

WEATHER ON WINGS



香港天文台
HONG KONG OBSERVATORY

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Hong Kong Observatory and Korea Meteorological Administration Sign MOU

CHAN Pak-wai



▲ The Director (left) pictured with Mr Cho Seok Joon after the signing of the MOU.

On 30 May, Mr SHUN Chi-ming, the Director of the Hong Kong Observatory (HKO) and Mr Cho Seok Joon, the Administrator of the Korea Meteorological Administration (KMA), signed a Memorandum of Understanding (MOU) on co-operation between the two organizations in Seoul, Republic of Korea. This is the first MOU that HKO establishes with an overseas meteorological service in the Asia Pacific region.

HKO has been collaborating with KMA over the years in various areas, including aviation weather services and public weather service support for developing countries. In recent years, they jointly co-ordinate a pilot project of the World

Meteorological Organization to support meteorological services to develop numerical weather prediction (NWP) capability. The signing of the MOU signifies further strengthening of the collaboration between the two organizations.

"I believe that with our advanced meteorological technologies, the KMA and HKO can co-operate further and create a synergy effect in many fields including NWP, climate change, satellite data analysis, aviation meteorology and so on", said Mr Cho.

Mr SHUN said: "The signing of the MOU marks a new chapter in the history of HKO, which will be celebrating its 130th anniversary next year. I sincerely hope that together we will be able to foster further development of weather services to reduce the impact of severe weather and climate change to the society in the years to come."

Both sides look forward to contributing to the regional and global development of weather services under the scope of co-operation of the MOU.

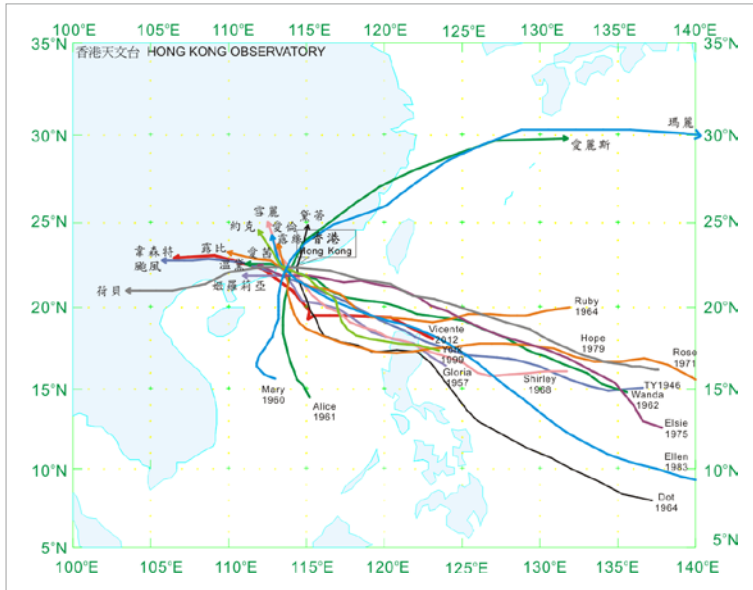
Please visit <http://www.weather.gov.hk/dhkovoice/speech20120531.pdf> for the full text of the Director's speech at the signing ceremony of the MOU.

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Severe Typhoon Vicente

LUI Wing-hong



▲ Figure 1: Tracks of the tropical cyclones that necessitated the issuance of the Hurricane Signal No.10 in Hong Kong since 1946.

The Observatory issued the Hurricane Signal No.10 in the small hours on 24 July during the passage of Severe Typhoon Vicente. This was the first Signal No.10 in Hong Kong since Typhoon York 13 years ago in September 1999.

During the past 67 years (1946-2012) after the Second World War, there were 14 tropical cyclones that necessitated the issuance of the Hurricane Signal No.10 in Hong Kong. The tracks of these tropical cyclones are shown in Figure 1.

Due to limited availability of meteorological data in the old days, records of tropical cyclones before 1950s were not used for compilation of statistics. Out of the 13 tropical cyclones that required the issuance of Signal No.10 since the 1950s, 4 were super typhoons (maximum sustained winds of 185 km/h or above), 3 were severe typhoons (maximum sustained winds of 150-184 km/h) and 6 of them were typhoons (maximum sustained winds of 118-149 km/h) during the periods when the Signal No.8 or above were in force. According to Table 1, Vicente was the farthest tropical cyclone that had necessitated the issuance of the Signal No. 10 since 1946. A comparison of the maximum gust and minimum pressure recorded during the passage of Vicente and the previous tropical cyclones is shown in Table 2.

Vicente exhibited a rather unusual track over the South China Sea. It began with a westward track, stalling for about 15 hours some 350 km to the south-southeast of Hong Kong on 22 and 23 July before moving northwestwards towards the south China coast. It also underwent rapid intensification in the 48 hours prior to its closest approach to Hong Kong, strengthening from a tropical storm to a severe typhoon. Such rapid intensification near the territory was unprecedented among the above-mentioned tropical cyclones.

Table 1: Comparison of Severe Typhoon Vicente with the previous tropical cyclones which necessitated the issuance of the Signal No. 10

Year	Name of tropical cyclone	Intensity of tropical cyclone during the period when the Signal No. 8 ^② or higher was issued			Nearest approach to the Observatory	
		Category	Maximum sustained wind speed near the centre (km/h)	Minimum mean sea level pressure near the centre (hPa)	Direction	Distance (km)
1946 ^①	--	--	--	--	S	70
1957	Gloria	Severe Typhoon	155	980	SW	55
1960	Mary	Typhoon	140	970	WNW	10
1961	Alice	Typhoon	120	980	Passing over the Observatory	
1962	Wanda	Super Typhoon	185	950	SSW	20
1964	Ruby	Super Typhoon	195	960	SW	30
1964	Dot	Typhoon	145	975	E	35
1968	Shirley	Typhoon	145	965	Passing over the Observatory	
1971	Rose	Super Typhoon	185	960	WSW	20
1975	Elsie	Typhoon	140	985	S	50
1979	Hope	Super Typhoon	205	940	NNW	10
1983	Ellen	Severe Typhoon	165	960	SW	45
1999	York	Typhoon	130	965	SSW	20
2012	Vicente	Severe Typhoon	155	950	SW	100

① No name and intensity information available

② Prior to 1973, the signals No. 5, 6, 7, and 8 all warned about gale or storm force winds

Table 2: Maximum gusts and minimum mean sea level pressure recorded in Hong Kong during the passage of Vicente and the previous tropical cyclones that necessitated the issuance of the Signal No. 10 in Hong Kong

Year	Name of tropical cyclone	Maximum gust peak speed (km/h)					Instantaneous minimum mean sea level pressure at the Observatory (hPa)
		Kai Tak	Waglan Island	Cheung Chau	Tate's Cairn	Chek Lap Kok	
1946 ^①	--	--	--	--	--	--	985.7 ^②
1957	Gloria	158	185	--	--	--	984.3
1960	Mary	164	194	--	--	--	973.8
1961	Alice	139	128	135	--	--	981.1
1962	Wanda	229	216	232	284	--	953.2
1964	Ruby	203	230	216	268	--	968.2
1964	Dot	198	184	205	220	--	977.3
1968	Shirley	151	209	167	203	--	968.6
1971	Rose	211	189	194	221	--	982.8
1975	Elsie	140	176	158	180	--	996.2
1979	Hope	182	198	185	229	205	961.6
1983	Ellen	203	227	238	218	--	983.1
1999	York	142	234	182	--	113	976.1
2012	Vicente	135	149	184	166	133	986.0

① No name and intensity information available

② Minimum hourly

A Celebration Gathering with Volunteers of the Friends of the Observatory

Editorial Board

A celebration was held in the evening of 11 May to thank volunteers of the Friends of the Observatory for their assistance rendered during the 2012 Open Day. Awards of Outstanding Volunteers and Docents were also presented. Mr SHUN Chi-ming, the Director, Mrs Hilda LAM KWONG Si-lin, the Assistant Director and more than 40 volunteers joined the happy occasion.



