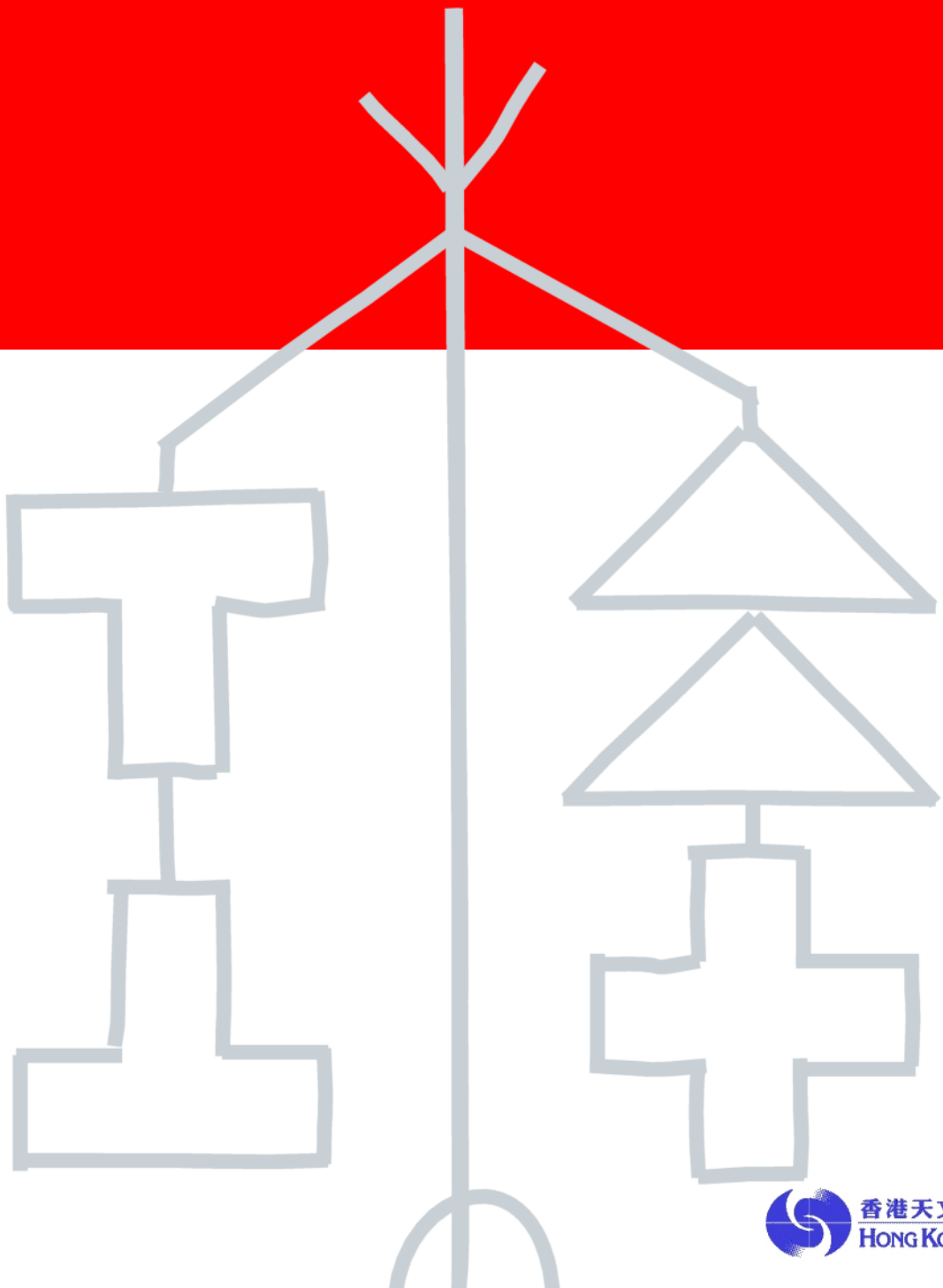
二零一四
熱帶氣旋
TROPICAL CYCLONES IN 2014



香港天文台
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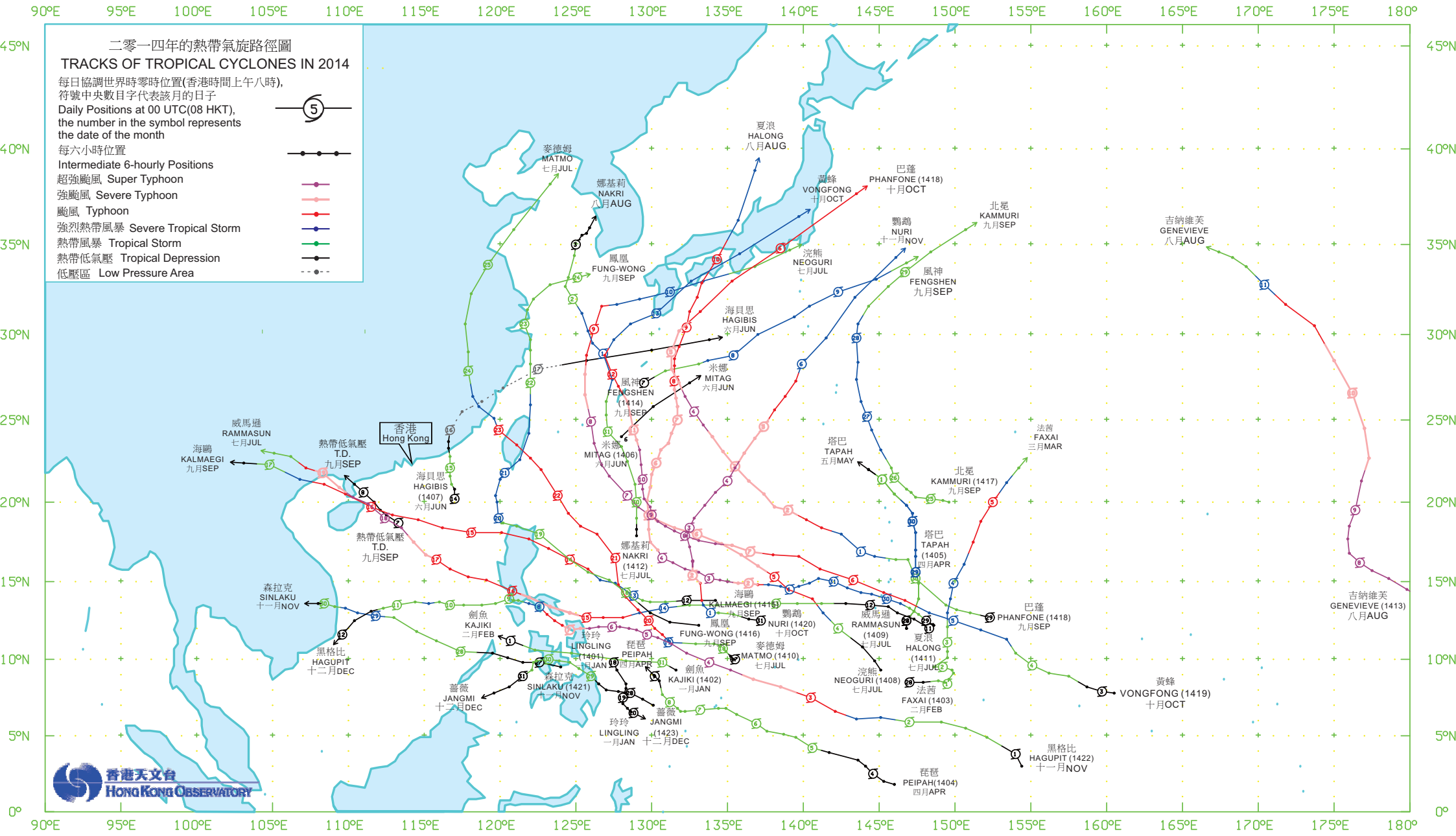
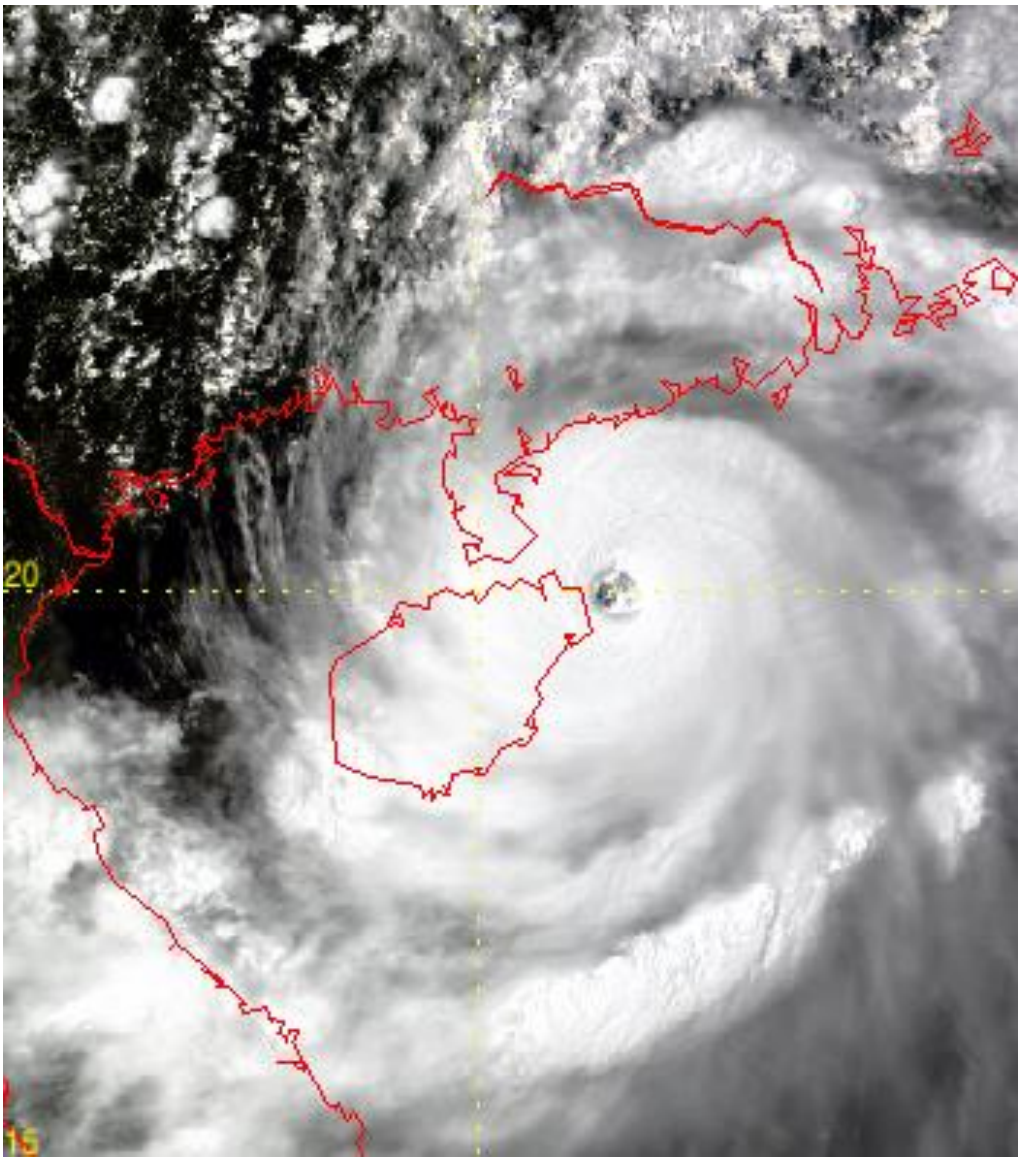

二零一四年的熱帶氣旋路徑圖
TRACKS OF TROPICAL CYCLONES IN 2014
每日協調世界時零時位置(香港時間上午八時),
符號中央數目字代表該月的日子
Daily Positions at 00 UTC(08 HKT),
the number in the symbol represents
the date of the month
每六小時位置
Intermediate 6-hourly Positions
超強颱風 Super Typhoon
強颱風 Severe Typhoon
颱風 Typhoon
強烈熱帶風暴 Severe Tropical Storm
熱帶風暴 Tropical Storm
熱帶低氣壓 Tropical Depression
低壓區 Low Pressure Area
香港
Hong Kong
威馬遜
RAMMASUN
七月JUL
海鷗
KALMAEGI
九月SEP
熱帶低氣壓
T.D.
九月SEP
海貝思
HAGIBIS
(1407)
六月JUN
熱帶低氣壓
T.D.
九月SEP
森拉克
SINLAKU
十一月NOV
黑格比
HAGUPIT
十二月DEC
劍魚
KAJIKI
二月FEB
蔷薇
JANGMI
十二月DEC
麥德姆
MATMO
七月JUL
娜基莉
NAKRI
八月AUG
鳳凰
FUNG-WONG
九月SEP
夏浪
HALONG
八月AUG
黃蜂
VONGFONG
十月OCT
巴蓬
PHANFONE (1418)
十月OCT
浣熊
NEOGURI
七月JUL
鸚鵡
NURI
十一月NOV
北冕
KAMMURI
九月SEP
風神
FENGSHEN
九月SEP
吉納維芙
GENEVIEVE
八月AUG
海貝思
HAGIBIS
六月JUN
米娜
MITAG
六月JUN
風神
FENGSHEN
(1414)
九月SEP
米娜
MITAG (1406)
六月JUN
塔巴
TAPAH
五月MAY
北冕
KAMMURI (1417)
九月SEP
法茜
FAXAI
三月MAR
塔巴
TAPAH
(1405)
四月APR
娜基莉
NAKRI
(1412)
七月JUL
海鷗
KALMAEGI (1415)
九月SEP
鳳凰
FUNG-WONG (1416)
九月SEP
鸚鵡
NURI (1420)
十月OCT
麥德姆
MATMO (1410)
七月JUL
玲玲
LINGLING
(1401)
一月JAN
琵琶
PEIPAH
四月APR
劍魚
KAJIKI (1402)
一月JAN
森拉克
SINLAKU (1421)
十一月NOV
蔷薇
JANGMI
(1423)
十二月DEC
玲玲
LINGLING
一月JAN
威馬遜
RAMMASUN
(1409)
七月JUL
浣熊
NEOGURI (1408)
七月JUL
夏浪
HALONG
(1411)
七月JUL
法茜
FAXAI (1403)
二月FEB
巴蓬
PHANFONE (1418)
九月SEP
黃蜂
VONGFONG (1419)
十月OCT
吉納維芙
GENEVIEVE (1413)
八月AUG
黑格比
HAGUPIT (1422)
十一月NOV
琵琶
PEIPAH(1404)
四月APR
香港天文台
HONG KONG OBSERVATORY
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
45°N
40°N
35°N
30°N
25°N
20°N
15°N
10°N
5°N
0°

香港天文台
HONG KONG OBSERVATORY

二零一四年熱帶氣旋

TROPICAL CYCLONES IN 2014



二零一五年七月出版
Published July 2015

香港天文台編製
香港九龍彌敦道134A

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551.515.2:551.506.1(512.317)

封面
超強颱風威馬遜於二零一四年七月十八日下午二時三十分的真彩衛星圖像。
〔此衛星圖像接收自美國國家海洋和大氣管理局的國家極地軌道夥伴(NPP)衛星。〕

Cover
True colour satellite image of Super Typhoon Rammasun captured at 2:30 p.m. on 18 July 2014.
[The image was captured by the National Polar-orbiting Partnership (NPP) satellite operated by the US National Oceanic and Atmospheric Administration (NOAA).]

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第一節　引言

1.1 熱帶氣旋刊物的沿革

除了在一九四零至一九四六年因二次大戰而中斷外，天文台自一八八四年以來便一直進行地面氣象觀測，並將整理好的數據撮列於由天文台出版的《氣象資料》年刊內。天文台在一九四七年開始進行高空氣象觀測後，該年刊便分成兩冊：分別是《氣象資料第一冊（地面觀測）》及《氣象資料第二冊（高空觀測）》。一九八一年，年刊第二冊改稱為《無線電探空儀觀測摘要》，而第一冊亦於一九八七年改稱為《香港地面觀測年報》。一九九三年，該兩刊物由一本名為《香港氣象觀測摘要》的新刊物所取代。這份摘要載列了地面及高空的氣象數據。

一八八四至一九三九年期間，部分對香港造成破壞的颱風的報告，曾以附錄形式載於《氣象資料》年刊內。而在一九四七至一九六七年出版的《天文台年報》，更擴充了有關熱帶氣旋的內容，收納所有導致香港吹烈風的熱帶氣旋的報告。其後，年刊系列加推《氣象資料第三冊（熱帶氣旋摘要）》，以記載每年北太平洋西部及南海區域所有熱帶氣旋的資料。此冊第一期在一九七一年出版，內容包括一九六八年赤道至北緯45度、東經100至160度範圍內所有熱帶氣旋的報告。由一九八五年開始，第三冊的覆蓋範圍東面邊界由東經160度伸展至180度。一九八七年，第三冊改稱為《熱帶氣旋年報》，內容大致上維持不變。年報由一九九七年起以中英雙語刊印，一年後加設電腦光碟版，二零零零年以網上版取代印刷版。

在一九三九年及以前，每年北太平洋西部及南海區域的熱帶氣旋的路徑圖都收錄於《氣象資料》年刊內。一九四七至一九六七年的路徑圖則載列於《氣象資料第一冊》內。在早期的刊物內，熱帶氣旋的路徑只顯示每日位置，而每日定位時間在某程度上還未統一。但到了一九四四年以後，則一直維持以每日協調世界時(UTC)零時作定位。此項改變的資料詳載於天文台出版的《技術記錄第十一號第一冊》內。由一九六一年開始，所有熱帶氣旋的路徑圖都顯示每六小時的位置。

為了能回應傳媒、航運界及其他有關人士或團體的需求，天文台自一九六零年開始就影響香港的個別熱帶氣旋編寫臨時報告，盡早為有需要的人士提供資料。初時，天文台只就那些曾導致天文台發出烈風或暴風信號以上的熱帶氣旋編寫臨時報告。自一九六八年起，天文台為所有引致天文台發出熱帶氣旋警告信號的熱帶氣旋編寫臨時報告。

1.2 熱帶氣旋等級

為了讓市民對較強的颱風特別提高警覺，天文台在二零零九年開始將「颱風」分為三級，即「颱風」、「強颱風」和「超強颱風」。根據熱帶氣旋中心附近的最高持續地面風速，熱帶氣旋共分為以下六個級別：

（i）　熱帶低氣壓（T.D.）的最高持續風速為每小時63公里以下。
（ii）　熱帶風暴（T.S.）的最高持續風速為每小時63至87公里。
（iii）　強烈熱帶風暴（S.T.S.）的最高持續風速為每小時88至117公里。

（iv） 颱風#（T.）的最高持續風速為每小時118至149公里。
（v） 強颱風*（S.T.）的最高持續風速為每小時150至184公里。
（vi） 超強颱風*（SuperT.）的最高持續風速為每小時185公里或以上。

1.3 熱帶氣旋命名

從一九四七年至一九九九年，北太平洋西部及南海區域的熱帶氣旋非正式地採用美國軍方「聯合颱風警報中心」所編訂的名單上的名字。由二零零零年開始，日本氣象廳根據一套新名單為每個達到熱帶風暴強度的熱帶氣旋命名。這套名單（表1.1）經颱風委員會通過，共有140個名字，分別由亞太區內14個國家或地區提供。這些名字除了用於為國際航空及航海界發放的預測和警報外，也是向國際傳媒發放熱帶氣旋消息時採用的規範名稱。而名單會每年檢討和更新，通常導致嚴重傷亡的熱帶氣旋會依照受影響國家或地區的要求而被刪除。提供該名字的國家或地區會建議新名字取代。

另外，日本氣象廳在一九八一年起已獲委託為每個在北太平洋西部及南海區域出現而達到熱帶風暴強度的熱帶氣旋編配一個四位數字編號。例如編號"1401"代表在二零一四年區內第一個被日本氣象廳分類為熱帶風暴或更強的熱帶氣旋。在年報內，此編號會顯示在熱帶氣旋名稱後的括弧內，例如熱帶低氣壓玲玲（1401）。

1.4 資料來源

年報內的海平面氣壓及地面風資料，是根據天文台氣象站及測風站網絡所錄得的數據。表1.2及1.3分別是該些網絡內各站的位置及海拔高度。

熱帶氣旋產生的最大風暴潮是由裝置在香港多處的潮汐測量器量度。圖1.1是本年報內提及的各個風速表及潮汐測量站的分佈地點。

年報內的雨量資料來自天文台氣象站和雨量站網絡及土力工程處的雨量站。

除特別列明外，年報內提及的最高持續風速均為10分鐘內風速的平均值；每小時平均風速為該小時前60分鐘內的平均風速；每日雨量為當天香港時間午夜前24小時內的總雨量。

1.5 年報內容

年報第二節是二零一四年所有影響北太平洋西部及南海區域的熱帶氣旋的概述。

年報第三節是二零一四年影響香港的熱帶氣旋的個別詳細報告，內容包括：

（i） 該熱帶氣旋對香港造成的影響；
（ii） 發出熱帶氣旋警告信號的過程；

二零零九年以前颱風的最高持續風速為每小時118公里或以上。
* 二零零九年新增等級

（iii） 香港各地錄得的最高陣風風速及最高每小時平均風速；
（iv） 香港天文台錄得的最低平均海平面氣壓；
（v） 香港天文台及其他地方錄得的每日總雨量；
（vi） 香港各潮汐測量站錄得的最高潮位及最大風暴潮；及
（vii） 氣象衛星雲圖及雷達圖像。

有關熱帶氣旋的各種資料及統計表載於年報第四節內。

二零一四年每個熱帶氣旋的每六小時位置，連同當時的最低中心氣壓及最高持續風速，則表列於年報第五節內。

年報依照內文需要採用了不同的時間系統。正式的時間以協調世界時（即UTC）為準。至於在熱帶氣旋的敘述中，用作表示每天各時段的詞彙，例如“上午”、“下午”、“早上”、“黃昏” 等則是指香港時間。香港時間為協調世界時加八小時。

1.6 香港的熱帶氣旋警告系統

表 1.4 是香港熱帶氣旋警告信號的定義。

由二零零七年開始，發出 3 號和 8 號信號的參考範圍由維多利亞港擴展至由八個涵蓋全港並接近海平面的參考測風站組成的網絡(圖 1.1 顯示 2014 年所採用的八個參考測風站)。這些測風站處於較為空曠的位置，地理上的考慮也包括山脈地勢的自然分隔，可概括地反映全港的風勢。

當參考網絡中半數或以上的測風站錄得或預料持續風速達到指標的風速限值，而且風勢可能持續時，天文台會考慮發出 3 號或 8 號信號。

Section 1 INTRODUCTION

1.1 Evolution of tropical cyclone publications

Apart from a disruption due to World War II during 1940-1946, surface observations of meteorological elements since 1884 have been summarized and published in the Observatory's annual publication "Meteorological Results". Upper-air observations began in 1947 and from then onwards the annual publication was divided into two parts, namely "Meteorological Results Part I - Surface Observations" and "Meteorological Results Part II - Upper-air Observations". These two publications were re-titled "Surface Observations in Hong Kong" and "Summary of Radiosonde-Radiowind Ascents" in 1987 and 1981 respectively. In 1993, both publications were merged into one revised publication entitled "Summary of Meteorological Observations in Hong Kong", including surface as well as upper-air data.

During the period 1884-1939, reports on some destructive typhoons were printed as Appendices to the "Meteorological Results". This practice was extended and accounts of all tropical cyclones which caused gales in Hong Kong were included in the publication "Director's Annual Departmental Reports" from 1947 to 1967 inclusive. The series "Meteorological Results Part III - Tropical Cyclone Summaries" was subsequently introduced to provide information on tropical cyclones over the western North Pacific and the South China Sea. The first issue, published in 1971, contained reports on tropical cyclones in 1968 within the area bounded by the Equator, 45°N, 100°E and 160°E. The eastern boundary of the area of coverage was extended from 160°E to 180° from 1985 onwards. In 1987, the series was re-titled as "Tropical Cyclones in YYYY" but its contents remained largely the same. Starting from 1997, the series was published in both Chinese and English. The CD-ROM version of the publication first appeared in 1998 and the printed version was replaced by the Internet version in 2000.

Tracks of tropical cyclones in the western North Pacific and the South China Sea were published in "Meteorological Results" up to 1939 and in "Meteorological Results Part I" from 1947 to 1967. In earlier publications, only daily positions were plotted on the tracks and the time of the daily positions varied to some extent, but then remained fixed at 0000 UTC after 1944. Details of the changes are given in the Observatory's publication "Technical Memoir No. 11, Volume 1". From 1961 onwards, six-hourly positions are shown on the tracks of all tropical cyclones.

Provisional reports on individual tropical cyclones affecting Hong Kong were prepared since 1960 to provide early information to meet the needs of the press, shipping companies and others. These reports were printed and supplied on request. Initially, provisional reports were only available for tropical cyclones for which gale or storm signals or above had been issued in Hong Kong. From 1968 onwards, provisional reports were prepared for all tropical cyclones that necessitated the issuance of tropical cyclone warning signals.

1.2 Classification of tropical cyclones

To enhance public awareness of stronger typhoons, the Observatory further categorised 'Typhoon' into 'Typhoon', 'Severe Typhoon' and 'Super Typhoon' starting from the 2009 tropical cyclone season. Tropical cyclones are now classified into the following six categories according to the maximum sustained surface winds near their centres:

(a) A TROPICAL DEPRESSION (T.D.) has maximum sustained winds of less than 63 km/h.
(b) A TROPICAL STORM (T.S.) has maximum sustained winds in the range 63-87 km/h.
(c) A SEVERE TROPICAL STORM (S.T.S.) has maximum sustained winds in the range 88-117 km/h.
(d) A TYPHOON[#] (T.) has maximum sustained winds of 118-149 km/h.
(e) A SEVERE TYPHOON* (S.T.) has maximum sustained winds of 150-184 km/h.
(f) A SUPER TYPHOON* (SuperT.) has maximum sustained winds of 185 km/h or more.

1.3 Naming of tropical cyclones

Over the western North Pacific and the South China Sea between 1947 and 1999, tropical cyclone names were assigned by the U.S. Armed Forces' Joint Typhoon Warning Center according to a pre-determined but unofficial list. With effect from 2000, the Japan Meteorological Agency has been assigned the responsibility to name tropical cyclones attaining tropical storm intensity according to a new list adopted by the Typhoon Committee. It contains a total of 140 names contributed by 14 countries or territories within the Asia Pacific region (Table 1.1). Apart from being used in forecasts and warnings issued to the international aviation and shipping communities, the names are also used officially in information on tropical cyclones issued to the international press. The list is reviewed every year, and usually names of tropical cyclones that have caused serious damage or casualty will be retired upon the requests of countries or territories affected. Countries or territories providing those names will then propose new names as replacement.

Besides, since 1981, Japan Meteorological Agency has been delegated with the responsibility of assigning to each tropical cyclone in the western North Pacific and the South China Sea attaining tropical storm intensity a numerical code of four digits. For example, the first tropical cyclone of tropical storm intensity or above, as classified by Japan Meteorological Agency, within the region in 2014 was assigned the code "1401". In this report, the associated code immediately follows the name of the tropical cyclone in bracket, e.g. Tropical Depression Lingling (1401).

1.4 Data sources

Mean sea level pressure and surface wind data presented in this report were obtained from a network of meteorological stations and anemometers operated by the Hong Kong Observatory. Details of such stations are listed in Tables 1.2 and 1.3.

Maximum storm surges caused by tropical cyclones were measured by tide gauges installed at several locations around Hong Kong. The locations of anemometers and tide gauges mentioned in this report are shown in Figure 1.1.

Rainfall data presented in this report were obtained from a network of meteorological and rainfall stations operated by the Hong Kong Observatory, as well as raingauges operated by the Geotechnical Engineering Office.

[#] Prior to 2009, the maximum sustained winds of typhoon was defined to be 118 km/h or more

* New categories adopted since 2009

Throughout this report, maximum sustained surface winds when used without qualification refer to wind speeds averaged over a period of 10 minutes. Hourly mean winds are winds averaged over a 60-minute interval ending on the hour. Daily rainfall amounts are computed over a 24-hour period ending at midnight Hong Kong Time.

1.5 Content

In Section 2, an overview of all the tropical cyclones over the western North Pacific and the South China Sea in 2014 is presented.

The reports in Section 3 are individual accounts of the life history of tropical cyclones affecting Hong Kong in 2014. They include the following information:-

(a) the effects of the tropical cyclone on Hong Kong;
(b) the sequence of display of tropical cyclone warning signals;
(c) the maximum gust peak speeds and maximum hourly mean winds recorded in Hong Kong;
(d) the lowest mean sea level pressure recorded at the Hong Kong Observatory;
(e) the daily amounts of rainfall recorded at the Hong Kong Observatory and selected locations;
(f) the times and heights of the maximum sea level and maximum storm surge recorded at various tide stations in Hong Kong;
(g) satellite and radar imageries.

Statistics and information relating to tropical cyclones are presented in various tables in Section 4.

Six-hourly positions together with the corresponding estimated minimum central pressures and maximum sustained surface winds for individual tropical cyclones in 2014 are tabulated in Section 5.

In this report, different time references are used depending on the contexts. The official reference times are given in Co-ordinated Universal Time and labelled UTC. Times of the day expressed as “a.m.”, “p.m.”, “morning”, “evening” etc. in the tropical cyclone narratives are in Hong Kong Time which is eight hours ahead of UTC.

1.6 Hong Kong’s Tropical Cyclone Warning System

Table 1.4 shows the meaning of tropical cyclone warning signals in Hong Kong.

Starting from 2007, the reference for the issuance of No.3 and No.8 signals has been expanded from the Victoria Harbour to a network of eight near-sea level reference anemometers covering the whole of Hong Kong. The eight reference anemometers adopted in 2014 are depicted in Figure 1.1. The reference anemometers have good exposure and geographical distribution, taking into account the physical separation created by Hong Kong’s natural terrain. Together, they are used to represent the overall wind condition in Hong Kong.

The Observatory will consider issuing the No. 3 or No. 8 signal, as the case may be, when half or more anemometers in the reference network register or are expected to register sustained strong winds or gale/storm force winds, and that the windy conditions are expected to persist.

表 1.1　　二零一四年一月一日起生效的熱帶氣旋名單
TABLE 1.1　　Tropical cyclone name list effective from 1 January 2014

來源	Contributed by	I	II	III	IV	V
		名字 Name	名字 Name	名字 Name	名字 Name	名字 Name
柬埔寨	Cambodia	達維 Damrey	康妮 Kong-rey	娜基莉 Nakri	科羅旺 Krovanh	莎莉嘉 Sarika
中國	China	海葵 Haikui	玉兔 Yutu	風神 Fengshen	杜鵑 Dujuan	海馬 Haima
朝鮮	DPR Korea	鴻雁 Kirogi	桃芝 Toraji	海鷗 Kalmaegi	彩虹 Mujigae	米雷 Meari
中國香港	Hong Kong, China	啟德 Kai-tak	萬宜 Man-yi	鳳凰 Fung-wong	彩雲 Choi-wan	馬鞍 Ma-on
日本	Japan	天秤 Tembin	天兔 Usagi	北冕 Kammuri	巨爵 Koppu	蝎虎 Tokage
老撾	Lao PDR	布拉萬 Bolaven	帕布 Pabuk	巴蓬 Phanfone	薔琵 Champi	洛坦 Nock-ten
中國澳門	Macau, China	三巴 Sanba	蝴蝶 Wutip	黃蜂 Vongfong	煙花 In-fa	梅花 Muifa
馬來西亞	Malaysia	杰拉華 Jelawat	聖帕 Sepat	鸚鵡 Nuri	茉莉 Melor	苗柏 Merbok
米克羅尼西亞	Micronesia	艾雲尼 Ewiniar	菲特 Fitow	森拉克 Sinlaku	尼伯特 Nepartak	南瑪都 Nanmadol
菲律賓	Philippines	馬力斯 Maliksi	丹娜絲 Danas	黑格比 Hagupit	盧碧 Lupit	塔拉斯 Talas
韓國	RO Korea	格美 Gaemi	百合 Nari	薔薇 Jangmi	銀河 Mirinae	奧鹿 Noru
泰國	Thailand	派比安 Prapiroon	韋帕 Wipha	米克拉 Mekkhala	妮妲 Nida	玫瑰 Kulap
美國	U.S.A.	瑪莉亞 Maria	范斯高 Francisco	海高斯 Higos	奧麥斯 Omais	洛克 Roke
越南	Viet Nam	山神 Son-Tinh	利奇馬 Lekima	巴威 Bavi	康森 Conson	桑卡 Sonca
柬埔寨	Cambodia	安比 Ampil	羅莎 Krosa	美莎克 Maysak	燦都 Chanthu	納沙 Nesat
中國	China	悟空 Wukong	海燕 Haiyan	海神 Haishen	電母 Dianmu	海棠 Haitang
朝鮮	DPR Korea	清松 Sonamu	楊柳 Podul	紅霞 Noul	蒲公英 Mindulle	尼格 Nalgae
中國香港	Hong Kong, China	珊珊 Shanshan	玲玲 Lingling	白海豚 Dolphin	獅子山 Lionrock	榕樹 Banyan
日本	Japan	摩羯 Yagi	劍魚 Kajiki	鯨魚 Kujira	圓規 Kompasu	天鴿 Hato
老撾	Lao PDR	麗琵 Leepi	法茜 Faxai	燦鴻 Chan-hom	南川 Namtheun	帕卡 Pakhar

表 1.1 (續)
TABLE 1.1 (cont'd)

來源 Contributed by		I	II	III	IV	V
		名字 Name	名字 Name	名字 Name	名字 Name	名字 Name
中國澳門	Macau, China	貝碧嘉 Bebinca	琵琶 Peipah	蓮花 Linfa	瑪瑙 Malou	珊瑚 Sanvu
馬來西亞	Malaysia	溫比亞 Rumbia	塔巴 Tapah	浪卡 Nangka	莫蘭蒂 Meranti	瑪娃 Mawar
米克羅尼西亞	Micronesia	蘇力 Soulik	米娜 Mitag	蘇迪羅 Soudelor	雷伊 Rai	古超 Guchol
菲律賓	Philippines	西馬侖 Cimaron	海貝思 Hagibis	莫拉菲 Molave	馬勒卡 Malakas	泰利 Talim
韓國	RO Korea	飛燕 Jebi	浣熊 Neoguri	天鵝 Goni	鮎魚 Megi	杜蘇芮 Doksuri
泰國	Thailand	山竹 Mangkhut	威馬遜 Rammasun	艾莎尼 Atsani	暹芭 Chaba	卡努 Khanun
美國	U.S.A.	尤特 Utor	麥德姆 Matmo	艾濤 Etau	艾利 Aere	韋森特 Vicente
越南	Viet Nam	潭美 Trami	夏浪 Halong	環高 Vamco	桑達 Songda	蘇拉 Saola

註：在二零一四年，西北太平洋和南海的熱帶氣旋名單上，新增一個新名字「安比」，取代舊有名字「寶霞」。
Note: In 2014, a new name "Ampil" has been adopted for tropical cyclones in the western North Pacific and South China Sea, replacing "Bopha".

