Australian Government
Bureau of Meteorology

Registered User 72 Hour Historical Observation Files

Data in these files is sourced from the same database as the state observation tables on the web (e.g. http://www.bom.gov.au/vic/observations/vicall.shtml).

File formats

Data shown is sourced from a number of message types and reformatted into xml, axf, and json. Files are then zipped into tgz format.

IDV60910.tgz – Victorian observations
IDQ60910.tgz – Queensland observations
IDN60910.tgz – New South Wales observations
IDT60910.tgz – Tasmanian observations
IDS60910.tgz – South Australian observations
IDW60910.tgz – Western Australian observations
IDD60910.tgz – Northern Territory observations

Update frequency

Every half hour, at approximately x:05 and x:35.

Observation source types

The source message from the automatic weather station determines which meteorological elements are displayed in the product.

For wind measurements, the source message also determines how the wind value is calculated (see table below). The source message type for wind information is given by the attribute *wind-src*.

Message types used at each site are determined based on the following hierarchy (most preferred to least preferred):

- *OMD*: One minute frequency messages. As far as possible, all sensors connected to an AWS are polled once per second; values are reported as per the table below.

- *metar*: METAR format, issued either half-hourly or hourly (on the hour or half-hour). Includes SPECI messages issued at non-standard times where conditions change significantly from the preceding message.

- *metar_10*: METAR format, issued either half-hourly or hourly (on the hour or half-hour). Does not include SPECI messages.

- *mdf*, *synop*: Sites which update only at three hourly or less frequent intervals are sourced from SYNOP messages, which are manually generated by

Bureau observers. Those with the type “Non-AWS” are usually SYNOP messages.

- *TMD*: Ten minute frequency messages. This message format has been superseded and is being replaced by one minute data and METAR messages.

Heading	Meaning
Date/time	Time is given in both local time (time-local) and UTC (time-utc).
air_temp	Last valid one second sample of the temperature at the specified minute.
apparent_t	Steadman Apparent Temperature. Calculated using temperature, relative humidity and wind speed.
dewpt	Dewpoint calculated from wet and dry bulb temperature (preferred), or air temperature and relative humidity.
rel_hum	Relative humidity calculated from wet and dry bulb temperature (preferred), or directly measured by a humidity sensing probe. Last valid one second sample of the specified minute (where directly measured).
delta_t	Air temperature minus wet bulb temperature. (Not included for Antarctic observations.)
wind_dir	Wind direction calculated using a trigonometric technique, given as one of 16 cardinal points. Calm conditions displayed as “CALM”. • OMD: Mean over one minute. • metar: See Appendix 3. • metar_10, synop, mdf: Mean over ten minutes.
wind_dir_deg	Wind direction in degrees. Calm conditions displayed as “0”. • One minute: Mean over one minute. • metar: See Appendix 3. • metar_10, synop, mdf: Mean over ten minutes.
wind_spd_kmh	Wind speed in kilometres per hour. • OMD: Mean (km/h) over one minute. • metar: See Appendix 3. • metar_10, synop, mdf: Mean (km/h) over ten minutes.
gust_kmh	Wind gust speed in kilometres per hour. • OMD: The highest three second mean wind speed (km/h) over the one minute period. • metar, metar_10: The highest three second mean wind speed (km/h) over the ten minute period. • synop, mdf: Not available.
wind_spd_kt	Wind speed in knots.

