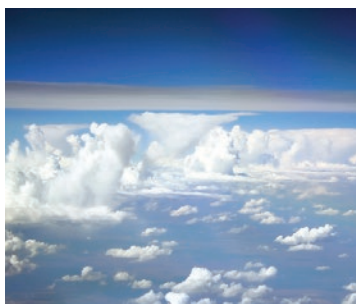


AVIATION WEATHER PRODUCTS SIGMET

Bureau of Meteorology › Aviation Meteorological Services



Pilots in command of aircraft encountering any phenomenon in this table not notified by SIGMET must report details of the phenomenon in an AIREP SPECIAL

SIGMET

A SIGMET provides a concise description concerning the occurrence or expected occurrence, in areas over which meteorological watch is being maintained, of en-route weather phenomena that are potentially hazardous to aircraft. A SIGMET will contain information on one of the following phenomena:

Code	Description
OBSC TS	Obscured thunderstorms
EMBDTS	Embedded thunderstorms
FRQTS	Frequent thunderstorms
SQLTS	Squall line thunderstorms
OBSC TSGR	Obscured thunderstorms with hail
EMBD TSGR	Embedded thunderstorms with hail
FRQ TSGR	Frequent thunderstorms with hail
SQL TSGR	Squall line thunderstorms with hail
TC	Tropical cyclone
SEV TURB	Severe turbulence
SEV ICE	Severe icing
SEV ICE (FZRA)	Severe icing due to freezing rain
SEV MTW	Severe mountain wave
HVY DS	Heavy duststorm
HVY SS	Heavy sandstorm
VA	Volcanic ash
RDOACT CLD	Radioactive cloud

A SIGMET provides information on the location, extent, expected movement or forecast location and change in intensity of the specified phenomenon.

SIGMET for thunderstorms are only issued when any one of the following conditions is observed or expected:

- Obscured (OBSC TS) by haze or smoke;
- Embedded (EMBDTS) within cloud layers and cannot be readily recognised, The area affected would be of the order of at least 3000 square nautical miles over ARFOR areas and at least 7200 square nautical miles over remaining areas;
- Frequent (FRQ TS), i.e. an area of thunderstorms with little or no separation between adjacent storms and covering more than 75% of the affected area. The area affected would be of the order of at least 3000 square nautical miles over ARFOR areas and at least 7200 square nautical miles over remaining areas; or
- Squall-line thunderstorms (SQL TS), i.e. thunderstorms along a line of about 100 nautical miles or more in length, with little or no separation between the clouds.

SIGMET for thunderstorms do not include reference to cumulonimbus cloud or associated icing and turbulence as their presence is implied.

SIGMET for severe mountain waves are distinct from SIGMET for severe turbulence, and may extend to high levels of the atmosphere.



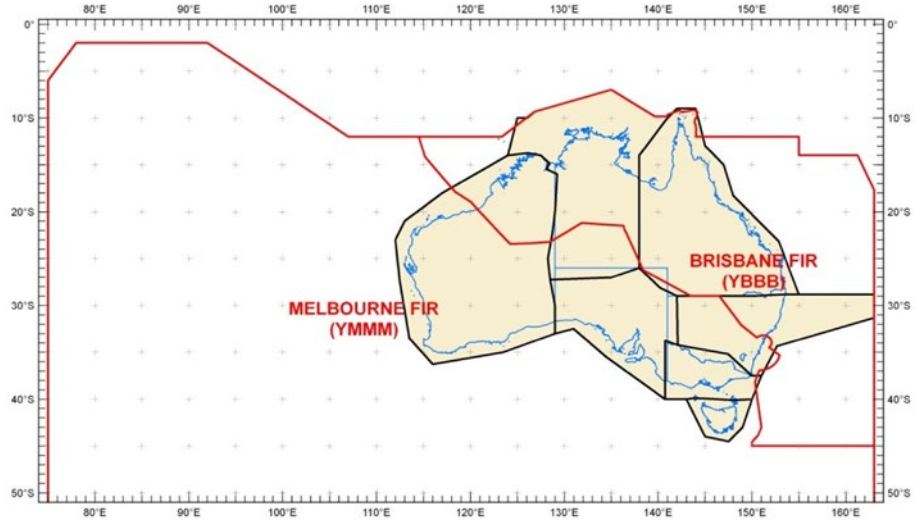
Australian Government
Bureau of Meteorology

SIGMET for severe turbulence refers to low-level turbulence associated with strong surface winds. Mechanical turbulence caused by topography (rotors), turbulence in cloud or Clear Air Turbulence (CAT). Severe turbulence SIGMETs are not issued for turbulence associated with CB or TCU.

