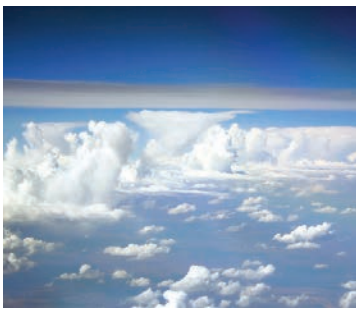
AVIATION WEATHER PRODUCTS

SIGMET



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
EMBD TS	Embedded thunderstorms
FRQ TS	Frequent thunderstorms
SQL TS	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 and expected movement and change in intensity of the specified phenomenon.

SIGMET for thunderstorms are only issued when they are:

- obscured (OBSC) by haze or smoke
- embedded (EMBD) within cloud layers and cannot be readily recognised
- frequent (FRQ), i.e. with little or no separation between adjacent storms and covering more than 75% of the area affected
- squall line (SQL) thunderstorms, i.e. thunderstorms along a line of about 100 nautical miles or more in length, with little or no separation between clouds.

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

SIGMET for tropical cyclones include reference to the height of cumulonimbus tops but no reference is made to thunderstorms, icing and turbulence as their presence is implied.

SIGMET for severe mountain waves are distinct from SIGMET for severe turbulence, and are issued when estimated accompanying downdrafts are 600FT/min or more.

SIGMET for severe turbulence refers to low-level turbulence associated with strong surface winds, rotor streaming or turbulence near jet streams.

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

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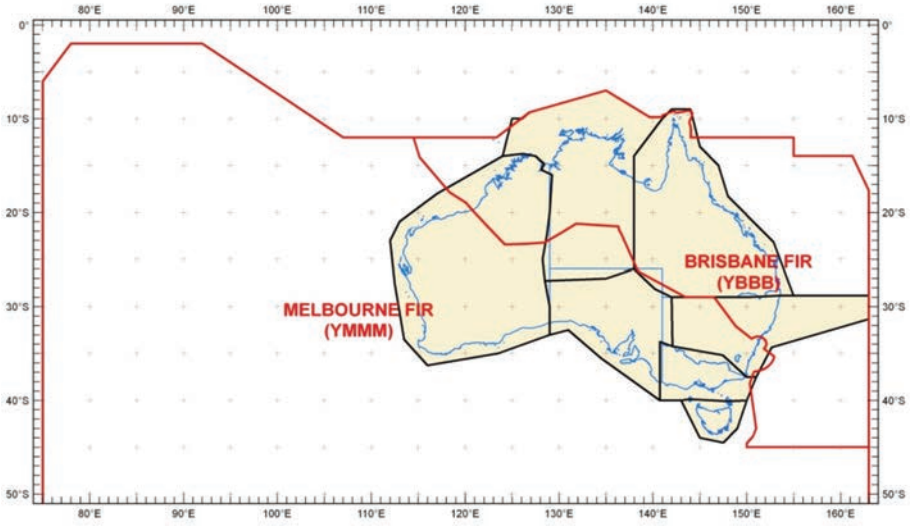
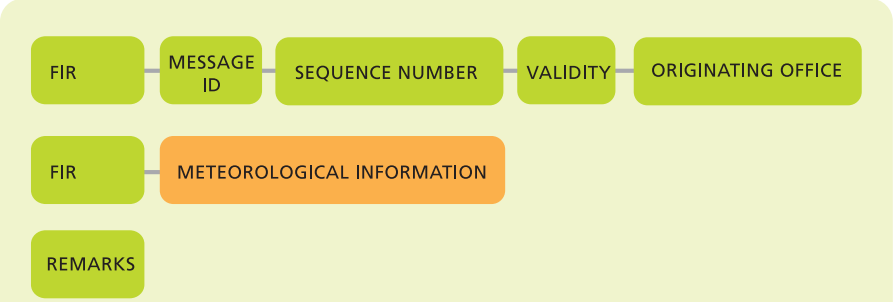
SIGMET Coverage

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 FL185 are issued for the whole of YBBB, and for YMMM to 50S. SIGMET for phenomena below FL185 (other than tropical cyclones and volcanic ash) are issued for the shaded area shown below.



