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Marine Environmental Data Service Report for 1993

by

G. F. Glenn

Marine Environmental Data Service (MEDS), Department of Fisheries and Oceans
12th Floor, 200 Kent St., Ottawa, Ontario Canada K1A 0E6

Abstract

The purpose of this report is to describe the data collected in the NAFO area, during the 1993 calendar year. Tables of subsurface, wave, current meter and dribu recorded observations are presented in the body of the report. Seasonal plots of ocean stations and dribu tracks are presented. Also included in the report, is an overview of the methods and results of an analysis by MEDS, of the environmental conditions in the NAFO area in 1993.

Introduction

The Marine Environmental Data Service, (MEDS) is Canada's national centre for the management and care of oceanographic data. MEDS is a branch of Physical and Chemical Science, a major component of the Department of Fisheries and Oceans, and works closely with DFO regional institutes. MEDS services include participating in national and international programmes, and in developing and incorporating techniques and software to ensure timely provision of high quality oceanographic data to the marine community.

An important feature of any national data centre is international data exchange. Through bilateral and multilateral agreements with other agencies and countries, MEDS receives copies of oceanographic data collected by foreign ships in waters of Canadian interest. More than 20 countries exchange data with Canada through MEDS on a regular basis.

International activities also include acting as the regional oceanographic data centre for the Northwest Atlantic Fisheries Organization (NAFO) and as Canada's archival centre for ocean data reported in real time by the Integrated Global Ocean Station System (IGOSS) on the Global Telecommunication System (GTS). In 1986, MEDS was accepted as the National Oceanographic Data Centre for Drifting Buoys (*RNODC/DB*) on behalf of the Intergovernmental Oceanographic Commission (IOC) and the World Meteorological Organization (WMO). MEDS also manages real time data for the Global Temperature Salinity Pilot Project (GTSPP) and is an active participant in the World Ocean Circulation Experiment (WOCE) and the Joint Global Ocean Flux Study (JGOFS).

MEDS is the designated data archive and distribution centre for satellite acquired international oceans data for scientific and research users in Canada. Data are received from the GEOSAT, ERS-1 and the TOPEX/POSEIDON satellites.

National activities include the processing and archiving of Canadian physical oceanographic data. Data sources include regional DFO research institutes such as the Northwest Atlantic Fisheries Centre (NAFC) in St. John's, Newfoundland; the Bedford Institute of Oceanography (BIO) in Dartmouth, Nova Scotia; the Maurice Lamontagne Institute (MLI) in Rimouski, Quebec; and the Institute of Ocean Sciences (IOS) in Patricia Bay, British Columbia. Occasionally, universities, the private sector, and the Ontario Ministry of Natural Resources contribute oceanographic data.

DFO's Canadian Hydrographic Service (CHS), through its regional offices, are responsible for the collection of canadian tide and water level data. Theses offices provide MEDS with daily near real time and delayed mode information.

MEDS processes and archives real time and delayed mode wave data as collected by our own Canadian Wave Climate Study in support of marine construction. Other sources of real time data include the Canadian Atmospheric Environment Service (AES) and the National Oceanographic and Atmospheric Administration (NOAA)in the U.S.

Environmental data sets are archived on behalf of the National Energy Board as collected by the offshore oil and gas industry. MEDS is working with all of the DFO regions in the design of a Contaminants Information System inventory and with BIO in the creation and maintenance of a climatology of temperature and salinity for the east coast of Canada.

Several hundred requests, from engineers, research scientists, and professionals in the private sector, federal and provincial agencies, universities, and foreign countries, are handled per year.

Oceanographic Station Data...

Vertical profiles are collected worldwide with water sampling bottles, and electronic instruments. These subsurface measurements include temperature, salinity, oxygen and a wide variety of nutrients and chemicals. Derived parameters, such as sigma-t and geopotential anomaly can be computed upon request. The data contain approximately one million profiles,some dating back to 1900.

Tide and Water Level Data...

Observed hourly heights and monthly instantaneous extremes collected from the Atlantic, Pacific, and Arctic coasts, the Great Lakes and the St. Lawrence River, are archived. The earliest data begins before the turn of the century.

Wave Data...

The wave data archive includes measurements from over 400 locations around Canada, including offshore East and West Coasts, the Beaufort Sea, the Great Lakes, and the St. Lawrence River. The file contains calculated wave spectra, significant wave height and peak period and the digital water surface elevation. The results of wave hindcast models conducted for waters around Canada have also been archived. The archive dates back to the early 1970s.

Drifter Data...

MEDS as the RNODC for drifting buoy data, has holdings of 6 million (as of 1993) DRIBU records for the world's oceans, beginning in 1978 and growing at a rate of more than one million messages per year. The message is comprised of the buoy position and some of the following parameters: surface and subsurface water temperature, air pressure and temperature, wind speed and direction.

Satellite Data...

Data holdings include altimeter data from the GEOSAT satellite for the period of 1985 to 1990. Low Bit Rate (LBR) data of altimeter, scatterometer and wave mode SAR from the ERS-1 satellite began in July 1991. Holdings of TOPEX/POSEIDON satellite altimeter data commenced in July 1992.

Other...

A variety of other data sets are also archived including daily seawater observations from the east and west coasts, and environmental data collected by offshore drilling operators for the National Energy Board.

NAFO Benefits from MEDS Data Processing and Archival

MEDS contributes to the knowledge of the environmental conditions of the Northwest Atlantic Fisheries, by collecting, processing, and distributing to scientists, oceanographic observation data. In this past year, data has been received by MEDS, for the NAFO area, from NAFC, BIO, the IGOSS system, the DRIBU system and the operating network of wave measurement buoys. The tables and diagrams, of this report, describe what data MEDS has been aware of, and to what extent these data have been made available to scientists in 1993/94 for 1993 and past years.

Ocean Subsurface Data

MEDS becomes aware of surveys of the physics and chemistry of the water column, directly: by delivery of these data to MEDS from responsible institutions and the IGOSS reporting system, and, indirectly: from Cruise Summary Reports and other reports of ocean cruise activity. Table 1 lists data collected in the NAFO area in 1993, but not yet received at MEDS as described in these Cruise

Summary Reports. Table 2 lists data collected in the NAFO area in 1993, received at MEDS but not yet archived. Table 3(a) gives a summary of the MEDS IGOSS archive for data received during 1993. Table 3(b) gives a summary of the data received from its originator for 1993, which has been processed and archived. Table 7 lists data processed and archived, in the past year, which was in the NAFO area, but for years prior to 1993.

Ocean subsurface data is processed at MEDS in much the same way for each of the data sets described in tables 3(a), and 3(b). Electronic files are converted from a wide range of formats, into a common Ocean's format. Quality control is carried out by a combination of specially designed software and trained personnel. The quality control has four main functions. The first is to check and ensure that each data message is properly formatted. The second is to identify duplication, and select the best version of a message, based on data type, source of the data, and general qualities in analysis and reporting of the observations. The third check, identifies and if possible, corrects, the date/time and geographical positioning information of each message, using computer tests and visual inspection of the track for each cruise. The final quality control procedure, uses a series of algorithms to find and flag, common instrument failures found in profiles of subsurface measurements. Each subsurface profile, of temperature, salinity and other subsurface constituents, is also visually inspected using software to plot the data, and allow a technician to set quality flags to individual points on a profile.

The tables showing summaries of data, list over 30,000 stations for the NAFO area. Much of the data MEDS has been aware of, for 1993, has been processed and made available to scientists conducting environmental assessments of the NAFO area. Maps of station locations of all ocean (subsurface) data for 1993, processed and archived by MEDS, are show in figures 1,2,3 and 4. These show station locations, as found in MEDS archives, for each of the four seasons.

Processing and Archival of the 1993 NAFO Drifting Buoy (Dribu) Data

Table 4 lists data collected by Drifting Buoys in the NAFO Area in 1993. Maps of DRIBU tracks for each season of 1993, processed and archived by MEDS, are show in figures 5,6,7 and 8.

Drifting buoy (or DRIBU) data is received at MEDS over the GTS. Measures taken to assure its quality are much the same as those for the ocean subsurface data described above. DRIBUs report via satellite, at rates of up to every 15 minutes. These messages are for format errors, and reformatted for quality control procedures and subsequent archival. Checks, flags and possible corrections to the data are carried out by trained personnel, using a system of MEDS software which organize, analyze and display plots of the data. Quality checks use algorithms which check drifting speed and position, and ranges of sea surface temperatures and sea level pressure. The range checks include a comparison to NOAA's Ashville SST Climatology (2.5x2.5 degrees and monthly). Duplicate checking is done, and is important to discriminate between data directly from buoys and messages routed through other data centers. Lower quality data (which are this type of duplicate) are flagged as such.

Processing and Archival of the 1993 NAFO Wave Data

Table 6 lists wave measurement data in the NAFO area for 1993. These data are visually inspected and using MEDS software, to set flags on data showing instrument failures. An inventory of wave data, in the NAFO area, will show many locations with a time series of data spanning many years.

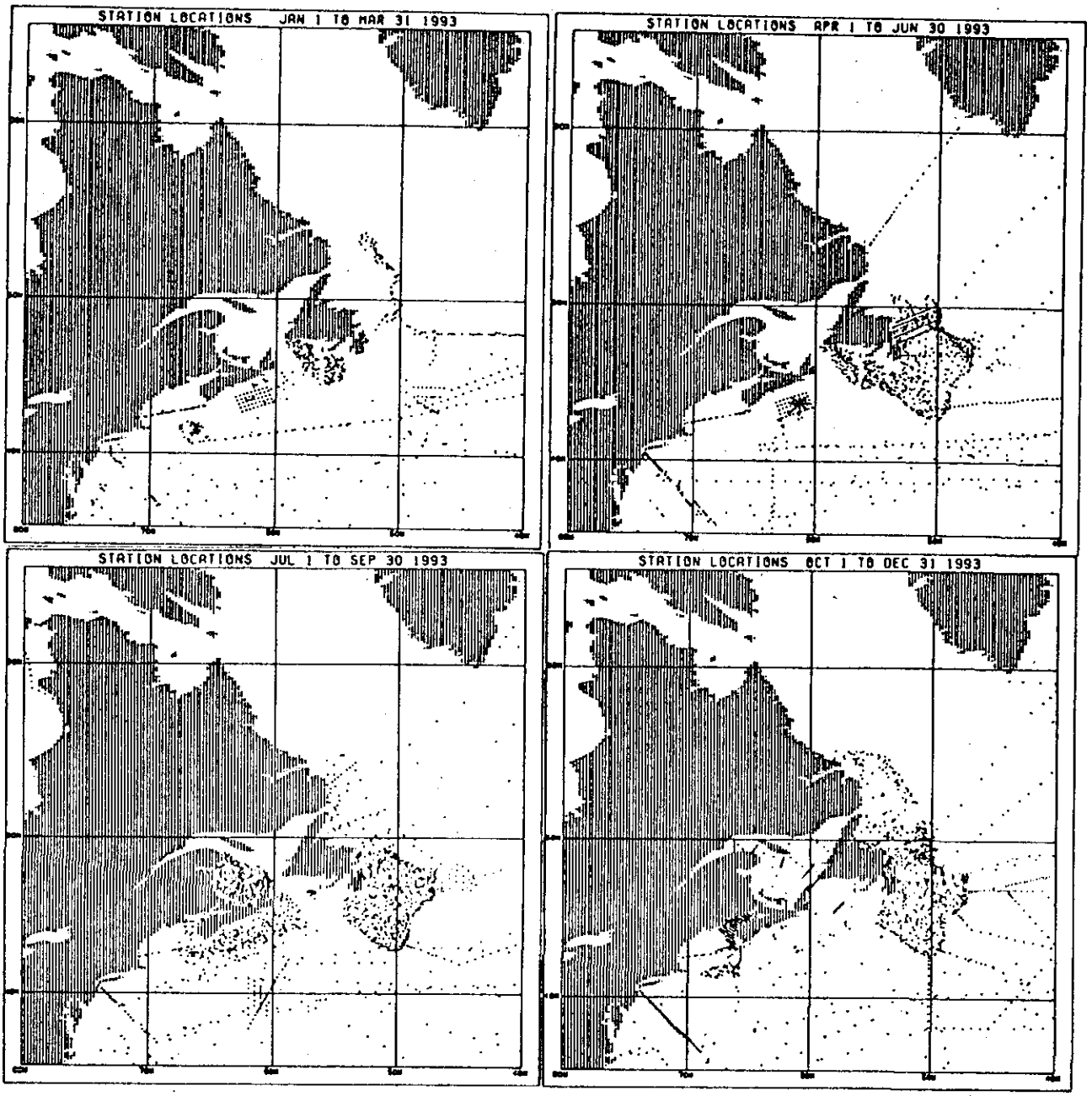
Environmental Analysis of the 1993 NAFO Area

