

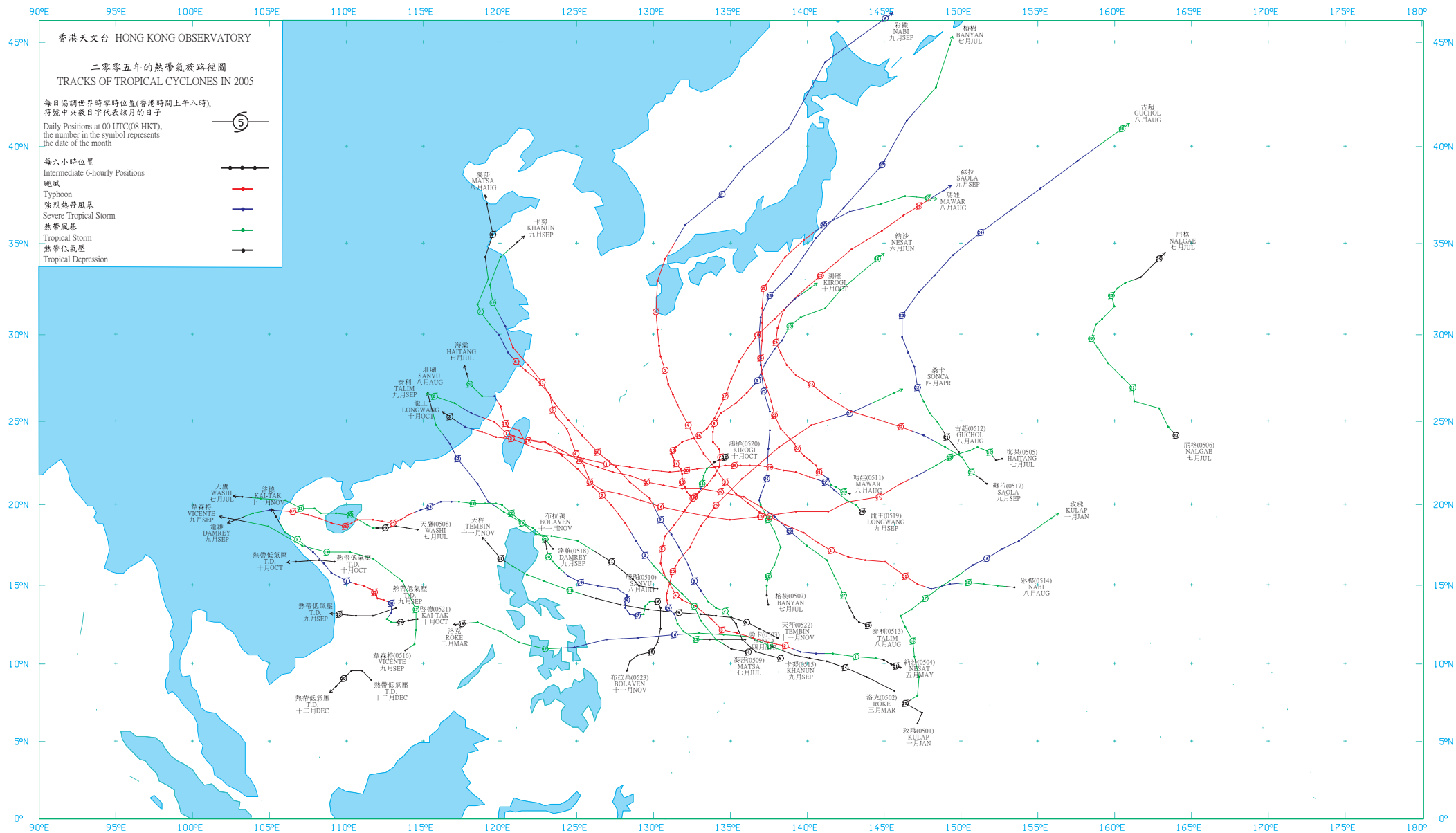


香港天文台

HONG KONG OBSERVATORY

二 零 零 五
熱 帶 氣 旋

**TROPICAL CYCLONES IN
2005**



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第一節

引言

Section 1

INTRODUCTION

1.1 熱帶氣旋刊物的沿革

除了在一九四零至一九四六年有過短暫中斷外，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。由於有氣象偵察機提供報告（此項服務已在一九八七年八月停辦）及氣象衛星圖片，在原本資料短缺的海洋上追蹤熱帶氣旋位置的工作比從前順利得多。因此，第三冊的覆蓋範圍東面邊界於一九八五年開始，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》，但內容則大致上維持不變。本年報由一九九七年起以中英雙語刊出，一年後加設電腦光碟版，並在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。由一九四七至一九六七年，則載列於《氣象資料第一冊》內。在一九六一年以前，熱帶氣旋的路徑只顯示每日位置。在較早期的刊物內，熱帶氣旋的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。

爲了能盡早滿足傳媒、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。這些報告可提供給有需要的人士使用。初時，天文台只就那些曾導致天文台發出暴風或烈風信號的熱帶氣旋編寫臨時報告，但自一九六八年起，所有引致天文台發出熱帶氣旋警告信號的熱帶氣旋都有編寫臨時報告。

1.2 熱帶氣旋等級

本年報根據熱帶氣旋中心附近的最高持續地面風速，把熱帶氣旋分爲以下四個級別：

- （i）熱帶低氣壓（T.D.）的最高持續風速爲每小時**63**公里以下。
- （ii）熱帶風暴（T.S.）的最高持續風速爲每小時**63**至**87**公里。
- （iii）強烈熱帶風暴（S.T.S.）的最高持續風速爲每小時**88**至**117**公里。
- （iv）颱風（T.）的最高持續風速爲每小時**118**公里或以上。

除特別列明外，在本年報內提及的最高持續風速均爲**10**分鐘內風速的平均值；每小時平均風速爲該小時前**60**分鐘內的平均風速；每日雨量爲該日香港時間午夜前**24**小時內的總雨量。

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。但由二零零零年開始，日本氣象廳會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。表1.1是二零零四年一月一日起生效的熱帶氣旋名單。這套名單經颱風委員會通過，一共有140個名字，分別由14個國家和地區提供。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，亦是向國際傳媒發熱帶氣旋消息時採用的規範名稱。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“0501”代表在二零零五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。在本年報內，此編號會顯示在緊隨著熱帶氣旋名稱的括弧內，例如強烈熱帶風暴玫瑰(0501)。

1.4 資料來源

本年報內的地面風資料，是由天文台所操作的測風站網絡錄得的。表1.2是該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的。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。

1.5 年報內容

本年報第二節是二零零五年所有影響北太平洋西部及南海區域的熱帶氣旋的概述。

而本年報第三節是二零零五年影響香港的熱帶氣旋的個別詳細報告，內容包括：

- (a) 該熱帶氣旋對香港造成的影響；
- (b) 發出熱帶氣旋警告信號的過程；
- (c) 香港各地錄得的最高陣風風速及最高每小時平均風速；
- (d) 香港天文台錄得的最低海平面氣壓；
- (e) 香港天文台及其他地方錄得的每日總雨量；
- (f) 香港各潮汐測量站錄得的最高潮位及最大風暴潮；及
- (g) 氣象衛星雲圖及雷達回波圖（如適用）。

有關熱帶氣旋的各種資料及統計表載於本年報第四節內。

二零零五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，則表列於本年報的第五節內。

本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。

1.1 Evolution of tropical cyclone publications

Apart from a short break 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 "Summary of Radiosonde-Radiowind Ascents" and "Surface Observations in Hong Kong" in 1981 and 1987 respectively. In 1993, both of these publications were made obsolete, and since then surface and upper-air data have been included in one revised publication entitled "Summary of Meteorological Observations in Hong Kong".

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. It contained information on tropical cyclones over the western North Pacific and the South China Sea. The first issue, which contained reports on tropical cyclones occurring in 1968, was published in 1971. Tropical cyclones within the area bounded by the Equator, 45°N, 100°E and 160°E were described. With reconnaissance aircraft reports (terminated from August 1987 onwards) and satellite pictures facilitating the tracking of tropical cyclones over the otherwise data-sparse ocean, 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 19YY" 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. Before 1961, only daily positions were plotted on the tracks. The time of the daily positions varied to some extent in the older publications but remained fixed at 0000 UTC after 1944. Details of the variation 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 have been prepared since 1960 to meet the immediate needs of the press, shipping companies and others. These reports are printed and supplied on request. Initially, provisional reports were only written on those tropical cyclones for which gale or storm signals had been issued in Hong Kong. From 1968 onwards, provisional reports were prepared for all tropical cyclones that necessitated the issuing of tropical cyclone warning signals.

1.2 Classification of tropical cyclones

In this publication, tropical cyclones are classified into the following four categories according to the maximum sustained surface winds near their centres :

- (i) A TROPICAL DEPRESSION (T.D.) has maximum sustained winds of less than 63 km/h.
- (ii) A TROPICAL STORM (T.S.) has maximum sustained winds in the range 63-87 km/h.
- (iii) A SEVERE TROPICAL STORM (S.T.S.) has maximum sustained winds in the range 88-117 km/h.
- (iv) A TYPHOON (T.) has maximum sustained winds of 118 km/h or more.

Throughout this publication, maximum sustained surface winds when used without qualification refer to wind speeds averaged over a period of 10 minutes. Mean hourly 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.

1.3 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. However, with effect from 2000, the Japan Meteorological Agency will assign names from a new list to tropical cyclones attaining tropical storm strength. Table 1.1 shows the name list effective from 1 January 2004. The name list was adopted by the Typhoon Committee. It consists of a total of 140 names contributed by 14 countries and territories. Apart from being used in forecasts and warnings issued to the international aviation and shipping communities, the names will also be used officially in information on tropical cyclones issued to the international press. Besides, Japan Meteorological Agency has been delegated since 1981 with the responsibility of assigning to each tropical cyclone in the western North Pacific and the South China Sea of tropical storm strength a numerical code of four digits. For example, the first tropical cyclone of tropical storm strength or above as classified by Japan Meteorological Agency which occurred within the region in 2005 was assigned the code "0501". In this publication, the appropriate code immediately follows the name of the tropical cyclone in bracket, e.g. Severe Tropical Storm Kulap (0501).

1.4 Data sources

Surface wind data presented in this report were obtained from a network of anemometers operated by the Hong Kong Observatory. Details of the stations are listed on Table 1.2.

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.

1.5 Content

In Section 2, an overview of all the tropical cyclones over the western North Pacific and the South China Sea in 2005 is presented.

The reports in Section 3 are individual accounts of the life history of tropical cyclones affecting Hong Kong in 2005. 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 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 imageries and radar echoes (if applicable).

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 are tabulated in Section 5.

In this publication, different times are used in different 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.

表 1.1 二零零四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 2004

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	龍王 Longwang	玉兔 Yutu	風神 Fengshen	杜鵑 Dajuan	海馬 Haima
北韓	DPR Korea	鴻雁 Kirogi	桃芝 Toraji	海鷗 Kalmaegi	鳴蟬 Maemi	米雷 Meari
中國香港	HK, China	啓德 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	凱薩娜 Ketsana	洛坦 Nock-ten
中國澳門	Macau, China	珍珠 Chanchu	蝴蝶 Wutip	黃蜂 Vongfong	芭瑪 Parma	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	碧利斯 Bilis	丹娜絲 Danas	黑格比 Hagupit	盧碧 Lupit	塔拉斯 Talas
南韓	RO Korea	格美 Kaemi	百合 Nari	薔薇 Changmi	蘇特 Sudal	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	桑美 Saomai	利奇馬 Lekima	巴威 Bavi	康森 Conson	桑卡 Sonca
柬埔寨	Cambodia	寶霞 Bopha	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
北韓	DPR Korea	清松 Sonamu	楊柳 Podul	鳳仙 Pongsona	蒲公英 Mindulle	尼格 Nalgae
中國香港	HK, China	珊珊 Shanshan	玲玲 Lingling	欣欣 Yanyan	婷婷 Tingting	榕樹 Banyan
日本	Japan	摩揭 Yagi	劍魚 Kajiki	鯨魚 Kujira	圓規 Kompasu	天鷹 Washi
老撾	Lao PDR	象神 Xangsane	法茜 Faxai	燦鴻 Chan-hom	南川 Namtheun	麥莎 Matsa

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	蘇廸羅 Soudelor	雲娜 Rananim	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
南韓	RO Korea	飛燕 Chebi	浣熊 Noguri	天鵝 Koni	鮎魚 Megi	彩蝶 Nabi
泰國	Thailand	榴槤 Durian	威馬遜 Rammasun	莫拉克 Morakot	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

表 1.2 本年報內各風速表的位置及海拔高度

TABLE 1.2 POSITIONS AND ELEVATIONS OF VARIOUS ANEMOMETERS MENTIONED IN THIS PUBLICATION

站 Station	位置 Position		風速表的 海拔高度(米)	
	北緯 Latitude N	東經 Longitude E	Elevation of anemometer above M.S.L. (m)	
中環（天星碼頭）	Central (Star Ferry Pier)	22°17'08"	114°09'31"	17
中環廣場	Central Plaza	22°16'53"	114°10'16"	378
香港國際機場	Hong Kong International Airport	22°19'00"	113°54'43"	14
長洲	Cheung Chau	22°12'04"	114°01'36"	99
長沙灣	Cheung Sha Wan	22°20'04"	114°09'05"	30
青洲	Green Island	22°17'12"	114°06'37"	107
啓德	Kai Tak	22°18'40"	114°12'39"	16
京士柏	King's Park	22°18'47"	114°10'13"	90
流浮山	Lau Fau Shan	22°28'09"	113°59'01"	50
北角	North Point	22°17'40"	114°11'59"	26
平洲	Ping Chau	22°32'54"	114°25'33"	39
西貢	Sai Kung	22°22'38"	114°16'18"	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°26'02"	114°05'06"	26
天星碼頭（九龍）	Star Ferry Pier (Kowloon)	22°17'35"	114°10'07"	18
打鼓嶺	Ta Kwu Ling	22°31'50"	114°09'13"	28
大尾篤	Tai Mei Tuk	22°28'36"	114°14'06"	71
大帽山	Tai Mo Shan	22°24'40"	114°07'29"	969
塔門	Tap Mun	22°28'22"	114°21'29"	37
大老山	Tate's Cairn	22°21'34"	114°12'55"	588
鯽魚湖	Tsak Yue Wu	22°24'11"	114°19'24"	23
將軍澳	Tseung Kwan O	22°18'56"	114°15'20"	52
青衣（青柏樓）	Tsing Yi (Ching Pak House)	22°21'00"	114°06'24"	136
屯門	Tuen Mun	22°23'32"	113°58'27"	69
橫瀾島	Waglan Island	22°11'01"	114°18'02"	82
黃竹坑	Wong Chuk Hang	22°14'54"	114°10'15"	30

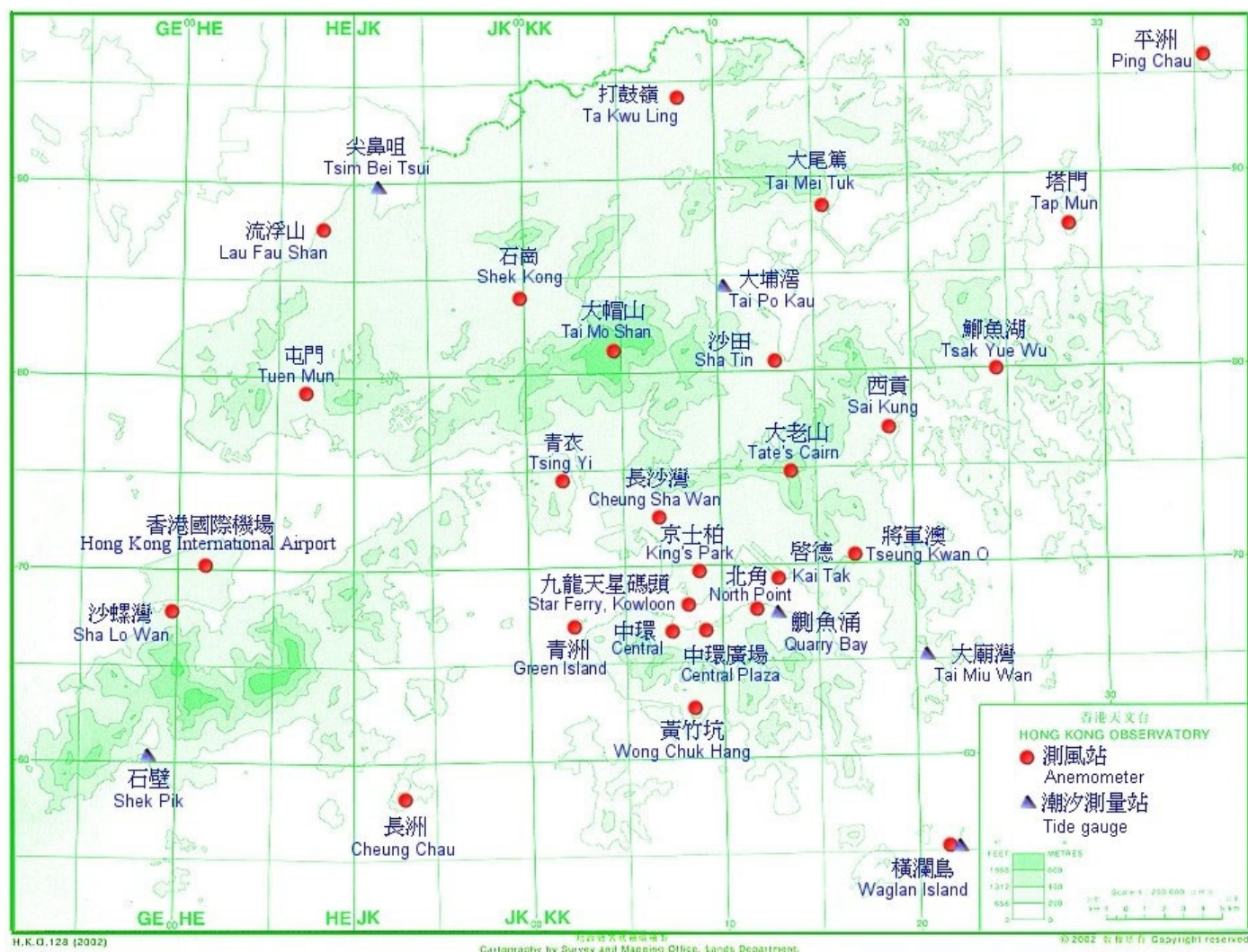


圖 1.1 本年報內提及的測風站及潮汐測量站之分佈地點。

FIGURE 1.1 LOCATIONS OF ANEMOMETERS AND TIDE GAUGE STATIONS MENTIONED IN THIS PUBLICATION.

