

# 每月天氣摘要 二零一九年八月

## Monthly Weather Summary August 2019



### 目錄

	<u>頁</u>
1. 二零一九年八月天氣回顧	1
2. 二零一九年八月影響北太平洋西部和南海的熱帶氣旋	8
3. 二零一九年八月每日天氣圖	52
4. 二零一九年八月氣象觀測資料	68

### Contents

	<u>Page</u>
1. Weather Review of August 2019	2
2. Tropical Cyclones over the western North Pacific and the South China Sea in August 2019	10
3. Daily Weather Maps for August 2019	52
4. Meteorological Observations for August 2019	68

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## 1. 二零一九年八月天氣回顧

由於南海北部海水溫度較正常高，二零一九年八月本港較正常炎熱。本月平均氣溫 29.0 度，較正常值 28.6 度高 0.4 度。此外，本年夏季異常炎熱，六月至八月的平均最低氣溫 27.2 度、平均氣溫 29.2 度及平均最高氣溫 31.8 度，分別是同期有記錄以來的第二、第三及第四高。由於熱帶氣旋韋帕及白鹿為本港帶來大雨，本月較正常多雨，月雨量達 596.4 毫米，較正常值 432.2 毫米多約百分之 38。本年首八個月錄得累積雨量 2034.3 毫米，較同期正常值 1905.5 毫米多約百分之 7。

熱帶風暴韋帕於八月一日清晨以逆時針方向在海南島東北沿岸徘徊，早上向北移動，其後在晚間向西橫過雷州半島。八月二日韋帕橫過廣西沿岸至北部灣一帶，並逐漸減弱。八月三日韋帕於廣西沿岸登陸並在越南北部進一步減弱為一個低壓區。

受韋帕影響，八月一日本港風勢頗大，初時離岸及高地間中吹烈風。八月一日至二日，與韋帕雨帶相關的狂風大驟雨及雷暴為本港大部分地區帶來超過 100 毫米雨量，而這兩天大嶼山部分地區更錄得超過 150 毫米雨量。

受高空擾動影響，八月三日本港仍然有驟雨。隨著高空擾動遠離，翌日驟雨逐漸減少及短暫時間有陽光。受高空反氣旋所支配，八月五日本港天氣轉為普遍天晴及酷熱。位於南海中部的一個廣闊低壓區於八月六日為本港帶來幾陣驟雨及局部地區雷暴。

八月七日至九日位於西北太平洋的超強颱風利奇馬向西北移動及橫過台灣以東海域，並於八月十日在華東登陸。受利奇馬的外圍下沉氣流影響，八月七日至九日本港天氣酷熱及有煙霞，高溫於八月八日晚上更觸發雷雨。在陽光充沛情況下，八月九日天文台氣溫上升至全月最高的 35.1 度。

受西南氣流所影響，八月十日及十一日本港天氣炎熱並夾雜著陽光及雷雨。八月十四日及十七日雨勢較大，這兩天本港地區均普遍錄得超過 30 毫米雨量。受一道徘徊於南海北部的低壓槽影響，八月十九日至二十日本港部分時間有陽光及有幾陣驟雨。隨著該道低壓槽遠離及減弱，八月二十一日至二十二日本港天氣轉為酷熱及普遍天晴，但局部地區有驟雨。在微風的情況下，八月二十三日本港大致多雲，局部地區有大驟雨及雷暴。

與此同時，八月二十一日位於菲律賓以東的一個低壓區增強為一個熱帶低氣壓並命名為白鹿。八月二十二日白鹿進一步增強為強烈熱帶風暴，其後向西北移動及橫過西北太平洋。八月二十四日白鹿掠過台灣南端及進入台灣海峽。八月二十五日白鹿在中國東南沿岸登陸及其後在廣東內陸逐步減弱為一個低壓區。

受白鹿的外圍下沉氣流影響，八月二十四日本港普遍天晴、酷熱及有煙霞。白鹿的外圍雨帶於八月二十五日及二十六日為本港間中帶來狂風大驟雨及雷暴，多處地區錄得

超過 150 毫米雨量，這兩天市區及新界部分地區更錄得超過 200 毫米雨量。八月二十六日清晨持續大雨期間，天文台氣溫下降至全月最低的 22.9 度。

隨著中國東南部的高空反氣旋增強，八月二十七日驟雨逐漸減弱，八月二十八日本港天氣轉為大致天晴及酷熱。與此同時，在菲律賓以東海域的一個低壓區於八月二十七日增強為一個熱帶氣旋並命名為楊柳。八月二十八日楊柳向西移動及進入南海。隨著楊柳橫過南海中部及移向海南島南部，八月二十九日本港天氣轉為大致多雲及風勢較大，亦有幾陣驟雨及雷暴。受楊柳相關的外圍雨帶影響，八月三十日本港天氣不穩定，間中有驟雨及雷暴。華南沿岸的一道廣闊低壓槽於本月最後一天持續為本港帶來雷雨，早上的大驟雨為沙田、西貢及將軍澳帶來超過 50 毫米雨量。

本月有六個熱帶氣旋影響南海及北太平洋西部。

本月有十七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。

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## 1. The Weather of August 2019

August 2019 was hotter than usual in Hong Kong, mainly attributing to the warmer than normal sea surface temperature over the northern part of the South China Sea. The monthly mean temperature of 29.0 degrees was 0.4 degree above the normal figure of 28.6 degrees. Moreover, the summer of this year from June to August was exceptionally hot. The mean minimum temperature of 27.2 degrees, mean temperature of 29.2 degrees and mean maximum temperature of 31.8 degrees were respectively the second, third and fourth highest on record for the same period. Due to the heavy rain brought by tropical cyclones Wipha and Bailu, the month was wetter than normal with the monthly total rainfall amounting to 596.4 millimetres, about 38 percent above the normal figure of 432.2 millimetres. The accumulated rainfall recorded in the first eight months of the year was 2034.3 millimetres, a surplus of 7 percent compared to the normal of 1905.5 millimetres for the same period.

After making an anti-clockwise loop around the northeastern coast of Hainan Island on the early morning of 1 August, Tropical Storm Wipha tracked northwards in the morning and then moved westwards across the Leizhou Peninsula that night. Wipha moved across the coast of Guangxi and the vicinity of Beibu Wan on 2 August and weakened gradually. It made landfall over the coast of Guangxi and further weakened into an area of low pressure over the northern part of Vietnam on 3 August.

Under the influence of Wipha, it was windy with occasional gale force winds offshore and on high ground at first on 1 August in Hong Kong. Heavy squally showers and

thunderstorms associated with the rainbands of Wipha also brought more than 100 millimetres of rainfall to most parts of the territory on 1 - 2 August and rainfall even exceeded 150 millimetres over parts of Lantau Island in these two days.

Affected by upper-air disturbances, the weather of Hong Kong remained showery on 3 August. With the departure of the upper-air disturbances, showers abated gradually with sunny intervals on the next day. Dominated by an anticyclone aloft, the weather became generally fine and very hot on 5 August. A broad area of low pressure over the central part of the South China Sea brought some showers and isolated thunderstorms to the territory on 6 August.

Over the western North Pacific, Super Typhoon Lekima moved northwestward across the sea areas to the east of Taiwan on 7 - 9 August and made landfall over eastern China on 10 August. Under the influence of the outer subsiding air of Lekima, the weather of Hong Kong was very hot with haze on 7 - 9 August. The high temperature also triggered thundery showers on the night of 8 August. With plenty of sunshine, the maximum temperature at the Observatory soared to 35.1 degrees on 9 August, the highest of the month.

With the prevalence of a southwesterly airstream, it was hot with a mixture of sunshine and thundery showers in Hong Kong on 10 - 18 August. The showers were particularly heavy on 14 August and 17 August with more than 30 millimetres of rainfall generally recorded over Hong Kong on both of these two days. Under the influence of a trough of low pressure lingering over the northern part of the South China Sea, there were sunny periods and some showers in Hong Kong on 19 - 20 August. With the departure and weakening of the trough of low pressure, local weather became generally fine and very hot apart from isolated showers on 21 - 22 August. Under light wind conditions, it was mainly cloudy with isolated heavy showers and thunderstorms on 23 August.

Meanwhile, an area of low pressure to the east of the Philippines intensified into a tropical depression and was named Bailu on 21 August. Bailu further intensified into a severe tropical storm on 22 August and moved generally northwestward across the western North Pacific. It skirted past the southern tip of Taiwan and entered the Taiwan Strait on 24 August. Bailu made landfall over the coast of southeastern China on 25 August and weakened progressively into an area of low pressure over inland Guangdong.

Affected by the outer subsiding air of Bailu, it was generally fine and very hot with haze in Hong Kong on 24 August. Lashed by the outer rainbands associated with Bailu, there were occasional heavy squally showers and thunderstorms in Hong Kong on 25 - 26 August. More than 150 millimetres of rainfall were recorded over many places, and rainfall even exceeded 200 millimetres in the urban areas and parts of New Territories in these two days. During the incessant downpour on the early morning of 26 August, the temperature at the

Observatory dropped to a minimum of 22.9 degrees, the lowest of the month.

With the strengthening of an anticyclone aloft southeastern China, the showers eased off gradually on 27 August and the weather became mainly fine and very hot on 28 August. Meanwhile, an area of low pressure developed into a tropical cyclone over the seas east to the Philippines on 27 August and was named Podul. It moved generally westward and entered the South China Sea on 28 August. With Podul moving across the central part of the South China Sea towards the vicinity of the southern part of Hainan Island, local weather turned mainly cloudy and windier with a few showers and thunderstorms on 29 August. Under the influence of the outer rainbands associated with Podul, local weather was unsettled with occasional showers and thunderstorms on 30 August. A broad trough of low pressure over the south China coast continued to bring thundery showers to the territory on the last day of the month. Heavy showers in the morning brought more than 50 millimetres of rainfall to Sha Tin, Sai Kung and Tseung Kwan O.

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

During the month, seventeen 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 二零一九年八月發出的警告及信號**  
**Table 1.1 Warnings and Signals issued in August 2019**

熱帶氣旋警告信號

Tropical Cyclone 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
		韋帕 WIPHA	3 1	31/7 1/8	2340 1920
白鹿 BAILU	1	24/8	1440	25/8	1920
楊柳 PODUL	1	28/8	1440	29/8	1220

暴雨警告信號

Rainstorm 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 Amber	1/8	0725	1/8	2100
黃色 Amber	2/8	0325	2/8	0440
黃色 Amber	14/8	0445	14/8	0610
黃色 Amber	17/8	1115	17/8	1230
黃色 Amber	25/8	0050	25/8	0240
黃色 Amber	25/8	1130	25/8	1445
黃色 Amber	25/8	2355	26/8	0040
紅色 Red	26/8	0040	26/8	0325
黃色 Amber	26/8	0325	26/8	0500

山泥傾瀉警告

Landslip 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
31/7	2040	2/8	0915
26/8	0250	26/8	2155

雷暴警告

Thunderstorm Warning

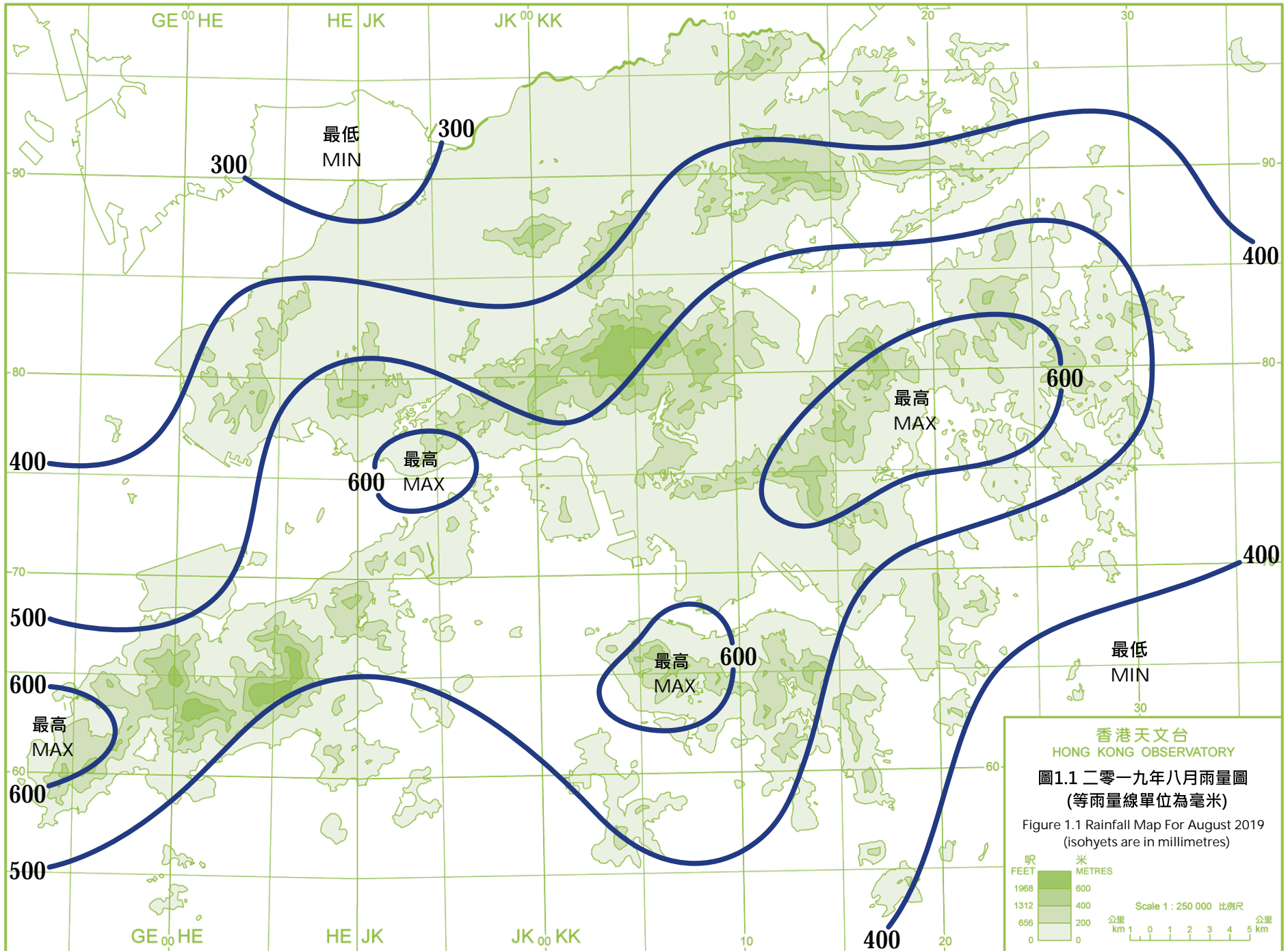
開始時間 Beginning Time		終結時間 Ending Time		開始時間 Beginning Time		終結時間 Ending Time	
日/月 day/month	時 hour	日/月 day/month	時 hour	日/月 day/month	時 hour	日/月 day/month	時 hour
1/8	0615	2/8	0530	2/8	0625	2/8	0930
3/8	0630	3/8	0945	6/8	1245	6/8	1445
8/8	2050	8/8	2300	10/8	0155	10/8	0500
10/8	1645	10/8	1825	11/8	0310	11/8	0515
12/8	0420	12/8	0630	12/8	1315	12/8	1430
12/8	1550	12/8	1900	14/8	0415	14/8	0615
14/8	1800	14/8	1915	15/8	0638	15/8	0730
15/8	1430	15/8	1550	16/8	0325	16/8	0645
16/8	1125	16/8	1730	16/8	1910	16/8	2015
16/8	2110	17/8	0100	17/8	0535	17/8	1400
17/8	1450	17/8	1700	18/8	1105	18/8	1830
19/8	1245	19/8	1345	19/8	1645	19/8	1945
23/8	0700	23/8	1430	23/8	1520	23/8	1700
24/8	2355	25/8	0245	25/8	1055	25/8	1500
25/8	2140	26/8	1530	27/8	0050	27/8	0200
29/8	0315	29/8	0730	29/8	1055	29/8	1630
30/8	0535	30/8	1030	31/8	0130	31/8	0600
31/8	1455	31/8	1945				

酷熱天氣警告

Very Hot 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
5/8	1230	6/8	1325
7/8	1240	10/8	1620
11/8	0945	11/8	1800
12/8	0945	12/8	1800
13/8	0845	14/8	0440
14/8	1115	14/8	1800
15/8	1115	15/8	1800
16/8	0845	16/8	1620
21/8	1220	21/8	1800
22/8	0945	25/8	0040
28/8	0645	28/8	1900





## 2.1 二零一九年八月熱帶氣旋概述

二零一九年八月在北太平洋西部及南海區域出現了六個熱帶氣旋，當中韋帕、白鹿及楊柳引致香港天文台需要發出熱帶氣旋警告信號，而韋帕影響香港期間天文台更需要發出今年首個八號烈風或暴風信號。

熱帶低氣壓韋帕於七月三十日下午在香港以南約 510 公里的南海北部上形成，晚間至翌日早上向北緩慢移動。韋帕於七月三十一日早上增強為熱帶風暴，其後達到最高強度時，中心附近最高持續風速估計為每小時 85 公里。韋帕於當日下午開始加速向西北偏西移向海南島，八月一日清晨韋帕移速減慢，以逆時針方向在海南島東北部沿岸徘徊，早上再度加速向北移動，晚上向西橫過雷州半島。八月二日韋帕橫過廣西沿岸至北部灣一帶，並逐漸減弱，翌日晚上在越南北部減弱為一個低壓區。

根據報章報導，韋帕在澳門造成六人受傷。韋帕亦為越南北部帶來暴雨，引致廣泛地區水浸，共造成最少 10 人死亡，11 人失蹤。有關韋帕的詳細資料及對香港的影響，請參閱它的熱帶氣旋報告。

熱帶低氣壓范斯高於八月二日早上在硫黃島之東南偏東約 1320 公里的北太平洋西部上形成，採取西北路徑移向日本九州一帶，並逐漸增強。范斯高於八月五日晚間增強為颱風，並達到其最高強度，中心附近最高持續風速估計為每小時 130 公里。翌日范斯高橫過日本九州並逐漸減弱。隨後范斯高向北橫過朝鮮半島，最後於八月七日晚上在朝鮮半島以東的海域演變為一股溫帶氣旋。

根據報章報導，范斯高吹襲日本九州期間帶來狂風暴雨，造成最少一人死亡及三人受傷，超過 17 000 戶停電。

熱帶低氣壓利奇馬於八月四日清晨在馬尼拉以東約 1180 公里的北太平洋西部上形成，大致向西北移向台灣以東海域，並逐漸增強。利奇馬於八月七日增強為颱風，翌日進一步發展為超強颱風並達到其最高強度，中心附近最高持續風速估計為每小時 195 公里。隨後兩天利奇馬橫過東海，並逐漸減弱。利奇馬於八月十日清晨在浙江沿岸登陸，其後轉向偏北方向橫過華東沿岸地區並減弱為熱帶風暴。八月十二日利奇馬在渤海緩慢移動，翌日下午演變為一股溫帶氣旋。

根據報章報導，受利奇馬影響，浙江、上海、江蘇、山東、安徽、福建、河北、遼寧、吉林九省市暴雨成災，共造成最少 56 人死亡和 14 人失蹤、逾一千四百萬人受災及直接經濟損失超過五百億元人民幣。利奇馬引致的暴雨在台灣造成至少兩死 11 傷。利奇馬吹襲琉球群島期間亦造成最少四人受傷和 15 000 多戶停電。

熱帶低氣壓羅莎於八月六日下午在硫黃島之東南偏南約 810 公里的北太平洋西部

上形成，移動緩慢並迅速增強。羅莎於八月九日增強為強颱風並達到其最高強度，中心附近最高持續風速估計為每小時 155 公里。隨後羅莎開始減弱，八月十二日開始加速向西北移動。羅莎於八月十四日轉向北移向日本九州至四國一帶。羅莎於八月十五日先後橫過日本四國及本州西部，翌日在本州以北的海域演變為一股溫帶氣旋。

根據報章報導，羅莎吹襲日本期間帶來狂風暴雨，造成最少三人死亡及 55 人受傷，逾 800 航班取消。

熱帶低氣壓白鹿於八月二十一日下午在高雄之東南偏東約 1460 公里的北太平洋西部上形成，初時向西移動。翌日白鹿增強為熱帶風暴，下午開始採取西北路徑移向台灣南部。當晚白鹿進一步增強為強烈熱帶風暴，八月二十三日晚上達到其最高強度，中心附近最高持續風速估計為每小時 105 公里。白鹿於八月二十四日橫過台灣南部，其後採取西北偏西路徑橫過台灣海峽。翌日早上白鹿在福建登陸並減弱為熱帶風暴，日間繼續移入內陸，八月二十六日凌晨在廣東內陸減弱為低壓區。

根據報章報導，白鹿吹襲台灣期間造成至少一人死亡和九人受傷，逾 10 萬戶停電。福建亦有至少 44 萬戶停電，陸空交通受影響。有關白鹿的詳細資料及對香港的影響，請參閱它的熱帶氣旋報告。

熱帶低氣壓楊柳於八月二十七日早上在馬尼拉以東約 590 公里的北太平洋西部上形成，向西北偏西迅速移動，當晚橫過呂宋。翌日楊柳繼續迅速向西橫過南海中部並增強為熱帶風暴，並在八月二十九日凌晨達其最高強度，中心附近最高持續風速估計為每小時 85 公里。八月三十日凌晨楊柳在越南北部登陸，日間在中南半島減弱為低壓區。

根據報章報導，楊柳吹襲菲律賓期間，一人被巨浪捲走而死亡。楊柳在海南島誘發龍捲風，造成至少八人死亡和兩人受傷。楊柳在越南亦造成至少六人死亡和兩人失蹤。有關楊柳的詳細資料及對香港的影響，請參閱它的熱帶氣旋報告。

## 2.1 Overview of Tropical Cyclones in August 2019

Six tropical cyclones occurred over the western North Pacific and the South China Sea in August 2019, of which Wipha, Bailu and Podul necessitated the issuance of the tropical cyclone warning signals by the Observatory. The first No. 8 Gale or Storm Signal in the year was issued under the passage of Wipha.

Wipha formed as a tropical depression over the northern part of the South China Sea about 510 km south of Hong Kong on the afternoon of 30 July. It drifted northwards slowly during that night and next morning. Wipha intensified into a tropical storm on the morning of 31 July, later reaching its peak intensity with an estimated maximum sustained wind of 85 km/h near its centre. It started to pick up speed to move west-northwest towards Hainan Island in the afternoon. Wipha slowed down on the early morning of 1 August, making an anti-clockwise loop around the northeastern coast of Hainan Island. It picked up its speed to move northward again in the morning and then moved westward across the Leizhou Peninsula that night. Wipha moved across the coast of Guangxi and the vicinity of Beibu Wan on 2 August and weakened gradually. It degenerated into an area of low pressure over the northern part of Vietnam the next night.

According to press reports, at least six people were injured in Macao during the passage of Wipha. Wipha also brought torrential rain to the northern part of Vietnam, which triggered extensive flooding. At least 10 people were killed and 11 were reported missing. For detailed information of Wipha including its impact to Hong Kong, please refer to the Tropical Cyclone Report of Wipha.

Francisco formed as a tropical depression over the western North Pacific about 1 320 km east-southeast of Iwo Jima on the morning of 2 August. It took on a northwest course towards the vicinity of Kyushu of Japan and intensified gradually. Francisco intensified into a typhoon on the night of 5 August, reaching its peak intensity with an estimated sustained wind of 130 km/h near its centre. It swept across Kyushu of Japan the next day and weakened gradually. Francisco then moved northward across the Korean Peninsula and finally evolved into an extratropical cyclone over the sea areas east of the Korean Peninsula on the night of 7 August.

According to press reports, Francisco brought torrential rain and squalls to Kyushu of Japan during its passage, leading to at least one dead and three injuries. There were more than 17 000 households without electricity supply.

Lekima formed as a tropical depression over the western North Pacific about 1180 km east of Manila on the small hours of 4 August. It tracked generally northwest towards the sea

areas east of Taiwan and intensified gradually. Lekima intensified into a typhoon on 7 August and further developed into a super typhoon the next day, reaching its peak intensity with an estimated sustained wind of 195 km/h near its centre. Lekima moved across the East China Sea and weakened gradually in the following two days. Lekima made landfall over the coast of Zhejiang on the small hours of 10 August. It then turned northwards across the coastal region of eastern China and weakened into a tropical storm. Lekima moved slowly over the Bohai Sea on 12 August and evolved into an extratropical cyclone the next afternoon.

According to press reports, Lekima wreaked havoc with torrential rain in nine provinces and cities including Zhejiang, Shanghai, Jiangsu, Shandong, Anhui, Fujian, Hebei, Liaoning and Jilin. There were at least 56 deaths and 14 missing. Over 14 million people were affected with direct economic loss exceeding 50 billion RMB. Under the influence of torrential rain brought by Lekima, there were at least two deaths and 11 injuries in Taiwan. At least four people were also injured in Ryukyu Islands during the passage of Lekima. Electricity supply to over 15 000 households was affected.

Krosa formed as a tropical depression over the western North Pacific about 810 km south-southeast of Iwo Jima on the afternoon of 6 August. While moving slowly, it intensified rapidly and developed into a severe typhoon on 9 August, reaching its peak intensity with an estimated sustained wind of 155 km/h near its centre. Krosa then started to weaken and picked up its speed to move northwards towards the vicinity of Kyushu and Shikoku of Japan on 14 August. After moving across Shikoku and the western part of Honshu of Japan on 15 August, Krosa finally evolved into an extratropical cyclone over the sea areas north of Honshu the next day.

According to press reports, Krosa brought torrential rain and squalls during its passage to Japan, leading to at least three deaths and 55 injuries. Over 800 flights were cancelled.

Bailu formed as a tropical depression over the western North Pacific about 1 460 km east-southeast of Gaoxiong on the afternoon of 21 August and drifted westwards at first. Bailu intensified into a tropical storm on 22 August and started to take on a northwesterly course towards the southern part of Taiwan in the afternoon. Bailu further intensified into a severe tropical storm that night. It reached its peak intensity on the night of 23 August with an estimated maximum sustained wind of 105 km/h near its centre. After sweeping across the southern part of Taiwan on 24 August, Bailu moved across the Taiwan Strait. It made landfall over Fujian the next morning and weakened into a tropical storm. Bailu moved further inland during the day and weakened into an area of low pressure over inland Guangdong on the small hours of 26 August.

According to press reports, Bailu brought at least one death and nine injuries to Taiwan during its passage. Over 100 000 households were without electricity supply. In Fujian, electricity supply to over 440 000 households was also interrupted. Air and land transportations were affected. For detailed information of Bailu including its impact to Hong Kong, please refer to the Tropical Cyclone Report of Bailu.

Podul formed as a tropical depression over the western North Pacific about 590 km east of Manila on the morning of 27 August. Drifting west-northwestwards quickly, it moved across Luzon that night. Podul continued to move westwards quickly across the central part of the South China Sea and intensified into a tropical storm on 28 August. Podul reached its peak intensity on the small hours of 29 August with an estimated maximum sustained wind of 85 km/h near its centre. Podul made landfall over the northern part of Vietnam on the small hours of 30 August and finally weakened into an area of low pressure over the Indo-China during the day.

According to press report, one person was killed by strong waves during the passage of Podul in the Philippines. Podul also triggered a tornado in Hainan, killing at least eight people and leaving two others injured. Podul also left at least six deaths and two missing in Vietnam. For detailed information of Podul including its impact to Hong Kong, please refer to the Tropical Cyclone Report of Podul.

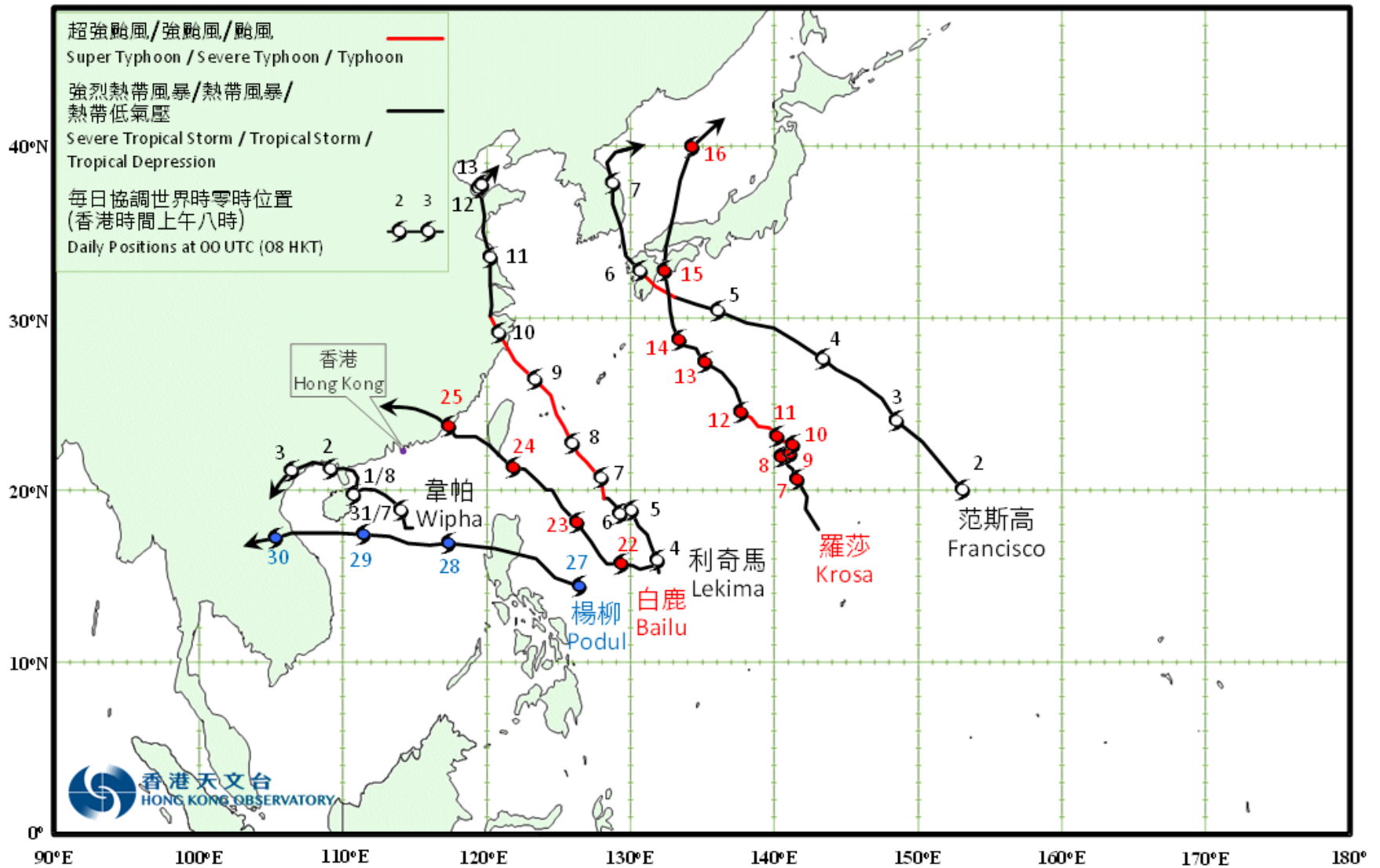


圖 2.1 二零一九年八月的熱帶氣旋路徑圖  
 Fig. 2.1 Tracks of tropical cyclones in August 2019

## 2.2 熱帶風暴韋帕 (1907)

二零一九年七月三十日至八月三日

韋帕是二零一九年第二個影響香港的熱帶氣旋。雖然熱帶風暴韋帕在香港約 310 公里掠過，但其廣闊的環流及不對稱的風力結構令天文台需要發出今年首個八號烈風或暴風信號。韋帕是一九六一年以來距離香港最遠而需發出八號烈風或暴風信號的熱帶風暴。

熱帶低氣壓韋帕於七月三十日下午在香港以南約 510 公里的南海北部上形成，晚間至翌日早上向北緩慢移動。韋帕於七月三十一日早上增強為熱帶風暴，其後達到最高強度時，中心附近最高持續風速估計為每小時 85 公里。韋帕於當日下午開始加速向西北偏西移向海南島，八月一日清晨韋帕移速減慢，以逆時針方向在海南島東北部沿岸徘徊，早上再度加速向北移動，晚上向西橫過雷州半島。八月二日韋帕橫過廣西沿岸至北部灣一帶，並逐漸減弱，翌日晚上在越南北部減弱為一個低壓區。

七月三十日下午韋帕於南海北部發展為熱帶低氣壓後，香港天文台在下午 3 時 40 分發出一號戒備信號，當時韋帕集結在香港以南約 500 公里。下午本港吹清勁偏東風，離岸及高地吹強風。隨著韋帕逐漸增強，天文台在當晚 9 時 15 分發出三號強風信號，當時韋帕位於香港以南約 500 公里。晚間本港吹清勁至強風程度的東至東北風。由於韋帕於七月三十一日上午採取較偏北路徑移動，進一步靠近廣東沿岸及增強，天文台在當日下午 1 時 40 分發出八號東北烈風或暴風信號，當時韋帕集結在香港以南約 340 公里。受韋帕右半圓外圍的強雨帶影響，下午本港普遍吹強風至烈風程度的東至東北風。韋帕在當日下午 5 時左右最接近香港，在香港之西南偏南約 310 公里掠過。隨著當晚韋帕逐漸遠離香港，本港風力有所減弱，天文台在晚上 11 時 40 分改發三號強風信號。八月一日初時韋帕仍然在海南島東北部沿岸徘徊，與其相關的外圍雨帶繼續影響香港。當日早上本港仍普遍吹強風程度的東至東南風，離岸及高地間中吹烈風。下午韋帕移向雷州半島，本港風力逐漸緩和，天文台在晚上 7 時 20 分改發一號戒備信號，到八月二日上午 8 時 40 分取消所有熱帶氣旋警告信號。

在韋帕的影響下，大帽山、長洲及橫瀾島錄得的最高每小時平均風速分別為每小時 88、72 及 70 公里，而最高陣風則分別為每小時 131、108 及 117 公里。尖鼻咀錄得最高潮位 3.47 米(海圖基準面以上)，而石壁則錄得最大風暴潮(天文潮高度以上) 0.64 米。各站錄得的最低瞬時海平面氣壓如下：



站	最低瞬時 海平面氣壓 (百帕斯卡)	日期/月份	時間
香港天文台總部	998.1	1/8	上午 4 時 49 分
香港國際機場	997.4	1/8	上午 4 時 30 分
長洲	997.3	1/8	上午 4 時 38 分
京士柏	998.1	1/8	上午 4 時 54 分
流浮山	997.8	1/8	上午 4 時 31 分
坪洲	997.6	1/8	上午 4 時 43 分
沙田	998.7	1/8	上午 4 時 49 分
上水	998.5	1/8	上午 4 時 20 分
打鼓嶺	998.2	1/8	上午 4 時 50 分
大埔	998.9	1/8	上午 4 時 54 分
橫瀾島	998.3	1/8	上午 4 時 21 分

韋帕的外圍雨帶在七月三十日至八月二日為香港帶來連場狂風大雨，期間本港普遍錄得超過 250 毫米雨量，而新界部分地區及大嶼山的雨量更超過 350 毫米。天文台在七月三十一日、八月一日及八月二日均曾發出黃色暴雨警告。雨勢在七月三十一日晚上最大，當晚天文台曾發出紅色暴雨警告、新界北部水浸特別報告及山泥傾瀉警告。

韋帕吹襲香港期間，最少有 20 人受傷，另有超過 850 宗塌樹報告，3 宗水浸報告及 3 宗山泥傾瀉報告。深水埗有天秤被強風吹塌，一人被雜物擊中受傷。西貢、東涌及香港仔分別有棚架倒塌。風暴期間，一人在石澳游泳時受傷，需要救生員協助。錦田有村民被洪水圍困，需要消防員協助離開。中環街市有假天花在大雨下倒塌。大棠亦有護土牆倒塌，壓倒一間鐵皮屋。約 300 公頃的新界農地受影響。香港國際機場有 693 班航班延誤、25 班航班取消、14 班航班需要轉飛其他地方。

根據報章報導，韋帕在澳門造成六人受傷。韋帕亦為越南北部帶來暴雨，引致廣泛地區水浸，共造成最少 10 人死亡，11 人失蹤。

## **2.2 Tropical Storm Wipha (1907) 30 July to 3 August 2019**

Wipha was the second tropical cyclone affecting Hong Kong in 2019. Although tropical storm Wipha skirted past at about 310 km of the territory, its extensive circulation and asymmetric wind structure necessitated the issuance of the first No.8 Gale or Storm Signal this year. Wipha is also the farthest tropical storm necessitating the issuance of No.8 Gale or Storm Signal in Hong Kong since 1961.

