First Meeting of the MID OPMET Bulletin Management Group

(MID OPMET BMG/1)

(Cairo, Egypt 18 December 2011)

EXECUTIVE SUMMARY

1. INTRODUCTION

1.1 The first meeting of the MID OPMET Bulletin Management Group (MID OPMET BMG/1) was held in the MID ICAO Regional Office, Cairo, Egypt on 18 December 2011. The meeting was attended by 12 participants from 4 States (Austria, Egypt, Kuwait, and Saudi Arabia) and ICAO as provided in **Appendix A**. The meeting was conducted in English in an informal manner and guided by the Secretariat, Mr. Christopher Keohan of the EUR/NAT ICAO Regional Office, Paris. The Secretariat briefly opened the meeting recalling that the MIDANPIRG/12 meeting requested this group be activated and proposed a meeting be convened (MIDANPIRG/12 Conclusion 12/69 refers). He noted that the strategic location of the MID Region for EUR-ASIA, NAM-ASIA, AFI-MID and AFI-ASIA flights which made it essential to implement standards with reference to the creation and exchange of OPMET data. He emphasized that timely, accurate OPMET data was used by operators in flight planning for destination airports in the MID Region and used as alternates for long haul flights resulting in less time and fuel required and thus reducing carbon emissions. The Secretariat also thanked the ICAO MID Regional Office for assisting in preparing for the meeting as well as the assistance by the Regional OPMET Centre (ROC) Vienna and wished everyone a successful meeting. Outcomes of the meeting would be reported to the MET SG/3 meeting being held from 19-21 December 2011 at the ICAO MID Regional Office.

1.2 In general, the meeting reviewed documentation associated with OPMET exchange such as the MID Air Navigation Plan Volume II (FASID) Part VI (MET) and MID SIGMET Guide; considered the development of a Regional OPMET Bulletin Exchange (ROBEX) Handbook including procedures and processes for the monitoring, management, quality control and backing-up of MID OPMET bulletins; and considered the establishment of Regional OPMET Data Banks and/or Regional OPMET Centres to improve the efficiency of inter-regional exchange and transmission of OPMET information to SADIS.

2. DISCUSSIONS

2.1 The meeting was invited to review the Terms of Reference (ToR) of the MID OPMET Bulletin Management Group (BMG) as provided in **Appendix B** to recall the duties of the group. No proposal to the ToR were provided at the meeting, but would be reviewed again at the MID MET SG/3 meeting.

OPMET availability, regularity, and timeliness

2.2 The BMG/1 meeting recalled the MET SG/2 initiative to improve the quality, availability, timeliness and regularity of OPMET data in the MID region was ongoing (draft Conclusions 2/7 and 2/8 refer; MIDANPIRG Conclusions 12/67 and 12/68 refer) noting that State letters have been issued on 14 December 2010 to improve the quality and availability of OPMET data in the MID Region by

- implementing ICAO Annex 3 provisions relating to OPMET data, including TAF;

- investigating the reasons for the absence of SIGMET messages and reconsider their procedures for SIGMET generation and transmission;

- considering the need for establishing local quality control and format verification procedures for OPMET data; and

- undertaking all efforts to reduce the errors in OPMET data significantly, the aim of which should be less than 5% of all issued OPMET data being incorrect.

DMG Monitoring & Outstanding Deficiencies

2.3 To increase the efficiency in inter-regional OPMET exchange, the meeting noted that designating an OPMET Centre in the MID Region for the collection and exchange of OPMET data to the EUR Region was most desirable. Coordination on routing changes would greatly increase the efficiency of OPMET exchange between the two Regions. Furthermore, efficiency would be gained if OPMET Centres were designated for inter-regional OPMET exchange to Asia and for Africa. The meeting agreed to propose a small ad-hoc group of the BMG coordinate with States present and not present in the BMG/1 meeting on establishing Regional OPMET Centre(s). The meeting also noted that bulletins in the MID Region (Bahrain, Beirut, Jeddah, Tehran and Cairo) were contained in the Asia/Pacific Regional OPMET Exchange (ROBEX) Handbook located at the following website http://www.bangkok.icao.int/edocs/robex2004_e12.pdf. One adjustment was provided by Egypt (update to SAEG31 bulletin to only include Cairo and placing the other bulletins in Egypt in SAEG32) that would be forwarded to the APAC OPMET/M TF for consideration. Likewise, a set of bulletins could be developed for exchange from the MID Region to ROC Vienna, which would be simpler in that only one send address would be needed (ROC Vienna). This information could be included in the EUR OPMET Data Management Handbook (EUR Doc 018) located at the following website http://www.paris.icao.int/documents_open/files.php?subcategory_id=87. Also, to improve coordination amongst the regions, the meeting (particularly those who were interested in becoming a Regional OPMET Centre) was invited to attend at least one of the other regions OPMET related meetings. The EUR Data Management Group (DMG) meetings in 2012 include DMG/4 from 13 – 15 March 2012 in Bucharest; DMG/5 from 19-21 June 2012 in Vienna; DMG/6 in October 2012 in Toulouse. The APAC OPMET/M TF/10 meeting would meet from 20-22 March 2012 in Bangkok. The list of participants of the BMG/1 would be informed by ICAO of forthcoming events. This list would be updated by States not present through coordination of the ad-hoc group. Given the above, the following proposed Draft Decision would be considered at the MET SG/3 meeting.

DRAFT DECISION 3/XX — ESTABLISHMENT OF AN AD-HOC GROUP TO CONSIDER THE DESIGNATION OF MID OPMET CENTRES FOR INTER-REGIONAL EXCHANGE OF OPMET DATA

That, an ad-hoc group consisting of Saudi Arabia, Kuwait and Egypt be established to coordinate and consider the establishment of Regional OPMET Centres in the MID Region in order to efficiently exchange OPMET data with other regions (EUR – coordination with ROC Vienna; APAC – coordination with RODB Bangkok; AFI – coordination with appropriate ROC).

Note that participation in the other regional OPMET related meetings was strongly encouraged and would be coordinated by ICAO.

2.4 The meeting was informed of incorrect bulletin addressing to Vienna (inter-regional OPMET exchange centre with the Middle East) that was identified through EUR Data Management Group (DMG) monitoring during the period from 28 October to 2 November 2011. Monitoring revealed that bulletins FTSY31 OSDI, FTYE21 OYSN and SALB31 OLBA should be sent to LOZZMMID (Vienna ROC) and reproduced in **Appendix C**. Multiple bulletins were also identified from the MID Region that were provided in **Appendix D** to this summary in order for States to consider deleting multiple bulletins or if used only on a bilateral basis deleting the entry for dissemination to Vienna.

2.5 The meeting noted the results of EUR DMG monitoring OPMET data routinely (twice per year at the EUR regional OPMET centres) against the SADIS User Guide Annex 1 OPMET user requirements (FASID Table MET 2A for each region is extracted from this global data base) which revealed the following errors:

- METAR requested, but not received for HEAZ, HEOW, OEJB (received only for 6 out of 16 exercises), ORNI
- FC requested but not received for OEYN (but FT is received – ICAO may need to update this table)
- FT requested but not received for HEAZ, HEOW, OIAA (received only for 5 out of 16 exercises), ORNI, ORSU, OYAD, OYRN, OYSY, OYTZ

2.6 Egypt informed the meeting that HEAZ and HEOW were used for military purposes and that OPMET data was not provided for these non-AOP aerodromes. As it is the States' prerogative whether to issue OPMET data for non-AOP aerodromes, the meeting noted that the State should inform ICAO to remove aerodromes from the SADIS User Guide Annex 1 if there was no intention of providing OPMET data for a non-AOP aerodrome. The SADIS User Guide Annex 1, which is the global OPMET database including AOP and non-AOP aerodromes, would be updated accordingly. Saudi Arabia informed the meeting that FC type TAF was not issued for OEYN and that the database should be updated accordingly. The Secretariat expected notification by email or letter from Egypt and Saudi Arabia of the information provided above for forwarding to the SADIS Secretariat in order to update the global OPMET database (SADIS SUG Annex 1). The above bullets were adapted with this information and provided in **Appendix E**.

2.7 The BMG/1 meeting noted OPMET data in the region that did not meet user requirements. In particular, 30-hour TAF requirements for 3 aerodromes in Iran (OIFM, OISS, OITT), 1 aerodrome in Jordan (OJAI) (not listed in list of deficiencies), and 1 aerodrome in Syria (OSDI) as well as 24-hour TAF for 2 aerodromes in Syria (OSAP and OSLK) had not been implemented as of the MET SG/2 meeting. Members from Syria, Jordan and Iran were not present and updates to implementation therefore not provided.

2.8 The meeting may was pleased to note that the practice of 2 TAF valid at one time at one aerodrome was no longer observed by DMG monitoring. Therefore, Jordan, Syria and Saudi Arabia were compliant to provisions of TAF in this regard.

2.9 In addition, the meeting recalled the added deficiency at MIDANPIRG/12 for the lack of reception of OPMET data at the Regional OPMET Centre (ROC) Vienna from Iraq noting AFTN was not yet available (however, RODB Singapore would be able to forward OPMET from Iraq to Vienna if the OPMET were sent by email to RODB Singapore). Given the above discussions based on monitoring of OPMET data and identified errors and deficiencies, the meeting formulated the following Draft MET SG Draft Conclusion for consideration at the MET SG/3 meeting.

DRAFT CONCLUSION 3/XX — OPMET DATA ERRORS AND DEFICIENCIES

That, the ICAO Regional Office notify States of

a) incorrect addressing to ROC Vienna as provided in **Appendix C**;

b) multiple bulletins received at ROC Vienna as provided in **Appendix D** and assure only one bulletin is sent to ROC Vienna;

c) non receipt of OPMET (SA, FC, FT) requests during monitoring as provided in **Appendix E** noting some issues identified only warranted a message from the State to their intention in providing OPMET data for non-AOP aerodromes; and

d) non compliance of TAF requirements and multiple TAF for the same aerodrome and time as provided in **Appendix F**.

2.10 The meeting recalled that in order to improve the timeliness and regularity of OPMET data (METAR and TAF) for AOP aerodromes in the MID Region, the ICAO MID Regional Office developed guidance material related to the issuance of OPMET data which was attached to State letter (Ref.: AN 10/11-10-426) issued on 14 December 2010. The BMG/1 meeting determined that further guidance was needed and agreed to use an excerpt from the APAC ROBEX Handbook modified further based on recent discussions between the SADIS Gateway and Inter-Regional OPMET Gateway (IROG) Singapore as provided in **Appendix G**. Given the above issues relating to OPMET data, the meeting formulated a Draft Conclusion for the MID MET SG/3 meeting.

DRAFT CONCLUSION 3/XX — OPMET DATA IMPROVEMENTS

That, the ICAO Regional Office notify States of procedures in the issuance of OPMET data as per **Appendix G**.

2.11 The overall OPMET exchange between IROG Vienna and MID States was provided in an EXCEL-file and reproduced as **Appendix H** for the meeting to consider updating as it had not been done for several years. The meeting would consider this list within the realm of developing Regional OPMET Centre(s).

2.12 The meeting learned of the planned backup procedure in the EUR Regional OPMET Exchange (RODEX) system whose associated documentation could be endorsed as early as the later half of 2012 (update to EUR OPMET Data Management Handbook (EUR Doc 018) – inclusion of Appendix H). The backup OPMET bulletin list would be updated through a shopping cart and through bi-annual data management group monitoring to assure the data base used in the backup for the Regional OPMET Centres were the same. In addition, users can check online which data was presently available within the EUR Region based on the FASID Table MET 2A (user requirements for OPMET data derived from SADIS User Guide Annex 1). This information was relevant to States outside the EUR-region in terms of requesting data through the shopping cart and thus updating their requirements with reference to EUR OPMET data.

Regional Air Navigation Plan

2.13 The BMG/1 meeting recalled the use of the Regional Air Navigation Plan as information in the FASID tables can be used as the basis of 1) cost recovery, 2) measuring implementation of requirements (e.g. OPMET monitoring) that assists in identifying where improvements need to be made, and 3) regional planning by some stakeholders.

2.14 The BMG/1 meeting recalled the MET SG/2 initiative that proposed an amendment to Part VI (MET) of the MID Air Navigation Plan Volume I and Volume II (MID Doc 9708) (MET SG/2 draft Conclusions 2/9 and 2/10 a) refer) which commenced in April 2010. This amendment aligned regional procedures with the International Airways Volcano Watch (IAVW) and World Area Forecast System (WAFS) with global provisions as well as amended Table MET 1A of Part VI (MET) of the MID ANP Volume II (FASID) to reflect regional requirements for 24- and 30-hour Aerodrome Forecasts (TAF) in the MID Region.

