

第三節 二零一六年影響香港的熱帶氣旋

3.1 熱帶低氣壓：二零一六年五月二十六至二十七日

一個在南海北部形成的熱帶低氣壓導致香港天文台在二零一六年首度發出熱帶氣旋警告信號。

五月二十六日晚上熱帶低氣壓在南海北部形成後大致向西北偏北方向移動，靠近廣東西部沿岸，翌日轉向偏北方向移動，並稍為增強，達到最高強度時其中心附近最高持續風速估計為每小時55公里。該熱帶低氣壓於五月二十七日傍晚在廣東西部陽江市附近登陸，並於當晚減弱為一個低壓區。根據報章報導，熱帶低氣壓為廣東西部帶來暴雨，有小橋遭洪水沖毀，一輛大巴墮河，兩人受傷。澳門外港碼頭發生撞船事故，兩名乘客受傷。

五月二十六日熱帶低氣壓在香港之西南偏南約370公里形成後，天文台於下午9時40分發出一號戒備信號，晚間本港普遍吹和緩至清勁偏東風。隨著該熱帶低氣壓北移及逐漸靠近廣東西部沿岸，天文台在五月二十七日上午5時40分發出三號強風信號，在熱帶低氣壓的外圍雨帶影響下，正午前本港多處地區的風力達到強風程度。隨著香港普遍吹強風的機會減退，天文台在下午1時40分以一號戒備信號取代三號強風信號。下午本港普遍吹清勁南至東南風，西部地區的風力間中達強風程度。天文台總部於下午5時40分錄得最低瞬時海平面氣壓1004.7百帕斯卡，當時熱帶低氣壓在香港以西約190公里的廣東西部海岸登陸，並於下午8時左右最接近香港，在本港以西約170公里附近掠過。熱帶低氣壓在廣東西部很快減弱為一個低壓區，天文台於當晚10時50分取消所有熱帶氣旋警告信號。

熱帶低氣壓影響香港期間，本港並沒有遭受嚴重破壞。熱帶低氣壓的外圍雨帶在五月二十七日間中為本港帶來狂風驟雨，普遍地區錄得超過10毫米雨量。最高潮位為在尖鼻咀錄得的2.67米(海圖基準面以上)，而大埔滘錄得的最大風暴潮為0.47米(天文潮高度以上)。

表3.1.1 - 3.1.4 分別是熱帶低氣壓影響香港期間各站錄得的最高風速、持續風力達到強風程度的時段、香港的日雨量及最高潮位資料。圖3.1.1 - 3.1.4 分別為熱帶低氣壓的路徑圖、本港的雨量分佈圖、熱帶低氣壓的衛星及雷達圖像。

Section 3 TROPICAL CYCLONES AFFECTING HONG KONG IN 2016

3.1 Tropical Depression: 26 – 27 May 2016

The formation of a tropical depression over the northern part of the South China Sea led to the issuance of tropical cyclone warning signals by the Hong Kong Observatory for the first time in 2016.

After formation over the northern part of the South China Sea on the night of 26 May, the tropical depression moved north-northwestwards and edged closer to the coast of western Guangdong. It took on a more northerly track the next day and slightly intensified, reaching peak intensity with an estimated sustained wind of 55 km/h near its centre. It made landfall near Yangjiang in western Guangdong on the evening of 27 May and soon degenerated into an area of low pressure that night. According to press reports, the tropical depression brought rainstorms to western Guangdong. A bridge was destroyed by flood, causing a bus to plunge into the river and injuring two persons. At the Macao Maritime Ferry Terminal, two passengers were injured during an incident of vessel collision.