Wipha formed as a tropical depression over the northern part of the South China Sea about 510 km south of Hong Kong on the afternoon of 30 July. It drifted northwards slowly during that night and next morning. Wipha intensified into a tropical storm on the morning of 31 July, later reaching its peak intensity with an estimated maximum sustained wind of 85 km/h near its centre. It started to pick up speed to move west-northwest towards Hainan Island in the afternoon. Wipha slowed down on the early morning of 1 August, making an anti-clockwise loop around the northeastern coast of Hainan Island. It picked up its speed to move northward again in the morning and then moved westward across the Leizhou Peninsula that night. Wipha moved across the coast of Guangxi and the vicinity of Beibu Wan on 2 August and weakened gradually. It degenerated into an area of low pressure over the northern part of Vietnam the next night.

After Wipha developed into a tropical depression over the northern part of the South China Sea on the afternoon of 30 July, the Hong Kong Observatory issued the Standby Signal No. 1 at 3:40 p.m. when Wipha was about 500 km south of Hong Kong. Local winds were fresh easterlies, reaching strong force offshore and on high ground in the afternoon. With Wipha intensifying gradually, the No. 3 Strong Wind Signal was issued at 9:15 p.m. that night when Wipha was about 500 km south of Hong Kong. Local winds became fresh to strong east to northeasterly during the night. As Wipha adopted a more northerly track and edged closer to the coast of Guangdong and intensified further on the morning of 31 July, the No. 8 Northeast Gale or Storm Signal was issued at 1:40 p.m. when Wipha was about 340 km south of Hong Kong. Under the influence of the intense outer rainbands in the right semicircle of Wipha, strong to gale force east to northeasterly winds generally affected the territory in the afternoon. Wipha came closest to Hong Kong at around 5 p.m. that day, skirting past about 310 km south-southwest of the territory. With Wipha departing gradually from Hong Kong and local wind moderating, the No. 3 Strong Wind Signal was issued at 11:40 p.m. that night. Wipha lingered around the northeastern coast of Hainan Island at first on 1 August and the rainbands associated with Wipha continued to affect Hong Kong. Strong east to southeasterly winds persisted over Hong Kong that morning, occasionally reaching gale force offshore and on high ground. Wipha moved towards Leizhou Peninsula in the afternoon and local winds abated gradually. The Standby Signal No.1 was issued at 7:20 p.m. on

1 August, before all tropical cyclone warning signals were cancelled at 8:40 a.m. on 2 August.

Under the influence of Wipha, maximum hourly mean winds of 88, 72 and 70 km/h and maximum gusts of 131, 108 and 117 km/h were recorded at Tai Mo Shan, Cheung Chau and Waglan Island respectively. A maximum sea level (above chart datum) of 3.47 m was recorded at Tsim Bei Tsui, and a maximum storm surge (above astronomical tide) of 0.64 m was recorded at Shek Pik. The lowest instantaneous mean sea-level pressures recorded at some selected stations are as follows:

Station	Lowest instantaneous mean sea-level pressure (hPa)	Date/Month	Time
Hong Kong Observatory Headquarters	998.1	1/8	4:49 a.m.
Hong Kong International Airport	997.4	1/8	4:30 a.m.
Cheung Chau	997.3	1/8	4:38 a.m.
King's Park	998.1	1/8	4:54 a.m.
Lau Fau Shan	997.8	1/8	4:31 a.m.
Peng Chau	997.6	1/8	4:43 a.m.
Shatin	998.7	1/8	4:49 a.m.
Sheung Shui	998.5	1/8	4:20 a.m.
Ta Kwu Ling	998.2	1/8	4:50 a.m.
Tai Po	998.9	1/8	4:54 a.m.
Waglan Island	998.3	1/8	4:21 a.m.

The heavy rain and squalls associated with the outer rainbands of Wipha lashed the territory during 30 July to 2 August. Overall, more than 250 millimetres of rainfall were generally recorded over the territory, with rainfall exceeding 350 millimetres over the Lantau Island and parts of the New Territories. Amber Rainstorm Warning was issued on 31 July, 1 August and 2 August. The rain was particularly heavy on the night of 31 July, necessitating the issuance of the Red Rainstorm Warning, Landslip Warning and Special Announcement on Flooding in Northern New Territories by the Observatory.

In Hong Kong, at least 20 people were injured during the passage of Wipha. There were more than 850 reports of fallen trees, 3 reports of flooding and 3 reports of landslides. Under high winds, a tower crane in Sham Shui Po was blown down and one person was injured by falling objects. Scaffoldings at Sai Kung, Tung Chung and Aberdeen were blown down. During the stormy weather, one person was injured while swimming in Shek O and required the assistance of

lifeguards. Villagers in Kam Tin were trapped by flood waters in and were taken to safety by firemen. Part of the false ceiling in Central Market collapsed under heavy rain. A retaining wall at Tai Tong also collapsed, damaging a metal hut. About 300 hectares of farmland in the New Territories were affected. 693 flights were cancelled, 25 flights were delayed and 14 flights diverted at the Hong Kong International Airport.

According to press reports, at least six people were injured in Macao during the passage of Wipha. Wipha also brought torrential rain to the northern part of Vietnam, which triggered extensive flooding. At least 10 people were killed and 11 were reported missing.

表 2.2.1 在韋帕影響下，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 the tropical cyclone warning signals for Wipha were in force

站 Station ( <a href="https://www.hko.gov.hk/zh/informtc/station2019.htm">https://www.hko.gov.hk/zh/informtc/station2019.htm</a> , <a href="https://www.hko.gov.hk/en/informtc/station2019.htm">https://www.hko.gov.hk/en/informtc/station2019.htm</a> )		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)	東	E	90	31/7	13:59	東南	SE	51	1/8	08:00
中環碼頭	Central Pier	東	E	94	31/7	13:44	東	E	43	31/7	16:00
長洲	Cheung Chau	東南偏東	ESE	108	1/8	07:18	東	E	72	1/8	08:00
長洲泳灘	Cheung Chau Beach	東北偏東	ENE	115	31/7	16:30	東	E	68	1/8	07:00
青洲	Green Island	東北偏東	ENE	112	31/7	13:46	東北偏東	ENE	59	31/7	16:00
香港國際機場	Hong Kong International Airport	東南偏東	ESE	79	1/8	07:32	東南偏東	ESE	47	1/8	08:00
啟德	Kai Tak	東	E	79	31/7	14:01	東	E	34	31/7	19:00
京士柏	King's Park	東	E	75	31/7	15:43	東	E	31	1/8	07:00
南丫島	Lamma Island	東南偏東	ESE	77	1/8	07:15	東	E	43	1/8	05:00
流浮山	Lau Fau Shan	東南	SE	90	1/8	07:49	東	E	31	30/7	17:00
北角	North Point	東	E	83	31/7	18:29	東	E	47	31/7	16:00
坪洲	Peng Chau	東	E	104	31/7	16:33	東	E	54	31/7	16:00
平洲	Ping Chau	東	E	49	31/7	18:25	東	E	22	31/7	20:00
西貢	Sai Kung	東北	NE	92	31/7	17:50	東北偏東	ENE	40	31/7	16:00
							東北偏東	ESE	40	31/7	20:00
沙洲	Sha Chau	東南	SE	85	1/8	07:32	東南偏東	ESE	49	1/8	08:00
沙螺灣	Sha Lo Wan	東	E	99	1/8	07:34	東	E	41	31/7	22:00
沙田	Sha Tin	東北偏東	ENE	62	31/7	22:02	東南	SE	23	1/8	20:00
石崗	Shek Kong	東	E	75	31/7	14:19	東	E	31	1/8	05:00
							東	E	31	1/8	11:00
九龍天星碼頭	Star Ferry (Kowloon)	東南	SE	90	1/8	07:27	東	E	45	1/8	08:00
打鼓嶺	Ta Kwu Ling	東北偏東	ENE	58	31/7	14:16	東	E	23	1/8	00:00
大美督	Tai Mei Tuk	東	E	94	31/7	22:55	東	E	59	1/8	07:00
大帽山	Tai Mo Shan	東南偏東	ESE	131	1/8	06:22	東南偏東	ESE	88	1/8	07:00
大埔滘	Tai Po Kau	東南偏東	ESE	76	1/8	07:40	東	E	43	31/7	15:00
塔門東*	Tap Mun East*	東南偏東	ESE	94	31/7	13:53	東	E	63	31/7	19:00
大老山	Tate's Cairn	東南偏東	ESE	121	31/7	20:08	東	E	76	31/7	21:00
將軍澳	Tseung Kwan O	東南偏東	ESE	63	31/7	19:27	東南偏東	ESE	20	1/8	20:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	東南偏南	SSE	77	1/8	07:30	東南偏東	ESE	31	1/8	08:00
屯門政府合署	Tuen Mun Government Offices	東南偏東	ESE	90	1/8	07:50	東南	SE	23	1/8	08:00
							東南	SE	23	1/8	21:00
橫瀾島	Waglan Island	東	E	117	31/7	13:48	東	E	70	31/7	19:00
濕地公園	Wetland Park	東	E	62	31/7	14:13	東	E	20	30/7	18:00
黃竹坑	Wong Chuk Hang	東南偏東	ESE	96	1/8	07:15	東北	NE	31	31/7	16:00

昂坪 - 沒有資料 Ngong Ping - data not available

\*基於不完整的數據 \*based on incomplete data

表 2.2.2 在韋帕影響下，熱帶氣旋警告信號系統的八個參考測風站在熱帶氣旋警告信號生效時錄得持續風力達到強風及烈風程度的時段

Table 2.2.2 Periods during which sustained strong and gale force winds were attained at the eight reference anemometers in the tropical cyclone warning system when tropical cyclone warning signals for Wipha were in force

站 Station  ( <a href="https://www.hko.gov.hk/tc/info/ormtc/station2019.htm">https://www.hko.gov.hk/tc/info/ormtc/station2019.htm</a> , <a href="https://www.hko.gov.hk/en/info/ormtc/station2019.htm">https://www.hko.gov.hk/en/info/ormtc/station2019.htm</a> )		最初達到強風* 時間		最後達到強風* 時間		最初達到烈風# 時間		最後達到烈風# 時間	
		Start time when strong wind speed* was attained		End time when strong wind speed* was attained		Start time when gale force wind speed# was attained		End time when gale force wind speed# was attained	
		日期/月份 Date/Month	時間 Time	日期/月份 Date/Month	時間 Time	日期/月份 Date/Month	時間 Time	日期/月份 Date/Month	時間 Time
長洲	Cheung Chau	30/7	15:40	2/8	06:22	31/7	14:17	1/8	22:08
香港國際機場	Hong Kong International Airport	30/7	23:59	1/8	09:52	-			
啟德	Kai Tak	31/7	14:02	1/8	10:46	-			
流浮山	Lau Fau Shan	31/7	14:21	1/8	08:04	-			
西貢	Sai Kung	31/7	12:24	1/8	08:05	-			
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	1/8	07:36	1/8	07:39	-			

沙田及打鼓嶺的持續風力未達到強風程度。

The sustained wind speed did not attain strong force at Sha Tin and Ta Kwu Ling.

- 未達到指定的風速

- not attaining the specified wind speed

\* 十分鐘平均風速達每小時 41-62 公里

\* 10-minute mean wind speed of 41- 62 km/h

# 十分鐘平均風速達每小時 63-87 公里

# 10-minute mean wind speed of 63-87 km/h

註： 本表列出持續風力達到強風及烈風程度的起始及終結時間。期間風力可能高於或低於指定的風力。

Note: The table gives the start and end time of sustained strong or gale force winds. Winds might fluctuate above or below the specified wind speeds in between the times indicated.

表 2.2.3 韋帕影響香港期間，香港天文台總部及其他各站所錄得的日雨量  
Table 2.2.3 Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Wipha

站 (參閱圖 2.2.2) Station (See Fig. 2.2.2)			七月三十日 30 Jul	七月三十一日 31 Jul	八月一日 1 Aug	八月二日 2 Aug	總雨量(毫米) Total rainfall (mm)
香港天文台 Hong Kong Observatory (HKO)			12.8	121.1	98.3	8.2	240.4
香港國際機場 Hong Kong International Airport (HKA)			8.8	99.2	104.8	45.7	258.5
長洲 Cheung Chau (CCH)			7.0	[100.5]	47.0	[16.5]	[171.0]
H23	香港仔 Aberdeen		14.5	130.0	90.5	6.5	241.5
N05	粉嶺 Fanling		6.0	120.5	99.0	20.0	245.5
N13	糧船灣 High Island		5.0	168.5	107.0	3.0	283.5
K04	佐敦谷 Jordan Valley		17.0	224.5	76.5	13.0	331.0
N06	葵涌 Kwai Chung		12.0	211.0	84.5	7.5	315.0
H12	半山區 Mid Levels		16.0	117.5	100.5	9.5	243.5
N09	沙田 Sha Tin		7.5	183.0	107.5	13.5	311.5
H19	筲箕灣 Shau Kei Wan		23.0	121.0	71.5	9.5	225.0
SEK	石崗 Shek Kong		5.0	[162.0]	65.5	[3.0]	[235.5]
K06	蘇屋邨 So Uk Estate		17.5	229.0	82.5	12.5	341.5
R31	大美督 Tai Mei Tuk		5.0	108.5	99.0	8.0	220.5
N17	東涌 Tung Chung		10.0	147.5	134.0	73.0	364.5
TMR	屯門水庫 Tuen Mun Reservoir		2.2	107.8	90.1	51.8	251.9

R21 踏石角- 沒有資料 Tap Shek Kok - data not available

註：[ ] 基於不完整的每小時雨量數據。Note：[ ] based on incomplete hourly data.

表 2.2.4 韋帕影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮  
Table 2.2.4 Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of Wipha

站 Station ( <a href="https://www.hko.gov.hk/tc/info/rmtc/station2019.htm">https://www.hko.gov.hk/tc/info/rmtc/station2019.htm</a> , <a href="https://www.hko.gov.hk/en/info/rmtc/station2019.htm">https://www.hko.gov.hk/en/info/rmtc/station2019.htm</a> )		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	2.97	1/8	07:38	0.53	1/8	07:36
石壁	Shek Pik	3.20	1/8	09:30	0.64	1/8	09:29
大廟灣	Tai Miu Wan	2.93	1/8	07:26	0.59	1/8	07:25
大埔滘	Tai Po Kau	2.93	1/8	07:26	0.63	1/8	00:44
尖鼻咀	Tsim Bei Tsui	3.47	1/8	09:11	0.60	1/8	18:04

橫瀾島 - 沒有資料 Waglan Island - data not available

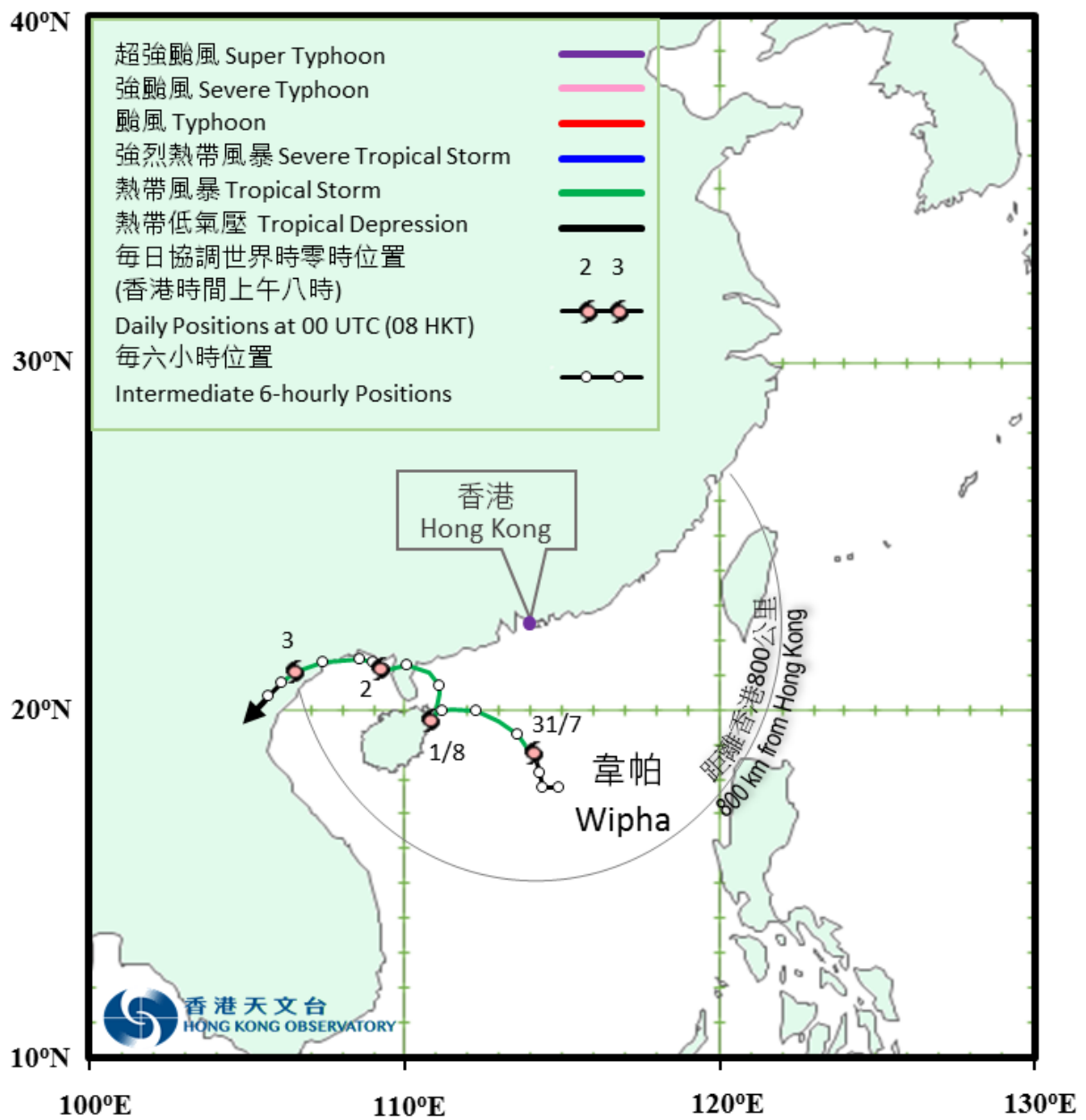


圖 2.2.1a 二零一九年七月三十日至八月三日韋帕的路徑圖。

Figure 2.2.1a Track of Wipha: 30 July – 3 August 2019.





圖 2.2.1b 韋帕接近香港時的路徑圖。

Figure 2.2.1b Track of Wipha near Hong Kong.

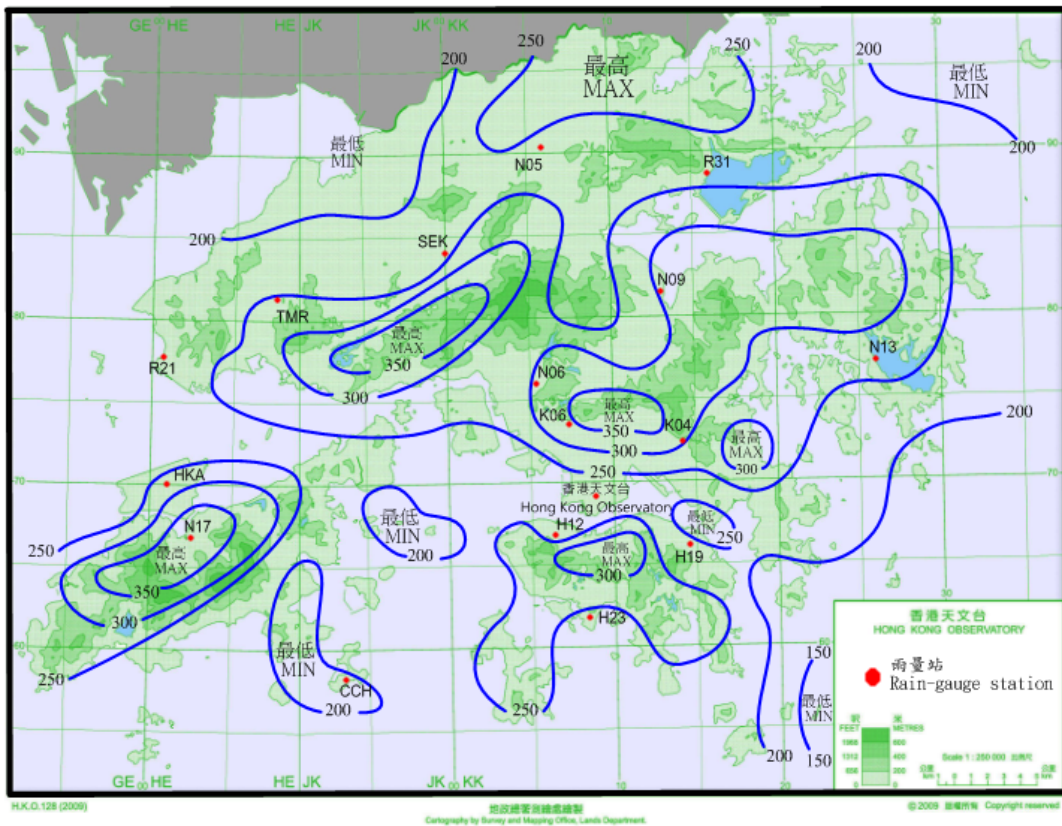


圖 2.2.2 二零一九年七月三十日至八月二日的雨量分佈(等雨量線單位為毫米)。

Figure 2.2.2 Rainfall distribution on 30 July - 2 August 2019 (isohyets in millimetres).

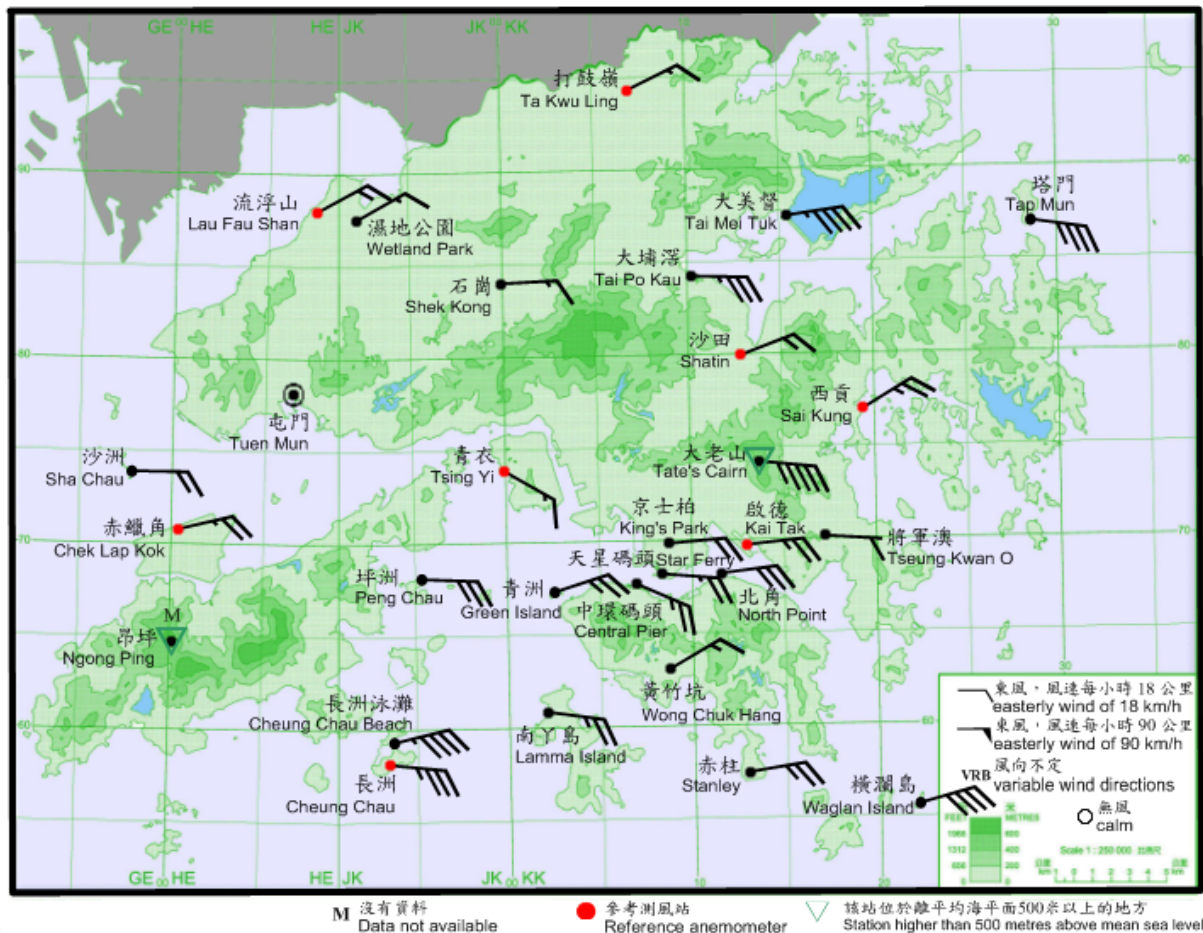


圖 2.2.3 二零一九年七月三十一日下午 2 時 10 分香港各站錄得的十分鐘平均風向和風速。當時大老山、橫瀾島、長洲泳灘、塔門及大美督的風力達到烈風程度。

Figure 2.2.3 10-minute mean wind direction and speed recorded at various stations in Hong Kong at 2:10 p.m. on 31 July 2019. Winds at Tate's Cairn, Waglan Island, Cheung Chau Beach, Tap Mun and Tai Mei Tuk reached gale force at the time.

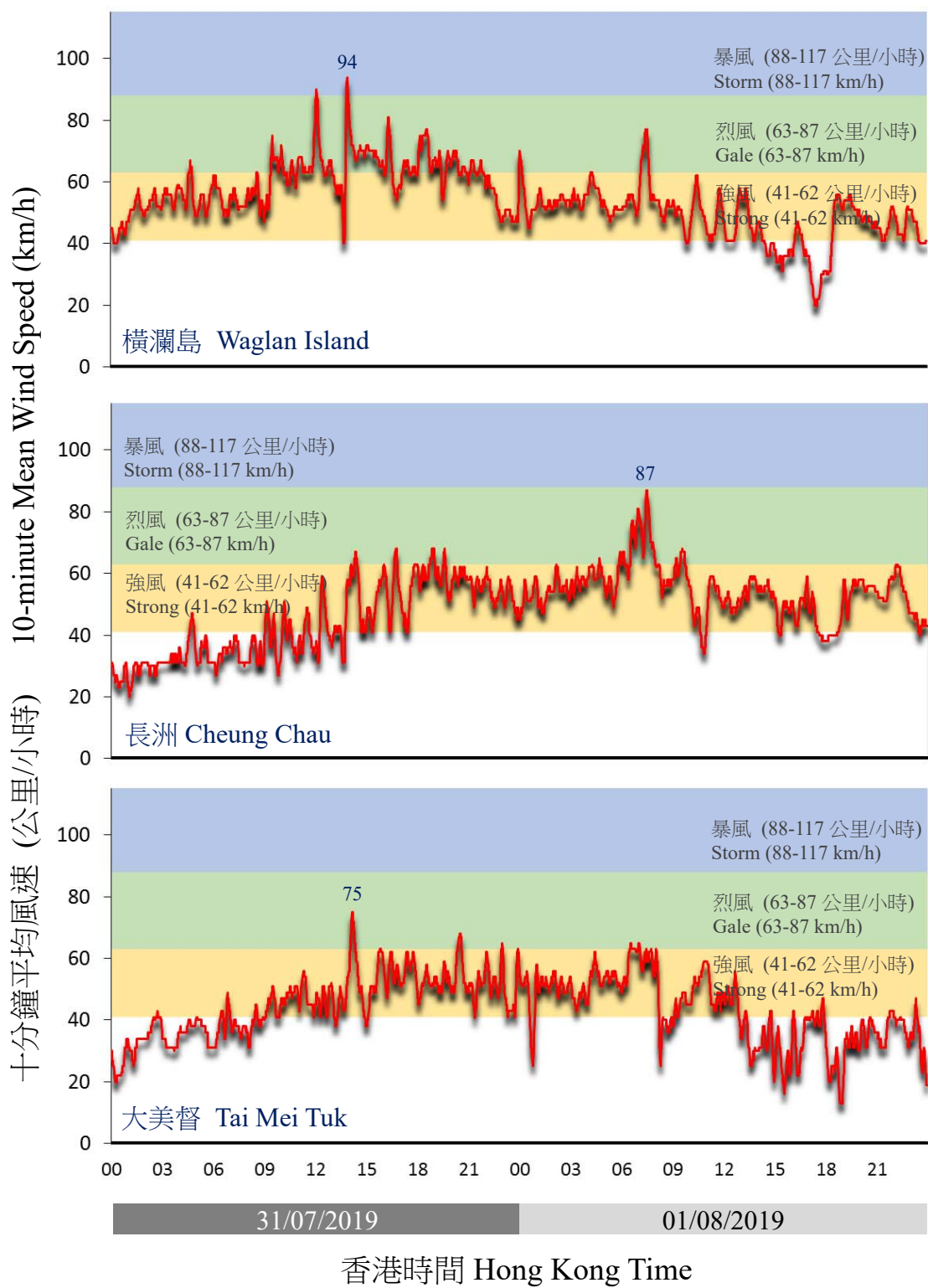


圖 2.2.4 二零一九年七月三十一日至八月一日在橫瀾島、長洲及大美督錄得的十分鐘平均風速。

Figure 2.2.4 Traces of 10-minute mean wind speed recorded at Waglan Island, Cheung Chau and Tai Mei Tuk on 31 July and 1 August 2019.

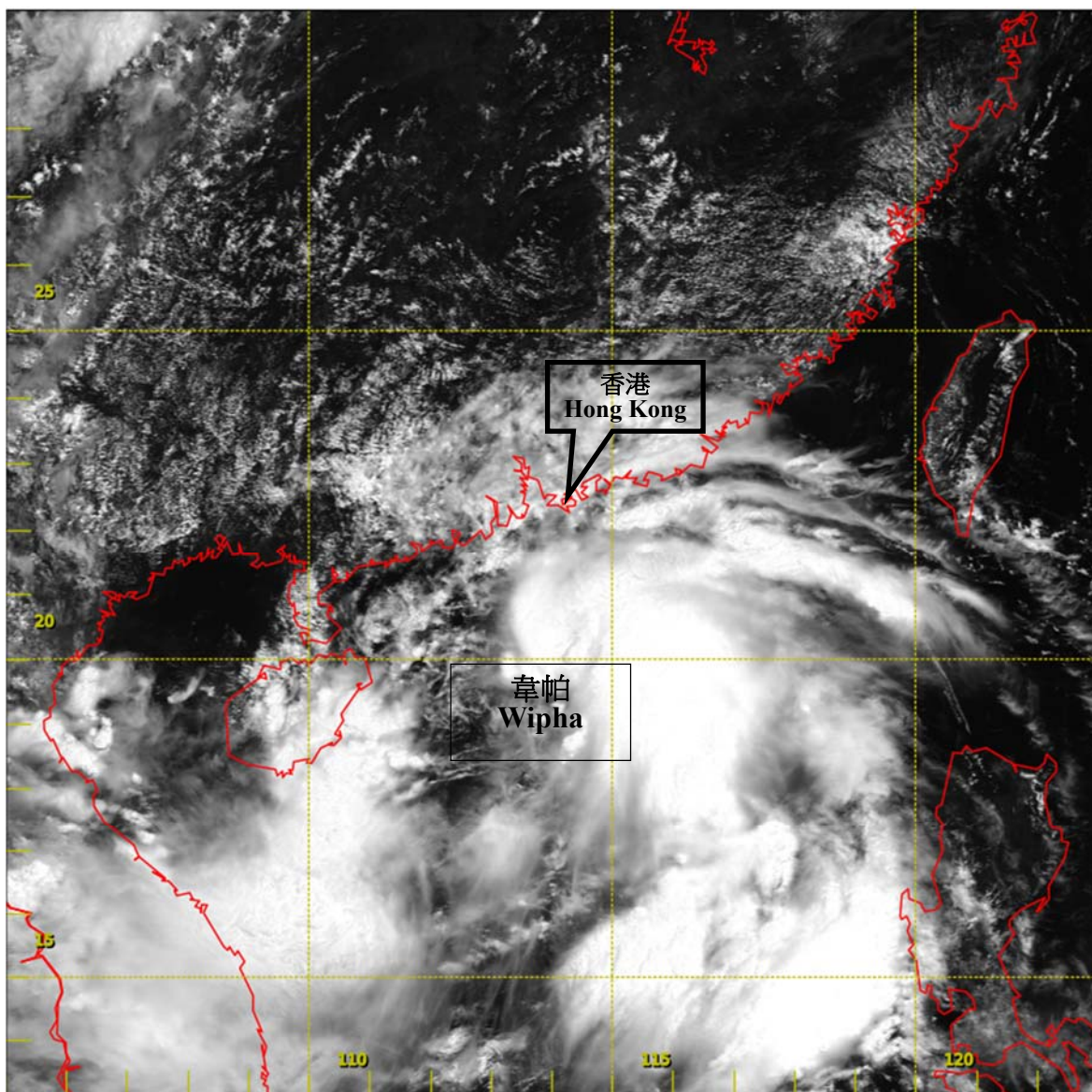


圖 2.2.5 二零一九年七月三十一日上午 11 時的可見光衛星圖片，當時韋帕達到其最高強度，中心附近最高持續風速估計為每小時 85 公里。韋帕的對流分佈相當不對稱，其右半圓發展較旺盛。

Figure 2.2.5 Visible satellite imagery around 11 a.m. on 31 July 2019, when Wipha was at peak intensity with estimated maximum sustained winds of 85 km/h near its centre. The convection of Wipha was highly asymmetric with more intense development on its right semicircle.