▲ The volunteers of "Friends of the Observatory" photographed with the Director (6th left, front row).

Launch of New Versions of "MyObservatory"

CHENG Yuen-chung



To enhance weather services for people on the move, the Observatory has launched a new version 2.2 of "MyObservatory" on the Android platform. The new version features two new services, provision of "Special Weather Tips" and display of two weather icons.

These two new services were first introduced on the Observatory's website in March. When the Observatory expects severe weather to affect Hong Kong, the "Special Weather Tips" will be provided to enable the public to take prompt precautions. When significant change in weather is expected within the forecast period, the Observatory will issue two weather icons to enable members of the public to get hold of the weather changes more easily and clearly. Only one weather icon will be displayed if no significant weather change is expected. Meanwhile, the new version also comes with pamphlets on the Observatory's services for viewing on Android tablet devices. The personalized weather service "MyObservatory" has been well-received since its launch. The total number of page views as at July 2012 has exceeded 3.3 billion.

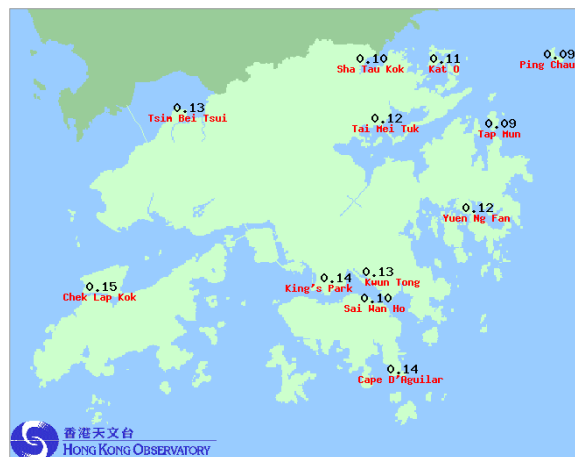
In addition, a new version 3.3 has also been launched for the "MyObservatory" on the iPhone/iPad platform. The new version incorporates weather charts in the past 30 days and optimizes the mobile app.

Please refer to http://www.hko.gov.hk/myobservatory_e.htm for details about "MyObservatory".

New Ambient Gamma Radiation Information at Chek Lap Kok and Cape D'Aguiar (Hok Tsui)

TAM Kwong-hung

The Observatory has set up two radiation monitoring stations at Chek Lap Kok on Lantau Island and Cape D'Aguiar (Hok Tsui) on Hong Kong Island South. The number of radiation monitoring stations has increased to 12, providing a more comprehensive coverage in the round-the-clock monitoring of ambient gamma radiation levels over Hong Kong. The new radiation monitoring stations are now under trial operation. Starting from

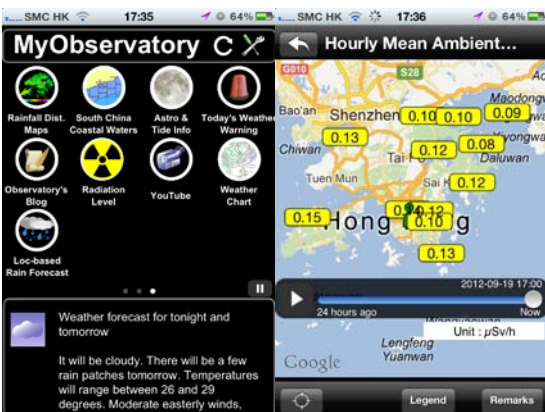


▲ Figure 1: Hourly mean ambient gamma radiation dose rate (μSv/h) recorded in Hong Kong.

25 April, hourly-averaged data from these two stations (Figure 1) will be made available at http://www.weather.gov.hk/radiation/ermp/rmn/applet/map/rmn_hourly_e.htm.

The real-time ambient gamma radiation levels from the two new radiation monitoring stations are also available at "MyObservatory" (Figure 2).

Ambient gamma radiation levels may vary due to natural causes such as geological conditions, rainfall, pressure and airflow. In Hong Kong, the normal values typically range between 0.06 and 0.30 microsievert (μSv) per hour.



◀ Figure 2: Sample screens of "MyObservatory".

The Observatory Launches Real-time Weather Photos at Sai Kung



TAM Kwong-hung

The Observatory has further enhanced its regional weather information service by adding real-time weather photos at Sai Kung to its website on 11 July. Weather photos captured by the two cameras installed at the Sai Kung Marine East Station help to monitor the weather conditions over Sai Kung Hoi, Port Shelter and their surrounding areas.

◀ Taken at Sai Kung Marine East Station, looking towards the northeast.

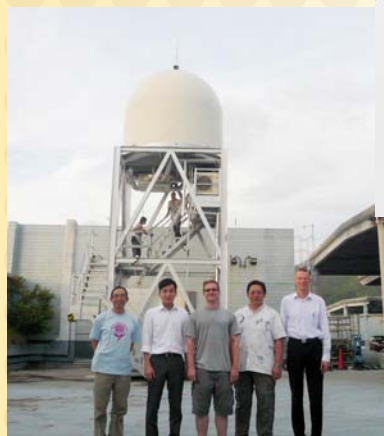
Installation of an Experimental X-band Dual-polarization Doppler Weather Radar

To further enhance aviation safety, the Observatory has installed an experimental X-band dual-polarization Doppler weather radar recently at Siu Ho Wan on the north coast of Lantau Island for the detection of low-level windshear near the airport (see Figure 1). The X-band weather radar emits electromagnetic waves of wavelength of about 3cm, which is shorter than those of 5cm or 10cm emitted by traditional weather radars. The benefit of a shorter wavelength radar is the use of a smaller and cheaper antenna, while the disadvantage is a shorter range of detection. The Observatory will collect weather data near the airport to verify the effectiveness of windshear detection by the new X-band Doppler weather radar and to study the use of a dual-polarization radar for precipitation analysis, laying the foundation for further enhancement of weather services in the future.

KONG Wai



▲ Figure 1: Location of Siu Ho Wan X-band dual-polarization Doppler weather radar.



