每月天氣摘要
二零一三年十一月

Monthly Weather Summary
November 2013

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二零一三年十二月出版

香港天文台編製
香港九龍彌敦道134A

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1. 二零一三年十一月天氣回顧

主要受強颱風羅莎及超強颱風海燕的影響，二零一三年十一月比正常多雨。本月總雨量為 83.1 毫米，為正常數值 37.6 毫米的兩倍以上。而本年至今累積雨量為 2759.0 毫米，較同期正常數值 2371.6 毫米多約百分之 16。本月亦較正常陰暗，總日照時間為 133.4 小時，較正常少約百分之 26。而本月的平均氣溫為 21.7 度，稍低於正常數值 21.8 度。

受華南一道高壓脊影響，本月首天本港天氣晴朗及乾燥。同時，颱風羅莎於當日早上進入南海，並於隨後兩天靠近廣東沿岸。受羅莎的雨帶影響，十一月二日及三日本港轉為多雲及有幾陣驟雨。

隨著羅莎於十一月四日減弱及遠離本港，與東北季候風相關的雲雨帶於十一月四日及五日為本港帶來幾陣雨。隨著雲層逐漸轉薄，本港於其後四天部分時間有陽光。

在北太平洋西部，超強颱風海燕於十一月八日向西移動及橫掃菲律賓中部。海燕稍後在南海逐漸減弱為一個颱風，並於十一月十一日早上在越南北部登陸。在海燕及東北季候風的共同影響下， 十一月九日至十一日本港風勢頗大、多雲及有幾陣雨。隨著海燕在廣西減弱為一個低壓區，海燕的殘餘及強烈東北季候風於十一月十二日持續為本港帶來風勢頗大及有雨的天氣。

隨著一股東北季候風補充的抵達，本港於十一月十三日天氣稍涼及有幾陣雨。十一月十四日雲層消散，下午天色轉晴。在一股乾燥的東北季候風支配下，隨後四天天氣持續普遍晴朗及乾燥。十一月十九日及二十日雲層再度覆蓋廣東沿岸。

受一股清勁至強風程度的偏東氣流影響，本港於十一月二十一日及二十二日大致多雲及有幾陣微雨。雲層於十一月二十三日轉薄，日間部分時間有陽光。同時，在華中的一道冷鋒於十一月二十四日向南移動，並於當晚橫過廣東沿岸。當冷鋒於傍晚橫過本港時，本港天氣轉為多雲及有幾陣狂風驟雨。

受冷鋒後的一股乾燥東北季候風影響，十一月二十五日及二十六日天氣較涼及乾燥。十一月二十七日初時天氣大致天晴，隨著一股強烈東北季候風補充抵達廣東沿岸地區，本港下午轉為多雲及有幾陣雨。受一道與東北季候風相關的寒流影響，十一月二十八日至三十日天氣轉為相當清涼。天文台於十一月二十八日早上錄得的氣溫降至最低 12.8 度，為本月最低，而本月最後兩天亦為天晴及非常乾燥。

本月有四個熱帶氣旋影響南海及北太平洋西部。

本月沒有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 November 2013

Mainly attributed by Severe Typhoon Krosa and Super Typhoon Haiyan, the weather of November 2013 was wetter than usual. The total rainfall of the month was 83.1 millimetres, more than double of the normal figure of 37.6 millimetres. The accumulated rainfall since 1 January was 2759.0 millimetres, about 16 percent above the normal figure of 2371.6 millimetres for the same period. It was also gloomier than usual with 133.4 hours bright sunshine, about 26 percent below normal. The monthly mean temperature of 21.7 degrees was slightly below the normal figure of 21.8 degrees.

Under the dominance of a ridge of high pressure over southern China, it was fine and dry in Hong Kong on the first day of the month. Meanwhile, Typhoon Krosa moved into the South China Sea that morning and edged closer towards the Guangdong coast during the next two days. Affected by the rain bands of Krosa, local weather became cloudy with a few showers on 2 and 3 November.

As Krosa weakened and moved away from Hong Kong on 4 November, bands of clouds and rain associated with the northeast monsoon moved in and brought a few rain patches to the territory on 4 and 5 November. With clouds thinning out gradually, sunny periods appeared over the next four days.

Over the western North Pacific, Super Typhoon Haiyan moved westwards and swept across the central part of the Philippines on 8 November. It weakened gradually into a typhoon over the South China Sea and made landfall over the northern part of Vietnam on the morning of 11 November. Under the combined effect of Haiyan and the northeast monsoon, local weather became windy and cloudy with a few rain patches from 9 to 11 November. After Haiyan weakened into an area of low pressure over Guangxi, the remnant of Haiyan and the intense northeast monsoon continued to bring windy and rainy weather to Hong Kong on 12 November.

With the arrival of a replenishment of the northeast monsoon, local weather became slightly cooler on 13 November with a few rain patches. As the clouds broke, the weather became fine on the afternoon of 14 November. Under the dominance of a dry northeast monsoon, generally fine and dry conditions persisted over the territory over the next four days, before clouds returned to cover the coast of Guangdong on 19 and 20 November.

Affected by a fresh to strong easterly airstream, it was mainly cloudy with light rain patches on 21 and 22 November. Clouds thinned out with sunny periods during the day on 23 November. Meanwhile, a cold front over central China moved southwards on

24 November and crossed the coast of Guangdong that night. Locally, the weather turned cloudy with a few squally showers during the passage of the cold front in the evening.

Under the influence of a dry northeast monsoon behind the cold front, the weather was cooler and dry on 25 and 26 November. The weather stayed mostly fine at first on 27 November, but soon turned cloudy with a few rain patches in the afternoon as an intense replenishment of the northeast monsoon reached the coastal areas of Guangdong. Affected by a cold airstream associated with the northeast monsoon, it became rather cool from 28 to 30 November. The temperatures recorded at the Hong Kong Observatory fell to a minimum of 12.8 degrees on the morning of 28 November, the lowest of the month. The weather was also fine and very dry on the last two days of the month.

Four tropical cyclones occurred over the South China Sea and the western North Pacific in the month..

During the month, no aircraft was 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　二零一三年十一月發出的警告及信號

Table 1.1　Warnings and Signals issued in November 2013

熱帶氣旋警告信號
Tropical Cyclones Warning Signals

熱帶氣旋名稱 Name of Tropical Cyclone	信號 Signal Number	開始時間 Beginning Time		終結時間 Ending Time	
		日/月 day/month	時 hour	日/月 day/month	時 hour
羅莎 KROSA	1	1/11	1520	3/11	2250

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
9/11 28/11	1910 0230	12/11 28/11	2245 0945

雷暴警告
Thunderstorm Warning

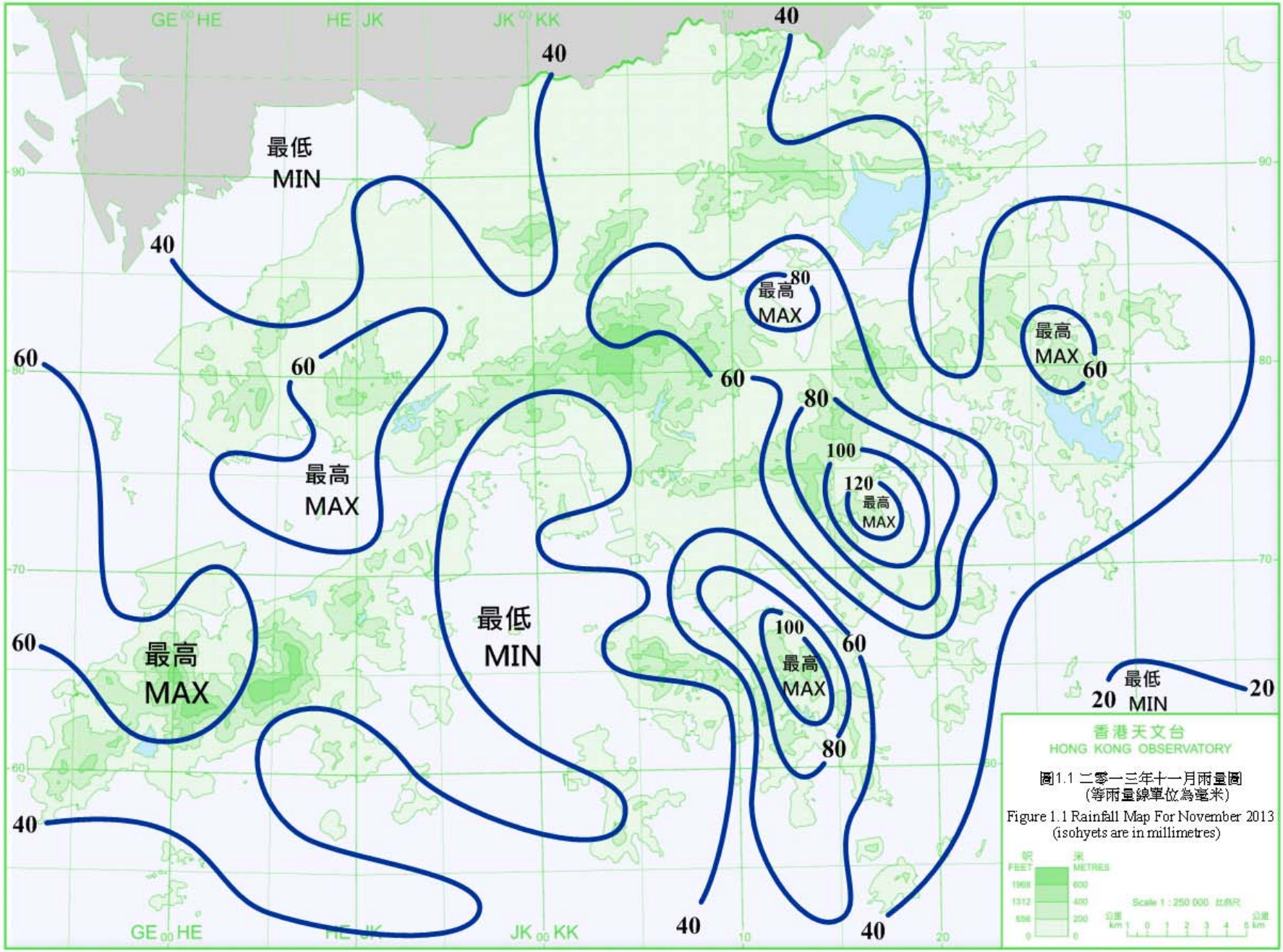
開始時間 Beginning Time		終結時間 Ending Time	
日/月 day/month	時 hour	日/月 day/month	時 hour
24/11	1725	24/11	1930

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	16/11	0600	17/11	0600
紅色 Red	17/11	0600	19/11	2100
紅色 Red	25/11	0600	26/11	0600
紅色 Red	29/11	0000	2/12	2145

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
28/11	1620	29/11	1145



H.K.O.128 (2009)

地政總署測繪處繪製
Cartography by Survey and Mapping Office, Lands Department.

