

1937-2007
7th Anniversary

香港航空氣象服務

Hong Kong Aviation Weather Services



2007

1997

1987

1977

1967

1957

1947

1937



香港天文台

HONG KONG OBSERVATORY

奠定基礎 穩步成長

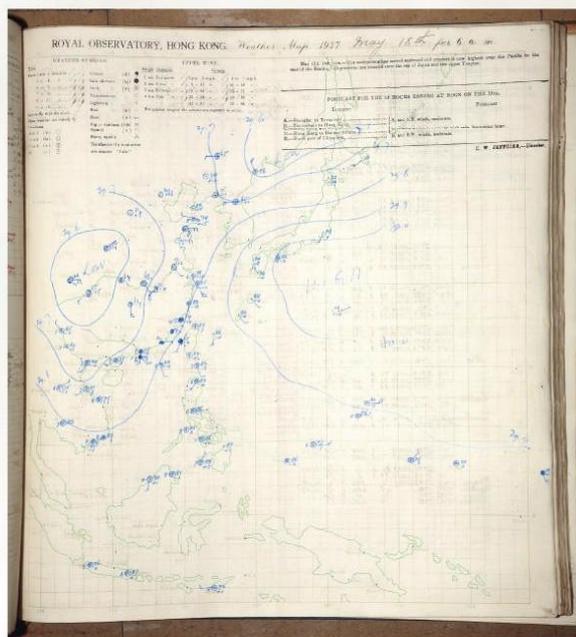
Laying the Foundation and Growing Up

序言 Introduction

香港天文台以此特刊回顧香港航空氣象服務70年的歷史，並將特刊獻給天文台同事、前輩及所有航空界夥伴，感謝他們多年來的貢獻和支持。

In this special booklet, the Hong Kong Observatory reviews the 70-year history of the aviation weather services in Hong Kong. This booklet is dedicated to the Observatory's colleagues and their predecessors, as well as all partners of the aviation community, in appreciation of their contribution and support throughout the years.

1937



1937年5月18日、雨天，天文台的航空氣象服務在這一天展開。當時有一位預報員及一位助手每天派駐啟德機場工作。(上) 1937年5月18日供機師使用的天氣圖。

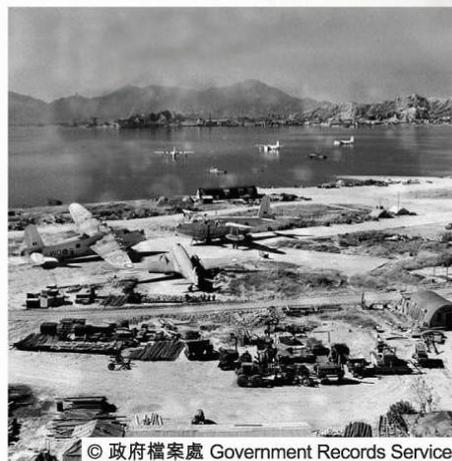
The aviation weather services of the Observatory commenced on 18 May 1937, a rainy day. A forecaster and an assistant stationed at Kai Tak airport on a daily basis. (Above) Weather chart of 18 May 1937 for use by pilot.

1939

位於啟德機場客運大樓的機場氣象所投入服務，天文台增加值班人手。

The Airport Meteorological Office, with additional staff, came into operation at the new Kai Tak Terminal Building.

1947



天文台於第二次世界大戰後的1947年1月開始跟英國空軍分擔航空氣象服務工作，直至8月天文台全面恢復提供航空氣象服務，天文台職員當時在啟德軍營工作。(圖)1947年的啟德機場。

Forecasters from the Observatory began to share in duties at Kai Tak with the Royal Air Force in January 1947 after World War II. The Observatory took over the responsibility for aviation weather services in August, with the staff working in a Nissen hut. (Figure) Kai Tak airport in 1947.

1952-53



位於橫瀾島及長洲的氣象站分別在1952及1953年開始投入服務，支援航空預報工作。(圖) 長洲氣象站。

Weather stations at Waglan and Cheung Chau were opened in 1952 and 1953 respectively. They were established primarily for supporting aviation forecasting. (Above) Cheung Chau weather station.

