

每月天氣摘要 二零二三年九月

Monthly Weather Summary September 2023

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二零二三年十月出版

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香港九龍彌敦道134A

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1. 二零二三年九月天氣回顧

二零二三年九月香港屢受極端天氣影響，當中包括九月一日至二日超強颱風蘇拉猛烈襲港及九月七日至八日的驚人暴雨。蘇拉中心附近的最高持續風速達每小時 **230** 公里，是自一九五零年以來影響南海第二強的熱帶氣旋。香港在蘇拉吹襲期間發出十號颶風信號，是繼二零一八年九月超強颱風山竹襲港後的首次。與熱帶氣旋海葵殘餘相關的低壓槽於九月七日至八日為香港帶來長時間的滂沱大雨，天文台發出黑色暴雨警告信號持續生效達 **16 小時 35 分鐘**，是自一九九二年設立暴雨警告系統以來的最長紀錄。主要歸因於上半月與蘇拉及低壓槽相關的大雨，天文台錄得的九月總雨量創歷史新高，達 **1067.1** 毫米，是九月份正常值 **321.4** 毫米的三倍以上，輕易打破了一九五二年九月創下 **844.2** 毫米的紀錄。此外，九月的破紀錄雨量彌補了本年首八個月雨量偏少的情況。本年首九個月的累積雨量為 **2224.3** 毫米，略少於同期正常值的 **2242.8** 毫米。雖然上半月出現了暴風雨天氣，下半月卻長時間陽光充沛及酷熱，其中包括九月二十一日至三十日連續 **10** 日的酷熱天氣，並創下最長九月份連續酷熱天氣日數紀錄。總括而言，本月仍較正常熱，平均氣溫為 **28.5** 度，較正常值 **27.9** 度高 **0.6** 度。

超強颱風蘇拉於九月一日大致向西移動，橫過廣東沿岸海域，並於當晚在香港東南偏南 **40** 公里內掠過。翌日蘇拉繼續橫過廣東西部沿岸，並逐步由超強颱風減弱至熱帶低氣壓。蘇拉在九月三日早上進入北部灣，並於當日稍後減弱為低壓區。

蘇拉的暴風至颶風於九月一日至二日影響本港多處地區。橫瀾島及長洲分別錄得最高 **60** 分鐘平均風速為每小時 **154** 公里及 **116** 公里。蘇拉引發的風暴潮亦導致本港部分沿岸低窪地區出現水浸，包括沙田、大埔及大澳。西貢的水位於九月一日午夜曾升至海圖基準面以上約 **4.5** 米。蘇拉於九月一日至二日為本港帶來狂風大驟雨。本港大部分地區在這兩日錄得超過 **150** 毫米雨量，而中西區、灣仔區及荃灣區的雨量更超過 **250** 毫米。根據初步資料，全港有超過 **3,000** 宗塌樹報告、**21** 宗水浸報告及 **7** 宗山泥傾瀉報告，亦有約 **40** 宗棚架、招牌及窗戶受損報告，而部分地方一度停電。香港國際機場有 **460** 班航班取消。超過 **80** 人在蘇拉襲港期間受傷，但沒有人死亡。隨著蘇拉遠離本港及逐步減弱，本地風力於九月二日稍後緩和。

在北太平洋西部，熱帶氣旋海葵於九月三日移向台灣。海葵於兩日後登陸廣東東部並在內陸減弱為低壓區。受海葵的外圍下沉氣流影響，除局部地區有驟雨及狂風雷暴外，九月三日至四日本港普遍天晴及酷熱。受海葵殘餘影響，九月五日至六日本港大致多雲及有幾陣驟雨。

受在廣東沿岸與海葵殘餘相關的低壓槽影響，本港天氣於九月七日晚上開始轉壞，有大雨及狂風雷暴。持續不斷的傾盆大雨一直影響本港至翌日。在滂沱大雨期間，香港天文台總部於九月七日晚上十一時至午夜十二時期間錄得 **158.1** 毫米雨量，是自一八八四年有記錄以來最高的一小時雨量。天文台總部亦在這場驚人暴雨期間錄得兩小時雨量 **201.0** 毫米及十二小時雨量 **605.8** 毫米，均打破其各自的紀錄。而九月七日下午四時至翌日下午四時的二十四小時雨量達 **638.5** 毫米，約為本港全年平均總雨量的四分之一，僅次於一八八九年五月三十日歷史雨災的紀錄。九月七日至八日本港多處錄得超過 **400** 毫米雨量，而港島東區及南區的

雨量更超過 800 毫米。本港多處出現水浸及山泥傾瀉，造成大規模交通受阻及設施損壞。根據初步資料，全港有超過 200 宗山泥傾瀉報告及 60 宗水浸報告，而部分地方一度停電停水。暴雨期間至少有兩人死亡，超過 140 人受傷。

由於低壓槽在廣東沿岸地區徘徊，九月九日至十六日本港天氣持續不穩定，間中有大驟雨及雷暴。部分地區的雨勢特別大。本港大部分地區在這八日錄得超過 100 毫米雨量，而西貢區、沙田區及大埔區的雨量更超過 400 毫米。在有雨的情況下，天文台氣溫於九月十日下降至全月最低的 24.8 度。隨著低壓槽減弱，九月十七日驟雨減少，日間部分時間有陽光。

受高空反氣旋影響，除局部地區有驟雨外，九月十八日至月底本港普遍天晴及酷熱。在微風的情況下，天文台氣溫於九月二十二日上升至全月最高的 34.4 度。此外，九月二十九日天文台錄得最高氣溫 33.7 度，是有記錄以來最熱的中秋節。高溫觸發的雷雨亦在九月三十日下午影響新界北部。

二零二三年九月有六個熱帶氣旋影響南海及北太平洋西部。

本月有一班航機因惡劣天氣須轉飛其他地方。表 1.1 載列本月發出及取消各種警告/信號的詳情。



1. The Weather of September 2023

In terms of extreme weather, September 2023 was an eventful month in Hong Kong with the ferocious strike by Super Typhoon Saola on 1 – 2 September and the phenomenal rainstorm on 7 – 8 September. With a maximum sustained wind of 230 km/h near its centre, Saola was the second most intense tropical cyclone affecting the South China Sea since 1950 and Hurricane Signal No. 10 was issued in Hong Kong during the passage of Saola, the first time since Super Typhoon Mangkhut hit Hong Kong in September 2018. A trough of low pressure associated with the remnant of tropical cyclone Haikui brought prolonged torrential rain to Hong Kong on 7 – 8 September and necessitated the issuance of the Black Rainstorm Warning for 16 hours and 35 minutes, setting the longest record since the introduction of the rainstorm warning system in 1992. Mainly attributing to the heavy rain associated with Saola and troughs of low pressure in the first half of the month, the Observatory recorded an all-time high September rainfall of 1067.1 millimetres, more than three times of the September normal of 321.4 millimetres and easily breaking the previous record of 844.2 millimetres set way back in September 1952. Moreover, the rainfall deficit in the first eight months of this year was mostly compensated by the record-breaking rainfall in September. The accumulated rainfall this year up to September was 2224.3 millimetres, slightly less than the normal figure of 2242.8 millimetres for the same period. Despite the stormy weather in the first part of the month, there was a long spell of sunny and very hot weather with 10 consecutive very hot days from 21 to 30 September in the later part of the month. It also set the longest record of consecutive very hot days for September. Overall, the month remained hotter than usual with a

mean temperature of 28.5 degrees, 0.6 degrees above the normal of 27.9 degrees.

Super Typhoon Saola moved generally westwards across the coastal waters of Guangdong on 1 September and skirted past within 40 kilometres to the south-southeast of Hong Kong that night. It continued to move across the coast of western Guangdong and weakened from a super typhoon into a tropical depression progressively the next day. Saola entered Beibu Wan on the morning of 3 September and weakened into an area of low pressure later that day.

The storm to hurricane force winds of Saola impacted many places in Hong Kong on 1 – 2 September. The maximum 60-minute mean wind speeds recorded at Waglan Island and Cheung Chau were 154 km/h and 116 km/h respectively. The storm surge induced by Saola also resulted in flooding in some low-lying coastal areas of Hong Kong, including Sha Tin, Tai Po, and Tai O. The water level at Sai Kung rose to about 4.5 mCD at midnight on 1 September. Saola brought squally heavy showers to Hong Kong on 1 – 2 September. More than 150 millimetres of rainfall were recorded over most parts of the territory and rainfall even exceeded 250 millimetres over Central and Western, Wan Chai and Tsuen Wan Districts on these two days. According to preliminary reports, there were over 3,000 reports of fallen trees, 21 reports of flooding and 7 reports of landslides in Hong Kong. There were also about 40 reports of damaged scaffolding, signboards and windows. Power supply was temporarily interrupted in some places. 460 flights were cancelled at the Hong Kong International Airport. While more than 80 people were injured, there was no fatality in Hong Kong during the passage of Saola. As Saola departed from Hong Kong and weakened progressively, local winds moderated later on 2 September.

Over the western North Pacific, tropical cyclone Haikui headed towards Taiwan on 3 September. It made landfall over eastern Guangdong and weakened into an area of low pressure over inland two days later. Under the influence of the outer subsiding air of Haikui, apart from isolated showers and squally thunderstorms, it was generally fine and very hot during the day in Hong Kong on 3 – 4 September. Affected by the remnant of Haikui, it was mainly cloudy with a few showers on 5 – 6 September.

Under the influence of a trough of low pressure associated with the remnant of Haikui over the coast of Guangdong, the weather of Hong Kong started to deteriorate with heavy rain and squally thunderstorms on the night of 7 September. The incessant downpour continued to affect the territory till the next day. During the torrential rain, the Hong Kong Observatory Headquarters registered a record-breaking hourly rainfall of 158.1 millimetres from 11 p.m. to midnight on 7 September, the highest since records began in 1884. The 2-hour total rainfall of 201.0 millimetres and 12-hour total rainfall of 605.8 millimetres recorded at the Observatory Headquarters during this phenomenal rainstorm also broke their respective records. Moreover, the 24-hour rainfall from 4 p.m. on 7 September to 4 p.m. next day reached 638.5 millimetres, about a quarter of the normal annual total rainfall of Hong Kong and just next to the highest records kept by the historical rainstorm on 30 May 1889. More than 400 millimetres of rainfall were recorded over many parts of

the territory and rainfall even exceeded 800 millimetres over the Eastern District and Southern District of Hong Kong Island on 7 – 8 September. Flash floods and landslides affected many parts of the territory, causing widespread traffic disruption and damage to infrastructures. According to preliminary reports, there were over 200 reports of landslides and 60 reports of flooding. Power and water supply were temporarily interrupted in some places. At least two people were killed and more than 140 were injured during the rainstorm.

With a trough of low pressure lingering over the coastal areas of Guangdong, local weather remained unsettled with outbreaks of heavy showers and thunderstorms on 9 – 16 September. The showers were particularly heavy in some areas. More than 100 millimetres of rainfall were recorded over most parts of the territory and rainfall even exceeded 400 millimetres over parts of Sai Kung, Sha Tin and Tai Po Districts on these eight days. Under the rain, temperatures at the Observatory dropped to a minimum of 24.8 degrees on 10 September, the lowest of the month. With the weakening of the trough of low pressure, the showers eased off with sunny periods during the day on 17 September.

Under the influence of an anticyclone aloft, apart from isolated showers, it was generally fine and very hot from 18 September to the end of the month. Under light wind conditions, the maximum temperature at the Observatory soared to 34.4 degrees on 22 September, the highest of the month. Moreover, the maximum temperature at the Observatory reached 33.7 degrees on 29 September, making it the hottest Mid-Autumn Festival on record. Thundery showers triggered by high temperatures also affected the northern part of the New Territories on the afternoon of 30 September.

Six tropical cyclones occurred over the South China Sea and the western North Pacific in September 2023.

During the month, one 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 二零二三年九月發出的警告及信號

Table 1.1 Warnings and Signals issued in September 2023

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
蘇拉 SAOLA	3	31/8	1540	1/9	0240
	8NW	1/9	0240	1/9	1820
	9	1/9	1820	1/9	2015
	10	1/9	2015	2/9	0340
	8SE	2/9	0340	2/9	1620
	3	2/9	1620	2/9	2020
	1	2/9	2020	2/9	2340
海葵 HAIKUI	1	4/9	0440	5/9	2140

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	1/9	1945	2/9	0100
黃色 Amber	7/9	2125	7/9	2150
紅色 Red	7/9	2150	7/9	2305
黑色 Black	7/9	2305	8/9	1540
黃色 Amber	8/9	1540	8/9	1645
黃色 Amber	10/9	0625	10/9	0855
黃色 Amber	14/9	0355	14/9	0555
紅色 Red	14/9	0555	14/9	1030
黃色 Amber	14/9	1030	14/9	1145
黃色 Amber	15/9	1955	15/9	2040
紅色 Red	15/9	2040	15/9	2200
黃色 Amber	15/9	2200	15/9	2345

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	24/9	1250	24/9	2045
黃色 Yellow	29/9	1200	29/9	1830
黃色 Yellow	30/9	0600	30/9	1800

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
2/9	0550	2/9	1715
7/9	2345	11/9	2015

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
1/9	1810	1/9	2330
2/9	0850	2/9	1100
3/9	1903	3/9	1940
4/9	1534	4/9	1630
4/9	1937	4/9	2200
6/9	1817	6/9	2100
6/9	2129	6/9	2230
7/9	0218	7/9	0630
7/9	0833	7/9	1145
7/9	1430	8/9	1700
9/9	1350	9/9	1515
10/9	0515	10/9	0900

開始時間 Beginning Time		終結時間 Ending Time	
日/月 day/month	時 hour	日/月 day/month	時 hour
10/9	1225	10/9	1430
11/9	0755	11/9	1530
12/9	1328	12/9	1700
13/9	2355	14/9	1230
14/9	1735	15/9	0200
15/9	1345	16/9	0200
16/9	1245	16/9	1545
17/9	1238	17/9	1630
22/9	1323	22/9	1700
24/9	0520	24/9	1025
25/9	0613	25/9	0830
30/9	1320	30/9	1700

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
3/9	1315	3/9	1800
4/9	0645	4/9	1800
18/9	1516	18/9	1800
19/9	1250	19/9	1800
20/9	0645	20/9	1800
21/9	0645	21/9	1830

開始時間 Beginning Time		終結時間 Ending Time	
日/月 day/month	時 hour	日/月 day/month	時 hour
22/9	1115	22/9	1800
23/9	0645	23/9	1745
24/9	1400	24/9	1715
25/9	0930	27/9	1745
28/9	0945	28/9	1730
29/9	1000	5/10	1800

新界北水浸特別報告

Special Announcement on Flooding in the northern New Territories

開始時間 Beginning Time		終結時間 Ending Time	
日/月 day/month	時 hour	日/月 day/month	時 hour
1/9	2205	2/9	0430
7/9	1950	8/9	1540

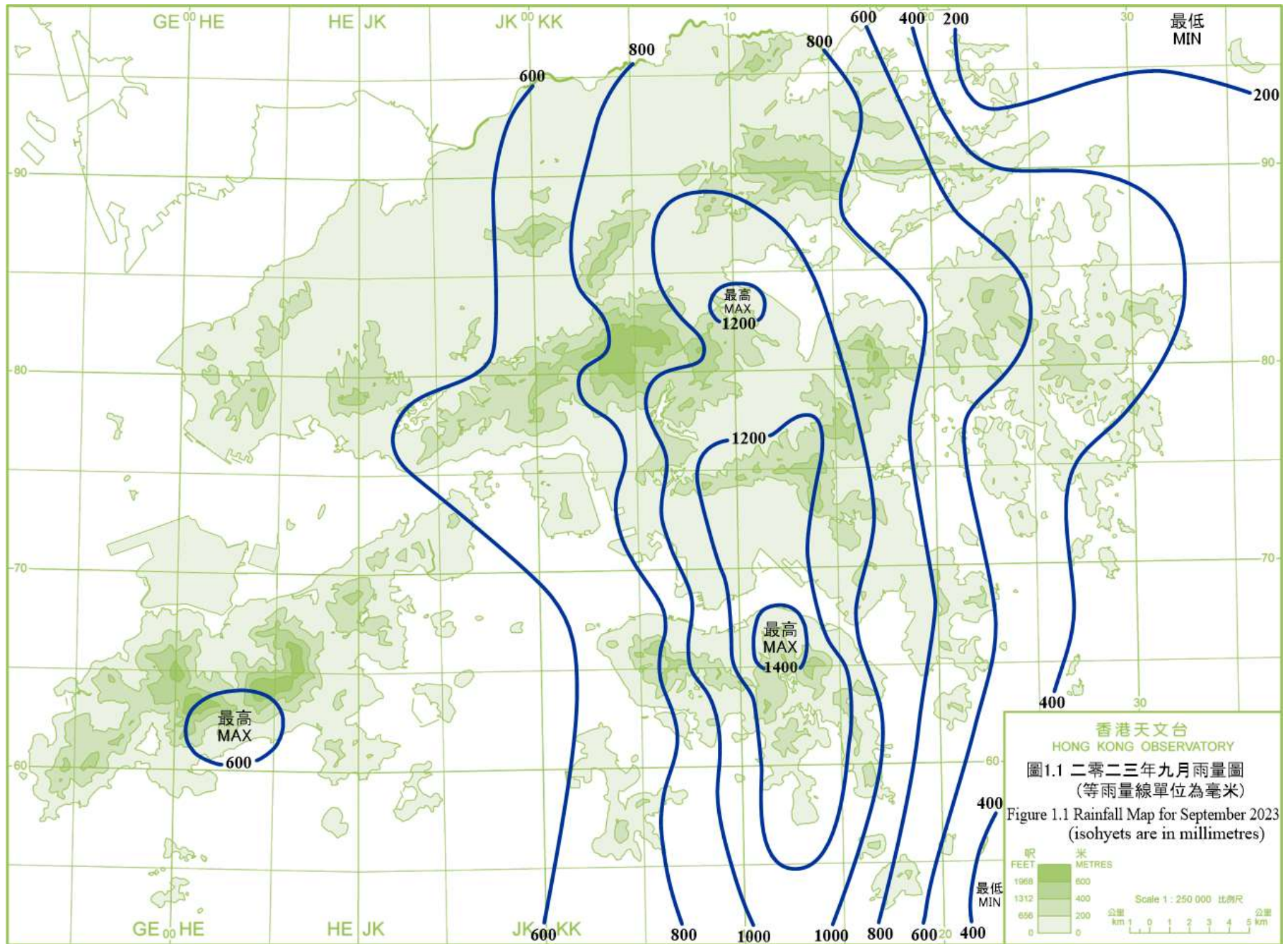




圖 1.2 蘇拉襲港期間本港多處有樹木倒塌(鳴謝相片來源：李子祥博士及 Dr. Martin Williams (左下相片))

Figure 1.2 The approach of Saola resulted in fallen trees in many parts of the territory (Courtesy of Dr. T. C. Lee and Dr. Martin Williams (bottom left))



圖 1.3 蘇拉引起的風暴潮導致城門河出現水浸 (鳴謝相片來源：Poon Chi Ming)
Figure 1.3 Flooding of Shing Mun River due to storm surge induced by Saola (Courtesy of Poon Chi Ming)

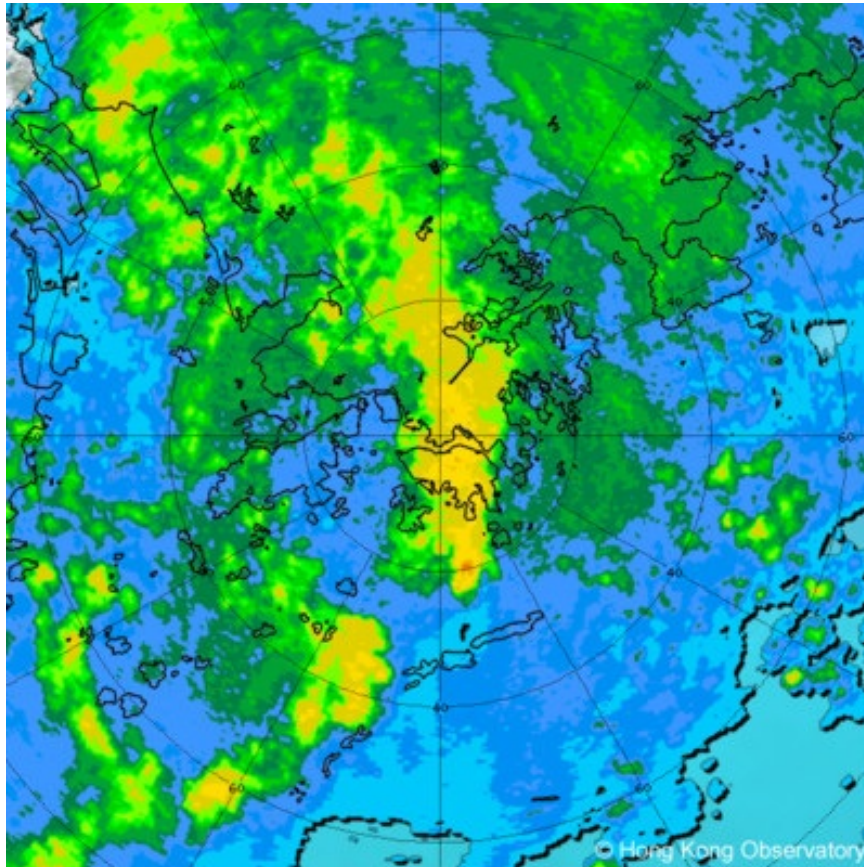


圖 1.4 2023 年 9 月 7 日晚上 11 時 36 分滂沱大雨影響香港期間的雷達影像
 Figure 1.4 Radar imagery at 23:36 on 7 September 2023 when torrential rain was affecting Hong Kong

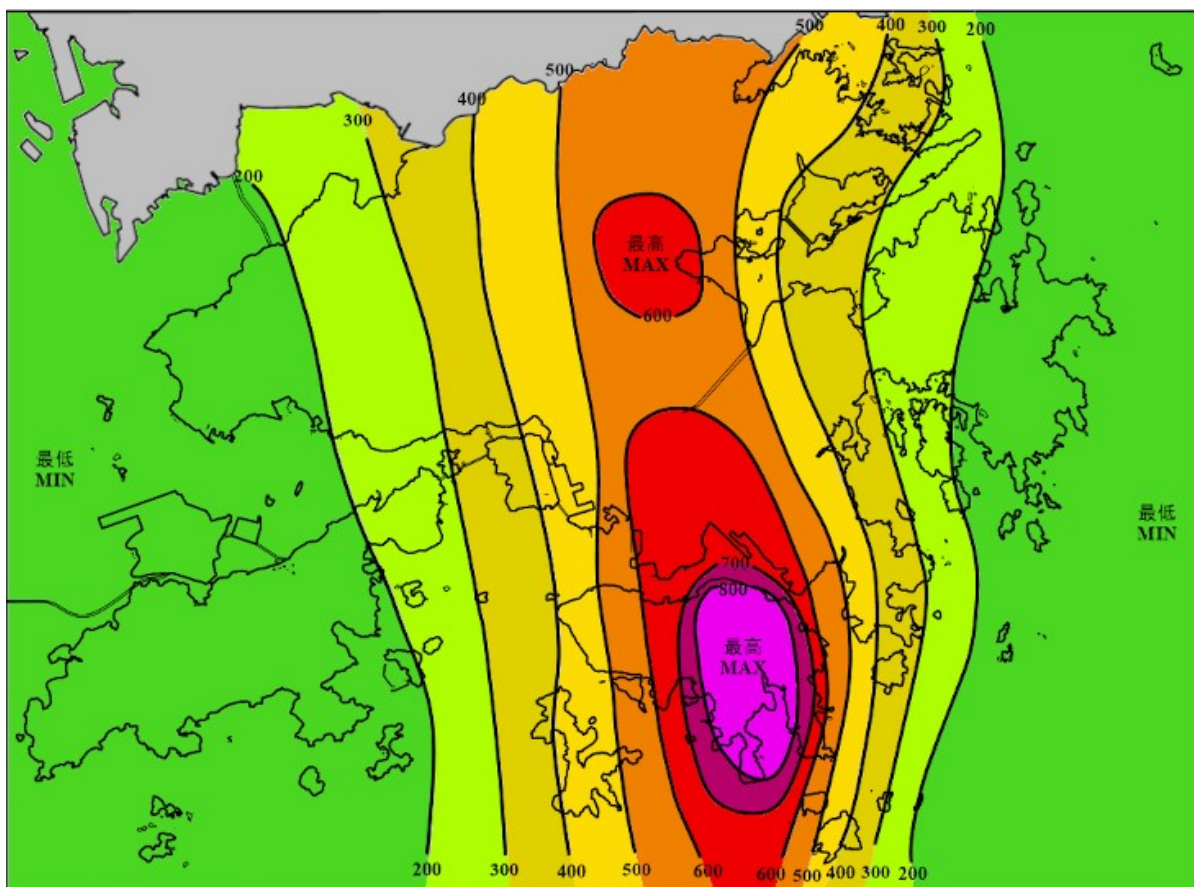


圖 1.5 二十四小時雨量分佈圖(2023 年 9 月 7 日下午 4 時至 2023 年 9 月 8 日下午 4 時)
 Figure 1.5 24-hour rainfall distribution map (16:00 on 7 September 2023 to 16:00 on 8 September 2023)



圖 1.6 2023 年 9 月 7 日至 8 日暴雨期間黃大仙出現嚴重水浸 (鳴謝相片來源：商台新聞)
Figure 1.6 Serious flooding in Wong Tai Sin during the rainstorm on 7 – 8 September 2023 (Courtesy of CRHK News)



圖 1.7 2023 年 9 月 7 日至 8 日暴雨期間筲箕灣出現山泥傾瀉 (鳴謝相片來源：商台新聞)
Figure 1.7 Landslide in Shau Kei Wan during the rainstorm on 7 – 8 September 2023 (Courtesy of CRHK News)

2.1 二零二三年九月的熱帶氣旋概述

二零二三年九月在北太平洋西部及南海區域出現了六個熱帶氣旋，當中蘇拉、海葵及小犬均引致天文台需要發出熱帶氣旋警告信號。

熱帶低氣壓蘇拉於八月二十三日晚上在高雄之東南約 670 公里的北太平洋西部上形成，初時移動緩慢，隨後五天蘇拉在呂宋以東海域以逆時針方向轉了一個圈，並迅速增強。八月二十六日晚上蘇拉增強為超強颱風。蘇拉於隨後三日曾兩度從超強颱風減弱為強颱風，但於八月二十九日傍晚再次增強為超強颱風，並採取西北偏西路徑，橫過呂宋海峽。蘇拉於八月三十日凌晨達到其最高強度，中心附近最高持續風速估計為每小時 230 公里，當日稍後蘇拉維持此強度進入南海，是天文台自一九五零年有記錄以來南海區域內第二強的熱帶氣旋，僅次於二零一四年的超強颱風威馬遜。蘇拉於翌日逐漸靠近廣東沿岸，並一直維持超強颱風強度。九月一日蘇拉轉向西移動，橫過廣東沿岸海域。九月二日蘇拉迅速減弱，並於下午在廣東陽江市附近登陸。隨後蘇拉繼續橫過廣東西部沿岸，逐步減弱為熱帶低氣壓。蘇拉在九月三日早上進入北部灣，最後於當晚減弱為低壓區。

根據報章報導，蘇拉為菲律賓北部帶來狂風暴雨，造成兩人死亡，三人受傷，兩人失蹤，超過 116 萬人受災，超過 7 800 間房屋受損，經濟損失超過 24 億菲律賓比索。受蘇拉的外圍雨帶影響，台灣有 60 宗水浸報告，約 200 人需要撤離，超過一萬戶停電；福建亦有約 45 萬人受災，約 17 萬人需要撤離，超過 140 間房屋受損，經濟損失超過 8.7 億元人民幣。珠海有超過 16 000 宗塌樹，約 70 輛汽車受損，經濟損失約 6 000 萬元人民幣。深圳有大樹被強風吹倒，擊中一輛駛經的車輛，造成一死兩傷。有關蘇拉的詳細資料及對香港的影響，請參閱其熱帶氣旋報告。

熱帶低氣壓海葵於八月二十七日晚上在硫黃島之東南偏南約 760 公里的北太平洋西部上形成，隨後六天向西或西北偏西移動，移向台灣南部，並逐漸增強。九月三日凌晨海葵增強為強颱風，並於當日中午前在台灣以東海域達到其最高強度，中心附近最高持續風速估計為每小時 175 公里。隨後海葵橫過台灣南部，並逐漸減弱。海葵在九月四日橫過台灣海峽期間

減弱為熱帶風暴。海葵於九月五日早上在福建省東山縣附近登陸，隨後移入廣東東部內陸，最後於當晚進一步減弱為低壓區。

根據報章報導，海葵吹襲台灣期間，造成至少 143 人受傷，超過兩萬戶停水及 27 萬戶停電，約 8 000 人需要撤離，經濟損失超過 4 300 萬美元。海葵在福建省亦造成超過 159 萬人受災，超過 2 500 間房屋受損，經濟損失超過 50 億元人民幣。此外，海葵在廣東東部內陸減弱為低壓區後，其殘餘持續緩慢西移肆虐沿岸地區，相關的大暴雨於九月五日至九月十一日期間影響廣東及廣西多地。深圳於九月七日晚上至八日早上期間錄得最大兩小時雨量 195.8 毫米、三小時雨量 246.8 毫米、六小時雨量 349.7 毫米及十二小時雨量 465.5 毫米，均打破了深圳自一九五二年有氣象記錄以來各自的紀錄。深圳多個地鐵站被水淹浸，部分路線停運。深圳機場部分航班延誤。深圳水庫在九月八日凌晨需要排洪。有關海葵的詳細資料及對香港的影響，請參閱其熱帶氣旋報告。

熱帶低氣壓鴻雁於八月三十日凌晨在關島以東約 1 110 公里的北太平洋西部上形成，向北移動並逐漸增強。翌日下午鴻雁轉向西北偏北移動及增強為強烈熱帶風暴，並達到其最高強度，中心附近最高持續風速估計為每小時 90 公里。隨後三日鴻雁向西北或西北偏西移動，移向日本以南海域，並逐漸減弱。最後鴻雁於九月四日下午在日本以南海域減弱為低壓區。

熱帶低氣壓鴛鴦於九月四日下午在沖繩島之東南偏南約 710 公里的北太平洋西部上形成，向東北或東北偏北移向日本本州，並逐漸增強。鴛鴦於翌日晚上增強為熱帶風暴，並於九月六日早上達到其最高強度，中心附近最高持續風速估計為每小時 75 公里。鴛鴦於九月八日逐漸減弱，最後於翌日凌晨在日本本州一帶演變為溫帶氣旋。

根據報章報導，鴛鴦在吹襲日本期間，造成 3 人死亡，21 人受傷，超過 2 600 間房屋受損，超過 170 戶停水及兩萬戶停電。

一個熱帶低氣壓於九月二十五日凌晨在峴港之東南偏東約 320 公里的南海中部上形成，中心附近最高持續風速估計為每小時 45 公里。當日

該熱帶低氣壓向西北或西北偏西移動，最後於翌日早上在越南中部減弱為低壓區。

熱帶低氣壓小犬於九月二十八日晚上在馬尼拉以東約 1 920 公里的北太平洋西部上形成，隨後向偏西移動，並逐漸增強。九月三十日下午小犬轉向西北移動，橫過菲律賓以東海域。



2.1 Overview of Tropical Cyclone in September 2023

Six tropical cyclones occurred over the western North Pacific and the South China Sea in September 2023. Among them, Saola, Haikui and Koinu necessitated the issuance of the tropical cyclone warning signals by the Observatory.

Saola formed as a tropical depression over the western North Pacific about 670 km southeast of Gaoxiong on the night of 23 August and moved slowly at first. It then made an anti-clockwise loop over the seas east of Luzon and intensified rapidly in the following five days. Saola intensified into a super typhoon on the night of 26 August. Saola weakened from super typhoon into a severe typhoon twice in the following three days, but intensified into a super typhoon again on the evening of 29 August and tracked west-northwestwards across Luzon Strait. Saola attained its peak intensity with an estimated maximum sustained wind of 230 km/h near its centre in the small hours of 30 August. Saola maintained this intensity and entered the South China Sea later that day, making it the second strongest tropical cyclone in the South China Sea since the Observatory's records began in 1950, just after Super Typhoon Rammasun in 2014. It edged closer to the coast of Guangdong gradually while maintaining super typhoon intensity on the next day. Saola turned to move westwards across the coastal waters of Guangdong on 1 September. It weakened rapidly on 2 September and made landfall near Yangjiang of Guangdong in the afternoon. Saola continued to move across the coast of western Guangdong afterwards and weakened into a tropical depression progressively. Saola entered Beibu Wan on the morning of 3 September and finally weakened into an area of low pressure that night.

According to press reports, Saola brought torrential rain and squalls to the northern part of the Philippines, causing 2 deaths, 3 injures and 2 missing. More than 1.16 million people were affected, more than 7 800 houses were damaged and economic loss exceeded PHP 2.4 billion. Under the influence of the outer rainbands of Saola, there were 60 reports of flooding in Taiwan.

Around 200 people were displaced and electricity supply to more than 10 000 households was disrupted; whereas in Fujian, about 450 000 people were affected, 170 000 people were displaced, more than 140 houses were damaged and economic loss exceeded RMB 870 million. There were over 16 000 reports of fallen trees in Zhuhai. About 70 vehicles were damaged and economic loss was around RMB 60 million. In Shenzhen, a large tree fell under strong winds and hit a passing vehicle, killing one person and injuring two people. For detailed information of Saola including its impact to Hong Kong, please refer to the Tropical Cyclone Report of Saola.

Haikui formed as a tropical depression over the western North Pacific about 760 km south-southeast of Iwo Jima on the night of 27 August. It moved westwards or west-northwestwards towards the southern part of Taiwan and intensified gradually in the following six days. Haikui intensified into a severe typhoon in the small hours on 3 September and attained its peak intensity over the seas east of Taiwan, with an estimated maximum sustained wind of 175 km/h near its centre before noon on that day. It then moved across the southern part of Taiwan and weakened gradually. Haikui weakened into a tropical storm when it moved across the Taiwan Strait on 4 September. Haikui made landfall near Dongshan in Fujian on the morning of 5 September. It then moved into inland eastern Guangdong and finally degenerated into an area of low pressure that night.

According to press reports, at least 143 people were injured when Haikui affected Taiwan. Water and electricity supply to more than 20 000 and 270 000 households were disrupted respectively. Around 8 000 people were displaced. Economic loss exceeded USD 43 million. In Fujian province, more than 1.59 million people were affected, more than 2 500 houses were damaged and economic loss exceeded RMB 5 billion. Besides, after Haikui has weakened into an area of low pressure over inland eastern Guangdong, its remnant continued to move westwards slowly and wreaked havoc the coastal areas with torrential rain affecting many places in Guangdong and Guangxi provinces during 5 – 11 September. In Shenzhen, from the night of 7 September to the morning of 8 September, maximum 2-hour rainfall of 195.8 millimetres, 3-hour rainfall of 246.8 millimetres, 6-hour rainfall of 349.7 millimetres and 12-hour rainfall of 465.5 millimetres were recorded, all breaking their respective records since Shenzhen's meteorological records began in 1952. Many metro stations were flooded and some of the lines were suspended in Shenzhen. Some flights at Shenzhen Airport were delayed. Water was discharged from Shenzhen Reservoir in the small hours on 8 September. For detailed information of Haikui including its impact to Hong Kong, please refer to the Tropical Cyclone Report of Haikui.

