrative of Cruise :

Purposes of the cruise are described below

- a) To clarify the water exchange between the Yamato Basin and Ulleung/Tsushima Basin
- b) To clarify the circulation in the Yamato and Tsushima/Ulleung Basin with a special emphasis on the intermediate and deep circulation

- c) To measure the turbulent dissipation rate in the Japan Sea
 - d) To estimate the heat transport and current structure through the Tsushima/Korea Straits.
- * : Training of navigation

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
C	36-20.7 N	132-08.0 E	D 01	Aandera type current meter/ current velocity and temperature/two: 1000 m and 1400 m below the surface/ moored on 14 June, 2000 and recovered on 7 June, 2001
B	38-20.0 N	136-30.0 E	D 01	Aandera type current meter/ current velocity and temperature/two: 1000 m and 1400 m below the surface/ moored on 10 June, 2000 and recovered on 9 June, 2001
B	37-20.0 N	133-40.0 E	D 01	Aandera type current meter/ current velocity and temperature/two: 1000 m and 1400 m below the surface/ moored on 8 June, 2001
B	37-40.0 N	134-00.0 E	D 01	Aandera type current meter/ current velocity and temperature/two: 1000 m and 1400 m below the surface/ moored on 12 June, 2001

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	7	Stations	D 90	Turbulent dissipation rate with micro structure profiler(Alec Electronics, AMSP)[Sta.D 06, CM 07, X, T 01, T 02, T 03, Y]
B	30	Stations	H 10	CTD(SBE 9/11 plus)[Sta.A 01 - A 15]×2
B	34	Stations	H 10	CTD(SBE 9/11 plus)[Sta.CM 01 - 09, CN 01 - 06, CG 01 - 06, CC 02 - 08, CS 01 - 06]
C	21	Stations	H 10	CTD(SBE 9/11 plus)[Sta.D 01 - D 09, E 01 - E 12]
C	36	Stations	H 22,H 24	Water samples with Niskin bottles on a rosette sampler at 10 m Depth.[Sta.A 02, 04, 06, 08, 10, 12, 14, D 01 - 09, E 01 - 12] 12 samples in vertical at Sta. E 12.
D	30	Stations	B 02	Water samples with Niskin Bottles on a rosette sampler. [Sta.A 01 - A 15]×2

Reference No. : 01009
 Ship Name : RYOFU MARU
 Ship Type : Research Vessel

Cruise No./Name : 01-01
Cruise Period : 2001/1/19 to 2001/2/21
Port of Departure : Tokyo
Port of Return : Tokyo
Responsible Laboratory :
 Japan Meteorological Agency (JMA)
Chief Scientist(s) :
 H.Kamiya / Marine Division,CMD,JMA
General Ocean Area(s) : North Pacific Ocean
Geographic Coverage : 23,59,95,131
Project Name : IGOSS, WESTPAC, MARPOLMoN
Coordinating Body : IOC
Principal Investigators :

A ; T.Yano / Marine Division,CMD,JMA
 B ; J.Oyama / Marine Division,CMD,JMA
 C ; J.Kotani / Ryofu Maru,CMD,JMA
 D ; M.Amino / Marine Division,CMD,JMA
 E ; T.Tokieda / MRI
 F ; S.Matsuda / SVD,JMA

Objectives and Brief Narrative of Cruise :

A routine oceanographical observation(physical, chemical and biological)

a.Seasonal observation of marine condition

b.Monitoring background marine pollution

Sea water sampling for radioactivity measurement

Sea water sampling for stable carbon isotope(¹³C) measurement

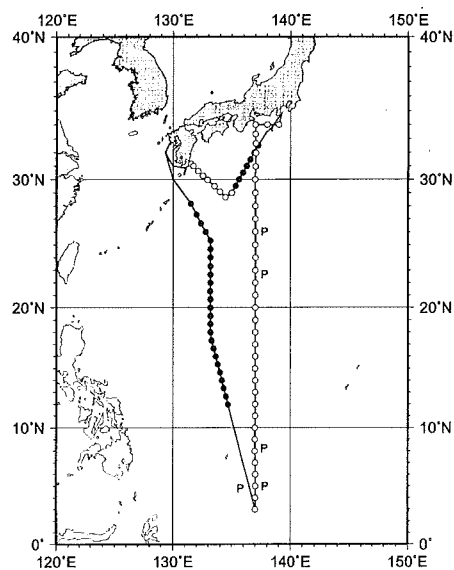
Deployment of PALACE floats

Foraminifera sampling

Recovery of ocean bottom seismographs

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	LON.	DATA TYPE	DESCRIPTION
D	29-55 N	136-55 E	D 06	Deployed an Argo float, 1, 22 Jan. 2001
D	26-59 N	136-59 E	D 06	Deployed an Argo float, 1, 23 Jan. 2001
F	33-29 N	137-56 E	G 90	Recovery of Ocean Bottom Seismograph, 1, 15 Feb. 2001
F	33-34 N	138-08 E	G 90	Recovery of Ocean Bottom Seismograph, 1, 18 Feb. 2001
F	33-36 N	138-23 E	G 90	Recovery of Ocean Bottom Seismograph, 1, 18 Feb. 2001
F	33-43 N	138-15 E	G 90	Recovery of Ocean Bottom Seismograph, 1, 18 Feb. 2001



Track chart
R/V Ryofu Maru, Cruise 01-01

○ Serial(CTD) Observation
 ● BT Observation
 P Pollution Observation

F 33-50 N 138-24 E G 90 Recovery of Ocean Bottom Seismograph, 1, 18
Feb. 2001

Summary of Measurements and Sample Taken :

PI NO	UNITS	DATA TYPE	DESCRIPTION
A 5349	NM	H 71	Continuous recording of sea surface temperature and salinity
A 44	Stations	H 10	Using FSI-ICTD
A 76	Stations	D 71	Using RD instrument Acoustic Doppler Current Profiler
A 76	Stations	G 73	Using NEC echosounder
A 16	Stations	H 16	Using Secchi disk
A 32	Drops	H 13	X-BT drops with T-7 type probe
A 19	Stations	H 09,H 21,H 22, H 24,H 25,H 26	Using Rosette Sampler
A 8	Stations	H 09,B 02	Using Rosette Sampler
A 8	Stations	B 08,B 09	Using Bucket(B 08) and Norpac net(B 09)
A 6	Stations	H 31	Gross beta radioactivity
5349	NM	H 74,M 71	Continuous sampling of CO ₂ concentration in air and sea surface water, and CH ₄ concentration
5	Stations	P 03	Dissolved hydrocarbons
7	Stations	P 02	Heavy metals
17	Stations	H 09,H 74	Total inorganic carbon concentration(Using Rosette sampler)
5	Stations	P 03	Floating Tar balls sampling(Using Neuston net)
24	Days	P 90	Oil slicks and floating pollutants(Daytime only)
204	Times	M 06	Observed every 3 hours
29	Ascents	M 01	Using shipboard automatic radio-sonde system
27	Days	B 09	Foraminifera sampling
11	Stations	H 32	Stable carbon isotope(13 C)

Reference No. : 01010
 Ship Name : TANSEI MARU
 Ship Type : Research Vessel
 Cruise No./Name : KT-01-01
 Cruise Period : 2001/3/1 to 2001/3/7
 Port of Departure : Tokyo
 Port of Return : Yokohama

Responsible Laboratory :

Ocean Research Institute, University of Tokyo (ORI,UT)

Chief Scientist(s) : M.Uematsu / ORI,UT

General Ocean Area(s) : Western North Pacific

Specific Areas : Sagami Bay

Geographic Coverage : 130,131

Project Name : SOLAS (Surface Ocean and Lower Atmosphere Study)

Coordinating Body : IGBP

Principal Investigators : A ; H.Matsuura / ORI,UT

B ; M.Uematsu / ORI,UT

C ; Y.Nakamura / School of Agr.,Tohoku Univ.

D ; Y.Senga / School of Marine & Technology, Tokai Univ.

Objectives and Brief Narrative of Cruise :

1. Feeding ecology and phylogenetic study of Zoo – plankton
2. Biogeochemical cycle between marine atmosphere and sea surface
3. Incubation experiments with steel making slag solution
4. Simultaneous observation with a Self – Cruising Ocean Observation Platform

A large KOSA event was observed during the cruise on 6 March.

