

第三節 二零一八年影響香港的熱帶氣旋

3.1 熱帶風暴艾雲尼 (1804)：二零一八年六月二日至八日

艾雲尼是二零一八年首個影響香港的熱帶氣旋。

熱帶低氣壓艾雲尼於六月二日晚上在西沙以南約 510 公里的南海南部上形成，向西北偏北移動。六月四日艾雲尼轉向北至東北偏北方向移動，翌日掠過海南島以東海域。六月六日艾雲尼移動減慢，並增強為熱帶風暴，在雷州半島以東及海南島東北部打圈徘徊。六月七日早上艾雲尼達到其最高強度，中心附近最高持續風速估計為每小時 75 公里，並開始穩定地向東北偏北方向移動，晚上在廣東西部海岸陽江市附近登陸，並逐漸減弱，最後於六月八日晚上在廣東內陸減弱為一個低壓區。

根據報章報導，艾雲尼為海南、廣東、廣西、福建及湖南帶來暴雨，多處出現水浸及山泥傾瀉，共造成至少五人死亡，超過 21 萬人受災。

香港天文台在六月五日上午 11 時 20 分發出一號戒備信號，當時艾雲尼集結在香港之西南偏南約 590 公里。六月五日及六日本港吹和緩至清勁東至東南風，離岸及高地間中吹強風。隨著艾雲尼逐漸靠近香港，天文台在六月七日下午 12 時 40 分發出三號強風信號，當時艾雲尼位於香港之西南偏西約 330 公里。當日下午本港普遍轉吹清勁至強風程度的東南風，高地間中吹烈風。艾雲尼於六月八日下午 1 時左右最接近香港，其中心在本港之西北偏西約 200 公里。隨著艾雲尼減弱，本港風力逐漸緩和，天文台在六月八日下午 3 時 40 分改發一號戒備信號，並於傍晚 6 時 20 分取消所有熱帶氣旋警告信號。

艾雲尼掠過期間，尖鼻咀錄得最高潮位 2.52 米(海圖基準面以上)及最大風暴潮(天文潮高度以上) 0.68 米。天文台總部於六月八日下午 5 時 01 分錄得最低瞬時海平面氣壓 998.7 百帕斯卡，當時艾雲尼位於本港西北偏西約 200 公里。

艾雲尼在六月五日至八日為本港帶來連場狂風大雨，期間本港普遍錄得超過 250 毫米雨量，而新界東北部的雨量更超過 400 毫米。六月六日午後的暴雨引致天文台發出今年首個黃色暴雨警告。翌日早上再有滂沱大雨，主要集中在沙田及大埔，而傍晚在長洲有水龍捲報告。六月八日早上的暴雨則導致天文台需要發出紅色暴雨警告。

艾雲尼吹襲期間，本港有多宗塌樹、水浸及山泥傾瀉報告。西灣河有大樹倒塌，壓毀兩部駛經的客貨車，其中一名司機受輕傷。大圍有私家車及薄扶林有小巴亦因塌樹遭受損毀。多處道路受水浸或塌樹影響而導致交通阻塞。

表3.1.1 - 3.1.4分別是艾雲尼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 - 3.1.2分別為艾雲尼的路徑圖和本港的雨量分佈圖。圖3.1.3 - 3.1.4分別為艾雲尼的衛星及雷達圖像。圖3.1.5為艾雲尼影響香港期間在長洲捕捉到的水龍捲現象。

Section 3 TROPICAL CYCLONES AFFECTING HONG KONG IN 2018

3.1 Tropical Storm Ewiniar (1804): 2 – 8 June 2018

Ewiniar was the first tropical cyclone affecting Hong Kong in 2018.

Ewiniar formed as a tropical depression over the southern part of the South China Sea about 510 km south of Xisha on the night of 2 June and moved north-northwestwards. Ewiniar turned to move north to north-northeastwards on 4 June and skirted past the sea areas east of Hainan Island the next day. Slowing down and intensifying into a tropical storm on 6 June, it lingered and made a loop east of Leizhou Peninsula and the northeastern part of Hainan Island. Ewiniar reached its peak intensity with an estimated sustained wind of 75 km/h near its centre on the morning of 7 June and started to move steadily north-northeastwards, making landfall near Yangjiang across the coast of western Guangdong that night. It weakened gradually and finally degenerated into an area of low pressure over the inland areas of Guangdong on the night of 8 June.