表 1.2 年報內各氣壓表的位置及海拔高度
TABLE 1.2 Positions and elevations of various barometers mentioned in this annual report

站 Station		位置 Position		氣壓表的海拔高度(米) Elevation of barometer above M.S.L. (m)
		北緯 Latitude N	東經 Longitude E	
香港天文台總部	Hong Kong Observatory Headquarters	22°18'07"	114°10'27"	40
長洲	Cheung Chau	22°12'04"	114°01'36"	79
香港國際機場	Hong Kong International Airport	22°18'34"	113°55'19"	7
京士柏	King's Park	22°18'43"	114°10'22"	66
流浮山	Lau Fau Shan	22°28'08"	113°59'01"	36
橫瀾島	Waglan Island	22°10'56"	114°18'12"	60

表 1.3　　年報內各風速表的位置及海拔高度

TABLE 1.3　Positions and elevations of various anemometers mentioned in this annual report

站 Station		位置 Position		風速表的海拔高度(米) Elevation of anemometer above M.S.L. (m)
		北緯 Latitude N	東經 Longitude E	
黃麻角(赤柱)	Bluff Head (Stanley)	22°11’51”	114°12’43”	103
中環碼頭	Central Pier	22°17’20”	114°09’21”	30
長洲*	Cheung Chau*	22°12’04”	114°01’36”	99
長洲泳灘	Cheung Chau Beach	22°12’39”	114°01’45”	27
青洲	Green Island	22°17’06”	114°06’46”	107
香港國際機場*	Hong Kong International Airport*	22°18’34”	113°55’19”	14#
啟德*	Kai Tak*	22°18’35”	114°12’48”	16
京士柏	King’s Park	22°18’43”	114°10’22”	90
流浮山*	Lau Fau Shan*	22°28’08”	113°59’01”	50
昂坪	Ngong Ping	22°15’31”	113°54’46”	607
北角	North Point	22°17’40”	114°11’59”	26
坪洲	Peng Chau	22°17’28”	114°02’36”	47
平洲	Ping Chau	22°32’48”	114°25’42”	39
西貢*	Sai Kung*	22°22’32”	114°16’28”	32
沙洲	Sha Chau	22°20’45”	113°53’28”	31
沙螺灣	Sha Lo Wan	22°17’28”	113°54’25”	71
沙田*	Sha Tin*	22°24’09”	114°12’36”	16
石崗	Shek Kong	22°26’10”	114°05’05”	26
九龍天星碼頭	Star Ferry (Kowloon)	22°17’35”	114°10’07”	18
打鼓嶺*	Ta Kwu Ling*	22°31’43”	114°09’24”	28
大美督	Tai Mei Tuk	22°28’31”	114°14’15”	71
大帽山	Tai Mo Shan	22°24’38”	114°07’28”	966
大埔滘	Tai Po Kau	22°26’33”	114°11’03”	11
塔門	Tap Mun	22°28’17”	114°21’38”	35
大老山	Tate's Cairn	22°21’28”	114°13’04”	587
將軍澳	Tseung Kwan O	22°18’57”	114°15’20”	52
青衣島蜆殼油庫*	Tsing Yi Shell Oil Depot*	22°20’48”	114°05’11”	43
屯門政府合署	Tuen Mun Government Offices	22°23’26”	113°58’36”	69
橫瀾島	Waglan Island	22°10’56”	114°18’12”	83
濕地公園	Wetland Park	22°28’00”	114°00’32”	15
黃竹坑	Wong Chuk Hang	22°14’52”	114°10’25”	30

所指風速表在北跑道近中間位置

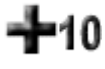
Refer to the wind sensor at the middle of the north runway

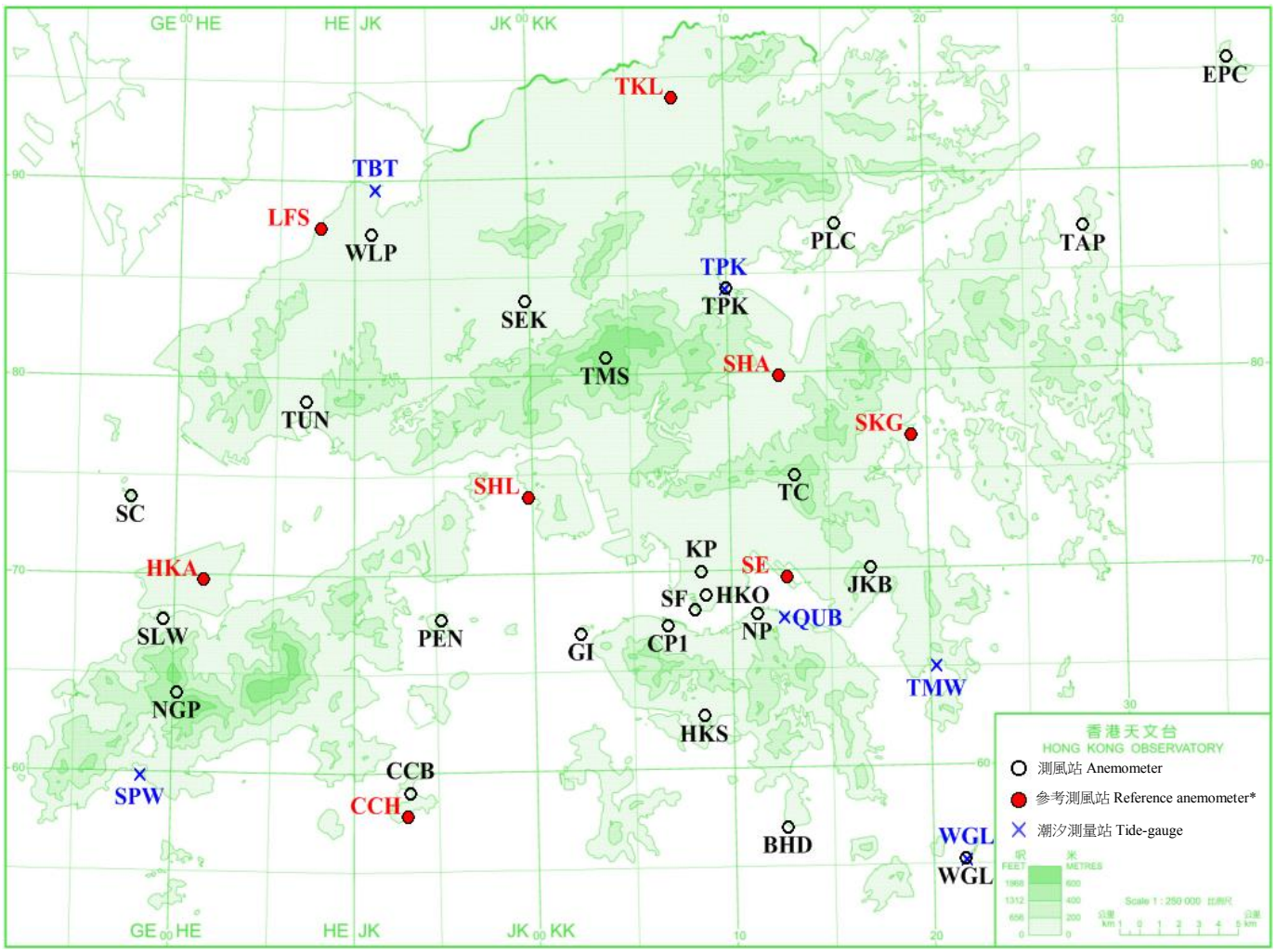
* 參考測風站

* Reference anemometer

表 1.4　　二零一四年香港熱帶氣旋警告信號的意義

TABLE 1.4　MEANING OF TROPICAL CYCLONE WARNING SIGNALS IN HONG KONG IN 2014

信號 **Signals**		顯示符號 **Symbol Display**	信號的意義 **Meaning of Signals**
戒備 Standby	1		有一熱帶氣旋集結於香港約800公里的範圍內，可能影響本港。 A tropical cyclone is centred within about 800 km of Hong Kong and may affect the territory.
強風 Strong Wind	3		香港近海平面處現正或預料會普遍吹強風，持續風力達每小時41至62公里，陣風更可能超過每小時110公里，且風勢可能持續。 Strong wind is expected or blowing generally in Hong Kong near sea level, with a sustained speed of 41-62 kilometres per hour (km/h), and gusts which may exceed 110 km/h, and the wind condition is expected to persist.
西北 烈風或暴風 NW'LY Gale or Storm	8 西北 NW		香港近海平面處現正或預料會普遍受烈風或暴風從信號所示方向吹襲，持續風力達每小時63至117公里，陣風更可能超過每小時180公里，且風勢可能持續。 Gale or storm force wind is expected or blowing generally in Hong Kong near sea level, with a sustained wind speed of 63-117 km/h from the quarter indicated and gusts which may exceed 180 km/h, and the wind condition is expected to persist.
西南 烈風或暴風 SW'LY Gale or Storm	8 西南 SW		
東北 烈風或暴風 NE'LY Gale or Storm	8 東北 NE		
東南 烈風或暴風 SE'LY Gale or Storm	8 東南 SE		
烈風或暴風 風力增強 Increasing Gale or Storm	9		烈風或暴風的風力現正或預料會顯著加強。 Gale or storm force wind is increasing or expected to increase significantly in strength.
颶風 Hurricane	10		風力現正或預料會達到颶風程度，持續風力達每小時118公里或以上，陣風更可能超過每小時220公里。 Hurricane force wind is expected or blowing with sustained speed reaching upwards from 118 km/h and gusts that may exceed 220 km/h.



* 熱帶氣旋警告系統的參考測風站網絡
Network of reference anemometers in the tropical cyclone warning system

測風站 Anemometers		測風站 Anemometers	
BHD	黃麻角(赤柱) Bluff Head (Stanley)	TUN	屯門政府合署 Tuen Mun Government Offices
CCB	長洲泳灘 Cheung Chau Beach	WLP	濕地公園 Wetland Park
CP1	中環碼頭 Central Pier	WGL	橫瀾島 Waglan Island
EPC	平洲 Ping Chau		
GI	青洲 Green Island	**參考測風站* Reference anemometers***	
HKO	天文台 Hong Kong Observatory	CCH	長洲 Cheung Chau
HKS	黃竹坑 Wong Chuk Hang	LFS	流浮山 Lau Fau Shan
JKB	將軍澳 Tseung Kwan O	HKA	香港國際機場 Hong Kong International Airport
KP	京士柏 King's Park	SE	啟德 Kai Tak
NGP	昂坪 Ngong Ping	SHA	沙田 Sha Tin
NP	北角 North Point	SHL	青衣島蜆殼油庫 Tsing Yi Shell Oil Depot
PEN	坪洲 Peng Chau	SKG	西貢 Sai Kung
PLC	大美督 Tai Mei Tuk	TKL	打鼓嶺 Ta Kwu Ling
SC	沙洲 Sha Chau		
SEK	石崗 Shek Kong	**潮汐測量站 Tide-gauge**	
SF	九龍天星碼頭 Star Ferry (Kowloon)	QUB	鰂魚涌 Quarry Bay
SLW	沙螺灣 Sha Lo Wan	SPW	石壁 Shek Pik
TAP	塔門 Tap Mun	TBT	尖鼻咀 Tsim Bei Tsui
TC	大老山 Tate's Cairn	TMW	大廟灣 Tai Miu Wan
TPK	大埔滘 Tai Po Kau	TPK	大埔滘 Tai Po Kau
TMS	大帽山 Tai Mo Shan	WGL	橫瀾島 Waglan Island

圖 1.1　　年報內提及的測風站及潮汐測量站之分佈地點。

Figure 1.1　Locations of anemometers and tide gauge stations mentioned in this annual report.

第二節　二零一四年熱帶氣旋概述

2.1　二零一四年的熱帶氣旋回顧

2.1.1　北太平洋西部（包括南海區域）的熱帶氣旋

二零一四年有24個熱帶氣旋影響北太平洋西部及南海區域（即由赤道至北緯45度、東經100至180度所包括的範圍），少於1961-2010年約30個的長期年平均數目。全年有11個熱帶氣旋達到颱風或以上強度，較1961-2010年的長期年平均數目(15個)為少，其中有八個熱帶氣旋更達到超強颱風程度(中心附近最高持續風速達到每小時185公里或以上)，是自二零零六年以來最多熱帶氣旋達到超強颱風程度的年份。

年內首個熱帶氣旋在一月形成，最後一個則在十二月形成。圖2.1是二零一四年在北太平洋西部及南海區域熱帶氣旋數目之逐月分佈。四月的熱帶風暴琵琶(1404)是本區域自二零零一年熱帶風暴畫眉(0126)以來最接近赤度生成的熱帶氣旋。

二零一四年八月沒有一個熱帶氣旋在北太平洋西部及南海區域生成，以八月而言是有記錄以來第一次。月內只有三個熱帶氣旋(包括來自北太平洋中部的吉納維芙)影響這個海域。八月份熱帶氣旋一般生成位置在菲律賓以東的海域。在正常情況下，跨越赤道氣流所產生的西南風會與副熱帶高壓脊南側的偏東風形成熱帶輻合帶，在適合的大氣條件下熱帶氣旋會在熱帶輻合帶內生成。但由於該股西南氣流在二零一四年八月明顯較正常弱，導致輻合效應降低。同時，副熱帶高壓脊位置偏南及偏強，與其相關的下沉氣流也抑制了雲團的發展。

二零一四年內有六個熱帶氣旋在中國大陸登陸，其中一個在香港300公里內的華南沿岸登陸。兩個熱帶氣旋橫過台灣，四個登陸日本，七個橫過菲律賓及兩個登陸越南。十月的超強颱風鸚鵡(1420)及十一月的超強颱風黑格比(1422)（圖2.3及2.4）是二零一四年北太平洋西部及南海區域最強的熱帶氣旋，兩者中心附近最高持續風速估計為每小時250公里，而最低海平面氣壓為905百帕斯卡（表4.1）。

2.1.2　香港責任範圍內的熱帶氣旋

在二零一四年的24個熱帶氣旋中，有十個出現在香港責任範圍（即北緯10至30度、東經105至125度），較1961-2010年約16個的長期年平均數目少六個（表2.1），當中有八個在香港責任範圍內形成。

2.1.3　南海區域內的熱帶氣旋

二零一四年共有八個熱帶氣旋影響南海區域（即北緯10至25度、東經105至120度），較1961-2010年約12個的長期年平均數目為少，當中只有兩個在南海上形成。

七月十八日超強颱風威馬遜(1409)（圖3.2.3）的中心附近最高持續風速達每小時240公里，是1950年有記錄以來在南海區域內最強的颱風。

2.1.4 影響香港的熱帶氣旋

二零一四年香港的颱風季節於六月十四日開始，當天熱帶風暴海貝思(1407)緩慢地靠近廣東東部沿岸，天文台發出一號戒備信號。九月十七日颱風海鷗(1415)減弱為強烈熱帶風暴並進一步移入越南北部內陸，二零一四年颱風季節隨著天文台當天取消熱帶氣旋警告信號而結束。

年內共有四個熱帶氣旋影響香港（圖2.2），少於1961-2010年約六個的長期年平均數目(表2.2)。這四個熱帶氣旋分別為六月的熱帶風暴海貝思(1407)、七月的超強颱風威馬遜(1409)、九月的熱帶低氣壓及颱風海鷗(1415)。天文台在海鷗影響香港期間曾發出八號烈風或暴風信號，是年內發出的最高熱帶氣旋警告信號。威馬遜吹襲期間天文台曾發出三號強風信號。海貝思及九月的熱帶低氣壓則只需發出一號戒備信號。

2.1.5 熱帶氣旋的雨量

二零一四年熱帶氣旋為香港帶來的雨量（即由熱帶氣旋出現於香港600公里範圍內至其消散或離開香港600公里範圍之後72小時期間天文台總部錄得的雨量）共為192.8毫米（表4.8.1），約佔年內總雨量2638.3毫米的百分之7.3，比1961-2010年的長期年平均值的728.8毫米少約74%。

颱風海鷗(1415)為天文台總部帶來77.2毫米的雨量(表4.8.1)，是年內雨量最多的熱帶氣旋。

2.2 每月概述

這一節逐月介紹二零一四年北太平洋西部及南海區域的熱帶氣旋概況。影響香港的各熱帶氣旋及傷亡報告則詳述於第三節。

一月

熱帶低氣壓玲玲(1401)於一月十八日在馬尼拉之東南約890公里的北太平洋西部上空形成，並大致向偏南方向移動，橫過菲律賓南部以東海域，其中心附近的最高持續風速為每小時55公里。玲玲於一月二十日在菲律賓南部以東的海面上消散。

熱帶低氣壓劍魚(1402) 於一月三十一日在馬尼拉之東南偏東約1 300公里的北太平洋西部上空形成，並向西移動。劍魚於當日下午增強為熱帶風暴，及達到其最高強度，中心附近最高持續風速為每小時85公里。它於晚上橫過菲律賓中部，二月一日進入南海南部不久後消散。

二月至三月

熱帶低氣壓法茜(1403)於二月二十八日在關島之東南約650公里的北太平洋西部上空形成，初時移動緩慢。法茜於三月一日向偏北方向移動，並增強為熱帶風暴，兩天後再增強為強烈熱帶風暴，並加速向東北偏北移動。它於三月五日凌晨在關島東北的太平洋上進一步增強為颱風及達到其最高強度，中心附近最高持續風速為每小時130公里，並向東北移動。隨後法茜逐漸減弱，翌日在北太平洋西部上演變為溫帶氣旋。

四月至五月

熱帶低氣壓琵琶(1404)於四月三日在關島以南約1 310公里的北太平洋西部上形成，並大致向西北偏西方向移動，逐漸靠近菲律賓。它於兩日後增強為熱帶風暴及達到其最高強度，中心附近最高持續風速 為每小時65公里。琵琶在四月八日晚上減弱為熱帶低氣壓，翌日移動轉為緩慢，在菲律賓以東海域徘徊，於四月十日在海面上消散。

熱帶低氣壓塔巴(1405)於四月二十八日在關島之東南約270公里的北太平洋西部上形成，並大致向東北偏北方向移動。它在當日下午發展為熱帶風暴，翌日增強為強烈熱帶風暴及達到其最高強度，中心附近最高持續風速為每小時110公里。塔巴在四月三十日轉向西北方向移動，並開始減弱。它在五月一日早上減弱為熱帶風暴，晚上在硫黃島之東南的海面上消散。

六月

熱帶低氣壓米娜(1406)於六月十一日下午在沖繩島以南約250公里的北太平洋西部上形成，並向東北移動。其中心附近最高持續風速估計為每小時55公里。米娜於翌日上午在沖繩島以東的海面上演變為一股溫帶氣旋。

熱帶低氣壓海貝思(1407)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。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。

七月

熱帶低氣壓浣熊(1408)於七月三日在關島以南約470公里的北太平洋西部形成，並大致向西北方向移動。浣熊在隨後數天繼續發展，並於七月七日在沖繩島之東南偏南處增強為超強颱風及達到其最高強度，中心附近最高持續風速估計為每小時195公里。它於七月八日開始轉向偏北方向移動，橫過琉球群島並減弱為強颱風。浣熊翌日再度轉向，朝東北偏東方向移動，七月十日上午在鹿兒島縣沿岸登陸，並進一步減弱為熱帶風暴，掠過九州和本州南部海岸，翌日上午於本州以東海域演變為一股溫帶氣旋。

根據報章報導，浣熊橫掃日本期間，導致至少七人死亡，超過50人受傷，逾50萬人要撤離家園。沖繩縣至少有八萬六千戶停電，超過190班航班取消。

熱帶低氣壓威馬遜(1409)於七月十一日早上在關島之東南偏東約410公里的北太平洋西部形成，隨後數天穩定地向偏西方向移動，並逐漸增強，發展為強颱風後於七月十五和十六日期間轉向西北偏西方向移動，橫過菲律賓中部後進入南海。受到陸地影響威馬遜曾一度減弱，在南海重新組織，並於七月十八日增強為超強颱風，達到其最高強度，中心附近最高持續風速估計為每小時240公里。威馬遜採取一個西北路徑，當天稍後於海南島北部文昌市附近登陸，翌日早上橫過廣西海岸，在內陸減弱，七月二十日在雲南減弱為一個低壓區。

根據報章報導，威馬遜吹襲菲律賓期間造成最少98人死亡，五人失蹤，另外630人受傷。威馬遜在海南島、廣東西部及廣西等地亦造成嚴重破壞，最少有18人死亡，三萬七千間房屋倒塌，740萬人受災。

熱帶低氣壓麥德姆(1410)於七月十七日早上在雅蒲島之西北偏西約280公里的北太平洋西部形成，初時緩慢向西移動，七月十九日轉向西北方向移動，當天晚上增強為颱風。麥德姆隨後繼續增強，於七月二十二日早上達到其最高強度，中心附近最高持續風力估計為每小時140公里。麥德姆於七月二十三日早上橫過台灣，日間減弱為強烈熱帶風暴，傍晚在福建福清市附近登陸，翌日早上進一步減弱為熱帶風暴。麥德姆向北橫過華東，七月二十五日掠過山東半島南岸，晚間在黃海北部演變為一股溫帶氣旋。

根據報章報導，麥德姆吹襲台灣期間，海陸空交通癱瘓，超過30萬戶停水停電。一架民航機在麥德姆引發的惡劣天氣下於澎湖群島失事墜毀，48人死亡，另外有十人受傷。麥德姆亦為福建、山東及華東地區帶來暴雨，最少有30萬人受災。

熱帶低氣壓夏浪(1411)於七月二十九日早上在關島之東南偏東約440公里的北太平洋西部形成，向西北偏西方向移動，翌日上午增強為強烈熱帶風暴。夏浪在隨後數天維持偏西途徑移動，趨向菲律賓以東的海域。它於八月二日晚上增強為超強颱風，翌日上午達到其最高強度，中心附近最高持續風速估計為每小時230公里。夏浪於八月四日轉向偏北方向移動並減弱為強颱風，隨後數天掠過琉球群島以東海域。它於八月十日橫過日本西部，並進一步減弱為強烈熱帶風暴，翌日上午在日本海演變為一股溫帶氣旋。根據報章報導，夏浪吹襲日本期間，造成最少十人死亡，96人受傷，兩人失蹤，超過470班航班取消。

熱帶低氣壓娜基莉(1412)於七月二十九日下午在馬尼拉之東北偏東約930公里的北太平洋西部形成，大致以偏北途徑移動，並增強為熱帶風暴，於七月三十一日橫過琉球群島，向東海進發。娜基莉於八月一日上午進一步增強為強烈熱帶風暴，並達到其最高強度，最高持續風速估計為每小時105公里。它在隨後兩天橫過東海並逐漸減弱，於八月四日上午在黃海北部演變為一股溫帶氣旋。 根據報章報導，娜基莉為日本四國帶來暴雨，引發洪水和山泥傾瀉，約45萬人需要疏散。

八月

超強颱風吉納維芙(1413)在北太平洋東部上空形成，並向偏西方向移動，於八月七日橫過國際換日線進入北太平洋西部，翌日上午達到其最高強度，中心附近最高持續風速估計為每小時230公里，並轉向偏北方向移動。隨後數天吉納維芙向西北漂移，並逐漸減弱，於八月十二日上午在威克島以北的海面消散。

九月

一股熱帶低氣壓於九月七日早上在海口之東南偏東約340公里的南海北部上形成，並採取西北路徑移向廣東西部至雷州半島一帶。它於當日下午達到其最高強度，中心附近最高持續風速估計為每小時55公里。九月八日下午熱帶低氣壓於湛江市附近登陸，晚上在雷州半島減弱為一個低壓區。

熱帶低氣壓風神(1414)於九月七日上午在沖繩島之東北偏東約210公里的北太平洋西部上形成，向東北偏東移動，當日下午發展為熱帶風暴。風神在翌日早上進一步增強為強烈

熱帶風暴，並達到其最高強度，中心附近最高持續風速為每小時105公里。風神繼續採取東北偏東路徑橫過日本以南海域，並逐漸減弱，於九月九日晚上演變為一股溫帶氣旋。

熱帶低氣壓海鷗(1415)於九月十二日早上在馬尼拉以東約1 430公里的北太平洋西部上空形成，向西北偏西方向移動，並逐漸增強為颱風。海鷗於九月十四日晚上橫過呂宋北部，翌日早上進入南海後繼續迅速移動。它在九月十六日上午於海南島東北部文昌市附近登陸前達到其最高強度，中心附近最高持續風速為每小時140公里。海鷗當日下午橫過北部灣，晚上於越南北部登陸，移入內陸及逐漸減弱，最後於九月十七日下午在雲南減弱為一個低壓區。

根據報章報導，海鷗在海南島、廣東西部及廣西等地造成嚴重破壞，最少有三人死亡、一人失蹤及大約600萬人受災，海陸空交通癱瘓。而海鷗引致的風暴潮亦令沿海地區出現海水倒灌，部分地區嚴重水浸，其中海口潮位是一九七三年有記錄以來最高。

熱帶低氣壓鳳凰(1416)於九月十七日下午在馬尼拉以東約1 340公里的北太平洋西部上空形成，大致向西北方向移動，翌日早上增強為熱帶風暴。鳳凰於九月十九日掠過呂宋北部後，採取偏北路徑橫過呂宋海峽，翌日早上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為每小時90公里。鳳凰於九月二十一日早上抵達台灣南部，沿著台灣東岸移動，翌日早上減弱為熱帶風暴。鳳凰於九月二十三日掠過中國東部沿岸後，隨後轉向東北偏東方向移動，翌日早上在朝鮮半島以南海域演變為一股溫帶氣旋。

根據報章報導，鳳凰吹襲菲律賓期間，造成最少17人死亡，數百間房屋被毀。而鳳凰為台灣帶來傾盆大雨，多處地方山洪暴發，至少導致四人遇難，逾百航班受阻。據初步統計，鳳凰在浙江省所造成的經濟損失約8億港元。

熱帶低氣壓北冕(1417)於九月二十四日晚上在關島之東北約920公里的北太平洋西部上形成，向西緩慢移動，翌日上午增強為熱帶風暴。北冕在九月二十六日上午開始採取西北偏北途徑移向日本以南海域，於九月二十七日早上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。北冕當晚轉向東北移動，於九月二十九日在日本以東海域演變為一股溫帶氣旋。

熱帶低氣壓巴蓬(1418)於九月二十九日早上在關島以東約810公里的北太平洋西部上形成，並採取西北路徑大致移向琉球群島及日本以南海域。隨後數天巴蓬逐步增強，於十月二日早上發展為強颱風，並於十月四日早上在沖繩島東南偏南約600公里處增強為超強颱風，達到其最高強度，中心附近最高持續風速為每小時185公里。巴蓬隨後開始減弱，並於十月五日轉向東北移動，掠過本州南部，最後於十月六日下午在日本以東海域演變為一股溫帶氣旋。根據報章報導，巴蓬吹襲日本期間造成最少九人死亡，超過320萬居民需要疏散，逾600班航班取消。

十月

熱帶低氣壓黃蜂(1419)於十月三日早上在關島之東南偏東約1 800公里的北太平洋西部上形成，隨後數天它穩定地向西北偏西方向移動及逐漸增強。黃蜂於十月七日晚上發展為超強颱風，並於翌日早上達到其最高強度，中心附近最高持續風速為每小時240公里。它於十月九日採取偏北路徑移向琉球群島，並開始逐漸減弱。黃蜂於十月十一日下午掠過琉球群島後，翌日晚上轉向東北移動，並減弱為強烈熱帶風暴。它於十月十三日先後橫過日本九州南部、四國南部及本州，最後於十月十四日在本州以東海域演變為一股溫帶氣旋。根

據報章報導，黃蜂橫掃日本期間造成至少三人死亡，約100人受傷。約660班航班取消。沖繩及九州至少有10萬戶停電。

熱帶低氣壓鸚鵡(1420)於十月三十一日早上在馬尼拉以東約1 770公里的北太平洋西部上形成，大致採取偏西路徑移動，當晚發展為熱帶風暴，翌日轉向西北偏北方向移動並繼續增強。鸚鵡於十一月二日晚上發展為超強颱風，翌日早上在硫黃島西南約1 210公里處達到其最高強度，中心附近最高持續風速為每小時250公里。隨後數天鸚鵡採取東北路徑橫過硫黃島西北的海面，並逐漸減弱，最後於十一月七日早上在日本以東海域演變為一股溫帶氣旋。

十一月

熱帶低氣壓森拉克(1421)於十一月二十七日早上在馬尼拉之東南偏南約650公里處形成，向西北偏西方向橫過菲律賓南部，翌日早上增強為熱帶風暴，橫過南海南部。森拉克於十一月二十九日在胡志明市之東北偏東約540公里處進一步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為每小時90公里。森拉克於十一月三十日凌晨登陸越南南部，並逐漸減弱，最後於當晚在柬埔寨減弱為低壓區。

十二月

熱帶低氣壓黑格比(1422)於十二月一日早上在關島之東南約1 580公里的北太平洋西部上形成，向西北偏西移動，當日下午發展為熱帶風暴。隨後數天黑格比繼續增強，於十二月四日凌晨發展為超強颱風，在最高強度時中心附近最高持續風速估計為每小時250公里。隨後兩天黑格比轉向偏西方向移動和逐步減弱。十二月七日黑格比橫過菲律賓中部，翌日減弱為熱帶風暴。十二月九日黑格比進入南海中部後繼續採取偏西路徑移動，並於十二月十日晚上在南沙島之東北偏北約 370 公里處再度增強為強烈熱帶風暴。隨後黑格比轉向西南偏西移動和逐漸減弱，最後於十二月十二日早上靠近越南南部海岸時減弱為一個低壓區。

根據報章報導，黑格比吹襲菲律賓期間造成至少27人死亡，逾100萬人需要撤離家園，多處大規模停電，海空交通大受影響。

熱帶低氣壓薔薇(1423)於十二月二十七日晚上在馬尼拉之東南約1 350公里的北太平洋西部上形成，大致向西北偏西移動，橫過菲律賓南部，於十二月二十九日增強為熱帶風暴，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。十二月三十日薔薇向西南方漂移，翌日在蘇祿海減弱為一個低壓區。

根據報章報導，薔薇吹襲菲律賓期間造成至少21人死亡。

備註：人命傷亡及財物損毀數據是根據報章報導輯錄而成。

Section 2 TROPICAL CYCLONE OVERVIEW FOR 2014

2.1 Review of tropical cyclones in 2014

2.1.1 Tropical cyclones over the western North Pacific (including the South China Sea)

In 2014, a total of 24 tropical cyclones occurred over the western North Pacific and the South China Sea bounded by the Equator, 45°N, 100°E and 180°, less than the long term (1961-2010) average figure of around 30. During the year, 11 of the tropical cyclones attained typhoon intensity or above, less than the long term average (15) of 1961 – 2010. Eight of them reached super typhoon intensity (maximum 10-minute wind speed of 185 km/h or above near the centre), the highest since 2006.

The first tropical cyclone of the year formed in January and the last one in December. Figure 2.1 shows the monthly frequencies of the occurrence of tropical cyclones in the western North Pacific and the South China Sea in 2014. Tropical Storm Peipah (1404) in April formed nearest to the Equator since Tropical Storm Vamei (0126) in 2001.

No tropical cyclone formed over the western North Pacific and the South China Sea in August 2014, the first time for August on records. Only three tropical cyclones (including Genevieve from the central North Pacific) affected the basin. In August, tropical cyclones normally form over the sea areas to the east of the Philippines where the southwesterly airstream generated by cross-equatorial flow converges with the easterly winds over the southern flank of the subtropical ridge, forming the Intertropical Convergence Zone where tropical cyclones may develop under favourable atmospheric conditions. However, the southwesterly airstream was significantly weaker than normal in August 2014, and hence leading to relatively weak convergence effect. Moreover, the subtropical ridge in August 2014 was stronger and located further to the south than normal. The related subsidence also hindered the development of cloud clusters.

During the year, six tropical cyclones made landfall over mainland China, with one of them making landfall over the south China coast within 300 km of Hong Kong. Two tropical cyclones crossed Taiwan, four made landfall over Japan, seven traversed the Philippines and two made landfall over Vietnam. Super Typhoon Nuri (1420) in October and Super Typhoon Hagupit (1422) in November (Figures 2.3 and 2.4) were the most intense tropical cyclones in 2014 over the western North Pacific and the South China Sea. Both had an estimated maximum sustained wind speed of 250 km/h and a minimum sea-level pressure of 905 hPa near their centres (Table 4.1).

2.1.2 Tropical cyclones in Hong Kong's area of responsibility

Amongst the 24 tropical cyclones in 2014, ten of them occurred inside Hong Kong's area of responsibility (i.e. the area bounded by 10°N, 30°N, 105°E and 125°E), less than the long term annual average figure of around 16 by six (Table 2.1). Eight of them developed within Hong Kong's area of responsibility. Altogether, 231 tropical cyclone warnings to ships and vessels were issued by the Hong Kong Observatory in 2014 (Table 4.2).

2.1.3 Tropical cyclones over the South China Sea

Eight tropical cyclones affected the South China Sea bounded by 10°N, 25°N, 105°E and 120°E in 2014, less than the long term annual average of around 12. Only two of them formed within the basin.

With an estimated maximum sustained wind 240 km/h near its centre on 18 July, Super Typhoon Rammasun (1409) (Figure 3.2.3) became the most intense typhoon to occur in the South China Sea since record began in 1950.

2.1.4 Tropical cyclones affecting Hong Kong

In 2014, the typhoon season in Hong Kong started on 14 June when Tropical Storm Hagibis (1407) slowly edged towards the coastal areas of eastern Guangdong, necessitating the issuance of the Standby Signal No. 1. The typhoon season ended with the cancellation of tropical cyclone warning signals on 17 September as Typhoon Kalmaegi (1415) weakened into a Severe Tropical Storm and moved further inland into the northern part of Vietnam.

Four tropical cyclones affected Hong Kong during 2014 (Figure 2.2), less than the long term (1961-2010) average figure of about six in a year (Table 2.2). They were Tropical Storm Hagibis (1407) in June, Super Typhoon Rammasun (1409) in July, Tropical Depression and Typhoon Kalmaegi (1415) in September. The No. 8 Gale or Storm Signal was issued during the passage of Kalmaegi, the highest tropical cyclone warning signal issued in 2014. The Strong Wind Signal No. 3 was issued during the passage of Rammasun. Hagibis and Tropical Depression only necessitated the issuance of Standby Signal No. 1 in Hong Kong.

2.1.5 Tropical cyclone rainfall

Tropical cyclone rainfall (total rainfall recorded at the Hong Kong Observatory Headquarters from the time when a tropical cyclone comes within 600 km of Hong Kong to 72 hours after it has dissipated or moved more than 600 km away from Hong Kong) in 2014 was 192.8 mm (Table 4.8.1). This accounted for approximately 7.3 % of the year's total rainfall of 2638.3 mm and was about 74 % below the 1961-2010 long term average of 728.8 mm.

Typhoon Kalmaegi (1415) brought 77.2 mm of rainfall to the Hong Kong Observatory Headquarters (Table 4.8.1) and was the wettest tropical cyclone in 2014.

2.2 Monthly overview

A monthly overview of tropical cyclones is given in this section. Detailed reports on tropical cyclones affecting Hong Kong, including reports of damage, are presented in Section 3.

JANUARY

Lingling (1401) formed as a tropical depression over the western North Pacific about 890 km southeast of Manila on 18 January and moved generally southwards across the seas east of the southern Philippines. The estimated maximum sustained winds near its centre was about 55 km/h. Lingling dissipated over the sea to the east of the southern Philippines on 20 January.

Kajiki (1402) formed as a tropical depression over the western North Pacific about 1 300 km east-southeast of Manila on 31 January and moved westwards. Kajiki intensified into a tropical storm in the afternoon, reaching its peak intensity with estimated sustained winds of 85 km/h near its centre. After crossing the central part of the Philippines that night, Kajiki soon dissipated after moving into the southern part of the South China Sea on 1 February.

FEBRUARY TO MARCH

Faxai (1403) formed as a tropical depression over the western North Pacific about 650 km southeast of Guam on 28 February and moved slowly initially. Faxai took on a northerly track on 1 March and intensified into a tropical storm. It intensified into a severe tropical storm two days later and speeded up towards the north-northeast. Moving northeastwards, Faxai intensified further into a typhoon over the Pacific to the northeast of Guam in the small hours on 5 March, reaching its peak intensity with estimated sustained winds of 130 km/h near its centre. It weakened gradually thereafter and became an extratropical cyclone over the western North Pacific the following day.

APRIL TO MAY

Peipah (1404) formed as a tropical depression over the western North Pacific about 1 310 km south of Guam on 3 April and generally moved west-northwestwards, edging closer to the Philippines. It intensified into a tropical storm two days later, reaching its peak intensity with estimated sustained winds of 65 km/h near its centre. Peipah weakened into a tropical depression on the night of 8 April. It became slow-moving and lingered over the sea areas east of the Philippines the next day, before dissipating over the seas on 10 April.

Tapah (1405) formed as a tropical depression over the western North Pacific about 270 km southeast of Guam on 28 April and generally moved north-northeastwards. It intensified into a tropical storm that afternoon and became a severe tropical storm the next day, reaching its peak intensity with estimated sustained winds of 110 km/h near its centre. Tapah turned northwestwards and started to weaken on 30 April. It weakened into a tropical storm on the morning of 1 May and dissipated over the seas southeast of Iwo Jima that night.

JUNE

Tropical depression Mitag (1406) formed over the western North Pacific about 250 km south of Okinawa on the afternoon of 11 June and moved northeastwards. The estimated maximum sustained winds near its centre was about 55 km/h. Mitag became an extratropical cyclone over the seas east of Okinawa on the morning of 12 June.

Hagibis (1407) 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. 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.

JULY

Neoguri (1408) formed as a tropical depression over the western North Pacific about 470 km south of Guam on 3 July and generally moved northwestwards. It continued to develop in the next few days and intensified into a super typhoon on 7 July to the south-southeast of Okinawa, reaching its peak intensity with estimated sustained winds of 195 km/h near its centre. It turned northwards on 8 July, crossing the Ryukyu Islands and weakening into a severe typhoon. Following another turn to the east-northeast the next day, Neoguri finally made landfall over the coast of Kagoshima Prefecture on the morning of 10 July. Weakening further into a tropical storm, it skirted past the south coast of Kyushu and Honshu before becoming an extratropical cyclone over the seas east of Honshu the next morning.

According to press reports, at least seven people were killed, more than 50 injured and over 500 000 people evacuated in Japan during the passage of Neoguri. There were also interruptions of electricity supply to at least 86 000 households in Okinawa Prefecture. More than 190 flights were cancelled.