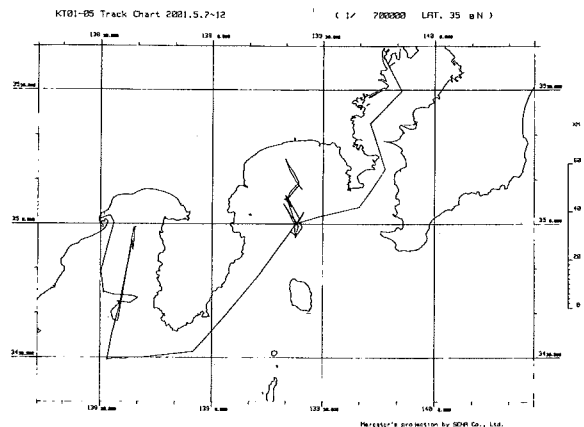
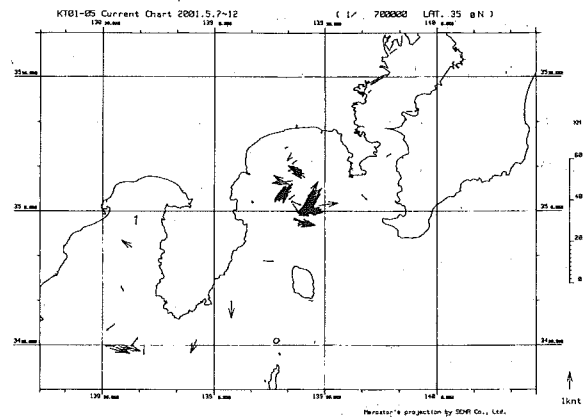
C	St.k	1 cast	CTD – RMS	T.S.Nutrients, chlorophyll – a, 0 – 100 m 9 depths.
D	3	Casts	CTD – RMS	Vertical profiles of Tend S.
D	15	Samples		Obsorbifum of suspended particles / GFIF filtration
D	40	Samples		phytoplanktua pigments analysis
D	4	Samples		Filter samples for SEM analysis
A	5	Casts		Chlorophyll fluorensence 0 – 80 m deep.
A	5	Casts	ORI net	200 plankton collection wire out 2000 m
A	2	Casts	MTD net	Day and Night 14 Layers × 2
A	1	Casts	Norpae net	200 plankton collection wire out 2000 m
B	7	Days		SO 2, 03 continuos measurements into marine atmosphere every 12 sec.
B	7	Days		Aerosol sampling by fileering every 12 hus.
B	7	Days		Continuos measuremest of Organic and Elemental carbon every 2 hus.
B	7	Days		Aerosol size and number by Optical particle counters every 20 min Aerosol samplries with particlesize by Anderson im- pactor every 24 hus.

Reference No. : 01011

Ship Name : TANSEI MARU

Ship Type : Research Vessel

Cruise No./Name : KT-01-5
Cruise Period : 2001/5/7 to 2001/5/12
Port of Departure : Tokyo
Port of Return : Shimizu
Responsible Laboratory :
 Ocean Research Institute,
 University of Tokyo (ORI,UT)
Chief Scientist(s) : S.Nishida / ORI
General Ocean Area(s) : North Pacific Ocean
Specific Areas : Sagami Bay, Suruga Bay
Geographic Coverage : 130,131
Project Name :
 Dynamics of Ocean Biosystems
Coordinating Body :
 Ministry of Education, Science, culture and sports
Principal Investigators : A ; S.Nishida / ORI
 B ; M.Nishimura / ORI
 C ; M.Shimanaga / ORI



Objectives and Brief Narrative of Cruise :

The major topic of the cruise was the "Interaction of Bacteria, Plankton and Benthos" and included the following independent studies : (1)interaction of zooplankton carcasses and bacteria, (2)interaction of benthos, bacteria, and zooplankton,(3)analysis of bacterial communities by a new method,(4)species diversity and feeding ecology of deep-sea copepods,(5)mechanism of bioluminescence in thaliaceans, and(6)life history of mictophid fishes.The field observations included plankton sampling with nets and a midwater trawl, CTD and water sampling, sediment collection with a multiple with nets and a midwater trawl, CTD and water sampling, sediment collection with a multiple corer, benthos collection with a dredge, and on-board experiments were conducted on bacterial and zooplankton activities.

Reference No. : 01012
Restrict Data : In part
Ship Name : KAKUYO MARU
Ship Type : Training Ship
Cruise No./Name : Voy. No.158
Cruise Period : 2001/6/25 to 2001/7/6
Port of Departure : Nagasaki / **Port of Return** : Nagasaki
Responsible Laboratory : Faculty of Fisheries, Nagasaki University (FF,NU)
Chief Scientist(s) : K.Okada / Graduate School of Science and Technology,Nagasaki Univ.
Specific Areas : East China Sea
Geographic Coverage : 96

Principal Investigators : A ; K.Okada / Graduate School of Science and Technology, Nagasaki Univ.
 B ; S.Mohamad / Graduate School of Science and Technology, Nagasaki Univ.
 C ; F.Nakano / Graduate School of Science and Technology, Nagasaki Univ.

Objectives and Brief Narrative of Cruise :

- 1: Training of navigation.
 - 2: Sampling of puffer fish and goby in subtropical island.
- CDEFG 3 Samples B 19 2 samples of toxic puffer fish and I sample toxic goby

Reference No. : 01013
 Restrict Data : Yes
 Ship Name : TAKUYO
 Ship Type : Surevey Vessel
 Cruise No./Name : 3 rd Continental Shelf Survey
 Cruise Period : 2001/5/26 to 2001/6/25
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :
 Hydrographic Department, Japan Coast Guard (HD,JCG)
 Chief Scientist(s) : Y.Sato / HD,JCG
 General Ocean Area(s) : Philippine Sea
 Specific Areas : East of Daitoukairei, East of Amamikaidai
 Geographic Coverage : 95
 Principal Investigators : A ; K.Ikeda / HD,JCG

Objectives and Brief Narrative of Cruise :

- Continental Shelf Survey for
- 1.This makes in necessary to prepare data for establishing the continental shelf margin Japan.
 - 2.Production of continental Shelf Basic Map of the sea.

Main task

- 1.Bathymetric Survey.
- 2.Sonic Prospecting.
- 3.Gravity measurement at sea.

A	5220	NM	G 74	Bethmetric and intensity data Using sea Beam.
A	5220	NM	G 27	Using KSS - 31 Gravity Meter.

Reference No. : 01014
 Restrict Data : No
 Ship Name : KOFU MARU

Ship Type : Research Vessel
Cruise No./Name : 01 - 06
Cruise Period : 2001/6/12 to 2001/7/25
Port of Departure : Hakodate
Port of Return : Hakodate
Responsible Laboratory :
 Hakodate Marine Observatory (HMO,JMA)

Chief Scientist(s) :
 T.Kohama / Oceanographical Division,HMO,JMA

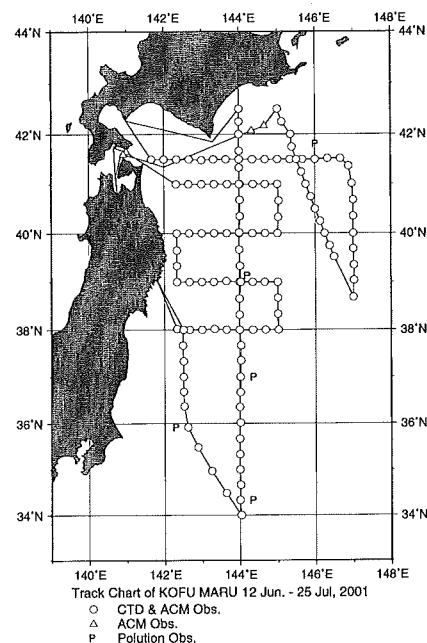
General Ocean Area(s) : North Pacific Ocean

Geographic Coverage : 130,166

Project Name :
 JCOMM, WESTPAC, MARPOLMoN, SAGE

Coordinating Body : WMO, IOC

Principal Investigators :
 A ; T.Miyao / Oceanographical Division,HMO,JMA
 B ; J.Nakagawa / Maritime Meteorological Division,HMO,JMA
 C ; T.Asou / Pollutants Chemical Analysis Center Marine Division,CMD,JMA
 D ; M.Aoyama / MRI



Objectives and Brief Narrative of Cruise :

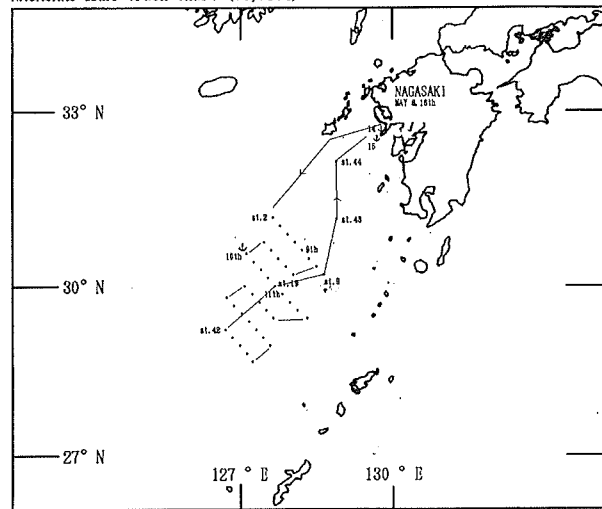
1. Regular observation of oceanography and marine meteorology.
2. Background marine pollution monitoring.
3. Observations for the Subarctic Gyre Experiment.
- 3-1. Observations for the study of North Pacific Intermediate Water.
- 3-2. Observations of the pCO₂ in air and sea surface water.
4. Sea water sampling for measurement of radioactivity.
5. Ocean wave sampling for the data of coastal wave recorders.

A	2265	NM	H 71	Continuous sea surface temperature & salinity recording.
A	117	Stations	H 10	Using Neil Brown CTD.
A	27	Stations	H 09,H 21,H 22, H 24,H 25,B 02	Using Neil Brown CTD with Rosette sampler.
A	8	Stations	H 28	Using Neil Brown CTD with Rosette sampler.
A	6	Stations	B 08	Using bucket.
A	6	Stations	B 09	Using NORPAC net.
A	65	Stations	H 16	Using Secchi Disk(Daytime only).
A	121	Stations	D 71	Using FURUNO Co.Acoustic Current Meter at 0,50,100 m in depth.
A	2	Stations	H 31	Sampling for measurement of Total β radioactivity.

A	3223	NM	H 74,M 71	CO 2 concentrations in air and sea surface water.
B	195	Times	M 06	Observed every three hours.
B	387	Times	M 90	Hourly Weather report except M 06.
B	33	Ascents	M 01	Using VAISALA system.
B	195	Times	D 72	Using Micro - wave & Tucker wave gauge.
C	2	Samples	P 02	Sampling for analysis of heavy metals.
C	2	Samples	P 03	Sampling for measurement of dissolved hydrocarbons.
C	5	Samples	P 03	Using Neuston net.

