

# SIGMET QUICK REFERENCE GUIDE

## WC SIGMET

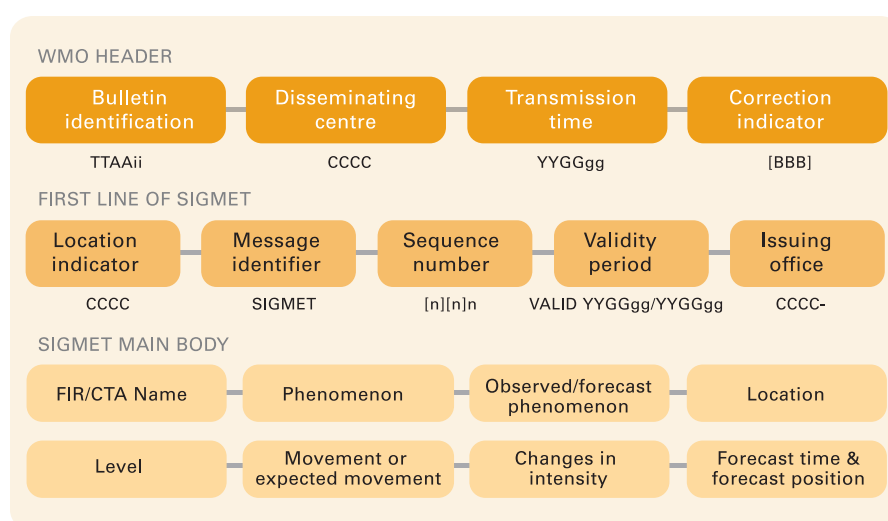
### SIGMET Abbreviations

ABV	Above
BLW	Below
CB	Cumulonimbus cloud
CNL	Cancel or cancelled
CTA	Control area
FCST	Forecast
FIR	Flight Information Region
FL	Flight level
FT	Feet
INTSF	Intensify or intensifying
KT	Knots
KMH	Kilometres per hour
M	Metres
MOV	Moving
NC	No Change (in intensity)
NM	Nautical Miles
OBS	Observed
PSN	Position
SFC	Surface
STNR	Stationary
TC	Tropical Cyclone
TOP	Top (of CB cloud)
WI	Within (area)
WKN	Weakening (intensity)
Z	Coordinated Universal Time

### WC SIGMET

A SIGMET provides concise information issued by a Meteorological Watch Office (MWO) concerning the occurrence or expected occurrence of specific en-route weather and other phenomena in the atmosphere that may affect the safety of aircraft operations. The WC SIGMET provides information on tropical cyclones (intensity 34 knots or greater). WC SIGMET should be based on the Tropical Cyclone Advisory.

### SIGMET Structure



### WMO Header

#### Bulletin identification

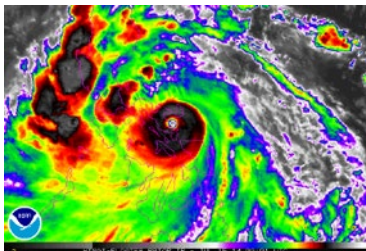
<b>TT</b>	Data type designator	<b>WC</b> – for SIGMET for tropical cyclone
<b>AA</b>	Country or territory designators	Assigned according to Table C1, Part II of <i>Manual on the Global Telecommunication System, Volume I – Global Aspects</i> (WMO Publication No. 386)
<b>ii</b>	Bulletin number	Assigned on national level according to Part II of <i>Manual on the Global Telecommunication System, Volume I – Global Aspects</i> (WMO Publication No. 386)

#### Disseminating centre

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

#### Transmission time

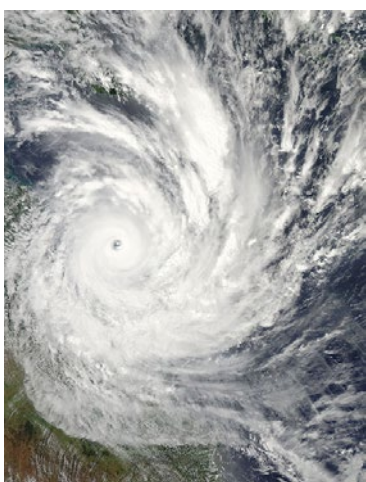
**YYGGgg** is the date/time group; where YY is the day of the month and GGgg is the time of transmission of the SIGMET in hours and minutes UTC (normally this time is assigned by the disseminating (AFTN) centre).



