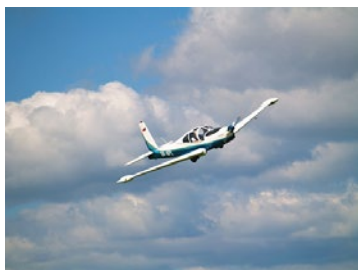


# AVIATION WEATHER PRODUCTS

## AIRMET

Bureau of Meteorology › Aviation Meteorological Services



**AIRMET provides advice on deteriorating conditions, not already included in the relevant Graphical Area Forecast (GAF).**

### Definitions

#### Isolated

Individual features which affect, or are forecast to affect up to 50% of an area.

#### Occasional

Well-separated features which affect, or are forecast to affect, greater than 50% but not more than 75% of an area.

#### Frequent

Little or no separation between adjacent features affecting, or forecast to affect, greater than 75% of an area.

#### Embedded

Embedded within cloud layers and cannot be readily recognised.

## AIRMET

AIRMET provides advice on deteriorating conditions, not already included in the relevant Graphical Area Forecast (GAF). AIRMETs are complimentary to the routine issue and correction of GAFs.

AIRMET information is passed on to pilots by Air Traffic Control (ATC) by way of a Hazard Alert.

AIRMET will be issued for the following phenomena if not already contained in the current GAF:

Weather element/phenomenon		Code	Description
Surface Visibility		SFC VIS	Widespread areas of visibility of less than 8000M, over an area of at least 3000NM <sup>2</sup> and/or less than 5000M in areas of high traffic density
<b>Cloud</b>			
Areas of coverage	Broken	BKN CLD	Widespread areas of cloud coverage of BKN or OVC below 1500FT above ground level, over an area of at least 3000NM <sup>2</sup> and/or below 1000FT in areas of high traffic density
	Overcast	OVC CLD	
Cumulonimbus	Isolated	ISOL CB	Isolated, occasional or frequent cumulonimbus cloud
	Occasional	OCNL CB	
	Frequent	FRQ CB	
Towering cumulus	Isolated	ISOL TCU	Isolated, occasional or frequent towering cumulus cloud
	Occasional	OCNL TCU	
	Frequent	FRQ TCU	
<b>Weather</b>			
Thunderstorms	Isolated without hail	ISOL TS	Isolated and occasional thunderstorms (with or without hail)
	Isolated with hail	ISOL TSGR	
	Occasional without hail	OCNL TS	
	Occasional with hail	OCNL TSGR	
Moderate icing		MOD ICE	Moderate icing (not issued separately when icing occurs in convective clouds)
Moderate turbulence		MOD TURB	Moderate turbulence (not issued separately when turbulence occurs in convective clouds)
Moderate mountain waves		MOD MTW	Moderate mountain waves
Freezing level		FZ LVL	Change in freezing level of 2000FT or more

### NOTES

1. AIRMET is not issued for wind.
2. If lightning, thunder or hail is expected the phenomenon TS will be used.
3. The phenomena CB or TCU will only be used when not accompanied by lightning, thunder or hail.
4. Turbulence and Icing will not be used in connection with convective clouds as they are implied.

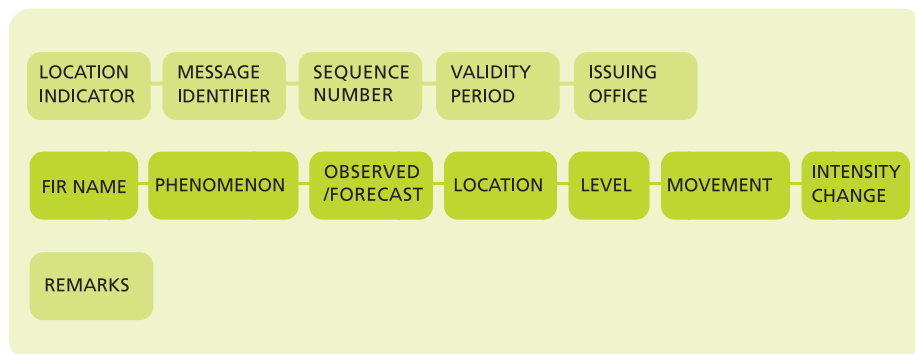


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## AIRMET Abbreviations

ABV	Above
BKN	Broken
BLW	Below
BR	Mist
CLD	Cloud
CNL	Cancel
DS	Duststorm
DU	Dust
DZ	Drizzle
E	East or eastern longitude
FC	Funnel Cloud
FG	Fog
FIR	Flight Information Region
FL	Flight level
FRQ	Frequent
FT	Feet
FU	Smoke
GAF	Graphical Area Forecast
GR	Hail
GS	Small hail and/or snow pellets
HZ	Haze
ICE	Icing
INTSF	Intensifying
ISOL	Isolated
KT	Knots
M	Metres
MOD	Moderate
MOV	Moving
MTW	Mountain Wave
N	North or northern latitude
NC	No Change (in intensity)
OBS	Observed
OBSC	Obscured
OCNL	Occasional
OVC	Overcast
PL	Ice pellets
PO	Dust/sand whirls (dust devils)
RA	Rain
S	South or southern latitude
SA	Sand
SFC	Surface
SG	Snow grains

## AIRMET Structure



### Location Indicator

The ICAO location indicator of the Australian Flight Information Region (i.e. either YMMM (Melbourne FIR) or YBBB (Brisbane FIR) for which an AIRMET is issued.

