



International Civil Aviation Organization

**FOURTEENTH MEETING OF THE
COMMUNICATIONS/NAVIGATION/SURVEILLANCE
AND METEOROLOGY SUB-GROUP OF
APANPIRG (CNS/MET SG/14)**



Jakarta, Indonesia, 19 – 22 July 2010

Agenda Item 11: Implementation of SIGMET and warnings:

2) SIGMET and warnings implementation issues

ADJUSTING OF METEOROLOGICAL WATCH OFFICES FOR TWO FIRs IN CHINA

(Presented by China)

SUMMARY

This paper discusses the adjusting of Meteorological Watch Offices for Kunming and Lanzhou FIRs in China and proposes appropriate action taken by related States and amendment to related contents of ICAO documents.

This paper relates to:

Strategic Objectives:

- A. Safety – Enhance global civil aviation safety
- D. Efficiency – Enhance the efficiency of aviation operations

Global Plan Initiatives:

- GPI-18 Aeronautical Information
- GPI-19 Meteorological Systems

1. Introduction

1.1 In Annex 3 to the Convention on International Civil Aviation, Meteorological Service for International Air Navigation, paragraph 3.4.1 describes that “A Contracting State, having accepted the responsibility for providing air traffic services within a flight information region or a control area, shall establish one or more meteorological watch offices, or arrange for another Contracting State to do so”.

19/07/10

1.2 There are nine flight information regions (FIR) in mainland China: Beijing (ZBPE) FIR, Shenyang (ZYSH) FIR, Shanghai (ZSHA) FIR, Guangzhou (ZGZU) FIR, Wuhan (ZHWH) FIR, Sanya (ZJSA) FIR, Kunming (ZPKM) FIR, Lanzhou (ZLHW) FIR and Urumqi (ZWUQ) FIR (Fig. 1). China has been maintaining one or more meteorological watch offices (MWO) for each FIR in accordance with the provisions of paragraph 3.4.1 of Annex 3 (Fig. 2).

1.3 Under the coordination of ICAO Asian/Pacific office, a Letter of Agreement (LOA) on the issuance of SIGMET for the Phnom Penh (VDPP) FIR was reached between the Air Traffic Management Bureau (ATMB) of the Civil Aviation Administration of China (CAAC) and the Flight Operation and Safety Department (FOSD) of the State Secretariat of Civil Aviation of Cambodia (SSCA) in May 2009. As described by the LOA, SIGMETs for the VDPP FIR have been issued by the Kunming (ZPPP) MWO on behalf of Cambodia since 1 June 2009.



Fig. 1 FIRs and their covering area in China

MWO location	ICAO location indicator	WMO SIGMET Headings			FIR/ACC served	Remarks
		WS	WC	WV	ICAO location indicator	
1	2	3	4	5	6	7
CHINA						
BEIJING/Capital	ZBAA	WSI33	WCI33	WVI33	ZBPE	
GUANGZHOU/Baiyun	ZGGG	WSI35	WCI35	WVI35	ZGZU	
HAIKOU/Meilan	ZJHK	WSI35	WCI35	WVI35	ZJSA	
KUNMING/Wujiaba	ZPPP	WSI36		WVI36	ZPKM	
CHENGDU/Shuangliu	ZUUU					
LANZHOU/Chongchuan	ZLLL	WSI37		WVI37	ZLHW	
XI'AN/Xianyang	ZLXY					
SHANGHAI/Hongqiao	ZSSS	WSI34	WCI34	WVI34	ZSHA	
SHENYANG/Taoxian	ZYTX	WSI38		WVI38	ZYSH	
TAIBEI/Taipei Intl	RCTP	WSI31	WCI31	WVI31	RCTP	
URUMQI/Diwopu	ZWWW	WSI39		WVI39	ZWUQ	
WUHAN/Tianhe	ZHHH	WSI45		WVI45	ZHWH	
HONG KONG/Hong Kong Intl	VHHH	WSS20	WCSS20	WVSS20	VHHK	

Fig. 2 MWOs and the corresponding area served

1.4 In China, there are seven regional ATMBs around the country and each covers a FIR except Central-south ATMB which covers three FIRs. Under each of the seven regional ATMB, a regional meteorological center has been established. Regional meteorological centers provide aeronautical meteorological service for the area covered by the corresponding regional ATMB. They also function as aerodrome meteorological offices for the aerodrome where they are located.

