

Subject: RE: FW: Two observation times in SIGMET [SEC=OFFICIAL]

From: Tim Hailes <tim.hailes@bom.gov.au>

Date: 31-May-21, 10:41 AM

To: "B.L. Choy" <blchoy@hko.gov.hk>

Hi Choy,

I have spoken to several people and I am yet to find (except maybe for HKG & Japan) anyone who feels we should support multiple obs times. I am ok (but not a fan) with multiple CB's in 1 SIGMET. Multiple SIGMETs should be used for these complex systems.

Cheers

Tim.

From: B.L. Choy <blchoy@hko.gov.hk>

Sent: Monday, 31 May 2021 11:27 AM

To: Tim Hailes <tim.hailes@bom.gov.au>

Subject: Re: FW: Two observation times in SIGMET [SEC=OFFICIAL]

Hi Tim,

Thank you for your effort in clarifying the issue. I kind of agree with Olli's view on (b), but the line to draw is difficult to judge. The example in SIGMET guide we focused on has a big CDO and a small triangular-shaped CB on its outer edge. This gives us an impression that the triangular-shaped CB is of lesser importance. What if the system has an exposed Low Level Circulation Centre (LLCL) with a small CB near its centre and the major convection displaced to one side?

This week I will make two proposals on changes to IWXXM: A major one following the idea the example brought up, and a minor one with just the required changes in accordance to Am79. Afterwards I will let people debate.

Regards,

Choy

On 31-May-21 7:41 AM, Tim Hailes wrote:

FYI...

From: om.turpeinen <om.turpeinen@orange.fr>

Sent: Sunday, 30 May 2021 11:03 PM

To: Tim Hailes <tim.hailes@bom.gov.au>; Jun <jryuzaki@icao.int>

Cc: Christy Leung <yyleung@hko.gov.hk>; Paula Acethorp <Paula.Acethorp@caa.govt.nz>; Shorey, Karen <karen.shorey@metoffice.gov.uk>; pwchan@hko.gov.hk; Domenic Panuccio <domenic.panuccio@bom.gov.au>

Subject: RE: Two observation times in SIGMET

Dear Tim,

Thank you very much for your interesting e-mail. Apologies for not replying earlier; I was on a short vacation in Southern France.

Concerning SIGMETs for tropical cyclones (TC), I agree, by and large, with your ideas. As you know, I have not been involved in the development of the amendment that allows the use of multiple CB clouds in SIGMET for TC. Nevertheless, I am offering my views in this respect. I feel that two principles should be borne in mind when issuing SIGMETs for TC:

a. All information contained in SIGMET for TC should be extracted from tropical cyclone advisories, in conformity with Annex 3 provisions. There are still a large number of MWOs which are not in a position to issue (reliable) SIGMET for TC without the corresponding advisory information. Furthermore, the use of the corresponding advisory information in the preparation of SIGMET ensures that conflicting information is not being made available for aeronautical users.

b. SIGMET for TC, similar to any other SIGMET, should be concise, in accordance with Annex 3. Highly complex SIGMET may well be more accurate from the MET point of view; however, they are often too cumbersome for aeronautical users, who are, after all, the end users of SIGMET.

In view of the foregoing, in my view, SIGMET for TC should normally only include one area of CB clouds directly associated with the TC (centre) concerned. If an additional area of CB clouds occurs in the FIR, I would favour the issuance of another SIGMET (perhaps for thunderstorms (TS), provided that the criteria for the issuance of SIGMET for TS are met).

It may be too late to revisit this issue at the forthcoming METP/5. It would be perhaps preferable to table this issue for consideration at a future WG meeting (if this issue can be accommodated under an existing job card). The views of aeronautical users (IATA, IFALPA) are of prime importance in this connection.

Kind regards from Paris,

Olli

Dr. Olli Marius Turpeinen
 Consultant, Aeronautical MET

Envoyé de mon Galaxy S20 FE 5G Orange

----- Message d'origine -----

De : Tim Hailes <tim.hailes@bom.gov.au>
 Date : 25/05/2021 11:25 (GMT+01:00)
 À : marius <om.turpeinen@orange.fr>, Jun <jryuzaki@icao.int>
 Cc : Christy Leung <yyleung@hko.gov.hk>, Paula Acethorp <Paula.Acethorp@caa.govt.nz>, "Shorey, Karen" <karen.shorey@metoffice.gov.uk>, pwchan@hko.gov.hk, "Shorey, Karen" <karen.shorey@metoffice.gov.uk>, Domenic Panuccio <domenic.panuccio@bom.gov.au>
 Objet : Two observation times in SIGMET [SEC=OFFICIAL]

Dear Olli & Jun,

I would like to seek your advice on the intended interpretation of Annex 3 TC SIGMET template and what information we want to promote in the regional SIGMET Guides and Doc 8896.

