

每月天氣摘要 二零二二年八月

Monthly Weather Summary August 2022

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1. 二零二二年八月天氣回顧

主要受與南海北部的熱帶氣旋活動相關的降雨影響，本月較正常多雨。全月總雨量為 **614.8 毫米**，較正常值 **453.2 毫米** 多約百分之 **36**。本年首八個月的累積雨量為 **1 827.8 毫米**，較同期正常值 **1 921.5 毫米** 少約百分之 **5**。本月平均氣溫為 **28.8 度**，與正常值 **28.7 度** 相約。由於二零二二年七月出現破紀錄的高溫天氣，本年六月至八月的夏季遠較正常炎熱，平均氣溫達 **29.2 度**，是有記錄以來同期的其中一個第四高。

受高空反氣旋影響，本月首日香港天氣晴朗及酷熱。在陽光充沛的情況下，天文台當日下午氣溫飆升至本月最高的 **35.7 度**。八月二日日間本港仍然大致天晴及酷熱，但高溫觸發的對流活動在傍晚為本港帶來雷雨。此外，八月三日晚上一個低壓區在南海東北部發展為熱帶低氣壓，並向西北偏西移向珠江口以東一帶。該熱帶低氣壓在惠東沿岸登陸後，於八月四日下午在廣東內陸減弱為一個低壓區。受該熱帶低氣壓及其殘餘的低壓區影響，八月三日至五日本港大致多雲，間中有大驟雨及狂風雷暴。這三天期間本港普遍錄得超過 **100 毫米** 雨量，東部地區的雨量更超過 **200 毫米**。在有雨的情況下，八月五日天文台氣溫下降至本月最低的 **24.5 度**。

隨著高空反氣旋增強，八月六日本港驟雨逐漸減少，短暫時間有陽光。翌日除局部地區有驟雨及狂風雷暴外，本港大致天晴。受南海中部的一個低壓區影響，八月八日本港轉為大致多雲，間中有驟雨及狂風雷暴。該低壓區在八月九日清晨逐漸發展為熱帶低氣壓，其後命名為木蘭。木蘭大致向北移動並在當日日間增強為熱帶風暴，隨後轉向西北移動。木蘭掠過海南島東北部及雷州半島南端後，八月十日晚上進入北部灣。八月十一日本蘭在越南北部登陸及在內陸減弱為低壓區。受木蘭影響，八月九日及十日本港風勢頗大。這兩天木蘭的外圍雨帶亦為本港間中帶來大驟雨、猛烈陣風及雷暴。八月九日及十日本港普遍地區共錄得超過 **100 毫米** 雨量，大嶼山部分地區的雨量更超過 **200 毫米**。

受一道廣闊低壓槽影響，八月十一日及十二日本港大致多雲，有驟雨及幾陣狂風雷暴。而八月十二日早上雨勢頗大，本港普遍地區錄得超過 **50 毫米** 雨量，港島、九龍及新界東北部地區雨量更超過 **70 毫米**。受高空反氣旋影響，八月十三日本港部分時間有陽光，局部地區有驟雨及雷暴。除局部地區有幾陣驟雨外，八月十四日及十五日本港大致天晴及天氣酷熱。

受南海東北部的一個低壓區及隨後的廣闊低壓槽影響，八月十六日至二十日本港天氣夾雜陽光、驟雨及雷暴。八月十七日的驟雨較大，新界部分地區錄得超過 **70 毫米** 雨量。隨著高空反氣旋逐漸覆蓋中國東南部，八月二十一日日間及其後兩天，本港轉為大致天晴及酷熱。

與此同時，八月二十一日一個低壓區在呂宋以東海域發展為熱帶低氣壓，其後命名為馬鞍。八月二十三日早上馬鞍逐漸增強為強烈熱帶風暴並橫過呂宋北部。馬鞍當晚進入南海東北部後，八月二十四日大致採取西北路徑橫過南海，移向廣東西部沿岸。翌日早上馬鞍在茂名附近登陸，並減弱為熱帶風暴。其後馬鞍先後橫過廣東及廣西，並於八月二十六日在中南半島減弱為低壓區。

受馬鞍前沿的下沉空氣影響，八月二十四日初時本港大致天晴及酷熱。隨著馬鞍靠近，當日稍後本港天氣轉為多雲，風勢明顯增強。天文台在當晚發出本年度第二個八號烈風或暴風信號。八月二十四日晚上及八月二十五日初時本港普遍吹強風至烈風，離岸及高地間中吹暴風。隨著馬鞍遠離本港及於內陸逐漸減弱，八月二十五日日間本港風勢迅速緩和。當日馬鞍的外圍雨帶亦間中為本港帶來狂風大驟雨，多處地區錄得超過 50 毫米雨量。

受高空反氣旋影響，除局部地區有驟雨外，八月二十六日至二十八日本港大致天晴及酷熱。在微風的情況下，本月最後三天本港部分時間有陽光，而高溫亦在本港部分地區觸發雷雨。

二零二二年八月有七個熱帶氣旋影響南海及北太平洋西部。

八月沒有航機因惡劣天氣須轉飛其他地方。表 1.1 載列八月份發出及取消各種警告／信號的詳情。表 1.2 則載列八月份天氣數字與平均數字的比較。

1. The Weather of August 2022

Mainly attributed to the rainfall associated with the tropical cyclone activity over the northern part of the South China Sea, the month was wetter than usual with the monthly rainfall of 614.8 millimetres, about 36 per cent more than the normal figure of 453.2 millimetres. The accumulated rainfall recorded in the first eight months of the year was 1 827.8 millimetres, about 5 percent below the normal figure of 1 921.5 millimetres for the same period. The monthly mean temperature of 28.8 degrees was near the normal figure of 28.7 degrees. Owing to the record-breaking high temperature weather in July 2022, the summer of this year from June to August was much hotter than usual. The mean temperature of 29.2 degrees was one of the fourth highest on record for the same period.

Under the influence of an anticyclone aloft, the weather of Hong Kong was fine and very hot on the first day of the month. With plenty of sunshine, the maximum temperature at the Observatory soared to 35.7 degrees in the afternoon, the highest of the month. While it was mainly fine and very hot during the day on August 2, convective activities triggered by high temperatures brought thundery showers to the territory in the evening. Meanwhile, an area of low pressure over the northeastern part of the South China Sea developed into a tropical depression on the night of August 3. It moved generally west-northwestwards towards the east of the Pearl River Estuary. The tropical depression made landfall over the coast of Huidong and weakened into an area of low pressure over inland Guangdong on the afternoon of 4 August. Affected by the tropical depression and its remnant low pressure area, local weather was mainly cloudy with occasional heavy showers and squally thunderstorms from August 3 to 5. More than 100 millimetres of rainfall were generally recorded over Hong Kong on these three days and rainfall even exceeded 200 millimetres over the eastern part of the territory. Under the rain, the temperature at the Observatory dropped to 24.5 degrees on August 5, the lowest of the month.

With the strengthening of the anticyclone aloft, showers abated gradually with sunny intervals on August 6. Apart from isolated showers and squally thunderstorms, the weather was generally fine the next day. Affected by an area of low pressure over the central part of the South China Sea, local weather turned mainly cloudy with occasional showers and squally thunderstorms on August 8. The area of low pressure developed gradually into a tropical depression on the early morning of August 9 and later named as Mulan. It moved generally northwards and intensified into a tropical storm during the day that day. It turned to move northwestwards afterwards. After skirting past the northeastern part of Hainan Island and southern tip of Leizhou Peninsula, Mulan entered Beibu Wan on the night of August 10. It made landfall over the northern part of Vietnam and weakened into an area of low pressure over inland on 11 August. Affected by Mulan, it was windy in Hong Kong on 9 - 10 August. The outer rainbands of Mulan also brought occasional heavy showers, violent gusts and thunderstorms to the territory on these two days. More than 100 millimetres of rainfall were generally recorded over Hong Kong from August 9 to 10 and rainfall even exceeded 200 millimetres over parts of Lantau Island.

Under the influence of a broad trough of low pressure, local weather remained mainly cloudy with showers and a few squally thunderstorms on August 11 and 12. The showers were heavier on the morning of 12 August. More than 50 millimetres of rainfall were generally recorded over the territory and rainfall even exceeded 70 millimetres over parts of Hong Kong Island, Kowloon and the northeastern part of the New Territories. Affected by an anticyclone aloft, there were sunny periods, isolated showers and thunderstorms on August 13. Apart from a few isolated showers, the weather turned generally fine and very hot on August 14 and 15.

Affected by an area of low pressure over the northeastern part of the South China Sea and the subsequent broad trough of low pressure, the weather of Hong Kong was a mixture of sunshine, showers and thunderstorms from August 16 to 20. Showers were heavier on August 17 with more than 70 millimetres of rainfall recorded over parts of the New Territories. With an anticyclone aloft gradually covering southeastern China, local weather became mainly fine and very hot during the day on August 21 and remained so in the following two days.

Meanwhile, the area of low pressure over the seas east of Luzon developed into a tropical depression on August 21 and later named as Ma-on. It gradually intensified into a severe tropical storm on the morning of August 23 and moved across the northern part of Luzon. Ma-on entered the northeastern part of the South China Sea on that night and tracked generally northwestwards across the South China Sea towards the coast of western Guangdong on 24 August. It made landfall near Maoming and then weakened into a tropical storm the next morning. Ma-on moved across Guangdong and Guangxi and weakened into an area of low pressure over Indo-China on 26 August.

Under the influence of the subsiding air ahead of Ma-on, the weather of Hong Kong was mainly fine and very hot at first on August 24. With Ma-on edging closer, the weather became cloudy with winds strengthening significantly later that day. The Observatory issued the second No.8 Gale or Storm Signal in this year that night. Strong to gale force winds generally affected the territory on

the night of August 24 and at first on August 25, with occasional storm force winds offshore and on high ground. With Ma-on departing from Hong Kong and weakening gradually over inland, local winds moderated quickly during the day on August 25. The outer rainbands of Ma-on also brought occasional heavy squally showers to Hong Kong that day. More than 50 millimetres of rainfall were recorded over many places.

Affected by an anticyclone aloft, apart from isolated showers, it was generally fine and very hot from August 26 to 28 August. Under light wind conditions, there were sunny periods and high temperature triggered thundery showers over parts of the territory on the last three days of the month.

Seven tropical cyclones occurred over the South China Sea and the western North Pacific in August 2022.

During August, no aircraft was diverted due to adverse weather. Details of issuance and cancellation of various warnings/signals in August are summarized in Table 1.1. Monthly meteorological figures and departures from normal for August are tabulated in Table 1.2.

表 1.1 二零二二年八月發出的警告及信號

Table 1.1 Warnings and Signals issued in August 2022

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
無名 NO NAME	1	3/8	2210	4/8	1440
木蘭 MULAN	1 3	9/8 9/8	0340 1125	9/8 10/8	1125 1820
馬鞍 MA-ON	1 3 8NE 8SE 3 1	23/8 24/8 24/8 25/8 25/8 25/8	2110 1240 1925 0140 0920 1410	24/8 24/8 25/8 25/8 25/8 25/8	1240 1925 0140 0920 1410 1610

強烈季候風信號

Strong Monsoon Signal

開始時間 Beginning Time		終結時間 Ending Time	
日/月 day/month	時 hour	日/月 day/month	時 hour
11/8 20/8	0210 0045	11/8 20/8	0620 0945

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	3/8	1530	3/8	1700
黃色 Amber	5/8	0408	5/8	0930
黃色 Amber	5/8	1305	5/8	1735
黃色 Amber	12/8	0840	12/8	1215
黃色 Amber	17/8	1610	17/8	1815

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
2/8	1232	2/8	1345
2/8	1750	2/8	2400
3/8	0427	3/8	1030
3/8	1255	3/8	2000
4/8	0840	4/8	1000
4/8	1337	4/8	1700
5/8	0325	5/8	0930
5/8	1032	5/8	1800
6/8	1000	6/8	1100
6/8	1135	6/8	1700
7/8	1207	7/8	1330
7/8	2021	7/8	2130
7/8	2200	7/8	2300
8/8	0101	8/8	0345
8/8	0605	8/8	1645
8/8	1740	8/8	0345
9/8	0630	9/8	2130
10/8	0430	10/8	0630

開始時間 Beginning Time		終結時間 Ending Time	
日/月 day/month	時 hour	日/月 day/month	時 hour
10/8	1704	10/8	2330
11/8	1015	11/8	1800
12/8	0404	12/8	0515
12/8	0732	12/8	1300
13/8	1440	13/8	1540
16/8	0612	16/8	0715
17/8	0143	17/8	0615
17/8	1531	17/8	1930
20/8	1310	20/8	1550
21/8	0232	21/8	0600
21/8	1825	21/8	2000
23/8	2000	23/8	2200
25/8	1650	25/8	2100
28/8	1318	28/8	1530
29/8	1316	29/8	1600
30/8	1350	30/8	1645
31/8	1114	31/8	1730

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
31/7	0930	2/8	2025
13/8	1345	15/8	1845
16/8	1445	16/8	1830
21/8	1145	24/8	1715
26/8	0945	30/8	1650

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
17/8	1550	17/8	1815

表 1.2 二零二二年八月的氣象數據與距平
Table 1.2 Figures and Departures from Normal - August 2022

氣象要素 Meteorological Element	本月數據 Figure of the month	距平* Departure from normal*	
		比正常〔長期平均〕高 above normal	比正常〔長期平均〕低 below normal
平均日最高氣溫 Mean Daily Maximum Air Temperature	31.9 °C	0.6 °C	----
平均氣溫 Mean Air Temperature	28.8 °C	0.1 °C	----
平均日最低氣溫 Mean Daily Minimum Air Temperature	26.8 °C	0.1 °C	----
平均露點溫度 Mean Dew Point Temperature	25.4 °C	0.3 °C	----
平均相對濕度 Mean Relative Humidity	82 %	1 %	----
平均雲量 Mean Cloud Amount	71 %	1 %	----
總雨量 Total Rainfall	毫米 614.8 mm	毫米 161.6 mm	----
出現低能見度的時數 Δ Number of hours of Reduced Visibility Δ	小時 2 hours	----	小時 38.9 hours §
總日照時間 Total Bright Sunshine Duration	小時 167.7 hours	----	小時 14.4 hours
平均每日太陽總輻射 Mean Daily Global Solar Radiation	兆焦耳/米 ² 16.22 MJ/m ²	兆焦耳/米 ² 0.49 MJ/m ²	----
總蒸發量 Total Evaporation	毫米 99.3 mm	----	毫米 30.4 mm

附註：除日照、太陽輻射及蒸發量在京士柏氣象站記錄和能見度在香港國際機場觀測外，其他數據均在天文台錄得。

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

Δ 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日前曾出現於此表內香港國際機場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。

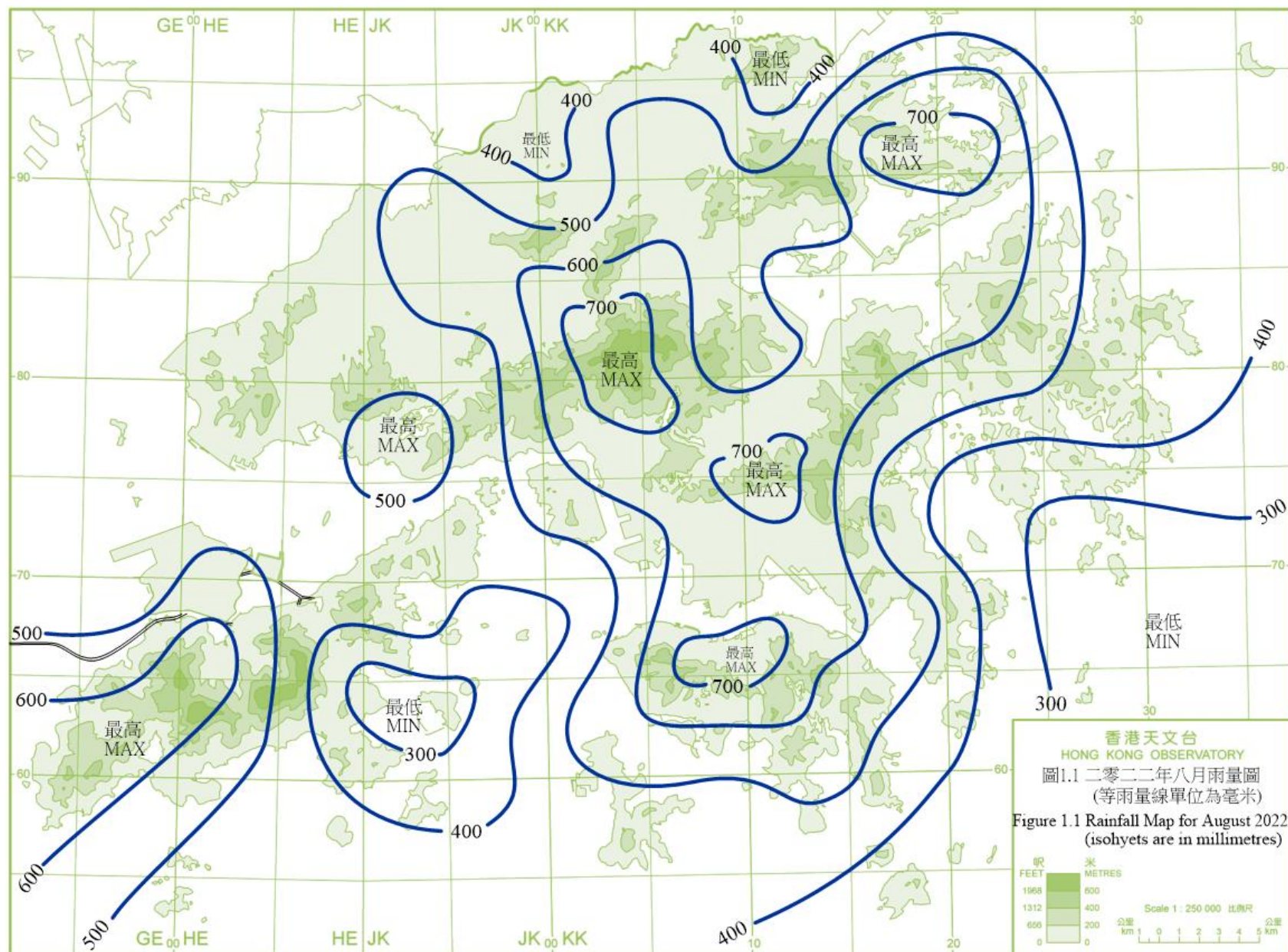
Δ The visibility readings at the Hong Kong International Airport are based on hourly observations by professional meteorological observers in 2004 and before, and average readings over the 10-minute period before the clock hour of the visibility meter near the middle of the south runway from 2005 onwards. The change of the data source in 2005 is an improvement of the visibility assessment using instrumented observations following the international trend. Before 10 October 2007, the number of hours of reduced visibility at the Hong Kong International Airport in 2005 and thereafter displayed in this 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.

* 1991-2020 氣候平均值的距平,低能見度時數除外。

* Departure from 1991-2020 climatological normal, except for number of hours of reduced visibility.

§ 1997-2021 平均值的距平。

§ Departure from mean value between 1997 and 2021.



2.1 二零二二年八月的熱帶氣旋概述

二零二二年八月在北太平洋西部及南海區域出現了七個熱帶氣旋，當中位於南海東北部的熱帶低氣壓、木蘭及馬鞍均引致香港天文台需要發出熱帶氣旋警告信號。

熱帶低氣壓翠絲於七月三十日下午在沖繩島以南約 510 公里的北太平洋西部上形成，向北移向琉球群島一帶並逐漸增強。七月三十一日早上翠絲增強為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 65 公里。翠絲隨後橫過東海並逐漸減弱，最後於八月一日在朝鮮半島減弱為低壓區。

一個熱帶低氣壓於八月三日晚上在香港之東南偏東約 310 公里的南海東北部上形成，採取西北偏西路徑移向珠江口以東一帶，中心附近最高持續風速估計為每小時 45 公里。該熱帶低氣壓於八月四日早上在惠東沿岸登陸，中午後在廣東內陸減弱為一個低壓區。

有關該熱帶低氣壓的詳細資料及對香港的影響，請參閱其熱帶氣旋報告。

熱帶低氣壓木蘭於八月九日凌晨在香港之西南偏南約 700 公里的南海中部上形成，初時向北至東北偏北方向移動。當日下午木蘭增強為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 65 公里。木蘭在八月九日晚上轉向西北移動，八月十日掠過海南島東北部及雷州半島南部，晚上橫過北部灣。八月十一日木蘭在越南北部登陸及在內陸減弱為低壓區。

有關木蘭的詳細資料及對香港的影響，請參閱其熱帶氣旋報告。

熱帶低氣壓米雷於八月十日早上在硫黃島之西北約 140 公里的北太平洋西部上形成，向西北方向移動並逐漸增強。八月十一日晚上米雷增強為熱帶風暴並採取偏北路徑移向日本本州。八月十二日晚上米雷達到其最高強度，中心附近最高持續風速估計為每小時 75 公里。米雷翌日轉向東北掠過日本本州南岸，最後於八月十四日在日本以東海域演變為一股溫帶氣旋。

根據報章報導，米雷掠過日本期間帶來狂風暴雨，造成約 10 000 戶停電。

熱帶低氣壓馬鞍於八月二十一日下午在馬尼拉之東北偏東約 730 公里的北太平洋西部上形成，向西南偏西方向移動並逐漸增強。八月二十二日馬鞍轉向西北偏西方向移動，八月二十三日凌晨發展為強烈熱帶風暴。馬鞍於當日橫過呂宋北部並在晚上進入南海北部。翌日馬鞍採取西北偏西路徑迅速橫過南海北部，移向廣東西部沿岸。當晚馬鞍進一步發展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 120 公里。受南海北部較強的垂直風切變影響，其後馬鞍逐漸減弱。八月二十五日中午前馬鞍於茂名電白附近登陸，最後於八月二十六日在越南北部減弱為低壓區。

根據報章報導，受馬鞍相關的狂風暴雨影響，珠海鐵路及船運服務暫停。有關馬鞍的詳細資料及對香港的影響，請參閱其熱帶氣旋報告。

熱帶低氣壓蝎虎於八月二十二日凌晨在硫黃島以東約 1 020 公里的北太平洋西部上形成，大致採取偏北路徑移動並逐漸增強。八月二十三日晚上蝎虎增強為颱風，並於八月二十四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 145 公里。蝎虎隨後逐漸減弱，最後於八月二十五日在日本以東的北太平洋西部演變為一股溫帶氣旋。

熱帶低氣壓軒嵐諾於八月二十八日凌晨在硫黃島以東約 960 公里的北太平洋西部上形成，大致向西北方向移動，並逐漸增強。八月二十九日軒嵐諾採取偏西路徑移向琉球群島一帶並迅速增強。八月三十日早上軒嵐諾發展為超強颱風。翌日軒嵐諾逐漸轉向西南移向台灣以東海域。



2.1 Overview of Tropical Cyclone in August 2022

Seven tropical cyclones occurred over the western North Pacific and the South China Sea in August 2022. Among them, the tropical depression over the northeastern part of the South China Sea, Mulan and Ma-on necessitated the issuance of the tropical cyclone warning signals by the Observatory.

Trases formed as a tropical depression over the western North Pacific about 510 km south of Okinawa on the afternoon of 30 July. It moved northwards towards the vicinity of the Ryukyu Islands and intensified gradually. Trases intensified into a tropical storm on the morning of 31 July and reached its peak intensity with an estimated maximum sustained wind of 65 km/h near its centre. It then moved across the East China Sea and weakened

gradually. Trases finally degenerated into an area of low pressure over the Korean Peninsula on 1 August.

A tropical depression formed over the northeastern part of the South China Sea about 310 km east-southeast of Hong Kong on the night of 3 August. It tracked west-northwestwards towards the east of the Pearl River Estuary with an estimated maximum sustained wind of 45 km/h near its centre. The tropical depression made landfall over the coast of Huidong on the morning of 4 August and degenerated into an area of low pressure over inland Guangdong after noon.

For detailed information of the tropical depression including its impact to Hong Kong, please refer to its Tropical Cyclone Report.

Mulan formed as a tropical depression over the central part of the South China Sea about 700 km south-southwest of Hong Kong in the small hours on 9 August. It moved north to north-northeastwards at first. Mulan intensified into a tropical storm in the afternoon and reached its peak intensity with an estimated maximum sustained wind of 65 km/h near its centre. It turned to move northwestwards on the night of 9 August. Mulan skirted past the northeastern part of Hainan Island and the southern part of Leizhou Peninsula on 10 August and moved across Beibu Wan at night. It made landfall over the northern part of Vietnam and weakened into an area of low pressure over inland on 11 August.

For detailed information of Mulan including its impact to Hong Kong, please refer to the Tropical Cyclone Report of Mulan.

Meari formed as a tropical depression over the western North Pacific about 140 km northwest of Iwo Jima on the morning of 10 August. It moved northwestwards and intensified gradually. Meari intensified into a tropical storm on the night of 11 August and generally tracked northwards towards Honshu, Japan. Meari reached its peak intensity on the night of 12 August with an estimated maximum sustained wind of 75 km/h near its centre. It moved northeastwards and skirted past the southern coast of Honshu, Japan on the next day and finally evolved into an extratropical cyclone over the seas east of Japan on 14 August.

According to press reports, Meari brought torrential rain and squalls to Japan which caused about 10 000 households without electricity supply during its passage.

Ma-on formed as a tropical depression over the western North Pacific about 730 km east-northeast of Manila on the afternoon of 21 August. It moved west-southwestwards and intensified gradually. Ma-on turned to track west-northwestwards on 22 August and developed into a severe tropical storm in the small hours on 23 August. It moved across the northern part of Luzon that day and entered the northern part of the South China Sea at night. Ma-on tracked west-northwestwards and moved rapidly across the northern part of the South China Sea towards the coast of western Guangdong the next day. Ma-on further developed into a typhoon that night, reaching its peak intensity with an estimated maximum sustained wind of 120 km/h near its centre. Affected by relatively strong vertical wind shear over the northern part of the South China Sea, Ma-on weakened gradually afterwards. It

made landfall near Dianbai, Maoming before noon on 25 August and finally weakened into an area of low pressure over the northern part of Vietnam on 26 August.

According to press reports, the rail and shipping services in Zhuhai were suspended under the influence of the torrential rain and squalls associated with Ma-on. For detailed information of Ma-on including its impact to Hong Kong, please refer to the Tropical Cyclone Report of Ma-on.

Tokage formed as a tropical depression over the western North Pacific about 1 020 km east of Iwo Jima in the small hours of 22 August. It generally tracked northwards and intensified gradually. Tokage intensified into a typhoon on the night of 23 August and reached its peak intensity in the small hours on 24 August with an estimated maximum sustained wind of 145 km/h near its centre. It then weakened gradually and finally evolved into an extratropical cyclone over the western North Pacific to the east of Japan on 25 August.

Hinnamnor formed as a tropical depression over the western North Pacific about 960 km east of Iwo Jima in the small hours on 28 August. It generally moved northwestwards and intensified gradually. On 29 August, Hinnamnor tracked westwards towards the vicinity of the Ryukyu Islands and intensified rapidly. Hinnamnor developed into a super typhoon on the morning of 30 August. It gradually turned to move southwestwards towards the seas east of Taiwan the next day.

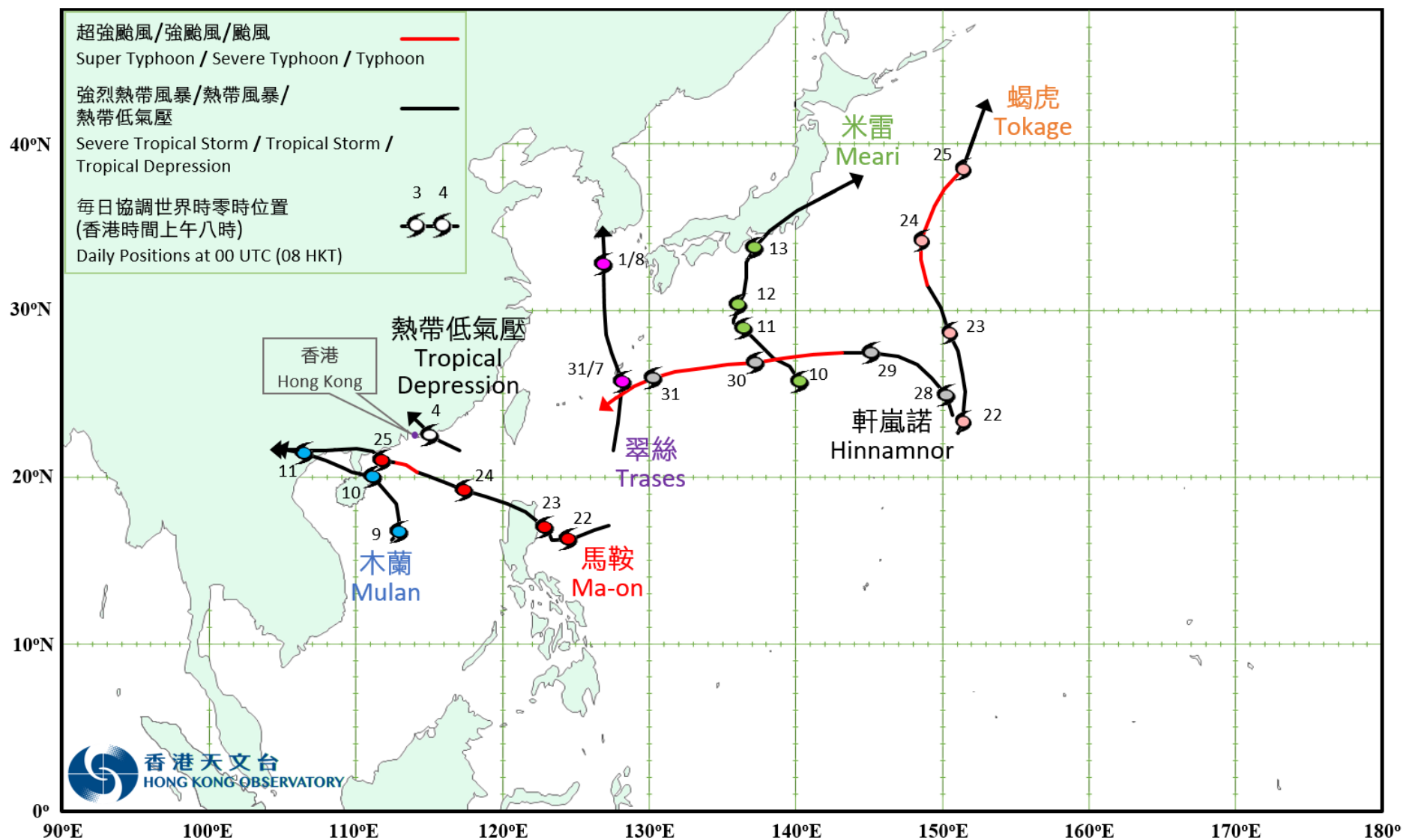


圖 2.1 二零二二年八月的熱帶氣旋暫定路徑圖

Fig. 2.1 Provisional Tropical Cyclone Tracks in August 2022

2.2 熱帶低氣壓

二零二二年八月三日至四日

八月三日晚上一個熱帶低氣壓在南海東北部形成，成為今年第二個影響香港的熱帶氣旋。

該熱帶低氣壓在香港之東南偏東約 310 公里的南海東北部上形成，採取西北偏西路徑移向珠江口以東一帶，中心附近最高持續風速估計為每小時 45 公里。該熱帶低氣壓於八月四日早上在惠東沿岸登陸，中午後在廣東內陸減弱為一個低壓區。

香港天文台於八月三日晚上 10 時 10 分發出一號戒備信號，當時熱帶低氣壓集結在香港之東南偏東約 250 公里。由於該熱帶低氣壓的環流組織較為鬆散，八月四日早上本港只普遍吹輕微至和緩的北至西北風。熱帶低氣壓於當日上午 11 時左右最接近本港，位置在香港天文台之東北約 80 公里。隨著該熱帶低氣壓在廣東內陸減弱為一個低壓區，天文台在八月四日下午 2 時 40 分取消所有熱帶氣旋警告信號。

受熱帶低氣壓及其殘餘低壓區的雨帶影響，八月三日至五日本港間中有大驟雨及狂風雷暴。八月五日的雨勢較大，當日天文台曾兩度發出黃色暴雨警告。八月三日至五日這三天期間本港普遍錄得超過 100 毫米雨量，東部地區的雨量更超過 200 毫米。

熱帶低氣壓對香港的影響不大，其間並沒有嚴重破壞報告。天文台總部於八月四日上午 4 時 15 分錄得最低瞬時海平面氣壓 1003.6 百帕斯卡。尖鼻咀在熱帶低氣壓掠過期間錄得最高潮位（海圖基準面以上）2.21 米，而大埔滘則錄得最大風暴潮（天文潮高度以上）0.23 米。

2.2 Tropical Depression

3 to 4 August 2022

A tropical depression formed over the northeastern part of the South China Sea on the night of 3 August and it was the second tropical cyclone affecting Hong Kong this year.

