WMO-No. 47

International list of Voluntary Observing Ships

Metadata fields & descriptions, exchange formats and code tables

Metadata Format Version 04

(Document Revision 4.1)

Prepared for the World Meteorological Organization by the
JCOMM Ship Observations Team

(Effective 1 June 2013)

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Version Control

Metadata Format Version	Document Revision	Date of Issue	Prepared By
01	1.0		WMO
02	2.0	8 July 2002	WMO
03	3.0	1 June 2006	SOT TT-Pub47
03	3.1	22 June 2006	SOT TT-Pub47
03	3.2	8 May 2007	SOT TT-Pub47
03	3.3	3 June 2008	SOT TT-Pub47
03	3.4	25 February 2010	SOT TT-Pub47
03	3.5	15 July 2011	SOT TT-Pub47
04	4.0	18 December 2012	SOT TT-Pub47
04	4.1	4 February 2013	SOT TT-Pub47

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Introduction

WMO maintains a catalogue of ships participating in the global Voluntary Observing Ship (VOS) Scheme. The catalogue is produced from the national VOS lists submitted by WMO Members.

The catalogue, which contains a comprehensive range of ship's metadata, was originally available as a WMO publication, WMO-No. 47 (commonly referred to as Pub 47). Due to increasing printing and distribution costs, the publication was suspended in the late 1990s. An electronic version of the catalogue became available on the WMO website < **http://www.wmo.ch/web/www/ois/pub47/pub47-home.htm** > during 2003. Despite the changed method of distribution, the electronic file retains the name of the original publication.

Because of changing demands for ship's metadata, the Ship Observations Team (SOT) formed a Task Team at SOT-II (July 2003, London, UK) to revise the metadata requirements of WMO-No. 47. The proposed changes were subsequently approved at JCOMM-II (September 2006, Halifax, Canada).

This document describes the field descriptions, presentation layout and file exchange formats for WMO-No. 47, Metadata Format Version 04, approved at JCOMM-II. These changes come into effect on **1 June 2013**.

Summary of changes in this version

This revision to WMO-No. 47 includes the following changes foreshadowed at SOT-VI and approved at JCOMM-IV:

1. The existing element **prST:**

    a. The definition is formally changed to **Transmission system for sending weather reports.**
    b. The element is changed to a mandatory table field (Code Table 1601) with a corresponding footnote.
    c. Added to Code Table 0601 **Code name of the field to which the footnote applies**.

2. A new metadata element **spd**:

    a. The definition of this element is **maximum operating speed of the vessel on normal service**.
    b. The element shall be reported in whole knots.

3. Members are strongly encouraged to use the recommended descriptors to report the plain language elements given below. The lists of recommended descriptors pertaining to each field will be maintained at ftp://esurfmar.meteo.fr/pub/Pub47/:

    a. **logE** – the name and version of electronic logbook software.
    b. **awsP** – the name and version of the automatic weather station processing software.
    c. **awsC** – the name and version of the automatic weather station data entry/display software.

4. A new CSV format and XML schema reflecting the changes to Pub47 version 4.0:

    a. Refer to p 6 regarding the implementation of the semi-colon delimited file exchange format.
    b. Refer to p 6 regarding the implementation of XML.
    c. Refer annex 3 for the XML sequence details.

5. A minimum suite of metadata has been declared for a new ship. These mandatory fields are noted under Obligations for WMO Members, page 5, para. 5.

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Obligations for WMO Members

1. The Manual on the Global Observing System, WMO-No. 544, requires WMO Members operating a VOS Program to provide the WMO Secretariat with a copy of their national VOS list.

2. Because of frequent changes in merchant fleets, and to ensure that WMO-No. 47 remains as current as is practicable, particularly for quality monitoring applications, members are asked to make regular submissions of their national VOS list to the Secretariat.

    a. The Guide to Marine Meteorological Services, WMO-No. 471 (paragraph 6.2.5) asks members to provide the Secretariat with an updated VOS lists every quarter.

    b. The Ship Observations Team at its fifth session (SOT-V, Geneva, 2009) asked members, wherever possible, to provide the Secretariat with an updated VOS list every month.

3. WMO Members submitting to WMO-No. 47 should note the following:

    a. To comply with the decision of the WMO Expert Team on Marine Climatology, only mobile platforms, including ships either temporarily or semi-permanently at anchor, shall be reported in WMO-No. 47. Fixed platforms shall be reported under the JCOMM ODAS metadata scheme.

    b. The list of ships shall be sorted alphabetically by name.

    c. Only mobile platforms recruited by the WMO Member shall be included in its national VOS list.

    d. Ship's digital images and drawings shall be retained by the NMS.

4. WMO Members should ensure that ships they intend to recruit are not already members of another country's VOS fleet by consulting the WMO-No. 47.

5. The following mandatory fields represent the minimum suite of metadata that can be submitted for a ship:

    a. rcnty (recruiting country)

    b. call (callsign)

    c. vosR (VOS recruitment date)

    d. vsslM (type of meteorological reporting vessel)

    e. atm (general observing practice)

6. Operators are strongly encouraged to use the search facility provided by the **E-Surfmar VOS Database** at < **http://esurfmar.meteo.fr/doc/vosmetadata/index.php** > to check for the multiple recruitment of ships in their national VOS fleet. In such cases, the recruiting countries should resolve the issue through bilateral agreement.

7. The national VOS list shall be emailed to the WMO Secretariat at: **pub47@wmo.int** whereby the updated list will automatically be distributed to WMO, JCOMMOPS and E-SURFMAR.

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General notes on exchange formats and XML schema

WMO-No. 47, Metadata Format Version 04, now gives WMO Members the choice of submitting their national VOS list as either a semi-colon delimited text file as in the past, or an XML (eXtensible Markup Language) file.

CSV (Semi-colon delimited) file

1. The file shall contain one line, comprising 120 metadata elements, for each platform.
2. The sequence of elements is given in Annex 1.
3. Each metadata element includes a semi-colon (;) delimiter as the last character as shown in Annex 1.

XML file

1. The sequence of elements in the XML file is given in Annex 3
.
2. The XML file shall consist of a top-level header: **<?xml version="1.0"?>**.
3. The dataset shall begin with an opening tag:
   <pub47dataset country="" version="04" prepared="" namespace>,

   where namespace consists of two parts, (a) and (b) below, separated by a space:

   a. xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

   b. xsi:noNamespaceSchemaLocation="http://www.bom.gov.au/jcomm/vos/pub47/**v4pub47.xsd**"
4. The dataset shall end with a closing tag: **</pub47dataset>**.
5. Each ship record in the dataset will comprise 98 metadata elements and section headers, and shall:

   a. Begin with an opening tag: <**pub47record nmsID="">**

   b. End with a closing tag **</pub47record>**.

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Semi-colon delimited exchange format – element descriptions, formats and sequence

Order	Code Name	Explanation	Table	Format	Footnote	Example
1	rcnty;	Recruiting country.	1801		No	
2	ver;	Metadata format version			No	04
3	prepared;	Date of report preparation.		ddmmyyyy	No	
4	name;	Ship's name.			No	
5	reg;	Country of registration.	1801		No	
6	call;	Call sign or WMO Number. Some sea stations are identified by a WMO Number instead of a call sign.			No	
7	IMOn;	IMO Number. Unique identifying number assigned by Lloyd's Register to the hull of the ship.			No	
8	vssl;	Vessel type.	2201		Yes	
9	vsslP;	Vessel digital image.	2203		No	
10	lenvsslD;	Length overall of the ship, ignoring bulbous bow.		0.0 m	No	
11	brdvsslD;	Moulded breadth. The greatest breadth amidships.		0.0 m	No	
12	frbvsslD;	Freeboard. The average height of the upper deck above the maximum Summer load line.		0.0 m	No	
13	drfvsslD;	Draught. The average depth of the keel below the maximum Summer load line.		0.0 m	No	
14	chtvsslD;	Cargo height. Maximum height above the maximum Summer load line.		0.0 m	No	
15	brdg;	Distance of the bridge from the bow.		0.0 m	No	
16	spd;	Maximum operating speed of the vessel on normal service.		0 kts	No	
17	rte;	Route No.1.	1802		Yes	
18	rte;	Route No.2.	1802		Yes	
19	rte;	Route No.3.	1802		Yes	
20	rte;	Route No.4.	1802		Yes	
21	rte;	Route No.5.	1802		Yes	
22	rte;	Route No.6.	1802		Yes	
23	rte;	Route No.7	1802		Yes	

