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History Office Inaugurates Newsletter

With the now decade-long divestiture of Air Weather Service, many members of Air Force Weather have seemingly lost touch with their heritage and with the Air Force Weather History Office—the only history office dedicated solely to the preservation and presentation of the legacy of Air Force Weather.

Air Force Weather traces its roots to the establishment of a meteorological service in

the Army's Signal Service in 1870, and, more specifically, to the weather service organized in the Signal Corps during World War I.

In 1937 the Secretary of War transferred the Army's weather service to the Air Corps, beginning a continuous lineage of airmen providing environmental situational awareness to the U.S. Army and the U.S. Air Force.

This July, Air Force Weather will celebrate 66 years of unbroken service. The Air Force Weather History Office is inaugurating this quarterly newsletter as a heritage outreach to all within Air Force Weather. It will hopefully serve *to provide historical perspective for Air Force Weather to know the past, understand the present, and anticipate the future.* We welcome your comments. ☞

Familiar Weather Symbols Have a Long History

Members of Air Force Weather recognize the anemometer and fleur-de-lis as elements of the weather career field badge. These symbols have been associated with Air Force Weather for more than 50 years.

The meteorologist badge was one of the first the Air Force approved for wear. In December 1986 Brig Gen George E. Chapman, commander of Air Weather Service from 1982 to 1988, requested the Air Force approve a distinctive badge for Air

Force meteorologists. The suggested badge incorporated the anemometer, fleur-de-lis, and divided background contained in the Air Weather Service emblem. The Air Force approved the badge in 1987, but dropped the divided background in the standardization process.

The AWS emblem—the emblem still used by the Air Force Weather



Agency—had its origins in the distinctive weather service insignia the U.S. Army approved in September 1942. The Army Air Force's weather service insignia was incorporated into the standard Air Force shield to form the Air Weather Service emblem in 1952.

The anemometer, a common weather instrument, represents the primary mission. The fleur-de-lis symbolizes the origins of today's weather service in France during World War I. ☞

Air Force Weather Lineage – the 11th OWS



The first weather station at Ladd Field, Alaska, November 1940.



The 11th Operational Weather Squadron was constituted as Air Corps Detachment, Weather, Alaska, on November 15, 1940. It was activated on January 11, 1941, at Ladd Field, Alaska, and assigned to the Ninth Service Command. The squadron relocated to Elmendorf Field on May 2, 1941.

The squadron was redesignated the 11th Air Corps Squadron,

Weather, on February 26, 1942, and reassigned to the 11th Air Force. It was designated the 11th Weather Squadron on January 6, 1944. On October 22, 1945 it was assigned to the Army Air Forces Weather Service (later redesignated Air Weather Service).

The squadron relocated to Keesler AFB, Mississippi in 1952 and was inactivated on November 18, 1957. It returned to

Elmendorf and was activated on June 18, 1958. It was reassigned to Pacific Air Forces on September 30, 1991, with the divestiture of Air Weather Service, and was inactivated on June 1, 1992 following a short stay at Eielson AFB.

The squadron was redesignated the 11th Operational Weather Squadron on February 5, 1999 and activated on February 19, 1999. ☞

Centennial of Flight Celebration Underway

On a gray December morning nearly 100 years ago, two brothers from Dayton, Ohio, stood atop windswept Kill Devil Hill in Kitty Hawk, North Carolina, hoping to prove to the world that powered, manned flight was possible. On Dec. 17, 1903, Orville and Wilbur Wright did just that.

Orville successfully flew the Wright Flyer for 12 seconds and covered a distance of 120 feet. It was the first time a powered flying machine had taken off from level ground, traveled through the air, and landed under the control of its pilot.

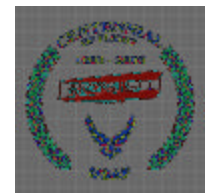
Orville and Wilbur were keenly aware the impact weather had on the performance of their fragile craft and took carefully observations prior to every flight.

This year the Centennial of Flight Celebration seeks to commemorate the contributions to aviation made by the Wright brothers and others.

The Celebration began December 17, 2002, and continues through December 17, 2003, the 100th anniversary of the Wright brothers' first flight at Kitty Hawk.

The U.S. Centennial of Flight Commission will oversee the Centennial of Flight Celebration. The Air Force created the Air Force Centennial of Flight Office to serve as a clearinghouse for all events, projects and information concerning the Air Force's role in the yearlong celebration of 100 years of powered heavier-than-air, manned flight.

The Air Force Centennial of Flight Office will work with representatives from each major command as well as the history office, public affairs, recruiting and marketing to coordinate projects and events for the centennial. All of the Air Force's current operational aircraft will be featured in one way or another at the many events throughout the year.



The Air Force Centennial of Flight Office maintains information on the year-long celebration at their website. Check it out at <http://www.centennialofflight.af.mil/index.shtml>. ☞



(above) Orville and Wilbur Wright in Dayton, Ohio.



(below) Wilbur Wright measures wind speed prior to a 1909 flight.

Jefferson's Weather Order to Lewis and Clark

This year marks the 200th Anniversary of the start of the journey by the Corps of Discovery, a small expeditionary group, whose mission was to explore the uncharted West. It might be argued that this four-year odyssey represents the first organized American military weather team.