2.1　二零一三年十一月熱帶氣旋概述

二零一三年十一月在北太平洋西部及南海區域出現了四個熱帶氣旋，其中，羅莎引致天文台需要發出熱帶氣旋警告信號。有關羅莎的詳細描述記載於第2.2 節。超強颱風海燕是本區域今年以來最強的熱帶氣旋，為菲律賓中部帶來重大傷亡及破壞。

熱帶低氣壓羅莎於十月二十九日在馬尼拉以東約1 580公里的北太平洋西部上空形成，並大致向西至西北偏西移動，翌日逐漸增強為強烈熱帶風暴。它於十月三十一日進一步增強為颱風，並橫過呂宋北端，於翌日進入南海北部。羅莎於十一月二日轉為移動緩慢及增強為強颱風，並達到其最高強度，中心附近最高持續風速為每小時165公里。它於十一月三日轉向西南移動，並逐漸減弱為熱帶風暴，翌日晚上在南海中部上消散。根據報章報導，羅莎在菲律賓造成三人死亡、兩人失蹤及超過17 000間房屋受損。

熱帶低氣壓海燕於十一月四日在關島之東南約1 240公里的北太平洋西部上空形成，並向西北偏西移動及逐漸增強，翌日在關島西南偏南約780公里增強成為颱風。它於十一月六日進一步增強成為超強颱風，於十一月八日達到其最高強度，中心附近最高持續風速為每小時275公里，其風眼在衛星圖像上清晰可見。海燕橫過菲律賓中部，於十一月九日進入南海並轉向西北移動，晚上在西沙之西南掠過及減弱為強颱風。翌日海燕橫過北部灣，並減弱為颱風。它於十一月十一日在越南北部沿岸登陸，並迅速減弱為熱帶低氣壓及轉向東北偏東移動，翌日在廣西消散。

根據報章報導，海燕吹襲菲律賓中部期間，為該區帶來廣泛水浸，及為沿岸地區帶來巨浪，觸發山泥傾瀉、引致多間房屋及樹木倒塌、電力供應中斷、海陸空交通癱瘓，超過6 000人死亡，約1 800人失蹤及23 000人受傷，直接經濟損失超過103億披索（約19億港元）。海燕在海南、廣西及廣東造成七人死亡，四人失蹤、超過9 400間房屋倒塌或受損、逾295萬公頃農地受災，直接經濟損失超過44億元人民幣。此外，海燕亦導致越南最少有13人死亡、81人受傷。雖然本港沒有直接受到海燕的影響，在海燕及東北季候風的共同影響下，本港風勢頗大，海面有大浪及出現湧浪，一人在大嶼山長沙游泳時失蹤，及後証實死亡。

一股熱帶低氣壓於十一月五日在南沙以東約320公里的南海南部上空形成，並向西至西北偏西移動。其中心附近最高持續風速為每小時55公里。該熱帶低氣壓於翌日在越南南部沿岸登陸後在內陸消散。

熱帶低氣壓楊柳於十一月十四日在南沙東北約130公里的南海南部上空形成，並向西至西北偏西移動。其中心附近最高持續風速為每小時55公里。楊柳於翌日在越南南部沿岸登陸後在內陸消散。楊柳為越南中部帶來豪雨，造成嚴重水浸，導致最少34人死亡，11人失蹤。

2.1 Overview of Tropical Cyclones in November 2013

Four tropical cyclones occurred over the western North Pacific and the South China Sea in November 2013. Amongst them, Krosa necessitated the issuance of tropical cyclone warning signals by the Hong Kong Observatory during the month. The detailed report of Krosa is presented in Section 2.2. Super Typhoon Haiyan was the most intense tropical cyclone in the region so far this year and it brought heavy casualties and damage to the central Philippines.

Krosa formed as a tropical depression over the western North Pacific about 1 580 km east of Manila on 29 October. Moving generally west to west-northwestwards, it intensified gradually into a severe tropical storm the following day. Krosa intensified further into a typhoon on 31 October and crossed the northern tip of Luzon. Krosa entered the northern part of the South China Sea on 1 November. It became slow moving and intensified into a severe typhoon over the northern part of the South China Sea on 2 November, reaching its peak intensity with estimated sustained winds of 165 km/h near its centre. Krosa turned southwestwards on 3 November and weakened gradually into a tropical storm, dissipating over the central part of the South China Sea during the night. According to press reports, three people were killed, two people were missing and more than 17 000 houses were damaged in the Philippines during the passage of Krosa.

Haiyan formed as a tropical depression over the western North Pacific about 1 240 km southeast of Guam on 4 November and moved west-northwestwards. Haiyan intensified gradually and became a typhoon about 780 km south-southwest of Guam the following day. It strengthened further into a super typhoon on 6 November, reaching its peak intensity with estimated sustained winds of 275 km/h near its centre on 8 November, with its eye clearly discernible on satellite images. Haiyan moved across the central Philippines and entered the South China Sea on 9 November. Turning northwestwards, it passed to the southwest of Xisha and weakened into a severe typhoon at night. It moved across Beibu Wan the following day and weakened into a typhoon. Haiyan made landfall over the coast of northern Vietnam on 11 November, weakened rapidly into a tropical depression and turned east-northeastwards. It dissipated over Guangxi the following day.

According to press reports, Haiyan caused widespread flooding in the central Philippines and brought hugh waves to coastal regions, resulting in landslides, collapsed houses, uprooted trees, power failure and disruption in sea and air traffic. Over 6 000 people were killed, around 1 800 people were reported missing, 23 000 people were injured and the direct economic loss exceeded 10.3 billion Pesos (around HK$1.9 billion) in the Philippines.

In Hainan Island, Guangxi and Guangdong, seven people were killed, four people were reported missing, over 9 400 houses collapsed or were damaged, and over 2.95 million hectares of farmland were damaged, with direct economic loss exceeding 4.4 billion RMB. In addition, at least 13 people were killed and 81 others were injured in Vietnam during the passage of Haiyan. Although Hong Kong was not directly in its path, one person was reported missing at Cheung Sha in Lantau Island and later confirmed dead after swimming in turbulent waves and swells whipped up by the high winds under the combined influence of Haiyan and the northeast monsoon.

A tropical depression formed over the southern part of the South China Sea about 320 km east of Nansha on 5 November and moved west to west-northwestwards. The estimated maximum sustained winds near its centre was about 55 km/h. The tropical depression made landfall over the coast of southern Vietnam the following day and dissipated inland.

Podul formed as a tropical depression over the southern part of the South China Sea about 130 km northeast of Nansha on 14 November and moved west to west-northwestwards. The estimated maximum sustained winds near its centre was about 55 km/h. Podul dissipated inland after making landfall over the coast of southern Vietnam the following day. Podul brought heavy rain and severe flooding to the central part of Vietnam, where at least 34 people were killed and 11 others were reported missing.

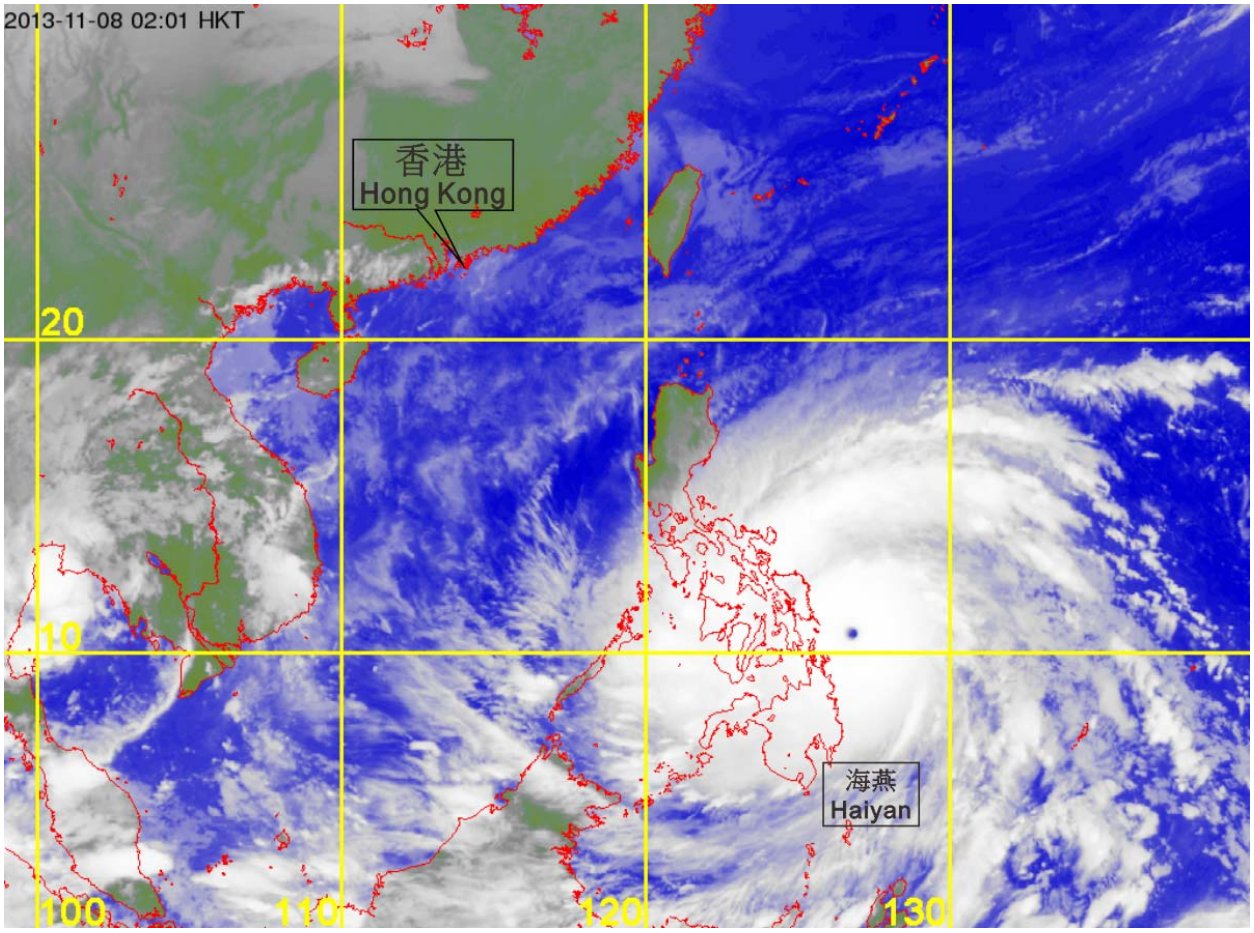


圖 2.1.1　二零一三年十一月八日上午 2 時的紅外線衛星圖片，當時海燕達到超強颱風強度，中心附近最高持續風速估計為每小時 275 公里，是今年以來最強的熱帶氣旋。

Figure 2.1.1　Infra-red satellite imagery at 2 a.m. on 8 November 2013, as Haiyan, the most intense tropical cyclone so far this year, reached super typhoon intensity with estimated maximum sustained winds of 275 kilometres per hour near its centre.

〔此衛星圖像接收自日本氣象廳的多用途輸送衛星-2。〕

[The satellite imagery was originally captured by the Multi-functional Transport Satellite-2 (MTSAT-2) of Japan Meteorological Agency (JMA).]

