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The Weather of October 2024 - The warmest October

4 November 2024

Mainly attributed to the weaker northeast monsoon over southern China, October 2024 was much warmer than usual in Hong Kong. The monthly mean maximum temperature of 30.3 degrees, monthly mean temperature of 27.3 degrees and monthly mean minimum temperature of 25.4 degrees were 2.2 degrees, 1.6 degrees and 1.5 degrees above their corresponding normals and all of them were the highest on record for October. There were three very hot days in the month, one of the highest on record for October. The month was also much drier than usual with a total rainfall of 11.3 millimetres, only about 9 percent of the normal figure of 120.3 millimetres. The accumulated rainfall this year up to October was 2115.6 millimetres, about 10 percent lower than the normal figure of 2363.1 millimetres for the same period.

Super Typhoon Krathon over the northeastern part of the South China Sea moved slowly towards the southern part of Taiwan on 1-2 October. It weakened into a typhoon and made landfall over the coast of Gaoxiong on the afternoon of 3 October. Krathon rapidly weakened into an area of low pressure over the southern part of Taiwan the next morning. Under the influence of the outer subsiding air of Krathon, it was mainly fine and very hot in Hong Kong on the first day of the month. The temperatures at the Observatory soared to a maximum of 34.2 degrees on that afternoon, the highest of the month and also the third highest absolute maximum temperature for October. Moreover, the daily mean temperature of 30.9 degrees on the same day was the highest on record for October.

Meanwhile, a strong northeast monsoon gradually affected the coast of Guangdong on 1 October and local winds strengthened from the north in the afternoon. Under the influence of the monsoon, it was slightly cooler in the morning on 2-3 October and the weather was mainly fine and dry during the day. The weather remained mainly fine and dry during the day on 4-8 October. With a band of clouds covering the coastal areas of Guangdong, the weather turned cloudier with a few light rain patches on 9 October. While it was dry with sunny periods during the day on 10 October, an easterly airstream set in at night and brought rainy weather to Hong Kong that night and the next morning. The rain was heavier on the morning of 11 October and more than 20 millimetres of rainfall were recorded over the eastern part of the territory. The weather turned dry with sunny intervals in the afternoon.

Under the influence of a dry easterly airstream, apart from a few rain patches on the morning of 12 October, the weather was mainly fine and dry during the day on 12 - 15 October. Affected by upper-air disturbances, the weather turned cloudier with a few showers on 16 - 18 October. It was mainly fine with some haze on 19 October. With light winds and plenty of sunshine, the maximum temperature recorded at the Observatory in the afternoon was 33.7 degrees, making it the latest very hot day of a year on record. Affected by an easterly airstream, there were a few light rain patches in the morning and sunny intervals during the day on 20 - 21 October. With the moderation of the easterly airstream, the weather turned mainly fine and dry on 22 October.

Meanwhile, an area of low pressure over the seas east of the Philippines intensified into a tropical depression on 21 October and was later named Trami. It tracked northwestwards towards Luzon and intensified gradually on 22 – 23 October. After moving across Luzon, Trami moved generally westwards across the central and northern parts of the South China Sea on 25 – 26 October. It made landfall over the central part of Vietnam on the morning of 27 October and progressively weakened into an area of low pressure over the inland areas the next day.

Under the influence of a dry northeast monsoon, it was mainly fine and dry on 23 October. With the strengthening of the monsoon, it was slightly cooler the next morning and the temperatures at the Observatory dropped to a minimum of 22.0 degrees, the lowest of the month. The weather was mainly fine and very dry during the day with the relative humidity over most parts of the territory once falling to about 30 percent. While it was still mainly fine during the day on 25 October, the weather turned cloudy at night with the approach of Trami. Under the combined effect of the northeast monsoon and Trami, the weather of Hong Kong was mainly cloudy with a few showers on 26 October. Strong winds were also recorded over many places of the territory on that day. With Trami departing from Hong Kong, local winds moderated gradually at night and the next morning. With a band of clouds covering the coast of Guangdong, the weather remained mainly cloudy with a few light rain patches in the morning on 27 – 29 October. Affected by a dry northeast monsoon, the weather turned fine and dry on the last two days of the month.

Five tropical cyclones occurred over the South China Sea and the western North Pacific in October 2024.

Details of issuance and cancellation of various warnings/signals in the month are summarised in Tables 1.1 to 1.5. Monthly meteorological figures and departures from normal for October are tabulated in Table 2.

Warnings and Signals issued in October 2024

Table 1.1 Tropical Cyclone Warning Signals

| Name of | Signal | Beginning Time | | Ending Time | |
|-------------------------|--------|----------------|------|-------------|------|
| Tropical Cyclone | Number | Day/Month | HKT | Day/Month | HKT |
| TRAMI | 1 | 25 / 10 | 0140 | 26 / 10 | 1040 |
| | 3 | 26 / 10 | 1040 | 26 / 10 | 2220 |
| | 1 | 26 / 10 | 2220 | 27 / 10 | 0020 |

Table 1.2 Strong Monsoon Signal

| Beginning Time | | Ending Time | | |
|----------------|------|-------------|------|--|
| Day/Month | HKT | Day/Month | HKT | |
| 1 / 10 | 1710 | 3 / 10 | 1140 | |
| 20 / 10 | 0745 | 20 / 10 | 1500 | |
| 24 / 10 | 0415 | 24 / 10 | 1145 | |

Table 1.3 Thunderstorm Warning

| Beginning Time | | Ending Time | |
|----------------|------|--------------------|------|
| Day/Month | HKT | Day/Month | HKT |
| 7 / 10 | 0330 | 7 / 10 | 0545 |

