

6 SPACE OPERATIONS SQUADRON



MISSION

6 Space Operations Squadron operates Defense Meteorological Satellite Program satellites in support of the Department of Defense, Department of Commerce and the National Oceanic and Atmospheric Administration.

LINEAGE

4000 Support Group established and organized, 1 Feb 1963
Redesignated 4000 Aerospace Application Group, 1 Jan 1973
Redesignated 4000 Satellite Operations Group, 3 Apr 1981
Redesignated 1000 Satellite Operations Group, 1 May 1983
Redesignated 6 Space Operations Squadron, 31 Jul 1992
Inactivated, 30 Sep 1998
Activated in the Reserve, 1 Oct 1998

STATIONS

Offutt AFB, NE, 1 Feb 1963-30 Sep 1998
Schriever AFB, CO, 1 Oct 1998

ASSIGNMENTS

Strategic Air Command, 1 Feb 1963
1 Strategic Aerospace Division, 1 Jan 1966
1 Space Wing, 1 May 1983
2 Space Wing, 1 Apr 1986
50 Space Wing, 30 Jan 1992
50 Operations Group, 31 Jul 1992-30 Sep 1998
310 Space Group, 1 Oct 1998

COMMANDERS

Lt Col Gordon C. Hannaford, 1 Feb 1963
Col Eugene L. Hudson, 23 Jul 1963
Col Ardelle W. Frenk, 11 Aug 1966
Col Ivan P. Kirschman, 1 Dec 1971
Col Gerald J. Winchell, 7 Apr 1975
Col Richard D. Youngflesh, 6 Jun 1977
Col Norman A. Degenhardt, 25 May 1979
Col Lester J. Weber, 24 Aug 1982
Col John N. Shults, 6 Jul 1983
Col James C. Wheeler, 26 Jun 1985
Col Carl M. Hatlelid, 19 Jul 1988
Col Kenneth D. Riley, 10 Jul 1991
Lt Col Michael L. Jamilkowski, Jr., 17 Aug 1992
Lt Col Neil R. Wyse, 7 Sep 1994
Lt Col John E. Hyten, 21 Aug 1996-30 Sep 1998

HONORS

Service Streamers

Campaign Streamers

Armed Forces Expeditionary Streamers

Decorations

Air Force Outstanding Unit Awards

1 Jul 1964-30 Jun 1966
1 Jul 1966-30 Jun 1968
1 Jul 1969-30 Jun 1971
1 Jul 1971-30 Jun 1973
1 Jul 1974-30 Jun 1976
1 Jul 1976-26 Jun 1977
1 Jul 1977-30 Jun 1979
1 May 1981-30 Apr 1983
1 May 1983-30 Apr 1984
1 Apr 1987-31 Mar 1988
1 Sep 1988-31 Aug 1990
1 Sep 1990-31 Aug 1991
1 Oct 2000-30 Sep 2002
1 Oct 2002-30 Jul 2004
1 Aug 2004-31 Jul 2006
1 Aug 2006-31 Jul 2008
1 Aug 2008-31 Jul 2010

EMBLEM



Celeste, the Milky Way Galaxy bendwise sinister Argent and a parabolic arch bendwise Gules surmounted by three lightning flashes radiating from fess point two and one bendwise Gules edged of the second. Overall, an olive branch Or palewise; all within a diminished bordure Argent. Attached above the disc, a light blue scroll edged with a narrow white border and inscribed "6TH SPACE OPERATIONS SQ in white letters. Attached below the disc, a light blue scroll edged with a narrow white border and inscribed "SUPRA ET ULTRA" in white letters. **SIGNIFICANCE:** Blue and yellow are the Air Force colors. Blue alludes to the sky, the primary theater of Air Force operations. Yellow refers to the sun and the excellence required of Air Force personnel. The white stars in a band across the blue field suggest a galaxy and allude to the unit's area of operations. The parabolic arc represents the Squadron's strategic aerospace activity. The lightning flashes symbolize the speed and power of the equipment used in aerospace operations. The olive branch denotes peace through strength, and together with the lightning flashes, reflects the unit's coordinated mission with its parent organization and its lineage within the former Strategic Air Command. (Approved, 10 Nov 1964; modified, 22 Mar 1994)

On a disc Azure, a Milky Way galaxy bendwise sinister throughout Argent, an arch bendwise Gules, overall in pale an olive branch Proper, emitting three lightning bolts Or, two as a bend

and one to chief, all within a narrow border White. Attached above the disc, a Blue scroll edged with a narrow White border and inscribed "SUPRA ET ULTRA" in White letters. Attached below the disc, a Blue scroll edged with a narrow White border and inscribed "6TH SPACE OPERATIONS SQ" in White letters. **SIGNIFICANCE:** Ultramarine blue and Air Force yellow are the Air Force colors. Blue alludes to the sky, the primary theater of Air Force operations. Yellow refers to the sun and the excellence required of Air Force personnel. The Milky Way galaxy represents the space environment associated with the Defense Meteorological Satellite Program operations and the austere conditions in which the squadron's mission is accomplished. The Milky Way galaxy is the only element added from the unit's original organization's emblem, the 400th Support Group, established in 1963. The arch represents a satellite in Earth's orbit. The lightning bolts represent power. The olive branch represents peace over all and the overarching aim for peaceful operations. Combined, the lightning bolts and the olive branch represent Power and Peace. (Approved, 14 Feb 2008)

