每月天氣摘要
二零一五年十二月

Monthly Weather Summary
December 2015

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二零一六年一月出版

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1. 二零一五年十二月天氣回顧

本港於二零一五年十二月大部分時間受較潮濕的氣團影響，整月天氣較正常陰暗及多雨。全月總日照時間為 75.9 小時，大約只有正常數值 172.2 小時的百分之 44。而月總雨量為 64.3 毫米，是正常 26.8 毫米的兩倍以上，而大部分雨量為十二月五日及九日的降雨所致。全年雨量為 1874.5 毫米，仍較正常值 2398.4 毫米少約百分之 22。二零一五年十二月亦較正常溫暖，月平均氣溫為 18.6 度，較正常值 17.9 度高 0.7 度。

本港於二零一五年十二月首兩天大致天晴及和暖。一道冷鋒於十二月二日在廣東北部形成並於當晚橫過廣東沿岸。受冷鋒後的一股東北季候風影響，本港天氣於隨後兩天轉為多雲及有幾陣微雨。東北季候風於十二月五日進一步增強，並為本港帶來風勢頗大、有雨及較清涼的天氣。受東北季候風支配，本港於隨後三天持續清涼及有幾陣雨。

受一股高空擾動影響，本港天氣於十二月九日轉為天陰及有雨，普遍地區錄得超過 40 毫米雨量。隨著高空擾動向東移離廣東，本港於隨後兩天天氣逐漸好轉及部分時間有陽光。受一股清勁偏東氣流影響，天氣於十二月十二日轉為多雲及有幾陣微雨，其後兩天天氣轉變不大。

影響華南沿岸地區的冬季季候風於十二月十五日增強，並為本港帶來顯著較涼的天氣。受偏北氣流增強所帶來的一股內陸氣團影響，十二月十六日天氣轉晴而氣溫進一步下降，隨後兩天早上天氣寒冷。天文台於十二月十八日早上的最低氣溫下降至 11.3 度，為本月的最低氣溫。

隨著冬季季候風緩和，本港氣溫於其後數天逐步回升，天氣逐漸轉為和暖、潮濕及有幾陣微雨，聖誕前夕天氣更是異常溫暖。十二月二十二日至二十四日亦有幾陣薄霧及霧的報告，十二月二十四日早上橫瀾島的能見度曾降至 500 米以下。

同時，一道冷鋒在華南北部形成，並於聖誕日凌晨橫過廣東沿岸地區。本港天氣於當日顯著轉涼及有幾陣雨。受東北季候風持續影響，本港於其後三天大致多雲、清涼及有幾陣微雨，月底期間陽光較多。

本月有一個熱帶氣旋影響南海及北太平洋西部。

本月有四班航機因惡劣天氣須轉飛其他地方。表 1.1 載列本月發出及取消各種警告/信號的詳情。

1. The Weather of December 2015

With a relatively humid air mass affecting the territory for most part of the month, the weather of December 2015 was gloomier and wetter than usual. The total duration of sunshine recorded in the month was 75.9 hours, only about 44 percent of the normal figure of 172.2 hours. Two rainy episodes on 5 and 9 December mostly contributed to the monthly rainfall of 64.3 millimetres, more than double the normal figure of 26.8 millimetres. However, the annual rainfall of 1874.5 millimetres was still about 22 percent below the normal of 2398.5 millimetres. December 2015 was also warmer than usual with a monthly mean temperature of 18.6 degrees, 0.7 degrees above the normal figure of 17.9 degrees.

December 2015 began with mainly fine and warm weather for the first two days of the month. A cold front formed over the northern part of Guangdong and moved across the coast of Guangdong on the night of 2 December. Affected by the northeast monsoon behind the cold front, local weather turned cloudy with light rain patches over the next couple of days. The northeast monsoon strengthened further and brought windy, rainy and even cooler weather on 5 December. Under the prevailing northeast monsoon, the weather remained cool with a few rain patches over the next three days.

Under the influence of an upper-air disturbance, it was overcast and rainy in Hong Kong on 9 December with more than 40 millimetres of rainfall generally recorded over the territory. As the upper-air disturbance moved eastwards away from Guangdong, local weather improved gradually with sunny periods over the next couple of days. Affected by a fresh easterly airstream, the clouds returned with light rain patches on 12 December and persisted for the next two days.

The strengthening of the winter monsoon over the south China coastal areas brought significantly cooler weather to Hong Kong on 15 December. Under the influence of a continental air mass brought by a strengthening northerly airstream, temperatures plunged further and local weather turned fine on 16 December with cold mornings over the next two days. Temperatures at the Observatory fell to a minimum of 11.3 degrees on the morning of 18 December, the lowest of the month.

With the moderation of the winter monsoon, local temperature recovered gradually and the weather turned increasingly mild and humid with light rain patches during the period leading up to an unseasonably warm Christmas Eve. Mist and fog patches were reported in Hong Kong on 22 – 24 December, with visibility at Waglan Island once dropping below 500 metres on the morning of 24 December.

Meanwhile, a cold front formed over the northern part of southern China and moved across the coastal areas of Guangdong in the early hours of Christmas Day. Local weather

became appreciably cooler with a few rain patches that day. The prevailing northeast monsoon then maintained generally cloudy and cool weather with light rain patches over the next three days, with more sunny periods appearing towards the end of the month.

One tropical cyclone occurred over the South China Sea and the western North Pacific in the month.

During the month, four aircraft were diverted due to adverse weather. Details of the issuance and cancellation of various warnings/signals in the month are summarized in Table 1.1.

表 1.1　二零一五年十二月發出的警告及信號
Table 1.1　Warnings and Signals issued in December 2015

強烈季候風信號
Strong Monsoon Signal

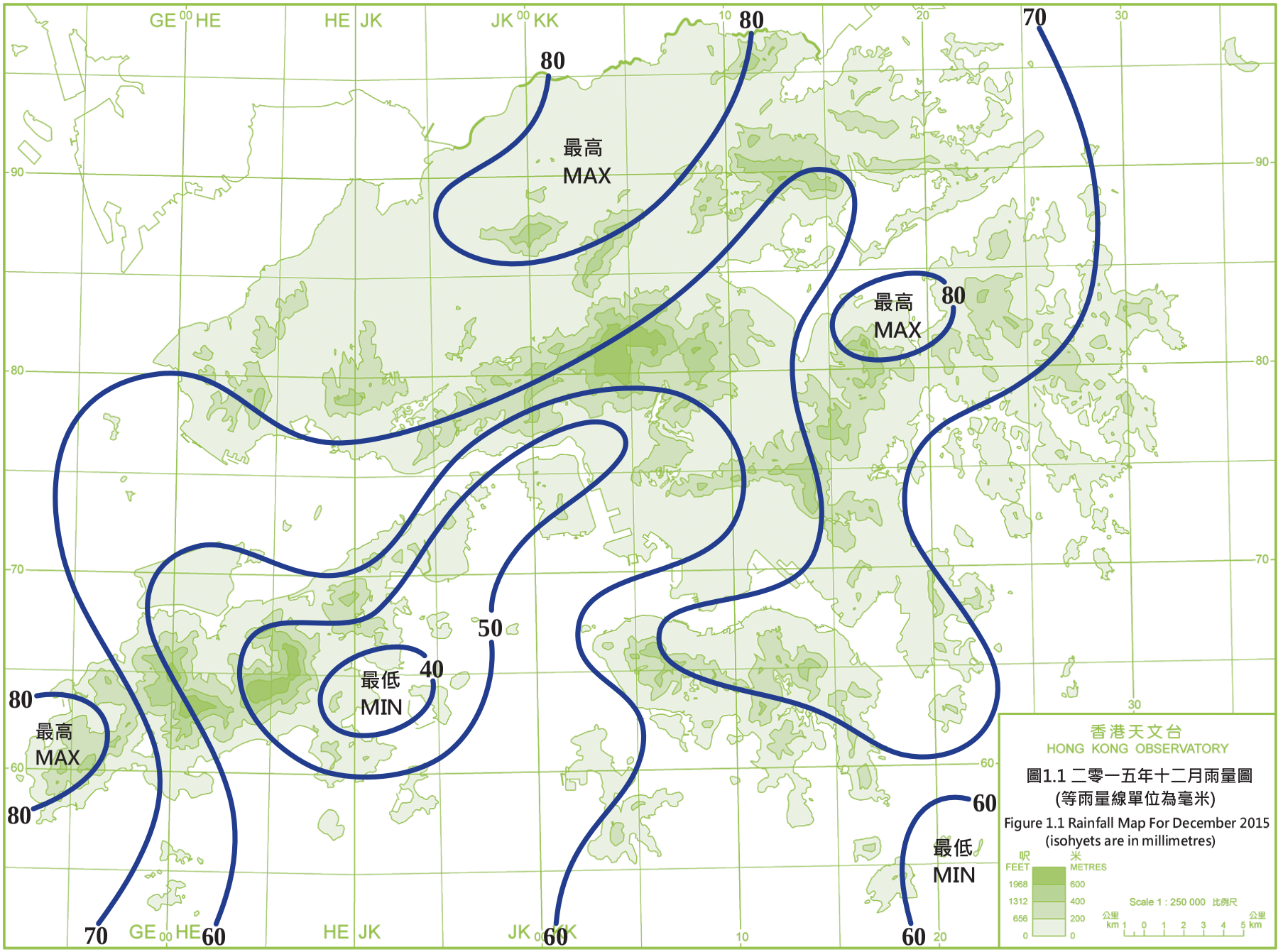
開始時間 Beginning Time		終結時間 Ending Time	
日/月 day/month	時 hour	日/月 day/month	時 hour
5/12	1020	6/12	1335
9/12	0115	9/12	2315
16/12	0140	17/12	1145
25/12	0725	25/12	1245

火災危險警告
Fire Danger Warnings

顏色 Colour	開始時間 Beginning Time		終結時間 Ending Time	
	日/月 day/month	時 hour	日/月 day/month	時 hour
黃色 Yellow	6/12	1100	6/12	1800
紅色 Red	16/12	0600	19/12	0600
黃色 Yellow	19/12	0600	20/12	1130
黃色 Yellow	26/12	0600	26/12	2315

寒冷天氣警告
Cold Weather Warning

開始時間 Beginning Time		終結時間 Ending Time	
日/月 day/month	時 hour	日/月 day/month	時 hour
16/12	1620	19/12	1045



H.K.O.128 (2014)
地政總署測繪處繪製
Cartography by Survey and Mapping Office, Lands Department.

2.1　二零一五年十二月的熱帶氣旋概述

二零一五年十二月在北太平洋西部及南海區域出現了一個熱帶氣旋，名為茉莉。

熱帶低氣壓茉莉於十二月十一日下午在雅蒲島以南約70公里的北太平洋西部上形成，向西北偏西方向移動，翌日早上發展為熱帶風暴，並繼續增強，於十二月十三日晚上演變為強颱風，翌日早上茉莉達到其最高強度，中心附近最高持續風速估計為每小時175公里。隨後一兩天茉莉橫過菲律賓中部及進入南海，移動減慢並轉弱，十二月十七日清晨在南海海面上消散。

根據報章報導，茉莉吹襲菲律賓期間帶來暴雨及水災，造成至少11人死亡，逾70萬人需要疏散。

2.1　Overview of Tropical Cyclones in December 2015

One tropical cyclone, named Melor, occurred over the western North Pacific and the South China Sea in December 2015.

Melor formed as a tropical depression over the western North Pacific about 70 km south of Yap on the afternoon of 11 December. Moving west-northwestwards, it became a tropical storm the next morning and continued to intensify, developing into a severe typhoon on the night of 13 December and reaching its peak intensity the following morning with an estimated sustained wind of 175 km/h near its centre. It then moved across the central part of the Philippines and into the South China Sea in the next couple of days, decelerating and weakening in the process. It finally dissipated over the South China Sea in the early hours of 17 December.

According to press reports, Melor brought heavy rain and flooding to the Philippines during its passage. At least 11 persons were killed and over 700 000 people had to be evacuated.