▲ Figure 2: Installation of radome by radar technical personnel.

◀ Figure 3: Photo of HKO staff and radar technical personnel (from left: Mr IP Wing-sing, Mr KONG Wai, Mr Ingo WINTERSCHIEDT, Mr KWONG Ching-kan and Dr Ronald HANNESEN).

"Climatology for Festivals and Special Days" Webpage

LI Kin-wai

As a diversified city with a remarkable convergence of both Chinese and western cultures, fascinating and joyful events of both traditional Chinese and western festivals as well as special days of commemoration are available in Hong Kong. These events also attract a large number of tourists coming to Hong Kong every year. With a view to providing the public and tourists with an easy access to the climate information of these festivals and special days, the Observatory launched a "Climatology for Festivals and Special Days" webpage in mid-June. It provides temperature, relative humidity, rainfall and cloud amount from 3 days before to 3 days after the festival or special day for each year since 1947 for reference by the public and tourists. Members of the public are welcome to access the information at http://www.hko.gov.hk/cis/statistic/festival_e.htm.

Climatology for Festivals & Special Days

Next Festival or Special Day

Mid-Autumn Festival



Aviation Meteorology

Familiarization Flight

WONG Sau-ha



▲ Ms WONG Sau-ha (middle), an aviation forecaster of the Observatory, taking a photo with Captain Craig Phillis (left) and First Officer Kenneth Mak (right) of the Hong Kong Dragon Airlines in the cockpit.

Five Observatory staff, including me participated in the familiarization flights arranged by the Hong Kong Dragon Airlines in April and May. It was the third round of familiarization flights since 2005. The objectives are to enable staff working in aviation weather services to better understand how air pilots utilize weather information during flight; to obtain pilots' feedback on the Observatory's present aviation weather products and services and to exchange views on the future service developments.

During the familiarization flight, I witnessed how pilots in the cockpit acquired the latest weather information and responded to it; how they communicated with air traffic controllers to take appropriate actions to avoid weather impacting aviation safety like turbulence and cumulonimbus clouds as far as possible. The familiarization flight facilitated me to appreciate the great importance of aviation weather services to the aviation community.

Director of the Observatory Meeting with the Senior Management of the ATMB/CAAC

LAM Ching-chi

► Mr SHUN Chi-ming (3rd right), the Director and Miss Sharon LAU Sum-ye, Assistant Director (2nd right) at the senior management meeting on aviation meteorology with Mr GAO Yi (3rd left), the Deputy Director General of ATMB/CAAC and Mr LI Zongji (2nd left), Director of Southwest Regional ATMB/CAAC.

Mr SHUN Chi-ming, the Director and Miss Sharon LAU Sum-ye, Assistant Director, visited Chengdu on 11 and 12 April to hold a biennial senior management meeting on aviation meteorology with the Air Traffic Management Bureau of the Civil Aviation Administration of China (ATMB/CAAC). The ATMB/CAAC delegation was led by Mr GAO Yi, Deputy Director General and included Mr LI Zongji, Director of Southwest Regional ATMB/CAAC; Mr ZHUANG Weifang, Assistant to Director General of ATMB/CAAC, as well as other meteorologists led by Mr CHEN Bao, Director of ATMB Meteorology Division. At the meeting, the two sides noted the increasing pressure on the services provided by air traffic management and meteorological services due to air traffic growth, and agreed that the development of terminal area forecast to support collaborative decision making should be the focus of future development and cooperation in this regard should be strengthened. Both sides also agreed to enhance communication during inclement weather and to coordinate and cooperate on international matters with a view to exerting greater influence on the development of aviation meteorological services in the international arena.



Specialized Weather Service to Support Parachute Show

LAM Ching-chi, CHAN Kai-wing

The Observatory provided professional weather service to the People's Liberation Army (PLA) in support of their 8-1 Parachute Brigade's show to celebrate the 15th anniversary of the establishment of the Hong Kong Special Administrative Region on 1 and 2 July at the Hong Kong Stadium and Victoria Park respectively. The service helped ensure the safety of the members of the brigade. This was also the first time the Observatory successfully implemented, through in-house development, a mobile upper-air sounding system adapted from the system used at King's Park to measure upper-level winds at different locations of Hong Kong.

The data from the radiosonde attached to a helium-filled weather balloon were received on-site by the Observatory's technical staff using a specially equipped survey vehicle which also served to deliver the system to the event site. Besides, an Aviation Forecaster also provided site and flight route specific forecasts to the PLA, and a weather observer made on-site cloud and visibility observations. All those involved were very delighted that the parachute shows were successfully conducted and the crowds of spectators showed their appreciation with heartfelt cheers and applause.



▲ CHAN Kai-wing, Scientific Officer, released the weather balloon with a radiosonde to collect upper-level wind data at the Hong Kong Stadium in support of the parachute show on 1 July.

Collaboration Between the Observatory and Government Flying Service to Brave the Storms

CHAN Pak-wai

The passage of Vicente brought a Hurricane Signal No.10 after a lapse of 13 years and illustrated the destructive power of a tropical cyclone. For accurate determination of the intensity of the tropical cyclone, when there is a tropical cyclone over the northern part of the South China Sea, the Observatory would team up with Government Flying Service (GFS) to fly the fixed-wing aircraft with the specialized meteorological measuring system into the storms for collecting weather data. The data so obtained have also been demonstrated in case studies to improve the forecasting of the movement of the cyclone.

GFS has helped collect weather data for Severe Tropical Storm Talim and Severe Typhoon Vicente in June and July 2012 respectively. Apart from making meteorological measurements, GFS colleagues have taken pictures of the weather conditions inside the storms. The pictures provide unique records about the clouds and the sea waves associated with the storms over the open sea, especially the adverse weather conditions brought about by the tropical cyclones.

Opening of the Ancillary Airport Meteorological Office (Information Centre)

YEUNG Kwok-chung



After more than two years of preparation, design and construction works, the Ancillary Airport Meteorological Office (Information Centre) on the 1/F of the Backup Air Traffic Control Complex was officially opened and put into operation on 22 June. In addition to the officiating guests Mr SHUN Chi-ming, the Director and Miss Sharon LAU Sum-ye, Assistant Director, over 50 staff from various divisions of the Observatory also joined the opening ceremony.

The opening of the Ancillary Airport Meteorological Office (Information Centre) greatly increases the working space and enhances the efficiency and sustainability of operation of the existing Ancillary Airport Meteorological Office (Forecasting Center). The Ancillary Airport Meteorological Office (Information Centre) is also equipped with a computer room which can accommodate 20 equipment racks. When equipment and servers are in place and fully operational, further improvements in quality and efficiency in the provision of aviation weather information and services are expected.

'International Air Cadet Exchange 2012' Visited the Observatory



▲ A group photo of the participants and Observatory staff showing the happy moment of the visit.