第二節

二零零五年熱帶氣旋概述

Section 2

TROPICAL CYCLONE OVERVIEW FOR 2005

2.1 二零零五年的熱帶氣旋回顧

2.1.1 北太平洋西部（包括南海區域）的熱帶氣旋

二零零五年共有26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），這數目少於1961-1990的30年平均數31個，當中有13個熱帶氣旋達到颱風強度，比正常數目少三個。

本年首個熱帶氣旋在一月形成。圖2.1是二零零五年在北太平洋西部及南海區域的熱帶氣旋及颱風出現次數之每月分佈。

於二零零五年內有八個熱帶氣旋吹襲中國，台灣和日本（包括琉球群島）則同樣受到三個熱帶氣旋影響，另有四個橫過菲律賓及六個登陸越南。

二零零五年風力最強的熱帶氣旋是彩蝶（0514），最高風速估計約為每小時220公里，而最低中心氣壓則約為910百帕斯卡。

2.1.2 香港責任範圍內的熱帶氣旋

在二零零五年的26個熱帶氣旋中，有15個影響香港責任範圍（即北緯10至30度、東經105至125度所包括的地區），與1961-1990的30年平均16.4個相約（表2.1）。這15個熱帶氣旋中，有六個在香港責任範圍內形成。在二零零五年，香港天文台總共發出301個供船舶使用的熱帶氣旋警告（表4.2）。

2.1.3 南海區域內的熱帶氣旋

二零零五年共有11個熱帶氣旋影響南海區域（即北緯10至25度、東經105至120度所包括的地區），當中有五個在南海形成，其餘六個從北太平洋西部進入南海。

2.1.4 影響香港的熱帶氣旋

全年只有三個熱帶氣旋影響香港（圖2.2），比正常數目少三個（表2.2）。這三個熱帶氣旋是珊瑚（0510）、韋森特（0516）及達維（0518）。

本年九月達維影響香港期間，天文台發出了三號強風信號，這亦是今年發出的最高信號。而八月的珊瑚和九月的韋森特亦導致天文台發出一號戒備信號。

2.1.5 熱帶氣旋的雨量

二零零五年各熱帶氣旋為香港帶來的雨量（即該熱帶氣旋在出現於香港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，天文台錄得的雨量）共為584.0毫米，約佔該年總雨量3 214.5毫米的百分之18，比正常的737.9毫米少約百分之21。

2.2 每月概述

這一節逐月介紹二零零五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則詳述於第三節。

一月

熱帶低氣壓**玫瑰(0501)**於一月十四日在關島東南偏南約850公里的西北太平洋上形成，並向北移動。次日它增強為一熱帶風暴，並於一月十六日橫越關島以東海面後，轉向東北移動。一月十八日，玫瑰進一步增強為一強烈熱帶風暴。玫瑰在翌日清晨減弱為一熱帶風暴，隨後在西北太平洋上變成一個低壓區。

二月

二零零五年二月並無熱帶氣旋影響北太平洋西部及南海區域。

三月

洛克(0502)於三月十三日在關島以南約590公里的西北太平洋上發展成為一熱帶低氣壓，並向西北偏西移動。三月十五日，洛克轉向西推進，翌日它增強成為一個強烈熱帶風暴。洛克於三月十七日橫過菲律賓中部，並逐漸減弱，次日在南海上消散。在洛克的吹襲下，菲律賓最少有八人死亡，一人失蹤。另外，一艘渡輪和一艘漁船翻沉。

四月

桑卡(0503)於四月二十二日在雅蒲島西北約340公里的西北太平洋上發展成為一熱帶低氣壓，並向西移動。次日，它變成一個熱帶風暴，然後向西北推進。桑卡於四月二十四日迅速增強成為一個颱風，翌日轉向東北移動。四月二十七日，桑卡掠過硫黃島以北海域，隨後變成溫帶氣旋。

五月及六月

納沙(0504)於五月三十一日在關島東南偏南約430公里處形成為一個熱帶低氣壓。它向西北偏西移動，並於六月二日清晨增強為一颱風。納沙翌日開始採取西北路徑，然後在六月五日轉向東北推進。納沙於六月九日在日本以南海域逐漸減弱。它於兩日後在太平洋上變成溫帶氣旋。

七月

海棠(0505)在七月十一日於硫黃島以東約1170 公里處發展成為一個熱帶低氣壓。它大致向西南偏西移動，並於七月十四日在馬里安納群島以北海域增強成為一個颱風。次日，海棠轉向西北偏西移動。七月十八日它在台灣東岸登陸。海棠吹襲台灣期間，共導致六人死亡，30人受傷，一人失蹤，超過一百萬戶的用電中斷，經濟損失超過四億五千萬新台幣。七月十九日，海棠橫越台灣海峽，當晚在福建沿岸登陸，並減弱成強烈熱帶風暴。在福建及浙江，海棠最少造成三人死亡，另外超過一百萬人需要疏散。翌日，海棠進一步移入內陸並且消散。

一個名為**尼格(0506)**的熱帶低氣壓在七月二十日於威克島西北偏北約610公里的太平洋上形成，並向西北移動。同日尼格增強為一熱帶風暴。七月二十二日尼格轉向大致東北路徑移動，七月二十四日在太平洋上消散。

七月二十一日，[榕樹\(0507\)](#)在雅蒲島以北約480公里的太平洋上發展成一個熱帶低氣壓，並向北移動。榕樹於七月二十三日達到強烈熱帶風暴強度。七月二十六日，榕樹轉向東北推進，並掠過日本本州東南沿岸後，在七月二十八日變成溫帶氣旋。受到榕樹的影響，日本有超過43班航機被取消。

[天鷹\(0508\)](#)在七月二十八日於東沙之西南約320公里的南海上發展成爲一個熱帶低氣壓，並向西北偏西推進。七月二十九日天鷹增強成爲一個熱帶風暴，次日橫過海南島。它於七月三十一日在越南北部沿岸登陸，翌日清晨在老撾北部消散。受天鷹的相關雨帶影響，香港在本月最後三天間中有大驟雨及狂風雷暴。

熱帶低氣壓[麥莎\(0509\)](#)在七月三十一日於雅蒲島西北約260公里的太平洋上形成，並向西北移動。八月二日，麥莎增強成爲一個颱風。隨後兩天，它橫過台灣以東海域。與麥莎相關的豪雨，在台灣引發多處山泥傾瀉和水浸，導致七人受傷，另有兩人失蹤，農業損失約爲四千萬新台幣。麥莎於八月六日在浙江登陸，八月八日在山東省消散。麥莎吹襲中國東部期間，最少造成八人死亡，經濟損失超過60億人民幣。

八月

[珊瑚\(0510\)](#)在八月十日於馬尼拉以東約990公里處發展成爲一個熱帶低氣壓，並向西北偏西移動。珊瑚橫越呂宋海峽後，於八月十二日晚上在南海北部增強成爲一強烈熱帶風暴，次日在廣東汕頭附近登陸，隨後變成熱帶風暴。珊瑚於八月十四日進一步減弱，並在內陸消散。

一個名爲[瑪娃\(0511\)](#)的熱帶低氣壓在八月二十日於硫黃島東南偏南約470公里的太平洋上形成。它向西北移動。並於八月二十一日增強成爲一個颱風。兩日後，瑪娃採取偏北路徑移動，大致趨向日本。八月二十五日，它轉向東北推進。掠過日本本州東南沿岸後，瑪娃於翌日減弱爲熱帶風暴。八月二十七日早上，它在太平洋上變成溫帶氣旋。受到瑪娃的影響，日本有一人死亡，五人受傷，超過30班航機被取消。

八月二十一日，[古超\(0512\)](#)在硫黃島東南偏東約880公里處發展成一個熱帶低氣壓，並向西北偏北移動。翌日它增強爲一強烈熱帶風暴。古超於八月二十三日轉向東北推進，於八月二十五日在太平洋上變成溫帶氣旋。

[泰利\(0513\)](#)在八月二十六日於關島西南偏南約150公里的太平洋上發展成一個熱帶低氣壓。它大致向西北移動並增強，於八月二十八日達到颱風強度。隨後，泰利轉向西北偏西推進，並於九月一日早上橫過台灣。受到泰利吹襲，台灣最少有七人死亡，200人受傷，農業損失約爲12億新台幣。同日下午，泰利在福建登陸後，進一步移入內陸，翌日減弱爲一低壓區。泰利在多省造成嚴重災害，導致96人死亡，約30人失蹤，經濟損失超過120億人民幣。

一個名爲[彩蝶\(0514\)](#)的熱帶低氣壓在八月二十九日於關島以東約940公里處形成，並向西移動。它於八月三十一日清晨增強成爲一個颱風，同日橫過瑪里安納群島。隨後數天，它大致趨向九州。彩蝶於九月六日在鹿兒島附近登陸後轉向東北移動。次日它在日本海減弱爲強烈熱帶風暴。九月八日早上，彩蝶橫越北海道後變成溫帶氣旋。彩蝶肆虐日本期間，導致21人死亡及149人受傷，另六人失蹤，損毀近2 000間房屋，約270 000用戶的電力中斷。

九月

[卡努\(0515\)](#)在九月六日於雅蒲島以北約100公里處發展成一個熱帶低氣壓。它大致向西北移動並增強，於九月九日達到颱風強度。卡努於九月十一日在浙江省登陸，次日橫過江

蘇省，最終於九月十三日清晨在黃海消散。受到卡努影響，華東最少有14人死亡，另九人失蹤。

一個熱帶低氣壓於九月十二日在西沙島之東南偏南約370公里的南海形成，它向西移動，翌日早上在越南南部沿岸地區消散。

韋森特(0516)於九月十六日在南沙島西北約80公里的南海上發展成爲一個熱帶低氣壓，並大致向北移動。在該日傍晚韋森特增強成爲熱帶風暴。它於九月十七日轉向西北偏西推進，次日在越南登陸。韋森特於九月十九日在老撾北部變爲一個低壓區。

一個名爲**蘇拉(0517)**的熱帶低氣壓在九月二十日於硫黃島東南偏東約1 120公里處形成，並向西北偏西移動。它於九月二十二日增強爲一颱風，並橫越硫黃島及小笠原群島之間海面。九月二十四日，蘇拉在日本以南的太平洋上轉向東北移動。兩日後它在日本以東海面減弱爲一強烈熱帶風暴，接著變成溫帶氣旋。

達維(0518)在九月二十一日清晨於碧瑤東北偏東約310公里的太平洋上發展成爲一個熱帶低氣壓，並向西北移動。同日早上它增強爲一熱帶風暴，然後掠過呂宋東北端。次日達維於南海轉向偏西路徑移動，大致趨向海南省。它在橫過南海北部期間，逐漸增強成爲一個颱風。達維於九月二十六日橫掃海南省，翌日在越南北部登陸。達維最終於九月二十八日在老撾消散。

一個名爲**龍王(0519)**的熱帶低氣壓在九月二十六日於硫黃島之東南偏南約620公里處形成。它大致向西北偏西移動，並於九月二十七日達到颱風強度。龍王於十月二日早上橫過台灣，造成一人死亡，50多人受傷，一人失蹤。約76萬戶的電力中斷，農業損失超過一億新台幣。龍王於十月二日晚上在廈門附近登陸，翌日在內陸消散。它在福建亦造成嚴重災害，導致最少有60人死亡，20多人失蹤，約54萬人需要撤離。另外，約5 400間房屋被損毀，經濟損失逾12億人民幣。

十月

一個熱帶低氣壓於十月七日下午在峴港之東北偏東約120公里的南海形成。它向西移動，翌日清晨橫過越南中部後消散。

鴻雁(0520)於十月十日在硫黃島之西南偏西約720公里處展成爲一個熱帶低氣壓，並大致向西南移動。它於翌日增強成爲颱風，然後緩慢地向西北偏北前進。十月十五日，鴻雁再度轉向，採取東北路徑移動。它於十月十九日清晨在本州和小笠原群島之間的海面減弱爲熱帶風暴，隨後變成溫帶氣旋。

熱帶低氣壓**啓德(0521)**在十月二十八日於南沙島以北約280公里的南海上形成。它大致向西北移動，並於十月三十日達到颱風強度。啓德於十一月二日在越南登陸，當晚在河內附近消散。啓德吹襲越南期間，造成20多人死亡，14人受傷，損毀近7 500間房屋。

十一月

天秤(0522)在十一月七日於雅蒲島以北約250公里的太平洋上發展成一個熱帶低氣壓，並大致向西北偏西移動。它於十一月十日早上增強爲一熱帶風暴，傍晚在呂宋東岸登陸，翌日在南海消散。

一個名爲**布拉萬(0523)**的熱帶低氣壓在十一月十四日於馬尼拉之東南約960公里處形成。隨後數天，它迂迴曲折地向北移動，並於十一月十七日增強爲強烈熱帶風暴。布拉萬在十一月十八日採取西北偏西路徑移動，翌日轉向西北推進。其後布拉萬逐漸減弱，並於十一月二十日在呂宋以東海面消散。

十二月

一個熱帶低氣壓在十二月十九日於南沙島西南偏西約340公里處形成，並大致向西北推進。它於翌日早上轉向西南移動，並於當天下午在越南以南海面消散。

備註：人命傷亡及財物損毀數據是根據報章報導輯錄而成。

2.1 Review of tropical cyclones in 2005

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

In 2005, 26 tropical cyclones occurred over the western North Pacific and the South China Sea (i.e. the area bounded by the Equator, 45°N, 100°E and 180°), less than the 30-year (1961-1990) average of 31. Throughout the year, 13 tropical cyclones attained typhoon strength, three less than the normal figure.

The first tropical cyclone of the year formed in January. The monthly frequencies of the occurrence of tropical cyclones and typhoons in the western North Pacific and the South China Sea in 2005 are shown in Figure 2.1.

During the year, eight tropical cyclones hit mainland China, three affected Taiwan, three affected Japan (including Ryukyu Islands), four traversed the Philippines, another six made landfall over Vietnam.

The most intense tropical cyclone in 2005 was Nabi (0514). Nabi had a maximum wind speed of about 220 km/h and a minimum sea-level pressure about 910 hPa.

2.1.2 Tropical cyclones in Hong Kong's area of responsibility

Amongst those 26 tropical cyclones in 2005, 15 occurred inside Hong Kong's area of responsibility (i.e. the area bounded by 10°N, 30°N, 105°E and 125°E). This was near the 30-year (1961-1990) annual average of 16.4 (Table 2.1). Six of these 15 tropical cyclones developed within Hong Kong's area of responsibility. Altogether, 301 tropical cyclone warnings to ships and vessels were issued by the Hong Kong Observatory in 2005 (Table 4.2).

2.1.3 Tropical cyclones over the South China Sea

There were 11 tropical cyclones affecting the South China Sea (i.e. the area bounded by 10°N, 25°N, 105°E and 120°E) in 2005. Five of them formed over the area. Six moved into the area from the western North Pacific.

2.1.4 Tropical cyclones affecting Hong Kong

Only three tropical cyclones affected Hong Kong in 2005 (Figure 2.2), three less than the normal number (Table 2.2). These three tropical cyclones were Sanvu (0510), Vicente (0516) and Damrey (0518).

The highest signal issued this year was Strong Wind Signal No.3 when Damrey affected Hong Kong in September. Sanvu in August and Vicente in September only necessitated the issuance of the Standby Signal No. 1 in Hong Kong.

2.1.5 Tropical cyclone rainfall

Tropical cyclone rainfall (the total rainfall recorded at the Hong Kong Observatory from the time when a tropical cyclone is centred within 600 km of Hong Kong to 72 hours after it has dissipated or moved farther than 600 km away from Hong Kong) in 2005 was 584.0 mm. This is 21 % below the normal of 737.9 mm and accounts for some 18 % of the year's total rainfall of 3 214.5 mm.

2.2 Monthly overview

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

JANUARY

Kulap (0501) formed as a tropical depression over the western North Pacific about 850 km south-southeast of Guam on 14 January and headed north. After intensifying into a tropical storm the following day, Kulap traversed the seas east of Guam and turned northeastwards on 16 January. It further intensified into a severe tropical storm on 18 January. Kulap weakened into a tropical storm early next morning before degenerating into an area of low pressure over the western North Pacific.

FEBRUARY

No tropical cyclone occurred over the western North Pacific and the South China Sea in February.

MARCH

Roke (0502) formed as a tropical depression over the western North Pacific about 590 km south of Guam on 13 March and headed west-northwestwards. It turned west on 15 March and intensified into a severe tropical storm the next day. Roke swept across the central part of the Philippines on 17 March and weakened gradually. It dissipated over the South China Sea the following day. Under the influence of Roke, at least eight people were killed and one reported missing in the Philippines. In addition, a ferry and a fishing boat capsized.

APRIL

Sonca (0503) formed as a tropical depression over the western North Pacific about 340 km northwest of Yap on 22 April and moved westwards. After intensifying into a tropical storm in the following day, it took on a northwesterly course. Sonca strengthened rapidly into a typhoon on 24 April. It turned to the northeast the next day. On 27 April, it became an extratropical cyclone after skirting the sea areas north of Iwo Jima.

MAY - JUNE

Nesat (0504) formed as a tropical depression about 430 km south-southeast of Guam on 31 May. Moving west-northwestwards, it reached typhoon strength in the early morning of 2 June. Nesat began to track northwestwards the next day and turned northeastwards on 5 June. It weakened gradually on 9 June over the sea areas to the south of Japan and became an extratropical cyclone over the Pacific two days later.

JULY

Haitang (0505) developed as a tropical depression about 1170 km east of Iwo Jima on 11 July. Tracking generally towards the west-southwest, it intensified into a typhoon over the seas to the north of Mariana Islands on 14 July. Haitang turned west-northwest the following day and made landfall over the eastern coast of Taiwan on 18 July. In the fury of Haitang, six people were killed, 30 injured, one reported missing, and the electricity supply of over one million households were interrupted in Taiwan. The economic loss exceeded NT\$ 0.45 billion. After moving across the Taiwan Strait on 19 July, Haitang made landfall over the coast of Fujian and weakened into a severe tropical storm that night. Under the influence of Haitang, at least three people were killed

and over one million people had to be evacuated in Fujian and Zhejiang. Haitang moved further inland and dissipated the next day.

A tropical depression named [Nalgae \(0506\)](#) formed over the Pacific about 610 km north-northwest of Wake Island on 20 July. Moving northwestwards, Nalgae strengthened into a tropical storm that day. It adopted a generally northeastward course on 22 July. Nalgae dissipated over the Pacific on 24 July.

On 21 July, [Banyan \(0507\)](#) developed as a tropical depression over the Pacific about 480 km north of Yap. Tracking northwards, Banyan attained severe tropical storm strength on 23 July. It turned to the northeast on 26 July. After skirting the southeastern coast of Honshu of Japan, Banyan became an extratropical cyclone on 28 July. Under the influence of Banyan, at least 43 flights were cancelled in Japan.

[Washi \(0508\)](#) developed as a tropical depression over the South China Sea about 320 km southwest of Dongsha on 28 July. Moving west-northwestwards, it strengthened into a tropical storm on 29 July. Washi swept across Hainan the following day. It made landfall over the coast of northern Vietnam on 31 July and dissipated over northern Laos early next morning. In the last three days of the month, the rain bands associated with Washi brought occasional heavy showers and squally thunderstorms to Hong Kong.

Tropical depression [Matsa \(0509\)](#) developed over the Pacific about 260 km northwest of Yap on 31 July. While tracking towards the northwest, Matsa intensified into a typhoon on 2 August. In the next 2 days, it moved across the sea areas east of Taiwan. Torrential rain associated with Matsa triggered a number of landslides and floods in Taiwan, injuring at least seven people. Another two persons were reported missing. Agricultural losses were estimated at around NT\$ 40 million. Matsa made landfall over Zhejiang on 6 August and dissipated over Shandong on 8 August. In the fury of Matsa, at least eight people were killed in eastern China. The economic loss exceeded RMB 6 billion.

[AUGUST](#)

[Sanvu \(0510\)](#) developed as a tropical depression about 990 km east of Manila on 10 August and moved towards the west-northwest. After traversing the Luzon Strait, it intensified into a severe tropical storm over the northern part of the South China Sea on the night of 12 August. Sanvu made landfall near Shantou in Guangdong and became a tropical storm the following day. On 14 August, Sanvu weakened further and dissipated over inland.

A tropical depression named [Mawar \(0511\)](#) formed over the Pacific about 470 km south-southeast of Iwo Jima on 20 August. Tracking northwestwards, it attained typhoon strength on 21 August. Mawar adopted a northward course towards Japan two days later and turned to the northeast on 25 August. Mawar weakened into a tropical storm the next day after skirting the southeastern coast of Honshu in Japan. It became an extratropical cyclone over the Pacific in the morning of 27 August. Under the influence of Mawar, one person was killed and another five injured in Japan. At least 30 flights were cancelled.

On 21 August, [Guchol \(0512\)](#) developed as a tropical depression about 880 km east-southeast of Iwo Jima and moved towards the north-northwest. It intensified into a severe tropical storm the next day. Guchol turned to the northeast on 23 August and became an extratropical cyclone over the Pacific on 25 August.

[Talim \(0513\)](#) developed as a tropical depression over the Pacific about 150 km south-southwest of Guam on 26 August. Tracking northwestwards, it reached typhoon strength on 28 August. Talim then adopted a west-northwestward track and swept across Taiwan in the

morning of 1 September. During the passage of Talim, at least seven people were found dead and 200 others were hurt in Taiwan. Agricultural losses were estimated at NT\$ 1.2 billion. Talim made landfall over Fujian and moved inland that afternoon. It degenerated into an area of low pressure the next day. Talim inflicted severe damage in several provinces, killing 96 people. Some 30 people were reported missing. The economic loss exceeded RMB 12 billion.

A tropical depression named [Nabi \(0514\)](#) formed about 940 km east of Guam on 29 August and moved westwards. It intensified into a typhoon in the early morning of 31 August and traversed Mariana Islands the same day. Nabi then tracked in the general direction towards Kyushu in the next few days. It made landfall near Kagoshima on 6 September. Nabi then turned to the northeast and weakened into a severe tropical storm over the Sea of Japan the following day. After traversing Hokkaido, it became an extratropical cyclone in the morning of 8 September. In the fury of Nabi, 21 people were killed, 149 injured, another six reported missing in Japan. Near 2 000 houses were destroyed and power supply to about 270 000 families was suspended.

SEPTEMBER

[Khanun \(0515\)](#) developed as a tropical depression about 100 km north of Yap on 6 September. Moving northwestwards, it attained typhoon strength on 9 September. Khanun made landfall over Zhejiang on 11 September and moved across Jiangsu in the following day. It eventually dissipated over the Yellow Sea in the early morning of 13 September. During its passage, at least 14 persons were killed, and another nine were reported missing in eastern China.

On 12 September, a tropical depression formed over the South China Sea, about 370 km south-southeast of Xisha Dao. It took on a westward course and dissipated over coastal areas of southern Vietnam the next morning.

On 16 September, [Vicente \(0516\)](#) formed as a tropical depression over the South China Sea about 80 km northwest of Nansha Dao. Moving generally towards the north, it deepened into a tropical storm that evening. Vicente turned west-northwestwards on 17 September and made landfall over Vietnam the following day. On 19 September, it degenerated into an area of low pressure over the northern part of Laos.

A tropical depression named [Saola \(0517\)](#) formed about 1 120 km east-southeast of Iwo Jima on 20 September. Moving towards the west-northwest, it intensified into a typhoon on 22 September and then traversed the sea between Iwo Jima and Ogasawara Islands. Saola turned northeastwards on 24 September over the Pacific to the south of Japan. It weakened into a severe tropical storm and subsequently became an extratropical cyclone over the seas east of Japan two days later.

[Damrey \(0518\)](#) developed as a tropical depression over the Pacific about 310 km east-northeast of Baguio in the early morning of 21 September. It moved northwestwards and intensified into a tropical storm before skirting the northeastern tip of Luzon that morning. Over the South China Sea, Damrey turned to the west the following day and then tracked in the general direction of Hainan. It gradually intensified into a typhoon while moving across the northern part of the South China Sea. Damrey swept across Hainan on 26 September and made landfall over northern Vietnam the next day. It eventually dissipated over Laos on 28 September.

A tropical depression named [Longwang \(0519\)](#) formed about 620 km south-southeast of Iwo Jima on 26 September. Tracking generally west-northwest, it reached typhoon strength on 27 September. Longwang swept across Taiwan in the morning of 2 October, causing one death and injuring some 50 people. Another person was reported missing. Power supply to some 760 000 households was interrupted. Agricultural losses exceeded NT\$ 100 million. Longwang made

landfall near Xiamen in the evening of 2 October and dissipated over inland area the next day. It also inflicted severe damage in Fujian where at least 60 people died, some 20 others were reported missing, and about 540 000 people had to be evacuated. In addition, around 5 400 houses were damaged. The economic loss exceeded RMB 1.2 billion.

