

### 3.4 颱風鸚鵡 (0812)： 二零零八年八月十七日至二十三日

鸚鵡是香港在二零零八年第四個需要發出熱帶氣旋警告信號的熱帶氣旋。鸚鵡吹襲香港期間，天文台需要發出九號烈風或暴風增強信號，是自二零零三年九月颱風杜鵑影響香港以來的首次。

熱帶低氣壓鸚鵡於八月十七日黃昏在香港東南偏東約2 500公里的北太平洋西部上形成，並向西移動。鸚鵡於八月十八日早上增強為熱帶風暴，當日黃昏再增強為強烈熱帶風暴，八月十九日進一步增強為颱風及向西北偏西移動。鸚鵡於八月二十日橫過巴林坦海峽，當日黃昏進入南海。八月二十一日黃昏鸚鵡在東沙附近掠過及轉向西北移動，大致移向香港。鸚鵡於八月二十二日下午四時五十分左右在本港東部西貢區香港科技大學附近登陸，並減弱為強烈熱帶風暴。受到地形影響，鸚鵡的環流重整，原有的中心向西北移動並迅速消散，一個新的中心在將軍澳附近形成，並轉向西移動，經過維多利亞港東部及九龍半島南部，並在天文台總部以南一公里內掠過。隨後鸚鵡的中心經過青衣島以南，然後向北移動，黃昏時橫過大嶼山東北部、屯門及元朗。當天晚上鸚鵡橫過后海灣、深圳西部及珠江口，隨後在南沙附近第二次登陸。八月二十三日凌晨鸚鵡減弱為熱帶風暴，當日早上減弱為熱帶低氣壓，早上較後時間在廣東減弱為一低壓區。根據報章報導，廣東至少有四人死亡、超過91萬人受災及53 000公頃農作物損壞，直接經濟損失約四億元人民幣。

香港天文台於八月二十日下午6時15分發出一號戒備信號，當時鸚鵡位於香港東南偏東約750公里。由於鸚鵡移近香港，天文台在八月二十一日下午8時40分改發三號強風信號，當時鸚鵡位於香港東南約310公里。當日本港大致吹輕微至和緩東北風，黃昏時本港東南部海域開始吹強烈東北風。由於鸚鵡繼續移近香港及本港風勢繼續增強，天文台於八月二十二日上午7時40分發出八號西北烈風或暴風信號，當時鸚鵡位於香港東南約140公里。當日早上本港受強烈北風影響，離岸及高地吹烈風，風力間中達到暴風程度。天文台在當日下午1時40分改發九號烈風或暴風增強信號，當時鸚鵡位於天文台東南偏東約40公里。鸚鵡的中心在下午較後時間及黃昏經過香港，本港風勢暫時減弱，但黃昏時本港離岸海域及高地轉吹西南烈風或暴風。當鸚鵡移離香港及暴風風力減弱，天文台於八月二十三日凌晨12時40分改發八號西南烈風或暴風信號，並於當日上午2時40分改發三號強風信號，而本港的烈風亦普遍減弱。隨着鸚鵡進一步移離香港，本港風勢繼續減弱，天文台於當日上午9時40分改發一號戒備信號及在當日上午11時15分取消所有熱帶氣旋警告信號。

在鸚鵡影響香港期間，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	日期/月份	最初及最後錄得的時間
香港天文台總部	982.3 百帕斯卡	22/8	下午3時46分 - 4 時12分

橫瀾島	979.5 百帕斯卡	22/8	下午12時53分 - 2 時40分
坪洲	983.4百帕斯卡	22/8	下午4時34分
香港國際機場	985.5百帕斯卡	22/8	下午4時01分 - 4時02分
流浮山	984.2 百帕斯卡	22/8	下午3時31 - 4時37分

香港於八月二十日天晴及酷熱，翌日轉為多雲及有幾陣驟雨。八月二十二日本港有狂風大雨。八月二十三日本港天氣轉為大致多雲及有驟雨。

本港在鸚鵡影響期間有兩人死亡，包括一名游泳人士及一名小輪大僑，及超過112人受傷。此外，共有122宗倒塌或危險樹木報告、超過31宗危險招牌及八宗棚架倒塌事件。彌敦道部份路段受到棚架倒塌影響，交通受阻約九個小時。銅鑼灣一座樓宇屋頂的外牆被破壞。觀塘及長洲分別有天台屋屋頂被風吹脫。深水埗有棚架倒塌，附近四輛汽車受損及兩人受傷。沙田及大圍之間有一列火車被塌下的樹木擊中，約250名乘客需要疏散。大埔魚排嚴重受損，估計損失約三百萬港元。香港國際機場超過590航班取消、延誤或轉飛其它機場。

表3.4.1-3.4.4 分別是鸚鵡影響香港期間各站錄得的最高風速、持續風力達到強風及烈風或暴風程度的時段、日雨量及最高潮汐資料。表3.4.5是一九四六年至今導致天文台需要發出九號或以上熱帶氣旋警告信號的熱帶氣旋。圖3.4.1-3.4.10 分別為鸚鵡的路徑圖、雨量分佈圖、鸚鵡的衛星及雷達圖像、香港各區風向及風力分佈圖、天文台總部錄得的氣壓變化圖、及長洲錄得的氣壓及風向風速變化圖。

### 3.4 Typhoon Nuri (0812):17 – 23 August 2008

Nuri was the fourth tropical cyclone that necessitated the issuance of tropical cyclone warning signals in Hong Kong in 2008. It also necessitated the issuance of the Increasing Gale or Storm Signal No. 9. This was the first No. 9 signal since Typhoon Dujuan in September 2003.