1.5 At present, five of the seven regional meteorological centers, except for Chengdu and Xi'an meteorological centers, also act as the MWOs for the corresponding FIR. Four aerodrome meteorological offices including Kunming (ZPPP) and Lanzhou (ZLLL) aerodrome meteorological offices function as MWOs.

2. Discussion

2.1 Along with the rapid growth of the air traffic, the flight flux among one FIR has been rising greater and greater, and the significant weather, such as thunderstorms and windshear, have been becoming the vital cause that affect the regularity of air navigation adversely. China is aware of the importance of the operation of MWOs and making more effect to enhance the capacity and function of MWOs.

2.2 In China, a regional meteorological center, which has advantages in personnel, technology and resources compared with an aerodrome meteorological office. Recent restructure and future plan of the development of the aeronautical meteorological service in China stress the development of the regional meteorological centers. Considering all this, we believe that a regional meteorological center will better perform as an MWO.

2.3 Chengdu (ZUUU) MWO (i.e. Chengdu meteorological center) is assigned as the MWO serving for Kunming (ZPKM) FIR to from 0000 (local time) 1 September, 2010 and Kunming (ZPPP) MWO will stop function from then on (Fig. 2).

2.4 Xi'an (ZLXY) MWO (i.e. Xi'an meteorological center) is assigned as the MWO serving for Lanzhou (ZPHW) FIR to from 0000 (local time) 1 September, 2010 and Lanzhou (ZLLL) MWO will stop function from then on (Fig. 2).

2.5 The SIGMETs for the Phnom Penh (VDPP) FIR will be issued by Chengdu (ZUUU) MWO if the FOSD of SSCA Cambodia agrees. The new VDPP SIGMET format is attached in ATTACHMENT 5 to this paper.

2.6 MWOs of adjacent FIRs are invited to pay attention to this adjustment and to exchange SIGMET information with ZUUU or ZLXY MWO respectively from 0000 (local time) 1 September, 2010.

2.7 The related contents of Asia/Pacific Regional SIGMET Guide, ROBEX Handbook, Asia/Pacific OPMET Data Banks ICD and SADIS User Guide are proposed to be amended (ATTACHMENTS 1-4).

3. Action by the Meeting

The Meeting is invited to:

- 3.1 ask the related states to take appropriate actions;
- 3.2 amend related contents of Asia/Pacific Regional SIGMET Guide,
- 3.3 amend related contents of ROBEX handbook;

3.4 amend related contents of Asia/Pacific OPMET Data Banks ICD; and

3.5 amend related contents of SADIS User Guide.

ATTACHMENT 1

Proposed amendment to Asia/Pacific Regional SIGMET Guide

APPENDIX A

TABLE MET 1B - METEOROLOGICAL WATCH OFFICES

MWO location	ICAO loc.	Ind.	Area served		Remarks
			Name	ICAO loc. Ind.	
1	2		3	4	5
CHINA					
BEIJING/Capital	ZBAA		Beijing FIR and SRR	ZBPE	
GUANGZHOU/Baiyun	ZGGG		Guangzhou FIR and SRR	ZGZU	
KUNMING/Wujiaba	ZPPP				
Chengdu/Shuangliu	ZUUU		Kunming FIR and SRR	ZPKM	
LANZHOU/Zhongchuan	ZLLL				
XI'AN/Xianyang	ZLXY		Lanzhou FIR and SRR	ZLHW	
HAIKOU/Meilan	ZJHK		Sanya FIR and SRR	ZJSA	
SHANGHAI/Hongqiao	ZSSS		Shanghai FIR and SRR	ZSHA	
SHENYANG/Taoxian	ZYTX		Shenyang FIR and SRR	ZYSH	
TAIBEI/Taipei Intl	RCTP		Taipei FIR and SRR	RCAA	
URUMQI/Diwopu	ZWWW		Urumqi FIR and SRR	ZWUQ	
WUHAN/Tianhe	ZHHH		Wuhan FIR and SRR	ZHWH	
HONG KONG/Hong Kong Intl	VHHH		Hong Kong FIR and SRR	VHHK	