OCTOBER

On 7 October, a tropical depression formed over the South China Sea about 120 km east-northeast of Da Nang and moved westwards. It dissipated soon after crossing central Vietnam early next morning.

Kirogi (0520) developed as a tropical depression about 720 km west-southwest of Iwo Jima on 10 October and moved generally southwestwards. It intensified into a typhoon the next day and then headed slowly towards the north-northwest. Kirogi changed direction again on 15 October and began to track northeastwards. Traversing the seas between Honshu and Ogasawara Islands, Kirogi weakened into a tropical storm in the early morning of 19 October and became an extratropical cyclone later that day.

Kai-tak (0521) formed as a tropical depression over the South China Sea about 280 km north of Nansha Dao on 28 October. Moving generally towards the northwest, it attained typhoon strength on 30 October. Kai-tak made landfall over Vietnam on 2 November and dissipated near Ha Noi that evening. During its passage, some 20 people were killed and 14 injured in Vietnam. Near 7 500 houses were damaged.

NOVEMBER

Tembin (0522) developed as a tropical depression over the Pacific about 250 km north of Yap on 7 November. Tracking mainly towards the west-northwest, it intensified into a tropical storm in the morning of 10 November. Tembin made landfall over the eastern coast of Luzon that evening and dissipated over the South China Sea the next day.

A tropical depression named **Bolaven (0523)** formed about 960 km southeast of Manila on 14 November. Meandering towards the north in the following days, Bolaven intensified into a severe tropical storm on 17 November. It took on the west-northwestward course on 18 November and turned to the northwest the next day. Bolaven weakened gradually thereafter and dissipated over seas east of Luzon on 20 November.

DECEMBER

A tropical depression formed about 340 km west-southwest of Nansha Dao on 19 December and tracked generally northwest. It turned to the southwest the next morning and dissipated over the seas off southern Vietnam that afternoon.

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

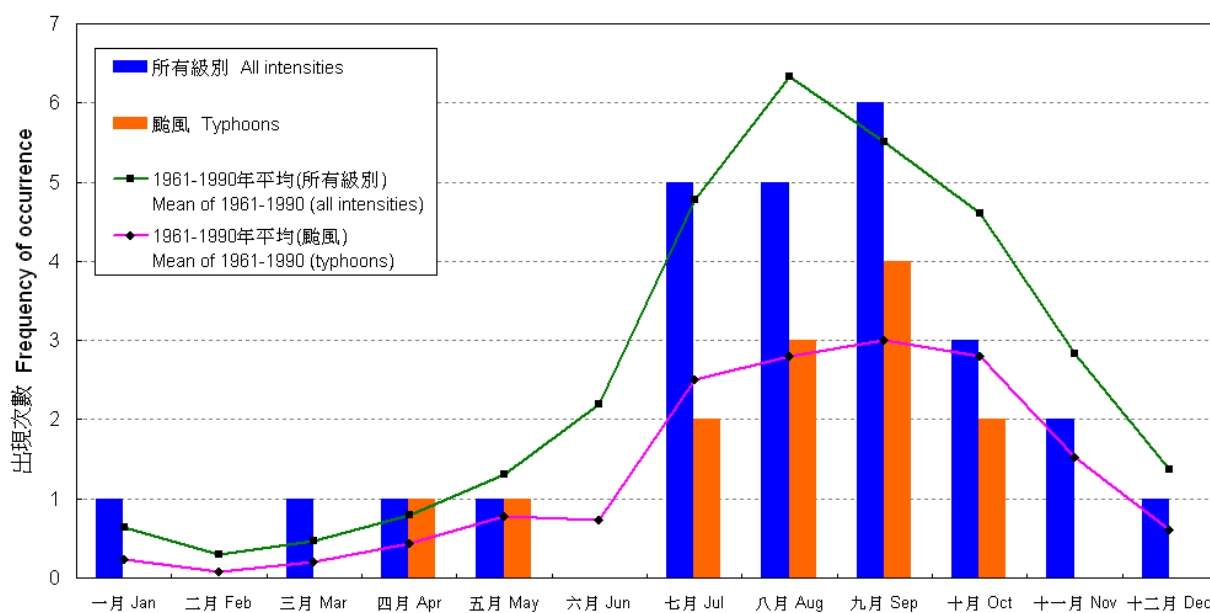


圖 2.1 二零零五年在北太平洋西部及南海區域的熱帶氣旋出現次數之每月分佈 (以熱帶氣旋在該月初次出現為準)。

Figure 2.1 Monthly frequencies of the occurrence of tropical cyclones in the western North Pacific and the South China Sea in 2005 (based on the first occurrence of the tropical cyclone in the month).

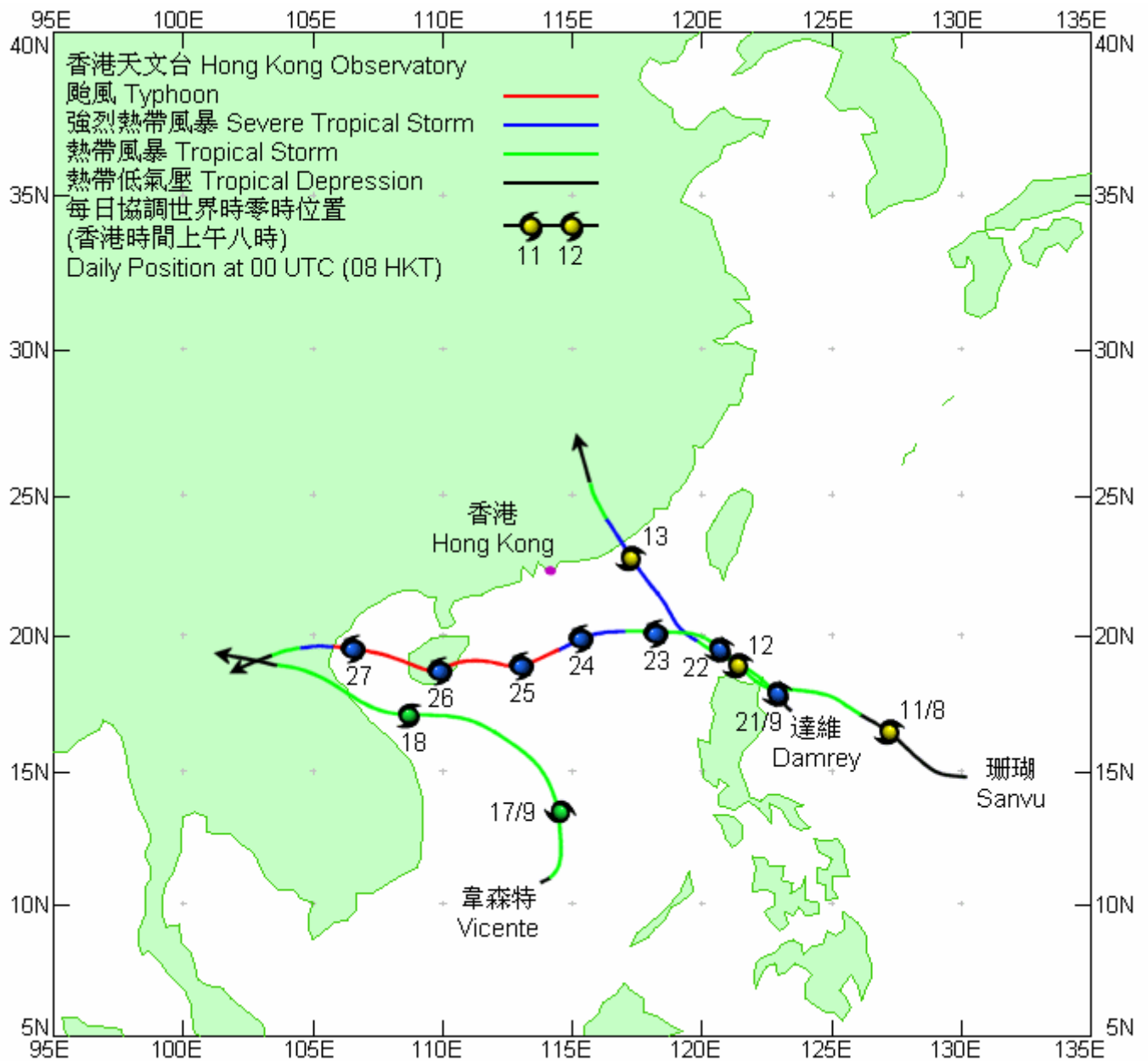


圖 2.2 二零零五年三個影響香港的熱帶氣旋的路徑圖。
 Figure 2.2 Tracks of the three tropical cyclones affecting Hong Kong in 2005.

表 2.1 在香港責任範圍內 (10°-30°N, 105°-125°E)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 (10° - 30°N, 105° - 125°E), BASED ON THE FIRST OCCURRENCE OF THE TROPICAL CYCLONE IN THE MONTH

年份 Year	月份 Month												共 Total
	一月	二月	三月	四月	五月	六月	七月	八月	九月	十月	十一月	十二月	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	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
正常 Normal	0.2	0.0	0.1	0.1	0.8	1.6	2.8	3.2	2.7	2.3	1.8	0.6	16.4

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	二月	三月	四月	五月	六月	七月	八月	九月	十月	十一月	十二月	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	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
正常 Normal	0.0	0.0	0.0	0.1	0.3	0.8	1.6	1.1	1.4	1.0	0.1	0.0	6.4

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.

表 2.3 香港各熱帶氣旋警告信號之意義

TABLE 2.3 MEANING OF ALL TROPICAL CYCLONE WARNING SIGNALS IN HONG KONG

信號 Signal		顯示符號 Symbol Display	信號之意義 Meaning of the Signal
戒備 Standby	1		有一熱帶氣旋集結於香港約800公里之範圍內，稍後可能影響香港。 A tropical cyclone is centred within about 800 kilometres (km) of Hong Kong and may later affect Hong Kong.
強風 Strong Wind	3		維多利亞港內吹強風或將有強風，持續風力每小時41-62公里，陣風可能超過每小時110公里。 Strong wind is expected or blowing in the Victoria harbour, with a sustained speed of 41-62 kilometres per hour (km/h), and gusts which may exceed 110 km/h.
西北 烈風或暴風 NW'LY Gale or Storm	8 西北 NW		維多利亞港內風力已達或將達每小時63-117公里之烈風或暴風程度，由所指之方向吹襲，而陣風可能超過每小時180公里。 Gale or storm force wind is expected or blowing in the Victoria harbour, with a sustained wind speed of 63-117 km/h from the quarter indicated and gusts which may exceed 180 km/h.
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		烈風或暴風風力現正或將會顯著增強。 Gale or storm force wind is increasing or expected to increase significantly in strength.
颶風 Hurricane	10		風力已達或將達颶風程度。即持續風力每小時118公里或以上，而陣風可能超過每小時220公里。 Hurricane force wind is expected or blowing, with sustained speed reaching upwards from 118 km/h and with gusts that may exceed 220 km/h.

第三節

二零零五年影響香港的熱帶氣旋

Section 3

TROPICAL CYCLONES AFFECTING HONG KONG IN 2005

3.1 強烈熱帶風暴珊瑚（0510）：二零零五年八月十日至十四日

珊瑚是二零零五年首個令香港天文台發出警告信號的熱帶氣旋。

珊瑚在八月十日於馬尼拉以東約 990 公里的太平洋上發展成爲一個熱帶低氣壓。它向西北偏西移動，在翌日增強爲一熱帶風暴，珊瑚掠過呂宋東北端後橫越呂宋海峽。在珊瑚的吹襲下，台灣東部的交通在八月十二日全面停頓。珊瑚進入南海之後，採取西北偏北路徑趨向廣東沿岸。它於八月十二日晚上增強爲一強烈熱帶風暴，次日在汕頭附近登陸，並減弱爲一熱帶風暴。珊瑚於八月十四日進一步減弱，然後在內陸消散。珊瑚在廣東和福建造成嚴重破壞，兩省分別約有 140 萬人和 210 萬人受災。

香港天文台在八月十二日上午 10 時 40 分發出一號戒備信號，當時珊瑚位於香港東南偏東約 770 公里。受到珊瑚影響，本港同日傍晚開始有狂風驟雨及雷暴。八月十三日下午 1 時，珊瑚最接近本港，當時它位於香港東北偏東約 300 公里。香港天文台總部於同日下午 3 時錄得每小時最低海平面氣壓爲 997.0 百帕斯卡。隨著珊瑚逐漸遠離香港，所有熱帶氣旋警告信號於當天下午 6 時 45 分取消。

珊瑚的雨帶在八月十三日爲香港帶來狂風大驟雨。天文台總部錄得超過 80 毫米雨量。天文台分別在八月十三日上午 11 時 40 分至下午 1 時 15 分及該晚 8 時 45 分至翌日零時 20 分發出黃色暴雨警告信號。

表 3.1.1-3.1.3 分別是珊瑚影響香港時各站錄得的最高風速、日雨量及最高潮汐資料。圖 3.1.1-3.1.3 則分別是珊瑚的路徑圖、香港雨量分佈圖及衛星雲圖。

3.1 Severe Tropical Storm Sanvu (0510) : 10 - 14 August 2005

Sanvu was the first tropical cyclone that necessitated the issuance of warning signals in 2005.

Sanvu developed as a tropical depression over the Pacific about 990 km east of Manila on 10 August. Moving west-northwestwards, it intensified into a tropical storm the next day. Sanvu skirted the northeastern tip of Luzon and then traversed the Luzon Strait. In the fury of Sanvu, transportation over eastern Taiwan was suspended on 12 August. Upon entering the South China Sea, Sanvu adopted a north-northwestward course and headed towards the coast of Guangdong. It intensified into a severe tropical storm on the night of 12 August. Sanvu made landfall near Shantou and weakened into a tropical storm the following day. On 14 August, Sanvu weakened further and dissipated over inland. Sanvu caused serious damages in Guangdong and Fujian where about 1.4 million and 2.1 million people were affected respectively.

In Hong Kong, the Standby Signal No. 1 was issued at 10.40 a.m. on 12 August when Sanvu was about 770 km to the east-southeast. Locally, squally showers and thunderstorms set in that evening as Hong Kong came under the influence of Sanvu. It came closest to Hong Kong at around 1 p.m. on 13 August when it was about 300 km to the east-northeast. The lowest hourly sea-level pressure of 997.0 hPa was recorded at the Hong Kong Observatory Headquarters at 3 p.m. that afternoon. All tropical cyclone warning signals were cancelled at 6.45 p.m. the same day as Sanvu gradually moved away from Hong Kong.

The rainbands of Sanvu brought heavy squally showers to Hong Kong on 13 August. More than 80 millimetres of rainfall were recorded at the Observatory Headquarters. The Amber Rainstorm Warning Signal was in force between 11.40 a.m. and 1.15 p.m. on 13 August, and between 8.45 p.m. that night and 0.20 a.m. the next day.

Information on wind, rainfall and tide during the passage of Sanvu is given in Tables 3.1.1-3.1.3. Figures 3.1.1-3.1.3 show the track of Sanvu, rainfall distribution in Hong Kong and cloud imagery respectively.

表 3.1.1 在珊瑚影響下，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 during the issuing of the tropical cyclone warning signal for Sanvu

站 (參閱圖 1.1)	Station (see Fig. 1.1)	最高陣風 Maximum Gust		日期/月份 Date/Month	時間 Time	最高每小時平均風速 Maximum Hourly Wind		日期/月份 Date/Month	時間 Time
		風向 Direction	風速(公里/時) Speed (km/h)			風向 Direction	風速(公里/時) Speed (km/h)		
中環	Central	西北偏北 NNW	49	13/8	17:06	西北 NW	13	12/8	13:00
中環廣場	Central Plaza	- -	77	12/8	18:55	- -	34	13/8	09:00
香港國際機場	Hong Kong International Airport	西北偏西 WNW	65	13/8	16:43	西南 SW	31	13/8	18:00
長洲	Cheung Chau	西北偏西 WNW	122	13/8	17:07	西南偏西 WSW	40	13/8	18:00
長沙灣	Cheung Sha Wan	東北 NE	58	12/8	18:45	西南偏南 SSW	13	13/8	11:00
青洲	Green Island	北 N	65	12/8	18:54	南 S	30	13/8	18:00
啓德	Kai Tak	西北 NW	62	13/8	17:03	西 W	20	12/8	13:00
京士柏	King's Park	西北 NW	67	13/8	17:01	西南偏西 WSW	13	12/8	13:00
流浮山	Lau Fau Shan	北 N	88	13/8	16:36	西北偏西 WNW	36	12/8	13:00
北角	North Point	西北偏北 NNW	59	13/8	17:04	西 W	23	12/8	13:00
平洲	Ping Chau	西 W	49	13/8	17:22	西 W	16	13/8	13:00
西貢	Sai Kung	西北 NW	67	13/8	16:59	西北偏西 WNW	22	12/8	23:00
沙螺灣	Sha Lo Wan	西北偏西 WNW	58	13/8	16:50	西南 SW	23	13/8	18:00
沙田	Sha Tin	西北偏北 NNW	45	12/8	18:35	西南偏南 SSW	16	13/8	15:00
石崗	Shek Kong	西北偏北 NNW	54	13/8	16:42	西北偏西 WNW	14	12/8	13:00
九龍天星碼頭	Star Ferry, Kowloon	西北偏北 NNW	49	13/8	17:05	西 W	27	12/8	13:00
打鼓嶺	Ta Kwu Ling	西北偏西 WNW	75	13/8	16:40	北 N	12	12/8	14:00
大尾篤	Tai Mei Tuk	西 W	83	13/8	16:50	西 W	31	12/8	23:00
大帽山	Tai Mo Shan	西北 NW	101	13/8	16:55	西 W	52	13/8	18:00
塔門	Tap Mun	西 W	72	13/8	17:03	西 W	25	13/8	08:00
大老山	Tate's Cairn	西 W	110	13/8	17:04	西南 SW	45	13/8	18:00
鯽魚湖	Tsak Yue Wu	東北 NE	52	12/8	18:35	東 E	12	12/8	23:00
將軍澳	Tseung Kwan O	北 N	63	13/8	17:08	西南偏南 SSW	14	13/8	18:00
青衣	Tsing Yi	北 N	65	13/8	16:57	東南 SE	25	13/8	00:00
屯門	Tuen Mun	西北偏西 WNW	59	13/8	16:42	西北 NW	16	12/8	15:00
橫瀾島	Waglan Island	東 E	83	12/8	22:45	西南偏西 WSW	41	13/8	18:00
黃竹坑	Wong Chuk Hang	東南 SE	56	13/8	17:22	- -	14	12/8	16:00

表 3.1.2 珊瑚影響香港期間，香港天文台總部及其他各站所錄得的日雨量（單位為毫米）

Table 3.1.2 Daily rainfall amounts in millimetres recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Sanvu

站 (參閱圖 3.1.2) Station (see Fig. 3.1.2)	八月十二日 12 Aug	八月十三日 13 Aug	八月十四日 14 Aug	八月十五日 15 Aug	八月十六日 16 Aug	總雨量 Total
香港天文台 Hong Kong Observatory	9.4	83.9	2.5	14.9	49.0	159.7
H12 半山區 Mid Levels	10.5	156.5	3.0	2.5	35.0	207.5
H19 筲箕灣 Shau Kei Wan	8.5	106.0	2.5	7.0	33.0	157.0
H21 淺水灣 Repulse Bay	13.0	137.5	3.0	7.5	27.5	188.5
K04 佐敦谷 Jordan Valley	3.0	87.0	1.5	33.5	26.0	151.0
K06 蘇屋邨 So Uk Estate	7.5	81.5	9.0	5.5	40.5	144.0
N05 粉嶺 Fanling	1.0	71.0	0.5	6.0	28.5	107.0
N06 葵涌 Kwai Chung	5.0	94.5	1.5	13.0	51.0	165.0
N09 沙田 Sha Tin	12.0	[65.0]	1.5	[28.0]	66.5	[173.0]
N12 元朗 Yuen Long	1.0	111.0	1.0	1.0	19.0	133.0
N13 糧船灣 High Island	2.5	55.5	[2.0]	10.5	[18.5]	[89.0]
N17 東涌 Tung Chung	1.0	110.5	3.0	67.5	68.5	250.5
R21 踏石角 Tap Shek Kok	6.5	85.5	0.5	0.0	17.5	110.0
R26 石崗 Shek Kong	5.5	89.5	1.0	3.0	24.5	123.5
R31 大尾篤 Tai Mei Tuk	6.0	32.0	1.5	2.0	40.5	82.0

註： [] 基於不齊全的每小時雨量數據。

Note: [] based on incomplete hourly data.

