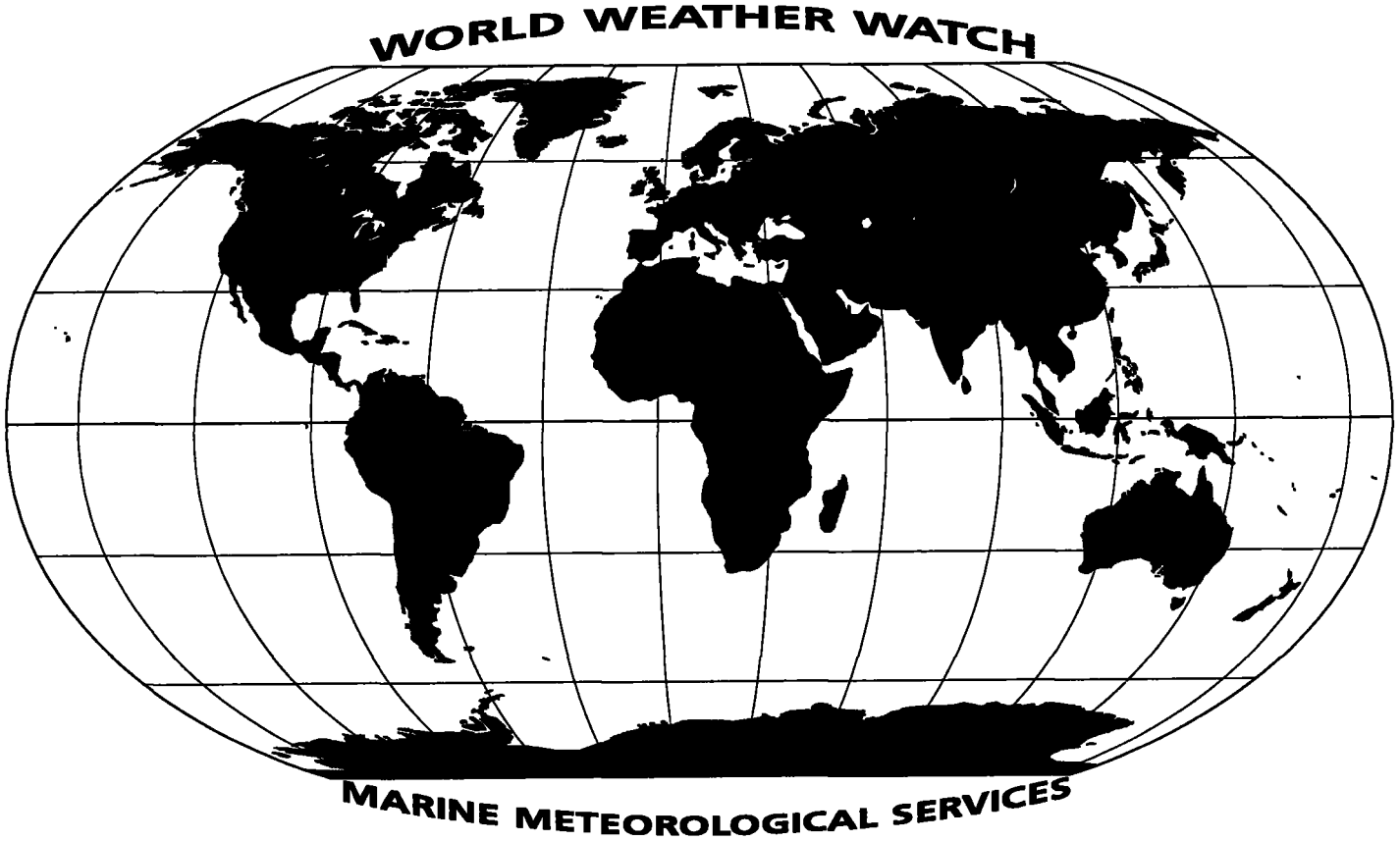
# OPERATIONAL
## *newsletter*

Volume 1995 — No. 5




World Meteorological Organization
GENEVA

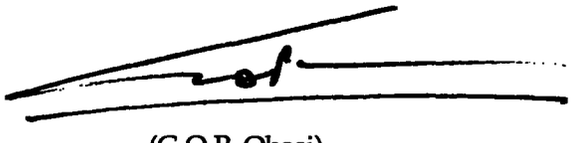
The WMO Secretariat would like to express its appreciation to all those who have contributed material to the "Operational Newsletter". ■

# Foreword

As you are aware, all the information on changes to the operation of the World Weather Watch (WWW) and Marine Meteorological Services (MMS) is being assembled and distributed by the Secretariat on a monthly basis to facilitate updating and follow-up action. In this connection we have created the "OPERATIONAL *NEWSLETTER*" to provide you with the latest operational information on WWW and MMS.

A special table is included in the "OPERATIONAL *NEWSLETTER*" in Annex I - *Global Observing System* to assist Members in reporting changes in the present status of implementation of observing programmes of SYNOP, TEMP and PILOT reporting stations.

Your co-operation in ensuring that the above information reaches the appropriate operational units of your service is greatly appreciated.



(G.O.P. Obasi)
Secretary-General

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# GLOBAL TELECOMMUNICATION SYSTEM



## Annex IV

# CODES

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# GLOBAL OBSERVING SYSTEM

## A. GOS REGULATORY OR GUIDANCE MATERIAL

### 3. GUIDANCE MATERIAL ON INSTRUMENTS AND OBSERVING METHODS

#### 3.1 WMO CATALOGUE OF RADIOSONDES AND UPPER-AIR WIND SYSTEMS IN USE BY MEMBERS

Reference: *Operational Newsletter* — Volume 1994 - No. 2

(Changes are underlined. Blank columns indicate that data remains unchanged)

| Index No. | Name of Station | SONDE | | | RADIATION | | DATE |
|---|---|---|---|---|---|---|---|
| | | Regular type used | alternative type used | Frequency (MHz) | Correction Y=Yes/N=No | Correction type | |
| 47807 | Fukoka | MEIR91 | | | | | 03/95 |
| 47981 | Iwojima | | | | Y | | 03/95 |
| 70219 | Bethel, AK | VIZ "B" | | | | | 07/95 |
| 72270 | El Paso, TX | VIZ "B" | | | | | 06/95 |
| 72274 | Tucson, AZ | VIZ "B" | | | | | 07/95 |
| 72363 | Amarillo, TX | VIZ "B" | | | | | 06/95 |
| 72681 | Boise, ID | VIZ "B" | | | | | 07/95 |
| 89532 | Syowa | MEIR91 | | | | | 03/95 |

## C. INFORMATION ON THE OPERATIONAL STATUS OF ELEMENTS OF THE SURFACE-BASED SUB-SYSTEM

### 1. PUBLICATION No. 9 — *Volume A - Stations*

#### 1.1 NEW STATIONS

| Index No. | Name | Latitude | Longitude | Elevation | | Pressure | Surface observations | | | | | | | | Obs. H | Upper-air | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | HP | H/HA | Level | 00 | 03 | 06 | 09 | 12 | 15 | 18 | 21 | Obs. S | 00 | 06 | 12 | 18 | |
| **Region I — Mali** | | | | | | | | | | | | | | | | | | | | |
| 61235 | Yélimané | 1507N | 1034W | 100 | - | | X | X | X | X | X | X | X | X | | . | . | . | . | |
| **Region III — Argentina** | | | | | | | | | | | | | | | | | | | | |
| 87468 | Venado Tuerto Aero | 3340S | 6158W | 113 | 112 | | X | . | . | . | X | X | X | X | S09-24 | . | . | . | . | |
| **Region IV — United States of America** | | | | | | | | | | | | | | | | | | | | |
| 72318 | Blacksburg, VA | 3712N | 8025W | 654 | 653 | | . | . | . | . | . | . | . | . | | RW | . | RW | . | |
| 72376 | Flagstaff, AZ | 3514N | 11149W | - | 2192 | | . | . | . | . | . | . | . | . | H00-24 | RW | . | RW | . | AUT |
| 72426 | Wilmington, OH | 3925N | 8349W | - | 317 | | . | . | . | . | . | . | . | . | | RW | . | RW | . | |

#### 1.2 DELETED STATIONS

| Index No. | Name |
|---|---|
| **Region V — New Zealand** | |
| 93573 | Belvue Bay |
| **Region VI — Denmark and Faroe Islands** | |
| 06009 | Akraberg |

**C. Information on the operational status of elements of the surface-based sub-system *(continued)*/**
**1. Publication No. 9, Volume A - Stations**

