AUSTRALIAN DAILY TEMPERATURE AND RAINFALL EXTREMES

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1. Introduction

Climate extremes are a major field of public interest. Whenever a significant record is broken or approached, it generates considerable media attention. In order to respond to this attention, climate scientists and the Bureau in particular need an accurate knowledge of what the significant historical extremes are.

In addition to their inherent interest, extreme values are a major indicator of climate impacts. They are an important input variable into many areas of applied climatology: for example, the maximum winds for which a building should be designed, or the geographical limits of crops prone to frost damage. Because of their role in climate impacts, the monitoring of changes in climate extremes has become a major part of climate change assessments, and was a significant part of the IPCC's Fourth Assessment Report, released in 2007.

Many of the Bureau's routine data quality control procedures also depend on knowledge of likely extremes, to identify observations that lie outside of those limits.

The principal scope of this report is to define the best available set of valid extremes for daily maximum and minimum temperature, and daily rainfall, as of the time of writing. As a precursor to this, the factors which influence temperature and rainfall extremes and their geographical distribution in Australia are discussed.

The extremes considered are for each calendar month for each state and the Northern Territory, and for Australia as a whole. Other climate elements (e.g. wind speed, air pressure, monthly and annual rainfall totals) were not considered at this time, but may be at a later date. Extremes at a specific site, or for a general location (for example, a capital city, encompassing a number of different observation sites), are not considered in this report, but the procedures described in sections 4 and 5 of this report are recommended in their future assessment.

2. Broadscale influences on temperature and rainfall extremes in Australia

2.1. Maximum temperatures

The highest extreme maximum temperatures in Australia have been concentrated in two broad areas (Fig. 1); south-central Australia, extending from the Nullarbor Plain across most of northern South Australia into north-western New South Wales and the far southwest of Queensland, and coastal and near-coastal Western Australia between Broome and Geraldton, especially the Pilbara coast. Many locations in these two regions have exceeded 48°C at least once.

In contrast, extremes are relatively modest along much of the east coast and adjacent ranges, and in the northern tropics. Whilst consistent heat is a hallmark of the northern tropics, extreme heat is rare. Few locations north of 16°S have exceeded 45°C, and the more exposed parts of the northern coastline, including Darwin, have never reached 40°C. Most locations along the east coast have record highs between 40 and 45°C, although a few (mostly in the Sydney-Newcastle area) have exceeded 45°C, and some of the more exposed locations, especially in Queensland, have never reached 40°C.

Along the ranges, extreme maximum temperatures largely depend on altitude. Over the greater part of the New South Wales Tablelands extreme maxima are in the 38-42°C, but the highest parts of the Snowy Mountains and Victorian Alps have never reached 30°C, and the higher parts of the New England plateau have record highs around 35°C.

In most other parts of mainland Australia, including the southern coast and much of the inland, extreme maximum temperatures are mostly in the 44-48°C range, although a few stations in these areas have exceeded 48°C, especially during the 2009 heatwave.

Extreme high maximum temperatures in Tasmania are, not surprisingly, much lower than they are on the mainland. Parts of the east coast and low-lying portions of the interior have reached near or just above 40°C, with most of the southern half of the state (except at high elevations) having reached 35°C. The lowest extreme maxima are found in the mountains and along the north coast. Days above 30°C are rare along most of the north coast, and some of the more exposed locations have never reached 30°C.

Also not surprisingly, the lowest daily maximum temperatures (Fig. 2) have occurred in the mountains of southeastern Australia (including Tasmania). Numerous locations above 1000 m elevation in the Snowy Mountains, Victorian Alps and Tasmanian highlands have experienced daily maxima below 0°C, with values below -5°C on some of the highest peaks. Sub-zero daily maxima have also occurred at a few elevated locations further north on the New South Wales tablelands, such as Orange, Oberon and Guyra. Most of the New South Wales tablelands, the Victorian highlands above 500 m elevation, and most of Tasmania (except the coastal fringe) have had maxima below 4°C.

At lower elevations outside the tropics, extreme low maxima are mostly between 7-10°C in Western Australia and South Australia, and 5-10°C in the eastern states, except for the east coast north of Port Macquarie (generally 10-12°C), the west coast north of Perth and a broad area of east-central Australia centred on northeastern South Australia and the far southwest of Queensland.

In tropical areas, maximum temperatures drop to low levels occasionally during rain events, and are normally at their lowest during winter rain events. As winter is the tropical dry season, such events are extremely rare (an especially notable one occurred in June 2007) and extreme low maximum temperatures can be relatively high in areas missed by those events in the historical record. Few areas north of 16°S have had a daily maximum below 14°C, and those relatively high extreme low maxima extend south along the Western Australian coast as far south as Shark Bay. Most of the northern half of Cape York Peninsula, as well as the northern coast of the Northern Territory Top End, has never had a daily maximum below 20°C, with extreme values as high as 24°C in the Torres Strait Islands and Tiwi Islands. In contrast, most areas south of 20°S in Queensland and the Northern Territory have experienced maxima below 12°C, with some readings (most of them during the June 2007 event) near or below 8°C.

2.1.1. Specific factors influencing extreme high maximum temperatures

As with many climatic variables, the potential for extreme high maximum temperatures is influenced by a number of overlapping factors.

Latitude is a strong influence on temperature, although its effect – through its influence on the amount of incoming solar radiation – is more subtle than one might expect. In general, solar radiation will be most intense where the sun is directly overhead, which, in mid-summer, is near the Tropic of Capricorn (23.5°S). However, the total amount of solar exposure received peaks slightly further south than this, because the increasing summer day length as one moves south allows for

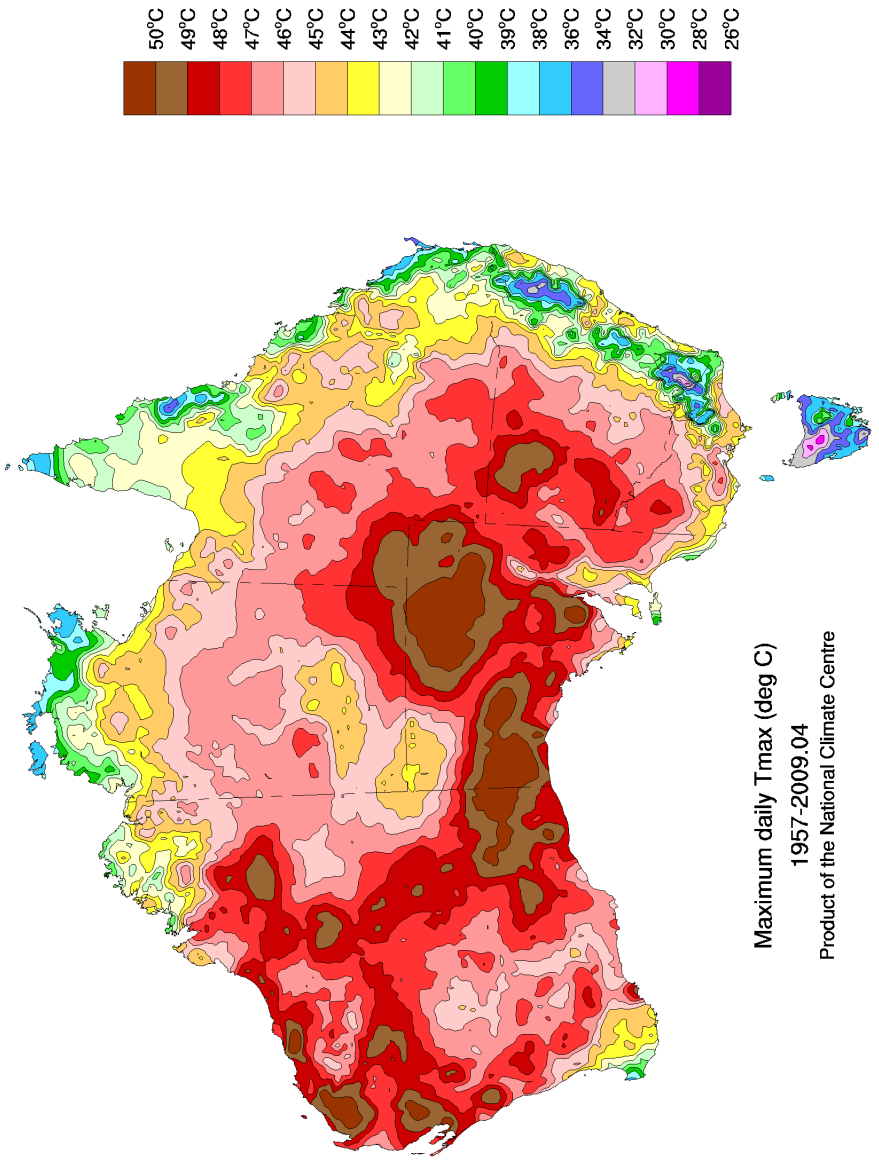

Figure 1. Highest recorded daily maximum temperatures (°C) in Australia, 1957 to April 2009, based on 0.05°×0.05° gridded daily analyses.

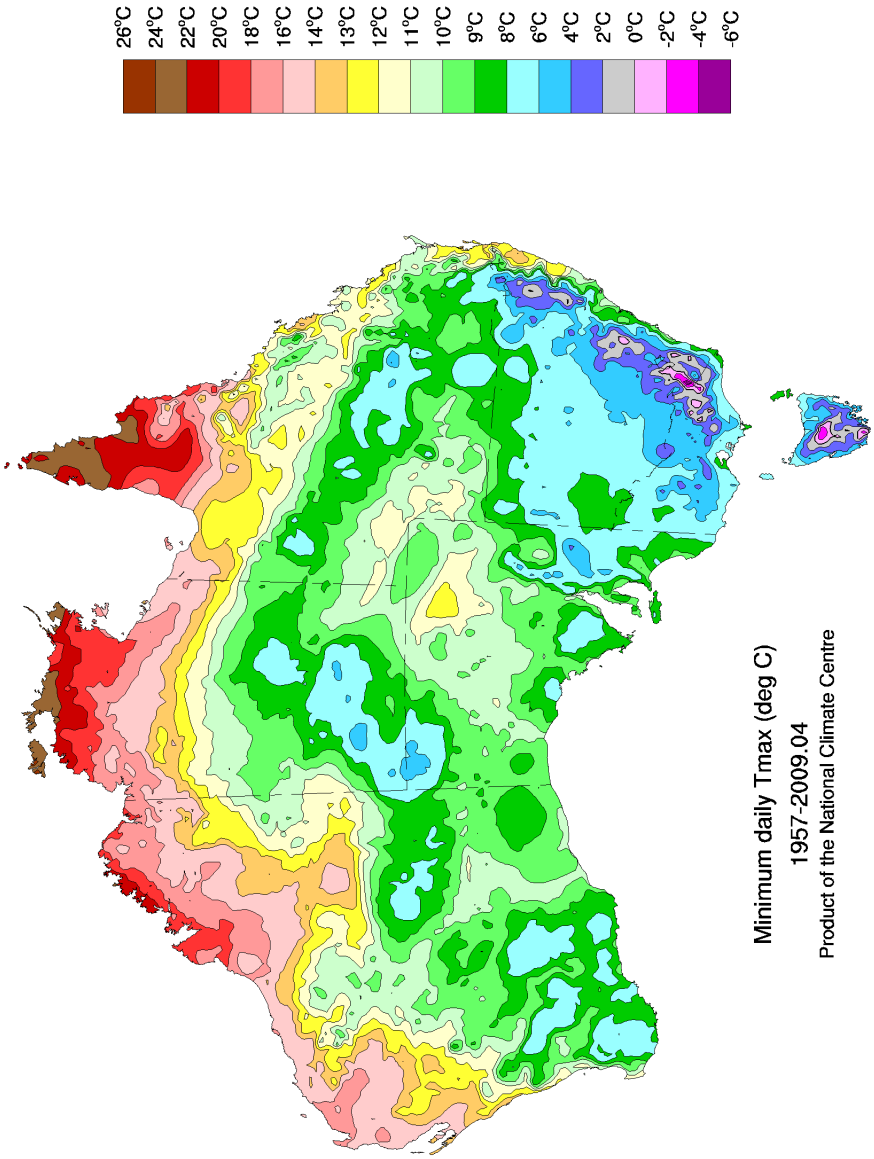

Figure 2. Lowest recorded daily maximum temperatures (°C) in Australia, 1957 to April 2009, based on 0.05°×0.05° gridded daily analyses.

more time for incoming solar radiation to be received. In December and January, average daily solar exposure peaks between 25 and 28°S, and it is in this latitude band where many of the highest extreme maxima have occurred. In the northern tropics, wet-season clouds also reduce the amount of incoming solar radiation in summer, to the extent that Darwin and northern Cape York Peninsula have a lower average daily solar exposure in January than most of Tasmania. Darwin's average daily solar exposure peaks in October (before the wet season, and when the sun is close to overhead) at about 24 MJ per square metre, a similar value to the midsummer peak in Melbourne.

Oceans have a strong moderating influence on temperature, and mean summer temperatures are substantially lower along most of the Australian coastline than they are in adjacent inland areas (unless those areas are at high elevation). However, extreme high temperatures can reach levels comparable to those inland if offshore winds draw air from inland areas out to the coast. In summer strong easterly winds occur on occasions along most of the west coast, and strong northerly winds along the south coast, and hence on those coasts there is usually little difference between extreme high temperatures on the coast and those further inland. A good example of this is provided at Esperance in Western Australia. Esperance's mean January maximum temperature of 26.1°C is 4.4°C lower than that at Salmon Gums, about 100 km inland to the north, but its record high temperature of 46.7°C is higher than Salmon Gums' 45.7°C. Limited exceptions occur at locations where winds originating from the central continent have to cross an area of water before reaching the observing site, such as Rottnest Island, Cape Borda (Kangaroo Island) and Robe (which has water immediately to its north).

In contrast, along the east coast prevailing winds in summer are easterly, and westerly winds from the inland are very rare, especially in Queensland. The Great Dividing Range, which has no real counterpart along the south or west coast, also provides an obstruction to continental air masses reaching the coastline. As a result extreme maximum temperatures are generally somewhat lower, particularly in Queensland, along the coast than they are on the western side of the Great Dividing Range at the same latitude. (Westerly winds are more common in winter and spring, and it is not unusual for eastern coastal locations from Sydney northwards to have their hottest day of the year in October or November; in one exceptional case at Yamba, in northern New South Wales, in 1946, its hottest day of the year was 13 August).

The influence of the ocean is also apparent in the pattern of extreme high temperatures in Tasmania. Here, extreme high temperatures occur when air from the mainland is drawn southwards in a northerly or north-westerly airstream. When

such air reaches the north coast, the surface layers have been cooled considerably by crossing the waters of Bass Strait (where sea surface temperatures are rarely much above 20°C), explaining the very low extreme maxima along the north coast – there is nowhere for very hot air to come from. However, such air masses are heated again, and warm air aloft remixed to the surface, in their passage over Tasmania, producing much higher temperatures under the right synoptic conditions on the east and southeast coast (and occasionally on the west coast if the flow is northerly rather than north-westerly). Under rare circumstances these high temperatures can extend to northern parts of the state away from the immediate coastal fringe.

The final major influence on extreme high maximum temperatures in Australia is elevation. In the absence of other influences, extreme high maxima decrease with elevation at a rate fairly close to the dry adiabatic lapse rate, the rate at which dry air cools with increasing elevation, about 1°C per 100 m. (Under Australian conditions extreme high temperatures are almost always associated with dry air). The relatively high elevation of the southern Northern Territory and large parts of the interior of Western Australia, most of which lies between 400 and 700 m above sea level, explains the relatively modest extremes there. The record highs at locations such as Alice Springs (546 m elevation, 45.2°C), Giles (598 m, 44.8°C) and Meekatharra (511 m, 45.7°C) all equate to 50-51°C at sea level, which is on a par with the highest values recorded at low-elevation sites. More obviously, elevation accounts for the low extreme high maxima on the higher parts of the eastern Australian ranges.

More complex aspects of topography, such as aspect, have little effect on extreme high maxima in Australia. The so-called 'föhn' or 'chinook' effect, in which air crossing a mountain range is warmed by the latent heat of condensation as moisture is removed from it – producing higher temperatures on the lee side than at the same elevation on the windward side – can be significant in some weather situations in Australia, particularly in the southeast in winter, but in situations conducive to extreme high temperatures, the original air mass is almost always dry and hence 'föhn' effects have little impact. (As a contrast, during the British winter, the warmest air masses are moist air masses originating over the oceans to the southwest, and hence the highest extreme maxima in winter occur in areas to the northeast of significant mountains, such as north Wales and northeast Scotland).

2.1.2. Specific factors influencing extreme low maximum temperatures

The dominant influences on extreme low maximum temperatures are latitude and altitude. In general, the potential for extreme low maximum temperatures de-

creases at lower latitudes (unlike the situation for high maxima, as low maxima occur in winter when the latitude where the sun is overhead is well north of the Australian continent), but the rate of decrease is relatively low, as there are few barriers, particularly in inland eastern Australia, to cold air from the south being drawn a long way northwards across the continent with little modification in the right synoptic situation. (To illustrate this, at elevations below 300 m in inland eastern Australia, the difference between the mean July maximum temperature at latitude 20°S (about 25°C) and at 35°S (about 14°C) is about 11°C, but the difference between the extreme low maxima is about half that (11-12°C at 20°S, about 6°C at 35°S)).

Extreme low maxima also tend to decrease with elevation, although at a slightly lower rate than extreme high maxima (typically between 0.6 and 0.8°C per 100 m), in part because extreme low maxima often occur in relatively moist air masses. This is especially true in the tropics where they are almost always associated with substantial rain events.

Local factors have only a limited influence on extreme low maximum temperatures. In general small-scale local topography does not affect extreme low maxima in the same way that it does extreme low minima, although there are partial exceptions in a few cases in inland parts of the southeast (especially in Tasmania) where fog and low cloud occasionally persist all day in sheltered valleys in winter. Rare fog events in other areas may also produce anomalously low maximum temperatures locally at particular locations. The most striking examples of the former effect occur in the Derwent Valley north-west of Hobart where near-freezing maxima have occurred near sea level at sites such as Bushy Park (0.0°C) and New Norfolk (0.4°C), and it has also been observed at Corryong in a sheltered part of the upper Murray (2.1°C). Examples of individual fog events producing extreme low maxima include those of 8 July 1973 in the eastern suburbs of Melbourne (2.5°C at Healesville, 4.2°C at Scoresby) and 27 June 1989 along parts of the Murray valley (3.8°C at Echuca and Kyabram, 5.0°C at Deniliquin). At higher latitudes in other parts of the world, where it is common for winter temperature inversions to persist for several days (or longer) in anticyclonic conditions, extreme low maxima tend to occur in valleys in much the same way as extreme low minima do, but at Australian latitudes incoming solar radiation during the daytime is almost always sufficient to break up overnight inversions by early afternoon.

Distance from the ocean is, in most cases, only a minor influence on extreme low maxima, as the land-sea temperature difference is weak in winter along most of the Australian coastline. (This is in contrast with the summer situation where, except in the far north, the land is substantially hotter than the adjacent ocean). The

rapid decrease in extreme low maxima moving inland from the east coast in New South Wales and southern Queensland is generally no greater than would be expected from the change in altitude.

An interesting feature is the area of relatively high values (generally between 10 and 13°C) in an area centred on the far northeast of South Australia and southwest of Queensland (Fig. 2). This area is at a lower elevation than those to the east and (particularly) the west, but the decrease in extreme low maxima to the north of this region appears to reflect the particular location of the exceptional June 2007 event, which largely missed the area, rather than any inherent tendency for a lack of low maximum temperatures in this area; if extreme low maximum temperatures are mapped excluding the June 2007 event (not shown) the values in the area are not substantially higher than those further north. This event highlights that even long records at stations of 50 to 100 years may not be sufficient to fully capture the range of temperatures that are possible under highly unusual synoptic situations.

2.2. Minimum temperatures

Extreme high minimum temperatures are relatively uniform over large parts of the continent (Fig. 3), with more than 80% of Australia having had a highest recorded overnight minimum temperature between 30 and 35°C. Within this region, the largest area to have experienced especially hot nights is the northeast of South Australia, north-western New South Wales, southwestern Queensland and the far southeast of the Northern Territory, where most places have experienced a night above 33°C and a few have exceeded 35°C. Such high overnight temperatures have also occurred in parts of Western Australia, especially the Pilbara and interior, and in parts of South Australia as far south as Adelaide.

The major mainland areas where minimum temperatures have not exceeded 30°C are most areas within 400 km of the east coast, almost all of Victoria and adjacent southeastern South Australia, and southern Western Australia south of a Perth-Norseman line. In most of this region extremes are between 24 and 30°C, although they approach 20°C in the highlands of northeastern Victoria and southern New South Wales, and on the higher parts of the New South Wales Central and Northern Tablelands.

Over most of Tasmania the highest minimum temperatures are close to 20°C, or slightly higher along the coast. The highest overnight minima in Tasmania are found along the west coast and on the Bass Strait islands, where values in the 24-27°C range have occurred.

The lowest minimum temperatures have occurred in the mountains of southeast-

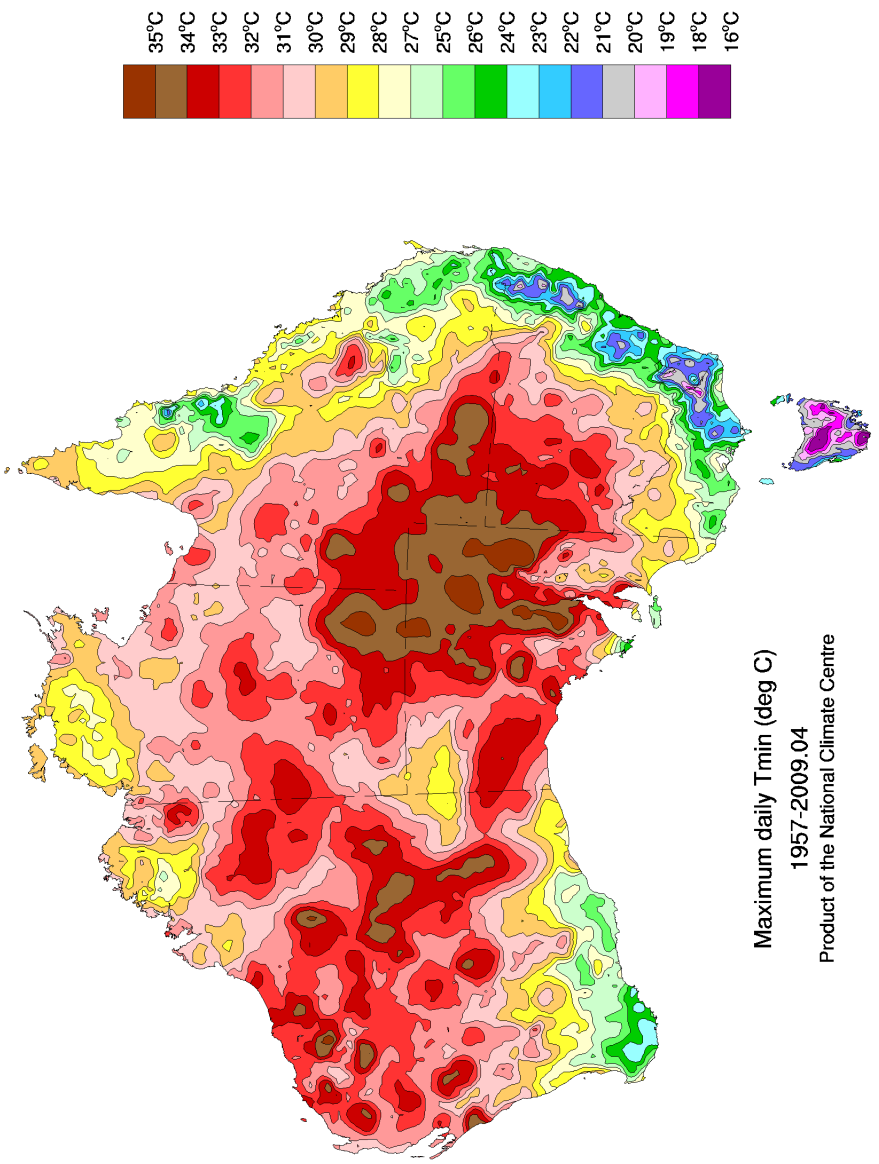

Figure 3. Highest recorded daily minimum temperatures (°C) in Australia, 1957 to April 2009, based on 0.05°×0.05° gridded daily analyses.

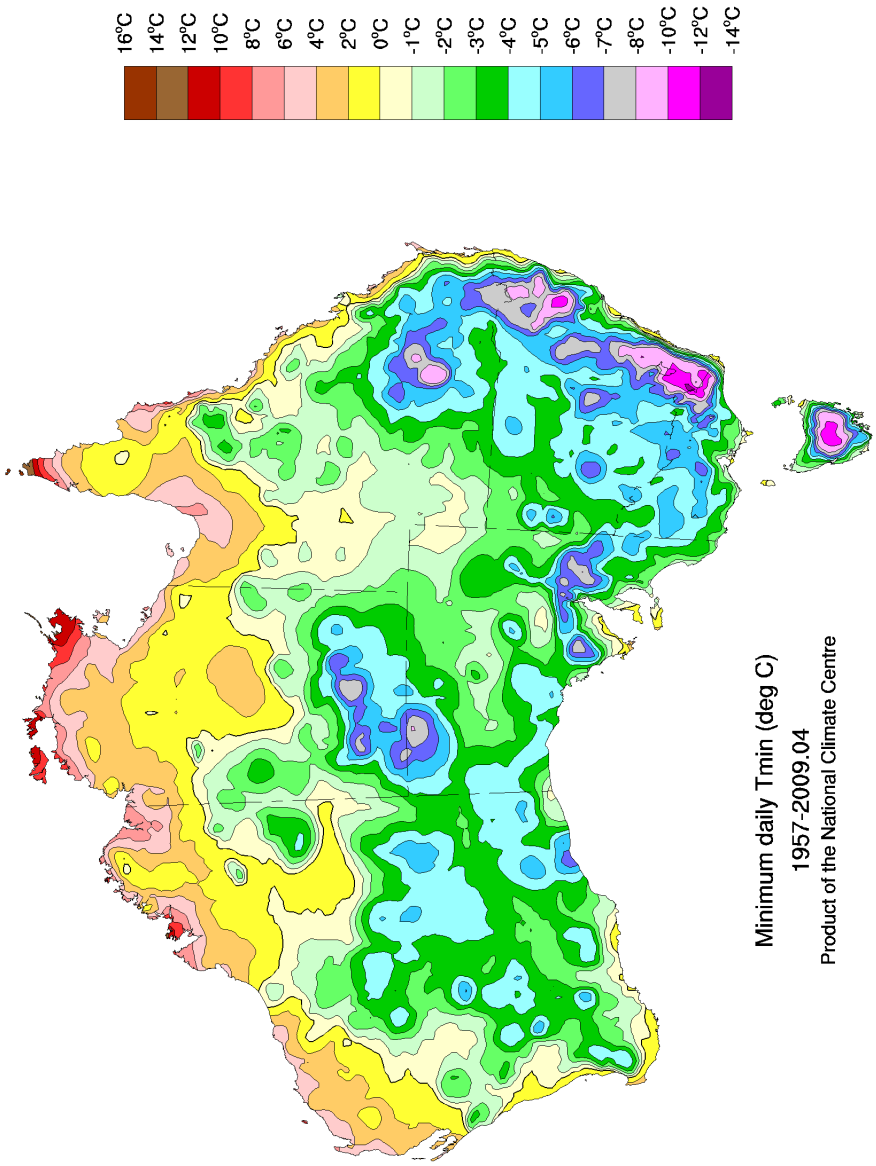

Figure 4. Lowest recorded daily minimum temperatures (°C) in Australia, 1957 to April 2009, based on 0.05°×0.05° gridded daily analyses.

ern New South Wales (Fig. 4). Charlotte Pass (-23.0°C) and Kiandra (-20.6°C) have recorded minima below -20°C. These extremely low values are localised (as discussed later in this section) and not fully reflected on the map in Figure 4. It is likely that some uninstrumented locations in high valleys in the Victorian and Tasmanian mountains have experienced minima below -15°C, although no temperature below -13°C has been measured in either state, as the only observing sites above the normal snowline in both states are in exposed hilltop locations which are not favourable for extreme low minima.

Outside the alpine regions, the other major regions where widespread minima below -8°C have occurred are the New South Wales tableland areas above 500 m elevation, extending into the far south of Queensland and northeastern Victoria, and parts of the Tasmanian interior. A number of topographically favoured locations in these regions have fallen well below -10°C, with values as low as -14.6°C at Gudgenby (south of Canberra), -14.5°C at Woolbrook (south of Armidale) and -13.9°C at Goulburn Airport. A few topographically favoured locations outside this area have also experienced minima below -8°C, including the elevated sites of Yongala, South Australia (-8.2°C) and Coonabarabran, New South Wales (-9.0°C), and, perhaps more surprisingly, Mitchell in southern inland Queensland (-9.4°C) and Richmond, on the north-western fringe of Sydney (-8.3°C, the lowest value recorded below 300 m elevation in mainland Australia).

Most inland regions south of the Tropic of Capricorn and below 500 m elevation have extreme low minima between -3°C and -7°C, except for southwestern Queensland where values are a little higher. Such values are also typical of all but the most exposed parts of the Tasmanian coast. There is a slight tendency towards slightly higher extreme low minima in Western Australia compared to locations at a similar elevation and latitude in the eastern states, with only a few Western Australian sites having fallen below -5°C.

South of the Tropic of Capricorn, latitude has only a modest impact on extreme low minima, but they increase progressively as one moves further north through the tropics. At latitude 20°S (near Mount Isa and Tennant Creek), most inland locations have extreme minima near 0°C. North of 20°S, extreme low minima are mostly between 0°C and 5°C except near some coasts, where the more exposed locations, such as Darwin (10.4°C) and Gove (11.1°C), have never fallen below 10°C. On the other hand, a few locations well into the tropics with favourable local topography have experienced sub-zero temperatures – Mount Elizabeth in the Kimberley region of Western Australia has reached -1.3°C – and several elevated locations on the Atherton Tableland of northern Queensland have also fallen below freezing.

The relatively warm waters of the ocean act as a moderating influence on overnight temperatures near the coast in winter, and extreme minima in the coastal zone are somewhat higher than those further inland (although the extent to which the coastal influence extends inland varies greatly depending on coastal topography, from several hundred kilometres in some tropical regions to only a few hundred metres on parts of the east coast, or not at all near the head of some narrow estuaries and inlets, such as those found in the Kimberley region). In the coastal region along the east coast, extreme minima are mostly between 0°C and 4°C from Townsville southwards to the Victorian/New South Wales border, as well as on the Western Australian coast between Carnarvon and Esperance. Along the south coast, except for a few specific locations (such as Eyre on the Nullarbor), extreme minima are mostly between -3°C and 0°C, whilst on most of the coast of tropical Western Australia, the Gulf of Carpentaria and eastern Queensland north of Cairns, they are between 4°C and 8°C. An interesting feature along the east coast is that, especially in areas where the coastal ranges are some distance inland from the coast, some very low minima have occurred in areas just inland from the coast. In addition to the previously mentioned observations in western Sydney, minima of -4°C or below have occurred at locations such as Bega (-8.1), Taree (-5.0), Casino (-4.6), and Amberley, on the western fringe of Brisbane (-4.9).

The moderating influence of the ocean is most evident on islands, especially small islands some distance from the coast. Even in southern Australia, locations such as Rottnest Island (4.5°C) and Neptune Island, near Port Lincoln (4.4°C) have not fallen below 4°C, and many tropical islands have not fallen below 10°C, including Barrow Island, Western Australia (10.5), Troughton Island, Western Australia (15.0), Elcho Island, Northern Territory (12.0) and Hamilton Island, Queensland (11.4).

2.2.1. Specific factors influencing extreme high minimum temperatures

Extreme high minimum temperatures are largely a function of the temperature of the overall air mass, and as such their geographic distribution over most of the continent is governed by many of the same influences as those which affect extreme high maximum temperatures, with extreme high minima over large parts of Australia away from the coasts 14-16°C below extreme high maxima at the same locations.

As is the case for extreme high maxima, the north-south gradient for extreme high minima is less than it is for mean values, because of the lack of barriers to hot air being drawn a long way south in strong northerly flow. Another factor further lessening the north-south gradient of extreme high minima is that, all other things

being equal, minimum temperatures will be higher on cloudy, windy nights (limiting radiation from the surface and keeping the lower levels of the atmosphere well mixed). As cloud also tends to lower daytime maximum temperatures, the optimal scenario for extreme high minima is for windy conditions with cloud developing overnight. Such conditions are more common in southern Australia in summer (where high cloud and strong northerly winds often occur in the 12-24 hours before the passage of a cold front or trough) than they are further north.

The east coast has a similar moderating influence on extreme high minimum temperatures to that which it has on extreme high maxima, with few east coastal locations south of the Tropic of Capricorn having experienced a minimum above 27°C. In the tropics, except on the west coast south of Broome where offshore (easterly) flow is common, extreme high minimum temperatures within 200 kilometres of the coast are normally very close to peak summer sea surface temperatures.

Unlike the situation for extreme high maxima, the ocean has a small moderating influence on extreme high minima along much of the south coast. An important difference between maxima and minima here is that, at exposed coastal stations, a strong offshore flow is usually required to bring hot air all the way to the coast; while this only needs to occur briefly to produce a very high maximum, to produce a very high minimum (one substantially above local sea surface temperatures), it needs to be sustained for a full 24-hour period, which is much rarer. This is well illustrated by the contrast between Melbourne and the very exposed coastal site of Wilsons Promontory. Temperatures of 25°C or above at 0600 local time are equally likely at both sites (3.2 days per year), and Wilsons Promontory has many more days with 0600 temperatures of 30°C or above (0.6 days per year compared with 0.2), but 24-hour minimum temperatures of 20°C or above are much more likely at Melbourne (8.5 days per year) than at Wilsons Promontory (1.5 days per year).[1]

Extreme high minimum temperatures tend to decline with elevation at a slightly slower rate than extreme high maxima (typically around 0.7-0.8°C per 100 metres), although this is masked slightly in the observed data by the high proportion of high-elevation stations that are on or near hilltops, a favourable location for relatively high minima (see further discussion below). The influence of local topography on extreme high minima is far less than it is for extreme low minima, given the tendency for very hot nights to be cloudy and windy (conditions which normally prevent low-level valley inversions from forming), but in some locations there is still a residual tendency for major valleys to be protected from extreme high

[1] Averages in this section are taken over the period 1987-2008, the period for which fully digitised three-hourly observations are available at Wilsons Promontory.

minima (for example, Corryong in the Upper Murray has a record high minimum of 24.9°C, whereas Hume Dam and Rutherglen, in more open terrain but at only a slightly lower elevation, have records of 28.2°C and 29.2°C respectively). Local relief of hundreds of metres appears to be required for a discernable influence on extreme high minima (whereas tens of metres will suffice on colder nights).

2.2.2. Specific factors influencing extreme low minimum temperatures

The key large-scale factors influencing temperatures in Australia as a whole – principally, latitude, elevation and proximity to the ocean – all have an influence on extreme low minimum temperatures. They are, however, influenced by local topography and site conditions to a much greater extent than any other temperature extremes.

In most of Australia, extreme low minimum temperatures occur on calm, clear nights with dry air, providing the most favourable conditions for radiative cooling at ground level. The main exceptions are at very exposed locations such as small islands or mountain peaks, where extreme low minima are driven primarily by the overall temperature of the air mass and can occur during strong cold outbreaks even when winds are strong, and in the tropics during the wet season, where dry air is rare and the lowest temperatures typically occur as a result of thunderstorm downdrafts.

Calm, clear nights with dry air also provide the most favourable conditions for local topography and site conditions to influence temperatures. Under these conditions, cold air, which is denser than warm air, will tend to drain away from hills and into valleys, and hence valley sites will tend to have lower minimum temperatures than hilltop sites at a similar elevation in the same region, with the difference usually being most pronounced on the coldest nights. This can occur even in areas where the local relief is only a few tens of metres. Particularly extreme examples have been documented near Goulburn and Coonabarabran by Laughlin and Kalma (1987) and Trewin (2005) respectively, with ridge-valley differences of up to 14-16°C on some nights at sites separated by no more than a few kilometres and about 100 metres in elevation, and differences of 4-6°C are not unusual.

Urban heat islands are also at their most pronounced under clear, calm conditions (Morris et al., 2001), as is the influence of poor site exposure (such as excessive building or paved surfaces in close proximity to the observation site). This is typically reflected in large differences in extreme minimum temperatures between built-up sites and nearby less-developed locations, although interpretation of urban-rural temperature differences around major Australian cities is compli-

cated by the influence of the oceans, as the five largest cities are all on the coast. One illustration of the large effect of urbanisation on low temperature extremes is that, in the post-1970 period (by which time the urban influences on the central Melbourne site were fully developed), the difference in mean July minimum temperatures between central Melbourne and the city fringe site of Laverton (a similar distance from the ocean) was 1.9°C, but Laverton's extreme lowest minimum in that time of -4.4°C was 3.6°C lower than Melbourne's -0.8°C.

A further local influence on extreme minimum temperatures is the ground surface type. Snow cover, where it occurs, is an effective insulator and an effective reflector of incoming solar radiation; snow-covered areas are thus highly susceptible to the development of especially strong inversions in the lowest levels of the atmosphere under clear, calm conditions, and thus particularly low minimum temperatures (at least at valley or level locations which allow inversions to develop). There are only a handful of Australian sites where clear, calm conditions occur over a snow cover with any substantial frequency, but the effect of snow cover on the potential for extreme low temperatures at such sites is illustrated by the fact that at the New South Wales alpine sites of Charlotte Pass and Kiandra, the extreme minimum temperatures (-23.0°C and -20.6°C respectively) are about 16°C below the July mean minimum, whereas at New South Wales tableland locations below the snowline a difference of about 10-11°C is more typical.