Nuri formed as a tropical depression over the western North Pacific about 2 500 km east-southeast of Hong Kong on the evening of 17 August and moved westwards. It intensified into a tropical storm on the morning of 18 August and a severe tropical storm that evening. It further intensified into a typhoon on 19 August and moved west-northwestwards. Nuri crossed the Balintang Channel on 20 August and entered the South China Sea that evening. It passed close to Dongsha on the evening of 21 August and turned to move northwestwards in the general direction

of Hong Kong. Nuri made landfall near the Hong Kong University of Science and Technology in Sai Kung area over the eastern part of Hong Kong at around 4:50 p.m. on 22 August and weakened into a severe tropical storm. Affected by the terrain, the circulation of Nuri re-organized itself. The original centre moved northwestwards and dissipated rapidly. A new centre formed near Tseung Kwan O and turned to move westwards, passing over the eastern part of Victoria Harbour and the southern part of Kowloon Peninsula within 1 km south of the Hong Kong Observatory Headquarters. The centre of Nuri then passed to the south of Tsing Yi Island, and turned northwards to cross the northeastern part of Lantau Island, Tuen Mun and Yuen Long that evening. Nuri then crossed Deep Bay, the western part of Shenzhen and the Pearl River Estuary that night and made a second landfall near Nansha subsequently. Nuri weakened into a tropical storm on the small hours of 23 August and a tropical depression that morning. It weakened further into an area of low pressure over Guangdong later in the morning. According to press reports, at least four people were killed in Guangdong, over 910 000 people and over 53 000 hectares of crops were affected during the passage of Nuri. The direct economic losses in Guangdong were around 0.4 billion yuan.

In Hong Kong, the Standby Signal No. 1 was issued at 6:15 p.m. on 20 August when Nuri was about 750 km east-southeast of Hong Kong. As Nuri moved closer to Hong Kong, the Strong Wind Signal No. 3 was issued at 8:40 p.m. on 21 August when Nuri was about 310 km to the southeast. The winds over Hong Kong were mainly light to moderate northeasterlies that day, with strong northeasterlies setting in over the southeastern part of the Hong Kong waters that evening. As Nuri continued to move closer and local winds continued to strengthen, the No. 8 NW Gale or Storm Signal was issued at 7:40 a.m. on 22 August when Nuri was about 140 km to the southeast. Local winds became generally strong northerlies that morning, with gales offshore and on high grounds and occasionally reaching storm force. The Increasing Gale or Storm Signal No. 9 was issued at 1:40 p.m. that day when Nuri was about 40 km to the east-southeast of the Observatory. The centre of Nuri passed through Hong Kong in the late afternoon and evening and local winds weakened temporarily. However, gale to storm force southwesterly winds affected the offshore waters and high grounds again that night. With Nuri moving away from Hong Kong and the storm force winds offshore subsiding, the No. 8 SW Gale or Storm Signal was issued at 12:40 a.m. on 23 August. It was replaced by the No. 3 Strong Wind Signal at 2:40 a.m. as the gales generally subsided. The No. 1 Signal was issued at 9:40 a.m. that day and all tropical cyclone warning signals were cancelled at 11:15 a.m. as Nuri moved further away and local winds continued to subside.

During the passage of Nuri, the lowest instantaneous mean sea-level pressures recorded at some selected stations were as follows :-

<u>Station</u>	<u>Lowest instantaneous mean sea-level pressure</u>	<u>Date/Month</u>	<u>First and last time recorded</u>
Hong Kong Observatory Headquarters	982.3 hPa	22/8	3:46 – 4:12 p.m.
Waglan Island	979.5 hPa	22/8	12:53 – 2:40 p.m.
Peng Chau	983.4 hPa	22/8	4:34 p.m.
Hong Kong International Airport	985.5 hPa	22/8	4:01 – 4:02 p.m.
Lau Fau Shan	984.2 hPa	22/8	3:31 – 4:37 p.m.

The weather was fine and very hot on 20 August. The weather became cloudy with a few showers the next day. It was overcast with squalls and heavy rain on 22 August. The weather became mainly cloudy with showers on 23 August.

In Hong Kong, two people, including one swimmer and one Launch Mechanic, were killed and over 112 others were injured during the passage of Nuri. There were 122 reports of fallen or dangerous trees, more than 31 cases of dangerous signboards and eight reports of collapsed scaffolding. Traffic in part of Nathan Road in Mongkok was disrupted for about 9 hours due to collapsed scaffolding. In Causeway Bay, the outer walls of the roof top of a building were damaged. The roof of two roof-top buildings were blown loose in Kwun Tong and Cheung Chau respectively. In Sham Shui Po, fallen scaffoldings damaged four vehicles nearby and injured two people. About 250 passengers had to be evacuated when a train was hit by a tree between Sha Tin and Tai Wai. Fishing rafts in Tai Po were severely damaged and the losses were estimated to be around three million Hong Kong dollars. At the Hong Kong International Airport, over 590 flights were either cancelled, delayed or diverted.

The information on maximum wind, periods of strong and gale or storm force winds, daily rainfall and maximum sea level during the passage of Nuri is given in Tables 3.4.1 - 3.4.4. The list of tropical cyclones requiring the issuance of the Increasing Gale or Storm Signal No. 9 or above since 1946 is given in Table 3.4.5. Figures 3.4.1 - 3.4.10 show the track of Nuri, rainfall distribution, satellite and radar imageries of Nuri, wind distribution around Hong Kong, variation of the pressure at the Observatory, and variation of the pressure and winds at Cheung Chau respectively.

表 3.4.1 在鸚鵡影響下，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 3.4.1 Maximum gust peak speeds and maximum hourly mean winds with associated wind directions recorded at various stations when tropical cyclone warning signals for Nuri were in force

