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**

- **TT** (Bulletin identification)
- **CCC** (Disseminating centre)
- **YYGGgg** (Transmission time)
- **[BBB]** (Correction indicator)

**FIRST LINE OF SIGMET**

- **Location indicator**
- **Message identifier**
- **Sequence number**
- **Validity period**
- **Issuing office**

**SIGMET MAIN BODY**

- **FIR/CTA Name**
- **Phenomenon**
- **Observed/forecast phenomenon**
- **Location**

- **Level**
- **Movement or expected movement**
- **Changes in intensity**
- **Forecast time & forecast position**

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### 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

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### WC SIGMET

**Bulletin identification**

- **TT** Data type designator
- **WC** – for SIGMET for tropical cyclone

- **AA** Country or territory designators
  - Assigned according to Table C1, Part II of *Manual on the Global Telecommunication System, Volume I – Global Aspects* (WMO Publication No. 386)

- **ii** Bulletin number
  - Assigned on national level according to Part II of *Manual on the Global Telecommunication System, Volume I – Global Aspects* (WMO Publication No. 386)

**Disseminating centre**

- **CCC** 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).
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.
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>Z TC 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

<table>
<thead>
<tr>
<th>Source of Information</th>
<th>Types of Information</th>
<th>Issue a WC SIGMET</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWO, TCAC</td>
<td>Observations that confirm a tropical cyclone has developed.</td>
<td>TC observed – issue immediately.</td>
</tr>
<tr>
<td></td>
<td>Information concerning a tropical cyclone is received from a TCAC.</td>
<td>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.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>FKAU05 ADRM 071830</th>
<th>20130307/1800Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC ADVISORY</td>
<td></td>
</tr>
<tr>
<td>DTG: 20130307/1800Z</td>
<td></td>
</tr>
<tr>
<td>TCAC: DARWIN</td>
<td></td>
</tr>
<tr>
<td>TC: SANDRA</td>
<td></td>
</tr>
<tr>
<td>NR: 02</td>
<td></td>
</tr>
<tr>
<td>PSN: S1500 E15600</td>
<td></td>
</tr>
<tr>
<td>MOV: NE 07KT</td>
<td></td>
</tr>
<tr>
<td>C: 989HPA</td>
<td></td>
</tr>
<tr>
<td>MAX WIND: 35KT</td>
<td></td>
</tr>
<tr>
<td>FCST PSN +6HR: 08/00000Z S1500 E15630</td>
<td></td>
</tr>
<tr>
<td>FCST MAX WIND +6HR: 40KT</td>
<td></td>
</tr>
<tr>
<td>FCST PSN +12HR: 08/06000Z S1448 E15706</td>
<td></td>
</tr>
<tr>
<td>FCST MAX WIND +12HR: 45KT</td>
<td></td>
</tr>
<tr>
<td>FCST PSN +18HR: 08/12000Z S1454 E15736</td>
<td></td>
</tr>
<tr>
<td>FCST MAX WIND +18HR: 50KT</td>
<td></td>
</tr>
<tr>
<td>FCST PSN +24HR: 08/18000Z S1500 E15800</td>
<td></td>
</tr>
<tr>
<td>FCST MAX WIND +24HR: 60KT</td>
<td></td>
</tr>
<tr>
<td>RMK: NIL</td>
<td></td>
</tr>
<tr>
<td>NXT MSG: 20130308/0100Z</td>
<td></td>
</tr>
</tbody>
</table>

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 <Names PSN <position> CB OBS/FCST [AT GGggZ]
<Location> <Level> <Movement or expected movement> <Changes in intensity> <Forecast time and forecast positions> =
Repetition of elements=

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

WCP031 RJTD 081200
RJJJ SIGMET K01 VALID 081210/081210 RJTD-

Tropical Cyclone SIGMET (WC) Example (with movement)

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

Cancellation

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

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.732 Guide to Practices for Meteorological Offices Serving Aviation

4 November 2016