Kirogi formed as a tropical depression over the western North Pacific about 1 110 km east of Guam in the small hours on 30 August. It moved northwards and intensified gradually. Kirogi turned to move north-northwestwards, intensified into a severe tropical storm and attained its peak intensity with an estimated maximum sustained wind of 90 km/h near its centre the next afternoon. It tracked northwestwards or west-northwestwards towards the seas south of Japan and weakened gradually in the following three days. Kirogi finally degenerated into an area of low pressure over the seas south of Japan on the afternoon of 4 September.

Yun-yeung formed as a tropical depression over the western North Pacific about 710 km south-southeast of Okinawa on the afternoon of 4 September. It moved northeastwards or north-northeastwards towards Honshu, Japan and intensified gradually. Yun-yeung intensified into a tropical storm the next night and attained its peak intensity with an estimated maximum sustained wind of 75 km/h near its centre on the morning of 6 September. It weakened gradually on 8 September and finally evolved into an extratropical cyclone in the vicinity of Honshu, Japan in the small hours of the next day.

According to press reports, Yun-yeung left 3 deaths and 21 injures in Japan during its passage. More than 2 600 houses were damaged. Water and electricity supply to more than 170 and 20 000 households were disrupted respectively.

A tropical depression formed over the central part of the South China Sea about 320 km east-southeast of Da Nang in the small hours on 25 September, with an estimated maximum sustained wind of 45 km/h near its centre. It moved northwestwards or west-northwestwards that day and finally degenerated into an area of low pressure over the central part of Vietnam the next morning.

Koinu formed as a tropical depression over the western North Pacific about 1 920 km east of Manila on the night of 28 September. It then moved westwards and intensified gradually. Koinu turned to move northwestwards across the seas east of the Philippines on the afternoon of 30 September.

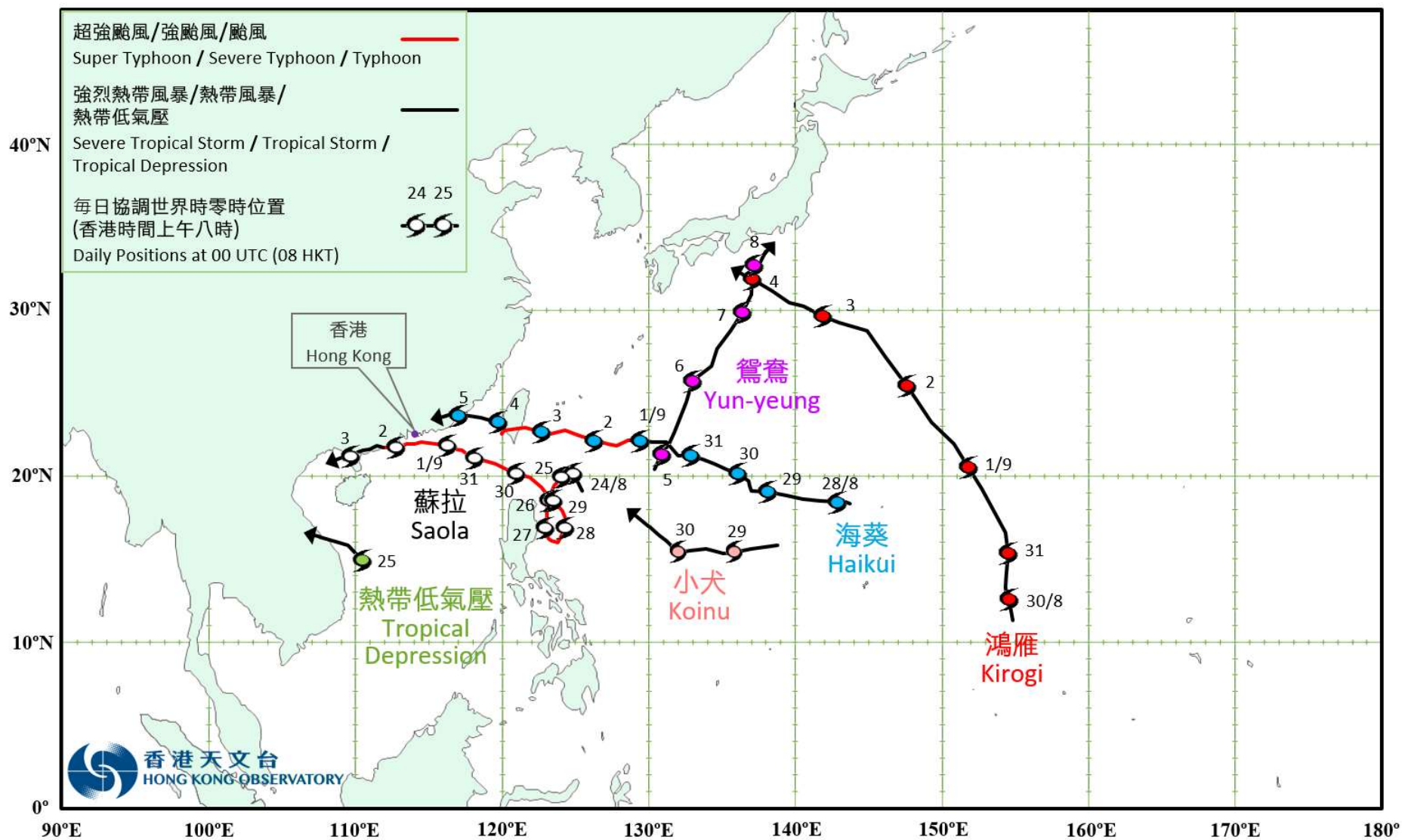


圖 2.1.1 二零二三年九月的熱帶氣旋暫定路徑圖

Figure. 2.1.1 Provisional Tropical Cyclone Tracks in September 2023

2.2 超強颱風蘇拉(2309)

二零二三年八月二十三日至九月三日

蘇拉是二零二三年第三個影響香港的熱帶氣旋。繼二零一八年超強颱風山竹襲港後，天文台在蘇拉襲港期間再次需要發出十號颶風信號。在八號或以上信號生效期間，蘇拉的中心附近最高持續風力為每小時 210 公里，打破了一九七九年超強颱風荷貝每小時 205 公里的紀錄，創下自一九四六年有記錄以來天文台在發出八號或以上信號期間的最高熱帶氣旋強度。

熱帶低氣壓蘇拉於八月二十三日晚上在高雄之東南約 670 公里的北太平洋西部上形成，初時移動緩慢，隨後五天蘇拉在呂宋以東海域以逆時針方向轉了一個圈，並迅速增強。八月二十六日晚上蘇拉增強為超強颱風。蘇拉於隨後三日曾兩度從超強颱風減弱為強颱風，但於八月二十九日傍晚再次增強為超強颱風，並採取西北偏西路徑，橫過呂宋海峽。蘇拉於八月三十日凌晨達到其最高強度，中心附近最高持續風速估計為每小時 230 公里，當日稍後蘇拉維持此強度進入南海，是天文台自一九五零年有記錄以來南海區域內第二強的熱帶氣旋，僅次於二零一四年的超強颱風威馬遜。蘇拉於翌日逐漸靠近廣東沿岸，並一直維持超強颱風強度。九月一日蘇拉轉向西移動，橫過廣東沿岸海域。九月二日蘇拉迅速減弱，並於下午在廣東陽江市附近登陸。隨後蘇拉繼續橫過廣東西部沿岸，逐步減弱為熱帶低氣壓。蘇拉在九月三日早上進入北部灣，最後於當晚減弱為低壓區。

根據報章報導，蘇拉為菲律賓北部帶來狂風暴雨，造成兩人死亡，三人受傷，兩人失蹤，超過 116 萬人受災，超過 7 800 間房屋受損，經濟損失超過 24 億菲律賓比索。受蘇拉的外圍雨帶影響，台灣有 60 宗水浸報告，約 200 人需要撤離，超過一萬戶停電；福建亦有約 45 萬人受災，約 17 萬人需要撤離，超過 140 間房屋受損，經濟損失超過 8.7 億元人民幣。珠海有超過 16 000 宗塌樹，約 70 輛汽車受損，經濟損失約 6 000 萬元人民幣。深圳有大樹被強風吹倒，擊中一輛駛經的車輛，造成一死兩傷。

天文台在八月三十日下午 5 時 40 分發出一號戒備信號，當時蘇拉集結在香港之東南偏東約 630 公里。當晚及翌日早上本港吹和緩至清勁偏北風。隨著蘇拉靠近廣東沿岸，天文台在八月三十一日下午 3 時 40 分發出三號強風信號，當時蘇拉位於香港之東南偏東約 380 公里。晚間本港風勢有所增強，高地吹達強風程度偏北風。

由於預料蘇拉在九月一日稍後會以強颱風至超強颱風強度相當接近珠江口一帶，對本港構成威脅，天文台在九月一日上午 2 時 40 分發出八號西北烈風或暴風信號，當時蘇拉集結在香港東南偏東約 280 公里。由於蘇拉環流緊密，日間稍後本港風力迅速增強，多處地方吹烈風程度的北至西北風，離岸及高地吹暴風。蘇拉繼續以超強颱風強度逼近香港，天文台在九月一日下午 6 時 20 分發出九號烈風或暴風風力增強信號，當時蘇拉已移至

天文台總部之東南偏東約 80 公里。傍晚本港風力顯著增強，普遍吹烈風至暴風程度的東至東北風，高地風力更達颶風程度。有見蘇拉眼壁及其相關具破壞力的颶風將會直接吹襲香港，天文台在下午 8 時 15 分發出十號颶風信號，當時蘇拉位於天文台總部之東南約 50 公里。晚上本港多處吹暴風，南部地區及高地則持續受颶風吹襲。蘇拉於當晚 9 時左右最接近香港，在天文台總部之東南偏南約 40 公里掠過。

隨著蘇拉在香港以南掠過，本港逐漸轉吹東至東南風。其後蘇拉減弱並逐漸遠離香港。當香港不再受颶風威脅，天文台在九月二日上午 3 時 40 分改發八號東南烈風或暴風信號。日間本港風力繼續減弱，天文台在九月二日下午 4 時 20 分改發三號強風信號，並於下午 8 時 20 分改發一號戒備信號。隨著蘇拉進一步遠離本港，天文台在當晚 11 時 40 分取消所有熱帶氣旋警告信號。

政府飛行服務隊曾於九月一日早上派出定翼機到蘇拉中心附近進行觀測。從機上拍攝到的相片顯示蘇拉發展成熟，風眼清晰，眼壁完整。當時的雷達圖像亦顯示蘇拉呈現雙眼壁結構。隨著蘇拉於當日稍後逼近本港，蘇拉的內眼壁因眼壁置換而逐漸縮小。雷達圖像(圖 2.2.6c)顯示蘇拉於九月一日晚上在本港以南掠過時，其環流相當緊密，最大風力只集中在距離中心約 10 至 15 公里的位置。

蘇拉的暴風至颶風於九月一日至二日影響本港多處地區。橫瀾島、昂坪及長洲泳灘錄得的最高每小時平均風速分別為每小時 153、133 及 130 公里，而最高陣風則分別為每小時 183、189 及 176 公里。蘇拉影響香港期間，本港整體的風力與二零一七年的天鴿相若，但較二零一八年的山竹弱(見表 2.2.2)。

蘇拉引發的風暴潮導致本港部分沿岸低窪地區出現水浸，包括沙田、大埔及大澳。尖鼻咀錄得最高潮位 3.41 米(海圖基準面以上)，而大埔滘則錄得最大風暴潮(天文潮高度以上) 1.48 米。而在西貢的水位感應儀於九月一日午夜曾錄得海圖基準面以上約 4.5 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	986.7	1/9	下午 9 時 45 分
香港國際機場	988.4	1/9	下午 10 時 58 分
長洲*	982.8	1/9	下午 10 時 24 分
京士柏	986.9	1/9	下午 9 時 24 分
流浮山	989.9	1/9	下午 8 時 41 分
坪洲	986.3	1/9	下午 9 時 53 分

沙田	988.9	1/9	下午 8 時 27 分
上水	991.5	1/9	下午 7 時 36 分
打鼓嶺	991.2	1/9	下午 8 時 30 分
大埔	991.5	1/9	下午 7 時 49 分
橫瀾島	979.1	1/9	下午 8 時 48 分

八月三十日及三十一日本港部分時間有陽光，日間炎熱及乾燥。在蘇拉環流的影響下，九月一日稍後本港天氣急速轉壞及有狂風大驟雨。九月一至二日本港大部分地區錄得超過 150 毫米雨量，而中西區、灣仔區及荃灣區的雨量更超過 250 毫米。

蘇拉吹襲香港期間，至少有 86 人受傷，另有超過 3 000 宗塌樹報告、21 宗水浸報告及七宗山泥傾瀉報告。全港亦有約 40 宗棚架、招牌及窗戶受損報告，部分地方的電力供應亦受影響。香港國際機場有 460 班航班取消。

風暴期間，全港多處路段因塌樹、高空墮物、棚架倒塌或水浸等需要封閉。旺角砵蘭街有棚架塌下，阻礙兩條行車線。李鄭屋邨有大廈天台的十多塊太陽能板被強風吹跌至對開的道路。將軍澳創新園有大樓玻璃窗在強風下鬆脫掉落街上。沙田城門河畔的單車徑及行人隧道出現水浸。鑽石山有大樹塌下，壓彎燈柱及擊中一輛的士。油麻地有酒店幕牆的玻璃從高處墮下，擊中對開的三輛車輛。鴨脷洲有棚架塌下，擊中路邊一輛的士及一輛輕型貨車。堅尼地城有大廈天台的組合屋被強風吹倒，擊中一輛客貨車。

*基於不完整的數據

◆

2.2 Super Typhoon Saola (2309) **23 August – 3 September 2023**

Saola was the third tropical cyclone affecting Hong Kong in 2023. Saola necessitated the issuance of the Hurricane Signal No. 10 again since Super Typhoon Mangkhut hitting Hong Kong in 2018. During the period of tropical cyclone warning signal No. 8 or above was in force, the maximum sustained wind near the centre of Saola was 210 km/h, breaking the previous record of 205 km/h set by Super Typhoon Hope in 1979 and setting the highest record since records began in 1946.

Saola formed as a tropical depression over the western North Pacific about 670 km southeast of Gaoxiong on the night of 23 August and moved slowly

at first. It then made an anti-clockwise loop over the seas east of Luzon and intensified rapidly in the following five days. Saola intensified into a super typhoon on the night of 26 August. Saola weakened from super typhoon into a severe typhoon twice in the following three days, but intensified into a super typhoon again on the evening of 29 August and tracked west-northwestwards across Luzon Strait. Saola attained its peak intensity with an estimated maximum sustained wind of 230 km/h near its centre in the small hours of 30 August. Saola maintained this intensity and entered the South China Sea later that day, making it the second strongest tropical cyclone in the South China Sea since the Observatory's records began in 1950, just after Super Typhoon Rammasun in 2014. It edged closer to the coast of Guangdong gradually while maintaining super typhoon intensity on the next day. Saola turned to move westwards across the coastal waters of Guangdong on 1 September. It weakened rapidly on 2 September and made landfall near Yangjiang of Guangdong in the afternoon. Saola continued to move across the coast of western Guangdong afterwards and weakened into a tropical depression progressively. Saola entered Beibu Wan on the morning of 3 September and finally weakened into an area of low pressure that night.

According to press reports, Saola brought torrential rain and squalls to the northern part of the Philippines, causing 2 deaths, 3 injuries and 2 missing. More than 1.16 million people were affected, more than 7 800 houses were damaged and economic loss exceeded PHP 2.4 billion. Under the influence of the outer rainbands of Saola, there were 60 reports of flooding in Taiwan. Around 200 people were displaced and electricity supply to more than 10 000 households was disrupted; whereas in Fujian, about 450 000 people were affected, 170 000 people were displaced, more than 140 houses were damaged and economic loss exceeded RMB 870 million. There were over 16 000 reports of fallen trees in Zhuhai. About 70 vehicles were damaged and economic loss was around RMB 60 million. In Shenzhen, a large tree fell under strong winds and hit a passing vehicle, killing one person and injuring two people.

The Standby Signal No. 1 was issued at 5:40 p.m. on 30 August, when Saola was about 630 km east-southeast of Hong Kong. Local winds were moderate to fresh northerlies that night and next morning. With Saola edging closer to the coast of Guangdong, the No. 3 Strong Wind Signal was issued at 3:40 p.m. on 31 August, when Saola was about 380 km east-southeast of Hong Kong. Winds over Hong Kong strengthened overnight, with strong northerlies on high ground.

Since Saola was expected to come rather close to the Pearl River Estuary with severe typhoon to super typhoon intensity and posed threat to the territory later on 1 September, the No. 8 Northwest Gale or Storm Signal was issued at 2:40 a.m. on 1 September when Saola was about 280 km east-southeast of Hong Kong. As the circulation of Saola was compact, local winds strengthened rapidly later during the day, with gale force north to northwesterlies over many places and reaching storm force offshore and on high ground. Saola continued to approach Hong Kong with super typhoon intensity. The Increasing Gale or Storm Signal No. 9 was issued at 6:20 p.m. on 1 September when Saola was about 80 km east-southeast of the Observatory Headquarters. Local winds strengthened significantly in the evening, with gale to storm force east to northeasterlies generally over the territory and reaching hurricane force on high ground. Since the eyewall of Saola and its associated destructive hurricane force winds were expected to lash Hong Kong directly, the Hurricane Signal No. 10 was issued at 8:15 p.m. when Saola was about 50 km southeast of the Observatory Headquarters. Many places of the territory were affected by storm force winds at night; whereas southern part of the territory and high ground were persistently battered by hurricane force winds. Saola came closest to Hong Kong at around 9 p.m. when its centre was located at about 40 km to the south-southeast of the Observatory Headquarters.

With Saola skirting past south of Hong Kong, local winds veered to east to southeasterlies gradually. Saola then weakened and departed from Hong Kong gradually. When hurricane force winds no longer affected the territory, the No. 8 Southeast Gale or Storm Signal was issued at 3:40 a.m. on 2 September to replace the Hurricane Signal No. 10. Local winds continued to subside during the day. The No. 3 Strong Wind Signal was issued at 4:20 p.m. on 2 September, followed by the issuance of No. 1 Standby Signal at 8:20 p.m. With Saola further departing from Hong Kong, all tropical cyclone warning signals were cancelled at 11:40 p.m.

Government Flying Service dispatched a fixed-wing aircraft to conduct surveillance near the centre of Saola on the morning of 1 September. The photo taken from the aircraft showed that Saola was a mature tropical cyclone with a clear eye and well-defined eyewalls. Radar imagery at that time also showed that Saola had a double eyewall structure. While Saola approached Hong Kong later that day, its inner eyewall shrunk gradually due to eyewall replacement. When Saola passed south of Hong Kong on the night of 1 September, radar imagery (Figure 2.2.6c) depicted that its circulation was rather compact, with the strongest winds concentrating at only about 10-15 kilometers away from the centre.

The storm to hurricane force winds of Saola impacted many places in Hong Kong on 1 – 2 September. Maximum hourly mean winds of 153, 133 and 130 km/h and gusts of 183, 189 and 176 km/h were recorded at Waglan Island, Ngong Ping and Cheung Chau Beach respectively. During the passage of Saola, the overall wind strength in Hong Kong was similar to that of Hato in 2017, but relatively weaker than that of Mangkhut in 2018 (Table 2.2.2).

The storm surge induced by Saola resulted in flooding in some low-lying coastal areas of Hong Kong, including Sha Tin, Tai Po, and Tai O. A maximum sea level (above chart datum) of 3.41 m was recorded at Tsim Bei Tsui and a maximum storm surge (above astronomical tide) of 1.48 m was recorded at Tai Po Kau. The water level sensor at Sai Kung recorded about 4.5 mCD at midnight on 1 September. 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	986.7	1/9	9:45 p.m.
Hong Kong International Airport	988.4	1/9	10:58 p.m.
Cheung Chau *	982.8	1/9	10:24 p.m.
King's Park	986.9	1/9	9:24 p.m.
Lau Fau Shan	989.9	1/9	8:41 p.m.
Peng Chau	986.3	1/9	9:53 p.m.
Sha Tin	988.9	1/9	8:27 p.m.
Sheung Shui	991.5	1/9	7:36 p.m.
Ta Kwu Ling	991.2	1/9	8:30 p.m.
Tai Po	991.5	1/9	7:49 p.m.
Waglan Island	979.1	1/9	8:48 p.m.

Locally, it was hot and dry with sunny periods during the day on 30 and 31 August. Under the influence of the circulation of Saola, the local weather deteriorated rapidly with squally heavy showers later on 1 September. On 1 – 2 September, more than 150 millimetres of rainfall were recorded over most parts of the territory and rainfall even exceeded 250 millimetres over Central and Western, Wan Chai and Tsuen Wan Districts.

In Hong Kong, more than 86 people were injured. There were also over 3,000 reports of fallen trees, 21 reports of flooding and 7 reports of landslides during the passage of Saola. There were also about 40 reports of damaged scaffolding, signboards and windows. Power supply was temporarily interrupted in some places. 460 flights were cancelled at the Hong Kong International Airport.

During the passage of Saola, many road sections in Hong Kong needed to be closed due to fallen trees, falling objects, collapsed scaffoldings or flooding. A scaffolding collapsed on Portland Street in Mangkok, blocking two traffic lanes. More than ten solar panels on the roof of a building in Lei Cheng Uk Estate were blown onto the roads by strong winds. A glass window of a building in Tseung Kwan O InnoPark was loosened due to strong winds and fell onto the streets. The cycle track and pedestrian subway next to the Shing Mun River in Sha Tin were flooded. A tree fell in Diamond Hill, bending a lamppost and hitting a taxi. A glass curtain wall of a hotel in Yau Ma Tei fell down and hit three nearby cars. A scaffolding collapsed in Ap Lei Chau, hitting a taxi and a light goods vehicle. A modular house on the roof of a building in Kennedy Town was blown down by strong winds and hit a truck.

*based on incomplete data

表 2.2.1 在蘇拉影響下，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 Saola were in force

站 Station (https://www.hko.gov.hk/tc/informtc/station2023.html)		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		
中環碼頭	Central Pier	東	E	140	1/9	22:49	東	E	79	1/9	23:00
		東	E	140	1/9	22:51					
長洲	Cheung Chau	東北偏北	NNE	171	1/9	22:10	東北偏北	NNE	114	1/9	23:00
長洲泳灘	Cheung Chau Beach	-	-	176	1/9	22:43	-	-	130	1/9	23:00
青洲	Green Island	東北偏北	NNE	180	1/9	21:46	東北偏北	NNE	126	1/9	22:00
香港國際機場	Hong Kong International Airport	東北偏東	ENE	105	2/9	00:09	東北偏東	ENE	69	2/9	01:00
啟德	Kai Tak	東北	NE	117	1/9	21:33	東南偏東	ESE	47	2/9	00:00
京士柏	King's Park	東北偏北	NNE	121	1/9	21:16	東北偏北	NNE	51	1/9	22:00
南丫島	Lamma Island	北	N	138	1/9	20:59	西北	NW	80	1/9	20:00
流浮山	Lau Fau Shan	東北偏北	NNE	122	1/9	22:01	北	N	76	1/9	21:00
昂坪	Ngong Ping	東北偏東	ENE	189	2/9	00:06	東北偏東	ENE	133	2/9	00:00
北角	North Point	東北偏東	ENE	140	1/9	22:56	東北偏東	ENE	90	1/9	23:00
坪洲	Peng Chau	東北	NE	147	1/9	21:53	東	E	108	2/9	00:00
平洲	Ping Chau	東北偏東	ENE	86	1/9	21:41	東北偏東	ENE	42	1/9	22:00
西貢	Sai Kung	北	N	138	1/9	20:11	東北	NE	80	1/9	22:00
沙洲	Sha Chau	北	N	136	1/9	22:08	北	N	94	1/9	23:00
沙螺灣	Sha Lo Wan	東北偏東	ENE	116	1/9	23:44	東北偏東	ENE	65	2/9	00:00
沙田	Sha Tin	東北偏北	NNE	97	1/9	21:22	東北偏北	NNE	44	1/9	22:00
石崗	Shek Kong	-	-	115	1/9	23:16	-	-	51	1/9	23:00
九龍天星碼頭	Star Ferry (Kowloon)	東	E	111	1/9	23:45	東	E	65	2/9	00:00
打鼓嶺	Ta Kwu Ling	東北偏東	ENE	107	1/9	23:39	東北偏東	ENE	45	2/9	00:00
大美督	Tai Mei Tuk	東北偏東	ENE	138	1/9	21:27	東北偏東	ENE	99	1/9	23:00
		東	E	138	1/9	22:47					
大帽山	Tai Mo Shan	東北偏東	ENE	176	1/9	21:11	北	N	110	1/9	20:00
塔門東	Tap Mun East	東	E	138	1/9	23:00	東	E	102	1/9	23:00
大老山	Tate's Cairn	東北偏東	ENE	183	1/9	21:07	東北	NE	129	1/9	22:00
將軍澳	Tseung Kwan O	東北	NE	122	1/9	20:52	東北	NE	44	1/9	22:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	西北	NW	114	1/9	19:26	西北偏北	NNW	47	1/9	20:00
屯門政府合署	Tuen Mun Government Offices	東北偏北	NNE	108	1/9	23:00	東北偏北	NNE	28	2/9	00:00
橫瀾島	Waglan Island	東北偏北	NNE	183	1/9	20:44	東北	NE	153	1/9	22:00
濕地公園	Wetland Park	東北偏東	ENE	81	1/9	23:30	東北	NE	30	2/9	00:00
黃竹坑	Wong Chuk Hang	東北	NE	123	1/9	21:48	東	E	46	2/9	00:00
		東	E	123	1/9	23:52					

黃麻角(赤柱)、大埔滘 - 沒有資料
長洲泳灘、石崗 - 沒有風向資料

Bluff Head (Stanley), Tai Po Kau - data not available
Cheung Chau Beach, Shek Kong - wind direction not available

表 2.2.2 蘇拉與近年引致天文台需要發出十號颶風信號的熱帶氣旋(山竹及天鴿)襲港期間錄得的最高 60 分鐘平均風速及最高陣風

Table 2.2.2 Maximum 60-minute mean wind speeds and maximum gusts recorded during the passage of Saola and the tropical cyclones necessitating the issuance of No. 10 signals recently (Mangkhut and Hato)

站 Station (https://www.hko.gov.hk/tc/informtc/station2023.html)		最高 60 分鐘平均風速/最高陣風 (公里/小時) Maximum 60-minute mean wind speeds / Maximum gust peak speeds (km/h)		
		2017	2018	2023
		天鴿 Hato	山竹 Mangkhut	蘇拉 Saola
中環碼頭	Central Pier	76/137	99/169	86/140
長洲	Cheung Chau	128/171	157/212	116/171
青洲	Green Island	-	128/229	127/180
香港國際機場	Hong Kong International Airport	92/144	101/157	71/105
流浮山	Lau Fau Shan	70/112	96/166	76/122
昂坪	Ngong Ping	142/224	-	133/189
啟德	Kai Tak	67/130	81/142	50/117
北角	North Point	85/137	110/171	91/140
西貢	Sai Kung	70/112	112/180	83/138
沙田	Sha Tin	40/104	51/149	44/97
九龍天星碼頭	Star Ferry (Kowloon)	63/112	85/135	66/111
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	45/106	59/137	48/114
打鼓嶺	Ta Kwu Ling	43/99	52/133	46/107
大美督	Tai Mei Tuk	101/140	139/198	102/138
大帽山	Tai Mo Shan	121/196	175/250	113/176
大老山	Tate's Cairn	118/187	166/256	135/183
橫瀾島	Waglan Island	137/193	161/220	154/183

- 沒有資料/ data not available

表 2.2.3 在蘇拉影響下，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 2.2.3 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 Saola were in force

站 Station (https://www.hko.gov.hk/tc/informtc/station2023.html)		最初達到強風*		最後達到強風*		最初達到烈風#		最後達到烈風#	
		時間		時間		時間		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	時間	日期/月份	時間	日期/月份	時間	日期/月份	時間
		Date/Month	Time	Date/Month	Time	Date/Month	Time	Date/Month	Time
長洲	Cheung Chau	1/9	10:49	2/9	23:34	1/9	16:29	2/9	08:32
香港國際機場	Hong Kong International Airport	1/9	15:46	2/9	11:30	1/9	19:34	2/9	01:14
啟德	Kai Tak	1/9	16:43	2/9	01:30	-			
流浮山	Lau Fau Shan	1/9	13:57	2/9	08:13	1/9	19:10	1/9	23:48
西貢	Sai Kung	1/9	15:25	2/9	13:31	1/9	19:36	2/9	00:15
沙田	Sha Tin	1/9	20:55	1/9	22:04	-			
打鼓嶺	Ta Kwu Ling	1/9	20:39	2/9	01:04	-			
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	1/9	17:55	1/9	20:49	-			

青衣島蜆殼油庫 - 數據不完整

Tsing Yi Shell Oil Depot - incomplete data

- 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 2.2.4 蘇拉影響香港期間，香港天文台總部及其他各站所錄得的日雨量

Table 2.2.4 Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Saola

站 (參閱圖 2.2.2) Station (See Fig. 2.2.2)			八月三十日 30 Aug	八月三十一日 31 Aug	九月一日 1 Sep	九月二日 2 Sep	總雨量(毫米) Total rainfall (mm)
香港天文台 Hong Kong Observatory (HKO)			0.0	0.4	98.9	80.4	179.7
香港國際機場 Hong Kong International Airport (HKA)			微量 Trace	微量 Trace	73.0	95.0	168.0
長洲 Cheung Chau (CCH)			0.0	0.0	39.5	35.0	74.5
H23	香港仔	Aberdeen	0.0	1.0	84.0	65.5	150.5
N05	粉嶺	Fanling	0.0	2.5	78.0	24.0	104.5
N13	糧船灣	High Island	0.0	0.0	96.0	35.0	131.0
K04	佐敦谷	Jordan Valley	0.0	1.0	114.5	75.5	191.0
N06	葵涌	Kwai Chung	0.0	0.5	127.0	107.0	234.5
H12	半山區	Mid Levels	0.0	1.5	92.0	110.0	203.5
N09	沙田	Sha Tin	0.0	1.5	112.5	55.5	169.5
H19	筲箕灣	Shau Kei Wan	0.0	0.0	102.0	64.0	166.0
SEK	石崗	Shek Kong	0.0	3.5	148.5	87.0	239.0
K06	蘇屋邨	So Uk Estate	0.0	0.0	124.0	83.0	207.0
R31	大美督	Tai Mei Tuk	0.0	0.5	92.0	32.5	125.0
R21	踏石角	Tap Shek Kok	0.0	0.0	81.0	86.0	167.0
N17	東涌	Tung Chung	0.0	2.0	65.0	120.0	187.0
TMR	屯門水庫	Tuen Mun Reservoir	0.0	0.0	100.2	81.7	181.9

表 2.2.5 蘇拉影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮

Table 2.2.5 Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of Saola

站 Station (https://www.hko.gov.hk/tc/informtc/station2023.html)		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
鯪魚涌	Quarry Bay	3.07	1/9	09:54	0.76	1/9	23:50
石壁	Shek Pik	3.07	1/9	10:09	0.72	2/9	04:40
大廟灣	Tai Miu Wan	3.02	1/9	09:45	0.91	1/9	22:45
大埔滘	Tai Po Kau	3.32	1/9	23:19	1.48	1/9	21:57
尖鼻咀	Tsim Bei Tsui	3.41	1/9	10:19	0.73	2/9	04:11

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

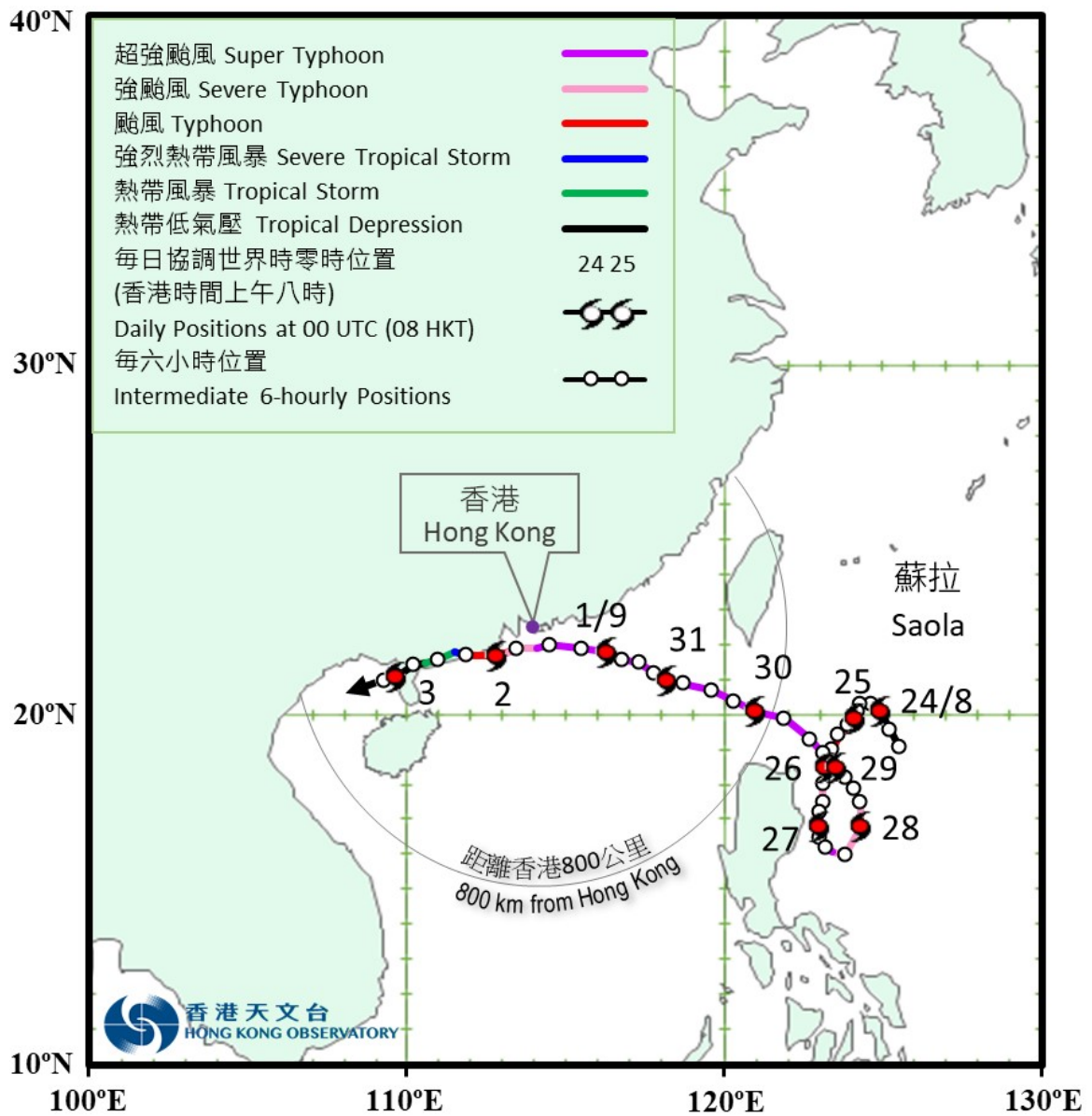


圖 2.2.1a 二零二三年八月二十三日至九月三日蘇拉(2309)的暫定路徑圖。

Figure 2.2.1a Provisional track of Saola (2309): 23 August - 3 September 2023.



