International Civil Aviation Organization

SEVENTEENTH MEETING OF THE METEOROLOGY SUB-GROUP (MET SG/17) OF APANPIRG

Bangkok, Thailand, 13 – 16 May 2013

Agenda Item 7: Meteorological advisories, warnings and hazards

7.2) implementation of advisories and warnings

CHANGES TO THE AUSTRALIAN SIGMET FORMAT

(Presented by Australia)

SUMMARY

This paper presents an overview of the changes to the Australian SIGMET format that will become effective from 0000UTC on 30 May 2013.

1. Introduction

1.1 The Australian Bureau of Meteorology (Bureau) will be introducing changes to its SIGMET format at 0000 UTC on 30 May 2013. Most of these changes are being made to align the Bureau's SIGMET service with the International Civil Aviation Organization's (ICAO) standards and recommended practices. These changes will simplify both the ingestion of SIGMETs into flight planning systems, and the training of international pilots.

1.2 Changes will be made to the:

- description of vertical extent for levels at and below 10 000 feet;
- format of the SIGMET sequence number; and
- format of the last line (remark line) of the SIGMET.

1.3 Additionally, the Bureau will issue a single SIGMET per phenomena, per Flight Information Region (FIR), rather than the current practice whereby SIGMETS are issued per meteorological watch region by the office responsible for that region.

2. Vertical Extent

2.1 Australian SIGMETs currently give vertical extent in hundreds of feet using:

- the letter A (altitude) for levels up to and including 10 000 feet (e.g. A100), and
- the letters FL (flight level) for levels above 10 000 feet (e.g. FL110).

2.2 From 30 May 2013, vertical extent will be given in:

- feet for levels below 10 000 feet (e.g. 9000FT), and
- hundreds of feet for levels at and above 10 000 feet (e.g. FL100).

Only FL will be used when describing a phenomenon which extends over the transition level (10 000 feet), as shown in the following example:

YMMM SIGMET C01 VALID 130200/130600 YPDM-
YMMM MELBOURNE FIR SEV TURB FCST WI YIDK - YWLA - YHKT - KALUG
FL080/150 STNR NC
RMK: ME NEW

(Note that the first point of a polygon is not repeated when describing the horizontal extent of an event.)

3. Sequence Number

3.1 Australian SIGMETs currently use a four-character sequence number group consisting of a two-letter location designator followed by a two-digit (sequence) number, e.g. the sequence number group AD01 describes the first SIGMET issued by the Bureau's Adelaide meteorological watch office on the given UTC day. Two systems of location designators are currently used; one for low-level phenomena and another for high-level phenomena.

3.2 From 30 May 2013, a new three-character sequence number will be introduced and a two-letter location designator will be provided in a remark (RMK) line of the end of the SIGMET.

3.3 The position in the SIGMET message of the new sequence number will remain the same (the third group in the first line), however the format will change to **ANN** where:

- **A** will be a single alpha character that will be assigned to the SIGMET event (e.g. severe icing) and will be used for any subsequent SIGMETs issued for that event within the FIR. There will not be two Australian SIGMETS current with the same sequence alpha character, even if they refer to the same event which is occurring across the two FIRs, i.e. if the event is straddling the YBBB/YMMM boundary, the two respective SIGMETs will have different letters for the same event. The first event for the day (since 0001 UTC) will be given the first unassigned alpha character, e.g. A, the second event B and so on through to Z. Any event (within the day) after Z will be given the first unassigned character.

- **NN** will be a two-digit number providing a sequential count of the number of SIGMETs issued for the event within the FIR since the last 0001 UTC.