The tropical depression formed over the northeastern part of the South China Sea about 310 km east-southeast of Hong Kong. It tracked west-northwestwards towards the east of the Pearl River Estuary with an estimated maximum sustained wind of 45 km/h near its centre. The tropical depression made landfall over the coast of Huidong on the morning of 4 August and degenerated into an area of low pressure over inland Guangdong after noon.

The Observatory issued the Standby Signal No. 1 at 10:10 p.m. on 3 August when the tropical depression was about 250 km east-southeast of Hong Kong. As the circulation of the tropical depression was relatively loose, local winds were only generally light to moderate north to northwesterlies on the morning of 4 August. The tropical depression came closest to Hong Kong at around 11 a.m. on that day when it was about 80 km northeast of the Observatory Headquarters. With the tropical depression degenerating into an area of low pressure over inland Guangdong, all tropical cyclone warning signals were cancelled at 2:40 p.m. on 4 August.

Under the influence of the rainbands of the tropical depression and its remnant low pressure area, there were occasional heavy showers and squally thunderstorms in Hong Kong on 3 - 5 August. The rain was heaviest on 5 August and the Observatory issued the Amber Rainstorm Warning twice on that day. More than 100 millimetres of rainfall were generally recorded over Hong Kong during 3 - 5 August, rainfall even exceeded 200 millimetres over the eastern part of the territory.

The tropical depression did not cause any significant damage in Hong Kong during its passage. At the Observatory Headquarters, the lowest instantaneous mean sea-level pressure of 1003.6 hPa was recorded at 4:15 a.m. on 4 August. A maximum sea level (above chart datum) of 2.21 m and a maximum storm surge of 0.23 m (above astronomical tide) were recorded at Tsim Bei Tsui and Tai Po Kau respectively.

表 2.2.1 在熱帶低氣壓影響下，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 the tropical depression were in force

站 Station (https://www.hko.gov.hk/tc/informtc/station2022.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	西北偏西	WNW	27	4/8	09:30	西	W	19	4/8	10:00
長洲	Cheung Chau	西	W	32	4/8	08:57	西	W	19	4/8	09:00
長洲泳灘	Cheung Chau Beach	西	W	26	4/8	08:38	西	W	11	4/8	09:00
青洲	Green Island	西北偏北	NNW	33	4/8	06:23	東北偏東	ENE	23	4/8	00:00
香港國際機場	Hong Kong International Airport	西北偏西	WNW	37	4/8	08:38	西	W	18	4/8	09:00
啟德	Kai Tak	東南偏東	ESE	21	4/8	14:34	西	W	9	4/8	10:00
京士柏	King's Park	西	W	25	4/8	09:39	西	W	10	4/8	10:00
南丫島	Lamma Island	西北	NW	32	4/8	09:36	西北	NW	22	4/8	10:00
流浮山	Lau Fau Shan	北	N	31	4/8	07:27	北	N	15	4/8	08:00
北角	North Point	西南偏西	WSW	26	4/8	09:37	西	W	18	4/8	10:00
		西南偏西	WSW	26	4/8	09:39					
坪洲	Peng Chau	西北偏西	WNW	30	4/8	09:08	西北	NW	16	4/8	10:00
平洲	Ping Chau	西	W	25	4/8	10:06	西南偏西	WSW	12	4/8	11:00
西貢	Sai Kung	東南偏南	SSE	27	4/8	14:38	東南偏南	SSE	9	4/8	14:00
		東南偏南	SSE	27	4/8	14:40					
沙洲	Sha Chau	西南偏西	WSW	33	4/8	08:21	北	N	18	4/8	08:00
沙螺灣	Sha Lo Wan	西南	SW	26	4/8	08:10	西北偏西	WNW	10	4/8	09:00
沙田	Sha Tin	東北偏北	NNE	17	4/8	06:24	北	N	6	4/8	07:00
九龍天星碼頭	Star Ferry (Kowloon)	西	W	24	4/8	09:32	西	W	19	4/8	10:00
		西	W	24	4/8	09:33					
打鼓嶺	Ta Kwu Ling	西北	NW	14	4/8	08:12	西北	NW	4	4/8	09:00
大美督	Tai Mei Tuk	東南	SE	24	4/8	13:59	西	W	11	4/8	11:00
		東南	SE	24	4/8	14:40					
大埔滘	Tai Po Kau	西北偏西	WNW	24	4/8	08:19	西	W	10	4/8	09:00
塔門東	Tap Mun East	西北	NW	29	4/8	07:23	西北	NW	14	4/8	08:00
大老山	Tate's Cairn	西北	NW	37	4/8	08:01	西北偏北	NNW	26	4/8	07:00
將軍澳	Tseung Kwan O	東北偏北	NNE	17	3/8	22:11	東北偏北	NNE	6	3/8	23:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	西北偏西	WNW	19	4/8	06:35	西北	NW	10	4/8	07:00
		西北偏西	WNW	19	4/8	06:36					
屯門政府合署	Tuen Mun Government Offices	東北偏北	NNE	21	4/8	08:21	東北偏北	NNE	10	4/8	09:00
橫瀾島	Waglan Island	東北	NE	26	3/8	22:16	東北	NE	21	3/8	23:00
		東北	NE	26	3/8	22:17					
		東北	NE	26	3/8	22:18					
濕地公園	Wetland Park	西北	NW	12	4/8	07:22	西南偏西	WSW	3	4/8	13:00
黃竹坑	Wong Chuk Hang	-	-	23	3/8	23:58	-	-	6	4/8	14:00

黃麻角(赤柱)、昂坪、石崗、大帽山 - 沒有資料

Bluff Head (Stanley), Ngong Ping, Shek Kong, Tai Mo Shan - data not available

青洲 - 數據不完整

Green Island - incomplete data

黃竹坑 - 沒有風向資料

Wong Chuk Hang - wind direction not available

表 2.2.2 熱帶低氣壓影響香港期間，香港天文台總部及其他各站所錄得的日雨量

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

站 (參閱圖 2.2.2) Station (See Fig. 2.2.2)			八月三日 3 Aug	八月四日 4 Aug	八月五日 5 Aug	總雨量(毫米) Total rainfall (mm)
香港天文台 Hong Kong Observatory (HKO)			34.9	14.9	165.5	215.3
香港國際機場 Hong Kong International Airport (HKA)			0.3	68.4	52.1	120.8
長洲 Cheung Chau (CCH)			3.0	5.0	61.0	69.0
H23	香港仔	Aberdeen	19.0	8.5	148.5	176.0
N05	粉嶺	Fanling	2.0	67.0	93.0	162.0
N13	糧船灣	High Island	3.0	30.0	117.5	150.5
K04	佐敦谷	Jordan Valley	96.0	23.0	147.5	266.5
N06	葵涌	Kwai Chung	14.0	13.0	146.5	173.5
H12	半山區	Mid Levels	22.0	11.5	170.0	203.5
N09	沙田	Sha Tin	24.5	44.0	135.0	203.5
H19	筲箕灣	Shau Kei Wan	33.5	9.0	156.0	198.5
SEK	石崗	Shek Kong	3.5	34.0	60.5	98.0
K06	蘇屋邨	So Uk Estate	16.0	16.5	161.5	194.0
R31	大美督	Tai Mei Tuk	28.0	39.0	125.0	192.0
R21	踏石角	Tap Shek Kok	5.0	29.5	53.5	88.0
N17	東涌	Tung Chung	1.0	40.5	55.0	96.5
TMR	屯門水庫	Tuen Mun Reservoir	12.5	19.5	73.3	105.3

表 2.2.3 熱帶低氣壓影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮

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

站 Station (https://www.hko.gov.hk/tc/informtc/station2022.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	1.84	4/8	13:56	0.15	3/8	22:11
石壁	Shek Pik	1.88	4/8	12:56	0.07	4/8	12:12
大廟灣	Tai Miu Wan	1.78	4/8	11:35	0.15	3/8	22:02
大埔滘	Tai Po Kau	1.84	4/8	10:37	0.23	3/8	22:15
尖鼻咀	Tsim Bei Tsui	2.21	4/8	13:38	0.14	4/8	12:48

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

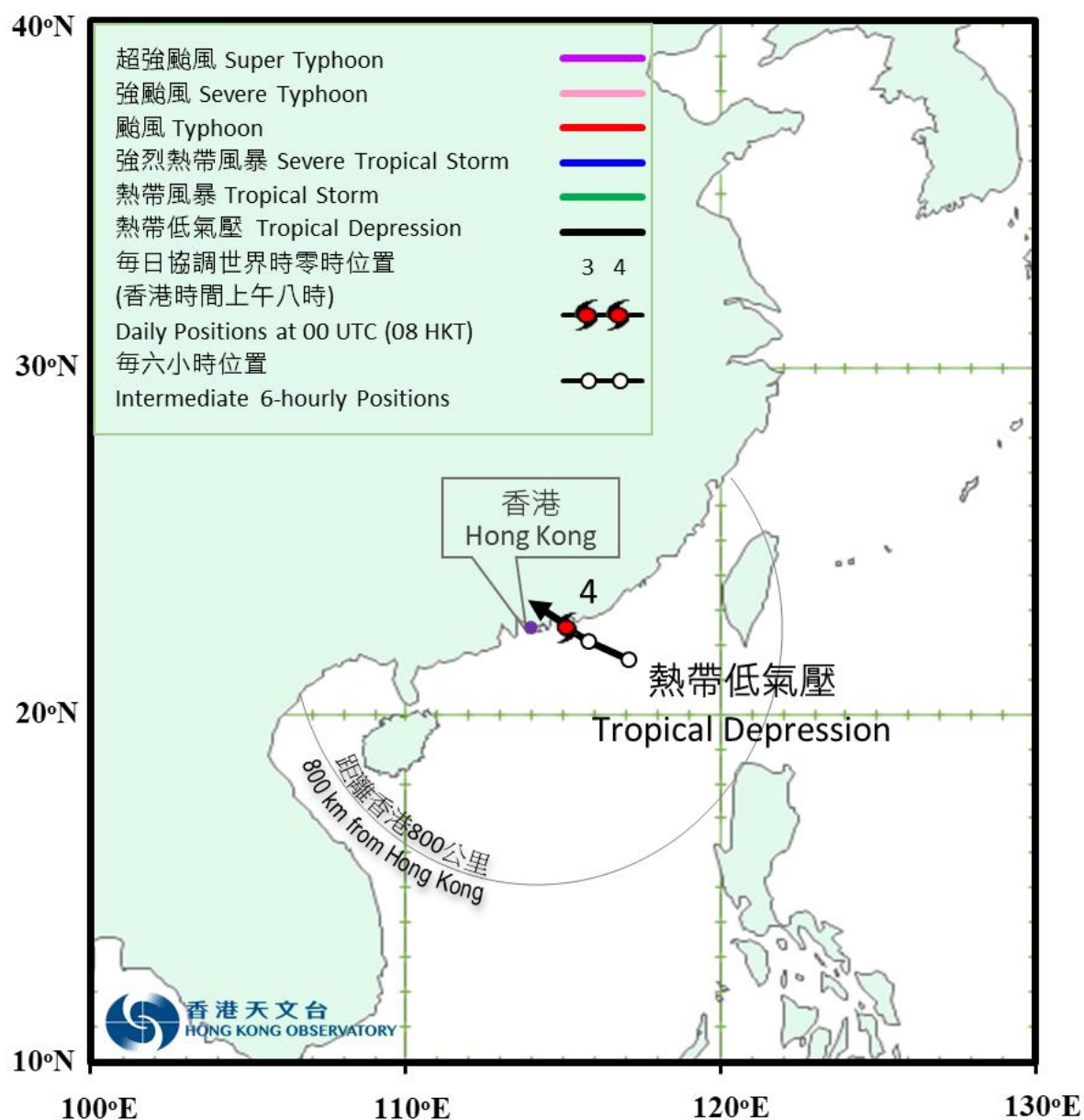


圖 2.2.1a 二零二二年八月三日至四日熱帶低氣壓的暫定路徑圖。
 Figure 2.2.1a Provisional track of the tropical depression: 3 - 4 August 2022.



圖 2.2.1b 熱帶低氣壓接近香港時的暫定路徑圖。

Figure 2.2.1b Provisional track of the tropical depression near Hong Kong.

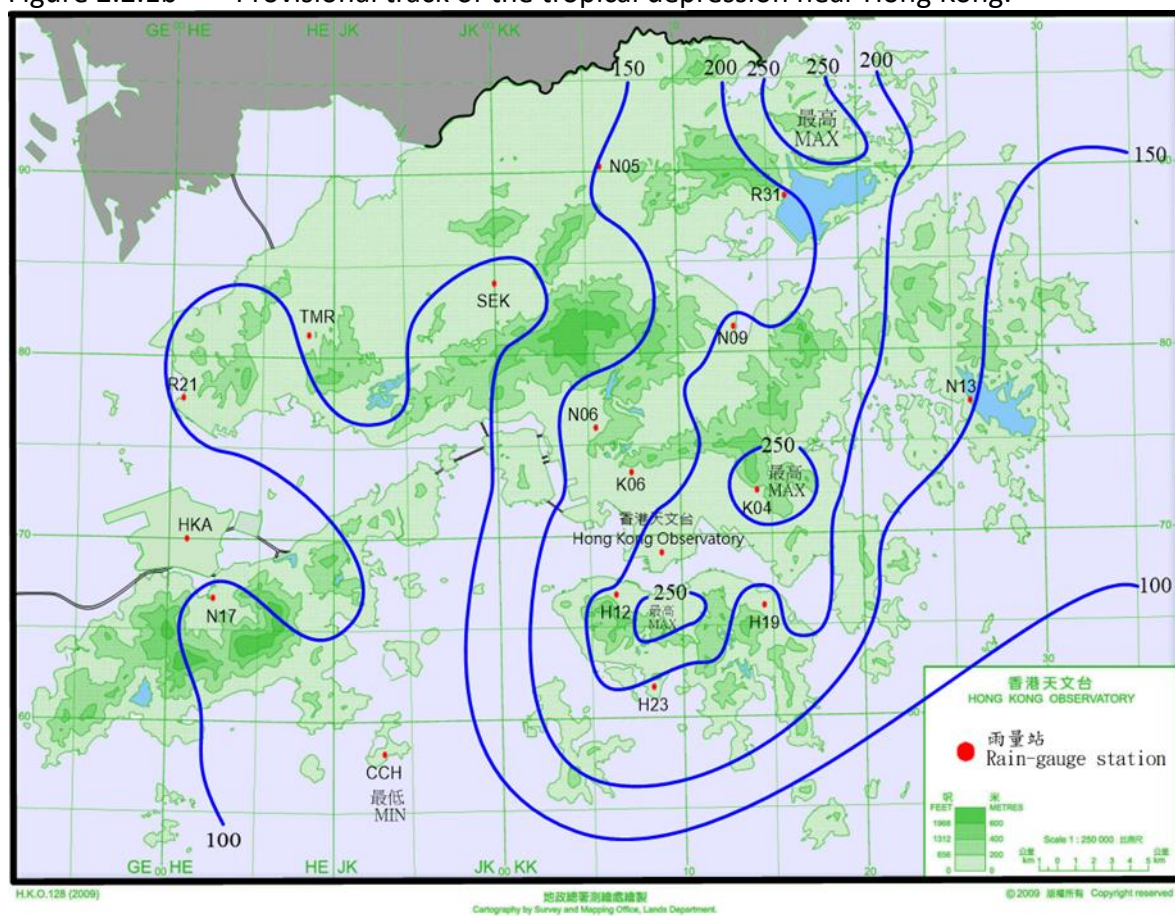


圖 2.2.2 二零二二年八月三日至五日的雨量分佈(等雨量線單位為毫米)。

Figure 2.2.2 Rainfall distribution on 3 – 5 August 2022 (isohyets are in millimetres).

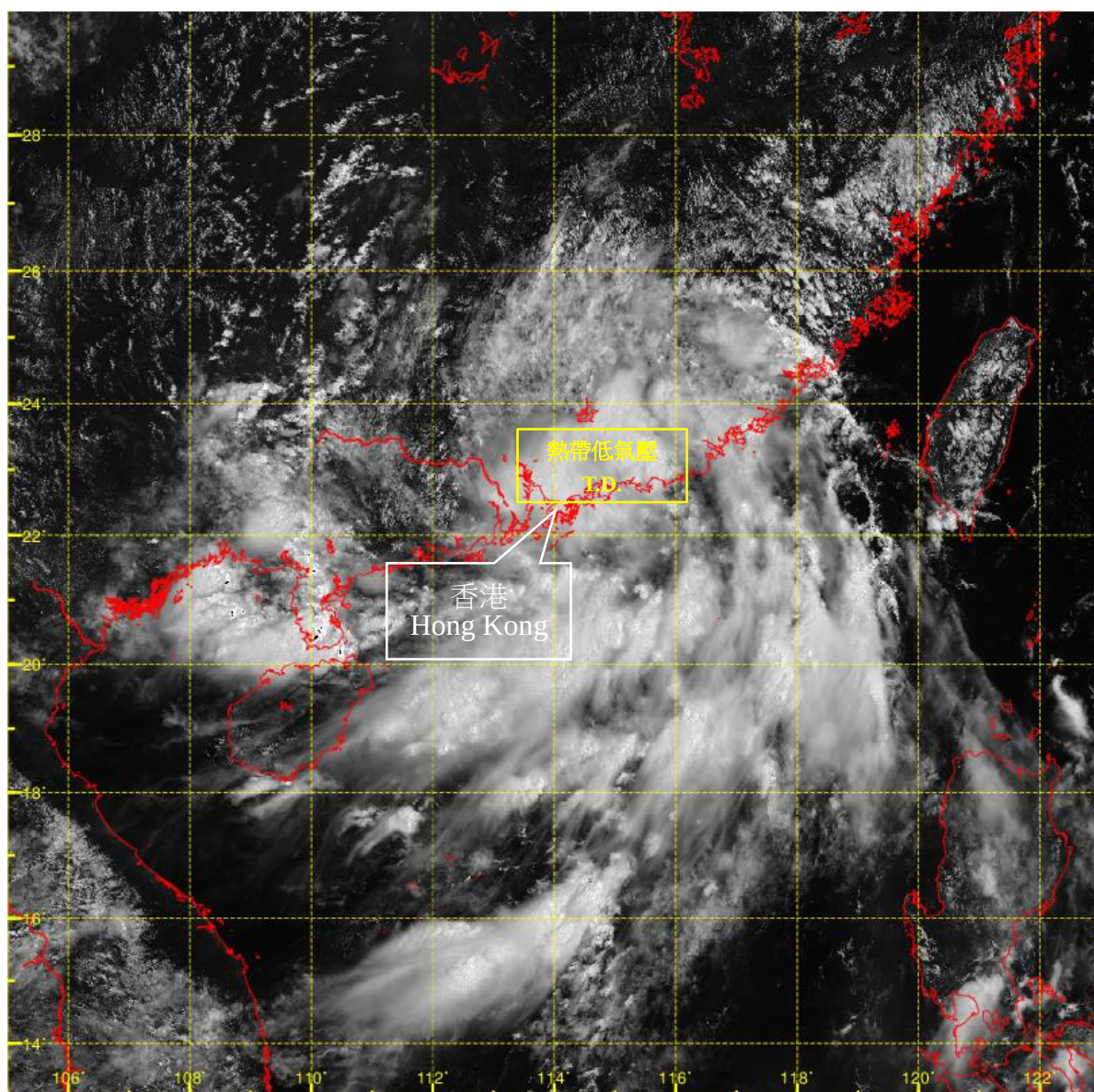


圖 2.2.3 二零二二年八月四日上午 11 時正的可見光衛星圖片，當時熱帶低氣壓最接近本港，位置在香港天文台之東北約 80 公里。

Figure 2.2.3 Visible satellite imagery at 11:00 a.m. on 4 August 2022 when the tropical depression was closest to Hong Kong and it was about 80 km northeast of the Observatory Headquarters.

〔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 of Japan Meteorological Agency.]

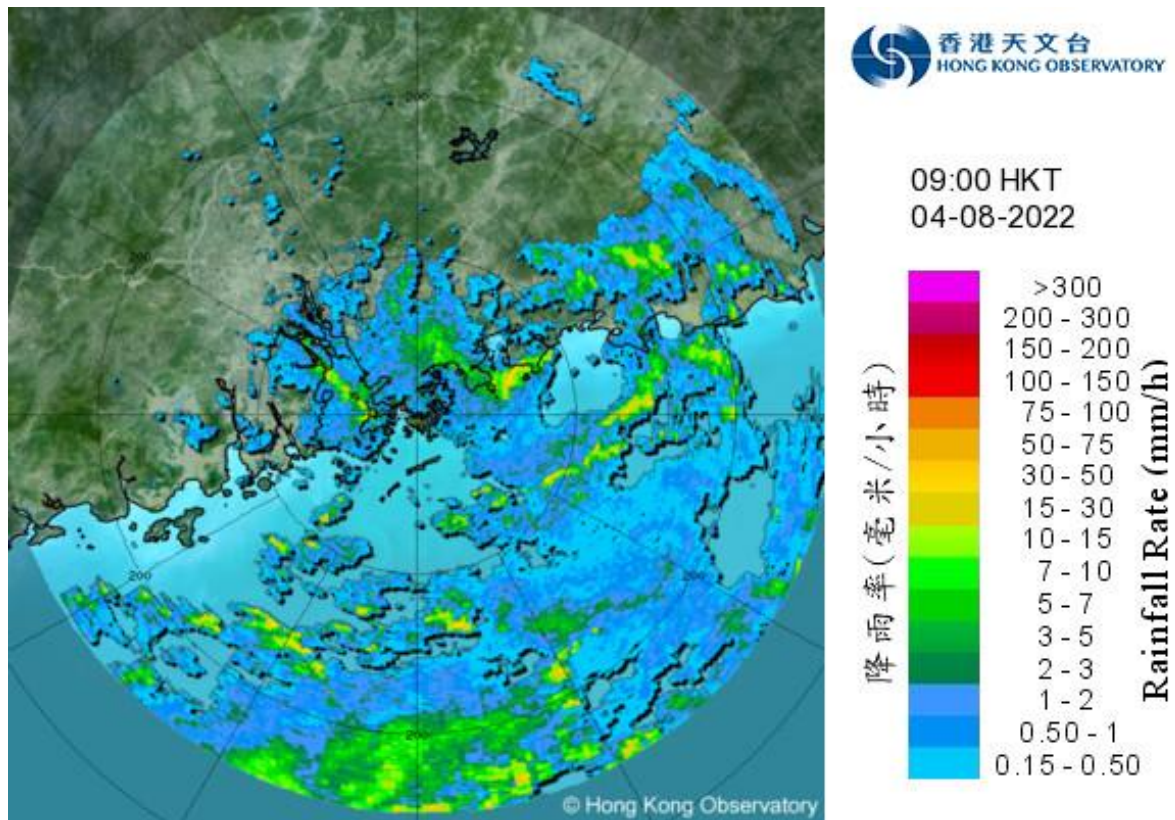


圖 2.2.4 二零二二年八月四日上午 9 時的雷達圖像顯示熱帶低氣壓的外圍雨帶正影響廣東沿岸及南海北部。

Figure 2.2.4 Radar image showing the outer rainbands of the tropical depression affecting the coast of Guangdong and the northern part of the South China Sea at 9:00 a.m. on 4 August 2022.

2.3 熱帶風暴木蘭 (2207)

二零二二年八月九日至十一日

木蘭是今年第三個影響香港的熱帶氣旋。

熱帶低氣壓木蘭於八月九日凌晨在香港之西南偏南約 700 公里的南海中部上形成，初時向北至東北偏北方向移動。當日下午木蘭增強為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 65 公里。木蘭當晚轉向西北移動，八月十日掠過海南島東北部及雷州半島南部，晚上橫過北部灣。八月十一日木蘭在越南北部登陸及在內陸減弱為低壓區。

八月九日凌晨木蘭形成後，香港天文台在當日上午 3 時 40 分發出一號戒備信號，當時木蘭集結在香港之西南偏南約 670 公里。本港當日早上普遍吹和緩至清勁偏東風，離岸及高地間中吹強風。隨著木蘭向北靠近海南島一帶，天文台在八月九日上午 11 時 25 分發出三號強風信號，當時木蘭位於香港之西南偏南約 590 公里。當日下午及翌日本港普遍吹清勁至強風程度的東至東南風，離岸及高地間中吹烈風。在與木蘭相關的強雨帶影響下，長洲在八月九日晚上 9 時左右曾錄得每小時 108 公里的陣風。木蘭於八月十日早上 8 時左右最接近香港，在本港西南約 400 公里處掠過。隨著木蘭遠離香港，本港風力在八月十日日間逐漸緩和，天文台於當日下午 6 時 20 分取消所有熱帶氣旋警告信號。

在木蘭的影響下，尖鼻咀錄得最高潮位(海圖基準面以上) 3.21 米，而大埔滘則錄得最大風暴潮(天文潮高度以上) 0.51 米。天文台總部於八月九日下午 4 時 31 分錄得最低瞬時海平面氣壓 1001.5 百帕斯卡。

木蘭廣闊的外圍雨帶在八月九日至十日為本港帶來大驟雨、猛烈陣風及雷暴。這兩天期間本港普遍地區錄得超過 100 毫米雨量，大嶼山部分地區的雨量更超過 200 毫米。

木蘭吹襲香港期間，本港有多宗塌樹報告。在猛烈陣風下尖沙咀有圍板被吹翻。柴灣及灣仔分別有大樹倒塌，損毀六輛小巴及一支街燈。觀塘及跑馬地亦有大樹被強風吹倒阻礙行車線，引致交通受阻。

2.3 Tropical Storm Mulan (2207)

9 to 11 August 2022

Mulan was the third tropical cyclone affecting Hong Kong this year.

Mulan formed as a tropical depression over the central part of the South China Sea about 700 km south-southwest of Hong Kong in the small hours on 9 August. It moved north to north-northeastwards at first. Mulan intensified into a tropical storm in the afternoon and reached its peak intensity with an estimated maximum sustained wind of 65 km/h near its centre. It turned to move northwestwards that night. Mulan skirted past the northeastern part of Hainan Island and the southern part of Leizhou Peninsula on 10 August and moved across Beibu Wan at night. It made landfall over the northern part of Vietnam and weakened into an area of low pressure over inland on 11 August.

After the formation of Mulan in the small hours on 9 August, the Hong Kong Observatory issued the Standby Signal No. 1 at 3:40 a.m. when Mulan was about 670 km south-southwest of Hong Kong. Local winds were moderate to fresh easterlies in that morning, occasionally reaching strong force offshore and on high ground. With Mulan moving northwards and edging closer to the vicinity of Hainan Island, the Strong Wind Signal No. 3 was issued at 11:25 a.m. on 9 August when Mulan was about 590 km south-southwest of Hong Kong. Local winds were generally fresh to strong east to southeasterlies that night and the next day, occasionally reaching gale force offshore and on high ground. Affected by the intense rainbands associated with Mulan, gust of 108 km/h was recorded at Cheung Chau at around 9 p.m. on 9 August. Mulan was closest to Hong Kong at around 8 a.m. on 10 August, skirting past at around 400 km southwest of the territory. With Mulan departing from Hong Kong, local winds moderated gradually during the day on 10 August and all tropical cyclone warning signals were cancelled at 6:20 p.m. on that day.

Under the influence of Mulan, a maximum sea level (above chart datum) of 3.21 m and a maximum storm surge of 0.51 m (above astronomical tide) were recorded at Tsim Bei Tsui and Tai Po Kau respectively. At the Observatory Headquarters, the lowest instantaneous mean sea-level pressure of 1001.5 hPa was recorded at 4:31 p.m. on 9 August.

The broad outer rainbands of Mulan brought heavy showers, violent gusts and thunderstorms to Hong Kong on 9 - 10 August. More than 100 millimetres of rainfall were generally recorded over Hong Kong on these two days and rainfall even exceeded 200 millimetres over parts of Lantau Island.

A number of fallen trees were reported in Hong Kong during the passage of Mulan. A hoarding in Tsim Sha Tsui was blown down under violent gusts. There were toppled trees at Chai Wan and Wan Chai, damaging six minibuses and a street lamp. The fallen trees at Kwun Tong and Happy Valley also blocked traffic lanes, resulting in disruption of traffic.

表 2.3.1 在木蘭影響下，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 Mulan were in force

站 Station (https://www.hko.gov.hk/tc/informtc/station2022.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	東南	SE	71	9/8	14:31	東南偏東	ESE	39	10/8	05:00
長洲	Cheung Chau	東南偏東	ESE	108	9/8	20:59	東南偏東	ESE	69	10/8	03:00
長洲泳灘	Cheung Chau Beach	東	E	102	9/8	20:59	東	E	62	10/8	05:00
青洲	Green Island	東南偏東	ESE	94	10/8	11:42	東	E	47	10/8	03:00
香港國際機場	Hong Kong International Airport	東南偏南	SSE	77	10/8	14:16	東南偏東	ESE	40	10/8	06:00
啟德	Kai Tak	東南偏東	ESE	71	10/8	05:09	東	E	30	10/8	03:00
京士柏	King's Park	東南偏南	SSE	78	10/8	11:41	東	E	35	10/8	03:00
南丫島	Lamma Island	東南偏東	ESE	82	10/8	05:18	東	E	37	10/8	05:00
流浮山	Lau Fau Shan	東南偏東	ESE	58	9/8	15:26	東南	SE	27	10/8	15:00
北角	North Point	東	E	72	9/8	14:30	東	E	39	9/8	08:00
坪洲	Peng Chau	東南	SE	77	10/8	11:43	東南偏東	ESE	42	10/8	05:00
平洲	Ping Chau	東南偏東	ESE	31	9/8	19:40	東北偏東	ENE	8	9/8	13:00
							東	E	8	10/8	18:00
西貢	Sai Kung	東南	SE	77	9/8	08:42	東南偏南	SSE	32	10/8	16:00
沙洲	Sha Chau	南	S	85	10/8	14:19	東南	SE	44	10/8	11:00
沙螺灣	Sha Lo Wan	東	E	87	10/8	03:37	東	E	35	10/8	05:00
沙田	Sha Tin	東	E	57	9/8	11:09	東南偏南	SSE	21	10/8	09:00
九龍天星碼頭	Star Ferry (Kowloon)	東	E	77	10/8	11:39	東	E	39	10/8	08:00
打鼓嶺	Ta Kwu Ling	東	E	61	10/8	05:01	東	E	24	10/8	02:00
大美督	Tai Mei Tuk	東北偏東	ENE	85	9/8	19:45	東	E	53	9/8	20:00
大帽山	Tai Mo Shan	東南偏東	ESE	118	10/8	06:15	東南偏東	ESE	82	10/8	05:00
大埔滢	Tai Po Kau	東南	SE	73	10/8	07:50	東南	SE	40	10/8	02:00
							東南偏東	ESE	40	10/8	04:00
塔門東	Tap Mun East	東南偏東	ESE	98	9/8	19:33	東南偏東	ESE	66	9/8	20:00
大老山	Tate's Cairn	東南偏東	ESE	107	9/8	11:04	東南偏東	ESE	63	10/8	05:00
		東南偏東	ESE	107	9/8	11:05					
將軍澳	Tseung Kwan O	東	E	58	10/8	02:09	東南	SE	18	10/8	03:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	東南	SE	67	10/8	06:49	東南偏東	ESE	24	10/8	03:00
屯門政府合署	Tuen Mun Government Offices	東南偏東	ESE	69	10/8	10:41	東南	SE	26	10/8	15:00
橫瀾島	Waglan Island	東	E	91	9/8	06:59	東	E	63	9/8	08:00
濕地公園	Wetland Park	東南	SE	47	10/8	09:58	東南偏東	ESE	17	10/8	10:00
黃竹坑	Wong Chuk Hang	-	-	69	9/8	12:30	-	-	27	10/8	05:00

黃麻角(赤柱)、昂坪、石崗 - 沒有資料

Bluff Head (Stanley), Ngong Ping, Shek Kong - data not available

黃竹坑 - 沒有風向資料

Wong Chuk Hang - wind direction not available

表 2.3.2 在木蘭影響下，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程度的時段

Table 2.3.2 Periods during which sustained strong force winds were attained at the eight reference anemometers in the tropical cyclone warning system when tropical cyclone warning signals for Mulan were in force

站 Station (https://www.hko.gov.hk/tc/informtc/station2022.html)		最初達到強風* 時間		最後達到強風* 時間	
		Start time when strong wind speed* was attained		End time when strong wind speed* was attained	
		日期/月份	時間	日期/月份	時間
		Date/Month	Time	Date/Month	Time
長洲	Cheung Chau	9/8	07:29	10/8	16:01
香港國際機場	Hong Kong International Airport	9/8	21:19	10/8	14:39
西貢	Sai Kung	9/8	08:47	9/8	21:37

流浮山，啟德，沙田，打鼓嶺及青衣島蜆殼油庫的持續風力未達到強風程度。

The sustained wind speed did not attain strong force at Lau Fau Shan, Kai Tak, Sha Tin, Ta Kwu Ling and Tsing Yi Shell Oil Depot.