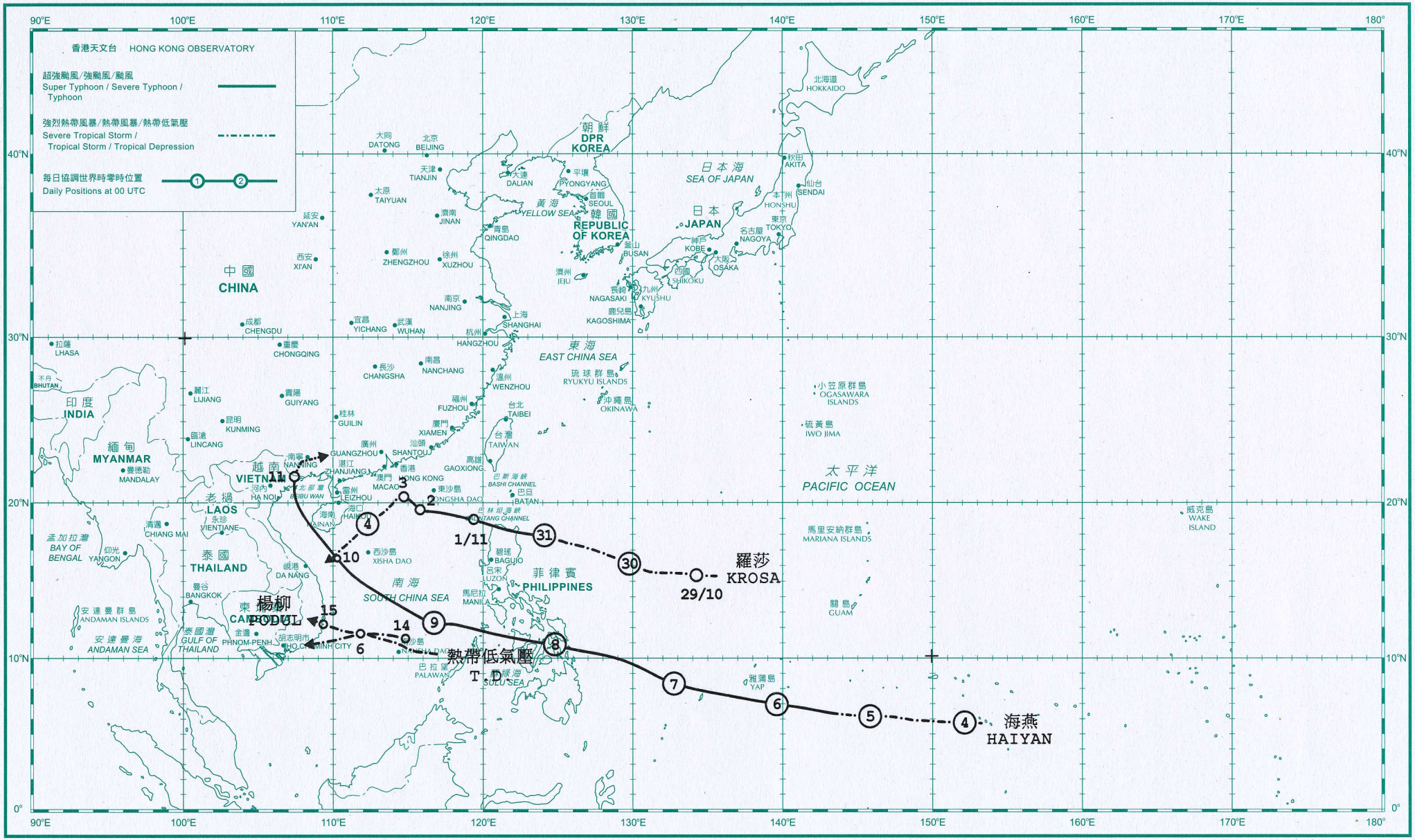


圖 2.1.2 二零一三年十一月的熱帶氣旋路徑圖

Figure 2.1.2 Track of tropical cyclones in November 2013

2.2 強颱風羅莎 (1329)
二零一三年十月二十九日至十一月四日

羅莎是香港天文台在二零一三年第七個需要發出熱帶氣旋警告信號的熱帶氣旋，也是自二零零六年以來天文台首個在十一月需要發出信號的熱帶氣旋。

熱帶低氣壓羅莎於十月二十九日在馬尼拉以東約1 580公里的北太平洋西部上空形成，並大致向西至西北偏西移動，翌日逐漸增強為強烈熱帶風暴。它於十月三十一日進一步增強為颱風，並橫過呂宋北端。下午八時，呂宋北端上的阿巴里錄得的持續風速為每小時108公里。羅莎於翌日進入南海北部，於十一月二日移動轉為緩慢及增強為強颱風，並達到其最高強度，中心附近最高持續風速為每小時165公里。羅莎的環流較小但組織相當緊密，其風眼在衛星雲圖上清晰可見。羅莎於十一月三日凌晨減弱為颱風。隨著一股東北季候風的補充逐步擴展至南海北部，傍晚時羅莎轉向西南移動及減弱為熱帶風暴。它於翌日繼續減弱為熱帶低氣壓，晚上在越南中部沿岸地區附近的南海中部上消散。根據報章報道，羅莎在菲律賓造成三人死亡、兩人失蹤及超過17 000間房屋受損。

香港天文台於十一月一日下午3時20分發出一號戒備信號，當時羅莎位於香港之東南約520公里。當日本港吹和緩東北風，晚上高地間中吹強風。隨後兩天東北風轉為清勁，離岸及高地吹強風。天文台總部於十一月二日下午2時06分錄得最低瞬時海平面氣壓1010.2百帕斯卡，當時羅莎位於香港之東南偏南約290公里。羅莎於十一月三日在香港以南的南海北部上緩慢移動及減弱，於下午二時左右最接近香港，在本港以南約220公里處掠過。隨著羅莎向西南移離本港及進一步減弱，天文台在下午10時50分取消所有熱帶氣旋警告信號。

羅莎吹襲期間，橫瀾島錄得的最高每小時平均風速為51公里，而青洲更錄得每小時68公里的最高陣風。最高潮位2.88米(海圖基準面以上)在尖鼻咀錄得，而最大風暴潮0.47米則在大埔滘錄得。

羅莎對香港的影響不大，期間並沒有嚴重破壞報告。十一月一日本港天色晴朗及乾燥，日間陽光充沛。受羅莎的雨帶影響，隨後兩天本港轉為多雲及有幾陣驟雨，期間本港只有部分地區錄得數毫米的雨量。

2.2 Severe Typhoon Krosa (1329)
29 October – 4 November 2013

Krosa was the seventh tropical cyclone necessitating the issuance of tropical cyclone warning signals by the Hong Kong Observatory in 2013. It was also the first tropical cyclone that requiring warning signals in Hong Kong in November since 2006.

Krosa formed as a tropical depression over the western North Pacific about 1 580 km east of Manila on 29 October. Moving generally west to west-northwestwards, it intensified gradually into a severe tropical storm the following day. Krosa intensified further into a typhoon on 31 October and crossed the northern tip of Luzon, where sustained wind of 108 km/h was reported at Aparri at 8 p.m. Krosa entered the northern part of the South China Sea the following day. It became slow moving and intensified into a severe typhoon over the northern part of the South China Sea on 2 November, reaching its peak intensity with estimated sustained winds of 165 km/h near its centre. Even though the circulation of Krosa was relatively small, it was rather compact in organisation, with an eye clearly visible on satellite imageries. Krosa weakened into a typhoon in the early hours on 3 November. As a replenishment of the northeast monsoon extended gradually towards the northern part of the South China Sea, Krosa turned southwestwards and weakened into a tropical storm that evening. It continued to weaken into a tropical depression the following day and dissipated over the central part of the South China Sea near the coastal areas of central Vietnam at night. According to press reports, three people were killed, two people were reported missing and more than 17 000 houses were damaged in the Philippines during the passage of Krosa.

The Hong Kong Observatory issued the Standby Signal No. 1 at 3:20 p.m. on 1 November when Krosa was about 520 km southeast of the territory. Local winds were moderate northeasterlies that day, occasionally strong on high ground at night. The northeasterlies freshened in the next couple of days, becoming strong offshore and on high ground. At the Hong Kong Observatory Headquarters, the lowest instantaneous mean sea-level pressure of 1010.2 hPa was recorded at 2:06 p.m. on 2 November, when Krosa was about 290 km to the south-southeast. Krosa moved slowly and weakened over the northern part of the South China Sea passing to the south of Hong Kong on 3 November. It was closest to the territory around 2 p.m. that day when it was about 220 km to the south. As Krosa moved southwestwards away from Hong Kong and continued to weaken, all signals were cancelled at 10:50 p.m.

During the passage of Krosa, maximum hourly mean wind of 51 km/h was recorded at Waglan Island, while maximum gust of 68 km/h was recorded at Green Island. A

maximum sea level of 2.88 m (above chart datum) was recorded at Tsim Bei Tsui, while a maximum storm surge of 0.47 m was recorded at Tai Po Kau.

No significant damage was reported in Hong Kong during the passage of Krosa. The weather was fine and dry with abundant sunshine during the day on 1 November. Affected by the rainbands of Krosa, local weather became cloudy with a few showers over the next two days. Only several millimetres of rainfall were recorded in parts of the territory during the period.

表 2.2.1　在羅莎影響下，本港各站在熱帶氣旋警告信號生效時所錄得的最高陣風、最高每小時平均風速及風向

Table 2.2.1　Maximum gust peak speeds and maximum hourly mean winds with associated wind directions recorded at various stations when tropical cyclone warning signals for Krosa were in force

站 Station (http://www.weather.gov.hk/informtc/station2013_uc.htm)		最高陣風 Maximum Gust					最高每小時平均風速 Maximum Hourly Mean Wind				
		風向 Direction		風速 (公里/時) Speed (km/h)	日期/月份 Date/Month	時間 Time	風向 Direction		風速 (公里/時) Speed (km/h)	日期/月份 Date/Month	時間 Time
黃麻角 (赤柱)	Bluff Head (Stanley)	-	-	51	2/11	18:54	-	-	19	1/11	17:00
中環碼頭	Central Pier	北	N	38	3/11	08:39	東北偏北	NNE	23	2/11	07:00
長洲	Cheung Chau	東北偏北	NNE	58	3/11	08:55	東北偏北	NNE	38	3/11	09:00
長洲泳灘	Cheung Chau Beach	東北	NE	65	2/11	20:22	東北	NE	45	3/11	00:00
青洲	Green Island	東北偏北	NNE	68	3/11	10:50	東北偏北	NNE	47	3/11	11:00
香港國際機場	Hong Kong International Airport	東北	NE	51	3/11	12:28	東北	NE	31	3/11	12:00
啟德	Kai Tak	東北偏北	NNE	49	3/11	10:44	東北偏北	NNE	20	3/11	11:00
京士柏	King's Park	東北	NE	49	3/11	08:23	東北	NE	20	3/11	09:00
流浮山	Lau Fau Shan	東北偏北	NNE	51	3/11	18:29	東北偏北	NNE	31	3/11	16:00
昂坪	Ngong Ping	東北	NE	62	3/11	05:06	東北偏東	ENE	49	2/11	22:00
北角	North Point	東北	NE	51	2/11	18:00	東北偏東	ENE	25	3/11	11:00
坪洲	Peng Chau	東北偏東	ENE	52	2/11	20:39	東北	NE	31	3/11	16:00
平洲	Ping Chau	東北	NE	30	3/11	17:06	東北偏北	NNE	7	2/11	15:00
							東北	NE	7	3/11	03:00
							東北偏北	NNE	7	3/11	13:00
西貢	Sai Kung	東北偏北	NNE	56	3/11	10:46	東北偏北	NNE	31	3/11	11:00
沙洲	Sha Chau	東北偏北	NNE	52	3/11	09:50	北	N	40	3/11	11:00
沙螺灣	Sha Lo Wan	東北	NE	40	3/11	10:40	東北	NE	22	3/11	12:00
沙田	Sha Tin	東北偏北	NNE	40	3/11	12:52	東北偏北	NNE	20	3/11	09:00
							東北偏北	NNE	20	3/11	11:00
							東北偏北	NNE	20	3/11	12:00
石崗	Shek Kong	東北	NE	34	3/11	09:12	東北偏東	ENE	19	2/11	19:00
九龍天星碼頭	Star Ferry (Kowloon)	東	E	36	2/11	16:15	東	E	16	3/11	22:00
打鼓嶺	Ta Kwu Ling	北	N	49	3/11	10:21	北	N	22	3/11	14:00
大美督	Tai Mei Tuk	東北	NE	59	3/11	12:50	東北偏北	NNE	36	3/11	02:00
大帽山	Tai Mo Shan	東	E	85	3/11	12:45	東	E	59	3/11	01:00
大埔滘	Tai Po Kau	東北偏東	ENE	36	3/11	13:41	東北	NE	14	3/11	15:00
塔門	Tap Mun	北	N	40	3/11	11:50	北	N	19	3/11	10:00
大老山	Tate's Cairn	東	E	85	3/11	02:13	東	E	58	3/11	02:00
將軍澳	Tseung Kwan O	東北偏北	NNE	40	3/11	10:54	北	N	14	3/11	08:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	-	-	31	3/11	08:05	-	-	14	3/11	08:00
		-	-	31	3/11	13:59					
屯門政府合署	Tuen Mun Government Offices	北	N	47	3/11	10:46	東北偏北	NNE	22	3/11	11:00
橫瀾島	Waglan Island	東北	NE	62	3/11	02:27	東北	NE	51	3/11	17:00
濕地公園	Wetland Park	東北偏北	NNE	40	3/11	11:55	東北	NE	19	3/11	12:00
黃竹坑	Wong Chuk Hang	東	E	52	3/11	08:31	東	E	20	3/11	17:00