APPENDIX C

FASID Table MET 3B
VOLCANIC ASH ADVISORY CENTRES

VAAC	AREA OF RESPONSIBILITY				MWO TO WHICH INFORMATION IS TO BE SENT	ACC/FIC TO WHICH INFORMATION IS TO BE SENT		
NAME	ICAO LOC. IND.	STATE	ICAO REGION	Name	ICAO LOC. IND.	Name	ICAO LOC. IND.	
1	2	3	4	5	6	7	8	9
Tokyo (Japan)	RJTD	N60 to N10 – and from E90 to Oakland Oceanic and Anchorage	China	APAC	Beijing	ZBAA	Beijing	ZBPE
		Oceanic and Continental FIR boundaries minus the region bounded by N10, N20, E90 and E100	China	APAC	Guangzhou	ZGGG	Huhhot	ZBHH
			China	APAC	Guangzhou	ZGGG	Taiyuan	ZBYN
			China	APAC	Guangzhou	ZGGG	Guangzhou	ZGZU
			China	APAC	Guangzhou	ZGGG	Changsha	ZGCS
			China	APAC	Guangzhou	ZGGG	Guilin	ZGKL
			China	APAC	Guangzhou	ZGGG	Nanning	ZGNN
			China	APAC	HAIKOU/Meilan	ZJHK	Sanya	ZJSA
			China	APAC	Hong Kong	VHHH	Hong Kong	VHHK
			China	APAC	Kunming	ZPPP	Kunming	ZPKM
			China	APAC	Chengdu	ZUUU	Chengdu	ZUDS
			China	APAC	Chengdu	ZUUU	Chongqing	ZUCK
			China	APAC	Lanzhou	ZLLL	Lanzhou	ZLAN
			China	APAC	Xi'an	ZLXY	Xi'an	ZLSN
			Cambodia	APAC	Phnom Penh2)	VDPP	Phnom-Penh	VDPP
			China	APAC	Shanghai	ZSSS	Shanghai	ZSHA
			China	APAC	Shanghai	ZSSS	Hefei	ZSOF
			China	APAC	Shanghai	ZSSS	Jinan	ZSTN
			China	APAC	Shanghai	ZSSS	Nanchang	ZSCN
			China	APAC	Shanghai	ZSSS	Nanjing	ZSNJ
			China	APAC	Shanghai	ZSSS	Xiamen	ZSAM
			China	APAC	Shanghai	ZSSS	Qingdao	ZSQD
			China	APAC	Shenyang	ZYTX	Shenyang	ZYSH
			China	APAC	Shenyang	ZYTX	Dalian	ZYTL
			China	APAC	Shenyang	ZYTX	Hailar	ZBLA
			China	APAC	Shenyang	ZYTX	Harbin	ZYHB
			China	APAC	Taibei	RCTP	Taibei	RCAA

Notes:

- 1) MWO not implemented.
- 2) MWO not implemented, however, arrangement made for issuance of SIGMET by ~~Kunming~~ Xi'an MWO.
- 3) MWO Darwin is designated to issue VA SIGMET for Brisbane and Melbourne FIRs.