### 1.3 CHANGES TO EXISTING STATIONS

(Changes are underlined. Blank columns indicate that data remains unchanged)

| Index No. | Name | Latitude | Longitude | Elevation HP | Elevation H/HA | Pressure Level | Surface observations 00 | 03 | 06 | 09 | 12 | 15 | 18 | 21 | Obs. H Obs. S | Upper-air 00 | 06 | 12 | 18 | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Region III — Argentina** | | | | | | | | | | | | | | | | | | | | |
| 87007 | La Quiaca Observatorio | | | | | | X | X | X | X | X | X | X | X | S00-24 | . | . | . | . | |
| 87022 | Tartagal Aero | | | | | | X | X | X | X | X | X | X | X | H00-24 | . | . | . | . | |
| 87078 | Las Lomitas | | | | | | X | X | X | X | X | X | X | X | S00-24 | . | . | . | . | |
| 87149 | Pcia Roque Saenz Peña Aero | | | | | | | | | | | | | | | | | | | |
| 87163 | Bernardo de Irigoyen Aero | | | | | | X | . | . | X | X | X | X | X | S09-24 | . | . | . | . | |
| 87166 | Corrientes Aero | | | | | | X | X | X | X | X | X | X | X | H00-24 | . | . | . | . | |
| 87171 | General Paz | | | | = | | | | | | | | | | | | | | | |
| 87244 | Villa de Maria del Rio Seco | | | | = | | X | X | X | X | X | X | X | X | S00-24 | . | . | . | . | |
| 87305 | Jachal | | | | = | | | | | | | | | | | | | | | |
| 87322 | Chepes | | | | = | | | | | | | | | | | | | | | |
| 87328 | Villa Dolores Aero | | | | | | X | ⊥ | ⊥ | ⊥ | X | X | X | X | H12-24 | . | . | . | . | |
| 87344 | Cordoba Aero | | | | | | X | X | X | X | X | X | X | X | H00-24 | . | . | ⊥ | ⊥ | |
| 87349 | Pilar observatorio | | | | = | | | | | | | | | | S00-24 | | | | | |
| 87405 | Uspallata | | | | = | | | | | | | | | | | | | | | |
| 87412 | San Carlos | | | | = | | | | | | | | | | | | | | | |
| 87416 | San martin | | | | = | | | | | | | | | | | | | | | |
| 87470 | El Trebol | | | 96 | = | | X | X | X | X | X | X | X | X | S00-24 | . | . | . | . | |
| 87532 | General Pico Aero | | | | | | X | ⊥ | ⊥ | X | X | X | X | X | H09-24 | . | . | . | . | |
| 87534 | Laboulaye Aero | | | | | | X | X | X | X | X | X | X | X | S00-24 | . | . | . | . | |
| 87544 | Pehuajo Aero | | | 87 | | | | | | | | | | | H00-24 | | | | | |
| 87550 | Nueve de Julio | | | | = | | X | . | . | X | X | X | X | X | S09-24 | . | . | . | . | |
| 87563 | Las Flores Aero | | | | | = | | | | | | | | | | | | | | |
| 87568 | Don Torcuato Aero | | | | | | X | ⊥ | ⊥ | X | X | X | X | X | H09-24 | . | . | . | . | |
| 87580 | Isla Martin Garcia | | | | | | | | | | | | | | | | | | | |
| 87582 | Aeroparque Bs. As. Aero | | | | | | | | | | | | | | | | . | | | |
| 87585 | Buenos Aires (Observatorio) | | | | = | | | | | | | | | | | | | | | |
| 87593 | La Plata Aero | | | | | | X | X | X | X | X | X | X | X | H00-24 | . | . | . | . | |
| 87598 | Ponton Practicos Recalada | | | | | | | | | | | | | | | | | | | |
| 87637 | Coronel Suarez Aero | | | | | | X | . | . | X | X | X | X | X | S09-24 | . | . | . | . | |
| 87641 | Azul Aero | 3650S | 5953W | 147 | 146 | | X | X | X | X | X | X | X | X | S00-24 | . | . | . | . | |
| 87648 | Dolores Aero | | | | | | | | | | | | | | H00-24 | | | | | |
| 87649 | Benito Juarez Aero | | | | 208 | | | | | | | | | | | | | | | |
| 87652 | Faro Punta Medanos | | | | | | | | | | | | | | | | | | | |

## C. Information on the operational status of elements of the surface-based sub-system / 1. Publication No. 9, Volume A - Stations / 1.3 Changes to Stations *(continued)*

| Index No. | Name | Latitude | Longitude | Elevation HP | Elevation H/HA | Pressure Level | Surface observations 00 | 03 | 06 | 09 | 12 | 15 | 18 | 21 | Obs. H Obs. S | Upper-air 00 | 06 | 12 | 18 | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 87688 | Tres Arroyos | | | | = | | X | X | X | X | X | X | X | X | S00-24 | . | . | . | . | |
| 87736 | Rio Colorado | | | | = | | | | | | | | | | | | | | | |
| 87743 | Faro el Rincon | | | 6 | = | | | | | | | | | | | | | | | |
| 87774 | Maquinchao | | | | = | | X | X | X | X | X | X | X | X | S00-24 | . | . | . | . | |
| 87784 | San Antonio Oeste Aero | 4047S | 6506W | 20 | 20 | | X | X | X | X | X | X | X | X | H00-24 | . | . | . | . | |
| 87800 | El Bolson Aero | | | | | | X | . | . | X | X | X | X | X | S09-24 | . | . | . | . | |
| 87823 | P. Madryn Aero | | | | | | X | . | . | X | X | X | X | X | S09-24 | . | . | . | . | |
| 87839 | Faro Punta Delgada | 4631S | | | | | | | | | | | | | | | | | | |
| 87880 | Gobernador Gregores Aero | | | | | | X | X | X | X | X | X | X | X | S00-24 | . | . | . | . | |
| 87898 | Faro Cabo Blanco | | | | | | | | | | | | | | | | | | | |
| 87909 | San Julian Aero | | 6745W | | | | | | | | | | | | | | | | | |
| 87912 | Santa Cruz Aero | | | 113 | | | X | . | . | X | X | X | X | X | S09-24 | . | . | . | . | |
| 87938 | Ushuaia Aero | | | 11 | | | | | | | | | | | | | | | | |
| | **Stations in the Antarctic operated by Argentina** | | | | | | | | | | | | | | | | | | | |
| 88968 | Base Orcadas | | | | = | | | | | | | | | | | | | | | |
| 89034 | Base Belgrano II | | | 256 | = | | | | | | | | | | | | | | | |
| | **Region IV — United States of America** | | | | | | | | | | | | | | | | | | | |
| 72374 | Winslow, AZ | | | | | | . | . | . | . | . | . | . | . | H00-24 | . | . | . | . | AUT |
| 72425 | Huntington, WV | | | | | | X | . | X | . | X | . | X | . | H00-24 | . | . | . | . | |
| 72429 | Dayton J.Cox Mun., OH | | | | | | | | | | | | | | | | | | | |
| | **Islands in the Pacific Ocean north of the Equator** | | | | | | | | | | | | | | | | | | | |
| 91212 | Nwso Agana, Guam Mariana Is. | | | | | | X | X | X | X | X | X | X | X | H00-24 | . | . | . | . | |
| 91217 | Wsmo Agana, Guam, Mariana Is. | | | | | | . | . | . | . | . | . | . | . | | RW | . | RW | . | |
| | **Region VI — Denmark and the Faroe Islands** | | | | | | | | | | | | | | | | | | | |
| 06080 | Esbjerg | | | | | | . | X | X | X | X | X | X | X | H06-21 | . | . | . | . | |
| 06179 | Moen | | | | | | . | . | X | X | X | . | . | . | | . | . | . | . | |
| | **Region VI — Greenland** | | | | | | | | | | | | | | | | | | | |
| 04220 | Egedesminde | | | 41 | | | | | | | | | | | | | | | | |
| | **Region VI — Italy** | | | | | | | | | | | | | | | | | | | |
| 16245 | Pratica di Mare (SYNOP station) | 4139N | 1227E | 21 | 6 | | X | X | X | X | X | X | X | X | H00-24 | . | . | . | . | |

**C. Information on the operational status of elements of the surface-based sub-system *(continued)***

## 4. AUTOMATIC MARINE STATIONS

KEY: Observed or Technical Parameters

| Column | Parameters |
|---|---|
| 1 | Wind direction and speed |
| 2 | Air temperature |
| 3 | Air pressure |
| 4 | Pressure tendency |
| 5 | Sea-surface temperature |
| 6 | Wave period and height |
| 7 | Wave spectra |
| 8 | Peak wind gust |

| Column | Parameters |
|---|---|
| 9 | Subsurface temperatures |
| 10 | Relative humidity |
| 11 | Visibility |
| | |
| - | Parameter not observed |
| X | Buoy observes this parameter |
| . | Data under evaluation, not reported |

### 4.3 UNITED STATES OF AMERICA

List of U.S.A. Ocean Data Acquisition System (ODAS) included in the **May 1995** Data Platform Status Report of the Data Buoy Centre of the National Oceanic and Atmospheric Administration (NOAA). Data from moored buoys and platforms are collected by geostationary meteorological satellites and reports are distributed on the GTS in SHIP code. Data from drifting buoys are collected by the ARGOS system and distributed on the GTS in DRIFTER code.

