

第三節 二零一四年影響香港的熱帶氣旋

3.1 熱帶風暴海貝思(1407)：二零一四年六月十四日至十八日

海貝思是香港天文台在二零一四年首個需要發出熱帶氣旋警告信號的熱帶氣旋。

熱帶低氣壓海貝思於六月十四日早上在香港之東南約380公里的南海東北部上形成，向西北偏北方向漂移，在下午增強為熱帶風暴，並於晚上達到其最高強度，中心附近最高持續風速估計為每小時75公里。翌日凌晨海貝思開始穩定地向偏北方向移動，靠近廣東東部沿岸，於下午在汕頭市附近登陸，在晚上減弱為熱帶低氣壓。海貝思在六月十六日早上在廣東東部內陸進一步減弱，但與其相關的殘餘低壓區繼續橫過中國東南部，翌日進入東海後在下午再度增強為熱帶低氣壓，並向東北偏東方向移動，最後於六月十八日早上在日本以南海域演變為一股溫帶氣旋。

香港天文台於六月十四日下午5時40分發出一號戒備信號，當時海貝思位於香港之東南偏東約310公里，並逐漸移近廣東東部沿岸。香港天文台總部於六月十五日上午4時53分錄得最低瞬時海平面氣壓1001.2百帕斯卡，當時海貝思位於香港之東南偏東約270公里。海貝思於當日上午9時最接近香港，在本港以東約260公里附近掠過。隨著海貝思強度開始減弱並對香港不再構成威脅，天文台於六月十五日下午1時20分取消所有熱帶氣旋警告信號。在海貝思影響香港期間，最高潮位(海圖基準面以上)為3.0米，在尖鼻咀錄得；而大廟灣及橫瀾島則錄得最大風暴潮0.54米。

六月十四日本港普遍吹和緩偏北風。受一股乾燥的大陸氣流影響，初時大致天晴及天氣酷熱。隨著海貝思的外圍雨帶開始影響本港，下午轉為多雲及有幾陣驟雨。六月十五日與海貝思相關的雨帶繼續為香港帶來驟雨，多處地區錄得超過10毫米雨量。

海貝思影響香港期間，海面有湧浪及大浪。兩人於六月十四日在鹹田灣沙灘遭大浪捲走遇溺，其後獲救。六人在西貢海面進行獨木舟活動時曾一度失蹤，其後被尋回，當中一人受傷。與海貝思相關的大雨令廣東及福建部分地區出現嚴重水浸，陸空交通受阻，超過11 520公頃農田受災，經濟損失達5億7千萬元人民幣。

表3.1.1 – 3.1.3 分別是海貝思影響香港期間各站錄得的最高風速、香港的日雨量及最高潮位資料。圖3.1.1 – 3.1.4 分別為海貝思的路徑圖、本港的雨量分佈圖、海貝思的衛星及相關雷達圖像。

Section 3 TROPICAL CYCLONES AFFECTING HONG KONG IN 2014

3.1 Tropical Storm Hagibis (1407): 14 – 18 June 2014

Hagibis was the first tropical cyclone that necessitated the issuance of tropical cyclone warning signal by the Hong Kong Observatory in 2014.

Hagibis formed as a tropical depression over the northeastern part of the South China Sea about 380 km southeast of Hong Kong on the morning of 14 June. Drifting north-northwestwards, it intensified into a tropical storm that afternoon and reached its peak intensity that night with an estimated sustained wind of 75 km/h near its centre. Hagibis started to move steadily northwards in the small hours on 15 June as it edged towards the coastal areas of eastern Guangdong. It made landfall near Shantou that afternoon and weakened into a tropical depression during the night. Hagibis weakened further over the inland areas of eastern Guangdong on the morning of 16 June. However, its remnant low pressure area continued to track across the southeastern part of China before entering the East China Sea the next day and re-intensifying into a tropical depression in the afternoon. Moving east-northeastwards, Hagibis finally evolved into an extratropical cyclone over the seas south of Japan on the morning of 18 June.