[此衛星圖像接收自日本氣象廳的向日葵 8 號衛星。]

[The satellite imagery was originally captured by Himawari-8 Satellite (H-8) of Japan Meteorological Agency (JMA).]

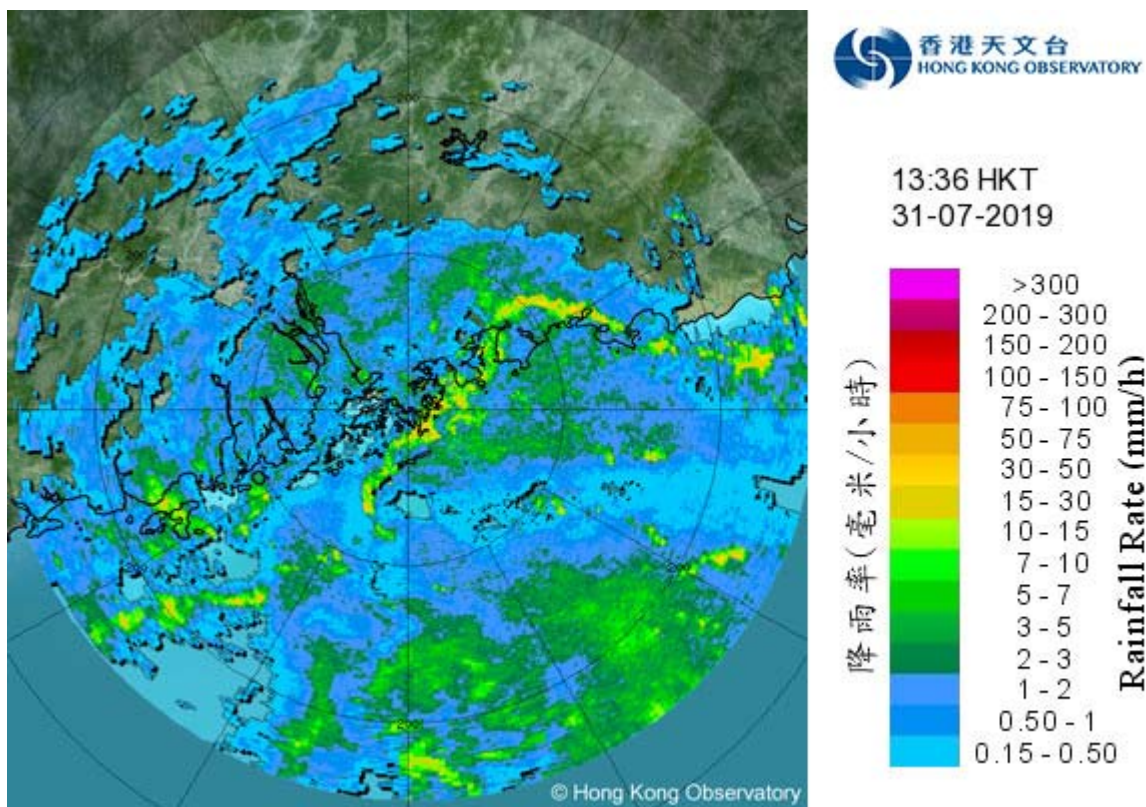


圖 2.2.6a 二零一九年七月三十一日下午 1 時 36 分的雷達回波圖像，與韋帕相關的雨帶正影響廣東沿岸及南海北部。

Figure 2.2.6a Image of radar echoes at 1:36 p.m. on 31 July 2019. The rainbands associated with Wipha were affecting the coast of Guangdong and the northern part of the South China Sea.

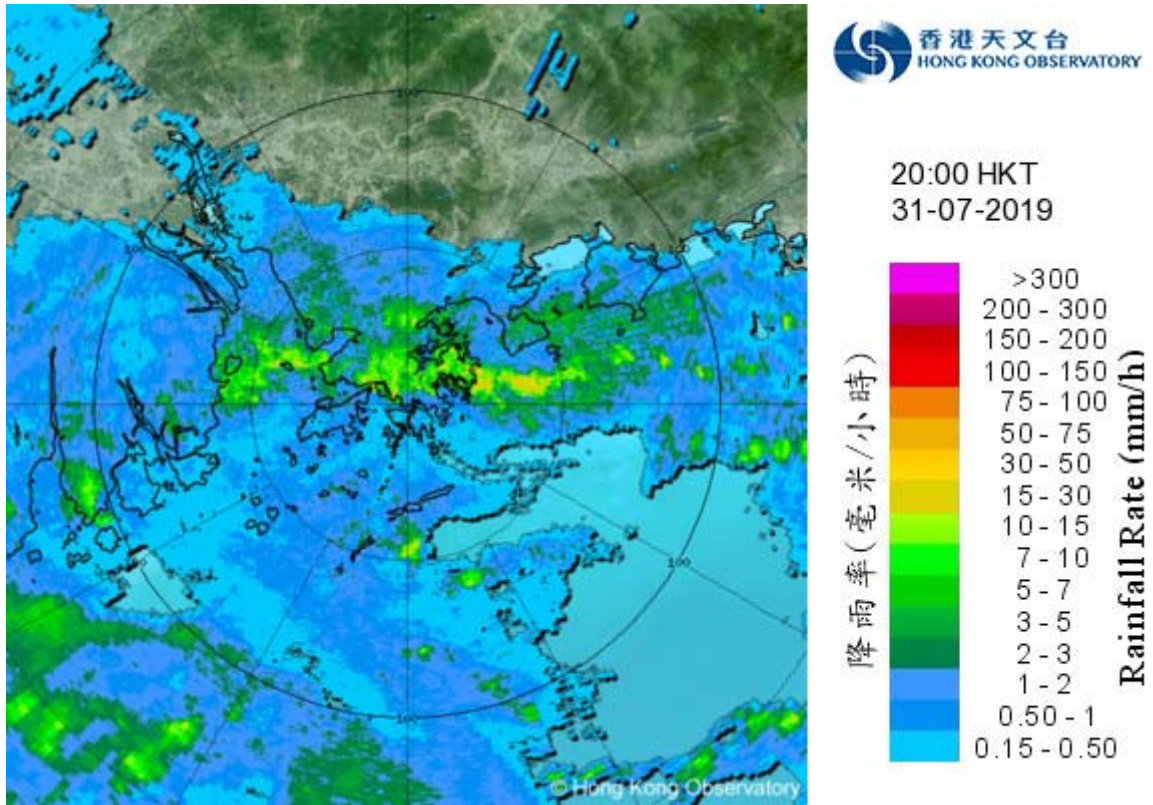


圖 2.2.6b 二零一九年七月三十一日晚上 8 時正的雷達回波圖像，與韋帕相關的強雨帶正影響香港，當時紅色暴雨警告正在生效。

Figure 2.2.6b Image of radar echoes at 8 p.m. on 31 July 2019. The intense rainbands associated with Wipha were affecting Hong Kong at that time and the Red Rainstorm Warning was in force.



圖 2.2.7

深水埗有天秤被強風吹塌。(圖片鳴謝：譚曉暉)

Figure 2.2.7

A tower crane in Sham Shui Po was blown down under high winds (photo courtesy of Tam Hiu Fai).

## 2.3 強烈熱帶風暴白鹿 (1911)

二零一九年八月二十一日至二十六日

白鹿是二零一九年第三個影響香港的熱帶氣旋。

熱帶低氣壓白鹿於八月二十一日下午在高雄之東南偏東約 1 460 公里的北太平洋西部上形成，初時向西移動。翌日白鹿增強為熱帶風暴，下午開始採取西北路徑移向台灣南部。當晚白鹿進一步增強為強烈熱帶風暴，八月二十三日晚上達到其最高強度，中心附近最高持續風速估計為每小時 105 公里。白鹿於八月二十四日橫過台灣南部，其後採取西北偏西路徑橫過台灣海峽。翌日早上白鹿在福建登陸並減弱為熱帶風暴，日間繼續移入內陸，八月二十六日凌晨在廣東內陸減弱為低壓區。

八月二十四日白鹿橫過台灣南部後，香港天文台在當日下午 2 時 40 分發出一號戒備信號，當時白鹿集結在香港以東約 650 公里。下午本港吹和緩至清勁的偏西風。受白鹿的外圍下沉氣流影響，本港下午天氣酷熱及有煙霞。與白鹿相關的強雷雨帶於八月二十五日凌晨為本港帶來頻密的雷暴及狂風，長洲泳灘及大埔滘曾分別錄得每小時 104 及 85 公里的陣風。在八月二十五日午夜至上午二時，本港境內錄得接近 4 000 次雲對地閃電。天文台需要發出黃色暴雨警告。雖然八月二十五日日間白鹿移入內陸及減弱，但仍繼續靠近本港。日間本港吹和緩至清勁西南風，離岸及高地間中吹強風。隨著白鹿進一步減弱及本地風勢緩和，天文台在八月二十五日晚上 7 時 20 分取消所有熱帶氣旋警告信號。白鹿於八月二十五日晚上 8 時最接近香港，其中心在本港以北約 280 公里掠過。與白鹿相關的雨帶於八月二十六日凌晨為本港帶來大雨及狂風雷暴，天文台曾發出紅色暴雨警告。總括來說，八月二十五日至二十六日本港大部分地區錄得超過 150 毫米雨量，市區的雨量更超過 250 毫米。

白鹿影響香港期間，尖鼻咀錄得最高潮位(海圖基準面以上)2.27 米及最大風暴潮(天文潮高度以上)0.22 米。天文台總部於八月二十五日上午 3 時 07 分錄得最低瞬時海平面氣壓 999.0 百帕斯卡。

八月二十五日凌晨香港受頻密狂風雷暴影響期間，港鐵東鐵線有塌樹壓毀架空電纜，引致服務受阻。本港多區亦出現電壓驟降，電力供應受影響。

根據報章報導，白鹿吹襲台灣期間造成至少一人死亡和九人受傷，逾 10 萬戶停電。福建亦有至少 44 萬戶停電，陸空交通受影響。



### **2.3 Severe Tropical Storm Bailu (1911) 21 to 26 August 2019**

Bailu was the third tropical cyclone affecting Hong Kong in 2019.

Bailu formed as a tropical depression over the western North Pacific about 1 460 km east-southeast of Gaoxiong on the afternoon of 21 August and drifted westwards at first. Bailu intensified into a tropical storm on 22 August and started to take on a northwesterly course towards the southern part of Taiwan in the afternoon. Bailu further intensified into a severe tropical storm that night. It reached its peak intensity on the night of 23 August with an estimated maximum sustained wind of 105 km/h near its centre. After sweeping across the southern part of Taiwan on 24 August, Bailu moved across the Taiwan Strait. It made landfall over Fujian the next morning and weakened into a tropical storm. Bailu moved further inland during the day and weakened into an area of low pressure over inland Guangdong on the small hours of 26 August.

After Bailu sweeping across the southern part of Taiwan on 24 August, the Hong Kong Observatory issued the Standby Signal No. 1 at 2:40 p.m. when Bailu was about 650 km east of Hong Kong. Local winds were moderate to fresh westerly. Affected by the outer subsiding air of Bailu, the weather was very hot with haze in Hong Kong in the afternoon. Bands of intense thundery showers associated with Bailu brought frequent thunderstorms and squalls to Hong Kong on the small hours of 25 August. Gusts of 104 and 85 km/h were once recorded at Cheung Chau Beach and Tai Po Kau respectively. Nearly 4000 cloud-to-ground lightning strokes were also recorded in Hong Kong between midnight and 2 a.m. on 25 August. The Amber Rainstorm Warning Signal was issued by the Observatory. Although Bailu moved inland and weakened during the day on 25 August, it still edged closer to Hong Kong. Local winds were moderate to fresh southwesterly during the day, occasionally reaching strong force offshore and on high ground. With Baliu weakening further and local winds moderating, all tropical cyclone warning signals were cancelled at 7:20 p.m. on 25 August. Bailu came closest to Hong Kong at around 8 p.m. on 25 August when it was around 280 km north of the territory. The rainbands associated with Bailu brought heavy downpour and squally thunderstorms to Hong Kong in the small hours on 26 August, necessitating the issuance of the Red Rainstorm Warning. Overall, more than 150 millimetres of rainfall were generally recorded over most parts of the territory on 25 and 26 August, with rainfall exceeding 250 millimetres over the urban areas.

Under the influence of Bailu, a maximum sea level (above chart datum) of 2.27 m and a maximum storm surge (above astronomical tide) of 0.22 m were recorded at Tsim Bei Tsui. The lowest instantaneous mean sea-level pressure of 999.0 hPa was recorded at the Observatory headquarters at 3:07 a.m. on 25 August.

When Hong Kong was hammered by frequent squally thunderstorms on the small hours of 25 August, the overhead cables of the East Rail of MTR were damaged by fallen trees, causing disruption to the train services. The power supply over many places was also affected because of the voltage dip.

According to press reports, Bailu caused at least one death and nine injuries to Taiwan during its passage. Over 100 000 households were without electricity supply. In Fujian, electricity supply to over 440 000 households was also interrupted. Air and land transportations were affected.

表 2.3.1 在白鹿影響下，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 2.3.1 Maximum gust peak speeds and maximum hourly mean winds with associated wind directions recorded at various stations when the tropical cyclone warning signals for Bailu were in force

站 Station ( <a href="https://www.hko.gov.hk/tc/informtc/station2019.htm">https://www.hko.gov.hk/tc/informtc/station2019.htm</a> , <a href="https://www.hko.gov.hk/en/informtc/station2019.htm">https://www.hko.gov.hk/en/informtc/station2019.htm</a> )		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)	西北偏北	NNW	43	25/8	00:51	西北偏西	WNW	22	25/8	12:00
中環碼頭	Central Pier	北	N	77	25/8	00:38	西	W	25	24/8	16:00
長洲	Cheung Chau	東北	NE	96	25/8	01:25	西	W	31	25/8	00:00
長洲泳灘	Cheung Chau Beach	北	N	104	25/8	01:22	北	N	40	25/8	02:00
青洲	Green Island	東北	NE	96	25/8	00:40	西北偏北	NNW	34	25/8	01:00
香港國際機場	Hong Kong International Airport	東北	NE	75	25/8	01:30	西南偏西	WSW	36	25/8	14:00
啟德	Kai Tak	北	N	65	25/8	00:37	西	W	20	24/8	16:00
京士柏	King's Park	西北偏北	NNW	79	25/8	00:37	西	W	16	25/8	01:00
南丫島	Lamma Island	北	N	58	25/8	01:10	西南偏西	WSW	36	25/8	12:00
流浮山	Lau Fau Shan	西北偏西	WNW	68	25/8	11:14	西南	SW	31	25/8	14:00
北角	North Point	北	N	62	25/8	00:38	西	W	27	25/8	13:00
坪洲	Peng Chau	東北	NE	68	25/8	01:15	東北偏東	ENE	27	25/8	02:00
平洲	Ping Chau	東北	NE	51	25/8	00:17	西南偏西	WSW	22	25/8	15:00
西貢	Sai Kung	西北	NW	58	25/8	00:29	西北	NW	23	25/8	01:00
沙洲	Sha Chau	東北偏東	ENE	77	25/8	01:27	西南偏南	SSW	31	25/8	18:00
沙螺灣	Sha Lo Wan	東	E	54	25/8	01:39	西南	SW	22	25/8	14:00
沙田	Sha Tin	東北偏北	NNE	62	25/8	00:23	西南偏南	SSW	20	25/8	15:00
		北	N	62	25/8	00:24					
石崗	Shek Kong	東	E	49	25/8	00:54	東	E	12	25/8	01:00
九龍天星碼頭	Star Ferry (Kowloon)	西北偏西	WNW	56	25/8	11:58	西	W	25	25/8	12:00
打鼓嶺	Ta Kwu Ling	東北偏北	NNE	59	25/8	00:53	東北	NE	14	25/8	01:00
大美督	Tai Mei Tuk	西北	NW	76	25/8	00:17	東北	NE	34	25/8	01:00
大帽山	Tai Mo Shan	東北偏北	NNE	113	25/8	01:07	西南偏西	WSW	77	25/8	16:00
大埔滘	Tai Po Kau	東北	NE	85	25/8	00:22	西北偏西	WNW	14	25/8	01:00
塔門東	Tap Mun East	西北	NW	52	25/8	00:20	西	W	27	25/8	15:00
將軍澳	Tseung Kwan O	西北偏北	NNW	41	25/8	00:30	西北偏北	NNW	9	25/8	01:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	西北偏北	NNW	51	25/8	01:26	西北偏西	WNW	20	25/8	12:00
屯門政府合署	Tuen Mun Government Offices	東北偏北	NNE	63	25/8	01:16	西南偏西	WSW	16	25/8	15:00
橫瀾島	Waglan Island	西北偏西	WNW	72	25/8	11:54	西	W	47	25/8	14:00
濕地公園	Wetland Park	東北偏東	ENE	47	25/8	01:02	東北偏東	ENE	13	25/8	02:00
黃竹坑	Wong Chuk Hang	西南偏西	WSW	38	25/8	00:38	西	W	16	25/8	01:00

大老山、昂坪 - 沒有資料 Tate's Cairn, Ngong Ping - data not available

表 2.3.2 白鹿影響香港期間，香港天文台總部及其他各站所錄得的日雨量  
Table 2.3.2 Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Bailu

站 (參閱圖 2.3.2) Station (See Fig. 2.3.2)			八月二十四日 24 Aug	八月二十五日 25 Aug	八月二十六日 26 Aug	總雨量(毫米) Total rainfall (mm)
香港天文台 Hong Kong Observatory (HKO)			0.0	88.4	178.3	266.7
香港國際機場 Hong Kong International Airport (HKA)			0.0	41.5	89.9	131.4
H23	香港仔	Aberdeen	0.0	100.5	160.5	261.0
N05	粉嶺	Fanling	0.0	49.5	76.0	125.5
N13	糧船灣	High Island	0.0	61.5	159.0	220.5
K04	佐敦谷	Jordan Valley	0.0	113.0	161.5	274.5
N06	葵涌	Kwai Chung	0.0	104.0	159.5	263.5
H12	半山區	Mid Levels	0.0	117.5	190.5	308.0
N09	沙田	Sha Tin	0.0	78.5	150.5	229.0
H19	筲箕灣	Shau Kei Wan	0.0	87.5	125.5	213.0
SEK	石崗	Shek Kong	0.0	68.5	61.0	129.5
K06	蘇屋邨	So Uk Estate	0.0	95.0	148.5	243.5
R31	大美督	Tai Mei Tuk	0.0	[61.5]	111.0	[172.5]
R21	踏石角	Tap Shek Kok	0.0	66.0	57.0	123.0
N17	東涌	Tung Chung	0.0	69.0	120.5	189.5
TMR	屯門水庫	Tuen Mun Reservoir	0.0	112.2	54.2	166.4

註：[ ] 基於不完整的每小時雨量數據。Note：[ ] based on incomplete hourly data.

CCH 長洲 - 沒有資料 Cheung Chau - data not available

表 2.3.3 白鹿影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮  
Table 2.3.3 Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of Bailu

站 Station ( <a href="https://www.hko.gov.hk/tc/inf/ormtc/station2019.htm">https://www.hko.gov.hk/tc/inf/ormtc/station2019.htm</a> , <a href="https://www.hko.gov.hk/en/inf/ormtc/station2019.htm">https://www.hko.gov.hk/en/inf/ormtc/station2019.htm</a> )		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	2.11	25/8	03:49	0.14	25/8	03:39
石壁	Shek Pik	2.10	25/8	03:55	0.12	25/8	09:36
大廟灣	Tai Miu Wan	2.04	25/8	04:19	0.20	25/8	10:04
大埔滘	Tai Po Kau	2.06	25/8	03:59	0.20	25/8	10:41
尖鼻咀	Tsim Bei Tsui	2.27	25/8	04:49	0.22	25/8	10:05

橫瀾島 - 沒有資料 Waglan Island - data not available

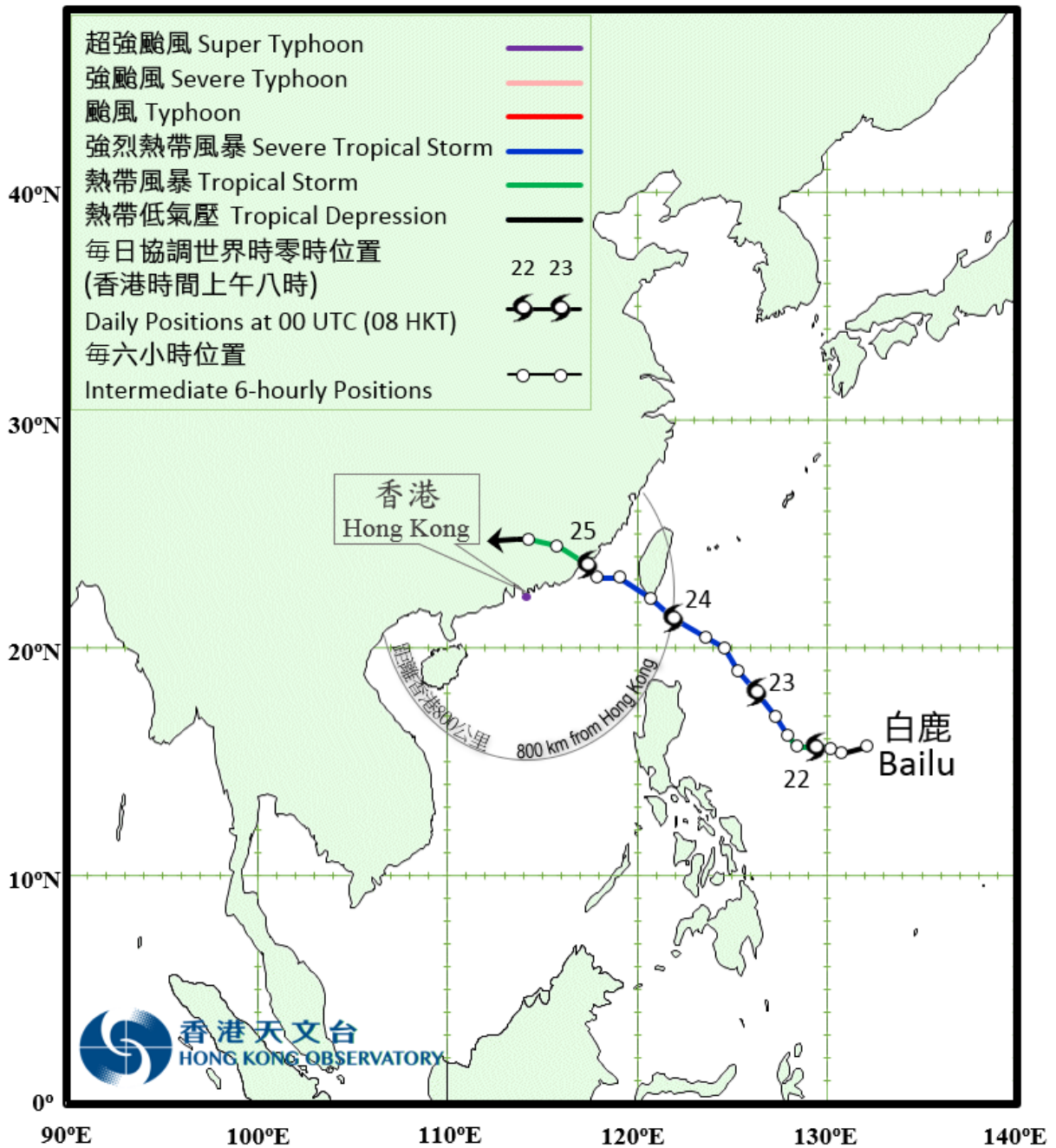


圖 2.3.1 二零一九年八月二十一日至二十六日白鹿的路徑圖。  
 Figure 2.3.1 Track of Bailu: 21 – 26 August 2019.

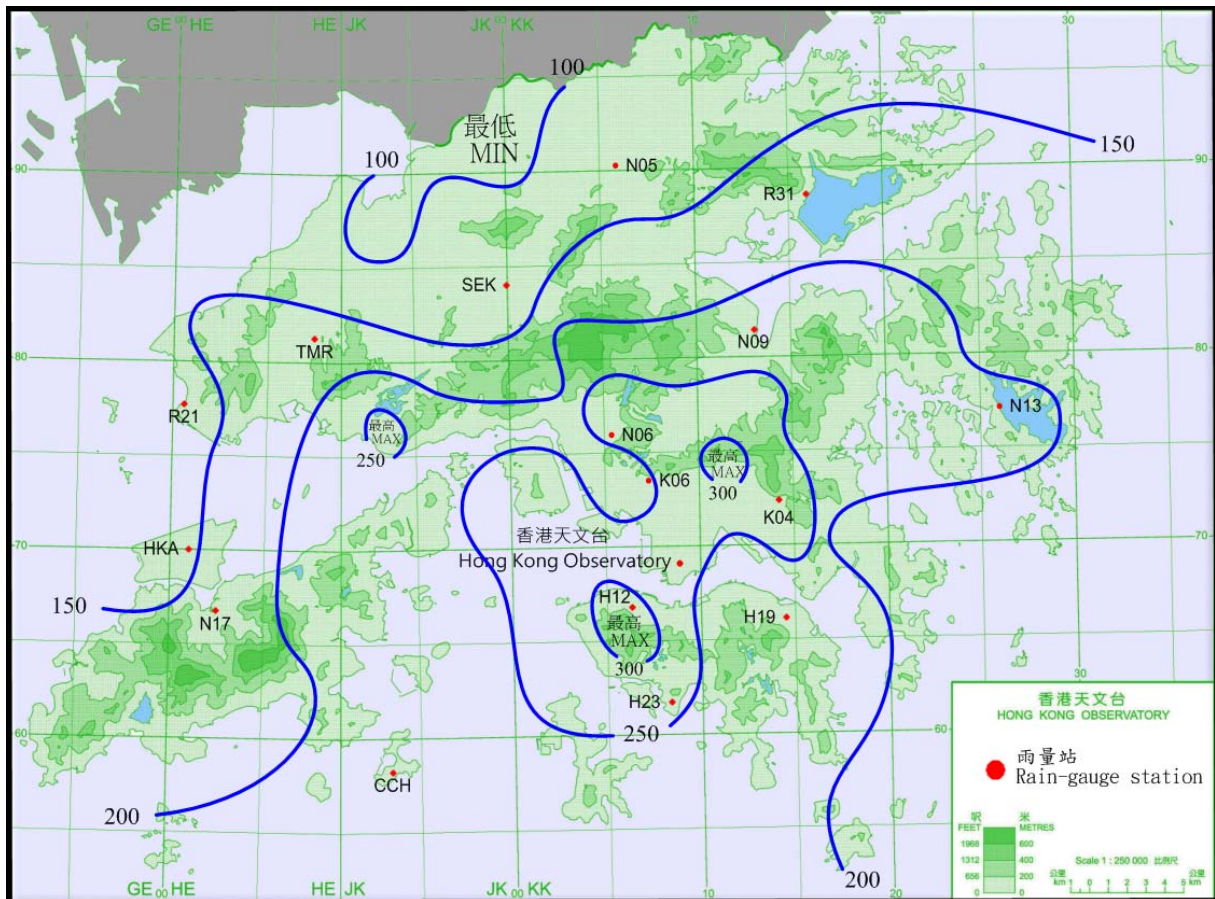


圖 2.3.2 二零一九年八月二十四至二十六日的雨量分佈(等雨量線單位為毫米)。  
 Figure 2.3.2 Rainfall distribution on 24 - 26 August 2019 (isohyets in millimetres).

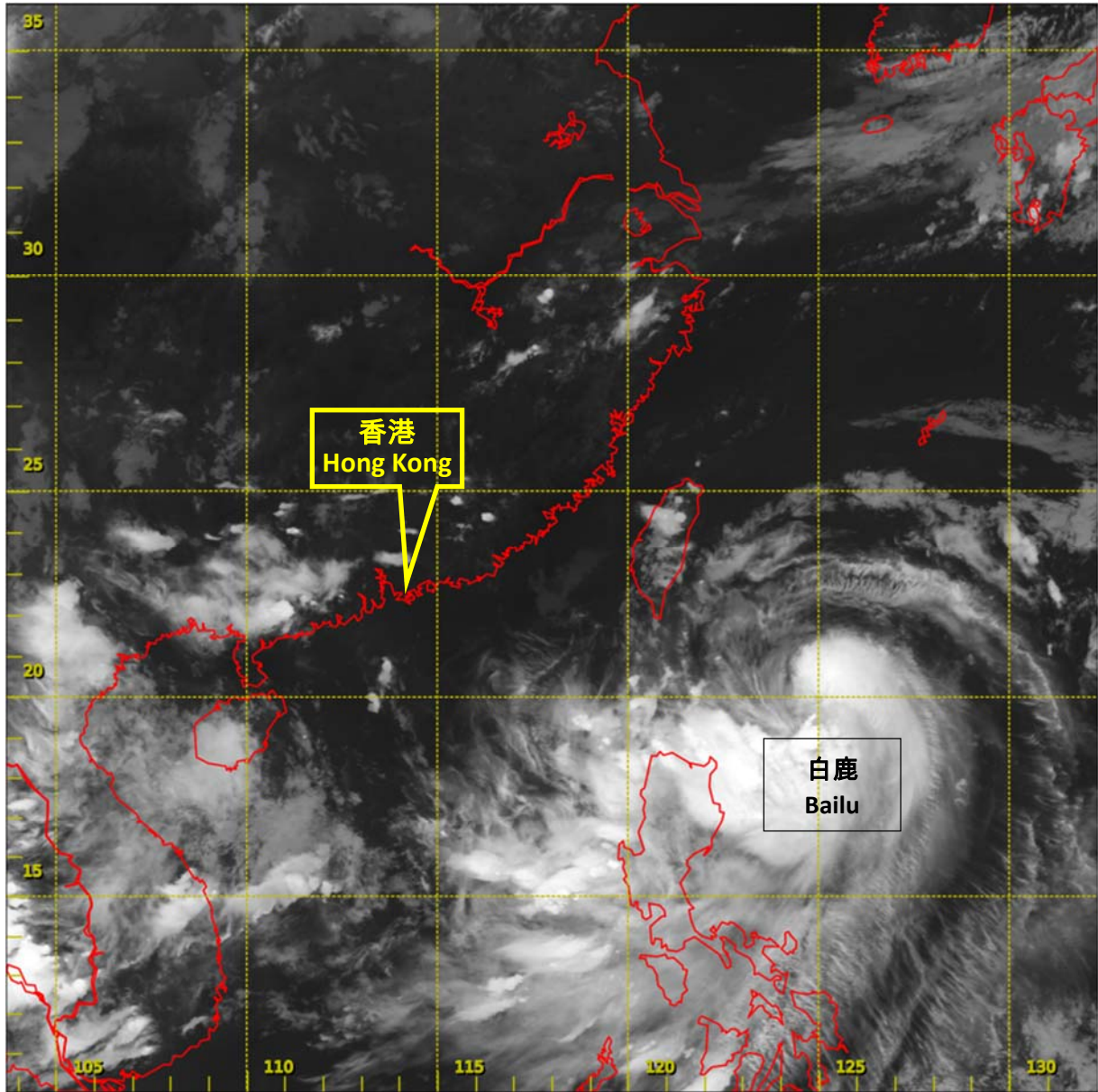


圖 2.3.3a 二零一九年八月二十三日下午 8 時左右的紅外線衛星圖片，當時白鹿達到其最高強度，中心附近最高持續風速估計為每小時 105 公里。

Figure 2.3.3a Infra-red satellite imagery at around 8 p.m. on 23 August 2019, when Bailu was at peak intensity with estimated maximum sustained winds of 105 km/h near its centre.

[此衛星圖像接收自日本氣象廳的向日葵 8 號衛星。]

[The satellite imagery was originally captured by Himawari-8 Satellite (H-8) of Japan Meteorological Agency (JMA).]

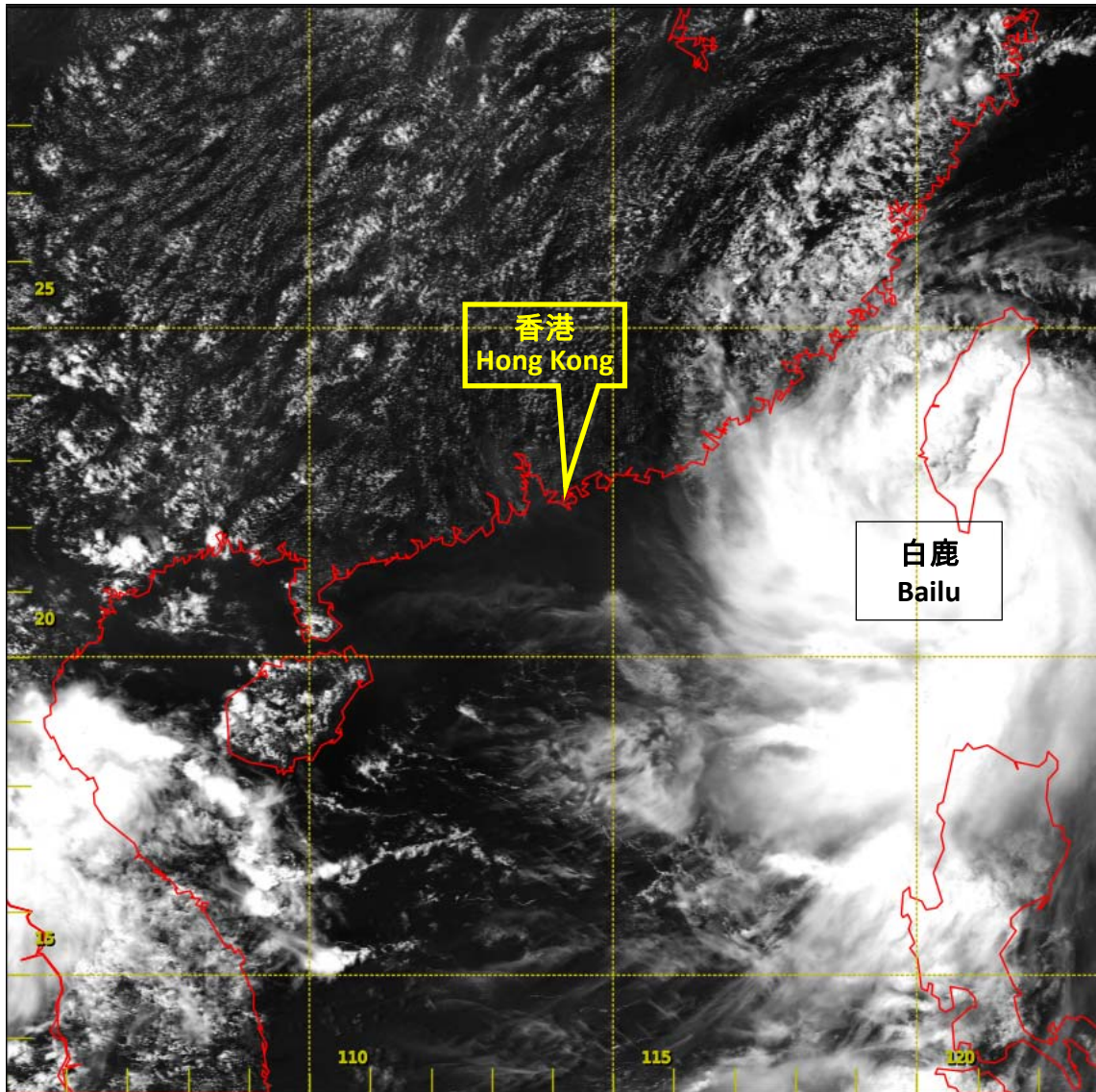


圖 2.3.3b 二零一九年八月二十四日下午 2 時左右的可見光衛星圖片。受白鹿的外圍下沉氣流影響，廣東沿岸普遍晴朗。

Figure 2.3.3b Visible satellite imagery at around 2 p.m. on 24 August 2019. Affected by the outer subsiding air of Bailu, it was generally fine over the coast of Guangdong.

