WORLDWIDE MARINE RADIOFACSIMILE BROADCAST SCHEDULES

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC and ATMOSPHERIC ADMINISTRATION

NATIONAL WEATHER SERVICE

August 16, 2004
INTRODUCTION

A printed copy of this publication is distributed free of charge to all ships that participate in the U.S. Voluntary Observing Ship (VOS) program. If your ship is not participating in this worthwhile international program, we urge you to join. Remember, the meteorological agencies that do the weather forecasting cannot help you without input from you. ONLY YOU KNOW THE WEATHER AT YOUR POSITION!!

Please report the weather at 0000, 0600, 1200, and 1800 UTC as explained in the National Weather Service Observing Handbook No. 1 for Marine Surface Weather Observations.

Within 300 nm of a named hurricane, typhoon or tropical storm, or within 200 nm of U.S. or Canadian waters, also report the weather at 0300, 0900, 1500, and 2100 UTC. Your participation is greatly appreciated by all mariners.

For assistance, contact a Port Meteorological Officer (PMO), who will come aboard your vessel and provide all the information you need to observe, code and transmit weather observations.

Appendix C contains information on a PC software program known as AMVER/SEAS which greatly assists in coding and transmitting meteorological observations and AMVER position reports.

This publication is made available via Internet at:

http://www.nws.noaa.gov/om/marine/home.htm

This webpage contains information on the dissemination of U.S. National Weather Service marine products including radiofax, such as frequency and scheduling information as well as links to products. A listing of other recommended webpages may be found in the Appendix.
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The schedules contained in this book were obtained from official and unofficial sources. The information herein may neither be complete or accurate. Wherever possible, the schedules are dated with the latest change available. In several cases, unofficial reception reports have been received identifying the station as no longer being operational. The National Weather Service would like to thank everyone who provided assistance.

For ease of use, all stations are listed by WMO region, in alphabetical order, by country and location. All times listed herein are Universal Coordinated Time (UTC), unless otherwise indicated.

Unless otherwise stated, assigned frequencies are shown, for carrier frequency subtract 1.9 kHz. Typically dedicated radiofax receivers use assigned frequencies, while receivers or transceivers, connected to external recorders or PCs, are operated in the upper sideband (USB) mode using carrier frequencies.

For information on weather broadcasts worldwide, also refer to NGA Publication 117, the Canadian Coast Guard Radio Aids to Navigation (Canada Only) and the British Admiralty List of Signals, which are updated through Notices to Mariners. Information on these and other marine weather publications may be found in Appendix D. These publications are HIGHLY recommended.

We receive many inquires on the status of the U.S. Navy radiofax broadcasts. The U.S. Navy terminated all regularly scheduled radiofax transmissions with the exception of the Mediterranean beginning January 1, 1998 and services to the Mediterranean from Rota, Spain beginning March 1, 1999. The system is operated in a back-up mode for on-demand service by fleet units upon request. These transmissions are to meet the requirements of the U.S. military and have no direct connection to the National Weather Service’s radiofax program. For questions on the U.S. Navy’s radiofax program, contact the NAVLANTMETOCCECN Command Duty Officer at 1-757-444-4044, e-mail cdo@nlmoc.navy.mil

This document also includes information on how to obtain National Weather Service text and graphic marine forecasts via the World Wide Web and e-mail (FTPMAIL). Mariners are highly encouraged to explore these options. In this issue, we have added instructions on how buoy and C-MAN observations may be downloaded.

The accuracy of this publication depends on YOUR input.

Please direct comments, recommendations, and corrections for this publication to:

Tim Rulon
National Weather Service W/OS21
1325 East-West Highway
Silver Spring, MD 20910 USA
1-301-713-1677 x128
1-301-713-1520 (fax)
timothy.rulon@noaa.gov
marine.weather@noaa.gov
http://www.nws.noaa.gov/om/marine/home.htm
AFRICA
NAIROBI, KENYA

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<td>FL390 UPPER AIR ANALYSIS</td>
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NOTE: CHANGES TO THE SCHEDULE WILL BE TRANSMITTED AT 0830 IN PLACE OF THE NORMAL TEST CHART.

(IINFORMATION DATED June 18, 2003)
Update 03/2002 - Reported as having a RPM/IOC of 180/576 vs. 120/576

CAPE NAVAL, SOUTH AFRICA

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<tr>
<th>CALL SIGNS</th>
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<th>EMISSION</th>
<th>POWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZSJ</td>
<td>4014 kHz</td>
<td>16Z-06Z (when available)</td>
<td>F3C</td>
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<td>ZSJ</td>
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<td>ZSJ</td>
<td>18238 kHz</td>
<td>06Z-16Z (when available)</td>
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<thead>
<tr>
<th>TIME</th>
<th>CONTENTS OF TRANSMISSION</th>
<th>RPM/IOC</th>
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<th>MAP AREA</th>
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<tr>
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<td>SURFACE ANALYSIS(.Shipping)</td>
<td>120/576</td>
<td>1200</td>
<td>FUXX</td>
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<tr>
<td>0630</td>
<td>UPPER AIR PROG</td>
<td>120/576</td>
<td>1200</td>
<td>FSXX</td>
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<tr>
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<td>120/576</td>
<td>1200</td>
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<tr>
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<td>RTTY WEATHER BULLETINS FOR COASTAL WATERS AND HIGHSEAS RTTY (170 Hz shift, 75 baud)</td>
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<td>1800</td>
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<tr>
<td>1030</td>
<td>SURFACE ANALYSIS(Shipping)</td>
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<td>1200</td>
<td>SURFACE PROG</td>
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<tr>
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<td>SURFACE ANALYSIS(Shipping)</td>
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<td>1700</td>
<td>RTTY WEATHER BULLETINS FOR COASTAL WATERS AND HIGHSEAS RTTY (170 Hz shift, 75 baud)</td>
<td>120/576</td>
<td>1800</td>
<td>ASXX</td>
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<td>2230</td>
<td>SURFACE ANALYSIS(Shipping)</td>
<td>120/576</td>
<td>1800</td>
<td>ASXX</td>
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</table>

MAP AREAS:
ASXX: 1:20,000 Lambert 00S20W 00S70E 60S50W 60S90E
FUXX: 1:20,000 Mercator 05S15W 05S60E 60S15W 60S60E
FSXX: 1:20,000 Mercator 05S15W 05S60E 60S15W 60S60E
AIAA 30E to 30W Antarctic coast to edge of ice pack except NIC West

(IINFORMATION DATED June 18, 2003)  http://www.weathersa.co.za/forecasts/shippingschedule.html
DAKAR, SENEGAL

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<th>CALL SIGNS</th>
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<table>
<thead>
<tr>
<th>TIME</th>
<th>CONTENTS OF TRANSMISSION</th>
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<th>MAP AREA</th>
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<td>------/1240</td>
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<td>0100/1300</td>
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<td>0340/------</td>
<td>TEST CHART</td>
<td>120/576</td>
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<tr>
<td>0400/1600</td>
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<td>700MB ANALYSIS</td>
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<td>300MB ANALYSIS</td>
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<tr>
<td>0545/1745</td>
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<td>500MB ANALYSIS</td>
<td>120/576</td>
<td>00/12</td>
<td>A/B</td>
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<td>18HR SIGNIFICANT WEATHER PROG</td>
<td>60/576</td>
<td>18/06</td>
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NOTE: THE TRANSMISSION IS CENTERED 1.900 Hz ABOVE THE ASSIGNED FREQUENCY.

MAP AREAS:

- A - 35N 035W, 35N 022.5E, EQ 035W, EQ 022.5E
- B - 1:15,000,000 55N 030W, 55N 040.0E, 05S 030W, 05S 040.0E
- C - 1:25,000,000 40N 050W, 40N 033.0E, 20S 050W, 20S 033.0E

(INFORMATION DATED 09/1996)
Update 03/2000 - Operations of this station may have terminated in 1998
ASIA
BEIJING (PEKING), CHINA

CALL SIGNS   FREQUENCIES TIMES   EMISSION    POWER
BAF6         5526.9 kHz    F3C      6-8 KW
BAF36        8121.9 kHz    F3C      6-8 KW
BAF4         10116.9 kHz   F3C      10 KW
BAF8         14366.9 kHz   F3C      15 KW
BAF9         16025.9 kHz   F3C      ?? KW
BAF33        18236.9 kHz   F3C      6-8 KW

TIME CONTENTS OF TRANSMISSION RPM/IOC VALID MAP
0008 24HR/36HR/48HR PRECIPITATION PROG (1 JUN-30 SEP) 120/576 1200 E
0132 36HR/48HR SURFACE PROG 120/576 1200 A1
0154 TYPHOON WARNING (IN ENGLISH & CHINESE)(1) 120/576 0000 E
0216 36HR MINIMUM TEMP PROG(1 OCT-30 APR) 120/576 E
0238 48HR MAXIMUM TEMP PROG(1 MAY-30 SEP) 120/576 E
0300 SATELLITE PICTURE ANALYSIS (1 MAY-30 SEP) 120/576
0406 48HR SURFACE PROG 120/576 1800 F
0450 SURFACE ANAL 120/576 0000 H
0724 SATELLITE PICTURE ANALYSIS (1 MAY-30 SEP) 120/576
0746 TYPHOON WARNING (IN ENGLISH & CHINESE)(1) 120/576 0600 E
0830 SURFACE PRESSURE ANALYSIS 120/576 0000 C
0852 24HR PRECIPITATION PROG 120/576 J
1126 TYPHOON TRACK PROG (2) 120/576 0000 D
1148 TEST CHART (4) 120/576
1158 PROGRAM AMENDMENTS (4) 120/576
1340 TYPHOON WARNING (IN ENGLISH AND CHINESE)(1) 120/576 1200 E
1904 500MB PLOTTED DATA 120/576
1926 SURFACE PRESSURE ANALYSIS 120/576 1200 G
1948 TYPHOON WARNING (IN ENGLISH AND CHINESE)(1) 120/576 1800 E
2134 500MB PLOTTED DATA 120/576
2158 36HR/48HR SURFACE ANALYSIS 120/576 1200 I
2240 TYPHOON TRACK PROG (2) 120/576 1200 D

NOTES: (1) IN CASE OF TYPHOON
(4) ON MONDAYS

MAP AREAS: A1 - 1:30,000,000 NORTHERN HEMISPHERE
C - 1:23,000,000 70S 040E, 70S 130W, 40N 040E, 40N 130W
D - 1:10,000,000 50N 105E, 50N 160E, 45N 105E, 45N 160E
E - 1:20,000,000 10N 085E, 10N 135E, 15N 085E, 15N 135E
F - 1:20,000,000 065 033E, 04S 04S, 130 130E, 40N 041E, 20N 085E
G - 1:10,000,000 06N 085E, 03N 142E, 42N 063E, 41N 174E
H - 1:10,000,000 04S 070E, 02S 145E, 42N 023E, 48N 174E
I - 1:10,000,000 15N 075E, 15N 125E, 40N 040E, 45N 150E
J - 1:03,000,000 43N 108E, 43N 120E, 33N 108E, 33N 120E

(INFORMATION DATED 11/1997)

BEIJING (PEKING), CHINA

CALL SIGNS   FREQUENCIES TIMES   EMISSION    POWER
3SD         8461.9 kHz    F3C      10 KW
3SD         12831.9 kHz   F3C      10 KW
3SD         16903.9 kHz   F3C      30 KW

TIME CONTENTS OF TRANSMISSION RPM/IOC VALID MAP
0755/1130 Wave Analysis, 24h forecast 120/576
10 Day SST 10th, 20th and 31st (or last day of the month)
10 day ice forecast on 9th, 19th and 29th (or the last day of the month)

(Date of Information Unknown)
### SHANGHAI, CHINA

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MAP AREAS: A - 60N 90E, 50N 180, 10N 100E, 05N 160E
B - YELLOW SEA, EAST CHINA SEA

(INFORMATION DATED 12/1992)
Update 02/2000 - This schedule reported as being out of date

### NEW DELHI, INDIA

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**NEW DELHI, INDIA**

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MAP AREAS:
- A - 1:20,000,000 45N - 25S, 30E - 125E
- B - 1:20,000,000 EQ - 40N, 30E - 125E
- D - 1:20,000,000 5N - 42.5N, 40E - 120E
- E - 1:20,000,000 EQ - 60N, 25E - 120E
- F - 1:20,000,000 EQ - 25N, 55E - 100E
- H - 1:20,000,000 15S - 67.5N, 000E - 180E

*(INFORMATION DATED 1999/2003) Frequencies listed may be slightly incorrect*

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**TOKYO, JAPAN**

**CALL SIGNS**

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**TIME**

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NOTES:
(1) IN CASE OF TROPICAL CYCLONE
(2) EVERY TUESDAY AND FRIDAY
(3) ON THE 20TH AND 21ST.
(4) EVERY TUESDAY AND FRIDAY (SEASONAL) RETRANSMISSION: AT 0130 ON THE NEXT DAY
(5) EVERY WEDNESDAY AND SATURDAY (SEASONAL), RETRANSMISSION: AT 0130 ON THE NEXT DAY

MAP AREAS:
- **C** - 1:20,000,000 27N 062E, 51N 152W, 05S 106E, 02N 160E
- **C'** - 1:20,000,000 39N 066E, 39N 146W, 01S 113E, 01S 167E
- **C''** - 1:20,000,000 38N 067E, 39N 148W, 01S 112E, 01S 167E
- **L** - 1:10,000,000 SEA OF OKHOTSK, NORTHERN SEA OF JAPAN, BO HAI, AND ADJACENT WATERS OF THE NORTH PACIFIC
- **L'** - 1:05,000,000 49N 140E, 49N 151E, 41N 140E, 40N 149E
- **X** - 1:6,000,000 46N 107E, 43N 160E, 18N 118E, 17N 147E

### PEVEK, CHUKOTKA PENINSULA

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<th>RPM/IOC</th>
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(INFORMATION DATED 11/97)
TAIPEI, REPUBLIC OF CHINA

CALL SIGN  FREQUENCIES  TIMES  EMISSION  POWER
BMF  4616 kHz  5250 kHz  8140 kHz  13900 kHz  18560 kHz  F3C  F3C  F3C  F3C  F3C  10 KW  10 KW  10 KW  10 KW  10 KW

TIME  CONTENTS OF TRANSMISSION  RPM/IOC  VALID  MAP
0040/------ BROADCAST SCHEDULE  120/576  TIME  AREA
0110/1310 TYPHOON WARNINGS (ENGLISH & CHINESE)  120/576 00/12
0130/1330 GMS SATELLITE IMAGE  120/576 00/12
0250/1450 FISHERY WEATHER FORECAST (IN CHINESE)  120/576 00/12
0330/1530 SURFACE ANALYSIS WITH PLOTTED DATA  120/576 00/12
0350/------ 24HR SURFACE PROG  120/576 0000
0410/1610 TYPHOON WARNING (ENGLISH & CHINESE)  120/576 03/15
0430/1630 850HPA ANALYSIS WITH PLOTTED DATA  120/576 00/12
0440/1640 700HPA ANALYSIS WITH PLOTTED DATA  120/576 00/12
0450/1650 500HPA ANALYSIS WITH PLOTTED DATA  120/576 00/12
0500/1700 300HPA ANALYSIS WITH PLOTTED DATA  120/576 00/12
0510/1710 RFS SURFACE PRESSURE ANALY/RFS 500HPA HEIGHT ANALYSIS  120/576 00/12
0520/1720 RFS 12HR SURFACE PROG/RFS 12HR 500HPA PROG  120/576 00/12
0530/1730 RFS 24HR SURFACE PROG/RFS 24HR 500HPA PROG  120/576 00/12
0540/1740 RFS 36HR SURFACE PROG/RFS 24HR 500HPA PROG  120/576 12/00
0550/1750 RFS 48HR SURFACE PROG/RFS 48HR 500HPA PROG  120/576 00/12
0600/1800 RFS 72HR SURFACE PROG/RFS 72HR 500HPA PROG  120/576 00/12
0620/1820 GFS 850HPA EQUATORIAL BELT WIND ANALYSIS  120/576 00/12
0630/1830 GFS 200HPA EQUATORIAL BELT WIND ANALYSIS  120/576 00/12
0640/1840 GFS 24HR 850HPA EQUATORIAL BELT WIND PROG  120/576 00/12
0650/1850 GFS 24HR 200HPA EQUATORIAL BELT WIND PROG  120/576 00/12
0710/1910 TYPHOON WARNINGS (ENGLISH & CHINESE)  120/576 06/18
0730/1930 GMS SATELLITE IMAGE  120/576 06/18
0745/1945 GFS 48HR 850HPA EQUATORIAL BELT WIND PROG  120/576 00/12
0755/1955 GFS 48HR 200HPA EQUATORIAL BELT WIND PROG  120/576 00/12
0805/------ WAVE ANALYSIS  120/576 0000
0820------ 36HR WAVE PROG  120/576 0000
------/2005 GFS 72HR 850HPA EQUATORIAL BELT WIND PROG  120/576 1200
------/2015 GFS 72HR 200HPA EQUATORIAL BELT WIND PROG  120/576 1200
------/2025 GFS 96HR SURFACE PROG  120/576 1200
------/2035 GFS 72HR SURFACE PROG  120/576 1200
0850/2050 FISHERY WEATHER FORECAST (IN CHINESE)  120/576 06/18
0930/2130 SURFACE ANALYSIS WITH PLOTTED DATA  120/576 06/18
1010------ TYPHOON WARNINGS (ENGLISH & CHINESE)  120/576 0900
------/2150 GFS 120HR SURFACE PROG  120/576 1200
------/2200 GFS 120HR 500HPA PROG  120/576 1200
------/2210 TYPHOON WARNINGS (ENGLISH & CHINESE)  120/576 2100

MAP AREA: 48N 060E, 48N 172W, EQ 099E, EQ 154E
(SCHEDULE EFFECTIVE APR 01, 2002)

SEOUL, REPUBLIC OF KOREA

CALL SIGN  FREQUENCIES  TIMES  EMISSION  POWER
HLL2  5385 kHz  CONTINUOUS  F3C  3 KW
HLL2  5857.5 kHz  CONTINUOUS  F3C  3 KW
HLL2  7433.5 kHz  CONTINUOUS  F3C  3 KW
HLL2  9165 kHz  CONTINUOUS  F3C  3 KW
HLL2  13570 kHz  CONTINUOUS  F3C  3 KW
### SEOUL, REPUBLIC OF KOREA

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**NOTES:**
1. IN CASE OF TYPHOON.
2. BROADCAST AT THE END OF THE MONTH.
3. NOVEMBER TO APRIL.
4. ALTERNATING BLACK AND WHITE SIGNALS WITH FREQUENCY OF 300 Hz WILL BE TRANSMITTED FOR 10 SECONDS PRIOR TO THE PHASING SIGNAL.
5. PHASING SIGNALS WILL BE TRANSMITTED FOR 30 SECONDS PRIOR TO TRANSMISSION OF EACH CHART.
6. STOP SIGNALS WILL BE TRANSMITTED FOR 15 SECONDS AFTER EACH TRANSMISSION.

(INFORMATION DATED 02/1999)

### BANGKOK, THAILAND

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<th>CALL SIGNS</th>
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II-7
### BANGKOK, THAILAND

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**MAP AREA:** A - 1:20,000,000  50N 045E, 50N 160E, 30S 045E, 30S 160E

(INFORMATION DATED 11/97)

### TASHKENT 1, UZBEKISTAN

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<th>POWER</th>
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**MAP AREA:** A - 1:20,000,000  50N 045E, 50N 160E, 30S 045E, 30S 160E

(INFORMATION DATED 09/1990)
# TASHKENT 2, UZBEKISTAN

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<td>MAX WIND ANALYSIS</td>
<td>90/576</td>
<td>00/18</td>
<td>A/D*</td>
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<tr>
<td>0950/------</td>
<td>RADAR DATA</td>
<td>90/576</td>
<td>0900</td>
<td>E</td>
</tr>
<tr>
<td>1140/2320</td>
<td>12HR 300MB/SIGNIFICANT WEATHER PROGS</td>
<td>90/576</td>
<td>18/00</td>
<td>H</td>
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</tbody>
</table>

**MAP AREAS:**

- **A** - 1:15,000,000 45N 037W, 43N 125E, 16N 011E, 15N 078E
- **A** - 1:05,000,000 57N 005W, 27N 123E, 14N 030E, 02N 088E
- **B** - 1:05,000,000 45N 030E, 49N 081E, 26N 040E, 28N 077E
- **C** - 1:15,000,000 53N 006W, 48N 095E, 25N 026E, 22N 072E
- **D** - 1:15,000,000 56N 021W, 58N 108E, 30N 016E, 31N 072E
- **D** - 1:15,000,000 70N 008W, 47N 118E, 34N 029E, 24N 082E
- **H** - 1:15,000,000 56N 021E, 58N 108E, 30N 016E, 31N 072E
- **K** - 1:07,500,000 47N 038E, 49N 079E, 30N 046E, 31N 174E

*(INFORMATION DATED 07/1997)*

Update 03/2002 - Reported as being non-operational since mid 2001
KYODO NEWS AGENCY, JAPAN/SINGAPORE

CALL SIGNS | FREQUENCIES | TIMES | EMISSION | POWER
---|---|---|---|---
JJC | 4316 kHz | CONTINUOUS | F3C | 5 KW
JJC | 8467.5 kHz | CONTINUOUS | F3C | 10 KW
JJC | 12745.5 kHz | CONTINUOUS | F3C | 15 KW
JJC | 16971 kHz | CONTINUOUS | F3C | 15 KW
JJC | 17069.6 kHz | CONTINUOUS | F3C | 15 KW
JJC | 22542 kHz | CONTINUOUS | F3C | 15 KW
9VF/252 | 16035 kHz | 0740-1010, 1415-1815 | F3C | 10 KW
9VF/252 | 17430 kHz | 0740-1010, 1415-1815 | F3C | 10 KW

TIME | CONTENTS OF TRANSMISSION | RPM/IOC | VALID TIME | MAP AREA
---|---|---|---|---
0145 | Sports Ed 2(R), (Seasonal during Sumo or High School baseball series) | 60/576
0200 | MON: NX for 1 week | 120/576
0200 | TUE-SUN: NX (R), Epidemic Information(R)(SUN only), Ocean Information(N)(4th,14th, and 24th,3rd,13th,23rd if a MON) | 120/576
0245 | Morning Ed(R), Sports Ed 1(R), NX(R) | 60/576
0430 | WX Chart | 120/576 0000
0430 | Ocean Information(n)(4th,14th, and 24th) | 120/576
0540 | TUE&FRI: Satellite Fishery Information | 60/576
0540 | SAT&SUN: Ocean Graphic Information | 60/576
0540 | SUN&MON: Sea Surface Current Prog | 60/576
0610 | TUE-SAT: English Ed (R) | 120/576
0635 | MON-SAT: FAX DAYORI 4(N), (except 2nd & 4th MON and every WED and FRI) | 60/576
0650 | SUN:WX Chart, Fishing Information (3 times per month) | 60/576 0300
0650 | MON-SAT: WX Chart | 60/576 0300
0705 | Background Stories(N), Life(N)(except MON) | 60/576
0745 | SUN: | 60/576
0745 | Sunday Ed(N), FAX DAYORI 1,2,3 (N) | 60/576
0745 | Sumo match (begins 0930 SAT as well) | 60/576
0745 | MON-SAT: Evening Ed(N), Kαιun-Suisan News(N)(Except SAT), Epidemic Information(N)(SAT only), FAX DAYORI 1(N), Sumo match (Seasonal)(N), FAX DAYORI 2(N) (except TUE&SAT) | 60/576
0745 | NATIONAL HOLIDAYS: Morning Ed(R), Sports Ed 1 (R), FAX DAYORI 1(N), Sumo match (Seasonal)(N) FAX DAYORI 2(N) | 60/576
1100 | NX (N), Sumo match (Seasonal)(R) | 60/576
1130 | MON-FRI: English Ed (N) | 60/576
1335 | Background Stories(R), Life(R)(except MON) | 60/576
1415 | MON-FRI: Kαιun-Suisan News(R) | 60/576
1445 | Sports Ed 2(N), (Seasonal during Sumo or High School baseball series) | 60/576
1500 | Morning Ed(N), Sports Ed 1(N), NX(R) | 60/576
1645 | MON: Sunday Ed(R) | 60/576
1645 | TUE-SUN: Evening Ed(R) | 60/576
1810 | TUE-SAT: English Ed (R) | 60/576
1930 | MON: Evening Ed(R), NX(R), FAX DAYORI 2,1,3 (R) | 60/576
1930 | TUE-SUN: Evening Ed(R), NX(R), FAX DAYORI 2,1,4 (no 4 on THU,SAT and TUE following 2nd & 4th MON) | 60/576
2030 | DAY AFTER NATIONAL HOLIDAYS: NX(R), FAX DAYORI 2,1,4 (R) | 60/576
2215 | TUE-SUN: (Also no 2 on WED and SUN)(R) | 60/576
2215 | MON and DAY AFTER NATIONAL HOLIDAYS: Morning Ed(R), Sports Ed 1,2(R), NX(R), FAX DAYORI 1-3(R)(3 Mon only) | 60/576
2215 | WX Chart | 60/576 2100
2215 | TUE-SUN: | 60/576 2100

NX: Navigational Warning, N: New, R: Repeat

Some of these transmissions may be encrypted

(INFORMATION DATED March 1, 1999 provided by Kyodo News April 2001)
NORTHWOOD, UNITED KINGDOM (PERSIAN GULF)

<table>
<thead>
<tr>
<th>CALL SIGNS</th>
<th>FREQUENCIES</th>
<th>TIMES</th>
<th>EMISSION</th>
<th>POWER</th>
</tr>
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<tbody>
<tr>
<td>GYA</td>
<td>6834 kHz</td>
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<td>GYA</td>
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<td>GYA</td>
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<td>GYA</td>
<td>14436 kHz</td>
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<td>F3C</td>
<td>10 kW</td>
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<table>
<thead>
<tr>
<th>TIME</th>
<th>CONTENTS OF TRANSMISSION</th>
<th>RPM/IOC</th>
<th>VALID TIME</th>
<th>MAP AREA</th>
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<tbody>
<tr>
<td>0230/1430</td>
<td>SCHEDULE</td>
<td>120/576</td>
<td>00/12</td>
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<tr>
<td>0306/1506</td>
<td>SURFACE ANALYSIS</td>
<td>120/576</td>
<td>00/12</td>
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<tr>
<td>0406/------</td>
<td>SURFACE ANALYSIS</td>
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<tr>
<td>0506/1806</td>
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<td>120/576</td>
<td>00/12</td>
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<tr>
<td>0630/1830</td>
<td>SURFACE PROG T +24</td>
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<tr>
<td>0642/1842</td>
<td>SURFACE PROG T +48</td>
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<tr>
<td>0654/1854</td>
<td>SURFACE PROG T +72</td>
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<tr>
<td>0706/1906</td>
<td>SURFACE PROG T +96</td>
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<tr>
<td>0718/1918</td>
<td>SURFACE PROG T +120</td>
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<td>0754/------</td>
<td>SURFACE PROG T +24</td>
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<td>0806/2006</td>
<td>Ambient Noise Prog T+24</td>
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<tr>
<td>0818/2018</td>
<td>Mixed Layer Depth Prog T+24</td>
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<tr>
<td>0830/------</td>
<td>Sea and Swell Prog T+24</td>
<td>120/576</td>
<td>0000</td>
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<tr>
<td>0842/2030</td>
<td>Sea Surface Temp T+24</td>
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<tr>
<td>------/2042</td>
<td>Sea and Swell Prog T+24</td>
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<tr>
<td>------/2206</td>
<td>SURFACE PROG T +24</td>
<td>120/576</td>
<td>1200</td>
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INFORMATION DATED 04 FEB 2004  http://www.users.zetnet.co.uk/tempusfugit/marine/fwocgulf.htm
(Unofficial link, information unavailable from official sources)
SOUTH AMERICA
**PUERTO BELGRANO ARGENTINA**

<table>
<thead>
<tr>
<th>CALL SIGN</th>
<th>FREQUENCIES</th>
<th>TIMES</th>
<th>EMISSION</th>
<th>POWER</th>
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<tbody>
<tr>
<td>LOR</td>
<td>5705 kHz</td>
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<td>F3C</td>
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<tr>
<td></td>
<td>12672 kHz</td>
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<td>F3C</td>
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No information about this broadcast is available other than it is being transmitted by the Argentine Navy. The contents of this broadcast are in Spanish.

