

PERSPECTIVES FROM THE TOP-

Air Force Director of Weather, Brig. Gen. Fred Lewis explains how the new career paths for Air Force Weather people standardize training, develop professional skills, and provide opportunities for advancement...Pages 3-5.

NEXRAD - Saving lives by watching the weather...and the birds...Pages 12-13.

CHANGES OF COMMAND - Air Force Combat Climatology Center and Air Force Combat Weather Center receive new commanders...Page 14.

ENLISTED PERSPECTIVES FROM

THE TOP - Chief of Enlisted Matters, Chief Master Sgt. Tony Ramirez outlines AFW's new plan to train weather apprentices in all core competencies...Page 6.

COMMAND LINE - Seize the day! Air Force Weather Agency commander, Col. John L. Hayes discusses opportu-

COMBAT LIGHTNING-Hard-

hitting training prepares weather warriors for real-world contingencies...Pages 8-9.

A WHOLE LOT MORE THAN

FORECASTING - Air National Guard weathermen are key to Army Guard special operations forces' success...Page 10.

END OF ERA - Tribute to two former Air Weather Service commanders who recently passed away...Pages 15-16.

HISTORY - Forecasting the weather was key to the success of Operation Overlordthe D-Day Invasion...Page 17.

nities created by reengineering...Page 7. REUNION – Weather observers who served in Guam during the Korean War meet in Dayton, Ohio to catch up on the past 47 years...Page 18.

> THE BEST OF CLIMES, THE WORST OF CLIMES - Real-life weather adventures by the people who lived them...Page 19.

SALUTES – Recognizing AFW people from around the world... Pages 20-23.

TAKE A LOOK AT MM5 - Check the accuracy of MM5 products...Page 11.

As the demand for versatile weathermen intensifies, weather training courses must adapt to meet the requirement head on.

Lighting, a 77-hour tactical course designed to familiarize students with profession. the latest in tactical and communications technology. It also goes a step further by training them in a wide variety of field skills, as well as defense maneuvers for wartime

contingencies.

Course graduates have a deeper understanding of the pivotal role they play on the battlefield, and thus are Leading the vanguard is Combat better prepared to take on the myriad challenges of today's military weather

> In this issue we focus our spotlight on Combat Lighting-its beginnings, present curriculum, and implications for the future.



BSERVER

AIR FORCE DIRECTOR OF WEATHER

Brig. Gen. Fred P. Lewis

AIR FORCE WEATHER AGENCY **COMMANDER**

Col. John L. Hayes

PUBLIC AFFAIRS

Ms. Paige D. Rowland Senior Master Sgt. Don Schmidt

SENIOR EDITOR

Capt. Gwyn A. Poock

EDITOR

Senior Airman Raymond J. Giuliano

This funded Air Force Weather magazine is an authorized publication for members of the U.S. military services. Contents of the OBSERVER are not necessarily the official view of, or endorsed by, the United States Government, the Department of Defense or the Department of the Air Force. Editorial content is edited, prepared and provided by the public affairs office of Headquarters Air Force Weather Agency, Offutt AFB, Neb. All photographs are Air Force photographs unless otherwise indicated. All written material and photos to be considered for publication must arrive at HQ AFWA/PA by the first week of the month prior to the month being published. Photos must be mailed to:

> HQ AFWA/PA 106 Peacekeeper Dr., Ste. 2N3 Offutt AFB, NE 68113-4039

Please call (404) 294-8166, or DSN: 272-8166, for more information about this publication. Electronic mail should be addressed to:

"rowlandp@afwa.af.mil"

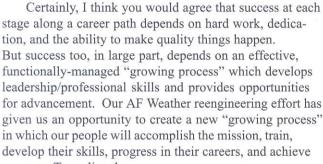
The OBSERVER is printed by Western Press Inc., 79 Progress Parkway, Maryland Heights, Mo. Mailing list inquiries should be directed to (314) 878-5700, faxed to (314) 878-5769 or sent by E-Mail to:

"western@westernpress.com"

Perspectives from the Top

Career paths stimulate growth Training, career opportunities expand

by Brig. Gen. Fred Lewis, Air Force Director of Weather



success. To realize these goals, we have developed officer and enlisted career paths, which allow us to efficiently "grow" our people while they accomplish the mission, by placing them in work envi-ronments focusing on our core war-fighting products. The principles of career progression are integral to every aspect of our re-engineering plan. Here are the details of how the new career paths will work.

The above figure illustrates the "notional" enlisted career path. The enlisted initial skills

course will be retooled for our entry-level enlisted personnel to include fundamental training in weather forecasting. Topics presented will continue to include basic observing. analysis, atmospheric dynamics, physics, and other core process building blocks. But in addition, this training will include the fundamentals in state-of-the-art forecasting processes and procedures along with rapidly emerging "internet" technologies. This will prepare our enlisted people for initial duties in an Operational Weather Squadron. In the OWS work environment, these 3-level apprentices will be part of a structured on-the-job training program to facilitate their upgrading to 5-level journeymen. For approximately three years, or through their first term of service, these apprentices will learn operational meteorology and gain experience by building weather products for Combat/Unit Weather Teams (which is our reengineered name for the Weather Flight or Detachment under the OSS or ASOG/ASOS) and our operational Air Force and Army customers. For those who reenlist for a second term, this training and experience will provide the qualifications necessary for a follow-on assignment to a Combat/Unit Weather Team (CWT), the next stop on the new enlisted career path.

ENVISIONED END STATE Enlisted Career Flow Optimized 3-level 7-level DISTANCE LEARNING CWT 5-level UGT 7-level Training / Space Wx Course OJT / CDC (20-26 wks) CDC / Resident Crs (2 wks) Init Skills SWX (18-22wks) Crs (2 wks) E-4 Combat Wx Tm OPS Wx SQ, Combat Wx **OPS Wx SQ** Team, Strat Center

AVG SEW-ON TIME

experienced technicians will prepare for assignment to a CWT by attending a training course which will be specially tailored to prepare our people for the customerfocused CWT mission. Initial responsibilities for newly-assigned CWT forecasters will be to learn the operational missions and requirements of their operational customers while they certify as observers

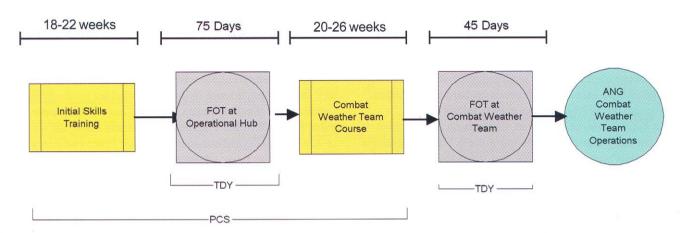
Our 5-level

and forecasters. Their main duties will be to tailor OWS weather products to provide timely, accurate, and relevant support to their customers' operational missions. In addition, since weather observations are an absolutely essential part of our core responsibilities, CWT forecasters will take and disseminate weather observations.

Career (third and subsequent term) airmen will have acquired both OWS and CWT experience. As such, these individuals will be prepared for higher degrees of responsibility in subsequent assignments to OWSs, CWTs, or the Strategic Centers (including Space Weather). As Staff Sergeants and above with approximately eight years or more of experience, qualification and eligibility for leader-

Envisioned End State

Air National Guard Training Flow Proposal



ship positions will be wide ranging, offering both professional challenges and rewarding personal growth opportunities.

We strongly believe this new enlisted career path resolves many of the issues associated with our present, dual career path. Instead of having one path for observers and one for forecasters, we have created a single path for weather technicians. Apprentices, journeymen, and craftsmen will be schooled and become highly competent in the "art and science" of providing highly accurate, relevant weather support for worldwide military operations. From a total force perspective, it is crucial that these career progression principles also apply to our Air National Guard and Air Force Reserve counterparts.

The chart above shows the proposed Air National Guard training flow. In order to prepare ANG weather flight members for their important role within the "total force," their career progression will be modeled after the active duty design. The most notable difference is the compression of timelines with the reliance on supplemental followon training (FOT) after both the initial skills training course and the CWT course. After initial skills training, ANG personnel will attend 75 days of FOT at a select OWS. This FOT program will be specifically designed to meet their compressed training needs. It will cover the same training areas as active duty members but in a compressed fashion. Following attendance in the CWT course, ANG personnel will then attend FOT training (approximately 45 days in duration) at a select CWT location based on particular mission taskings. We believe that the compressed FOT will work since we expect experience levels to remain high with the ANG Weather Flights. With regard to our AF Reserve enlisted Individual Mobilization

Augmentees, they will undergo similar training in concert with their experience levels when hired.

Let's now look at how the weather officer "growing process" will work (illustrated on page 5). Weather officer training and career assignments will follow a systematic progression to ensure continued mentoring in Air and Space core proficiencies, weather core proficiencies, and operations. For our entry-level officers, initial skills training will be expanded to include an Air and Space basic course. The Air and Space basic course will be provided to all new Air Force officers and will focus on the core competencies required to operate and accomplish the Air Force mission in a seamless aerospace environment.

Weather officers will continue to enter active duty with a degree in meteorology (or we will send them to a one-year basic meteorology course at select universities to get this education level). This will continue to provide our career field with a state-of-the-art scientific foundation. After the Air and Space basic course, new weather officers will be assigned to one of the operational weather squadrons to begin certification training for duties as operational meteorologists. They will earn the 15W3 Air Force specialty code following one year of OWS experience. New weather officers will not only infuse state-of-the-art forecasting techniques into unit operations and customer support, they will also gain operational meteorology experience from senior officers and NCOs in the OWS that will be invaluable during follow-on assignments. Following about three years as operational meteorologists in the OWS, many of the first lieutenants who are about to make captain will follow a career path to prepare them for key leadership positions in a CWT. They will attend portions of the CWT formal course with our enlisted technicians,

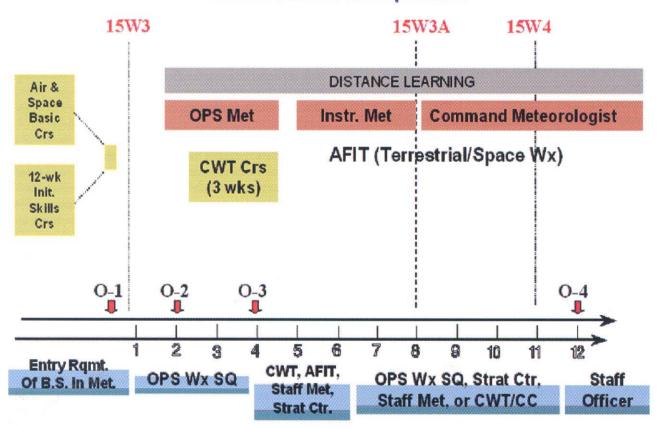
which will provide training on core CWT roles and responsibilities. This will be followed by an officer-unique track which will focus on roles and re-sponsibilities of weather officers in a CWT. Following a two- to three-year assignment to a CWT, many of-ficers will attend the Air Force Institute of Technology for an advanced weather degree. Our officers will then be ready to take on key positions at Strategic Centers, or as staff meteorologists, or supporting other specialized DoD programs. Next, many of our officers will become weather flight commanders. Officer careers above this level will be very similar to those we have today with one notable exception. There will be many more opportunities for command and key leadership positions in the Operational Weather Squadrons.