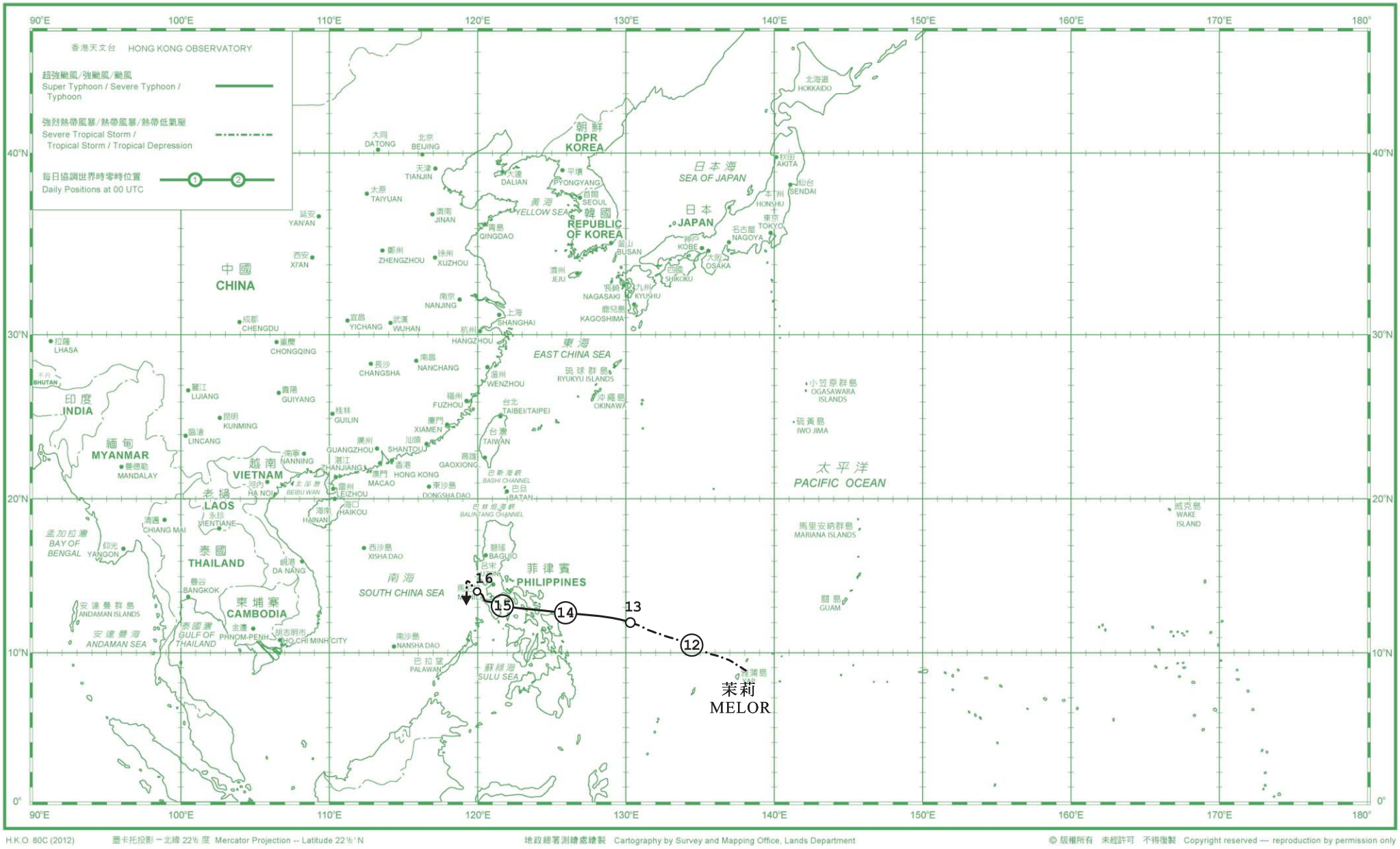
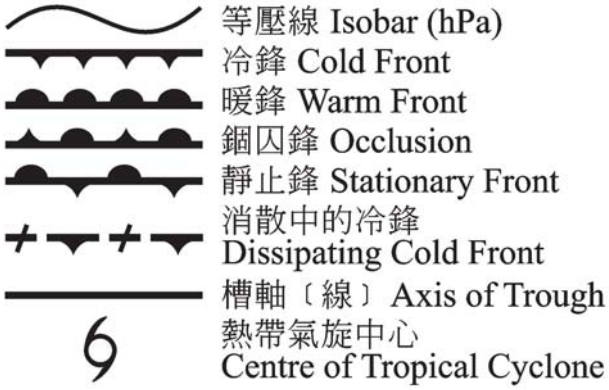
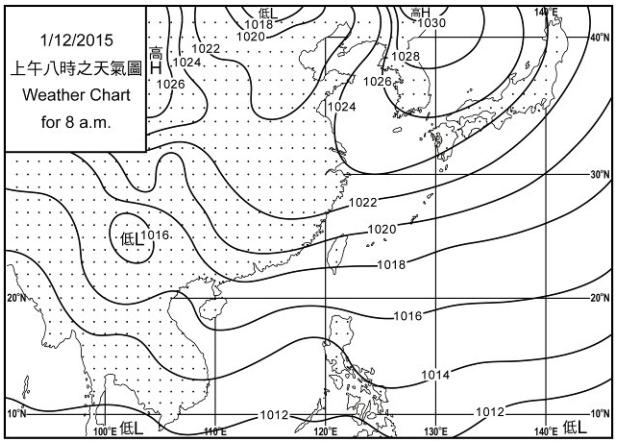


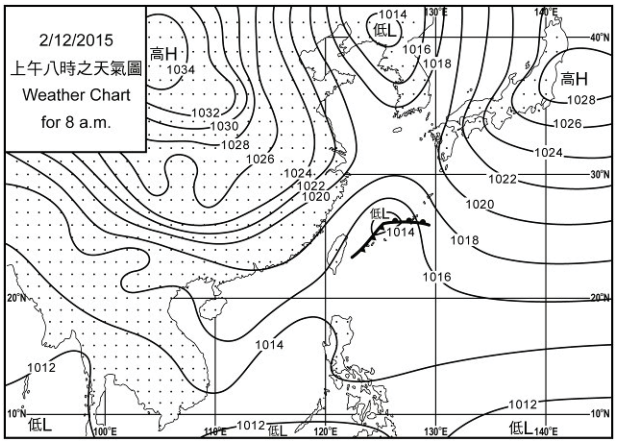
圖 2.1.1 二零一五年十二月的熱帶氣旋路徑圖

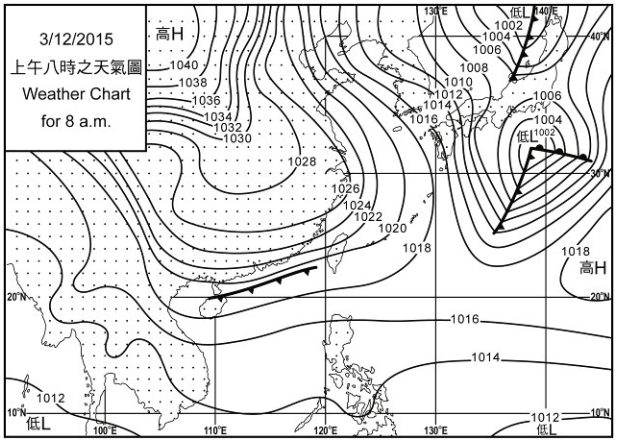
Figure 2.1.1 Track of tropical cyclones in December 2015

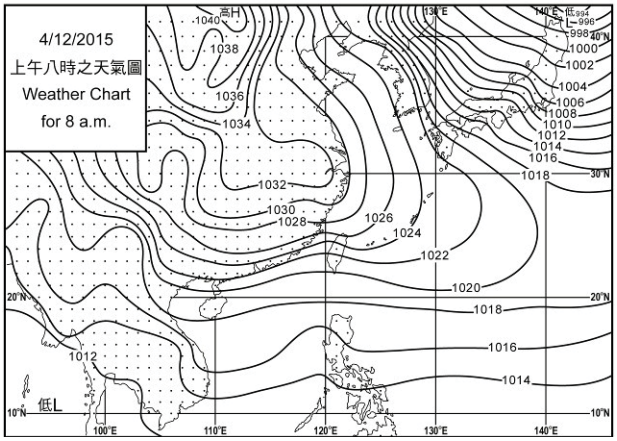
3. 二零一五年十二月每日天氣圖
3. Daily Weather Maps for December 2015