站 (參閱圖1.1) Station (See Fig 1.1)		最高陣風 Maximum Gust			日期/月份 Date/Month	時間 Time	最高每小時平均風速 Maximum Hourly Wind			日期/月份 Date/Month	時間 Time
		風向 Direction	風速(公里/時) Speed (km/h)				風向 Direction	風速(公里/時) Speed (km/h)			
黃麻角 (赤柱)	Bluff Head (Stanley)	西南偏南	SSW	118	22/8	19:54	西南偏南	SSW	75	22/8	20:00
中環碼頭	Central Pier	西北偏西	WNW	90	22/8	11:44	西北	NW	43	22/8	12:00
長洲	Cheung Chau	西南偏南	SSW	126	22/8	22:18	西南偏南	SSW	88	22/8	23:00
長沙灣	Cheung Sha Wan	西南	SW	96	23/8	00:10	西南	SW	54	22/8	21:00
青洲	Green Island	西南偏南	SSW	144	22/8	23:06	西南	SW	110	22/8	21:00
香港國際機場	Hong Kong International Airport	西南偏南	SSW	112	23/8	01:11	西南偏南	SSW	76	23/8	01:00
啟德	Kai Tak	北	N	118	22/8	13:08	北	N	47	22/8	13:00
京士柏	King's Park	東北偏北	NNE	118	22/8	10:51	西南偏南	SSW	49	22/8	21:00
流浮山	Lau Fau Shan	北	N	92	22/8	08:28	北	N	49	22/8	09:00
昂坪	Ngong Ping	西南	SW	196	22/8	23:31	西南	SW	128	23/8	01:00
北角	North Point	東北偏北	NNE	110	22/8	12:02	東北偏北	NNE	54	22/8	14:00
坪洲	Peng Chau	北	N	112	22/8	10:32	西北偏北	NNW	62	22/8	12:00
							西北偏北	NNW	62	22/8	14:00
平洲	Ping Chau	東北偏東	ENE	108	22/8	13:32	東	E	34	22/8	15:00
西貢	Sai Kung	東北偏北	NNE	148	22/8	13:33	東北偏北	NNE	87	22/8	14:00
沙洲	Sha Chau	西北偏北	NNW	128	22/8	12:36	北	N	94	22/8	15:00
		西南偏南	SSW	128	23/8	01:12					
沙螺灣	Sha Lo Wan	西南	SW	135	23/8	01:10	西南	SW	65	23/8	02:00
沙田	Sha Tin	西南	SW	101	22/8	21:27	西南偏南	SSW	45	22/8	21:00
石崗	Shek Kong	東北偏北	NNE	76	22/8	14:10	北	N	38	22/8	15:00
九龍天星碼頭	Star Ferry (Kowloon)	西南偏西	WSW	104	22/8	20:00	南	S	34	22/8	21:00
		西南	SW	104	22/8	21:12					
打鼓嶺	Ta Kwu Ling	東北偏北	NNE	87	22/8	13:26	北	N	40	22/8	14:00
大美督	Tai Mei Tuk	西南	SW	144	22/8	20:25	東北	NE	79	22/8	14:00
大帽山	Tai Mo Shan	西南偏南	SSW	144	22/8	20:53	北	N	96	22/8	13:00
塔門	Tap Mun	東北	NE	121	22/8	13:33	東北	NE	62	22/8	14:00
大老山	Tate's Cairn	北	N	193	22/8	13:45	北	N	122	22/8	14:00
鯉魚湖	Tsak Yue Wu	東北偏北	NNE	106	22/8	11:48	東北偏北	NNE	45	22/8	12:00
將軍澳	Tseung Kwan O	北	N	90	22/8	12:08	北	N	31	22/8	13:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	西北偏北	NNW	101	22/8	10:06	西北偏北	NNW	56	22/8	13:00
屯門政府合署	Tuen Mun Government Offices	西南偏南	SSW	96	23/8	02:39	南	S	36	23/8	01:00
							南	S	36	23/8	02:00
橫瀾島	Waglan Island	西南偏南	SSW	157	22/8	19:32	西南偏南	SSW	115	22/8	20:00
濕地公園	Wetland Park	北	N	94	22/8	12:08	北	N	41	22/8	14:00
黃竹坑	Wong Chuk Hang	北	N	88	22/8	11:32	西北偏北	NNW	31	22/8	13:00

表 3.4.2 在鸚鵡影響下，在熱帶氣旋警告系統的八個參考測風站所錄到持續風力達到強風及烈風程度的時段

Table 3.4.2 Periods during which sustained strong and gale force winds were reached at the 8 reference anemometers in the tropical cyclone warning system, when warning signals for Nuri were in force

站 (參閱圖 1.1) Station (See Fig 1.1))		最初達到強風*時間 First time strong wind speed* was reached		最後達到強風*時間 Last time strong wind speed* was reached		最初達到烈風#時間 First time reaching gale force#		最後達到烈風#時間 Last time reaching gale force#	
		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	22/8	06:05	23/8	09:51	22/8	09:45	23/8	02:58
香港國際機場	Hong Kong International Airport	22/8	06:19	23/8	09:46	22/8	09:51	23/8	03:47
啓德	Kai Tak	22/8	11:34	23/8	00:44	-			
西貢	Sai Kung	22/8	05:09	23/8	02:22	22/8	10:14	22/8	23:40
沙田	Sha Tin	22/8	19:53	23/8	01:53	-			
打鼓嶺	Ta Kwu Ling	22/8	12:51	22/8	21:07	-			
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	22/8	06:42	23/8	02:37	-			
濕地公園	Wetland Park	22/8	11:00	22/8	15:25	-			

- 未達到指定的風力  
not reaching the specified wind speed

\* 十分鐘平均風速達 41 – 62 公里  
10-minute mean wind speed of 41 – 62 km/h

# 十分鐘平均風速達 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及烈風程度的時間。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 or gale force winds were recorded. Note that the winds might fluctuate above or below the specified wind speed in between the times indicated.

表 3.4.3 鸚鵡影響香港期間，香港天文台總部及其他各站所錄得的日雨量(單位為毫米)

Table 3.4.3 Daily rainfall amounts in millimetres recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Nuri

站 (參閱圖 3.4.2) Station (See Fig. 3.4.2)	八月二十日 20 Aug	八月二十一日 21 Aug	八月二十二日 22 Aug	八月二十三日 23 Aug	總雨量 Total
香港天文台 Hong Kong Observatory	0.0	微量 Trace	61.6	36.9	98.5
CCH 長洲 Cheung Chau	0.0	0.0	34.5	15.0	49.5
HKA 香港國際機場 Hong Kong International Airport	0.0	微量 Trace	69.8	34.9	104.7
H12 半山區 Mid Levels	[0.0]	[0.0]	[47.0]	[39.0]	[86.0]
H19 筲箕灣 Shau Kei Wan	0.0	0.0	53.0	38.0	91.0
H21 淺水灣 Repulse Bay	0.0	0.0	20.5	29.5	50.0
K04 佐敦谷 Jordan Valley	[0.0]	[0.0]	[56.5]	[29.5]	[86.0]
K06 蘇屋邨 So Uk Estate	[0.0]	[0.0]	[51.0]	[26.0]	[77.0]
N05 粉嶺 Fanling	0.0	0.0	21.5	23.0	44.5
N06 葵涌 Kwai Chung	0.0	0.0	49.0	35.0	84.0
N09 沙田 Sha Tin	[0.0]	[0.0]	[58.0]	36.5	[94.5]
N12 元朗 Yuen Long	0.0	0.0	26.0	20.0	46.0
N13 糧船灣 High Island	0.0	0.0	40.5	24.0	64.5
N17 東涌 Tung Chung	0.0	0.0	106.0	66.5	172.5
R21 踏石角 Tap Shek Kok	0.0	5.5	26.0	19.5	51.0
SEK 石崗 Shek Kong	0.0	0.0	33.5	18.5	52.0
R31 大美督 Tai Mei Tuk	0.0	0.0	35.0	15.0	50.0

註： [ ] 基於不齊全的每小時雨量數據。

Note: [ ] based on incomplete hourly data.