I firmly believe these new career paths create better ways of smartly growing our people. The experience-rich duty environments offered in the OWSs and CWTs will be much more conducive to mentoring and learning and will

build and maintain a solid experience base to ensure the highest quality operational support for our many customers. Our people will move up the career ladder groomed and ready for increased responsibility and key leadership positions. Our people will benefit from this process, our career field will also benefit, and most importantly, our Air Force, Army, and other DoD customers will greatly benefit.

These new, smartly-built career paths will enable our people to do their absolute best as they serve our nation. We are about to enter into a new era in AFW... an era which will significantly enhance our support to the warfighters and operators—not because of technology but because we will have invested in our people, our most precious asset! I'm proud to be working with each of you as we bring Air Force Weather into this bright new era. Thanks for your hard work and support!

ENVISIONED END STATE Officer Career Flow Optimized



AVG PIN-ON TIME



Starting a Career Path Right

by Chief Master Sgt. Tony Ramirez, Chief, Enlisted Matters, Air Force Directorate of Weather

The reengineered Air Force Weather enlisted career path contains a number of improvements to many existing paradigms. A change I'm particularly proud of is the new process whereby we will train our new weather apprentices in all of our core processes (collection, analysis, forecasting, tailoring, dissemination) within the Initial Skills Course. Then, from the first day they begin performing apprentice duties in an operational weather squadron, our new weather technicians will be utilizing and building upon this full spectrum of our core skills through standardized, on-the-job, position qualification and upgrade training programs.

Today, our new airmen are primarily trained to observe and report weather elements and perform basic analysis. Their first term of service is pretty much limited to performing these basic tasks. Historically in our career field, the path to becoming a fully qualified enlisted weather forecaster has been to spend the entire first term of service as an observer. We've been comfortable with two basic beliefs: (1) the belief that enlisted weather personnel had to operationally observe the weather in order to forecast it, and (2) that completing the forecaster course is sufficient qualification to be considered a journeyman forecaster. The observer to forecaster issue has good arguments on both sides. What I want to call your attention to is the true readiness of a forecaster course graduate. In my opinion, today's forecaster course graduate is, in reality, a forecaster apprentice. Following a relatively brief period of position qualification training and certification, we immediately expect new forecasters to accomplish the entire range of forecasting tasks regardless of the complexity

of the weather challenge, operational mission, or workload. Although many succeed and do quite well meeting these expectations, our new approach will be much, much better.

Within the reengineered enlisted career path, our new apprentices will be trained and utilized as true apprentices. They will receive their initial apprentice level training at Keesler Air Force Base, Miss. Then, they will be utilized as apprentices in the operational weather squadron while they upgrade to 5-level journeymen under the mentorship of highly experienced contract trainers. They will be challenged to perform some very demanding weather tasks and assume some very demanding responsibilities, but they will not be expected to handle the most complex weather situations until they are trained, certified, and ready.

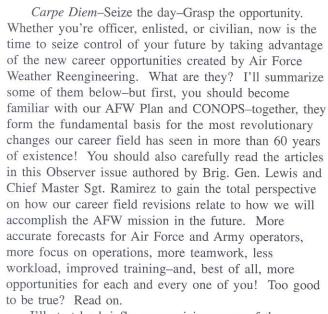
The decision to make the Air Force a career is much dependent on the first impressions our people experience during their first term of service. The Air Force work ethic and influential professional relationships develop during this first term of service. Although esprit de corps starts to develop during basic training and technical school, hopefully the environment in the operational weather squadron will start to "lock in" esprit de corps resulting from a feeling of belonging to a "crack," mission oriented, Air Force organization. The camaraderie experienced and developed during the first years in an Air Force operational weather squadron will be a constant source of professional pride and energy which will carry people throughout their careers whether they stay in the Air Force or decide to return to civilian life. And, really, those who choose to return to civilian life will be more successful members of society having been through this experience. For those who stay with us, the path to combat weather teams and beyond (as Brig. Gen. Lewis outlined in the preceeding article) will offer continued, professionally satisfying, and continuously evolving career challenges which can only be found in our future Air and Space Force.

Those of us who have been around for a while realize there are many different "forks in the road" along any career path. Each individual is unique and will make their own career decisions. But, by starting the career path out right, by creating and maintaining a satisfying learning and working environment, every individual will have a solid baseline of experience on which to base decisions along the way—and this baseline will consist of the full range of our core proficiencies. Our new career path vision is right. Let's work together to make it happen. Let's work together to make the entire vision a reality.



eizing the day

by Col. John L. Hayes, Air Force Weather Agency commander



I'll start by briefly summarizing some of the changes in training-the foundation on which a successful career is built. If you're enlisted, you'll start your weather career at Keesler Air Force Base, Miss. at the single schoolhouse. Yes, it's back-a single course that prepares you for field duty-both forecasting and observing. You'll learn the fundamentals of meteorology in an integrated weather observing and forecasting Initial Skills Course-and graduate as a weather apprentice, ready to qualify as an observer and forecaster. You'll complete your apprenticeship at an operational weather squadron, where you'll be teamed with a skilled senior enlisted journeyman to hone your forecasting skills, providing point and area forecasts for your hub's area of responsibility. Following an OWS tour, you'll go to a follow-on Keesler course prior to CWT assignment. There, you'll learn CWT operations-in garrison and deployed; how to operate and exploit your equipment; how to exploit weather for battle.

What about our officer corps? Most of you will complete a university degree program in meteorology prior to entering the Air Force and will start your AFW career in a weather ISC. Those who don't have weather degrees will spend a year in a basic meteorology program where you will take a concentrated set of college-level courses prior to the ISC. At the ISC you'll learn the art of weather warfare-how weather affects military operations; how to forecast; how to tailor products to specific missions. Upon completion you,



too, will be assigned to an OWS to serve an internship with a seasoned forecaster team-providing weather support for a designated theater of operations. Following that tour, your AFW vistas, too, will be virtually unlimited.

And what about civilians? In most cases, you will have either a degree in meteorology, a prior AFW career, or both. Depending on your skills, you could be assigned to a strategic center or at a CWT. Because of your prior experience, most of you will be almost immediately qualified to tackle any of these challenges.

Now, here's the beef: let's look at career progression. If you're enlisted, after your OWS tour, target CWTs as your first priority. Go out to the cutting edgewhere the rubber meets the ramp-where the tank tread meets the mud-and experience the thrills of helping your operator achieve mission success with accurate forecasts tailored to his or her needs-and, in some cases, suffer the frustration when good forecasts unfortunately aren't as good as you'd like them to be. A few of you will move to strategic centers-you'll be physically further removed from operator interface than an OWS or CWT member but your contributions will be every bit as critical to mission success. Following that second ops tour, the vista is unlimited: Another CWTan OWS trainer-a strategic center forecaster. At the 10to 12-year mark, many of you will graduate to leadership positions-as team chiefs at OWSs and strategic centers or as assistant station chiefs and station chiefs at CWTs. Later career opportunities will remain for super grades-weather superintendents at OWSs and strategic centers; or senior enlisted leaders at major commands, within the field operating agency and at headquarters USAF.

What about officers? Following your OWS tour, you'll attend portions of the same follow-on Keesler course that our enlisted technicians attend prior to CWT assignment, plus officer-unique training classes. the CWT, you'll be part of a new breed of weather officer-an ops-focused leader integral to Air Force and Army military operations. You, too, will experience the thrill of an accurate critical forecast and the agony of the "bust." And, you will learn firsthand what needs to be done to keep AFW in step with operations by applying advanced science and technology.

See Opportunity, page 15

COMBAT LIGHTNING

by Tech. Sgt. John Andrews, NCOIC Supplemental Weather Training Detachment 1, 334th Training Squadron, Air Education and Training Command

It seems hard to imagine going to work these days without hearing about some new change within the weather career field, especially concerning training. A course that not only teaches basic field skills and the



Capt. Joe Piasecki, officer career field training requirements manager, Air Force Weather Agency (Scott), responds to an enemy attack.

newest tactical equipment, but goes on to provide weather personnel with a 36-hour exercise to reinforce and refine those skills, is Combat Lightning.

Beginning in 1986, in response to readiness deficiencies identified in after-action reports on Operation URGENT FURY (the invasion of the island of Grenada), the 6th Weather Squadron (Mobile) was given the task of developing a new course. This course would prepare Air Weather Service officers and airmen to function in a field environment in support of contingency operations.

The original course layout, still intact, was designed to train four officers, eight forecasters and four observers per class, six times a year. Instruction focused primarily on field skills taken from the "U.S. Army's Soldier's Manual of

Common Tasks" Skill Level 1, and "Harvest Eagle" (an Air Force course on how to setup a bivouac area), and incorporated the use of tactical meteorological and communications equipment. At that time equipment was limited to such items as the Fireman's Belt Weather Kit and Tactical FAX.

The course was originally named VOLANT LIGHT-NING EXERCISE. "Volant" was taken from the Military Airlift Command's exercises such as VOLANT RALLY and others of which AWS was a part. The name changed to COMBAT LIGHTNING EXERCISE when AWS became a separate field agency under the DoD and lost its major command affiliation. The exercise was later titled a "course" when Combat Lightning was transferred to the Air Education and Training Command in 1994.

Over the years, the course has been able to accommodate nearly any potential real-world contingency. Excellent examples of this were Operations DESERT SHIELD and DESERT STORM. During the period before DESERT STORM the course's class size and overall length was adjusted to provide seven classes in an eight-week period, with a new battle scenario developed specifically for the Mid-East region.

At the conclusion of the course, many participants deployed to Saudi Arabia and contributed to the war effort.

"A real-world conflict is not the time to find out if someone can or cannot perform under intense pressure. Real lives are dependent on our Staff Sgt. Claude Tranter, combat weather team instructor, Hurlburt Field, Fla., explains operation of M-16 and Multiple Integrated Laser Engagement System equipment to 2nd Lt. Stephen Phillips, wing weather officer, Offutt Air Force Base, Neb.



ability to do our jobs," said Senior Airman Joseph Ellis, weather apprentice, Davis-Monthan AFB, Ariz.

Providing training on the newest tactical equipment has always been one of Combat Lightning's greatest strengths. As each new piece of tactical meteorological equipment or a tactical communication system becomes avail-able, it is added and the course is modified.

The belt weather kit was updated by the GMQ-33 (Cloud Height Set) and GMQ-34 (Meteorological Measuring Set) and then later augmented by the Manual Observing System Kit. Goldwing Quick Reaction Computer Terminal II and Rapid Deployable Imagery Terminal have now been replaced with the newest QRCT III, Small Tactical Terminal and Digital Atmosphere.

"Combat Lightning does an excellent job on introductory skill level instruction for deploying personnel and refresher for those who have already received most of this type of training. However, the biggest benefit for having Combat Lightning is new technology inser-tion," said Senior Master Sgt. Michael Cavanaugh, weather section noncommissioned officer in charge, Air National Guard Readiness Center, Andrews AFB, Md.

Today's 77-hour course trains weather personnel not



Staff Sgt. Scott Gilbert, combat weather team instructor, Hurlburt Field, Fla., demonstrates the proper rush technique to the class.

only on tactical meteorological or communication equipment, but also covers perimeter defense, land mine identification, personnel and equipment camouflage, land navigation, weapon safety, wear of load-bearing equip-

See Lightning, page 13

2nd Lt. Stephen Phillips, wing weather officer, Offutt Air Force Base, Neb.; Senior Airman Jennifer Dorn, chief observer, Ft. Bragg, N.C.; and Staff Sgt. Steve Adams, special operations weather forecaster, Ft. Campbell, Ky. construct a defensive fighting position at the field site.