After the formation of the tropical depression about 370 km south-southwest of Hong Kong on 26 May, the Hong Kong Observatory issued the Standby Signal No. 1 at 9:40 p.m. that evening. Winds were moderate to fresh easterly winds in Hong Kong overnight. As the tropical depression moved northwards and edged closer to the coast of western Guangdong, the Strong Wind Signal No. 3 was issued at 5:40 a.m. on 27 May. Under the influence of the outer rainbands of the tropical depression, winds reached strong force over many places in the territory around noon time. As the chance of having generally strong winds in Hong Kong subsequently receded, the Strong Wind Signal No. 3 was replaced by the Standby Signal No. 1 at 1:40 p.m. Fresh south to southeasterlies generally affected Hong Kong in the afternoon, occasionally reaching strong force over the western part of the territory. At the Observatory Headquarters, the lowest instantaneous mean sea-level pressure of 1004.7 hPa was recorded at 5:40 p.m. when the tropical depression was making landfall over coast of western Guangdong about 190 km west of Hong Kong. The tropical depression was closest to the territory at around 8 p.m., passing about 170 km to the west. As it soon degenerated into an area of low pressure over western Guangdong, all tropical cyclone warning signals were cancelled at 10:50 p.m. that night.

The tropical depression did not cause any significant damage in Hong Kong during its passage. Its outer rainbands brought occasional squally showers on 27 May and more than 10 mm of rainfall were generally recorded over the territory. A maximum sea level of 2.67 m (above chart datum) was recorded at Tsim Bei Tsui, while a maximum storm surge of 0.47 m (above astronomical tide) was recorded at Tai Po Kau.

Information on the maximum wind, period of strong winds, daily rainfall and maximum sea level reached in Hong Kong during the passage of the tropical depression is given in Tables 3.1.1 - 3.1.4 respectively. Figures 3.1.1 - 3.1.4 show respectively the track of the tropical depression, the rainfall distribution for Hong Kong, a satellite imagery and a related radar imagery of the tropical depression.

表 3.1.1 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 3.1.1 Maximum gust peak speeds and maximum hourly mean winds with associated wind directions recorded at various stations when tropical cyclone warning signal for the tropical depression was in force