Typhoon Rammasun landfall in the Philippines on 15 July 2014. Image courtesy NOAA Satellite Services Division.



Damage from Super typhoon Pongsona on the island of Rota, 20 December 2002. Image courtesy FEMA Photo Library, Andrea Booher.



Satellite image of Severe Tropical Cyclone Yasi approaching Queensland, Australia on 2 February 2011. Image courtesy NASA; MODIS.

### Correction indicator

**BBB** should only be included when issuing a correction to a SIGMET which had already been transmitted. The BBB indicator shall take the form **CCx** for corrections to previously relayed bulletins, where x takes the value A for the first correction, B for the second correction, etc., for a specific SIGMET.

### First line of SIGMET

#### Location indicator

**CCCC** is the ICAO location indicator of the ATS unit serving the FIR or CTA to which the SIGMET refers.

#### Message identifier

The message identifier is **SIGMET**.

#### Sequence number

The daily sequence number in the form **[n][n]n**, e.g. 1, 2, 01, 02, A01, A02, restarts every day for SIGMETs issued from 0001 UTC.

#### Validity period

The validity period is given in the format **VALID YYGGgg/YYGGgg** where YY is the day of the month and GGgg is the time in hours and minutes UTC. For an observed TC, the start of validity for the SIGMET should be the same as the issue time. For a forecast TC, the start of validity should be the time the TC is expected to enter/develop in a MWO's FIR and can be issued no more than 12 hours prior to the start of validity. The validity period for a WC SIGMET shall be no more than 6 hours.

#### Issuing Office

**CCCC-** is the ICAO location indicator of the MWO originating the message followed by a hyphen.

### SIGMET Main Body

#### FIR/CTA name

The ICAO location indicator and full name of the FIR/CTA for which the SIGMET is issued in the form **CCCC <name> FIR/[UIR]** or **CCCC <name> CTA**.

#### Phenomenon

The description of the tropical cyclone consists of the abbreviation TC, the international name given by the corresponding WMO RSMC in the form **TC <name>** and the TC centre position at the time specified under element 'Observed or forecast phenomenon' in the form **PSN <N(S)nn[nn] E(W)nnn[nn]>**, where latitude and longitude is given in degrees and minutes. If the disturbance is expected to become a TC, but is not yet named, the term **TC NN** should be used.

#### Observed or forecast phenomenon

Whether the tropical cyclone at position given in 'phenomenon' is observed or forecast in the form **OBS [AT GGggZ]** or **FCST [AT GGggZ]** where GG is hours and gg minutes UTC.

#### Location

The location of the CB associated with the tropical cyclone is provided with reference to geographical coordinates in latitude and longitude in degrees and minutes.

E	East or eastern longitude
ENE	East-north-east
ESE	East-south-east
N	North or northern latitude
NE	North-east
NNE	North-north-east
NNW	North-north-west
NW	North-west
S	South or southern latitude
SE	South-east
SSE	South-south-east
SSW	South-south-west
SW	South-west
W	West or western longitude
WNW	West-north-west
WSW	West-south-west



Typhoon Jelawat on 9 August 2000, showing clear Annular characteristics. Image courtesy NASA.

### Level

The vertical extent of the CB associated with the tropical cyclone in the form:

**TOP [ABV or BLW] <FLnnn>**

### Movement or expected movement (not included if ‘forecast time’ and ‘forecast position’ are given)

Direction and rate of movement of the tropical cyclone where the direction is given with reference to one of the sixteen points of the compass (using the appropriate abbreviation) and the rate is given in KT (or KMH) in the form **MOV <direction> <speed>KT or KMH**. The abbreviation **STNR** (Stationary) is used if no significant movement is expected.