1959

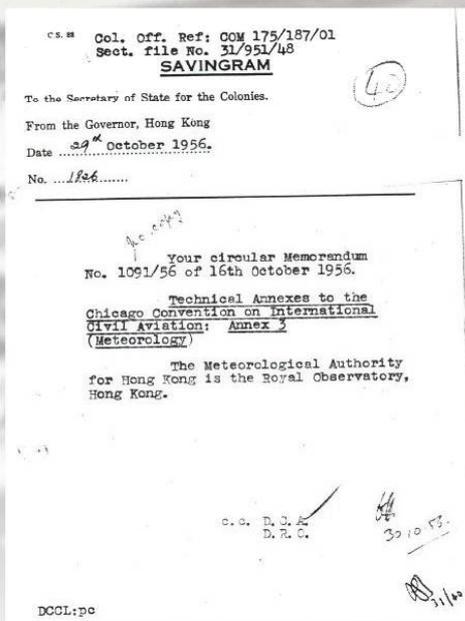


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航空預報員及觀測員開始在啟德機場氣象所24小時值班。(圖) 1960年的啟德機場。

Round-the-clock manning of the Airport Meteorological Office by aviation weather forecasters and observers commenced. (Figure) Kai Tak airport in 1960.

1956



天文台於1956年被英國指定為香港的氣象當局，為航空界提供符合國際標準的氣象服務。(圖) 港督葛量洪在1956年10月29日發出的有關文件。

The Observatory was designated by the United Kingdom in 1956 as the Meteorological Authority in Hong Kong, responsible for providing weather services following international standards for the aviation community. (Figure) Relevant correspondence issued by Sir Alexander Grantham, the Governor of Hong Kong, on 29 October 1956.

1962



1962年9月19日，機場氣象所遷移至當時啟德機場新客運大樓四樓(上: 彩色部份)，為用戶提供更快捷有效的服務。(左) 預報員正在向機師作天氣簡報。

The Airport Meteorological Office moved into the new Airport Terminal Building (above : coloured part) on 19 September 1962 and the move resulted in improved and more efficient services. A forecaster was briefing pilots at the Airport Meteorological Office (above).

為新機場作準備 Preparation for the New Airport



1979

天文台在赤鱸角設立了一個由天氣觀測員當值的臨時氣象站，搜集天氣資料作新機場可行性研究。

A manned temporary meteorological station started operation at Chek Lap Kok as part of a feasibility study for the replacement airport.



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天文台職員在赤鱸角臨時氣象站進行天氣觀測。

Observatory's staff making weather observations at the temporary meteorological station on Chek Lap Kok island.

1982

天文台完成有關赤鱸角的氣象及海洋研究。

The Observatory completed the Chek Lap Kok Meteorological and Oceanographic Investigations.

1983

在1983年9月，颱風愛倫正面吹襲下，赤鱸角臨時氣象站被強風嚴重損毀。當值的天氣觀測員正等候輔助空軍利用直升機撤離至安全地方。

The temporary meteorological station at Chek Lap Kok was blown down by Typhoon Ellen in September 1983. The duty weather observers were waiting to be air lifted to safety by an Auxiliary Air Force helicopter.



1984

天文台在赤鱸角興建自動氣象站來繼續天氣觀測，直至1991年，當時為興建新機場需進行赤鱸角島夷平工程，該自動氣象站才停止運作。

An automatic weather station was set up at Chek Lap Kok to continue the weather observations until leveling of the site for the new airport construction in 1991.

1993



天文台成立「航空天氣服務聯絡組」，邀得航空公司及飛機師參與。(圖)1994年舉行的第二屆聯絡組會議。

The Observatory established the Liaison Group on Aviation Weather Services with participation of airlines and pilots. (Figure) The second meeting of the group in 1994.

1997

在大嶼山裝設風速儀器 -- 在了無人煙的外站「空降」是十分刺激的事。

Setting up anemometers on Lantau Island -- it was an exciting experience to "land" at a remote out-station.



1995

在夷平後的赤鱸角島上，天文台再興建自動氣象站(圖)來繼續天氣觀測，準備新機場的啟用。

An automatic weather station was set up on Chek Lap Kok island after its leveling to continue the weather observation in preparation for the opening of the new airport.