* 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

註：本表列出持續風力達到強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 force winds. Winds might fluctuate above or below the specified wind speeds in between the times indicated.

表 2.3.3 木蘭影響香港期間，香港天文台總部及其他各站所錄得的日雨量
Table 2.3.3 Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Mulan

站 (參閱圖 2.2.2) Station (See Fig. 2.2.2)			八月九日 9 Aug	八月十日 10 Aug	總雨量(毫米) Total rainfall (mm)
香港天文台 Hong Kong Observatory (HKO)			72.0	49.7	121.7
香港國際機場 Hong Kong International Airport (HKA)			48.6	121.4	170.0
長洲 Cheung Chau (CCH)			39.0	116.5	155.5
H23	香港仔	Aberdeen	69.5	44.5	114.0
N05	粉嶺	Fanling	99.5	36.0	135.5
N13	糧船灣	High Island	41.0	59.0	100.0
K04	佐敦谷	Jordan Valley	74.0	48.0	122.0
N06	葵涌	Kwai Chung	92.0	62.5	154.5
H12	半山區	Mid Levels	54.5	53.0	107.5
N09	沙田	Sha Tin	95.5	37.0	132.5
H19	筲箕灣	Shau Kei Wan	57.0	34.0	91.0
SEK	石崗	Shek Kong	86.5	89.0	175.5
K06	蘇屋邨	So Uk Estate	96.0	64.5	160.5
R31	大美督	Tai Mei Tuk	75.5	46.5	122.0
R21	踏石角	Tap Shek Kok	60.0	86.0	146.0
N17	東涌	Tung Chung	66.0	163.5	229.5
TMR	屯門水庫	Tuen Mun Reservoir	81.3	85.7	167.0

表 2.3.4 木蘭影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮
Table 2.3.4 Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of Mulan

站 Station (https://www.hko.gov.hk/tc/informtc/station2022.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	2.72	10/8	05:31	0.40	9/8	11:54
石壁	Shek Pik	2.82	10/8	06:37	0.42	9/8	22:35
大廟灣	Tai Miu Wan	2.72	10/8	05:33	0.44	9/8	21:21
大埔滢	Tai Po Kau	2.74	10/8	05:30	0.51	9/8	20:24
尖鼻咀	Tsim Bei Tsui	3.21	10/8	07:35	0.39	9/8	18:31

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

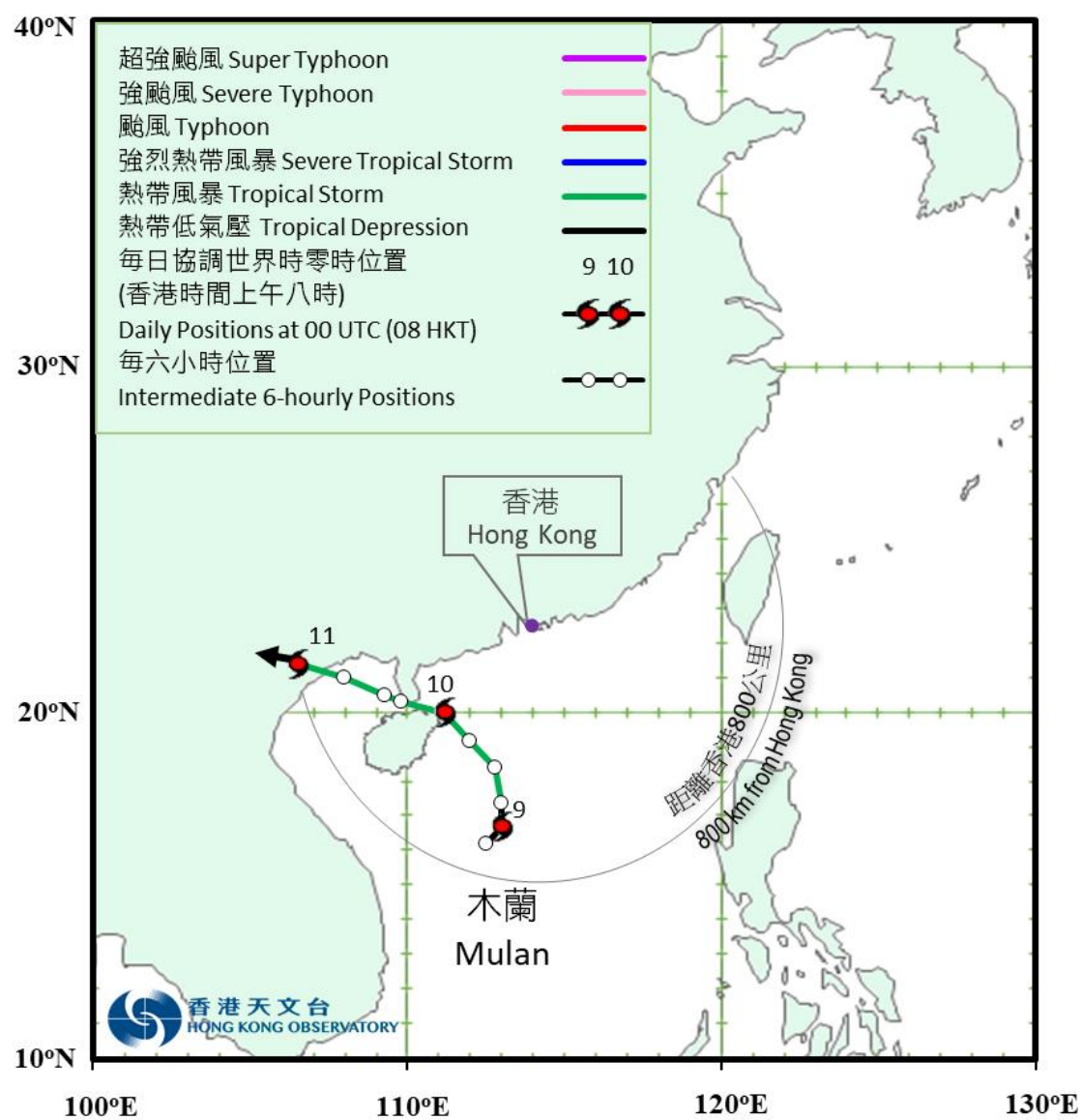


圖 2.3.1 二零二二年八月九日至十一日木蘭的暫定路徑圖。

Figure 2.3.1 Provisional Track of Mulan : 9 – 11 August 2022.

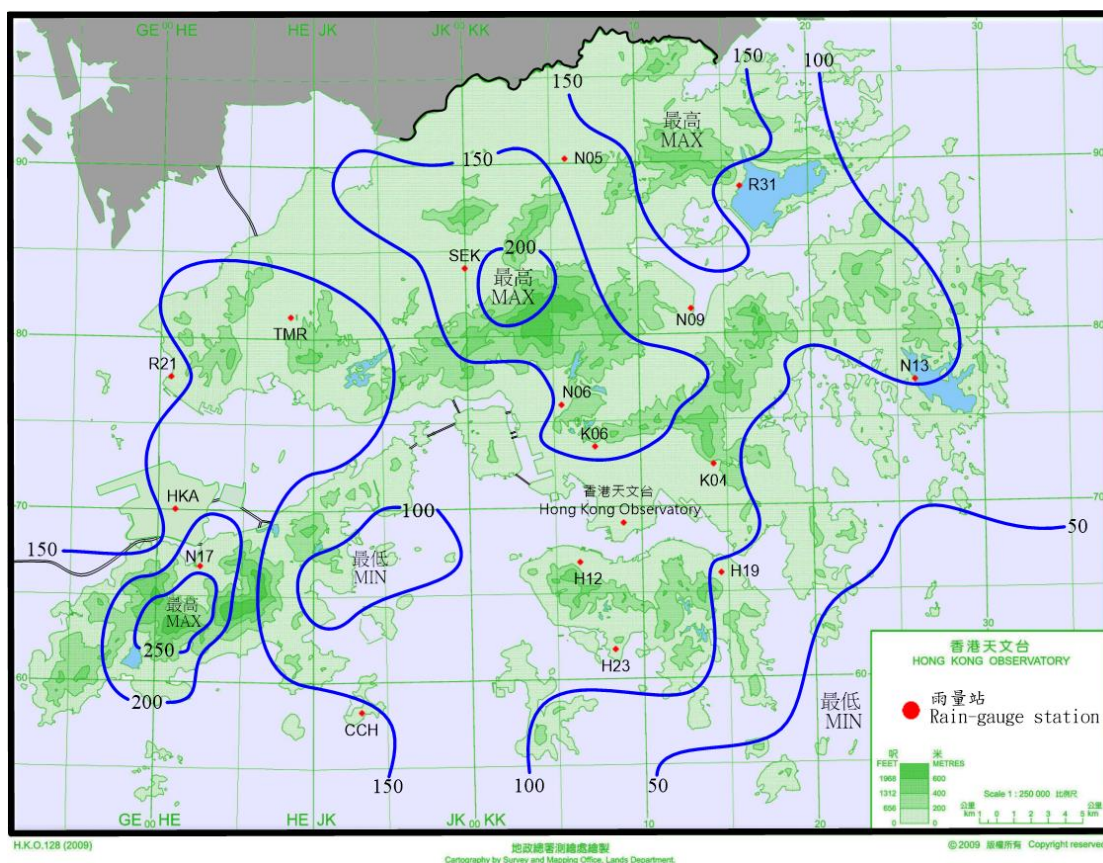


圖 2.3.2 二零二二年八月九日至十日的雨量分佈(等雨量線單位為毫米)。

Figure 2.3.2 Rainfall distribution on 9 – 10 August 2022 (isohyets are in millimetres).

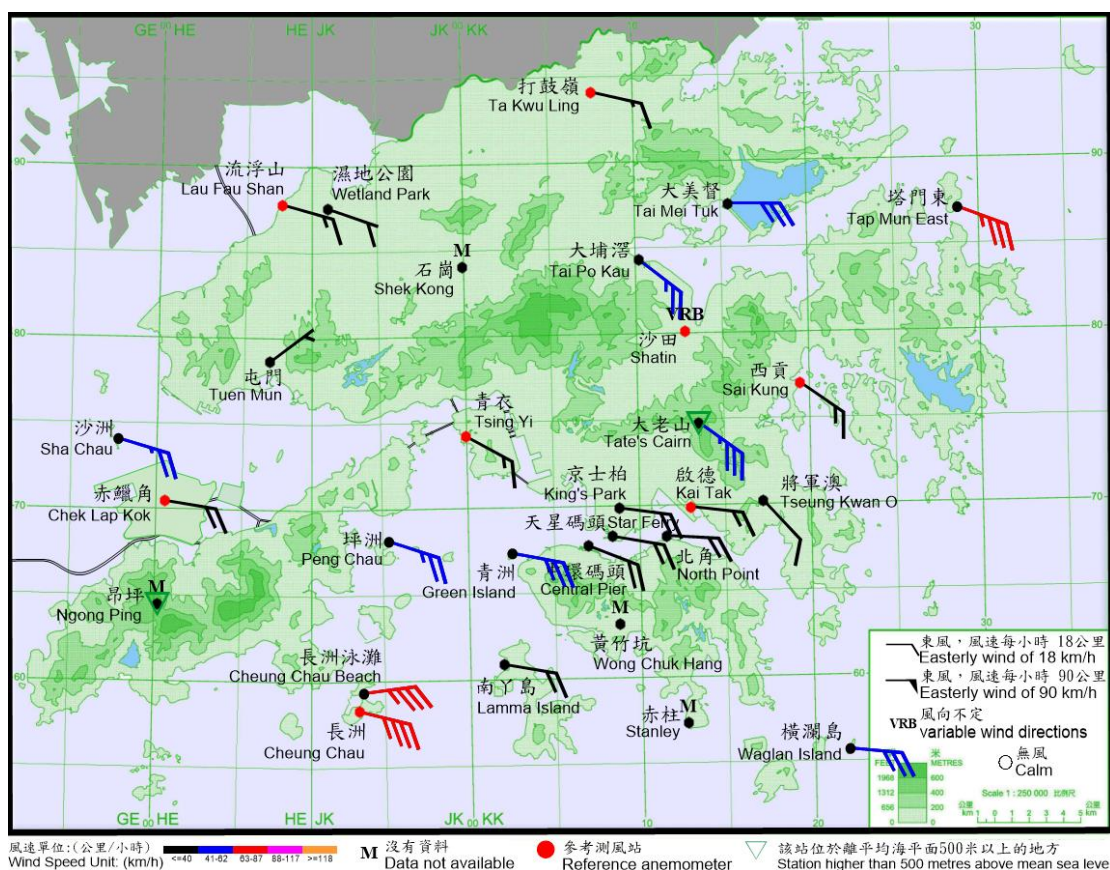


圖 2.3.3 二零二二年八月十日上午 2 時 40 分香港各站錄得的十分鐘平均風向和風速。

Figure 2.3.3 10-minute mean wind direction and speed recorded at various stations in Hong Kong at 2:40 a.m. on 10 August 2022.

註：沙田當時錄得的十分鐘平均風速為每小時 12 公里。

Note: The 10-minute mean wind speeds recorded at the time at Sha Tin was 12 km/h.

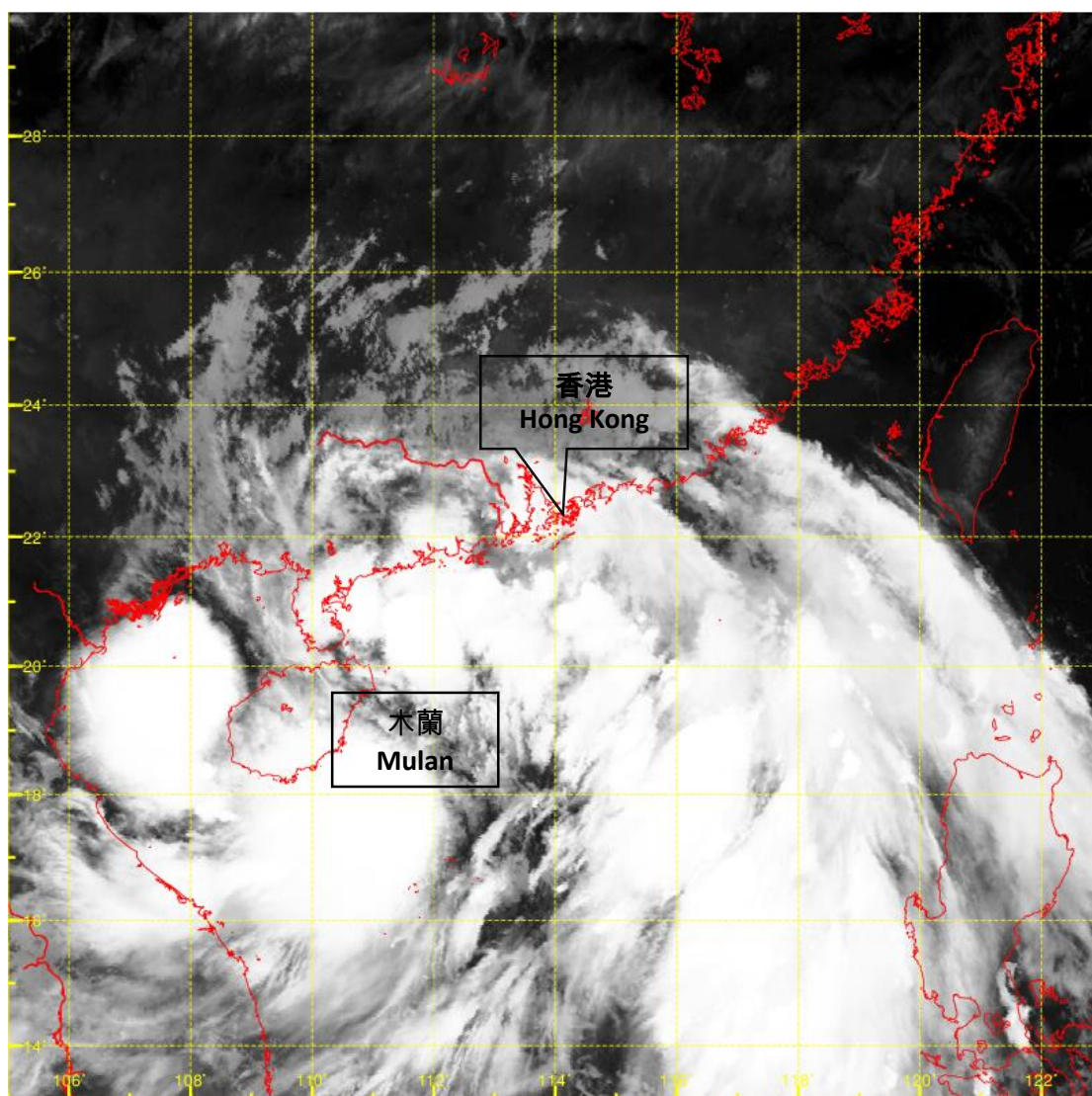


圖 2.3.4 二零二二年八月十日上午 2 時左右的紅外線衛星圖片顯示木蘭廣闊的環流。木蘭的強雨帶主要集中在其外圍，具有季風低壓的特徵。

Figure 2.3.4 Infra-red satellite imagery around 2 a.m. on 10 August 2022 showing Mulan's broad circulation. Mulan exhibited characteristics of a monsoon depression with intense rainbands mainly locating around the periphery.

〔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.]

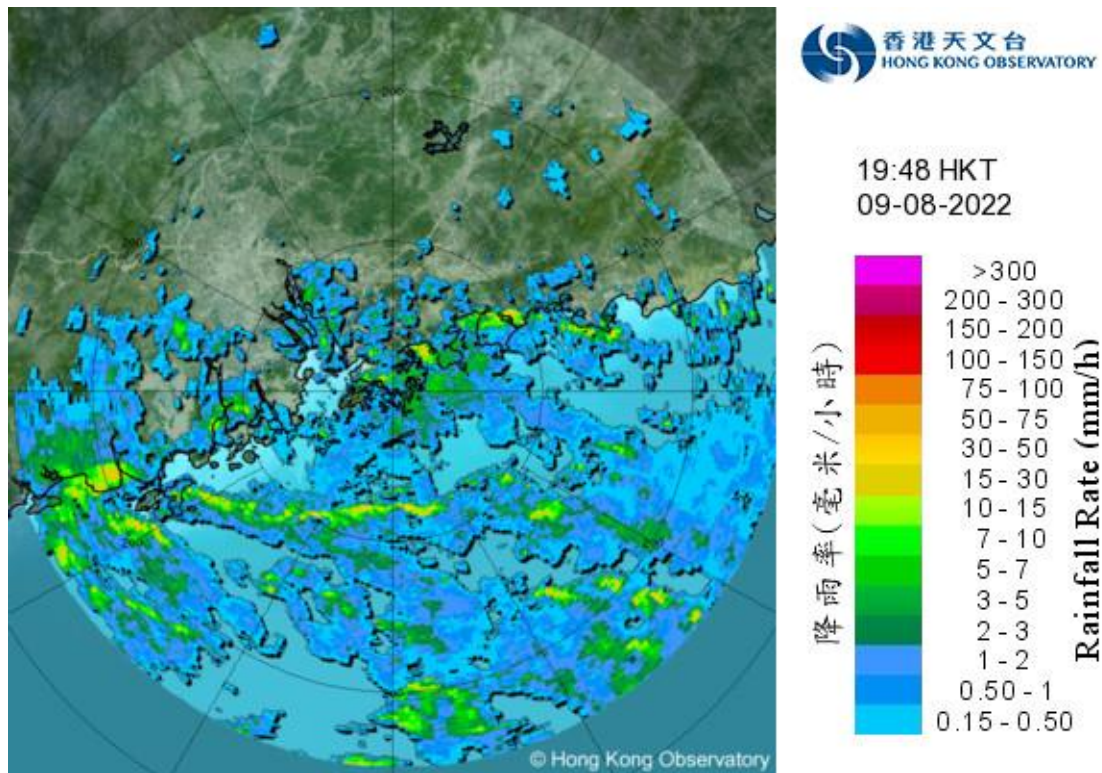


圖 2.3.5 二零二二年八月九日晚上 7 時 48 分的雷達回波圖像，當時與木蘭相關的強雨帶正影響香港。

Figure 2.3.5 Image of radar echoes at 7:48 p.m. on 9 August 2022 when the intense rainbands associated with Mulan were affecting Hong Kong.

2.4 颱風馬鞍 (2209)

二零二二年八月二十一日至二十六日

馬鞍是今年第四個影響香港的熱帶氣旋。馬鞍吹襲香港期間，天文台需要發出本年第二個八號烈風或暴風信號。

熱帶低氣壓馬鞍於八月二十一日下午在馬尼拉之東北偏東約 730 公里的北太平洋西部上形成，向西南偏西方向移動並逐漸增強。八月二十二日馬鞍轉向西北偏西方向移動，八月二十三日凌晨發展為強烈熱帶風暴。馬鞍於當日橫過呂宋北部並在晚上進入南海北部。翌日馬鞍採取西北偏西路徑迅速橫過南海北部，移向廣東西部沿岸。當晚馬鞍進一步發展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 120 公里。受南海北部較強的垂直風切變影響，其後馬鞍逐漸減弱。八月二十五日中午前馬鞍於茂名電白附近登陸，最後於八月二十六日在越南北部減弱為低壓區。

根據報章報導，受馬鞍相關的狂風暴雨影響，珠海鐵路及船運服務暫停。

天文台在八月二十三日晚上 9 時 10 分發出一號戒備信號，當時馬鞍集結在香港之東南偏東約 760 公里。晚間本港吹輕微至和緩北至東北風。隨著馬鞍迅速靠近廣東沿岸，天文台在八月二十四日下午 12 時 40 分發出三號強風信號，當時馬鞍位於香港之東南約 420 公里。下午本港風力明顯增強，普遍吹強風程度的東至東北風，離岸及高地間中吹烈風。隨著馬鞍進一步靠近本港，天文台在當日晚上 7 時 25 分發出八號東北烈風或暴風信號，當時馬鞍集結在香港之東南偏南約 270 公里。晚上本港風力進一步增強，普遍地區吹強風至烈風程度東至東北風，高地間中吹暴風。

午夜後馬鞍移至本港之西南面，本港轉吹東至東南風，天文台在八月二十五日上午 1 時 40 分改發八號東南烈風或暴風信號。馬鞍在八月二十五日上午 2 時左右最接近香港，在本港之西南偏南約 190 公里掠過。隨著馬鞍逐漸遠離香港，本港普遍風力減弱，天文台在八月二十五日早上 9 時 20 分改發三號強風信號，取代八號東南烈風或暴風信號。當日下午馬鞍繼續減弱及進一步遠離香港，天文台在當日下午 2 時 10 分以一號戒備信號

取代三號強風信號，並於下午 4 時 10 分取消所有熱帶氣旋警告信號。

在馬鞍的影響下，昂坪、長洲及橫瀾島錄得的最高每小時平均風速分別為每小時 95、82 及 75 公里，而最高陣風則分別為每小時 144、111 及 103 公里。尖鼻咀錄得最高潮位 3.27 米(海圖基準面以上)，而大廟灣及尖鼻咀則錄得最大風暴潮(天文潮高度以上) 0.73 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	999.4	24/8	下午 4 時 11 分
香港國際機場	999.1	24/8	下午 4 時 08 分
長洲	999.5	24/8	下午 5 時 13 分
京士柏	999.1	24/8	下午 4 時 13 分
流浮山	999.5	24/8	下午 4 時 02 分
坪洲	999.3	24/8	下午 3 時 49 分
沙田	999.7	24/8	下午 4 時 02 分
上水	999.1	24/8	下午 4 時 21 分
打鼓嶺	999.6	24/8	下午 4 時 17 分
大埔	999.8	24/8	下午 4 時 11 分
橫瀾島	999.0	24/8	下午 4 時 00 分

受馬鞍前沿的下沉氣流影響，八月二十四日初時本港大致天晴及酷熱。隨著馬鞍靠近，當日稍後本港轉為多雲。馬鞍的外圍雨帶在八月二十四日晚上至八月二十五日間中為本港帶來狂風大驟雨，多處地區錄得超過 50 毫米雨量。

馬鞍吹襲香港期間至少有一人受傷，另有 279 宗塌樹報告及一宗水浸報告。紅磡有鋁窗被強風吹倒，飛墜至行人過路處。

2.4 Typhoon Ma-on (2209)

21 - 26 August 2022

Ma-on was the fourth tropical cyclone affecting Hong Kong this year. The Observatory issued the second No. 8 Gale or Storm Signal in the year during the passage of Ma-on.

Ma-on formed as a tropical depression over the western North Pacific about 730 km east-northeast of Manila on the afternoon of 21 August. It moved west-southwestwards and intensified gradually. Ma-on turned to track west-northwestwards on 22 August and developed into a severe tropical storm in the small hours on 23 August. It moved across the northern part of Luzon that day and entered the northern part of the South China Sea at night. Ma-on tracked west-northwestwards and moved rapidly across the northern part of the South China Sea towards the coast of western Guangdong the next day. Ma-on further developed into a typhoon that night, reaching its peak intensity with an estimated maximum sustained wind of 120 km/h near its centre. Affected by relatively strong vertical wind shear over the northern part of the South China Sea, Ma-on weakened gradually afterwards. It made landfall near Dianbai, Maoming before noon on 25 August and finally weakened into an area of low pressure over the northern part of Vietnam on 26 August.

According to press reports, the rail and shipping services in Zhuhai were suspended under the influence of the torrential rain and squalls associated with Ma-on.

The Standby Signal No. 1 was issued at 9:10 p.m. on 23 August when Ma-on was about 760 km east-southeast of Hong Kong. Local winds were light to moderate north to northeasterlies. With Ma-on approaching the coast of Guangdong quickly, the No. 3 Strong Wind Signal was issued at 12:40 p.m. on 24 August when Ma-on was about 420 km southeast of Hong Kong. Local winds strengthened significantly in the afternoon, becoming generally strong east to northeasterlies and occasionally reaching gale force offshore and on high ground. With Ma-on edging even closer to Hong Kong, the No. 8 Northeast Gale or Storm Signal was issued at 7:25 p.m. that night when Ma-on was about 270 km south-southeast of the territory. Local winds further strengthened at night, becoming generally strong to gale force east to northeasterlies and occasionally reaching storm force on high ground.

Ma-on moved to the southwest of Hong Kong after midnight and local winds veered to east to southeasterlies. The No. 8 Southeast Gale or Storm Signal was issued at 1:40 a.m. on 25 August. Ma-on came closest to Hong Kong at around 2 a.m. on 25 August when it skirted past about 190 km south-southwest of the territory. With Ma-on gradually departing from Hong Kong and local winds moderating, the No. 8 Southeast Gale or Storm Signal was replaced by the No. 3 Strong Wind Signal at 9:20 a.m. on 25 August. As Ma-on continued to weaken and moved further away from Hong Kong in the afternoon, the Standby Signal No. 1 was issued at 2:10 p.m. to replace the No. 3 Strong Wind Signal and all tropical cyclone warning signals were cancelled at 4:10 p.m. that day.

Under the influence of Ma-on, maximum hourly mean winds of 95, 82 and 75 km/h and gusts of 144, 111 and 103 km/h were recorded at Ngong Ping, Cheung Chau, and Waglan Island respectively. A maximum sea level (above chart datum) of 3.27 m was recorded at Tsim Bei Tsui and a maximum storm surge (above astronomical tide) of 0.73 m was recorded at Tai Miu Wan and Tsim Bei Tsui. 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	999.4	24/8	4:11 p.m.
Hong Kong International Airport	999.1	24/8	4:08 p.m.
Cheung Chau	999.5	24/8	5:13 p.m.
King's Park	999.1	24/8	4:13 p.m.
Lau Fau Shan	999.5	24/8	4:02 p.m.
Peng Chau	999.3	24/8	3:49 p.m.
Sha Tin	999.7	24/8	4:02 p.m.
Sheung Shui	999.1	24/8	4:21 p.m.
Ta Kwu Ling	999.6	24/8	4:17 p.m.
Tai Po	999.8	24/8	4:11 p.m.
Waglan Island	999.0	24/8	4:00 p.m.

Under the influence of the subsiding air ahead of Ma-on, the weather of Hong Kong was mainly fine and very hot at first on 24 August. With Ma-on edging closer, the weather became cloudy later that day. The outer rainbands of Ma-on also brought occasional heavy squally showers to Hong Kong on the night of 24 August and on 25 August. More than 50 millimetres of rainfall were recorded over many places.

In Hong Kong, one person was injured during the passage of Ma-on. There were 279 reports of fallen trees and one report of flooding. An aluminium window was blown down by strong winds and fell to a pedestrian crossing place in Hung Hom.

