

## 55 SPACE WEATHER SQUADRON



### MISSION

#### LINEAGE

655 Bombardment Squadron, Heavy, constituted, 11 Aug 1944

Activated, 21 Aug 1944

Redesignated 55 Reconnaissance Squadron, Long Range, Weather, 16 Jun 1945

Redesignated 55 Reconnaissance Squadron, Very Long Range, Weather, 27 Nov 1945

Inactivated, 15 Oct 1947

Redesignated 55 Strategic Reconnaissance Squadron, Medium, Weather, 22 Jan 1951

Activated, 21 Feb 1951

Redesignated 55 Weather Reconnaissance Squadron, 15 Feb 1954

Discontinued and inactivated, 8 Jul 1961

Activated, 12 Oct 1961

Organized, 8 Jan 1962

Inactivated, 1 Oct 1993

Redesignated 55 Space Weather Squadron, 1 Mar 1997

Activated, 17 Mar 1997

Inactivated, 16 Jul 2002

#### STATIONS

Will Rogers Field, OK, 21 Aug 1944-5 Mar 1945

Depot (later, Harmon) Field, Guam, 11 Apr 1945-28 Feb 1946

Buckley Field, CO, 20 Mar 1946

Langley Field, VA, 9 May 1946

Morrison Field, FL, Jul 1946  
Fairfield-Suisun AAFld, CA, 1 Jun-15 Oct 1947  
McClellan AFB, CA, 21 Feb 1951-8 Jul 1961  
McClellan AFB, CA, 8 Jan 1962-1 Oct 1993  
Falcon (later, Schriever) AFB, CO, 17 Mar 1997-16 Jul 02

### **ASSIGNMENTS**

Third Air Force, 21 Aug 1944  
III Tactical Air Command, 1 Oct 1944  
III Tactical Air Division, (by Nov) 1944  
Twentieth Air Force, 11 Apr 1945  
311 Reconnaissance Wing, 27 Nov 1945  
Air Transport Command, 13 Mar 1946  
Air Weather Service, 20 Mar 1946-15 Oct 1947  
Air Weather Service, 21 Feb 1951  
9 Weather Group, 20 Apr 1953-8 Jul 1961  
Military Air Transport Service, 12 Oct 1961  
9 Weather Reconnaissance Group, 8 Jan 1962  
9 Weather Reconnaissance Wing, 8 Jul 1965  
41 Rescue and Weather Reconnaissance Wing, 1 Sep 1975  
Air Rescue Service, 1 Aug 1989  
60 Operations Group, 1 Feb-1 Oct 1993  
50 Operations Group, 17 Mar 1997-16 Jul 02

### **ATTACHMENTS**

XXI Bomber Command, 11 Apr-26 Nov 1945  
U.S. Army Strategic Air Forces, 27 Nov 1945-19 Mar 1946

### **WEAPON SYSTEMS**

A-20, 1944  
B-24, 1944-1945  
B-29, 1946-1947  
C-47, 1946-1947  
WB/TB-29, 1951-1955  
WB-50, 1954-1961  
WB-47, 1957-1961  
C-54, 1958-1961  
TB-50A, 1958-1960  
JB-57, 1960-1961  
WB-50D, 1962-1963  
WB-47, 1962-1969  
JB-57, 1962-1963  
C/WC-130, 1962-1965  
RB-57, 1963-1964