圖 2.2.1b 蘇拉(2309)接近香港時的暫定路徑圖。

Figure 2.2.1b Provisional track of Saola (2309) near Hong Kong.

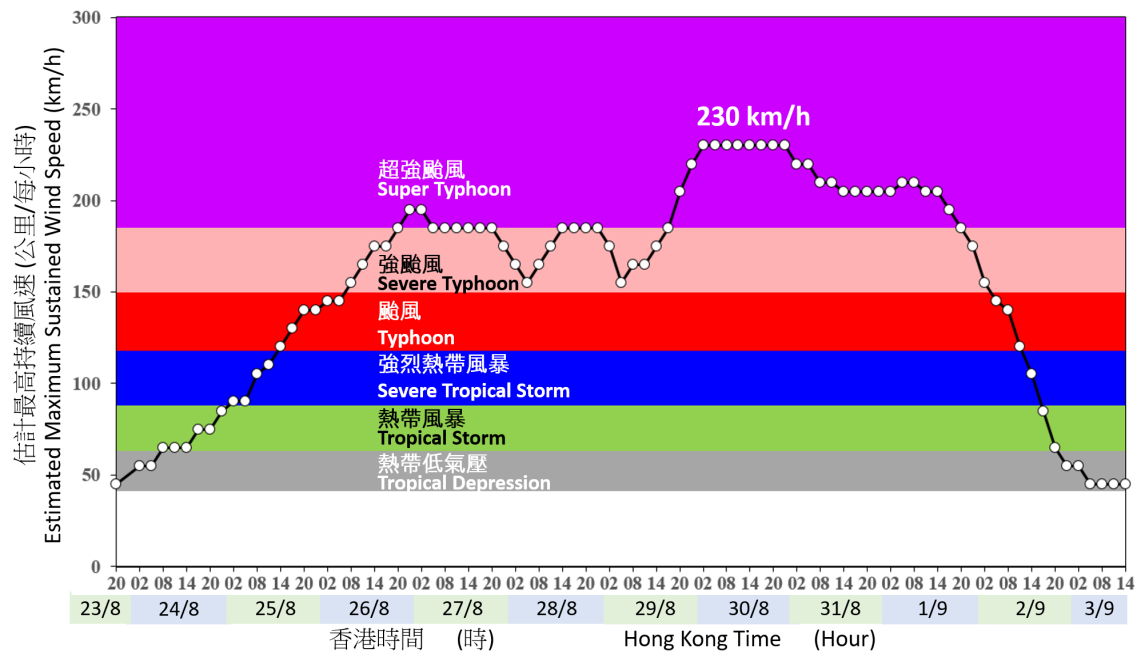


圖 2.2.2 二零二三年八月二十三日至九月三日蘇拉(2309)之估計最高持續風速的時間序列（初步評估）。

Figure 2.2.2 Time series of the estimated maximum sustained wind speed near the centre of Saola (2309): 23 August - 3 September 2023 (initial assessment).

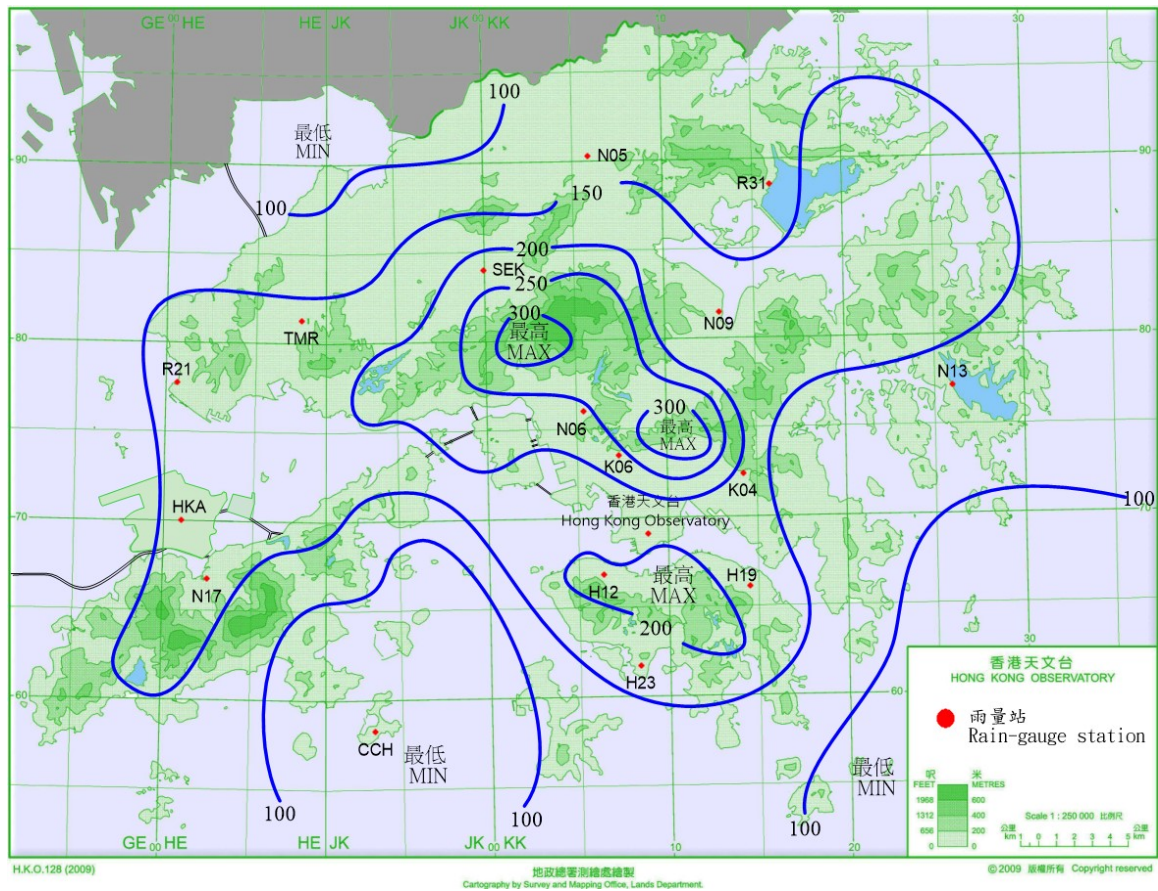


圖 2.2.3 二零二三年八月三十日至九月二日的雨量分佈(等雨量線單位為毫米)。

Figure 2.2.3 Rainfall distribution on 30 August – 2 September 2023 (isohyets are in millimetres).

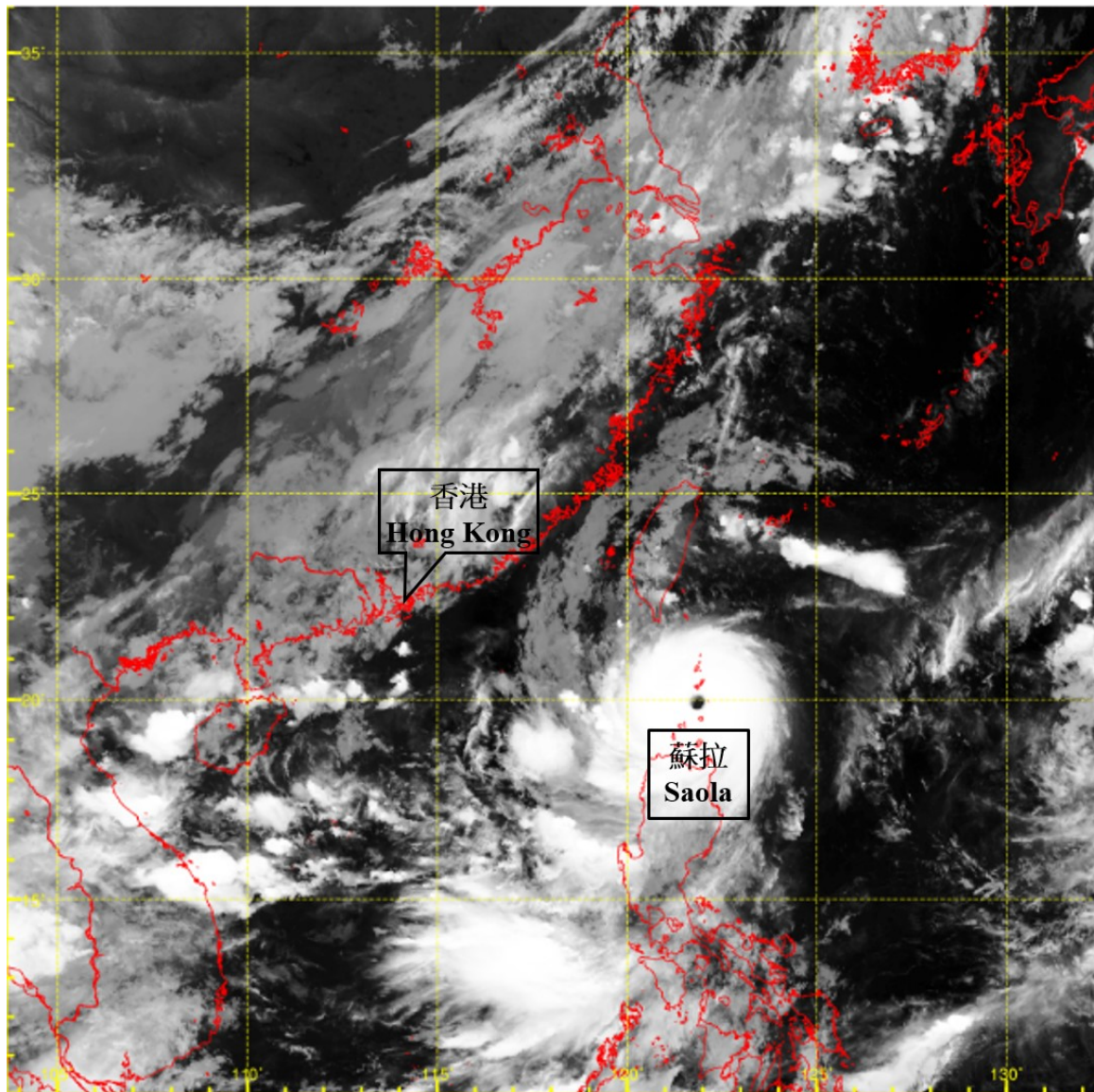


圖 2.2.4a 二零二三年八月三十日上午二時左右的紅外線衛星圖片。當時蘇拉達到其最高強度，中心附近最高持續風速估計為每小時 230 公里。

Figure 2.2.4a Infra-red satellite imagery at around 2 a.m. on 30 August 2023 when Saola was at its peak intensity with an estimated maximum sustained wind of 230 km/h near its centre.

[此衛星圖像接收自日本氣象廳的向日葵 9 號衛星。]

[The satellite imagery was originally captured by Himawari-9 Satellite (H-9) of Japan Meteorological Agency.]

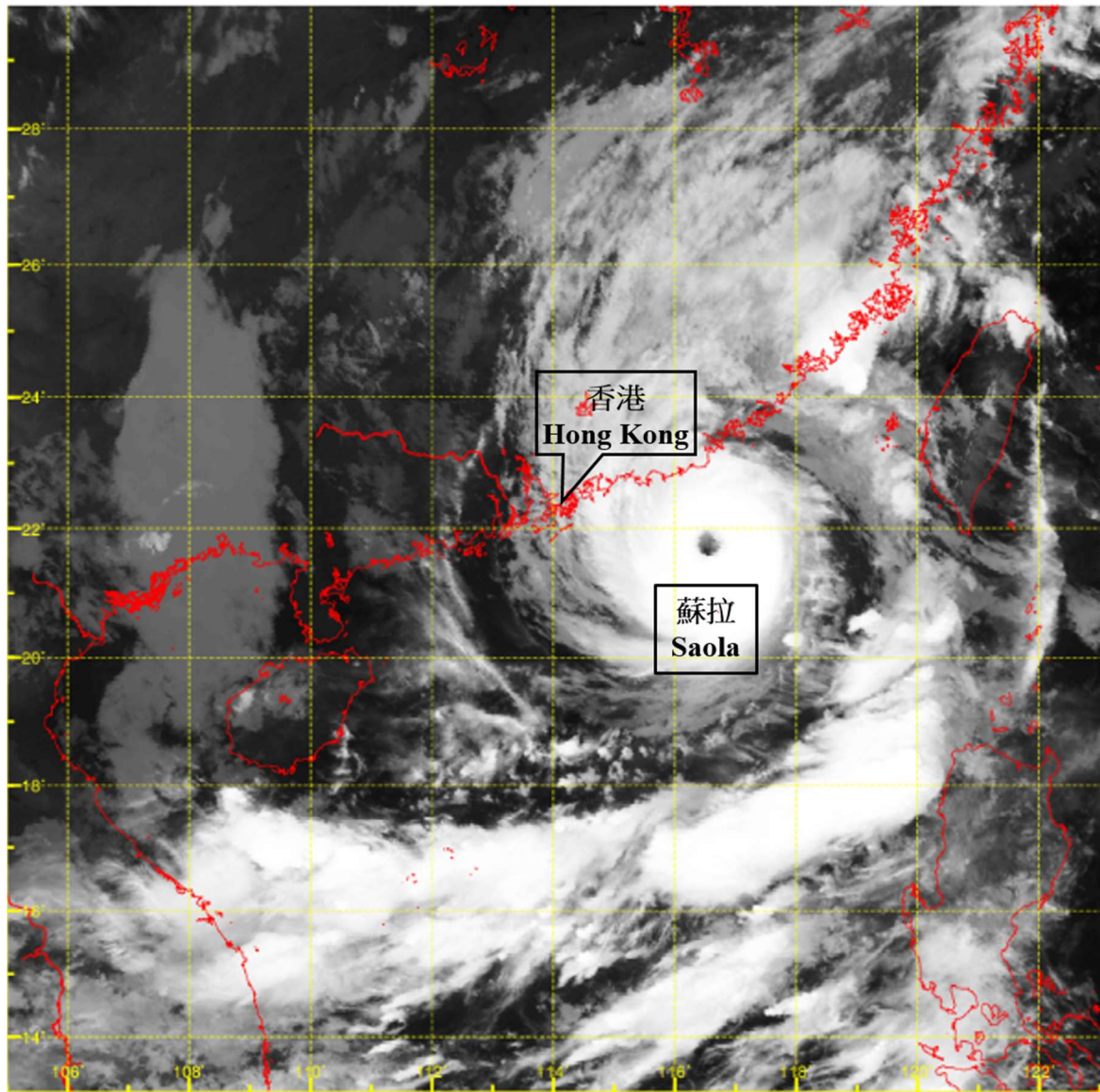


圖 2.2.4b 二零二三年九月一日上午五時左右的紅外線衛星圖片。當時八號西北烈風或暴風信號正生效，而蘇拉中心附近最高持續風速估計為每小時 210 公里。

Figure 2.2.4b Infra-red satellite imagery at around 5 a.m. on 1 September 2023. The No. 8 Northwest Gale or Storm Signal was in force and the maximum sustained wind near the centre of Saola was estimated to be 210 km/h at that time.

[此衛星圖像接收自日本氣象廳的向日葵 9 號衛星。]

[The satellite imagery was originally captured by Himawari-9 Satellite (H-9) of Japan Meteorological Agency.]



圖 2.2.5 政府飛行服務隊於九月一日早上派出一架定翼機到蘇拉附近進行觀測。從定翼機拍攝到的相片顯示蘇拉發展成熟，風眼清晰，眼壁完整。(鳴謝相片來源：政府飛行服務隊)。

Figure 2.2.5 Government Flying Service (GFS) dispatched a fixed-wing aircraft to conduct surveillance near Saola on the morning of 1 September. The photo taken at the aircraft showed that Saola was a mature tropical cyclone with a clear eye and well-defined eyewalls. (Courtesy of GFS).

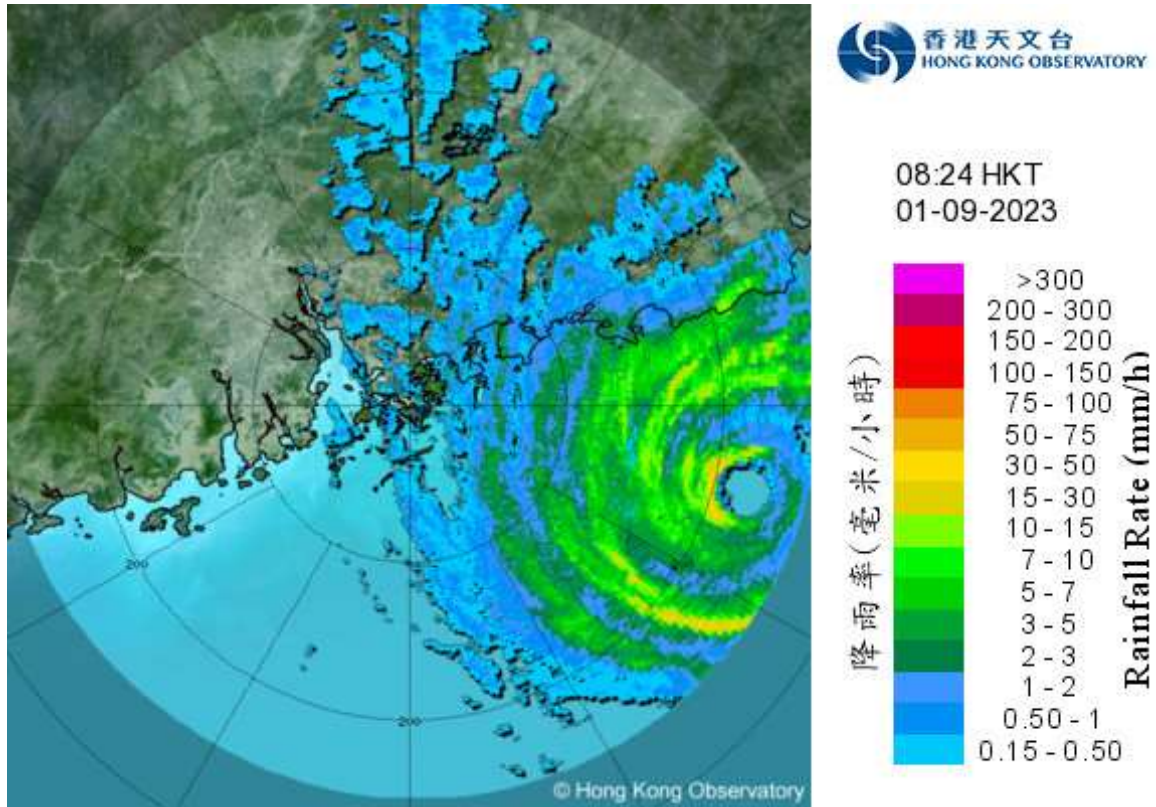


圖 2.2.6a 二零二三年九月一日上午 8 時 24 分的雷達回波圖像，當時蘇拉環流緊密，風眼清晰，並呈現雙眼壁結構。同時，與蘇拉相關的外圍雨帶正逐漸影響香港。

Figure 2.2.6a Image of radar echoes captured at 8:24 a.m. on 1 September 2023. Saola had a tight circulation with a clear eye and a double eyewall structure at that time. Meanwhile, the outer rainbands associated with Saola were affecting Hong Kong gradually.

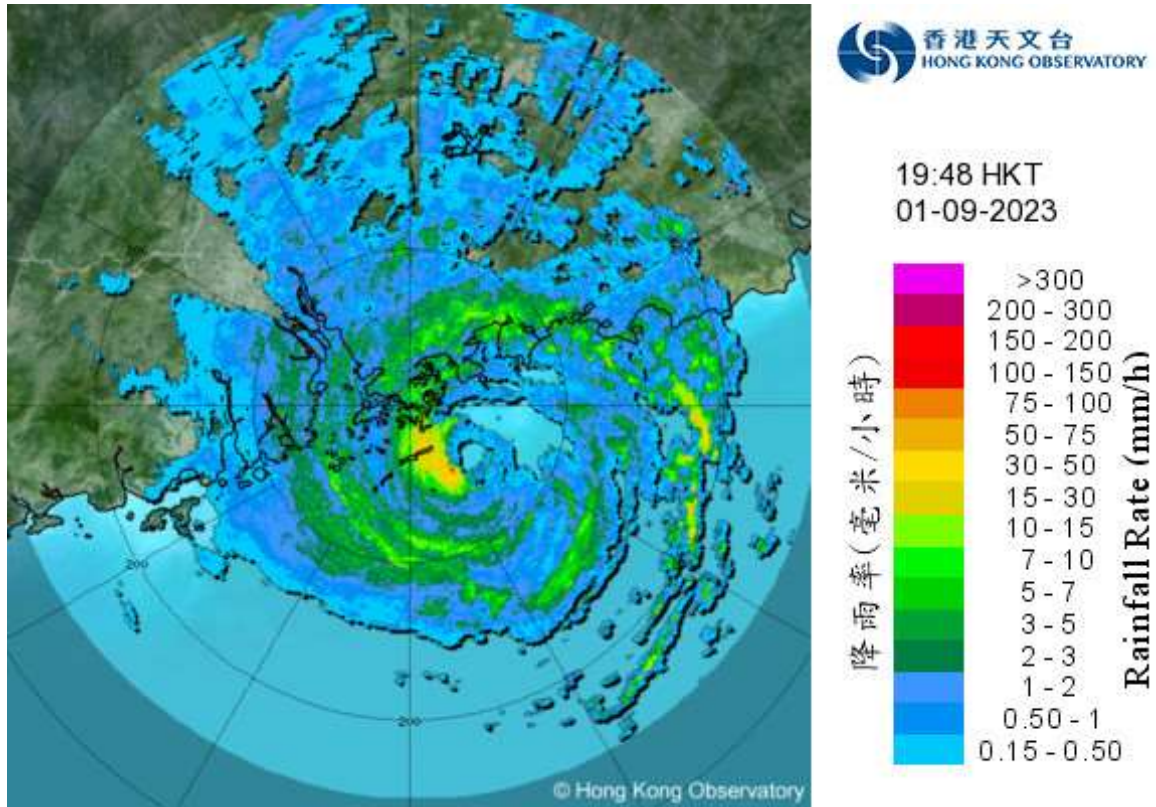


圖 2.2.6b 二零二三年九月一日下午 7 時 48 分的雷達回波圖像，當時蘇拉的內眼壁明顯縮小。同時，與蘇拉相關的外圍雨帶稍為減弱，但其眼壁附近的對流仍非常強烈。

Figure 2.2.6b Image of radar echoes captured at 7:48 p.m. on 1 September 2023. The inner eyewall of Saola shrunk apparently. Meanwhile, the outer rainbands associated with Saola weakened slightly but the convections near the eyewall of Saola remained very intense.

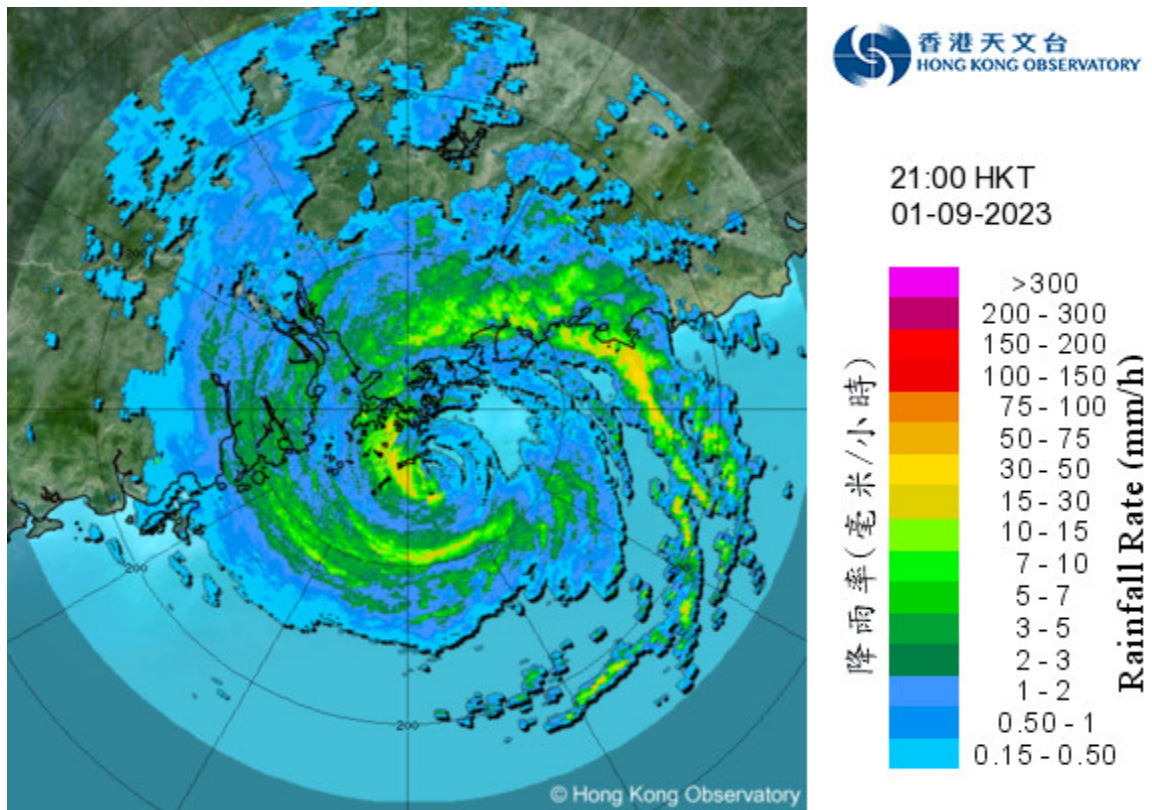


圖 2.2.6c 二零二三年九月一日下午 9 時的雷達回波圖像，當時蘇拉最接近香港，在天文台總部之東南偏南約 40 公里掠過。同時，蘇拉的眼壁正影響本港。

Figure 2.2.6c Image of radar echoes captured at 9 p.m. on 1 September 2023 when Saola was closest to Hong Kong, skirting past about 40 km south-southeast of the Observatory Headquarters. Meanwhile, the eyewall of Saola was affecting Hong Kong.

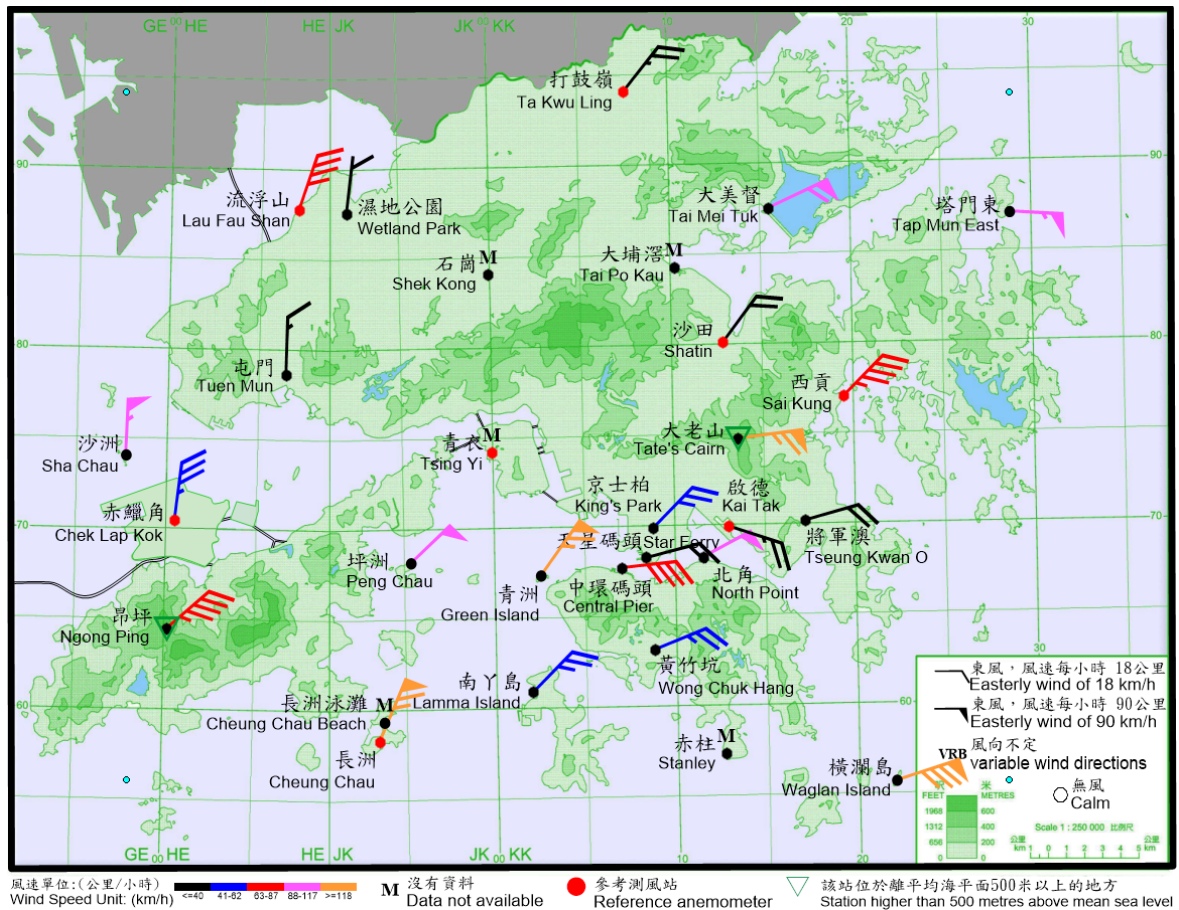


圖 2.2.7a 二零二三年九月一日下午 10 時 20 分香港各站錄得的十分鐘平均風向和風速。當時本港普遍吹東北風，長洲、橫瀾島、青州及大老山的風力達到颶風程度。

Figure 2.2.7a 10-minute mean wind direction and speed recorded at various stations in Hong Kong at 10:20 p.m. on 1 September 2023. Local winds were generally northeasterlies, with winds at Cheung Chau, Waglan Island, Green Island and Tate's Cairn reaching hurricane force at the time.

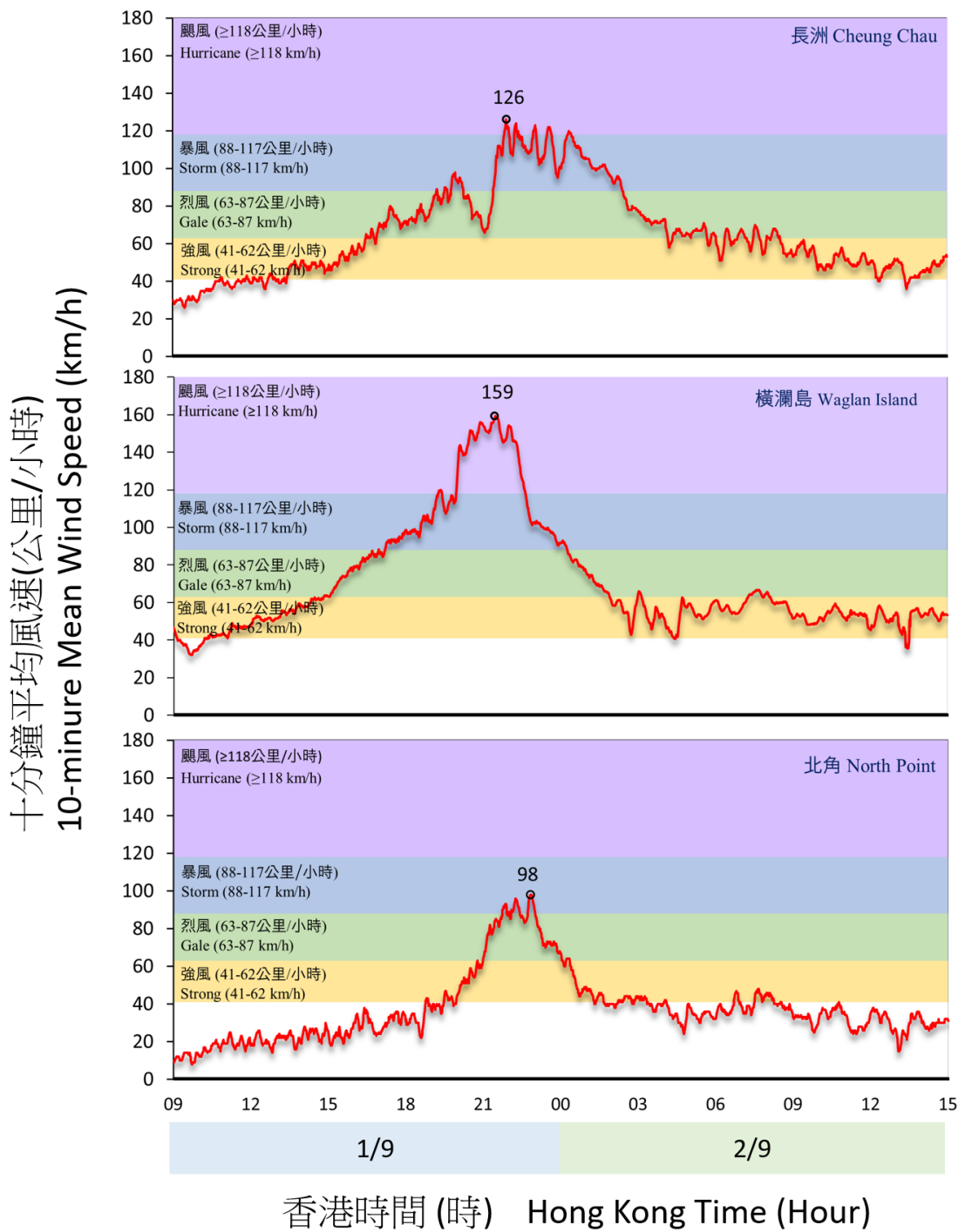


圖 2.2.8 二零二三年九月一日至二日的長洲、橫瀾島及北角錄得的十分鐘平均風速。

Figure 2.2.8 Traces of 10-minute mean wind speed recorded at Cheung Chau, Waglan Island and North Point on 1 – 2 September 2023.