As Hagibis edged closer to the coastal areas of eastern Guangdong, the Standby Signal No. 1 was issued by the Hong Kong Observatory at 5:40 p.m. on 14 June when Hagibis was about 310 km east-southeast of the territory. At the Hong Kong Observatory headquarters, the lowest instantaneous mean sea-level pressure of 1001.2 hPa was recorded at 4:53 a.m. on 15 June when Hagibis was about 270 km to the east-southeast. Hagibis was closest to the territory at 9 a.m. that day as it skirted past about 260 km to the east. With Hagibis weakening and posing no further threat to Hong Kong, all tropical cyclone warning signals were cancelled at 1:20 p.m. on 15 June. Under the influence of Hagibis, a maximum sea level (above chart datum) of 3.0 m was recorded at Tsim Bei Tsui, while a maximum storm surge of 0.54 m was recorded at Tai Miu Wan and Waglan Island.

Local winds were generally moderate from the north on 14 June. Affected by a dry continental airstream, local weather was mainly fine and very hot at first. As the outer rainbands of Hagibis moved towards the territory, the weather became cloudy with a few showers in the afternoon. Rainbands associated with Hagibis brought more showers on 15 June, and more than 10 millimetres of rainfall were recorded in many places over Hong Kong.

In Hong Kong, there were heavy swell and rough seas under the influence of Hagibis. Two people swept away by freak waves at the beach of Ham Tin Wan on 14 June were saved from drowning. Six canoeists reported missing in Sai Kung were later found, with one of them injured. Heavy rain associated with Hagibis led to severe flooding in parts of Guangdong and Fujian where land and sea traffic was disrupted. More than 11 520 hectares of farmland were affected, with economic losses reaching 570 million RMB.

Information on the maximum wind, daily rainfall and maximum sea level reached in Hong Kong during the passage of Hagibis is given in Tables 3.1.1 - 3.1.3 respectively. Figures 3.1.1 - 3.1.4 show respectively the track of Hagibis, the rainfall distribution for Hong Kong, a satellite imagery and a related radar imagery of Hagibis.

表 3.1.1 在海貝思影響下，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 signals for Hagibis were 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)	東北偏北	NNE	36	14/6	21:07	東	E	22	14/6	18:00
中環碼頭	Central Pier	西	W	30	15/6	11:02	東	E	22	14/6	18:00
		西北偏西	WNW	30	15/6	12:40					
長洲	Cheung Chau	東南偏南	SSE	47	14/6	17:41	東南偏東	ESE	30	14/6	18:00
長洲泳灘	Cheung Chau Beach	東	E	34	14/6	17:40	東	E	27	14/6	18:00
青洲	Green Island	東北	NE	49	14/6	17:49	東北	NE	34	14/6	18:00
香港國際機場	Hong Kong International Airport	東南偏東	ESE	36	14/6	18:11	東	E	25	14/6	19:00
啟德	Kai Tak	東北	NE	31	14/6	20:49	東	E	19	14/6	18:00
京士柏	King's Park	東北	NE	30	14/6	22:55	東南	SE	14	14/6	18:00
流浮山	Lau Fau Shan	北	N	34	15/6	07:54	西北偏北	NNW	20	14/6	18:00
昂坪	Ngong Ping	東北	NE	52	15/6	10:12	東北偏東	ENE	27	15/6	11:00
北角	North Point	西	W	31	15/6	10:43	東	E	19	14/6	18:00
							西南偏西	WSW	19	15/6	11:00
坪洲	Peng Chau	西北	NW	47	15/6	10:34	東	E	25	14/6	19:00
平洲	Ping Chau	西北	NW	23	15/6	06:22	西北	NW	7	15/6	07:00
西貢	Sai Kung	北	N	31	15/6	00:15	東	E	13	14/6	18:00
							北	N	13	15/6	01:00
沙洲	Sha Chau	北	N	47	15/6	10:07	北	N	23	15/6	11:00
沙螺灣	Sha Lo Wan	東南偏東	ESE	30	15/6	11:51	西南	SW	13	15/6	3:00
沙田	Sha Tin	東南偏東	ESE	20	14/6	18:16	東南	SE	9	14/6	18:00
		北	N	20	15/6	10:13					
		東北	NE	20	15/6	10:19					
石崗	Shek Kong	東	E	27	14/6	17:58	東	E	13	14/6	18:00
九龍天星碼頭	Star Ferry (Kowloon)	西	W	30	15/6	10:43	西	W	23	15/6	11:00
		西	W	30	15/6	10:44					
打鼓嶺	Ta Kwu Ling	東	E	27	14/6	17:46	東	E	13	14/6	18:00
		東南偏東	ESE	27	14/6	18:40					
大美督	Tai Mei Tuk	西北偏西	WNW	40	15/6	09:10	西	W	22	15/6	10:00
大帽山	Tai Mo Shan	西北偏北	NNW	63	14/6	21:50	西北偏北	NNW	40	15/6	08:00
大埔滘	Tai Po Kau	西北偏西	WNW	25	15/6	11:57	東	E	16	14/6	18:00
塔門	Tap Mun	西北偏西	WNW	38	15/6	10:11	西	W	22	15/6	11:00
大老山	Tate's Cairn	北	N	51	14/6	20:39	東北偏東	ENE	34	14/6	21:00
		北	N	51	14/6	20:44					
將軍澳	Tseung Kwan O	北	N	23	15/6	08:08	東北偏東	ENE	7	14/6	18:00
							東	E	7	14/6	19:00
							東北偏東	ENE	7	14/6	21:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	-	-	23	14/6	17:40	-	-	14	14/6	18:00
屯門政府合署	Tuen Mun Government Offices	東北偏北	NNE	27	15/6	10:15	東北偏北	NNE	9	15/6	11:00
橫瀾島	Waglan Island	東	E	47	14/6	18:30	東	E	36	14/6	19:00
濕地公園	Wetland Park	西北	NW	23	15/6	10:01	西北	NW	13	15/6	11:00
黃竹坑	Wong Chuk Hang	北	N	30	15/6	09:55	東	E	12	14/6	18:00