站 (參閱圖 1.1) Station (See Fig. 1.1)		最高陣風 Maximum Gust				最高每小時平均風速 Maximum Hourly Mean Wind					
		風向 Direction	風速 (公里/時) Speed (km/h)	日期/月份 Date/ Month	時間 Time	風向 Direction	風速 (公里/時) Speed (km/h)	日期/月份 Date/ Month	時間 Time		
黃麻角(赤柱) Bluff Head (Stanley)		東	E	54	26/5	22:53	南	S	31	27/5	20:00
		東南偏南	SSE	54	27/5	12:09					
中環碼頭	Central Pier	東	E	43	27/5	17:51	東	E	31	27/5	00:00
長洲	Cheung Chau	東南	SE	70	27/5	03:19	東南偏東	ESE	40	27/5	12:00
長洲泳灘	Cheung Chau Beach	東北偏東	ENE	59	26/5	23:18	東北偏東	ENE	41	27/5	03:00
青洲	Green Island	南	S	75	27/5	19:02	南	S	51	27/5	19:00
香港國際機場	Hong Kong International Airport	南	S	72	27/5	19:34	南	S	45	27/5	20:00
啟德	Kai Tak	東南偏東	ESE	70	27/5	12:23	東	E	27	26/5	23:00
京士柏	King's Park	南	S	45	27/5	18:51	東南偏東	ESE	19	27/5	12:00
流浮山	Lau Fau Shan	東南	SE	58	27/5	15:37	東南	SE	31	27/5	15:00
昂坪	Ngong Ping	西南偏南	SSW	106	27/5	16:29	東	E	72	27/5	02:00
北角	North Point	東北偏東	ENE	49	27/5	00:43	東	E	30	27/5	00:00
坪洲	Peng Chau	東南偏南	SSE	51	27/5	18:08	東	E	31	27/5	00:00
平洲	Ping Chau	東南	SE	34	27/5	12:52	東南	SE	9	27/5	20:00
西貢	Sai Kung	東南偏南	SSE	58	27/5	12:34	東北偏東	ENE	31	26/5	23:00
沙洲	Sha Chau	南	S	79	27/5	17:54	南	S	47	27/5	19:00
沙螺灣	Sha Lo Wan	東南	SE	65	27/5	15:27	東南偏南	SSE	25	27/5	18:00
沙田	Sha Tin	東南	SE	34	27/5	11:09	東南	SE	16	27/5	13:00
石崗	Shek Kong	東北偏東	ENE	52	26/5	22:33	東	E	22	26/5	23:00
九龍天星碼頭	Star Ferry (Kowloon)	東南偏東	ESE	56	27/5	14:12	東	E	27	27/5	03:00
打鼓嶺	Ta Kwu Ling	東	E	41	27/5	02:51	東北偏東	ENE	13	27/5	05:00
大美督	Tai Mei Tuk	東南	SE	59	27/5	12:45	東	E	36	27/5	00:00
大帽山	Tai Mo Shan	西南偏南	SSW	92	27/5	19:47	東	E	59	26/5	22:00
大埔滘	Tai Po Kau	東	E	58	27/5	06:18	東	E	30	27/5	00:00
塔門	Tap Mun	東南	SE	68	27/5	12:37	東南偏東	ESE	23	27/5	13:00
大老山	Tate's Cairn	東南	SE	79	27/5	04:17	東	E	52	26/5	23:00
將軍澳	Tseung Kwan O	東南偏東	ESE	41	27/5	12:23	東南	SE	12	27/5	12:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	東南	SE	49	27/5	18:20	東南	SE	34	27/5	19:00
屯門政府合署	Tuen Mun Government Offices	東南偏南	SSE	63	27/5	19:22	東南偏南	SSE	25	27/5	18:00
		東南偏南	SSE	63	27/5	19:22	東南偏南	SSE	25	27/5	20:00
橫瀾島	Waglan Island	東南偏南	SSE	72	27/5	12:10	東	E	45	26/5	23:00
濕地公園	Wetland Park	東南	SE	43	27/5	14:56	東南偏南	SSE	20	27/5	15:00
黃竹坑	Wong Chuk Hang	東	E	62	27/5	02:26	東	E	25	27/5	03:00

表 3.1.2 在熱帶低氣壓影響下，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 3.1.2 Periods during which sustained strong winds were attained at the eight reference anemometers in the tropical cyclone warning system when the tropical cyclone warning signals for the tropical depression were in force

站 (參閱圖 1.1) Station (See Fig. 1.1)		最初達到強風*時間 Start time strong wind speed* was reached		最後達到強風*時間 End time strong wind speed* was reached	
		日期/月份 Date/Month	時間 Time	日期/月份 Date/Month	時間 Time
長洲	Cheung Chau	26/5	23:19	27/5	12:14
香港國際機場	Hong Kong International Airport	27/5	17:10	27/5	20:38
啟德	Kai Tak	27/5	12:29	27/5	12:31
西貢	Sai Kung	27/5	12:37	27/5	12:45

流浮山、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, 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

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： 本表列出持續風力最初及最後達到強風程度的時間。其間，風力可能高於或低於指定的風力。

Note: The table gives the first and last time when strong winds were recorded. Note that the winds might fluctuate above or below the specified wind speeds in between the times indicated.

表 3.1.3 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 3.1.3 Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of the tropical depression.