On 25 July, 30 "International Air Cadet Exchange (IACE) 2012" participants from 8 countries accompanied by 10 local members of Hong Kong Air Cadet Corps (HKACC) visited the Observatory. This is the 4th year the IACE has conducted visits to the Observatory as part of its programme in Hong Kong. During the visit, the participants attended lectures on aviation meteorology and the Observatory's aviation weather services. Apart from the exhibition hall in which meteorological measuring equipments were exhibited, the participants also toured the Central Forecasting Office to learn how weather observations and forecasts were made.

Weather is a crucial factor for aviation, the Observatory would be happy to continue to promote meteorological knowledge and contribute to international exchange through partnership with HKACC.



New Name for Tropical Cyclone in 2012

LUI Wing-hong

A new name "Rai" has been adopted for tropical cyclones in the western North Pacific and South China Sea in 2012, replacing "Fanapi".

"Rai" is the stone money of Yap, Federated States of Micronesia. The new name was endorsed by the Typhoon Committee, under the joint auspices of the United Nations Economic and Social Commission for Asia and the Pacific and the World Meteorological Organisation, at its 44th Session in February 2012.

According to the convention of the Typhoon Committee, a country or region that has suffered serious human casualties and economic losses from a tropical cyclone may propose to have the cyclone's name removed from the name list. During the passage of "Fanapi" over southern China in September 2010, 100 houses collapsed in Fujian and the direct economic losses amounted to RMB 280 million. In Guangdong, rainstorms triggered by "Fanapi" resulted in 75 people killed or missing. Over 1,400 houses collapsed with a direct economic loss of about RMB 2 billion.

The public, aviation and shipping sectors and the media are requested to take note of the newly updated tropical cyclone name and to take appropriate action. The updated list of tropical cyclone names and their corresponding meanings are available at <http://www.weather.gov.hk/informtc/sound/tcname2012e.htm>.



▲ The stone money of Yap (Courtesy of wikipedia).

Climate Change FAQ

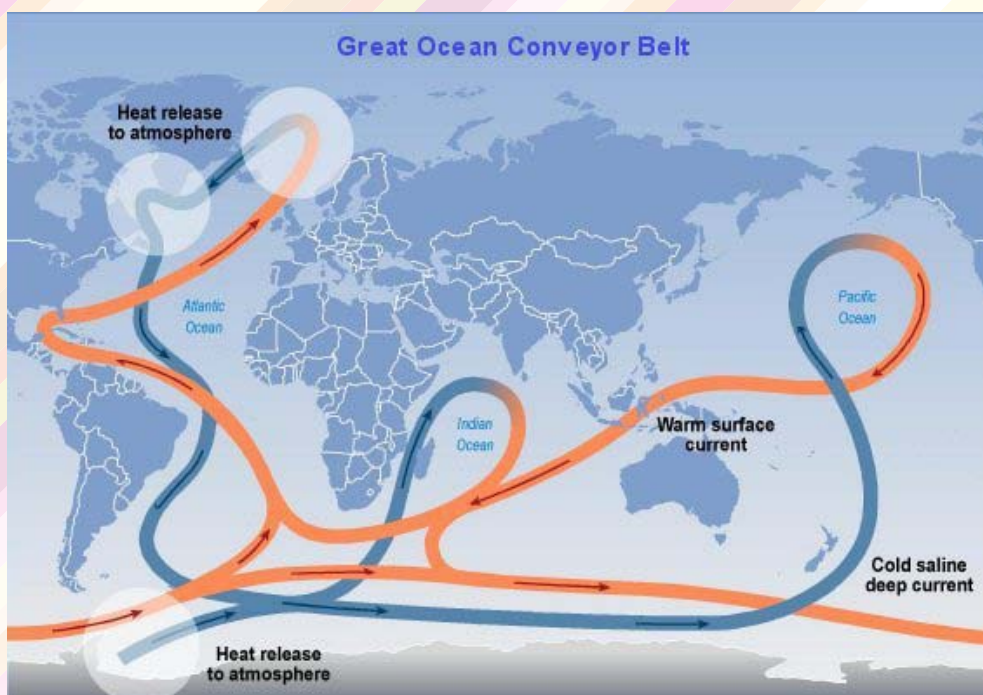
LEE Sai-ming

Through a question and answer approach, the Climate Change FAQ will explain some basic knowledge and facts of climate change in layman terms in order to enhance public understanding of the causes of climate change, its impacts and what we can do to mitigate its effects.

Q: What is thermohaline circulation?

A: The thermohaline circulation (also called Great Ocean Conveyor Belt) is a large-scale density-driven circulation in the ocean, caused by differences in temperature (thermo) and salinity (haline). It is also driven by mechanical forces such as winds and tides. In the North Atlantic, the thermohaline circulation consists of warm surface water flowing northwards and cold deep water flowing southward (see the figure), resulting in a net poleward transport of heat, thereby warming the high latitudes of Europe.

There are concerns that greater rainfall and melting of land ice and snow associated with climate change may change the salinity of the oceans and slow down or even halt the thermohaline circulation. Up to the end of the 20th century, parts of the thermohaline circulation exhibit considerable inter-decadal variability, but data do not support a coherent trend. According to the Fourth Assessment Report of IPCC, it is very likely that the Atlantic thermohaline circulation will slow down over the course of the 21st century, but an abrupt transition is very unlikely.



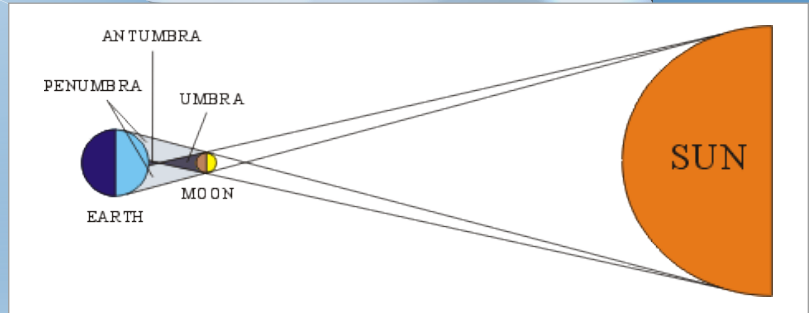
▲ Simplified illustration of the Great Ocean Conveyor Belt (Source: Climate change 2001 - Synthesis report, IPCC).

Annular Solar Eclipse and Transit of Venus

WOO Wang-chun

The annular solar eclipse on 21 May and the Transit of Venus on 6 June were both very rare astronomical events.