SIGMET for heavy duststorms or heavy sandstorms are issued when the visibility is observed, or expected to be reduced to, less than 200 metres.

SIGMET Coverage

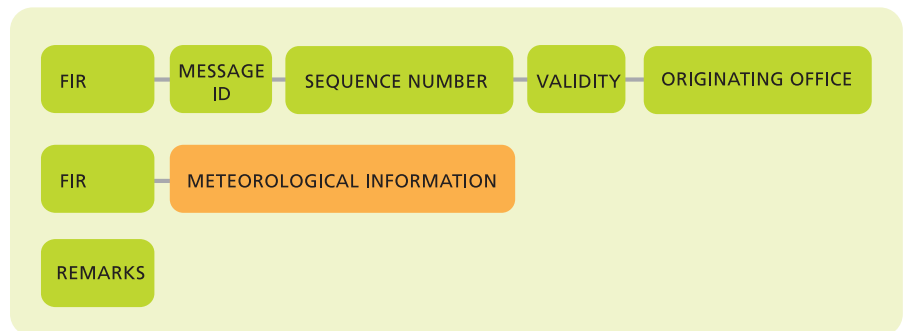
SIGMET for volcanic ash cloud and tropical cyclones are issued for the whole of the Melbourne and Brisbane FIRs (YMMM and YBBB). SIGMET for turbulence or icing at or above 10000FT above MSL are issued for the whole of YBBB, and for YMMM to 50S. SIGMET for phenomena below 10000FT above MSL (other than tropical cyclones and volcanic ash) are issued for the shaded area shown below.



SIGMET Structure

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YBBB SIGMET B02 VALID
200100/200700YPDM-
YBBB RISBANE FIR
VA ERUPTION PSN S0416 E15212
VA CLD OBS AT 0100Z W/
S1130 E14530 - S1330
E14900 - S1030 E15030 -
S0830 E14700 - S1130 E14430
5000/9000FT FCST AT 0700Z W/
S110 E144530 -
S1230 E14930 - S1050 E15130
- S0800 E14700 - S1130 E14400
RMK: BN
    
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FIR (Flight Information Region)

Gives the abbreviation of the FIR (YMMM or YBBB) for which the SIGMET is issued.

Message Identifier

The message identifier is SIGMET.

Sequence Number

The sequence number consists of three characters, e.g. B02, where:

- the first character is a single alpha character that will be assigned to the SIGMET event (e.g. severe icing) and will be used for any subsequent SIGMETs issued for that event within the FIR. There will not be two Australian SIGMETs current with the same sequence alpha character, even if they refer to the same event which is occurring across the two FIRs (YMMM/YBBB). Alpha characters are not necessarily assigned alphabetically.

SIGMET Abbreviations

BLW	Below
CLD	Cloud
CNL	Cancel
DS	Dust storm
E	East or eastern longitude
EMBD	Embedded
EXTD	Extends
FCST	Forecast
FIR	Flight Information Region
FL	Flight level
FRQ	Frequent
FT	Feet
FZRA	Freezing rain
GR	Hail
HVY	Heavy
ICE	Icing
INTSF	Intensifying
KT	Knots
LOC	Location
MOV	Moving
MT	Mount
MTW	Mountain Wave
N	North or northern latitude
NC	No Change (in intensity)
NM	Nautical Miles
OBS	Observed
OBSC	Obscured
PSN	Position
RDOACT CLD	Radioactive cloud
S	South or southern latitude
SEV	Severe
SFC	Surface
SQL	Squall line
SS	Sand storm
STNR	Stationary
STS	Status
TC	Tropical cyclone
TOP	Top (of cloud)
TS	Thunderstorm
TURB	Turbulence
VA	Volcanic ash
W	West or western longitude
WI	Within (area)
WKN	Weakening (intensity)
Z	Code for UTC (Universal Time Coordinated)

- the second and third characters are a two-digit number, giving a count of the number of SIGMETs issued for the event within the FIR.
- All SIGMETs with a sequence number 01 will be a new SIGMET, whereas any SIGMET with a sequence number greater than 01 will be an extension or cancellation of a previously issued SIGMET.

Validity

The validity period is given in the format DDHHMM/DDHHMM, where DD is the day of the month and HHMM is the time in hours and minutes UTC.

The period of validity cannot be more than six hours for VA and TC SIGMET, and not more than four hours for SIGMETs for other phenomena.

Originating Office

The International Civil Aviation Organization (ICAO) location indicators for Australian Meteorological Watch Offices are:

YPRM	Adelaide
YPRF	Perth
YBRF	Brisbane
YSRF	Sydney
YPDM	Darwin
YMRF	Melbourne
YMHF	Hobart
YMMC	Aviation Weather Centre Melbourne

FIR (Flight Information Region)

This gives the abbreviation and full name of the FIR (YMMM or YBBB) for which the SIGMET is issued.