3.4 When a SIGMET persists into the following UTC day, its letter character will remain the same, but the sequential count will be reset to 01, as shown in the following examples:

YMMM SIGMET D02 VALID 122230/130230 YMHF-
YMMM MELBOURNE FIR SEV TURB FCST WI S4015 E14430 - S4015 E14830 - S4400 E 14830 - S4400 E14500 FL120/160 STNR NC
RMK: ME REV D01 121830/122230

YMMM SIGMET D01 VALID 130230/130630 YMHF-
YMMM MELBOURNE FIR SEV TURB FCST WI S4015 E14420 - S4015 E14830 - S4400 E 14830 - S4400 E14500 FL120/160 STNR NC
RMK: ME REV D02 122230/130230

4. Remark Line

4.1 The Bureau provides information additional to the ICAO specification in the last line of the SIGMET to assist users within Australia in processing the message.

e.g. STS: REV SIGMET BN05 202000/210000

4.2 From 30 May 2013, the format of this line will be changed to **RMK: LocationDesignator Status Reference**, as shown in the following example:

YMMM SIGMET C02 VALID 101200/101600 YSRF-
YMMM MELBOURNE FIR SEV TURB FCST WI YSWG – YCBB – YTRE – YMCO SFC/FL120 MOV N 20KT WKN
RMK: ME REV C01 100800/101200 SEE ALSO YBBB D02

4.3 **RMK** (remarks) is used to indicate that the information that follows is not part of the ICAO specification and will be removed prior to international distribution of the SIGMET (as is the case with TAF and METAR/SPECI).

4.4 **LocationDesignator** (e.g. ME) provides a quick reference on the location of the phenomenon. Two systems of location designators are currently used: one for low-level phenomena and another for high-level phenomena. From 30 May 2013, only one system of location designators will be used, as shown in Figure 1:

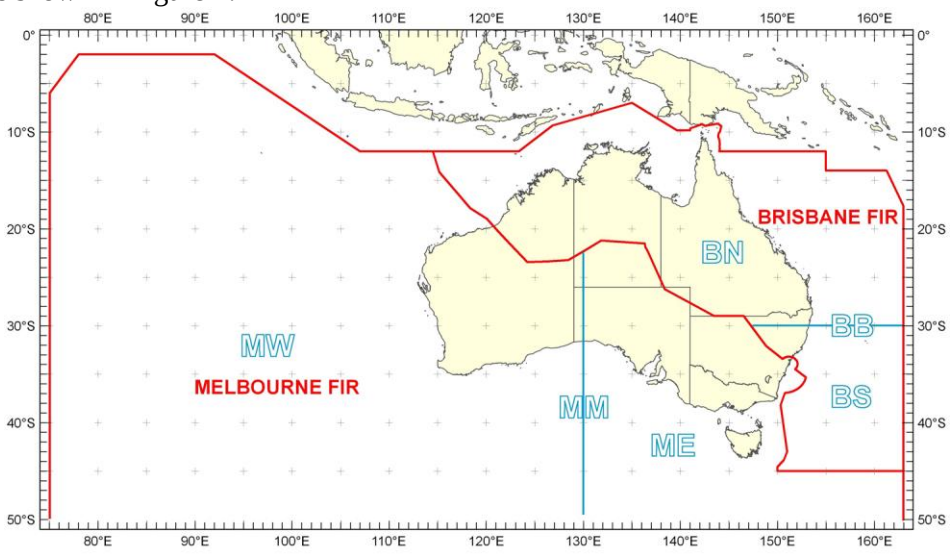

Figure 1: Location designators for use in Australian SIGMET

Note: ***MW*** *will be used for events in the Melbourne FIR to the west of 130E*
ME *will be used for events in the Melbourne FIR east of 130E*
MM *will be used for events in the Melbourne FIR that cross 130E*
BN *will be used for events in the Brisbane FIR north of 30S*
BS *will be used for events in the Brisbane FIR south of 30S*
BB *will be used for events in the Brisbane FIR that cross 30S.*

4.5 **Status** information (e.g. REV C01 100800/101200) is provided using the following terminology:

- **NEW** (e.g. RMK: MW **NEW**) to indicate either that the SIGMET is for a new phenomenon in the FIR, or it is a SIGMET being issued to correct a previously issued SIGMET that was in error (and has been cancelled).