表 2.2.2　　羅莎影響香港期間，香港天文台總部及其他各站所錄得的日雨量

Table 2.2.2　Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Krosa

站 (參閱圖 2.2.2) Station (See Fig. 2.2.2)			十一月一日 1 Nov	十一月二日 2 Nov	十一月三日 3 Nov	總雨量(毫米) Total Rainfall (mm)
香港天文台 Hong Kong Observatory			0.0	微量 Trace	0.4	0.4
香港國際機場 Hong Kong International Airport (HKA)			0.0	微量 Trace	1.9	1.9
長洲 Cheung Chau (CCH)			0.0	0.0	1.0	1.0
H23	香 港 仔	Aberdeen	0.0	0.0	1.0	1.0
N05	粉 嶺	Fanling	0.0	0.0	0.5	0.5
N13	糧 船 灣	High Island	0.0	0.0	1.0	1.0
K04	佐 敦 谷	Jordan Valley	0.0	0.0	1.0	1.0
N06	葵 涌	Kwai Chung	0.0	0.0	0.0	0.0
H12	半 山 區	Mid Levels	0.0	0.0	0.0	0.0
N09	沙 田	Sha Tin	0.0	0.0	0.0	0.0
H19	筲 箕 灣	Shau Kei Wan	0.0	0.0	1.0	1.0
SEK	石 崗	Shek Kong	0.0	0.0	1.0	1.0
K06	蘇 屋 邨	So Uk Estate	0.0	0.0	0.0	0.0
R31	大 美 督	Tai Mei Tuk	0.0	0.0	0.0	0.0
R21	踏 石 角	Tap Shek Kok	0.0	0.0	2.5	2.5
N17	東 涌	Tung Chung	0.0	0.0	3.5	3.5
R27	元 朗	Yuen Long	0.0	0.0	0.0	0.0

表 2.2.3　　羅莎影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮

Table 2.2.3　Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of Krosa

站 Station (http://www.weather.gov.hk/informtc/station2013_uc.htm)		最高潮位 (海圖基準面以上) Maximum sea level (above chart datum)			最大風暴潮 (天文潮高度以上) Maximum storm surge (above astronomical tide)		
		高度(米) Height (m)	日期/月份 Date/Month	時間 Time	高度(米) Height (m)	日期/月份 Date/Month	時間 Time
鰂魚涌	Quarry Bay	2.62	3/11	21:20	0.36	2/11	15:26
石壁	Shek Pik	2.69	3/11	21:03	0.36	2/11	16:21
大埔滘	Tai Po Kau	2.71	3/11	22:03	0.47	2/11	08:51
尖鼻咀	Tsim Bei Tsui	2.88	3/11	21:19	0.43	2/11	17:58
橫瀾島	Waglan Island	2.62	3/11	21:10	0.26	2/11	08:40

大廟灣 - 沒有資料 Tai Miu Wan - data not available

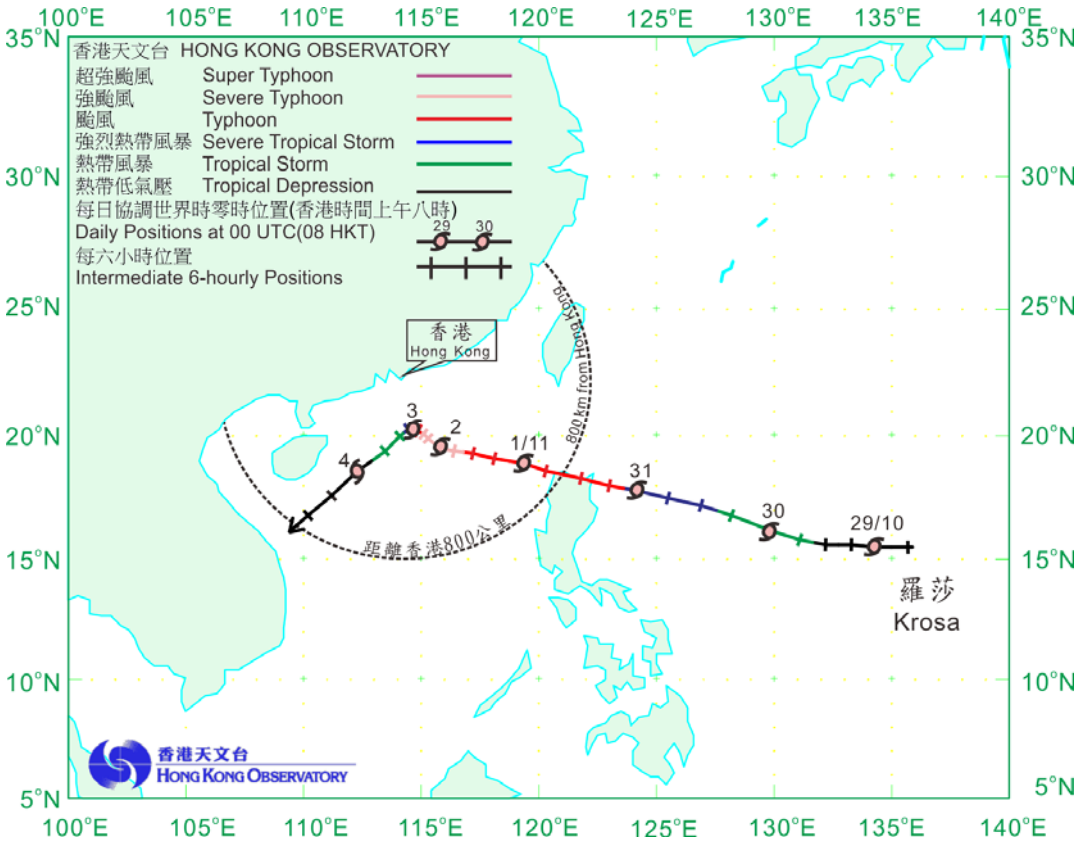


圖 2.2.1(a)　　二零一三年十月二十九日至十一月四日羅莎（1329）的路徑圖。

Figure 2.2.1(a)　　Track of Krosa (1329) on 29 October – 4 November 2013.

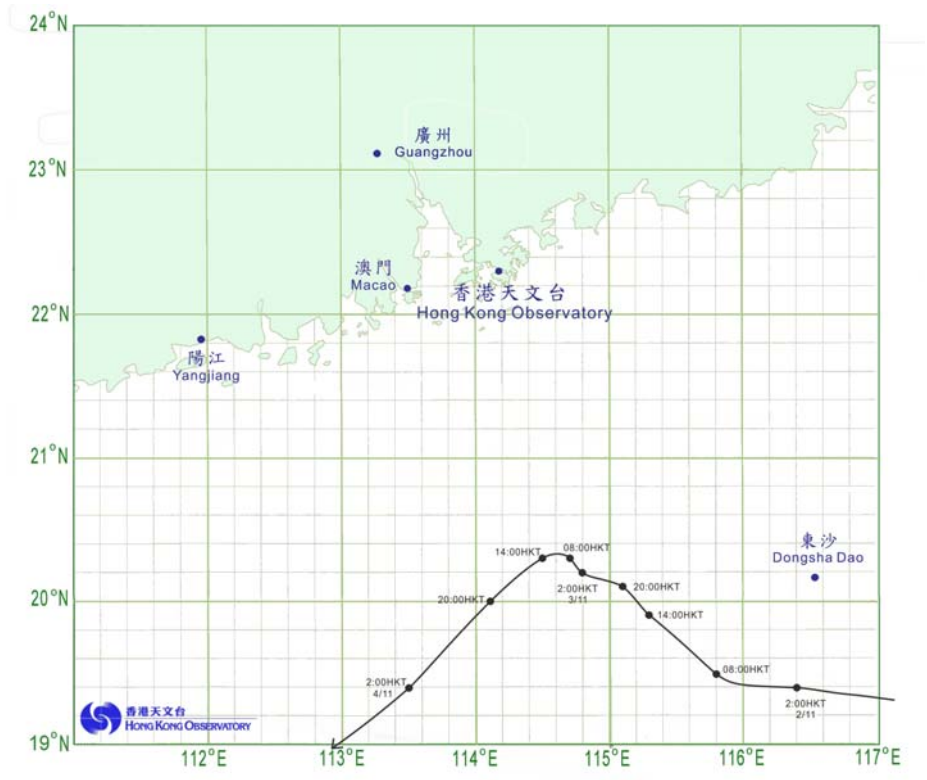


圖 2.2.1(b)　　羅莎接近香港時的路徑圖。

Figure 2.2.1(b)　　Track of Krosa near Hong Kong.

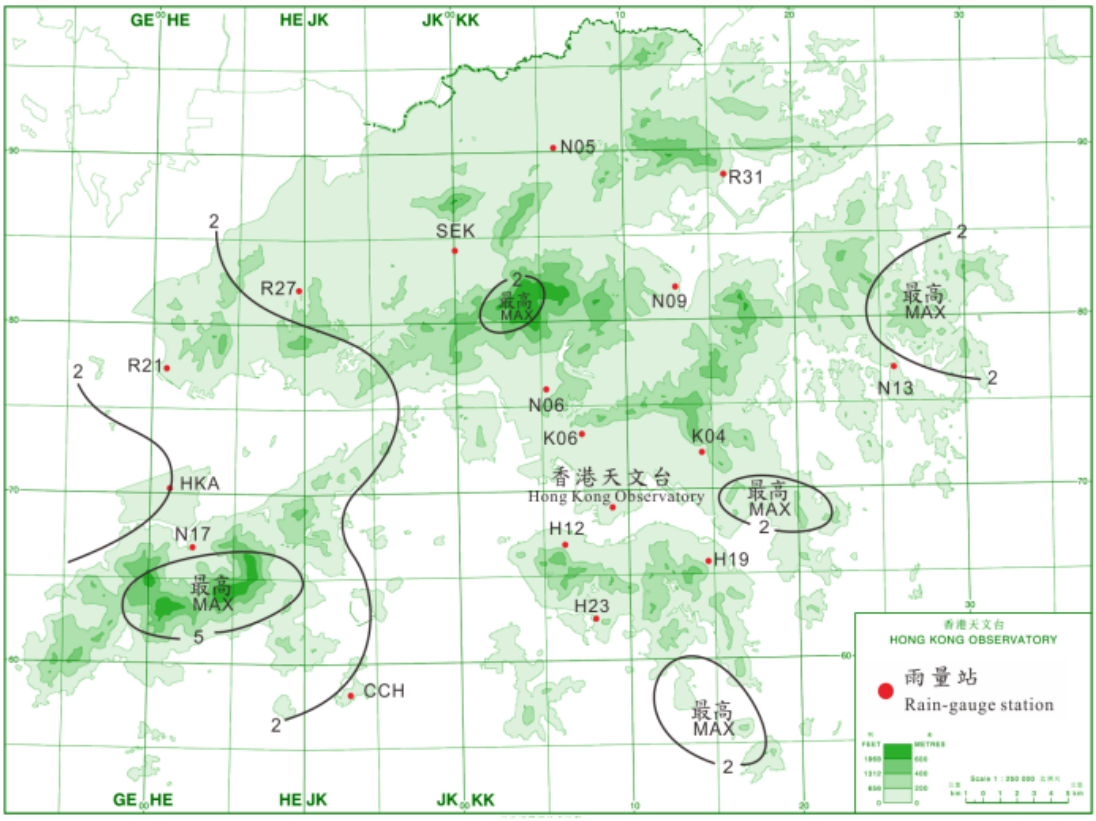


圖 2.2.2　　二零一三年十一月一日至三日的雨量分佈(等雨量線單位為毫米)。

Figure 2.2.2　Rainfall distribution on 1 – 3 November 2013 (isohyets are in millimetres)