Reference No. : 01015
 Restrict Data : Yes
 Ship Name : NAGASAKI MARU
 Ship Type : Training Ship
 Cruise No./Name : Voy. No. 134
 Cruise Period : 2001.5.8 to 2001.5.16
 Port of Departure : Nagasaki
 Port of Return : Nagasaki
 Responsible Laboratory :
 Faculty of Fisheries,
 Nagasaki University (FF,NU)
 Chief Scientist(s) : J.Ishizaka / FF,NU
 General Ocean Area(s) : East China Sea
 Geographic Coverage : 96
 Principal Investigators : A ; J.Ishizaka / FF,NU
 B ; Y.Okazaki / FF,NU

NAGASAKI MARU track chart (voy.134)



Objectives and Brief Narrative of Cruise :

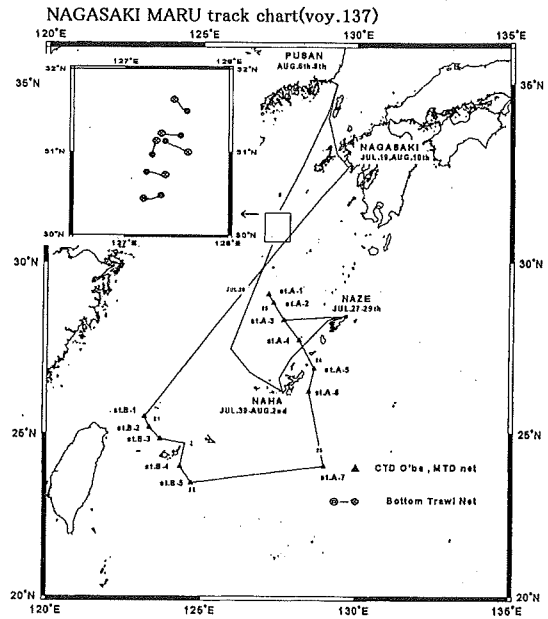
Main Task

- 1 : Training of navigation.
- 2 : Oceanographic observation.
- 3 : Collection of fish roe and fish larva

A	41	Stations	H 10	Using SBE 9 - plus CTD
A	31	Stations	H 10	Using SBE 9 - plus CTD with Carousel water sampler
B	30	Stations	B 13	Using Bongo net
A	6	Stations	H 17	Using Prr

Reference No. : 01016
 Restrict Data : Yes
 Ship Name : NAGASAKI MARU
 Ship Type : Training Ship

Cruise No./Name : Voy. No. 137
 Cruise Period : 2001.7.18 to 2001.8.10
 Port of Departure : Nagasaki
 Port of Return : Nagasaki
 Responsible Laboratory :
 Faculty of Fisheries, Nagasaki University (FF,NU)
 Chief Scientist(s) : Y.Ujiie / ORI,UT
 General Ocean Area(s) : East China Sea
 Geographic Coverage : 96
 Principal Investigators : A ; Y.Jjiie / ORI,UT
 B ; M.Yamane / ORI,UT



Objectives and Brief Narrative of Cruise :

Main Task

- 1: Training of navigation.
- 2: Training operations of bottom trawl net.
- 3: Oceanographic observation.
- 4: Collection of plankton

A	11	Stations	H 10	Using MTD net
B	12	Stations	B 09	Using SBE 9 – plus CTD

Reference No. : 01017
 Restrict Data : No
 Ship Name : KAIYO
 Ship Type : Survey Vessel
 Cruise No./Name : ARGO Observation
 Cruise Period : 2001.9.1 to 2001.9.7
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :

Hydrographic Department,
 Japan Coast Guard (HD,JCG)

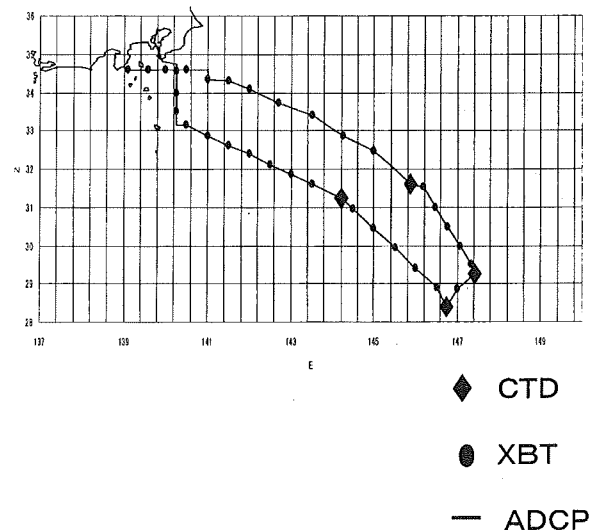
Chief Scientist(s) : K.Muneta / HD,JCG
 General Ocean Area(s) : North Pacific Ocean
 Geographic Coverage : 94,130,131
 Principal Investigators : K.Muneta / HD,JCG

Objectives and Brief Narrative of Cruise :

Object: As the part of the ARGO plan, the Kuroshio fluctuation grasp observation is carried out, while verification observation of the Argo –float which JAMSTEC discharged is carried out.

(A)Surface current observation by ADCP

ARGO Observation (2001.09.01-07)

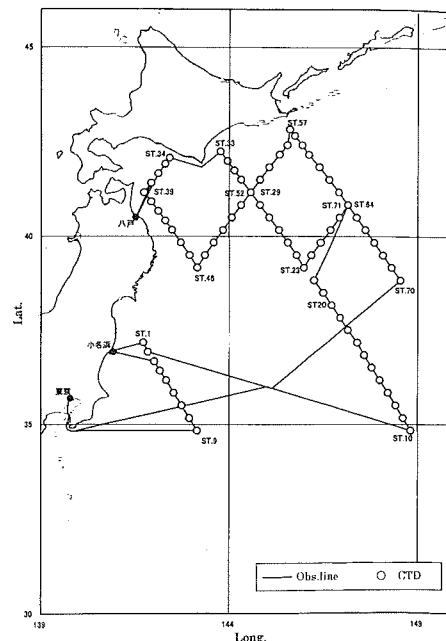


(B)Measurement of water temperature at surface layer by XBT

(C)Measurement of water temperature and salinity by using CTD

A	Continuous	D 71	Surface current observation by ADCP
A 33	Drops	H 13	XBT Drops with F 6 type probes
A 4		H 10	Using SeaBird SBE 19 CTD

Reference No. : 01018
 Restrict Data : No
 Ship Name : TAKUYO
 Ship Type : Survey Vessel
 Cruise Period : 2001.10.3 to 2001.10.23
 Port of Departure : Tokyo
 Port of Return : Tokyo
 Responsible Laboratory :
 Hydrographic Department, Japan Coast Guard (HD,JCG)
 Chief Scientist(s) : H.Nakamura / HD,JCG
 General Ocean Area(s) : North Pacific Ocean
 Geographic Coverage : 130
 Principal Investigators : H.Nakamura / HD,JCG



Objectives and Brief Narrative of Cruise :

Object : It makes oceanographic observation in order to establish the height-precise, geoid right under geoid high under TOPEX/POSEIDON satellite orbit. Carbon dioxide partial pressure of surface layer sea water and atmosphere is observed in order to promote international joint research or North Pacific Ocean subfrigid zones circulation and climatic variation.

(A)Surface current observation by ADCP.

(B)Measurement of the density of carbonic acid gas.

(C)Measurement of water temperature at surface layer by XBT.

(D)Measurement of water temperature and Salinity by using CTD.

A	Continuous	D 71	Surface current observation by ADCP.
A	Continuous	H 74	Measurement of the density of carbonic acid gas by using Bines 4-1.
A 36		H 13	XBT drops with T-6 type probes
A 75		H 10	Using SeaBird SBE 9 plus CTD

Reference No. : 01019
 Restrict Data : No
 Ship Name : NAGASAKI MARU
 Ship Type : Training Ship
 Cruise No./Name : Voy. No. 139
 Cruise Period : 2001.9.18 to 2001.10.12

Port of Departure : Nagasaki

Port of Return : Nagasaki

Responsible Laboratory :

Faculty of Fisheries, Nagasaki University (FF,NU)

Chief Scientist(s) : Y.Takaki, / FF,NU

General Ocean Area(s) : East China Sea

Geographic Coverage : 96,132

Principal Investigators :

A ; T.Oomori / Ryukyu Univ.

B ; M.Nakamura / Ryukyu Univ.

C ; K.Matsuno / RIAM

D ; J.Ishizaka / NU

E ; A.Isobe / RIAM

Objectives and Brief Narrative of Cruise :

Main task

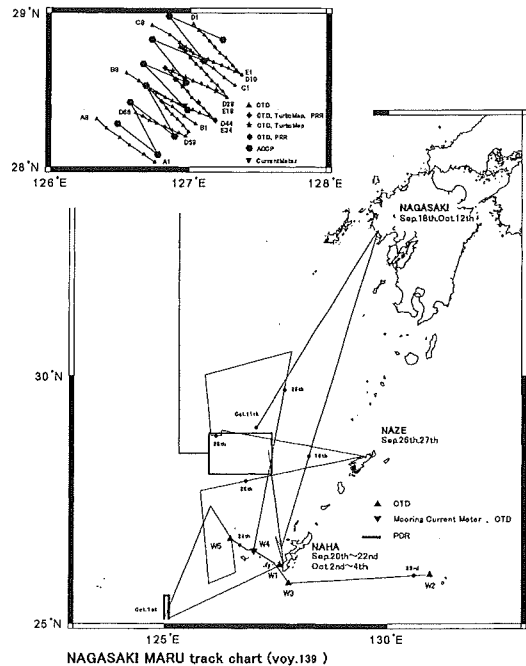
- 1 : Training of navigation.
- 2 : Training operations of bottom trawl net.
- 3 : Oceanographic observation.
- 4 : Investigation of ocean floor.