2.15 Furthermore, the BMG/1 meeting recalled the MET SG/2 initiative to review Part VI (MET) of the MID Air Navigation Plan Volume II (FASID) in time for the MET SG/3 meeting noting that FASID Tables MET 2B, 2C, 4A and 4B related to OPMET exchange in coordination with the MID OPMET Bulletin Management Group (MET SG/2 draft Decision 2/10 & MIDANPIRG Conclusion 12/73 refer) and reproduced in **Appendices I, J, K** and **L**. This initiative was considered in this meeting (the first meeting of the MID OPMET Bulleting Management Group (MID OPMET BMG/1) held on 18 December 2011 (MET SG/2 draft Conclusion 2/14 & MIDANPIRG Conclusion 12/69 refer)). The BMG/1 meeting noted that FASID Table 2B did not warrant any changes. The BMG/1 meeting would propose changes to FASID Tables MET 2C, 4A (e.g. inclusion of Dammam to Dhahran) and 4B for consideration at the MID MET SG/3 meeting or thereafter, but before the next proposed amendment scheduled in the beginning of February 2012.

MID SIGMET Guide

2.16 The meeting recalled another ongoing initiative developed by the MET SG/2 meeting which pertained to finalizing the MID SIGMET Guide (MET SG/2 draft Conclusion 2/6 refers). The BMG/1 meeting recalled that the working draft was circulated to States in January 2010 and finalized in December 2010 through MIDANPIRG Conclusion 12/66. Since that time, the WMO Abbreviated Header Line (AHL) for SIGMET for Saudi Arabia was received and included in the draft MID SIGMET Guide as provided in **Appendix M**. The meeting noted that only two entries have been completed and States strongly encouraged to provide this information and would be accounted for through a draft Conclusion to notify States at the MET SG/3.

3. ANY OTHER BUSINESS

3.1 The meeting agreed that coordination on OPMET exchange was useful and that another meeting for a 3 day period be scheduled in approximately six months at the ICAO MID Regional Office in Cairo. The participants of the BMG/1 would determine dates in coordination with ICAO in the not too distant future. Correspondence on OPMET exchange would continue between meetings in order to accomplish the many tasks identified in this report.

International Civil Aviation Organization

MID OPMET Bulletin Management Group
First Meeting (MID OPMET BMG/1)

(Cairo, Egypt 18 December 2011)

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TERMS OF REFERENCE OF THE MID OPMET BULLETIN MANAGEMENT GROUP (MID OPMET BMG)

1. Terms of Reference

a) Review the OPMET exchange schemes in the MID Region and develop proposals for their optimization taking into account the current trends in the global OPMET exchange;

b) Develop monitoring and management procedures related to the ROBEX exchange and other exchanges of OPMET information;

c) Keep up-to-date the regional guidance material related to OPMET exchange;

d) Liaise with similar groups in the adjacent ICAO Regions in order to ensure harmonized and seamless OPMET exchange; and

e) The group will report to the MET Sub-Group of MIDANPIRG.

2. Work Programme

The work to be addressed by the MID OPMET BMG includes:

a) examine the existing requirements and any new requirements for the OPMET exchange in MID Region and to assess the feasibility of satisfying these requirements, taking into account the availability of the data;

b) review the ROBEX scheme and other OPMET exchange schemes and prepare proposal for updating and optimizing of the schemes;

c) review and update the procedures for interregional exchange and for transmission of the regional OPMET data to SADIS;

d) review and amend the regional guidance materials on the OPMET exchange and include procedures for the exchange of all required OPMET message types: SA, SP, FC, FT, WS, WC, WV, FK, FV, UA;

e) develop procedures for monitoring and management of the OPMET information, based on similar procedures used in the EUR and APAC Regions; and

f) provide regular progress reports to MET SG meetings.

3. Composition

a) The OPMET/BMG is composed by experts from Egypt, Iran, Kuwait and Oman (Rapporteur). Bahrain, Saudi Arabia and UAE are also expected to participate in the activity of the Group; and

b) Experts from the EUR OPMET Data Management Group (DMG), the VAAC Toulouse, APAC OPMET/M Task Force and IATA are invited to participate in the work of the MID OPMET BMG.

4. Working Arrangements

It is expected that most of the work of the group will be conducted via correspondence by fax, e-mail or telephone. The group should establish a network of OPMET focal points at all MID COM/MET centres dealing with OPMET data. When necessary, the Rapporteur, in coordination with the Regional Office, Cairo, will call teleconferences or meetings to discuss important issues.

FTSY31 OSDI, FTYE21 OYSN and SALB31 OLBA should be sent to LOZZMMID (Vienna ROC)

TT	AAii	CCCC	Loc.Ind.	Sent to	Originator	Suggestion
FT	AR20	OEJD	OBBI	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OBBI	LOZZMMID	OLLLYPYX	FTAR20 OEJD is obviously a recompiled bulletin. All included reports are received within the original bulletins. It is not necessary to s
FT	BN31	OBBI	OBBI	LOZZMMID	OBBITAFS	this bulletin to LOWM. Furthermore it should be checked whether there is a need for it in general.
FT	BN31	OBBI	OBBI	LOZZMMID	OBBIYPYX	Furthermore both bulletins are received more than once, sent by differnent centres. It is sufficient to receive it from only one centr
FT	BN31	OBBI	OBBI	LOZZMMID	OLLLYPYX	FTIN90 VOMM: It seems to be a special recompilation of airports from different states. UK will be contacted for details.
FT	IN90	VOMM	OBBI	LOWMMMXX	EGGYYBYA	
FT	SD40	OEJD	OEAB	LOZZMMID	OEJDYMYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
FT	SD40	OEJD	OEAB	LOZZMMID	OLLLYPYX	
FT	BN31	OBBI	OEDF	LOZZMMID	OBBITAFS	
FT	BN31	OBBI	OEDF	LOZZMMID	OBBIYPYX	The bulletin FTBN31 OBBI is received from three different AFTN-addresses. Receiving it from only one would be sufficient.
FT	BN31	OBBI	OEDF	LOZZMMID	OLLLYPYX	The buleltins FTSD22 OEJD as well as FTSD31 OEJD are received from two different addresses. Receiving it from only on would be
FT	SD22	OEJD	OEDF	LOZZMMID	OEJDYMYX	sufficient.
FT	SD22	OEJD	OEDF	LOZZMMID	OLLLYPYX	
FT	SD31	OEJD	OEDF	LOZZMMID	OEJDYMYX	The TAF for OEDF is included in all three of them!!
FT	SD31	OEJD	OEDF	LOZZMMID	OLLLYPYX	
FT	BN31	OBBI	OEDR	LOZZMMID	OBBITAFS	
FT	BN31	OBBI	OEDR	LOZZMMID	OBBIYPYX	
FT	BN31	OBBI	OEDR	LOZZMMID	OLLLYPYX	
FT	SD22	OEJD	OEDR	LOZZMMID	OEJDYMYX	Same as above!
FT	SD22	OEJD	OEDR	LOZZMMID	OLLLYPYX	
FT	SD31	OEJD	OEDR	LOZZMMID	OEJDYMYX	
FT	SD31	OEJD	OEDR	LOZZMMID	OLLLYPYX	
FT	SD22	OEJD	OEJN	LOZZMMID	OEJDYMYX	
FT	SD22	OEJD	OEJN	LOZZMMID	OLLLYPYX	Same as above!
FT	SD31	OEJD	OEJN	LOZZMMID	OEJDYMYX	
FT	SD31	OEJD	OEJN	LOZZMMID	OLLLYPYX	
FT	SD22	OEJD	OEMA	LOZZMMID	OEJDYMYX	
FT	SD22	OEJD	OEMA	LOZZMMID	OLLLYPYX	Same as above!
FT	SD31	OEJD	OEMA	LOZZMMID	OEJDYMYX	
FT	SD31	OEJD	OEMA	LOZZMMID	OLLLYPYX	
FT	SD22	OEJD	OERK	LOZZMMID	OEJDYMYX	
FT	SD22	OEJD	OERK	LOZZMMID	OLLLYPYX	Same as above!
FT	SD31	OEJD	OERK	LOZZMMID	OEJDYMYX	
FT	SD31	OEJD	OERK	LOZZMMID	OLLLYPYX	
FT	SD22	OEJD	OETF	LOZZMMID	OEJDYMYX	
FT	SD22	OEJD	OETF	LOZZMMID	OLLLYPYX	
FT	SD32	OEJD	OETF	LOZZMMID	OEJDYMYX	Same as above with different bulletins!
FT	SD40	OEJD	OETF	LOZZMMID	OEJDYMYX	
FT	SD40	OEJD	OETF	LOZZMMID	OLLLYPYX	
FT	IR31	OIII	OIAW	LOZZMMID	OIIIYPYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
FT	IR31	OIII	OIAW	LOZZMMID	OLLLYPYX	
FT	IR32	OIII	OIBK	LOZZMMID	OIIIYPYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
FT	IR32	OIII	OIBK	LOZZMMID	OLLLYPYX	
FT	IR33	OIII	OIZC	LOZZMMID	OIIIYPYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
FT	IR33	OIII	OIZC	LOZZMMID	OLLLYPYX	
FT	JD31	OJAI	OJAI	LOZZMMID	OJAMYMYX	
FT	ME31	OEJD	OJAI	LOZZMMID	OEJDYMYX	The TAF for OJAI is received in three different bulletins. The bulletin FTME31 is available as compilation from OEJD and OLBA.
FT	ME31	OLBA	OJAI	LOZZMMID	OLBAYZYX	
FT	JD31	OJAI	OJAM	LOZZMMID	OJAMYMYX	
FT	ME31	OEJD	OJAM	LOZZMMID	OEJDYMYX	Same as above!
FT	ME31	OLBA	OJAM	LOZZMMID	OLBAYZYX	
FT	JD31	OJAI	OJAQ	LOZZMMID	OJAMYMYX	
FT	ME31	OEJD	OJAQ	LOZZMMID	OEJDYMYX	Same as above!
FT	ME31	OLBA	OJAQ	LOZZMMID	OLBAYZYX	
FT	AR20	OEJD	OKBK	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OKBK	LOZZMMID	OLLLYPYX	
FT	BN31	OBBI	OKBK	LOZZMMID	OBBITAFS	
FT	BN31	OBBI	OKBK	LOZZMMID	OBBIYPYX	The TAF for OKBK is included in three different bulletins from the MID region sent from different addresses and in one compilation
FT	BN31	OBBI	OKBK	LOZZMMID	OLLLYPYX	by VOMM.
FT	IN90	VOMM	OKBK	LOWMMMXX	EGGYYBYA	
FT	KW21	OKBK	OKBK	LOZZMMID	OLLLYPYX	
FT	LB31	OLBA	OLBA	LOZZMMID	OLBAYMYX	
FT	ME31	OEJD	OLBA	LOZZMMID	OEJDYMYX	The TAF for OLBA is received in three different bulletins. The bulletin FTME31 is available as compilation from OEJD and OLBA.
FT	ME31	OLBA	OLBA	LOZZMMID	OLBAYZYX	
FT	AR20	OEJD	OMAA	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OMAA	LOZZMMID	OLLLYPYX	
FT	BN32	OBBI	OMAA	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMAA	LOZZMMID	OBBIYPYX	The TAF for OMAA is included in three different bulletins from the MID region sent from different addresses and in one compilation
FT	BN32	OBBI	OMAA	LOZZMMID	OLLLYPYX	by VOMM.
FT	ER32	OMAE	OMAA	LOZZMMID	OMAEYFYX	
FT	ER32	OMAE	OMAA	LOZZMMID	OMAEYPYX	

