JANUARY 2009

WEATHER ON WINGS

香港天文台
HONG KONG OBSERVATORY

Dial-a-Weather : 187 8200
Home page : http://www.hko.gov.hk, http://www.weather.gov.hk

Headline

The Financial Secretary visited the Observatory

Editorial board

Mr John Tsang (1st left) listened attentively to the Director, Mr Lam Chiu-ying (1st right) who explained the operation of the weather monitoring systems. Mr Tsang showed keen interest in the Observatory's nowcasting system "SWIRLS" which performed well in the Beijing Olympic Games. The TV on the top right corner displayed the products of SWIRLS.

The Hong Kong Observatory is one of the government departments under the jurisdiction of the Financial Secretary. The Financial Secretary, Mr John C Tsang, JP, visited the Hong Kong Observatory on 11 November 2008. That Mr Tsang spent his valuable time visiting the Observatory while busily engaged in tackling problems associated with the global financial tsunami reflects the importance he attached to the Observatory's work.

On that day, Mr Tsang and his accompanying officers were taken to a tour by the Director, Mr Lam Chiu-ying. He also discussed with the Assistant Directors to find out more about the Observatory's weather service, the work on radiation monitoring and assessment, earthquake and tsunami warning. While he complimented the Observatory in its provision of various services, Mr Tsang was particularly interested in how the Observatory's aviation weather service was related to air navigation safety. He was also impressed by the creativeness of the Observatory staff in the application of LIDAR (LIght Detection And Ranging) to monitor wind shear.

Science in the Public Service Fun Fair 2008

LAM Hok-yin

The Science in Public Service Fun Fair 2008 took place from 14 to 16 November at Victoria Park. As a member of the Organizing Committee, the Hong Kong Observatory (HKO) played an active role in the event. An estimated 40,000 people visited the fun fair. The Chief Executive, Mr Donald Tsang, and the Secretary for Commerce and Economic Development, Mrs Rita Lau, officiated at the opening ceremony of the fun fair.

Besides colleagues from HKO, Friends of Observatory also assisted in distributing souvenirs to the visitors and helped ensure the smooth running of the event.

Group photo of guests in the opening ceremony

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The fun fair showcased partners' scientific work and the application of science and technology in the provision of their services through vehicle exhibitions, interactive games and workshops. There were also a wide variety of stage programmes, including band performances, Chinese orchestra, demonstrations by police dogs and quarantine detector dogs, each with a scientific theme. A talk show on climate change featured by the Director of HKO, Mr Lam Chiu-ying and the famous talk show host, Mr Lam Chiu-wing, was well received.

Since the campaign was launched in January 2006 by the Chief Executive, the number of campaign partners has increased from 30 to 43, including government policy bureaux, departments and collaborating organizations. For the latest news about the campaign, please browse the website www.science.gov.hk.

Crossover talk show by the Director of the Hong Kong Observatory Mr Lam Chiu-ying (left) and the famous talk show host Mr Lam Chiu-wing.

Weather Services in Support of the 2008 Olympic Games — Mission Accomplished

YEUNG Kwok-chung YEUNG Hon-yin WONG Wai-kin

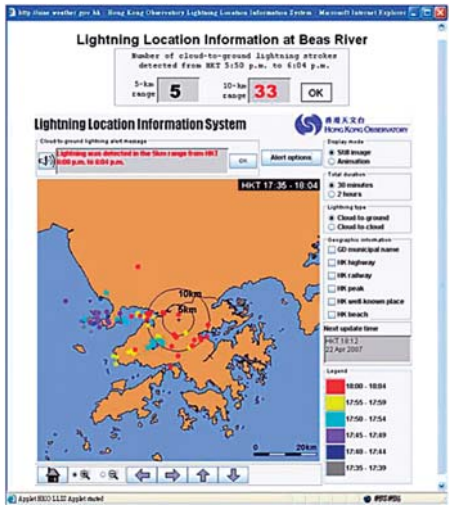
Equestrian Forecasting Team formed by three scientific officers: Dr Yeung Kwok-chung, Mr Lee Kwok-lun and Miss Li Yuet-sim (from left)

Olympic Equestrian Events in Hong Kong

Full Preparation

The Olympic and Paralympic Equestrian Events were conducted in August and September 2008. Tropical cyclones, thunderstorms, rainstorms and hot weather were the bad weather most concerned by the Observatory.

As early as in 2005, the Observatory commenced the preparation for the events, including discussion with the specialists of the Federation Equestre Internationale (FEI), carrying out drills and exercises and analyzing important weather data to ensure that our services would meet the requirements for the Equestrian Events. Special equipment to measure the wet-bulb and globe temperature (WBGT) for monitoring the heat stress of horses was also designed and built. In 2008, the Observatory together with the Equestrian Company had established thresholds of various weather warnings specifically designed for the events, such as WBGT reaching 30 degrees, over 15 lightning strikes in the past 15 minutes within 10 km range of the event venues, etc. The Equestrian Company would receive our alert messages automatically when the pre-defined warning thresholds are reached. The Observatory also deployed three experienced forecasters to form an Equestrian Forecasting Team (EFT). The EFT repeatedly conducted tests and fine tuned various forecasting tools and operation procedures before the commencement of the events. The EFT also provided round-the-clock weather consultation service for the events from 24 July.



The system issues a warning alert automatically if lightning is detected within certain range of the event venues

Narrow Escape

With tropical cyclone Nuri entering the South China Sea, Tropical Cyclone Warning Signal No.1 was already in force before the last competition session on the evening of 21 August. According to the latest assessment at that moment, some thunderstorms would affect Hong Kong and the weather situation would continue to deteriorate further in the following couple of days. If the competition was delayed or postponed, the whole events would not be able to complete before the closing of the Olympic Games. It would then be the first time in the Olympic Equestrian history.

With the assistance of our EFT forecaster who kept providing the lastest weather information and assessment, the Equestrian Company finally decided to carry out the competition according to schedule and complete as many races as possible in that evening.

As predicted by the forecaster, thunderstorms affected our territory in the late afternoon of 21 August. Fortunately, the thunderstorms were mainly confined to the western part of the New Territories, away from the competition venue at Sha Tin. It was truly a huge relief when the Equestrian Company informed us around midnight that all the competitions and ceremonies had been completed. The Tropical Cyclone Warning Signal No. 8 and No.9 on the following day became inconsequential to the whole Equestrian Events.

Outstanding Professionalism

Both the Equestrian Company and FEI veterinary delegate indicated after the completion of the Olympic Equestrian Events that all the local work forces, athletes and guests from all over the world were impressed by the professionalism, support and services provided by the Observatory during the events. It was truly a magnificent Olympic Equestrian Event.

SWIRLS Spinning Fast in Beijing

Scientists' elbow grease and midnight oil consumed in the past three years finally paid off as SWIRLS (abbreviation for "Short-range Warning of Intense Rainstorms in Localized Systems", the Observatory's nowcasting system) swirled at full speed in Beijing during the Olympic. Under the banner of the Beijing 2008 Forecast Demonstration Project (B08FDP), SWIRLS worked in tandem with other nowcasting forerunners in the world to provide all Olympic venues and the Beijing city at large with forecast guidance and warning decision support on various severe weather threats, including rainstorm, hail, lightning, as well as damaging squalls. Throughout the Olympic period, SWIRLS' performance was among the best in terms of heavy rain and thunderstorm track forecasts. It was also the only system offering lightning and squalls forecasts.

Hosting the Olympic Games in Beijing was

a dream fulfilled for the Chinese people, ably accomplished under the close scrutiny of the whole world. To ensure smooth progress and operation, no effort was spared. As the Olympic meteorological services provider, the Beijing Meteorological Bureau (BMB) invited nowcasting experts from the participating meteorological organizations, including the Hong Kong Observatory, to station in Beijing during the Olympic Games to maintain a smooth B08FDP operation and to quality-check outputs from each of the nowcasting systems.

International collaboration on such scale was perhaps unprecedented, most certainly a milestone marker in the development of forecasting and warning services. During the critical 16 game days, the team of experts was tasked with an additional responsibility to share their unique experience and to reach a so-called "consensus forecast" using all available nowcasting information. Based on the consensus view, they attended the Olympic weather conferences held routinely in BMB to brief the top-level decision makers on various venue-specific short-range forecast strategies.

New technology and standards developed in the course of the B08FDP venture are being adapted and transferred back to Hong Kong for the benefits of the local community. The first example is a new service of GIS-based nowcast rainfall information over the Pearl River delta area, with products delivered in an innovative, rapidly updating and tailored manner ***(please refer to the article "Rainfall Nowcast for the Pearl River Delta Region" below)***.

Sailing with the Wind

The Observatory's meteorological support rendered to the Hong Kong Windsurfing Team in the Qingdao Olympic sailing competition started full operation in late July 2008. Comprehensive weather information was sent by mobile electronic device and by email for sailors to help formulate their race strategies.

During the race period, weather situations fluctuated appreciably, with days of calm conditions interspersed with days of windy weather and threats of intense cyclone development. Despite losing ground after some fine performances in the first half of the contest, our windsurfers still finished with the best ever results in the men's races.

Representatives from the Hong Kong Windsurfing Team visited the Observatory in early September to express their appreciation for the meteorological services provided. The visitors also expressed their wish for the Observatory's continual support to the team during major races in the future.

Mr Cowen Chiu (middle), the President of the Windsurfing Association of Hong Kong; and Mr Daniel Lam (left), the Chairman of the Hong Kong Windsurfing Team, visited the Observatory on 4 September 2008 and presented a souvenir to Mr Lam Chiu-ying (right), Director of the Hong Kong Observatory, to express their appreciation for the weather services rendered to the windsurfing team.

Products & Services

Rainfall Nowcast for the Pearl River Delta Region

YEUNG Hon-yin, Linus

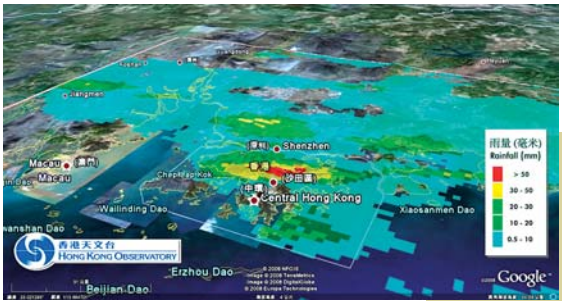
With increasingly frequent travelling within the Pearl River Delta (PRD) region, it is not uncommon to find a commuter trapped in the following dilemma:

Mr. Biz is sitting in a coffee shop thinking about going home after a tiring day of business talks in Shenzhen. The sky turns gloomy outside and without an umbrella he ponders the risk of getting caught in the rain before he can get to the car parked near his clients' office: "*Shall I make a move right away, or should I wait? Even though the coffee is very nice, how long would I have to wait for? …*"

If such a situation occurs a year ago, the story is likely to end here with Mr. Biz missing the only chance to fetch his car and go home unscathed. But let's turn the clock back to one rainy day last October and the following ending would have been possible:

At this decisive moment, he recalls a remark from his witty secretary earlier that morning: "*The Observatory predicted heavy rain for today. They have just launched a new web page where you can check the latest rain situation.*" Mr. Biz clicks on his smart phone, fiddles over the gadget's screen, finishes his coffee and walks out briskly with a smile of confidence.