APPENDIX H

**WMO HEADINGS FOR SIGMET BULLETINS
 USED BY ASIA/PAC METEOROLOGICAL WATCH OFFICES**

MWO location	ICAO location indicator	WMO SIGMET Headings			FIR/ACC served	Remarks
		WS	WC	WV	ICAO location indicator	
1	2	3	4	5	6	7
CHINA						
BEIJING/Capital	ZBAA	WSC133	WCC133	WVC133	ZBPE	
GUANGZHOU/Baiyun	ZGGG	WSC135	WCC135	WVC135	ZGZU	
HAIKOU/Meilan	ZJHK	WSC135	WCC135	WVC135	ZJSA	
KUNMING/Wujiaba	ZPPP	WSC136		WVC136	ZPKM	
CHENGDU/Shuangliu	ZUUU					
LANZHOU/Zhongchuan	ZLLL	WSC137		WVC137	ZLHW	
XI'AN/Xianyang	ZLXY					
SHANGHAI/Hongqiao	ZSSS	WSC134	WCC134	WVC134	ZSHA	
SHENYANG/Taoxian	ZYTX	WSC138		WVC138	ZYSH	
TAIBEI/Taibei Intl	RCTP	WSC131	WCC131	WVC131	RCTP	
URUMQI/Diwopu	ZWWW	WSC139		WVC139	ZWUQ	
WUHAN/Tianhe	ZHHH	WSC145		WVC145	ZHWH	
HONG KONG/Hong Kong Intl	VHHH	WSSS20	WCSS20	WVSS20	VHHK	

NOTE: 1. The “deleted word/text” is shown using strikethrough (text to be deleted).
 2. The “added word/text” is shown with grey shading (text to be inserted or to replace the existing text).

ATTACHMENT 2

Proposed amendment to ROBEX Handbook

Table D: ROBEX Collection and Dissemination of AIREP Bulletins

ROBEX Centre		AIREP bulletin and collection area			Bul. Time	DISSEMINATION TO	
Name	CCCC	BUL No.	MWO	CCCC		RODB/ROBEX C.	AFTN Address
1		2	3		4	5	
ASIA/PAC REGION							
Beijing	ZBBB	UACI31	BEIJING/Capital	ZBAA	H+00	BANGKOK	VTBBYPYX
			GUANGZHOU/Baiyun	ZGGG		BRISBANE	YBZZSQJX
			HAIKOU/Meilan	ZJHK		SINGAPORE	WSZZYPYM
			KUNMING/Wujiaba	ZPPP		TOKYO	RJAAPYX
			CHENGDU/Shuangliu	ZUUU		Delhi	VIDPYPYX
			LANZHOU/Zhongchuan	ZLLL		Hong Kong	VHZZYPYX
			XI'AN/Xianyang	ZLXY		Kolkata	VECCYPYX
			SHANGHAI/Hongqiao	ZSSS			
			SHENYANG/Taoxian	ZYTX			
			URUMQI/Diwopu	ZWWW			
			WUHAN/Tianhe	ZHHH			
			ULAANBAATOR/Bryant-Ukhaa	ZMUB			

NOTE: 1. The “deleted word/text” is shown using strikeout (~~text to be deleted~~).

2. The “added word/text” is shown with grey shading (text to be inserted or to replace the existing text).

ATTACHMENT 3

Proposed amendment to Asia/Pacific OPMET Data Banks ICD

APPENDIX D

**REGIONAL OPMET DATA BANK – SINGAPORE
(RODB Singapore)**

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RODB Singapore – OPMET Data Catalogue

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ASIA/PACIFIC REGION

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CHINA

TTAAii	CCCC	STATIONS or FIR
WSC133	ZBAA	ZBPE
WSC134	ZSSS	ZSHA
WSC135	ZGGG	ZGZU
WSC135	ZJHK	ZJSA
WSC136	ZPPP	ZPKM
	ZUUU	
WSC137	ZLLL	ZLHW
	ZLXY	
WSC139	ZWWW	ZWUQ

APPENDIX E

**REGIONAL OPMET DATA BANK – TOKYO
(RODB Tokyo)**

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RODB Tokyo-OPMET Data Catalogue:

Bulletin

Bulletins available from the RODB-Tokyo are listed below.