On February 28, 1803, President Thomas Jefferson won Congressional approval for this visionary project, an endeavor that became one of America's greatest stories of adventure. Over the next four years, the Corps of Discovery traveled thousands of

miles, experiencing lands, rivers and peoples that no white American ever had before.

As finally organized, the expedition was made up of Captains Lewis and Clark, nine young men from Kentucky, fourteen regular soldiers of the United States Army, two French voyageurs, and Captain Clark's servant. All, except Clark's servant, were enlisted into the military service of the United States during the expedition.

The duties of the explorers were numerous and important. They were to explore as thoroughly as possible the country

through which they were to pass and to document what they observed.

In a letter to Lewis, Jefferson, himself an amateur meteorologist who bought his first thermometer while writing the Declaration of Independence, listed the many tasks the expedition was to accomplish.

Among this list was the observation and recording of "*Climate, as characterized by the thermometer, by the proportion of rainy, cloudy, and clear days; by lightning, hail, snow, ice; by the access and recess of frost; by the winds prevailing at different seasons. . .*"



Meriwether Lewis



William Clark

Brig Gen Johnson Suggests New Book

The Air Force Director of Weather, Brig Gen David L. Johnson, announced he is adding a new selection to the Air Force Weather Professional Reading List, *Storms in Space* by John W. Freeman.

Freeman is Professor Emeritus and Research Professor of Physics and Astronomy at Rice University. Over the past 35 years he has directed a number of satellite instrumentation projects, including the Apollo 12, 14, and 15 projects for which he was awarded the

NASA Medal for Exceptional Scientific Achievement in 1973. He has also served as Editor-in-Chief of Space Power. Freeman is currently working to develop a model that will forecast the intensity of the Van Allen Radiation Belts and helping to build a National Space Weather Service.

Storms in Space is the first book to unveil the unseen elements of outer space. Freeman opens with a series of vignettes describing how the Northern and Southern

lights [the aurora] are a visible manifestation of space storms, and how satellites serve as weather stations in space. These vignettes provide visual analogies to help illustrate the effects of a storm in space on people. He explores the chain of events that lead to the storm and connects the facets of the storm with the scenes in the vignettes.

Continued Storms in Space, p. 4

"John has done a fine job in giving explanations that will appeal to readers from outside our community and that should serve as a model for writers in our field. He conveys technical information easily and makes it interesting to catch the reader's attention."

Joe H. Allen, NOAA

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In the next issue

15OWS Lineage;
D-Day Forecast;
AFWA 60th;
and more.

"Provide the historical perspective for Air Force Weather to know the past, understand the present, and anticipate the future."

Looking Back at Air Force Weather

January 7, 1946, Headquarters, Army Air Forces Weather Service moved from Asheville, North Carolina, to Langley Field, Virginia.

January 15, 1975, Air Weather Service conducted its last aerial photomapping mission.

February 9, 1976, Air Force awarded contract for the procurement and installation of three AN/FRR-95 solar radio telescope systems for Air Weather Service.

February 24, 1959, Air Weather Service forwarded the first formal statement of requirements for meteorological satellite data.

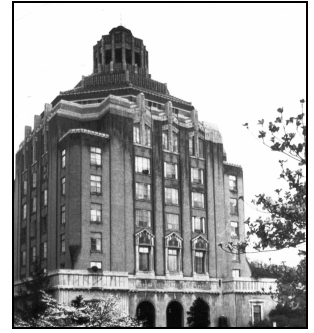
March 4, 1968, Air Weather Service suffered its first casualties in Southeast Asia when SSgt James Swann and SSgt Edward Milan were mortally wounded during a mortar attack at Ban Me Thout, Republic of Vietnam

March 25, 1948, Air Weather Service's Maj Ernest J. Fawbush and Capt Robert C. Miller issued the first tornado forecast.

Storms in Space (from page 3)

Freeman details the state of the art in forecasting space storms, the models that are used, and the prospects for their future improvement. He also describes the hazards of space storms for human technological systems including human space flight.

Storms in Space provides both a new understanding and appreciation of how seemingly insignificant disturbances in space can have major effects here on earth. ☞



The Municipal Building in Asheville, North Carolina, housed Army Air Forces Weather Service headquarters from 1943 to 1946.



Air Weather Service used the WC-130 to conduct photomapping until the conclusion of that mission in 1975.

Recalling the Origins of Severe Storm Forecasting

The roots of severe weather prediction in the United States can be traced to the work of the Signal Corp's Lt. John P. Finley. In the mid 1880s, Finley organized a team of more than 2000 "reporters" to document tornadoes and their associated weather conditions over the central and eastern United States. Using this data, Finley assembled maps of characteristic tornado-

producing weather patterns, which were used to issue tornado "alerts." Finley's forecasts fell out of favor in the late 1880s because the Signal Corps felt that mention of the word "tornado" provoked undue fear and panic amongst the public.

Little further progress was made in severe storm forecasting for many years. The growth of military aviation in the 1940s increased interest

in storm prediction. Using the work of other researchers and their own investigation of an earlier tornado, then-Maj Ernest Fawbush and then-Capt Robert Miller predicted the occurrence of a tornado at Tinker AFB, Oklahoma, on March 25, 1948. Their work led to the organization of the Severe Weather Warning Center at Tinker in 1951 under their leadership. ☞