Rammasun (1409) formed as a tropical depression over the western North Pacific about 410 km east-southeast of Guam on the morning of 11 July. It intensified gradually and moved westwards steadily in the following few days. Rammasun developed into a severe typhoon and turned west-northwestwards on 15 and 16 July, moving across the central part of the Philippines and entering the South China Sea. After weakening over terrain, Rammasun re-organized over the South China Sea and intensified into a super typhoon on 18 July, reaching its peak intensity with an estimated sustained wind of 240 km/h near its centre. Tracking northwestwards, it made landfall near Wenchang over the northern part of Hainan Island later that day and crossed the coast of Guangxi the next morning. Rammasun weakened over land and became an area of low pressure over Yunnan on 20 July.

According to press reports, at least 98 people were killed, five were missing and 630 others were injured in the Philippines during the passage of Rammasun. It also wreaked havoc in Hainan Island, western Guangdong and Guangxi. At least 18 people were killed, 37 000 houses collapsed, with 7.4 million people affected.

Matmo (1410) formed as a tropical depression over the western North Pacific about 280 km west-northwest of Yap on the morning of 17 July. Moving slowly westwards initially, it turned northwestwards on 19 July and intensified into a typhoon that night. It continued to intensify and reached its peak intensity with estimated sustained winds of 140 km/h near its centre on the morning of 22 July. Matmo moved across Taiwan on the morning of 23 July and weakened into a severe tropical storm during the day. It made landfall near Fuqing of Fujian that evening and weakened further into a tropical storm the next morning. Tracking northwards across eastern China, Matmo skirted the south coast of Shandong Peninsula on 25 July and became an extratropical cyclone over the northern part of the Yellow Sea during the night.

According to press reports, all transportation services were suspended and there were interruptions of water and electricity supply to over 300 000 households in Taiwan during the passage of Matmo. A civilian aircraft crashed at the Penghu islands under severe weather triggered by Matmo, killing 48 people and injuring ten others. Matmo also brought rainstorms to Fujian, Shandong and eastern China, affecting at least 300 000 people.

Halong (1411) formed as a tropical depression over the western North Pacific about 440 km east-southeast of Guam on the morning of 29 July and moved west-northwestwards. It intensified into a severe tropical storm the next morning and continued to move generally westwards in the

direction of the sea areas east of the Philippines. Halong became a super typhoon on the night of 2 August and reached its peak intensity the next morning with estimated sustained winds of 230 km/h near its centre. Turning northwards on 4 August, Halong weakened into a severe typhoon as it moved over the seas east of Ryukyu Islands in the following few days. Halong crossed the western part of Japan on 10 August and further weakened into a severe tropical storm before becoming an extratropical cyclone over the Sea of Japan the next morning. According to press reports, at least ten people were killed, 96 injured and two reported missing in Japan during the passage of Halong. More than 470 flights were cancelled.

Nakri (1412) formed as a tropical depression over the western North Pacific about 930 km east-northeast of Manila on the afternoon of 29 July. Moving generally northwards and intensifying into a tropical storm, it swept past the Ryukyu Islands and headed towards the East China Sea on 31 July. Nakri intensified further into a severe tropical storm on the morning of 1 August, reaching its peak intensity with estimated sustained winds of 105 km/h. It moved across the East China Sea in the next couple of days and weakened gradually, before becoming an extratropical cyclone over the northern part of the Yellow Sea on the morning of 4 August. According to press reports, Nakri brought torrential rain to Shikoku of Japan, triggering flooding and landslides, and around 450 000 people had to be evacuated.

AUGUST

Having formed over the eastern North Pacific, Super Typhoon Genevieve (1413) tracked westwards crossing the International Date Line and entered the western North Pacific on 7 August. Genevieve reached its peak intensity the next morning with estimated sustained winds of 230 km/h near its centre and turned northwards. Drifting northwestwards and weakening gradually, Genevieve dissipated over the sea areas north of Wake Island on the morning of 12 August.

SEPTEMBER

A tropical depression formed over the northern part of the South China Sea about 340 km east-southeast of Haikou on the morning of 7 September. Taking a northwesterly track towards western Guangdong and the Leizhou Peninsula, it reached peak intensity that afternoon with an estimated sustained wind of 55 km/h near its centre. The tropical depression made landfall near Zhanjiang on the afternoon of 8 September and weakened into an area of low pressure over the Leizhou Peninsula that night.

Fengshen (1414) formed as tropical depression over the western North Pacific about 210 km east-northeast of Okinawa on the morning of 7 September. Drifting east-northeastwards, it developed into a tropical storm that afternoon. Fengshen intensified further into a severe tropical storm the next morning, reaching peak intensity with an estimated maximum sustained wind of 105 km/h near its centre. Maintaining an east-northeasterly track, Fengshen moved across the seas south of Japan and weakened gradually. It became an extratropical cyclone on the night of 9 September.

Kalmaegi (1415) formed as a tropical depression over the western North Pacific about 1 430 km east of Manila on the morning of 12 September. It moved west-northwestwards and intensified gradually into a typhoon. Kalmaegi moved across the northern part of Luzon on the night of 14 September and maintained a good pace after entering the South China Sea the next morning. It reached peak intensity with an estimated sustained wind of 140 km/h near its centre before making landfall near Wenchang over the northeastern part of Hainan Island on the morning of 16 September. After crossing Beibu Wan in the afternoon, Kalmaegi made landfall over the

northern part of Vietnam that night. Moving inland and weakening gradually, it finally became an area of low pressure over Yunnan on the afternoon of 17 September.

According to press reports, Kalmaegi wreaked havoc in Hainan Island, western Guangdong and Guangxi, resulting in at least three deaths, one missing and about 6 million people affected. Transportation services were suspended. Storm surge triggered by Kalmaegi caused backflow of sea water in coastal areas, resulting in severe flooding in some areas. Sea level at Haikou was the highest since record began in 1973.

Fung-wong (1416) formed as a tropical depression over the western North Pacific about 1 340 km east of Manila on the afternoon of 17 September. Moving northwestwards, Fung-wong intensified into a tropical storm the next morning. It skirted past the northern part of Luzon on 19 September and turned northwards across Luzon strait. It intensified into a severe tropical storm the next morning, reaching peak intensity with an estimated sustained wind of 90 km/h near its centre. Fung-wong reached the southern part of Taiwan on the morning of 21 September and moved along the east coast of Taiwan. It weakened into a tropical storm the next morning. After skirting past the coast of eastern China on 23 September, it turned east-northeastward and became an extratropical cyclone over the seas south of the Korean Peninsula the next morning.

According to press reports, at least 17 people were killed and several hundred houses were damaged in the Philippines during the passage of Fung-wong. Torrential rain associated with Fung-wong also triggered extensive landslides and flooding in Taiwan, causing at least four deaths and more than a hundred flights disrupted. According to preliminary estimates, economic losses in Zhejiang Province as a result of Fung-wong were around HK$800 million.

Kammuri (1417) formed as a tropical depression over the western North Pacific about 920 km northeast of Guam on the morning of 24 September and moved slowly westwards. It intensified into a tropical storm the next morning. Kammuri started to take a north-northwesterly track towards the seas south of Japan on the morning of 26 September and intensified into a severe tropical storm on the early morning 27 September, reaching peak intensity with estimated sustained winds of 90 km/h near its centre. Kammuri turned northeastwards that night and became an extratropical cyclone over the seas east of Japan on 29 September.

Phanfone (1418) formed as a tropical depression over the western North Pacific about 810 km east of Guam on the morning of 29 September and tracked northwestwards in the general direction of Ryukyu Islands and the seas south of Japan. Phanfone intensified gradually in the following few days, developing into a severe typhoon on the morning of 2 October and becoming a super typhoon about 600 km south-southeast of Okinawa on the morning of 4 October. At peak intensity, maximum sustained wind reached 185 km/h near its centre. Phanfone then started to weaken and turn northeastwards on 5 October, skirting past the southern part of Honshu. It finally evolved into an extratropical cyclone over the seas east of Japan on the afternoon of 6 October. According to press reports, at least nine people were killed, more than 3.2 million people had to be evacuated and over 600 flights were cancelled in Japan during the passage of Phanfone.

OCTOBER

Vongfong (1419) formed as a tropical depression over the western North Pacific about 1 800 km east-southeast of Guam on the morning of 3 October. It intensified gradually and moved west-northwestwards steadily in the following few days. Vongfong developed into a super typhoon on the night of 7 October and reached peak intensity the next morning with an estimated maximum sustained wind of 240 km/h near its centre. It took on a northward course towards Ryukyu Islands

on 9 October and started to weaken gradually. After skirting past Ryukyu Islands on the afternoon of 11 October, Vongfong turned northeastwards and weakened into a severe tropical storm the following night. It swept across the southern part of Kyushu, the southern part of Shikoku and Honshu of Japan on 13 October and became an extratropical cyclone over the seas east of Honshu on 14 October. According to press reports, at least three people were killed and around 100 people were injured in Japan during the passage of Vongfong. About 660 flights were cancelled. Electricity supply to at least 100 000 households in Okinawa and Kyushu was interrupted.

Nuri (1420) formed as a tropical depression over the western North Pacific about 1 770 km east of Manila on the morning of 31 October and moved generally westwards. Developing into a tropical storm that night, Nuri turned north-northwestwards the following day and continued to intensify. It developed into a super typhoon about 1 210 km southwest of Iwo Jima on the night of 2 November and reached its peak intensity the next morning with an estimated sustained winds of 250 km/h near its centre. Tracking northeastwards, Nuri moved across the sea areas northwest of Iwo Jima and weakened gradually in the following few days. It finally evolved into an extratropical cyclone over the seas east of Japan on the morning of 7 November.

NOVEMBER

Sinlaku (1421) formed as a tropical depression about 650 km south-southeast of Manila on the morning of 27 November and moved west-northwestwards across the southern part of the Philippines. It intensified into a tropical storm the next morning and moved across the southern part of the South China Sea. Sinlaku further intensified into a severe tropical storm about 540 km east-northeast of Ho Chi Minh City on 29 November, reaching peak intensity with an estimated sustained winds of 90 km/h near its centre. Sinlaku made landfall over southern Vietnam in the small hours of 30 November and weakened gradually. It finally weakened into an area of low pressure over Cambodia that night.

DECEMBER

Hagupit (1422) formed as a tropical depression over the western North Pacific about 1 580 km southeast of Guam early on 1 December. It moved west-northwestwards, intensifying into a tropical storm that afternoon. It continued to intensify in the next few days and developed into a super typhoon in the small hours of 4 December, with an estimated sustained winds of 250 km/h near its centre at peak intensity. Hagupit turned westwards in the next two days and gradually weakened. It moved across the central part of the Philippines on 7 December and became a tropical storm the next day. Entering the central part of the South China Sea on 9 December, it continued on a westward track and re-intensified into a severe tropical storm about 370 km north-northeast of Nansha on the night of 10 December. Moving west-southwestwards and weakening gradually, Hagupit finally degenerated into an area of low pressure as it approached the coast of southern Vietnam on the morning of 12 December.

According to press reports, at least 27 people were killed and over a million people had to be evacuated in the Philippines during the passage of Hagupit. There were also reports of widespread power outages and disruption in sea and air traffic.

Jangmi (1423) formed as a tropical depression over the western North Pacific about 1 350 km southeast of Manila on the night of 27 December and generally followed a west-northwesterly track. Moving across the southern part of the Philippines, Jangmi intensified into a tropical storm on 29 December and reached its peak intensity with an estimated sustained

winds of 75 km/h near its centre. It drifted southwestwards on 30 December and weakened into an area of low pressure over the Sulu Sea the next day.

According to press reports, at least 21 people were killed in the Philippines during the passage of Jangmi.

Note: Casualties and damage figures were compiled from press reports.

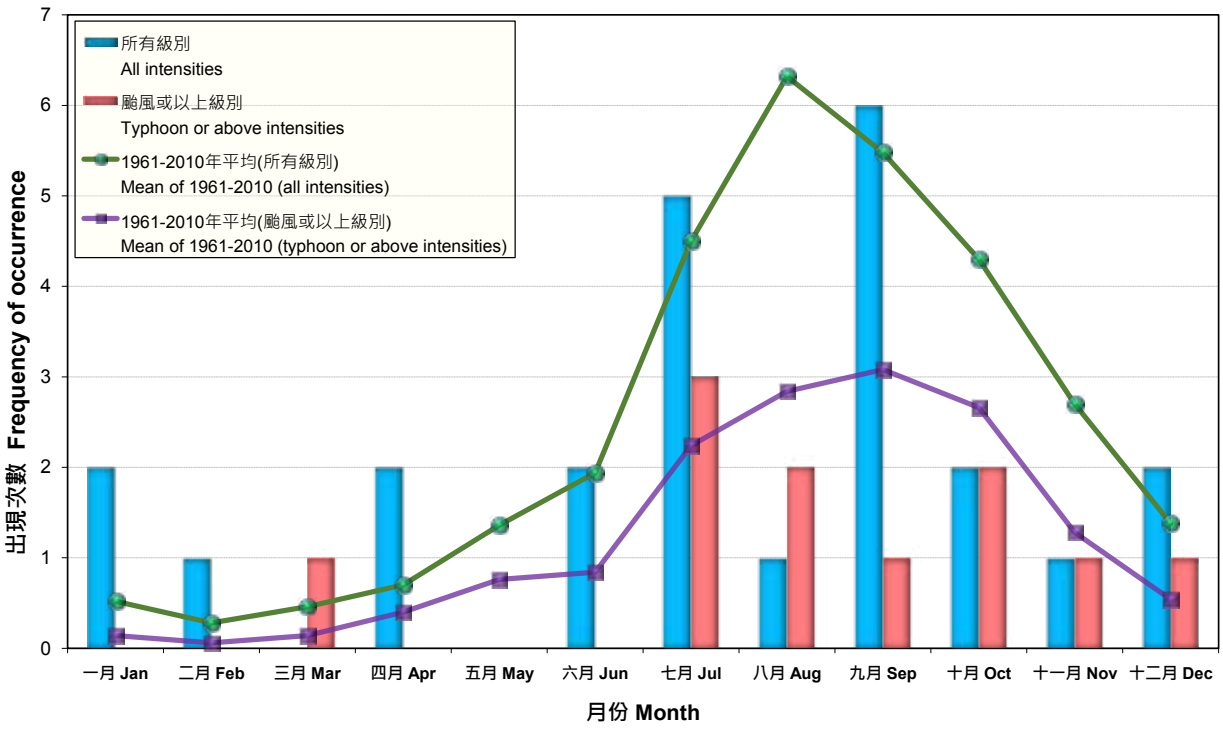


圖 2.1　二零一四年在北太平洋西部及南海區域的熱帶氣旋出現次數之每月分佈 (以熱帶氣旋在該月初次出現為準，假如一熱帶氣旋在九月形成並在十月首次增強為颱風或以上級別，它在「所有級別」及「颱風或以上級別」的統計數字將分別計算在九月及十月份內)。

Figure 2.1　Monthly frequencies of the occurrence of tropical cyclones in the western North Pacific and the South China Sea in 2014 (based on the first occurrence of the tropical cyclone in the month; for example if a tropical cyclone forms in September and first intensifies into typhoon or above intensities in October, its related statistics for "all intensities" and "typhoon or above intensities" will be counted in September and October respectively).

圖 2.2　二零一四年四個影響香港的熱帶氣旋的路徑圖。

Figure 2.2　Tracks of the four tropical cyclones affecting Hong Kong in 2014.

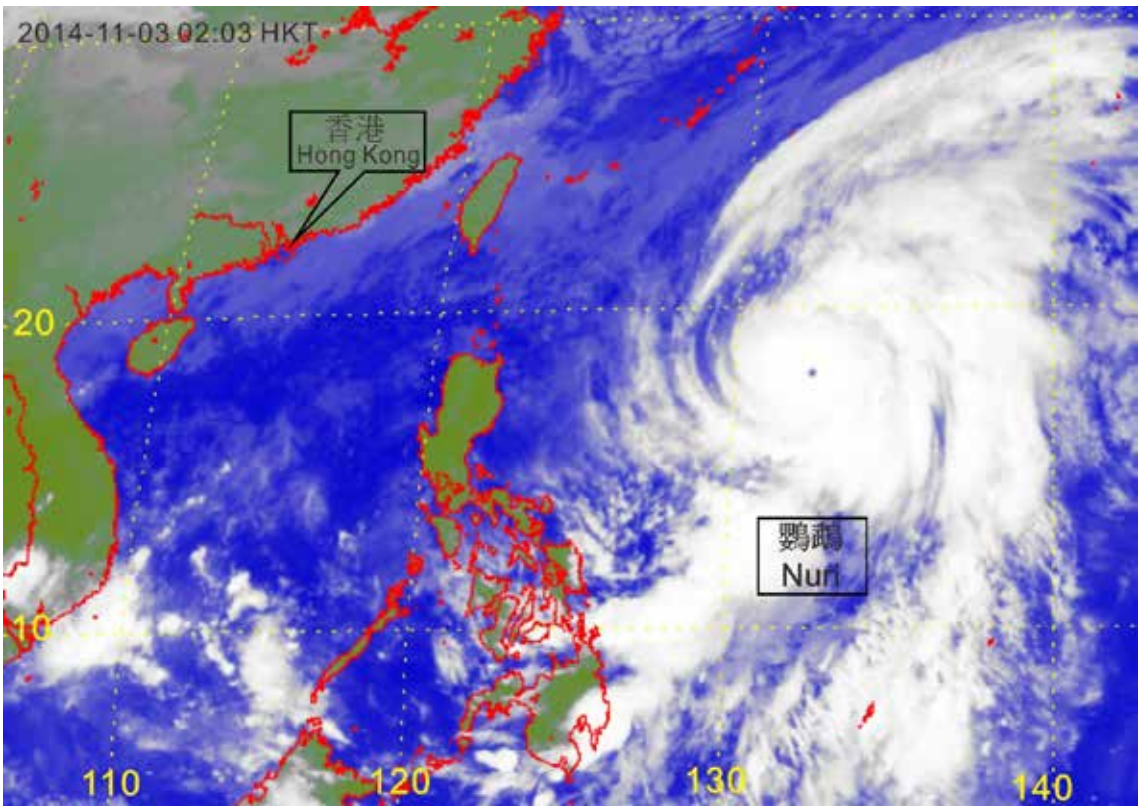


圖 2.3　超強颱風鸚鵡(1420)在二零一四年十一月三日上午2時的紅外線衛星圖片。當時鸚鵡位於馬尼拉之東北偏東約1 260公里的北太平洋西部上，最高風速估計為每小時250公里，而最低中心氣壓為905百帕斯卡。

Figure 2.3　Infra-red satellite imagery of Super Typhoon Nuri (1420) at peak intensity at 2 a.m. on 3 November 2014. Nuri was centred over the western North Pacific about 1 260 km east-northeast of Manila with an estimated maximum sustained wind of 250 km/h and a minimum sea-level pressure of 905 hPa at that time.

〔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 (MTSAT-2) of Japan Meteorological Agency (JMA).]

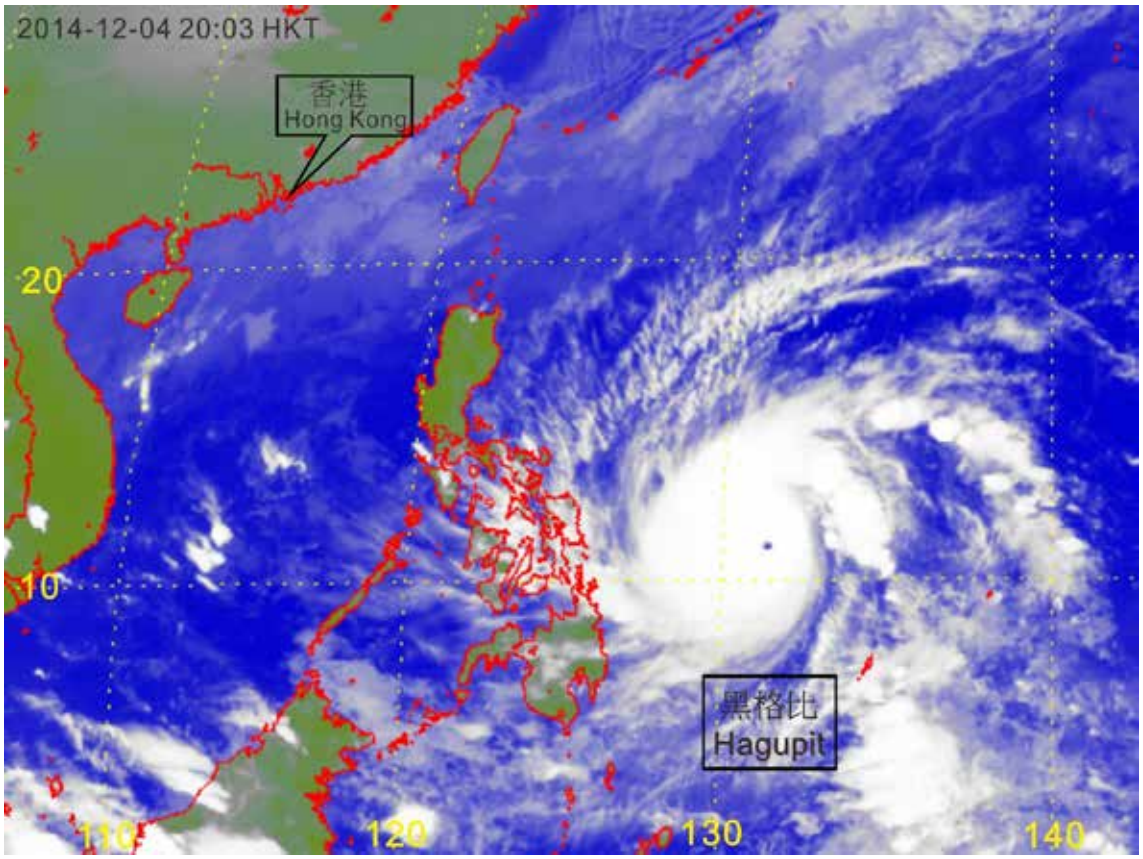


圖 2.4　超強颱風黑格比(1422)在二零一四年十二月四日下午8時的紅外線衛星圖片。當時黑格比位於馬尼拉之東南偏東約1 180公里的北太平洋西部上，最高風速估計為每小時250公里，而最低中心氣壓為905百帕斯卡。

Figure 2.4　Infra-red satellite imagery of Super Typhoon Hagupit (1422) at peak intensity at 8 p.m. on 4 December 2014. Hagupit was centred over the western North Pacific about 1 180 km east-southeast of Manila with an estimated maximum sustained wind of 250 km/h and a minimum sea-level pressure of 905 hPa at that time.

〔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 (MTSAT-2) of Japan Meteorological Agency (JMA).]

表 2.1 在香港責任範圍內(10º-30ºN, 105º-125ºE)熱帶氣旋出現之每月分佈(以熱帶氣旋在該月初次出現為準)

TABLE 2.1 MONTHLY DISTRIBUTION OF THE OCCURRENCE OF TROPICAL CYCLONES IN HONG KONG'S AREA OF RESPONSIBILITY (10º - 30ºN, 105º - 125ºE), BASED ON THE FIRST OCCURRENCE OF THE TROPICAL CYCLONE IN THE MONTH

年份 Year	月份 Month												共 Total
	一月 Jan	二月 Feb	三月 Mar	四月 Apr	五月 May	六月 Jun	七月 Jul	八月 Aug	九月 Sep	十月 Oct	十一月 Nov	十二月 Dec	
1961					3	5	2	5	4	3	1	1	24
1962					3		4	5	4	1	3		20
1963						3	3	3	2			2	13
1964					1	1	5	3	6	3	6	1	26
1965	1				2	3	4	3	2		1		16
1966					2		5	2	3	2	2	1	17
1967			1	1		1	2	6	1	2	3		17
1968							2	4	2	1	3		12
1969							3	3	4	1			11
1970		1				2	2	3	4	5	3		20
1971				1	2	2	5	3	3	4			20
1972	1					3	2	4	2	1	1	1	15
1973							4	4	2	4	3		17
1974						3	2	4	2	4	4	2	21
1975	1					1		3	2	3	1	1	12
1976					1	1	1	4	1		1	1	10
1977						1	4	1	3		1		10
1978	1			1		2	2	4	5	4	1		20
1979				1	2	1	3	5	2	2	1	1	18
1980			1		3	1	5	2	3	1	1		17
1981						3	3	3	1	1	3	1	15
1982			2		1	1	3	3	3	1		2	16
1983						1	3	1	3	5	2		15
1984						2	2	4	2	2	2		14
1985						2	2	2	4	4	1		15
1986					1	1	1	4	1	3	3	2	16
1987						1	3	2	1	1	3	1	12
1988	1				1	3	1	1	2	5	2	1	17
1989					2	1	4	2	4	3	1		17
1990					1	4	2	3	3	3	2		18
1991				1	1	1	3	2	2	1	3		14
1992						2	3	2	2	2			11
1993						1	1	2	3	2	2	3	14
1994				1	1	2	6	5	2	2		1	20
1995						1	1	5	5	3	1	1	17
1996		1		1	2		3	3	2	1	2		15
1997					1		1	4	1	2	1		10
1998							1	3	4	3	3	1	15
1999				1		1	1	2	3	2	1	1	12
2000					2	1	3	5	3	3	2	1	20
2001					1	2	4	2	2	1	1	1	14
2002	1					1	3	2	3				10
2003				1	1	2	2	3	1	1	1		12
2004			1		1	3	2	2	2	1	2	1	15
2005			1				2	3	4	3	2		15
2006					1	1	3	3	4	1	2	1	16
2007							1	4	3	1	3		12
2008				1	2	1	2	3	5	1	2		17
2009					2	2	3	2	3	4	1		17
2010							3	4	2	2			11
2011					2	3	1	2	2	2			12
2012				1		3	2	3	1	2		2	14
2013						2	3	4	4	3	3		19
2014	1					1	2		3		1	2	10
平均 Average (1961-2010)	0.1	0.0	0.1	0.2	0.8	1.4	2.6	3.1	2.7	2.1	1.7	0.6	15.6

表 2.2　　影響香港的熱帶氣旋之每月分佈
TABLE 2.2　MONTHLY DISTRIBUTION OF TROPICAL CYCLONES AFFECTING HONG KONG

年份 Year	月份 # Month #												共 Total
	一月 Jan	二月 Feb	三月 Mar	四月 Apr	五月 May	六月 Jun	七月 Jul	八月 Aug	九月 Sep	十月 Oct	十一月 Nov	十二月 Dec	
1961					1		3		2				6
1962							2	1		1			4
1963						1	1	1	1				4
1964					1	1		1	4	3			10
1965						1	2		2		1		6
1966					1		3	1	1				6
1967				1		1	1	3		1	1		8
1968							1	3	2				6
1969							1		2	1			4
1970							1	2	1	2			6
1971					1	2	3	1	1	1			9
1972						2	1	1			1		5
1973							2	3	2	2			9
1974						2	1		2	4	1	1	11
1975						1		1	2	3			7
1976						1	1	2	1				5
1977						1	3	1	3				8
1978				1			1	2	2	2			8
1979							2	2	2				6
1980					1	1	4	1	2	1			10
1981						1	2	1	1				5
1982						1	2		1	1			5
1983							3		2	2			7
1984						1	1	2	1				5
1985						1	1		2	1			5
1986							1	2		1			4
1987						1		2	1	1			5
1988					1	1	1		1	2			6
1989					1	1	2		1	2			7
1990					1	2	1	1	1				6
1991							3	1	2				6
1992						1	3	1					5
1993						1	1	2	3	1	1		9
1994						2		1	1				4
1995							1	4	2	1			8
1996							2	2	2	1			7
1997							1	1					2
1998								2	1	2			5
1999				1		1	1	1	3	1			8
2000						1	2	2	1		1		7
2001						2	2	1	1				6
2002								2	1				3
2003							2	1	1				4
2004						1	1	1					3
2005								1	2				3
2006					1	1		3	1	1			7
2007								1	1				2
2008				1		1		2	1	1			6
2009						2	2	1	3				8
2010							2	1	1	1			5
2011						2	1		1	1			5
2012						2	1	2					5
2013						2	1	2	1		1		7
2014						1	1		2				4
平均 Average (1961-2010)	0.0	0.0	0.0	0.1	0.2	0.7	1.5	1.3	1.5	0.9	0.1	0.0	6.0

熱帶氣旋警告信號首次發出的月份。#The month that the tropical cyclone warning signal was first issued.

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

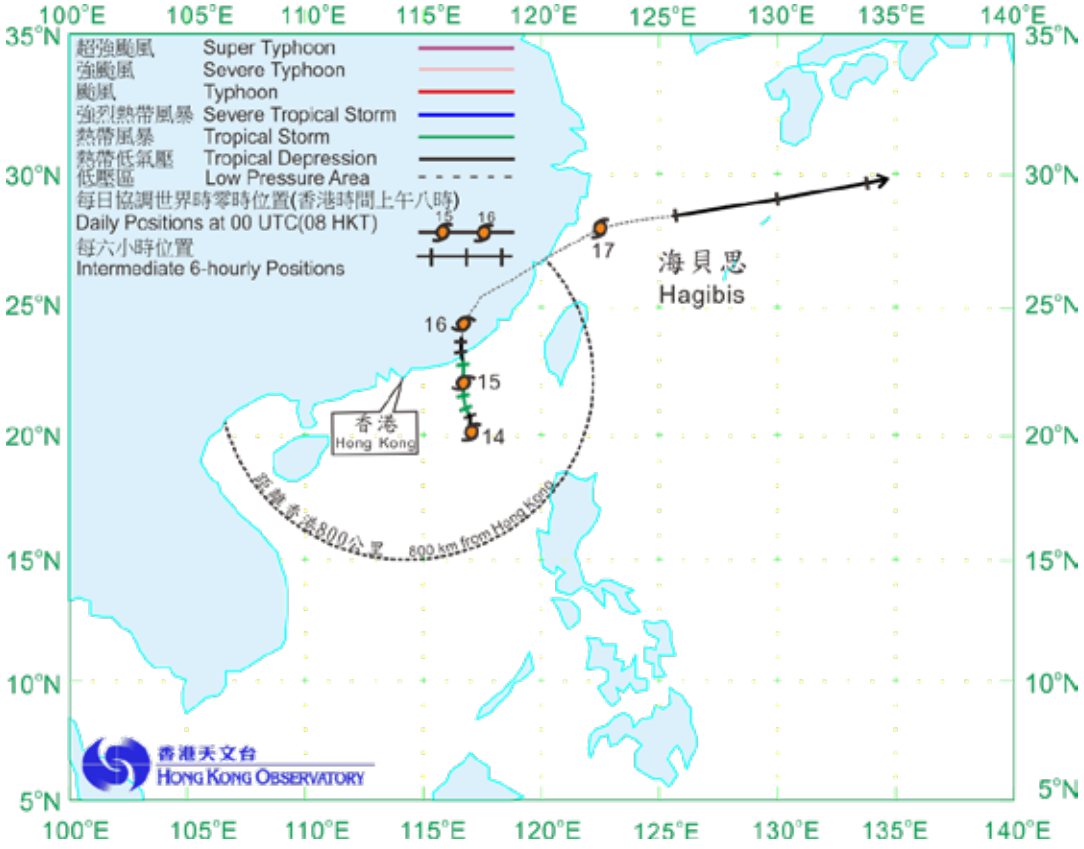


圖 3.1.1 海貝思 (1407) 在二零一四年六月十四日至十八日的路徑圖。

Figure 3.1.1 Track of Hagibis (1407) on 14 – 18 June 2014.

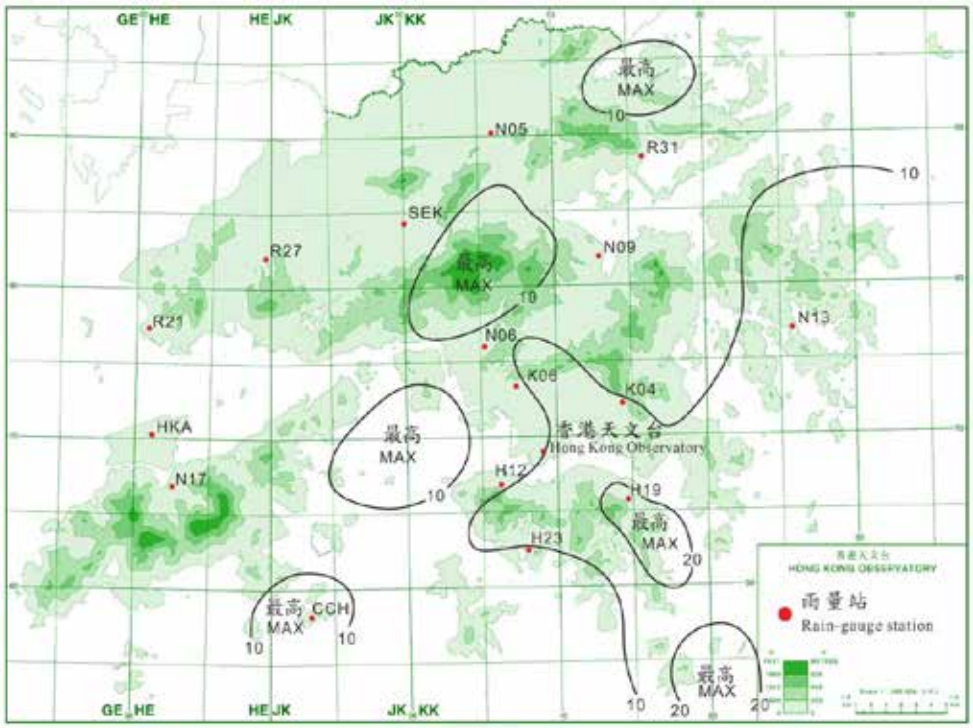


圖 3.1.2 二零一四年六月十四日至十五日的雨量分佈 (等雨量線單位為毫米)。

Figure 3.1.2 Rainfall distribution on 14 - 15 June 2014 (isohyets are in millimetres).

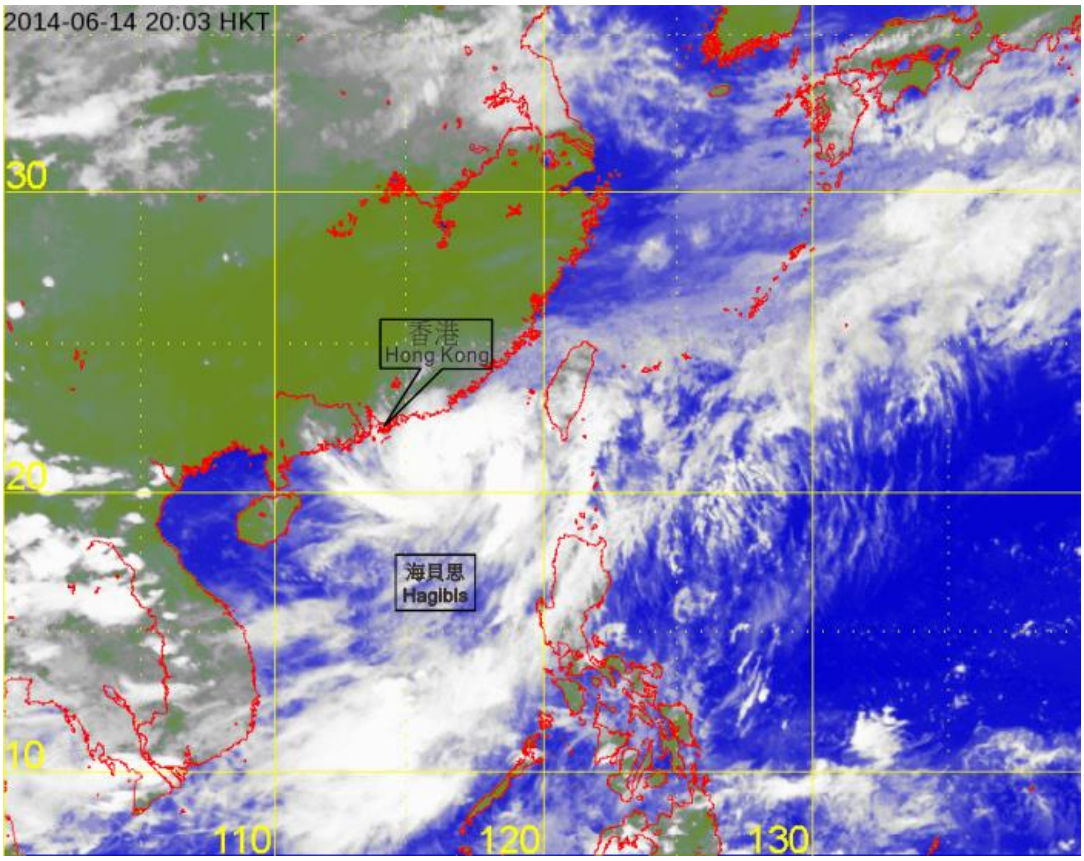


圖 3.1.3　熱帶風暴海貝思在二零一四年六月十四日下午 8 時的紅外線衛星圖片，當時海貝思達到其最高強度，中心附近最高持續風速估計為每小時 75 公里。

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).]