FT	ER32	OMAE	OMAA	LOZZMMID	OMAEYYPY	
FT	IN90	VOMM	OMAA	LOWMMMXX	EGGYYBYA	
FT	AR20	OEJD	OMAD	LOZZMMID	OEJDYMYX	
FT	BN32	OBBI	OMAD	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMAD	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMAD	LOZZMMID	OLLLYPYX	The TAF for OMAD is included in three different bulletins from the MID region sent from different addresses.
FT	ER32	OMAE	OMAD	LOZZMMID	OMAEYFYX	
FT	ER32	OMAE	OMAD	LOZZMMID	OMAEYPYX	
FT	ER32	OMAE	OMAD	LOZZMMID	OMAEYYPY	
FT	BN32	OBBI	OMAL	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMAL	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMAL	LOZZMMID	OLLLYPYX	
FT	ER32	OMAE	OMAL	LOZZMMID	OMAEYFYX	The TAF for OMAL is included in two different bulletins from the MID region sent from different addresses and in one compilation d
FT	ER32	OMAE	OMAL	LOZZMMID	OMAEYPYX	by VOMM.
FT	ER32	OMAE	OMAL	LOZZMMID	OMAEYYPY	
FT	IN90	VOMM	OMAL	LOWMMMXX	EGGYYBYA	
FT	AR20	OEJD	OMDB	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OMDB	LOZZMMID	OLLLYPYX	
FT	BN32	OBBI	OMDB	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMDB	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMDB	LOZZMMID	OLLLYPYX	The TAF for OMDB is included in three different bulletins from the MID region sent from different addresses and in one compilation
FT	ER32	OMAE	OMDB	LOZZMMID	OMAEYFYX	by VOMM.
FT	ER32	OMAE	OMDB	LOZZMMID	OMAEYPYX	
FT	ER32	OMAE	OMDB	LOZZMMID	OMAEYYPY	
FT	IN90	VOMM	OMDB	LOWMMMXX	EGGYYBYA	
FT	BN32	OBBI	OMDW	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMDW	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMDW	LOZZMMID	OLLLYPYX	
FT	ER32	OMAE	OMDW	LOZZMMID	OMAEYFYX	The TAF for OBBI is included in two different bulletins from the MID region sent from different addresses.
FT	ER32	OMAE	OMDW	LOZZMMID	OMAEYPYX	
FT	ER32	OMAE	OMDW	LOZZMMID	OMAEYYPY	
FT	BN32	OBBI	OMFJ	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMFJ	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMFJ	LOZZMMID	OLLLYPYX	
FT	ER32	OMAE	OMFJ	LOZZMMID	OMAEYFYX	The TAF for OMFJ is included in two different bulletins from the MID region sent from different addresses and in one compilation do
FT	ER32	OMAE	OMFJ	LOZZMMID	OMAEYPYX	VOMM.
FT	ER32	OMAE	OMFJ	LOZZMMID	OMAEYYPY	
FT	IN90	VOMM	OMFJ	LOWMMMXX	EGGYYBYA	
FT	AR20	OEJD	OMRK	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OMRK	LOZZMMID	OLLLYPYX	
FT	BN32	OBBI	OMRK	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMRK	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMRK	LOZZMMID	OLLLYPYX	The TAF for OMRK is included in three different bulletins from the MID region sent from different addresses.
FT	ER32	OMAE	OMRK	LOZZMMID	OMAEYFYX	
FT	ER32	OMAE	OMRK	LOZZMMID	OMAEYPYX	
FT	ER32	OMAE	OMRK	LOZZMMID	OMAEYYPY	
FT	AR20	OEJD	OMSJ	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OMSJ	LOZZMMID	OLLLYPYX	
FT	BN32	OBBI	OMSJ	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMSJ	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMSJ	LOZZMMID	OLLLYPYX	The TAF for OMSJ is included in three different bulletins from the MID region sent from different addresses and in one compilation
FT	ER32	OMAE	OMSJ	LOZZMMID	OMAEYFYX	by VOMM.
FT	ER32	OMAE	OMSJ	LOZZMMID	OMAEYPYX	
FT	ER32	OMAE	OMSJ	LOZZMMID	OMAEYYPY	
FT	IN90	VOMM	OMSJ	LOWMMMXX	EGGYYBYA	
FT	AR20	OEJD	OOMS	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OOMS	LOZZMMID	OLLLYPYX	
FT	BN32	OBBI	OOMS	LOZZMMID	OBBITAFS	The TAF for OOMS is included in two different bulletins from the MID region sent from different addresses and in one compilation c
FT	BN32	OBBI	OOMS	LOZZMMID	OBBIYPYX	by VOMM.
FT	BN32	OBBI	OOMS	LOZZMMID	OLLLYPYX	
FT	IN90	VOMM	OOMS	LOWMMMXX	EGGYYBYA	
FT	AR20	OEJD	OOSA	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OOSA	LOZZMMID	OLLLYPYX	The TAF for OEJD is included in two different bulletins from the MID region sent from different addresses.
FT	BN32	OBBI	OOSA	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OOSA	LOZZMMID	OLLLYPYX	
FT	ME31	OEJD	OSAP	LOZZMMID	OEJDYMYX	
FT	ME31	OLBA	OSAP	LOZZMMID	OLBAYZYX	The TAF for OSAP is included in three different bulletins from the MID region sent from different addresses.
FT	SY31	OSDI	OSAP	LOZZMMID	OSDIYMYX	
FT	SY31	OSDI	OSAP	LOWMYBYX	OSDIYMYX	
FT	ME31	OEJD	OSDI	LOZZMMID	OEJDYMYX	
FT	ME31	OLBA	OSDI	LOZZMMID	OLBAYZYX	The TAF for OSDI is included in three different bulletins from the MID region sent from different addresses and in one compilation d
FT	SY31	OSDI	OSDI	LOZZMMID	OSDIYMYX	by VOMM.

FT	SY31	OSDI	OSDI	LOWMYBYX	OSDIYMYX	
FT	ME31	OEJD	OSLK	LOZZMMID	OEJDYMYX	The TAF for OSLK is included in two different bulletins from the MID region sent from different addresses.
FT	ME31	OLBA	OSLK	LOZZMMID	OLBAYZYX	
FT	SY31	OSDI	OSLK	LOZZMMID	OSDIYMYX	
FT	SY31	OSDI	OSLK	LOWMYBYX	OSDIYMYX	
FT	AR20	OEJD	OTBD	LOZZMMID	OEJDYMYX	The TAF for OTBD is included in two different bulletins from the MID region sent from different addresses and in one compilation d
FT	AR20	OEJD	OTBD	LOZZMMID	OLLLYPYX	
FT	BN31	OBBI	OTBD	LOZZMMID	OBBITAFS	
FT	BN31	OBBI	OTBD	LOZZMMID	OBBIYPYX	VOMM.
FT	BN31	OBBI	OTBD	LOZZMMID	OLLLYPYX	
FT	IN90	VOMM	OTBD	LOWMMMXX	EGGYYBYA	
FT	AR20	OEJD	OYAA	LOZZMMID	OEJDYMYX	The TAF for OYAA is included in two different bulletins from the MID region sent from different addresses.
FT	AR20	OEJD	OYAA	LOZZMMID	OLLLYPYX	
FT	YE21	OYSN	OYAA	LOZZMMID	OLLLYPYX	
FT	YE21	OYSN	OYAA	LOWMYBYX	OYSNYMYX	
FT	YE21	OYSN	OYHD	LOZZMMID	OLLLYPYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
FT	YE21	OYSN	OYHD	LOWMYBYX	OYSNYMYX	
FT	AR20	OEJD	OYSN	LOZZMMID	OEJDYMYX	The TAF for OKBK is included in three different bulletins from the MID region sent from different addresses.
FT	AR20	OEJD	OYSN	LOZZMMID	OLLLYPYX	
FT	SD31	OEJD	OYSN	LOZZMMID	OEJDYMYX	
FT	SD31	OEJD	OYSN	LOZZMMID	OLLLYPYX	
FT	YE21	OYSN	OYSN	LOZZMMID	OLLLYPYX	
FT	YE21	OYSN	OYSN	LOWMYBYX	OYSNYMYX	
SA	BN31	OBBI	OBBI	LOZZMMID	OBBIYRYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
SA	BN31	OBBI	OBBI	LOZZMMID	OLLLYPYX	
SA	SD20	OEJD	OEAB	LOZZMMID	OEJDYMYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
SA	SD20	OEJD	OEAB	LOZZMMID	OLLLYPYX	
SA	BN31	OBBI	OEDF	LOZZMMID	OBBIYRYX	The METAR for OEDF is included in three different bulletins from the MID region sent from different addresses.
SA	BN31	OBBI	OEDF	LOZZMMID	OLLLYPYX	
SA	SD20	OEJD	OEDF	LOZZMMID	OEJDYMYX	
SA	SD20	OEJD	OEDF	LOZZMMID	OLLLYPYX	
SA	SD31	OEJD	OEDF	LOZZMMID	OEJDYMYX	
SA	SD31	OEJD	OEDF	LOZZMMID	OLLLYPYX	
SA	BN31	OBBI	OEDR	LOZZMMID	OBBIYRYX	The METAR for OEDR is included in three different bulletins from the MID region sent from different addresses.
SA	BN31	OBBI	OEDR	LOZZMMID	OLLLYPYX	
SA	SD20	OEJD	OEDR	LOZZMMID	OEJDYMYX	
SA	SD20	OEJD	OEDR	LOZZMMID	OLLLYPYX	
SA	SD31	OEJD	OEDR	LOZZMMID	OEJDYMYX	
SA	SD31	OEJD	OEDR	LOZZMMID	OLLLYPYX	
SA	SD20	OEJD	OEJN	LOZZMMID	OEJDYMYX	The METAR for OEJN is included in two different bulletins from the MID region sent from different addresses.
SA	SD20	OEJD	OEJN	LOZZMMID	OLLLYPYX	
SA	SD31	OEJD	OEJN	LOZZMMID	OEJDYMYX	
SA	SD31	OEJD	OEJN	LOZZMMID	OLLLYPYX	
SA	SD20	OEJD	OEMA	LOZZMMID	OEJDYMYX	The METAR for OEMA is included in two different bulletins from the MID region sent from different addresses.
SA	SD20	OEJD	OEMA	LOZZMMID	OLLLYPYX	
SA	SD31	OEJD	OEMA	LOZZMMID	OEJDYMYX	
SA	SD31	OEJD	OEMA	LOZZMMID	OLLLYPYX	
SA	SD20	OEJD	OERK	LOZZMMID	OEJDYMYX	The METAR for OERK is included in two different bulletins from the MID region sent from different addresses.
SA	SD20	OEJD	OERK	LOZZMMID	OLLLYPYX	
SA	SD31	OEJD	OERK	LOZZMMID	OEJDYMYX	
SA	SD31	OEJD	OERK	LOZZMMID	OLLLYPYX	
SA	SD20	OEJD	OETF	LOZZMMID	OEJDYMYX	The METAR for OETF is included in two different bulletins from the MID region sent from different addresses.
SA	SD20	OEJD	OETF	LOZZMMID	OLLLYPYX	
SA	SD32	OEJD	OETF	LOZZMMID	OEJDYMYX	
SA	SD32	OEJD	OETF	LOZZMMID	OLLLYPYX	
SA	JD20	OJAM	OJAI	LOWMMMXX	EDZWYMYX	The METAR for OJAI is included in **four** different bulletins from the MID region sent from different addresses.
SA	JD31	OJAI	OJAI	LOZZMMID	OJAMYMYX	
SA	ME31	OEJD	OJAI	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAI	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAI	LOZZMMID	OLBAYZYX	
SA	JD20	OJAM	OJAM	LOWMMMXX	EDZWYMYX	The METAR for OJAM is included in **four** different bulletins from the MID region sent from different addresses.
SA	JD31	OJAI	OJAM	LOZZMMID	OJAMYMYX	
SA	ME31	OEJD	OJAM	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAM	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAM	LOZZMMID	OLBAYZYX	
SA	JD20	OJAM	OJAQ	LOWMMMXX	EDZWYMYX	The METAR for OJAQ is included in **four** different bulletins from the MID region sent from different addresses.
SA	JD31	OJAI	OJAQ	LOZZMMID	OJAMYMYX	
SA	ME31	OEJD	OJAQ	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAQ	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAQ	LOZZMMID	OLBAYZYX	
SA	BN31	OBBI	OKBK	LOZZMMID	OBBIYRYX	The METAR for OKBK is included in two different bulletins from the MID region sent from different addresses.
SA	BN31	OBBI	OKBK	LOZZMMID	OLLLYPYX	

SA	KW31	OKBK	OKBK	LOZZMMID	OLLLYPYX	
SA	LB31	OLBA	OLBA	LOWMYMYX	OLBAYMYX	The METAR for OLBA is included in three different bulletins from the MID region sent from different addresses.
SA	ME31	OEJD	OLBA	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OLBA	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OLBA	LOZZMMID	OLBAYZYX	
SA	BN32	OBBI	OMAA	LOZZMMID	OBBIYRYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
SA	BN32	OBBI	OMAA	LOZZMMID	OLLLYPYX	
SA	BN32	OBBI	OOMS	LOZZMMID	OBBIYRYX	The METAR for OOMS is included in two different bulletins from the MID region sent from different addresses.
SA	BN32	OBBI	OOMS	LOZZMMID	OLLLYPYX	
SA	OM20	OOMS	OOMS	LOZZMMID	OLLLYPYX	
SA	BN32	OBBI	OOSA	LOZZMMID	OBBIYRYX	The METAR for OOSA is included in two different bulletins from the MID region sent from different addresses.
SA	BN32	OBBI	OOSA	LOZZMMID	OLLLYPYX	
SA	OM20	OOMS	OOSA	LOZZMMID	OLLLYPYX	
SA	ME31	OEJD	OSAP	LOZZMMID	OEJDYMYX	The METAR for OSAP is included in three different bulletins from the MID region sent from different addresses.
SA	ME31	OLBA	OSAP	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OSAP	LOZZMMID	OLBAYZYX	
SA	SY31	OSDI	OSAP	LOZZMMID	OSDIYMYX	
SA	ME31	OEJD	OSDI	LOZZMMID	OEJDYMYX	The METAR for OSDI is included in three different bulletins from the MID region sent from different addresses.
SA	ME31	OLBA	OSDI	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OSDI	LOZZMMID	OLBAYZYX	
SA	SY31	OSDI	OSDI	LOZZMMID	OSDIYMYX	
SA	ME31	OEJD	OSLK	LOZZMMID	OEJDYMYX	The METAR for OSLK is included in three different bulletins from the MID region sent from different addresses.
SA	ME31	OLBA	OSLK	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OSLK	LOZZMMID	OLBAYZYX	
SA	SY31	OSDI	OSLK	LOZZMMID	OSDIYMYX	
SA	BN31	OBBI	OTBD	LOZZMMID	OBBIYRYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
SA	BN31	OBBI	OTBD	LOZZMMID	OLLLYPYX	
SA	YE20	OYAA	OYAA	LOWMMMXX	EDZWYMYX	Two different bulletins are issued with the same content. One with only the TAF for the respective aerodrome. The second one is th compilation. Both bulletins are not addressed to Vienna but are received from Germany. According to an info from Germany they re the bulletins via Madrid.
SA	YE20	OYSC	OYAA	LOWMMMXX	EDZWYMYX	
SA	YE20	OYAG	OYAG	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYAG	LOWMMMXX	EDZWYMYX	
SA	YE20	OYAS	OYAS	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYAS	LOWMMMXX	EDZWYMYX	
SA	YE20	OYAT	OYAT	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYAT	LOWMMMXX	EDZWYMYX	
SA	YE20	OYHD	OYHD	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYHD	LOWMMMXX	EDZWYMYX	
SA	YE20	OYMB	OYMB	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYMB	LOWMMMXX	EDZWYMYX	
SA	YE20	OYRN	OYRN	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYRN	LOWMMMXX	EDZWYMYX	
SA	SD31	OEJD	OYSN	LOZZMMID	OEJDYMYX	Two different bulletins are issued with the same content. One with only the TAF for the respective aerodrome. The second one is th compilation. Both bulletins are not addressed to Vienna but are received from Germany. According to an info from Germany they re the bulletins via Madrid. Furthermore the report is included in the compiation SASD31 OEJD. This is not necessary.
SA	SD31	OEJD	OYSN	LOZZMMID	OLLLYPYX	
SA	YE20	OYSC	OYSN	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSN	OYSN	LOWMMMXX	EDZWYMYX	
SA	YE20	OYAA	OYSQ	LOWMMMXX	EDZWYMYX	Two different bulletins are issued with the same content. One with only the TAF for the respective aerodrome. The second one is th compilation. Both bulletins are not addressed to Vienna but are received from Germany. According to an info from Germany they re the bulletins via Madrid.
SA	YE20	OYSC	OYSQ	LOWMMMXX	EDZWYMYX	
SA	YE20	LOWM	OYSY	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYSY	LOWMMMXX	EDZWYMYX	
SA	YE20	LOWM	OYTZ	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYTZ	LOWMMMXX	EDZWYMYX	