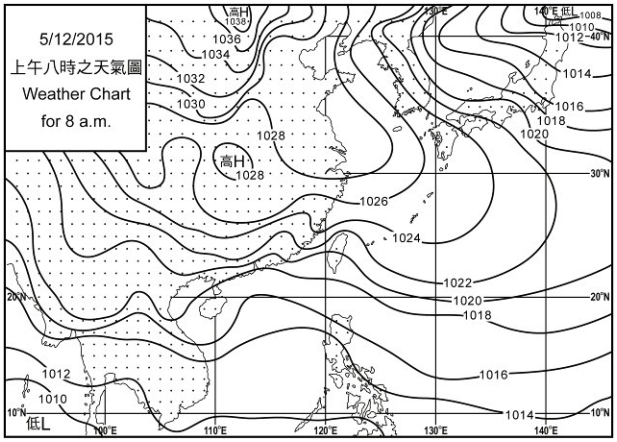


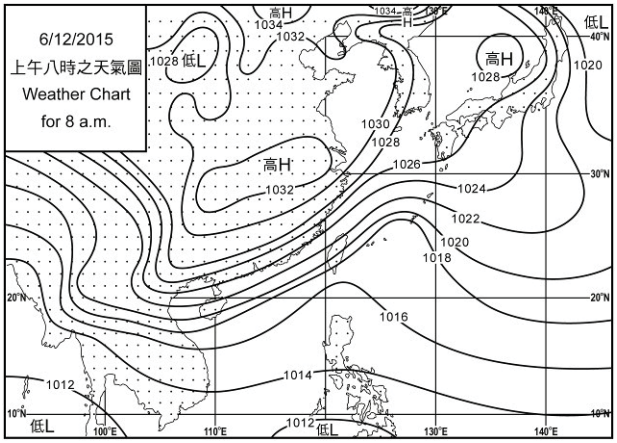


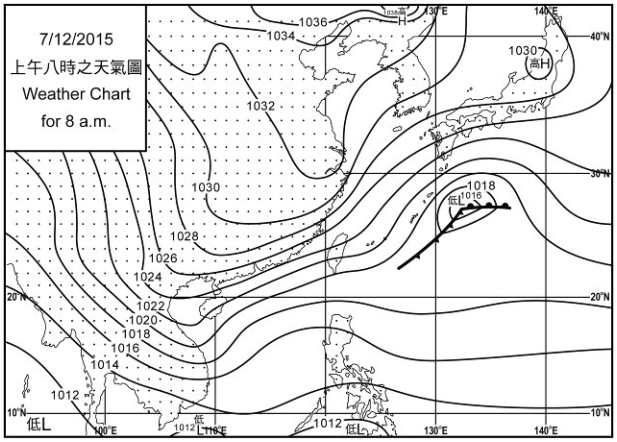


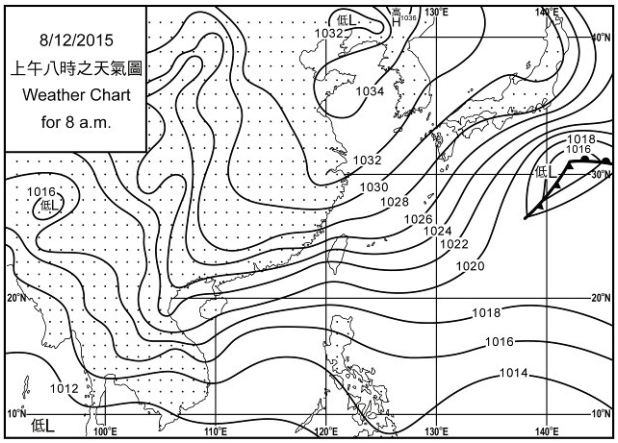


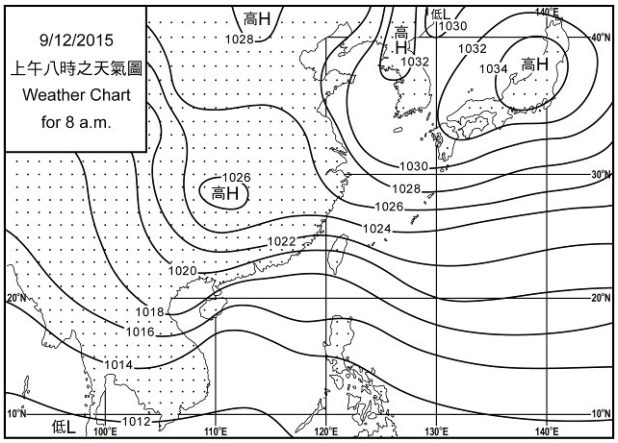









8/12/2015
上午八時之天氣圖
Weather Chart
for 8 a.m.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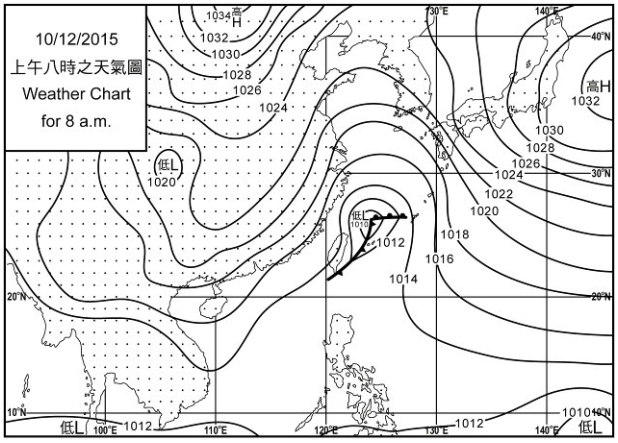
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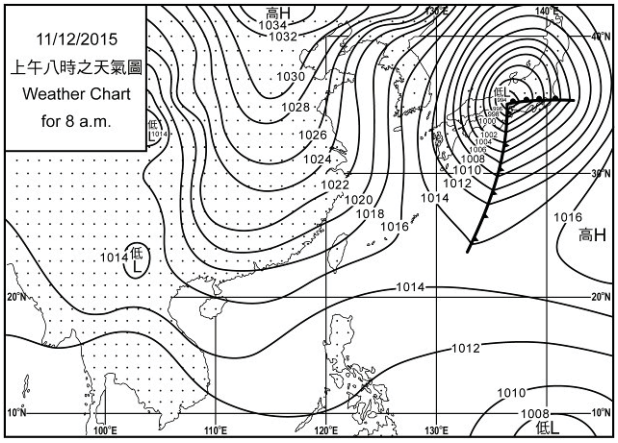
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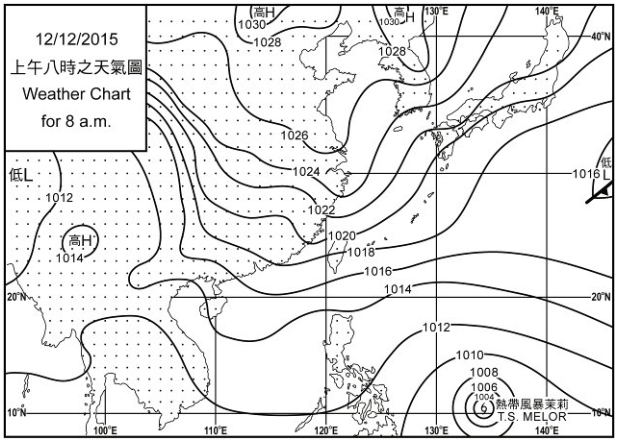
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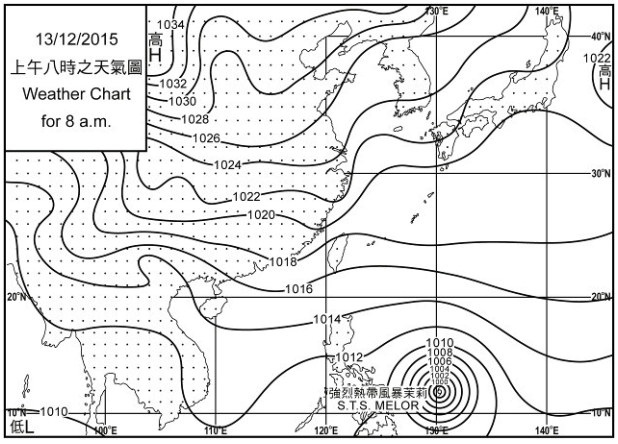
熱帶風暴茉莉
T.S. MELOR


13/12/2015
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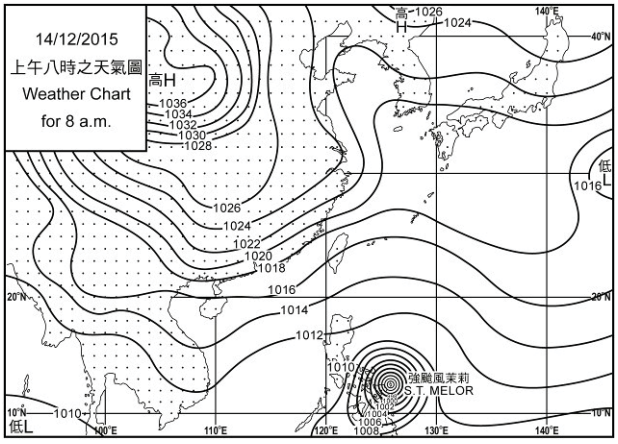
強烈熱帶風暴茉莉
S.T.S. MELOR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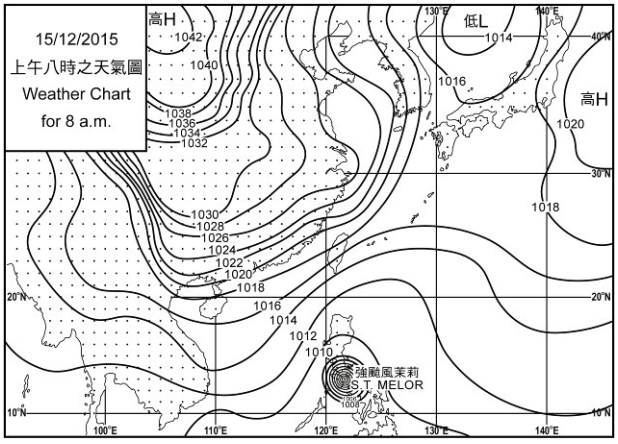
強颱風茉莉
S.T. MELOR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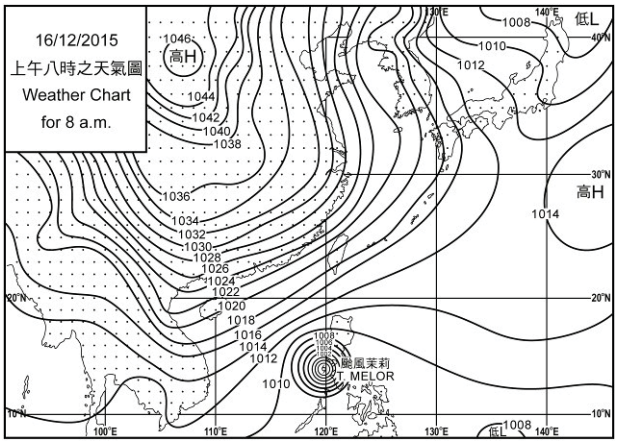
強颱風茉莉
S.T. MELOR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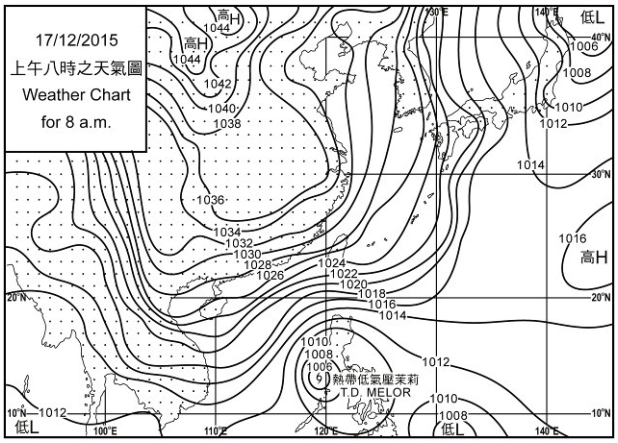
颱風茉莉
T. MELOR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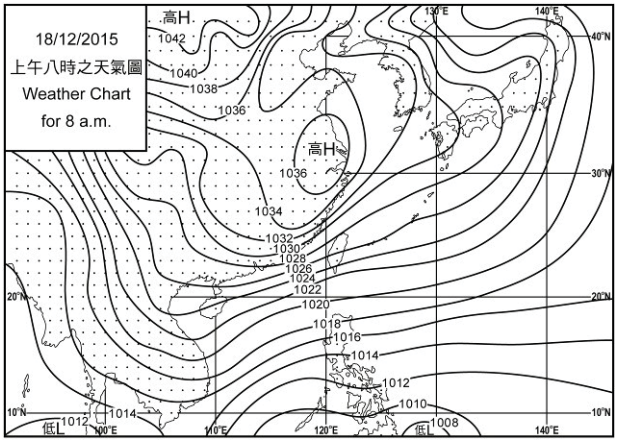
熱帶低氣壓茉莉
T.D. MELOR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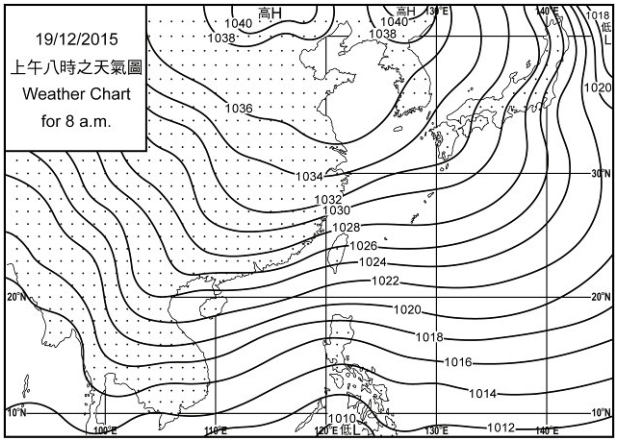
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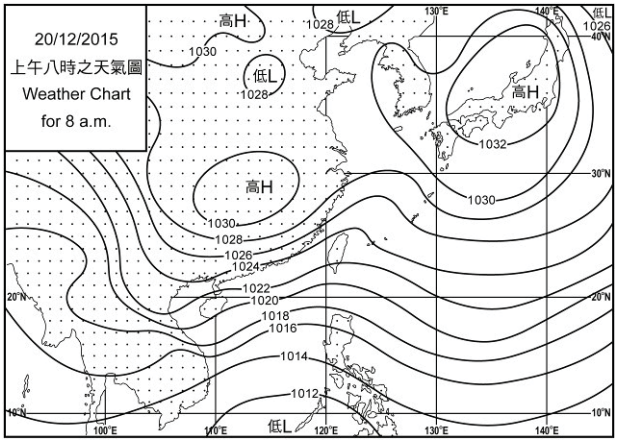
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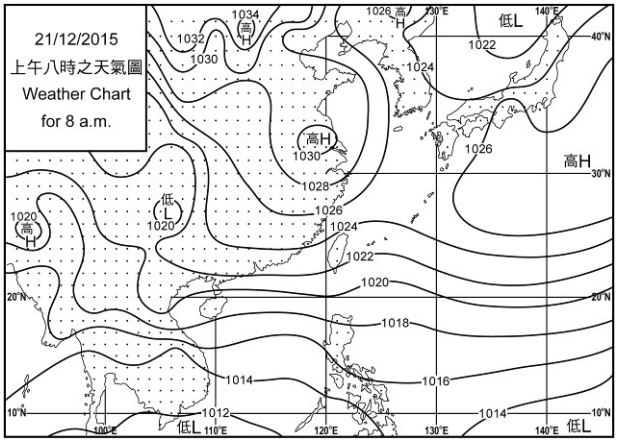
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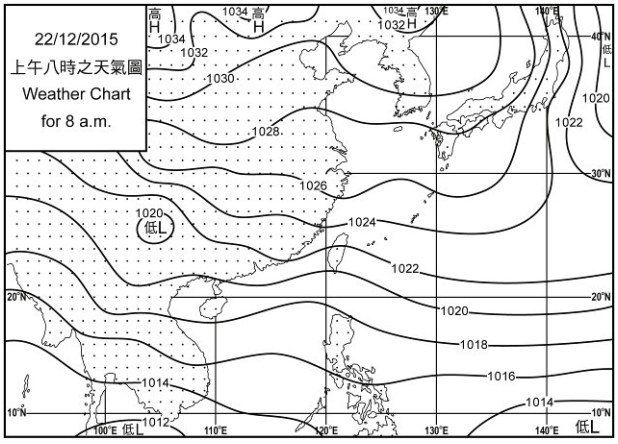
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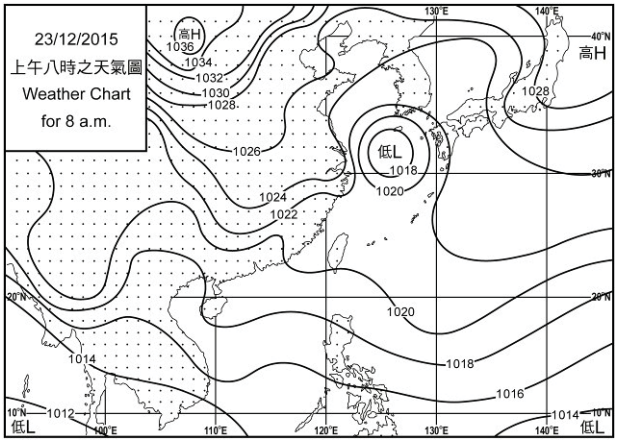
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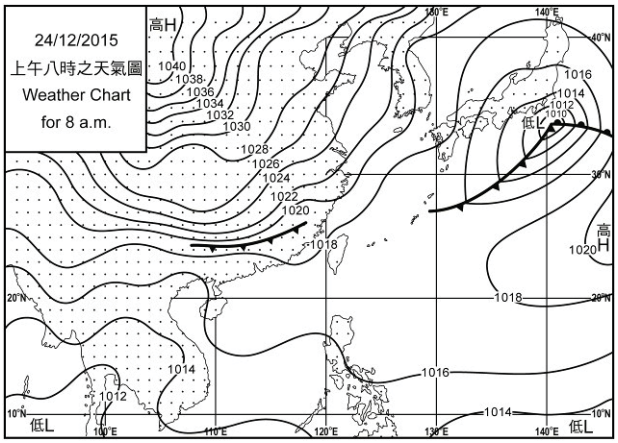
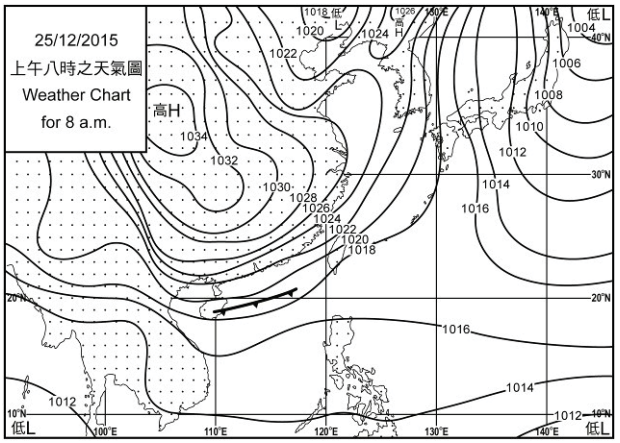
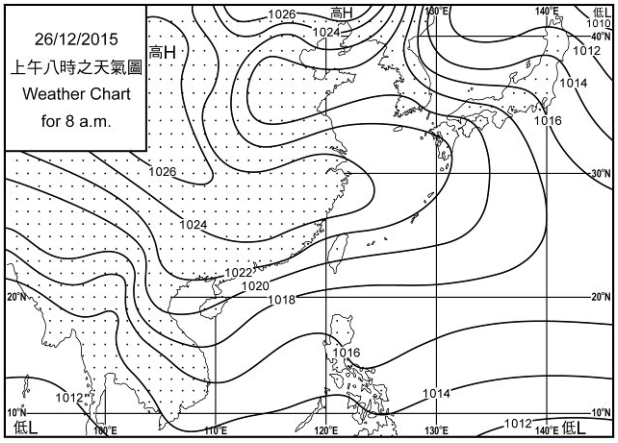
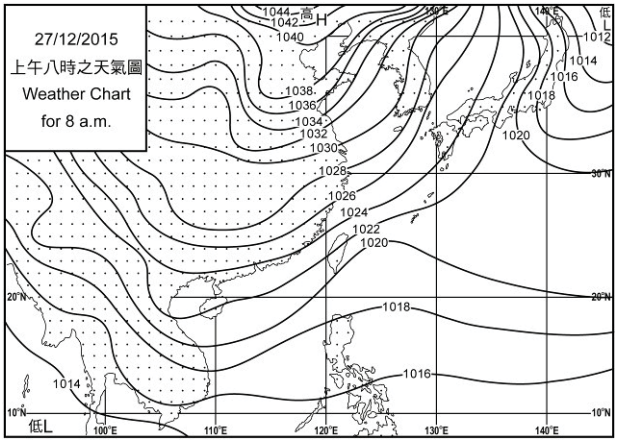
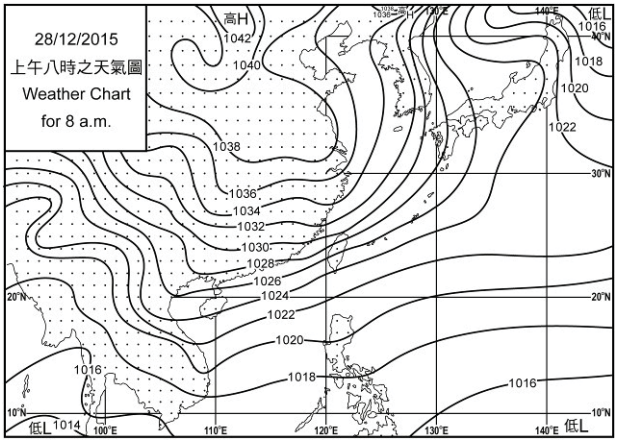
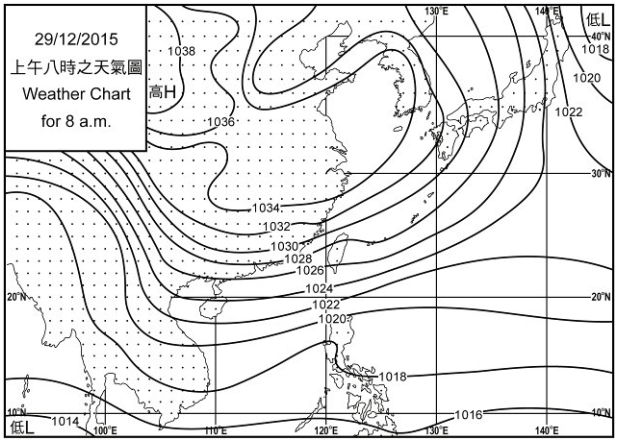

