USER NOTES

Aerodrome Climatological Summaries

Climatological summaries, based on ICAO recommendations, are available for selected aerodromes in Australia.

Data

Data for Models A-E are sourced from half hourly METAR/SPECI observations. Where an observation is missing on the half hour the next closest observation 15 minutes either side of the half hour is used. Where manual observations are not available Automatic Weather Station (AWS) and ceilometer data are used. Data for Model F is sourced from manual synoptic observations only. The commencement of METAR/SPECI observations used in Models A-E may differ to the commencement of manual synoptic observations used in Model F. This will be reflected in the Period of Record as displayed on each output.

Stations for analysis are accepted where observations have been made over at least five consecutive years.

Percentage Frequency Definition – occurrence of one element during specified time or period divided by the total observations of that element during the same time or period multiplied by 100. Percentage Frequency = (total occurrences/ total observations) X 100

Total Observations Definition – All occurrences of one element per observation during a specified time or period.

Models A and C – cloud frequency values may include some occurrences of fog or mist.

Model F – present weather reports (WMO Code Table 4680) were used for generating Model F statistics.

Values are rounded to one decimal after analysis for display. Percentages that are greater than zero and less than 0.05 are represented by an asterisk.

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Gaps and Missing Data

Due to a reliance on Automatic Weather Stations, there is a notable absence of data for Models A, B, C and F at many minor aerodromes. These Models rely heavily on manual observations of visibility, cloud height and weather phenomena.

Very few sites have a complete unbroken record of climate information. A site may have been closed, reopened, upgraded to a full weather site or downgraded to a rainfall only site during its existence causing breaks in the record for some or all elements. Some gaps may be for one element due to a damaged instrument, others may be for all elements due to the absence or illness of an observer or a technical fault.

Instruments & Observational Practices

Historically a nearby site may have used the same site number. There may have been changes in instrumentation and/or observing practices over the period included in a dataset, which may have an effect on the long-term record. In recent years many sites have had observers replaced by Automatic Weather Stations, either completely or at certain times of the day.

Time

Data for Models A-E are based on UTC standard. Data for Model F are based on Local Time.

For a part of the year some Australian States adopt Daylight Saving Time (DST), and observers continue to take observations according to the local clock. Daylight Saving has been used in many Australian states since 1973. The changeovers occur almost always in October and March, but exact dates vary from State to State and year to year. More information can be found at: **http://www.bom.gov.au/climate/averages/tables/daysavtm.shtml**

Quality Control

In general only primary quality control is done at the ingest stage on METAR/ SPECI data. The following indicates QC parameters:

Temperature range is -70°C (-99°C for Antarctic sites) to 60°C.

Wind upper bound is 100 m/s. Wind speed cannot be negative. Wind direction must be between 0 and 360.

Cloud (manual observations) amount range is 1 to 8 oktas inclusive. NULL values are associated to zero cloud. Cloud ceilometer (see below).

Visibility cannot be negative.

Ceilometer Data

The Ceilometer is an instrument which uses a vertical laser beam to estimate cloud amounts and heights. The instrument only samples the sky directly above it. The ceilometer reports heights to 12,500 feet with amounts broken into the following subgroups: FEW (few); SCT (scattered); BKN (broken); OVC (overcast). Requirements for these analyses only use amounts SCT and OVC where there is an absence of manual cloud observations.

Latitudes and Longitudes

Latitudes and longitudes are given to 4 decimal places, but in many cases will not be accurate to 4 decimal places. This is because in the early days the positions of stations were estimated from maps. Gradually the network of open stations is being checked (and if necessary corrected) using GPS (Global Positioning System).

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