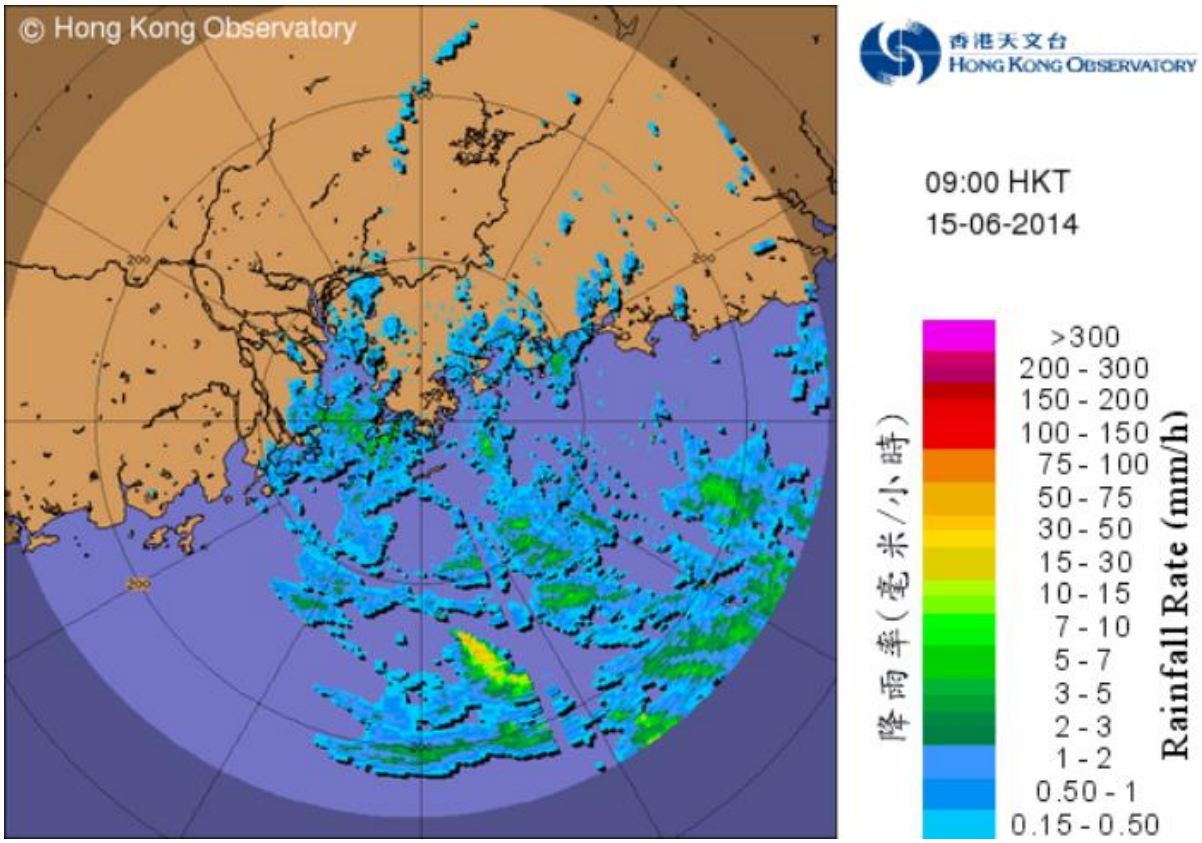


圖 3.1.4　二零一四年六月十五日上午 9 時的雷達回波圖像，熱帶風暴海貝思最接近本港的一刻，其中心集結在香港以東約 260 公里。當時海貝思的外圍雨帶正影響本港。

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.

3.2 超強颱風威馬遜 (1409)：二零一四年七月十一日至二十日

威馬遜是香港天文台在二零一四年第二個需要發出熱帶氣旋警告信號的熱帶氣旋，也是今年首個需要發出三號強風信號的熱帶氣旋。

熱帶低氣壓威馬遜於七月十一日早上在關島之東南偏東約410公里的北太平洋西部形成，隨後數天穩定地向偏西方向移動，並逐漸增強，發展為強颱風後於七月十五和十六日期間轉向西北偏西方向移動，橫過菲律賓中部後進入南海。受到陸地影響威馬遜曾一度減弱，在南海重新組織，並於七月十八日增強為超強颱風，達到其最高強度，中心附近最高持續風速估計為每小時240公里。威馬遜採取一個西北路徑，當天稍後於海南島北部文昌市附近登陸，翌日早上橫過廣西海岸，在內陸減弱，七月二十日在雲南減弱為一個低壓區。

根據報章報導，威馬遜吹襲菲律賓期間造成最少98人死亡，五人失蹤，另外630人受傷，多處地區停電，直接經濟損失超過108億披索(約19億港元)。威馬遜在海南島、廣東西部及廣西等地亦造成嚴重破壞，最少有18人死亡，三萬七千間房屋倒塌，740萬人受災，逾468 500公頃農田受影響，海陸空交通癱瘓，局部地區通信中斷，直接經濟損失超過265億元人民幣。威馬遜為雲南帶來暴雨及泥石流，造成最少14人死亡。

香港天文台於七月十六日下午11時40分發出一號戒備信號，當時威馬遜位於香港之東南偏南約790公里。隨着威馬遜逐漸移近華南沿岸，本港在七月十七日東風逐漸增強，天文台在下午4時15分發出三號強風信號，當時威馬遜位於香港以南約590公里。晚上本港風勢進一步增強，普遍吹達強風程度的東至東南風，離岸及高地間中吹烈風。香港天文台總部於七月十八日上午4時01分錄得最低瞬時海平面氣壓1001.6百帕斯卡，當時威馬遜位於香港之西南偏南約420公里。威馬遜於當日正午時分最接近香港，在本港西南約390公里附近掠過。隨著威馬遜移離，本港風勢逐漸減弱，天文台在晚上7時40分改發一號戒備信號，取代三號強風信號。威馬遜在晚間橫過北部灣並進一步遠離本港，天文台於七月十九日上午3時40分取消所有熱帶氣旋警告信號。

威馬遜影響香港期間，尖鼻咀錄得最高潮位(海圖基準面以上)為2.52米，而大埔滘則錄得最大風暴潮0.59米。

七月十七日本港初時大致天晴。受威馬遜的外圍雨帶影響，日間漸轉多雲，有狂風驟雨及雷暴，多處地區錄得超過20毫米雨量。威馬遜於七月十八日繼續為香港帶來狂風大驟雨及雷暴，普遍地區錄得20毫米雨量，西貢及新界北部更錄得超過50毫米。

威馬遜吹襲香港期間，本港最少有51宗塌樹報告及多宗高空墜物意外。荃灣路行車天橋的一支燈柱於七月十七日在強風吹襲下折斷，壓毀兩部私家車。香港國際機場有57班航班取消和413班航班延誤，另外有6班航班需要轉飛其它地方。

表3.2.1 - 3.2.4 分別是威馬遜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程度的時段、香港的日雨量及最高潮位資料。圖3.2.1 - 3.2.4 分別為威馬遜的路徑圖、本港的雨量分佈圖、威馬遜的衛星及雷達圖像。

3.2 Super Typhoon Rammasun (1409): 11 – 20 July 2014

Rammasun was the second tropical cyclone that necessitated the issuance of tropical cyclone warning signal by the Hong Kong Observatory in 2014. It was also the first tropical cyclone necessitating the issuance of Strong Wind Signal No. 3 in the year.

Rammasun formed as a tropical depression over the western North Pacific about 410 km east-southeast of Guam on the morning of 11 July. It intensified gradually and moved westwards steadily in the following few days. Rammasun developed into a severe typhoon and turned west-northwestwards on 15 and 16 July, moving across the central part of the Philippines and entering the South China Sea. After weakening over terrain, Rammasun re-organized over the South China Sea and intensified into a super typhoon on 18 July, reaching its peak intensity with an estimated sustained wind of 240 km/h near its centre. Tracking northwestwards, it made landfall near Wenchang over the northern part of Hainan Island later that day and crossed the coast of Guangxi the next morning. Rammasun weakened over land and became an area of low pressure over Yunnan on 20 July.

According to press reports, at least 98 people were killed, five were missing and 630 others were injured in the Philippines during the passage of Rammasun. There were also power blackouts over many places and the direct economic loss exceeded 10.8 billion PHP (around 1.9 billion HKD). Rammasun also wreaked havoc in Hainan Island, western Guangdong and Guangxi. At least 18 people were killed, 37 000 houses collapsed, with 7.4 million people and more than 468 500 hectares of farmland affected. Transportation services were suspended and communication in some areas was disrupted. The direct economic loss exceeded 26.5 billion RMB. Rammasun also brought rainstorms and mudslides to Yunnan where at least 14 people were killed.

In Hong Kong, the Standby Signal No. 1 was issued at 11:40 p.m. on 16 July when Rammasun was about 790 km south-southeast of the territory. With Rammasun edging closer to the south China coast, local winds strengthened gradually from the east on 17 July and the Strong Wind Signal No. 3 was issued at 4:15 p.m. when Rammasun was about 590 km south of Hong Kong. Winds in Hong Kong picked up further that night, becoming generally strong east to southeasterlies with occasionally gale force over offshore and on high grounds. At the Hong Kong Observatory Headquarters, the lowest instantaneous mean sea-level pressure of 1001.6 hPa was recorded at 4:01 a.m. on 18 July when Rammasun was at about 420 km to the south-southwest. Rammasun came closest to the territory around noon that day, skirting at around 390 km to the southwest of Hong Kong. Local winds subsided gradually as Rammasun moved away from Hong Kong. The Strong Wind Signal No. 3 was replaced by the Standby Signal No. 1 at 7:40 p.m. on 18 July. As Rammasun crossing Beibu Wan and moved further away from Hong Kong overnight, all tropical cyclone warning signals were cancelled at 3:40 a.m. on 19 July.

Under the influence of Rammasun, a maximum sea level (above chart datum) of 2.52 m was recorded at Tsim Bei Tsui, while a maximum storm surge of 0.59 m was recorded at Tai Po Kau.

Local weather was mainly fine at first on 17 July. Under the influence of the outer rainbands of Rammasun, the weather became cloudy with squally showers and thunderstorms. More than 20 millimetres of rainfall were recorded over many places in Hong Kong. Rammasun continued to bring heavy squally showers and thunderstorms to the territory on 18 July. 20 millimetres of rainfall were recorded generally over the territory, and rainfall even exceeded 50 millimetres over Sai Kung and northern part of the New Territories.

In Hong Kong, at least 51 trees were blown down and many incidents of fallen objects were reported. A lamp post in Tsuen Wan flyover fell down under strong winds on 17 July, damaging two private cars. At the Hong Kong International Airport, 57 flights were cancelled, 413 delayed and 6 aircraft were diverted.

Information on the maximum wind, period of strong and gale force winds, daily rainfall and maximum sea level reached in Hong Kong during the passage of Rammasun is given in Tables 3.2.1 - 3.2.4 respectively. Figures 3.2.1 - 3.2.4 show respectively the track of Rammasun, the rainfall distribution for Hong Kong, a satellite imagery and a radar imagery of Rammasun.

表 3.2.1　在威馬遜影響下，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 3.2.1　Maximum gust peak speeds and maximum hourly mean winds with associated wind directions recorded at various stations when the tropical cyclone warning signals for Rammasun 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	E	77	17/7	19:25	東南偏東	ESE	45	18/7	06:00
中環碼頭	Central Pier	東北偏東	ENE	81	17/7	17:21	東	E	40	18/7	09:00
長洲	Cheung Chau	東南	SE	103	18/7	09:42	東南	SE	63	18/7	12:00
長洲泳灘	Cheung Chau Beach	東北偏東	ENE	96	17/7	17:33	東	E	65	18/7	06:00
青洲	Green Island	東北	NE	101	17/7	17:24	東北	NE	58	17/7	17:00
香港國際機場	Hong Kong International Airport	東南偏東	ESE	77	18/7	00:05	東南	SE	45	18/7	14:00
啟德	Kai Tak	東	E	77	17/7	17:16	東南偏東	ESE	36	19/7	00:00
京士柏	King's Park	東南	SE	67	18/7	05:38	東南	SE	34	18/7	09:00
流浮山	Lau Fau Shan	東南	SE	67	18/7	10:29	東	E	31	17/7	16:00
北角	North Point	東	E	77	17/7	17:22	東	E	36	18/7	06:00
坪洲	Peng Chau	東	E	76	17/7	19:42	東	E	45	18/7	06:00
平洲	Ping Chau	東	E	34	17/7	18:29	東	E	12	17/7	16:00
西貢	Sai Kung	東北偏東	ENE	70	17/7	21:34	東北偏東	ENE	41	17/7	16:00
沙洲	Sha Chau	東南偏南	SSE	90	18/7	10:05	東南	SE	49	18/7	14:00
沙螺灣	Sha Lo Wan	東南	SE	92	18/7	10:08	東	E	36	17/7	18:00
沙田	Sha Tin	東	E	59	17/7	17:21	東	E	20	17/7	13:00
石崗	Shek Kong	東南偏東	ESE	70	17/7	20:14	東	E	25	18/7	06:00
							東	E	25	18/7	08:00
九龍天星碼頭	Star Ferry (Kowloon)	東	E	75	18/7	04:43	東	E	45	18/7	06:00
打鼓嶺	Ta Kwu Ling	東	E	58	18/7	06:54	東	E	25	18/7	08:00
大美督	Tai Mei Tuk	東	E	79	18/7	05:33	東	E	54	18/7	09:00
大帽山	Tai Mo Shan	東	E	118	18/7	06:27	東	E	79	18/7	07:00
塔門	Tap Mun	東	E	65	17/7	21:25	東南	SE	31	18/7	13:00
大老山	Tate's Cairn	東	E	113	17/7	17:19	東	E	67	18/7	06:00
將軍澳	Tseung Kwan O	東南偏東	ESE	59	18/7	11:04	東南偏東	ESE	16	18/7	14:00
		東南偏東	ESE	59	18/7	13:13					
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	-	-	63	18/7	10:10	-	-	25	18/7	09:00
屯門政府合署	Tuen Mun Government Offices	東南	SE	63	18/7	10:18	東南	SE	22	18/7	15:00
橫瀾島	Waglan Island	東	E	96	17/7	19:19	東南偏東	ESE	62	18/7	05:00
濕地公園	Wetland Park	東	E	52	17/7	16:52	東	E	22	18/7	06:00
							東南偏東	ESE	22	18/7	08:00
黃竹坑	Wong Chuk Hang	東南	SE	77	18/7	9:54	東南偏東	ESE	30	18/7	06:00

昂坪、大埔滘 - 沒有資料 Ngong Ping, Tai Po Kau- data not available

- 沒有資料 - data not available

表 3.2.2　在威馬遜影響下，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程度的時段

Table 3.2.2　Periods during which sustained strong winds were reached among the eight reference anemometers in the tropical cyclone warning system when warning signals for Rammasun 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	17/7	10:52	19/7	01:47
香港國際機場	Hong Kong International Airport	17/7	13:21	18/7	15:11
啟德	Kai Tak	17/7	19:37	18/7	13:02
西貢	Sai Kung	17/7	12:45	18/7	13:23

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

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 3.2.3　威馬遜影響香港期間，香港天文台總部及其他各站所錄得的日雨量
Table 3.2.3　Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Rammasun

站 (參閱圖 3.2.2) Station (See Fig. 3.2.2)			七月十七日 17 Jul	七月十八日 18 Jul	七月十九日 19 Jul	總雨量 (毫米) Total (mm)
香港天文台 Hong Kong Observatory			34.5	19.5	6.5	60.5
香港國際機場 Hong Kong International Airport (HKA)			9.6	36.4	3.4	49.4
長洲 Cheung Chau (CCH)			20.0	17.5	1.0	38.5
H23	香港仔	Aberdeen	41.5	20.0	4.0	65.5
N05	粉嶺	Fanling	3.0	37.0	8.0	48.0
N13	糧船灣	High Island	24.5	27.0	7.5	59.0
K04	佐敦谷	Jordan Valley	27.5	28.0	13.5	69.0
N06	葵涌	Kwai Chung	22.5	28.0	10.0	60.5
H12	半山區	Mid Levels	32.0	23.0	6.5	61.5
N09	沙田	Sha Tin	17.0	47.0	10.0	74.0
H19	筲箕灣	Shau Kei Wan	39.0	16.0	5.5	60.5
SEK	石崗	Shek Kong	13.5	51.0	12.0	76.5
K06	蘇屋邨	So Uk Estate	0.5	24.5	7.0	32.0
R31	大美督	Tai Mei Tuk	8.0	59.0	8.0	75.0
R21	踏石角	Tap Shek Kok	3.5	19.5	1.5	24.5
N17	東涌	Tung Chung	14.5	31.0	7.0	52.5
R27	元朗	Yuen Long	8.5	27.5	2.5	38.5

表 3.2.4　威馬遜影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮
Table 3.2.4　Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of Rammasun

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	2.29	17/7	12:51	0.48	18/7	05:50
石壁	Shek Pik	2.37	18/7	13:07	0.52	18/7	13:07
大廟灣	Tai Miu Wan	2.28	17/7	12:43	0.53	18/7	12:21
大埔滘	Tai Po Kau	2.25	17/7	13:50	0.59	18/7	06:46
尖鼻咀	Tsim Bei Tsui	2.52	17/7	13:29	0.37	18/7	14:02
橫瀾島	Waglan Island	2.43	17/7	12:53	0.47	18/7	12:28

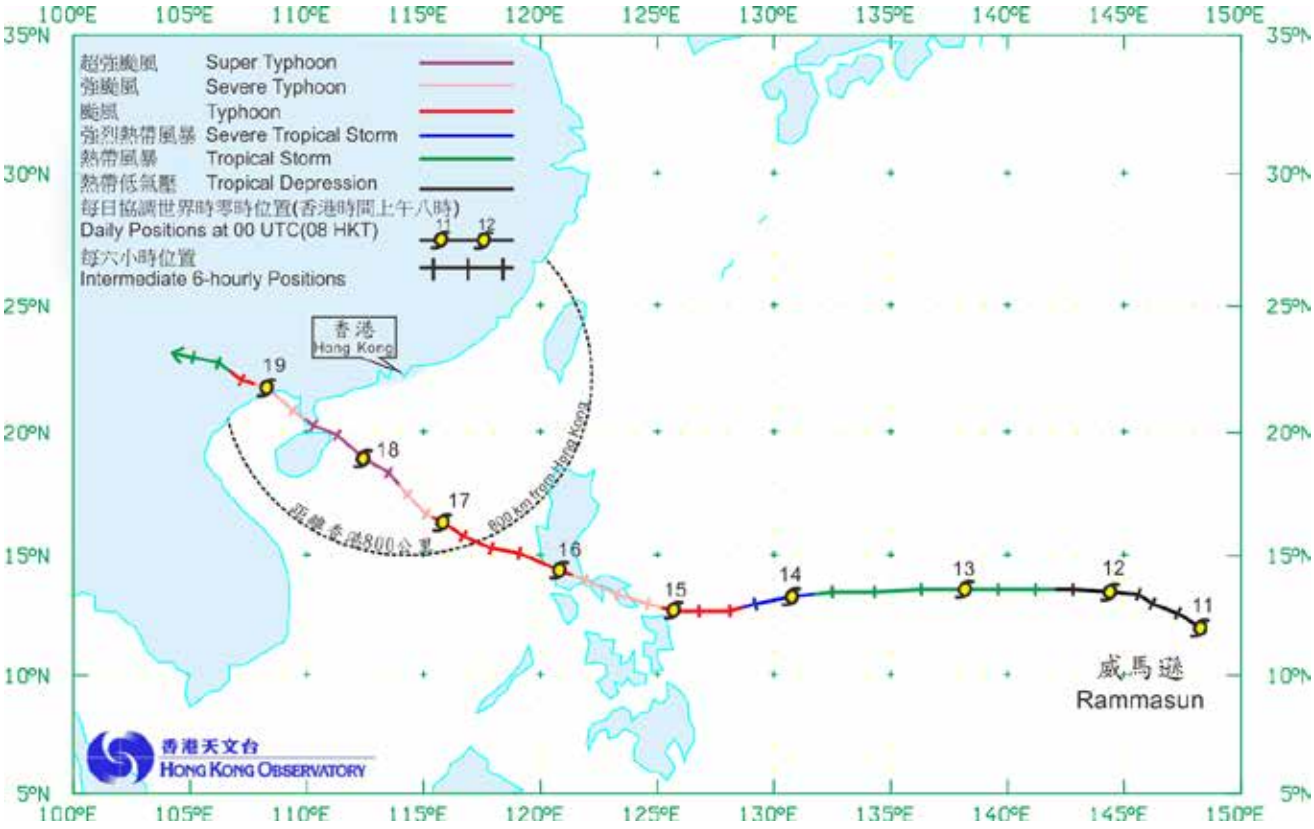


圖 3.2.1 威馬遜 (1409)在二零一四年七月十一日至二十日的路徑圖。

Figure 3.2.1 Track of Rammasun (1409) on 11 - 20 July 2014.

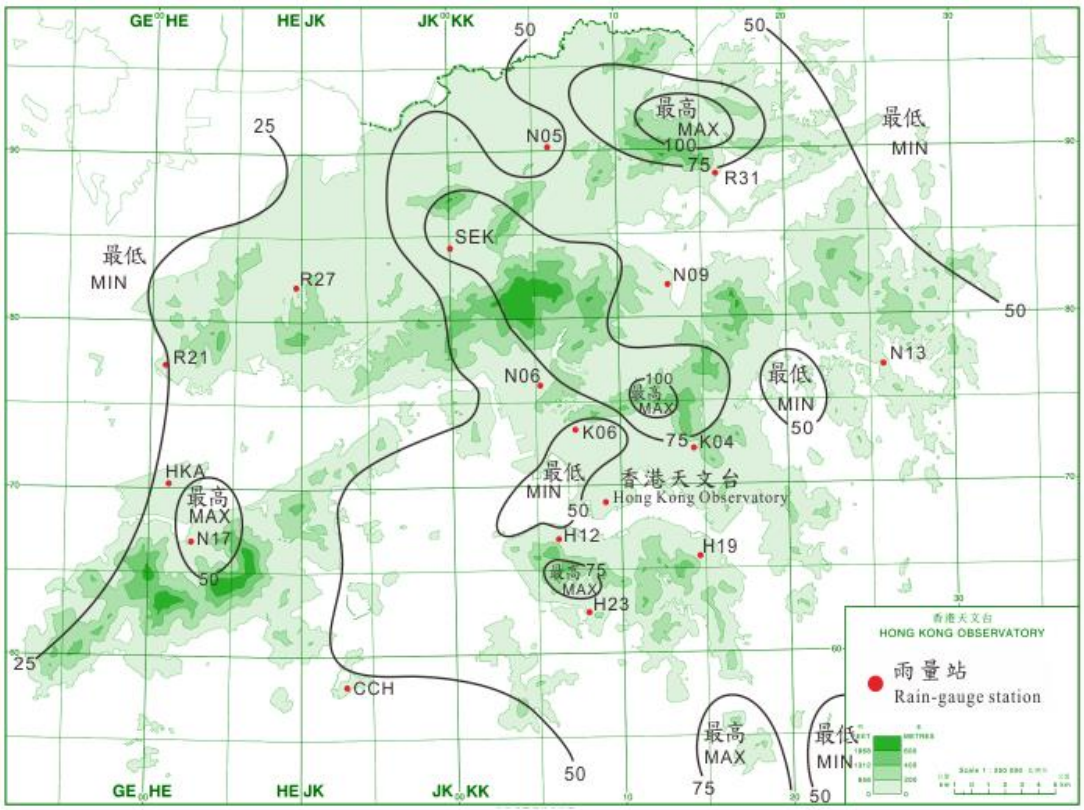


圖 3.2.2 二零一四年七月十七日至十九日的雨量分佈 (等雨量線單位為毫米)。

Figure 3.2.2 Rainfall distribution on 17 - 19 July 2014 (isohyets are in millimetres).

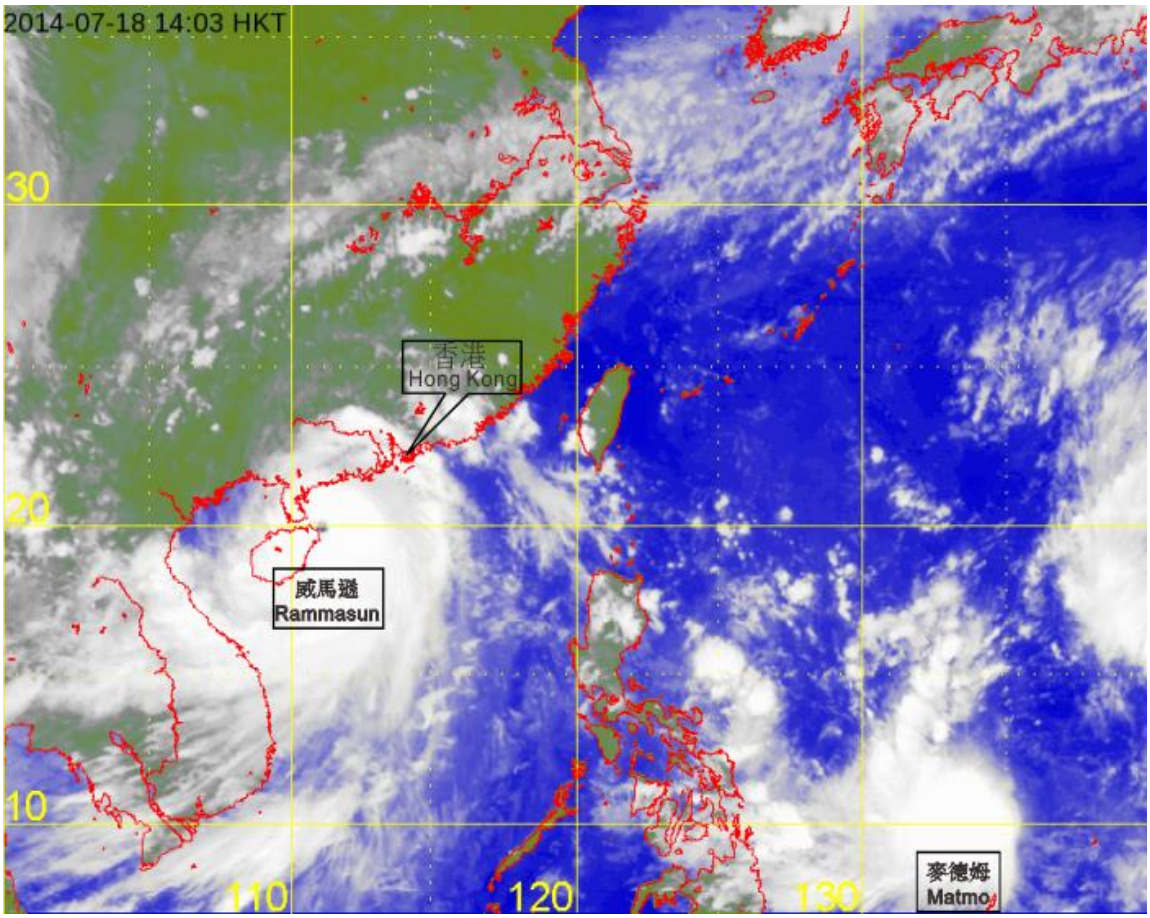


圖 3.2.3　超強颱風威馬遜在二零一四年七月十八日下午 2 時的紅外線衛星圖片，當時威馬遜達到其最高強度，中心附近最高持續風速估計為每小時 240 公里，其風眼正移近海南島文昌市沿岸。

Figure 3.2.3　Infra-red satellite imagery of Super Typhoon Rammasun at 2 p.m. on 18 July 2014 at its peak intensity with estimated maximum sustained winds of 240 km/h near its centre. The eye of Rammasun was edging close to the coast of Wenchang of Hainan Island.

〔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).]

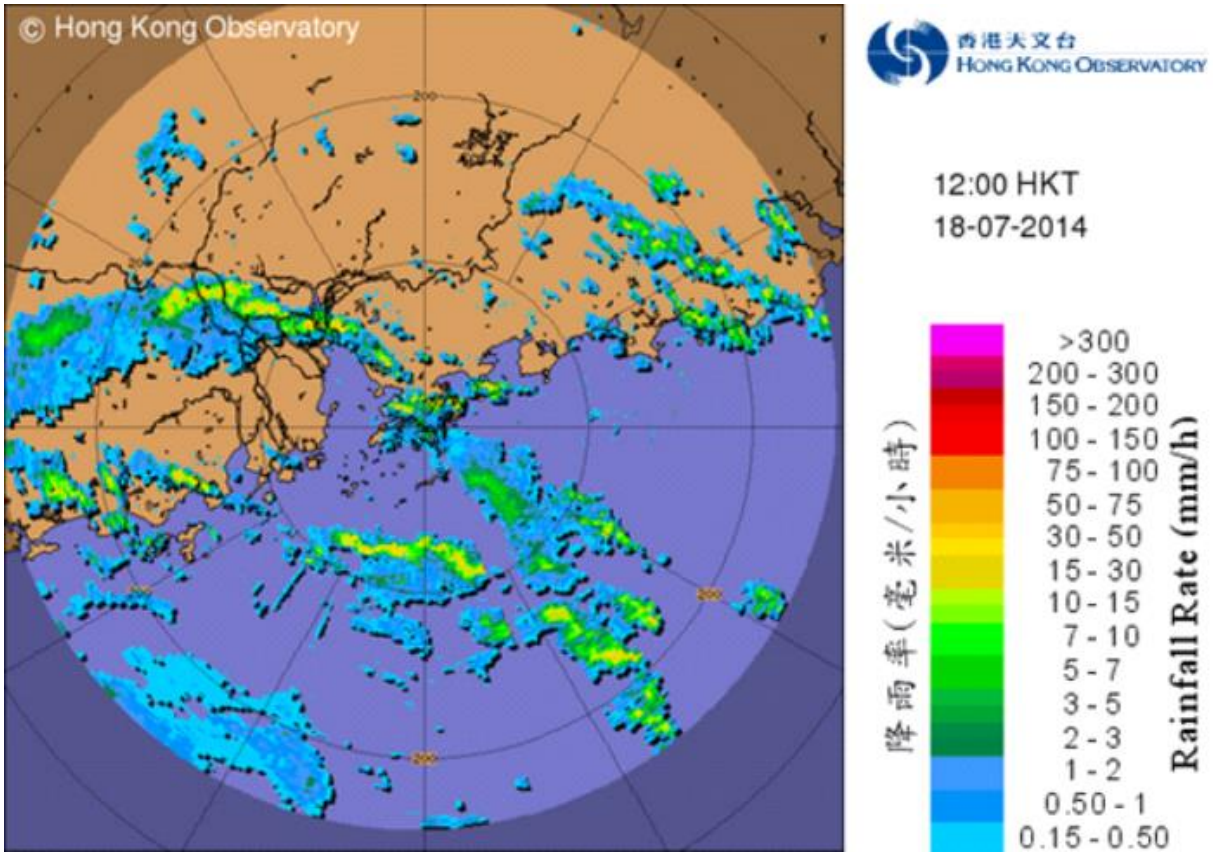


圖 3.2.4　二零一四年七月十八日中午 12 時的雷達回波圖像，超強颱風威馬遜最接近本港的一刻，其中心集結在香港之西南約 390 公里。當時威馬遜的外圍雨帶正影響本港。

Figure 3.2.4　Image of radar echoes captured at noon on 18 July 2014 when Super Typhoon Rammasun was closest to Hong Kong with its centre about 390 km to the southwest. The outer rainbands of Rammasun were affecting the territory.

3.3 熱帶低氣壓 ：二零一四年九月七日至八日

九月七日早上一個熱帶低氣壓在南海北部形成，成為二零一四年第三個天文台需要發出熱帶氣旋警告信號的熱帶氣旋。

該熱帶低氣壓的生成位置約在海口之東南偏東約340公里，並採取西北路徑移向廣東西部至雷州半島一帶。它於當日下午達到其最高強度，中心附近最高持續風速估計為每小時55公里。九月八日下午熱帶低氣壓於湛江市附近登陸，晚上在雷州半島減弱為一個低壓區。

天文台於九月七日上午9時40分發出一號戒備信號，當時該熱帶低氣壓位於香港之西南偏南約390公里，本港風勢稍為增強，吹和緩至清勁偏東風，高地間中吹強風。天文台總部於當天下午2時38分錄得最低瞬時海平面氣壓1006.0百帕斯卡，當時該熱帶低氣壓位於香港之西南偏南約390公里。熱帶低氣壓於九月八日上午2時左右最接近香港，在本港西南約360公里附近掠過。隨著熱帶低氣壓逐漸遠離，本港風勢逐漸減弱，天文台於當天早上9時10分取消所有熱帶氣旋警告信號。

在熱帶低氣壓的影響下，尖鼻咀錄得的最高潮位(海圖基準面以上)為2.84米，而大埔滘則錄得最大風暴潮0.22米(天文潮高度以上)。

受熱帶低氣壓的外圍雨帶影響，九月七至八日本港大致多雲及有幾陣狂風驟雨，局部地區有雷暴，部分地區錄得超過10毫米雨量。

該熱帶低氣壓並沒有在香港造成嚴重破壞。一人於九月七日在大浪西灣遭大浪捲走，其後獲救。

表3.3.1 - 3.3.3分別是熱帶低氣壓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3.3.1 - 3.3.4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相關雷達圖像。

3.3 Tropical Depression : 7 – 8 September 2014

A tropical depression formed over the northern part of the South China Sea on the morning of 7 September, becoming the third tropical cyclone necessitating the issuance of tropical cyclone warning signal by the Observatory in 2014.

After forming about 340 km east-southeast of Haikou, the tropical depression moved northwestwards towards western Guangdong and the Leizhou Peninsula. It reached peak intensity that afternoon with an estimated sustained wind of 55 km/h near its centre. The tropical depression made landfall near Zhanjiang on the afternoon of 8 September and weakened into an area of low pressure over the Leizhou Peninsula that night.

In Hong Kong, the Standby Signal No. 1 was issued by the Observatory at 9:40 a.m. on 7 September when the tropical depression was about 390 km south-southwest of the territory. Local winds picked up slightly, becoming moderate to fresh easterlies and occasionally strong on high ground. At the Observatory Headquarters, the lowest instantaneous mean sea-level pressure of 1006.0 hPa was recorded at 2:38 p.m. that day when the tropical depression was about 390 km to the south-southwest. The tropical depression was closest to the territory at about 2 a.m. the next day as it skirted past about 360 km to the southwest. With the tropical depression moving gradually away from Hong Kong, local winds subsided on 8 September and all tropical cyclone warning signals were cancelled at 9:10 a.m. that morning.

Under the influence of the tropical depression, a maximum sea level (above chart datum) of 2.84 m was recorded at Tsim Bei Tsui, while a maximum storm surge (above astronomical tide) of 0.22 m was recorded at Tai Po Kau.

Affected by the outer rainbands of the tropical depression, local weather was mainly cloudy with a few squally showers and isolated thunderstorms on 7 and 8 September. More than 10 millimetres of rainfall were recorded over parts of the territory.

The tropical depression did not cause any significant damage in Hong Kong. A person swept away by freak waves at Tai Long Sai Wan on 7 September was later rescued.

Information on the maximum wind, daily rainfall and maximum sea level reached in Hong Kong during the passage of the tropical depression is given in Tables 3.3.1 - 3.3.3 respectively. Figures 3.3.1 - 3.3.4 show respectively the track of the tropical depression, the rainfall distribution for Hong Kong, a satellite imagery and a radar imagery of the tropical depression.