[此衛星圖像接收自日本氣象廳的向日葵 8 號衛星。]

[The satellite imagery was originally captured by Himawari-8 Satellite (H-8) of Japan Meteorological Agency (JMA).]



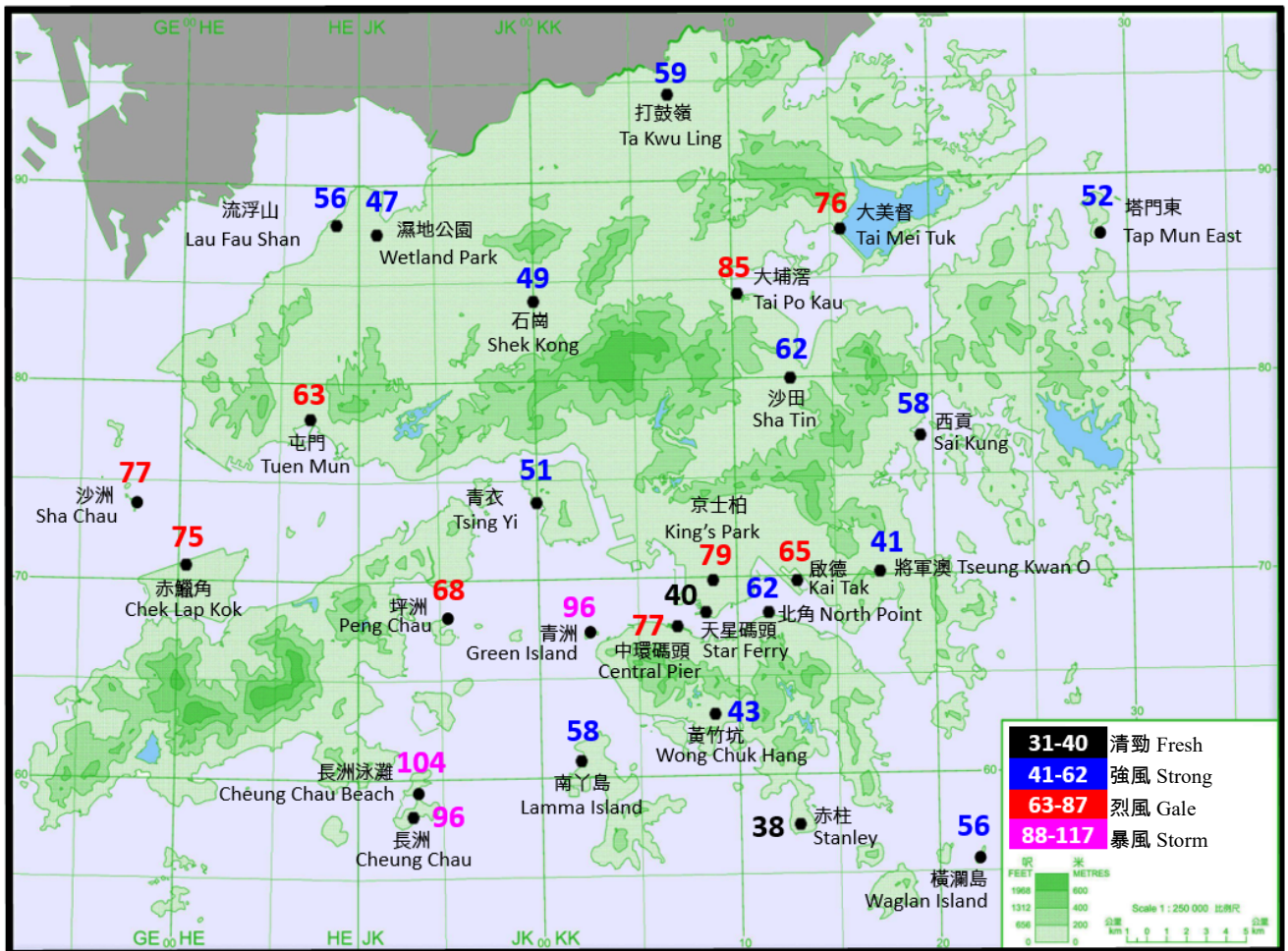


圖 2.3.4 二零一九年八月二十五日午夜至上午 2 時期間香港各站錄得的最高陣風(公里/小時)，當時與白鹿相關的強雷雨帶正為本港帶來頻密的雷暴及狂風。

Figure 2.3.4 Maximum gust recorded (in km/h) at various stations in Hong Kong during the period between midnight and 2 a.m. on 25 August 2019. Bands of intense thundery showers associated with Bailu brought frequent thunderstorms and squalls to Hong Kong at that time.

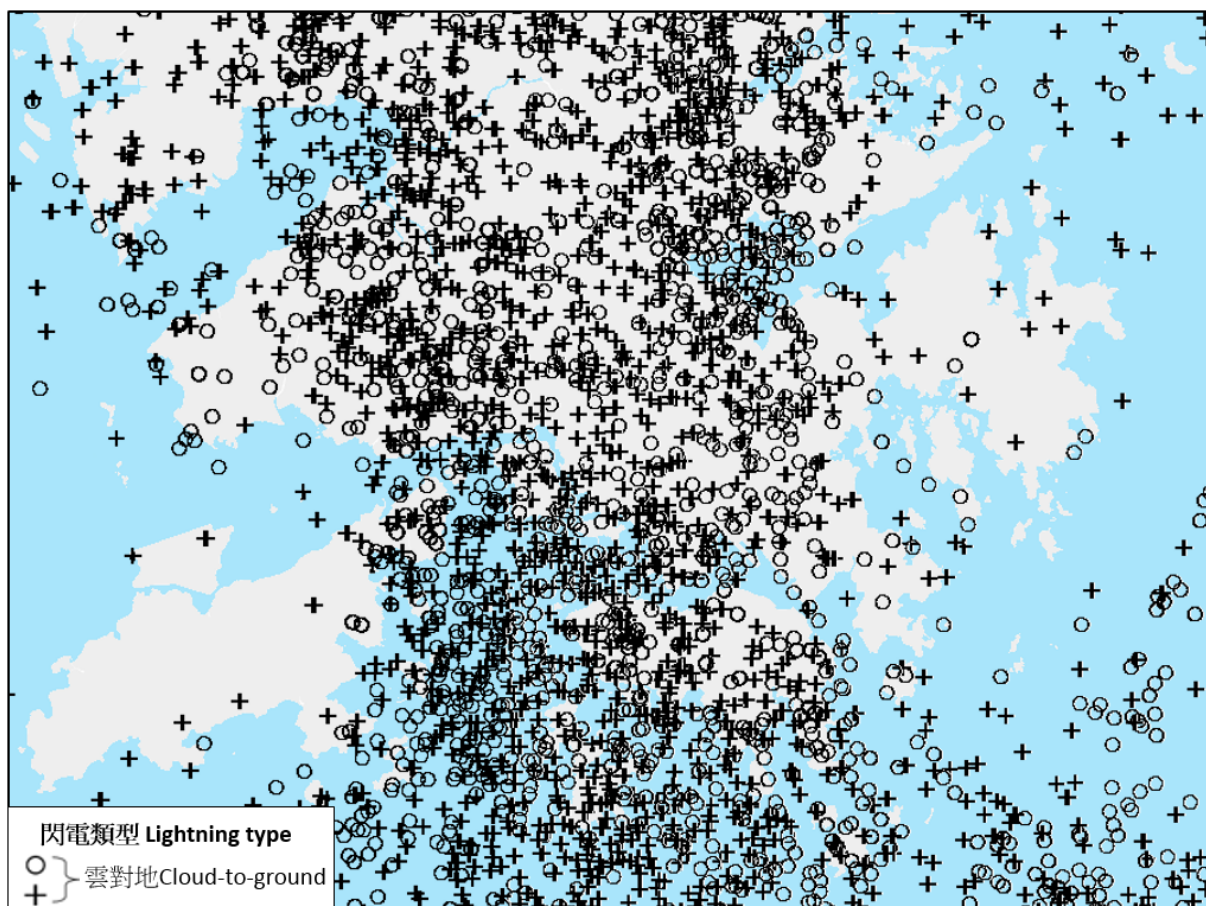


圖 2.3.5 二零一九年八月二十五日午夜至上午 2 時期間錄得的雲對地閃電。在這兩小時內香港境內共錄得接近 4 000 次雲對地閃電。

Figure 2.3.5 The cloud-to-ground lightning recorded between midnight and 2:00 a.m. on 25 August 2019. Nearly 4 000 cloud-to-ground lightning strokes were recorded in Hong Kong during these two hours.



圖 2.3.6 二零一九年八月二十五日上午 1 時 30 分左右在元朗拍攝的閃電 (圖片鳴謝：Kenneth Wong)。

Figure 2.3.6 Lightning strokes captured in Yuen Long at around 1:30 a.m. on 25 August 2019 (photo courtesy of Kenneth Wong).

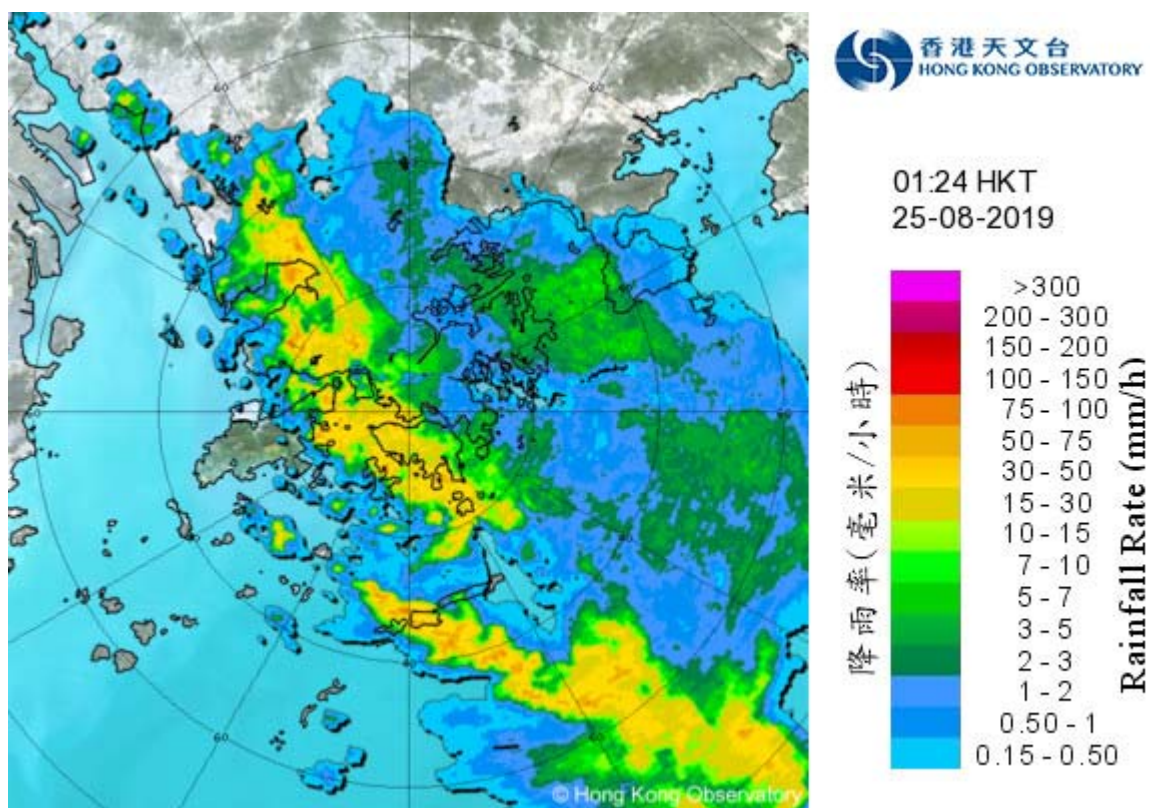


圖 2.3.7a 二零一九年八月二十五日上午 1 時 24 分的雷達回波圖像。當時與白鹿相關的強雷雨帶正影響本港，黃色暴雨警告正在生效。

Figure 2.3.7a Image of radar echoes at 1:24 a.m. on 25 August 2019. The bands of intense thundery showers associated with Bailu were affecting Hong Kong at the time and the Amber Rainstorm Warning was in force.

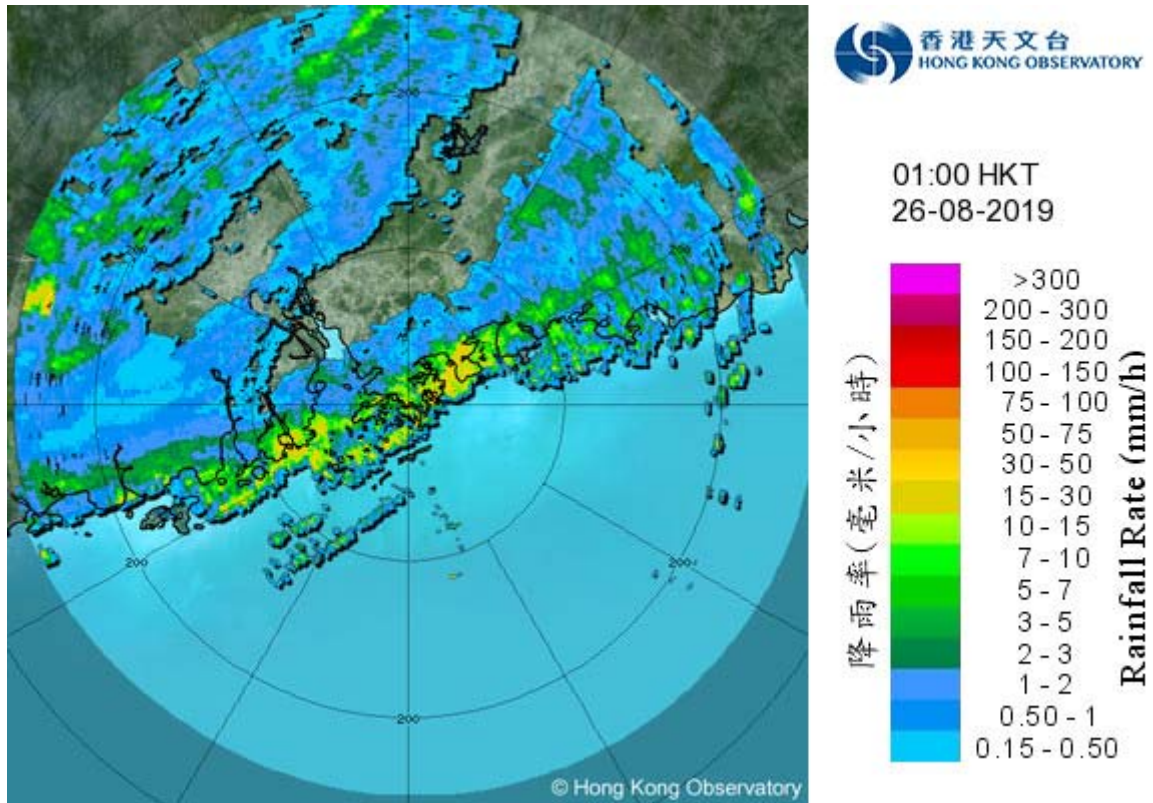


圖 2.3.7b 二零一九年八月二十六日上午 1 時正的雷達回波圖像。當時一道與白鹿相關的強雨帶正影響廣東沿岸，紅色暴雨警告正在生效。

Figure 2.3.7b Image of radar echoes at 1:00 a.m. on 26 August 2019. An intense rainband associated with Bailu was affecting the coast of Guangdong and the Red Rainstorm Warning was in force in Hong Kong at that time.

## 2.4 熱帶風暴楊柳 (1912)

二零一九年八月二十七日至三十日

楊柳是二零一九年第四個影響香港的熱帶氣旋。

熱帶低氣壓楊柳於八月二十七日早上在馬尼拉以東約 590 公里的北太平洋西部上形成，向西北偏西迅速移動，當晚橫過呂宋。翌日楊柳繼續迅速向西橫過南海中部並增強為熱帶風暴，並在八月二十九日凌晨達其最高強度，中心附近最高持續風速估計為每小時 85 公里。八月三十日凌晨楊柳在越南北部登陸，日間在中南半島減弱為低壓區。

香港天文台在八月二十八日下午 2 時 40 分發出一號戒備信號，當時楊柳集結在香港之東南偏南約 640 公里。當晚及翌日清晨本港吹和緩至清勁的偏東風，離岸間中吹強風。受楊柳相關的外圍雨帶影響，本港在八月二十九日有幾陣驟雨及雷暴。楊柳於八月二十九日上午 2 時左右最接近本港，其中心在香港以南約 560 公里左右掠過。隨著楊柳遠離香港，本港風力有所減弱，天文台在八月二十九日下午 12 時 20 分取消所有熱帶氣旋警告信號。

楊柳影響香港期間，尖鼻咀錄得最高潮位(海圖基準面以上) 2.99 米，而大埔滘錄得最大風暴潮(天文潮高度以上) 0.24 米。天文台總部於八月二十八日下午 5 時 28 分錄得最低瞬時海平面氣壓 1003.7 百帕斯卡。

楊柳並沒有對香港造成嚴重破壞。根據報章報導，楊柳吹襲菲律賓期間，一人被巨浪捲走而死亡。楊柳在海南島誘發龍捲風，造成至少八人死亡和兩人受傷。楊柳在越南亦造成至少六人死亡和兩人失蹤。

## **2.4 Tropical Storm Podul (1912) 27 to 30 August 2019**

Podul was the fourth tropical cyclone affecting Hong Kong in 2019.

Podul formed as a tropical depression over the western North Pacific about 590 km east of Manila on the morning of 27 August. Travelling west-northwestwards quickly, it moved across Luzon that night. Podul continued to move westwards quickly across the central part of the South China Sea and intensified into a tropical storm on 28 August. Podul reached its peak intensity on the small hours of 29 August with an estimated maximum sustained wind of 85 km/h near its centre. Podul made landfall over the northern part of Vietnam on the small hours of 30 August and finally weakened into an area of low pressure over the Indo-China during the day.

The Standby Signal No. 1 was issued by the Observatory at 2:40 p.m. on 28 August when Podul was about 640 km south-southeast of Hong Kong. Local winds were moderate to fresh easterly and occasionally reached strong force offshore that night and early next morning. Affected by the outer rainbands associated with Podul, there were a few showers and thunderstorms in Hong Kong on 29 August. Podul came closest to the territory at around 2 a.m. on 29 August with its centre skirting past about 560 km south of Hong Kong. With Podul departing from Hong Kong and local winds weakening, all tropical cyclone warning signals were cancelled at 12:20 p.m. on 29 August.

Under the influence of Podul, a maximum sea level (above chart datum) of 2.99 m was recorded at Tsim Bei Tsui and a maximum storm surge (above astronomical tide) of 0.24 m was recorded at Tai Po Kau. The lowest instantaneous mean sea-level pressure of 1003.7 hPa was recorded at the Observatory headquarters at 5:28 p.m. on 28 August.

Podul did not cause significant damage in Hong Kong. According to press reports, one person was killed by strong waves during the passage of Podul in the Philippines. Podul triggered a tornado in Hainan, killing at least eight people and leaving two others injured. Podul also left at least six deaths and two missing in Vietnam.

表 2.4.1 在楊柳影響下，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 2.4.1 Maximum gust peak speeds and maximum hourly mean winds with associated wind directions recorded at various stations when the tropical cyclone warning signals for Podul were in force

站 Station ( <a href="https://www.hko.gov.hk/tc/informtc/station2019.htm">https://www.hko.gov.hk/tc/informtc/station2019.htm</a> , <a href="https://www.hko.gov.hk/en/informtc/station2019.htm">https://www.hko.gov.hk/en/informtc/station2019.htm</a> )		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)	東北偏東	ENE	65	29/8	04:42	東	E	30	29/8	02:00
		東北偏東	ENE	30	29/8	05:00					
中環碼頭	Central Pier	東	E	56	29/8	04:40	東	E	34	29/8	05:00
長洲	Cheung Chau	東南偏東	ESE	63	29/8	04:22	東	E	40	29/8	05:00
長洲泳灘	Cheung Chau Beach	-	-	68	29/8	03:06	-	-	47	29/8	04:00
青洲	Green Island	東北偏東	ENE	67	29/8	04:26	東北偏東	ENE	45	29/8	05:00
香港國際機場	Hong Kong International Airport	東	E	47	29/8	00:38	東	E	34	29/8	01:00
啟德	Kai Tak	東	E	59	29/8	04:43	東	E	25	29/8	05:00
南丫島	Lamma Island	東	E	58	29/8	03:50	東	E	25	29/8	04:00
京士柏	King's Park	東	E	56	29/8	01:52	東	E	22	29/8	03:00
流浮山	Lau Fau Shan	東北偏東	ENE	52	29/8	09:59	東北偏東	ENE	30	29/8	12:00
北角	North Point	東	E	59	29/8	03:05	東	E	36	29/8	05:00
坪洲	Peng Chau	東	E	52	29/8	04:36	東	E	40	29/8	05:00
平洲	Ping Chau	東	E	31	28/8	23:54	東	E	14	29/8	02:00
西貢	Sai Kung	東北偏東	ENE	49	29/8	03:47	東北偏東	ENE	31	29/8	09:00
沙洲	Sha Chau	東南偏東	ESE	43	29/8	04:41	東南	SE	31	28/8	22:00
		東南偏東	ESE	43	29/8	04:50					
沙螺灣	Sha Lo Wan	東南偏東	ESE	54	28/8	23:27	東	E	27	29/8	03:00
		東南偏東	ESE	54	28/8	23:31					
沙田	Sha Tin	東北	NE	47	29/8	04:28	東	E	16	29/8	05:00
石崗	Shek Kong	東	E	58	29/8	04:41	東	E	23	29/8	09:00
九龍天星碼頭	Star Ferry (Kowloon)	東	E	49	29/8	04:31	東	E	25	29/8	03:00
打鼓嶺	Ta Kwu Ling	東	E	38	28/8	22:05	東	E	16	28/8	23:00
大帽山	Tai Mo Shan	東	E	83	29/8	02:07	東	E	54	29/8	02:00
大埔滘	Tai Po Kau	東	E	45	29/8	04:21	東	E	34	29/8	05:00
塔門東	Tap Mun East	東	E	62	29/8	01:34	東	E	45	29/8	01:00
							東	E	45	29/8	02:00
大老山	Tate's Cairn	-	-	72	29/8	04:30	-	-	45	29/8	05:00
將軍澳	Tseung Kwan O	東	E	45	29/8	04:43	東北偏東	ENE	12	29/8	11:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	東南偏東	ESE	45	29/8	03:57	東南偏東	ESE	19	29/8	04:00
屯門政府合署	Tuen Mun Government Offices	東南偏東	ESE	52	29/8	12:11	東南偏東	ESE	14	28/8	22:00
橫瀾島	Waglan Island	東北偏東	ENE	67	29/8	04:26	東北偏東	ENE	51	29/8	08:00
濕地公園	Wetland Park	東南偏東	ESE	38	29/8	10:19	東	E	16	29/8	11:00
		東北偏東	ENE	38	29/8	12:09					
黃竹坑	Wong Chuk Hang	東北偏東	ENE	58	29/8	02:27	東北偏東	ENE	22	29/8	04:00
							東北偏東	ENE	22	29/8	05:00

大美督、昂坪 - 沒有資料 Tai Mei Tuk, Ngong Ping - data not available

長洲泳灘、大老山 - 沒有風向資料 Cheung Chau Beach, Tate's Cairn - wind direction not available



表 2.4.2 楊柳影響香港期間，香港天文台總部及其他各站所錄得的日雨量  
Table 2.4.2 Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Podul

站 (參閱圖 2.4.2) Station (See Fig. 2.4.2)			八月二十八日 28 Aug	八月二十九日 29 Aug	總雨量(毫米) Total rainfall (mm)
香港天文台 Hong Kong Observatory (HKO)			0.0	5.9	5.9
香港國際機場 Hong Kong International Airport (HKA)			0.0	13.2	13.2
長洲 Cheung Chau (CCH)			0.0	8.5	8.5
H23	香港仔 Aberdeen		0.0	23.5	23.5
N05	粉嶺 Fanling		0.0	5.5	5.5
N13	糧船灣 High Island		0.0	7.5	7.5
K04	佐敦谷 Jordan Valley		0.0	14.0	14.0
N06	葵涌 Kwai Chung		0.0	11.5	11.5
H12	半山區 Mid Levels		0.0	12.5	12.5
N09	沙田 Sha Tin		0.0	10.0	10.0
H19	筲箕灣 Shau Kei Wan		0.0	7.0	7.0
SEK	石崗 Shek Kong		0.0	3.0	3.0
K06	蘇屋邨 So Uk Estate		0.0	16.5	16.5
R31	大美督 Tai Mei Tuk		0.0	4.5	4.5
R21	踏石角 Tap Shek Kok		0.0	6.0	6.0
N17	東涌 Tung Chung		0.0	11.5	11.5
TMR	屯門水庫 Tuen Mun Reservoir		0.0	10.5	10.5

註：[ ] 基於不完整的每小時雨量數據。Note: [ ] based on incomplete hourly data.

表 2.4.3 楊柳影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮  
Table 2.4.3 Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of Podul

站 Station ( <a href="https://www.hko.gov.hk/tc/info/ormtc/station2019.htm">https://www.hko.gov.hk/tc/info/ormtc/station2019.htm</a> , <a href="https://www.hko.gov.hk/en/info/ormtc/station2019.htm">https://www.hko.gov.hk/en/info/ormtc/station2019.htm</a> )		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	2.55	29/8	08:03	0.10	29/8	08:03
石壁	Shek Pik	2.71	29/8	07:32	0.16	29/8	07:31
大廟灣	Tai Miu Wan	2.53	29/8	08:12	0.19	29/8	08:17
大埔滘	Tai Po Kau	2.54	29/8	08:56	0.24	29/8	04:57
尖鼻咀	Tsim Bei Tsui	2.99	29/8	08:22	0.14	29/8	08:11

橫瀾島 - 沒有資料 Waglan Island - data not available

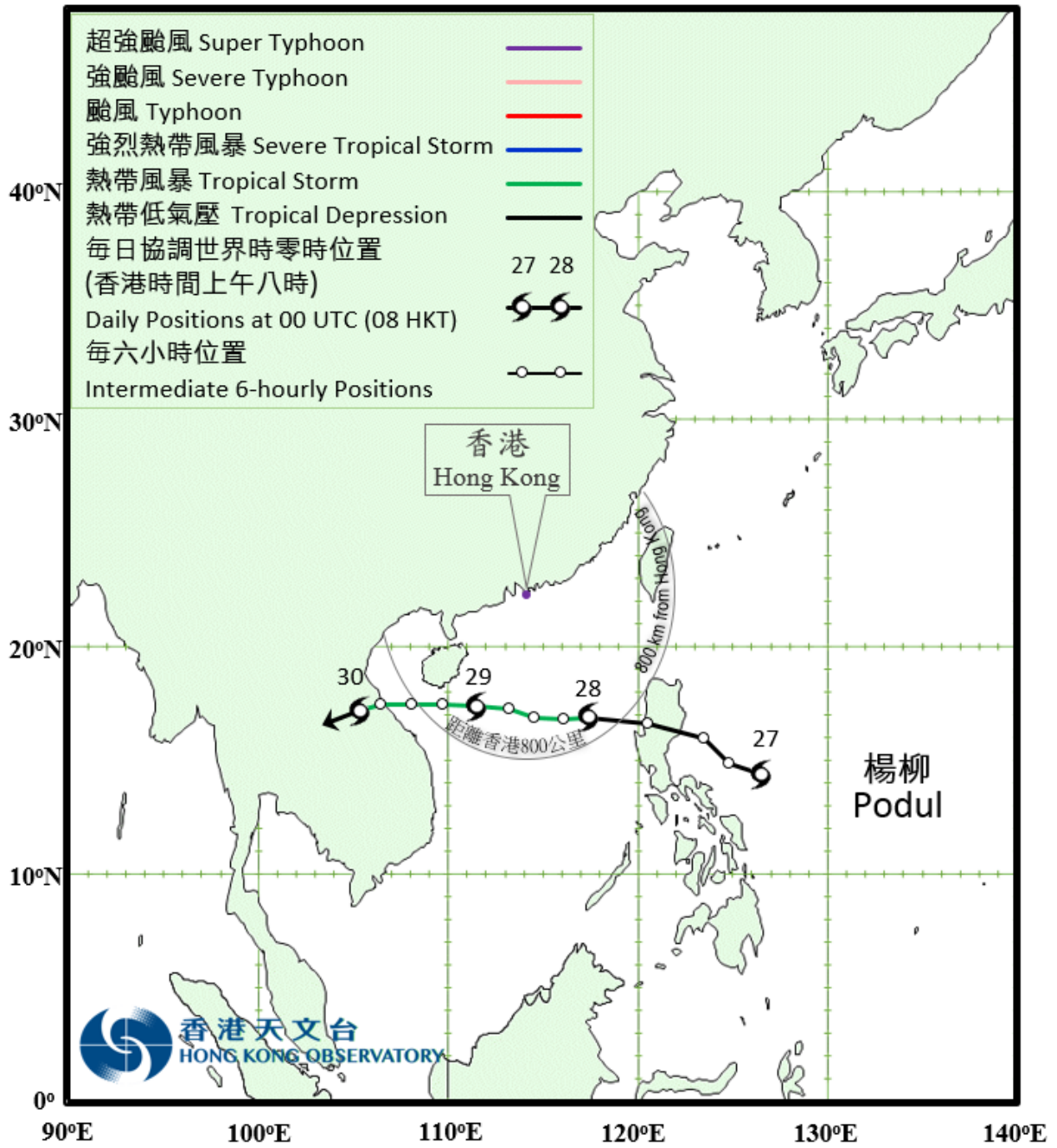


圖 2.4.1 二零一九年八月二十七日至三十日楊柳的路徑圖。  
 Figure 2.4.1 Track of Podul: 27 – 30 August 2019.

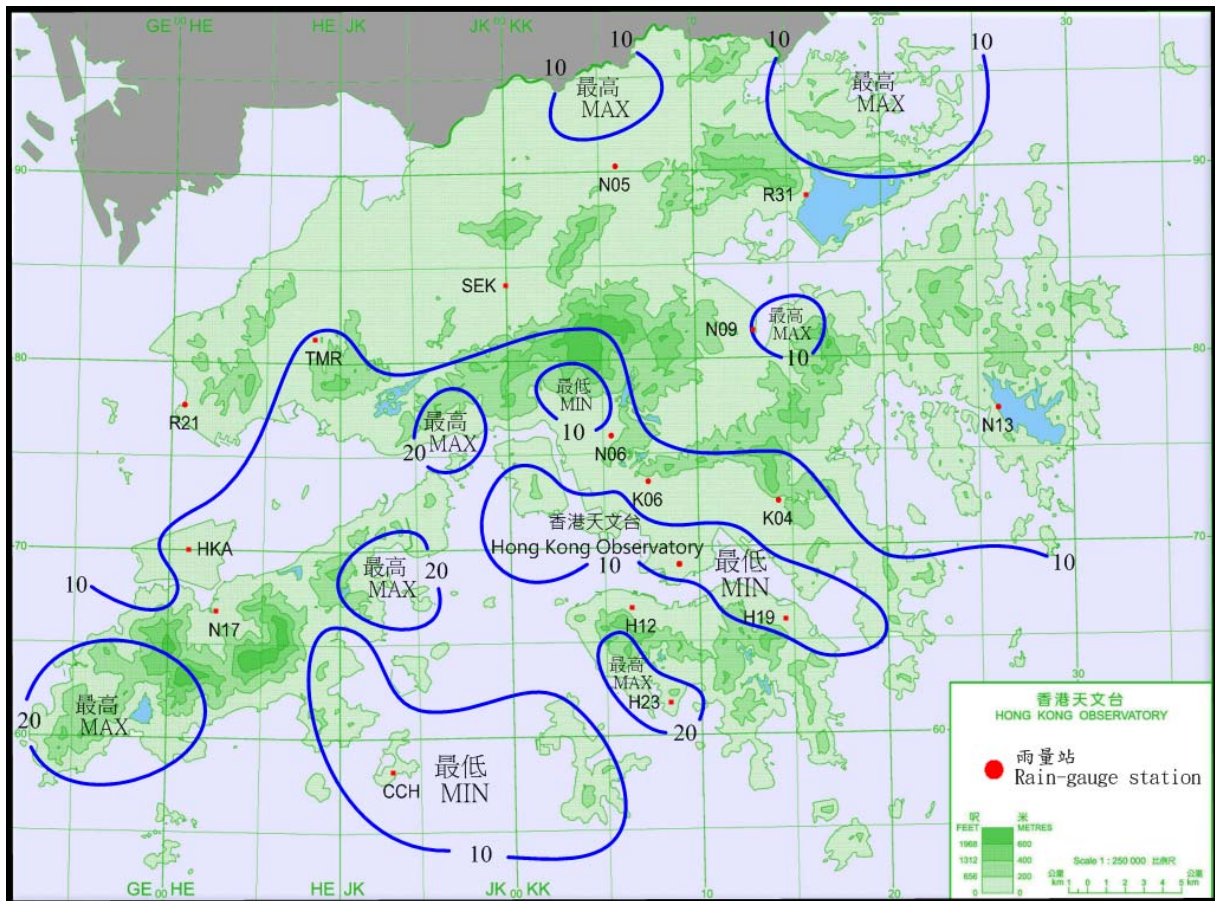


圖 2.4.2 二零一九年八月二十八日至二十九日的雨量分佈(等雨量線單位為毫米)。  
 Figure 2.4.2 Rainfall distribution on 28 - 29 August 2019 (isohyets in millimetres).