站 (參閱圖 3.1.2) Station (See Fig. 3.1.2)			五月二十六日 26 May	五月二十七日 27 May	總雨量 (毫米) Total (mm)
香港天文台 Hong Kong Observatory			0.1	14.4	14.5
香港國際機場 Hong Kong International Airport (HKA)			0.0	16.5	16.5
長洲 Cheung Chau (CCH)			0.0	17.5	17.5
H23	香港仔	Aberdeen	0.0	29.0	29.0
N05	粉嶺	Fanling	0.0	8.5	8.5
N13	糧船灣	High Island	0.5	21.0	21.5
K04	佐敦谷	Jordan Valley	2.0	10.5	12.5
N06	葵涌	Kwai Chung	1.5	16.0	17.5
H12	半山區	Mid Levels	0.0	19.0	19.0
N09	沙田	Sha Tin	0.5	9.5	10.0
H19	筲箕灣	Shau Kei Wan	0.0	10.5	10.5
SEK	石崗	Shek Kong	0.0	8.0	8.0
K06	蘇屋邨	So Uk Estate	0.0	16.5	16.5
R31	大美督	Tai Mei Tuk	1.0	6.5	7.5
R21	踏石角	Tap Shek Kok	0.0	9.0	9.0
TMR	屯門水庫	Tuen Mun Reservoir	0.0	11.1	11.1
N17	東涌	Tung Chung	0.0	18.5	18.5

表 3.1.4 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 3.1.4 Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of the tropical depression

站 (參閱圖 1.1) Station (See Fig. 1.1)		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	2.35	27/5	12:22	0.27	27/5	12:25
石壁	Shek Pik	2.53	27/5	12:10	0.36	27/5	12:10
大廟灣	Tai Miu Wan	2.29	27/5	12:10	0.32	27/5	03:56
大埔滘	Tai Po Kau	2.38	27/5	13:46	0.47	27/5	16:18
尖鼻咀	Tsim Bei Tsui	2.67	27/5	12:19	0.27	27/5	12:08
橫瀾島	Waglan Island	2.50	27/5	09:55	0.41	27/5	09:55