#### 4.3.1 MOORED BUOYS

| WMO buoy Identifier | ARGOS Identifier | Position: 11-18 May 1995 | | Observed or technical parameters | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Latitude | Longitude | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 41001* | | 34.7N | 72.6W | X | X | X | - | X | X | X | - | - | - | - |
| 41002* | | 32.3N | 75.2W | X | X | X | - | X | X | X | - | - | - | - |
| 41004 | | 32.5N | 79.1W | X | + | + | - | X | X | X | - | - | - | - |
| 41006* | | 29.3N | 77.3W | X | X | X | - | X | X | X | - | - | - | - |
| 41009 | | 28.5N | 80.2W | X | X | X | - | X | X | X | - | - | - | - |
| 41010 | | 28.9N | 78.5W | X | X | X | - | X | X | X | - | - | - | - |
| 41016 | | 24.6N | 76.5W | X | X | X | - | X | X | X | - | - | - | - |
| 41018 | | 15.0N | 75.0W | + | + | + | - | + | + | + | - | - | - | - |
| 41021 | | 31.9N | 80.9W | X | X | X | - | X | + | + | - | - | - | - |
| 42001* | | 25.9N | 89.7W | X | X | X | - | X | X | X | - | - | - | - |
| 42002* | | 25.9N | 93.6W | X | X | X | - | X | X | X | - | - | - | - |
| 42003* | | 25.9N | 85.9W | X | X | X | - | X | + | + | - | - | - | - |
| 42007 | | 30.1N | 88.8W | X | X | X | - | X | . | . | - | - | - | - |
| 42020 | | 27.0N | 96.5W | X | X | X | - | + | X | X | - | - | - | - |
| 42025 | | 24.9N | 80.5W | N | X | N | - | X | X | X | - | - | - | - |
| 42035 | | 29.2N | 94.4W | X | X | X | - | X | X | X | - | - | - | - |
| 42036 | | 28.5N | 84.5W | X | X | X | - | X | X | X | - | - | - | - |
| 42037 | | 24.5N | 81.4W | X | X | X | - | X | X | X | - | - | - | - |
| 44004* | | 38.5N | 70.7W | + | X | X | - | X | X | X | - | - | - | - |
| 44005* | | 42.9N | 68.9W | X | X | X | - | X | X | X | - | - | - | - |
| 44006 | | 36.3N | 75.5W | X | X | X | - | X | X | X | - | - | - | - |
| 44007 | | 43.5N | 70.1W | X | X | X | - | X | X | X | - | - | - | - |
| 44008 | | 40.5N | 69.4W | X | + | X | - | X | X | X | - | - | - | - |

## C. Information on the operational status of elements of the surface-based sub-system/ 4. Automatic marine stations / 4.3 United States of America / 4.3.1 Moored Buoys *(continued)*

| WMO buoy Identifier | ARGOS Identifier | Position: 11-18 May 1995 | | Observed or technical parameters | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Latitude | Longitude | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 44009 | | 38.5N | 74.7W | X | X | X | - | X | X | X | - | - | - | - |
| 44010 | | 36.0N | 75.0W | X | X | X | - | X | + | + | - | - | - | - |
| 44011* | | 41.1N | 66.6W | X | X | X | - | X | X | X | - | - | - | - |
| 44013 | | 42.4N | 70.7W | X | X | X | - | + | X | X | - | - | - | - |
| 44014 | | 36.6N | 74.8W | X | X | + | - | + | + | + | - | - | - | - |
| 44019 | | 36.4N | 75.2W | X | X | X | - | X | + | + | - | - | - | - |
| 44025 | | 40.3N | 73.2W | X | X | X | - | X | X | X | - | - | - | - |
| 44028* | | 41.4N | 71.1W | X | X | X | - | X | X | X | - | - | - | - |
| 45001* | | 48.0N | 87.8W | X | X | X | - | X | X | X | - | - | - | - |
| 45002* | | 45.3N | 86.4W | X | X | X | - | X | X | X | - | - | - | - |
| 45003* | | 45.3N | 82.8W | X | X | X | - | X | X | X | - | - | - | - |
| 45004* | | 47.5N | 86.5W | X | X | X | - | X | X | X | - | - | - | - |
| 45005* | | 41.7N | 82.4W | X | X | X | - | X | X | X | - | - | - | - |
| 45006* | | 47.3N | 89.9W | X | X | X | - | X | X | X | - | - | - | - |
| 45007* | | 42.7N | 87.0W | X | X | X | - | X | X | X | - | - | - | - |
| 45008* | | 44.3N | 82.4W | X | X | X | - | X | X | X | - | - | - | - |
| 45010 | | 43.0N | 87.8W | X | X | X | - | X | X | X | - | - | - | - |
| 46001* | | 56.3N | 148.2W | + | + | X | - | X | X | X | - | - | - | - |
| 46002* | | 42.5N | 130.3W | X | X | X | - | X | X | X | - | - | - | - |
| 46003* | | 51.9N | 155.9W | + | + | X | - | + | X | X | - | - | - | - |
| 46005* | | 46.1N | 131.0W | X | X | X | - | X | X | X | - | - | - | - |
| 46006* | | 40.9N | 137.5W | X | X | X | - | X | X | X | - | - | - | - |
| 46011 | | 34.9N | 120.9W | + | X | X | - | X | X | X | - | - | - | - |
| 46013* | | 38.2N | 123.3W | X | X | X | - | X | X | X | - | - | - | - |
| 46014* | | 39.2N | 124.0W | + | X | X | - | X | X | X | - | - | - | - |
| 46022 | | 40.8N | 124.5W | X | X | X | - | X | X | X | - | - | - | - |
| 46023 | | 34.3N | 120.7W | X | X | X | - | X | X | X | - | - | - | - |
| 46025 | | 33.7N | 119.1W | X | X | X | - | X | X | X | - | - | - | - |
| 46026 | | 37.7N | 122.8W | X | X | X | - | X | X | X | - | - | - | - |
| 46027 | | 41.9N | 124.4W | X | X | X | - | X | X | X | - | - | - | - |
| 46028* | | 35.7N | 121.9W | X | X | X | - | X | X | X | - | - | - | - |
| 46029 | | 46.2N | 124.2W | X | X | X | - | X | X | X | - | - | - | - |
| 46030 | | 40.4N | 124.5W | + | X | X | - | X | X | X | - | - | - | - |
| 46035 | | 57.0N | 177.7W | X | X | X | - | X | X | X | - | - | - | - |
| 46041 | | 47.4N | 124.5W | X | X | X | - | X | X | X | - | - | - | - |
| 46042 | | 36.8N | 122.4W | X | X | X | - | X | X | X | - | - | - | - |
| 46045 | | 33.8N | 118.4W | X | X | X | - | X | X | X | - | - | - | - |
| 46050 | | 44.6N | 124.5W | X | X | X | - | X | X | X | - | - | - | - |
| 46053 | | 34.2N | 119.8W | X | X | X | - | X | X | X | - | - | - | - |
| 46054 | | 34.3N | 120.4W | X | X | X | - | X | X | X | - | - | - | - |
| 46059 | | 38.0N | 130.0W | X | X | X | - | X | X | X | - | - | - | - |

## C. Information on the operational status of elements of the surface-based sub-system / 4. Automatic marine stations / 4.3 United States of America / 4.3.1 Moored Buoys *(continued)*

| WMO buoy Identifier | ARGOS Identifier | Position: 11-18 May 1995 | | Observed or technical parameters | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Latitude | Longitude | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 46060 | | 60.6N | 146.8W | . | X | X | - | X | X | X | - | - | - | - |
| 46061 | | 60.2N | 146.8W | X | X | X | - | X | X | X | - | - | - | - |
| 51001* | | 23.4N | 162.3W | X | X | X | - | X | X | X | - | - | - | - |
| 51002 | | 17.2N | 157.8W | X | X | X | - | X | + | + | - | - | - | - |
| 51003* | | 19.1N | 160.8W | X | X | X | - | X | X | X | - | - | - | - |
| 51004* | | 17.4N | 152.5W | X | X | X | - | X | X | X | - | - | - | - |
| 51026 | | 21.4N | 156.9W | X | X | X | - | X | X | X | - | - | - | - |
| 51027 | | 20.4N | 157.1W | X | X | X | | X | X | X | | | | |

| | |
|---|---|
| Total base funded buoys: = | 29 |
| Total other buoys: = | 41 |
| TOTAL moored buoys: | 70 |

* Base funded station of National Weather Service (NWS); however, all stations report data to NWS
\+ Sensor/system failure