前天文台台長林鴻銜博士在1997年12月19日宣佈在新機場設置的先進氣象系統準備就緒。

On 19 December 1997, Dr. H.K. Lam (ex-HKO Director) announced the readiness of the advanced meteorological systems installed for the new airport.

1996

天氣觀測員(右)早於1996年3月已開始在赤鱸角作天氣觀測。

Weather observation at Chek Lap Kok by weather observers (right) started in March 1996.



同年年中天文台在大欖涌裝置機場多普勒天氣雷達(上)來探測影響赤鱸角的風切變。

The Terminal Doppler Weather Radar (above) was installed at Tai Lam Chung in mid-1996 for automatic detection of windshear affecting Chek Lap Kok.

1998



1998年7月6日凌晨，機場氣象所順利由啟德過渡至赤鱸角(上:最後在啟德機場氣象所值班的天文台同事留影)。

The transition of the Airport Meteorological Office (AMO) from Kai Tak to the new airport at Chek Lap Kok went smoothly overnight on 6 July 1998 (Above: Observatory's staff working the last shift at Kai Tak AMO).

屢創高峯

Achieving New Heights

1998



1998年7月6日凌晨赤鱸角機場氣象所正式為新機場提供航空氣象服務。

The Chek Lap Kok Airport Meteorological Office (AMO) commenced provision of aviation weather services for the new airport overnight on 6 July 1998.



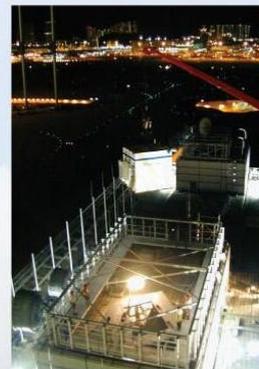
同日，網上「航空氣象資料發送系統」啟用(上:現時網頁)，成為航空公司為每班航機預備飛行計劃的重要平台。

The web-based "Aviation Meteorological Information Dissemination System" (AMIDS) started operation on the same day, and has since become an important platform for airlines' flight planning (above: the current AMIDS homepage).

2002

在2002年8月，天文台在香港國際機場裝設了世界上第一台用於機場天氣預警的激光雷達系統(右)。

The world's first Light Detection and Ranging (LIDAR) system for weather alerting was installed at HKIA in August 2002 (right).



天文台的機場氣象所在2002年10月10日成為亞太區首批獲頒發ISO 9001 認證的氣象服務單位之一。(上) 機場氣象所人員慶祝獲得ISO認證。

The Observatory became one of the first weather services in the Asia/Pacific region to obtain ISO 9001 certification for the AMO on 10 October 2002. (Above) Observatory's staff at AMO celebrated the ISO certification.

2001

天文台於2001年12月在香港境內設置全世界首個監察機場天氣的浮標氣象站(左)。

Installed in December 2001, the first weather buoy (left) of the Observatory is used for weather monitoring at the Hong Kong International Airport (HKIA).



2003

天文台與國泰航空公司及民航處合作在2003年3月首次成功接收從客機下傳的自動天氣報告(右)。

Automatic weather reports downlinked from passenger aircraft were successfully received in March 2003 for the first time, in collaboration with Cathay Pacific Airways and the Civil Aviation Department (above).



2004



天文台藉著提供優質的航空氣象服務，奪得2003至04年度公務員顧客服務獎勵計劃「內部支援獎」亞軍。

The Observatory won the first runner-up of the 2003-04 Civil Service Outstanding Customer Service Award Scheme (Internal Support) for the excellent aviation weather services it provided.

2005



天文台成立了「通用航空氣象服務聯絡組」，政府飛行服務隊、香港飛行總會及直升機公司均派代表出席聯絡組會議。

Liaison Group on Weather Information for General Aviation was established with participation of the Government Flying Service, Hong Kong Aviation Club and helicopter operators.



由天文台研發的世界首個激光雷達風切變預警系統(圖)於2005年12月在香港國際機場正式投入業務運作。

The world's first LIDAR Windshear Alerting System (Figure) developed by the

Observatory began operation at HKIA in December 2005.