Few people understand the hidden world of special forces, stealthy soldiers taking on complex objectives in distant lands. Even fewer people realize Air Guard weathermen help guide them every step of the way.

Assigned to the Army Guard's 20th Special Forces Group, "Airborne," Pennsylvania's 146th Weather Flight plays an important role in mission accomplishment.

"The big thing I try to emphasize is that we do much more than weather," said Tech. Sgt. Michael D. Gardner, a 146th weather manager. "Hydrology, vegetation, soils, anything that can help an A-Team guy move quieter, quicker and with the least amount of weight as possible: this is our mission."

Special Forces Weather: a whole lot more than forecasting

by Lt. Col. Chris Cleaver, 146th Air National Guard, Public Affairs

For example, in 1997 four members of the weather flight supported 200 special operations soldiers at the Joint Readiness Training Center at Fort Polk, La. Working behind computers linked to several sources, daily temperatures and forecasts were at times back burner issues. More pressing topics were lunar and solar illumination data, lunar candlepower information and solar flare potential.

With abounding technology, the Air Guard meteorologists rely on three sources of information, all available through phone lines: Internet, Air Force Weather Information Network, and Navy Oceanographic Data Distribution System. The Internet provides weather maps, bulletins, even the Weather Channel. AFWIN provides, among many things, specific information on flying. Navy Oceanographic Data Distribution System provides charts on upper air data worldwide, especially above the oceans. "The biggest thing is keeping all this data organized," said Tech. Sgt. Robert F. Warren, who worked the graveyard shift during the exercise.

This weather information is invaluable, if you have access to phone lines. But these mobile forecasters can provide weather services even in an environment with no power. "If we are inserted with a special forces team, we can take wind direction, temperature, [and] pressure and transmit information back to the forward operating base," said Senior Airman Clayton R. Eyler, a second-generation 146th member. This scenario is more than a possibility. In

1996, the 146th's own Staff Sgt. Rick Webb leaped into history as the Air Guard's first jump-qualified weather forecaster. However, this would not be the norm for members of the 146th.

"In most cases, we would be working at a forward site with generators," said Gardner. "We can then use the METOC [Meteorological Oceanographic Tactical Computer

At Fort Polk, the mission boiled down to five small special forces teams, each with their own areas of expertise, mission objectives and weather needs.

One team, planning a rather long and detailed ten-day reconnaissance mission, was very concerned with the moon illumination in the final stages of their deployment. Apparently it was shedding too much light for them to leave the area without being detected. Another team with a much shorter recovery tasking was concerned with initial sunlight. They needed to get in, accomplish their work, and return before even the first glint of sunlight. Simultaneously, a real-world tropical depression was trying to

"The 146th is very important to the successful completion of our mission," said Lt. Col. Allen E. Brewer, 2nd Battalion Commander, 20th Special Forces Group. "They say if, and when, we go."

gather energy in the Gulf.

"It boils down to providing weather information in a dynamic environment," said 1st Lt. Stephen Wilkinson, weather flight officer in charge. "For special forces we try to forecast for extended time periods, because the idea is to get a team on the ground and back."

"Special Forces folks like weather people. If you do a good job for them, they will take you in [as a member of their team]," said Gardner.

Working as a tight-knit team is by far the most important long-range forecast for the 146th Weather Flight and the 20th Special Forces Group.

System] and the satellite dish. This system is a tremendous resource for long-term forecasting." No matter what the situation, the weather flight members were prepared to provide their important service to the mission.

1230Z.

MM5, Mesoscale Abilities

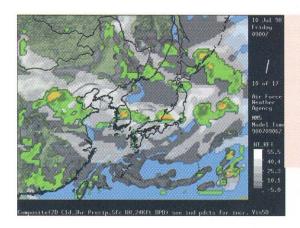


The actual radar image for 10 July 1998 at

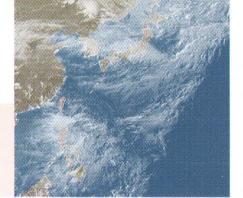
The hour precipitation forecast from the MM5 for Friday, 10 July 1998 at 1200Z. This is a 30-hour forecast from the previous day. Model time 98070906Z.



The MM5 forecast precipitaion chart compared very well with the radar image over the Nebraska/ Missouri area as well as off the Gulf Coast into Florida and on into the Atlantic. An excellent comparison overall given the long forecast time and the Mesoscale nature of the rain events.



The cloud composite with 3-hour precipitation forecast from the MM5 over the Pacific theater valid 10 July 1998 at 900Z. Product is made up of the 24,000 ft and above dewpoint depression(in white), the 2-D clouds from 0 to 60,000 ft (in white/greyshade colors), and the low-level relative humidity (in dark grey); overlaid is the 3-hour precipitation in color.



The actual GMS-5 satellite image for the Pacific theater at the same time (10 July 1998 at 0900Z).

The MM5 forecast composite cloud chart provided excellent agreement with the satellite image of the enhanced east-west clouds from Eastern China through Korea and on into Japan and points eastward. Product picks up convective precipitation north of Korea and also the extensive low clouds over much of the western Pacific.

RADAR...for the birds

by 1st Lt. Sam Highley, 8th Fighter Wing public affairs, Kunsan Air Base, Korea

When the first NEXRAD radar site was installed in Twin Lakes, Okla., in 1990, it was seen as the first step toward revolutionizing how weather information was gathered.

But eight years later, the powerful Doppler radar system has proven itself in another life-saving capacity, watching the sky for something that can often be more deadly to a pilot than any thunderstorm — birds.

NEXRAD is the common name of the Next Generation Weather Radar. Installed at Kunsan in 1995, it sits atop Wolf Pack Park like a giant golf ball providing important weather information to the 8th Fighter Wing.

Through the combined efforts of 8th Operations Support Squadron's Airfield Operations Flight, the squadron's weather wizards and the wing Safety Office, Kunsan's NEXRAD system has been used not only to watch for the latest weather front, but also the latest flock of birds.

The driving force behind this innovative application has been Senior Master Sgt. John Hoffman, chief of airfield management. Taking what he learned about NEXRAD at safety conferences while assigned to Air Mobility Command, he began implementing the program at Kunsan shortly after his arrival in June.

"I knew the bird threat was really bad here, extremely hazardous," Hoffman said, "So I was able to take the ideas on NEXRAD from BASH (bird aircraft strike hazard) working groups and apply them here."

The word "RADAR" was coined in 1941 as an acronym for "radio detecting and ranging." Much as the word's origin suggests, a radar system consists of a radio transmitter and receiver. Simply put, the transmitter sends out radio waves and the receiver processes any reflections caused by the waves bouncing off objects during emission.

NEXRAD has proven so sensitive that just as its radio waves reflect off of rain or hail, they also reflect off of groups of birds. Much like the Doppler radar screens seen on weather reports back home, NEXRAD gives airfield management personnel a screen full of red and yellow splotches where large flocks of birds could be threatening the wing's aircraft.

"We've seen where NEXRAD will pick up as few as eight birds," Hoffman said. "You don't necessarily have to have that big of a mass."

During high-threat conditions, base operations personnel check the NEXRAD screen every 15 minutes; it usually comes up clear. But when a large flock of birds shows up on the screen, airfield operations springs into action.

These actions can range from simple airfield advisories — called bird watch conditions - that warn pilots which areas to stay away from to avoid a possible bird strike, to more direct measures. Like a rancher herding cattle, Hoffman and his team will often use audiotapes of birdcalls, loud firecrackers, and gas cannons to coax and scare the birds away from the airfield.

"What we did in the old days was find the birds by chance or luck," Hoffman said. "We relied on visual identification from the tower. But by the time we saw the birds, it would be too late. They'd already be over our airfield. With NEXRAD we see them as far as 15 miles out."

The positive effects that something like this can have on a safety program cannot be overstated, according to Senior Airman Timothy Larson of the airfield operations flight. Larson, one of the flight's members who watches the NEXRAD screen for birds, recalled a 1995 incident at Elmendorf Air Force Base, Alaska, in which 30 geese took down an E-3 Airborne Warning and Control System aircraft killing 24 Air Force members.

"If you hear the tape of that incident, it sends chills down your spine to realize how quickly something like that can happen," Larson said. "Just imagine hitting something as big as a watermelon at almost 500 mph. The results can be devastating."

But Larson sees NEXRAD helping to keep incidents like that from happening again, in an Air Force that suffered 31,522 bird strikes from 1985 to 1997. Aside from the immense cost in lives lost, these bird strikes caused more than \$457 million in damage.

Larson thinks NEXRAD can help change that. "The program works," he affirmed. "I can attest to that since I've seen it in action."

The next big test for Kunsan's NEXRAD will come in the fall. Huge flocks of crows can sweep through the area on a regular basis during October to March, turning the sky black.

But through a stepped-up BASH program that includes better gas cannon placement, a deeper grass height that's unattractive to birds and drawing the flocks away from the airfield with truck-mounted speakers blasting birdcalls, the sky has remained mostly blue. Safety officials say NEXRAD helps in this cause.

Kunsan has suffered only one bird strike in the last six months thanks to the energized BASH program that includes this innovative use of NEXRAD, said Capt. Gregg Lunsford, former 8th FW Safety Office flight safety chief.

"Using NEXRAD makes our BASH program more proactive and preventive," Lunsford said. "Before,

when the birds just showed up, it wasn't preventive — it was reactive. NEXRAD is just another tool for prevention, not even letting the birds get close to the airfield."

While NEXRAD's ability to track large groups of birds has long been known, Kunsan is the first base to implement such procedures on a wide scale. Hoffman and Lunsford presented the wing's use of NEXRAD to both military and civilian aviation officials at a recent BASH conference hosted by the Air Force Safety Center at Kirtland AFB, N.M., where it was positively received.

"There was a lot of interest in what we were doing at Kunsan, both amongst the civilians there who have researched this and the military members also representing bases," Lunsford said. "There were some bases that were very interested because they have similar locales to

ours. They sit on the water and have a lot of different types of birds."

Both Lunsford and Hoffman hope the success NEXRAD has had with the BASH program at Kunsan will be carried over to other bases. Already the Federal Aviation Administration is looking at use of NEXRAD in protecting commercial planes from bird strikes, and the Israeli government recently purchased three units for its own bird strike prevention programs.

"I think it has a place at Air Force bases with severe bird problems, ones that are on coasts where you have birds migrating to and from the sites," Hoffman said. "What NEXRAD effectively does is give us that extra tool to allow us to control the environment." (Courtesy of Pacific Air Forces News Service)

Lightning, cont'd from page 9

ment, safety and hygiene.

"Course content was excellent; a must for a combat weather team course," said Capt. Joseph

Golemboski, chief of weather, 11th Reconnaissance Squadron, Nellis AFB. Nev.

"Hands-on experience is the only way to go, and there was plenty of it," added Airman 1st Class Brandon Hintergardt, weather apprentice, Fort Polk, La.

The first three-and-a-half days of instruction are followed

by a field exercise designed to simulate the stresses of a real-world deployment.

