



香港天文台

HONG KONG OBSERVATORY

Reprint 568

Specification of Graphical Tropical Cyclone SIGMET
for Uplink to Aircraft

H.G. Wai

Meteorological Information Data Link
Study Group (METLINKSG) Eighth Meeting,
Montreal, Canada, 1-4 February 2005



**METEOROLOGICAL INFORMATION DATA LINK STUDY GROUP
(METLINKSG)**

EIGHTH MEETING

Montreal, 1 to 4 February 2005

**Agenda Item 6: Uplink of meteorological information
6.2: Specifications and requirements for graphical information**

**SPECIFICATION OF GRAPHICAL TROPICAL CYCLONE SIGMET
FOR UPLINK TO AIRCRAFT**

(Presented by H.G. Wai)

SUMMARY

This paper presents the revised draft model chart for graphical SIGMET for tropical cyclones.

1. INTRODUCTION

1.1 With the application of Amendment 72 to Annex 3 on 1 November 2001, meteorological watch offices (MWOs) in a position to issue SIGMETs for tropical cyclones and volcanic ash cloud in graphical format should do so using the WMO BUFR code form in addition to the issuance of the SIGMET information in abbreviated plain language.

1.2 METLINKSG/7 studied model charts for graphical SIGMET for tropical cyclone and volcanic ash presented by H. G. Wai and Ted Williams, and tasked them to prepare further draft models for graphical SIGMET for tropical cyclone and volcanic ash following revisions mentioned in para. 4.2.2 and 4.2.3 of the METLINKSG/7 SoD, namely:

- a) graphical versions of SIGMET must, as a minimum, contain all of the information that would appear in the corresponding alphanumeric version of the same SIGMET;
- b) the identification numbers allocated to the alphanumeric SIGMET are matched by the graphical version so that the two products are linked and recognized as the same entity. The draft graphical SIGMET should contain the corresponding numbering so as to link to the parallel alphanumeric version;

- c) the model chart should contain the graphical portion only and no repetition of the alphanumeric message itself, notwithstanding the requirements noted above; and
- d) the boundary of the appropriate FIR or CTA must appear on the graphical version of the SIGMET.

1.3 In addressing the requirements in a) to d) above, it was understood that the common features (e.g. legend of symbols, SIGMET heading, latitude and longitude labels etc.) of graphical SIGMET for tropical cyclone and volcanic ash should be harmonized. This paper presents the revised format of the graphical SIGMET for tropical cyclone incorporating the results of coordination.

2. CONTENTS

2.1 As graphical SIGMET will be issued by MWOs in parallel with alpha-numeric SIGMET, users will be looking at either or both of the graphical format and the alpha numeric format. It is essential that all the information appearing in both versions should be congruent. Table A6-1 of Appendix 6 to Annex 3 to the Convention on International Civil Aviation prescribes the content of the alpha-numeric SIGMET.

3. PRESENTATION

3.1 The graphical SIGMET for tropical cyclone will be issued in the WMO BUFR code form. When the uplink message is received by the aircraft, the graphical form of the SIGMET will be generated by the display software on board the aircraft.

3.2 The revised draft model chart for the graphical SIGMET for tropical cyclone is shown in the appendix. The chart contains a geographical display and a legend, and is presented in black and white. In particular, modifications from the previous draft as presented at the METLINKSG/7 have been made to address the views expressed by the Study Group (see para.1.2 and 1.3 above), as follows:

- a) the location indicator of FIR/CTA as well as the identification (including the identification sequence number), validity period and location indicator of MWO are placed on the upper left corner of the graphical image, following harmonization with graphical SIGMET for volcanic ash. Here the identification sequence number is the same as that of the alpha-numeric SIGMET (re. para. 1.2 b)).
- b) the boundary of the appropriate FIR/CTA is shown and delineated in 'dash-dot' line in the graphical SIGMET (re. para. 1.2 d));
- c) the legend of the TC symbols is presented on the lower left corner of the graphical SIGMET following harmonization with graphical SIGMET for volcanic ash (re. para. 1.3). Here the observation time is explicitly shown for ease of reference. Also the choice of the TC symbols is: (i) filled in with black at the observed position; (ii) open symbol (i.e. not filled) at the forecast positions;
- d) the name of the TC is shown in the graphical SIGMET for easy identification (re. para. 1.2 a));

- e) the latitude/longitude labelling convention is +ve values for E/N, -ve values for W/S, following harmonization with graphical SIGMET for volcanic ash. The labels are shown on the four sides of the graphical image;
- f) the flight level and extent of the associated CB cloud are marked at the TC in the graphical SIGMET (re. para. 1.2(a)). The area of the graphical SIGMET should be such that the observed and forecast TC positions are covered;
- g) the movement of the TC are indicated by arrows in the graphical image (re. para. 1.2 c)); and
- h) the expected change in intensity (using abbreviation INTSF/WKN/NC) are marked at the observed TC position in the graphical SIGMET (re. para. 1.2 a)).