Meteorological Information

This section includes:

- type of phenomenon
- phenomenon observed or forecast
- location, both horizontal and vertical extent
- movement or expected movement
- expected change in intensity
- forecast position (only in SIGMET for VA)

SEVTURB FCST WI S3200 E12800 - S3200 E13000 - S4700 E13600 - S4700 E13400 FL260/400 MOV E 25KT NC

TC GRAHAM OBS AT 1800Z S1015 E13230 CBTOP FL450 WI 100NM OF CENTRE MOV SE 10KT INTSF

The first point of a polygon is not repeated when describing the horizontal extent of the phenomenon. The vertical extent of the phenomenon will be given in feet, e.g. 6000/9000FT, for levels below 10000FT above MSL; and in flight levels, e.g. FL120, above this. When an event straddles the boundary of the YBBB and YMMM FIRs, a SIGMET for each FIR will be issued. In such cases, the horizontal extent of the phenomenon given in each SIGMET will be the same.

Cancelling a SIGMET

If during the validity period of a SIGMET, the phenomenon is no longer occurring or is no longer expected, the SIGMET is cancelled by issuing a SIGMET with the abbreviation CNL in lieu of meteorological information. An example is given on the next page.

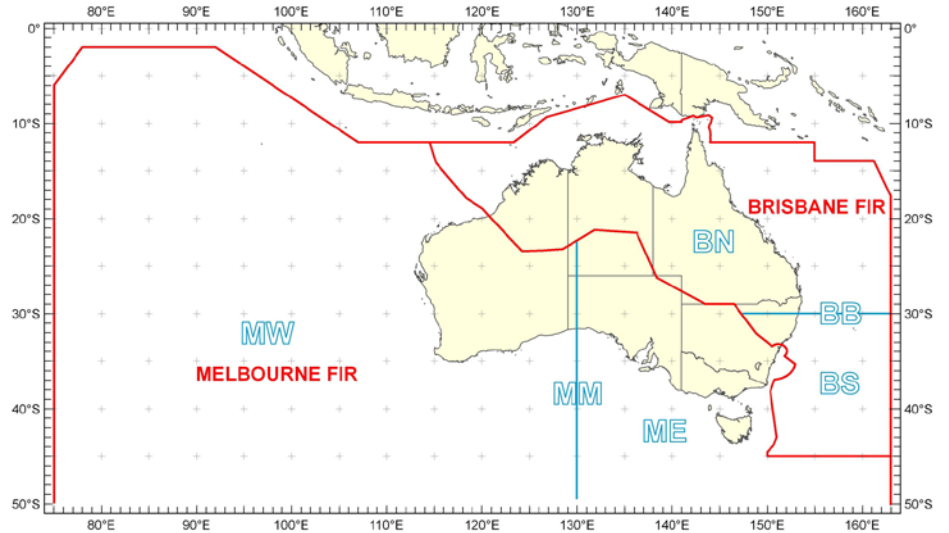
YMMM SIGMET C02 VALID
 180720/180839YMMC-
 YMMM MELBOURNE FIR CNL
 SIGMET C01 180439/180839
 RMK: MW

RMK (remarks) Line

The remarks line includes the following information:

- a **location designator** which provides a quick reference on the general location of the phenomenon.
- **reference** to any SIGMET in the adjoining FIR (YBBB or YMMM) that is current for the same event.

The **location designator** will be one of the following:



RMK: BN

RMK: BN SEE ALSO YMMM D01

MW	used for events in the Melbourne FIR to the west of 130E
MM	used for events in the Melbourne FIR that cross 130E
ME	used for events in the Melbourne FIR east of 130E
BN	used for events in the Brisbane FIR north of 30S
BB	used for events in the Brisbane FIR that cross 30S
BS	used for events in the Brisbane FIR south of 30S

Reference to another SIGMET will be included when there is a SIGMET current for the same event in the adjoining FIR (YBBB or YMMM), i.e. when the weather phenomenon straddles the YMMM and YBBB FIR boundary).



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Airservices Australia is the official distributor of aviation forecasts, warnings and observations issued by the Bureau of Meteorology. Airservices' flight briefing services are available at www.airservicesaustralia.com. Telephone contact details for elaborative briefings are contained in Airservices' Aeronautical Information Publication Australia (AIP), which is available online through their website.

Other brochures produced by the Bureau of Meteorology's aviation weather services program can be found at www.bom.gov.au/aviation/knowledge-centre.

A vertical line in the right-hand margin indicates a text amendment since last update.