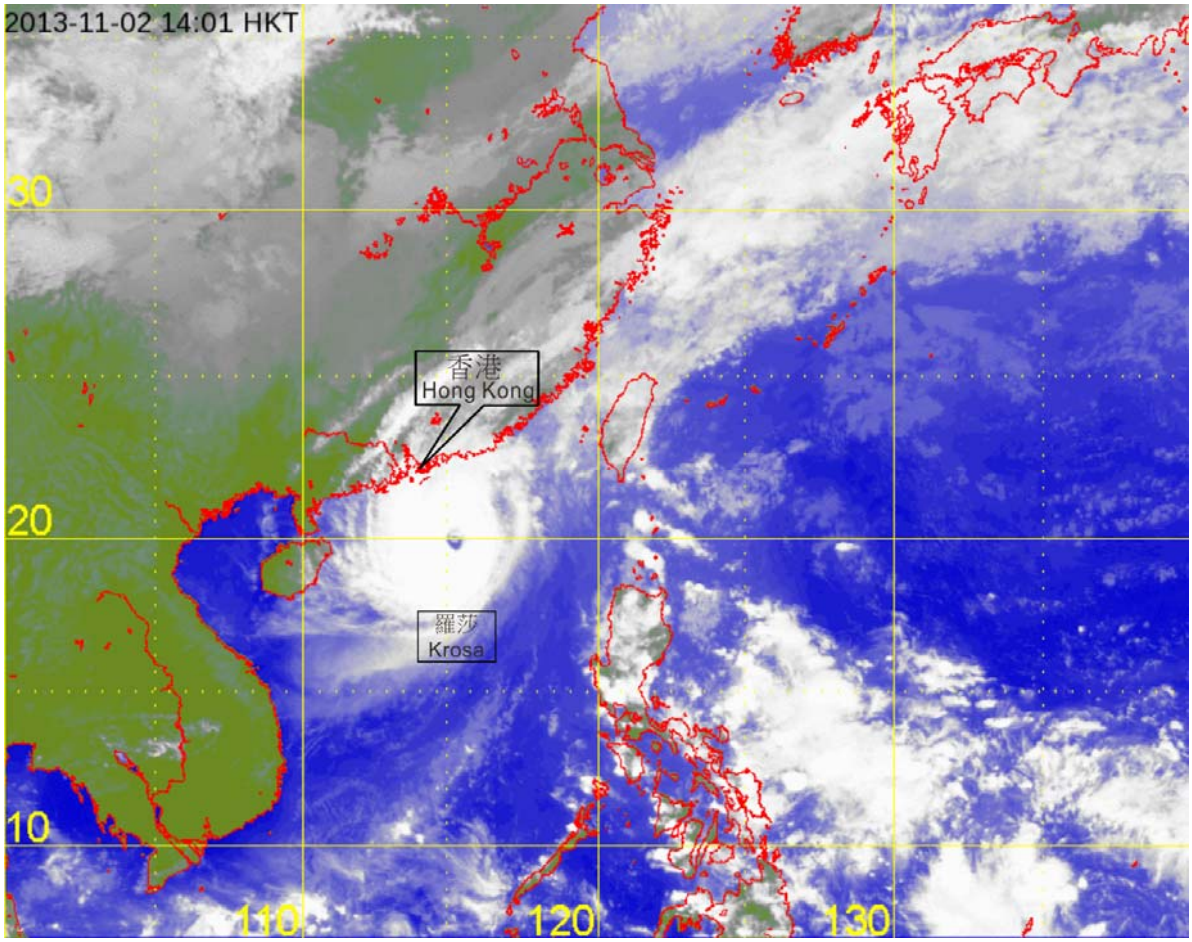


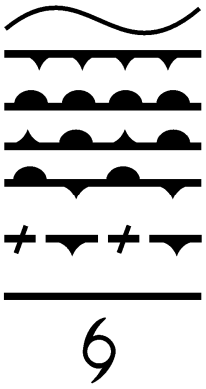
圖 2.2.3　二零一三年十一月二日下午 2 時的紅外線衛星圖片，當時羅莎達到強颱風強度，中心附近最高持續風速估計為每小時 165 公里。

Figure 2.2.3　Infra-red satellite imagery at 2 p.m. on 2 November 2013, as Krosa reached severe typhoon intensity with estimated maximum sustained winds of 165 kilometres per hour near its centre.

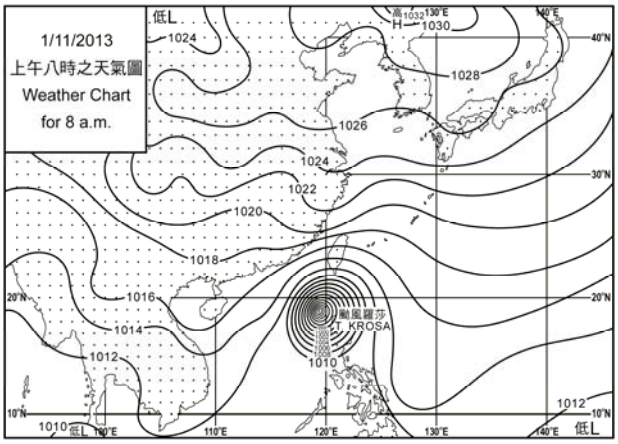
〔此衛星圖像接收自日本氣象廳的多用途輸送衛星-2。〕

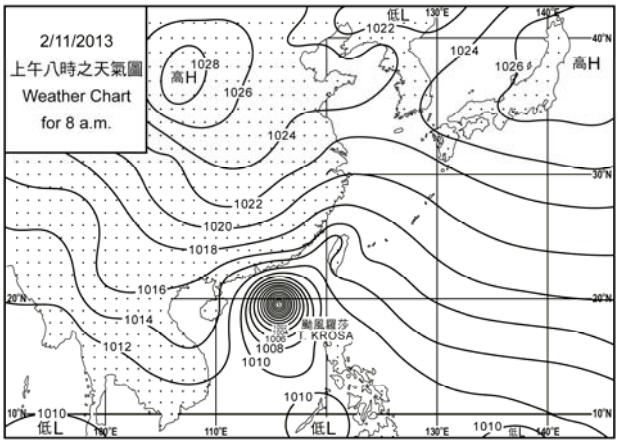
[The satellite imagery was originally captured by the Multi-functional Transport Satellite-2 (MTSAT-2) of Japan Meteorological Agency (JMA).]

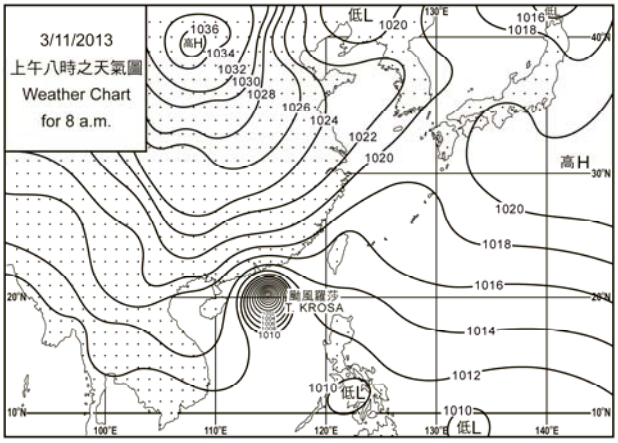
3. 二零一三年十一月每日天氣圖
3. Daily Weather Maps for November 2013

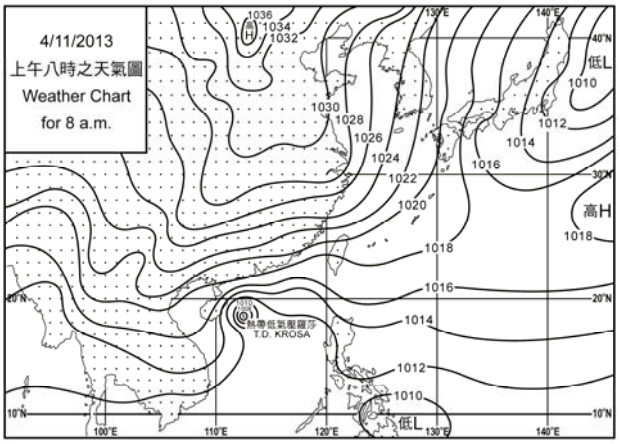


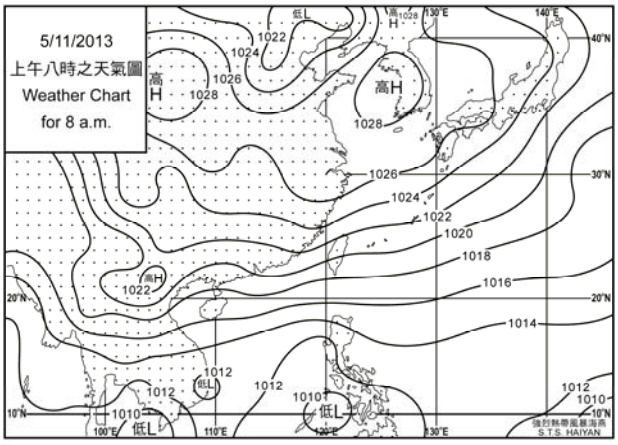
等壓線 Isobar (hPa)
冷鋒 Cold Front
暖鋒 Warm Front
錮囚鋒 Occlusion
靜止鋒 Stationary Front
消散中的冷鋒
Dissipating Cold Front
槽軸〔線〕Axis of Trough
熱帶氣旋中心
Centre of Tropical Cyclone