C-135, 1965  
WC-135, 1965-1993  
WC-130, 1970-1975  
HC-130, 1975

#### **COMMANDERS**

Capt Raymond A. Walker, 21 Aug 1944  
Lt Col Nicholas H. Chauvasse, 3 Sep 1944  
Capt Fred M. Barricklow, 1 Apr 1946  
2<sup>nd</sup> Lt Eugene R. Cummings, 11 Jul 1946  
Capt Y. Mitchell, 13 Jul 1946  
Maj Charles F. Adams, 10 Sep 1946  
Maj Paul V. Fackler, 16 Sep 1946  
Maj Kenneth A. Linder, 24 May 1947  
Maj Robert L. Foley, 16 Jun-15 Oct 1947  
Lt Col Aubrey D. Taylor, 21 Feb 1951  
Lt Col Richard D. Stowell, 7 Jan 1952  
Lt Col Kenneth A. Linder, 13 Feb 1952  
Lt Col Russell W. Neely, 12 Oct 1953  
Lt Col Roger A. Stevenson, 13 Sep 1954  
Lt Col Dale D. Desper, 22 Sep 1956  
Maj Robert E. Kerr, 3 Mar 1958  
Col Harvey P. Hall, 15 Jun 1958-8 Jul 1961  
Lt Col Robert V. McKibban, 8 Jan 1962  
Lt Col John D. Horn, 29 May 1962  
Lt Col Robert V. McKibban, Dec 1962  
Lt Col Earl W. Peters, Dec 1963  
Lt Col Clyde C. Angley, 8 Jun 1965  
Col Leon M. Grisham, 26 Jun 1965  
Col Hiram P. Bilyeu, 15 Jul 1967  
Col Leslie E. Gamble, 20 Nov 1969  
Lt Col Carlton F. Garlock, 10 Nov 1970  
Col Wilson V. Palmore, 15 Apr 1971  
Col Foster A. Post, 26 May 1973  
Col Orville J. Beranek, 1 Aug 1973  
Col Charles M. Teed, 3 Sep 1975  
Lt Col Forrest N. Dye, 1 Mar 1977  
Lt Col John P. Joyce, 1 Jun 1979  
Lt Col James D. Johnson, 28 Oct 1980  
Lt Col George B. Stokes, 30 Oct 1981  
Lt Col Daniel B. Ahern, 16 Sep 1983  
Lt Col Gary B. Koch, 3 Jun 1985  
Lt Col Milton O. Payne, Jr., 22 Dec 1986  
Lt Col William H. Richard, 6 Jul 1989

Lt Col Brian R. Voorhees, 25 Jul 1991-1 Oct 1993

## HONORS

### Service Streamers

### Campaign Streamers

World War II

Western Pacific

### Armed Forces Expeditionary Streamers

### Decorations

Army Meritorious Unit Commendation

15 May 1945-1 Jan 1946

### Air Force Outstanding Unit Awards

1 Mar 1960-28 Feb 1961

1 Jul 1967-30 Jun 1968

1 Jan-31 Dec 1971

1 Sep 1975-1 May 1977

16 Jul 1977-16 Jul 1979

17 Jul 1979-15 Jun 1981

1 Apr 1984-31 Mar 1986

1 Apr 1986-31 Mar 1988

1 Aug 1989-30 Jun 1991

## EMBLEM



655 Bombardment Squadron, Heavy (Weather Reconnaissance, Heavy) emblem: Willie Weatherbee symbolizes the squadron's readiness to carry out its assigned mission under all climatic conditions. NOTE: The nickname "Willie" most likely comes from the name of the Army Air Field Will Rogers Field, OK where the squadron was activated in 1944. (Approved, 16 Feb 1945)



55th Weather Reconnaissance Squadron emblem: The blue field depicts the sky, the primary theater of the Air Force operations, and the global shape alludes to the worldwide scope of the squadron's activities. The gold fess with red simulated lightning across the sphere symbolizes the earth's rigid, temperate, and torrid zones. The gold dividers counter-colored over the zones reflect the route, area weather data, and aerial atmospheric sampling obtained through photographic and visual reconnaissance. The five pointed star with five rays, while indicating the squadron's designation, also symbolizes the unit's awards—the Meritorious Unit Commendation earned during WWII and the units Air Forces Outstanding Unit Awards. The emblem bears the national colors of red, white and blue and the Air Force colors of golden yellow and ultramarine blue. (Approved, 3 July 1967)



55 Space Weather Squadron patch

## **MOTTO**

## **OPERATIONS**

The squadron was activated on August 21, 1944, at Will Rogers Field, Oklahoma, as the 655th Bombardment Squadron, Heavy, and flew modified B-24's. The unit provided valuable weather data for the air war against Japan.

The squadron was assigned brand new B-24 Liberators built for long range weather

reconnaissance missions. The forward Bomb bay housed fuel tanks for the long missions. The aft bomb bay had accommodations for the weather officer. The first commander, Cpt Raymond A Walker headed the squadron for two weeks until LT COL Nicholas H. Chavasse arrived to take over. This group trained flying weather missions over the Gulf of Mexico. In March they moved to Fort Lawton, Washington then on to Hamon Field, Guam on 8 March with the first four aircraft. They soon began flying their long range missions over Japanese territory. The squadron soon grew to 21 aircraft, 25 aircrews and between 700-800 personnel. They were assigned to the 20th Air Force under XXI Bomber Command effective April 11, 1945. This unit provided critical meteorological data to the strategic bombing campaign planners.