According to press reports, Ewiniar brought torrential rain to Hainan, Guangdong, Guangxi, Fujian and Hunan, with flooding and landslides reported in many places. At least five people were killed and over 210 000 people were affected.

In Hong Kong, the No. 1 Standby Signal was issued at 11:20 a.m. on 5 June when Ewiniar was about 590 km south-southwest of the territory. Local winds were moderate to fresh east to southeasterlies on 5 and 6 June, occasionally strong offshore and on high ground. With Ewiniar edging closer to Hong Kong, the No. 3 Strong Wind Signal was issued at 12:40 p.m. on 7 June when Ewiniar was about 330 km west-southwest of Hong Kong. Local winds became generally fresh to strong southeasterly in the afternoon, occasionally reaching gale force on high ground. Ewiniar came closest to Hong Kong around 1 p.m. on 8 June with its centre about 200 km west-northwest of Hong Kong. With Ewiniar weakening and local winds subsiding gradually, the No. 3 Strong Wind Signal was replaced by the No. 1 Standby Signal at 3:40 p.m. on 8 June, and all tropical cyclone warning signals were cancelled at 6:20 p.m. that evening.

During the passage of Ewiniar, a maximum sea level (above chart datum) of 2.52 m and a maximum storm surge (above astronomical tide) of 0.68 m were recorded at Tsim Bei Tsui. The lowest instantaneous mean sea-level pressure of 998.7 hPa was recorded at the Observatory headquarters at 5:01 p.m. on 8 June when Ewiniar was about 200 km west-northwest of Hong Kong.

Ewiniar brought episodes of heavy rain and squalls to Hong Kong during 5 – 8 June. Overall, more than 250 millimetres of rainfall were generally recorded over the territory, with rainfall over the northeastern part of the New Territories exceeding 400 millimetres. The rainstorm shortly after noon time on 6 June led to the issuance of the first Amber Rainstorm Warning this year. There were more outbreaks of heavy rain the next morning, especially at Sha Tin and Tai Po, and waterspout was spotted at Cheung Chau that evening. The heavy downpour on the morning of 8 June necessitated the issuance of the Red Rainstorm Warning by the Observatory.

In Hong Kong, there were reports of fallen trees, flooding and landslide during the passage of Ewinar. A tree collapsed in Sai Wan Ho, damaging two vans passing by and one of the drivers suffered a minor injury. A private car in Tai Wai and a minibus in Pokfulam were also damaged by toppled trees. A number of roads were blocked due to flooding or fallen trees, resulting in disruption of traffic.

Information on the maximum wind, periods of strong force winds, daily rainfall and maximum sea level reached in Hong Kong during the passage of Ewinar is given in Tables 3.1.1 - 3.1.4 respectively. Figures 3.1.1 - 3.1.2 show respectively the track of Ewinar and the rainfall distribution for Hong Kong. Figures 3.1.3 - 3.1.4 show respectively a satellite imagery and radar imageries of Ewinar. Waterspout captured in Cheung Chau during the passage of Ewinar is illustrated in Figure 3.1.5.

