每月天氣摘要 二零一七年六月

Monthly Weather Summary June 2017

<u>目錄</u>

		頁
1.	二零一七年六月天氣回顧	1
2.	二零一七年六月影響北太平洋西部和南海的熱帶氣旋	8
3.	二零一七年六月每日天氣圖	26
4.	二零一七年六月氣象觀測資料	41

Contents

		<u>Page</u>
1.	Weather Review of June 2017	2
2.	Tropical Cyclones over the western North Pacific and the South China Sea in June 2017	8
3.	Daily Weather Maps for June 2017	26
4.	Meteorological Observations for June 2017	41

二零一七年七月出版

香港天文台編製 香港九龍彌敦道134A

- 1. 除特別列明外,所有時間均以協調世界時加八小時為準。
- 2. 除特別列明外,所有氣象要素數值均在香港天文台錄得。
- 3. 因惡劣天氣引致的人命傷亡及財物損毀數字是由各政府部門提供或根據報章報導輯錄。
- 4. 本刊物的編製和發表,目的是促進資料交流。香港特別行政區政府(包括其僱員及代理人)對於本刊物所載資料的準確性、完整性或效用,概不作出明確或暗示的保證、聲明或陳述;在法律許可的範圍內,對於提供或使用這些資料而可能直接或間接引致任何損失、損壞或傷害(包括死亡),亦不負任何法律承擔或責任(包括疏忽責任)。
- 5. 未經香港天文台台長同意,不得翻印本刊物任何部分內容。

Published: July 2017

Prepared and published by: Hong Kong Observatory,

134A Nathan Road,

Kowloon, Hong Kong.

- 1. Unless otherwise stated, all times given are 8 hours ahead of Co-ordinated Universal Time (UTC).
- 2. Values of meteorological elements are those recorded at the Hong Kong Observatory, unless otherwise specified.
- 3. Figures of damage and casualties caused by weather phenomena are compiled from press reports and information provided by other government departments.
- 4. This publication is prepared and disseminated in the interest of promoting the exchange of information. The Government of the Hong Kong Special Administrative Region (including its servants and agents) makes no warranty, statement or representation, express or implied, with respect to the accuracy, completeness, or usefulness of the information contained herein, and in so far as permitted by law, shall not have any legal liability or responsibility (including liability for negligence) for any loss, damage or injury (including death) which may result whether directly or indirectly, from the supply or use of such information.
- 5. Permission to reproduce any part of this publication should be obtained through the Director of the Hong Kong Observatory.

1. 二零一七年六月天氣回顧

由於六月初天氣酷熱及月中持續有雨,本月整體較正常溫暖及多雨。本月的平均氣溫為28.8度,較正常27.9度高0.9度。全月總雨量為656.0毫米,較六月份正常456.1毫米多約百分之44。而首半年累積雨量為1189.8毫米,較同期正常1096.9毫米多約百分之8。

受一股活躍西南季候風影響,本月首兩天的天氣為大致多雲及有驟雨。六月三日天 色較為明朗,隨著風勢減弱及陽光增多,六月五日至七日天氣酷熱。然而,一道低壓槽 亦於六月六日至七日在廣東內陸徘徊,引致沿岸驟雨顯著,並且影響本港。其後,普遍 天晴的天氣持續至六月十一日,香港天文台當日的氣溫上升至最高34.1度,是本月的最 高氣溫。

同時,南海一個低壓區於六月十一日發展為熱帶風暴,名為苗柏。苗柏於六月十二日橫過南海北部,晚上增強為強烈熱帶風暴,並於午夜前橫過本港東部水域及在大鵬半島登陸。隨著苗柏靠近,本港於六月十二日稍後時間風力顯著增強及有狂風大驟雨,天文台發出自2012年以來首個六月份的八號烈風或暴風信號。雖然苗柏在內陸減弱,其兩帶仍持續為華南沿岸地區帶來強陣風及大驟雨。六月十三日早上大雨期間,天文台錄得本月最低氣溫24.3度,並且發出紅色暴雨警告信號。六月十三日至十四日期間本港普遍錄得超過150毫米雨量,市區的雨量更超過250毫米。

苗柏橫過後,西南季候風於六月十五日至十六日增強,一道低壓槽在廣東沿岸地區 徘徊,不穩定和有雨的天氣持續至六月二十一日。六月十七日雨勢頗大及有狂風雷暴, 普遍地區錄得超過100毫米雨量,天文台再度發出紅色暴雨警告信號。

當低壓槽消散後,六月二十二日天氣轉晴及炎熱。隨後五天持續有陽光和驟雨。雖然另一道低壓槽在華南發展,但沿岸地區的驟雨逐漸減弱。月底期間本港天氣普遍晴朗,日間天氣酷熱。

本月一個熱帶氣旋影響南海及北太平洋西部。

本月有七班航機因惡劣天氣須轉飛其他地方。表 1.1 載列本月發出及取消各種警告 /信號的詳情。

1. The Weather of June 2017

As a result of the very hot weather in early June and the rainy spell in mid-June, the month was overall warmer and wetter than usual. The monthly mean temperature was 28.8 degrees, 0.9 degree above the normal of 27.9 degrees. The total rainfall recorded in the month was 656.0 millimetres, about 44 percent above the June normal of 456.1 millimetres. The accumulated rainfall recorded in the first half year was 1189.8 millimetres, a surplus of 8 percent compared to the normal of 1096.9 millimetres for the same period.

Under the influence of an active southwest monsoon, the weather was mainly cloudy and showery on the first two days of the month. The weather turned brighter on 3 June, and with winds subsiding and more sunshine, the weather became very hot on 5-7 June. Despite the fine conditions, a lingering trough over the inland areas of Guangdong also led to some significant development of showery activities along the coast that affected the territory on 6 and 7 June. Generally fine weather persisted till 11 June with temperature at the Hong Kong Observatory that day soaring to a maximum of 34.1 degrees, the highest of the month.

Meanwhile, an area of low pressure over the South China Sea developed into a tropical storm, named Merbok, on 11 June. Merbok moved across the northern part of the South China Sea on 12 June and intensified further into a severe tropical storm that night. It traversed the eastern part of Hong Kong waters and made landfall over the Dapeng Peninsula before midnight. With the approach of Merbok, local winds strengthened significantly with heavy squally showers later on 12 June, leading to the issuance of the No.8 Gale or Storm Signal for the first time in June since 2012. As Merbok weakened over land, its rainbands continued to affect the south China coastal region with gusty winds and heavy rain, with temperature at the Hong Kong Observatory falling to the month's lowest of 24.3 degrees in rain and the issuance of the Red Rainstorm Warning Signal on the morning of 13 June. More than 150 millimetres of rainfall were generally recorded over the territory on 13 – 14 June, with rainfall over the urban areas exceeding 250 millimetres.

Under the influence of an enhanced southwest monsoon in the wake of Merbok on 15 and 16 June and with the development of a lingering trough of low pressure along the coastal areas of the Guangdong, the weather remained unstable and rainy till 21 June. In particular, outbreaks of heavy rain and squally thunderstorms on 17 June brought more than 100 millimetres of rainfall to the territory and again led to the issuance of the Red Rainstorm Warning Signal.

After the dissipation of the trough, the weather turned fine and hot on 22 June. A mixture of sunshine and showers then persisted for the next five days. Despite the development of another trough over southern China, showery activities over the coastal region gradually subsided and daytime conditions became very hot as generally fine weather

prevailed over the territory towards the end of the month.

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

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

表 1.1 二零一七年六月發出的警告及信號

Table 1.1 Warnings and Signals issued in June 2017

熱帶氣旋警告信號

Tropical Cyclones Warning Signals

		開始	時間	終結時間 Ending Time	
熱帶氣旋名稱	信號	Beginni	ng Time		
Name of Tropical Cyclone	Signal Number	日/月	時	日/月	時
		day/month	hour	day/month	hour
	1	11/6	1940	12/6	1040
	3	12/6	1040	12/6	1720
苗柏	8NE	12/6	1720	12/6	2020
MERBOK	8NW	12/6	2020	13/6	0010
	8SW	13/6	0010	13/6	0440
	3	13/6	0440	13/6	1110

強烈季候風信號

Strong Monsoon Signal

開始	時間	終結時間			
Beginni	ng Time	Ending Time			
日/月	時	日/月	時		
day/month	hour	day/month	hour		
2/6			1840		

暴雨警告信號

Rainstorm Warnings

顏色	開始		終結時間		
	Beginni	ing Time	Ending Time		
Colour	日/月	時	日/月	時	
	day/month	hour	day/month	hour	
 	12/6	0250	12/6	0045	
黃色 Amber	13/6	0250	13/6	0845	
紅色 Red	13/6	0845	13/6	1150	
黃色 Amber	13/6	1150	13/6	1230	
黃色 Amber	17/6	0150	17/6	0225	
紅色 Red	17/6	0225	17/6	0405	
黄色 Amber	17/6	2040	17/6	2215	
黄色 Amber	21/6	0120	21/6	0245	

山泥傾瀉警告

Landslip Warning

	時間 ng Time	終結時間 Ending Time			
日/月 day/month	時 hour	日/月 時 day/month hour			
13/6	0855	13/6	2100		

雷暴警告

Thunderstorm Warning

開始時間		終結時間		開始	時間	終結時間	
Beginning Time		Ending Time		Beginning Time		Ending Time	
日/月	時	日/月	時	日/月	時	日/月	時
day/month	hour	day/month	hour	day/month	hour	day/month	hour
6/6	0525	6/6	0630	6/6	0915	6/6	1015
7/6	0420	7/6	0630	9/6	0810	9/6	0915
12/6	2310	13/6	1630	13/6	2225	14/6	0030
14/6	0755	14/6	0930	15/6	0635	15/6	0830
15/6	1030	15/6	1300	15/6	1345	15/6	1500
16/6	0005	16/6	1430	16/6	2205	17/6	0630
17/6	1235	17/6	1645	17/6	2000	17/6	2330
18/6	0840	18/6	1445	18/6	1930	18/6	2130
19/6	0530	19/6	1100	19/6	1540	19/6	1800
20/6	0900	20/6	1030	20/6	1150	20/6	1430
20/6	2000	20/6	2055	20/6	2215	21/6	1430
21/6	1645	21/6	1945	23/6	1330	23/6	1430
24/6	1145	24/6	1415	26/6	1300	26/6	1400
27/6	1240	27/6	1345	30/6	1020	30/6	1130

酷熱天氣警告

Very Hot Weather Warning

very free vi earner vi arming								
開始	時間	終結時間						
Beginni	ng Time	Ending Time						
日/月	時	日/月	時					
day/month	hour	day/month	hour					
3/6	1255	3/6	1800					
5/6	1210	12/6	0505					
23/6	0945	23/6	1620					
27/6	27/6 0730		1715					
30/6	30/6 1145		1830					

新界北水浸特別報告

Special Announcement on Flooding in the northern New Territories

	時間 ng Time	終結時間 Ending Time			
日/月 day/month	時 hour	日/月 時 day/month hour			
13/6	0935	13/6	1510		