24	rte;	Route No.8.	1802		Yes	
25	rte;	Route No.9.	1802		Yes	
26	rte;	Route No.10.	1802		Yes	
27	vosR;	Recruitment date of the current VOS participation.		ddmmyyyy	No	
28	vosD;	De-recruitment date of the last VOS participation (report only if the vessel has been re-recruited).		ddmmyyyy	No	
29	vclmR;	Last VOSClim recruitment date if within the current period of VOS participation.		ddmmyyyy	No	
30	vclmD;	Last VOSClim de-recruitment date if within the current period of VOS participation.		ddmmyyyy	No	
31	vsslM;	Type of meteorological reporting ship.	2202		Yes	
32	atm;	General observing practice.	0105		Yes	
33	freq;	Routine observing frequency.	0602		Yes	
34	prST;	Transmission system for sending weather reports.	1601		Yes	
35	logE;	Name and version of the electronic logbook software.			No	TurboWin 3.5
36	wwH;	Visual wind/wave observing height.		0.0 m	No	
37	anmU;	General wind observing practice.	0103		No	
38	blc;	Baseline check of the automatic weather station.	0203		No	
39	awsM;	Make and model of the automatic weather station.			No	Vaisala Milos 500
40	awsP;	Name and version of the automatic weather station processing software.			No	Milos 500 2.56
41	awsC;	Name and version of the automatic weather station data entry/display software.			No	Yourlink 1.03.20
42	barm;	Primary barometer type.	0202		Yes	
43	barm;	Secondary barometer type.	0202		Yes	
44	bMS;	Make and model of the primary barometer.			No	Vaisala PTB220B
45	bMS;	Make and model of the secondary barometer.			No	
46	brmH;	Height of the primary barometer above the maximum Summer load line.		0.0 m	No	
47	brmH;	Height of the secondary barometer above the maximum Summer load line.		0.0 m	No	
48	brmL;	Location of the primary barometer.	0204		Yes	
49	brmL;	Location of the secondary barometer.	0204		Yes	
50	brmU;	Pressure units of the primary barometer.			No	hPa
51	brmU;	Pressure units of the secondary barometer.			No	
52	brmC;	Most recent calibration date of the primary barometer.		ddmmyyyy	No	
53	brmC;	Most recent calibration date of the secondary barometer.		ddmmyyyy	No	
54	thrm;	Dry bulb thermometer type No.1.	2002		Yes	
55	thrm;	Dry bulb thermometer type No.2.	2002		Yes	
56	thMS;	Make and model of the dry bulb thermometer No.1.			No	Rosemount ST401

57	thMS;	Make and model of the dry bulb thermometer No.2.			No	
58	thmE;	Exposure of the dry bulb thermometer No.1.	0801		Yes	
59	thmE;	Exposure of the dry bulb thermometer No.2.	0801		Yes	
60	thmL;	Location of dry bulb thermometer No.1 and hgyrometer No.1.	2001		Yes	
61	thmL;	Location of dry bulb thermometer No.2 and hgyrometer No.2.	2001		Yes	
62	thmH;	Height of the dry bulb thermometer No.1 and hygrometer No.1 above the maximum Summer load line.		0.0 m	No	
63	thmH;	Height of the dry bulb thermometer No.2 and hygrometer No.2 above the maximum Summer load line.		0.0 m	No	
64	tscale;	General reporting practice for dry bulb thermometer No.1 and hygrometer No.1.	2003		Yes	
65	tscale;	General reporting practice for dry bulb thermometer No.2 and hygrometer No.2.	2003		Yes	
66	hygr;	Hygrometer type No.1.	0802		Yes	
67	hygr;	Hygrometer type No.2.	0802		Yes	
68	hgrE;	Exposure of the hygrometer No.1.	0801		No	
69	hgrE;	Exposure of the hygrometer No.2.	0801		No	
70	sstM;	Primary method of obtaining the sea surface temperature.	1901		Yes	
71	sstM;	Secondary method of obtaining the sea surface temperature.	1901		Yes	
72	sstD;	Depth of the primary sea surface temperature observation below the maximum Summer load line.		0.0 m	No	
73	sstD;	Depth of the secondary sea surface temperature observation below the maximum Summer load line.		0.0 m	No	
74	barg;	Primary barograph type, or method of determining pressure tendency.	0201		Yes	
75	barg;	Secondary barograph type, or method of determining pressure tendency.	0201		Yes	
76	anmT;	Primary anemometer type.	0102		Yes	
77	anmT;	Secondary anemometer type.	0102		Yes	
78	anmM;	Make and model of the primary anemometer.			No	Vaisala WAV151 & WAA151
79	anmM;	Make and model of the secondary anemometer.			No	
80	anmL;	Location of the primary anemometer.	0101		Yes	
81	anmL;	Location of the secondary anemometer.	0101		Yes	
82	anDB;	Distance of the primary (fixed) anemometer from the bow.		0.0 m	No	
83	anDB;	Distance of the secondary (fixed) anemometer from the bow.		0.0 m	No	
84	anDC;	Distance of the primary (fixed) anemometer from the centre line.		0.0 m	No	
85	anSC;	Side indicator of the primary (fixed) anemometer from the centre line, if appropriate.	0104		No	
86	anDC;	Distance of the secondary (fixed) anemometer from the centre line.		0.0 m	No	
87	anSC;	Side indicator of the secondary (fixed) anemometer from the centre line, if appropriate.	0104		No	
88	anHL;	Height of the primary (fixed) anemometer above the maximum Summer load line.		0.0 m	No	

89	anHL;	Height of the secondary (fixed) anemometer above the maximum Summer load line.		0.0 m	No	
90	anHD;	Height of the primary (fixed) anemometer above the deck on which it is installed.		0.0 m	No	
91	anHD;	Height of the secondary (fixed) anemometer above the deck on which it is installed.		0.0 m	No	
92	anmC;	Most recent calibration date of the primary anemometer.		ddmmyyyy	No	
93	anmC;	Most recent calibration date of the secondary anemometer.		ddmmyyyy	No	
94	othI;	Other meteorological/oceanographic instrument No.1.	1501		Yes	
95	othI;	Other meteorological/oceanographic instrument No.2.	1501		Yes	
96	othI;	Other meteorological/oceanographic instrument No.3.	1501		Yes	
97	othI;	Other meteorological/oceanographic instrument No.4.	1501		Yes	
98	othI;	Other meteorological/oceanographic instrument No.5.	1501		Yes	
99	othI;	Other meteorological/oceanographic instrument No.6.	1501		Yes	
100	chgd;	Last date of change to any metadata value.		ddmmyyyy	No	
101	fieldabbrev;	Code name of the field to which footnote No. 1 applies.	0601			vssl
102	fieldabbrev;	Code name of the field to which footnote No. 2 applies.	0601			thmE
103	fieldabbrev;	Code name of the field to which footnote No. 3 applies.	0601			rte
104	fieldabbrev;	Code name of the field to which footnote No. 4 applies.	0601			
105	fieldabbrev;	Code name of the field to which footnote No. 5 applies.	0601			
106	fieldabbrev;	Code name of the field to which footnote No. 6 applies.	0601			
107	fieldabbrev;	Code name of the field to which footnote No. 7 applies.	0601			
108	fieldabbrev;	Code name of the field to which footnote No. 8 applies.	0601			
109	fieldabbrev;	Code name of the field to which footnote No. 9 applies.	0601			
110	fieldabbrev;	Code name of the field to which footnote No. 10 applies.	0601			
111	footID;	Footnote No. 1 (Mandatory extra details if code **OT** is reported. Optional if **Yes** in footnote column)				Ice strengthened
112	footID;	Footnote No. 2 (Mandatory extra details if code **OT** is reported. Optional if **Yes** in footnote column)				Plastic screen
113	footID;	Footnote No. 3 (Mandatory extra details if code **OT** is reported. Optional if **Yes** in footnote column)				Area 73 – Austral Summer only
114	footID;	Footnote No. 4 (Mandatory extra details if code **OT** is reported. Optional if **Yes** in footnote column)				
115	footID;	Footnote No. 5 (Mandatory extra details if code **OT** is reported. Optional if **Yes** in footnote column)				
116	footID;	Footnote No. 6 (Mandatory extra details if code **OT** is reported. Optional if **Yes** in footnote column)				
117	footID;	Footnote No. 7 (Mandatory extra details if code **OT** is reported. Optional if **Yes** in footnote column)				
118	footID;	Footnote No. 8 (Mandatory extra details if code **OT** is reported. Optional if **Yes** in footnote column)				
119	footID;	Footnote No. 9 (Mandatory extra details if code **OT** is reported. Optional if **Yes** in footnote column)				
120	footID;	Footnote No. 10 (Mandatory extra details if code **OT** is reported. Optional if **Yes** in footnote column)				

