

# Marine Meteorological Observations and the Services of Port Meteorological Officers

March 2004

Climate and Marine Department, Japan Meteorological Agency (JMA)

**Marine meteorological observations and reports from vessels are indispensable for making marine meteorological information such as marine meteorological forecasts and warnings. They are also important to monitor and research the climate change and the global warming.**

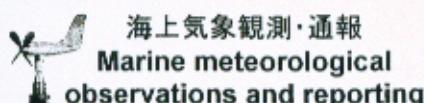
In transmitting the weather message via INMARSAT, the transmission fee is free of charge as long as you use the special access code "41" which represents weather messages.

World Meteorological Organization (WMO), which is one of the specialized agencies of the United Nations, encourages ships to make meteorological observations and reporting, and calls them "Voluntary Observing Ships (VOSs)".

The figure on the back side of this brochure shows that the main ports in the world where a Port Meteorological Officer appointed.  
(as of February 10, 2003)

National Meteorological Services (NMSs) appoint Port Meteorological Officers (PMOs) at main ports in their countries. PMOs regularly visit VOSs, check meteorological instruments such as barometer, refill supplies such as logbooks and guides, and give advice on meteorological or oceanographic matters to support VOSs. These services are available free of charge.

In Japan, Port Meteorological Services are provided at Yokohama, Nagoya, Kobe, Hakodate, Maizuru and Nagasaki.



篤志観測船  
VOS



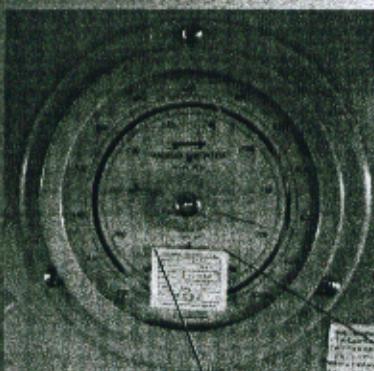
港湾気象官  
PMO



各国気象機関  
NMS



港湾気象官は、篤志観測船と気象機関を結ぶ掛け橋です  
PMO is a bridge between VOS and NMS



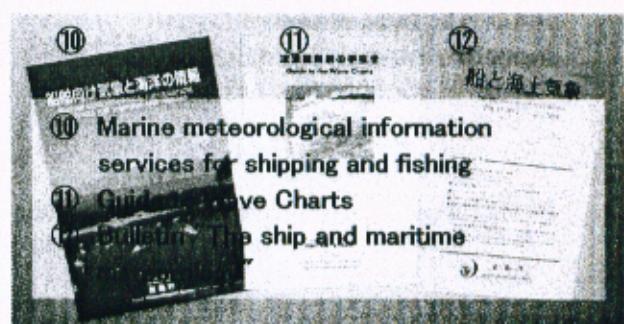
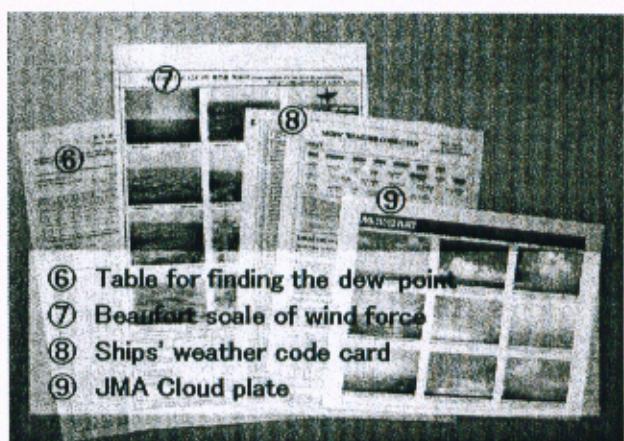
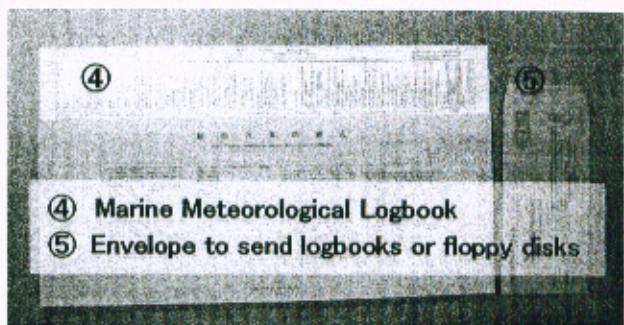
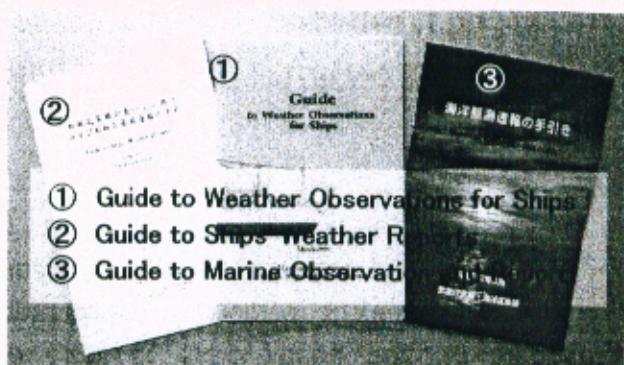
Correction card  
attached on the barometer on board