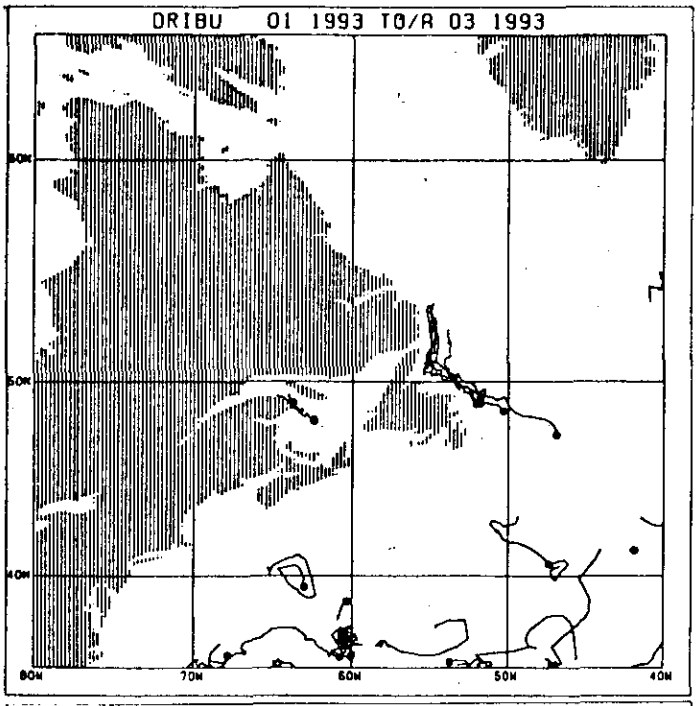
Methods of regional water climatological analysis, for the NAFO area, have evolved substantially over the past several years. The MEDS report for NAFO, for the previous year (1992) examined the adequacy of the "Levitus" climatology, for providing a description of normal temperatures in NAFO regional waters. The report noted that due to the low resolution of the climatology, and the real complexity of regional water currents and water mass structures, a yearly analysis based on a comparison of data and climatology: gave results with errors far in excess of the actual anomalies being derived. For this report, this analysis was not done. In this past year, it has been the intention of MEDS to concentrate its efforts in providing complete and timely access to high quality data, for Ken Drinkwater's group at BIO , for their analysis of the region.

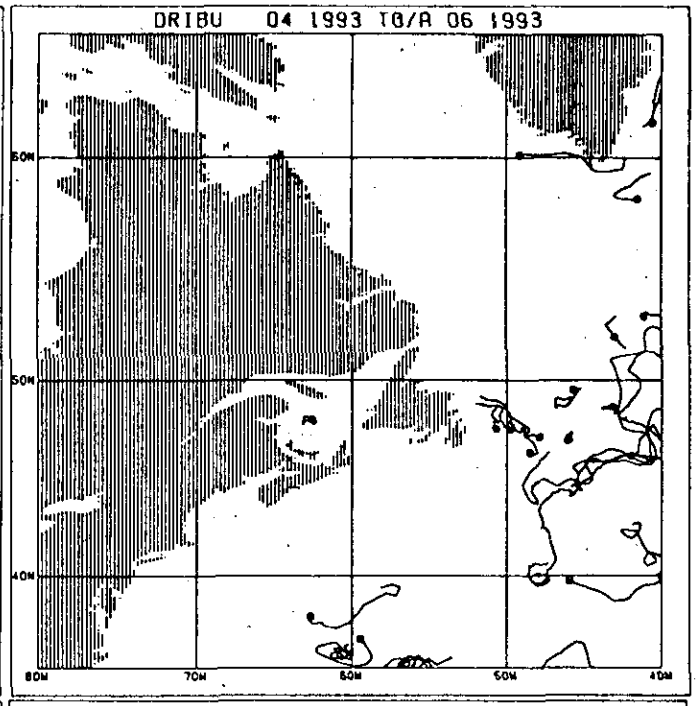
Conclusion

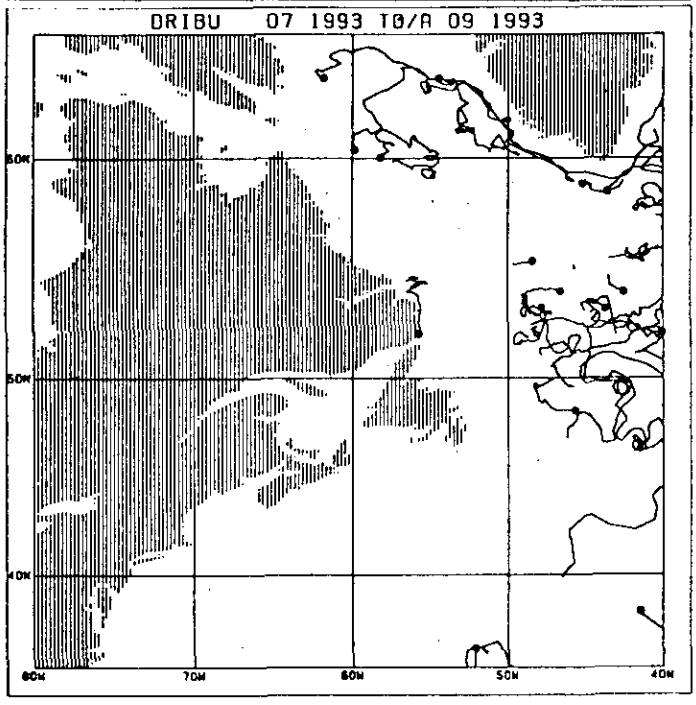
As sparse as oceanographic observations are, environmental analysis of the NAFO region is

still based on the ability of an oceanographer to assimilate billions of measurements into a meaningful model of the ocean. Broad range and classical statistical methods have little value when trying to interpret these sparse observations in a complicated physical system. Each measurement must be scrutinised for accuracy. MEDS has been using methods developed by its computer and scientific staff to ensure that the data used in analyses, by oceanographers, is accurate and as far as possible, complete. These procedures and software analyses have implemented much expertise under several national and international programmes, and have been accepted widely as viable methods of creating large sets of useful data.




DRIBU 01 1993 TO/A 03 1993
60N
50N
40N
80W
70W
60W
50W
40W


DRIBU 04 1993 TO/A 06 1993
60N
50N
40N
80W
70W
60W
50W
40W


DRIBU 07 1993 TO/A 09 1993
60N
50N
40N
80W
70W
60W
50W
40W

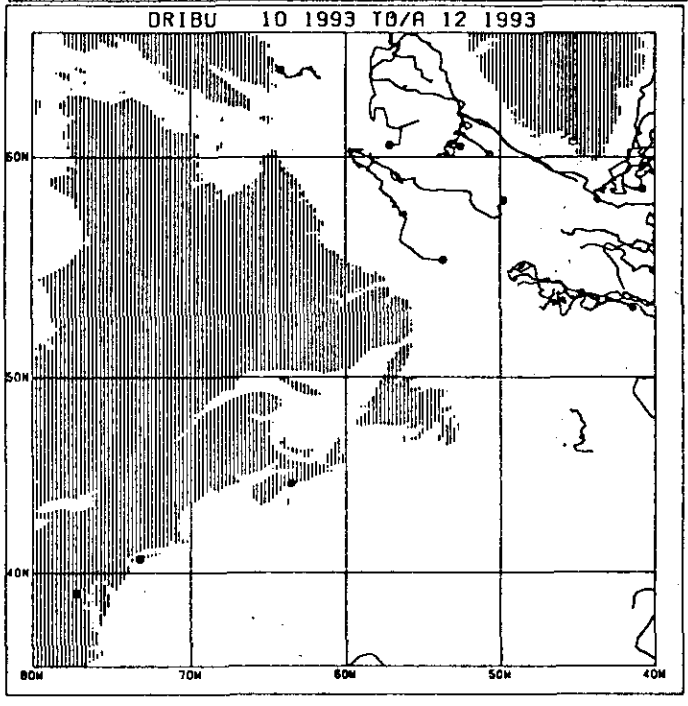

DRIBU 10 1993 TO/A 12 1993
60N
50N
40N
80W
70W
60W
50W
40W

Table 1: Data collected in the NAFO area in 1993, not yet received at MEDS.

Ship Name	Cruise Period	Stations	Reference	NAFO Subarea
ABEL-J	Aug-3 - Aug-22		CSR-REP	4X,5Y
ALBATROSS	Jan-20 - Jan-28	21	CSR-REP	5Y,5ZE
GADUS ALANTICA	Jan-07 - Jan-27		CSR-REP	
BRANDAL	Feb-10 - Feb-25		CSR-REP	3L,3K
DELAWARE II	Jan-05 - Jan-21	177	CSR-REP	5ZE
	Jul-20 - Aug-04	149	CSR-REP	5Y,4X
	Aug-23 - Aug-31	46	CSR-REP	5Y,5ZE,4X
J.L. HART	Jun-28 - Jul-02		CSR-REP	4X
	May-26 - May-28		CSR-REP	4X
	May-31 - Jun-18		CSR-REP	4X
CSS ALFRED NEEDLER	Apr-01 - Apr-06		CSR-REP	4X,4W,4VS
	May-06 - May-06		CSR-REP	4W
	May-08 - May-16	3	CSR-REP	4W
EE PRINCE	Jan-04 - Jan-23		CSR-REP	4W
	Apr-28 - Apr-30		CSR-REP	4VS
	May-03 - May-21		CSR-REP	4X,4W,4VS
FCG SMITH	May-25 - Oct-15		CSR-REP	4W,4VS

Table 2: Data collected in the NAFO area in 1993, recieved at MEDS but not yet archived.
Total = 981 stations
Note: Data recieved from NAFC = 3028 stations, where all BTs archived (388), and no CTDs archived (2640) but 70% of NAFC CTDs were recieved as TESACs in the real-time (IGOSS) system and archived.
Results: 75% of all NAFC data, was archived

Ship Name	Cruise Period	BT	Bottle	CTD	NAFO Subarea
W.TEMPLEMAN	May-10 - May-20			90	
	May-25 - Jun-10			158	
	Jun-14 - Jun-23			12	
	Oct-23 - Nov-05			101	
GADUS ATLANTICA	Jun-06 - Jun-30			10	
SHAMOOK	Aug-08 - Aug-25			19	
PARIZEAU	Sep-23 - Sep-29			97	
	Oct-27 - Nov-08			38	
PETREL V	Jul-02 - Jul-15			259	
(Russian)90VJ93043	Apr-28 - Jul-07			197	
(East Coast Navey)	?	?	?	?	