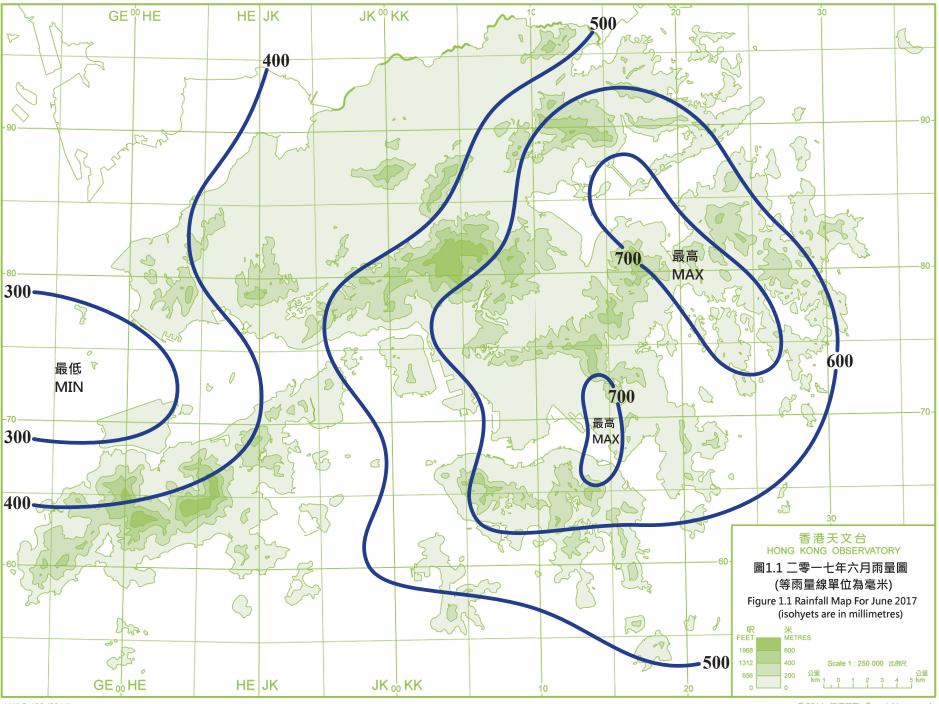




圖 1.2 赤柱大潭道一幅護土牆在六月十三日的一場暴雨下倒塌 (照片由土 力工程處及土木工程拓展署提供)

Fig. 1.2 A retaining wall at Tai Tam Road in Stanley collapsed under the heavy rain on 13 June (courtesy of the Geotechnical Engineering Office and the Civil Engineering and Development Department)

2.1 二零一七年六月熱帶氣旋概述

二零一七年六月在北太平洋西部及南海北部出現了一個熱帶氣旋。

熱帶低氣壓苗柏於六月十一日凌晨在東沙以南約580公里的南海中部上形成,向西 北偏北移動,當日下午增強為熱帶風暴。翌日苗柏繼續移近廣東沿岸地區,當晚增強為 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。午夜 前苗柏在大鵬半島登陸並減弱為熱帶風暴,六月十三日上午苗柏採取東北偏北路徑橫過 廣東,下午在江西消散。

根據報章報導,苗柏為廣東帶來狂風大雨,多處地區出現水浸,超過 12 萬人受災, 直接經濟損失達 2.6 億元人民幣。汕尾有超過 45 000 戶電力供應受影響。

2.1 Overview of Tropical Cyclones in June 2017

One tropical cyclone occurred over the western North Pacific and the South China Sea in June 2017.

Merbok formed as a tropical depression over the central part of the South China Sea about 580 km south of Dongsha in the small hours of 11 June. Moving north-northwestwards, it intensified into a tropical storm that afternoon. Merbok continued to move closer to the coastal areas of Guangdong on 12 June and intensified into a severe tropical storm that night, reaching its peak intensity with an estimated sustained wind of 90 km/h near its centre. It made landfall over the Dapeng Peninsula before midnight and weakened into a tropical storm. Taking on a north-northeasterly track, Merbok moved across Guangdong on the morning of 13 June and dissipated over Jiangxi in the afternoon.

According to press reports, Merbok brought heavy rain and squalls to Guangdong with extensive flooding. At least 120 000 people were affected with a direct economic loss reaching 260 million RMB. Electricity supply to more than 45 000 households was interrupted in Shanwei.



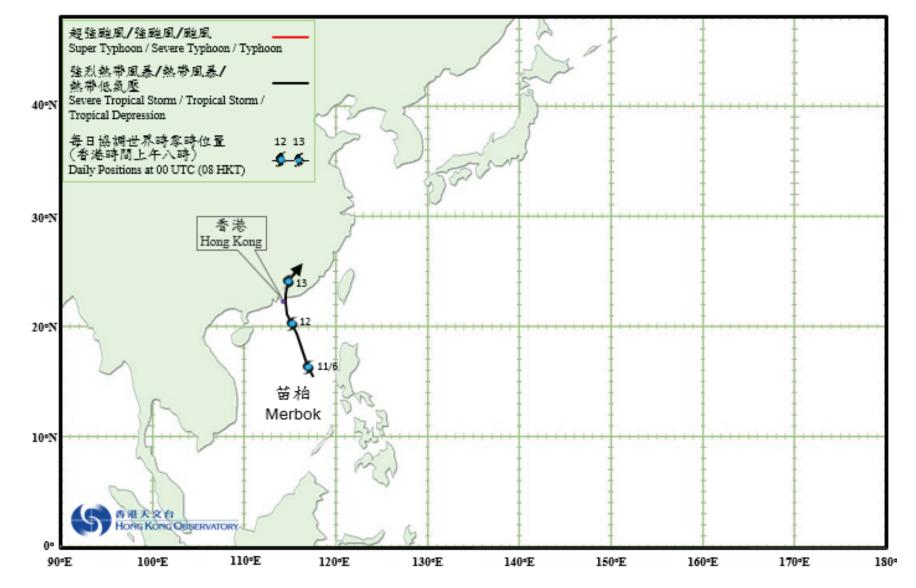


圖 2.1 二零一七年六月的熱帶氣旋路徑圖

Fig. 2.1 Tracks of tropical cyclones in June 2017

2.2 強烈熱帶風暴苗柏 (1702)

二零一七年六月十一日至十三日

苗柏是二零一七年首個影響香港的熱帶氣旋。苗柏吹襲香港期間,天文台需要發出八號烈風或暴風信號。苗柏的中心在六月十二日晚上橫過香港東部水域, 是自二零零八年八月颱風鸚鵡後再次有熱帶氣旋的中心進入香港境內。

熱帶低氣壓苗柏於六月十一日凌晨在東沙以南約 580 公里的南海中部上形成,向西北偏北移動,當日下午增強為熱帶風暴。翌日苗柏繼續移近廣東沿岸地區,當晚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。午夜前苗柏在大鵬半島登陸並減弱為熱帶風暴,六月十三日上午苗柏採取東北偏北路徑橫過廣東,下午在江西消散。

根據報章報導,苗柏為廣東帶來狂風大雨,多處地區出現水浸,超過 12 萬人受災,直接經濟損失達 2.6 億元人民幣。汕尾有超過 45 000 戶電力供應受影響。

香港天文台在六月十一日晚上 7 時 40 分發出一號戒備信號,當時苗柏集結在香港之東南偏南約 530 公里。晚間本港吹和緩偏東風。隨著苗柏靠近廣東沿岸,天文台在六月十二日早上 10 時 40 分發出三號強風信號,當時苗柏位於香港之東南偏南約 210 公里。下午本港逐漸轉吹清勁至強風程度的東至東北風,離岸間中吹烈風。下午 5 時 20 分天文台發出八號東北烈風或暴風信號,當時苗柏集結在香港天文台之東南偏南約 90 公里。本港風力顯著增強,普遍吹強風至烈風程度的北至東北風,離岸及高地風力更間中達到暴風程度。

苗柏趨近香港時開始採取較偏北路徑移動,本港轉吹西北風,天文台在晚上 8 時 20 分改發八號西北烈風或暴風信號。苗柏橫過香港東部水域,晚上 9 時 30 分最為接近,其中心在天文台總部以東約 25 公里處掠過。午夜前苗柏在大鵬半島登陸,本港逐漸轉吹西南風,天文台在六月十三日上午 12 時 10 分改發八號西南烈風或暴風信號。隨著苗柏移入內陸及減弱,本港風力隨即緩和,天文台於上午 4 時 40 分改發三號強風信號,取代八號西南烈風或暴風信號,並於當日早上 11 時 10 分取消所有熱帶氣旋警告信號。

在苗柏的影響下,九龍天星碼頭、橫瀾島及大老山錄得的最高每小時平均風速分別為每小時 59、87 及 85 公里,而最高陣風則分別為每小時 77、113 及 131 公里。尖鼻咀錄得最高潮位 2.86 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) 0.55 米。各站錄得的最低瞬時海平面氣壓如下:

站	最低瞬時	日期/月份	時間
	海平面氣壓		
	(百帕斯卡)		
香港天文台總部	995.5	12/6	下午8時08分
香港國際機場	998.4	12/6	下午7時53分
京士柏	995.5	12/6	下午 8 時 23 分
坪洲	996.1	12/6	下午7時44分
打鼓嶺	996.7	12/6	下午10時16分
大埔	996.0	12/6	下午9時50分
沙田	995.1	12/6	下午9時51分
上水	997.2	12/6	下午9時46分
流浮山	998.2	12/6	下午8時47分
長洲	996.0	12/6	下午7時39分
橫瀾島	989.7	12/6	下午7時51分

六月十一日本港大致天晴,日間天氣酷熱。受苗柏相關的兩帶影響,六月十二日及十三日本港有狂風大驟雨及雷暴。兩勢在六月十三日早上最大,當時天文台曾發出紅色暴雨警告、山泥傾瀉警告、新界北部水浸特別報告及雷暴警告。這兩天期間本港普遍錄得超過150毫米雨量,市區的雨量更超過250毫米。

苗柏吹襲香港期間,最少有十人受傷,另有超過 600 宗塌樹報告、20 宗水 浸報告及兩宗山泥傾瀉報告。上環一座商業大廈的玻璃幕牆爆裂,而土瓜灣一座 大廈有鋁窗墜下,兩部私家車受損。在六月十三日早上的暴雨期間,多區道路出 現水浸,交通大受影響。赤柱大潭道一幅護土牆在暴雨下倒塌。新界約 300 公頃 的農地受到影響。香港國際機場有超過 500 班航班取消或延誤。

2.2 Severe Tropical Storm Merbok (1702) 11 to 13 June 2017

Merbok was the first tropical cyclone affecting Hong Kong in 2017 and the No. 8 Gale or Storm Signal was issued by the Hong Kong Observatory during its passage. The centre of Merbok moved across the eastern part of Hong Kong waters on the night of 12 June, the first time the centre of a tropical cyclone entered the territory of Hong Kong since Typhoon Nuri in August 2008.

Merbok formed as a tropical depression over the central part of the South China Sea about 580 km south of Dongsha in the small hours of 11 June. Moving north-northwestwards, it intensified into a tropical storm that afternoon. Merbok continued to move closer to the coastal areas of Guangdong on 12 June and intensified into a severe tropical storm that night, reaching its peak intensity with an estimated sustained wind of 90 km/h near its centre. It made landfall over the Dapeng Peninsula before midnight and weakened into a tropical storm. Taking on a north-northeasterly track, Merbok moved across Guangdong on the morning of 13 June and dissipated over Jiangxi in the afternoon.

According to press reports, Merbok brought heavy rain and squalls to Guangdong with extensive flooding. At least 120 000 people were affected with a direct economic loss reaching 260 million RMB. Electricity supply to more than 45 000 households was interrupted in Shanwei.

In Hong Kong, the No. 1 Standby Signal was issued at 7:40 p.m. on 11 June when Merbok was about 530 km south-southeast of the territory. Local winds were moderate easterlies during the night. As Merbok edged closer to the coast of Guangdong, the No. 3 Strong Wind Signal was issued at 10:40 a.m. on 12 June when Merbok was about 210 km south-southeast of Hong Kong. Local winds gradually became fresh to strong east to northeasterlies in the afternoon and occasionally reaching gale force offshore. The No. 8 Northeast Gale or Storm Signal was issued at 5:20 p.m. on 12 June when Merbok was about 90 km south-southeast of the Hong Kong Observatory. Local winds strengthened significantly, becoming generally strong to gales force from north to northeast, with winds reaching storm force occasionally offshore and on high ground.