### Barometer check service

To maintain the accuracy of barometer, 6-monthly check is required. PMOs visit your ship and check your barometers free of charge.

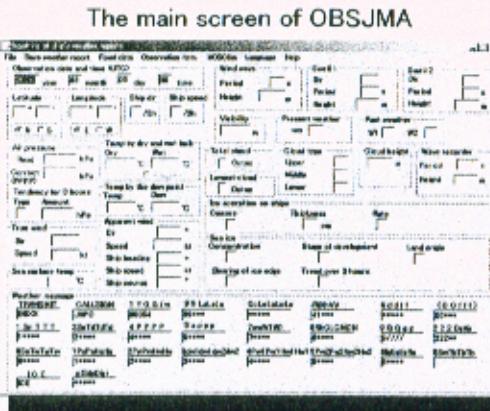
After checking a barometer, PMO put a correction card (picture above) with the total correction value, which consist of barometer instrumental error and correction value to the sea level, on your barometer. You need to add this total correction value to your barometer's value so as to report the air pressure at sea level.

In Japan, PMOs offer the barometer check services using facsimile if it is not possible for your ship to visit the Japanese port where a PMO is appointed. Please send the form to one of the PMOs or Marine Observatories after you have filled in all the necessary information on the given form. The PMO will send you back the result.



PMO distributes guides, logbooks and pamphlets of marine meteorological observations and meteorological or oceanographic matters.

JMA distributes software "OBSJMA" which enables to make weather reports on PC easily and accurately. The observation sheet convenient to input the observation data in, and floppy disks to store the electrical logbooks in, and postage-free envelops for sending those floppy disks to JMA are also available on request.



The screenshot shows the homepage of the website. At the top, there is a banner with Japanese text. Below it, the title "Ships' Weather Observations/Reports" is displayed, along with the logo of the Japan Meteorological Agency. There are language selection buttons for "English" and "日本語". A link to "Web server maintenance" is present. The main content area contains a brief message about the website's purpose and a link to "Information for users".

Top page of the website  
"Ships' Weather Observations/Reports"

We operate a website "Ships' Weather Observations/Reports" on the Internet;

<http://marine.kishou.go.jp/VOS>

Pamphlets, download of the software "OBSJMA", contact address of worldwide PMOs and links to other NMSs' websites are available on this site.

## The ports where our meteorological services available

### PMO Yokohama, Yokohama Local Meteorological Observatory

99, Yamatecho, Naka-ku, Yokohama  
231-0862  
TEL: +81 45 621 1991 FAX: +81 45 622 3520

### PMO Nagoya, Nagoya Local Meteorological Observatory

2-18, Hiyoricho, Chikusa-ku, Nagoya  
464-0039  
TEL: +81 52 752 6364 FAX: +81 52 762 1242

### PMO Kobe, Kobe Marine Observatory

1-4-3 Wakinohamakaigan-Dori, Chuo-Ku,  
Kobe 651-0073  
TEL: +81 78 222 8918 FAX: +81 78 222 8946

### Maritime Meteorological Division, Hakodate Marine Observatory

3-4-4 Mihara, Hakodate 041-0806  
TEL: +81 138 46 2213 FAX: +81 13847 7682

### Maritime Meteorological Division, Maizuru Marine Observatory

901 Shimofukui, Maizuru 624-0946  
TEL: +81 773 76 4114 FAX: +81 773 76 4114

### Maritime Meteorological Division, Nagasaki Marine Observatory

11-51, Minami-yamate, Nagasaki 850-0931  
TEL: +81 95 811 4867 FAX: +81 95 823 8220

EMAIL: pmo@climar.kishou.go.jp (common to all above 6 observatories)

## CONTACT

Please contact us for the address below if you have questions about marine meteorological observation or PMO;

### Marine Division, Climate and Marine Department, Japan Meteorological Agency

1-3-4 Otemachi, Chiyoda-ku, Tokyo, Japan 100-8122

TEL: +81 3 3212 8341 (Ext.5144) FAX: +81 3 3211 6908

EMAIL: VOS@climar.kishou.go.jp



**Meteo France QC**

In order to get statistics informations about data provided by Voluntary Observing Ships onto the GTS, please filled up the query form here below and then click on the button "OK". Last update on February 2nd, 2004.