A sandy surface, especially when it is bare, can also be favourable for low extreme minimum temperatures. The best example of this is Eyre, near the Nullarbor coast in Western Australia. Despite being within a kilometre of the coast and only 6 metres above sea level, Eyre has recorded a minimum of -7.2°C (the lowest on record for Western Australia, and well below any other Nullarbor site), and also holds the Western Australia state record for the months of September, October and November. It also holds the Australian record for the largest ever diurnal range of temperature, 37.4°C, when the maximum reached 44.2°C after a minimum of 6.8°C on 5 March 2008. (Eyre is also in a shallow depression and is cut off from shallow marine air masses on calm nights by a sand ridge between it and the ocean.) To a lesser extent, the sandy ground surface is a partial explanation for the low minimum temperatures experienced at Perth after observations moved to their current location (at a golf course) in 1993; the record low at the pre-1993 site of 1.2°C is surpassed about twice a year on average at the new site, with a lowest value of -0.6°C. Soil moisture can also have an influence on extreme minima in some areas, although its influence on interannual variability at a single location is greater than that on differences in absolute extremes between locations – a particularly striking example occurs at Rutherglen in northeastern Victoria, where the 11 coldest October nights on record (across five separate years) all occurred in years when rainfall

in the preceding August-September was at least 30% below normal.

The presence of the ocean, or another large body of water, near an observing site also has a moderating influence on extreme low minimum temperatures, as the water is a source of relative warmth nearby on cold nights, as well as limiting the extent to which the air can dry out. The maritime influence, however, is often confined to a shallow layer of air, and very low minima can still occur very close to the coastline, especially if there is a topographic barrier (such as a headland or sand dune) in between the observing site and the open ocean. An example on the New South Wales south coast is that Moruya Airport has had minima as low as -4.0°C in its nine years of operation, whereas at Moruya Heads, on a low coastal headland 1.3 km away, the lowest temperature recorded in that time is 1.8°C.

2.3. Daily rainfall

The highest daily rainfall recorded over Australia in the 1900-2008 period is shown in Fig. 5. The heaviest daily rainfalls have occurred along the east coast and the eastern side of the adjacent ranges, and in the northern tropics, particularly near the coast. Most parts of the east coast, extending as far south as East Gippsland in Victoria, have recorded daily totals of at least 200 mm, with falls exceeding 300 mm scattered along the length of the coast, especially in Queensland. Heavier falls have occurred, with a number of locations, especially where mountains are near the coast, having experienced daily falls in excess of 500 mm. (Most of these events are confined to locations particularly favoured by topography, such as Dorrigo in New South Wales and Springbrook and Bellenden Ker in Queensland, and are too localised to be visible in Fig. 5). Such extreme falls have mostly occurred in Queensland but have been observed as far south as the Illawarra region just south of Sydney.

Most parts of the tropics north of 15°S, or within 200 km of the coast, have also received daily falls in excess of 200 mm. Totals in the 300-500 mm range have occurred at a wide range of places in this area, especially along the tracks of landfalling tropical cyclones. Scattered locations further inland in the tropics have experienced daily falls exceeding 200 mm, with a few in excess of 300 mm, but extremes in the 100-200 mm range are more typical of the inland tropics.

Outside the tropics, except for areas near the east coast, only a few locations have had daily falls exceeding 200 mm. The bulk of this region has had daily extreme rainfalls reasonably close to 100 mm south of 30°S, and 100-150 mm further north. However, numerous regions in the south, mostly in the southern half of South Australia but also covering parts of north-western Victoria and southwestern New South Wales, have not exceeded 75 mm in a day.

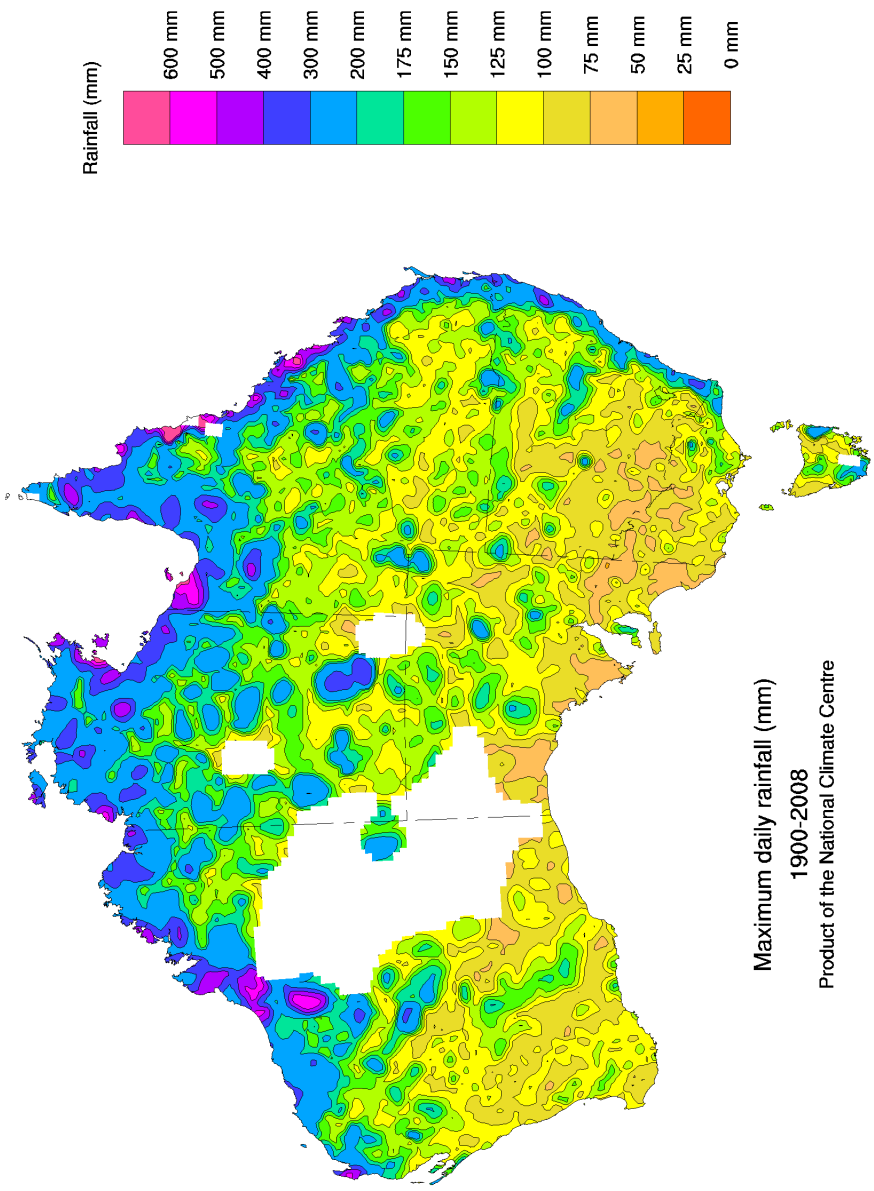

Figure 5. Highest recorded daily rainfall (mm) in Australia, 1900 to 2008, based on 0.05°×0.05° gridded daily analyses. The white shaded areas are regions where the station coverage is insufficient to allow a meaningful analysis.

Tasmania's heaviest daily rainfalls have occurred along the east coast, particularly in the northeast where numerous locations have exceeded 200 mm. Falls in the 150-250 mm range have also occurred in highland areas exposed to the north. Despite the high mean rainfall along Tasmania's west coast, daily falls in excess of 100 mm are rare there, and extremes are also typically close to 100 mm along most of the north coast and in the state's interior.

2.3.1. Specific factors influencing extreme high daily rainfall

The most important influence on extreme high daily rainfalls is the availability of moisture. The major sources of moisture are the oceans surrounding Australia, and, as the moisture-carrying capacity of air near the ocean surface increases with its temperature (which is, in turn, largely determined by the sea surface temperature), air originating over warm oceans generally has the potential to hold more moisture than that originating over cooler waters. In the Australian context, this means that the majority of extreme high daily rainfalls over the Australian mainland, even over the southernmost parts of the continent, are associated with the southward penetration of air masses of tropical or subtropical origin.

Once the moisture is available, a suitable weather system is still required to convert it into rainfall. The larger-scale systems most commonly associated with extreme rainfalls are tropical cyclones and tropical/monsoonal depressions (which may or may not be developing or decaying tropical cyclones), cut-off lows away from the tropics, and, near the east coast, onshore flow from the east (especially on the southern side of an east-coast low). Sometimes, the responsible feature is weak at the surface but more pronounced in the upper atmosphere; smaller-scale (mesoscale) convective systems, producing extremely heavy rain in a reasonably small area, can also be embedded in general onshore flow. Mountains and hills also tend to enhance rainfall on their peaks and windward sides as air masses rising over them lose some of their moisture in transit (orographic rainfall), although their influence on extremes is not always as great as it is on mean rainfall. Areas where high mountains are very close to the coast, such as the north Queensland coast south of Cairns, are particularly favoured in this respect.

Severe thunderstorms are another major rain-producing mechanism. At many locations away from the east coast and the tropical cyclone region of influence, the record daily rainfalls were set in thunderstorms. As thunderstorms are quite small-scale features and their locations of peak intensity are relatively random (unlike the situation for low minimum temperatures, where differences between valleys and nearby hills can be large but are reasonably predictable), there can be large differences in extreme daily rainfalls between neighbouring, apparently

similar sites. In Melbourne, Laverton has had a daily rainfall as high as 188 mm (from a 1977 thunderstorm which largely missed the city centre), but the city centre's record is only 113 mm.

Another explanation for the apparently erratic extreme rainfalls over most of the continent, as shown in Fig. 5, is that in many places the difference between the heaviest and second- or third-heaviest recorded rainfall can be large, so if a specific site missed the most extreme event – either because it was not operating at the time or because no observations were made on the day (perhaps because of floods!) – its measured extreme may be substantially lower than that of a nearby site which did record the most extreme event.

The differing influences on mean and extreme rainfalls are well-illustrated by the situation in Victoria, where the majority of the annual rainfall over most of the state occurs with airstreams from between the northwest and southwest, but the highest extreme daily rainfalls (mostly in Gippsland, but also in the Otway Ranges) occur in easterly airstreams which draw in air from the relatively warm Tasman Sea, rather than the cool Southern Ocean. As a result, sites with exposure to the west or southwest are favoured for high mean rainfalls, but sites with an easterly aspect are favoured for extremes. Two of Victoria's wetter locations are Weeaproinah and Tanybryn, 15 km apart in the Otway Ranges. Weeaproinah, which is exposed to the west and southwest, has the higher mean annual rainfall (1963 mm, compared with 1541 mm), but Tanybryn, with a southeasterly aspect, has many more extreme daily rainfall events. Daily totals of 100 mm or more occur there on average 6.0 times per decade (compared with 1.9 times per decade at Weeaproinah), and their record daily total of 375 mm (a Victorian state record) compares with only 153.7 mm at Weeaproinah. Similar contrasts exist between western and eastern Tasmania, with the west receiving much heavier annual rainfall on average but lower daily extremes.

3. Data quality and homogeneity

Whilst the vast majority of meteorological observations are accurate, it is inevitable that a small proportion of them will be in error, through instrument faults, observer errors, data processing errors or other causes. The Bureau of Meteorology currently undertakes various quality control procedures to detect and flag erroneous or suspect data. Whilst these processes are not perfect – some errors are missed and some genuine observations are flagged as being in error – they result in most spurious 'extremes' being detected.

Quality control procedures have improved over time. Significant advances were made when the Bureau's relational database for climate data (ADAM) was introduced in 1994. Prior to 1994, data quality control was limited, and, in particular, very little spatial analysis was carried out. A major objective in the compilation of the extremes described in this report was to subject all relevant data to a level of scrutiny comparable with that available as part of routine quality control procedures in 2009.

A further question that arises with any long-term time series of climate data is that of data homogeneity – that is, that any changes in the time series are a reflection of changes in the climate, rather than changes in the conditions under which the observations were made. In the context of this report, the most important homogeneity-related issue is the extent to which an historical observation can be validly compared with one made under present-day conditions. Specific data homogeneity issues relevant to this report are discussed further in section 6.

4. Data availability and network coverage

4.1. Data availability

At the time of writing, there are approximately 800 stations that make maximum and minimum temperature observations in Australia, and 8000 which make daily rainfall observations. Whilst there have been fluctuations in these numbers from year to year, a network of several hundred temperature stations and several thousand rainfall stations has existed since the early 1900s. In total, including stations that are now closed, observations exist for some period of time (ranging from a few months to more than 150 years) at approximately 1700 stations for temperature, and 17,000 for rainfall.

Virtually all temperature data now observed in Australia are now available in near real-time (typically within 1 hour of the observation being made), either transmitted directly by automatic weather stations or through manual observations being entered into an electronic system. Some daily rainfall data are also available through one of these methods, but most rainfall observations are still submitted on paper forms at the end of each month and have to be entered into the database by Bureau staff. Most of those observations are received and processed within a few weeks of the end of each month, but some do not arrive for many months after the event.

Historically, many temperature observations have also been submitted in the form of monthly paper returns. Most stations reported this way up until the late 1990's (sometimes as a supplement to real-time reports, sometimes as their only form of reporting), but only one station (at the time of writing) still reports temperatures only in paper form.

Many historical observations have not yet been entered into the Bureau's digital climate database and are available on paper only. These observations are effectively unavailable for climate analyses. Most daily rainfall data have been digitised. Until recently, there was very little digitised daily temperature data prior to 1957 available. The CLIMARC project (Clarkson et al., 2001) has partly addressed this, and an increasing amount of pre-1957 data is becoming available, but the digitised pre-1957 data still comprise only a small proportion of the total number of pre-1957 observations.

The availability of temperature data at sub-daily resolutions has also varied over

time. (These data are not directly within the scope of this report, but assist in quality control where they are available, as described in section 5). Data prior to 1987 from times other than 0900 and 1500 have generally not been digitised, except at Bureau-staffed sites. With the widespread introduction of automatic stations, hourly or half-hourly data (via METAR messages) have become available at many locations from the mid-1990s onwards, with one-minute data available from some locations since 2002.

4.2. Network coverage

An issue in the compilation of lists of climate extremes is the extent to which the observational network is able to sample the most extreme climates found in the region of interest. For national low-maximum temperature extremes, it is likely that Australia is better sampled than most countries, as there is a station (Thredbo Top Station) within 300 m elevation of Australia's highest point, whereas in many more mountainous countries the highest mountains extend 2000 m or more above the highest observations. However, at the regional scale, there are no observations within 800 m elevation of the highest point in the Northern Territory, nor within 600 m of the highest point in southern Western Australia, and it is therefore likely that the lowest daily maximum temperatures which occur in those regions are substantially lower than those cited in this report. Low minimum temperatures are likely to be less affected, as they are relatively less dependent on elevation and more dependent on local topography than are maximum temperatures (Trewin, 2005); in this case the issue is the fact that many high-elevation stations, including all those in Victoria, are in hilltop locations which are not favourable for extreme low minima.

Changes in network coverage influence the occurrence of extremes through time. Whilst the total number of stations has not changed greatly over the post-1910 period, their distribution through Australia has. In particular, a number of stations in key locations in central Australia (such as Oodnadatta and Birdsville) opened between 1940 and 1960, while more recently, the introduction of automatic stations at high-elevation sites has greatly improved the data coverage in alpine regions since 1990 (Fig. 6), particularly in summer (when such manual observations as were made were very fragmented with much missing data). A result is that a disproportionate number of record low maxima in New South Wales, Victoria, Tasmania and South Australia have been set since 1990; it is likely that this reflects changes in network coverage rather than an increase in the frequency of extreme low maxima. Figure 7 shows the temperature network coverage in 1930 and 2000.

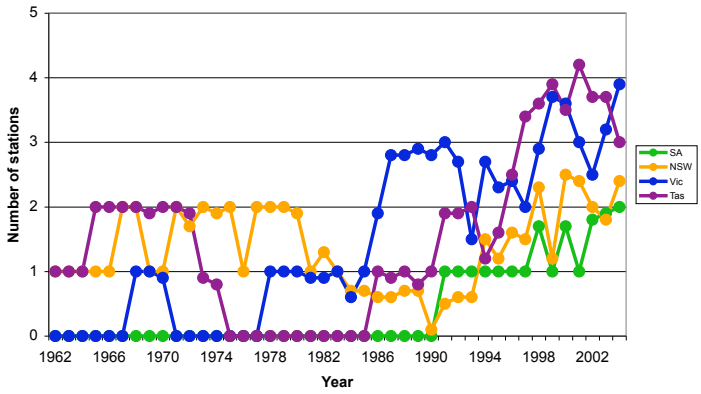

Figure 6. Number of high-elevation stations operating in January of the listed year (defined as total number of observations divided by 31 days). High-elevation stations are defined as those above 1500 m in NSW and Victoria, 1000 m in Tasmania and 700 m in South Australia.

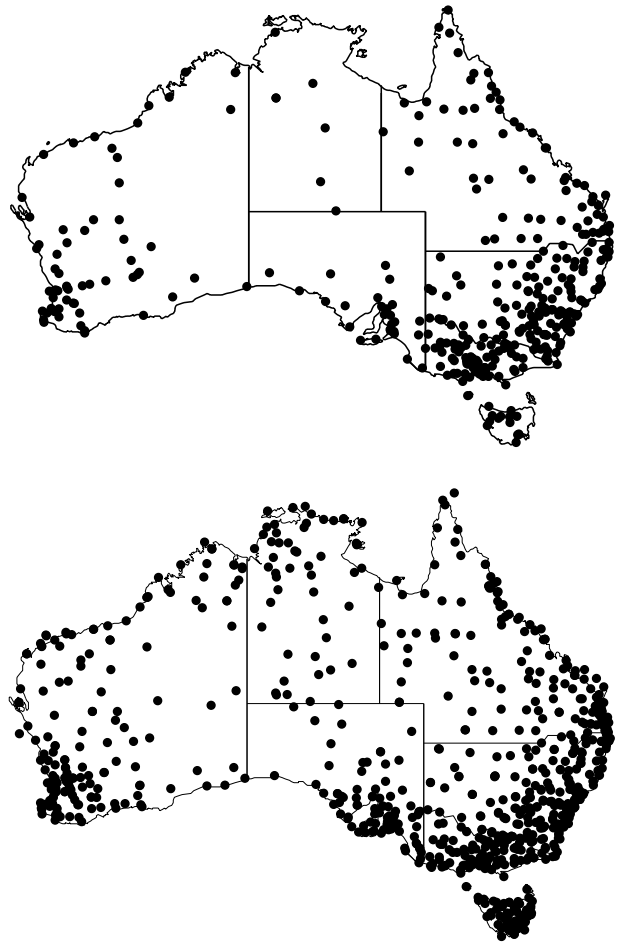

Figure 7. Temperature observing network in 1930 (top) and 2000 (bottom).

4.3. Data included in this report

The major source of data for this report was the daily data available in the Bureau's digital climate database. Other sources of data were:

a. Information in monthly data tables[2] about the highest/lowest temperature of the month. In general these fields are populated if and only if daily data are available for the station/month concerned, but there are a number of stations, mostly in New South Wales, where information on highest monthly maximum temperature (and, in a few cases, lowest monthly minimum temperature) is available with no corresponding digitised daily data. Note that this cannot be guaranteed to be a complete list of extremes for the month concerned, as only the highest/lowest temperature of the month is identified, and in some cases the second-highest/lowest may still be in the five extreme values for the state.
b. A small number of daily data sets digitised to support specific research projects that have not (yet) been ingested into ADAM.

Extremes that appear in published information but are not supported by a digital data set (except for case (b) above) are not included in these lists. A number of well-known special cases that are not included in the lists are described in section 7.

Offshore islands and 'Antarctic' stations[3] are not included in the lists, even if they are administratively part of a state or mainland territory (for example, Macquarie Island is excluded, even though it is administratively part of Tasmania). This makes geographic sense since islands and the Australian Antarctic Territory have distinctive climates (a set of extremes specifically for these island and Antarctic locations could be compiled at a later time). Stations operated and managed through agencies other than the Bureau of Meteorology (sites with 500-series station numbers) are also excluded, although some notable observations at such stations are discussed in section 7. Thus the compiled set is of official Bureau of Meteorology records over the Australian continent (including Tasmania and most major near-shore islands).

[2]The Bureau's relational climate database contains a number of separate tables which are relevant to this study: day_rains (daily rainfall), sfc_lnds (3-hourly data), sfc_days (daily data), sfc_mos (monthly data, including monthly extremes), metar_speci (METAR data) and aws_one_min (one-minute data).
[3]These stations are defined as those with Bureau station numbers in the 200- (island) and 300- (Antarctic) series. Whilst the definition of the Antarctic and sub-Antarctic stations is clear-cut, the distinction between islands in the 200- series and those which are not is somewhat arbitrary – for example, both 200- and 14- series numbers have been used historically for stations in the Tiwi Islands, and both 200- and 99- series numbers for stations on small islands in Bass Strait. In practice, this will have limited impact on extremes (with the possible exception of extreme high minimum temperatures in the tropics in winter) as few extremes occur on islands.

5. Data quality control methods used in the report

An independent quality control procedure was carried out on all data considered in this report. The existing Bureau quality control designation was used to eliminate data at the start of the process – data were not considered if they had previously been given a quality flag of 6 (suspect) or 9 (wrong). The major quality control methods used in this report were:

Internal consistency: The data were checked for internal consistency (e.g. maximum temperature ≥ minimum; maximum ≥ any fixed-hour observation).

Comparison with fixed-hour observations: Maximum and minimum temperatures were compared with all available fixed-hour observations within the 24-hour window covered by the maximum/minimum. A violation clearly occurs if a fixed-hour observation is greater than the maximum or less than the minimum. In some cases, this is an indicator of a non-standard observation time (see section 6).

It is also a potential indicator of suspect data if the maximum is too far above the highest fixed-hour observation, or the minimum too far below. The utility of such a check is greatest where high-resolution data exists. If hourly data exist, it would be unlikely that the genuine maximum/minimum would be more than 2-3 degrees outside the range of the highest or lowest hourly observation; on the other hand, if the only fixed-hour observations are at 0900 and 1500, the 1500 observation may be useful (with care) as an indicator of the likely maximum temperature, but the 0900 temperature is only of very limited use in verifying minima.

Spatial intercomparison: Observations were compared with available neighbouring sites. The number of sites used depended on the availability of neighbouring data but was typically four to six. A further check for rainfall, where a suspect high value was identified, was to check earlier days for evidence of zeroes where neighbouring stations received non-zero totals – this is a potential pointer to an undocumented accumulation over more than one day (see section 6).

The thresholds used for identifying data as potentially suspect depended on the station density. In relatively uniform topography away from the coast with a high station density, a temperature observation 3–4 degrees outside the range set by its neighbours may be suspect; in other cases, where the network is sparse or local climate gradients are steep (or both), even an observation differing from neighbours by 10 degrees or more may be valid. Sparseness of the network is a particu-

lar issue in remote areas, and in the pre-1957 period when only small amounts of digitised daily data are available for comparison.

Rainfall, because of its tendency to vary dramatically on small spatial length scales (particularly at the daily timescale), is difficult to assess. An assessment of a rainfall extreme as suspect was reinforced if zeroes in the preceding days/weeks pointed to possible undocumented accumulations (the most common cause of suspect daily rainfall data – e.g. Figure 8).

Examination of metadata: If an examination of metadata indicated a significant problem with a station (e.g. an instrument failing its next calibration check), affected data were considered to be suspect.

Follow-up investigations: In many cases, the data alone were sufficient to determine, with a high level of confidence, that an observation was suspect (or not suspect). There were, however, a number of marginal cases, or cases where the procedures described above did not provide sufficient information to make a decision. In these cases, a number of other potential sources of verifying information were considered, including (depending on the case):

- The original manuscript record, where available, to check for possible processing errors and/or observer comments which might reinforce an unusual observation.
- Station files and other metadata, for potential information on unusual events or instrument faults (particularly for observations made before the introduction of SitesDB[4] in 1997).
- Surface and upper-air analyses (in particular, 850 hPa temperatures were used as a reference series, against which alpine observations were compared, in a number of cases).
- Newspaper reports and other accounts of extreme events. (Many events sufficiently extreme to be included in this report, particularly for rainfall, will have consequences that are reported in the media).

Whilst observations were regarded as valid unless sufficient evidence could be found to consider them suspect with a reasonable level of confidence, in some cases what constitutes 'sufficient' evidence is a matter of subjective judgement from those with experience in quality control of climate data. In all cases the relevant evidence for observations considered suspect is summarised in the tables.

[4]SitesDB is a relational database, developed in 1997, which contains metadata relating to Bureau stations.

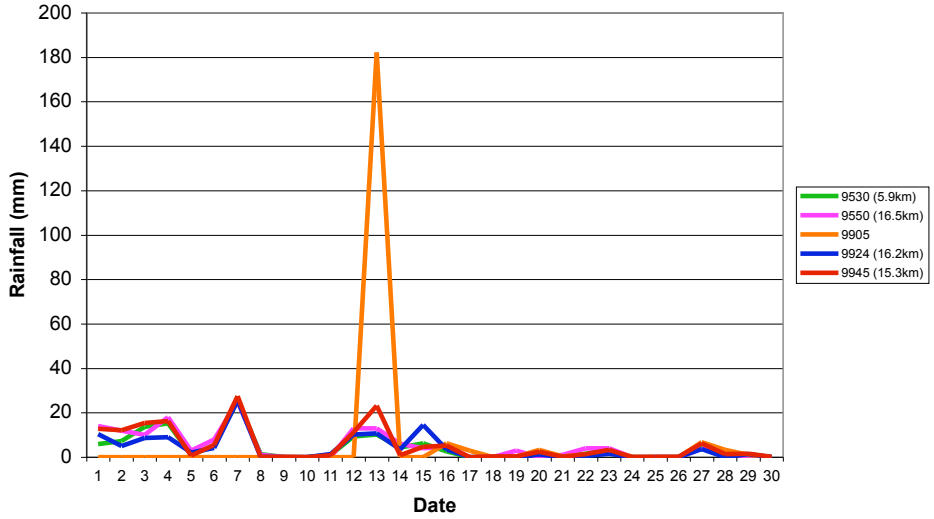

Figure 8. An example of spatial intercomparison of rainfall showing an undocumented accumulation during September 1983, at station 9905 Nerragagup Pool (34.34°S, 116.36°E), Western Australia. Adjacent station locations are: 9530 Deeside (34.38°S, 116.41°E), 9550 Glen Warren (34.41°S, 116.21°E), 9924 Wyndarra (34.25°S, 116.50°E), 9945 Manjimup (Smiths Brook TRIB) (34.37°S, 116.20°E). Distances of comparison stations from the suspect site are given in the diagram's key.

6. Data homogeneity and systematic issues affecting extremes

In compiling a list of extremes, it is necessary to strike a balance between focusing on observations that are comparable with current standards, and including all observations which were made according to the standards available at the time.

Systematic data homogeneity issues that have an impact on extremes data sets include:

(a) Thermometer screens/instrument shelters: The Stevenson screen has been the standard shelter for temperature measurement in Australia since around the time of the formation of the Bureau as a national organisation in 1908, although a small number of non-standard screens remained in place for many years after that (Torok and Nicholls, 1996; Nicholls et al., 1996). Prior to 1908, a wide variety of instrument exposures existed. The most common of these was the Glaisher stand, an open stand shaded from above and behind but not from underneath, but many thermometers were in other exposures such as on south-facing walls, in wall-mounted boxes, hung underneath verandahs (often tin), or even indoors in unheated rooms.

The most extensive comparative study of different instrument shelters was carried out in Adelaide, where a Glaisher stand and Stevenson screen operated side by side for more than 60 years, from 1887 until 1948 (Nicholls et al., 1996). This study found that mean maximum temperatures in the summer half-year were up to 1.0 degrees higher in the Glaisher stand than in the Stevenson screen, with greater differences on the hottest days (for example, on Adelaide's hottest day on record, 12 January 1939, a maximum of 47.6°C was observed in the Glaisher stand, whilst 46.1°C was observed in the Stevenson screen). Maximum temperature differences in winter were minimal, whilst minimum temperatures were consistently about 0.2°C lower in the Glaisher stand all year.

Systematic comparative studies are not available for most other types of pre-1910 instrument shelters (and, in any case, comparisons between 'verandah'-type exposures and a Stevenson screen are likely to be highly site-specific). However, comparisons around the time of Stevenson screen introduction, between those sites which had installed them and those which had not, suggest that the majority of pre-Stevenson instrument exposures measured maximum temperatures substantially higher than those in Stevenson screens, with differences of 2-3°C not unusual and differences of up to 10°C in extreme cases. No obvious pattern of dif-

ferences was evident for minimum temperatures.

As a consequence of these observed systematic differences, extreme high maximum temperatures not measured in Stevenson screens cannot be considered to be comparable with those that were, and are therefore not included in the tables in this report. (A few well-known specific cases are noted in Table 1). Minimum temperatures, and extreme low maxima, are not so systematically different to those in Stevenson screens, and are included unless there was evidence suggesting that the instrument exposure at the specific station resulted in observations which were not comparable with those in a Stevenson screen. As the precise date of Stevenson screen installation is often not precisely known, it was presumed for the purposes of this report that all pre-1910 observations were not measured in a Stevenson screen, unless it was known that a Stevenson screen was installed prior to the date of observation.

(b) Observation times: The current standard for observation times of maximum and minimum temperature and daily rainfall in Australia is that it is measured for the 24 hours ending at 0900 local time. This standard has remained essentially unchanged for rainfall throughout the period of record, although there have been known minor variations at individual stations. There have, however, been two major variations in temperature observation times during the period of record:

- Between 1932 and 1963, many stations observed maximum and minimum temperature for the 24 hours ending at midnight local time.
- Since 1993, some automatic weather stations have observed maximum temperatures for the 24 hours ending at 1200 UTC, and minimum temperatures for the 24 hours ending at 0000 UTC.

These variations will have no impact on high maximum and low minimum temperatures (other than possibly affecting the date to which they are attributed), but do have the potential to affect high minimum and low maximum temperatures (for example, in southern Australia, where extreme high overnight minima often occur on the last night before the passage of a cold front, some high minima were 'lost' because of cooling after the passage of the change).

In this report, maximum and minimum temperatures observed over a 24-hour period, regardless of when that 24-hour period ended, were included. High minimum and low maximum temperatures observed over a period shorter than 24 hours (for example, 1500 to 0900) were not included. Rainfall in the daily tables was included, but other 24-hour rainfall totals not at fixed times (e.g. from pluviograph data) were not.

(c) Accumulated observations: There are many cases of observations (both temperature and rainfall) which have been made over a period longer than one day, after one or more missed observations. Most accumulated rainfall observations (but not all) are flagged in the Bureau's database. However, flagging of temperature observations in the database has been inconsistent over time.

In the case of temperature, an accumulated observation will represent the highest maximum and lowest minimum over the period of missed observations. As such, it represents a valid extreme observation, but one with an uncertain date. These observations were included in this report, with notes (based on evidence from neighbouring stations) as to which day the extreme probably occurred. (A few exceptions exist where the period of accumulated data spans the start of a calendar month, and evidence suggests that the extreme occurred in a different month to that in which the period of accumulated data ended.)

Rainfall observations accumulated over more than one day were not considered for inclusion in this report. In some cases accumulated observations were incorrectly indicated to be over one day in the database. These were detected by comparison with surrounding stations (both on the day of the supposed extreme, and through checking for zero readings on preceding days when neighbouring stations recorded rain). An example is shown in Figure 8.

(d) Rounded observations: There are a number of automatic stations where maximum and minimum temperatures are only recorded in the database to whole degrees Celsius, due to limitations in some versions of the software used to transmit observations and/or the codes used to transmit observations to the network. In some, but not all, cases, these whole-degree observations for observation days ending at 0900 local time overwrite observations to 0.1 degree precision made for days ending at 0000/1200 UTC.

Observations rounded to the nearest whole degree will have a random error of up to ±0.5°C. In some cases fixed-hour observations indicate that the rounded observation is definitely higher/lower than the higher-precision one (for example, if the rounded maximum is 17°C and the 1500 temperature is 17.2°C, the higher-precision maximum temperature must be somewhere in the range 17.2-17.5°C). However, precise estimates cannot be done with any consistency.

As the resultant error is random, rounded observations are accepted at face value, except that where a higher-precision value is known (e.g. through reporting of a 1200 UTC maxima, or through contacting the observer), that value is used. Comments are made in the tables where appropriate.

7. Some special cases not included in the lists

A number of well-known extremes are not included in the lists in tables 2.1 to 6.8 inclusive. This is because they are not supported by a digital data set (as described in section 4.3), or because they did not meet the data quality or homogeneity requirements described in section 5 or 6, or both. These observations are listed in Table 1. A practical consequence of this is that in most cases records of high maximum temperatures are post-1910 records, with some limited exceptions.

Another special case is that of multi-day rainfalls at Bellenden Ker (Top Station). There have been two instances of two-day rainfalls at this location that are more than double the Australian one-day record of 907 mm (1947 mm on 4-5 January 1979, and 1870 mm on 12-13 February 1999). In both cases one-day rainfalls are not available because of missed observations. In the 1979 event, some sources quote a one-day figure of 1140 mm, but this is based on a simple extrapolation of rainfall rates, not a measured value. Most other stations in the region show a ratio of approximately 2:1 between rainfall totals on 4 and 5 January, suggesting that the most likely one-day rainfall for 4 January at Bellenden Ker (Top Station) would be approximately 1300 mm.

As noted in section 4, data from 500-series stations (mostly those operated by bodies or individuals other than the Bureau of Meteorology, but also including some Bureau pluviographs) have not been considered for inclusion in the main extremes lists at this time. This may be reviewed at a later time if, as part of the creation of the Bureau's Water Division, sufficient metadata becomes available to enable sufficient quality assurance of these data. Some known notable events are included in Table 1.

8. Updating of extreme values

It is expected that extreme values will be updated as and when new records are set. A new extremes monitoring web page (internal access only at the time of writing) is being established within the National Climate Centre. It is planned to generate alerts when one of the records described in this publication is broken.

It is also intended to reassess historical records from time to time. This could occur for the following reasons:

- Records set in newly digitised daily data during periods prior to the start of current digitised data sets.
- Newly digitised data sets from other stations, or other information, which allows a further assessment of data where quality control was limited or non-existent in this study due to a lack of comparison data.
- Newly identified or analysed metadata.

As such, whilst this document describes the Bureau's best available assessment of climate extremes in Australia as of the time of writing, it should not be taken as a permanently definitive assessment of extremes in the period up to and including February 2009.

9. Convention for quality control descriptors

The quality control procedures that support the quality flags in ADAM mean that many erroneous extremes are automatically flagged and not considered in this work. The remaining observations were subject to the quality control and homogeneity procedures described previously. A four level quality description was used for observations. These are provided in the comments column in Tables 2 through 6.

The definitions used are:

- 'Wrong' – indicates that an observation cannot be correct if other data are correct (e.g. where the maximum temperature is lower than the temperature at 1500) or the observation is physically unrealistic.
- 'Suspect' – indicates that the observation is considered suspect but no firm relationship between variables or physics is violated.
- 'Insufficient data to reject at this stage' (or similar) – indicates that there is no firm evidence to reject the observation at this time, but that a more comprehensive assessment may be possible at a later date if/when further data are digitised from other stations and/or other times at the same station. This particularly applies to pre-1957 temperature data where the network of digitised data is sparse.
- OK – indicates that the data survives the quality control procedures and based on current evidence is deemed reliable.

All known data not flagged as suspect in ADAM at the time of writing were considered for inclusion in these tables. However, only those data flagged in this report as OK should be considered as being fully reliable, and hence be reported as extremes for Australia.

10. Acknowledgements

Comments from Sam Cleland, Neil Plummer, David Jones, Mary Voice, Robert Fawcett, Chris Lucas and Perry Wiles on drafts of the manuscript were of great assistance. The assistance of all of the Bureau's Regional Offices, particularly in facilitating access to archival material, is also gratefully acknowledged.

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In addition, many of the meteorological events associated with the setting of records listed in this publication are described in separate publications. These include the Bureau's "Meteorological Notes" series, the Bureau's 2004 publication "Drought, Dust and Deluge: A Century Of Climatic Extremes in Australia", the "Charts From The Past" series published in the *Bulletin of the Australian Meteorological and Oceaonographic Society,* and various articles published in a range of journals, particularly the *Australian Meteorological Magazine*.

Extremes tables – scope and definitions

In Tables 2.1-6.8 inclusive, the five highest/lowest observations (and ties) are shown for each month. In the event that all five are classified as suspect or wrong, the next most extreme valid observation is also included.

Data considered for inclusion in Tables 2.1 to 8 inclusive includes the following:

- Data in relevant daily tables of ADAM (Australian Data Archive for Meteorology, the Bureau's digital climate database) as at 28 February 2009. This will include temperature data up to that date, but some rainfall data from 2008 or early 2009 may not have been processed by that date.
- Monthly extremes in monthly tables of ADAM. This covers a number of stations (mostly in New South Wales, but including a few in other states) which have monthly extremes digitised for some months where daily data have not yet been digitised. These are labelled 'From sfc_mos' in the comments column.
- A few stations where data have been digitised as part of separate projects but are not yet in ADAM.

Data not currently available in digital form have not been included in the tables, except where explicitly stated in comments.

High maximum temperatures prior to 1910 are included only if they are known to have been measured in a Stevenson screen. Other pre-1910 temperature observations are included but notes are made in the comments column where applicable.

Offshore island and Antarctic stations (those with station numbers in the 200- and 300- series) are not included, even where they are administratively part of a state or one of the two mainland territories. Non-Bureau stations (500-series) are also excluded.

Data with an ADAM quality flag of 6 (suspect), 9 (wrong) or 20 (inconsistent) at the time of writing are not included unless explicitly stated otherwise.
Definitions in the comments column are as described in section 9. Abbreviations and acronyms used in this column include:

- AP: airport
- AWS: automatic weather station.
- DP: dewpoint

- F68: name of hard-copy monthly rainfall form used at Bureau of Meteorology stations.
- Max.: maximum
- METAR: fixed-time observation made for aviation purposes, normally hourly or half-hourly but sometimes at more frequent intervals.
- Min.: minimum
- MO: Meteorological Office (of the Bureau of Meteorology).
- MWR: Monthly Weather Review (a publication released monthly for each State and the Northern Territory which includes a description of significant weather events during the month).
- Obs: observations.
- PO: post office
- Prev.: previous
- RO: Regional Office (of the Bureau of Meteorology).
- SitesDB: The Bureau's database for site-related information (metadata).
- TC: tropical cyclone.
- UTC: Universal Coordinated Time (often referred to as Greenwich Mean Time).