24/12/2015
上午八時之天氣圖
Weather Chart
for 8 a.m.

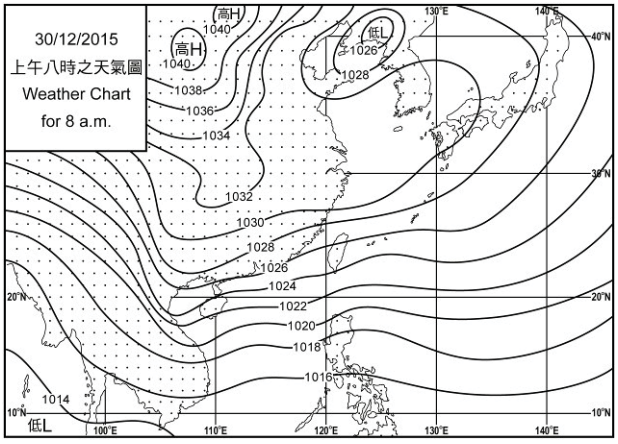

25/12/2015
上午八時之天氣圖
Weather Chart
for 8 a.m.

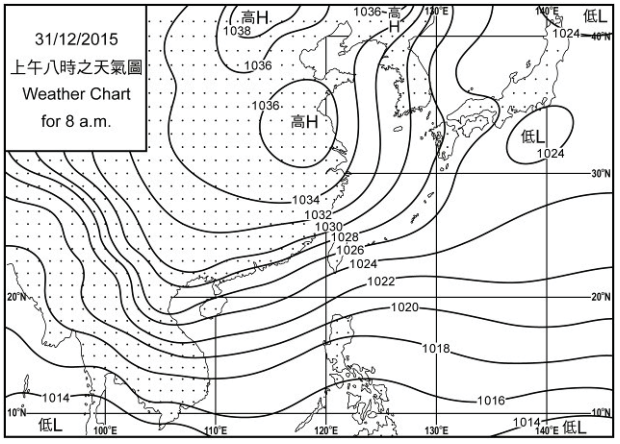

26/12/2015
上午八時之天氣圖
Weather Chart
for 8 a.m.


27/12/2015
上午八時之天氣圖
Weather Chart
for 8 a.m.


28/12/2015
上午八時之天氣圖
Weather Chart
for 8 a.m.


29/12/2015
上午八時之天氣圖
Weather Chart
for 8 a.m.


30/12/2015
上午八時之天氣圖
Weather Chart
for 8 a.m.


31/12/2015
上午八時之天氣圖
Weather Chart
for 8 a.m.

4.1.1 二零一五年十二月香港氣象觀測摘錄(一)

4.1.1 Extract of Meteorological Observations in Hong Kong (Part 1), December 2015

日期 Date	平均氣壓 Mean Pressure	氣溫 Air Temperature 最高 Maximum	氣溫 Air Temperature 平均 Mean	氣溫 Air Temperature 最低 Minimum	平均露點溫度 Mean Dew Point Temperature	平均相對濕度 Mean Relative Humidity	平均雲量 Mean Amount of Cloud	總雨量 Total Rainfall
十二月 December	百帕斯卡 hPa	°C	°C	°C	°C	%	%	毫米 mm
1	1017.6	25.1	22.9	22.0	19.0	79	85	-
2	1017.1	25.0	23.3	22.2	19.6	80	69	Tr
3	1019.4	22.3	20.8	19.6	16.5	77	93	Tr
4	1021.1	21.0	19.5	18.4	14.9	75	88	Tr
5	1018.4	20.3	18.4	15.7	15.8	85	91	15.7
6	1021.3	18.1	16.6	15.4	12.2	76	91	1.0
7	1023.1	19.3	17.3	15.4	12.1	72	86	-
8	1022.2	19.0	18.0	17.0	14.1	78	90	0.7
9	1016.8	18.9	17.7	16.9	16.8	95	95	44.6
10	1015.5	20.9	19.3	17.6	16.8	86	80	Tr
11	1016.4	23.0	19.9	17.9	15.5	76	72	-
12	1016.2	20.7	20.0	19.4	17.1	83	88	-
13	1016.4	21.0	20.4	19.7	17.8	85	83	Tr
14	1016.6	21.3	20.4	19.1	17.3	82	84	Tr
15	1019.0	20.4	18.4	16.0	12.6	69	70	Tr
16	1022.5	17.2	15.2	13.4	4.3	49	11	-
17	1025.9	15.2	13.2	11.5	-0.4	39	25	-
18	1026.4	16.5	13.9	11.3	3.1	48	11	-
19	1025.4	18.2	16.2	13.8	8.7	62	71	-
20	1022.5	18.6	17.6	17.0	12.9	75	88	0.7
21	1021.3	21.1	19.4	17.1	16.2	82	87	Tr
22	1020.3	20.6	19.9	18.7	17.6	87	88	0.6
23	1017.8	22.3	21.1	19.8	19.6	91	79	Tr
24	1016.8	24.7	22.3	21.1	20.7	91	70	Tr
25	1020.4	21.4	18.2	16.1	13.5	75	89	0.2
26	1020.6	19.7	17.9	16.9	13.3	74	87	-
27	1022.7	18.8	17.7	16.9	15.0	84	90	0.4
28	1026.6	18.6	17.3	16.3	12.8	75	85	Tr
29	1025.9	18.9	17.7	16.4	13.3	75	78	Tr
30	1025.3	19.2	17.3	15.2	13.3	78	86	0.4
31	1026.4	20.5	17.8	15.5	13.0	74	66	Tr
平均/總值 Mean/Total	1020.8	20.3	18.6	17.1	14.0	76	77	64.3
正常* Normal*	1020.5	20.2	17.9	15.9	11.9	69	52	26.8
觀測站 Station	天文台 Hong Kong Observatory							

天文台於十二月九日 16 時 11 分錄得本月最低氣壓 1013.1 百帕斯卡。
The minimum pressure recorded at the Hong Kong Observatory was 1013.1 hectopascals at 1611 HKT on 9 December.

天文台於十二月一日 12 時 48 分錄得本月最高氣溫 25.1 °C。
The maximum air temperature recorded at the Hong Kong Observatory was 25.1 °C at 1248 HKT on 1 December.

天文台於十二月十八日 5 時 29 分錄得本月最低氣溫 11.3 °C。
The minimum air temperature recorded at the Hong Kong Observatory was 11.3 °C at 0529 HKT on 18 December.

京士柏於十二月九日 18 時 42 分錄得本月最高瞬時降雨率 146 毫米/小時。
The maximum instantaneous rate of rainfall recorded at King's Park was 146 millimetres per hour at 1842 HKT on 9 December.

* 1981-2010 氣候平均值（除特別列明外） *(http://www.hko.gov.hk/wxinfo/climat/normal/cnormal12.htm)*

* 1981-2010 Climatological normal, unless otherwise specified *(http://www.hko.gov.hk/wxinfo/climat/normal/enormal12.htm)*

Tr - 微量 (降雨量少於 0.05 毫米)

Tr - Trace of rainfall (amount less than 0.05 mm)

4.1.2 二零一五年十二月香港氣象觀測摘錄(二)

4.1.2 Extract of Meteorological Observations in Hong Kong (Part 2), December 2015

日期 Date	出現低能見度的時數# Number of hours of Reduced Visibility#	總日照 Total Bright Sunshine	每日太陽總輻射 Daily Global Solar Radiation	總蒸發量 Total Evaporation	盛行風向 Prevailing Wind Direction	平均風速 Mean Wind Speed
十二月 December	小時 hours	小時 hours	兆焦耳/米^2 MJ/m^2	毫米 mm	度 degrees	公里/小時 km/h
1	5	2.0	9.78	2.7	070	25.0
2	1	6.3	13.26	3.4	070	15.9
3	0	-	2.41	1.9	020	27.9
4	0	0.6	8.60	1.2	050	37.9
5	0	0.1	1.97	2.9	070	41.3
6	0	0.1	6.42	2.6	010	28.4
7	0	0.9	8.95	2.3	010	21.8
8	0	-	2.76	1.0	030	28.5
9	0	-	1.66	0.9	060	35.1
10	7	5.1	11.86	1.2	020	10.2
11	0	6.3	12.58	2.3	060	20.7
12	3	0.2	4.31	0.6	070	39.5
13	8	-	4.31	1.8	070	30.3
14	2	0.4	5.42	2.1	050	20.3
15	0	2.2	8.42	3.6	010	26.8
16	8	9.3	15.54	6.7	010	48.0
17	0	9.1	16.46	4.0	020	35.6
18	0	9.5	16.39	2.5	040	25.2
19	0	2.1	6.00	1.2	030	29.0
20	4	-	2.39	1.8	040	19.0
21	6	1.6	8.46	1.7	050	22.5
22	0	0.3	5.33	1.0	060	27.3
23	1	-	5.50	1.1	040	15.0
24	0	6.0	13.40	2.7	040	9.4
25	0	0.7	5.97	3.0	010	27.6
26	7	0.6	6.14	2.5	030	21.6
27	7	-	2.60	1.2	030	18.4
28	0	1.0	5.75	1.6	020	25.9
29	8	4.6	11.50	2.5	070	33.4
30	15	1.2	8.82	2.6	020	20.9
31	19	5.7	11.60	2.3	020	23.3
平均/總值 Mean/Total	101	75.9	7.89	68.9	020	26.2
正常* Normal*	231.8 §	172.2	10.89	83.7	070	26.0
觀測站 Station	香港國際機場 Hong Kong International Airport		京士柏 King's Park		橫瀾島^ Waglan Island^	

橫瀾島於十二月十六日 19 時 56 分錄得本月最高陣風 75 公里/小時，風向 020 度。

The maximum gust peak speed recorded at Waglan Island was 75 kilometres per hour from 020 degrees at 1956 HKT on 16 December.