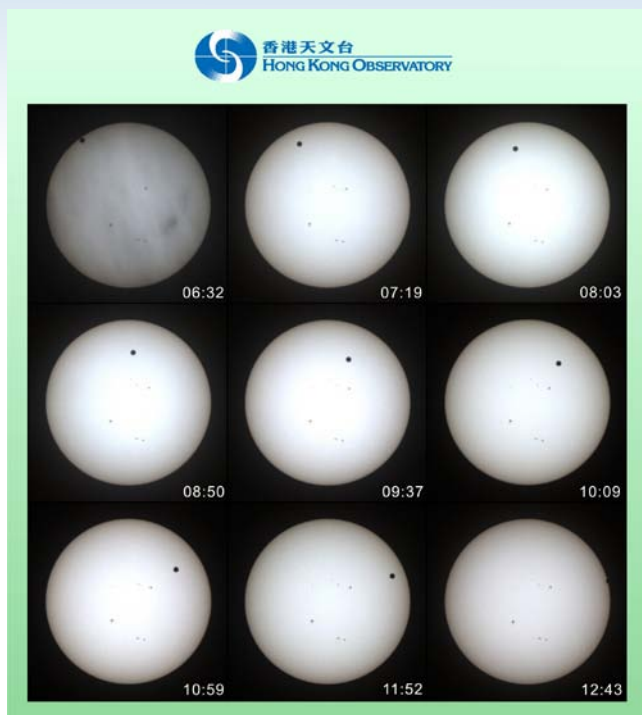
Solar eclipse occurs when the Moon comes between the Earth and the Sun, blocking parts or all of the Sun's rays from reaching the Earth's surface. This phenomenon can be observed at places under the shadow of the Moon on Earth (Figure 1). Annular solar eclipses are very rare astronomical phenomena. Although there are on average two to three solar eclipses every year globally, observing an annular or total eclipse at your place of residence is an invaluable experience as the shadow of the Moon on Earth is relatively small and the majority part of the Earth, such as oceans and glaciers, is uninhabited. Although there were 71 annular solar eclipses and 68 total solar eclipses in the 20th Century, only one annular solar eclipse was observable in Hong Kong.



▲ Figure 1: Relative positions of the Sun, the Moon and the Earth during an annular solar eclipse.



▲ Figure 2: Staff of the Hong Kong Observatory and of the Hong Kong Space Museum jointly shooting the annular solar eclipse in front of the Cape D'Aguiar Lighthouse on 21 May



▲ Figure 3: Photos taken by the Observatory's staff at Cape D'Aguiar during the transit of Venus. At the time, Venus came between the Sun and the Earth. Its silhouette, appearing as a dark dot, moved across the Sun's disc.

"Transit of Venus" is also a rare astronomical phenomenon. In a period of more than 100 years, it only occurs in a pair separated by 8 years. Although the diameter of Venus is almost four times that of the Moon, due to its much larger distance away from the Earth, we can just see a small black spot travelling across the face of the Sun during "Transit of Venus".

To strengthen the public's knowledge and to record the events for future references, the Observatory provided webcasts jointly with the Hong Kong Space Museum and the Ho Koon Nature Education cum Astronomical Centre. Our colleagues even conducted astronomical observations at Cape D'Aguiar, the southeastern tip of the Hong Kong Island (Figure 2). Although the annular solar eclipse could not be recorded due to cloudy weather, magnificent photos were captured during the Transit of Venus (Figure 3), which brought the team into euphoria.

Leap Second Added on 1 July

WOO Wang-chun

A leap second was introduced to the Coordinated Universal Time (UTC) between 7:59:59am and 8:00:00am (Hong Kong time) on 1 July 2012. The Hong Kong standard time, exactly 8 hours ahead of UTC, was delayed by 1 second accordingly. Leap seconds have been introduced 25 times since the adoption of UTC in 1972. The last adjustment was made on 1 January 2009.

UTC is a stable and even time scale based on the frequency of atomic oscillations in atomic clocks. This is the current international time scale for civil use. The astronomical time scale based on the Earth's rotation is another common time scale. As a result of atmospheric circulation and other geophysical events on Earth, the rate of the Earth's rotation is uneven and slowing down. At present, 1 second based on the astronomical time scale is slightly longer than that based on the standard atomic time scale. It is therefore necessary to add a leap second from time to time to reconcile the two time scales in order to keep the difference between them to below 0.9 second.



▲ The web clock of the Observatory successfully displayed the leap second as 07:59:60.

Early this year, the International Telecommunication Union Radiocommunication Assembly deliberated on whether to change the definition of the universally adopted time standard "UTC" to the effect that it would decouple from the astronomical time scale and adhere strictly to the atomic time scale, thus dispensing with the need to apply leap seconds. But the Assembly decided to defer the decision. If the definition of the UTC is changed to follow the atomic time scale entirely, it will no longer be necessary to introduce leap seconds. The time scale UTC will then become continuous and predictable, thus simplifying the development, testing and maintenance of computer and navigation systems and reducing the chance of incidents. However, without leap seconds, the time of astronomical phenomena in a day would drift against the UTC at a very slow rate. It is estimated that the time of sunrise and sunset would become two or three minutes later than now in a hundred years, and about half an hour later in seven hundred years. Thousands or tens of thousands of years from now, it may occur that the sun would rise at 6:00 p.m. and set at 6:00 a.m.

To ensure proper operation of the Observatory's time services, in addition to procuring suitable instruments, it had also been stipulated that only instruments and computer programs shown to pass leap second tests repeatedly could be adopted for operational use. The handling of leap seconds was also emphasized in product developments to ensure that leap seconds could be correctly displayed on all time service instruments and web clocks. On 1 July, colleagues closely monitored the operations of the instruments in the Observatory to ensure smooth transition and to record the responses of the instruments for future reference.



Weather Seminars for Media

Editorial Board

Two weather seminars were held at the Observatory on 6 and 8 June to enhance media personnel's knowledge of frequently used meteorological terms and weather systems which affect Hong Kong. The seminars also provided an opportunity for both parties to share their experience and forge closer co-operation, which would be conducive to better public response and preparedness to hazardous weather.



▲ Mr LEE Kwok-lun, Scientific Officer, presenting the use of meteorological information.

▲ Mr HUI Tai-wai (standing), Scientific Officer, sharing the experience on analyzing weather chart with participants.

Climate Change TV Documentary - "Sinking Islands"

Editorial Board

As the understanding of climate change unfolds, many dubbed it as the greatest threat that humankind has ever faced. To increase public awareness on this important subject, RTHK has produced a 5-episode TV documentary, "Sinking Islands", premiered on TVB Jade at 7:30 pm on 5 consecutive Sundays starting from 27 May.



(Photograph courtesy of RTHK)

▲ Mr LEUNG visited Kiribati, the "Sinking Islands".

Hosted by Mr LEUNG Wing-mo, ex-Assistant Director of the Observatory, the documentary will take you to the little known South Pacific nation, Kiribati, as well as other places where rising sea level compounded by other consequences of climate change are affecting the lives and livelihood of the people there. You will see first hand how these countries and their people are coping and adapting to the challenges.

Please refer to RTHK's website (<http://programme.rthk.hk/rthk/tv/programme.php?name=tv/sinkingislands&p=5537>) for detailed information.



▲ Mr SHUN (middle) presenting gold awards to the outstanding voluntary observing ships in Hong Kong.

this helps safeguard navigation safety, we will continue to support and expand the voluntary observing ships scheme."

Thirty-one representatives from shipping companies, container terminal operators, the Hong Kong Shipowners Association, the Marine Department and the Observatory attended the meeting, the largest participation since the establishment of the liaison group in 2010. The opportunity was taken to discuss the Observatory's marine meteorological services and to share the experience on precautionary measures to be taken in tsunamis by marine communities in other regions.