NON RECEIPT OF REQUESTED OPMET DATA

- METAR requested, but not received for HEAZ, HEOW, OEJB (received only for 6 out of 16 exercises), ORNI
- FC requested but not received for OEYN (but FT is received – ICAO may need to update this table)
- FT requested but not received for HEAZ, HEOW, OIAA (received only for 5 out of 16 exercises), ORNI, ORSU, OYAD, OYRN, OYSY, OYTZ

Note that Egypt would inform ICAO RO-MET that OPMET is not provided for HEAZ and HEOW as they are used for military purposes

Note that Saudi Arabia would inform ICAO RO-MET that METAR is not provided for OEJB as it is used as a naval airbase

Note that Saudi Arabia demonstrated to the meeting that FC for OEYN is included in FCSD31 Jeddah bulletin and that this would be communicated to ROC Vienna

The Secretariat would then inform the SADISOPSG Secretariat of the above changes to the global OPMET database

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Deficiencies in the MET field IRAN										
Item No	**Identification**		**Deficiencies**				**Corrective Action**			
	Requirement	**Facilities/ Services**	**Description**	**Date first reported**	**Remarks/ Rationale for non-elimination**		**Facilities/ Services**	**Executing body**	**Date of completetion**	**Priority for action**
1	Annex 3 Chapter 6 Para 6.2.6. MID ANP Doc 9706 Volume I (Basic ANP) Part VI (MET) Para 9.	Provision of 30-hour aerodrome forecasts (TAF)	No international exchange requirement for 18-hour validity long-TAF in the MID Region. Only 30-hour validity long-TAF should be available internationally for OIFM, OISS and OITT.	Dec 2009	Follow-up of MIDANPIRG METSG/2 report. State Letter ME 3/56.14-10/091 issued 15 March 2010.	F H O	Only 30-hour validity long-TAF should be available internationally for OIFM, OISS and OITT. Availability of 18-hour long-TAF for these aerodromes should cease.	Iran	Dec 2010	A

Deficiencies in the MET field

IRAQ

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination		Facilities/ Services	Executing body	Date of completetion	Priority for action
1	Annex 3, App. 3, 3.1 and App. 5, 1.6	Provision of OPMET data (METAR and TAF) to international OPMET data banks	OPMET data not available at Vienna RODB	Jun 2008	-	FHO	-	Iraq	Dec 2011	A

Deficiencies in the MET field

SYRIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date first reported	Remarks/ Rationale for non-elimination		Facilities/ Services	Executing body	Date of completetion	Priority for action
1	Annex 3 Chapter 6 Para 6.2.6. MID ANP Doc 9706 Volume I (Basic ANP) Part VI (MET) Para 9.	Provision of 24- or 30-hour aerodrome forecasts (TAF)	No international exchange requirement for 9-hour validity short-TAF or 18-hour long-TAF. Only 24- or 30-hour validity long-TAF should be exchanged internationally.	Dec 2009	Follow-up of MIDANPIRG METSG/2 report. State Letter ME 3/56.14-10/093 issued 15 March 2010.	F H O	Only 24- or 30-hour long-TAF should be available internationally for OSAP, OSDI and OSLK. Availability of 9-hour short-TAF or 18-hour long-TAF for these aerodromes should cease.	Syria	Dec 2010	A

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7.5 Summary of OPMET data issuance

7.5.1 In response to APANPIRG/20 Conclusion 20/62, a summary of correct methods of issuing OPMET data are provided in the following two tables (adapted further with input provided by Regional OPMET Data Bank Singapore – highlighted in yellow)

METAR Observation, Compiling and Filing

Function	Responsible Entity	Explanation of Time	Time of task (min)
METAR Observation	Originating stations (AMS, AMO, forecast office, MWO, TCAC, VAAC)	State determines how often and when (emphasis on consistency, i.e. 50 minutes past the hour every hour every day) **Examples : HH+00, HH+30, HH+10, HH+50** Note that the observation time is used in the METAR report	0
Send METAR observation to NOC	Orig station		
Send METAR observations to ROBEX Centre	NOC		
Bulletin compiling and filing	ROBEX Bulletin Compiling Centre	Up to 5 minutes after actual time of observation (ref.: Annex 3, App. 10, 2.1.2) Note that the observation time of the METAR is used in the DTG – YYGGgg of the bulletin header Note that the filing time is used in the AFTN header and should be up to 5 minutes after the observation time given in the bulletin header also referred to as the WMO Abbreviated Heading in the ROBEX HB	<5
Send METAR bulletin to: ROBEX Centres (predefined distribution list) RODBs NOCs Other MET offices	ROBEX Centre *via AFTN*	Up to 5 minutes (10 minutes for distances greater than 900 km) (ref.: Annex 3, App. 10, 1.1)	<5 (<10 for distances > 900 km)
Acceptable time from observation at originating stations to reception by user			<10 (<15 mins for distances > 900 km)

TAF Issuance, Compiling and Filing

Function	Responsible Entity	Explanation of Time	Time of task (min)
TAF Issuance	AMO or NOC	State determines time of 4 scheduled TAFs (emphasis on consistency, i.e. 00, 06, 12, 18Z every day) Note that issuance time of TAF (which is one hour before the start period of validity of the TAF) is used in the date/time group (DTG) (YYGGggZ) of TAF messages TAF is sent to ROBEX Centre before the cutoff time of accepting TAF for filing one hour before the start period of validity time (typically 15 minutes before filing)	(allow enough time to reach ROBEX Centre before cutoff time – typically 15 minutes before the filing time or one-hour and 15 minutes before the start period of validity) Ex: TAF to be valid at 0600 is sent to ROBEX Centre by 0445
Bulletin compiling and filing	ROBEX Centre	Bulletins are compiled during the 15 minutes before filing Note that the TAF issuance time (official filing time) is used in the DTG – YYGGgg of the bulletin header Note that the actual filing time is used in the AFTN header and should be after the time given in the bulletin header also referred to as the WMO Abbreviated Heading in the ROBEX HB TAF should be filed for transmission at least one hour before the commencement of their period of validity, unless otherwise determined by regional air navigation agreement. (ref.: Annex 3, App. 10, 2.1.2)	<15 Ex: TAF bulletin compiled between 0445 and 0500 and filed for transmission
Send TAF bulletin to: ROBEX Centres (predefined distribution list) RODBs NOCs Other MET offices	ROBEX Centre *via AFTN*	Up to 5 minutes (10 minutes for distances greater than 900 km) (ref.: Annex 3, App. 10, 1.1)	<5 (<10 for distances > 900 km)
Acceptable time for ROBEX BCC compiling and filing to reception by user			<20 (<25 for distances > 900 km)

OBZZYPYX	OEJDYPYX	OPKCYMYX	OPZZYPYX	OKBKYMYX
FCFR22 LFPW	FCFR22 LFPW	FCTRA31 RUMS	FCAJ31 UBBB	FCFR22 LFPW
FCFR23 LFPW	FCFR23 LFPW	FTAJ31 UBBB	FCBY31 UMMM	FCFR23 LFPW
FCFR24 LFPW	FCFR24 LFPW	FTBX31 EBBR	FCBY31 UMMN	FCFR24 LFPW
FTBU31 LBSM	FTBU31 LBSM		FCEE31 LOWM	FTBU31 LBSM
FTBX31 EBBR	FTBX31 EBBR		FCFR22 LFPW	FTBX31 EBBR
FTCY31 LCLK	FTCY31 LCLK		FCFR23 LFPW	FTCY31 LCLK
FTCZ31 LKPW	FTCZ31 LKPW		FCFR24 LFPW	FTCZ31 LKPW
FTDN31 EKCH	FTDN31 EKCH		FCGG31 UGTB	FTDN31 EKCH
FTEU31 BKPR	FTEU31 BKPR		FCKZ31 RUMS	FTEU31 BKPR
FTEW32 LEMM	FTEW32 LEMM		FCRA31 RUMS	FTEW32 LEMM
FTFI31 EFHK	FTFI31 EFHK		FCRA32 RUMS	FTFI31 EFHK
FTFR21 LFPW	FTFR21 LFPW		FCRS31 RUMS	FTFR21 LFPW
FTFR31 LFPW	FTFR31 LFPW		FCRS32 RUMS	FTFR31 LFPW
FTFR32 LFPW	FTFR32 LFPW		FCRS33 RUMS	FTFR32 LFPW
FTFR33 LFPW	FTFR33 LFPW		FCRS34 RUMS	FTFR33 LFPW
FTFR34 LFPW	FTFR34 LFPW		FCTA31 RUMS	FTFR34 LFPW
FTFR35 LFPW	FTFR35 LFPW		FCTR31 RUMS	FTFR35 LFPW
FTFR36 LFPW	FTFR36 LFPW		FCUR30 UKMS	FTFR36 LFPW
FTFR37 LFPW	FTFR37 LFPW		FCUR31 UKMS	FTFR37 LFPW
FTFR38 LFPW	FTFR38 LFPW		FCUZ31 UTTT	FTFR38 LFPW
FTFR39 LFPW	FTFR39 LFPW		FCUZ31 UTTW	FTFR39 LFPW
FTGR31 LGAT	FTGR31 LGAT		FTAJ31 UBBB	FTGR31 LGAT
FTGR32 LGAT	FTGR32 LGAT		FTAY31 RUMS	FTGR32 LGAT
FTHU31 LHBM	FTHU31 LHBM		FTBU31 LBSM	FTHU31 LHBM
FTIE31 EIDB	FTIE31 EIDB		FTBX31 EBBR	FTIE31 EIDB
FTIY31 LIIB	FTIY31 LIIB		FTBY31 UMMN	FTIY31 LIIB
FTNL31 EHDB	FTNL31 EHDB		FTCY31 LCLK	FTNL31 EHDB
FTNO31 ENMI	FTNO31 ENMI		FTCZ31 LKPW	FTNO31 ENMI
FTNO32 ENMI	FTNO32 ENMI		FTDN31 EKCH	FTNO32 ENMI
FTNO32 LOWM	FTNO32 LOWM		FTEU31 BKPR	FTNO32 LOWM
FTNO33 ENMI	FTNO33 ENMI		FTEW31 LEMM	FTNO33 ENMI
FTNO38 ENMI	FTNO38 ENMI		FTEW32 LEMM	FTNO38 ENMI
FTOS31 LOWM	FTOS31 LOWM		FTEW33 LEMM	FTOS31 LOWM
FTPL31 EPWA	FTPL31 EPWA		FTEW34 LEMM	FTPL31 EPWA
FTPO31 LPMG	FTPO31 LPMG		FTEW35 LEMM	FTPO31 LPMG
FTPO32 LPMG	FTPO32 LPMG		FTEW36 LEMM	FTPO32 LPMG
FTPO33 LPMG	FTPO33 LPMG		FTEW37 LEMM	FTPO33 LPMG
FTRH31 LDZM	FTRH31 LDZM		FTEW38 LEMM	FTRH31 LDZM
FTRO31 LROM	FTRO31 LROM		FTFI31 EFHK	FTRO31 LROM
FTSN31 ESWI	FTSN31 ESWI		FTFR21 LFPW	FTSN31 ESWI
FTSQ31 LZIB	FTSQ31 LZIB		FTFR31 LFPW	FTSQ31 LZIB
FTSW31 LSSW	FTSW31 LSSW		FTFR32 LFPW	FTSW31 LSSW
FTTS31 DTTA	FTTS31 DTTA		FTFR33 LFPW	FTTS31 DTTA
FTTS32 DTTA	FTTS32 DTTA		FTFR34 LFPW	FTTS32 DTTA
FTTU31 LTAA	FTTU31 LTAA		FTFR35 LFPW	FTTU31 LTAA
FTTU32 LTAA	FTTU32 LTAA		FTFR36 LFPW	FTTU32 LTAA
FTUK31 EGGY	FTUK31 EGGY		FTFR37 LFPW	FTUK31 EGGY
FTUK32 EGGY	FTUK32 EGGY		FTFR38 LFPW	FTUK32 EGGY
FTUK33 EGGY	FTUK33 EGGY		FTFR39 LFPW	FTUK33 EGGY