表 3.4.4 鸚鵡影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮

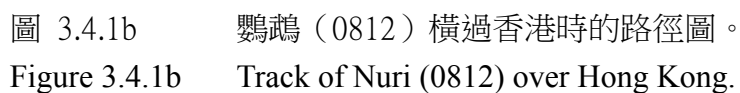
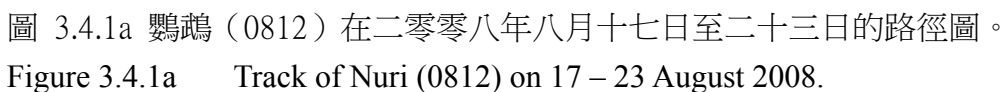
Table 3.4.4 Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of Nuri

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	2.16	22/8	11:10	0.56	22/8	11:10
石壁	Shek Pik	2.46	23/8	00:30	0.48	22/8	12:44
大廟灣	Tai Miu Wan	2.50	22/8	11:10	0.93	22/8	11:10
大埔滘	Tai Po Kau	2.61	22/8	13:51	1.13	22/8	16:17
尖鼻咀	Tsim Bei Tsui	3.03	23/8	02:10	0.78	23/8	00:00
橫瀾島	Waglan Island	2.43	22/8	12:15	0.69	22/8	10:52

表 3.4.5 一九四六年至二零零八年間引致天文台需要發出九號烈風或暴風增強信號或以上信號的熱帶氣旋  
 Table 3.4.5 Tropical cyclones requiring the issuing of the Increasing Gale or Storm Signal No. 9 or above during the period 1946 – 2008

熱帶氣旋名稱 Name of tropical cyclone	最高信號 Highest signal	日期 Date
颱風 Typhoon	10	18/7/1946
颱風 Typhoon	9	8/9/1949
奧西亞 Ossia	9	5/10/1950
露爾斯 Louise	9	1/8/1951
蘇姍 Susan	9	18/9/1953
艾黛 Ida	9	29/8/1954
柏美娜 Pamela	9	6/11/1954
姬羅莉亞 Gloria	10	22/9/1957
瑪麗 Mary	10	9/6/1960
愛麗斯 Alice	10	19/5/1961
溫黛 Wanda	10	1/9/1962
艾黛 Ida	9	8/8/1964
露比 Ruby	10	5/9/1964
黛蒂 Dot	10	13/10/1964
雪麗 Shirley	10	21/8/1968
露絲 Rose	10	16 - 17/8/1971
黛蒂 Dot	9	16 - 17/7/1973
嘉曼 Carmen	9	19/10/1974
愛茜 Elsie	10	14/10/1975
荷貝 Hope	10	2/8/1979
愛倫 Ellen	10	9/9/1983
維克托 Victor	9	2/8/1997
瑪姬 Maggie	9	7/6/1999
約克 York	10	16/9/1999
杜鵑 Dujuan	9	2/9/2003
鸚鵡 Nuri	9	22 - 23/8/2008





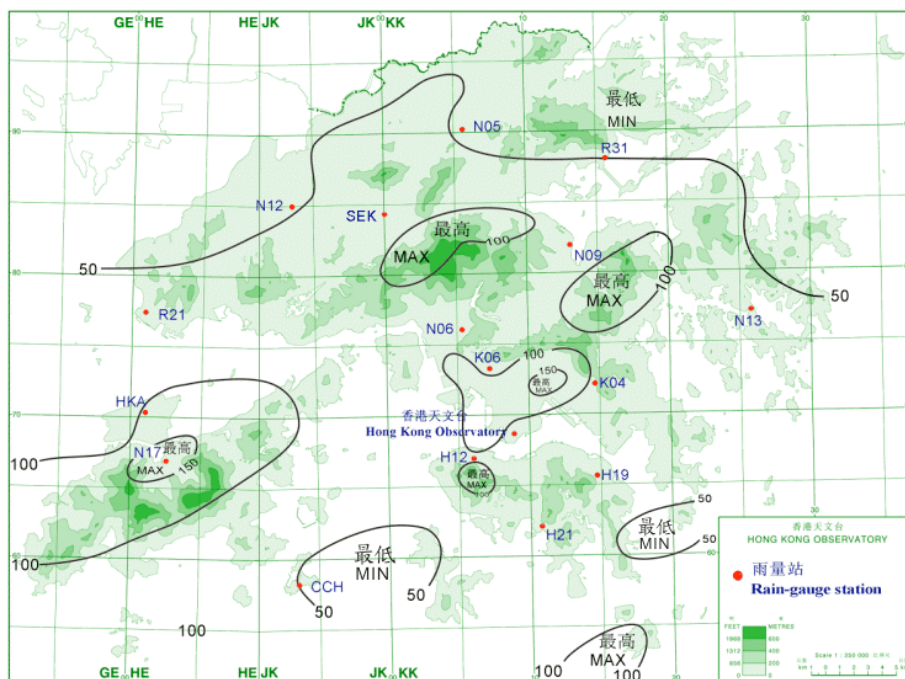


圖 3.4.2 二零零八年八月二十至二十三日的雨量分佈(等雨量線單位為毫米)。

Figure 3.4.2 Rainfall distribution on 20 – 23 August 2008 (isohyets are in millimetres).