The "magical" Internet product that would have enabled Mr. Biz's happy ending is the "Rainfall Nowcast for the PRD Region" web page (Fig.1 refers) launched on 8 October 2008 by the Hong Kong Observatory. Visualized with a geographical information system (GIS), the rainfall nowcast product can vividly present the evolution of rainfall distribution over the PRD region, including Hong Kong, within the next two hours, providing quantified and graphical rainfall forecast information. It is generated automatically by the computers of SWIRLS (Short-range Warning of Intense Rainstorms in Localized Systems), a nowcast system developed in-house by the Observatory, without any manual adjustment. The main purpose is to provide at first instance the latest available rain information for users' quick reference. Through GIS display software that can be downloaded from the Internet, users can zoom-in, zoom-out, configure panoramic view and animate the forecast maps of rainfall distribution. This enables the users to appreciate the spatial coverage and the movement trends of the rain areas, as well as the amount of rainfall that can be expected.

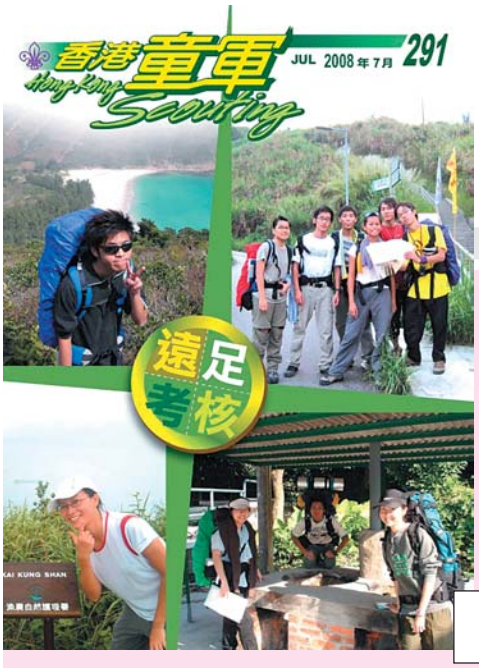


Graphical rainfall distribution forecast information over the PRD region, including Hong Kong, visualized with a geographical information system.

Within one week after the new service was launched (URL: http://www.weather.gov.hk/nowcast/prd/index.htm), we received a number of feedbacks from members of the public. Among these was an interesting and brilliant idea of a student from the Sun Yat-sen University in Guangdong:

"*I plan to tap the PRD rainfall nowcast information and write a simple computer program to check if there will be any rain over our campuses in the next 2 hours. I will post it to the Internet for reference by my classmates. Hopefully, it could save the trouble of frequently checking radar pictures and typing SMS.*"

The student has since acted on his idea and a web page was duly launched. Interested readers may wish to applaud him by browsing his "Sun Yat-sen University Rainfall Nowcast System" at: http://7timer.y234.cn/V3/product.php?language=zh_cn&product_id=3.



Observatory's location-specific lightning alert service promoted by the HK Scouts

LEUNG Man-yee

Since the location-specific lightning alert service was launched by the Observatory in May 2008, it has been well received by the public and various sectors in society, especially those who often organise outdoor activities. In recognition of the service, the Scout Association of Hong Kong introduced the lightning alert webpage in the July 2008 issue of its "Hong Kong Scouting" monthly magazine and recommended the scout members to use it to ensure safety during outdoor activities. The web version of the article can be found at: http://www.scout.org.hk/article_attach/10307/HKS29119.PDF (in Chinese only).

The new services is free of charge and has proved to be very handy for outdoor workers, hikers, swimmers, swimming pool operators and organisers of big outdoor events. Since its introduction in May 2008, more than 1.2 million visits to the webpage were recorded.

"Hong Kong Scouting" monthly magazine introduced the location-specific lightning alert service of the Hong Kong Observatory

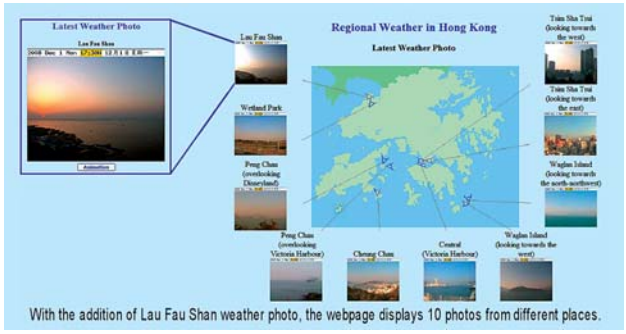
More real-time weather photos from Hong Kong Observatory

CHIU Chiu-yee

Lau Fau Shan is a small village on the coast of Deep Bay in western New Territories. The sunset view from there is one of the most beautiful in Hong Kong. Public and tourists like to go there to enjoy seafood, to see the magnificent architecture of the Hong Kong - Shenzhen Western Corridor and to watch the daily activities of fishermen from a close distance. To provide tourists with updated weather information so that they can better plan their journey, the observatory has been posting real-time weather photos at Lau Fau Shan on its website since October 2008. To view the photos, please visit the Observatory's "Regional Weather" webpage:

http://www.weather.gov.hk/wxinfo/ts/webcam/LFS_e_realtime.htm

and PDA webpage: http://pda.hko.gov.hk/wxphotoe_lfs.htm between 7a.m. and 7p.m. Photos are updated every 15 minutes.



With the addition of Lau Fau Shan weather photo, the webpage displays 10 photos from different places.

Public Course on "Weather Observations"

MA Chi-fai

Demonstration of making weather observations

The Hong Kong Observatory conducted a public course on "Weather Observations" at its headquarters on the mornings of 11 and 25 October 2008. This 6-hour public course introduced the visual method for determining cloud type, visibility and state of weather. It also covered the basics of meteorological instruments, use of real-time data available on the Observatory's website, procedures for coding weather observation and interpretation of weather folklore.

Practical session, explaining the principles of meteorological instruments

Very positive feedback was received with an overall rating of 4.2 on a 5-point scale. Most of the participants expressed that the course was well-organized and useful, and could foster their interest in observing the random but predictable sky.

The Hong Kong Observatory won the 2007-08 Web Care Award

Dr C.M. Tam (2nd left) and Mr S.W. Li (3rd left) of the Hong Kong Observatory received the Web Care Award from the iProA President, Dr Winnie Tang (1st right) and Vice Chairman-e-Inclusion Committee, Mr Peter Chu.

LI Sun-wai

The Hong Kong Observatory website (www.hko.gov.hk or www.weather.gov.hk) has won the Silver Prize of the 2007-08 Web Care Award. The awards presentation ceremony was held at the Science Park, Sha Tin on 18 October 2008.

The Observatory website has been one of the most popular government websites since its launch in 1996. Features, including audio webpages, alternative texts for images and banners, sufficient background and foreground colour contrast, etc. were built into the webpages during their design and development stages to facilitate browsing by physically challenged users.

The Web Care Award is a major activity in the e-Inclusion Campaign organized by the Internet Professional Association (iProA). The Award aims to promote among public and private organizations the importance of barrier-free websites in addressing the Digital Divide in the society. This is done through providing needy communities, including the physically challenged, with equal opportunities to reap the benefit of the information shared on the Internet.

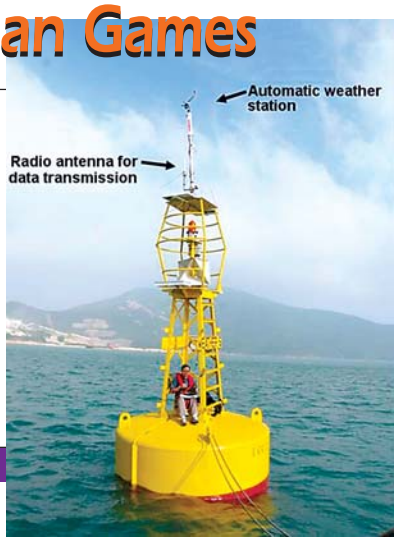
Weather Buoy Launched for the Hong Kong 2009 East Asian Games

CHAN Pak-wai

After the completion of the 2008 Olympic Equestrian Event, the Hong Kong 2009 East Asian Games will come very soon. To support the windsurfing events under the East Asian Games to be held in December 2009, the Observatory launched a weather buoy at Tai Tam Bay, near Stanley, on 30 October 2008.

Apart from making observations of air temperature, relative humidity, pressure, wind speed and direction, and sea surface temperature, the buoy also carries with it a current meter for measuring the near-surface current.

The buoy was launched in time for the coming Hong Kong Open Windsurfing Championships 2008, a pre-race of the East Asian Games, held during 18-24 November 2008. It provided the race organizer with real-time weather observations over the race venue to facilitate the smooth running of the event.



An Observatory colleague checking the instruments and the data on the weather buoy

Weather Forecast and Information - Indispensible for Massive Activities

LEUNG Yin-kong, John; Hilda LAM

Smooth running of massive outdoor activities hinges on the coordination of "good weather condition", "geographic convenience" and "social harmony". At the request of the organiser, the Hong Kong Observatory often provides tailored weather forecasts to facilitate them in making suitable manoeuvres to ensure smooth running of the activities.

Year 2008 witnessed a year of rainstorms and tropical cyclones. Hong Kong was affected by six tropical cyclones. Among them "Fengshen", "Kammuri", "Nuri" and "Hagupit" necessitated the issuance of the No. 8 Tropical Cyclone Warning Signals. In April, for the rainstorm associated with Typhoon Neoguri, the Observatory had to issue the earliest Black Rainstorm Signal ever recorded. The successive rainstorm events in June 2008 also broke the highest monthly rainfall record in June. Fortunately, many massive outdoor events in 2008 such as the firework display in the Chinese New Year and the National Day, the flag-raising ceremony of the Handover Anniversary and the National Day, the Olympic Torch Relay and the Equestrian Events, the Olympic and Paralympic Live Sites, the Legco Election etc., were held successfully. The Observatory received many appreciation letters from the organizers of such events commending the accurate weather forecasts and the professional and efficient services.

The Observatory's forecasting office provides accurate weather forecasts for massive outdoor activities.

Another milestone in upper-air sounding

A helium filled balloon launched out of the Automatic Upper-air Sounding System carries with it a radiosonde that continuously survey the atmosphere to provide invaluable meteorological data for weather forecasting.