### 4.3.2 DRIFTING BUOYS

| WMO buoy Identifier | ARGOS Identifier | Position: 17-18 May 1995 | | Observed or technical parameters | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Latitude | Longitude | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 16811 | 17180 | 34°S | 079°E | . | X | X | - | X | . | . | . | - | - | - |
| 17810 | 17182 | 37°S | 019°E | . | X | X | - | X | . | . | . | - | - | - |
| 17818 | 17175 | 40°S | 047°E | . | X | X | - | + | . | . | . | - | - | - |
| 17819 | 17174 | 42°S | 125°E | . | + | X | - | X | . | . | . | - | - | - |
| 17821 | 17176 | 36°S | 062°E | . | + | X | - | X | . | . | . | - | - | - |
| 17822 | 17184 | 41°S | 050°E | . | X | X | - | + | . | . | . | - | - | - |
| 32811 | 17170 | 18°S | 096°W | . | + | X | - | X | . | . | . | - | - | - |
| 32812 | 17171 | 27°S | 121°W | . | X | X | - | X | . | . | . | - | - | - |
| 32813 | 17172 | 30°S | 093°W | . | + | X | - | X | . | . | . | - | - | - |
| 32814 | 17161 | 29°S | 093°W | . | + | X | - | + | . | . | . | - | - | - |
| 33838 | 17163 | 30°S | 010°W | . | X | X | - | + | . | . | . | - | - | - |
| 33839 | 17164 | 27°S | 009°W | . | + | X | - | X | . | . | . | - | - | - |
| 33840 | 17165 | 34°S | 053°E | . | + | X | - | + | . | . | . | - | - | - |
| 33841 | 17166 | 28°S | 007°W | . | + | X | - | X | . | . | . | - | - | - |
| 33843 | 20714 | 50°S | 008°E | . | X | X | - | X | . | . | . | - | - | - |
| 46551 | 20705 | 44°N | 162°W | + | X | X | - | X | . | . | . | - | - | - |
| 46552 | 20706 | 38°N | 159°W | + | + | X | - | X | . | . | . | - | - | - |
| 46553 | 20710 | 49°N | 160°W | X | X | X | - | X | . | . | . | - | - | - |

**C. Information on the operational status of elements of the surface-based sub-system /**
**4. Automatic marine stations / 4.3 United States of America / 4.3.1 Drifting Buoys *(continued)***

| WMO buoy Identifier | ARGOS Identifier | Position: 11-18 May 1995 | | Observed or technical parameters | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Latitude | Longitude | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 46554 | 20712 | 33°N | 153°W | X | + | X | - | X | . | . | . | - | - | - |
| 46555 | 20707 | 44°N | 162°W | X | X | X | - | X | . | . | . | - | - | - |
| 46556 | 20711 | 50°N | 170°W | X | X | X | - | X | . | . | . | - | - | - |
| 46557 | 20709 | 34°N | 170°W | X | + | X | - | X | . | . | . | - | - | - |
| 46558 | 20708 | 40°N | 164°W | X | + | X | - | X | . | . | . | - | - | - |
| 53825 | 20715 | 10°S | 121°E | . | + | X | - | + | . | . | . | - | - | - |
| 54807 | 20718 | 54°S | 085°W | . | X | X | - | X | . | . | . | - | - | - |
| 54808 | 20722 | 59°S | 072°W | . | X | X | - | X | . | . | . | - | - | - |
| 54809 | 20719 | 38°S | 177°W | . | X | X | - | X | . | . | . | - | - | - |
| 54810 | 17181 | 28°S | 175°W | . | X | X | - | X | . | . | . | - | - | - |
| 54811 | 20713 | 42°S | 142°W | . | X | X | - | X | . | . | . | - | - | - |
| 54812 | 17178 | 50°S | 098°W | . | X | X | - | X | . | . | . | - | - | - |
| 54813 | 20717 | 42°S | 152°W | . | X | X | - | X | . | . | . | - | - | - |
| 54814 | 05127 | 31°S | 166°W | . | X | X | | X | . | . | . | | | |
| 54844 | 17168 | 32°S | 112°W | . | + | X | | X | . | . | . | | | |
| 54845 | 17162 | 43°S | 166°W | . | X | X | | X | . | . | . | | | |
| 55801 | 20721 | 39°S | 156°E | . | + | X | | X | . | . | . | | | |
| 56804 | 1977 | 39°S | 129°E | . | + | X | | X | . | . | . | | | |
| 56806 | 1984 | 25°S | 064°E | . | X | X | | X | . | . | . | | | |
| 56807 | 20716 | 16°S | 074°E | . | + | X | | X | . | . | . | | | |
| 56808 | 20720 | 24°S | 079°E | . | X | X | | X | . | . | . | | | |
| 56809 | 17169 | 26°S | 090°E | . | X | X | | X | . | . | . | | | |
| 56810 | 17185 | 28°S | 087°E | . | X | X | | X | . | . | . | | | |

335 drifting buoys have been deployed in support of TOGA; 33 are operational

+ Sensor failure

**C. Information on the operational status of elements of the surface-based sub-system *(continued)***

## 5. ARGOS SERVICE

### 5.1 ARGOS MONTHLY STATUS REPORT

Date of statistics computation : 1 June 1995

***•Reports handled by ARGOS Service (list of monthly collected ARGOS platforms sorted by type of platform)***

| | | |
|---|---|---|
| Drifting Buoys | : | 1034 |
| Boats (<20 knots) | : | — |
| Marine Stations | : | 9 |
| Moored Buoys | : | 296 |
| Fixed Stations | : | 418 |
| Terrestrial Animals | : | 89 |
| Marine Animals | : | 89 |
| Birds | : | 41 |
| Balloons | : | 6 |
| TOTAL | : | 1982 |

***•Reports for insertion into the GTS (list of monthly collected GTS platforms on every GTS site sorted by type of platform)***

***Transmission to RTH Paris:***

| | | |
|---|---|---|
| Boat (less than 20 knots) | : | — |
| Drifting Buoys | : | 84 |
| Fixed Stations | : | 12 |
| Marine Stations | : | 1 |
| Moored Buoys | : | 2 |
| Synoptic PTT | : | — |

| | | |
|---|---|---|
| Drifting Buoys | : | 504 |
| Fixed Stations | : | 9 |
| High Speed | : | — |
| Moored Buoys | : | 2 |

***•GTS coding statistics of platforms reporting through ARGOS and distributed over the GTS***

| | |
|---|---|
| BATHY = | 453 |
| BUOY = | 176053 |
| SYNOP = | 11203 |
| TOTAL: | 187709 |

## 8. FEED-BACK FROM MEMBERS TO THE SECRETARIAT ON ANY CHANGES IN THE OBSERVING NETWORK

In view of the difficulties experienced in identifying non-implemented observing stations or implemented stations which are closed or suspended for a certain period, or stations making observations but not reaching their NMCs, a special table accompanied by explanatory notes (see Appendix I) is attached, to serve as feed-back from Members to the Secretariat on any changes of the present state of implementation of observing programmes of SYNOP, TEMP and PILOT reporting stations.

Members are urged to fill in the special table as and when appropriate, and to return it to the Secretariat **before the 20th of each month** to enable changes to be included in the next "OPERATIONAL *NEWSLETTER*".

## Feed-Back from Members to the Secretariat on any changes in the Observing Network

*(Explanatory Notes overleaf)*

**Country:** _____ **Date effective:** _____

**Global Exchange:** ☐ **Regional Exchange:** ☐

*(please tick the appropriate box)*

| A | | B | | C | D | | | | | | | | E | | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Station | | | | Bulletin Identification | Implementation of Observing Programme | | | | | | | | Elevation | | Pressure | Remarks |
| Index No. | Name | Latitude | Longitude | TTAAii CCCC | 00 | 03 | 06 | 09 | 12 | 15 | 18 | 21 | HP | H/HA | Level | |
| **1.** SYNOP | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
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| **2.** TEMP | | | | | | | | | | | | | | | | |
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| **3.** PILOT | | | | | | | | | | | | | | | | |
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## Explanatory Notes

1. Separate tables should be prepared for global exchange and regional exchange respectively. These tables should contain information concerning any changes of the present state of implementation of observing programmes of SYNOP, TEMP and PILOT reporting stations (for Volume A and the Catalogue of meteorological Bulletins), and particularly for stations included in the Regional Basic Synoptic Networks (RBSN).

2. For entries in these tables, the following should be taken into account:

**Column A:** The index number (IIiii) and name of each station should be entered in case of any changes in the observing programmes of the stations;

**Column B:** The Latitude and the Longitude in degrees and minutes with the appropriate letters (N, S, E and W) should be indicated;

**Column C:** The TTAAii CCCC of the abbreviated heading of the meteorological bulletins which contains reports from the station should be inserted;

**Column D:** "X" for implementation and "-" for non-implementation should be inserted as appropriate. In order to easily identify changes in the programme, these should be marked in red;

**Column E:** HP= the elevation of the station in metres (the datum level to which barometric pressure reports at the station refer);

H = the elevation of the ground, in metres, (average level of terrain in immediate vicinity of station), is given for stations not located on aerodromes;

HA = the official altitude of the aerodrome is given for stations located on aerodromes and is indicated by the letter "A" in the column "Other observations and Remarks" of Volume A;

**Column F:** For those stations not indicating pressure reduced to mean sea level (group 4PPPP) in their synoptic reports, the entry in this column shows which information is reported in lieu of group 4PPPP:

| STATION | Pressure at station level reported using group $3P_oP_oP_oP_o$ |
|---|---|
| 1000 hPa | geopotential of the given standard isobaric surface reported using group 4a3hhh |
| 850 hPa | |
| 700 hPa | |
| 500 hPa | |

**Column G:** Reasons for temporary suspension of observing programmes and an expected date of resumption of the programmes should be given as far as possible. Non-standard collection and/or distribution times should also be included, and also possible alternate observing stations, as appropriate.

3. These tables should be sent to the Secretariat **before the 20th of the month** for inclusion in the "OPERATIONAL *NEWSLETTER*", as appropriate.