這項激光雷達風切變預警服務隨後奪得2007年公務員優質服務獎勵計劃「專門服務獎」冠軍。



This LIDAR Windshear Alerting Service subsequently won the championship of the 2007 Civil Service Outstanding Service Award Scheme (Specialized Service).

2006



天文台岑智明先生(圖:右一)在2006年11月獲選為世界氣象組織航空氣象委員會副主席，顯示天文台的航空氣象服務領導世界。

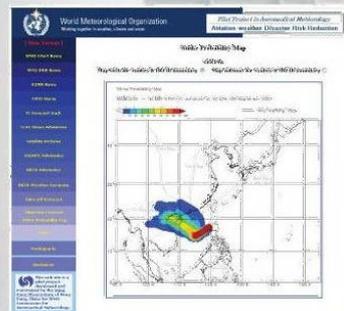
Mr. C.M. Shun (above: first from the right) of the Observatory was elected vice-president of the Commission for Aeronautical Meteorology of the World Meteorological Organization (WMO) in November 2006, showing the Observatory's leadership in aviation weather services in the world.

天文台開亞太區的先河，利用數據鏈路直接傳送實時的風切變預警至飛機駕駛艙。(圖) 天文台人員為西北航空機師介紹計劃。



As a pioneer in the Asia/Pacific region, the Observatory transmitted real-time windshear alerts directly using datalink to the cockpit of aircraft. (Figure) Observatory's staff briefed a Northwest Airlines pilot on the program.

2007



天文台積極為國際航空氣象事務作出貢獻，受世界氣象組織及國際民航組織的委託，發展了航空氣象網頁(圖)，供航空界使用。

The Observatory actively contributed to international aviation meteorology. Entrusted by WMO and the International Civil Aviation Organization (ICAO), aviation weather websites (Figure) were launched for use by the aviation community.

同年，全世界首個雙激光雷達風切變預警系統啟用，以加強風切變預警服務。

The world's first Dual-LIDAR Windshear Alerting System started operation to further enhance the windshear alerting service.



香港航空氣象服務

Hong Kong Aviation Weather Services



展望將來 Going to the Future



通過用戶的積極參與，天文台繼續努力提升航空氣象服務，務求符合航空界的新要求。一些新項目將在未來數年間推出。

With active engagement of the users, the Observatory will strive to enhance the aviation weather services in Hong Kong to meet evolving new requirements from the aviation community. A number of initiatives are planned to be implemented in the next few years.

飛機自動天氣觀測 Automatic weather observation by instrumented aircraft



一套天氣觀測系統將會安裝在政府飛行服務隊的一架定翼機上，用以量度高頻的風及其他氣象數據，以加強機場的低空湍流預警。

A weather observation system will be installed on a fixed-wing aircraft of the Government Flying Service for measuring the high frequency wind and other meteorological elements, so that the warning of low-level turbulence at the airport could be enhanced.

雷暴臨近預報產品 Thunderstorm nowcasting products



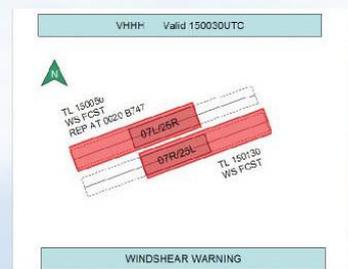
天文台正在開發雷暴臨近預報產品，以支援機場及鄰近區域更有效的空中交通管理及飛行運作。

A thunderstorm nowcasting product is being developed by the Observatory in support of more efficient air traffic management and flight operations at the airport and its surrounding region.

上傳圖像天氣資料 Graphical weather information uplink

當飛機具備高容量的數據鏈路設備後，圖像天氣產品便可上傳至駕駛艙，供飛機師使用。圖中顯示天文台為國際民航組織訂訂的圖像風切變警告標準。

When high capacity datalink avionics becomes available on aircraft, graphical weather products will be uplinked to the cockpit for use by pilots. The figure shows the graphical windshear warning standard developed by the Observatory for ICAO.



鳴謝政府新聞處、政府檔案處及文匯報提供部份圖片
Courtesy Information Services Department, Government Records Service and Wen Wei Po for providing certain pictures in this booklet.

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