(INFORMATION DATED July 1997)

**RIO DE JANEIRO, BRAZIL**

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<thead>
<tr>
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<th>FREQUENCIES</th>
<th>TIMES</th>
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<th>POWER</th>
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<tbody>
<tr>
<td>PWZ-33</td>
<td>12665 kHz</td>
<td>CONTINUOUS</td>
<td>F3C</td>
<td>1 KW</td>
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<td>PWZ-33</td>
<td>16978 kHz</td>
<td>CONTINUOUS</td>
<td>F3C</td>
<td>1 KW</td>
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**TIME** | **CONTENTS OF TRANSMISSION** | **RPM/IOC** | **VALID TIME** | **MAP AREA** |
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>0745/1630</td>
<td>TEST CHART</td>
<td>120/576</td>
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<td></td>
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<tr>
<td>0750/1635</td>
<td>SURFACE ANALYSIS (Hpa)</td>
<td>120/576</td>
<td>00/12</td>
<td>A</td>
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<tr>
<td>0810/1655</td>
<td>WAVES SIG HEIGHT (m) AND DIR PROG 12Z+36HR</td>
<td>120/576</td>
<td>00/12</td>
<td>B</td>
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<tr>
<td>0830/1715</td>
<td>WIND AT 10 m (KTS) PROG 12Z+36 HR</td>
<td>120/576</td>
<td>00/12</td>
<td>C</td>
</tr>
<tr>
<td>0850/1735</td>
<td>SEA SURFACE TEMPERATURE</td>
<td>120/576</td>
<td>12/00</td>
<td>D</td>
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MAP AREA: A: 1:53,000,000 20N 090W, 20N 020E, 70S 090W, 70S 020E  
B: 1:58,000,000 20N 090W, 20N 020E, 70S 090W, 70S 020E  
C: 1:58,500,000 20N 090W, 20N 020E, 70S 090W, 70S 020E  
D: 1:32,700,000 15N 072W, 15N 018W, 50S 072W, 50S 018E


**VALPARAISO PLAYA ANCHA, CHILE**

<table>
<thead>
<tr>
<th>CALL SIGNS</th>
<th>FREQUENCIES</th>
<th>TIMES</th>
<th>EMISSION</th>
<th>POWER</th>
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<tbody>
<tr>
<td>CBV</td>
<td>4228.0 kHz</td>
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<td>F3C</td>
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<td>CBV</td>
<td>8677.0 kHz</td>
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<td>F3C</td>
<td>1 KW</td>
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<td>CBV</td>
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<td>F3C</td>
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</table>

**TIME** | **CONTENTS OF TRANSMISSION** | **RPM/IOC** | **VALID TIME** | **MAP AREA** |
<table>
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<tbody>
<tr>
<td>1115</td>
<td>SURFACE ANALYSIS</td>
<td>120/576</td>
<td>0600</td>
<td>A</td>
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<tr>
<td>1130</td>
<td>SATELLITE IMAGE</td>
<td>120/576</td>
<td>0900</td>
<td>A</td>
</tr>
<tr>
<td>1630</td>
<td>SURFACE ANALYSIS</td>
<td>120/576</td>
<td>1200</td>
<td>A</td>
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<tr>
<td>1645</td>
<td>SATELLITE IMAGE</td>
<td>120/576</td>
<td>1500</td>
<td>A</td>
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<tr>
<td>1915</td>
<td>SIGNIFICANT WAVE MAP (MTS)</td>
<td>120/576</td>
<td>1800</td>
<td>A</td>
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<tr>
<td>1930</td>
<td>SATELLITE IMAGE</td>
<td>120/576</td>
<td>1800</td>
<td>A</td>
</tr>
<tr>
<td>2200</td>
<td>SURFACE ANALYSIS</td>
<td>120/576</td>
<td>1800</td>
<td>A</td>
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<tr>
<td>2215</td>
<td>ICE REPORT</td>
<td>120/576</td>
<td>1800</td>
<td>A</td>
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<td>2230</td>
<td>12HR WINDS BARB ISOTACHS FORECAST</td>
<td>120/576</td>
<td>1200</td>
<td>A</td>
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<tr>
<td>2310</td>
<td>12HR SURFACE FORECAST</td>
<td>120/576</td>
<td>1200</td>
<td>A</td>
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<tr>
<td>2325</td>
<td>SATELLITE IMAGE</td>
<td>120/576</td>
<td>2100</td>
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</tbody>
</table>

MAP AREA: A: 10S-120W, 10S-050W, 80S-130W, 80S-030W

(INFORMATION DATED Sep 10, 2003)  http://www.directemar.cl/meteo/operador/horarios.htm

III-1
NORTH AMERICA
### Halifax, Nova Scotia, Canada

#### Call Sign, Frequencies, Times, Emission, Power

<table>
<thead>
<tr>
<th>Call Sign</th>
<th>Frequencies</th>
<th>Times</th>
<th>Emission</th>
<th>Power</th>
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</thead>
<tbody>
<tr>
<td>CFH</td>
<td>122.5 kHz, 4271 kHz, 6496.4 kHz, 10536 kHz, 13510 kHz</td>
<td>Continuous</td>
<td>F3C</td>
<td>10 KW, 6 KW, 6 KW, 6 KW, 6 KW</td>
</tr>
</tbody>
</table>

#### Time, Contents of Transmission, RPM/IOC, Valid Time, Map

<table>
<thead>
<tr>
<th>Time</th>
<th>Contents of Transmission</th>
<th>RPM/IOC</th>
<th>Valid Time</th>
<th>Map</th>
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<tbody>
<tr>
<td>0001/------</td>
<td>Labrador Coast Ice Chart (Seasonal)</td>
<td>120/576</td>
<td>LATEST</td>
<td></td>
</tr>
<tr>
<td>0100/------</td>
<td>3-DAY PROG</td>
<td>120/576</td>
<td>1200</td>
<td>G</td>
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<tr>
<td>0101/------</td>
<td>Satellite Photo Infrared</td>
<td>120/576</td>
<td>0000</td>
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<tr>
<td>0122/------</td>
<td>4-DAY PROG</td>
<td>120/576</td>
<td>1200</td>
<td>G</td>
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<tr>
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<td>5-DAY PROG</td>
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<td>1200</td>
<td>G</td>
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<td>0201/1401</td>
<td>12/00Z Significant Weather Depiction</td>
<td>120/576</td>
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<td>0301/1501</td>
<td>500MB Analysis</td>
<td>120/576</td>
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<td>0322/1522</td>
<td>Surface Analysis</td>
<td>120/576</td>
<td>00/12</td>
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<tr>
<td>0401/1622</td>
<td>36HR 500MB Forecast</td>
<td>120/576</td>
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<tr>
<td>0422/1701</td>
<td>24HR Surface Prog</td>
<td>120/576</td>
<td>00/12</td>
<td>A</td>
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<tr>
<td>0501/------</td>
<td>850 MB Forecast Winds</td>
<td>120/576</td>
<td>18/00</td>
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<td>0601/1801</td>
<td>36HR Surface Prog</td>
<td>120/576</td>
<td>12/00</td>
<td>A</td>
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<tr>
<td>0622/1822</td>
<td>850MB Forecast Winds</td>
<td>120/576</td>
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<td>18/06Z Significant Weather Depiction</td>
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<td>24/36HR Significant Wave Prognosis</td>
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<td>0901/2101</td>
<td>Surface Analysis</td>
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<td>06/18</td>
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<td>1001/------</td>
<td>SST: Nova Scotia - Mon. Newfoundland - Tue/Fri</td>
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<td>E/D</td>
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<td>1022/------</td>
<td>Satellite Photo Infrared</td>
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<td>0900</td>
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<tr>
<td>1022/------</td>
<td>Newfoundland Ice Chart</td>
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<td>CFH Broadcast Schedule</td>
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<tr>
<td>1201/------</td>
<td>Gulf of St Lawrence Ice Chart (Seasonal)</td>
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### Notes:

The geographic area of coverage for the ice charts varies according to season. The following are the typical areas to be broadcast: Gulf of St. Lawrence, East Newfoundland waters, Labrador Coast, Hudson Strait, Davis Strait and Baffin Bay. The Canadian Ice Service prepares all ice charts.

#### Map Areas

- **A**: 49N90W, 64N16W, 28N67W, 5N27W
- **B**: 76N16W, 30N20W, 23N110W, 08N99W
- **C**: 48N85W, 65N15W, 28N62W, 34N23W
- **D**: 60N68W, 53N30W, 42N66W, 38N40W
- **E**: 46N77W, 48N46W, 32N74W, 32N51W
- **G**: 49N21W, 27N40W, 27N80W, 49N94W
- **H**: 30N107W, 15N67W, 34N24W, 79N60W

(Information Dated 2003) [http://www.ccg-gcc.gc.ca/mcts-sctm/ramn_armm/Atlantic/part_5_e.htm](http://www.ccg-gcc.gc.ca/mcts-sctm/ramn_armm/Atlantic/part_5_e.htm)
IQALUIT, N.W.T., CANADA

<table>
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<tr>
<th>CALL SIGN</th>
<th>FREQUENCIES</th>
<th>TIMES</th>
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<th>POWER</th>
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<td>3253.0 kHz</td>
<td>USB</td>
<td>J3C</td>
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<td>USB</td>
<td>J3C</td>
<td>5 KW</td>
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<th>CONTENTS OF TRANSMISSION</th>
<th>RPM/IOC</th>
<th>VALID TIME</th>
<th>MAP AREA</th>
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<tr>
<td>0500/------</td>
<td>ICE ANALYSIS (AREAS 1,2,3,4,5,6,7)</td>
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MAP AREA: 1. HUDSON BAY (SOUTH) 2. HUDSON BAY (NORTH) 3. HUDSON STRAIT 4. FOXE BASIN 5. LABRADOR COAST 6. DAVIS STRAIT 7. BAFFIN BAY

NOTE: THE AREAS INCLUDED IN THE BROADCASTS VARY WITH ICE CONDITIONS AND MARINE ACTIVITY. ALL CHARTS AVAILABLE CAN BE TRANSMITTED ON REQUEST.

(INFORMATION DATED 2003) http://www.ccg-gcc.gc.ca/mcts-sctm/ramn_arrm/Atlantic/part_2_e.htm

RESOLUTE, N.W.T., CANADA

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MAP AREAS: 7. BAFFIN BAY 8. APPROACHES TO RESOLUTE 9. EUREKA SOUND 10. PARRY CHANNEL 11. QYENN MAUDE/PRINCE REGENT

(INFORMATION DATED 2003) http://www.ccg-gcc.gc.ca/mcts-sctm/ramn_arrm/Atlantic/part_2_e.htm

SYDNEY - NOVA SCOTIA, CANADA

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(INFORMATION DATED 2003) http://www.ccg-gcc.gc.ca/mcts-sctm/ramn_arrm/Atlantic/part_2_e.htm
## KODIAK, ALASKA, U.S.A.

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**MAP AREAS:**
1. 20N - 70N, 115W - 135E
2. 40N - 70N, 125W - 150E
3. 40N - 70N, 115W - 170E
4. 40N - 60N, 125W - 160E
5. 05N - 60N, 110W - 160W
6. ICE COVERED AK WATERS
7. COOK INLET

**NOTES:**
1. BROADCAST MAY BE PERFORMED ON FOUR FREQUENCIES SIMULTANEOUSLY WHEN RESOURCES ARE AVAILABLE
2. CARRIER FREQUENCY IS 1.9 kHz BELOW THE ASSIGNED FREQUENCY
3. COMMENTS AND SUGGESTIONS SHOULD BE DIRECTED TO:

   **METEOROLOGIST-IN-CHARGE**
   NATIONAL WEATHER SERVICE/NOAA
   6930 SAND LAKE ROAD
   ANCHORAGE, AK 99502-1845
   PH: (907) 266-5105/FAX: (907) 266-5188
   E-MAIL: nwsfoanc@alaska.net

*(EFFECTIVE DATE Jan 15, 2004)*
*(INFORMATION DATED Feb 10, 2004)*

http://weather.noaa.gov/fax/alaska.shtml
PT. REYES, CALIFORNIA, U.S.A.

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MAP AREAS:

1. 20N - 70N, 155W - 135E
2. 20N - 70N, 175W - 135E
3. 20N - 70N, 175W - 135E
4. 20S - 30N, EAST OF 145W
5. 05N - 60N, WEST OF 100W
6. 25N - 40N, EAST OF 136W
7. 05N - 55N, EAST OF 130W
8. 25N - 60N, EAST OF 155W
9. 40N - 55N, EAST OF 136W
10. 0N - 40N, 80W – 180W

NOTES:
1. REPLACED BY HIGH WIND/WAVE WARNING WHEN NOT IN HURRICANE SEASON
2. CARRIER FREQUENCY IS 1.9 KHZ BELOW ASSIGNED FREQUENCY
3. COMMENTS AND SUGGESTIONS CONCERNING THIS BROADCAST SHOULD BE DIRECTED TO:

NATIONAL WEATHER SERVICE/NOAA
NATIONAL CENTER FOR ENVIRONMENTAL PREDICTION
MARINE FORECAST BRANCH W/NMC31
5200 AUTH ROAD
CAMP SPRINGS, MD 20746-4304
PHONE: (301) 763-8000 X7401/FAX: (301) 763-8085
EMAIL: David.Feit@noaa.gov

(INFORMATION DATED Aug 16, 2004)
### NEW ORLEANS, LOUISIANA, U.S.A.

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<td>U.S. / TROPICAL SURFACE ANALYSIS (W HALF)</td>
<td>120/576</td>
<td>11/23</td>
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<tr>
<td>0035/1235</td>
<td>24 HR WIND/WAVE FORECAST</td>
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<tr>
<td>0055/1255</td>
<td>72 HR WIND/WAVE FORECAST</td>
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<td>11/23</td>
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<td>0105/1305</td>
<td>24 HR SURFACE FORECAST</td>
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<td>11/23</td>
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<td>0115/1315</td>
<td>48 HR SURFACE FORECAST</td>
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<td>0125/1325</td>
<td>72 HR SURFACE FORECAST</td>
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<tr>
<td>0135/1335</td>
<td>TROPICAL CYCLONE DANGER AREA* or HIGH WIND/WAVES</td>
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<td>11/23</td>
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<tr>
<td>0150/------</td>
<td>72 HR WAVE PERIOD/SWELL DIRECTION</td>
<td>120/576</td>
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<tr>
<td>0200/1400</td>
<td>GOES IR TROPICAL SATELLITE IMAGE</td>
<td>120/576</td>
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<td>0215/1415</td>
<td>00HR SEA STATE ANALYSIS</td>
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<td>0225/1445</td>
<td>HIGH SEAS FORECAST (IN ENGLISH)</td>
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<tr>
<td>0600/1800</td>
<td>TEST PATTERN</td>
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<td>0745/1945</td>
<td>48 HR WAVE PERIOD/SWELL DIRECTION</td>
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<td>0800/2000</td>
<td>GOES IR TROPICAL SATELLITE IMAGE</td>
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<td>REBROADCAST OF 0215/1415</td>
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<td>REQUEST FOR COMMENTS/BROADCAST SCHEDULE</td>
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<tr>
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<td>HIGH SEAS FORECAST (IN ENGLISH)</td>
<td>120/576</td>
<td>11/23</td>
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</tbody>
</table>

**NOTES:**
1. REPLACED BY HIGH WIND/WAVE WARNING WHEN NOT IN HURRICANE SEASON
2. CARRIER FREQUENCY IS 1.9 KHZ BELOW ASSIGNED FREQUENCY
3. THIS BROADCAST ORIGINATES FROM THE TROPICAL PREDICTION CENTER (FORMERLY THE NATIONAL HURRICANE CENTER) OF THE NATIONAL WEATHER SERVICE.

**CONTACT:**
TROPICAL PREDICTION CENTER
ATTN: CHIEF OF TAFB
11691 SOUTHWEST 17TH STREET
MIAMI, FL 33165-2149
PHONE: (305) 229-4430/FAX: (305) 553-1264
EMAIL: tpc.mar@noaa.gov

**MAP AREAS:**
1. 05S-50N, 55W-125W
2. 05S-50N, 00W-120W
3. 00N-31N, 35W-100W
4. 12S-44N, 28W-112W
5. 07N-31N, 35W-098W (AREA COVERED BY TEXT FORECAST)
6. 05N-60N, 00W-100W

BOSTON, MASSACHUSETTS, U.S.A.

CALL SIGN  FREQUENCIES  TIMES    EMISSION  POWER
NMF       4235 kHz  0230z-1015z      F3C     4 KW
          6340.5 kHz  CONTINUOUS     F3C     4 KW
          9110 kHz  CONTINUOUS     F3C     4 KW
         12750 kHz  1400z-2215z      F3C     4 KW

TIME  CONTENTS OF TRANSMISSION  RPM/IOC  VALID MAP TIME AREA
0230/1400 TEST PATTERN        120/576
-------/1405 BROADCAST SCHEDULE (PART 1)  120/576
-------/1420 BROADCAST SCHEDULE (PART 2)  120/576
-------/1433 REQUEST FOR COMMENTS       120/576
-------/1443 PRODUCT NOTICE BULLETIN      120/576
0233/1453 PRELIMINARY SURFACE ANALYSIS  120/576  00/12   1
0243/------ BROADCAST SCHEDULE (PART 1)  120/576
0254/------ BROADCAST SCHEDULE (PART 2)  120/576
0305/------ REQUEST FOR COMMENTS       120/576
-------/1503 GOES IR SATELLITE IMAGE     120/576  1200   5
0315/1515 SEA STATE ANALYSIS         120/576  00/12   1
0325/1525 SURFACE ANALYSIS (PART 1 NE ATLANTIC)     120/576  00/12   2
0338/1538 SURFACE ANALYSIS (PART 2 NW ATLANTIC)     120/576  00/12   3
0351/------ GOES IR SATELLITE IMAGE     120/576  0000   5
-------/1600 ICE CHARTS (FROM INTERNATIONAL ICE PATROL)    120/576 LATEST
-------/1720 TEST PATTERN        120/576
0402/1723 SURFACE ANALYSIS (PART 1) (REBROADCAST OF 0325/1525) 120/576  00/12   2
0415/1736 SURFACE ANALYSIS (PART 2) (REBROADCAST OF 0338/1538) 120/576  00/12   3
0428/1749 500MB ANALYSIS         120/576  0000   5
-------/1810 ICE CHARTS (FROM INTERNATIONAL ICE PATROL)    120/576 LATEST
0745/1900 TEST PATTERN        120/576
0755/------ PRELIMINARY SURFACE ANALYSIS      120/576  0600   1
0805/1905 24HR SURFACE FORECAST       120/576  0600   1
0815/1915 24HR WIND/WAVE FORECAST       120/576  0600   1
0825/1925 24HR 500MB FORECAST         120/576  1200   4
0835/1935 36HR 500MB FORECAST         120/576  12/00   4
0845/1945 48HR 500MB FORECAST         120/576  00/12   4
0855/1955 48HR SURFACE FORECAST       120/576  00/12   4
0905/2005 48HR WIND/WAVE FORECAST       120/576  00/12   4
0915/2015 48HR WAVE PERIOD FORECAST     120/576  00/12   4
-------/2025 PRELIMINARY SURFACE ANALYSIS      120/576  1800   1
-------/2035 96HR 500MB FORECAST         120/576  1800   1
-------/2045 96HR SURFACE FORECAST       120/576  1200   4
-------/2055 96HR WIND/WAVE FORECAST       120/576  1200   4
-------/2105 96HR WAVE PERIOD FORECAST     120/576  1200   4
0925/2125 SURFACE ANALYSIS (PART 1 NE ATLANTIC)     120/576  06/18   2
0938/2138 SURFACE ANALYSIS (PART 2 NW ATLANTIC)     120/576  06/18   3
0951/2151 GOES IR SATELLITE IMAGE     120/576  06/18   6
1002/2202 SURFACE ANALYSIS (PART 1) (REBROADCAST OF 0925/2125) 120/576  06/18   2
1015/2215 SURFACE ANALYSIS (PART 2) (REBROADCAST OF 0938/2138) 120/576  06/18   3

MAP AREAS
1.  28N-52N, 45W-85W
2.  18N-65N, 10E-45W
3.  18N-65N, 40W-95W
4.  18N-65N, 10E-95W
5.  20N-55N, 55W-95W
6.  EQ-60N, 40W-130W

NOTES:
1. CARRIER FREQUENCY IS 1.9 KHz BELOW THE ASSIGNED FREQUENCY.
2. COMMENTS AND SUGGESTIONS SHOULD BE DIRECTED TO:

NATIONAL WEATHER SERVICE/NOAA
NATIONAL CENTER FOR ENVIRONMENTAL PREDICTION
MARINE FORECAST BRANCH W/NMC31
5200 AUTH ROAD
CAMP SPRINGS, MD 20746-4304
PHONE: (301) 763-8000 X7401/FAX: (301) 763-8085
EMAIL: David.Feit@noaa.gov

IV-6
### INUVIK, CANADA

<table>
<thead>
<tr>
<th>CALL SIGN</th>
<th>FREQUENCIES</th>
<th>TIMES</th>
<th>EMISSION</th>
<th>POWER</th>
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<tbody>
<tr>
<td>VFA</td>
<td>8457.8 kHz</td>
<td></td>
<td>J3C</td>
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<table>
<thead>
<tr>
<th>TIME</th>
<th>CONTENTS OF TRANSMISSION</th>
<th>RPM/IOC</th>
<th>VALID TIME</th>
<th>MAP AREA</th>
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<tbody>
<tr>
<td>0200</td>
<td>Marine Surface Analysis</td>
<td>120/576</td>
<td>1200</td>
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<tr>
<td></td>
<td>(Availability of charts may vary depending on shipping)</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Ice Analysis (mid July to October 15)</td>
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<tr>
<td></td>
<td>Amundsen Gulf, Queen Maud and McClure Strait.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Ice Analysis Beaufort Sea/Alaskan Coast</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 1630 | Marine Surface Analysis  | 120/576 | 1200       |          |
|      | (Availability of charts may vary depending on shipping) |         |            |          |
|      | Ice Analysis (mid July to October 15) |         |            |          |
|      | Amundsen Gulf, Queen Maud and McClure Strait. |         |            |          |
|      | Ice Analysis Beaufort Sea/Alaskan Coast |         |            |          |

Note: Also available on request


(Update Mar 2002) Frequencies listed may be carrier frequencies, add 1.9 kHz for center frequency.

### AIRBORNE ICE TRANSMISSIONS, CANADA

<table>
<thead>
<tr>
<th>CALL SIGN</th>
<th>FREQUENCIES</th>
<th>TIMES</th>
<th>EMISSION</th>
<th>POWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3C</td>
<td>4616.0 kHz</td>
<td>see below</td>
<td>F3C</td>
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</tr>
<tr>
<td>F3C</td>
<td>7708.1 kHz</td>
<td>see below</td>
<td>F3C</td>
<td></td>
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<tr>
<td>F3C</td>
<td>6915.1 kHz</td>
<td>see below</td>
<td>F3C</td>
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<table>
<thead>
<tr>
<th>TIME</th>
<th>CONTENTS OF TRANSMISSION</th>
<th>RPM/IOC</th>
<th>VALID TIME</th>
<th>MAP AREA</th>
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<tbody>
<tr>
<td>H+0 to H+29</td>
<td>Gulf of St. Lawrence (Winter)</td>
<td>7708.1 kHz</td>
<td>120/576</td>
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<tr>
<td>H+0 to H+29</td>
<td>East Newfoundland waters (Winter)</td>
<td>7708.1 kHz</td>
<td>120/576</td>
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<tr>
<td>H+0 to H+29</td>
<td>Eastern Arctic (Summer)</td>
<td>6915.1 kHz</td>
<td>120/576</td>
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<td>H+0 to H+19</td>
<td>Western Arctic (Summer)</td>
<td>7708.1 kHz or 4616.0 kHz</td>
<td>120/576</td>
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</table>

Airborne Facsimile Transmissions of observed ice conditions from ice reconnaissance aircraft schedule on days flights are flown (as soon as possible after airborne):

(a) Specific Coast Guard and aerial reconnaissance units will be designated by operational orders as appropriate.
(b) Frequencies are primary frequencies. The following alternate frequencies (kHz USB) assigned to MSC/CCG for Radio Facsimile Communications may be used as appropriate for
1) Unscheduled broadcasts to Canadian Ice Service.
2) Unscheduled aircraft tactical support.
3) Intership tactical support or when necessary due to prevailing HF propagation conditions:
   3251.1, 4616.0, 6915.1 (Winter only) 8113.1, 10155.1, 10169.1, 12055.1, 13440.0, 14440.0, 15642.1, 17443.1, 18168.1, 20168.1, 20530.1.
For correct reception of these broadcasts on WMO standard facsimile recorders requiring 2300 Hz for black and 1500 Hz for white, radio receivers should be tuned in the upper sideband mode to the frequencies listed.