In May 1945, the 655th started staging missions through Iwo Jima, by the end of May they had a flight of four aircraft, with aircrews and mechanics at Iwo supporting the VII Fighter Command. The B-24s scouted target and enroute weather for the forward based P-47s and P-51s.

On 16 June 45 the unit was re-designated the 55th Reconnaissance Squadron, Long Range Weather. The 55th's operational life ended after September 1945 when equipment was turned in and aircraft and crews came back to the U. S. In its last month the squadron found and tracked nine typhoons. In its short life in the Pacific They flew more than 508 missions and logged more than 5,000 flying hours.

Squadron returned to the United States in 1946, where it trained and conducted weather reconnaissance. Between July and Oct 1947, when it inactivated, the squadron flew daily missions over the eastern Pacific Ocean.

The 55th Squadron, having completed its training period at Morrison Field, moved to Fairfield-Suisun AAB, California on 1 June 1947.

Effective 19 February 1951 the 374th Reconnaissance Squadron, VLR, Weather was inactivated at McClellan AFB, California. The 55th Strategic Reconnaissance Squadron, Medium, Weather was activated on 20 February 1951 at McClellan AFB, California. After activation, the squadron flew weather reconnaissance missions over the northern Pacific.

Tested WB-50 aircraft and trained crews for other weather squadrons.

During the 1950s, supported atomic tests by monitoring radioactive clouds and taking atmospheric samples. Provided weather reconnaissance data for northeast Pacific Ocean, parts of Arctic Ocean, and northwestern Atlantic Ocean in late 1950s.

Tracked Hurricanes Dot and Donna in 1959 and 1960.

Provided weather data for transoceanic fighter deployments, photographic reconnaissance for testing satellite imagery, and surveillance for space flight recoveries until inactivation in 1961. After organization in 1962, flew weather reconnaissance and atmospheric sampling missions over the Pacific and Arctic.

Between 1965 and 1993, used jet aircraft to test air for radiation from possible nuclear tests to verify treaty limitations, flying missions worldwide.

In 1986, monitored atmospheric radiation in Europe after Chernobyl nuclear accident in the Soviet Union.

In 1988 and 1989, tested special photographic equipment for Strategic Defense Initiative research.

November 14, 2000: Space weather forecasters at the 55th Space Weather Squadron, Schriever Air Force Base, Colo., are monitoring a severe solar radiation storm that is effecting some satellite operations. "A flare erupted from the sun (Nov. 8)," said Tech. Sgt. Robert Joyce, crew chief and space weather forecaster. "This event was so energetic that many of our sensing instruments were saturated moments after the flare erupted." A number of space weather forecast products, including an initial warning, were sent to various Department of Defense agencies. "We issued a space weather advisory three minutes after we recorded the burst," Joyce said. "Since the onset, updated products have been sent out every three hours."

Capt. Kelly Law, a space weather officer here said there are typically three types of phenomena associated with flares of the sun. Light energy reaches Earth instantaneously and can impact high frequency communications. Next, high energy particles, called protons, reach Earth within minutes to hours and can damage satellites, increase radiation in higher altitudes and cause communication outages in the polar caps. Finally, lower energy particles, or electrons, reach Earth hours or days after the flare and cause geomagnetic storming and the aurora borealis.

"Our job is to forecast those events so our DOD customers can determine the impacts to their mission," said Law, in this case referring to the high altitude radiation forecast, which warns pilots flying at high altitudes of increased radiation levels. "Our sensors indicated high altitude radiation levels were elevated with this event.

"Geomagnetic storming peaked (Nov. 10), with particles continuing to impact the near-Earth environment," Law said. Events, like this one, occur 18 to 20 times a year around the peak of the solar maximum. Space weather forecasters expect the solar maximum to take place in the next few months. This solar storm produced the fourth highest measured proton levels since monitoring began in 1978. The highest recorded proton event occurred in March 1991.

AFWA space weather forecasters analyze and forecast space weather conditions that can adversely affect satellite operations, communications, intelligence collection, GPS navigation, space tracking and high altitude human flight.

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DEPARTMENT OF THE AIR FORCE ORGANIZATIONAL HISTORIES

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Sources

Air Force Historical Research Agency, U.S. Air Force, Maxwell AFB, Alabama.

The Institute of Heraldry. U.S. Army. Fort Belvoir, Virginia.

Air Force News. Air Force Public Affairs Agency.

Unit history. *McClellan AFB, CA, A Pictorial History. 1982*

Unit yearbook. *Sacramento Air Material Area, McClellan AFB, CA. 1967.*