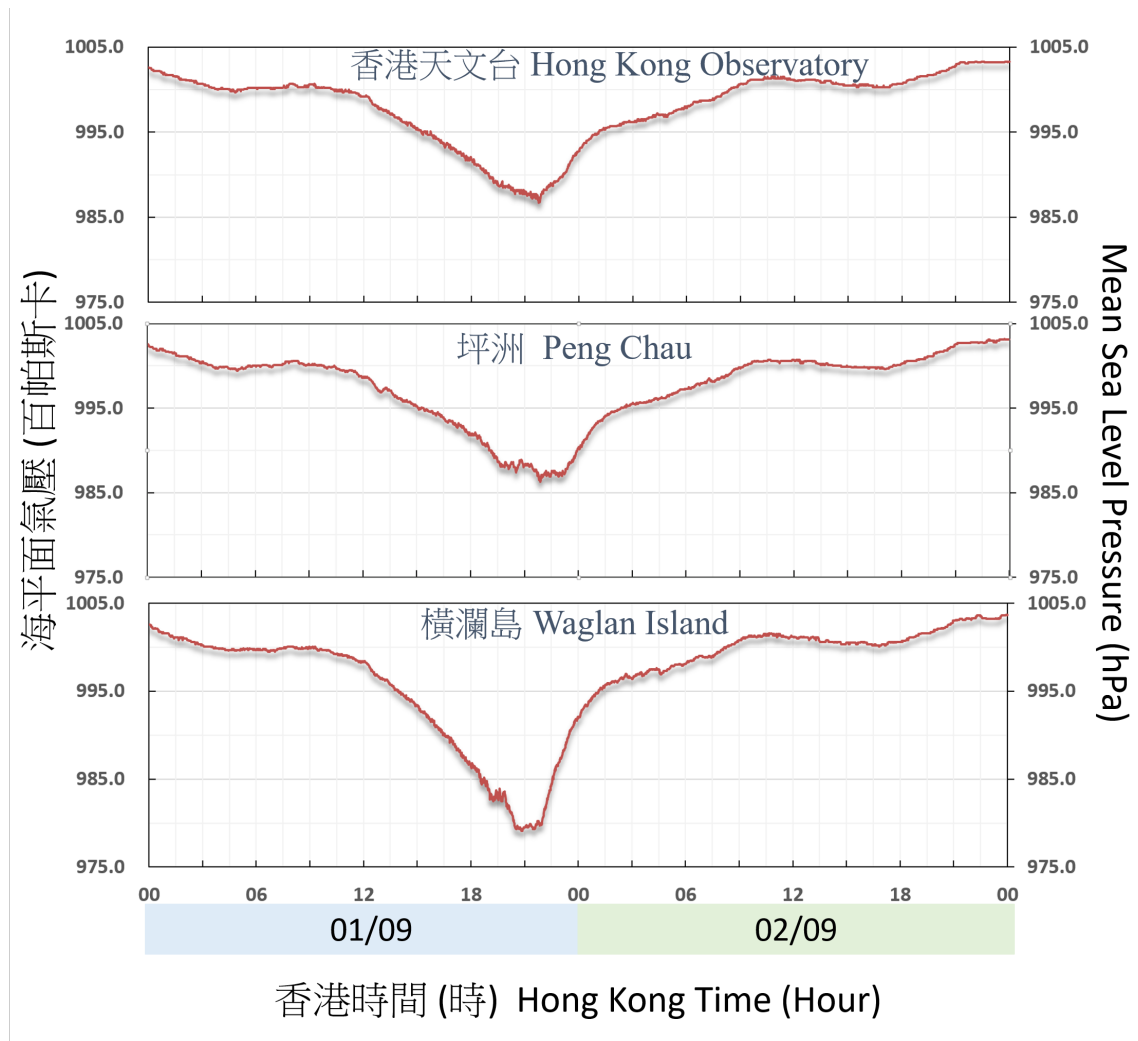


圖 2.2.9 二零二三年九月一日至二日香港天文台、坪洲及橫瀾島錄得的海平面氣壓。

Figure 2.2.9 Traces of mean sea-level pressure recorded at the Hong Kong Observatory, Peng Chau and Waglan Island on 1 – 2 September 2023.



圖 2.2.10 蘇拉襲港期間，本港多處有樹木倒塌。(鳴謝相片來源：李子祥博士及 Dr. Martin Williams (左下相片))

Figure 2.2.10 The passage of Saola resulted in fallen trees in many parts of Hong Kong. (Courtesy of Dr. T. C. Lee and Dr. Martin Williams (bottom left))



圖 2.2.11 蘇拉引起的風暴潮導致沙田城門河出現水浸。(鳴謝相片來源：Poon Chi Ming)

Figure 2.2.11 Shing Mun River in Sha Tin was flooded due to storm surge induced by Saola. (Courtesy of Poon Chi Ming)

2.3 強颱風海葵(2311)

二零二三年八月二十七日至九月五日

海葵是二零二三年第四個影響香港的熱帶氣旋。雖然天文台在海葵靠近本港期間只需發出一號戒備信號，但與海葵殘餘相關的低壓槽在九月七日晚上至九月八日上午為本港帶來持續不斷的傾盆大雨，打破多個雨量紀錄並引致多區出現嚴重水浸。總括而言，海葵及其殘餘為香港帶來的雨量¹達 641.1 毫米，打破了一九九九年颱風森姆的 616.5 毫米的紀錄，成為自一八八四年有記錄以來為香港帶來最多雨量的熱帶氣旋。

熱帶低氣壓海葵於八月二十七日晚上在硫黃島之東南偏南約 760 公里的北太平洋西部上形成，隨後六天向西或西北偏西移動，移向台灣南部，並逐漸增強。九月三日凌晨海葵增強為強颱風，並於當日中午前在台灣以東海域達到其最高強度，中心附近最高持續風速估計為每小時 175 公里。隨後海葵橫過台灣南部，並逐漸減弱。海葵在九月四日橫過台灣海峽期間減弱為熱帶風暴。海葵於九月五日早上在福建省東山縣附近登陸，隨後移入廣東東部內陸，最後於當晚進一步減弱為低壓區。

根據報章報導，海葵吹襲台灣期間，造成至少 143 人受傷，超過兩萬戶停水及 27 萬戶停電，約 8 000 人需要撤離，經濟損失超過 4 300 萬美元。海葵在福建省亦造成超過 159 萬人受災，超過 2 500 間房屋受損，經濟損失超過 50 億元人民幣。此外，海葵在廣東東部內陸減弱為低壓區後，其殘餘持續緩慢西移肆虐沿岸地區，相關的大暴雨於九月五日至九月十一日期間影響廣東及廣西多地。深圳於九月七日晚上至八日早上期間錄得最大兩小時雨量 195.8 毫米、三小時雨量 246.8 毫米、六小時雨量 349.7 毫米及十二小時雨量 465.5 毫米，均打破了深圳自一九五二年有氣象記錄以來各自的紀錄。深圳多個地鐵站被水淹浸，部分路線停運。深圳機場部分航班延誤。深圳水庫在九月八日凌晨需要排洪。

本港方面，天文台於九月四日上午 4 時 40 分發出一號戒備信號，當時海葵集結在香港以東約 610 公里。當日及翌日日間本港普遍吹和緩西至西北風，離岸及高地風勢間中清勁。天文台總部於當日下午 3 時 24 分錄得最低瞬時海平面氣壓 1000.7 百帕斯卡。海葵於九月五日下午八時左右最接近本港，位置在香港之東北約 250 公里。隨著海葵在廣東東部內陸減弱為低壓區，天文台於九月五日下午 9 時 40 分取消所有熱帶氣旋警告信號。

海葵掠過期間，尖鼻咀錄得最高潮位（海圖基準面以上）2.53 米，而大埔滘則錄得最大風暴潮（天文潮高度以上）0.39 米。

受海葵的外圍下沉氣流影響，除局部地區有驟雨及狂風雷暴外，九月

¹即熱帶氣旋在出現於香港 600 公里範圍內至其消散或離開香港 600 公里範圍之後 72 小時期間，天文台總部錄得的雨量

三日至四日本港普遍天晴及酷熱。受海葵殘餘影響，九月五日至六日本港大致多雲及有幾陣驟雨。在廣東沿岸與海葵殘餘相關的低壓槽於九月七日晚上開始為香港帶來大雨及狂風雷暴。傾盆大雨一直影響本港至翌日。在滂沱大雨期間，天文台總部於九月七日晚上十一時至午夜十二時期間錄得 158.1 毫米雨量，是自一八八四年有記錄以來最高的一小時雨量。天文台總部亦在這場驚人暴雨期間錄得兩小時雨量 201.0 毫米及十二小時雨量 605.8 毫米，均打破其各自的紀錄。而九月七日下午四時至翌日下午四時的二十四小時雨量達 638.5 毫米，約為本港全年平均總雨量的四分之一，僅次於一八八九年五月三十日歷史雨災的紀錄。九月七日至八日本港多處錄得超過 400 毫米雨量，而港島東區及南區的雨量更超過 800 毫米。長時間大雨之下，天文台需要發出黑色暴雨警告信號，並持續生效達 16 小時 35 分鐘，是自一九九二年設立暴雨警告系統以來的最長紀錄。

持續的大雨引致本港多處出現嚴重水浸及山泥傾瀉，造成大規模交通受阻及設施損壞。全港有 60 宗水浸報告及超過 200 宗山泥傾瀉報告，而部分地方一度停電停水。暴雨期間至少有兩人死亡，超過 140 人受傷。黃大仙出現嚴重水浸，黃大仙港鐵站有大量雨水沿電梯及樓梯湧入月台及隧道，觀塘線部分路段需要停駛。而鄰近的黃大仙中心北館地下全層被水淹沒，對出的龍翔道亦出現水浸，多輛汽車被困。沙田李屋村有村屋倒塌。筲箕灣耀興道附近一處山坡發生山泥傾瀉，有多塊巨石跌下擋路，有汽車被石塊擊中，附近亦因水管爆裂，部分住宅暫停供水。柴灣環翠邨停車場被水淹浸，水深高達半架車。香港島多處地方有路面出現地陷，當中包括淺水灣、石澳及柴灣等。其中香島道與淺水灣道交界一處路陷，一輛駛經的私家車墮入深坑。因山泥傾瀉和路陷，石澳道曾需全線封閉。

2.3 Severe Typhoon Haikui (2311) **27 August - 5 September 2023**

Haikui was the fourth tropical cyclone affecting Hong Kong in 2023. While only the Standby Signal No. 1 was issued during the approach of Haikui, the trough of low pressure associated with the remnant of Haikui brought incessant downpour to Hong Kong from the night of 7 September to the morning of 8 September, breaking a number of rainfall records and triggering severe flooding in many parts of Hong Kong. Overall, Haikui and its remnant brought 641.1 millimetres of rainfall² to Hong Kong, breaking the previous record of 616.5 millimetres set by Typhoon Sam in 1999, and making it the wettest tropical

² defined as the total rainfall recorded at the Hong Kong Observatory Headquarters from the time when a tropical cyclone was centred within 600 km of Hong Kong to 72 hours after the tropical cyclone has dissipated or moved outside 600 km of Hong Kong

cyclone ever to affect Hong Kong since records began in 1884.

Haikui formed as a tropical depression over the western North Pacific about 760 km south-southeast of Iwo Jima on the night of 27 August. It moved westwards or west-northwestwards towards the southern part of Taiwan and intensified gradually in the following six days. Haikui intensified into a severe typhoon in the small hours on 3 September and attained its peak intensity over the seas east of Taiwan, with an estimated maximum sustained wind of 175 km/h near its centre before noon on that day. It then moved across the southern part of Taiwan and weakened gradually. Haikui weakened into a tropical storm when it moved across the Taiwan Strait on 4 September. Haikui made landfall near Dongshan in Fujian on the morning of 5 September. It then moved into inland eastern Guangdong and finally degenerated into an area of low pressure that night.

According to press reports, at least 143 people were injured when Haikui affected Taiwan. Water and electricity supply to more than 20 000 and 270 000 households were disrupted respectively. Around 8 000 people were displaced. Economic loss exceeded USD 43 million. In Fujian province, more than 1.59 million people were affected, more than 2 500 houses were damaged and economic loss exceeded RMB 5 billion. Besides, after Haikui has weakened into an area of low pressure over inland eastern Guangdong, its remnant continued to move westwards slowly and wreaked havoc the coastal areas with torrential rain affecting many places in Guangdong and Guangxi provinces during 5 – 11 September. In Shenzhen, from the night of 7 September to the morning of 8 September, maximum 2-hour rainfall of 195.8 millimetres, 3-hour rainfall of 246.8 millimetres, 6-hour rainfall of 349.7 millimetres and 12-hour rainfall of 465.5 millimetres were recorded, all breaking their respective records since Shenzhen's meteorological records began in 1952. Many metro stations were flooded and some of the lines were suspended in Shenzhen. Some flights at Shenzhen Airport were delayed. Water was discharged from Shenzhen Reservoir in the small hours on 8 September.

In Hong Kong, the Standby Signal No. 1 was issued at 4:40 a.m. on 4 September, when Haikui was about 610 km east of Hong Kong. Local winds were generally moderate west to northwesterlies, occasionally fresh offshore and on high ground on that day and during the day next day. The lowest instantaneous mean sea-level pressure of 1000.7 hPa was recorded at the Observatory Headquarters at 3:24 p.m. on that day. Haikui came closest to the territory at around 8 p.m. on 5 September, when it was about 250 km northeast of Hong Kong. As Haikui weakened into an area of low pressure over inland

eastern Guangdong, all tropical cyclone warning signals were cancelled at 9:40 p.m. on 5 September.

During the passage of Haikui, a maximum sea level (above chart datum) of 2.53 m was recorded at Tsim Bei Tsui, while a maximum storm surge of 0.39 m (above astronomical tide) was recorded at Tai Po Kau.

Under the influence of the outer subsiding air of Haikui, apart from isolated showers and squally thunderstorms, it was generally fine and very hot during the day in Hong Kong on 3 – 4 September. Affected by the remnant of Haikui, it was mainly cloudy with a few showers on 5 – 6 September. The trough of low pressure associated with the remnant of Haikui over the coast of Guangdong started to bring heavy rain and squally thunderstorms to Hong Kong on the night of 7 September. The heavy downpour continued to affect the territory till the next day. During the torrential rain, the Hong Kong Observatory Headquarters registered a record-breaking hourly rainfall of 158.1 millimetres from 11 p.m. to midnight on 7 September, the highest since records began in 1884. The 2-hour total rainfall of 201.0 millimetres and 12-hour total rainfall of 605.8 millimetres recorded at the Observatory Headquarters during this phenomenal rainstorm also broke their respective records. Moreover, the 24-hour rainfall from 4 p.m. on 7 September to 4 p.m. next day reached 638.5 millimetres, about a quarter of the normal annual total rainfall of Hong Kong and just next to the highest records kept by the historical rainstorm on 30 May 1889. More than 400 millimetres of rainfall were recorded over many parts of the territory and rainfall even exceeded 800 millimetres over the Eastern District and Southern District of Hong Kong Island on 7 – 8 September. The prolonged heavy rain necessitated the issuance of the Black Rainstorm Warning for 16 hours and 35 minutes, setting the longest record since the introduction of the rainstorm warning system in 1992.

The unrelenting heavy rain triggered flash floods and landslides in many parts of Hong Kong, resulting in widespread traffic disruption and damage to infrastructures. Locally, there were 60 reports of flooding and over 200 reports of landslides. Power and water supply were temporarily interrupted in some places. At least two people were killed and more than 140 were injured during the rainstorm. Wong Tin Sin was swamped by severe flooding. At Wong Tai Sin Mass Transit Railway Station, rainwater poured into the station platform and tunnel along the elevators and stairs. Parts of the Kwun Tong Line were suspended. The entire underground floor of the nearby Temple Mall North was submerged. The Lung Cheung Road in front of the mall was also flooded with many vehicles trapped. A house collapsed at Lei Uk Tsuen in Sha Tin. A landslide occurred on a mountain slope near Yiu Hing Road in Shau Kei Wan

with many boulders falling and blocking the road. A vehicle was hit by the rocks. Water pipes were damaged and water supply to nearby residences was suspended. The car park at Wan Tsui Estate in Chai Wan was flooded with the water depth reaching half a vehicle. There were road subsidence in different places of Hong Kong Island, including Repulse Bay, Shek O, and Chai Wan. A passing vehicle fell into a subsided hole at the intersection of Island Road and Repulse Bay Road. Shek O Road was once closed due to landslides and road subsidence.

表 2.3.1 在海葵影響下，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 Haikui were in force

站 Station (https://www.hko.gov.hk/tc/informtc/station2023.html)		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		
中環碼頭	Central Pier	東北偏東	ENE	29	4/9	22:58	西北偏西	WNW	18	5/9	11:00
長洲	Cheung Chau	西北偏西	WNW	44	5/9	07:29	西北	NW	22	5/9	10:00
長洲泳灘	Cheung Chau Beach	-	-	36	4/9	20:45	-	-	14	5/9	08:00
青洲	Green Island	西北	NW	40	4/9	07:43	西北	NW	28	5/9	09:00
香港國際機場	Hong Kong International Airport	東北	NE	37	4/9	20:44	西北偏北	NNW	24	5/9	11:00
啟德	Kai Tak	西北	NW	29	5/9	17:42	西北	NW	12	5/9	12:00
京士柏	King's Park	北	N	36	4/9	22:03	東北偏北	NNE	14	4/9	23:00
南丫島	Lamma Island	西北	NW	25	5/9	09:10	西北偏北	NNW	15	5/9	09:00
流浮山	Lau Fau Shan	東北偏北	NNE	58	4/9	20:13	西北偏北	NNW	21	5/9	12:00
							西北偏北	NNW	21	5/9	15:00
昂坪	Ngong Ping	東北偏北	NNE	40	5/9	09:40	東北偏北	NNE	23	5/9	00:00
北角	North Point	西南偏西	WSW	26	4/9	04:44	西南偏西	WSW	18	4/9	05:00
		西南偏西	WSW	26	4/9	04:45					
		西南偏西	WSW	26	4/9	05:06					
		西南偏西	WSW	26	4/9	05:15					
坪洲	Peng Chau	北	N	40	4/9	20:37	西北	NW	24	5/9	08:00
平洲	Ping Chau	西北偏西	WNW	20	5/9	11:16	西北偏西	WNW	8	5/9	12:00
西貢	Sai Kung	北	N	33	4/9	23:26	北	N	17	4/9	11:00
沙洲	Sha Chau	北	N	58	4/9	20:36	西北偏北	NNW	29	4/9	21:00
沙螺灣	Sha Lo Wan	東北偏東	ENE	30	4/9	20:55	西	W	8	4/9	21:00
							西南偏西	WSW	8	5/9	07:00
沙田	Sha Tin	東北	NE	24	4/9	22:15	東北	NE	9	4/9	12:00
石崗	Shek Kong	-	-	39	4/9	19:57	-	-	12	5/9	13:00
九龍天星碼頭	Star Ferry (Kowloon)	西北偏西	WNW	35	5/9	10:28	西	W	18	4/9	16:00
打鼓嶺	Ta Kwu Ling	北	N	28	4/9	10:03	東北偏北	NNE	12	4/9	11:00
大美督	Tai Mei Tuk	東北	NE	43	4/9	22:02	東北	NE	19	4/9	22:00
大帽山	Tai Mo Shan	東北偏北	NNE	54	4/9	23:32	東北偏北	NNE	42	5/9	00:00
		東北偏北	NNE	54	4/9	23:38					
塔門東	Tap Mun East	西北偏西	WNW	43	4/9	18:26	西北偏西	WNW	17	5/9	10:00
大老山	Tate's Cairn	東北偏北	NNE	57	4/9	22:19	東北偏北	NNE	44	4/9	23:00
將軍澳	Tseung Kwan O	東北偏東	ENE	27	4/9	08:40	東北偏東	ENE	12	4/9	12:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	北	N	39	4/9	20:21	西北	NW	10	4/9	09:00
							西北	NW	10	4/9	10:00
							西北偏西	WNW	10	4/9	18:00
屯門政府合署	Tuen Mun Government Offices	東北偏北	NNE	34	4/9	20:29	西北偏西	WNW	12	4/9	16:00
橫瀾島	Waglan Island	西北偏西	WNW	30	5/9	12:05	西北偏北	NNW	22	5/9	02:00
濕地公園	Wetland Park	西北偏北	NNW	24	4/9	20:18	西南偏西	WSW	6	4/9	16:00
黃竹坑	Wong Chuk Hang	西	W	32	4/9	22:44	西北偏北	NNW	8	5/9	10:00

黃麻角(赤柱)、大埔滘 - 沒有資料
長洲泳灘、石崗 - 沒有風向資料

Bluff Head (Stanley), Tai Po Kau - data not available

Cheung Chau Beach, Shek Kong - wind direction not available

表 2.3.2 海葵影響香港期間，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 Haikui

站 (參閱圖 2.3.2) Station (See Fig. 2.3.2)		九月四日 4 Sep	九月五日 5 Sep	九月六日 6 Sep	九月七日 7 Sep	九月八日 8 Sep	總雨量(毫米) Total rainfall (mm)
香港天文台 Hong Kong Observatory (HKO)		微量 Trace	0.4	0.0	215.7	425.0	641.1
香港國際機場 Hong Kong International Airport (HKA)		4.8	微量 Trace	微量 Trace	90.9	71.0	166.7
長洲 Cheung Chau (CCH)		0.0	0.0	0.5	35.0	113.0	148.5
H23	香港仔 Aberdeen	0.0	0.0	0.0	175.0	375.0	550.0
N05	粉嶺 Fanling	0.0	0.0	0.0	224.5	373.5	598.0
N13	糧船灣 High Island	0.5	0.0	0.5	34.5	114.0	149.5
K04	佐敦谷 Jordan Valley	0.0	1.0	0.0	197.5	348.5	547.0
N06	葵涌 Kwai Chung	0.0	0.0	0.0	150.5	379.5	530.0
H12	半山區 Mid Levels	0.0	0.5	0.5	148.0	311.5	460.5
N09	沙田 Sha Tin	0.0	0.5	0.5	167.5	234.5	403.0
H19	筲箕灣 Shau Kei Wan	0.0	1.0	0.0	260.5	546.0	807.5
SEK	石崗 Shek Kong	7.5	0.0	0.0	72.5	291.0	371.0
K06	蘇屋邨 So Uk Estate	0.0	1.0	0.5	209.0	429.0	639.5
R31	大美督 Tai Mei Tuk	0.0	0.0	0.5	196.0	138.0	334.5
R21	踏石角 Tap Shek Kok	13.0	0.0	0.0	74.5	78.0	165.5
N17	東涌 Tung Chung	8.5	0.0	0.0	79.0	72.5	160.0
TMR	屯門水庫 Tuen Mun Reservoir	6.0	0.0	0.0	96.1	118.5	220.6

表 2.3.3 海葵影響香港期間，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 Haikui

站 Station (https://www.hko.gov.hk/tc/informtc/station2023.html)		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	2.31	5/9	00:40	0.29	4/9	11:35
石壁	Shek Pik	2.26	5/9	00:55	0.23	4/9	19:49
大廟灣	Tai Miu Wan	2.23	5/9	00:51	0.29	4/9	19:18
大埔滘	Tai Po Kau	2.46	5/9	00:49	0.39	4/9	12:01
尖鼻咀	Tsim Bei Tsui	2.53	4/9	13:23	0.32	4/9	21:07

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

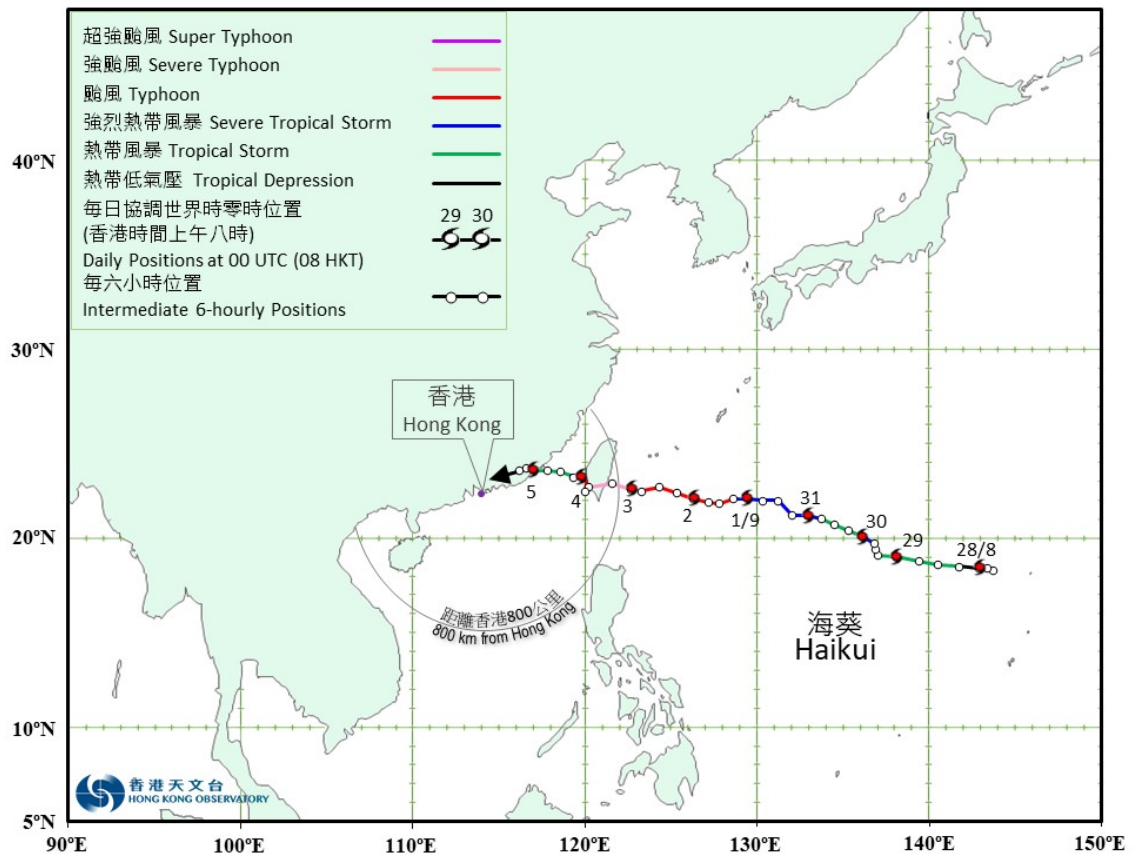


圖 2.3.1a 二零二三年八月二十七日至九月五日海葵(2311)的暫定路徑圖。
 Figure 2.3.1a Provisional track of Haikui (2311): 27 August – 5 September 2023.

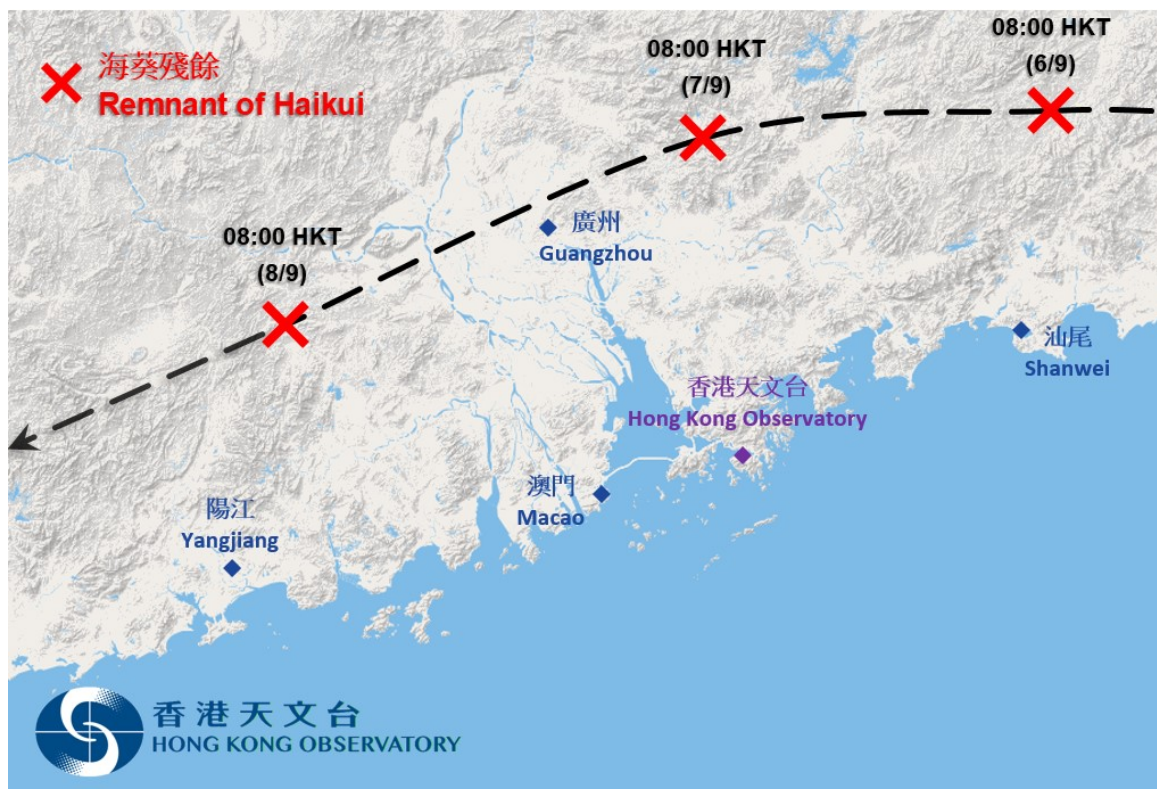


圖 2.3.1b 二零二三年九月六日至八日海葵殘餘的中心的大約位置。(初步分析)

Figure 2.3.1b Approximate location of the centre of the remnant of Haikui on 6 – 8 September 2023. (initial analysis)

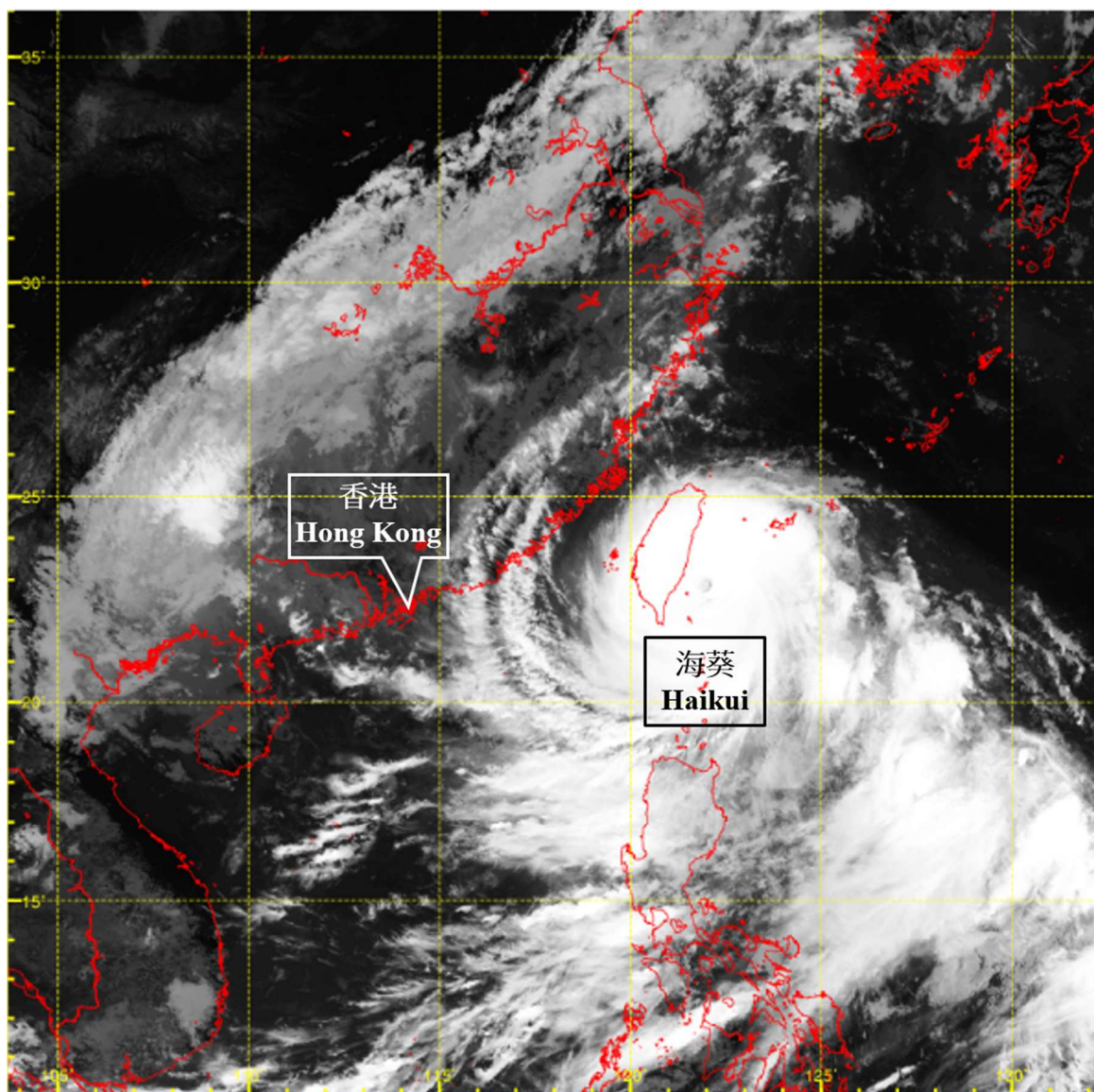


圖 2.3.2a 二零二三年九月三日上午十一時左右的紅外線衛星圖片，當時海葵達到其最高強度，中心附近最高持續風速估計為每小時 175 公里。

Figure 2.3.2a Infra-red satellite imagery at around 11 a.m. on 3 September 2023 when Haikui was at its peak intensity with an estimated maximum sustained wind of 175 km/h near its centre.

〔此衛星圖像接收自日本氣象廳的向日葵 9 號衛星。〕

[The satellite imagery was originally captured by Himawari-9 Satellite (H-9) of Japan Meteorological Agency.]

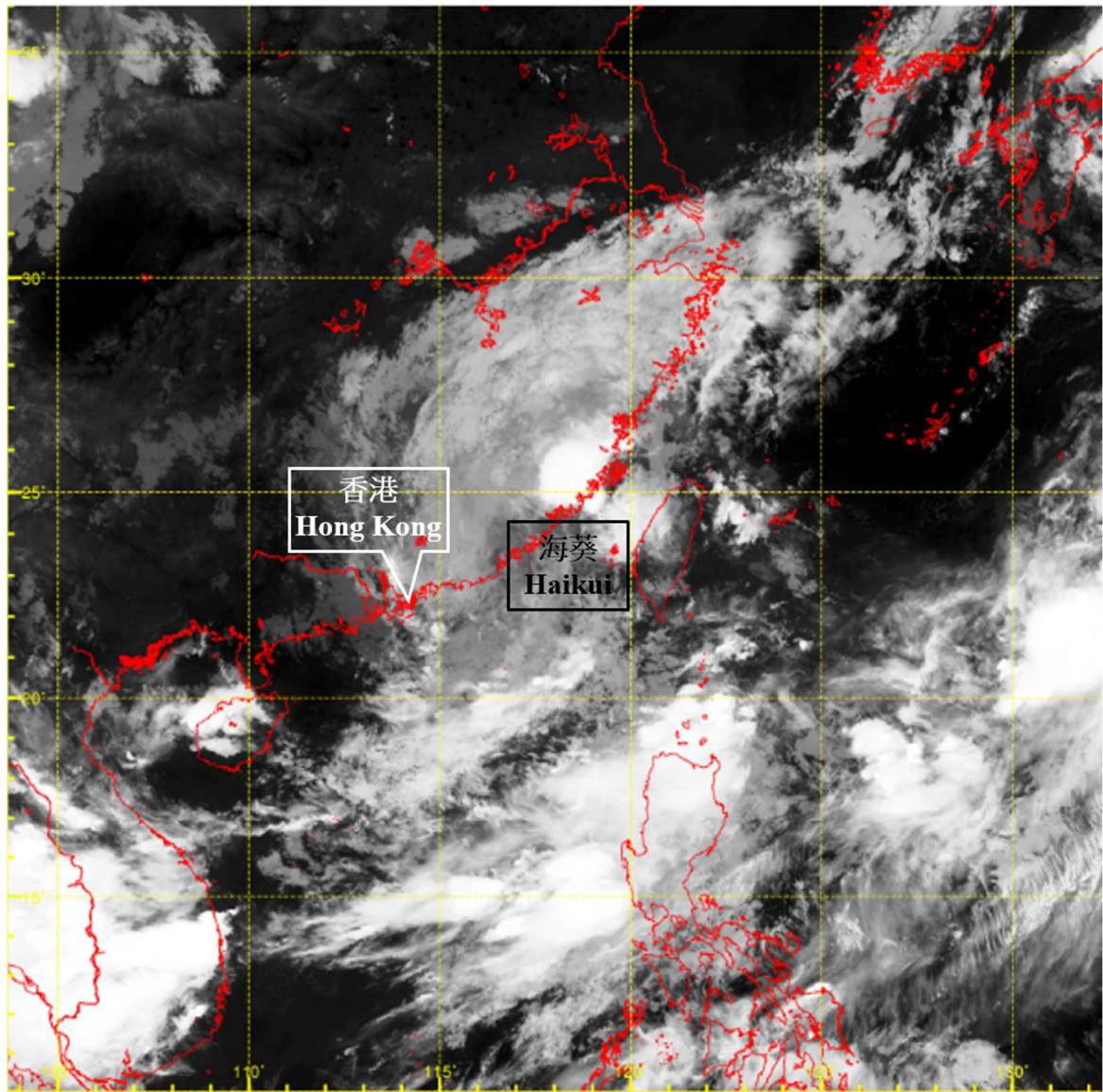


圖 2.3.2b 二零二三年九月五日下午八時左右的紅外線衛星圖片，當時海葵最接近本港，在香港之東北約 250 公里。

Figure 2.3.2b Infra-red satellite imagery at around 8 p.m. on 5 September 2023. Haikui was closest to the territory at the time, around 250 km northeast of Hong Kong.