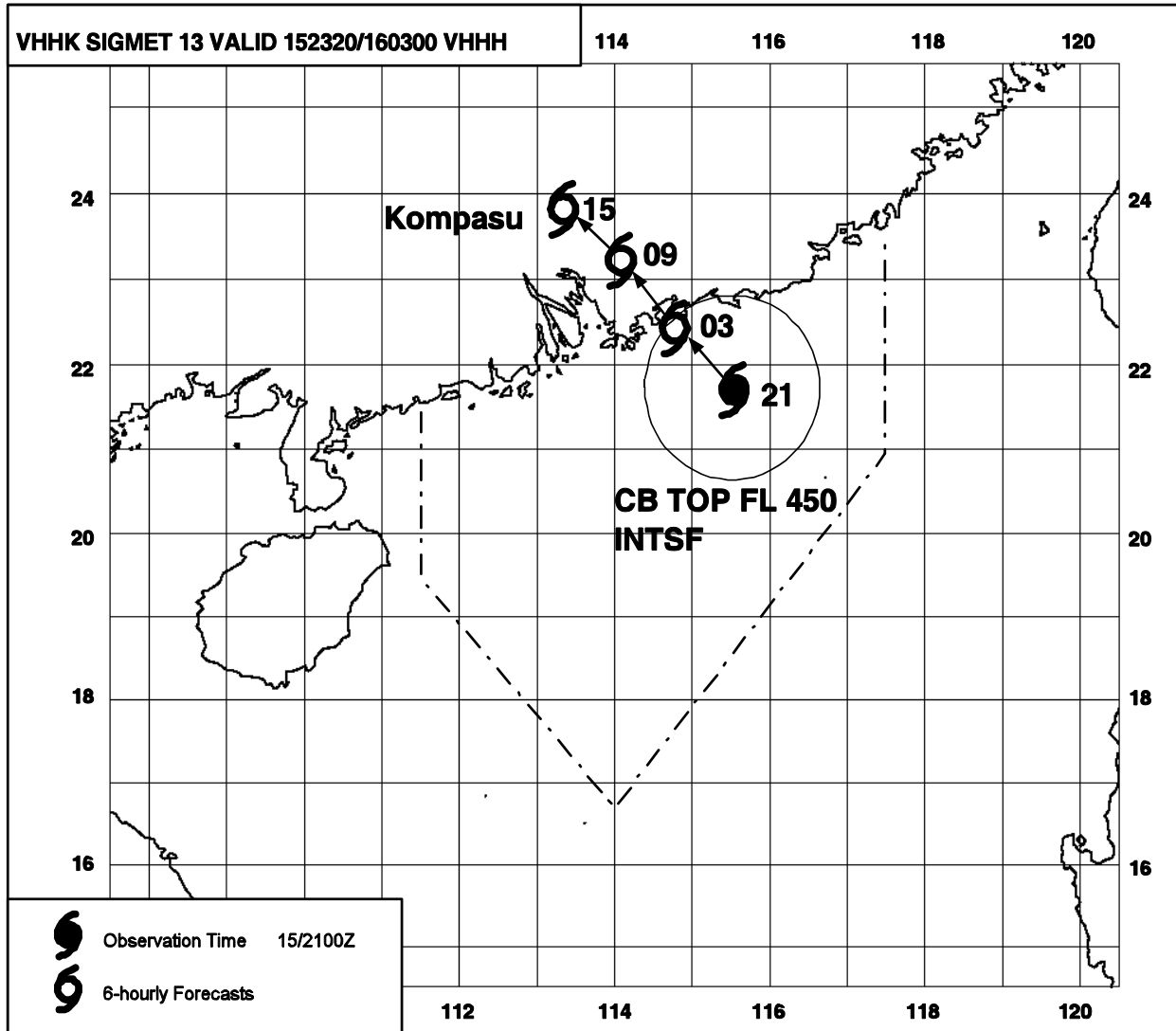
4. **ACTION BY THE GROUP**

4.1 The group is invited to:

- a) review the revised draft model chart for graphical SIGMET for tropical cyclone in the appendix to this paper; and
- b) consider recommending the inclusion of the revised draft model chart in Annex 3.

APPENDIX

DRAFT MODEL CHART FOR GRAPHICAL SIGMET



Revised draft model chart for graphical SIGMET for tropical cyclone

— END —