### Message ID

The message identifier is 'AIRMET'.

### Sequence Number

Consists of a two-digit sequence number. The two-digit sequence number provides a sequential count of the number of AIRMETs issued within an FIR since the last 0001 UTC day, commencing at 01.

The sequence number will reset to 01 on the UTC day rollover (at 0001 UTC). For example if AIRMET 08 was allocated at 2200 UTC and the next sequence number is requested at 0015 UTC, then sequence number 01 will be allocated.

### Validity period

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 in UTC.

An AIRMET is valid for a maximum of four hours.

### Issuing 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

### FIR (Flight Information Region)

The abbreviation and full name of the FIR (YMMM or YBBB) for which the AIRMET is issued.

### Phenomenon

The description of the phenomenon consists of a qualifier and a phenomenon abbreviation.

### Observed or Forecast

This gives an indication of whether the element is Observed or Forecast, OBS [AT <GGggZ>] or FCST.

## AIRMET Abbreviations (continued)

SS	Sandstorm
STNR	Stationary
TOP	Top (of cloud)
TS	Thunderstorm
TURB	Turbulence
VIS	Visibility
W	West or western longitude
WI	Within (area)
WKN	Weakening (intensity)
YBBB	Brisbane Flight Information Region
YMMM	Melbourne Flight Information Region
Z	Code for UTC (Universal Time Coordinated)

### Location

Gives the geographical forecast location of the phenomenon.

The location can be depicted as a single location, using an approved PCA location or it can be depicted as an area bounded by a series of PCA locations or coordinate points. The point or polygon describes the location of the phenomenon at the beginning of the validity period.

### Level

The vertical extent of the phenomenon is given in the same format as used in SIGMET messages.

The vertical extent will be the lowest and highest altitude of the phenomenon in feet above MSL. Feet is used for levels at and below 10,000 feet.

If a layer is extending through the transition level (10,000 feet) then:

- where the base of the phenomenon is below 10,000 feet but the top is above 10,000 feet, ABV nnnnFT, will be used where 'nnnn' is the base of the phenomenon, e.g. ABV 5000FT.
- In the case of TS, CB and TCU where the top of the phenomenon may be above 10,000 feet then TOP ABV 10000FT will be used.

### Movement

The movement or expected movement, is given with reference to one of the 16 compass radials and speed is given in knots (KT). For example, MOV NNE 25KT.

Speed must be in 5 knot increments and two digits shall be used for speeds less than 10 knots; or

The abbreviation STNR (stationary) is used if no significant movement is expected and for FZLVL AIRMETs.

### Intensity Change

The expected evolution of the phenomenon's intensity is indicated by one of the following abbreviations:

- INTSF: intensifying
- WKN: weakening
- NC: no change

The abbreviation NC will always be used for FZLVL AIRMETs.

### Remarks

The remarks line is found only in Australian AIRMET messages and is removed before sending internationally. It begins on a new line. The purpose is to allow additional information to be conveyed in an AIRMET message, such as:

- list of GAF identifiers the AIRMET message applies to; and/or
- cross-referencing AIRMET messages when a phenomenon straddles the FIR boundary;

### Cancellation

An AIRMET will be cancelled when during the validity period of an AIRMET, the phenomenon for which the AIRMET had been issued is included in a routine GAF or the phenomenon ceases to exist.

**Note:** There is no provision for amendments to AIRMET and therefore if an amendment is required or an error is to be corrected the current AIRMET will be cancelled, and a new AIRMET issued with a new (or next) sequence number.

RMK: GAF NSW-E

RMK: GAF NSW-E, NSW-W

RMK: GAF NSW-E, SEE ALSO  
YBBB 01

## Vertical Extent

This will be given in feet AMSL, using one of the following formats:

Format	Example
SFC/[n]nnnnFT	SFC/7000FT
[n]nnnnFT	10000FT
[n]nnnn/[n]nnnnFT	6000/10000FT
ABV [n]nnnnFT	ABV 5000FT
TOP [n]nnnnFT	TOP 10000FT
TOP ABV [n]nnnnFT	TOP ABV 10000FT

## GAF Domain



## AIRMET Examples

### AIRMET for fog

YMMM AIRMET 01 VALID 231400/231800 YSRF –  
 YMMM MELBOURNE SFC VIS 0300M (FG) FCST WI YORG – KIAN – YBOM – YSCN  
 SFC/0600FT STNR NC  
 RMK: GAF NSW-E

### AIRMET for thunderstorm

YMMM AIRMET 02 VALID 190530/190930 YPRM –  
 YMMM MELBOURNE FIR ISOL TS OBS AT 0525Z WI YCFH - MRE - YCBP - YALA TOP ABV  
 10000FT MOV S 05KT NC  
 RMK: GAF SA

### Cancelled AIRMET

YMMM AIRMET 04 VALID 190830/190930 YPRM –  
 YMMM MELBOURNE FIR CNL AIRMET 02 190530/190930  
 RMK: GAF SA



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

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