表 3.1.1 在艾雲尼影響下，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 the tropical cyclone warning signals for Ewinar 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)	東南偏南	SSE	67	7/6	03:45	東南偏南	SSE	34	8/6	14:00
中環碼頭	Central Pier	東南	SE	49	8/6	13:16	東南偏東	ESE	23	7/6	20:00
長洲	Cheung Chau	南	S	87	8/6	09:03	東南偏東	ESE	52	8/6	01:00
長洲泳灘	Cheung Chau Beach	南	S	67	8/6	09:00	東	E	45	8/6	00:00
香港國際機場	Hong Kong International Airport	東南偏南	SSE	65	7/6	04:04	東南偏東	ESE	34	8/6	01:00
啟德	Kai Tak	東	E	62	8/6	00:52	東南偏東	ESE	31	8/6	08:00
京士柏	King's Park	東南偏南	SSE	52	5/6	13:06	東	E	20	6/6	23:00
							東	E	20	7/6	00:00
流浮山	Lau Fau Shan	東南	SE	54	7/6	04:58	東南	SE	25	8/6	16:00
北角	North Point	東	E	45	7/6	07:27	東	E	20	7/6	19:00
坪洲	Peng Chau	東南	SE	56	7/6	10:04	東南偏東	ESE	30	8/6	01:00
平洲	Ping Chau	東南偏南	SSE	38	8/6	12:16	東南偏南	SSE	9	8/6	15:00
西貢	Sai Kung	南	S	67	5/6	13:09	東南偏南	SSE	31	8/6	09:00
沙洲	Sha Chau	西南偏南	SSW	79	8/6	07:53	東南	SE	40	8/6	01:00
沙螺灣	Sha Lo Wan	東南偏東	ESE	72	8/6	01:56	東南偏東	ESE	31	8/6	02:00
沙田	Sha Tin	東南	SE	47	8/6	04:49	東南	SE	19	8/6	05:00
							東南	SE	19	8/6	08:00
石崗	Shek Kong	東	E	41	8/6	07:28	東北偏東	ENE	12	6/6	18:00
							東	E	12	7/6	10:00
							東	E	12	8/6	08:00
九龍天星碼頭	Star Ferry (Kowloon)	東	E	59	7/6	03:58	東南偏東	ESE	31	8/6	01:00
							東	E	31	8/6	02:00
打鼓嶺	Ta Kwu Ling	東	E	40	8/6	02:34	東北偏東	ENE	14	7/6	21:00
							東北偏東	ENE	14	8/6	00:00
大美督	Tai Mei Tuk	東	E	54	7/6	19:59	東	E	30	7/6	21:00
大帽山	Tai Mo Shan	東南	SE	104	7/6	04:13	東南	SE	68	8/6	02:00
大埔滘	Tai Po Kau	東南偏東	ESE	51	7/6	00:48	東南偏東	ESE	23	8/6	00:00
塔門東	Tap Mun East	東南偏東	ESE	72	8/6	02:16	東	E	49	7/6	23:00
大老山	Tate's Cairn	南	S	79	8/6	08:41	南	S	45	8/6	09:00
將軍澳	Tseung Kwan O	東南偏東	ESE	45	8/6	00:28	東	E	14	8/6	01:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	東南	SE	58	8/6	07:51	東南	SE	27	8/6	10:00
屯門政府合署	Tuen Mun Government Offices	東南偏南	SSE	54	7/6	03:19	東南偏南	SSE	22	8/6	10:00
濕地公園	Wetland Park	南	S	45	7/6	04:56	東南偏南	SSE	16	8/6	16:00
黃竹坑	Wong Chuk Hang	東南	SE	54	6/6	23:07	東	E	19	8/6	08:00

青洲、昂坪、橫瀾島 - 沒有資料 Green Island, Ngong Ping, Waglan Island - data not available

表 3.1.2 在艾雲尼影響下，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 force winds were attained at the eight reference anemometers in the tropical cyclone warning system when tropical cyclone warning signals for Ewinar were in force

站 (參閱圖 1.1) Station (See Fig. 1.1)		最初達到強風*時間 Start time when strong wind speed* was attained		最後達到強風*時間 End time when strong wind speed* was attained	
		日期/月份 Date/Month	時間 Time	日期/月份 Date/Month	時間 Time
長洲	Cheung Chau	6/6	01:31	8/6	09:24
香港國際機場	Hong Kong International Airport	7/6	04:04	8/6	08:44
西貢	Sai Kung	7/6	00:43	7/6	08:28

啟德、沙田、流浮山、打鼓嶺、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 Kai Tak, Sha Tin, Lau Fau Shan, 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。其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 3.1.3 艾雲尼掠過期間，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 Ewinia

站 (參閱圖 3.1.2)		六月五日	六月六日	六月七日	六月八日	總雨量 (毫米)
Station (See Fig. 3.1.2)		5 June	6 June	7 June	8 June	Total (mm)
香港天文台 Hong Kong Observatory		28.2	58.3	47.4	70.2	204.1
香港國際機場 Hong Kong International Airport (HKA)		17.8	74.4	83.4	71.9	247.5
長洲 Cheung Chau (CCH)		[35.5]	134.0	[35.5]	[57.0]	[262.0]
H23	香港仔 Aberdeen	49.0	39.0	52.0	70.0	210.0
N05	粉嶺 Fanling	38.5	130.5	225.5	71.0	465.5
N13	糧船灣 High Island	38.5	41.0	30.5	93.5	203.5
K04	佐敦谷 Jordan Valley	39.5	52.5	107.5	124.0	323.5
N06	葵涌 Kwai Chung	41.5	111.5	78.5	81.0	312.5
H12	半山區 Mid Levels	59.5	76.5	70.5	92.5	299.0
N09	沙田 Sha Tin	43.0	115.5	135.5	78.0	372.0
H19	筲箕灣 Shau Kei Wan	36.5	70.5	76.5	118.5	302.0
SEK	石崗 Shek Kong	[23.5]	[94.5]	[68.5]	60.5	[247.0]
K06	蘇屋邨 So Uk Estate	32.0	88.5	72.0	66.0	258.5
R31	大美督 Tai Mei Tuk	41.0	189.5	70.0	100.0	400.5
R21	踏石角 Tap Shek Kok	25.0	75.0	105.5	68.0	273.5