In some cases Bureau station numbers have been used in the comments column to identify neighbouring locations with relevant observations. A full directory of station numbers can be found on the Bureau website at http://www.bom.gov.au/climate/how/sitedat.shtml. Other numbers in this column refer to observations at fixed times (for example, a temperature observation at 1500 which is being compared with a maximum temperature). Where the potential exists for confusion the term 'station' is used before a station number.

Table 1. Selected notable published extremes not included in the main lists

State	Value	Date	Station number (if any)	Station name	Comments
Highest maximum temperature (ºC)					
NSW	50.0	11/1/1939	46043	Wilcannia	Not supported by digital data.
Victoria	49.4	18/1/1908	77042	Swan Hill	Not supported by digital data. Not observed in a Stevenson Screen. Date on leaflet (1906) is incorrect.
Queensland	53.1	16/1/1889	29008	Cloncurry	Not supported by digital data. Not observed in a Stevenson screen. Further details in Trewin (1997).
Lowest minimum temperature (ºC)					
Victoria	−12.8	30/7/1931	83014	Mount Hotham	Not supported by digital data.
Victoria	−12.8	13/8/1947	83014	Mount Hotham	Not supported by digital data. Appears doubtful by comparison with other sites.
Queensland	−11.0	4/7/1895	41095	Stanthorpe	Not supported by digital data. Stevenson screen probably installed by this date.
Highest daily rainfall (mm)					
Queensland	778.0	24/8/2007	540209	Coops Corner	500-series station. Supported by Rainbow Beach data (see main tables). Exceeds Australian record for August.
NSW	797.0	18/2/1984		Wongawilli	Gauge operated by NSW Public Works Department. Only one higher known daily total in NSW, and none so far south.
SA	330.0	2/3/1983		North Dutton	Private gauge confirmed by Bureau of Meteorology staff. Exceeds SA state record. Fell in 3 hours.
Tasmania	445.0	22/3/1974		German Town	Private gauge. Estimate as gauge overflowed. Discussed in Bureau of Meteorology (1975). Appears to be a different site to site 92014 (listed in Table 2.7). Exceeds Tasmanian state record.

Values quoted are from the leaflet 'Australian Weather Extremes: What's The Record?' (Bureau of Meteorology, 1999), the 'Notable Point Rainfall Events' list on the website of the Bureau's Hydrometeorological Advisory Service (http://www.bom.gov.au/hydro/has/notables.shtml), other publications, or data in ADAM from 500-series stations.

Table 2.1. Highest daily rainfall by month – Western Australia (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
January	567.9	6/1/1917	3023	Roebuck Plains	OK
	504.8	17/1/1982	1009	Kuri Bay	OK
	482.6	19/1/1974	3023	Roebuck Plains	OK
	481.6	30/1/1997	3087	Tanjungpandan	OK
	476.6	30/1/1997	3003	Broome AP	OK
February	419.1	3/2/1932	3023	Roebuck Plains	OK
	415.8	10/2/1995	5040	Balmoral	OK
	401.6	3/2/1971	4086	Sherlock	OK
	388.0	22/2/1991	3056	Thangoo	OK
	374.4	3/2/1932	3056	Thangoo	OK
March	525.5	28/3/2004	4103	Nifty Copper Mine	OK
	445.0	17/3/2005	1014	Emma Gorge	OK. TC *Ingrid* in area.
	438.0	16/3/2005	1020	Truscott	OK. Obs. derived from 10-minute data.
	412.8	30/3/1964	5031	Yardie Creek	OK. Cyclone in area.
	354.0	29/3/1988	4016	Indee	OK
April	747.0	3/4/1898	4042	Whim Creek	OK
	496.3	1/4/1934	4044	Widjup	OK
	431.3	6/4/1959	2014	Kununurra	OK
	426.2	6/4/1959	2013	Ivanhoe	OK
	338.0	9/4/1995	3052	Mount Hart	OK
May	593.3	3/5/1890	5044	Fortescue	OK. Refer description in SitesDB. Daily value not in ADAM at time of writing.
	330.2	19/5/1931	3000	Beagle Bay	OK
	310.6	29/5/1958	5031	Yardie Creek	Suspect. Only 15 mm at 5004 (56 km).
	302.0	27/5/1929	9717	McLeods Creek	Suspect. Undocumented accumulation 10-27/5 (and still looks high).
	286.5	25/5/1949	3004	Cape Leveque	OK
June	304.6	4/6/2002	5051	Exmouth	OK
	272.2	11/6/1992	5078	Urala	OK
	259.1	30/6/1930	8112	RPF 170	Suspect. Identified by WA RO.
	240.0	13/6/1934	8112	RPF 170	Suspect. Identified by WA RO.
	219.2	20/6/1954	6031	Mangaroon	OK
July	350.2	15/7/1979	9952	Waterfall Gully	Suspect. Identified by WA RO.
	280.0	9/7/1996	9973	Bundilla	Suspect. Undocumented accumulation 4/6-8/7.
	267.0	16/7/1974	7009	Bullara	Suspect. 4 times too high Jan-Jul 1974 – probably not converted from points.
	254.0	16/7/1991	9803	Chapman Hill	Suspect. Undocumented accumulation 5/6-15/7.
	252.7	31/7/1926	9081	Dale Road	Suspect. Monthly totals recorded as daily on last day of month throughout.
	220.0	7/7/1978	3000	Beagle Bay	Suspect. 4 others within 75 km all 56-70.
	202.0	15/7/1996	6103	Middalya	OK
August	220.0	18/8/1979	9948	Rosa Brook	Suspect. Station overreads relative to neighbours Sep 1978-Nov 1979.
	190.0	29/8/1978	9952	Waterfall Gully	Suspect. Identified by WA RO.
	180.2	8/8/1979	9948	Rosa Brook	Suspect. Station overreads relative to neighbours Sep 1978-Nov 1979.
	174.2	18/8/1932	8112	RPF 170	Suspect. Identified by WA RO.
	174.0	11/8/1994	9518	Cape Leeuwin	OK. Confirmed with WA Regional Office (notes on file). 117 mm in 3 hours 2100-0000.

Table 2.1 (cont.). Highest daily rainfall by month – Western Australia (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
September	182.2	13/9/1983	9905	Nerragagup Pool	Suspect. Undocumented accumulation 15/8-12/9.
	175.5	20/9/1927	9559	Kalgon River	OK
	169.2	20/9/1927	9564	King River	OK
	167.6	20/9/1927	9719	Napier Creek	OK
	160.6	11/9/1978	9948	Rosa Brook	Suspect. Station overreads relative to neighbours Sep 1978-Nov 1979.
October	320.8	1/10/1978	9952	Waterfall Gully	Suspect. Identified by WA Regional Office.
	200.7	30/10/1910	9520	Cape Riche	OK
	152.2	6/10/1990	8088	Mingenew	OK
	150.2	31/10/1975	2042	Glenroy	OK
	144.8	31/10/1910	10729	Chillinup	OK. Possible brief undocumented accumulation but no sig. effect on total.
November	256.8	20/11/1910	3023	Roebuck Plains	OK
	248.9	23/11/1973	3019	Napier Downs	OK
	241.3	21/11/1910	3029	Frazier Downs	OK
	230.6	23/11/1973	2042	Glenroy	OK
	226.1	22/11/1973	3011	Leopold Downs	OK
December	635.0	5/12/1970	3041	Kilto	Suspect. Gauge in 44-gallon drum and overflowed, figure is estimate.
	507.7	10/12/1971	3030	Bidyadanga	OK. TC in area.
	396.2	15/12/1971	2060	Kingston Rest	Suspect. 4 other sites within 50 km < 40 mm.
	381.0	17/12/1998	7079	Sylvania	OK. TC in area.
	330.7	24/12/1920	3053	Obaganna	OK. TC in area.

Table 2.2. Highest daily rainfall by month – Northern Territory (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
January	507.5	12/1/1958	14502	Yirrkala	OK. TC in area.
	408.6	22/1/1987	14612	Larrimah	OK
	364.0	3/1/1997	14217	Darwin Bot Gdns	OK
	362.0	13/1/2003	14048	Leaders Creek	OK
	353.0	3/1/1997	14162	Coconut Grove	OK
February	510.0	18/2/1976	14905	Port Keats	Doubtful. Previous analysis suggests obs. questionable but not def. wrong.
	404.0	13/2/1975	14706	Robinson River	Suspect. Jan-Apr 1975 looks 4 times too high – possibly in points.
	346.7	5/2/1942	14822	Timber Creek	OK
	345.6	20/2/2008	14277	Dum-in-Mirrie	OK
	304.8	3/2/1938	14710	Borroloola	OK
March	513.3	28/3/1953	14506	Angurugu	Doubtful. Needs more research. Extreme fall in isolated area.
	454.0	3/3/1998	14013	Geriatric Park	Doubtful. 136 mm at Dum In Mirrie (21 km). Gauge may not have been emptied 2/3.
	426.0	10/3/1981	14400	Maningrida	OK. TC in area.
	425.5	15/3/1967	14506	Angurugu	OK
	410.8	4/3/2007	14963	Wudikapildiyerr	OK. TC in area.
April	544.6	15/4/1963	14617	Roper Valley	OK
	509.4	22/4/1999	14509	Alcan Mine	OK
	457.2	22/4/1999	14501	Yirrkala Trop Gdn	OK
	437.0	22/4/1999	14508	Gove Airport	OK
	405.1	14/4/1958	14502	Yirrkala	OK
May	297.9	3/5/1977	14011	Minjilang	OK
	284.4	19/5/2004	14501	Yirrkala Trop Gdn	OK
	260.9	2/5/1936	14506	Angurugu	OK
	207.5	19/5/2004	14509	Alcan Mine	OK
	205.0	2/5/1977	14103	Milikapiti	OK
June	177.5	16/6/1973	14613	Mayfield	OK
	167.9	6/6/1950	15523	Glen Helen	OK. Extreme fall in isolated area.
	126.2	16/6/1973	15124	Heyfield	OK
	118.1	18/6/1973	15103	Ucharonidge	Suspect. Undocumented accumulation 16-18/6, though most on 16th.
	115.6	3/6/1944	15004	Austral Downs	OK
July	142.2	2/7/1986	15085	Brunette Downs	OK
	135.4	23/7/1986	15540	Alice Springs PO	Suspect. Obs, appear to be 12-24 hours out of sync. 212.8 mm over 2 days compares with 59.2 at Alice Springs AP. No reports of significant flooding. Data quality poor all year with many missed obs. Possibly a month-to-date cumulative total?
	131.0	31/7/1974	15574	Erldunda	Doubtful. Possibly on wrong day. Palmer Valley (53 km) 1.2 on 31/7, 39.6 on 1/8.
	119.2	2/7/1986	15040	Soudan	OK
	116.0	9/7/1978	14806	Birrimba	OK

Table 2.2 (cont.). Highest daily rainfall by month – Northern Territory (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
August	93.0	25/8/1988	14210	Palmerston	OK
	87.0	25/8/1988	14225	Strangways	OK
	85.9	5/8/1966	15569	Willowra	OK
	83.0	25/8/1988	14086	Beatrice Hill	OK
	82.0	6/8/1966	15572	Stirling	OK
September	177.4	24/9/1998	14638	Gorrie	OK
	177.0	29/9/1981	14001	Nguiu	OK
	157.8	25/9/1981	14138	Batchelor PO	OK
	131.0	15/9/2002	14240	Lake Bennett	Suspect. Neighbours < 10 mm. No other reports from site in 2002.
	113.0	26/9/1995	14824	Bullita	OK. Nothing else > 15 mm but severe thunderstorm confirmed in MWR
October	219.0	30/10/1975	14810	Bollo River	Doubtful. Neighbour 15.2 (35 km), not impossible in storm. New station.
	195.1	27/10/1969	14623	Elsey	OK. Neighbours spotty.
	164.2	24/10/2005	14183	Darwin River Dam	OK
	164.0	15/10/2001	14284	S Alligator Rangers	OK
	160.4	2/10/1975	14815	Waterloo	OK. Storms in area.
November	344.2	30/11/1970	14504	Galibinka	OK. TC in area.
	264.2	19/11/1973	14180	Murganella	OK
	241.3	30/11/1958	14263	Point Stuart	Suspect. Undocumented accumulation 21-29/11.
	222.8	20/11/2005	14950	Mount Felix	Suspect. 84.0 at Nitmiluk Rangers (31 km), not impossible, but further, much larger, deviations in Dec. suggest instrument fault.
	203.0	27/11/1987	14829	Lajamanu	OK. Storm in isolated area.
December	430.4	10/12/1998	14219	McMinns Lagoon	OK
	425.6	10/12/1998	14149	Howard Springs	OK
	374.0	9/12/1998	14265	TERC Berrimah	OK
	371.8	10/12/1998	14226	Humpty Doo	OK
	367.0	10/12/1998	14287	Marlow Lagoon	OK

Table 2.3. Highest daily rainfall by month – South Australia (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
January	198.1	17/1/1979	17016	Clifton Hills	OK
	193.0	13/1/1984	17037	Muloorina	OK. Possible obs. time issue.
	189.0	28/1/1974	17028	Innamincka	OK
	182.4	14/1/1984	17099	Arkaroola	OK
	173.7	25/1/1941	24517	Mannum Council	OK
February	241.0	6/2/1991	17019	Cordillo Downs	OK. Isolated heavy fall but another 80+.
	222.0	18/2/1946	22017	Stansbury	OK
	219.7	2/2/1950	17017	Commodore	OK
	205.7	18/2/1946	22000	Ardrossan	OK
	200.0	9/2/1976	17043	Oodnadatta	OK
March	272.6	14/3/1989	17098	Motpena	OK
	247.0	14/3/1989	17113	Nilpena	OK
	246.0	14/3/1989	17010	Balcanoona	OK
	235.6	14/3/1989	17119	Beltana	OK
	222.0	14/3/1989	17017	Commodore	OK
April	208.3	17/4/1889	23745	Stirling	OK
	181.4	17/4/1889	23712	Dingo Vale	OK
	174.0	5/4/1891	19003	Old Baratta	OK
	167.1	12/4/1941	17031	Marree PO	OK
	154.9	26/4/1963	16005	Carriewerloo	Suspect. Others 6-21 mm. Possibly 61 points instead of 610?
May	197.0	9/5/1989	24015	Ramco	OK
	181.0	9/5/1989	24018	Waikerie	OK
	164.0	9/5/1989	24041	Golden Heights	OK
	157.5	13/5/1884	19085	Mambray Creek	OK
	155.2	13/5/1884	19048	Wilmington	OK
June	222.0	4/6/1978	19053	Wirrabara	OK. Confirmed with SA RO and station.
	150.6	6/6/1978	19048	Wilmington	Suspect. Undocumented accumulation 4-6/6.
	137.2	29/6/1939	19049	Wilpena Head Station	OK. Higher than neighbours (30-50) but topography could explain this.
	125.0	13/6/1975	17002	Alberrie Creek	Suspect. No rain anywhere else in district 17.
	121.8	21/6/2005	23905	Sutton Creek	Suspect. Identified by SA RO.
July	145.0	8/7/1993	23723	Inman Valley	OK
	129.0	16/7/1971	23360	St. Kitts	Suspect. 11-18 mm at 4 other sites within 10 km. Probably 12.9 mm.
	114.0	6/7/1975	23072	Magill	Suspect. 4-14 mm at 4 other sites within 7 km. Probably 11.4 mm.
	110.0	8/7/1993	23811	Second Valley	OK
	105.8	8/7/1993	23744	Poolamacca	OK
August	225.4	2/8/2004	23374	Hansborough	Suspect. Value now deleted from ADAM.
	173.0	1/8/2004	23374	Hansborough	Suspect. Value now deleted from ADAM.
	115.3	9/8/1989	23319	Tarlee	Suspect. 0-3 mm at 4 other sites within 10 km.
	107.2	14/8/1970	18147	Hughes	Suspect. No rain at 3 other sites within 120 km.
	104.0	30/8/1992	23801	Lenswood RC	OK

Table 2.3 (cont.). Highest daily rainfall by month – South Australia (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
September	149.4	19/9/1913	19053	Wirrabara	OK
	125.0	1/9/2001	19070	Wilpena	OK
	101.6	2/9/1937	21075	Calcannia	OK
	100.3	16/9/1935	23709	Cherry Gardens	OK
	97.8	20/9/1946	17099	Arkaroola	Suspect. 0-4 mm at 4 other sites within 30 km. Possible 3-day accumulation.
October	142.0	25/10/1975	19053	Wirrabara	OK
	122.2	20/10/1948	21075	Calcannia	Suspect. Undocumented accumulation 8-20/10.
	120.7	21/10/1938	20053	Tepco	Suspect. Possibly a 4-day accumulation at start of period (0 mm on 24/10, others near 100 mm).
	117.9	24/10/1938	20017	Mutooroo	OK
	116.2	25/10/1975	21114	Beetaloo Reservoir	OK
November	217.2	12/11/1920	17062	Cadelga	OK
	160.0	11/11/1920	17087	Haddon	OK except for date (should be 12/11).
	149.6	15/11/1979	23835	Crafers	Suspect. 23-38 mm at 4 other sites within 3 km.
	142.2	24/11/1971	18112	Barton	OK
	142.2	12/11/1920	17054	Wirrealpa	OK
December	165.4	13/12/1975	20018	Oakbank	OK
	152.4	4/12/1886	17060	Tilcha	OK
	149.9	1/12/1954	17032	Moolooloo	OK. Far above neighbours but thundery situation.
	148.6	13/12/1975	20024	Winnininnie	OK
	138.2	24/12/1919	19061	Yednalue	OK

Table 2.4. Highest daily rainfall by month – Queensland (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
January	819.2	19/1/1970	33158	Hecate	OK. TC in area. Possible obs. time issue.
	818.8	11/1/1981	31012	Cape Tribulation	OK
	789.9	19/1/1970	33130	Wagoona	OK. TC in area. Possible obs. time issue.
	780.0	9/1/1998	31141	Bellenden Ker (Top)	OK
	756.0	5/1/1979	31140	Bellenden Ker (Bottom)	OK. 2nd day of Top Station's 2-day 1947 mm.
February	907.0	3/2/1893	40062	Crohamhurst	OK
	878.3	18/2/1958	33026	Finch Hatton	OK
	825.0	8/2/1979	33203	Cape Hillsborough	Suspect. Undocumented accumulation.
	810.0	1/2/1977	31141	Bellenden Ker (Top)	OK
	760.7	18/2/1958	33080	Mount Charlton	OK
March	812.8	22/3/1985	31064	Yarrabah	Suspect. No others > 200 mm in region. Not accumulated.
	804.1	2/3/1988	33186	Carmila	OK. TC *Charlie* in area.
	762.0	3/3/1946	33151	Majors Creek	OK. Round number (30") suggests possible gauge overflow.
	755.4	3/3/1946	32092	Mt Speculation	OK
	745.2	6/3/1996	31012	Cape Tribulation	OK
April	800.9	1/4/1911	31052	Port Douglas	OK
	778.5	2/4/1911	31064	Yarrabah	OK
	731.5	2/4/1911	31036	Kuranda	OK
	617.2	1/4/1911	31036	Kuranda	OK
	581.0	5/4/1989	33016	Dalrymple Heights	OK
May	588.0	14/5/1977	34032	Wambiana	Suspect. < 12 mm at 4 other sites within 30 km.
	490.0	30/5/1982	40500	Embreys Bridge	Suspect. 31-51 mm at 4 other sites within 21 km. Possibly 49.0?
	480.0	7/5/1980	40220	Coorparoo	Suspect. 103-128 mm at 5 other sites within 4 km. Possibly 4.80 inches.
	455.0	3/5/1996	40550	Numinbah	OK
	448.1	26/5/1955	33010	Calen PO	OK
June	621.0	12/6/1967	40192	Springbrook	OK
	520.7	12/6/1967	40550	Numinbah	OK
	517.1	12/6/1967	40620	Lenore Vale	OK
	389.9	25/6/1956	40196	Tallebudgera	Suspect. 89-108 mm at 4 other sites within 13 km.
	384.0	30/6/2005	40319	Rocky Point Sugar	OK
July	510.3	20/7/1965	40192	Springbrook	OK
	482.3	20/7/1965	40620	Lenore Vale	OK
	458.7	20/7/1965	40550	Numinbah	OK
	407.7	20/7/1965	40182	Green Mountains	OK
	388.4	11/7/1954	39265	Bullyard	Suspect. 35-93 mm at 4 other sites within 25 km. Possibly 2 days out of sync – 200+ at 2 nearby sites on 13/7.
August	529.2	24/8/2007	40856	Rainbow Beach	OK. Data taken from logger as manual gauge overflowed.
	464.0	31/8/1998	32168	Mourilyan Harbour	OK
	412.0	31/8/1998	31021	Deeral	OK
	375.0	31/8/1998	32175	Rangeview Ranch	OK
	348.0	31/8/1998	32064	Paluma	OK

Table 2.4 (cont.). Highest daily rainfall by month – Queensland (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
September	370.3	20/9/1890	33001	Ayr (Burdekin Shire)	OK
	370.0	1/9/1997	31141	Bellenden Ker (Top)	OK
	360.0	15/9/1981	31141	Bellenden Ker (Top)	OK
	341.6	30/9/1933	39218	Moolboolaman	Suspect. 50-85 mm at 4 other sites within 30 km. Possibly 1 day out of sync (which puts it into October).
	294.0	4/9/2006	31141	Happy Valley	OK
October	551.2	8/10/1914	33077	Pacific Heights	OK
	438.9	4/10/1930	32032	Macknade	OK
	433.1	4/10/1930	32002	Bemerside	OK
	427.5	4/10/1930	32023	Halifax	OK
	397.5	28/10/1972	40417	Miami	OK
November	630.0	23/11/1989	31141	Bellenden Ker (Top)	OK
	532.6	9/11/1933	31021	Deeral	OK
	495.3	9/11/1933	31093	Harvey Creek	OK
	420.0	22/11/1989	31141	Bellenden Ker (Top)	OK
	418.0	17/11/2000	33059	Plane Creek	OK
December	724.0	30/12/1990	33067	Sarina PO	Suspect. Undocumented accumulation over 2 days (0 mm on 29/12, 314 mm at Mackay MO on the same day).
	632.0	3/12/1982	40500	Embreys Bridge	Suspect. 24-60 mm at 4 other sites within 21 km. Possibly 63.2?
	593.1	7/12/1964	32032	Macknade	OK
	590.0	27/12/1990	33016	Dalrymple Heights	OK
	561.4	27/12/1990	33172	Crediton	OK

Table 2.5. Highest daily rainfall by month – New South Wales/ACT (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
January	570.7	22/1/1959	59067	Dorrigo (Myrtle St)	OK. This is the only day when the two Dorrigo sites are identical.
	570.7	22/1/1959	59013	Dorrigo PO	OK
	529.1	13/1/1911	68137	Cookville	OK
	508.0	26/1/1974	58067	Tomewin	OK. Round number (20") may indicate gauge overflow.
	474.5	13/1/1911	68039	Maddens Creek	OK
February	809.2	21/2/1954	59067	Dorrigo (Myrtle St)	OK
	774.7	21/2/1954	59013	Dorrigo PO	OK
	573.5	14/2/1898	68142	Cordeaux River	OK
	509.3	14/2/1898	68137	Cookville	OK
	508.0	6/2/1931	58067	Tomewin	OK. Round number (20") may indicate gauge overflow.
March	650.0	9/3/2001	59113	Leigh	Wrong. NSW RO confirmed correct value is approx 325 mm.
	549.6	10/3/1974	58147	The Channon	Suspect. < 315 mm at 4 other sites within 13 km. Possibly obs. time issue as 2-day total 10-11/3 is reasonable.
	546.6	9/3/1893	61046	Morpeth	OK
	494.4	11/3/1975	68086	Mt. Keira	OK
	487.7	24/3/1907	58083	Billinudgel	Suspect. < 61 mm at 4 other sites within 21 km.
April	662.0	22/4/1974	59108	Yallamurra	Suspect. Early 1974 obs. appear to be in points.
	502.9	16/4/1927	60002	Bulahdelah	OK
	476.0	2/4/1989	58036	Chillingham	OK
	456.0	2/4/1989	58109	Tyalgum	OK
	438.7	28/4/1963	59029	Raleigh PO	OK
May	410.0	10/5/1987	58020	Taleswood	OK
	407.2	10/5/1925	68054	Robertson	Suspect. Undocumented accumulation covering 10-11/5.
	406.4	1/5/1955	58067	Tomewin	OK
	402.1	27/5/1925	69000	Araluen PO	OK
	388.0	17/5/1977	59078	Bellingen (Crystal Creeks)	OK
June	636.0	24/6/1950	59013	Dorrigo PO	OK
	502.9	24/6/1950	59026	Upper Orara	OK
	478.0	24/6/1950	59066	Tallowwood Point	OK
	472.0	11/6/1991	68209	Jamberoo	OK
	431.8	2/6/1903	59026	Upper Orara	Suspect. Undocumented accumulation covering 2-3/6.
July	554.5	6/7/1973	59080	Mt. Moombil	OK
	487.2	11/7/1962	59067	Dorrigo (Myrtle St)	OK
	451.1	11/7/1962	59013	Dorrigo PO	OK
	394.0	6/7/1973	59067	Dorrigo (Myrtle St)	OK
	386.1	11/7/1962	59003	Brooklana	OK
August	436.8	18/8/1998	68108	Woonona	OK
	407.2	2/8/1990	68036	Kangaroo Valley	OK
	404.0	28/8/1974	68168	Knights Hill	OK
	388.0	21/8/2007	59078	Bellingen (Crystal Creeks)	OK
	370.6	18/8/1998	68169	Mt. Keira	OK

Table 2.5 (cont.). Highest daily rainfall by month – New South Wales/ACT (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
September	574.0	29/9/1975	58114	Mullumbimby	Suspect. All neighbouring sites < 17 mm.
	432.8	11/9/1950	68197	Foxground Road	OK. Highly variable in region with one other 249 mm.
	362.4	26/9/1992	69022	Narooma	OK. Highly variable in region with one other 237 mm.
	348.0	25/9/1951	68036	Kangaroo Valley	OK
	272.3	16/9/1962	69042	Moruya (The Lagoon)	OK
October	409.4	21/10/1959	68197	Foxground Road	OK
	397.5	28/10/1972	58150	Upper Crystal Ck.	OK
	387.4	28/10/1972	58067	Tomewin	OK
	380.5	26/10/1972	58114	Mullumbimby	Suspect. Obs. at least 1 (possibly 2) days out of sync.
	368.3	28/10/1972	58020	Taleswood	OK
November	422.4	19/11/1961	68197	Foxground Road	OK
	417.0	2/11/1984	58060	Whian Whian	Suspect. Undocumented accumulation 31/10-2/11.
	415.0	19/11/1961	68024	Darkes Forest	OK
	414.0	27/11/1985	69075	Yowrie	Suspect. 83-131 mm at 3 other sites within 13 km.
	387.1	19/11/1961	68086	Mt. Keira	OK
December	420.0	19/12/1975	59110	Bowraville (Ben Avon)	Suspect. No others in district > 120 mm on either 19 or 20/12.
	405.0	6/12/1980	59097	Friday Creek	Suspect. < 164 mm at 5 other sites within 13 km.
	360.2	20/12/1975	59110	Bowraville (Ben Avon)	Suspect. No others in district > 120 mm on either 19 or 20/12.
	352.2	13/12/1991	58057	Tyalgum	OK
	325.6	13/12/1991	58129	Kunghur	OK

Table 2.6. Highest daily rainfall by month – Victoria (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
January	237.0	24/1/1999	84016	Gabo Island	OK
	228.1	26/1/1941	87078	Green Hill	OK. Steep local rainfall gradients (122 mm at 3 km, 54 at 12 km).
	218.4	30/1/1971	85090	Bulgar Park	OK
	213.2	5/1/1987	84016	Gabo Island	OK
	198.1	29/1/1920	84090	Tambo Crossing	Suspect. Undocumented accumulation over at least 3 days.
February	274.6	18/2/1951	85008	Balook	OK
	251.5	27/2/1919	84066	Tonghi Creek 1	OK
	242.8	27/2/1919	84026	Noorinbee	OK
	213.4	10/2/1935	84024	Murrungowar	Suspect. Undocumented accumulation over several days before and after.
	202.2	2/2/1990	90087	Wyelangta	OK
March	375.0	22/3/1983	90076	Tanybryn	OK
	275.1	12/3/1906	84029	Wairewa	OK
	252.5	16/3/1938	84026	Noorinbee	OK
	239.0	22/3/1983	85053	Madalya	OK
	227.3	19/3/1950	81036	East Noorilim	OK
April	268.6	22/4/2001	90183	Mt. Sabine	OK
	266.7	15/4/1900	86154	Hazeldene	Suspect. 28-39 mm at 3 other sites within 20 km. Possibly factor of 10 out.
	260.6	3/4/1978	84008	Cabbage Tree Creek	OK
	238.6	23/4/2001	86393	Cape Schanck	OK
	223.1	3/4/1978	84031	Brodribb River	OK
May	271.1	16/5/1974	83014	Hotham Heights	Suspect. Split between 15th and 16th not consistent with neighbours. Probably incorrect obs. time.
	258.0	15/5/1974	83078	Cresta	OK
	249.0	20/5/1978	84070	Point Hicks	OK
	248.0	29/5/1981	84131	Nowa Nowa Plateau	Suspect. Undocumented accumulation over many days.
	242.0	27/5/1981	84132	Errinundra Plateau	Suspect. Undocumented accumulation over many days.
June	318.6	28/6/2007	85304	Mt. Wellington	OK
	284.6	24/6/1998	84009	Club Terrace	OK
	272.0	24/6/1998	84008	Cabbage Tree Creek	OK
	247.6	24/6/1998	84030	Orbost	OK
	232.7	17/6/1952	90076	Tanybryn	OK
July	225.8	13/7/1925	84090	Tambo Crossing	OK
	214.6	13/7/1925	84005	Buchan	OK
	186.0	18/7/1974	83043	Rocky Valley	OK
	179.1	13/7/1925	84034	Sarsfield	OK
	172.7	13/7/1925	84030	Orbost	OK
August	222.8	1/8/1958	83037	Falls Creek	Suspect. Undocumented accumulation over 8 days.
	194.3	27/8/1919	84067	Wroxham	OK
	177.8	4/8/1891	85091	Walhalla	Suspect. Undocumented accumulation 3-4/8.
	172.2	27/8/1919	84050	Boulder Flat	OK
	167.6	27/8/1919	84066	Tonghi Creek 1	OK

Table 2.6 (cont.). Highest daily rainfall by month – Victoria (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
September	195.0	23/9/1998	83073	Mount Buffalo	OK
	193.8	1/9/1906	85119	Gunyah Gunyah	OK
	183.6	27/9/1916	85008	Balook	OK
	179.0	23/9/1998	83043	Rocky Valley	OK
	174.5	21/9/1959	86121	Warburton	Suspect. Undocumented accumulation 20-21/9.
October	275.0	5/10/1993	83043	Rocky Valley	Suspect. Undocumented accumulation 2-5/10.
	259.0	16/10/1976	90076	Tanybryn	OK
	234.4	4/10/1993	83083	Edi Upper	OK
	224.3	4/10/1966	84009	Club Terrace	OK
	212.2	22/10/1990	83043	Rocky Valley	Suspect. Undocumented accumulation over 3-5 days.
November	300.0	27/11/1988	85273	Rotamah Island	OK. Lower bound as gauge overflowed in severe storm.
	218.8	17/11/1988	84085	Combienbar	OK
	206.8	8/11/1971	83037	Falls Creek	OK
	195.4	17/11/1988	84008	Cabbage Tree Creek	OK
	194.2	17/11/1988	84009	Club Terrace	OK
December	266.7	1/12/1934	85037	Hazel Park	OK
	264.9	1/12/1934	86200	Sherbrooke	OK
	257.8	28/12/1893	84049	Goomgerah	Suspect. Undocumented accumulation over 2-3 days.
	255.5	1/12/1934	85109	Binginwarri	OK
	255.3	1/12/1934	86058	Kalorama	OK

Table 2.7. Highest daily rainfall by month – Tasmania (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
January	246.9	30/1/1916	94066	The Springs	OK
	237.0	29/1/2004	92015	Gray (Blueberry Cottage)	OK
	234.2	29/1/2004	92052	Gray (Craigie-Lea)	OK
	213.0	30/1/2004	92083	Roses Tier	Suspect. Undocumented accumulation over many days.
	208.0	29/1/1995	92009	Cullenswood	OK
February	227.8	23/2/1938	91001	Beaconsfield	OK
	218.2	7/2/1907	92034	St. Marys	OK. Other nearby sites have heavy rain on 6/2, but 7/2 correct under current obs. practices.
	200.6	2/2/2004	91300	New River	Suspect. Undocumented accumulation over several days.
	195.3	2/2/1971	92017	Kellevie	OK
	178.8	19/2/1946	91064	Moina	OK
March	352.0	22/3/1974	92009	Cullenswood	OK
	260.0	22/3/1974	92014	German Town	OK. Lower bound as gauge overflowed. F68 not originally processed into ADAM.
	253.5	3/3/1931	92022	Lottah	OK
	250.4	17/3/1936	99010	Emita	OK
	223.5	16/3/1938	94066	The Springs	OK
April	336.6	5/4/1929	92024	Mathinna	OK
	308.1	5/4/1929	92016	Goulds Country	OK
	282.4	5/4/1929	92009	Cullenswood	OK
	281.4	5/4/1929	91083	Riana	OK
	254.0	22/4/1960	92000	Rossarden	Suspect. Undocumented accumulation over several days.
May	258.0	18/5/1986	92052	Gray (Craigie-Lea)	OK
	210.8	30/5/1969	92009	Cullenswood	OK
	198.1	30/5/1969	92052	Gray (Craigie-Lea)	OK
	193.8	2/5/1973	92052	Gray (Craigie-Lea)	OK
	184.2	24/5/1956	92009	Cullenswood	OK
June	269.8	30/6/2004	97076	Picton Valley	Suspect. Believed by Tas. RO to be multi-day accumulation.
	266.7	5/6/1923	92009	Cullenswood	OK
	259.1	5/6/1923	92043	Triabunna	OK
	241.3	5/6/1923	92034	St. Marys	OK
	230.1	5/6/1923	92022	Lottah	OK
July	494.2	21/7/2003	97007	Port Davey (Melaleuca)	Suspect. Believed by Tas. RO to be multi-day accumulation.
	188.0	8/7/1988	92052	Gray (Craigie-Lea)	OK
	184.2	20/7/1946	91088	Targa Farm	Suspect. Gauge only read weekly.
	175.0	28/7/1980	96066	Lake Mackenzie Dam	OK
	165.6	5/7/1943	96006	Cuvier River	Suspect. Undocumented accumulation over extended period.
August	250.8	31/8/2005	96078	Breona	OK
	225.0	19/8/2005	97076	Picton Valley	Suspect. Gauge read fortnightly.
	194.1	26/8/1958	95023	The Settlement	Suspect. Undocumented accumulation over extended period.
	177.3	17/8/1958	94066	The Springs	OK
	175.0	12/8/1981	92032	Orford (Rheban)	Suspect. Undocumented accumulation over extended period.