表 2.4.1 在馬鞍影響下，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 Ma-on were in force

站 Station (https://www.hko.gov.hk/tc/informtc/station2022.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	東南偏東	ESE	75	25/8	00:05	東	E	46	24/8	21:00
							東	E	46	24/8	22:00
長洲	Cheung Chau	東南偏東	ESE	111	25/8	01:57	東南偏東	ESE	82	25/8	04:00
長洲泳灘	Cheung Chau Beach	東北偏東	ENE	102	24/8	21:43	東	E	73	25/8	02:00
青洲	Green Island	東北偏東	ENE	105	24/8	22:27	東北偏東	ENE	72	24/8	22:00
香港國際機場	Hong Kong International Airport	東南偏東	ESE	75	25/8	07:59	東南偏東	ESE	45	25/8	04:00
啟德	Kai Tak	東南偏東	ESE	83	25/8	00:45	東南偏東	ESE	35	25/8	05:00
京士柏	King's Park	東	E	71	25/8	00:45	東	E	36	25/8	02:00
南丫島	Lamma Island	東南偏東	ESE	86	25/8	03:13	東南偏東	ESE	49	25/8	04:00
		東南偏東	ESE	86	25/8	03:36					
流浮山	Lau Fau Shan	東南偏南	SSE	69	25/8	08:40	東北偏東	ENE	37	24/8	23:00
昂坪	Ngong Ping	東南偏東	ESE	144	25/8	04:27	東	E	95	25/8	02:00
							東	E	95	25/8	03:00
北角	North Point	東北偏東	ENE	85	24/8	21:31	東北偏東	ENE	53	24/8	22:00
坪洲	Peng Chau	東	E	86	24/8	22:04	東	E	62	24/8	23:00
平洲	Ping Chau	東北偏東	ENE	44	24/8	21:51	東	E	16	24/8	22:00
西貢	Sai Kung	東北偏東	ENE	81	24/8	22:54	東南偏南	SSE	49	25/8	05:00
沙洲	Sha Chau	東南偏南	SSE	79	25/8	03:46	東南	SE	53	25/8	04:00
沙螺灣	Sha Lo Wan	東南	SE	98	25/8	03:38	東	E	38	25/8	00:00
沙田	Sha Tin	東	E	87	24/8	21:36	東	E	21	24/8	22:00
九龍天星碼頭	Star Ferry (Kowloon)	東	E	82	25/8	02:18	東南偏東	ESE	40	25/8	04:00
打鼓嶺	Ta Kwu Ling	東	E	58	25/8	07:24	東	E	24	25/8	03:00
大美督	Tai Mei Tuk	東	E	90	25/8	00:26	東北偏東	ENE	62	24/8	18:00
							東	E	62	25/8	01:00
大埔滘	Tai Po Kau	東南偏東	ESE	83	25/8	00:55	東	E	49	24/8	23:00
塔門東	Tap Mun East	東南	SE	99	25/8	04:31	東南偏東	ESE	66	25/8	02:00
							東南偏東	ESE	66	25/8	03:00
大老山	Tate's Cairn	東	E	107	24/8	22:37	東南偏東	ESE	72	25/8	00:00
將軍澳	Tseung Kwan O	東	E	67	25/8	00:57	東北偏北	NNE	19	24/8	21:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	東南	SE	83	25/8	02:39	東南	SE	33	25/8	09:00
屯門政府合署	Tuen Mun Government Offices	東南	SE	69	25/8	03:50	東南	SE	27	25/8	05:00
橫瀾島	Waglan Island	東南偏東	ESE	103	25/8	01:59	東南偏東	ESE	75	25/8	04:00
濕地公園	Wetland Park	東南偏南	SSE	51	25/8	11:59	東北偏東	ENE	18	24/8	21:00
黃竹坑	Wong Chuk Hang	-	-	77	25/8	00:54	-	-	25	25/8	03:00
							-	-	25	25/8	04:00

黃麻角(赤柱)、石崗、大帽山 - 沒有資料 Bluff Head (Stanley), Shek Kong, Tai Mo Shan - data not available

黃竹坑 - 沒有風向資料 Wong Chuk Hang - wind direction not available

表 2.4.2 在馬鞍影響下，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 2.4.2 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 Ma-on were in force

站 Station (https://www.hko.gov.hk/tc/informtc/station2022.html)		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	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	24/8	16:56	25/8	12:31	24/8	22:49	25/8	08:52
香港國際機場	Hong Kong International Airport	24/8	20:15	25/8	11:42	-			
流浮山	Lau Fau Shan	24/8	18:37	25/8	08:50	-			
啟德	Kai Tak	25/8	04:05	25/8	07:11	-			
西貢	Sai Kung	24/8	15:50	25/8	12:11	-			
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	25/8	08:42	25/8	09:00	-			

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 2.4.3 馬鞍影響香港期間，香港天文台總部及其他各站所錄得的日雨量

Table 2.4.3 Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Ma-on

站 (參閱圖 2.2.2) Station (See Fig. 2.2.2)			八月二十三日 23 Aug	八月二十四日 24 Aug	八月二十五日 25 Aug	總雨量(毫米) Total rainfall (mm)
香港天文台 Hong Kong Observatory (HKO)			0.0	5.5	48.1	53.6
香港國際機場 Hong Kong International Airport (HKA)			0.0	3.0	64.9	67.9
長洲 Cheung Chau (CCH)			0.0	4.5	38.0	42.5
H23	香港仔	Aberdeen	0.0	5.0	16.5	21.5
N05	粉嶺	Fanling	0.0	7.5	59.0	66.5
N13	糧船灣	High Island	0.0	5.5	53.5	59.0
K04	佐敦谷	Jordan Valley	0.0	5.5	59.0	64.5
N06	葵涌	Kwai Chung	0.0	11.5	50.5	62.0
H12	半山區	Mid Levels	0.0	6.0	36.0	42.0
N09	沙田	Sha Tin	0.0	8.5	65.0	73.5
H19	筲箕灣	Shau Kei Wan	0.0	9.0	52.5	61.5
SEK	石崗	Shek Kong	0.0	[7.5]	56.0	[63.5]
K06	蘇屋邨	So Uk Estate	0.0	7.5	44.0	51.5
R31	大美督	Tai Mei Tuk	0.0	8.5	64.5	73.0
R21	踏石角	Tap Shek Kok	0.0	2.5	52.0	54.5
N17	東涌	Tung Chung	0.0	9.0	75.0	84.0
TMR	屯門水庫	Tuen Mun Reservoir	0.0	2.4	60.7	63.1

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

表 2.4.4 馬鞍影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮

Table 2.4.4 Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of Ma-on

站 Station (https://www.hko.gov.hk/tc/informtc/station2022.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	2.73	25/8	07:09	0.59	25/8	03:51
石壁	Shek Pik	2.94	25/8	07:12	0.70	25/8	04:39
大廟灣	Tai Miu Wan	2.65	25/8	06:48	0.73	25/8	03:52
大埔滢	Tai Po Kau	2.65	25/8	05:02	0.70	25/8	00:26
尖鼻咀	Tsim Bei Tsui	3.27	25/8	08:23	0.73	25/8	02:00

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

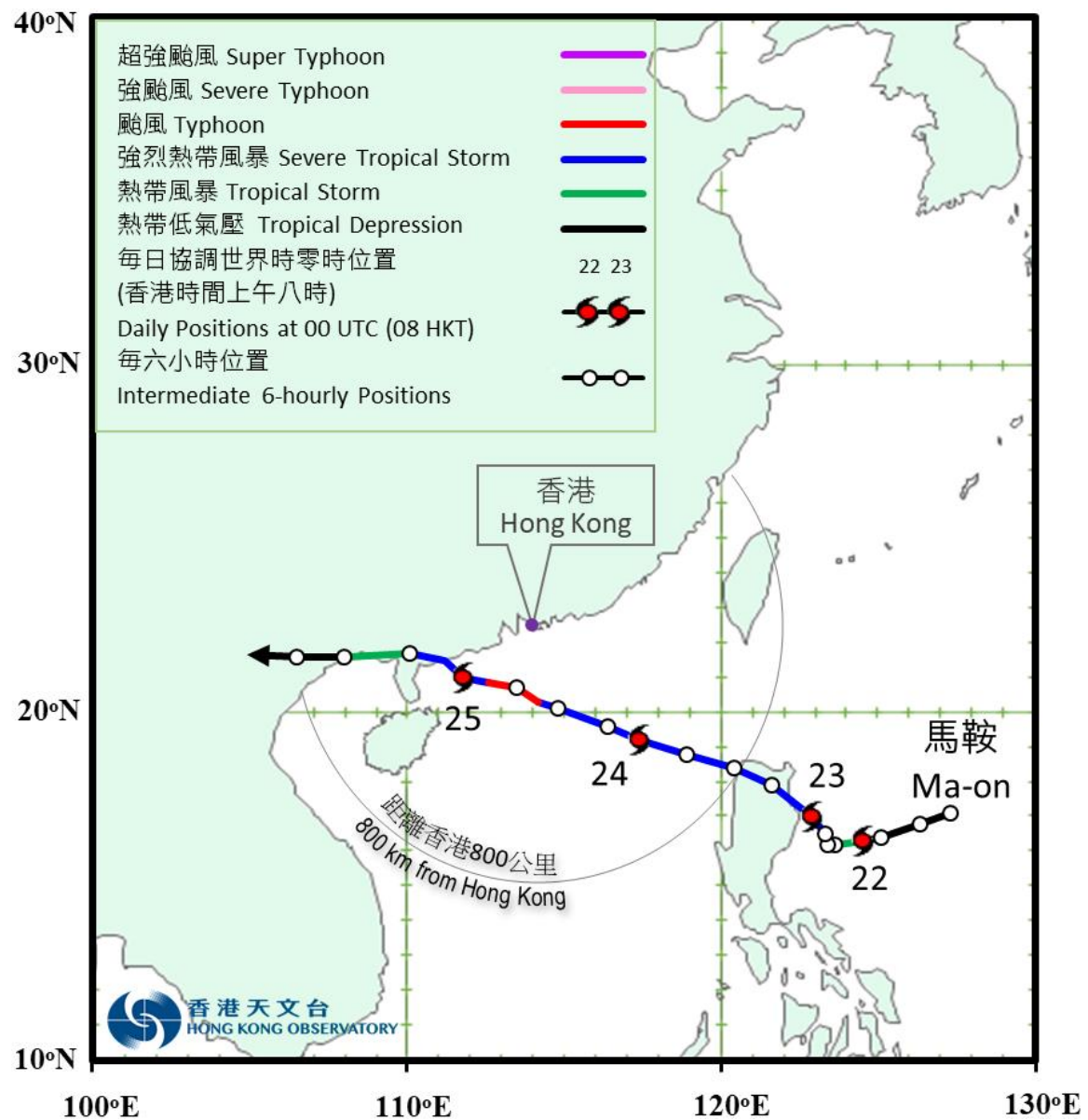


圖 2.4.1a 二零二二年八月二十一日至二十六日馬鞍(2209)的暫定路徑圖。

Figure 2.4.1a Provisional track of Ma-on (2209): 21 - 26 August 2022.



圖 2.4.1b 馬鞍(2209)接近香港時的暫定路徑圖。

Figure 2.4.1b Provisional track of Ma-on (2209) near Hong Kong.

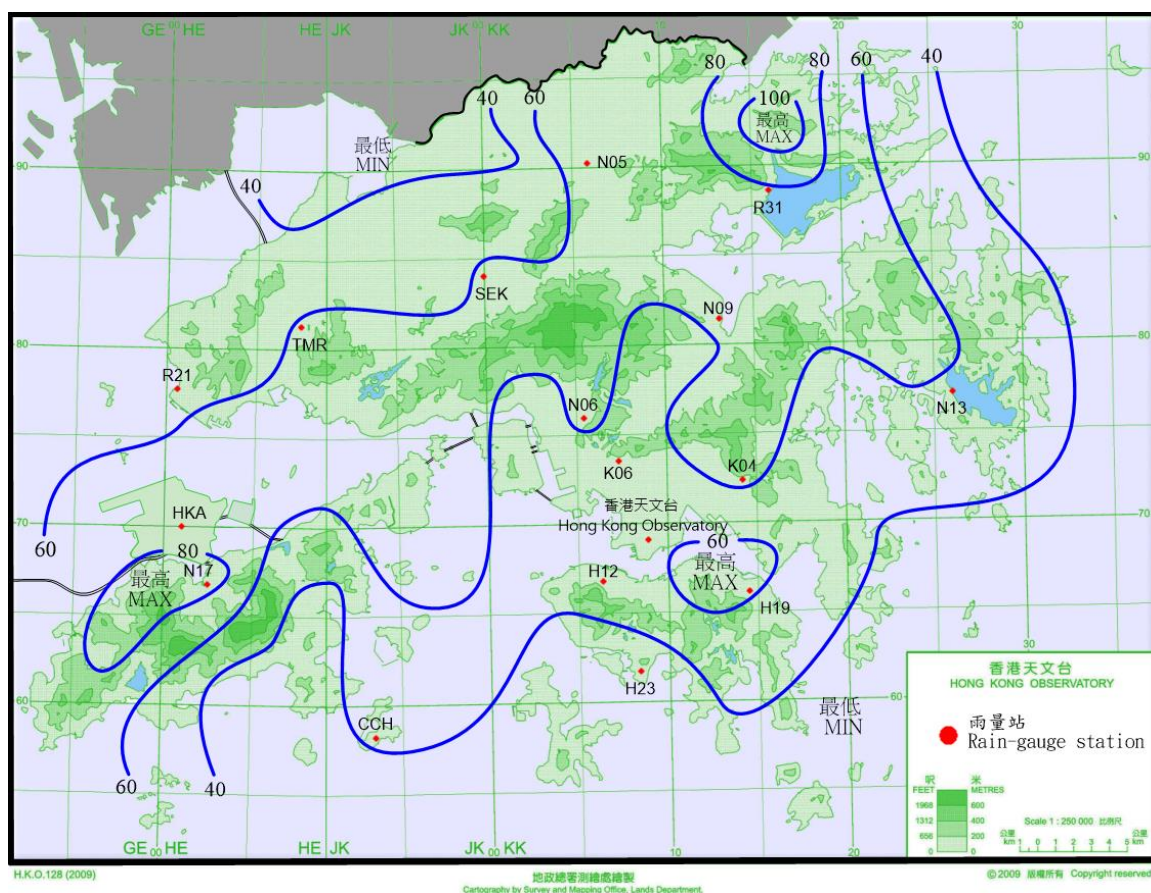


圖 2.4.2 二零二二年八月二十三日至二十五日的雨量分佈(等雨量線單位為毫米)。

Figure 2.4.2 Rainfall distribution on 23 – 25 August 2022 (isohyets are in millimetres).

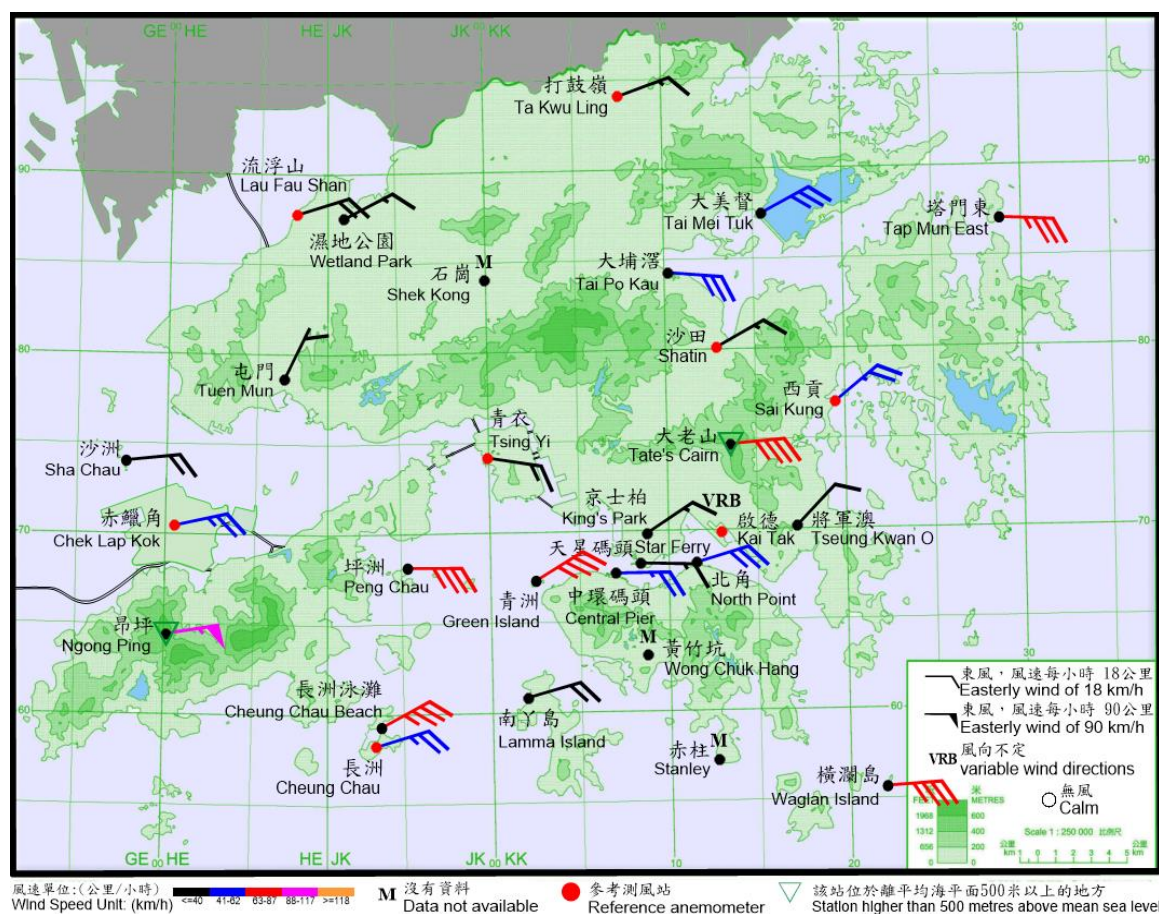


圖 2.4.3a 二零二二年八月二十四日晚上 10 時 30 分香港各站錄得的十分鐘平均風向和風速。

Figure 2.4.3a 10-minute mean wind direction and speed recorded at various stations in Hong Kong at 10:30 p.m. on 24 August 2022.

註： 啟德當時錄得的十分鐘平均風速為每小時 18 公里。

Note: The 10-minute mean wind speed recorded at the time at Kai Tak was 18 km/h.

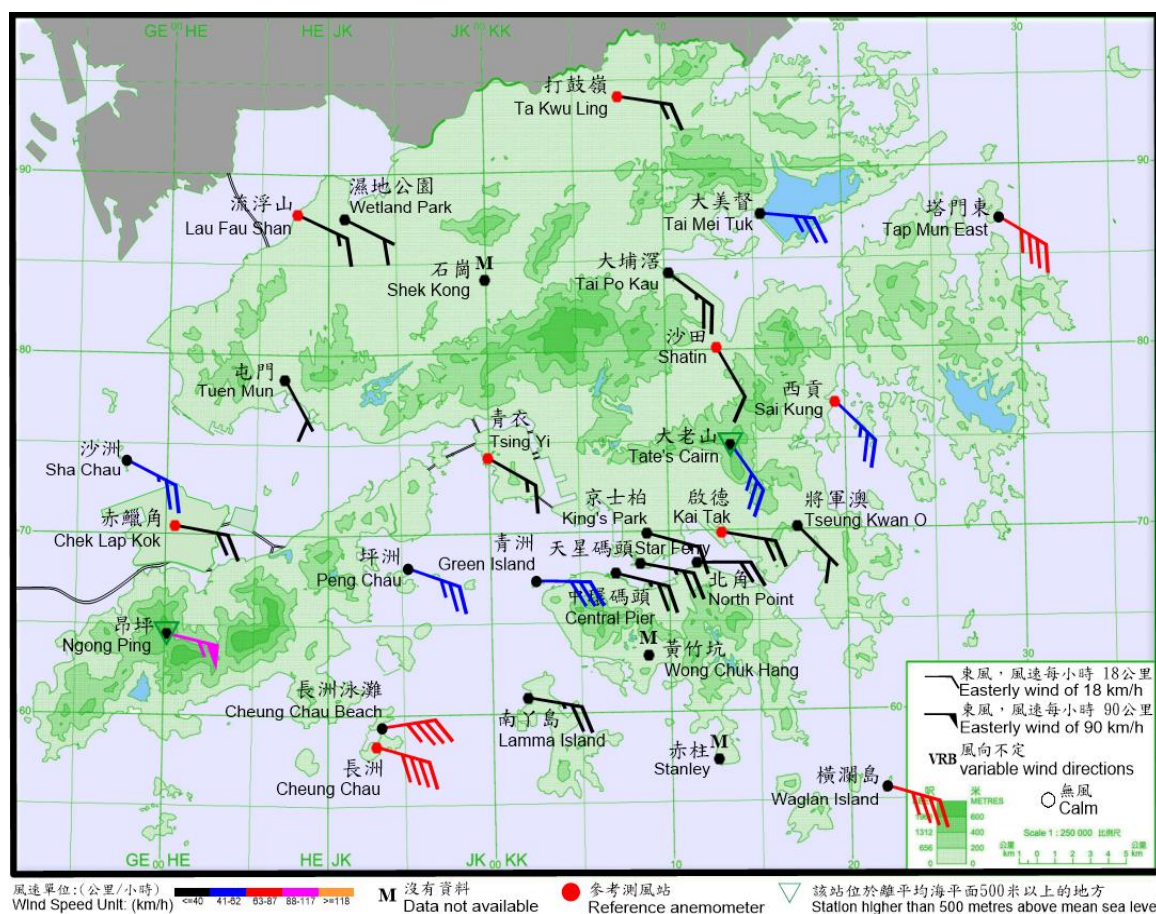


圖 2.4.3b 二零二二年八月二十五日早上 2 時 30 分香港各站錄得的十分鐘平均風向和風速。

Figure 2.4.3b 10-minute mean wind direction and speed recorded at various stations in Hong Kong at 2:30 a.m. on 25 August 2022.

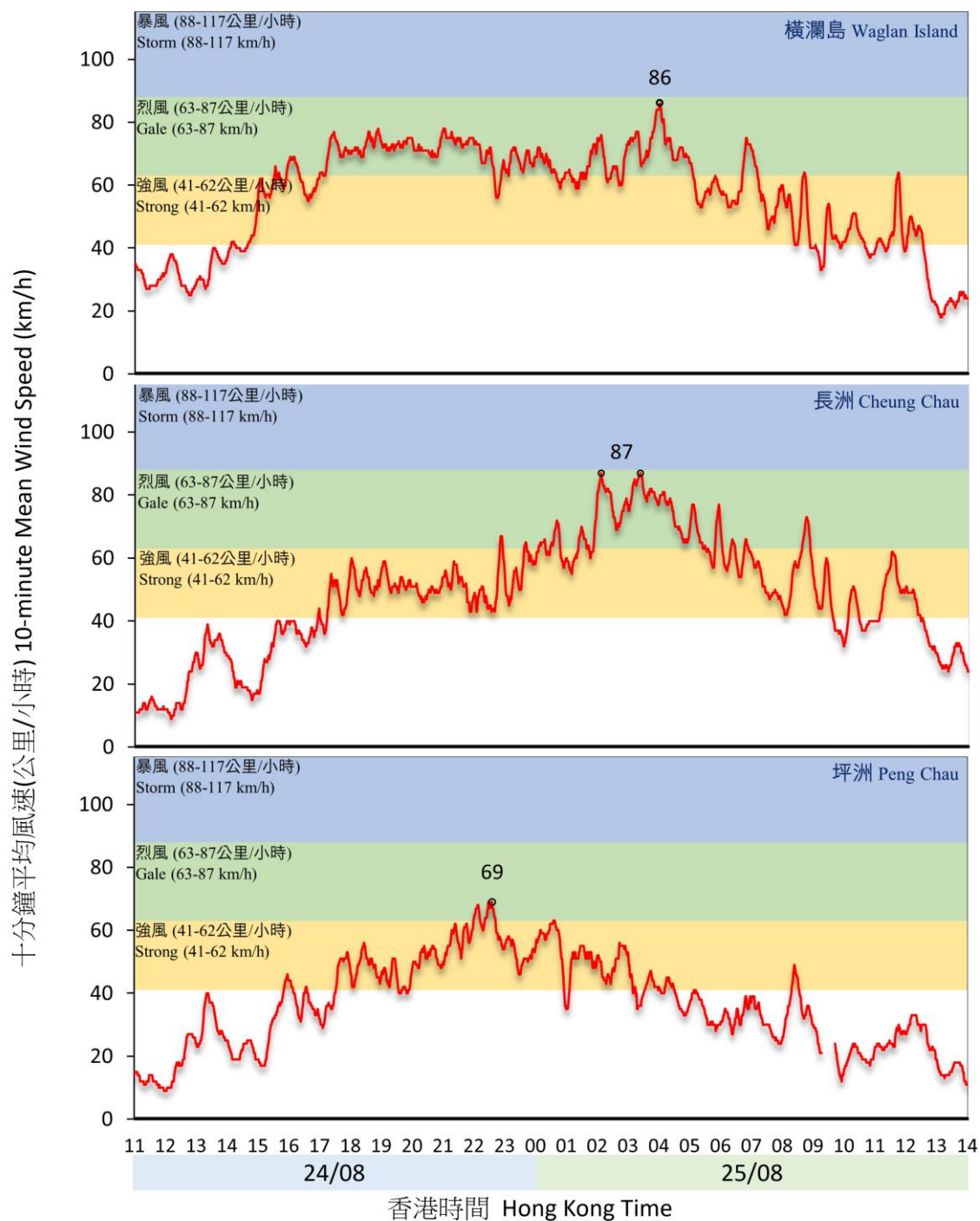


圖 2.4.4 二零二二年八月二十四日至二十五日橫瀾島、長洲及坪洲錄得的十分鐘平均風速。

Figure 2.4.4 Traces of 10-minute mean wind speed recorded at Waglan Island, Cheung Chau and Peng Chau on 24 – 25 August 2022.

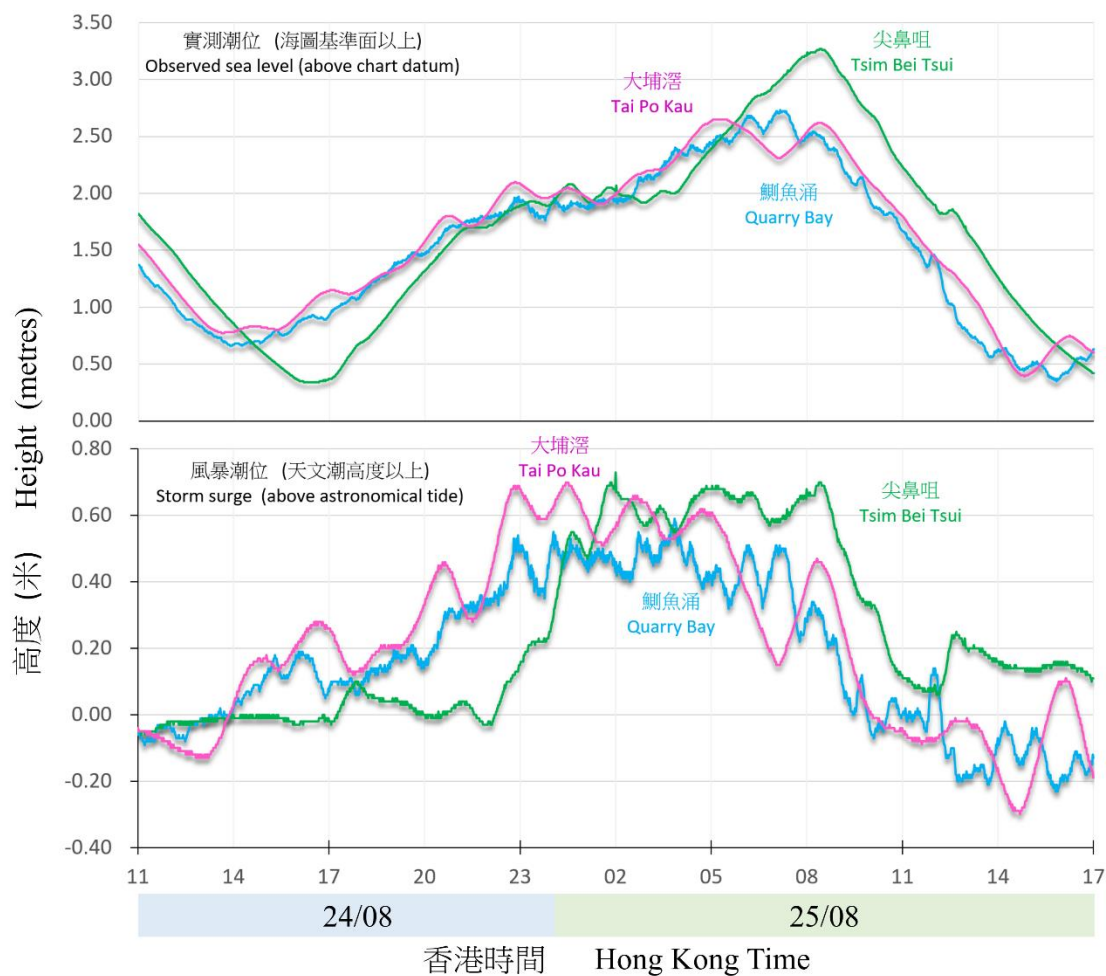


圖 2.4.5 二零二二年八月二十四日至二十五日在鰂魚涌、大埔滘及尖鼻咀錄得的潮位(海圖基準面以上)及風暴潮(天文潮高度以上)。

Figure 2.4.5 Traces of sea level (above chart datum) and storm surge (above astronomical tide) recorded at Quarry Bay, Tai Po Kau, and Tsim Bei Tsui on 24 - 25 August 2022.

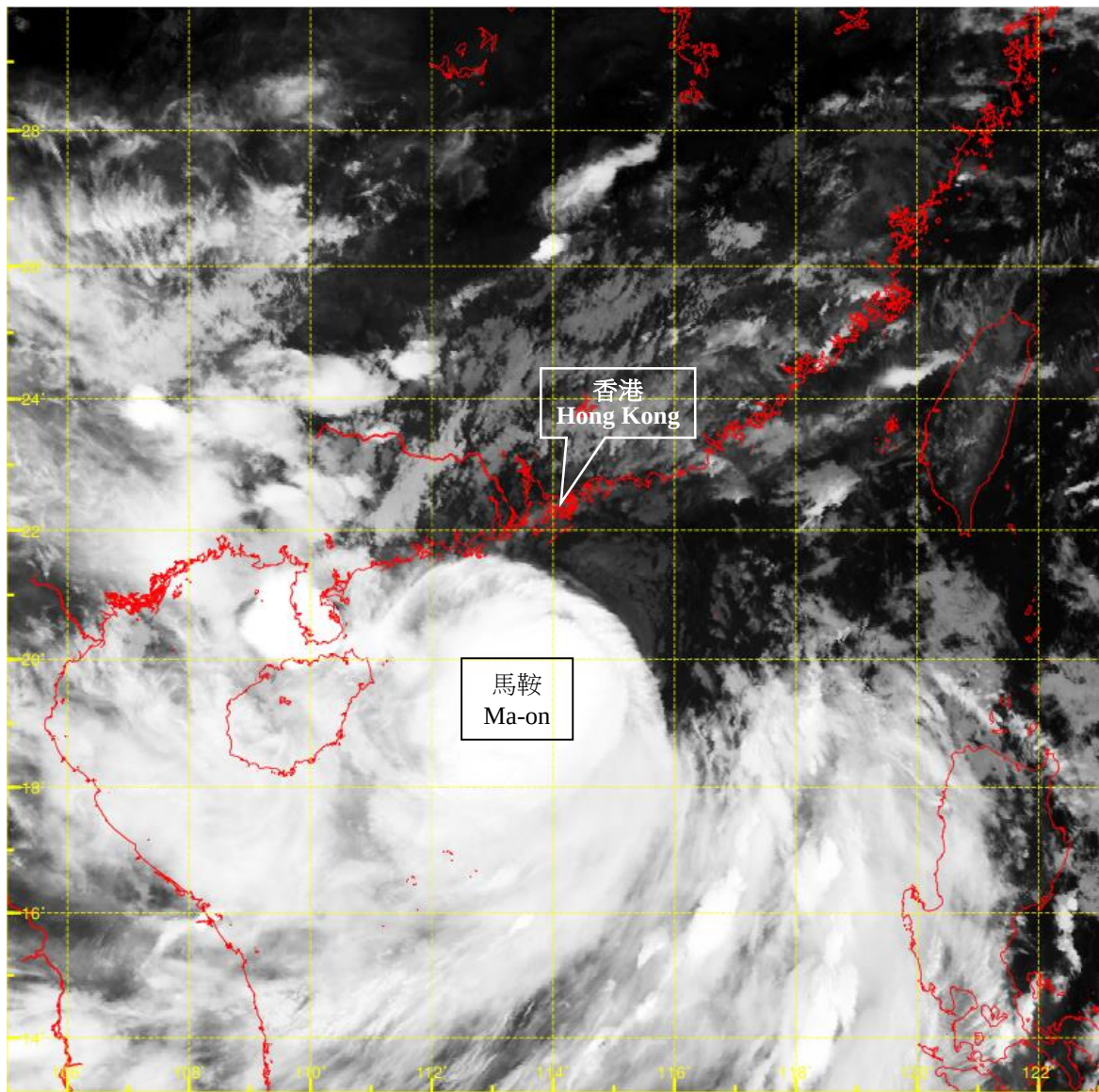


圖 2.4.6 二零二二年八月二十四日晚上十一時左右的紅外線衛星圖片，當時馬鞍達到其最高強度，中心附近最高持續風速估計為每小時 120 公里。

Figure 2.4.6 Infra-red satellite imagery around 11 p.m. on 24 August 2022 when Ma-on was at its peak intensity with an estimated maximum sustained wind of 120 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.]