屯門水庫、東涌 - 沒有資料 Tuen Mun Reservoir, Tung Chung - data not available

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

表 3.1.4 艾雲尼掠過期間，香港各潮汐站所錄得的最高潮位及最大風暴潮
Table 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 Ewinia

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	2.18	5/6	12:59	0.35	8/6	07:51
石壁	Shek Pik	2.24	5/6	11:44	0.40	8/6	06:35
大埔滘	Tai Po Kau	2.08	5/6	12:43	0.33	8/6	06:26
大廟灣	Tai Miu Wan	2.13	5/6	11:17	0.46	8/6	13:21
尖鼻咀	Tsim Bei Tsui	2.52	5/6	13:34	0.68	8/6	08:12

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

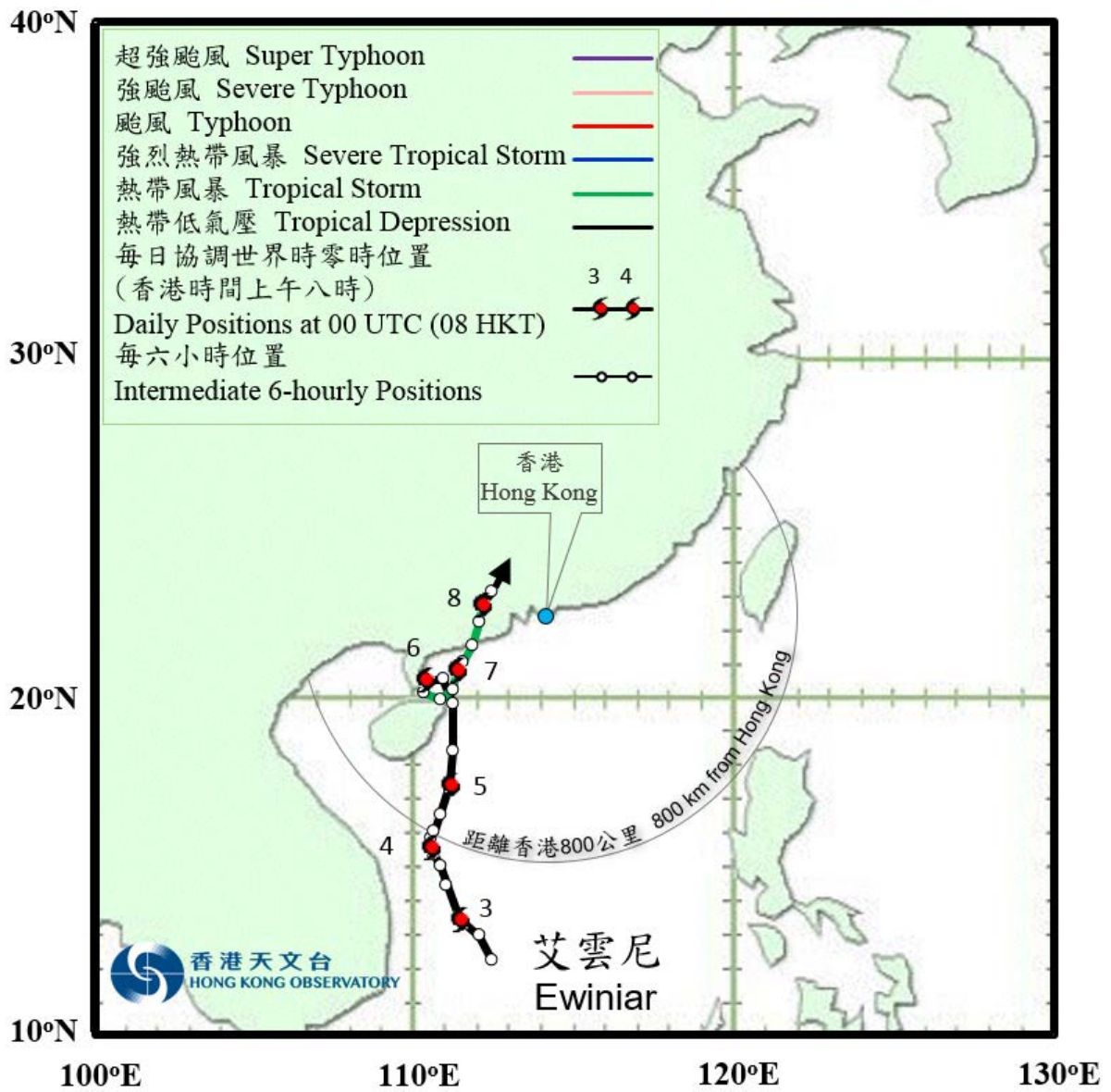


圖 3.1.1a 二零一八年六月二日至八日艾雲尼的路徑圖。

Figure 3.1.1a Track of the Ewiniar: 2 – 8 June 2018.

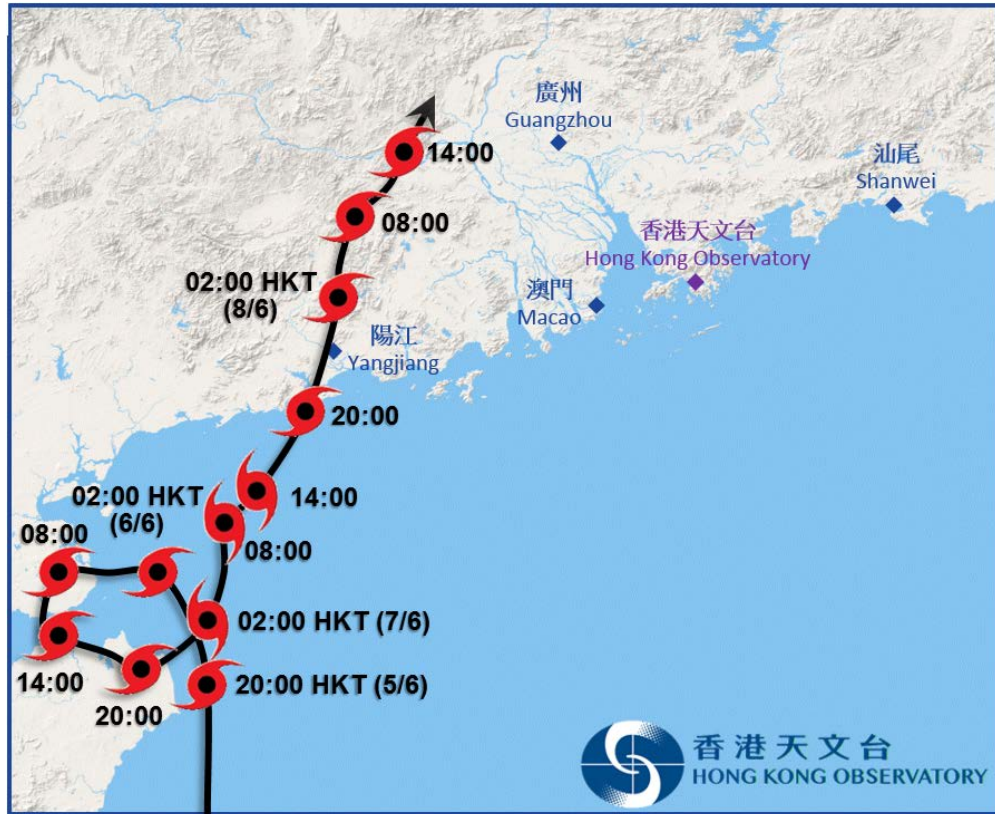


圖 3.1.1b 艾雲尼接近香港時的路徑圖。

Figure 3.1.1b Track of Ewinia near Hong Kong.