Observatory Praises Outstanding Voluntary Observing Ships

WU Chung-wai

The liaison group for the Marine Community of the Observatory met for the 3rd time on 8 June. Before the meeting, Mr SHUN Chi-ming, the Director, presented gold awards to the Hong Kong Voluntary Observing Ships (HKVOS) with outstanding performance in 2011, in appreciation of their significant effort in contributing to maritime safety worldwide. The 5 winning HKVOS are Maersk Gairloch, OOCL Brisbane, OOCL Hamburg, OOCL Rotterdam and OOCL Tokyo.

Mr ZHOU Wai, Assistant General Manager of OOCL, said: "The weather reports made by voluntary observing ships are important for the preparation of weather forecasts and warnings of hazardous weather for the sea areas. As



▲ Mr SHUN (10th left, back row) photographed with the participants of the 3rd meeting of the liaison group for the shipping community.

Active Participation in Typhoon Committee Meetings

Editorial Board

On 28 and 29 May, Mr SHUN Chi-ming, the Director, and Mr Edwin LAI Sau-tak, Assistant Director, visited Seoul in the Republic of Korea to attend a specially convened 2-day Typhoon Committee Advisory Working Group (AWG) meeting. This meeting followed up on the Committee's 44th Session held in Hangzhou, China earlier this year in which measures to enhance the governance and operational efficiency of the Typhoon Committee were proposed.



▲ Mr SHUN Chi-ming (4th right, front row) and Mr LAI Sau-tak, Edwin (2nd right, front row) photographed with Mr CHO Seok-joon (5th right, front row), Administrator of the Korea Meteorological Administration, chair of meeting and other participants.



▲ Mr Edwin LAI Sau-tak (3rd left), at the Typhoon Committee DRR Workshop to review and plan for DRR projects and activities.

The AWG, comprising key representatives from Typhoon Committee Members responsible for leading the implementation of activities under the three core components of meteorology, hydrology and disaster risk reduction (DRR), met to discuss a series of measures to improve the future running of the Committee. Specifically, structural changes were introduced to better coordinate the organization of various technical activities and to streamline the conduction of annual meetings, starting with the 45th Session to be held in Hong Kong in January 2013. Mr SHUN and Mr LAI, as Vice-chairperson of the Committee and Chairperson of the Training and Research Coordination Group respectively, were the masterminds behind these changes.

Visit to AFCD's Tai Lung Farm

Editorial Board

Mrs Hilda LAM KWONG Si-lin, Assistant Director, and three colleagues visited the Tai Lung Farm of the Agriculture, Fisheries and Conservation Department (AFCD) on 10 May 2012. During the visit, the Observatory introduced its climatological information and climate forecast services while AFCD shared its experience on the impact of weather and climate on the growth of agricultural products. Views on how to enhance climate services for the benefit of the farming sector were exchanged. The visit has further strengthened the mutual understanding and tie between the Observatory and AFCD and both sides look forward to closer collaboration in the future.



▲ AFCD's Agricultural Officer, Mr WONG Koon-wang introduced new species of agricultural product to Mrs Hilda LAM.

WWIS Website Hitting One Billion Mark

CHENG Yuen-chung

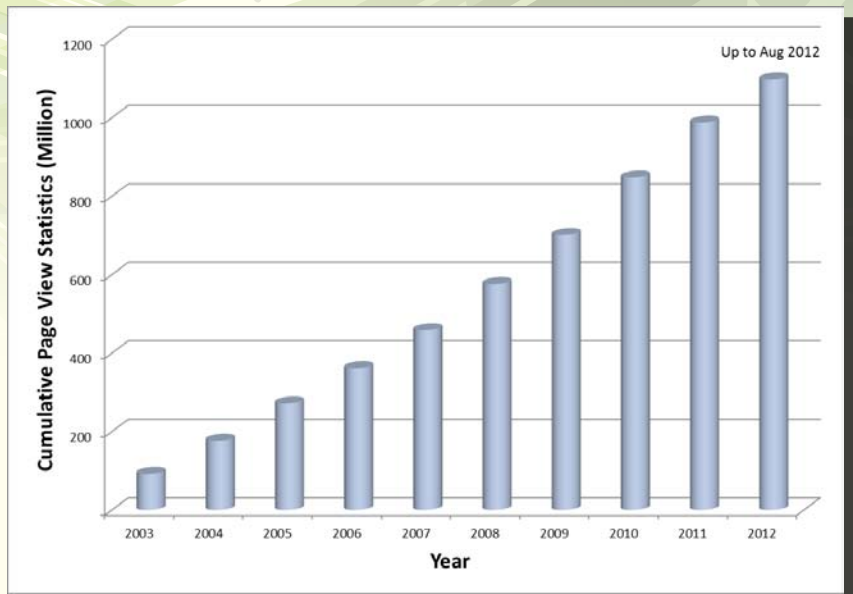
The World Weather Information Service (WWIS) website (<http://worldweather.wmo.int/>) is well received by people from around the world. The cumulative number of page visits since operation in 2001 has already exceeded one billion.

The WWIS website was developed and maintained by the Observatory on behalf of the World Meteorological Organization (WMO). The WWIS aims to provide authoritative and reliable weather information from worldwide National Meteorological Services. At present, 132 WMO members provide official weather forecasts covering more than 1,600 cities on the website. It is also available in 10 different languages, serving the people worldwide in Arabic, Chinese, English, French, German, Italian, Polish, Portuguese, Russian and Spanish.

Apart from the website, a mobile application of the WWIS, viz. "MyWorldWeather", was launched on the iPhone platform in October 2011. Equipped with location-based technology to detect the user's location, the application automatically displays the latest official weather forecasts and climatological information of the city nearest to the user. The "MyWorldWeather" has also become popular and around 41,000 copies have been downloaded since its launch.

"MyWorldWeather" is a free application downloadable at <http://itunes.apple.com/hk/app/myworldweather/id453654229?mt=8>.

► Cumulative page view statistics during the past 10 years.



Weather Services Supporting the Celebration of the 15th Anniversary of the Establishment of the Hong Kong Special Administrative Region

LEE Kwok-lun



While members of the public were devotedly preparing for various events to celebrate the 15th Anniversary of the Establishment of the Hong Kong Special Administrative Region, Tropical Storm Doksuri seemed eager to join the celebration too. Doksuri brought the first Tropical Cyclone Signal No.8 this year on the night of 29 June. Colleagues at the Observatory were busy monitoring the movement of Doksuri throughout its visit. In addition to releasing latest information of the storm for safeguarding public safety, our forecasters also provided expert opinions to various government departments and related organizations so as to facilitate them to make appropriate arrangements. These included the Home Affairs Department and the Leisure and Cultural Services Department for the flag raising ceremony and the fireworks display respectively. Fortunately, Doksuri just paid a short visit and soon moved away from Hong Kong as well as weakened on 30 June. Local winds also subsided with rain easing off gradually. The flag raising ceremony ran as scheduled on the morning of 1 July and brilliant fireworks painted the sky that evening. A number of other celebrating activities also ran smoothly. Seeing the successful completion of the many celebrating events, the Observatory was very glad to make its contributions behind the scenes.