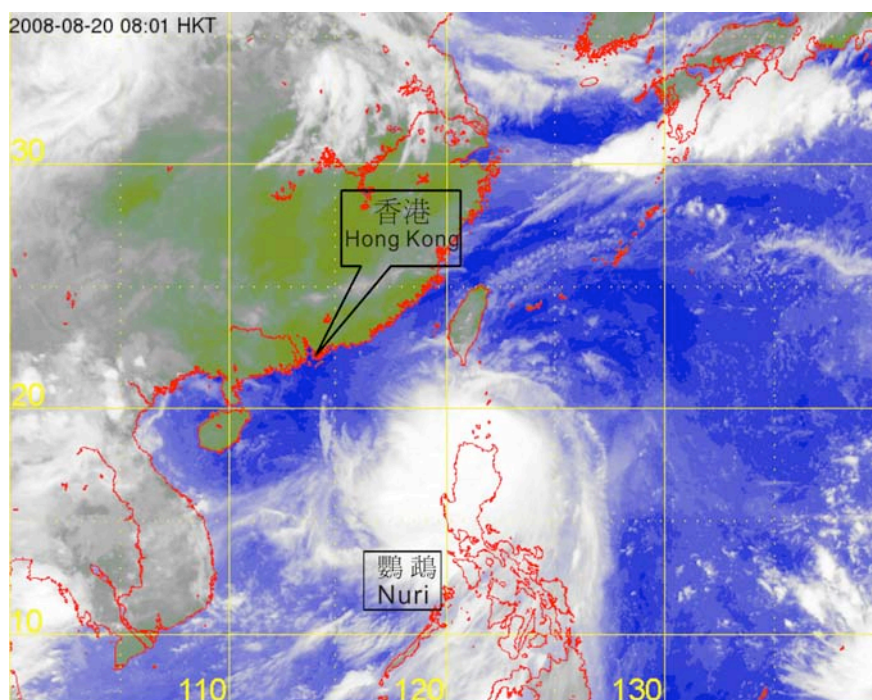


圖 3.4.3.a 鸚鵡在二零零八年八月二十日上午8時的紅外線衛星圖片。

Figure 3.4.3.a Infra-red satellite imagery at 8 a.m. on 20 August 2008 of Nuri.

[ 圖像 3.4.3.a-d接收自日本氣象廳的多用途輸送衛星-1R 。 ]

[The imageries in Figures 3.4.3.a-d were originally captured by Multi-functional Transport Satellite-1R (MTSAT-1R) of Japan Meteorological Agency (JMA).]



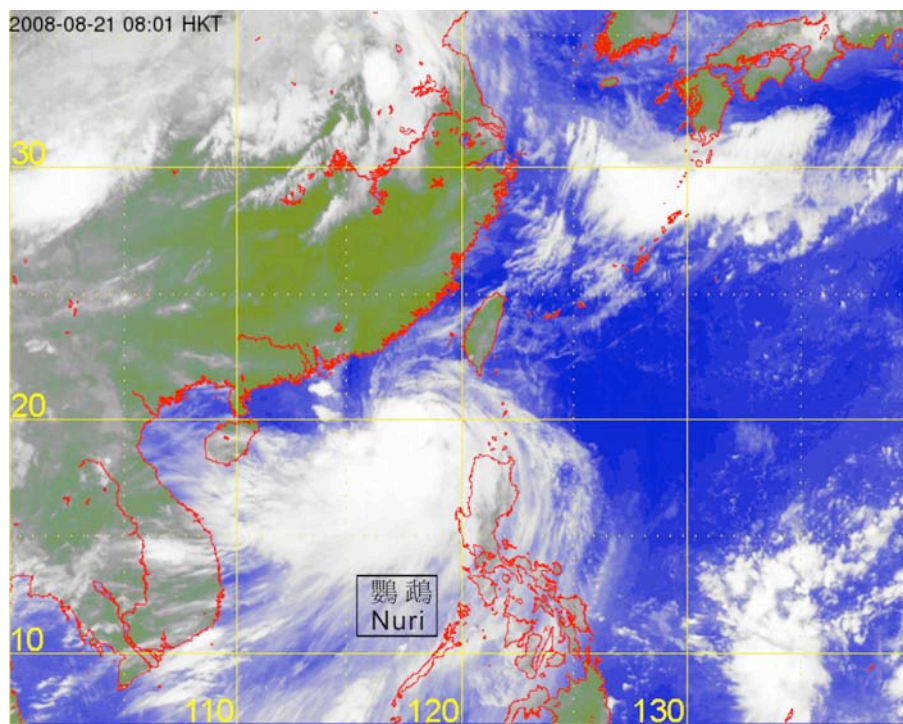


圖 3.4.3.b 鸚鵡在二零零八年八月二十一日上午8時的紅外線衛星圖片。  
 Figure 3.4.3.b Infra-red satellite imagery at 8 a.m. on 21 August 2008 of Nuri.

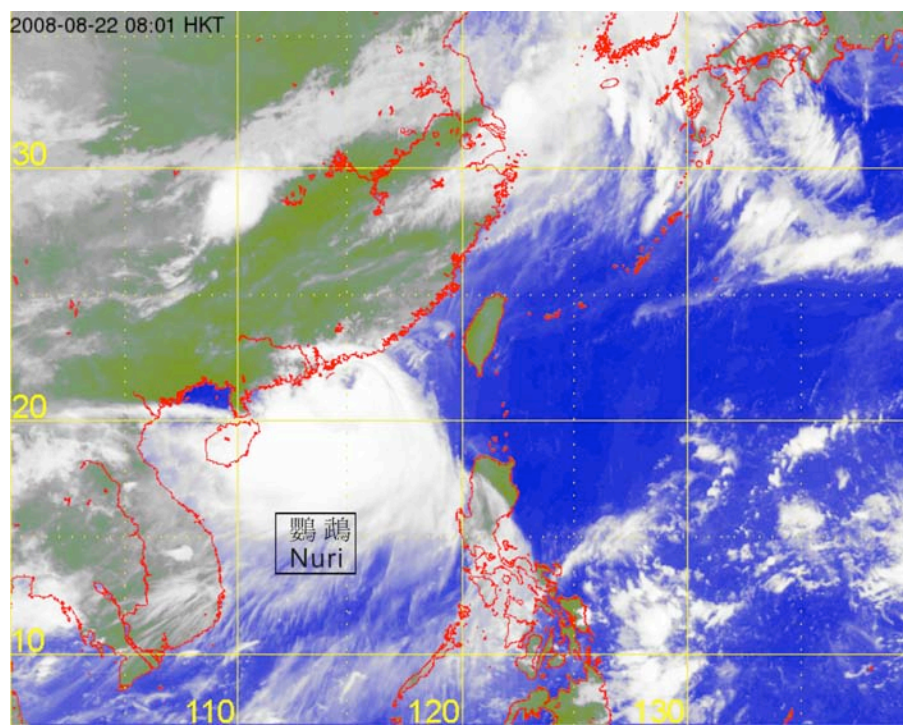


圖 3.4.3.c 鸚鵡在二零零八年八月二十二日上午8時的紅外線衛星圖片。  
 Figure 3.4.3.c Infra-red satellite imagery at 8 a.m. on 22 August 2008 of Nuri.