Only the field "Call Sign" must be filled up (click here for more details). Default values are used for the other fields.

| Parameter: | Center: | Date     | Origin | Code | Centre | Lat  | Lon   | Nobs | GE | Bias | s.d. | r.m.s |
|------------|---------|----------|--------|------|--------|------|-------|------|----|------|------|-------|
| Call Sign: | All     | 20030821 | ALL    | S    | CMM    | 34.1 | 134.9 | 355  | 0  | 0.1  | 0.6  | 0.6   |
|            |         | 20030929 | ALL    | S    | CMM    | 34.1 | 134.9 | 87   | 0  | -0.3 | 0.6  | 0.7   |
|            |         | 20031031 | ALL    | S    | CMM    | 30.7 | 136.3 | 66   | 0  | -0.3 | 0.7  | 0.8   |
|            |         | 20031127 | ALL    | S    | CMM    | 34.1 | 134.9 | 485  | 0  | -0.1 | 0.8  | 0.8   |
|            |         | 20031206 | ALL    | S    | CMM    | 34.0 | 134.9 | 83   | 0  | -0.2 | 1.1  | 1.1   |
|            |         | 20040131 | ALL    | S    | CMM    | 7.4  | 136.9 | 303  | 0  | -0.1 | 0.8  | 0.8   |

Last position: 7.4 136.9 ● ● ●

**VOS ship JPBN info**

**KEIFU MARU**  
Call sign : JPBN  
Research vessel  
recruited by Japan as selected ship

Length : 82 m  
Breadth : 13 m  
Freeboard : 2 m

**QC Statistics – Air Pressure**

**QC Statistics – Air Pressure**

File (F) 表示 (D) 検索 (S) ヘルプ (H)

戻る (R) 次 (N) 検索 (S) ヘルプ (H)

アドレス (A) http://www.shom.fr/carr-bin/meteo/rechstatvessel?num=JPBN&sign=&center=

File (F) 表示 (D) 検索 (S) ヘルプ (H)

戻る (R) 次 (N) 検索 (S) ヘルプ (H)

アドレス (A) http://www.shom.fr/carr-bin/meteo/rechstatvessel?num=JPBN&sign=&center=

**VOS ship JPBN info**

OK

**指定船舶のデータが閲覧できる**  
Comments can be mailed to pierre.bouyoux@shom.fr

メタデータ

# Meteo France QC

## VOS Data and QC plots

Buoy data received on GTS for the past 15 days can be viewed here  
Comparisons with model outputs can be seen too  
Just fill up the query and click on OK.

Please take care of the results when using the graphs to check VOS ships.

The model outputs don't reflect necessarily the truth  
VOS data can be significantly different from model outputs in sparse areas, coastal areas (due to local effects), areas with strong gradient.

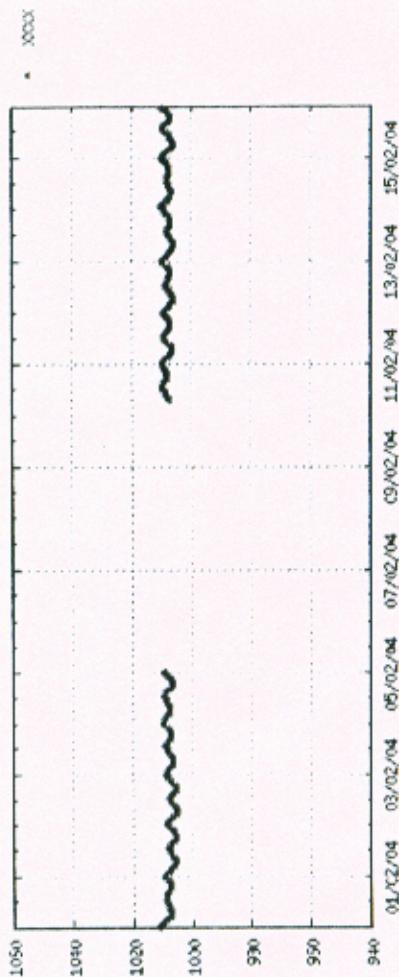
## 【気圧】

(c) Data Plot or (c) QC plot

Call Sign: JPBN  
Parameter:  
Air Temperature  
Wind Direction

A page with more explanations will be available soon  
Please send any questions or comments to [2000fr\\_bureau@meteo.fr](mailto:2000fr_bureau@meteo.fr)