(INFORMATION DATED 2003) http://www.ccg-gcc.gc.ca/mcts-sctm/ramn_armm/Atlantic/part_5_e.htm

IV-7
### COAST GUARD ICE BREAKERS, CANADA

**CALL SIGN** | **FREQUENCIES** | **TIMES** | **EMISSION** | **POWER**
---|---|---|---|---
 | 14770 kHz | see below | F3C | |

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<th>TIME</th>
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<th>RPM/IOC</th>
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<th>MAP AREA</th>
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<td>1630-1649</td>
<td>CG UNIT 1</td>
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<tr>
<td>1650-1709</td>
<td>CG UNIT 2</td>
<td>120/576</td>
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<tr>
<td>1710-1729</td>
<td>CG UNIT 3</td>
<td>120/576</td>
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<tr>
<td>1730-1749</td>
<td>CG UNIT 4</td>
<td>120/576</td>
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<td>1750-1809</td>
<td>CG UNIT 5</td>
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<td>1810-1829</td>
<td>CG UNIT 6</td>
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<td>1850-1909</td>
<td>CG UNIT 9</td>
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<td>1930-1949</td>
<td>CG UNIT 10</td>
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</table>

(a) Specific Coast Guard and aerial reconnaissance units will be designated by operational orders as appropriate.

(b) Frequencies are primary frequencies. The following alternate frequencies (kHZ USB) assigned to MSC/CCG for Radio Facsimile Communications may be used as appropriate for:

1) Unscheduled broadcasts to Canadian Ice Service.
2) Unscheduled aircraft tactical support.
3) Intership tactical support or when necessary due to prevailing HF propagation conditions:

3251.1, 4616.0, 6915.1 (Winter only) 8113.1, 10155.1, 10169.1, 12055.1, 13440.0, 14440.0, 15642.1, 17443.1, 18168.1, 20168.1, 20530.1.

For correct reception of these broadcasts on WMO standard facsimile recorders requiring 2300 Hz for black and 1500 Hz for white, radio receivers should be tuned in the upper sideband mode to the frequencies listed.

(INFORMATION DATED 2003) [http://www.ccg-gcc.gc.ca/mcts-sctm/ramn_arml/Atlantic/part_5_e.htm](http://www.ccg-gcc.gc.ca/mcts-sctm/ramn_arml/Atlantic/part_5_e.htm)
PACIFIC
OCEAN
BASIN
## CHARLEVILLE, AUSTRALIA

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<td>VMC</td>
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## WILUNA, AUSTRALIA

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<tbody>
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<td>VMW</td>
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<td>2100-1100</td>
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## TIME CONTENTS OF TRANSMISSION

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<th>TIME</th>
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<th>VALID TIME</th>
<th>MAP AREA</th>
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<td>Australian Sigsx Prog Valid</td>
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<td>0600</td>
<td>RSW</td>
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<td>South Pacific Ocean Total Waves (H+48)</td>
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<td>SWP</td>
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<td>Indian Ocean Total Waves (H+48)</td>
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<td>Pacific Ocean Sea Surface Temps (Weekly)</td>
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<td>SWP</td>
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CHARLEVILLE & WILUNA, AUSTRALIA

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NOTES:
1. ALL WEEKLY OCEANOGRAPHIC PRODUCTS, SUCH AS SEA SURFACE TEMPERATURE CHARTS, WHICH WERE BROADCAST ONLY ONE DAY A WEEK, ARE NOW BROADCAST EVERY DAY. HOWEVER, NOTE THE CHARTS ARE ONLY UPDATED ONCE A WEEK, BUT BROADCAST EVERY DAY UNTIL A NEW CHART IS AVAILABLE TO REPLACE THE OLD CHART.
2. FOR FURTHER INFORMATION CONTACT:
   SYSTEM HELP DESK
   PH: (+613) 9662 2182
   FAX: (+613) 9662 1223
   EMAIL: opsgen@bom.gov.au

MAP AREAS:
A: 30N - 35S, 120E - 180
B: 30N - 35S, 070E - 130E
C: 30N - 35S, 070E - 180
D: 43S 110E, 34S 155E, 34N 142E, 29N 096E
E: 23N - 23S, 100E - 170E
H: 25N - 25S, 080E - 180
AUST: LAMBERT 10S 090E, 50S 080E, 10S 170E, 50S 180
SEANST- MERCATOR 31S - 40S, 148E - 156E
SWAUST MERCATOR 25S - 37S, 110E - 120E
RSW - MERCATOR 0S - 50S, 100E - 180
IO - POLAR 10S - 90S, EQ - 090E - 180
SWP - POLAR 20S - 90S, 150E - 180 - 90W
SH - POLAR 10S - 90S, ALL LONGITUDES

(Schedule Effective ??????)

WELLINGTON, NEW ZEALAND

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<tr>
<th>CALL SIGN</th>
<th>FREQUENCIES</th>
<th>TIMES</th>
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<td>5807 kHz</td>
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<td>9459 kHz</td>
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<td>13550.5 kHz</td>
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<td>16340.1 kHz</td>
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Single transmitter used. Times below reflect broadcast times at 5807 kHz
Add 15 minutes for 9459 kHz, 30 minutes for 13550.5 kHz and 45 minutes for 3247.4 and 16340.1 kHz

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MAP AREAS: TNZ - TASMAN SEA - NEW ZEALAND
SWP - SOUTHWEST PACIFIC

(INFORMATION DATED MAY 2002) http://www.metservice.co.nz/services/radiofax_schedule.asp
### Call Sign and Frequencies

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### Time and Contents of Transmission

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### Map Areas

- **A** - 50N-30S, 110W-160E
- **J** - 50N-EQ, 110W-130E
- **C** - 60N-55S, 055W-070E
- **K** - 30N-30S, 110W-130E
- **D** - 50N-30S, 100W-120E
- **M** - 30N-20S, 70W-140W
- **E** - 60N-35S, 110W-130E
- **F** - 50N-40S, 120W-120E
- **SP** - 05N-40S, 130W-165E
- **G** - 30N-20S, 145W-080W
- **NPA** - 55N-EQ, 010W-160E
- **H** - 40N-40S, 105W-120E

(1) TROPICAL STREAM-FUNCTION ANALYSIS AND THE WIND/STREAM-FUNCTION FORECAST CHARTS DISPLAY 1000 MILLIBAR STREAM FUNCTION LINES. FOR SPEEDS IN KNOTS FOR ALL LATITUDES, DIVIDE 50 BY THE SPACING BETWEEN THE STREAM FUNCTION LINES EXPRESSED IN DEGREES OF LATITUDE. THESE CHARTS, COMPUTER-GENERATED, ARE PARTICULARLY USEFUL IN THE TROPICS, WHERE THE ISOBARIC SPACING AND WIND-SPEED RELATIONSHIPS BECOME LESS MEANINGFUL. ARROWS ON THE STREAM-FUNCTION ANALYSIS CHARTS DEPICT VELOCITIES IN KNOTS OF THE TOPS OF LOWER CLOUDS DERIVED FROM SUCCESSIVE OBSERVATIONS BY SATELLITE. CAUTION - THESE CHARTS, BEING COMPUTER GENERATED, MAY NOT PROPERLY DELINEATE SMALL, THOUGH INTENSE, SYSTEMS IN DATA-SPARSE AREAS. NOTES ARE MANUALLY ADDED TO DIRECT ATTENTION TO SUCH SYSTEMS WHEN PRESENT.
(2) NORTH PACIFIC SURFACE PRESSURE ISOBARIC ANALYSIS CHARTS, MANUALLY ANALYZED AT THE WEATHER SERVICE FORECAST OFFICE/CENTRAL PACIFIC HURRICANE CENTER, HONOLULU DEPICT THE ISOBARIC (PRESSURE) FIELD NORTH OF 10N.

(3) PACIFIC STREAMLINE ANALYSIS DEPICTS WIND DIRECTION USING STREAMLINES. THE ANALYSIS IS PRODUCED MANUALLY AT THE FORECAST OFFICE AND COVERS THE AREA BETWEEN 30S AND 30N, BETWEEN 130E AND 120W.

(4) THE 48-HOUR ISOBARIC SURFACE/THICKNESS FORECAST CHARTS DEPICT LINES OF EQUAL PRESSURE IN MILLIBARS (SOLID LINES) AND, CHIEFLY OF INTEREST TO METEOROLOGISTS, 1000-TO-500 MILLIBAR THICKNESSES (DASHED LINES).

(5) THE SIGNIFICANT CLOUD FEATURES CHARTS DEPICT CLOUD FEATURES BASED UPON IMAGES FROM THE VARIOUS GEOSTATIONARY AND POLAR ORBITING SATELLITES OVER THE PACIFIC. ABBREVIATIONS ON THESE CHARTS INCLUDE: AC - ALTOCUMULUS; AS - ALTOSTRATUS; BKN - BROKEN; CB - CUMULONIMBUS; CC - CIRROCUMULUS; CI - CIRRUS; CS - CIRROSTRATUS; CU - CUMULUS; FEW - FEW; ISOL - ISOLATED; LYRS - LAYERS; NS - NIMBOSTRATUS; OVC - OVERCAST; SC - STRATO-CUMULUS; SCT - SCATTERED; TCU - TOWERING CUMULUS; TSTM – THUNDERSTORM.

(6) TROPICAL CYCLONE DANGER GRAPHIC TRANSMITTED DURING HURRICANE SEASON.

(7) RADIOFAX FREQUENCIES ARE ASSIGNED FREQUENCIES. TO CONVERT TO CARRIER FREQUENCIES, SUBTRACT 1.9 KHZ FROM THE ASSIGNED FREQUENCIES.

(8) BROADCAST MAY BE PERFORMED CONTINUOUSLY ON FOUR LISTED FREQUENCIES WHEN RESOURCES ARE AVAILABLE.

(9) TRANSMITTERS MAY BROADCAST AT 10KW AT TIMES.

(10) YOU MAY ADDRESS COMMENTS ABOUT THIS BROADCAST TO:

    KVM70
    National Weather Service
    2525 Correa Rd.
    Honolulu, HI  96822-2219
    PHONE: (808) 973-5286 x237/FAX: (808) 973-5271
    E-Mail  W-HFO.Webmaster@noaa.gov

EUROPE
# SKAMLEBAEK, DENMARK

<table>
<thead>
<tr>
<th>CALL SIGN</th>
<th>FREQUENCIES</th>
<th>TIMES</th>
<th>EMISSION</th>
<th>POWER</th>
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<td></td>
<td>9360 kHz</td>
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<td>1828-1850</td>
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<td>13855 kHz</td>
<td>1218-1240</td>
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<td>17510 kHz</td>
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The contents of transmission are:

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<th>TIME</th>
<th>CONTENTS OF TRANSMISSION</th>
<th>RPM/IOC</th>
<th>VALID TIME</th>
<th>MAP AREA</th>
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<td>ICE CHART #2 (OR #1)</td>
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<tr>
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<td>ICE CHART #2 (OR #1)</td>
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<tr>
<td>1803</td>
<td>ICE CHART #1</td>
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<td>1828</td>
<td>ICE CHART #1</td>
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Notes:
1. Call sign is transmitted for a period of 2 minutes immediately prior to chart transmission.
2. Either one of Chart #2 is transmitted if available, otherwise Chart #1 is transmitted.
3. Chart #1 covers the southern tip of Greenland. Chart #2 is a section, which may cover any area north of 62 degrees north according to need and time of year either on west or east coast of Greenland.

(INFORMATION DATED Feb 10, 04)  
http://www.dmi.dk/dmi/index/viden/sendeplan.htm

# ATHENS, GREECE

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<th>CALL SIGN</th>
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<th>EMISSION</th>
<th>POWER</th>
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The contents of transmission are:

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<th>TIME</th>
<th>CONTENTS OF TRANSMISSION</th>
<th>RPM/IOC</th>
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<th>MAP AREA</th>
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<td>SURFACE PROG (H+48)</td>
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<td>WAVE HEIGHT PROG (H+42)</td>
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<tr>
<td>1009</td>
<td>WAVE HEIGHT PROG (H+30)</td>
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<td>C</td>
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<td>1200</td>
<td>C</td>
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Map area:  
A - South Europe, Mediterranean Sea, Black Sea  
B - Mediterranean  
C - Aegean  

(INFORMATION DATED (04/2001)
HAMBURG/PINNEBERG, GERMANY

<table>
<thead>
<tr>
<th>CALL SIGNS</th>
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<th>EMISSION</th>
<th>POWER</th>
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<tr>
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<tr>
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<td>13882.5 kHz</td>
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**TIME** | **CONTENTS OF TRANSMISSION** | **RPM/IOC** | **VALID TIME** | **MAP AREA**
---|-------------------------------|-------------|----------------|-------------|
-----|-------------------------------|-------------|----------------|-------------|
1206 | H+96 (GSM) Sea and swell, Wind (10 m) | 120/576     | 0000           |             |
1219 | Ice Chart northwesternpart atlantik | 120/576     | 0000           |             |
1232 | Ice Chart Western Baltic | 120/576     | 0000           |             |
1520 | Ice conditions chart West Baltic Sea or special area | 120/576 | 0900 | |
1540 | Ice conditions chart West Baltic Sea or special area | 120/576 | 0900 | |
0430 | Surface weather chart | 120/576     | 00/12          |             |
0500 | H + 00, H + 24 (GME) surface P and wind (10m) | 120/576 | 0000 | |
0512 | h + 30 (GME) surface pressure | 120/576     | 1800           |             |
0525 | Surface pressure analysis, arrows showing the movement of pressure systems, sig\-ificant weather, ice | 120/576 | 00/12 | |
0546 | Information of tropical storms, North Atlantic (during the season) | 120/576 | 03/15 | |
0559 | H + 12, H + 24 (GME) 500 hPa H + T, surface P | 120/576 | 0000 | |
0612 | H + 12, H + 24 (GME) 850 hPa H + T, 700 hPa U | 120/576 | 0000 | |
0625 | H + 36, H + 48 (GME) 500 hPa H + T, surface P | 120/576 | 0000 | |
1834 | H+24 (GME) surface pressure | 120/576 | 1200 | |
0638 | H + 36, H + 48 (GME) 850 hPa H + T, 700 hPa U | 120/576 | 0000 | |
1847 | Repetition 07.30 UTC, H+48 (GME) surface pressure | 120/576 | 1200 | |
0651 | H + 60, H + 72 (GME) 500 hPa H + T, surface P | 120/576 | 0000 | |
1900 | Repetition 08.04 UTC, H+72 (GME) surface pressure | 120/576 | 1200 | |
0704 | H + 60, H + 72 (GME) 850 hPa H + T, 700 hPa U | 120/576 | 0000 | |
1912 | H + 00, H + 24 (GME) surface P and wind (10m) | 120/576 | 1200 | |
0717 | Repetition chart 05.12 UTC | 120/576 | 1800 | |
0730 | H+48 (GME) surface pressure | 120/576 | 0000 | |
0743 | Repetition chart 0525 UTC | 120/576 | 0000 | |
0804 | H+72 (GME) surface pressure | 120/576 | 0000 | |
0817 | H+96 (GME) surface pressure | 120/576 | 0000 | |
1924 | analysis (GME) 500 hPa, pressure | 120/576 | 00/12 | |
1936 | H+36, H+48 (GME) surface P and wind (10 m) | 120/576 | 00/12 | |
1948 | H+24 (GME) 850 hPa, 700 hPa, U | 120/576 | 00/12 | |
0906 | H+36 (GME) 850 hPa, 700 hPa, U | 120/576 | 00/12 | |
0918 | H+72, H+96 (GME) surface P and wind (10 m) | 120/576 | 00/12 | |
2024 | H+24 (GSM) sea and swell | 120/576 | 1200 | |
2036 | H+48 (GSM) sea and swell | 120/576 | 1200 | |
2048 | H+72 (GSM) sea and swell | 120/576 | 1200 | |
0930 | H+24 (GSM) Sea and swell, Wind (10 m) | 120/576 | 0000 | |
2100 | Ice conditions chart North-west Atlantic | 120/576 | 1200 | |
2115 | Ice conditions chart West Baltic Sea | 120/576 | 1500 | |
2137 | H+48 wave prediction | 120/576 | 1200 | |
0943 | Sea surface temperature North Sea | 120/576 | 0000 | |
1004 | H+48 (GSM) Sea and swell, Wind (10 m) | 120/576 | 0000 | |
1018 | H+72 (GSM) Sea and swell, Wind (10 m) | 120/576 | 0000 | |
1029 | H+48 wave prediction | 120/576 | 0000 | |
1050 | Surface weather chart | 120/576 | 06/18 | |
1111 | Transmission schedule | 120/576 | | |
1132 | Test chart | 120/576 | | |
1145 | Repetition chart 1050 utc | 120/576 | 0600 | |

* Special transmissions for FS Polarstern

Notes: Abbreviations have the following meaning: GME Global model (31 layers, 60 km) H Contour lines (gpdam) MSL Mean sea level T Isotherms (° C) U Relative humidity (%)

(INFORMATION DATED (Jun 16, 2004, effective until 02 Oct 2004)
http://www.dwd.de/de/wir/Geschaeftsfelder/Seeschiffahr/Sendeplaene/e_faxplan.htm

VI-2
### CALL SIGNS, FREQUENCIES, TIMES

<table>
<thead>
<tr>
<th>CALL SIGNS</th>
<th>FREQUENCIES</th>
<th>TIMES</th>
<th>EMISSION</th>
<th>POWER</th>
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<tbody>
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### TIME CONTENTS OF TRANSMISSION

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<tr>
<th>TIME</th>
<th>CONTENTS OF TRANSMISSION</th>
<th>RPM/IOC</th>
<th>VALID TIME</th>
<th>MAP AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>0048</td>
<td>FL 390, 340, 300, 240, 180, 100, 50 SW for 12/Z di BRACKNELL</td>
<td>120/576</td>
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<td>AS (ORA LEGALE) 00/Z</td>
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<td>FRZL 00/Z; AU850 00/Z</td>
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<tr>
<td>2322</td>
<td>FS H + 24; DP 3 HR 18/Z</td>
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<tr>
<td>2335</td>
<td>SW TMW FL 100–40 for 06/Z (in mancanza della SW delle 20:48)</td>
<td>120/576</td>
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SW TMW: Tempo significativo + tropopausa e vento massimo;
FZRL: freezing level;
AU: analisi in quota;
FU: prevista in quota;
AS: analisi al suolo;
FS: prevista al suolo;
DP: tendenza barometrica.

## MOSCOW, RUSSIA

### CALL SIGNS FREQUENCIES TIMES EMISSION POWER

<table>
<thead>
<tr>
<th>Call Signs</th>
<th>Frequencies</th>
<th>Times</th>
<th>Emission</th>
<th>Power</th>
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<td>3830 kHz</td>
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<td>5008 kHz</td>
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<td>6987 kHz</td>
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<td>RDD78</td>
<td>11617 kHz</td>
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### TIME CONTENTS OF TRANSMISSION RPM/IOC VALID MAP AREA

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<tr>
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<th>Contents of Transmission</th>
<th>RPM/IOC</th>
<th>Valid Time</th>
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<td>0003-----</td>
<td>18HR SIGNIFICANT WEATHER PROG BELOW 400MB</td>
<td>120/576</td>
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<td>Q</td>
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<td>0016-----</td>
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<td>0029-----</td>
<td>18HR 400MB PROG</td>
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<td>1200</td>
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<tr>
<td>0044-----</td>
<td>24HR SIGNIFICANT WEATHER PROG ABOVE 400MB</td>
<td>120/576</td>
<td>0000</td>
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<tr>
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<td>30HR 200MB PROG</td>
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<tr>
<td>0114-----</td>
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<td>1200</td>
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<td>300MB ANALYSIS</td>
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<td>SURFACE ANALYSIS</td>
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<td>TROPOPAUSE ANALYSIS</td>
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<td>0407-----</td>
<td>1000/500MB THICKNESS ANALYSIS</td>
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<td>03/15</td>
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<td>0543-----</td>
<td>24HR SURFACE PROG</td>
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<td>0000</td>
<td>U</td>
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<tr>
<td>0555-----</td>
<td>24HR/36HR 700MB PROG</td>
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<td>00/12</td>
<td>U</td>
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<tr>
<td>0607-----</td>
<td>24HR/36HR 500MB PROG</td>
<td>120/288</td>
<td>00/12</td>
<td>U</td>
</tr>
<tr>
<td>0619-----</td>
<td>30HR 200MB PROG</td>
<td>120/576</td>
<td>0600</td>
<td>R</td>
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<tr>
<td>0631-----</td>
<td>12HR 300MB PROG</td>
<td>120/576</td>
<td>1200</td>
<td>M</td>
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<tr>
<td>0644-----</td>
<td>NEPHANAL &amp; 24HR PROG</td>
<td>120/576</td>
<td>1200</td>
<td>M</td>
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<tr>
<td>0655-----</td>
<td>24HR/36HR 700MB PROG</td>
<td>120/288</td>
<td>00/12</td>
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<tr>
<td>0679-----</td>
<td>24HR SURFACE PROG</td>
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<td>0703-----</td>
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<tr>
<td>0719-----</td>
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<td>120/576</td>
<td>0600</td>
<td>R</td>
</tr>
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<td>0731-----</td>
<td>12HR 300MB PROG</td>
<td>120/576</td>
<td>1200</td>
<td>M</td>
</tr>
<tr>
<td>0744-----</td>
<td>NEPHANAL &amp; 24HR CLOUD PROG</td>
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<tr>
<td>0758-----</td>
<td>30HR 300MB PROG</td>
<td>120/576</td>
<td>0600</td>
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<td>MAX WIND ANALYSIS</td>
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<td>0828-----</td>
<td>MAX WIND ANALYSIS</td>
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<td>MAX WIND ANALYSIS</td>
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<td>0856-----</td>
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<tr>
<td>0922-----</td>
<td>24HR/36HR 850MB PROG</td>
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<td>0936-----</td>
<td>24HR SURFACE PROG</td>
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<td>U</td>
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<tr>
<td>0946-----</td>
<td>1000MB &amp; 500MB ANALYSIS</td>
<td>120/576</td>
<td>1200</td>
<td>X</td>
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<tr>
<td>1013-----</td>
<td>48HR/72HR/96HR/120HR/144HR SURFACE GRID DATA</td>
<td>90/576</td>
<td>1200</td>
<td>X</td>
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<tr>
<td>1021-----</td>
<td>24HR 200MB PROG</td>
<td>120/576</td>
<td>1200</td>
<td>R</td>
</tr>
<tr>
<td>1035-----</td>
<td>24HR 250MB PROG</td>
<td>120/576</td>
<td>1200</td>
<td>R</td>
</tr>
</tbody>
</table>
MOSCOW, RUSSIA

TIME CONTENTS OF TRANSMISSION RPM/IOC VALID MAP
-----/2231 24HR 300MB PROG 120/576 1200 R
1040/2246 SURFACE ANALYSIS 90/576 09/21 P
1116/------ TECHNICAL STOP
-----/2322 24HR SIGNIFICANT WEATHER PROG 120/576 1200 R
-----/2337 18HR SIGNIFICANT WEATHER PROG ABOVE 400MB 120/576 1200 M
1140/------ 24HR 200MB PROG 120/576 0000 R
-----/2350 18HR 300MB PROG 120/576 0600 M
1155/------ 24HR 250MB PROG 120/576 0000 R

MAP AREAS:
M - 1:15,000,000 56N 018W, 58N 108E, 30N 016W, 32N 072E
N - 1:30,000,000 03N 097W, 03S 027W, EQ 142E, 05S 077E
P - 1:05,000,000 67N 002E, 42N 028E, 74N 061E, 44N 055E
Q - 1:07,500,000 61N 010E, 43N 022E, 61N 071E, 43N 059E
R - 1:30,000,000 39N 066W, 08N 014E, 18N 149E, 02S 088E
U - 1:20,000,000 32N 051W, 15N 014E, 32N 167E, 16N 103E
X - 1:30,000,000 NORTHERN HEMISPHERE 90N - 20N

(INFORMATION DATED 11/1996)
(Update 3/2001) - Frequencies reported as 53.8, 10611 and 13886 kHz and also 5108 and 6890 kHz at irregular times.
(Update 3/2002) - Frequencies reported as 4318, 5108, 6890(night), 10611 and 13886 (night)
(Update 3/2002) - All broadcasts reported as 120/576 or 120/288 mode. 60 or 90 rpm is no longer used.