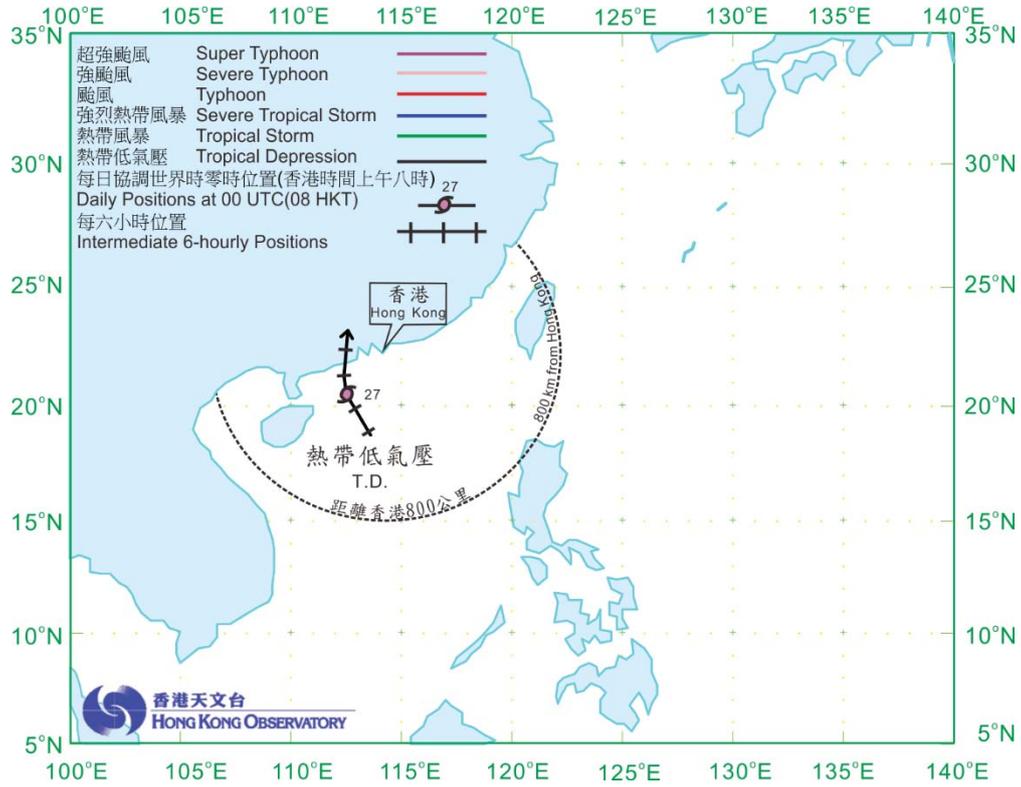


圖 3.1.1a 二零一六年五月二十六日至二十七日熱帶低氣壓的路徑圖。
 Figure 3.1.1a Track of the tropical depression on 26 – 27 May 2016.

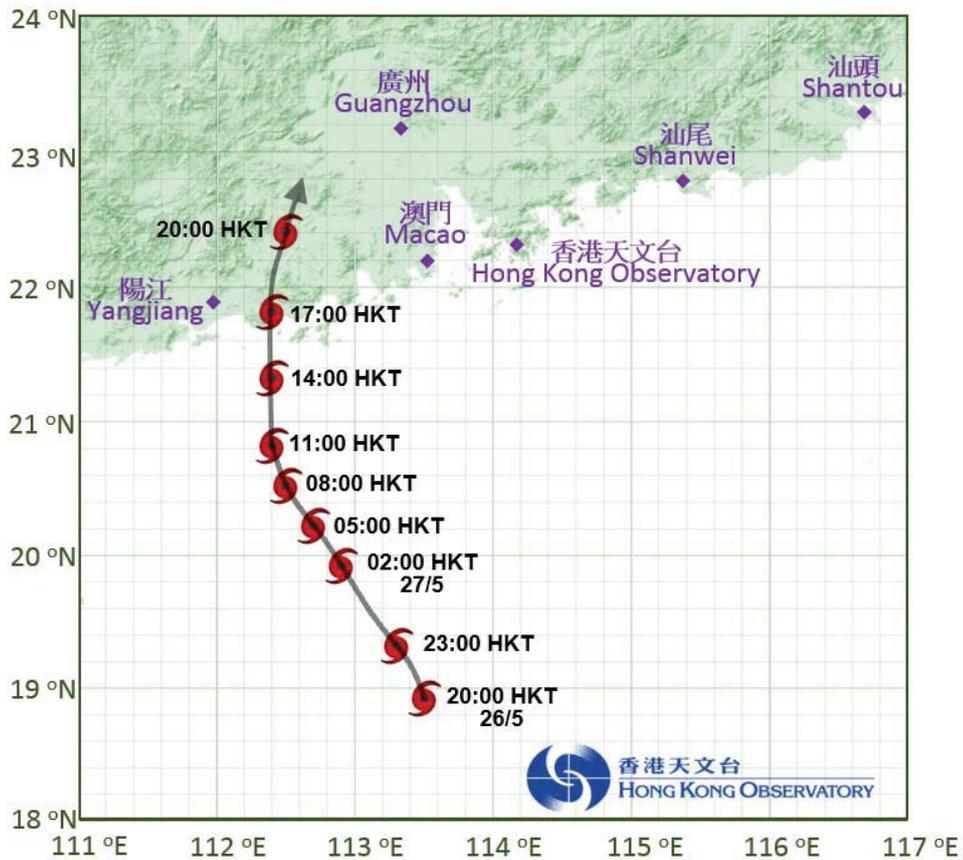


圖 3.1.1b 熱帶低氣壓接近香港時的路徑圖。
 Figure 3.1.1b Track of the tropical depression in the vicinity of Hong Kong.

