

AVIATION WEATHER PRODUCTS

Significant Weather (SIGWX) Charts

Bureau of Meteorology › Aviation Weather Services



The Bureau issues SIGWX forecast charts for significant weather expected in the airspace FL100 to FL630.

SIGWX Forecast Charts

The Bureau issues SIGWX forecast charts for significant weather expected in the airspace:

- FL250 to FL630 – SIGWX High (SWH)
- FL100 to FL250 – SIGWX Medium (SWM)

Charts are valid for 00, 06, 12 and 18 UTC. SWM are normally first available fifteen hours before validity, and will be updated four hours before validity. SWH are normally available sixteen hours before validity, and will only be updated if an error or omission is found. The issue time is shown in the bottom left-hand corner of the chart.

Forecast charts are valid for the time point indicated (00, 06, 12 or 18 UTC) but are used for operations within three hours each side of this time.

The following phenomena are shown on the charts:

- tropical cyclones
- moderate or severe turbulence, including clear air turbulence (CAT)
- moderate or severe icing
- surface fronts
- cumulonimbus (CB) cloud associated with thunderstorms and with any of the above
- non-convective cloud associated with in-cloud moderate or severe turbulence or icing
- jet streams
- volcanic eruptions
- tropopause heights
- radioactive material

Note that the inclusion of CB on SIGWX charts implies the existence of thunderstorms, moderate or severe turbulence, moderate or severe icing, and hail.





Cloud amount is indicated by the standard abbreviations:

- ISOL, OCNL, FRQ and EMBD for CB
- FEW, SCT, BKN and OVC for clouds other than CB

The numerals following the cloud type abbreviation are the forecast height of the top and base, respectively, of the cloud. If the top/base is above/below the level of the chart coverage, XXX is used, e.g.

ISOL	EMBD	or	ISOL	EMBD	or	ISOL	EMBD
CB	XXX		CB	400		CB	XXX
	100			XXX			XXX

A similar convention is employed to indicate the forecast height of icing and turbulence.



















Jet streams are indicated by a solid line with pennants () to show wind speeds of 50 knots, feathers () to show 10 knots, and half feathers () to show 5 knots. A 20 knot change is indicated by two parallel lines across the jet stream ().

The tropopause is indicated at various points by a rectangular box framing the flight level of the tropopause. The location of the highest and lowest tropopause points may also be shown.



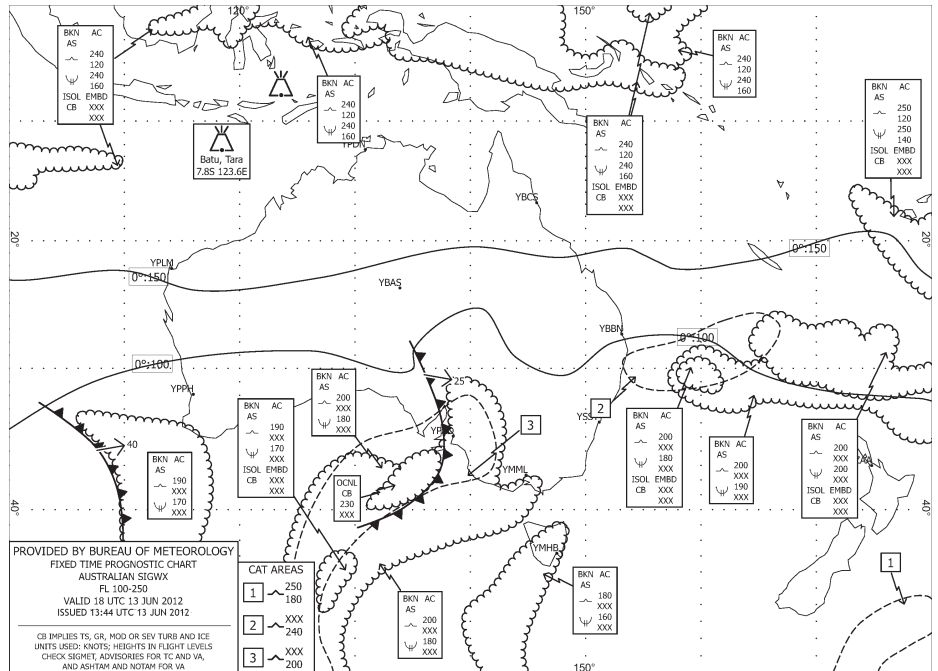
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SIGWX Symbols

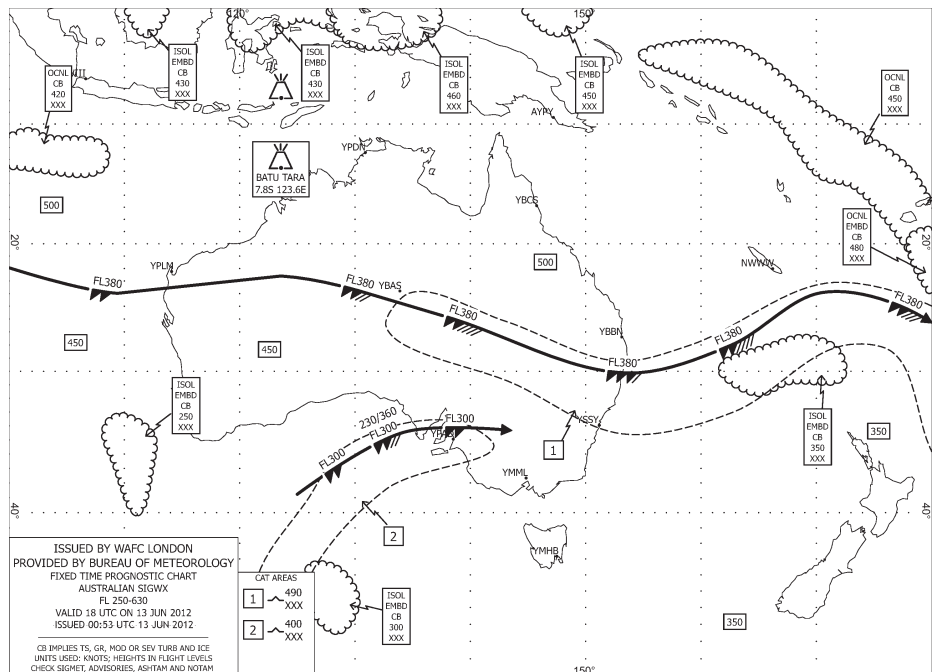
	Tropical cyclone
	Moderate turbulence
	Severe turbulence
	Moderate aircraft icing
	Severe aircraft icing
	Thunderstorm
	Rain
	Snow
	Hail
	Volcanic eruption
	Radioactive materials in the atmosphere
	Tropopause high
	Tropopause low
	Tropopause level
	Position, speed and level of jet stream
	The flight levels between which winds are greater than 80 KT
	20 KT change in jet stream wind speed
	Surface cold front

Example Forecast Charts

SIGWX Medium



SIGWX High



Australian Government
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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 margin indicates a text amendment since last update.