MURMANSK, RUSSIA

CALL SIGN FREQUENCIES TIMES EMISSION POWER
RBW 41 5336 kHz  F3C
6445.5 kHz CONTINUOUS F3C
7908.8 kHz 1900-0600 F3C
RBW48 10130 kHz 0600-1900 F3C

TIME CONTENTS OF TRANSMISSION RPM/IOC VALID MAP
0700 36HR SURFACE PROG 120/576 0000 A
0800 SEA STATE ANALYSIS 120/576 0600 C
1400 SURFACE TEMP ANALYSIS/ICEBERG POSITIONS 120/576 1200 B
1400 ANAL OF ICEBERG POSITIONS FOR PAST+24HR 120/576 1200 C
1430 24HR SEA STATE PROG 120/576 1200 C
1850 BROADCAST SCHEDULE 90/576
2000 ICEBERG PROGNOSIS 120/576

NOTES: (1) BASIC COVERAGE AREA IS FOR BARENTS SEA.MAP AREAS:
A - 1:05,000,000 67N 032W, 53N 047E, 72N 074E, 51N 004W
B - 1:03,000,000 79N 010E, 74N 010E, 79N 040E, 74N 040E
C - 1:05,000,000 78N 010E, 66N 010E, 78N 070E, 66N 070E

(INFORMATION DATED 11/97)
Update 03/2000 - Current operational frequencies report as being 6446 and 8444 kHz (nights) and 7907 kHz (days).
Update 03/2000 - Broadcast schedule may no longer be transmitted on-air.
Update 03/2002 - May only be transmitting on 6446 kHz.
NORTHWOOD, UNITED KINGDOM

CALL SIGNS | FREQUENCIES | TIMES | EMISSION | POWER
--- | --- | --- | --- | ---
GYA | 2618.5 kHz | At least 2 freq in use at any time | F3C | 10 KW
GYA | 4610 kHz | At least 2 freq in use at any time | F3C | 10 KW
GYA | 8040 kHz | At least 2 freq in use at any time | F3C | 10 KW
GYA | 11086.5 kHz | At least 2 freq in use at any time | F3C | 10 KW

TIME | CONTENTS OF TRANSMISSION | RPM/IOC | VALID TIME | MAP AREA
--- | --- | --- | --- | ---
0000/1200 | Analysis | 120/576 | 18/06 | 
0012/1212 | Prog 24 | 120/576 | 18/06 | 
0024/1224 | Prog 24 Wind/Pptn | 120/576 | 18/06 | 
0036/1236 | Prog 24 Td/SST diff | 120/576 | 18/06 | 
0048/1248 | Ship Ice Accretion | 120/576 | 12/00 | 
0100/1300 | Main schedule | 120/576 | | 
0112/1312 | QSL | 120/576 | | 
0124/1324 | Auxiliary schedule | 120/576 | | 
0036/1336 | Front and Eddies | 120/576 | 00/00 | 
0152/1352 | Analysis | 120/576 | 00/12 | 
0024/1348 | Gale Warning summary | 120/576 | 04/16 | 
0040/1360 | Analysis | 120/576 | 00/12 | 
0042/1362 | Prog 24 | 120/576 | 00/12 | 
0046/1364 | Prog 24 Wind/Pptn | 120/576 | 00/12 | 
0436/1336 | Gale Warning summary | 120/576 | 06/18 | 
0448/1348 | SCEXA TAFS | 120/576 | 06/18 | 
0500/1700 | Analysis | 120/576 | 00/12 | 
0512/1712 | Prog 24 | 120/576 | 00/12 | 
0512/1712 | Prog 48 | 120/576 | 00/12 | 
0536/1736 | SCEXA TAFS | 120/576 | 06/18 | 
0548/1748 | Gale Warning summary | 120/576 | 06/18 | 
0600/1800 | Analysis | 120/576 | 00/12 | 
0612/1812 | Prog 24 | 120/576 | 00/12 | 
0648/1848 | SCEXA TAFS | 120/576 | 07/19 | 
0700/1900 | Spare TAFS | 120/576 | 06/07/12/13 | 
0724/1924 | 850mb WBPT prog 24 | 120/576 | 00/12 | 
0724/1924 | Prog 48 | 120/576 | 00/12 | 
0736/1936 | Prog 72 | 120/576 | 00/12 | 
0748/1948 | Prog 96 | 120/576 | 00/12 | 
0800/2000 | Prog 120 | 120/576 | 00/12 | 
0812/2012 | Thickness/GPH Anal | 120/576 | 00/12 | 
0824/2024 | Sig Winds Countour 48 | 120/576 | 00/12 | 
0836/2036 | Sig Winds Countour 72 | 120/576 | 00/12 | 
0848/2048 | Sig Winds Countour 96 | 120/576 | 00/12 | 
0900/2100 | Analysis | 120/576 | 06/18 | 
0912/2112 | Thickness/GPH Anal | 120/576 | 00/12 | 
0924/2124 | Thickness/GPH Prog 24 | 120/576 | 00/12 | 
0936/2136 | 850 winds 24 | 120/576 | 00/12 | 
0948/2148 | 700 winds 24 | 120/576 | 00/12 | 
1000/2200 | Analysis | 120/576 | 06/18 | 
1012/2212 | Prog 24 | 120/576 | 06/18 | 
1024/2224 | Reduced Vis Prog 24 | 120/576 | 06/18 | 
1036/2236 | Prog 24 Wind/Pptn | 120/576 | 06/18 | 
1048/2248 | Prog 24 Td/SST diff | 120/576 | 06/18 | 
1100/2300 | Analysis | 120/576 | 06/18 | 
1112/2312 | Prog 24 | 120/576 | 06/18 | 
1124/2324 | Sea and Swell Prog 24 | 120/576 | 06/18 | 
1136/2336 | Thickness/GPH Prog 24 | 120/576 | 00/12 | 
1148/2348 | Gale Warning summary | | | 

(INFORMATION DATED 20 MAY 2004)
ANTARTICA
CASEY, ANTARCTICA

<table>
<thead>
<tr>
<th>TIME</th>
<th>CONTENTS OF TRANSMISSION</th>
<th>RPM/IOC</th>
<th>VALID TIME</th>
<th>MAP AREA</th>
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<tr>
<td>0000/1200</td>
<td>48Hr Mean Sea Level Prognosis</td>
<td>120/576</td>
<td>12/00</td>
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<td>0020/1220</td>
<td>48Hr Surface Wind Forecast</td>
<td>120/576</td>
<td>12/00</td>
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<td>0040/1240</td>
<td>48Hr Total Wave Height Forecast</td>
<td>120/576</td>
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<td>0100/1300</td>
<td>60Hr Mean Sea Level Prognosis</td>
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<td>0200/0320</td>
<td>72Hr Mean Sea Level Prognosis</td>
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<td>0700------</td>
<td>BROADCAST SCHEDULE</td>
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<td>WEEKLY</td>
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<td>0800/2000</td>
<td>NMOC Manual Surface Analysis</td>
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<td>00/12</td>
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<tr>
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<td>24Hr Mean Sea Level Prognosis</td>
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<td>1020/2220</td>
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<td>36Hr Mean Sea Level Prognosis</td>
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<td>1120/2320</td>
<td>36Hr Surface Wind Forecast</td>
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<td>1140/2340</td>
<td>36Hr Total Wave Height Forecast</td>
<td>120/576</td>
<td>12/00</td>
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</table>

NOTES: COMMENTS OR SUGGESTIONS MAY BE FORWARDED TO:
STEVE PENDLEBURY
s.pendlebury@bom.gov.au
Phone: +61 3 62212021, FAX +61 3 62212080
GPO BOX 727G
Hobart, Tasmania 7001, Australia

APPENDICES
The Internet is **not** part of the National Weather Service's operational data stream and should never be relied upon as a means to obtain the latest forecast and warning data. Become familiar with and use other means such as NOAA Weather Radio to obtain the latest forecasts and warnings.

*Note: Any reference to a commercial product or service does not imply any endorsement by the National Weather Service as to function or suitability for your purpose or environment.*

The **Marine Product Dissemination Information webpage** contains information on the dissemination of U.S. National Weather Service marine products including radiofax such as frequency and scheduling information as well as links to products. The webpage may be found at:

http://www.nws.noaa.gov/om/marine/home.htm

**Marine Text Forecasts and Products**
The majority of National Weather Service (NWS) forecasts and warnings may be found under the NWS webpage (http://www.nws.noaa.gov). Of specific interest to mariners are NWS Marine Text Forecasts and Products (http://www.nws.noaa.gov/om/marine//home.htm#text). For convenience, High Seas, Offshore and Coastal marine forecasts are subdivided by sea area or zone and available via the Internet using our text interface or graphic interface. **Individual NWS Forecast Offices and Centers** producing marine forecasts provide links to their products as well as additional regionally focused information (http://www.nws.noaa.gov/om/marine/marine_map.htm).

**Marine Graphic Forecasts and Products**
Graphic marine forecasts are produced by NWS for broadcast via radiofax and also made available via the Internet at Marine Radiofax Charts (http://weather.noaa.gov/fax/marine.shtml). The National Weather Service also plans to make available marine forecast data in gridded and vector formats for display on electronic charts and use by other value-added applications. A limited number of graphics using these data are available via the Internet on an experimental basis. See http://www.nws.noaa.gov/om/marine/newsggridded.htm

Also see **Computer Generated Model Guidance** below.

**Satellite and RADAR Imagery**
Satellite imagery may be found on the GOES webpage (http://www.goes.noaa.gov/) and is also available from NASA (http://rsd.gsfc.nasa.gov/goes/). Ocean surface winds and other data derived from polar orbiting and geostationary satellites may be found on NOAA's Marine Observing Systems Team Homepage (http://manati.wwb.noaa.gov/doc/oppt.html) and NOAA's Coastwatch Homepage (http://sgio12.wwb.noaa.gov/COASTWATCH/). Information and links to Sea Surface Temperature Charts and Gulf Stream charts may be found on our FAQ webpage (http://www.nws.noaa.gov/om/marine/faq.htm). **NEXRAD Doppler Radar images** (http://weather.noaa.gov/radar/mosaic/DS.p19r0/ar.us.conus.shtml) are available on the Internet on the NWS Homepage (http://www.nws.noaa.gov) and local NWS Forecast Offices homepages (http://www.nws.noaa.gov/om/marinr/marine_map.htm). NEXRAD Doppler Radar images may also be found on local cable channels and the Internet webpages of local media including TV stations, radio stations and newspapers as well as others

**Ice Analyses, Forecasts and Iceberg Reports**
Ice analyses, forecasts and iceberg reports are available from the National Ice Center (http://www.natice.noaa.gov/) and the U.S. Coast Guard's International Ice Patrol (http://www.uscg.mil/lantarea/iip/home.html), and local NWS marine forecast offices in areas such as Alaska where ice is a concern. Ice forecasts and observations are also made available as radiofax, text products and computer generated model guidance.
Computer Generated Model Guidance

Computer generated model guidance products used by marine forecasters is available from the Ocean Modeling Branch (http://polar.wwb.noaa.gov/), the Environmental Modeling Center (http://www.emc.ncep.noaa.gov/), the National Ocean Services’s Chesapeake Bay Operational Forecast System (http://co-ops.nos.noaa.gov/CBOFS/cbofs.shtml), and the Great Lakes Forecasting System (http://superior.eng.ohio-state.edu/). The Weather Charts webpage (http://weather.noaa.gov/fax/graph.shtml) contains charts, intended as guidance to forecasters, which can prove of value to mariners. Caution...these data have not been validated by marine forecasters and may be misleading. Mariners should use these data in conjunction with forecaster generated forecasts.

Note: Several charts listed under "Weather Charts", which are no longer required to support NWS operations, may be terminated or made available at alternate sites. This should not include those which are broadcast by marine radiofacsimile.

Marine Climatological Information

User-friendly climatological information for marine coastal areas may be found in Appendix T of the National Ocean Service’s Coast Pilot's, volumes 1-9 (http://chartmaker.ncd.noaa.gov:80/nsd/cpdownload.htm). These appendices, which were prepared by the National Climatic Data Center (http://lwf.ncdc.noaa.gov/oa/ncdc.html), also contain other useful meteorological information such as conversion tables. Visit their webpage for further information.

Foreign Marine Forecasts


The WMO also introduced a GMDSS Webpage which provides links to worldwide meteorological bulletins and warnings issued for high seas via SafetyNet (as a first step). See: http://weather.gmdss.org/

Buoy and Other Real-Time Observations

The latest coastal and offshore weather observations from NOAA fixed and drifting data buoys and Coastal-Marine Automated Network (C-MAN) stations may be found at the National Data Buoy Center webpage (http://www.ndbc.noaa.gov). Real time meteorological and oceanographic observations for several sites are also available from the Physical Oceanographic Real-Time System (Ports) (http://coops.nos.noaa.gov/d_ports.html). PORTS is a program of the U.S. National Ocean Service (http://www.nos.noaa.gov) that supports safe and cost-efficient navigation by providing ship masters and pilots with accurate real-time information required to avoid groundings and collisions. Several National Ocean Service tide gages are also equipped with ancillary meteorological sensors (http://tidesonline.nos.noaa.gov/geographic.html). Regionally focused observation data may also be found on the webages of local NWS Forecast Offices. Some marine observations may also be found on our NWS Marine Product Listing and Schedule (http://www.nws.noaa.gov/om/marine/forecast.htm). Historical and real-time beach temperature data is available from the NODC Coastal Water Temperature Guide (http://www.nodc.noaa.gov/dsdt/cwtg/). A variety of marine observations may be viewed on the National Ocean Service’s nowCOAST WEb Portal(BETA), (http://chartmaker.ncd.noaa.gov/csd/op/nowcoast.htm).

NOAA’s Forecast Systems Laboratory (FSL) offers a Display of Surface Data (http://www-frd.fsl.noaa.gov/mesonet/) from several government, commercial and voluntarily operated mesonets as well as observations of those of the Voluntary Observing Ship (VOS) Program and data buoys. Among these mesonets, are observing systems at several U.S. Coast Guard stations (http://uscg.instaweather.com/) as part of the Homeland Security WeatherNet Network (http://www.aws.com/aws_2001/homeland/index.html) which is a public-private partnership between AWS Convergence Technologies (http://www.aws.com/aws_2001/default.asp) and NWS. A variety of marine observations may also be viewed on the National Ocean Service’s BETA nowCOAST Web Portal (http://chartmaker.ncd.noaa.gov/csd/op/nowcoast.htm).
For mariners with a low speed Internet connection....... The latest buoy or C-MAN data may be retrieved via the Internet as in the following example where 44017 refers to buoy #44017.

http://www.ndbc.noaa.gov/mini_station_page.phtml?station=44017

**Tide Predictions, Observations and Storm Surge Forecasts**

Near real-time Water Level Observations, and Predicted Tide Information http://www.co-ops.nos.noaa.gov for the calendar year are available from the National Ocean Service (http://www.nos.noaa.gov). Read the NOS Tides FAQ (http://www.co-ops.nos.noaa.gov/faq1.html) for further information on obtaining NOS tides and tidal current data. Caution is urged in using tide data made available at University and other webpages. This information may not be based on current government data and be of unknown quality.


Experimental, computer generated, Extratropical Water Level Forecasts (www.nws.noaa.gov/tdl/etsurge) are available from the National Weather Service's Meteorological Development Laboratory (www.nws.noaa.gov/tdl/). Status maps are provided to give the user a quick overview of a region. Forecasts of storm surge produced as a result of a tropical storm or hurricane are available from your local NWS Forecast Office (www.nws.noaa.gov/om/marine/marine_map.htm).

The National Ocean Service's Chesapeake Bay Operational Forecast System (http://co-ops.nos.noaa.gov/CBOFS/cbofs.shtml) has been created by NOS to provide the maritime community with improved short-term predictions of water level in the Chesapeake Bay. Please be advised that these predictions are based on a hydrodynamic model and, as such, should be considered as computer-generated forecast guidance.

**Historic Weather Forecasts, Satellite Images and Oceanographic Data**

For historic weather forecasts, satellite images and oceanographic data, contact the National Climatic Data Center and National Oceanographic Data Center, found on our listing of Phone Numbers and Addresses (http://www.nws.noaa.gov/om/marine/phone.htm).

Voluntary Observations from Mariners

All NWS marine forecasts rely heavily on the Voluntary Observing Ship (VOS) program (http://www.vos.noaa.gov/) for obtaining meteorological observations. Ship observations may also be found on the National Data Buoy Center - Observations Search (http://www.ndbc.noaa.gov/obs_search.shtml), National Data Buoy Center - Ships Observation Report (http://www.ndbc.noaa.gov/ship_obs.phtml), NOAA's Forecast Systems Laboratory (choose maritime) (http://www-frd.fsl.noaa.gov/mesonet/), Penn State http://www.ems.psu.edu/cgi-bin/wx/offshore.cgi), Oceanweather (http://www.oceanweather.com/data/index.html) and Great Lakes Ship Locations (http://reef.atmos.colostate.edu/drummond/)

The National Weather Service has a number of other volunteer observation programs including the SKYWARN, MAREP, MAROB, MARS, APRSWXNET/Citizen Weather Observer Program (CWOP) and the Cooperative Observer Program (COOP) which are of benefit to the marine community. See: http://www.nws.noaa.gov/om/marine/voluntary.htm

**Marine Webpages**

The Internet contains a great number of webpages of interest to the mariner. Visit our Links webpage (http://www.nws.noaa.gov/om/marine/mlinks.htm) for a listing of recommended webpages pertaining to Marine Weather. The U.S. Coast Guard Maritime Telecommunications
Information webpage (http://www.navcen.uscg.gov/marcomms) contains an excellent description of marine communication systems. There are also many other Internet sites of interest to the mariner. Use one the Internet search engines to search on topics such as "marine weather", "radiofax", "radiofacsimile", "weather buoys", "tides", etc. The NOAA Library (http://www.lib.noaa.gov) provides an excellent listing of links to marine related webpages within NOAA and elsewhere.

Marine Weather Publications On the Web
Many marine weather related government publications are available on the Web. Visit our publications webpage (http://www.nws.noaa.gov/om/marine/pub.htm) for several we recommend including our popular Marine Service Charts, the Mariners Weather Log Magazine, and our listing of Worldwide Marine Radiofacsimile Broadcast Schedules (this publication).

Internet Access for Mariners
Internet at sea can be problematic unless you stay within cellular telephone range of shore. Internet access using cellular technology is technically challenging and potentially frustrating as well. Terrestrial wireless Internet services such as those provided by GoAmerica (www.goamerica.net), Palm.Net (http://www.palm.com/products/palmvii/wireless.html), OmniSky (www.omnisky.com/), TeleSea (http://www.telesawireless.net/), Motient (http://www.motient.com/), eHarbor (www.eharbor.org) and AlwaysOnline.net (www.alwaysonline.net) are beginning to become available, however, these provide limited maritime coverage. These companies may employ "Marine WIFI" technology which is rapidly becoming popular at marinas and in favorite harbor areas. Satellite services including Inmarsat (www.inmarsat.org), Iridium (www.irdium.com/), Globalstar (www.globalstarusa.com), Thuraya (www.thuraya.com), Emsat (www.eutelsat.com/products/2_4_2.html), AceS (www.acesinternational.com/), tracNet/DirecPC (www.kvh.com/MarineSat/index.asp?flash=yes), Mobile Satellite Ventures (www.tmi.ca), Boatracs (www.boatracs.com, Orbcomm (www.orbcomm.com), Digital Seas International (http://www.mtnsat.com/digitalseas.htm), and MTN (www.mtnsat.com) are available, however, costs are generally greater.

Several companies offer e-mail services designed to optimize satellite connectivity including MAILASAIL (http://www.mailasail.com/), MarineNet (http://www.marinenet.net/), Telaurus (http://www.telaurus.net/ ) and UUPLUS (http://www.uuplus.com/). Full Internet access is often available if you have a satellite terminal onboard, but presently unless you restrict your use to e-mail messages, costs can be high. A number of satellite services such as Inmarsat-C offer e-mail messaging services only and provide no direct access to the World Wide Web. Several transmission and data compression schemes are available and in development to make the Web more accessible to the mariner. There are also several public FTP-to-EMAIL and WWW-to-EMAIL servers available to allow Internet access for users who do not have direct or cost effective access to the World Wide Web but who are equipped with an e-mail system. Visit http://www.faqs.org/faqs/internet-services/access-via-email/ for information. Low cost, worldwide, access to the World Wide Web via satellite should be available to the mariner in the next five to ten years.

E-mail access is available offshore if you have an HF marine radio from companies such as Sailmail (www.sailmail.com), SeaMail (www.seamail.org), CruiseEmail (www.cruiseemail.com/index.html), MarineNet (www.marinenet.net), Kielradio (www.kielradio.de/GB/Start_GB.htm), Globe Wireless (www.globewireless.com), Mobile Marine Radio Network-WLO (http://world.std.com/~msgctr/). E-mail can be accomplished at no cost using amateur radio (http://www.nws.noaa.gov/om/marine/ham.htm).

The domain of the Internet is rapidly expanding to now include wireless devices such as so-called "Internet-Ready" digital cellular phones and Personal Data Assistants (PDAs). These offer great potential for making marine forecasts available to coastal mariners, who have limited other options.
available. The majority of these are by voice where there is always the possibility of misunderstanding. Visit http://www.nhc.noaa.gov/aboutwap.html where you will find NHC/TPC's wireless web page. There you can find the link to obtain NHC/TPC's most popular hurricane products using your own Internet-ready phone, or use one of simulators for which a link is provided. Also visit the Miami Forecast Office's Wireless Access Page (http://www.srh.noaa.gov/mia/newpage/cgi-bin/master.pl?suite=wireless)

A number of Cellular service providers are beginning to offer value-added Internet-like services which provide access to NOAA tide data, marine forecasts, and other items of interest to the wireless customer. These require a digital phone with some of the more advanced features. See your Cellular service provider for details. There may be a nominal fee required for using these services. Examples of specific interest to the mariner include Ekkosoft's "SaltWater Tides" and "MarineWeather with marine411" (http://www.ekkosoft.com/)

A Palm Query application named MarineWX for PALM compatible PDA's is now available to obtain the most popular NWS marine text forecasts. This software requires that your Palm be directly connected to the Internet using a Palm Modem, interconnection to your cellular telephone, etc. See: http://www.nws.noaa.gov/om/marine/internet.htm#palm

**National Weather Service Products Available Via E-MAIL (FTPMAIL)**
National Weather Service marine text forecasts and radiofax charts are available via e-mail. Further, FTPMAIL may be used to acquire any file on a *.noaa.gov FTP server. The FTPMAIL server is intended to allow Internet access for mariners and other users who do not have direct access to the World Wide Web but who are equipped with an e-mail system. Turnaround is generally in under one hour, however, performance may vary widely and receipt cannot be guaranteed. To get started in using the NWS FTPMAIL service, follow these simple directions to obtain the FTPMAIL "help" file (11 KBytes), or visit http://weather.noaa.gov/pub/fax/ftpmail.txt.

Send an e-mail to: ftppmail@weather.noaa.gov
Subject line: Put anything you like
Body: help

The FTPMAIL "help", command and product index files are included in Appendix B of this document for convenience. Be certain to occasionally download these files to make certain you have the latest versions available.

An FAQ webpage describing several public and commercial FTP-to-EMAIL and WWW-to-EMAIL servers may be found at:


A webpage describing several different e-mail "robots" similar in concept to FTPMAIL, including some with advanced features such as allowing retrieval of NWS marine GRIB files, simple webpages, and allowing products to be retrieved on a scheduled, recurring basis may be found at: http://weather.noaa.gov/pub/fax/robots.txt

**National Hurricane Center Listserver**
The National Hurricane Center operates an e-mail listserver which is special interest to mariners who do not have direct access to the World Wide Web but who are equipped with an e-mail system. This listserver provides an automated means to receive NWS hurricane forecast products via e-mail. However, performance may vary and receipt cannot be guaranteed. This is an experimental service. Interruptions or duplications in e-mail deliveries while we test the system are to be expected. Notices will be sent if any extended interruptions are encountered. See instructions on using the NHC listserver (http://www.nhc.noaa.gov/signup.html).
University of Illinois Listserver
The University of Illinois at Urbana-Champaign operates an e-mail listserver (http://ralph.centerone.com/wxlist/) of which two Lists, WX-ATLAN, and WX-TROPL are of special interest to mariners who do not have direct access to the World Wide Web but who are equipped with an e-mail system. These Lists provide an automated means to receive NWS hurricane forecast products via e-mail. However, performance may vary and receipt cannot be guaranteed. For instructions on using the UIUC listserver visit http://weather.noaa.gov/pub/fax/uiuclist.txt.

Internet Broadcasts
Marine weather data may also be obtained via the Internet using EMWIN (http://www.nws.noaa.gov/om/marine/emwin.htm). As part of the New NOAA Weather Wire Service (http://www.nws.noaa.gov/om/marine/wxwire.htm). DynCorp (http://dynis.is.dyncorp.com/contracts/nwws/index.html) broadcasts the entire Weather Wire product stream on the Internet as a commercial service.

Change Notices

Directories of NWS Marine Forecasts
For Website developers or other "power" users, many NWS marine text forecast products are available at the following URL's, indexed by WMO header or zone.

http://weather.noaa.gov/pub/data/forecasts/marine/
ftp://weather.noaa.gov/data/forecasts/marine/
http://weather.noaa.gov/pub/data/raw/
ftp://weather.noaa.gov/data/raw/
http://iwin.nws.noaa.gov/pub/data/text/
ftp://iwin.nws.noaa.gov/data/text/
http://iwin2.nws.noaa.gov/pub/data/text/
ftp://iwin2.nws.noaa.gov/data/text/
http://www.ndbc.noaa.gov/data/Forecasts/
http://asp1.sbs.ohio-state.edu/text/marine/

Many National Weather Service Weather Charts may be found in the following directories, indexed by WMO ID or other identifier.

http://weather.noaa.gov/pub/fax/
ftp://weather.noaa.gov/fax/
http://www.opc.ncep.noaa.gov/shtml/
NATIONAL WEATHER SERVICE INTERNET SITES

NWS Homepage http://www.nws.noaa.gov
NWS Marine Forecasts http://www.nws.noaa.gov/om/marine/home.htm
NWS Marine Text Products http://www.nws.noaa.gov/om/marine/home.htm#text
NWS Voluntary Observing Ship Program http://www.vos.noaa.gov
AMVER/SEAS Homepage http://seas.amverseas.noaa.gov/seas/

U.S. NAVY AND OTHER WEATHER INTERNET SITES

See these sites for further links

Naval Oceanographic Office http://www.navo.navy.mil
Navy Fleet Numerical http://www.fnmoc.navy.mil
International Ice patrol http://www.uscg.mil/lantarea/iip/home.html
National Ice Center http://www.natice.noaa.gov
WMO Homepage http://www.wmo.ch
JCOMM GMDSS http://weather.gmdss.org/
USCG Maritime Telecommunications http://www.navcen.uscg.gov/marcomms

APPENDIX A-7
FTPMAIL help file

WARNING

This is a United States Government Computer. Use of this computer for purposes for which authorization has not been extended is a violation of federal law.

(Reference Public Law 99-474)

For Help contact:

Timothy.Rulon@noaa.gov 301-713-1677 x 128
Clifford.Fridlind@noaa.gov 301-713-0882 x 122

**** NEW USERS....Read these notes on CAPITALIZATION *****

CORRECT CAPITALIZATION FOR COMMANDS, DIRECTORY AND FILE NAMES IS CRITICAL. FOLLOW THE EXAMPLES CLOSELY.

*.noaa.gov sites are the only valid FTP sites for this server

This National Weather Service (NWS) FTPMAIL server is intended to allow Internet access for users who do not have direct access to the World Wide Web but who are equipped with an e-mail system. The service is free and no signup is required. Using FTPMAIL, users can request files from NWS and have them automatically e-mailed back to them. Turnaround is generally in under one hour, however, performance may vary widely and receipt cannot be guaranteed.

NOTICE - Check time and date of forecasts. Downloaded data may not represent the latest forecast. The Internet is not part of the National Weather Service's operational data stream and should never be relied upon as a means to obtain the latest forecast and warning data. Become familiar with and use other means such as NOAA Weather Radio to obtain the latest forecasts and warnings. Please read our disclaimer at http://www.nws.noaa.gov/disclaimer.html

Although these instructions are tailored for marine users to gain access to graphic(radiofax) and text products via e-mail, all publicly available data on any *.noaa.gov Internet FTP server is accessible using the FTPMAIL server.

To use FTPMAIL, the user sends a small script file via e-mail to NWS requesting the desired file(s). An error message will be returned if the script file is in error.

Users should be familiar with sending and receiving messages and attachments with their particular e-mail system. Attachments are received in UUencoded form. The majority of modern e-mail systems handle the conversion automatically, other users will need to run the UUdecode program for their particular system. See your system administrator if you have any questions on this topic. The UUencoding process can add 0 to >100% overhead depending on your system and the type of file.

Files sizes for NWS radiofax graphic files average 35KB but can
be much greater. Users should be aware of the costs for operating their particular e-mail system before attempting to use FTPMAIL, especially when using satellite communication systems. For marine users, using FTPMAIL via INMARSAT-C for obtaining current NWS radiofax graphic files is cost prohibitive. Using the FTPMAIL compression feature of FTPMAIL is not recommended as these files are already in a compressed T4(G4) format enveloped in TIFF for viewing. You will need a graphics program capable of displaying files in this format in order to view them. Suggestions for TIFF viewers may be found in file http://weather.noaa.gov/fax/rfaxtif.txt

NEW! Radiofax .TIF files now also available as (larger) .gif files

The following examples demonstrate the use of FTPMAIL. Indexes of currently available marine products, the list FTPMAIL commands, and suggestions for TIFF viewers may be obtained following these instructions.