▲ Photo of fireworks display was provided by Information Services Department.

THE VOICE OF DIRECTOR

Editorial Board

(Photograph courtesy of Phoenix TV)



▲ "Flying saucer clouds".

▲ The Director showed the photos of changeable clouds.

The Hong Kong Observatory has been serving the community since 1883. Just before the Observatory commences its 130th year of service, Mr SHUN Chi-ming, the Director, in a recent interview by the Phoenix TV, gave a brief account of the Observatory's services and reviewed major historical typhoons in Hong Kong. The revisit of these events served as a reminder for all to be aware of the impact of severe weather, particularly as extreme weather is expected to increase in frequency while global warming progresses. Incidentally, just about a month after the TV interview, Severe Typhoon Vicente brought us the first No. 10 signal since Typhoon York in 1999.

Mr SHUN also talked about the development of the mobile App "MyObservatory". With the advent in communication technology, mobile App has become a very popular channel, in addition to radio and television broadcasts and the Observatory's internet website, for the public to obtain timely warning signals and location-specific weather information anytime and anywhere. Mr SHUN also elaborated on how "MyObservatory" could be developed and become a popular personalized weather service within a short period of time. The audience could also appreciate the changeable clouds and the beauty of nature from cloud photos taken by Mr SHUN.

You may visit <http://www.hko.gov.hk/hkonews/D4/news-20120810e.htm> for the video clips (The clips are presented in Cantonese only).

EASTERN DISTRICT COUNCIL VISITED THE OBSERVATORY

Editorial Board



A delegation of 14 members from the Eastern District Council visited the Observatory on 11 July. Mr SHUN Chi-ming, the Director, welcomed the councilors for taking time to understand further the Observatory's history, facilities and operation. They toured the History Room, the Central Forecasting Office, the TV Studio, the weather information LED display at Tsuen Wan Shing Mun Valley Automatic Weather Station and the Tai Mo Shan Radar Station. The councilors were much impressed by the Observatory's application of science and technology in serving the public.

▲ A delegation from Eastern District Council photographed with the Director (3rd right, front row).

Visits • Courses • Talks • Meetings

17 April 2012



Mr Kurosh Massoudansari (right), Economic Consul United States Consulate General, Hong Kong visited the Observatory. Mr MA Wai-man, Senior Scientific Officer, briefed him on the operation of meteorological observations.

20 April 2012



Mr XIU Jigang, Deputy Director General of China Earthquake Administration (5th right) led a delegation to visit the Observatory. He was briefed on the work of the Observatory.

26 and 27 April 2012



The Observatory together with more than 1,000 officers from more than 30 government agencies took part in the "Daya Bay drill", a major inter-departmental exercise.

21 May 2012



The team members of voluntary emergency service from Zhongshan, China visited the Observatory.

11 to 22 June 2012



Ms LI Hui (2nd right) and Ms XU Wenwen (1st right), two representatives of the Meteorological Bureau of Shenzhen Municipality, visited the Observatory's meteorological facilities in addition to share working experience, and they also attached to the Central Forecasting Office to understand the operation of Observatory's weather forecast.

12 to 13 June 2012



At the invitation of the World Meteorological Organization (WMO), Mr LEE Lap-shun (3rd right, front row), Senior Scientific Officer, gave a lecture on benefit evaluation of meteorological services in a training workshop on tropical cyclone held in Shanghai. Experts from other meteorological services in China, Japan, Republic of Korea and USA also lectured at the workshop. Around 70 forecasters and researchers from the meteorological services of Shanghai and neighbouring cities participated in the workshop. Mr HO Ka-leong (9th right, back row), Senior Experimental Officer, was also invited to share his experience in aviation weather forecasting with other participants.

21 June 2012



Mr WONG Fuk Loi, David (2nd left), Deputy Secretary of Commerce and Economic Development Bureau, accompanied by Mr SHUN Chi-ming (1st left), the Director, visited the Central Forecasting Office, TV studio, etc. He was briefed on the operation of the Observatory.

22 June 2012



A delegation of 26 members, led by Deputy Director of Economic Co-operation of the Brunei government, paid a familiarization visit to the Observatory.

30 June 2012



The award presentation ceremony for the student project competition "Challenges and Opportunities of using Nuclear Energy" organized by the "Science in the Public Service" campaign was held at the Hong Kong Science Museum. More than 50 teams from primary and secondary schools participated in the competition. They were able to explore the close relationship between science and daily life, and enhance their knowledge in nuclear energy and radiation.

7 July 2012



The award presentation ceremony of "Visibility Measurement Method Design Competition", jointly organized by the Observatory and the Faculty of Engineering of the University of Hong Kong (HKU), was held at the Rayson Huang Theatre of HKU. Mr. LAI Sau-tak, Edwin (1st right), Assistant Director, presented award to representatives from the champion of the junior category in the competition. Over 140 teachers and students from primary 4 to form 6 of 16 schools formed 26 teams to compete for awards. The entries fully demonstrated the students' ability in meteorological measurements and in the application of information technology.

14 July 2012



Miss LEE Shuk-ming (standing), Senior Scientific Officer, delivered a public talk on "Radiation Monitoring in Hong Kong". She introduced the basic knowledge of radiation, the Environmental Radiation Monitoring Programme, and the instruments for monitoring the environmental radiation level to enhance the audience understanding of the subject.

18 July 2012



A delegation of four from Space Application Section, Information and Communication Technology and Disaster Risk Reduction Division, UN ESCAP, led by Mr Keran Wong, visited the Observatory.

25 July to 3 August 2012



World renowned radar meteorologist, Dr Dusan Zrnica, National Severe Storm Laboratory, National Oceanic and Atmospheric Administration, USA gave a series of lectures on the latest weather radar technologies and their application, and provided advice on optimization of the new X-band weather radar for windshear detection, greatly benefiting Observatory staff.

31 July 2012



A renowned architect, Professor Edward NG Yan-yung, School of Architecture of the Chinese University of Hong Kong, visited the Observatory. He delivered a talk on "Climate Information for Improved Planning and Management of High Density for Quality Urban Living".

11 August 2012



Mr WOO Wang-chun (6th left), Scientific Officer, took about 20 members of "Friends of the Observatory" on a tour of the Seismograph Station of the Observatory.

15 August 2012



A delegation of Governmental Institution of Zhuhai Municipality visited the Observatory.

25 August 2012



A public talk on "Significant weather affecting aircraft operation" given by Mr LI Luen-on (1st left), Chief Experimental Officer, attracted more than 100 people.



Mr LAI Sau Tak, Edwin Promoted to Assistant Director

Editorial Board

Mr LAI Sau Tak, Edwin was promoted to Assistant Director on 14 May to succeed Mr LEUNG Wing-mo who has proceeded on pre-retirement leave.