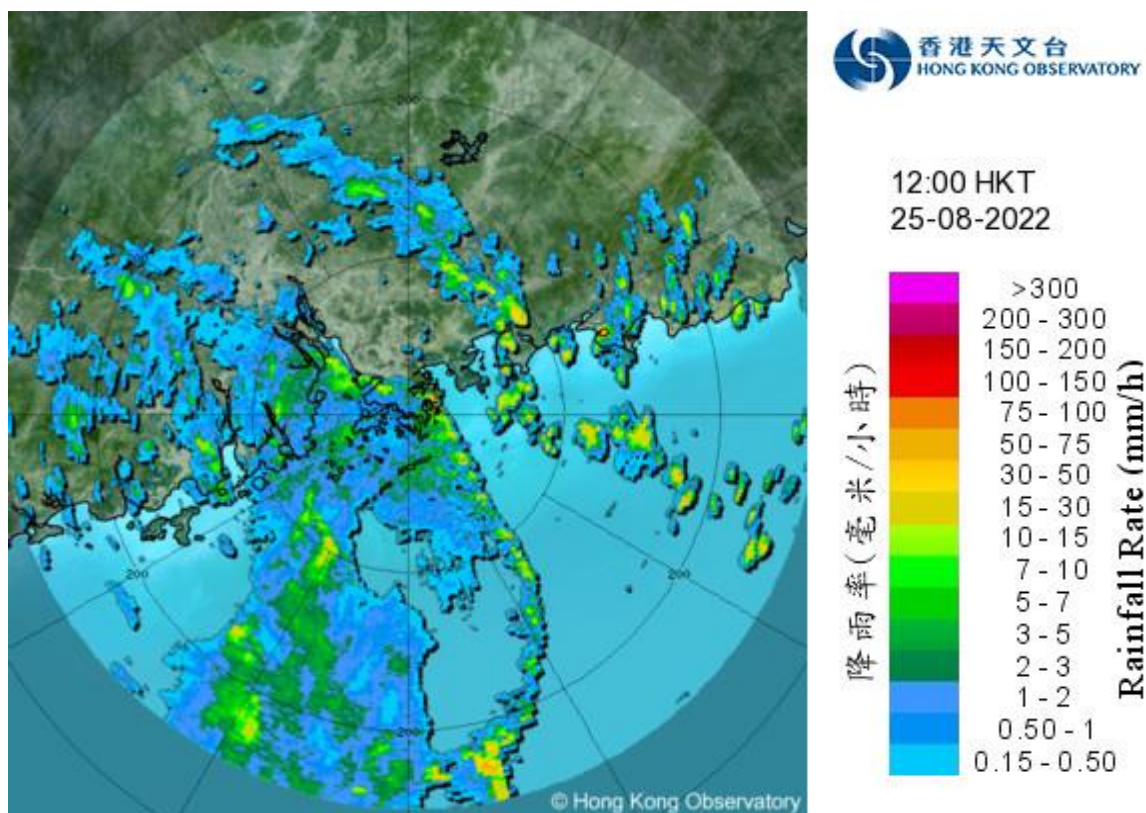
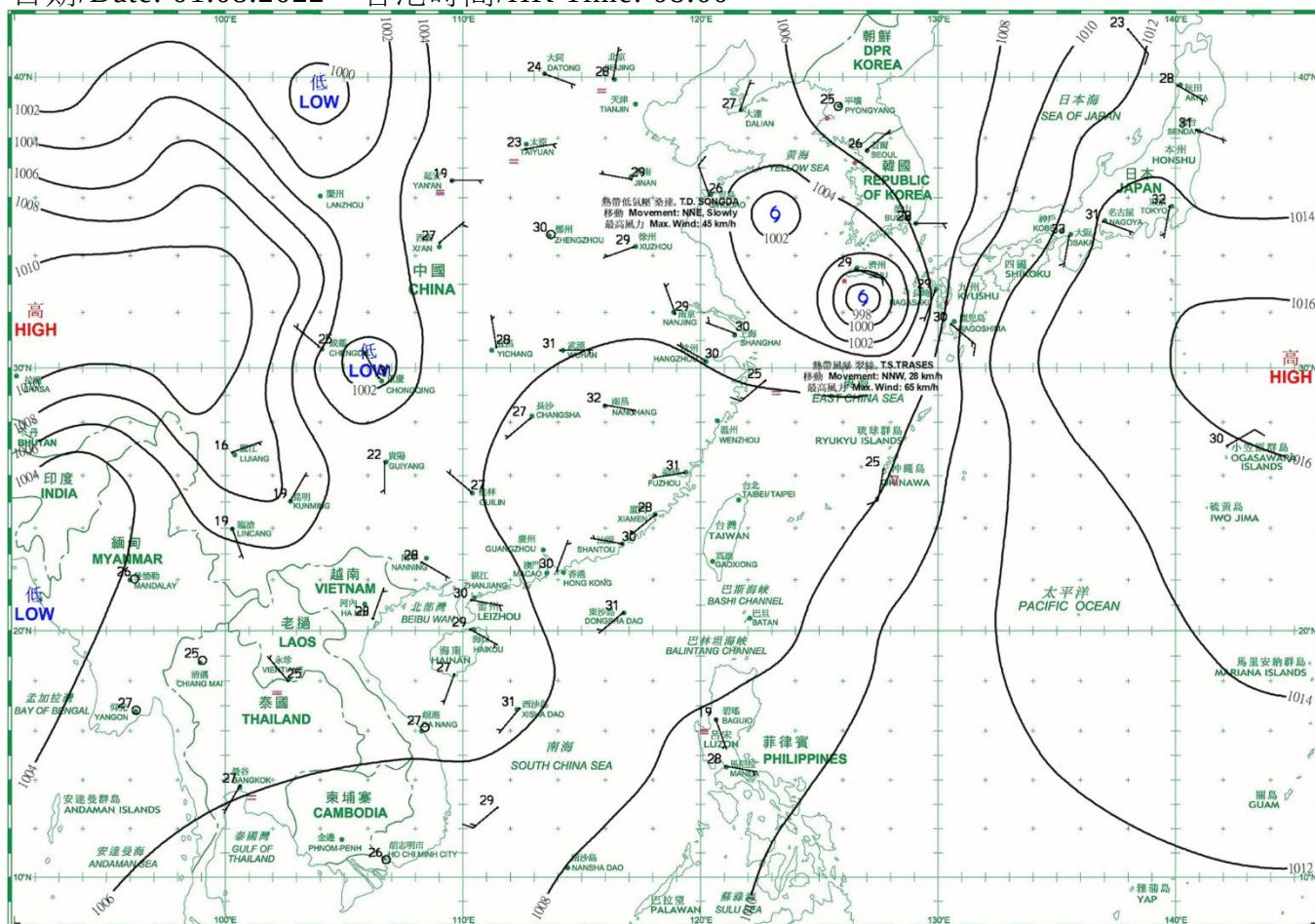


圖 2.4.7 二零二二年八月二十五日正午 12 時的雷達回波圖像。與馬鞍相關的雨帶正影響廣東沿岸及南海北部。

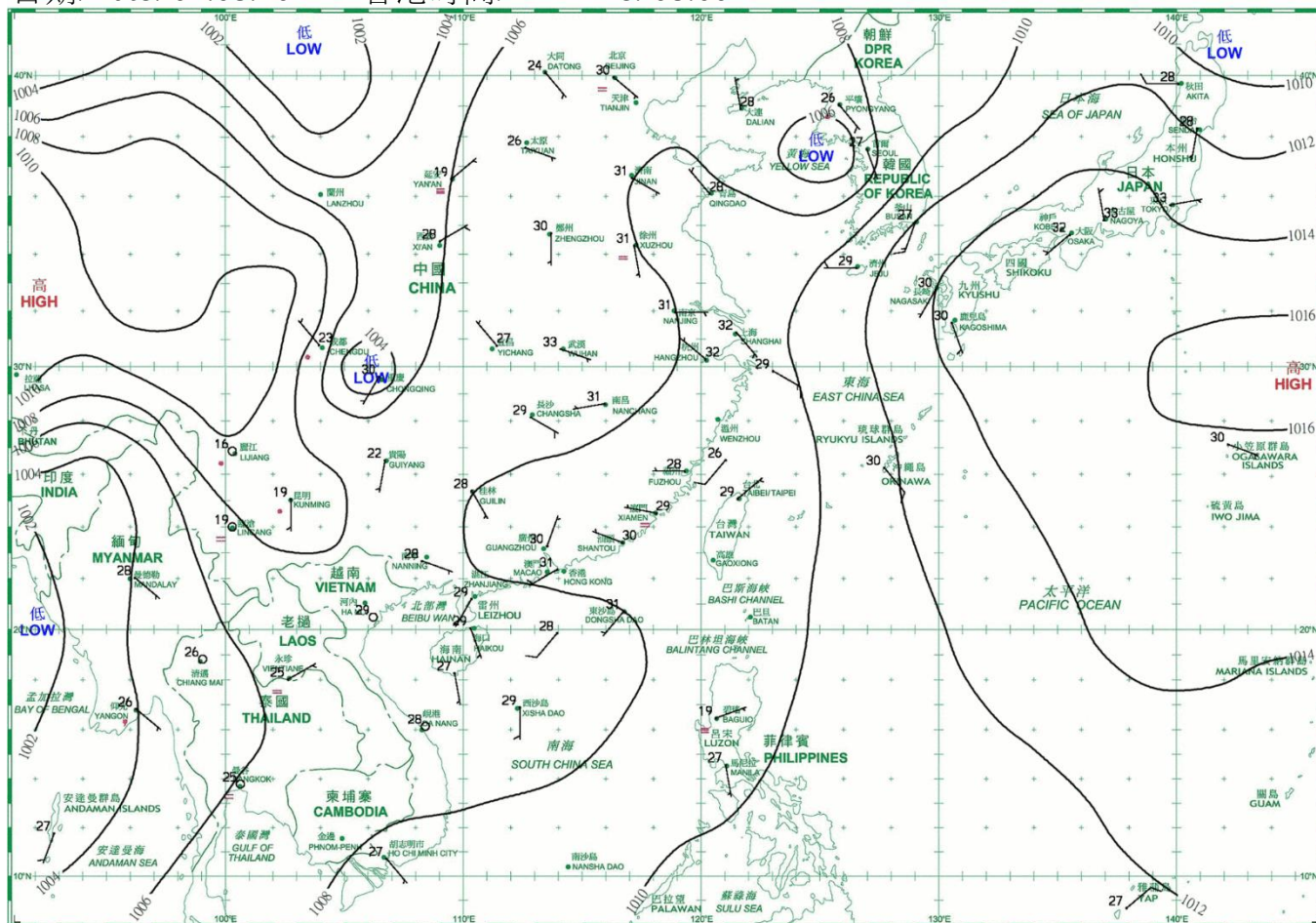
Figure 2.4.7 Radar echoes captured at 12 noon on 25 August 2022. The rainbands associated with Ma-on were affecting the coast of Guangdong and the northern part of the South China Sea.

3. 二零二二年八月每日天氣圖 Daily Weather Maps for August 2022

日期/Date: 01.08.2022 香港時間/HK Time: 08:00

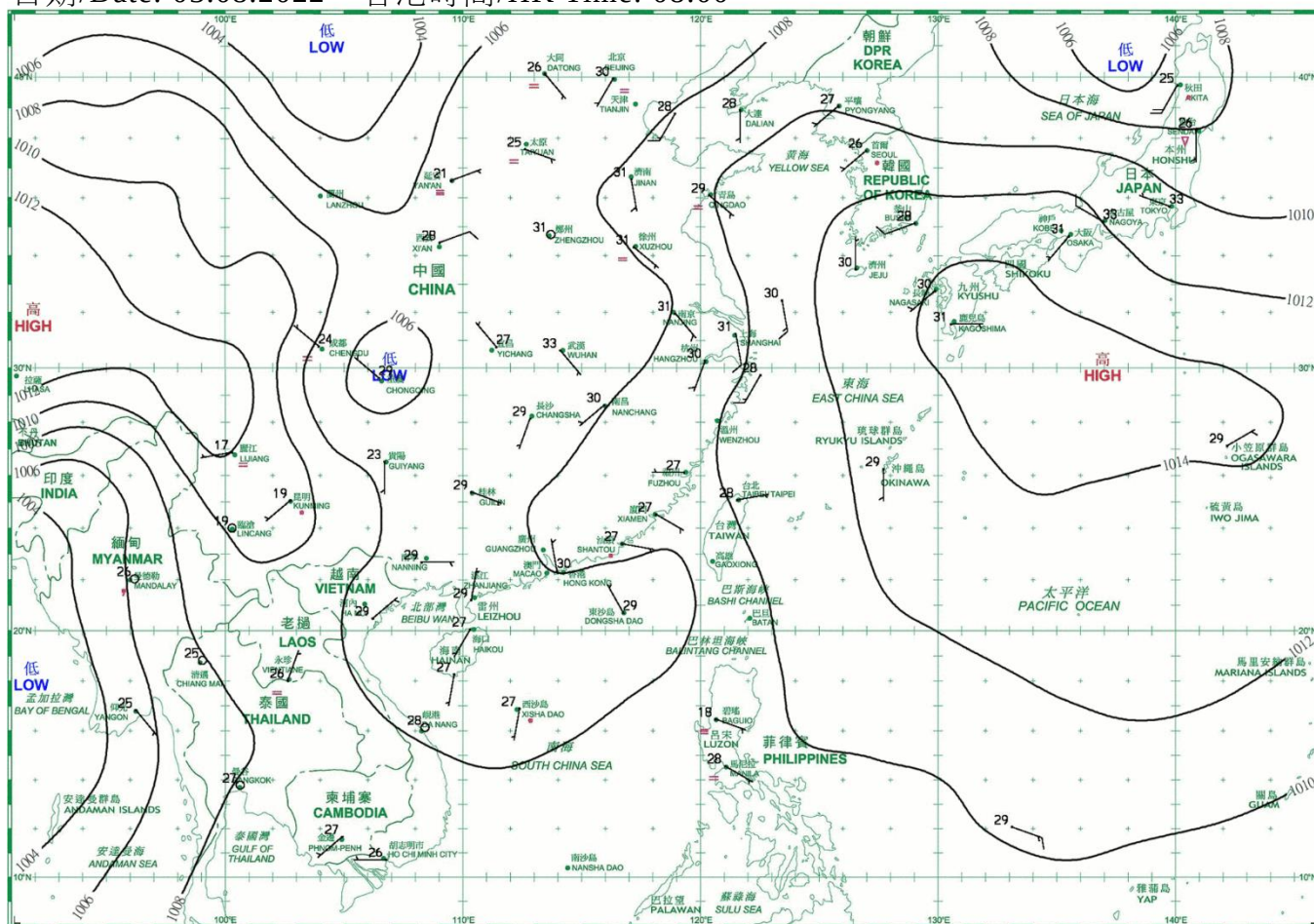


日期/Date: 02.08.2022 香港時間/HK Time: 08:00

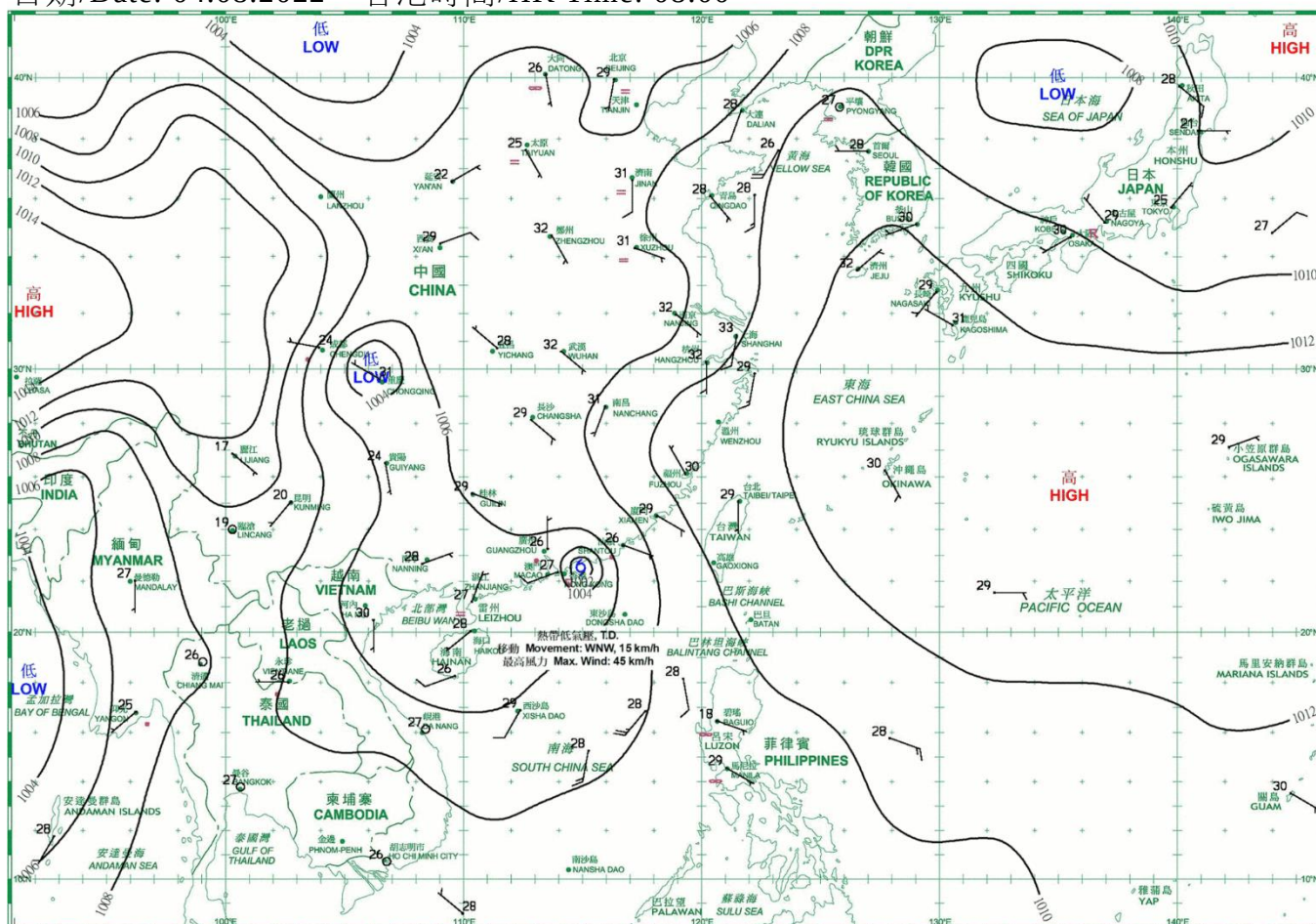


等壓線 Isobar(hPa) 暖鋒 Warm Front 靜止鋒 Stationary Front 消散中的冷鋒 Dissipating Cold Front
 冷鋒 Cold Front 錮囚鋒 Occlusion 槽軸 (線) Axis of Trough 熱帶氣旋中心 Centre of Tropical Cyclone