\# 低能見度是指能見度低於 8 公里，不包括出現霧、薄霧或降水。

- 在2004年及以前，香港國際機場的能見度讀數是基於專業氣象觀測員每小時的觀測數據。在2005年及以後，讀數是採用位於機場南跑道中間的能見度儀表在每小時前10分鐘的平均數據。這與使用儀器觀測來改進能見度評估的國際趨勢是一致的。
- 在2007年10月10日前曾出現於此摘錄內香港國際機場2005年及以後的低能見度時數資料乃基於專業氣象觀測員每小時的觀測數據。有關資料已於2007年10月10日起改為以機場南跑道中間之能見度儀表在每小時前10分鐘的平均數據計算。

\# Reduced visibility refers to visibility below 8 kilometres when there is no fog, mist, or precipitation.

- 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 summary 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.

^ 如橫瀾島未能提供數據，則以長洲或其他鄰近氣象站的數據作補充，以計算盛行風向和平均風速。

^ In case the data are not available from Waglan Island, observations of Cheung Chau or other nearby weather stations will be incorporated in computing the Prevailing Wind Direction and Mean Wind Speed.

* 1981-2010 氣候平均值（除特別列明外） *(http://www.hko.gov.hk/wxinfo/climat/normal/cnormal12.htm)*

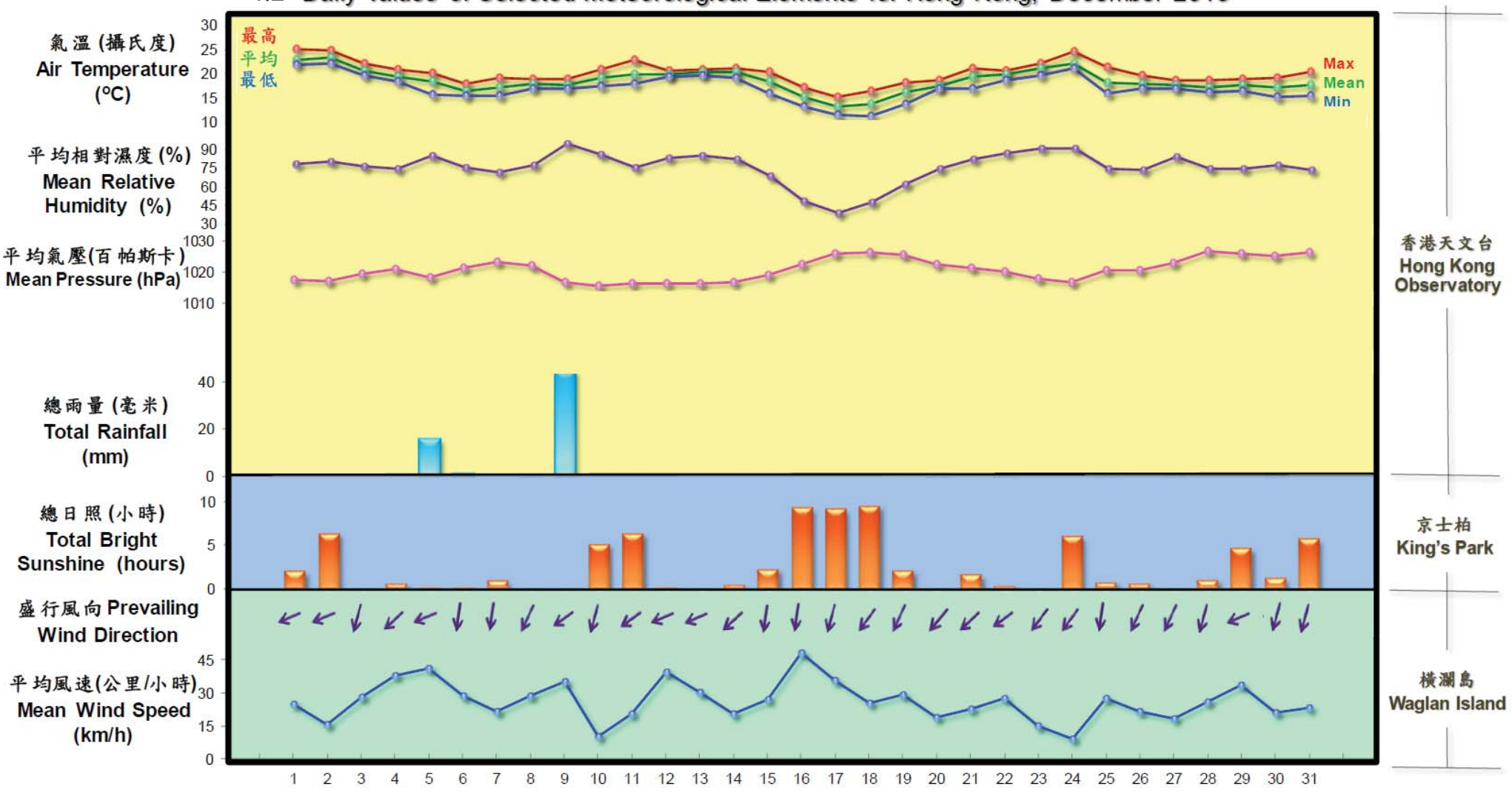
* 1981-2010 Climatological normal, unless otherwise specified *(http://www.hko.gov.hk/wxinfo/climat/normal/enormal12.htm)*

§ 1997-2014 平均值

§ 1997-2014 Mean value

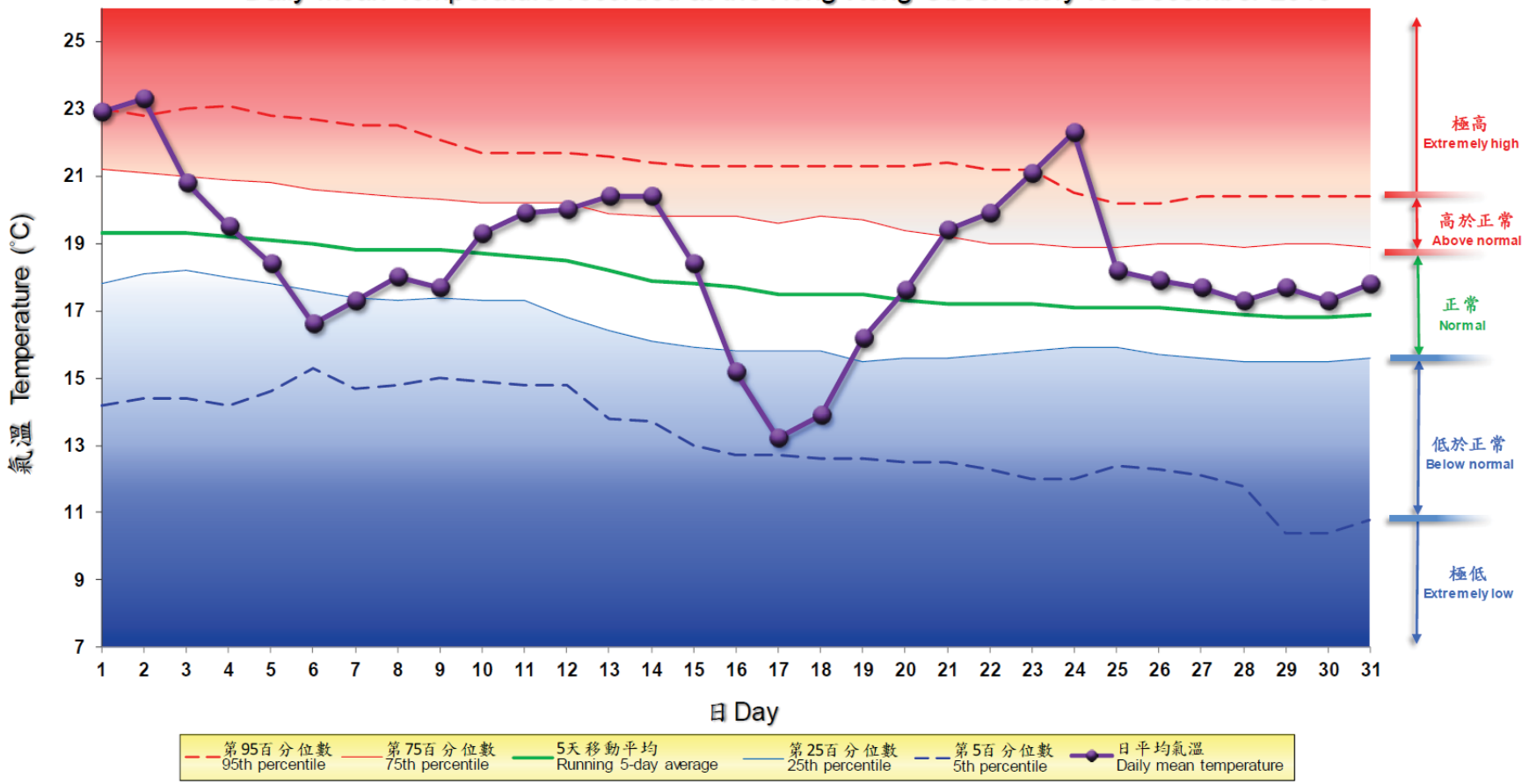
4.2 2015年12月部分香港氣象要素的每日記錄

4.2 Daily Values of Selected Meteorological Elements for Hong Kong, December 2015



4.3 2015年12月香港天文台錄得的日平均氣溫

4.3 Daily Mean Temperature recorded at the Hong Kong Observatory for December 2015



備註:
極高: 高於第 95 百分位數
高於正常: 介乎第 75 和第 95 百分位數之間
正常: 介乎第 25 和第 75 百分位數之間
低於正常: 介乎第 5 和第 25 百分位數之間
極低: 低於第 5 百分位數
百分位數值及 5 天移動平均值是基於 1981 至 2010 年的數據計算所得

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 1981 to 2010

5. 二零一五年天氣概況

根據世界氣象組織的初步評估，2015 年可能是自 1850 年全球有記錄以來最溫暖的年份。2015 年 9 月北極海冰最少面積為有記錄以來的第四低。此外，2015 年多宗極端天氣事件在全球各處肆虐，當中包括印度、巴基斯坦南部、非洲北部、南非、中東、澳洲南部及歐洲多處地方的熱浪；美國波士頓及伍斯特地區的雪災；北美洲西部、南非、俄羅斯、智利南部、巴西及印尼的乾旱；美國南部、墨西哥、歐洲東南部、英國、巴基斯坦、中國及阿根廷的洪澇及暴雨；美國南部、緬甸、日本及也門由熱帶氣旋引起的滂沱大雨。

2014 年 5 月厄爾尼諾現象開始在赤道太平洋中部和東部形成並持續到 2015 年。海水表面溫度在這期間持續及顯著變暖，在夏季後期發展為強展厄爾尼諾事件，亦創出自 1950 年以來最長紀錄。

在全球變暖的背景下，2015 年亦是香港有記錄以來最溫暖的一年，全年平均氣溫為 24.2 度，比 1981-2010 年氣候正常值[1]高 0.9 度(或較 1961-1990 年氣候正常值高 1.2 度)。2015 年 6 月、11 月、夏季(6 至 8 月)及秋季(9 月至 11 月)的平均氣溫皆是香港自 1884 年有記錄以來的最高紀錄。

在極端氣溫方面，2015 年酷熱天氣日數[2] 共有 28 天，熱夜日數[3] 共有 37 天，分別為香港有記錄以來的第五高及最高。全年寒冷天氣日數[4] 只有 7 天，比 1981-2010 年氣候正常值少約 10 天，是有記錄以來其中一個最低紀錄。天文台於 8 月 8 日錄得創新高紀錄的 36.3 度最高氣溫，而最低氣溫為 1 月 14 日的 10.3 度，是有記錄以來第二最高紀錄。

2015 年比正常少雨。全年雨量只有 1874.5 毫米，較 1981-2010 年氣候正常值 2398.5 毫米少約百分之 22 (較 1961-1990 年氣候正常值少約百分之 15)。天文台錄得的雷暴日數共 37 天，大致與 1981-2010 年氣候正常值相約。受低壓槽影響，本港於 5 月 26 日出現滂沱大雨及強烈雷暴，天文台需要發出黑色暴雨警告。

2015 年共有 27 個熱帶氣旋影響北太平洋西部及南海，比長期平均(1961-2010)的約 30 個為少。全年有 20 個熱帶氣旋達到颱風或以上強度[5]，比長期平均約 15 個為多，當中有 13 個熱帶氣旋達超強颱風程度(中心附近最高十分鐘持續風速達到每小時 185 公里或以上)，是自 1961 年有完整記錄以來最高。年內有 3 個熱帶氣旋引致香港天文台發出熱帶氣旋警告信號，比長期年平均約 6 個為少。其中颱風蓮花在 7 月襲港期間需要發出八號烈風或暴風信號。

至於各月份的詳細天氣論述，可參考「每月天氣摘要」網頁:
http://www.weather.gov.hk/wxinfo/pastwx/mws/mwsc_uc.htm

2015 年本港發生的重要天氣事件扼**述**如下：

5 月的不穩定天氣及黑色暴雨

本港 5 月天氣不穩定及有幾場大雨。華南一道與冷鋒相關的颱線於 5 月 11 日黃昏為本港帶來大驟雨及狂風雷暴，天文台需要發出 2015 年首個黃色暴雨警告。由於一道低壓槽徘徊於廣東沿岸地區，天文台於 5 月 20 日及 23 日先後兩次發出紅色暴雨警告，兩天的暴雨共為本港大部分地區帶來超過 150 毫米雨量。5 月 23 日的強烈雷暴更導致香港國際機場的運作一度嚴重受阻，數以百計航班受到影響。另一場急速發展的暴雨於 5 月 26 日為市區帶來超過 70 毫米雨量，而沙田、荃灣、西貢及馬鞍山的雨量更超過 100 毫米，天文台於當天發出 2015 年唯一的黑色暴雨警告。