Moorings, Bottom Mounted Gear and Drifting Systems :

PI	LAT.	Lon.	DATA TYPE	DESCRIPTION
A	26 - 30.0 N	126 - 59.8 E	D 01	Aandera type current meter Moored on Sep.24 th Recovered on Sep.30 th
C	28 - 24.0 N	126 - 52.6 E	D 01	Aandera type current meter Electro magnetic current meter thermometer Moored on Oct.6 th Recovered on Oct.9 th
	28 - 46.8 N	126 - 57.0 E	D 01	Aandera type current meter Electro magnetic current meter thermometer Moored on Oct.6 th Recovered on Oct.9 th

Summary of Measurements and Sample Taken :

PI	NO	UNITS	DATA TYPE	DESCRIPTION
A	16	Stations	H 10	Using CTD with carousel multi sampler
B	30	N.Miles	G 90	Using 3.5 kHz Echo sounder
C	149	Stations	H 10	Using CTD with carousel multi sampler
D	7	Stations	H 17	Using PRR



C 12 Stations D 90 Using Turbo map
 D 120 N.Miles D 71 Towing ADCP

Reference No. : 01020
 Restrict Data : No
 Ship Name : NAGASAKI MARU
 Ship Type : Training Ship
 Cruise No./Name : Voy. No. 140
 Cruise Period : 2001.10.24 to 2001.11.1
 Port of Departure : Nagasaki
 Port of Return : Nagasaki

Responsible Laboratory :
 Faculty of Fisheries,
 Nagasaki University (FF,NU)
 Chief Scientist(s) : Y.Takaki, / FF,NU

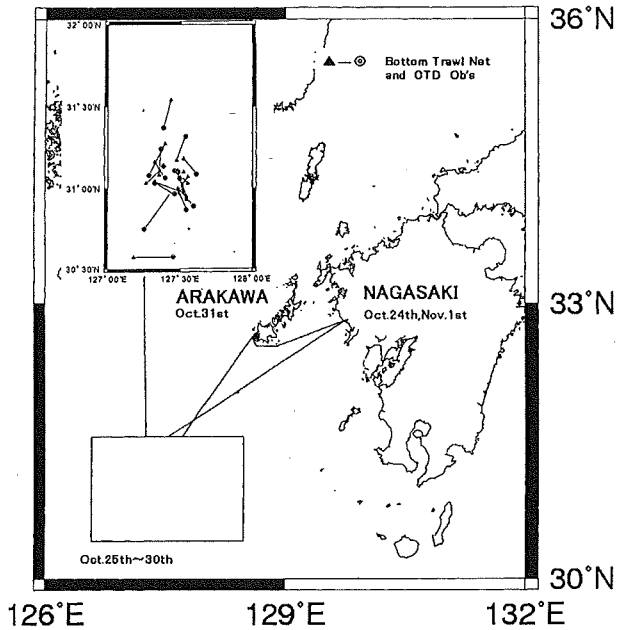
General Ocean Area(s) : East China Sea
 Geographic Coverage : 96
 Principal Investigators : Y.Morii / FF,NU

Objectives and Brief Narrative of Cruise :

Main task

- 1 : Training of navigation.
- 2 : Training operations of bottom trawl net.
- 3 : Oceanographic observation.

A 19 Stations H 64,B 90 Using bottom trawl net
 6 Stations B 09 Using SBE 9 – plus CTD

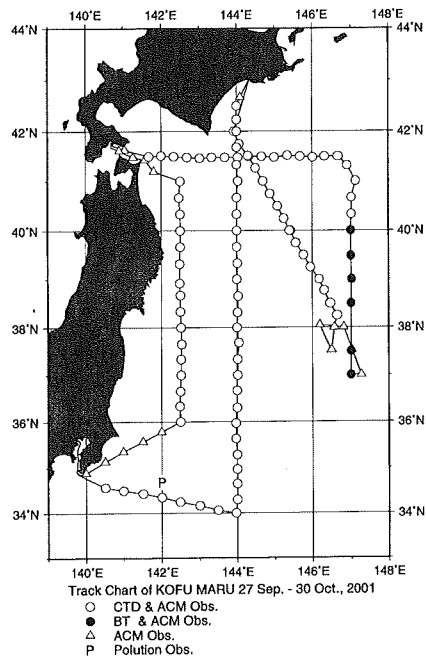


NAGASAKI MARU track chart (voy.140)

Reference No. : 01021
 Restrict Data : No
 Ship Name : KOFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 01 - 09
 Cruise Period : 2001.9.27 to 2001.10.30
 Port of Departure : Hakodate
 Port of Return : Hakodate

Responsible Laboratory :
 Hakodate Marine Observatory (HMO,JMA)
 Chief Scientist(s) :
 T.Miyao / Oceanographic Division,HMO,JMA

General Ocean Area(s) : North Pacific Ocean
 Geographic Coverage : 130,131,166



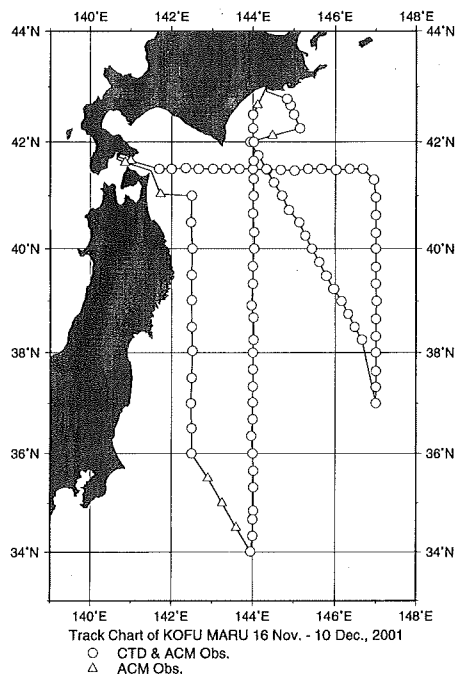
Project Name : JCOMM, WESTPAC, MARPOLMoN, SAGE
 Coordinating Body : WMO, IOC
 Principal Investigators : A ; T.Miyao / Oceanographical Division,HMO,JMA
 B ; J.Nakagawa / Maritime Meteorological Division,HMO,JMA
 C ; T.Asou / Pollutants Chemical Analysis Center Marine Division,
 CMD,JMA

Objectives and Brief Narrative of Cruise :

- 1.Regular observation of oceanography and marine meteorology.
- 2.Background marine pollution monitoring.
- 3.Observations for the Subarctic Gyre Experiment.
- 3-1.Observations for the study of North Pacific Intermediate Water.
- 3-2.Observations for the pCO₂ in air and sea surface water.
- 4.Observations for development of the ocean data assimilation system(COMPASS - K).
- 5.Ocean wave sampling for the data of coastal wave recorders.

A	2689	N.Miles	H 71	Continuous sea surface temperature & salinity recording.
A	71	Stations	H 10	Using Neil Brown CTD.
A	22	Stations	H 09,H 21,H 22, H 24,H 25,B 02	Using Neil Brown CTD with Rosette sampler.
A	7	Stations	H 28	Using Neil Brown CTD with Rosette sampler.
A	6	Stations	B 08	Using bucket.
A	6	Stations	B 09	Using NORPAC net.
A	29	Stations	H 16	Using Secchi Disk(Daytime only).
A	16	Drops	H 10	Using Tsurumi - Seiki XCTD.
A	6	Drops	H 13	Using Tsurumi - Seiki Deep blue type XBT.
A	110	Stations	D 71	Using FURUNO Co.Acoustic Current Meter at 0,50,100 m in depth.
A	2689	N.Miles	H 74,M 71	CO ₂ concentrations in air and sea surface water.
B	139	Times	M 06	Observed every three hours.
B	275	Times	M 90	Hourly Weather report except M 06.
B	23	Ascents	M 01	Using VAISALA system.
B	138	Times	D 72	Using Micro - wave & Tucker wave gauge.
C	2	Samples	P 02	Sampling for analysis of heavy metals.
C	2	Samples	P 03	Sampling for measurement of dissolved hydrocarbons.
C	1	Stations	P 03	Using Neuston net.
C	11	Days	P 90	Oil slicks and floating pollutants observed visually (Daytime only).
C	39	Stations	H 74	Sampling for analysis of total inorganic carbons.

Reference No. : 01022
 Restrict Data : No
 Ship Name : KOFU MARU
 Ship Type : Research Vessel
 Cruise No./Name : 01 - 11
 Cruise Period : 2001.11.16 to 2001.12.10
 Port of Departure : Hakodate
 Port of Return : Hakodate
 Responsible Laboratory :
 Hakodate Marine Observatory (HMO,JMA)
 Chief Scientist(s) :
 T.Saito / Oceanographic Division,HMO,JMA
 General Ocean Area(s) : North Pacific Ocean
 Geographic Coverage : 130,166
 Project Name : JCOMM, WESTPAC, SAGE
 Coordinating Body : WMO, IOC
 Principal Investigators :



A ; T.Miyao / Oceanographical Division,HMO,JMA
 B ; J.Nakagawa / Maritime Meteorological Division,HMO,JMA
 C ; T.Asou / Pollutants Chemical Analysis Center Marine Division,CMD,JMA

Objectives and Brief Narrative of Cruise :

- 1.Regular observation of oceanography and marine meteorology.
- 2.Observations for the Subarctic Gyre Experiment.
- 2-1.Observations for the study of North Pacific Intermediate Water.
- 2-2.Observations of the pCO₂ in air and sea surface water.
- 3.Observations for development of the ocean data assimilation system(COMPASS - K).
- 4.Ocean wave sampling for the data of coastal wave recorders.