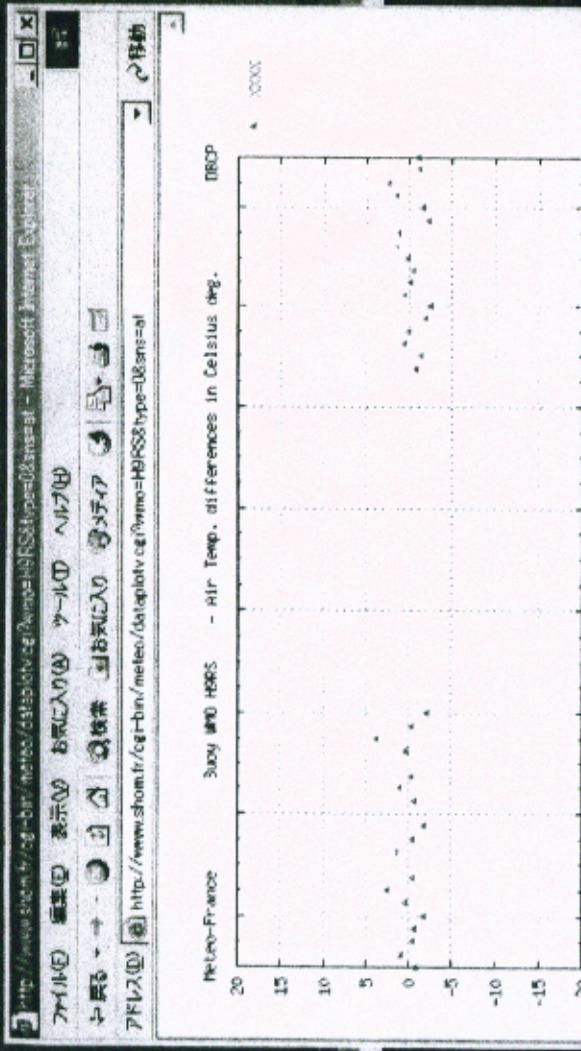
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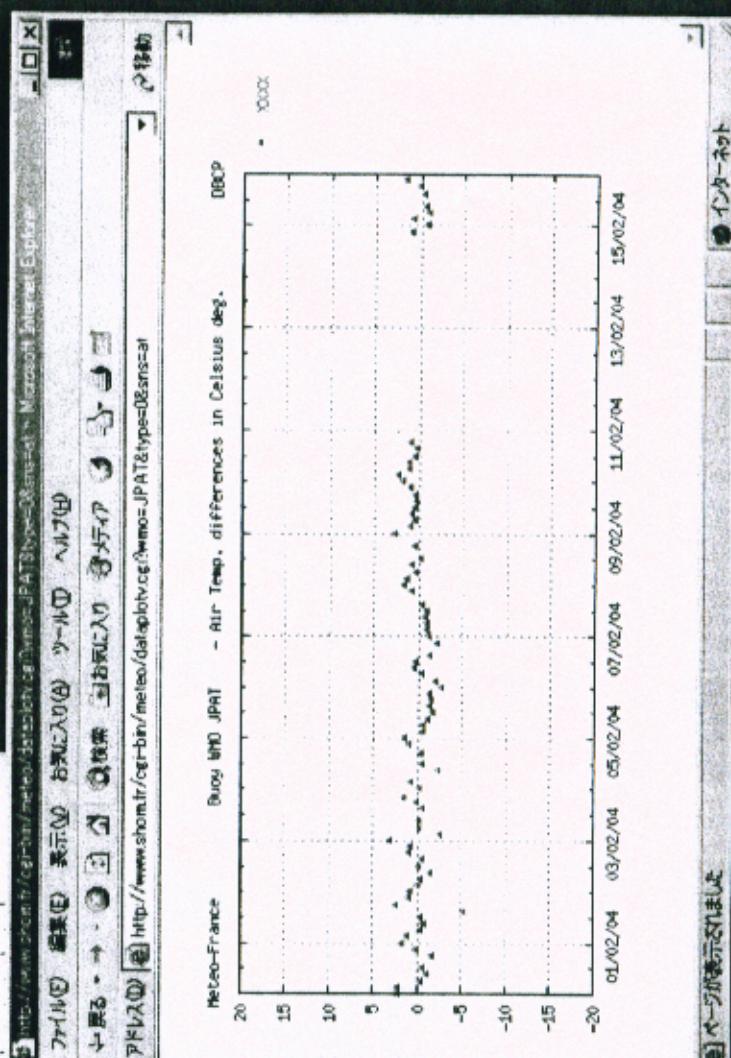
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指定船のデータが  
グラフで閲覧できる  
□ 観測データ