Weather personnel are subject to everything and anything, including the set-up and tear-down of a bare-base operation, analyzing and disseminating forecasts and observations, working in austere environments, preparing mass

Senior Airman David Blankenship, Special Operations Weather Team Forcaster, Ft. Campbell, Ky., takes up a fighting position.

briefings for a variety of scenarios, chemical attacks, perimeter defense, maintenance of field equipment, andof course-hostile attacks by an enemy force.

"Combat Lightning has reached a new high in providing our personnel

> [Air Force Weather] training in customer support and sur-vival skills in a deployed environment for both Army and Air Force operations," stated Cavenaugh.

> The Combat Lightning Course is offered several times ayear by Detachment 1,334th Training Squadron, AETC and the Combat Weather Center, Air Force Weather Agency at Hurlburt Field, Fla. Contact your major

command training manager for future class dates.

Changes of Command

Air Force Combat Climatology Center

by Senior Airman Ray Giuliano, Air Force Weather Agency (Scott) public affairs

Lt. Col. Virginia A. Dillon assumed command of the Air Force Combat Climatology Center from Col. Francis X. Routhier in a change of command ceremony at Scott Air Force Base on April 3, 1998.

Col. John L. Hayes, commander of Air Force Weather Agency, presided over the ceremony. Hayes praised Dillon's accomplishments and explained that, given her wide range of experience and ability, her assumption of command of AFCCC was an "auspicious" event.

In her remarks, Dillon predicted AFCCC wouldn't merely survive the many changes and developments now transpiring in Air Force Weather, but it would "thrive" as a result of them. In closing, she

stated, "We need only to stay focused and keep doing the kind of fine work we have already done to achieve complete success."

According to Dillon, several assignments helped prepare her for this position. The Syracuse, N.Y. native served as commander of Detachment 1, 11th Weather Squadron at Elmendorf AFB, Alaska from May 1985 to July 1987. She was in charge of weather officer assignments at Randolph AFB, Texas from May 1989 to July 1992. She also served as executive officer to two Air Force Directors of Weather at the Pentagon from May 1993 to August 1995. Finally, she served as vice commander of AFCCC until her appointment as commander.

During her nearly 20 years of service, Dillon has earned the Meritorious Service Medal with two oak leaf clusters, the Air Force Commendation medal with one oak leaf cluster, and the Air Force Achievement Medal.

Dillon earned her bachelor's degree in chemistry at the California Polytechnic State University, followed by a master's degree in atmospheric science at the University of Michigan. She is also a graduate of Squadron Officer School, the Air Command and Staff College, and the Air War College.

Dillon's predecessor, Routhier, became Director of Operations, headquarters AFWA/XO, Offutt AFB, Neb.

Air Force Combat Weather Center

by Senior Airman Ray Giuliano, Air Force Weather Agency (Scott), Public Affairs

Lt. Col. Jonathon K. Hayward assumed command of the Air Force Combat Weather Center on March 17, 1998. Col. John L. Hayes, commander of Air Force Weather Agency, presided over the ceremony at Hurlburt Field, Fla.

Hayward was optimistic about his new command, expressing pride in its unique mission and rich tradition. "This proud unit is at the very foundation of making Air Force Weather a reality, in terms of how an effective combat weather flight will operate in the future."

Hayes praised the resourcefulness of CWC personnel. "This unit, perhaps more than any other weather unit in the Air Force, has continuously adapted its organiza-

tion and resources to meet Air Force Weather combat mission requirements," he said.

During his 17-year career, Hayward has earned the Meritorious Service Medal with three oak leaf clusters, the Air Force Commendation Medal, and the Air Force Achievement Medal.

The Richmond, Ind., native earned a bachelor's degree in mete-orology and entered the Air Force in 1981. He graduated from the Air Force Institute of Technology with a master's degree in space operations in 1984. He was assigned to the 4th Weather Wing and supported the North American Aerospace Defense Command, Defense Weather Support Unit. He completed Squadron

Officer's School in 1985. He was assigned as commander of Detachment 4, 11th Weather Squadron, and was responsible for weather support to Army Forces, Alaska. In 1990, Hayward was assigned as the Staff Meteorologist for the Air Force Civil Engineering Agency, and in 1991 became the agency's executive officer and squadron section commander. He attended Air Command and Staff College in 1994, followed by an assignment to the Air Force Special Operations Command as Chief, Weather Requirements, Resources and Programs.

Hayward is married to the former Jenny Sue Warfield of Richmond, Ind. They have a son, Brian and a daughter, Casey.

Final Farewell to Former AWS *commander*

Retired Brig. Gen. Roy Nelson, commander of Air Weather Service from March 1963 to October 1965, died on May 5, 1998.

While Nelson was AWS commander, the Joint Chiefs of Staff decided to develop weather support concepts for the Worldwide Military Command and Control System on April 2, 1963. The 3rd Weather Wing received the first operationally-ready automatic picture transmission weather satellite readout on Aug. 20, 1963. The Washington D.C. Climatic Center was redesignated as the Environmental Technical Applications Center on Dec. 15, 1964. Also the Automated Weather Network opened to link Fuchu Air Station, Japan, with Royal Air Force High Wycombe, United Kingdom, and Global Weather Central, Offutt Air Force Base, Neb., through the Tinker AFB, Okla. switch on July 1, 1965.

Born in Tacoma, Wash., on Sept. 20, 1916, Nelson graduated from West Point in 1940, receiving his pilot's wings at Stockton, Calif. In late 1941 he entered the California Institute of Technology to study meteorology.

During World War II he served in the Mediterranean theater of operations as staff weather officer to the North African Coastal Command, and to Maj. Gen. Nathan W. Twining's Fifteenth Air Force from its activation until V-E Day.

In 1947 he was transferred to Guam where he commanded the 514th Reconnaissance Squadron, Very Long Range, Weather, which was the first B-29 weather reconnaissance squadron overseas.

Among other highlights of his career, in 1951 Nelson was appointed commander of MATS activities supporting the Operation Ivy nuclear bomb tests in the Pacific. In February 1957, he took command of the 2nd Weather Wing at Wiesbaden, Germany. Promoted to brigadier general on Feb. 26, 1963, Nelson became AWS Commander in March of the same year. In October 1965 he was reassigned to Travis AFB, Calif. as Deputy Commander of MATS Western Transport Air Force.

Opportunity, cont'd from page 7

Following a CWT tour, most officers will return to academia to get master's degrees in meteorology at civilian institutions. An important point here is that this education is not so much to make you weather radar specialists, numerical modelers, or atmospheric chemists; rather, it is to prepare you to tackle tough technical challenges facing AFWwhether or not they happen to be in your specific area of expertise. Following AFIT, most, if not all, of you will be assigned to a job where you'll use that education in a technical leadership role-leading people, solving problems, developing technical plans and programs, to name a few. At the 9- to 10-year mark, most officers will compete for their first command-where you will lead dedicated CWTs as an integral part of military operations. Some will move to OWSs and strategic centers in more technology-focused leadership roles.

Field graders will have a wealth of career opportunities: Air Staff-FOA staff-branch chiefs at strat centers and OWSs-squadron director of operations or commander. While the number of officers in AFW has decreased, the percentage of key leadership opportunities has actually increased. At the senior level, opportunities at MAJCOMs, FOA and Air Staff will provide superb capstones for successful careers.

Now, what about civilians? Well, I'll be frank-we don't have the large number of civilian positions and the numerous opportunities for career progression the bigger career fields in the Air Force offer. But again-if you are willing to seize the day-you too can have successful, progressive and satisfying careers. Despite the onslaught of civilian force cuts that have significantly reduced civilian employment options in many commands, we've preserved most existing AFW positions. At base level, as in years past, there will be

opportunities for that seasoned, veteran forecaster to provide critical continuity and mentor tomorrow's leaders. Career advancement opportunities will be most abundant at strategic centers-ranging from frontline forecasting to training, operations, planning and programming. As we evolve the reengineering concepts further, look for additional opportunities. But, please note: Career Programs registration is a must. Registration for a large geographic area will increase your opportunities to advance, both inside and outside AFW.

In closing, let me share a few thoughts: As I look back to 1970 when one Lt. Hayes entered AWS, I never expected to be a colonel or to command the AFWA. I set my sights on taking on jobs that contributed to the Air Force mission, jobs that challenged me professionally, jobs that I enjoyed. As I look to the future, I see more opportunities and challenges for each of you. You have only to seize the day, grasp the opportunity-CARPE DIEM!

Moorman's Passing Marks End of

by Lilian Nolan, Air Force Weather Historian

In this month's issue we pay our respects to Lt. Gen. Thomas S. Moorman, Jr., who died Dec. 23, 1997.

Moorman's military career began when he graduated from West Point in 1933, as a second lieutenant. He went on to Air Corps Flying Training School at Randolph Field, Texas, where he earned his pilot's wings and was assigned to the 4th Observation Squadron, Luke Field, Hawaii. In 1936 he was promoted to first lieutenant and reassigned to the 97th Reconnaissance Squadron, Mitchell Field, N.Y.

The following year he entered California's Institute of Technology, obtained a master's degree in Meteorology under Dr. Irving P. Krick, and was subsequently assigned as assistant station weather officer at Randolph Field, Texas. He was dualhatted, working also as assistant instructor of meteorology at Randolph Field's flight school, where he and Capt. Don Zimmerman co-wrote the first Army-published "Weather Manual for Pilots." In 1940, as a captain, he was part of a six-man research team that worked to establish a weather research center at Bolling Field, Md. This center became a weather central for long-range forecasting. When he was promoted to major in 1941, Moorman received an assignment to Air Corps Headquarters as Chief Climatologist, Assistant Director of the Air Corps Research Center and liaison officer to the U.S. Weather Bureau.

In January 1942, Moorman was once again promoted, this time to lieutenant colonel, and the following year made the move to Bradley Field, Conn. to become regional control officer for the 21st Weather Squadron, a mobile weather squadron trained specifically for combat. Mobile units of the 21st found themselves going ashore as part of the D-Day invasion of Normandy.

Moorman took over command of the 21st Squadron after his promotion to colonel in 1943. Just a few months later, he was assigned as staff weather officer, and eventually director, of weather support to 9th Air Force. By 1944, Moorman was the liaison officer for the American 1st Army commanded at that time by Lt. Gen. Omar N. Bradley.

Upon his return to the U.S. in 1945, Moorman became Deputy Chief of Staff for Air Weather Service and the following year, the air weather officer, a position he retained until 1947 when he attended Air War College.

Moorman was sent to Tokyo in 1949 to be commander of the 2143rd Air Weather Wing and during that time he once again was dual-hatted, serving as staff weather officer to the General of the Army, Douglas MacArthur. In August 1952, he became Deputy Commander of Air Weather Service and received his first star the following month. He was appointed Commander of Air Weather Service in 1954 and after two years in that position, received his second star.

Just prior to his change of command ceremony on March 28, 1958, he was awarded the Legion of Merit by Maj. Gen. Fritz Glantzberg, Military Transport Service vicecommander.

During his tenure as commander of Air Weather Service, many significant accomplishments were noted, including installation of the first radar specifically designed for meteorological use; activation of the Joint Numerical Weather Prediction Unit at Suitland, Md.; sanction of Project 433L, a weather observing and forecasting system; operation of the first transmissometer at Andrews Air Force Base, Md.: installation of the first surface wind set at Eielson AFB, Alaska; and the expansion of Global Weather Central located at Offutt AFB, Neb. (following the closure of the United States Air Force Weather Central in 1957).