[此衛星圖像接收自日本氣象廳的向日葵 9 號衛星。]

[The satellite imagery was originally captured by Himawari-9 Satellite (H-9) of Japan Meteorological Agency.]

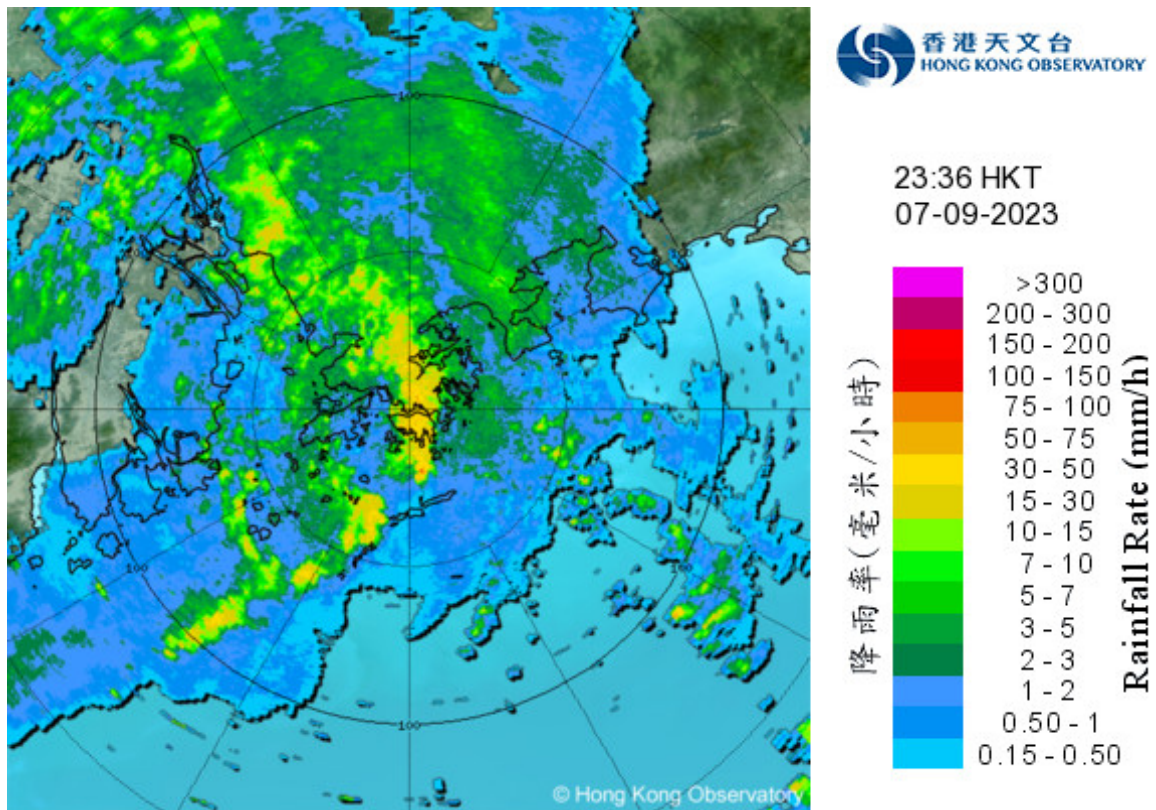


圖 2.3.3a 二零二三年九月七日晚上 11 時 36 分滂沱大雨影響香港期間的雷達回波圖像。

Figure 2.3.3a Image of radar echoes captured at 11:36 p.m. on 7 September 2023 when torrential rain was affecting Hong Kong.

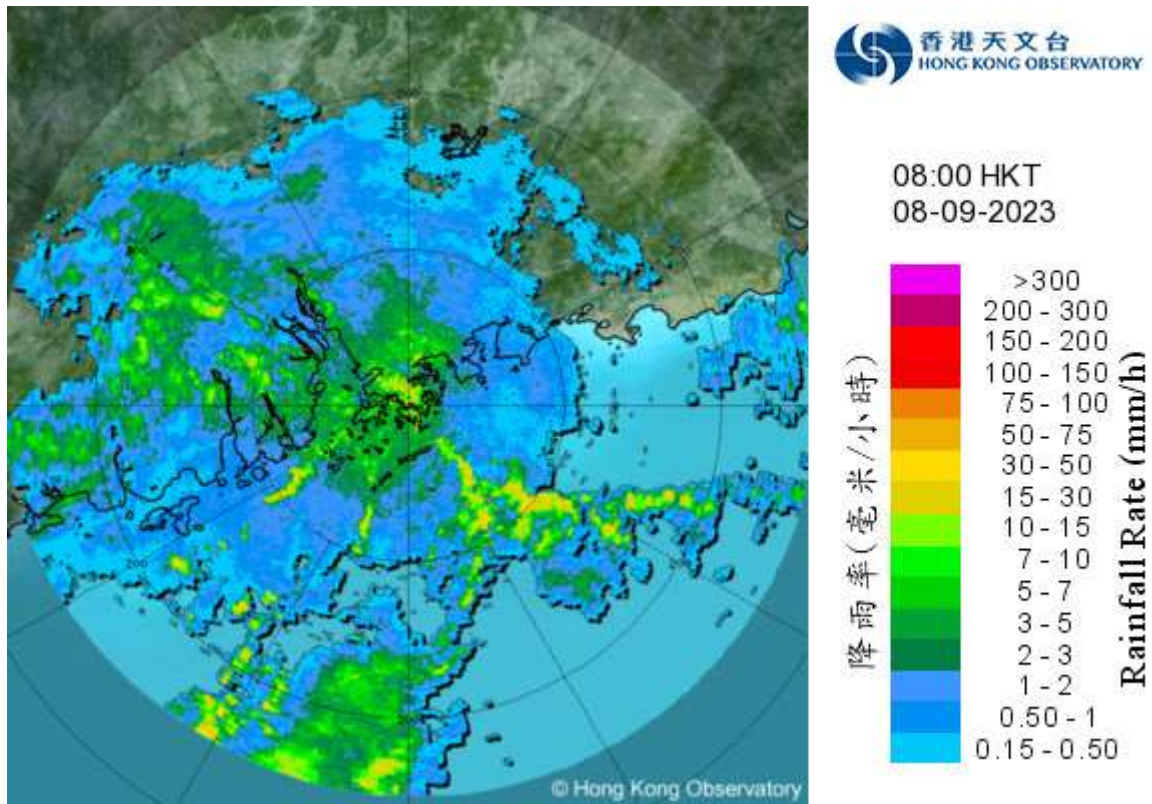


圖 2.3.3b 二零二三年九月八日上午 8 時的雷達回波圖像，當時海葵殘餘的中心已移至香港西北面，但與其相關的大雨仍然影響本港。

Figure 2.3.3b Image of radar echoes captured at 8:00 a.m. on 8 September 2023. While the remnant low pressure area associated with Haikui moved to the northwest of Hong Kong, its associated heavy rain was still affecting the territory.

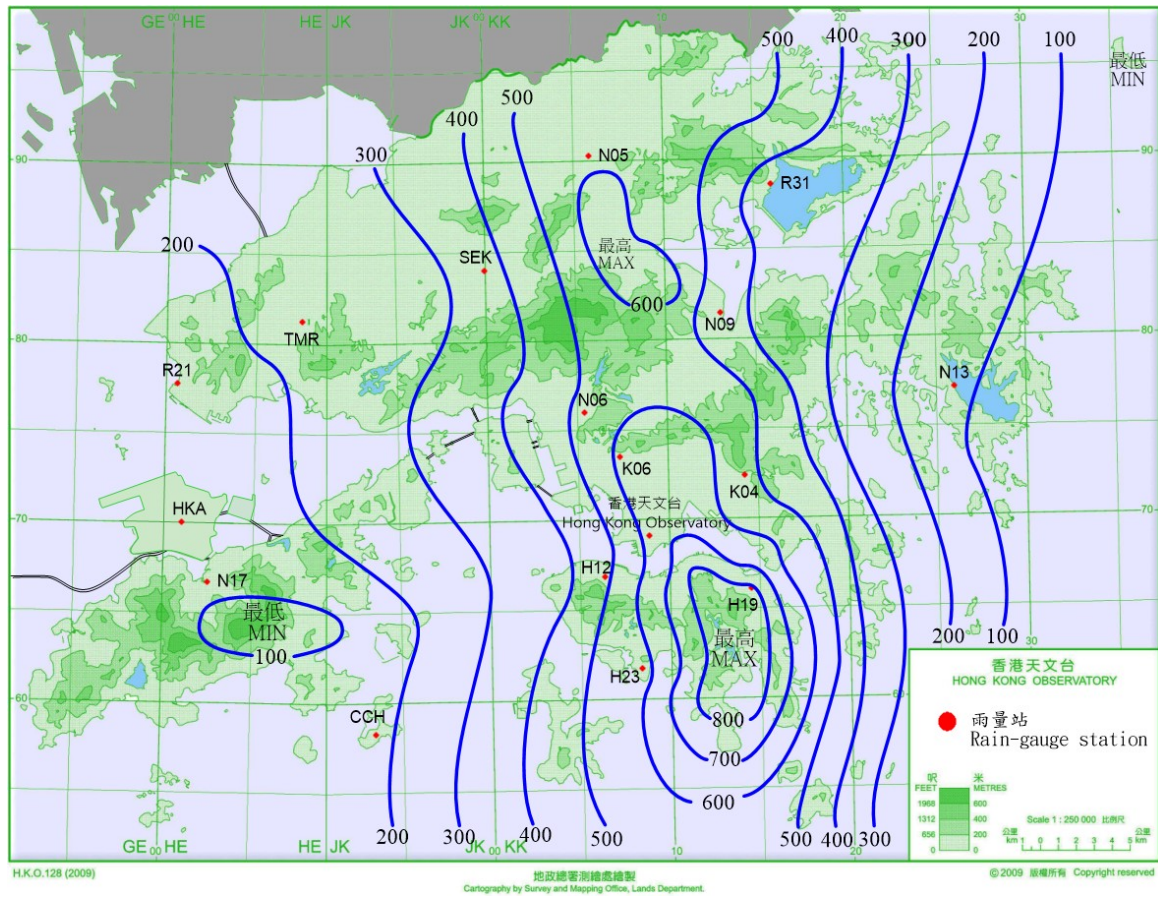


圖 2.3.4 二零二三年九月四日至八日的雨量分佈(等雨量線單位為毫米)。
 Figure 2.3.4 Rainfall distribution on 4 – 8 September 2023 (isohyets are in millimetres).

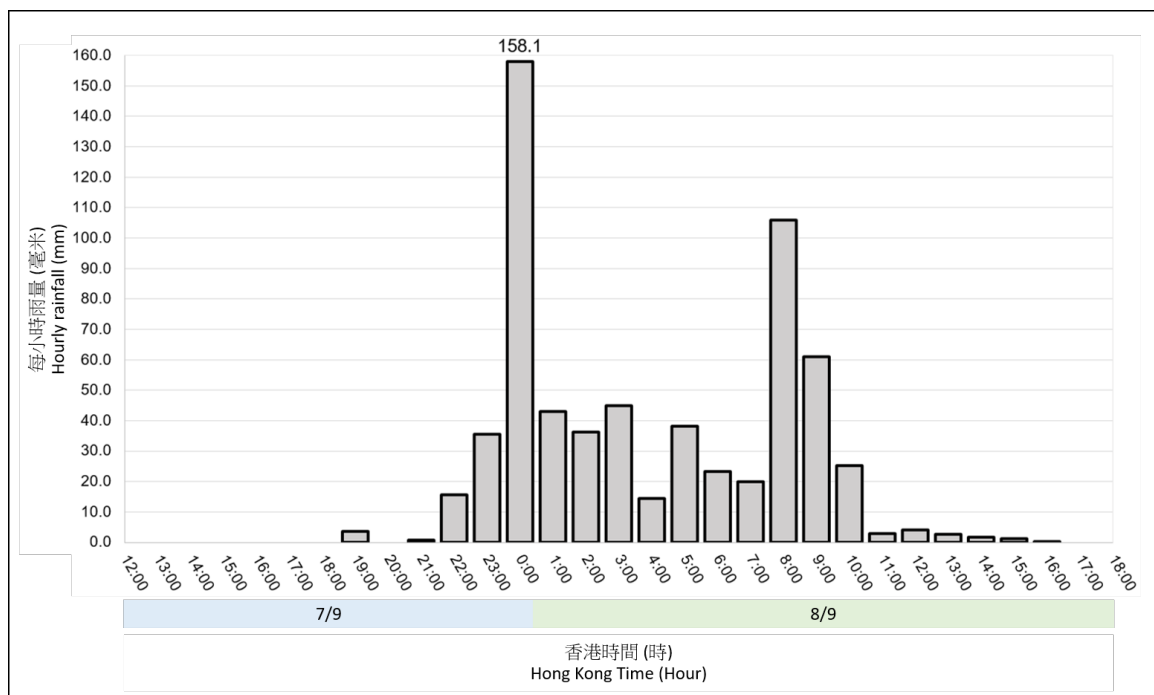


圖 2.3.5 二零二三年九月七日正午 12 時至九月八日下午 6 時香港天文台總部錄得的每小時雨量。

Figure 2.3.5 Hourly rainfall recorded at the Hong Kong Observatory Headquarters from noon on 7 September to 6 p.m. on 8 September 2023.



圖 2.3.6 二零二三年九月七日至八日暴雨期間黃大仙出現嚴重水浸(鳴謝相片來源：商台新聞)。

Figure 2.3.6 Serious flooding in Wong Tai Sin during the rainstorm on 7 – 8 September 2023 (Courtesy of CRHK News).



圖 2.3.7 二零二三年九月七日至八日暴雨期間筲箕灣出現山泥傾瀉(鳴謝相片來源：土力工程處)。

Figure 2.3.7 Landslide in Shau Kei Wan during the rainstorm on 7 – 8 September 2023 (Courtesy of Geotechnical Engineering Office).

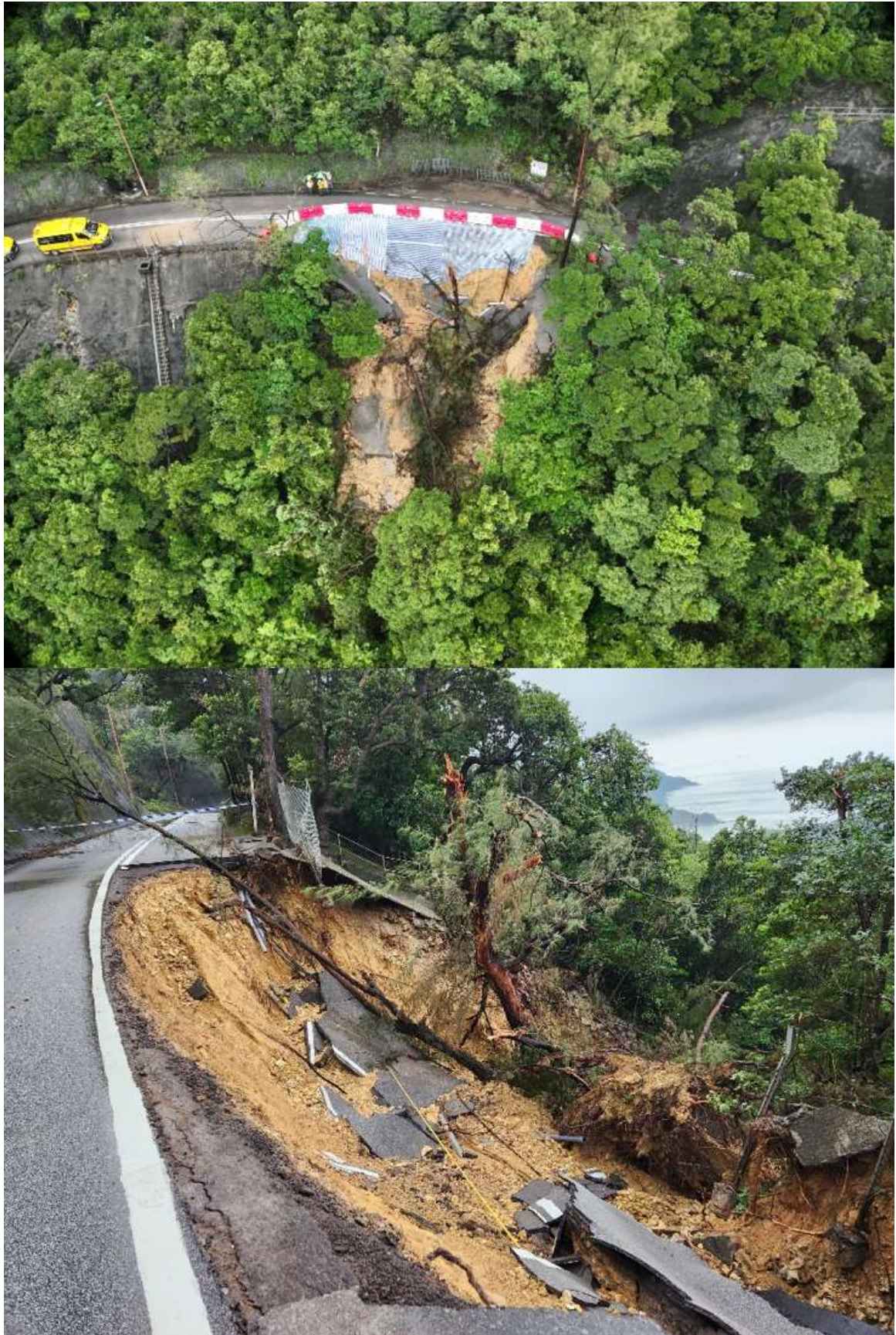
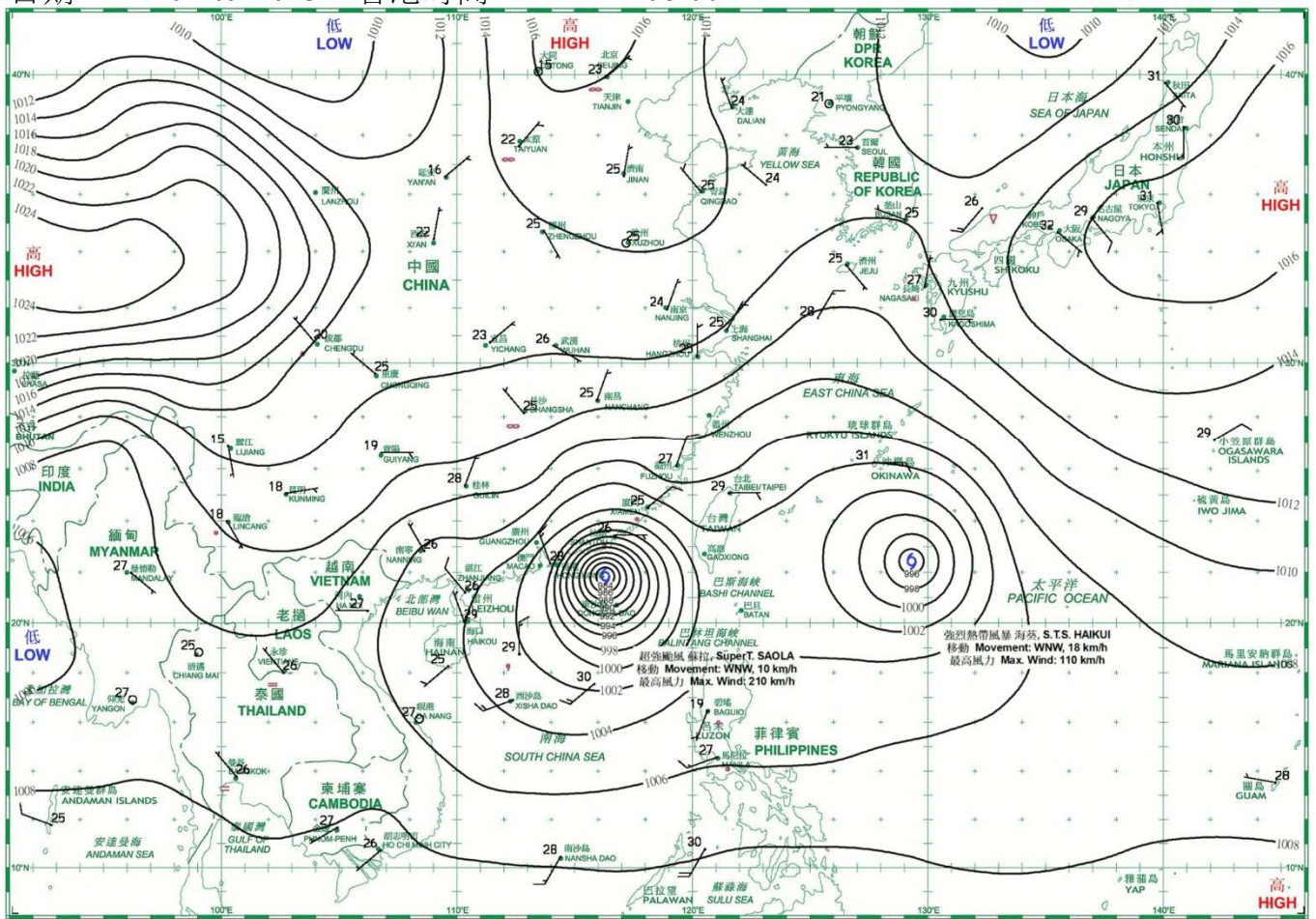


圖 2.3.8 二零二三年九月七日至八日暴雨期間石澳道出現路陷(鳴謝相片來源：土力工程處)。

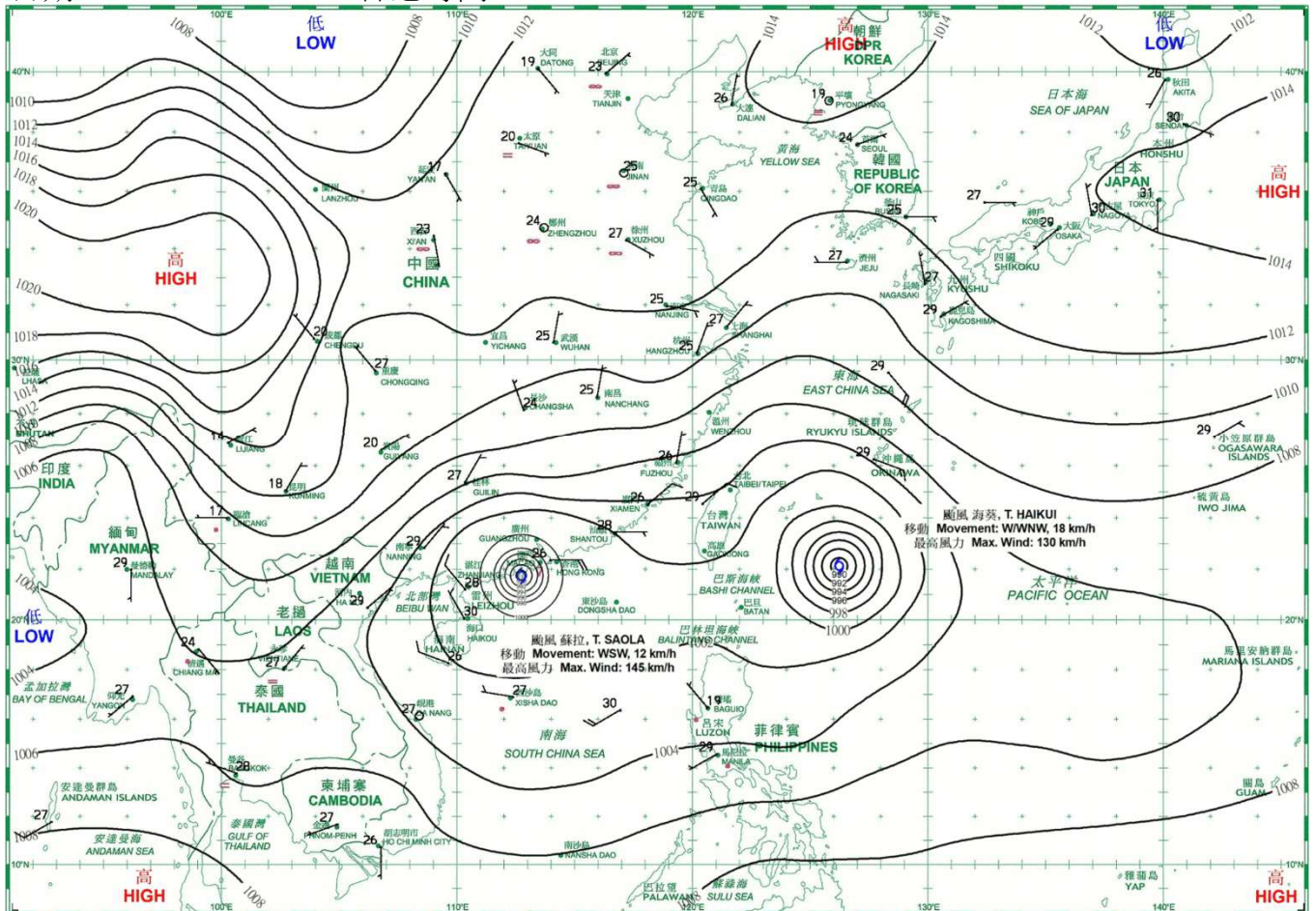
Figure 2.3.8 Road subsidence in Shek O Road during the rainstorm on 7 – 8 September 2023 (Courtesy of Geotechnical Engineering Office).

3. 二零二三年九月每日天氣圖 3. Daily Weather Maps for September 2023

日期/Date: 01.09.2023 香港時間/HK Time: 08:00

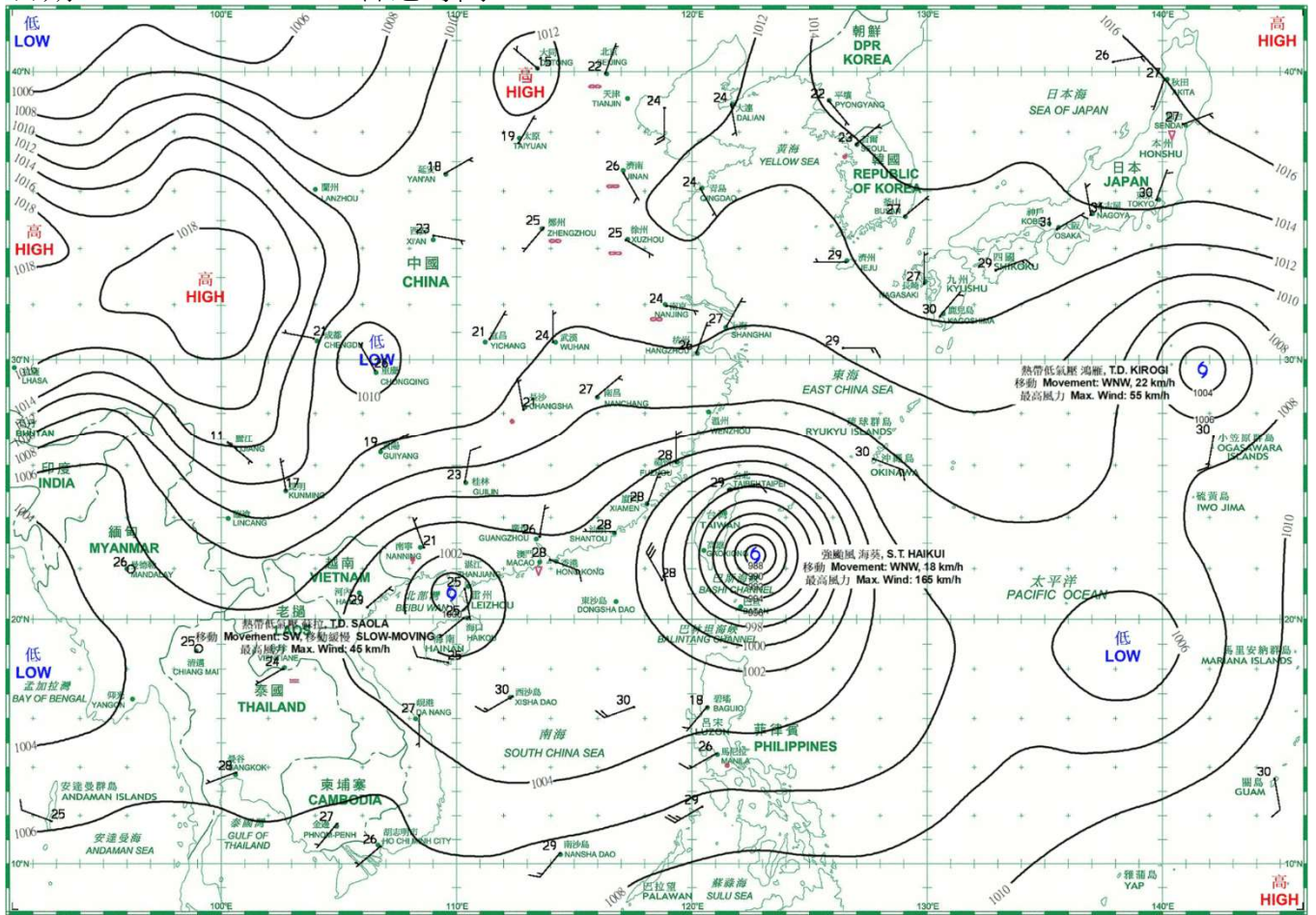


日期/Date: 02.09.2023 香港時間/HK Time: 08:00

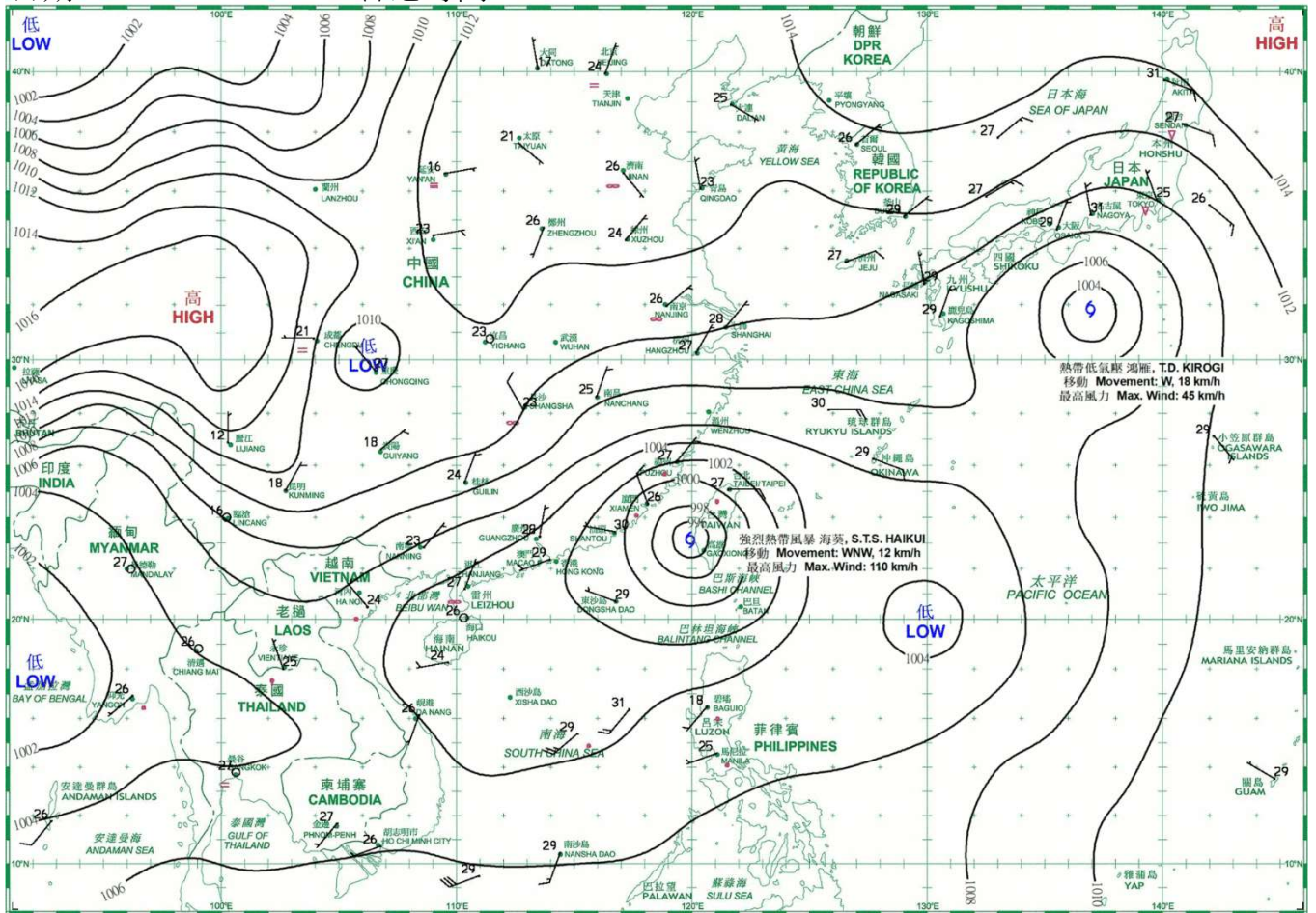


等壓線 Isobar(hPa) 暖鋒 Warm Front 靜止鋒 Stationary Front 消散中的冷鋒 Dissipating Cold Front
 冷鋒 Cold Front 錮囚鋒 Occlusion 槽軸 (線) Axis of Trough 熱帶氣旋中心 Centre of Tropical Cyclone