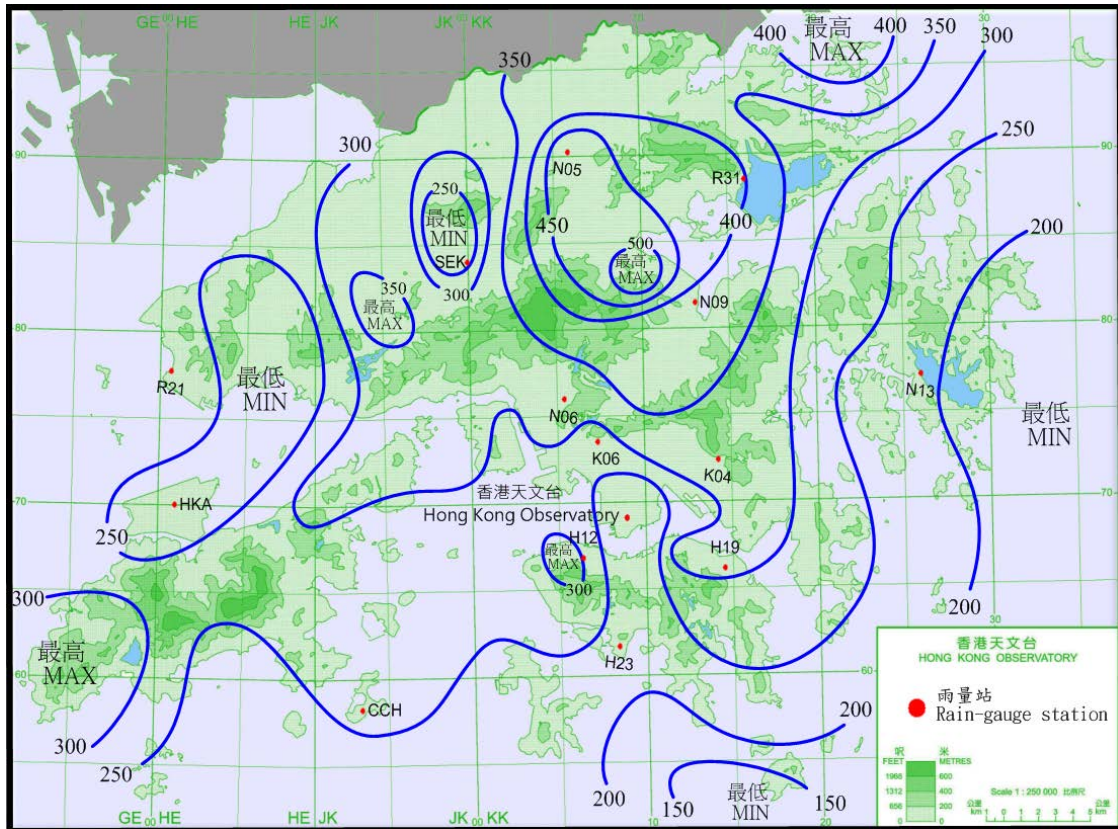


圖 3.1.2 二零一八年六月五日至八日的雨量分佈(等雨量線單位為毫米)。

Figure 3.1.2 Rainfall distribution on 5 – 8 June 2018 (isohyets are in millimetres).