# Meteo France QC



## 観測値と解析値の比較データ



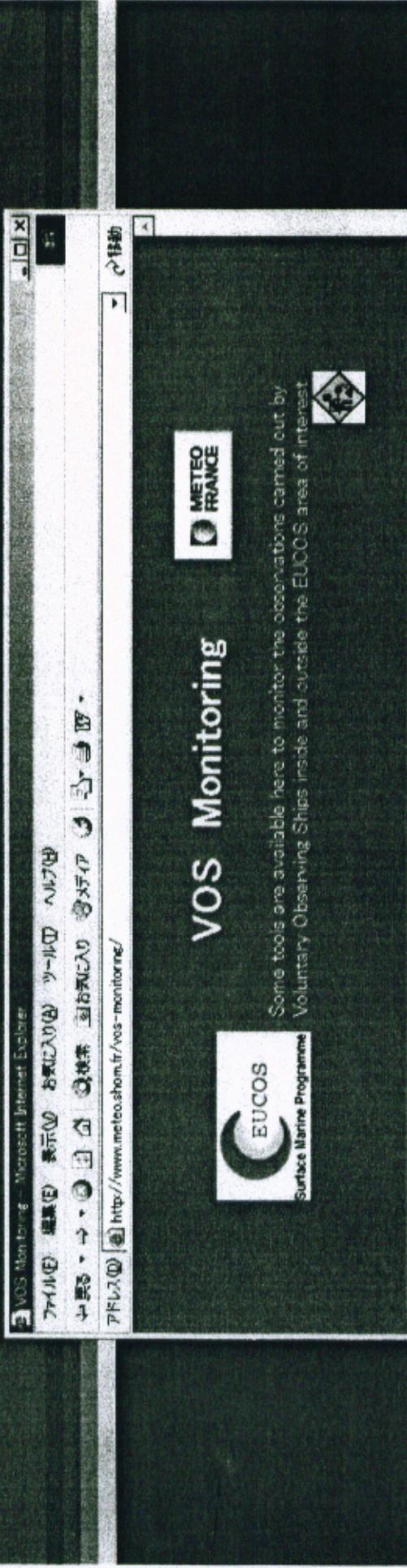
## 【気圧】 H9RS (Sweet Brier) モニタリング船舶

JPAT(海鷹丸)  
: 1月にカナダのPMIOにより、  
気圧にバイアスが2.5hPaある  
と指摘がありました

ページが表示されました

# Meteo France

<http://www.meteo.shom.fr/vos-monitoring/>



The screenshot shows the homepage of the VOS Monitoring website. At the top right is the METEO FRANCE logo. Below it is the EUROS logo with the text "EUROS Surface Marine Programme". A link "http://www.meteo.shom.fr/vos-monitoring/" is also present.

**VOS Monitoring**

Some tools are available here to monitor the observations carried out by Voluntary Observing Ships inside and outside the EUROS area of interest

**VOS information**  
Information on Voluntary Observing Ships indexed into WMO No 47 list  
Access to ship characteristics, latest reports, monthly statistics, data and QC plots.

**VOS QC statistics**  
Monthly statistics of comparisons with model outputs & query form allowing to retrieve those of any ship reporting observations on the GTS

**Data and QC plots**  
Recent ship data (< 2 best weeks) and results of comparison with Meteo-France model outputs can be seen on graphs. Files are daily updated

**VOS blacklist for AP**  
Automatically issued every day a list of VOS ships having reported dubious AD values onto the GTS over the last two weeks. Links allow to carefully check data and positions

**Obs. counters**  
Counting of observations per ship or country: automated or not, inside or outside the EUROS area of interest

<http://www.meteo.shom.fr/qptools/meteostat.htm>

The screenshot shows the 'Observation Monitoring' section of the Met Office website. At the top, there's a search bar with 'SEARCH Met Office' and a 'GO' button. Below it, a banner features a stylized figure and the text 'Weather warnings issued'. To the right, there's a sidebar with 'Met Office' branding and a 'SEARCH' button.