To use FTPMAIL:
  o Send an e-mail via the Internet to: ftpmail@weather.noaa.gov
  o Put anything you like on the subject line
  o Enter a command script in the body of the message

NOTE: Correct capitalization for commands, directory and file names is critical

Example scripts are:

help

    Connect to default_site (weather.noaa.gov) and send back this help file to e-mail address of requestor

open
cd fax
get PWAE98.TIF
quit

    Connect to default_site (weather.noaa.gov) and send back the chart file PWAE98.TIF to e-mail address of requestor

open
cd data
cd forecasts
cd marine
cd coastal
cd an
get anz231.txt
quit

    Connect to default_site (weather.noaa.gov) and send back coastal marine zone forecast ANZ231 to e-mail address of requestor

open
cd data
cd forecasts
cd zone
cd md
get mdz009.txt
quit
Connect to default_site (weather.noaa.gov) and send back public land zone forecast MDZ009 to e-mail address of requestor. (Contact your local forecast office to identify the public forecast zone number for your county, known as the UGC code)

reply-to captain.kidd@noaa.gov
open
dir
quit

Connect to default_site (weather.noaa.gov) and send back the contents of the top level directory to captain.kidd@noaa.gov

open www.ndbc.noaa.gov
cd data
cd latest_obs
get 42007.txt
get gdill1.txt
quit

Connect to the National Data Buoy Center's FTP server and send back the latest observations for buoy #42007 and C-MAN station GDIL1

open
cd fax
get ftpcmd.txt (List of FTPMAIL commands)
ge rfaxtif.txt (TIFF suggestions)
ge rfaxatl.txt (Atlantic radiofax file directory)
ge rfaxpac.txt (Pacific radiofax file directory)
ge rfaxmex.txt (Gulf of Mexico and Trop Atl radiofax file dir)
ge rfaxak.txt (Alaska radiofax and ice file directory)
ge rfaxhi.txt (Hawaii radiofax file directory)
ge otherfax.txt (Foreign charts file directory)
ge marinel1.txt (Highsea,Offshore,Open Lakes,NAVTEX text file dir)
ge marine2.txt (Hurricane text file directory)
ge marine3.txt (Coastal forecasts text file directory)
ge marine4.txt (Offshore forecasts by zone directory)
ge marine5.txt (Atlantic coastal forecasts by zone directory)
ge marine6.txt (Pacific coastal forecasts by zone directory)
ge marine7.txt (Gulf of Mexico coastal forecasts by zone dir)
ge marine8.txt (Great Lakes coastal forecasts by zone directory)
ge marine9.txt (Alaska coastal forecasts by zone directory)
ge marine10.txt (Hawaii&Trust coastal forecasts by zone directory)
ge uk.txt (UK marine forecasts from Bracknell directory)
ge canada.txt (Canadian marine text forecast directory)
ge buoydata.txt (Buoy and C-MAN data directory)
ge robots.txt (Marine forecasts via e-mail systems)
quit

Connect to default_site (weather.noaa.gov) and send back the requested files to e-mail address of requestor.

Many, but not all National Weather Service forecast products may be obtained using FTPMAIL if the WMO/AWIPS Header is known as follows. Be aware that several NWS products share WMO headers so the desired forecast may be overwritten at times by another product.
Example:
To obtain the Atlantic high seas Forecast, WMO header FZNT01 KWBC,
AWIPS HEADER HSFAT1

Send an e-mail to: ftplemail@weather.noaa.gov
Subject Line: Put anything you like
Body:
open iwin.nws.noaa.gov
cd data
cd text
cd FZNT01
get KWBC.TXT
quit

or

Send an e-mail to: ftplemail@weather.noaa.gov
Subject Line: Put anything you like
Body:
open
cd data
cd raw
cd fz
get fznt01.kwbc.hsf.at1.txt
quit

*****************************************************************************SPECIAL NOTES*****************************************************************************

CORRECT CAPITALIZATION FOR COMMANDS, DIRECTORY AND FILE
NAMES IS CRITICAL. FOLLOW THE EXAMPLES CLOSELY.

FTPMAIL e-mail requests must be sent in ASCII/Plain Text only.
HTML formatting will likely result in no response from the FTPMAIL server.

Problems have recently been reported by users of Hotmail. If you are
a Hotmail user and are using the system successfully, please notify
us of and your experiences and any workarounds you may have developed.

If you restrict incoming e-mail as a means of preventing spam, you
must program your e-mail system to allow messages from:
ftpmail@tgsv22.nws.noaa.gov, ftpmail@tgsv23.nws.noaa.gov,
ftpmail@tgsv24.nws.noaa.gov, ftpmail@tgsv25.nws.noaa.gov

The majority of error messages have been disabled. You may or may
not receive an error message back from FTPMAIL if your script is in
error.

FTPMAIL problems are occasionally encountered when embedded control
characters are received within the e-mail message received by the
FTPMAIL server. These control characters may be introduced by the
user's e-mail system and may be unavoidable. We are working to develop
a version of FTPMAIL which parses these control characters.

Also be certain that each of your commands is not followed by any trailing
space(s) or you will see an error message with a number of statements
saying "=20"

Problems may also be encountered in trying to go down several levels
of directories simultaneously, e.g. "cd data/forecasts/marine/test".
Use a series of commands "cd data", "cd forecasts", "cd marine" instead.

In both these instances, the likely error will be "Directory not Found"
If the FTPMAIL server is too busy, you will receive an e-mail with a subject line similar to: "ftpmail job queuing for retry queue/097095.69568" Your request will be resubmitted automatically and your requested file(s) should be received within several hours.

****************************************************************

If you have access to the World Wide Web be certain to check out the following webpages. See these pages for further links.

http://www.nws.noaa.gov NWS Homepage
http://www.nws.noaa.gov/om/marine/home.htm NWS Marine Page

An FAQ webpage describing several public and commercial FTP-to-EMAIL and WWW-to-EMAIL servers may be found at: www.faqs.org/faqs/internet-services/access-via-email/

A free service which is similar in concept to FTPMAIL and also allows retrieval of NWS marine GRIB files, simple webpages, and products to be retrieved on a scheduled, recurring basis may be found at: www.saildocs.com or send a blank email to: info@saildocs.com

Note: Any reference to a commercial product or service does not imply any endorsement by the National Weather Service as to function or suitability for your purpose or environment.

Author: Timothy Rulon, Marine and Coastal Weather Services Branch W/OS21 National Weather Service
Last Modified April 01, 2004
Document URL: http://weather.noaa.gov/pub/fax/ftpmail.txt
ftp://weather.noaa.gov/fax/ftpmail.txt
FTP's files and sends them back via electronic mail

NOTE: *.noaa.gov are the only valid FTP sites for this FTPMAIL server.

NOTE: Capitalization is critical for this server. Commands are un-capitalized, while some directory and file names are CAPITALIZED, while others are un-capitalized.

To use FTPMAIL:
- Send an E-mail via the Internet to ftpmail@weather.noaa.gov
- Put anything you like on the subject line
- Enter a command script in the body of the message

Example scripts are:

```
reply-to lmjm@server.big.ac.uk
open
dir
quit
```

Connect to default_site (weather.noaa.gov) and send back the contents of the top level directory to lmjm@server.big.ac.uk

```
open
cd fax
get PWAG01.TIF
quit
```

Connect to default_site (weather.noaa.gov) and send back the chart file PWAG01.TIF to e-mail address of requestor

>>Valid commands to the ftpmail gateway are:

```
reply-to email-address       Who to send the response to. This is optional and defaults to the users email address

help                         Just send back help

delete jobid                 Delete the given job
   (jobid is received from server)

open [site [user [pass]]]    Site to ftp to. Default is:
   default_site anonymous reply-to-address.
```

>>If there was an open then it can be followed by up to 100 of the following commands

```
cd pathname                  Change directory.
```
cd ..                    Move up 1 directory.
cd /                     Move to the root directory.

ls [pathname]            Short listing of pathname.
                          Default pathname is current directory.
dir [pathname]           Long listing of pathname.
                          Default pathname is current directory.

get pathname             Get a file and email it back.
compress                 Compress files/dir-listings before emailing back
gzip                     Gzip files/dir-listings before emailing back
uuencode                 These are mutually exclusive options for
btoa                     converting a binary file before emailing.
                        (Default is uuencode.)

force uuencode          Force all files or directory listings to
force btoa               be encoded before sending back.
                        There is no default.

mime                     Send the message as a Mime Version 1.0 message.
                        Text will be sent as text/plain charset=US-ASCII
                        Non-text as application/octet-stream.
                        If the file is splitup then it will be sent
                        as a message/partial.

force mime               As mime but force text files to be sent as
                          application/octet-stream

no [compress|gzip|uuencode|btoa|mime]   Turn the option off.

size num[K|M]            Set the max size a file can be before it
                        is split up and emailed back in parts to
                        the given number of Kilo or Mega bytes.
                        This is limited to 275KB. Default is 275KB.

mode binary              Change the mode selected for the get
mode ascii                command. Defaults to binary.

quit                     End of input - ignore any following lines.


Author: Timothy Rulon, Office of Meteorology, National Weather Service
Last Modified August 01, 2003
Document URL: http://weather.noaa.gov/pub/fax/ftpcmd.txt
              ftp://weather.noaa.gov/fax/ftpcmd.txt
The (G4)/TIFF format is used because the facsimile charts are in BLACK & WHITE and other encoding formats generate significantly larger files. The suggested TIFF viewers listed here are to help in your selection and have been found to work in viewing these charts in past testing. The viewers and sources listed imply no endorsement by the NWS.

Commercial Viewers for DOS/Windows 3.1
HyperFax.111 by Hypersoft (603) 356-0210
Viewdirector by TMS, Inc. (800) 944-7654
Imagehandler by LeadTools (800) 637-4699
Keyview by FTP Software (800) 242-4FTP
Snowview Platinum by Snowbound Software (617) 630-9495

Shareware viewers for DOS/Windows 3.1
Paint Shop Pro 3.0 by Jasc, Inc. (612) 930-9171
Graphic Workshop v1.1p
VIDVUE v1.1 by L. Gozum
QuickView v1.2e (limited - can't rotate)

Shareware viewers for OS/2
PMJPEG
PMView v0.9

Shareware viewer for Apple/MAC
GraphicConverter 2.6

Author: Timothy Rulon, Office of Meteorology, National Weather Service
Last Modified Tuesday, 14-JAN-97, 10:17:34
Document URL: http://tgsv5.nws.noaa.gov/pub/fax/rfaxtif.txt
NATIONAL WEATHER SERVICE RADIOFAX PRODUCTS
for the Western Atlantic Ocean

U.S. Coast Guard Communications Station NMF - Boston, Massachusetts

Assigned frequencies 4235.0, 6340.5, 9110, 12750 kHz

Select a carrier frequency 1.9 kHz below those listed when using a single sideband radio in the USB mode to receive these broadcasts.

The latest version of marine weather charts for broadcast by the U.S. Coast Guard are available from the National Weather Service Telecommunication Gateway on this server. The listed charts are in the G4(T4) format and enveloped in TIFF for viewing. These charts may be found in directory:
ftp://weather.noaa.gov/fax or http://weather.noaa.gov/pub/fax

.TIF files now also available as .gif files

<table>
<thead>
<tr>
<th>FILE</th>
<th>NAME</th>
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<td>WIND/SEAS CHARTS</td>
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<tr>
<td>12Z Sea State Analysis, 10E-95W Northern Hemisphere</td>
<td>PJAA99.TIF</td>
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<tr>
<td>00Z Sea State Analysis, 45W-85W Northern Hemisphere</td>
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<td>Sea State Analysis, (Most Current)</td>
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<tr>
<td>24HR Wind/Wave Chart VT00Z Forecast 45W-85W N. Hemisphere</td>
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<tr>
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<td>48HR Wave Period VT12Z Forecast 10E-95W Northern Hemisphere</td>
<td>PWAAB10.TIF</td>
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<tr>
<td>48HR Wave Period Chart Forecast (Most Current)</td>
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<td>96HR Wave Period Chart VT12Z Forecast 10E-95W N. Hemisphere</td>
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| SURFACE CHARTS        |                       |
| 00Z Preliminary Surface Chart Analysis 45W-85W N. Hemisphere | PWAAB99.TIF          |
| 06Z Preliminary Surface Chart Analysis 45W-85W N. Hemisphere | PWAAB99.TIF          |
| 12Z Preliminary Surface Chart Analysis 45W-85W N. Hemisphere | PWAAB99.TIF          |
| 18Z Preliminary Surface Chart Analysis 45W-85W N. Hemisphere | PWAAB99.TIF          |
| Preliminary Surface Chart Analysis (Most Current) | PWAAB99.TIF          |
| 00Z Surface Analysis Chart, Part 1, 10E-45W N. Hemisphere | PWAAB99.TIF          |
| 00Z Surface Analysis Chart, Part 2, 40W-95W N. Hemisphere | PWAAB99.TIF          |
| 06Z Surface Analysis Chart, Part 1, 10E-45W N. Hemisphere | PWAAB99.TIF          |
| 06Z Surface Analysis Chart, Part 2, 40W-95W N. Hemisphere | PWAAB99.TIF          |
| 12Z Surface Analysis Chart, Part 1, 10E-45W N. Hemisphere | PWAAB99.TIF          |
| 12Z Surface Analysis Chart, Part 2, 40W-95W N. Hemisphere | PWAAB99.TIF          |
| 18Z Surface Analysis Chart, Part 1, 10E-45W N. Hemisphere | PWAAB99.TIF          |
| 18Z Surface Analysis Chart, Part 2, 40W-95W N. Hemisphere | PWAAB99.TIF          |
| Surface Analysis Chart, Part 1, (Most Current) | PWAAB99.TIF          |
| Surface Analysis Chart, Part 2, (Most Current) | PWAAB99.TIF          |
| 24HR Surface Chart VT00Z Forecast 45W-85W Northern Hemisphere | PWAAB99.TIF          |
| 24HR Surface Chart VT12Z Forecast 45W-85W Northern Hemisphere | PWAAB99.TIF          |
| 24HR Surface Chart Forecast (Most Current) | PWAAB99.TIF          |
| 48HR Surface Chart VT00Z Forecast 10E-95W Northern Hemisphere | PWAAB99.TIF          |
| 48HR Surface Chart VT12Z Forecast 10E-95W Northern Hemisphere | PWAAB99.TIF          |
| 48HR Surface Chart Forecast (Most Current) | PWAAB99.TIF          |
| 96HR Surface Chart VT12Z Forecast 10E-95W Northern Hemisphere | PWAAB99.TIF          |
UPPER AIR CHARTS

00Z 500MB Surface Chart Analysis 10E-95W Northern Hemisphere   PPAA50.TIF
12Z 500MB Surface Chart Analysis 10E-95W Northern Hemisphere   PPAA51.TIF
  500MB Surface Chart Analysis (Most Current)   PPAA10.TIF
24HR 500MB Chart VT00Z Forecast 45W-85W Northern Hemisphere   PPAE50.TIF
24HR 500MB Chart VT12Z Forecast 45W-85W Northern Hemisphere   PPAE51.TIF
24HR 500MB Chart Forecast (Most Current)   PPAE11.TIF
36HR 500MB Chart VT00Z Forecast 10E-95W Northern Hemisphere   PPAG50.TIF
36HR 500MB Chart VT12Z Forecast 10E-95W Northern Hemisphere   PPAG51.TIF
36HR 500MB Chart Forecast (Most Current)   PPAG11.TIF
48HR 500MB Chart VT00Z Forecast 10E-95W Northern Hemisphere   PPAI50.TIF
48HR 500MB Chart VT12Z Forecast 10E-95W Northern Hemisphere   PPAI51.TIF
48HR 500MB Chart Forecast (Most Current)   PPAI10.TIF
96HR 500MB Chart VT12Z Forecast 10E-95W Northern Hemisphere   PPAM50.TIF

SATELLITE IMAGERY

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06Z GOES Infrared   evnt06.jpg
12Z GOES Infrared   evnt12.jpg
18Z GOES Infrared   evnt18.jpg
  GOES Infrared (Most Current)   evnt99.jpg

ICE CHARTS

Ice Chart (When Available)   PIEA88.TIF
(Ice chart normally not available on this server see:

SCHEDULE INFORMATION

Radiofax Schedule Part 1  (Boston, MA)   PLAZ01.TIF
Radiofax Schedule Part 2  (Boston, MA)   PLAZ02.TIF
Radiofax Schedule (DOS Text Version)   hfmarsh.txt
Request for Comments   PLAZ03.TIF
Product Notice Bulletin   PLAZ04.TIF
Test Pattern   PZZZ94.TIF
Internet File Names (This file)   rfaxatl.txt
Further information see: http://www.nws.noaa.gov/om/marine/home.htm

Author: Timothy Rulon, Office of Marine and Coastal Services W/OS21,
  National Weather Service
Last Modified Jul 07, 2004
Document URL: http://weather.noaa.gov/pub/fax/rfaxatl.txt
           ftp://weather.noaa.gov/fax/rfaxatl.txt
NATIONAL WEATHER SERVICE RADIOFAX PRODUCTS
for the Eastern Pacific Ocean

U.S. Coast Guard Communications Station NMC - Point Reyes, CA

Assigned frequencies 4346, 8682, 12590.5, 17151.2, 22527 kHz

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Example using FTPMAIL:

Send an e-mail to: ftpmail@weather.noaa.gov
Subject line: Put anything you like
Body:
open
cd fax
get PWBE10.TIF
get PWBM99.gif
quit

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Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body: help

FILE
NAME

WIND/WAVE CHARTS
00Z Sea State Analysis 20N-70N, 115W-135E PJBA99.TIF
00Z Sea State Analysis 25N-60N, E OF 155W PWBA88.TIF
12Z Sea State Analysis 25N-60N, E OF 155W PWBA99.TIF
12Z Sea State Analysis 25N-60N, E OF 155W (Most Current) PWBA90.TIF
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24HR Wind/Wave Forecast VT12Z 25N-60N, E of 155W PWBE99.TIF
24HR Wind/Wave Forecast (Most Current) PWBE10.TIF
48HR Wind/Wave Forecast VT00Z 20N-70N, 115W-135E PJBI98.TIF
48HR Wind/Wave Forecast VT12Z 20N-70N, 115W-135E PJBI99.TIF
48HR Wind Wave Forecast (Most Current) PJBI10.TIF
48HR Wave Period/Swell Direction VT00Z 20N-70N, 115W-135E  PJBI88.TIF
48HR Wave Period/Swell Direction VT12Z 20N-70N, 115W-135E  PJBI89.TIF
48HR Wave Period/Swell Direction (Most Current)  PJBI20.TIF
96HR Wind/Wave Forecast VT12Z 20N-70N, 115W-135E  PJBM98.TIF
96HR Wave Period/Swell Direction VT12Z 20N-70N, 115W-135E  PJBM88.TIF

@ Not transmitted via Pt. Reyes radiofax but listed here for convenience

TROPICAL WIND/WAVE CHARTS

0/24HR Wind/Wave Forecasts(2 Charts) VT00Z 30N-20S, E of 145W  PWFA88.TIF
0/24HR Wind/Wave Forecasts(2 Charts) VT06Z 30N-20S, E of 145W  PWFA89.TIF
0/24HR Wind/Wave Forecasts(2 Charts) VT12Z 30N-20S, E of 145W  PJBA00.TIF
0/24HR Wind/Wave Forecasts(2 Charts) VT18Z 30N-20S, E of 145W  PJBA01.TIF
0/24HR Wind/Wave Forecasts(Most Current)  PJBA90.TIF
48HR Wind/Wave Forecast VT00Z 30N-20S, E of 145W  PWFI88.TIF
48HR Wave Period/Swell Direction VT12Z 30N-20S, E of 145W  PJFI88.TIF
48/72HR Wave Period/Swell Direction VT00Z 30N-20S,E of 145W  PJFK88.TIF
48/72HR Wind/Wave Forecast VT12Z 30N-20S, E of 145W  PWFI89.TIF

SURFACE CHARTS

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00Z Surface Analysis NW Pacific (Part 2) 20N-70W, 175W-135E  PYBA02.TIF
06Z Surface Analysis NE Pacific (Part 1) 20N-70W, 115W-175W  PYBA03.TIF
06Z Surface Analysis NW Pacific (Part 2) 20N-70W, 175W-135E  PYBA04.TIF
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18Z Surface Analysis NE Pacific (Part 1) 20N-70W, 115W-175W  PYBA07.TIF
18Z Surface Analysis NW Pacific (Part 2) 20N-70W, 175W-135E  PYBA08.TIF
  Surface Analysis, Part 1 (Most Current)**  PYBA90.TIF
  Surface Analysis, Part 2 (Most Current)**  PYBA91.TIF
24HR Surface Forecast VT00Z Forecast 25N-60W, E of 155W  PPBE00.TIF
24HR Surface Forecast VT12Z Forecast 25N-60W, E of 155W  PPBE01.TIF
24HR Surface Forecast (Most Current)  PPBE10.TIF
48HR Surface Forecast VT00Z 20N-70W, 115W-135E  PWBI98.TIF
48HR Surface Forecast VT12Z 20N-70W, 115W-135E  PWBI99.TIF
48HR Surface Forecast (Most Current)  PWBI10.TIF
96HR Surface Forecast VT12Z 20N-70W, 115W-135E  PWBM99.TIF

UPPER AIR CHARTS

00Z 500 MB Analysis 20N-70N  115W-135E  PPBA50.TIF
12Z 500 MB Analysis 20N-70N, 115W-135E  PPBA51.TIF
  500 MB Analysis (Most Current)  PPBA10.TIF
48HR 500 MB Forecast VT00Z 20N-70N, 115W-135E  PPBI98.TIF
48HR 500 MB Forecast VT12Z 20N-70N, 115W-135E  PPBI99.TIF
48HR 500 MB Forecast (Most Current)  PPBI10.TIF
96HR 500 MB VT12Z 20N-70N, 115W-135E  PPBM99.TIF

TROPICAL SURFACE CHARTS

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06Z Tropical Surface Analysis 30N-20S, E of 145W  PYFA97.TIF
12Z Tropical Surface Analysis 30N-20S, E of 145W  PYFA98.TIF
18Z Tropical Surface Analysis 30N-20S, E of 145W  PYFA99.TIF
  Tropical Surface Analysis Most Current  PYFA90.TIF
@00Z U.S./Tropical Surface Analysis (W Half) 5S-50N,55W-125W;  PYEB86.TIF
@06Z U.S./Tropical Surface Analysis (W Half) 5S-50N,55W-125W;  PYEB87.TIF
@12Z U.S./Tropical Surface Analysis (W Half) 5S-50N,55W-125W;  PYEB85.TIF
@18Z U.S./Tropical Surface Analysis (W Half) 5S-50N,55W-125W;  PYEB88.TIF
@  U.S./Tropical Surface Analysis (W Half) (Most Current);  PYEB11.TIF
TROPICAL CYCLONE CHARTS

72 HR Tropical Cyclone Danger Area VT 03Z 0N-40N, 80W-180W  PWFK88.TIF
72 HR Tropical Cyclone Danger Area VT 09Z 0N-40N, 80W-180W  PWFK89.TIF
72 HR Tropical Cyclone Danger Area VT 15Z 0N-40N, 80W-180W  PWFK90.TIF
72 HR Tropical Cyclone Danger Area VT 21Z 0N-40N, 80W-180W  PWFK91.TIF
72 HR Tropical Cyclone Danger Area (Most Current)  PWFK11.TIF

Note: Tropical Cyclone Danger Area chart replaced by High Wind/Wave Warning chart Dec 01 - May 14.