# Annex III

# GLOBAL TELECOMMUNICATION SYSTEM

## C. INFORMATION ON THE OPERATION OF THE GTS

### 2. TRANSMISSION SCHEDULES (Publication No. 9 - *Volume C, Chapter II)*

#### 2.2 DELETED TRANSMISSIONS/BROADCASTS

**•Notification from former USSR**

Due to financial difficulties the aerological station "Brest" will be closed as from 1 June 1995.

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# Annex IV

# CODES

## B. MANUAL ON CODES

### 1. GLOBAL PRACTICES

#### 1.3 CHANGES TO CODES

The President of the Commission for Basic Systems and then the President of WMO have approved the following Recommendation 14 (CBS-95). It is important to note that:

(1) the amendments to alphanumeric codes FM 15-IX Ext. METAR, FM 16-IX Ext. SPECI, FM 51-IX Ext. TAF, FM 53-IX Ext. ARFOR, FM 54-IX Ext. ROFOR given in annex A to the recommendation are for use as from 1 January 1996,

(2) the amendments to tables of binary representations FM 92-X GRIB and FM 94-X BUFR given in annex B to the recommendation are for use as from 8 November 1995.

### RECOMMENDATION 14 (CBS-95)

Rec. 14 (CBS-95) Amendments to Alphanumeric Codes FM 15-IX Ext. METAR, FM 16-IX Ext. SPECI, FM 51-IX Ext. TAF, FM 53-IX Ext. ARFOR, FM 54-IX Ext. ROFOR and in tables of binary data representations FM 92-X GRIB and FM 94-X BUFR
THE COMMISSION FOR BASIC SYSTEMS,

NOTING:

(1) Resolution 6 (CBS-X) - Working Group on Data Management,

(2) The abridged final report of CBS-X, general summary, paragraph 6.4.52,

(3) The final report of the Expert Group to review the Aeronautical Meteorological Codes (Geneva, 30 May to 3 June 1994),

(4) The report of the tenth session of the CAeM (Geneva,10-21 October 1994),

CONSIDERING that there is an urgent need to introduce modifications to Aeronautical Codes and additions to the GRIB and BUFR tables to meet new requirements,

RECOMMENDS:

(1) That the amendments to Alphanumeric Codes FM 15-IX Ext. METAR, FM 16-IX Ext. SPECI, FM 51-IX Ext. TAF, FM 53-IX Ext. ARFOR, FM 54-IX Ext. ROFOR given in annex A to this recommendation be adopted for use as from 1 January 1996,

(2) That amendments to Tables of Binary Representations FM 92-X GRIB and FM 94-X BUFR given in Annex B to this recommendation be adopted for use as from 8 November 1995;

INVITES the President of WMO to approve this recommendation as a matter of urgency, on behalf of the Executive Council;

REQUESTS the Secretary-General to arrange for the inclusion of these amendments in Volume I of the Manual on Codes.

**B. Manual on Codes /1. Global practices / 1.3 Changes to codes *(continued)***

## ANNEX A TO RECOMMENDATION 14 (CBS-95)

**Amendments to the:**

**MANUAL ON CODES — Volume I, Part A, Alphanumeric Codes (WMO No. 306)**
(new or modified text in regulations is in *italics*)

**FM 15-IX Ext. METAR and FM 16-IX Ext. SPECI:**

MODIFY: • CODE FORM as follows: (GGggZ) as *(YYGGggZ)*

INSERT: • Group *(AUTO)* after (YYGGggZ)

DELETE: • In second line delete *(ww)*

REPLACE: • WS TKOF RWY$D_RD_R$ and/or WS LDG RWY$D_RD_R$ by WS RWY$D_RD_R$ and/or WS ALL RWY

• In last line replace SKC by *(SKC (or (NSC*

ADD: • Group *(RMK .....)* at the end.

MODIFY: • 15.1.1 as follows:

DELETE: • Note at the end of 15.1.1 and append to the last line of the paragraph 15.1.1 the following:

*However, in a bulletin the code name METAR and SPECI may be omitted by regional air navigation agreement, or by agreement between the authorities concerned.*

MODIFY: • 15.3 as follows: *Group* YYGGggZ

• Beginning of 15.3.1 as follows: *The day of the month and the* time.....

ADD: • New regulation 15.4 as follows: Group *(AUTO)*

INSERT: • New regulation 15.4.1:

*The optional group (AUTO) may be inserted before the wind group, indicating a report containing fully automated observations without human intervention. If any element cannot be observed, the group in which it would have been encoded shall be replaced by the appropriate number of solidi. The number of solidi depends on the number of symbolic letters for the specific group which is not able to be reported; i.e. four for visibility group, two for the present weather group and three or six for the cloud group, as appropriate.*

RENUMBER: • Regulations: 15.4 to 15.7 as 15.5 to 15.8

MODIFY: • Second sentence in the old 15.4.2 as follows:

*A variable wind at higher speeds, with variation of wind direction by 180° or more,* shall....

INSERT: • In the old 15.5.3 after first sentence:... maximum visibility. *If the lowest visibility is observed in more than one direction, then $D_v$ shall represent the most operationally significant direction.* Otherwise...

MODIFY: • The end of the old 15.6.4.1 as follows: .....touchdown zone of the *active landing runway(s) up to a maximum of four.*

ADD: • In note 13 of Code table 4678:

• In second line in the list of letter abbreviations: *TS.*

• Add in list of old regulation 15.7.10: *TS.*

REPLACE: • The old 15.7.4 by:

• *Intensity shall be indicated only with precipitation, precipitation associated with showers and/or thunderstorms, blowing dust, sand or snow, duststorm or sandstorm.* If the intensity of the phenomena reported in the group is either light or heavy, this shall be indicated by the appropriate sign (see Code table 4678 and specially its note (5)). No indicator shall be included in the group *when the intensity of the reported phenomenon is moderate.*

MODIFY: • In NOTE (1) of the old 15.7.10: ..... kilometres of the aerodrome *perimeter* but not.....

REPLACE: • 3000 metres by *5000 metres* in the old regulations 15.7.12, 15.7.13 and 15.7.14

**B. Manual on Codes /1. Global practices / 1.3 Changes to codes *(continued)***

MODIFY: • Code table 4678 column 1, third line, as follows:

+ Heavy *(well developed in the case of dust/sand whirls (dust devils) and funnel clouds)*

INSERT: • Column 2, insert between BC and DR: *PR Partial (covering part of the aerodrome)*
• Column 2, last line, as follows: FZ *Freezing (Supercooled)*
• Column 3, fifth line, as follows: *IC Ice crystals (diamond dust)*
• Column 5, first line, as follows: PO *dust/sand whirls (dust devils)*

MODIFY: • Beginning of note (7) as follows: The descriptors MI, *BC and PR shall....*
• Note (5) as follows: .....with precipitation, *precipitation associated with showers and/or thunderstorms,* blowing dust, sand or snow, duststorm or sand storm. Well-developed *dust/sand whirls or funnel clouds (tornadoes or waterspouts)* shall be....
• The old 15.7.12 as follows: .....the phenomenon *ice crystals (diamond dust).* For.....
• The old 15.7.18 as follows: ...fog patches *and the letter abbreviation PRFG to report* fog covering...

DELETE: • 15.8

MODIFY: • Beginning of 15.9.1.1, as follows: The cloud amount $N_sN_sN_s$ shall be reported as *few (1 to 2 oktas), scattered (3 to 4 oktas),* broken (5 to 7 oktas) or overcast (8 oktas), using the three-letter abbreviations *FEW,* SCT,...
• Second sentence of 15.9.1.4 as follows: 1st group: the lowest individual layer (mass) of any amount to be reported as *FEW,* SCT, BKN or OVC;

ADD: • In last sentence of 15.9.1.1

Between "clouds" and "and" the following: *...and no restriction on vertical visibility*

• At the end of the 15.9.1.1 the following: *If SKC is reported but visibility is restricted by FG, SS, DS, BR, FU, HZ, DU, IC and SA, vertical visibility shall not be reported.*

REPLACE: • 15.9.1.5 to be in line with Annex 3 4.9.5 as follows:

The height of the base of the cloud layer (mass) shall be reported in *steps of 30m (100ft) up to 3000m (10 000ft) and in steps of 300m (1000ft) above 3000m (10 000ft)* in the form of $h_sh_sh_s$

• NOTE: See Note (2) to Regulation *15.7.4.2*

MODIFY: • end of note of 15.9.1.7 as follows: ...as Cumulonimbus only *and the amount of clouds shall be encoded as the sum of the CB and TCU amounts.*

REPLACE: • In 15.10, in the first sentence replace 15.7 by 15.8.

Replace (c) by: *No significant weather phenomena (see Code table 4678).*

MODIFY: • 15.13.2.1 as follows:

*Up to three groups of* information on recent..... .....since the last routine report, *or last hour, whichever is shorter* but not at the time of observation:

ADD: • In the second item of list within 15.13.2.1: Between heavy and rain: *drizzle,*
• To the end of the fourth item of list within 15.13.2.1: *(including snowstorm)*
• between the last two items of list within 15.13.2.1: *Funnel cloud(s) (tornado or water-spout)*

MODIFY: • 15.13.3 as follows:

Wind shear in the lower layers *WS RWY$D_RD_R$ or WS ALL RWY*

Information on the existence of wind shear along the take-off path or approach path between one runway level and 500 metres (1600ft) significant to aircraft operations shall be reported whenever available and local circumstances so warrant, using *the group set WS RWY$D_RD_R$ repeated as necessary. If the wind shear along the take-off path or approach path is affecting all runways in the airport, WS ALL RWY shall be used.*

• beginning of (d) in 15.14.5 as follows: When *it is possible to specify a time for the change to occur* during the trend forecast period: by the change indicator...