表 3.1.3 珊瑚影響香港期間，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 Sanvu

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/月 Date/Month	時間 Time	高度 (米) Height (m)	日/月 Date/Month	時間 Time
鰂魚涌 Quarry Bay	2.05	13/8	02:36	0.32	13/8	08:56
石壁 Shek Pik	2.13	13/8	02:13	0.20	13/8	16:20
大埔滘 Tai Po Kau	2.11	13/8	03:15	0.36	13/8	09:49
橫瀾島 Waglan Island	1.98	13/8	03:10	0.10	13/8	16:15

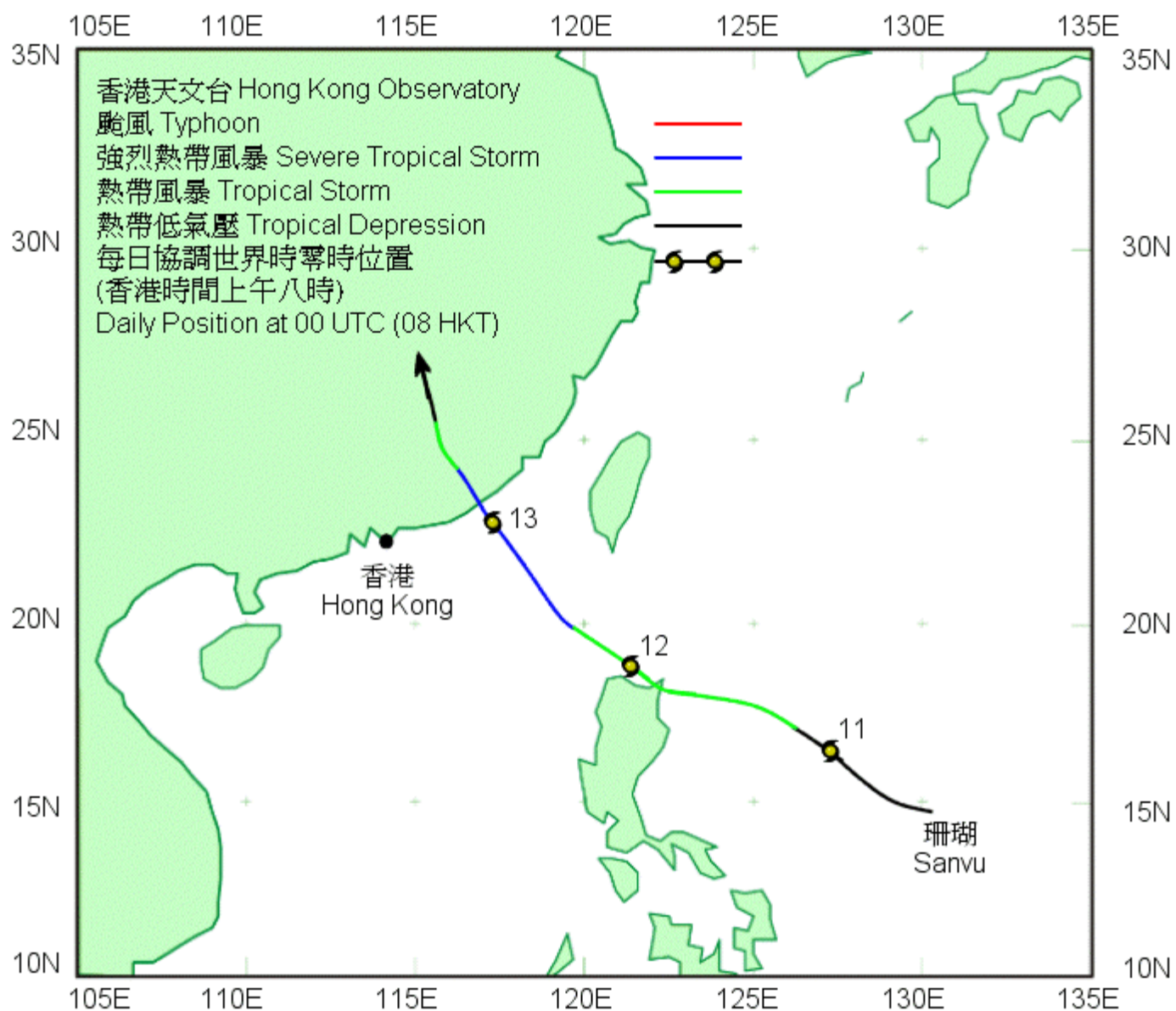


圖 3.1.1 二零零五年八月十日至十四日珊瑚（0510）的路徑圖

Figure 3.1.1 Track of Sanvu (0510) on 10 - 14 August 2005.

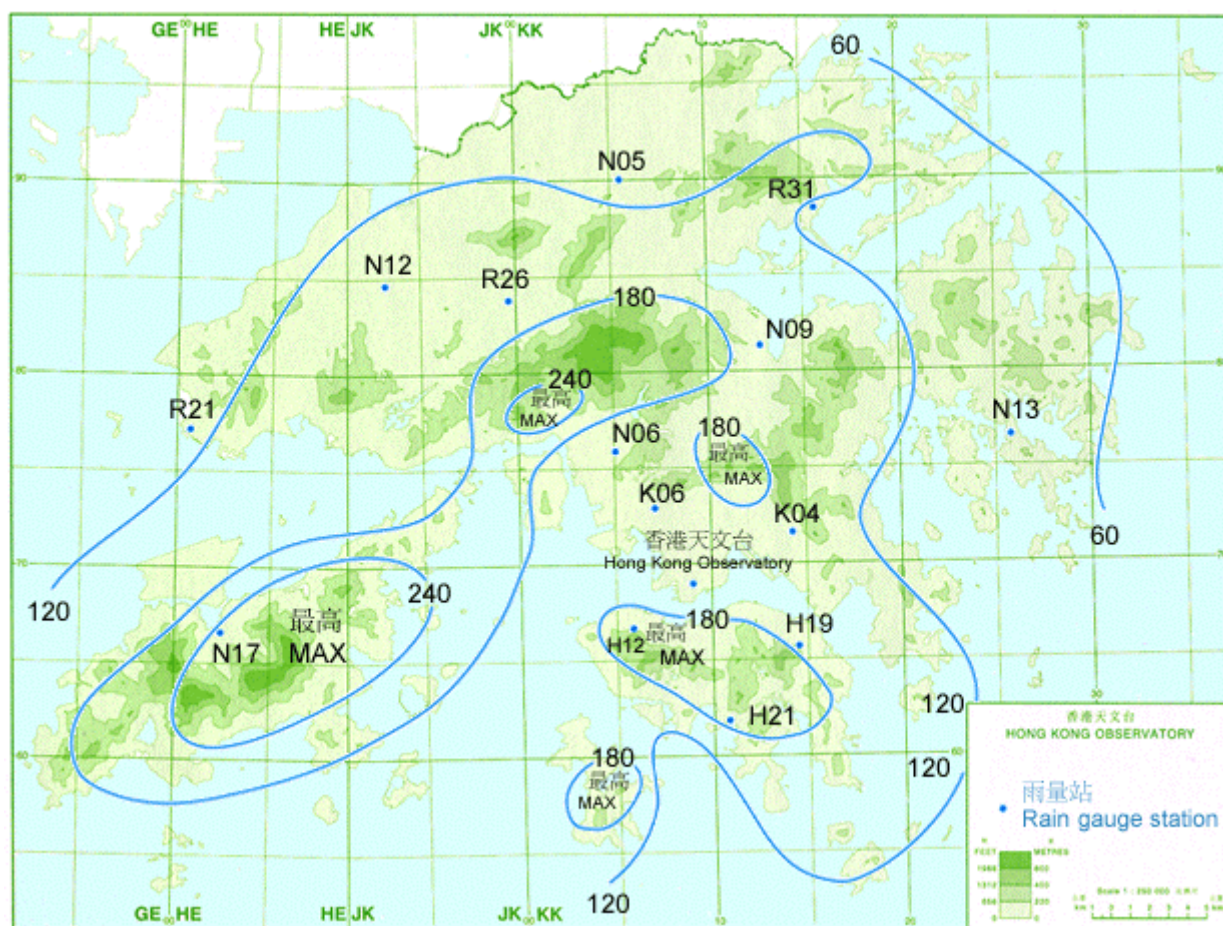


圖 3.1.2 二零零五年八月十二日至十六日的雨量分佈（等雨量線單位為毫米）。

Figure 3.1.2 Rainfall distribution on 12-16 August 2005 (isohyets are in millimetres).

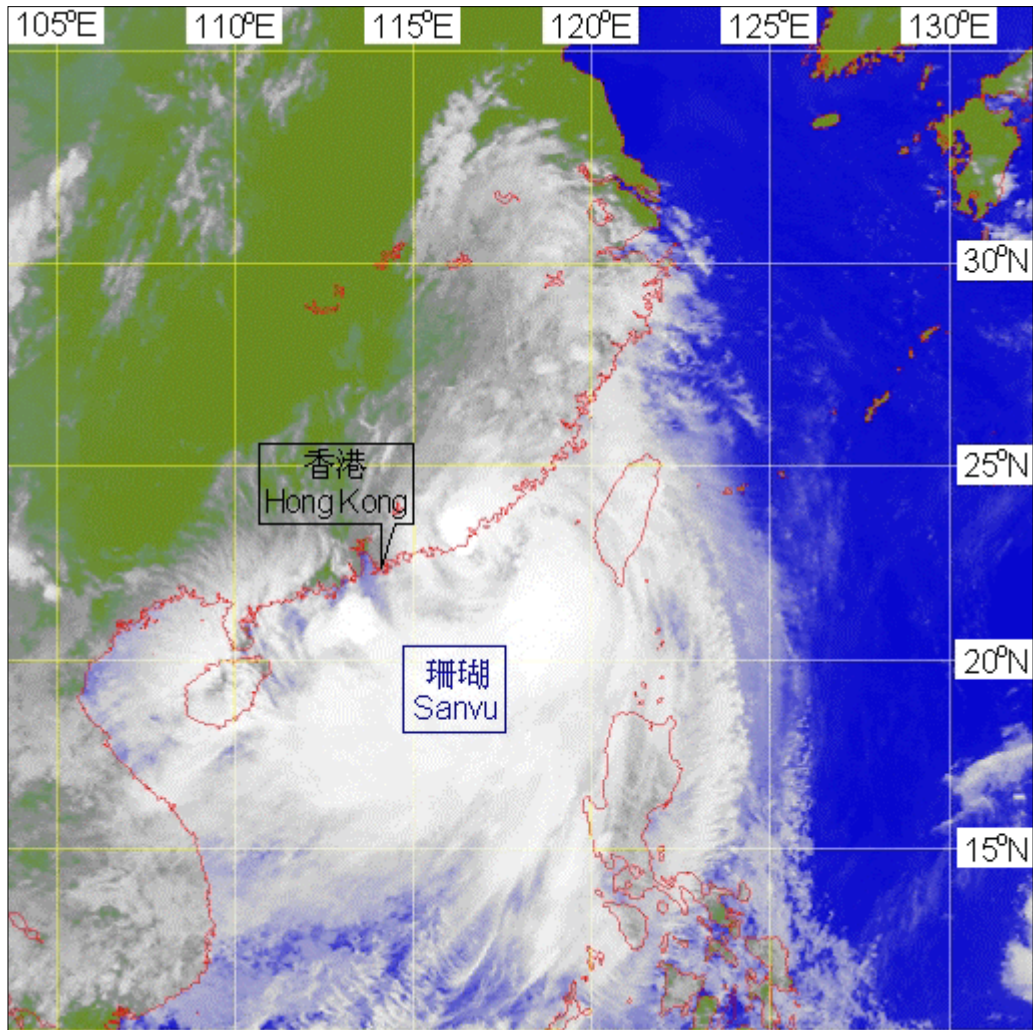


圖 3.1.3 珊瑚在二零零五年八月十三日約上午八時的紅外線衛星圖片。
〔此衛星圖像接收自日本氣象廳的多用途輸送衛星-1R (MTSAT-1R)。〕

Figure 3.1.3 Infra-red imagery at around 8 a.m. on 13 August 2005 of Sanvu.
[The satellite imagery was originally captured with Multi-functional Transport Satellite-1R (MTSAT-1R) of Japan Meteorological Agency (JMA).]

3.2 熱帶風暴韋森特（0516）：二零零五年九月十六日至十九日

九月十六日，韋森特於南沙島西北約 80 公里的南海上發展成爲一個熱帶低氣壓，大致向北移動。傍晚，韋森特增強成爲熱帶風暴。它於翌日下午轉向西北偏西推進。韋森特於九月十八日在越南登陸，次日於老撾北部變爲一個低壓區。在韋森特的吹襲下，越南約有 20 人死亡或失蹤。

香港天文台在九月十七日下午 2 時 40 分發出一號戒備信號，當時韋森特位於香港以南約 760 公里。受到它的外圍雨帶影響，本港天氣變得不穩定及有狂風驟雨和雷暴。在熱帶氣旋警告信號生效期間，香港天文台總部於九月十七日下午 3 時及 4 時錄得最低每小時海平面氣壓 1 010.4 百帕斯卡。同日晚上 8 時左右，韋森特最接近香港，當時它集結在本港西南偏南約 670 公里。隨後韋森特逐漸遠離香港，所有熱帶氣旋警告信號於九月十八日上午 7 時 40 分取消。

在韋森特與中國東南部的高壓脊共同影響下，九月十七日和十八日，本港離岸及高地普遍吹強風，海面有大浪，多處海灘懸掛紅旗。本港兩名泳客分別於九月十七和十八日在西貢鹹田灣被大浪捲走，遇溺喪生。

表 3.2.1-3.2.3 分別是韋森特影響香港時各站錄得的最高風速、日雨量及最高潮汐資料。圖 3.2.1-3.2.3 則分別是韋森特的路徑圖、香港雨量分佈圖及衛星雲圖。

3.2 Tropical Storm Vicente (0516) : 16 - 19 September 2005

On 16 September, Vicente formed as a tropical depression over the South China Sea about 80 km northwest of Nansha Dao. Moving generally towards the north, it deepened into a tropical storm that evening. Vicente turned west-northwestwards in the afternoon on the following day. It made landfall over Vietnam on 18 September and degenerated into an area of low pressure over the northern part of Laos the next day. In Vietnam, about 20 people were killed or reported missing in the fury of Vicente.

In Hong Kong, the Standby Signal No. 1 was issued at 2.40 p.m. on 17 September when Vicente was about 760 km to the south. As Hong Kong came under the influence of its outer rainbands, local weather became unstable with squally showers and thunderstorms. During the passage of Vicente, the lowest hourly sea-level pressure of 1 010.4 hPa was recorded at the Hong Kong Observatory Headquarters at 3 p.m. and 4 p.m. on 17 September. Vicente was closest to Hong Kong at around 8 p.m. when it was about 670 km to the south-southwest. Vicente then gradually moved away from Hong Kong and all tropical cyclone warning signals were cancelled at 7.40 a.m. on 18 September.

Under the combined effect of Vicente and a ridge of high pressure over southeast China, winds were generally strong offshore and on high grounds on 17 and 18 September. Seas were rough and red flags were hoisted at a number of beaches in Hong Kong. Locally, a swimmer was drowned on 17 September and another one on the following day in rough seas at Ham Tin Wan of Sai Kung.

Information on wind, rainfall and tide during the passage of Vicente is given in Tables 3.2.1-3.2.3. Figures 3.2.1-3.2.3 show the track of Vicente, rainfall distribution in Hong Kong and cloud imagery respectively.

表 3.2.1 在韋森特影響下，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 during the issuing of the tropical cyclone warning signal for Vicente

站 (參閱圖 1.1)	Station (see Fig. 1.1)	最高陣風 Maximum Gust		日期/月份 Date/Month	時間 Time	最高每小時平均風速 Maximum Hourly Wind		日期/月份 Date/Month	時間 Time
		風向 Direction	風速(公里/時) Speed (km/h)			風向 Direction	風速(公里/時) Speed (km/h)		
中環	Central	東 E	59	17/9	14:45	東 E	23	17/9	16:00
中環廣場	Central Plaza	- -	104	17/9	14:44	- -	56	17/9	15:00
香港國際機場	Hong Kong International Airport	東南偏東 ESE	67	17/9	15:05	東 E	38	18/9	05:00
長洲	Cheung Chau	東南偏東 ESE	115	17/9	14:52	東 E	51	18/9	06:00
長沙灣	Cheung Sha Wan	東北偏東 ENE	51	18/9	04:02	東北偏東 ENE	19	18/9	05:00
青洲	Green Island	東 E	79	18/9	03:57	東 E	47	17/9	19:00
啓德	Kai Tak	東南 SE	83	17/9	14:41	東 E	34	18/9	05:00
京士柏	King's Park	東 E	63	17/9	14:48	東 E	23	17/9	16:00
流浮山	Lau Fau Shan	東 E	58	17/9	20:14	東 E	30	17/9	21:00
北角	North Point	東 E	72	17/9	14:42	東 E	34	18/9	04:00
平洲	Ping Chau	東 E	51	17/9	18:33	東 E	14	17/9	19:00
						東 E	14	17/9	20:00
						東 E	14	17/9	23:00
西貢	Sai Kung	東南 SE	72	17/9	14:45	東北偏東 ENE	31	17/9	23:00
		東南 SE	72	17/9	14:49				
沙螺灣	Sha Lo Wan	東 E	70	17/9	20:30	東 E	40	17/9	20:00
沙田	Sha Tin	東北偏東 ENE	59	17/9	22:18	東北偏東 ENE	16	17/9	20:00
石崗	Shek Kong	東 E	58	18/9	04:05	東 E	25	18/9	00:00
九龍天星碼頭	Star Ferry, Kowloon	東 E	75	17/9	14:44	東 E	36	18/9	05:00
打鼓嶺	Ta Kwu Ling	東南偏東 ESE	68	17/9	14:59	東南偏東 ESE	20	17/9	16:00
大尾篤	Tai Mei Tuk	東北偏東 ENE	83	17/9	14:51	東 E	43	17/9	16:00
大帽山	Tai Mo Shan	東南偏東 ESE	101	17/9	15:06	東南偏東 ESE	65	18/9	05:00
塔門	Tap Mun	東南偏東 ESE	68	17/9	14:53	東南偏東 ESE	30	17/9	16:00
大老山	Tate's Cairn	東北偏東 ENE	90	18/9	03:31	東 E	58	18/9	04:00
		東 E	90	18/9	05:04				
鯽魚湖	Tsak Yue Wu	東北偏東 ENE	40	17/9	19:47	東 E	14	17/9	19:00
		東北偏東 ENE	40	18/9	06:19				
將軍澳	Tseung Kwan O	東南 SE	52	17/9	15:26	東南 SE	14	17/9	15:00
						東南 SE	14	17/9	16:00
青衣	Tsing Yi	東南偏東 ESE	79	18/9	04:36	東南偏東 ESE	38	18/9	05:00
屯門	Tuen Mun	東 E	43	18/9	05:05	東南 SE	12	17/9	15:00
						東 E	12	18/9	06:00
橫瀾島	Waglan Island	東南偏東 ESE	68	17/9	14:40	東南偏東 ESE	54	17/9	15:00
黃竹坑	Wong Chuk Hang	- -	68	18/9	02:45	- -	27	17/9	19:00

表 3.2.2 韋森特影響香港期間，香港天文台總部及其他各站所錄得的日雨量（單位為毫米）

Table 3.2.2 Daily rainfall amounts in millimetres recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Vicente

站 (參閱圖 3.2.2) Station (see Fig. 3.2.2)	九月十七日 17 Sep	九月十八日 18 Sep	總雨量 Total
香港天文台 Hong Kong Observatory	23.0	3.8	26.8
H12 半山區 Mid Levels	25.0	13.5	38.5
H19 筲箕灣 Shau Kei Wan	[17.5]	5.0	[22.5]
H21 淺水灣 Repulse Bay	[26.5]	[4.5]	[31.0]
K04 佐敦谷 Jordan Valley	20.0	6.5	26.5
K06 蘇屋邨 So Uk Estate	22.0	8.0	30.0
N05 粉嶺 Fanling	[11.5]	16.0	[27.5]
N06 葵涌 Kwai Chung	[13.5]	9.5	[23.0]
N09 沙田 Sha Tin	[9.0]	10.0	[19.0]
N12 元朗 Yuen Long	[8.5]	3.5	[12.0]
N13 糧船灣 High Island	[7.5]	3.0	[10.5]
N17 東涌 Tung Chung	[14.5]	1.0	[15.5]
R21 踏石角 Tap Shek Kok	10.0	1.0	11.0
R26 石崗 Shek Kong	15.5	28.5	44.0
R31 大尾篤 Tai Mei Tuk	12.0	11.0	23.0

註： [] 基於不齊全的每小時雨量數據。

Note : [] based on incomplete hourly data.