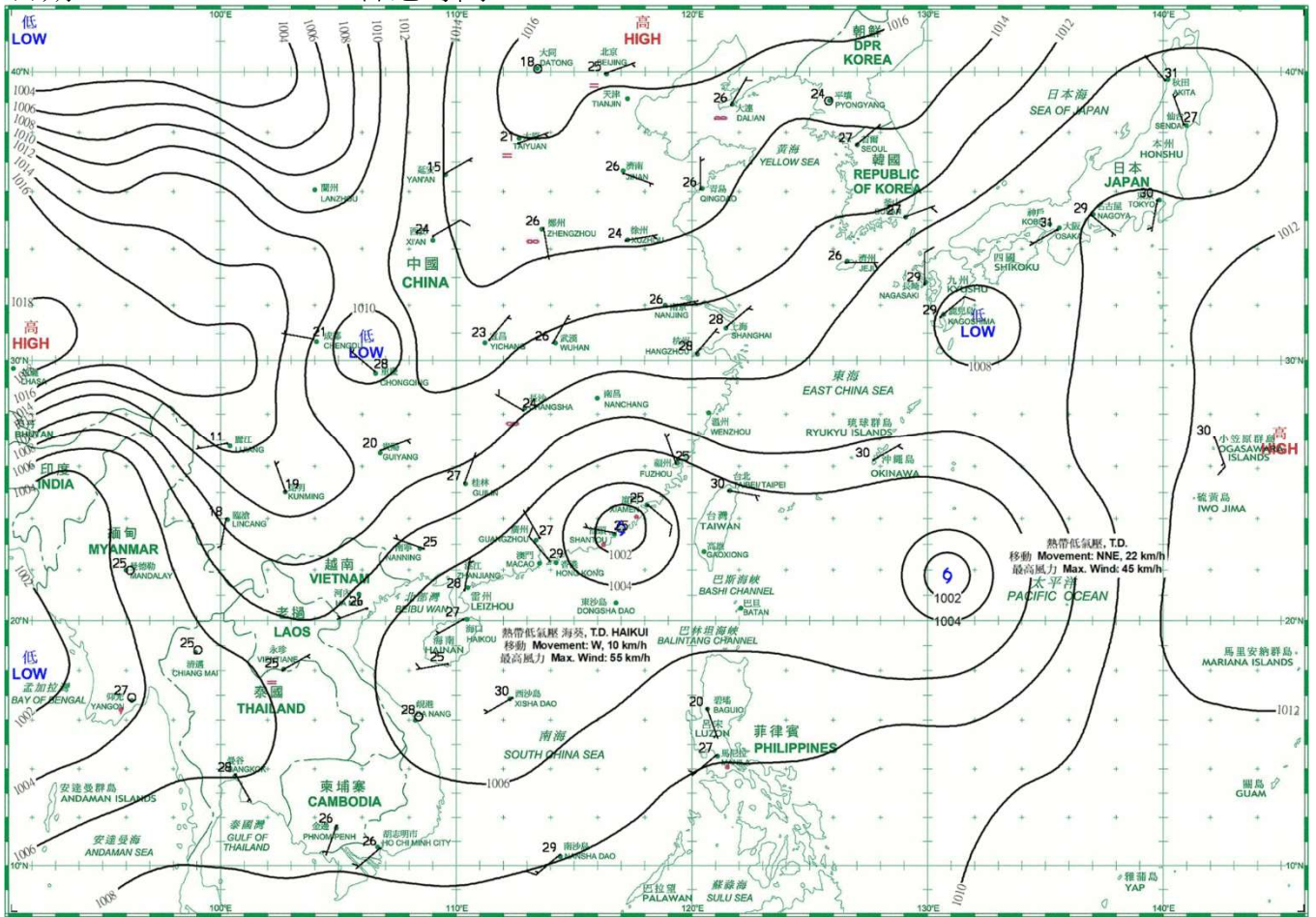
日期/Date: 03.09.2023 香港時間/HK Time: 08:00



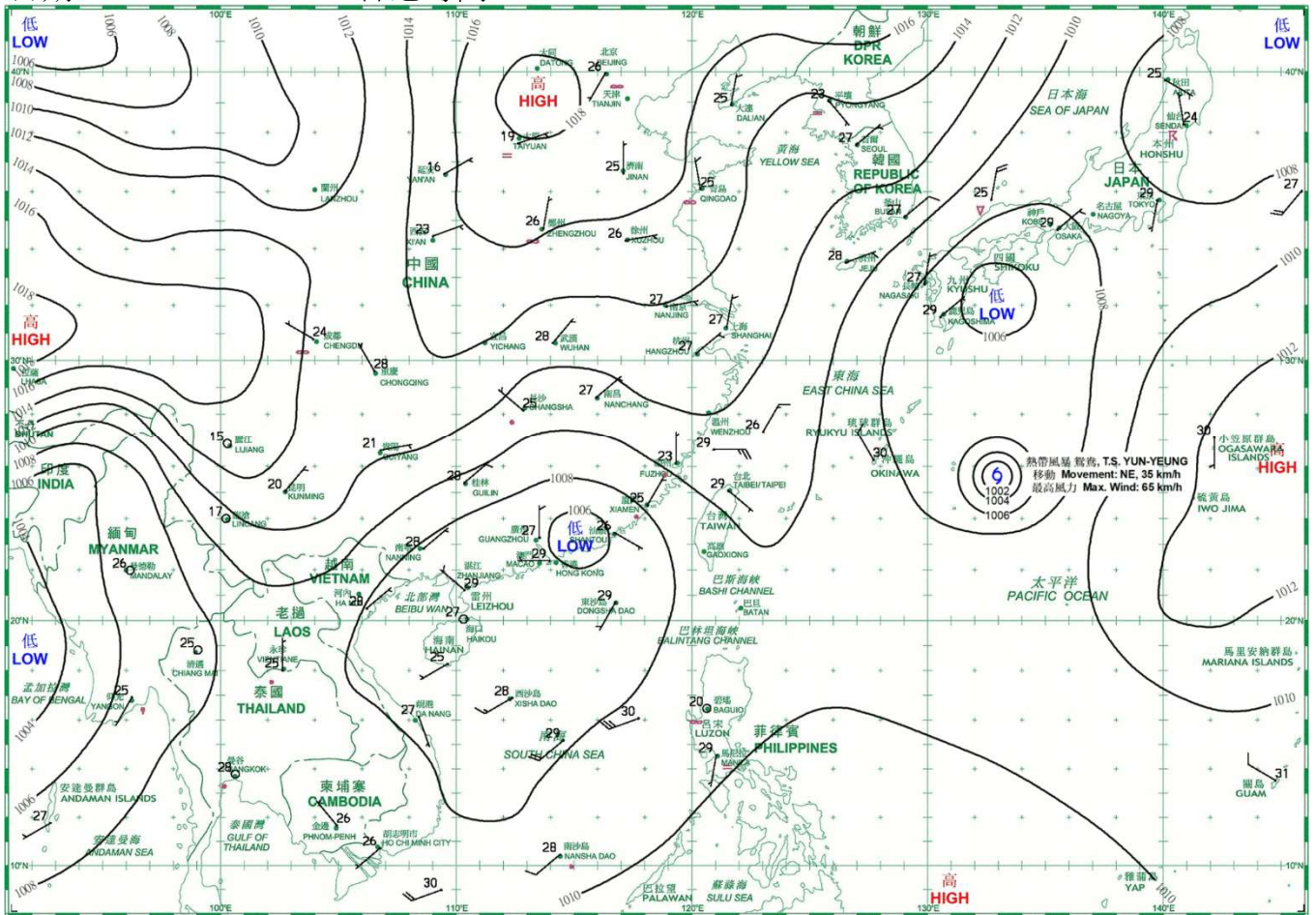
日期/Date: 04.09.2023 香港時間/HK Time: 08:00



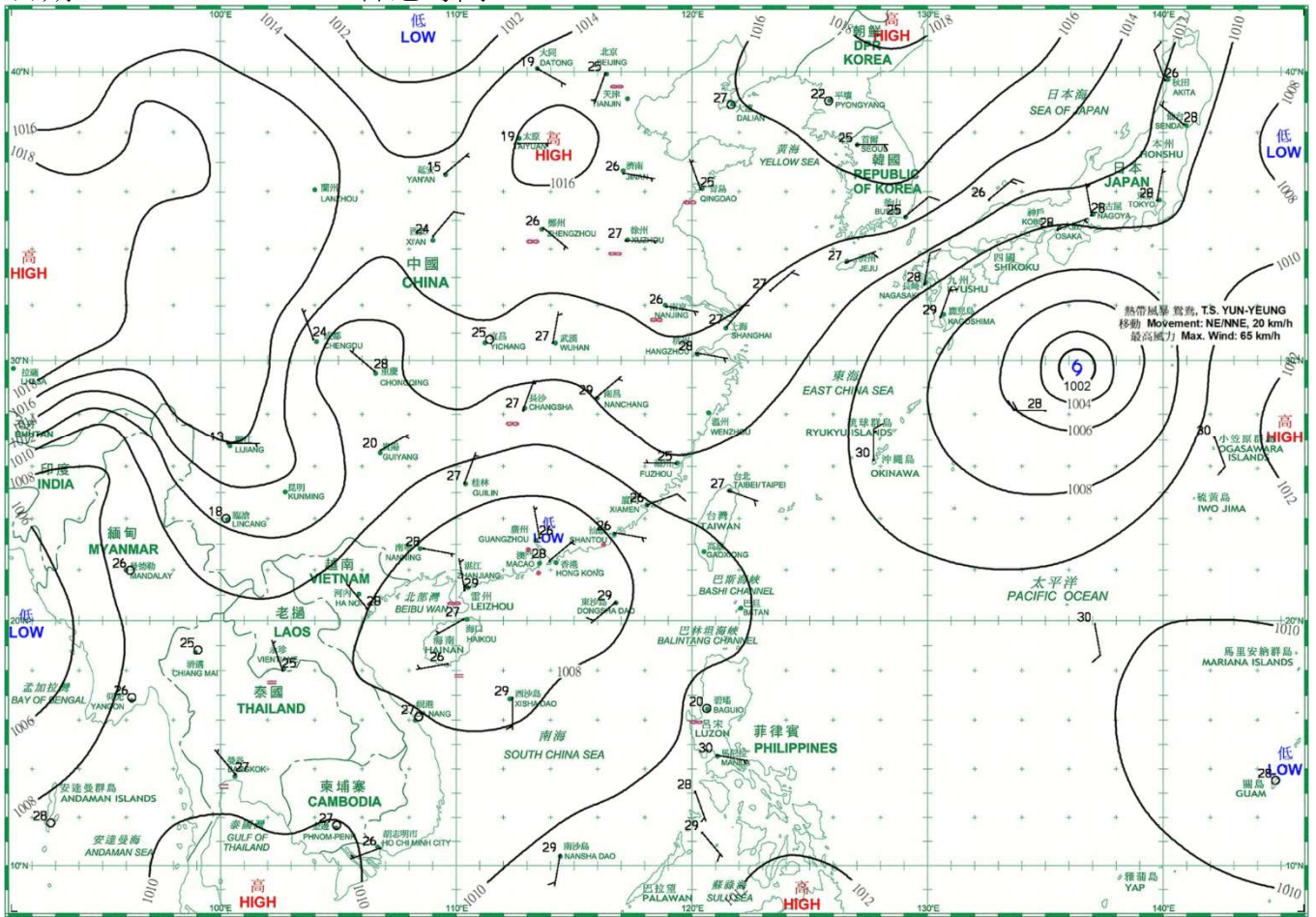
日期/Date: 05.09.2023 香港時間/HK Time: 08:00



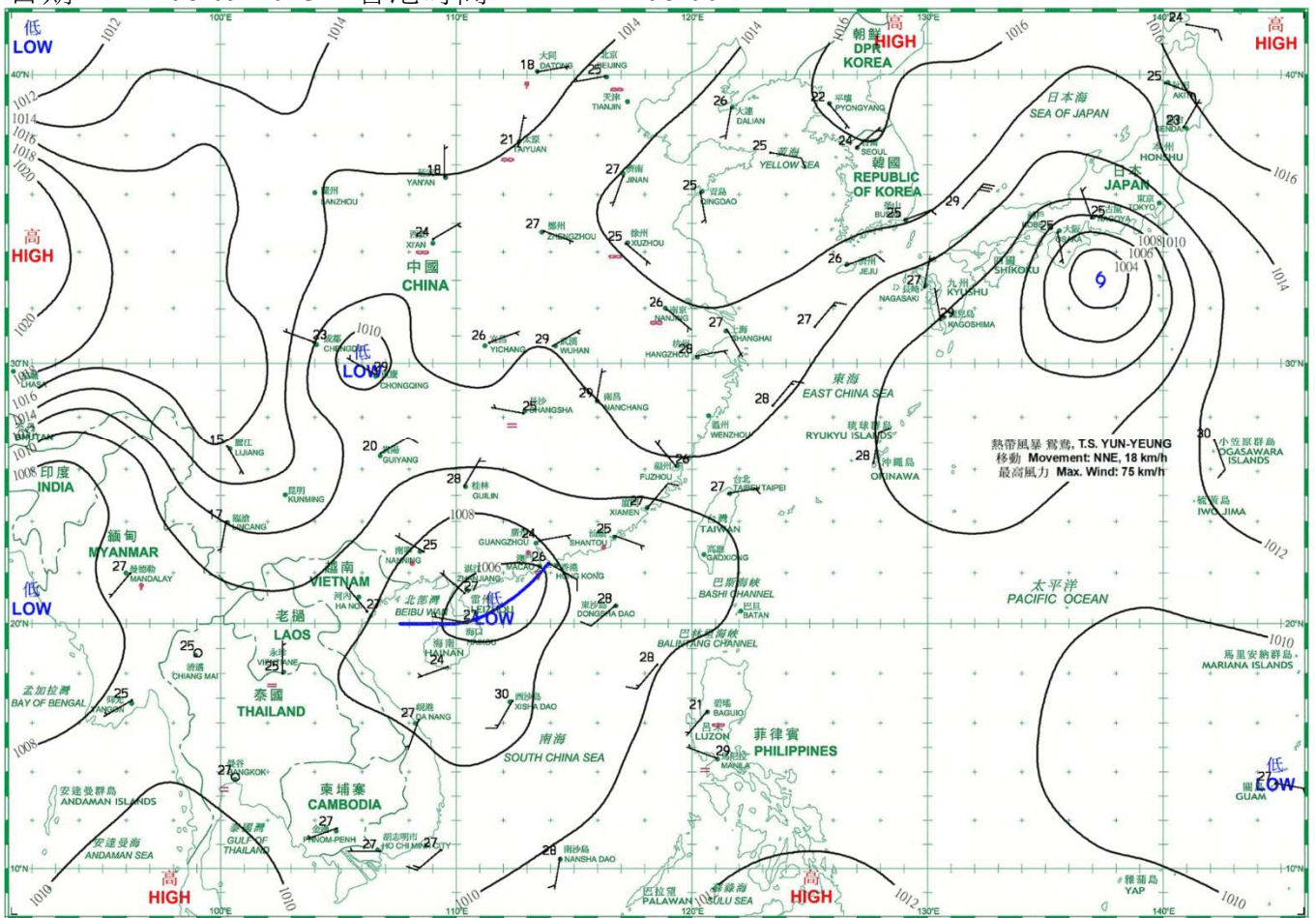
日期/Date: 06.09.2023 香港時間/HK Time: 08:00



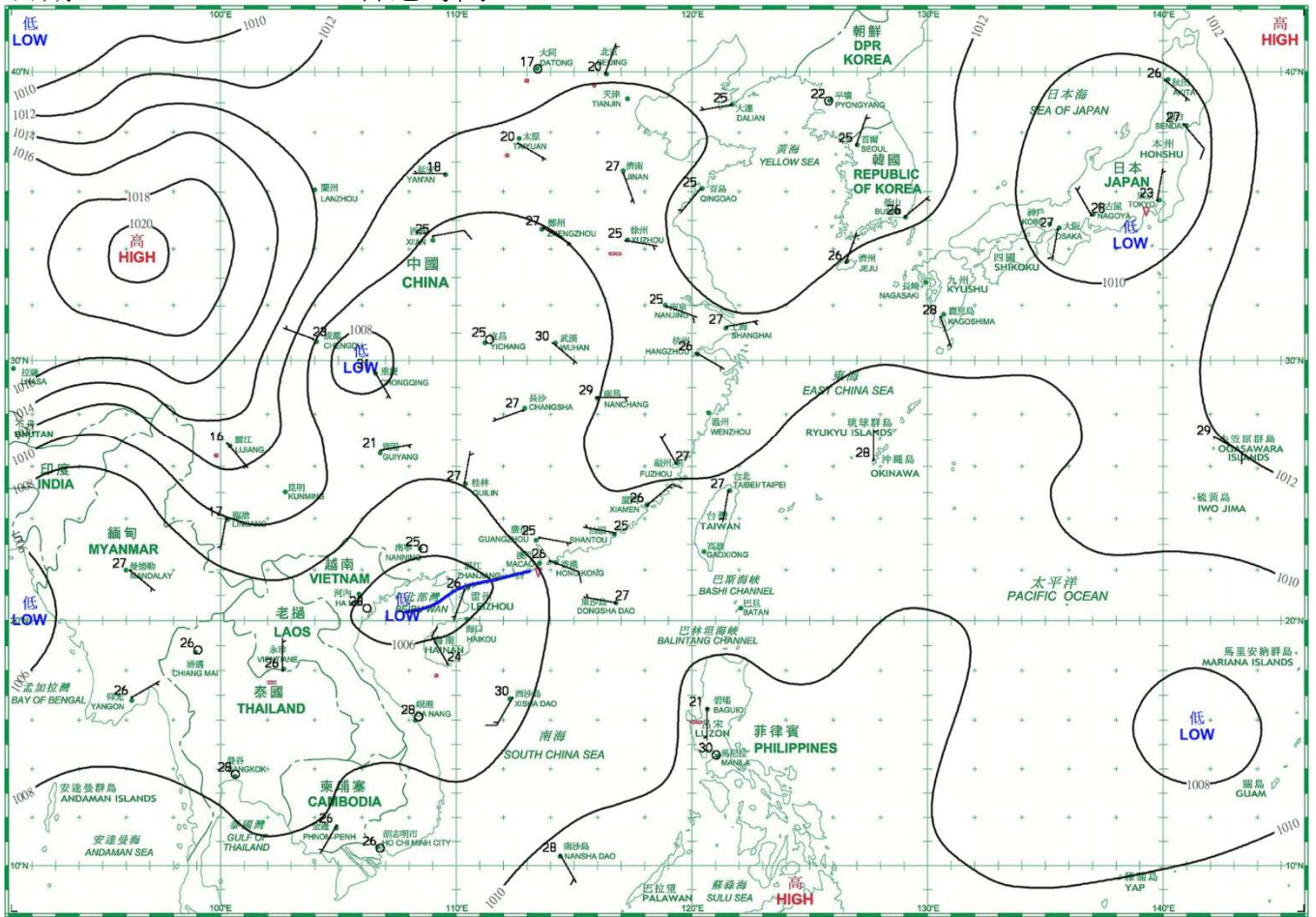
日期/Date: 07.09.2023 香港時間/HK Time: 08:00



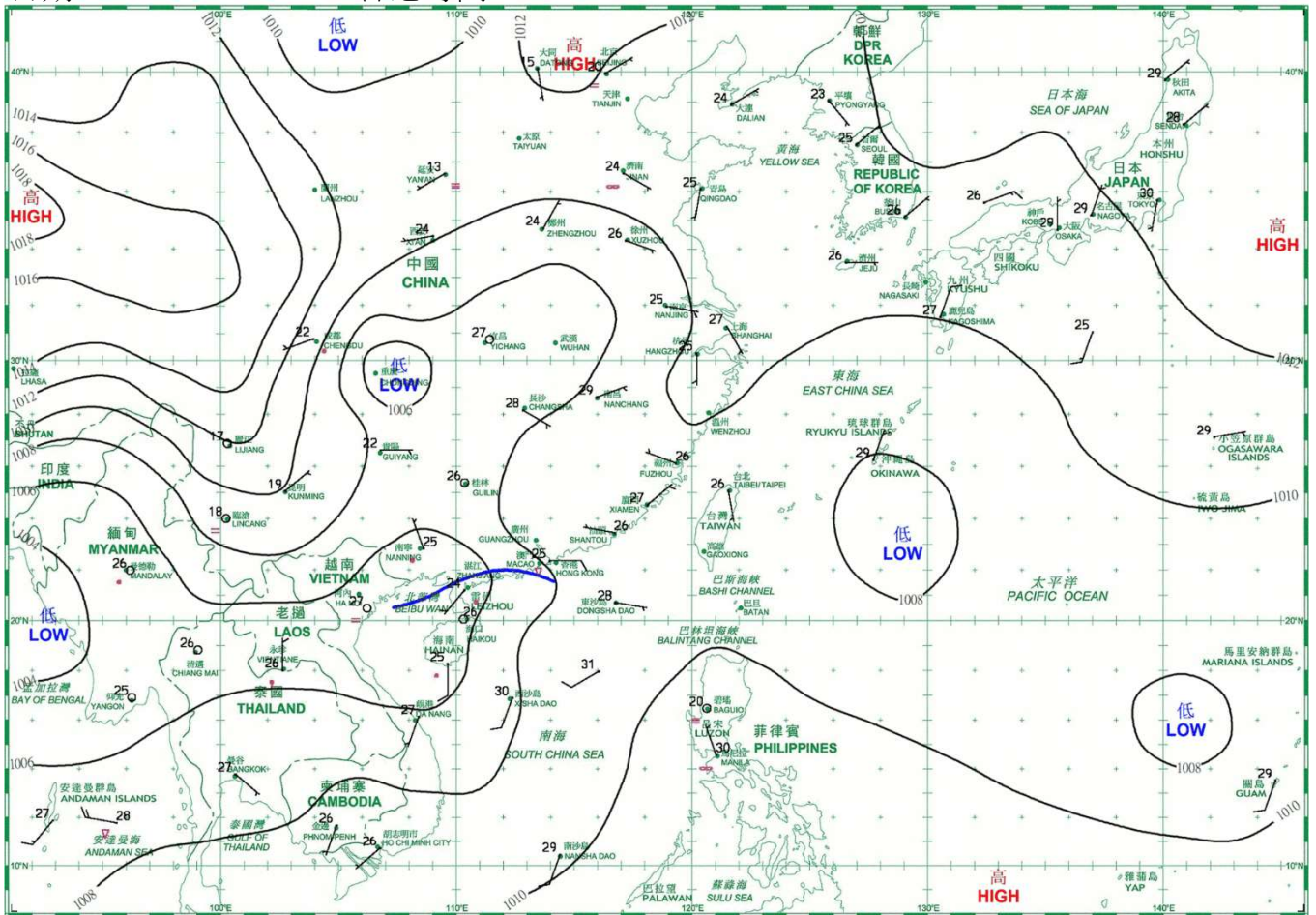
日期/Date: 08.09.2023 香港時間/HK Time: 08:00



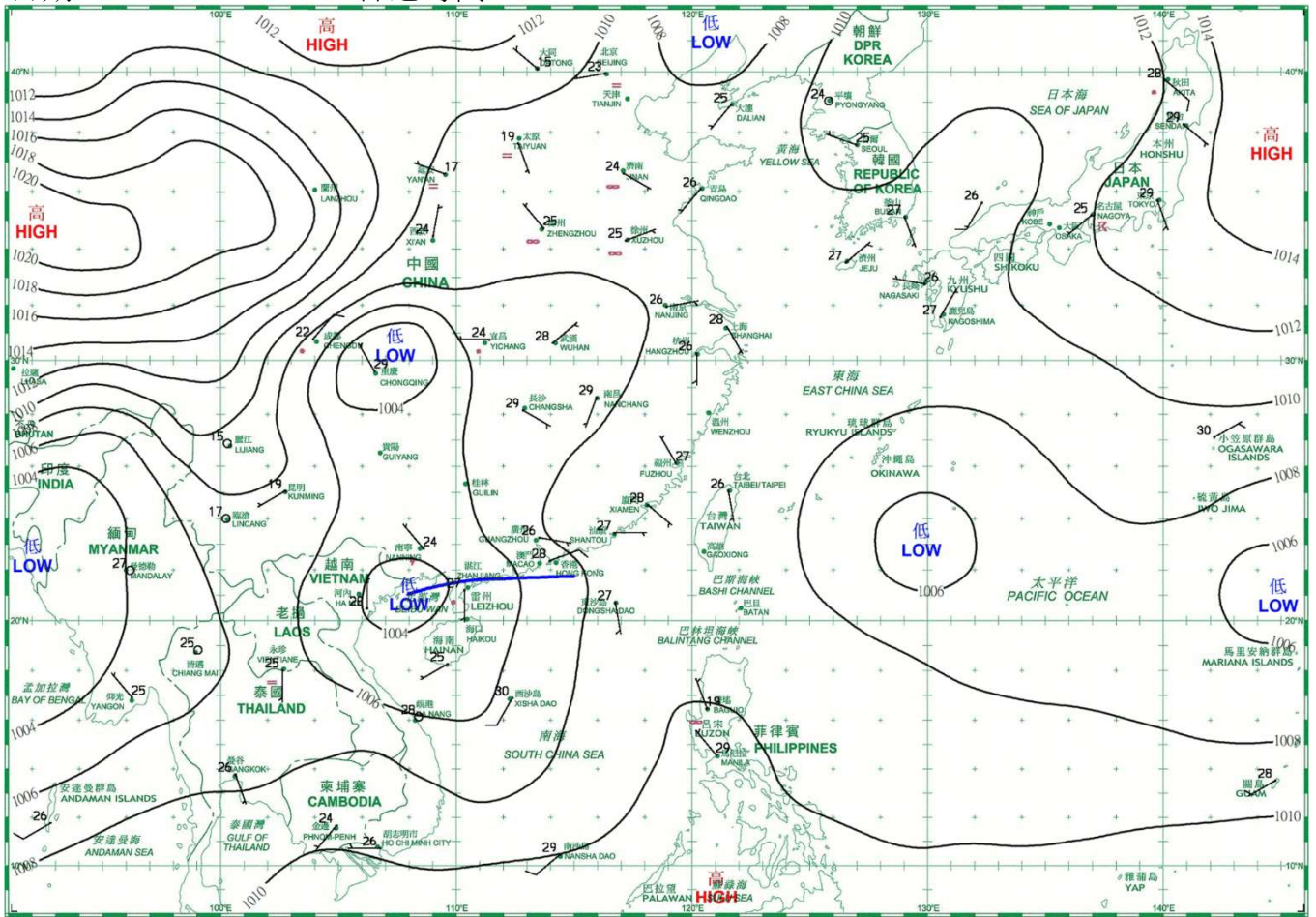
日期/Date: 09.09.2023 香港時間/HK Time: 08:00



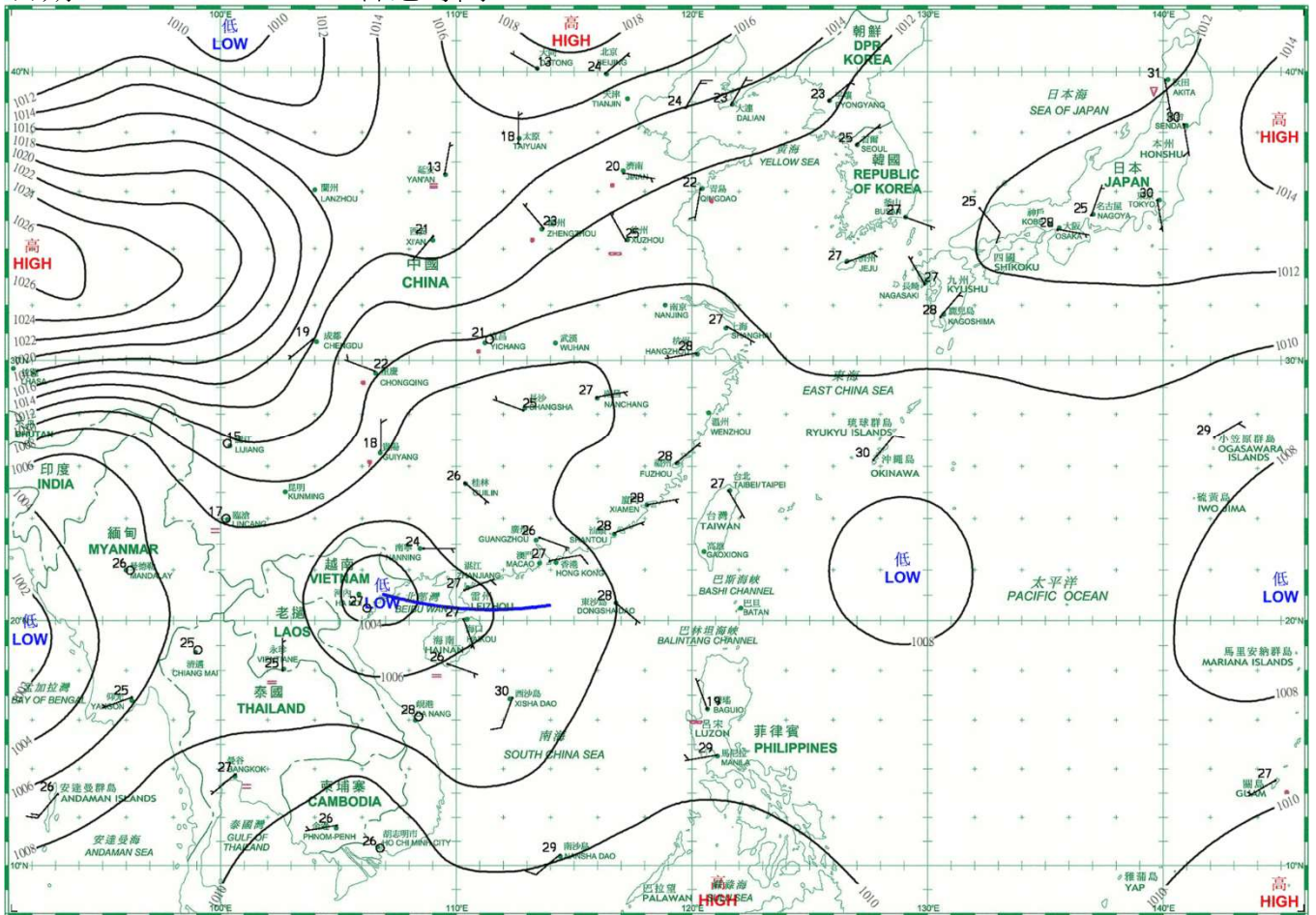
日期/Date: 10.09.2023 香港時間/HK Time: 08:00



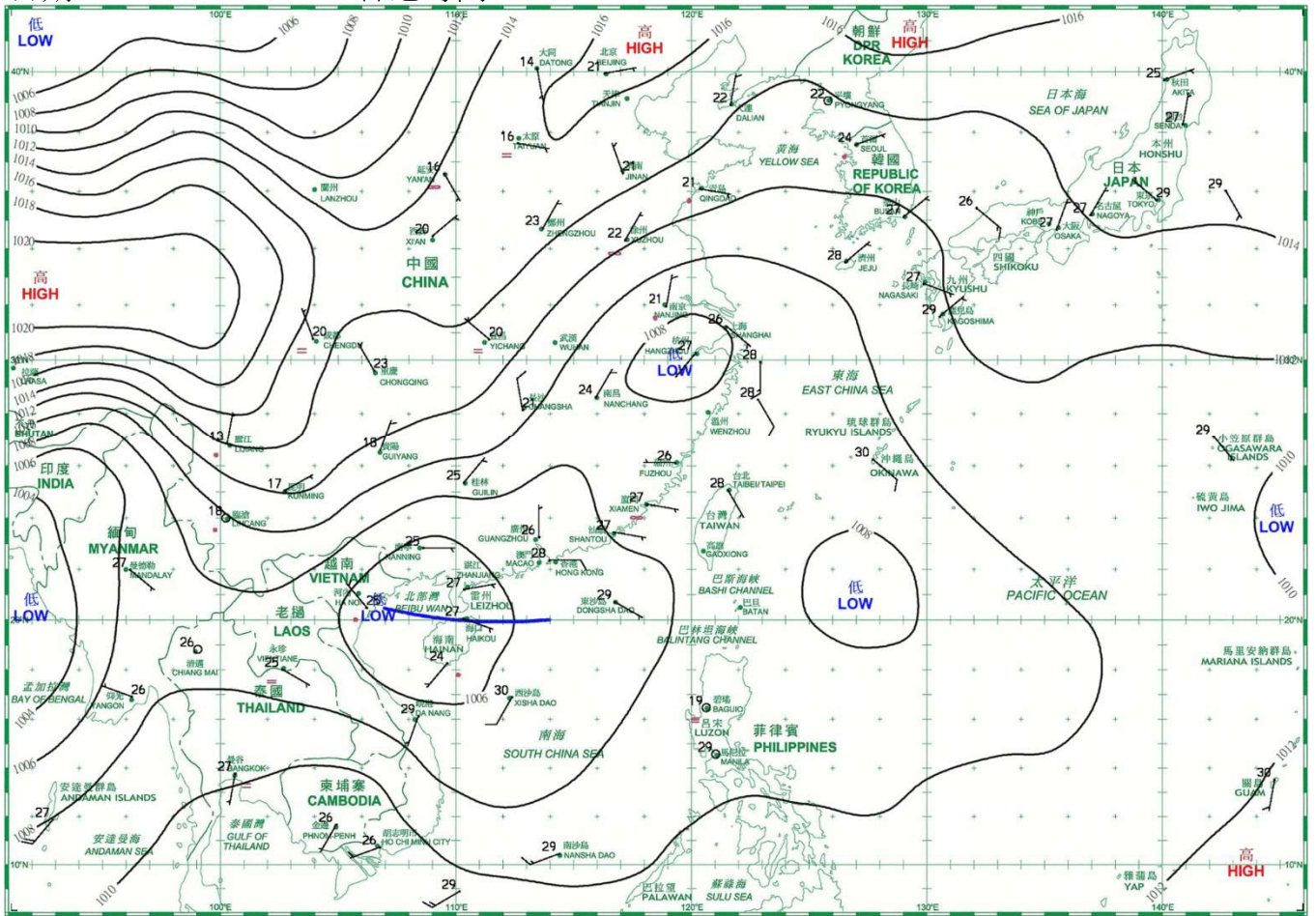
日期/Date: 11.09.2023 香港時間/HK Time: 08:00



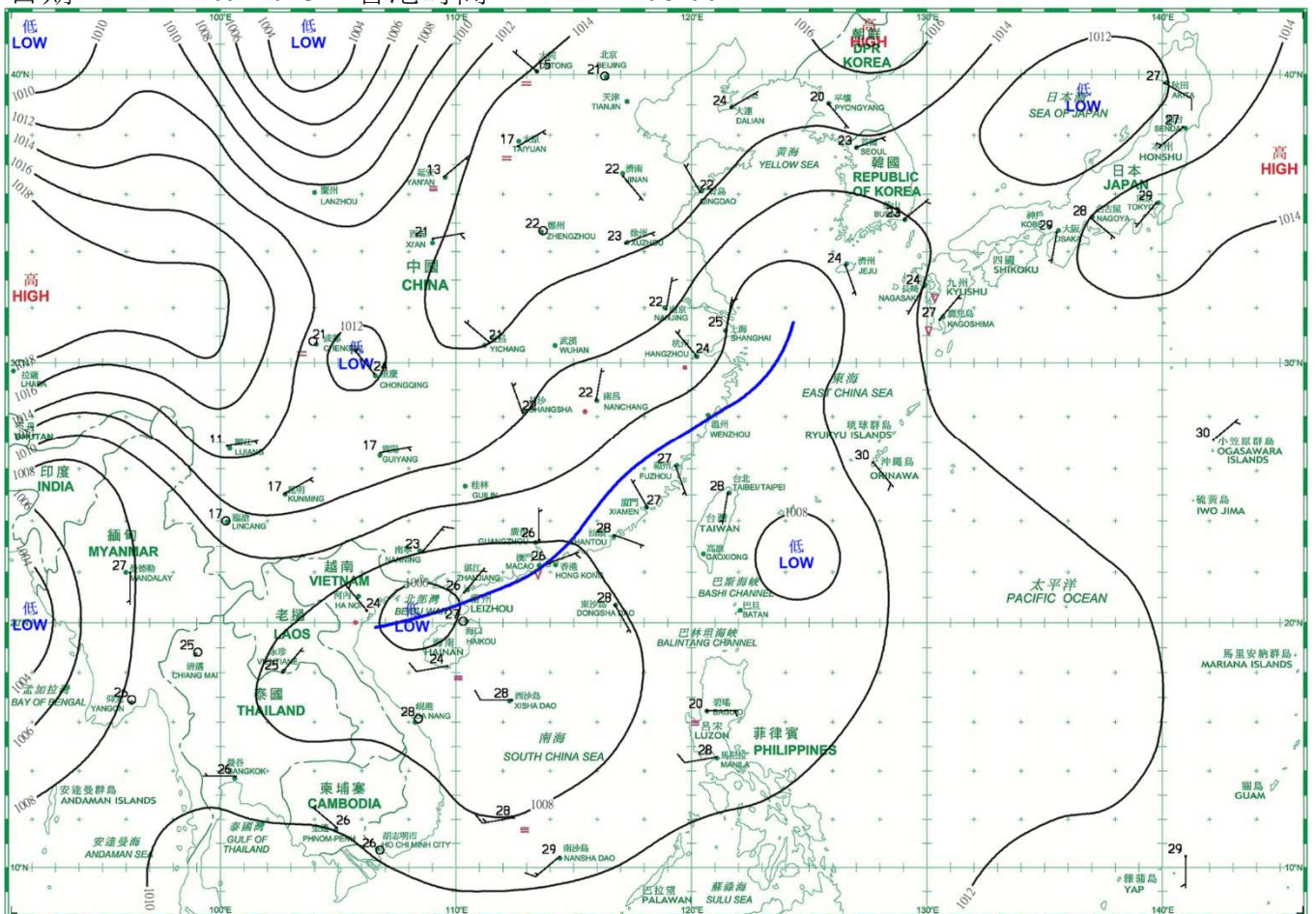
日期/Date: 12.09.2023 香港時間/HK Time: 08:00



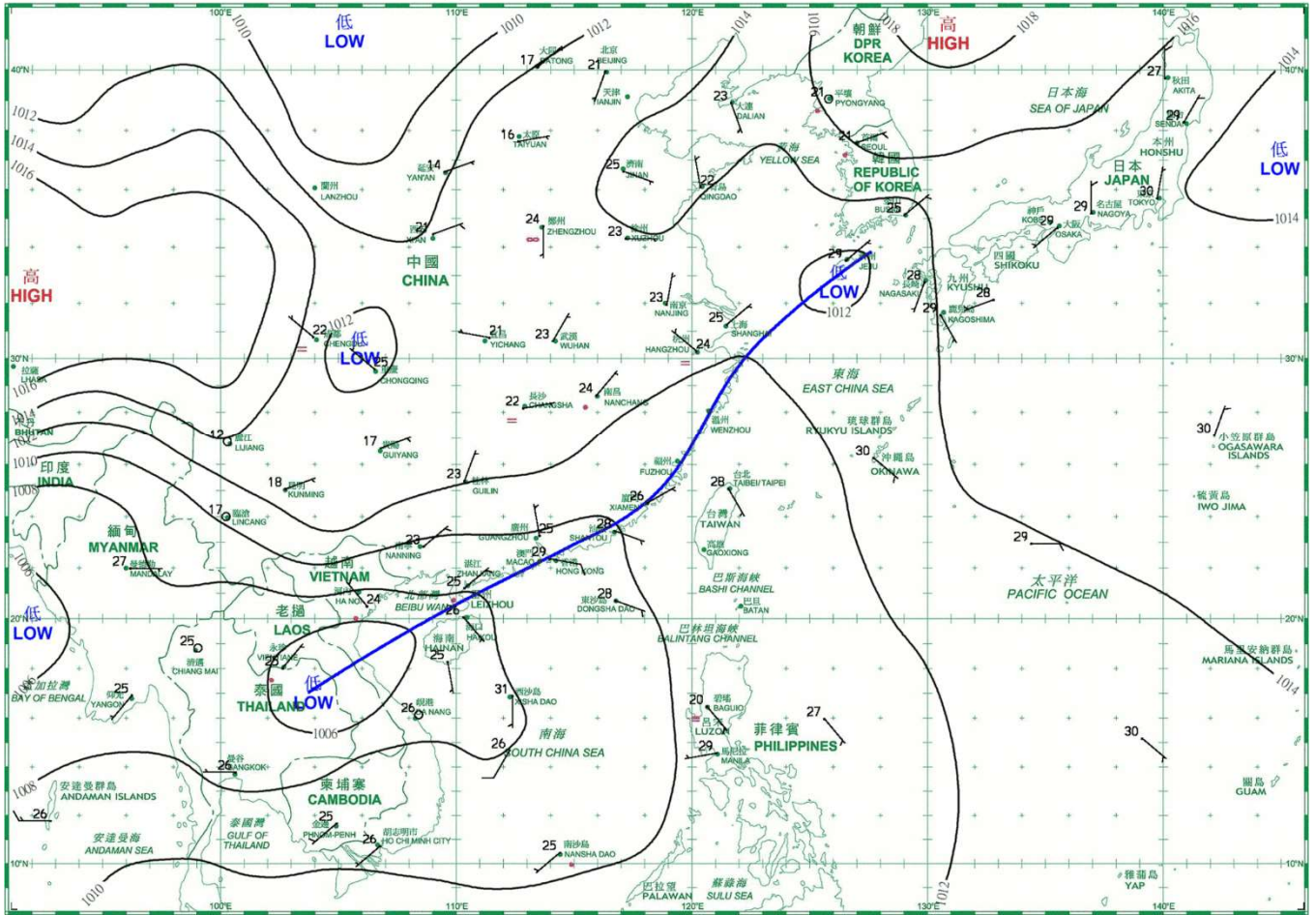
日期/Date: 13.09.2023 香港時間/HK Time: 08:00



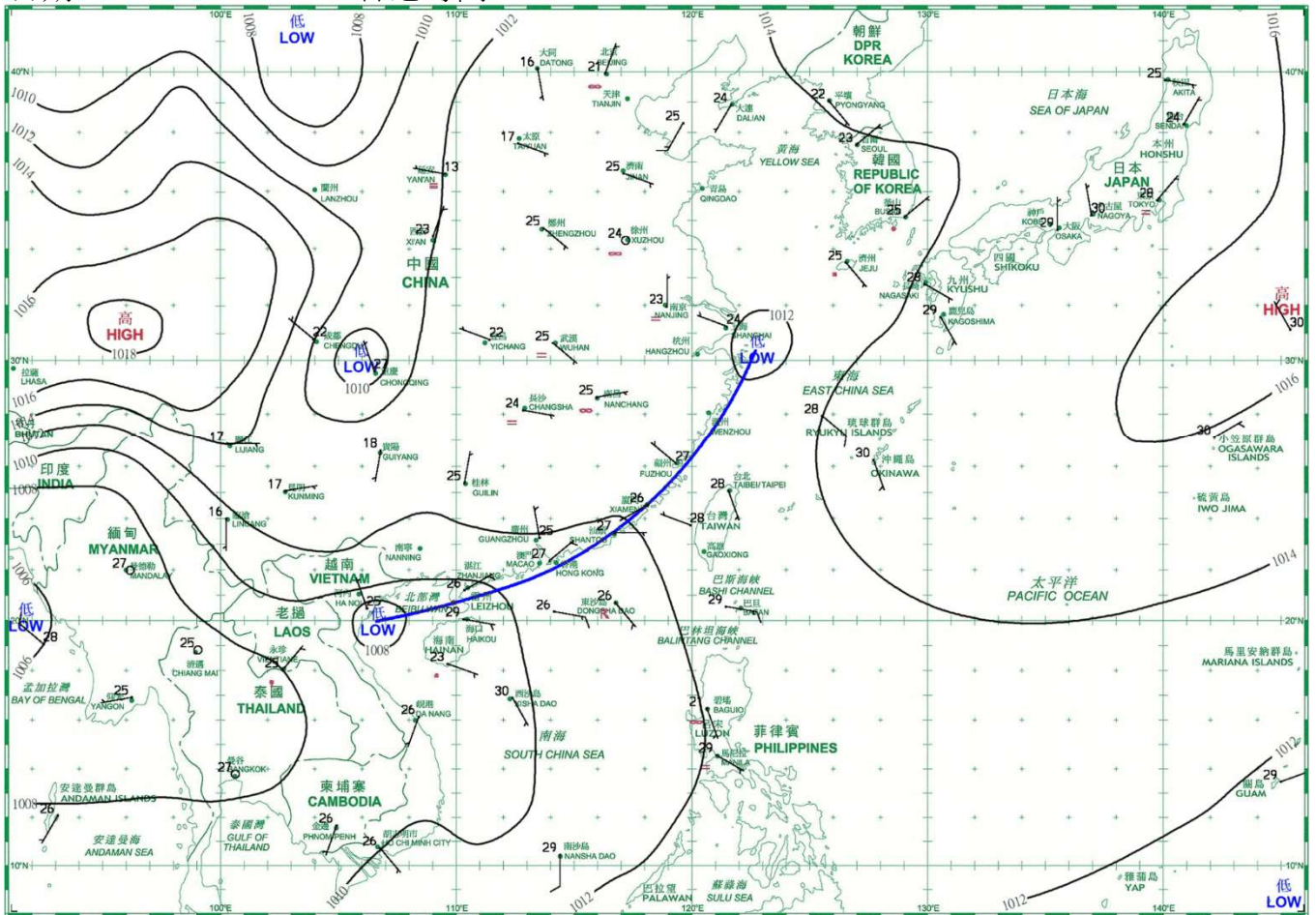
日期/Date: 14.09.2023 香港時間/HK Time: 08:00



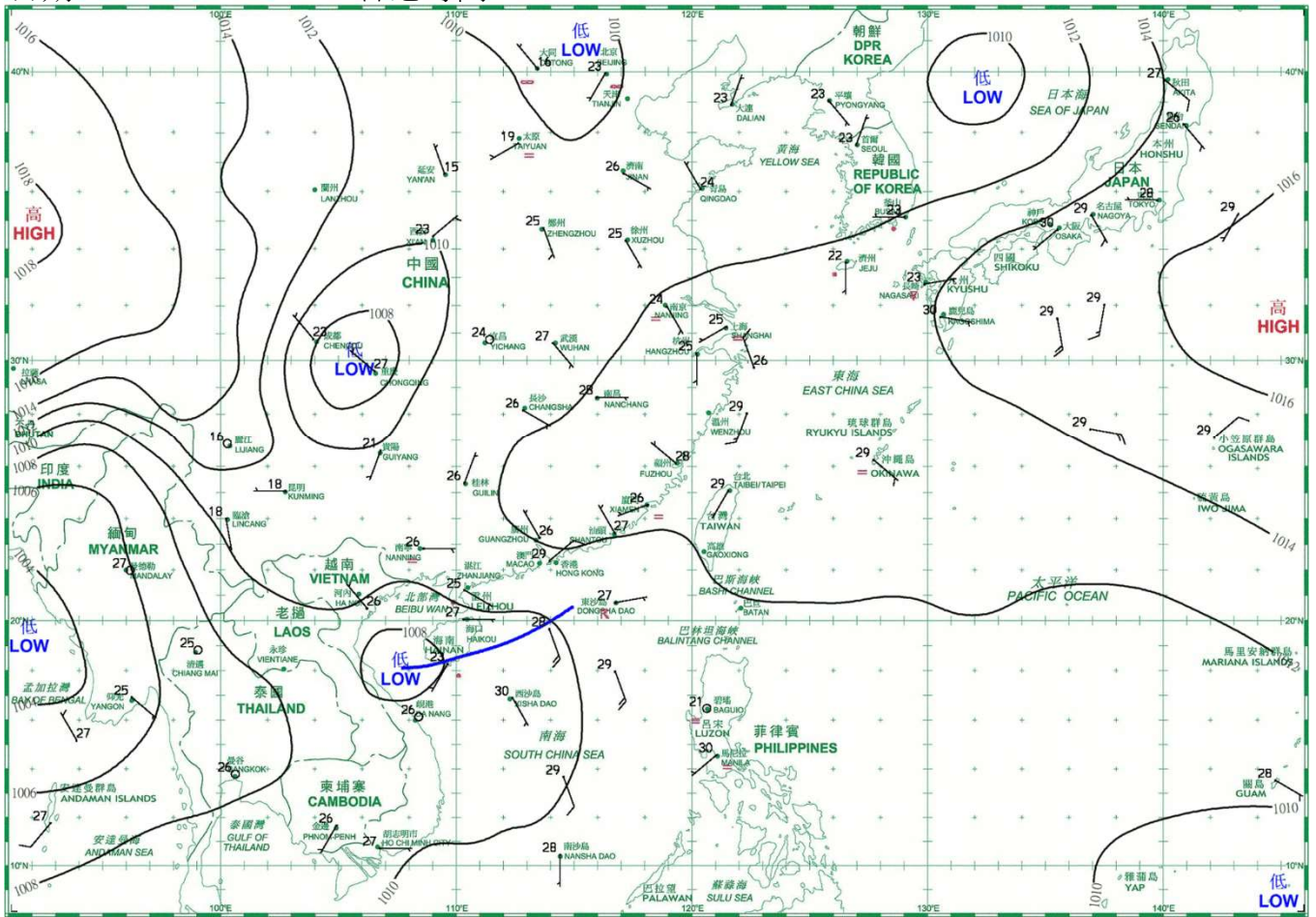
日期/Date: 15.09.2023 香港時間/HK Time: 08:00



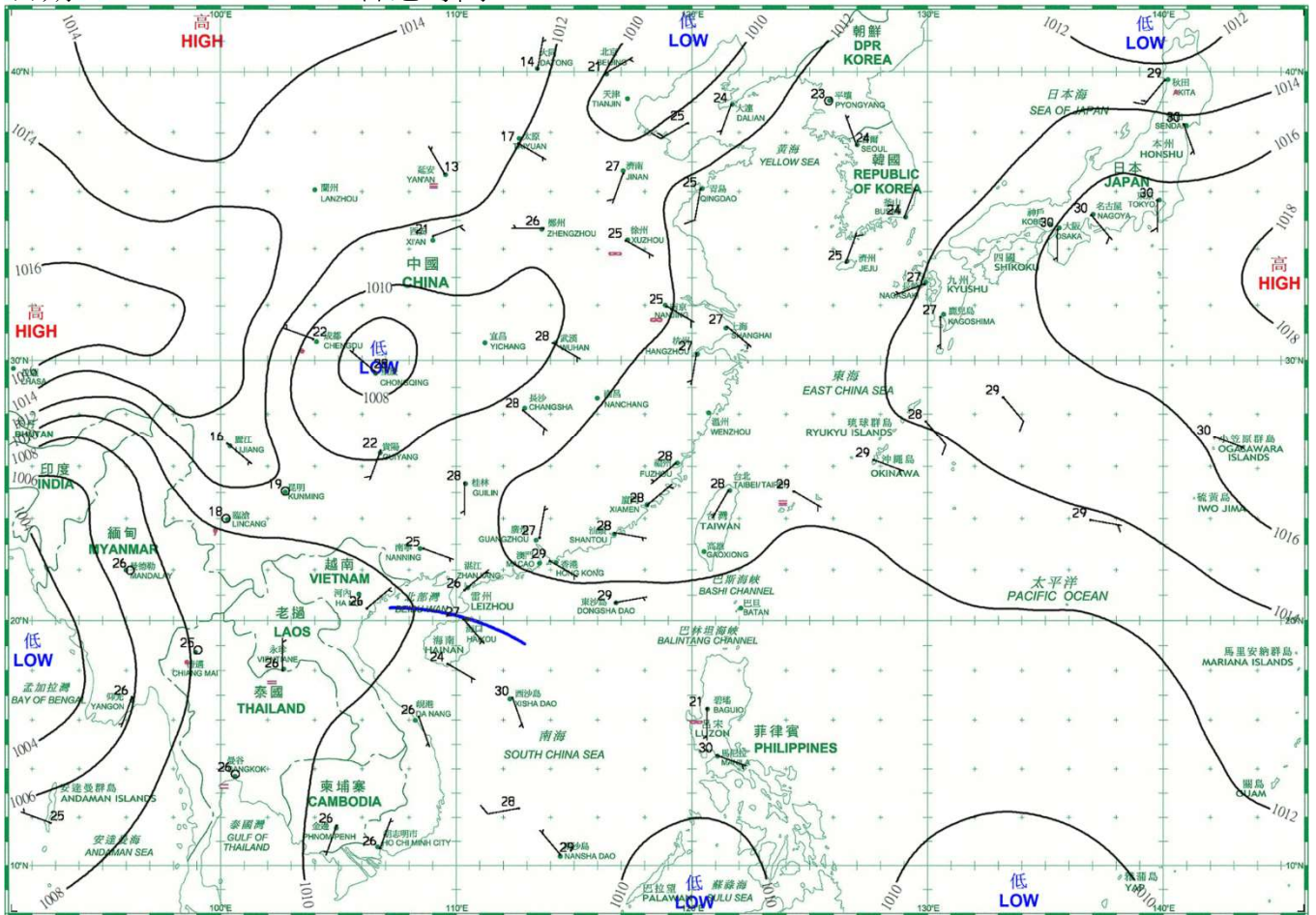
日期/Date: 16.09.2023 香港時間/HK Time: 08:00



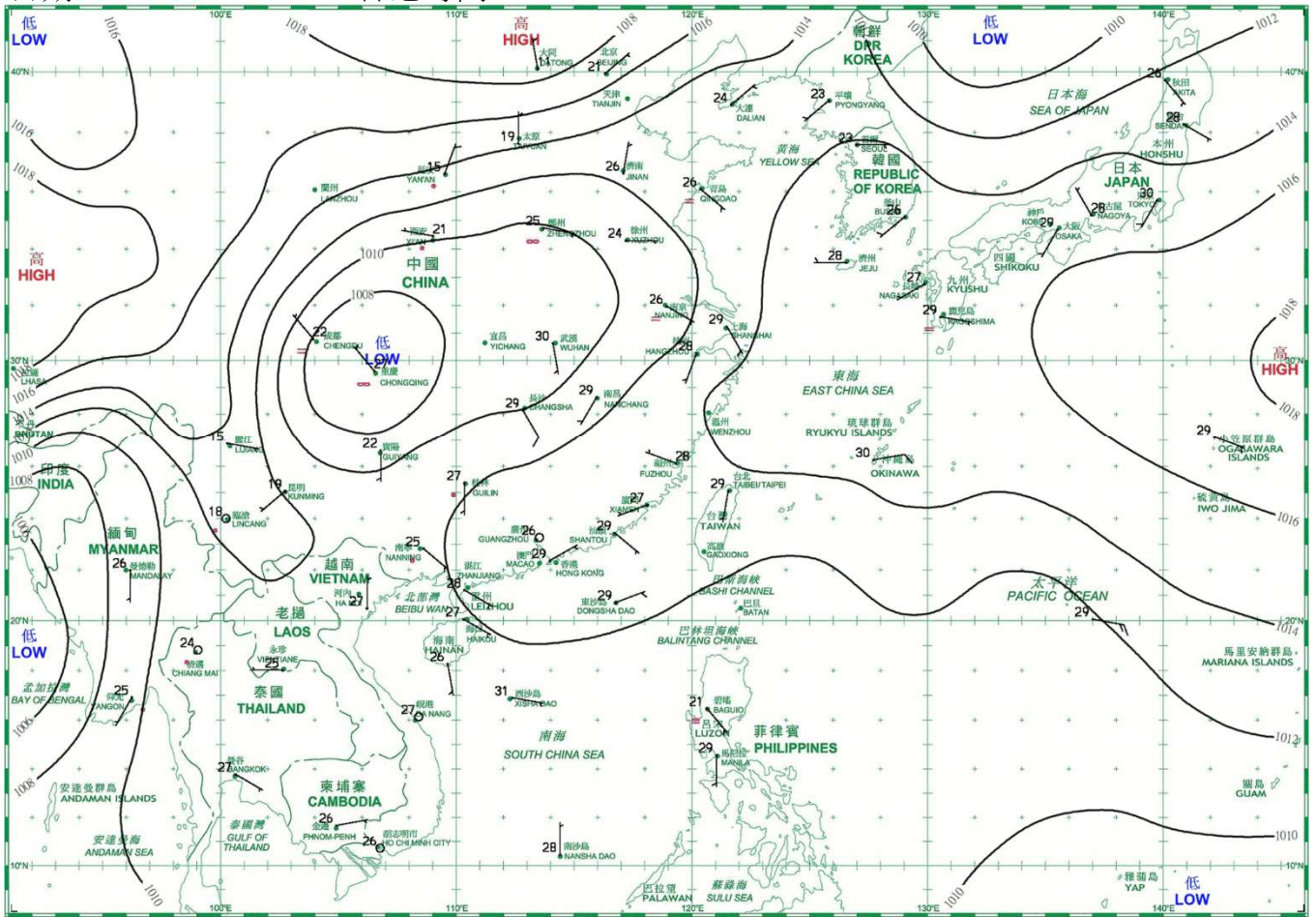
日期/Date: 17.09.2023 香港時間/HK Time: 08:00



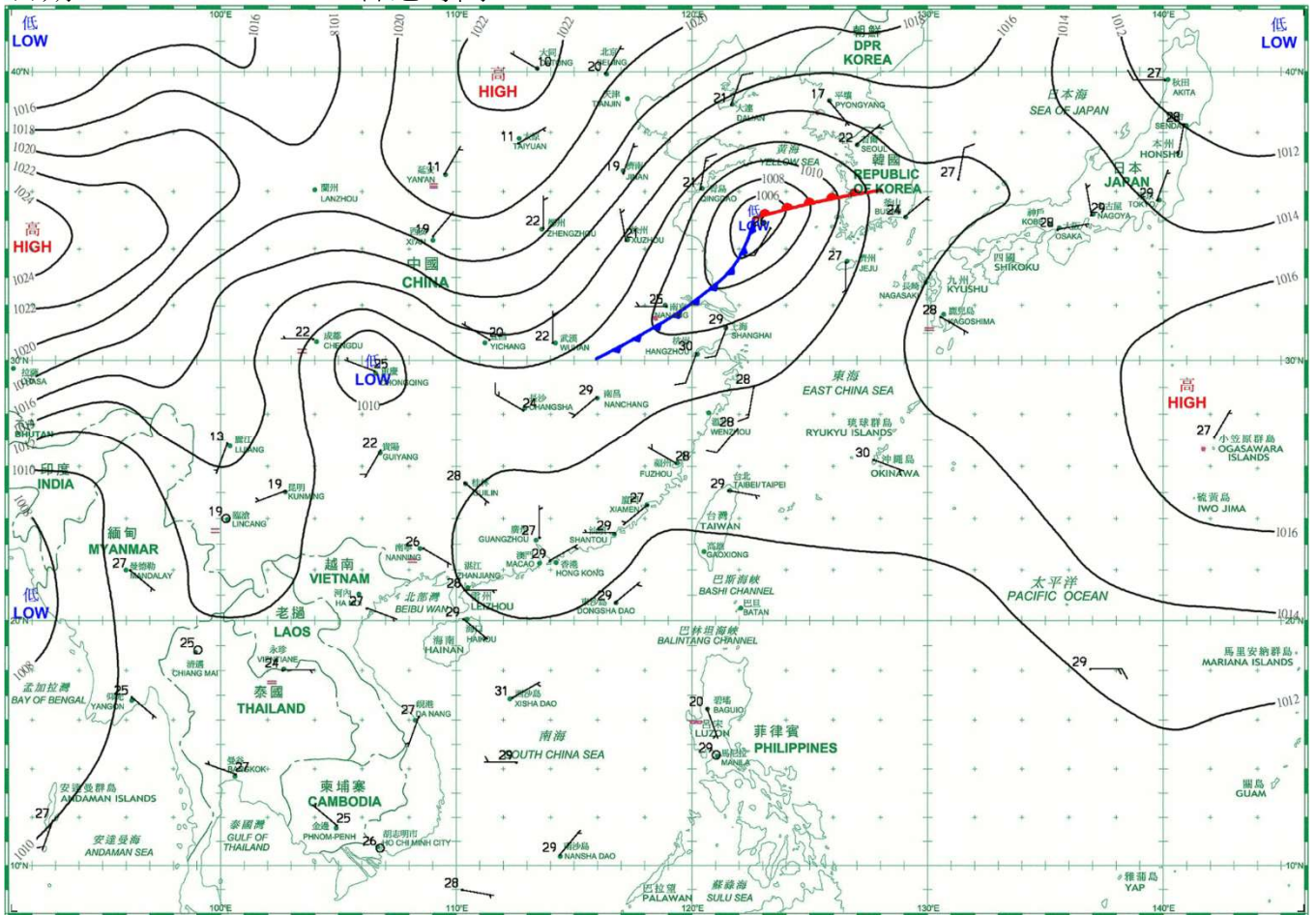
日期/Date: 18.09.2023 香港時間/HK Time: 08:00



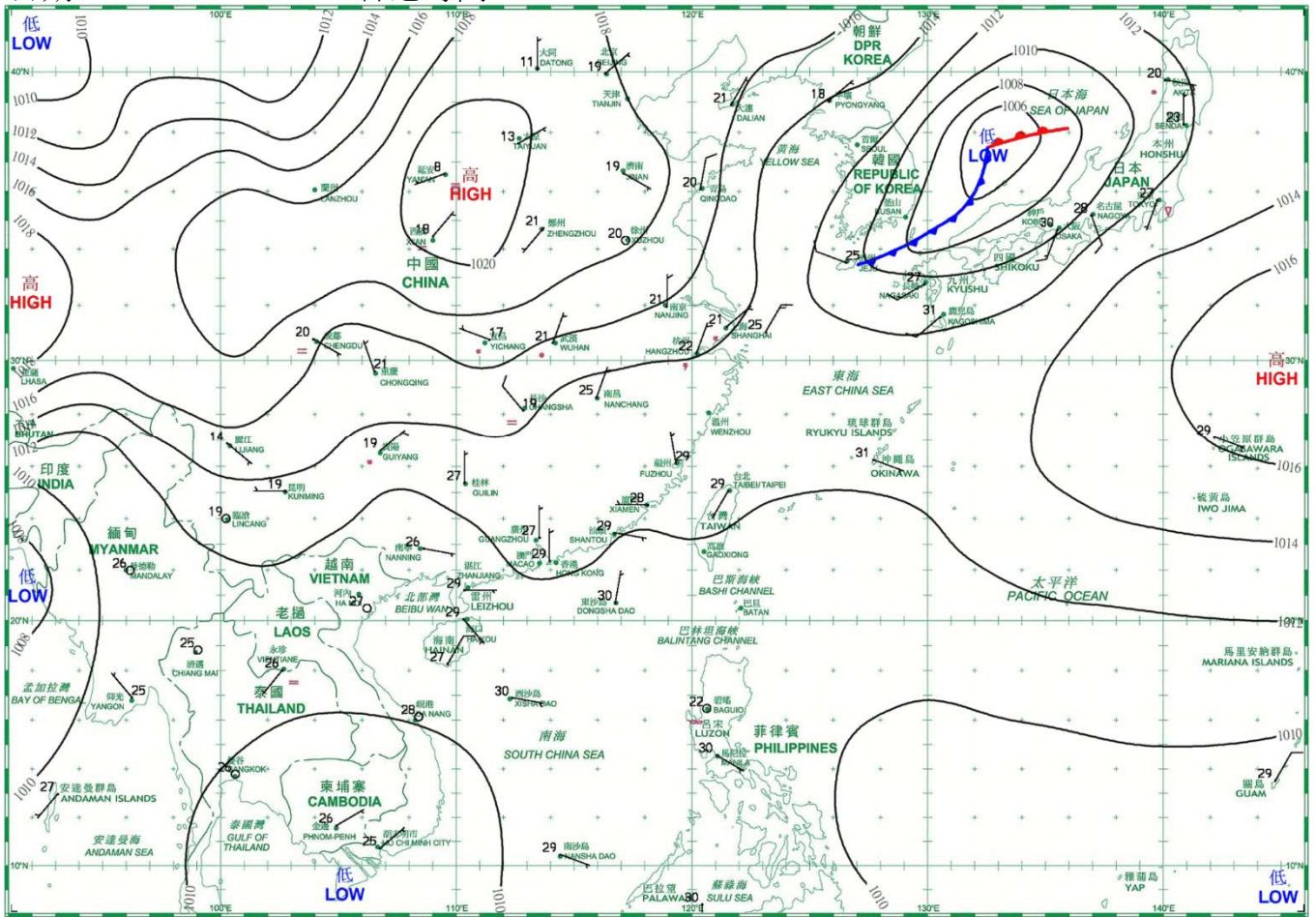
日期/Date: 19.09.2023 香港時間/HK Time: 08:00



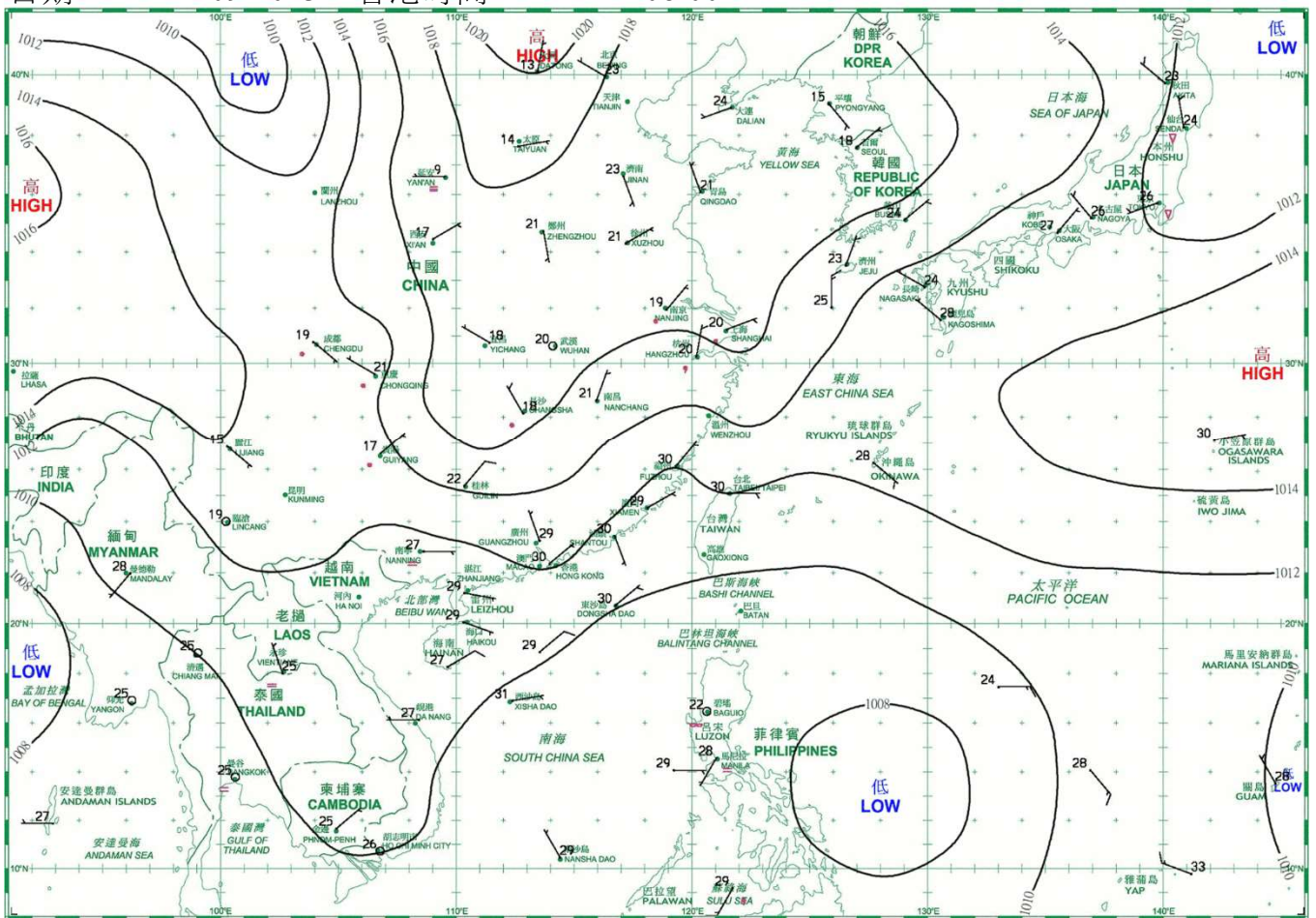
日期/Date: 20.09.2023 香港時間/HK Time: 08:00



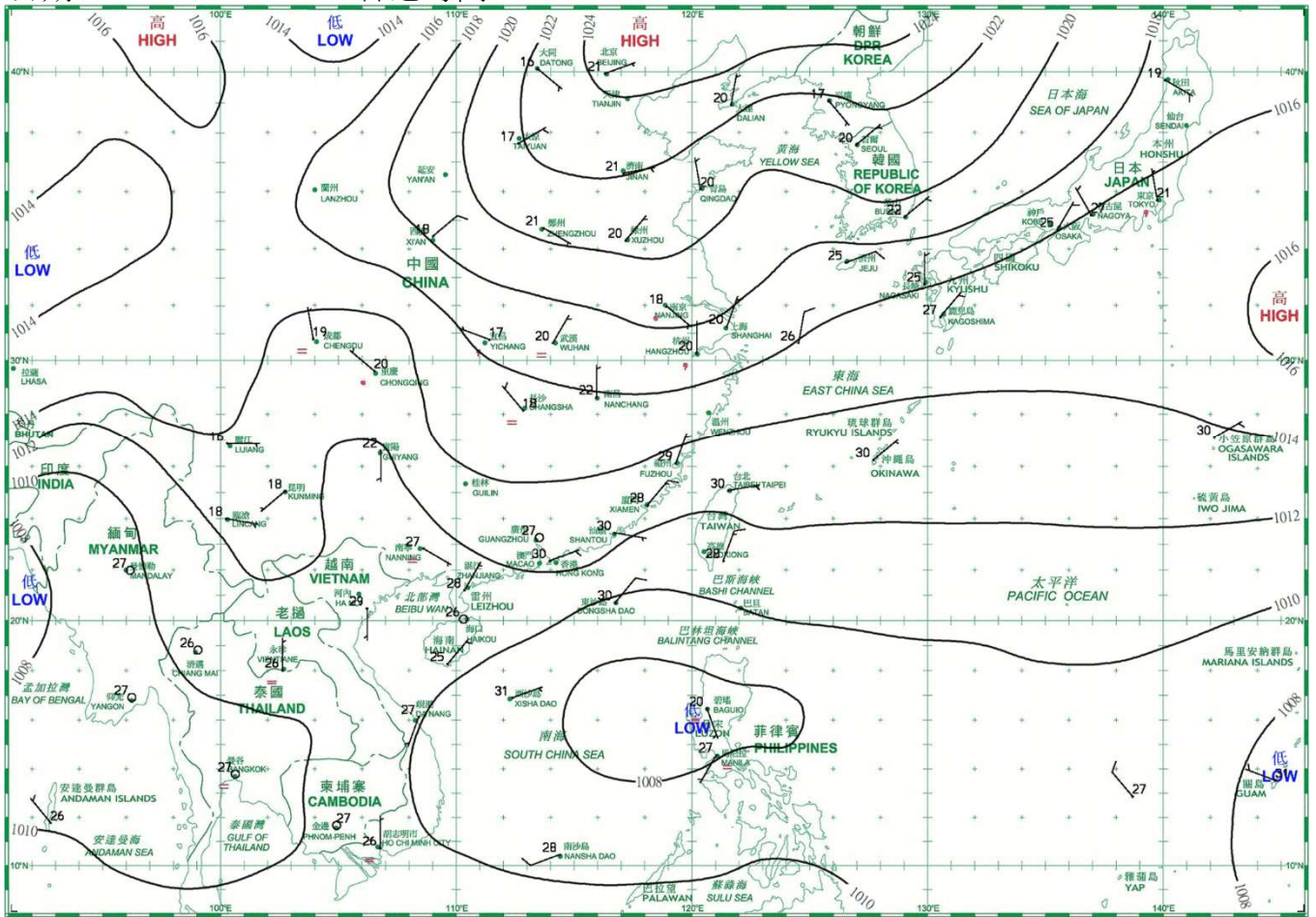
日期/Date: 21.09.2023 香港時間/HK Time: 08:00



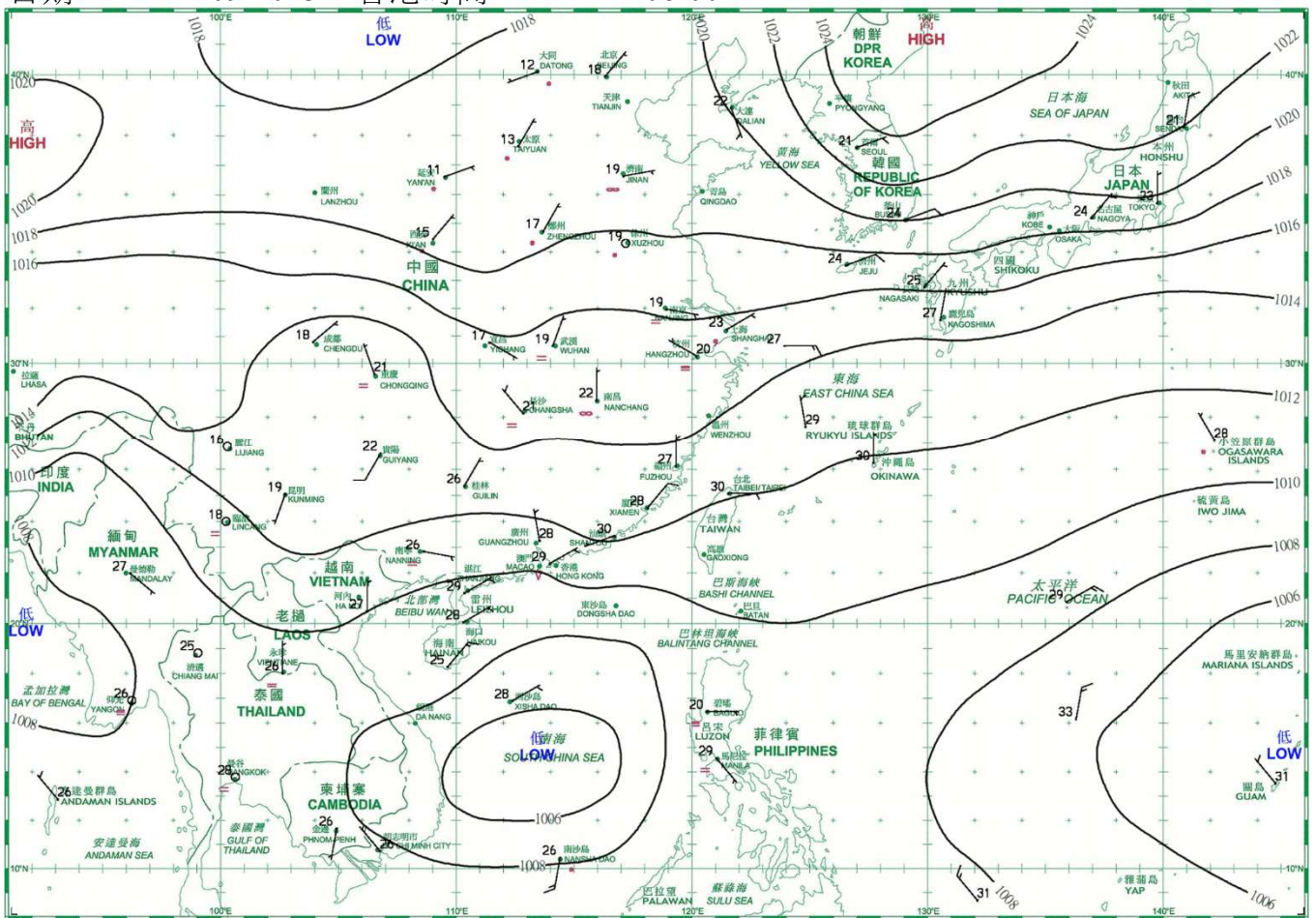
日期/Date: 22.09.2023 香港時間/HK Time: 08:00



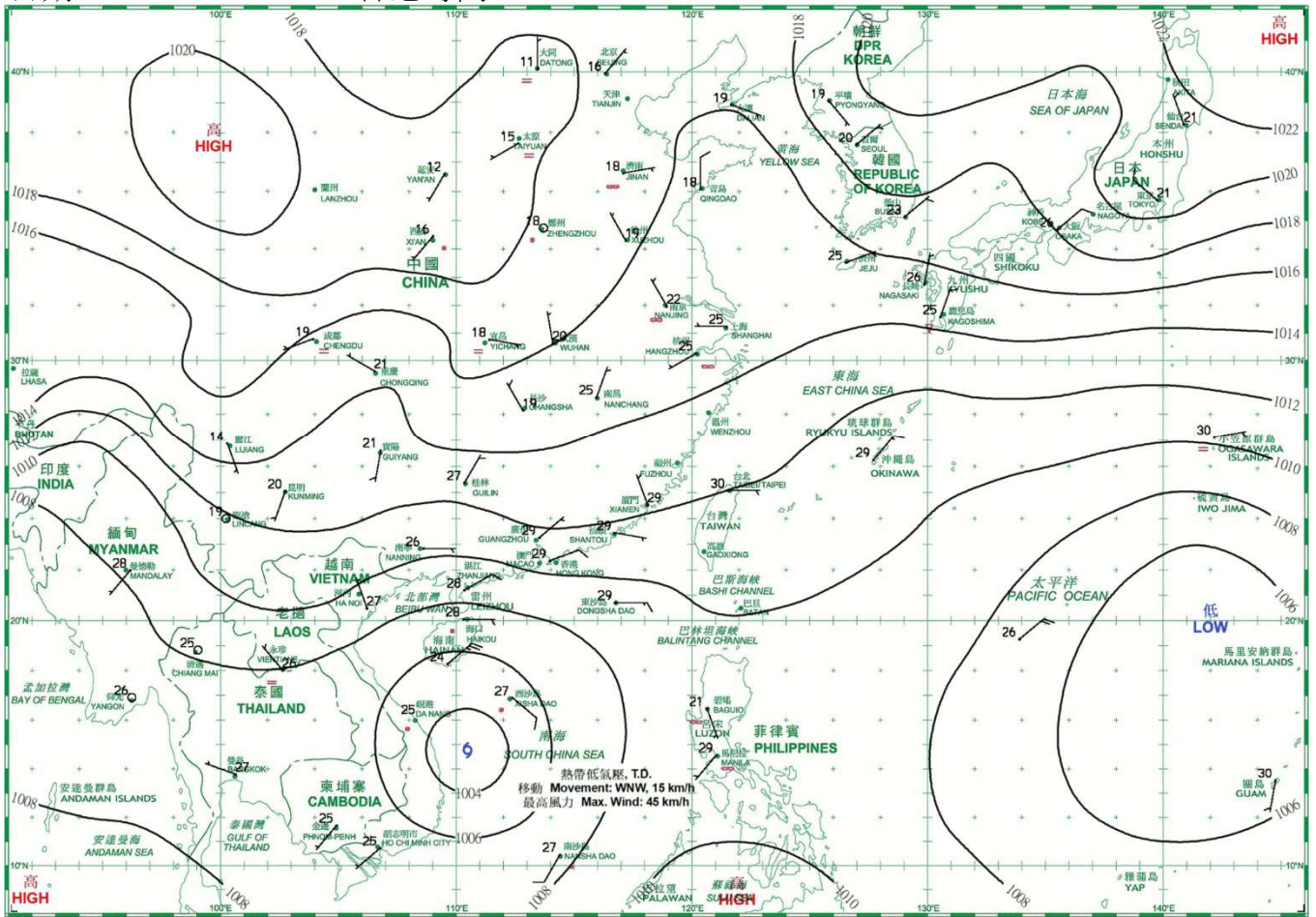
日期/Date: 23.09.2023 香港時間/HK Time: 08:00



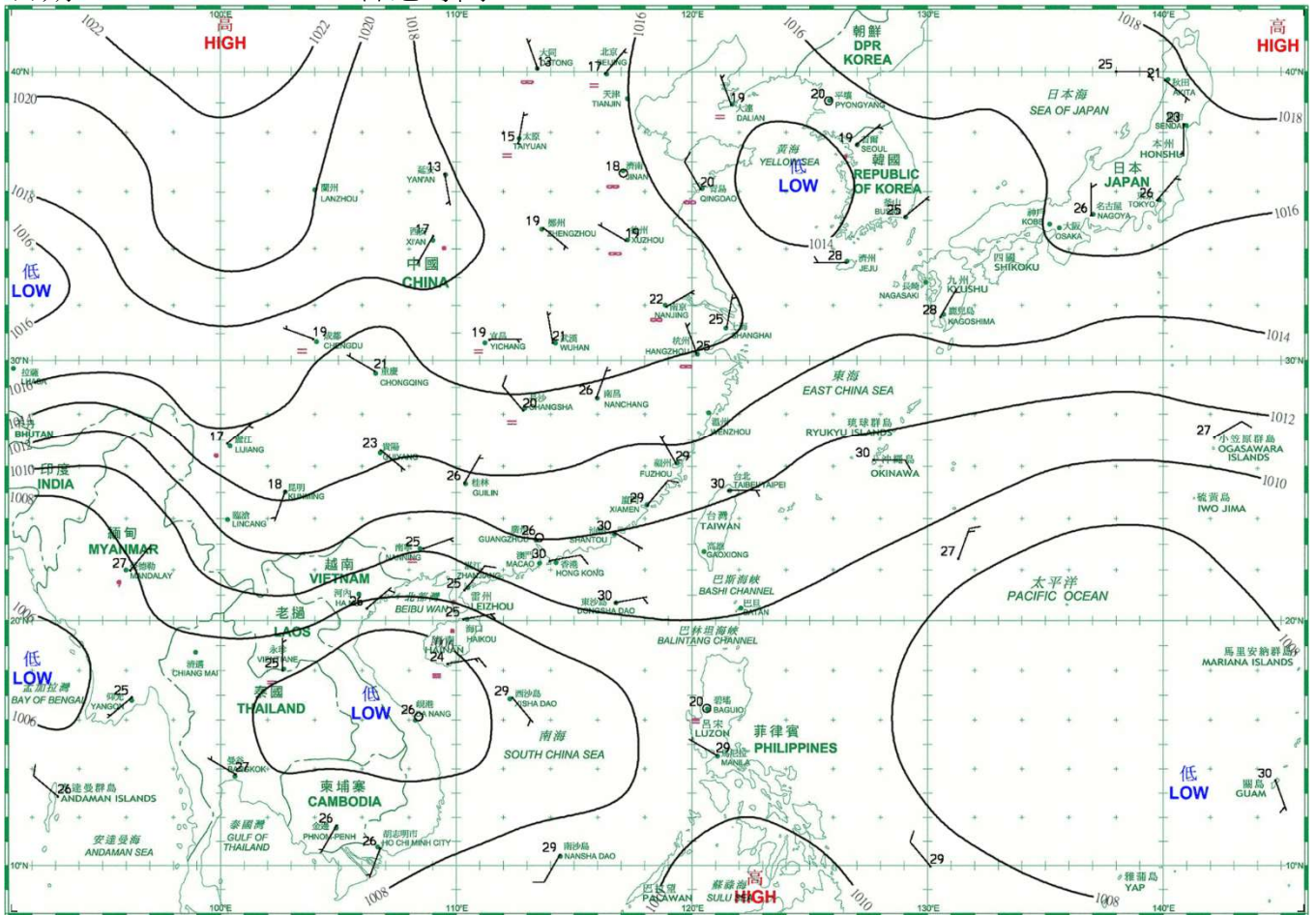
日期/Date: 24.09.2023 香港時間/HK Time: 08:00



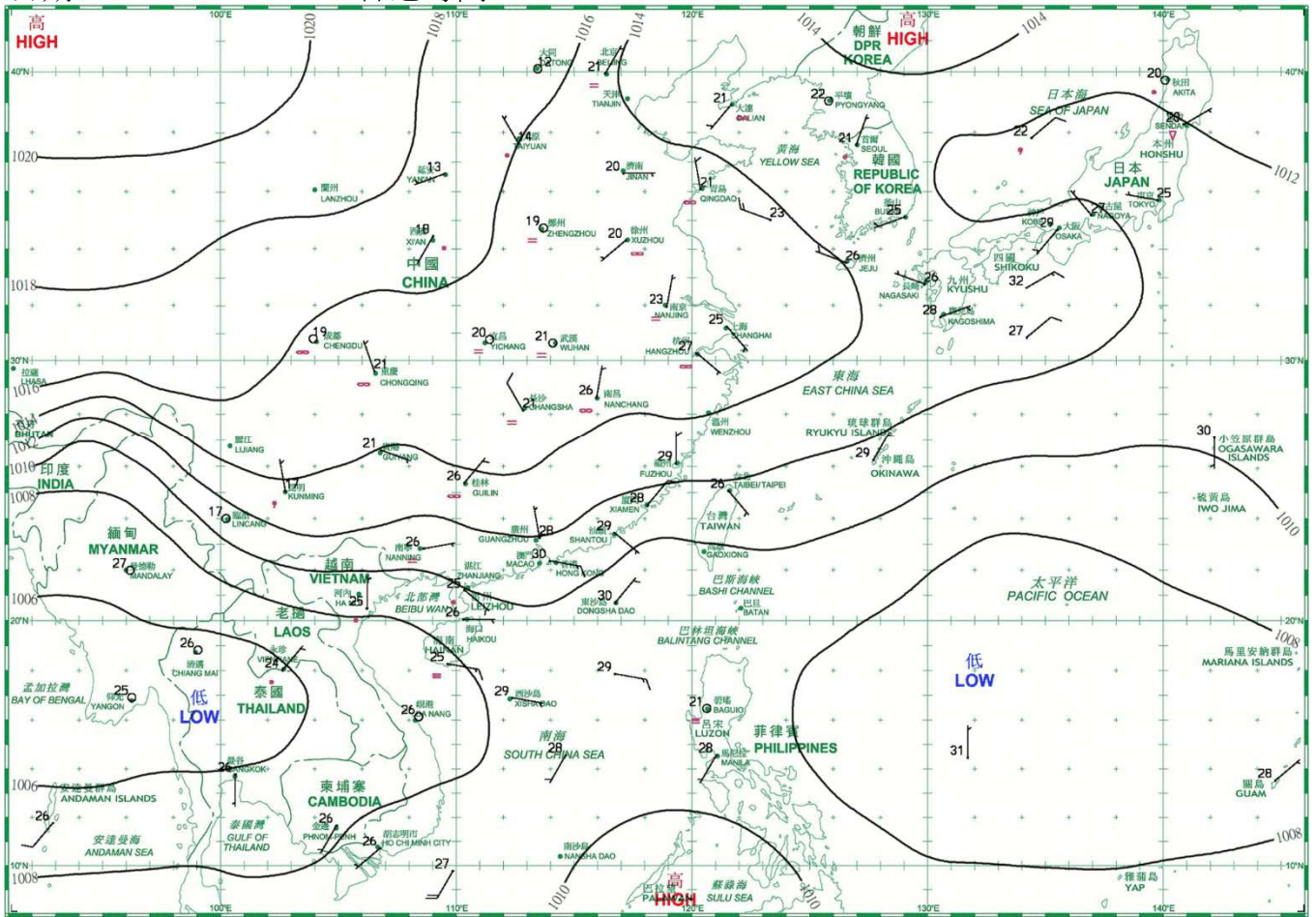
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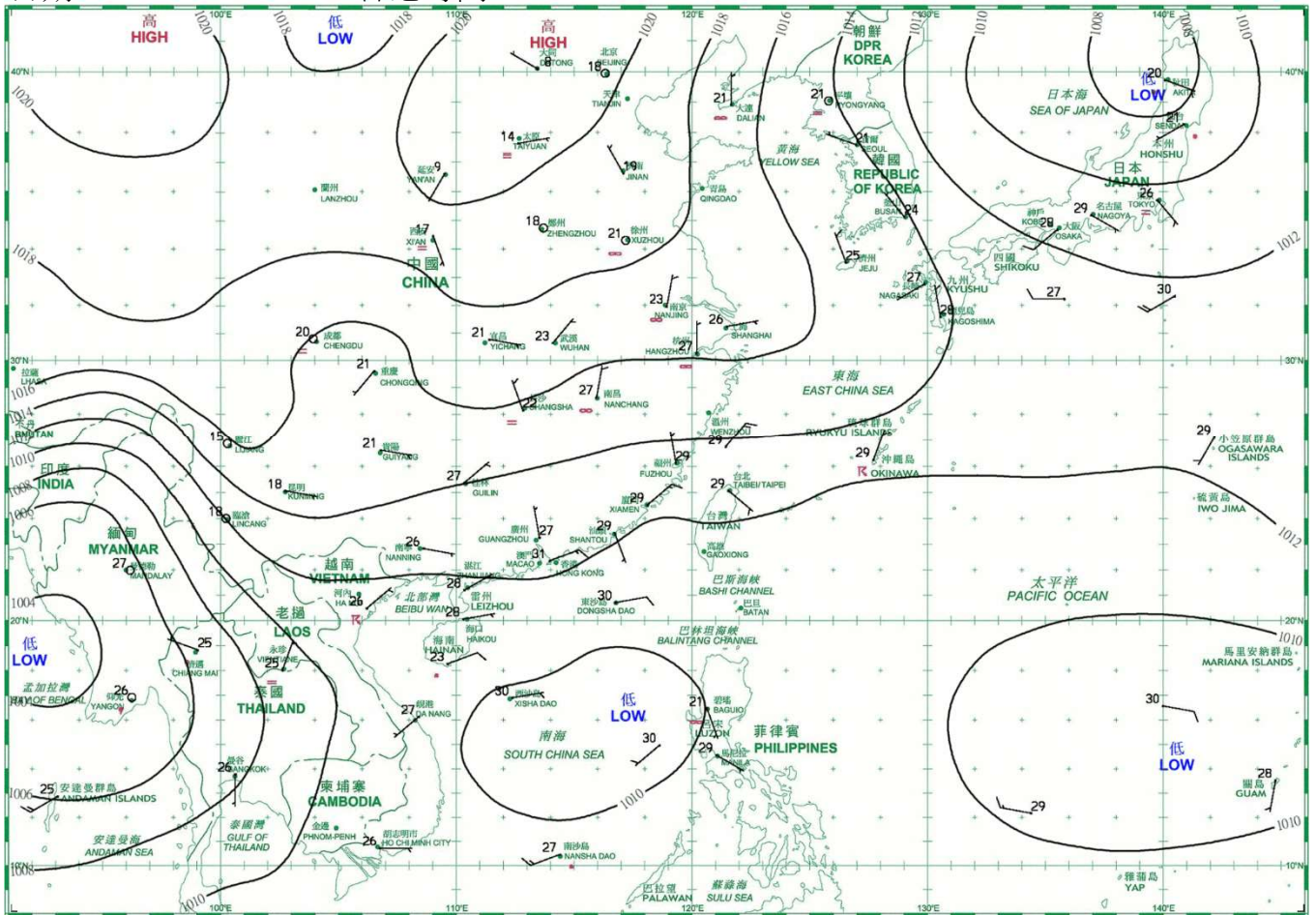
日期/Date: 26.09.2023 香港時間/HK Time: 08:00



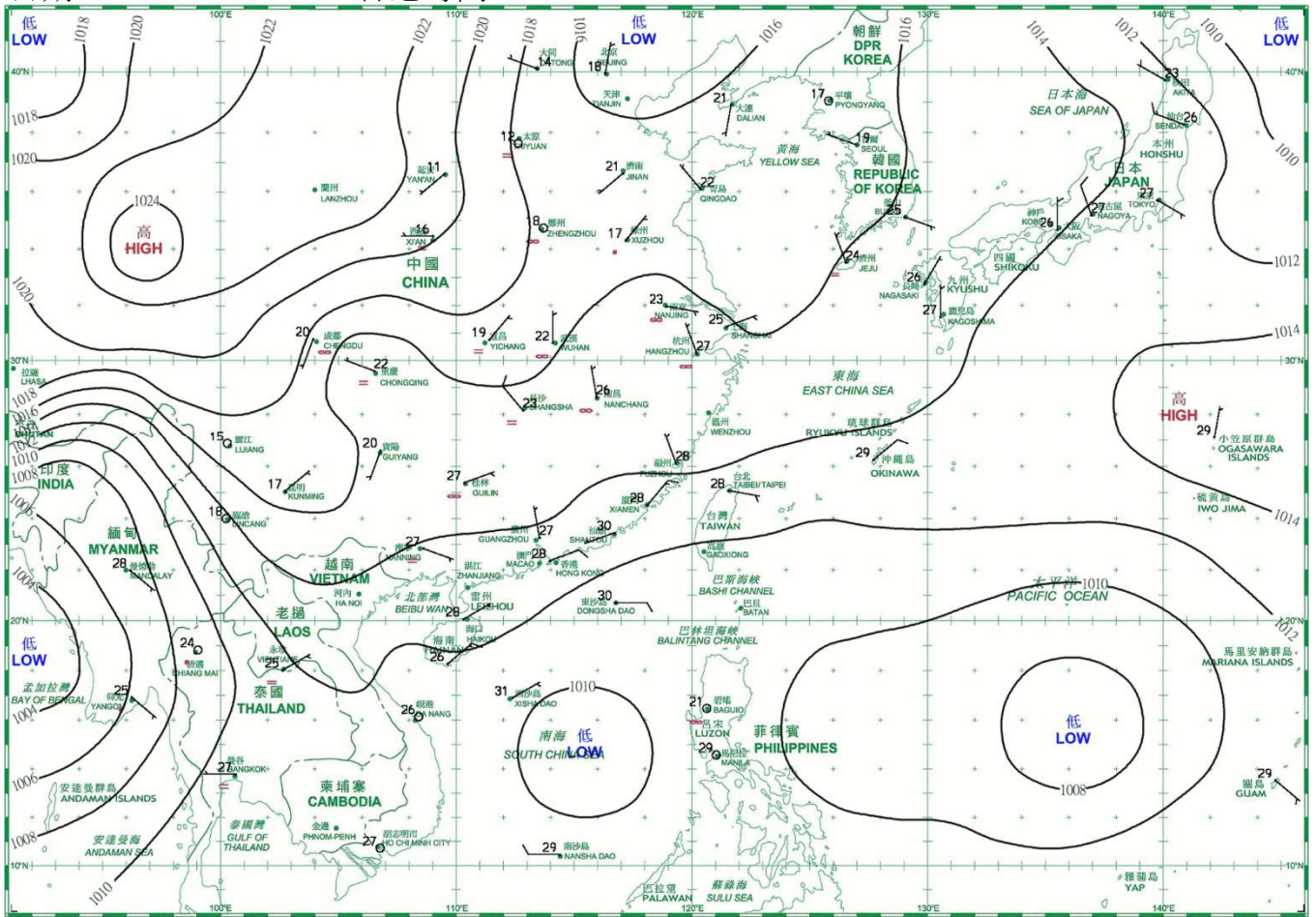
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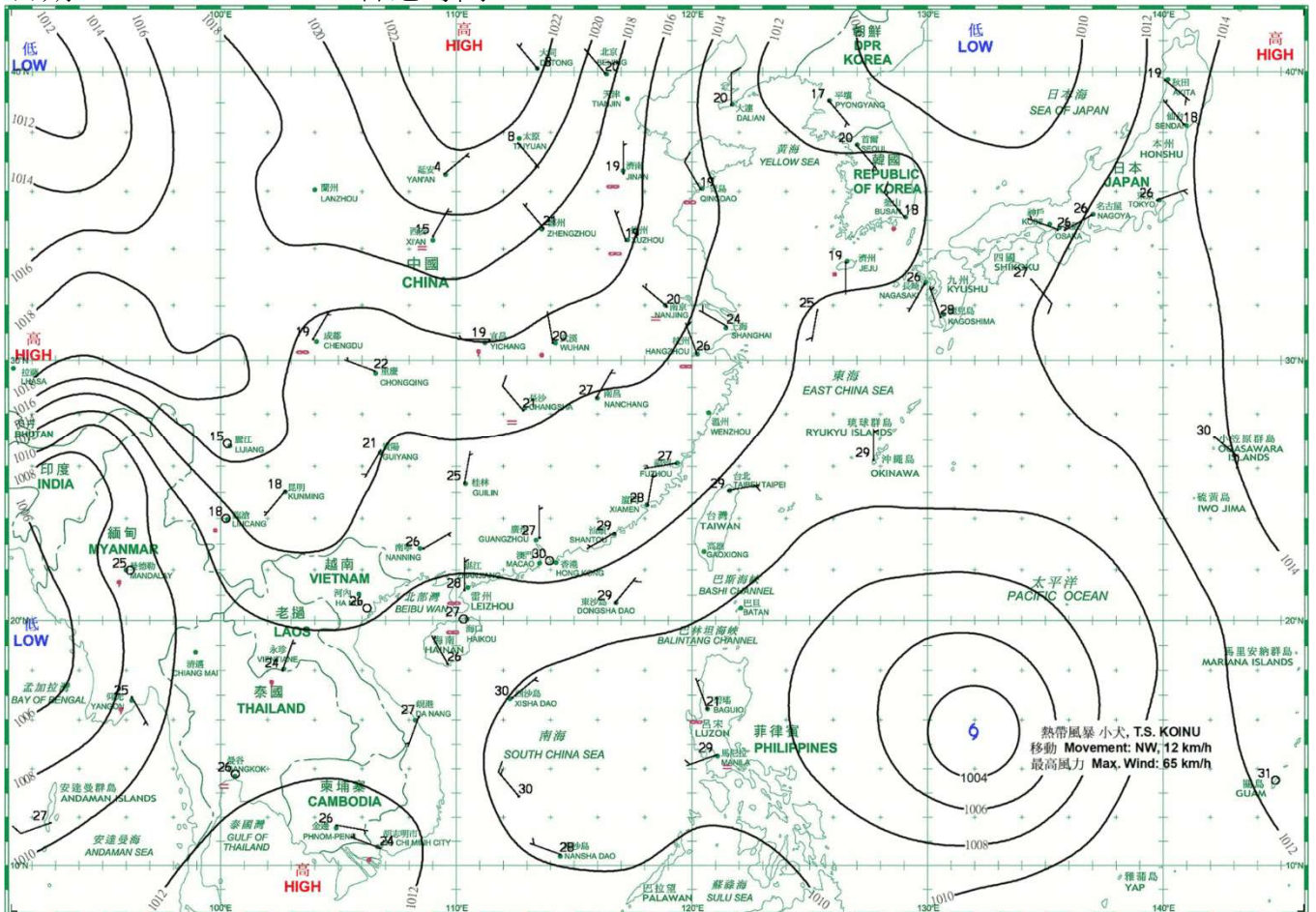