REPLACE: • In 15.14.11: replace second item in the list by:

"Moderate or heavy precipitation *(including shower)";* replace bracket after Thunderstorm by: *(with or without precipitation);* replace and insert *"Freezing fog"* as second item; add after fourth item: *(including snowstorm);*

MODIFY: • 15.14.12 as follows: NSW *(Nil* Significant Weather)

**B. Manual on Codes /1. Global practices / 1.3 Changes to codes *(continued)***

ADD: • To regulation 15.14.13: *When no cloud below 1500 metres (5000 ft) or the highest minimum sector altitude, whichever is greater, and no cumulonimbus are forecast, and CAVOK or SKC are not appropriate, the abbrevation NSC shall be used.*

• To regulation 15.15: *Group (RMK.....)*

• 15.15.1: *The indicator RMK denotes the beginning of a section containing information included by national decision which shall not be disseminated internationally.*

REPLACE: • Correct references to regulations as follow:

In the old 15.5.2 replace 15.5.3 by 15.6.3
In the old 15.5.3 replace 15.5.2 by 15.6.2, 15.5.1 by 15.6.1
In the old 15.6.1 replace 15.6 by 15.7
In the old 15.6.4.2 replace 15.6.5 by 15.7.5
In the old 15.6.5 replace 15.6.6 by 15.7.6 and 15.6.4.3 by 15.7.4.3
In the old 15.7.10 replace 15.7.17 by 15.8.17 and 15.7.7 by 15.8.7
In 15.9.1.5 replace 15.6.4.2 by 15.7.4.2
In 15.9.2 replace 15.6.4.2 by 15.7.4.2
In 15.13.3 replace 15.6.3 by 15.7.3
In 15.14.11 replace 15.7 by 15.8

**FM 51-IX Ext. T A F:**

MOVE: • In Code Form move group $TT_FT_F/G_FG_FZ$ to the end

MODIFY: • The validity group $G_1G_1G_2G_2$ in the code form as follows: $Y_1Y_1G_1G_1G_2G_2$ where $Y_1Y_1$ represents the date of the month of the beginning of the period of validity.

• Last line of cloud groups in code form as follows: SKC *(or NSC)*

• TTGG by *TTGGgg*

ADD: • At end of regulation 51.1.1: *However, in a bulletin the code name TAF may be omitted by regional air navigation agreement or by agreement between the authorities concerned.*

MODIFY: • 51.1.4 as follows: The forecast shall cover the period $Y_1Y_1G_1G_1$ *to* $G_2G_2$. The forecast may be divided into two or more self-contained parts by the use of the time indicator group TTGGgg in the form of FMGGgg. A complete description of the forecast prevailing conditions shall be given at the beginning of the forecast or the self contained parts designated by FMGGgg. If any element..... *Regulation 51.1.5.*

• The heading of 51.5 as follows: Group w`w` *or NSW*

REPLACE: • In 51.5.1: Second item in the list replace by: Moderate or heavy *precipitation (including shower);*

ADD: • In 51.5.1: add after fourth item: *(including snowstorm);*

REPLACE: • In 51.5.1: replace bracket after Thunderstorm by: *(With or without precipitation);*

INSERT: • In 51.5.1: Insert second item: - *Freezing fog;*

MODIFY: • In 51.5.2: *(Nil Significant Weather)*

• In 51.6: Last line read as: *SKC (or NSC)*

• 51.6.1.1 read as: The cloud amount NsNsNs shall be given as *few (1 to 2 oktas), scattered (3* to 4 oktas), broken ..... using the three letter abbreviations *FEW,* SCT.....

• 51.6.1.3 second sentence read as: ..... cloud forecast. The number of groups shall not exceed *three,* except that.....

• 51.6.1.4 the 1st group read as: ..... to be indicated as *FEW,* SCT, BKN or OVC

APPEND: • In 51.6.1.6 append to the end the following:

*In case CB and TCU are forecast with the same height of cloud base, the cloud amount shall be the sum of the CB and TCU amounts and the cloud type given as CB*

MODIFY: • 51.7 part (c) as follows: *(c) No significant weather phenomena (see code table 4678)*

ADD: • 51.8.3 : *Forecast temperature group(s), normally not exceeding four, shall appear in sequence at the end of the report.*

**B. Manual on Codes /1. Global practices / 1.3 Changes to codes *(continued)***

RENUMBER:
- 51.8 as 51.13
- 51.8.1 as 51.13.1
- 51.8.2 as 51.13.2
- 51.8.3 as 51.13.3
- 51.9 to 51.12.3 as 51.8 to 51.11.3
- 51.13 as 51.14

REPLACE:
- In the old 51.11, replace TTGG by *TTGGgg*

ADD:
- In the old 51.11.1 after GG add: *or GGgg*
- In the old 51.11.2 and 51.12.3 add: *gg* after every GG.
- In NOTES of old 51.11.3 and 51.11.4, add *gg* after every FMGG

REPLACE:
- Correct references to regulations as follow:

In 51.1.4 replace 51.11.1 by 51.10.1
In 51.3.2 replace 15.4.2 by 15.5.2 and 15.4.4 by 15.5.4
In 51.3.5 replace 15.4.6 by 15.5.6
In 51.4.3 replace 15.5.4 by 15.6.4
In 51.5.1 replace 15.7 by 15.8
In 51.5.2 replace 51.11.3 by 51.10.3
In the old 51.10 replace 51.9.1 by 51.8.1 and 51.9.2 by 51.8.2
In the old 51.11.4 replace 51.11.2 by 51.10.2 and 51.11.3 by 51.10.3

**FM 53-IX Ext. ARFOR:**

MODIFY:
- In the Code Form: the validity group $G_1G_1G_2G_2$ as follows: $Y_1Y_1G_1G_1G_2G_2$ where $Y_1Y_1$ represents the date of the month of the beginning of the period of validity
- The last line of cloud groups in code form as follows: SKC *(or NSC)*

REPLACE:
- 53.1.2 replace $G_1G_1G_2G_2$ by $Y_1Y_1G_1G_1G_2G_2$
- 53.1.7 replace SKC by "SKC *(or NSC)*"

MODIFY:
- Beginning of 53.4.4 as follows:

The group $97GGG_P$, *with $G_P$ coded 1 to 9*, shall be ....

INSERT:
- Text of Regulation 53.4.5 at end of Regulation 53.4.4 (before NOTES) and

DELETE:
- Regulation 53.4.5

RENUMBER:
- 53.4.6 to 53.4.8 by 53.4.5 to 53.4.7

REPLACE:
- In 53.1.9 replace 51.9.1 by 51.8.1 and 51.9.2 by 51.8.2

RENUMBER:
- In the old 53.4.6.2 renumber 53.4.7 by 53.4.6

**FM 54-IX Ext. ROFOR:**

MODIFY:
- In the Code Form the validity group $G_1G_1G_2G_2$ as follows:

$Y_1Y_1G_1G_1G_2G_2$ where $Y_1Y_1$ represents the date of the month of the beginning of the period of validity.

REPLACE:
- In 54.1.3 replace $G_1G_1G_2G_2$ by $Y_1Y_1G_1G_1G_2G_2$
- In 54.4.3 replace reference to 53.4.8 by reference to 53.4.7

**B. Manual on Codes /1. Global practices / 1.3 Changes to codes *(continued)***

CODE TABLE *4678

**w'w' - Significant present and forecast weather**

| QUALIFIER | | | WEATHER PHENOMENA | | | | |
|---|---|---|---|---|---|---|---|
| Intensity or Proximity | Descriptor | | Precipitation | | Obscuration | Other | |
| 1 | 2 | | 3 | | 4 | 5 | |
| Light | MI | Shallow | DZ | Drizzle | BR Mist | PO | (dust/sand whirls) (dust devils) |
| Moderate (no qualifier ) | BC | Patches | RA | Rain | FG Fog | SQ | Squalls |
| + Heavy (well- developed in the case of dust/sand whirls) (dust devils) and funnel clouds | PR | Partial (covering part of the aerodrome) | SN | Snow | FU Smoke | FC | Funnel cloud(s) (tornado or water-spout) |
| VC In the vicinity | DR | Low drifting | SG | Snow grains | VA Volcanic Ash | SS | Sandstorm |
| | BL | Blowing | IC | Ice crystals (Diamond Dust) | DU Widespread | DS | Duststorm |
| | SH | Shower(s) | PE | Ice pellets | SA Sand | | |
| | TS | Thunderstorm | GR | Hail | HZ Haze | | |
| | FZ | Freezing (Supercooled ) | GS | Small hail and/or snow pellets | | | |

The w'w' groups shall be constructed by considering columns 1 to 5 in the table above in sequence, that is intensity, followed by description, followed by weather phenomena. An example could be: + SHRA (heavy shower(s) of rain).