Table 2.7 (cont.). Highest daily rainfall by month – Tasmania (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
September	214.0	15/9/1983	94066	The Springs	Suspect. Undocumented accumulation 1-15/9.
	190.5	15/9/1957	94066	The Springs	OK
	184.0	21/9/1997	99021	Lackrana	Suspect. Undocumented accumulation 1-21/9.
	179.1	7/9/1912	97039	Mount Read	OK
	170.2	15/9/1957	94076	Hobart (Strickland	OK
October	220.4	22/10/2005	92014	German Town	OK.
	206.5	31/10/1958	95023	The Settlement	Suspect. Appears to be a monthly total.
	196.0	22/10/2005	92015	Gray (Blueberry Cottage)	OK
	192.2	31/10/2005	97076	Picton Valley	Suspect. Appears to be a monthly total.
	192.0	22/10/2005	92122	St. Marys (Ponderosa)	OK
November	273.0	4/11/1975	92052	Gray (Craigie-Lea)	OK
	251.2	1/11/1969	92052	Gray (Craigie-Lea)	OK
	246.6	4/11/1975	92034	St. Marys	OK
	204.0	4/11/1975	92014	German Town	OK
	182.2	21/11/1975	93013	Jericho	OK
December	289.0	23/12/1993	92076	Falmouth (Glencoe)	OK
	277.2	23/12/1993	92052	Gray (Craigie-Lea)	OK
	260.0	4/12/1976	95017	Sharpes Siding	Suspect. 31-62 mm at 3 other sites within 15 km. Possibly in points?
	240.0	23/12/1993	92007	Chain of Lagoons	OK
	240.0	11/12/1970	92052	Gray (Craigie-Lea)	OK

Table 2.8. Highest daily rainfall by month – Australia (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
January	819.2	19/1/1970	33158	Hecate	OK. TC in area. Possible obs. time issue.
	818.8	11/1/1981	31012	Cape Tribulation	OK
	789.9	19/1/1970	33130	Wagoona	OK. TC in area. Possible obs. time issue.
	780.0	9/1/1998	31141	Bellenden Ker (Top)	OK
	756.0	5/1/1979	31140	Bellenden Ker (Bottom)	OK. 2nd day of Top Station's 2-day 1947 mm.
February	907.0	3/2/1893	40062	Crohamhurst	OK
	878.3	18/2/1958	33026	Finch Hatton	OK
	825.0	8/2/1979	33203	Cape Hillsborough	Suspect. Undocumented accumulation.
	810.0	1/2/1977	31141	Bellenden Ker (Top)	OK
	809.2	21/2/1954	59067	Dorrigo (Myrtle St)	OK
March	812.8	22/3/1985	31064	Yarrabah	Suspect. No others > 200 mm in region. Not accumulated.
	804.1	2/3/1988	33186	Carmila	OK. TC *Charlie* in area.
	762.0	3/3/1946	33151	Majors Creek	OK. Round number (30") suggests possible gauge overflow.
	755.4	3/3/1946	32092	Mt. Speculation	OK
	745.2	6/3/1996	31012	Cape Tribulation	OK
April	800.9	1/4/1911	31052	Port Douglas	OK
	778.5	2/4/1911	31064	Yarrabah	OK
	747.0	3/4/1898	4042	Whim Creek	OK
	731.5	2/4/1911	31036	Kuranda	OK
	662.0	22/4/1974	59108	Yallamurra	Suspect. Early 1974 obs. appear to be in points.
May	593.3	3/5/1890	5044	Fortescue	OK. Refer description in SitesDB. Daily value not in ADAM at time of writing.
	588.0	14/5/1977	34032	Wambiana	Suspect. < 12 mm at 4 other sites within 30 km.
	490.0	30/5/1982	40500	Embreys Bridge	Suspect. 31-51 mm at 4 other sites within 21 km. Possibly 49.0?
	480.0	7/5/1980	40220	Coorparoo	Suspect. 103-128 mm at 5 other sites within 4 km. Possibly 4.80 inches.
	455.0	3/5/1996	40550	Numinbah	OK
June	636.0	24/6/1950	59013	Dorrigo PO	OK
	621.0	12/6/1967	40192	Springbrook	OK
	520.7	12/6/1967	40550	Numinbah	OK
	517.1	12/6/1967	40620	Lenore Vale	OK
	502.9	24/6/1950	59026	Upper Orara	OK
July	554.5	6/7/1973	59080	Mt. Moombil	OK
	510.3	20/7/1965	40192	Springbrook	OK
	487.2	11/7/1962	59067	Dorrigo (Myrtle St)	OK
	451.1	11/7/1962	59013	Dorrigo PO	OK
	394.0	6/7/1973	59067	Dorrigo (Myrtle St)	OK
August	529.2	24/8/2007	40856	Rainbow Beach	OK. Data taken from logger as manual gauge overflowed.
	464.0	31/8/1998	32168	Mourilyan Harbour	OK
	436.8	18/8/1998	68108	Woonona	OK
	412.0	31/8/1998	31021	Deeral	OK
	407.2	2/8/1990	68036	Kangaroo Valley	OK

Table 2.8 (cont.). Highest daily rainfall by month – Australia (as of 28/02/2009)

Month	Value (mm)	Date	Station number	Station name	Comments
September	574.0	29/9/1975	58114	Mullumbimby	Suspect. All neighbouring sites < 17 mm.
	432.8	11/9/1950	68197	Foxground Road	OK. Highly variable in region with one other 249 mm.
	370.3	20/9/1890	33001	Ayr (Burdekin Shire)	OK
	370.0	1/9/1997	31141	Bellenden Ker (Top)	OK
	362.4	26/9/1992	69022	Narooma	OK. Highly variable in region with one other 237 mm.
October	551.2	8/10/1914	33077	Pacific Heights	OK
	438.9	4/10/1930	32032	Macknade	OK
	433.1	4/10/1930	32002	Bemerside	OK
November	630.0	23/11/1989	31141	Bellenden Ker (Top)	OK
	532.6	9/11/1933	31021	Deeral	OK
	495.3	9/11/1933	31093	Harvey Creek	OK
	422.4	19/11/1961	68197	Foxground Road	OK
	420.0	22/11/1989	31141	Bellenden Ker (Top)	OK
December	724.0	30/12/1990	33067	Sarina PO	Suspect. Undocumented accumulation over 2 days (0 mm on 29/12, 314 mm at Mackay MO).
	635.0	5/12/1970	3041	Kilto	Suspect. Gauge in 44-gallon drum and overflowed, figure is estimate.
	632.0	3/12/1982	40500	Embreys Bridge	Suspect. 24-60 mm at 4 other sites within 21 km. Possibly 63.2?
	593.1	7/12/1964	32032	Macknade	OK
	590.0	27/12/1990	33016	Dalrymple Heights	OK

Table 3.1. Highest daily maximum temperature by month – Western Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	49.8	3/1/1979	11008	Mundrabilla	OK
	49.8	13/1/1979	11004	Forrest	OK
	49.4	7/1/1971	11016	Madura	OK
	49.2	3/1/1922	4020	Marble Bar	No evidence to reject at this time. No hourly or comparison data available.
	49.2	11/1/2008	5016	Onslow	OK
February	50.5	19/2/1998	5008	Mardie	OK
	49.8	21/2/1998	6072	Emu Creek	OK
	49.4	16/2/1998	6072	Emu Creek	OK
	49.2	9/2/1977	5008	Mardie	OK
	49.1	18/2/1998	4035	Roebourne	OK
March	47.8	4/3/1998	4035	Roebourne	OK
	47.8	6/3/2007	6011	Carnarvon	OK
	47.2	4/3/1980	5008	Mardie	OK
	47.2	6/3/2007	6105	Shark Bay AP	OK
	47.2	6/3/2007	8251	Kalbarri	OK
April	45.0	2/4/1928	4020	Marble Bar	No evidence to reject at this time. No hourly or comparison data available.
	45.0	1/4/1948	4002	Port Hedland PO	OK
	44.7	1/4/1928	4020	Marble Bar	No evidence to reject at this time. No hourly or comparison data available.
	44.3	2/4/1948	4002	Port Hedland PO	OK
	44.2	2/4/1972	6022	Gascoyne Junction	OK
May	40.7	15/5/2005	3096	West Roebuck	Suspect. Station failed calibration Jun. 2005.
	40.6	6/5/1990	3030	Bidyadanga	OK
	40.5	3/5/1990	5008	Mardie	OK
	40.3	1/5/2005	3096	West Roebuck	Suspect. Station failed calibration Jun. 2005.
	40.2	1/5/1990	5008	Mardie	OK
June	37.8	2/6/1962	1005	Wyndham Port	OK. 32.2 at 1500, but 36.2 at Warmun.
	37.2	6/6/1998	3078	Cadjebut	OK
	37.2	6/6/1998	2014	Kimberley Res Stn	OK
	37.2	7/6/1961	1005	Wyndham Port	OK
	37.0	4/6/1998	3093	Fitzroy Crossing AP	OK
	37.0	13/6/1963	3006	Fitzroy Crossing	OK
July	37.6	19/7/1996	1013	Wyndham	OK
	37.3	15/7/1995	1013	Wyndham	OK
	37.2	19/7/1996	2014	Kimberley Res Stn	OK
	37.1	18/7/1996	1013	Wyndham	OK
	37.0	25/7/1998	3093	Fitzroy Crossing AP	OK
August	40.0	27/8/1970	1021	Kalumburu	OK
	39.6	31/8/1985	1013	Wyndham	OK
	39.5	27/8/1965	3007	Derby PO	OK
	39.4	29/8/1970	2038	Kununurra	OK
	39.3	27/8/1970	2038	Kununurra	OK
September	43.1	27/9/2003	3096	West Roebuck	OK
	42.9	27/9/2003	3093	Fitzroy Crossing AP	OK
	42.8	29/9/1998	4019	Mandora	Valid 6-hour max 0900-1500. No obs. at 0900 next day.
	42.8	24/9/1989	3007	Derby PO	OK
	42.6	29/9/1942	4020	Marble Bar	No evidence to reject at this time. No hourly obs. 36.3 at 4002.
	42.6	24/9/1983	4019	Mandora	OK

Table 3.1 (cont.). Highest daily maximum temperature by month – Western Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
October	46.9	22/10/2002	4032	Port Hedland AP	OK
	46.8	22/10/2002	4019	Mandora	OK
	46.7	22/10/2002	4028	Pardoo	OK
	46.7	21/10/2002	4019	Mandora	OK
	46.5	22/10/2002	4090	Roebourne AP	OK
	46.5	28/10/2002	3078	Cadjebut	OK
November	48.0	19/11/1973	4074	Goldsworthy	OK
	47.8	16/11/1968	3007	Derby PO	OK
	47.4	19/11/1973	4035	Roebourne	OK
	47.4	19/11/1973	4032	Port Hedland AP	OK
	47.4	26/11/1974	3040	Camballin	Suspect. No other sites in region > 38.4. Max appears suspect from 25/11 onwards, and min for much of Nov-Dec 1974.
December	49.3	17/12/1912	11003	Eucla	Suspect. Comparison with Madura suggests Stevenson screen not installed until 1913.
	48.8	26/12/1986	5008	Mardie	OK
	48.6	31/12/1968	8181	Eneabba (old site)	OK
	48.4	31/12/1997	6072	Emu Creek	OK
	48.4	22/12/1981	4019	Mandora	OK

Table 3.2. Highest daily maximum temperature by month – Northern Territory (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	48.3	2/1/1960	15526	Finke PO	OK
	48.3	1/1/1960	15526	Finke PO	OK
	47.8	3/1/1960	15526	Finke PO	OK
	47.5	3/1/1978	15602	Jervois	Suspect. 0900-1500 max 43.0, no reason to expect jump after 1500 and would be inconsistent with other sites in region.
	46.5	14/1/1988	15602	Jervois	OK
	46.5	15/1/1980	15528	Yuendumu	OK
February	46.1	16/2/1983	15602	Jervois	OK
	46.0	17/2/1992	15511	Curtin Springs	OK
	45.9	21/2/1996	15548	Rabbit Flat	OK
	45.9	19/2/1970	15089	Newcastle Waters	OK
	45.8	17/2/1992	15635	Yulara	OK
March	44.0	7/3/1983	15633	Palm Valley	Suspect. Other sites in region < 39.7, 39.3 at 1500.
	43.9	16/3/1968	15526	Finke PO	OK
	43.9	22/3/1961	15087	Tennant Creek PO	Suspect. No other southern NT sites > 38.6, 37.8 at 1500.
	43.8	2/3/2007	15603	Kulgera	OK
	43.8	3/3/2007	15664	Wulungurru	OK
	43.8	4/3/2007	15664	Wulungurru	OK
April	45.2	22/4/2005	14704	McArthur River	Suspect. Other sites in region < 37.2. METAR obs. 35.2 at 1600, 45.2 at 1650, 35.2 at 1652, 30.2 at 1703.
	41.4	23/4/1988	14011	Minjilang	Suspect. Other sites in region < 37.
	41.3	12/4/1998	15548	Rabbit Flat	OK
	41.1	14/4/1961	14054	Wave Hill	Suspect. No front on screen (from station file). From sfc_mos.
	41.1	25/4/1988	14011	Minjilang	Suspect. Other sites in region < 36.
May	40.3	8/5/1997	14723	Borroloola	Suspect. Other sites in region < 35.1, 34.9 at 1500.
	39.4	27/5/1964	14905	Port Keats	Suspect. Other sites in region < 33. From sfc_mos.
	38.8	10/5/1975	14840	Wave Hill	Suspect. Other sites in region < 32.4, 28.6 at 1500.
	38.6	16/5/1990	14840	Wave Hill	Suspect. 0900-1500 max 36.3, 35.9 at Victoria River Downs. Probably too big a jump to accept, although can't absolutely rule out.
	38.6	4/5/2007	14850	Timber Creek	OK
	38.6	5/5/2007	14626	Daly Waters	OK
June	37.5	20/6/1987	14042	Oenpelli	Suspect. 0900-1500 max 35.0, 35.2 at Jabiru. Fire around screen after 1500 (from fieldbook).
	37.1	2/6/1973	14837	Keep River	OK
	37.0	17/6/1937	14016	Darwin PO	Suspect. 30.6 at 1500, 27.9 at Parap.
	36.8	1/6/1963	15089	Newcastle Waters	OK
	36.7	3/6/1970	14905	Port Keats	OK
	36.7	4/6/1970	14905	Port Keats	OK
	36.7	3/6/1970	14908	Wooliana	OK
	36.7	15/6/1937	14016	Darwin PO	Suspect. 28.1 at 1500, 30.3 at Parap.

Table 3.2 (cont.). Highest daily maximum temperature by month – Northern Territory (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
July	40.5	6/7/1995	14932	Tindal	Suspect. Other sites in region < 30, 26.6 at 1500.
	40.0	4/7/1966	14904	Katherine Exp Farm	Suspect. Other sites in region 31-33.
	37.3	16/7/1995	14850	Timber Creek	OK
	37.2	5/7/1964	14402	Milingimbi	Suspect. 25.6 at 1500. No nearby sites.
	37.0	23/7/1998	14924	Injun Beach	Suspect. Other sites in region < 35, 33.6 at 1500.
	37.0	15/7/1995	14850	Timber Creek	OK
August	39.2	25/8/1998	14938	Mango Farm	OK
	39.2	28/8/1970	14825	Victoria River Downs	OK
	39.0	29/8/1999	14924	Injun Beach	Suspect. Other sites in region < 34. 37.2 at 1500, suggesting long-lived AWS problem.
	39.0	31/8/1989	14042	Oenpelli	OK
	38.9	27/8/1970	15089	Newcastle Waters	OK
	38.9	27/8/1970	14825	Victoria River Downs	OK
September	42.8	10/9/1933	14054	Wave Hill	Wrong. Correct value (from station file) is 37.2.
	42.0	28/9/1988	15131	Elliott	OK
	42.0	30/9/2000	14847	Kidman Springs	OK
	41.8	21/9/1995	15548	Rabbit Flat	OK
	41.7	29/9/1988	15548	Rabbit Flat	OK
October	46.2	29/10/1991	14932	Tindal	Suspect. Other sites in region near 40. No obs. before 1500 (38.5).
	45.5	17/10/1997	14847	Kidman Springs	Suspect. Other sites in region < 40.
	45.0	23/10/2002	14840	Wave Hill	OK
	44.6	25/10/2002	15666	Rabbit Flat	OK
	44.5	29/10/2003	14609	Ngukurr	OK
November	47.2	1/11/1996	14847	Kidman Springs	Suspect. Other sites in region < 40.3.
	46.8	20/11/1992	14932	Tindal	Suspect. Other sites in region near 37. 35.0 at 1500; 1200 missing.
	46.1	18/11/1990	15548	Rabbit Flat	OK
	46.0	30/11/1996	15548	Rabbit Flat	OK
	46.0	26/11/1991	14932	Tindal	Suspect. Other sites in region 37-38. 1500 (41.0) and 1800 obs. also look suspect.
	46.0	16/11/1996	14847	Kidman Springs	Suspect. Other sites in region < 43.
	46.0	26/11/1991	14932	Tindal	OK
December	47.2	22/12/1990	15602	Jervois	OK
	47.2	23/12/1972	15526	Finke PO	OK
	47.1	24/12/1972	15526	Finke PO	OK
	47.0	31/12/1993	15635	Yulara	Suspect. Other sites in region < 41, 38.1 at 1500.
	47.0	28/12/1990	15548	Rabbit Flat	OK

Table 3.3. Highest daily maximum temperature by month – South Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	50.7	2/1/1960	17043	Oodnadatta	OK
	50.3	3/1/1960	17043	Oodnadatta	OK
	49.4	2/1/1960	18103	Whyalla (Norrie)	OK
	49.4	2/1/1960	17031	Marree PO	OK
	49.3	9/1/1939	18044	Kyancutta	Suspect at this time. Not consistent with 41.4 at 1500, but 1500 may be wrong. More data needed for spatial comparison.
February	48.2	7/2/2009	24048	Renmark AP	OK
	48.1	7/2/2009	18201	Port Augusta AP	OK
	48.0	7/2/2009	18120	Whyalla	OK
	47.9	16/2/2004	17031	Marree PO	OK
	47.9	17/2/1992	16044	Tarcoola	OK
March	46.5	6/3/1986	18110	Cook	OK
	46.1	6/3/1986	18044	Kyancutta	OK
	46.1	1/3/1963	17031	Marree PO	OK
	45.8	6/3/1986	18012	Ceduna	OK
	45.7	7/3/1986	16044	Tarcoola	Valid 2-day max 6-7/3. Highest max probably on 6th.
April	42.1	2/4/2005	17043	Oodnadatta	OK
	41.8	3/4/1953	17043	Oodnadatta	OK
	41.8	1/4/2005	18106	Nullarbor	OK. Max derived from 10-minute data – is still listed as 42 in ADAM at time of writing.
	41.5	2/4/2005	16090	Coober Pedy AP	OK
	41.3	2/4/2005	16085	Marla	OK
May	36.5	4/5/1990	18106	Nullarbor	OK
	36.0	4/5/1990	18110	Cook	OK
	35.4	1/5/1981	18110	Cook	OK
	35.0	1/5/1944	17043	Oodnadatta	OK
	34.9	11/5/1996	16085	Marla	OK
June	34.0	2/6/1996	17070	Mount Dare	OK
	32.8	8/6/1995	17043	Oodnadatta	OK
	32.2	8/6/1995	16085	Marla	OK
	32.1	8/6/1995	16090	Coober Pedy AP	OK
	32.0	3/6/1996	16085	Marla	OK
	32.0	22/6/1997	18106	Nullarbor	Suspect. Other sites in region < 20. METARs spiking wildly from 0930-1330.
	32.0	25/6/1997	18106	Nullarbor	Suspect. Other sites in region 15-18. No obs. 0900-1500, 12.6 at 1800.
July	34.2	29/7/1975	18110	Cook	OK
	32.6	29/7/1975	18012	Ceduna	OK
	32.2	18/7/1964	17043	Oodnadatta	OK
	32.0	28/7/1965	16007	Coober Pedy	OK
	31.7	12/7/1975	17043	Oodnadatta	OK
August	36.5	12/8/1946	17043	Oodnadatta	OK
	36.4	11/8/1946	17043	Oodnadatta	OK
	36.2	26/8/1970	17043	Oodnadatta	OK
	36.1	23/8/1954	17043	Oodnadatta	OK
	36.0	31/8/1961	17043	Oodnadatta	OK
	36.0	21/8/1954	17043	Oodnadatta	OK

Table 3.3 (cont.). Highest daily maximum temperature by month – South Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
September	41.5	22/9/2003	17123	Moomba AP	OK
	40.7	25/9/2007	17043	Oodnadatta	OK
	40.5	30/9/1980	17043	Oodnadatta	OK
	40.3	28/9/2004	17123	Moomba AP	OK
	40.0	14/9/1980	17043	Oodnadatta	OK
	40.0	29/9/1998	17070	Mount Dare	OK
	40.0	21/9/2003	17123	Moomba AP	OK
	40.0	30/9/1961	25509	Lameroo	Suspect. Other sites in region < 36.1, 35.0 at 1500.
October	45.4	31/10/1995	17043	Oodnadatta	OK
	45.1	29/10/1960	17043	Oodnadatta	OK
	45.1	28/10/1958	17043	Oodnadatta	OK
	45.0	31/10/1987	18106	Nullarbor	OK
	45.0	20/10/1988	17114	Oodnadatta Police	OK
	45.0	31/10/1995	16044	Tarcoola	OK
November	47.9	30/11/1993	16044	Tarcoola	OK
	47.3	29/11/2006	17043	Oodnadatta	OK
	47.1	17/11/1944	17043	Oodnadatta	OK
	47.0	30/11/2006	17123	Moomba AP	OK
	46.9	27/11/1996	17070	Mount Dare	OK
December	49.1	23/12/1972	17096	Moomba	OK
	49.0	22/12/1972	17031	Marree PO	OK
	48.9	27/12/1949	16044	Tarcoola	OK
	48.8	21/12/1972	17031	Marree PO	OK
	48.6	21/12/1972	17096	Moomba	OK

Table 3.4. Highest daily maximum temperature by month – Queensland (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	48.5	6/1/2004	38002	Birdsville	OK
	48.5	5/1/2004	38002	Birdsville	OK
	48.0	22/1/1988	38002	Birdsville	OK
	47.9	5/1/2004	38026	Birdsville AP	OK
	47.9	26/1/1947	36030	Longreach PO	OK
February	48.3	7/2/1915	38003	Boulia	Suspect. Max temps Nov. 1914 – Feb. 1915 consistently 3-4 degrees too high by comparison with 1500 temps and other western Qld stations.
	47.8	6/2/1915	38003	Boulia	Suspect. Max temps Nov. 1914 – Feb. 1915 consistently 3-4 degrees too high by comparison with 1500 temps and other western Qld stations.
	47.2	22/2/1905	38003	Boulia	No evidence to reject at this time. 42.2 at 1500, but not consistent differences as in 1915.
	47.2	9/2/1905	38003	Boulia	No evidence to reject at this time. 42.2 at 1500, but not consistent differences as in 1915.
	46.5	6/2/1980	37043	Urandangi	Suspect. Other sites in region 36-39, 37.0 at 1500.
	46.5	6/2/2006	45009	Ballera	OK
	46.3	16/2/2004	45017	Thargomindah	OK
	46.3	16/2/2004	45009	Ballera	OK
	46.3	5/2/2006	45009	Ballera	OK
March	46.7	2/3/1951	38003	Boulia	OK
	45.6	12/3/1915	38003	Boulia	Insufficient evidence to reject at this time. Refer comments for 7/2/1915.
	45.0	4/3/1951	38003	Boulia	OK
	45.0	15/3/1915	38003	Boulia	Insufficient evidence to reject at this time. Refer comments for 7/2/1915.
	45.0	8/3/1982	38002	Birdsville	OK
April	41.7	16/4/1968	38002	Birdsville	OK
	41.1	9/4/1914	38003	Boulia	OK
	40.9	12/4/2003	38003	Boulia	OK
	40.9	12/4/2003	38000	Bedourie	OK
	40.7	1/4/2005	38026	Birdsville AP	OK
May	39.5	5/5/1981	29090	Toorak Res Stn	Suspect. Other sites in region 30-34. No 1500 obs.
	39.5	16/5/1981	29004	Burketown	Suspect. Other sites in region < 32.2, 33.5 at 1500.
	39.3	4/5/2007	29058	Julia Creek AP	OK
	39.0	1/5/1985	34002	Charters Towers PO	Suspect. Other sites in region < 32, 28.0 at 1500.
	38.8	3/5/2007	29090	Toorak Res Stn	OK
	38.7	4/5/2007	29141	Cloncurry AP	OK

Table 3.4 (cont.). Highest daily maximum temperature by month – Queensland (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
June	36.7	27/6/1970	29038	Kowanyama	Suspect. Other sites in region < 31.5. No 1500 obs.
	36.5	6/6/1978	27015	Moreton Telegraph St	Suspect. Other sites in region < 32.5. 30.1 at 1500.
	36.0	4/6/2003	29077	Burketown AP	OK. Rounded to whole degrees.
	36.0	16/6/2002	29058	Julia Creek AP	OK. Rounded to whole degrees.
	35.6	2/6/1970	29038	Kowanyama	OK
	35.6	1/6/1962	29041	Normanton	OK
	35.6	1/6/1962	37010	Camooweal	OK
	35.6	22/6/1947	37010	Camooweal	Suspect. 28.9 at 1500, other sites in region < 29.4.
July	37.7	18/7/1996	37043	Urandangi	Suspect. Other sites in region < 33, 32.0 at 1500.
	36.7	14/7/1996	30018	Georgetown PO	Suspect. Other sites in region < 28.1, 24.0 at 1500.
	36.7	31/7/1964	29041	Normanton PO	Suspect. Other sites in region < 31.1, 30.6 at 1500.
	36.1	21/7/1964	30018	Georgetown PO	Suspect. Other sites in region < 30.3, 29.4 at 1500.
	36.1	22/7/1964	29041	Normanton PO	Suspect. Other sites in region < 31.1, 30.6 at 1500.
	36.0	28/7/1976	30045	Richmond PO	OK
	36.0	17/7/1995	29025	Julia Creek	OK
August	38.3	26/8/1968	29041	Normanton PO	OK
	38.2	30/8/1892	35027	Emerald PO	Suspect. Stevenson-type screen but had iron roof.
	38.0	27/8/1985	37043	Urandangi	OK
	37.8	27/8/1970	29025	Julia Creek PO	OK
	37.7	27/8/1970	29009	Cloncurry	OK
September	42.6	30/9/2000	38000	Bedourie	Suspect. Other sites in region 31-37, 33.2 at 1500.
	42.4	22/9/2003	38026	Birdsville AP	OK
	42.4	22/9/2003	38002	Birdsville	OK
	42.2	15/9/1968	38002	Birdsville	Suspect. No other sites in area > 32.7, 30.6 at 1500.
	41.7	21/9/1943	38003	Boulia	OK
October	46.1	28/10/2003	29167	Century Mine	Suspect. Other sites in region < 44, highest hourly obs. 42.6. Station has history of data spikes.
	45.1	31/10/1995	38002	Birdsville	OK
	45.0	6/10/1972	37051	Winton	Suspect. Other sites in region 37-40, 39.5 at 1500.
	45.0	27/10/2005	29090	Toorak Res Stn	OK
	44.9	29/10/2003	29167	Century Mine	Suspect. Other sites in region < 42, highest hourly obs. 42.6. Station has history of data spikes.
	44.9	29/10/1988	38002	Birdsville	OK
	44.9	27/10/2003	29167	Century Mine	Suspect. Highest hourly obs. 41.7. Station has history of data spikes.

Table 3.4 (cont.). Highest daily maximum temperature by month – Queensland (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
November	48.7	17/11/1990	38002	Birdsville	OK
	48.5	30/11/2006	38026	Birdsville AP	OK
	48.2	19/11/1987	38002	Birdsville	OK
	47.1	28/11/1996	38002	Birdsville	OK
	47.0	29/11/2006	38026	Birdsville AP	OK
December	49.5	24/12/1972	38002	Birdsville	OK
	49.0	6/12/1981	38002	Birdsville	OK
	48.8	22/12/1990	38002	Birdsville	OK
	48.5	5/12/1981	38002	Birdsville	OK
	48.5	23/12/1972	38002	Birdsville	OK

Table 3.5. Highest daily maximum temperature by month – New South Wales/ACT (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	49.7	10/1/1939	47019	Menindee	OK.
	48.7	10/1/1939	49013	Euston	OK. From sfc_mos.
	48.6	3/1/1973	46042	White Cliffs	OK
	48.6	11/1/1939	47019	Menindee	OK
	48.3	10/1/1939	48013	Bourke	OK
	48.3	28/1/1932	48013	Bourke	OK
February	48.5	15/2/2004	49019	Ivanhoe	OK
	47.6	14/2/2004	47029	Pooncarie	OK
	47.2	1/2/1968	74110	Urana	OK
	47.2	1/2/1968	75031	Hay	OK
	47.2	14/2/1933	48015	Brewarrina	OK. From sfc_mos.
	47.2	23/2/1923	47019	Menindee	OK
	47.2	5/2/1915	48013	Bourke	OK
March	45.0	1/3/1951	46037	Tibooburra	OK
	44.7	3/3/2007	49019	Ivanhoe	OK
	44.5	13/3/1998	46037	Tibooburra	OK
	44.5	1/3/2005	46037	Tibooburra	OK
	44.4	1/3/2005	46043	Wilcannia	OK
	44.4	13/3/1926	48013	Bourke	OK
	44.4	13/3/1926	46037	Tibooburra	OK
April	41.4	18/4/1993	47019	Menindee	Wrong. Other sites in region 27-29. No 1500 obs.
	40.6	2/4/1954	49032	Mount Hope	Suspect. No other obs. in NSW > 35.6. From sfc_mos.
	40.6	5/4/1919	47019	Menindee	Suspect. No other sites in region > 35. Max looks too high for much of 1918-19, possibly related to reported broken screen 17/12/1917.
	40.0	2/4/1923	47019	Menindee	Suspect. No other obs. in NSW > 34.
	40.0	1/4/1922	48031	Collarenebri	OK. From sfc_mos.
	39.4	1/4/1922	48013	Bourke	OK
	39.4	6/4/1919	48013	Bourke	OK
May	40.2	5/5/1995	58208	Casino AP	Wrong. Other sites in region 19-23. 20.6 at 1500.
	40.1	31/5/1994	61363	Scone AP	Wrong. Other sites in region 20-24. 22.5 at 1200.
	36.6	14/5/1972	53002	Baradine	Wrong. Other sites in region 17-22. No hourly obs.
	35.6	10/5/1926	49002	Balranald	Suspect. No other obs. in NSW > 29. From sfc_mos.
	35.0	15/5/1968	59051	Woolgoolga St Forest	Wrong. Other sites in region 15-20. From sfc_mos.
	35.0	8/5/1919	48015	Brewarrina	Suspect. 29.4 at Bourke, 27.2 at Walgett. From sfc_mos.
	34.4	4/5/1942	46043	Tibooburra	OK

Table 3.5 (cont.). Highest daily maximum temperature by month – New South Wales/ACT (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
June	42.0	22/6/1994	55325	Tamworth AP	Wrong. Other sites in region 17-19. 18.5 at 1500.
	35.3	19/6/1993	72160	Albury AP	Wrong. Other sites in region 13-15. 13.5 at 1500.
	31.9	4/6/1992	47048	Broken Hill AP	Suspect. Other sites in region 18-21. 17.6 at 1500.
	30.5	16/6/2002	58130	Grafton Pool	OK
	30.4	15/6/1994	63292	Mount Boyce	Wrong. Other sites in region 12-16. 12.9 at 0900 and fell thereafter.
July	36.4	23/7/1990	47048	Broken Hill AP	Suspect. Other sites in region 22-24, 23.0 at 1500.
	36.1	30/7/1961	51018	Gilgandra	Wrong. Other sites in region 19-22. From sfc_mos.
	31.7	28/7/1958	46037	Tibooburra	OK
	30.6	28/7/1958	46043	Wilcannia	OK
	30.6	22/7/1926	46037	Tibooburra	OK
August	37.0	22/8/1990	47048	Broken Hill AP	Wrong. Other sites in region 14-17. 14.2 at 1500.
	36.1	13/8/1946	58012	Yamba	OK. From separately digitised data not yet in ADAM.
	35.0	14/8/1945	48031	Collarenebri	Wrong. Other sites in region < 21.1. From sfc_mos.
	35.0	13/8/1946	48015	Brewarrina	OK. From sfc_mos.
	34.5	22/8/1995	58130	Grafton Pool	OK
September	42.2	9/9/1941	46037	Tibooburra	Suspect. Other northern NSW sites < 30. May be 1 day out of sync but still too high.
	39.6	28/9/2004	48079	Wanaaring	OK
	39.5	22/9/2003	47019	Menindee	OK
	39.5	22/9/2003	46042	White Cliffs	OK
	39.4	22/9/2003	46043	Wilcannia	OK
October	43.9	31/10/1919	48015	Brewarrina	OK. From sfc_mos.
	42.8	29/10/1958	48015	Brewarrina	OK. From sfc_mos.
	42.8	30/10/1919	47019	Menindee	OK
	42.8	31/10/1919	47019	Menindee	OK
	42.6	21/10/1988	52026	Walgett	OK
November	47.6	12/11/1993	72160	Albury AP	Wrong. Other sites in region 25-26. 26.0 at 1500.
	46.1	19/11/1944	51010	Coonamble	OK. From sfc_mos.
	45.6	27/11/1919	48013	Bourke	OK
	45.6	30/11/1936	48013	Bourke	OK
	45.6	30/11/2004	49019	Ivanhoe	OK
	45.6	19/11/1968	51010	Coonamble	OK
	45.6	19/11/1944	52026	Walgett	OK

Table 3.5 (cont.). Highest daily maximum temperature by month – New South Wales/ACT (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
December	48.9	19/12/1912	48015	Brewarrina	No evidence to reject at this time. From sfc_mos. 44.9 at Bourke but could be out of sync.
	48.9	9/12/1918	47019	Menindee	Suspect. Looks a bit high (43.3 at Broken Hill). Station appears too warm for much of 1918-19 – see April comments above.
	47.9	5/12/1981	48013	Bourke	OK. From sfc_mos
	47.8	21/12/1912	47016	Lake Victoria	OK. From sfc_mos
	47.8	29/12/1949	48015	Brewarrina	OK
	47.8	21/12/1912	47019	Menindee	OK

Table 3.6. Highest daily maximum temperature by month – Victoria (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	47.2	10/1/1939	76077	Mildura PO	OK
	46.9	13/1/1939	76077	Mildura PO	OK
	46.9	3/1/1990	76031	Mildura AP	OK
	46.8	5/1/1979	76031	Mildura AP	OK
	46.8	14/1/1939	82039	Rutherglen	OK
February	48.8	7/2/2009	77010	Hopetoun AP	OK
	48.1	7/2/2009	76064	Walpeup	OK
	47.9	7/2/2009	87113	Avalon AP	OK
	47.6	7/2/2009	79023	Horsham (Polkemmet)	OK
	47.6	7/2/2009	79028	Longerenong	OK
March	44.4	11/3/1934	76077	Mildura PO	OK
	43.3	12/3/1934	76077	Mildura PO	OK
	42.6	10/3/1950	76077	Mildura PO	OK
	42.4	9/3/1940	76077	Mildura PO	OK
	42.2	3/3/1942	76077	Mildura PO	OK
	42.2	10/3/1934	76077	Mildura PO	OK
	42.2	2/3/1919	76077	Mildura PO	Suspect. No others within 400 km > 38.3.
April	37.8	4/4/1986	76031	Mildura AP	OK
	37.5	4/4/1986	85279	Bairnsdale AP	OK
	37.4	4/4/1986	76064	Walpeup	OK
	37.3	3/4/1986	76064	Walpeup	OK
	37.0	10/4/2005	80023	Kerang	OK
	37.0	4/4/1986	76047	Ouyen	OK
May	32.8	11/5/1988	79028	Longerenong	Wrong. Other sites in region < 17, 14.6 at 1500.
	32.2	15/5/1938	76077	Mildura PO	OK
	31.7	6/5/1911	76077	Mildura PO	OK
	31.4	4/5/1988	79028	Longerenong	Suspect. Other sites in region < 28, 22.4 at 1500.
	31.1	5/5/1921	76077	Mildura PO	OK
	31.1	1/5/1921	76077	Mildura PO	OK. 2-day max. 30/4-1/5, neighbours suggest 1/5 was the hotter day.
June	27.8	6/6/1995	84084	Mallacoota	Wrong. Other sites in region < 18.3, 10.5 at 1500, no data 1800-2100.
	26.7	17/6/1919	76077	Mildura PO	Wrong. 13.9 at Nhill, and nothing in month > 23 on NSW side. 10.0 at 0900 (cooler than days either side with max. 15-17).
	25.7	8/6/2005	77010	Hopetoun AP	OK
	25.7	3/6/1957	84080	Bairnsdale PO	OK
	25.6	5/6/1998	80023	Kerang	OK
July	37.1	19/7/1995	90176	Mortlake	Wrong. Other sites in region 10-14, 10.6 at 1500.
	33.0	5/7/1994	83084	Falls Creek	Wrong. Other elevated sites in region 2-5, 2.5 at 0000 (highest during day).
	28.8	30/7/1975	76064	Walpeup	Suspect. Other sites in region < 26.2. 25.5 at 1500 (after 26.7 on previous day).
	27.1	29/7/1975	76125	Robinvale	OK
	27.1	28/7/1975	76125	Robinvale	OK

Table 3.6 (cont.). Highest daily maximum temperature by month – Victoria (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
August	30.5	31/8/1940	76077	Mildura PO	Suspect. No immediate neighbours, but 21.7 on 30/8 and Adelaide, Deniliquin suggest no rapid warming in SE Aus. 1500 obs. missing.
	30.2	26/8/1991	90175	Port Fairy	Suspect. Other sites in region < 16, 14.4 at 1500.
	29.9	28/8/1977	76125	Robinvale	OK
	29.9	30/8/2007	76031	Mildura AP	OK
	29.8	26/8/1977	76047	Ouyen	OK
September	37.4	22/9/2003	76031	Mildura AP	OK
	35.6	25/9/1965	76031	Mildura AP	OK
	35.6	22/9/2003	76047	Ouyen	OK
	35.6	30/9/1961	76031	Mildura AP	OK
	35.6	25/9/1965	76026	Merbein	OK
October	40.2	12/10/2004	76064	Walpeup	OK
	40.2	12/10/2004	76031	Mildura AP	OK
	40.1	12/10/2004	76047	Ouyen	OK
	40.0	29/10/1914	76077	Mildura PO	OK
	40.0	29/10/1925	76077	Mildura PO	Value OK. Probably 1 day out of sync – 28th is hottest day at other sites in region, and 0900 temp higher on 28th.
	40.0	30/10/1965	76031	Mildura AP	OK
	40.0	13/10/1977	76125	Robinvale	OK
	40.0	25/10/1914	80023	Kerang	OK
November	44.5	17/11/1980	76031	Mildura AP	OK
	44.0	25/11/1997	77094	Swan Hill AP	OK
	44.0	25/11/1997	76047	Ouyen	OK
	43.6	16/11/1980	76031	Mildura AP	OK
	43.5	26/11/1997	85279	Bairnsdale AP	OK
December	46.6	31/12/1976	76125	Robinvale	OK
	46.4	31/12/2005	77010	Hopetoun	OK
	46.0	31/12/2005	78015	Nhill AP	OK
	46.0	31/12/2005	79100	Horsham AP	OK
	45.9	31/12/2005	76064	Walpeup	OK