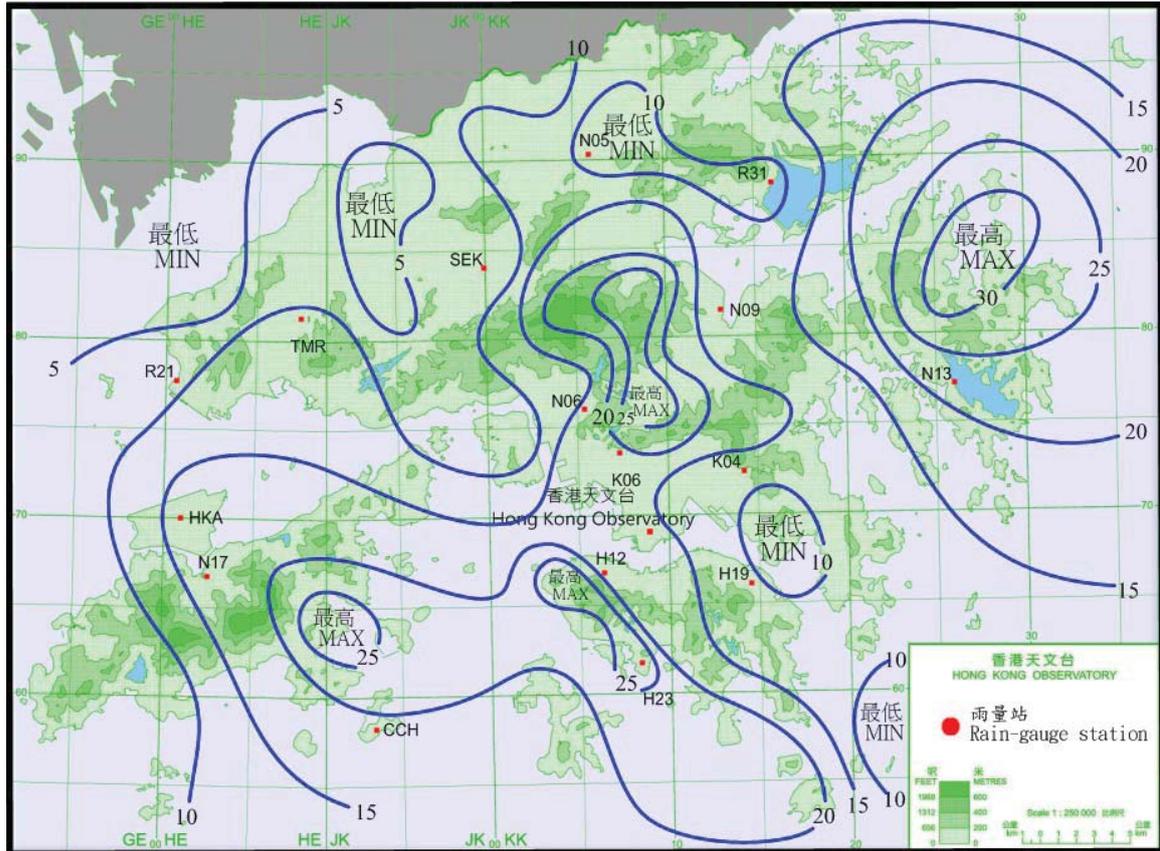


圖 3.1.2 二零一六年五月二十六日至二十七日的雨量分佈(等雨量線單位為毫米)。
Figure 3.1.2 Rainfall distribution on 26 – 27 May 2016 (isohyets are in millimetres).