Lt. Gen. Thomas S. Moorman, Jr., had an extremely unique and exciting career. He was a special individual who made a tremendous impact on the way we see weather today.

Weather Played Significant Role in **D-Day Invasion**

by Patricia Warner, Writer, Air Force Weather History Office

When the Supreme Headquarters, Allied Expeditionary Force came into being in February 1944, the D-Day invasion commander, Gen. Dwight Eisenhower, noted that "the selection of the actual day would depend on weather forecasts." Therefore, selecting the general's personal meteor-ological support team was of paramount importance.

Two meteorologists, one British (James Martin Stagg) and one American (Col. Don Yates) were appointed to the invasion planning staff. These two leaders often mediated professional differences of opinion among forecasters at the three weather centrals supporting SHAEF: United States Strategic Air Forces in Europe, the Royal Air Force's Dunstable, and the Royal Navy's Admiralty.

Stagg wrote that "in less than half an hour I was expected to present to Gen. Eisenhower an 'agreed' forecast for the next five days. Yet no two of the expert partcipants in the discussion could agree on the likely weather even for the next 24 hours."

On June 2, USSTAF Central was confidently optimistic, Dunstable was gloomy, and the Admiralty sided with USSTAF Central.

As the days progressed a decision was made to delay the invasion, but only for one day.

According to Yates, "It was touch and go. It was clear there was going to be time in between two fronts. It was also clear that it wasn't going to be an absolutely clear night for bombing, and it was going to be kind of rough in the Channel, rougher than we had been given as the limits."

In other words, the weather predicted was barely tolerable, rather than ideal for an assault, but Eisenhower decided it was a "go."

As Stagg and Yates returned to their tents after the decision, they couldn't help noting with a certain sense of irony that in a period of less than 24 hours, the decision to postpone Operation Overlord

> had been made when the weather was clear, but the operation remounted during rain and gale winds.

> The invasion occurred after midnight June 6 under the predicted weather conditions. which were less than ideal. However, this very allowed weather Eisenhower to achieve complete tactical surprise.

> As it turned out, in terms of weather, June 1944 was ultimately the worst June in more than 20 years. If Eisenhower had waited until the alternate date, June 19, a howling gale would have awaited the troops. After seeing the storm's effect, Eisenhower wrote Stagg: "I thank the gods of war we went when we did!"

> In retrospect, Sverre Petterssen, a noted Scandinavian meteorologist, observed that June 6, 1944 was "meteorology's finest hour."

Did You Know?

- On June 6, 1944, the D-Day invasion, Operation Overlord, was launched on the beaches of Normandy.
- On June 26, 1948, Operation Vittles, the Berlin Airlift, commenced, continuing until May 12, 1949.
- On June 27, 1950, Air Weather Service established the first weather station at Taeju, Korea, just two days after hostilities started.
- On June 23, 1958, the AWS moved its headquarters from Andrews Air Force Base, District of Columbia, to Scott AFB, Ill.
- On June 21, 1965, U.S. Weather Bureau officials in Washington, and learned of its capabilities for securing hurricane data.
- On June 10, 1966, a Lockheed WC-130 of Detachment 2, 53rd Weather Reconnaissance Squadron, Ramey AFB, Puerto Rico,
- On June 1, 1973, the 1st Aerial Cartographic and Geodetic Squadron's Elmendorf AFB, Alaska for the Defense Mapping Agency, U.S. Geo-
- On June 7, 1973, the "Pilot to Forecaster Service" became the "Pilot to Metro Service" as AWS policy allowed observers to pass weather information to pilots via radio.
- On June 1, 1974, a Military Airlift Command Programming Plan outlined steps necessary to move the U.S. Air Force Environmental D.C., to Scott AFB, Ill. by August 31, 1975.

Weathermen Reunite After 47 Years

by Dr. John Van Valkenburg, former weather observer, 15-2 Weather Detachment

Weather observers who served on Guam in the 15-2 Weather Detachment during the Korean War, met May 8 to 10, 1998 at the Marriott Hotel in Dayton, Ohio.

These men who operated the weather station on Andersen Air Force Base, Guam from 1951 to 1952 met to renew friendships, introduce their wives and relate stories and events after their 47-year absence from one another.

The Guam weather unit was typical of most weather operations during that period. Weather observation at that time was a hands-on operation. with the observer recording the weather in the immediate area and recording and plotting data on regional maps.

The Guam weather crew was made up of close-knit teams who kept the weather record 24 hours a day. This type of shift work and shared responsibility led to close personal ties between the men who served.

The men visiting Dayton recalled typhoons, detachment parties, relaxing on Guam's white sand beaches, eating coconuts and many other shared experiences. Although the 15-2 Weather Detachment was the smallest unit at Andersen AFB, the unit provided a softball team that boasted the base winning title.

While in Dayton, the observers arranged a visit to the modern weather station at Wright-Patterson AFB. They also visited the Air Force Museum. The reunion concluded with a banquet of remembrances and speech recognition of those who had passed away.

The observers and their wives came from all corners of the United States. Those attending were as follows: Mr. and Mrs. Mario Armanini of Baton Rouge, La.; Mr. David Borga of New Weston, Ohio; Mr. John Borgerding of Beloit, Wis.; Mr. and Mrs. Clark Hartwig of Lansing, Mich.; Mr. Clark McConkey of Almira, Wash.; Mr. Robert McGlew of Amesbury, Mass.; Mr. and Mrs.



Reunion members (left to right) in front row: Tom Malmgren, Clark McConkey, Clark Hartwig, Robert McGlew, John Van Valkenburg. Back row: Joe Streb, Mario Armanini, Moe Steelman, John Zerbe, David Barga, James Rolfe, John Borgerding.

Thomas Malmgren of Auburn, Mass.; Mr. and Mrs. James Rolfe of Allegan, Mich.; Mr. and Mrs. Maurice Steelman of West Lafavette, Ind.; Mr. and Mrs. Joseph Streb of Wisconsin Rapids, Wis.; Dr. and Mrs. John Valkenburg of Orange Beach, Ala.; and Mr. and Mrs. John Zerbe of Hershey, Pa.

The 15-2 weather observers agreed to meet again in the year 2000. Contact Valkenburg at P.O. Box 765, Orange Beach, Ala. 36561, for more information.

Excerpts from Trip to Dayton

by Dr. John Van Valkenburg

In 1951 and 1952 through Guam's gates walked men of character, humility and care

To find that each new 15-2 relationship put one in contact with a person rare.

But now, through the Marriott doors of Dayton walked these same men, now with experience and strength,

Here they strolled together, to recall tales and events of saga

The warmth of a Streb, Borgie,

Rolfe, Zerbe, Barga and Moe to name a few.

The heart of a Malmgren, Armanini, McConkey, Hartwig and MacGlew

Can we learn from these Guam friends new characteristics laid dormant for so long?

A revitalization of temperament buildingNew chattels so strong.

That from this simple act of comingtogether on a weekend in

That we walk a little brisker intotomorrow's life's highway.

Best Of Climes... Worst of Climes...

URBU

by Lt. Col. Timothy Minor, HQ AFWA

It was only my third mission as an aircraft commander. There I was, at four o'clock in the morning, at the briefing for a higher-headquarters-directed air refueling mission. My crew and I were to number two in the cell to refuel the "Habu" (SR-71) on a very visible mission. We were 'good to go' (a phrase unheard of in those days), though, when the weather briefer placed a chart showing thunderstorms all around the air refueling track at VIP level four and level five. We knew something was going to make this a day to remember.

It wasn't until ten minutes later, with the conclusion of the last briefing, that the final slide appeared. "Flying Safety is Paramount" is all it said.

As we approached the air-refueling track some five hours later, a large wall of thunderstorms crossed our path. Tops to 50,000 feet were reported. One controller said there were reports of tornadoes on the ground. With the SR-71 already airborne and descending from its 'hot run' high on the other side of the thunderstorms, there was little to do but stay in formation behind the lead as he probed the squall line for a path through these weather giants. It was clearly too late to change tracks.

Within a few moments, we encountered just about the worst ride I can say I've ever experienced in an aircraft. It started with a brief bout with heavy precipitation. Next came the pounding of hailstorms, followed by severe turbulence, which forced us up and down over 400 feet within seconds. Then came the bluish glow of 'St. Elmo's Fire' on the cockpit windows. Then the aircraft electrical system quit. We went to battery power until our craft was out of the storm. Once clear, we reset two generators.

Upon landing we found a six-inch hole in the radome. We had been hit by lighting, but we were also very fortunate. It could have ended a lot worse. After all, we still had many more good years of aviation left

And so began my passion for the weather and flying.

FIRST FORECAST

by Don Cooke

I arrived in Keesler Field, Miss., in September 1943. As a newly minted second lieutenant from the meteorology course at MIT, I was assigned the midnight shift. This was probably because the captain decided to minimize the amount of damage an untried forecaster could bring about! My first night on the job there was no air traffic at all and after studying the weather map, I just sat around.

At 4 a.m. the phone rang. It was the officer of the day, and he wanted to know what the uniform of the day should be. I told him that it looked like it was going to be a nice day and that khakis should be fine. There was a long pause, followed by "Lieutenant, do you know it's raining now?" The troops wore raincoats that day and I can just imagine the stories going around the Officers' Club that night.

Whether or not it was by design or chance I will never know, but that was one of the few forecasts I was destined to make. In a couple of weeks I was off to the 8th Air Force Headquarters to England where I was assigned work in climatology, including duties related to the impending Normandy invasion.

FRIGID ENCOUNTER

Anonymous

Back when I was a crusty old staff sergeant counter forecaster assigned to Coleman Barracks, Germany, I was briefing C-12 pilots flying the central and southern corridors into Berlin. The corridors in Templehoff were narrow and didn't allow pilots much room to circumnavigate flight hazards.

One day my forecast called for light rime ice. Later, an intrepid CW4 returned from his trip to provide me with his personal PIREP. He barged into the weather station, slammed a giant slab of clear ice on the forecast counter (shards flew everywhere), and said: "Here's your *!#\$& LIGHT RIME ICE!!!"

Do you have an exciting adventure you would like to share about your days as an Air Force Weather Warrior? If so, you can submit your story to:

> HO AFWA/PA 106 Peacekeeper Dr., Ste. 2N3 Offutt Air Force Base, NE 68113-4039 Fax: (402) 232-8168

් පිත්මර්ල් ප Davoga mogs Olyop World

Air Force Meritorious Service Medal
Lt. Col. Ira Robbins, 140° WF, Willow Grove, Pa. Lt. Col. David P. Urbanski, HQ AFWA, Offutt AFB, Neb

Master Sgt. Vernon Lebby, Jr., 24th WS, Howard AFB. Panama

Maj. Vincent Ries, HQ AFWA, Offutt AFB, Neb. Maj. David Miller, HQ AFWA, Offutt AFB, Neb. Tech. Sgt. James Barber, HQ AFWA, Offutt AFB, Neb.

Tech. Sgt. Donald T. Grev. HO AFWA, Offutt AFB, Neb.

Air Force Commendation Medal

Tech. Sgt. Katherine Zupan, OL-A, 18th WS, Fort Bragg, N.C.