SEA SURFACE TEMPERATURES

Pacific SST Chart  40N-53N, E of 136W  PTBA88.TIF
Pacific SST Chart  23N-42N, E of 136W  PTBA89.TIF

SATELLITE IMAGERY

06Z GOES IR Satellite Image, Tropical East Pacific  evpn07.jpg
00Z GOES IR Satellite Image, East Pacific  evpn00.jpg
12Z GOES IR Satellite Image, East Pacific  evpn13.jpg
GOES IR Satellite Image, East Pacific (MOST CURRENT)  evpn98.jpg
00Z GOES IR Satellite Image, Pacific  evpn01.jpg
06Z GOES IR Satellite Image, Pacific  evpn06.jpg
12Z GOES IR Satellite Image, Pacific  evpn12.jpg
18Z GOES IR Satellite Image, Pacific  evpn18.jpg
GOES IR Satellite Image, Pacific (MOST CURRENT)  evpn99.jpg

SCHEDULE INFORMATION

Radiofax Schedule Part 1 (Point Reyes, CA)  PLBZ01.TIF
Radiofax Schedule Part 2 (Point Reyes, CA)  PLBZ02.TIF
Radiofax Schedule (DOS Text Format)  hfreyes.txt
Request for Comments  PLBZ03.TIF
Product Notice Bulletin  PLBZ04.TIF
Test Pattern  PZZZ93.TIF
Internet File Names (This file)  rfaxpac.txt

Further information see: http://www.nws.noaa.gov/ommarine/home.htm

Author: Tim Rulon, NWS Marine And Coastal Weather Services Branch W/OS21
Last Modified August 16, 2004
Document URL: http://weather.noaa.gov/pub/fax/rfaxpac.txt
ftp://weather.noaa.gov/fax/rfaxpac.txt
NATIONAL WEATHER SERVICE RADIOFAX PRODUCTS
for the Gulf of Mexico, Caribbean, Tropical Atlantic and Tropical Pacific

U.S. Coast Guard Communications Station NMG - New Orleans, Louisiana

Assigned frequencies 4317.9, 8503.9, 12789.9 kHz

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Subject line: Put anything you like
Body:
open
cd fax
get PWEE11.TIF
get PYEA11.gif
quit

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Subject Line: Put anything you like
Body: help

WIND/WAVE CHARTS

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<td>48HR Wave Period/Swell Dir Forecast VT12, ON-31N, 35W-100W;</td>
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<td>PJEI88.TIF</td>
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48HR Wave Period/Swell Direction Forecast (Most Current); PJEII11.TIF
72HR Wind/Wave Forecast VT00, 0N-31N, 35W-100W; PJEK88.TIF
72HR Wind/Wave Forecast VT12, 0N-31N, 35W-100W; PJEK89.TIF
72HR Wind/Wave Forecast (Most Current); PJEK11.TIF
72HR Wave Period/Swell Dir Forecast VT00, 0N-31N, 35W-100W; PKEK88.TIF

SURFACE CHARTS

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06Z U.S./Tropical Surface Analysis (W Half) 5S-50N,55W-125W; PYEB87.TIF
12Z U.S./Tropical Surface Analysis (W Half) 5S-50N,55W-125W; PYEB85.TIF
18Z U.S./Tropical Surface Analysis (W Half) 5S-50N,55W-125W; PYEB88.TIF
U.S./Tropical Surface Analysis (W Half) (Most Current); PYEB11.TIF
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06Z Tropical Surface Analysis (E Half) 5S-50N, 0W-70W; PYEA87.TIF
12Z Tropical Surface Analysis (E Half) 5S-50N, 0W-70W; PYEA85.TIF
18Z Tropical Surface Analysis (E Half) 5S-50N, 0W-70W; PYEA88.TIF
Tropical Surface Analysis (E Half) (Most Current); PYEA11.TIF
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@24HR Tropical Surface Forecast(W Half)VT12,20S-30N,80W-145W; PYFE80.TIF
@24HR Tropical Surface Forecast(Most Current); PYFE10.TIF
@48HR Tropical Surface Forecast(W Half)VT00,20S-30N,80W-145W; PYFI81.TIF
@48HR Tropical Surface Forecast(W Half)VT12,20S-30N,80W-145W; PYFI82.TIF
@48HR Tropical Surface Forecast(Most Current); PYFI10.TIF
@72HR Tropical Surface Forecast(W Half)VT00,20S-30N,80W-145W; PYFK83.TIF
@72HR Tropical Surface Forecast(W Half)VT12,20S-30N,80W-145W; PYFK84.TIF
@72HR Tropical Surface Forecast(Most Current); PYFK10.TIF
24HR Tropical Surface Forecast(E Half)VT00,00N-31N, 35W-100W; PYEE79.TIF
24HR Tropical Surface Forecast(E Half)VT12,00N-31N, 35W-100W; PYEE80.TIF
Tropical Surface Forecast(Most Current); PYEE10.TIF
48HR Tropical Surface Forecast(E Half)VT00,00N-31N, 35W-100W; PYEI81.TIF
48HR Tropical Surface Forecast(E Half)VT12,00N-31N, 35W-100W; PYEI82.TIF
Tropical Surface Forecast(Most Current); PYEI10.TIF
72HR Tropical Surface Forecast(E Half)VT00,00N-31N, 35W-100W; PYEK83.TIF
72HR Tropical Surface Forecast(E Half)VT12,00N-31N, 35W-100W; PYEK84.TIF
Tropical Surface Forecast(Most Current); PYEK10.TIF

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TROPICAL CYCLONE CHARTS

Tropical Cyclone Danger Area* VT03, 05N-60N, 00W-100W; PWEK89.TIF
Tropical Cyclone Danger Area* VT09, 05N-60N, 00W-100W; PWEK90.TIF
Tropical Cyclone Danger Area* VT15, 05N-60N, 00W-100W; PWEK91.TIF
Tropical Cyclone Danger Area* VT21, 05N-60N, 00W-100W; PWEK88.TIF
Tropical Cyclone Danger Area* (Most Current); PWEK11.TIF

HIGH SEAS FORECASTS

04Z High Seas Forecast 7N-31N, 35W-98W, In English; PLEA86.TIF
10Z High Seas Forecast 7N-31N, 35W-98W, In English; PLEA87.TIF
16Z High Seas Forecast 7N-31N, 35W-98W, In English; PLEA89.TIF
22Z High Seas Forecast 7N-31N, 35W-98W, In English; PLEA88.TIF
High Seas Forecast (Most Current); PLEA10.TIF

SATELLITE IMAGERY

0645Z GOES IR Satellite Image, 12S-44N, 28W-112W; evst06.jpg
1145Z GOES IR Satellite Image, 12S-44N, 28W-112W; evst12.jpg
1745Z GOES IR Satellite Image, 12S-44N, 28W-112W; evst18.jpg
SCHEDULE INFORMATION

Radiofax Schedule (New Orleans, LA);  PLEZ01.TIF
Radiofax Schedule (DOS Text Format);  hfgulf.txt
Request for Comments;  PLEZ02.TIF
Product Notice Bulletin;  PLEZ03.TIF
Test Chart;  PZZZ95.TIF
Internet File Names, (This file);  rfaxmex.txt

* Tropical Cyclone Danger Area chart replaced by High Wind/Wave Warning chart Dec 01 - May 15, valid times 00z, 06z, 12z and 18z, 05N - 40N, 35W - 100W

Further information see: http://www.nws.noaa.gov/om/marine/home.htm

Author: Tim Rulon, NWS Marine And Coastal Weather Services Branch, W/OS21
Last Modified June 10, 2003
Document URL: http://weather.noaa.gov/pub/fax/rfaxmex.txt
U.S. Coast Guard Communications Station NOJ - Kodiak, Alaska

Assigned frequencies 2054, 4298, 8459, 12412.5 kHz

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or
ftp://inetsrv.arh.noaa.gov/pub/marfax/ (for files indicated by #)

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.TIF files now also available as .gif files

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Send an e-mail to: ftpmail@weather.noaa.gov
Subject line: Put anything you like
Body:
open inetsrv.arh.noaa.gov
cd pub
cd marfax
get martab.gif
get sfcmap00.gif
quit

Send an e-mail to: ftpmail@weather.noaa.gov
Subject line: Put anything you like
Body:
open
cd fax
get PJBI99.TIF
get PYBE10.gif
quit

The "help" file contains a more detailed description of the FTPMAIL system and available products. To obtain a copy of the FTPMAIL "help file".

Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body: help

FILE
WIND/WAVE CHARTS
00Z  Sea State Analysis 20N-70N, 115W-135E  PJBA99.TIF
24HR Wind/Wave Forecast VT00Z 40N-70N, 115W-170E PJBE88.TIF
24HR Wind/Wave Forecast VT12Z 40N-70N, 115W-170E PJBE89.TIF
24HR Wind Wave Forecast (Most Current) PJBE10.TIF
48HR Wind/Wave Forecast VT00Z 20N-70N, 115W-135E PJBI98.TIF
48HR Wind/Wave Forecast VT12Z 20N-70N, 115W-135E PJBI99.TIF
48HR Wind Wave Forecast (Most Current) PJBI10.TIF
48HR Wave Period/Swell Direction VT00Z 20N-70N, 115W-135E PJBI88.TIF
48HR Wave Period/Swell Direction VT12Z 20N-70N, 115W-135E PJBI89.TIF
48HR Wave Period/Swell Direction (Most Current) PJBI20.TIF
96HR Wind/Wave Forecast VT12Z 20N-70N, 115W-135E PJBM98.TIF
96HR Wave Period/Swell Direction VT12Z 20N-70N, 115W-135E PJBM88.TIF

SURFACE CHARTS

00Z Surface Analysis 40N-70N, 125W-150E sfcmap00.gif#
06Z Surface Analysis 40N-70N, 125W-150E sfcmap06.gif#
12Z Surface Analysis 40N-70N, 125W-150E sfcmap12.gif#
18Z Surface Analysis 40N-70N, 125W-150E sfcmap18.gif#
Surface Analysis (Most Current) PYPA00.TIF
(Covers larger area than on-air broadcast)
24HR Surface Chart Forecast VT00Z 40N-70N, 115W-170E PYBE00.TIF
24HR Surface Chart Forecast VT12Z 40N-70N, 115W-170E PYBE01.TIF
24HR Surface Chart Forecast (Most Current) PYBE10.TIF
48HR Surface Chart Forecast VT00Z 20N-70N 115W-135E PWBI99.TIF
48HR Surface Chart Forecast VT12Z 20N-70N 115W-135E PWBI98.TIF
48HR Surface Chart Forecast (Most Current) PWBI10.TIF
96HR Surface Chart Forecast VT12Z PWBM99.TIF

UPPER AIR CHARTS

00Z 500 MB Analysis 20N-70N 115W-135E PPBA50.TIF
12Z 500 MB Analysis 20N-70N, 115W-135E PPBA51.TIF
500 MB Analysis (Most Current) PPBA10.TIF
48HR 500 MB Forecast VT00Z 20N-70N, 115W-135E PPBI50.TIF
48HR 500 MB Forecast VT12Z 20N-70N, 115W-135E PPBI51.TIF
48HR 500 MB Forecast (Most Current) PPBI10.TIF
96HR 500 MB VT12Z 20N-70N, 115W-135E PPBM50.TIF

SEA SURFACE TEMPERATURES

Sea Surface Temperature Analysis 40N-60N,125W - 160E sst.gif#

SATELLITE IMAGERY

00Z GOES IR Satellite Image, Pacific evpn01.jpg
06Z GOES IR Satellite Image, Pacific evpn06.jpg
12Z GOES IR Satellite Image, Pacific evpn12.jpg
18Z GOES IR Satellite Image, Pacific evpn18.jpg
GOES IR Satellite Image, Pacific (MOST CURRENT) evpn99.jpg

ICE CHARTS

Sea Ice Analysis ICE.GIF
5 Day Sea Ice Forecast ICEF.GIF
Cook Inlet Sea Ice Analysis COOKICE.GIF

OTHER PRODUCTS
AK Coastal Forecast Tables

SCHEDULE INFORMATION and MISCELLANEOUS

Radiofax Schedule Kodiak, AK; sched.gif#
Radiofax Schedule (DOS Text Version) hfak.txt
Test Pattern; xxxxxxx.xxx
Radiofacsimile Symbols and Contractions symbol.gif#
Internet File Names; (This file) rfaxak.txt

xxxxxxx.xxx = Currently unavailable

Further information see: http://www.nws.noaa.gov/om/marine/home.htm

Author: Tim Rulon, NWS Marine And Coastal Weather Services Branch W/OS21
Last Modified Jan 22, 2004
Document URL: http://weather.noaa.gov/pub/fax/rfaxak.txt
ftp://weather.noaa.gov/fax/rfaxak.txt
NATIONAL WEATHER SERVICE RADIOFAX PRODUCTS
for the Central Pacific

NAVY Communications Station KVM-70 - Honolulu, Hawaii

Assigned frequencies 9982.5, 11090, 16135 and 23331.5 kHz

Select a carrier frequency 1.9 kHz below those listed when using a
single sideband radio in the USB mode to receive these broadcasts.

The latest version of NWS marine weather charts for broadcast by the NAVY
are available from the National Weather Service Telecommunication
Gateway on this server. The listed charts are in the G4(T4) format and
enveloped in TIFF for viewing. These charts may be found in directory:
ftp://weather.noaa.gov/fax or http://weather.noaa.gov/pub/fax

For information of how these files and other text and graphic marine
forecasts may be downloaded via e-mail (FTPMAIL) see:
http://weather.noaa.gov/pub/fax/ftpmail.txt

xxxxxx  (Not yet available from these directories)

.TIF files now also available as .gif files

This file is intended to assist mariners using the FTPMAIL system
which is used to obtain National Weather Service products via
e-mail. The following is an example in the use of the FTPMAIL
system.

PAY ATTENTION TO CAPITALIZATION:

Example using FTPMAIL:

Send an e-mail to:         ftpmail@weather.noaa.gov
Subject line:              Put anything you like
Body:                      open
cd fax
get PJBA90.TIF
get QDEQ99.gif
quit

The "help" file contains a more detailed description of the
FTPMAIL system and available products. To obtain a copy of the
FTPMAIL "help file".

Send an e-mail to:       ftpmail@weather.noaa.gov
Subject Line:            Put anything you like
Body:                    help

FILE
WIND/WAVE CHARTS
NAME
PWFA88.TIF
PJBA00.TIF
PJBA01.TIF
PJBA90.TIF
QWBI99.TIF
QWBQ99.TIF
PWFI88.TIF
PJFI88.TIF
PJFK88.TIF
SURFACE CHARTS

00Z Pacific Streamline Analysis 30N-30S, 110W-130E; xxxxxx.TIF
06Z Pacific Streamline Analysis 30N-30S, 110W-130E; xxxxxx.TIF
12Z Pacific Streamline Analysis 30N-30S, 110W-130E; xxxxxx.TIF
18Z Pacific Streamline Analysis 30N-30S, 110W-130E; xxxxxx.TIF
Pacific Streamline Analysis (Most Current); xxxxxx.TIF
00Z North Pacific Surface Pressure Analysis 50N-EQ, 110W-130E; xxxxxx.TIF
06Z North Pacific Surface Pressure Analysis 50N-EQ, 110W-130E; xxxxxx.TIF
12Z North Pacific Surface Pressure Analysis 50N-EQ, 110W-130E; xxxxxx.TIF
18Z North Pacific Surface Pressure Analysis 50N-EQ, 110W-130E; xxxxxx.TIF
North Pacific Surface Pressure Analysis (Most Current); xxxxxx.TIF
00Z Tropical Surface Analysis 50N-30S, 100W-120E; xxxxxx.TIF
06Z Tropical Surface Analysis 50N-30S, 100W-120E; xxxxxx.TIF
12Z Tropical Surface Analysis 50N-30S, 100W-120E; xxxxxx.TIF
18Z Tropical Surface Analysis 50N-30S, 100W-120E; xxxxxx.TIF
Tropical Surface Analysis (Most Current) QYFA99.TIF
00Z Significant Cloud Features 50N-30S, 110W-160E; xxxxxx.TIF
12Z Significant Cloud Features 50N-30S, 110W-160E; xxxxxx.TIF
Significant Cloud Features (Most Current); xxxxxx.TIF
24HR Wind/Stream Forecast VT00Z 50N-30S, 100W-120E; QWFT99.TIF
24HR Tropical Surface Forecast(W Half)VT00,20S-30N,80W-145W; PYFE79.TIF
24HR Tropical Surface Forecast(W Half)VT12,20S-30N,80W-145W; PYFE80.TIF
24HR Tropical Surface Forecast(Most Current); PYFE10.TIF
48HR Wind/Stream Forecast VT00Z 50N-30S, 100W-120E; QWFQ99.TIF
48HR Surface Forecast VT06Z 60N-55S, 55W-70E; xxxxxx.TIF
48HR Surface Forecast VT18Z 60N-55S, 55W-70E; xxxxxx.TIF
48HR Surface Forecast (Most Current); QDEQ99.TIF
48HR Tropical Surface Forecast(W Half)VT00,20S-30N,80W-145W; PYFI81.TIF
48HR Tropical Surface Forecast(W Half)VT12,20S-30N,80W-145W; PYFI82.TIF
48HR Tropical Surface Forecast(Most Current); PYFI10.TIF
72HR Tropical Surface Forecast(W Half)VT00,20S-30N,80W-145W; PYFK83.TIF
72HR Tropical Surface Forecast(W Half)VT12,20S-30N,80W-145W; PYFK84.TIF
72HR Tropical Surface Forecast (Most Current); PYFK10.TIF

UPPER AIR CHARTS

@48HR 500 MB Forecast VT00Z 50N-25S, 120W-120E xxxxxx.TIF
@48HR 500 MB Forecast VT12Z 50N-25S, 120W-120E xxxxxx.TIF
@48HR 500 MB Forecast (Most Current) QHFQ50.TIF
@ Not transmitted via Honolulu radiofax but listed here for convenience

TROPICAL CYCLONE CHARTS

72 HR Tropical Cyclone Danger Area VT 03Z 0N-40N, 80W-180W PWFK88.TIF
72 HR Tropical Cyclone Danger Area VT 09Z 0N-40N, 80W-180W PWFK89.TIF
72 HR Tropical Cyclone Danger Area VT 15Z 0N-40N, 80W-180W PWFK90.TIF
72 HR Tropical Cyclone Danger Area VT 21Z 0N-40N, 80W-180W PWFK91.TIF
72 HR Tropical Cyclone Danger Area (Most Current) PWFK11.TIF

Note: Tropical Cyclone Danger Area chart replaced by High Wind/Wave Warning chart Dec 01 – May 14.

SATELLITE IMAGERY

00Z Eastern Pacific Satellite Image (IR)55N-40S, 105W-155E xxxxxx.jpg
06Z Eastern Pacific Satellite Image (IR) 55N-40S, 105W-155E; xxxxxx.jpg
12Z Eastern Pacific Satellite Image (IR) 55N-40S, 105W-155E; xxxxxx.jpg
18Z Eastern Pacific Satellite Image (IR) 55N-40S, 105W-155E; xxxxxx.jpg
Eastern Pacific Satellite Image (Most Current); xxxxxx.jpg

00Z Southern Pacific Satellite Image (IR) 05N-40S, 130W-165E; xxxxxx.jpg
06Z Southern Pacific Satellite Image (IR) 05N-40S, 130W-165E; xxxxxx.jpg
12Z Southern Pacific Satellite Image (IR) 05N-40S, 130W-165E; xxxxxx.jpg
18Z Southern Pacific Satellite Image (IR) 05N-40S, 130W-165E; xxxxxx.jpg
Southern Pacific Satellite Image (Most Current); xxxxxx.jpg

SEA SURFACE TEMPERATURE CHARTS

Pacific Sea Surface Temperature (VT Tuesday and Thursday); xxxxxx.TIF

SCHEDULE INFORMATION

Radiofax Schedule (Honolulu, HI); xxxxxx.TIF
Radiofax Schedule (DOS Text Version) hfhi.txt
Test/Map Symbols/General Notice; xxxxxxxx.TIF
Internet File Names; (This file) rfaxhi.txt

Further information see: http://www.nws.noaa.gov/om/marine/home.htm

Author: Timothy Rulon, NWS Marine and Coastal Weather Services Branch W/OS21 National Weather Service
Last Modified December 11, 2003
Document URL: http://weather.noaa.gov/pub/fax/rfaxhi.txt
ftp://weather.noaa.gov/fax/rfaxhi.txt
This file is intended to assist mariners using the FTPMAIL system which is used to obtain National Weather Service products via
e-mail. The following is an example in the use of the FTPMAIL system. NOTE CAPITALIZATION!

Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body: open
cd data
cd forecasts
cd marine
cd high_seas
get north_pacific.txt
get north_atlantic.txt
quit

The "help" file contains a more detailed description of the FTPMAIL system and available products. To obtain a copy of the FTPMAIL "help file".

Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body: help

HIGH SEAS FORECASTS

These files may be found in directory:
ftp://weather.noaa.gov/data/forecasts/marine/high_seas/

<table>
<thead>
<tr>
<th>PRODUCT DESCRIPTION</th>
<th>FILE NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northwest Atlantic Highseas (GMDSS Area IV)</td>
<td>north_atlantic.txt</td>
</tr>
<tr>
<td>Northeast Pacific Highseas (GMDSS Area XII)</td>
<td>north_pacific.txt</td>
</tr>
<tr>
<td>Peru Highseas (GMDSS Area XVI)</td>
<td>east_pacific_3.txt</td>
</tr>
<tr>
<td>25S-0N, 160E-120W South Central Pacific</td>
<td>south_hawaii.txt</td>
</tr>
<tr>
<td>30-60N, east of 160 E (p/o NE Pacific)</td>
<td>east_pacific_1.txt</td>
</tr>
<tr>
<td>0-30N, E of 140W (p/o NE Pacific)</td>
<td>east_pacific_2.txt</td>
</tr>
<tr>
<td>0-30N, 160E-140W (p/o NE Pacific)</td>
<td>north_hawaii.txt</td>
</tr>
</tbody>
</table>

FORECAST DISCUSSION
These files may be found in directory:
ftp://weather.noaa.gov/data/raw/ag/

Example:
Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body: open
cd data
cd raw
cd ag
get agnt40.kwnm.mim.atn.txt
quit

Note...these Forecast Discussions are primarily intended for use by forecasters and make heavy use of abbreviations. A glossary is
not available.

Northwest Atlantic                     agnt40.kwnm.mim.atn.txt
Northeast Pacific                      agpn40.kwnm.mim.pac.txt
Gulf, Caribbean Sea & SW N. Atlantic   agxx40.knhc.mim.ats.txt

OFFSHORE FORECASTS

For offshore forecasts, NAVTEX forecasts also be utilized
where available which are nearly identical and may contain
supplementary information at times for coastal areas.

These files may be found in directory:
ftp://iwin.nws.noaa.gov/data/text/FZNT21 (FZNT22, etc)
or
ftp://iwin2.nws.noaa.gov/data/text/FZNT21 (FZNT22, etc)

Example:
Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body: open iwin.nws.noaa.gov
cd data
cd text
cd FZNT21
get KWBC.TXT
quit

PRODUCT DESCRIPTION                        FILE NAME

New England                             /FZNT21/KWBC.TXT
Mid-Atlantic                            /FZNT22/KWBC.TXT
SW North Atlantic, Caribbean            /FZNT23/KNHC.TXT
Gulf of Mexico                          /FZNT24/KNHC.TXT
Washington, Oregon                      /FZPN25/KWBC.TXT
California                              /FZPN26/KWBC.TXT
Eastern Gulf of Alaska                  /FZAK67/PAJK.TXT
Western Gulf of Alaska                  /FZAK61/PAFC.TXT
Bering Sea                              /FZAK62/PAFC.TXT
Hawaii                                  /FZHW60/PHFO.TXT

NAVTEX FORECASTS

These files may be found in directory:
ftp://weather.noaa.gov/data/forecasts/marine/offshore/

Example:
Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body:
open

cd data
cd forecasts
cd marine
cd offshore
get fznt23.kwnm.off.n01.txt
quit

PRODUCT DESCRIPTION                        FILE NAME
These files may be found in directory: ftp://weather.noaa.gov/data/raw/fz/

Example:
Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body:
open
cd data
cd raw
cd fz
get fzus61.kbuf.glf.sl.txt
quit

Further information see: http://www.nws.noaa.gov/om/marine/home.htm

Author: Timothy Rulon, Office of Marine and Coastal Services W/OS21,
National Weather Service
Last Modified Jul 15, 2004
Document URL: http://weather.noaa.gov/pub/fax/marine1.txt
ftp://weather.noaa.gov/fax/marine1.txt
This file is intended to assist mariners using the FTPMAIL system which is used to obtain National Weather Service products via e-mail. The following is an example in the use of the FTPMAIL system. NOTE CAPITALIZATION!

Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body:
  open
cd data
cd hurricane_products
cd atlantic
cd weather
get outlook.txt
cd /data
cd hurricane_products
cd atlantic
cd storm_2
get technical_advisory.txt
quit

The "help" file contains a more detailed description of the FTPMAIL system and available products. To obtain a copy of the FTPMAIL "help file".

Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body: help

ATLANTIC HURRICANE PRODUCTS

These files may be found in directory:
ftp://weather.noaa.gov/data/hurricane_products/atlantic

<table>
<thead>
<tr>
<th>PRODUCT DESCRIPTION</th>
<th>FILE NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tropical WX Outlook</td>
<td>/weather/outlook.txt</td>
</tr>
<tr>
<td>Tropical WX Discussion</td>
<td>/weather/discussion.txt</td>
</tr>
<tr>
<td>Tropical WX Summary</td>
<td>/weather/summary.txt</td>
</tr>
<tr>
<td>Tropical WX Disturbance Stmt</td>
<td>/weather/advisory.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Updates</td>
<td>TBD</td>
</tr>
<tr>
<td>Tropical Cyclone Positions</td>
<td>TBD</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #1)</td>
<td>/storm_1/discussion.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #2)</td>
<td>/storm_2/discussion.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #3)</td>
<td>/storm_3/discussion.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #4)</td>
<td>/storm_4/discussion.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #5)</td>
<td>/storm_5/discussion.txt</td>
</tr>
<tr>
<td>Public Advisory (Storm #1)</td>
<td>/storm_1/advisory.txt</td>
</tr>
<tr>
<td>Public Advisory (Storm #2)</td>
<td>/storm_2/advisory.txt</td>
</tr>
<tr>
<td>Public Advisory (Storm #3)</td>
<td>/storm_3/advisory.txt</td>
</tr>
<tr>
<td>Public Advisory (Storm #4)</td>
<td>/storm_4/advisory.txt</td>
</tr>
<tr>
<td>Public Advisory (Storm #5)</td>
<td>/storm_5/advisory.txt</td>
</tr>
<tr>
<td>Tropical Depression Forecast (Storm #1)</td>
<td>/storm_1/technical_advisory.txt</td>
</tr>
<tr>
<td>Tropical Depression Forecast (Storm #2)</td>
<td>/storm_2/technical_advisory.txt</td>
</tr>
<tr>
<td>Tropical Depression Forecast (Storm #3)</td>
<td>/storm_3/technical_advisory.txt</td>
</tr>
<tr>
<td>Tropical Depression Forecast (Storm #4)</td>
<td>/storm_4/technical_advisory.txt</td>
</tr>
<tr>
<td>Tropical Depression Forecast (Storm #5)</td>
<td>/storm_5/technical_advisory.txt</td>
</tr>
<tr>
<td>Hurricane Probabilities (Storm #1)</td>
<td>/storm_1/strike_probability.txt</td>
</tr>
<tr>
<td>Hurricane Probabilities (Storm #2)</td>
<td>/storm_2/strike_probability.txt</td>
</tr>
</tbody>
</table>
Hurricane Probabilities (Storm #3) /storm_3/strike_probability.txt
Hurricane Probabilities (Storm #4) /storm_4/strike_probability.txt
Hurricane Probabilities (Storm #5) /storm_5/strike_probability.txt
RECON Plan TBD

Atlantic Tropical Weather Outlook normally issued 0300z, 0900z, 1500z and 2100z during hurricane season, June 1 - November 30. Remaining products issued when active systems exist. May be issued at 3-hourly intervals and other unscheduled times as system approaches landfall.

EASTERN PACIFIC HURRICANE PRODUCTS

These files may be found in directory:
ftp://weather.noaa.gov/data/hurricane_products/eastern_pacific

<table>
<thead>
<tr>
<th>PRODUCT DESCRIPTION</th>
<th>FILE NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tropical WX Outlook</td>
<td>/weather/outlook.txt</td>
</tr>
<tr>
<td>Tropical WX Discussion</td>
<td>/weather/discussion.txt</td>
</tr>
<tr>
<td>Tropical WX Summary</td>
<td>/weather/summary.txt</td>
</tr>
<tr>
<td>Tropical WX Disturbance Stmt</td>
<td>/weather/advisory.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Updates</td>
<td>/weather/update.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Positions</td>
<td>TBD</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #1)</td>
<td>/storm_1/discussion.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #2)</td>
<td>/storm_2/discussion.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #3)</td>
<td>/storm_3/discussion.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #4)</td>
<td>/storm_4/discussion.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #5)</td>
<td>/storm_5/discussion.txt</td>
</tr>
<tr>
<td>Public Advisory (Storm #1)</td>
<td>/storm_1/advisory.txt</td>
</tr>
<tr>
<td>Public Advisory (Storm #2)</td>
<td>/storm_2/advisory.txt</td>
</tr>
<tr>
<td>Public Advisory (Storm #3)</td>
<td>/storm_3/advisory.txt</td>
</tr>
<tr>
<td>Public Advisory (Storm #4)</td>
<td>/storm_4/advisory.txt</td>
</tr>
<tr>
<td>Public Advisory (Storm #5)</td>
<td>/storm_5/advisory.txt</td>
</tr>
<tr>
<td>Tropical Depression Forecast (Storm #1)</td>
<td>/storm_1/technical_advisory.txt</td>
</tr>
<tr>
<td>Tropical Depression Forecast (Storm #2)</td>
<td>/storm_2/technical_advisory.txt</td>
</tr>
<tr>
<td>Tropical Depression Forecast (Storm #3)</td>
<td>/storm_3/technical_advisory.txt</td>
</tr>
<tr>
<td>Tropical Depression Forecast (Storm #4)</td>
<td>/storm_4/technical_advisory.txt</td>
</tr>
<tr>
<td>Tropical Depression Forecast (Storm #5)</td>
<td>/storm_5/technical_advisory.txt</td>
</tr>
<tr>
<td>RECON Plan</td>
<td>TBD</td>
</tr>
</tbody>
</table>

Eastern Pacific Tropical Weather Outlook normally issued 0300z, 0900z, 1500z and 2100z during hurricane season, May 15 - November 30. Remaining products issued when active systems exist. May be issued at 3-hourly intervals and other unscheduled times as system approaches landfall.