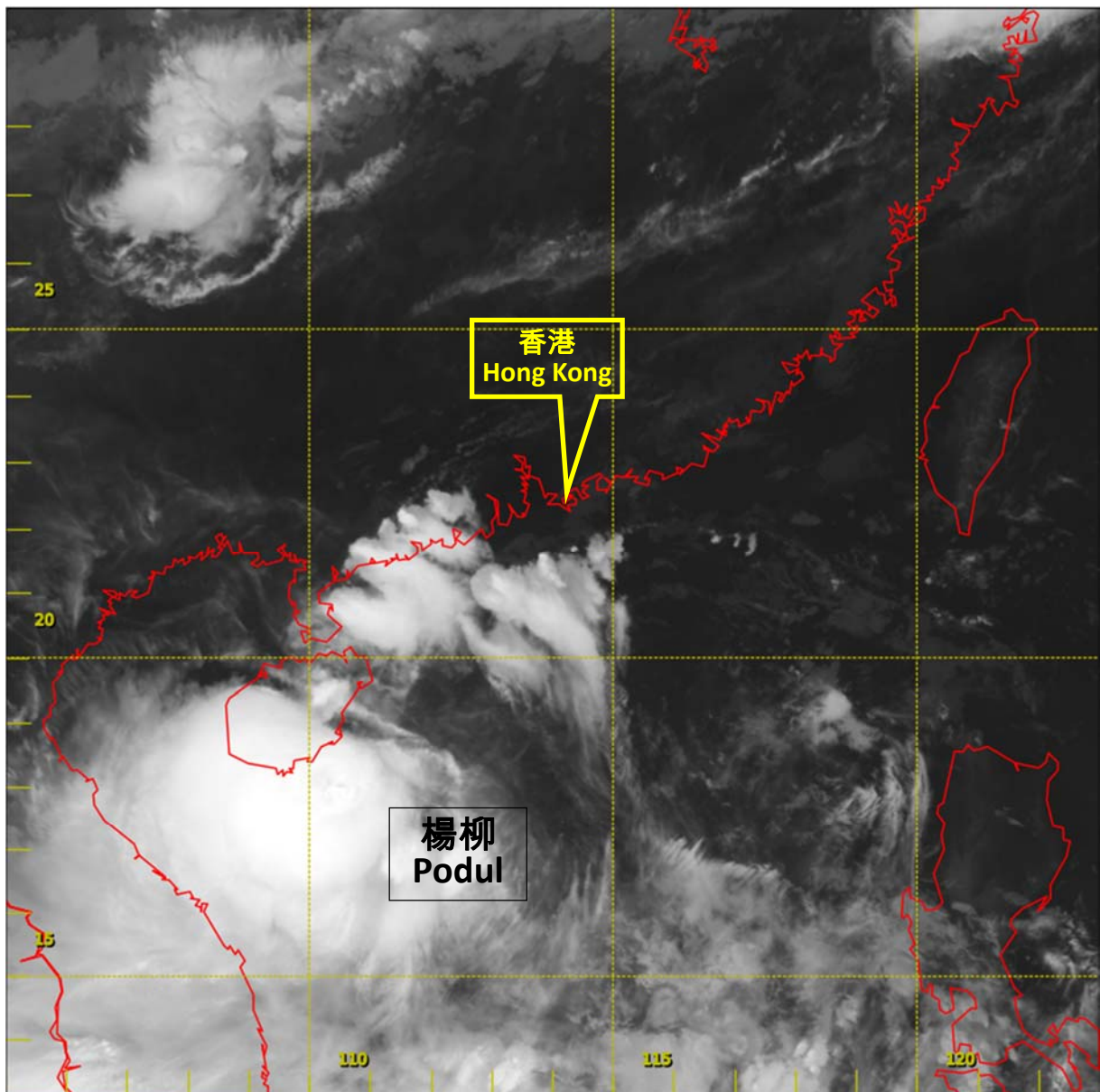


圖 2.4.3 二零一九年八月二十九日上午 2 時的紅外線衛星圖片，當時楊柳達到其最高強度，中心附近最高持續風速估計為每小時 85 公里。

Figure 2.4.3 Infra-red satellite imagery around 2 a.m. on 29 August 2019, when Podul was at peak intensity with estimated maximum sustained winds of 85 km/h near its centre.

[此衛星圖像接收自日本氣象廳的向日葵 8 號衛星。]

[The satellite imagery was originally captured by Himawari-8 Satellite (H-8) of Japan Meteorological Agency (JMA).]

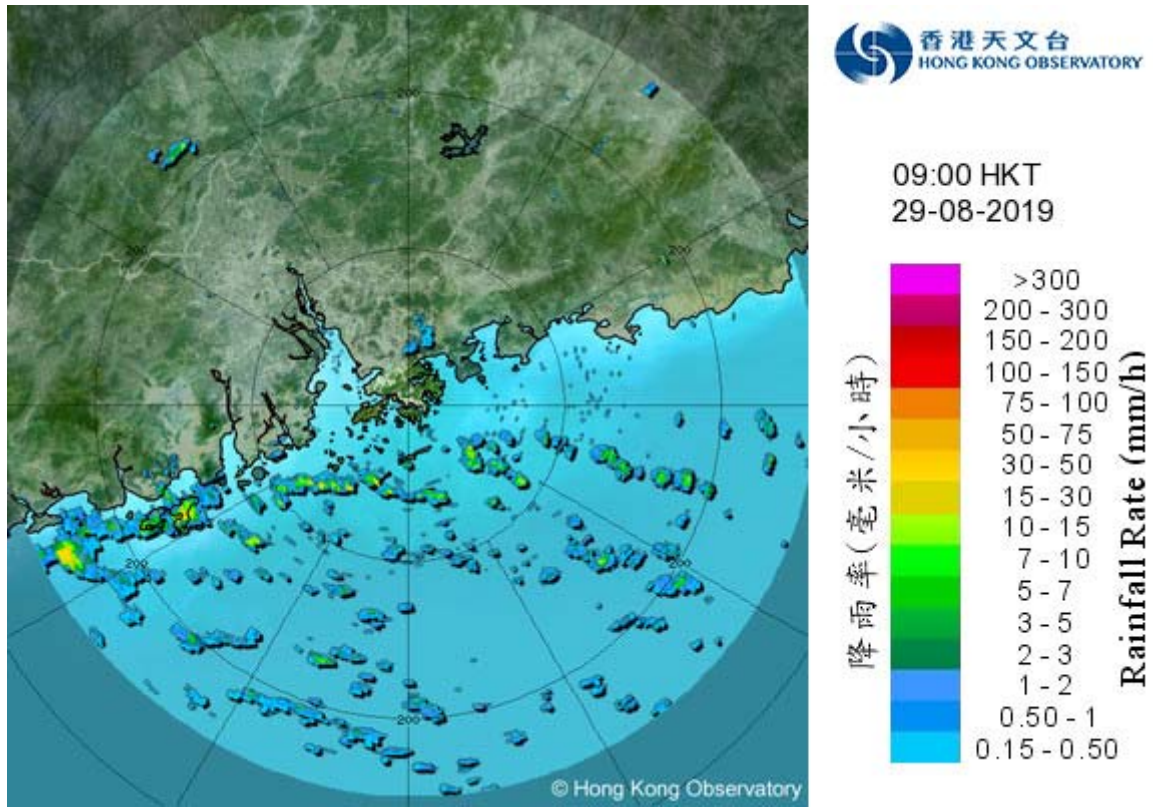
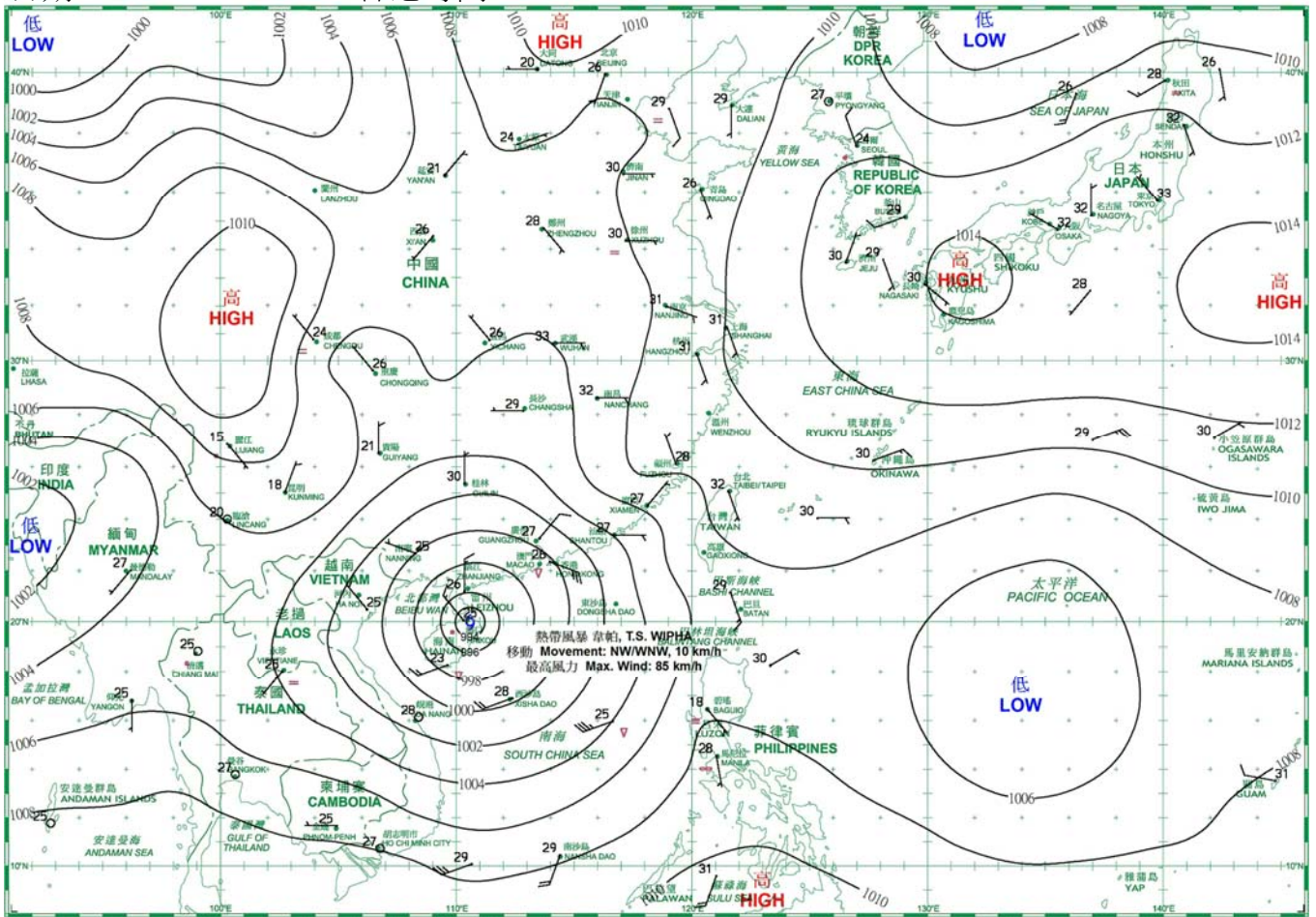


圖 2.4.4 二零一九年八月二十九日上午 9 時的雷達回波圖像，當時楊柳的外圍雨帶正影響南海北部及廣東沿岸地區。

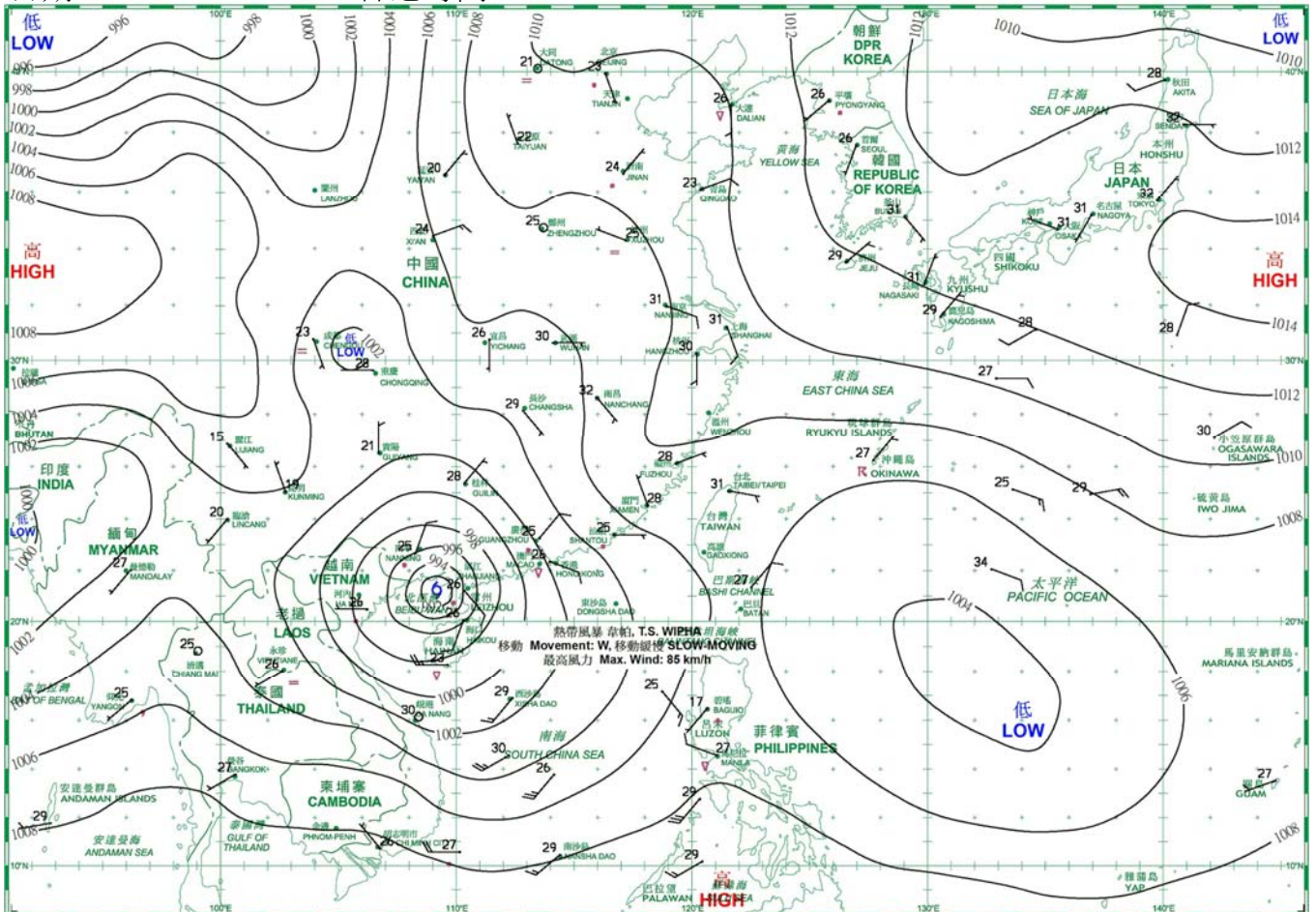
Figure 2.4.4 Image of radar echoes at 9:00 a.m. on 29 August 2019. The outer rainbands of Podul were affecting the northern part of the South China Sea and the coastal areas of Guangdong at that time.

### 3. 二零一九年八月每日天氣圖 Daily Weather Maps for August 2019

日期/Date: 01.08.2019 香港時間/HK Time: 08:00

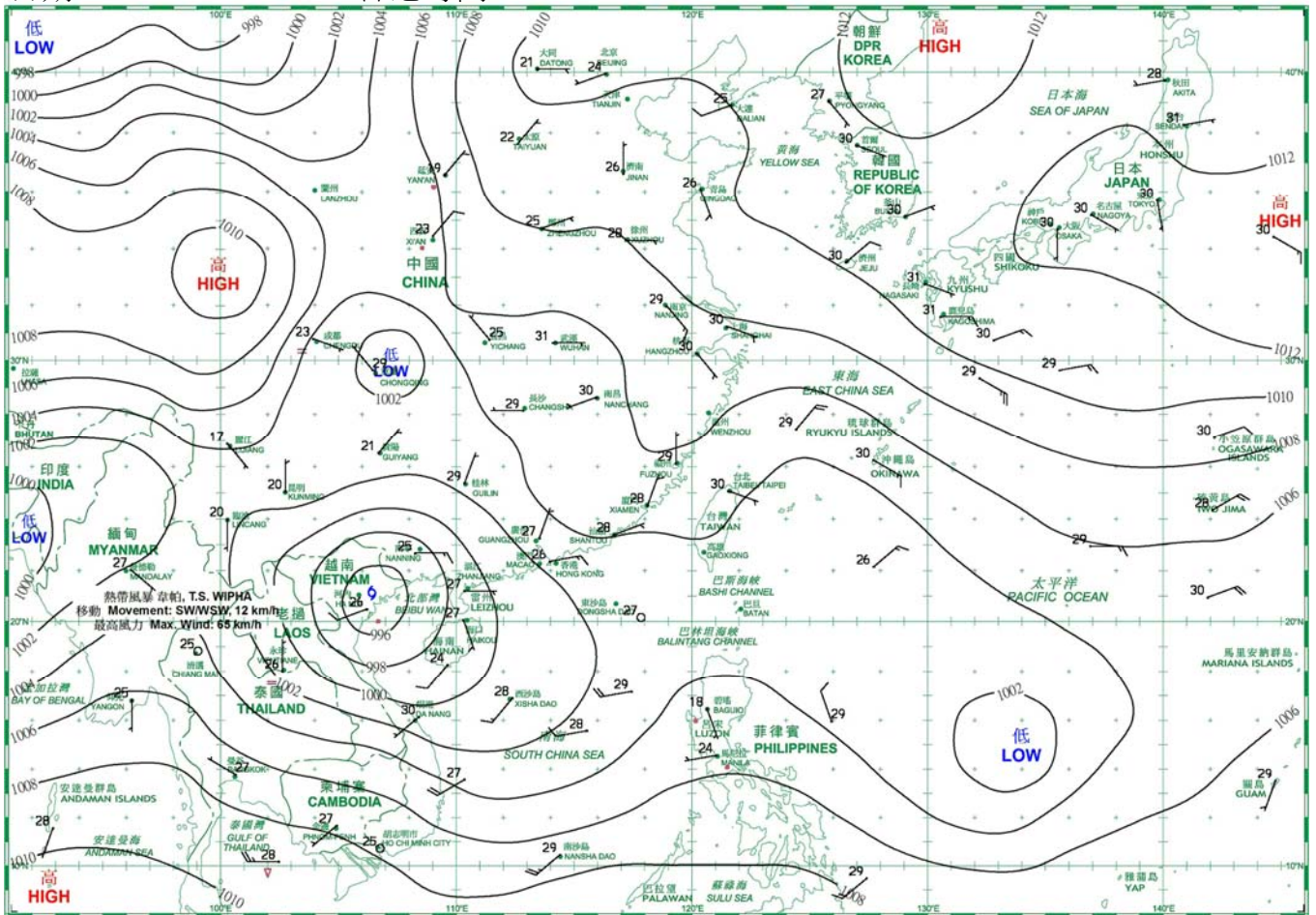


日期/Date: 02.08.2019 香港時間/HK Time: 08:00

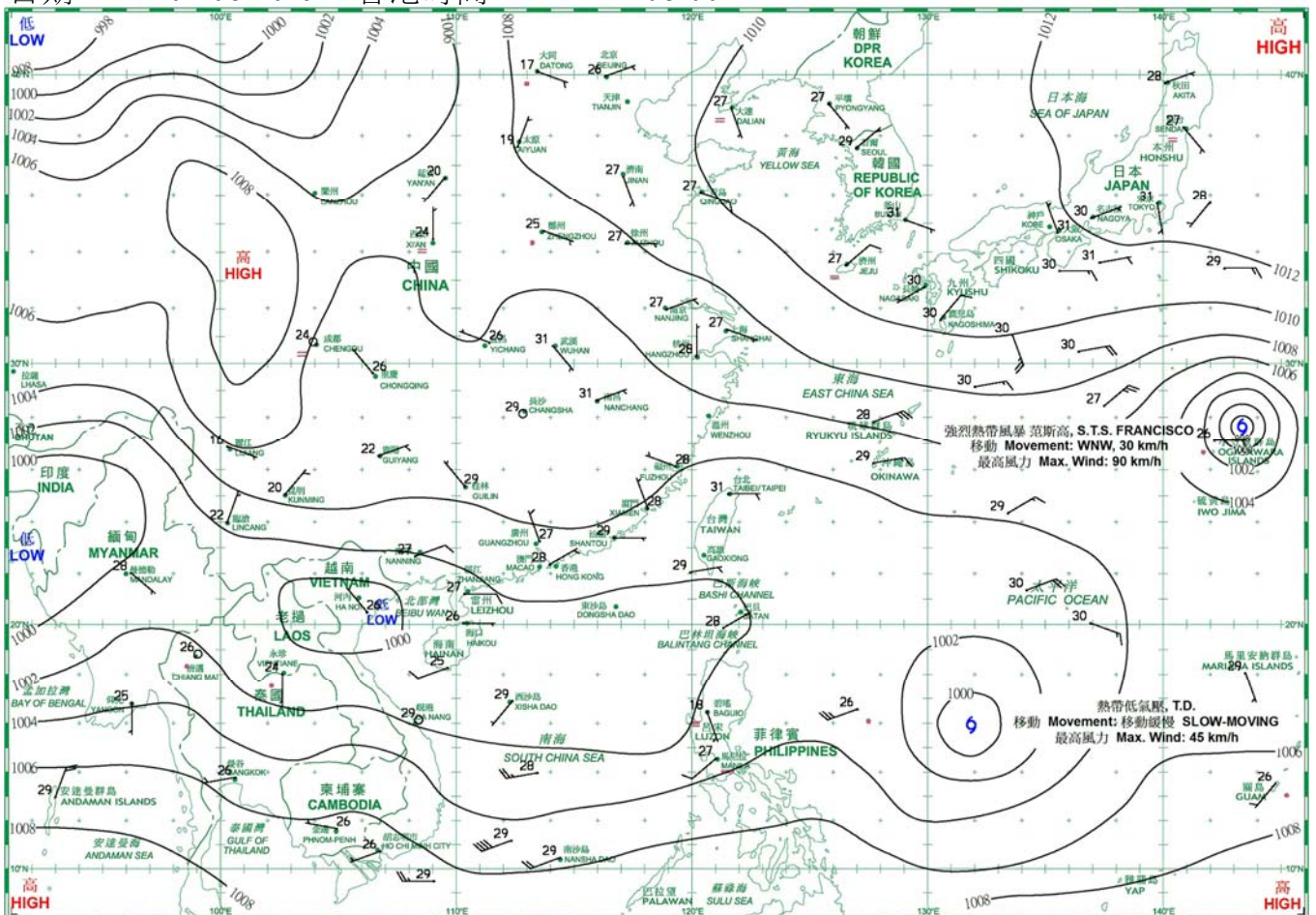


- 等壓線 Isobar(hPa)
- 暖鋒 Warm Front
- 靜止鋒 Stationary Front
- 消散中的冷鋒 Dissipating Cold Front
- 冷鋒 Cold Front
- 錮囚鋒 Occlusion
- 槽軸 (線) Axis of Trough
- 6 熱帶氣旋中心 Centre of Tropical Cyclone