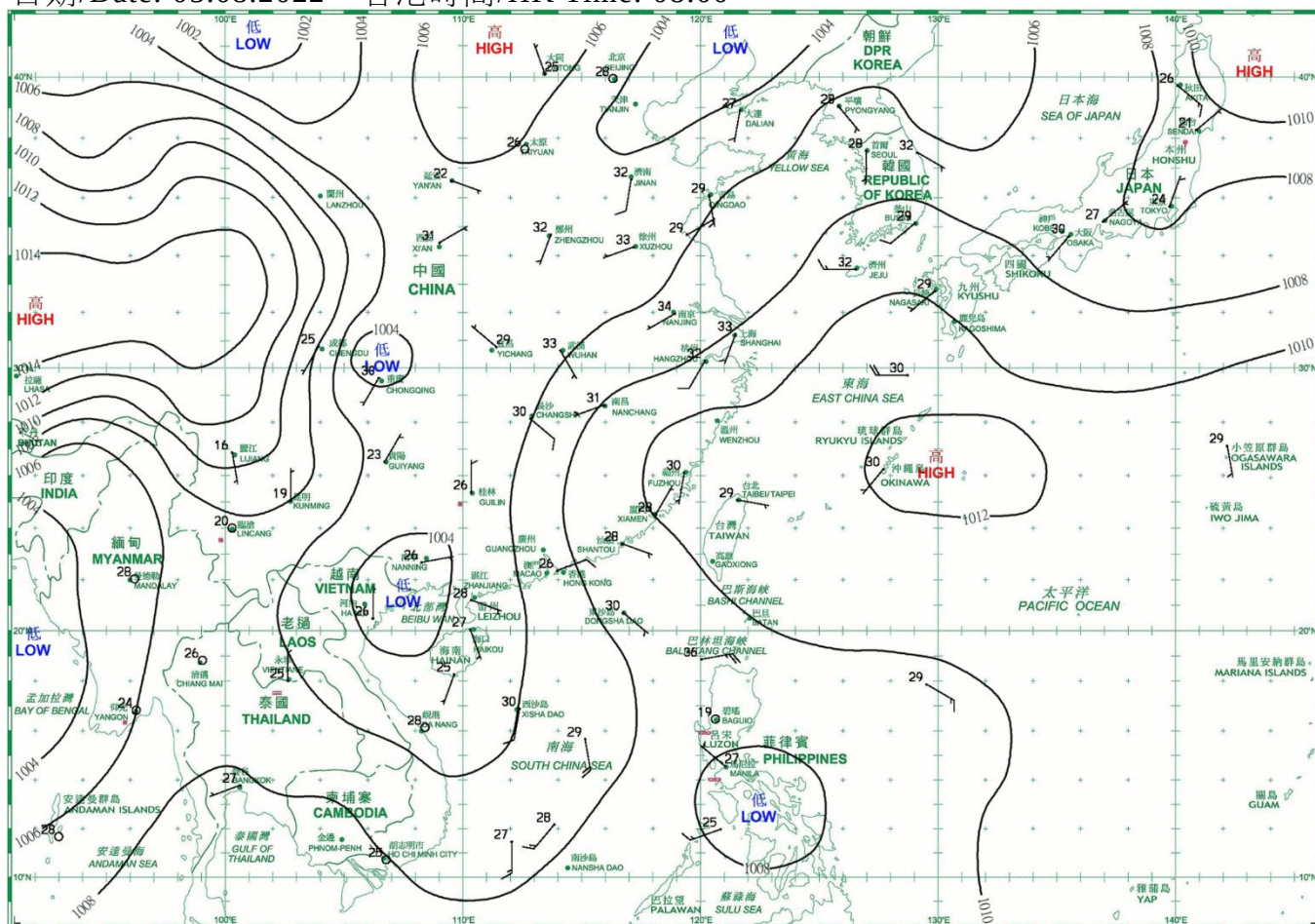
日期/Date: 03.08.2022 香港時間/HK Time: 08:00



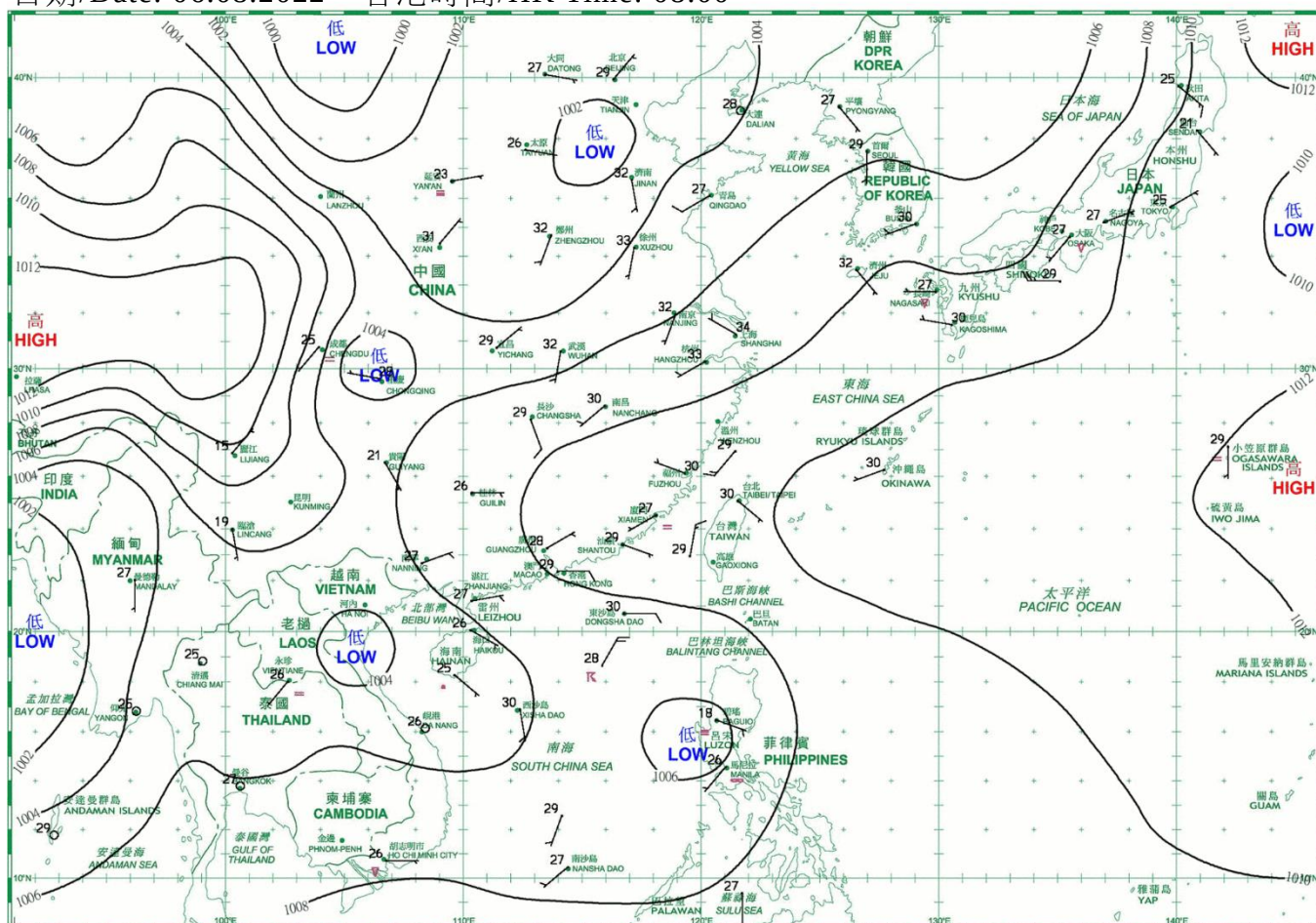
日期/Date: 04.08.2022 香港時間/HK Time: 08:00



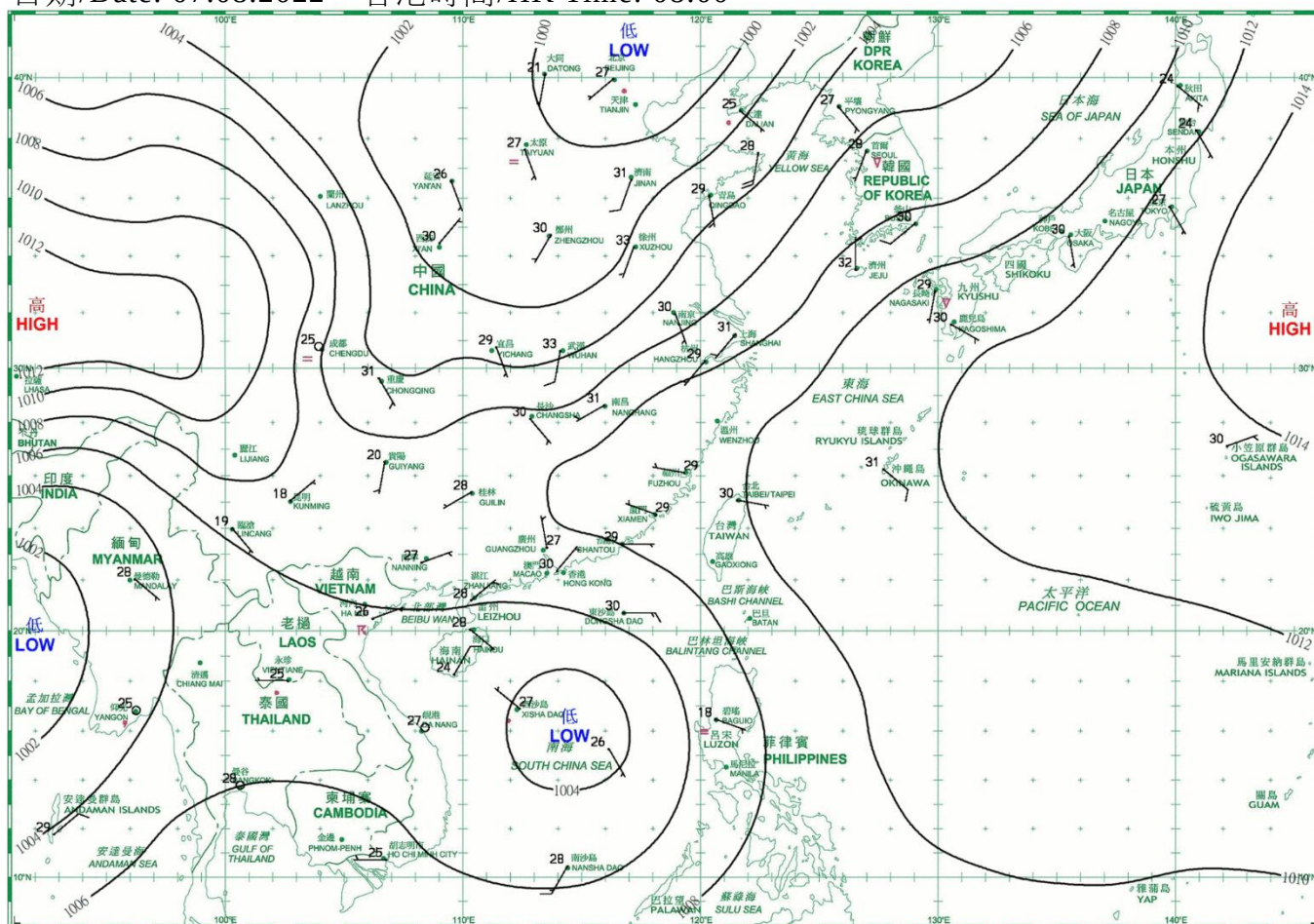
日期/Date: 05.08.2022 香港時間/HK Time: 08:00



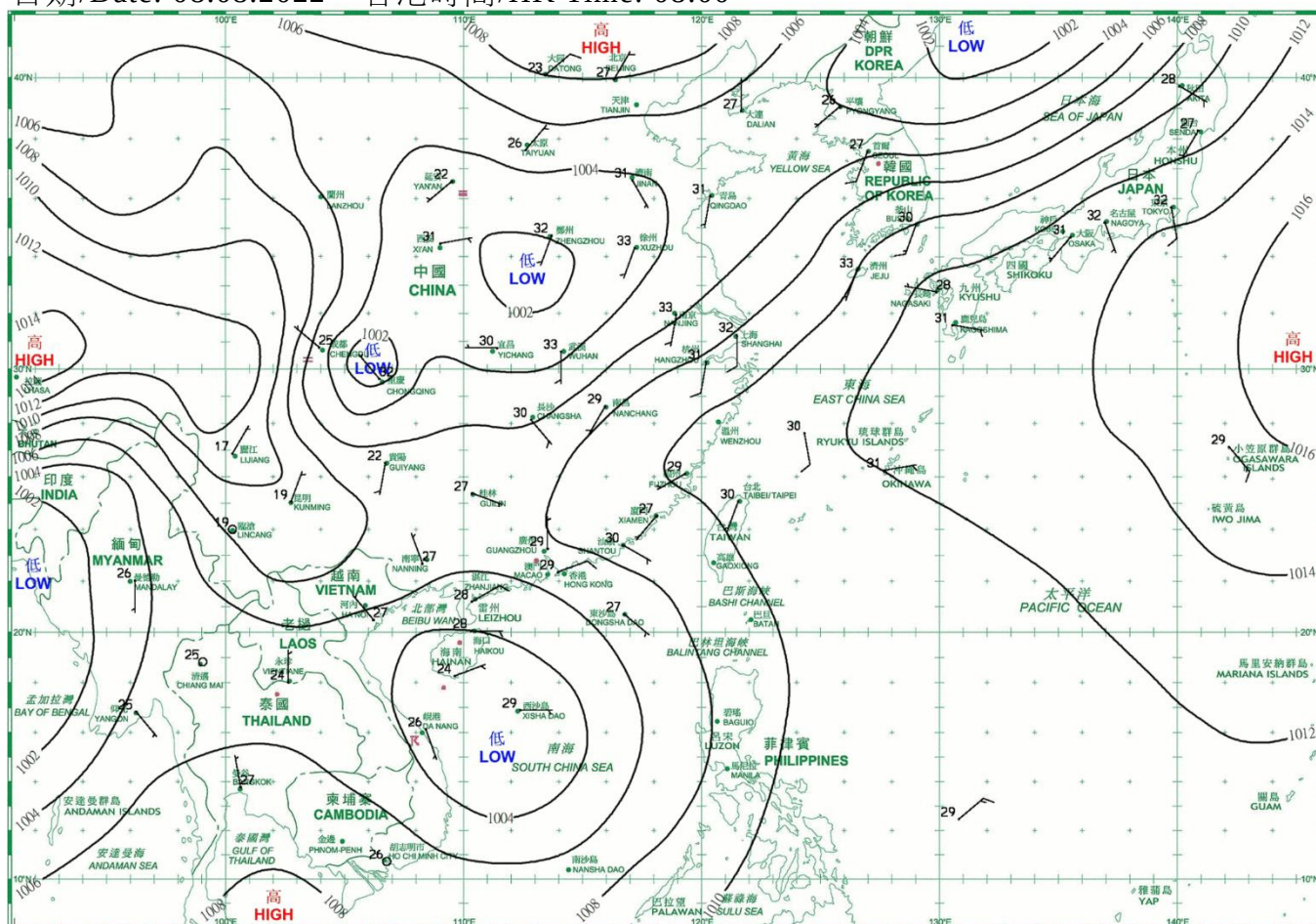
日期/Date: 06.08.2022 香港時間/HK Time: 08:00



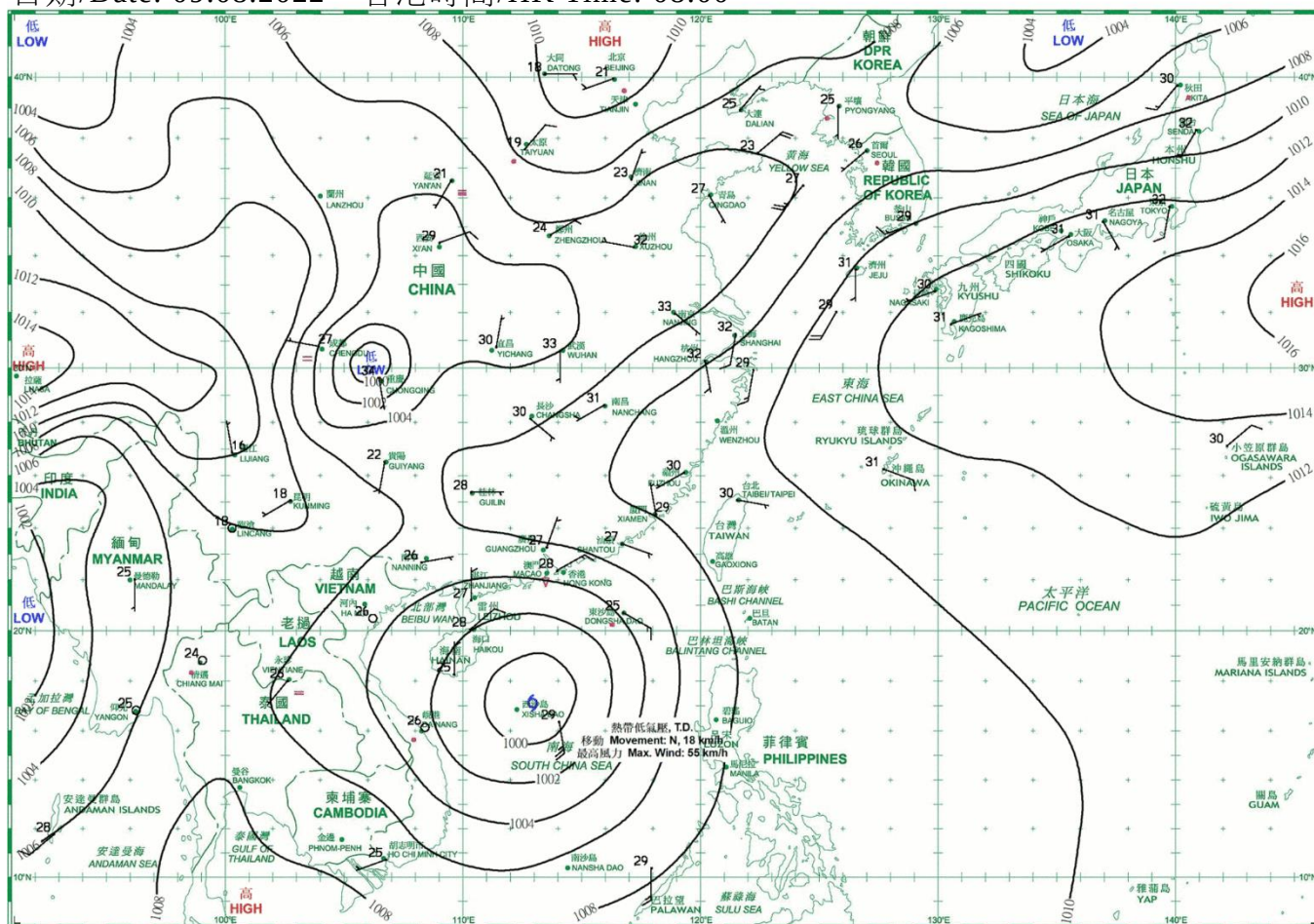
日期/Date: 07.08.2022 香港時間/HK Time: 08:00



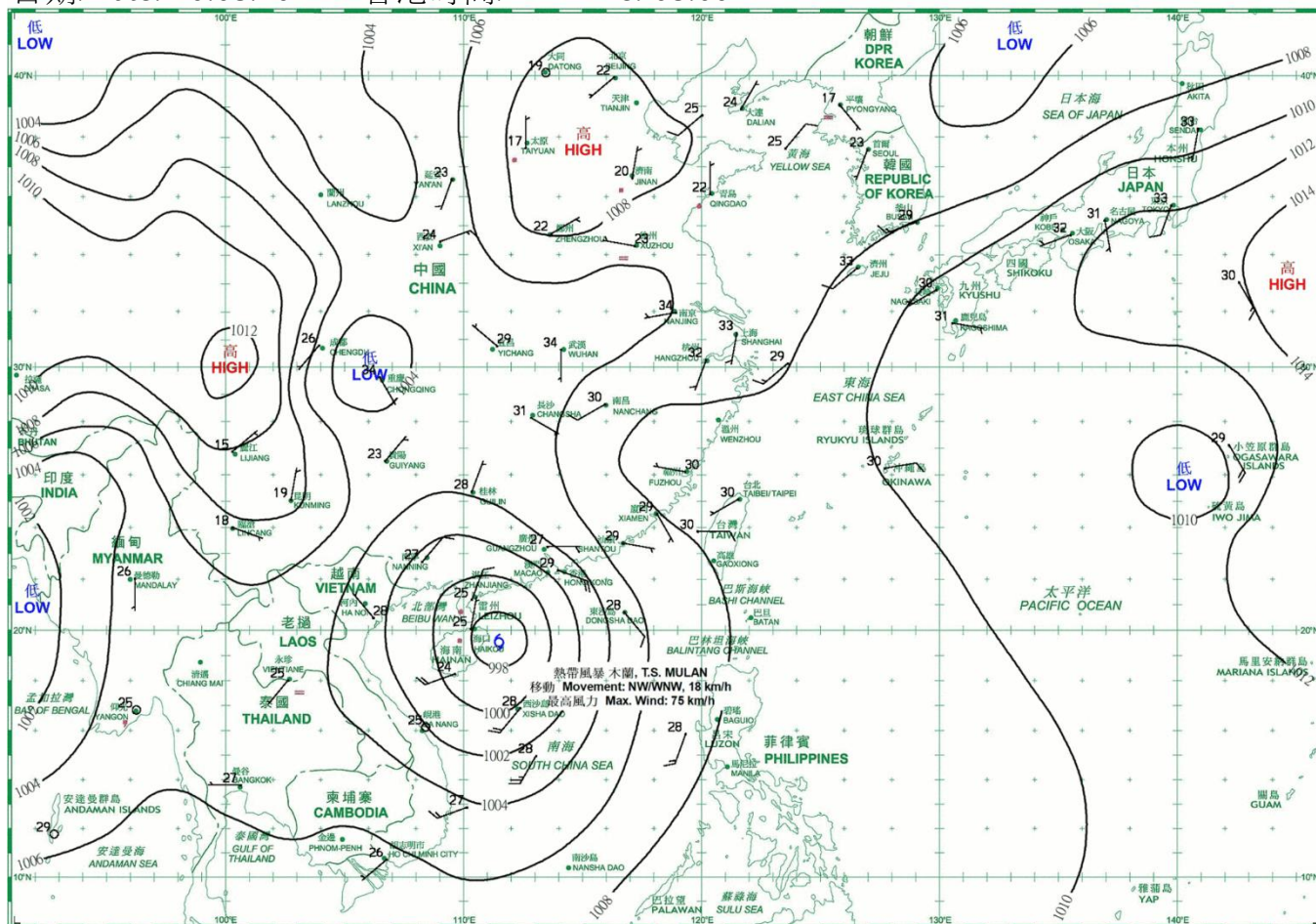
日期/Date: 08.08.2022 香港時間/HK Time: 08:00



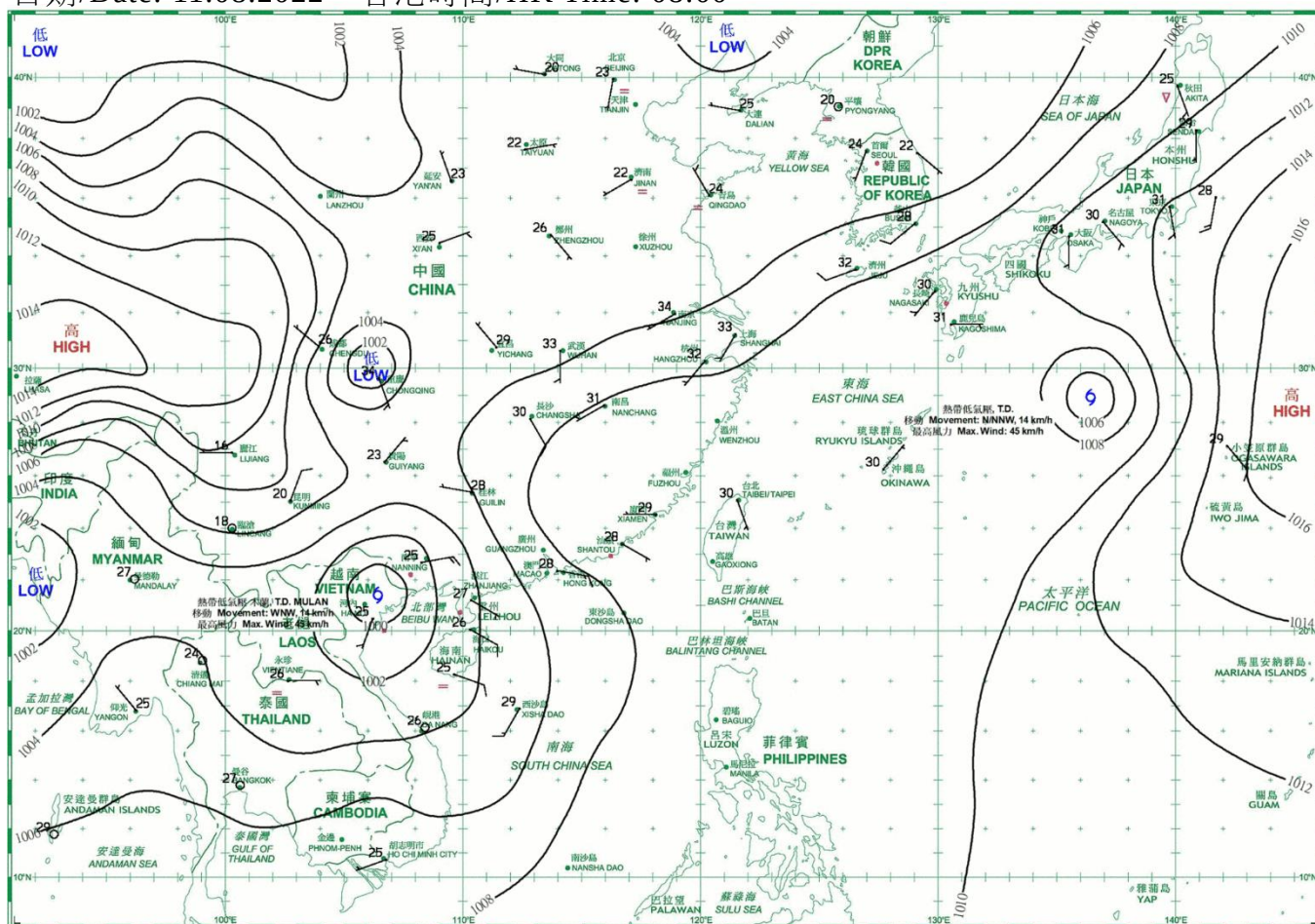
日期/Date: 09.08.2022 香港時間/HK Time: 08:00



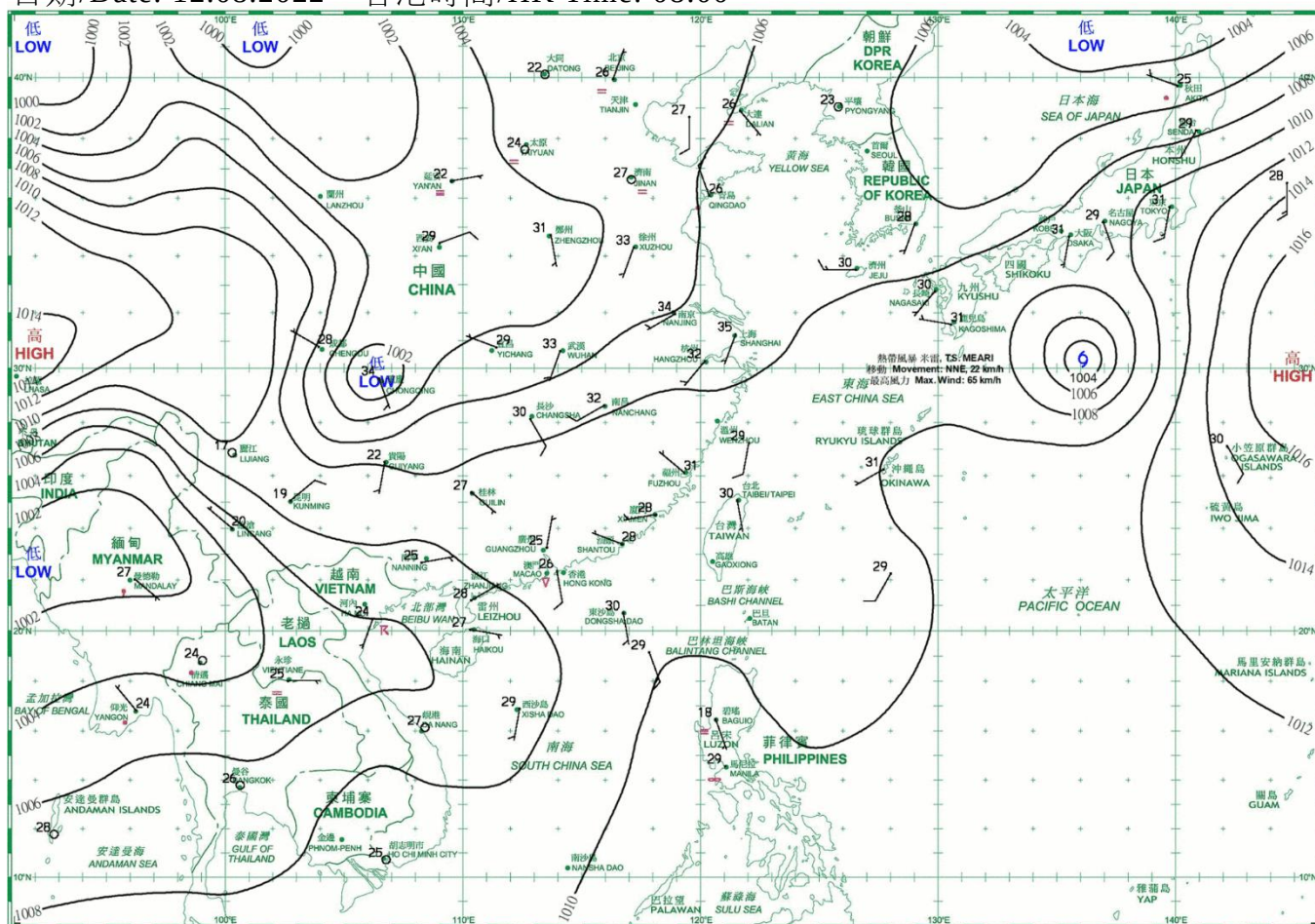
日期/Date: 10.08.2022 香港時間/HK Time: 08:00



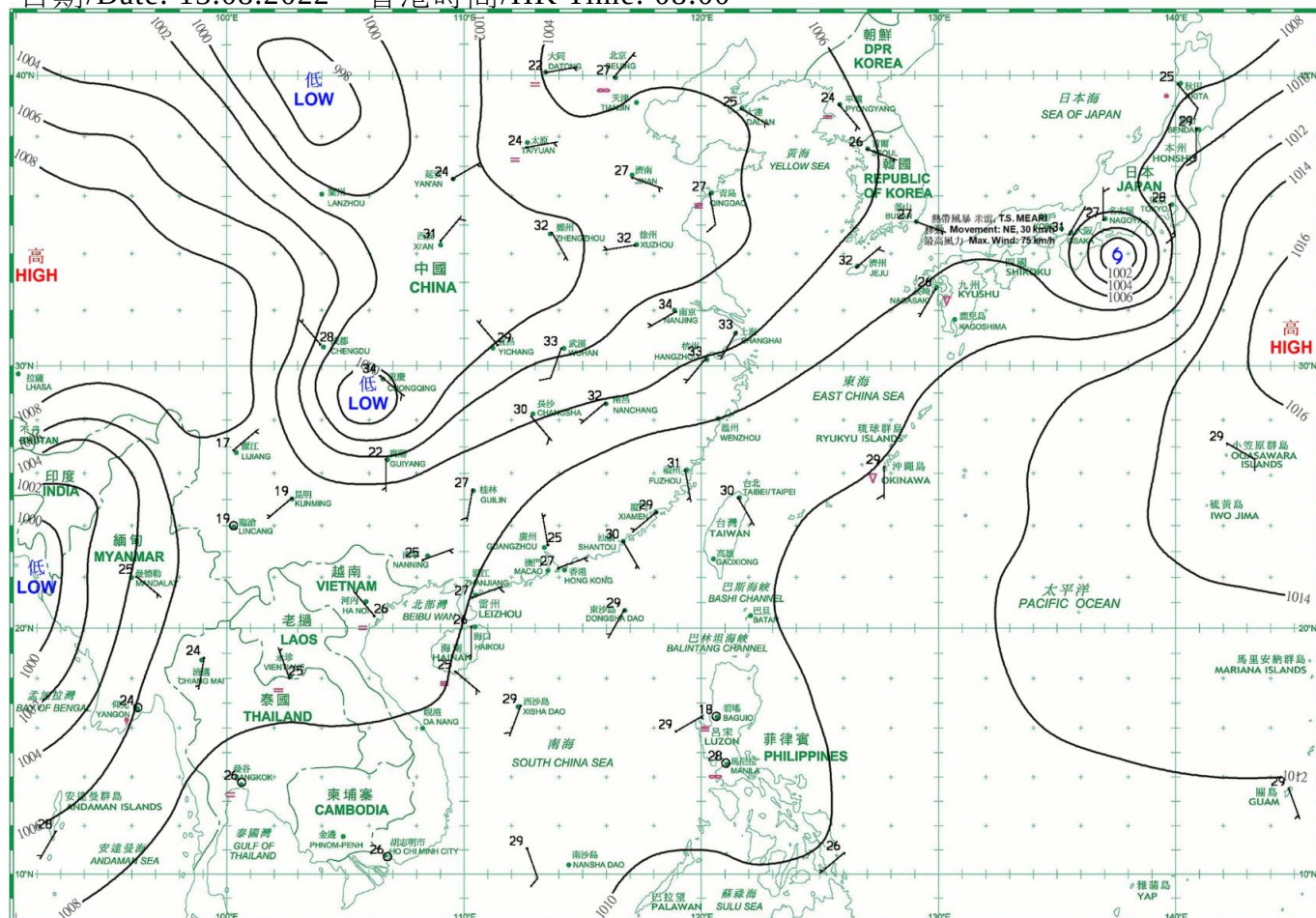
日期/Date: 11.08.2022 香港時間/HK Time: 08:00



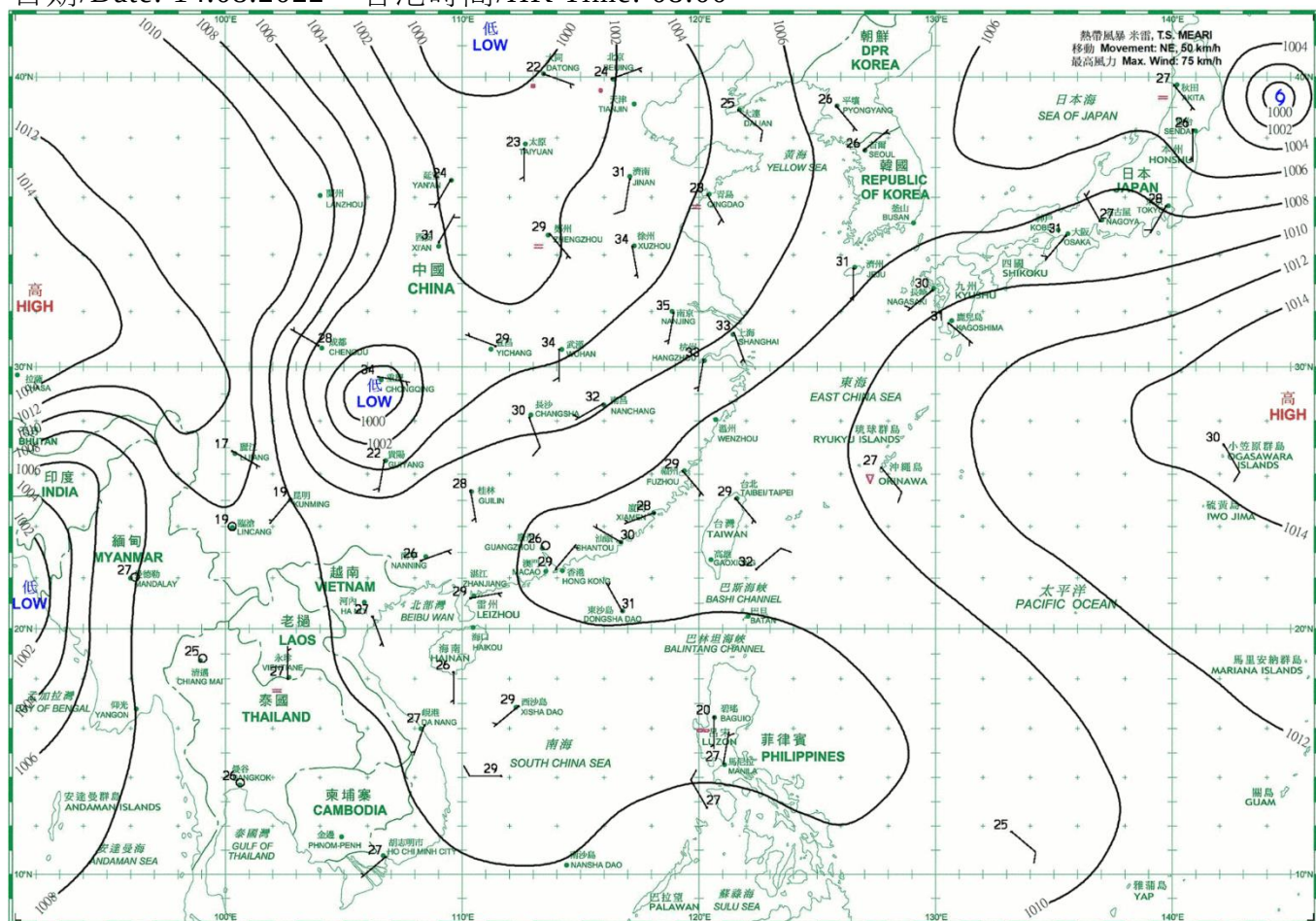
日期/Date: 12.08.2022 香港時間/HK Time: 08:00



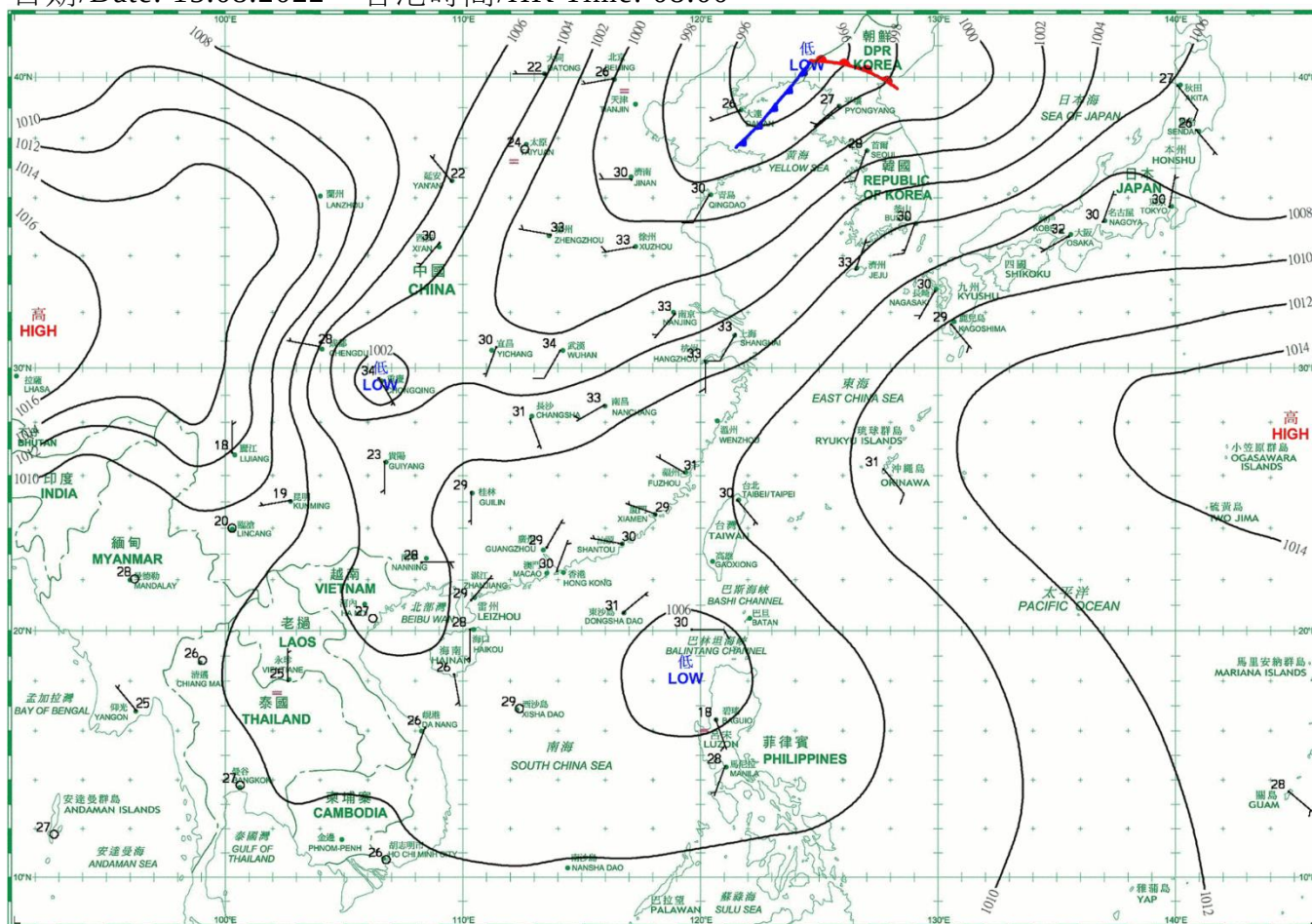
日期/Date: 13.08.2022 香港時間/HK Time: 08:00



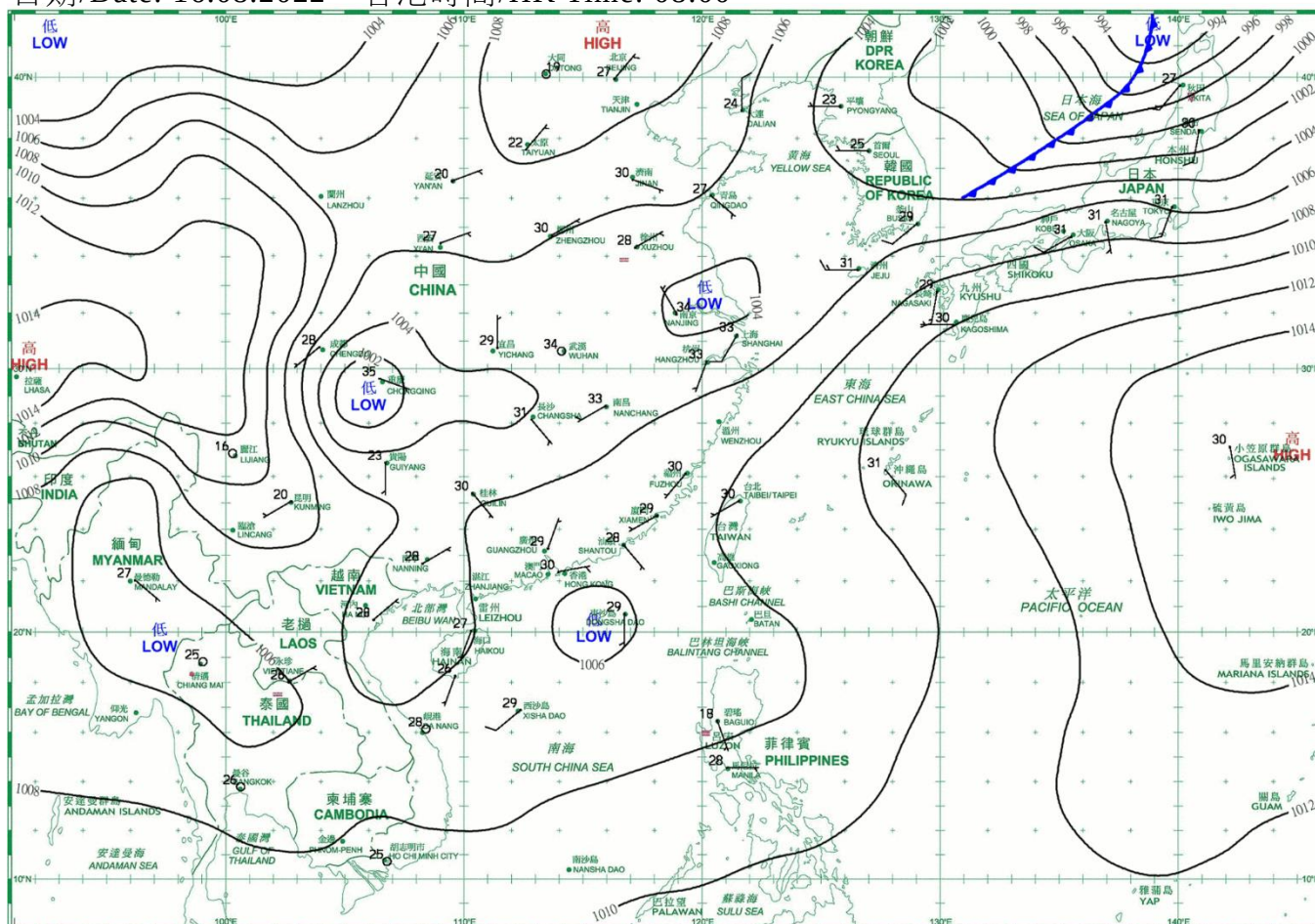
日期/Date: 14.08.2022 香港時間/HK Time: 08:00



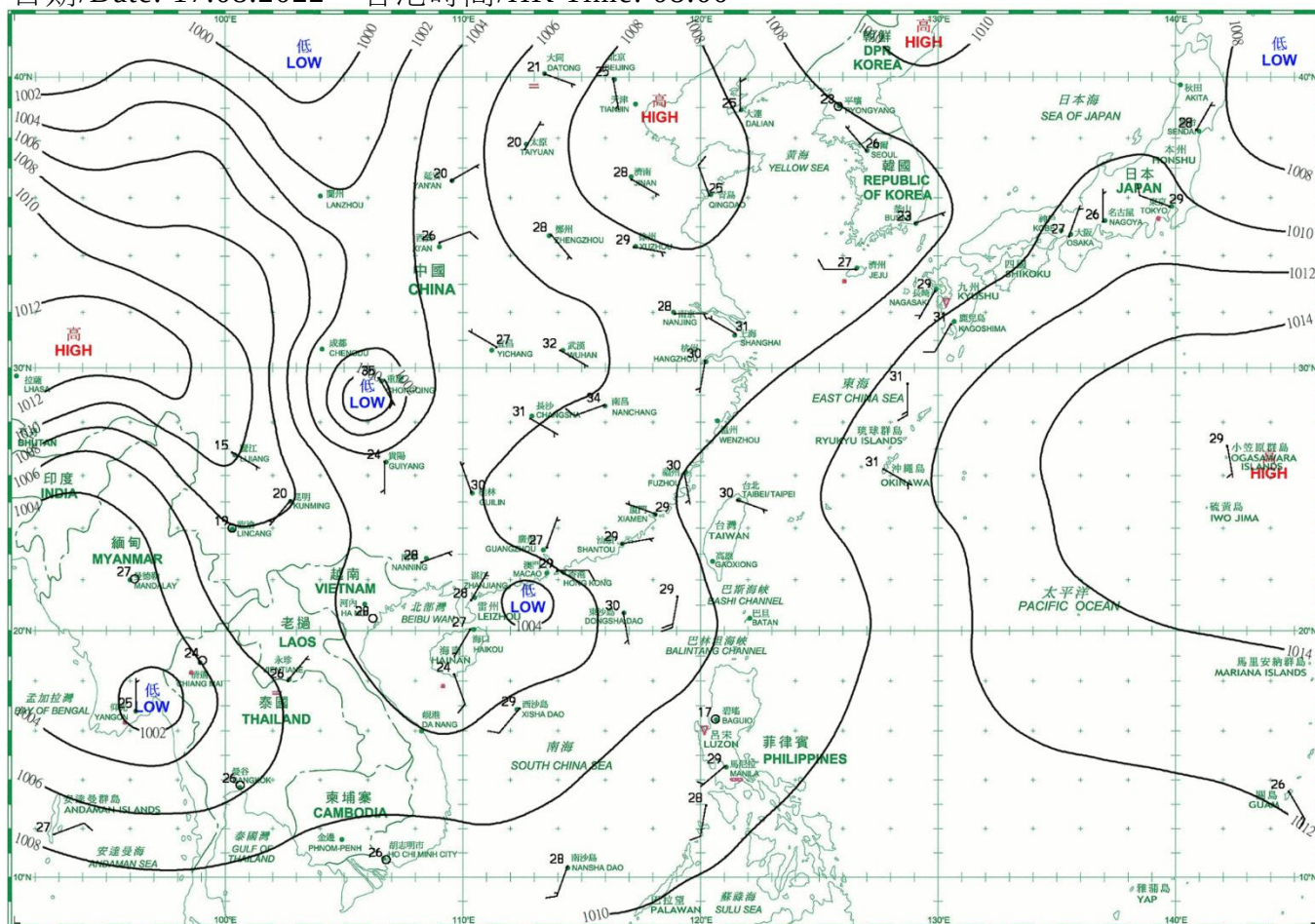
日期/Date: 15.08.2022 香港時間/HK Time: 08:00



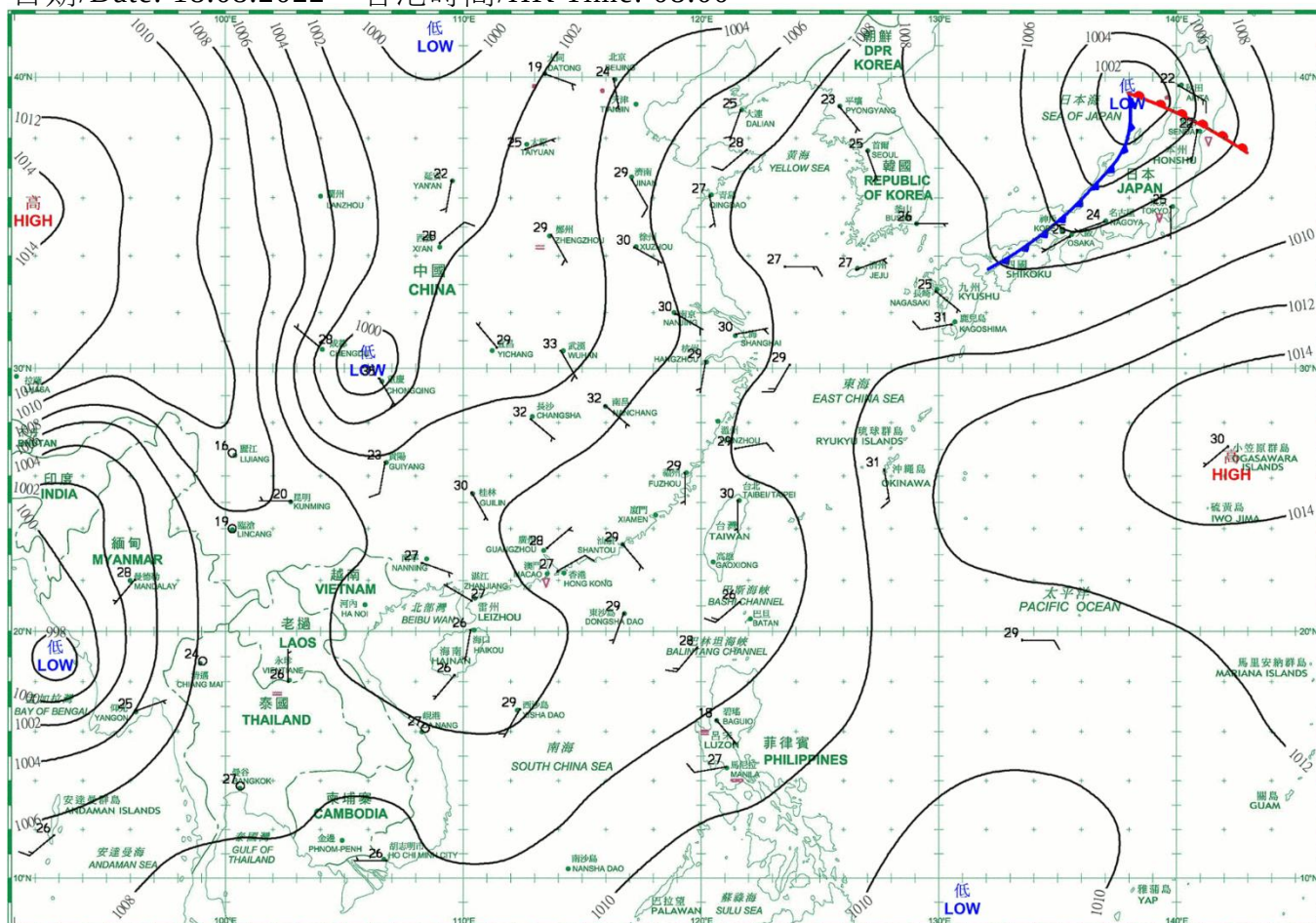
日期/Date: 16.08.2022 香港時間/HK Time: 08:00



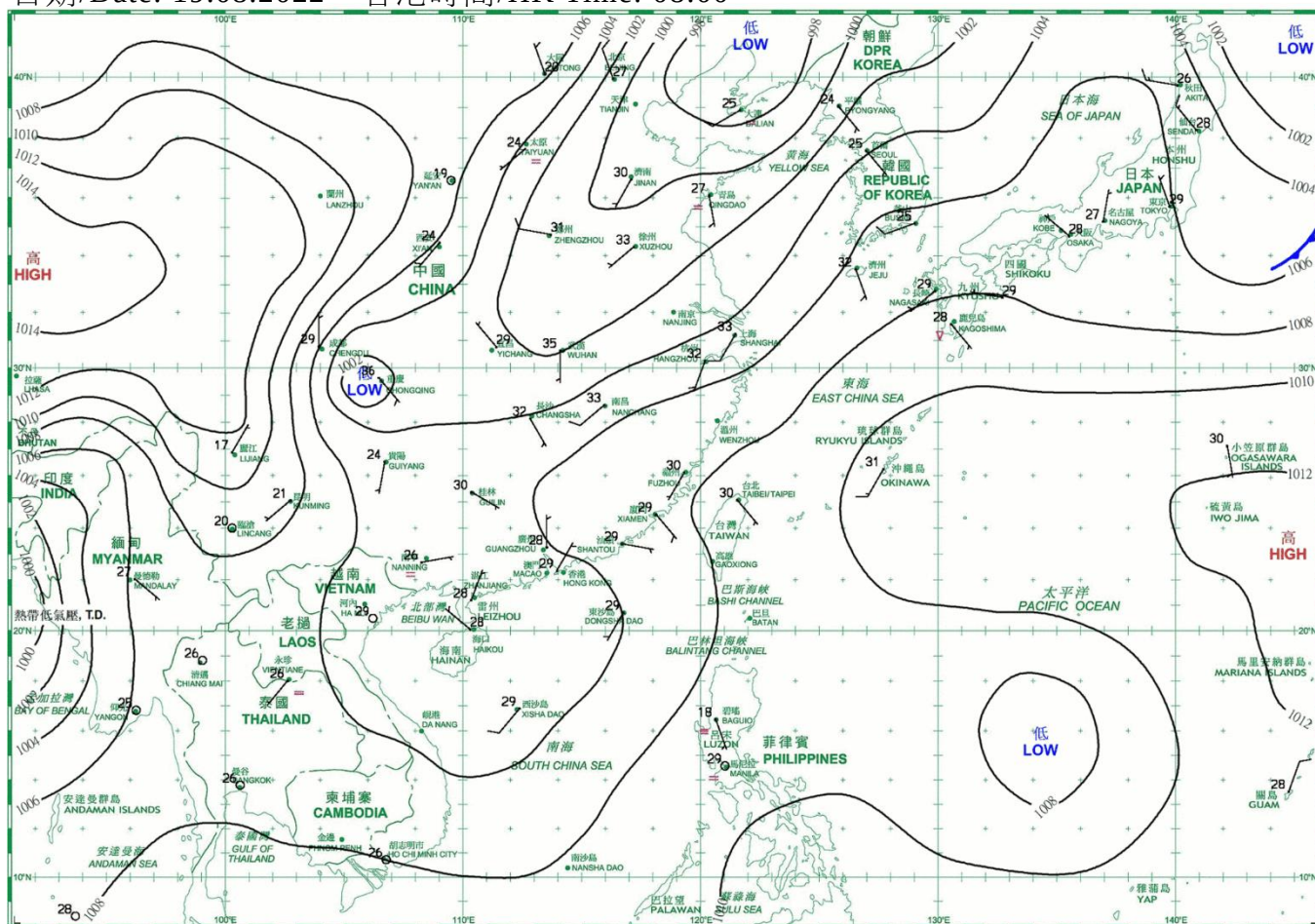
日期/Date: 17.08.2022 香港時間/HK Time: 08:00



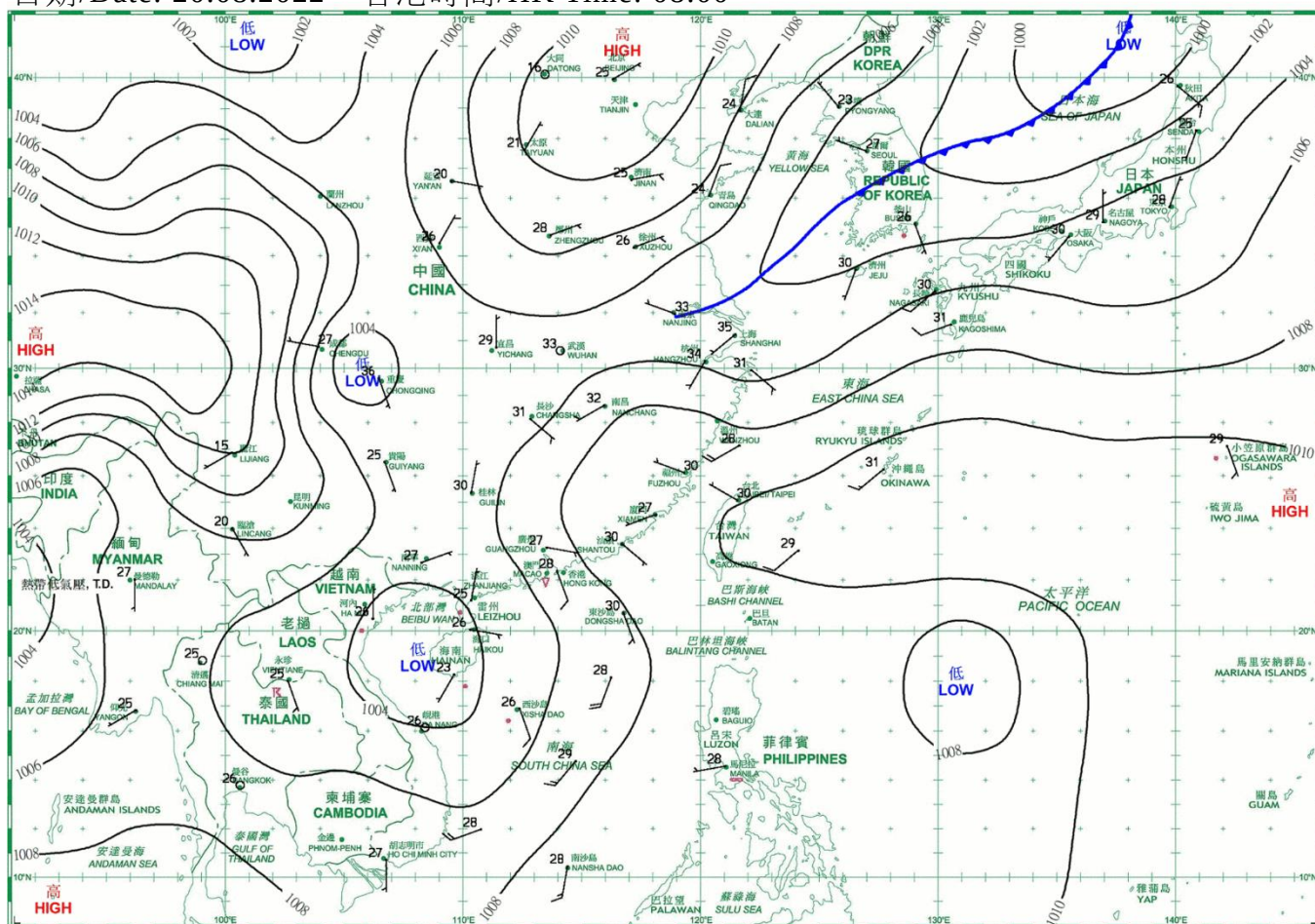
日期/Date: 18.08.2022 香港時間/HK Time: 08:00



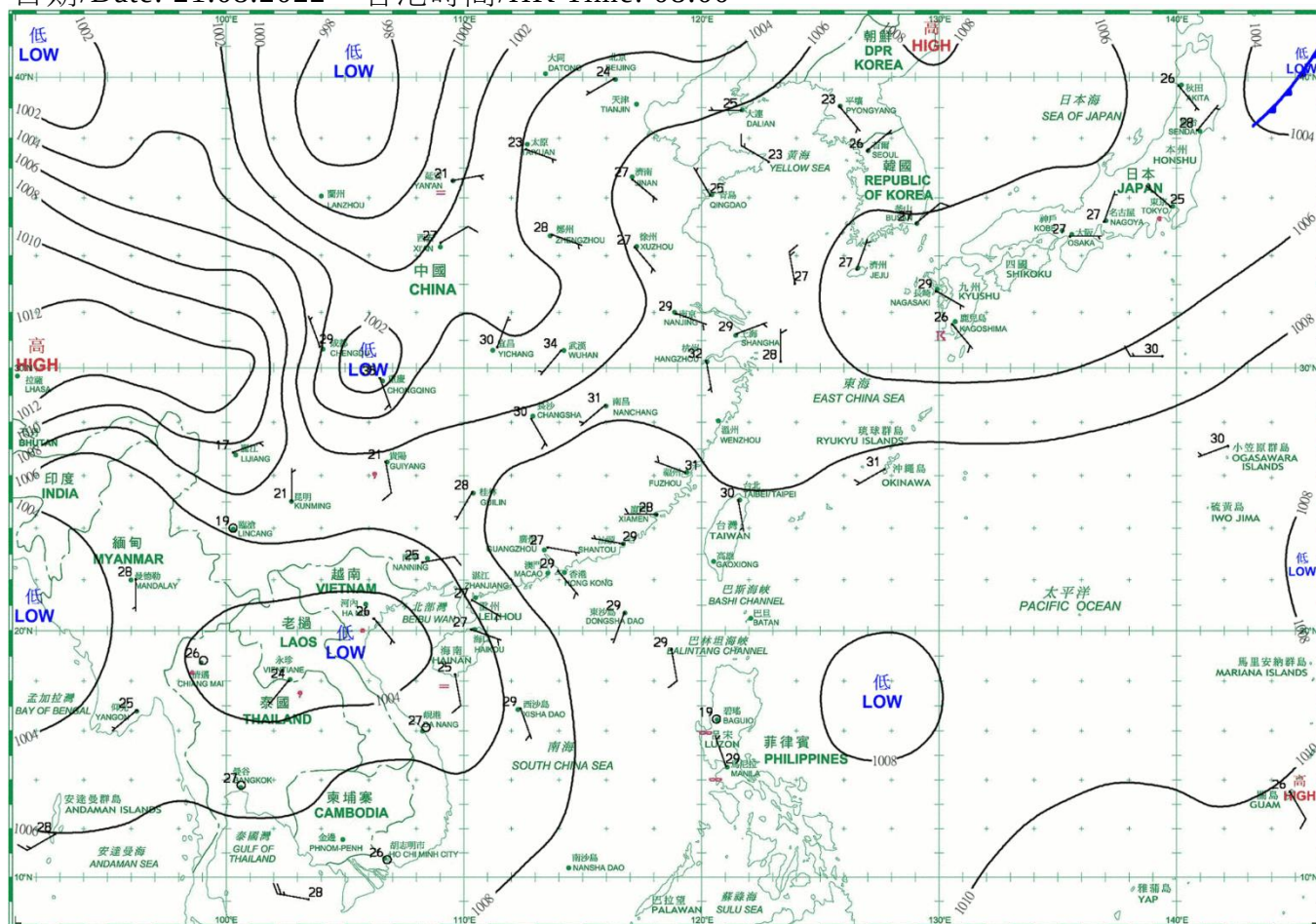
日期/Date: 19.08.2022 香港時間/HK Time: 08:00



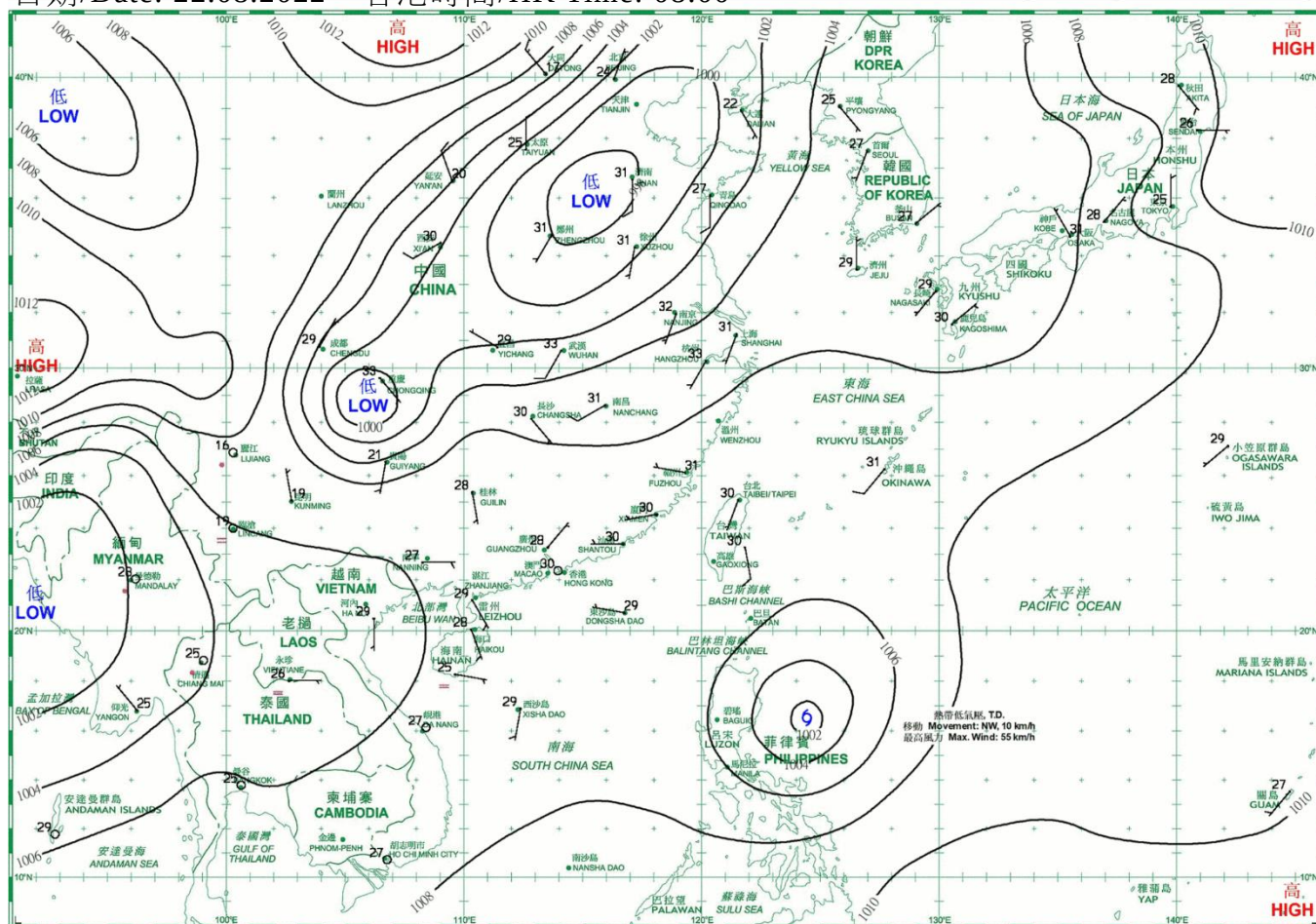
日期/Date: 20.08.2022 香港時間/HK Time: 08:00



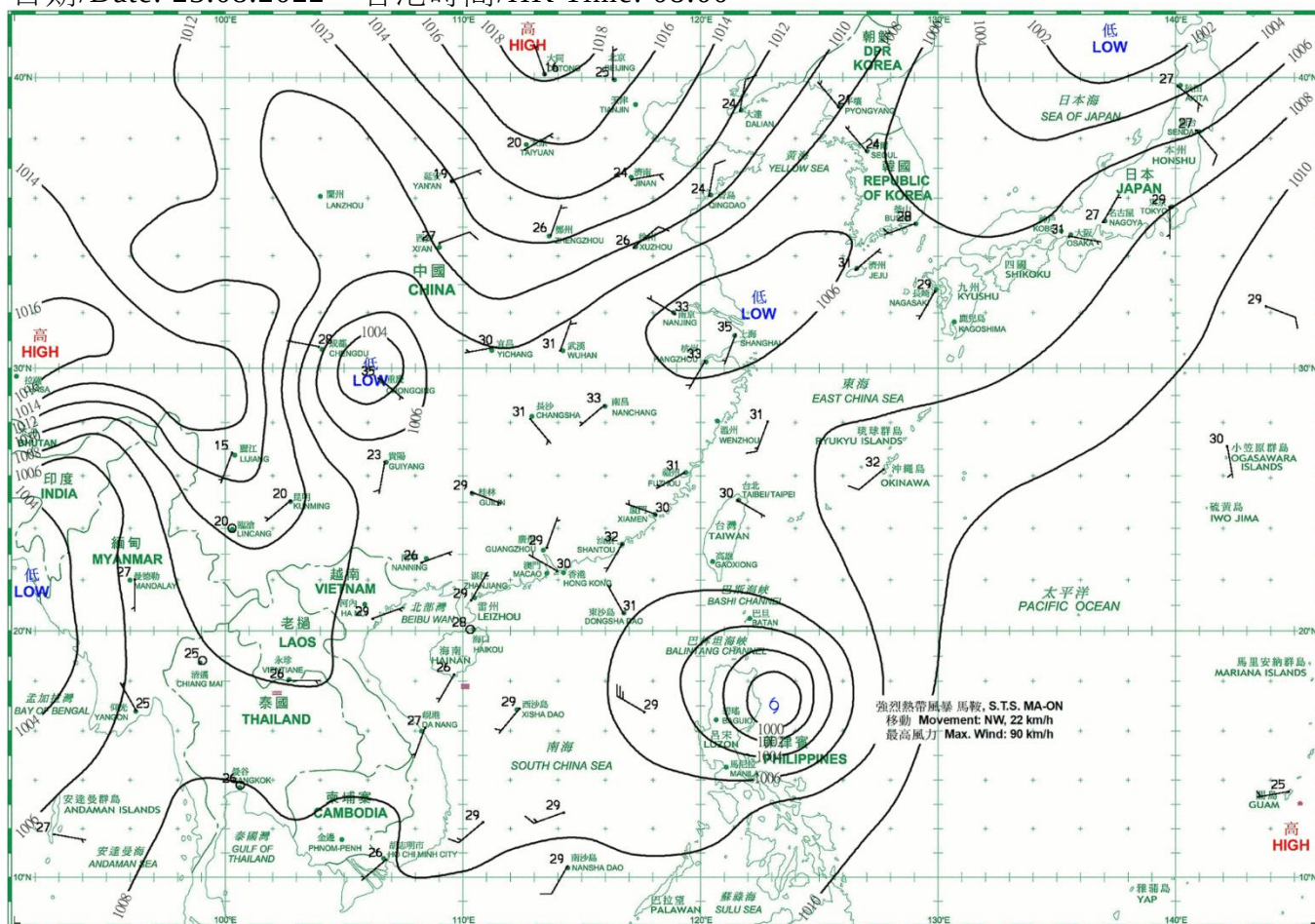
日期/Date: 21.08.2022 香港時間/HK Time: 08:00



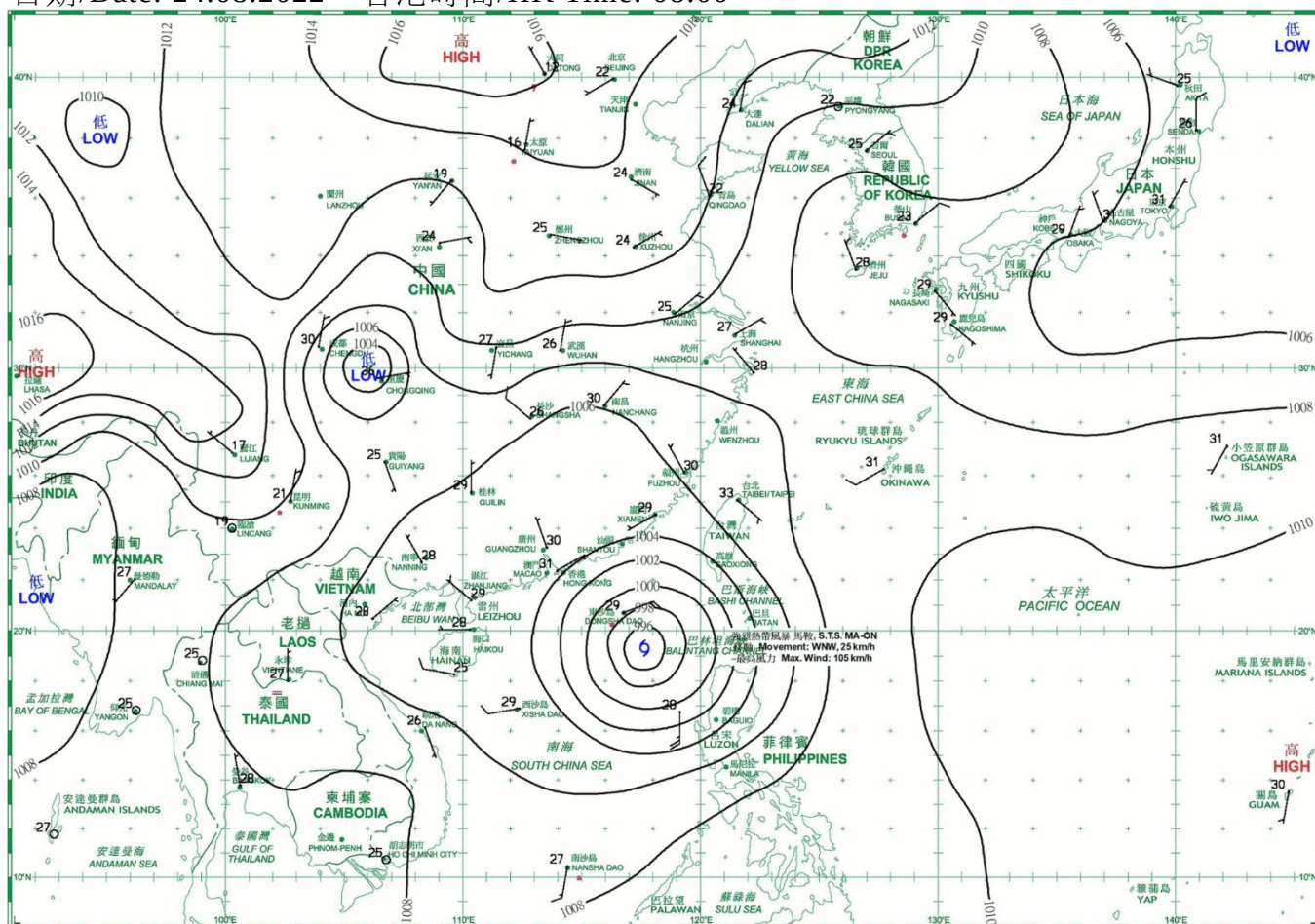
日期/Date: 22.08.2022 香港時間/HK Time: 08:00



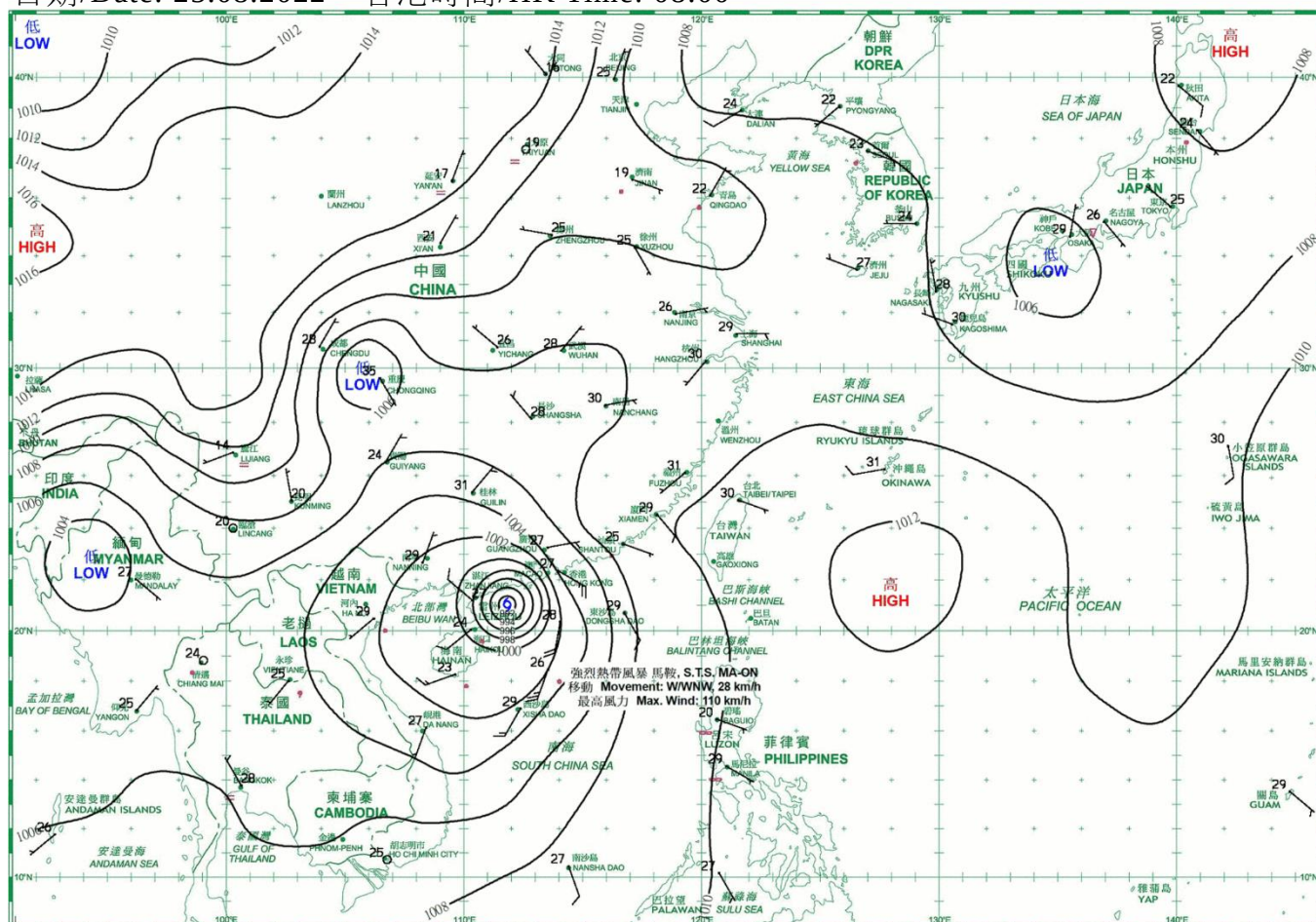
日期/Date: 23.08.2022 香港時間/HK Time: 08:00



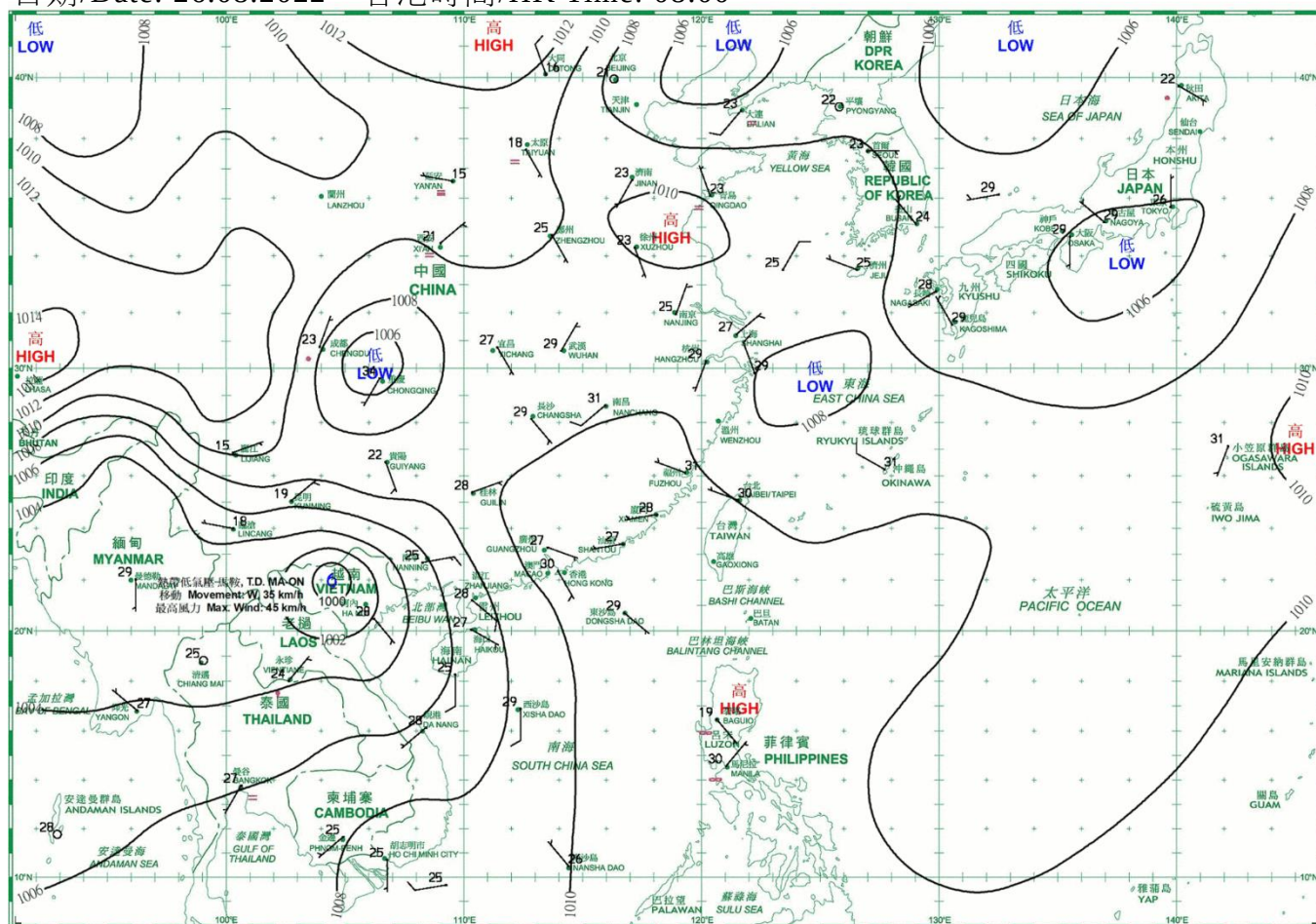
日期/Date: 24.08.2022 香港時間/HK Time: 08:00



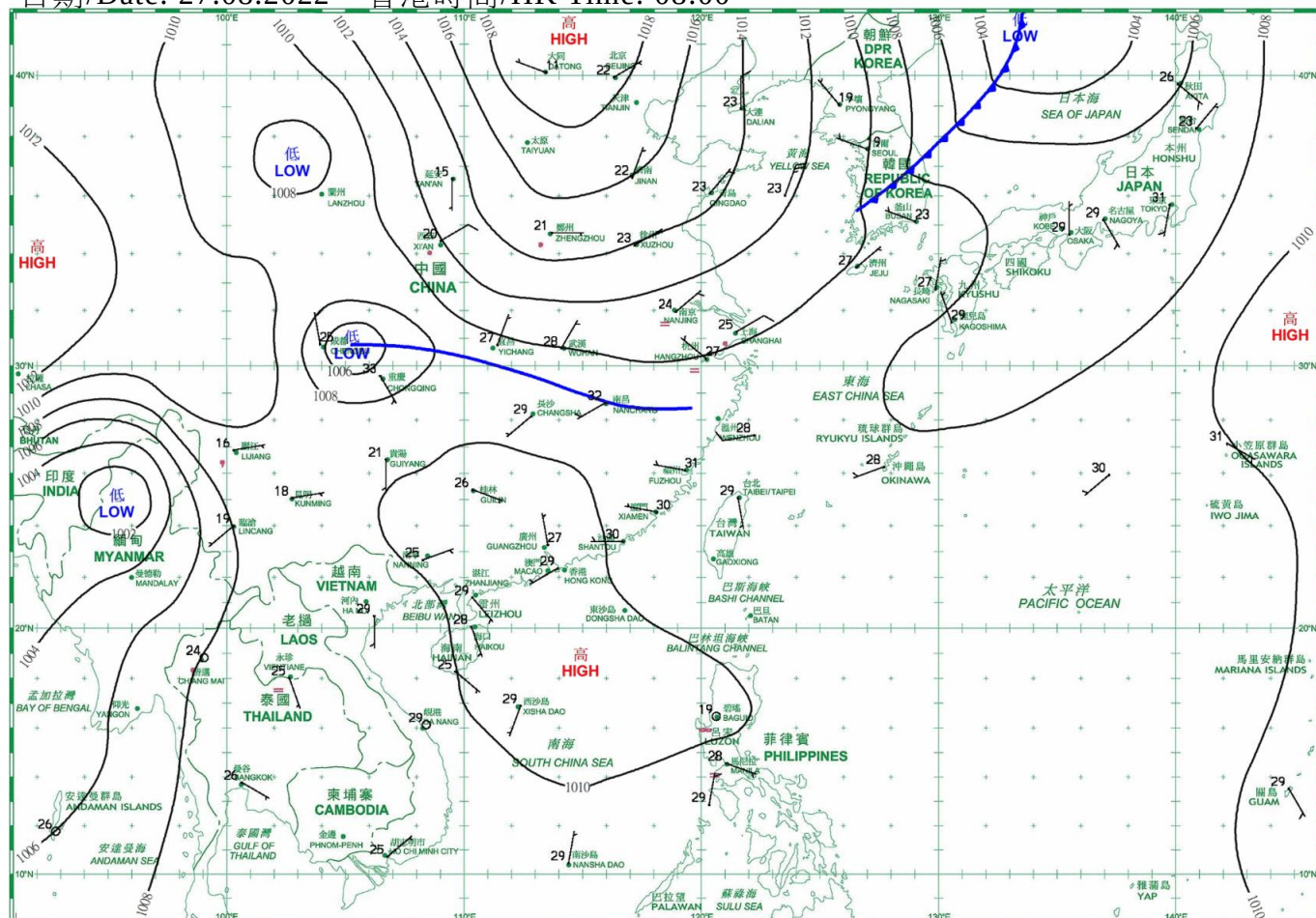
日期/Date: 25.08.2022 香港時間/HK Time: 08:00



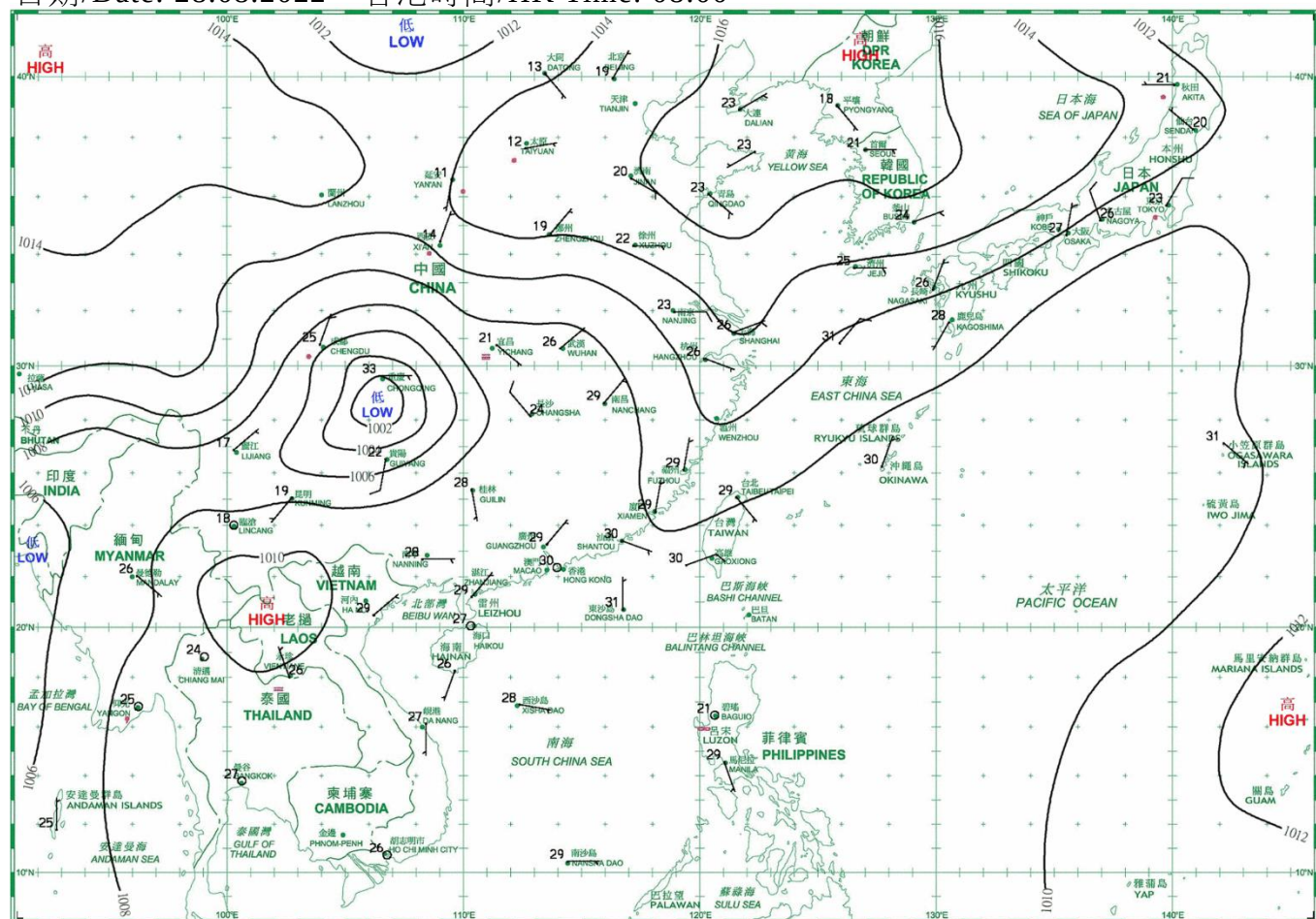
日期/Date: 26.08.2022 香港時間/HK Time: 08:00



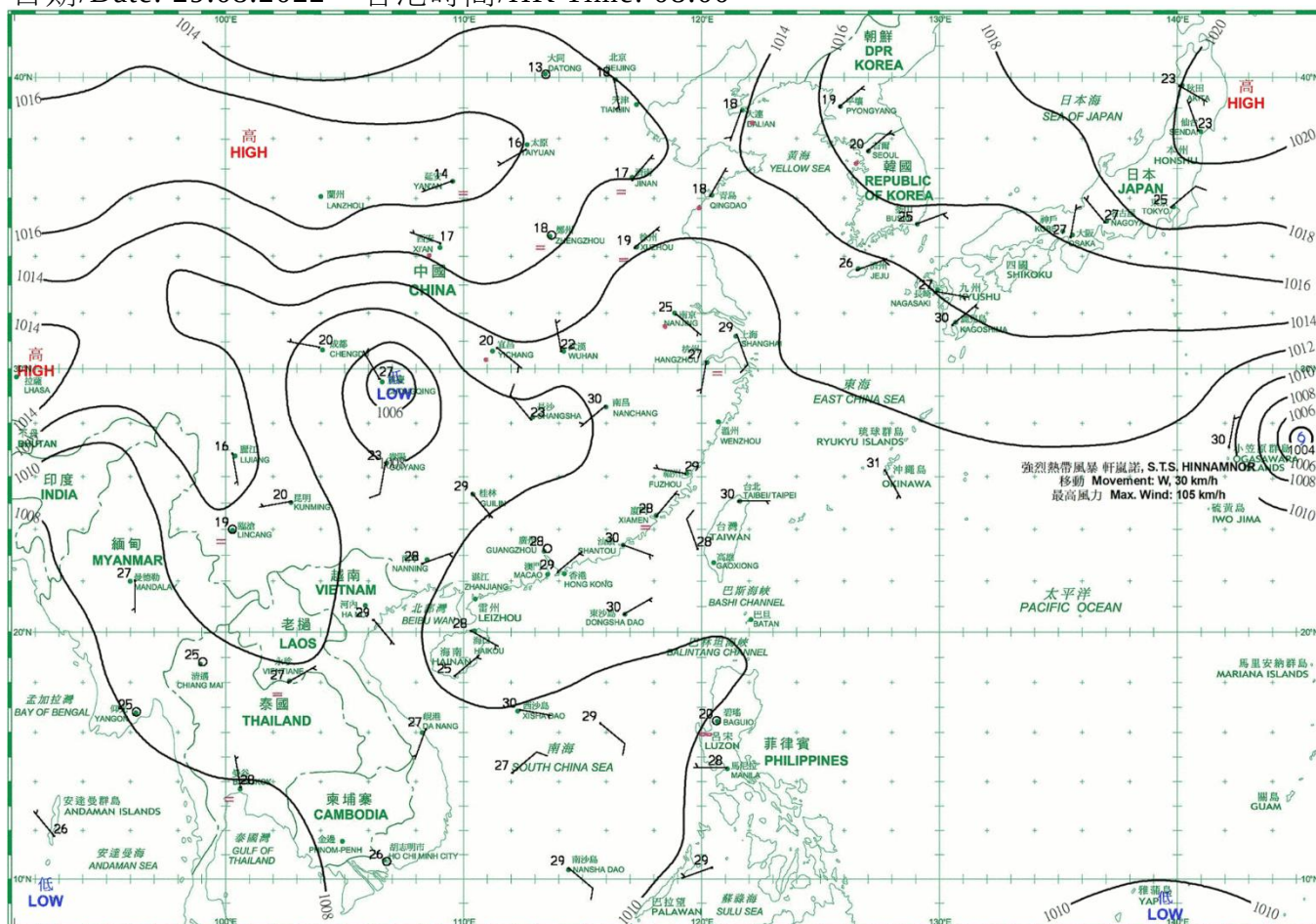
日期/Date: 27.08.2022 香港時間/HK Time: 08:00



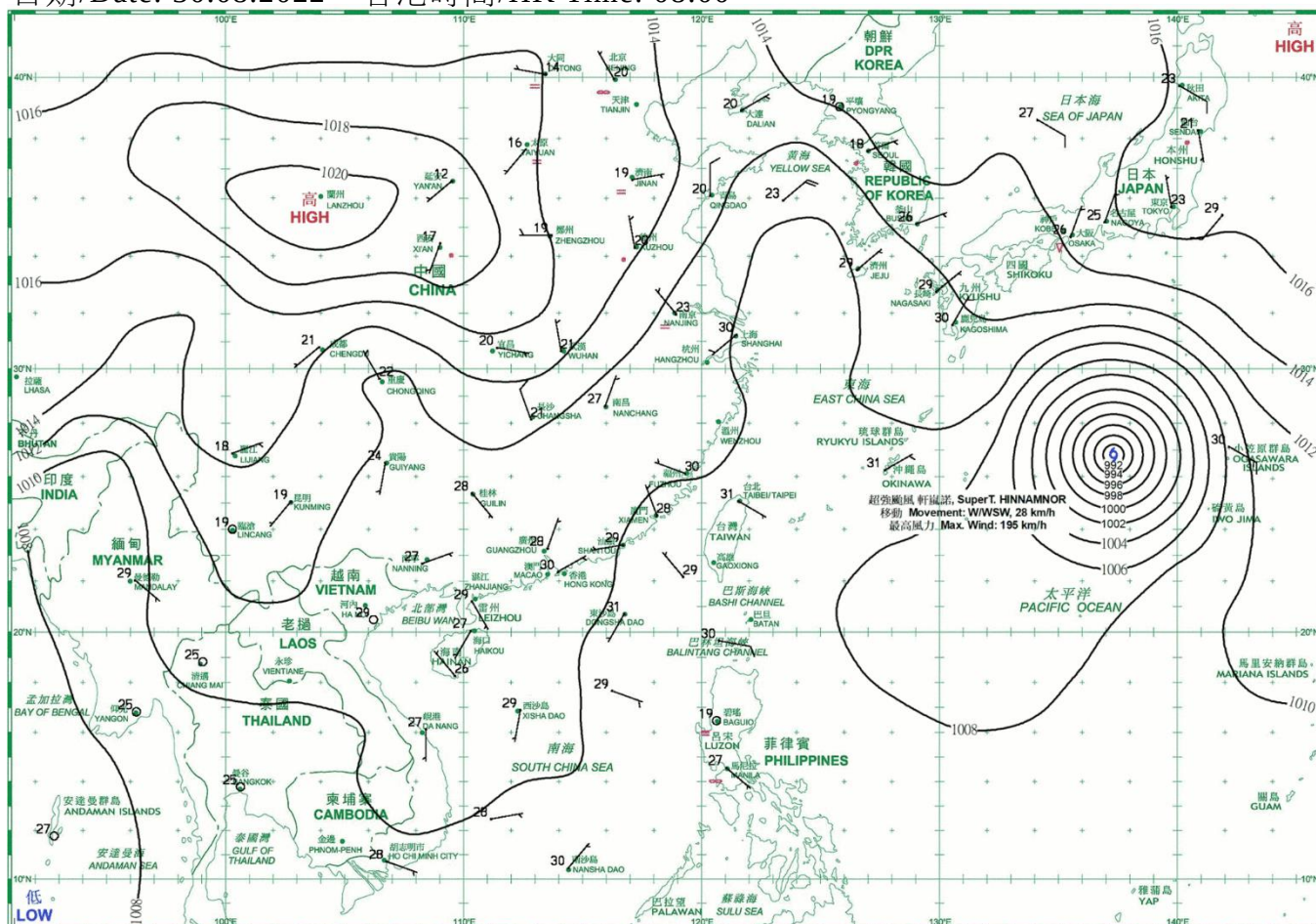
日期/Date: 28.08.2022 香港時間/HK Time: 08:00



日期/Date: 29.08.2022 香港時間/HK Time: 08:00



日期/Date: 30.08.2022 香港時間/HK Time: 08:00



This is a detailed weather map of East Asia and the surrounding regions, including parts of China, Korea, Japan, the Philippines, and Southeast Asia. The map displays various weather systems and features:

- Pressure Systems:**
 - A **High (HIGH)** pressure system is located over the Bay of Bengal, with a central pressure of 1018.
 - A **Low (LOW)** pressure system is centered over the Sea of Japan, with a central pressure of 1006.
 - Another **Low (LOW)** pressure system is located over the Philippines, with a central pressure of 1002.
 - A **High (HIGH)** pressure system is visible on the far right edge of the map, with a central pressure of 1014.