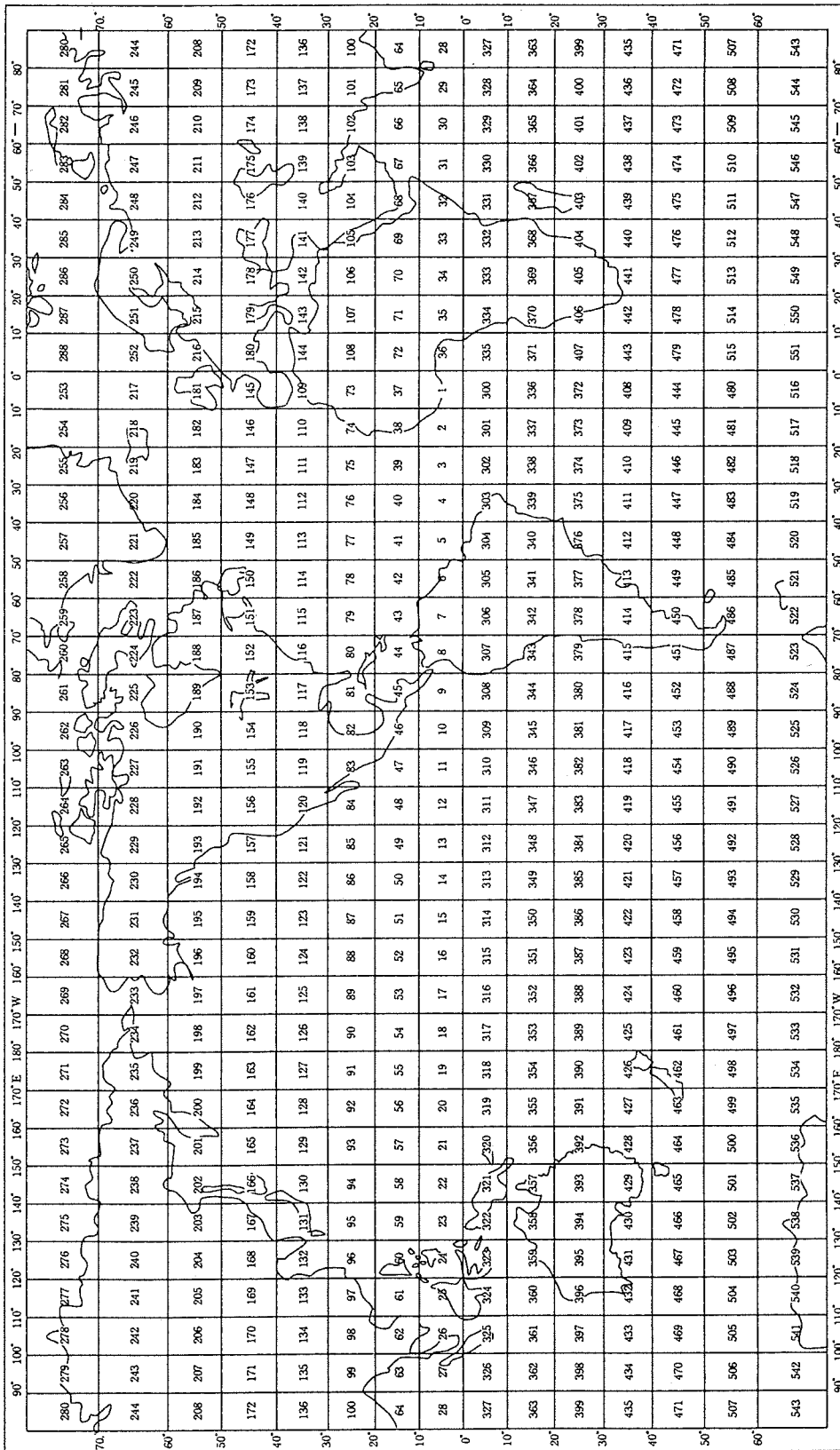
A	2297	N.Miles	H 71	Continuous sea surface temperature & salinity recording.
A	77	Stations	H 10	Using Neil Brown CTD.
A	11	Stations	H 09,H 21,H 22, H 24,H 25,B 02	Using Neil Brown CTD with Rosette sampler.
A	8	Stations	H 28	Using Neil Brown CTD with Rosette sampler.
A	29	Stations	H 16	Using Secchi Disk(Daytime only).
A	11	Drops	H 10	Using Tsurumi - seiki XCTD.
A	96	Stations	D 71	Using FURUNO Co.Acoustic Current Meter at 0,50,100 m in depth.
A	2297	N.Miles	H 74,M 71	CO ₂ concentrations in air and sea surface water.
B	121	Times	M 06	Observed every three hours.
B	240	Times	M 90	Hourly Weather report except M 06.

B	23	Ascents	M 01	Using VAISALA system.
B	121	Times	D 72	Using Micro – wave & Tucker wave gauge.
C	51	Stations	H 74	Sampling for analysis of total inorganic carbons.

付録目次

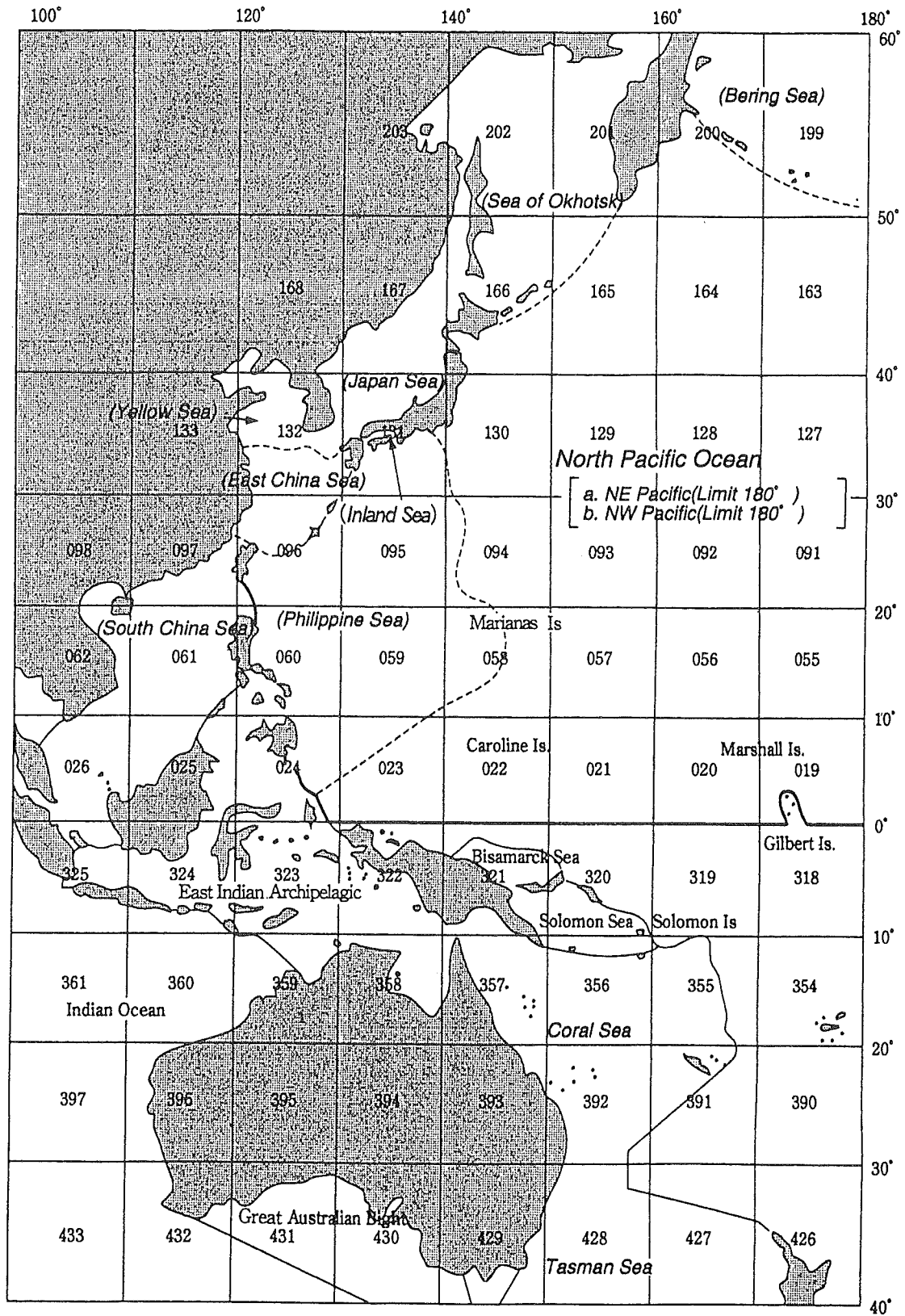
- 付録1 MSQ海域番号図（全世界、西太平洋）
- 付録2 記入要領（書式つき）
- 付録3 調査機関略語表

MSQ 海域番号図 (全世界)