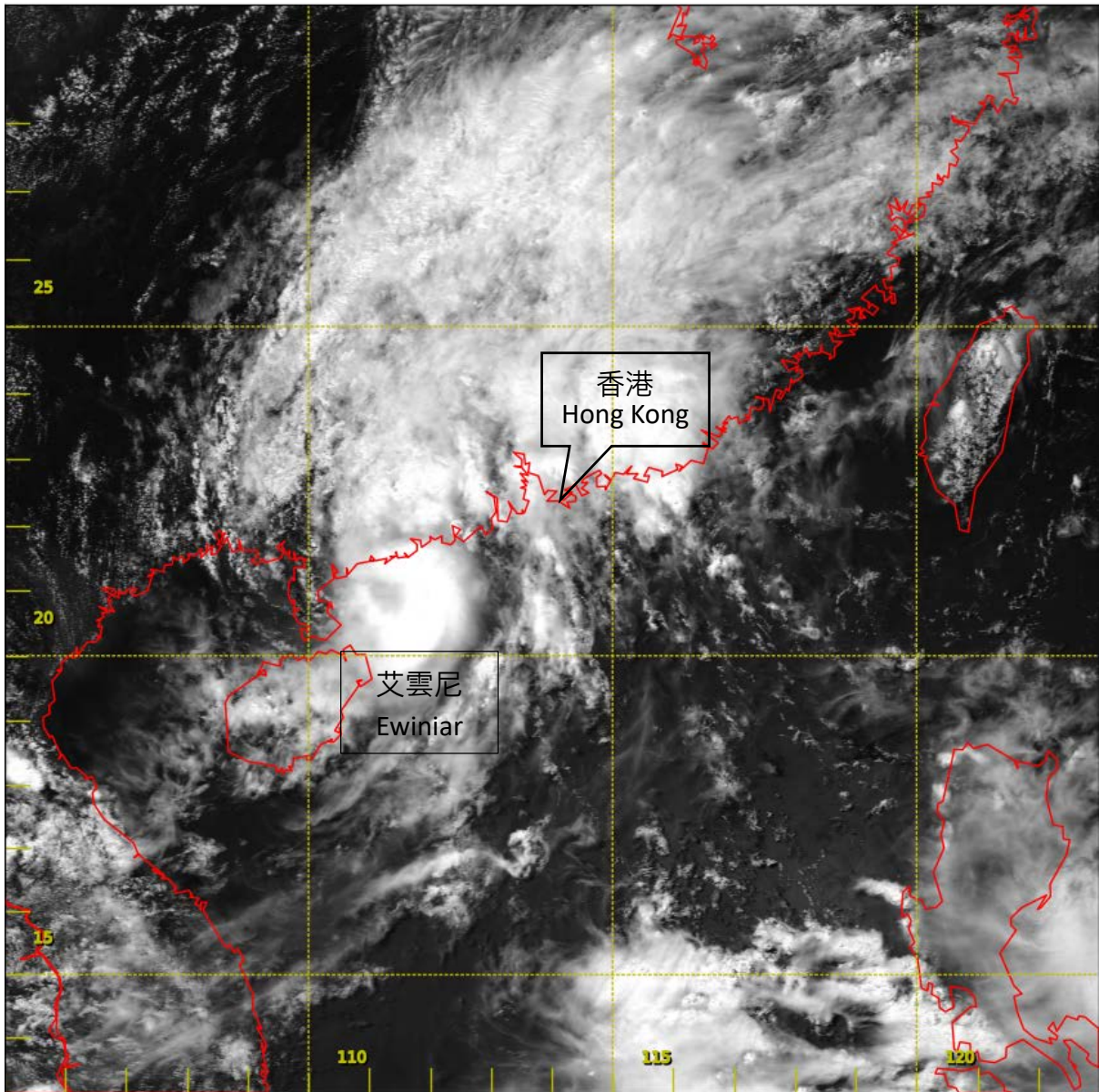


圖 3.1.3 二零一八年六月七日下午 2 時左右的可見光衛星圖片，當時艾雲尼達到其最高強度，中心附近最高持續風速估計為每小時 75 公里。

Figure 3.1.3 Visible satellite imagery around 2 p.m. on 7 June 2018, when Ewinar was at 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).]