CENTRAL PACIFIC HURRICANE PRODUCTS

These files may be found in directory:
ftp://weather.noaa.gov/data/hurricane_products/central_pacific

<table>
<thead>
<tr>
<th>PRODUCT DESCRIPTION</th>
<th>FILE NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tropical WX Outlook</td>
<td>/weather/outlook.txt</td>
</tr>
<tr>
<td>Tropical WX Discussion</td>
<td>(discontinued)</td>
</tr>
<tr>
<td>Tropical WX Summary</td>
<td>/weather/summary.txt</td>
</tr>
<tr>
<td>Tropical WX Disturbance Stmt</td>
<td>/weather/advisory.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Updates</td>
<td>/weather/update.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Positions</td>
<td>TBD</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #1)</td>
<td>/storm_1/discussion.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #2)</td>
<td>/storm_2/discussion.txt</td>
</tr>
<tr>
<td>Tropical Cyclone Discussion (Storm #3)</td>
<td>/storm_3/discussion.txt</td>
</tr>
</tbody>
</table>
Central Pacific Tropical Weather Outlook normally issued 0300z, 0900z, 1500z and 2100z during hurricane season, June 1 - November 30. Remaining products issued when active systems exist. May be issued at 3-hourly intervals and other unscheduled times as system approaches landfall.

WESTERN PACIFIC HURRICANE PRODUCTS

These files may be found in directory:
http://weather.noaa.gov/pub/data/raw/wt

Example:

Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body: open
cd data
cd raw
cd wt
get wtpq31.pgum.tcp.pq1.txt
quit

PRODUCT DESCRIPTION

<table>
<thead>
<tr>
<th>PRODUCT DESCRIPTION</th>
<th>FILE NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Advisory (Storm #1)</td>
<td>/wtpq31.pgum.tcp.pq1.txt</td>
</tr>
<tr>
<td>Public Advisory (Storm #2)</td>
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<td>/wtpq35.pgum.tcp.pq5.txt</td>
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These products may only contain information on cyclones with potential landfalls in U.S. areas. See NAVY products below for additional information.

WESTERN PACIFIC HURRICANE PRODUCTS (NAVY)

These files may be found in directory:
http://weather.noaa.gov/pub/data/raw/wt

Example:

Send an e-mail to: ftpmail@weather.noaa.gov
Subject Line: Put anything you like
Body: open
<table>
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<th>PRODUCT DESCRIPTION</th>
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<tr>
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<td>/wtpn44.pgtw..txt</td>
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<td>/wtpn55.pgtw..txt</td>
</tr>
<tr>
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<tr>
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Author: Timothy Rulon  
Marine and Coastal Services Branch, OS21  
National Weather Service  
Last Modified Friday May 28, 2004  
Document URL: http://weather.noaa.gov/pub/fax/marine2.txt
This file is intended to assist mariners using the FTPMAIL system which is used to obtain National Weather Service products via e-mail. The following is an example in the use of the FTPMAIL system. NOTE CAPITALIZATION!

Send an e-mail to:      ftpmail@weather.noaa.gov
Subject Line:           Put anything you like
Body:                   open
cd data
cd raw
cd fz
get fzus56.kmtr.cwf.mtr.txt
quit

The "help" file contains a more detailed description of the FTPMAIL system and available products. To obtain a copy of the FTPMAIL "help file".

Send an e-mail to:       ftpmail@weather.noaa.gov
Subject Line:            Put anything you like
Body:                    help

COASTAL and NEARSHORE MARINE FORECASTS

These files may be found in directory: ftp://weather.noaa.gov/data/raw/fz

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<td>Taunton, MA</td>
<td>fzus51.kbox.cwf.box.txt</td>
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<td>New York, NY</td>
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<td>fzus51.klwx.cwf.lwx.txt</td>
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Los Angeles, CA                     fzus56.klox.cwf.lox.txt
San Diego, CA                       fzus56.ksgx.cwf.sgx.txt
Hawaii                               fzhw50.phfo.cwf.hfo.txt
Marianas (Guam)                      fzmy50.pgum.cwf.my.txt
Micronesia                           fzpq50.pgum.cwf.pq.txt
Samoa                                fzzs50.nstu.cwf.ppg.txt
Buffalo,NY                           fzus51.kbuf.nsh.buf.txt
Cleveland,OH                          fzus51.kcle.nsh.cle.txt
Detroit/Pontiac,MI                    fzus53.kdtx.nsh.dtx.txt
Gaylord, MI                           fzus53.kapx.nsh.apx.txt
Grand Rapids,MI                       fzus53.kgrr.nsh.grr.txt
Chicago, IL                           fzus53.klot.nsh.lot.txt
Milwaukee/Sullivan, WI                fzus53.kmkx.nsh.mkx.txt
Green Bay, WI                         fzus53.kgrb.nsh.grb.txt
Marquette, MI                         fzus53.kmqt.nsh.mqt.txt
Duluth, MN                            fzus53.kdlh.nsh.dlh.txt
AK, SE Inner Coastal Waters          fzak51.pajk.cwf.ajk.txt
AK, SE Outside Coastal Waters        fzak52.pajk.cwf.aeg.txt
AK, Yakutat Bay                       fzak57.paya.cwf.yak.txt
AK, North Gulf Coast and Kodiak      fzak51.pafc.cwf.aer.txt
AK, Valdez Arm and Narrows           fzak58.pavw.cwf.vws.txt
AK, Chiniak and Marmot Bays          fzak58.padq.cwf.adq.txt
Southwest AK and the Aleutians       fzak52.pafc.cwf.alu.txt
Western AK and the Arctic Coast      fzak59.pafg.cwf.afg.txt

Author:  Timothy Rulon, Marine and Coastal Weather Services Branch (W/OS21)
National Weather Service
Last Modified Jul 15, 2004
Document URL: http://weather.noaa.gov/pub/fax/marine3.txt
ftp://weather.noaa.gov/fax/marine3.txt
This file is intended to assist mariners using the FTPMAIL system which is used to obtain National Weather Service products via e-mail. The following is an example in the use of the FTPMAIL system to retrieve the latest NWS buoy and C-MAN observations.

NOTE CAPITALIZATION!

For the latest operational status of buoy and C-MAN stations see:
http://www.ndbc.noaa.gov/wstat.shtml

For questions on buoy or C-MAN observations contact:
webmaster.ndbc@noaa.gov

Example:

Send an e-mail to:   ftpmail@weather.noaa.gov
Subject Line:       Put anything you like
Body:               open www.ndbc.noaa.gov
cd data
cd latest_obs
get 42007.txt
get gdil1.txt
quit

The "help" file contains a more detailed description of the FTPMAIL system and available products. To obtain a copy of the FTPMAIL "help file".

Send an e-mail to:   ftpmail@weather.noaa.gov
Subject Line:       Put anything you like
Body:               help

BUOY and C-MAN OBSERVATION ID's

These files may be found in directory:
ftp://www.ndbc.noaa.gov/data/latest_obs/
e.g.
ftp://www.ndbc.noaa.gov/data/latest_obs/41001.txt

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<tr>
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<td>1D12</td>
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<td>W. SANTA BARB</td>
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<td>46059*</td>
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<td>CALIFORNIA</td>
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<tr>
<td>46061*</td>
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<td>SEAL ROCKS (S.</td>
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<tr>
<td>46062*</td>
<td>3DV01</td>
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<td>46063*</td>
<td>6N31</td>
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<td>PT.CONCEPTION</td>
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<td>46066*</td>
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<td>D</td>
<td>KODIAK</td>
<td>52.70N</td>
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<td>46069*</td>
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<td>46080*</td>
<td>6N29</td>
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<tr>
<td>46081*</td>
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Total Base Funded Buoys: 74
Total Other Buoys: 12
Total Moored Buoys: 86
*Base funded station of National Weather Service (NWS); however, all stations report data to NWS.

**NDBC MOORED BUOY STATION LEGEND:**
Hull Type-Anemometer Height
12D - 12 meter discus 10 m
10D - 10 meter discus 10 m
6N - 6 meter NOMAD 5 m
3D/3DV meter discus 5 m
LNS - 12 meter discus 8.5 m

Payload Types
A - ARES
D - DACT
M - MARS
V - VEEP

<table>
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<tr>
<th>PLATFORM</th>
<th>PAYLOAD</th>
<th>LOCATION</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
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<td>ALEXANDRIA BAY NY</td>
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<td>75.93W</td>
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<td>A</td>
<td>AMBOSE LIGHT NY</td>
<td>40.45N</td>
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<td>A</td>
<td>EAST AMATULI ISLAND</td>
<td>58.92N</td>
<td>151.95W</td>
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<td>auga2*</td>
<td>M</td>
<td>AUGUSTINE ISLAND AK</td>
<td>59.38N</td>
<td>153.35W</td>
</tr>
<tr>
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<td>BLIGH REEF LIGHT</td>
<td>60.84N</td>
<td>146.88W</td>
</tr>
<tr>
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<td>SOUTHWEST PASS LA</td>
<td>28.91N</td>
<td>89.43W</td>
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<tr>
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<td>M</td>
<td>BUZZARDS BAY MA</td>
<td>41.40N</td>
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<td>caro3*</td>
<td>M</td>
<td>CAPE ARAGO OR</td>
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<td>V</td>
<td>CEDAR KEY FL</td>
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<td>CHESAPEAKE LIGHT VA</td>
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<td>FOLLY ISLAND SC</td>
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<td>FLAT ISLAND LIGHT</td>
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<td>29.82N</td>
<td>83.59W</td>
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<td>LONG KEY FL</td>
<td>24.84N</td>
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lscm4  V  LAKE ST. CLAIR          42.47N    82.76W
mdrm1*  D  MT DESERT ROCK          43.97N    68.13W
misl1*  D  MATINICUS ROCK ME        43.78N    68.86W
mlrf1*  V  MOLASSES REEF FL          25.01N    80.38W
mrka2*  V  MIDDLE ROCK LIGHT          61.08N    146.66W
nwpo3*  D  NEWPORT OR            44.61N    124.07W
pila2*  M  PILOT ROCK AK          59.74N    149.47W
pi1m4*  V  PASSAGE ISLAND MI         48.22N    88.37W
pota2*  V  POTATO POINT AK          61.06N    146.70W
ptac1*  M  POINT ARENA CA            38.96N    123.74W
ptat2*  M  PORT ARANSAS TX         27.83N    97.05W
ptgc1*  M  POINT ARGUELLO CA          34.58N    120.65W
roam4*  D  ROCK OF AGES            47.87N    89.31W
sanf1*  M  SAND KEY FL              24.46N    81.88W
sauf1*  V  ST. AUGUSTINE FL         29.86N    81.27W
sbio1*  M  SOUTH BASS ISLAND         41.63N    82.84W
sgnw3*  D  SHEBOYGAN WI            43.75N    87.69W
sgof1*  M  ST. GEORGE OFFSHORE       29.41N    84.86W
sisw1*  M  SMITH ISLAND WA          48.32N    122.84W
smkf1*  M  SOMBRERO KEY FL           24.63N    81.11W
spgf1*  M  SETTLEMENT PT GBI         26.70N    78.99W
srst2*  M  SABINE TX               29.67N    94.05W
stdm4*  D  STANNARD ROCK MI         47.18N    87.23W
supn6  V  SUPERIOR SHOALS NY           44.47N    75.80W
thin6  V  THOUSAND ISL. NY          44.30N    75.98W
tplm2*  M  THOMAS POINT MD           38.90N    76.44W
ttiw1*  D  TATOOSH ISLAND WA         48.39N    124.74W
venf1*  M  VENICE FL               27.07N    82.45W
wpow1*  V  WEST POINT WA            47.66N    122.44W

Total Base Funded Stations: 53
Total Other Stations : 04
Total Stations : 57
*Base funded station of National Weather Service (NWS); however, all stations report data to NWS.

NDBC C–MAN STATION LEGEND:
Payload Types
A - ARES
D - DACT
M - MARS
V - VEEP

For current buoy status see: http://www.ndbc.noaa.gov/wstat.shtml

Further information see: http://www.nws.noaa.gov/om/marine/home.htm

Author: Timothy Rulon, Office of Marine and Coastal Services W/OS21,
National Weather Service
Last Modified Jun 18, 2004
Document URL: http://weather.noaa.gov/pub/fax/buoydata.txt
ftp://weather.noaa.gov/fax/buoydata.txt
National Hurricane Center Listserver

Tropical Cyclone text products released by the National Hurricane Center are available by email. Products from the Central Pacific Hurricane Center are not available using this Listserver (see FTPMAIL server below). This Listserver allows you to subscribe and unsubscribe to any of the six lists currently offered. The lists are arranged by region (Atlantic and E. Pacific), with the choice of receiving just the Public Advisories and any updates or position estimates, along with the Tropical Weather Outlook, just the Forecast/Advisories and any updates or position estimates, along with the Tropical Weather Outlook, or you can opt for the full suite of Tropical Cyclone advisories and the Tropical Weather Outlook.

Please Note: This is an experimental service. Interruptions or duplications in email deliveries while we test the system are to be expected. Notices will be sent if any extended interruptions are encountered. Although there is no charge for the service, users should be aware of the costs for operating their particular email system before attempting to use this Listserver, especially when using satellite communication systems.

Disclaimer: This server may not be available 24 hours a day, seven days a week. Timely delivery of data and products from this server through the Internet is not guaranteed. Please read the full Disclaimer (http://www.nws.noaa.gov/disclaimer1.html) for more information.

Privacy: You must submit a valid email address to subscribe to the service. The server will reply to the address given to verify that the address is valid. The email address is stored on the server only as long as you are subscribed to the service. Please read the NHC/TPC Privacy Statement (http://www.nhc.noaa.gov/privacy.html) for full details on information gathered by the website.

The following products are available via email for the indicated areas during the hurricane season (June 1 through November 30 for the Atlantic, May 15 through November 30 for the Eastern Pacific):

- **Tropical Weather Outlook*** (Atlantic and E Pacific 4 times a day)
- **Forecast/Advisory** (Atlantic and E Pacific)
- **Public Advisory** (Atlantic always, E Pacific only when land is threatened)
- **Discussion** (Atlantic and E Pacific)
- **Probabilities** (Atlantic only)
- **Update** (Atlantic and E Pacific...intermittent)
- **Position Estimate** (Atlantic and E Pacific...intermittent)
- **Special Tropical** (Atlantic and E Pacific...intermittent)
- **Disturbance Statement**

*The Tropical Weather Outlook is sent to all lists for each region.

Please note that there is overlap in the lists, so that, for example, subscribing to both the FULL and PUBLIC ADVISORIES ONLY lists for the same region will generate some duplicate email notices. It is suggested that you subscribe to only one list per region.

To subscribe or unsubscribe send an empty email to the following addresses as follows:

Subscription addresses:
-----------------------

**Atlantic (Public Advisories and updates, morning Outlook)**
mail-storm-atlan-subscribe@hogfish.nhc.noaa.gov
Atlantic Marine (Forecast/Advisories and updates, morning Outlook)
  mail-storm-atlan-marine-subscribe@hogfish.nhc.noaa.gov

Atlantic Full (All Advisories and updates, morning Outlook)
  mail-storm-atlan-full-subscribe@hogfish.nhc.noaa.gov

Atlantic Spanish (Spanish-language Public Advisory, morning Outlook)
  mail-atlan-outlook-sp-subscribe@hogfish.nhc.noaa.gov

Atlantic Outlooks (the rest of the Outlooks)
  mail-atlan-outlook-subscribe@hogfish.nhc.noaa.gov

Atlantic Outlooks Spanish (the rest of the Outlooks in Spanish)
  mail-atlan-outlook-sp-subscribe@hogfish.nhc.noaa.gov

East Pacific (Public Advisories and updates, morning Outlook)
  mail-storm-epac-subscribe@hogfish.nhc.noaa.gov

East Pacific Marine (Forecast/Advisories and updates, morning Outlook)
  mail-storm-epac-marine-subscribe@hogfish.nhc.noaa.gov

East Pacific Full (All Advisories and updates, morning Outlook)
  mail-storm-epac-full-subscribe@hogfish.nhc.noaa.gov

East Pacific Outlooks (the rest of the Outlooks)
  mail-epac-outlook-subscribe@hogfish.nhc.noaa.gov

Unsubscription addresses:
-------------------------

Atlantic
  mail-storm-atlan-unsubscribe@hogfish.nhc.noaa.gov

Atlantic Marine
  mail-storm-atlan-marine-unsubscribe@hogfish.nhc.noaa.gov

Atlantic Full
  mail-storm-atlan-full-unsubscribe@hogfish.nhc.noaa.gov

Atlantic Spanish
  mail-storm-atlan-sp-unsubscribe@hogfish.nhc.noaa.gov

Atlantic Outlooks
  mail-atlan-outlook-unsubscribe@hogfish.nhc.noaa.gov

Atlantic Outlooks Spanish
  mail-atlan-outlook-sp-unsubscribe@hogfish.nhc.noaa.gov

East Pacific
  mail-storm-epac-unsubscribe@hogfish.nhc.noaa.gov

East Pacific Marine
  mail-storm-epac-marine-unsubscribe@hogfish.nhc.noaa.gov

East Pacific Full
  mail-storm-epac-full-unsubscribe@hogfish.nhc.noaa.gov

East Pacific Outlooks
  mail-epac-outlook-unsubscribe@hogfish.nhc.noaa.gov
If you desire to receive hurricane advisories from the Central Pacific Hurricane Center, or other NWS forecast products only as requested, the NWS FTPMAIL server will be more appropriate for your needs.

To obtain the FTPMAIL "Help" file:

Send an e-mail to:       ftpmail@weather.noaa.gov
Subject Line:           Put anything you like
Body:                   help

Information on other e-mail "robots" may be found as follows:

Send an e-mail to:       ftpmail@weather.noaa.gov
Subject line:          Put anything you like
Body:                   open
cd fax
get robots.txt
quit

If you have access to the World Wide Web be certain to check out the following webpages.  See these pages for further links.

http://www.nws.noaa.gov              NWS Homepage
http://www.nws.noaa.gov/om/marine/home.htm   NWS Marine Page

A non-NWS FAQ webpage describing several public FTP-to-EMAIL and WWW-to-EMAIL servers may be found at:

http://www.faqs.org/faqs/internet-services/access-via-email/

Author: Timothy Rulon
National Weather Service
Last Modified July 20, 2004
Document URL: http://weather.noaa.gov/pub/fax/nhclist.txt
ftp://weather.noaa.gov/fax/nhclist.txt
University of Illinois Listserver for Marine Applications

Note: The following provided information does not imply any endorsement by the National Weather Service as to function or suitability for your purpose or environment.

These Lists provide an automated means to receive NWS hurricane forecast products via e-mail. However, performance may vary and receipt cannot be guaranteed by either UIUC or the National Weather Service.

The University of Illinois at Urbana-Champaign (UIUC) operates an e-mail Listserver of which two Lists, WX-ATLAN, and WX-TROPL are of special interest to mariners who do not have direct access to the World Wide Web but who are equipped with an e-mail system. These Lists provide an automated means to receive hurricane information via e-mail. Information on this system may be found at: http://www.lsoft.se/scripts/wl.exe?XH=LISTSERV.UIUC.EDU

Users should be aware of the costs for operating their particular e-mail system before attempting to use this List server, especially when using satellite communication systems. Although the service is free, the user is responsible for any charges associated with the communication system(s) used by their e-mail system. As this List server will send requested data on a continuous basis until service is successfully terminated, potential charges might be significant.

As a general guide, National Weather Service hurricane products average 1 Kbyte each in length. The tropical weather OUTLOOK is transmitted on a 6 hour cycle during the hurricane season. Other products are transmitted when active systems exist, on a 6 hour cycle (one series of products for each storm). Products may be transmitted more often as the systems approach landfall, to make corrections, etc. The Lists may contain products in addition to those produced by the National Weather Service.

This List server is not operated or maintained by the National Weather Service, please direct all questions to WX-ATLAN-request@LISTSERV.UIUC.EDU

National Weather Service hurricane products may also be found on the World Wide Web at links including:

http://www.nhc.noaa.gov
http://www.nws.noaa.gov/om/marine/forecast.htm

Below are an abbreviated set of instructions for the WX-ATLAN and WX-TROPL Lists on the UIUC List server.

****WX-ATLAN INFORMATION****

This list contains topical weather outlooks, hurricane position reports, etc. It is most active from June through December. Portions of the products on this list may be in abbreviated (coded) format.

To subscribe to WX-ATLAN send e-mail to LISTSERV@UIUC.EDU and include the following message:
sub wx-atlan YourFirstName YourLastName

To signoff WX-ATLAN send e-mail to LISTSERV@UIUC.EDU and include the following message:

signoff wx-atlan

WX-ATLAN mailings are subdivided based on product category. There is presently no way to restrict mailings to a specific storm. By default, when you first subscribe, you will receive ONLY the brief outlook (OUTLOOK)

!!! IMPORTANT NOTE !!!

YOU WILL ONLY RECEIVE THE TROPICAL WEATHER OUTLOOK WHEN YOU FIRST SUBSCRIBE TO WX-ATLAN. THIS MEANS YOU WILL *NOT* RECEIVE ANY HURRICANE WATCHES, WARNINGS, OR ADVISORIES UNLESS YOU CHANGE YOUR SUB-TOPIC PROFILE (SEE BELOW).

The available sub-topics are:

ALL = All sub-topics
OUTLOOK = Brief discussions concerning development trends [ABNT20]
TROPDISC = Detailed discussions concerning development trends [AXNT20]
FORECAST = Storm forecasts (wind and sea height estimates) [WTNT2x]
ADVISORY = Storm status reports (movement, wind speeds, etc) [WTNT3x]
STRMDISC = Discussion reports concerning a specific storm [WTNT4x]
POSITION = Position reports [WTNT5x]
UPDATE = Storm updates (they often cites recon reports) [WTNT6x]
STRIKE = Strike probabilities (landfall probabilities) [WTNT7x]
ALL = All sub-topics
RECON = URNT12 FOS header Vortex messages
SEAFCST = High Seas Forecast [FZNT01]
SUMMARY = Tropical Storm Summary Information
ESPNOL = Spanish-language bulletins [WTCA4x] [ACCA62]
MARINE = Products specifically of interest to maritime interests

To receive bulletins from just one specific product say the strike probabilities, send e-mail to LISTSERV@UIUC.EDU with the following:

SET WX-ATLAN TOPICS: STRIKE

You can also use combinations of the keywords for multiple products. For example:

SET WX-ATLAN TOPICS: STRIKE,POSITION,TROPDISC

Notes: If you have previously specified a list of sub-topics and now you want to add or delete specific sub-topics, prefix them with a (+) or (-) respectively. For example, to add ADVISORY and delete TROPDISC (while leaving any other sub-topics alone) you would send the command:

SET WX-ATLAN TOPICS: +ADVISORY -TROPDISC

You *must* already be subscribed to WX-ATLAN in order to use the sub-topic commands.

You can also use the web interface to control your subscription.
once you are subscribed:

http://listserv.uiuc.edu/wa.cgi?SUBED1=wx-atlan&A=1

Please address *ALL* questions concerning subscriptions to chris@siu.edu.

A Web Archive of WX-ATLAN may be found at:
http://listserv.uiuc.edu/archives/wx-atlan.html

****WX-TROPL TROPICAL INFORMATION****

This list contains topical weather outlooks, hurricane position reports, etc. Portions of the products on this list may be in abbreviated (coded) format. This list includes some NAVY as well as NWS products

NOTE: For Atlantic and Gulf of Mexico information see the WX-ATLAN list.

To subscribe to WX-TROPL send e-mail to LISTSERV@UIUC.EDU and include the following message:

sub wx-tropl YourFirstName YourLastName

To signoff WX-TROPL send e-mail to LISTSERV@UIUC.EDU and include the following message:

signoff wx-tropl

WX-TROPL mailings are subdivided into geographic regions. By default, new subscribers will receive ALL bulletins. We have set up sub-topic areas for a number of geographically related regions:

PACIFIC-EN = Pacific Ocean Eastern Northern region (90W to 140W)
PACIFIC-NC = Pacific Ocean North Central region (140W to 180W)
PACIFIC-NW = Pacific Ocean Northwest region (100E to 180E)
PACIFIC-SW = Pacific Ocean Southwest (120E to 180E south of Equator)
PACIFIC-SE = Pacific Ocean Southeast Region
INDIAN-N = Indian Ocean (North) (100E to 40E north of Equator)
INDIAN-S = Indian Ocean (South) (120E to 40E south of Equator)

To receive bulletins from just one specific region, say the northwest Pacific Ocean, send e-mail to LISTSERV@UIUC.EDU with the following:

SET WX-TROPL TOPICS: PACIFIC-NW

You can also use combinations of the keywords for multiple areas. For example:

SET WX-TROPL TOPICS: PACIFIC-EN, PACIFIC-NW

Notes: If you have previously specified a list of sub-topics and now you want to add or delete specific sub-topics, prefix them with a (+) or (-) respectively. For example, to add PACIFIC-NW and delete INDIAN-N (while leaving any other sub-topics alone) you would send the command:

SET WX-TROPL TOPICS: +PACIFIC-NW -INDIAN-N

You *must* already be subscribed to WX-TROPL in order to use the sub-topic commands.
You can also use the web interface to control your subscription once you are subscribed:

http://listserv.uiuc.edu/wa.cgi?SUBED1=wx-tropl&A=1

Please address *ALL* questions concerning subscriptions to chris@siu.edu.

A Web Archive of WX-TROPL may be found at:
http://listserv.uiuc.edu/archives/wx-tropl.html

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If you wish to receive National Weather Service hurricane products via e-mail only upon individual request, the NWS FTPMAIL server may be more appropriate for your needs.

NWS FTPMAIL SERVER
National Weather Service radiofax charts broadcast by U.S. Coast Guard from Boston, New Orleans and Pt. Reyes, California are available via e-mail. Marine text products are also available. The FTPMAIL server is intended to allow Internet access for mariners and other users who do not have direct access to the World Wide Web but who are equipped with an e-mail system. Turnaround is generally in under three hours, however, performance may vary widely and receipt cannot be guaranteed. To get started in using the NWS FTPMAIL service, follow these simple directions to obtain the FTPMAIL "help" file (8 Kbytes).