## ANNEX B TO RECOMMENDATION 14 (CBS-95)

**Amendments to the:**
**MANUAL ON CODES — Volume I, Part B, Binary Codes (WMO No. 306)**

**FM 92-X GRIB:**

Code Table 2, add:

| Code Figure | Field parameter | Unit |
|---|---|---|
| 10 | Total Ozone | Dobson |

Code Table 3, modify by adding:

| Octet 10 | | Octet 11 | Octet 12 |
|---|---|---|---|
| CODE FIGURE | MEANING | CONTENTS | CONTENTS |
| 115 | Level at specified pressure differences from ground to level | hPa (2 octets) | |
| 116 | Layer between two levels at specified pressure differences from ground to level | Pressure difference from ground to top level (hPa) | Pressure differences from ground to bottom level (hPa) |
| 117 | Potential vorticity $10^{-6}km^2kg^{-1}s^{-1}$ | | |
| 118 ) | Reserved | | |
| • ) | | | |
| 120 ) | | | |

Code Table 4, modify by adding:

| Code Figure | Meaning |
|---|---|
| 8 ) | Reserved |
| 9 ) | |
| 10 | 3 hours |
| 11 | 6 hours |
| 12 | 12 hours |
| 13 ) | Reserved |
| • ) | |
| • ) | |
| • ) | |
| 253 ) | |

Code Table 5, modify by adding:

| Code Figure | Meaning |
|---|---|
| 119 | Standard deviation of N forecasts, all with the same reference time with respect to the time average of forecasts; the first forecast has a forecast period of P1, the remaining forecasts follow at intervals of P2. |

**B. Manual on Codes /1. Global practices / 1.3 Changes to codes *(continued)***

Code Table 6, modify by adding:

| Code Figure | Meaning |
|---|---|
| 91 ) | Reserved |
| . ) | |
| 191 ) | |
| 192 ) | Reserved for local use |
| . ) | |
| 254 ) | |

**FM 94-X BUFR:**
**Additions to Table B:**

**In Class 08 - Significance qualifiers:**

| TABLE REFERENCE | | | | | | | |
|---|---|---|---|---|---|---|---|
| F | X | Y | ELEMENT NAME | UNIT | SCALE | REFERENCE VALUE | DATA WIDTH (BITS) |
| 0 | 08 | 025 | Time difference qualifier | Code table | 0 | 0 | 4 |

**In Class 26 - Non-co-ordinate location (time):**

| TABLE REFERENCE | | | | | | | |
|---|---|---|---|---|---|---|---|
| F | X | Y | ELEMENT NAME | UNIT | SCALE | REFERENCE VALUE | DATA WIDTH (BITS) |
| 0 | 26 | 003 | time difference | minutes | 0 | -1440 | 12 |

**Add a code table:**

*0 08 025 — Time difference qualifier*

| Code Figure | |
|---|---|
| 0 | Reserved |
| 1 | Local Standard Time |
| 2-14 | Reserved |
| 15 | Missing |

**B. Manual on Codes /2. Regional practices / 2.3 Changes to codes *(continued)***

## 2. REGIONAL PRACTICES
## MANUAL ON CODES — Volume II (WMO No. 306)

### 2.3 CHANGES TO CODES

- **In Region I change to code form RF 1/02 AGRO**

During its eleventh session RA I adopted the following Resolution 7 updating the code Form RF 1/02 AGRO. These changes are to be implemented by 8 November 1995:

Res.7 (XI-RA I) - Updated code form RF 1/02 AGRO - Agrometeorological report of decadal data including monitoring on crops and locust control related observations

THE REGIONAL ASSOCIATION FOR AFRICA,

NOTING:

(1) The report of the second session of the Working Group on Planning and Implementation of the WWW in RA I (Lusaka, Zambia, 23-27 November 1992),

CONSIDERS:

(1) The requirements expressed by some Members of RA I and by the Drought Monitoring Centres (DMCs) to exchange decadal data, to include more information on instruments used, to add information on locust in the AGRO code and to report wetness of the ground,

DECIDES:

To adopt the updated Code Form RF 1/02 AGRO given in the Annex to this recommendation for use as from 8 November 1995;

REQUESTS the Secretary-General to arrange for the inclusion of these modifications in Volume II of the Manual on Codes.

### ANNEX TO RESOLUTION 7 (XI-RA I)

#### UPDATED CODE FORM

**RF 1/02 AGRO - Agrometeorological report of decadal data including monitoring on crops and locust control related observations**

CODE FORM:

| | | | | |
|---|---|---|---|---|
| Section 0 | AGRO yMMJJ | $Q_cL_aL_aL_aL_a$ | $L_oL_oL_oL_oL_o$ | |
| Section 1 | $(99R_iN_RN_R$ | $(0R_nR_nR_nR_n))$ | $(1t_sE_iE'h_a)$ | |
| | | $(2s_nT_xT_xT_x)$ | $(3s_nT_nT_nT_n)$ | $(4ssss)$ |
| | | $(5E_pE_pE_pE_p)$ | $(6f_rf_rf_rf_r)$ | $(666n_{fr}n_{fr})$ |
| Section 2 | 888 | $(0Q_if_Eg_Ss)$ | $(1c'c'v'v')$ | $(2C_dk_Pg_Pg)$ |
| | | $(3F_oE_dE_px_Sw)$ | $(4I_{se}I_{se}R_sR_s)$ | |
| Section 3 | 777 | $(0L_nL_cL_dL_g)$ | $(1S_LdL_DL_Ve)$ | |
| Section 4 | 666 | (Group to be developed nationally) | | |

NOTES:

The code format contains five sections

| Section | Content |
|---|---|
| 0 | Identification and position |
| 1 | Decadal information |
| 2 | Data on crop assessment as a result of agrometeorological monitoring on up to three crops |
| 3 | Data on locust control related observations |
| 4 | If included may contain data for national use |

**B. Manual on Codes /2. Regional practices / 2.3 Changes to codes *(continued)***

**REGULATIONS:**

1/02.1 *General*

1/02.1.1 The code name AGRO and the groups yMMJJ $Q_cL_aL_aL_aL_a$ and $L_oL_oL_oL_oL_o$ shall appear as a prefix to individual reports.

1/02/1/2 The code name AGRO and the group yMMJJ shall be included as the first line of the text of a meteorological bulletin of AGRO reports. Individual reports in the bulletin shall contain neither the code name nor the group yMMJJ.

1/02.1.3 The position of an agrometeorological station in degrees and minutes shall be indicated by the groups $Q_cL_aL_aL_aL_a$ $L_oL_oL_oL_oL_o$.

1/02.2 *Use of Sections*

1/02.2.1 Whenever data are available, section 1,2 and 3 shall be reported together except that some sections may be reported when data for any other section(s) is (are) not available.

1/02/2.2 The groups of section 2 shall be reported for the first crop monitored and repeated without the indicator group 888, for other crops monitored up to a maximum total of the three most representative crops.

1/02.2.3 Groups of section 3 shall all be reported together whenever locust control related observations can be included by all members capable of doing so.

1/02.3 *Section 1*

1/02.3.1 When included the groups $99R_iN_RN_R$ and $0R_nR_nR_nR_n$ shall refer to the total precipitation measured in the periods ending with the reading on the first, eleventh and twenty first days of each month UTC.

1/02.3.2 Reports on the eleventh and twenty-first days of the month UTC shall refer to the total amount of precipitation measured during the period of ten days ending on the morning of the reporting day, while reports on the first day of the month UTC shall refer to the total amount of precipitation since the end of the period covered by the report of the twenty-first day of the preceding month.

1/02.3.3 The group $99R_iN_RN_R$ shall be used where Ri indicates whether the total rainfall $R_nR_nR_nR_n$ reported for the period in question is less than one millimeter or not (See code table 166).

1/02.3.4 $R_nR_nR_nR_n$ shall be used to report the amount of rainfall for the period in millimeters and 0.5 will be rounded upwards. The rounding up will only apply when Ri is encoded 8-9 in the group $99R_iN_RN_R$.

1/02.3.5 When there is no precipitation recorded during the period $99R_iN_RN_R$ shall be coded 99000 to indicate this, and in this case the group $0R_nR_nR_nR_n$ shall not be included in the report.

1/02.3.6 The group $1t_ss_iiE h_a$ when included in the report will give additional information relating to the decadal data reported.

Whenever each indicator is reported using a solidus (/) this implies that the appropriate groups relating to it shall not be included in the report.

1/02.3.7 The groups $2s_nT_xT_xT_x$ and $3s_nT_nT_nT_n$ with their sign of data indicator ($s_n$) relate to the reported mean maximum and minimum temperature in tenths of degrees Celsius for the ten days respectively.

1/02.3.8 Group 4ssss. This group when included in the report gives the total sunshine hours in tenths of an of an hour for the period.

1/02.3.9 Groups 5EpEpEpEp. This group when included shall contain information on the total potential evaporation in millimetres for the decadal period.