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XML exchange format – element descriptions, formats and sequence

Order	Code Name	Header Code Name Explanation	Table	Format	Footnote*	Example
1	country	Recruiting country.	1801		No	
2	version	Metadata format version			No	04
3	prepared	Date of report preparation.		yyyymmdd	No	

Order	Code Name	Record Code Name Explanation	Table	Format	Footnote*	Example
1	nmsID	NMS reference number. Unique reference or identifier assigned by the NMS to the ship (if applicable).			No	
2	name	Ship's name.			No	
3	reg	Country of registration.	1801		No	
4	call	Call sign or WMO Number. Some sea stations are identified by a WMO Number instead of a call sign.			No	
5	IMOn	IMO Number. Unique identifying number assigned by Lloyd's Register to the hull of the ship.			No	
6	vssl	Vessel type.	2201		Yes	
7	vsslP	Vessel digital image.	2203		No	
8	lenvsslD	Length overall of the ship, ignoring bulbous bow.		0.0 m	No	
9	brdvsslD	Moulded breadth. The greatest breadth amidships.		0.0 m	No	
10	frbvsslD	Freeboard. The average height of the upper deck above the maximum Summer load line.		0.0 m	No	
11	drfvsslD	Draught. The average depth of the keel below the maximum Summer load line.		0.0 m	No	
12	chtvsslD	Cargo height. Maximum height above the maximum Summer load line.		0.0 m	No	
13	brdg	Distance of the bridge from the bow.		0.0 m	No	
14	spd	Maximum operating speed of the vessel on normal service.		0 kts	No	
15	rte	Route No.1.	1802		Yes	
16	rte	Route No.2.	1802		Yes	
17	rte	Route No.3.	1802		Yes	
18	rte	Route No.4.	1802		Yes	

19	rte	Route No.5.	1802		Yes	
20	rte	Route No.6.	1802		Yes	
21	rte	Route No.7	1802		Yes	
22	rte	Route No.8.	1802		Yes	
23	rte	Route No.9.	1802		Yes	
24	rte	Route No.10.	1802		Yes	
25	vosR	Recruitment date of the current VOS participation.		yyyymmdd	No	
26	vosD	De-recruitment date of the last VOS participation (report only if the vessel has been re-recruited).		yyyymmdd	No	
27	vclmR	Last VOSClim recruitment date if within the current period of VOS participation.		yyyymmdd	No	
28	vclmD	Last VOSClim de-recruitment date if within the current period of VOS participation.		yyyymmdd	No	
29	vsslM	Type of meteorological reporting ship.	2202		Yes	
30	atm	General observing practice.	0105		Yes	
31	freq	Routine observing frequency.	0602		Yes	
32	prST	Transmission system for sending weather reports.	1601		Yes	
33	logE	Name and version of the electronic logbook software.			No	TurboWin 3.5
34	wwH	Visual wind/wave observing height.		0.0 m	No	
35	anmU	General wind observing practice.	0103		Yes	
36	blc	Baseline check of the automatic weather station.	0203		Yes	
37	awsM	Make and model of the automatic weather station.			No	Vaisala Milos 500
38	awsP	Name and version of the automatic weather station processing software.			No	Milos 500 2.56
39	awsC	Name and version of the automatic weather station data entry/display software.			No	Yourlink 1.03.20
40	barm	Primary barometer type.	0202		Yes	
41	bMS	Make and model of the primary barometer.			No	Vaisala PTB220B
42	brmH	Height of the primary barometer above the maximum Summer load line.		0.0 m	No	
43	brmL	Location of the primary barometer.	0204		Yes	
44	brmU	Pressure units of the primary barometer.			No	hPa
45	brmC	Most recent calibration date of the primary barometer.		yyyymmdd	No	
46	barm	Secondary barometer type.	0202		Yes	
47	bMS	Make and model of the secondary barometer.			No	
48	brmH	Height of the secondary barometer above the maximum Summer load line.		0.0 m	No	
49	brmL	Location of the secondary barometer.	0204		Yes	
50	brmU	Pressure units of the secondary barometer.			No	
51	brmC	Most recent calibration date of the secondary barometer.		yyyymmdd	No	

52	thrm	Dry bulb thermometer type No.1.	2002		Yes	
53	thMS	Make and model of the dry bulb thermometer No.1.			No	Rosemount ST401
54	thmE	Exposure of the dry bulb thermometer No.1.	0801		Yes	
55	thmL	Location of dry bulb thermometer No.1 and hgyrometer No.1.	2001		Yes	
56	thmH	Height of the dry bulb thermometer No.1 and hygrometer No.1 above the maximum Summer load line.		0.0 m	No	
57	tscale	General reporting practice for dry bulb thermometer No.1 and hygrometer No.1.	2003		Yes	
58	thrm	Dry bulb thermometer type No.2.	2002		Yes	
59	thMS	Make and model of the dry bulb thermometer No.2.			No	
60	thmE	Exposure of the dry bulb thermometer No.2.	0801		Yes	
61	thmL	Location of dry bulb thermometer No.2 and hgyrometer No.2.	2001		Yes	
62	thmH	Height of the dry bulb thermometer No.2 and hygrometer No.2 above the maximum Summer load line.		0.0 m	No	
63	tscale	General reporting practice for dry bulb thermometer No.2 and hygrometer No.2.	2003		Yes	
64	hygr	Hygrometer type No.1.	0802		Yes	
65	hgrE	Exposure of the hygrometer No.1.	0801		Yes	
66	hygr	Hygrometer type No.2.	0802		Yes	
67	hgrE	Exposure of the hygrometer No.2.	0801		Yes	
68	sstM	Primary method of obtaining the sea surface temperature.	1901		Yes	
69	sstD	Depth of the primary sea surface temperature observation below the maximum Summer load line.		0.0 m	No	
70	sstM	Secondary method of obtaining the sea surface temperature.	1901		Yes	
71	sstD	Depth of the secondary sea surface temperature observation below the maximum Summer load line.		0.0 m	No	
72	barg	Primary barograph type, or method of determining pressure tendency.	0201		Yes	
73	barg	Secondary barograph type, or method of determining pressure tendency.	0201		Yes	
74	anmT	Primary anemometer type.	0102		Yes	Vaisala WAV151 & WAA151
75	anmM	Make and model of the primary anemometer.			No	
76	anmL	Location of the primary anemometer.	0101		Yes	
77	anDB	Distance of the primary (fixed) anemometer from the bow.		0.0 m	No	
78	anDC	Distance of the primary (fixed) anemometer from the centre line.		0.0 m	No	
79	anSC	Side indicator of the primary (fixed) anemometer from the centre line, if appropriate.	0104		No	
80	anHL	Height of the primary (fixed) anemometer above the maximum Summer load line.		0.0 m	No	
81	anHD	Height of the primary (fixed) anemometer above the deck on which it is installed.		0.0 m	No	
82	anmC	Most recent calibration date of the primary anemometer.		yyyymmdd	No	
83	anmT	Secondary anemometer type.	0102		Yes	

84	anmM	Make and model of the secondary anemometer.			No	
85	anmL	Location of the secondary anemometer.	0101		Yes	
86	anDB	Distance of the secondary (fixed) anemometer from the bow.		0.0 m	No	
87	anDC	Distance of the secondary (fixed) anemometer from the centre line.		0.0 m	No	
88	anSC	Side indicator of the secondary (fixed) anemometer from the centre line, if appropriate.	0104		No	
89	anHL	Height of the secondary (fixed) anemometer above the maximum Summer load line.		0.0 m	No	
90	anHD	Height of the secondary (fixed) anemometer above the deck on which it is installed.		0.0 m	No	
91	anmC	Most recent calibration date of the secondary anemometer.		yyyymmdd	No	
92	othI	Other meteorological/oceanographic instrument No.1.	1501		Yes	
93	othI	Other meteorological/oceanographic instrument No.2.	1501		Yes	
94	othI	Other meteorological/oceanographic instrument No.3.	1501		Yes	
95	othI	Other meteorological/oceanographic instrument No.4.	1501		Yes	
96	othI	Other meteorological/oceanographic instrument No.5.	1501		Yes	
97	othI	Other meteorological/oceanographic instrument No.6.	1501		Yes	
98	chgd	Last date of change to any metadata value.		yyyymmdd	No	