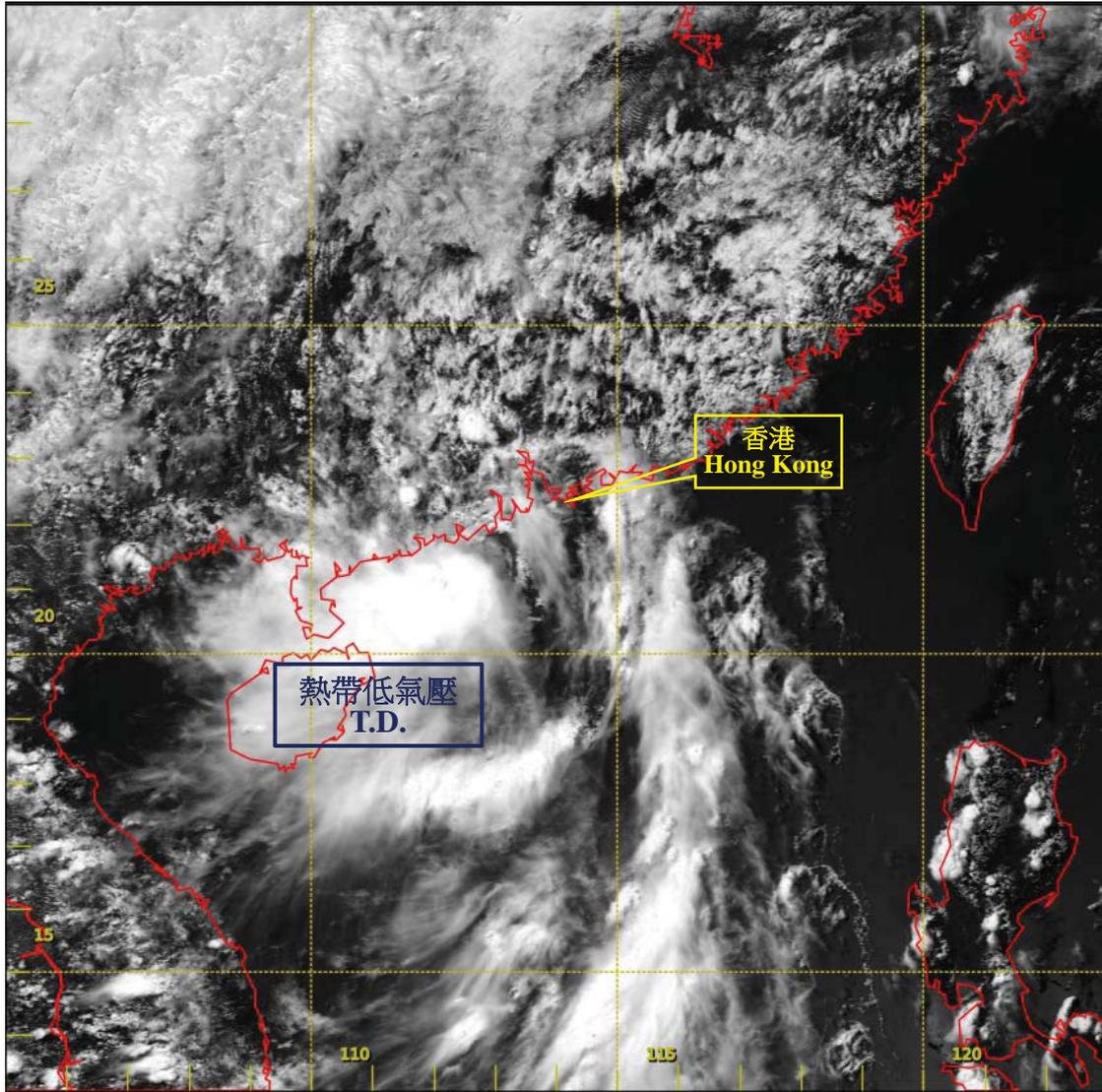


圖 3.1.3 二零一六年五月二十七日下午二時正的可見光衛星圖片，當時熱帶低氣壓達到其最高強度，中心附近最高持續風速估計為每小時 55 公里。

Figure 3.1.3 Visible satellite imagery at 2:00 p.m. on 27 May 2016 as the tropical depression reached its peak intensity with estimated maximum sustained winds of 55 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 the Himawari-8 (H-8) of Japan Meteorological Agency (JMA).]