表 3.3.1　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 3.3.1　Maximum gust peak speeds and maximum hourly mean winds with associated wind directions recorded at various stations when the tropical cyclone warning signals for the tropical depression 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)	東南偏東	ESE	58	7/9	16:46	東南偏東	ESE	27	7/9	17:00
中環碼頭	Central Pier	東	E	43	7/9	17:06	東	E	31	7/9	16:00
		東	E	43	7/9	17:16					
長洲	Cheung Chau	東南偏東	ESE	58	7/9	20:22	東	E	36	7/9	17:00
長洲泳灘	Cheung Chau Beach	東北偏東	ENE	59	7/9	17:09	東	E	38	7/9	17:00
青洲	Green Island	東北	NE	58	7/9	20:54	東北	NE	43	7/9	16:00
香港國際機場	Hong Kong International Airport	東南偏東	ESE	49	7/9	16:22	東南偏東	ESE	34	7/9	16:00
啟德	Kai Tak	東南偏東	ESE	51	7/9	13:02	東	E	23	7/9	13:00
							東	E	23	7/9	14:00
京士柏	King's Park	東南偏東	ESE	41	7/9	16:59	東南	SE	16	7/9	16:00
							東南偏東	ESE	16	7/9	20:00
							東南偏東	ESE	16	7/9	21:00
流浮山	Lau Fau Shan	東北偏東	ENE	49	7/9	14:25	東北偏東	ENE	30	7/9	15:00
昂坪	Ngong Ping	東	E	79	7/9	18:36	東	E	63	7/9	19:00
北角	North Point	東	E	43	7/9	11:14	東	E	25	7/9	16:00
		東	E	43	7/9	15:48					
坪洲	Peng Chau	東	E	47	7/9	15:16	東	E	36	7/9	16:00
西貢	Sai Kung	東北偏東	ENE	38	7/9	15:50	東北偏東	ENE	25	7/9	12:00
沙洲	Sha Chau	東南	SE	41	7/9	17:46	東南	SE	30	7/9	16:00
沙螺灣	Sha Lo Wan	東	E	47	7/9	16:20	東	E	25	7/9	17:00
沙田	Sha Tin	東	E	31	7/9	14:55	東	E	13	7/9	14:00
							東	E	13	7/9	15:00
石崗	Shek Kong	東	E	36	7/9	16:36	東	E	19	7/9	16:00
九龍天星碼頭	Star Ferry (Kowloon)	東	E	49	7/9	17:02	東	E	31	7/9	17:00
打鼓嶺	Ta Kwu Ling	東	E	34	7/9	18:32	東	E	14	7/9	17:00
大美督	Tai Mei Tuk	東	E	47	7/9	15:54	東	E	31	7/9	15:00
		東	E	47	7/9	17:09					
大帽山	Tai Mo Shan	東南偏東	ESE	75	7/9	19:31	東	E	52	7/9	20:00
大埔滘	Tai Po Kau	東	E	40	7/9	16:06	東	E	27	7/9	17:00
塔門	Tap Mun	東南	SE	34	7/9	23:46	東南	SE	22	8/9	09:00
大老山	Tate's Cairn	東南偏東	ESE	63	7/9	19:52	東	E	40	7/9	20:00
將軍澳	Tseung Kwan O	東北偏東	ENE	40	7/9	15:39	東北偏東	ENE	14	7/9	14:00
青衣島蜆殼油庫	Tsing Yi Shell Oil Depot	-	-	36	7/9	12:50	-	-	16	7/9	16:00
屯門政府合署	Tuen Mun Government Offices	東南偏東	ESE	40	7/9	15:16	東南	SE	19	7/9	16:00
橫瀾島	Waglan Island	東南	SE	67	7/9	16:36	東北偏東	ENE	41	7/9	12:00
濕地公園	Wetland Park	東	E	34	7/9	14:50	東	E	16	7/9	15:00
黃竹坑	Wong Chuk Hang	東南	SE	43	7/9	17:02	東	E	22	7/9	13:00

- 沒有資料 - data not available

平洲- 沒有資料 Ping Chau- data not available

表 3.3.2　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 3.3.2　Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of the tropical depression

站 (參閱圖 3.3.2) Station (See Fig. 3.3.2)			九月七日 7 Sep	九月八日 8 Sep	總雨量 (毫米) Total (mm)
香港天文台 Hong Kong Observatory			0.6	3.0	3.6
香港國際機場 Hong Kong International Airport (HKA)			0.2	2.1	2.3
長洲 Cheung Chau (CCH)			4.5	4.0	8.5
H23	香港仔	Aberdeen	1.0	[3.5]	[4.5]
N05	粉嶺	Fanling	[0.5]	[4.0]	[4.5]
N13	糧船灣	High Island	0.0	[1.0]	[1.0]
K04	佐敦谷	Jordan Valley	3.0	[11.0]	[14.0]
N06	葵涌	Kwai Chung	6.0	[7.5]	[13.5]
H12	半山區	Mid Levels	1.5	[6.0]	[7.5]
SHA	沙田	Sha Tin	4.0	14.0	18.0
H19	筲箕灣	Shau Kei Wan	0.5	[12.0]	[12.5]
SEK	石崗	Shek Kong	3.0	4.5	7.5
K06	蘇屋邨	So Uk Estate	3.0	[5.0]	[8.0]
R31	大美督	Tai Mei Tuk	4.0	8.0	12.0
R21	踏石角	Tap Shek Kok	0.5	1.0	1.5
N17	東涌	Tung Chung	1.5	[9.5]	[11.0]
R27	元朗	Yuen Long	2.0	1.0	3.0

註: [ ] 基於不齊全的每小時雨量數據。 Note: [ ] based on incomplete hourly data.

表 3.3.3　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 3.3.3　Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of 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	2.49	8/9	07:54	0.11	7/9	21:22
石壁	Shek Pik	2.53	8/9	07:48	0.10	7/9	21:39
大廟灣	Tai Miu Wan	2.34	8/9	08:01	0.06	7/9	20:58
大埔滘	Tai Po Kau	2.50	8/9	09:09	0.22	7/9	11:48
尖鼻咀	Tsim Bei Tsui	2.84	8/9	08:51	0.02	8/9	08:55
橫瀾島	Waglan Island	2.52	8/9	07:55	0.10	7/9	21:00

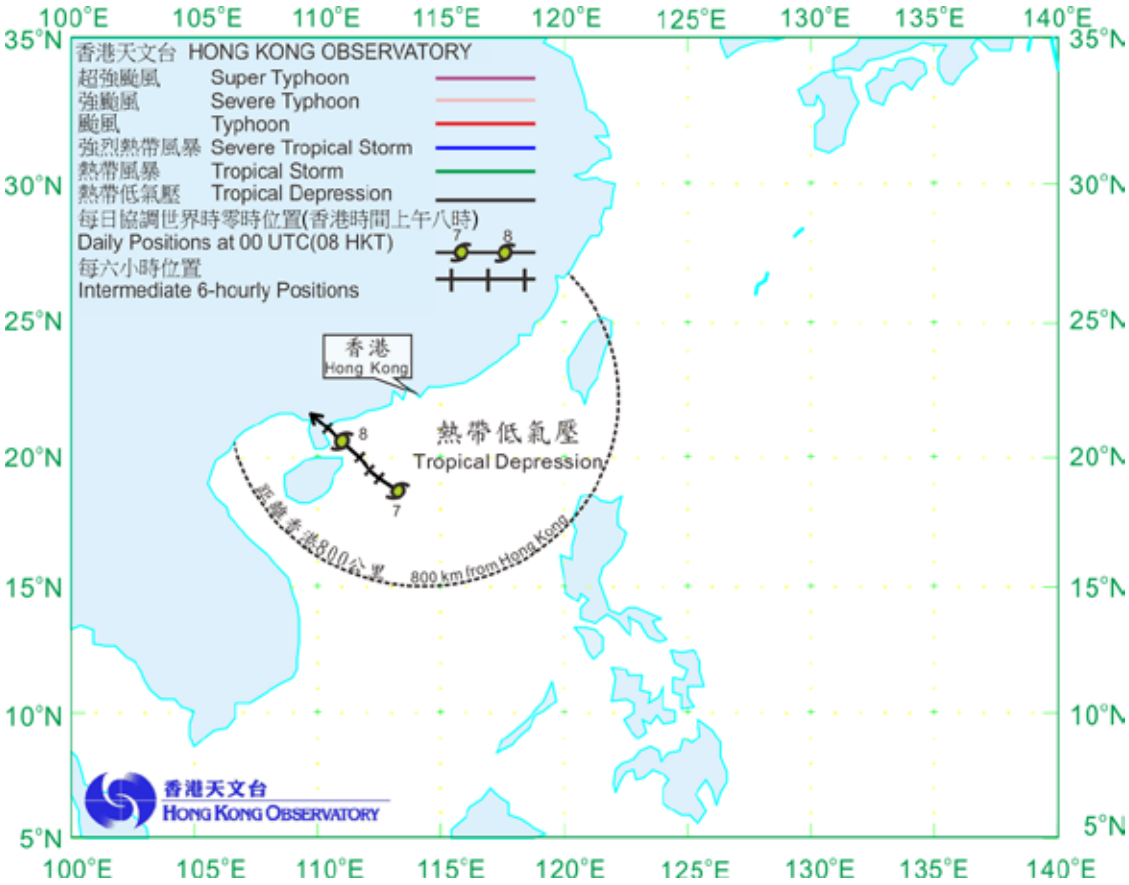


圖 3.3.1　　二零一四年九月七日至八日熱帶低氣壓的路徑圖。
Figure 3.3.1　　Track of the tropical depression on 7 - 8 September 2014.

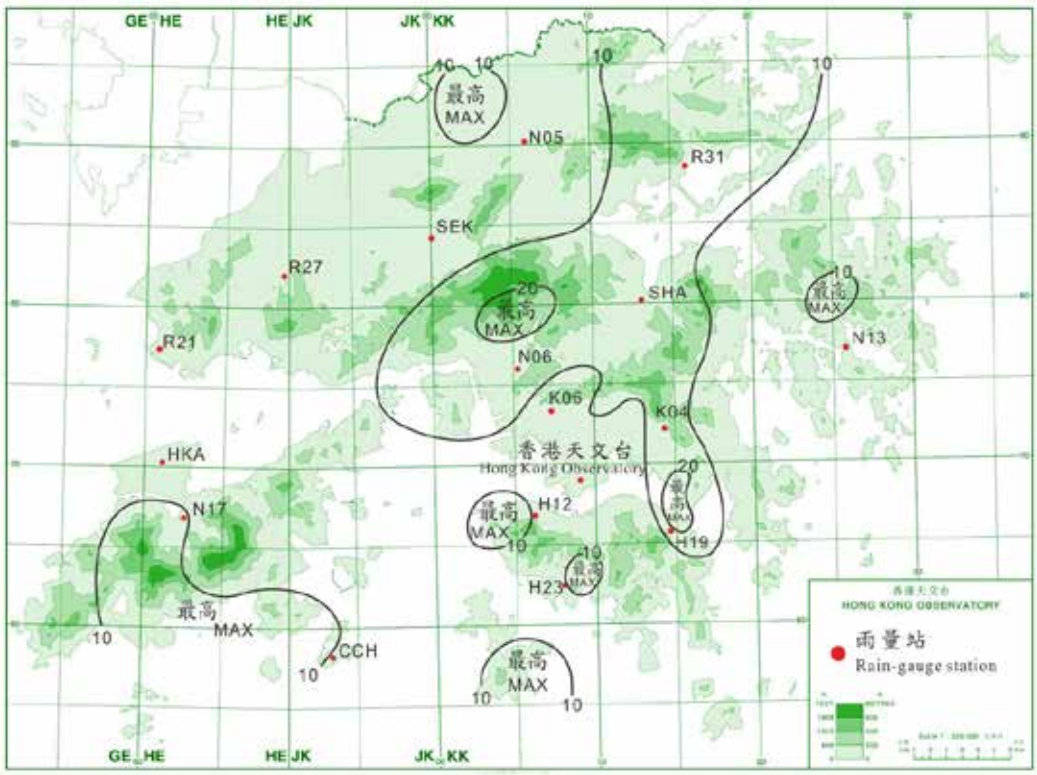


圖 3.3.2　　二零一四年九月七日至八日的雨量分佈(等雨量線單位為毫米)。
Figure 3.3.2　　Rainfall distribution on 7 - 8 September 2014 (isohyets are in millimetres).

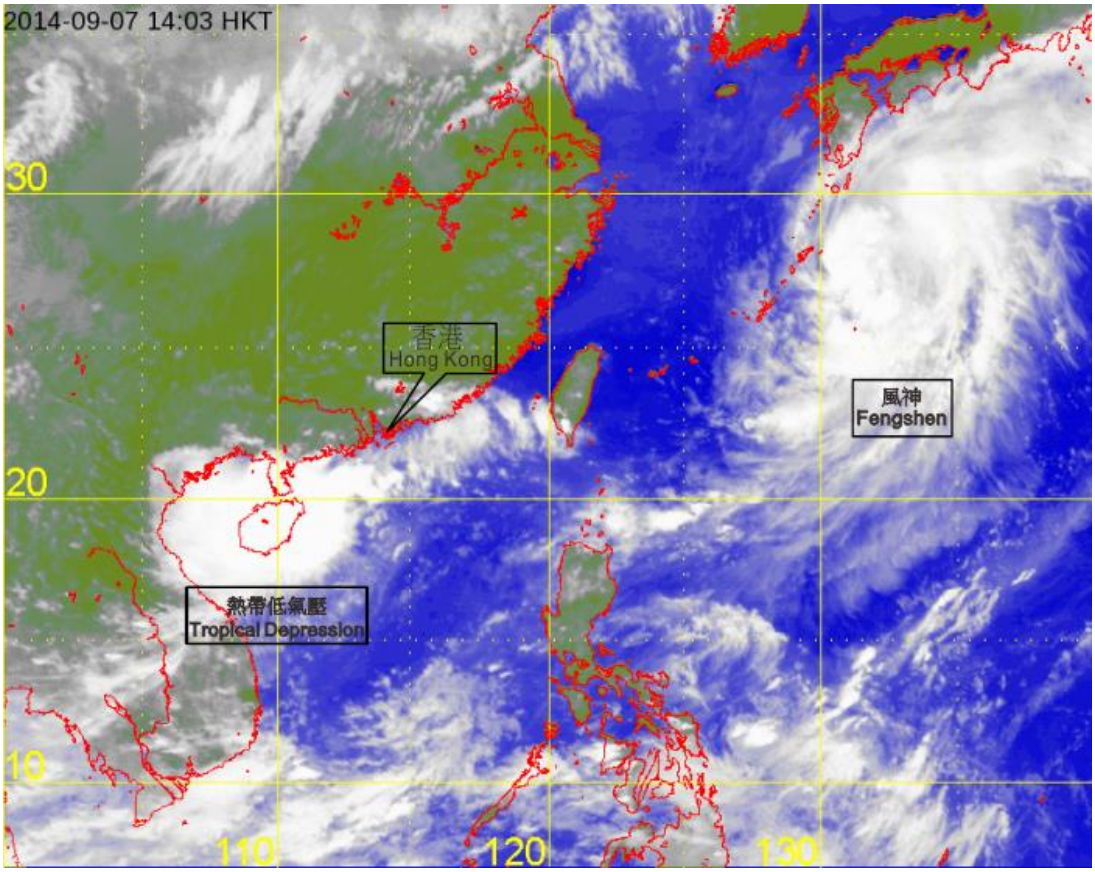


圖 3.3.3　二零一四年九月七日下午 2 時左右的紅外線衛星圖片，當時熱帶低氣壓達到其最高強度，中心附近最高持續風速估計為每小時 55 公里。

Figure 3.3.3　Infra-red satellite imagery at about 2 p.m. on 7 September 2014, when the tropical depression was at 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).]

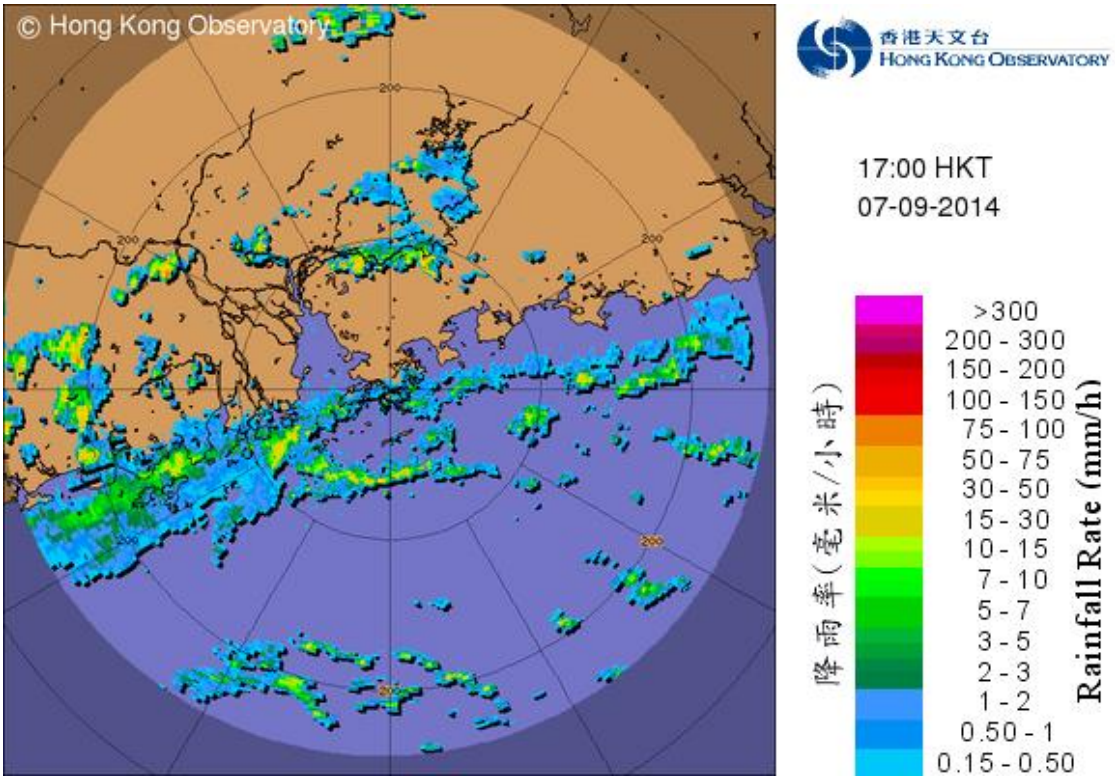


圖 3.3.4　二零一四年九月七日下午 5 時的雷達回波圖像，當時該熱帶低氣壓正集結在香港之西南偏南約 390 公里，其外圍雨帶正影響本港。

Figure 3.3.4　Image of radar echoes at 5 p.m. on 7 September 2014, when the tropical depression was located about 390 km south-southwest of Hong Kong and its outer rainbands were affecting the territory.

3.4 颱風海鷗 (1415)：二零一四年九月十二日至十七日

海鷗是香港天文台在二零一四年第四個需要發出熱帶氣旋警告信號的熱帶氣旋，也是今年唯一需要發出八號烈風或暴風信號的熱帶氣旋。

熱帶低氣壓海鷗於九月十二日早上在馬尼拉以東約1 430公里的北太平洋西部上空形成，向西北偏西方向移動，並逐漸增強為颱風。海鷗於九月十四日晚上橫過呂宋北部，翌日早上進入南海後繼續迅速移動。它在九月十六日上午於海南島東北部文昌市附近登陸前達到其最高強度，中心附近最高持續風速為每小時140公里。海鷗當日下午橫過北部灣，晚上於越南北部登陸，移入內陸及逐漸減弱，最後於九月十七日下午在雲南減弱為一個低壓區。

根據報章報導，海鷗吹襲菲律賓期間，一艘渡輪在菲律賓中部海面沉沒，造成三人死亡、三人失蹤。在中國，海鷗在海南島、廣東西部及廣西等地造成嚴重破壞，最少有三人死亡、一人失蹤及大約600萬人受災，海陸空交通癱瘓。而海鷗引致的風暴潮亦令沿海地區出現海水倒灌，部分地區嚴重水浸，其中海口潮位是一九七三年有記錄以來最高。澳門內港亦因海水倒灌，多處地區水浸。一艘貨輪在澳門西南約20公里海面失去動力，14名船員獲救，其中一人受傷。

由於海鷗移動迅速和環流廣闊，香港天文台於九月十四日晚上11時35分已發出一號戒備信號，當時海鷗位於香港之東南約850公里，成為自一九八九年颱風戈登以來首個在香港800公里範圍外發出一號戒備信號的熱帶氣旋。九月十五日早上本港吹和緩至清勁東北風。隨著海鷗穩定地靠近華南沿岸，天文台於當日下午12時40分發出三號強風信號，當時海鷗位於香港之東南偏南約510公里。下午本港風勢逐漸增強，吹清勁至強風程度東至東北風，離岸及高地間中吹烈風。由於海鷗繼續移近華南沿岸，天文台於晚上10時30分發出八號東南烈風或暴風信號，當時海鷗位於香港以南約370公里。晚間本港普遍吹烈風程度東至東南風，離岸吹暴風，高地風力更間中達颶風程度。本港熱帶氣旋警告系統網絡的八個參考測風站中有四個站的持續風力曾達烈風程度或以上。

海鷗於九月十六日凌晨時分最接近香港，在香港西南偏南約370公里處掠過。隨後海鷗逐漸遠離，本港風力逐漸減弱，天文台於當天早上10時40分改發三號強風信號，取代八號東南烈風或暴風信號。下午海鷗繼續移離本港，天文台於下午8時40分改發一號戒備信號。直至翌日凌晨海鷗進一步移入越南北部內陸，天文台於上午2時10分取消所有熱帶氣旋警告信號。但受到海鷗外圍環流與中國東南沿岸一道高壓脊的共同影響，本港離岸海域仍然吹強風，天文台隨即發出強烈季候風信號，直至當日下午6時15分取消。

在海鷗的影響下，長洲泳灘錄得的最高每小時平均風速為96公里，而昂坪更錄得每小時175公里的最高陣風。大埔滘錄得最高潮位3.28米(海圖基準面以上)及最大風暴潮(天文潮高度以上) 1.20米。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 (百帕斯卡)	日期/月份	時間
香港天文台總部	998.7	16/9	上午 12 時 36 分
長洲	997.6	16/9	上午 3 時 47 分
香港國際機場	998.0	16/9	上午 3 時 59 分
京士柏	998.3	16/9	上午 12 時 38 分
流浮山	998.7	16/9	上午 12 時 53 分
橫瀾島	997.5	16/9	上午 3 時 45 分

九月十五日本港初時部分時間有陽光，天氣酷熱。受海鷗的外圍雨帶影響，稍後漸轉密雲，有狂風驟雨及幾陣雷暴。海鷗在九月十六日繼續為本港帶來狂風大驟雨及幾陣雷暴。兩天內本港大部分地區錄得超過50毫米的雨量，港島西部及新界北部的雨量更超過100毫米。

海鷗吹襲香港期間最少有29人受傷，另有1 352宗塌樹報告、五宗水浸報告、一宗山泥傾瀉報告及多宗高空墜物意外。葵涌打磚坪街有一幅棚架倒塌，導致一輛貨車及一輛小巴損毀。荃灣福來邨有一棵大樹倒塌，部分樹枝擊碎窗戶並插入民居。海鷗引致的風暴潮令部分低窪地區出現海水倒灌，當中鯉魚門近岸多間村屋出現水浸，多名居民需要疏散。將軍澳南海濱長廊行人路亦被海浪破壞。新界約300公頃的農地受到影響。香港國際機場有131班航班取消和1 234班航班延誤，另外有20班需要轉飛其他地方。

表3.4.1- 3.4.4 分別是海鷗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程度的時段、香港的日雨量及最高潮位資料。圖3.4.1 - 3.4.2 分別為海鷗的路徑圖和本港的雨量分佈圖。圖3.4.3顯示香港各站錄得的風向和風速。圖3.4.4 - 3.4.5分別顯示天文台總部錄得的海平面氣壓和鰂魚涌錄得的潮位圖。圖3.4.6- 3.4.7分別顯示海鷗的衛星圖像及雷達圖像。海鷗在香港造成的破壞可參見圖3.4.8及3.4.9。

3.4 Typhoon Kalmaegi (1415): 12 – 17 September 2014

Kalmaegi was the fourth tropical cyclone necessitating the issuance of tropical cyclone warning signal by the Hong Kong Observatory in 2014. It was also the only tropical cyclone requiring the issuance of Gale or Storm Wind Signal No. 8 in the year.

Kalmaegi formed as a tropical depression over the western North Pacific about 1 430 km east of Manila on the morning of 12 September. It moved west-northwestwards and intensified gradually into a typhoon. Kalmaegi moved across the northern part of Luzon on the night of 14 September and maintained a good pace after entering the South China Sea the next morning. It reached peak intensity with an estimated sustained wind of 140 km/h near its centre before making landfall near Wenchang over the northeastern part of Hainan Island on the morning of 16 September. After crossing Beibu Wan in the afternoon, Kalmaegi made landfall over the northern part of Vietnam that night. Moving inland and weakening gradually, it finally became an area of low pressure over Yunnan on the afternoon of 17 September.

According to press reports, three people were killed and three others were missing after a passenger ferry sank over the seas off the central part of the Philippines during the passage of Kalmaegi. In China, Kalmaegi also wreaked havoc in Hainan Island, western Guangdong and Guangxi, resulting in at least three deaths, one missing and about 6 million people affected. Transportation services were suspended. Storm surge triggered by Kalmaegi caused backflow of sea water in coastal areas, resulting in severe flooding in some areas. Sea level at Haikou was the highest since record began in 1973. There was also backflow of sea water inside the harbour of Macao, causing flooding in many places. A cargo ship lost power at seas about 20 km southwest of Macao, 14 crewmen were rescued with one injured.

As Kalmaegi was a fast-moving storm with an extensive circulation, the Standby Signal No. 1 was issued by the Hong Kong Observatory at 11:35 p.m. on 14 September when it was about 850 km southeast of the territory. It was the first time the Standby Signal No. 1 was issued for a tropical cyclone centred outside 800-km range of Hong Kong since Typhoon Gordon in 1989. Local winds were moderate to fresh from the northeast on the morning of 15 September. With Kalmaegi moving steadily towards the south China coast, the Strong Wind Signal No. 3 was issued at 12:40 p.m. when it was about 510 km south-southeast of Hong Kong. Local winds strengthened gradually in the afternoon, becoming fresh to strong east to northeasterlies and occasionally reaching gale force offshore and on high ground. As Kalmaegi continued to edge closer to the south China coast, the No. 8 Southeast Gale or Storm Signal was issued at 10:30 p.m. when Kalmaegi was about 370 km south of Hong Kong. East to southeasterly gales generally affected the territory overnight, with storm force winds offshore and winds even reaching hurricane force occasionally on high ground. Sustained gale force winds or above were attained at four out of the eight reference stations in the network of reference anemometers under the tropical cyclone warning system of Hong Kong.

Kalmaegi was closest to the territory in the small hours of 16 September as it skirted past about 370 km to the south-southwest. Winds subsided gradually as Kalmaegi moved away from Hong Kong. The No. 8 Southeast Gale or Storm Signal was replaced by the Strong Wind Signal No. 3 at 10:40 a.m that morning. With Kalmaegi moving further away from the territory in the afternoon, the Standby Signal No. 1 was issued at 8:40 p.m. As Kalmaegi moved further inland into the northern part of Vietnam, all tropical cyclone warning signals were cancelled at 2:10 a.m. Nevertheless, strong winds still affected the offshore waters of Hong Kong under the combined effect of the outer circulation of Kalmaegi and a ridge of high pressure along the southeastern coast of China. The Strong Monsoon Signal was issued immediately afterwards and lasted till 6:15 p.m. that day.

Under the influence of Kalmaegi, a maximum hourly mean wind of 96 km/h was recorded at Cheung Chau Beach, while maximum gusts of 175 km/h were recorded at Ngong Ping. A maximum sea level (above chart datum) of 3.28 m and a maximum storm surge (above astronomical tide) of 1.20 m were recorded at Tai Po Kau. The lowest instantaneous mean sea-level pressures recorded at some selected stations are as follows:-

Station	Lowest instantaneous mean sea-level pressure (hPa)	Date/ Month	Time
Hong Kong Observatory Headquarters	998.7	16/9	12:36 a.m.
Cheung Chau	997.6	16/9	03:47 a.m.
Hong Kong International Airport	998.0	16/9	03:59 a.m.
King’s Park	998.3	16/9	12:38 a.m.
Lau Fau Shan	998.7	16/9	12:53 a.m.
Waglan Island	997.5	16/9	03:45 a.m.

Local weather was very hot with sunny periods at first on 15 September. Under the influence of the outer circulation of Kalmaegi, the weather became cloudy to overcast with squally showers and a few thunderstorms in the latter part of the day. The outer rainbands of Kalmaegi continued to bring heavy squally showers and a few thunderstorms to the territory on 16 September. More than 50 millimetres of rainfall were recorded over most parts of the territory during these two days, with rainfall over the northern part of the New Territories and the western part of Hong Kong Island exceeding 100 millimetres.

In Hong Kong, at least 29 people were injured during the passage of Kalmaegi. There were 1 352 reports of fallen trees, five reports of flooding, one report of landslide and many incidents of blown down objects. A scaffolding at Ta Chuen Ping Street of Kwai Chung collapsed, damaging a lorry and a minibus. A tree at Fuk Loi Estate in Tsuen Wan fell down, with some of the branches smashing through the glass windows of a residential flat. Storm surge triggered by Kalmaegi caused backflow of sea water in some low lying areas. Village houses near the coast at Lei Yue Mun became flooded and many residents had to be evacuated. The pavement at the South

Waterfront Promenade at Tseung Kwan O was also damaged by sea waves. About 300 hectares of farmland in the New Territories were affected. At the Hong Kong International Airport, 131 flights were cancelled, 1 234 delayed and 20 aircraft were diverted.

Information on the maximum wind, period of strong and gale force winds, daily rainfall and maximum sea level reached in Hong Kong during the passage of Kalmaegi is given in Tables 3.4.1 - 3.4.4 respectively. Figures 3.4.1 - 3.4.2 show respectively the track of Kalmaegi and the rainfall distribution for Hong Kong. Figure 3.4.3 shows the winds recorded at various stations in Hong Kong. Figures 3.4.4 – 3.4.5 show repectively trace of mean sea-level pressure recorded at the Hong Kong Observatory's Headquarters and tide and storm surge recorded at Quarry Bay. Figures 3.4.6 – 3.4.7 show respectively a satellite imagery and a radar imagery of Kalmaegi. Some damages caused by Kalmaegi in Hong Kong are illustrated in Figures 3.4.8 and 3.4.9.

表 3.4.1　在海鷗影響下，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 the tropical cyclone warning signals for Kalmaegi 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)	東南偏東	ESE	96	16/9	08:13	東南偏東	ESE	58	16/9	02:00
中環碼頭	Central Pier	東	E	96	16/9	06:03	東	E	56	15/9	23:00
長洲	Cheung Chau	東南	SE	137	16/9	01:02	東南偏東	ESE	85	16/9	08:00
長洲泳灘	Cheung Chau Beach	東	E	130	16/9	01:06	東	E	96	16/9	02:00
青洲	Green Island	東北	NE	117	15/9	23:27	東北	NE	77	16/9	00:00
香港國際機場	Hong Kong International Airport	東	E	108	16/9	00:27	東	E	62	16/9	01:00
							東	E	62	16/9	04:00
啟德	Kai Tak	東南偏東	ESE	87	16/9	01:10	東	E	43	16/9	11:00
京士柏	King's Park	東南	SE	99	16/9	01:58	東南	SE	49	16/9	02:00
流浮山	Lau Fau Shan	東北偏東	ENE	115	16/9	00:51	東北偏東	ENE	54	16/9	01:00
昂坪	Ngong Ping	東北偏東	ENE	175	16/9	00:15	東北偏東	ENE	118	16/9	00:00
北角	North Point	東	E	101	16/9	00:00	東	E	49	15/9	23:00
							東	E	49	16/9	05:00
坪洲	Peng Chau	東	E	113	16/9	00:26	東	E	75	16/9	00:00
平洲	Ping Chau	東	E	59	16/9	00:34	東	E	22	16/9	00:00
西貢	Sai Kung	東南	SE	94	16/9	01:44	東北偏東	ENE	59	16/9	01:00
沙洲	Sha Chau	東南	SE	92	16/9	09:40	東南	SE	65	16/9	10:00
沙螺灣	Sha Lo Wan	東	E	104	15/9	23:09	東	E	56	16/9	00:00
沙田	Sha Tin	東北	NE	77	16/9	00:33	東北偏東	ENE	25	16/9	01:00
石崗	Shek Kong	東	E	81	16/9	05:20	東	E	38	16/9	03:00
九龍天星碼頭	Star Ferry (Kowloon)	東	E	101	15/9	19:08	東	E	58	16/9	05:00
打鼓嶺	Ta Kwu Ling	東	E	87	16/9	06:56	東	E	31	16/9	08:00
大美督	Tai Mei Tuk	東北偏東	ENE	135	16/9	01:11	東	E	85	16/9	01:00
大帽山	Tai Mo Shan	東	E	169	16/9	01:37	東	E	110	16/9	03:00
大埔滘	Tai Po Kau	東南	SE	108	16/9	01:51	東	E	58	16/9	01:00
塔門	Tap Mun	東	E	90	16/9	00:50	東	E	45	16/9	01:00
		東	E	90	16/9	00:52					
大老山	Tate's Cairn	東南偏東	ESE	139	16/9	01:09	東	E	88	16/9	05:00
將軍澳	Tseung Kwan O	東北	NE	76	15/9	23:42	東北	NE	20	15/9	22:00
青衣島 蜆殼油庫	Tsing Yi Shell Oil Depot	-	-	81	16/9	02:04	-	-	36	16/9	04:00
		-	-	81	16/9	04:29	-	-	36	16/9	06:00
		-	-	81	16/9	04:44					
屯門政府合署	Tuen Mun Government Offices	東南偏東	ESE	81	16/9	09:45	東南	SE	36	16/9	12:00
橫瀾島	Waglan Island	東	E	112	16/9	00:15	東	E	79	15/9	23:00
濕地公園	Wetland Park	東	E	83	16/9	01:05	東	E	34	16/9	01:00
黃竹坑	Wong Chuk Hang	東南	SE	108	16/9	00:50	東	E	41	16/9	00:00

- 沒有資料 - data not available

表 3.4.2　在海鷗影響下，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 among the eight reference anemometers in the tropical cyclone warning system when warning signals for Kalmaegi 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		最初達到烈風#時間 Start time gale force wind speed# was reached		最後達到烈風#時間 End time gale force wind speed# was reached	
		日期/月份 Date/Month	時間 Time	日期/月份 Date/Month	時間 Time	日期/月份 Date/Month	時間 Time	日期/月份 Date/Month	時間 Time
長洲	Cheung Chau	15/9	14:57	17/9	02:10	15/9	21:59	16/9	20:39
香港國際機場	Hong Kong International Airport	15/9	19:26	16/9	20:33	15/9	21:57	16/9	08:42
啟德	Kai Tak	16/9	00:53	16/9	12:51	-			
流浮山	Lau Fau Shan	15/9	22:20	16/9	10:03	16/9	00:51	16/9	00:57
西貢	Sai Kung	15/9	18:53	16/9	13:50	16/9	00:09	16/9	00:52
打鼓嶺	Ta Kwu Ling	16/9	06:59	16/9	07:00	-			

沙田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 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 winds or gale winds were recorded. Note that the winds might fluctuate above or below the specified wind speeds in between the times indicated.