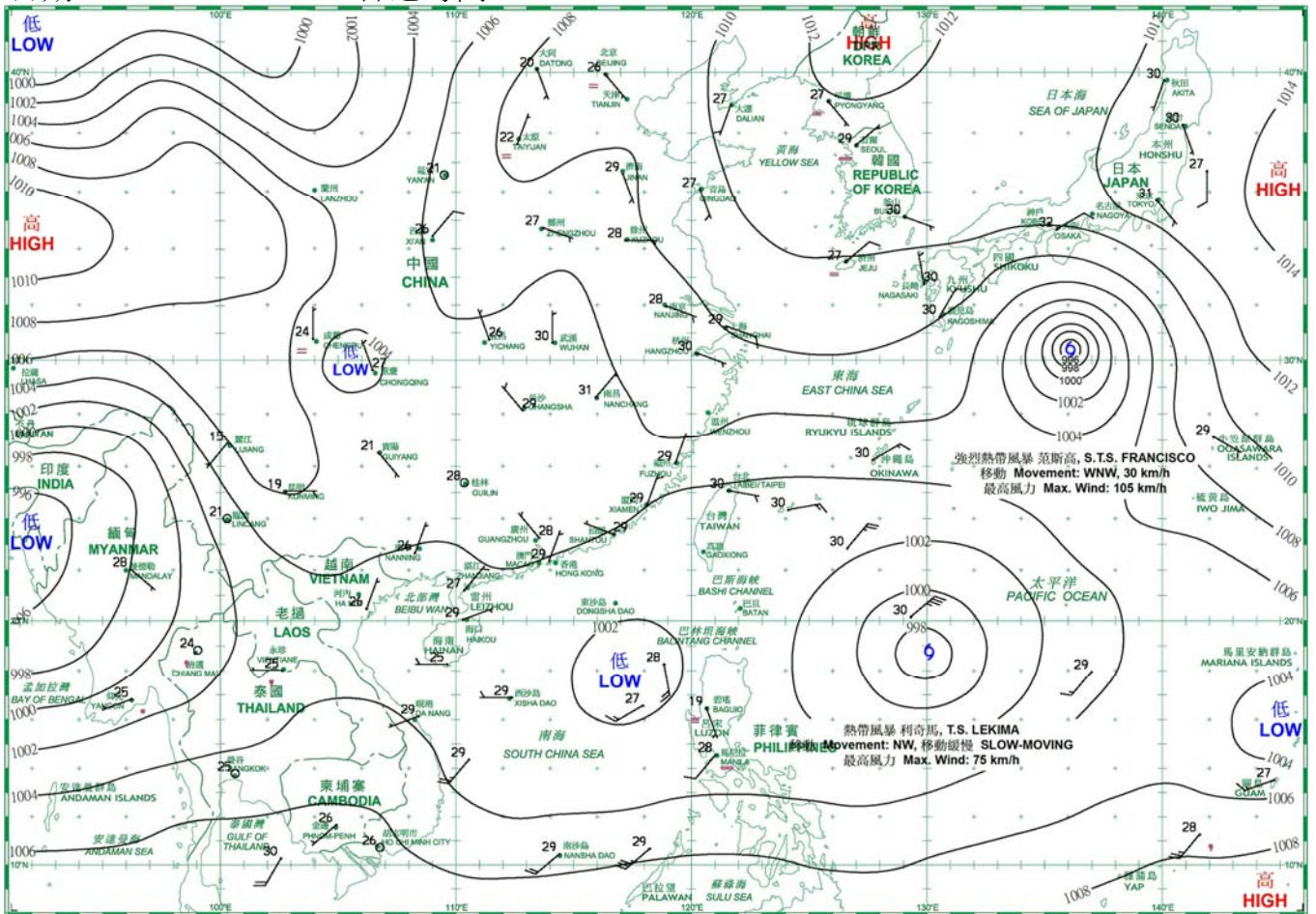
日期/Date: 03.08.2019 香港時間/HK Time: 08:00



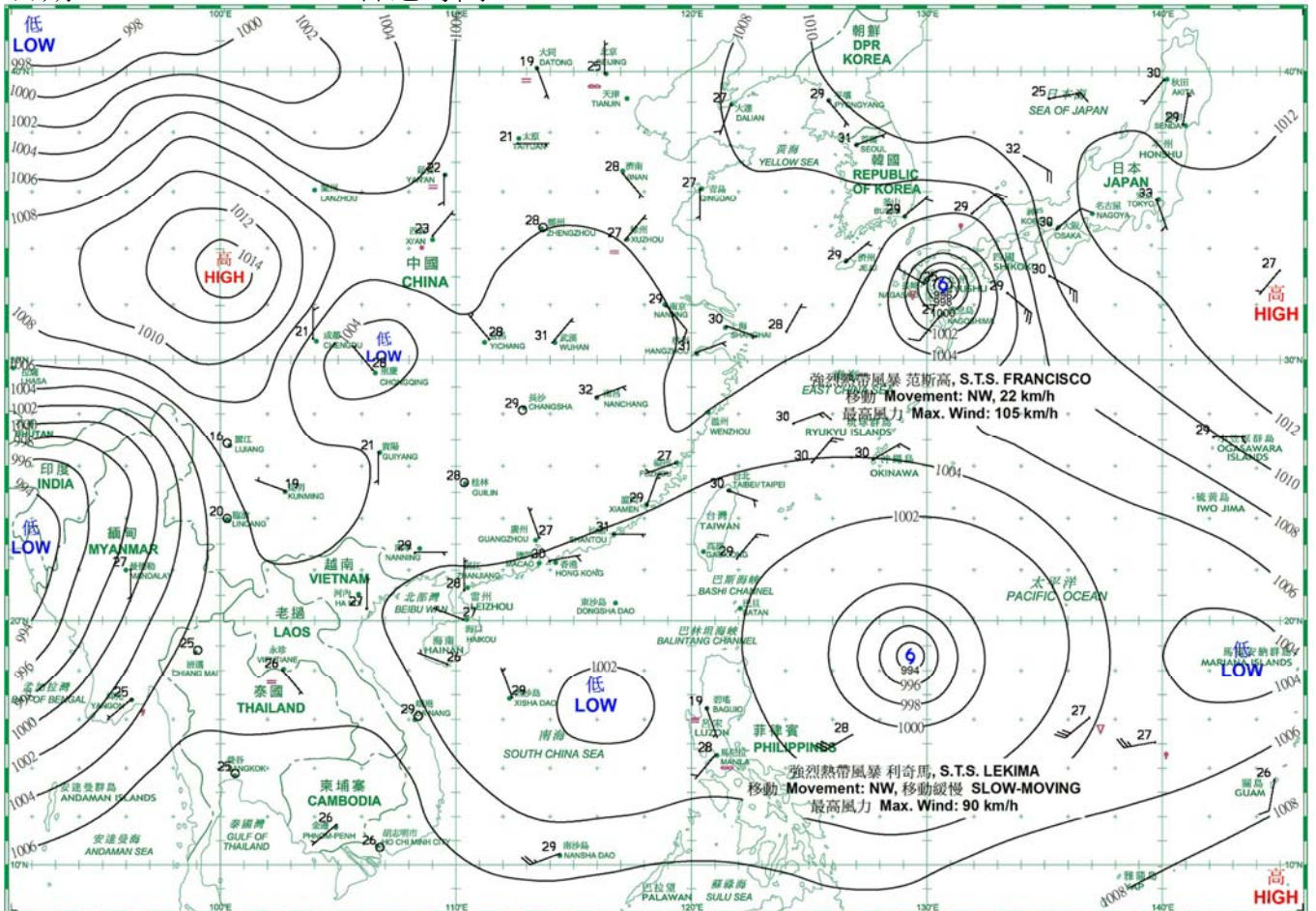
日期/Date: 04.08.2019 香港時間/HK Time: 08:00



日期/Date: 05.08.2019 香港時間/HK Time: 08:00

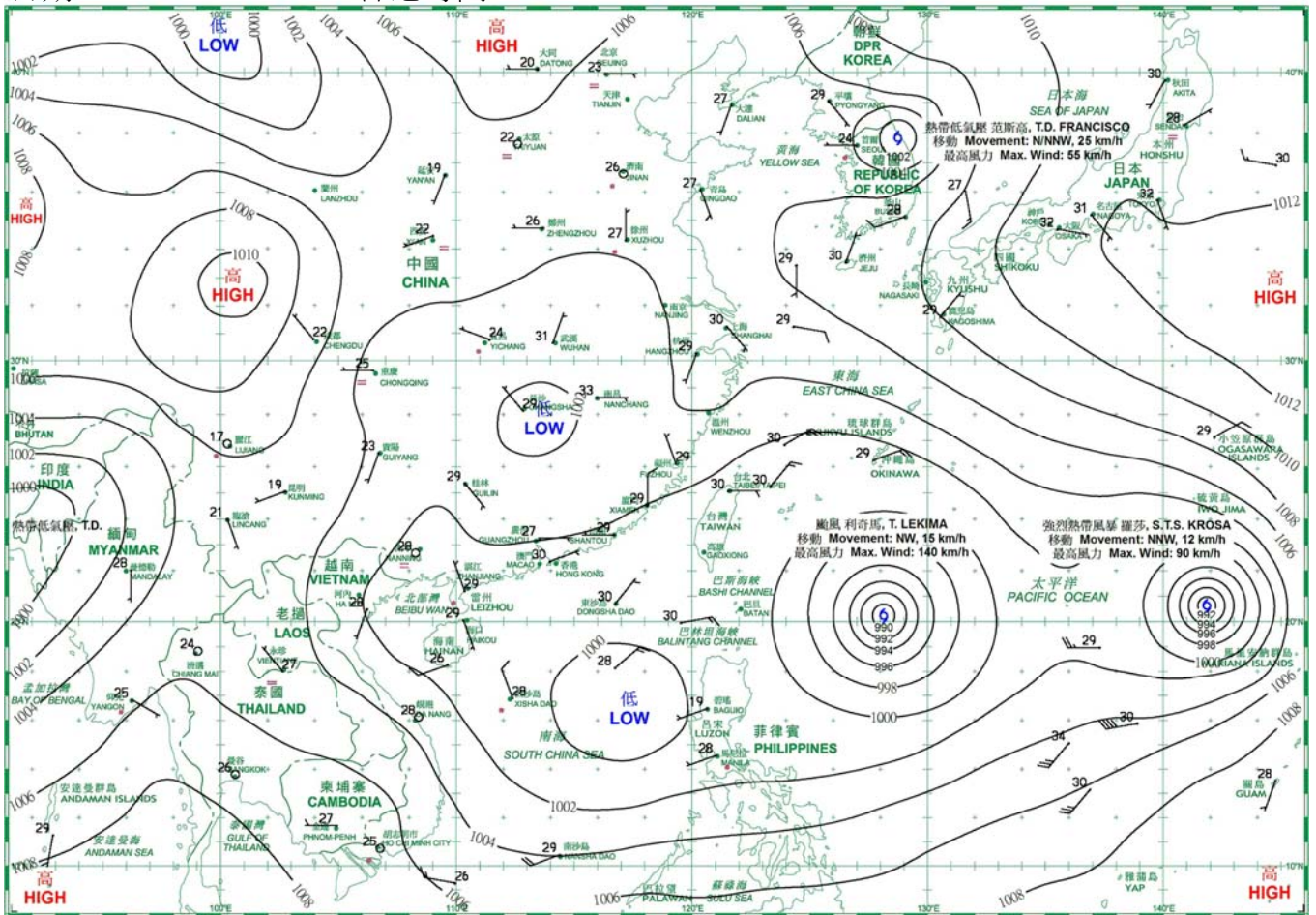


日期/Date: 06.08.2019 香港時間/HK Time: 08:00

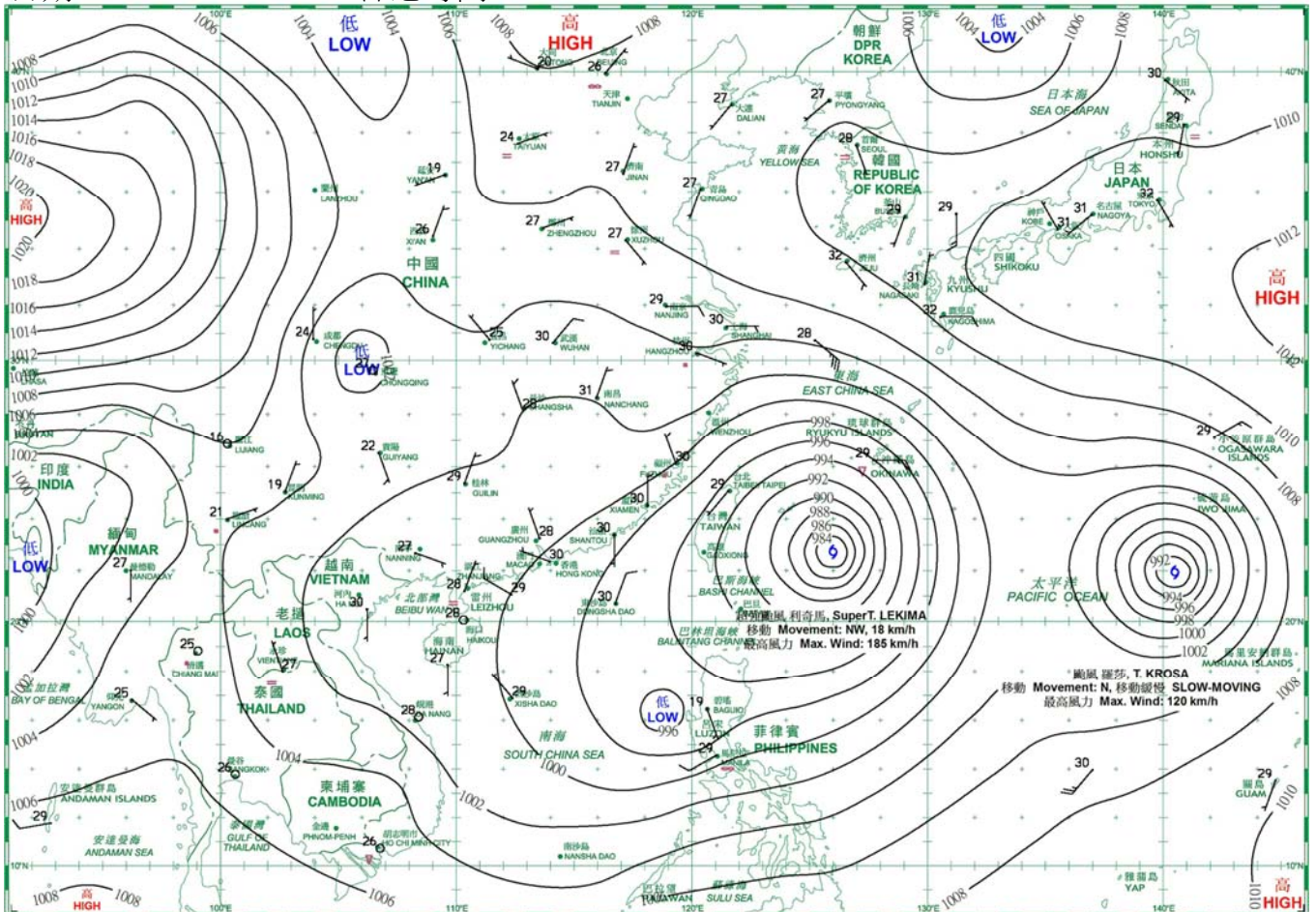




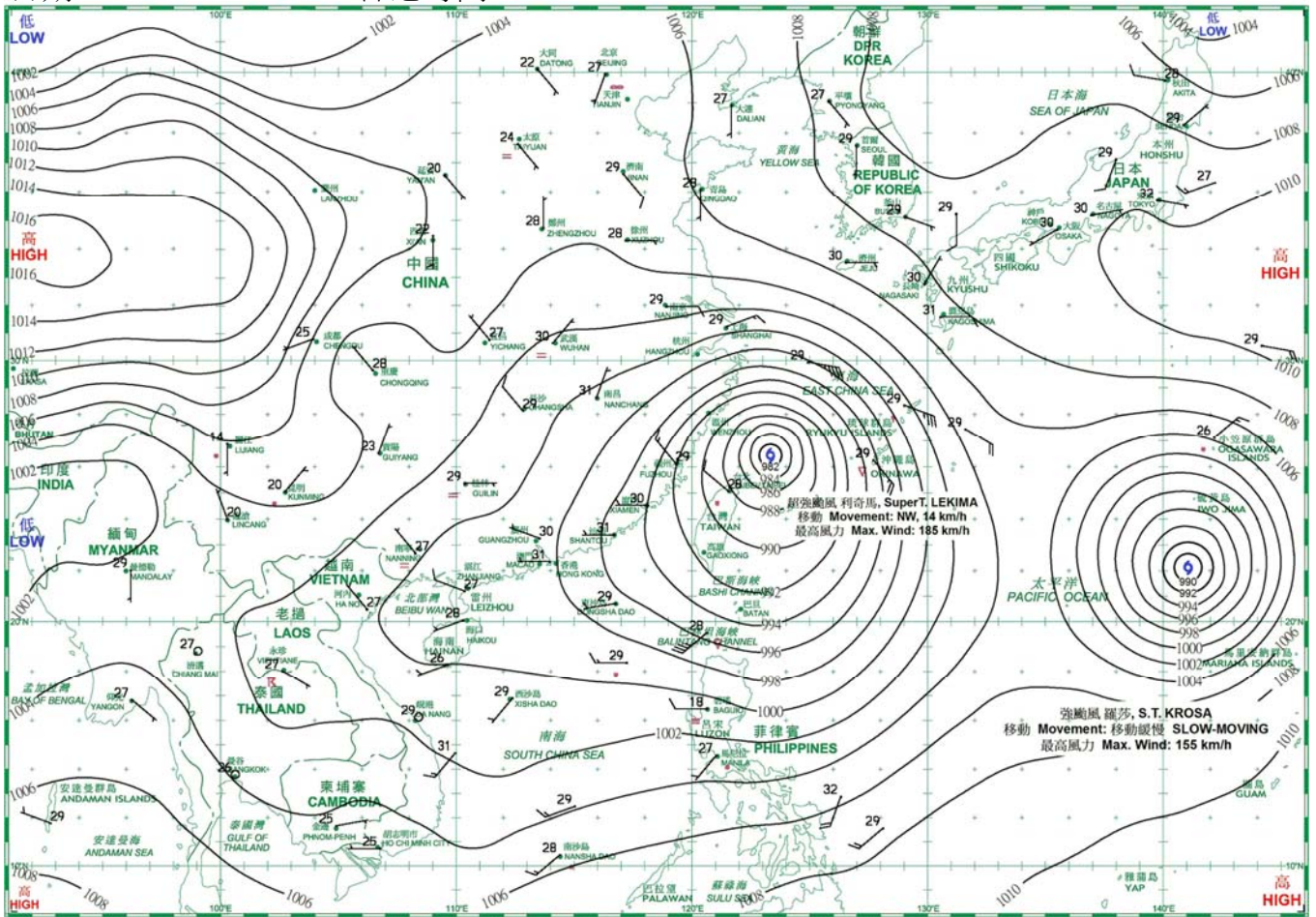
日期/Date: 07.08.2019 香港時間/HK Time: 08:00



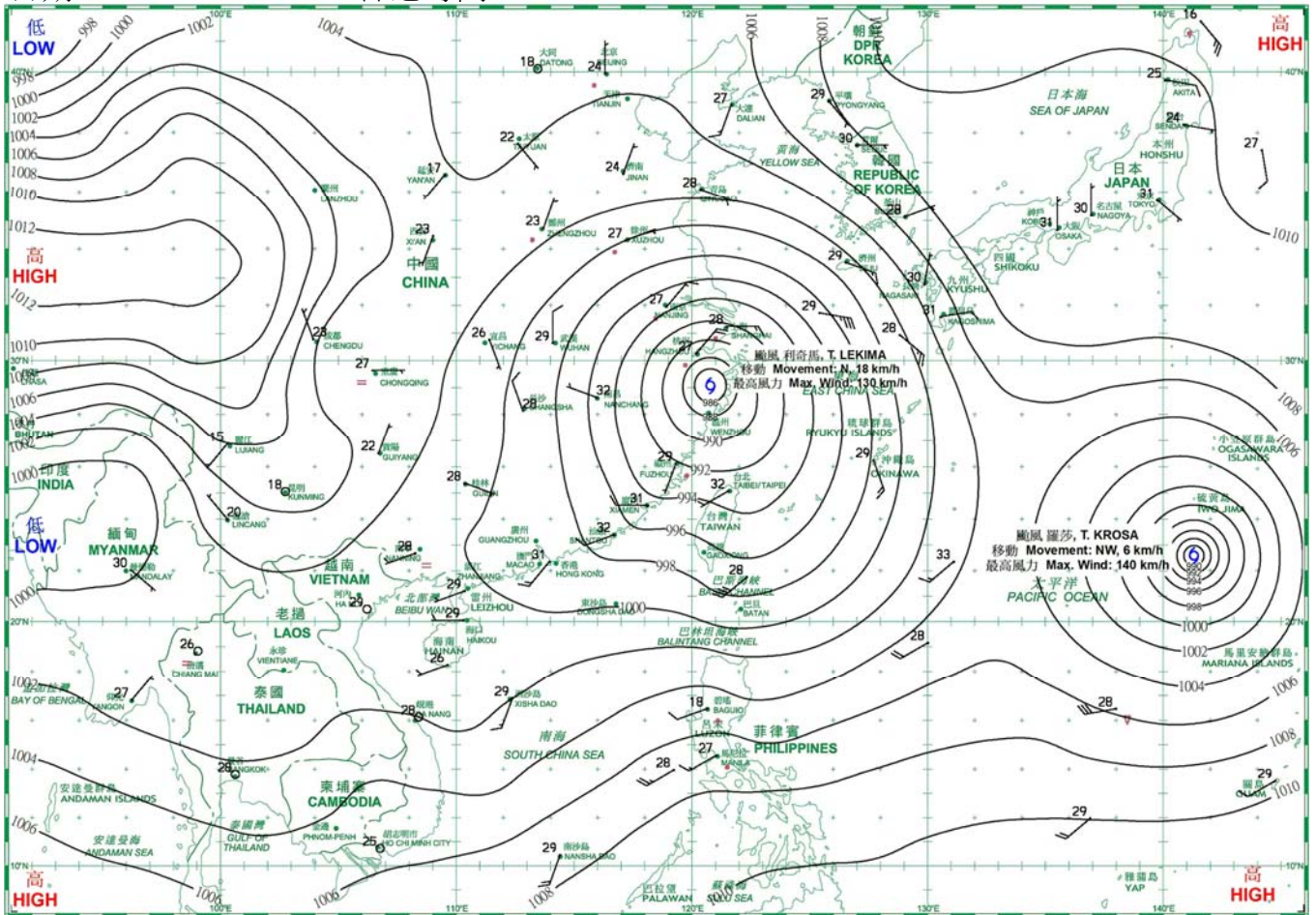
日期/Date: 08.08.2019 香港時間/HK Time: 08:00



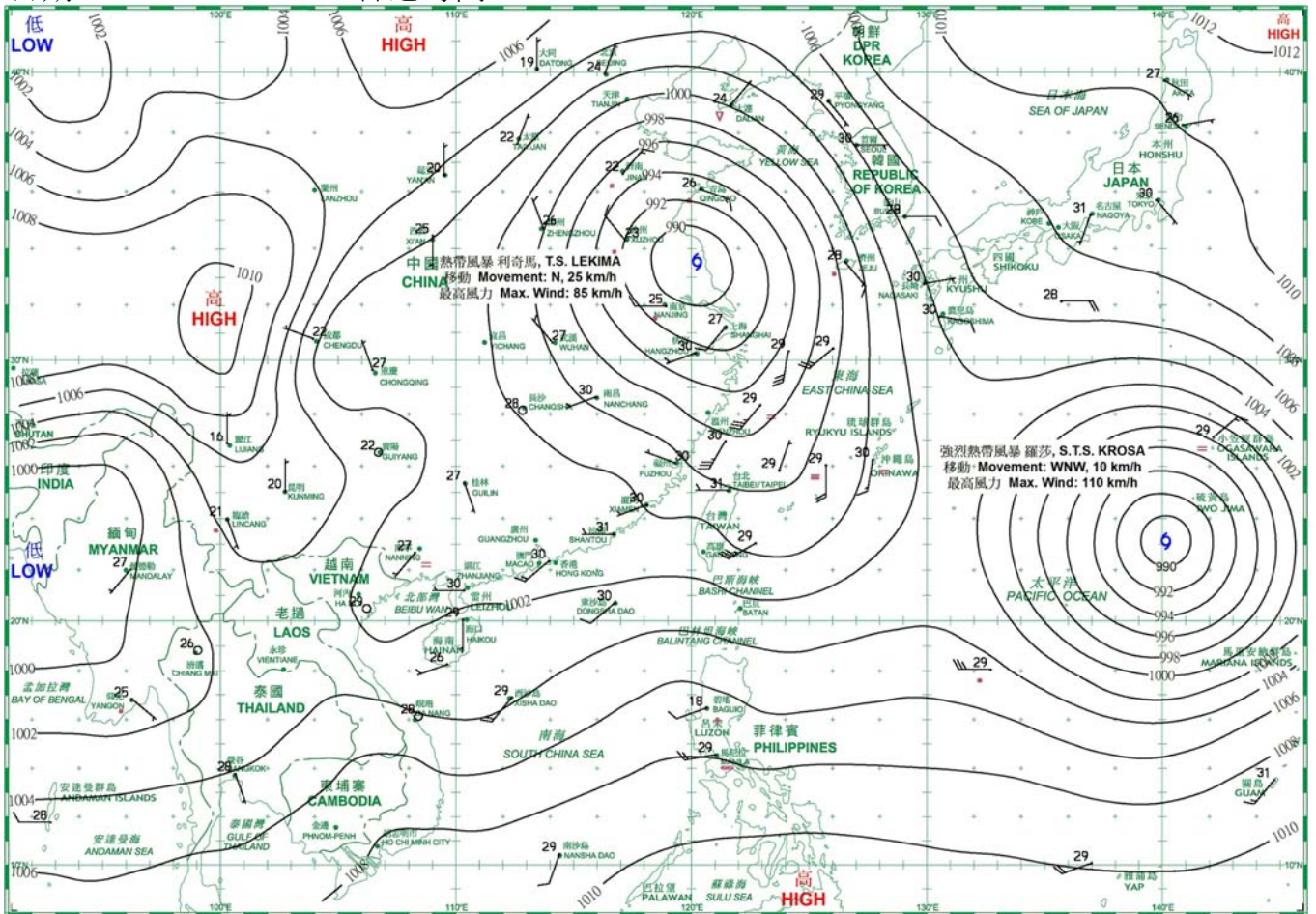
日期/Date: 09.08.2019 香港時間/HK Time: 08:00



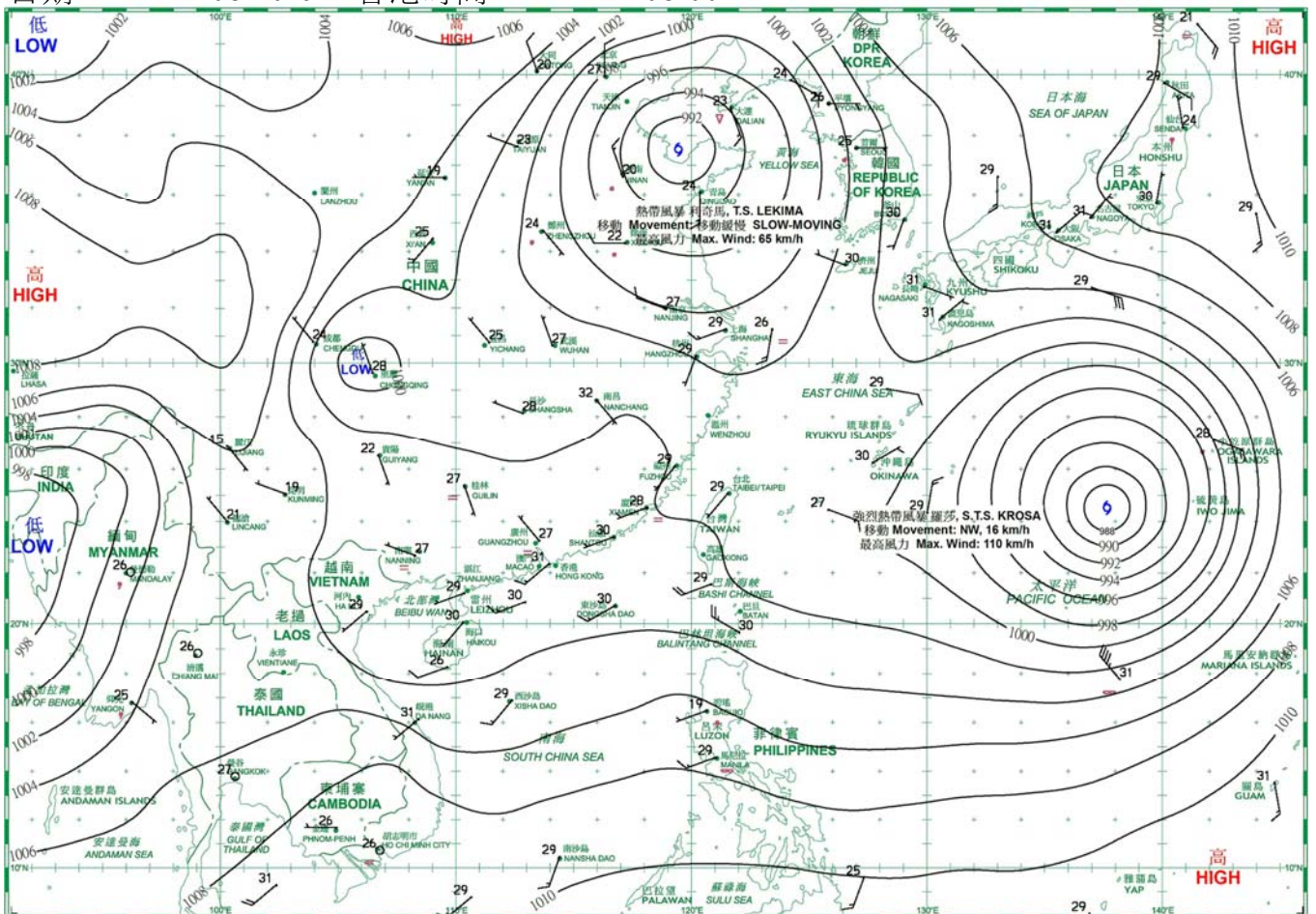
日期/Date: 10.08.2019 香港時間/HK Time: 08:00



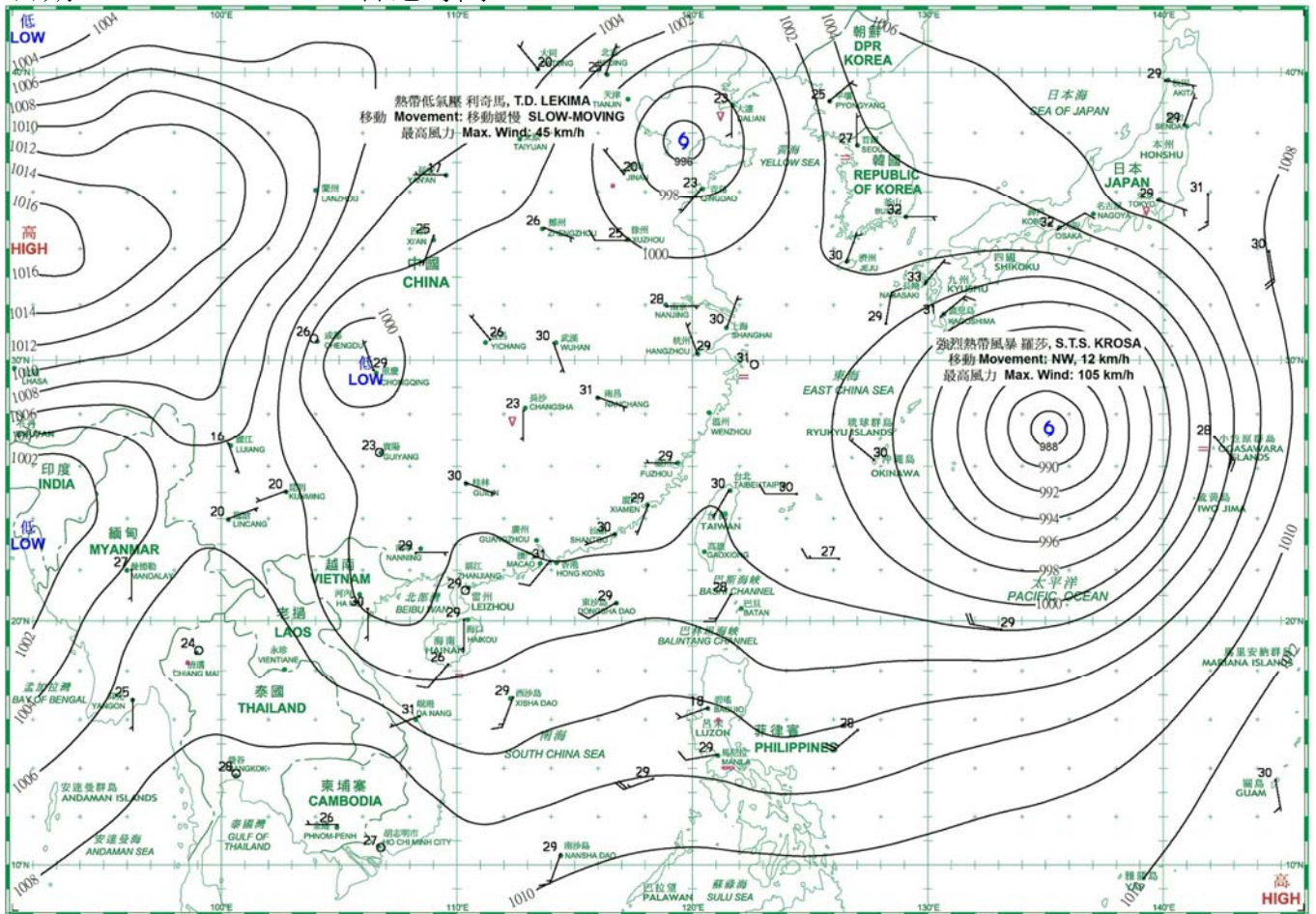
日期/Date: 11.08.2019 香港時間/HK Time: 08:00



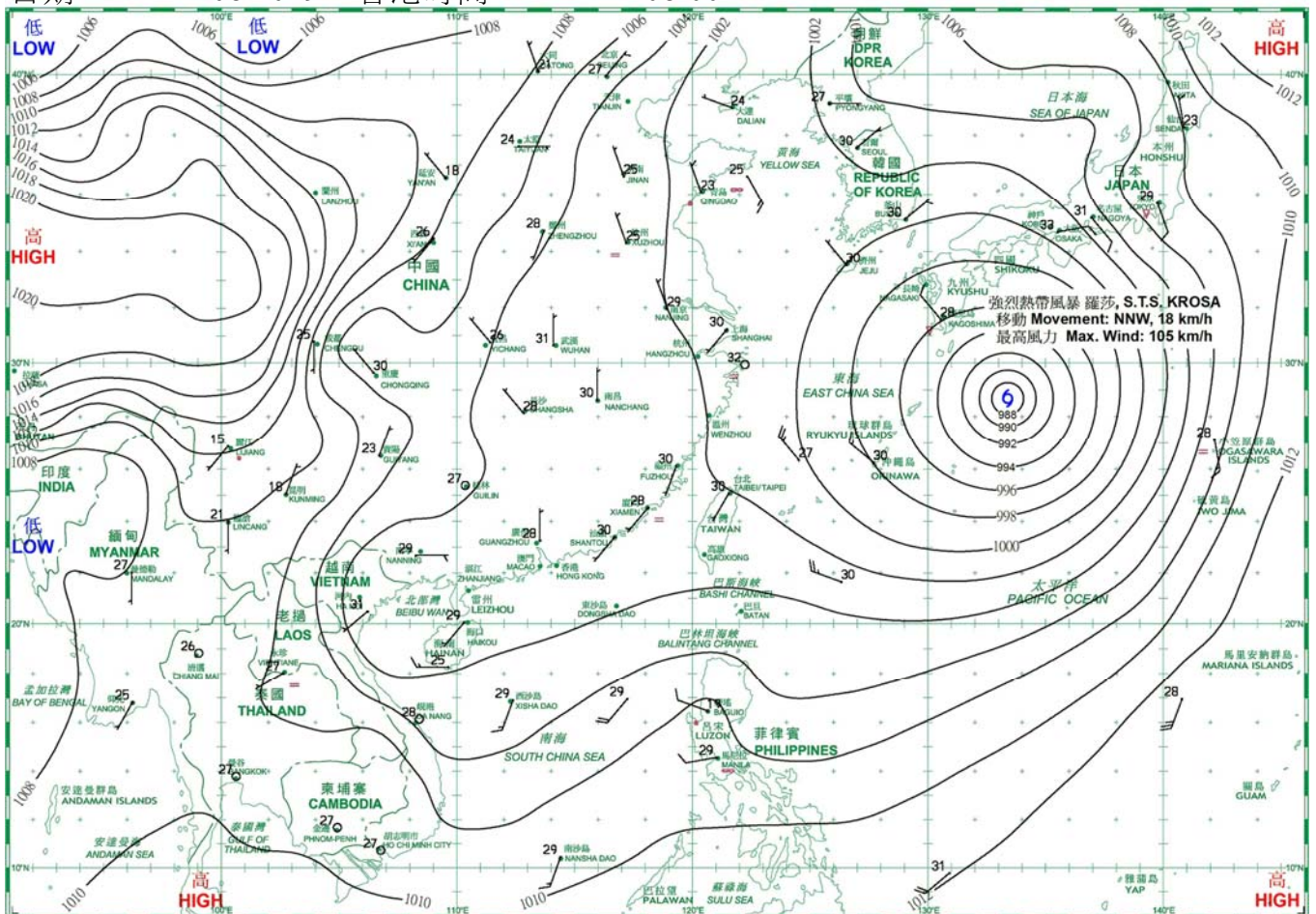
日期/Date: 12.08.2019 香港時間/HK Time: 08:00



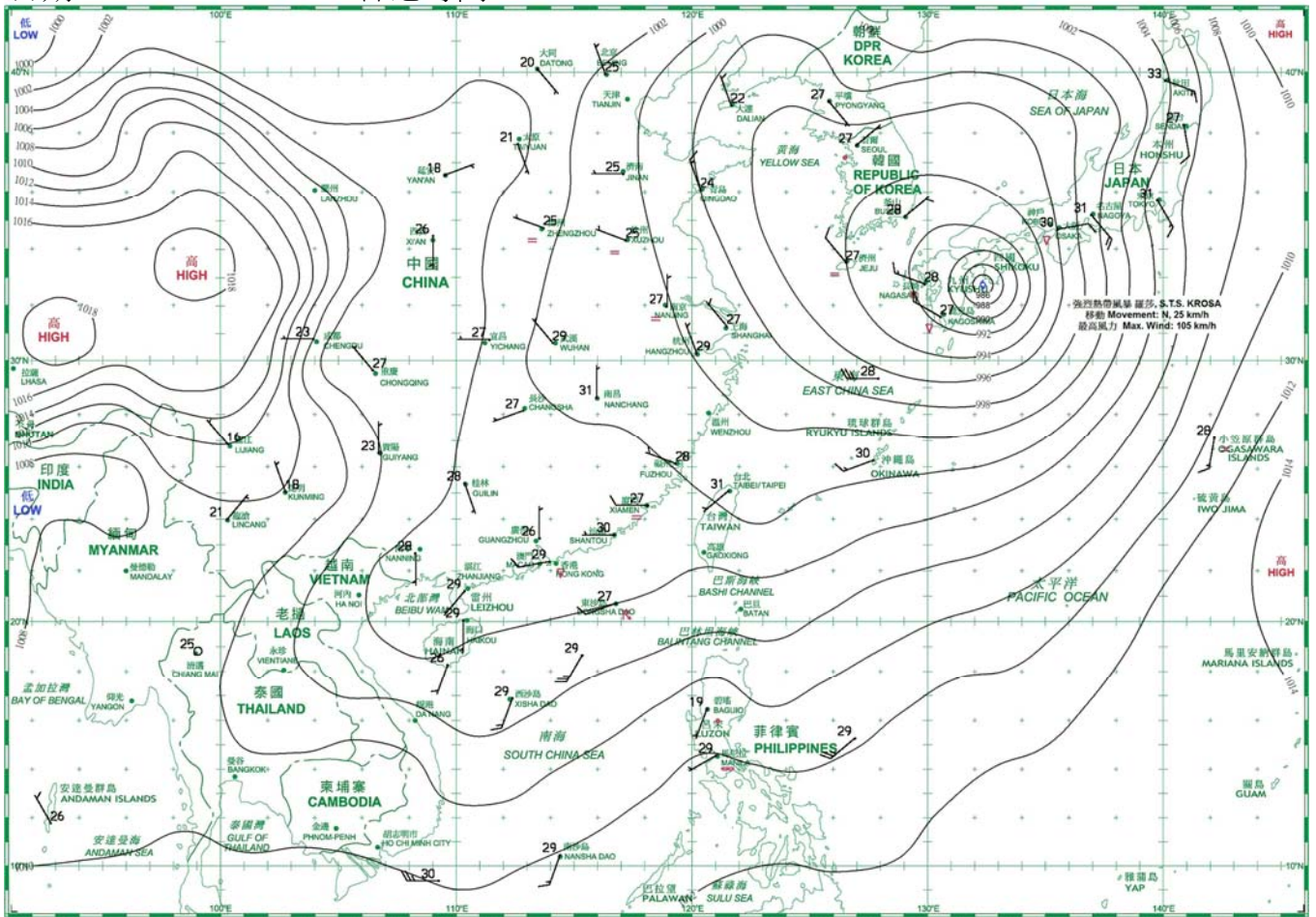
日期/Date: 13.08.2019 香港時間/HK Time: 08:00



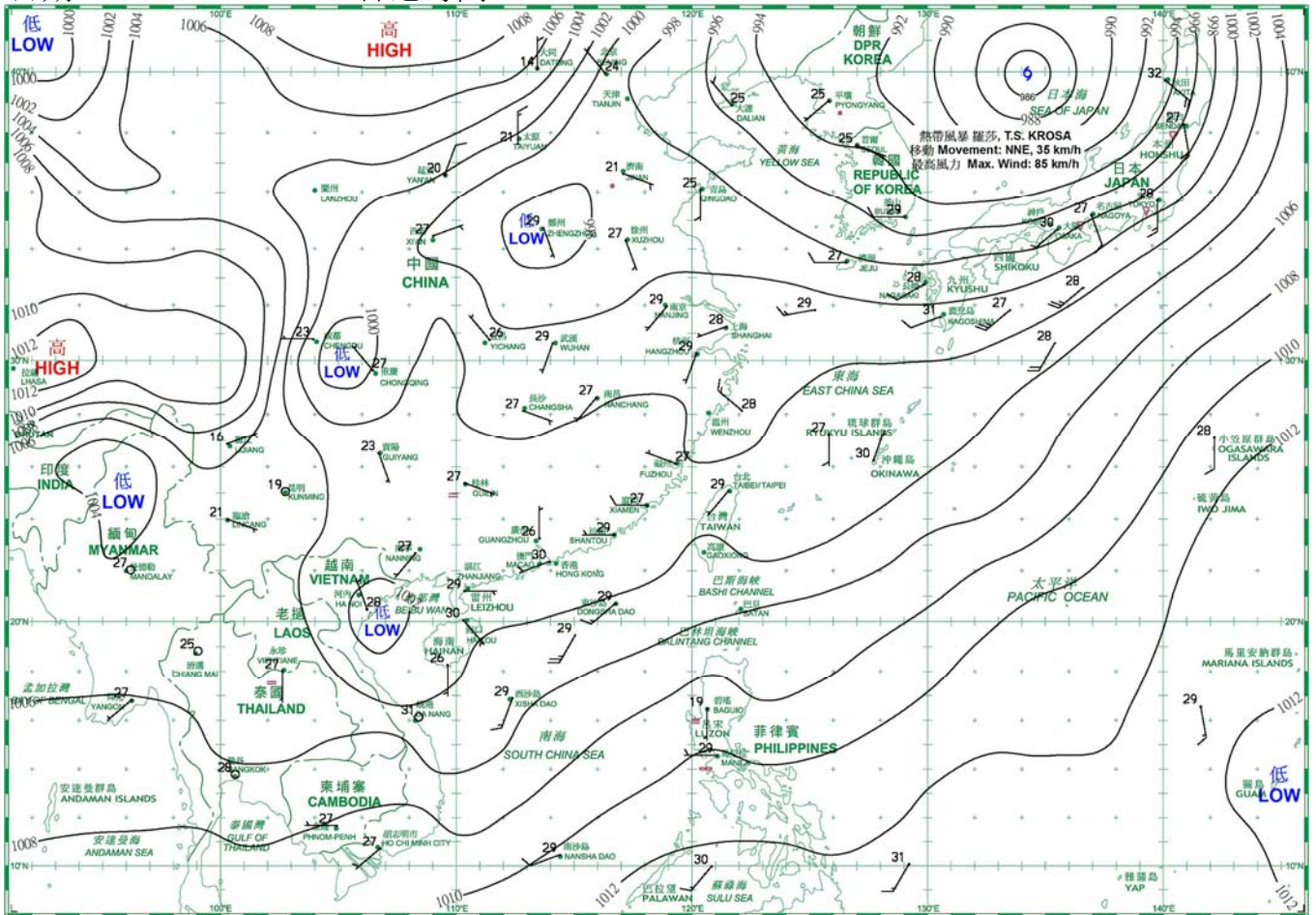
日期/Date: 14.08.2019 香港時間/HK Time: 08:00



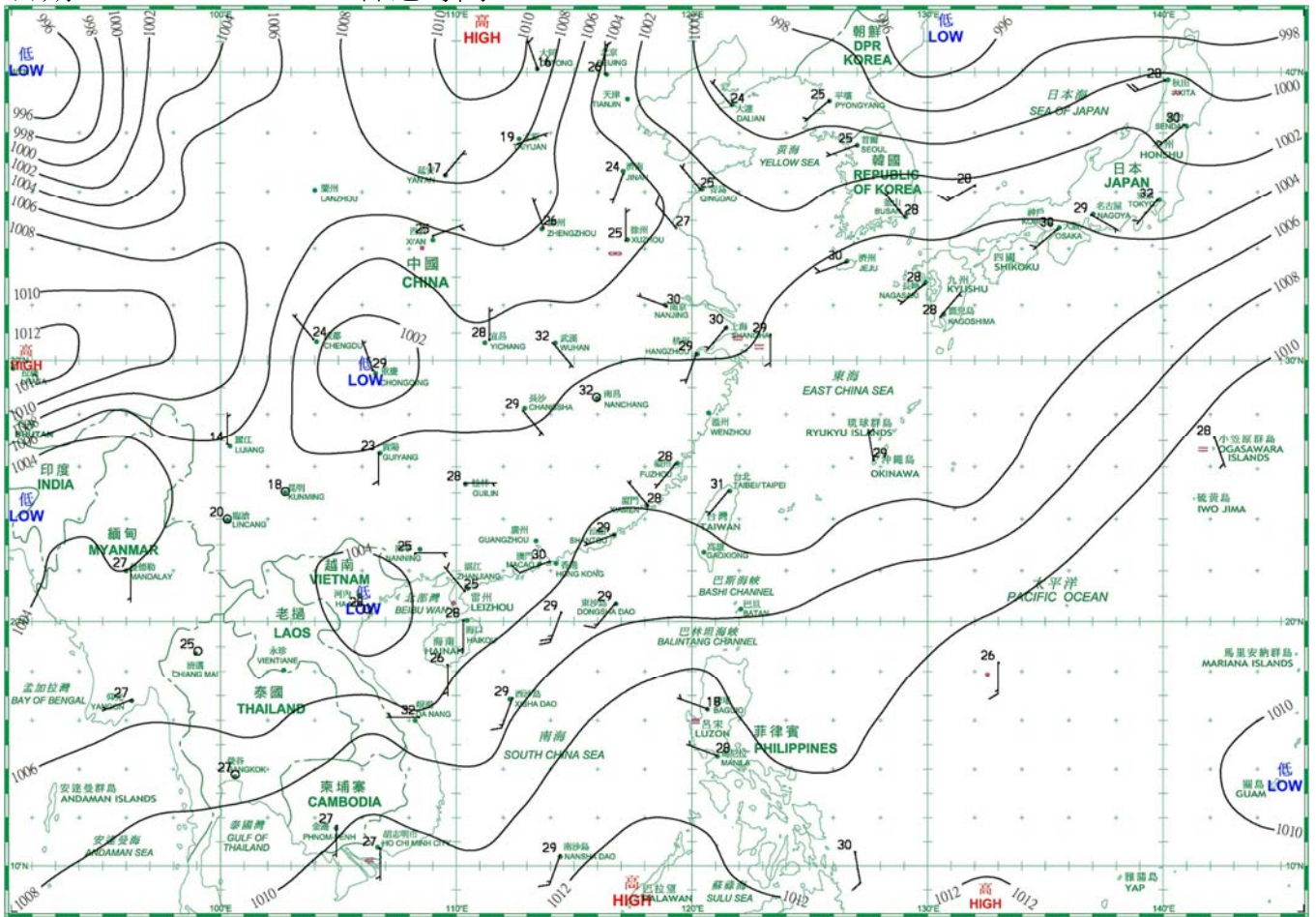
日期/Date: 15.08.2019 香港時間/HK Time: 08:00



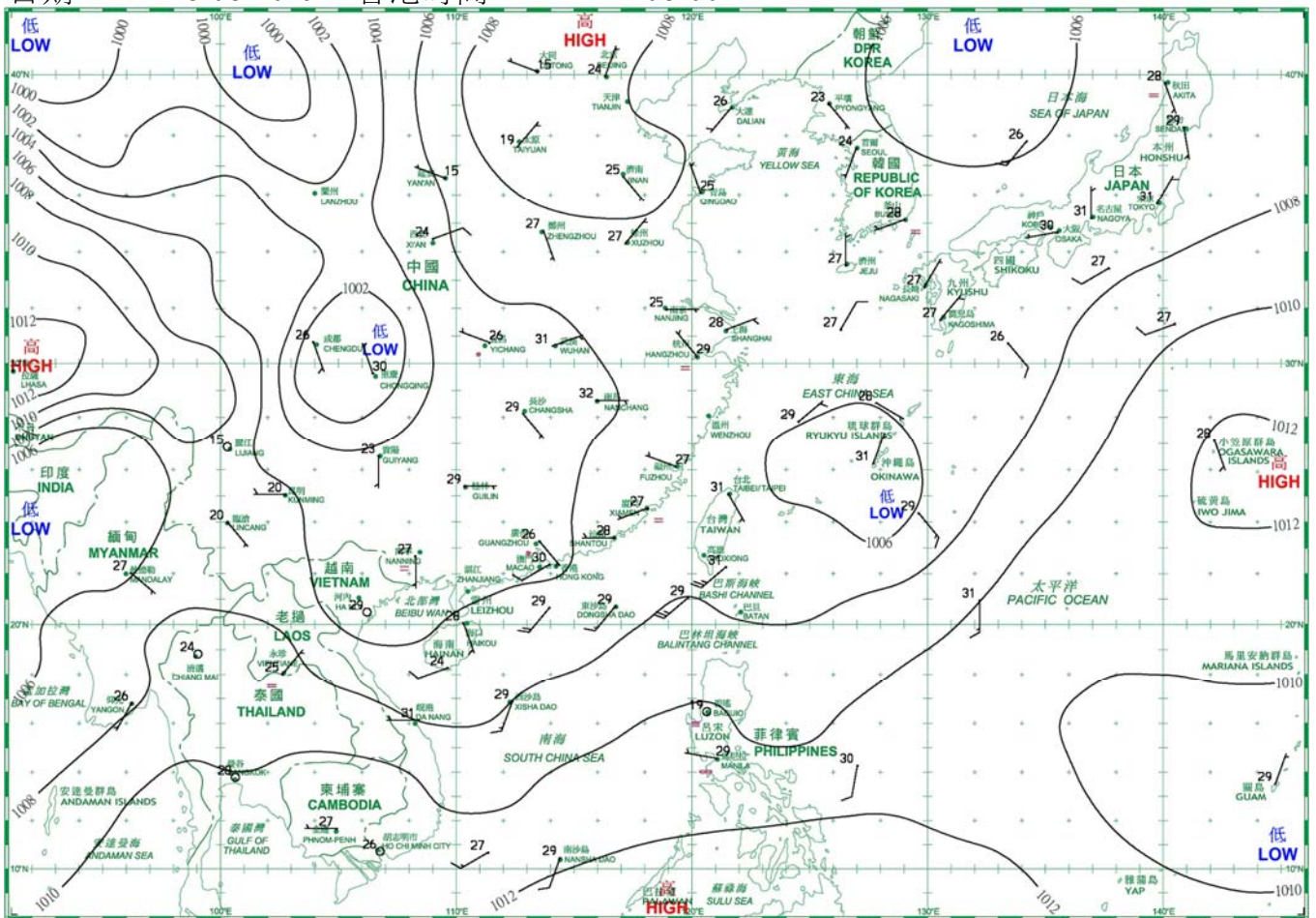
日期/Date: 16.08.2019 香港時間/HK Time: 08:00



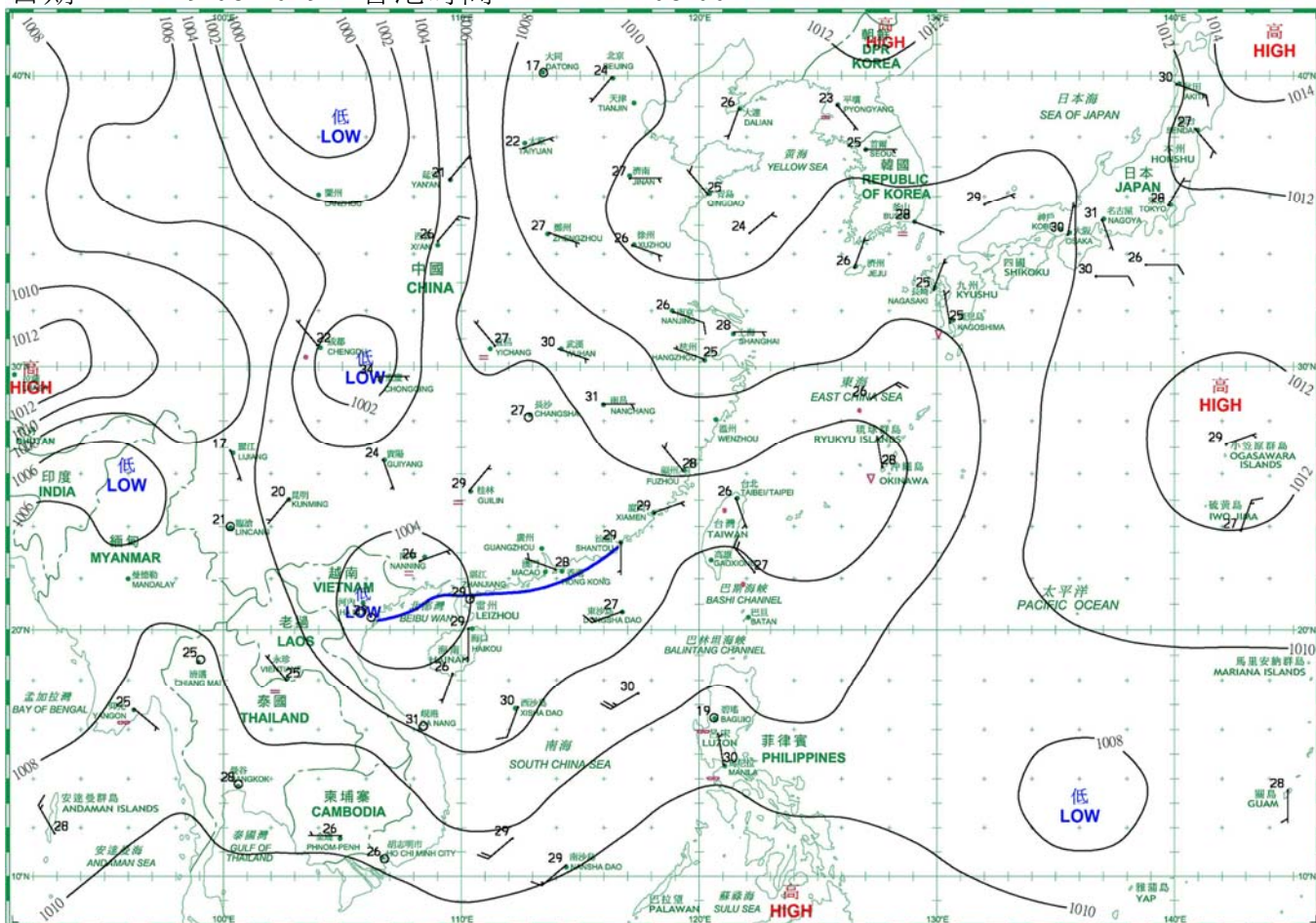
日期/Date: 17.08.2019 香港時間/HK Time: 08:00



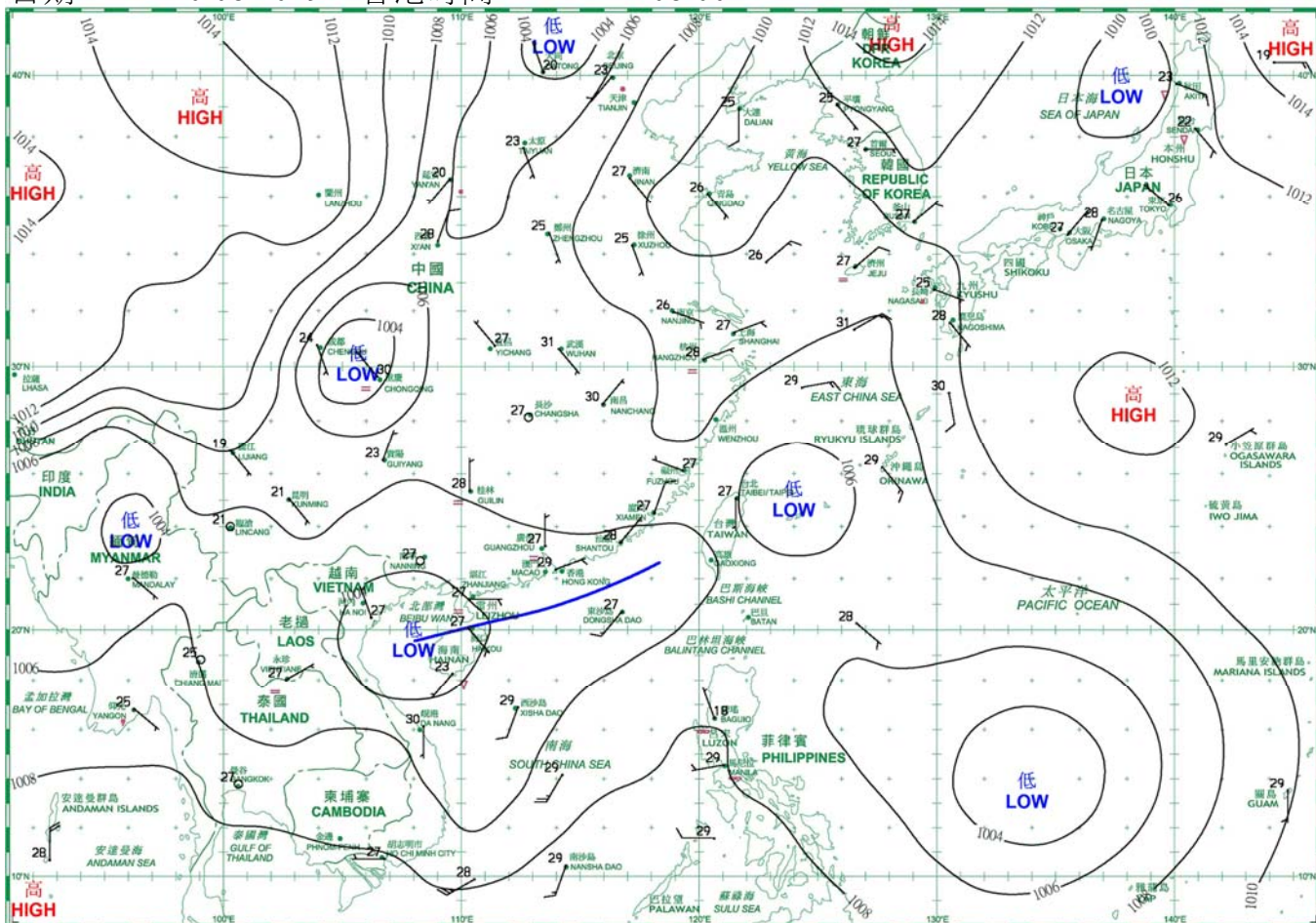
日期/Date: 18.08.2019 香港時間/HK Time: 08:00



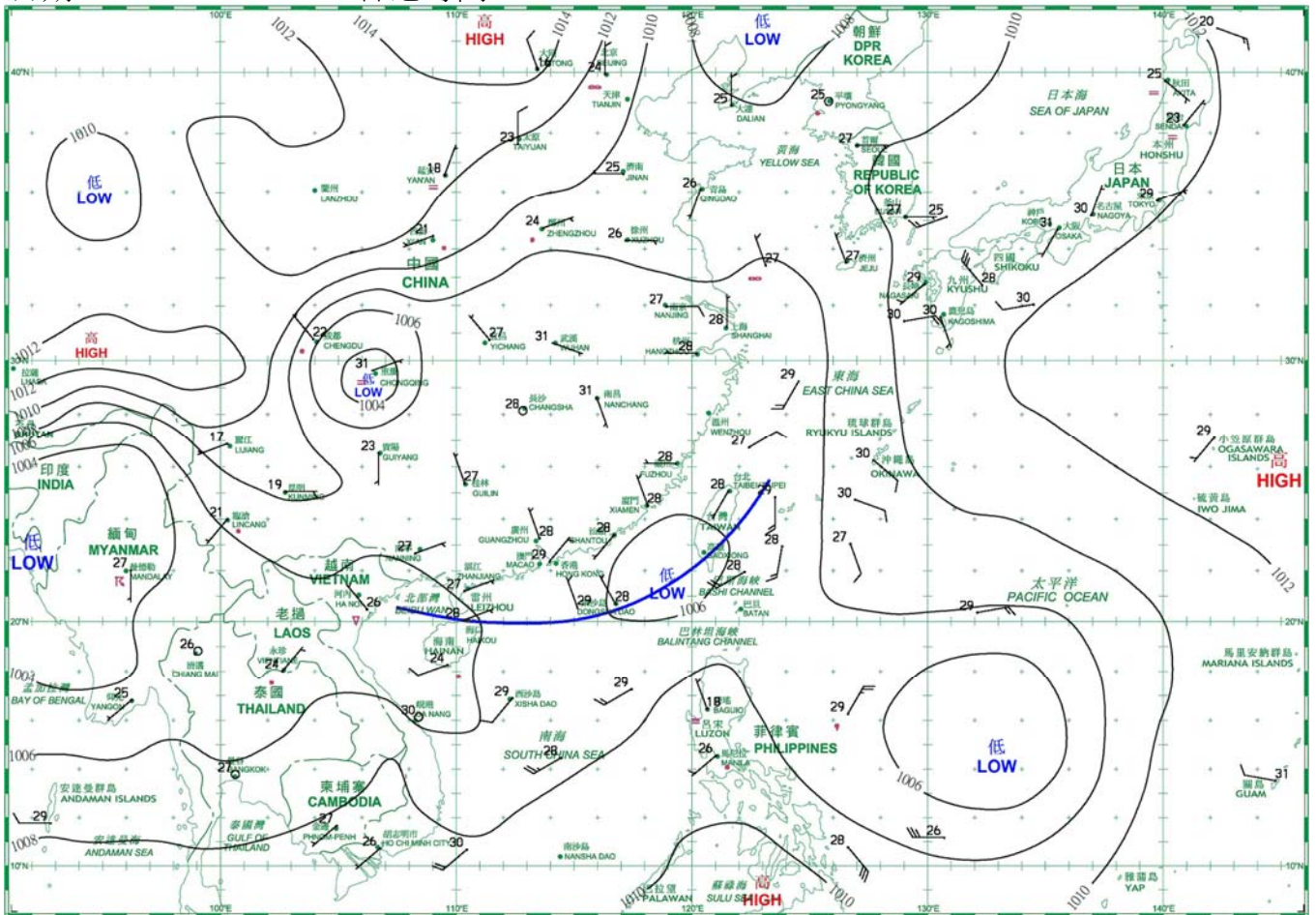
日期/Date: 19.08.2019 香港時間/HK Time: 08:00



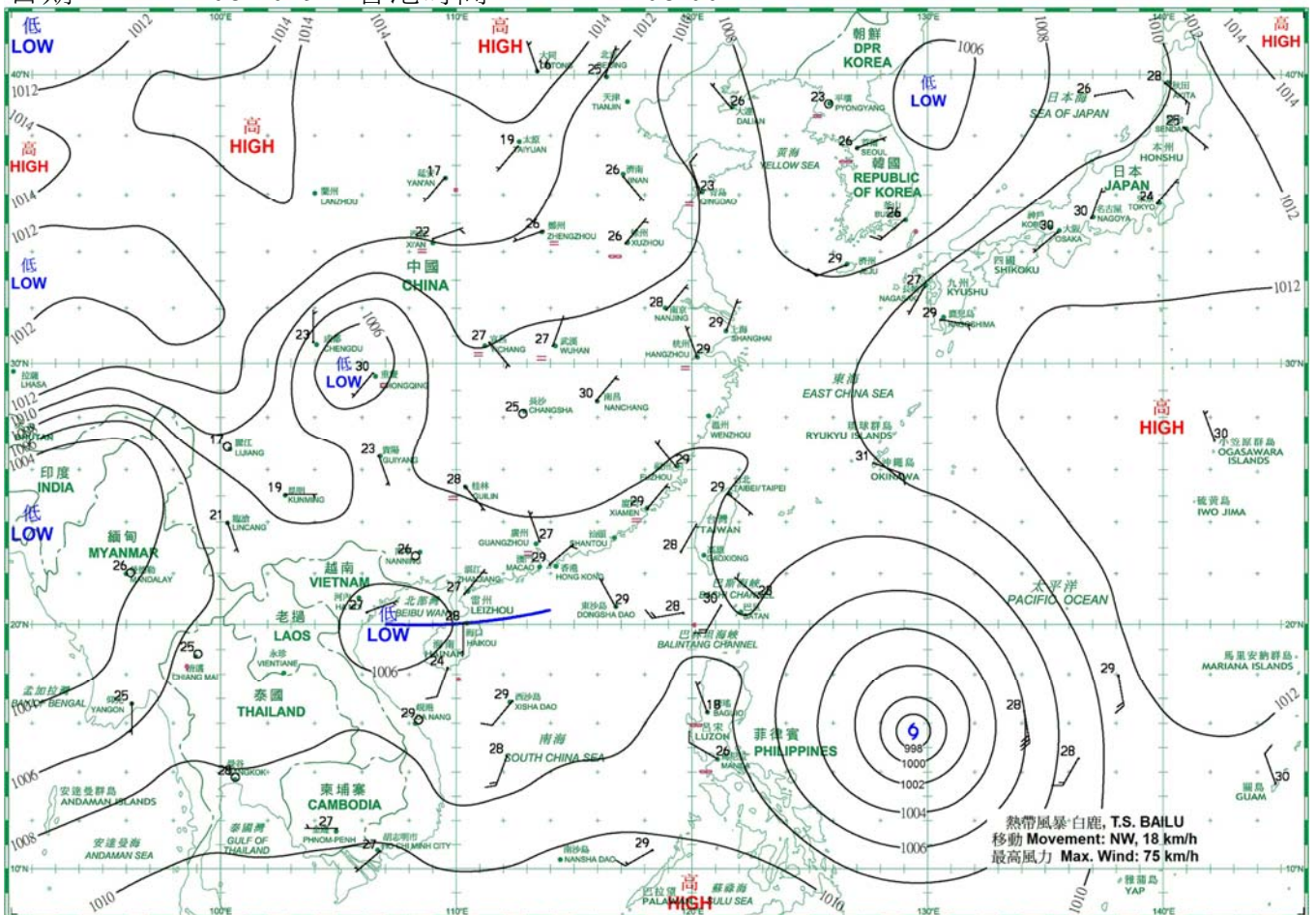
日期/Date: 20.08.2019 香港時間/HK Time: 08:00



日期/Date: 21.08.2019 香港時間/HK Time: 08:00

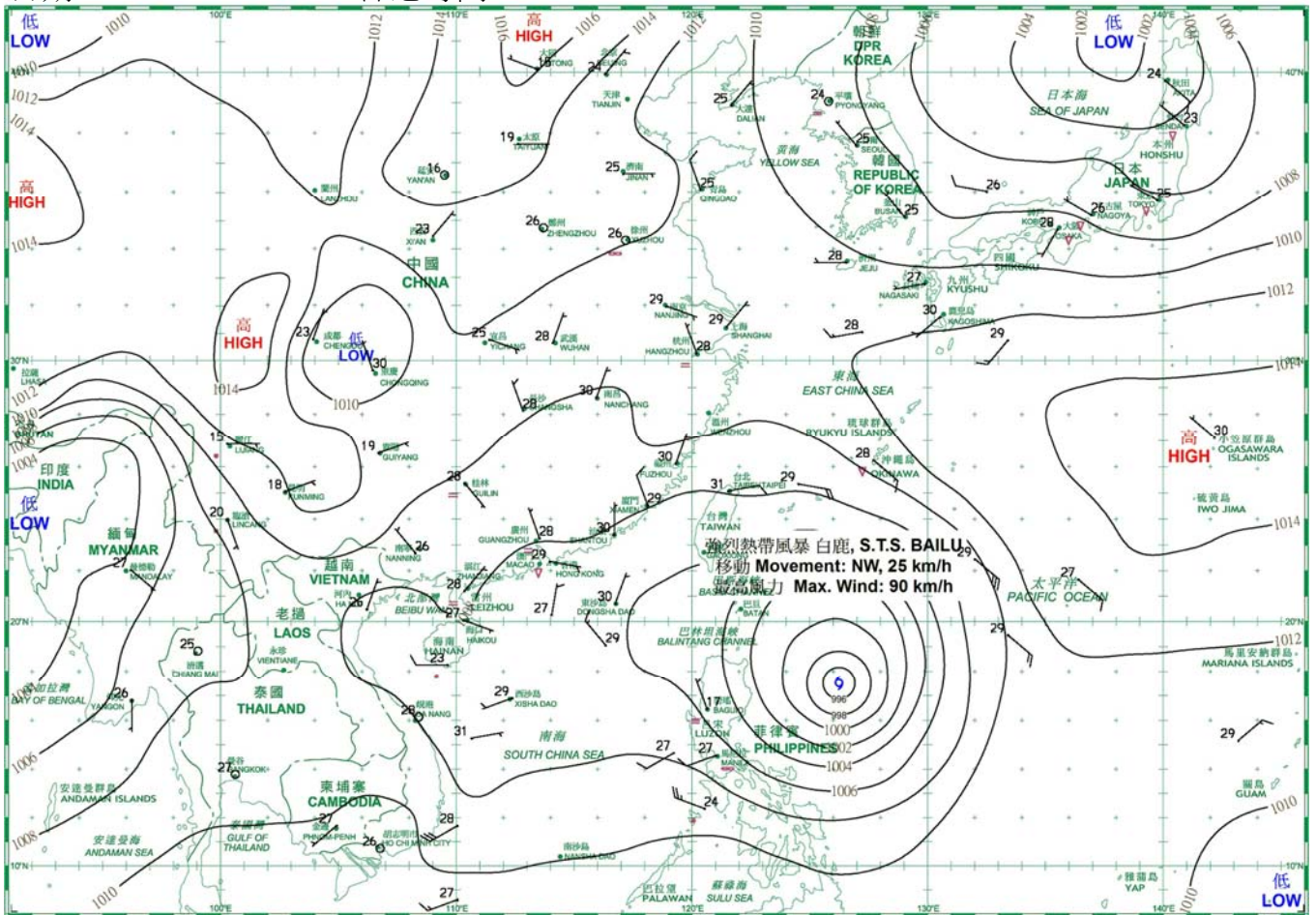


日期/Date: 22.08.2019 香港時間/HK Time: 08:00

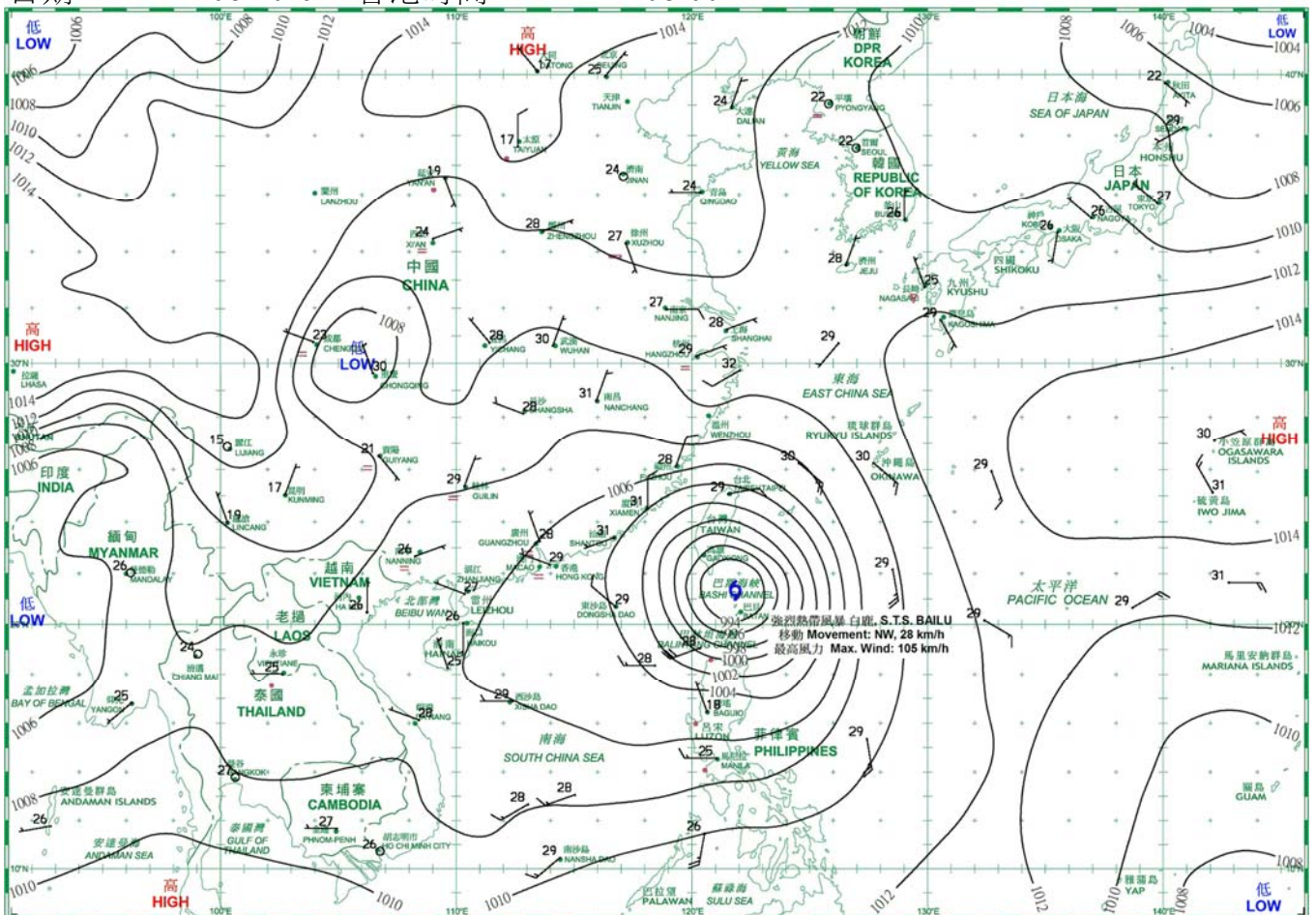




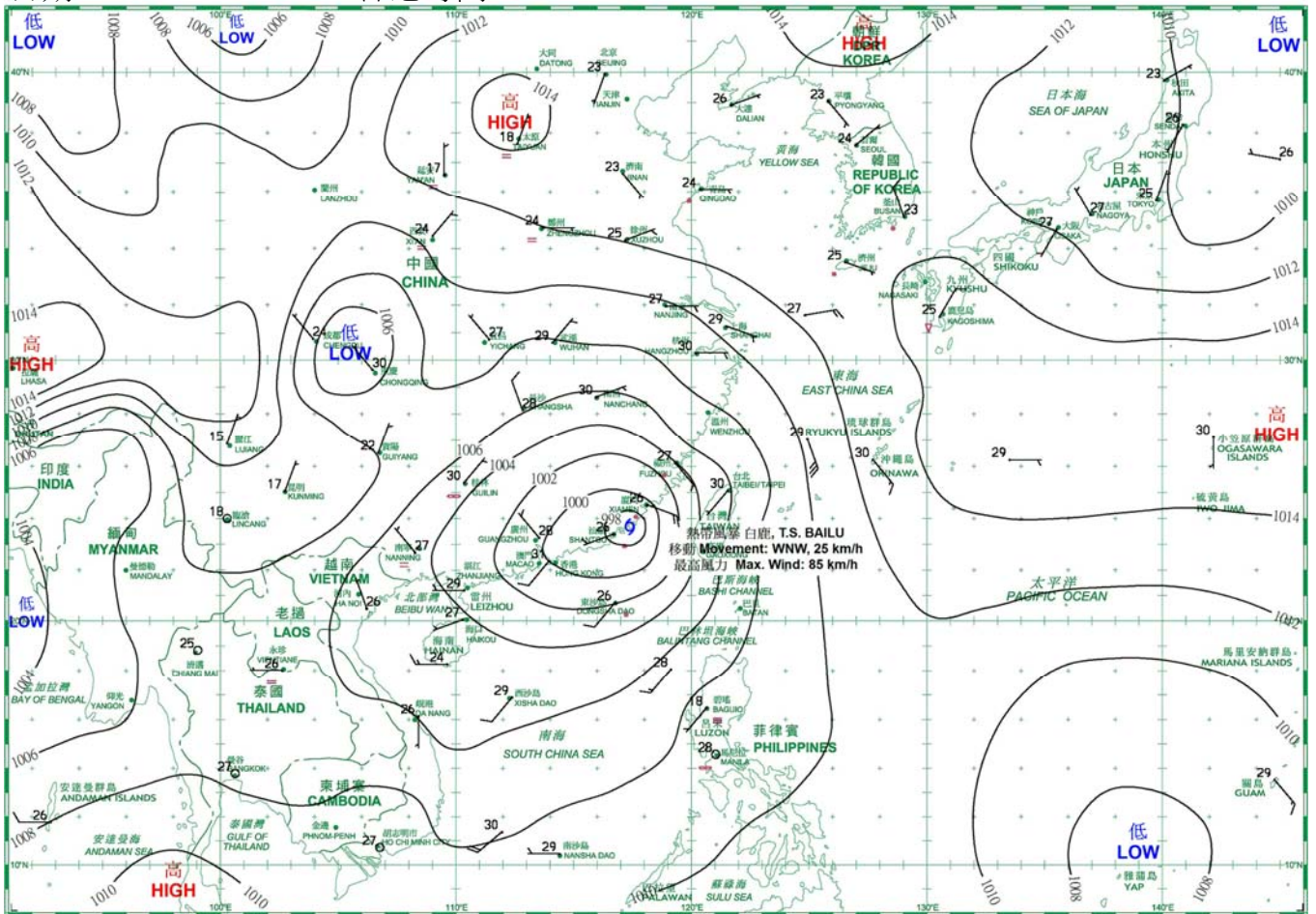
日期/Date: 23.08.2019 香港時間/HK Time: 08:00



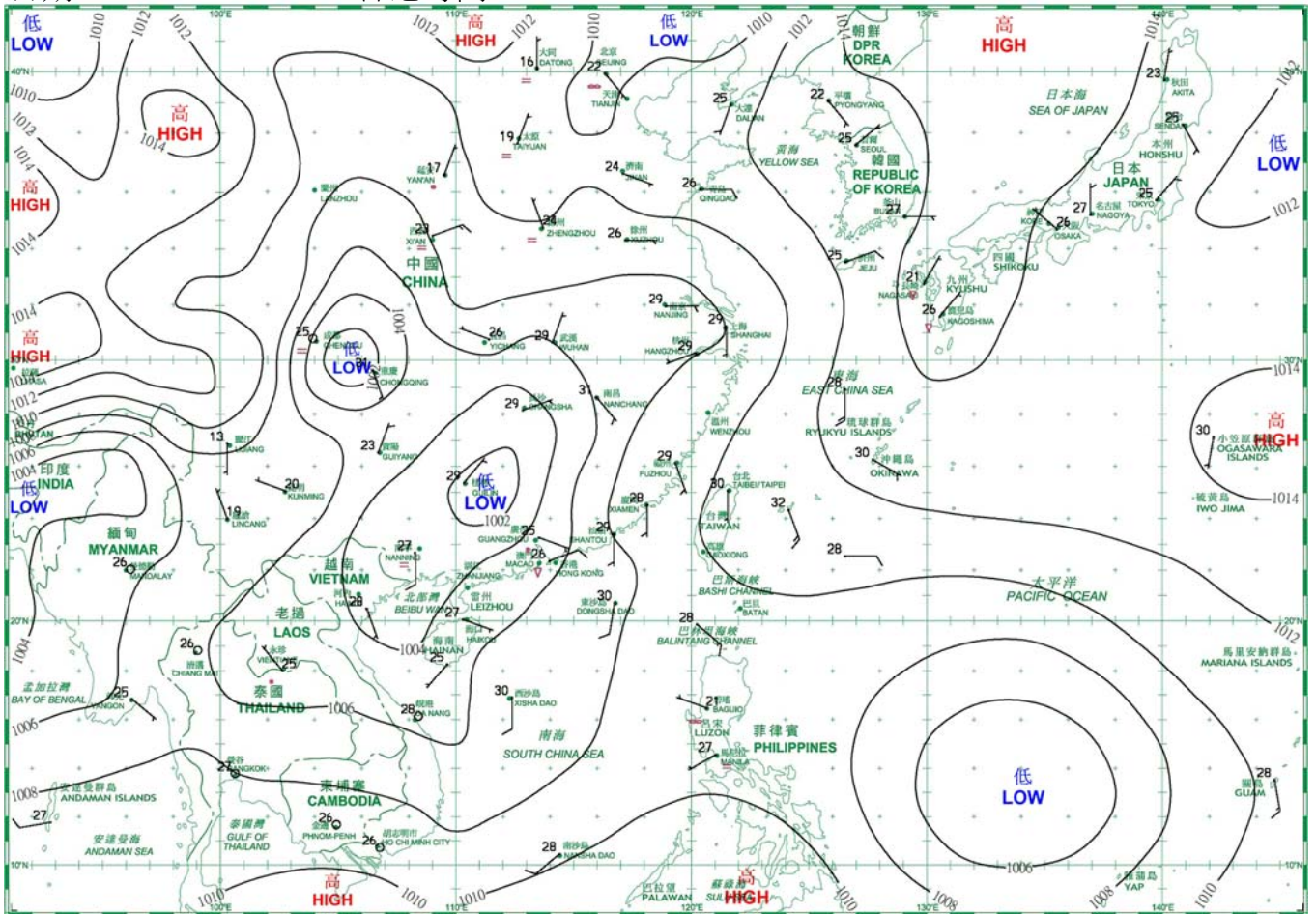
日期/Date: 24.08.2019 香港時間/HK Time: 08:00



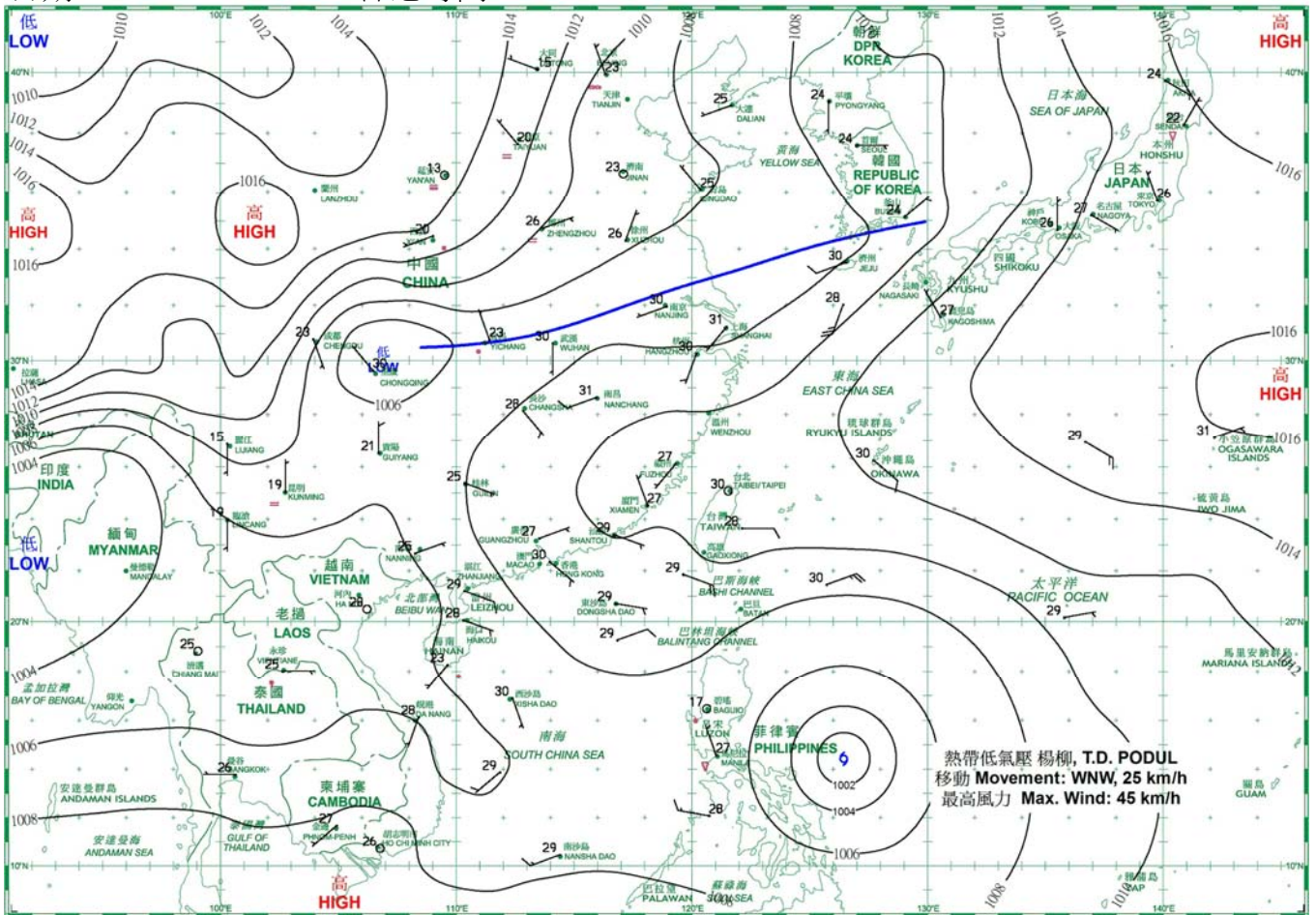
日期/Date: 25.08.2019 香港時間/HK Time: 08:00



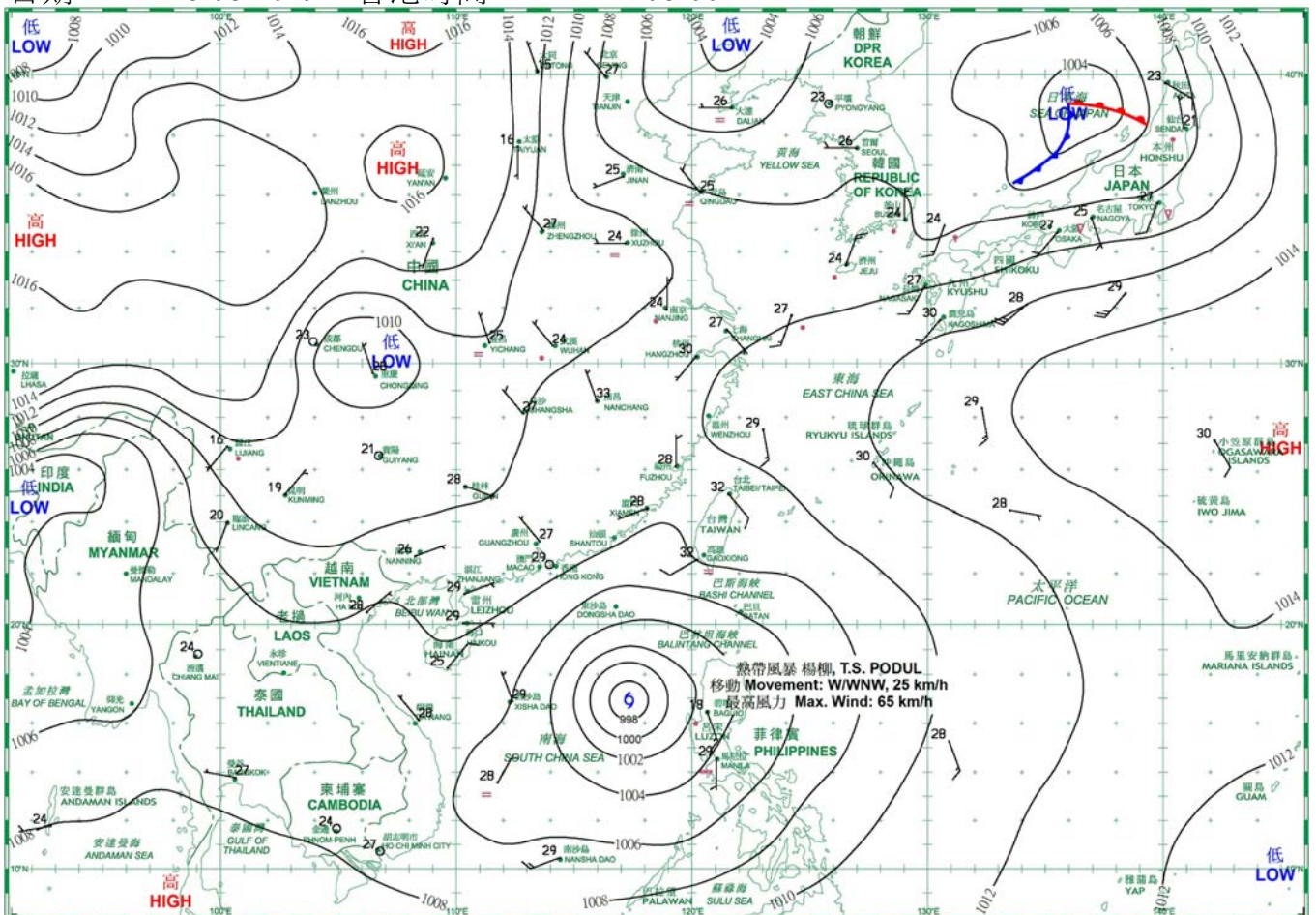
日期/Date: 26.08.2019 香港時間/HK Time: 08:00



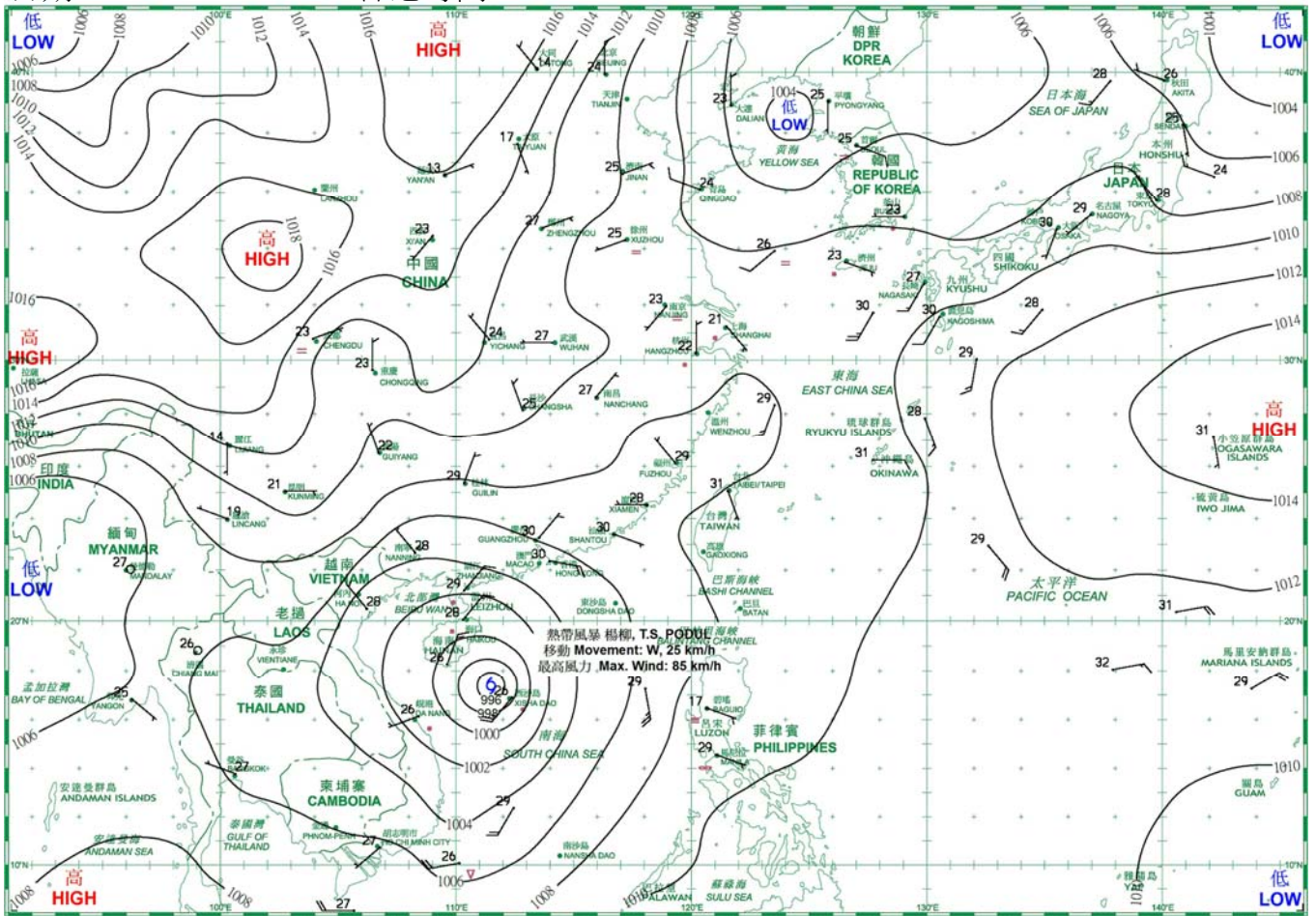
日期/Date: 27.08.2019 香港時間/HK Time: 08:00



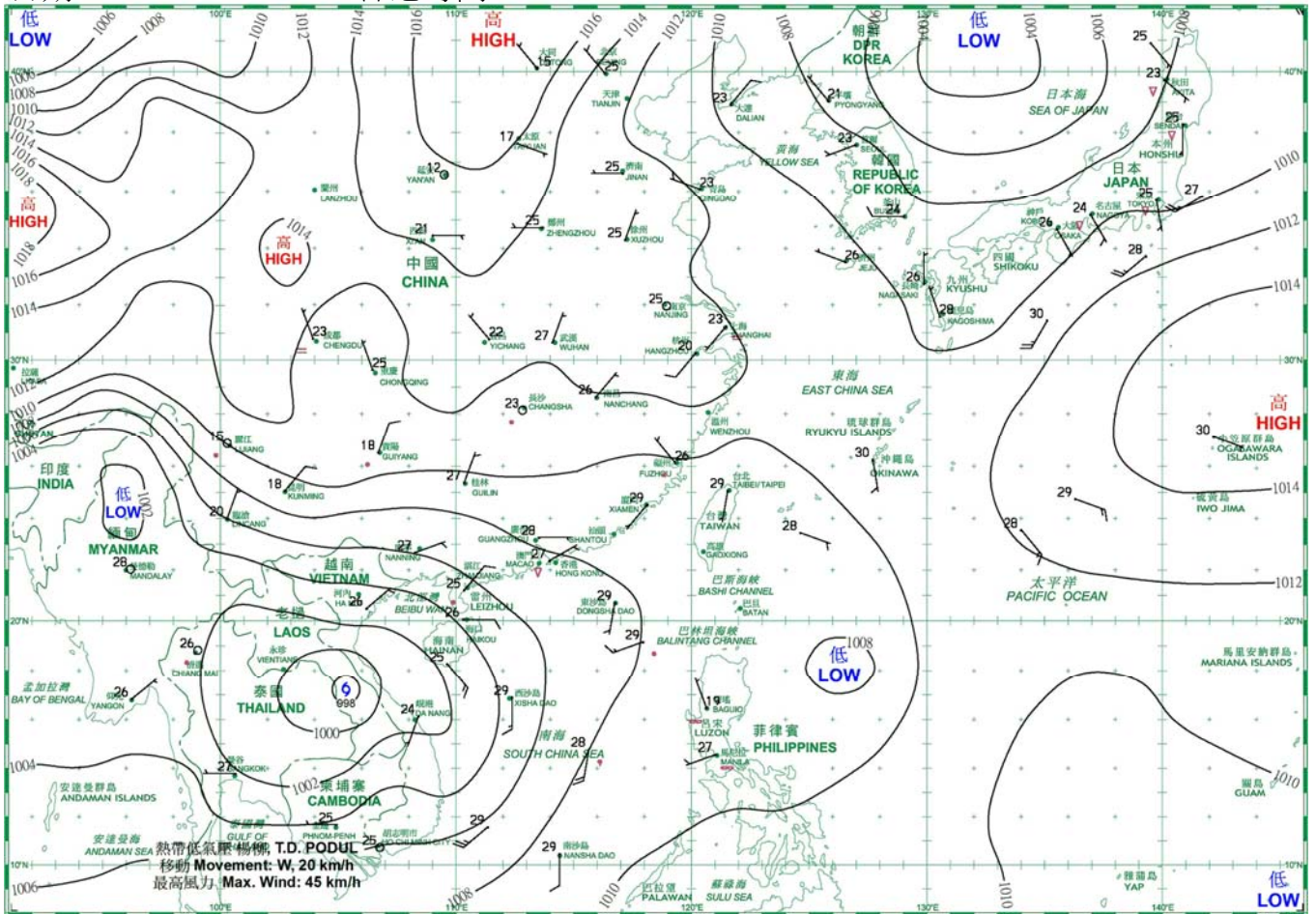
日期/Date: 28.08.2019 香港時間/HK Time: 08:00

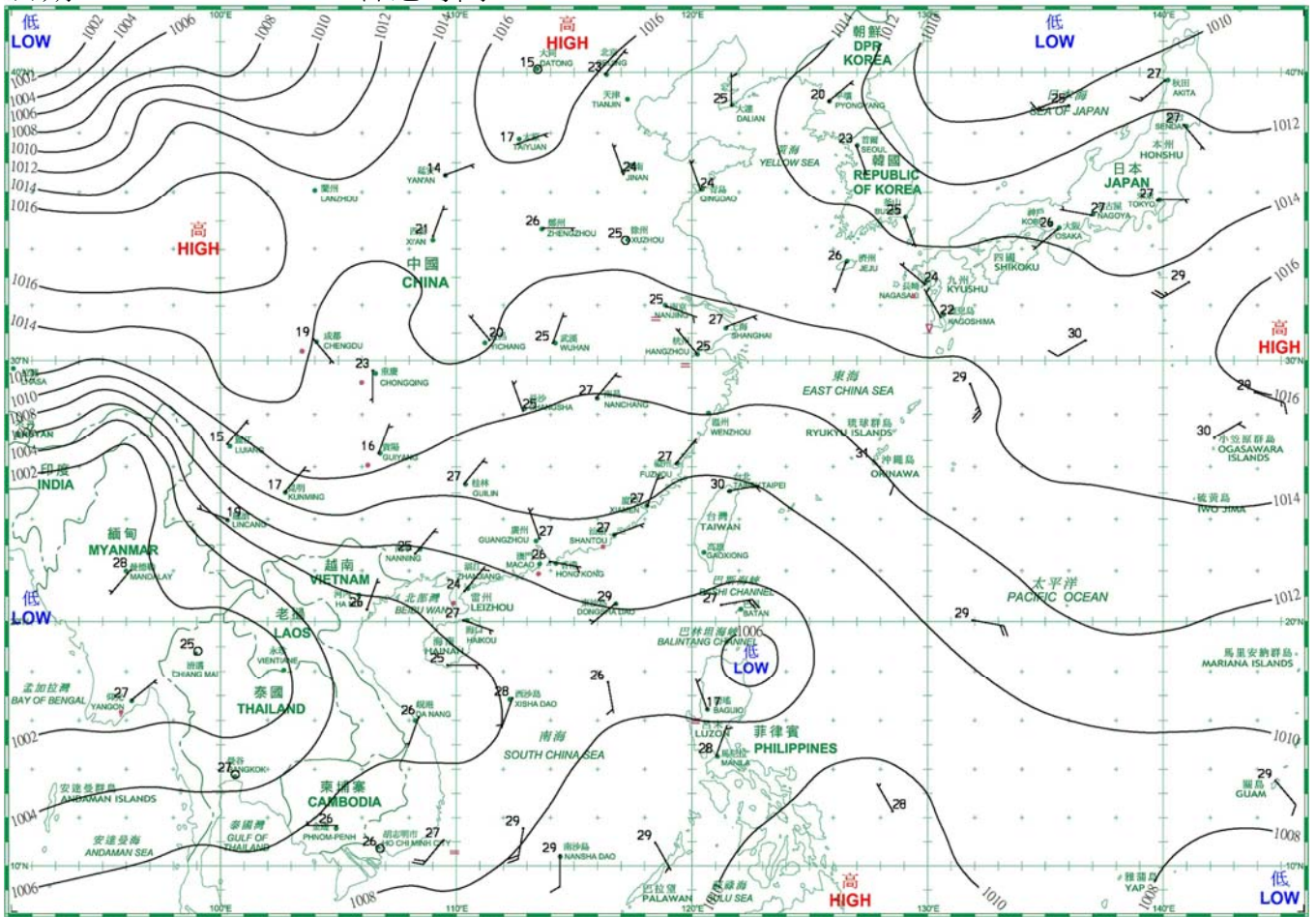


日期/Date: 29.08.2019 香港時間/HK Time: 08:00