表 3.2.3 韋森特影響香港期間，香港各潮汐站所錄得的最高潮位及最大風暴潮

Table 3.2.3 Times and heights of the maximum sea level and the maximum storm surge recorded at tide stations in Hong Kong during the passage of Vicente

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/月 Date/Month	時間 Time	高度 (米) Height (m)	日/月 Date/Month	時間 Time
鰂魚涌 Quarry Bay	2.42	18/9	07:40	0.38	17/9	14:51
石壁 Shek Pik	2.59	18/9	07:40	0.20	17/9	14:40
大廟灣 Tai Miu Wan	2.44	18/9	07:40	0.17	18/9	06:11
大埔滘 Tai Po Kau	2.37	18/9	07:40	0.31	17/9	14:40
尖鼻咀 Tsim Bei Tsui	2.36	18/9	07:40	0.32	18/9	07:40
橫瀾島 Waglan Island	2.38	18/9	07:40	0.02	17/9	16:51

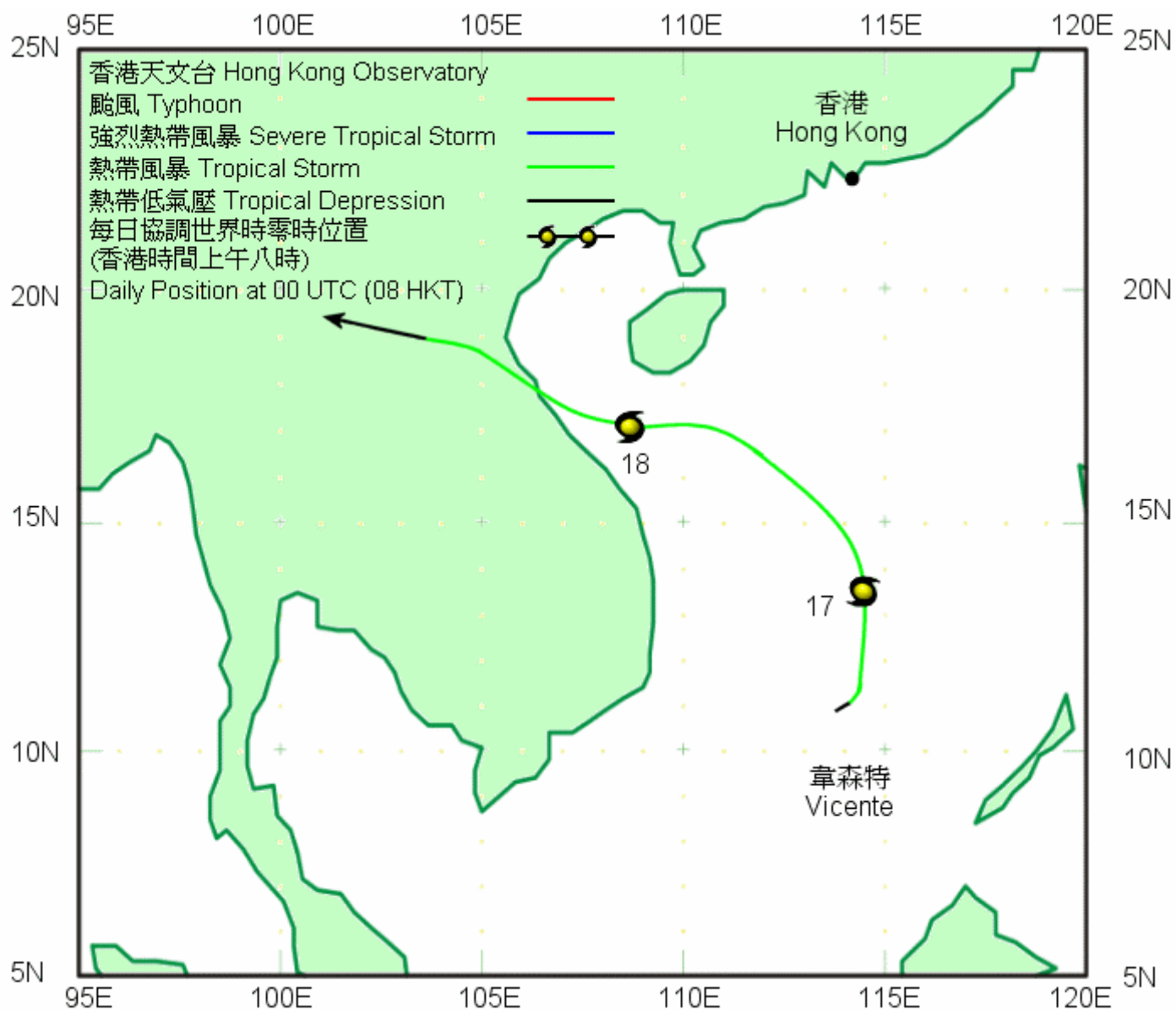


圖 3.2.1 二零零五年九月十六日至十九日韋森特 (0516) 的路徑圖。
Figure 3.2.1 Track of Vicente (0516) on 16 - 19 September 2005.

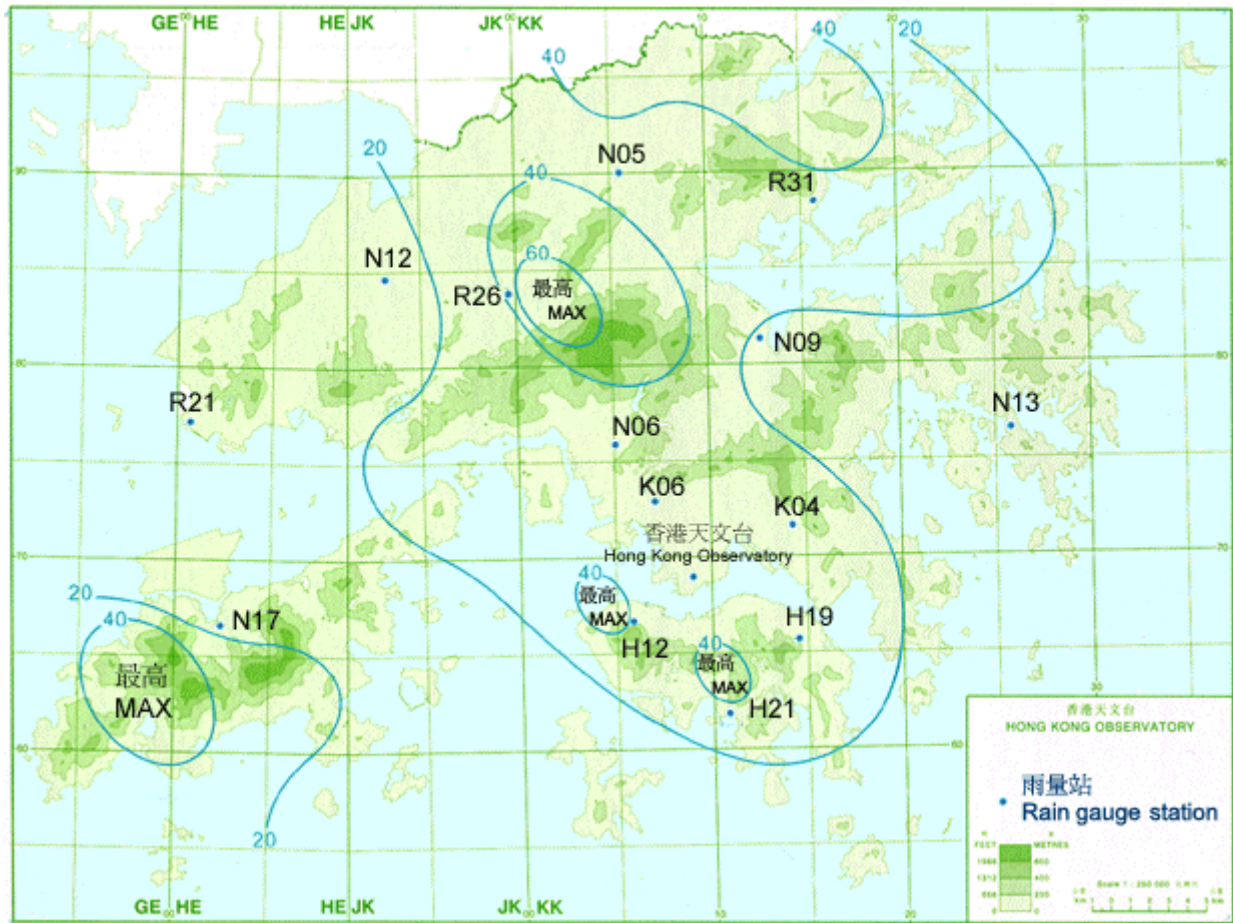


圖 3.2.2 二零零五年九月十七日至十八日的雨量分佈（等雨量線單位為毫米）。
 Figure 3.2.2 Rainfall distribution on 17-18 September 2005 (isohyets are in millimetres).

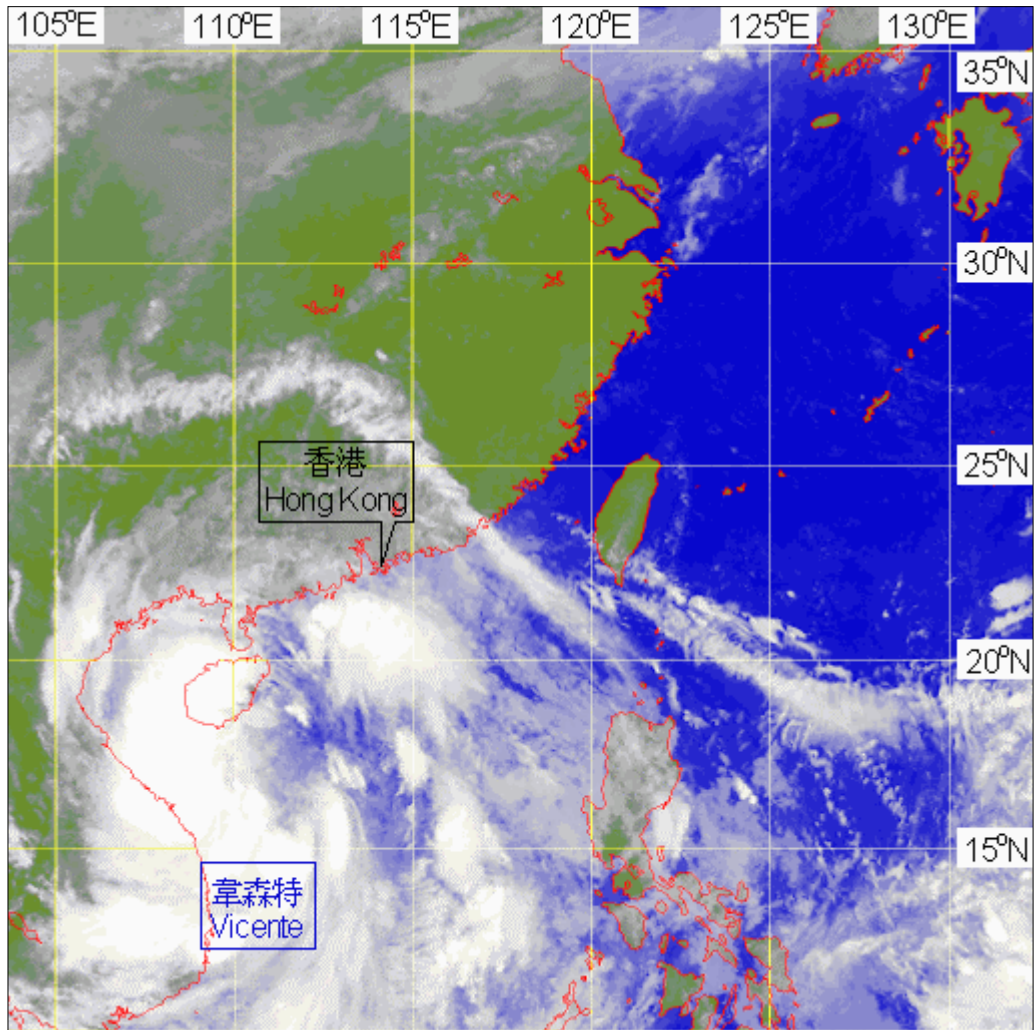


圖 3.2.3 韋森特在二零零五年九月十八日約上午二時的紅外線衛星圖片。
〔此衛星圖像接收自日本氣象廳的多用途輸送衛星-1R (MTSAT-1R)。〕

Figure 3.2.3 Infra-red imagery at around 2 a.m. on 18 September 2005 of Vicente.
[The satellite imagery was originally captured with Multi-functional Transport Satellite-1R (MTSAT-1R) of Japan Meteorological Agency (JMA).]

3.3 颱風達維（0518）：二零零五年九月二十一日至二十八日

達維是二零零五年首個引致香港天文台發出三號強風信號的熱帶氣旋。

達維在九月二十一日清晨於碧瑤東北偏東約310公里的太平洋上發展成爲一個熱帶低氣壓，並向西北移動。同日早上它增強爲一熱帶風暴，然後掠過呂宋東北端。達維在吹襲菲律賓期間，最少造成18人死亡，約20 000人需要撤離。

達維於九月二十二日進入南海北部，並轉向西推進，大致趨向海南省。兩天後它增強成一個颱風。達維於九月二十六日在海南省東岸登陸並橫掃該省。達維所帶來的惡劣天氣及風暴潮在廣東、廣西和海南三省，共導致21人死亡，逾九百萬人受災。另外，約三萬間房屋倒塌，103萬公頃農地受損，直接經濟損失約爲121億人民幣。

達維於九月二十七日在越南北部作第二次登陸，翌日於老撾北部消散。達維吹襲越南期間，多處出現山泥傾瀉和水浸，約100人死亡或受傷，逾千間房屋倒塌，約十萬公頃農地被水淹。

在香港，天文台於九月二十二日上午10時40分發出一號戒備信號，當時達維位於香港東南偏東約710公里。隨著達維移近，天文台於九月二十四日上午8時40分發出三號強風信號，其後本地風勢顯著增強，達維的外圍雨帶亦開始爲香港帶來驟雨。

香港天文台總部於九月二十三日下午3時及4時錄得最低每小時海平面氣壓1 002.7百帕斯卡。九月二十四日上午8時左右，達維最接近香港，當時它集結在本港東南偏南約290公里。隨著達維遠離，境內風勢逐漸減弱，天文台在九月二十六日上午8時20分取消所有熱帶氣旋警告信號。達維的雨帶一連數天影響香港，天文台總部共錄得超過200毫米雨量。

受到達維影響，香港有三人分別在油麻地、尖沙咀及元朗被高空墮物擊中受傷，黃大仙部份路面出現水浸。全港有數宗樹木倒塌、招牌墮下及棚架鬆脫的報告。

表 3.3.1-3.3.3 分別是達維影響香港時各站錄得的最高風速、日雨量及最高潮汐資料。圖 3.3.1-3.3.3 則分別是達維的路徑圖、香港雨量分佈圖及衛星雲圖。

3.3 Typhoon Damrey (0518) : 21 - 28 September 2005

Damrey was the first tropical cyclone to necessitate the issuance of Strong Wind Signal No. 3 in 2005.

Damrey developed as a tropical depression over the Pacific about 310 km east-northeast of Baguio in the early morning of 21 September. It moved northwestwards and intensified into a tropical storm before skirting the northeastern tip of Luzon that morning. During the passage of Damrey, at least 18 people were killed in the Philippines where about 20 000 people had to flee their homes.

On 22 September, Damrey entered the northern part of the South China Sea. Heading generally westward in the direction of Hainan, it intensified into a typhoon two days later. After making landfall on eastern Hainan on 26 September, Damrey rampaged through the province. The adverse weather and storm surge brought by Damrey inflicted widespread damage in Guangdong, Guangxi and Hainan. Altogether, 21 people were killed and nine million people or more were affected in the three provinces. In addition, about 30 000 houses collapsed and over 1.03 million hectares of farmland were damaged. The direct economic loss was approximately RMB 12.1 billion.

Damrey made landfall a second time over northern Vietnam on 27 September and dissipated over northern part of Laos the next day. In Vietnam landslides and floods triggered by Damrey caused some 100 deaths or injuries, over 1 000 houses to collapse, and around 100 000 hectares of farmland flooded.

In Hong Kong, the Standby Signal No. 1 was issued at 10.40 a.m. on 22 September when Damrey was 710 km to the east-southeast of Hong Kong. With Damrey edging closer to Hong Kong, the Strong Wind Signal No. 3 was issued at 8.40 a.m. on 24 September. Subsequently, winds strengthened and showers set in as Hong Kong began to come under the influence of Damrey's outer rainbands.

The lowest hourly sea-level pressure of 1 002.7 hPa was recorded at the Hong Kong Observatory Headquarters at 3 p.m. and 4 p.m. on 23 September. Damrey was closest to Hong Kong at around 8 a.m. on 24 September when it was centred about 290 km to the south-southeast. As Damrey moved away, all tropical cyclone warning signals were cancelled at 8.20 a.m. on 26 September. The rainbands of Damrey affected Hong Kong for several days. More than 200 millimetres of rainfall were recorded at the Observatory Headquarters.

During the passage of Damrey, three people were hit and injured by fallen objects in Yau Ma Tei, Tsim Sha Tsui and Yuen Long. Road flooding occurred at Wong Tai Sin. Several cases of fallen trees and signboards, and loosened scaffolding were reported.

Information on wind, rainfall and tide during the passage of Damrey is given in Tables 3.3.1-3.3.3. Figures 3.3.1-3.3.3 show the track of Damrey, rainfall distribution in Hong Kong and cloud imagery respectively.

表 3.3.1 在達維影響下，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 during the issuing of the tropical cyclone warning signal for Damrey.

站 (參閱圖 1.1)	Station (see Fig. 1.1)	最高陣風 Maximum Gust		日期/月份 Date/Month	時間 Time	最高每小時平均風速 Maximum Hourly Wind		日期/月份 Date/Month	時間 Time
		風向 Direction	風速(公里/時) Speed (km/h)			風向 Direction	風速(公里/時) Speed (km/h)		
中環	Central	東北偏東 ENE	68	24/9	16:56	東北偏東 ENE	34	24/9	21:00
		東北偏東 ENE	68	25/9	04:33	東北偏東 ENE	34	25/9	01:00
中環廣場	Central Plaza	-	124	24/9	16:53	-	75	24/9	17:00
香港國際機場	Hong Kong International Airport	東南偏東 ESE	92	25/9	10:17	東 E	51	24/9	22:00
長洲	Cheung Chau	東南偏東 ESE	117	25/9	09:39	東 E	67	25/9	10:00
長沙灣	Cheung Sha Wan	東北偏北 NNE	92	24/9	18:23	東北 NE	30	24/9	21:00
青洲	Green Island	東北偏東 ENE	144	24/9	16:58	東北偏東 ENE	67	24/9	13:00
啓德	Kai Tak	東南 SE	94	25/9	10:00	東 E	36	25/9	21:00
京士柏	King's Park	東北 NE	83	24/9	12:39	東北 NE	30	24/9	13:00
流浮山	Lau Fau Shan	東南偏南 SSE	72	25/9	10:33	北 N	38	23/9	17:00
北角	North Point	東 E	92	24/9	16:37	東 E	38	26/9	00:00
平洲	Ping Chau	東 E	72	24/9	17:57	東 E	23	25/9	05:00
西貢	Sai Kung	東北偏北 NNE	122	25/9	05:17	東北 NE	47	24/9	13:00
沙螺灣	Sha Lo Wan	東南 SE	99	25/9	10:06	東 E	49	24/9	20:00
沙田	Sha Tin	東北偏北 NNE	90	25/9	04:55	東北偏東 ENE	23	25/9	21:00
石崗	Shek Kong	東北 NE	88	24/9	17:55	東 E	34	25/9	15:00
九龍天星碼頭	Star Ferry, Kowloon	東 E	79	25/9	18:17	東 E	40	26/9	01:00
打鼓嶺	Ta Kwu Ling	東北偏東 ENE	76	25/9	05:12	東 E	27	24/9	19:00
大尾篤	Tai Mei Tuk	東北偏東 ENE	117	25/9	06:09	東北偏東 ENE	65	24/9	22:00
大帽山	Tai Mo Shan	東 E	140	24/9	17:52	東 E	81	25/9	09:00
塔門	Tap Mun	東南偏東 ESE	96	25/9	10:51	東北偏東 ENE	45	25/9	05:00
大老山	Tate's Cairn	東北偏東 ENE	131	24/9	16:50	東北偏北 NNE	77	24/9	11:00
鯽魚湖	Tsak Yue Wu	東北偏東 ENE	72	25/9	03:29	東北偏北 NNE	27	23/9	04:00
將軍澳	Tseung Kwan O	東北偏北 NNE	88	24/9	16:33	東北偏北 NNE	31	24/9	14:00
青衣	Tsing Yi	東南 SE	112	25/9	10:10	東北偏東 ENE	51	24/9	19:00
屯門	Tuen Mun	東南 SE	81	25/9	10:30	東南偏南 SSE	22	25/9	11:00
橫瀾島	Waglan Island	東北偏東 ENE	108	24/9	16:31	東北偏東 ENE	81	24/9	17:00
黃竹坑	Wong Chuk Hang	-	88	25/9	10:36	-	34	24/9	17:00
		-	-			-	34	25/9	02:00

表 3.3.2 達維影響香港期間，香港天文台總部及其他各站所錄得的日雨量(單位為毫米)

Table 3.3.2 Daily rainfall amounts in millimetres recorded at the Hong Kong Observatory Headquarters and other stations during the passage of Damrey.

站 (參閱圖 3.3.2) Station (see Fig. 3.3.2)	九月二十二日 22 Sep	九月二十三日 23 Sep	九月二十四日 24 Sep	九月二十五日 25 Sep	九月二十六日 26 Sep	九月二十七日 27 Sep	總雨量 Total
香港天文台 Hong Kong Observatory	0.0	微量 Trace	10.6	130.2	37.2	30.6	208.6
H12 半山區 Mid Levels	0.0	0.0	10.5	109.0	42.5	25.5	187.5
H19 筲箕灣 Shau Kei Wan	0.0	3.5	12.5	102.5	33.5	35.0	187.0
H21 淺水灣 Repulse Bay	0.0	3.0	[10.0]	98.0	54.0	34.5	[199.5]
K04 佐敦谷 Jordan Valley	0.0	1.5	16.0	143.5	55.5	35.0	251.5
K06 蘇屋邨 So Uk Estate	0.0	0.5	15.0	145.5	42.5	38.5	242.0
N05 粉嶺 Fanling	0.0	0.5	10.5	54.5	82.0	28.0	175.5
N06 葵涌 Kwai Chung	0.0	1.0	13.0	155.5	60.5	45.5	275.5
N09 沙田 Sha Tin	0.0	1.0	[11.0]	88.0	134.5	[19.5]	[254.0]
N12 元朗 Yuen Long	0.0	1.5	6.0	59.5	58.0	21.0	146.0
N13 糧船灣 High Island	0.0	4.5	17.5	91.0	68.5	13.0	194.5
N17 東涌 Tung Chung	0.0	1.5	5.5	[59.5]	22.0	7.0	[95.5]
R21 踏石角 Tap Shek Kok	0.0	1.0	3.0	69.0	30.0	4.0	107.0
R26 石崗 Shek Kong	0.0	1.0	11.5	94.5	121.5	52.5	281.0
R31 大尾篤 Tai Mei Tuk	0.0	2.0	14.5	53.5	90.0	18.5	178.5

註： [] 基於不齊全的每小時雨量數據。

Note : [] based on incomplete hourly data.