With Merbok taking on a more northerly track on its approach, winds started to turn northwesterly and the No. 8 Northwest Gale or Storm Signal was issued at 8:20 p.m. Merbok traversed the eastern part of Hong Kong waters and came closest to the Observatory Headquarters around 9:30 p.m. that evening with its centre located about 25 km to the east. Merbok made landfall over the Dapeng Peninsula before midnight and local winds gradually turned southwesterly. The No. 8 Southwest Gale or Storm Signal was issued at 12:10 a.m. on 13 June. With Merbok moving inland and weakening, local winds soon subsided. The No. 8 Southwest Gale or Storm Signal was replaced by the No. 3 Strong Wind Signal at 4:40 a.m. on 13 June, and all tropical cyclone warning signals were cancelled at 11:10 a.m. later that morning.

Under the influence of Merbok, maximum hourly mean winds of 59, 87 and 85 km/h and gusts of 77, 113 and 131 km/h were recorded at Star Ferry (Kowloon), Waglan Island and Tate's Cairn respectively. A maximum sea level (above chart datum) of 2.86 m was recorded at Tsim Bei Tsui, and a maximum storm surge (above astronomical tide) of 0.55

m was recorded at Tai Po Kau. The lowest instantaneous mean sea-level pressures recorded at some selected stations are as follows:

Station	Lowest	Date/Month	Time
	instantaneous		
	mean sea-level		
	pressure (hPa)		
Hong Kong Observatory	995.5	12/6	8:08 p.m.
Headquarters			
Hong Kong International	998.4	12/6	7:53 p.m.
Airport			
King's Park	995.5	12/6	8:23 p.m.
Peng Chau	996.1	12/6	7:44 p.m.
Ta Kwu Ling	996.7	12/6	10:16 p.m.
Tai Po	996.0	12/6	9:50 p.m.
Shatin	995.1	12/6	9:51 p.m.
Sheung Shui	997.2	12/6	9:46 p.m.
Lau Fau Shan	998.2	12/6	8:47 p.m.
Cheung Chau	996.0	12/6	7:39 p.m.
Waglan Island	989.7	12/6	7:51 p.m.

Locally, it was mainly fine and very hot during the day on 11 June. The rainbands associated with Merbok brought heavy squally showers and thunderstorms to Hong Kong on 12 and 13 June. The rain was most intense on the morning of 13 June. Red Rainstorm Warning, Landslip Warning, Special Announcement on Flooding in the Northern New Territories and Thunderstorm Warning were issued by the Observatory that morning. More than 150 millimetres of rainfall were generally recorded over the territory during these two days, with rainfall in the urban areas exceeding 250 millimetres.

In Hong Kong, at least 10 people were injured during the passage of Merbok. There were more than 600 reports of fallen trees, 20 reports of flooding and two reports of landslide. The glass curtain wall of a commercial building in Sheung Wan cracked, and an aluminum window fell down from a building in To Kwa Wan, damaging two private cars. Traffic was seriously disrupted as many roads were flooded during the rainstorm on the morning of 13 June. A retaining wall at Tai Tam Road in Stanley collapsed under the heavy rain. About 300 hectares of farmland in the New Territories were affected. More than 500 flights were cancelled or delayed at the Hong Kong International Airport.

表 2.2.1 在苗柏影響下,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 Merbok were in force

		最高陣風					最高每小時平均風速				
	站 Station	Maximum Gust					Maximum Hourly Mean Wind				
0.11				風速					風速		
` 1	ww.weather.gov.hk/	風向		(公里/時)	日期/月份	時間	風向	<u> </u>	(公里/時)	日期/月份	時間
informtc/	station2016_uc.htm)	Direc	tion	Speed	Date/Month	Time	Direct	tion	Speed	Date/Month	Time
				(km/h)					(km/h)		
黄麻角 (赤柱)	Bluff Head (Stanley)	東北偏東	ENE	68	12/06	15:50	東	Е	31	12/06	14:00
	Central Pier	東北	NE	81	12/06	18:12	西北偏西	WNW	51	12/06	22:00
長洲	Cheung Chau	西北偏西	WNW	92	12/06	23:08	西北偏西	WNW	58	13/06	00:00
	Cheung Chau Beach	西南	SW	79	13/06	06:10	東北	NE	51	12/06	16:00
	C						西北偏北	NNW	63	12/06	22:00
青洲	Green Island	西南偏南	SSW	96	13/06	08:21	西南	SW	63	13/06	07:00
香港國際	Hong Kong	西南	SW	79	13/06	06:04	西北	NW	51	12/06	23:00
機場	International Airport	四用	5 **			00.04	RA기다		31	12/00	
啟德	Kai Tak	西南偏西	WSW	85	13/06	06:16	西	W	41	13/06	00:00
京士柏	King's Park	北	N	77	12/06	20:30	西北偏西	WNW	30	13/06	00:00
流浮山	Lau Fau Shan	西北	NW	75	12/06	23:34	西北偏北	NNW	52	12/06	22:00
昂坪	Ngong Ping	西南偏西	WSW	110	13/06	05:38	西南偏西	WSW	77	13/06	06:00
北角	North Point	西南偏西	WSW	96	13/06	05:18	西	W	59	13/06	00:00
坪洲	Peng Chau	西北	NW	83	12/06	21:16	西北	NW	49	12/06	22:00
平洲	Ping Chau	西	W	68	13/06	00:20	西	W	36	13/06	01:00
西貢	Sai Kung	東北偏北	NNE	99	12/06	20:34	北	N	49	12/06	21:00
沙洲	Sha Chau	北	N	79	12/06	19:54	北	N	58	12/06	20:00
24/111	Ch - Ti		CW	50	12/06	04.20	北	N	23	12/06	21:00
沙田	Sha Tin	西南	SW	59	13/06	04:20	西南	SW	23	13/06	07:00
九龍天星	Star Ferry	西	W	77	12/06	23:38	西	W	59	13/06	00:00
碼頭	(Kowloon)										
打鼓嶺	Ta Kwu Ling	西	W	54	12/06	23:41	西北偏西	WNW	22	13/06	00:00
大美督	Tai Mei Tuk	東北偏北	NNE	103	12/06	20:21	東北偏北	NNE	54	12/06	21:00
大帽山	Tai Mo Shan	西北	NW	124	12/06	23:10	西	W	77	13/06	02:00
大埔滘	Tai Po Kau	西北偏西	WNW	75	12/06	23:24	西北偏西	WNW	40	12/06	23:00
塔門	Tap Mun	西	W	94	12/06	23:16	西	W	58	13/06	00:00
大老山	Tate's Cairn	東北偏北	NNE	131	12/06	20:14	北	N	85	12/06	21:00
將軍澳	Tseung Kwan O	東北偏北	NNE	68	12/06	18:58	西北偏北	NNW	23	12/06	21:00
青衣島蜆 殼油庫	Tsing Yi Shell Oil Depot	西北偏北	NNW	65	12/06	20:59	西北	NW	31	12/06	21:00
屯門政府 合署	Tuen Mun Government Offices	西北偏西	WNW	72	13/06	00:24	西北偏西	WNW	25	13/06	01:00
口者 横瀾島	Waglan Island	北	N	113	12/06	19:53	東北偏北	NNE	87	12/06	20:00
	Ü	西北	NW	52	12/06	23:34	西北	NW	22	13/06	00:00
黄竹坑	Wong Chuk Hang	西西	W	77	12/06	21:35	西西	W	31	12/06	22:00
共口が	TOILS CHAR Hairs	H	**	, ,	12/00	41.33	ഥ	**	<i>J</i> 1	12/00	22.00

沙螺灣及石崗 - 資料不齊全

Sha Lo Wan and Shek Kong - data incomplete

- 表 2.2.2 在苗柏影響下,熱帶氣旋警告信號系統的八個參考測風站在熱帶氣 旋警告信號生效時錄得持續風力達到強風及烈風程度的時段
- Table 2.2.2 Periods during which sustained strong and gale force winds were attained at the eight reference anemometers in the tropical cyclone warning system when tropical cyclone warning signals for Merbok were in force

			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		
站 Station (http://www.weather.gov.hk/informtc/station2016_uc.htm)		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		
			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	12/6	1630	13/6	1009	12/6	2308	12/6	2323	
香港國際 機場	Hong Kong International Airport	12/6	1856	13/6	0652	-		-		
啟德 Kai Tak		12/6	2101	12/6	2358	-				
流浮山	Lau Fau Shan	12/6	1940	13/6	0623	-				
西貢	Sai Kung	12/6	1243	12/6	2146	-				

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 Sha Tin, Ta Kwu Ling and Tsing Yi Shell Oil Depot.

- 未達到指定的風速
- not attaining the specified wind speed
- * 十分鐘平均風速達每小時 41-62 公里
- * 10-minute mean wind speed of 41- 62 km/h
- # 十分鐘平均風速達每小時 63-87 公里
- # 10-minute mean wind speed of 63-87 km/h
- 註: 本表列出持續風力達到強風及烈風程度的起始及終結時間。期間風力可能高於或低於指定的風力。

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

表 2.2.3 苗柏掠過期間,香港天文台總部及其他各站所錄得的日雨量

Table 2.2.3 Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Merbok

	other stations during the passage of Wierook								
站			六月十一日	六月十二日	六月十三日	總雨量(毫米)			
Station			11 Jun	12 Jun	13 Jun	Total rainfall (mm)			
香港天文台 Hong Kong Observatory			微量 Trace	37.7	219.4	257.1			
香港國際機場 Hong Kong International Airport (HKA)			0.0	11.0	71.0	82.0			
長洲(長洲 Cheung Chau (CCH)			7.0	118.0	125.0			
H23	香港仔	Aberdeen	0.0	42.0	171.0	213.0			
N05	粉嶺	Fanling	0.0	26.5	173.0	199.5			
N13	糧船灣	High Island	0.0	35.0	165.0	200.0			
K04	佐敦谷	Jordan Valley	0.0	61.0	213.5	274.5			
N06	葵涌	Kwai Chung	0.0	54.0	186.0	240.0			
H12	半山區	Mid Levels	0.0	38.0	260.0	298.0			
N09	沙田	Sha Tin	0.0	46.0	150.0	196.0			
H19 筲箕灣 Shau Kei Wan		0.0	42.0	243.0	285.0				
SEK	石崗	Shek Kong	0.0	36.0	125.5	161.5			
K06			0.0	52.5	197.0	249.5			
R31			[0.0]	41.5	159.5	[201.0]			
R21 踏石角 Tap Shek Kok		[0.0]	23.5	92.5	[116.0]				
TMR	屯門水庫	Tuen Mun Reservoir	[0.0]	24.5	[126.9]	[151.4]			
N17	東涌	Tung Chung	0.0	10.5	109.0	119.5			

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

表 2.2.4 苗柏掠過期間,香港各潮汐站所錄得的最高潮位及最大風暴潮

Table 2.2.4 Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of Merbok

站 Station (http://www.weather.gov.hk/ informtc/station2016_uc.htm)		Max	(海圖基準i imum sea lev ve chart datur	rel	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	2.35	12/6	10:12	0.24	12/6	14:10	
石壁	Shek Pik	2.57	12/6	10:06	0.28	12/6	10:09	
		2.57	12/0	10.00	0.20	12/0	10.09	
大廟灣	Tai Miu Wan	2.28	12/6	11:46	0.55	12/6	15:19	
大廟灣 大埔滘								
	Tai Miu Wan	2.28	12/6	11:46	0.55	12/6	15:19	

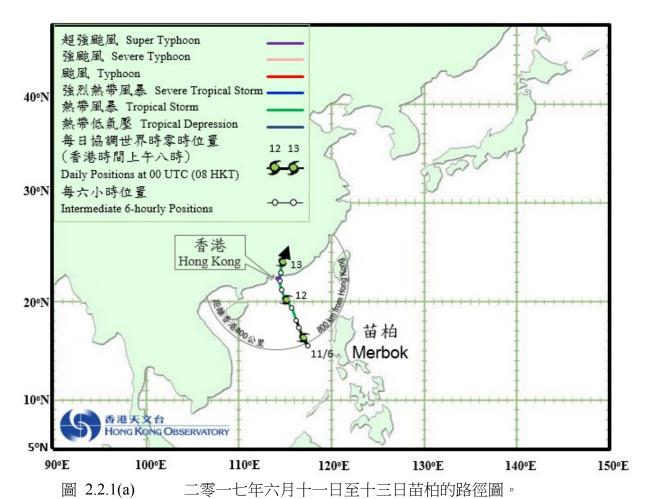
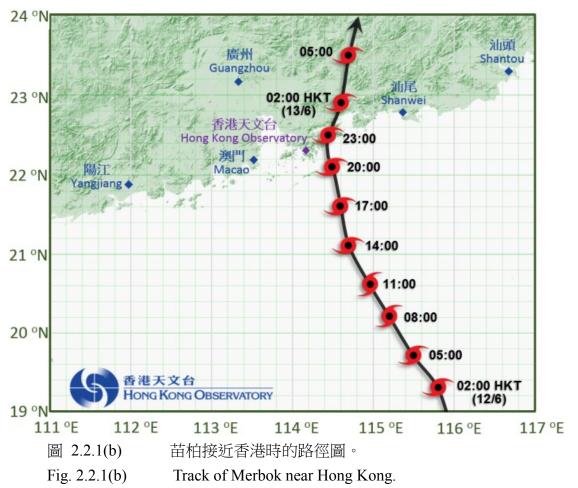


Fig. 2.2.1(a) Track of Merbok: 11 – 13 June 2017.