Table 3(a): IGOSS data recieved during 1993, and archived.
Total = 4629 stations

Ship Name	Country	Call Sign	Cruise Period	BATHY	TESAC	NAFO Subarea
		0HIP 93	Apr-04 - Apr-04	1	0	6A
RECIFE	PANAMA	3EGR6 93	Jan-22 - Jan-22	2	0	6D,6E
			Mar-26 - Mar-28	10	0	
5ZE,6A,6D,6E,6F						
			Aug-24 - Aug-27	5	0	4W,6G,6H
			Oct-30 - Oct-30	1	0	6A
			Nov-07 - Nov-08	3	0	6C,6D
UNKNOWN	USA	3EHE6 93	Jul-18 - Jul-19	5	0	4VS,6G,6H
			Oct-04 - Oct-07	8	0	

4VS,4W,4X,6G,6H							
				Dec 04 - Dec 04	1	0	6C
				Dec 13 - Dec 15	7	0	5ZE,6E,6F
SHAMOOK	CANADA	CG2676	93	Jan-20 - Jan-20	0	1	3L
				Jan-25 - Jan-27	0	3	3L
				May-12 - May-13	3	0	3L
				May-27 - Jun-08	3	15	3L
				Jun-23 - Jun-24	0	2	3L
				Jul-12 - Jul-29	0	56	3L
				Aug-05 - Aug-18	14	0	3L
				Aug-24 - Aug-25	5	0	3L
				Sep-09 - Sep-10	3	6	3L
				Oct-29 - Nov-09	0	37	3L
MARINUS	CANADA	CG2680	93	Nov-22 - Nov-25	2	0	3L
				Dec 04 - Dec 05	3	0	3L
ALFRED NEEDLER	CANADA	CG2683	93	Mar-04 - Mar-13	22	4	4VS,4W
				Mar-24 - Mar-24	1	0	4W
				Jun-01 - Jun-07	0	6	3L
				Jul-06 - Aug-01	184	100	
4VN,4VS,4W,4X,5Y							
				Nov-14 - Nov-24	0	65	5ZE
PARIZEAU	CANADA	CGBS	93	Apr-27 - May-03	0	57	3L,3N
				Jun-03 - Jun-10	0	87	3K,3L
				Oct-11 - Oct-24	0	108	4W,4X,5ZE
				Nov-11 - Nov-20	0	70	
3PS,4R,4S,4T,4VN,4VS							
HUDSON	CANADA	CGDG	93	Jun-19 - Jun-23	0	27	1F,2H,2J
				Aug-09 - Aug-10	0	2	2J
				Nov-16 - Dec 14	0	86	
3L,3M,3N,4VS,6G,6H							
E.E. PRINCE	CANADA	CGDK	93	Oct-03 - Oct-03	0	1	5Y
				Oct-24 - Nov-04	0	117	4X,5Y
W. TEMPLEMAN	CANADA	CGDV	93	Jan-10 - Jan-27	0	46	2J,3K,3L
				Feb-05 - Feb-24	3	160	
3L,3O,3PS,3PN,4VN							
				Mar-09 - Mar-18	49	0	5ZE
				Apr-01 - Apr-21	12	149	
3L,3O,3PS,3PN,4VN,4VS							
				Apr-26 - May-06	2	93	3L,3N,3O
				Aug-24 - Dec 16	31	743	3K,3L,3N,3O
		CHAC	93	Dec 04 - Dec 04	1	0	4W
USN COMMAND TASK UNIT	USA	CTU	93	Aug-22 - Aug-22	28	0	4W,4X,5ZE,6E
QUEST	CANADA	CZDO	93	Mar-08 - Mar-10	3	0	4W
				Apr-15 - Apr-17	3	0	6E
				May-05 - May-08	10	0	4W,4X,6E
				May-27 - May-27	1	0	4W
				Jun-04 - Jun-10	10	0	4W
				Aug-05 - Aug-06	4	0	4W
				Aug-13 - Aug-14	9	0	4W
				Sep-12 - Sep-12	1	0	6D
				Sep-25 - Sep-25	1	0	6E
				Nov-10 - Nov-16	8	0	3O,4VS
				Dec 03 - Dec 11	20	0	4W
SEDCO-BP471	LIBERIA	D5BC	93	Jun-04 - Jun-11	31	0	
6A,6B,6D,6E,6F,6G,6H							
				Jul-21 - Jul-24	12	0	
3L,4W,4X,5ZE,5ZW,6A							
				Jul-30 - Aug-01	3	0	1F,3K
				Nov-18 - Nov-22	14	0	1F,2J,3K,3L

				Nov-29 - Nov-30	6	0	3N,6H
KOELN ATLANTIC	FRG	DAKE	93	Jan-02 - Jan-03	11	0	3M,3N
				Feb-04 - Feb-07	29	0	
3M,3N,3O,4VS,4W,4X,5ZE							
				Mar-11 - Mar-14	31	0	
3M,3N,3O,4VS,4W,4X,5ZE							
				Apr-22 - Apr-24	29	0	
3M,3N,3O,4VS,4W,4X							
				May-08 - May-10	28	0	
3M,3N,3O,4VS,4W,4X,5ZE							
				Jul-23 - Jul-25	16	0	3L,3M,4VS,4W
				Aug-07 - Aug-09	17	0	
3M,3N,3O,4VS,4W,4X,5ZE							
				Oct-14 - Oct-17	13	0	
3L,3M,4VS,4W,4X,5ZE							
				Oct-29 - Oct-30	5	0	3M
GAUSS	FRG	DBBX	93	Jun-25 - Jun-26	24	14	3M,3N
				Jul-08 - Jul-11	0	19	3M,3N
DAGMAR AERNN	FRG	DIXX	93	Jun-10 - Jun-11	3	0	1F
YANKEE CLIPPER	FRG	DLEZ	93	Jan-15 - Jan-16	11	0	4X,5Y,5ZW
				Feb-12 - Feb-12	1	0	5ZW
				Feb-20 - Feb-20	12	0	4X,5Y,5ZW
				Mar-13 - Mar-13	10	0	4X,5Y,5ZW
				Apr-22 - Apr-23	10	0	4X,5Y,5ZW
				May-14 - May-15	9	0	4X,5Y,5ZW
				Jun-11 - Jun-12	7	0	4X,5Y,5ZW
				Aug-06 - Aug-07	5	0	4X,5Y,5ZW
				Sep-11 - Sep-11	2	0	4X,5Y
				Sep-24 - Sep-25	4	0	4X,5ZW
COLUMBUS OHIO	LIBERIA	ELHL6	93	May-25 - May-25	2	0	6C,6D
ANGO	FRANCE	FNOM	93	Jan-13 - Jan-14	3	0	6G,6H
DELAWARE #2	USA	KNBD	93	Jul-08 - Jul-14	4	0	5ZE
				Aug-12 - Aug-17	3	0	5ZE
				Nov-01 - Nov-01	1	0	5ZW
SEA WOLF	USA	KNFG	93	Feb-07 - Feb-07	2	0	6B
				Mar-22 - Mar-22	1	0	6C
				May-04 - May-04	1	0	6C
				Jun-16 - Jun-17	3	0	6B,6C
				Jul-28 - Jul-28	1	0	6C
				Sep-09 - Sep-10	5	0	6B,6C,6D
				Oct-20 - Oct-20	3	0	6B,6C
TEXAS CLIPPER	USA	KVWA	93	Jul-20 - Jul-21	2	0	3K,3L
ICEPAT GROTON CT	USA	NIDK	93	Jan-04 - Jan-04	1	0	3M
				Feb-26 - Feb-26	2	0	3M
				Mar-21 - Mar-25	7	0	3N
				Apr-01 - Apr-02	3	0	3M,3N
				May-04 - May-04	1	0	3N
				May-18 - May-19	2	0	3L
				Jun-01 - Jun-03	4	0	3L,3M,3N
				Jun-11 - Jun-11	1	0	3K
DOYLE	USA	NJHD	93	Sep-12 - Sep-12	1	0	6C
UNKNOWN	USA	NNJB	93	Jan-07 - Jan-12	8	0	6B,6C
				Feb-04 - Feb-05	2	0	6C
				Oct-13 - Oct-13	2	0	6C
				Dec 08 - Dec 12	3	0	6B,6C
USCG POLAR SEA	USA	NRUO	93	Jul-08 - Jul-13	7	0	
1F,2H,2J,5ZE,6A							
				Sep-02 - Sep-02	1	0	6H
OLEANDER	NETHERLAND	PJJU	93	Jan-08 - Jan-08	1	0	6A