表 3.3.3 達維影響香港期間，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 Damrey.

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	2.72	24/9	00:23	0.75	24/9	08:53
石壁 Shek Pik	2.89	25/9	00:08	0.69	24/9	06:56
大廟灣 Tai Miu Wan	2.81	24/9	01:32	0.67	24/9	14:11
大埔滘 Tai Po Kau	2.74	25/9	02:10	0.76	24/9	09:55
尖鼻咀 Tsim Bei Tsui	2.92	24/9	01:15	0.76	24/9	22:02

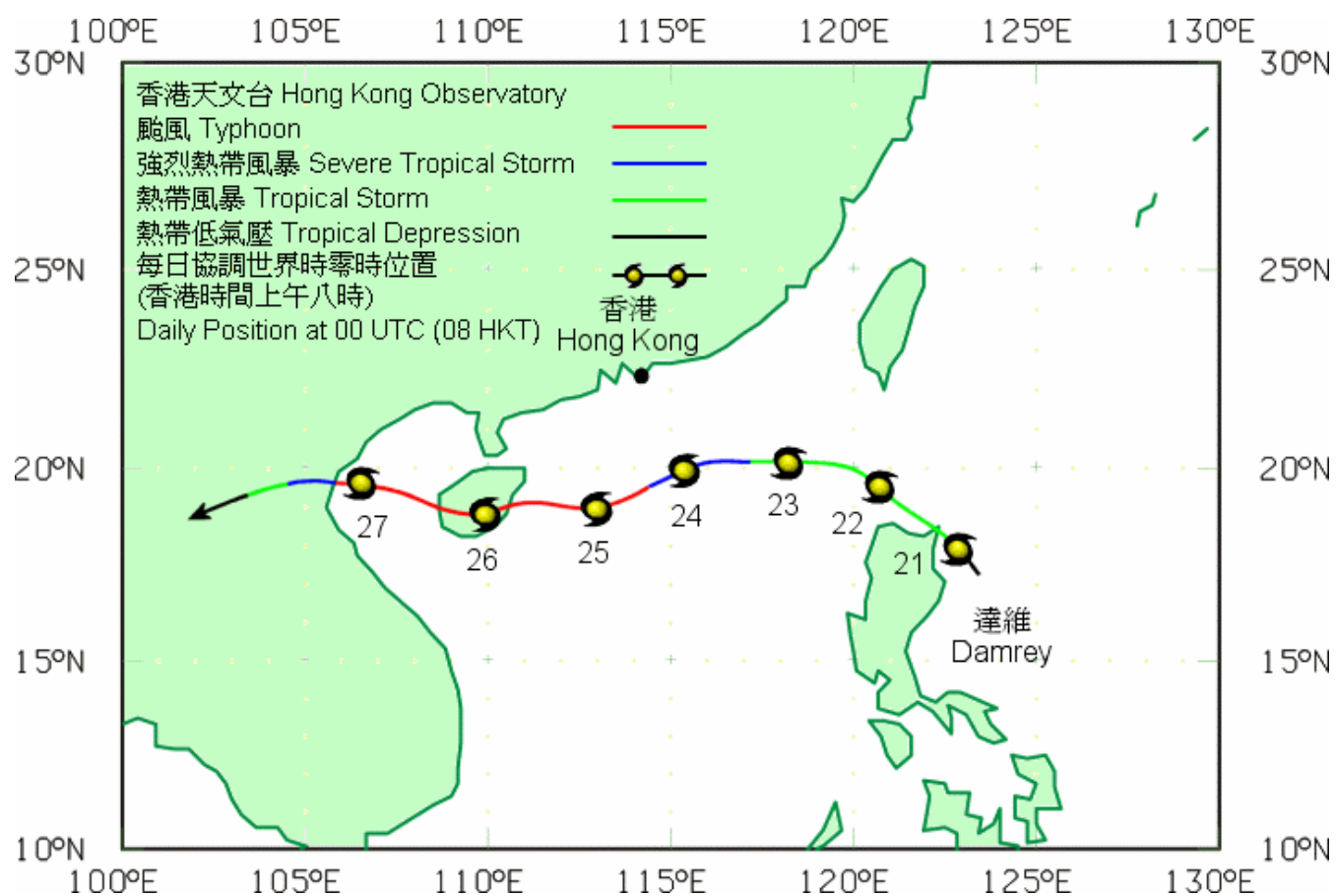


圖 3.3.1 二零零五年九月二十一日至二十八日達維（0518）的路徑圖。

Figure 3.3.1 Track of Damrey (0518) on 21 - 28 September 2005.

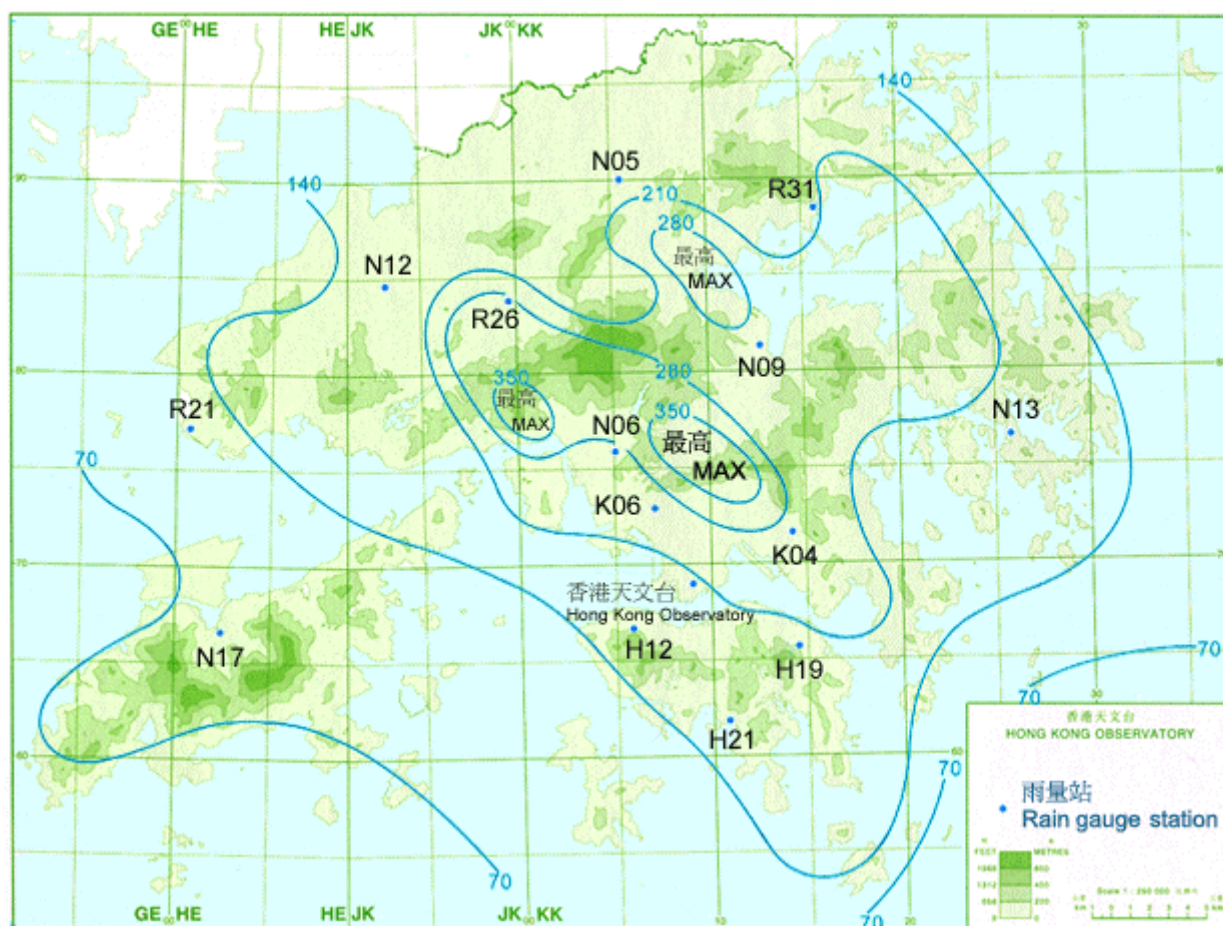


圖 3.3.2 二零零五年九月二十二日至二十七日的雨量分佈（等雨量線單位為毫米）。
 Figure 3.3.2 Rainfall distribution on 22-27 September 2005 (isohyets are in millimetres).

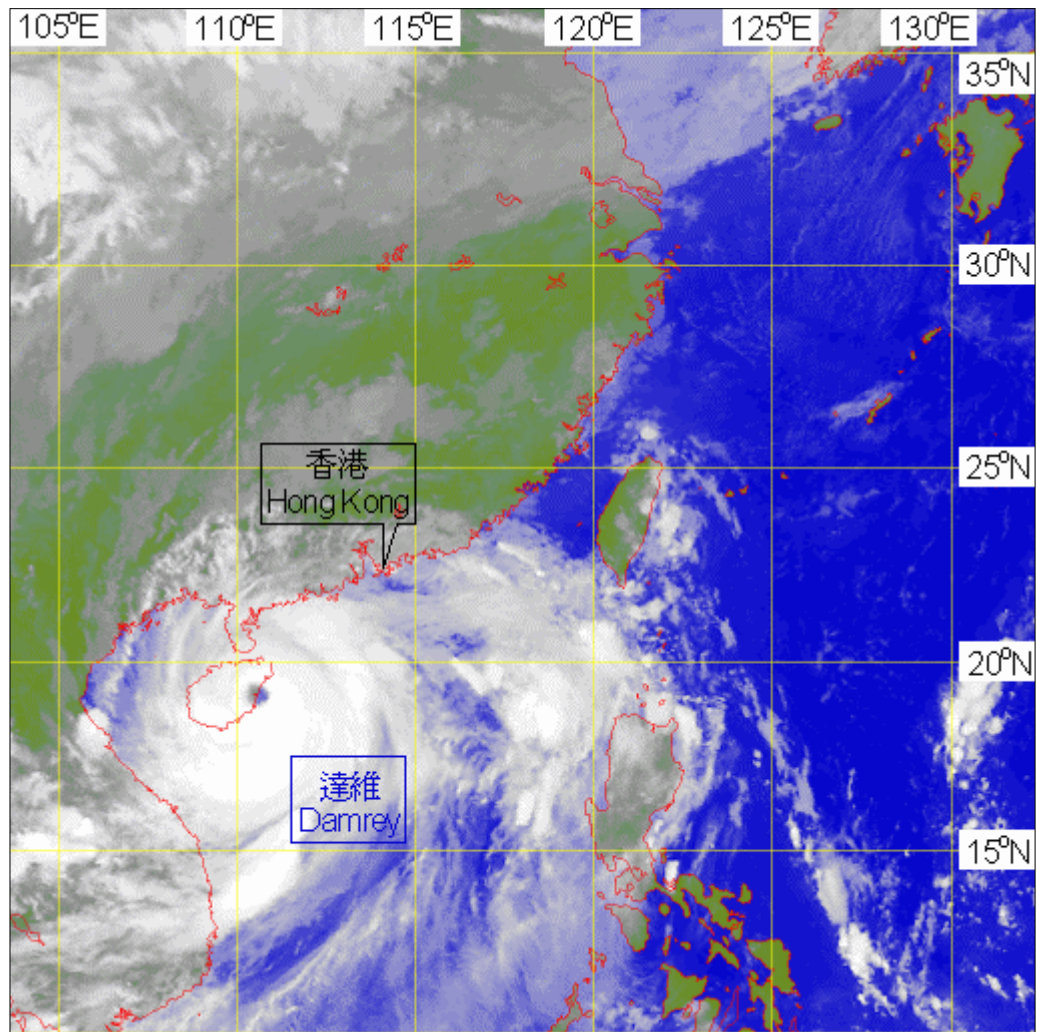


圖 3.3.3 達維在二零零五年九月二十六日約上午二時的紅外線衛星圖片。
〔此衛星圖像接收自日本氣象廳的多用途輸送衛星-1R (MTSAT-1R)。〕

Figure 3.3.3 Infra-red imagery at around 2 a.m. on 26 September 2005 of Damrey.
[The satellite imagery was originally captured with Multi-functional Transport Satellite-1R (MTSAT-1R) of Japan Meteorological Agency (JMA).]

第四節

熱帶氣旋統計表

Section 4

TROPICAL CYCLONE STATISTICS AND TABLES

表4.1是二零零五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。表內所給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是天文台在二零零五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是二零零五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是一九五六至二零零五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是一九五六至二零零五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是一九五六至二零零五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是二零零五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是二零零五年位於香港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二零零五年間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。內容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是二零零五年間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是一九六零至二零零五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。

TABLE 4.1 is a list of tropical cyclones in 2005 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 2005, 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 2005. 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 2005 inclusive.

TABLE 4.5 gives the annual number of tropical cyclones in Hong Kong's area of responsibility between 1956 and 2005 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 1956-2005.

TABLE 4.7 is a summary of meteorological information for each tropical cyclone affecting Hong Kong in 2005. Information on the nearest approach together with an estimate of the minimum central pressure of each tropical cyclone during its closest approach, the maximum winds at King's Park 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 are included.

TABLE 4.8.1 tabulates the amount of rainfall associated with each tropical cyclone that came within 600 km of Hong Kong in 2005.

TABLE 4.8.2 highlights the 10 wettest tropical cyclones in Hong Kong for the period 1884-1939 and 1947-2005.

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 2005. 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 : 1960-2005. The information is based on reports from various government departments, public utility companies and local newspapers.

表 4.1 二零零五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 2005

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		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						北緯 ° N	東經 ° E
強烈熱帶風暴玫瑰	Severe Tropical Storm Kulap	(0501)	14 / 1	1200	6.2	147.1	90	984	18 / 1	1800	19.2	155.8	DISP
強烈熱帶風暴洛克	Severe Tropical Storm Roke	(0502)	13 / 3	1200	8.3	145.6	100	980	18 / 3	0000	12.6	117.5	DISP
颱風桑卡	Typhoon Sonca	(0503)	22 / 4	0600	11.6	135.9	160	950	27 / 4	0600	26.7	145.6	XT
颱風納沙	Typhoon Nesat	(0504)	30 / 5	1800	9.8	146.0	185	935	11 / 6	0000	34.2	144.5	XT
颱風海棠	Typhoon Haitang	(0505)	11 / 7	1200	22.8	152.6	215	915	20 / 7	0600	27.8	117.8	DISP
熱帶風暴尼格	Tropical Storm Nalgae	(0506)	20 / 7	0000	24.2	163.9	85	988	24 / 7	0000	34.2	162.8	DISP
強烈熱帶風暴榕樹	Severe Tropical Storm Banyan	(0507)	21 / 7	0600	13.8	137.4	100	975	27 / 7	1800	44.9	149.2	XT
熱帶風暴天鷹	Tropical Storm Washi	(0508)	28 / 7	1200	18.5	114.6	85	984	31 / 7	1800	20.5	103.2	DISP
颱風麥莎	Typhoon Matsa	(0509)	31 / 7	0000	10.8	136.1	150	955	08 / 8	0600	37.1	119.1	DISP
強烈熱帶風暴珊瑚	Severe Tropical Storm Sanvu	(0510)	10 / 8	0600	14.8	130.2	110	975	13 / 8	1800	26.2	115.4	DISP
颱風瑪娃	Typhoon Mawar	(0511)	19 / 8	1800	20.7	142.7	185	935	27 / 8	0000	37.4	147.8	XT
強烈熱帶風暴古超	Severe Tropical Storm Guchol	(0512)	20 / 8	1800	23.2	149.8	100	980	25 / 8	0000	40.9	160.4	XT
颱風泰利	Typhoon Talim	(0513)	26 / 8	0000	12.5	143.9	185	930	02 / 9	0000	26.5	115.7	DISP
颱風彩蝶	Typhoon Nabi	(0514)	29 / 8	0600	14.9	153.4	220	910	08 / 9	0000	46.1	145.0	XT
颱風卡努	Typhoon Khanun	(0515)	06 / 9	0000	10.4	138.2	165	945	12 / 9	1800	35.1	121.1	DISP
熱帶低氣壓	Tropical Depression		12 / 9	0600	13.6	113.2	55	998	13 / 9	0000	13.2	109.5	DISP
熱帶風暴韋森特	Tropical Storm Vicente	(0516)	16 / 9	0600	10.9	113.8	85	984	18 / 9	1800	19.2	102.3	DISP
颱風蘇拉	Typhoon Saola	(0517)	20 / 9	1200	21.3	151.6	160	950	26 / 9	0600	37.8	148.8	XT
颱風達維	Typhoon Damrey	(0518)	20 / 9	1800	17.3	123.4	175	940	27 / 9	1800	19.1	102.8	DISP
颱風龍王	Typhoon Longwang	(0519)	26 / 9	0000	19.6	143.5	215	915	03 / 10	0000	25.3	116.7	DISP
熱帶低氣壓	Tropical Depression		07 / 10	0600	16.5	109.2	55	1000	07 / 10	1800	16.5	106.7	DISP
颱風鴻雁	Typhoon Kirogi	(0520)	10 / 10	0000	22.9	134.6	175	940	18 / 10	1800	32.6	140.1	XT
颱風啟德	Typhoon Kai-tak	(0521)	28 / 10	1200	12.9	114.6	150	950	02 / 11	1200	19.3	105.4	DISP
熱帶風暴天秤	Tropical Storm Tembin	(0522)	07 / 11	1200	11.7	138.0	75	992	11 / 11	0600	17.6	119.2	DISP
強烈熱帶風暴布拉萬	Severe Tropical Storm Bolaven	(0523)	14 / 11	0600	9.6	128.2	110	975	20 / 11	0600	17.3	123.0	DISP
熱帶低氣壓	Tropical Depression		19 / 12	0600	9.0	111.6	55	996	20 / 12	0600	8.6	109.3	DISP

⁺ 時間為協調世界時 ⁺ Times are given in UTC

表 4.2 二零零五年為船舶發出的熱帶氣旋警告

TABLE 4.2 TROPICAL CYCLONE WARNINGS FOR SHIPPING ISSUED IN 2005

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 時間 ⁺ Date/Month Time ⁺	日期/月份 時間 ⁺ Date/Month Time ⁺			
強烈熱帶風暴洛克	Severe Tropical Storm Roke	15	16 / 3	1800	18 / 3	1200	42
颱風海棠	Typhoon Haitang	24	17 / 7	0600	20 / 7	0300	69
熱帶風暴天鷹	Tropical Storm Washi	25	28 / 7	1200	31 / 7	1200	72
颱風麥莎	Typhoon Matsa	21	4 / 8	0000	6 / 8	1200	60
* 強烈熱帶風暴珊瑚	* Severe Tropical Storm Sanvu	21	11 / 8	0900	13 / 8	1500	54
颱風泰利	Typhoon Talim	14	31 / 8	0300	1 / 9	1800	39
颱風卡努	Typhoon Khanun	12	10 / 9	0900	11 / 9	1800	33
熱帶低氣壓	Tropical Depression	9	12 / 9	0900	13 / 9	0300	18
* 熱帶風暴韋森特	* Tropical Storm Vicente	21	16 / 9	0300	18 / 9	1200	57
* 颱風達維	* Typhoon Damrey	54	20 / 9	1500	27 / 9	0600	159
颱風龍王	Typhoon Longwang	13	1 / 10	0900	2 / 10	2100	36
熱帶低氣壓	Tropical Depression	5	7 / 10	0600	7 / 10	1500	9
颱風啓德	Typhoon Kai-tak	43	28 / 10	0900	2 / 11	1200	123
熱帶風暴天秤	Tropical Storm Tembin	12	10 / 11	0000	11 / 11	0900	33
強烈熱帶風暴布拉萬	Severe Tropical Storm Bolaven	12	19 / 11	0300	20 / 11	1200	33
	共 Total	301					837

* 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 二零零五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 2005

摘要 SUMMARY

信號 Signal	次數 No. of occasions	總時段 Total duration	
		時 h	分 min
1	3	95	5
3	1	47	40
8 西北 NW	-	-	-
8 西南 SW	-	-	-
8 東北 NE	-	-	-
8 東南 SE	-	-	-
9	-	-	-
10	-	-	-
共 Total	4	142	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 *
強烈熱帶風暴珊瑚 Severe Tropical Storm Sanvu	33	1	12 / 8	1040	13 / 8	1845
熱帶風暴韋森特 Tropical Storm Vicente	19	1	17 / 9	1440	18 / 9	0740
颱風達維 Typhoon Damrey	96	1	22 / 9	1040	24 / 9	0840
		3	24 / 9	0840	26 / 9	0820

* 香港時間（協調世界時加八小時）

* Hong Kong Time (UTC + 8 hours)

表 4.4 一九五六至二零零五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 : 1956-2005

年份 Year 信號 Signals	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 分 h 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
共 Total	315	278	20	27	54	40	17	12	13438 19
平均 Mean	6.3	5.6	0.4	0.5	1.1	0.8	0.3	0.2	268 46

表 4.5 一九五六至二零零五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 : 1956-2005

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
共 Total	791	300
平均 Mean	15.8	6.0