MOTTO

SUPRA ET ULTRA--Above and Beyond

OPERATIONS

The 4000th Support Group came into being on 1 February 1963 under the cloak of extreme secrecy. It was comprised of four distinct components:

Headquarters at Offutt AFB, Nebraska

Detachment 1 at Fairchild AFB, Washington

Detachment 2 at Loring AFB, Maine

4300th Support Squadron at Vandenberg AFB, California

Due to the unit's high mission priority and the extreme security required for its operation, the 4000th was assigned to Headquarters SAC where it reported directly to the Chief of Staff.

In June, 1963, the first personnel arrived at Loring AFB, ME for assignment to Det 2. Activation plans called for radome and antenna installation, hook-up of operations vans, placement of a diesel generator. and the establishment of office/living space. By July, 1963, the vans and antenna were in place and operational at the site. On 10 July 1963, a major milestone was reached when Det 2 started the first ever "Blue Suit" space operation in the Air Force. Work continued and diesel generator and live-in capabilities were achieved in September 1963; and none too soon. On 24 October, the personnel at Det 2 were given the opportunity to successfully test the live-in conditions when the harsh Maine winter brought forth a furious storm that dumped 10 inches of snow in approximately three hours. From that point on the site continued to improve both operationally and in appearance. It became a showplace, attesting to the professionalism and pride of the personnel assigned.

In May 1967, due to a realignment of launch responsibilities, the 4300th was deactivated with a record of 16 launches without a launch failure.

In 1968, the Group name changed to 4000th Aerospace Applications Group. Like its

predecessors, the mission of the 4000th Aerospace Applications Group was to provide on-orbit command and control of Defense Meteorological Satellite Program (DMSP) spacecraft; collect and retrieve all data supplied by those satellites; and provide state-of-health analysis and protection for the assigned satellites. In accomplishing that mission, the Group assumed several new and unique responsibilities.

In April 1990, Detachment 2 at Loring AFB was deactivated after 27 years of operations.

In May 1983, the group was transferred to the newly formed Air Force Space Command under the 1st Space Wing and was given a new designation, the 1000th Satellite Operations Group. The group reorganized to align itself with the structure of the 2nd Space Wing in 1985.

Major effort of the 4000 aeroag was toward recovery of satellite 12535. Attempt to regain contact initially appeared futile. On 1 through 2 oct, an apparent shift of attitude allowed the solar collecting panels to receive sunlight thereby raising the power level and allowing communications with the satellite by 5 oct. An ops 12535 recovery plan 1-76 was developed and published detailing responsibilities and specifying procedures. Four day rehearsal was conducted to demonstrate readiness and on 1 dec phase i began. Operation was a success and by 8 dec, the spin had been reduced by three tenths of one revolution. De-spin effort will continue into the next quarter. Satellite 7529 failed on 9 dec due to a burn-out in the data transmitter and was placed in a nonoperational status. New roll-up area for the logistics division was completed on 10 dec with their and subsequent moves being completed by 17 dec. Progress is being made to colocate spo (system program office) and contractor system analysts with group engineering analysts. Also, development efforts continue on the ics (integrated command system)-1a, advance system (system 2), and 5d2.

In May 1989, Detachment 1 at Fairchild Air Force Base, Washington, was upgraded to squadron status, becoming the 5th Satellite Control Squadron. In August 1989, Air Force Space Command accepted the turn over of Fairchild Satellite Operations Center as the new DMSP command and control facility. Later in the year, the Multi-Purpose Satellite Operations Center at Offutt AFB was retrofitted with a new multimillion dollar ground system.

In July 1992, the One Grand downsized from a group to a squadron and was redesignated as the 6th Space Operations Squadron aligned under the 50th Space Wing, The 5th Satellite Control Squadron at Fairchild Air Force Base reorganized and became Detachment 1 once again.

In May 1994, President Clinton directed the convergence of the DMSP program with the Department of Commerce National Oceanic and Atmospheric Administration (NOAA) Polar-orbiting Environmental Satellite (POES) program. As part of the convergence process, Det 1 at Fairchild closed in 1997.

During 1997, their last full year of operations, the 6 SOPS accomplished a record number of satellite missions...22,221!

On 29 May 1998, the 6th Space Operations Squadron transferred satellite control authority of DMSP to NOAA as a result of the 1994 Presidential directive.