* Provision to report a footnote (Mandatory extra detail if **OT** is selected from a Code Table. Optional if **Yes** in footnote column)

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Metadata Format Version 04

XML File Structure and element sequence

Important changes from version 03 are highlighted

```
<?xml version="1.0"?>
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                        <rte Id="3" footnote=""/>
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                        <rte Id="5" footnote=""/>
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```

<< **New version number, namespace specification at end of annex 3.**

<< **New element added in version 04.**

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            <rte Id="8" footnote=""/>
            <rte Id="9" footnote=""/>
            <rte Id="10" footnote=""/>
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                        <brmC/>
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<< **Footnote added to element prST in version 04.**

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        <thmL footnote=""/>
        <thmH/>
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        <thMS/>
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        <sstD/>
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<barograph Id="2">
        <barg footnote=""/>
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```

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        </instrumentation>
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    </pub47record>
</pub47dataset>
```

namespace specification for Pub47 XML Schema, version 4.0:

xmlns:xsi=”http://www.w3.org/2001/XMLSchema-instance” xsi:noNamespaceSchemaLocation="http://www.bom.gov.au/jcomm/vos/pub47/**v4pub47.xsd**"

WMO-No. 47

Metadata Format Version 04

Code Tables

Table	Code	Description
0101	anmL	Location of the anemometer.
0102	anmT	Anemometer type.
0103	anmU	General wind observing practice.
0104	anSC	Side indicator of the (fixed) anemometer from the centre line, if appropriate.
0105	atm	General observing practice.
0201	barg	Barograph type, or method of determining pressure tendency.
0202	barm	Barometer type.
0203	blc	Baseline check of the automatic weather station.
0204	brmL	Location of the barometer.
0601	fieldabbrev	Code name of the field to which the footnote applies (in order of reporting in pub47).
0602	freq	Routine observing frequency.
0801	hgrE	Exposure of the hygrometer.
	thmE	Exposure of the dry bulb thermometer.
0802	hygr	Hygrometer type.
1501	othI	Other meteorological/oceanographic instrument.
1601	prST	Transmission system for sending weather reports.
1801	rcnty	Recruiting country.
	reg	Country of registration.
1802	rte	Route
1901	sstM	Method of obtaining the sea surface temperature.
2001	thmL	Location of the dry bulb thermometer and hygrometer
2002	thrm	Dry bulb thermometer type.
2003	tscale	General temperature reporting practice.
2201	vssl	Vessel type.
2202	vsslM	Type of meteorological reporting ship.
2203	vsslP	Vessel digital image.

Changes to Code Table entries are denoted by a solid black block to the extreme right.

0101

anmL **Location of the anemometer.**

Code	Description
1	Not fitted.
2	Mainmast.
3	Mainmast port yardarm.
4	Mainmast starboard yardarm.
5	Aft mast.
6	Foremast.
7	Foremast port yardarm.
8	Foremast starboard yardarm.
9	Meteorological mast.
10	Mast on wheelhouse top.
11	Mast on wheelhouse top port yardarm.
12	Mast on wheelhouse top starboard yardarm.
13	Handheld.
OT	Other (specify in footnote).

0102

anmT **Anemometer type.**

Code	Description
AN	Anemograph.
CCV	Cup anemometer and wind vane (combined unit).
SCV	Cup anemometer and wind vane (separate instruments).
HA	Handheld anemometer.
PV	Propeller vane.
SON	Sonic anemometer.
OT	Other (specify in footnote).

0103

anmU **General wind observing practice.**

Code	Description
1	Anemometer, true wind computed.
2	Anemometer, true wind manual.
3	Visual estimates (sea state).
4	Visual estimate (open sea), anemometer (near port).

0104

anSC **Side indicator of the (fixed) anemometer from the centre line, if appropriate.**

Code	Description
P	Port
S	Starboard

0105

atm **General observing practice.**

Code	Description
1	Fully automated.
2	Always supplemented by manual input.
3	Occasionally supplemented by manual input.
4	Unknown.
5	Fully manual (no automation).

0201

barg **Barograph type, or method of determining pressure tendency.**

Code	Description
OS	Open Scale barograph.
OS1	Open Scale barograph with 1 day clock.
OS2	Open Scale barograph with 2 day clock.
OS3	Open Scale barograph with 3 day clock.
OS4	Open Scale barograph with 4 day clock.
OS5	Open Scale barograph with 5 day clock.
OS6	Open Scale barograph with 6 day clock.
OS7	Open Scale barograph with 7 day clock.
OS8	Open Scale barograph with 8 day clock.
OS9	Open Scale barograph with 9 day clock.
SS	Small Scale barograph.
ET	Tendency obtained from an electronic digital barometer.
OT	Other (specify in footnote).

0202

barm **Barometer type.**

Code	Description
AN	Aneroid barometer (issued by the PMO or a NMS).
DA	Digital aneroid barometer (aka Precision Aneroid Barometer).
ELE	Electronic digital barometer (consisting of one or more pressure transducers).
MER	Mercury barometer.
SAN	Ship's aneroid barometer.
OT	Other (specify in footnote).

0203

blc **Baseline check of the automatic weather station.**

Code	Description
1	Yes - periodic baseline check to ensure system operating satisfactorily.
2	No.
3	No automation.

0204

brmL **Location of the barometer.**

Code	Description
PW	Pressurised wheelhouse (closed and not vented to the outside).
WH	Wheelhouse, not pressurised (vented to the outside).
OT	Other (specify in footnote).

0601

fieldabbrev **Code name of the field to which the footnote applies.**

Code	Description
vssl	Vessel type.
rte	Route
vsslM	Type of meteorological reporting ship.
atm	General observing practice.
freq	Routine observing frequency.
prST	Transmission system for sending weather reports
anmU	General wind observing practice.
blc	Baseline check of the automatic weather station.
barm	Barometer type.
brmL	Location of the barometer.
thrm	Dry bulb thermometer type.
thmE	Exposure of the dry bulb thermometer.
thmL	Location of the dry bulb thermometer and hgyrometer
tscale	General temperature reporting practice.
hygr	Hygrometer type.
hgrE	Exposure of the hygrometer.
sstM	Method of obtaining the sea surface temperature.
barg	Barograph type, or method of determining pressure tendency.
anmT	Anemometer type.
anmL	Location of the anemometer.
othI	Other meteorological/oceanographic instrument.

0602

freq **Routine observing frequency.**

Code	Description
OPD	One observation per day (24 hour intervals).
TPD	Two observations per day (12 hour intervals).
FPD	Four observations per day (6 hour intervals).
EPD	Eight observations per day (3 hour intervals).
HLY	Hourly observations.
IRR	Irregular observations.

0801

hgrE **Exposure of the hygrometer.**
thmE **Exposure of the dry bulb thermometer.**

Code	Description
A	Aspirated (Assmann type).
S	Screen (non ventilated, i.e. natural ventilation).
VS	Screen (ventilated, i.e. assisted ventilation).
SN	Ship's screen (property of the ship).
SG	Ship's sling (property of the ship).
US	Unscreened.
W	Whirling or Sling psychrometer.

0802

hygr **Hygrometer type.**

Code	Description
C	Capacitance.
CM	Chilled mirror.
E	Electric.
H	Hair hygrometer.
HG	Hygristor.
P	Psychrometer.
T	Torsion.
OT	Other (specify in footnote).