1/02.3.10 Groups $6f_rf_rf_rf_r$ $666n_{fr}n_{fr}$. The reporting of these groups will contain the total wind run in hundredth of kilometers during the period (If the total wind run in ten days is 700.64 statute miles this is equivalent to 1127.33 kilometers and will be reported as 61127 666 33 where $n_{fr}n_{fr}$ represents the hundredths digits of the run of wind reported by $f_rf_rf_rf_r$ group).

1/02.4 *Section 2*

1/02.4.1 This section consists of the indicator group 888 followed by data on crop assessment groups $0Q_if E_gS_s$, 1c'c'v'v', $2C_dkP_gP_g$, $3F_oE_dE_pxS_w$, $4I_seI_seR_sR_s$. These groups shall be reported only when a station has conducted crop monitoring on at least one crop.

**B. Manual on Codes /2. Regional practices / 2.3 Changes to codes *(continued)***

1/02.4.2 Group 0QifEgSs when included will contain information in the quality of the crop by general assessment, indicator of soil moisture source, state of ground and state of crop due to moisture stress. Indicator if gives in addition predominance of dryness or wetness of ground in the period and whether or not experiments are conducted in the fields

1/02.4.3 Group Ic'c'v'v'. This group contain the type of crop and variety

1/02.4.4 Group $2C_dkP_gP_g$ when reported will contain data on crop damage, kind of pest, disease or adverse weather which did cause the damage and information on the phenological phase of the crop at the time of observation

1/02.4.5 Group $3F_oE_dE_pxS_w$ reports the field operations during the period concerned extent of damage due to diseases pests and adverse weather as well as the extent of spread of weeds. This group gives complementary information to group $2C_dkP_gP_g$

1/02.4.6 Group $4I_{se}I_{se}R_sR_s$ when included shall contain data on soil water reserve and water sufficiency index, when the indices have been calculated. Otherwise it shall be omitted

1/02.5 *Section 3*

1/02.5.1 Section 3 with indicator 777 will consist of data on locust control related observations

1/02.5.2 Group $0L_nL_cL_dL_g$ . This group shall contain information relating to locust (acridian) name and color, stage of development of the swarms or bands of locust and their organization state

1/02.5.3 Group $1s_Ld_LD_Lv_e$. This group shall always be reported in association with group $0L_nL_cL_dL_g$ and shall contain information on size and density of the swarms or bands, direction of motion and the extent of vegetation

1/02.6 *Section 4*

This section may be developed nationally

## ADDITIONAL OR MODIFIED CODE TABLES FOR REGIONAL USE

**Code table 142**

Eg — *State of the ground for agrometeorological monitoring purposes*

| Code Figure | |
|---|---|
| 0 | Surface of the ground not dry or wet (normal) |
| 1 | Surface of the ground dry no loose sand or dust |
| 2 | Surface of the ground dry with loose sand or dust |
| 3 | Surface of the ground very dry with cracks |
| 4 | Surface of the ground freezing (frost) |
| 5 | Surface of the ground moist |
| 6 | Surface of the ground wet (slippery at places) |
| 7 | Surface of the ground wet with standing water in pools |
| 8 | Surface of the ground flooded (inundation) |
| 9 | Surface of the ground partly or wholly covered with hail |

$h_a$ — *Height of counting anemometer above the ground surface*

| Code Figure | |
|---|---|
| 1 | Counting anemometer height below 2 meters from ground surface |
| 2 | Counting anemometer height 2 meters above ground surface |
| 3 | Counting anemometer height above 2 meters from ground surface |
| 4-9 | Not used |
| / | Data not available |

**B. Manual on Codes /2. Regional practices / 2.3 Changes to codes *(continued)***

### Code table 154

$^{i}E$ — *Type of evaporameter*

| Code Figure | |
|---|---|
| 1 | Sunken tank or pan |
| 2 | Tank or pan above group surface |
| 3-9 | Not used |
| / | Data not available |

### Code table 155

$^{i}f$ — *Indicator of soil moisture source, duration of dryness or wetness in the period with or without experimental tests of fertilizers and effect of insecticides or herbicies.*

| Code Figure | |
|---|---|
| 0 | Rainfed farming (in rainy areas) has been dry most of the period - No experimental tests |
| 1 | Rainfed farming (in rainy areas) has been dry most of the period - with experimental tests |
| 2 | Rainfed farming (in rainy areas) has been wet/flooded most of the period - No experimental tests |
| 3 | Rainfed farming (in rainy areas) has been wet most of the period - with experimental tests |
| 4 | Rainfed farming (in dry areas) has been dry most of the period - No experimental tests |
| 5 | Rainfed farming (in dry areas) has been dry most of the period - with experimental tests |
| 6 | Rainfed farming (in dry areas) has been wet/flooded most of the period - No experimental tests |
| 7 | Rainfed farming (in dry areas) has been wet most of the period - with experimental tests |
| 8 | Irrigated fields - no experimental tests |
| 9 | Irrigated fields - with experimental tests |

### Code table 166

$R_i$ — *Indicator specifying the reported rainfall for the period is in tenths of millimeters or in whole millimeters and also height of gauge orifice above ground surface*

| Code Figure | | |
|---|---|---|
| 0 | No precipitation | ) In tenths of millimetres |
| 1 | Rainfall measured using precipitation gauge installed with orifice at a level with the surrounding ground | ) ) |
| 2 | Rainfall measured using gauge installed with orifice at 30 cm above ground | ) ) |
| 3 | Rainfall measured using a gauge installed with orifice above 30cm | ) ) |
| 4 | Rainfall derived from an automatic weather station | ) |
| 5 | Not used | ) |
| 6 | Rainfall measured using precipitation gauge installed with orifice at a level with the surrounding ground | ) In whole millimetres ) |
| 7 | Rainfall measured using precipitation gauge installed with orifice at 30cm above ground | ) ) |
| 8 | Rainfall measured using precipitation gauge installed with orifice above 30cm from ground surface | ) ) |
| 9 | Rainfall derived from an automatic weather station | ) |

**B. Manual on Codes /2. Regional practices / 2.3 Changes to codes *(continued)***

**Code table 169**

$s_i$ — *Instrument used to measure sunshine*

| Code Figure | |
|---|---|
| 1 | Glass sphere |
| 2 | Photoelectric detector |
| 3 | Others |
| 4-9 | Not used |
| / | Data not available |

**Code table 179**

$t_s$ — *Type of temperature sensor*

| Code Figure | |
|---|---|
| 1 | Liquid in glass thermometer |
| 2 | Bimetallic or Bourdon tube sensor |
| 3 | Electric thermometer |
| 4 | Others |
| 5-9 | Not used |
| / | Data not available |

## NEW SPECIFICATIONS OF SYMBOLIC LETTERS FOR REGIONAL USE

$E_g$ State of the ground for agrometeorological monitoring purposes code table 142 (RF 1/02)

$E_pE_pE_pE_p$ Total potential evaporation in millimeters (RF 1/02)

$f_rf_rf_rf_r$ Total wind run in hundredths of kilometers (RF 1/02)

$h_a$ Height of counting anemometer above the ground surface code table 153 (RF 1/02)

$i_E$ Type of evaporimeter code table 154 (RF 1/02)

$i_f$ Indicator of soil moisture source, predominance of dryness or wetness in the period with or without experimental tests on fertilizers, effect of insecticides or herbicides code table 155 (RF 1/02)

$n_{fr}n_{fr}$ The hundredths digits of the run of wind reported by frfrfrfr. (RF 1/02)

$R_i$ Indicator specifying the reported rainfall for the period is in tenths of millimeters or in whole millimeters Code table 166 (RF 1/02)

ssss Total duration of sunshine in tenths of an hour for the period (RF 1/02)

$s_i$ Instrument used to measure sunshine Code table 169 (RF 1/02)

$t_s$ Type of temperature sensor code table 179 (RF 1/02)

**B. Manual on Codes /2. Regional practices / 2.3 Changes to codes *(continued)***

**REGION IV**

Change related to FM-IX Ext. TAF, following decision of the President of RA IV, the use of the word CYCON has been discontinued. At the end of chapter A-1-INTERNATIONAL CODE FORMS, NOTES AND REGULATIONS, delete the whole paragraph FM 51-IX Ext. TAF including the two regulations 4/51.1 and 4/51.2.

## 3. NATIONAL PRACTICES

### 3.3 CHANGES TO CODES OR PROCEDURES

USA indicated the following modification:

Chapter IV
**F — NATIONAL CODE FORMS**
Region IV — UNITED STATES OF AMERICA,

In code RECCO- Report from a meteorological reconnaissance flight, replace text for TT and modify in CODE TABLE 4-10:

TT Air temperature at flight level $h_ah_ah_a$ in whole degrees Celsius.

(1) For negative temperatures, 50 is added to the absolute value of the temperature, with the hundreds figure, if any, being omitted. A temperature of -50°C is given as 00, the distinction between -50°C and 0°C being made from $i_d$, code Table 4-8. Missing or unknown temperatures are reported as //.

**CODE TABLE 4-10**
j — *Index pertaining to HHH.*

- Change code figure 9 to read:

| | |
|---|---|
| 9 | Altitude of 925 hPa surface in geopotential meters; thousands figure omitted |

- Add:

/ Geopotential height not available or not within ± 30m/4 hPa requirements

Note: When j= / HHH is encoded as ///.