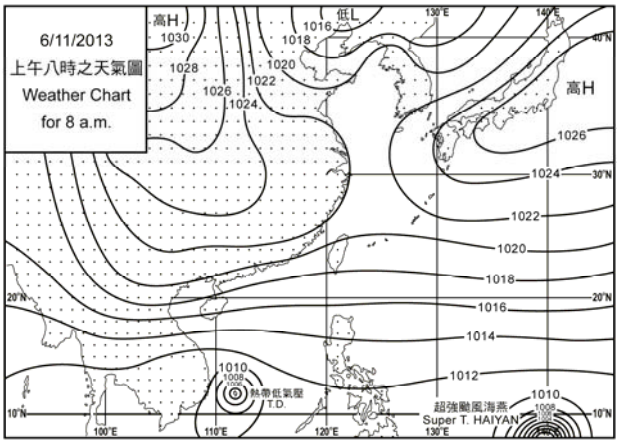


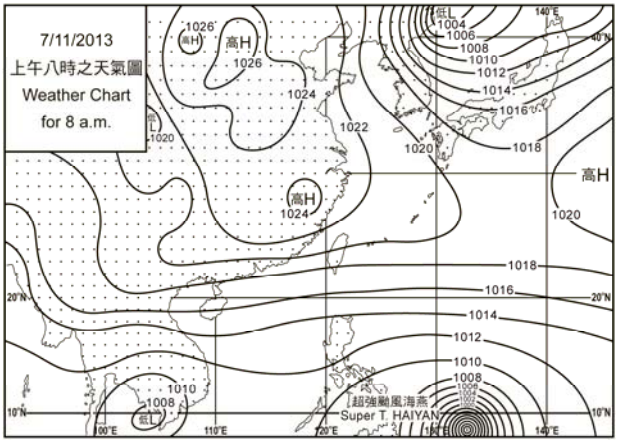


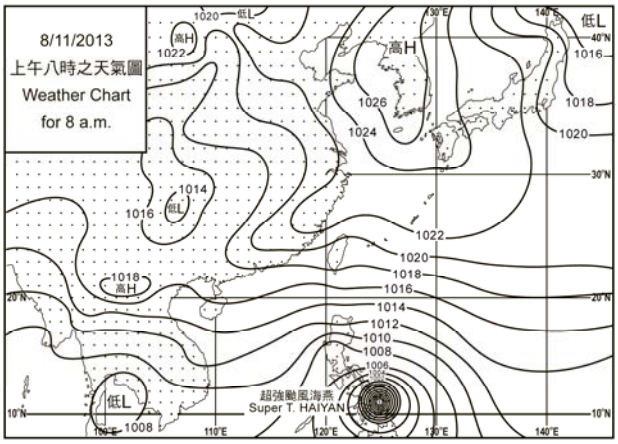


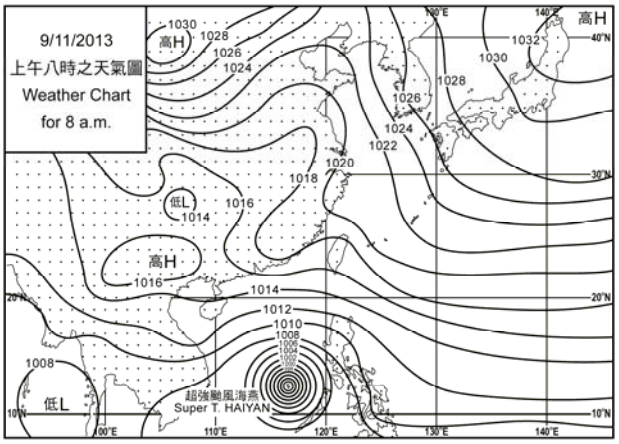


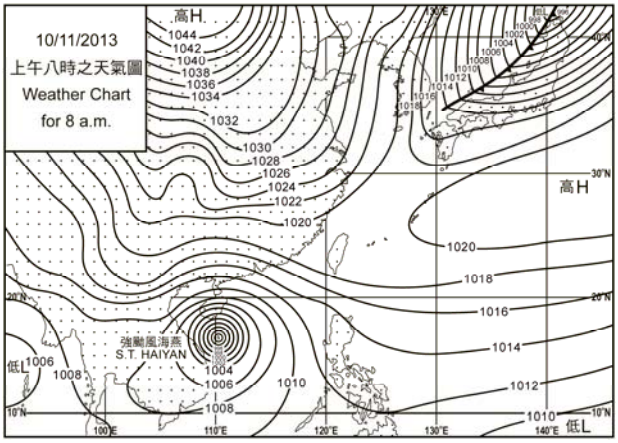


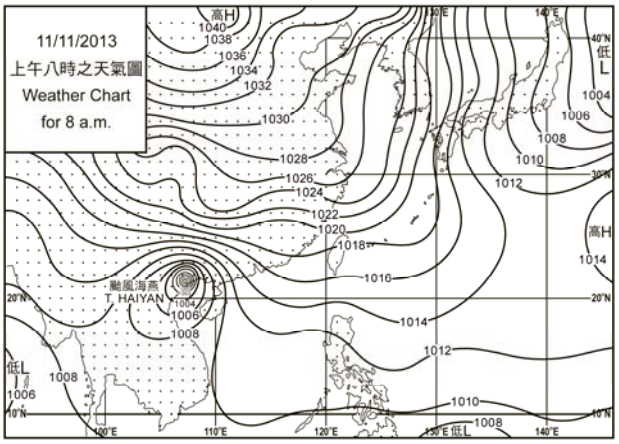


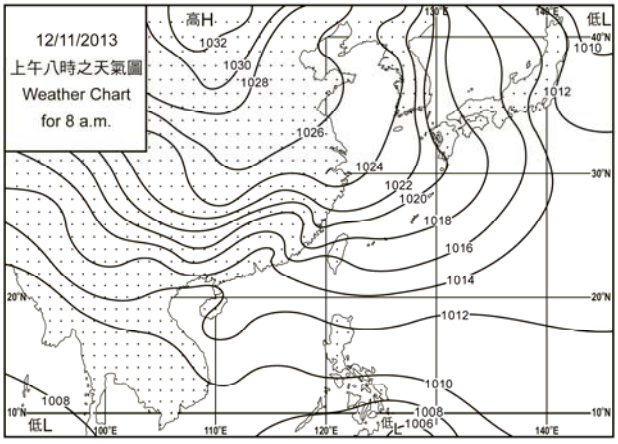


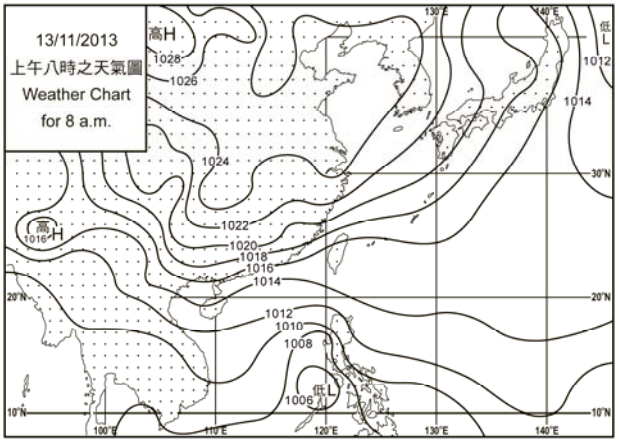

8/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.
超強颱風海燕
Super T. HAIYAN

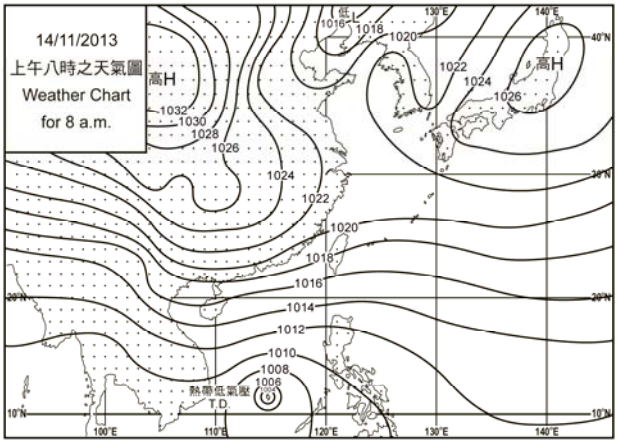

9/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.
超強颱風海燕
Super T. HAIYAN

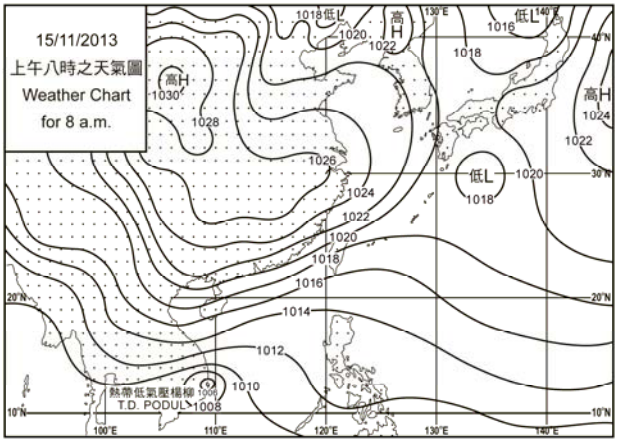

10/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.
強颱風海燕
S.T. HAIYAN

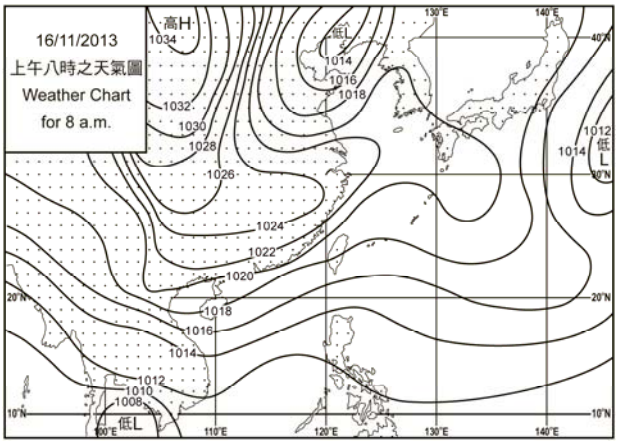

11/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.
颱風海燕
T. HAIYAN

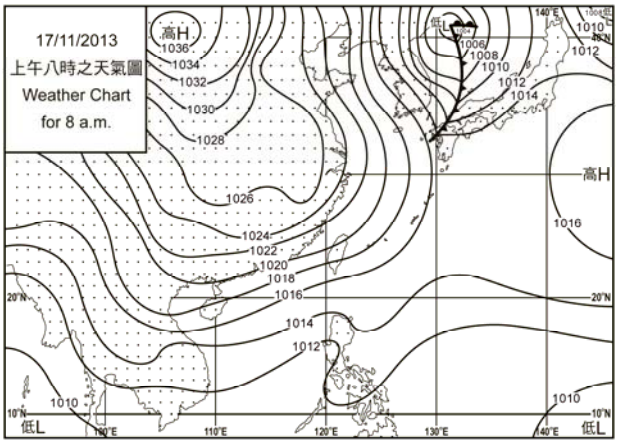

12/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.

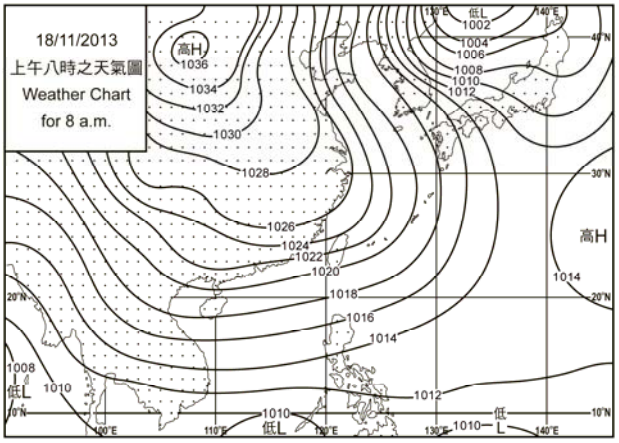

13/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.

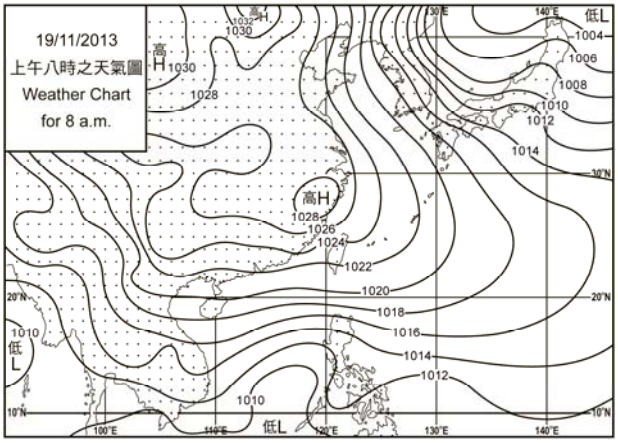

14/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.
熱帶低氣壓
T.D.

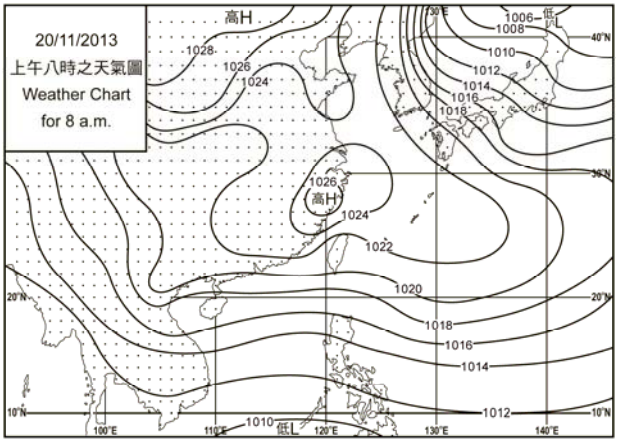

15/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.
熱帶低氣壓楊柳
T.D. PODUL

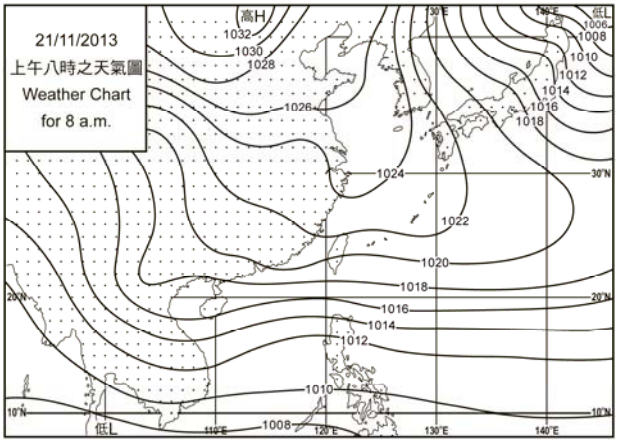

16/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.