1501

othl **Other meteorological/oceanographic instrument.**

Code	Description
BAT	Bathythermometer.
BT	Bathythermograph (towed).
FLM	Fluorometer.
LWR	Long wave radiation.
MAX	Maximum thermometer.
MIN	Minimum thermometer.
NTE	Nitrate sensor.
NTT	Nutrient sensor.
P	Pilot balloon equipment.
CO2	pCO2 system.
PLK	Plankton recorder.
PRS	Photosynthetic radiation sensor.
PYG	Pyrogeometer.
R	Radiosonde equipment.
RG	Rain gauge.
RSD	Radar storm and meteorological phenomena detection.
RT	Reversing thermometer.
SKY	Sky camera.
SLM	Solarimeter.
ST	Sea thermograph.
SWR	Short wave radiation.
TSD	Temperature/salinity/depth probe.
TUR	Turbidity sensor.
W	Radiowind or radarwind equipment.
WR	Wave Recorder
XBT	Expendable bathythermograph.
OT	Other (specify in footnote).

1601

prST **Transmission system for sending weather reports.**

	Code	Description
Costs borne by the ship	SVCE	Voice (ship). The observation is sent to a NMS through the telephone network. The communication may use Inmarsat, Iridium, Vsat, VHF
	SMAI	Email (ship). The observation is sent to a NMS through an email. The WMO message is attached to this email. The satellite communication provider may be Inmarsat, Iridium, Vsat
	SWEB	Web (ship). The observation is sent through the Web (example: TurboWeb). The satellite communication provider may be Inmarsat, Iridium, Vsat
Conventional VOS	CT41	Inmarsat-C (FM13, SAC41). Standard procedure used to report observations (FM13 messages) from conventional VOS for many years. Collect call system: the NMS which receives the observations pays the communication costs
	CTX	Inmarsat-C (FM13, other SAC). FM13 messages are sent to a dedicated SAC (other than SAC41) established at one, or more LES. In general, communications are paid by the country who recruited the ship
	CTH	Inmarsat-C (EUHC). Text messages containing compressed data (E-SURFMAR format) are sent ashore through Inmarsat-C to a dedicated SAC and LES. Communications are paid by the country who recruited the ship
	CDS	Inmarsat-C (SEAS). SEAS binary messages sent through Inmarsat-C Data Mode to a dedicated SAC and LES. Communications are paid by NOAA/NWS
Shipboard Automatic Weather Stations	AIS	Automated Identification System (direct or through satellite)
	ARG	Argos system
	TDUP	Cellular (Dial-up). Dial-up communication using terrestrial wireless networks (GSM, GPRS)
	TSMS	Cellular (SMS). SMS sent through terrestrial wireless networks (GSM, GPRS)
	GBS	Globalstar communication system
	GMS	GMS (DCP). Data Collecting Platform of Geostationary Meteorological Satellites
	ISBD	Iridium (SBD). Short Burst Data service of Iridium communication system
	IMAI	Iridium (Email). Email sent through Iridium (e.g. Easymail)
	IDUP	Iridium (Dial-up). Dial-up communication using Iridium
	CDM	Inmarsat-C (Data Mode). Data Mode service of Inmarsat-C used by S-AWS. See above for SEAS which also uses this service for conventional VOS
	CMAI	Inmarsat-C (Email). Email sent through Inmarsat-C
	ORBC	Orbcomm communication system
	VMAI	Vsat (Email). Email sent through Vsat
	VDUP	Vsat (Dial-up). Dial-up communication using Vsat
	DMO	Delayed Mode only
	OT	Other (specify in footnote).

1.
1801 (Source: IS0 3166-1, 2 June 2008)

rcnty **Recruiting country.**
reg **Country of registration.**

Code	Description
AF	AFGHANISTAN
AX	ÅLAND ISLANDS
AL	ALBANIA
DZ	ALGERIA
AS	AMERICAN SAMOA
AD	ANDORRA
AO	ANGOLA
AI	ANGUILLA
AQ	ANTARCTICA
AG	ANTIGUA AND BARBUDA
AR	ARGENTINA
AM	ARMENIA
AW	ARUBA
AU	AUSTRALIA
AT	AUSTRIA
AZ	AZERBAIJAN
BS	BAHAMAS
BH	BAHRAIN
BD	BANGLADESH
BB	BARBADOS
BY	BELARUS
BE	BELGIUM
BZ	BELIZE
BJ	BENIN
BM	BERMUDA
BT	BHUTAN
BO	BOLIVIA
BA	BOSNIA AND HERZEGOVINA
BW	BOTSWANA
BV	BOUVET ISLAND
BR	BRAZIL
IO	BRITISH INDIAN OCEAN TERRITORY
BN	BRUNEI DARUSSALAM
BG	BULGARIA
BF	BURKINA FASO
BI	BURUNDI
KH	CAMBODIA
CM	CAMEROON
CA	CANADA
CV	CAPE VERDE
KY	CAYMAN ISLANDS
CF	CENTRAL AFRICAN REPUBLIC
TD	CHAD
CL	CHILE
CN	CHINA
CX	CHRISTMAS ISLAND
CC	COCOS (KEELING) ISLANDS
CO	COLOMBIA

KM	COMOROS
CG	CONGO
CD	CONGO, THE DEMOCRATIC REPUBLIC OF THE
CK	COOK ISLANDS
CR	COSTA RICA
CI	CÖTE D'IVOIRE
HR	CROATIA
CU	CUBA
CY	CYPRUS
CZ	CZECH REPUBLIC
DK	DENMARK
DJ	DJIBOUTI
DM	DOMINICA
DO	DOMINICAN REPUBLIC
EC	ECUADOR
EG	EGYPT
SV	EL SALVADOR
GQ	EQUATORIAL GUINEA
ER	ERITREA
EE	ESTONIA
ET	ETHIOPIA
FK	FALKLAND ISLANDS (MALVINAS)
FO	FAROE ISLANDS
FJ	FIJI
FI	FINLAND
FR	FRANCE
GF	FRENCH GUIANA
PF	FRENCH POLYNESIA
TF	FRENCH SOUTHERN TERRITORIES
GA	GABON
GM	GAMBIA
GE	GEORGIA
DE	GERMANY
GH	GHANA
GI	GIBRALTAR
GR	GREECE
GL	GREENLAND
GD	GRENADA
GP	GUADELOUPE
GU	GUAM
GT	GUATEMALA
GG	GUERNSEY
GN	GUINEA
GW	GUINEA-BISSAU
GY	GUYANA
HT	HAITI
HM	HEARD ISLAND AND MCDONALD ISLANDS
VA	HOLY SEE (VATICAN CITY STATE)
HN	HONDURAS
HK	HONG KONG
HU	HUNGARY
IS	ICELAND
IN	INDIA
ID	INDONESIA
IR	IRAN, ISLAMIC REPUBLIC OF