FTUK34 EGGY	FTUK34 EGGY
FTUK35 EGGY	FTUK35 EGGY
FTYG31 LYBM	FTYG31 LYBM
SACY31 LCLK	SACY31 LCLK
SAGR31 LGAT	SAGR31 LGAT
SAGR32 LGAT	SAGR32 LGAT
SAGR33 LGAT	SAGR33 LGAT
SATU31 LTAA	SATU31 LTAA
UACY31 ////	UACY31 ////
UAGR31 ////	UAGR31 ////
UARM// ////	UARM// ////
UATU31 LTAA	UATU31 LTAA
WSCY// ////	WSCY// ////
WSGR// ////	WSGR// ////
WSTU31 LTAC	WSTU31 LTAC
WSTU31 LTBA	WSTU31 LTBA

FTGG31 UGTB	FTUK34 EGGY
FTGI32 EGRR	FTUK35 EGGY
FTGR31 LGAT	FTYG31 LYBM
FTGR32 LGAT	SACY31 LCLK
FTHU31 LHBM	SAGR31 LGAT
FTIE31 EIDB	SAGR32 LGAT
FTIY31 LIIB	SAGR33 LGAT
FTIY32 LIIB	SATU31 LTAA
FTKY31 RUMS	UACY31 ////
FTNL31 EHDB	UAGR31 ////
FTNO31 ENMI	UARM// ////
FTNO32 ENMI	UATU31 LTAA
FTNO32 LOWM	WSCY// ////
FTNO33 ENMI	WSGR// ////
FTNO38 ENMI	WSTU31 LTAC
FTOS31 LOWM	WSTU31 LTBA
FTPL31 EPWA	
FTPO31 LPMG	
FTPO32 LPMG	
FTPO33 LPMG	
FTRA31 RUMS	
FTRA32 RUMS	
FTRA33 RUMS	
FTRA34 RUMS	
FTRA35 RUMS	
FTRA36 RUMS	
FTRA37 RUMS	
FTRH31 LDZM	
FTRO31 LROM	
FTRS31 RUMS	
FTRS32 RUMS	
FTRS33 RUMS	
FTRS34 RUMS	
FTRS35 RUMS	
FTSN31 ESWI	
FTSQ31 LZIB	
FTSW31 LSSW	
FTTR31 RUMS	
FTTS31 DTTA	
FTTS32 DTTA	
FTTU31 LTAA	
FTTU32 LTAA	
FTUK31 EGGY	
FTUK32 EGGY	
FTUK33 EGGY	
FTUK34 EGGY	
FTUK35 EGGY	
FTUR30 UKMS	
FTUR31 UKMS	
FTUZ31 UTTT	

```
FTUZ31 UTTW
FTYG31 LYBM
SAAJ31 UBBB
SAAY31 RUMS
SABY31 UMMN
SACY31 LCLK
SAEE31 LOWM
SAGG31 UGTB
SAGR31 LGAT
SAGR32 LGAT
SAGR33 LGAT
SAKY31 RUMS
SAKZ31 RUMS
SARA31 RUMS
SARA32 RUMS
SARA33 RUMS
SARA34 RUMS
SARA35 RUMS
SARA36 RUMS
SARS31 RUMS
SARS32 RUMS
SARS33 RUMS
SARS34 RUMS
SARS35 RUMS
SATR31 RUMS
SATU31 LTAA
SAUR30 UKMS
SAUR31 UKMS
SAUZ31 UTSB
SAUZ31 UTTT
SAUZ31 UTTW
SPAJ31 UBBB
SPAY31  RUMS
SPBY31 UMMN
SPGG31 UGTB
SPRA34 RUMS
SPTR// ////
SPUR30 UKMS
SPUR31 UKMS
SPUR41 ////
SPUZ31 ////
UACY31 ////
UAGR31 ////
UARM// ////
UATU31 LTAA
WSCY// ////
WSGR// ////
WSTU31 LTAC
WSTU31 LTBA
```

OBBIYMYX	OBBIYZYX	OIZZYPYB	OIIIYPYX	OPLAYMYX
FTDN31 EKCH	FTDN31 EKCH	FCUK31 EGGY	FTBU31 LBSM	FTDL31 EDZO
FTFI31 EFHK	FTFI31 EFHK	FCUK32 EGGY	FTCZ31 LKPW	FTDL32 EDZO
FTNO31 ENMI	FTNO31 ENMI	FCUK33 EGGY	FTEU31 BKPR	FTDL33 EDZO
FTNO32 ENMI	FTNO32 ENMI	FCUK34 EGGY	FTHU31 LHBM	
FTNO33 ENMI	FTNO33 ENMI	FCUK35 EGGY	FTPL31 EPWA	
FTNO38 ENMI	FTNO38 ENMI	FCUK36 EGGY	FTRO31 LROM	
FTSN31 ESWI	FTSN31 ESWI	FTDL31 EDZO	FTSQ31 LZIB	
		FTIQ01 ORBI	FTTU31 LTAA	
		FTUK31 EGGY	FTTU32 LTAA	
		FTUK32 EGGY	FTTU33 LTAA	
		FTUK33 EGGY	FTTU34 LTAA	
		FTUK34 EGGY	FTYG31 LYBM	
		FTUK35 EGGY		
		SADL31 EDZO		
		SAIQ01 KWBC		
		SAIQ01 ORBI		
		SAUK31 EGGY		
		SAUK32 EGGY		
		SAUK33 EGGY		
		SAUK34 EGGY		
		SAUK35 EGGY		
		SAUK36 EGGY		
		SAUK37 EGGY		
		SAUK38 EGGY		
		SPUK31 EGBE		
		WSUK// ////		

OEJDYRYX	OIZZYRYR
FTIL31 BICC	SARS41 LOWM

FASID Table MET 2B

EXCHANGE REQUIREMENTS FOR SIGMET, AIRMET, VOLCANIC ASH AND TROPICAL CYCLONE ADVISORIES, AND SPECIAL AIR REPORTS FOR WHICH SIGMET HAS NOT BEEN ISSUED

Since the EUR Region has a requirement for a global set of SIGMET, AIRMET, volcanic ash and tropical cyclone advisories, and special air reports for which SIGMET has not been issued, no FASID Table MET 2B is included in the document. All the foregoing information issued outside the EUR Region should be AFTN addressed as follows:

Source Region Responsible EUR Gateway in AFTN address to be used

AFI	France	LFZZMAFI
MID	**Austria**	**LOZZMMID**
ASIA	United Kingdom	EGZZMASI
CAR	United Kingdom	EGZZMCAR
NAM	United Kingdom	EGZZMNAM
NAT	United Kingdom	EGZZMNAT
PAC	United Kingdom	EGZZMPAC
SAM	United Kingdom	EGZZMSAM

FASID Table MET 2C

EXCHANGE OF OPERATIONAL METEOROLOGICAL INFORMATION DURING THE PILGRIMAGE SEASON

EXPLANATION OF THE TABLE

Column

1 Name of the State in which the operational meteorological information should be available.

2 Location from which, or related to which, the operational meteorological information refers.

3 TF – Aerodrome forecasts X: Seasonal requirement

4 RF – Route forecasts

To be available in	From or related to	Information required	
		TF	RF
1	2	3	4
SAUDI ARABIA	ABIDJAN	X	
	ACCRA	X	
	AKTYUBINSK	X	
	ALGER (ROUTE/RUTA		X
	CASABLANCA-TRIPOLI)	X	
	ALMATY	X	
	ASKHABAT	X	
	BAMAKO	X	
	BANGUI	X	
	BRAZZAVILLE		X
	CAIRO (ROUTE/RUTA TRIPOLI-JEDDAH)	X	
	CONAKRY	X	
	COTONOU	X	
	DAKAR	X	
	DOUALA	X	
	DUSHANBE		X
	KHARTOUM (ROUTE/RUTA KHARTOUM-GENEINA)	X	
	KYIV	X	
	NOUADHIBOU	X	
	OUAGADOUGOU	X	
	SAL ISLAND	X	
	SAMARKAND		
	TASHKENT		

FASID Table MET 4A

REGIONAL OPMET BULLETIN EXCHANGE (ROBEX) SCHEME – COLLECTION AREAS FOR AERODROME FORECASTS

EXPLANATION OF THE TABLE

Column

1 Location of the TAF collection centre

2 Aerodromes for which aerodrome forecasts in the TAF code form are collected

TAF Collection Centre	Collection Area
BAHRAIN	ABU DHABI AL AIN BAHRAIN DAMMAM DOHA DUBAI FUJAIRAH KUWAIT MUSCAT RAS AL KHAIMAH SALALAH SHARJAH
BEIRUT	AMMAN BAGHDAD BASRAH BEIRUT DAMASCUS
JEDDAH	ADEN DHAHRAN JEDDAH MADINAH RIYADH SANA'A
TEHRAN	AHWAZ BANDAR ABBASS ESFAHAN KERMAN MASHHAD SHIRAZ TABRIZ TEHRAN ZAHEDAN

FASID Table MET 4B

REGIONAL OPMET BULLETIN EXCHANGE (ROBEX) SCHEME – COLLECTION AREAS FOR ROUTINE REPORTS AND AIR-REPORTS

EXPLANATION OF THE TABLE

Column

1 Location of the METAR/AIREP collection centre

2 Aerodromes for which aerodrome forecasts in the METAR/AIREP code form are collected

METAR/AIREP Collection Centre	Collection Area
BAGHDAD	BAGHDAD BASRAH
BAHRAIN	ABU DHABI AL AIN BAHRAIN DAMMAM DOHA DUBAI FUJAIRAH KUWAIT MUSCAT RAS AL KHAIMAH SHARJAH
BEIRUT	AMMAN BEIRUT DAMASCUS
JEDDAH	DHAHRAN JEDDAH MADINAH RIYADH SANA'A
TEHRAN	AHWAZ BANDAR ABBASS ESFAHAN KABUL KANDAHAR KERMAN MASHHAD SHIRAZ TABRIZ TEHRAN ZAHEDAN

INTERNATIONAL CIVIL AVIATION ORGANIZATION

Working Draft **of the**

MID SIGMET GUIDE

FIRST EDITION
October 2010

PREPARED BY THE MIDDLE EAST OFFICE OF ICAO

First Edition
October 2010

RECORD OF AMENDMENTS AND CORRIGENDA

Amendments			
No.	Date of issue	Date entered	Entered by

Corrigenda			
No.	Date of issue	Date entered	Entered by

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PART 1. INTRODUCTION

1.1 The main purpose of this document is to provide guidance for standardization and harmonization of the procedures and formats related to the occurrence or expected occurrence of specified hazardous en-route weather conditions which may affect the safety of aircraft and low-level aircraft operations, known as SIGMET information. The guidance is complementary to the Annex 3 standards and recommended practices (SARPS) regarding SIGMET, and to the SIGMET related provisions of the MID ANP/FASID (ICAO Doc 9708).

1.2 In respect of SIGMET messages, this document includes guidance concerning SIGMET messages for significant en-route weather phenomena, volcanic ash and tropical cyclone SIGMET messages.

1.3 ICAO provisions concerning the issuance and dissemination of SIGMET information are contained in:

- Annex 3 - *Meteorological Service for International Air Navigation*, Part I, Chapter 3, paragraphs 3.4 – 3.7, Chapter 7, paragraphs 7.1 – 7.2, and Part II, Appendix 6.

- MID Basic ANP, Part VI and FASID Table MET 1B , MET 2B, MET 3A and MET 3B.

- Annex 11 - *Air Traffic Services*, Chapter 4, paragraph 4.2.1 and Chapter 7, paragraph 7.1.

- PANS – *Air Traffic Management*, Doc 4444, Chapter 9, paragraph 9.1.3.2.

Additional guidance on the SIGMET procedures is contained in the *Manual of Aeronautical Meteorological Practice*, Doc 8896, and *Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services*, Doc 9377.

1.4 The SIGMET Guide is intended mainly to assist the meteorological watch offices (MWOs) in the MID Region in preparing and disseminating SIGMET information. It provides detailed information on the format of SIGMET messages as specified by Annex 3. The explanations of the format are accompanied by a number of examples based on region-specific meteorological phenomena. The guide also provides information regarding the necessary coordination between the MWOs, the ATS units and the pilots, and their respective responsibilities.