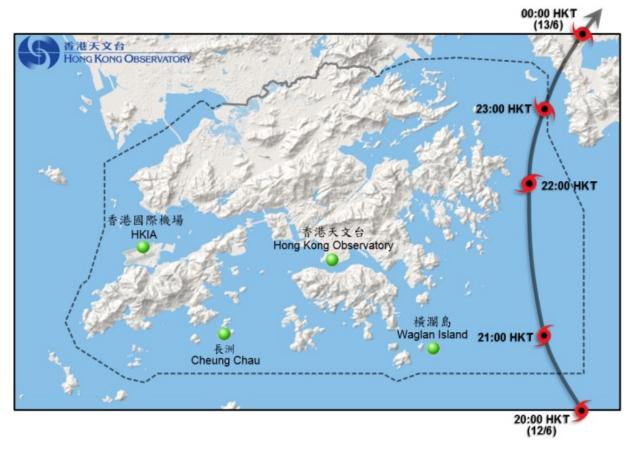


圖 2.2.1(c) 苗柏橫過香港時的路徑圖。

Fig. 2.2.1(c) Track of Merbok moving across Hong Kong.

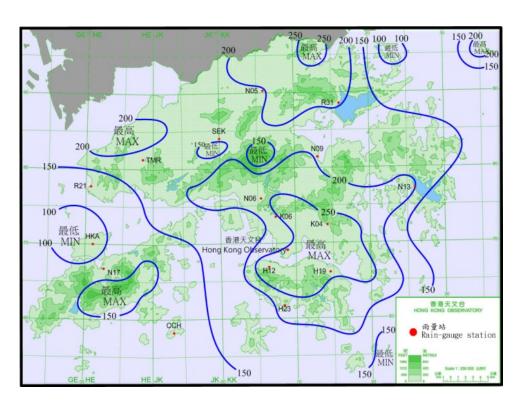


圖 2.2.2 二零一七年六月十一日至十三日的雨量分佈(等雨量線單位為毫米)。

Fig. 2.2.2 Rainfall distribution on 11 - 13 June 2017 (isohyets in millimetres).

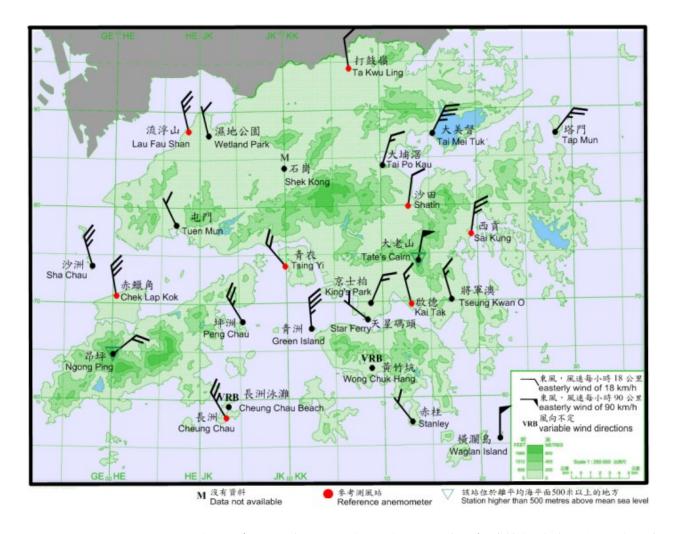


圖 2.2.3(a) 二零一七年六月十二日下午 8 時 20 分香港各站錄得的十分鐘平均風向和風速。當時橫瀾島及大老山的風力達到暴風程度。

Fig. 2.2.3(a) 10-minute mean wind direction and speed recorded at various stations in Hong Kong at 8:20 p.m. on 12 June 2017. Winds at Waglan Island and Tate's Cairn reached storm force at the time.

註: 黄竹坑及長洲泳灘當時錄得的十分鐘平均風速分別為每小時 19 及 14 公里。

Note: The 10-minute mean wind speeds recorded at that time at Wong Chuk Hang and Cheung Chau Beach were 19 and 14 km/h respectively.

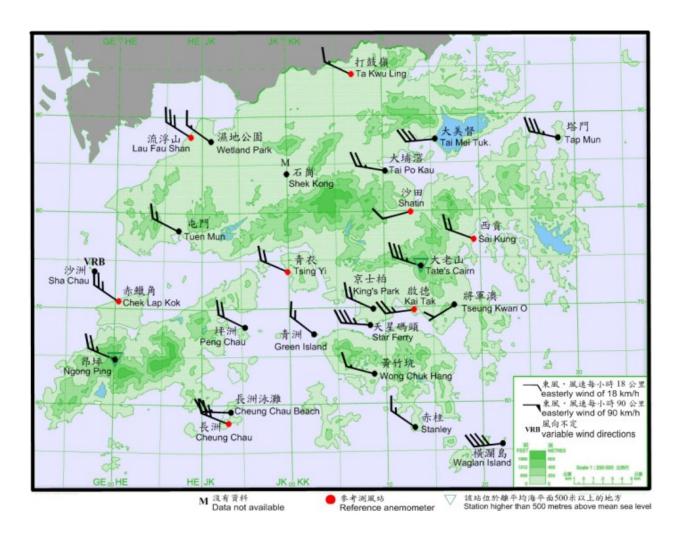


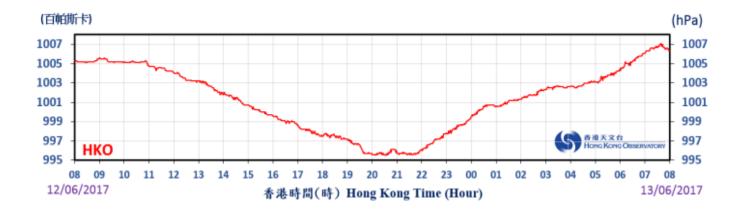
圖 2.2.3(b) 二零一七年六月十二日晚上 11 時 40 分香港各站錄得的十分鐘平均風向和風速。當時九龍天星碼頭及橫瀾島的風力達到烈風程度。

Fig. 2.2.3(b) 10-minute mean wind direction and speed recorded at various stations in Hong Kong at 11:40 p.m. on 12 June 2017. Winds at Star Ferry (Kowloon) and Waglan Island reached gale force at the time.

註: 沙洲當時錄得的十分鐘平均風速為每小時 19 公里。

Station higher than 500 metres above mean sea level

Note: The 10-minute mean wind speed recorded at that time at Sha Chau was 19 km/h.



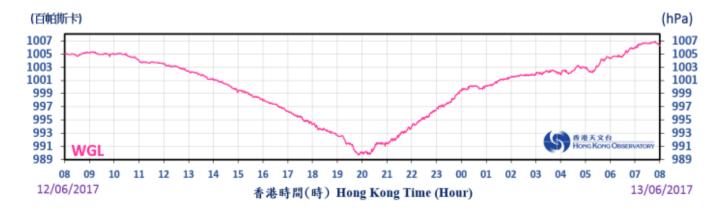


圖 2.2.4 二零一七年六月十二日至十三日天文台總部(上圖)及橫瀾島(下圖)錄得的海平面氣壓。

Fig. 2.2.4 Traces of mean sea-level pressure recorded at the Observatory Headquarters (top panel) and Waglan Island (bottom panel) between 12 and 13 June 2017.

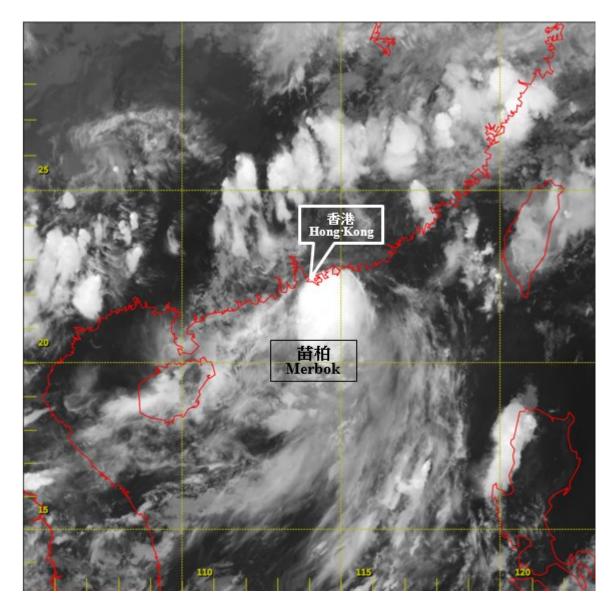


圖 2.2.5 二零一七年六月十二日晚上 8 時左右的紅外線衛星圖片,當時苗柏達到其最高強度,中心附近最高持續風速估計為每小時 90 公里。 〔此衛星圖像接收自日本氣象廳的向日葵8號衛星。〕

Fig. 2.2.5 Infra-red satellite imagery around 8 p.m. on 12 June 2017, when Merbok was at peak intensity with estimated maximum sustained winds of 90 km/h near its centre.

[The satellite imagery was originally captured by Himawari-8 Satellite (H-8) of

Japan Meteorological Agency (JMA).]

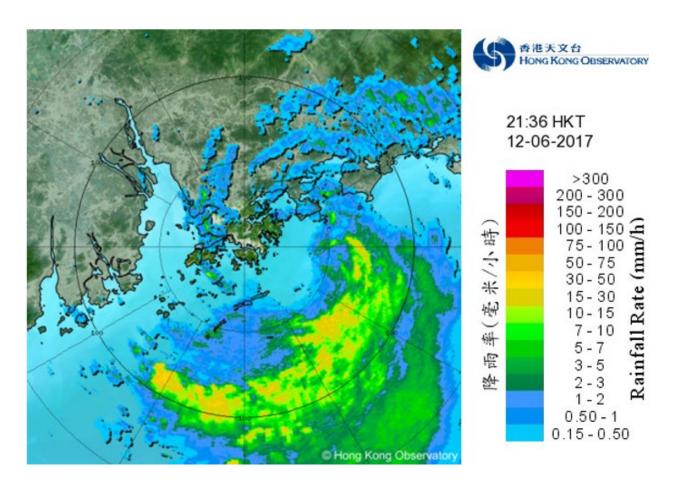


圖 2.2.6(a) 二零一七年六月十二日晚上 9 時 36 分的雷達回波圖像,當時苗柏最接近香港。

Fig. 2.2.6(a) Image of radar echoes at 9:36 p.m. on 12 June 2017, when Merbok was closest to the territory.