### Changes in intensity

The expected evolution of the tropical cyclone’s intensity as indicated by:

**INTSF or WKN or NC**

### Forecast time and forecast position (not included if movement is given)

The forecast time and forecast position of the tropical cyclone in the form: **FCST AT <GGgg>ZTC CENTRE PSN <location>**

### Repetition of elements

This is used to repeat the elements in a SIGMET message when two tropical cyclones occur simultaneously in an FIR. The descriptor **AND** is used to separate the elements for each tropical cyclone.

## Renewing a SIGMET

A SIGMET is renewed with a new sequence number when the validity period is due to expire but the tropical cyclone is expected to persist.

## Cancelling a SIGMET

If, during the validity period of a SIGMET, the tropical cyclone intensity falls below 34 knots or if it has moved out of the FIR, the SIGMET shall be cancelled by issuing a SIGMET with the abbreviation CNL in lieu of meteorological information.

**CNL SIGMET [n][n]n YYGGgg/YYGGgg**

When cancelling a WC SIGMET consider the need for a WS SIGMET for thunderstorms.

## Source of Information

Source of Information	Types of Information	Issue a WC SIGMET
MWO, TCAC	Observations that confirm a tropical cyclone has developed.	TC observed – issue immediately.
	Information concerning a tropical cyclone is received from a TCAC.	TC forecast to enter/develop in MWOs FIR – issue up to 12 hours before the time the TC is expected to enter/develop in FIR.

## SIGMET Dissemination

SIGMET is part of operational meteorological (OPMET) information and should be exchanged via aeronautical fixed service (AFS). The SIGMET priority indicator used shall be **FF**.

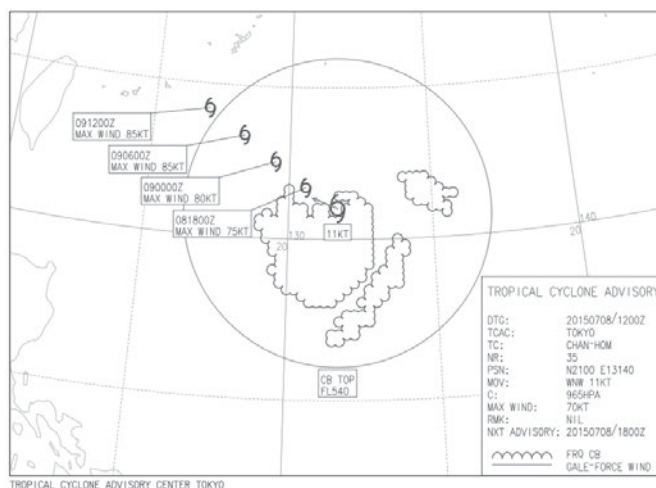
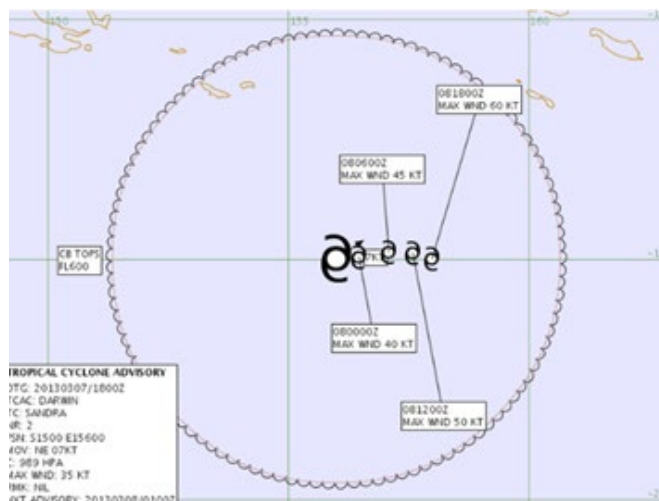
## TCA and WC SIGMET Examples