I understand that both the TC Advisory and TC SIGMETs templates were designed to support multiple OBS and FCST CB clouds, as per previous METP discussions. Last year we also had a teleconference and emails with the ICAO Secretariat about how to describe multiple CB clouds in SIGMETs and discussed concerns about potential complexities interpreting SIGMETs. We previously agreed to the use of a second SIGMET for complex situations and simplifying examples in the SIGMET Guides and 8896 (see attached email).

I have very recently become aware that the current APAC SIGMET Guide and the proposed Doc 8896 (WG-MOG version attached), include an example of where we have included CB clouds with different observation times. I am supportive of multiple CB clouds in SIGMETs but I am concerned that introducing multiple observation times makes the SIGMET much more complex for users & the WMO IWXXM schema (which currently does not support multiple observation times).

The TCA template notes the area of cloud can be repeated as necessary but I do not believe it is intended to support multiple OBS times – if the TCA has two areas of cloud, then it'll only be for one single OBS time.

I'm trying to understand a situation where the MWO will create a SIGMET with two different observation times – perhaps because the MWO want to provide an 'extra' area of CB cloud. I think in that case, particularly when the observation times does not match the other observation times in the SIGMET, if MWO really wants to add an additional cloud to what's in the TCA, it should just be a separate TS SIGMET with the additional area of cloud. That way we retain consistency between TCA and SIGMET and avoiding user confusion, as agreed previously (refer attached email).

We may need to update the SIGMET template to clarify the footnote 21 (and probably 20 as well) should use the same nnnnZ when repeating the OBS/FCST element – I believe that might have been the original intention.

Observed or forecast phenomenon (M) ^{20, 21}	Indication whether the information is observed and expected to continue, or forecast	OBS [AT nnnnZ] or FCST [AT nnnnZ]	OBS OBS AT 1210Z FCST FCST AT 1815Z
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In either case, I don't think we promote the use of two different observations times as shown in the latest draft of 8896.

[@Karen Shorey](#), I have sent this to you as I understand that you led the WG-MOG changes to Doc 8896.

I welcome your views on this matter.
 Best regards
 Tim.

From: Christy Leung <yyleung@hko.gov.hk>
Sent: Friday, 21 May 2021 1:09 PM
To: michi-ikedada@met.kishou.go.jp; 'THAM Yap Fung' <THAM_Yap_Fung@nea.gov.sg>; Tim Hailes <tim.hailes@bom.gov.au>; B.L. Choy <blchoy@hko.gov.hk>; RRomero@icao.int; Domenic Panuccio <domenic.panuccio@bom.gov.au>
Cc: PW Chan (internet) <pwchan@hko.gov.hk>; jeffreylee@hko.gov.hk; psho <psho@hko.gov.hk>; PW Li <pwli@hko.gov.hk>
Subject: Re: Fwd: Fw: APAC SIGMET Guide and IWXXM [SEC=OFFICIAL]

Dear all,

Just to supplement, my colleague just found the latest edition (13th) of Doc 8896 (note its not yet in final form) on ICAO website (last modified 31 March 2021).

Please see Appendix 11 Example A11-2 which also got the multiple timestamps in the OBS cloud. Details are explained in Table A11-1.

Example A11-2. SIGMET information for TC, present in the FIR at the time of issuance, based on advisory information for TC and MET information from reliable data sources

Note. – Use of multiple lines is not a requirement; it is used in this example for clarity.

```
YUCC SIGMET 3 VALID 251230/251830 YUDO-  
YUCC AMSWELL FIR TC GLORIA PSN N10 W060 CB OBS AT 1210Z WI 200KM OF TC CENTRE TOP FL500 AND  
OBS AT 1220Z WI N1230 W06030 – N1255 W06000 – N1250 W06055 – N1230 W06030 TOP ABV FL500  
MOV WNW INTSF  
FCST AT 1800Z TC CENTRE PSN N1015 W06040 CB WI 220KM OF TC CENTRE AND WI N12 W070 – N13 W075 –  
N13 W065 – N12 W070
```

Hope it helps with the discussion!

Regards,
Ms. Christy Leung
Scientific Officer
Hong Kong Observatory
Email: yyleung@hko.gov.hk
Tel: (+852) 2926 5013

On 21/05/2021 10:23, Christy Leung wrote:

Dear all,

This is Christy from the Hong Kong Observatory.

Recalling back to the discussions in mid-2020 (I dig back the emails by then), actually the timing of this example has not been changed/discussed during the discussions in the ad hoc group back then.

In my understanding, the example has made reference to the draft of an appendix of the Doc 8896 on the guidance related to the issuance of sigmet information for tropical cyclones (actual version of doc 8896 with this appendix is not yet released, so i have attached the draft version that I got in mid 2020 [note may not be the final version]) [See page 7 Table 1, extract copied out below].