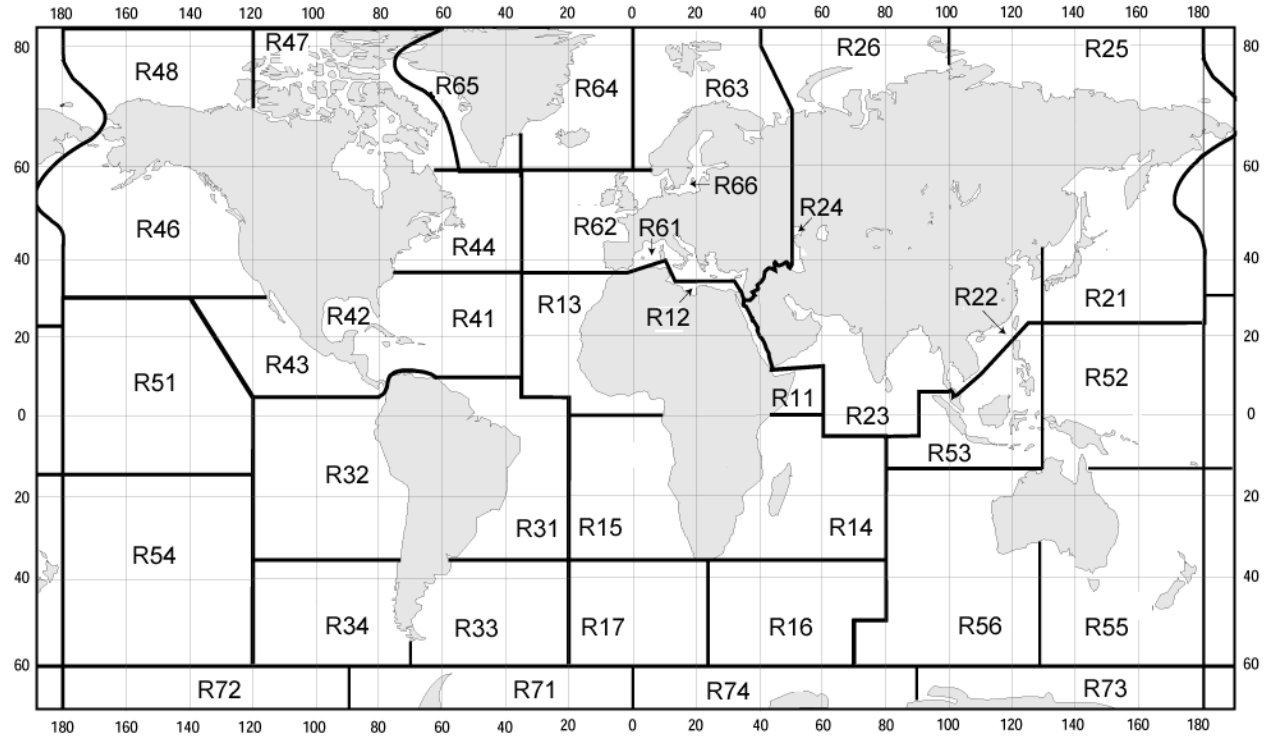
IQ	IRAQ
IE	IRELAND
IM	ISLE OF MAN
IL	ISRAEL
IT	ITALY
JM	JAMAICA
JP	JAPAN
JE	JERSEY
JO	JORDAN
KZ	KAZAKHSTAN
KE	KENYA
KI	KIRIBATI
KP	KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF
KR	KOREA, REPUBLIC OF
KW	KUWAIT
KG	KYRGYZSTAN
LA	LAO PEOPLE'S DEMOCRATIC REPUBLIC
LV	LATVIA
LB	LEBANON
LS	LESOTHO
LR	LIBERIA
LY	LIBYAN ARAB JAMAHIRIYA
LI	LIECHTENSTEIN
LT	LITHUANIA
LU	LUXEMBOURG
MO	MACAO
MK	MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF
MG	MADAGASCAR
MW	MALAWI
MY	MALAYSIA
MV	MALDIVES
ML	MALI
MT	MALTA
MH	MARSHALL ISLANDS
MQ	MARTINIQUE
MR	MAURITANIA
MU	MAURITIUS
YT	MAYOTTE
MX	MEXICO
FM	MICRONESIA, FEDERATED STATES OF
MD	MOLDOVA, REPUBLIC OF
MC	MONACO
MN	MONGOLIA
ME	MONTENEGRO
MS	MONTSERRAT
MA	MOROCCO
MZ	MOZAMBIQUE
MM	MYANMAR
NA	NAMIBIA
NR	NAURU
NP	NEPAL
NL	NETHERLANDS
AN	NETHERLANDS ANTILLES
NC	NEW CALEDONIA
NZ	NEW ZEALAND

NI	NICARAGUA
NE	NIGER
NG	NIGERIA
NU	NIUE
NF	NORFOLK ISLAND
MP	NORTHERN MARIANA ISLANDS
NO	NORWAY
OM	OMAN
PK	PAKISTAN
PW	PALAU
PS	PALESTINIAN TERRITORY, OCCUPIED
PA	PANAMA
PG	PAPUA NEW GUINEA
PY	PARAGUAY
PE	PERU
PH	PHILIPPINES
PN	PITCAIRN
PL	POLAND
PT	PORTUGAL
PR	PUERTO RICO
QA	QATAR
RE	REUNION
RO	ROMANIA
RU	RUSSIAN FEDERATION
RW	RWANDA
BL	SAINT BARTHÉLEMY
SH	SAINT HELENA
KN	SAINT KITTS AND NEVIS
LC	SAINT LUCIA
MF	SAINT MARTIN
PM	SAINT PIERRE AND MIQUELON
VC	SAINT VINCENT AND THE GRENADINES
WS	SAMOA
SM	SAN MARINO
ST	SAO TOME AND PRINCIPE
SA	SAUDI ARABIA
SN	SENEGAL
RS	SERBIA
SC	SEYCHELLES
SL	SIERRA LEONE
SG	SINGAPORE
SK	SLOVAKIA
SI	SLOVENIA
SB	SOLOMON ISLANDS
SO	SOMALIA
ZA	SOUTH AFRICA
GS	SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS
ES	SPAIN
LK	SRI LANKA
SD	SUDAN
SR	SURINAME
SJ	SVALBARD AND JAN MAYEN
SZ	SWAZILAND
SE	SWEDEN
CH	SWITZERLAND

SY	SYRIAN ARAB REPUBLIC
TW	TAIWAN, PROVINCE OF CHINA
TJ	TAJIKISTAN
TZ	TANZANIA, UNITED REPUBLIC OF
TH	THAILAND
TL	TIMOR-LESTE
TG	TOGO
TK	TOKELAU
TO	TONGA
TT	TRINIDAD AND TOBAGO
TN	TUNISIA
TR	TURKEY
TM	TURKMENISTAN
TC	TURKS AND CAICOS ISLANDS
TV	TUVALU
UG	UGANDA
UA	UKRAINE
AE	UNITED ARAB EMIRATES
GB	UNITED KINGDOM
US	UNITED STATES
UM	UNITED STATES MINOR OUTLYING ISLANDS
UY	URUGUAY
UZ	UZBEKISTAN
VU	VANUATU
VE	VENEZUELA
VN	VIET NAM
VG	VIRGIN ISLANDS, BRITISH
VI	VIRGIN ISLANDS, U.S.
WF	WALLIS AND FUTUNA
EH	WESTERN SAHARA
YE	YEMEN
ZM	ZAMBIA
ZW	ZIMBABWE

1802

rte **Route**

Code	Description/marine area
	
R90	More than 10 separate marine areas (see Note 2).
R91	Inland sea or river (see Note 3).
R92	Variable or no fixed route (see Note 2).

Note 1 A maximum of 10 marine areas visited by the ship can be reported individually, otherwise use R90.

Note 2 For R90 or R92, specify the most visited marine area(s) by the ship in the footnote if this can be determined, e.g. “most visited - R62, R41”.

Note 3 For R91, specify the location in the footnote, e.g. “Black Sea”, “Mackenzie River”.

Note 4 Use footnotes as necessary to provide more detail, e.g. “coastal service”, “fixed location”.

Note 5 If using the semi-colon delimited metadata exchange format, include the relevant marine area in the footnote if more than one **rte** is defined, e.g. “R73 – Austral Summer only”, otherwise format the footnote as shown in the examples for Notes 2 – 4.

1901

sstM **Method of obtaining the sea surface temperature.**

Code	Description
BTT	Bait tanks thermometer.
BU	Bucket thermometer.
C	Condensor Intake on Steam Ships, or Engine Cooling System Inlet on Motor Ships.
HC	Hull contact sensor.
HT	"Through Hull" sensor.
RAD	Radiation thermometer.
TT	Trailing thermistor.
OT	Other (specify in footnote).

2001

thmL **Location of the dry bulb thermometer and hgyrometer**

Code	Description
1	Bridge wing port.
2	Bridge wing starboard.
3	Bridge wing both sides.
4	Bridge wing windward side.
5	Wheelhouse top port.
6	Wheelhouse top starboard.
7	Wheelhouse top both.
8	Wheelhouse top center.
9	Wheelhouse top windward side.
10	Mainmast.
11	Foremast.
12	Mast on wheelhouse top.
13	Main deck port side.
14	Main deck starboard side.
15	Main deck both sides.
OT	Other (specify in footnote).

2002

thrm **Dry bulb thermometer type.**

Code	Description
ALC	Alcohol thermometer.
MER	Dry bulb mercury thermometer.
ELE	Electric (resistance) thermometer.

2003

tscale **General temperature reporting practice.**

Code	Description
1	Centigrade to tenths.
2	Half degrees centigrade.
3	Whole degree centigrade.
4	Whole degree fahrenheit.
5	Fahrenheit to tenths.
6	Dry bulb centigrade, wet bulb fahrenheit.
7	Dry bulb fahrenheit, wet bulb centigrade.
OT	Other combinations or scale (specify in footnote).