表 3.4.3　海鷗影響香港期間，香港天文台總部及其他各站所錄得的日雨量
Table 3.4.3　Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Kalmaegi

站 (參閱圖 3.4.2) Station (See Fig. 3.4.2)			九月十五日 15 Sep	九月十六日 16 Sep	總雨量 (毫米) Total (mm)
香港天文台 Hong Kong Observatory			17.6	51.6	69.2
香港國際機場 Hong Kong International Airport (HKA)			2.4	35.7	38.1
長洲 Cheung Chau (CCH)			9.0	9.0	18.0
H23	香港仔	Aberdeen	11.5	43.5	55.0
N05	粉 嶺	Fanling	[32.5]	[66.0]	[98.5]
N13	糧 船 灣	High Island	9.0	[29.0]	[38.0]
K04	佐 敦 谷	Jordan Valley	[18.0]	33.0	[51.0]
N06	葵 涌	Kwai Chung	[12.5]	56.0	[68.5]
H12	半 山 區	Mid Levels	15.0	70.0	85.0
N09	沙 田	Sha Tin	18.5	45.5	64.0
H19	筲 箕 灣	Shau Kei Wan	10.5	39.0	49.5
SEK	石 崗	Shek Kong	26.0	59.5	85.5
K06	蘇 屋 邨	So Uk Estate	15.0	52.5	67.5
R31	大 美 督	Tai Mei Tuk	34.5	34.5	69.0
R21	踏 石 角	Tap Shek Kok	4.0	21.0	25.0
N17	東 涌	Tung Chung	4.5	34.0	38.5
R27	元 朗	Yuen Long	12.0	[40.0]	[52.0]

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

表 3.4.4　海鷗影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮
Table 3.4.4　Daily rainfall amounts recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Kalmaegi

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	3.03	16/9	02:11	0.92	16/9	02:11
石壁	Shek Pik	3.20	16/9	02:31	1.03	16/9	02:31
大埔滘	Tai Po Kau	3.28	16/9	02:20	1.20	16/9	02:20

大廟灣、尖鼻咀、橫瀾島 - 沒有資料
Tai Miu Wan, Tsim Bei Tsui ,Waglan Island - data not available

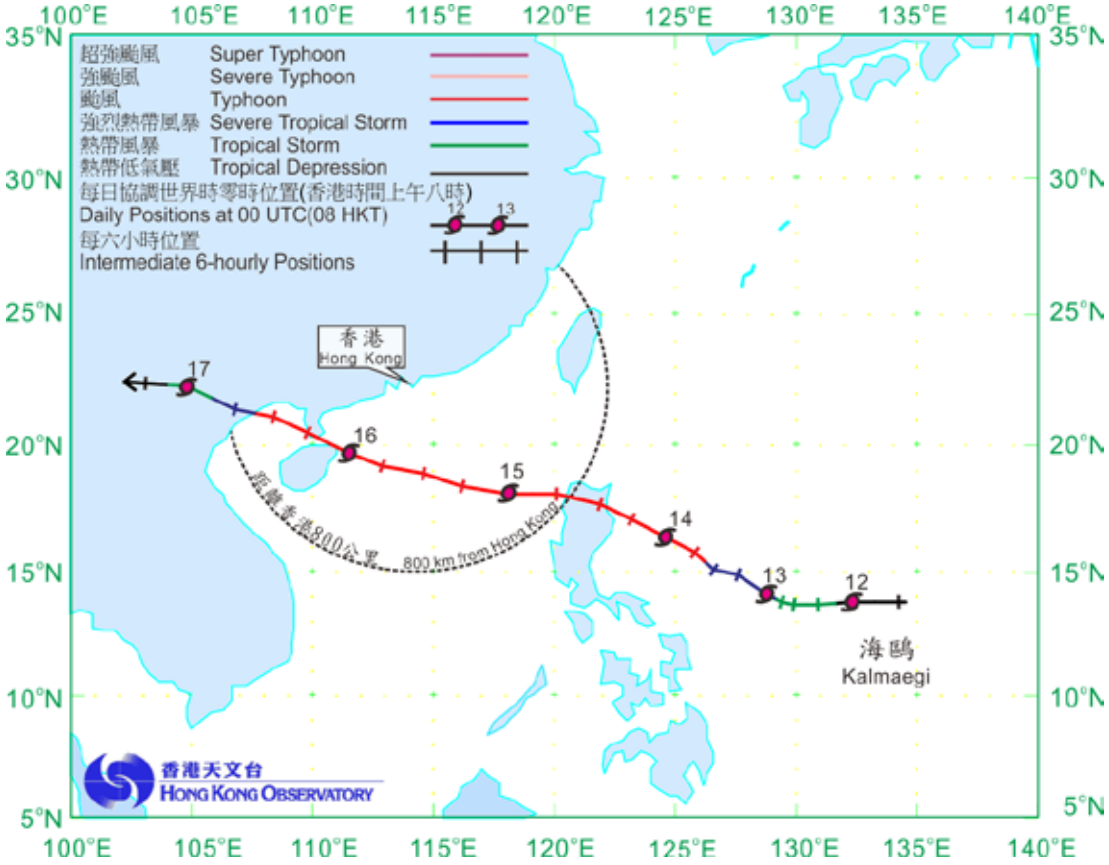


圖 3.4.1 颱風海鷗(1415)在二零一四年九月十二日至十七日的路徑圖。
Figure 3.4.1 Track of Typhoon Kalmaegi (1415) on 12 – 17 September 2014.

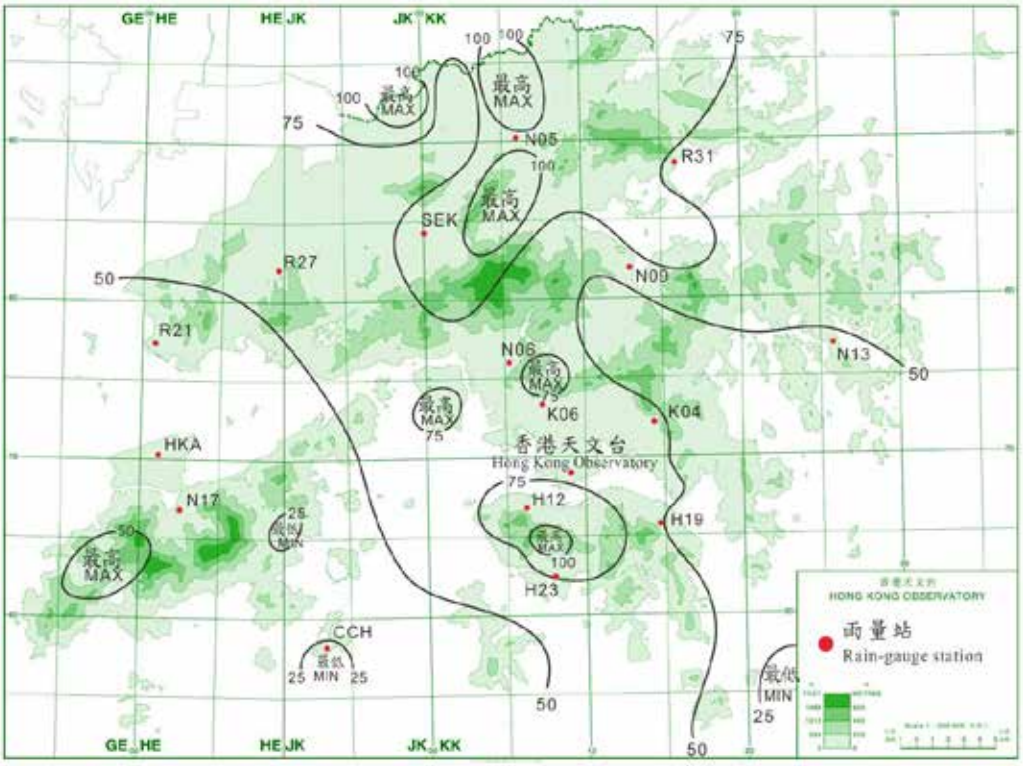


圖 3.4.2 二零一四年九月十五日至十六日的雨量分佈(等雨量線單位為毫米)。
Figure 3.4.2 Rainfall distribution on 15 – 16 September 2014 (isohyets are in millimetres).

「M」 ：表示該站的風向儀在維修中 Wind direction sensor under maintenance

「VRB」 ：表示風向不定 Variable winds

「 」 ：表示東風，風速每小時 18 公里 Easterly wind of 18 km/h

「 」 ：表示東風，風速每小時 90 公里 Easterly wind of 90 km/h

「 」 ：表示該站位於離平均海平面 500 米以上的地方
Station higher than 500 metres above mean sea level

註: 沙田、青衣及屯門當時錄得的十分鐘平均風速為分別為每小時 25、30 及 13 公里
Note: The 10-minute mean wind speed recorded at that time at Sha Tin, Tsing Yi and Tuen Mun were 25, 30 and 13 km/h respectively

圖 3.4.3 二零一四年九月十六日上午 12 時 10 分香港各站錄得的十分鐘平均風向和風速。颱風海鷗於當日凌晨時分最接近香港。

Figure 3.4.3 10-minute mean wind direction and speed recorded at various stations in Hong Kong at 12:10 a.m. on 16 September 2014. Typhoon Kalmaegi was closest to the territory in the small hours of that day.

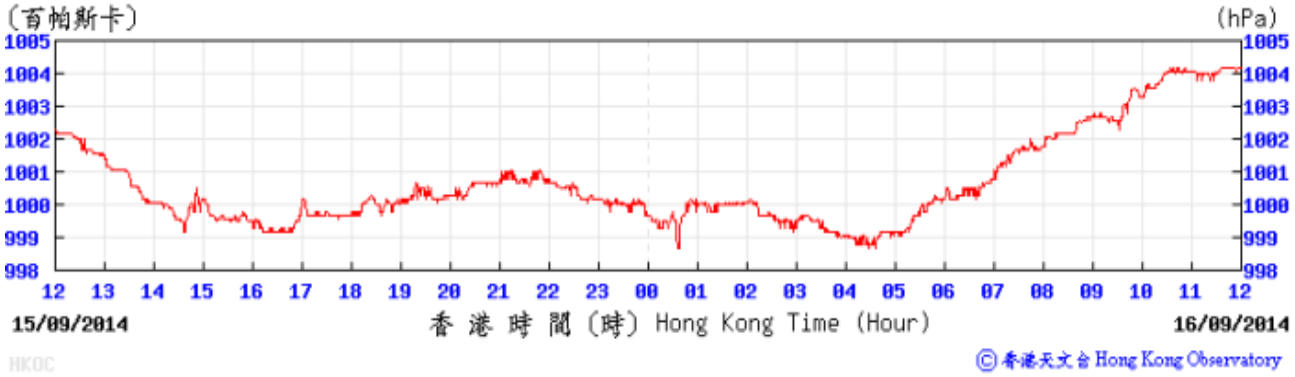


圖 3.4.4 二零一四年九月十五日至十六日天文台總部錄得的海平面氣壓。

Figure 3.4.4 Trace of mean sea-level pressure recorded at the Hong Kong Observatory's Headquarters on 15 - 16 September 2014.

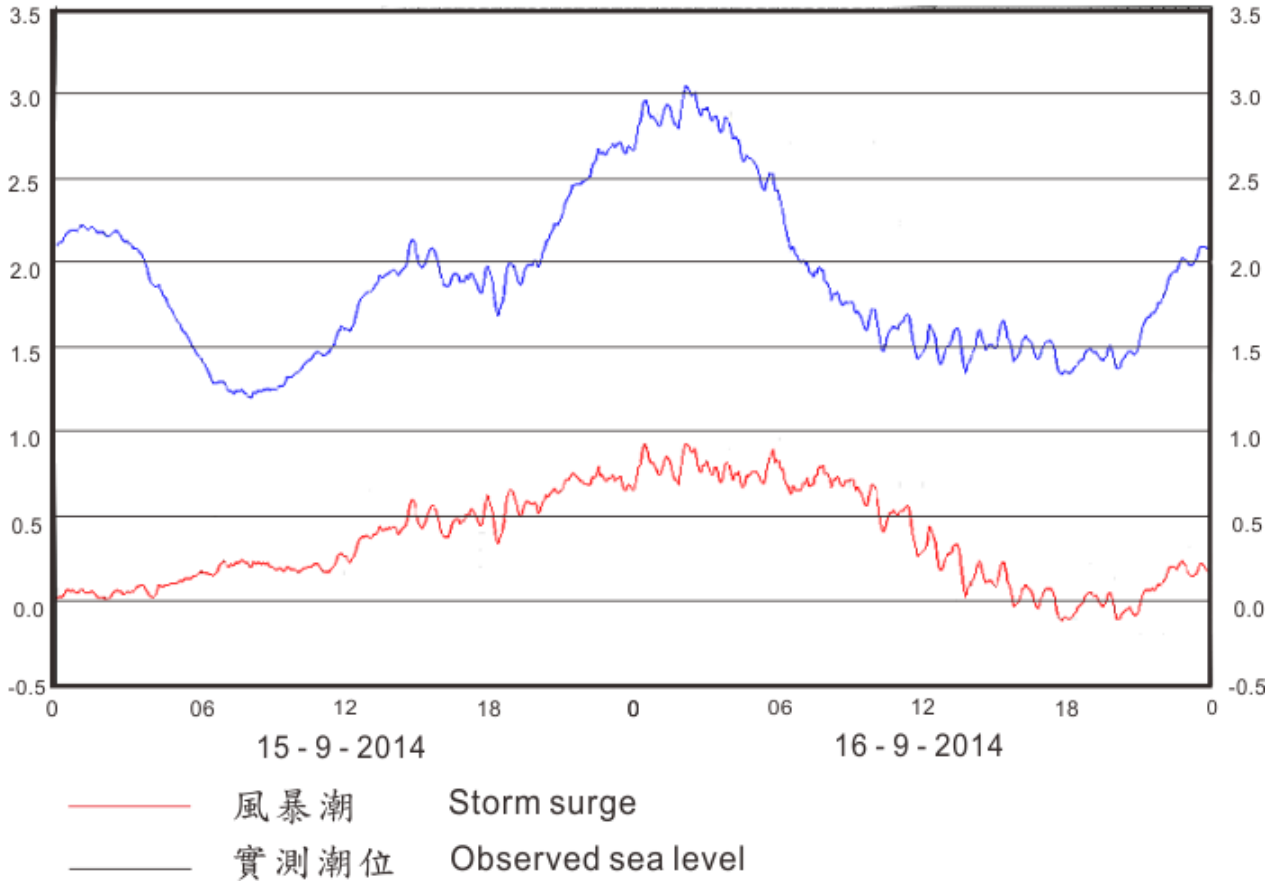


圖 3.4.5 二零一四年九月十五日至十六日鰂魚涌錄得的潮位圖(潮位為海圖基準面以上，單位為米)。

Figure 3.4.5 Tide and storm surge recorded at Quarry Bay for 15 - 16 September 2014 (Sea level in metres above chart datum).

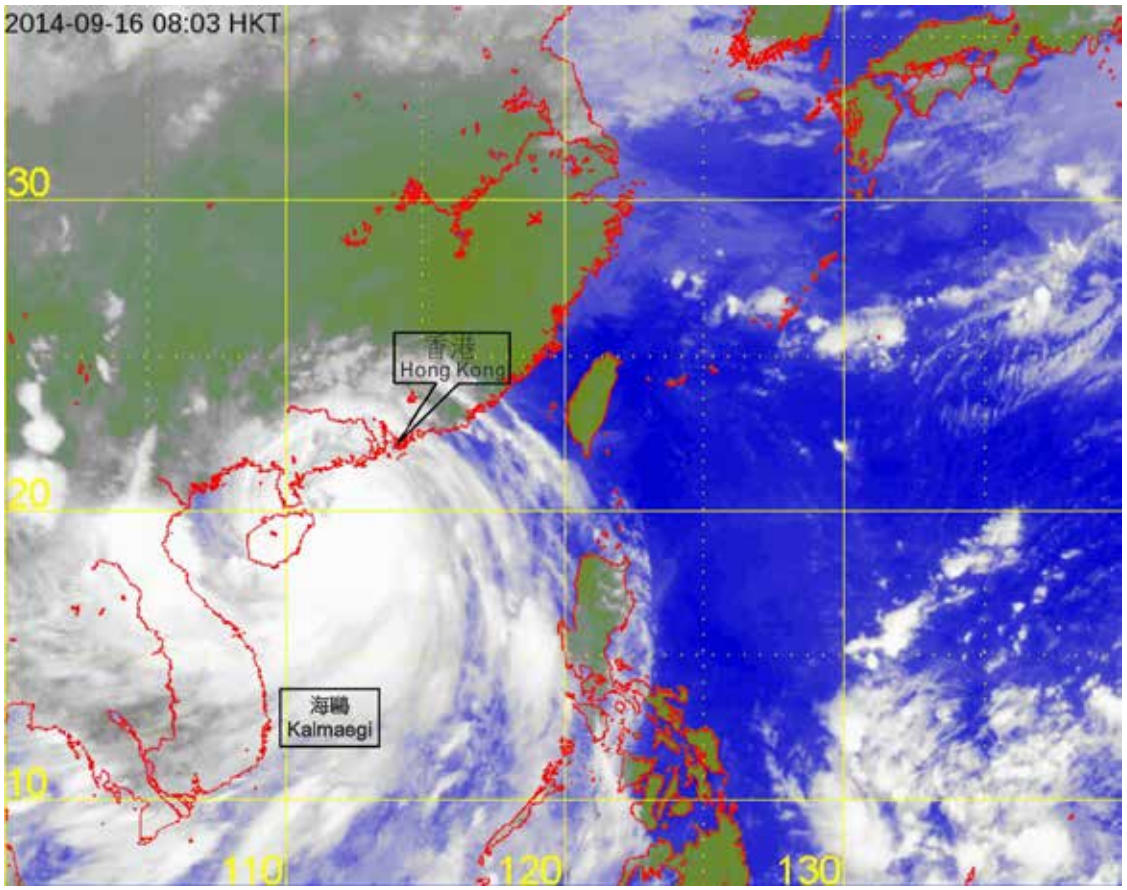


圖 3.4.6　颱風海鷗在二零一四年九月十六日上午 8 時左右的紅外線衛星圖片，當時海鷗達到其最高強度，中心附近最高持續風速估計為每小時 140 公里。

Figure 3.4.6　Infra-red satellite imagery of Typhoon Kalmaegi around 8 a.m. on 16 September 2014 at peak intensity with estimated maximum sustained winds of 140 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).]

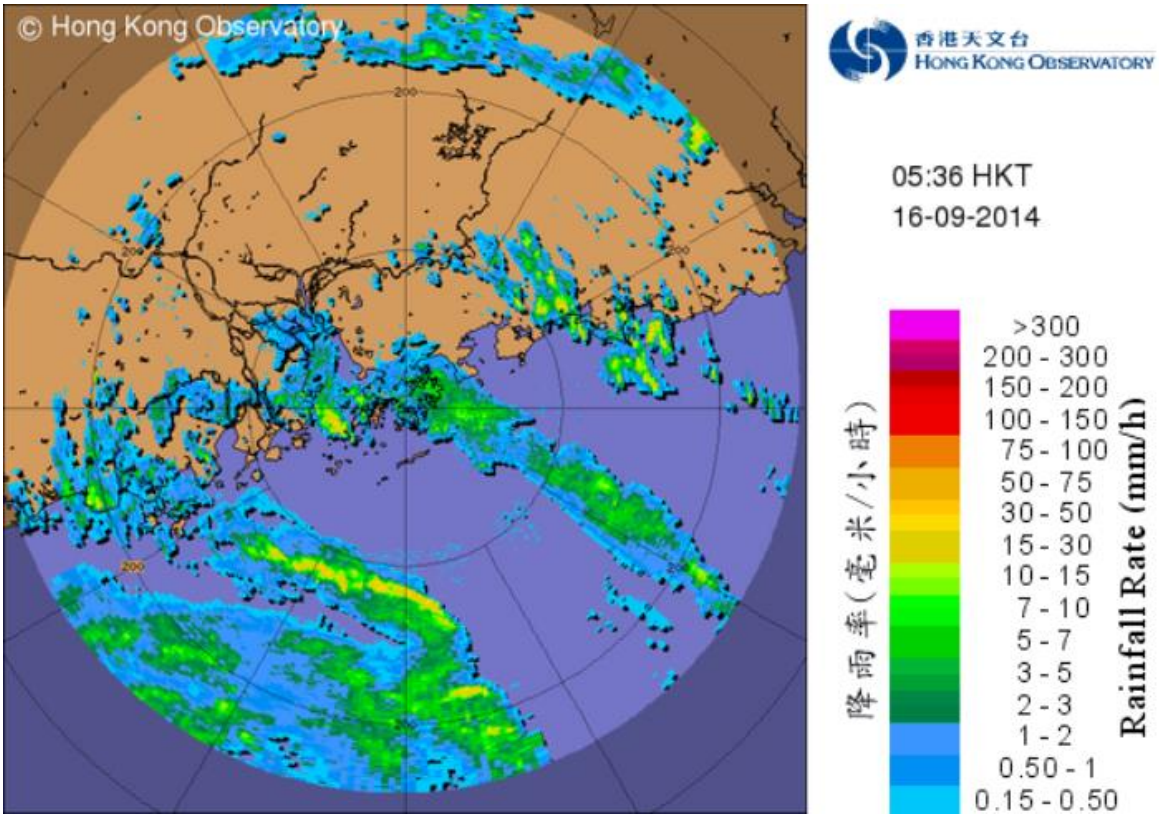


圖 3.4.7　二零一四年九月十六日上午 5 時 36 分的雷達回波圖像，當時颱風海鷗的中心正集結在香港之西南偏南約 380 公里，與其相關的雨帶正影響本港。

Figure 3.4.7　Image of radar echoes at 5:36 a.m. on 16 September 2014, when the centre of Typhoon Kalmaegi was located about 380 km south-southwest of Hong Kong. Rainbands associated with Kalmaegi were affecting the territory.

圖 3.4.8　颱風海鷗引致的風暴潮令鯉魚門馬環村出現海水倒灌(相片由星島日報提供)。

Figure 3.4.8　Storm surge triggered by Typhoon Kalmaegi caused backflow of sea water at Ma Wan Village at Lei Yue Mun. (Photo courtesy of Sing Tao Daily).

圖 3.4.9　颱風海鷗吹襲期間，葵涌打磚坪街有一幅棚架倒塌，導致一輛貨車及一輛小巴損毀(相片由星島日報提供)。

Figure 3.4.9　A scaffolding at Ta Chuen Ping Street of Kwai Chung collapsed, damaging a lorry and a minibus during the passage of Typhoon Kalmaegi. (Photo courtesy of Sing Tao Daily).

第四節　熱帶氣旋統計表

表4.1是二零一四年在北太平洋西部及南海區域（即由赤道至北緯45度、東經100度至180度所包括的範圍）的熱帶氣旋一覽。表內所列出的日期只說明某熱帶氣旋在上述範圍內出現的時間，因而不一定包括整個風暴過程。這個限制對表內其他元素亦同樣適用。

表4.2是天文台在二零一四年為船舶發出的熱帶氣旋警告的次數、時段、首個及末個警告發出的時間。當有熱帶氣旋位於香港責任範圍內時（即由北緯10至30度、東經105至125度所包括的範圍），天文台會發出這些警告。表內使用的時間為協調世界時。

表4.3是二零一四年熱帶氣旋警告信號發出的次數及其時段的摘要。表內亦提供每次熱帶氣旋警告信號生效的時間和發出警報的次數。表內使用的時間為香港時間。

表4.4是一九五六至二零一四年間熱帶氣旋警告信號發出的次數及其時段的摘要。

表4.5是一九五六至二零一四年間每年位於香港責任範圍內以及每年引致天文台需要發出熱帶氣旋警告信號的熱帶氣旋總數。

表4.6是一九五六至二零一四年間天文台發出各種熱帶氣旋警告信號的最長、最短及平均時段。

表 4.7 是二零一四年當熱帶氣旋影響香港時本港的氣象觀測摘要。資料包括熱帶氣旋最接近香港時的位置及時間和當時估計熱帶氣旋中心附近的最低氣壓、京士柏、香港國際機場及橫瀾島錄得的最高風速、香港天文台錄得的最低平均海平面氣壓以及香港各潮汐測量站錄得的最大風暴潮（即實際水位高出潮汐表中預計的部分，單位為米）。

表4.8.1是二零一四年位於香港600公里範圍內的熱帶氣旋及其為香港所帶來的雨量。

表4.8.2是一八八四至一九三九年以及一九四七至二零一四年十個為香港帶來最多雨量的熱帶氣旋和有關的雨量資料。

表4.9是自一九四六年以來，天文台發出十號颶風信號時所錄得的氣象資料，包括熱帶氣旋吹襲香港時的最近距離及方位、天文台錄得的最低平均海平面氣壓、香港各站錄得的最高60分鐘平均風速和最高陣風。

表4.10是二零一四年熱帶氣旋在香港所造成的損失。資料參考了各政府部門和公共事業機構所提供的報告及本地報章的報導。

表4.11是一九六零至二零一四年間熱帶氣旋在香港所造成的人命傷亡及破壞。資料參考了各政府部門和公共事業機構所提供的報告及本地報章的報導。

Section 4 TROPICAL CYCLONE STATISTICS AND TABLES

TABLE 4.1 is a list of tropical cyclones in 2014 in the western North Pacific and the South China Sea (i.e. the area bounded by the Equator, 45°N, 100°E and 180°). The dates cited are the residence times of each tropical cyclone within the above-mentioned region and as such might not cover the full life-span. This limitation applies to all other elements in the table.

TABLE 4.2 gives the number of tropical cyclone warnings for shipping issued by the Hong Kong Observatory in 2014, the durations of these warnings and the times of issue of the first and last warnings for all tropical cyclones in Hong Kong's area of responsibility (i.e. the area bounded by 10°N, 30°N, 105°E and 125°E). Times are given in hours and minutes in UTC.

TABLE 4.3 presents a summary of the occasions/durations of the issuing of tropical cyclone warning signals in 2014. The sequence of the signals displayed and the number of tropical cyclone warning bulletins issued for each tropical cyclone are also given. Times are given in hours and minutes in Hong Kong Time.

TABLE 4.4 presents a summary of the occasions/durations of the issuing of tropical cyclone warning signals from 1956 to 2014 inclusive.

TABLE 4.5 gives the annual number of tropical cyclones in Hong Kong's area of responsibility between 1956 and 2014 and also the annual number of tropical cyclones necessitated the issuing of tropical cyclone warning signals in Hong Kong.

TABLE 4.6 shows the maximum, mean and minimum durations of the tropical cyclone warning signals issued during the period 1956-2014.

TABLE 4.7 is a summary of meteorological information for each tropical cyclone affecting Hong Kong in 2014, including the position, time and the estimated minimum central pressure of each tropical cyclone during its closest approach to Hong Kong, the maximum winds at King’s Park, Hong Kong International Airport and Waglan Island, the minimum mean sea-level pressure recorded at the Hong Kong Observatory and the maximum storm surge (the excess, in metres, of the actual water level over that predicted in the Tide Tables) recorded at various tide stations in Hong Kong.

TABLE 4.8.1 tabulates the amount of rainfall associated with each tropical cyclone that came within 600 km of Hong Kong in 2014.

TABLE 4.8.2 highlights the 10 wettest tropical cyclones in Hong Kong for the period 1884-1939 and 1947-2014.

TABLE 4.9 provides some meteorological information for those typhoons requiring the issuing of the Hurricane Signal No. 10 in Hong Kong since 1946. The information presented includes the distances and bearings of nearest approach, the minimum mean sea-level pressures recorded at the Hong Kong Observatory and the maximum 60-minute mean winds and maximum gust peak speeds recorded at some stations in Hong Kong.

TABLE 4.10 contains damage caused by tropical cyclones in 2014. The information is based on reports from various government departments, public utility companies and local newspapers.

TABLE 4.11 presents casualties and damage caused by tropical cyclones in Hong Kong: 1960-2014. The information is based on reports from various government departments, public utility companies and local newspapers.

表 4.1　　二零一四年在北太平洋西部及南海區域的熱帶氣旋一覽

TABLE 4.1　　LIST OF TROPICAL CYCLONES IN THE WESTERN NORTH PACIFIC AND THE SOUTH CHINA SEA IN 2014

熱帶氣旋名稱	Name of tropical cyclone	編號 Code	路徑起點 Beginning of track				最高強度 (估計) Peak intensity (estimated)		路徑終點 End of track				DISP: 消散 Dissipated XT: 變為溫帶氣旋 Extratropical
			日期/月份 Date/Month	時間+ Time+	位置 Position 北緯 °N	東經 °E	風力 (公里每小時) Winds (km/h)	氣壓 (百帕斯卡) Pressure (hPa)	日期/月份 Date/Month	時間+ Time+	位置 Position 北緯 °N	東經 °E	
熱帶低氣壓玲玲	Tropical Depression Lingling	1401	18 / 1	0000	9.8	127.5	55	1002	20 / 1	0000	6.5	128.8	DISP
熱帶風暴劍魚	Tropical Storm Kajiki	1402	30 / 1	1800	9.3	131.6	85	990	1 / 2	0000	11.2	120.7	DISP
颱風法茜	Typhoon Faxai	1403	28 / 2	0000	8.5	147.0	130	970	5 / 3	1200	22.1	154.2	XT
熱帶風暴琵琶	Tropical Storm Peipah	1404	3 / 4	1200	1.8	146.0	65	998	9 / 4	1800	8.9	130.2	DISP
強烈熱帶風暴塔巴	Severe Tropical Storm Tapah	1405	27 / 4	1800	12.0	146.8	110	980	1 / 5	0600	22.0	144.3	DISP
熱帶低氣壓米娜	Tropical Depression Mitag	1406	11 / 6	0600	24.0	128.0	55	996	11 / 6	1800	27.2	132.5	XT
熱帶風暴海貝思	Tropical Storm Hagibis	1407	14 / 6	0000	20.2	117.0	75	988	17 / 6	1800	29.7	133.8	XT
超強颱風浣熊	Super Typhoon Neoguri	1408	3 / 7	0600	9.3	145.1	195	925	10 / 7	1800	34.7	139.1	XT
超強颱風威馬遜	Super Typhoon Rammasun	1409	11 / 7	0000	12.0	148.3	240	910	19 / 7	1800	23.0	105.1	DISP
颱風麥德姆	Typhoon Matmo	1410	17 / 7	0000	10.0	135.5	140	960	25 / 7	1200	38.2	123.3	XT
超強颱風夏浪	Super Typhoon Halong	1411	28 / 7	1800	12.2	148.6	230	915	10 / 8	1200	38.9	136.8	XT
強烈熱帶風暴娜基莉	Severe Tropical Storm Nakri	1412	29 / 7	0600	17.9	129.0	105	976	3 / 8	1800	35.9	125.9	XT
超強颱風吉納維芙	Super Typhoon Genevieve	1413	7 / 8	0600	14.5	179.8	230	915	11 / 8	1800	34.6	167.4	DISP
熱帶低氣壓	Tropical Depression	-	7 / 9	0000	18.7	113.3	55	998	8 / 9	0600	21.1	110.4	DISP
強烈熱帶風暴風神	Severe Tropical Storm Fengshen	1414	7 / 9	0000	27.2	129.5	105	980	9 / 9	1200	34.0	146.8	XT
颱風海鷗	Typhoon Kalmaegi	1415	11 / 9	1800	13.8	134.2	140	960	17 / 9	0600	22.4	103.1	DISP
強烈熱帶風暴鳳凰	Severe Tropical Storm Fung-wong	1416	17 / 9	0600	12.2	133.1	90	982	24 / 9	0000	33.2	125.1	XT
強烈熱帶風暴北冕	Severe Tropical Storm Kammuri	1417	24 / 9	1200	20.0	149.6	90	985	29 / 9	1200	35.8	150.7	XT
超強颱風巴蓬	Super Typhoon Phanfone	1418	29 / 9	0000	12.7	152.3	185	930	6 / 10	0600	37.7	143.5	XT
超強颱風黃蜂	Super Typhoon Vongfong	1419	2 / 10	1800	7.8	160.5	240	910	13 / 10	1800	36.5	139.7	XT
超強颱風鸚鵡	Super Typhoon Nuri	1420	31 / 10	0000	12.5	137.2	250	905	6 / 11	1800	34.3	146.1	XT
強烈熱帶風暴森拉克	Severe Tropical Storm Sinlaku	1421	26 / 11	1800	9.5	124.0	90	986	30 / 11	0600	13.6	108.0	DISP
超強颱風黑格比	Super Typhoon Hagupit	1422	30 / 11	1800	3.0	154.4	250	905	12 / 12	0000	11.6	109.6	DISP
熱帶風暴薔薇	Tropical Storm Jangmi	1423	27 / 12	1200	7.0	130.1	75	992	31 / 12	1200	7.8	119.6	DISP

+ 時間為協調世界時。　+ Times are given in UTC.

表 4.2　　二零一四年為船舶發出的熱帶氣旋警告
TABLE 4.2　TROPICAL CYCLONE WARNINGS FOR SHIPPING ISSUED IN 2014

熱帶氣旋	Tropical cyclone	發出警告的次數 No. of warnings issued	發出的日期及時間 Date and time of issue of				時段 (小時) Duration (hours)
			首次警告 First warning		末次警告 Last warning		
			日期/月份 Date/Month	時間+ Time+	日期/月份 Date/Month	時間+ Time+	
熱帶風暴劍魚	Tropical Storm Kajiki	7	31 / 1	1800	1 / 2	1200	18
* 熱帶風暴海貝思	* Tropical Storm Hagibis	14	14 / 6	0000	15 / 6	1200	36
* 超強颱風威馬遜	* Super Typhoon Rammasun	38	15 / 7	0600	19 / 7	1200	102
颱風麥德姆	Typhoon Matmo	22	21 / 7	1800	24 / 7	0000	54
* 熱帶低氣壓	* Tropical Depression	11	7 / 9	0000	8 / 9	0600	30
* 颱風海鷗	* Typhoon Kalmaegi	26	14 / 9	0000	17 / 9	0000	72
強烈熱帶風暴鳳凰	Severe Tropical Storm Fung-wong	38	18 / 9	1800	22 / 9	2100	99
強烈熱帶風暴森拉克	Severe Tropical Storm Sinlaku	22	27 / 12	0900	30 / 12	0000	63
超強颱風黑格比	Super Typhoon Hagupit	44	6 / 12	2100	12 / 12	0300	126
熱帶風暴薔薇	Tropical Storm Jangmi	9	29 / 12	2100	30 / 12	2100	24
	共 Total	231					624

* 這些熱帶氣旋引致天文台需要發出熱帶氣旋警告信號。

* Tropical cyclones for which tropical cyclone warning signals were issued in Hong Kong.

+ 時間為協調世界時。

+ Times are given in UTC.