CHOW Chi-hung

2008 marks another milestone in the Observatory's history of upper-air sounding. Starting from 1921, hydrogen was used for inflating weather balloons for upper-air sounding. At the end of 2008, a new helium supply system was installed and commissioned at the King's Park Meteorological Station. Since then, helium has been used as balloon gas in place of hydrogen.

Hydrogen is the lightest gas on Earth. Balloon filled with hydrogen rises faster than those filled with different gases of the same volume. However, hydrogen is a highly flammable gas which when in contact with air, a stray spark can cause explosion or fire. Helium, though slightly heavier than hydrogen, is still much lighter than air. Hence, balloon inflated with helium also rises rapidly in the atmosphere. The prominent advantage of helium is its non-flammable characteristic. It is thus much safer than hydrogen and is commonly used for filling party balloons and advertising blimps.

Although there has never been any incident of using hydrogen in upper-air sounding, safety is always the prime concern of the Observatory. Plan for using helium was devised a few years ago for enhancing the safety of operating staff and the station as well as eliminating the risk to nearby residents. After months of preparation, works eventually started in 2008. During the critical transition period from hydrogen to helium, colleagues made concerted efforts to fully test the new system and to resolve problems promptly.

I am very glad that I was one of the helping hands in laying the milestone. I am also deeply impressed by the dedication and cooperation of colleagues and other workers for the success of the project.

Hong Kong - the hub of world weather information

With growing number of Hong Kong people traveling abroad, the need for overseas weather information is on the rise. At present, the World Weather Information Service website hosted by the Observatory provides weather forecasts for 1,273 cities from over 110 countries with a daily hit count of more than 200,000.

The World Weather Information Service is offered in six different languages viz. Arab, Chinese, English, French, Portuguese and Spanish. Apart from hosting the English website, the Observatory also takes up the role of collecting and processing weather forecasts from national meteorological authorities all over the world and distributing them to other language hosts. The service showcases international partnership in the meteorological community. Last year, it won the prestigious Stockholm Challenge Award in the Environment category.

WAI Hon-gor

The Observatory has been providing world weather information for 20 years. In the 80's, the Observatory used to issue weather forecasts for 23 cities in Europe and North America to the media twice a day to meet the need of the public at the time. The information was derived from the conventional weather reports and airport weather forecast. The number of cities increased gradually over the years. In 2000, the World Meteorological Organization picking up an initiative raised by the Observatory, decided to establish the World Weather Information Service and launched a pilot project. The service became operational in 2005 with Hong Kong serving as the world hub for the exchange of city weather forecasts.

Weather Wizard 2.0

LI Sun-wai

The Hong Kong Observatory launched a new version of the Weather Wizard gadget - Weather Wizard 2.0 in early December 2008 (http://www.hko.gov.hk/wxinfo/wxwizard/wxwizard.htm or http://www.weather.gov.hk/wxinfo/wxwizard/wxwizard.htm).

The Weather Wizard is a simple-to-use PC-based gadget. At regular intervals, it retrieves the latest weather information and warnings from the Observatory's web servers, and displays them on the "Toolbar" at the bottom of the screen. A dialog box will pop up with an audio alarm to alert users when there is a change in the warning status. Thus, users can remain focused on their work while being kept constantly informed of the latest warning status.

In Weather Wizard 2.0, users can select to display the hourly air temperature and relative humidity readings from any of 27 locations in Hong Kong. The latest weather condition over Hong Kong and UV index at King's Park are also displayed. Furthermore, the Pre - No. 8 Special Announcement for tropical cyclone warning will be passed to Weather Wizard 2.0 users when issued.

Weather Wizard 2.0 showing the weather condition over Hong Kong, UV index at King's Park, and air temperature and relative humidity at Sha Tin.

The first version of the gadget was launched in May 2008. Up to early December, over 100,000 copies have been downloaded and more than 100 million counts of data retrievals have been registered. Compliments and encouragements have been received from the public praising the gadget's ease of use and effectiveness in keeping track of the weather situation.

Opening of the Automatic Weather Station for Wan Chai District

CHAN Ying-wa

Guests officiating at the opening ceremony of the automatic weather station for the Wan Chai District: (from left) Director of Racing Operations of the Hong Kong Jockey Club, Mr John Ridley; Director of the Hong Kong Observatory, Mr Lam Chiu-ying; District Officer of the Wan Chai District, Mr Yuen Jing-yee; and Chairman of the Wan Chai District Council, Mr Suen Kai-cheong.

The automatic weather station for the Wan Chai District was officially opened on 1 December 2008. This marked the completion of the "One District One Station" target on the Hong Kong Island.

Located at the Happy Valley Racecourse, the new weather station is equipped with instruments for measuring temperature and rainfall. The first race held in the Happy Valley Racecourse went far back to 1846. The Observatory is proud of installing an AWS in such a historic place and appreciates the full support and co-operation of the Wan Chai District Council and the Hong Kong Jockey Club.

The automatic weather station for the Wan Chai District provides the latest temperature readings round-the-clock. You can access the information from the Observatory's "Regional Weather" webpage at: http://www.weather.gov.hk/wxinfo/ts/display_graph_e.htm?hpv&menu=otherwxi&rwx&addbar or PDA webpage at: http://pda.hko.gov.hk/regione_hpv.htm. You can also call the Observatory's dial-a-weather hotline at 187 8200. The rainfall information from the station is used to plot the rainfall distribution map of Hong Kong (website: http://www.hko.gov.hk/wxinfo/rainfall/isohyete.shtml).

"Deer in the Box" Exhibition

Editorial Board

An intriguing title. A deer goes astray and gets lost in Hong Kong. Not able to roam wild and free in its natural habitat, it learns about the climate change in Hong Kong, and finds out that under global warming, an increase of temperature of steps of one degree Celsius could bring progressively more severe impacts, and would lead us to a world resembling the Cretaceous period for a 6-degree warming.

This exhibition is produced in association with the Hong Kong Observatory by the School of Journalism and Communication of the Chinese University of Hong Kong, with the National Geographic Channel as a co-organizer. The exhibition aims to remind us to take care of our fragile environment. The Director of the Observatory, Mr Lam Chiu-ying, is one of the key contributors to the creative conception of the exhibition. Mr Lam's philosophy of "deriving happiness from nature" is also part of the exhibition. **The exhibition will be open to the public until July 2009. Details are available in the webpage of the Chinese University of Hong Kong:**

http://www.com.cuhk.edu.hk/ch/news/deerinthebox.htm

Hong Kong Observatory Calendar 2009 now on sale

Editorial broad

The "Hong Kong Observatory Calendar 2009" is now on sale at $50 a copy. It is available at the Hong Kong Observatory Resource Centre, the Publications Sales Unit of the Information Services Department, the Kowloon Map Publications Centre of the Lands Department, General Post Office, Tsim Sha Tsui Post Office, Tuen Mun Central Post Office and Sha Tin Central Post Office. An electronic book-ordering service is also available at the online Government Bookstore at http://www.bookstore.gov.hk, details of which can be obtained through the telephone enquiry service of the Information Services Department on 2537 1910.

To bring out the theme "Weather, Climate and the Air we Breathe" of the 2009 World Meteorological Day, this calendar contains a collection of photos showing a diversity of life-forms enjoying themselves in the ambient air. It serves to remind ourselves that human beings are not the only living species breathing the air on Earth, and helps us appreciate why the unprecedented climate change caused by the industrialized civilization is a major threat to us all. The main message of the calendar is aptly summarized in the preface by the Director of the Observatory, Mr C Y Lam, "We combat human-induced climate change not just for human beings. We do it for all of us, that is, all living beings on Earth".

One of the photographers Mr Kevin Ho holding Hong Kong Observatory Calendar 2009 and displaying his photo.

Educational Talks - Work Arrangement under Tropical Cyclone and Rainstorm Warnings

LEUNG Yin-kong, John

Scientific Officer Mr Leung Yin-kong delivering talks on "Work Arrangement under Tropical Cyclone and Rainstorm Warnings"

During severe weather, workers are particularly concerned about their own safety. Whether they need to turn up for work or whether they will be released early are their real concerns. In view of this, the Observatory at the invitation by the Hong Kong Institute of Human Resource Management and the Occupational Safety Health Council, conducted talks in the last typhoon season for representatives of the Labour Department for the managers and employees of various organisations. The talks introduced the characteristics of severe weather, the precautionary measures that had to be taken, and encouraged employers and employees to establish safety regulations and work arrangements under severe weather conditions. Participants were active in raising questions and sharing their management experience. The talks deepened their understanding of the Observatory's severe weather warning systems and foster closer communication among government departments.

Aviation Meteorology

International Collaboration to Enhance Weather Warning for Flights

CHOY Boon-leung

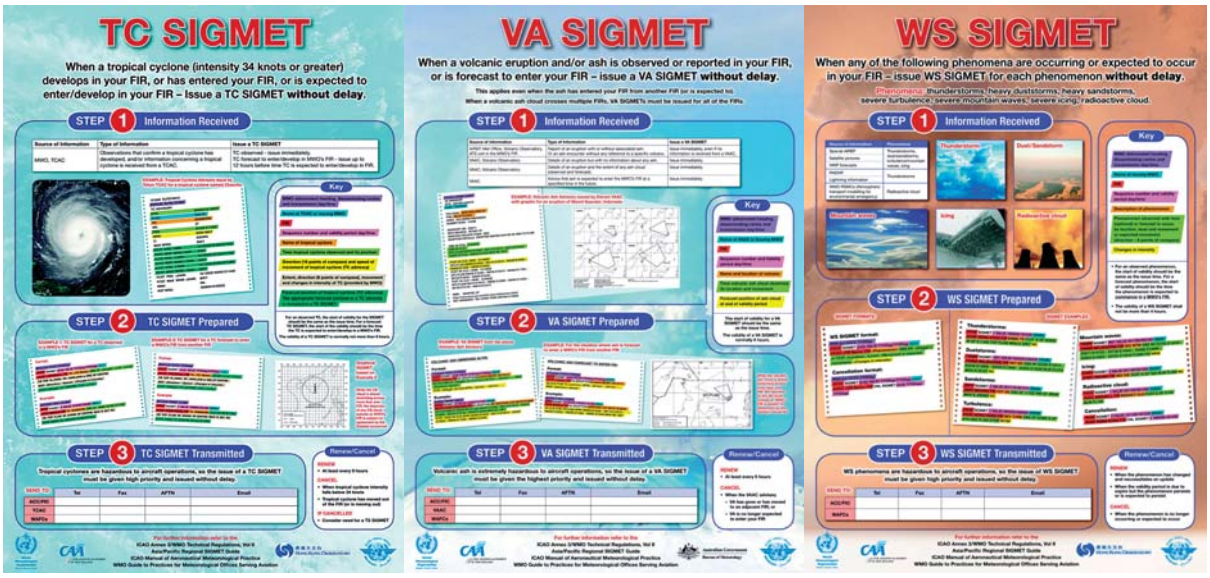
The Hong Kong Observatory (HKO), Civil Aviation Authority of New Zealand (CAANZ) and Bureau of Meteorology of Australia (BoM) worked together with the International Civil Aviation Organization (ICAO) and World Meteorological Organization (WMO) to promulgate a set of three posters on the best practices of issuing SIGMET for providing appropriate hazardous weather information to aircrafts.