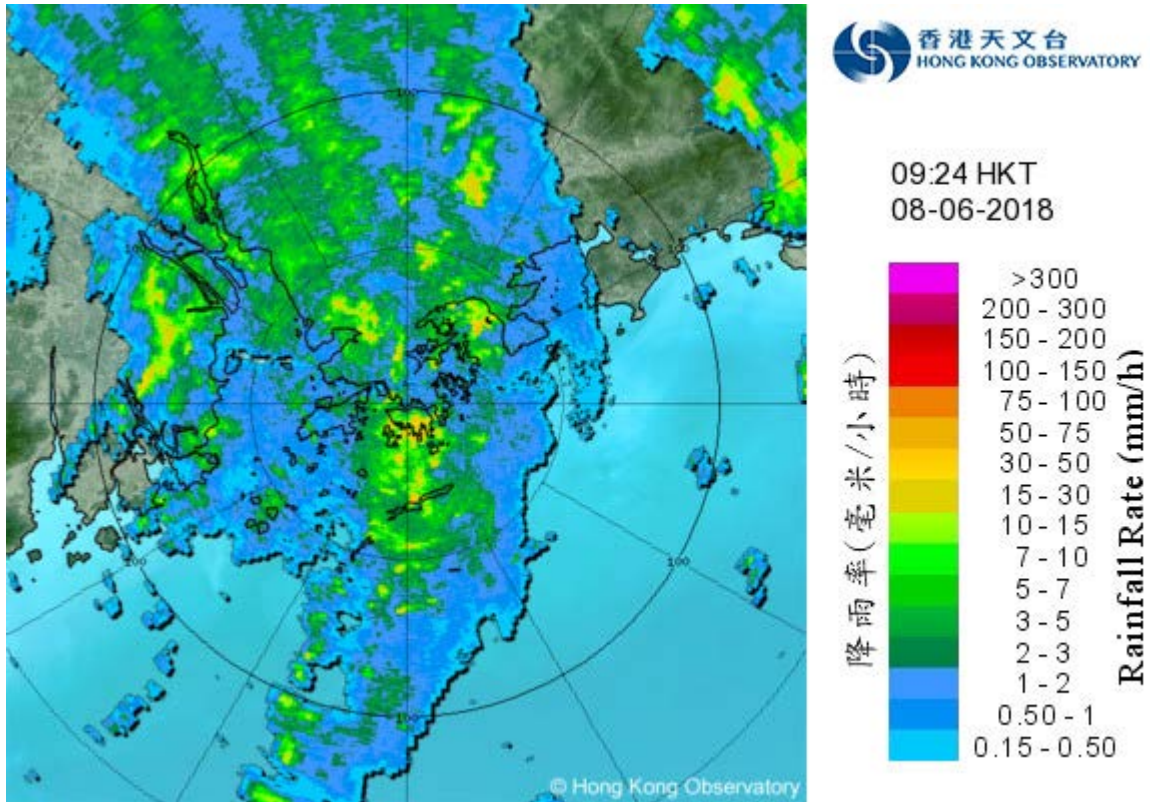


圖 3.1.4 二零一八年六月八日上午 9 時 24 分的雷達回波圖像，艾雲尼的雨帶正影響香港。

Figure 3.1.4 Image of radar echoes at 9:24 a.m. on 8 June 2018 when the rainbands of Ewiniar were affecting Hong Kong.

2018 Jun 7 Thu 18:45H 6月7日

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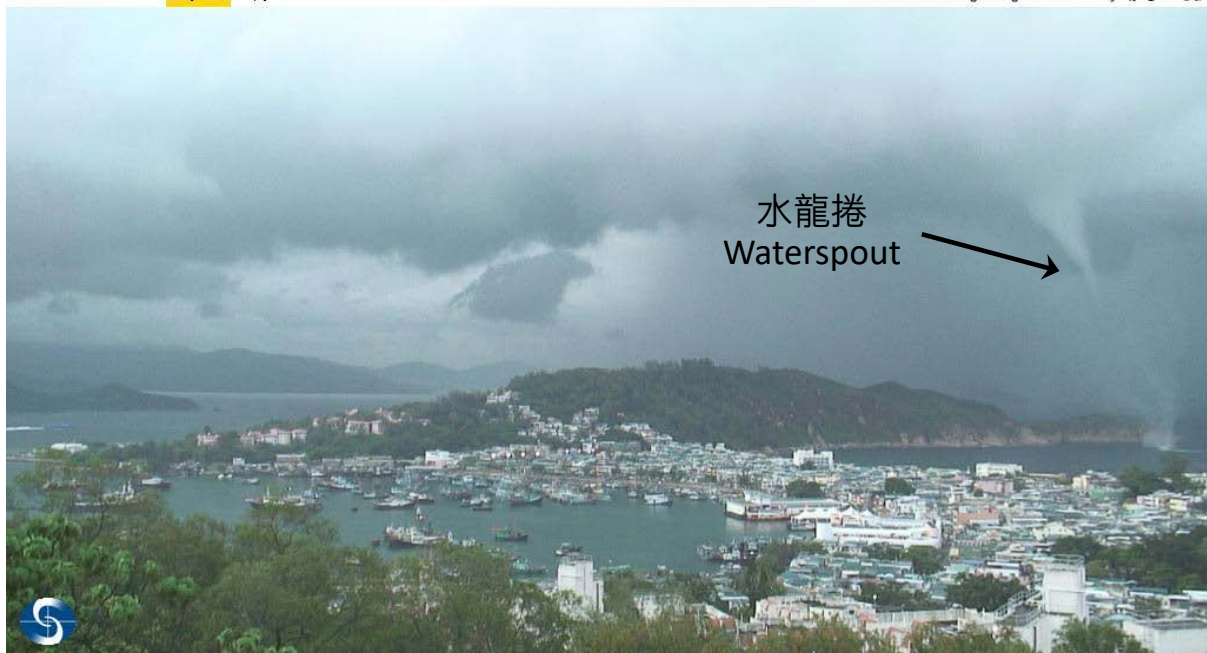


圖 3.1.5 二零一八年六月七日下午 6 時 45 分左右長洲有水龍捲報告，天文台長洲自動氣象站的網絡照相機亦捕捉到此現象

Figure 3.1.5 Waterspout was reported around 6:45 p.m. on 7 June 2018 at Cheung Chau and captured by the Observatory webcam at Cheung Chau automatic weather station.