**Observation Monitoring**

Home > Research > NWP > Observations > Observation Monitoring

NWP | Climate | Seasonal forecasting | Atmospheric processes | Oceanography | Projects | The stratosphere

**Global D 2005**

Table of Suspects

**Suspect lists**

Table 1. Marine sea  
temperatures

| ID                                       | IDENTIFIER | ELEN | WMO | PCE | SE | SD    | BIAS  | MEAN  |
|--|------------|------|-----|-----|----|-------|-------|-------|
| AIRC                                     | P          | 20   | 0   | 185 | 1  | 5.7   | 5.3   | 5.3   |
| AIRF                                     | P          | 24   | 0   | 185 | 1  | 4.9   | 4.9   | 4.9   |
| AIRG                                     | P          | 42   | 0   | 185 | 1  | 4.4   | 4.4   | 4.4   |
| CIOB                                     | P          | 216  | 0   | 185 | 1  | 5.7   | 5.4   | 5.4   |
| CIOA                                     | P          | 46   | 0   | 185 | 0  | 4.0   | 4.0   | 4.0   |
| CIOX                                     | P          | 26   | 0   | 185 | 0  | -11.7 | -11.3 | -11.3 |
| CIP25                                    | P          | 23   | 0   | 187 | 0  | 10.1  | 10.3  | 10.3  |
| CHEE                                     | P          | 68   | 0   | 187 | 0  | 6.8   | 5.9   | 5.9   |
| CIOB                                     | P          | 24   | 0   | 185 | 0  | 4.1   | 4.2   | 4.2   |
| CIOB:                                    | P          | 20   | 0   | 185 | 0  | 4.4   | 4.4   | 4.4   |
| EL1995                                   | P          | 21   | 0   | 186 | 0  | 5.8   | 5.8   | 5.8   |
| SUSPECT                                  | P          | 26   | 0   | 185 | 0  | 6.5   | 6.5   | 6.5   |
| Table 3. Land surf.<br>temp              | P          | 23   | 0   | 187 | 0  | 10.1  | 10.3  | 10.3  |
| List of suspect                          | P          | 68   | 0   | 187 | 0  | 6.8   | 5.9   | 5.9   |
| Table 4. Aircraft al<br>List of aircraft | P          | 24   | 0   | 186 | 0  | 4.5   | 4.5   | 4.5   |
| CIOA                                     | P          | 24   | 0   | 186 | 0  | 4.5   | 4.5   | 4.5   |
| CIOB                                     | P          | 21   | 0   | 186 | 0  | 4.5   | 4.5   | 4.5   |
| TEC1                                     | P          | 24   | 0   | 186 | 0  | 6.5   | 6.5   | 6.5   |
| TEC1                                     | P          | 24   | 0   | 186 | 0  | 6.5   | 6.5   | 6.5   |
| Table 5. Radiosonde<br>List of suspect   | P          | 26   | 0   | 186 | 0  | 4.5   | 4.5   | 4.5   |
| TEC1                                     | P          | 24   | 0   | 186 | 0  | 6.5   | 6.5   | 6.5   |
| TEC1                                     | P          | 24   | 0   | 186 | 0  | 6.5   | 6.5   | 6.5   |
| TEC1                                     | P          | 24   | 0   | 186 | 0  | 6.5   | 6.5   | 6.5   |

<http://www.metoffice.com/research/nwp/observations/index.html>

The Observing Monitoring team at the Met Office receives and assimilated, and follow up any prior excluded from the NWP suite or corrected prior to observation and model accuracy. This is used to also be exploited to optimise the assimilation algorithm for monitoring the quality of surface marine Monitoring Centre for the International Voluntary

The Met Office shares in WMO co-ordinated monitoring centre for monitoring the quality of surface marine Monitoring Centre for the International Voluntary

### Latest Observation Monitoring report

As the WMO-appointed lead centre for monitoring monthly statistics on the quality of these observations information along with statistics for most other presented according to the agreed standards for

The report is based on data received in time for current cut-off time is approximately seven hours quality is based on comparison with the appropriate background field to provide background values valid at t interpolation of the T+3, T+6 and T+9 forecasts except in data sparse areas, tropical regions and taken in interpreting the statistics shown.