海域番号図 (西太平洋)

海域の境界は IHO 分類による



<h1 style="margin: 0;">CRUISE SUMMARY REPORT</h1> <h2 style="margin: 0;">航海概要報告</h2>	FOR COLLATING / CENTER USE (照会のためセンターで使用) Center: <u>JODC</u> Ref.No: Is data exchange restricted? <input type="checkbox"/> Yes <input type="checkbox"/> In part <input checked="" type="checkbox"/> No <small>データ交換に制限があるか はい 条件付き いいえ</small>
SHIP enter the full name and international radio call sign of the ship from which the data were collected, and indicate the type of ship, for example, research ship; ship of opportunity, naval survey vessel; etc. <small>データを収集した船舶のフルネームと国際無線呼出符号を記入し、船舶の種類は、例えば、調査船、便宜供与船、海軍の調査船などを記入する。</small> Name: <u>Shirase</u> Call Sign: Type of ship: <u>Icebreaker</u>	
CRUISE NO./NAME <u>JARE 33</u> enter the unique number, name or acronym assigned to the cruise (or cruise leg, if appropriate). <small>航海(又は航海のレグ)の固有番号、名前又は略称を記入</small>	
CRUISE PERIOD start <u>114</u> <u>111</u> <u>119111</u> to <u>210</u> <u>014</u> <u>11912</u> end <small>航海期間 (set sail) day month year (出港) day month year (return to port) (人港)</small>	
PORT OF DEPARTURE (enter name and country) <u>Tokyo, Japan</u> PORT OF RETURN (enter name and country) <u>Tokyo, Japan</u>	
RESPONSIBLE LABORATORY enter name and address of the laboratory responsible for coordinating the scientific planning of the cruise. <small>担当機関 航海の観測計画を作成した担当調査機関の名称と住所を記入</small> Name: <u>National Institute of Polar Research</u> Address: <u>1-9-10, Kaga, Itabashi-ku, Tokyo 173</u> Country: <u>Japan</u>	
CHIEF SCIENTIST(S) enter name and laboratory of the person(s) in charge of the scientific work(chief of mission) during the cruise. <small>観測責任者 航海中観測調査を担当した者(観測班長)の名前と所属機関を記入</small> <u>T. Yamamoto, Hydrographic Department, Maritime Safety Agency</u>	
OBJECTIVES AND BRIEF NARRATIVE OF CRUISE enter sufficient information about the purpose and nature of the cruise so as to provide the context in which the reported data were collected. <small>航海の目的と簡単な報告内容 収集されたデータの有効利用に供するため、航海の目的と性格について十分な情報を記入</small> <u>One of a routine oceanographic observation (physical and chemical) on the 33rd summer mission of Japanese Antarctic Research Expedition</u> <u>A. Monitoring the position of Subtropical Convergence and Antarctic Convergence</u> <u>B. Trace of the Antarctic Circumpolar Current</u> <u>C. Marine pollution analysis</u> Main task <u>1. Deploy surface drifting buoy at 47° 35' S, 47° 10' E</u> <u>2. Surface water sampling for temperature measurement and chemical analysis</u> <u>3. Hydrographic measurement in Southern Ocean en route from Fremantle to Mauritius</u>	
PROJECT (IF APPLICABLE) if the cruise is designated as part of a larger scale cooperative project (or expedition or programme), then enter the name of the project, and of the organization responsible for coordinating the project. <small>(該当する場合) 航海が共同プロジェクト(または調査、計画)の一部であるならば、そのプロジェクトの名称と調整機関名を記入</small> Project Name: Coordinating body:	

PRINCIPAL INVESTIGATORS: enter the name and address of the principal investigators responsible for the data collected on the cruise, and who may be contacted for further information about the data. (the letter assigned below against each principal investigator is used on pages 2 and 3, under the column heading 'PI', to identify the data sets for which he/she is responsible)

主調査者: 航海で収集されたデータについて責任を持っている筆頭の調査者とデータに関する詳細な情報照会に応じる者の名前とあて先を記入 (2ページ、3ページのPI欄には、A、B、C…で記入する。)

A... *Dr. T. Yamamoto, Hydrographic Department, Maritime Safety Agency, 5-3-1, Tsukiji, Chuo-ku, Tokyo 104*

B... *Mr. S. Suzuki, 2nd Regional Maritime Safety Headquarter, 3-4-1, Teizan-dori, ShiogamaMiyagi 985*

C.....

D.....

E.....

F.....

MOORINGS, BOTTOM MOUNTED GEAR AND DRIFTING SYSTEMS

this section should be used for reporting moorings, bottom mounted gear and drifting systems (both surface and deep) deployed and/or recovered during the cruise. separate entries should be made for each location (only deployment positions need be given for drifting systems). this section may also be used to report data collected at fixed locations which are returned to routinely in order to construct 'long time series'.

係留、海底設置機器、漂流システム

係留、海底設置機器及び漂流システム(海面、海中とも)の設置と回収について記入する。各設置点ごとに記入のこと。(漂流システムについては投入した位置のみで可)

また、時系列をとるために定期的に測定される地点でのデータについてもこの欄に記入してよい。

PI <small>see top of page.</small>	APPROXIMATE POSITION						DATA TYPE	DESCRIPTION
	LATITUDE			LONGITUDE			<small>enter code(s) from list on cover page. リストのコードを記入</small>	identify, as appropriate, the nature of the instrumentation, the parameters (to be) measured, the number of instruments and their depths, whether deployed and/or recovered, dates of deployment and/or recovery, and any identifiers given to the site. 機器の種類、測定のパラメータ、機器数とその深度、設置または回収の日付と位置
deg	min	N/S	deg	min	E/W			
A	47	35	S	47	10	E	D05	Deployed a drifting buoy, March 7, 1991
A	69	00	S	39	34	E	D09	Set new tidegauge, January 14, 1992 (Meiseidenki Co. QWP-8-103D. straingauge)

Please continue on separate sheet if necessary.
書ききれない場合は別紙に続ける。

SUMMARY OF MEASUREMENTS AND SAMPLES TAKEN

except for the data already described on page 2 under 'moorings, bottom mounted gear and drifting systems', this section should include a summary of all data collected on the cruise, whether they be measurements (e.g. temperature, salinity values) or samples (e.g. cores, net hauls). separate entries should be made for each distinct and coherent set of measurements or samples. different modes of data collection (e.g. vertical profiles as opposed to underway measurements) should be clearly distinguished, as should measurement/sampling techniques that imply distinctly different accuracies or spatial/temporal resolutions. thus, for example, separate entries would be created for i) BT drops, ii) water bottle stations, iii) CTD casts, iv) towed CTD, v) towed undulating CTD profiler, vi) surface water intake measurements, etc. each data set entry should start on a new line - it's description may extend over several lines if necessary.

測定とサンプル採取の概要

2ページに記入する係留、海底設置機器、漂流システムを除く全ての測定（水温、塩分等）やサンプル（コア、ドレッジ等）によるデータに関する概要について記入のこと。

測定とサンプル毎に分けて記入のこと。データ収集の方法が異なる（例えば、航行しながらの測定と停船してセンサーを鉛直に降ろして行う測定）場合や精度や場所・時間の分解能が明らかに異なる測定/サンプリング手法の場合には区別して記入すること。例えば、BT投下、採水点、CTD投入、CTD曳航、CTD波形曳航、表面水取水口観測等は分けて記入することになる。記入はデータ毎に改行すること。必要ならば、一つのデータの記述が数行にわたっても構わない。

NO, UNITS: for each data set, enter the estimated amount of data collected expressed in terms of the number of; 'stations'; 'miles' of track; 'days' of recording; 'cores' taken; net 'hauls'; balloon 'ascents'; or whatever unit is most appropriate to the data. the amount should be entered under 'no' and the counting unit should be identified in plain text under 'units'.

数量、単位 各データセットごとに、収集されたデータの推定量を観測地点数、航跡距離（NM）、観測記録の日数、収集されたコア数、曳網数、揚げた気球数その他取得データにふさわしい単位を用いて記述すること。量はNOの項に、単位は平易な記述でUNITSの項に記入

PI	NO	UNITS	DATA TYPE	DESCRIPTION
see page 2	see above	see above	enter code(s) from list on cover page. リストのコードを記入	identify, as appropriate, the nature of the data and of the instrumentation/sampling gear and list the parameters measured. include any supplementary information that may be appropriate, e.g. vertical or horizontal profiles, depth horizons, continuous recording or discrete samples, etc. for samples taken for later analysis on shore, an indication should be given of the type of analysis planned, i.e. the purpose for which the samples were taken. データ、使用機器/装置の種類・特性を適宜明記し、測定されたデータ項目を列記する。水平/垂直プロファイルの別、測定層の深度、連続記録か間隔を開けたものか、等の適当な補足情報も含むこと。陸上での解析のために採取されたサンプルについては、どのような分析が行われる予定であるのか、即ちサンプルが採取された目的を記すこと。
A	13	Stations	H09, H21 H22, H24 H25, H76 H26, H28	Deep cast using Nansen bottles with reversing thermometers
A	13	Stations	H10	Using Neil-Brown Smart CTD (upper 1000m)
A	51	Drops	H13	XBT Drops with T6 type probes
B	198	Samples	H71, H21 H22, H24 H25, H76 H26, H28	Surface temperature measurement and surface water sampling for Chemical analysis were made twice or three times a day (once a day as Shirase stayed in ice-covered area).
B	29	Samples	P02, P03	9 samples of surface water for trace metals (Cadmium, Mercury, Copper and Zinc) 20 samples of surface water for petroleum oil

Please continue on separate sheet if necessary.