The three posters provide examples for meteorological offices to prepare and disseminate SIGMET messages, including Volcanic Ash (VA), Tropical Cyclone (TC) and other weather phenomena (WS) (including thunderstorms, dust/sandstorms, turbulence, mountain waves, icing and radioactive cloud). HKO was responsible for the development and production of the TC and WS posters, while BoM was responsible for the VA poster and CAANZ the posters' layout. Apart from serving as a quick reference for the aviation forecasters, these posters also highlight the importance of SIGMET to the safety of flights for the aviation users.

To facilitate their widest promulgation within the aviation community, these posters will be distributed by ICAO to all Contracting States around the world. They are now available in electronic form on the websites of the Observatory's and ICAO:

http://www.hko.gov.hk/aviat/sig_poster/sig_poster.htm. *(English version only)*

http://www.icao.int/anb/sg/metwsg/Poster_SIGMET.htm

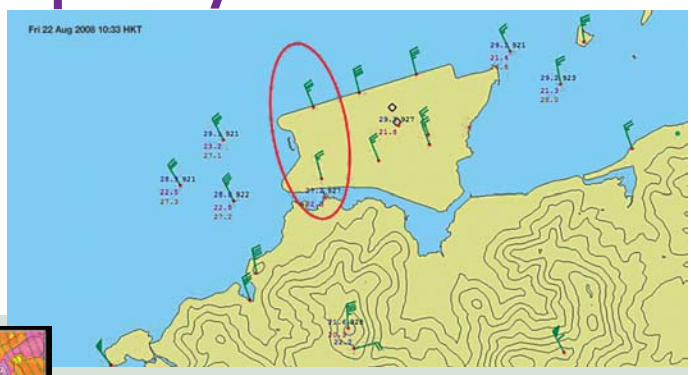


HKO participated in the development of SIGMET posters

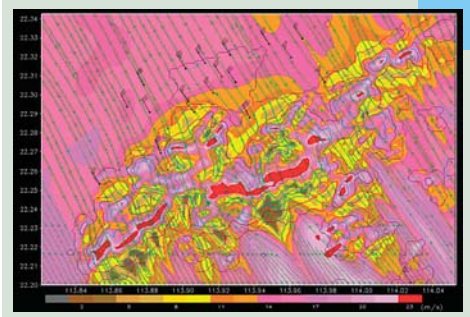
Wind distribution over the Hong Kong International Airport (HKIA) under strong northerly winds associated with tropical cyclones

CHAN Pak-wai

Under the strong northerly winds associated with tropical cyclones, the wind distribution over HKIA could be uneven at times. For instance, the winds over the north runway could be generally stronger than those over the south runway. During the approach of Typhoon Nuri in August 2008, the winds over north runway were stronger by 10 - 16 knots (i.e. 19 - 30 kilometres/hour) than over the south runway in the western part of the airport, as indicated in Figure 1. As the crosswind over the north runway was too strong at that time, the aircraft could only land at the south runway from the west. However, the airflow was more turbulent over the south runway, which might lead to instability of the aircraft during landing.



▲ Figure 1 Wind distribution inside and around HKIA at 10:33 a.m., 22 August 2008. The wind speed on the western side of the north runway was about 10 knots higher than that on the south runway (indicated by red ellipse).



◀ Figure 2 Distribution of wind speed near the ground (colour contours) at and around the airport on the morning of 22 August 2008 as simulated by a high-resolution numerical weather prediction model.

The wind difference between the two runways may be related to the terrain on Lantau Island. The Observatory uses a high-resolution numerical weather prediction model to study how Lantau Island affects the wind distribution over HKIA. Figure 2 shows the situation under strong northerly winds associated with Typhoon Nuri. It could be seen that the model successfully simulates that, over the western part of the airport, the winds at the north runway could be stronger than those at the south runway by about 10 knots, which is consistent with the actual observations. As such, in strong northerly winds, the terrain of Lautau Island does have an impact on the wind distribution over HKIA.

On the other hand, the buildings over the airport may also lead to uneven wind distribution. The Observatory collaborates with the Department of Mechanical Engineering of the University of Hong Kong to study the uneven wind distribution arising from buildings in typical strong wind conditions associated with tropical cyclones using high-resolution computational fluid dynamics model. The modelling result shows that the wind difference could reach 15 knots (about 28 kilometres/hour) between the areas upstream and downstream of a building.

The above results are based on very preliminary case study. For more complete understanding of the uneven wind distribution over HKIA, it may be necessary to consider both the terrain in the vicinity of the airport and the buildings on the airfield. This would be a frontier topic in numerical simulation study.

15th Anniversary of the Hong Kong Liaison Group on Aviation Weather Services

CHOY Boon-leung

The Hong Kong Observatory, together with representatives from airlines and pilots, celebrated the 15th Anniversary of the Liaison Group on Aviation Weather Services on 28 August 2008.

Mr Lam Chiu-ying, Director of the Hong Kong Observatory (center), together with the Observatory staff and representatives of airlines and pilots, celebrated the 15th Anniversary of the Hong Kong Liaison Group on Aviation Weather Service.

Speaking at the celebration ceremony, Mr Lam Chiu-ying, the Director of the Hong Kong Observatory, said "In the past 15 years, the aviation meteorological services in Hong Kong achieved new heights. The liaison group has been instrumental in these achievements." Mr Lam, a founder member of the Liaison Group on Aviation Weather Services, valued the contribution of the liaison group. "Not many countries have the valuable support of an aviation weather liaison group which has operated effectively for our airport for 15 years", Mr Lam added.

Mr Robert Wong of Lufthansa Airlines, one of the longest serving members of the liaison group, said, "The liaison group is a good channel for direct exchange of views between the aviation users and the Observatory, enabling our needs to be better understood. As a result, the Observatory develops and provides products and services that users really desire. We are pleased to see the continuous enhancement in the aviation weather services of the Observatory over the past 15 years."

At the ceremony, Mr Lam paid tribute to all past and present liaison group members for their contribution to the Hong Kong aviation weather services.

The Observatory provided meteorological training for the "Dragonair Aviation Certificate Programme"

Participants of the "Dragonair Aviation Certificate Programme" and Observatory's staff (front row, left and right).

CHOY Boon-leung

The Observatory delivered a one-and-a-half-day meteorological training course in the latter half of November 2008 for the "Dragonair Aviation Certificate Programme" to provide participants with basic training on weather observation and aviation weather forecasting. Each of the trainees was arranged to practice side-by-side with our staff at different posts in the Airport Meteorological Office to experience the close collaboration between meteorological personnel and the aviation community.

Quality Management System for Aviation Meteorological Service successfully completed Full Scale Audit

CHOY Boon-leung

The Hong Kong Observatory successfully completed the second re-certification of the ISO9001 quality management system for aviation meteorological service in October 2008 and received the renewed certificate (Figure). Re-certification is a full scale audit carried out every 3 years which is supplemented by annual surveillance audits to monitor the effectiveness of the quality management system. Mr Wong, the lead auditor of the re-certification, was satisfied with the Observatory's quality management system for aviation meteorological services and considered it effectively operated.

India's Aviation Weather Chief Visited the Observatory

CHOY Boon-leung

Mr M.K. Bhatnagar, Director of Aviation Services of the India Meteorological Department, came to Hong Kong on 23 November 2008 to learn about the Observatory's provision of aviation weather services. He visited the Airport Meteorological Office, the Light Detection And Ranging (LIDAR) system at the airport and the Terminal Doppler Weather Radar (TDWR) at Tai Lam Chung. He was particularly impressed by the LIDAR and TDWR which are the core components of the Observatory's windshear alerting system for the airport. Mr Bhatnagar expressed his gratitude to the Observatory for sharing its experience on windshear alerting and indicated that the information could help his work in setting up similar systems in India.

Mr M.K. Bhatnagar (middle), Assistant Director Mr C.M. Shun (left) and Scientific Officer Miss Olivia Lee photographed while visiting the Terminal Doppler Weather Radar at Tai Lam Chung.

The Observatory invited to lecture at a windshear seminar in the Mainland

YEUNG King-kay

The Meteorological Division of the Air Traffic Management Bureau (ATMB), Civil Aviation Administration of China (CAAC) held the "Seminar on low-level windshear alerting technology" at Shenzhen between 20 and 23 October 2008. Experts from the Observatory were invited to lecture at the seminar, covering the introduction of the Terminal Doppler Weather Radar and Light Detection And Ranging (LIDAR) systems at the Hong Kong International Airport, and the in-house development of automatic windshear detection methods. At the same time, the mainland participants also introduced the windshear conditions and alerting methods at the airports in the various regions. The seminar facilitated experience sharing on windshear and turbulence alerting, and fostered cooperation and communication of both sides.

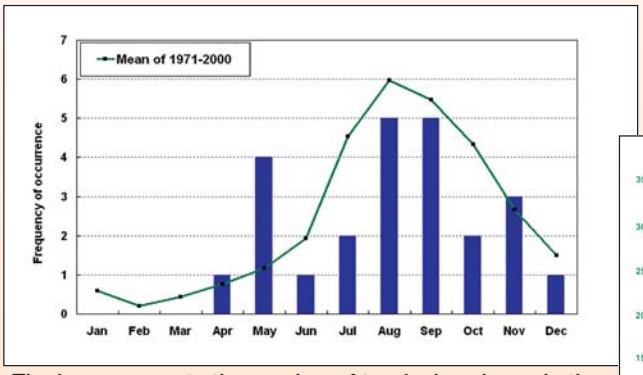
Director of Meteorological Division, ATMB, CAAC, Mr Chen Bao (middle) and Assistant Director, Hong Kong Observatory, Mr C.M. Shun on his right, shared experience with the seminar participants in windshear alerting.

A special typhoon season in 2008

LUI Wing-hong

Hong Kong experienced a very special typhoon season in 2008. Let us review some of the characteristics of this rainy and stormy typhoon season.

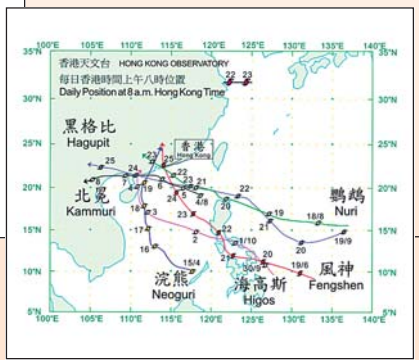
Firstly, the typhoon season started early on 17 April, and was the second earliest since 1946. The earliest record was set on 9 April 1967 when Tropical Storm Viola passed to the southeast of Hong Kong and the Observatory had to hoist the Standby Signal No. 1. Secondly, there were only 24 tropical cyclones over the western North Pacific and the South China Sea in 2008, less than the mean annual number of tropical cyclones for the years 1971-2000. Most of the tropical cyclones formed between May and September. The formation positions were relatively west with over 80% over the ocean to the west of 140 degrees East.