				Feb-05 - Feb-06	2	0	6A
				Mar-06 - Mar-11	19	0	6A,6D
				Apr-03 - Apr-08	27	0	6A,6B,6C,6D
				May-07 - May-12	16	0	6A,6B,6D
				Jun-12 - Jun-16	14	0	6A,6D
				Jul-03 - Jul-07	9	0	6A,6D
				Aug-04 - Aug-07	5	0	6A,6B
				Sep-24 - Sep-29	16	0	6A,6B
				Oct-16 - Oct-16	23	0	6A,6B,6D
				Nov-05 - Nov-10	21	0	5ZW,6A,6B,6D
				Dec 04 - Dec 05	21	0	6A,6B,6D
UNKNOWN	UNKNOWN	SHIP	93	Jan-05 - Jan-05	1	0	3L
				Jan-14 - Jan-14	1	0	3L
				Jan-22 - Jan-25	2	0	3L,6D
				Mar-20 - Mar-24	2	0	4VS,6B
				Apr-02 - Apr-05	3	0	6E,6H
				Apr-26 - Apr-26	1	0	6F
				May-03 - May-06	2	0	6C,6E
				Jun-09 - Jun-12	1	1	3L,5Y
				Jul-19 - Jul-20	3	0	3K
				Aug-10 - Aug-17	21	0	3K,4W,4X
				Aug-22 - Aug-22	3	0	4W,4X,6E
				Sep-02 - Sep-08	4	0	3K,3N,4W,6D
				Sep-24 - Sep-25	4	0	4X,5Y
				Oct-16 - Oct-27	5	0	3M,3N,6B,6C,6E
				Nov-08 - Nov-08	1	0	6D
				Nov-23 - Nov-23	1	0	6H
				Dec 04 - Dec 04	1	0	6B
				Dec 22 - Dec 22	1	0	4VS
				Dec 30 - Dec 30	1	0	3K
IJMA	USSR	UFJN	93	Apr-28 - May-29	0	88	3L,3N,3O
				Jun-04 - Jul-07	0	74	3L,3M,3N,3O
PROF MULTANOVSKY	USSR	UJFO	93	Jan-01 - Jan-10	49	0	3L,3M,3N
				Jan-25 - Jan-25	1	0	3O
				Nov-04 - Nov-04	18	0	3L,3M
SKOGAFOSS	ANTIGUA AN	V2QT	93	Jun-14 - Jun-16	11	0	1F,2J,3K,3L
				Nov-05 - Nov-07	6	0	4X,5Y,5ZW
				Dec 01 - Dec 01	1	0	4X
				Dec 06 - Dec 06	8	0	4X,5Y,5ZW
				Dec 30 - Dec 30	3	0	3K
GADUS ATLANTICA	CANADA	VC9450	93	Feb-05 - Mar-02	36	31	2J,3K,3L
				May-21 - May-29	0	9	3L,3PS
				Jun-10 - Jun-29	65	0	3K,3L,3M
				Jul-23 - Oct-18	133	188	
2J,3K,3L,3N,3O,3PS,4R							
				Oct-30 - Nov-09	4	77	2J,3K
				Nov-25 - Dec 06	5	87	3K,3L
UNKNOWN	AUSTRALIA	VJPK	93	Jun-09 - Jun-28	43	0	3K,3L
BIBI	UK	VSBI3	93	Feb-13 - Feb-16	7	0	
3M,3N,4VS,6C,6D,6E							
				Apr-07 - Apr-09	6	0	6E,6F,6G,6H
				May-03 - May-03	1	0	6H
				May-23 - May-26	7	0	
3M,3N,4VS,6C,6E							
				Jul-08 - Jul-08	1	0	6E
				Oct-05 - Oct-08	11	0	3M,3N,6E,6F,6G
				Nov-21 - Nov-22	7	0	6F,6G,6H
AIRCRAFT	USA	VXN-8	93	Sep-06 - Sep-06	21	0	4VS,4W,6E
FOGO ISLE	CANADA	VXZM	93	Oct-20 - Oct-25	0	36	4S,4VN

PETREL V	CANADA	VYPK	93	Apr-29 - May-06	0	166	4W
SEA-LAND ACHIEVER	USA	WPKD	93	Jan-01 - Jan-01	3	0	4W,4X
				Jan-11 - Jan-13	9	0	6D,6E,6F,6G,6H
				Feb-02 - Feb-05	5	0	3M,3N,4X
				Feb-14 - Feb-17	10	0	
3M,4VS,6C,6D,6E,6F,6G							
				Mar-10 - Mar-11	2	0	3M,4VS
				Mar-22 - Mar-25	7	0	3M,3N,6D,6F
				Apr-14 - Apr-16	2	0	3N,4X
				Apr-25 - Apr-28	9	0	3M,3N,6D,6E,6F
				May-19 - May-21	9	0	3M,3N,4VS,4W
				May-29 - Jun-01	7	0	6D,6E,6F,6G,6H
				Jun-23 - Jun-25	4	0	3M,4VS,4W,4X
				Jul-04 - Jul-06	12	0	
3N,4VS,6C,6D,6E,6F							
				Jul-27 - Jul-29	8	0	3M,3O,4VS,4W
				Aug-07 - Aug-10	17	0	
3M,3N,4VS,4W,6C,6D,6E							
				Sep-07 - Sep-10	9	0	
3M,3N,3O,4VS,4X							
				Sep-18 - Sep-22	14	0	
3M,3N,4VS,6C,6D,6F							
				Oct-13 - Oct-16	7	0	
3M,3N,3O,4VS,4W,6D							
				Oct-24 - Oct-27	18	0	
3M,3N,4VS,6C,6D,6E,6F							
				Nov-16 - Nov-19	5	0	4VS,4W,5ZE,6H
				Dec 01 - Dec 01	1	0	3M
				Dec 21 - Dec 23	8	0	3M,3N,4VS,4W
PACMISRANFAC HAWAREA	USA	WRBA	93	Aug-10 - Aug-10	14	0	4W,4X
TABASCO	MEXICO	XCSH	93	Apr-25 - Apr-28	9	0	
3M,3N,4VS,6E,6F,6G							

Table 3(b): Ocean Subsurface Data (other than IGOSS) for 1993, and archived.
Total = 940 stations

Country	Cruise Num	Cruise Period	BT	CTD	BOTTLE	NAFO Subarea
CANADA	180593001	Jan-20 - Jan-20	1	0	0	3L
		Jan-25 - Jan-27	3	0	0	3L
CANADA	180593002	Jan-11 - Jan-19	4	0	0	2J,3K,3L
CANADA	180593003	Feb-10 - Feb-17	3	0	0	3PS,3PN
CANADA	180593004	Feb-10 - Mar-01	36	0	0	2J,3K,3L
CANADA	180593006	May-12 - May-13	3	0	0	3L
CANADA	180593007	May-27 - May-28	3	0	0	3L
CANADA	180593009	Apr-29 - Apr-30	2	0	0	3O
CANADA	180593010	Apr-03 - Apr-19	12	0	0	3PS
CANADA	180593012	May-14 - May-18	6	0	0	3L,3N
CANADA	180593015	May-26 - Jun-09	7	0	0	3L,3O
CANADA	180593016	Jun-17 - Jun-22	3	0	0	3L,3N
CANADA	180593017	Jul-06 - Jul-06	4	0	0	3K,3L
CANADA	180593018	Jun-10 - Jun-29	65	0	0	3K,3L,3M
CANADA	180593019	Jul-23 - Jul-28	9	0	0	3L,3PS
CANADA	180593021	Jun-10 - Jun-28	43	0	0	3K,3L
CANADA	180593023	Aug-05 - Aug-18	14	0	0	3L
		Aug-24 - Aug-25	5	0	0	3L
CANADA	180593025	Sep-09 - Sep-10	3	0	0	3L
CANADA	180593026	Oct-13 - Oct-18	11	0	0	3L
CANADA	180593027	Aug-12 - Aug-22	25	0	0	3L,3N,3O

CANADA	180593028	Aug-28 - Sep-06	8	0	0	3N,3O
CANADA	180593029	Aug-30 - Oct-18	99	0	0	2J,3K,3L,4R
CANADA	180593030	Sep-09 - Sep-24	6	0	0	3L,3N
CANADA	180593031	Oct-24 - Oct-25	5	0	0	3O
CANADA	180593033	Oct-31 - Oct-31	1	0	0	3K
		Nov-05 - Nov-07	3	0	0	2J
CANADA	180593034	Nov-06 - Nov-08	2	0	0	3L,3N
		Nov-15 - Nov-20	5	0	0	3L
CANADA	180593035	Nov-11 - Nov-17	6	0	0	2J,3K
CANADA	180593038	Nov-29 - Dec 02	5	0	0	3L
CANADA	180593039	Nov-22 - Nov-25	2	0	0	3L
		Dec 04 - Dec 05	3	0	0	3L
CANADA	180593040	Nov-28 - Dec 04	5	0	0	3K
CANADA	181093001	Apr-01 - Apr-03	7	0	0	3K,3M,3N
CANADA	181093002	Jun-14 - Jun-16	11	0	0	1F,2J,3K,3L
CANADA	181093100	Nov-05 - Nov-07	7	0	0	4X,5Y,5ZW
CANADA	181093101	Dec 06 - Dec 06	10	0	0	4X,5Y,5ZW
CANADA	181093102	Dec 11 - Dec 11	1	0	0	6B
		Dec 18 - Dec 18	1	0	0	3K
		Dec 29 - Dec 30	12	0	0	1F,2J,3K
CANADA	181493001	Jan-12 - Jan-16	0	45	0	4W
CANADA	181493002	Feb-16 - Feb-24	0	31	0	4W
CANADA	181493003	Mar-20 - Mar-23	0	43	0	4W
CANADA	181493004	Apr-16 - Apr-21	0	44	0	4W
CANADA	181493005	May-16 - May-20	0	42	0	4W
CANADA	183493192	Sep-10 - Sep-29	0	192	0	4T,4VN
CANADA	184193040	Jul-28 - Aug-09	0	12	0	4T
CANADA	184193049	Sep-30 - Sep-30	0	1	0	4S
		Oct-05 - Oct-05	0	3	0	4S
CANADA	184193052	Oct-20 - Oct-25	0	36	0	4S,4VN

Table 4: Data Collected by Drifing Buoys in the NAFO Area in 1993
Total = 79 Buoy Months

BUOY	DATE RANGE	DAYS	SST	AP	AT	WS	WD	TC	NAFO AREAS
12507	Oct-08 - Oct-19	11	-	X	X	-	-	-	6B
21579	Jan-01 - Jan-04	4	X	X	X	-	-	-	6D
41503	Jan-08 - Jan-18	10	X	X	X	-	-	-	6C,6D
41524	Jan-08 - Jan-19	11	X	X	-	-	-	-	6D,6E
41524	Jan-28 - Jan-28	1	X	X	-	-	-	-	6E
41901	Jan-08 - Feb-20	27	X	-	-	-	-	-	6G,6H
41901	Feb-26 - Feb-26	1	X	-	-	-	-	-	6G
41901	Mar-09 - May-05	28	X	-	-	-	-	-	6F,6G
41901	May-11 - Jun-05	15	X	-	-	-	-	-	6F
41903	Jan-02 - Feb-16	19	X	-	-	-	-	-	6F,6G
41903	Feb-25 - Feb-28	2	X	-	-	-	-	-	6F
41903	Mar-12 - Mar-12	1	X	-	-	-	-	-	6F
41903	Mar-24 - Mar-27	2	X	-	-	-	-	-	6E
41903	Apr-02 - Apr-14	5	X	-	-	-	-	-	4VS,6F
41903	Apr-26 - May-11	6	X	-	-	-	-	-	6E,6F
41903	May-17 - May-20	2	X	-	-	-	-	-	6E
41903	May-26 - May-29	2	X	-	-	-	-	-	6E
41912	Jan-20 - Feb-20	21	X	-	-	-	-	-	3M,6H
41912	Jun-13 - Jul-14	22	X	-	-	-	-	-	3M,6H
41915	Jan-01 - Jan-02	2	X	-	-	-	-	-	6H
41920	Jan-02 - May-20	49	X	-	-	-	-	-	6E,6F
41923	May-19 - Jun-10	16	X	-	-	-	-	-	6H
41923	Aug-08 - Sep-02	18	X	-	-	-	-	-	6G,6H