表 3.1.2 海貝思影響香港期間，香港天文台總部及其他各站所錄得的日雨量
 Table 3.1.2 Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Hagibis

站 (參閱圖 3.1.2) Station (See Fig. 3.1.2)			六月十四日 14 Jun	六月十五日 15 Jun	總雨量 (毫米) Total (mm)
香港天文台 Hong Kong Observatory			微量 (Trace)	9.9	9.9
香港國際機場 Hong Kong International Airport (HKA)			0.0	6.6	6.6
長洲 Cheung Chau (CCH)			0.0	11.0	11.0
H23	香港仔	Aberdeen	0.5	9.0	9.5
N05	粉嶺	Fanling	0.0	8.0	8.0
N13	糧船灣	High Island	0.0	12.5	12.5
K04	佐敦谷	Jordan Valley	0.0	11.5	11.5
N06	葵涌	Kwai Chung	0.0	7.5	7.5
H12	半山區	Mid Levels	0.0	8.0	8.0
N09	沙田	Sha Tin	0.0	6.5	6.5
H19	筲箕灣	Shau Kei Wan	0.0	27	27
SEK	石崗	Shek Kong	0.0	5.5	5.5
K06	蘇屋邨	So Uk Estate	0.0	7.5	7.5
R31	大美督	Tai Mei Tuk	0.0	7.0	7.0
R21	踏石角	Tap Shek Kok	0.0	9.0	9.0
N17	東涌	Tung Chung	0.0	4.0	4.0
R27	元朗	Yuen Long	0.0	4.5	4.5

淺水灣 (H21) - 沒有資料。 Repulse Bay (H21) - data not available

表 3.1.3 海貝思影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮
 Table 3.1.3 Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of Hagibis

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	2.75	15/6	10:40	0.51	15/6	05:41
石壁	Shek Pik	2.76	15/6	10:29	0.36	15/6	00:08
大廟灣	Tai Miu Wan	2.69	15/6	10:34	0.54	15/6	04:27
大埔滘	Tai Po Kau	2.75	15/6	11:30	0.51	15/6	03:02
尖鼻咀	Tsim Bei Tsui	3.00	15/6	10:46	0.32	15/6	01:33
橫瀾島	Waglan Island	2.87	15/6	11:01	0.54	15/6	05:33