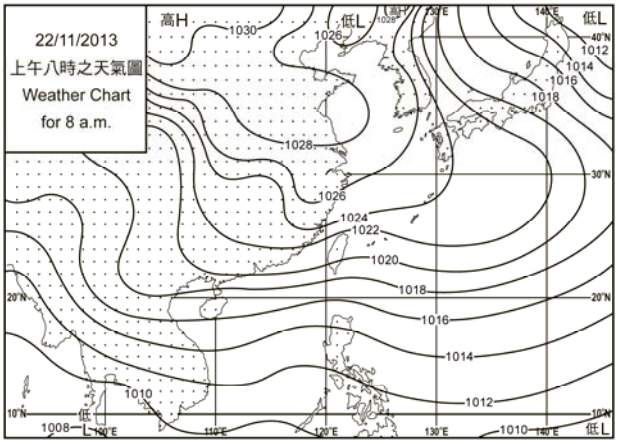

17/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.

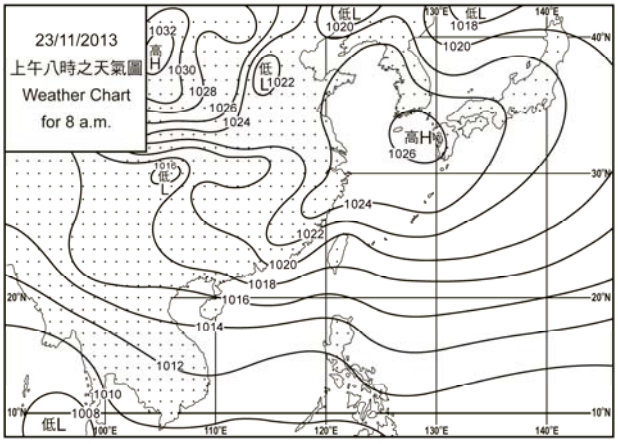

18/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.

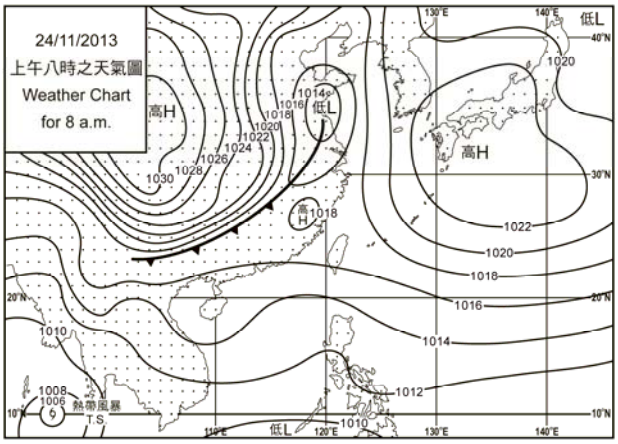

19/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.

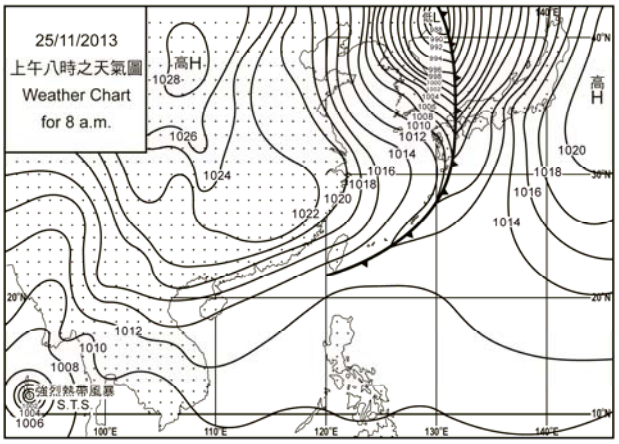

20/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.

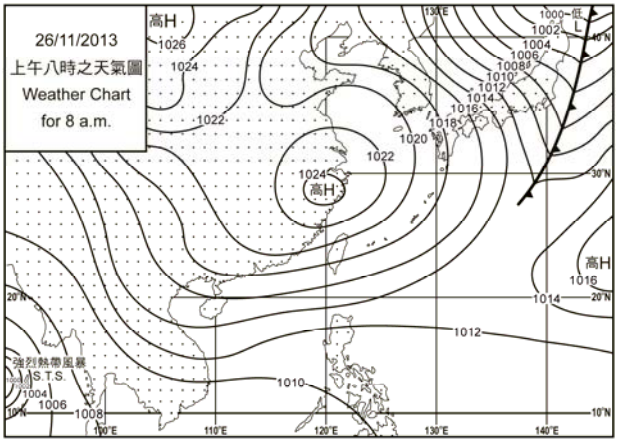

21/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.

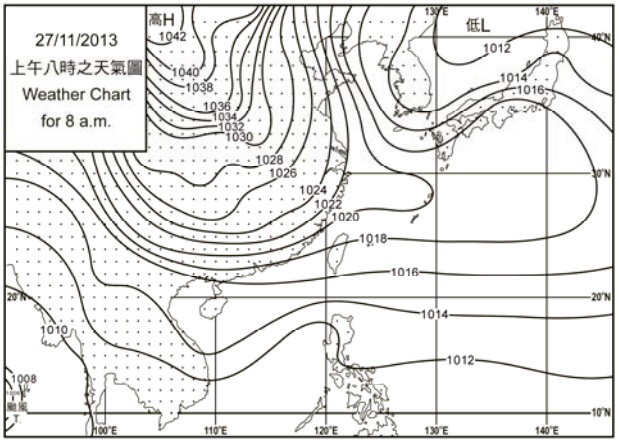

22/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.

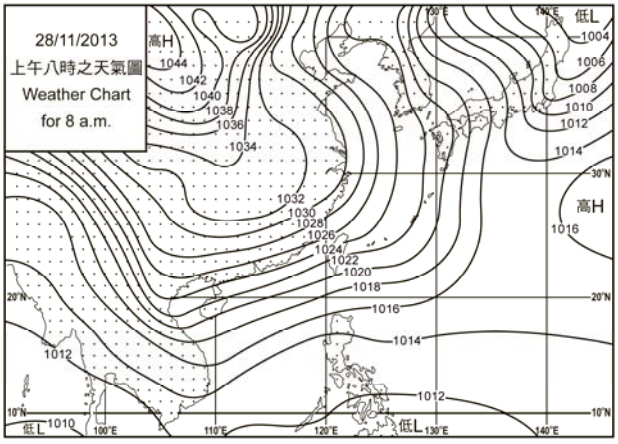

23/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.

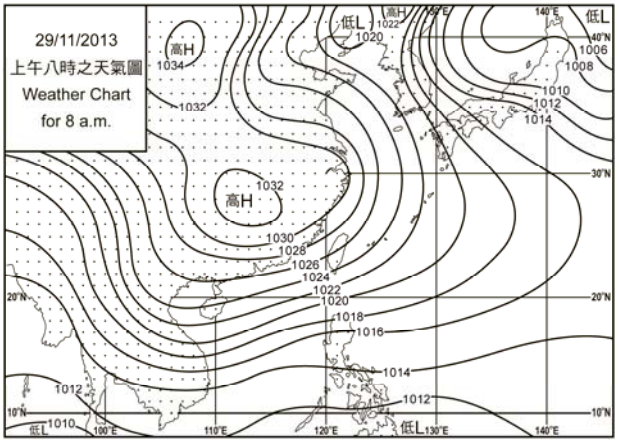

24/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.
熱帶風暴
T.S.

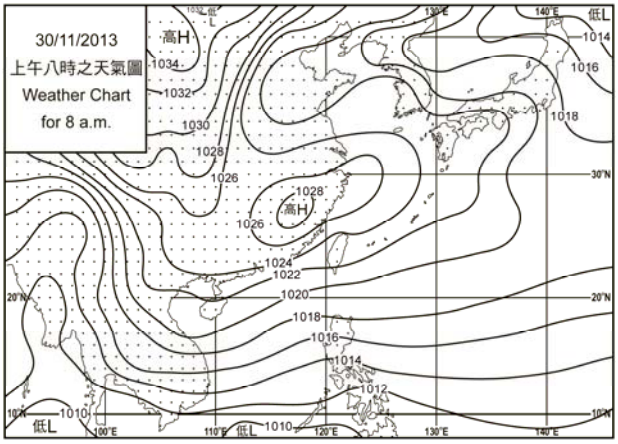

25/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.
強烈熱帶風暴
S.T.S.


26/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.
強烈熱帶風暴
S.T.S.


27/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.


28/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.


29/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.


30/11/2013
上午八時之天氣圖
Weather Chart
for 8 a.m.

4.1.1 二零一三年十一月香港氣象觀測摘錄(一)

4.1.1 Extract of Meteorological Observations in Hong Kong (Part 1), November 2013

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
十一 月 November	百帕斯卡 hPa	°C	°C	°C	°C	%	%	毫米 mm
1	1014.0	29.5	25.5	22.6	18.0	65	57	-
2	1011.5	27.5	26.2	24.9	19.0	65	81	Tr
3	1012.8	27.6	25.6	23.5	20.0	71	88	0.4
4	1017.6	24.3	22.7	21.5	20.4	87	89	12.2
5	1019.0	24.2	22.6	20.9	20.4	88	91	3.6
6	1018.3	27.4	24.2	22.6	20.6	81	83	Tr
7	1017.6	26.7	24.1	23.0	20.4	80	70	-
8	1016.4	26.9	24.2	22.8	19.5	76	67	Tr
9	1014.6	27.7	25.5	22.9	20.4	74	77	Tr
10	1014.7	26.4	25.4	23.7	22.4	84	88	7.6
11	1014.0	25.3	24.1	23.0	21.3	85	83	Tr
12	1013.2	23.1	21.9	21.1	21.0	95	88	33.4
13	1014.2	21.3	20.7	19.7	19.2	91	88	3.9
14	1017.3	23.6	21.0	19.6	17.2	79	67	Tr
15	1018.4	24.7	21.5	18.8	16.2	72	35	-
16	1018.2	23.9	21.7	19.2	15.4	68	31	-
17	1018.6	23.8	21.3	18.8	12.7	58	54	-
18	1020.6	23.6	20.7	18.5	10.7	53	31	-
19	1021.1	21.3	20.2	18.7	13.2	64	81	-
20	1019.5	21.4	20.1	19.3	14.6	71	86	Tr
21	1018.5	22.6	20.5	17.6	13.9	66	81	0.5
22	1018.7	22.8	21.0	19.5	16.9	78	82	0.7
23	1017.3	23.0	21.7	20.6	17.4	76	70	Tr
24	1014.3	25.8	22.7	20.4	19.4	82	76	15.2
25	1015.0	22.3	19.5	16.7	9.7	54	28	-
26	1016.9	21.3	19.6	17.7	14.1	71	59	-
27	1018.1	23.2	20.1	16.0	16.1	78	73	0.5
28	1023.5	17.8	15.6	12.8	9.3	68	68	5.1
29	1024.2	17.2	15.0	12.9	1.4	40	14	-
30	1021.8	19.2	16.0	13.1	6.6	54	18	-
平均/總值 Mean/Total	1017.3	23.8	21.7	19.7	16.2	72	67	83.1
正常* Normal*	1017.7	24.1	21.8	19.8	16.0	71	54	37.6
觀測站 Station	天文台 Hong Kong Observatory							

天文台於十一月二日 14 時 6 分錄得本月最低氣壓 1010.2 百帕斯卡。
The minimum pressure recorded at the Hong Kong Observatory was 1010.2 hectopascals at 1406 HKT on 2 November.