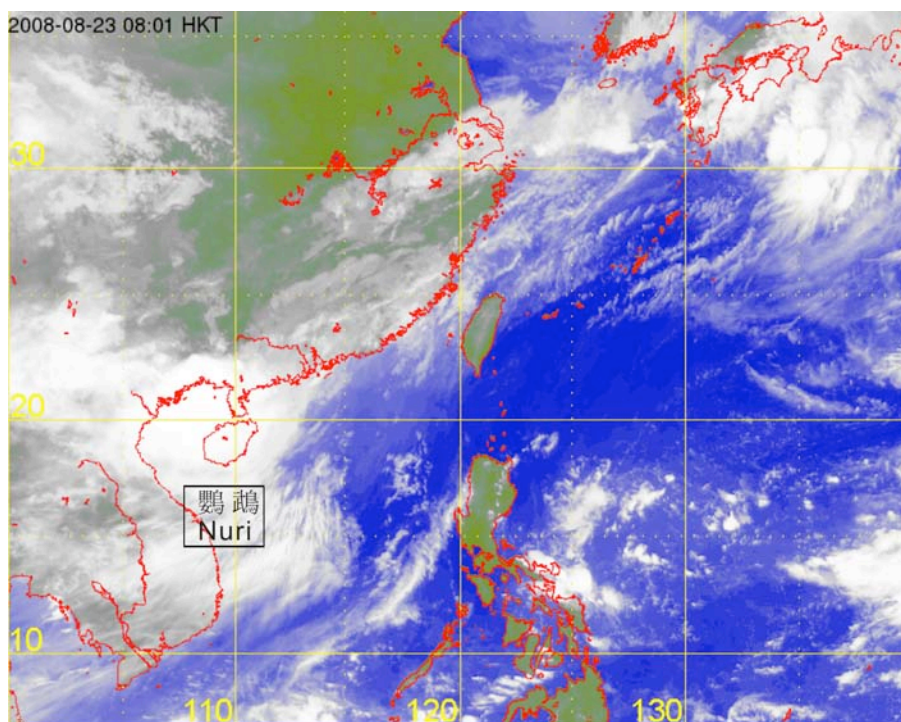


圖 3.4.3.d 鸚鵡在二零零八年八月二十三日上午8時的紅外線衛星圖片。  
 Figure 3.4.3.d Infra-red satellite imagery at 8 a.m. on 23 August 2008 of Nuri.

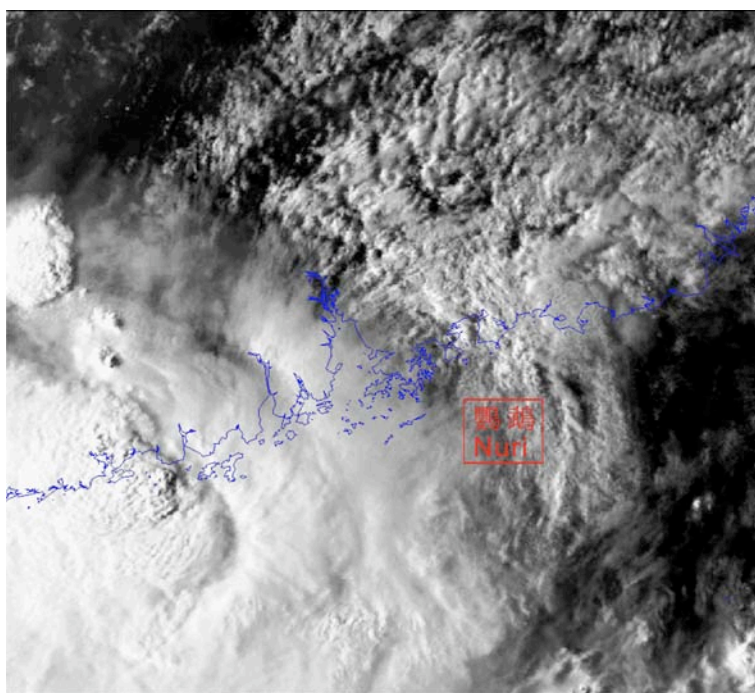
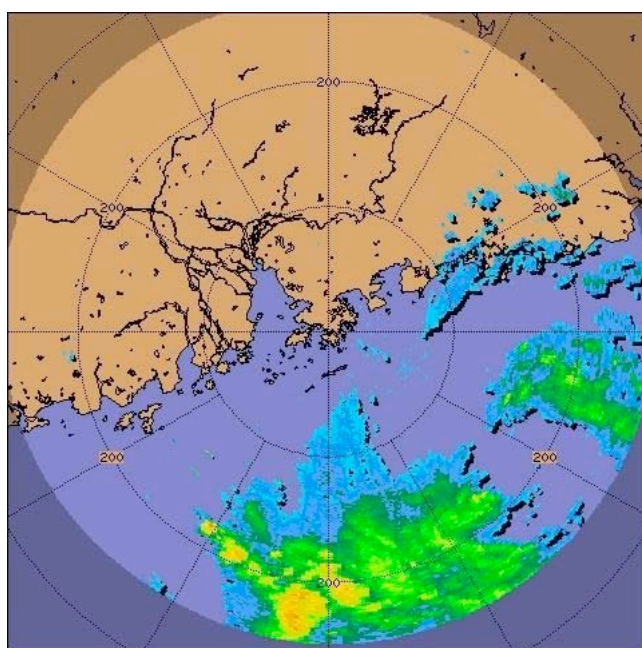
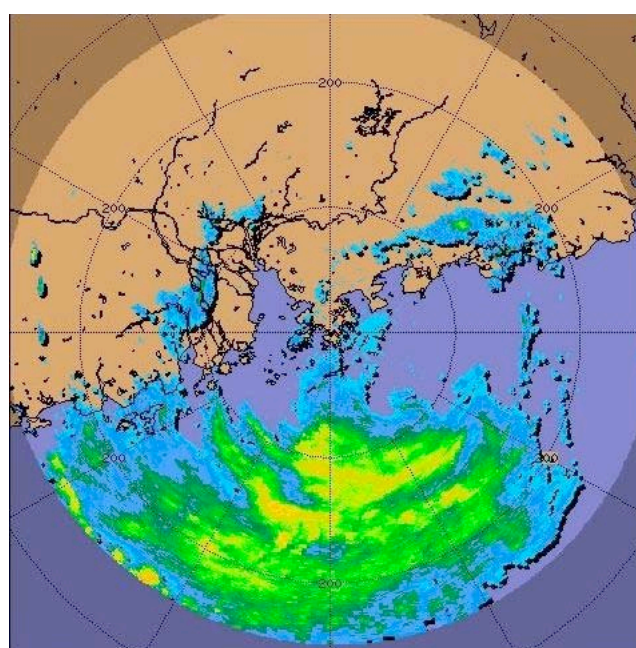