SIGMET Structure



YBBB SIGMET B02 VALID 200100/200700 YPDM-
YBBB BRISBANE FIR
ERUPTION LOC S0416 E15212
VA CLD OBS AT 200100Z
5000/9000FT APRX 120NM BY 40NM S1130 E14530 - S1330 E14900 - S1030 E15030 - S0830 E14700 - S1130 E14430
MOV SW 20KT FCST 0700Z
VA CLD APRX S110 E144530 - S1230 E14930 - S1050 E15130 - S0800 E14700 - S1130 E14400
RMK: BN EXTD B01 191900/200100

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.
- 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 since the last 0001 UTC.

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.

SIGMET Abbreviations

APRX	Approximately
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
N	North or northern latitude
NC	No Change (in intensity)
NM	Nautical Miles
OBS	Observed
OBSC	Obscured
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)

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 at the end of the validity period (only in SIGMET for TC and VA)

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

TC GRAHAM OBS AT 1800Z S1015 E13230 CB TOP FL450 WI 100NM OF CENTRE MOV SE 10KT INTSF FCST 0000Z TC CENTRE S1215 E13130

The first point of a polygon is not repeated when describing the horizontal extent of an event. The vertical extent of an event will be given in feet, e.g. 6000/9000FT, for levels below 10 000 feet; and in flight levels, e.g. FL100, above this, except when the event extends across the transition level (10 000FT) in which case only FL will be used, e.g. FL080/150. 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 event given in each SIGMET will be the same.

Cancelling a SIGMET

If during the validity period of a SIGMET, the phenomenon for which the SIGMET 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. CNL is also included in the RMK (remarks) line. An example is given on the next page.

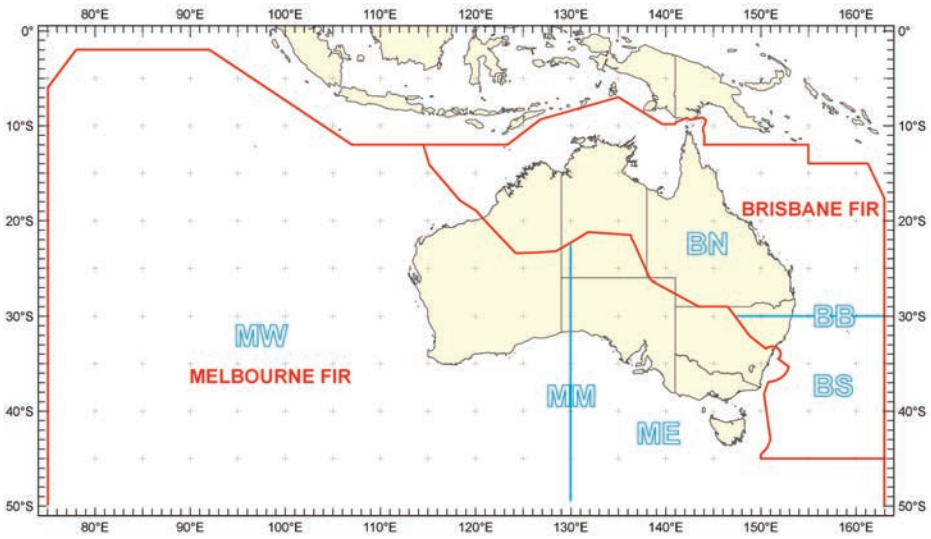
RMK (remarks) Line

The remarks line includes the following information:

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

YMMM SIGMET C02 VALID 180720/180839 YMMC-
YMMM MELBOURNE FIR CNL SIGMET C01 180439/180839
RMK: MW CNL CO1

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



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

RMK: BN NEW

RMK: BN EXTD M01 100800/101200

RMK: BN CNL M01

RMK: BN EXTD CO2 100800/101200 SEE ALSO YMMM D01

The **message status** will be one of the following:

- NEW to indicate that the SIGMET is for a new phenomenon in the FIR.
- EXTD to indicate that the SIGMET extends an earlier SIGMET issued for the phenomenon.
- CNL to indicate that the SIGMET cancels a current SIGMET.

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\YBBB FIR boundary).

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