表 4.6 一九五六至二零零五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 : 1956-2005

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 h	分 min	時 h	分 min	時 h	分 min	時 h	分 min	時 h	分 min	時 h	分 min
一號或以上 1 or higher	312	43	4	161	0	4	30	268	46	570	15	36	35
三號或以上 3 or higher	208	30	31	124	15	4	30	126	58	306	35	17	15
八號或以上 8 or higher	72	15	23	66	50	2	40	22	9	100	55	0	0
8 西北 NW	20	6	1	15	45	1	30	2	24	18	0	0	0
8 西南 SW	27	4	55	10	45	2	30	2	39	16	10	0	0
8 東北 NE	54	8	4	35	35	2	35	8	42	40	20	0	0
8 東南 SE	40	7	20	21	45	0	20	5	52	31	15	0	0
九號或以上 9 or higher	18	7	1	12	25	2	0	2	32	19	25	0	0
10	12	6	34	11	0	2	30	1	35	12	10	0	0

表 4.7 二零零五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 2005

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
強烈熱帶風暴珊瑚 S.T.S Sanvu	8	13	13	東北偏東 ENE	300	西北 NW 25	980	8	13	14:52 15:00-15:01 15:03-15:23 15:37-15:40	996.8	0.32	0.20	-	0.36	-	0.10
								8	13	15:00	997.0						
熱帶風暴韋森特 T.S Vicente	9	17	20	西南偏南 SSW	670	西北偏西 WNW 30	988	9	17	14:40	1010.0	0.38	0.20	0.17	0.31	0.32	0.02
								9	17	15:00 16:00	1010.4						
颱風達維 T. Damrey	9	24	8	東南偏南 SSE	290	西南偏西 WSW 12	980	9	23	14:46-14:52 14:54-14:58 15:01-15:06 15:08 15:40-16:01 16:06 16:13 16:18-16:20	1002.7	0.75	0.69	0.67	0.76	0.76	-
								9	24	16:15-16:16 16:19 16:22 16:25-16:29 16:50-16:51							
								9	23	15:00 16:00	1002.7						

* 香港時間(協調世界時加八小時)

* Hong Kong Time (UTC + 8 hours)

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
強烈熱帶風暴珊瑚 S.T.S. Sanvu	8	西南偏西 14 WSW	西南 40 SW	西 41 W	西北偏北 30 NNW	西北 51 NW	東 58 E	西北 67 NW	西北偏西 65 WNW	東 83 E
熱帶風暴韋森特 T.S Vicente	9	東 23 E	東 40 E	東 58 E	東 27 E	東 43 E	東南偏東 68 ESE	東 63 E	東南偏東 67 ESE	東南偏東 68 ESE
颱風達維 T. Damrey	9	東北偏北 31 NNE	東 51 E	東北偏東 81 ENE	東北 38 NE	東 56 E	東北偏東 87 ENE	東北 83 NE	東南偏東 92 ESE	東北偏東 108 ENE

表 4.8.1 二零零五年位於香港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 2005

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 時間* Date/Month 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)
熱帶風暴天鷹 # T.S. Washi #	(T ₁) 28 / 7 2000 - (T ₂) 30 / 7 1400	66.0	64.3	82.1	82.1	148.1
強烈熱帶風暴珊瑚 S.T.S. Sanvu	(T ₁) 12 / 8 1900 - (T ₂) 14 / 8 0200	85.8	0.8	19.9	72.3	158.1
颱風泰利 # T. Talim #	(T ₁) 1 / 9 1600 - (T ₂) 2 / 9 0800	0.0	5.7	25.2	66.0	66.0
颱風達維 T. Damrey	(T ₁) 22 / 9 2200 - (T ₂) 26 / 9 0800	156.9	30.5	52.7	52.7	209.6
颱風龍王 # T. Longwang #	(T ₁) 2 / 10 1400 - (T ₂) 3 / 10 0800	2.0	0.0	0.0	0.2	2.2
共 Total					共 Total	584.0

* 香港時間（協調世界時加八小時）

T₁ - 熱帶氣旋首次出現於香港600公里範圍內的時間。

T₂ - 熱帶氣旋在香港600公里範圍內消散或離開該範圍的時間。

該熱帶氣旋並未導致天文台需要發出熱帶氣旋警告信號。

* Hong Kong Time (UTC + 8 hours)

T₁ - The time when a tropical cyclone was first centred within 600 km of Hong Kong.

T₂ - The time when a tropical cyclone was dissipated within or moved outside 600 km of Hong Kong.

Tropical cyclone without issuing of tropical cyclone warning signal in Hong Kong.

表 4.8.2 一八八四至一九三九年及一九四七至二零零五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, 1947-2005)

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 →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)
1999	8	森姆 Sam	368.1	178.9	248.1	248.4	616.5
1926	7	-	34.8 #	534.0 #	561.1 #	562.2 #	597.0
1916	6	-	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	-	446.5 #	- #	3.7 #	26.7 #	473.2

T₁ - 熱帶氣旋首次出現於香港600公里範圍內的時間。

T₂ - 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。

T₁ - The time when a tropical cyclone was first centred within 600 km of Hong Kong.

T₂ - 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 一九四六至二零零五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 1946-2005

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	啓德 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	啓德 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	-	-	-	東南偏南 SSE	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	-	-	-		

* 估計，超出風速記錄圖的上限。
estimated, exceeding upper limit of anemogram

表 4.10 二零零五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 2005

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 Public works facilities	公用業務 Public utilities	物業單位 Property	山泥傾瀉及 斜坡倒塌 Landslip and collapse of slope	農業 Agriculture	公用建設 Public works facilities	公用業務 Public utilities	私人物業 Private property	其他 Others	共 Total
強烈熱帶風暴珊瑚 S.T.S. Sanvu	8	-	-	-	-	1 宗 1 case	-	-	-	-	-	-
熱帶風暴韋森特 T.S. Vicente	9	-	道路: 1 處 road : 1 site	-	-	1 宗 1 case	-	-	-	-	-	-
颱風達維 T. Damrey	9	-	-	-	-	4 宗 4 cases	-	-	-	-	-	-

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 一九六零至二零零五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 : 1960-2005

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 7 / 9 - 10 / 9	T. Alice	愛麗斯	4	0	20	*	*	*
		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 2 / 8 - 9 / 8 2 / 9 - 6 / 9 4 / 9 - 10 / 9 7 / 10 - 13 / 10	T. Viola	維奧娜	0	0	41	5	18	18
		T. Ida	艾黛	5	4	56	3	7	60
		T. Ruby	露比	38	6	300	20	32	282
		T. Sally	莎莉	9	0	24	0	0	0
		T. Dot	黛蒂	26	10	85	2	31	59
1965	6 / 7 - 16 / 7 25 / 9 - 28 / 9	T. Freda	法妮黛	2	0	16	0	1	0
		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 8 / 9 - 14 / 9	T.D. -	-	2 ⁺	0	0	0	0	0
		T. Georgia	喬治亞	0	0	0	2	0	*
1971	15 / 6 - 18 / 6 16 / 7 - 22 / 7 10 / 8 - 17 / 8	T. Freda	法妮黛	2	0	30	8	0	0
		T. Lucy	露茜	0	0	38	10	2	13
		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 18 / 7 - 22 / 7 15 / 10 - 19 / 10 21 / 10 - 27 / 10	T. Dinah	戴娜	0	0	0	1	*	*
		T. Ivy	艾菲	0	0	0	2	*	*
		T. Carmen	嘉曼	1	0	0	5	*	*
		T. Della	黛娜	0	0	0	2	*	*
1975	10 / 8 - 14 / 8 9 / 10 - 14 / 10 16 / 10 - 23 / 10	T.D. -	-	2	1	0	3	1	*
		T. Elsie	愛茜	0	0	46	7	2	1
		S.T.S. Flossie	霍蘿茜	0	0	0	1	*	*
1976	22 / 6 - 4 / 7 21 / 7 - 26 / 7 5 / 8 - 6 / 8 21 / 8 - 24 / 8 15 / 9 - 21 / 9	T. Ruby	露比	3	2	2	0	0	0
		S.T.S. Violet	維奧莉	2	1	1	0	0	0
		S.T.S. Clara	嘉麗	0	0	4	0	0	0
		T.S. Ellen	愛倫	27	3	65	0	4	7
		T. Iris	愛莉斯	0	0	27	6	0	1
1977	4 / 7 - 6 / 7 3 / 9 - 5 / 9 22 / 9 - 25 / 9	T.D. -	-	0	0	2	0	0	0
		T.S. Carla	嘉娜	0	0	1	1	0	0
		S.T.S. Freda	法妮黛	1	0	37	2	0	0
1978	24 / 7 - 30 / 7 9 / 8 - 12 / 8 23 / 8 - 28 / 8 22 / 9 - 26 / 9 7 / 10 - 16 / 10 17 / 10 - 29 / 10	S.T.S. Agnes	愛娜斯	3	0	134	0	25	42
		T.S. Bonnie	邦妮	0	0	0	2	0	0
		S.T.S. Elaine	伊蘭	1	0	51	8	5	8
		S.T.S. Kit	吉蒂	0	7	0	0	1	0
		S.T.S. Nina	蓮娜	0	0	2	0	0	0
		T. Rita	麗姐	0	0	3	1	5	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
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
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

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
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
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. Kompas	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

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

二零零五年熱帶氣旋的位置及強度數據

Section 5

**TROPICAL CYCLONE POSITION AND
INTENSITY DATA, 2005**

以下是二零零五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。

熱帶氣旋名稱	頁
強烈熱帶風暴玫瑰(0501)	75
強烈熱帶風暴洛克(0502)	76
颱風桑卡(0503)	77
颱風納沙(0504)	78
颱風海棠(0505)	79
熱帶風暴尼格(0506)	80
強烈熱帶風暴榕樹(0507)	81
熱帶風暴天鷹(0508)	82
颱風麥莎(0509)	83
強烈熱帶風暴珊瑚(0510)	84
颱風瑪娃(0511)	85
強烈熱帶風暴古超(0512)	86
颱風泰利(0513)	87
颱風彩蝶(0514)	88
颱風卡努(0515)	89
熱帶低氣壓: 九月十二至十三日	90
熱帶風暴韋森特(0516)	91
颱風蘇拉(0517)	92
颱風達維(0518)	93
颱風龍王(0519)	94
熱帶低氣壓: 十月七至八日	95
颱風鴻雁(0520)	96
颱風啓德(0521)	97
熱帶風暴天秤(0522)	98
強烈熱帶風暴布拉萬(0523)	99
熱帶低氣壓: 十二月十九至二十日	100

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

Six-hourly position and intensity data are tabulated in this section for the following tropical cyclones in 2005 over the western North Pacific and the South China Sea (i.e. the area bounded by the Equator, 45°N, 100°E and 180°).

Name of tropical cyclone	Page
Severe Tropical Storm Kulap (0501)	75
Severe Tropical Storm Roke (0502)	76
Typhoon Sonca (0503)	77
Typhoon Nesat (0504)	78
Typhoon Haitang (0505)	79
Tropical Storm Nalgae (0506)	80
Severe Tropical Storm Banyan (0507)	81
Tropical Storm Washi (0508)	82
Typhoon Matsa (0509)	83
Severe Tropical Storm Sanvu (0510)	84
Typhoon Mawar (0511)	85
Severe Tropical Storm Guchol (0512)	86
Typhoon Talim (0513)	87
Typhoon Nabi (0514)	88
Typhoon Khanun (0515)	89
Tropical Depression of 12 - 13 September	90
Tropical Storm Vicente (0516)	91
Typhoon Saola (0517)	92
Typhoon Damrey (0518)	93
Typhoon Longwang (0519)	94
Tropical Depression of 7 - 8 October	95
Typhoon Kirogi (0520)	96
Typhoon Kai-tak (0521)	97
Tropical Storm Tembin (0522)	98
Severe Tropical Storm Bolaven (0523)	99
Tropical Depression of 19 - 20 December	100

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

強烈熱帶風暴玫瑰(0501)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
SEVERE TROPICAL STORM KULAP (0501)

[illegible]

強烈熱帶風暴洛克(0502)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
SEVERE TROPICAL STORM ROKE (0502)

[illegible]

颱風桑卡(0503)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON SONCA (0503)

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	22	0600	T.D.	1000	13	11.6	135.9
		1200	T.D.	996	16	11.6	134.4
		1800	T.D.	996	16	11.6	133.6
	23	0000	T.S.	992	18	11.6	132.7
		0600	T.S.	988	21	12.1	131.9
		1200	T.S.	984	23	12.6	131.5
	24	1800	S.T.S.	980	28	13.2	131.3
		0000	S.T.S.	975	31	13.6	130.9
		0600	T.	965	36	14.1	130.8
	25	1200	T.	955	41	14.5	130.8
		1800	T.	950	43	15.2	131.0
		0000	T.	950	43	15.9	131.2
	26	0600	T.	950	43	16.6	131.6
		1200	T.	950	43	17.4	132.3
		1800	T.	955	41	18.7	133.0
	27	0000	T.	955	41	20.0	134.0
		0600	T.	960	39	21.6	135.7
		1200	T.	965	36	23.5	138.1
		1800	T.	970	33	24.8	140.2
		0000	S.T.S.	980	28	25.5	142.7
		0600	T.S.	984	23	26.7	145.6

變為溫帶氣旋
Became Extratropical

颱風納沙(0504)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON NESAT (0504)

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
五月 May	30	1800	T.D.	1002	13	9.8	146.0
		31					
		0000	T.D.	1002	13	9.9	145.7
		0600	T.D.	1000	16	10.0	145.4
		1200	T.D.	1000	16	10.3	144.9
六月 Jun	1	1800	T.S.	996	18	10.4	144.4
		0000	T.S.	992	21	10.5	143.1
		0600	T.S.	988	23	10.7	141.6
		1200	S.T.S.	984	25	10.7	140.5
		1800	S.T.S.	975	31	10.8	139.5
	2	0000	T.	965	36	11.2	138.5
		0600	T.	955	41	11.4	137.4
		1200	T.	950	43	11.7	136.4
		1800	T.	950	43	12.0	135.4
	3	0000	T.	950	43	12.2	134.4
		0600	T.	950	43	12.9	133.7
		1200	T.	945	46	13.7	132.7
		1800	T.	940	49	14.1	131.8
	4	0000	T.	935	51	14.4	131.4
		0600	T.	935	51	15.1	131.0
		1200	T.	935	51	15.8	130.6
		1800	T.	940	49	16.4	130.4
	5	0000	T.	945	46	17.3	130.5
		0600	T.	950	43	18.1	130.7
		1200	T.	950	43	18.8	131.3
		1800	T.	950	43	19.7	132.0
	6	0000	T.	950	43	20.5	132.6
		0600	T.	945	46	21.2	133.4
		1200	T.	945	46	21.8	133.9
		1800	T.	945	46	22.3	134.2
	7	0000	T.	950	43	22.9	134.3
		0600	T.	955	41	23.4	134.2
		1200	T.	955	41	23.8	133.8
		1800	T.	955	41	24.4	133.8
	8	0000	T.	955	41	24.9	133.9
		0600	T.	960	39	25.5	134.3
		1200	T.	965	36	26.1	135.3
		1800	T.	970	33	26.7	136.0
	9	0000	S.T.S.	975	31	27.4	136.7
		0600	S.T.S.	980	28	28.4	137.2
		1200	S.T.S.	984	25	29.2	137.8
		1800	S.T.S.	984	25	29.7	138.3
	10	0000	T.S.	988	23	30.5	138.8
		0600	T.S.	992	21	31.0	139.5
		1200	T.S.	992	21	31.5	141.1
		1800	T.S.	996	18	32.5	142.1
	11	0000	T.S.	996	18	34.2	144.5

變為溫帶氣旋
Became Extratropical

颱風海棠(0505)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON HAITANG (0505)

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	1200	T.D.	1000	13	22.8	152.6
		1800	T.D.	996	16	22.7	152.2
	12	0000	T.S.	992	18	23.2	151.8
		0600	T.S.	992	18	23.5	151.0
		1200	T.S.	992	18	23.3	150.5
		1800	T.S.	992	18	23.1	149.8
	13	0000	T.S.	992	18	22.9	149.2
		0600	T.S.	984	23	22.4	148.3
		1200	S.T.S.	975	28	21.8	147.1
		1800	T.	970	33	21.3	146.0
	14	0000	T.	965	36	20.5	144.6
		0600	T.	965	36	20.2	142.6
		1200	T.	960	39	19.6	141.3
		1800	T.	960	39	19.6	139.2
	15	0000	T.	960	39	19.3	136.9
		0600	T.	955	41	19.1	134.9
		1200	T.	950	43	19.3	133.5
		1800	T.	945	46	19.6	131.9
	16	0000	T.	935	49	19.9	130.4
		0600	T.	925	54	20.3	129.1
		1200	T.	915	59	20.7	127.7
		1800	T.	915	59	20.9	126.6
	17	0000	T.	915	59	21.4	125.8
		0600	T.	920	57	22.2	125.0
		1200	T.	925	54	23.0	124.0
		1800	T.	925	54	23.7	123.1
	18	0000	T.	935	49	23.9	121.8
		0600	T.	945	43	23.8	121.6
		1200	T.	955	39	24.5	121.2
		1800	T.	960	36	24.7	120.5
	19	0000	T.	960	36	24.9	120.3
		0600	T.	965	33	25.9	120.0
		1200	S.T.S.	975	28	26.5	119.6
		1800	T.S.	984	23	26.5	118.8
	20	0000	T.S.	992	18	27.2	118.0
		0600	T.D.	996	16	27.8	117.8

消散
Dissipated

熱帶風暴尼格(0506)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TROPICAL STORM NALGAE (0506)

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)	估計 最高風速 (米每秒)	北緯 Lat. ° N	東經 Long. ° E
				Estimated minimum central pressure (hPa)	Estimated maximum surface winds (m/s)		
七月 Jul	20	0000	T.D.	998	16	24.2	163.9
		0600	T.S.	996	18	24.7	163.4
		1200	T.S.	992	21	25.8	162.8
		1800	T.S.	992	21	26.2	161.2
	21	0000	T.S.	988	23	27.0	161.1
		0600	T.S.	988	23	27.6	160.4
		1200	T.S.	988	23	28.4	159.5
		1800	T.S.	992	21	29.3	158.8
	22	0000	T.S.	992	21	29.8	158.4
		0600	T.S.	992	21	30.6	158.7
		1200	T.S.	988	23	30.9	159.1
		1800	T.S.	988	23	31.6	159.9
	23	0000	T.S.	992	21	32.2	159.7
		0600	T.S.	992	21	32.6	160.1
		1200	T.S.	996	18	32.9	160.6
		1800	T.D.	998	16	33.2	161.6
	24	0000	T.D.	998	16	34.2	162.8
				消散 Dissipated			

強烈熱帶風暴榕樹(0507)的每六小時位置及強度
**SIX-HOURLY POSITION AND INTENSITY DATA OF
 SEVERE TROPICAL STORM BANYAN (0507)**

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	21	0600	T.D.	998	13	13.8	137.4
		1200	T.D.	996	16	14.4	137.3
		1800	T.S.	992	18	15.0	137.3
	22	0000	T.S.	988	21	15.6	137.4
		0600	T.S.	988	21	16.3	137.8
		1200	T.S.	988	21	17.4	138.2
	23	1800	T.S.	988	21	18.4	137.8
		0000	T.S.	984	23	19.1	137.4
		0600	T.S.	984	23	20.0	136.9
	24	1200	S.T.S.	980	25	20.3	136.8
		1800	S.T.S.	975	28	20.6	136.9
		0000	S.T.S.	975	28	21.6	137.3
	25	0600	S.T.S.	975	28	23.4	137.4
		1200	S.T.S.	975	28	24.5	137.5
		1800	S.T.S.	975	28	25.6	137.5
	26	0000	S.T.S.	975	28	26.8	137.1
		0600	S.T.S.	975	28	28.3	136.9
		1200	S.T.S.	975	28	30.0	136.8
	27	1800	S.T.S.	980	25	31.0	136.9
		0000	S.T.S.	980	25	32.2	137.5
		0600	S.T.S.	980	25	33.4	138.9
		1200	S.T.S.	980	25	35.3	140.5
		1800	S.T.S.	980	25	36.9	142.3
		0000	S.T.S.	980	25	39.1	144.8
		0600	S.T.S.	980	25	41.3	146.4
		1200	T.S.	984	23	42.9	148.3
		1800	T.S.	988	21	44.9	149.2

變為溫帶氣旋
 Became Extratropical

消散
Dissipated

颱風麥莎(0509)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON MATSA (0509)

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	31	0000	T.D.	1000	13	10.8	136.1
		0600	T.D.	996	16	11.0	135.0
		1200	T.S.	992	18	11.6	134.0
		1800	T.S.	992	18	12.8	133.0
八月 Aug	1	0000	T.S.	988	21	13.7	132.6
		0600	T.S.	988	21	14.5	131.8
		1200	T.S.	988	21	15.5	130.7
		1800	T.S.	984	23	16.2	130.0
	2	0000	S.T.S.	980	28	16.9	129.4
		0600	S.T.S.	975	31	17.8	128.8
		1200	T.	970	33	18.9	128.1
		1800	T.	965	36	20.0	127.2
	3	0000	T.	965	36	20.6	126.6
		0600	T.	960	39	21.1	126.0
		1200	T.	960	39	21.7	125.7
		1800	T.	955	41	22.4	125.4
	4	0000	T.	955	41	23.1	124.9
		0600	T.	955	41	23.9	124.6
		1200	T.	955	41	24.6	124.3
		1800	T.	955	41	25.3	123.6
	5	0000	T.	955	41	25.7	123.4
		0600	T.	955	41	26.6	123.2
		1200	T.	955	41	27.5	122.3
		1800	T.	955	41	28.0	121.6
	6	0000	T.	965	36	28.5	121.0
		0600	S.T.S.	975	31	29.0	120.5
		1200	S.T.S.	984	25	30.0	119.9
		1800	T.S.	988	23	30.6	119.3
	7	0000	T.S.	992	21	31.3	118.7
		0600	T.S.	992	21	31.7	118.5
		1200	T.S.	996	18	33.1	119.2
		1800	T.D.	998	16	34.3	119.0
	8	0000	T.D.	998	16	35.5	119.5
		0600	T.D.	998	16	37.1	119.1