Heading	Meaning
	• OMD: Mean (knots) over one minute. • metar: See Appendix 3. • metar_10, synop, mdf: Mean (knots) over ten minutes.
gust_kt	Wind gust speed in knots. • OMD: The highest three second mean wind speed (knots) over the one minute period. • metar, metar_10: The highest three second mean wind speed (knots) over the ten minute period. • synop, mdf: Not available.
press	Atmospheric pressure sourced from either QNH or mean sea level pressure. Where both QNH and MSLP are available, the value shown is MSLP. Last valid one second sample of the specified minute.
press_msl	Mean sea level atmospheric pressure in hectopascals. Last valid one second sample of the specified minute.
press_qnh	QNH atmospheric pressure in hectopascals. Last valid one second sample of the specified minute.
press_tend	Trend in pressure since the last observation that has been corrected for diurnal variation; two peaks and troughs in pressure each day. Manual observation sites only (R rising, F falling, S steady).
rain_trace	Precipitation during the stated period, usually since 9am local time. Some amounts may be rounded to the nearest millimetre.
rain_ten	Precipitation over the ten minutes preceding the observation time (OMD, metar and metar_10 only).
rain_hour	Precipitation over the hour preceding the observation time (metar and metar_10 only).
weather	Observed weather type (see Appendix 1) where manual observations are available (synop, mdf only).
cloud	Cloud description (see Appendix 2) generated either from ceilometer data at aerodrome AWSs or from manual observations where available. • OMD: Last valid one second sample of the specified minute (automated only). • metar, metar_10: Last valid one second (automated) sample of the specified minute or manual observation at the stated time. • synop, mdf: Manual observation at the stated time.
cloud_base_m	Cloud base height above station height in metres.
cloud_oktas	Cloud cover in oktas.
vis_km	Visibility generated either from visibility meter data at aerodrome AWSs or from manual observations where

Heading	Meaning
	available. • OMD: Last valid one second sample of the specified minute (automated only). • metar, metar_10: Last valid one second (automated) sample of the specified minute or manual observation at the stated time. • synop, mdf: Manual observation at the stated time.
swell_height	Manual swell height in metres at coastal sites (synop, mdf only). '+' indicates 'greater than', '<' indicates 'less than'.
swell_period	Manual swell period in seconds at coastal sites (synop, mdf only). '+' indicates 'greater than', '<' indicates 'less than'.
swell_dir_worded	Manual observations at coastal sites (synop, mdf only). Direction the swell comes from, given as one of eight cardinal points. 'CF' indicates confused swell, 'NS' indicates no swell.

Information on the elements themselves can be found here:
http://www.bom.gov.au/catalogue/observations/about.shtml

For further enquiries, please contact webreg@bom.gov.au

Appendix 1 – Weather Types

Fine
Haze
Dust whirls
Mist
Shallow fog
Distant/nearby virga
Thunder
Funnel cloud
Recent rain
Recent rain and snow
Recent shower
Recent fog
Dust storm
Drifting snow
Distant fog
Drizzle
Rain
Sleet
Ice prisms
Starlike crystals
Shower
Snow shower
Smoke
Dust
Dust storm
Fog patches
Lightning
Distant precipitation
Squall
Recent drizzle
Recent snow
Recent precipitation
Recent hail
Recent thunderstorm
Severe dust storm
Blowing snow
Fog
Freezing drizzle
Freezing rain
Snow
Snow grains
Ice pellets
Violent shower
Soft hail shower

Hail shower
Thunderstorm and hail
Thunderstorm and dust
Thunderstorm
Heavy thunderstorm

Appendix 2 – Cloud Types

0 oktas: "Clear"
1-2 oktas: "Mostly clear"
3-5 oktas: "Partly cloudy"
6-7 oktas: "Mostly cloudy"
8 oktas: "Cloudy"
9 oktas: "Fog"

Appendix 3 – METAR/SPECI Wind Assessment Period (WAP)

The length of the WAP may be any value from 2 to 10 minutes. For METAR messages the WAP will be 10 minutes except when a wind discontinuity is detected during the 10 minute period preceding the observation, in which case the WAP will be 2 minutes plus the length of time expired since the discontinuity, up to a maximum of 10 minutes.

For a wind direction or wind speed SPECI, the length of the wind assessment period will always be 2 minutes.

For all other SPECI messages, the length of the wind assessment period will be the time elapsed since the last occurrence of any assessment period reset event (i.e. a wind discontinuity, a wind direction SPECIAWS, or a wind speed SPECIAWS) during the 10 minute period preceding the observation, in which case the WAP will be 2 minutes plus the length of time expired since the last reset, up to a maximum of 10 minutes. If a reset event has not occurred, the wind assessment period will be 10 minutes.