日期/Date: 28.09.2023 香港時間/HK Time: 08:00



日期/Date: 29.09.2023 香港時間/HK Time: 08:00



日期/Date: 30.09.2023 香港時間/HK Time: 08:00



4.1.1 二零二三年九月香港氣象觀測摘錄(一)

4.1.1 Extract of Meteorological Observations in Hong Kong (Part 1), September 2023

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				
九月 September	百帕斯卡 hPa	°C	°C	°C	°C	%	%	毫米 mm
1	996.3	28.7	26.9	25.0	23.2	81	92	98.9
2	1000.1	27.2	26.2	25.2	24.7	92	95	80.4
3	1001.9	33.7	29.4	27.0	24.6	76	88	0.1
4	1002.1	32.6	29.9	27.3	24.4	73	87	Tr
5	1003.6	31.0	29.1	27.7	23.6	73	88	0.4
6	1005.4	32.1	29.4	27.8	23.8	72	88	-
7	1006.3	29.7	27.7	25.5	25.6	89	89	215.7
8	1007.9	26.3	25.7	25.0	24.7	94	96	425.0
9	1008.2	26.6	26.2	25.5	24.7	92	88	9.8
10	1008.3	26.5	25.8	24.8	24.5	93	90	67.4
11	1007.3	28.2	26.5	25.6	25.3	93	89	20.5
12	1006.5	29.4	27.0	26.0	25.0	89	83	0.9
13	1006.6	30.4	27.9	26.8	25.7	88	87	2.5
14	1007.7	28.2	26.9	25.6	25.5	92	88	103.5
15	1009.5	30.6	27.3	25.2	25.3	89	88	28.5
16	1011.1	28.8	27.1	25.4	25.2	89	88	4.3
17	1010.9	31.7	28.5	26.8	25.5	85	79	-
18	1011.4	32.7	29.2	27.4	25.3	80	57	-
19	1011.9	33.5	29.5	27.3	25.3	79	48	-
20	1011.0	32.9	29.6	27.5	24.7	76	28	-
21	1010.5	33.6	30.0	27.6	25.5	77	28	-
22	1010.4	34.4	30.2	28.4	25.3	75	67	Tr
23	1010.5	33.7	30.1	28.3	24.8	74	52	-
24	1009.9	33.1	29.9	28.5	24.9	75	76	-
25	1010.1	33.1	29.8	27.9	25.0	76	55	1.5
26	1010.7	33.4	30.0	28.3	25.0	75	52	-
27	1010.5	33.9	30.3	28.6	24.7	72	72	Tr
28	1011.6	33.6	30.3	28.7	24.4	71	73	-
29	1012.0	33.7	29.8	26.7	25.4	78	59	7.7
30	1010.4	33.6	30.0	28.2	25.0	75	44	-
平均/總值 Mean/Total	1008.0	31.2	28.5	26.9	24.9	81	74	1067.1
正常* Normal*	1008.8	30.5	27.9	26.1	23.6	78	66	321.4
觀測站 Station	天文台 Hong Kong Observatory							

天文台於九月一日 21 時 45 分錄得本月最低氣壓 986.7 百帕斯卡。

The minimum pressure recorded at the Hong Kong Observatory was 986.7 hectopascals at 2145 HKT on 1 September.

天文台於九月二十二日 12 時 39 分錄得本月最高氣溫 34.4 °C。

The maximum air temperature recorded at the Hong Kong Observatory was 34.4 °C at 1239 HKT on 22 September.

天文台於九月十日 8 時 0 分錄得本月最低氣溫 24.8 °C。

The minimum air temperature recorded at the Hong Kong Observatory was 24.8 °C at 0800 HKT on 10 September.

天文台於九月七日 23 時 46 分錄得本月最高1分鐘平均降雨率 235 毫米/小時。