Staff Sgt. Carlton W. Hatfield, OL-A, 18th WS, Fort Bragg, N.C.

Master Sgt. Donald P. Urbanski, HQ AFWA, Offutt AFB. Neb.

Senior Airman Lisa M. Gray, HQ AFWA, Offutt AFB. Neb

Tech. Sgt. Joseph J. Frederico, HQ AFWA, Offutt AFB, Neb

Senior Airman James A. Shaw, HQ AFWA, Offutt

AFB. Neb. Capt. Frederick G. Meyer, HQ AFWA, Offutt AFB,

Staff Sgt. Bruce A. Suntych, HQ AFWA, Offutt

AFR Neh

Tech. Sgt. Norma T. O'Brien, HQ AFWA, Offutt AFB, Neb

Staff Sgt. Michael Chavis, HQ AFWA, Offutt AFB, Neb.

Capt. Julie A. Wyzywany, HQ ACC/DIWPR

Air Force Achievement Medal

Senior Master Sgt. Steven J. Walter, HQ AFWA, Offutt AFB. Neb.

Staff Sgt. Anthony Gulbrandsen, HQ AFWA, Offutt AFB, Neb.

Senior Airman Rebecca M. Carney, HQ AFWA, Offutt AFB, Neb.

Senior Airman Mathew A. Lipke, HQ AFWA, Offutt AFB, Neb.

Staff Sgt. Ty Hunt, HQ AFWA, Offutt AFB, Neb. Staff Sgt. Roxanne D. Gelb, HQ AFWA, Offutt AFB, Neb

Tech. Sgt. Patrick A. Therien, HQ AFWA, Offutt AFB, Neb

Tech. Sgt. John A. Diorio, HQ AFWA, Offutt AFB, Neb.

Master Sgt. William Kohler, III, HQ AFWA, Offutt AFB, Neb.

1st Lt. Michael Handiboe, HQ AFWA, Offutt AFB, Neb.

1st Lt. Scott T. Ekstrom, HQ AFWA, Offutt AFB, Neb. 1st Lt. Thomas J. Black, HQ AFWA, Offutt AFB,

Capt. Richard L. Ritz, HQ AFWA, Offutt AFB, Neb.

Senior Airman Ernest G. Samuel, Jr., HQ AFWA, Offutt AFB, Neb.

Staff Sgt. Dory L. Hasson, HQ AFWA, Offutt AFB,

Senior Airman Tashia D. Brandenburg, HQ AFWA, Offutt AFB, Neb.

Staff Sgt. Christing L. Reisert, HQ AFWA, Offutt AFB, Neb.

Staff Sgt. Dry L. Hasson, HQ AFWA, Offutt AFB,

Tech. Sgt. Carl R. Wetterberg, HQ AFWA, Offutt

Staff Sgt. Arthur N. Croswell III, 23rd FS. Spangdahlem, AB, German

Senior Airman Gregory C. Wildes, 702nd CSS, Tyndall AFB, Fla.

Master Sgt. George R. Statler, 18th WS, Fort Bragg,

Senior Airman Paul Montas, 9th OSS/OSW, Beale AFB, Calif

Staff Sgt. Carlton W. Hatfield, OL-A, 18th WS, Fort Belvoir, Va.

Army Commendation Medal

Master Sgt. Walter W. Mathie, HQ AFWA, Offutt

Staff Sgt. Cassandra Richards-Groff, 24th WS, Howard AFR Panama

Joint Service Commendation Medal

Tech. Sgt. Dennis W. Miller, JTWC, Nimitz Hill,

Army Achievement Medal

Staff Sgt. Carlton W. Hatfield, OL-A, 18th WS, Fort Belvoir, Va

Senior Airman Carol Walker, OL-B, 18th WS, Fort Eustis, Va.

Senior Airman William T. Haley, 3rd OSS/WE, Elmendorf AFB, Alaska

Maj. Mark Miller, HQ AFWA, Offutt AFB, Neb. Tech. Sgt. Richard W. Nieman, HQ AFWA, Offutt AFB. Neb.

Maj. Randy J. Lafevre, HQ AFWA, Offutt AFB, Neb.

Staff Sgt. Timothy E. Webb, HQ AFWA, Offutt AFB. Neb.

Capt. Kimberly W. Kreis, HQ AFWA, Offutt AFB, Neb.

Senior Airman Scott A. Price, HQ AFWA, Offutt AFB, Neb.

Tech. Sgt. Philip B. Hamblett, HO AFWA, Offutt AFB, Neb

Staff Sgt. Michelle L. Haney, HQ AFWA, Offutt AFB, Neb.

Master Sgt. Timothy A. Kalb, HQ AFWA, Offutt AFB, Neb.

Staff Sgt. Loretta J. Lemley, HQ AFWA, Offutt AFB, Neb.

Master Sgt. Linda M. Mango, HQ AFWA, Offutt AFB, Neb.

Senior Airman Lois M. Marin, HQ AFWA, Offutt AFB, Neb

Staff Sgt. William J. Martin, HQ AFWA, Offutt AFB, Neb.

Staff Sgt. Paul Pervis, HQ AFWA, Offutt AFB, Neb. Staff Sgt. Erik D. Rabesl, HQ AFWA, Offutt AFB,

Tech. Sgt. Jeffrey D. Smeby, HQ AFWA, Offutt AFB, Neb.

Staff Sgt. Jeffrey J. Struebing, HQ AFWA, Offutt AFB, Neb.

Staff Sgt. Channing Wwinmeister, HQ AFWA, Offutt AFB, Neb.

Master Sgt. Kathren L. Williams, HQ AFWA, Offutt AFB, Neb.

Senior Airman Michelle Mavcock, Howard AFB. Panama

Senior Airman Kristen Koehl, Howard AFB, Panama

Staff Sgt. Joseph K. Cruz, HQ AFWA, Offutt AFB, Neb

Master Sgt. Gary G. Griffin, HQ AFWA, Offutt AFB, Neb.

Senior Airman Wynne V. Grizzard, HQ AFWA, Offutt AFB, Neb.

Master Sgt. Robert L. Hirl, HQ AFWA, Offutt AFB,

Staff Sgt. Gregory J. McQuoid, HQ AFWA, Offutt AFB, Neb

Senior Airman Allen Richardson, HQ AFWA, Offutt AFB, Neb.

Tech. Sgt. George Splonkowski, HQ AFWA, Offutt AFB, Neb

Tech. Sgt. Thomas N. Taylorn, HQ AFWA, Offutt AFB, Neb.

Master Sgt. William A. Ward, HQ AFWA, Offutt AFB, Neb.

Senior Airman Ronald J. Warlick, HQ AFWA, Offutt AFB, Neb.

Tech. Sgt. Gerard D. Graves, HQ AFWA, Offutt AFB, Neb.

Senior Airman Scotty B. Jackson, HO AFWA. Offutt AFB. Nel

Senior Airman Raymond A. J. Miller, HQ AFWA. Offutt AFB, Neb

Staff Sgt. Merle G. Richard, HQ AFWA, Offutt AFB, Neb.

Senior Airman Craig A. J. Rolling, HQ AFWA, Offutt AFB, Neb

Senior Master Sgt. Mark E. Wilke, HQ AFWA, Offutt AFB, Nel

Tech. Sgt. Scott A. Bawek, HQ AFWA, Offutt AFB, Neh

Tech. Sgt. Dana Rae Becker, HQ AFWA, Offutt AFB. Net

Senior Airman Ryan L. Bratt, HQ AFWA, Offutt AFB. Neb.

Staff Sgt. Chris C. Childress, HQ AFWA, Offutt AFB, Neb

Senior Airman Tashia Brandenburg, HQ AFWA, Offutt AFB, Nel

Senior Airman Michael Hermann, 21st ASOS/ASW, Fort Polk, La.

Senior Airman Carol Walker, OL-B, 18th WS, Fort Eustis, Va.

Military Outstanding Volunteer Service Medal Capt. Mark Yeisley, HQ AFWA, Offutt AFB, Neb. Capt. Jennifer Roman, HQ AFWA, Offutt AFB, Neb.

Capt. Shannon King, HQ AFWA, Offutt AFB, Neb. Capt. Julie Novy, HQ AFWA, Offutt AFB, Neb. Maj. Vincent Ries, HQ AFWA, Offutt AFB, Neb.

PROMOTIONS:

Lieutenant Colonel

Ray Clark, 24th WS, Howard AFB, Panama Jonathon K. Hayward, Air Force Combat Weather Center, Hurlburt Field, Fla.

Major

Peter B. Roohr, HQ AFWA, Offutt AFB, Neb. Mark B. Miller, HQ AFWA, Offutt AFB, Neb. Vincent T. Ries, HQ AFWA, Offutt AFB, Neb. Michael Farrar, 8th OSS/OSW, Kunsan AB, ROK

1st Lieutenant

Rayna Mercer, 24th WS, Howard AFB, Panama

Senior Master Set.

Bruce A. Moyer, HQ AFWA, Offutt AFB, Neb.

Jerry L. Sanders, HQ AFWA, Offutt AFB, Neb.

Master Set.

Donavon Williams, 24th WS, Howard AFB Antonio Chisolm, Offutt AFR, Neb. Dennis W. Miller, AFCCC, Asheville, N.C. David A. Fincher, HQ AFWA, Offutt AFB, Neb. William G. Howerton, HQ AFWA, Offutt AFB, Neb. David M. Ward, HQ AFWA, Offutt AFB, Neb.

Tech. Sgt.

James Vinson, 24th WS, Howard AFB Peter J. Baity, 110th WF, St. Louis, Mo. Curtis L. Garner, 209th WF, Austin, Texas Victor L. Waldron, 126th WF, Milwaukee, Wis. Paul W. Wendt, 110th WF, St. Louis, Mo. David Haney, HQ AFWA, Offutt AFB, Neb. Jeffrey Papka, HQ AFWA, Offutt AFB, Neb. Christopher A. Comte, HQ AFWA, Offutt AFB,

Jeffrey J. Struebing, HQ AFWA, Offutt AFB, Neb. Michael L. Allstott, HQ AFWA, Offutt AFB, Neb.

Staff Set.

Brian Thomas, Dragon Flight, 18th WS, Fort Bragg,

Floyd Brown, HQ AFWA, Offutt AFB, Neb. Timothy C. Osten, HQ AFWA, Offutt AFB, Neb. Timothy W. Dunman, HQ AFWA, Offutt AFB, Neb.

Scott McCormick, HQ AMC, TACC/XOW, Scott AFB, Ill.

Philip Hardin, 21st ASOS/ASW, Fort Polk. La. Brian Thomas, Dragon Flight, 18th WS, Fort Bragg, N.C.

Senior Airman

Jennifer Dorn (BTZ), Dragon Flight, 18th WS, Fort Bragg, N.C.

Michael Lee, 18th WS, Fort Bragg, N.C. Rebekah A. Chadwick, 120th WF, Buckley ANGB, Colo.

Martin C. Clark, 125th WF, Tulsa, Okla. Margaret Mazzarello, 125th WF, Tulsa, Okla. Christopher Spangler, 127th WF, Forbes Field, Kan. Asish A. Kakkad, 412th OSS/OSW, Edwards AFB, Calif.

Monica E. Preble, 412th OSS/OSW, Edwards AFB, Calif.