Table 3.7. Highest daily maximum temperature by month – Tasmania (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	42.2	30/1/2009	92094	Scamander	OK
	41.8	30/1/2009	92120	St. Helens AP	OK
	41.6	30/1/2009	93053	Ross	OK
	41.5	29/1/2009	99005	Flinders Island AP	OK
	41.4	30/1/2009	91306	Cressy	OK
February	39.8	15/2/1982	94008	Hobart Airport	OK
	39.8	1/2/1983	92094	Scamander	OK
	39.8	1/2/1983	92033	St. Helens PO	OK
	39.7	15/2/1982	94146	Geeveston (Fourfoot)	OK
	39.7	7/2/1967	94069	Grove	OK
March	38.0	14/3/2008	94212	Campania	OK
	37.8	7/3/1966	95015	New Norfolk	OK
	37.6	7/3/1966	95003	Bushy Park	OK
	37.6	11/3/1940	92038	Swansea	OK
	37.3	7/3/1966	94069	Grove	OK
	37.3	13/3/1940	94029	Hobart	OK
	37.3	13/3/1940	92038	Swansea	OK
	37.3	14/3/2008	94029	Hobart	OK
April	35.8	18/4/1964	99015	Whitemark PO	Wrong. 21.7 at Flinders Island AP, no data 0900 and 1500.
	34.2	14/4/1997	96075	Barren Tier	Wrong. Other sites in region 10-12. 6.7 at 1200, 1500 missing.
	32.3	5/4/1972	97054	Zeehan	Wrong. Other sites in region < 18, 15.0 at 1500.
	32.0	2/4/2005	94212	Campania	OK
	31.7	12/4/1985	94069	Grove	OK
	31.7	10/4/2005	99005	Flinders Island AP	OK
May	28.8	1/5/1936	92038	Swansea	OK
	27.4	1/5/1997	99005	Flinders Island AP	OK
	27.0	1/5/1997	92038	Swansea	OK
	26.7	5/5/1972	92003	Bicheno	OK
	26.7	14/5/1952	94069	Grove	Suspect. No hourly data, 13.1 at Hobart.
June	23.1	14/6/1987	94137	Geeveston	Wrong. 3-day max. but still too high – Grove not above 12.3 in this period.
	23.0	25/6/1991	91245	Cape Grim	Wrong. Other sites in region < 15, 14.3 at 1500.
	22.0	26/6/1979	92097	Bicheno (Homestead)	OK
	21.6	1/6/1999	92033	St. Helens PO	OK
	21.1	23/6/1988	92033	St. Helens PO	OK
	21.1	3/6/1957	92038	Swansea	OK
	21.1	4/6/1958	92038	Swansea	OK
	21.1	3/6/1972	92003	Bicheno	OK
July	24.0	30/7/1975	92038	Swansea	OK
	21.8	30/7/1975	92094	Scamander	OK
	21.6	30/7/1975	92033	St. Helens PO	OK
	21.5	30/7/1975	94036	Kingston	OK
	21.4	30/7/1975	99005	Flinders Island AP	OK
August	25.0	31/8/2006	94212	Campania	OK
	24.9	31/8/2006	92094	Scamander	OK
	24.5	26/8/1977	94029	Hobart	OK
	24.3	29/8/1982	92038	Swansea	OK
	24.0	26/8/1977	94056	Risdon	OK
	24.0	25/8/1977	94056	Risdon	OK
	24.0	29/8/1982	92094	Scamander	OK

Table 3.7 (cont.). Highest daily maximum temperature by month – Tasmania (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
September	31.1	27/9/1987	94008	Hobart Airport	OK
	31.0	27/9/1987	94029	Hobart	OK
	30.6	27/9/1987	92003	Bicheno	OK
	30.2	30/9/1961	94027	Hastings	OK
	29.9	30/9/1980	94027	Hastings	Wrong. Other sites in region < 22, 20.3 at 0900, 17.9 at 1500.
October	34.6	31/10/1987	94029	Hobart	OK
	34.3	12/10/2006	94212	Campania	OK
	33.9	31/10/1987	92038	Swansea PO	OK
	33.6	31/10/1987	94146	Geeveston (Fourfoot)	OK
	33.5	31/10/1987	95003	Bushy Park	OK
	33.5	12/10/2006	94166	Bull Bay	OK
November	38.5	23/11/1966	94008	Hobart Airport	OK
	36.8	26/11/1937	94029	Hobart	OK
	36.6	23/11/1966	94069	Grove	OK
	36.5	13/11/1980	92097	Bicheno (Homestead)	OK
	36.1	23/11/1966	95015	New Norfolk	OK
	36.1	23/11/1966	94029	Hobart	OK
	36.1	23/11/1966	94036	Kingston	OK
December	39.2	11/12/1998	94008	Hobart Airport	OK
	38.9	24/12/1920	94029	Hobart	OK
	38.6	11/12/1998	95003	Bushy Park	OK
	38.2	11/12/1998	94029	Hobart	OK
	38.2	26/12/1945	94029	Hobart	OK

Table 3.8. Highest daily maximum temperature by month – Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	50.7	2/1/1960	17043	Oodnadatta	OK
	50.3	3/1/1960	17043	Oodnadatta	OK
	49.8	3/1/1979	11008	Mundrabilla	OK
	49.8	13/1/1979	11004	Forrest	OK
	49.7	10/1/1939	47019	Menindee	OK. From sfc mos.
February	50.5	19/2/1998	5008	Mardie	OK
	49.8	21/2/1998	6072	Emu Creek	OK
	49.4	16/2/1998	6072	Emu Creek	OK
	49.2	9/2/1977	5008	Mardie	OK
	49.1	18/2/1998	4035	Roebourne	OK
March	47.8	4/3/1998	4035	Roebourne	OK
	47.8	6/3/2007	6011	Carnarvon	OK
	47.2	4/3/1980	5008	Mardie	OK
	47.2	6/3/2007	6105	Shark Bay AP	OK
	47.2	6/3/2007	8251	Kalbarri	OK
April	45.2	22/4/2005	14704	McArthur River	Suspect. Other sites in region < 37.2. METAR obs. - 35.2 at 1600, 45.2 at 1650, 35.2 at 1652, 30.2 at 1703.
	45.0	2/4/1928	4020	Marble Bar	No evidence to reject at this time. No hourly or comparison data available.
	45.0	1/4/1948	4002	Port Hedland PO	OK
	44.7	1/4/1928	4020	Marble Bar	No evidence to reject at this time. No hourly or comparison data available.
	44.3	2/4/1948	4002	Port Hedland PO	OK
May	40.7	15/5/2005	3096	West Roebuck	Suspect. Station failed calibration Jun. 2005.
	40.6	6/5/1990	3030	Bidyadanga	OK
	40.5	3/5/1990	5008	Mardie	OK
	40.3	1/5/2005	3096	West Roebuck	Suspect. Station failed calibration Jun. 2005.
	40.3	8/5/1997	14723	Borroloola	Suspect. Other sites in region < 35.1, 34.9 at 1500.
June	42.0	22/6/1994	55325	Tamworth AP	Wrong. Other sites in region 17-19. 18.5 at 1500.
	37.8	2/6/1962	1005	Wyndham Port	OK. 32.2 at 1500, but 36.2 at Warmun.
	37.5	20/6/1987	14042	Oenpelli	Suspect. 0900-1500 max 35.0, 35.2 at Jabiru. Fire around screen after 1500 (from fieldbook).
	37.2	6/6/1998	3078	Cadjebut	OK
	37.2	6/6/1998	2014	Kimberley Res Stn	OK
	37.2	7/6/1961	1005	Wyndham Port	OK
July	40.5	6/7/1995	14932	Tindal	Suspect. Other sites in region < 30, 26.6 at 1500.
	40.0	4/7/1966	14904	Katherine Exp Farm	Suspect. Other sites in region 31-33.
	37.7	18/7/1996	37043	Urandangi	Suspect. Other sites in region < 33, 32.0 at 1500.
	37.6	19/7/1996	1013	Wyndham	OK
	37.3	16/7/1995	14850	Timber Creek	OK
	37.3	15/7/1995	1013	Wyndham	OK
August	40.0	27/8/1970	1021	Kalumburu	OK
	39.6	31/8/1985	1013	Wyndham	OK
	39.5	27/8/1965	3007	Derby PO	OK
	39.4	29/8/1970	2038	Kununurra	OK
	39.3	27/8/1970	2038	Kununurra	OK

Table 3.8 (cont.). Highest daily maximum temperature by month – Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
September	43.1	27/9/2003	3096	West Roebuck	OK
	42.9	27/9/2003	3093	Fitzroy Crossing AP	OK
	42.8	29/9/1998	4019	Mandora	Valid 6-hour max. 0900-1500. No obs. at 0900 next day.
	42.8	24/9/1989	3007	Derby PO	OK
	42.8	10/9/1933	14054	Wave Hill	Wrong. Correct value (from station file) is 37.2.
October	46.9	22/10/2002	4032	Port Hedland AP	OK
	46.8	22/10/2002	4019	Mandora	OK
	46.7	22/10/2002	4028	Pardoo	OK
	46.7	21/10/2002	4019	Mandora	OK
	46.5	22/10/2002	4090	Roebourne AP	OK
	46.5	28/10/2002	3078	Cadjebut	OK
November	48.7	17/11/1990	38002	Birdsville	OK
	48.5	30/11/2006	38026	Birdsville AP	OK
	48.2	19/11/1987	38002	Birdsville	OK
	48.0	19/11/1973	4074	Goldsworthy	OK
	47.9	30/11/1993	16044	Tarcoola	OK
December	49.5	24/12/1972	38002	Birdsville	OK
	49.3	17/12/1912	11003	Eucla	Suspect. Comparison with Madura suggests Stevenson screen not installed until 1913.
	49.1	23/12/1972	17096	Moomba	OK
	49.0	22/12/1972	17031	Marree PO	OK
	49.0	6/12/1981	38002	Birdsville	OK

Table 4.1. Highest daily minimum temperature by month – Western Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	35.5	21/1/2003	5026	Wittenoom	OK
	35.1	24/1/1916	4020	Marble Bar	OK at this stage. No evidence to reject. Hourly obs. not digitised.
	34.9	5/1/1991	4043	Redmont	Suspect. Other sites in region < 28. 36.0 at 0900.
	34.8	18/1/1991	4084	Shay Gap	Suspect. Other sites in region < 30.3. 35.0 at 0900.
	34.4	5/1/1960	4020	Marble Bar	OK
February	35.0	13/2/1968	5051	Exmouth	Suspect. Other sites in region <30. Consistent with hourly obs. (0000 35.6), but numerous obs. on earlier days corrected in book – instrument problems?
	34.9	23/2/1991	8251	Kalbarri	OK
	34.9	19/2/1998	5026	Wittenoom	OK
	34.3	18/2/1998	5026	Wittenoom	OK
	34.0	10/2/1977	6072	Emu Creek	OK
March	34.0	4/3/1973	5008	Mardie	OK
	33.7	4/3/1998	5026	Wittenoom	OK
	33.5	1/3/1998	3078	Cadjebut	Looks high but not enough evidence to reject at this time. Other sites in region < 31. 33.5 at 0900 prev. day, 34.8 at 0900.
	33.3	1/3/2005	4106	Marble Bar	OK
	32.7	12/3/1973	6072	Emu Creek	OK
	32.7	8/3/1932	4020	Marble Bar	Probably OK. Difficult to verify – no hourly observations. 29.6 at Port Hedland.
April	32.0	8/4/1981	5069	Pannawonica	Suspect. Original fieldbook value 33.4, amended to 32 in processing. 0900 prev. day 32.0, 32.5 at 0900. Other sites in region < 27.8.
	31.7	8/4/1967	1021	Kalumburu	Suspect. 31.4 at 0900, 30.6 at 0900 prev. day. Other sites in region < 27.
	31.5	7/4/1992	3030	Bidyadanga	Suspect. 0900 obs. missing, 32.5 at 1500 prev. day. 27.4 at 3003.
	31.2	21/4/1986	2056	Kununurra AP	Suspect. 20.0 at Kimberley Res Stn, 31.2 at 0900 prev. day.
	31.0	4/4/1986	4035	Roebourne	OK
May	29.3	20/5/1984	3069	Koolan Island	Suspect. Matches 0900 obs. (29.3). 26.5 at Cape Leveque.
	29.2	7/5/1967	3025	Cockatoo Island	Suspect. 23.9 at Cape Leveque. 29.8 at 0900.
	29.2	6/5/1973	1007	Troughton Island	OK
	29.0	7/5/1981	2038	Kununurra	Suspect. 18.0 at Kimberley Res Stn.
	29.0	9/5/1964	1007	Troughton Island	OK
June	27.2	1/6/1971	3025	Cockatoo Island	OK
	27.1	2/6/2007	1007	Troughton Island	OK
	27.0	14/6/1980	3025	Cockatoo Island	OK
	27.0	6/6/1973	3025	Cockatoo Island	OK
	26.9	1/6/2007	1007	Troughton Island	OK
	26.9	3/6/2007	1007	Troughton Island	OK

Table 4.1 (cont.). Highest daily minimum temperature by month – Western Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
July	26.5	15/7/1973	3025	Cockatoo Island	OK
	26.2	3/7/1981	1013	Wyndham	OK
	25.8	24/7/1973	3025	Cockatoo Island	OK
	25.8	8/7/1968	3025	Cockatoo Island	OK
	25.7	3/7/1981	2038	Kununurra	OK
	25.7	19/7/1958	1007	Troughton Island	OK
	25.7	29/7/1958	1007	Troughton Island	OK
	25.7	12/7/1961	1021	Kalumburu	Wrong. 24.7 at 0900.
August	27.5	26/8/1998	3078	Cadjebut	OK
	27.0	22/8/1992	1025	Doongan	Suspect. Other sites in region 17-21. 27.0 at 0900.
	27.0	31/8/1996	1013	Wyndham	OK
	27.0	31/8/1973	1013	Wyndham	OK
	26.6	28/8/1995	2056	Kununurra AP	OK
	26.6	28/8/1995	1013	Wyndham	OK
	26.6	28/8/1983	1013	Wyndham	OK
	26.6	31/8/1973	1007	Troughton Island	OK
	26.6	29/8/1973	2038	Kununurra	OK
	26.6	25/8/1973	1013	Wyndham	OK
September	31.6	25/9/1971	1013	Wyndham	Suspect. 26-27 at two Kununurra stations. 0/8 cloud, 35.1 at 0900.
	29.7	25/9/2005	1013	Wyndham	OK
	29.4	22/9/1959	7062	Mundiwindi	Wrong. 25.2 at 0900. Other sites in region < 22.
	29.4	28/9/1960	4020	Marble Bar	Suspect. 29.4 at 0900. Other sites in region < 21.1.
	29.3	9/9/1984	2014	Kimberley RS	Suspect. 21.7 at Kununurra. 30.4 at 0900.
October	32.7	19/10/1900	2011	Old Halls Creek	OK at this time. 36.6 at 0900. Can't verify with available data.
	32.2	31/10/1980	4043	Redmont	Looks high but not enough evidence to reject at this time. 27.8 at Marble Bar. 32.2 at 0900 previous day. Fieldbook shows cloud/wind.
	31.6	22/10/2002	5026	Wittenoom	OK
	31.5	31/10/1988	13015	Carnegie	Wrong. 25.6 at 0600.
	31.3	30/10/2005	2012	Halls Creek	OK
November	33.9	21/11/1951	4020	Marble Bar	Looks high but not enough evidence to reject at this time. A long way above Port Hedland (25.6) but not impossible. No hourly observations.
	33.4	9/11/1990	4074	Goldsworthy	OK
	33.4	21/11/1973	4074	Goldsworthy	OK
	33.4	19/11/1964	2032	Warmun	OK
	33.2	27/11/1972	4027	Nullagine	Suspect. Previous day missing. Other sites in region < 27.8. Matches fieldbook.
December	35.0	28/12/1902	4020	Marble Bar	OK at this stage. No comparison data (hourly or neighbours) to verify.
	34.2	4/12/1993	4020	Marble Bar	OK
	33.6	19/12/1987	5026	Wittenoom	OK
	33.6	17/12/1972	5026	Wittenoom	OK
	33.4	20/12/2004	4106	Marble Bar	OK
	33.4	17/12/2002	5026	Wittenoom	OK
	33.4	13/12/1935	4020	Marble Bar	Hard to verify – no hourly data. Days before and after near 29 with little change in maximum temperature.

Table 4.2. Highest daily minimum temperature by month – Northern Territory (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	34.4	30/1/1948	15087	Tennant Creek PO	Suspect. Just below 0900 (34.6) and 2100 obs., and cloud/wind/DP/max all consistent with days either side with mins 26-29. Probably 10°F too high.
	33.7	5/1/2006	15602	Jervois	OK
	33.6	29/1/1973	15526	Finke	OK
	33.5	10/1/2008	15664	Wulungurru	OK
	33.3	3/1/1960	15526	Finke	OK
February	32.8	25/2/1981	14402	Milingimbi	Wrong. 28.0 at 0900, other sites in region < 27.
	32.5	8/2/1994	15652	Watarrka	OK
	32.2	10/2/1963	15526	Finke	OK
	32.0	4/2/2000	15652	Watarrka	OK
	32.0	18/2/2007	15635	Yulara	OK
March	33.9	2/3/1966	14109	Tortilla Flats	Wrong. 27.2 at 0900, other sites in region < 24.
	33.0	13/3/1981	14850	Timber Creek	Wrong. 28.2 at 0900, other sites in region < 23.
	30.7	5/3/1999	15652	Watarrka	OK
	30.7	10/3/1926	14016	Darwin PO	Suspect. Min. temps suspect throughout month with many fixed-hour violations.
	30.6	9/3/2006	15664	Wulungurru	OK
April	29.2	14/4/1998	14840	Wave Hill	OK
	29.1	30/4/1988	14506	Angurugu	Suspect. 20.7 at Alyangula. 29.8 at 0900.
	29.0	5/4/2002	14274	McCleur Island	OK. Rounded value – 28.8 at 0600.
	29.0	11/4/2005	15664	Wulungurru	OK
	28.9	25/4/1970	14008	Cape Don	Suspect. Other sites in region < 26. 28.9 at 0900.
	28.9	4/4/1958	14008	Cape Don	Suspect. Other sites in region < 26. 28.9 at 0900.
May	29.0	10/5/1975	14042	Oenpelli	Suspect. 29.0 at 0900, 28.5 at 0900 prev. day. Other sites in region < 26.5.
	29.0	10/5/1973	14042	Oenpelli	Suspect. Other sites in region < 25.3. 29.5 at 0900.
	28.5	7/5/1988	14011	Minjilang	OK
	28.1	11/5/1972	14710	Borroloola	Suspect. Other sites in region < 23.3. 28.3 at 0900.
	28.0	11/5/1992	14924	Injun Beach	OK
June	28.5	11/6/1973	14042	Oenpelli	Suspect. Other sites in region < 24.4, 29.0 at 0900.
	27.3	9/6/1987	14513	Wallaby Beach	Suspect. 22.5 at Gove, 27.4 at 0900. Follows period of missing data.
	27.2	30/6/1987	14513	Wallaby Beach	Wrong. 26.5 at 0900. Follows period of missing data.
	27.2	8/6/1963	14008	Cape Don	Suspect. 22.8 at Darwin, 27.2 at 0900.
	27.0	4/6/2003	14274	McCleur Island	OK
	27.0	2/6/2003	14274	McCleur Island	OK
	27.0	3/6/2003	14274	McCleur Island	OK

Table 4.2 (cont.). Highest daily minimum temperature by month – Northern Territory (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
July	25.6	29/7/1972	14502	Yirrkala	Suspect. 19.1 at Gove, 25.6 at 0900.
	25.6	23/7/1941	14016	Darwin PO	Suspect. 17.7 at Darwin AP. May and July 1941 probably transposed at PO.
	25.5	22/7/1998	14508	Gove AP	OK
	25.5	24/7/2003	14274	McCleur Island	OK
	25.5	24/7/1981	14011	Minjilang	OK
	25.5	25/7/1974	14198	Jabiru	OK
August	28.7	21/8/1973	14103	Milikapiti	Suspect. Other sites in region < 22.5. No hourly obs. before 1500.
	27.2	26/8/1998	14847	Kidman Springs	OK
	27.0	24/8/1979	14042	Oenpelli	Suspect. Other sites in region < 22.5. 27.0 at 0900 prev. day.
	26.8	31/8/1998	14901	Douglas River	Wrong. 12.6 at 0600, other sites in region < 17.
	26.4	28/8/1999	14850	Timber Creek	OK
	26.4	31/8/1926	14016	Darwin PO	No evidence to reject at this time.
	26.4	11/8/1973	14837	Keep River	Wrong. 24.0 at 0900 previous day.
	26.4	27/8/1983	14850	Timber Creek	Suspect. 20.7 at Victoria River Downs, 27.1 at 0900.
	26.4	2/8/1987	14011	Minjilang	Suspect. Neighbours < 22.5. 26.4 at 0900 previous day.
September	29.4	25/9/1989	14825	Victoria River Downs	Suspect. 29.4 at 0300, other sites in region < 25. Probably not too far wrong but unlikely that 0300 value was min.
	29.0	13/9/1988	14850	Timber Creek	OK
	29.0	28/9/2001	14954	Bradshaw	Wrong. 23.2 at 0600, other sites in region < 22 (most < 20)
	29.0	20/9/1931	14016	Darwin PO	Suspect. 29.3 at 2100, 29.1 at 0900. Heavy rain 0100-0200.
	28.8	23/9/1999	14901	Douglas River	Wrong. 21.6 at 0600, other sites in region < 24.
October	31.6	30/10/1990	14153	Black Point	Wrong. 27.9 at 0900, other sites in region < 26.
	31.5	27/10/1976	14825	Victoria River Downs	OK. Matches fieldbook. Previous day missing.
	31.0	26/10/1996	14847	Kidman Springs	Suspect. 21.4 at Victoria River Downs, 31.0 at 0900 prev. day.
	30.9	28/10/2003	15602	Jervois	OK
	30.8	16/10/1998	14847	Kidman Springs	OK
November	36.7	9/11/1965	14080	Noonamah	Wrong. 31.1 at 0900. Max recorded as min.
	34.6	17/11/1996	15548	Rabbit Flat	Suspect. 26.4 at other Rabbit Flat site. 34.6 at 0900.
	33.6	29/11/1993	15635	Yulara	Suspect. Other sites in region < 26, no hourly obs. before 1200.
	32.0	17/11/1990	15548	Rabbit Flat	OK
	32.0	15/11/1974	14710	Borroloola	Suspect. Other sites in region < 28.2, 32.0 at 0900.
December	33.9	29/12/1878	15540	Alice Springs PO	Wrong. 27.8 at 0900.
	32.5	29/12/1973	15526	Finke	OK
	32.5	22/12/1990	15603	Kulgera	OK
	32.5	16/12/1925	15087	Tennant Creek PO	OK
	32.4	1/12/1996	15602	Jervois	OK
	32.4	25/12/1963	15526	Finke	No evidence to reject at this time.

Table 4.3. Highest daily minimum temperature by month – South Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	36.6	12/1/1960	17031	Marree PO	Wrong. 33.2 at 0900.
	35.5	24/1/1982	17099	Arkaroola	OK
	35.4	24/1/1982	19066	Port Augusta	OK
	35.4	24/1/1982	16065	Andamooka	OK
	35.2	24/1/1982	23031	Waite Institute	OK
	35.2	24/1/1982	23037	Parafield Plant Ctr	OK
February	36.0	12/2/1963	24016	Renmark	Wrong. 28.9 at 0900, other sites in region < 23.
	35.0	17/2/2004	17123	Moomba AP	OK
	33.7	7/2/2009	16096	Olympic Dam	OK
	33.5	17/2/1989	17114	Oodnadatta Police	Suspect. Other sites in region < 27. No hourly obs.
	33.4	16/2/1981	17096	Moomba	OK
	33.4	10/2/1963	17043	Oodnadatta	OK
March	33.9	2/3/1965	16044	Tarcoola	Suspect. Other sites in region < 27.8. 34.2 at 0900.
	32.8	3/3/1965	16044	Tarcoola	Suspect. Other sites in region < 25.6. 32.8 at 0900.
	31.9	1/3/1965	16044	Tarcoola	Suspect. Other sites in region < 25.6. 32.2 at 0900.
	31.1	7/3/1983	17043	Oodnadatta	OK
	31.0	8/3/1983	17043	Oodnadatta	OK
April	28.2	2/4/1961	17043	Oodnadatta	OK
	27.5	10/4/2005	17043	Oodnadatta	OK
	26.8	4/4/1975	17031	Marree PO	Wrong. 23.2 at 0900 prev. day. Other sites in region 22-23.
	26.7	4/4/1992	23013	Parafield	OK
	26.6	2/4/2005	23090	Adelaide RO	OK
	26.6	2/4/2005	23885	Noarlunga	OK
May	21.9	1/5/1997	16044	Tarcoola	OK
	21.7	5/5/1990	23747	Strathalbyn	OK
	21.6	5/5/1990	24521	Murray Bridge	OK
	21.5	11/5/1987	21043	Port Pirie	OK
	21.5	7/5/1973	17096	Moomba	OK
June	19.6	9/6/1995	17099	Arkaroola	OK
	19.5	9/6/1995	17043	Oodnadatta	OK
	19.2	9/6/1995	17031	Marree PO	OK
	19.2	3/6/1996	16085	Marla	OK
	19.2	8/6/2005	17043	Oodnadatta	OK
July	19.2	30/7/1975	18103	Whyalla (Norrie)	OK
	19.2	30/7/1975	16044	Tarcoola	OK
	19.0	13/7/1995	17043	Oodnadatta	OK
	18.9	28/7/1975	23031	Waite Institute	OK
	18.2	17/7/1974	16044	Tarcoola	Wrong. 11.2 at 0900 prev. day. Other sites in region < 15.
August	22.3	23/8/1995	17043	Oodnadatta	Valid 0000-0000 UTC min. Would still be a record for 0900-0900 local time (21.9 at 0900 prev. day).
	21.9	30/8/2005	17031	Marree PO	OK
	21.9	30/8/2005	17126	Marree AP	OK
	20.1	30/8/2005	17043	Oodnadatta	OK
	19.6	24/8/1995	16090	Coober Pedy AP	Valid 0000-0000 UTC min. 17.3 at 0900 prev. day.

Table 4.3 (cont.). Highest daily minimum temperature by month – South Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
September	26.0	24/9/1944	18012	Ceduna	OK
	25.7	24/9/1944	18044	Kyancutta	OK
	25.6	24/9/1944	18011	Ceduna PO	OK
	25.6	24/9/2001	17099	Arkaroola	OK
	25.5	27/9/1987	16044	Tarcoola	OK
October	29.5	13/10/1977	16001	Woomera	OK
	29.3	31/10/1977	17043	Oodnadatta	OK
	29.2	30/10/1990	17114	Oodnadatta Police	OK. No hourly obs.
	29.0	13/10/2004	17099	Arkaroola	OK. Looks high but confirmed by observer (note in SitesDB).
	28.9	20/10/1957	17043	Oodnadatta	OK
November	32.2	30/11/2006	17043	Oodnadatta	OK
	32.0	2/11/1995	17123	Moomba AP	OK. Based on hourly obs., other sites in wider region. 24.0 at other Moomba site doubtful.
	32.0	18/11/1990	17114	Oodnadatta Police	Suspect – other sites in region < 21.7. No hourly obs.
	31.6	28/11/1995	17096	Moomba	OK
	31.3	29/11/2006	17123	Moomba AP	OK
December	34.6	28/12/1994	17099	Arkaroola	Wrong. 28.1 at 0900 previous day. 34.6 at 0900.
	34.5	26/12/1980	16007	Coober Pedy	Wrong. Other sites in region < 28. Earlier analyses suggested 0900 and min swapped 21/12-18/1 – hourly obs. now deleted but mins still in database.
	34.0	21/12/1994	17099	Arkaroola	Wrong. 31.0 at 0900 previous day.
	34.0	27/12/1980	16007	Coober Pedy	Suspect. Refer comments above.
	33.2	31/12/2005	18201	Port Augusta AP	OK

Table 4.4. Highest daily minimum temperature by month – Queensland (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	34.5	30/1/2003	38002	Birdsville Police	OK
	34.4	6/1/2004	45009	Ballera	OK
	34.4	30/1/2003	45009	Ballera	OK
	34.4	5/1/2006	38003	Boulia	OK
	34.2	30/1/2003	38026	Birdsville AP	OK
February	34.4	13/2/1963	38002	Birdsville Police	Insufficient evidence to reject at this stage. 35.0 at 0900. Other sites in region < 29, but a remote area.
	34.4	16/2/1962	29041	Normanton	Wrong. 28.3 at 0900, other sites in region < 27.
	34.1	4/2/2006	45025	Thargomindah AP	OK
	34.0	2/2/2006	45025	Thargomindah AP	OK
	33.8	5/2/2006	45009	Ballera	OK
	33.8	6/2/1993	38002	Birdsville Police	OK
March	32.0	1/3/2001	38026	Birdsville AP	OK
	31.5	1/3/1983	45017	Thargomindah	OK
	31.5	8/3/1982	38002	Birdsville Police	OK
	31.3	1/3/1986	38002	Birdsville Police	OK
	31.1	5/3/1958	38003	Boulia	OK
	31.1	5/3/2007	45015	Quilpie	OK
April	29.0	28/4/2001	27054	Coconut Island	Suspect. Failed next calibration by 1.2 degrees and looks consistently too high relative to Horn Island.
	29.0	8/4/2002	27054	Coconut Island	Suspect. Refer comments for 28/4/2001.
	29.0	5/4/2002	27054	Coconut Island	Suspect. Refer comments for 28/4/2001.
	29.0	12/4/2002	27054	Coconut Island	Suspect. Refer comments for 28/4/2001.
	28.9	11/4/1963	41038	Goondiwindi PO	Wrong. 22.2 at 0900, other sites in region < 14.
	28.8	22/4/2008	29039	Mornington Island	Suspect. No METARs before 0925, neighbours < 24.2
	28.5	15/4/1980	37043	Urandangi	Wrong. 27.5 at 0900, other sites in region < 22.
	28.5	4/4/1980	37043	Urandangi	Wrong. 27.0 at 0900, other sites in region < 22.
	28.5	7/4/1986	29004	Burketown	OK
May	28.0	4/5/2001	27054	Coconut Island	Suspect. Refer comments for 28/4/2001.
	28.0	2/5/2001	27054	Coconut Island	Suspect. Refer comments for 28/4/2001.
	27.3	8/5/1995	27058	Horn Island	OK. Most 3-hourly obs. missing but min is consistent with 0600 value (27.4).
	27.2	6/5/2004	27058	Horn Island	OK
	27.2	5/5/2004	27054	Coconut Island	OK
	27.2	3/5/1959	30018	Georgetown	Suspect. Other sites in region < 23. 27.8 at 0900.
June	27.0	18/6/2002	27054	Coconut Island	Suspect. Refer comments for 28/4/2001.
	27.0	17/6/2002	27054	Coconut Island	Suspect. Refer comments for 28/4/2001.
	27.0	15/6/2002	27054	Coconut Island	Suspect. Refer comments for 28/4/2001.
	27.0	13/6/2002	27054	Coconut Island	Suspect. Refer comments for 28/4/2001.
	27.0	11/6/2001	27054	Coconut Island	Suspect. Refer comments for 28/4/2001.
	27.0	10/6/2001	27054	Coconut Island	Suspect. Refer comments for 28/4/2001.
	27.0	8/6/2001	27054	Coconut Island	Suspect. Refer comments for 28/4/2001.
	27.0	2/6/1998	27054	Coconut Island	OK. Rounded to whole degrees. 26.5 at 0300 (so min must be 26.5), but still a record (next highest is 26.3).

Table 4.4 (cont.). Highest daily minimum temperature by month – Queensland (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
July	26.0	5/7/1998	27054	Coconut Island	OK. Obs. to 1 degree precision – 25.8 at 0600
	25.9	6/7/2005	27058	Horn Island	OK
	25.6	5/7/2005	27054	Coconut Island	OK
	25.5	1/7/2005	27054	Coconut Island	OK
	25.5	22/7/1998	27058	Horn Island	OK
August	25.4	10/8/1956	27022	Thursday Island	OK
	25.3	13/8/1955	27022	Thursday Island	OK
	25.3	11/8/1955	27022	Thursday Island	OK
	25.2	24/8/1998	27006	Coen AP	OK
	25.1	25/8/1998	27058	Horn Island	OK
	25.1	16/8/2007	27054	Coconut Island	OK
	25.1	16/8/2007	27058	Horn Island	OK
	25.1	22/8/1988	27042	Weipa	OK
	25.1	24/8/1998	27058	Horn Island	OK
	25.1	17/8/1973	27022	Thursday Island	Unlikely. 25.1 at both 0300 and 0600.
September	31.1	11/9/1962	38002	Birdsville Police	Wrong. 16.7 at 0900. Other sites in region < 15.
	29.1	27/9/2003	29090	Toorak Research Stn	OK
	28.9	27/9/2003	29058	Julia Creek AP	OK
	28.3	30/9/1988	29126	Mount Isa Mines	OK
	28.2	23/9/2003	38002	Birdsville Police	OK
	28.2	23/9/2003	38026	Birdsville AP	OK
October	31.4	20/10/1980	38003	Boulia	OK
	31.1	19/10/1957	40189	Somerset Dam	Wrong. 27.5 at 0900. Other sites in region < 22.
	31.1	29/10/1948	37010	Camooweal	Suspect. 31.1 at 0900. Other sites in region < 25.
	31.1	31/10/2008	38026	Birdsville AP	OK
	31.0	28/10/2003	37036	Trepell AP	OK
November	35.0	6/11/1965	44026	Cunnamulla	OK
	34.4	6/11/1965	44036	Gilruth Plains	OK
	33.6	1/11/1965	29025	Julia Creek	Wrong. 32.3 at 0900 prev. day. Other sites in region < 25.
	33.3	5/11/1965	38003	Boulia	OK
	33.3	15/11/1968	29041	Normanton	Wrong. 32.2 at 0900 prev. day. 33.3 at 0900. Other sites in region < 28.
December	33.9	30/12/1963	38024	Windorah	OK
	33.8	31/12/2003	45009	Ballera	OK
	33.7	25/12/2003	38024	Windorah	OK
	33.6	20/12/1901	36030	Longreach PO	Insufficient evidence to reject at this stage. 38.3 at 0900. No other station > 27 but data very sparse.
	33.5	4/12/1988	38002	Birdsville Police	OK

Table 4.5. Highest daily minimum temperature by month – New South Wales/ACT (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	34.4	2/1/1905	55023	Gunnedah Pool	Suspect. 13.9 at Inverell. No hourly obs. Probably not Stevenson screen.
	33.9	1/1/1965	54029	Warialda	Wrong. Other sites in region 11-17. Probably max, not min.
	33.9	8/1/1964	46037	Tibooburra PO	OK
	33.9	17/1/1872	72151	Wagga Wagga (Kooringal)	Wrong. 11.7 at Deniliquin. No hourly obs. Not Stevenson screen.
	33.9	7/1/1964	46037	Tibooburra PO	OK
February	33.6	6/2/1973	75050	Naradhan	Wrong. 30.0 at 0900 prev. day, 33.6 at 0900.
	33.3	5/2/1915	46037	Tibooburra PO	OK
	33.2	15/2/2004	49019	Ivanhoe PO	OK
	33.0	15/2/2004	49000	Ivanhoe AP	OK
	32.8	21/2/2004	46126	Tibooburra AP	OK
March	32.2	20/3/1942	67075	Schofields	Suspect. All Schofields data suspect – data believed to be recorded against wrong station number.
	30.6	13/3/1991	75039	Lake Cargelligo	Wrong. 20.2 at 0900. Other sites in region 7-14. Probably max, not min.
	30.3	1/3/1983	46042	White Cliffs	OK
	30.2	8/3/1982	46042	White Cliffs	OK
	30.0	27/3/1990	75041	Griffith AP	Wrong. 29.5 at 1500. 0900 obs. missing. Other sites in region 16-19.
April	28.2	18/4/1967	74093	Strathdrummond	Wrong. 19.4 at 0900. Other sites in region 11-14.
	26.2	10/4/2005	46042	White Cliffs	OK. Original value of 26.3 amended (26.2 at 0900 previous day).
	26.0	13/4/1991	68220	Minto	Wrong. 21.0 at 0900. Other sites in region 10-14.
	25.8	7/4/1943	48013	Bourke PO	OK
	25.6	7/4/1958	46037	Tibooburra PO	OK
	25.6	1/4/1922	46037	Tibooburra PO	OK
	25.6	2/4/1899	48013	Bourke PO	Probably not Stevenson screen but OK otherwise.
	25.6	1/4/1972	58013	Condong	Suspect. Min = max. No hourly data. Other sites in region < 20.
May	30.5	31/5/1990	75039	Lake Cargelligo	Wrong. 13.5 at 0900, other sites in region 9-13.
	22.8	7/5/1882	52026	Walgett PO	Suspect. 12.2 at Bourke and no other sites > 13 in northern NSW.
	21.9	5/5/1996	58198	Ballina	OK
	21.8	6/5/1996	58198	Ballina	OK
	21.7	11/5/1942	67075	Schofields	Suspect. Refer comments for 20/3/1942
June	21.1	19/6/1942	67075	Schofields	Suspect. Refer comments for 20/3/1942
	20.8	26/6/1942	67075	Schofields	Suspect. Refer comments for 20/3/1942
	20.8	1/6/1966	58052	Tabbimobile	Suspect. Other sites in region 15-18. No hourly obs. Station consistently too warm.
	20.6	27/6/1942	67075	Schofields	Suspect. Refer comments for 20/3/1942
	20.6	21/6/1942	67075	Schofields	Suspect. Refer comments for 20/3/1942
	20.0	3/6/2003	58009	Cape Byron AWS	OK. Possibly rounded but no METAR < 20.0.