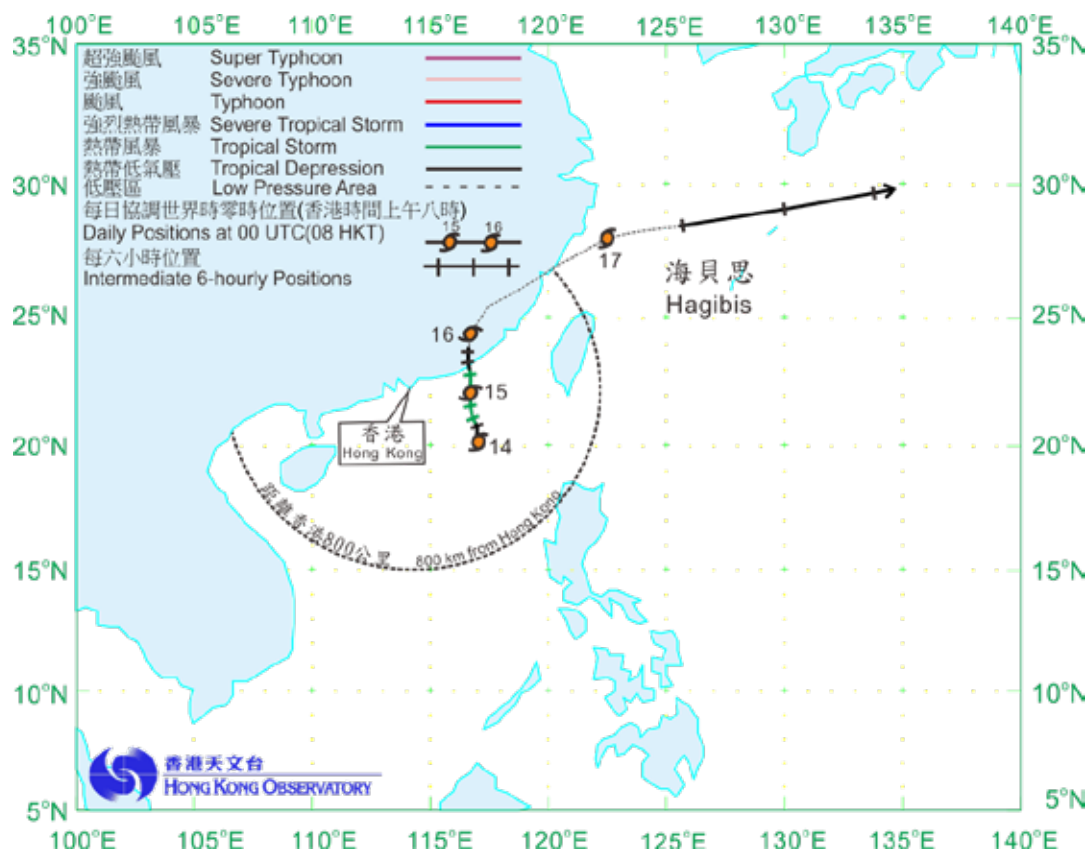


圖 3.1.1 海貝思 (1407) 在二零一四年六月十四日至十八日的路徑圖。
Figure 3.1.1 Track of Hagibis (1407) on 14 – 18 June 2014.