41923	Sep-14	-	Sep-20	5	X	-	-	-	-	-	6G
41925	Oct-16	-	Oct-25	7	X	-	-	-	-	-	6F
44137	Feb-03	-	Feb-12	10	-	-	-	-	-	-	4W
44139	Feb-13	-	Feb-17	5	-	-	-	-	-	-	4VS
44501	May-26	-	Nov-12	171	X	-	-	-	-	-	1F,2J,3K,3L,3M
44502	May-25	-	Aug-16	81	X	-	-	-	-	-	3K,3M
44503	Jun-04	-	Jun-30	27	X	-	-	-	-	-	3L,3M,3N
44503	Jul-17	-	Sep-08	54	X	-	-	-	-	-	1F,2J,3K,3M
44510	Mar-05	-	May-12	68	X	-	-	-	-	-	3M,3N,3O
44510	May-25	-	Jun-19	23	X	-	-	-	-	-	3K,3M
44511	Apr-15	-	Apr-29	11	X	-	-	-	-	-	3M
44512	Apr-15	-	Apr-25	10	X	-	-	-	-	-	3M
44512	May-16	-	May-25	10	X	-	-	-	-	-	3K,3M
44515	Aug-30	-	Oct-29	61	X	X	X	-	-	-	1F,2J
44516	Jan-01	-	Jan-26	25	X	X	X	-	-	-	6D,6E
44517	Jan-01	-	Jan-20	19	X	X	X	-	-	-	4W,4X,6E
44613	Sep-10	-	Sep-25	15	X	X	X	-	-	-	3K
44614	Nov-02	-	Nov-15	14	X	X	X	X	X	-	1F
44616	Nov-02	-	Nov-24	23	X	X	X	X	X	-	1F,2J
44624	Nov-29	-	Dec 07	8	X	X	X	-	-	-	1F
44645	Feb-26	-	Apr-24	58	-	-	-	-	-	-	4T
44646	Feb-26	-	Mar-01	4	-	-	-	-	-	-	4S,4T
44647	Feb-26	-	Mar-31	34	-	-	-	-	-	-	2J,3K,3L
44668	Jul-06	-	Aug-29	54	X	X	X	-	-	-	2J,4R
44670	Jul-27	-	Jul-31	5	X	X	X	-	-	-	1F,2G
44670	Aug-13	-	Nov-22	102	X	X	X	-	-	-	1E,1F,2G
44682	Feb-23	-	Apr-21	58	X	X	X	-	-	-	2J,3K,3L
44683	Feb-22	-	Apr-18	56	X	X	X	-	-	-	2J,3K,3L
44684	Feb-23	-	Apr-18	55	X	X	X	-	-	-	2J,3K,3L
44685	Feb-23	-	Apr-12	43	X	X	X	-	-	-	2J,3K,3L
44686	Feb-23	-	Mar-09	15	-	X	-	-	-	-	2J,3K
44726	Nov-29	-	Dec 29	31	X	X	X	-	-	-	1F,2J
44777	Jun-01	-	Jul-05	31	X	X	X	X	X	-	1F,2J,3K
44777	Jul-12	-	Aug-17	32	X	X	X	X	X	-	1F,2J,3K
44778	Jul-21	-	Aug-14	22	X	X	X	X	X	-	1F
44778	Sep-02	-	Sep-06	5	X	X	X	X	X	-	1F
44779	Aug-05	-	Sep-01	24	X	X	X	X	X	-	1F,2J
44780	Jul-20	-	Sep-09	52	X	X	X	-	-	-	2J,3K
44901	May-07	-	May-10	3	X	-	-	-	-	-	3M
44902	Sep-22	-	Dec 06	51	X	-	-	-	-	-	1F,2H,2J
44909	Jul-27	-	Nov-19	77	X	-	-	-	-	-	3K,3L,3M
44913	Sep-22	-	Oct-19	18	X	-	-	-	-	-	1F
47031	Dec 01	-	Dec 31	28	-	-	X	-	-	-	0A
47032	Dec 01	-	Dec 31	28	-	-	-	-	-	-	0A
47033	Dec 01	-	Dec 31	28	-	-	-	-	-	-	0A
47606	Jun-05	-	Dec 31	177	-	X	X	-	-	-	1C,1D,1E,1F
52533	Nov-21	-	Nov-22	2	X	-	X	-	-	-	6A
52534	Nov-21	-	Nov-22	2	X	-	X	-	-	-	6A
52535	Nov-21	-	Nov-22	2	X	-	X	-	-	-	6A
52536	Nov-21	-	Nov-22	2	X	-	X	-	-	-	6A
52537	Nov-18	-	Nov-21	3	X	-	X	-	-	-	6A
52539	Nov-21	-	Nov-21	1	X	-	X	-	-	-	6A
52540	Nov-21	-	Nov-22	2	X	-	-	-	-	-	6A
62711	Oct-24	-	Nov-07	15	X	X	X	-	-	-	1F
64429	Dec 08	-	Dec 30	16	X	-	-	-	-	-	2H,2J
64539	Oct-13	-	Oct-20	7	X	X	X	-	-	-	1F
64540	Sep-18	-	Nov-25	64	X	X	X	-	-	-	1C,1D,1E,1F
64580	Dec 07	-	Dec 12	6	X	X	X	-	-	-	4X
64929	Jul-21	-	Dec 06	93	X	-	-	-	-	-	0B,1D,1E,1F,2G,2H

65562	Jul-21 - Nov-06	106	X	X	X	-	-	-	0B,1C,1D,1E,1F
65562	Nov-13 - Nov-23	7	X	X	X	-	-	-	0B
65597	Jun-26 - Jun-29	4	X	X	X	-	-	-	1F
65901	Sep-23 - Dec 31	66	X	-	-	-	-	-	1E,1F

Table 6: Wave measurement data in the NAFO area for 1993.

STATION NAME	LATITUDE	LONGITUDE	INST TYPE	WATER DEPTH (M)	START DATE DD/MM/YYYY	END DATE DD/MM/YYYY	NAFO AREA
HOTEL	38.5000	70.7000	WA	3231.0	01/01/1993	31/12/1993	6B
GULF OF ME	42.6000	68.6000	WA	202.0	01/01/1993	31/12/1993	5Y
NANTUCKET	40.5000	69.4000	WA	60.0	15/04/1993	31/12/1993	5ZE
DEL BAY	38.5000	74.7000	WA	28.0	17/05/1993	14/12/1993	6B
GEORGES BANK	41.1000	66.6000	WA	87.0	06/04/1993	02/10/1993	5ZE
LONG ISLAND	40.3000	73.2000	WA	40.0	01/01/1993	31/12/1993	6A
Bras D'or Lakes	46.0500	60.7000	AE	26.0	27/05/1993	29/11/1993	4V
East Scotian Slope	41.2000	61.1330	AE	4500.0	01/01/1993	31/12/1993	4W
SW Grand Banks	44.2330	53.6330	AE	1500.0	01/01/1993	31/12/1993	3O
Banquereau	44.3170	57.3500	AE	1100.0	01/01/1993	31/12/1993	4VS
Laurentian Fan	42.0670	56.1500	AE	4500.0	01/01/1993	29/11/1993	4VS
La Have Bank	42.4670	64.2500	AE	1500.0	01/07/1993	31/12/1993	4X
Mont Louis	49.5500	65.7500	AE		15/04/1993	13/11/1993	4S
TORBAY	47.6330	52.5000	WA	164.4	01/01/1993	21/12/1993	3L
OSBORNE HEAD	44.4830	63.4170	WA	56.7	01/01/1993	31/12/1993	4W
Bay de Verde, Inner	48.0830	52.9000	SW	6.0	01/01/1993	01/01/1993	3L
Bay de Verde, Outer	48.0830	52.9000	SW	6.0	01/01/1993	01/01/1993	3L
St-Bride's, Inner	46.9170	54.1830	SW	2.0	01/01/1993	01/01/1993	3L
St-Bride's, Outer	46.9170	54.1830	SW	2.0	01/01/1993	01/01/1993	3L
Port-Aux-Basques Inn	47.5670	59.1330	WA	27.4	14/07/1993	31/12/1993	3P
Port-Aux-Basques Out	47.5670	59.1000	WA	61.6	14/07/1993	31/12/1993	3P

Table 7: Historical data (from years prior to 1993), recieved at MEDS since last NAFO report for 1992. Total Stations = 26,217

MEDS Cruise No	Year	BT	Bottle	CTD	NAFO Subarea
180180027	1991	0	0	93	0A,1A
180391001	1991	0	122	114	5Z
180391002	1991	0	87	71	4V,4W
180391003	1991	0	85	85	4X,4W,5Y
180391004	1992	0	104	103	4W,4V
180392001	1992	0	85	78	5Z
180392002	1989	0	55	24	4V,4W
180589001	1989	41	0	0	3K,3L,2J,3N
180589002	1989	9	0	0	3K,3L
180589003	1989	5	0	0	3P,3L
180589004	1989	43	0	0	3L
180589005	1989	72	0	0	3L,3K,3O,3N
180589006	1989	44	0	0	3N,3L,3O
180589007	1989	25	0	0	2J,3L,2H
180589009	1989	9	0	0	3L,3N
180589010	1989	26	0	0	3K,2J,3L
180589011	1989	5	0	0	2J
180589012	1989	17	0	0	2J,3K
180589013	1989	14	0	0	3K,2J

180589014	1989	33	0	0	3N,3O
180589015	1989	103	0	0	3P,3O,3L,4V
180589016	1989	213	0	0	3O,3N,3L,3P
180589017	1989	172	0	0	3L,3O,3P
180589018	1989	39	0	0	3O,3N,3L
180589019	1989	61	0	0	3L,3O
180589020	1989	11	0	0	2J,1P,2H,3L,2G
180589021	1989	197	0	0	3L,3N,3P,3K,3O
180589022	1989	35	0	0	3O,3L
180589023	1989	32	0	0	3L
180589024	1989	11	0	0	3P
180589025	1989	26	0	0	3L
180589026	1989	25	0	0	3L
180589027	1989	31	0	0	3L
180589028	1989	10	0	0	2J
180589029	1989	9	0	0	3L
180589030	1989	14	0	0	3L
180589031	1989	14	0	0	3L
180589032	1989	48	0	0	3L
180589033	1990	44	0	0	3L
180590001	1990	66	0	0	2J,3K,3L
180590002	1990	5	0	0	3P
180590003	1990	18	0	0	3L
180590004	1990	105	0	0	3L,3K
180590005	1990	2	0	0	2H,3K
180590006	1990	45	0	0	3P,4W,4V,4T,3L,4R
180590007	1990	1	0	0	3L
180590008	1990	34	0	0	2J,3L,3K
180590010	1990	8	0	0	3K
180590011	1990	6	0	0	3K,3L
180590012	1990	27	0	0	3L,3N
180590013	1990	16	0	0	3P,3L
180590014	1990	22	0	0	3L,3O,3N
180590015	1990	28	0	0	3L,3O,3N
180590016	1990	2	0	0	3L
180590017	1990	52	0	0	3N,3L
180590018	1990	168	0	0	3N,3L,3P,3K,3O
180590019	1990	10	0	0	3N,3L,3O
180590020	1990	12	0	0	3L
180590021	1990	6	0	0	3N,3L
180590022	1990	3	0	0	3L,3O
180590023	1990	3	0	0	3L
180590024	1990	9	0	0	3L,3N,3O
180590025	1990	8	0	0	3L
180590026	1990	10	0	0	2J
180590027	1990	9	0	0	3P,3L
180590028	1990	24	0	0	3L
180590029	1990	14	0	0	3K,3L
180590030	1990	4	0	0	3L,3O
180590031	1990	17	0	0	3L
180590032	1991	34	0	0	3K,3L
180591001	1991	22	0	0	3L
180591002	1991	21	0	0	3P,3L
180591003	1991	59	0	0	3K,2J,3L
180591004	1991	13	0	0	3K,3L
180591005	1991	20	0	0	3L
180591007	1991	30	0	0	3L,3O,3P
180591008	1991	32	0	0	3L
180591009	1991	3	0	0	3L