The bar represents the number of tropical cyclones in the western North Pacific and the South China Sea in each month of 2008. The long-term mean number is represented by the line.

Thirdly, while the number of tropical cyclones over the western North Pacific and the South China Sea was less than normal, as many as six of them affected Hong Kong and four even necessitated the issuance of the Number 8 Gale or Storm Signal, making the year with the most Number 8 Signals since 1999. Moreover, the centre of Typhoon Nuri even passed through the urban areas of Hong Kong, which was rare in recent years. During the period, the Observatory issued the Increasing Gale or Storm Signal Number 9, the first such signal since the passage of Typhoon Dujuan in September 2003. According to earlier studies, Hong Kong would be affected by more tropical cyclones when under the influence of La Niña, the phenomenon of widespread sea temperature becoming colder in the equatorial eastern Pacific. The phenomenon started to establish in mid-2007 and lasted until spring of 2008.

These six tropical cyclones exhibited the power of nature and brought a lot of rainfall to Hong Kong. Apart from causing the death of two people and more than 200 people injured, there were floodings, landslides, fallen trees and collapsed scaffoldings in many parts of Hong Kong. Air traffic in the Hong Kong International Airport was severely disrupted. Many flights were cancelled, delayed or diverted to other airports. Typhoon Hagupit even brought storm surges to Hong Kong, with a maximum sea level of 3.53 metres recorded at Quarry Bay, the highest since Typhoon Wanda in September 1962.



Tracks of the six tropical cyclones that affected Hong Kong in 2008.

Highlights of the Fourth WMO International Workshop on Monsoons

LEUNG Wai-hung

Mr Leung Wai Hung, Scientific Officer, introducing the Observatory's research results on monsoon to a workshop participant

The Fourth WMO International Workshop on Monsoons, organized by the World Meteorological Organization (WMO) and co-sponsored by the China Meteorological Administration, was held in Beijing from 20 to 25 October 2008. The workshop provided a forum for more than 130 meteorologists and researchers from different places of the world to discuss recent advances and forecasting issues related to monsoons.

World renowned experts in the field of monsoon were invited to give presentations at the workshop. Among others, Professor Lau Ngar-cheung of the Princeton University gave a presentation about the use of high resolution model to simulate successfully monsoon weather patterns, and Professor Ding Yihui of the National Climate Centre explained the "Mei-yu" weather system in East Asia. And studies by Dr Akio Kitoh from the Japan Meteorological Agency showed that the strength of winter monsoon would weaken towards the end of the 21th century under the effect of climate change.

I also presented a recent research paper entitled "Effect of El Niño-Southern Oscillation on Winter Monsoon affecting Hong Kong". Our research results showed that the winter monsoon affecting Hong Kong is often stronger during La Niña years and likely to be weaker during El Niño years.

Apart from gaining a better understanding of the recent advances in monsoon research and forecasting, participation in the workshop provided me with an excellent opportunity to meet and exchange ideas with meteorological experts around the world. This invaluable experience would help me better prepare for future challenges in my work.

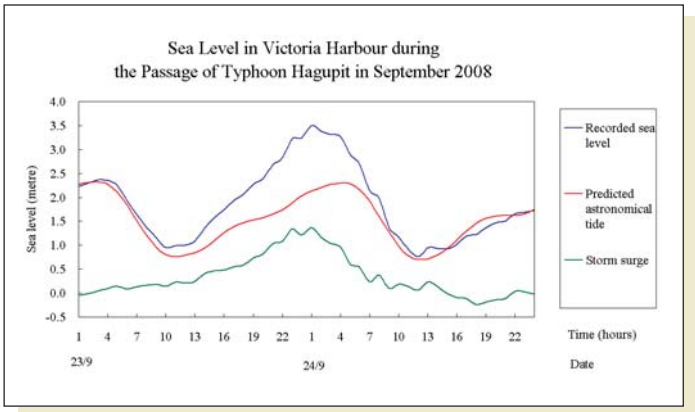
The opening ceremony of the Fourth International WMO Workshop on Monsoons

The Storm Surge Brought by Typhoon Hagupit

WONG Chi-fai

The sea-level rises and falls every day. The daily event called tide is of great interest to many people especially mariners and those on fishing sports. Sometimes, the sea-level can exceed the normal limits and behave extraordinarily. During the passage of a tropical cyclone, sea water may pile up in strong winds and the sea surface bulges under low atmospheric pressure. Such a rise of the sea-level is called storm surge. If storm surge occurs during high tide, the sea can rise to a high level and floods low-lying areas.

On the evening of 23 September 2008, Typhoon Hagupit skirted southwest of Hong Kong under a local No. 8 Gale or Storm Signal. The Observatory issued a warning on storm surge to alert members of the public on the threat of sea flooding over low-lying coastal areas. The storm surge rode on high tide. At around 1 a.m. on 24 September, the sea-level at Victoria Harbour reached a maximum of 3.53 metres, the highest level since Typhoon Wanda in 1962.



People living or working in low-lying areas should always be on the alert for high sea-level and pay heed to the warnings issued by the Observatory. As a safety precaution, people should move to a safe place on the high ground when necessary.

Influence of Tropical Cyclones on Visibility in Hong Kong

LEUNG Yin-kong, John; WU Man-chi

Reduction in visibility is mainly caused by the absorption and scattering of visible light by suspended particulates. In summer, although the visibility in Hong Kong is usually better than in other seasons, reduction in visibility often occurs when a tropical cyclone is situated in the vicinity of Taiwan. According to a study by the Observatory, the causes of reduced visibility are associated with the change in the source of air mass, the convergence of horizontal and vertical airstreams as well as the low wind speed (see Figure 1).

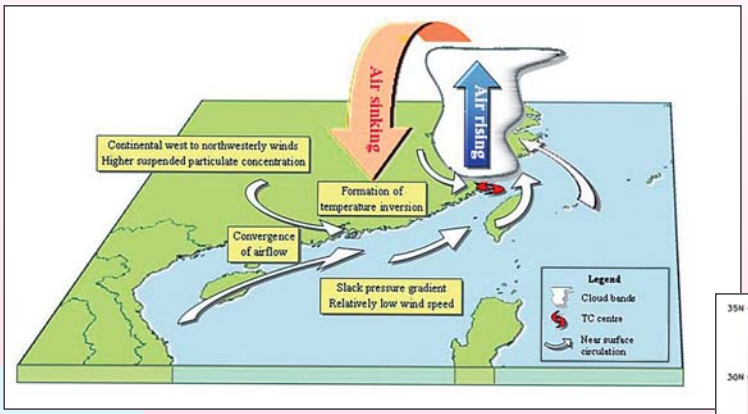


Figure 1 Conceptual model of the occurrence of reduced visibility in Hong Kong due to a tropical cyclone near Taiwan.

Take Typhoon Haitang in 2005 as an example, when Haitang was near Taiwan on 19 and 20 July, the visibility in Hong Kong dropped significantly. Figure 2 shows that on 14 July, when Haitang was still quite far away from Hong Kong, the air mass in Hong Kong was mainly from the relatively clean ocean. However, with Haitang gradually approaching on 19 and 20 July, the outer circulation of the typhoon brought along air to Hong Kong from the mainland where human activities were high. During the period when Haitang traversed Taiwan, the surface isobars near Hong Kong were slackened and hence the wind speed was low. The outer circulation of Haitang also caused the convergence of the continental (west to northwesterly) airstream and the maritime (west to southwesterly) airflow near Hong Kong. The air current near the centre of Haitang ascended while those relatively far away from Hong Kong descended. Low wind speed and the convergence of horizontal and vertical airstreams hindered the dispersal of suspended particulates and thus causing a drop in visibility.

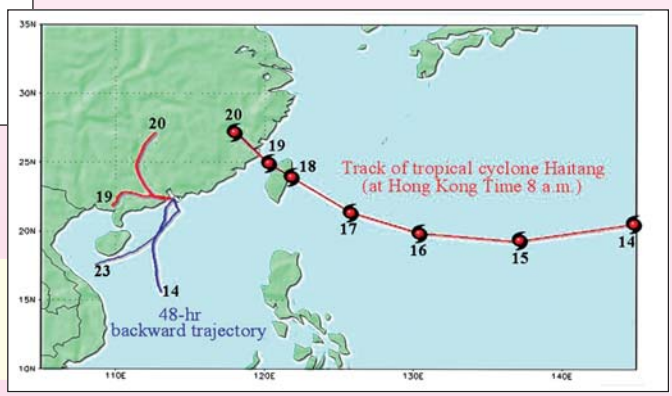


Figure 2 Track of typhoon Haitang and the backward trajectory of the air mass in Hong Kong during the period Haitang traversed Taiwan.

The Olympic and Paralympic Equestrian Events - Weather Observation Experience

CHENG Yat-leung

2008 was a year of expectation for the Chinese people. It was also the year that Beijing, China hosted the 2008 Olympic Games with great success.

Although Beijing and Hong Kong are thousands of kilometres apart, we were privileged to be a co-host city for the Beijing Olympics, staging the Equestrian Events. To facilitate the smooth running of the competitions, the Hong Kong Observatory provided the organizers with various types of weather information, including the venue-specific weather forecasts and weather observations.

Our team of four was appointed to provide real-time weather observations at the competition venues during the period from 25 July to 12 September 2008. Being a temporary setup, the on-site office at Sha Tin was affected by nearby light sources during night time and also by trees in the vicinity. To overcome this, weather observations were taken at another location some distance away from our temporary office but closer to the competition venue. Colleagues who were on duty during tropical cyclones passages also witnessed the full fury of the storms. Due to the exposure of the observation site, we experienced the rattling of our workplace in high winds and observed waves on the Shing Mun River.

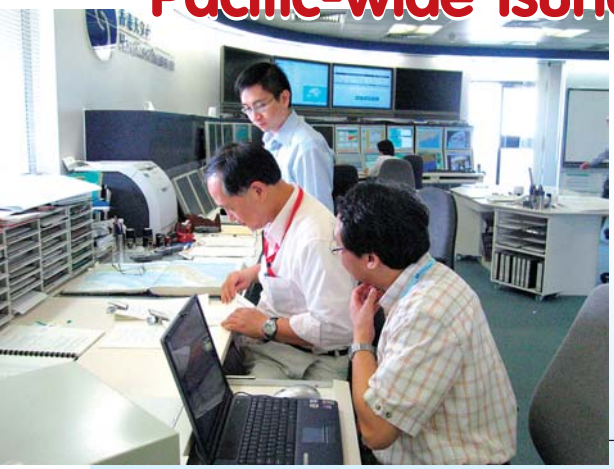
As we were on duty during the height of summer, the competition venues at both Sha Tin and Beas River were very hot during the day, but unlike the sultry urban areas, the weather there was relatively cool during the night. In addition, "light pollution" around the competition venues after midnight was less serious than in the urban areas and significantly more stars could be observed. As a city-dweller, this provided me with first hand experience of the impact of urbanization to the environment.