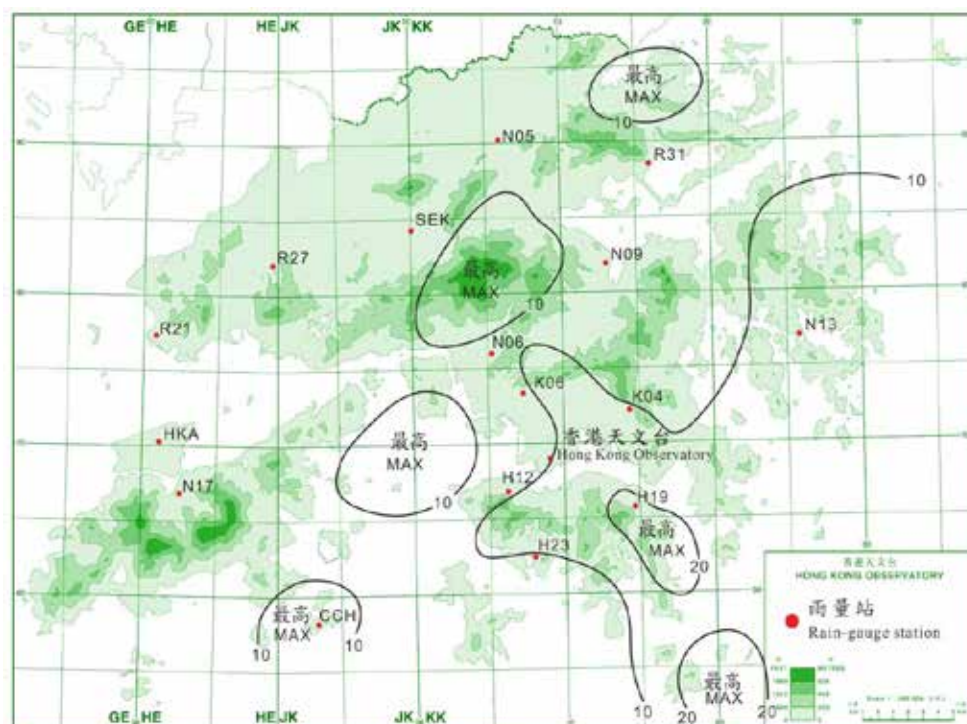


圖 3.1.2 二零一四年六月十四日至十五日的雨量分佈 (等雨量線單位為毫米)。
Figure 3.1.2 Rainfall distribution on 14 - 15 June 2014 (isohyets are in millimetres).

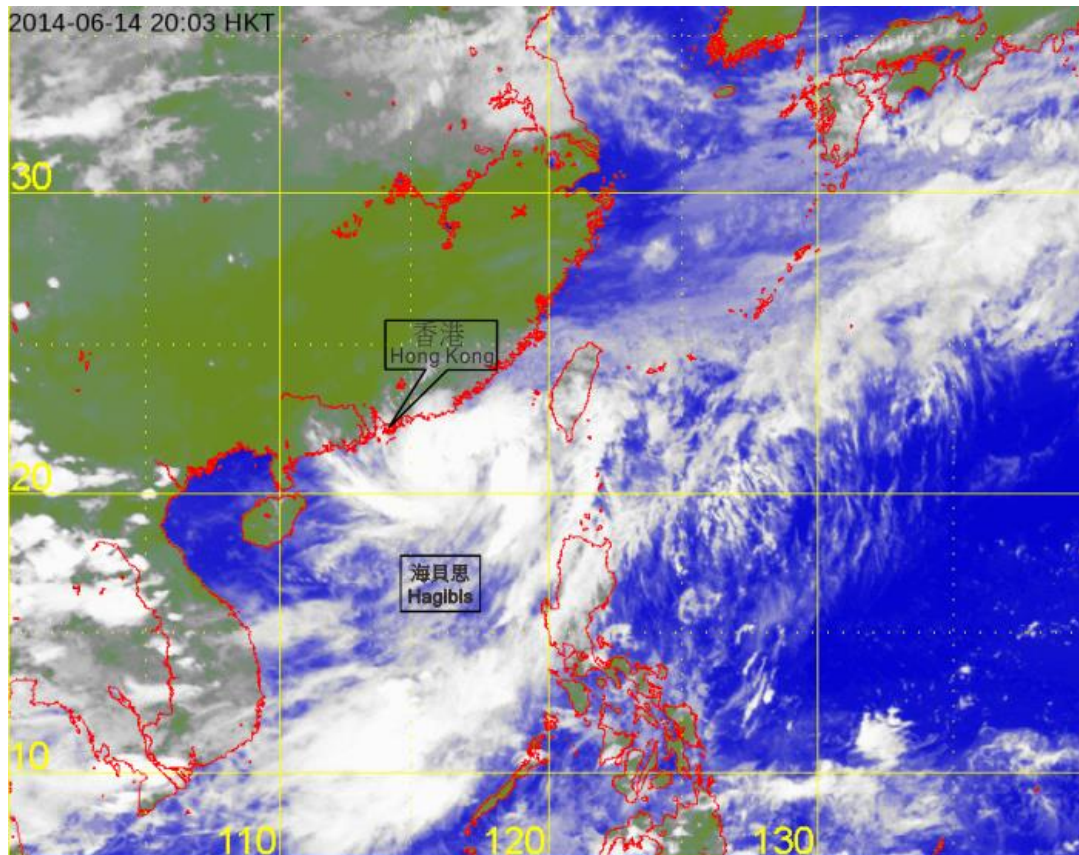


圖 3.1.3 熱帶風暴海貝思在二零一四年六月十四日下午8時的紅外線衛星圖片，當時海貝思達到其最高強度，中心附近最高持續風速估計為每小時 75 公里。

Figure 3.1.3 Infra-red satellite imagery of Tropical Storm Hagibis at 8 p.m. on 14 June 2014 at its peak intensity with estimated maximum sustained winds of 75 km/h near its centre.