1.5 This document is prepared by the ICAO MID Regional Office. It should be reviewed and updated regularly in order to be kept in line with the ICAO SARPs and regional procedures. This first edition of the MID SIGMET Guide takes into account changes to SIGMET provisions resulting from the applicability of Amendment 75 to Annex 3 on 18 November 2010.

PART 2. RESPONSIBILITIES AND COORDINATION

2.1 General

2.1.1 SIGMET is warning information; hence it is of highest priority among other types of OPMET information provided to aviation users. The primary purpose of SIGMET is for in-flight service, which requires timely transmission of the SIGMET messages to pilots by the ATS units and/or through VOLMET and D-VOLMET.

2.1.2 Airlines are the main users of the SIGMET information. Pilots contribute to the effectiveness of the SIGMET service through issuance of special air-reports to the ATS units. Special air-reports are among the most valuable sources of information for the Meteorological Watch Offices (MWO) in the preparation of SIGMET. The ATS units receiving special air-reports should forward them to the associated MWOs without delay.

2.1.3 As seen from the above, the SIGMET service involves MET, ATS and pilots. In order for the SIGMET service to be effective, close coordination between these parties, as well as mutual understanding of the needs and responsibilities, should be maintained.

2.1.4 For the special case of SIGMET for volcanic ash, the MWOs are provided with advisories from the volcanic ash advisory centres (VAAC) designated in the Regional ANP.

2.1.5 SIGMET is also used for the flight planning. This requires global dissemination of SIGMET through the international OPMET data banks and the satellite broadcasts: ISCS and SADIS. SIGMET should also be distributed to the World Area Forecast Centres (WAFC) London and Washington for use in the preparation of the significant weather (SIGWX) forecasts.

2.1.6 In the next paragraphs, the main responsibilities and coordination links between MET, ATS and pilots are described.

2.2 Meteorological Watch Office – responsibilities and procedures related to SIGMET

2.2.1 SIGMET information is issued by the MWO in order to provide timely warning for the occurrence or expected occurrence of specified en-route weather phenomena, affecting the safety of the flight operations in the MWO's area of responsibility (AOR). SIGMET provides information concerning the location, extent, intensity and expected evolution of the specified phenomena.

2.2.2 Information about the provision of SIGMET service, including details on the designated MWO(s), should be included in the State's Aeronautical Information Publication (AIP) as specified in Annex 15, Aeronautical Information Service, Appendix 1, GEN 3.5.8.

2.2.3 All designated MWOs in the MID Region are listed in the FASID Table MET 1B of the MID FASID.

2.2.4 If, for some reason, a MWO is not able to meet its obligations, including the provision of SIGMET, arrangements have to be made by the meteorological authority concerned, that another MWO takes over these responsibilities for a certain period of time. Such delegation of responsibilities has to be notified by a NOTAM and a letter to the ICAO Regional Office.

2.2.5 Since the MWO is normally not a separate administrative unit, but part of the functions of an aerodrome meteorological office or another meteorological office, the meteorological authority concerned should ensure that the MWO obligations and responsibilities are clearly defined and assigned to the unit designated to serve as MWO. The corresponding operational procedures have to be established and the meteorological staff should be trained accordingly.

2.2.6 In preparing SIGMET information, the MWOs have to strictly follow the format determined in Annex 3 (detailed format description is provided in Appendix 6, Table A6-1 of Annex 3). SIGMET should be issued only for those weather phenomena listed in Annex 3 and only when specified criteria for intensity and spatial extent are met.

2.2.7 The MWOs should be adequately equipped in order to identify, analyse and forecast (to the extent required) those phenomena for which SIGMET is required. The MWO should make use of all available sources of information, such as special air-reports, information from meteorological satellites and weather radars, numerical predictions, etc.

2.2.8 On receipt of a special air-report from the associated ACC or FIC, the MWO should :

a) issue the corresponding SIGMET information; or

b) send the special air-report for on-ward transmission in case that the issuance of SIGMET information is not warranted (e.g., the phenomenon reported is of transient nature).

2.2.9 Appropriate telecommunication means have to be available at the MWO in order to ensure timely dissemination of SIGMETs according to a dissemination scheme, which includes transmission to:

- local ATS users;
- aeronautical MET offices within the AOR;
- other MWOs concerned (it should be ensured that SIGMET is sent to all MWOs whose AORs are, at least partly, within the 925 km (500 NM) range from the reported phenomenon);
- centres designated for transmission of VOLMET or D-VOLMET where SIGMET is required for transmission;
- the responsible Regional OPMET Centres (ROC) and international OPMET data banks (it should be arranged through the EUR RODEX scheme, that SIGMETs are sent to the designated OPMET data banks in other ICAO Regions, to the WAFCs and to the uplink stations of SADIS and ISCS);
- responsible TCAC or VAAC (if applicable) according to FASID Table MET 3A and MET 3B respectively; and

2.2.10 In issuing SIGMET for volcanic ash or tropical cyclone, the MWOs should take into consideration the advisory information received from the responsible VAAC or TCAC. In addition to the information received from the VAAC or TCAC, the MWOs may use available complementary information from other reliable sources. In such a case the responsibility for this additional information would lie completely on the MWO concerned.

2.3 Responsibilities of ATS units

2.3.1 Close coordination should be established between the MWO and the corresponding ATS unit (ACC or FIC), including arrangements in order to ensure:

- receipt without delay and display at the relevant ATS units of SIGMETs issued by the associated MWO;

- receipt and display at the ATS unit of SIGMETs issued by MWOs responsible for the neighbouring FIRs /ACCs if these SIGMETs are required according to paragraph 2.3.4 below ; and

- transmission without delay of special air-reports received through voice communication to the associated MWO.

2.3.2 SIGMET information should be transmitted to aircraft with the least possible delay on the initiative of the responsible ATS unit, by the preferred method of direct transmission followed by acknowledgement or by a general call when the number of aircraft would render the preferred method impracticable.

2.3.3 SIGMET information passed to aircraft should cover a portion of the route up to a flying time of two hours ahead of the aircraft.

2.3.4 Air traffic controllers should ascertain whether any of the currently valid SIGMETs may affect any of the aircraft they are controlling, either within or outside their AOR up to a flying time of two hours ahead of the current position of the aircraft. If this is the case, the controllers should transmit the SIGMET promptly to the aircraft-in-flight likely to be affected.

2.3.5 The ATS units have to transmit to the concerned aircraft-in-flight the special air reports received, for which SIGMET has not been issued. Once a SIGMET for the weather phenomenon reported in the special air report is made available, this obligation of the ATS unit expires.

2.4 Responsibilities of pilots

2.4.1 Timely issuance of SIGMET information is largely dependent on the prompt receipt by MWOs of special air reports. That is why, it is essential that pilots prepare and transmit such reports to the ATS units whenever any of the specified en-route conditions are encountered or observed.

2.4.2 It should be emphasized that, even when automatic dependent surveillance (ADS) is being used for routine air reports, pilots should continue to make special air reports.

2.5 Coordination between MWOs and the VAACs and TCACs

2.5.1 Amongst the phenomena for which SIGMET information is required, the volcanic ash clouds and tropical cyclones are of particular importance for the planning of long-haul flights.

2.5.2 Since the identification, analysis and forecasting of volcanic ash and tropical cyclones requires considerable technical and human resource, normally not available at each MWO, the Volcanic Ash Advisory Centres (VAAC) and Tropical Cyclone Advisory Centres (TCAC) have been designated to provided VA and TC advisories to the users and assist the MWOs in the preparation of the forecast part of the SIGMETs for those phenomena. Close coordination should be established between the MWO and its responsible TCAC and/or VAAC.

2.5.3 Information regarding the VAACs and TCACs serving the MID Region with their corresponding areas of responsibility and lists of MWOs to which advisories are to be sent is provided in the MET FASID Tables MET 3A and MET 3B.

2.5.4 TC and VA advisories are required for global exchange through the satellite distribution systems, SADIS and ISCS. They are used by the operators during the pre-flight planning. Nevertheless, it should be emphasized that SIGMET information is still of higher operational status and is required especially for in-flight re-planning. SIGMETs should be transmitted to aircraft-in-flight through voice communication or VOLMET or D-VOLMET thus providing vital information for making in-flight decisions regarding large-scale route deviations due to volcanic ash clouds or tropical cyclones.

PART 3. RULES FOR PREPARATION OF SIGMET INFORMATION

3.1 General

3.1.1 SIGMET information is prepared in abbreviated plain language using approved ICAO abbreviations, a limited number of non-abbreviated words, geographical names and numerical values of self-explanatory nature. All abbreviations and words to be used in SIGMET are given in **Appendix A.**

3.1.2 The increasing use of automated systems for handling MET information by the MET offices and the aviation users makes it essential that all types of OPMET information, including SIGMET, are prepared and transmitted in the prescribed standardized formats. Therefore, the structure and format of the SIGMET message, as specified in Annex 3, Part II, Appendix 6, should be followed strictly by the MWOs. Appendix 6 provides detailed information regarding the content and order of elements in the SIGMET message.

3.1.3 SIGMET is intended for transmission to aircraft in flight either by ATC or by VOLMET or D-VOLMET. Therefore, SIGMET messages should be kept short and clear, without additional descriptive text other than that prescribed in Annex 3.

3.1.4 After issuing a SIGMET, the MWO maintain watch over the evolution of the phenomenon for which the SIGMET has been issued and issue a new updated SIGMET when necessary. VA SIGMETs have to be updated at least every 6 hours.

3.1.5 SIGMETs should be promptly cancelled when the phenomenon is no longer occurring or no longer expected to occur in the MWO's area of responsibility. The SIGMET is understood to cancel itself automatically at the end of its validity period. If the phenomenon persists a new SIGMET message for a further period of validity has to be issued.

3.2 Types of SIGMET

3.2.1 Although Annex 3 provides one general SIGMET format, which encompasses all weather phenomena, it is convenient when describing the structure and format of the messages to distinguish between three types of SIGMET, as follows:

- SIGMET for en-route weather phenomena other than volcanic ash or tropical cyclones (this includes: TS, TURB, ICE, MTW, DS and SS); this SIGMET will be referred as WS SIGMET;
- SIGMET for volcanic ash (VA SIGMET) (to be referred also as WV SIGMET)
- SIGMET for tropical cyclones (TC SIGMET (to be referred also as WC SIGMET)).

3.2.2 The three types of SIGMET can be identified through the data type designator included in the WMO abbreviated heading of the SIGMET message, as explained in the following paragraphs.

3.3 Structure of the SIGMET message

3.3.1 A SIGMET message consists of:

- *WMO heading* – all SIGMETs are preceded by an appropriate WMO heading;
- *First line*, containing location indicators of the relevant ATS unit and MWO, sequential number and period of validity;
- *Meteorological part*, containing meteorological information concerning the phenomenon for which the SIGMET is issued;

3.3.2 The first two parts of the SIGMET message are common for all types of SIGMETs. The content and format of the meteorological part is different depending on the type of SIGMET. Therefore, in the following paragraphs, the meteorological part of the WS, WV and WC types of SIGMET is described separately.

3.4 Format of SIGMET

Note: In the following text, square brackets - [ ] - are used to indicate an optional or conditional element, and angled brackets - < > - for symbolic representation of a variable element, which in the real SIGMETs accepts concrete numerical values.

3.4.1 WMO Header

$T_1T_2A_1A_2$ii CCCC YYGGgg

3.4.1.1 The group **$T_1T_2A_1A_2$ii** is the bulletin identification for the SIGMET message. It is constructed in the following way:

T_1T_2	Data type designator	**WS** – for SIGMET **WV** – for SIGMET for volcanic ash **WC** – for SIGMET for tropical cyclone
A_1A_2	Country or territory designators	Assigned according to Table C1, Part II of Manual on the Global Telecommunication System, Vol I – Global Aspects (WMO - No. 386)
ii	Bulletin number	Assigned on national level according to paragraph 2.3.2.2, Part II of Manual on the Global Telecommunication System, Vol I – Global Aspects (WMO - No. 386)

3.4.1.2 **CCCC** is the ICAO location indicator of the communication centre disseminating the message (could be the same as the MWO).

3.4.1.3 **YYGGgg** is the date/time group, where YY is the date and GGgg is the time in hours and minutes UTC, of the transmission of the SIGMET (normally this is the time assigned by the AFTN centre which disseminates the message).

3.4.1.4 It is recommended to assign a unique WMO header for each SIGMET bulletin per FIR, CTA or UIR. The distinction between different SIGMET bulletins issued by the State's MWOs should be through the respective data type designator (T_1T_2) and bulletin number (ii**).**

Examples (fictitious AHL):

WSOM50 OOMS 231100
WVOM50 OOMS 011400
WCOM50 OOMS 161700

Note: A table with WMO SIGMET headers used by the MID Meteorological Watch Offices is included in ***Appendix B***

3.4.2 First line of SIGMET

CCCC SIGMET [nn]n VALID YYGGgg/YYGGgg CCCC-

3.4.2.1 The meaning of the groups in the first line of the SIGMET is as follows:

CCCC	ICAO location indicator of the ATS unit serving the FIR or CTA to which the SIGMET refers
SIGMET	Message identifier
[nn]n	Daily sequence number (see paragraph 3.4.2.2)
VALID	Period of validity indicator
YYGGgg/YYGGgg	Validity period of the SIGMET given by date/time group of the beginning and date/time group of the end of the period (see paragraph 3.4.2.3)
CCCC-	ICAO location indicator of the MWO originating the message and – (hyphen, without space, to separate the preamble from the text)

3.4.2.2 The numbering of SIGMETs should start every day at 0001 UTC. The sequence number should consist of up to three symbols and may be a combination of letters and numbers, such as:

- 1, 2, …
- 01, 02, …
- A01, A02, …

Examples:

OOMM SIGMET 1 VALID 121100/121500 OOMS-
OEJD SIGMET 01 VALID 231300/231700 OEJD-

Note 1: No other combinations should be used, like "CHARLIE 05" or "NR7".