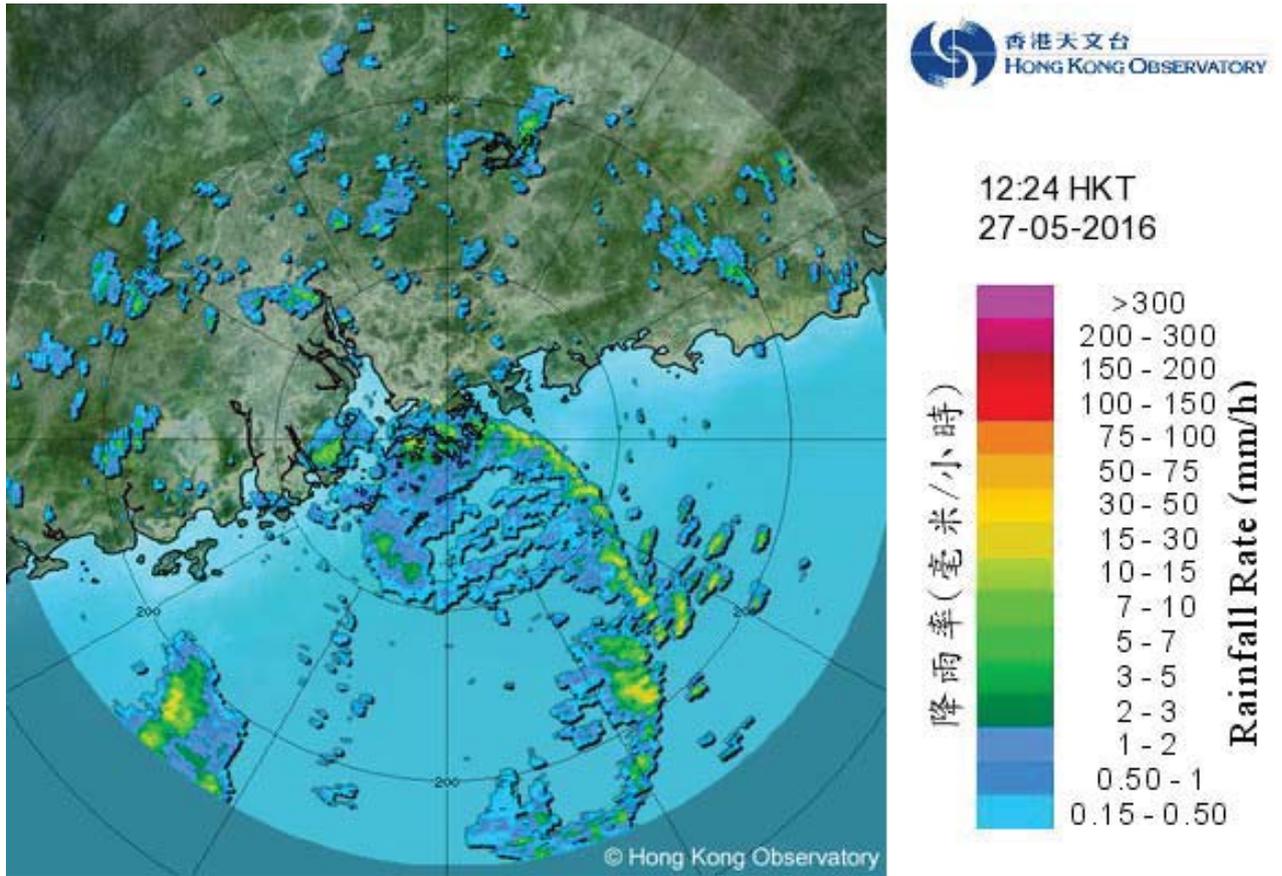


圖 3.1.4 二零一六年五月二十七日下午十二時廿四分的雷達圖像顯示熱帶低氣壓的外圍雨帶正影響本港。

Figure 3.1.4 Radar image showing the outer rainbands of the tropical depression affecting Hong Kong at around 12:24 p.m. on 27 May 2016