- Fronts:**
 - Several cold fronts (indicated by lines with triangles) and warm fronts (indicated by lines with semicircles) are shown across the region, particularly over China and the Korean Peninsula.
- Wind Patterns:**
 - Arrows indicate wind direction and speed. Wind speeds are marked with numbers (e.g., 14, 18, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31).
 - A specific note for the low over the Philippines states: "Super T. HINNANMOR 移動 Movement: WSW, 22 km/h 最高風力 Max. Wind: 240 km/h".
- Geographical Labels:**
 - Countries:** CHINA, DPR KOREA, REPUBLIC OF KOREA, JAPAN, VIETNAM, THAILAND, CAMBODIA, MYANMAR, INDIA, PHILIPPINES, MALAYSIA, SINGAPORE.
 - Cities:** BEIJING, TAIPEI, SEOUL, BUSAN, YOKOHAMA, TOKYO, OSAKA, MANILA, CEBU, DAVAO, HONG KONG, GUANGZHOU, SHANGHAI, TIENTSIN, PEKING, CHENGDU, KUNMING, LUZHOU, NINGBO, SHENZHEN, HANGZHOU, NANJING, WUZHOU, YICHANG, CHONGQING, LUZHOU, NINGBO, SHENZHEN, HANGZHOU, NANJING, WUZHOU, YICHANG, CHONGQING.
 - Oceans/Seas:** EAST CHINA SEA, SOUTH CHINA SEA, GULF OF THAILAND, ANDAMAN SEA, BAY OF BENGAL, SEA OF JAPAN, JAPAN SEA, KURILSKY CANAL, BASHI CHANNEL, BALINTANG CHANNEL, SULO SEA.
 - Islands:** HAINAN, TAIWAN, RYUKYU ISLANDS, IWO JIMA, MARIANA ISLANDS, GUAM, PALAWAN, ANDAMAN ISLANDS, COCOS (KEELING) ISLANDS.
- Map Features:**
 - The map includes a latitude and longitude grid.
 - Isobars (lines of equal pressure) are drawn at intervals of 2 hPa (e.g., 1008, 1010, 1012, 1014, 1016, 1018).
 - Shaded areas represent different weather conditions or pressure ranges.

4.1.1 二零二二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 2022

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	1005.9	35.7	31.4	29.1	25.0	69	47	-
2	1007.1	35.2	31.1	28.0	24.9	70	63	0.2
3	1006.7	30.8	28.2	25.6	24.7	82	85	34.9
4	1004.5	28.4	27.1	25.9	24.6	86	83	14.9
5	1007.6	28.6	26.1	24.5	25.1	94	89	165.5
6	1007.6	30.9	27.9	26.1	25.9	89	81	5.5
7	1006.7	32.6	29.6	27.6	26.1	82	71	2.8
8	1006.3	30.9	28.3	26.2	25.8	87	86	33.3
9	1003.6	28.5	26.7	25.4	24.5	88	88	72.0
10	1004.1	29.6	27.4	25.8	25.6	90	90	49.7
11	1007.8	28.8	26.7	25.5	25.0	90	88	12.4
12	1008.8	27.1	26.1	24.9	24.8	93	84	76.0
13	1008.0	32.6	28.7	25.8	25.1	81	57	-
14	1007.2	33.3	29.5	26.9	25.1	78	27	-
15	1006.2	33.6	30.0	28.1	25.6	78	57	-
16	1005.6	33.2	29.4	26.2	25.9	82	72	9.1
17	1005.8	32.3	28.2	26.2	25.6	86	84	29.8
18	1005.5	30.4	28.1	26.2	25.6	87	84	22.1
19	1004.9	32.0	28.3	26.4	25.5	85	87	4.8
20	1007.5	31.9	28.2	26.5	25.0	83	74	8.4
21	1008.3	32.9	29.0	26.6	25.9	84	71	1.9
22	1006.9	32.9	30.1	28.2	25.5	77	41	-
23	1005.0	34.5	31.1	28.6	26.4	77	28	-
24	1002.3	34.9	30.8	26.4	25.2	73	69	5.5
25	1006.3	29.8	27.2	25.0	24.4	85	87	48.1
26	1010.6	32.9	29.4	27.5	25.6	80	66	0.1
27	1009.2	33.0	29.7	27.4	25.4	78	60	-
28	1008.4	34.4	30.5	28.3	26.7	80	57	-
29	1010.2	34.6	30.1	28.6	25.9	78	81	-
30	1008.8	32.3	29.5	27.9	25.7	80	65	13.1
31	1006.7	31.7	29.7	28.1	25.8	80	70	4.7
平均/總值 Mean/Total	1006.8	31.9	28.8	26.8	25.4	82	71	614.8