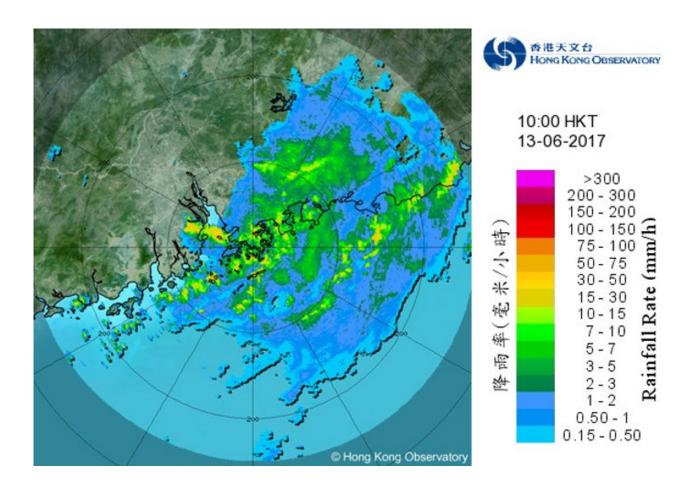


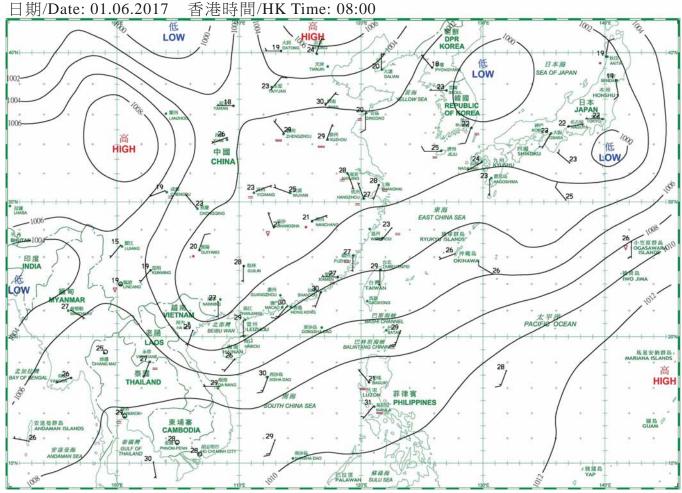
圖 2.2.6(b) 二零一七年六月十三日早上 10 時的雷達回波圖像。苗柏為香港帶來暴雨。

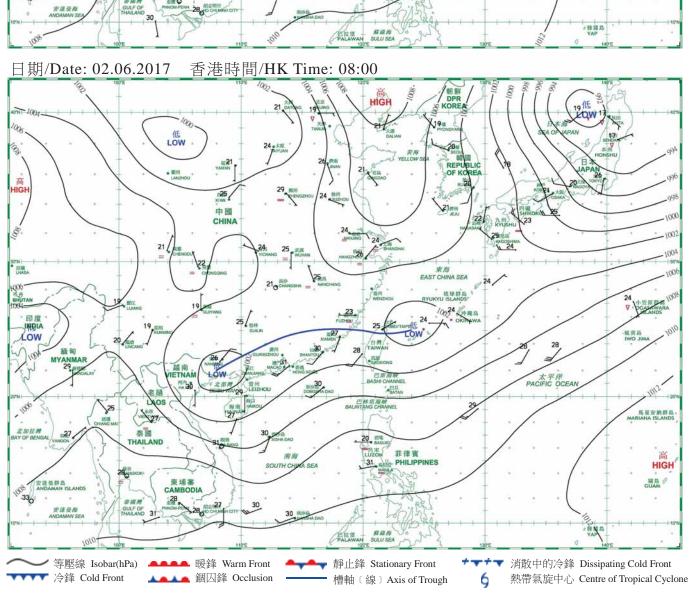
Fig. 2.2.6(b) Image of radar echoes at 10 a.m. on 13 June 2017, as rainstorms associated with Merbok affected Hong Kong.

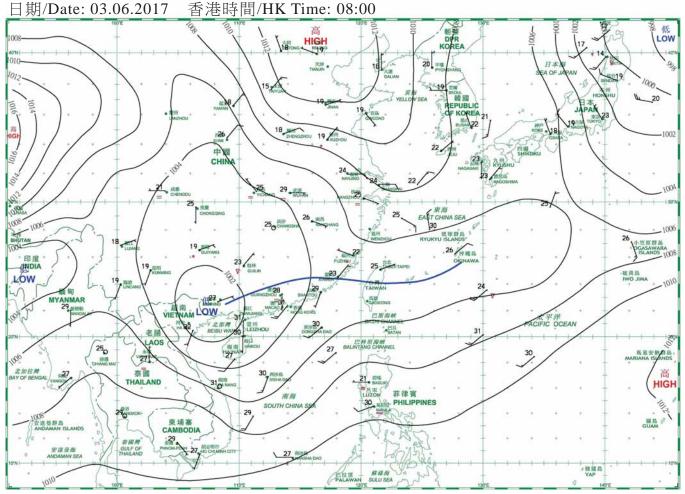


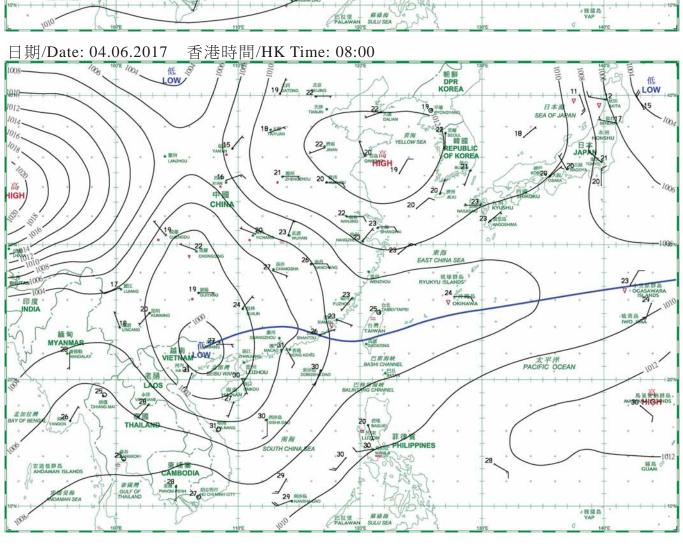
圖 2.2.7 柱大潭道一幅護土牆在暴雨下倒塌(照片由土力工程處及土木工程拓展署提供)。

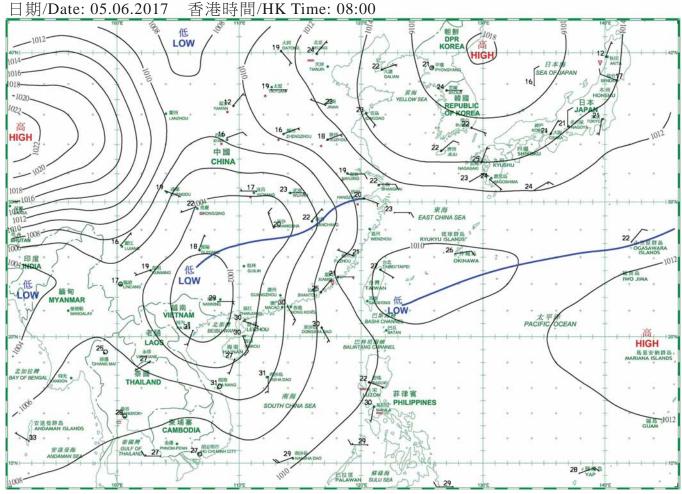
Fig. 2.2.7 A retaining wall at Tai Tam Road in Stanley collapsed under the heavy rain. (courtesy of the Geotechnical Engineering Office and the Civil Engineering and Development Department).