Millions of people around the world have read about and seen the exploits of the Air Force Reserve's Hurricane Hunters and the mission they perform each year tracking hurricanes in the Gulf of Mexico and Atlantic. However, they aren't the only Air Force Reservists who are involved in keeping a watchful eye on these powerful and deadly storms. Operating in relative obscurity from their home at the base of the Rocky Mountains at Schriever Air Force Base, Colo., members of the 6th Space Operations Squadron also play a major role in this high-profile operation. Instead of flying C-130s directly into the eye of the storms, these Reservists conduct their business using satellites orbiting the Earth hundreds of miles in space. But the 6th SOPS is about so much more than tracking hurricanes. The squadron's overall mission is to provide near real-time environmental data to strategic and tactical military commanders. In addition, the unit serves as an alternate command and control organization for the National Oceanic and Atmospheric Administration's Defense Meteorological Satellite Program. DMSP is a long-term U.S. effort in space to monitor the meteorological, oceanographic and solar-geophysical environment of the Earth in support of Department of Defense, Department of Commerce and NASA operations, said Capt. Sheila Demboski, 6th SOPS chief of standardization and evaluations. Ten active Guard and Reserve members and 22 traditional Air Force Reservists are prepared to take over the program's operations at a moment's notice to ensure continuous, 24-hour collection and dissemination of atmospheric data. "We have to be prepared for anything to go down," said Tech. Sgt. Christy Gravitt, 6th SOPS NCO in charge of initial upgrade training. Normal operations consist of a crew of five to seven mission-ready personnel who perform all tasks on the program such as monitoring sensors, gathering and transmitting data, troubleshooting any potential anomalies, and knowing where the satellites are sitting in space, Sergeant Gravitt said. Military commanders worldwide are dependent upon accurate environmental data to plan and execute their missions. The forecasts built from DMSP data are essential for the Federal Aviation Administration and the U.S. military to maintain safe aircraft travel, Captain Demboski said. The satellite program has collected weather data for U.S. military operations for more than four decades. The mission was born under a cloak of extreme secrecy in the early 1960's, shortly after the Russians launched the very first satellite (Sputnik) into space in 1957. In December 1972, DMSP data was declassified and made available to the civil/scientific community, Captain Demboski said. By serving as the "hot back-up" to NOAA, the squadron collects vital weather data from the DMSP. Military and civilian forecasters use this data to monitor and predict regional and global weather patterns, including the presence of severe thunderstorms, hurricanes and typhoons. The data helps save lives and minimize potential property damage by aiding in the planning of evacuation directives, the captain said. As a primary source of data for the National Hurricane Center, DMSP tracked 26 named storms and seven major hurricanes during the 2005 Atlantic hurricane season. Environmental data is gathered from tracking stations around the world utilizing large antennas that "talk" to the satellites. The mission data is then relayed from the tracking stations to the Air Force Weather Agency at Offutt AFB, Neb., and to the U.S. Navy's Fleet Numerical Meteorological and Oceanographic Center at Monterey, Calif. Captain Demboski explained that the colorful

weather graphics people see on television are generated at the California facility. The data that DMSP provides is very valuable in the aftermath of natural disasters. For example, program data was critical in determining the extent of damage and coordinating disaster response efforts after the December 2004 tsunami that struck in Indonesia, Captain Demboski said. Every 101 minutes, the Reservists capture and deliver an entire orbit's worth of Earth and atmospheric data to the Air Force Weather Agency within 10 minutes of ground station receipt, said Senior Master Sgt. Troy Wilds, 6th SOPS operations superintendent. The primary weather sensor on DMSP records pictures of visible light and heat, infrared imagery, in an area that measures 1,600 nautical miles wide as it orbits the Earth. Additional satellite sensors provide data on air temperature and its moisture content, Sergeant Wilds said. At first glance, information on moisture content wouldn't seem to be significant. Prior to Operation Desert Storm, the program provided data on the soil/moisture content of the desert sand in the Middle East. Tests were then performed to determine if it was safe to transport tanks, service members and equipment across the desert, the sergeant said. In addition to predicting weather patterns, the program's infrared imaging pinpoints fires in both populated and isolated areas, and predicts the impact of wind conditions. The program is also used in analyzing and predicting volcanic ash distribution in major eruptions and to monitor polar ice growth and reduction, Captain Demboski said. Through the satellite program, Reservists can help monitor compliance with international treaties designed to minimize human impact on the environment. For example, to ensure certain areas are not over-fished, the program can observe the activity of fishing boats casting light on the ocean's surface. International treaties also govern drilling for oil and natural gas; the gas flares that accompany these activities are readily detectable by the satellites, Captain Demboski said. 2006

DEPARTMENT OF THE AIR FORCE UNIT HISTORIES

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Sources

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

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

Air Force News. Air Force Public Affairs Agency.