### Tropical Cyclone Advisory (TCA) Example

FKAU05 ADRM 071830  
 TC ADVISORY  
 DTG: 20130307/1800Z  
 TCAC: DARWIN  
 TC: SANDRA  
 NR: 02  
 PSN: S1500 E15600  
 MOV: NE 07KT  
 C: 989HPA  
 MAX WIND: 35KT  
 FCST PSN +6HR: 08/0000Z S1500 E15630  
 FCST MAX WIND +6HR: 40KT  
 FCST PSN +12HR: 08/0600Z S1448 E15706  
 FCST MAX WIND +12HR: 45KT  
 FCST PSN +18HR: 08/1200Z S1454 E15736  
 FCST MAX WIND +18HR: 50KT  
 FCST PSN +24HR: 08/1800Z S1500 E15800  
 FCST MAX WIND +24HR: 60KT  
 RMK: NIL  
 NXT MSG: 20130308/0100Z

FKPQ30 RJTD 081200  
 TC ADVISORY  
 DTG: 20150708/1200Z  
 TCAC: TOKYO  
 TC: CHAN-HOM  
 NR: 35  
 PSN: N2100 E13140  
 MOV: WNW 11KT  
 C: 965HPA  
 MAX WIND: 70KT  
 FCST PSN +6HR: 08/1800Z N2140 E13035  
 FCST MAX WIND +6HR: 75KT  
 FCST PSN +12HR: 09/0000Z N2230 E12930  
 FCST MAX WIND +12HR: 80KT  
 FCST PSN +18HR: 09/0600Z N2320 E12820  
 FCST MAX WIND +18HR: 85KT  
 FCST PSN +24HR: 09/1200Z N2410 E12700  
 FCST MAX WIND +24HR: 85KT  
 RMK: NIL  
 NXT MSG: 20150708/1800Z =

### Tropical Cyclone Advisory Graphic (TCG) Example



#### Tropical Cyclone SIGMET Format

WCAAii CCCCYYGGgg [BBB] CCCC SIGMET [n][n]n  
 VALIDYYGGgg/YYGGgg CCCC- CCCC <FIR/CTA Name> FIR  
 TC <Name> PSN <position> CB OBS/FCST [AT GGggZ]  
 <Location> <Level> <Movement or expected movement>  
 <Changes in intensity> <Forecast time and forecast  
 position> <Repetition of elements>=

#### Tropical Cyclone SIGMET (WC) Example (with movement)

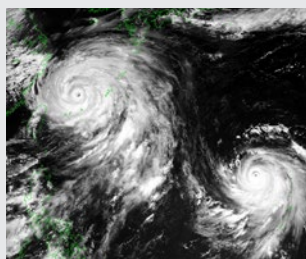
WCAU01 ABRF 071910  
 YBBB SIGMET D02 VALID 071915/080115 YBRF-  
 YBBB BRISBANE FIR TC SANDRA PSN S1500 E15600 CB  
 OBS AT 1800Z WI 280NM OF TC CENTRE TOP FL500 MOV NE  
 07KT INTSF =

#### Cancellation

WCAU01 ABRF 100515  
 YBBB SIGMET D12 VALID 100515/100715 YBRF-  
 YBBB BRISBANE FIR CNL SIGMET D06 100115/100715=

#### Tropical Cyclone SIGMET (WC) Example (with forecast position)

WCJP31 RJTD 081310  
 RJJJ SIGMET K01 VALID 081310/061910 RJTD-  
 RJJJ FUKUOKA FIR TC CHAN-HOM PSN N2100 E13140 CB  
 OBS AT 1200Z WI N1625 E13155 - N1830 E12935 - N2030 E12845  
 - N2140 E13000 - N2125 E13220 - N1920 E13430 - N1625 E13155  
 TOP FL540 INTSF FCST AT 1800Z TC CENTRE PSN N2140  
 E13035=



Tropical cyclones Chan-hom and Nangka, 10 July 2015 from Himawari-8. Image courtesy of JMA.

#### Refer to the following for more information

ICAO Annex 3 – Meteorological Service for International Air Navigation (Amd 77)  
 ICAO Regional SIGMET Guide  
 ICAO Doc.8896 – Manual of Aeronautical Meteorological Practice  
 WMO No.49 Technical Regulations Volume II – Meteorological Service for International Air Navigation (2013 ed)  
 WMO No.732 Guide to Practices for Meteorological Offices Serving Aviation