Dalia Sutton, 3rd OSS/WE, Elmendorf AFB, Alaska Robert E. Trennert, 3rd OSS/WE, Elmendorf AFB, Alaska

Kristen Koehl, 24th WS, Howard AFB, Panama Nelson D. Rouleau, Jr., 6th WF, Fort Rucker, Ala. Carol Walker, OL-B, 18th WS, Fort Eustis, Va. Michael Hermann, 21st ASOS/ASW, Fort Polk, La. Victor Renderos, 21st ASOS/ASW, Fort Polk, La. Ellie Parcel, 21st ASOS/ASW, Fort Polk, La Tamika Shipman, 21st ASOS/ASW, Fort Polk, La. Scott Fuller, 21st ASOS/ASW, Fort Polk, La. Jennifer Dorn (BTZ), Dragon Flight, 18th WS, Fort Bragg N.C.

Michael Lee, Simmons Flight, 18th WS, Fort Bragg,

Stephen Hale, 8th OSS/OSW, Kunsan AB, ROK

Airman 1st Class

Cheryl J. Anderson, 159th WF, Camp Blanding, Fla. Fernando Ortega, 12th OSS/OSW, Randolph AFB, Texas

Elizabeth Markley, OL-B, 18th WS, Fort Eustis, Va. Tomika Redmond, 21st ASOS/ASW, Fort Polk, La. Timothy Sullivan, 21st ASOS/ASW, Fort Polk, La.

HAILS AND FAREWELLS

Airman 1st Class Rachael Ramos, to 24th WS/PA, Howard AB, Panama, from Cannon AFB, N.M. Capt. Mark R. Lajoie, to 51st OSS/OSW, from 7th Weather Squadron, Heidelberg, Germany Senior Airman Brandon D. Orr, to 51st OSS/OSW, from Fort Campbell, Ky.

Senior Airman Mark E. Reed, to Sheppard AFB, Texas, from 51st OSS/OSW

Capt. Theodore P. Danecki, to 51st OSS/OSW, from Yongsan, ROK

Airman 1st Class Shannon Ahern, to Osan AB, ROK

Senior Airman Emili A. Sadler, to Keesler AFB, Miss from 412th OSS/OSW Edwards AFR Calif Airman 1st Class Olivia P. Brillantes, to Yongsan, ROK, from 412th OSS/OSW, Edwards AFB, Calif. Capt. Barry L. Crook, to Grand Forks AFB, N.D., from 3rd OSS/WE, Elmendorf AFB, Alaska Master Sgt. William T. Shacklady, to Scott AFB, from 3rd OSS/WE, Elmendorf AFB, Alaska Staff Sgt. James M. Flashing, to Camp Stanley, ROK, from 3rd OSS/WE, Elmendorf AFB, Alaska Senior Airman Brent A. Persinger, to Keesler AFB. Miss., from 3rd OSS/WE, Elmendorf AFB, Alaska Capt. Gary B. Kubat, from JTWC, Guam, to Elmendorf AFB, Alaska

Master Sgt. Steve K. Long, from Minot AFB, N.D., to Elmendorf AFB, Alaska

Staff Sgt. Trisha A. Oleksa, from 611th OSF/WE, Elmendorf AFB, Alaska, to 3rd OSS/WE, Elmendorf AFB, Alaska

Capt. Brian Griffith, to Colorado State University (AFIT), from Det.2, 10th CWS (SOWT), Fort Campbell, Ky.

Capt. Joe Piasecki, to Det. 2, 10th CWS (SOWT), Fort Campbell, Ky.

Tech. Sgt. Price, to HQ AFWA, Offutt AFB, Neb., from Scott AFB, Ill.

Airman 1st Class James Schmidt, to HQ AFWA, Offutt AFB, Neb., from Keesler AFB, Miss Capt. Scott Magnan, to HQ AFWA, Offutt AFB, Neb., from naval Post Graduate School

1st Lt. Daniel Pawlak, to HQ AFWA, Offutt AFB, Neb., from Penn. State.

Staff Sgt. Raymond Pelletier, to Shaw AFB, N.C., from HO AFWA, Offutt AFB, Neb. Staff Sgt. Eric Rabes, to Peterson AFB, Colo., from

HQ AFWA, Offutt AFB, Neb. Capt. Lester Roberts, to Ramstein AB, from HQ

AFWA, Offutt AFB, Neb. Master Sgt. MeiLin, to HQ AFWA, Offutt AFB, Neb., from Belgium

Tech. Sgt. Raymond Bigler, to HQ AFWA, Offutt AFB, from Yongsan AB, ROK

Senior Master Sgt. Mark Wilke, to HQ AFWA. Offutt AFB, from Ramstein AB, Germany

Lt. Col. Robert G. Nuss, to HQ AFWA, Offutt AFB, Neb., from STRATCOM

1st Lt. Calvin Myles, to Pentagon, from HQ AFWA, Offutt AFB, Neb.

Airman 1st Class Stacey L. Bennett, to Osan AB, ROK, from HQ AFWA, Offutt AFB, Neb. Staff Sgt. Anthony Morence, to Red Cloud, ROK, from HO AFWA, Offutt AFB, Neb.

1st Lt. Thomas Black, to Peterson AFB, Colo., from HQ AFWA, Offutt AFB, Neb.

Staff Sgt. Cassandra Kirk, to OTS, Maxwell AFB, Ala., from HO AFWA, Offutt AFB, Neb. Staff Sgt. John F. Suther, to 12th OSS/OSW, Randolph AFB, Texas, from Wheeler AAF, Hawaii Staff Sgt. Mark C. Ayers, to 12th OSS/OSW, Randolph AFB, Texas, from Yokota AB, Japan

Senior Airman G. Chapa, to Forecasting School, Keesler AFB, Miss., from 12th OSS/OSW, Randolph AFB, Texas

Airman 1st Class Avelardo E. Zuritabenitez, to 12th OSS/OSW, Randolph AFB, Texas, from Keesler AFB,

Senior Airman Stephen L. Moore, to Grafenwohr AIN, Germany, from 12th OSS/OSW, Randolph AFB, Texas

Airman 1st Class Elroy Muse, to Camp Stanley, ROK, from 4th OSS/OSW, Seymour Johnson AFB, N.C.

Master Sgt. Steve Grimes, to Simmons Flight, 18th WS, Fort Bragg, N.C., from Nellis AFB, Nev. Staff Sgt. Dave Wilson, to ROK, from Simmons Flight, 18th WS, Fort Belvoir, Va.

Senior Airman Charles E. Hall, to ROK, from Simmons Flight, 18th WS, Fort Bragg, N.C.

Senior Airman Deyle D. Nitz, ETZ, from Simmons Flight, 18th WS, Fort Bragg, N.C. Airman 1st Class Wes Cornett, to ROK, from

Dragon Flight, 18th WS, Fort Bragg, N.C. Airman Jose E. Martinez-Flores, to OL-C, 18th WS, Fort Knox, Ky., from Keesler AFB, Miss Staff Sgt. Rachel Cox, to HQ AFWA, Offutt AFB,

Neb., from Lakenheath, England Capt. Mark Fitzgerald, to HQ AFWA, Offutt AFB, Neb., from Penn. State University

Staff Sgt. Patrick D. Mumford, to HQ AFWA, Offutt AFB, Neb., from Neb. Weather Station Senior Rick Cardenas, to HQ AFWA, Offutt AFB,

Neb., from Mildenhall AB, England Senior Wesley A. Freese, Jr., to HQ AFWA, Offutt AFB, Neb., from Howard AFB, Panama Staff Sgt. Kelly J. Lawless-Foster, to HQ AFWA, Offutt AFB, Neb., from Giebelstadt AIN, Germany Senior Airman Stephen Horsmann, to HQ AFWA, Offutt AFB, Neb., from Wheeler AAF, Hawaii Staff Sgt. Diane Fay, to HQ AFWA, Offutt AFB, Neb., from Wheeler AAF, Hawaii

Tech. Sgt. Gregory Streetman, to Scott AFB, Ill., from HQ AFWA, Offutt AFB, Neb.

Master Sgt. Michael Daniels, to San Antonio, Texas, from HQ AFWA, Offutt AFB, Neb.

Senior Airman Tashia Brandenburg, to Shaw AFB. N.C., from HQ AFWA, Offutt AFB, Neb.

Airman 1st Class Lance Stringham, to 51st OSS/ OSW, ROK, from McChord AFB, Wash. Master Sgt. Jamie Minyon, to 51st OSS/OSW, ROK,

from Dyess AFR Texas Master Sgt. Dennis Hern, to Little Rock AFB, Ark.,

from 51st OSS/OSW, ROK Senior Airman Angela Carter, to Keesler AFB,

Miss., Forecasting School Staff Sgt. Kenneth Brooks, to Incirlik AB, Turkey,

from 21st ASOS/ASW, Fort Polk, La. 1st Lt. Patricia Vollmer, to Yongsan AIN, ROK, from

21st ASOS/ASW, Fort Polk, La. 2nd Lt. David Vollmer, to Yongsan AIN, ROK, from

21st ASOS/ASW, Fort Polk, La.

Tech. Sgt. Arlen Lewis, to Dover AFB, Del., from 8th OSS/OSW, Kunsan AB, ROK

Tech. Sgt. Paul Dufresne, to 8th OSS/OSW, Kunsan AB, ROK, from OL-A, AFOG, Fort Detrick, Md. Capt. Paul Gifford, to AFELM NOAA, Boulder, Colo., from HQACC/DIWSE

DEPLOYMENTS

1st Lt. Patricia Vollmer, from 21st ASOS/ASW to OPERATION JOINT GUARD 2nd Lt. David Vollmer, from 21st ASOS/ASW to OPERATION JOINT GUARD Tech. Sgt. Jimmy Clark, from 21st ASOS/ASW to OPERATION JOINT GUARD Staff Sgt. Kenneth Brooks, from 21st ASOS/ASW to OPERATION JOINT GUARD Senior Airman Tamika Shipman, from 21st ASOS/ ASW to OPERATION JOINT GUARD

Airman 1st Class Lori Williams, from 21st ASOS/ASW to OPERATION JOINT GUARD

Staff Sgt. Gary L. Ellingson, 3rd OSS/WE, Elmendorf AFB, Alaska, deployed to Kwangju, ROK Staff Sgt. Robert T. Tebben, 3rd OSS/WE. Elmendorf AFB, Alaska, deployed to Kwangju, ROK Staff Sgt. Steve Adams, Det. 2, 10th CWS (SOWT), Fort Campbell, Ky., to Combat Lighting Exercise Senior Airman Dave Blankenship, Det. 2, 10th CWS (SOWT), Fort Campbell, Ky., to Combat Lighting Exercise

Senior Airman Chris Ragan, Det. 2, 10th CWS (SOWT), Fort Campbell, Ky., to Combat Lighting

AWARDS

Panama

24th Weather Squadron Company Grade Officer of the Quarter (1st)

1st Lt. Robert Stenger, 24th Weather Squadron, Howard AFB, Panama

24th Weather Squadron Senior NCO of the Quarter (1st)

Master Sgt. Vernon Lebby, 24th Weather Squadron, Howard AFB, Panama

24th Weather Squadron NCO of the Quarter (1st) Staff Sgt. Gary Hall, 24th Weather Squadron, Howard AFB, Panama

24th Weather Squadron Airman of the Quarter (1st) Senior Airman James Durio, 25th Weather Squadron, Howard AFB, Panama

24th Weather Squadron Company Grade Officer of the Quarter (4th) 2nd Lt. Rayna Mercer, 24th WS, Howard AFB,

24th Weather Squadron Senior NCO of the Quarter (4th)

Senior Master Sgt. Peter Copeskey, 24th WS, Howard AFB, Panama

24th Weather Squadron NCO of the Quarter (4th) Staff Sgt. Cassandra Richards-Groff, 24th WS, Howard AFB, Panama

24th Weather Squadron Airman of the Quarter (4th) Senior Airman Brad Smith, 24th WS, Howard AFB,

24th Ops Group Airman of the Quarter (4th) Senior Airman Brad Smith, 24th WS, Howard AFB, Panama

24th Weather Squadron Civilian of the Quarter (4th) Alberto Smith, 24th WS, Howard AFB, Panama

24th Weather Squadron Company Grade Officer of

1st Lt. Robert Stenger, 24th WS, Howard AFB, Panama

24th Weather Squadron Senior NCO of the Year Senior Master Sgt. Peter Copesky, 24th WS, Howard AFB, Panama

24th Weather Squadron NCO of the Year/NCC NCO of the Year

Tech. Sgt. Donovan Williams, 24th WS, Howard AFB, Panama

24th Weather Squadron Airman of the Year Senior Airman Michelle Maycock, 24th WS, Howard AFB, Panama

18th Weather Squadron Airman of the Quarter (2nd) Airman 1st Class James Fischer, Dragon Flight, 18th WS, Fort Bragg, N.C.