天文台於十一月一日 15 時 12 分錄得本月最高氣溫 29.5 °C。
The maximum air temperature recorded at the Hong Kong Observatory was 29.5 °C at 1512 HKT on 1 November.

天文台於十一月二十八日 6 時 12 分錄得本月最低氣溫 12.8 °C。
The minimum air temperature recorded at the Hong Kong Observatory was 12.8 °C at 0612 HKT on 28 November.

京士柏於十一月二十四日 18 時 15 分錄得本月最高瞬時降雨率 144 毫米/小時。
The maximum instantaneous rate of rainfall recorded at King's Park was 144 millimetres per hour at 1815 HKT on 24 November.

* 1981-2010 氣候平均值（除特別列明外） *(http://www.hko.gov.hk/wxinfo/climat/normal/cnormal11.htm)*
* 1981-2010 Climatological normal, unless otherwise specified *(http://www.hko.gov.hk/wxinfo/climat/normal/enormal11.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 二零一三年十一月香港氣象觀測摘錄(二)

4.1.2 Extract of Meteorological Observations in Hong Kong (Part 2), November 2013

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
十一 月 November	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	2	10.0	18.89	4.9	030	17.0
2	0	0.7	7.67	5.9	030	32.5
3	0	0.9	9.23	1.5	040	39.8
4	9	-	4.46	0.4	050	29.4
5	15	-	7.02	1.9	080	36.2
6	20	2.8	9.69	3.0	080	18.7
7	8	6.5	15.29	4.2	090	30.3
8	5	3.8	12.85	5.9	070	30.8
9	6	6.7	12.50	0.8	070	39.9
10	0	0.1	5.61	2.3	080	41.0
11	0	0.2	3.46	2.4	090	49.3
12	0	-	0.84	1.1	100	48.0
13	0	-	2.11	2.1	030	30.8
14	5	3.1	9.90	2.6	030	23.3
15	0	9.4	16.89	3.3	030	23.8
16	7	10.0	16.09	4.2	030	14.4
17	0	7.4	14.60	4.2	030	19.7
18	0	9.7	17.76	6.0	080	24.3
19	0	0.3	6.44	1.5	080	29.1
20	0	1.0	7.37	2.4	080	35.2
21	0	3.8	11.04	2.0	070	31.2
22	0	3.7	11.38	5.7	080	37.7
23	0	8.0	15.96	2.1	080	35.6
24	0	5.9	14.04	5.7	060	20.6
25	0	9.9	17.64	3.8	030	28.0
26	0	6.1	13.85	2.1	070	29.8
27	3	3.9	9.55	2.8	070	30.3
28	0	0.7	7.71	4.3	030	40.1
29	0	9.8	17.94	3.6	030	28.6
30	0	9.0	16.44	2.8	030	19.4
平均/總值 Mean/Total	80	133.4	11.14	95.5	080	30.5
正常* Normal*	146.1 §	180.1	12.28	99.5	080	27.0
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	

橫瀾島於十一月十一日 21 時 21 分錄得本月最高陣風 72 公里/小時，風向 100 度。

The maximum gust peak speed recorded at Waglan Island was 72 kilometres per hour from 100 degrees at 2121 HKT on 11 November.

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.hko.gov.hk/wxinfo/climat/normal/cnormal11.htm)*

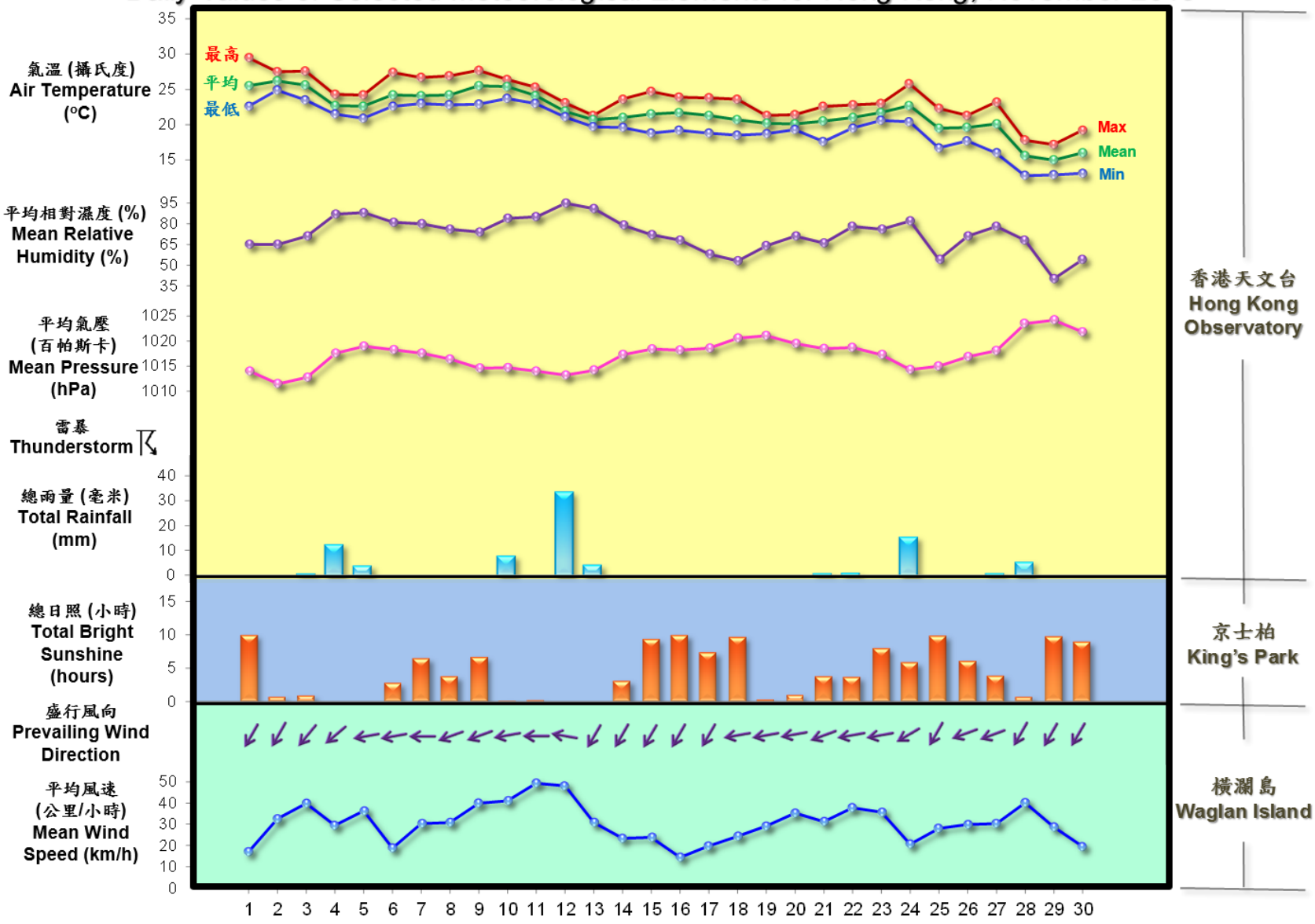
* 1981-2010 Climatological normal, unless otherwise specified *(http://www.hko.gov.hk/wxinfo/climat/normal/enormal11.htm)*

§ 1997-2012 平均值

§ 1997-2012 Mean value

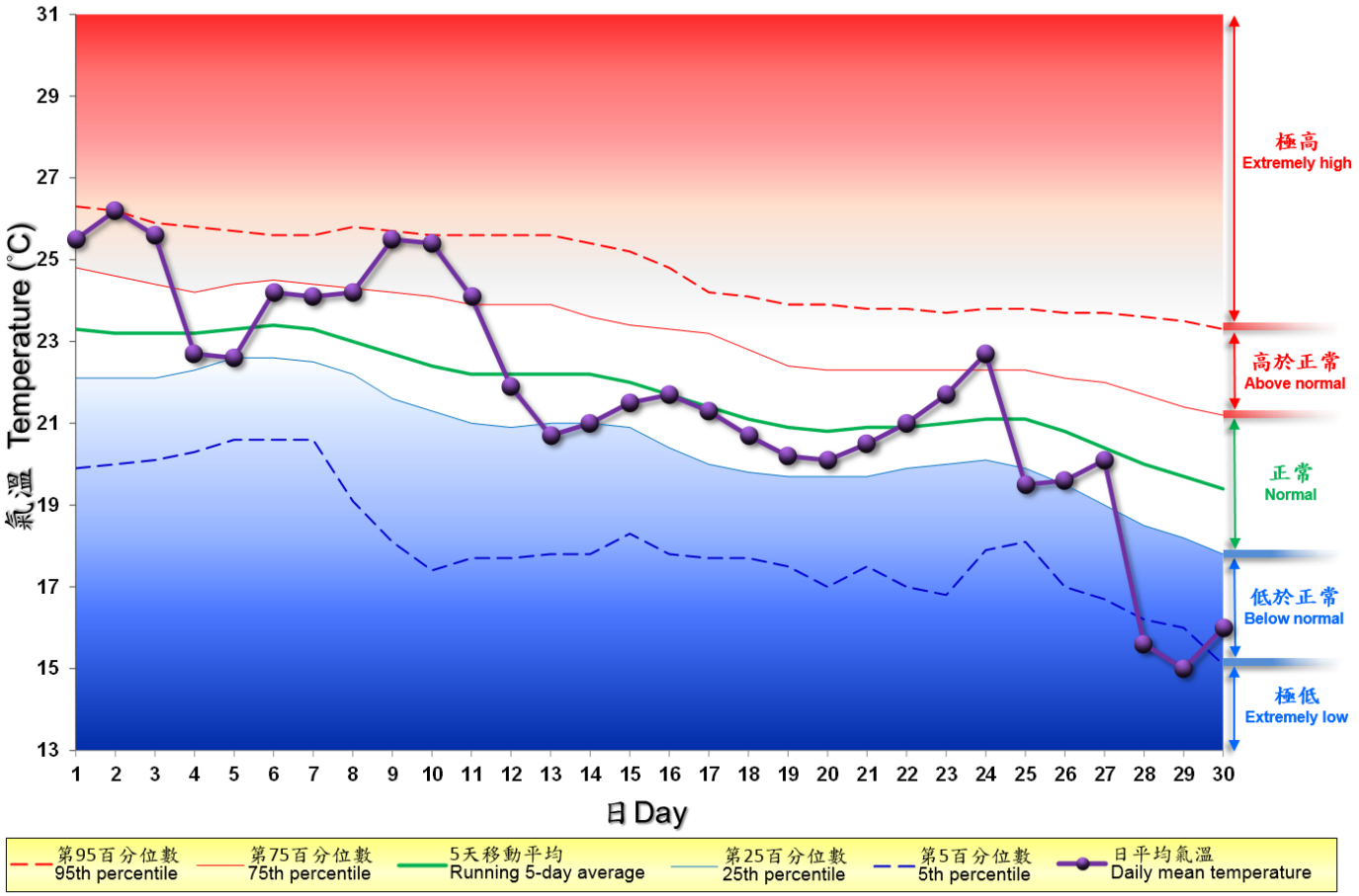
4.2 2013年11月部分香港氣象要素的每日記錄

4.2 Daily Values of Selected Meteorological Elements for Hong Kong, November 2013



4.3 2013年11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 November 2013



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