書ききれない場合には別紙に続ける。

TRACK CHART: You are strongly encouraged to submit, with the completed report, an annotated track chart illustrating the route followed and the points where measurements were taken. Insert a tick (✓) in this box if a track chart is supplied.

航跡図 なるべく航跡と測定点を示す注釈付き航跡図を本報告に添付すること。 航跡図添付の場合はマーク(✓)する。

GENERAL OCEAN AREA(S): Enter the names of the oceans and/or seas in which data were collected during the cruise - please use commonly recognized names (see, for example, international hydrographic bureau special publication no. 23, 'limits of oceans and seas').

調査海域 航海中にデータを収集した海洋または海域の名称を記入する。一般的な名称を使用のこと。(国際水路局(IHB)増刊23号 "Limits of Ocean and Seas" を参照)

Philippine sea, East Indian Archipelago

Indian Ocean, South China Sea

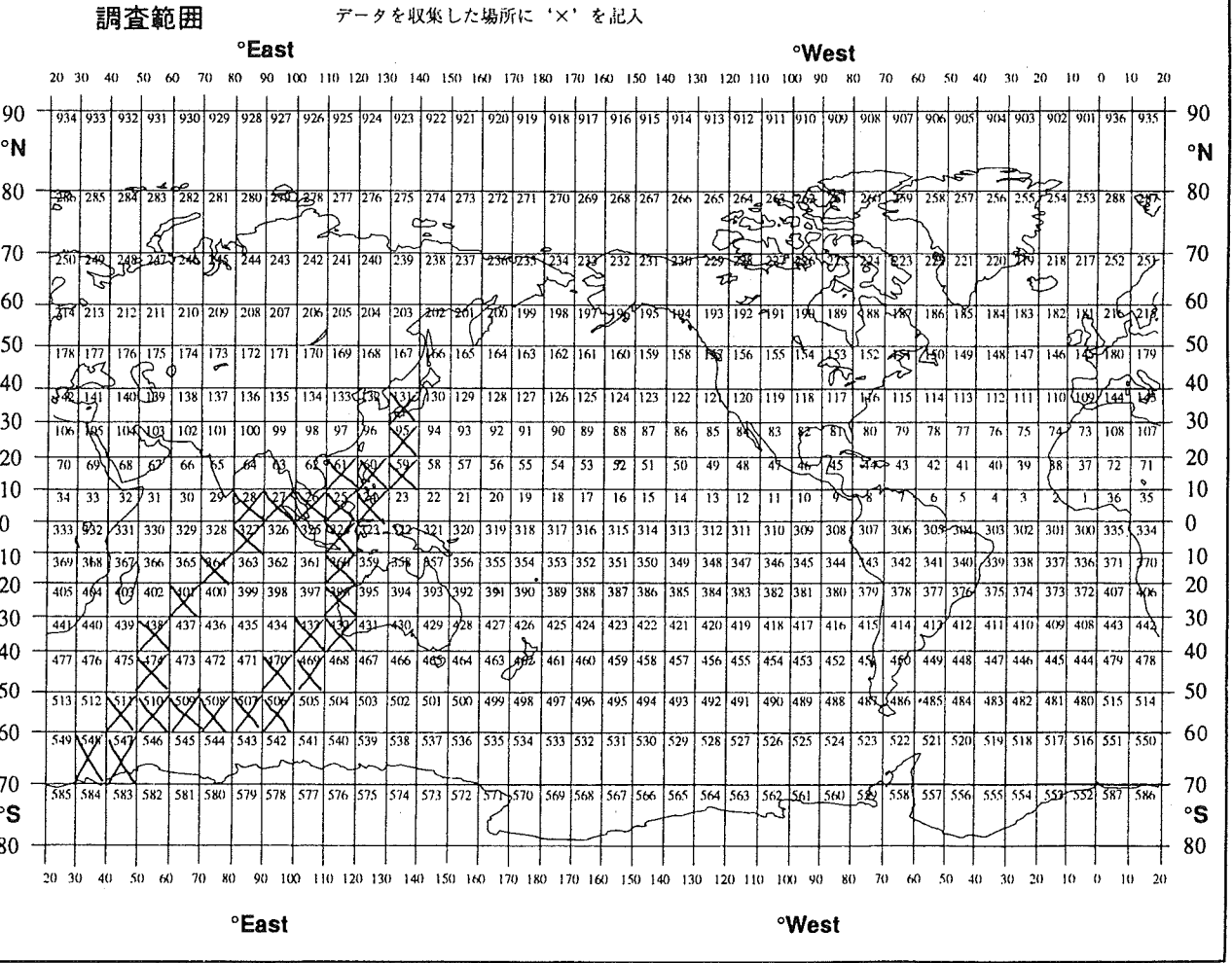
SPECIFIC AREAS: If the cruise activities were concentrated in a specific area(s) of an ocean or sea, then enter a description of the area(s). such descriptions may include references to local geographic areas, to sea floor features, or to geographic coordinates.

特定海域 調査航海がある海域の特定区域に集中したならば、その区域について、ローカルの海域名、海底地形、または地理座標などを記載する。

Main Area : Bred Bay (70° -15' S to 70° -10' S at latitude , 23° -45' E to 24° -30' E at longitude)

Long Section : Antarctic ice edge to the east off Madagascar

GEOGRAPHIC COVERAGE - INSERT 'X' IN EACH SQUARE IN WHICH DATA WERE COLLECTED



THANK YOU FOR YOUR COOPERATION

Please send your completed report without delay to the collating center indicated on the cover page

ご協力有難うございました。
完成した報告は遅滞なく日本海洋データセンターまで送付願います。

航跡図の例

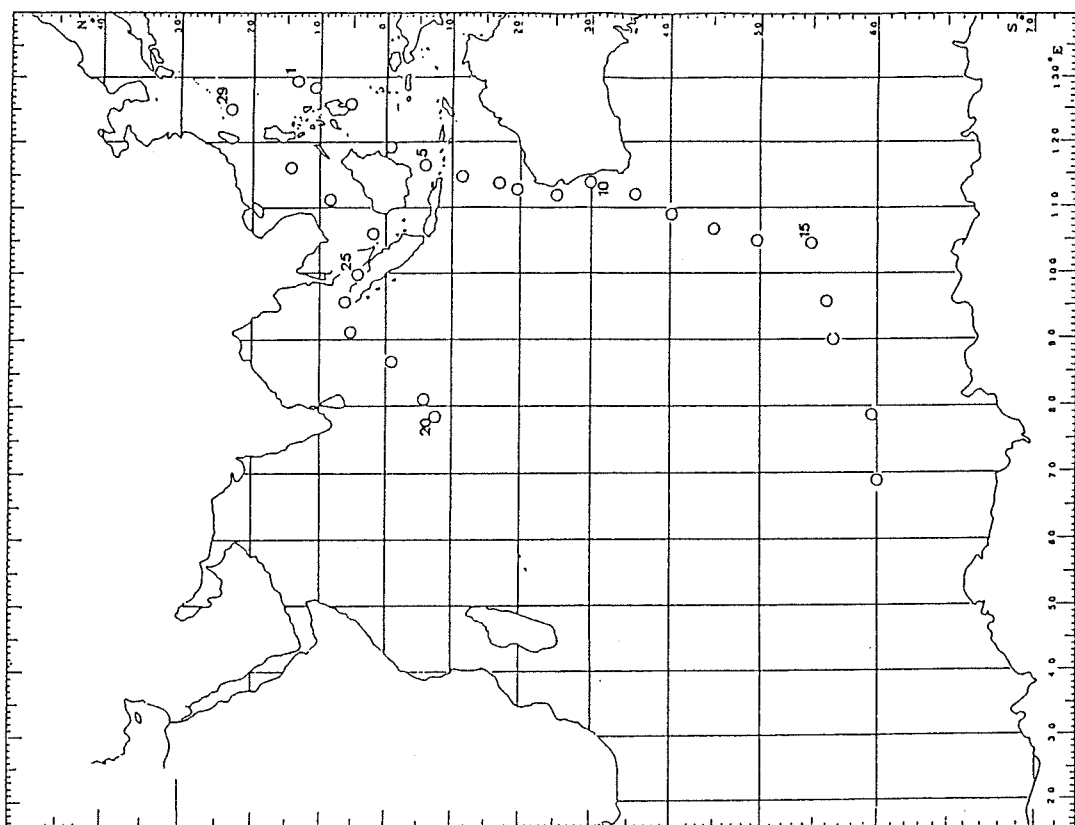


Fig. 2. The location of surface water sampling for marine pollution analysis (petroleum oil, Cd, Hg, Cu and Zn).