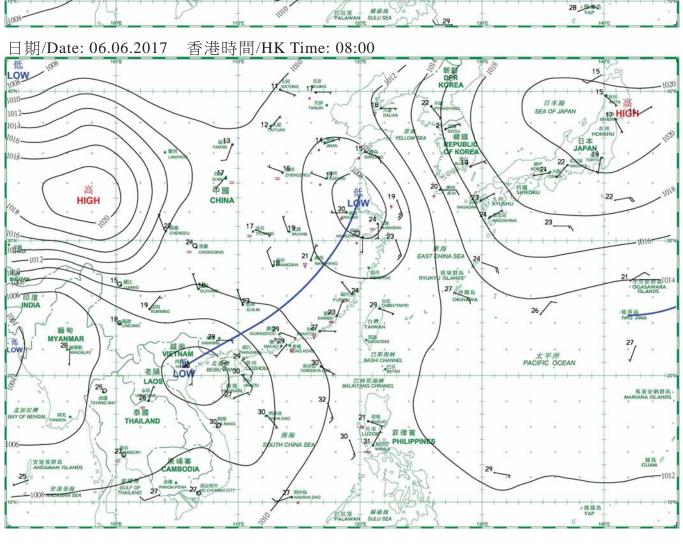


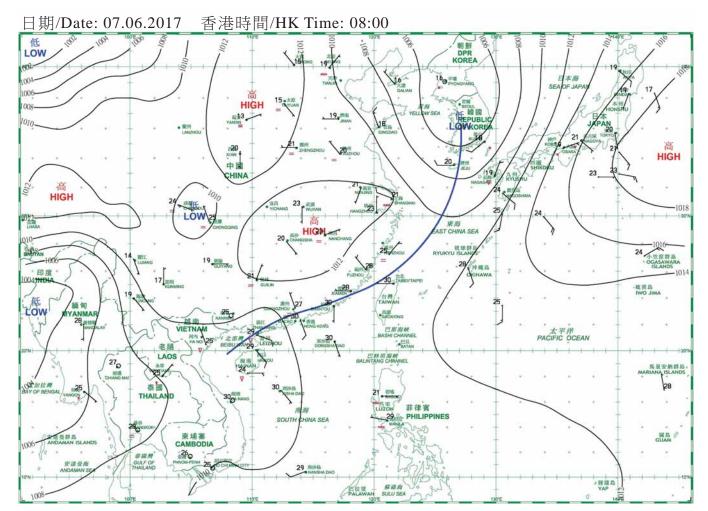


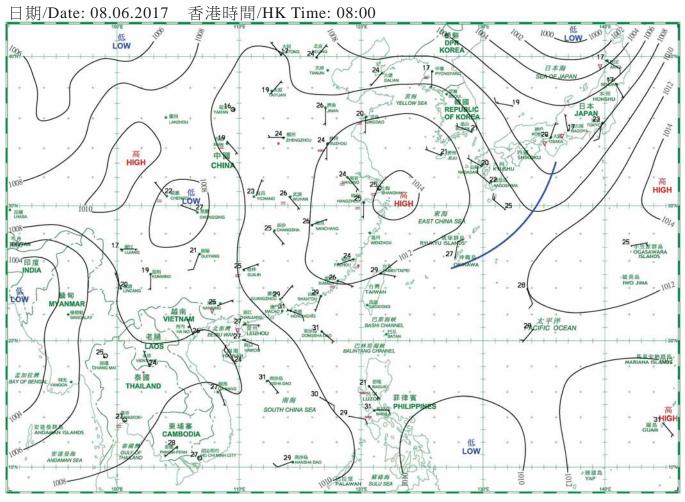


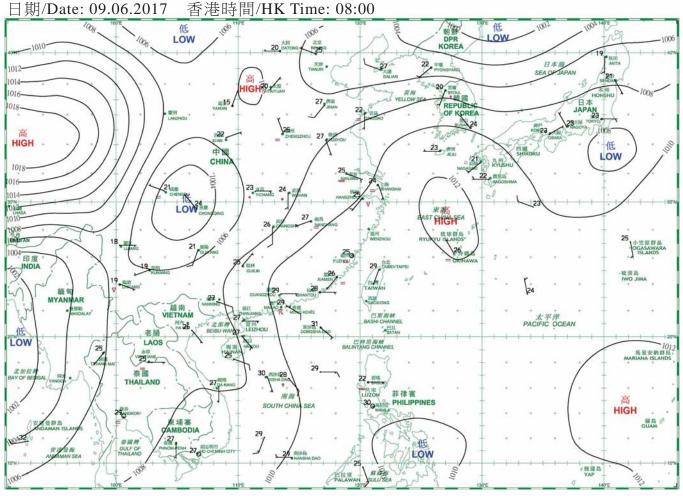


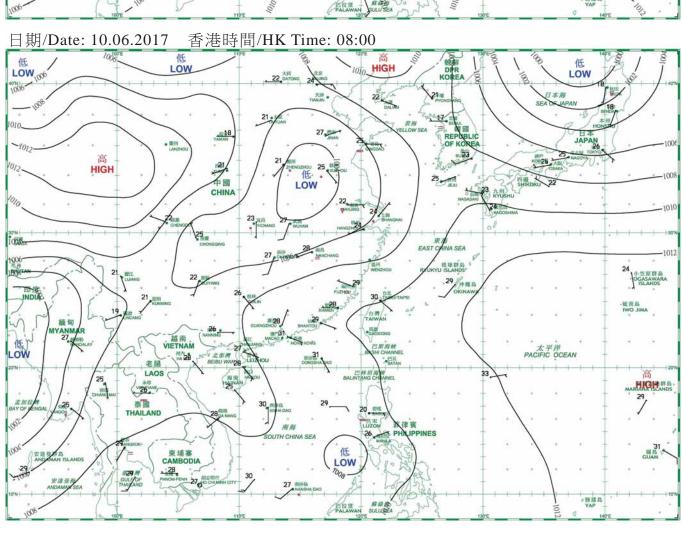


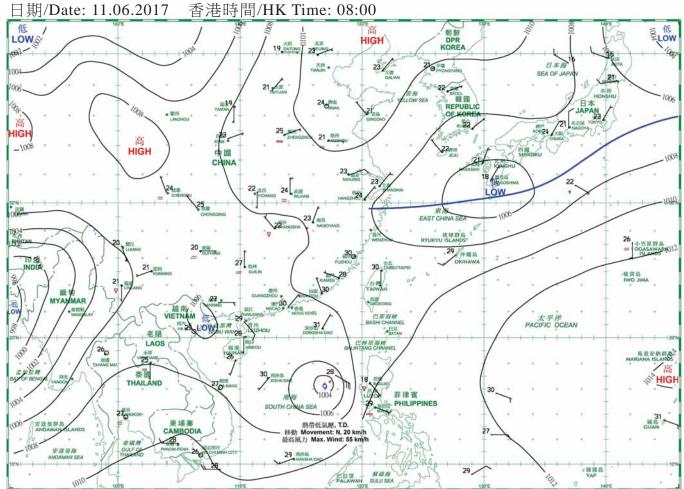


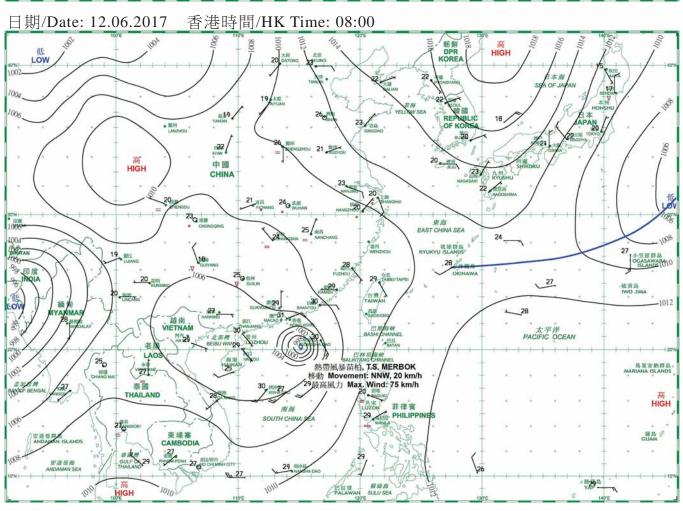


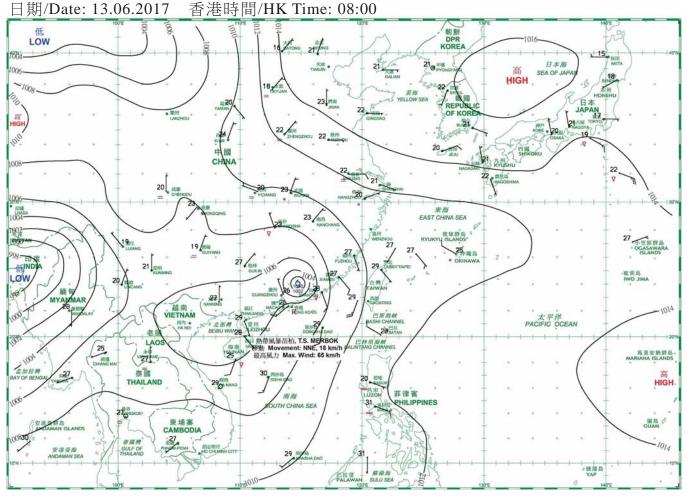


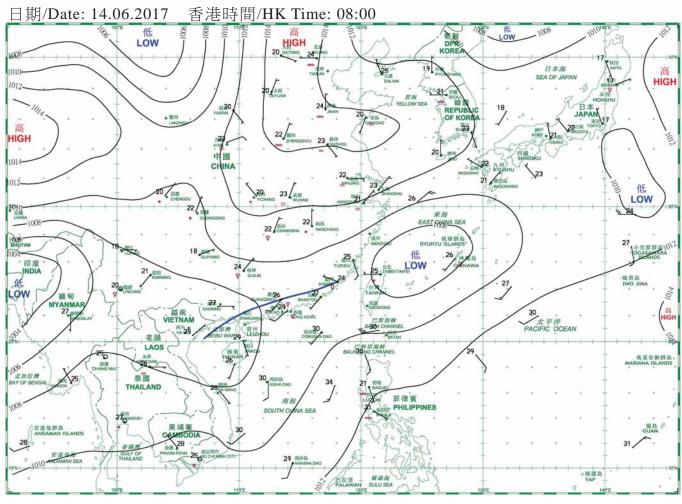


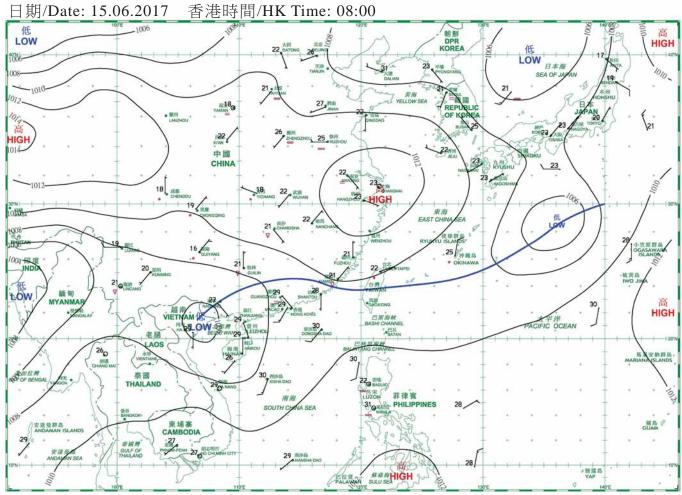


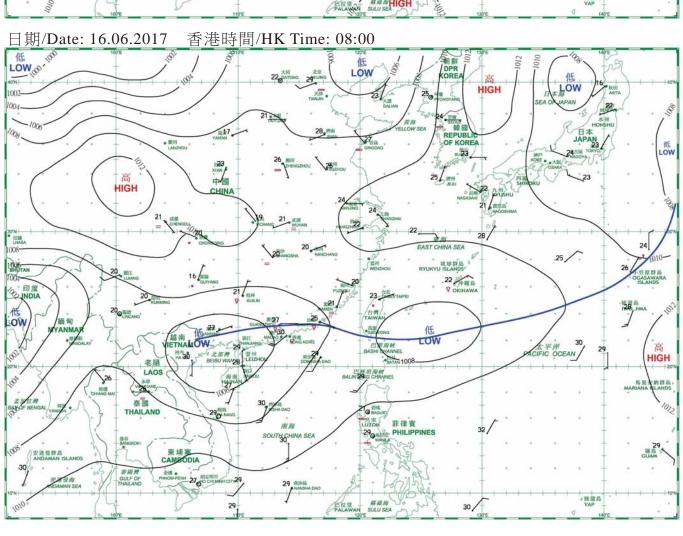


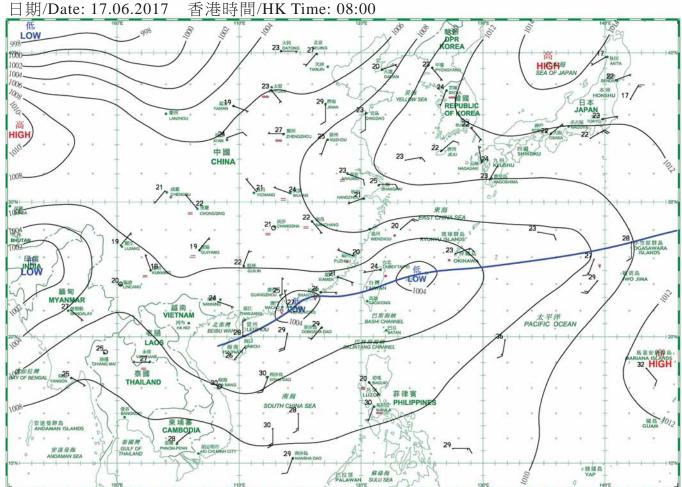


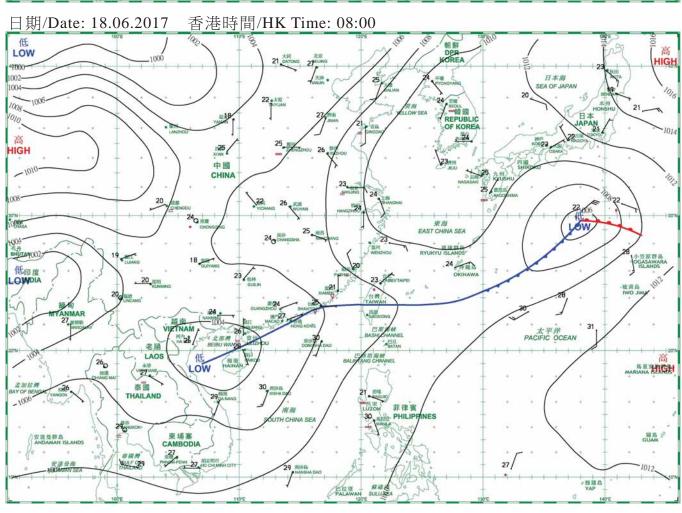