The maximum 1-minute mean rainfall rate recorded at the Hong Kong Observatory was 235 millimetres per hour at 2346 HKT on 7 September.

* 1991-2020 氣候平均值 (除特別列明外) (https://www.hko.gov.hk/tc/cis/normal/1991_2020/normal.s.htm)

* 1991-2020 Climatological normal, unless otherwise specified (https://www.hko.gov.hk/en/cis/normal/1991_2020/normal.s.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 二零二三年九月香港氣象觀測摘錄(二)

4.1.2 Extract of Meteorological Observations in Hong Kong (Part 2), September 2023

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
九月 September	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	0	-	2.99	0.0	330	65.9
2	0	-	2.33	0.8	080	51.8
3	0	9.4	24.64	4.7	050	13.8
4	0	8.9	17.24	3.9	270	8.5
5	0	0.4	8.12	1.9	280	13.0
6	0	6.4	18.18	3.2	220	16.0
7	0	0.2	7.28	0.5	090	17.4
8	0	-	2.43	0.5	080	30.8
9	0	-	8.03	1.5	080	18.4
10	0	-	6.54	1.1	080	19.8
11	0	0.9	8.39	0.3	080	21.4
12	0	4.0	13.44	1.6	070	10.2
13	0	5.0	17.51	1.9	070	16.2
14	0	-	5.29	0.1	070	18.5
15	0	4.9	15.32	0.5	070	16.1
16	0	0.8	10.52	1.5	070	17.6
17	0	9.0	21.10	3.3	060	15.1
18	0	9.9	22.03	3.9	060	7.5
19	0	9.0	18.41	3.5	090	4.6
20	0	8.9	18.63	3.3	100	2.7
21	0	11.1	22.79	4.0	220	8.9
22	0	6.8	17.14	4.2	080	5.7
23	0	9.7	22.05	5.2	060	22.9
24	0	6.5	15.44	3.8	060	30.5
25	0	10.2	23.94	5.6	060	30.4
26	0	8.3	20.62	4.9	060	28.3
27	0	10.0	22.16	5.1	080	20.3
28	0	10.7	23.79	5.3	070	25.9
29	0	9.0	21.37	4.6	070	21.8
30	0	10.5	21.65	4.4	140	9.0
平均/總值 Mean/Total	0	170.5	15.31	85.1	070	19.6
正常* Normal*	[65.6] §	174.4	14.99	122.8	080	21.4
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 [^]	

橫瀾島於九月一日 20 時 44 分錄得本月最高陣風 183 公里/小時，風向 020 度。

The maximum gust peak speed recorded at Waglan Island was 183 kilometres per hour from 020 degrees at 2044 HKT on 1 September.

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.

* 1991-2020 氣候平均值 (除特別列明外) (https://www.hko.gov.hk/tc/cis/normal/1991_2020/normal.s.htm)

* 1991-2020 Climatological normal, unless otherwise specified (https://www.hko.gov.hk/en/cis/normal/1991_2020/normal.s.htm)

§ 1997-2022 平均值

§ 1997-2022 Mean value

4.2 2023年9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, September 2023