180591011	1991	1	0	0	3L
180591012	1991	4	0	0	3O,3L
180591014	1991	26	0	0	3L,3N,3O
180591015	1991	15	0	0	3L
180591016	1991	52	0	0	3L,3K
180591017	1991	31	0	0	3L
180591018	1991	6	0	0	3L
180591019	1991	69	0	0	3K,3L
180591021	1991	19	0	0	3L
180591022	1991	9	0	0	3O,3L,3N
180591023	1991	47	0	0	3L,3K
180591025	1991	121	0	0	3L,3P
180591029	1991	41	0	0	3K,2J
180591030	1991	18	0	0	3L,3K
180591031	1991	11	0	0	2J
180591032	1991	13	0	0	4V,3L,3P,4R
180591033	1991	21	0	0	3L,3N
180591034	1991	33	0	0	3L
180591035	1991	2	0	0	3P
180591037	1991	4	0	0	3K
180591038	1991	13	0	0	3O,3L
180591039	1991	15	0	0	3L,3M
180591040	1991	11	0	0	1F,3L,2H,2J,3K
180591041	1991	70	0	0	2J,3K,3L
180591042	1991	5	0	0	3N,3O
180591043	1991	2	0	0	3P,3L
180591044	1991	28	0	0	3K,2J
180591045	1991	4	0	0	3L,3N
180591046	1991	26	0	0	3L
180591047	1991	53	0	0	3K,2J,3L
180591048	1991	75	0	0	2H,2G,3L
180591049	1991	6	0	0	3L
180591050	1991	65	0	0	3K,3L
180591051	1991	12	0	0	3L
180591052	1992	22	0	0	3L
180592001	1992	13	0	0	3P,3L
180592002	1992	2	0	0	3P
180592003	1992	12	0	0	2J,3L
180592004	1992	27	0	0	2J,3L
180592005	1992	27	0	0	3P,3L
180592006	1992	34	0	0	3L,3K
180592007	1992	24	0	0	3P
180592008	1992	21	0	0	3P,3L
180592009	1992	60	0	0	3L,3K
180592010	1992	65	0	0	3K,2J
180592012	1992	4	0	0	3O
180592013	1992	11	0	0	3L,3N
180592015	1992	48	0	0	3L
180592016	1992	11	0	0	3L
180592018	1992	6	0	0	3L
180592020	1992	68	0	0	3K,3L
180592022	1992	5	0	0	3P
180592024	1992	13	0	0	3L,3N
180592025	1992	23	0	0	3L
180592028	1992	11	0	0	3L
180592029	1992	51	0	0	3K,3L
180592030	1992	12	0	0	3O,3N,3L
180592033	1992	2	0	0	3L
180592037	1992	18	0	0	3L

180592038	1992	8	0	0	3O,3N
180592039	1992	9	0	0	3P,4V
180592040	1992	13	0	0	3N
180592041	1992	4	0	0	3O,3L
180592044	1992	5	0	0	3L
180592046	1992	37	0	0	3K,2J,3L
180592050	1992	65	0	0	3N,3O,3L
180592052	1992	4	0	0	2J
180592053	1992	8	0	0	3L
180592054	1992	10	0	0	3K,3L
180592055	1992	18	0	0	3L,3K
180592056	1992	6	0	0	3K,3L
180592057	1992	13	0	0	3L
180592058	1974	17	0	0	3K,3L
181074031	1974	0	0	60	4V
181074035	1975	0	0	21	4W,4X
181075003	1975	0	0	34	4W,6E,4X
181075006	1975	0	0	23	4W,4X
181075008	1975	0	0	155	4V
181075020	1975	0	0	27	4V,4W
181075033	1976	0	0	17	4X,4V,4W
181076005	1976	0	0	55	4X,4W
181076020	1976	0	0	76	4W,4X
181076033	1976	0	0	30	4X,4W
181076034	1976	0	0	13	4V
181076038	1977	0	0	25	4X,4W
181077003	1977	0	0	35	4W,4X
181077013	1977	0	0	17	4W
181077017	1977	0	0	51	4X,4W
181077029	1977	0	0	125	2H,2G,2J,0B
181077033	1978	0	0	12	4R,4S,4T
181078001	1978	0	0	17	4X,4W
181078028	1978	0	0	46	4S,4R
181078034	1979	0	0	38	4S,4T,4R,4V
181079001	1979	0	0	133	3M,3L,3K
181079016	1979	0	0	87	3M
181079026	1979	0	0	31	4S,4T
181079027	1979	0	0	120	4X,5Z
181079031	1980	0	0	12	4T,4S,4R
181080018	1980	0	0	61	4X
181080037	1980	0	0	20	2J
181080039	1981	0	0	75	4X
181081004	1981	0	0	28	4X
181081010	1981	0	0	76	4X
181081011	1981	0	0	41	4S,4R
181081014	1981	0	0	8	4X
181081035	1981	0	0	14	2J
181081040	1981	0	0	24	4X,4W
181081042	1982	0	0	72	4X,4W
181082002	1982	0	0	32	3L,3M,XX,3K
181082027	1982	0	0	129	XX,2J,2H,2G,0B
181082043	1983	0	0	29	4W,4X
181083001	1983	0	0	29	4X,5Z
181083018	1983	0	0	46	3K,4R
181083024	1983	0	0	30	4W,4X
181083030	1983	0	0	76	2H,2J,2G,0B,3K
181083032	1983	0	0	9	4W
181083034	1983	0	0	15	4X
181083036	1983	0	0	56	3K,2J,XX,3M

181083038	1984	0	0	35	4S,4V,4R,4T
181084007	1984	0	0	30	4W,4V
181084012	1984	0	0	50	4W,6F,4V,6E
181084025	1984	0	0	138	4X
181084026	1984	0	0	36	2J,2H
181084031	1984	0	0	35	1A
181084034	1984	0	0	30	4V,4W
181084036	1984	0	0	29	4W,4V,6F
181084038	1984	0	0	26	2J
181084039	1984	0	0	17	0A
181084043	1984	0	0	57	4X
181084048	1985	0	0	66	4S,4R,4V,4T
181085004	1985	0	0	79	4W,4V,6F
181085008	1985	0	0	25	3N,3L
181085017	1985	0	0	120	4X,4V,4W
181085018	1985	0	0	37	2J,2H
181085024	1985	0	0	42	3L,3M
181085029	1985	0	0	65	0A,2H,XX,1A,1B
181085039	1985	0	0	35	4T,4S,4R,4V
181085040	1986	0	0	89	4W,4V
181086001	1986	0	0	60	4W,4V
181086005	1986	0	0	28	3N,3L,3O
181086006	1986	0	0	91	3N,3M,6H,4V
181086008	1986	0	0	16	4X
181086022	1986	0	0	23	4W,4X
181086036	1986	0	0	11	4W,4X
181086037	1987	0	0	26	4S,4V,4T,4R
181087002	1987	0	0	228	3L,3O
181087005	1987	0	0	98	5Z,4X,4W
181087026	1987	0	0	46	2H,2J,3K
181087031	1987	0	0	192	1A,0A,0B,1C,1B
181087038	1987	0	0	39	4X
181087041	1987	0	0	115	3N,3O
181087045	1988	0	0	53	4T,4V,4R,4S,4W,3P
181088017	1988	0	0	33	5Z
181088023	1988	0	0	193	5Z,4X
181088025	1988	0	0	57	3K,3M,3L,XX,2J,2H
181088037	1988	0	0	115	0A,1B,0B,1C
181088042	1989	0	0	35	4S,4R,4T,4V
181088043	1988	0	0	1	3K
181088918	1990	0	0	7	2H
181089041	1989	0	0	120	3K,3L,3N,3M
181089918	1991	0	0	5	2H,2J
181090001	1990	9	0	0	3L,3K,3M
181090008	1990	0	0	14	3L
181090012	1990	0	0	31	1F,2J,2H
181090014	1990	0	0	69	4W
181090022	1991	0	0	117	1C,0A,0B,1B,1A
181091001	1991	11	0	0	3L,3K,3M
181091002	1991	10	0	0	1F,3L,3K,2J
181091003	1992	3	0	0	3K
181092001	1992	5	0	0	3K
181092002	1992	9	0	0	3L,2J,1F,3K
181092003	1991	11	0	0	2J,1F,3K
181491001	1991	0	0	31	4W
181491002	1991	0	0	32	4W
181491003	1991	0	0	36	4W
181491004	1991	0	0	41	4W
181491005	1991	0	0	33	4W

181491006	1991	0	0	28	4W
181491007	1992	0	0	11	4W
181492001	1992	0	0	21	4W
181492002	1992	0	0	42	4W
181492003	1992	0	0	44	4W
181492004	1992	0	0	30	4W
181492005	1992	0	0	45	4W
181492006	1992	0	0	45	4W
181492007	1992	0	0	41	4W
181492008	1992	0	0	39	4W
181492009	1992	0	0	39	4W
181492010	1992	0	0	41	4W
181492011	1992	0	0	35	4W
181492012	1986	0	0	43	4W
181886039	1986	2	0	0	4X
181886040	1986	29	0	0	4X,4W,5Y
181886041	1986	21	0	0	4V,4W,3O,3L,3K,4X
181886042	1986	16	0	0	4W,4X
181886043	1986	28	0	0	1A,0A,1E,1D,1F,0B,2G,1C
181886044	1987	7	0	0	4X,4W
181887001	1987	10	0	0	6E,4W,6D
181887002	1987	7	0	0	6C,4X,6E
181887003	1987	10	0	0	4W,4X
181887004	1987	6	0	0	6E,4X,4W
181887005	1987	15	0	0	4X,6E,6D
181887006	1987	13	0	0	4X,4W
181887007	1987	22	0	0	4X,6D,6E
181887008	1987	8	0	0	4X,4W
181887009	1987	3	0	0	4W,4X
181887010	1987	3	0	0	4W,4X
181887011	1987	13	0	0	6E,4X
181887012	1987	34	0	0	6B,6C,5Z,3K,3L,4V
181887013	1987	10	0	0	4X,6E
181887014	1987	17	0	0	4X,5Z,6E,6C,6B
181887015	1987	10	0	0	4X,4W
181887016	1987	20	0	0	6E,4X
181887017	1987	22	0	0	5Z,4X,6C,6B,6E
181887018	1987	15	0	0	4X,4W
181887019	1987	9	0	0	4X,4W
181887020	1987	5	0	0	4V,4T,4W
181887021	1987	27	0	0	3O,4V,3P,3N,4W,3L
181887022	1987	9	0	0	4X,6E
181887024	1987	13	0	0	3P,4W,3L,4V
181887025	1987	32	0	0	4W,4X
181887026	1987	8	0	0	3N,3O
181887027	1987	13	0	0	3L,4X,4V,3P,4W,3O
181887028	1987	37	0	0	4V,3O,4W,3N,4X,3L
181887029	1987	3	0	0	4X,4W
181887030	1987	1	0	0	4X
181887031	1987	2	0	0	4X
181887032	1987	16	0	0	4W,4X
181887033	1987	15	0	0	4X
181887034	1987	4	0	0	4X,4W
181887035	1987	2	0	0	4X,4W
181887036	1987	23	0	0	4W,4X,5Z
181887037	1987	15	0	0	4W,4X
181887038	1987	2	0	0	4X
181887039	1987	1	0	0	4X
181887040	1987	12	0	0	4W,4X