The overall idea behind is that when an MWO receive a TC advisory (TCA) about 12Z information and its related OBS CB at 12Z, then MWO would issue a SIGMET with a later issuance time (e.g. 1230Z), the flexibility in Amd 79 allows MWO to add additional CB cloud associated with the TC and cover the FIR additional to that of the TCA, so the timing could be difference from TCA and at a later time (e.g. 1220Z). The timing is thus used after the word "AND" and its the second CB cloud.

SIGMET issuance time: 1230Z
First CB cloud (in TCA): 1200Z
Second CB cloud (additional in that FIR, not in TCA): 1220Z
Forecast end time: 1800Z

Hope my contribution helps you to understand a bit more.

Regards,
Ms. Christy Leung
Scientific Officer
Hong Kong Observatory
Email: yyleung@hko.gov.hk
Tel: (+852) 2926 5013

	(Line 8)			advisory; to be included in SIGMET
Repetition of elements ¹	Not available	[AND]	[AND]	Optional elements, to be included only if these additional CB clouds are associated with the TC and cover an area in the FIR additional to that indicated in the TC advisory. This information should be based on reliable data sources (e.g. satellite images, radar data, high-resolution numerical weather prediction models etc.). For ease of interpretation and use, the time of observation should be should be close to that included in the corresponding advisory information.
Observed or forecast phenomenon (C)	Not available	OBS AT nnnnZ	OBS AT 1220Z	
Location (C)	Not available	WI Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – [Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] or WI nnnKM (or nnnNM) OF TC CENTRE	WI N1030 W06050 – N1055 W06000 – N1050 W06030 – N1030 W06050	

From: [Domenic Panuccio](#)
Sent: Thursday, May 20, 2021 3:46 PM
To: pwchan@hko.gov.hk ; michi-ikeda@met.kishou.go.jp ; [Yap Fung THAM \(NEA\)](#)
Cc: [Tim Hailes](#) ; blchoy@hko.gov.hk ; RRomero@icao.int
Subject: FW: APAC SIGMET Guide and IWXXM [SEC=OFFICIAL]

Hi all,

Please refer to the SIGMET example in Tim's email below. This appears in the latest version of the APAC Regional SIGMET Guide. It was included in the guide following extensive discussions that were held during 2020, particularly in the lead up to ICAO APAC MET/S WG/10 held in July 2020.

I understand that most of the people involved in the discussions relating to this particular example are no longer in the SIGMET Guide ad hoc working group, so background on how a decision for inclusion of this example may be limited.

I'm wondering whether those in the current group feel that the difference in OBS times for the separate CB cloud areas (1200Z and 1220Z) could be a typographical error? If not, can anyone think of a reason why there would be a time difference of the reported OBS CB areas? I would agree with Tim that the different times could be a potential point of confusion for users.

I believe Raul Romero at ICAO was one of the people who contributed in a meeting last year relating to the new TC SIGMET allowances prior to the decision for inclusion of this example, so have also included him in the email in case he can provide any input on the question.

Kind regards,

Domenic Panuccio | Senior Aviation Meteorologist
 (Member, ICAO Asia/Pacific Meteorological Services Working Group)



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I honour and acknowledge the people of the Kulin nation as the traditional custodians of the land on which I live and work, and pay my respects to their Elders both past and present.



From: Tim Hailes <tim.hailes@bom.gov.au>
Sent: Wednesday, 12 May 2021 11:11 AM
To: Domenic Panuccio <domenic.panuccio@bom.gov.au>
Subject: APAC SIGMET Guide and IWXXM [SEC=OFFICIAL]

Hi Dom,

At WG-MIE last night, WMO advised that IWXXM release candidate is ready for publication. The release include all changes for Amendment 80 to ICAO Annex 3, except SIGMET. The APAC SIGMET Guide includes a TC SIGMETs with different observation times for TC centre and CB cloud and this is new capability not previously known. Tim suggested that we should seek advice from APAC and conform the need for this behaviour.

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YUDD SIGMET 3 VALID 251230/251830 YUSO-  
YUDD SHANLON FIR TC GLORIA PSN N22 W061 CB OBS AT 1200Z WI 050KM OF TC  
CENTRE TOP FL500 INTSF FCST AT 1800Z TC CENTRE PSN N2230 W06230 CB WI  
060KM OF TC CENTRE AND OBS AT 1220Z WI N2230 W06045 - N2230 W06015 -  
N2200 W06030 - N2230 W06045 TOP ABV FL500 FCST AT 1800Z WI N2300 W06200  
- N2300 W06130 - N2230 W06145 - N2300 W06200=
```

Dom, what is the use case and benefit to users to having different obs times? I wonder whether the potential confusion to users justifies different times?

Happy to discuss.

Cheers

Tim

Tim Hailes | National Manager Aviation Service Development



Australian Government
Bureau of Meteorology

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