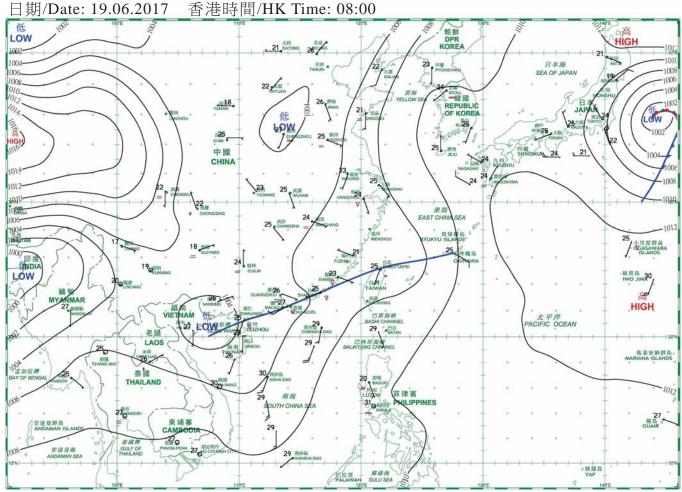


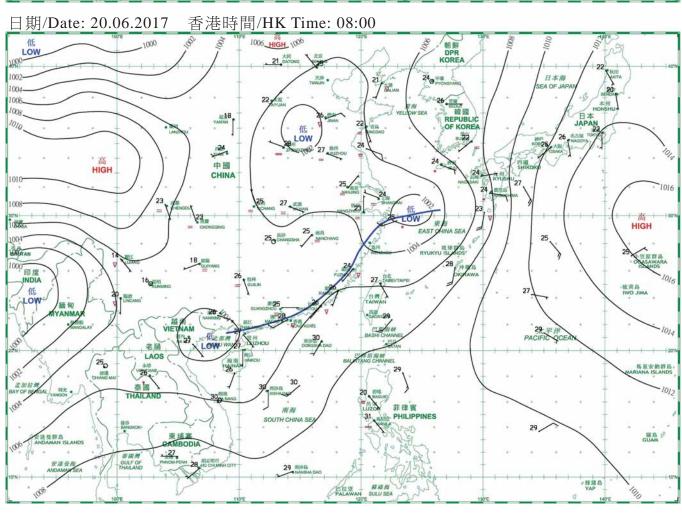


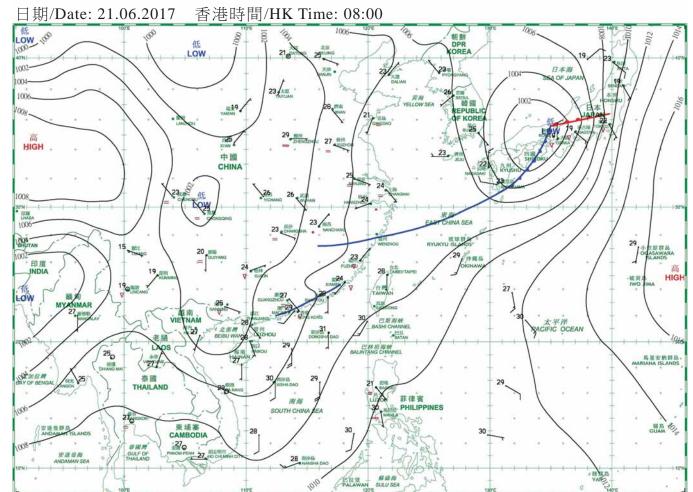


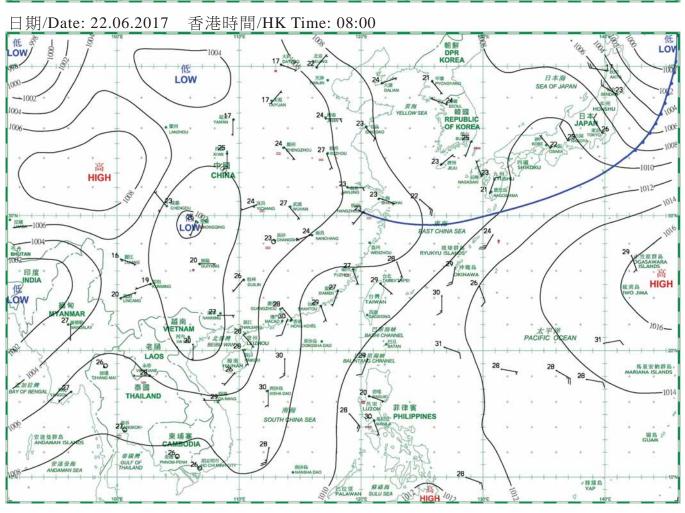


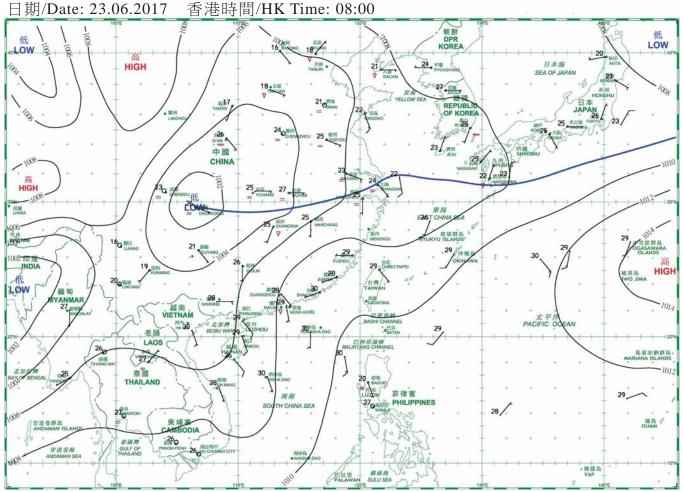


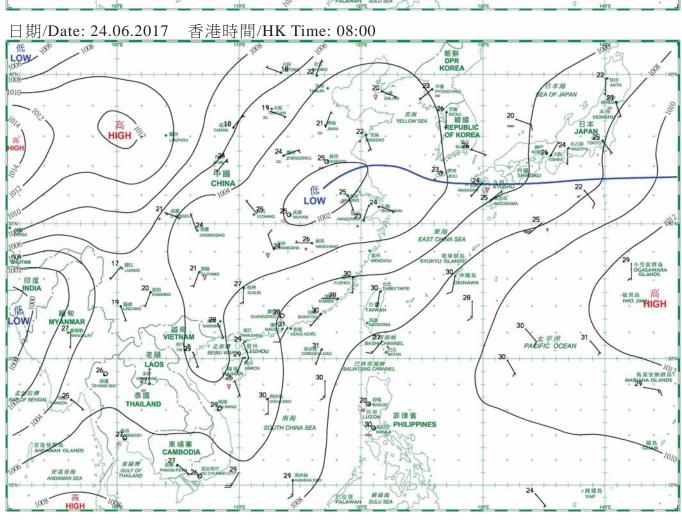


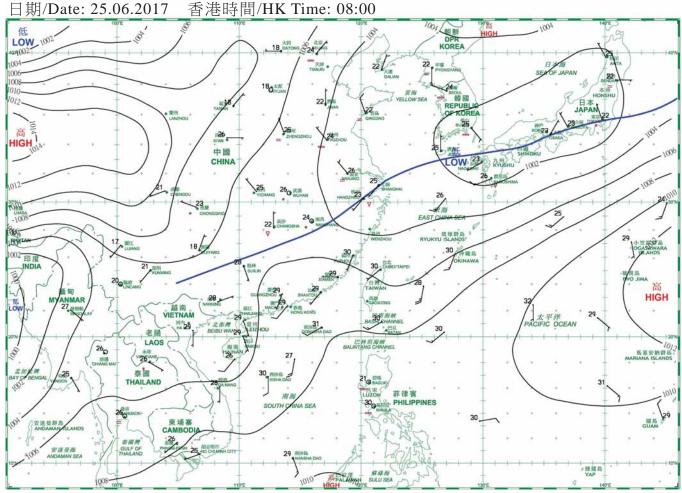


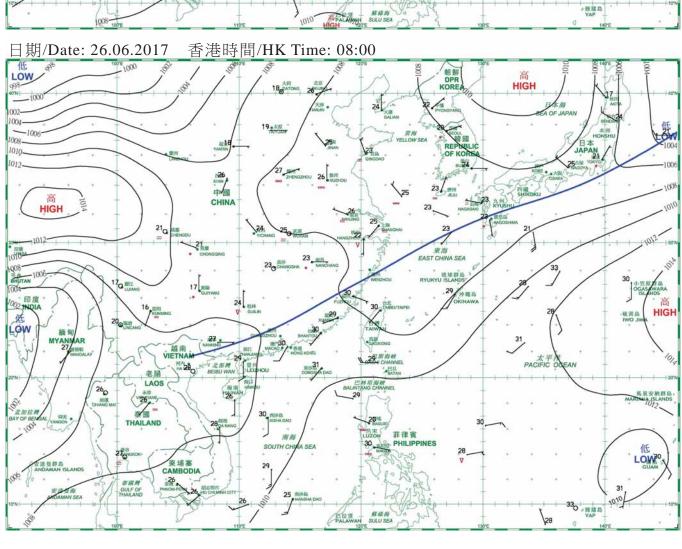


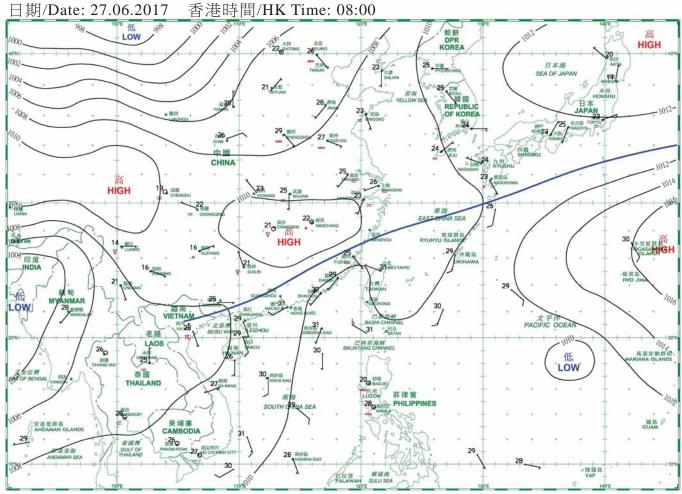


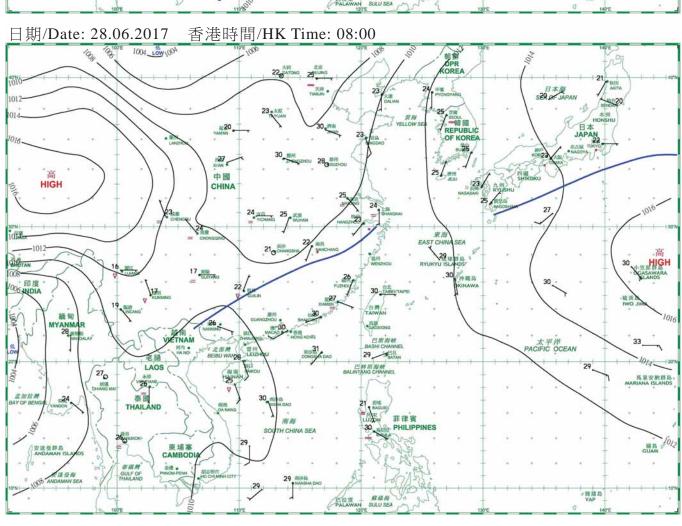


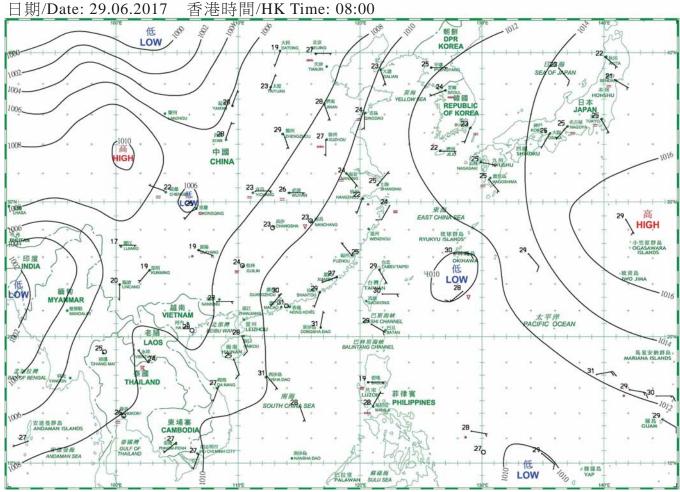


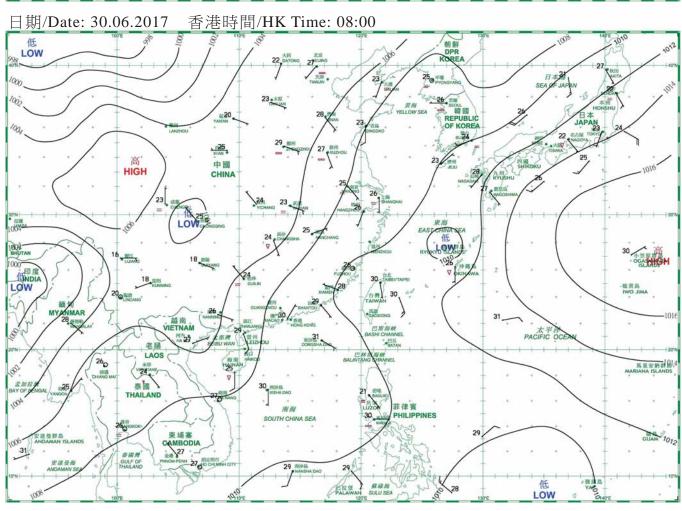












4.1.1 二零一七年六月香港氣象觀測摘錄(一)