Send an e-mail to: ftpmail@weather.noaa.gov
Subject line: Put anything you like
Body: help

or available at: http://weather.noaa.gov/pub/fax/ftpmail.txt

also please visit:
http://www.nws.noaa.gov/om/marine/home.htm

*****

National Weather Service, NOAA
1325 East West Highway
Silver Spring, MD 20910

Webpage Content: Tim Rulon,
NWS Office of Marine and Coastal Services W/OS21
Last Modified: March 26, 2003
Document URL: http://weather.noaa.gov/pub/fax/ftpmail.txt
ftp://weather.noaa.gov/fax/ftpmail.txt
Marine Forecasts Available via E-mail

National Weather Service (and other) marine forecasts are available via a variety of Government, University, Commercial and Public/Freeware systems intended to make information accessible to users such as mariners who may have an e-mail capability but do not have direct Internet access. The following is a listing of several known automated systems.

Note: Any reference to any product or service does not imply any endorsement by the National Weather Service as to function or suitability for your purpose or environment.

This document (http://weather.noaa.gov/pub/fax/robots.txt) may be retrieved via e-mail as follows:

Send an e-mail to:   ftpmail@weather.noaa.gov
Subject line:        Put anything you like
Body:                open
cd fax
get robots.txt
quit

FTPMAIL
National Weather Service marine text forecasts, radiofax charts and buoy observations are available via e-mail via an FTPMAIL server. Further, FTPMAIL may be used to acquire any file on a *.noaa.gov FTP server. The FTPMAIL server is intended to allow Internet access for mariners and other users who do not have direct access to the World Wide Web but who are equipped with an e-mail system. Turnaround is generally less than one hour, however, performance may vary widely and receipt cannot be guaranteed. To get started in using the NWS FTPMAIL service, follow these simple directions to obtain the FTPMAIL "help" file (11 KBytes), or see http://weather.noaa.gov/pub/fax/ftpmail.txt

Send an e-mail to:   ftpmail@weather.noaa.gov
Subject line:        Put anything you like
Body:                help

National Hurricane Center Listserver
The National Weather Service's National Hurricane Center operates an e-mail listserver which is special interest to mariners who do not have direct access to the World Wide Web but who are equipped with an e-mail system. This listserver provides an automated means to receive NWS hurricane forecast products via e-mail. However, performance may vary and receipt cannot be guaranteed. This is an experimental service. Interruptions or duplications in e-mail deliveries while we test the system are to be expected. To get started in using the National Hurricane Center Listserver, follow these simple directions for more information, or see:   http://www.nhc.noaa.gov/signup.shtml

Send an e-mail to:   ftpmail@weather.noaa.gov
Subject line:        Put anything you like
Body:                open
cd fax
get nhclist.txt
quit
University of Illinois Listserver
The University of Illinois at Urbana-Champaign operates an e-mail listserver of which two Lists, WX-ATLAN, and WX-TROPL are of special interest to mariners who do not have direct access to the World Wide Web but who are equipped with an e-mail system. These Lists provide an automated means to receive NWS hurricane (and some marine) forecast products via e-mail. However, performance may vary and receipt cannot be guaranteed. To get started in using the University of Illinois Listserver, follow these simple directions to obtain further information, or see: http://www.lsoft.se/scripts/wl.exe?XH=LISTSERV.UIUC.EDU

Send an e-mail to: ftpmail@weather.noaa.gov
Subject line: Put anything you like
Body: open
cd fax
get uiuclist.txt
quit

Hurricane Watch Net YahooGroup Listserver
The Amateur Radio "HAM" Hurricane Watch Net manages two YahooGroup Lists, HWN, and hwn_epac, which are of special interest to mariners who do not have direct access to the World Wide Web but who are equipped with an e-mail system. These Lists provide an automated means to receive NWS hurricane forecast products via e-mail. However, performance may vary and receipt cannot be guaranteed. Due to a system limitation, duplicate e-mails are likely. To get started in using the HWN/hwn_epac YahooGroup Listserver, follow these simple directions to obtain further information, or see: http://www.hwn.org/, http://groups.yahoo.com/group/HWN and http://groups.yahoo.com/group/hwn_epac

Send an e-mail to: ftpmail@weather.noaa.gov
Subject line: Put anything you like
Body: open
cd fax
get hwnlist.txt
quit

NEMOC Automated Chart System
The U.S. Naval European Meteorology and Oceanography Command (NEMOC) has developed a method of weather chart/warning delivery via e-mail for forecasts of the Eastern Atlantic and Mediterranean. For questions or comments on NEMOC's products and services contact the 24x7 Command Duty Officer at cdo@nemoc.navy.mil, or call 011-34-945-82-2410. To receive the NEMOC Automated Chart System "help" file:

Send an e-mail to: products@nemoc.navy.mil
Subject line: Put anything you like
Body: Put anything you like

SAILDOCS
SAILDOCS is an email-based document-retrieval system which currently offers two services: a document retrieval service which will return
documents from the Internet or SAILDOCS own files, and a subscription service which will send Internet documents (for example weather reports) at scheduled intervals. SAILDOCS files include National Weather Service text forecasts and gridded binary (GRIB files) for wind, pressure, 500mb, and sea surface temperature. SAILDOCS is supported in part by Sailmail (www.sailmail.com) but is an independent service that can be used by anyone who agrees to the terms and conditions. To get started in using SAILDOCS, follow these simple directions to obtain further information, or see: http://www.saildocs.com/

Send an e-mail to: info@saildocs.com
Subject line: Put anything you like
Body: Put anything you like

NAVIMAIL
Météo-France's NAVIMAIL system enables you to receive gridded binary (GRIB files) for wind, pressure, waves, sea surface temperature, as well as text bulletins and satellite images. There is a service charge for GRIB data, however, text bulletins and satellite images are available at no charge. To get started in using NAVIMAIL, follow these simple directions to obtain further information, or see: http://www.meteo.fr/meteonet/services/navimail/navimail.htm

Send an e-mail to: ftpmail@weather.noaa.gov
Subject line: Put anything you like
Body: open
cd fax
get navimail.txt
quit

U.S. COAST GUARD LOCAL NOTICES TO MARINERS (LNM) LISTSERVER
LNM's and other maritime related information are available via a one-way listserver at: http://www.navcen.uscg.gov/lnm/listserver.htm

NANUS & GPS STATUS MSGS BY EMAIL
Users with an urgent need to be notified of changes to the GPS Constellation may subscribe to the Navigation Center NANU List Server (http://cglsl.uscg.mil/mailman/listinfo/nanu) and/or the GPS Status Message List Server (http://cglsl.uscg.mil/mailman/listinfo/gps). These services provide emails containing the NANU and/or GPS Status Messages, generally within 60 minutes of notification by the Air Force of a change to the GPS Constellation. This is a free service. PRIVACY INFORMATION: Disclosure of your email address is voluntary. It is solicited for the sole purpose of delivering the requested information to you and will not be released to any other party.

OTHERS
A non-NWS FAQ webpage describing several FTP-to-EMAIL and WWW-to-EMAIL servers may be found at: http://www.faqs.org/faqs/internet-services/access-via-email/

If you have access to the World Wide Web be certain to check out the following webpages. See these pages for further links.

http://www.nws.noaa.gov NWS Homepage
http://www.nws.noaa.gov/om/marine/home.htm NWS Marine Page
Under a cooperative agreement between the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Coast Guard (USCG), software has been created to assist Volunteer Observing Ships (VOS) in submitting marine weather reports and participating in the Automated Mutual-assistance VEssel Rescue system (AMVER). The VOS program allows ships to report marine weather to the National Weather Service (NWS) so that high seas forecasts will be as timely and accurate as possible. The AMVER system allows ships to report their intended track so that in the event of an emergency all available resources may be focused on aiding ships in distress. Both of these systems are voluntary and are intended to aid all mariners on the high seas. All transmission costs are paid by the U.S. Coast Guard and NOAA. The ship is not responsible for any transmission costs, provided messages are sent to the address specified in the user's guide.

NOAA's SEAS (Shipboard Environmental data Acquisition System) program relies on volunteer observers to report weather at least four times per day at 00Z, 06Z, 12Z, and 18Z. Ships are encouraged to also submit reports at 03Z, 09Z, 15Z and 21Z. In addition, a very limited number of ships are asked to collect oceanographic data. For these ships, a SEAS field representative installs the extra hardware needed and trains the crew in collecting and transmitting the data. Portions of the software needed for these observations are password protected to eliminate confusion.

AMVER reports allow the U.S. Coast Guard to track a vessel's position. The AMVER program relies on ships to submit four types of reports: (1) Sail Plans; (2) Position Reports; (3) Arrival Reports and (4) Deviation Reports, when necessary. The U.S. Coast Guard updates their database with the position information from these reports, which allows them to identify vessels in the vicinity of a ship in distress.

Ships may participate in either the AMVER or SEAS program, but there are benefits to participating in both. A ship can reduce reporting requirements, since AMVER position reports are created from every weather message and automatically forwarded to the U.S. Coast Guard.

A typical voyage would require the submission of an AMVER Sail Plan before departure, submissions of weather reports four times per day and the submission of an Arrival Report upon arrival. A Deviation Report is only submitted if the ship deviates from its original plan. Ships that follow the same routes repeatedly get an additional benefit since Sail Plans can be stored in the system and recalled and modified rather than creating new ones.

The AMVER/SEAS PC software was developed for use with INMARSAT C transceivers. For those ships already participating in the SEAS program, GOES transmitters will continue to work for the transmission of SEAS observations. To participate in the AMVER program the ship must possess an INMARSAT C transmitter with a floppy drive and the ability to send messages in binary format, and a 286 (or better) IBM compatible PC.

A Windows 95/98/00/ME/NT/XP version of AMVER/SEAS is now available.

For Information on SEAS contact:
Your nearest U.S. Port Meteorological Officer or SEAS representative listed in the Appendix.

For Information on AMVER contact:
Rick Kenney  1-212-668-7762
e-mail:  rkenney@battery.ny.uscg.mil

or visit the SEAS website at:
http://seas.amverseas.noaa.gov/seas/
The MAROB Program is an experimental voluntary marine observation program of the National Weather Service in the early stages of development. It seeks the participation of all mariners, both commercial and recreational, which are not part of the more in-depth VOS program. It is the goal of the program to collect as many marine observations as practicable, to improve the accuracy of coastal, offshore and high seas forecasts, by taking advantage of technological advancements in marine communications and the proliferation of the Internet.

MAROB observations will be in coded form which can be better ingested, distributed and displayed by forecasters than observations in plain language. The MAROB report format will be identical to VOS coded reports, with the exception that "MAROB" will replace "BBXX". The MAROB program will differ from the VOS Program in at least several other aspects: Although MAROBs will be used by forecasters in forecast decision process, these data will likely not be used directly by computer models; Any communications charges and the cost of any observing equipment will not be reimbursed by the Weather Service; The observation elements collected will typically be a subset of those collected in the full VOS report.

The National Weather Service is in the process of developing cooperative arrangements with organizations such as the United States Power Squadrons, the Coast Guard Auxiliary, the WinLink 2000 Global Radio Network, the Maritime Mobile Service Network, CruiseEmail.com, Ocens, Sailmail, SkyMate, MarineNet Wireless, and the YOTREP Reporting System, to both train observers and forward observations to NWS. Technologies utilized may include cellular telephone, HF Marine radio, MF Marine radio, VHF Marine Radio, Ham Radio, Webforms and e-mail.

In several cases, MAROB reporting schemes will work in conjunction with vessel position reporting systems such as WinLink's Position Reporter, the Maritime Mobile Service Network's ShipTrak, and the YOTREPs Reporter, to enhance the safety of mariners.

At present, mariners may participate in the MAROB program in any of several ways.

For information on the MAROB Program see:

http://www.nws.noaa.gov/om/marine/marob.htm

Or contact::
timothy.rulon@noaa.gov
1-301-713-1677 x 128

For information on other marine observation programs of the National Weather Service see:

http://www.nws.noaa.gov/om/marine/voluntary.htm

Note: Any reference to a commercial product or service does not imply any endorsement by the National Weather Service as to function or suitability for your purpose or environment.
USEFUL MARINE WEATHER PUBLICATIONS

Marine Service Charts (MSC) - $1.25

Marine Service Charts (MSC) list frequencies, schedules and locations of stations disseminating NWS products. They also contain additional weather information of interest to the mariner. Charts are also available via the Internet at: http://www.nws.noaa.gov/om/marine/pub.htm.

<table>
<thead>
<tr>
<th>Location</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastport, ME to Montauk Point, NY</td>
<td>MSC-1</td>
</tr>
<tr>
<td>Montauk Point, NY to Manasquan, NJ</td>
<td>MSC-2</td>
</tr>
<tr>
<td>Manasquan, NJ to Cape Hatteras, NC</td>
<td>MSC-3</td>
</tr>
<tr>
<td>Cape Hatteras, NC to Savannah, GA</td>
<td>MSC-4</td>
</tr>
<tr>
<td>Savannah, GA to Apalachicola, FL</td>
<td>MSC-5</td>
</tr>
<tr>
<td>Apalachicola, FL to Morgan City, LA</td>
<td>MSC-6</td>
</tr>
<tr>
<td>Morgan City, LA to Brownsville, TX</td>
<td>MSC-7</td>
</tr>
<tr>
<td>Mexican Border to Point Conception, CA</td>
<td>MSC-8</td>
</tr>
<tr>
<td>Point Conception, CA to Point St George, CA</td>
<td>MSC-9</td>
</tr>
<tr>
<td>Point St George, CA to Canadian Border</td>
<td>MSC-10</td>
</tr>
<tr>
<td>Great Lakes</td>
<td>MSC-11/12</td>
</tr>
<tr>
<td>Hawaiian Waters</td>
<td>MSC-13</td>
</tr>
<tr>
<td>Puerto Rico and Virgin Islands</td>
<td>MSC-14</td>
</tr>
<tr>
<td>Alaskan Waters</td>
<td>MSC-15</td>
</tr>
<tr>
<td>Guam and the Northern Mariana Islands</td>
<td>MSC-16</td>
</tr>
</tbody>
</table>

OTHER PUBLICATIONS OF VALUE TO THE MARINER

Mariner's Weather Log Magazine - $13.00/2 issues/yr ($18.20 foreign)
Selected Marine Worldwide Weather Broadcasts (9/92)
Voluntary Observing Ship Program Brochure (1999) Free
NWS Observing Handbook NO.1 (4/99)
Worldwide Marine Radiofacsimile Broadcast Schedules (06/03)
NOAA Weather Radio Brochure (NOAA/PA 94070, 3/97) Free
NOAA Weather Radio Handout (NOAA/PA 94061, 3/97) Free
A Mariners Guide to Marine Weather Services - Great Lakes (NOAA/PA 98053) Free
A Mariners Guide to Marine Weather Services - Coastal, Offshore, and High Seas (NOAA/PA 98054) Free
Safe Boating Weather Tips (NOAA/PA 94058, 6/98) Free
World Meteorological Organization Publication 9 - Weather Reporting, Volume D - Information for Shipping (Broadcast Schedules)
National Ocean Service Coast Pilot, Volumes 1-9
NGA Publication 117 "Radio Navigational Aids" (2002)...Includes CD
American Practical Navigator (Bowdich) Publication 9 (2002)
Pilot Chart Atlas - 5 areas
Sailing Directions - 42 volumes
U.S. Notices to Mariners
U.S. Notices to Mariners #1, Special Notice to Mariners Paragraphs
Summary of Notice to Mariners Corrections
Maritime Navigational Safety Information Sources, (9/94) $8
The British Admiralty List of Radio Signals
  Volume 1 Coast Radio Stations (2 parts)

APPENDIX D-1
Volume 3 Maritime Safety Information Services
Volume 4 Meteorological Observation Stations
Volume 5 Global Maritime Distress and Safety Systems
Volume 6 Pilot Services, Vessel Traffic Services & Port Operations (5 parts)

Canadian Coast Guard Radio Aids to Navigation - $18.95 Cdn
Directory of Private Weather Services - Free
TSUNAMI The Great Waves - Free
International SafetyNET Manual, 1994; IMO-908E
NAVTEX Manual, 1994; IMO-951E
GMDSS Handbook, 1995 (Includes GMDSS Master Plan); IMO-970E
SOLAS Consolidated Edition, 1997; IMO-110E
Mariners Guide for Hurricane Awareness in the North Atlantic Basin (large file 2.3 MB PDF format)
U.S. NAVY Hurricane Havens/Heavy Weather Handbooks
Radiofacsimile Charts User's Guide (large file 2.2 MB PDF format)

1. FAA/National Aeronautical Charting Office
   Distribution Division, AVN-530
   6303 Ivy Lane, Suite 400
   Greenbelt, MD 20770
   (301) 436-8301
   (800) 638-8972 toll free, U.S. only
   (301) 436-6829 FAX
   Email: 9-AMC-chartsales@faa.gov
   http://chartmaker.ncd.noaa.gov
   or your local chart agent: http://chartmaker.ncd.noaa.gov/nsd/states.html

   Or from your local National Weather Service Forecast Office.

3. Superintendent of Documents
   P.O. Box 371954
   Pittsburgh, PA 15250-7954
   (202) 512-1800 (7:30am-4:30pm EST)
   (202) 512-2250 FAX
   http://www.gpo.gov
   http://www.nws.noaa.gov/om/mwl/mwl.htm
   (Distributed free to ships in VOS program)

4. (Printed copies available only to ships participating in U.S. VOS program)
   web version http://www.nws.noaa.gov/om/marine/home.htm
   National Weather Service
   Voluntary Observing Ship Technical Lead
   NDBC Bldg #1100
   Stennis Space Center, MS 39529
   1-228-688-1457  1-228-688-3153 (fax)
   robert.luke@noaa.gov
   http://www.vos.noaa.gov

APPENDIX D-2
5. Joint Publication of National Weather Service and Naval Oceanography Command
   Currently out of date, out of print, will no longer be available
   Tim Rulon, NOAA
   Marine Communications Program Manager
   National Weather Service W/OS21
   1325 East-West Highway
   Silver Spring, MD 20910
   1-301-713-1677 x128  1-301-713-1520 (fax)
   timothy.rulon@noaa.gov
   marine.weather@noaa.gov
   http://www.nws.noaa.gov/om/marine/home.htm

6. (Some publications available only to ships participating in U.S. VOS program)
   National Weather Service
   Voluntary Observing Ship Technical Lead
   NDBC Bldg #1100
   Stennis Space Center, MS 39529
   1-228-688-1457
   1-228-688-3153 (fax)
   robert.luke@noaa.gov
   http://www.vos.noaa.gov

7. Radio Technical Commission for Maritime Services (RTCM)
   1800 Diagonal Rd., Suite 600
   Alexandria, VA 22314-2840
   (703)-684-4481
   (703)-836-4229 (FAX)
   information@rtcm.org
   http://www.rtcn.org
   (New revisions in process)

8. UK Hydrographic Office
   Admiralty Way, Tauton, Somerset
   TA1 2DN United Kingdom
   +44(0) 1823 337900 x3333
   +44(0) 1823 323753 FAX
   info@hydro.gov.uk
   http://www.ukho.gov.uk

9. Commandant (G-SCT)
   U.S. Coast Guard
   2100 Second Street S.W.
   Washington, D.C. 20593
   (202)-267-2860
   (202)-267-4106 (FAX)
   cgcomms@comdt.uscg.mil
   http://www.navcen.uscg.gov/marcomms/gmdss/#Brochure
   http://www.navcen.uscg.gov/marcomms/marcomms.htm

10. National Weather Service
    Industrial Meteorology Staff
    1325 East West Highway
    Silver Spring, MD 20910
    (301)-713-0258
    (301)-713-0610
    nws.im@noaa.gov
    http://www.nws.noaa.gov/im

APPENDIX D-3
11. International Tsunami Information Center
    737 Bishop St. Suite 2200
    Honolulu, HI 96813-3213
    808-532-6422
    808-532-5576 (FAX)
    itic@itic.noaa.gov
    http://www.nws.noaa.gov/pr/hq/itic.htm

12. International Maritime Organization (IMO)
    4 Albert Embankment
    London SE1 7SR UK
    +44 0171 357611
    +44 0171 5873210 FAX (general inquiries)
    +44 0171 5873241 FAX (publication sales)
    Telex: 23588
    info@imo.org
    http://www.imo.org

13. Superintendent of Documents
    P.O. Box 371954
    Pittsburgh, PA 15250-7954
    (202) 512-1800 (7:30am-4:30pm EST)
    (202) 512-2250 FAX
    http://www.gpo.gov
    (NIMA product distribution is presently in a transition process from
     National Ocean Service to GPO)

14. Defense Supply Center-Richmond, Customer Assistance
    ATTN: Product Center 9
    8000 Jefferson Davis Highway
    Richmond, VA 23297-5337
    1-800-826-0342

15. American Meteorological Society
    Attn: WMO Publications Center
    45 Beacon Street
    Boston, MA 02108 USA
    1-617-227-2425 Fax: 1-617-742-8718
    wmopubs@ametsoc.org
    http://www.wmo.ch/web/catalogue/

    RAMN's may be purchased at any Canadian Hydrographic Service Authorized Chart Dealer.

APPENDIX D-4
PORT METEOROLOGICAL OFFICERS

U.S. Port Meteorological Officers
Headquarters
Robert A. Luke
Voluntary Observing Ship Program Leader
National Data Buoy Center
Building Bldg. 3203, Room 305B
Stennis Space Center, MS 39529-6000
Tel: 228-688-1457
Fax: 228-688-3923
E-mail: robert.luke@noaa.gov

Tim Rulon
Marine Communications Program Manager
National Weather Service/NOAA
SSMC2, #13134 W/OS21
1325 East-West Highway
Silver Spring, MD 20910-3233
Tel: 301-713-1677 x128
Fax: 301-713-1520
E-mail: timothy.rulon@noaa.gov

Atlantic Ports
Port Meteorological Officer
National Weather Service, NOAA
2550 Eisenhower Blvd, Suite 312
P.O. Box 165504
Port Everglades, FL 33316
Tel: 954-463-4271
Fax: 954-462-8963
E-mail: vos@noaa.gov

John Warrelmann, PMO
National Weather Service, NOAA
13701 Fang Road
Jacksonville, FL 32218-7933
Tel: 904-741-5186 Ext. 117
Fax: 904-741-0078
E-mail: john.warrelmann@noaa.gov

Tim Kenefick, PMO
NOAA Coastal Services Center
2234 South Hobson Avenue
Charleston, SC 29405-2413
Tel: 843-740-1281
Fax: 843-740-1289
E-mail: timothy.kenefick@noaa.gov

Quebec
Eric Gola, PMO
Meteorological Service of Canada-Quebec Region
100 Alexis Nihon, Suite 300, 3rd Floor
Montreal, Quebec H4M 2N8
Tel: 514-283-1644
514-386-8269
Fax: 514-496-1867
E-mail: erich.gola@ec.gc.ca

China
YU Zhaoguo
Shanghai Meteorological Bureau
166 Puxi Road
Shanghai, China

Denmark
Commander Lutz O. R. Niegsch
PMO, Danish Meteorological Inst.
Lyngbyvej 100, DK-2100
Copenhagen, Denmark
Tel: +45 39157500
Fax: +45 39157300

United Kingdom
Headquarters
Sarah North, Nautical Officer
Marine Observations Manager, Met. Office
Observations Supply - Marine Networks
Fitzroy Road
Exeter
Devon, EX1 3PD
Tel: +44 (0) 870 900 0100
Fax: +44 (0) 870 900 5050
Email: sarah.north@metoffice.com

Bristol Channel (closing soon?)
Captain A Maytham, PMO
Met Office, 12th Floor,
Southgate House, Wood Street
Cardiff. CF10 1EW
Wales United Kingdom
Tel: +44 (0) 29 2026 7965
Fax:+44 (0) 29 2026 7950
austin.maytham@metoffice.com
North & West England and Wales
Colin B. Attfield, PMO
12 Brackley Close
Wallasey
Merseyside
CH44 3EJ
Tel:+44 0151 638 8516
Fax: +44 0870 900 5050
Mobile: 07753 880465.
E-mail: pmoliverpool@metoffice.com or
E-mail: colin.attfield@metoffice.com

Southeast England
Captain Harry H. Gale, PMO
Trident House, 21 Berth, Tilbury Dock
Tilbury, Essex RM18 7HL
Tel: +44 01385 859970
Fax: +44 01375 859972,

Southwest England (closing soon?)
Captain James M. Roe, PMO
8 Viceroy House, Mountbatten Business Centre
Millbrook Road East
Southampton SO15 1HY
Tel: +44 023 8022 0632
Fax: +44 023 8033 7341

East England (closing soon?)
Captain John Steel, PMO
Customs Building, Albert Dock
Hull HU1 2DP
Tel: +44 01482 320158
Fax: +44 01482 328957

France
Le Havre
Yann Prigent, PMO
Station Mét., Noveau Semaphore
Quai des Abeilles, Le Havre
Tel: +33 35422106
Fax: +33 35413119

Marseille
P. Coulon
Station Météorologique
de Marseille-Port
12 rue Sainte Cassien
13002 Marseille
Tel: +33 91914651 Ext. 336
Pacific Ports
Derek LeeLoe
Ocean Services Program Coordinator
National Weather Service Pacific Region HQ
Grosvenor Center, Mauka Tower
737 Bishop Street, Suite 2200
Honolulu, HI 96813-3201
Tel: 808-532-6439
Fax: 808-532-5569
E-mail: derek.leeloy@noaa.gov

Robert Webster, PMO
National Weather Service, NOAA
501 West Ocean Blvd., Room 4480
Long Beach, CA 90802-4213
Tel: 562-980-4090
Fax: 562-980-4089
E-mail: bob.webster@noaa.gov

Robert Novak, PMO
National Weather Service, NOAA
1301 Clay Street, Suite 1190N
Oakland, CA 94612-5217
Tel: 510-637-2960
Fax: 510-637-2961
E-mail: bob.novak@noaa.gov

Patrick Brandow, PMO
National Weather Service, NOAA
7600 Sand Point Way, N.E.
BIN C15700
Seattle, WA 98115-6349
Tel: 206-526-6100
Fax: 206-526-4571 or 6094
E-mail: pat.brandow@noaa.gov

Richard Courtney
National Weather Service, NOAA
600 Sandy Hook Street, Suite 1
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Channel numbers, e.g. (WX1, WX2) etc. have no special significance but are often designated this way in consumer equipment. Other channel numbering schemes are also prevalent.

The NOAA Weather Radio network provides voice broadcasts of local and coastal marine forecasts on a continuous cycle. The forecasts are produced by local National Weather Service Forecast Offices. Coastal stations also broadcast predicted tides and real time observations from buoys and coastal meteorological stations operated by NOAA's National Data Buoy Center. Based on user demand, and where feasible, Offshore and Open Lake forecasts are broadcast as well.

The NOAA Weather Radio network provides near continuous coverage of the coastal U.S, Great Lakes, Hawaii, and populated Alaska coastline. Typical coverage is 25 nautical miles offshore, but may extend much further in certain areas.