ASIA/PACIFIC REGION

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CHINA

TTAAii CCCC STATIONS or FIR

WCCI31 RCTP	RCAA
WCCI33 ZBAA	ZBPE
WCCI34 ZSSS	ZSHA
WCCI35 ZGGG	ZGZU
WCCI35 ZJHK	ZJSA
WSCI31 RCTP	RCAA
WSCI33 ZBAA	ZBPE
WSCI34 ZSSS	ZSHA
WSCI35 ZGGG	ZGZU
WSCI35 ZJHK	ZJSA
WSCI36 ZPPP ZUUU	ZPKM
WSCI37 ZLLL	ZLHW
WSCI37 ZLXY	ZLHW
WSCI38 ZYTX	ZYSH
WSCI39 ZWWW	ZWUQ
WSCI45 ZHHH	ZHWH
WVCI31 RCTP	RCAA
WVCI33 ZBAA	ZBPE
WVCI34 ZSSS	ZSHA
WVCI35 ZGGG	ZGZU
WVCI35 ZJHK	ZJSA
WVCI36 ZPPP ZUUU	ZPKM
WVCI37 ZLLL	ZLHW
WVCI37 ZLXY	ZLHW
WVCI38 ZYTX	ZYSH
WVCI39 ZWWW	ZWUQ
WVCI45 ZHHH	ZHWH

NOTE: 1. The “deleted word/text” is shown using strikethrough (~~text to be deleted~~).

2. The “added word/text” is shown with grey shading (text to be inserted or to replace the existing text).

ATTACHMENT 4

Proposed amendment to SADIS User Guide

ANNEX 3

**OPMET INFORMATION ON THE SADIS BROADCAST —
LISTED IN TERMS OF BULLETIN NUMBERS AND LOCATION INDICATORS OF
AERODROMES CONTAINED IN EACH BULLETIN**

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TTAAii	CCCC	STATIONS or FIR/UIR	MONITOR
WSC131	RCTP	RCAA	Y
WSC133	ZBAA	ZBPE	N
WSC134	ZSSS	ZSHA	N
WSC135	ZGGG	ZGZU	N
WSC135	ZJHK	ZJSA	N
WSC136	ZPPP	ZPKM	Y
	ZUUU		
WSC137	ZLLL	ZLHW	Y
WSC137	ZLXY	ZLHW	Y
WSC138	ZYTX	ZYSH	Y
WSC139	ZWW	ZWUQ	Y
	W		
WSC145	ZHHH	ZHWH	Y

NOTE: 1. The “deleted word/text” is shown using strikethrough (~~text to be deleted~~).

2. The “added word/text” is shown with grey shading (text to be inserted or to replace the existing text).

ATTACHMENT 5

The new VDPP SIGMET format

1. Format of messages

Format of SIGMET

SIGMET prepared by ATMB/CAAC should be according to the standard SIGMET format specified in ICAO Annex 3, Appendix 6.

SIGMET for the VDPP FIR should be issued by the ~~Kunming/Wujiabi~~ Chengdu/Shuangliu Meteorological Watch Office without delay in a bulletin with the following WMO abbreviated heading (TTAAii CCCC YYGGgg):

WSKP31 ~~ZPPP~~ ZUUU YYGGgg for SIGMET other than TC and VA
WCKP31 ~~ZPPP~~ ZUUU YYGGgg for TC SIGMET
WVKP31 ~~ZPPP~~ ZUUU YYGGgg for VA SIGMET

Example:

WSKP31 ~~ZPPP~~ ZUUU 181800
VDPP SIGMET 6 VALID 181800/182200 ~~ZPPP~~ ZUUU
VDPP Phnom Penh FIR EMBD TS...=

The CCCC entry in the WMO header is of the communication centre disseminating the message (~~ZPPP~~ ZUUU)

The first CCCC entry in the first line of SIGMET is of the ATS unit serving FIR (VDPP) and the second CCCC entry in the first line of SIGMET is the issuing MWO (~~ZPPP~~ ZUUU)

The CCCC in the second line of SIGMET is of the ICAO id of the FIR the SIGMET serves (VDPP)

- NOTE: 1. The “deleted word/text” is shown using strikethrough (~~text to be deleted~~).
2. The “added word/text” is shown with grey shading (text to be inserted or to replace the existing text).