- **REV** (e.g. RMK: MW **REV** B01 100100/100500) is used to indicate that the SIGMET reviews (supersedes) an existing SIGMET (either NEW or REV) within the FIR. REV is followed by the sequence number and validity of the SIGMET being reviewed.

- **CNL** (e.g. RMK: MW **CNL** B01) is used when a SIGMET is being cancelled. CNL is followed by the sequence number of the SIGMET being cancelled.

4.6 **Reference** (e.g. SEE ALSO YBBB D01) will be included when there is a SIGMET current for the same event in the adjoining Australian FIR (i.e. when the weather event straddles the YMMM/YBBB boundary), e.g. RMK: ME REV C01 100800/101200 SEE ALSO YBBB D01

5. Examples

5.1 The following examples show the new format (with the changes given in red). The first SIGMET is for a turbulence event which is initially confined to the Brisbane FIR (YBBB). The second and third SIGMETs are subsequently issued because the extent of the turbulence is expected to move south and straddle the boundary of YBBB/YMMM. The fourth and fifth SIGMETs cancel C02 and D01 as the intensity of the turbulence has weakened and hence no longer requires a SIGMET.

YBBB SIGMET C01 VALID 100800/101200 YBRF-
YBBB BRISBANE FIR SEV TURB FCST WI YMNY – YJAK – YEUO – YTHY SFC/9000FT MOV S 15KT NC
RMK: BN NEW

YBBB SIGMET C02 VALID 101200/101600 YBRF-
YBBB BRISBANE FIR SEV TURB FCST WI YARY – YTIB – YWAG – YEMG 2000/9000FT MOV S 15KT WKN
RMK: BN REV C01 100800/101200 SEE ALSO YMMM D01

YMMM SIGMET D01 VALID 101200/101600 YSRF-
YMMM MELBOURNE FIR SEV TURB FCST WI YARY – YTIB – YWAG - YEMG
FL020/100 MOV S 15KT WKN
RMK: ME NEW SEE ALSO YBBB C02

YBBB SIGMET C03 VALID 101500/101600 YBRF-
YBBB BRISBANE FIR CNL SIGMET C02 101200/101600
RMK: BN CNL C02

YMMM SIGMET D02 VALID 101500/101600 YSRF-
YMMM MELBOURNE FIR CNL SIGMET D01 101200/101600
RMK: ME CNL D01

Note that when a SIGMET event straddles the YBBB/YMMM FIR boundary, the alpha characters in the sequence number groups will be different (C for YBBB, and D for YMMM in the examples above) but the description of the horizontal extent will be the same.

6. Summary

6.1 These SIGMET format changes are summarised in the table below:

CURRENT	FROM 30 MAY 2013
Describing vertical extent	
A (altitude) for levels up to and including 10 000 feet, e.g. A100	**FT** (feet) for levels below 10 000 feet, e.g. 9000FT
FL (flight level) for levels above 10 000 feet, e.g. FL110	**FL** for levels at and above 10 000 feet, e.g. FL100
Note: when the vertical extent crosses the transition level, only FL is used, e.g. FL020/110	
Sequence number	
Four characters consisting of a two-letter location designator followed by a two-digit number, e.g. SY01	**Three characters** consisting of a single letter event designator followed by a two-digit number, e.g. C01
Last line of SIGMET	
e.g. STS: REV SIGMET SY01 191900/200100	e.g. RMK: BS REV A01 191900/200100

6.2 In addition to these format changes, from 30 May 2013 there will only be a single SIGMET current for a weather event per FIR. This compares with the current practice whereby each of the Bureau's meteorological watch offices issue SIGMET only for their region of responsibility, often resulting in multiple SIGMETs being current within an FIR for one weather event.

6.3 Under the new procedures, when a weather event straddles the boundaries of adjoining meteorological watch offices, the offices will collaborate so that only a single SIGMET per FIR will be current for the event. However, note that when the event straddles the YBBB/YMMM FIR boundary, there will be a SIGMET current in each FIR for the event.

7. Action by the Meeting

7.1 The meeting is invited to note the information contained in this paper.

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