8 月及 9 月沒有熱帶氣旋警告信號

8 月及 9 月期間沒有任何熱帶氣旋影響本港而無需發出熱帶氣旋警告信號，是自 1946 年以來的首次。受厄爾尼諾影響，熱帶氣旋生成位置較正常偏東，熱帶氣旋進入南海的機會因而減低。同時，這兩個月的西南氣流比正常偏弱，亦抑制了南海熱帶氣旋的形成。

夏季及秋季的高溫天氣

年內香港經歷了自 1884 年有記錄以來最炎熱的夏季。6 月至 8 月平均氣溫為 29.4 度，打破了 2014 年剛創下的 29.3 度紀錄。此外，2015 年 6 月是有記錄以來最炎熱的 6 月，月平均氣溫為 29.7 度。受颱風蘇迪羅的下沉氣流影響，2015 年 8 月 8 日天文台的最高氣溫飆升至 36.3 度，打破了 1990 年錄得的 36.1 度舊紀錄。

2015 年香港秋季亦異常溫暖。雖然 11 月持續受東北季候風影響，但月平均氣溫仍有 24.0 度，成為本港有記錄以來最溫暖的 11 月。而 9 月至 11 月天文台錄得的平均氣溫為 26.1 度，也是同期有記錄以來最高。

表 5.1.1　　2015 年破紀錄高溫天氣事件摘要

破紀錄事件 (自 1884 年有記錄以來)	日期/ 週期	新紀錄
1. 最高 6 月平均最高氣溫	2015 年 6 月	32.3°C
2. 最高 6 月平均氣溫	2015 年 6 月	29.7°C
3. 最高 6 月平均最低氣溫	2015 年 6 月	27.7°C
4. 最高 6 月酷熱天氣日數	2015 年 6 月	10 *
5. 最高 6 月熱夜數目	2015 年 6 月	13
6. 最高夏季平均氣溫	2015 年 6-8 月	29.4°C
7. 最高夏季平均最低氣溫	2015 年 6-8 月	27.4°C
8. 最高夏季酷熱天氣日數	2015 年 6-8 月	28 *
9. 最高日最高氣溫	2015 年 8 月 8 日	36.3°C
10. 最高日平均氣溫	2015 年 8 月 8 日	32.4°C
11. 最高 11 月平均氣溫	2015 年 11 月	24.0°C
12. 最高 11 月平均最低氣溫	2015 年 11 月	22.4°C
13. 最高秋季平均氣溫	2015 年 9-11 月	26.1°C
14. 最高秋季平均最低氣溫	2015 年 9-11 月	24.4°C
15. 最高全年熱夜數目	2015 年	37
16. 最低全年寒冷天氣日數	2015 年	7 *
17. 最高全年平均氣溫	2015 年	24.2°C
18. 最高全年平均最低氣溫	2015 年	22.4°C

*平最高/最低紀錄

附註：

[1] 1961-1990 年、1971-2000 及 1981-2010 年氣候正常值，可參考:
http://www.weather.gov.hk/cis/normal_c.htm。
除特別列明外，本文採用 1981-2010 氣候正常值。

[2] 酷熱天氣指當日最高氣溫達 33.0 度或以上。

[3] 熱夜天氣指當日最低氣溫在 28.0 度或以上。

[4] 寒冷天氣指當日最低氣溫在 12.0 度或以下。

[5] 熱帶氣旋分級資料可瀏覽 http://www.hko.gov.hk/informtc/classc.htm。

5. The Year's Weather – 2015

According to the World Meteorological Organization's preliminary assessment, 2015 is likely to be the warmest year globally since records began in 1850. Over the Arctic, the minimum sea ice extent in September 2015 was the fourth lowest on record. Moreover, notable extreme weather events wreaked havoc in many parts of the world in 2015, including heat waves in India, southern Pakistan, northern Africa, South Africa, the Middle East, southern Australia and many parts of Europe, snow storms in Boston and Worcester of the United States, drought in western North America, South Africa, Russia, southern Chile, Brazil and Indonesia, extreme rainfall and flooding in southern United States, Mexico, southeastern Europe, United Kingdom, Pakistan, China and Argentina, and torrential rain induced by tropical cyclones in southern United States, Myanmar, Japan and Yemen.

Over the central and eastern equatorial Pacific, the El Niño episode started in May 2014 and continued into 2015. The sea surface temperature warmed progressively and significantly during the course of the year, developing into a strong event by late summer and setting a record for the longest episode since 1950.

Against a background of global warming, 2015 also emerged as the warmest year in Hong Kong on record with an annual mean temperature of 24.2 degrees, 0.9 degrees above the 1981-2010 normal[1] (and1.2 degrees above the 1961-1990 normal). The mean temperatures for June, November, summer (June to August) and autumn (September to November) all ranked the highest since records began in 1884.

For extreme temperatures, there were 28 Very Hot Days[2] and 37 Hot Nights[3] in Hong Kong in 2015, ranking the fifth highest and the highest on record respectively. The number of Cold Days[4] in the year was only 7 days, 10 days below the 1981-2010 normal and one of the lowest on record. The maximum temperature recorded at the Hong Kong Observatory reached a record high of 36.3 degrees on 8 August, while the minimum temperature of 10.3 degrees recorded during the year on 14 January was the second highest on record.

The year 2015 was drier than normal in Hong Kong. The annual total rainfall was 1874.5 millimetres, a deficit of 22 percent comparing to the 1981-2010 normal of 2398.5 millimetres (and about 15 percent below the 1961-1990 normal). The number of days with thunderstorms reported in Hong Kong was 37 days in 2015, close to the 1981-2010 normal. Affected by a trough of low pressure, torrential rain and intense thunderstorms in Hong Kong necessitated the issuance of the Black Rainstorm Warning on 26 May.

A total of 27 tropical cyclones occurred over the western North Pacific and the South China Sea in 2015, less than the long-term (1961-2010) average of around 30. There were 20 tropical cyclones reaching typhoon intensity[5] or above during the year, more than the long-term average of about 15, and 13 of them reached super typhoon intensity (maximum 10-minute wind speed of 185 km/h or above near the centre), the highest since full records began in 1961. In Hong Kong, three tropical cyclones necessitated the issuance of local tropical cyclone warning signals, lower than the long-term average of about six in a year. The No. 8 Gale or Storm Signal was issued during the passage of Typhoon Linfa in July.

Detailed description of the weather for individual months is available on the Monthly Weather Summary webpage: http://www.hko.gov.hk/wxinfo/pastwx/mws.htm

Some significant weather events in Hong Kong in 2015 are highlighted below:

Unsettled Weather with Black Rainstorm in May

Local weather was unsettled with several heavy rain episodes in May. A squall line associated with a cold front from southern China brought heavy showers and squally thunderstorms to Hong Kong on the evening of 11 May 2015, necessitating the issuance of the first Amber Rainstorm Warning in the year. Two 'Red' rainstorm episodes associated with a trough of low pressure lingering over the coastal areas of Guangdong occurred on 20 and 23 May, bringing more than 150 millimetres of rain to most parts of the territory. The intense thunderstorms on 23 May also caused serious disruption to the operation of Hong Kong International Airport where hundreds of flights were affected. Another rapidly developed rainstorm brought more than 70 millimetres of rain to the urban areas and over 100 millimetres to Sha Tin, Tsuen Wan, Sai Kung and Ma On Shan on 26 May, necessitating the issuance of the only Black Rainstorm Warning in the year.

No Tropical Cyclone Warning Signal in August and September

No tropical cyclone warning signal was issued in Hong Kong in August and September 2015, the first time since 1946. This was mainly attributed to the El Niño event which favoured more tropical cyclones forming further to the east and hence making them less likely to enter the South China Sea, and the weaker-than-normal southwesterly airstream during the two-month period and hence suppressing tropical cyclone development over the South China Sea.

High Temperatures in Summer and Autumn

Hong Kong experienced the hottest summer ever since records began in 1884. The mean temperature for June to August 2015 reached 29.4 degrees, breaking the previous record of 29.3 degrees set only last year. Moreover, June 2015 was the hottest June on record with a monthly mean temperature of 29.7 degrees. Under the subsidence effect associated with Typhoon Soudelor, the temperature at the Hong Kong Observatory soared to a record-breaking 36.3 degrees on 8 August 2015, beating the previous extreme of 36.1 degrees set in 1990.

The weather in Hong Kong was also unseasonably warm in autumn. Despite the prevailing northeast monsoon in November, a monthly mean temperature of 24.0 degrees made it the warmest November ever. The mean temperature for September to November recorded at the Hong Kong Observatory was 26.1 degrees, the highest on record for the period.

Table 5.1.2 Summary of record-breaking high temperatures in 2015

Record-breaking Events (since records began in 1884)	Date / Period	New Record
1. Highest Mean Maximum Temperature for June	Jun 2015	32.3°C
2. Highest Mean Temperature for June	Jun 2015	29.7°C
3. Highest Mean Minimum Temperature for June	Jun 2015	27.7°C
4. Highest Number of Very Hot Days for June	Jun 2015	10 *
5. Highest Number of Hot Nights for June	Jun 2015	13
6. Highest Mean Temperature for summer	Jun-Aug 2015	29.4°C
7. Highest Mean Minimum Temperature for summer	Jun-Aug 2015	27.4°C
8. Highest Number of Very Hot Days for summer	Jun-Aug 2015	28 *
9. Highest Daily Maximum Temperature	8 Aug 2015	36.3°C
10. Highest Daily Mean Temperature	8 Aug 2015	32.4°C
11. Highest Mean Temperature for November	Nov 2015	24.0°C
12. Highest Mean Minimum Temperature for November	Nov 2015	22.4°C
13. Highest Mean Temperature for Autumn	Sep-Nov 2015	26.1°C
14. Highest Mean Minimum Temperature for Autumn	Sep-Nov 2015	24.4°C
15. Highest Annual Number of Hot Nights	2015	37
16. Lowest Annual Number of Cold Days	2015	7 *
17. Highest Annual Mean Temperature	2015	24.2°C
18. Highest Annual Mean Minimum Temperature	2015	22.4°C

* tied highest/lowest record

Notes :

[1] Climatological normals for the reference period of 1961-1990, 1971-2000 and 1981-2010 are available at : http://www.weather.gov.hk/cis/normal_e.htm. Climatological normals of 1981-2010 are referenced in the text unless otherwise stated.

[2] 'Very Hot Day' refers to the condition with the daily maximum temperature equal to or higher than 33.0 degrees.

[3] 'Hot Night' refers to the condition with the daily minimum temperature equal to or higher than 28.0 degrees.

[4] 'Cold Day' refers to the condition with the daily minimum temperature equal to or lower than 12.0 degrees.

[5] Information on the classification of Tropical Cyclones is available at : http://www.hko.gov.hk/informtc/class.htm

表 5.2.1 二零一五年香港氣象觀測摘要(一)

Table 5.2.1 Summary of Meteorological Observations in Hong Kong (Part1), 2015

月份 Month	平均氣壓 Mean Pressure	氣溫 Air Temperature			平均露點溫度 Mean Dew Point Temperature	平均相對濕度 Mean Relative Humidity	平均雲量 Mean Amount of Cloud	總雨量 Total Rainfall
		平均日最高 Mean Daily Maximum	平均 Mean	平均日最低 Mean Daily Minimum				
	百帕斯卡 hPa	°C	°C	°C	°C	%	%	毫米 mm
一月 January	1021.2	18.9	16.4	14.5	11.2	72	45	41.7
二月 February	1019.4	19.5	17.5	15.9	13.4	78	74	32.0
三月 March	1017.7	22.0	19.9	18.5	17.1	85	83	28.4
四月 April	1014.1	26.7	23.6	21.4	19.2	77	63	64.5
五月 May	1008.7	29.9	27.5	25.5	24.5	85	84	513.0
六月 June	1007.3	32.3	29.7	27.7	25.7	80	69	302.1
七月 July	1004.2	31.8	29.1	27.2	25.0	79	75	406.2
八月 August	1006.1	32.1	29.3	27.2	25.0	78	65	143.3
九月 September	1010.2	31.1	28.4	26.6	24.1	78	61	87.9
十月 October	1014.4	28.5	26.0	24.2	21.4	77	64	168.3
十一月 November	1017.5	26.1	24.0	22.4	20.0	79	66	22.8
十二月 December	1020.8	20.3	18.6	17.1	14.0	76	77	64.3
平均/總值 Mean/Total	1013.5	26.6	24.2	22.4	20.1	79	69	1874.5
正常* Normal*	1012.9	25.6	23.3	21.4	19.0	78	68	2398.5
觀測站 Station	天文台 Hong Kong Observatory							

香港天文台於七月九日 16 時 21 分錄得本年最低氣壓 993.8 百帕斯卡。
The annual minimum pressure recorded at the Hong Kong Observatory was 993.8 hectopascals at 1621 HKT on 9 July.

香港天文台於八月八日 15 時 51 分錄得本年最高氣溫 36.3 °C。
The annual maximum air temperature recorded at the Hong Kong Observatory was 36.3 °C at 1551 HKT on 8 August.