消散
Dissipated

強烈熱帶風暴珊瑚(0510)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
SEVERE TROPICAL STORM SANVU (0510)

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	10	0600	T.D.	1000	13	14.8	130.2
		1200	T.D.	1000	13	15.0	129.0
		1800	T.D.	998	16	15.4	128.6
	11	0000	T.D.	998	16	16.5	127.2
		0600	T.S.	996	18	17.8	125.0
		1200	T.S.	996	18	18.1	123.3
	12	1800	T.S.	992	21	18.2	122.3
		0000	T.S.	992	21	18.9	121.4
		0600	T.S.	988	23	19.6	120.2
	13	1200	S.T.S.	984	25	20.2	119.2
		1800	S.T.S.	984	25	21.3	118.5
		0000	S.T.S.	975	31	22.8	117.2
		0600	S.T.S.	984	25	23.7	116.7
		1200	T.S.	992	21	24.8	115.8
		1800	T.D.	996	16	26.2	115.4

消散
Dissipated

颱風瑪娃(0511)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON MAWAR (0511)

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	19	1800	T.D.	1000	16	20.7	142.7
		0000	T.S.	996	18	20.8	142.3
	20	0600	T.S.	992	21	21.1	141.8
		1200	T.S.	988	23	21.2	141.5
		1800	S.T.S.	980	28	21.6	141.3
		0000	T.	970	33	22.0	140.7
	21	0600	T.	960	39	22.4	140.5
		1200	T.	950	43	22.7	140.1
		1800	T.	940	49	23.0	139.7
		0000	T.	935	51	23.4	139.3
	22	0600	T.	935	51	23.7	139.1
		1200	T.	945	46	24.0	138.8
		1800	T.	955	41	24.6	138.2
		0000	T.	955	41	25.4	137.8
	23	0600	T.	950	43	26.2	137.6
		1200	T.	950	43	27.0	137.3
		1800	T.	955	41	27.8	137.0
		0000	T.	955	41	28.7	136.9
	24	0600	T.	955	41	29.7	137.0
		1200	T.	955	41	30.7	137.0
		1800	T.	955	41	31.5	137.0
		0000	T.	955	41	32.6	137.1
	25	0600	T.	960	39	33.4	137.7
		1200	T.	960	39	34.3	138.5
		1800	T.	965	36	35.2	139.7
		0000	S.T.S.	975	31	36.0	141.0
	26	0600	S.T.S.	984	25	36.7	142.7
		1200	T.S.	988	23	37.1	144.7
		1800	T.S.	988	23	37.5	146.3
		0000	T.S.	992	21	37.4	147.8

變為溫帶氣旋
Became Extratropical

強烈熱帶風暴古超(0512)的每六小時位置及強度
**SIX-HOURLY POSITION AND INTENSITY DATA OF
 SEVERE TROPICAL STORM GUCHOL (0512)**

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	20	1800	T.D.	1002	13	23.2	149.8
		0000	T.D.	1000	16	24.1	149.0
	21	0600	T.S.	996	18	25.0	148.4
		1200	T.S.	992	21	25.5	147.9
		1800	T.S.	988	23	26.2	147.5
		0000	S.T.S.	984	25	27.0	147.1
		0600	S.T.S.	984	25	28.2	146.9
	22	1200	S.T.S.	984	25	29.0	146.5
		1800	S.T.S.	984	25	29.9	146.1
		0000	S.T.S.	984	25	31.1	146.1
		0600	S.T.S.	980	28	32.4	147.2
		1200	S.T.S.	980	28	33.3	148.2
	23	1800	S.T.S.	980	28	34.4	149.4
		0000	S.T.S.	980	28	35.6	151.2
		0600	S.T.S.	980	28	36.8	153.2
		1200	S.T.S.	980	28	37.9	155.1
		1800	S.T.S.	984	25	39.3	157.5
	24	0000	T.S.	988	23	40.9	160.4

變為溫帶氣旋
 Became Extratropical

颱風泰利(0513)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON TALIM (0513)

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	26	0000	T.D.	1000	13	12.5	143.9
		0600	T.D.	996	16	12.7	143.3
		1200	T.D.	996	16	13.0	143.0
		1800	T.D.	996	16	13.6	142.7
	27	0000	T.S.	992	18	14.4	142.3
		0600	T.S.	992	18	15.6	141.7
		1200	T.S.	988	21	16.6	141.2
		1800	T.S.	984	23	17.5	139.9
	28	0000	S.T.S.	980	25	18.4	138.8
		0600	S.T.S.	970	31	19.3	137.8
		1200	T.	965	33	19.9	136.9
		1800	T.	960	36	20.5	135.8
	29	0000	T.	960	36	20.8	134.3
		0600	T.	950	41	21.0	133.0
		1200	T.	940	46	21.0	131.8
		1800	T.	930	51	21.2	130.6
	30	0000	T.	930	51	21.4	129.5
		0600	T.	930	51	21.8	128.4
		1200	T.	930	51	22.0	127.3
		1800	T.	935	49	22.3	126.3
	31	0000	T.	935	49	22.7	125.1
		0600	T.	935	49	23.3	124.0
		1200	T.	935	49	23.8	122.9
		1800	T.	940	46	24.0	121.4
九月 Sep	1	0000	T.	950	41	24.3	120.4
		0600	T.	960	36	25.0	119.6
		1200	S.T.S.	975	28	25.5	118.1
		1800	T.S.	984	23	26.1	117.0
	2	0000	T.S.	996	18	26.5	115.7

消散
Dissipated

颱風彩蝶(0514)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON NABI (0514)

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	29	0600	T.D.	998	16	14.9	153.4
		1200	T.S.	994	18	15.0	152.3
		1800	T.S.	990	21	15.1	151.4
	30	0000	T.S.	985	23	15.2	150.4
		0600	S.T.S.	975	28	15.1	149.2
		1200	S.T.S.	970	31	14.8	148.0
	31	1800	T.	965	33	15.1	147.1
		0000	T.	955	39	15.6	146.3
		0600	T.	945	43	16.5	145.0
		1200	T.	940	46	16.6	143.7
		1800	T.	935	49	16.8	142.6
		0000	T.	930	51	17.2	141.5
九月 Sep	1	0600	T.	925	54	17.7	140.6
		1200	T.	920	57	18.3	139.7
		1800	T.	910	61	18.8	138.5
	2	0000	T.	910	61	19.3	137.5
		0600	T.	910	61	19.6	136.8
		1200	T.	910	61	20.1	136.1
	3	1800	T.	915	59	20.7	135.3
		0000	T.	920	57	21.4	134.6
		0600	T.	920	57	22.3	133.9
		1200	T.	920	57	23.1	133.2
		1800	T.	920	57	24.0	132.6
	4	0000	T.	920	57	24.8	132.2
		0600	T.	925	54	26.0	131.5
		1200	T.	925	54	26.6	131.2
	5	1800	T.	925	54	27.2	130.9
		0000	T.	930	51	28.0	130.7
		0600	T.	930	51	28.8	130.4
		1200	T.	935	49	29.4	130.3
		1800	T.	935	49	30.3	130.2
	6	0000	T.	945	43	31.3	130.1
		0600	T.	955	39	33.0	130.2
		1200	T.	965	33	34.2	130.7
		1800	S.T.S.	970	31	36.0	132.0
	7	0000	S.T.S.	975	28	37.6	134.4
		0600	S.T.S.	980	25	39.0	135.8
		1200	S.T.S.	980	25	40.9	138.7
		1800	S.T.S.	980	25	44.1	141.1
	8	0000	S.T.S.	980	25	46.1	145.0

變為溫帶氣旋
Became Extratropical

颱風卡努(0515)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON KHANUN (0515)

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	6	0000	T.D.	1000	13	10.4	138.2
		0600	T.D.	998	16	10.8	136.6
		1200	T.D.	998	16	11.6	135.7
		1800	T.D.	998	16	12.6	135.3
	7	0000	T.S.	996	18	13.4	134.6
		0600	T.S.	992	21	13.6	134.0
		1200	T.S.	988	23	14.0	133.5
		1800	S.T.S.	984	25	14.7	133.0
	8	0000	S.T.S.	980	28	15.3	132.6
		0600	S.T.S.	980	28	16.3	132.2
		1200	S.T.S.	980	28	17.4	131.6
		1800	S.T.S.	975	31	18.2	131.1
	9	0000	S.T.S.	975	31	19.1	130.4
		0600	T.	970	33	20.4	129.7
		1200	T.	965	36	21.4	128.4
		1800	T.	965	36	22.3	127.5
	10	0000	T.	960	39	23.2	126.3
		0600	T.	945	46	24.2	125.3
		1200	T.	945	46	25.1	124.4
		1800	T.	945	46	26.1	123.5
	11	0000	T.	945	46	27.3	122.7
		0600	T.	950	43	28.3	121.8
		1200	T.	965	36	29.3	120.8
		1800	S.T.S.	980	28	30.5	120.3
	12	0000	T.S.	988	23	31.8	119.5
		0600	T.S.	992	21	32.8	119.3
		1200	T.S.	996	18	34.3	120.0
		1800	T.D.	998	16	35.1	121.1

消散
Dissipated

熱帶低氣壓由九月十二至十三日的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
THE TROPICAL DEPRESSION OF 12 -13 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	12	0600	T.D.	1000	13	13.6	113.2
		1200	T.D.	998	16	13.1	111.7
		1800	T.D.	998	16	13.1	110.6
	13	0000	T.D.	998	16	13.2	109.5
			消散 Dissipated				

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	16	0600	T.D.	996	16	10.9	113.8	
		1200	T.S.	992	18	11.3	114.4	
		1800	T.S.	988	21	12.2	114.5	
	17	0000	T.S.	988	21	13.5	114.5	
		0600	T.S.	988	21	15.3	113.6	
		1200	T.S.	988	21	16.7	111.7	
	18	1800	T.S.	984	23	17.1	110.2	
		0000	T.S.	984	23	17.1	108.7	
		0600	T.S.	984	23	17.5	107.1	
		1200	T.S.	988	21	18.7	104.9	
		1800	T.D.	996	16	19.2	102.3	
	消散 Dissipated							

颱風蘇拉(0517)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON SAOLA (0517)

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	20	1200	T.D.	1002	13	21.3	151.6
		1800	T.D.	1000	16	21.6	151.2
	21	0000	T.S.	996	18	22.0	150.6
		0600	T.S.	992	21	22.9	150.0
		1200	T.S.	988	23	23.5	148.9
		1800	S.T.S.	980	28	24.2	147.5
	22	0000	T.	970	33	24.7	146.0
		0600	T.	965	36	25.2	144.3
		1200	T.	960	39	25.6	142.8
		1800	T.	955	41	26.4	141.3
	23	0000	T.	950	43	27.2	140.2
		0600	T.	950	43	27.7	139.2
		1200	T.	950	43	28.3	138.6
		1800	T.	950	43	29.0	138.2
	24	0000	T.	950	43	29.6	137.9
		0600	T.	950	43	30.4	138.0
		1200	T.	950	43	31.4	138.4
		1800	T.	955	41	32.2	139.3
	25	0000	T.	955	41	33.3	140.8
		0600	T.	960	39	34.7	142.8
		1200	T.	965	36	35.7	144.8
		1800	T.	970	33	36.5	146.2
	26	0000	T.	970	33	37.0	147.2
		0600	S.T.S.	984	25	37.8	148.8

變為溫帶氣旋
Became Extratropical

颱風達維(0518)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON DAMREY (0518)

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	20	1800	T.D.	1000	16	17.3	123.4
		21					
	21	0000	T.S.	996	18	17.9	122.9
		0600	T.S.	992	21	18.6	122.1
		1200	T.S.	988	23	18.8	121.6
		1800	T.S.	988	23	19.1	121.2
		22					
	22	0000	T.S.	988	23	19.5	120.7
		0600	T.S.	988	23	20.0	120.1
		1200	T.S.	988	23	20.1	119.7
		1800	T.S.	988	23	20.1	119.0
		23					
	23	0000	T.S.	988	23	20.1	118.2
		0600	T.S.	988	23	20.2	117.3
		1200	S.T.S.	984	25	20.2	116.8
		1800	S.T.S.	984	25	20.2	116.1
		24					
	24	0000	S.T.S.	980	28	19.9	115.4
		0600	S.T.S.	975	31	19.7	114.8
		1200	T.	970	33	19.4	114.0
		1800	T.	965	36	19.1	113.5
		25					
	25	0000	T.	955	41	18.9	113.0
		0600	T.	945	46	19.0	112.3
		1200	T.	940	49	19.1	111.7
		1800	T.	940	49	19.1	110.7
		26					
	26	0000	T.	960	39	18.7	109.9
		0600	T.	965	36	18.9	109.0
		1200	T.	970	33	19.2	108.2
		1800	T.	970	33	19.4	107.5
		27					
	27	0000	T.	970	33	19.6	106.5
		0600	S.T.S.	980	28	19.7	105.0
		1200	T.S.	992	21	19.5	103.9
		1800	T.D.	1002	13	19.1	102.8

消散
Dissipated

颱風龍王(0519)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON LONGWANG (0519)

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	26	0000	T.D.	998	16	19.6	143.5
		0600	T.S.	995	18	20.0	143.1
		1200	T.S.	990	21	20.3	142.5
		1800	S.T.S.	980	25	20.9	141.7
	27	0000	S.T.S.	970	31	21.4	141.1
		0600	T.	960	36	21.7	140.1
		1200	T.	955	39	22.0	139.2
		1800	T.	950	41	22.1	138.4
	28	0000	T.	945	43	22.3	137.5
		0600	T.	940	46	22.4	136.8
		1200	T.	935	49	22.4	136.2
		1800	T.	935	49	22.4	135.6
	29	0000	T.	935	49	22.4	135.2
		0600	T.	930	51	22.4	134.6
		1200	T.	925	54	22.3	133.9
		1800	T.	925	54	22.2	132.8
	30	0000	T.	930	51	22.1	132.1
		0600	T.	930	51	22.0	131.0
		1200	T.	925	54	22.1	129.9
		1800	T.	920	57	22.3	128.4
十月 Oct	1	0000	T.	915	59	22.5	126.9
		0600	T.	915	59	22.8	125.4
		1200	T.	920	57	23.1	123.9
		1800	T.	925	54	23.4	122.4
	2	0000	T.	935	49	24.0	120.7
		0600	T.	950	41	24.1	119.7
		1200	T.	965	33	24.4	118.8
		1800	S.T.S.	980	25	24.7	117.7
	3	0000	T.D.	998	16	25.3	116.7

消散
Dissipated

SIX-HOURLY POSITION AND INTENSITY DATA OF
THE TROPICAL DEPRESSION OF 7 - 8 OCTOBER

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	7	0600	T.D.	1002	13	16.5	109.2
		1200	T.D.	1000	16	16.6	108.2
		1800	T.D.	1002	13	16.5	106.7
			消散 Dissipated				

颱風鴻雁(0520)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON KIROGI (0520)

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	10	0000	T.D.	1002	13	22.9	134.6
		0600	T.D.	1000	16	22.6	133.9
		1200	T.S.	996	18	22.2	133.4
		1800	T.S.	992	21	21.8	133.2
	11	0000	T.S.	988	23	21.3	133.1
		0600	S.T.S.	980	28	21.0	133.0
		1200	T.	965	36	20.8	132.9
		1800	T.	950	43	20.5	132.7
	12	0000	T.	945	46	20.4	132.5
		0600	T.	945	46	20.6	132.3
		1200	T.	945	46	20.8	132.1
		1800	T.	945	46	21.1	132.0
	13	0000	T.	950	43	21.4	131.8
		0600	T.	950	43	21.6	131.8
		1200	T.	950	43	21.9	131.8
		1800	T.	950	43	22.2	131.7
	14	0000	T.	950	43	22.5	131.4
		0600	T.	950	43	22.7	131.3
		1200	T.	945	46	22.9	131.2
		1800	T.	945	46	23.1	131.1
	15	0000	T.	945	46	23.3	131.2
		0600	T.	945	46	23.5	131.4
		1200	T.	945	46	23.8	131.8
		1800	T.	945	46	24.0	132.4
	16	0000	T.	945	46	24.2	132.9
		0600	T.	940	49	24.6	133.4
		1200	T.	940	49	25.2	133.9
		1800	T.	940	49	25.8	134.2
	17	0000	T.	945	46	26.5	134.6
		0600	T.	945	46	27.5	135.0
		1200	T.	950	43	28.5	135.5
		1800	T.	955	41	29.3	136.1
	18	0000	T.	960	39	30.0	136.7
		0600	T.	965	36	30.9	137.8
		1200	S.T.S.	975	31	32.0	139.1
		1800	T.S.	988	23	32.6	140.1

變為溫帶氣旋
Became Extratropical

颱風啓德(0521)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TYPHOON KAI-TAK (0521)

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	28	1200	T.D.	1002	13	12.9	114.6
		1800	T.D.	1002	13	12.8	114.0
	29	0000	T.D.	1000	16	12.7	113.5
		0600	T.S.	992	21	12.7	112.9
		1200	T.S.	988	23	12.9	112.6
		1800	S.T.S.	984	25	13.3	112.9
	30	0000	S.T.S.	975	31	13.9	112.9
		0600	T.	965	36	14.1	112.4
		1200	T.	950	41	14.2	112.0
		1800	T.	950	41	14.4	111.9
	31	0000	T.	950	41	14.6	111.8
		0600	T.	960	39	14.8	111.5
		1200	T.	965	36	15.0	111.1
		1800	T.	970	33	15.1	110.6
十一月 Nov	1	0000	S.T.S.	975	31	15.3	110.0
		0600	S.T.S.	975	31	15.8	109.0
		1200	S.T.S.	975	31	16.4	108.5
		1800	S.T.S.	980	28	17.1	107.8
	2	0000	T.S.	988	23	17.9	106.8
		0600	T.S.	992	21	18.3	106.0
		1200	T.D.	1000	16	19.3	105.4

消散
Dissipated

熱帶風暴天秤(0522)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
TROPICAL STORM TEMBIN (0522)

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	7	1200	T.D.	1000	13	11.7	138.0
		1800	T.D.	998	16	12.3	136.8
	8	0000	T.D.	998	16	12.7	136.0
		0600	T.D.	998	16	13.0	135.0
		1200	T.D.	1000	13	13.1	134.0
		1800	T.D.	1000	13	13.2	133.0
	9	0000	T.D.	1000	13	13.3	131.6
		0600	T.D.	1000	13	13.5	129.6
		1200	T.D.	998	16	13.8	127.8
		1800	T.D.	998	16	14.2	126.2
	10	0000	T.S.	996	18	14.7	124.5
		0600	T.S.	992	21	15.3	122.8
		1200	T.S.	992	21	15.7	121.7
		1800	T.S.	996	18	16.2	120.8
	11	0000	T.D.	998	16	16.7	120.0
		0600	T.D.	1000	13	17.6	119.2

消散
Dissipated

**強烈熱帶風暴布拉萬(0523)的每六小時位置及強度
SIX-HOURLY POSITION AND INTENSITY DATA OF
SEVERE TROPICAL STORM BOLAVEN (0523)**

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)	估計 最高風速 (米每秒)	北緯 Lat. ° N	東經 Long. ° E
				Estimated minimum central pressure (hPa)	Estimated maximum surface winds (m/s)		
十一月 Nov	14	0600	T.D.	1002	13	9.6	128.2
		1200	T.D.	1002	13	10.2	128.4
		1800	T.D.	1002	13	10.6	128.9
	15	0000	T.D.	1002	13	10.8	129.8
		0600	T.D.	1002	13	11.4	130.2
		1200	T.D.	1002	13	12.3	130.4
	16	1800	T.D.	1000	16	13.6	130.4
		0000	T.D.	1000	16	14.0	130.2
		0600	T.S.	996	18	14.0	129.7
	17	1200	T.S.	992	21	13.7	129.4
		1800	T.S.	988	23	13.2	129.3
		0000	S.T.S.	984	25	13.1	128.9
	18	0600	S.T.S.	980	28	13.2	128.4
		1200	S.T.S.	975	31	13.6	128.1
		1800	S.T.S.	975	31	13.8	128.1
	19	0000	S.T.S.	975	31	14.1	128.2
		0600	S.T.S.	975	31	14.4	128.2
		1200	S.T.S.	975	31	14.8	127.6
	20	1800	S.T.S.	975	31	15.0	126.3
		0000	S.T.S.	975	31	15.2	125.2
		0600	S.T.S.	980	28	15.6	124.4
		1200	T.S.	988	23	16.1	123.8
		1800	T.S.	992	21	16.5	123.4
		0000	T.S.	996	18	16.8	123.1
		0600	T.D.	1000	16	17.3	123.0
	消散 Dissipated						

熱帶低氣壓由十二月十九至二十日的每六小時位置及強度
**SIX-HOURLY POSITION AND INTENSITY DATA OF
 THE TROPICAL DEPRESSION OF 19 -20 DECEMBER**

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	19	0600	T.D.	996	16	9.0	111.6
		1200	T.D.	996	16	9.6	111.0
		1800	T.D.	996	16	9.6	110.3
	20	0000	T.D.	1000	13	9.1	109.8
		0600	T.D.	1000	13	8.6	109.3
			消散 Dissipated				