181887041	1987	14	0	0	4X,4W
181887042	1987	37	0	0	4X,4W,5Z
181887043	1987	44	0	0	3P,3L,4X,3O,4V,4W,XX,3M,4T,3K
181887044	1987	44	0	0	4W,4X
181887045	1987	6	0	0	4X,4W
181887046	1987	17	0	0	4X,4W
181887047	1987	37	0	0	4W,4X,4V,3P,XX,3L,3O,3M,3K
181887048	1987	13	0	0	4W,4X
181887049	1987	3	0	0	4W
181887050	1987	22	0	0	4X,4W,5Y
181887051	1987	11	0	0	4W,4X
181887053	1987	5	0	0	4W
181887055	1987	28	0	0	4W,4X
181887056	1987	31	0	0	4X,4W
181887057	1987	29	0	0	4X,4W,5Z,5Y
181887058	1987	25	0	0	3M,3L,4W,4V,3K,4X
181887063	1987	52	0	0	4X,4W,5Y,5Z
181887064	1987	15	0	0	3L,4W,4V,3P,3K
181887065	1987	38	0	0	6E,4X,4W,6D
181887066	1988	6	0	0	6B,5Z
181888011	1988	16	0	0	6C,4X
181888012	1988	1	0	0	4V
181888013	1988	15	0	0	6E,4W,4X,4V,3L,3P
181888014	1988	22	0	0	4X,6C,5Z,6E,4W
181888015	1988	24	0	0	4W,4X,6E
181888016	1988	3	0	0	4X
181888017	1988	18	0	0	4X,6E
181888018	1988	2	0	0	4X
181888019	1988	15	0	0	4X,4W
181888020	1988	9	0	0	4W,6E
181888021	1988	38	0	0	4V,6E,6F,4W
181888022	1988	10	0	0	4X
181888023	1988	4	0	0	4X
181888024	1988	3	0	0	4X
181888025	1988	12	0	0	4W,4X
181888026	1988	3	0	0	6B,5Z,6C
181888027	1988	4	0	0	4W,4X
181888028	1988	10	0	0	6E,4X
181888029	1988	18	0	0	3N,4X,4V,3M,3O,4W
181888030	1988	12	0	0	3M,4W,4V,3O
181888031	1988	14	0	0	4V,3O,4W,3P,XX,3M,3N
181888032	1988	13	0	0	6E,4X,4W
181888033	1988	17	0	0	3N,3M,4X,4W,3P,4V,3O
181888034	1988	20	0	0	3M,4W,4V,3N,3P,4X,3L
181888035	1988	24	0	0	3N,4W,4V,3L,3O,4X,3M,XX
181888036	1988	4	0	0	4X,4W
181888038	1988	16	0	0	4X
181888039	1988	9	0	0	4X,4W
181888040	1988	11	0	0	4W,4X
181888041	1988	6	0	0	4W,4X
181888042	1988	11	0	0	4X,4W
181888043	1988	12	0	0	3N,4V,3L,4W,3O
181888044	1988	14	0	0	4W,4X,5Y
181888045	1988	1	0	0	4W
181888046	1988	18	0	0	4X,5Y,5Z
181888047	1989	14	0	0	3L,3P,3K,4V,4W
181889006	1989	6	0	0	4X
181889008	1989	14	0	0	4X,4V,3N,6G,6E
181889009	1989	17	0	0	4V,3N,5Z,6G,4X,6D,3M

181889010	1989	8	0	0	6D,4X
181889011	1989	13	0	0	4V,3O,3P,XX,4W,3M,3N
181889012	1989	26	0	0	3K,2H,3L,2J,4V,4W,3O,3P
181889013	1989	2	0	0	6E,4X
181889014	1989	10	0	0	6D,4X,4W,5Z
181889015	1989	15	0	0	4X,4W
181889016	1989	16	0	0	3N,3M,3O,4V,4W,3L
181889017	1989	30	0	0	6B,5Z,6E,6C,4X
181889018	1989	7	0	0	4W
181889019	1989	6	0	0	4W,3N,3L,3O
181889020	1989	3	0	0	3N,3O
181889021	1989	6	0	0	4X,6E
181889022	1989	18	0	0	4X,4V,3L,4W,XX,3M,3N
181889023	1989	15	0	0	3P,3L,4W,3M,4V,3K
181889024	1989	42	0	0	6E,4X,6C,5Z,6B
181889025	1989	15	0	0	4W,3L,3P,3K,XX,3M,4V
181889026	1989	30	0	0	4X,4W
181889027	1989	4	0	0	4X,4W
181889028	1989	59	0	0	2H,2J,4X,3P,4W,3L,3K,4V
181889029	1989	11	0	0	6D,4X
181889032	1989	1	0	0	3M
181889033	1989	15	0	0	4X
181889034	1989	4	0	0	4X
181889035	1989	10	0	0	3K,3L,3O,4V,4X,4W
181889036	1989	16	0	0	4X,4W
181889037	1989	19	0	0	4X,4W
181889038	1989	8	0	0	4W,4X
181889039	1989	1	0	0	4W
181889040	1989	6	0	0	3L,4W,3P,4V
181889041	1990	14	0	0	6G,6F,3N,4W,4V
181890001	1990	8	0	0	4X,4W
181890002	1990	14	0	0	4X
181890003	1990	5	0	0	4W,4X
181890004	1990	3	0	0	4W
181890005	1990	36	0	0	6E,4X,4W
181890006	1990	4	0	0	4V,3M
181890007	1990	12	0	0	4X,4W
181890008	1990	14	0	0	4W
181890009	1990	14	0	0	5Z,6D,4X,6C
181890010	1990	17	0	0	4X,4W
181890011	1990	10	0	0	4W,4X
181890012	1990	12	0	0	4X
181890013	1990	16	0	0	4X
181890014	1990	14	0	0	4W,4X
181890015	1990	4	0	0	4X,4W
181890016	1990	3	0	0	4W
181890017	1990	2	0	0	4W,4X
181890018	1990	3	0	0	4W
181890019	1990	3	0	0	4X
181890020	1990	4	0	0	4X,4W
181890021	1990	2	0	0	4X
181890022	1990	11	0	0	3O,3N,3P
181890023	1990	27	0	0	6B,4X,6C,6D,5Z
181890024	1990	10	0	0	3M,XX,3O,3N,4V
181890025	1990	15	0	0	6H,3L,3P,3M,4V,4W
181890026	1990	11	0	0	6D,5Z,4X
181890028	1990	2	0	0	6C
181890029	1990	12	0	0	4X,4W
181890030	1990	15	0	0	4W,6E,3O,4X,XX,4V

181890031	1990	26	0	0	6C,4X,6D,5Z,6B
181890033	1990	7	0	0	6E,4W
181890034	1990	18	0	0	6C,6B,6D
181890035	1990	3	0	0	4X,5Z
181890036	1990	14	0	0	4X,4W
181890037	1990	8	0	0	6E,4X
181890038	1990	12	0	0	4X,4W
181890039	1990	6	0	0	4X,4W
181890040	1990	6	0	0	4X,4W
181890041	1990	12	0	0	3O,3N,4V
181890042	1990	6	0	0	4X,6E
181890043	1990	2	0	0	4X
181890044	1990	1	0	0	4X
181890045	1990	11	0	0	4W,4X
181890046	1990	5	0	0	5Z,6C,6D
181890048	1990	8	0	0	4X,6D,6C,5Z
181890049	1990	13	0	0	6E,4X
181890050	1991	25	0	0	4X,4W
181891001	1991	49	0	0	4W,4X
181891002	1991	14	0	0	3N,3O,4W,3P,3L,4V,3M
181891003	1991	11	0	0	6H,3L,XX,5Z,3P,3O,6D
181891004	1991	9	0	0	4X,6E
181891006	1991	5	0	0	4X,4W
181891007	1991	6	0	0	4X,4W
181891008	1991	32	0	0	3O,3L,3M,3N,4V,4X,4W
181891009	1991	10	0	0	4X,6E
181891010	1991	12	0	0	4X,4T,4W
181891011	1991	5	0	0	4X,4W
181891012	1991	15	0	0	4W,3N,3O,4V,3L
181891013	1991	34	0	0	3P,3O,3L,4W,5Z,4X,4V
181891014	1991	46	0	0	4W,4X,5Z
181891015	1991	3	0	0	4X,4W
181891016	1991	5	0	0	4W,4X
181891017	1991	1	0	0	4X
181891018	1991	6	0	0	4X,4W
181891019	1991	2	0	0	4X,6E
181891020	1987	10	0	0	6D,4X
181987018	1987	14	0	0	4X,4W
181987019	1987	11	0	0	4X
181987020	1987	19	0	0	4W,4X
181987033	1987	66	0	0	4X,4W,5Z
181987034	1987	29	0	0	3L,3N,4W,3O,4V,3P
181987035	1987	7	0	0	4X,4W
181987036	1987	4	0	0	4W
181987037	1988	2	0	0	4W
181988001	1990	46	0	0	3L,3N,3O,4W,4V,3M
181990012	1990	2	0	0	4V,3N
181990024	1990	8	0	0	XX,6C,4X,6B
181990025	1990	7	0	0	4W,4X
316G82001	1987	0	0	29	5Z
316G87001	1987	0	0	113	5Z,6B,6A,6C
316G87002	1987	0	0	178	6A,5Z,6C,6B,4X,5Y
316G87003	1988	0	0	118	6A,6B,6C,5Z
316G88001	1989	0	0	62	6A,6B,6C
316G89001	1989	0	0	125	6A,6B,6C
316G89002	1989	0	0	117	5Z,5Y
316G89003	1972	0	0	123	5Z,5Y
316N72001	1973	0	0	12	6H,3K,1F,3M
316N73002	1976	0	0	1	6D