The smooth running and successful completion of the Beijing Olympics is the pride of every Chinese. I am delighted and honored to have contributed to the Events.

Observatory colleague taking weather observation at the Sha Tin Equestrian venue.

Pacific-wide Tsunami Exercise 2008 Completed Successfully

WOO Wang-chun



The Hong Kong Observatory together with 15 other government bureaux/departments participated in the 2008 Pacific-wide tsunami exercise organized by the UNESCO Intergovernmental Oceanographic Commission on 29 October 2008. A total of 34 countries around the Pacific Rim took part in the exercise. Both the notification mechanism of the Pacific Tsunami Warning and Mitigation System and Hong Kong's tsunami warning arrangement under the Contingency Plan on Natural Disasters were exercised and proved to be effective.

Colleagues of the Observatory conducting the tsunami exercise

Gained one more second

LAU Dick-shum, Dickson

Frictional forces exerted by the atmosphere and oceans are slowing down the Earth's rotation. At present, one second on the astronomical time scale based on the Earth's rate of rotation is slightly longer than that on the standard International Atomic Time (TAI) scale. The International Earth Rotation and Reference System Service (IERS) in Paris, France therefore adjusts the Coordinated Universal Time (UTC) by one second from time to time to reconcile the two time scales so that their difference is kept to less than 0.9 second. This is called the "Leap Second".

At 7:59:59a.m. on 1 January 2009 Hong Kong Time , a positive leap second was added to UTC. The Hong Kong standard time, which is exactly eight hours ahead of UTC, was delayed by one second accordingly. At that time, everyone gained one second. Although one second might sound a short period of time, leap seconds have been introduced 24 times since the adoption of UTC in 1972. We should make good use of the extra time given by nature.

The warmest October

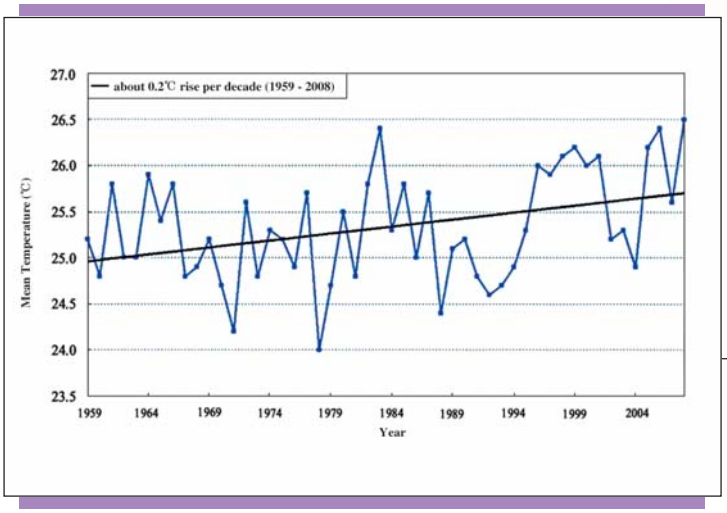
LI Kin-wai

According to my memory, the weather should start to be cool in October, and I am accustomed to replacing tees and shorts with woollies and overcoats in my wardrobe in this time of the year. However, my habit has changed in recent years. What has happened?

The monthly mean temperature of October 2008 recorded at the Hong Kong Observatory was 26.5 degrees, the warmest since records began in 1884. According to recent climatological records (1971 to 2000), there are on average about 6 days with minimum temperatures below 22 degrees in October. However, there was not a single day this October with temperature below 22 degrees.

From the perspective of large-scale weather situation, the main reason for the unusual warmth in Hong Kong in October 2008 was that the northeast monsoon was rather weak. Thus cool air failed to reach the south China coastal areas. This record-breaking temperature reflects to some extent the long-term warming trend in Hong Kong. According to the records of the Hong Kong Observatory from 1959 to 2008, the monthly mean October temperatures of the past 50 years showed a long-term rising trend of about 0.2 degrees per decade. It is also of interest to note that half of the 10 warmest Octobers occurred in the past decade.

It is a critical time for us to do something now to get back the normal cool feeling in autumns.



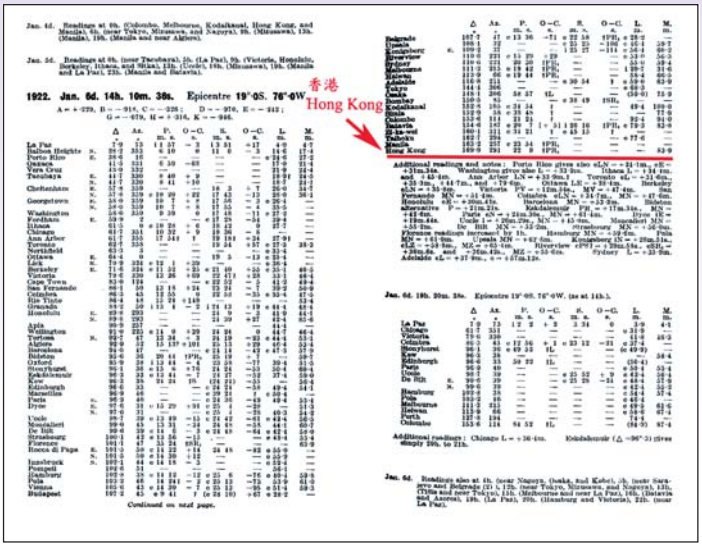
Trend of the monthly mean temperature of October recorded at the Hong Kong Observatory Headquarters in the past 50 years (1959-2008)

Our Partners

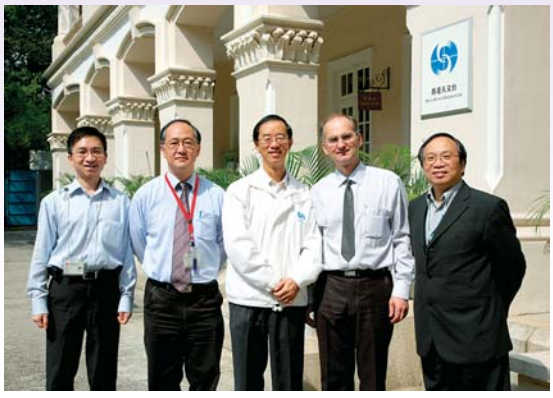
Dr Dmitry A Storchak, Director of International Seismological Centre visits the Observatory

WOO Wang-chun

Dr Dmitry A Storchak, Director of International Seismological Centre (ISC), visited the Hong Kong Observatory on 23 October 2008. He briefed Observatory officers on the work of ISC and toured the earthquake monitoring facilities of the Observatory. Dr Storchak observed that the ISC (formerly called the International Seismological Summary or ISS) and the Observatory had a long history of cooperation as one of its former directors offered expert advice to the then Director of the Observatory on the setting up of the first seismograph at the Observatory in 1921. Since then, the Observatory has been providing seismic data to the ISS and later ISC, and seismic data from the Observatory were published in the ISS's earthquake analysis reports as early as 1922 (see reprint at the bottom). Dr Storchak looked forward to closer cooperation between the two organizations in enhancing seismic monitoring activities in the region.



Seismic records of the Observatory appearing on International Seismological Summary 1922



Dr Dmitry A Storchak (2nd right) and Observatory personnel

Hong Kong Co-WIN celebrates first anniversary

TSE Wai-ming

On 5 November 2008, the Hong Kong Observatory, the Department of Applied Physics of the Hong Kong Polytechnic University and the Hong Kong Joint-school Meteorological Association celebrated the first anniversary of the "Hong Kong Community Weather Information Network" (HK Co-WIN). It also marked the official launch of the Community UV (Ultraviolet) Information Network on the Internet.

Since the launch of the UV Index recorded at the Observatory's King's Park Meteorological Station, it was found that the public had great interest in UV information. The Community UV Information Network can meet the public demand by providing UV information at more places in Hong Kong.

Establishment of the HK Co-WIN allows the Observatory to work more closely with the community, arouse students' interests in science and enhance their capability in conducting investigative studies. During the ceremony, students reported the results of the experiments they carried out using the UV equipment installed at their schools and shared their experience with the participants.

Please visit the HK Co-WIN website http://weather.ap.polyu.edu.hk/index.php for more. The website is also linked to the Observatory website at http://www.weather.gov.hk/contente.htm.

Students reporting their studies on UV using equipment installed at their school.

Typhoon Committee 40th Anniversary

Editorial board

Under the direction of Dr Angelina Au, the Music Office Youth Choir performed the song "Typhoon! Typhoon!" in perfection

When the Typhoon committee was established in 1968 under the joint auspices of World Meteorological Organization (WMO) and United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), Hong Kong was one of the founding members. Forty years later, the membership has increased to 14. The Typhoon Committee aims to promote and coordinate efforts to minimize tropical cyclone damage, to recommend plans and measures for improvement of damage prevention facilities, and to promote training and research programmes. The Committee also promotes closer integration of meteorology, hydrology, and disaster prevention and preparedness for greater effectiveness at the national level.

To celebrate its 40th Anniversary in 2008, the Typhoon Committee organized a song composition contest. The panel of judges selected the song "Typhoon! Typhoon!" as the Committee Song. The lyrics of "Typhoon! Typhoon!" was the work of Mr Lam Chiu-ying, Director of the Hong Kong Observatory, and the score was that of Mr Lam Fung, a Hong Kong composer. The Hong Kong Observatory invited the Music Office Youth Choir of the Leisure and Cultural Services Department to sing the song, under the direction of Dr Angelina Au, Senior Music Officer, for recording at the Hong Kong Cultural Centre. Members of the choir braved the Amber Rainstorm on the night of 5 October to get to the recording theatre at the Cultural Centre. At the end of the choir's performance that was filled with enthusiasm and vitality, there were a cry of bravo and spontaneous applause from Mr and Mrs Lam, showing their approval of the effort of the young ladies and gentlemen of the choir.

Friends of the Observatory visited the Airport Meteorological Office

Editorial board

Dr Li Ping-wah (right) explained the operation of the AMO to Friends of the Observatory.