Before promotion, Mr LAI was the senior scientific officer in charge of training and exercises. Prior to that, he was responsible for weather forecasting and warning operations for a period of time. After promotion, Mr LAI heads the Radiation Monitoring and Assessment Branch in the Observatory.



▲ Mr LAI Sau-tak (left) receiving the promotion letter from the Director

Retirement of Chief Scientific Assistant

Mr WAN Bui (3rd right), Chief Scientific Assistant, started his pre-retirement leave on 17 July, the Director together with other senior staff bade his farewell and presented him with a souvenir, commending his contributions to the Observatory in the past 40 years.



Best TV Weather Programme Presenters

2nd Quarter, 2012

Mr WOO Wang-chun

Presentation Ceremony of Research Excellence Award

The Director presented the award on 25 April to commend 3 colleagues for their outstanding and meritorious research.



▲ (From left to right) Mr CHAN Pak-wai, Senior Scientific Officer, Dr LEETsz-cheung, Senior Scientific Officer and Mr WONG Wai-kin, Scientific Officer.

Observatory Staff and Friends of the Observatory Receiving Praises

Editorial Board

Staff of the Observatory and Friends of the Observatory who received words of thanks and commendation from the public or organizations during May to August 2012:

Mr HUI Tai-wai, David
(Scientific Officer)

Mr LI Sun-wai, Victor
(Scientific Officer)

Mr WOO Wang-chun
(Scientific Officer)

Mr LAU Dick-shum, Dickson
(Experimental Officer)

Mr CHAU Ming-sum
(Senior Scientific Assistant)

Mr CHEE Shiu-chung
(Scientific Assistant)

Mr NG Pui-man
(Scientific Assistant)

Ms WONG Hiu-kam
(Scientific Assistant)

Mr WONG Wai-kwong, Albert
(Scientific Assistant)

Mr HUNG Chi-cheung
(Workman II)

Mr KWAN Koon-wah, Roger
(Friends of the Observatory)

Miss WONG Pui-shan, Vannex
(Friends of the Observatory)

The Observatory Winning Awards Again

CHAN Wing-shan

The Observatory has once again won the "CARE Scheme Civil Service Category Highest Per Capita Contribution Award" and the "Corporate and Employee Contribution Programme Bronze Award" under the Community Chest Corporate and Employee Contribution Programme 2011/12. It fully shows the generosity of the Observatory staff in supporting charity causes.



In addition, we have been awarded a Certificate of Merit in the "Hong Kong Awards for Environmental Excellence Sectoral Awards Scheme (Public Organizations and Utilities Sector) 2011". This is the 3rd year that the Observatory has been awarded a Certificate of Merit for our overall performance towards environmental excellence and our efforts in environmental protection. The Observatory will continue to dedicate to green management.



Staff Association's "Four Seasons" Photo Contest - Spring

Staff Association

The Staff Association's "Four Seasons" Photo Contest provides a platform for colleagues to share their joys of photography and learn from each another the skills of photography. Subsequent to the contests held in autumn and winter, adjudication of the spring contest was also completed successfully. The championship was won by Miss CHEUNG Man-sze. The composition of her photo is very nice and the color is pleasant and natural. It was no surprise that her work was highly commended by the judges.

▶ Winning work of the champion, Miss CHEUNG Man-sze.



A Forum on Nature Exploration and Stargazing

CHIU Hung-yu

Mr Micah KWOK, Principal of Ho Koon Nature Education cum Astronomical Centre, and 3 teachers from the Centre presented the Centre's activities and shared their experience in stargazing and nature exploration at a forum held at the Observatory on 19 July.

Apart from explaining the objectives behind the Centre's activities, the speakers also presented in captivating images and words the giant spiny frogs and fireflies found at Tai Mo Shan, as well as the summer night skies of Hong Kong. The minds of the audience were instantly transported to a fascinating outdoor environment, and all were enlightened with more understanding about this piece of land in Hong Kong.

▶ Mr Kenneth HUI, Astronomy Officer of Ho Koon Nature Education cum Astronomical Centre, introducing the summer night skies of Hong Kong.



Chief Executive Thanked Staff Fulfilling Their Duty During the Passage of Vicente

LEE SHUK MING

Mr LEUNG Chun-ying, Chief Executive, hosted a reception at the Government House on 3 August to show his appreciation to frontline staff of government departments and public bodies on duty during the passage of Vicente. Mr YEUNG Yu-shin, Radar Specialist Mechanic, and Mr YIP Choi-hung, Scientific Assistant, attended the reception on behalf of the Observatory. In the reception, Mr LEUNG expressed his appreciation of the dedicated effort of Observatory staff in fulfilling their duties to provide effective weather warning services.

◀ Mr YEUNG Yu-shin (1st left), Radar Specialist Mechanic, and Mr YIP Choi-hung (1st right), Scientific Assistant, described to Mr LEUNG Chun-ying (middle), Chief Executive, their work during the passage of Vicente.



(Photograph courtesy of Ta Kung Pao)

Fire Protection Expert and Social Enterprise Elite Shared Their Management Experiences

CHIU Hung-yu

The Observatory invited Mr KWOK Jing-keung, former Director of Fire Services Department, and Ms Irene LEUNG, Chief Executive Officer of Senior Citizen Home Safety Association, to share their managerial insight with Observatory colleagues, in the management forums held on 9 May and 21 June respectively.

In the forums, they illustrated how to face the challenges and opportunities encountered, create values for sustainable development, build a well-motivated team, and provide quality services. Their sharing was most enlightening, which inspired further thoughts on how the Observatory's services could be improved.



▲ Mr KWOK Jing-keung speaking in a management forum at the Observatory.



◀ Mr SHUN Chi-ming (right), the Director presenting a souvenir to Ms Irene LEUNG.

Mailing Address

Dr CHIN Ping-chuen Visited the Observatory

HUI Tai-wai, David

Dr CHIN Ping-chuen, "Uncle CHIN", a respected former colleague, visited the Observatory on 21 July. He had been working, since early 1950s, in a number of research areas such as analysis of aviation meteorological data, prediction of cold surge, estimation of probable maximum precipitation, compilation of tropical cyclone climatology, etc; his research and published papers laid a solid foundation of local meteorological services. The gathering not only provided colleagues with an opportunity to listen to stories of the old days, but also marked a memorable occasion at the Observatory in the run-up to its 130th anniversary.

► "Uncle CHIN" (1st right) shared his experience with the Observatory's colleagues.

St. Christopher's Home visited the Observatory

CHOW Chi-kin



Thirty five children coming from the S.K.H. St. Christopher's Home visited the Observatory in the morning on 11 August. The HKO volunteer team arranged a series of interesting programmes for them, including singing songs, dance performance, funny games and quiz. Tour guides also led the children to the Central Forecasting Office and the Exhibition Hall to fulfil their curiosity and deepen their understanding of the Observatory. All participants played together, enjoying a happy weekend, and the visit ended in the midst of laughter.