香港天文台於一月十四日 5 時 47 分錄得本年最低氣溫 10.3 °C。
The annual minimum air temperature recorded at the Hong Kong Observatory was 10.3 °C at 0547 HKT on 14 January.

橫瀾島於七月二十日 22 時 28 分錄得本年最高陣風 96 公里/小時，風向 230 度。
The annual maximum gust peak speed recorded at Waglan Island was 96 kilometres per hour from 230 degrees at 2228 HKT on 20 July.

* 1981-2010 氣候平均值 (http://www.weather.gov.hk/cis/normal/1981_2010/normals_c.htm)
* 1981-2010 Climatological normal (http://www.weather.gov.hk/cis/normal/1981_2010/normals_e.htm)

表 5.2.2 二零一五年香港氣象觀測摘要(二)

Table 5.2.2 Summary of Meteorological Observations in Hong Kong (Part2), 2015

月份 Month	出現低能見度的時數# Number of hours of Reduced Visibility#		總日照 Total Bright Sunshine	平均每日太陽總輻射 Mean Daily Global Solar Radiation	總蒸發量 Total Evaporation	盛行風向 Prevailing Wind Direction	平均風速 Mean Wind Speed
	小時 hours		小時 hours	兆焦耳/米^2 MJ/m^2	毫米 mm	度 degrees	公里/小時 km/h
一月 January	127	172	198.8	13.27	81.9	050	24.3
二月 February	162	209	97.5	10.72	66.4	040	22.2
三月 March	121	72	69.9	10.12	69.2	050	22.6
四月 April	15	16	159.2	15.74	112.9	020	18.2
五月 May	7	2	93.5	12.41	98.2&	210	20.1
六月 June	0	0	192.8	18.88	141.7&	220	20.3
七月 July	6	8	164.9	16.13	146.6&	210	20.4
八月 August	48	14	195.9	17.18	150.2&	220	12.8
九月 September	37	3	204.5	17.67	143.9	060	20.0
十月 October	60	26	172.8	13.40	103.2&	080	23.0
十一月 November	13	54	143.9	11.69	95.8	080	27.7
十二月 December	71	101	75.9	7.89	68.9	020	26.2
平均/總值 Mean/Total	667	677	1769.6	13.76	1278.9&	060	21.5
正常* Normal*	692.3	1347.3§	1835.6	12.85	1227.3	080	23.3
觀測站 Station	天文台 Hong Kong Observatory	香港國際機場 Hong Kong International Airport	京士柏 King's Park			橫瀾島^ Waglan Island^	

京士柏於六月十二日 9 時 57 分錄得本年最高瞬時降雨率 290 毫米/小時。

The annual maximum instantaneous rate of rainfall recorded at King's Park was 290 millimetres per hour at 0957 HKT on 12 June.

低能見度是指能見度低於 8 公里，不包括出現霧、薄霧或降水。
- 在2004年及以前，香港國際機場的能見度讀數是基於專業氣象觀測員每小時的觀測數據。在2005年及以後，讀數是採用位於機場南跑道中間的能見度儀表在每小時前10分鐘的平均數據。這與使用儀器觀測來改進能見度評估的國際趨勢是一致的。
- 在2007年10月10日前曾出現於此摘錄內香港國際機場2005年及以後的低能見度時數資料乃基於專業氣象觀測員每小時的觀測數據。有關資料已於2007年10月10日起改為以機場南跑道中間之能見度儀表在每小時前10分鐘的平均數據計算。

Reduced visibility refers to visibility below 8 kilometres when there is no fog, mist, or precipitation.
- 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 summary 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.

* 1981-2010 氣候平均值 (除特別列明外) (http://www.weather.gov.hk/cis/normal/1981_2010/normals_c.htm)

* 1981-2010 Climatological normal, unless otherwise specified (http://www.weather.gov.hk/cis/normal/1981_2010/normals_e.htm)

§ 1997-2014 平均值

§ 1997-2014 Mean value

& 數據不完整

& data incomplete

^ 如橫瀾島未能提供數據，則以長洲或其他鄰近氣象站的數據作補充，以計算盛行風向和平均風速

^ In case the data are not available from Waglan Island, observations of Cheung Chau or other nearby weather stations will be incorporated in computing the Prevailing Wind Direction and Mean Wind Speed

表 5.2.3 二零一五年香港氣象觀測摘要(三)

Table 5.2.3 Summary of Meteorological Observations in Hong Kong (Part3), 2015

月份 Month	酷熱天氣日數 Number of Very Hot days	熱夜日數 Number of Hot nights	寒冷天氣日數 Number of Cold days	雷暴日數 Number of days with Thunderstorm
一月 January	-	-	4	-
二月 February	-	-	1	-
三月 March	-	-	-	-
四月 April	-	-	-	-
五月 May	-	2	-	10
六月 June	10	13	-	4
七月 July	6	12	-	8
八月 August	12	8	-	9
九月 September	-	2	-	4
十月 October	-	-	-	2
十一月 November	-	-	-	-
十二月 December	-	-	2	-
平均/總值 Mean/Total	28	37	7	37
正常* Normal*	10.2	17.8	17.1	38.6
觀測站 Station	天文台 Hong Kong Observatory			

* 1981-2010 氣候平均值 (http://www.weather.gov.hk/cis/normal/1981_2010/normals_c.htm)
* 1981-2010 Climatological normal (http://www.weather.gov.hk/cis/normal/1981_2010/normals_e.htm)