〔此衛星圖像接收自日本氣象廳的多用途輸送衛星-2。〕
 [The satellite imagery was originally captured by the Multi-functional Transport Satellite-2 (MTSAT-2) of Japan Meteorological Agency (JMA).]

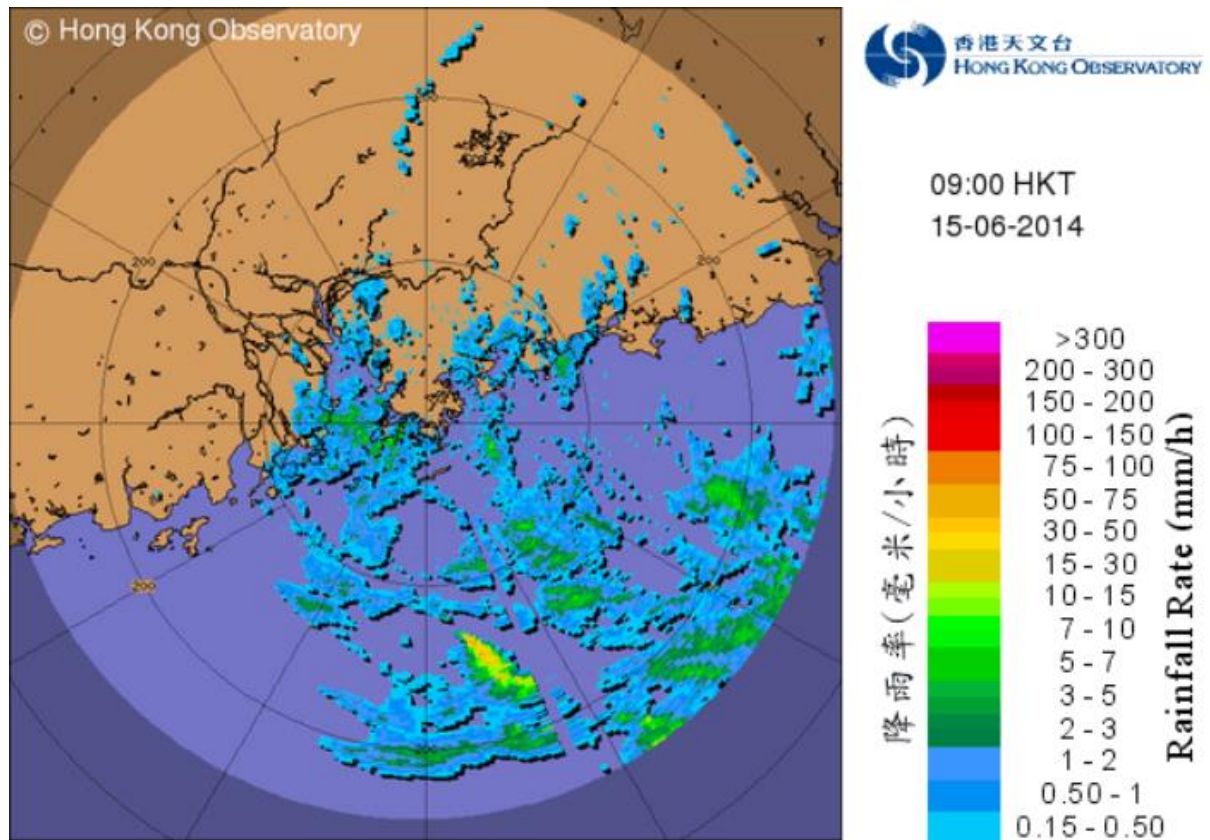


圖 3.1.4 二零一四年六月十五日上午 9 時的雷達回波圖像，熱帶風暴海貝思最接近本港的一刻，其中心集結在香港以東約 260 公里。當時海貝思的外圍雨帶正影響本港。

Figure 3.1.4 Image of radar echoes at 9 a.m. on 15 June 2014, when Tropical Storm Hagibis was closest to Hong Kong with its centre about 260 km to the east. The outer rainbands of Hagibis were affecting the territory.