Table 4.5 (cont.). Highest daily minimum temperature by month – New South Wales/ACT (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
July	20.0	4/7/1942	67075	Schofields	Suspect. Refer comments for 20/3/1942
	19.6	12/7/1942	67075	Schofields	Suspect. Refer comments for 20/3/1942
	19.4	20/7/1965	58052	Tabbimobile	Suspect. Other sites in region 11-14. No hourly obs. Station consistently too warm.
	19.4	5/7/1942	67075	Schofields	Suspect. Refer comments for 20/3/1942
	19.4	1/7/1942	67075	Schofields	Suspect. Refer comments for 20/3/1942
	19.1	1/7/1920	60026	Port Macquarie	OK
	18.9	20/7/1915	58012	Yamba	OK
	18.9	13/7/1964	59001	Bellingen PO	Suspect. Other sites in region < 13.3. 18.9 at 0900, 6.7 at 0900 prev. day.
	18.9	12/7/1958	59001	Bellingen PO	Wrong. 12.8 at 0900. Other sites in region < 10. 18.9 at 1500.
	18.7	2/7/1981	59040	Coffs Harbour	OK
August	20.6	28/8/1932	48013	Bourke PO	Suspect. Equal to 0900, clear sky, DP 7.6. Other sites in northern NSW < 14.
	20.3	17/8/1965	58052	Tabbimobile	Suspect. Other sites in region 15-18. No hourly obs. Station consistently too warm.
	20.2	21/8/1942	66037	Sydney AP	Suspect. Probably valid as an 1500-0900 min, but not as either 0000-0000 or 0900-0900 (14.8 at 0900 prev. day, 17.9 at 2100).
	20.2	29/8/1969	49032	Mount Hope	Wrong. 19.6 at 0900. Other sites in region 8-12.
	20.1	30/8/2005	47048	Broken Hill AP	OK
September	25.8	23/9/2003	48245	Bourke AWS	OK
	25.0	22/9/1981	48046	Goodooga	Suspect. Other sites in region 13-18.
	25.0	21/9/1928	48013	Bourke PO	OK
	24.5	30/9/1980	74221	Narrandera Golf Club	Wrong. 18.0 at 0900 prev. day, 24.5 at 0900. Other sites in region 7-12.
	24.4	29/9/2004	48243	Lightning Ridge	OK
	24.4	21/9/1942	52026	Walgett PO	Suspect. 21.6 at 0900 previous day, 25.0 at 1500. Probably valid overnight min.
October	30.6	15/10/1957	48013	Bourke PO	Wrong. 22.2 at 0900. Min = max.
	28.9	31/10/1961	49019	Ivanhoe PO	OK. No other sites > 22.2, but data-sparse area, 32.2 at 0900, high winds and blowing dust. Confirmed in fieldbook.
	28.6	13/10/2004	47048	Broken Hill AP	OK
	28.2	18/10/2006	48079	Wanaaring	OK
	28.1	13/10/2004	47007	Broken Hill	OK
November	32.8	29/11/1960	63021	Cowra PO	Wrong. 24.4 at 0900, other sites in region 5-11.
	32.0	27/11/1997	73038	Temora ARS	Wrong. Other sites in region 17-24. 42.0 at 0900 also suspect (max 41.0).
	31.7	18/11/1944	48030	Cobar PO	Insufficient evidence to reject at this stage. 37.2 at 0900. 21.1 at Bourke.
	31.3	28/11/1996	52020	Mungindi	Wrong. 30.0 at 0900 prev. day. Other sites in region < 26.
	30.7	30/11/2004	46037	Tibooburra PO	OK

Table 4.5 (cont.). Highest daily minimum temperature by month – New South Wales/ACT (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
December	34.0	21/12/1994	49019	Ivanhoe PO	OK
	33.9	31/12/1904	48030	Cobar PO	No evidence to reject at this time. Unclear whether or not Stevenson screen in use.
	33.7	31/12/1959	74039	Deniliquin (Falkiner)	Wrong. 20.4 at Deniliquin.
	33.4	21/12/1994	46043	Wilcannia	OK
	33.2	30/12/1965	47007	Broken Hill	Wrong. 30.7 at 0900 prev. day. Probably valid overnight min.
	33.2	22/12/1994	46042	White Cliffs	OK

Table 4.6. Highest daily minimum temperature by month – Victoria (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	36.9	30/1/1964	85093	Warragul	Wrong. 21.8 at 0900, other sites in region < 15.
	35.6	6/1/1906	76077	Mildura PO	Not Stevenson screen. Clearly a very hot night.
	31.7	1/1/1905	76077	Mildura PO	Not Stevenson screen. Value is plausible - 41.1 at 0900.
	31.3	11/1/1991	88068	Rubicon	Wrong. 24.6 at 0900. Other sites in region < 22.
	31.1	19/1/1968	77007	Birchip	Wrong. 22.9 at 0900 previous day. 31.1 at 0900. Most other sites in region < 26.
	30.9	26/1/2003	80023	Kerang	OK
	30.9	18/1/1890	76077	Mildura PO	Not Stevenson screen
	30.9	24/1/2001	76031	Mildura AP	OK
February	31.3	15/2/1968	76047	Ouyen	Wrong. 29.4 at 0900. Other sites in region < 22.
	30.5	1/2/1902	86071	Melbourne	OK
	30.0	15/2/2004	76031	Mildura AP	OK
	30.0	5/2/2000	77094	Swan Hill AP	OK
	30.0	9/2/1970	77004	Beulah	OK
March	30.3	7/3/1928	90015	Cape Otway	Insufficient evidence to reject at this stage. 31.0 at 0900, 32.2 at 0900 prev. day. 20.7 at Melbourne.
	27.3	17/3/1991	83067	Bright	Wrong. 20.0 at 0900. Other sites in region < 12.
	27.2	10/3/1934	76077	Mildura PO	OK
	27.2	3/3/1927	76077	Mildura PO	Insufficient evidence to reject at this stage. 30.0 at 0900. Adelaide, Nhill much lower but Mildura was ahead of front.
	27.0	1/3/1983	76031	Mildura AP	OK. Reset min – overnight min appears to be > 30.
April	23.9	2/4/1962	86017	Cape Schanck	Wrong. 19.4 at 0900. Other sites in region < 15.
	23.9	4/4/1957	76047	Ouyen	Wrong. 17.2 at 0900. Other sites in region < 9.
	23.8	10/4/2005	90180	Aireys Inlet	OK
	23.5	15/4/2004	84083	Lakes Entrance	OK
	23.4	2/4/2005	85096	Wilsons Promontory	OK. No hourly obs. after 0400. Bushfire in area but did not reach site until after 0900.
May	21.6	2/5/1972	88029	Heathcote	Suspect. Other sites in region < 12.2 (most < 10). 0900 (24.4) also suspect.
	21.0	9/5/2002	85096	Wilsons Promontory	OK
	20.0	5/5/1967	85096	Wilsons Promontory	OK
	19.8	2/5/1997	76047	Ouyen	OK
	19.7	5/5/1921	90015	Cape Otway	OK
June	17.2	3/6/1957	88036	Kyneton	Wrong. 5.0 at 0900. Other sites in region < 10.
	17.0	7/6/2001	86068	Viewbank	Valid whole-degree min. 16.6 at 0900 lowest half-hourly obs.
	16.7	3/6/1957	90015	Cape Otway	OK
	16.6	9/6/1995	76031	Mildura AP	OK
	16.4	3/6/1972	86094	Powelltown	Wrong. 7.2 at 0900 prev. day. Other sites in region < 14.

Table 4.6 (cont.). Highest daily minimum temperature by month – Victoria (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
July	54.6	14/7/1988	86354	Phillip Island	Wrong. 10.7 at 0900, other sites in region < 9.
	16.0	30/7/1975	76125	Robinvale	OK
	16.0	30/7/1975	76047	Ouyen	OK
	15.4	30/7/1975	76026	Merbein	OK
	15.0	31/7/1975	84070	Point Hicks	OK
	15.0	30/7/1975	76064	Walpeup	OK
	15.0	3/7/1985	85096	Wilsons Promontory	OK
August	19.3	26/8/1977	85096	Wilsons Promontory	OK
	18.8	30/8/2005	76031	Mildura AP	OK
	17.2	20/8/1942	85096	Wilsons Promontory	OK
	16.8	30/8/2005	76047	Ouyen	OK
	16.8	26/8/2004	86077	Moorabbin	OK
September	22.5	27/9/1987	90015	Cape Otway	OK
	22.1	24/9/2001	76031	Mildura AP	OK
	22.0	30/9/1980	85096	Wilsons Promontory	OK
	21.8	28/9/1987	84070	Point Hicks	OK
	21.7	25/9/1944	76077	Mildura PO	Insufficient evidence to reject at this stage. 21.7 at 0900. 21.1 at 2100 prev. day (and 15.6 at 0900) but might have used 0000-0000 observation day.
October	26.7	23/10/1933	76077	Mildura PO	OK
	26.1	31/10/1914	76077	Mildura PO	Insufficient evidence to reject at this stage. 26.1 at 0900, and max 37.2 so not continuously falling through 0900.
	25.8	28/10/1977	85096	Wilsons Promontory	OK
	24.9	14/10/1940	76077	Mildura PO	OK
	24.4	28/10/1906	76077	Mildura PO	Not Stevenson screen.
November	30.0	30/11/1911	76077	Mildura PO	OK
	29.0	26/11/1977	76125	Robinvale	Wrong. 22.8 at 0900 prev. day. Other sites in region < 22.
	28.3	18/11/1944	76077	Mildura PO	OK
	27.8	9/11/1909	76077	Mildura PO	OK
	27.6	26/11/1997	76031	Mildura AP	OK
December	34.1	19/12/1957	78034	Serviceton	Wrong. 30.1 at 0900. Other sites in region < 23.3.
	33.4	24/12/1960	82053	Wangaratta	Wrong. 17.4 at 0900. Other sites in region < 13.
	32.2	28/12/1897	76077	Mildura PO	Not Stevenson screen.
	30.6	31/12/1897	90015	Cape Otway	Not Stevenson screen.
	29.5	12/12/1975	76064	Walpeup	OK

Table 4.7. Highest daily minimum temperature by month – Tasmania (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	25.6	17/1/1962	94056	Risdon	Suspect. 17.2 at Hobart. Possibly an overnight min.
	25.0	20/1/1973	97067	Strahan	OK
	24.2	6/1/1997	99005	Flinders Island AP	OK
	24.1	21/1/1997	99005	Flinders Island AP	OK
	24.0	15/1/1993	92100	Storys Creek	Valid 0000-0000 UTC min.
	24.0	30/1/2009	94201	Melton Mowbray	OK
February	27.3	15/2/1982	97067	Strahan	OK
	27.2	25/2/1968	97047	Savage River	Wrong. 18.4 at 0900 prev. day. 27.2 at 0900.
	27.0	15/2/1982	97072	Strahan AP	OK. No hourly obs.
	25.3	13/2/1957	95003	Bushy Park	Wrong. 15.6 at 0900. Other sites in region < 13.
	24.7	1/2/1974	94069	Grove	OK
March	24.0	7/3/1986	97067	Strahan	OK
	23.3	8/3/1966	99005	Flinders Island AP	OK
	22.0	27/3/1990	97067	Strahan	OK. Big difference with others (14.5 at Queenstown) but consistent with hourly obs. and site has history of warm extreme mins.
	21.7	17/3/1967	94075	Tasman Island	OK
	21.7	30/3/1971	94069	Grove	OK
April	21.8	27/4/1994	99005	Flinders Island AP	OK
	21.2	4/4/1981	97034	Queenstown	OK
	21.2	27/4/1962	94069	Grove	OK
	20.0	6/4/1961	91080	Quoiba	Wrong. 15.6 at 0900. Max = min.
	20.0	2/4/1941	92038	Swansea	OK
May	17.7	5/5/2005	94069	Grove	OK
	17.6	2/5/1988	99005	Flinders Island AP	OK
	17.5	5/5/2005	94220	Grove AWS	OK
	17.5	3/5/1988	99001	Deal Island	OK
	17.4	5/5/1990	92038	Swansea	OK
June	15.2	7/6/1991	99005	Flinders Island AP	OK
	15.0	8/6/1991	99005	Flinders Island AP	OK
	15.0	5/6/1974	92045	Eddystone Point	OK
	14.9	6/6/1974	92045	Eddystone Point	OK
	14.9	5/6/2003	92037	Swan Island	OK. No hourly obs.
July	14.5	3/7/1985	92038	Swansea	OK
	14.2	3/7/1985	99005	Flinders Island AP	OK
	14.1	3/7/1985	92094	Scamander	OK
	14.0	27/7/1975	94056	Risdon	OK
	13.7	11/7/1991	99005	Flinders Island AP	OK
August	16.1	30/8/2005	94069	Grove	OK
	15.7	30/8/2005	94220	Grove AWS	OK
	15.0	29/8/2005	94069	Grove	OK
	15.0	30/8/2005	94010	Cape Bruny	OK
	15.0	30/8/2005	94029	Hobart	OK
	15.0	26/8/1977	97067	Strahan	OK
	15.0	28/8/1994	92038	Swansea	OK
September	19.0	30/9/1973	94056	Risdon	OK
	18.6	30/9/1980	92038	Swansea	OK
	18.5	27/9/1987	98001	Currie	OK
	18.3	30/9/1980	99005	Flinders Island AP	OK
	18.1	29/9/1999	94069	Grove	OK

Table 4.7 (cont.). Highest daily minimum temperature by month – Tasmania (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
October	20.6	28/10/1977	99005	Flinders Island AP	OK
	20.0	28/10/1977	92000	Rossarden	OK
	19.4	24/10/1914	92038	Swansea	OK
	19.2	12/10/2006	97072	Strahan AP	OK
	19.1	12/10/2006	94166	Bull Bay	OK
November	20.6	23/11/1969	95011	Maydena	Wrong. 15.0 at 0900. Other sites in region < 12.
	20.4	30/11/2003	97072	Strahan AP	OK
	20.4	3/11/2005	99005	Flinders Island AP	OK
	20.2	27/11/1984	98001	Currie	OK
	20.0	2/11/1987	98001	Currie	OK
December	23.9	24/12/1920	94029	Hobart	OK
	23.3	7/12/1994	92027	Orford	OK
	23.3	26/12/1945	94041	Maatsuyker Island	OK
	22.8	28/12/1966	97034	Queenstown	Wrong. 16.1 at 0900 prev. day. 22.8 at 0900. Other sites in region < 11.
	22.8	22/12/1988	94069	Grove	Wrong. 13.6 at 0900. Other sites in region < 11.

Table 4.8. Highest daily minimum temperature by month – Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	36.9	30/1/1964	85093	Warragul	Wrong. 21.8 at 0900, other sites in region < 15.
	36.6	12/1/1960	17031	Marree PO	Wrong. 33.2 at 0900.
	35.6	6/1/1906	76077	Mildura PO	Not Stevenson screen. Clearly very hot night.
	35.5	24/1/1982	17099	Arkaroola	OK
	35.5	21/1/2003	5026	Wittenoom	OK
February	36.0	12/2/1963	24016	Renmark	Wrong. 28.9 at 0900, other sites in region < 23.
	35.0	17/2/2004	17123	Moomba AP	OK
	35.0	13/2/1968	5051	Exmouth	Suspect. Other sites in region <30. Consistent with hourly obs. (0000 35.6), but numerous obs. on earlier days corrected in book – instrument problems?
	34.9	23/2/1991	8251	Kalbarri	OK
	34.9	19/2/1998	5026	Wittenoom	OK
March	34.0	4/3/1973	5008	Mardie	OK
	33.9	2/3/1965	16044	Tarcoola	Suspect. Other sites in region < 27.8. 34.2 at 0900.
	33.9	2/3/1966	14109	Tortilla Flats	Wrong. 27.2 at 0900, other sites in region < 24.
	33.7	4/3/1998	5026	Wittenoom	OK
	33.5	1/3/1998	3078	Cadjebut	Looks high but not enough evidence to reject at this time. Other sites in region < 31. 33.5 at 0900 prev. day, 34.8 at 0900.
April	32.0	8/4/1981	5069	Pannawonica	Suspect. Original fieldbook value 33.4, amended to 32 in processing. 0900 prev. day 32.0, 32.5 at 0900. Other sites in region < 27.8.
	31.7	8/4/1967	1021	Kalumburu	Suspect. 31.4 at 0900, 30.6 at 0900 prev. day. Other sites in region < 27.
	31.5	7/4/1992	3030	Bidyadanga	Suspect. 0900 obs. missing, 32.5 at 1500 prev. day. 27.4 at Broome.
	31.2	21/4/1986	2056	Kununurra AP	Suspect. 20.0 at Kimberley Res Stn, 31.2 at 0900 prev. day.
	31.0	4/4/1986	4035	Roebourne	OK
May	29.3	20/5/1984	3069	Koolan Island	Suspect. Matches 0900 obs. (29.3). 26.5 at Cape Leveque.
	29.2	7/5/1967	3025	Cockatoo Island	Suspect. 23.9 at Cape Leveque. 29.8 at 0900.
	29.2	6/5/1973	1007	Troughton Island	OK
	29.0	7/5/1981	2038	Kununurra	Suspect. 18.0 at Kimberley Res Stn. OK
	29.0	9/5/1964	1007	Troughton Island	Suspect. 29.0 at 0900, 28.5 at 0900 prev.
	29.0	10/5/1975	14042	Oenpelli	day. Other sites in region < 26.5.
	29.0	10/5/1973	14042	Oenpelli	Suspect. Other sites in region < 25.3. 29.5 at 0900.
June	28.5	11/6/1973	14042	Oenpelli	Suspect. Other sites in region < 24.4, 29.0 at 0900
	27.3	9/6/1987	14513	Wallaby Beach	Suspect. 22.5 at Gove, 27.4 at 0900. Follows period of missing data.
	27.2	30/6/1987	14513	Wallaby Beach	Wrong. 26.5 at 0900. Follows period of missing data.
	27.2	8/6/1963	14008	Cape Don	Suspect. 22.8 at Darwin, 27.2 at 0900.
	27.2	1/6/1971	3025	Cockatoo Island	OK

Table 4.8 (cont.). Highest daily minimum temperature by month – Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
July	26.5	15/7/1973	3025	Cockatoo Island	OK
	26.2	3/7/1981	1013	Wyndham	OK
	26.0	5/7/1998	27054	Coconut Island	OK. Obs. to 1 degree precision – 25.8 at 0600.
	25.9	6/7/2005	27058	Horn Island	OK
	25.8	24/7/1973	3025	Cockatoo Island	OK
	25.8	8/7/1968	3025	Cockatoo Island	OK
August	28.7	21/8/1973	14103	Milkiapiti	Suspect. Other sites in region < 22.5. No hourly obs. before 1500.
	27.5	26/8/1998	3078	Cadjebut	OK
	27.2	26/8/1998	14847	Kidman Springs	OK
	27.0	22/8/1992	1025	Doongan	Suspect. Other sites in region 17-21. 27.0 at 0900.
	27.0	31/8/1996	1013	Wyndham	OK
	27.0	31/8/1973	1013	Wyndham	OK
	27.0	24/8/1979	14042	Oenpelli	Suspect. Other sites in region < 22.5. 27.0 at 0900 prev. day.
September	31.6	25/9/1971	1013	Wyndham	Suspect. 26-27 at two Kununurra stations. 0/8 cloud, 35.1 at 0900.
	31.1	11/9/1962	38002	Birdsville Police	Wrong. 16.7 at 0900. Other sites in region < 15.
	29.7	25/9/2005	1013	Wyndham	OK
	29.4	22/9/1959	7062	Mundiwindi	Wrong. 25.2 at 0900. Other sites in region < 22.
	29.4	28/9/1960	4020	Marble Bar	Suspect. 29.4 at 0900. Other sites in region < 21.1.
	29.4	25/9/1989	14825	Victoria R. Downs	Suspect. 29.4 at 0300, other sites in region < 25. Probably not too far wrong but unlikely that 0300 value was min.
October	32.7	19/10/1900	2011	Old Halls Creek	OK at this time. 36.6 at 0900. Can't verify with available data.
	32.2	31/10/1980	4043	Redmont	Looks high but not enough evidence to reject at this time. 27.8 at Marble Bar. 32.2 at 0900 prev. day. Fieldbook shows cloud/wind.
	31.6	22/10/2002	5026	Wittenoom	OK
	31.6	30/10/1990	14153	Black Point	Wrong. 27.9 at 0900, other sites in region < 26.
	31.5	31/10/1988	13015	Carnegie	Wrong. 25.6 at 0600.
	31.5	27/10/1976	14825	Victoria R. Downs	OK. Matches fieldbook. Previous day missing.
November	36.7	9/11/1965	14080	Noonamah	Wrong. 31.1 at 0900. Max recorded as min.
	35.0	6/11/1965	44026	Cunnamulla	OK
	34.6	17/11/1996	15548	Rabbit Flat	Suspect. 26.4 at 15666. 34.6 at 0900.
	34.4	6/11/1965	44036	Gilruth Plains	OK
	33.9	21/11/1951	4020	Marble Bar	Looks high but not enough evidence to reject at this time. A long way above 4032 (25.6) but not impossible. No hourly obs.

Table 4.8 (cont.). Highest daily minimum temperature by month – Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
December	35.0	28/12/1902	4020	Marble Bar	OK at this stage. No comparison data (hourly or neighbours) to verify.
	34.6	28/12/1994	17099	Arkaroola	Wrong. 28.1 at 0900 prev. day. 34.6 at 0900.
	34.5	26/12/1980	16007	Coober Pedy	Wrong. Other sites in region < 28. Earlier analyses suggested 0900 and min swapped 21/12-18/1 – hourly obs. now deleted but mins still in database.
	34.2	4/12/1993	4020	Marble Bar	OK
	34.1	19/12/1957	78034	Serviceton	Wrong. 30.1 at 0900. Other sites in region < 23.3.

Table 5.1. Lowest daily maximum temperature by month – Western Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	13.9	1/1/1960	9581	Mount Barker	OK
	13.9	28/1/1917	9581	Mount Barker	OK
	14.1	28/1/1943	9581	Mount Barker	OK
	14.4	22/1/1967	12038	Kalgoorlie	OK
	14.4	5/1/2004	9581	Mount Barker	OK
February	13.3	17/2/1914	9581	Mount Barker	OK
	13.9	15/2/1919	9581	Mount Barker	OK
	13.9	17/2/1914	9514	Bunbury	OK
	14.4	17/2/1914	9515	Busselton	OK
	14.6	25/2/1991	10579	Katanning	OK
	14.6	14/2/1982	9592	Pemberton	OK
	14.6	25/2/1991	10622	Ongerup	OK
March	10.7	31/3/2005	9573	Manjimup	OK
	10.8	27/3/1968	9135	Walliston	Wrong. 14.7 at 0900 next day. Appears to be 0900-1500 max.
	11.0	31/3/2005	9968	Shannon	Valid whole-degree max. 11.2 at 0300, 0900 next day.
	11.5	31/3/2005	9592	Pemberton	OK
	11.6	31/3/2005	9964	Rocky Gully	OK
April	10.0	12/4/1955	9581	Mount Barker	OK
	10.0	20/4/1970	9573	Manjimup	OK
	10.1	29/4/1922	9581	Mount Barker	OK
	10.3	16/4/1919	10614	Narrogin	OK
	10.3	19/4/1926	9581	Mount Barker	OK
May	7.8	31/5/1976	9843	Frankland	OK
	7.8	12/5/1908	9581	Mount Barker	OK
	7.9	12/5/1908	9510	Bridgetown	OK
	8.1	22/5/1971	12071	Salmon Gums	Suspect. No hourly obs., 18-19 at Esperance, Norseman.
	8.1	30/5/1928	10614	Narrogin	OK
June	5.0	21/6/1960	10614	Narrogin	Wrong. No hourly obs., other sites in region 15-16.
	6.0	19/6/1960	10614	Narrogin	Wrong. No hourly obs., other sites in region 15-17.
	6.3	26/6/1956	8138	Wongan Hills RS	OK
	6.6	29/6/1920	10579	Katanning	OK
	6.7	26/6/1956	8151	Walebing	OK
	6.7	30/6/1950	9581	Mount Barker	OK
July	3.5	20/7/1988	10568	Hyden	Wrong. 13.3 at 1500.
	3.8	21/7/1971	8138	Wongan Hills RS	Wrong. No hourly obs., 12.2 at PO.
	6.2	15/7/1971	8138	Wongan Hills RS	Wrong. No hourly obs., 15.0 at PO. (suspect for full period 9-29/7).
	6.4	10/7/1969	9642	Wokalup	Suspect. Max same as 0900 temp., other sites in region mostly near 10.
	6.5	29/7/1975	9538	Dwellingup	OK
August	5.6	14/8/1920	10579	Katanning	OK
	5.6	5/8/1951	9581	Mount Barker	OK
	6.3	5/8/1973	10614	Narrogin	OK
	6.7	5/8/1973	9573	Manjimup	OK
	6.8	2/8/1935	10614	Narrogin	Suspect. No other sites in region < 10.

Table 5.1 (cont.). Lowest daily maximum temperature by month – Western Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
September	1.8	24/9/1988	10568	Hyden	Wrong. 19.1 at 1500.
	6.5	18/9/1993	10905	Jacup	Suspect. Value not totally implausible, but hourly obs. very erratic suggesting AWS fault.
	7.8	24/9/1971	10582	Kojonup	OK
	8.1	4/9/1931	10614	Narrogin	OK
	8.2	24/9/1971	9573	Manjimup	OK
October	7.8	6/10/1928	9581	Mount Barker	OK
	8.3	4/10/1939	9581	Mount Barker	OK
	8.4	6/10/1992	10579	Katanning	OK
	8.9	6/10/1992	10614	Narrogin	OK
	9.0	6/10/1992	10647	Wagin	OK
	9.0	6/10/1992	10582	Kojonup	OK
November	7.7	19/11/1992	9581	Mount Barker	OK
	9.1	19/11/1992	9573	Manjimup	OK
	9.4	10/11/1971	9581	Mount Barker	OK
	9.8	19/11/1992	10614	Narrogin	OK
	9.8	19/11/1992	10582	Kojonup	OK
December	11.5	6/12/1968	11023	Caiguna	Wrong. 36.9 at 1500. Max = min.
	11.7	31/12/1959	10579	Katanning	Valid 0000-0000 max. 13.3 at 0900 next day.
	12.2	17/12/1952	10073	Kellerberrin	OK
	12.2	31/12/1959	9581	Mount Barker	OK
	12.2	7/12/1922	9581	Mount Barker	Insufficient evidence to reject at this stage. No hourly obs., 15.2 at 9510.

Table 5.2. Lowest daily maximum temperature by month – Northern Territory (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	16.0	11/1/1983	15603	Kulgera	OK
	16.1	6/1/1953	15540	Alice Springs PO	OK
	16.2	6/1/1953	15590	Alice Springs AP	OK
	17.0	11/1/1983	15511	Curtin Springs	OK
	17.5	15/1/1930	15540	Alice Springs PO	OK
February	15.0	6/2/1953	15540	Alice Springs PO	OK
	15.3	21/2/2002	15603	Kulgera	OK
	15.7	22/2/2002	15603	Kulgera	OK
	16.2	23/2/2002	15603	Kulgera	OK
	16.7	25/2/1949	15540	Alice Springs PO	OK
	16.7	22/2/1949	15540	Alice Springs PO	OK
	16.7	22/2/1949	15590	Alice Springs AP	OK
	16.7	2/2/1887	15540	Alice Springs PO	OK
March	13.9	27/3/1913	15540	Alice Springs PO	OK
	14.4	22/3/2001	15635	Yulara	OK
	14.4	21/3/2001	15511	Curtin Springs	OK
	14.5	22/3/2001	15660	Uluru	OK
	14.5	22/3/2001	15511	Curtin Springs	OK
April	10.6	26/4/1916	15540	Alice Springs PO	OK
	11.3	5/4/1898	15540	Alice Springs PO	OK
	11.6	24/4/1983	15633	Palm Valley	OK
	11.8	25/4/1983	15590	Alice Springs AP	OK
	11.9	28/4/1905	15540	Alice Springs PO	Wrong. 23.3 at 1500.
May	7.8	25/5/1904	15540	Alice Springs PO	OK
	9.0	20/5/1895	15540	Alice Springs PO	OK
	9.1	21/5/1895	15540	Alice Springs PO	OK
	9.2	29/5/2004	15528	Yuendumu	OK
	9.5	29/5/2004	15612	Papunya	OK
June	7.2	29/6/1935	15540	Alice Springs PO	OK
	7.4	15/6/1988	15633	Palm Valley	Wrong. 19.9 at 1500, other sites in region 19-23.
	7.7	22/6/1956	15590	Alice Springs AP	OK
	7.8	21/6/1956	15590	Alice Springs AP	OK
	8.0	20/6/2007	15135	Tennant Creek AP	OK
	8.0	20/6/2007	15502	Ali Curung	OK
July	3.6	5/7/1994	15635	Yulara	Wrong. Other sites in region > 22. Hourly obs. also suspect. Suspect for whole period 1-6/7, possibly earlier.
	5.9	11/7/1997	15635	Yulara	OK. Max listed as 'corrected'.
	6.2	2/7/1994	15635	Yulara	Suspect. Other sites in region > 20. See comments above.
	6.7	2/7/1901	15540	Alice Springs PO	OK
	6.8	11/7/1997	15652	Watarrka	OK
	6.8	4/7/1895	15540	Alice Springs PO	OK
August	7.0	6/8/1966	15590	Alice Springs AP	OK
	7.2	6/8/1966	15546	Ringwood	OK
	7.2	5/8/1966	15590	Alice Springs AP	OK
	7.2	11/8/1933	15540	Alice Springs PO	OK
	7.4	5/8/1966	15546	Ringwood	OK
September	8.3	11/9/1971	15511	Curtin Springs	OK
	9.9	11/9/1971	15527	Ayers Rock	OK
	10.0	4/9/1977	15527	Ayers Rock	OK
	10.5	4/9/1977	15511	Curtin Springs	OK
	11.1	24/9/1927	15540	Alice Springs PO	OK

Table 5.2 (cont.). Lowest daily maximum temperature by month – Northern Territory (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
October	11.1	7/10/1910	15540	Alice Springs PO	OK
	11.7	8/10/1968	15590	Alice Springs AP	OK
	12.2	8/10/1968	15546	Ringwood	OK
	12.4	11/10/1960	15590	Alice Springs AP	OK
	12.5	1/10/1973	15527	Ayers Rock	OK
November	11.0	18/11/1981	15525	Barrow Creek	OK. Possibly rounded – 11.1 at 0900 next day.
	12.0	18/11/1981	15602	Jervois	OK
	12.0	18/11/1981	15528	Yuendumu	OK
	12.8	18/11/1981	15590	Alice Springs AP	OK
	12.9	17/11/1981	15528	Yuendumu	OK
December	16.1	29/12/1929	15540	Alice Springs PO	No evidence to reject at this stage. No 1500 obs. or other supporting info.
	16.1	20/12/1906	15540	Alice Springs PO	OK
	17.1	30/12/1957	15590	Alice Springs AP	OK
	17.2	19/12/1906	15540	Alice Springs PO	OK
	18.0	5/12/1970	15590	Alice Springs AP	OK

Table 5.3. Lowest daily maximum temperature by month – South Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	9.7	8/1/1994	23842	Mount Lofty	OK
	10.0	1/1/2002	23842	Mount Lofty	OK
	10.2	25/1/1996	23842	Mount Lofty	OK
	10.4	1/1/2000	23842	Mount Lofty	OK
	10.4	29/1/1960	23321	Nuriootpa	Wrong. 25.7 at 1500, other sites in region 27-32.
February	10.0	21/2/1993	23842	Mount Lofty	OK
	10.3	10/2/2002	23842	Mount Lofty	OK
	10.4	8/2/2002	23842	Mount Lofty	OK
	10.6	28/2/1993	23842	Mount Lofty	OK
	10.8	2/2/2005	23842	Mount Lofty	OK
March	8.1	31/3/1999	23842	Mount Lofty	OK
	9.6	23/3/2000	23842	Mount Lofty	OK
	9.8	21/3/2001	23842	Mount Lofty	OK
	9.8	28/3/1999	23842	Mount Lofty	OK
	10.2	27/3/2008	23842	Mount Lofty	OK
April	7.3	27/4/2008	23842	Mount Lofty	OK
	7.9	7/4/1995	23842	Mount Lofty	OK
	8.0	10/4/1995	23842	Mount Lofty	OK
	8.1	24/4/2004	23842	Mount Lofty	OK
	8.1	27/4/1999	23842	Mount Lofty	OK
May	5.1	23/5/2006	23842	Mount Lofty	OK
	6.0	16/5/1992	23842	Mount Lofty	OK
	6.4	19/5/2001	23842	Mount Lofty	OK
	6.5	30/5/2000	23842	Mount Lofty	OK
	6.5	19/5/1981	19062	Yongala	OK
June	4.4	12/6/1969	24018	Waikerie	Wrong. 11.1 at 0900, other sites in region 17-19.
	4.4	28/6/2002	23842	Mount Lofty	OK
	4.6	12/6/2006	23842	Mount Lofty	OK
	4.7	22/6/2007	23842	Mount Lofty	OK
	4.9	22/6/1998	23842	Mount Lofty	OK
July	3.5	28/7/1998	23842	Mount Lofty	OK
	3.6	26/7/2000	23842	Mount Lofty	Valid 1200-1200 UTC max. 4.3 at 0900 next day.
	3.6	30/7/1994	23842	Mount Lofty	OK
	4.0	19/7/1992	23842	Mount Lofty	OK
	4.2	17/7/2004	23842	Mount Lofty	OK
	4.2	15/7/1984	19062	Yongala	OK
August	3.4	10/8/2003	23842	Mount Lofty	Valid 1200-1200 UTC max. 5.5 at 0900 next day.
	4.0	23/8/1991	23842	Mount Lofty	OK
	4.0	10/8/2008	23842	Mount Lofty	OK
	4.2	10/8/2003	23878	Mount Crawford	Valid 1200-1200 UTC max. 5.7 at 0900 next day.
	4.2	18/8/1996	23842	Mount Lofty	Valid 1200-1200 UTC max. 6.3 at 0900 next day.
September	4.4	11/9/2004	23842	Mount Lofty	OK
	4.5	6/9/1995	23842	Mount Lofty	OK
	4.8	5/9/1995	23842	Mount Lofty	OK
	5.3	11/9/2005	23842	Mount Lofty	OK
	5.4	20/9/1993	23842	Mount Lofty	OK

Table 5.3 (cont.). Lowest daily maximum temperature by month – South Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
October	5.5	22/10/1995	23842	Mount Lofty	OK
	5.6	21/10/1995	23842	Mount Lofty	OK
	5.9	10/10/1993	23842	Mount Lofty	OK
	6.0	10/10/2003	23842	Mount Lofty	OK
	6.1	20/10/1995	23842	Mount Lofty	OK
November	6.0	1/11/1994	23842	Mount Lofty	Valid 1200-1200 UTC max. 6.2 at 0300 next day (would be record regardless).
	7.4	3/11/1994	23842	Mount Lofty	OK
	7.5	25/11/1992	23842	Mount Lofty	OK
	7.6	2/11/1994	23842	Mount Lofty	OK
	7.7	11/11/2001	23842	Mount Lofty	OK
December	8.3	9/12/2002	23842	Mount Lofty	OK
	8.7	26/12/1993	23842	Mount Lofty	OK
	8.9	4/12/2002	23842	Mount Lofty	Valid 1200-1200 UTC max. 10.0 at 0900 next day.
	9.0	9/12/1990	23842	Mount Lofty	OK
	9.3	1/12/1966	23785	Stirling	OK

Table 5.4. Lowest daily maximum temperature by month – Queensland (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	16.2	18/1/1967	41175	Applethorpe	OK
	17.2	18/1/1967	41095	Stanthorpe	OK
	17.2	1/1/1958	41095	Stanthorpe	OK
	17.2	24/1/1966	39014	Bulburin	OK
	17.6	27/1/1982	41175	Applethorpe	OK
February	0.0	22/2/1987	40241	Samford	Wrong. 27.0 at 0900, other sites in region 31-36.
	15.0	24/2/1949	37010	Camooweal	OK
	15.1	10/2/1976	41116	Wallangarra	OK
	15.7	10/2/1976	41175	Applethorpe	OK
	16.1	3/2/1917	41038	Goondiwindi PO	OK
	16.2	17/2/1961	41095	Stanthorpe	OK
March	15.5	30/3/1970	41175	Applethorpe	OK
	16.0	29/3/1999	41175	Applethorpe	OK
	16.0	30/3/2005	41175	Applethorpe	OK
	16.1	8/3/1972	41095	Stanthorpe	OK
	16.2	31/3/1988	41175	Applethorpe	OK
	16.2	8/3/1985	41175	Applethorpe	OK
	16.2	17/3/1989	41175	Applethorpe	OK
	16.2	26/3/1990	41175	Applethorpe	OK
April	12.5	26/4/1983	41103	Toowoomba	OK
	12.6	13/4/1994	41095	Stanthorpe	OK
	12.7	12/4/1994	41175	Applethorpe	OK
	12.8	26/4/1966	41095	Stanthorpe	OK
	13.0	28/4/2004	41175	Applethorpe	OK
	13.0	28/4/1999	41175	Applethorpe	Suspect. Appears to be rounded value. 13.2 at 1500.
May	6.9	30/5/1969	41175	Applethorpe	OK
	7.0	25/5/1974	41095	Stanthorpe	OK
	7.1	25/5/1974	41175	Applethorpe	OK
	8.0	30/5/2000	41175	Applethorpe	OK
	8.3	31/5/1969	41175	Applethorpe	OK
	8.3	15/5/1968	41082	Pittsworth	OK
June	4.9	20/6/2007	41175	Applethorpe	OK
	6.0	10/6/1969	41116	Wallangarra	Wrong. 12.4 at 0900 next day, other sites in region 12-14.
	6.0	23/6/2005	41175	Applethorpe	OK
	6.0	28/6/2007	41175	Applethorpe	OK
	6.4	20/6/2007	41095	Stanthorpe	OK
July	2.4	3/7/1984	41116	Wallangarra	OK
	2.9	4/7/1984	41175	Applethorpe	OK
	3.0	3/7/1984	41175	Applethorpe	OK
	4.0	4/7/1984	41095	Stanthorpe	OK
	4.1	4/7/1984	41116	Wallangarra	OK
August	1.0	19/8/1990	41176	Warwick	Wrong. 17.9 at Hermitage. No hourly obs.
	5.7	18/8/1973	41116	Wallangarra	Suspect. Other sites in region > 9.
	6.5	19/8/1973	41116	Wallangarra	Suspect. Other sites in region > 9.9. No hourly obs. but 6.5 at 0900 next day.
	7.0	12/8/2005	41175	Applethorpe	OK
	7.2	8/8/1989	41175	Applethorpe	OK
	7.2	21/8/1962	41095	Stanthorpe	OK

Table 5.4 (cont.). Lowest daily maximum temperature by month – Queensland (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
September	6.1	22/9/1969	41095	Stanthorpe	Wrong. 7.8 at 0900 next day.
	6.5	2/9/1985	41116	Wallangarra	OK
	6.7	22/9/1969	41116	Wallangarra	OK
	7.0	2/9/1985	41095	Stanthorpe	OK
	7.2	22/9/1969	41175	Applethorpe	OK
October	5.5	2/10/1984	40451	Toolara	Wrong. 22.5 at 1500, other sites in region 22-26.
	6.6	3/10/1984	40451	Toolara	Wrong. 23.0 at 1500, other sites in region 22-27.
	10.7	16/10/1959	41095	Stanthorpe	OK
	10.9	9/10/1985	40158	Nanango	Wrong. 17.0 at 0900, other sites in region 20-26.
	11.1	3/10/1966	41095	Stanthorpe	OK
November	11.3	19/11/1986	41116	Wallangarra	OK
	11.6	30/11/1986	41175	Applethorpe	OK
	12.4	19/11/1986	41095	Stanthorpe	OK
	12.6	30/11/1986	41095	Stanthorpe	OK
	12.8	19/11/1986	41175	Applethorpe	OK
	12.8	26/11/1971	41095	Stanthorpe	OK
December	13.1	1/12/1986	41175	Applethorpe	OK
	13.3	1/12/1986	41116	Wallangarra	OK
	14.4	1/12/1986	41095	Stanthorpe	OK
	15.0	27/12/1999	41175	Applethorpe	OK
	15.0	2/12/1986	41175	Applethorpe	OK
	15.0	9/12/1963	41095	Stanthorpe	Valid midnight-midnight maximum. 18.3 at 0900 following day.