表 4.3　　二零一四年天文台所發出的熱帶氣旋警告信號及警報發出的次數
TABLE 4.3　TROPICAL CYCLONE WARNING SIGNALS ISSUED IN HONG KONG AND NUMBER OF WARNING BULLETINS ISSUED IN 2014

摘要 SUMMARY

信號 Signal	次數 No. of occasions	總時段 Total duration	
		時 h	分 min
1	6	86	20
3	3	47	15
8 西北 NW	0	0	0
8 西南 SW	0	0	0
8 東北 NE	0	0	0
8 東南 SE	1	12	10
9	0	0	0
10	0	0	0
共 Total	10	145	45

詳情 DETAILS

熱帶氣旋 Tropical cyclone	警報發出的次數 No. of warning bulletins issued	信號 Signal	發出 Issued		取消 Cancelled	
			日期/月份 Date/Month	時間* Time*	日期/月份 Date/Month	時間* Time*
熱帶風暴海貝思 Tropical Storm Hagibis	21	1	14/06	17:40	15/06	13:20
超強颱風威馬遜 Super Typhoon Rammasun	54	1	16/07	23:40	17/07	16:15
		3	17/07	16:15	18/07	19:40
		1	18/07	19:40	19/07	03:40
熱帶低氣壓 Tropical Depression	26	1	07/09	09:40	08/09	09:10
颱風海鷗 Typhoon Kalmaegi	58	1	14/09	23:35	15/09	12:40
		3	15/09	12:40	15/09	22:30
		8 東南 SE	15/09	22:30	16/09	10:40
		3	16/09	10:40	16/09	20:40
		1	16/09	20:40	17/09	02:10

* 香港時間（協調世界時加八小時）
* Hong Kong Time （UTC + 8 hours）

表 4.4　　一九五六至二零一四年間每年各熱帶氣旋警告信號的發出次數及總時段

TABLE 4.4　FREQUENCY AND TOTAL DURATION OF DISPLAY OF TROPICAL CYCLONE WARNING SIGNALS : 1956-2014

信號 Signals / 年份 Year	1	3	8 西北 NW	8 西南 SW	8 東北 NE	8 東南 SE	9	10	總時段 Total duration 時 h	分 min
1956	5	4	0	0	0	0	0	0	191	25
1957	4	9	1	1	2	2	0	1	295	45
1958	4	5	0	0	1	0	0	0	214	5
1959	1	1	0	0	0	0	0	0	36	35
1960	11	7	0	2	2	2	1	1	432	35
1961	6	7	1	2	1	0	1	1	192	55
1962	4	3	0	1	1	0	1	1	158	10
1963	4	5	0	0	1	0	0	0	175	50
1964	11	14	1	3	5	3	3	2	570	15
1965	7	6	0	0	1	1	0	0	239	40
1966	6	5	0	0	2	2	0	0	284	40
1967	8	6	0	0	2	1	0	0	339	10
1968	7	7	0	1	1	0	1	1	290	10
1969	4	2	0	0	0	0	0	0	110	15
1970	6	8	2	1	2	0	0	0	286	45
1971	9	10	1	3	2	2	1	1	323	25
1972	8	6	0	0	1	1	0	0	288	20
1973	8	6	1	1	1	0	1	0	416	50
1974	12	10	0	0	2	1	1	0	525	20
1975	8	6	1	0	0	1	1	1	292	20
1976	6	6	0	0	1	2	0	0	351	30
1977	8	6	0	0	1	0	0	0	395	10
1978	8	9	1	1	3	2	0	0	462	10
1979	5	5	1	0	2	2	1	1	281	15
1980	10	8	0	0	1	1	0	0	414	5
1981	5	4	0	0	1	1	0	0	202	20
1982	7	4	0	0	0	0	0	0	247	35
1983	8	7	0	1	2	2	1	1	289	42
1984	6	6	0	0	1	0	0	0	280	2
1985	5	4	1	0	0	1	0	0	193	35
1986	6	7	0	1	1	0	0	0	305	0
1987	6	1	0	0	0	0	0	0	165	45
1988	6	4	0	0	0	0	0	0	204	10
1989	7	8	0	0	2	2	0	0	306	10
1990	6	4	0	0	0	0	0	0	245	10
1991	8	6	0	0	1	1	0	0	349	55
1992	5	5	0	0	1	1	0	0	167	5
1993	8	9	0	0	2	4	0	0	325	40
1994	4	3	0	0	0	0	0	0	138	10
1995	8	6	2	2	1	1	0	0	348	50
1996	7	2	0	0	0	1	0	0	189	0
1997	2	3	0	1	1	0	1	0	97	30
1998	5	2	0	0	0	0	0	0	188	35
1999	10	13	4	3	2	0	2	1	520	0
2000	7	3	0	0	0	0	0	0	329	5
2001	6	6	1	1	2	1	0	0	253	35
2002	3	2	0	0	0	1	0	0	144	25
2003	4	5	1	1	1	1	1	0	158	0
2004	3	2	1	1	1	0	0	0	77	35
2005	3	1	0	0	0	0	0	0	142	45
2006	10	3	0	0	0	0	0	0	317	50
2007	4	3	0	1	0	0	0	0	86	50
2008	8	9	2	2	3	2	1	0	347	0
2009	13	9	1	1	1	2	1	0	255	30
2010	8	3	0	0	0	0	0	0	220	0
2011	8	5	0	0	0	1	0	0	213	0
2012	9	7	0	0	2	3	1	1	252	45
2013	10	7	1	1	0	1	0	0	292	50
2014	6	3	0	0	0	1	0	0	145	45
共 Total	391	327	24	32	60	50	20	13	15569	49
平均 Mean	6.6	5.5	0.4	0.5	1.0	0.8	0.3	0.2	263	54

表 4.5　一九五六至二零一四年間每年位於香港責任範圍內以及每年引致天文台需要發出熱帶氣旋警告信號的熱帶氣旋總數

TABLE 4.5 ANNUAL NUMBER OF TROPICAL CYCLONES IN HONG KONG'S AREA OF RESPONSIBILITY AND THE NUMBER THAT NECESSITATED THE DISPLAY OF TROPICAL CYCLONE WARNING SIGNALS IN HONG KONG : 1956-2014

年份 Year	每年位於香港責任範圍內的熱帶氣旋總數 Annual number of tropical cyclones in Hong Kong's area of responsibility	每年引致天文台需要發出熱帶氣旋警告信號的熱帶氣旋總數 Annual number of tropical cyclones necessitating the display of signals in Hong Kong
1956	23	5
1957	12	6
1958	15	5
1959	18	2
1960	18	9
1961	24	6
1962	20	4
1963	13	4
1964	26	10
1965	16	6
1966	17	6
1967	17	8
1968	12	6
1969	11	4
1970	20	6
1971	20	9
1972	15	5
1973	17	9
1974	21	11
1975	12	7
1976	10	5
1977	10	8
1978	20	8
1979	18	6
1980	17	10
1981	15	5
1982	16	5
1983	15	7
1984	14	5
1985	15	5
1986	16	4
1987	12	5
1988	17	6
1989	17	7
1990	18	6
1991	14	6
1992	11	5
1993	14	9
1994	20	4
1995	17	8
1996	15	7
1997	10	2
1998	15	5
1999	12	8
2000	20	7
2001	14	6
2002	10	3
2003	12	4
2004	15	3
2005	15	3
2006	16	7
2007	12	2
2008	17	6
2009	17	8
2010	11	5
2011	12	5
2012	14	5
2013	19	7
2014	10	4
平均 Mean	15.6	5.9

表 4.6　　一九五六至二零一四年間天文台發出熱帶氣旋警告信號的時段

TABLE 4.6　DURATION OF TROPICAL CYCLONE WARNING SIGNALS ISSUED IN HONG KONG : 1956-2014

信號 Signal	次數 Number of occasions	每次時段 Duration of each occasion			每年總時段 Total duration per year		
		平均 Mean	最長 Maximum	最短 Minimum	平均 Mean	最長 Maximum	最短 Minimum
		時 分 h min	時 分 h min	時 分 h min	時 分 h min	時 分 h min	時 分 h min
一號或以上 1 or higher	363	42 54	161 0 (桃麗達Tilda, 1964)	4 30 (熱帶低氣壓 T.D., 2000)	263 54	570 15 (1964)	36 35 (1959)
三號或以上 3 or higher	242	29 27	124 15 (瑪麗Mary, 1960)	4 5 (熱帶低氣壓 T.D., 2006)	120 46	306 35 (1974)	15 5 (2004)
八號或以上 8 or higher	87	14 42	66 50 (瑪麗Mary, 1960)	2 40 (雲茵Wynne, 1984)	21 41	100 55 (1964)	0 0
8 西北 NW	24	5 47	15 45	1 30	2 21	18 0	0 0
8 西南 SW	32	4 56	10 45	2 0	2 41	16 10	0 0
8 東北 NE	60	7 41	35 35	1 35	7 49	40 20	0 0
8 東南 SE	50	7 32	21 45	0 20	6 23	31 15	0 0
九號或以上 9 or higher	21	6 54	12 25 (約克York, 1999)	2 0 (杜鵑Dujuan, 2003)	2 27	19 25 (1964)	0 0
十號 10	13	6 17	11 0 (約克York, 1999)	2 30 (愛麗斯Alice, 1961)	1 23	12 10 (1964)	0 0

註：( ) 內為創造該記錄的熱帶氣旋名稱及年份。

Note: ( ) are the years and the names of the tropical cyclones which created the record.

表 4.7　　二零一四年當熱帶氣旋影響香港時本港的氣象觀測摘要

TABLE 4.7　A SUMMARY OF METEOROLOGICAL OBSERVATIONS RECORDED IN HONG KONG DURING THE PASSAGES OF TROPICAL CYCLONES IN 2014

熱帶氣旋 名稱 Name of tropical cyclone	當最接近香港時 Nearest approach to Hong Kong							香港天文台錄得的最低 海平面氣壓(百帕斯卡) Minimum M.S.L. pressure (hPa) at the Hong Kong Observatory				最大風暴潮(米) Maximum storm surge (metres)					
	月份 Month	日期 Date	時間* Hour*	方位 Direction	距離 (公里) Distance (km)	移動方向 及速度 (公里每小時) Movement (km/h)		估計最低 中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	月份 Month	日期 Date	時間* Hour*	瞬時 Inst. 每小時 Hourly	鰂魚涌 Quarry Bay	石壁 Shek Pik	大廟灣 Tai Miu Wan	大埔滘 Tai Po Kau	尖鼻咀 Tsim Bei Tsui	橫瀾島 Waglan Island
熱帶風暴海貝思 Tropical Storm Hagibis	6	15	09	東 E	260	北 N	13	988	6	15	04:53 - 13:20#	1001.2	0.51	0.36	0.54	0.51	0.32	0.54
											5:00	1001.2						
超強颱風威馬遜 Super Typhoon Rammasun	7	18	12	西南 SW	390	西北 NW	10	915	7	18	04:01 - 04:17#	1001.6	0.48	0.52	0.53	0.59	0.37	0.47
											4:00	1001.7						
熱帶低氣壓 Tropical Depression	9	8	02	西南 SW	360	西北 NW	18	998	9	7	14:38 - 16:38#	1006.0	0.11	0.10	0.06	0.22	0.02	0.10
											16:00, 17:00	1006.2						
										8	5:00	1006.2						
颱風海鷗 Typhoon Kalmaegi	9	16	00	西南偏南 SSW	370	西北偏西 WNW	13	965	9	16	0:36 - 04:36#	998.7	0.92	1.03	-	1.20	-	-
											4:00	999.1						

* 香港時間（協調世界時加八小時）　* Hong Kong Time （UTC + 8 hours）

\# 最初及最後錄得的時間　\# First and last time recorded

\- 沒有資料　\- data not available

表 4.7 (續) TABLE 4.7 (cont'd)

熱帶氣旋名稱 Name of tropical cyclone	月份 Month	最高60分鐘平均風向及風速 (公里每小時) Maximum 60-min mean wind in points and km/h			最高10分鐘平均風向及風速 (公里每小時) Maximum 10-min mean wind in points and km/h			最高陣風風向及風速 (公里每小時) Maximum gust peak speed in km/h with direction in points		
		京士柏 King's Park	香港國際機場 Hong Kong International Airport	橫瀾島 Waglan Island	京士柏 King's Park	香港國際機場 Hong Kong International Airport	橫瀾島 Waglan Island	京士柏 King's Park	香港國際機場 Hong Kong International Airport	橫瀾島 Waglan Island
熱帶風暴海貝思 Tropical Storm Hagibis	6	東南 SE 14	東南偏東 ESE 27	東 E 38	東南 SE 14	東南偏東 ESE 30	東 E 43	東北 NE 30	東南偏東 ESE 36	東 E 47
超強颱風威馬遜 Super Typhoon Rammasun	7	東南, 東南偏東 SE, ESE 36	東南偏東 ESE 45	東 E 63	東南 SE 40	東南偏東 ESE 52	東北偏東 ENE 72	東南 SE 67	東南偏東 ESE 77	東 E 96
熱帶低氣壓 Tropical Depression	9	東南偏東 ESE 20	東南偏東 ESE 36	東北偏東 ENE 41	東南偏東, 東南, ESE, SE 23	東南偏東 ESE 38	東南偏東 ESE 47	東南偏東 ESE 41	東南偏東 ESE 49	東南 SE 67
颱風海鷗 Typhoon Kalmaegi	9	東南 SE 49	東 E 63	東 E 81	東南偏東, 東南, ESE, SE 54	東 E 77	東北偏東 ENE 88	東南 SE 99	東 E 108	東 E 112

表 4.8.1　二零一四年位於香港600公里範圍內的熱帶氣旋及其為本港帶來的雨量期間，天文台錄得的雨量

TABLE 4.8.1　RAINFALL ASSOCIATED WITH EACH TROPICAL CYCLONE THAT CAME WITHIN 600 KM OF HONG KONG IN 2014

熱帶氣旋名稱 Name of tropical cyclone	熱帶氣旋位於香港600公里範圍內的時期 Period when tropical cyclone within 600 km of Hong Kong (T_1 → T_2) 日期/月份 Date/Month 時間* Time*	香港天文台錄得的雨量(毫米) Rainfall at the Hong Kong Observatory (mm)				
		(i) 在香港600公里內 within 600 km of Hong Kong (T_1→ T_2)	(ii) 在 T_2 之後的24小時內 24-hour period after T_2	(iii) 在 T_2 之後的48小時內 48-hour period after T_2	(iv) 在 T_2 之後的72小時內 72-hour period after T_2	(i) + (iv) 共 Total T_1 → (T_2+72 小時 hours)
熱帶風暴海貝思 Tropical Storm Hagibis	(T_1) 14 / 6 0800 - (T_2) 16 / 6 0200	9.9	3.8	4.9	10.9	20.8
超強颱風威馬遜 Super Typhoon Rammasun	(T_1) 17 / 7 1600 - (T_2) 19 / 7 0700	56.5	14.2	14.5	14.5	71.0
颱風麥德姆 Typhoon Matmo	(T_1) 23 / 7 1900 - (T_2) 23 / 7 2200	0.0	7.3	13.5	20.2	20.2
熱帶低氣壓 Tropical Depression	(T_1) 7 / 9 0800 - (T_2) 8 / 9 1400	3.6	微量 Trace	微量 Trace	微量 Trace	3.6
颱風海鷗 Typhoon Kalmaegi	(T_1) 15 / 9 0900 - (T_2) 16 / 9 1900	58.9	18.0	18.0	18.3	77.2
					共 Total	192.8

* 香港時間（協調世界時加八小時）。

T_1 - 熱帶氣旋首次出現於香港600公里範圍內的時間。

T_2 - 熱帶氣旋在香港600公里範圍內消散或離開該範圍的時間。

* Hong Kong Time （UTC + 8 hours）.

T_1 - The time when a tropical cyclone was first centred within 600 km of Hong Kong.

T_2 - The time when a tropical cyclone was dissipated within or moved outside 600 km of Hong Kong.

表 4.8.2　一八八四至一九三九年及一九四七至二零一四年間十個為香港帶來最多雨量的熱帶氣旋

TABLE 4.8.2　TEN WETTEST TROPICAL CYCLONES IN HONG KONG (1884-1939, 1947-2014)

熱帶氣旋 Tropical Cyclone			香港天文台錄得的雨量(毫米) Rainfall at the Hong Kong Observatory (mm)				
年份 Year	月份 Month	名稱 Name	(i) 在香港600公里內 within 600 km of Hong Kong ($T_1 \rightarrow T_2$)	(ii) 在 T_2 之後的 24 小時內 24-hour period after T_2	(iii) 在 T_2 之後的 48 小時內 48-hour period after T_2	(iv) 在 T_2 之後的 72 小時內 72-hour period after T_2	(i) + (iv) 共 Total $T_1 \rightarrow$ (T_2+72 小時 hours)
1999	8	森姆 Sam	368.1	178.9	248.1	248.4	616.5
1926	7	熱帶氣旋 T.C.	34.8 #	534.0 #	561.1 #	562.2 #	597.0
1916	6	熱帶氣旋 T.C.	494.8 #	27.9 #	59.4 #	67.2 #	562.0
1965	9	愛娜斯 Agnes	404.6	8.9	64.3	126.1	530.7
1978	7	愛娜斯 Agnes	502.4	12.3	12.3	16.6	519.0
1976	8	愛倫 Ellen	90.7	394.2	421.0	425.4	516.1
1993	9	黛蒂 Dot	459.6	37.9	37.9	37.9	497.5
1982	8	黛蒂 Dot	41.2	322.5	403.1	450.5	491.7
1995	8	海倫 Helen	241.4	146.2	235.2	239.5	480.9
1904	8	熱帶氣旋 T.C.	446.5 #	0.0 #	3.7 #	26.7 #	473.2

T_1 - 熱帶氣旋首次出現於香港600公里範圍內的時間。

T_2 - 熱帶氣旋在香港600公里範圍內消散或離開該範圍的時間。

對於一九六一年以前的熱帶氣旋，欄(i)顯示當它位於香港600公里範圍內的日子裡，天文台所錄得的總日雨量，欄(ii)至(iv)分別是指其後一至三天累積的日雨量。

T_1 - The time when a tropical cyclone was first centred within 600 km of Hong Kong.

T_2 - The time when a tropical cyclone was dissipated within or moved outside 600 km of Hong Kong.

For years prior to 1961, column (i) is the sum of daily rainfall on those days when a tropical cyclone was centred within 600 km of Hong Kong, columns (ii) to (iv) show respectively the accumulated daily rainfall on the following one to three days.

表 4.9　　一九四六至二零一四年間引致天文台需要發出十號颶風信號的颱風

TABLE 4.9　TYPHOONS REQUIRING THE ISSUING OF THE HURRICANE SIGNAL NO. 10 DURING THE PERIOD 1946-2014

颱風名稱 Name of typhoon	當最接近天文台時 Nearest approach to the Hong Kong Observatory			最低平均海平面氣壓 (百帕斯卡) Minimum M.S.L. pressure (hPa)		最高60分鐘平均風向及風速 (公里每小時) Maximum 60-min mean wind in points and km/h							最高陣風風向及風速 (公里每小時) Maximum gust peak speed in km/h with direction in points						
	日期/月份 Date/Month	年份 Year	方位 Direction	距離 (公里) Distance (km)	每小時 Hourly	瞬時 Inst.	香港天文台 Hong Kong Observatory	京士柏 King's Park	啟德機場 # Kai Tak Airport #	橫瀾島 Waglan Island	長洲 Cheung Chau	大老山 Tate's Cairn	青洲 Green Island	香港天文台 Hong Kong Observatory	京士柏 King's Park	啟德機場 # Kai Tak Airport #	橫瀾島 Waglan Island	長洲 Cheung Chau	大老山 Tate's Cairn	青洲 Green Island
-	18 / 7	1946	南 S	70	985.7	-	東北 NE	-	-	-	-	-	-	-	-	-	-	-	-	-
姬羅莉亞 Gloria	22 / 9	1957	西南 SW	55	986.2	984.3	東南偏東 ESE	115	-	東南偏東 ESE	72	東 E	113	-	-	-	東 E	187	-	東北偏東 ENE	158	東北偏東 ENE	185	-	-	-
瑪麗 Mary	9 / 6	1960	西北偏西 WNW	10	974.3	973.8	東南偏南 SSE	96	-	東南偏南 SSE	92	西南偏南 SSW	112	-	-	-	東南 SE	191	-	東南 SE	164	西南偏南 SSW	194	-	-	-
愛麗斯 Alice	19 / 5	1961		0	981.6	981.1	東北偏東 ENE	83	-	東 E	70	東南偏東 ESE	90	東北偏東 ENE	76	-	-	東 E	166	-	東北偏東 ENE	139	西南 SW	128	東北偏東 ENE	135	-	-
溫黛 Wanda	1 / 9	1962	西南偏南 SSW	20	955.1	953.2	北 N	133	-	北 N	108	西北 NW	148	西北 NW	118	東南 SE	189	-	北 N	259	-	北 N	229	西北偏北 NNW	216	西北 NW	232	東南偏東 ESE	284	-
露比 Ruby	5 / 9	1964	西南 SW	30	971.0	968.2	東 E	110	-	北 N	118	東北偏東 ENE	148	東北 NE	113	東南偏東 ESE	167	-	東北偏北 NNE	227	-	西北 NW	203	東 E	230	東北偏北 NNE	216	東 E	268	-
黛蒂 Dot	13 / 10	1964	東 E	35	978.9	977.3	西北偏北 NNW	88	-	北 N	67	北 N	117	西北偏北 NNW	96	東北偏北 NNE	157	-	北 N	175	-	北 N	198	北 N	184	西北偏西 WNW	205	東北 NE	220	-
雪麗 Shirley	21 / 8	1968		0	968.7	968.6	北 N	68	-	北 N	75	東北偏北 NNE	124	西南偏南 SSW	90	東北偏北 NNE	126	-	北 N	133	-	北 N	151	東北 NE	209	西南偏南 SSW	167	東北偏北 NNE	203	-
露絲 Rose	17 / 8	1971	西南偏西 WSW	20	984.5	982.8	東南 SE	103	-	東南 SE	122	東南偏東 ESE	140	東南 SE	131	南 S	148	-	東南偏東 ESE	224	-	東南偏東 ESE	211	東南偏東 ESE	189	東南 SE	194	南 S	221	-
愛茜 Elsie	14 /10	1975	南 S	50	996.4	996.2	東北偏東 ENE	58	北 N	75	西北偏北 NNW	67	東北偏北 NNE	118	北 N	106	東北 NE	130	西北偏北 NNW	118	東北 NE	140	北 N	137	北 N	140	東北偏東 ENE	176	東北 NE	158	東北偏北 NNE	180	東北 NE	167
荷貝 Hope	2 / 8	1979	西北偏北 NNW	10	961.8	961.6	西 W	75	西北偏西 WNW	79	西 W	115	西南 SW	144	西南偏南 SSW	117	西北 NW	115	西 W	108	西 W	175	西北偏西 WNW	166	西北偏西 WNW	182	西南 SW	198	西南偏西 WSW	185	西北偏西 WNW	229	西 W	167
愛倫 Ellen	9 / 9	1983	西南 SW	45	983.9	983.1	東 E	92	東 E	88	東 E	112	東南偏東 ESE	169	東南偏東 ESE	171	東 E	126	南 S	137	東 E	185	東 E	167	東 E	203	東 E	227	東南偏南 SSE	238	東北偏東 ENE	218	南 S	220*
約克 York	16 / 9	1999	西南偏南 SSW	20	976.8	976.1	東 E	63	北 N	68	東北偏北 NNE	59	東北偏北 NNE	153	東北偏北 NNE	113	-		-		東 E	137	東北偏北 NNE	149	東北偏東 ENE	142	東北偏北 NNE	234	東北 NE	182	-		-	
韋森特 Vicente	24 / 7	2012	西南 SW	100	986.3	986.0	東 E	56	東南偏東 ESE	56	東南偏東 ESE	70	東 E	108	東南偏東 ESE	128	東 E	117	東北 NE	92	東南偏東 ESE	117	東南偏東 ESE	110	東 E	135	東南偏東 ESE	149	東 E	184	東南偏東 ESE	166	東北 NE	155

隨著香港國際機場遷移到赤鱲角，啟德的氣象所已於一九九八年七月六日關閉。啟德測風站於一九九八年九月四日開始運作。

With the moving of the Hong Kong International Airport to Chek Lap Kok, the meteorological office at Kai Tak was closed on 6 July 1998. Kai Tak anemometer station started operation on 4 September 1998.

* 估計，超出風速記錄圖的上限。

* estimated, exceeding upper limit of anemogram.

表 4.10　　二零一四年熱帶氣旋在香港所造成的損失

TABLE 4.10　DAMAGE CAUSED BY TROPICAL CYCLONES IN HONG KONG IN 2014

熱帶氣旋名稱 Name of tropical cyclone	月份 Month	物質損毀 Damage in physical terms					金錢損失（百萬港元） Damage in monetary terms (million HK$)					
		農業 Agriculture	公用建設 (處) Public works facilities (site)	公用業務 (處) Public utilities (site)	物業單位 (個) Property (unit)	山泥傾瀉及斜坡倒塌 (宗) Landslip and collapse of slope (case)	農業 Agriculture	公用建設 Public works facilities	公用業務 Public utilities	私人物業 Private property	工業 Industry	共 Total
超強颱風威馬逊 Super Typhoon Rammasun	7		小徑及通道 Footpath & access road: 1			2						
颱風海鷗 Typhoon Kalmaegi	9	農地 Farmland: 318 公頃 hectares 農作物 Crops: 2 247 噸 tons	小徑及通道 Footpath & access road: 1		4		35.10					35.10

備註： 資料由各有關政府部門及公共事業機構提供，同時亦參考了本地報章上的損毀報導。

N.B.: Based on information supplied by relevant government departments and public utility companies. Damage reports in the local press were also examined and collated.

表 4.11　　一九六零至二零一四年間熱帶氣旋在香港所造成的人命傷亡及破壞

TABLE 4.11　CASUALTIES AND DAMAGE CAUSED BY TROPICAL CYCLONES IN HONG KONG : 1960-2014

年份 Year	日期 / 月份 Date / Month	Name of tropical cyclone	熱帶氣旋名稱	死亡人數 Persons dead	失蹤人數 Persons missing	受傷人數 Persons injured	遇事越洋船舶 Ocean-going vessels in trouble	受到毀壞或翻沉的小艇數目 Small craft sunk or wrecked	受到損壞的小艇數目 Small craft damaged
1960	4 / 6 - 12 / 6	T. Mary	瑪麗	45	11	127	6	352	462
1961	17 / 5 - 21 / 5	T. Alice	愛麗斯	4	0	20	*	*	*
	7 / 9 - 10 / 9	S.T.S. Olga	奧嘉	7	0	0	0	1	0
1962	28 / 8 - 2 / 9	T. Wanda	溫黛	130	53	*	36	1 297	756
1963	1 / 9 - 9 / 9	T. Faye	菲爾	3	0	51	0	2	0
1964	26 / 5 - 28 / 5	T. Viola	維奧娜	0	0	41	5	18	18
	2 / 8 - 9 / 8	T. Ida	艾黛	5	4	56	3	7	60
	2 / 9 - 6 / 9	T. Ruby	露比	38	6	300	20	32	282
	4 / 9 - 10 / 9	T. Sally	莎莉	9	0	24	0	0	0
	7 /10 - 13 /10	T. Dot	黛蒂	26	10	85	2	31	59
1965	6 / 7 - 16 / 7	T. Freda	法妮黛	2	0	16	0	1	0
	25 / 9 - 28 / 9	T.S. Agnes	愛娜斯	5	0	3	0	0	0
1966	12 / 7 - 14 / 7	S.T.S. Lola	露娜	1	0	6	0	*	6
1967	19 / 8 - 22 / 8	S.T.S. Kate	姬蒂	0	0	3	3	1	0
1968	17 / 8 - 22 / 8	T. Shirley	雪麗	0	0	4	1	*	3
1969	22 / 7 - 29 / 7	T. Viola	維奧娜	0	0	0	0	3	0
1970	1 / 8 - 3 / 8	T.D. -	-	2+	0	0	0	0	0
	8 / 9 - 14 / 9	T. Georgia	喬治亞	0	0	0	2	0	*
1971	15 / 6 - 18 / 6	T. Freda	法妮黛	2	0	30	8	0	0
	16 / 7 - 22 / 7	T. Lucy	露茜	0	0	38	10	2	13
	10 / 8 - 17 / 8	T. Rose	露絲	110	5	286	34	303	*
1972	4 /11 - 9 /11	T. Pamela	柏美娜	1	0	8	3	0	0
1973	14 / 7 - 20 / 7	T. Dot	黛蒂	1	0	38	14	*	*
1974	7 / 6 - 14 / 6	T. Dinah	戴娜	0	0	0	1	*	*
	18 / 7 - 22 / 7	T. Ivy	艾菲	0	0	0	2	*	*
	15 /10 - 19 /10	T. Carmen	嘉曼	1	0	0	5	*	*
	21 /10 - 27 /10	T. Della	黛娜	0	0	0	2	*	*
1975	10 / 8 - 14 / 8	T.D. -	-	2	1	0	3	1	*
	9 /10 - 14 /10	T. Elsie	愛茜	0	0	46	7	2	1
	16 /10 - 23 /10	S.T.S. Flossie	霍蘿茜	0	0	0	1	*	*
1976	22 / 6 - 4 / 7	T. Ruby	露比	3	2	2	0	0	0
	21 / 7 - 26 / 7	S.T.S. Violet	維奧莉	2	1	1	0	0	0
	5 / 8 - 6 / 8	S.T.S. Clara	嘉麗	0	0	4	0	0	0
	21 / 8 - 24 / 8	T.S. Ellen	愛倫	27	3	65	0	4	7
	15 / 9 - 21 / 9	T. Iris	愛莉斯	0	0	27	6	0	1
1977	4 / 7 - 6 / 7	T.D. -	-	0	0	2	0	0	0
	3 / 9 - 5 / 9	T.S. Carla	嘉娜	0	0	1	1	0	0
	22 / 9 - 25 / 9	S.T.S. Freda	法妮黛	1	0	37	2	0	0
1978	24 / 7 - 30 / 7	S.T.S. Agnes	愛娜斯	3	0	134	0	25	42
	9 / 8 - 12 / 8	T.S. Bonnie	邦妮	0	0	0	2	0	0
	23 / 8 - 28 / 8	S.T.S. Elaine	伊蘭	1	0	51	8	5	8
	22 / 9 - 26 / 9	S.T.S. Kit	吉蒂	0	7	0	0	1	0
	7 /10 - 16 /10	S.T.S. Nina	蓮娜	0	0	2	0	0	0
	17 /10 - 29 /10	T. Rita	麗妲	0	0	3	1	5	0
1979	1 / 7 - 6 / 7	T. Ellis	艾利斯	0	0	0	0	2	0
	26 / 7 - 30 / 7	T.S. Gordon	戈登	0	0	0	0	2	0
	28 / 7 - 3 / 8	T. Hope	荷貝	12	0	260	29	167	207
	6 / 8 - 9 / 8	T.D. -	-	0	0	0	0	3	0
	16 / 9 - 24 / 9	S.T.S. Mac	麥克	1	0	67	2	12	0
1980	5 / 7 - 12 / 7	S.T.S. Ida	艾黛	0	0	0	1	0	0
	18 / 7 - 23 / 7	T. Joe	喬伊	2	1	59	4	0	1
	20 / 7 - 28 / 7	T. Kim	甘茵	0	0	0	0	2	1
	29 /10 - 2 /11	T.S. Cary	卡里	0	0	0	0	0	2

表 4.11 (續)
TABLE 4.11 (cont'd)

年份 Year	日期 / 月份 Date / Month	Name of tropical cyclone	熱帶氣旋名稱	死亡人數 Persons dead	失蹤人數 Persons missing	受傷人數 Persons injured	遇事越洋船舶 Ocean-going vessels in trouble	受到毀壞或翻沉的小艇數目 Small craft sunk or wrecked	受到損壞的小艇數目 Small craft damaged
1981	3 / 7 - 7 / 7	S.T.S. Lynn	林茵	0	0	32	0	0	3
1982	27 / 6 - 2 / 7	T.S. Tess	戴絲	0	0	16	0	1	0
	22 / 7 - 30 / 7	T. Andy	安迪	0	0	0	0	0	1
	5 / 9 - 16 / 9	T. Irving	伊文	0	0	0	0	0	2
1983	12 / 7 - 19 / 7	T. Vera	維娜	0	0	0	0	1	0
	29 / 8 - 9 / 9	T. Ellen	愛倫	10	12	333	44	135	225
	10 /10 - 14 /10	T. Joe	喬伊	0	0	58	2	0	3
	20 /10 - 26 /10	S.T.S. Lex	力士	0	0	0	0	0	1
1984	27 / 8 - 7 / 9	T. Ike	艾克	0	0	1	0	0	0
1985	19 / 6 - 25 / 6	T. Hal	哈爾	0	1	13	0	4	2
	1 / 9 - 7 / 9	T. Tess	戴絲	2	0	12	6	1	3
	13 /10 - 22 /10	T. Dot	黛蒂	0	0	1	0	0	0
1986	3 / 7 - 12 / 7	T. Peggy	蓓姬	1	0	26	3	0	3
	9 / 8 - 12 / 8	T.D. -	-	0	0	3	0	1	5
	18 / 8 - 6 / 9	T. Wayne	韋恩	3	1	15+	0	3	0
	11 /10 - 19 /10	T. Ellen	愛倫	0	0	4	1	2	1
1987	16 /10 - 27 /10	T. Lynn	林茵	0	0	1	0	0	0
1988	14 / 7 - 20 / 7	T. Warren	華倫	0	1	12	1	2	1
	19 / 9 - 22 / 9	T. Kit	吉蒂	0	0	0	0	0	1
	18 /10 - 23 /10	T. Pat	帕特	2	0	1	0	0	0
	21 /10 - 29 /10	T. Ruby	露比	0	0	4	0	0	0
1989	16 / 5 - 21 / 5	T. Brenda	布倫達	6	1	119	0	3	5
	11 / 7 - 19 / 7	T. Gordon	戈登	2	0	31	1	0	8
	8 /10 - 14 /10	T. Dan	丹尼	0	0	0	1	0	1
1990	15 / 5 - 19 / 5	T. Marian	瑪麗安	0	0	0	0	0	1
	15 / 6 - 19 / 6	S.T.S. Nathan	彌敦	5	1	1	1	0	2
	21 / 6 - 30 / 6	T. Percy	珀西	1	0	0	0	0	0
	27 / 7 - 31 / 7	S.T.S. Tasha	泰莎	0	0	1	0	1	0
	25 / 8 - 30 / 8	T. Becky	貝姬	0	1	0	0	0	0
	10 / 9 - 20 / 9	T. Ed	義德	0	0	1	0	0	0
1991	15 / 7 - 20 / 7	T. Amy	艾美	0	0	1	1	0	2
	20 / 7 - 24 / 7	S.T.S. Brendan	布倫登	0	0	17	1	1	13
	13 / 8 - 18 / 8	T. Fred	法雷德	0	0	0	0	1	0
1992	9 / 7 - 14 / 7	T. Eli	艾里	0	0	23	0	0	1
	17 / 7 - 18 / 7	T.S. Faye	菲爾	2	0	24	1	0	3
	19 / 7 - 23 / 7	S.T.S. Gary	加里	0	0	18	2	0	0
1993	21 / 6 - 28 / 6	T. Koryn	高蓮	0	0	183	0	0	2
	16 / 8 - 21 / 8	T. Tasha	泰莎	0	0	35	0	0	7
	9 / 9 - 14 / 9	T. Abe	艾貝	1	0	0	0	0	0
	15 / 9 - 17 / 9	S.T.S. Becky	貝姬	1	0	130	0	0	10
	23 / 9 - 27 / 9	T. Dot	黛蒂	0	1	48	0	1	0
	28 /10 - 5 /11	T. Ira	艾拉	2	0	30	0	1	0
1994	23 / 6 - 25 / 6	T.S. Sharon	莎朗	0	0	5	0	1	1
	25 / 8 - 29 / 8	S.T.S. Harry	夏里	1	0	2	0	0	2
1995	7 / 8 - 12 / 8	S.T.S. Helen	海倫	3	0	35	0	0	0
	25 / 8 - 1 / 9	T. Kent	肯特	0	0	5	0	0	0
	28 / 9 - 4 /10	T. Sibyl	斯寶	0	0	14	0	0	0
1996	5 / 9 - 10 / 9	T. Sally	莎莉	2	0	4	0	0	0
	18 / 9 - 23 / 9	S.T.S. Willie	威利	0	1	0	0	0	0
1997	31 / 7 - 3 / 8	T. Victor	維克托	1	0	58	0	0	0
	20 / 8 - 23 / 8	T. Zita	思蒂	0	0	3	0	0	0
1998	7 / 8 - 11 / 8	S.T.S. Penny	彭妮	1	0	1	0	0	0
	12 / 9 - 14 / 9	T.D. -	-	0	0	10	0	0	0
	15 /10 - 27 /10	T. Babs	寶絲	0	0	14	0	0	0

表 4.11 (續)
TABLE 4.11 (cont'd)

年份 Year	日期 / 月份 Date / Month	Name of tropical cyclone	熱帶氣旋名稱	死亡人數 Persons dead	失蹤人數 Persons missing	受傷人數 Persons injured	遇事越洋船舶 Ocean-going vessels in trouble	受到毀壞或翻沉的小艇數目 Small craft sunk or wrecked	受到損壞的小艇數目 Small craft damaged
1999	28 / 4 - 2 / 5	T. Leo	利奧	0	0	14	0	0	0
	2 / 6 - 8 / 6	T. Maggie	瑪姬	0	0	5	0	2	0
	25 / 7 - 28 / 7	T.S. -	-	0	0	18	0	0	0
	19 / 8 - 23 / 8	T. Sam	森姆	4	0	328	0	0	0
	12 / 9 - 17 / 9	T. York	約克	2	0	500	3	*	*
	24 / 9 - 26 / 9	S.T.S. Cam	錦雯	1	0	23	0	0	0
2000	15 / 7 - 16 / 7	T.D. -	-	0	1	6	0	0	0
	27 / 8 - 1 / 9	S.T.S. Maria	瑪莉亞	2	0	0	0	0	0
	5 / 9 - 10 / 9	T. Wukong	悟空	0	0	1	0	0	1
2001	30 / 6 - 3 / 7	T. Durian	榴槤	0	0	1	0	0	0
	1 / 7 - 8 / 7	T. Utor	尤特	1	0	1	0	1	0
	23 / 7 - 26 / 7	T. Yutu	玉兔	0	0	10	0	0	0
	28 / 8 - 1 / 9	T.S. Fitow	菲特	2	0	0	0	0	0
2002	15 / 8 - 20 / 8	S.T.S. Vongfong	黃蜂	0	0	2	0	0	1
	10 / 9 - 13 / 9	S.T.S. Hagupit	黑格比	0	0	32	0	0	3
2003	16 / 7 - 23 / 7	S.T.S. Koni	天鵝	0	0	15	0	0	0
	17 / 7 - 25 / 7	T. Imbudo	伊布都	1	0	45	0	2	8
	17 / 8 - 26 / 8	T. Krovanh	科羅旺	0	0	11	0	0	2
	29 / 8 - 3 / 9	T. Dujuan	杜鵑	0	4	24	0	1	4
2004	14 / 7 - 16 / 7	T.S. Kompasu	圓規	0	0	12	0	0	0
2005	10 / 8 - 14 / 8	S.T.S. Sanvu	珊瑚	0	0	0	0	0	1
	16 / 9 - 19 / 9	T.S. Vicente	韋森特	2	0	0	0	0	0
	21 / 9 - 28 / 9	T. Damrey	達維	0	0	5	0	0	1
2006	9 / 5 - 18 / 5	T. Chanchu	珍珠	0	0	6	0	1	0
	27 / 6 - 29 / 6	T.S. Jelawat	杰拉華	1	0	0	0	0	0
	31 / 7 - 4 / 8	T. Prapiroon	派比安	0	0	8	0	1	4
	6 / 8 - 10 / 8	S.T.S. Bopha	寶霞	0	0	0	0	0	1
	23 / 8 - 25 / 8	T.D. -	-	0	0	0	0	0	1
	12 / 9 - 13 / 9	T.D. -	-	0	0	1	0	0	0
	27 /10 - 6 / 11	T. Cimaron	西馬侖	0	0	4	0	0	0
2007	5 / 8 - 11 / 8	S.T.S. Pabuk	帕布	1	0	17	0	0	0
2008	15 / 4 - 20 / 4	T. Neoguri	浣熊	0	0	2	0	0	0
	18 / 6 - 26 / 6	T. Fengshen	風神	0	0	17	0	0	0
	4 / 8 - 8 / 8	S.T.S. Kammuri	北冕	0	0	37	0	0	0
	17 / 8 - 23 / 8	T. Nuri	鸚鵡	2	0	112	0	0	0
	19 / 9 - 25 / 9	T. Hagupit	黑格比	0	0	58	0	10	0
2009	15 / 7 - 19 / 7	T. Molave	莫拉菲	0	0	5	0	3	0
	1 / 8 - 9 / 8	S.T.S. Goni	天鵝	4	0	10	0	1	0
	9 / 9 - 12 / 9	T.S. Mujigae	彩虹	0	0	1	0	0	0
	12 / 9 - 16 / 9	T. Koppu	巨爵	0	0	74	0	0	0
2010	19 / 7 - 23 / 7	T. Chanthu	燦都	4	0	30	0	0	0
2011	18 / 6 - 25 / 6	T.S. Haima	海馬	0	0	3	0	1	0
	25 / 7 - 31 / 7	S.T.S. Nock-ten	洛坦	0	0	4	0	0	1
	23 / 9 - 1 /10	T. Nesat	納沙	0	0	26	0	1	1
	27 / 9 - 5 /10	S.T. Nalgae	尼格	0	0	1	0	0	0
2012	26 / 6 - 30 / 6	T.S. Doksuri	杜蘇芮	0	0	2	0	1	0
	20 / 7 - 25 / 7	S.T. Vicente	韋森特	0	0	138	0	1	0
	12 / 8 - 18 / 8	T. Kai-tak	啟德	0	0	1	0	0	0
	18 / 8 - 30 / 8	S.T. Tembin	天秤	1	0	1	0	0	0
2013	9 / 8 - 16 / 8	SuperT. Utor	尤特	0	1	9	0	0	0
	17 / 9 - 23 / 9	SuperT. Usagi	天兔	0	0	17	0	0	0
2014	14 / 6 - 15 / 6	T.S. Hagibis	海貝思	0	0	1	0	0	0
	14 / 9 - 17 / 9	T. Kalmaegi	海鷗	0	0	29	0	0	0

備註： 資料由各有關政府部門及公共事業機構提供，同時亦參考了本地報章上的損毀報導。

N.B.: Based on information supplied by relevant government departments and public utility companies. Damage reports in the local press were also examined and collated.