The Hong Kong Observatory organizes visits for members of the "Friends of the Observatory" regularly to enhance their understanding of the work of the Observatory. On 10 October 2008, a visit to the Airport Meteorological Office (AMO) was arranged. As the AMO is inside the restricted area of the Hong Kong International Airport and hence not open to the public, the event attracted more than one hundred applications. 14 lucky members were invited to take part in the tour after drawing lots. During the visit, Dr. Li Ping-wah, scientific officer, explained in details to the visitors the works at AMO and the operation of different cutting-edge instruments. Every one treasured the valuable opportunity and asked a lot questions and took many photos during the visit.

Observatory Co-organised "Mountaineering Safety Promotion Day"

TAI Sai-choi

Scientific Officer Mr Tai Sai-choi giving a talk on weather and mountaineering safety.

Visitors queuing for the game at the Observatory's booth

To enhance public awareness of mountaineering safety, the Civil Aid Service joined hands with 14 government departments and NGOs to hold the "Mountaineering Safety Promotion Day" on 25-26 October (Saturday and Sunday). As one of the co-organisers, the Observatory set up a booth to introduce weather related to mountaineering and hiking, and gave three talks on mountaineering and weather. More than ten "Friends of Observatory" volunteers helped man the booth and enjoyed a happy day with the visitors.

The Director of the Hong Kong Observatory (5th left) officiated at the opening ceremony of "Mountaineering Safety Promotion Day"

The Observatory supports Hong Kong Polytechnic University's General Education Course - "Climate and the Environment"

TAM Kwong-hung

Between September and November 2008, the Hong Kong Observatory, in collaboration with the Hong Kong Polytechnic University's Applied Physics Department, organized a general education course entitled "Climate and the Environment" for students of the university. Apart from introducing various weather phenomena and how weather and environmental elements are measured, the course also included talks delivered by Dr Lee Tsz-cheung, Scientific Officer of the Observatory, on topics related to climate change. These talks include hot topics such as greenhouse effect, global warming and urban heat island effect due to urbanization, as well as the Observatory's work in weather monitoring and forecasting. Two visits were also arranged for the students, one to Ho Koon Nature Education cum Astronomical Centre for its renewable energy facilities, and the other to the Hong Kong Meteorological Centre at the Observatory Headquarters where students were briefed about the work of the forecaster in weather forecasting and monitoring of inclement weather.

Scientific officer Dr Li Ping-wa explaining the weather forecasting works to students

Technical Seminar on Marine Hazards Forecasting

NG Moon-chiu

The National Marine Environment Forecast Center of the State Oceanic Administration and the Hong Kong Observatory jointly held a technical seminar on marine hazards forecasting on 4-5 December 2008 in Beijing. Topics discussed included sea wave, tropical cyclone, storm surge, tsunami and application of numerical modelling. The seminar strengthened the ties between the two organizations and facilitated the advancement of forecasting techniques.

The technical seminar on marine hazards forecasting

Anemometer Design Competition

YEUNG Siu-wai

In the workshop held in November 2008, students learned how to make use of electronic devices to count and record wind direction and speed.

The Observatory and the Faculty of Engineering of the University of Hong Kong jointly organised an anemometer design competition for Hong Kong's primary and secondary school students. The competition is to promote realization of novel designs and innovative ideas, and to enrich the student's understanding of meteorological measurement. More than 50 teams have registered for the competition.

Various activities including lectures, visits and workshops have been conducted by the Observatory and the University of Hong Kong for this competition. The creativity of the design, accuracy and appearance of the wind measurement device are the main judging criteria. All the activities of the competition will continue until July 2009. For updated information and details of the competition, please visit http://www.cs.hku.hk/~wind/English/index.html.

Attachment Programme for Forecasters from Malaysia and Viet Nam

CHIU Hung-yu

Mr Chiu Hung-yu (1st left) of the Observatory introducing operations of the equipment to the foreign forecasters.

Two forecasters from the Malaysian Meteorological Department and three from the National Hydro-Meteorological Service of Viet Nam attended an attachment programme on typhoon and severe weather forecasting at the Hong Kong Observatory between mid September and early October 2008.

The Observatory keeps close watch on the weather and issues appropriate forecasts and warnings to alert members of the public when Hong Kong is threatened by tropical cyclones and other severe weather. The Observatory also developed and operates the "Severe Weather Information Centre" web site (http://severe.worldweather.org/) on behalf of the World Meteorological Organization of the United Nations as a portal of the latest warnings of severe weather in different regions of the world.

The participants commended the Observatory for its highly professional weather services and remarked that the experience was valuable.

Scientific Advisor Professor Lau Ngar-cheung visits the Observatory

LEE Tsz-cheung

The scientific advisor of the Hong Kong Observatory, Professor Lau Ngar-cheung, visited the Observatory on 3 October 2008 and delivered a lecture entitled "Simulation of Asian monsoon weather and climate using a high-resolution global climate model".

Professor Lau has been appointed a scientific advisor of the Hong Kong Observatory for years. He is a renowned climate researcher and a Professor of the Geophysical Fluid Dynamics Laboratory (GFDL) of Princeton University. He has been actively involved in atmospheric general circulation research with over 100 scientific publications.

In the lecture, Professor Lau presented the use of GDFL's global climate model in simulating Asian monsoon weather systems and explained some of the related analyses and experimental results. Professor Lau also discussed with the Observatory's colleagues the future development of climate research.

Colleagues of the Observatory benefited greatly from the lecture and interflow and gained a more in-depth understanding of the future development of global climate model.

Assistant Director of the Hong Kong Observatory Dr Wong Ming-chung presented a souvenir to Professor Lau Ngar-cheung.

FRIENDLY VISITS

Assistant Director Dr Wong Ming-chung presented souvenir to Dr Ren Guoyu (right), the Chief Expert at the National Climate Center, China Meteorological Administration when he visited the Observatory on 23 September.

Study class of Economic Management for Leading Cadres of Liaison Office of the Central People's Government in HKSAR visited the Observatory on 12 September.

Chairman of the Southern District Council Ms Mar Yuet-har (5th right, front row) with other council members and District Officer of Southern District Office Mr Alex Wong (4th left, front row) visited the Observatory on 17 November.

Director of the Observatory Mr Lam Chiu-ying (right) welcoming Mrs Avril Doyle, Member of the European Parliament (MET) on 13 August.

Assistant Director Dr Lee Boon-ying (left) presented a souvenir to Dr Ken Knapp of Remote Sensing and Applications Division, National Climatic Data Center, NOAA USA when he visited the Observatory on 25 September.

Delegation of the Commissioner's Office of China's Foreign Ministry in the HKSAR led by the Deputy Commissioner Mr Zhan Yongxin (6th right) visited the Observatory on 26 October.

FRIENDLY VISITS

Director of the Observatory Mr Lam Chiu-ying (right) introduced the book "Weathering the Storm: Hong Kong Observatory and Social Development" to Professor Leo Jeffcott, FEI Veterinary Delegate, when he visited the Observatory on 8 September.

Director of the Observatory Mr Lam Chiu-ying (5th left, front row) taking photos with a delegation of the Emergency Management Office of Shanghai led by the Officer Mr Gai Guoping (6th left, front row) when they visited the Observatory on 13 November.

Senior Scientific Officer Ms Lam Ching-chi explaining the work of the forecasting office to staff of the Heliport Management Hong Kong Limited when they visited the Observatory on 25 October.

Dr Li Ping-wah of the Observatory delivered a meteorological lecture to CAD's officers in November as part of the training course for Air Traffic Controllers. He explained in details the various weather phenomena relevant to air traffic control operations and arranged a guided tour to the Airport Meteorological Office afterwards.

The chief executive of Civic Exchange, Ms Christine Loh Kung-wai (2nd left) visited the Observatory on 23 December, taking photos with the Director of the Observatory Mr Lam Chiu-ying (3rd left).

Scientific Advisor of Hong Kong Observatory Dr W Timothy LIU (1st left) visited the Observatory and discussed with Senior Scientific Officer Dr Cheng Cho-ming (2nd left) on 28 November.

Swiss Environmental Expedition SOS

Scout Association of Hong Kong New Territories East Region

The expedition team pictured with the Observatory's Climate Change Educational Package at the receding glacier.

Switzerland is ranked the World's greenest country. For this reason, a team of 21 scouts from the New Territories East Region of Scout Association of Hong Kong visited Switzerland in July - August 2008 to conduct environmental study with particular interest in the impact of global warming on glaciers. The expedition was entitled 'Journey to Switzerland - SOS', where 'SOS' stands for 'Scout On-journey-to Switzerland' and 'Save Our Society'. It aims to show our concern on global warming, and raising public interests in the issues of carbon emission and ways to environmental-friendly lifestyles.

The scouts stayed at the Kendersteg International Scout Centre as base and visited various places in Switzerland to learn about what the Swiss had done in protecting the environment. They also visited the Europe Weather Station at the top of Jungfraujoch to learn about the work being done at the station to monitor the ambient pollutants and meteorological parameters. The Scouts also visited the Aletsch Glacier to witness the receding of glaciers.

The Hong Kong Observatory has rendered unreserved support to the expedition, including touring the team to its headquarters and giving them a talk on the causes and consequences of climate change. Special thanks are due to Mr Lam Chiu-ying JP, Director of the Hong Kong Observatory, who was the advisor of the expedition and officiated at the expedition team's flag-presentation ceremony on 5 July 2008. He was also our honoured guest speaker of the seminar held after the ceremony, which attracted an audience of nearly 200.

People

Assistant Director Dr. B.Y. Lee drafted Strategic Plan for the World Meteorological Organization

Editorial board

Dr B.Y. Lee, Assistant Director, visited the World Meteorological Organization (WMO) during 1 to 10 September 2008 and worked as a consultant in the preparation of a draft Strategic Plan for the Regional Association (RA) II (Asia) for the next few years. The task was to align the Plan with the results-based management strategies recently promulgated by WMO. RA II was the first among all WMO's six Regional Associations in respect of the above task. The Plan will be considered for implementation by a RA II session near the end of 2008.

Dr B.Y. Lee pictured with Dr T. Toya (Left), Regional Director for Asia and the South-west Pacific, WMO, at the WMO Headquarters.

New Office for Radar and Satellite Meteorology Division

LI Ho-yin

Through the efforts of our colleagues, the electronic laboratory of the Radar and Satellite Meteorology Division moved smoothly to the 6th floor of the Observatory's Centenary Building in September 2008. The happy "reunion" of the laboratory and the other integral parts of the Division facilitates a closer cooperation between the colleagues involved. A small celebration was held at the new office on 21 October 2008.

Colleagues of the electronic laboratory pictured in front of the new office enjoyed the snack during the celebration party.