Table 5.5. Lowest daily maximum temperature by month – New South Wales/ACT (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	1.9	11/1/1983	71032	Thredbo (Top Stn)	OK
	2.6	11/1/1975	71032	Thredbo (Top Stn)	OK
	2.6	8/1/1994	71003	Charlotte Pass	OK
	3.0	2/1/2002	71032	Thredbo (Top Stn)	OK
	3.2	28/1/1978	71032	Thredbo (Top Stn)	OK
February	0.3	3/2/2005	71032	Thredbo (Top Stn)	OK
	0.6	6/2/1993	75041	Griffith AP	Wrong. Other sites in region 31-36. No hourly obs.
	1.8	3/2/2005	71003	Charlotte Pass	OK
	2.0	22/2/1993	71072	Perisher Valley	OK
	2.3	4/2/2005	71032	Thredbo (Top Stn)	OK
March	−0.6	29/3/1970	71032	Thredbo (Top Stn)	OK
	−0.1	23/3/1967	71032	Thredbo (Top Stn)	OK
	0.0	1/3/2003	71032	Thredbo (Top Stn)	OK
	1.0	31/3/1975	71032	Thredbo (Top Stn)	OK
	2.1	20/3/1975	71032	Thredbo (Top Stn)	OK
	2.1	30/3/2007	71032	Thredbo (Top Stn)	OK
April	−5.6	27/4/1978	71032	Thredbo (Top Stn)	Wrong. 5.0 at 1500.
	−2.6	27/4/1982	71032	Thredbo (Top Stn)	OK
	−2.0	28/4/1982	71032	Thredbo (Top Stn)	OK. Probably rounded. -1.6 at 0900 next day.
	−2.0	28/4/2008	71032	Thredbo (Top Stn)	OK
	−1.7	7/4/1995	72091	Cabramurra	OK
	−1.7	21/4/2006	71032	Thredbo (Top Stn)	OK
	−1.7	28/4/2008	71003	Charlotte Pass	
May	−6.0	28/5/2000	71032	Thredbo (Top Stn)	OK
	−5.5	31/5/1977	71072	Perisher Valley	OK. -5.0 at 0900 next day but this is within bounds of rounding error.
	−5.0	27/5/2000	71032	Thredbo (Top Stn)	OK
	−4.5	31/5/1977	72091	Cabramurra	OK
	−4.0	29/5/2000	71032	Thredbo (Top Stn)	OK
	−4.0	22/5/1977	71032	Thredbo (Top Stn)	OK
June	−10.6	11/6/1993	72160	Albury AP	Wrong. Other sites in region 9-11. Min and hourly obs. also wrong.
	−6.0	26/6/1983	71032	Thredbo (Top Stn)	OK, but a 2-day max for 26-27/6, should be attributed to 27/6. No obs. at 0900 27/6.
	−6.0	26/6/1983	71072	Perisher Valley	OK
	−6.0	23/6/1981	71032	Thredbo (Top Stn)	OK
	−5.7	27/6/1983	71072	Perisher Valley	OK. -5.3 at 0900 next day but this is within bounds of rounding error.
July	−6.9	9/7/1978	71032	Thredbo (Top Stn)	OK
	−6.2	2/7/1975	71041	Thredbo Village	Wrong. -1.8 at 0900 next day. 2.8 at Top Station.
	−6.0	8/7/1986	71032	Thredbo (Top Stn)	Wrong. -4.5 at 0900. Max from 9/7 is missing and may have been attributed to wrong day.
	−6.0	18/7/2004	71032	Thredbo (Top Stn)	OK
	−6.0	10/7/1978	71032	Thredbo (Top Stn)	OK

Table 5.5 (cont.). Lowest daily maximum temperature by month – New South Wales/ACT (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
August	−6.4	5/8/1974	71032	Thredbo (Top Stn)	OK
	−6.4	11/8/2005	71032	Thredbo (Top Stn)	OK
	−6.0	24/8/1997	71032	Thredbo (Top Stn)	Suspect. No obs. from 2100 23/8 to 2100 24/8, although value is plausible.
	−6.0	13/8/1976	71032	Thredbo (Top Stn)	OK
	−5.8	14/8/1967	71032	Thredbo (Top Stn)	OK
	−5.8	21/8/1962	71029	Spencers Creek	OK
September	−6.0	5/9/1995	71032	Thredbo (Top Stn)	OK
	−5.9	12/9/1969	71032	Thredbo (Top Stn)	OK
	−5.8	11/9/1969	71032	Thredbo (Top Stn)	OK
	−5.2	1/9/1987	71032	Thredbo (Top Stn)	OK
	−4.9	9/9/1982	71032	Thredbo (Top Stn)	OK
	−4.9	4/9/1977	71032	Thredbo (Top Stn)	OK
October	−5.0	11/10/1972	71032	Thredbo (Top Stn)	OK
	−3.5	11/10/1972	71003	Charlotte Pass	OK
	−3.0	10/10/2003	71032	Thredbo (Top Stn)	OK
	−3.0	1/10/2000	71032	Thredbo (Top Stn)	OK
	−3.0	27/10/1998	71032	Thredbo (Top Stn)	OK
	−3.0	7/10/1998	71032	Thredbo (Top Stn)	OK
November	−3.1	26/11/1967	71032	Thredbo (Top Stn)	OK
	−2.9	11/11/1965	71029	Spencers Creek	OK
	−2.0	7/11/1994	71072	Perisher Valley	OK
	−1.8	15/11/2006	71032	Thredbo (Top Stn)	OK
	−1.5	7/11/1994	71003	Charlotte Pass	OK
December	0.7	31/12/1970	71032	Thredbo (Top Stn)	Wrong. 2.1 at 0900 next day. 8.3 at Charlotte Pass.
	1.0	4/12/1976	71032	Thredbo (Top Stn)	OK
	1.7	6/12/1962	71029	Spencers Creek	Valid 0000-0000 maximum. 6.7 at 0900 next day but valid under 1962 standards.
	1.7	2/12/1969	71003	Charlotte Pass	OK
	2.3	31/12/1971	71032	Thredbo (Top Stn)	OK

Table 5.6. Lowest daily maximum temperature by month – Victoria (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	1.9	9/1/1994	83085	Mount Hotham	Valid max for 1200-1200 UTC 8/1 – obs. 1 day out of sync.
	2.3	8/1/2004	83085	Mount Hotham	OK
	2.7	9/1/1994	83084	Falls Creek	Valid max for 1200-1200 UTC 8/1 – obs. 1 day out of sync.
	3.0	6/1/2005	85291	Mount Baw Baw	Valid whole-degree max. 3.4 at 1200.
	3.0	23/1/2000	85291	Mount Baw Baw	OK
	3.0	22/1/2000	85291	Mount Baw Baw	OK
	3.0	11/1/1983	83081	Mount Hotham	OK
	3.0	8/1/1994	83024	Mount Buller	OK
February	−0.2	3/2/2005	83085	Mount Hotham	OK
	1.0	16/2/1998	85291	Mount Baw Baw	Suspect. No obs. 1500-0000, so probably max for 0900-1500 only. 1.2 at 0900 next day.
	1.5	3/2/2005	83084	Falls Creek	OK. 0900 temp next day substituted for 1200-1200 UTC max (1.0).
	1.6	22/2/1993	83084	Falls Creek	OK
	1.9	3/2/2005	83024	Mount Buller	OK. 0900 temp next day substituted for 1200-1200 UTC max (1.5).
	1.9	9/2/1996	83085	Mount Hotham	Valid max for 1200-1200 UTC.
March	−0.4	8/3/1987	83024	Mount Buller	OK
	0.0	28/3/1999	85291	Mount Baw Baw	OK
	0.0	12/3/1994	83085	Mount Hotham	OK
	0.4	8/3/1987	83081	Mount Hotham	OK
	0.6	28/3/1999	83024	Mount Buller	OK
	0.6	31/3/1995	83085	Mount Hotham	Valid max for 1200-1200 UTC.
April	−3.2	28/4/2008	83085	Mount Hotham	OK
	−2.6	21/4/2006	83085	Mount Hotham	OK
	−2.1	28/4/2008	83024	Mount Buller	OK
	−2.0	17/4/1985	83081	Mount Hotham	OK
	−2.0	28/4/2008	83084	Falls Creek	OK
May	−5.6	28/5/2000	83085	Mount Hotham	OK
	−5.2	28/5/2000	83084	Falls Creek	OK
	−5.0	24/5/1968	83014	Hotham Heights	OK
	−3.9	31/5/1969	83024	Mount Buller	OK
	−3.3	29/5/2000	83085	Mount Hotham	OK
	−3.3	30/5/1997	83085	Mount Hotham	OK
June	−5.4	26/6/1983	83081	Mount Hotham	OK
	−5.0	27/6/1983	83081	Mount Hotham	OK
	−4.6	19/6/2004	83085	Mount Hotham	OK
	−4.4	11/6/2006	83085	Mount Hotham	OK
	−4.2	29/6/1979	83081	Mount Hotham	OK. Hourly obs. on 30/6 suspect.
July	−6.6	18/7/2004	83085	Mount Hotham	OK
	−6.0	18/7/2004	83024	Mount Buller	Valid 1200-1200 UTC max. −3.9 at 0900 next day.
	−5.8	18/7/2004	83084	Falls Creek	OK
	−5.2	18/7/2007	83085	Mount Hotham	OK
	−5.1	29/7/1998	83085	Mount Hotham	Valid 1200-1200 UTC max. −4.9 at 0600 next day.
	−5.1	9/7/1978	83081	Mount Hotham	OK

Table 5.6 (cont.). Lowest daily maximum temperature by month – Victoria (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
August	−6.7	10/8/2005	83085	Mount Hotham	OK
	−5.9	10/8/2005	83084	Falls Creek	OK. −5.7 at 1330, within error margin.
	−5.9	9/8/2003	83085	Mount Hotham	OK
	−5.3	24/8/1997	83085	Mount Hotham	OK
	−5.1	8/8/1995	83085	Mount Hotham	OK
September	−6.2	5/9/1995	83024	Mount Buller	Valid 1200-1200 UTC max. −5.9 at 0900 next day.
	−6.1	11/9/1969	83014	Hotham Heights	OK
	−5.3	5/9/1995	83085	Mount Hotham	Valid 1200-1200 UTC max. Hourly data suggests 0900-0900 local time max near −7.
	−4.7	19/9/1994	83085	Mount Hotham	OK
	−4.4	12/9/1969	83014	Hotham Heights	OK
October	−4.0	16/10/1984	83081	Mount Hotham	OK
	−3.9	10/10/2003	83085	Mount Hotham	OK
	−3.9	1/10/1968	83014	Hotham Heights	OK. No hourly obs. but consistent with NSW alpine sites.
	−3.0	7/10/1998	83085	Mount Hotham	OK
	−3.0	20/10/1992	83085	Mount Hotham	OK
November	−3.0	15/11/2006	83085	Mount Hotham	OK
	−2.8	7/11/1994	83084	Falls Creek	OK
	−2.6	15/11/2006	83024	Mount Buller	OK
	−2.6	15/11/2006	85291	Mount Baw Baw	OK
	−2.1	10/11/1992	83085	Mount Hotham	OK
December	−0.8	25/12/2006	83024	Mount Buller	OK
	−0.4	25/12/2006	85291	Mount Baw Baw	OK
	0.0	27/12/1993	83085	Mount Hotham	Valid 1200-1200 UTC max. 2.9 at 0600 next day.
	0.0	6/12/2002	83024	Mount Buller	Valid 1200-1200 UTC max. 6.6 at 0900 next day.
	0.4	26/12/2001	83085	Mount Hotham	OK

Table 5.7. Lowest daily maximum temperature by month – Tasmania (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	2.1	16/1/2009	94087	Mount Wellington	OK
	2.2	21/1/1995	94087	Mount Wellington	OK
	2.5	26/1/1962	94087	Mount Wellington	OK
	2.7	6/1/1965	94087	Mount Wellington	OK
	2.7	2/1/2009	97085	Mount Read	OK
February	−2.7	18/2/1994	94087	Mount Wellington	Wrong. Values 17-19/2 not credible when compared with 850 hPa temps and low-elevation obs.
	−2.4	19/2/1994	94087	Mount Wellington	Wrong. Refer comments above.
	−1.3	17/2/1994	94087	Mount Wellington	Wrong. Refer comments above.
	0.2	23/2/1964	94087	Mount Wellington	OK
	1.9	8/2/1968	94087	Mount Wellington	OK
	1.9	19/2/1963	94087	Mount Wellington	OK
March	−0.9	31/3/1995	94087	Mount Wellington	Valid 1200-1200 UTC maximum. 0.6 at 0900 next day.
	−0.6	23/3/1967	94087	Mount Wellington	Suspect. 2-4 degrees too low compared with other obs. Possibly an 0900-1500 max as no 0900 obs. next day.
	0.0	4/3/1967	94087	Mount Wellington	OK
	0.6	29/3/1970	94087	Mount Wellington	OK
	0.7	27/3/2008	94087	Mount Wellington	OK
April	−2.4	13/4/1963	94087	Mount Wellington	Valid 0000-0000 max. −1.7 at 0900 next day.
	−2.2	25/4/1967	94087	Mount Wellington	OK
	−1.7	22/4/1969	94087	Mount Wellington	OK
	−1.5	9/4/1995	94087	Mount Wellington	Valid 1200-1200 UTC max. −0.5 at 0900 next day.
	−1.0	18/4/1997	94087	Mount Wellington	Valid 1200-1200 UTC max. −0.8 at 0900 next day.
May	−3.2	24/5/1968	94087	Mount Wellington	OK
	−2.8	22/5/1963	94087	Mount Wellington	OK
	−2.4	29/5/2000	94087	Mount Wellington	Valid 1200-1200 UTC max. −2.1 at 0900 next day.
	−2.4	17/5/1970	94087	Mount Wellington	OK
	−2.4	28/5/1968	94087	Mount Wellington	OK
June	−4.0	7/6/1973	91131	Mount Barrow	OK
	−3.9	22/6/1965	91131	Mount Barrow	OK
	−3.8	18/6/1961	94087	Mount Wellington	OK
	−3.3	28/6/1961	94087	Mount Wellington	OK
	−3.3	25/6/1968	94087	Mount Wellington	OK
	−3.3	19/6/1961	94087	Mount Wellington	Suspect. Appears to be a rounded value (26°F). −3.1 at 1500.
July	−4.8	22/7/1991	94087	Mount Wellington	Valid 1200-1200 UTC max. −4.2 at 0900 next day.
	−4.2	15/7/1966	91131	Mount Barrow	OK
	−3.9	15/7/1966	94087	Mount Wellington	OK
	−3.6	17/7/2004	94087	Mount Wellington	OK
	−3.5	5/7/2004	94087	Mount Wellington	OK
August	−5.0	11/8/2005	94087	Mount Wellington	OK
	−4.4	2/8/1994	94087	Mount Wellington	OK
	−4.2	2/8/1961	94087	Mount Wellington	OK
	−4.1	8/8/1994	94087	Mount Wellington	Valid 1200-1200 UTC max. −1.7 at 0900 next day.
	−4.1	10/8/1964	94087	Mount Wellington	OK

Table 5.7 (cont.). Lowest daily maximum temperature by month – Tasmania (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
September	−5.0	5/9/1995	94087	Mount Wellington	Valid 1200-1200 UTC max. −3.9 at 0900 next day.
	−4.4	19/9/1994	94087	Mount Wellington	Valid 1200-1200 UTC max. −3.8 at 0900 next day.
	−4.4	11/9/1969	94087	Mount Wellington	OK
	−4.1	19/9/2002	94087	Mount Wellington	Valid 1200-1200 UTC max. −1.9 at 0900 next day.
	−3.9	24/9/1970	94087	Mount Wellington	OK
October	−2.2	9/10/1968	94087	Mount Wellington	OK
	−2.2	22/10/1962	94087	Mount Wellington	Valid 0000-0000 max. −1.7 at 0900 next day.
	−1.7	19/10/2001	94087	Mount Wellington	Valid 1200-1200 UTC max. −0.5 at 0900 next day.
	−1.7	10/10/2003	94087	Mount Wellington	OK
	−1.7	22/10/1970	94087	Mount Wellington	OK
	−1.7	1/10/1965	91131	Mount Barrow	OK
	−1.7	2/10/1967	94087	Mount Wellington	OK
	−1.7	1/10/1968	91131	Mount Barrow	OK
November	−1.7	4/11/1963	94087	Mount Wellington	OK
	−1.3	15/11/2006	94087	Mount Wellington	OK
	−1.1	2/11/1966	94087	Mount Wellington	OK
	−1.1	24/11/1962	94087	Mount Wellington	Valid 0000-0000 max. 0.0 at 0900 next day.
	−1.1	15/11/2006	97085	Mount Read	OK
December	−0.1	6/12/2002	94087	Mount Wellington	Valid 1200-1200 UTC max. 2.1 at 0900 next day.
	−0.1	10/12/1964	94087	Mount Wellington	OK
	0.0	4/12/1967	94087	Mount Wellington	OK
	0.0	8/12/1966	94087	Mount Wellington	OK
	0.6	3/12/1967	94087	Mount Wellington	OK

Table 5.8. Lowest daily maximum temperature by month – Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	1.9	11/1/1983	71032	Thredbo (Top Stn)	OK
	1.9	9/1/1994	83085	Mount Hotham	Valid max for 1200-1200 UTC 8/1. Obs. 1 day out of sync.
	2.1	16/1/2009	94087	Mount Wellington	OK
	2.2	21/1/1995	94087	Mount Wellington	OK
	2.3	8/1/2004	83085	Mount Hotham	OK
February	−2.7	18/2/1994	94087	Mount Wellington	Wrong. Values 17-19/2 not credible when compared with 850 hPa temps and low-elevation obs.
	−2.4	19/2/1994	94087	Mount Wellington	Wrong. Refer comments above.
	−1.3	17/2/1994	94087	Mount Wellington	Wrong. Refer comments above.
	−0.2	3/2/2005	83085	Mount Hotham	OK
	0.2	23/2/1964	94087	Mount Wellington	OK
March	−0.9	31/3/1995	94087	Mount Wellington	Valid 1200-1200 UTC maximum. 0.6 at 0900 next day.
	−0.6	23/3/1967	94087	Mount Wellington	Suspect. 2-4 degrees too low compared with other obs. Possibly an 0900-1500 max as no 0900 obs. next day.
	−0.6	29/3/1970	71032	Thredbo (Top Stn)	OK
	−0.4	8/3/1987	83024	Mount Buller	OK
	−0.1	23/3/1967	71032	Thredbo (Top Stn)	OK
April	−5.6	27/4/1978	71032	Thredbo (Top Stn)	Wrong. 5.0 at 1500.
	−3.2	28/4/2008	83085	Mount Hotham	OK
	−2.6	27/4/1982	71032	Thredbo (Top Stn)	OK
	−2.6	21/4/2006	83085	Mount Hotham	OK
	−2.4	13/4/1963	94087	Mount Wellington	Valid 0000-0000 max. −1.7 at 0900 next day.
May	−6.0	28/5/2000	71032	Thredbo (Top Stn)	OK
	−5.6	28/5/2000	83085	Mount Hotham	OK
	−5.5	31/5/1977	71072	Perisher Valley	OK. −5.0 at 0900 next day but this is within bounds of rounding error.
	−5.2	28/5/2000	83084	Falls Creek	OK
	−5.0	27/5/2000	71032	Thredbo (Top Stn)	OK
	−5.0	24/5/1968	83014	Hotham Heights	OK
June	−10.6	11/6/1993	72160	Albury AP	Wrong. Other sites in region 9-11. Min and hourly obs. also wrong.
	−6.0	26/6/1983	71032	Thredbo (Top Stn)	OK, but a 2-day max for 26-27/6, should be attributed to 27/6. No obs. at 0900 27/6.
	−6.0	26/6/1983	71072	Perisher Valley	OK
	−6.0	23/6/1981	71032	Thredbo (Top Stn)	OK
	−5.7	27/6/1983	71072	Perisher Valley	OK. −5.3 at 0900 next day but this is within bounds of rounding error.
July	−6.9	9/7/1978	71032	Thredbo (Top Stn)	OK
	−6.6	18/7/2004	83085	Mount Hotham	OK
	−6.2	2/7/1975	71041	Thredbo Village	Wrong. −1.8 at 0900 next day. 2.8 at Top Station.
	−6.0	8/7/1986	71032	Thredbo (Top Stn)	Wrong. −4.5 at 0900. Max from 9/7 is missing and may have been attributed to wrong day.
	−6.0	18/7/2004	71032	Thredbo (Top Stn)	OK
	−6.0	10/7/1978	71032	Thredbo (Top Stn)	OK
	−6.0	18/7/2004	83024	Mount Buller	Valid 1200-1200 UTC max. −3.9 at 0900 next day.

Table 5.8 (cont.). Lowest daily maximum temperature by month – Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
August	−6.7	10/8/2005	83085	Mount Hotham	OK
	−6.4	11/8/2005	71032	Thredbo (Top Stn)	OK
	−6.4	5/8/1974	71032	Thredbo (Top Stn)	OK
	−6.0	24/8/1997	71032	Thredbo (Top Stn)	Suspect. No obs. from 2100 23/8 to 2100 24/8, although value is plausible.
	−6.0	13/8/1976	71032	Thredbo (Top Stn)	OK.
September	−6.2	5/9/1995	83024	Mount Buller	Valid 1200-1200 UTC max. −5.9 at 0900 next day.
	−6.1	11/9/1969	83014	Hotham Heights	OK
	−6.0	5/9/1995	71032	Thredbo (Top Stn)	OK
	−5.9	12/9/1969	71032	Thredbo (Top Stn)	OK
	−5.8	11/9/1969	71032	Thredbo (Top Stn)	OK
October	−5.0	11/10/1972	71032	Thredbo (Top Stn)	OK
	−4.0	16/10/1984	83081	Mount Hotham	OK
	−3.9	10/10/2003	83085	Mount Hotham	OK
	−3.9	1/10/1968	83014	Hotham Heights	OK. No hourly obs. but consistent with NSW alpine sites.
	−3.5	11/10/1972	71003	Charlotte Pass	OK
November	−3.1	26/11/1967	71032	Thredbo (Top Stn)	OK
	−3.0	15/11/2006	83085	Mount Hotham	OK
	−2.9	11/11/1965	71029	Spencers Creek	OK
	−2.8	7/11/1994	71072	Perisher Valley	OK
	−2.6	15/11/2006	83024	Mount Buller	OK
	−2.6	15/11/2006	85291	Mount Baw Baw	OK
December	−0.8	25/12/2006	83024	Mount Buller	OK
	−0.4	25/12/2006	85291	Mount Baw Baw	OK
	−0.1	6/12/2002	94087	Mount Wellington	Valid 1200-1200 UTC max. 2.1 at 0900 next day.
	−0.1	10/12/1964	94087	Mount Wellington	OK
	0.0	4/12/1967	94087	Mount Wellington	OK
	0.0	8/12/1966	94087	Mount Wellington	OK
	0.0	27/12/1993	83085	Mount Hotham	Valid 1200-1200 UTC max. 2.9 at 0600 next day.
	0.0	6/12/2002	83024	Mount Buller	Valid 1200-1200 UTC max. 6.6 at 0900 next day.

Table 6.1. Lowest daily minimum temperature by month – Western Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	0.9	2/1/1921	9510	Bridgetown	OK. Other sites in region 5-7. No hourly obs.
	1.2	14/1/1941	9510	Bridgetown	No evidence to reject at this time. Other sites in region > 7, but known cold site.
	1.3	7/1/1996	9109	Stoneville	Wrong. Other sites in region 15-21. No hourly obs.
	1.5	13/1/2003	9842	Jarrahwood	OK
	1.6	24/1/1929	9510	Bridgetown	OK
February	−1.0	18/2/1950	12071	Salmon Gums	Wrong. 12-16 at Kalgoorlie, Esperance. No hourly obs. Whole period 5-28/2 too low.
	0.0	8/2/1991	9887	Mandurah	Wrong. Other sites in region mostly > 14, 16.9 at 0600.
	0.1	7/2/1946	9510	Bridgetown	Suspect. Site appears consistently 3-4 degrees too low relative to neighbours Oct 1945 – May 1946.
	0.5	16/2/1919	9510	Bridgetown	OK
	0.7	8/2/1946	9510	Bridgetown	Suspect. Refer comments above.
	0.7	24/2/1950	12071	Salmon Gums	Suspect. Refer comments above.
March	−0.9	4/3/1946	9510	Bridgetown	Suspect. Refer comments for Feb.above.
	−0.8	23/3/1946	9510	Bridgetown	Suspect. Refer comments for Feb above.
	−0.8	22/3/1922	9510	Bridgetown	OK
	−0.7	23/3/1903	10648	Wandering	No evidence to reject at this time. 8.0 at Perth.
	−0.6	27/3/1942	9510	Bridgetown	No evidence to reject at this time. 5.6 at Wandering.
April	−2.2	28/4/1954	10648	Wandering	OK
	−2.2	14/4/1958	9510	Bridgetown	OK
	−2.0	21/4/2006	11019	Eyre	OK
	−1.7	30/4/1954	10648	Wandering	OK
	−1.7	1/4/1954	9510	Bridgetown	OK
May	−8.0	9/5/1993	5084	Thevenard Island	Wrong. Other sites in region > 16. No obs. at 0300 or 0600.
	−5.6	30/5/1964	10648	Wandering	OK
	−5.3	31/5/1964	10648	Wandering	OK
	−4.4	29/5/1964	10648	Wandering	OK
	−4.4	27/5/1964	10648	Wandering	OK
June	−6.0	17/6/2006	9994	Collie East	OK
	−5.9	14/6/2006	11019	Eyre	OK
	−5.7	1/6/1964	10648	Wandering	OK
	−5.7	15/6/2006	12071	Salmon Gums	OK
	−5.7	17/6/2006	9617	Bridgetown	OK
July	−6.7	12/7/1969	12008	Booylgoo Spring	OK
	−6.5	1/7/1990	6099	Murchison	OK
	−5.6	28/7/1982	10568	Hyden	OK
	−5.5	4/7/1982	10568	Hyden	OK
	−5.5	8/7/1977	7080	Three Rivers	OK
	−5.5	28/7/1976	7080	Three Rivers	OK
	−5.5	29/7/1976	7080	Three Rivers	OK

Table 6.1 (cont.). Lowest daily minimum temperature by month – Western Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
August	−8.0	8/8/1993	5084	Thevenard Island	Wrong. Other sites in region > 10. 17.6 at 0600.
	−8.0	6/8/1993	5084	Thevenard Island	Wrong. Other sites in region > 12. 20.7 at 0900 prev. day.
	−7.2	17/8/2008	11019	Eyre	OK
	−6.1	15/8/1970	12071	Salmon Gums	OK
	−5.7	23/8/2008	11019	Eyre	OK
September	−4.6	26/9/1989	11019	Eyre	OK
	−4.5	12/9/2004	10073	Kellerberrin	Valid 2-day min for 11-12/9 which probably occurred on the 11th.
	−4.4	19/9/1953	12071	Salmon Gums	OK
	−4.4	29/9/2002	11019	Eyre	OK
	−4.3	11/9/2004	12009	Norseman Airport	OK
October	−4.3	24/10/1995	11019	Eyre	OK
	−4.0	4/10/2002	11019	Eyre	OK
	−3.5	4/10/2008	11019	Eyre	OK
	−3.1	31/10/1997	10692	Newdegate	OK
	−3.0	12/10/1996	11019	Eyre	OK
November	−8.0	13/11/1991	5084	Thevenard Island	Wrong. Other sites in region > 15. 19.5 at 0600.
	−8.0	10/11/1991	5084	Thevenard Island	Wrong. Other sites in region > 15.9. 0900 obs. missing.
	−2.0	9/11/1999	11019	Eyre	OK
	−1.7	1/11/1968	10648	Wandering	OK
	−1.7	1/11/1968	10524	Brookton	OK
December	0.0	20/12/1990	9887	Mandurah	Wrong. Other sites in region mostly 12-18. 15.5 at 0600.
	0.0	7/12/1953	9510	Bridgetown	OK
	0.0	7/12/1993	5084	Thevenard Island	Wrong. Other sites in region > 18.7. 22.2 at 0300.
	0.3	1/12/1932	9510	Bridgetown	OK
	0.5	3/12/2006	11019	Eyre	OK

Table 6.2. Lowest daily minimum temperature by month – Northern Territory (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	6.7	3/1/1970	15557	Tempe Downs	OK
	7.6	26/1/1982	15603	Kulgera	Suspect. 2-day minimum 25-26/1, other sites in region > 18 both nights.
	8.1	3/1/1970	15602	Jervois	OK
	8.7	3/1/1970	15511	Curtin Springs	OK
	8.9	4/1/1970	15557	Tempe Downs	OK
	8.9	3/1/1970	15527	Ayers Rock	OK
February	8.5	24/2/1949	15590	Alice Springs AP	OK
	8.6	14/2/2009	15594	Arltunga	OK
	8.9	26/2/1949	15540	Alice Springs PO	OK
	9.3	28/2/1939	15540	Alice Springs PO	OK
	9.5	4/2/2005	15594	Arltunga	OK
March	3.9	31/3/1880	15540	Alice Springs PO	No evidence to reject at this time. No supporting info available. Probably not Stevenson screen.
	3.9	30/3/1880	15540	Alice Springs PO	No evidence to reject at this time. No supporting info available. Probably not Stevenson screen.
	4.7	25/3/1967	15546	Ringwood	OK
	5.0	29/3/1880	15540	Alice Springs PO	No evidence to reject at this time. No supporting info available. Probably not Stevenson screen.
	5.2	24/3/1967	15546	Ringwood	OK
April	1.0	26/4/1971	15557	Tempe Downs	Valid 3-day minimum 24-26/4. From other sites in region, 26/4 prob. coldest.
	1.3	28/4/1996	15635	Yulara	Suspect. 11.6 at Uluru and Curtin Springs, 13.1 at 0600.
	1.4	23/4/2001	15590	Alice Springs AP	OK
	1.5	24/4/2001	15594	Arltunga	OK
	1.5	23/4/2001	15594	Arltunga	OK
May	−3.0	27/5/1898	15540	Alice Springs PO	No evidence to reject at this time. No supporting info available. Probably not Stevenson screen.
	−2.8	24/5/1920	15540	Alice Springs PO	OK
	−2.8	23/5/1920	15540	Alice Springs PO	OK
	−2.7	30/5/1987	15590	Alice Springs AP	OK. 0300, 0600 obs. missing but min consistent with other sites in region.
	−2.7	28/5/1898	15540	Alice Springs PO	No evidence to reject at this time. No supporting info available. Probably not Stevenson screen.
June	−6.0	30/6/2002	15590	Alice Springs AP	OK
	−5.6	30/6/1948	15540	Alice Springs PO	OK
	−5.6	21/6/1925	15540	Alice Springs PO	No evidence to reject at this time. Little supporting info available.
	−5.5	21/6/1976	15557	Tempe Downs	OK
	−5.3	19/6/1976	15557	Tempe Downs	OK
July	−7.5	17/7/1976	15590	Alice Springs AP	OK
	−7.2	1/7/1948	15540	Alice Springs PO	Wrong. Should be −3.9. Transposed with terrestrial minimum.
	−7.0	14/7/2002	15660	Uluru	OK
	−6.9	24/7/1971	15557	Tempe Downs	Suspect. Refer earlier Ruckert report.
	−6.8	7/7/1977	15557	Tempe Downs	OK

Table 6.2 (cont.). Lowest daily minimum temperature by month – Northern Territory (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
August	−5.4	13/8/1976	15557	Tempe Downs	OK
	−5.3	16/8/1967	15546	Ringwood	OK
	−5.1	19/8/1970	15557	Tempe Downs	OK
	−4.7	14/8/1976	15557	Tempe Downs	OK
	−4.5	16/8/2002	15594	Arltunga	OK
September	−2.8	1/9/2001	15652	Watarrka	OK
	−2.0	14/9/1972	15546	Ringwood	OK
	−1.9	10/9/1972	15557	Tempe Downs	OK
	−1.6	11/9/1972	15557	Tempe Downs	OK
	−1.3	1/9/1970	15557	Tempe Downs	OK
October	0.0	1/10/2002	15594	Arltunga	OK
	1.3	1/10/1982	15590	Alice Springs AP	OK
	1.7	2/10/1982	15590	Alice Springs AP	OK
	2.0	2/10/1982	15511	Curtin Springs	OK
	2.4	15/10/1895	15540	Alice Springs PO	No evidence to reject at this time. No supporting info available. Probably not Stevenson screen.
November	3.5	2/11/1974	15590	Alice Springs AP	OK
	3.5	3/11/1974	15602	Jervois	OK
	4.1	2/11/1974	15546	Ringwood	OK
	4.1	13/11/1939	15540	Alice Springs PO	Suspect. Terrestrial min 11.8, 28.9 at 0900. Max (36.7) also looks high for a cold night.
	4.4	2/11/1879	15540	Alice Springs PO	No evidence to reject at this time. No supporting info available. Probably not Stevenson screen.
December	7.8	16/12/1882	15540	Alice Springs PO	No evidence to reject at this time. No supporting info available. Probably not Stevenson screen.
	8.9	14/12/1882	15540	Alice Springs PO	No evidence to reject at this time. No supporting info available. Probably not Stevenson screen.
	9.3	12/12/2002	15590	Alice Springs AP	OK
	9.4	8/12/1926	15540	Alice Springs PO	OK
	9.5	12/12/2002	15594	Arltunga	OK
	9.5	11/12/2002	15603	Kulgera	OK
	9.5	12/12/1995	15660	Uluru	OK

Table 6.3. Lowest daily minimum temperature by month – South Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	0.2	9/1/1987	26091	Coonawarra	OK
	1.0	9/1/2002	26099	Naracoorte AP	OK
	1.1	17/1/1977	25034	Wanbi Res Ctr	Wrong. 3-day min 15-17/1, other sites in region > 13 on all 3 days.
	1.4	9/1/1994	26091	Coonawarra	OK
	1.4	9/1/1957	26021	Mount Gambier AP	OK
February	0.8	27/2/1982	26045	Coonawarra	OK
	0.8	10/2/1980	26013	Kybybolite	OK
	0.9	10/2/1980	26070	Konetta	OK
	1.0	11/2/2002	25557	Munkora (Keith W)	OK
	1.0	22/2/1993	23763	Mount Crawford	OK
March	−2.2	30/3/1970	23763	Mount Crawford	OK
	−1.0	12/3/1995	22841	Kingscote AP	Wrong. Lowest METAR 12.0, other sites in region > 10.
	−1.0	26/3/2005	26099	Naracoorte AP	OK
	−0.9	28/3/2008	25557	Munkora (Keith W)	OK
	−0.5	26/3/2005	25557	Munkora (Keith W)	OK
April	−3.5	25/4/1981	23763	Mount Crawford	OK
	−3.0	23/4/1999	20062	Yunta AP	OK
	−2.5	18/4/1987	23763	Mount Crawford	OK
	−2.5	24/4/1999	19062	Yongala	OK
	−2.5	26/4/1975	23763	Mount Crawford	OK
	−2.5	16/4/1963	23738	Myponga	Valid 3-day min 14-16/4. Most likely occurred on the 15th.
May	−6.6	25/5/1957	19062	Yongala	OK
	−6.1	24/5/2006	19062	Yongala	OK
	−5.9	24/5/2006	20062	Yunta AP	OK
	−5.6	13/5/1994	19062	Yongala	OK
	−5.6	21/5/1985	19062	Yongala	OK
June	−8.1	16/6/1959	19062	Yongala	OK
	−7.7	17/6/1959	19062	Yongala	OK
	−7.3	15/6/2006	19062	Yongala	OK
	−7.2	14/6/2006	19062	Yongala	OK
	−7.2	28/6/1989	24045	Cadell	Suspect. Other sites in region > −1.2. 3.8 at 0900.
July	−8.2	20/7/1976	19062	Yongala	OK
	−7.9	10/7/1958	19062	Yongala	OK
	−7.8	19/7/1976	19062	Yongala	OK
	−7.7	16/7/1976	20026	Yunta	OK
	−7.6	19/7/1983	16013	Ernabella	OK
August	−6.0	14/8/1976	19062	Yongala	OK
	−5.6	16/8/1994	19062	Yongala	OK
	−5.5	25/8/2002	19062	Yongala	OK
	−5.4	24/8/1992	20026	Yunta	OK
	−5.4	8/8/1967	19062	Yongala	OK
September	−4.5	6/9/1995	19062	Yongala	OK
	−4.4	4/9/1959	23738	Myponga	OK
	−4.2	7/9/1995	19062	Yongala	OK
	−4.0	15/9/1994	23763	Mount Crawford	OK
	−4.0	3/9/1979	23763	Mount Crawford	Valid 3-day min 1-3/9. Other sites suggest lowest min would be on 1/9.

Table 6.3 (cont.). Lowest daily minimum temperature by month – South Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
October	−4.4	3/10/1967	26045	Coonawarra	OK
	−3.5	15/10/1982	23763	Mount Crawford	OK
	−3.3	21/10/2006	25557	Munkora (Keith W)	OK
	−3.2	9/10/2006	25557	Munkora (Keith W)	OK
	−3.1	12/10/1987	26089	Padthaway	OK
November	−2.0	16/11/1977	23763	Mount Crawford	OK
	−2.0	1/11/1998	26099	Naracoorte AP	OK
	−2.0	3/11/2004	19062	Yongala	OK
	−1.7	3/11/1974	19062	Yongala	OK
	−1.7	9/11/1960	19062	Yongala	OK
	−1.7	2/11/1960	19062	Yongala	OK
December	−0.6	13/12/1958	23015	Penfield	Wrong. Other sites in region > 6.9.
	−0.5	5/12/1993	26013	Kybybolite	OK
	−0.2	5/12/1991	26013	Kybybolite	OK
	0.0	7/12/1961	23738	Myponga	OK
	0.1	20/12/1990	23763	Mount Crawford	Wrong. Other sites in region > 11, 12.0 at 0600.