2201

vssl **Vessel type.**

Code	Description
BA	Barges, including crane barges and tank barges.
BC	Bulk Carriers, including Ore/Bulk/Oil (OBO) carriers and Ore/Oil carriers.
CA	Cable ships.
CG	Coastguard cutters, patrol ships and launches.
CS	Container ships, including open and closed container ships and refrigerated container ships.
DR	Dredgers including bucket, hopper, grab and suction dredgers.
FE	Passenger ferries (carrying passengers only).
FP	Floating Production and Storage Units.
FV	Fishing Vessels including purse seiners, long liners etc., but excluding trawlers.
GC	General Cargo ships with one or more holds.
GT	Liquefied gas carriers/tankers including LNG and LPG carriers.
IC	Icebreaking vessels (dedicated vessel). If the vessel fits in another category and is ice strengthened then include 'ice strengthened' as a footnote.
LC	Livestock Carrier (dedicated ship for the carriage of livestock).
LT	Liquid tankers including oil product tankers, chemical tankers and crude oil tankers (including VLCC's and ULCC's).
LV	Light vessels.
MI	Mobile installations, including mobile offshore drill ships, jack-up rigs, semi-submersibles.
MS	Military ships.
OW	Ocean Weather Ships (dedicated weather ship).
PI	Pipe Layers.
PS	Passenger ships and Cruise liners.
RF	Ro Ro ferries (carrying passengers and laden vehicles).
RR	Ro Ro cargo ships for carriage of road and/or rail vehicles and cargo, including containerised cargo.
RS	Refrigerated cargo ships including banana ships.
RV	Research Vessels, including oceanographic, meteorological and hydrographic research ships and seismographic research ships.
SA	Large sailing vessels, including sail training vessels.
SV	Support vessels including offshore support vessels, offshore supply vessels, stand-by vessels, pipe carriers, anchor handling vessels, buoy tenders (including coastguard vessels engaged solely on buoy tending duties), diving support vessels, etc.
TR	Trawler fishing vessels.
TU	Tugs, including fire-fighting tugs, salvage tugs, pusher tugs, pilot vessels, tenders etc.
VC	Vehicle Carriers: dedicated multi deck ships for the carriage of new unladen road vehicles.
YA	Yachts and pleasure craft.
OT	Other (specify in footnote).

2202

vsslM **Type of meteorological reporting ship.**

Code	Description
10	Selected ***Definition:*** *A mobile ship station equipped with sufficient certified meteorological instruments for making observations, transmits regular weather reports and enters the observations in a meteorological logbook. A Selected ship should have at least a barometer, a thermometer to measure SST, a psychrometer (for AT and humidity), a barograph and possibly an anemometer.*
15	Selected (AWS) ***Definition:*** *an AWS system equipped with certified meteorological instruments to measure at least at least air pressure, pressure change, temperature and humidity. Optional sensors would include wind speed and direction and sea temperature measurement. The AWS may or may not have the facility for manual input of the visual elements, and transmit reports at least three hourly or more frequently. The AWS should have the facility to log the data.*
30	VOSClim – VOS Climate ***Definition:*** *A mobile ship station equipped with sufficient certified meteorological instruments for making observations, transmits regular and timely weather reports, enters the observations in an IMMT compliant electronic logbook including the extra VOSClim delayed-mode groups, and has a proven record of providing high quality observations. The ship should have at least a barometer, a thermometer to measure SST, a psychrometer (for AT and humidity), a barograph and possibly an anemometer. The ship should be inspected at less that six month intervals.*
35	VOSClim (AWS) – VOS Climate (AWS) ***Definition*** *An AWS system equipped with certified meteorological instruments to measure at least air pressure, pressure change, temperature and humidity. Optional sensors would include wind speed and direction and sea temperature measurement. The AWS may have a facility for manual input of the visual elements, and transmit reports at least three hourly or more frequently. The AWS must have the facility to log the data including the additional IMMT delayed-mode VOSClim groups. The ship should be inspected at less that six month intervals.*
40	Supplementary ***Definition:*** *A mobile ship station equipped with a limited number of certified meteorological instruments for making observations. It transmits regular weather reports and enters the observations in a meteorological logbook.*
45	Supplementary (AWS) ***Definition:*** *an AWS system equipped with a limited number of certified meteorological instruments that reports regularly. The AWS should at least measure air pressure.*
70	Auxiliary ***Definition:*** *A mobile ship station normally without certified meteorological instruments, which transmits in a reduced code form or in plain language, either on a routine basis or on request, in certain areas and under certain conditions.*
75	Auxiliary (AWS) ***Definition:*** *an AWS system using non-certified meteorological instruments and reporting regularly. The AWS should at least measure air pressure.*
OT	Other (specify in footnote).

2203

vsslP **Vessel digital image.**

Code	Description
AV	Available in separate digital file (see Note 2).
NA	Not available.
PA	Photo available but not yet scanned.

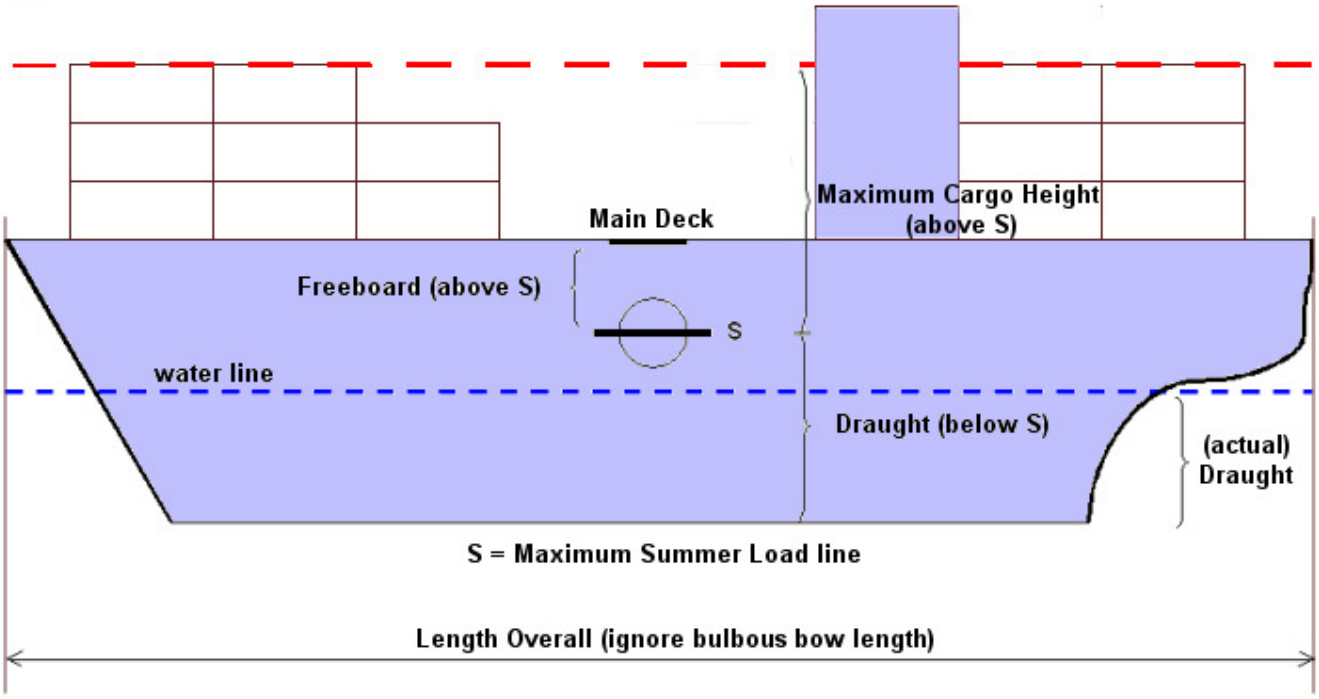
Note 1 See Annex 6 for the recommended VOS and VOSClim minimum suite of digital images and drawings