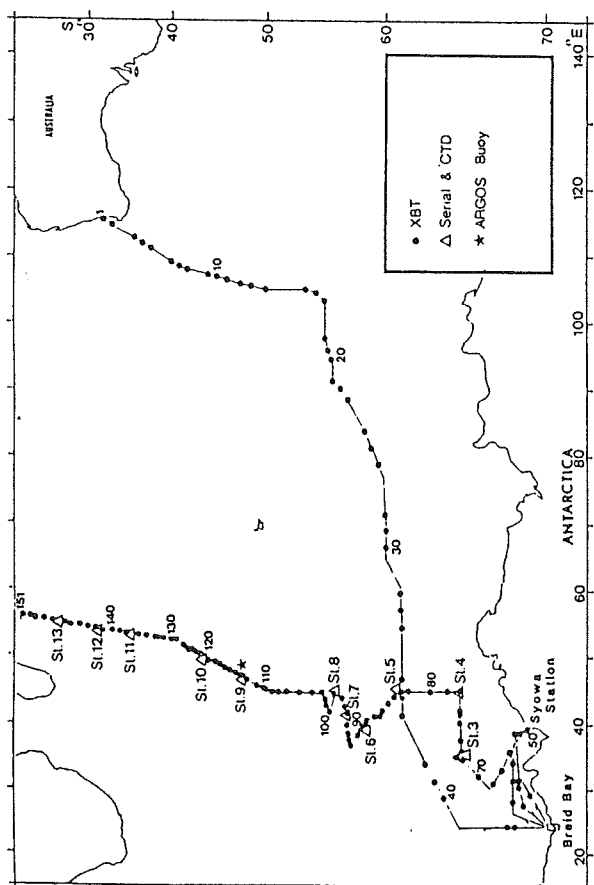
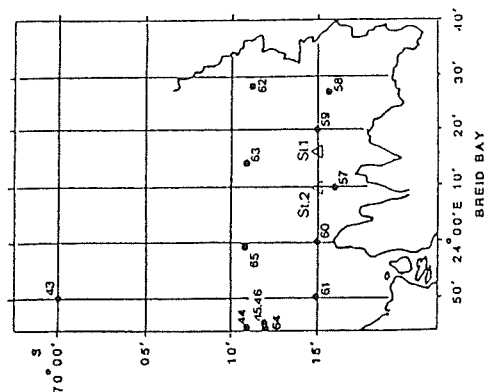


Fig. 1a. The track chart and the station location of oceanographic observations.



航海概要報告 (CRUISE SUMMARY REPORT) 書式

以下の4ページは記入用の書式です。今後、記入送付される方はこの書式を使用して下さい。

CRUISE SUMMARY REPORT

航海概要報告

FOR COLLATING / CENTER USE

(照合のためセンターで使用)

Center:..... Ref.No:.....

Is data exchange restricted? Yes In part No
 データ交換に制限があるか はい 条件付き いいえ

SHIP enter the full name and international radio call sign of the ship from which the data were collected, and indicate the type of ship, for example, research ship; ship of opportunity, naval survey vessel; etc.
 データを収集した船舶のフルネームと国際無線呼出符号を記入し、船舶の種類は、例えば、調査船、便宜供与船、海軍の調査船などを記入する。

Name:..... Call Sign:.....

Type of ship:.....

CRUISE NO./NAME..... enter the unique number, name or acronym assigned to the cruise (or cruise leg, if appropriate).
 航海(又は航海のレグ)の固有番号、名前又は略称を記入

CRUISE PERIOD start (set sail) day month year to day month year end (return to port)
 航海期間 (出港) (入港)

PORT OF DEPARTURE (enter name and country).....

PORT OF RETURN (enter name and country).....

RESPONSIBLE LABORATORY enter name and address of the laboratory responsible for coordinating the scientific planning of the cruise.
 担当機関 航海の観測計画を作成した担当調査機関の名称と住所を記入

Name:.....

Address:.....

..... Country:.....

CHIEF SCIENTIST(S) enter name and laboratory of the person(s) in charge of the scientific work(chief of mission) during the cruise.

観測責任者 航海中観測調査を担当した者(観測班長)の名前と所属機関を記入

OBJECTIVES AND BRIEF NARRATIVE OF CRUISE enter sufficient information about the purpose and nature of the cruise so as to provide the context in which the reported data were collected.

航海の目的と簡単な報告内容 収集されたデータの有効利用に供するため、航海の目的と性格について十分な情報を記入

PROJECT (IF APPLICABLE) if the cruise is designated as part of a larger scale cooperative project (or expedition or programme), then enter the name of the project, and of the organization responsible for coordinating the project.

(該当する場合) 航海が共同プロジェクト(または調査、計画)の一部であるならば、そのプロジェクトの名称と調整機関名を記入

Project Name:.....

Coordinating body:.....

SUMMARY OF MEASUREMENTS AND SAMPLES TAKEN

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Table with 5 columns: PI, NO, UNITS, DATA TYPE, DESCRIPTION. Includes instructions for data entry and a large empty grid for recording measurements and samples.

Please continue on separate sheet if necessary.

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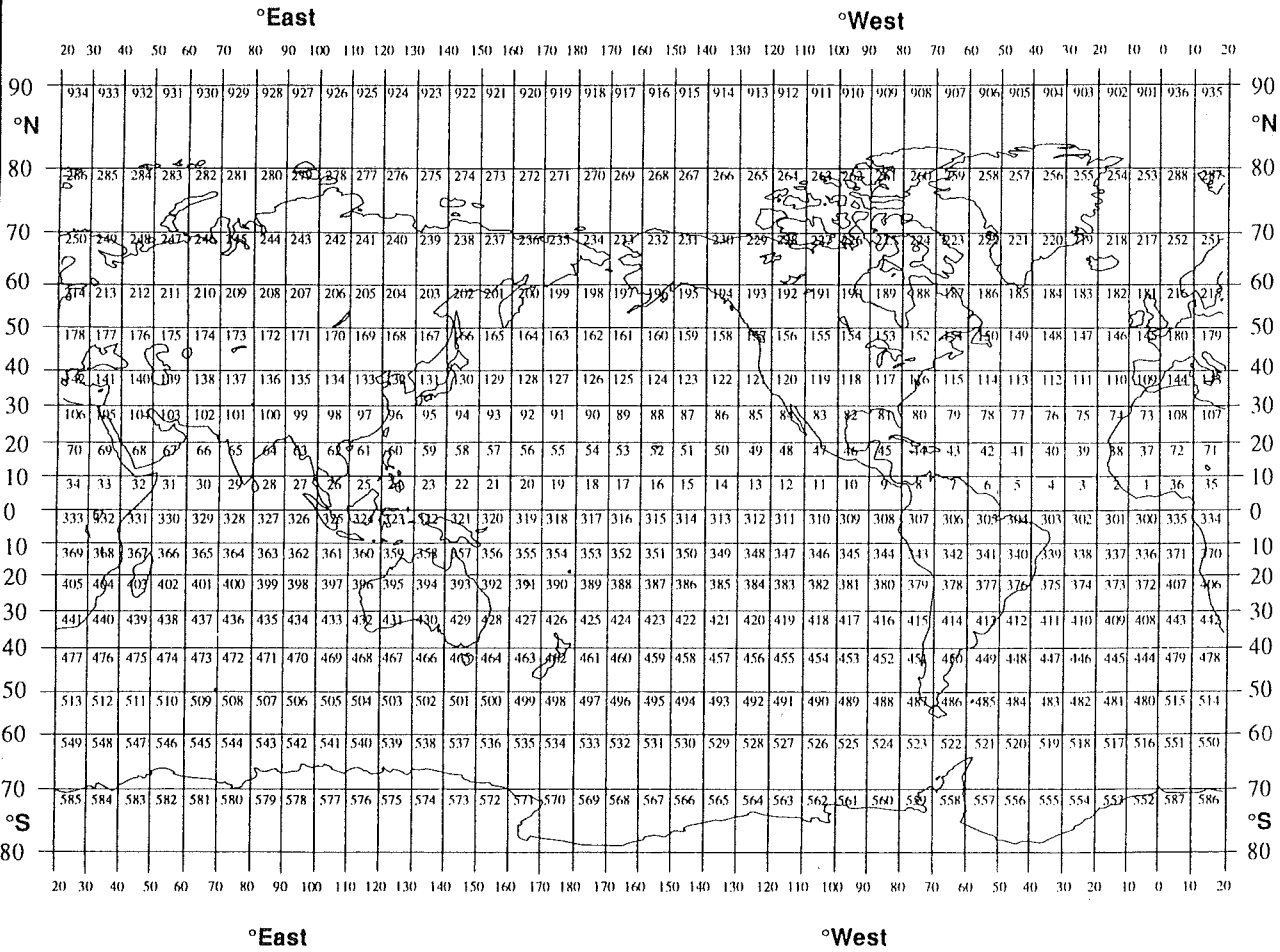
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GEOGRAPHIC COVERAGE - INSERT 'X' IN EACH SQUARE IN WHICH DATA WERE COLLECTED

調査範囲

データを収集した場所に 'X' を記入



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調査機関略語表

略語	調査機関名
HD, JCG	海上保安庁水路部 Hydrographic Department, Japan Coast Guard
JMA	気象庁 (Japan Meteorological Agency)
CMD, JMA	気象庁気候・海洋気象部 (Climate and Marine Dept., Japan Meteorological Agency)
SVD, JMA	気象庁地震火山部 (Seismological and Volcanological Department, Japan Meteorological Agency)
HMO, JMA	函館海洋気象台 (Hakodate Marine Observatory, Japan Meteorological Agency)
KMO, JMA	神戸海洋気象台 (Kobe Marine Observatory, Japan Meteorological Agency)
MMO, JMA	舞鶴海洋気象台 (Maizuru Marine Observatory, Japan Meteorological Agency)
JAMSTEC	海洋科学技術センター (Japan Marine Science and Technology Center)
RIAM, KU	九州大学応用力学研究所 (Research Institute for Applied Mechanics (RIAM), Kyusyu Univ.)
FF, NU	長崎大学水産学部 (Faculty of Fisheries, Nagasaki Univ.)
MRI	気象学調査研究所 (Meteorological Research Institute)
NIPR	国立極地研究所 (National Institute of Polar Research)
ORI, UT	東京大学海洋研究所 (Oceanography Research Institute, Tokyo Univ.)