Note 2: Correct numbering of SIGMET is very important since the number is used for reference in the communication between ATC and pilots and in VOLMET and D-VOLMET.

3.4.2.3 The following has to be considered when determining the validity period:

- the period of validity of WS SIGMET should not exceed 4 hours;
- the period of validity of WV and WC SIGMET should be up to 6 hours;
- in case of a SIGMET for an observed phenomenon the filing time (date/time group in the WMO heading) should be same or close to the date/time group indicating the start of the SIGMET validity period;
- when the SIGMET is issued for an expected (forecast) phenomenon:
  - the beginning of validity period should be the time of expected commencement (occurrence) of the phenomenon;
  - the lead time (the time of issuance of the SIGMET) should be not more than 4 hours before the start of validity period (i.e., expected time of occurrence of the phenomenon); for VA and TC SIGMETs the lead time may be up to 12 hours.

3.4.2.4 The period of validity is the period during which the SIGMET is valid for transmission to aircraft in flight.

Examples:

1. SIGMET for an observed phenomenon:

WSSD20 OEJD 231300
OEJD SIGMET 01 VALID 231300/231700 OEJD-

2. SIGMET for a forecast phenomenon (expected time of occurrence 1530)

WSSD20 OEJD 231300
OEJD SIGMET 01 VALID 231530/231930 OEJD-

3.4.3 *Format of the meteorological part of SIGMET messages for weather phenomena other than VA and TC*

3.4.3.1 The meteorological part of a SIGMET consists of eight elements as shown in the table below.

Start of the second line of the message

1	2	3	4	5	6
Location indicator of the FIR/UIR or CTA	Name of the FIR or UIR or FIR/UIR or CTA	Description of the phenomenon	Observed or forecast	Location	Level
<CCCC>	<name> FIR [UIR, FIR/UIR, CTA]	<Phenomenon>	OBS [AT <GGggZ>] or FCST [AT <GGggZ>]	Geographical location of the phenomenon given by coordinates, or geographical objects, or location indicators	FL<nnn/nnn> or [SFC/]FL<nnn> or [SFC/]<nnnn>M or [SFC/]<nnnn>FT or TOP FL<nnn> or [TOP] ABV FL<nnn>

7	8
Movement or expected movement	Changes in intensity
MOV <direction, speed> KMH[KT], or STNR	INTSF or WKN or NC

3.4.3.1.1 Location indicator and name of the FIR, UIR, FIR/UIR or CTA

location indicator <name> FIR
or
location indicator <name> UIR
or
location indictor <name> FIR/UIR
or
location indicator <name> CTA

Example:

OOMM MUSCAT FIR

3.4.3.1.2 Phenomenon

The description of the phenomenon consists of a qualifier and a phenomenon abbreviation. SIGMET shall be issued only for the following phenomena (with only one phenomenon in each SIGMET):

at cruising levels (irrespective of altitude):

- thunderstorms – if they are OBSC, EMBD, FRQ or SQL with or without hail;
- turbulence – only SEV
- icing – only SEV with or without FZRA
- mountain waves – only SEV
- dust storm – only HVY
- sand storm – only HVY
- radioactive cloud – RDOACT CLD

The appropriate abbreviations and combinations thereof, and their meaning are given in **Appendix C**.

3.4.3.1.3 Indication if the phenomenon is observed or forecast

OBS [AT <GGggZ>]
or
FCST [AT <GGggZ>]

The indication whether the information is observed or forecast is given by the abbreviations OBS and FCST. OBS and FCST are optionally followed by a time group in the form AT GGggZ, where GGgg is the time of the observation or forecast in hours and minutes UTC. If the exact time of the observation or forecast is not known the time is not included.

Examples:

OBS AT 0140Z
FCST AT 0200Z

3.4.3.1.4 Location of the phenomenon

The location of the phenomenon is given with reference to geographical coordinates (latitude and longitude) or with reference to geographical features well known internationally. The MWOs should try to be as specific as possible in reporting the location of the phenomenon and, at the same time, to avoid overwhelming geographical information, which may be difficult to process or perceive.

The following are the most common ways to describe the location of the phenomenon:

- Indication of a part of the FIR with reference to latitude:
  N OF or S OF <Nnn[nn]> or <Snn[nn]>

- indication of a part of the FIR with reference to a longitude:
  E OF or W OF <Ennn[nn]> or <Wnnn[nn]>

- indication of a part of the FIR with reference to a latitude and longitude:
  any combination of the above two cases;

- with reference to a location with ICAO location indicator CCCC (normally, this should be the case in a SIGMET based on a special air-report in which the reported phenomenon is given with reference to an airport or another object with an ICAO location indicator CCCC), or

- with reference to geographical features well known internationally.

More details on reporting of the location of the phenomenon are given in Appendix 6 to Annex 3 and in **Appendix D** to this Guide.

3.4.3.1.5 Flight level or altitude and extent

[SFC/]FL<nnn>
or FL<nnn/nnn>
or [SFC/]<nnnn>M
or [SFC/]<nnnn>FT
or TOP FL<nnn>
or [TOP] ABV FL<nnn>

The location or extent of the phenomenon in the vertical is given by one or more of the above abbreviations, as follows:

- reporting of single level – **FL<nnn>**;
- reporting of a layer – **SFC/FL<nnn>, SFC/<nnnn>M, or SFC/<nnnn>FT**, where the lower level is the surface and the upper level is a flight level, an altitude in metres or an altitude in feet respectively;
- reporting a layer using flight levels – **FL<nnn/nnn>**, where the lower flight level is reported first; this is used particularly in reporting turbulence and icing;
- reporting the top of a phenomenon with reference to one flight level – **TOP FL<nnn>;**
- reporting a phenomenon with reference to one flight level and the abbreviation ABV – **ABV FL<nnn>;**
- reporting the top of a phenomenon with reference to one flight level and the abbreviation ABV – **TOP ABV FL<nnn>;**

Examples:

EMBD TS … TOP ABV FL340
SEV TURB … FL180/210
SEV ICE … SFC/FL150
SEV MTW … FL090

3.4.3.1.6 Movement

MOV <direction> <speed> KMH[KT]
or
STNR

Direction of movement is given with reference to one of the sixteen points of compass. Speed of movement is given in KMH or KT. The abbreviation STNR is used if no significant movement is expected.

Examples:

MOV NW 30KMH
MOV NNW 30KMH
MOV E 25KT

3.4.3.1.7 Expected changes in intensity

The expected evolution of the phenomenon's intensity is indicated by one of the following abbreviations:

INTSF – intensifying
WKN – weakening
NC – no change

3.4.4 Structure of the meteorological part of VA SIGMET

3.4.4.1 The general structure of the meteorological part of the SIGMET message is given in the table below:

Start of the second line of the message

1	2	3		4
Location indicator of the FIR/UIR or CTA	Name of the FIR or UIR or FIR/UIR or CTA	Volcano		Volcanic ash cloud
		Name	Location	
<CCCC>	<name> FIR [UIR, FIR/UIR, CTA]	[VA ERUPTION] [MT <name>]	[PSN <position>]	VA CLD OBS [AT <GGggZ>] or VA CLD FCST [AT GGggZ]

5			6
Extent of the cloud			Expected movement
Location	Vertical	Horizontal	
Location (referring to latitude and longitude (in degrees and minutes) or locations or geographic features well known internationally)	FL<nnn/nnn>	[APRX <nnn>KM BY <nnn>KM] or [APRX <nnn>NM BY <nnn>NM]	MOV <direction> <speed>

7	
Volcanic ash cloud forecast at the end of the period of validity	
FCST time	Position
FCST <GGggZ>	VA CLD APRX <lat,lon> - <lat,lon> - …

3.4.4.2 Name and location of the volcano and/or indicator for VA cloud

[VA ERUPTION] [MT <name>] [PSN <lat,lon>] VA CLD
or
VA CLD

3.4.4.2.1 The description of the volcano injecting volcanic ash consists of the following elements:

- the term **VA ERUPTION** is used when the SIGMET is issued for a known volcanic eruption;
- geographical/location information:
  i. if the name of the volcano is known, it is given by the abbreviation **MT** – mountain, followed by the name, e.g. **MT RABAUL**
  ii. the position of the volcano is given by the abbreviation **PSN**, followed by the latitude and longitude in degrees and minutes, e.g. **PSN N3520 E09040**
- this section of the message ends with the abbreviation **VA CLD** – volcanic ash cloud.

3.4.4.2.2 If the FIR is affected by a VA cloud with no information about the volcanic eruption which generated the cloud, only the abbreviation **VA CLD** shall be included in the SIGMET.

3.4.4.3 Time of VA CLD observation or forecast

VA CLD OBS [AT <GGgg>Z]
or
VA CLD FCST [AT <GGgg>Z]

The time of observation is taken from the source of the observation – satellite image, special air- report, report from a ground volcano logical station, etc. If the VA cloud is not yet observed over the FIR but the volcanic ash advisory received from the responsible VAAC indicates that the cloud is affecting the FIR after certain time, SIGMET shall be issued, and the abbreviation VA CLD FCST [AT <GGgg>Z] shall be used.

Examples:

VA CLD OBS AT 0100Z
VA CLD FCST AT 1200Z

3.4.4.4 Level and extent of the volcanic ash cloud

<P1(lat,lon) - P2(lat,lon) - … > FL<nnn/nnn> [APRX <nnn>KM BY <nnn>KM] or
<P1(lat,lon) - P2(lat,lon) - … > FL<nnn/nnn> [APRX <nnn>NM BY <nnn>NM]

<P1(lat,lon) – P2(lat,lon) - … >	Approximate description of the VA cloud by a number of points given with their geographical coordinates[1]; the points shall be separated by hyphen
FL<nnn/nnn>	The layer of the atmosphere where the VA cloud is situated, given by two flight levels from the lower to the upper boundary of the cloud
[APRX <nnn>KM BY <nnn>KM] or [APRX <nnn>NM BY <nnn>NM]	Approximate horizontal extent of the VA cloud in KM or NM

If the VA cloud spreads over more than one FIR, separate SIGMETs shall be issued by all MWOs whose FIRs are affected. In such a case, the description of the volcanic ash cloud by each MWO should encompass the part of the cloud, which lies over the MWO's area of responsibility. The MWOs should try to keep the description of the volcanic ash clouds consistent by checking the SIGMET messages received from the neighbouring MWOs.

Examples:

N0100 E09530 – N1215 E11045 FL100/180 APRX 10KM BY 50KM

S0530 E09300 – N0100 E09530 – N1215 E11045 FL 150/210

3.4.4.5 Movement or expected movement of the VA cloud

MOV <direction> <speed>

The direction of movement is given by the abbreviation **MOV** – moving, followed by one of the sixteen points of compass: N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW. The speed of movement is given in KMH or KT.

Examples:

MOV E 35 KMH
MOV SSW 20 KT
STNR

[1] The format of geographical coordinates reporting in SIGMET is given in **Appendix D.**

3.4.4.6 Forecast position of the VA cloud at the end of the validity period of the SIGMET message

FCST <GGggZ> VA CLD APRX <P1(lat,lon) - P2(lat,lon) - … >

3.4.4.6.1 The **GGggZ** group should indicate the end of the validity period given in the first line of the SIGMET message. The description of the expected position of the volcanic ash cloud is given by a number of points forming a simplified geometrical approximation of the cloud.

3.4.4.6.2 In describing the VA cloud, up to four different layers can be used, indicated by flight levels in the form FL<nnn/nnn>. The use of more than one level is necessary when the wind direction changes with height which causes the VA cloud to spread into different directions at different heights.

3.4.5 ***Structure of the meteorological part of TC SIGMET***

3.4.5.1 The general structure of the meteorological part of the TC SIGMET is given in the table below:

Start of the second line of the message

1	2	3	4		5
Location indicator of the FIR/UIR or CTA	Name of the FIR or UIR or FIR/UIR or CTA	TC name	Observed or forecast		Extent
			Time	Location of TC centre	
<CCCC>	<name> FIR [UIR, FIR/UIR, CTA]	TC <name> or TC NN	OBS [AT <GGgg>Z] or FCST [AT <GGgg>Z]	<lat,lon>	CB TOP [ABV or BLW] FL<nnn> WI <nnn> KM[NM] OF CENTRE

6	7	8
Expected movement	Intensity change	Forecast of the centre position at the end of the validity period
MOV <direction> <speed> KMH[KT] or STNR	INTSF or WKN or NC	FCST <GGgg>Z TC CENTRE <lat,lon>

3.4.5.2 Name of the tropical cyclone

TC <name>
TC NN

Note: NN used for unnamed tropical cyclones.