Reaching out to South America and Africa

Senior Scentific Officer Song Man-kuen giving lecture to South American meteorologists

SONG Man-kuen, Sandy

At the invitation of the World Meteorological Organization (WMO), I travelled far to Brazil and South Africa to deliver a series of lectures at two training workshops in September and November 2008 respectively. 53 meteorologists from 21 South American and African countries attended the workshops. The lectures focused on the important role of public weather services in support of disaster prevention and mitigation, especially on the communication and coordination between meteorological services and disaster management stakeholders. The workshops were organized under the Public Weather Services (PWS) Programme of the WMO (http://www.wmo.int/pages/prog/amp/pwsp/eventsworkshops_en.htm).

After the lecture in Brazil, Mr Jorge D. Chira La Rosa from Peru praised the successful experience of the Observatory in public weather services, which sets a role model for the meteorological community worldwide. The lectures would help him better coordinate disaster management activities. Ms Emma Giada Matschinske from Brazil, the local organizer of the workshop, complimented me on the lecture about media interviewing techniques, saying that the information was extremely useful.

After the lecture in South Africa, Mr Prem Goolaup of Mauritius paid tribute to my excellent presentation, which provided them with useful insights on how to further improve the public weather services in their country. The workshop stimulated enthusiastic responses and sharing of experience among the lecturers and participants.

My lecturing for South American and African countries demonstrated the international recognition of the Observatory's expertise in public weather services, as well as the continual support of the Observatory for the developing world in enhancing public weather services in the international meteorological community.

Song Man-kuen (front right) together with African participants.

Observatory officer attends Taiwan academic conference for the first time

LEE Lap-shun

In October last year, I attended the East Asia Regional Ultraviolet (UV) Symposium on Monitoring and Health Study in Taiwan. When the aircraft landed in the Taiwan Taoyuan Airport, I could not help getting excited about this special historical moment because this was the first time the Observatory sent an officer to Taiwan to attend an academic conference.

The conference was initiated and organized by the Taiwan University and the Environmental Protection Administration of Taiwan. There were more than 50 participants, including academics and those specialized in UV from Japan, Republic of Korea, Hong Kong and Taiwan. In the conference, the technology of UV monitoring, the methodology of UV forecasting, and topics such as the health effects of UV were discussed. On behalf of the Hong Kong Observatory, I presented a paper on how the Observatory monitored and forecast UV and how good the performance was. I also took this opportunity to visit the Environmental Protection Administration of Taiwan and understand more about their work on UV.

The conference deepened my understanding on UV monitoring and forecasting. It will be of much help to the enhancement of our UV service in the future.

Mr Lee Lap-shun (1st left, front row), Scientific Officer of the Hong Kong Observatory, and the other symposium participants at the Taiwan University

Staff Promotion

Mr Siu received the appointment letter of Work Supervisor II from the Director Mr Lam Chiu-ying.

Mr Siu On-pong was promoted to Work Supervisor II on 25 November 2008 after serving the Observatory diligently for more than 15 years.

Best TV Weather Programme Presenter

(3rd Quarter, 2008)
Mr NG Ping-wing

(4th Quarter, 2008)
Mr YEUNG Hon-yin

Training course for new Scientific Assistant recruits

HUI Tai-wai

The Hong Kong Observatory was reinforced with new energy as nine young newly recruited Student Scientific Assistants reported duties early this winter. They attended a 10-week professional training course covering basic meteorology, meteorological instruments, weather observation techniques, statistics, information technology, practice of disseminating weather messages, techniques of handling telephone enquiries, Putonghua, etc. The trainees will start contributing to the daily operations of the Observatory upon successful completion of the course.

A group photo of instructors (front row, and newly recruited Student Scientific Assistants participating in the training course (middle and back rows).

Observatory Staff Receiving Praise

Staff of the Observatory who received words of thanks and commendation from the public or organizations during September-December 2008:

Mr LAM Chiu-ying	Director
Mr WAI Hon-gor	Assistant Director
Mr LEUNG Wing-mo	Senior Scientific Officer
Mrs Hilda LAM	Senior Scientific Officer
Mr TAI Sai-choi	Scientific Officer
Mr LEUNG Yin-kong	Scientific Officer
Dr YEUNG Kwok-chung	Scientific Officer
Miss NG Yuk-yam	Assistant Clerical Officer

New Docents for the Observatory Public Tours

TAI Sai-choi

Attentive students

Conscientious teacher

The Observatory has been holding tours of its headquarters for the public on Saturday afternoons since 2004. Guided by trained "Friends of the Observatory" volunteers, the visitors are introduced the long history of the Observatory, the advanced meteorological instruments, the Central Forecasting Office, and the rare mini-forest in the heart of the city. The guided tour is not only fun for a family day, it also serves to promote public awareness of the Observatory's weather services and disaster prevention. It remains a popular activity since its inception and more than 1,500 visitors were received in 2008.

To receive such a large crowd of visitors, it is essential to maintain a full team of enthusiastic voluntary docents. Most volunteers, however, are at work or in school and therefore difficult to persistently spare time for the tours. We are pleased that there are still some twenty active docents in 2008.

To add new blood to the team, a recruitment exercise was inaugurated in August 2008. The advertisement was met with ardent responses. More than 150 people applied, mostly with bachelor's or even master's degrees. Through stringent interviews, around thirty elites were selected to attend 12 hours of training courses and finally nearly all of them passed the exams. They will become fully qualified docents after doubling-up with experienced docents in the next couple of months. Let's bid them welcome joining the team, to serve whole-heartedly with what they've learnt.

A senior docent, Roger Kwan (middle) explaining the ecology of the mini-forest in the Observatory headquarters.

2008 Safe Driving Award

Congratulations to Mr Chan Chak-to, Motor Driver, who has won the Safe Driving Award this year presented by the Government Logistics Department. This award is a recognition to his meritorious driving performance in the past ten years.

Motor Driver of the Hong Kong Observatory Mr Chan Chak-to (1st right, back row) won the Safe Driving Award.

Keep going Weatherman

Editorial board

Young TV weather programme hosts Woo Wang-chun (right) and Wong Tak-kan (left) pictured with veteran Ng Ping-wing (middle).

Mr Ng Ping-wing, Senior Scientific Officer, and the Observatory TV personality with his trademark smile and mustache, said good bye to the screen after hosting TV weather programmes for more than a decade. Over the years, Mr Ng received numerous compliments and awards. He bid farewell to the audience in his last TV weather programme on 22 October 2008. While no doubt the audience would miss his mustache and smile, he would spend more of his time to contribute to other services of the Observatory.

While losing a great presenter, two new members have joined the presenter team. After months of training, the young Scientific Officer, Mr Woo Wang-chun and the young Experimental Officer, Mr Wong Tak-kan made their debuts in early November 2008, hosting evening weather programmes for Cable TV and TVBN. These programmes are available at http://www.weather.gov.hk/video/video.shtml. We hope you enjoy watching their performance.

Happy Business

Senior psychologist lecturing on stress management

CHIU Hung-yu

Mr Eddie Li, Senior Clinical Psychologist, HKPF, lecturing on stress management at the Observatory.

The Observatory holds a management forum every month to promote sharing of insight and experience in management. The speaker this October was Mr Li Kam-wah, Eddie, Senior Clinical Psychologist of the Hong Kong Police Force. On the subject of stress management, Mr Li elaborated on the responsibility on the part of the corporation as well as the individual. It was a most stimulating and thought-provoking talk, with zealous response from the floor during the Q&A session.

Visit to the OFTA's Radio Monitoring Unit

CHIU Hung-yu

The Happy Business Working Group had the pleasure of arranging a visit for colleagues to the Radio Monitoring Unit (MRU) of the Office of the Telecommunications Authority (OFTA) on 25 November 2008. The MRU undertakes radio monitoring and interference investigation. The visit was welcomed by colleagues and all places were filled within the day the notice was issued.

The weather was fine on the day of the visit. The experts of the MRU introduced the work of the Unit in detail, explained how to monitor radio transmission spectrum and determine the position of the radio interference source. They also demonstrated the operations of the facilities of their "Radio Laboratory" and the "Radio Monitoring and Interference Investigation Teams". Colleagues were keen to ask questions and appreciated very much the professional contributions of the MRU.

The visit broadened our views and enabled us to understand the work and operations of the MRU. It also enriched our knowledge on information and communication science. As the service of the Observatory relies a lot on radio communication, the visit is most beneficial to our colleagues.

Photo of Observatory colleagues, the officer-in-charge and experts of the MRU in front of the mobile radio monitoring vehicle

香港天文台
HONG KONG OBSERVATORY

Mailing Address

HKO's 125th anniversary commemorative watches

LEI Chi-lap

To celebrate the HKO's 125th anniversary, commemorative watches were produced and presented to the guests, collaborative partners, colleagues and retirees of HKO as a token of gratitude and appreciation of their efforts devoted to HKO. What makes the watches so special is that the face of the watch has adopted the winning design from the "Friends of Observatory - 125th HKO anniversary logo competition".

The watch means a lot to the colleagues because the HKO has been providing time service to the community for more than hundred years.

The HKO 125th anniversary commemorative watch

In the early days, the local time was determined by astronomical observations at the Observatory using a 6-inch Lee Equatorial and a 3-inch Transit Circle. The time signals were then indicated to the people by dropping a 6-feet diameter time ball from a mast in front of the Marine Police Station at Tsim Sha Tsui. Time passed and the time service is now based on the Caesium beam atomic clock. The signal can also be disseminated to the public in several real-time channels like internet, telephone and radio broadcast.

Confucius Kong Zi has once said, "Time is like a river that never stops running, no matter day or night". Time, is so incontrollable that even the famous philosopher would puzzle about. HKO, however, is still standing firmly in the flow of time to strike for the excellence. Although we are not capable of freezing the time, we promise to serve the public with our greatest effort and to write a footnote in the history of HKO. This is the true meaning of the commemorative watch.

Weathering the Storms - Evolution of the Hong Kong Observatory

Editorial board

To celebrate the 125th anniversary of the Hong Kong Observatory, an exhibition "Hong Kong Observatory - Weathering the Storms for 125 Years" was staged at the Hong Kong Museum of History on 23 July - 22 September 2008. The exhibition, which introduced how the Observatory has evolved in the past century to cope with societal changes and reviewed the natural disasters that have devastated Hong Kong, attracted more than 30 thousands visitors. To take the opportunity to encourage staff members to know more about the history of the Observatory, the Director, Mr Lam Chiu-ying, personally conducted a guided tour of the exhibition for several colleagues in September 2008.

In conjunction with the exhibition, Mr Lam also gave a public lecture "Weathering the Storms-Evolution of the Hong Kong Observatory" at the Lecture Hall of the Hong Kong Museum of History on 23 August 2008. The lecture attracted about 160 citizens. In his typical style, Mr Lam mixed history with pleasantry to explain how the Observatory as a scientific government department has evolved to cope with societal changes in the past century. He also unfolded interesting stories of key people in the history of the Observatory. The talk was well received with bursts of applause and laughter from the audience.

The Director of Hong Kong Observatory, Mr Lam Chiu-ying, explaining the evolution of the Observatory.