日期/Date: 30.08.2019 香港時間/HK Time: 08:00





## 4.1.1 二零一九年八月香港氣象觀測摘錄(一)

### 4.1.1 Extract of Meteorological Observations in Hong Kong (Part 1), August 2019

日期 Date	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
		最高 Maximum	平均 Mean	最低 Minimum				
八月 August	百帕斯卡 hPa	°C	°C	°C	°C	%	%	毫米 mm
1	1000.1	27.6	26.4	24.9	25.2	94	94	98.3
2	1002.1	28.5	27.0	25.4	25.3	91	88	8.2
3	1002.7	27.5	26.7	25.3	25.1	91	88	28.4
4	1002.7	30.2	27.9	26.9	24.6	83	87	Tr
5	1003.1	34.5	29.7	26.5	25.0	77	34	-
6	1002.7	32.2	29.8	28.7	25.4	78	65	Tr
7	1000.7	33.6	30.1	28.0	23.8	70	43	-
8	998.5	33.5	30.4	27.7	25.1	74	43	-
9	997.2	35.1	31.3	28.1	26.2	75	36	-
10	999.0	33.2	30.6	29.4	27.4	83	83	-
11	1000.7	32.7	30.4	29.2	26.9	82	85	1.1
12	1001.6	34.0	30.8	29.2	27.0	80	78	0.4
13	1001.7	33.3	30.8	28.8	26.6	79	67	9.2
14	1002.0	33.4	30.0	25.2	26.2	80	70	54.4
15	1001.9	32.4	30.0	26.5	25.8	79	69	5.6
16	1003.4	32.0	30.0	27.6	26.2	81	82	1.1
17	1005.6	30.1	28.0	25.9	25.5	87	87	42.2
18	1005.1	31.6	27.8	25.0	25.2	86	84	19.0
19	1003.9	31.8	28.8	26.8	25.6	83	81	0.1
20	1004.8	31.7	29.1	28.0	25.2	79	74	Tr
21	1005.9	32.8	29.5	27.6	24.3	74	74	-
22	1006.6	33.0	29.7	27.5	25.3	77	62	-
23	1006.7	31.4	29.4	28.2	25.5	80	65	0.7
24	1002.3	33.9	30.9	27.7	25.9	75	56	-
25	1000.8	32.6	27.2	25.1	25.2	89	95	88.4
26	1006.3	28.7	25.7	22.9	24.7	95	81	178.3
27	1008.1	31.4	28.6	26.9	26.3	88	57	2.9
28	1006.2	33.8	29.9	27.2	25.4	77	72	-
29	1005.6	30.7	29.0	27.8	25.8	83	80	5.9
30	1007.6	30.1	27.7	25.0	25.1	86	83	8.5
31	1007.8	30.3	26.9	25.0	25.3	91	90	43.7
平均/總值 Mean/Total	1003.3	31.9	29.0	26.9	25.6	82	73	596.4
正常* Normal*	1005.2	31.1	28.6	26.6	25.0	81	69	432.2
觀測站 Station	天文台 Hong Kong Observatory							

天文台於八月九日 15 時 45 分錄得本月最低氣壓 995.3 百帕斯卡。

The minimum pressure recorded at the Hong Kong Observatory was 995.3 hectopascals at 1545 HKT on 9 August.

天文台於八月九日 15 時 9 分錄得本月最高氣溫 35.1 °C。

The maximum air temperature recorded at the Hong Kong Observatory was 35.1 °C at 1509 HKT on 9 August.

天文台於八月二十六日 1 時 17 分錄得本月最低氣溫 22.9 °C。

The minimum air temperature recorded at the Hong Kong Observatory was 22.9 °C at 0117 HKT on 26 August.

京士柏於八月二十五日 0 時 45 分錄得本月最高1分鐘平均降雨率 198 毫米/小時。

The maximum 1-minute mean rainfall rate recorded at King's Park was 198 millimetres per hour at 0045 HKT on 25 August.