316N76007	1976	0	0	7	5Z,6F
316N76008	1976	0	0	24	6D,6E
316N76009	1977	0	0	12	6G,4V,3O,6F
316N77001	1982	0	0	14	6G,4V,6F,6D
316N82001	1982	0	0	31	6B,5Z,6D,6A
316N82002	1983	0	0	43	6B,6C,5Z
316N83001	1976	0	0	13	1F
316O76001	1989	0	0	13	6B,6C
316O89001	1977	0	0	136	6A
317577001	1981	0	0	14	6C,6D,6B
318280001	1981	0	0	86	6A
318L81001	1982	0	0	288	6B
318L82002	1982	0	0	38	6B
318L82003	1982	0	0	38	6B
318L82004	1982	0	0	31	6B
318L82005	1982	0	0	1	6B
318L82006	1983	0	0	28	6B
318L83007	1983	0	0	9	6B
318L83008	1983	0	0	23	6B
318L83009	1983	0	0	106	6B
318L83010	1983	0	0	6	6B
318L83011	1983	0	0	26	6B
318L83012	1983	0	0	3	6B
318L83013	1984	0	0	6	6B
318L84014	1984	0	0	36	6B,6A
318L84015	1984	0	0	9	6B,6A
318L84016	1984	0	0	3	6B
318L84017	1984	0	0	7	6B
318L84018	1984	0	0	7	6A,6B
318L84019	1984	0	0	34	6B
318L84020	1984	0	0	4	6B,6A
318L84021	1984	0	0	11	6A,6B
318L84022	1984	0	0	13	6A,6B
318L84023	1985	0	0	1	6B
318L85001	1985	0	0	36	6B
318L85002	1985	0	0	43	6B
318L85003	1985	0	0	39	6B
318L85004	1981	0	0	58	6B,6A
31A481001	1982	0	0	67	4X,4W,5Z
31A482001	1982	0	0	63	5Z,6B,6D
31A482002	1982	0	0	92	6C,6B,5Z
31A482003	1986	0	0	52	5Z,4X
31A486001	1987	0	0	31	5Z
31A487001	1987	0	0	20	6A
31A487002	1987	0	0	153	6A
31A487003	1988	0	0	71	6A
31A488001	1988	0	0	25	6A
31A488002	1982	0	0	22	6A
31AA82001	1982	0	0	76	5Z
31AA82002	1983	0	0	39	5Z
31AA83003	1983	0	0	47	5Z
31AA83004	1981	0	0	48	5Z
31AN81002	1982	0	0	25	5Z,4X
31BL82002	1982	0	0	81	6C,6B
31BL82003	1982	0	0	39	6C,6B
31BL82004	1982	0	0	30	6B
31DS82028	1986	0	0	46	6B,6C
31EV86001	1987	0	0	95	3N,3M
31EV87001	1989	0	0	90	3N

31M789001	1989	0	0	7	6C
31M789002	1981	0	0	1	6C
31OC81001	1989	0	0	29	5Z
31WH89001	1990	0	0	4	6B,6C
31WH90001	1990	0	0	7	6C,6B
31WH90002	1990	0	0	3	6C,6B
31WH90003	1990	0	0	3	6C
31WH90004	1990	0	0	2	6C
31WH90005	1990	0	0	1	6C
31WH90006	1982	0	0	2	6B,6C
32BL82001	1984	0	0	42	6B,6C
32CW84001	1984	0	0	7	6C
32CW84002	1984	0	0	26	6C,6B
32CW84003	1984	0	0	23	6B,6C
32CW84004	1985	0	0	23	6B,6C
32CW85001	1985	0	0	24	6B,6C
32CW85002	1985	0	0	32	6B,6C
32CW85003	1985	0	0	36	6C,6B
32CW85004	1981	0	0	12	6B,6C
32EV81001	1982	0	0	95	4X,6D,4W,5Z,6E
32EV82001	1982	0	0	53	6C,6A,6D,6B,5Z
32EV82002	1982	0	0	56	6B,6C
32EV82003	1982	0	0	37	4X,4W,6E,6D,5Z
32EV82004	1985	0	0	69	6C,6B,5Z
32EV85001	1986	0	0	35	4X,4W,6E
32EV86002	1991	0	0	1	6C
32EV91001	1977	74	47	47	3M,4V,3N,3K,3L,3O,1F,3P,2J
32G877001	1977	0	0	66	5Z,4X
32G877002	1978	0	0	48	5Z,4X
32G878003	1978	0	0	62	5Z,4X
32G878004	1978	0	0	72	5Z,4X
32G878005	1979	0	0	42	5Z,4X
32G879006	1979	0	0	58	4X,5Z
32G879007	1979	0	0	118	5Z,4X
32G879008	1981	0	0	121	5Z,4X
32GY81001	1982	0	0	20	5Y
32GY82001	1983	0	0	120	4X,5Y,5Z
32GY83001	1984	0	0	143	4X,5Y,5Z
32GY84001	1985	0	0	100	5Y,4X,5Z
32GY85002	1986	0	0	57	5Y,4X,5Z
32GY86001	1978	0	0	93	5Y,5Z,4X
32IV78001	1978	0	0	104	5Z
32IV78002	1978	0	0	88	5Z
32IV78003	1979	0	0	93	5Z
32IV79004	1979	0	0	10	5Z
32IV79005	1979	0	0	24	5Z
32IV79006	1976	0	0	29	5Z
32JW76001	1977	0	0	42	6B,6C
32JW77002	1977	0	0	27	6C
32JW77003	1978	0	0	21	6C
32JW78004	1984	0	0	34	6C
32KZ84001	1984	0	0	12	5Y
32KZ84002	1985	0	0	23	6B,6C
32KZ85001	1985	0	0	37	5Y
32KZ85002	1985	0	0	12	4W,5Y,5Z,6D,4X
32KZ85003	1985	0	0	20	5Y,5Z,6D
32KZ85004	1985	0	0	20	5Y,5Z
32KZ85005	1985	0	0	16	6C,6B
32KZ85006	1986	0	0	23	6B,6C

32KZ86001	1986	0	0	1	6C
32KZ86002	1986	0	0	2	6C
32KZ86003	1986	0	0	16	4W,6E,5Y,4X,5Z
32KZ86004	1987	0	0	14	6C
32KZ87001	1987	0	0	36	6B,6C
32KZ87002	1987	0	0	15	6C,6D,6B
32KZ87003	1976	0	0	5	6C
32OC76001	1977	0	0	109	5Z,4X
32OC77002	1978	0	0	135	5Z,6A,6B
32OC77003	1981	0	0	8	6D,5Z
32OC81004	1982	0	0	34	5Z
32OC82001	1982	0	0	41	5Z
32OC82002	1982	0	0	33	5Z
32OC82005	1983	0	0	66	5Z
32OC83006	1983	0	0	30	3O,4V,6G
32OC83007	1983	0	0	32	5Z
32OC83008	1984	0	0	76	6E,4W,4V,6F,6D,5Z,6G,6C,3O,3P,4X
32OC84008	1984	0	0	18	5Z
32OC84009	1983	0	0	41	5Z
909988001	1989	0	33	0	3M,3N
909989001	1989	0	123	0	3M,3N,6H,3O
909989002	1989	0	141	0	3M,3N,6H
909989003	1989	0	33	0	3N,6H,3M
909989004	1990	0	48	0	3N,3O,4V,6H,6G,XX
909990001	1991	0	98	0	3M,3N,6H,3K
909991001	1991	0	9	0	XX,3M
909991002	1991	0	10	0	3M,XX
909991003	1991	0	10	0	3M,3N
909991004	1991	0	10	0	3M,3N
909991005	1991	0	5	0	3N
909991006	1991	0	6	0	3N
909991007	1991	0	36	0	3N,3M,6H
909991008	1984	0	10	0	3M
90BG84001	1983	0	61	0	3N,3M,6H
90BV83001	1984	0	45	0	3N,3M,6H
90BV84002	1985	0	66	0	3M,3N,6H
90BV85001	1985	0	35	0	3N,3M,6H
90BV85002	1985	0	54	0	3M,3N,6H
90BV85003	1988	0	97	0	3M,3N,6H
90BV88001	1988	0	33	0	3M
90BV88002	1990	0	5	0	3N,3M
90CJ90001	1982	0	95	0	3N,3K,3O,2J,3L
90KE82001	1982	0	28	0	3M
90KE82002	1983	0	38	0	3M
90KE83001	1984	0	9	0	3M
90KE84001	1984	0	31	0	3M
90KE84002	1986	0	97	0	3M,3N,6H
90KE86001	1987	0	97	0	6H,3M,3N
90KE87001	1988	0	87	0	6H,3N,3M
90KE88001	1988	0	113	0	3M,3N,6H,3O
90KE88002	1989	0	106	0	3N,3M
90KS89017	1990	0	159	0	1D,3L,3O,0B,3K,2J,2H,2G,3N,1C
90KS90023	1992	0	117	0	3K,2H,1C,0B,1D,1B,2J,2G
90KS92027	1981	0	26	0	3M,3L
90MU81001	1982	0	33	0	3M
90MU82001	1983	0	37	0	3M
90MU83001	1984	0	81	0	3M,3N,6H
90MU84001	1985	0	97	0	3M,3N,6H
90MU85001	1986	0	43	0	3M,3N,6H

90MU86001	1986	0	97	0	3M,3N,6H
90MU86002	1987	0	97	0	3M,3N,6H
90MU87001	1987	0	97	0	3M,6H,3N
90MU87002	1987	0	97	0	3M,6H,3N
90MU87003	1988	0	97	0	3N,3M,6H,3L
90MU88001	1988	0	73	0	3N,3M,6H
90MU88002	1989	0	67	0	3M,6H,3N
90MU89001	1989	0	87	0	3N,3M,6H
90P389043	1988	0	440	0	3O,3L,3N,3K,3M
90P588001	1981	0	50	0	3M,3L,3N
90PT81001	1982	0	38	0	3M
90PT82001	1982	0	45	0	3N,3M,6H
90PT82002	1984	0	82	0	3M,6H,3N
90PT84001	1984	0	97	0	3N,3M,6H
90PT84002	1984	0	74	0	3N,3M,6H
90PT84003	1986	0	97	0	3N,3M,6H
90PT86001	1986	0	97	0	3M,3N,6H
90PT86002	1981	0	15	0	3M,3N
90UG81002	1982	0	18	0	3M
90UG82001	1983	0	37	0	3M
90UG83001	1983	0	81	0	3M,3N,6H
90UG83002	1983	0	97	0	3M,3N,6H
90UG83003	1983	0	97	0	6H,3N,3M
90UG83004	1984	0	52	0	3M,3N
90UG84001	1984	0	37	0	3M
90UG84002	1985	0	97	0	3M,3N,6H
90UG85001	1985	0	42	0	3M,3N,6H
90UG85002	1986	0	97	0	3M,3N,6H
90UG86001	1986	0	97	0	3M,6H,3N
90UG86002	1986	0	88	0	3M,3N,6H
90UG86003	1985	0	97	0	3M,6H,3N
90VB85001	1986	0	15	0	3M
90VB86001	1987	0	97	0	3M,3N,6H
90VB87001	1987	0	44	0	3M,3N
90VB87002	1988	0	53	0	3M,6H
90VB88001	1988	0	75	0	6H,3O,6G,4V,3N
90VB88002	1989	0	63	0	3M,6H,3N
90VB89001	1990	0	6	0	3M
90VB90001	1988	0	149	0	3M,3O,3N,6H