The description of the tropical cyclone consists of the abbreviation TC followed by the international name of the tropical cyclone given by the corresponding WMO RSMC. If the TC has not yet been given a name, the abbreviation NN shall be used.

Examples:

TC GLORIA
TC 04B
TC NN

3.4.5.3 Time of observation or indication of forecast

OBS [AT <GGgg>Z]
or
FCST [AT <GGgg>Z]

The time in UTC is given in hours and minutes, followed by the indicator Z. Normally, time is taken from own observations or from a TC advisory received from the responsible TCAC. If the TC is not yet observed in the FIR but the tropical cyclone advisory received from the responsible TCAC, or any other TC forecast used by the MWO, indicates that the TC is going to affect the FIR within the next 12 hrs, SIGMET should be issuedand the abbreviation FCST should be used.

Examples:
OBS AT 2330Z
FCST AT 1400Z

3.4.5.4 Location of the TC centre

<location>

The location of the TC centre is given by its lat, lon coordinates in degrees and minutes.

Examples:

N1535 E14230

3.4.5.5 Vertical and horizontal extent of the CB cloud formation around TC centre

CB TOP [ABV or BLW] <FLnnn> WI <nnnKM or nnnNM> OF CENTRE

Examples:

CB TOP ABV FL450 WI 200NM OF CENTRE
CB TOP FL500 WI 250KM OF CENTRE

3.4.5.6 Movement or expected movement

MOV <direction> <speed>KMH[KT]
or
STNR

Direction of movement is given with reference to one of the sixteen points of compass. Speed is given in KMH or KT. The abbreviation STNR is used if no significant movement is expected.

Examples:

MOV NW 30KMH
MOV NNW 30KMH
MOV E 25KT

3.4.5.7 Intensity change

The expected change of the intensity of the tropical cyclone is indicated by one of the following abbreviations:

INTSF – intensifying
WKN – weakening
NC – no change

3.4.5.8 Forecast location of the TC centre at the end of the validity period of the SIGMET Message

FCST <GGgg>Z TC CENTRE <location>

Normally, the time given by GGggZ should be the same as the end of validity period indicated in the first line of the SIGMET message. Since the period of validity is up to 6 hours (normally, 6 hours), this is a 6-hour forecast of the position of the TC centre.

The location of the TC centre is given by its lat, lon coordinates following the general rules of reporting lat, lon information provided in **Appendix D** to this Guide.

Examples:

FCST 1200Z TC CENTRE N1430 E12800

3.4.6 ***Cancellation of SIGMET***

3.4.6.1 If, during the validity period of a SIGMET, the phenomenon for which the SIGMET had been issued is no longer occurring or no longer expected, this SIGMET should be cancelled by the issuing MWO. The cancellation is done by issuing the same type of SIGMET with the following structure:

- WMO heading with the same data type designator;
- first line, including the next sequence number followed by a new validity period, and
- second line, which contains the location indicator and name of the FIR or CTA, the combination CNL SIGMET, followed by the sequential number of the original SIGMET and its validity period.

Examples:

1. Cancellation of a WS or WC SIGMET with the following first line

WSXY31 YUSO 101200
YUDD SIGMET 5 VALID 101200/101600 YUSO-
YUDD SHANLON FIR …

Cancellation SIGMET:

WSXY31 YUSO 101430
YUDD SIGMET 6 VALID 101430/101600 YUSO-
YUDD SHANLON FIR CNL SIGMET 5 101200/101600=

2. Cancellation of a VA SIGMET

WVXY31 YUSO 131518
YUDD SIGMET 03 VALID 131515/132115 YUSO-
YUDD SHANLON FIR …

Cancellation SIGMET:

WVXY31 YUSO 132000
YUDD SIGMET 04 VALID 132000/132115 YUSO-
YUDD SHANLON FIR CNL SIGMET 03 13151500/132115 VA MOV TO YUDO FIR=

APPENDIX A

List of the abbreviations and decode used in SIGMET

Abbreviation	Decode
ABV	Above
AND*	And
APRX	Approximate or approximately
AT	At *(followed by time)*
BLW	Below
BY*	By
CB	Cumulonimbus
CENTRE*	Centre *(used to indicate tropical cyclone centre)*
CLD	Cloud
CNL	Cancel *or* cancelled
CTA	Control area
DS	Duststorm
E	East *or* eastern longitude
EMBD	Embedded in layer *(to indicate CB embedded in layers of other clouds)*
ENE	East-Northeast
ERUPTION*	Eruption *(used to indicate volcanic eruption)*
ESE	East=Southeast
FCST	Forecast
FIR	Flight information region
FL	Flight level
FRQ	Frequent
FZRA	Freezing rain
GR	Hail
HVY	Heavy *(used to indicate intensity of weather phenomena)*
ICE	Icing
INTSF	Intensify *or* intensifying
ISOL	Isolated
KM	Kilometres
KMH	Kilometres per hour
KT	Knots
LINE	Line
MOD	Moderate *(used to indicate intensity of weather phenomena)*
MOV	Move *or* moving *or* movement
MPS	Metres per second
MT	Mountain
MTW	Mountain waves
N	North *or* northern latitude
NC	No change
NE	North-east
NM	Nautical miles
NNE	North-Northeast
NNW	North-Northwest
NW	North-west
OBS	Observe *or* observed *or* observation
OBSC	Obscure *or* obscured *or* obscuring
OCNL	Occasional *or* occasionally
OF*	Of … *(place)*
PSN	Position
RA	Rain
RDOACT*	Radioactive

Abbreviation	Decode
S	South *or* southern latitude
SE	South-east
SEV	Severe *(used e.g. to qualify icing and turbulence reports)*
SIGMET	Information concerning en-route weather phenomena which may affect the safety of aircraft operations
SQL	Squall line
SS	Sandstorm
SSE	South-Southeast
SSW	South-Southwest
STNR	Stationary
SW	South-west
TC	Tropical cyclone
TO	To … *(place)*
TOP	Cloud top
TS	Thunderstorm
TURB	Turbulence
UIR	Upper flight information region
VA	Volcanic ash
VALID*	Valid
W	West *or* western longitude
WI	Within
WID	Width
WNW	West-Northwest
WSW	West-Southwest
Z	Coordinated Universal Time *(used in meteorological messages)*

** not in the ICAO Doc 8400, ICAO Abbreviations and Codes*

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APPENDIX B

List of MID SIGMET (WS, WV and WC) headers

State	MWO name (Doc 7910)	MWO Loc. Ind.	WS AHL	WV AHL	WC AHL	FIR Name (Doc 7910)	FIR Loc. Ind.	ATSU serving the FIR
BAHRAIN	BAHRAIN INTERNATIONAL	OBBI	WS[AAii] [CCCC]	WV[AAii] [CCCC]	WC[AAii] [CCCC]	BAHRAIN	OBBB	OBBB
EGYPT	CAIRO/INTL	HECA	WS[AAii] [CCCC]	WV[AAii] [CCCC]	N/A	CAIRO	HECC	HECC
IRAN (ISLAMIC REPUBLIC OF)	TEHRAN/MEHRABAD INTL	OIII	WS[AAii] [CCCC]	WV[AAii] [CCCC]	WC[AAii] [CCCC]	TEHRAN	OIIX	OIIX
IRAQ	BAGHDAD INTERNATIONAL AIRPORT	ORBI	WS[AAii] [CCCC]	WV[AAii] [CCCC]	N/A	BAGHDAD	ORBB	ORBS
~~ISRAEL~~	~~TEL AVIV/BEN GURION AIRPORT~~	~~LLBG~~	~~WS[AAii] [CCCC]~~	~~WV[AAii] [CCCC]~~	~~N/A~~	~~TEL AVIV~~	~~LLLL~~	~~LLAD~~
JORDAN	AMMAN/QUEEN ALIA	OJAI	WS[AAii] [CCCC]	WV[AAii] [CCCC]	N/A	AMMAN	OJAC	OJAC
KUWAIT	KUWAIT/INTL AIRPORT	OKBK	WSKW10 OKBK	WVKW10 OKBK	WCKW10 OKBK	KUWAIT	OKAC	OKAC
LEBANON	BEIRUT/BEIRUT INTL	OLBA	WS[AAii] [CCCC]	WV[AAii] [CCCC]	N/A	BEIRUT	OLBB	OLBA
OMAN	MUSCAT/SEEB INTL	OOMS	WS[AAii] [CCCC]	WV[AAii] [CCCC]	WC[AAii] [CCCC]	MUSCAT	OOMM	OOMM
SAUDI ARABIA	JEDDAH/KING ABDULAZIZ INTL	OEJN	WSSD20 OEJD	WVSD20 OEJD	WCSD20 OEJD	JEDDAH	OEJD	OEJD
SYRIAN ARAB REPUBLIC	DAMASCUS/INTL	OSDI	WS[AAii] [CCCC]	WV[AAii] [CCCC]	N/A	DAMASCUS	OSTT	OSDI
UNITED ARAB EMIRATES	ABU DHABI INTERNATIONAL	OMAA	WS[AAii] [CCCC]	WV[AAii] [CCCC]	WC[AAii] [CCCC]	EMIRATES	OMAE	OMAE
YEMEN	SANAA/INTL	OYSN	WS[AAii] [CCCC]	WV[AAii] [CCCC]	WC[AAii] [CCCC]	SANAA	OYSC	OYSN

Note 1: Qatar is not indicated in the above table, since it has no FIR area if responsibility.

Note 2: The AHL for each of the WS, WV and WC SIGMETs (highlighted above) is to be completed based on information provided by the State(s) concerned following consultation.

APPENDIX C

Meteorological phenomena to be reported by SIGMET

Phenomenon	Description	Meaning
Thunderstorm (TS)	OBSC[2] TS EMBD[3] TS FRQ[4] TS SQL[5] TS OBSC TSGR EMBD TSGR FRQ TSGR SQL TSGR	Obscured thunderstorm(s) Embedded thunderstorm(s) Frequent thunderstorm(s) Squall line thunderstorm(s) Obscured thunderstorm(s) with hail Embedded thunderstorm(s) with hail Frequent thunderstorm(s) with hail Squall line thunderstorm(s) with hail
Tropical cyclone (TC)	TC (+ TC name)	Tropical cyclone (+ TC name)
Turbulence (TURB)	SEV TURB[6]	Severe turbulence
Icing (ICE)	SEV ICE SEV ICE (FZRA)	Severe icing Severe icing due to freezing rain
Mountain wave (MTW)	SEV MTW[7]	Severe mountain wave
Duststorm (DS)	HVY DS	Heavy duststorm
Sandstorm (SS)	HVY SS	Heavy sandstorm
Volcanic ash cloud (VA)	VA (+ volcano name, if known)	Volcanic ash (+ volcano name)
Radioactive cloud	RDOACT CLD	Radioactive cloud

Notes:

1. Only one of the weather phenomena listed should be selected and included in each SIGMET

*2. Obscured (**OBSC**) indicates that the thunderstorm is obscured by haze or smoke or cannot be readily seen due to darkness*

*3. Embedded (**EMBD**) – indicates that the thunderstorm is embedded within cloud layers and cannot be readily recognized*

*4. Frequent (**FRQ**) indicates an area of thunderstorms within which there is little or no separation between adjacent thunderstorms with a maximum spatial coverage greater than 75% of the area affected, or forecasts to be affected, by the phenomenon (at a fixed time or during the period of validity)*

*5. Squall line (**SQL**) indicates thunderstorms along a line with little or no space between individual clouds*

*6. Severe (**SEV**) turbulence (**TURB**) refers only to:*
- *low-level turbulence associated with strong surface winds;*
- *rotor streaming;*
- *turbulence whether in cloud or not in cloud (CAT) near to jet streams.*
- *Turbulence is considered severe whenever the peak value of the cube root of the eddy dissipation rate (EDR) exceeds 0.7.*

*7. A mountain wave (**MTW**) is considered:*
- *severe – whenever an accompanying downdraft of 3.0 m/s (600 ft/min) or more and/or severe turbulence is observed or forecasted..*

APPENDIX D

Guidelines for reporting geographical coordinates in SIGMET

When reporting geographical coordinates of points in SIGMET the following should apply:

1. Each point is represented by latitude/longitude coordinates in whole degrees or degrees and minutes in the form:

N(S)nn[nn] W(E)nnn[nn]

Note: There is a space between the latitude and longitude value.

Examples:

N3623 W04515

S1530 E12500

N42 E023

2. In describing lines or polygons, the latitude, longitude coordinates of the respective points are separated by the combination space-hyphen-space, as in the following examples:

S0530 E09300 – N0100 E09530 – N1215 E11045 – S0820 E10330

S05 E093 – N01 E095 – N12 E110 – S08 E103

Note1: It is not necessary to repeat the first point when describing a polygon.

Note 2: In the case of the same phenomenon covering more than one area within the FIR, these elements may be repeated, as necessary.

3. When describing a volcanic ash cloud approximate form and position, a limited number of points, which form a simplified geometric figure (a line, or a triangle, or quadrangle, etc.) should be used in order to allow for a straightforward interpretation by the user.