圖 3.4.3e 鸚鵡在二零零八年八月二十二日下午4時47分的可見光衛星圖片，當時鸚鵡正在香港東部西貢區登陸。  
 [圖像接收自美國國家海洋及大氣管理局的NOAA-16號衛星。]  
 Figure 3.4.3e Visible satellite imagery of Nuri at 4:47 p.m. on 22 August 2008, when Nuri was making landfall at Sai Kung area in the eastern part of Hong Kong.  
 [The imagery was originally captured by the NOAA-16 satellite operated by the U.S. National Oceanic and Atmospheric Administration.]

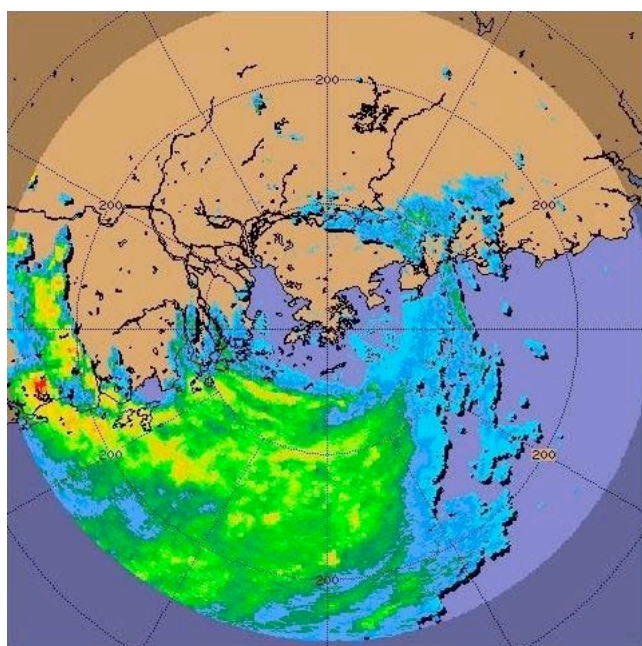




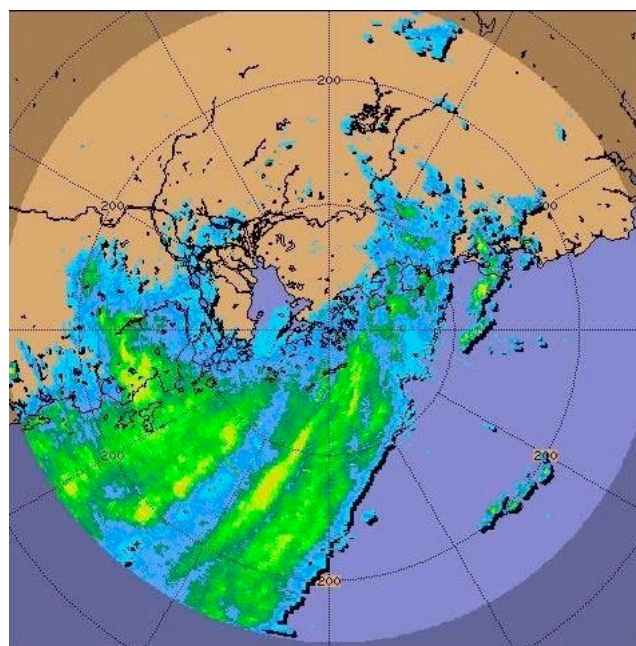
(a) 二零零八年八月二十二日上午5時  
5 a.m. on 22 August 2008



(b) 二零零八年八月二十二日上午11時  
11 a.m. on 22 August 2008



(c) 二零零八年八月二十二日下午5時  
5 p.m. on 22 August 2008



(d) 二零零八年八月二十二日下午11時  
11 p.m. on 22 August 2008

圖 3.4.4 鸚鵡的雷達回波圖像。

Fig. 3.4.4 Radar echoes of Nuri.