Table 1.4 Fire Danger Warnings

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|--------------------------------|----------------|------|-------------|------|
| Colour | Beginning Time | | Ending Time | |
| Coloui | Day/Month | HKT | Day/Month | HKT |
| Red | 1 / 10 | 0600 | 4 / 10 | 2345 |
| Yellow | 5 / 10 | 0600 | 5 / 10 | 2030 |
| Yellow | 6 / 10 | 0600 | 6 / 10 | 1930 |
| Red | 10 / 10 | 1245 | 10 / 10 | 1845 |
| Yellow | 11 / 10 | 1000 | 11 / 10 | 2000 |
| Yellow | 12 / 10 | 0600 | 12 / 10 | 2045 |
| Yellow | 13 / 10 | 0600 | 13 / 10 | 1815 |
| Yellow | 19 / 10 | 0945 | 19 / 10 | 1800 |
| Yellow | 20 / 10 | 1130 | 20 / 10 | 1800 |
| Red | 22 / 10 | 0600 | 26 / 10 | 0400 |
| Yellow | 27 / 10 | 0700 | 27 / 10 | 1900 |
| Red | 30 / 10 | 0600 | 2 / 11 | 2230 |

Table 1.5 Very Hot Weather Warning

| Beginning Time | | Ending Time | | |
|----------------|------|-------------|------|--|
| Day/Month | HKT | Day/Month | HKT | |
| 30 / 9 | 0645 | 1 / 10 | 1710 | |
| 6 / 10 | 1315 | 6 / 10 | 1715 | |
| 7 / 10 | 0745 | 7 / 10 | 1800 | |
| 19 / 10 | 1015 | 19 / 10 | 1800 | |
| 22 / 10 | 0645 | 22 / 10 | 1730 | |

Table 2 Figures and Departures from Normal - October 2024

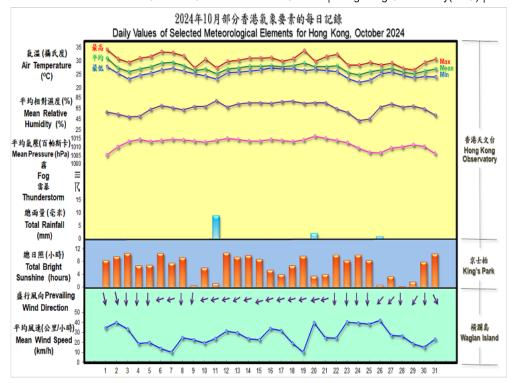
| Meteorological Element | Figure of the Month | Departure from Normal* |
|--|--------------------------------|-----------------------------|
| Mean Daily Maximum Air Temperature | 30.3 degrees C | 2.2 degrees above normal |
| Mean Air Temperature | 27.3 degrees C | 1.6 degrees above normal |
| Mean Daily Minimum Air Temperature | 25.4 degrees C | 1.5 degrees above normal |
| Mean Dew Point Temperature | 20.0 degrees C | 0.2 degrees below normal |
| Mean Relative Humidity | 65 % | 8 % below normal |
| Mean Cloud Amount | 69 % | 11 % above normal |
| Total Rainfall | 11.3 mm | 109.0 mm below normal |
| Number of hours of Reduced Visibility Δ | 3 hours | 100.2 hours below normal§ |
| Total Bright Sunshine Duration | 209.1 hours | 11.3 hours above normal |
| Mean Daily Global Solar Radiation | 15.91 Megajoule / square metre | 1.39 Megajoule above normal |
| Total Evaporation | 139.3 mm | 16.7 mm above normal |

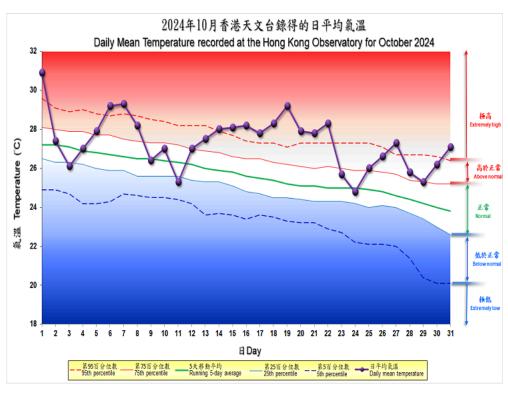
Remarks: All measurements were made at the Hong Kong Observatory except sunshine, solar radiation and evaporation which were recorded at King's Park Meteorological Station and visibility which was observed at the Hong Kong International Airport.

Δ The visibility readings at the Hong Kong International Airport are based on hourly observations by professional meteorological observers in 2004 and before, and average readings over the 10-minute period before the clock hour of the visibility meter near the middle of the south runway from 2005 onwards. The change of the data source in 2005 is an improvement of the visibility assessment using instrumented observations following the international trend.

Before 10 October 2007, the number of hours of reduced visibility at the Hong Kong International Airport in 2005 and thereafter displayed in this web page was based on hourly visibility observations by professional meteorological observers. Since 10 October 2007, the data have been revised using the average visibility readings over the 10-minute period before the clock hour, as recorded by the visibility meter near the middle of the south runway.

- * Departure from 1991 2020 climatological normal, except for number of hours of reduced visibility
- § Departure from mean value between 1997 and 2023





Remarks: Extremely high: above 95th percentile

Above normal: between 75th and 95th percentile Normal: between 25th and 75th percentile Below normal: between 5th and 25th percentile

Extremely low: below 5th percentile

Percentile and 5-day running average values are computed based on the data from 1991 to 2020

Extract of Meteorological Observations in Hong Kong for October 2024