Table 6.4. Lowest daily minimum temperature by month – Queensland (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	4.4	1/1/1962	41095	Stanthorpe	Wrong. Other sites in region > 10 (17.5 at Inverell), terrestrial min 14.4, 6/8 cloud and DP 14 at 0900.
	5.1	30/1/1971	41056	Killarney	Wrong. Other sites in region > 15. 21.7 at 0900, 8/8 cloud.
	5.5	1/1/1994	41175	Applethorpe	Suspect. Appears to be a long-term accumulated min (no obs. Dec 1993). Other sites in region > 10.
	6.8	6/1/1976	41056	Killarney	Suspect. Other sites in region > 13. 22.1 at 0900, 7/8 cloud.
	7.1	30/1/1925	40264	Tewantin	Suspect. 19.1 at Brisbane.
	7.2	12/1/1965	41095	Stanthorpe	OK
	7.2	3/1/1970	41095	Stanthorpe	OK
February	3.3	25/2/1964	41095	Stanthorpe	OK
	4.3	23/2/1972	41175	Applethorpe	OK
	4.4	23/2/1972	41011	Cambooya	OK
	4.4	23/2/1972	41095	Stanthorpe	OK
	4.6	18/2/1893	33001	Ayr (Burdekin St)	Wrong. Value not credible (other coastal Qld sites > 23). 27.5 at 0900 (DP 24.6)
March	−0.2	30/3/2008	41095	Stanthorpe	OK
	0.3	30/3/2008	41175	Applethorpe	OK
	0.5	1/3/1990	43035	Surat	Wrong. Other sites in region > 18. 22.6 at 0900, 6/8 cloud, DP 17.
	0.9	31/3/2008	41095	Stanthorpe	OK
	1.1	30/3/1966	41044	Warwick (Hermitage)	OK
April	−3.5	27/4/1978	41175	Applethorpe	OK
	−2.2	30/4/2008	41095	Stanthorpe	OK
	−2.1	30/4/2008	41175	Applethorpe	OK
	−2.1	24/4/1925	42023	Miles	OK
	−2.0	27/4/1978	41095	Stanthorpe	OK
May	−6.8	31/5/2006	41095	Stanthorpe	OK
	−6.4	29/5/1987	43020	Mitchell	OK
	−6.4	28/5/1987	41116	Wallangarra	OK
	−6.1	27/5/1965	41095	Stanthorpe	OK
	−6.1	25/5/1957	41095	Stanthorpe	OK
June	−10.6	23/6/1961	41095	Stanthorpe	OK
	−8.9	26/6/1971	41095	Stanthorpe	OK
	−8.2	26/6/1971	41056	Killarney	OK
	−7.9	26/6/1971	41044	Warwick (Hermitage)	OK
	−7.8	26/6/1971	41175	Applethorpe	OK
	−7.8	24/6/1908	42023	Miles	OK
July	−10.6	12/7/1965	41044	Warwick (Hermitage)	OK
	−9.4	17/7/1970	41095	Stanthorpe	OK
	−9.1	13/7/1965	41044	Warwick (Hermitage)	OK
	−8.9	14/7/1970	41095	Stanthorpe	OK
	−8.9	16/7/1970	41095	Stanthorpe	OK
	−8.9	10/7/2006	41095	Stanthorpe	OK
	−8.9	11/7/1965	41044	Warwick (Hermitage)	OK
	−8.9	12/7/1965	41095	Stanthorpe	OK
	−8.9	18/7/1965	39057	Kalpowar	OK

Table 6.4 (cont.). Lowest daily minimum temperature by month – Queensland (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
August	−9.4	15/8/1979	43020	Mitchell	OK
	−7.8	9/8/1965	41011	Cambooya	Suspect. 2-day min 8-9/8, other sites in region > −2.2 on both days. Station regularly too cold 1960-65.
	−7.8	7/8/1970	41095	Stanthorpe	OK
	−7.7	13/8/1964	41095	Stanthorpe	OK
	−7.5	2/8/1982	41359	Oakey	Valid 3-day min 31/7-2/8, other sites suggest lowest min unlikely to have been 31/7.
September	−5.6	12/9/1970	41095	Stanthorpe	OK
	−5.3	7/9/1995	41095	Stanthorpe	OK
	−5.3	7/9/1995	41044	Warwick (Hermitage)	OK
	−5.1	1/9/1970	41175	Applethorpe	OK
	−5.0	1/9/1970	41095	Stanthorpe	OK
October	−4.5	1/10/1984	41011	Cambooya	Suspect. Valid 2-day min 30/9-1/10, but other sites suggest lowest temp was on 30/9, not in October.
	−3.6	9/10/1966	41044	Warwick (Hermitage)	OK
	−3.5	1/10/1984	41056	Killarney	Suspect. Valid 4-day min 28/9-1/10, but other sites suggest lowest temp was on 30/9, not in October.
	−3.3	5/10/1909	41023	Dalby PO	No evidence to reject at this time. 3.9 at Goondiwindi.
	−2.8	7/10/1966	41044	Warwick (Hermitage)	OK
November	0.0	17/11/2006	41095	Stanthorpe	OK
	0.0	17/11/2006	41175	Applethorpe	OK
	0.2	15/11/1966	41175	Applethorpe	OK
	1.0	2/11/2003	41175	Applethorpe	OK
	1.1	17/11/1967	41095	Stanthorpe	OK
	1.1	4/11/1962	41095	Stanthorpe	OK
December	2.2	11/12/1964	39057	Kalpowar	OK
	4.0	5/12/1984	41175	Applethorpe	OK
	4.1	1/12/1992	41175	Applethorpe	OK
	4.2	19/12/1980	41175	Applethorpe	OK
	4.3	20/12/1976	41056	Killarney	Valid 3-day min 18-20/12. Date cannot be determined with certainty but probably 18th or 19th.

Table 6.5. Lowest daily minimum temperature by month – New South Wales/ACT (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	−7.7	11/1/1975	71032	Thredbo (Top Stn)	Suspect. 0.0 at Charlotte Pass, 4.7 at Thredbo Village
	−5.6	24/1/2000	71032	Thredbo (Top Stn)	OK. Value in ADAM is −6.0 at present but value recorded on console was −5.6.
	−5.6	22/1/1995	71003	Charlotte Pass	OK
	−5.4	24/1/2000	71003	Charlotte Pass	OK
	−5.0	2/1/1996	71072	Perisher Valley	Suspect. 11-day accumulation. −6.6 at Charlotte Pass on 24/12/1995.
February	−7.0	17/2/1979	71072	Perisher Valley	OK
	−5.6	12/2/1965	71010	Kiandra	OK
	−5.5	17/2/1998	71003	Charlotte Pass	OK
	−5.2	17/2/1979	71041	Thredbo Village	OK
	−5.2	14/2/2005	71003	Charlotte Pass	Valid 2-day min 13-14/2. Evidence from Thredbo Village suggests 13th probably coldest.
	−5.2	29/2/2008	71032	Thredbo (Top Stn)	OK
March	−7.2	25/3/1964	71010	Kiandra	OK
	−6.7	24/3/1967	71032	Thredbo (Top Stn)	OK
	−6.7	9/3/1968	71003	Charlotte Pass	OK
	−6.7	30/3/1995	70310	Tidbinbilla	Suspect. 0.5 at Canberra and no other sites in region below −1.7. DP 2.9 at 0900.
	−6.7	5/3/1965	61034	East Maitland	Wrong. Other sites in region 12-18. No hourly obs.
April	−11.3	4/4/1979	71072	Perisher Valley	Suspect. 2.6 at Thredbo Village and no other sites in region below 0.
	−10.8	16/4/1963	71010	Kiandra	OK
	−10.6	27/4/1967	71010	Kiandra	OK
	−10.1	28/4/1996	71003	Charlotte Pass	OK
	−10.0	3/4/1995	71003	Charlotte Pass	OK
	−10.0	30/4/2008	71003	Charlotte Pass	OK
	−10.0	27/4/1958	71010	Kiandra	OK
	−10.0	9/4/1968	71003	Charlotte Pass	Suspect. 10.0 at 0900, −0.6 at Kiandra.
May	−14.2	25/5/1987	70312	Glendale Crossing	Suspect. Other sites in region > 3.
	−13.4	24/5/2008	71003	Charlotte Pass	OK
	−13.0	23/5/2008	71003	Charlotte Pass	OK
	−13.0	16/5/1967	71010	Kiandra	OK
	−13.0	31/5/1997	71003	Charlotte Pass	OK
June	−23.0	29/6/1994	71003	Charlotte Pass	OK
	−19.0	30/6/1994	71003	Charlotte Pass	OK
	−18.0	29/6/1994	71072	Perisher Valley	OK
	−17.0	28/6/1994	71003	Charlotte Pass	OK
	−16.5	25/6/2005	71003	Charlotte Pass	OK
July	−19.5	23/7/1979	71072	Perisher Valley	Suspect. No other sites in region < −6, cloudy and windy. Appears to have been considered suspect by NSWRO at the time but not flagged in ADAM.
	−19.0	1/7/1994	71003	Charlotte Pass	OK
	−18.0	12/7/1998	71003	Charlotte Pass	OK
	−17.8	8/7/1968	71003	Charlotte Pass	No evidence to reject at this time. −12.8 at Kiandra, but 0.0 at 0900.
	−17.8	21/7/1966	71010	Kiandra	OK
	−17.8	8/7/1960	71010	Kiandra	OK

Table 6.5 (cont.). Lowest daily minimum temperature by month – New South Wales/ACT (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
August	−20.6	15/8/1968	71003	Charlotte Pass	Suspect. Min temps very low 14-19/8 relative to other stations in area - possible cold air pocket trapped in valley but 0900 temps too warm for this (4.4 at 0900).
	−19.0	16/8/2004	71003	Charlotte Pass	OK
	−18.0	11/8/1997	71003	Charlotte Pass	Suspect. −3.1 at Perisher.
	−17.8	10/8/1965	71010	Kiandra	OK
	−17.2	13/8/1968	71003	Charlotte Pass	OK
September	−16.7	20/9/1970	71003	Charlotte Pass	OK
	−15.0	28/9/2003	71003	Charlotte Pass	OK
	−14.4	26/9/1968	71003	Charlotte Pass	OK
	−14.1	8/9/2003	71003	Charlotte Pass	OK
	−13.9	19/9/1970	71003	Charlotte Pass	OK
October	−12.0	31/10/2006	71003	Charlotte Pass	Valid 4-day min 28-31/10. Evidence from other sites suggests coldest night probably 29/10, possibly 30/10.
	−11.6	23/10/2006	71072	Perisher Valley	Valid 2-day min 22-23/10. Evidence from other sites suggests coldest night probably 22/10.
	−10.8	3/10/1989	71072	Perisher Valley	OK
	−10.6	18/10/1975	71003	Charlotte Pass	OK
	−10.5	30/10/2006	71072	Perisher Valley	Valid 2-day min 29-30/10. Evidence from other sites suggests coldest night probably 29/10, possibly 30/10.
November	−9.4	26/11/1968	71003	Charlotte Pass	OK
	−8.9	17/11/2008	71003	Charlotte Pass	OK
	−8.5	9/11/1999	71072	Perisher Valley	OK
	−8.5	6/11/1973	71032	Thredbo (Top Stn)	Suspect. −3 or above at Charlotte Pass, Thredbo Village. No sign of extreme cold outbreak.
	−8.5	22/11/2001	71003	Charlotte Pass	OK
	−8.5	19/11/1996	71003	Charlotte Pass	OK
	−8.5	17/11/2006	71003	Charlotte Pass	OK
December	−9.6	29/12/1990	70217	Cooma Airport	Wrong. 8.0 at Cooma, 8.9 at 0600.
	−9.0	13/12/1976	71032	Thredbo (Top Stn)	Suspect. −0.7 at Perisher, no sign of extreme cold outbreak.
	−8.9	5/12/1903	63004	Bathurst Gaol	Wrong. Value not credible. Clearly cold night (2.8 at Forbes). Probably not Stevenson screen. 8.9 DP at 0900.
	−7.0	1/12/1986	71072	Perisher Valley	Suspect. 3-day minimum 29/11-1/12. Data from Thredbo suggests 29/11 or 30/11 was coldest night.
	−7.0	20/12/1999	71003	Charlotte Pass	OK

Table 6.6. Lowest daily minimum temperature by month – Victoria (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	−7.4	6/1/1993	83085	Mount Hotham	Wrong. Other sites in region > 3, 2.3 at 0600.
	−4.4	28/1/1965	84077	Bendoc	Suspect. −1.1 at Bondi Forest. All mins in month corrected in fieldbook for no obvious reason – originally −0.6.
	−3.9	9/1/1994	83084	Falls Creek	OK
	−3.7	2/1/2009	83055	Mount Hotham AP	OK
	−3.7	2/1/2009	83085	Mount Hotham	OK
February	−6.5	10/2/1995	83084	Falls Creek	Suspect. Other sites in region > 3, 5.3 at 0000.
	−6.3	15/2/1991	83085	Mount Hotham	Suspect. Other sites in region > 5, 7.5 at 0000.
	−6.0	11/2/1989	83081	Mount Hotham	Suspect. Other sites in region > 2.
	−5.5	10/2/1989	83081	Mount Hotham	Suspect. Other sites in region > 1.
	−5.4	28/2/1985	83081	Mount Hotham	Suspect. 5.6 at Thredbo Top Stn (no other high stations). 1.5 at 1500 prev. day, 8.0 at 0900.
	−3.9	17/2/1998	83084	Falls Creek	OK
March	−6.8	27/3/1984	83081	Mount Hotham	Insufficient evidence to reject at this stage. No other high Vic stations. −0.8 at 0900, snow, 27 mm precip. Value matches fieldbook.
	−6.7	5/3/1968	83014	Hotham Heights	Suspect. 4.4 at Mt. Buffalo, 4.4 at 0900.
	−4.5	27/3/1991	83024	Mount Buller	Suspect. 0.2 at Falls Creek, 2.7 at 0900 (and DP 2.7).
	−4.3	11/3/1991	83085	Mount Hotham	Value OK. Date incorrect - should be 12/3 (all dates in this period 1 day out of sync).
	−4.1	20/3/1996	83024	Mount Buller	OK
April	−6.9	27/4/1967	84077	Bendoc	OK
	−6.7	9/4/1988	83037	Falls Creek SEC	Suspect. 0.1 at 0900, DP 0.0, 8/8 cloud. −2.6 at Mount Hotham.
	−6.7	24/4/1966	83033	Woods Point	OK
	−6.7	23/4/1969	83014	Hotham Heights	OK
	−6.6	7/4/1995	83085	Mount Hotham	OK
May	−8.3	30/5/1965	84077	Bendoc	Valid 2-day min 29-30/5. Coldest night probably 30th.
	−7.8	16/5/1967	83025	Omeo	OK
	−7.8	23/5/1965	84077	Bendoc	Suspect. 2-day min 22-23/5 but other sites in region > −3.3 both days.
	−7.8	25/5/1968	83014	Hotham Heights	OK
	−7.7	16/5/1999	83084	Falls Creek	OK
June	−11.7	15/6/1965	83025	Omeo	OK
	−10.0	7/6/1966	83033	Woods Point	OK. Issues with obs. practices but shouldn't affect extreme minima.
	−10.0	26/6/1965	83025	Omeo	OK
	−9.9	25/6/1972	83025	Omeo	OK
	−9.4	5/6/1966	83033	Woods Point	OK. Refer comments for 7/6 above.
July	−11.7	3/7/1970	83071	Falls Creek	OK
	−10.2	26/7/1986	83024	Mount Buller	OK
	−10.0	26/7/1986	83081	Mount Hotham	OK
	−10.0	25/7/1986	83081	Mount Hotham	OK
	−10.0	24/7/1985	83081	Mount Hotham	OK
	−10.0	13/7/1971	83025	Omeo	OK

Table 6.6 (cont.). Lowest daily minimum temperature by month – Victoria (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
August	−11.4	26/8/1994	83024	Mount Buller	Wrong. Other sites in region > 0. 0.8 at 0900 prev. day, nothing lower in following 24 hours.
	−11.1	15/8/1968	83014	Hotham Heights	Suspect. 3-day min 13-15/8. Comparisons with Thredbo, Falls Creek suggest 4-6 degrees too low.
	−10.5	6/8/1974	83037	Falls Creek SEC	OK
	−9.5	8/8/1989	83037	Falls Creek SEC	OK
	−9.3	20/8/2003	83085	Mount Hotham	OK
	−9.3	11/8/2005	83084	Falls Creek	OK
September	−9.6	10/9/1987	83037	Falls Creek SEC	OK. Matches fieldbook and within plausible range (−7.5 at Mount Hotham), although −2.0 at 0900 and cloudy with light snow.
	−9.4	12/9/1969	83014	Hotham Heights	OK
	−9.4	1/9/1967	83014	Hotham Heights	OK
	−9.2	28/9/2003	83085	Mount Hotham	OK
	−9.2	25/9/2006	83085	Mount Hotham	OK
October	−8.4	9/10/2003	83085	Mount Hotham	OK
	−8.1	16/10/1989	83081	Mount Hotham	Suspect. 3-day min 14-16/10. −3.0 lowest at Falls Creek and 850 hPa temp never below 0.
	−8.1	2/10/1968	83073	Mount Buffalo	Suspect. −7.2 at Hotham Heights (500 m higher). −1.8 at 0900, DP −3.
	−8.1	17/10/1984	83081	Mount Hotham	OK
	−8.0	1/10/1968	83014	Hotham Heights	OK
	−8.0	28/10/2006	83085	Mount Hotham	OK
November	−6.8	8/11/1992	83085	Mount Hotham	Wrong. 5.9 at Falls Creek, no hourly obs. below 3.2 (even allowing for sync problem).
	−6.8	16/11/2006	83085	Mount Hotham	OK
	−6.7	3/11/1980	83081	Mount Hotham	OK
	−6.5	9/11/1999	83085	Mount Hotham	OK
	−6.5	21/11/1978	83081	Mount Hotham	Suspect. 2.5 at 83073, 6.0 at 0900 (0.4 at 0900 previous day).
December	−8.0	26/12/1992	83085	Mount Hotham	Wrong. Lowest hourly obs. 3.8.
	−6.3	19/12/1984	83081	Mount Hotham	Suspect. 3.6 at 0900. No other Vic mountain sites, but 3.5 at 83025, 3.3 at Perisher.
	−6.2	12/12/1996	83024	Mount Buller	Wrong. Other sites in region > −0.1, 6.1 at 0300.
	−6.1	6/12/1969	83014	Hotham Heights	Suspect. 2.8 at 0900, 3.6 at Mt. Buffalo.
	−6.0	29/12/1992	83085	Mount Hotham	Wrong. Lowest hourly obs. 2.3.
	−5.7	13/12/1992	83085	Mount Hotham	Wrong. 6.0 at Falls Creek, lowest hourly obs. 5.7 (even allowing for sync problem).
	−5.2	20/12/1978	83081	Mount Hotham	OK

Table 6.7. Lowest daily minimum temperature by month – Tasmania (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	−5.0	9/1/1969	94087	Mount Wellington	OK. Looks low but not impossible, and matches fieldbook.
	−4.2	18/1/1992	91126	Devonport AP	Wrong. Other sites in region > 3.8 (most coastal sites > 8), 7.6 at 0600.
	−4.0	24/1/2000	96065	Liawenee	OK
	−3.9	19/1/2004	96033	Liawenee AWS	OK
	−3.6	18/1/1966	91131	Mount Barrow	OK
	−3.6	9/1/2009	96033	Liawenee AWS	OK
February	−7.4	18/2/1994	94087	Mount Wellington	Suspect. Refer comments in Table 5.7.
	−5.9	17/2/1994	94087	Mount Wellington	Suspect. Refer comments in Table 5.7.
	−4.9	16/2/1994	94087	Mount Wellington	Suspect. Refer comments in Table 5.7.
	−4.7	19/2/1994	94087	Mount Wellington	Suspect. Refer comments in Table 5.7.
	−4.0	23/2/1995	96071	Lake St. Clair	OK
March	−6.9	26/3/2005	96033	Liawenee AWS	OK
	−5.1	25/3/1965	93006	Ross	OK
	−5.0	21/3/2000	96065	Liawenee	OK
	−4.9	20/3/2006	96033	Liawenee AWS	OK
	−4.8	21/3/2004	96033	Liawenee AWS	OK
	−4.8	1/3/2001	96033	Liawenee AWS	OK
April	−7.7	21/4/2001	96033	Liawenee AWS	OK
	−7.0	28/4/2002	96033	Liawenee AWS	OK
	−7.0	14/4/1963	96021	Shannon	OK
	−7.0	26/4/1975	95001	Bothwell	OK
	−6.7	27/4/1967	95001	Bothwell	OK
	−6.7	25/4/1966	91123	Launceston (Mount Pleasant)	Suspect. 1.8 at Launceston Airport.
	−6.7	25/4/1966	91131	Mount Barrow	Suspect. Looks too low throughout 23-25/4. Lowest hourly value in period −1.6.
May	−10.5	30/5/2006	96033	Liawenee AWS	OK
	−9.7	23/5/2001	96033	Liawenee AWS	OK
	−9.6	26/5/1989	91237	Launceston (TT Bend)	Suspect. −1.4 at Launceston AP. Terrestrial −3.4, possibly transposed.
	−9.0	26/5/2002	96033	Liawenee AWS	OK
	−8.9	30/5/1972	95001	Bothwell	OK
June	−13.0	30/6/1983	96003	Butlers Gorge	OK
	−13.0	30/6/1983	96021	Shannon	OK
	−13.0	30/6/1983	95018	Tarraleah	OK
	−12.5	24/6/1972	95001	Bothwell	OK
	−12.2	24/6/1972	93036	Campbell Town	OK
July	−12.5	1/7/1983	96003	Butlers Gorge	OK
	−11.0	1/7/1983	95018	Tarraleah	OK
	−10.2	20/7/1982	96021	Shannon	OK
	−10.2	4/7/2008	96033	Liawenee AWS	OK
	−10.0	28/7/1976	96021	Shannon	OK
	−10.0	1/7/1983	96015	Lake St. Clair	OK
August	−11.0	6/8/1974	96021	Shannon	OK
	−10.0	6/8/1974	96003	Butlers Gorge	OK
	−10.0	14/8/1978	92000	Rossarden	Suspect. 5-day min 10-14/8, but other sites in region > −5 on all days.
	−9.4	9/8/1960	96021	Shannon	OK
	−9.1	16/8/2004	96033	Liawenee AWS	OK

Table 6.7 (cont.). Lowest daily minimum temperature by month – Tasmania (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
September	−10.7	8/9/2003	96033	Liawenee AWS	OK
	−10.7	14/9/1983	96021	Shannon	OK
	−9.1	3/9/1993	94087	Mount Wellington	OK
	−8.4	9/9/2003	96033	Liawenee AWS	OK
	−8.3	21/9/1994	94087	Mount Wellington	OK
October	−9.5	10/10/1990	94087	Mount Wellington	Wrong. 0.7 at 0300, other sites in region > 0.
	−8.5	3/10/1983	96021	Shannon	Valid 3-day min 1-3/10. Min probably occurred on 3rd.
	−7.9	16/10/2006	96033	Liawenee AWS	OK
	−7.7	5/10/1965	95001	Bothwell	OK
	−7.7	2/10/1965	94087	Mount Wellington	OK
November	−3.6	5/11/2008	96033	Liawenee AWS	OK
	−6.7	30/11/1966	94056	Risdon	Wrong. Other sites in region > 10. 17.8 at 0900.
	−6.2	5/11/1963	94087	Mount Wellington	OK
	−5.6	18/11/1998	96065	Liawenee	OK
	−5.6	4/11/1963	94087	Mount Wellington	OK
December	−5.0	7/12/1969	91131	Mount Barrow	OK
	−4.6	4/12/1967	91131	Mount Barrow	OK
	−4.5	7/12/1991	94087	Mount Wellington	Suspect. Other sites in region > 0, 8.1 at 0600.
	−4.5	10/12/2008	96033	Liawenee AWS	OK
	−4.4	7/12/1969	94087	Mount Wellington	OK
	−4.4	9/12/1966	94087	Mount Wellington	OK

Table 6.8. Lowest daily minimum temperature by month – Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
January	−7.7	11/1/1975	71032	Thredbo (Top Stn)	Suspect. 0.0 at Charlotte Pass, 4.7 at Thredbo Village.
	−7.4	6/1/1993	83085	Mount Hotham	Wrong. Other sites in region > 3, 2.3 at 0600.
	−5.6	24/1/2000	71032	Thredbo (Top Stn)	OK. Value in ADAM is −6.0 at present but value recorded on console was −5.6.
	−5.6	22/1/1995	71003	Charlotte Pass	OK
	−5.4	24/1/2000	71003	Charlotte Pass	OK
February	−7.4	18/2/1994	94087	Mount Wellington	Suspect. Refer comments in Table 5.7.
	−7.0	17/2/1979	71072	Perisher Valley	OK
	−6.5	10/2/1995	83084	Falls Creek	Suspect. Other sites in region > 3, 5.3 at 0000.
	−6.3	15/2/1991	83085	Mount Hotham	Suspect. Other sites in region > 5, 7.5 at 0000.
	−6.0	11/2/1989	83081	Mount Hotham	Suspect. Other sites in region > 2.
March	−7.2	25/3/1964	71010	Kiandra	OK
	−6.9	26/3/2005	96033	Liawenee AWS	OK
	−6.8	27/3/1984	83081	Mount Hotham	Insufficient evidence to reject at this stage. No other high Vic stations. −0.8 at 0900, snow, 27 mm precip. Value matches fieldbook.
	−6.7	5/3/1968	83014	Hotham Heights	Suspect. 4.4 at Mt. Buffalo, 4.4 at 0900.
	−6.7	24/3/1967	71032	Thredbo (Top Stn)	OK
	−6.7	9/3/1968	71003	Charlotte Pass	OK
	−6.7	30/3/1995	70310	Tidbinbilla	Suspect. 0.5 at Canberra and no other sites in region below −1.7. DP 2.9 at 0900.
	−6.7	5/3/1965	61034	East Maitland	Wrong. Other sites in region 12-18. No hourly obs.
April	−11.3	4/4/1979	71072	Perisher Valley	Suspect. 2.6 at Thredbo Village and no other sites in region below 0.
	−10.8	16/4/1963	71010	Kiandra	OK
	−10.6	27/4/1967	71010	Kiandra	OK
	−10.1	28/4/1996	71003	Charlotte Pass	OK
	−10.0	3/4/1995	71003	Charlotte Pass	OK
	−10.0	30/4/2008	71003	Charlotte Pass	OK
	−10.0	27/4/1958	71010	Kiandra	OK
	−10.0	9/4/1968	71003	Charlotte Pass	Suspect. 10.0 at 0900, −0.6 at Kiandra.
May	−14.2	25/5/1987	70312	Glendale Crossing	Suspect. Other sites in region > 3.
	−13.4	24/5/2008	71003	Charlotte Pass	OK
	−13.0	23/5/2008	71003	Charlotte Pass	OK
	−13.0	16/5/1967	71010	Kiandra	OK
	−13.0	31/5/1997	71003	Charlotte Pass	OK
June	−23.0	29/6/1994	71003	Charlotte Pass	OK
	−19.0	30/6/1994	71003	Charlotte Pass	OK
	−18.0	29/6/1994	71072	Perisher Valley	OK
	−17.0	28/6/1994	71003	Charlotte Pass	OK
	−16.5	25/6/2005	71003	Charlotte Pass	OK

Table 6.8 (cont.). Lowest daily minimum temperature by month – Australia (as of 28/02/2009)

Month	Value (ºC)	Date	Station number	Station name	Comments
July	−19.5	23/7/1979	71072	Perisher Valley	Suspect. No other sites in region < −6, cloudy and windy. Appears to have been considered suspect by NSWRO at the time but not flagged in ADAM.
	−19.0	1/7/1994	71003	Charlotte Pass	OK
	−18.0	12/7/1998	71003	Charlotte Pass	OK
	−17.8	8/7/1968	71003	Charlotte Pass	No evidence to reject at this time. −12.8 at Kiandra, but 0.0 at 0900.
	−17.8	21/7/1966	71010	Kiandra	OK
	−17.8	8/7/1960	71010	Kiandra	OK
August	−20.6	15/8/1968	71003	Charlotte Pass	Suspect. Min temps very low 14-19/8 relative to other stations in area - possible cold air pocket trapped in valley but 0900 temps too warm for this (4.4 at 0900).
	−19.0	16/8/2004	71003	Charlotte Pass	OK
	−18.0	11/8/1997	71003	Charlotte Pass	Suspect. −3.1 at Perisher.
	−17.8	10/8/1965	71010	Kiandra	OK
	−17.2	13/8/1968	71003	Charlotte Pass	OK
September	−16.7	20/9/1970	71003	Charlotte Pass	OK
	−15.0	28/9/2003	71003	Charlotte Pass	OK
	−14.4	26/9/1968	71003	Charlotte Pass	OK
	−14.1	8/9/2003	71003	Charlotte Pass	OK
	−13.9	19/9/1970	71003	Charlotte Pass	OK
October	−12.0	31/10/2006	71003	Charlotte Pass	Valid 4-day min 28-31/10. Evidence from other sites suggests coldest night probably 29/10, possibly 30/10.
	−11.6	23/10/2006	71072	Perisher Valley	Valid 2-day min 22-23/10. Evidence from other sites suggests coldest night probably 22/10.
	−10.8	3/10/1989	71072	Perisher Valley	OK
	−10.6	18/10/1975	71003	Charlotte Pass	OK
	−10.5	30/10/2006	71072	Perisher Valley	Valid 2-day min 29-30/10. Evidence from other sites suggests coldest night probably 29/10, possibly 30/10.
November	−9.4	26/11/1968	71003	Charlotte Pass	OK
	−8.9	17/11/2008	71003	Charlotte Pass	OK
	−8.5	9/11/1999	71072	Perisher Valley	OK
	−8.5	6/11/1973	71032	Thredbo (Top Stn)	Suspect. −3 or above at Charlotte Pass, Thredbo Village. No sign of extreme cold outbreak.
	−8.5	22/11/2001	71003	Charlotte Pass	OK
	−8.5	19/11/1996	71003	Charlotte Pass	OK
	−8.5	17/11/2006	71003	Charlotte Pass	OK
December	−9.6	29/12/1990	70217	Cooma Airport	Wrong. 8.0 at Cooma, 8.9 at 0600.
	−9.0	13/12/1976	71032	Thredbo (Top Stn)	Suspect. −0.7 at Perisher, no sign of extreme cold outbreak.
	−8.9	5/12/1903	63004	Bathurst Gaol	Wrong. Value not credible. Clearly cold night (2.8 at Forbes). Probably not Stevenson screen. 8.9 DP at 0900.
	−8.0	26/12/1992	83085	Mount Hotham	Wrong. Lowest hourly obs. 3.8.
	−7.0	1/12/1986	71072	Perisher Valley	Suspect. 3-day minimum 29/11-1/12. Data from Thredbo Village suggests 29/11 or 30/11 was coldest night.
	−7.0	20/12/1999	71003	Charlotte Pass	OK

Table 7. Summary of all of the Australian records with 'OK' classification (as of 28/02/2009)

Element	Month	Value	Date	Station number	Station name
Highest daily rainfall (mm)	January	819.2	19/1/1970	33158	Hecate
	February	907.0	3/2/1893	40062	Crohamhurst
	March	804.1	2/3/1988	33186	Carmila
	April	800.9	1/4/1911	31052	Port Douglas
	May	593.3	3/5/1890	5044	Fortescue
	June	636.0	24/6/1950	59013	Dorrigo PO
	July	554.5	6/7/1973	59080	Mount Moombil
	August	529.2	24/8/2007	40856	Rainbow Beach
	September	432.8	11/9/1950	68197	Foxground Road
	October	551.2	8/10/1914	33077	Pacific Heights
	November	630.0	23/11/1989	31141	Bellenden Ker (Top Station)
	December	593.1	7/12/1964	32032	Macknade
Highest maximum temperature (°C)	January	50.7	2/1/1960	17043	Oodnadatta
	February	50.5	19/2/1998	5008	Mardie
	March	47.8	4/3/1998	4035	Roebourne
		47.8	6/3/2007	6011	Carnarvon
	April	45.0	1/4/1948	4002	Port Hedland PO
	May	40.6	6/5/1990	3030	Bidyadanga
	June	37.8	2/6/1962	1005	Wyndham Port
	July	37.6	19/7/1996	1013	Wyndham
	August	40.0	27/8/1970	1021	Kalumburu
	September	43.1	27/9/2003	3096	West Roebuck
	October	46.9	22/10/2002	4032	Port Hedland
	November	48.7	17/11/1990	38002	Birdsville
	December	49.5	24/12/1972	38002	Birdsville
Highest minimum temperature (°C)	January	35.5	24/1/1982	17099	Arkaroola
			21/1/2003	5026	Wittenoom
	February	35.0	17/2/2004	17123	Moomba AP
	March	34.0	4/3/1973	5008	Mardie
	April	31.0	4/4/1986	4035	Roebourne
	May	29.2	7/5/1967	1007	Troughton Island
	June	27.2	1/6/1971	3025	Cockatoo Island
	July	26.5	15/7/1973	3025	Cockatoo Island
	August	27.5	26/8/1998	3078	Cadjebut
	September	29.7	25/9/2005	1013	Wyndham
	October	32.7	19/10/1900	2011	Halls Creek
	November	35.0	6/11/1965	44026	Cunnamulla
	December	35.0	28/12/1902	4020	Marble Bar
Lowest maximum temperature (°C)	January	1.9	11/1/1983	71032	Thredbo (Top Station)
			8/1/1994	83085	Mount Hotham
	February	−0.2	3/2/2005	83085	Mount Hotham
	March	−0.9	31/3/1995	94087	Mount Wellington
	April	−2.6	27/4/1982	71032	Thredbo (Top Station)
	May	−6.0	28/5/2000	71032	Thredbo (Top Station)
	June	−6.0	23/6/1981	71032	Thredbo (Top Station)
			26/6/1983	71032	Thredbo (Top Station)
			26/6/1983	71072	Perisher Valley
	July	−6.9	9/7/1978	71032	Thredbo (Top Station)
	August	−6.7	10/8/2005	83085	Mount Hotham
	September	−6.2	5/9/1995	83024	Mount Buller
	October	−5.0	11/10/1972	71032	Thredbo (Top Station)
	November	−3.1	26/11/1967	71032	Thredbo (Top Station)
	December	−0.8	25/12/2006	83024	Mount Buller

Table 7 (cont.). Summary of all of the Australian records with 'OK' classification (as of 28/02/2009)

Element	Month	Value	Date	Station number	Station name
Lowest minimum temperature (°C)	January	−5.6	22/1/1995	71003	Charlotte Pass
			24/1/2000	71032	Thredbo (Top Station)
	February	−7.0	17/2/1979	71072	Perisher Valley
	March	−7.2	25/3/1964	71010	Kiandra
	April	−10.8	16/4/1963	71010	Kiandra
	May	−13.4	24/5/2008	71003	Charlotte Pass
	June	−23.0	29/6/1994	71003	Charlotte Pass
	July	−19.0	1/7/1994	71003	Charlotte Pass
	August	−19.0	16/8/2004	71003	Charlotte Pass
	September	−16.7	20/9/1970	71003	Charlotte Pass
	October	−12.0	31/10/2006	71003	Charlotte Pass
	November	−9.4	26/11/1968	71003	Charlotte Pass
	December	−7.0	20/12/1999	71003	Charlotte Pass

Table 8. Summary of all of the State records with 'OK' classification (as of 28/02/2009)

Element	State	Value	Date	Station number	Station name
Highest daily rainfall (mm)	WA	747.0	3/4/1898	4042	Whim Creek
	NT	544.6	15/4/1963	14617	Roper Valley
	SA	272.6	14/3/1989	17098	Motpena
	QLD	907.0	3/2/1893	40062	Crohamhurst
	NSW	809.2	21/2/1954	59067	Dorrigo (Myrtle Street)
	VIC	375.0	22/3/1983	90076	Tanybryn
	TAS	352.0	22/3/1974	92009	Cullenswood
Highest maximum temperature (°C)	WA	50.5	19/2/1998	5008	Mardie
	NT	48.3	1/1/1960	15526	Finke
			2/1/1960	15526	Finke
	SA	50.7	2/1/1960	17043	Oodnadatta
	QLD	49.5	24/12/1972	38002	Birdsville
	NSW	49.7	10/1/1939	47019	Menindee
	VIC	48.8	7/2/2009	77010	Hopetoun AP
	TAS	42.2	30/1/2009	94094	Scamander
Highest minimum temperature (°C)	WA	35.5	21/1/2003	5026	Wittenoom
	NT	33.7	5/1/2006	15602	Jervois
	SA	35.5	24/1/1982	17099	Arkaroola
	QLD	35.0	6/11/1965	44026	Cunnamulla
	NSW	34.0	21/12/1994	49019	Ivanhoe PO
	VIC	30.9	24/1/2001	76031	Mildura
			26/1/2003	80023	Kerang
	TAS	27.3	15/2/1982	97067	Strahan
Lowest maximum temperature (°C)	WA	5.6	14/8/1920	10579	Katanning
	NT	5.9	11/7/1997	15635	Yulara
	SA	3.4	10/8/2003	23842	Mount Lofty
	QLD	2.4	3/7/1984	41116	Wallangarra
	NSW	−6.9	9/7/1978	71032	Charlotte Pass
	VIC	−6.7	10/8/2005	83085	Mount Hotham
	TAS	−5.0	5/9/1995	94029	Mount Wellington
			11/8/2005	94029	Mount Wellington
Lowest minimum temperature (°C)	WA	−7.2	17/8/2008	11019	Eyre
	NT	−7.5	17/7/1976	15590	Alice Springs
	SA	−8.2	20/7/1976	19062	Yongala
	QLD	−10.6	23/6/1961	41095	Stanthorpe
			12/7/1965	41044	Warwick (Hermitage)
	NSW	−23.0	29/6/1994	71003	Charlotte Pass
	VIC	−11.7	15/6/1965	83025	Omeo
			3/7/1970	83071	Falls Creek
	TAS	−13.0	30/6/1983	95018	Tarraleah
				96003	Butlers Gorge
				96021	Shannon