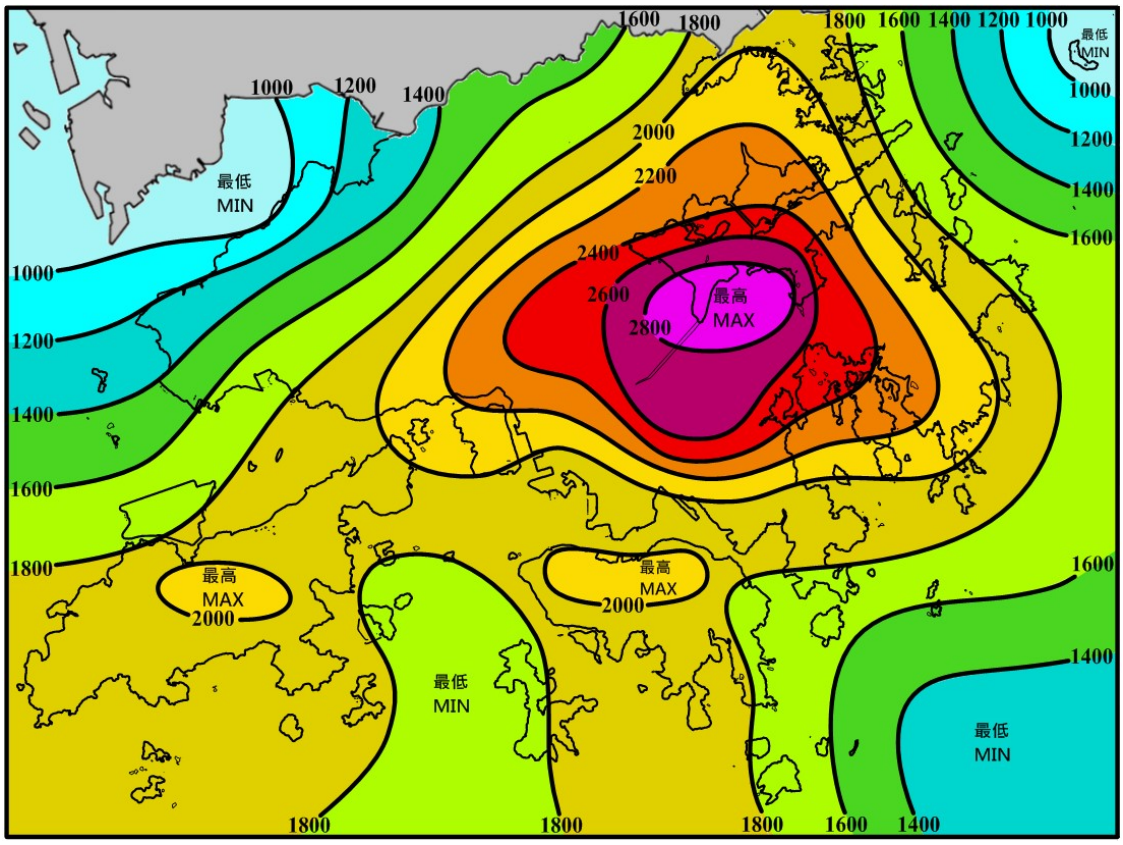


圖 5.1　　2015 年香港年雨量分布

Fig. 5.1　　Annual Rainfall Distribution in Hong Kong in 2015

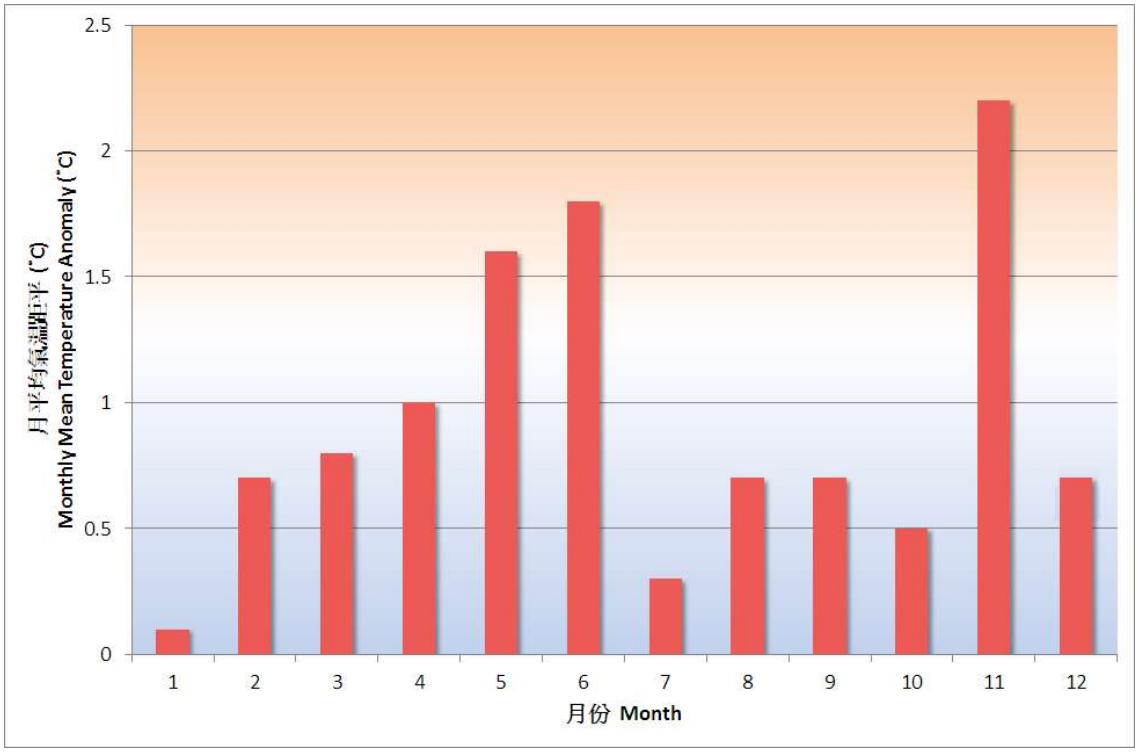


圖 5.2　　2015 年香港月平均氣溫距平

Fig. 5.2　　Monthly mean temperature anomalies in Hong Kong in 2015

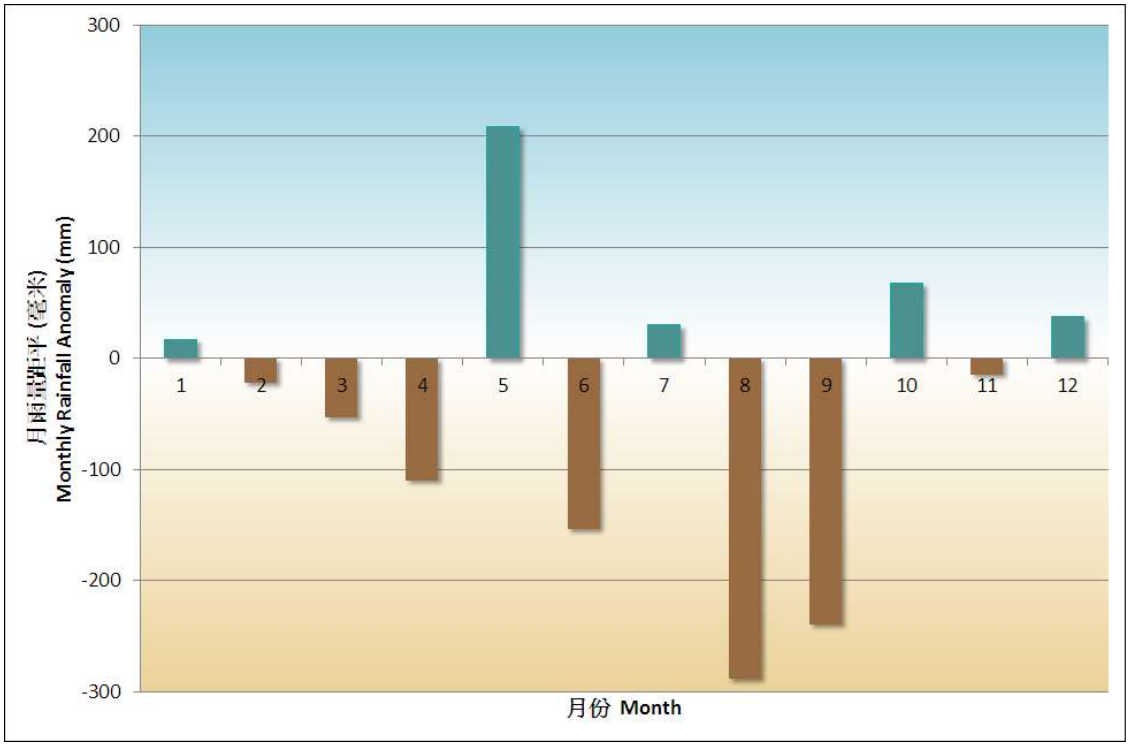


圖 5.3　　2015 年香港月雨量距平

Fig. 5.3　　Monthly rainfall anomalies in Hong Kong in 2015

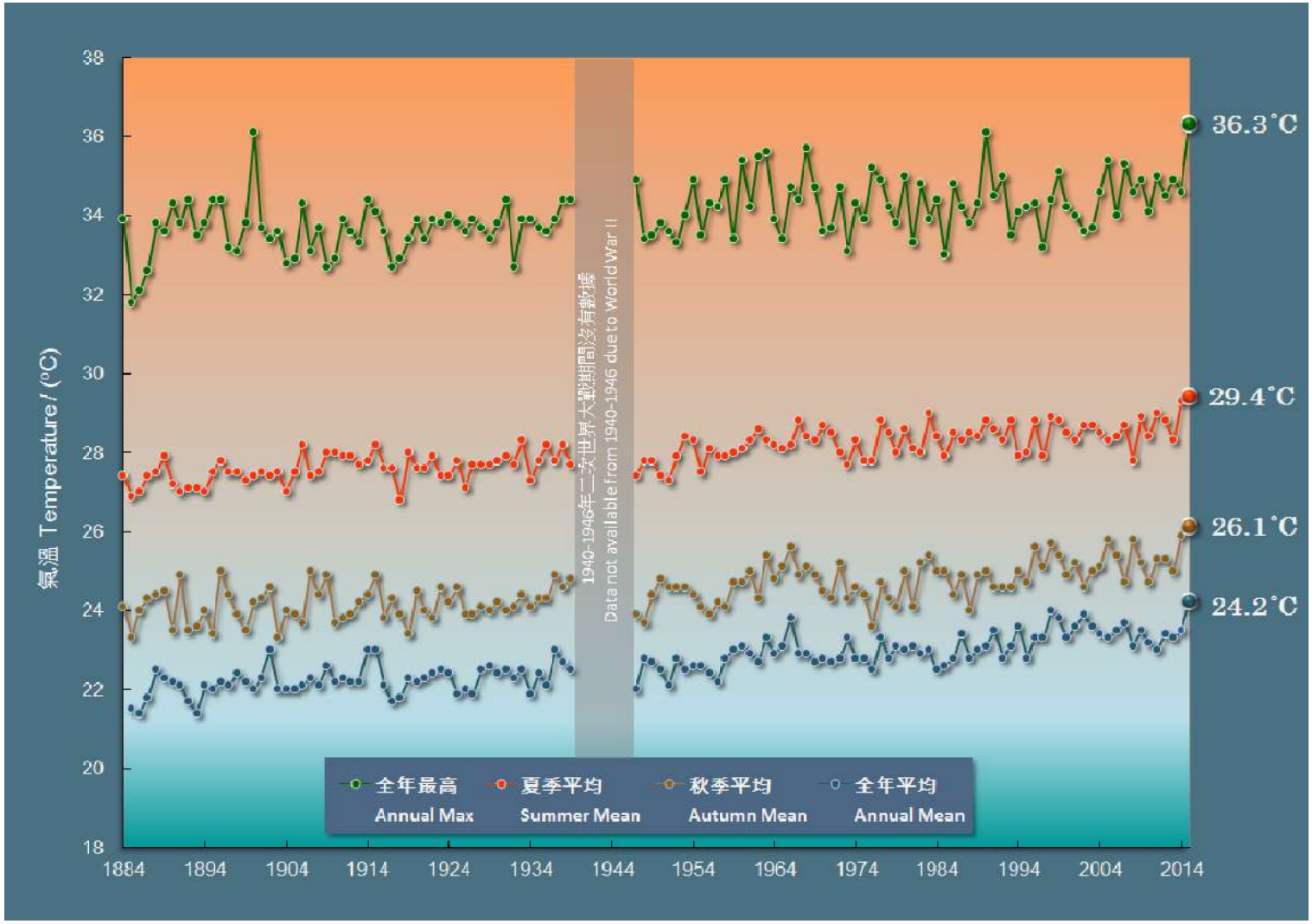


圖 5.4　香港天文台錄得的全年最高、全年平均氣溫、夏季平均氣溫及秋季平均氣溫的長期趨勢(1884-2015)

Fig. 5.4　Long-term trends of annual maximum, annual mean, summer mean and autumn mean temperatures recorded at the Hong Kong Observatory (1884-2015)

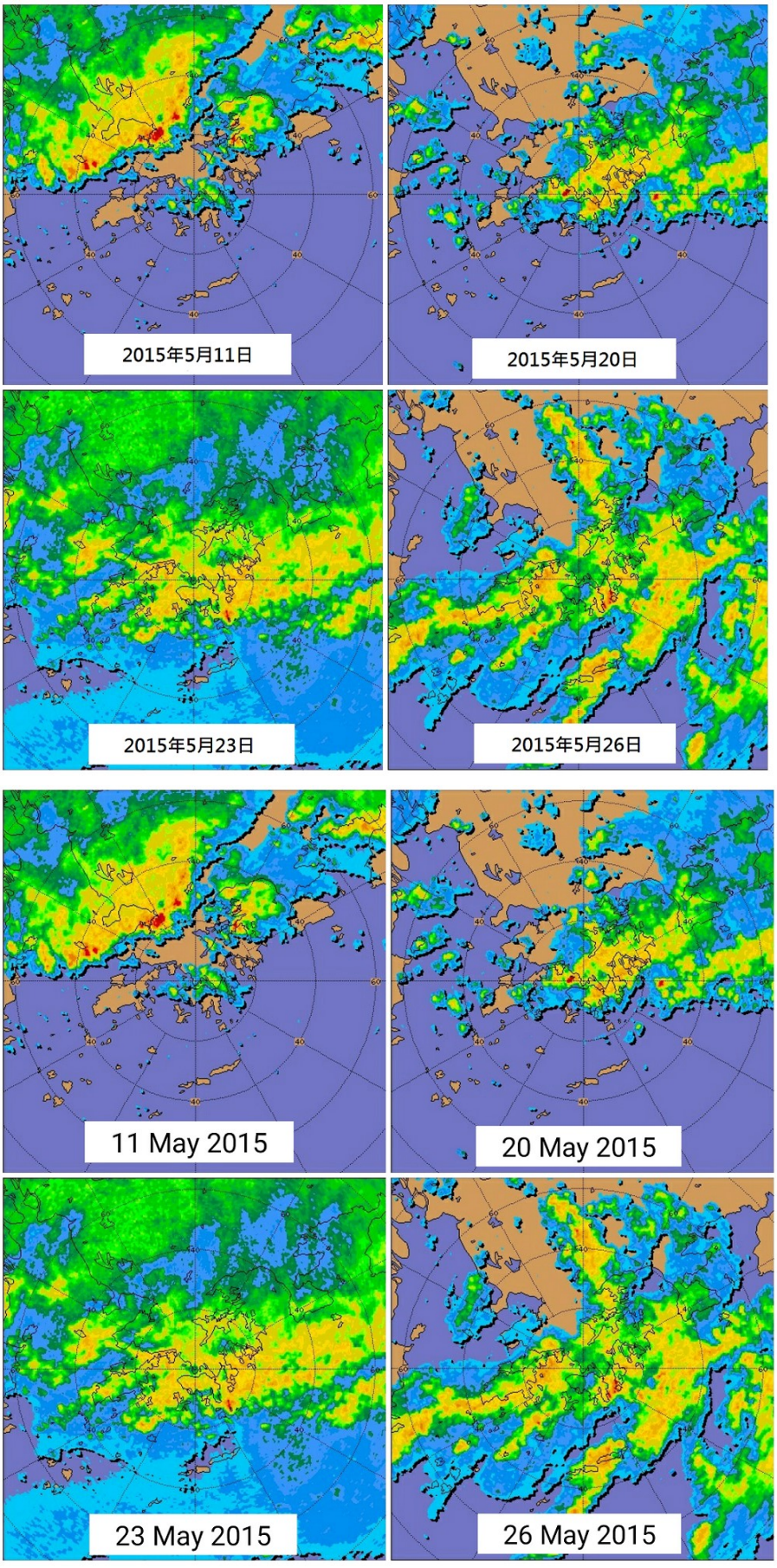


圖 5.5　5 月期間影響香港四場大雨的雷達回波圖像

Figure 5.5　Radar echoes for the four rainstorm episodes affecting Hong Kong in May 2015

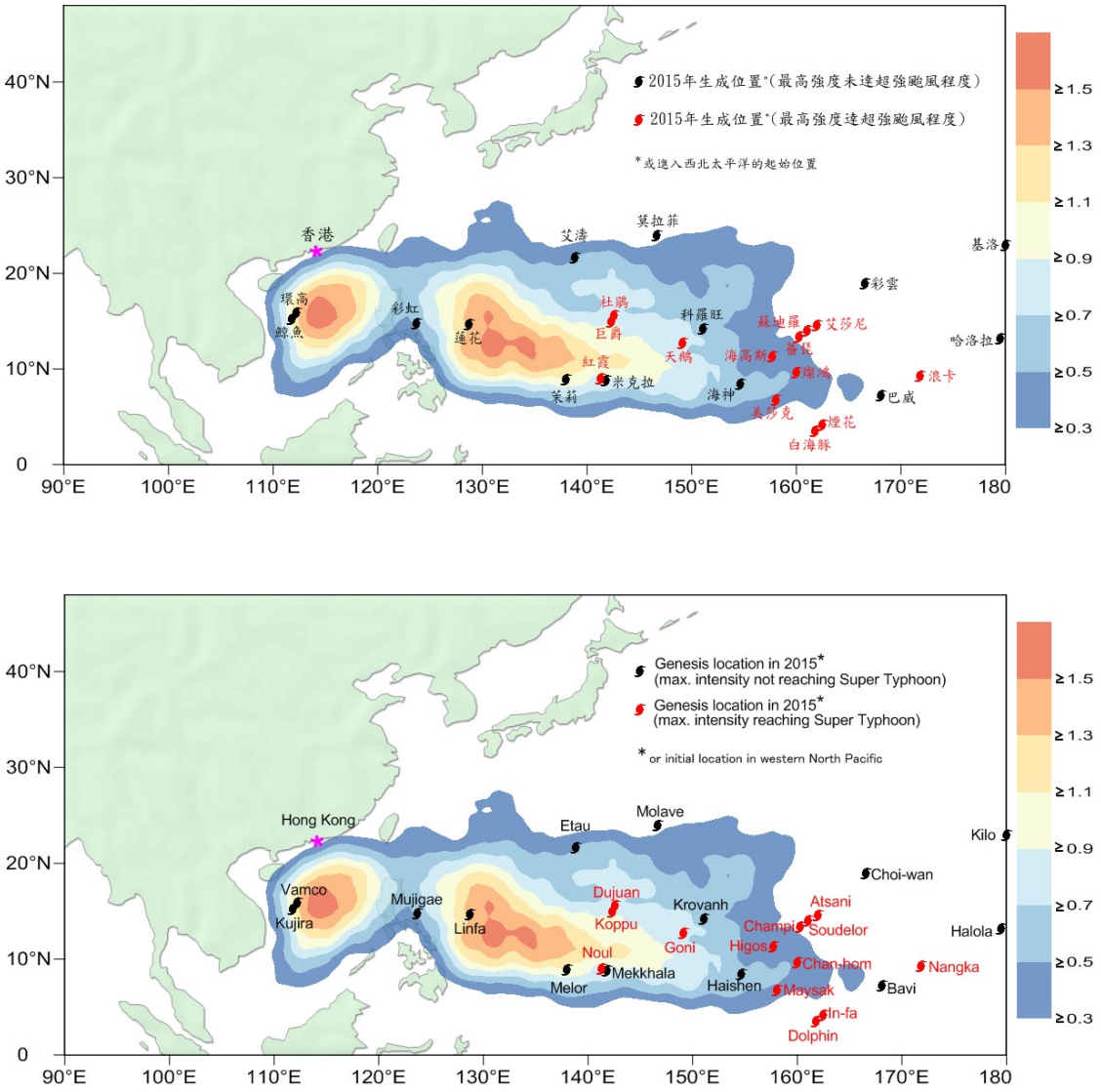


圖 5.6　2015 年熱帶氣旋生成位置較(1961-2010)年長期平均位置(顏色陰影背景)偏東。

Fig. 5.6　Tropical cyclone genesis positions in 2015 were displaced further east comparing with the long-term (1961-2010) yearly average of tropical cyclone genesis distribution (colour-shaded area in the background)