\* 1981-2010 氣候平均值 (除特別列明外) (<http://www.hko.gov.hk/wxinfo/climat/normal/cnormal08.htm>)

\* 1981-2010 Climatological normal, unless otherwise specified (<http://www.hko.gov.hk/wxinfo/climat/normal/enormal08.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 二零一九年八月香港氣象觀測摘錄(二)

### 4.1.2 Extract of Meteorological Observations in Hong Kong (Part 2), August 2019

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
八月 August	小時 hours	小時 hours	兆焦耳/米 <sup>2</sup> MJ/m <sup>2</sup>	毫米 mm	度 degrees	公里/小時 km/h
1	0	-	1.44	0.6	100	48.0
2	0	1.6	10.20	1.1	080	35.1
3	0	-	7.47	1.4	060	27.8
4	0	1.7	12.65	2.6	050	20.8
5	0	11.5	26.59	5.4	030	12.8
6	0	2.7	10.46	3.0	030	12.5
7	0	8.2	21.86	4.4	050	15.3
8	2	10.9	24.44	5.5	230	17.0
9	0	11.0	22.86	5.2	240	26.6
10	0	4.8	16.79	4.1	240	40.3
11	0	7.8	20.74	4.7	230	40.4
12	0	8.5	23.78	5.1	240	33.9
13	0	10.8	25.99	5.9	230	34.1
14	0	7.7	22.26	4.9	230	29.3
15	0	8.6	23.02	5.0	240	31.2
16	0	3.8	13.55	4.2	230	28.8
17	0	3.2	9.14	1.2	230	19.0
18	0	4.9	12.55	2.0	230	19.1
19	0	4.0	13.52	2.5	280	6.4
20	0	7.5	18.97	4.4	090	17.4
21	0	9.7	23.65	5.5	060	14.8
22	0	9.4	20.04	3.9	080	5.9
23	0	3.8	13.56	1.9	080	4.9
24	7	10.0	21.10	4.3	260	21.2
25	0	-	2.46	3.5	260	27.1
26	0	1.4	8.55	1.6	050	16.7
27	0	4.3	15.48	3.1	120	16.0
28	1	10.2	20.10	5.2	070	17.7
29	0	4.7	15.28	2.6	070	34.7
30	0	3.6	11.94	2.1	090	14.8
31	0	2.3	12.39	2.6	070	25.5
平均/總值 Mean/Total	10	178.6	16.22	109.5	240	23.1
正常* Normal*	46.0 §	188.9	15.63	134.9	230	19.4
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^	

橫瀾島於八月一日 7 時 17 分錄得本月最高陣風 112 公里/小時，風向 110 度。

The maximum gust peak speed recorded at Waglan Island was 112 kilometres per hour from 110 degrees at 0717 HKT on 1 August.

# 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/cnormal08.htm>)

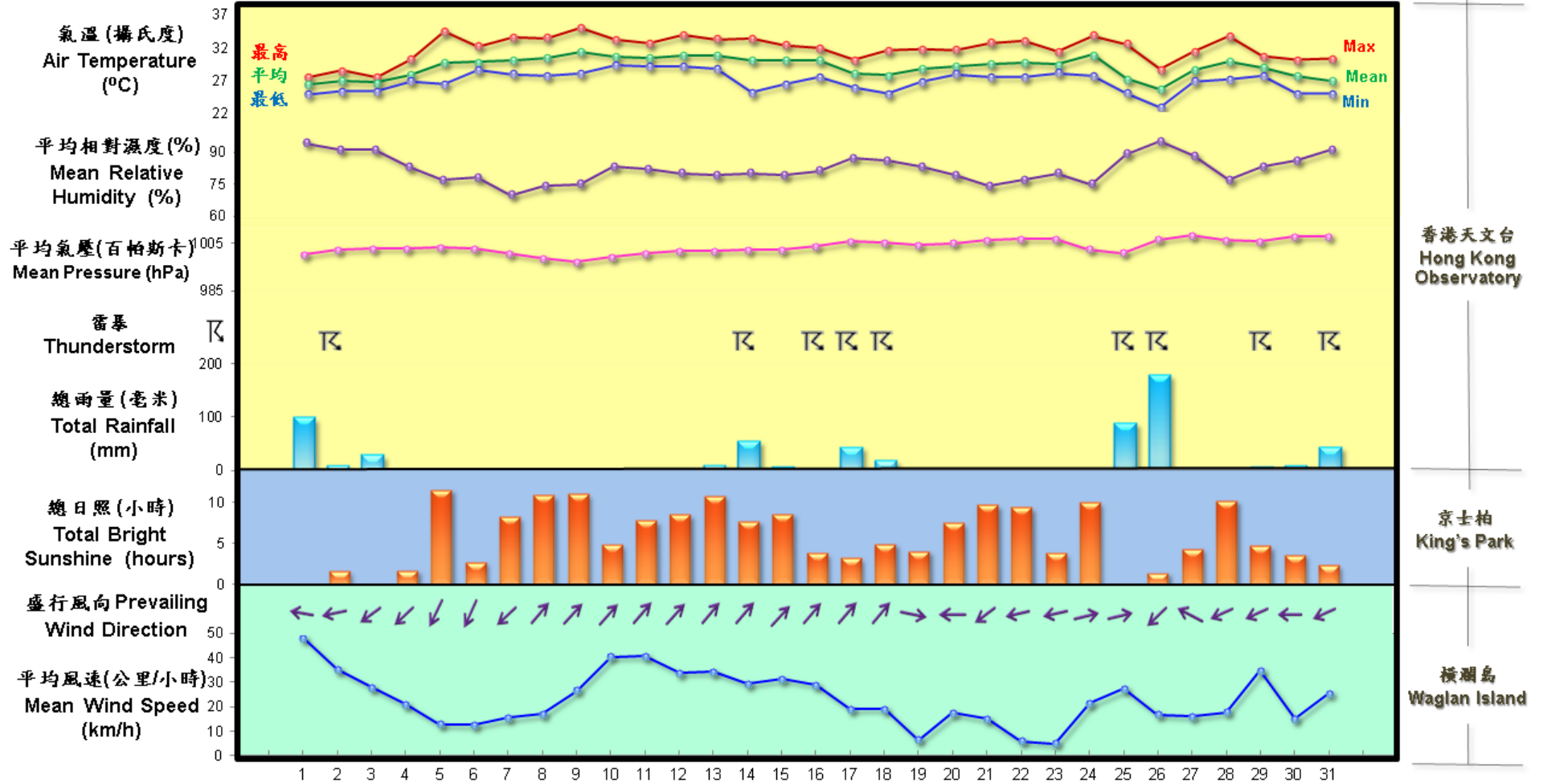
\* 1981-2010 Climatological normal, unless otherwise specified (<http://www.hko.gov.hk/wxinfo/climat/normal/enormal08.htm>)

§ 1997-2018 平均值

§ 1997-2018 Mean value

## 4.2 2019年8月部分香港氣象要素的每日記錄

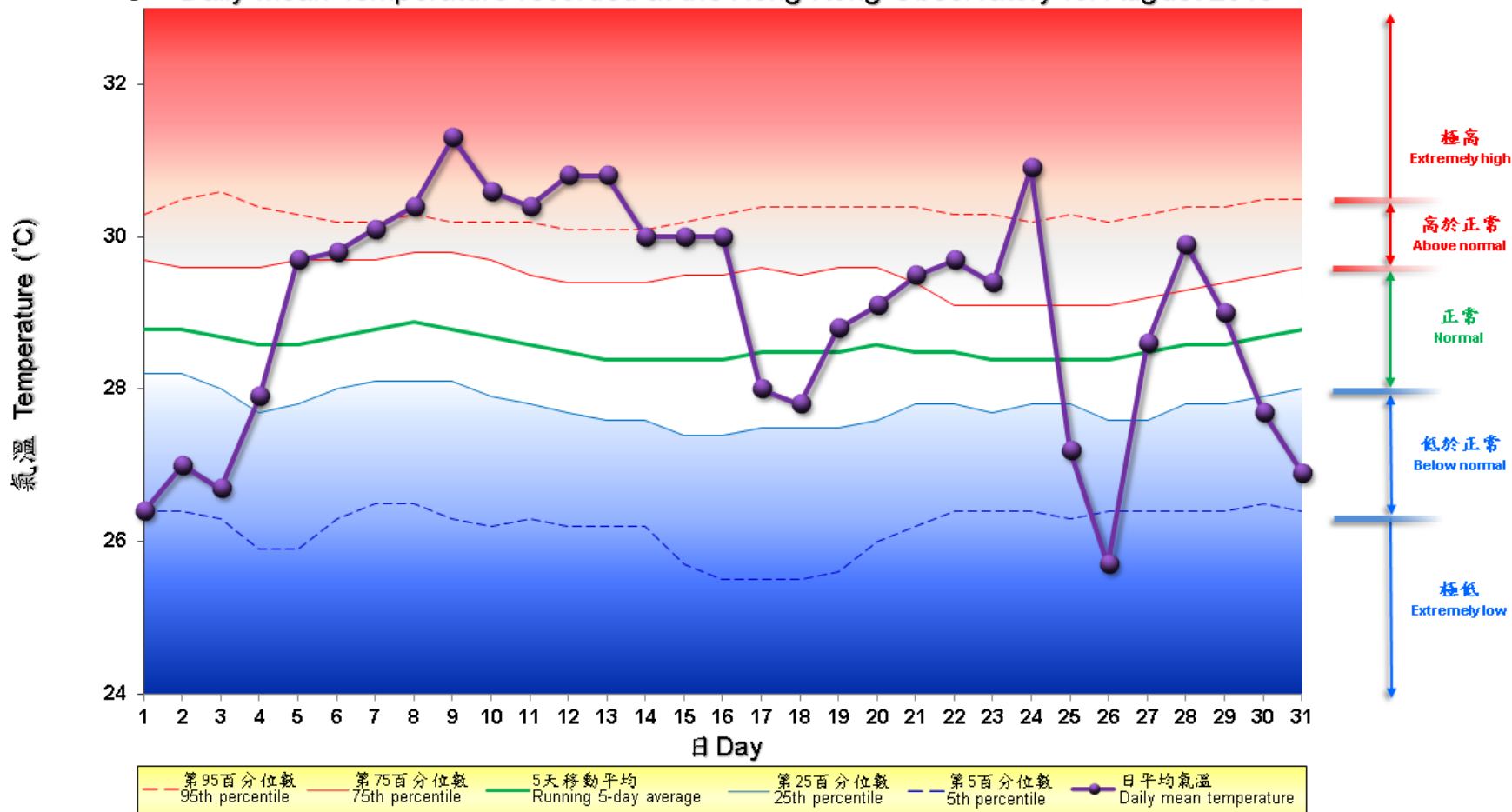
### 4.2 Daily Values of Selected Meteorological Elements for Hong Kong, August 2019





### 4.3 2019年8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 August 2019



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