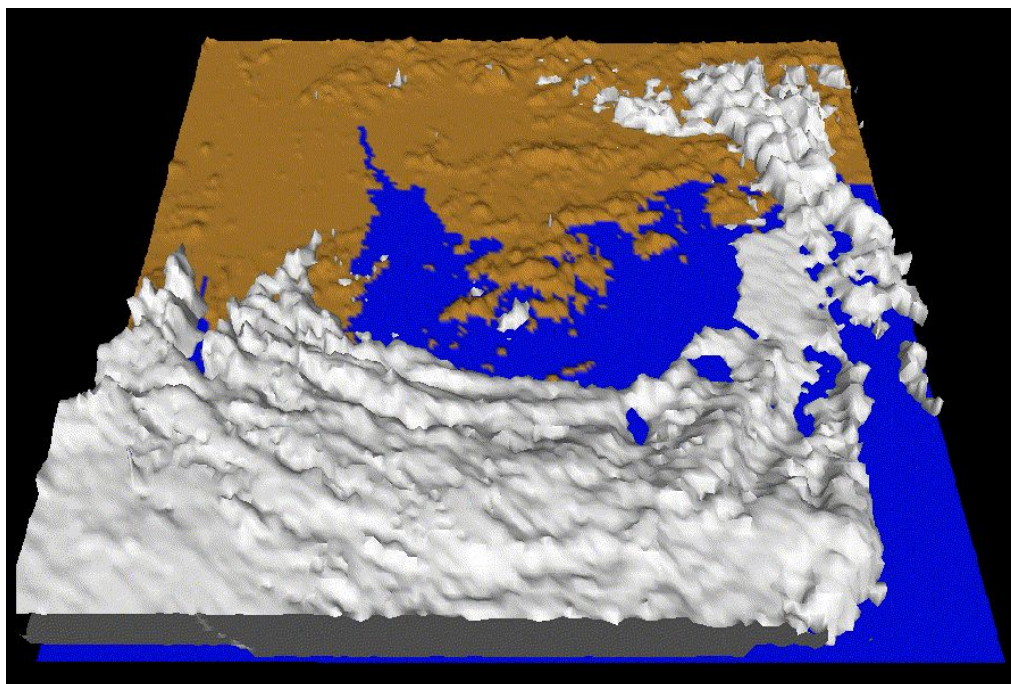


圖 3.4.5 強烈熱帶風暴鸚鵡在二零零八年八月二十二日下午 5 時 18 分的立體雷達回波圖像。當時鸚鵡的中心正在橫過九龍半島。

Figure 3.4.5 Three-dimensional radar echoes captured at 5:18 p.m. on 22 August 2008 of Severe Tropical Storm Nuri. The centre of Nuri was crossing the Kowloon Peninsula around that time.



圖 3.4.6 二零零八年八月二十二日下午五時二十分香港各區風向及風力分佈圖。

Figure 3.4.6 Wind distribution around Hong Kong as at 5:20 p.m. on 22 August 2008.

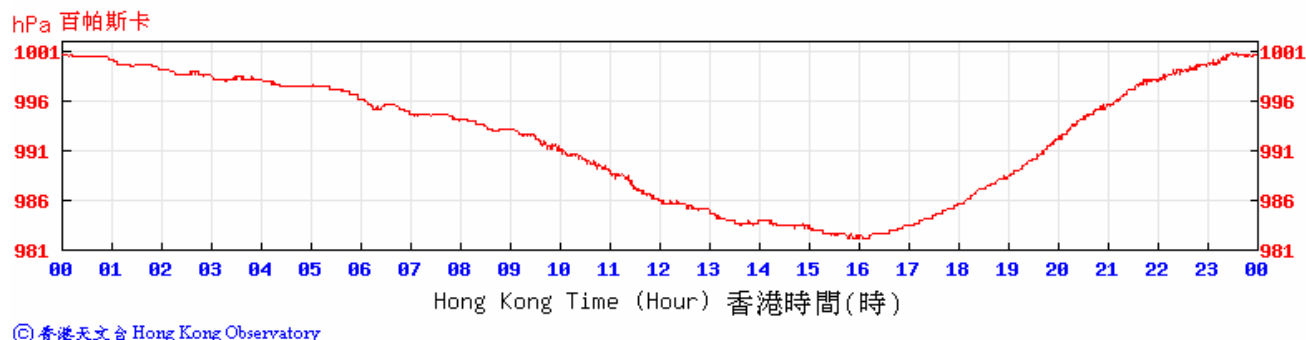


圖 3.4.7 天文台總部在二零零八年八月二十二日錄得的海平面氣壓變化。

Figure 3.4.7 Trace of mean sea level pressure recorded at the Hong Kong Observatory Headquarters on 22 August 2008.

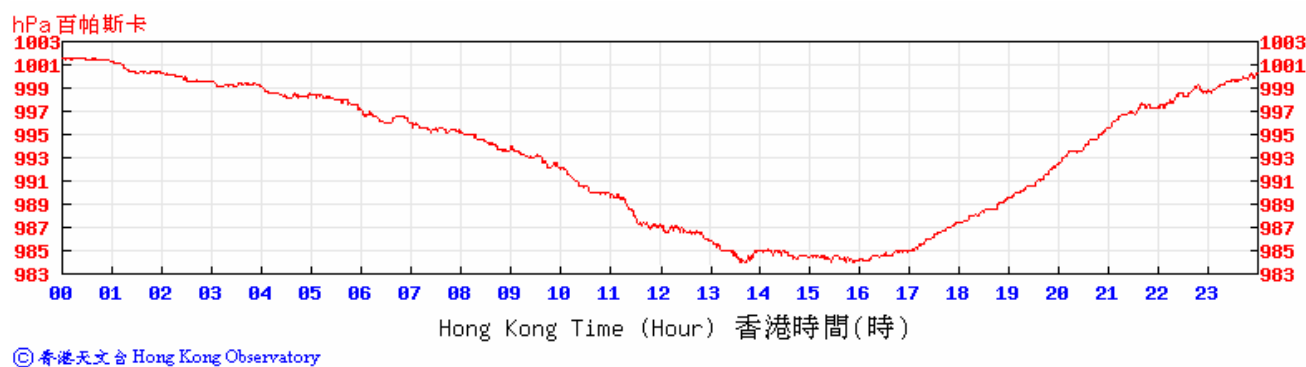


圖 3.4.8 長洲在二零零八年八月二十二日錄得的海平面氣壓變化。

Figure 3.4.8 Trace of mean sea level pressure recorded at Cheung Chau on 22 August 2008.

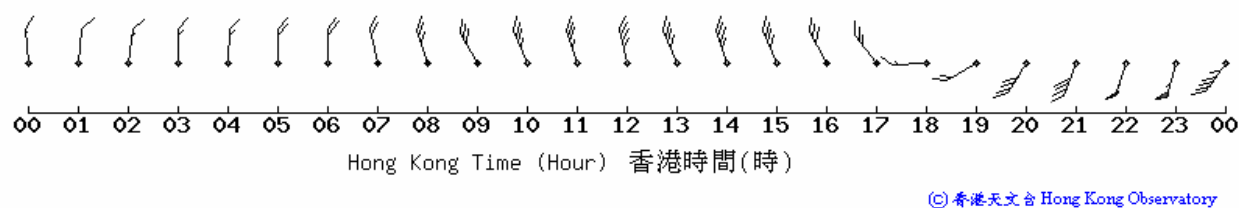


圖 3.4.9 長洲在二零零八年八月二十二日錄得的十分鐘平均風向及風速變化 ( \ 表示吹西風，風速為每小時 18 公里，而 ▴ 表示吹西風，風速為每小時 90 公里)

Figure 3.4.9 Ten-minute mean wind directions and speeds recorded at Cheung Chau on 22 August 2008 ( \ represents westerly winds with speed of 18 kilometres per hour and ▴ represents westerly winds with speeds of 90 kilometres per hour).