* 缺乏數據 Data unavailable.

+ 被雷電擊中 Struck by lightning.

第五節　二零一四年熱帶氣旋的位置及強度數據

以下是二零一四年位於北太平洋西部及南海區域（即由赤道至北緯45度、東經100度至180度所包括的範圍）的熱帶氣旋。其每六小時之位置及強度刊於本節。

在本節，風速均取10分鐘內的平均值，單位為米每秒（1米每秒約為1.94海里或3.6公里每小時）。熱帶氣旋的強度分為：-

(a) T.D.: - 熱帶低氣壓
(b) T.S.: - 熱帶風暴
(c) S.T.S.: - 強烈熱帶風暴
(d) T.: - 颱風
(e) S.T.: - 強颱風
(f) Super T.: - 超強颱風

Section 5 TROPICAL CYCLONE POSITION AND INTENSITY DATA, 2014

Six-hourly position and intensity data are tabulated in this section for the following tropical cyclones in 2014 over the western North Pacific and the South China Sea (i.e. the area bounded by the Equator, 45°N, 100°E and 180°).

In this section, surface winds refer to wind speeds averaged over a period of 10 minutes given in the unit of m/s (1 m/s is about 1.94 knots or 3.6 km/h). Intensities of tropical cyclones are classified as follows:-

(a) T.D. : - tropical depression
(b) T.S. : - tropical storm
(c) S.T.S. : - severe tropical storm
(d) T. : - typhoon
(e) S.T. : - severe typhoon
(f) Super T. : - super typhoon

熱帶低氣壓玲玲(1401)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF TROPICAL DEPRESSION LINGLING (1401)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
一月 JAN	18	0000	T.D.	1004	13	9.8	127.5
		0600	T.D.	1002	16	9.3	127.7
		1200	T.D.	1002	16	8.4	128.3
		1800	T.D.	1002	16	8.1	128.3
	19	0000	T.D.	1004	13	7.5	128.1
		0600	T.D.	1004	13	7.1	128.1
		1200	T.D.	1004	13	6.8	128.4
		1800	T.D.	1004	13	6.6	128.6
	20	0000	T.D.	1004	13	6.5	128.8
			消散 Dissipated				

熱帶風暴劍魚(1402)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF TROPICAL STORM KAJIKI (1402)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
一月 JAN	30	1800	T.D.	1000	13	9.3	131.6
	31	0000	T.S.	996	18	9.8	130.7
		0600	T.S.	990	23	9.9	128.3
		1200	T.S.	992	21	10.4	124.7
		1800	T.S.	996	18	10.6	122.3
二月 FEB	1	0000	T.D.	998	16	11.2	120.7
			消散 Dissipated				

颱風法茜(1403)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF TYPHOON FAXAI (1403)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
二月 FEB	28	0000	T.D.	1002	13	8.5	147.0
		0600	T.D.	998	16	8.5	147.9
		1200	T.S.	996	18	8.6	148.9
		1800	T.S.	996	18	8.5	149.3
三月 MAR	1	0000	T.S.	996	18	8.4	149.5
		0600	T.S.	996	18	8.7	149.6
		1200	T.S.	996	18	9.1	149.9
		1800	T.S.	992	21	9.3	149.8
	2	0000	T.S.	992	21	9.5	149.2
		0600	T.S.	992	21	9.5	148.6
		1200	T.S.	992	21	10.1	149.5
		1800	T.S.	992	21	10.5	149.5
	3	0000	T.S.	990	23	11.1	149.5
		0600	T.S.	990	23	12.1	149.5
		1200	S.T.S.	985	25	13.0	149.5
		1800	S.T.S.	982	28	13.9	149.7
	4	0000	S.T.S.	982	28	14.9	149.9
		0600	S.T.S.	978	31	16.1	150.6
		1200	T.	975	33	17.5	151.2
		1800	T.	970	36	18.8	151.7
	5	0000	T.	975	33	20.0	152.5
		0600	S.T.S.	982	28	21.2	153.4
		1200	T.S.	990	23	22.1	154.2
			變為溫帶氣旋 Became Extratropical				

熱帶風暴琵琶(1404)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF TROPICAL STORM PEIPAH (1404)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
四月 APR	3	1200	T.D.	1002	13	1.8	146.0
		1800	T.D.	1002	13	2.0	145.3
	4	0000	T.D.	1000	16	2.5	144.6
		0600	T.D.	1000	16	3.0	144.1
		1200	T.D.	1000	16	3.4	143.6
		1800	T.D.	1000	16	3.9	141.7
	5	0000	T.S.	998	18	4.2	140.6
		0600	T.S.	998	18	4.9	139.5
		1200	T.S.	998	18	5.1	138.7
		1800	T.S.	998	18	5.3	137.6
	6	0000	T.S.	998	18	5.8	136.9
		0600	T.S.	998	18	6.4	135.6
		1200	T.S.	998	18	6.8	134.9
		1800	T.S.	998	18	6.8	134.4
	7	0000	T.S.	998	18	6.7	133.2
		0600	T.S.	998	18	6.6	132.2
		1200	T.S.	998	18	6.6	131.9
		1800	T.S.	998	18	6.8	131.7
	8	0000	T.S.	998	18	7.2	131.2
		0600	T.S.	998	18	7.7	130.7
		1200	T.D.	1000	16	8.6	130.5
		1800	T.D.	1000	16	8.9	130.2
	9	0000	T.D.	1000	16	8.9	130.2
		0600	T.D.	1000	16	8.9	130.2
		1200	T.D.	1002	13	8.9	130.2
		1800	T.D.	1002	13	8.9	130.2
			消散 Dissipated				

強烈熱帶風暴塔巴(1405)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SEVERE TROPICAL STORM TAPAH (1405)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
四月 APR	27	1800	T.D.	1002	13	12.0	146.8
	28	0000	T.D.	1000	16	12.5	146.8
		0600	T.S.	998	18	13.1	147.3
		1200	T.S.	996	21	13.9	147.6
		1800	T.S.	992	23	14.9	147.6
	29	0000	S.T.S.	988	25	15.6	147.4
		0600	S.T.S.	984	28	16.6	147.4
		1200	S.T.S.	980	31	17.0	147.4
		1800	S.T.S.	980	31	18.1	147.4
	30	0000	S.T.S.	980	31	18.8	147.2
		0600	S.T.S.	984	28	19.3	147.2
		1200	S.T.S.	988	25	19.8	146.8
		1800	T.S.	992	23	20.5	146.0
五月 MAY	1	0000	T.S.	998	18	21.4	145.2
		0600	T.D.	1002	13	22.0	144.3
			消散 Dissipated				

熱帶低氣壓米娜(1406)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF TROPICAL DEPRESSION MITAG (1406)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
六月 JUN	11	0600	T.D.	996	16	24.0	128.0
		1200	T.D.	996	16	25.8	130.1
		1800	T.D.	996	16	27.2	132.5
			變為溫帶氣旋 Became Extratropical				

熱帶風暴海貝思(1407)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF TROPICAL STORM HAGIBIS (1407)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
六月 JUN	14	0000	T.D.	996	13	20.2	117.0
		0600	T.D.	992	16	20.8	117.0
		1200	T.S.	988	21	21.1	116.8
		1800	T.S.	988	21	21.6	116.7
	15	0000	T.S.	988	21	22.1	116.7
		0600	T.S.	990	18	22.8	116.7
		1200	T.D.	994	16	23.3	116.6
		1800	T.D.	996	13	23.7	116.6
	16	0000	Low	998	11	24.4	116.7
		0600	Low	998	11	25.5	117.5
		1200	Low	998	11	26.1	118.8
		1800	Low	998	11	26.9	120.2
	17	0000	Low	998	11	28.0	122.5
		0600	T.D.	996	13	28.5	125.7
		1200	T.D.	994	16	29.1	130.0
		1800	T.D. 變為溫帶氣旋 Became Extratropical	994	16	29.7	133.8

Low: 低壓區 Low Pressure Area

超強颱風浣熊(1408)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SUPER TYPHOON NEOGURI (1408)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
七月 JUL	3	0600	T.D.	1000	13	9.3	145.1
		1200	T.D.	996	16	9.9	144.7
		1800	T.D.	996	16	10.8	143.9
	4	0000	T.S.	994	18	12.0	142.3
		0600	S.T.S.	990	25	13.0	141.3
		1200	T.	975	33	13.9	140.6
		1800	T.	970	36	14.5	139.0
	5	0000	T.	955	41	15.3	138.1
		0600	S.T.	950	43	16.0	137.0
		1200	S.T.	945	46	16.7	135.9
		1800	S.T.	945	49	17.4	134.6
	6	0000	S.T.	940	49	18.0	133.0
		0600	S.T.	940	49	18.4	131.5
		1200	S.T.	935	49	18.9	130.3
		1800	SuperT.	925	54	19.7	129.1
	7	0000	SuperT.	930	52	20.4	128.4
		0600	SuperT.	930	52	21.6	127.2
		1200	SuperT.	930	52	22.3	126.7
		1800	SuperT.	930	52	23.6	126.2
	8	0000	SuperT.	930	52	24.9	126.0
		0600	S.T.	935	49	26.5	125.6
		1200	S.T.	940	46	27.7	125.6
		1800	T.	950	41	28.8	125.7
	9	0000	T.	960	39	30.3	126.2
		0600	T.	965	36	31.6	126.7
		1200	S.T.S.	975	31	31.7	127.7
		1800	S.T.S.	980	28	32.0	129.2
	10	0000	S.T.S.	984	25	32.4	131.2
		0600	S.T.S.	984	25	33.0	133.4
		1200	T.S.	988	23	33.8	136.8
		1800	T.S.	988	21	34.7	139.1
			變為溫帶氣旋 Became Extratropical				

超強颱風威馬遜(1409)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SUPER TYPHOON RAMMASUN (1409)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
七月 JUL	11	0000	T.D.	1006	13	12.0	148.3
		0600	T.D.	1006	13	12.6	147.3
		1200	T.D.	1006	13	13.0	146.2
		1800	T.D.	1006	13	13.4	145.6
	12	0000	T.D.	1004	13	13.5	144.4
		0600	T.D.	1002	16	13.6	142.8
		1200	T.S.	998	18	13.6	141.2
		1800	T.S.	998	18	13.6	139.6
	13	0000	T.S.	998	18	13.6	138.2
		0600	T.S.	994	21	13.6	136.3
		1200	T.S.	994	21	13.5	134.3
		1800	T.S.	990	23	13.5	132.5
	14	0000	S.T.S.	984	25	13.3	130.8
		0600	S.T.S.	975	31	13.0	129.2
		1200	T.	970	33	12.7	128.1
		1800	T.	965	36	12.7	126.8
	15	0000	T.	955	41	12.7	125.7
		0600	S.T.	945	46	13.0	124.6
		1200	S.T.	940	49	13.4	123.3
		1800	S.T.	940	49	14.0	121.9
	16	0000	T.	955	41	14.4	120.8
		0600	T.	960	39	15.1	119.1
		1200	T.	965	36	15.3	117.9
		1800	T.	965	36	15.8	116.7
	17	0000	T.	960	39	16.4	115.8
		0600	S.T.	950	43	16.7	115.1
		1200	S.T.	940	49	17.5	114.3
		1800	SuperT.	935	52	18.4	113.5
	18	0000	SuperT.	920	59	19.0	112.4
		0600	SuperT.	910	67	19.9	111.3
		1200	SuperT.	925	57	20.3	110.3
		1800	S.T.	940	49	20.9	109.4
	19	0000	S.T.	950	43	21.8	108.3
		0600	T.	970	33	22.1	107.2
		1200	T.S.	988	23	22.8	106.2
		1800	T.S.	996	18	23.0	105.1
			消散 Dissipated				

颱風麥德姆(1410)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF TYPHOON MATMO (1410)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
七月 JUL	17	0000	T.D.	1002	13	10.0	135.5
		0600	T.D.	1002	16	10.0	135.4
		1200	T.D.	1000	16	10.2	135.2
		1800	T.S.	998	18	10.5	134.9
	18	0000	T.S.	998	18	10.7	134.7
		0600	T.S.	994	21	10.9	134.5
		1200	T.S.	992	21	11.0	134.1
		1800	T.S.	990	23	11.0	132.9
	19	0000	S.T.S.	984	28	11.1	131.1
		0600	S.T.S.	980	31	11.2	131.1
		1200	T.	970	33	11.6	130.7
		1800	T.	965	36	12.0	130.2
	20	0000	T.	965	36	12.5	129.8
		0600	T.	965	33	13.2	129.1
		1200	T.	965	33	14.0	128.3
		1800	T.	965	36	14.8	127.8
	21	0000	T.	965	36	16.5	127.6
		0600	T.	965	36	18.0	126.4
		1200	T.	965	36	18.5	125.3
		1800	T.	965	36	19.3	124.5
	22	0000	T.	960	39	20.4	123.8
		0600	T.	960	39	22.0	122.7
		1200	T.	960	39	22.7	122.0
		1800	T.	960	36	23.5	121.1
	23	0000	T.	970	33	24.4	119.9
		0600	S.T.S.	975	31	25.1	119.6
		1200	S.T.S.	980	28	25.8	118.6
		1800	S.T.S.	980	25	26.4	118.2
	24	0000	T.S.	990	23	27.9	117.9
		0600	T.S.	990	21	29.0	117.9
		1200	T.S.	990	18	30.6	117.7
		1800	T.S.	990	18	32.3	118.1
	25	0000	T.S.	990	18	33.9	119.2
		0600	T.S.	990	18	35.8	120.9
		1200	T.S.	990	18	38.2	123.3
			變為溫帶氣旋 Became Extratropical				

超強颱風夏浪(1411)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SUPER TYPHOON HALONG (1411)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
七月 JUL	28	1800	T.D.	1002	13	12.2	148.6
	29	0000	T.D.	998	16	12.5	148.1
		0600	T.S.	996	18	12.9	147.6
		1200	T.S.	988	23	13.3	147.0
		1800	S.T.S.	984	25	13.6	146.4
	30	0000	S.T.S.	984	25	13.9	145.5
		0600	S.T.S.	984	25	14.2	144.5
		1200	S.T.S.	984	25	14.3	143.8
		1800	S.T.S.	984	25	14.6	142.9
	31	0000	S.T.S.	984	25	15.0	142.0
		0600	S.T.S.	984	25	15.2	141.0
		1200	S.T.S.	984	25	14.9	140.4
		1800	S.T.S.	984	25	14.7	139.7
八月 AUG	1	0000	S.T.S.	984	25	14.5	139.1
		0600	S.T.S.	980	28	14.7	138.5
		1200	S.T.S.	976	31	14.8	137.7
		1800	T.	965	36	14.8	137.0
	2	0000	S.T.	950	43	14.9	136.4
		0600	S.T.	940	49	14.9	135.7
		1200	SuperT.	935	54	15.0	135.0
		1800	SuperT.	925	59	15.1	134.5
	3	0000	SuperT.	915	64	15.2	133.8
		0600	SuperT.	915	64	15.6	133.1
		1200	SuperT.	920	61	15.8	132.2
		1800	SuperT.	925	59	16.2	131.4
	4	0000	SuperT.	935	54	16.5	130.7
		0600	S.T.	940	49	17.0	130.4
		1200	S.T.	945	46	17.5	129.9
		1800	S.T.	950	43	18.3	129.8
	5	0000	S.T.	950	43	19.2	129.8
		0600	S.T.	950	43	20.1	129.7
		1200	S.T.	950	43	20.9	129.9
		1800	S.T.	950	43	21.7	130.0
	6	0000	S.T.	950	43	22.4	130.3
		0600	S.T.	950	43	23.2	130.6
		1200	S.T.	950	43	23.6	131.1
		1800	S.T.	945	46	24.2	131.3
	7	0000	S.T.	945	46	25.0	131.7
		0600	S.T.	945	46	25.8	131.7
		1200	S.T.	945	46	26.3	131.6
		1800	S.T.	950	43	26.8	131.5
	8	0000	T.	950	41	27.3	131.5
		0600	T.	955	39	28.2	131.5
		1200	T.	955	39	28.6	131.5
		1800	T.	955	39	29.3	131.8
	9	0000	T.	955	39	30.4	132.3
		0600	T.	960	36	31.3	132.5
		1200	T.	960	36	32.1	133.0
		1800	T.	960	36	32.9	133.3
	10	0000	T.	965	33	34.2	134.3
		0600	S.T.S.	972	31	36.3	135.7
		1200	S.T.S.	978	28	38.9	136.8
		變為溫帶氣旋 Became Extratropical					

強烈熱帶風暴娜基莉(1412)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SEVERE TROPICAL STORM NAKRI (1412)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
七月 JUL	29	0600	T.D.	1000	13	17.9	129.0
		1200	T.D.	996	16	18.3	129.0
		1800	T.S.	992	18	19.0	129.0
	30	0000	T.S.	992	18	20.0	129.0
		0600	T.S.	992	18	21.1	128.9
		1200	T.S.	992	18	22.5	128.4
		1800	T.S.	992	18	23.4	128.0
	31	0000	T.S.	992	18	24.3	127.1
		0600	T.S.	988	21	25.3	127.0
		1200	T.S.	984	23	26.1	127.0
		1800	S.T.S.	980	25	27.4	127.4
八月 AUG	1	0000	S.T.S.	976	28	28.9	126.8
		0600	S.T.S.	976	28	29.5	126.1
		1200	S.T.S.	980	25	30.2	125.8
		1800	S.T.S.	980	25	31.2	125.4
	2	0000	T.S.	984	23	32.0	124.8
		0600	T.S.	984	23	32.7	124.3
		1200	T.S.	986	21	33.2	124.5
		1800	T.S.	988	18	34.4	124.9
	3	0000	T.D.	992	16	35.0	125.0
		0600	T.D.	992	16	35.5	125.4
		1200	T.D.	994	13	35.6	125.7
		1800	T.D.	994	13	35.9	125.9
			變為溫帶氣旋 Became Extratropical				

超強颱風吉納維芙(1413)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SUPER TYPHOON GENEVIEVE (1413)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
八月 AUG	7	0600	SuperT.	915	64	14.5	179.8
		1200	SuperT.	915	64	15.2	178.6
		1800	SuperT.	915	64	15.7	177.5
	8	0000	SuperT.	915	64	16.2	176.7
		0600	SuperT.	920	59	16.8	176.0
		1200	SuperT.	930	54	17.7	175.9
		1800	SuperT.	930	54	18.5	176.0
	9	0000	SuperT.	935	52	19.5	176.4
		0600	SuperT.	935	52	21.3	176.8
		1200	S.T.	940	49	22.7	177.3
		1800	S.T.	945	46	24.5	177.0
	10	0000	S.T.	945	46	26.6	176.2
		0600	S.T.	950	43	28.5	175.0
		1200	T.	960	39	30.5	173.7
		1800	T.	970	33	31.7	171.8
	11	0000	S.T.S.	980	28	32.8	170.4
		0600	T.S.	990	23	33.8	169.2
		1200	T.S.	994	21	34.3	168.3
		1800	T.S.	998	18	34.6	167.4
			消散 Dissipated				

熱帶低氣壓(由九月七日至八日)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF TROPICAL DEPRESSION OF 7 - 8 SEPTEMBER

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
九月 SEP	7	0000	T.D.	1000	13	18.7	113.3
		0600	T.D.	998	16	19.2	112.5
		1200	T.D.	998	16	19.5	112.1
		1800	T.D.	998	16	20.0	111.7
	8	0000	T.D.	998	16	20.6	111.0
		0600	T.D.	1000	13	21.1	110.4
			消散 Dissipated				

強烈熱帶風暴風神(1414)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SEVERE TROPICAL STORM FENGSHEN (1414)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
九月 SEP	7	0000	T.D.	998	13	27.2	129.5
		0600	T.S.	995	18	27.9	130.9
		1200	T.S.	988	23	28.3	133.1
		1800	S.T.S.	985	25	28.5	133.7
	8	0000	S.T.S.	980	28	28.8	135.4
		0600	S.T.S.	980	28	30.0	137.0
		1200	S.T.S.	980	28	31.0	139.4
		1800	S.T.S.	980	28	31.6	140.4
	9	0000	S.T.S.	980	28	32.4	142.3
		0600	S.T.S.	985	25	33.1	144.8
		1200	T.S.	988	23	34.0	146.8
			變為溫帶氣旋 Became Extratropical				

颱風海鷗(1415)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF TYPHOON KALMAEGI (1415)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
九月 SEP	11	1800	T.D.	1002	13	13.8	134.2
	12	0000	T.D.	998	16	13.8	132.3
		0600	T.S.	996	18	13.7	130.9
		1200	T.S.	992	21	13.7	129.9
		1800	T.S.	988	23	13.8	129.4
	13	0000	S.T.S.	984	25	14.1	128.8
		0600	S.T.S.	980	28	14.9	127.6
		1200	S.T.S.	975	31	15.1	126.6
		1800	T.	970	33	15.8	125.8
	14	0000	T.	965	36	16.4	124.6
		0600	T.	965	36	17.1	123.2
		1200	T.	970	33	17.7	121.9
		1800	T.	970	33	18.1	120.1
	15	0000	T.	970	33	18.1	118.1
		0600	T.	965	36	18.4	116.2
		1200	T.	965	36	18.9	114.6
		1800	T.	965	36	19.2	112.9
	16	0000	T.	960	39	19.7	111.5
		0600	T.	965	36	20.5	109.8
		1200	T.	965	36	21.1	108.4
		1800	S.T.S.	975	31	21.4	106.8
	17	0000	T.S.	988	23	22.3	104.8
		0600	T.D.	995	16	22.4	103.1
			消散 Dissipated				

強烈熱帶風暴鳳凰(1416)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SEVERE TROPICAL STORM FUNG-WONG (1416)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
九月 SEP	17	0600	T.D.	1000	13	12.2	133.1
		1200	T.D.	998	16	12.4	131.2
		1800	T.D.	998	16	13.0	129.9
	18	0000	T.S.	996	18	14.3	128.3
		0600	T.S.	996	18	15.1	127.2
		1200	T.S.	996	18	15.6	125.8
		1800	T.S.	990	21	16.4	124.6
	19	0000	T.S.	990	21	18.0	122.6
		0600	T.S.	986	23	18.5	121.1
		1200	T.S.	986	23	18.7	120.2
		1800	T.S.	986	23	18.7	120.1
	20	0000	S.T.S.	982	25	19.0	119.9
		0600	S.T.S.	982	25	20.0	119.8
		1200	S.T.S.	982	25	20.4	119.7
		1800	S.T.S.	982	25	21.4	120.0
	21	0000	S.T.S.	982	25	21.8	120.3
		0600	S.T.S.	982	25	22.6	121.3
		1200	S.T.S.	982	25	24.2	121.9
		1800	S.T.S.	982	25	25.9	122.0
	22	0000	T.S.	984	23	27.2	122.0
		0600	T.S.	984	23	28.3	122.0
		1200	T.S.	986	23	29.1	122.0
		1800	T.S.	986	23	29.7	122.0
	23	0000	T.S.	988	21	30.6	121.6
		0600	T.S.	990	21	31.4	121.8
		1200	T.S.	995	18	32.0	122.2
		1800	T.S.	998	18	32.8	123.3
	24	0000	T.S.	998	18	33.2	125.1
			變為溫帶氣旋 Became Extratropical				

強烈熱帶風暴北冕(1417)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SEVERE TROPICAL STORM KAMMURI (1417)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
九月 SEP	24	1200	T.S.	998	18	20.0	149.6
		1800	T.S.	994	21	20.1	149.2
	25	0000	T.S.	994	21	20.2	148.4
		0600	T.S.	994	21	20.3	147.4
		1200	T.S.	994	21	20.6	147.1
		1800	T.S.	992	21	20.8	146.8
	26	0000	T.S.	992	21	21.5	146.0
		0600	T.S.	990	23	22.1	145.8
		1200	S.T.S.	985	25	23.2	145.1
		1800	S.T.S.	985	25	24.4	144.5
	27	0000	S.T.S.	985	25	25.2	144.2
		0600	S.T.S.	985	25	26.1	143.8
		1200	S.T.S.	985	25	27.4	143.5
		1800	S.T.S.	985	25	28.4	143.6
	28	0000	S.T.S.	985	25	29.8	143.5
		0600	S.T.S.	985	25	30.6	143.6
		1200	T.S.	990	23	31.6	144.3
		1800	T.S.	990	23	32.7	145.6
	29	0000	T.S.	990	23	33.5	146.7
		0600	T.S.	990	23	34.6	148.4
		1200	T.S.	990	23	35.8	150.7
			變為溫帶氣旋 Became Extratropical				

超強颱風巴蓬(1418)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SUPER TYPHOON PHANFONE (1418)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
九月 SEP	29	0000	T.D.	1002	16	12.7	152.3
		0600	T.S.	998	18	13.0	151.0
		1200	T.S.	994	21	13.2	150.1
		1800	T.S.	990	23	13.5	149.4
	30	0000	T.S.	990	23	15.2	147.4
		0600	T.S.	990	23	16.4	146.9
		1200	T.S.	990	23	16.4	146.1
		1800	S.T.S.	985	25	16.6	144.7
十月 OCT	1	0000	S.T.S.	975	31	16.9	143.8
		0600	S.T.S.	975	31	18.0	142.5
		1200	T.	970	33	18.4	141.2
		1800	T.	960	39	18.9	140.2
	2	0000	S.T.	950	43	19.5	139.0
		0600	S.T.	945	46	19.7	138.1
		1200	S.T.	945	46	20.5	137.4
		1800	S.T.	945	46	21.3	136.4
	3	0000	S.T.	940	49	22.2	135.5
		0600	S.T.	940	49	23.1	134.7
		1200	S.T.	940	49	24.0	134.0
		1800	SuperT.	935	52	24.7	133.4
	4	0000	SuperT.	930	52	25.5	132.8
		0600	SuperT.	930	52	26.4	132.2
		1200	S.T.	935	49	27.2	131.8
		1800	S.T.	940	46	28.0	131.3
	5	0000	S.T.	945	43	29.0	131.3
		0600	S.T.	945	43	30.2	131.8
		1200	T.	950	41	31.3	133.2
		1800	T.	955	39	33.0	135.3
	6	0000	T.	960	36	34.8	138.5
		0600	T.	970	33	37.7	143.5
			變為溫帶氣旋 Became Extratropical				

超強颱風黃蜂(1419)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SUPER TYPHOON VONGFONG (1419)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
十月 OCT	2	1800	T.D.	1004	16	7.8	160.5
	3	0000	T.D.	1004	16	7.9	159.7
		0600	T.D.	1004	16	8.2	158.7
		1200	T.S.	1002	18	8.9	157.5
		1800	T.S.	1000	18	9.1	156.2
	4	0000	T.S.	996	21	9.6	155.1
		0600	T.S.	992	23	10.4	154.0
		1200	S.T.S.	992	25	11.3	153.4
		1800	S.T.S.	985	28	11.9	151.7
	5	0000	S.T.S.	975	31	12.5	149.9
		0600	S.T.S.	975	31	13.0	148.3
		1200	T.	970	33	13.8	146.7
		1800	T.	970	33	14.3	145.3
	6	0000	T.	970	33	15.1	143.3
		0600	T.	965	36	15.8	141.1
		1200	T.	960	39	16.6	139.7
		1800	T.	955	41	16.7	138.0
	7	0000	S.T.	950	43	16.9	136.5
		0600	S.T.	940	49	17.3	135.3
		1200	SuperT.	930	57	17.4	134.2
		1800	SuperT.	910	67	17.6	133.1
	8	0000	SuperT.	910	67	17.9	132.2
		0600	SuperT.	910	67	18.2	131.5
		1200	SuperT.	910	67	18.5	130.9
		1800	SuperT.	910	67	18.8	130.4
	9	0000	SuperT.	910	67	19.2	130.0
		0600	SuperT.	915	64	19.7	129.9
		1200	SuperT.	920	61	20.2	129.5
		1800	SuperT.	925	59	20.8	129.4
	10	0000	SuperT.	930	57	21.4	129.4
		0600	SuperT.	935	52	22.3	129.3
		1200	SuperT.	935	52	23.2	129.2
		1800	S.T.	940	49	23.8	129.0
	11	0000	S.T.	945	46	24.4	128.8
		0600	S.T.	950	43	25.3	128.6
		1200	S.T.	950	43	26.1	128.4
		1800	T.	955	41	27.0	127.8
	12	0000	T.	965	36	27.7	127.4
		0600	T.	970	33	28.8	126.9
		1200	S.T.S.	975	31	29.7	127.5
		1800	S.T.S.	975	31	30.6	128.6
	13	0000	S.T.S.	976	28	31.2	130.3
		0600	S.T.S.	976	28	33.0	132.6
		1200	S.T.S.	982	25	34.5	135.8
		1800	S.T.S.	982	25	36.5	139.7
			變為溫帶氣旋 Became Extratropical				

超強颱風鸚鵡(1420)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SUPER TYPHOON NURI (1420)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
十月 OCT	31	0000	T.D.	1000	13	12.5	137.2
		0600	T.D.	998	16	12.6	136.4
		1200	T.S.	995	18	12.9	135.4
		1800	T.S.	990	21	13.0	134.4
十一月 NOV	1	0000	S.T.S.	985	25	13.0	133.9
		0600	S.T.S.	975	28	13.5	133.4
		1200	T.	970	33	13.8	133.3
		1800	T.	960	39	14.9	133.2
	2	0000	S.T.	950	43	15.4	132.7
		0600	SuperT.	930	54	16.3	132.7
		1200	SuperT.	915	61	17.2	132.5
		1800	SuperT.	905	69	17.9	132.3
	3	0000	SuperT.	905	69	18.4	132.5
		0600	SuperT.	910	67	19.0	132.8
		1200	SuperT.	915	61	19.8	133.5
		1800	SuperT.	920	59	20.6	134.2
	4	0000	SuperT.	925	57	21.3	135.0
		0600	SuperT.	930	54	22.1	135.5
		1200	S.T.	940	49	23.0	136.1
		1800	S.T.	945	46	23.9	136.8
	5	0000	S.T.	950	43	24.6	137.4
		0600	T.	955	41	25.6	138.1
		1200	T.	960	39	26.4	138.8
		1800	T.	965	33	27.3	139.5
	6	0000	S.T.S.	975	31	28.3	139.9
		0600	S.T.S.	975	31	29.8	141.5
		1200	S.T.S.	980	28	32.1	143.4
		1800	S.T.S. 變為溫帶氣旋 Became Extratropical	980	28	34.3	146.1

強烈熱帶風暴森拉克(1421)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SEVERE TROPICAL STORM SINLAKU (1421)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
十一月 NOV	26	1800	T.D.	1000	16	9.5	124.0
	27	0000	T.D.	1000	16	9.8	122.6
		0600	T.D.	1000	16	9.8	121.5
		1200	T.D.	1000	16	10.1	120.5
		1800	T.D.	1000	16	10.4	119.5
	28	0000	T.S.	996	18	10.5	117.4
		0600	T.S.	992	21	11.2	115.8
		1200	T.S.	990	23	11.8	114.5
		1800	T.S.	990	23	12.7	113.0
	29	0000	S.T.S.	986	25	12.8	111.8
		0600	S.T.S.	986	25	13.0	110.6
		1200	S.T.S.	986	25	13.3	109.8
		1800	T.S.	990	23	13.4	109.1
	30	0000	T.S.	992	21	13.6	108.4
		0600	T.D.	1000	16	13.6	108.0
			消散 Dissipated				

超強颱風黑格比(1422)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF SUPER TYPHOON HAGUPIT (1422)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
十一月 NOV	30	1800	T.D.	1004	13	3.0	154.4
十二月 DEC	1	0000	T.D.	1002	16	3.8	154.0
		0600	T.S.	998	18	4.9	152.1
		1200	T.S.	998	18	5.5	150.7
		1800	T.S.	996	21	5.9	149.1
	2	0000	T.S.	992	23	5.9	147.0
		0600	S.T.S.	984	25	6.2	145.1
		1200	S.T.S.	975	31	6.1	143.5
		1800	T.	965	36	6.6	142.1
	3	0000	T.	955	41	7.5	140.5
		0600	S.T.	950	43	8.2	138.5
		1200	S.T.	945	46	8.7	136.7
		1800	SuperT.	935	52	9.3	135.2
	4	0000	SuperT.	920	59	9.8	133.8
		0600	SuperT.	910	64	10.4	132.3
		1200	SuperT.	905	69	11.0	131.3
		1800	SuperT.	910	67	11.4	130.4
	5	0000	SuperT.	915	61	11.6	129.7
		0600	SuperT.	915	61	11.9	129.0
		1200	SuperT.	915	61	12.0	128.5
		1800	SuperT.	920	59	12.1	127.9
	6	0000	SuperT.	925	57	12.1	127.4
		0600	SuperT.	930	54	12.1	126.5
		1200	SuperT.	935	52	12.0	125.9
		1800	S.T.	940	49	12.0	125.3
	7	0000	S.T.	950	43	11.9	124.6
		0600	T.	955	41	12.2	124.1
		1200	T.	960	39	12.5	123.6
		1800	T.	965	36	12.9	123.1
	8	0000	S.T.S.	975	28	13.4	122.6
		0600	S.T.S.	980	25	13.6	121.9
		1200	T.S.	985	23	13.8	121.2
		1800	T.S.	992	21	13.8	120.9
	9	0000	T.S.	995	18	13.9	120.6
		0600	T.S.	995	18	13.6	119.7
		1200	T.S.	990	21	13.5	118.8
		1800	T.S.	990	21	13.5	117.6
	10	0000	T.S.	985	23	13.5	116.7
		0600	T.S.	985	23	13.7	116.0
		1200	S.T.S.	980	25	13.6	115.3
		1800	T.S.	985	23	13.7	114.4
	11	0000	T.S.	990	21	13.5	113.2
		0600	T.S.	998	18	13.3	112.3
		1200	T.D.	1002	16	13.1	111.5
		1800	T.D.	1002	16	12.5	110.4
	12	0000	T.D.	1004	13	11.6	109.6
			消散 Dissipated				

熱帶風暴薔薇(1423)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF TROPICAL STORM JANGMI (1423)

月份 Month	日期 Date	時間 (協調世界時) Time (UTC)	強度 Intensity	估計最低中心氣壓 (百帕斯卡) Estimated minimum central pressure (hPa)	估計最高風速 (米每秒) Estimated maximum surface winds (m/s)	北緯 Lat. °N	東經 Long. °E
十二月 DEC	27	1200	T.D.	1004	13	7.0	130.1
		1800	T.D.	1004	13	7.4	129.4
	28	0000	T.D.	1002	16	7.8	128.6
		0600	T.D.	1000	16	7.9	127.8
		1200	T.D.	1000	16	8.0	127.0
		1800	T.D.	1000	16	8.4	126.5
	29	0000	T.S.	995	18	8.9	126.0
		0600	T.S.	992	21	9.4	125.2
		1200	T.S.	992	21	9.8	124.6
		1800	T.S.	992	21	9.9	123.9
	30	0000	T.S.	992	21	10.0	123.2
		0600	T.S.	992	21	9.9	122.4
		1200	T.S.	992	18	9.8	122.2
		1800	T.S.	995	18	9.3	122.1
	31	0000	T.D.	1000	16	8.9	121.5
		0600	T.D.	1000	16	8.2	120.6
		1200	T.D.	1002	13	7.8	119.6
			消散 Dissipated				