正常* Normal*	1005.2	31.3	28.7	26.7	25.1	81	70	453.2
觀測站 Station	天文台 Hong Kong Observatory							

天文台於八月二十四日 16 時 11 分錄得本月最低氣壓 999.4 百帕斯卡。

The minimum pressure recorded at the Hong Kong Observatory was 999.4 hectopascals at 1611 HKT on 24 August.

天文台於八月一日 15 時 18 分錄得本月最高氣溫 35.7 °C。

The maximum air temperature recorded at the Hong Kong Observatory was 35.7 °C at 1518 HKT on 01 August.

天文台於八月五日 06 時 04 分錄得本月最低氣溫 24.5 °C。

The minimum air temperature recorded at the Hong Kong Observatory was 24.5 °C at 0604 HKT on 05 August.

京士柏於八月九日 22 時 46 分錄得本月最高1分鐘平均降雨率 140 毫米/小時。

The maximum 1-minute mean rainfall rate recorded at King's Park was 140 millimetres per hour at 2246 HKT on 09 August.

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

* 1991-2020 Climatological normal, unless otherwise specified (http://www.hko.gov.hk/en/cis/normal/1991_2020/normal.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 二零二二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 2022

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 ² MJ/m ²	毫米 mm	度 degrees	公里/小時 km/h
1	0	11.5	27.51	6.9	230	12.7
2	0	10.3	23.96	5.6	220	10.7
3	0	0.8	9.25	5.1	030	14.5
4	0	0.2	5.33	0.3	290	19.6
5	0	1.3	8.49	0.5	030	15.1
6	0	5.3	16.71	2.0	050	18.5
7	0	9.0	24.81	6.9	080	27.3
8	0	1.9	8.43	1.1	090	27.9
9	0	0.3	6.65	0.2	100	50.9
10	0	0.9	6.99	1.1	110	44.4
11	0	1.2	8.08	0.3	090	25.8
12	0	0.1	4.61	1.6	120	14.3
13	0	5.3	15.09	2.8	020	6.2
14	0	10.0	22.63	4.7	170	4.7
15	0	7.6	19.48	3.7	160	5.8
16	0	6.5	19.41	3.7	080	16.4
17	0	4.1	15.07	2.5	100	18.1
18	0	1.8	10.43	1.8	100	10.8
19	0	3.5	14.34	2.3	100	16.1
20	0	6.2	18.28	2.0	140	30.6
21	0	5.9	17.45	3.6	140	18.6
22	0	10.6	25.86	5.3	240	18.1
23	0	10.1	22.90	5.2	270	11.6
24	0	6.3	17.66	4.2	070	36.5
25	0	1.8	11.26	1.7	100	39.6
26	0	7.7	22.57	4.7	130	13.8
27	0	10.8	25.57	5.3	240	14.8
28	0	10.9	24.88	5.2	080	12.1
29	0	3.2	15.97	4.0	080	10.3
30	0	6.6	18.15	2.0	220	4.9
31	2	6.0	15.08	3.0	260	4.7
平均/總值 Mean/Total	2	167.7	16.22	99.3	090	18.6
正常* Normal*	40.9 §	182.1	15.73	129.7	230	18.8
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^			

橫瀾島於八月二十五日 01 時 59 分錄得本月最高陣風 103 公里/小時，風向 120 度。

The maximum gust peak speed recorded at Waglan Island was 103 kilometres per hour from 120 degrees at 0159 HKT on 25 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.

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

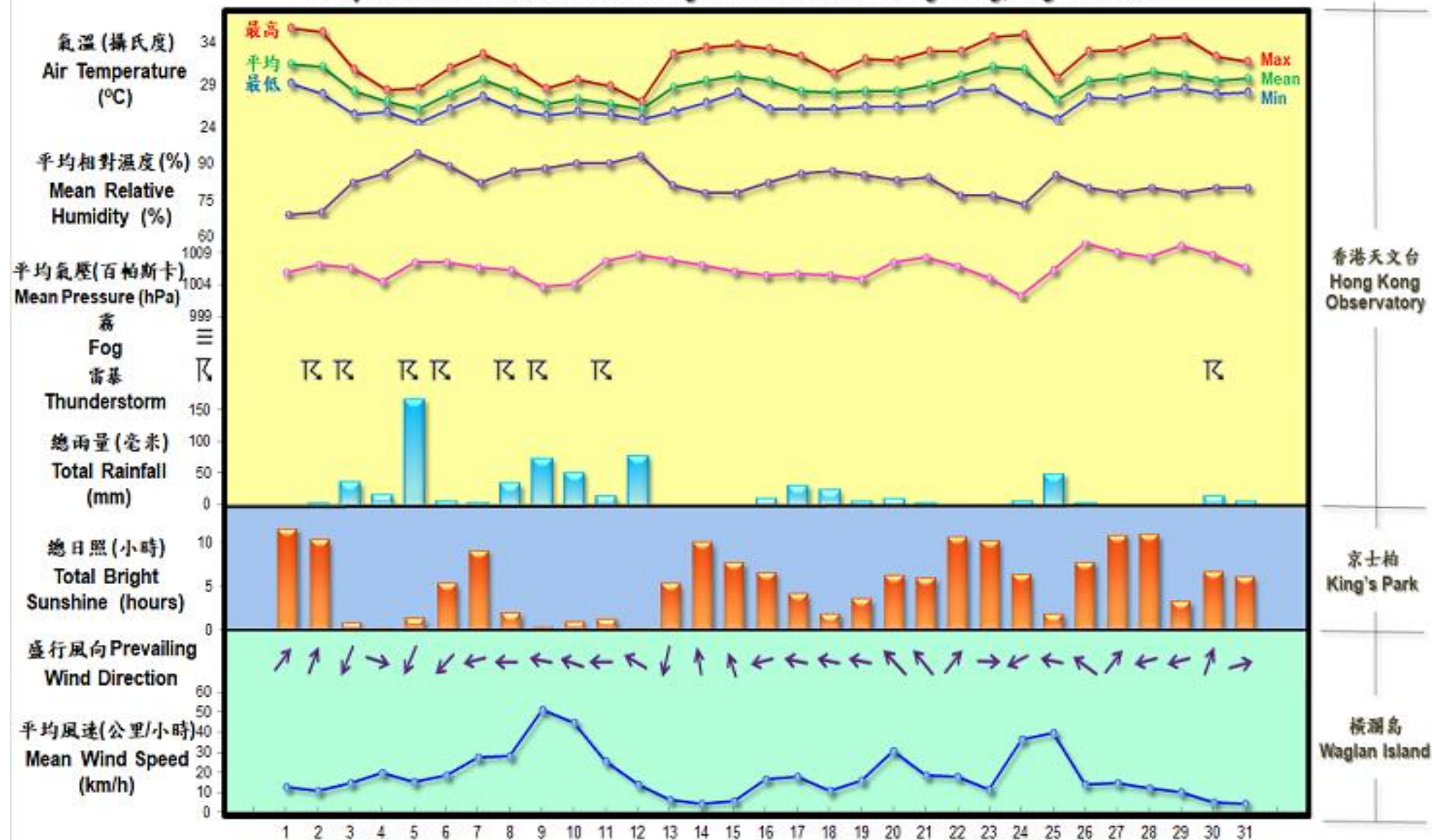
* 1991-2020 Climatological normal, unless otherwise specified (http://www.hko.gov.hk/en/cis/normal/1991_2020/normals.htm)

§ 1997-2021 平均值

§ 1997-2021 Mean value

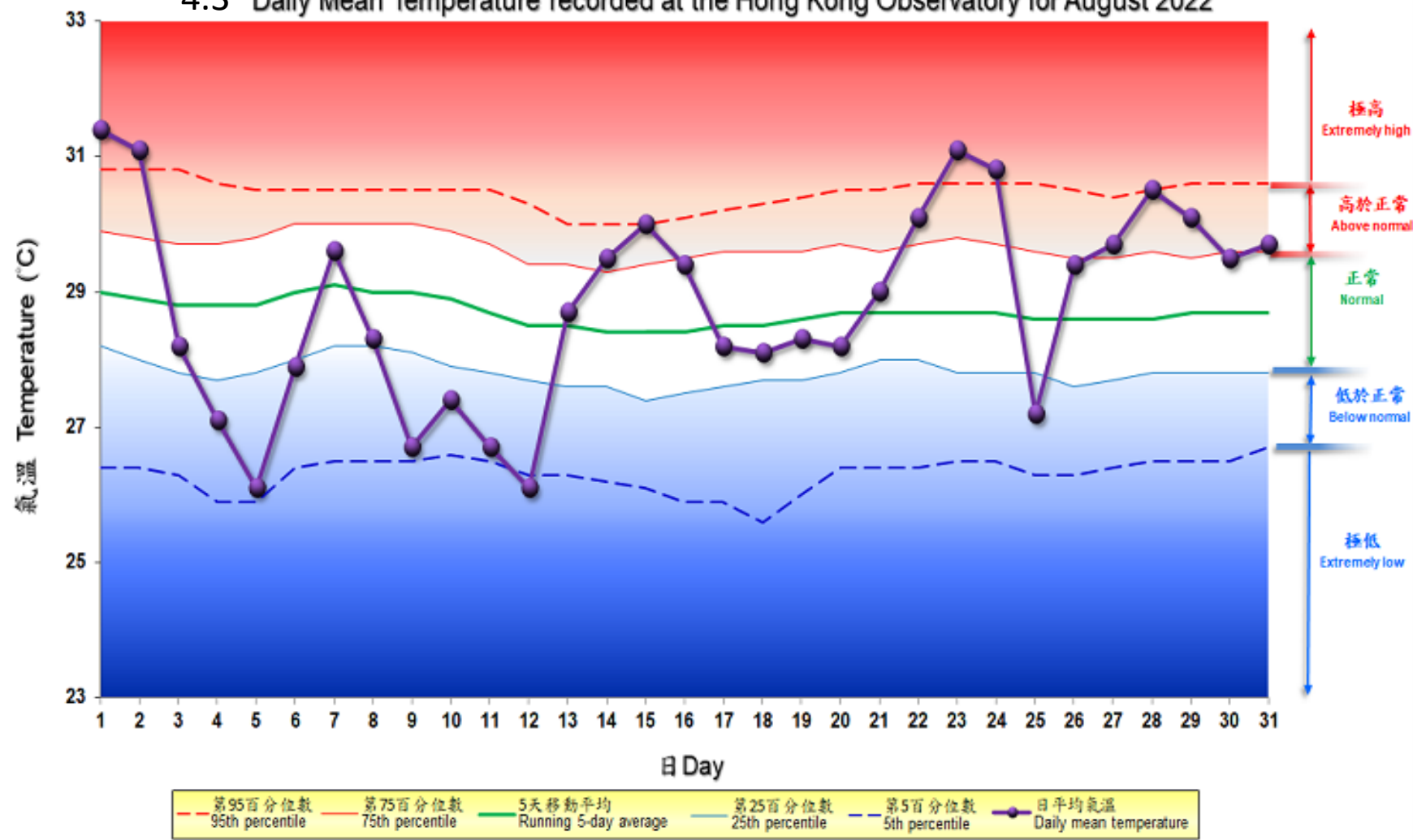
4.2 2022年8月部分香港氣象要素的每日記錄

4.2 Daily Values of Selected Meteorological Elements for Hong Kong, August 2022



4.3 2022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 2022



附註：
 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1991至2020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 1991 to 2020