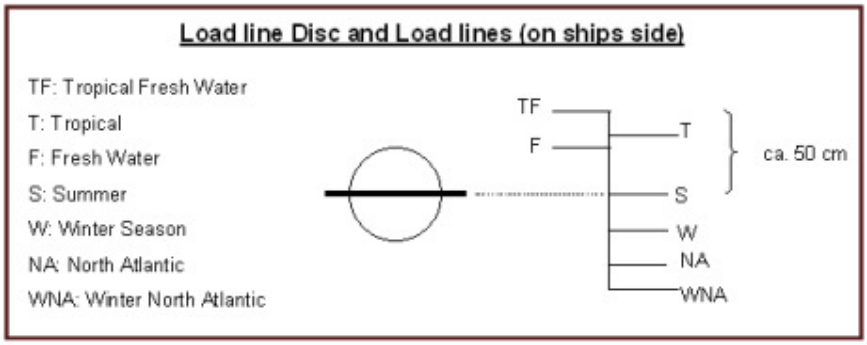
Note 2 Digital image file-naming convention:
“00” & “IMO Number” & “image_description” & “date”, where the date format shall be YYYYMMDD, e.g. 007417868aerial_starboard_profile_from_stern20030717.jpg

WMO-No. 47

Metadata Format Version 04

Ship's Layout Diagram





WMO-No. 47

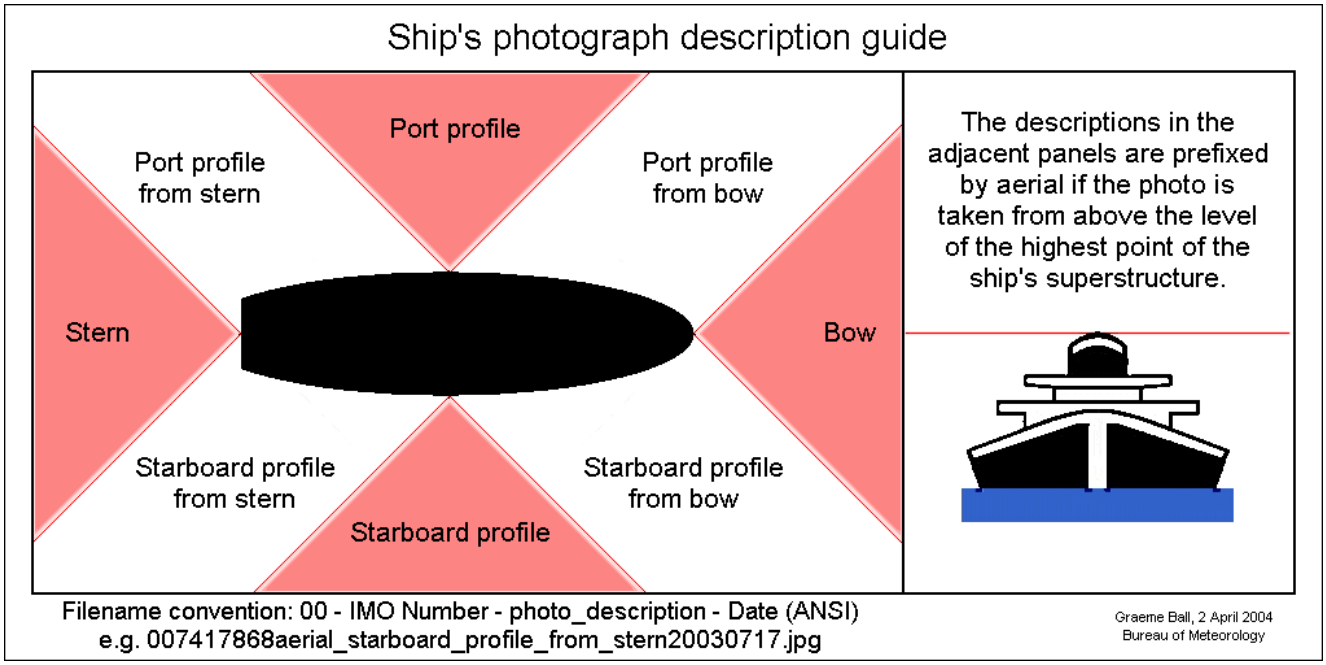
Metadata Format Version 04

Vessel Digital Images (Code Table 2203)

1. Recommended minimum suite of digital images/photographs

Description	VOSClim	Sel / Supp / Aux
Exposure of screen(s) showing the location of any adjacent obstructions, over-hangings, etc	Yes	Yes
Exposure of anemometer (if applicable)	Yes	Yes
Exposure of other meteorological instruments	Yes	Optional
Ship's profile – quayside or at sea if possible	Yes	Yes
Deck cargo stowage (if applicable)	Yes	Optional

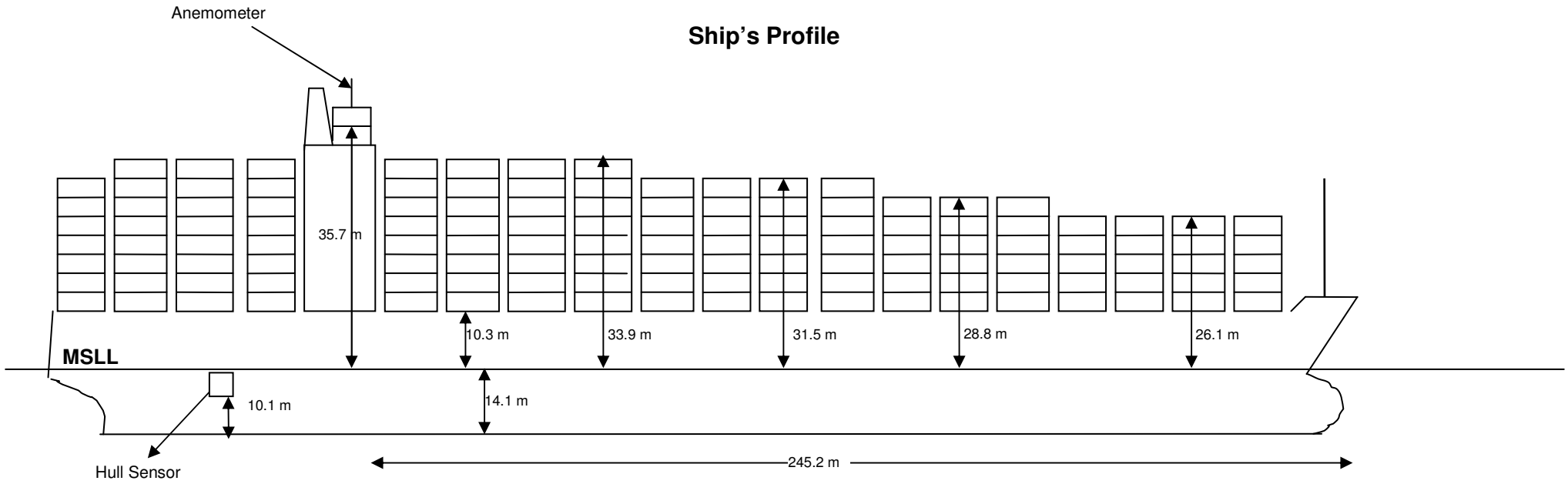
2. Suggested descriptions of profile photographs

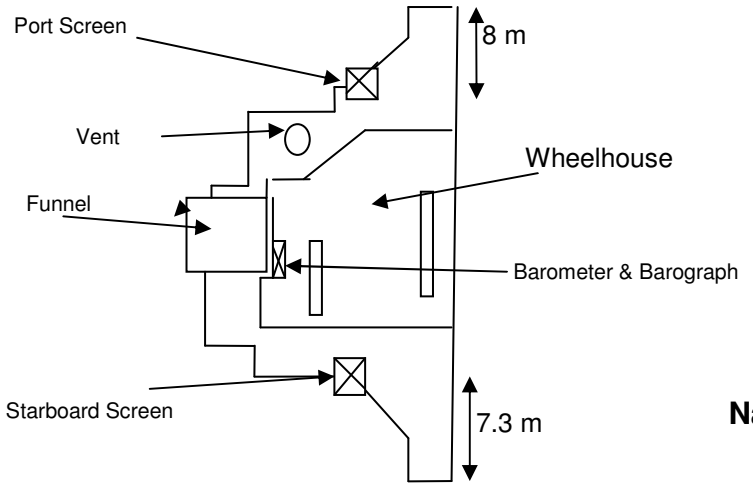


3. Suggested drawings/sketches

Description	VOSClim	Sel / Supp / Aux
Ship's general profile – basic sketch showing instrument location and dimensions	Yes	Optional
Navigational Bridge Deck/wheelhouse plan – basic sketch showing instrument location	Yes	Optional
General Arrangement Plan or drawing	Yes	Optional

4. Sample sketches





Navigating Bridge Deck

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