4.1.1 Extract of Meteorological Observations in Hong Kong (Part 1), June 2017

日 期 Date	平均氣壓	氣 溫 Air Temperature			平均 露點溫度	平均 相對濕度	平均雲量 Mean	總雨量
	Mean Pressure	最高 Maximum	平均 Mean	最低 Minimum	Mean Dew Point Temperature	Mean Relative Humidity	Amount of Cloud	Total Rainfall
六 月 June	百帕斯卡 hPa	°C	°C	°C	°C	%	%	毫米 mm
1	1003.2	30.6	29.1	27.8	26.0	83	88	Tr
2	1002.6	30.6	29.4	28.6	26.6	85	88	Tr
3	1002.7	32.5	30.0	28.5	26.6	83	84	-
4	1003.6	31.2	30.0	29.3	26.5	81	88	Tr
5	1006.2	33.5	30.3	28.8	26.3	80	67	Tr
6	1009.2	33.8	30.4	28.5	26.0	78	59	Tr
7	1010.0	34.0	30.0	27.2	26.0	80	50	4.3
8	1009.9	32.5	29.8	28.3	25.9	80	63	-
9	1009.2	31.9	29.5	28.1	25.8	81	81	1.1
10	1008.3	33.8	29.9	28.0	25.7	79	77	Tr
11	1007.0	34.1	29.8	28.1	25.6	78	47	Tr
12	1001.9	30.0	27.6	25.3	25.2	87	80	37.7
13	1006.2	28.9	26.4	24.3	25.1	93	91	219.4
14	1008.6	29.5	28.3	25.5	25.5	85	88	15.6
15	1007.6	31.1	29.2	26.8	25.7	81	88	14.5
16	1005.1	29.6	29.0	27.8	26.1	85	88	13.5
17	1003.7	28.4	25.5	24.4	24.8	96	93	138.0
18	1004.7	27.3	26.2	24.7	24.6	91	91	24.2
19	1005.3	28.3	26.2	25.3	24.8	92	86	32.6
20	1005.1	28.2	26.5	25.2	24.9	91	88	24.8
21	1005.3	29.2	27.4	25.2	25.5	90	89	95.9
22	1007.8	32.4	29.3	28.0	25.7	81	80	Tr
23	1007.7	31.6	28.9	27.5	25.8	84	80	10.5
24	1006.3	30.8	28.5	26.4	25.8	85	79	18.3
25	1006.9	31.5	29.2	26.8	25.1	79	81	4.2
26	1008.4	32.0	29.8	28.6	25.4	78	85	0.1
27	1009.5	31.5	29.5	28.6	25.5	79	83	1.3
28	1010.2	32.3	29.7	28.2	25.2	77	58	-
29	1009.7	32.8	29.6	27.9	25.4	78	62	-
30	1007.8	33.7	29.9	27.6	24.8	75	64	-
平均/總值 Mean/Total	1006.7	31.3	28.8	27.2	25.6	83	78	656.0
正常* Normal*	1006.1	30.2	27.9	26.2	24.6	82	77	456.1
觀測站 Station				天文章 Hong Kong Ol				

天文台於六月十二日 20 時 8 分錄得本月最低氣壓 995.5 百帕斯卡。

The minimum pressure recorded at the Hong Kong Observatory was 995.5 hectopascals at 2008 HKT on 12 June.

天文台於六月十一日 13 時 45 分錄得本月最高氣溫 34.1 $^{\circ}$ C $^{\circ}$

The maximum air temperature recorded at the Hong Kong Observatory was 34.1 $^{\rm o}$ C at 1345 HKT on 11 June.

天文台於六月十三日 9 時 21 分錄得本月最低氣溫 24.3 °C。

The minimum air temperature recorded at the Hong Kong Observatory was 24.3 $^{\rm o}$ C at 0921 HKT on 13 June.

天文台於六月十三日 8 時 48 分錄得本月最高1分鐘平均降雨率 164 毫米/小時。

The maximum 1-minute mean rainfall rate recorded at the Hong Kong Observatory was 164 millimetres per hour at 0848 HKT on 13 June.

^{* 1981-2010} 氣候平均值 (除特別列明外) (http://www.hko.gov.hk/wxinfo/climat/normal/cnormal06.htm)

^{* 1981-2010} Climatological normal, unless otherwise specified (http://www.hko.gov.hk/wxinfo/climat/normal/enormal06.htm)

Tr - 微量 (降雨量少於 0.05 毫米)

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

4.1.2 二零一七年六月香港氣象觀測摘錄(二)

4.1.2 Extract of Meteorological Observations in Hong Kong (Part 2), June 2017

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
六 月 June	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	1.3	11.85	2.7	240	37.8
2	0	0.5	8.58	2.0	240	36.1
3	0	6.2	21.85	4.8	240	30.5
4	0	1.5	9.44	2.4	210	22.9
5	0	5.2	18.70	3.8	160	21.3
6	0	6.5	20.57	4.9	150	19.4
7	0	10.3	26.98	5.3	150	14.6
8	0	8.3	22.67	4.0	120	15.4
9	0	7.8	22.51	4.5	120	20.6
10	0	8.7	21.66	4.3	150	16.1
11	0	8.7	21.00	5.7	130	10.8
12	0	4.4	17.54	1.1	080	53.5
13	0	-	2.12	1.7	240	32.0
14	0	-	6.78	1.3	210	19.8
15	0	3.0	14.42	3.4	230	31.3
16	0	-	4.84	2.7	230	40.3
17	0	-	2.94	2.1	230	19.8
18	0	-	6.11	1.8	250	16.2
19	0	0.3	7.08	1.8	260	11.7
20	0	0.2	4.84	1.8	240	13.9
21	0	0.4	4.86	1.0	210	27.6
22	0	5.6	18.16	3.3	210	22.4
23	0	5.2	15.87	4.2	180	19.5
24	0	6.1	17.32	3.6	190	23.0
25	0	8.4	22.74	4.7	240	25.6
26	0	6.3	21.40	4.3	230	28.1
27	0	5.1	16.66	3.7	230	24.8
28	0	10.7	26.97	5.1	240	18.3
29	0	8.8	22.86	4.5	230	9.5
30	0	9.4	23.34	4.9	150	7.9
平均/總值 Mean/Total	0	138.9	15.42	101.4	240	23.0
正常* Normal*	17.6 §	146.1	14.19	117.1	220	22.9
觀測站 Station	香港國際機場 Hong Kong International Airport		京士柏 King's Park		横瀾. Waglan l	

横瀾島於六月十二日 19 時 53 分錄得本月最高陣風 113 公里/小時,風向 010 度。

The maximum gust peak speed recorded at Waglan Island was 113 kilometres per hour from 010 degrees at 1953 HKT on 12 June.

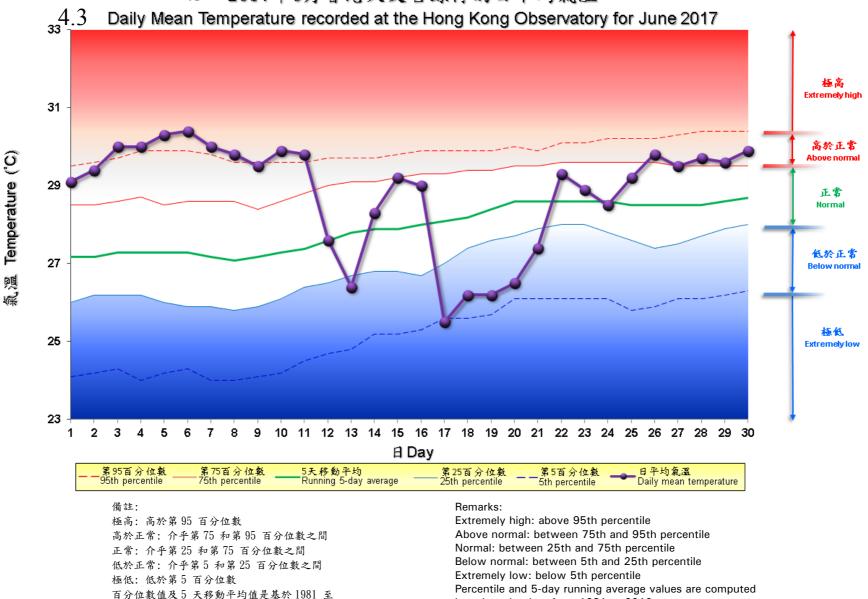
- # 低能見度是指能見度低於 8 公里,不包括出現霧、薄霧或降水。
 - 在2004年及以前,香港國際機場的能見度讀數是基於專業氣象觀測員每小時的觀測數據。在2005年及以後,讀數是採用位於機場 南跑道中間的能見度儀表在每小時前10分鐘的平均數據。這與使用儀器觀測來改進能見度評估的國際趨勢是一致的。
 - 在2007年10月10日前曾出現於此摘錄內香港國際機場2005年及以後的低能見度時數資料乃基於專業氣象觀測員每小時的觀測數據。 有關資料已於2007年10月10日起改為以機場南跑道中間之能見度儀表在每小時前10分鐘的平均數據計算。
- # Reduced visibility refers to visibility below 8 kilometres when there is no fog, mist, or precipitation.
 - The visibility readings at the Hong Kong International Airport are based on hourly observations by professional meteorological observers in 2004 and before, and average readings over the 10-minute period before the clock hour of the visibility meter near the middle of the south runway from 2005 onwards. The change of the data source in 2005 is an improvement of the visibility assessment using instrumented observations following the international trend.
 - Before 10 October 2007, the number of hours of reduced visibility at the Hong Kong International Airport in 2005 and thereafter displayed in this summary was based on hourly visibility observations by professional meteorological observers. Since 10 October 2007, the data have been revised using the average visibility readings over the 10-minute period before the clock hour, as recorded by the visibility meter near the middle of the south runway.
- ^ 如橫瀾島未能提供數據,則以長洲或其他鄰近氣象站的數據作補充,以計算盛行風向和平均風速。
- ^ In case the data are not available from Waglan Island, observations of Cheung Chau or other nearby weather stations will be incorporated in computing the Prevailing Wind Direction and Mean Wind Speed.
- * 1981-2010 氣候平均值 (除特別列明外) (http://www.hko.gov.hk/wxinfo/climat/normal/cnormal06.htm)
- * 1981-2010 Climatological normal, unless otherwise specified (http://www.hko.gov.hk/wxinfo/climat/normal/enormal06.htm)
- § 1997-2016 平均值
- § 1997-2016 Mean value

4.2 2017年6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, Jun 2017 氣溫(攝氏度) Mean Air Temperature 27 (°C) 22 平均相對濕度(%) 90 Mean Relative Humidity (%) 60 香港天文台 平均氣壓(百帕斯卡)1008 Hong Kong Mean Pressure (hPa) Observatory 雷基 Κ 지지지 지지지지 区 区 Thunderstorm 300 總雨量(毫米) 200 Total Rainfall 100 (mm) 0 10 總日照(小時) 京士柏 Total Bright King's Park 5 Sunshine (hours) 盛行風向 Prevailing Wind Direction 60 横淵島 平均風速(公里/小時)40 Waglan Island Mean Wind Speed 20 (km/h)

8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

1 2 3 4 5 6

4.3 2017年6月香港天文台錄得的日平均氣溫



2010年的數據計算所得

based on the data from 1981 to 2010