314th Weather Flight Company Grade Officer of the

2nd Lt. Christopher M. Hogue, 314th WF, Little Rock AFB, Ark.

314th Weather Flight Senior NCO of the Quarter (1st)

Master Sgt. Philip D. Thompson, 314th WF, Little Rock AFB, Ark

314th Weather Flight NCO of the Quarter (1st) Tech. Sgt. Mary Whitney, 314th WF, Little Rock AFB, Ark.

314th Weather Flight Airman of the Quarter (1st) Airman 1st Class James L. McKenzie, 314th WF, Little Rock, Ark.

314th Weather Flight Forecaster Technician of the Quarter (1st) Staff Sgt. Kelvin J. Bailey, 314th WF, Little Rock AFB, Ark.

314th Weather Flight Observer Technician of the Quarter (1st)

Airman 1st Class Tracy A. Beene, 314th WF, Little Rock AFB. Ark.

9th Weather Flight Outstanding Civilian of the Year James Wainwright, Jr., 9th OSS/OSW, Beale AFB,

9th Weather Flight Company Grade Office of the

Capt. Muriel Ramirez-Salas, 9th OSS/OSW, Beale AFB, Calif.

412th OSS Airman of the Quarter (1st) Senior Airman Ashish A. Kakkad, 412th OSS/OSW, Edwards AFB, Calif.

412th OSS NCO of the Quarter (1st) Staff Sgt. Gary L. Davis, 412th OSS/OSW, Edwards AFB, Calif.

Det. 4, 7th Weather Squadron 1997 "Best Award" Master Sgt. Scott Nee, Det. 4, 7th WS, Traben-Trarbach, Germany

1997 USAFE Weather Award/Moorman Award Det. 4, 7th Weather Squadron, Traben-Trarbach, Germany

PACAF Senior NCO of the Year Master Sgt. Steve K. Long, 3rd OSS/WE, Elmendorf AFB, Alaska

12th Operations Group Senior NCO of the Year Master Sgt. Curtis P. Cote, 12th OSS/OSW, Randolph AFB, Texas

12th Operations Group NCO of the Year Tech. Sgt. Donna L. Lacourse, 12th OSS/OSW, Randolph AFB, Texas

12th Operations Support Squadron's Forecaster of the Year Staff Sgt. Jimmy R. Odom, 12th OSS/OSW,

Randolph AFB, Texas

12th Operations Support Squadron's Observer of the Year

Senior Airman Emily J. Gleason, 12th OSS/OSW, Randolph AFB, Texas

12th Operations Support Squadron's Support Squadron's Company Grade Officer of the Quarter

Capt. Randall K. Bartlett, 12th OSS/OSW, Randolph AFB, Texas

12th Operations Group's Support Specialist of the

Tech. Sgt. Ernest J. Luoma, 12th OSS/OSW, Randolph AFB, Texas

12th Flying Training Wing's Airman of the Quarter

Senior Airman Shane R. Wagner, 12th Flying Wing, Randolph AFB, Texas

HQ AFWA Company Grade Officer of the Quarter

Capt. Mark Yiesley, HQ AFWA, Offutt AFB, Neb.

HQ AFWA Senior NCO of the Quarter (2nd) Senior Master Sgt. Stephen Story, Scott AFB, Ill.

HQ AFWA NCOs of the Quarter (1st and 2nd) Tech. Sgt. James Pickard and Staff Sgt. Cynthis Rice, HQ AFWA, Offutt AFB, Neb.

HO AFWA Airman of the Quarter (2nd) Senior Airman Snyder, HQ AFWA, Offutt Air Force Base, Neb.

21st ASOS NCO of the Quarter (2nd) Tech. Sgt. Michael King, 21st ASOS/ASW, Fort Polk, La.

21st ASOS Observer of the Quarter (2nd) Airman 1st Class Brandon Hintergart, 21st ASOS/ASW, Fort Polk, La.

18th WS NCO of the Quarter (2nd) Staff Sgt. Frank P. Accomando, Jr., OL-B, 18th WS, Fort Belvoir, Va.

18th WS NCO of the Quarter (2nd) Staff Sgt. Mark W. Adams, OL-C, 18th WS, Fort Knox, Kv.

6th WF NCO of the Quarter (2nd) Staff Sgt. Amado Azua, Jr., 6th WF, Fort Rucker,

18th WS Senior NCO of the Quarter (2nd) Master Sgt. Nathaniel Thomas, OL-A, 6th WF, Fort Belvoir, Va.

6th WF Senior NCO of the Quarter (2nd) Master Sgt. James G. Brock, 6th WF, Fort Rucker,

7th Expeditionary Weather Squadron Eagle Award Airman 1st Class Leslie M. Houser, OL-A, 18th WS, Fort Belvoir, Va.

8th Operations Group Weather Person of the Quarter

Senior Airman Greg Bianchi, 8th Fighter Wing, Kunsan AB, ROK

8th Operations Support Squadron NCO of the Year

Tech. Sgt. Arlen Lewis, 8th Fighter Wing, Kunsan AB, ROK

8th Operations Group NCO of the Year (1997) Tech. Sgt. Arlen Lewis, 8th Fighter Wing, Kunsan

EDUCATION

Weather Officer Course (Class 980212)

- 2nd Lt. Douglas Kronk, Shaw AFB, S.C.
- 2nd Lt. John Roberts, Maxwell AFB, Ala.
- 2nd Lt. Scott Lisko, Tyndall AFB, Fla.
- 2nd Lt. Matthew Stratton, Barksdale AFB, La.
- 2nd Lt. Clayton Baskin, Fort Hood, Texas
- 2nd Lt. Andrea Hagen, Randolph AFB, Texas
- 2nd Lt. Darren Sokol, Eielson AFB, Ala.
- 2nd Lt. Carl Johnson, Spangdahlen AB, Germany
- 2nd Lt. Christopher Pelczar, Fort Bragg, N.C.

Weather Apprentice Course (Class 980121) Senior Airman Nathan J. Nylander (Distinguished

Senior Airman Kristopher S. Kudla (Distinguished

Graduate)

Senior Airman Michael E. Milton (Distinguished Graduate)

Airman 1st Class Jorge L. Evans Airman 1st Class Mike Davidquintero

Airman Eric S. Bevard

Airman Sharon M. Wood

Weather Apprentice Course (Class of 980113) Airman 1st Class Christina Bell (Distinguished Graduate)

Senior Airman James Hicks

Senior Airman Warren Labare

Senior Airman Allan Price

Senior Airman Richard Smith

Airman 1st Class Karen Young

Airman Rachael Dockery

Airman Matthew Lawrence

Airman Andrew Linskens

Airman Jessica Minute

Weather Apprentice Course (971217) Senior Airman Ronald M. White (Distinguished

Graduate)

Senior Airman Matthew W. Fox Senior Airman Robert D. Gaylord

Senior Airman Michael H. Matthews

Airman 1st Class Erik W. Gilliand

Airman 1st Class Susan T. Linenberger

Airman Gina K. Huckaba

Airman Richard C. Kienzle

Airman Sarah A. Ligmann

Airman Min M. Lou

Weather Apprentice Course (970925)

Senior Airman Nancy Blatt (Distinguished

Senior Airman Fambro Knight III

Airman 1st Class Matthew Ellis (Distinguished Graduate)

Staff Sgt. Philip Studler, Jr.

Senior Airman Aaron Wesson

Airman 1st Class Brandon Walker

Airman April Armstrong

Airman Kenon Thompson

Airman Leah Wollard

Meteorological Satellite Course Tech. Sgt. Michael Mortenson Staff Sgt. Vincent Petrasek Staff Sgt. Steven Krywany

Senior Airman Paul Montas

Associate of Applied Science in Weather Technology Master Sgt. David L. Tucker II, 146th WF, Pittsburgh, Pa.

Tech. Sgt. Michael D. Graf, 146th WF, Pittsburgh,

Squadron Officers' School

Capt. Gary B. Kubat, 3rd OSS/WE, Elmendorf AFB, Alaska

AWDS Manager Course

Senior Gregory W. Ball, 3rd OSS/WE, Elmendorf AFB, Alaska

NCO Academy

Tech. Sgt. Brad Davis, 4th OSS/OSW, Seymour Johnson AFB, N.C.

Tech. Sgt. Daniel George, TACC, Scott AFB, Ill.

Airman Leadership School

Senior Airman Brent A. Persinger, 3rd OSS/WE, Elmendorf AFB, Ala.

Senior Airman Guy Bishop, Det. 2, 10th CWS (SOWT), Fort Campbell, Ky.

Senior Airman Rich Bollinger, Det. 2, 10th CWS (SOWT), Fort Campbell, Ky.

Senior Airman Melvin Barnhill, 21st ASOS/AWS, Fort Polk, La.

Satellite Interpretation School

Senior Airman Chris Ragan, Det. 2, 10th CWS (SOWT), Fort Campbell, Ky.

Staff Sgt. Marc Gahagan, Dragon Flight, 18th WS, Fort Bragg, N.C.

American Meteorological Society's Certified Consulting Meteorologist Designation

Alan W. Gibbs, HQ Air Force SPACECOM/DORW. Peterson AFB, Colo.

NEXRAD Course

2nd Lt. Sean Campbell, 21st ASOS/ASW, Fort Polk, La.

Weather Satellite and Photo System Interpretation Senior Airman Scott McCormick, TACC, Scott

Staff Sgt. Steven Glass, TACC, Scott AFB, III.

Air Mobility Operations Course (Graduate) Senior Master Sgt. Jeff Fluegge, TACC, Scott AFB, Ill.

Army Airborne School

Airman Tony Carson, Dragon Flight, 18th WS, Fort Bragg, N.C.

Officer Professional Development Course Lt. Ed Goetz, Dragon Flight, 18th WS, Fort Bragg,

COMBAT LIGHTNING Course

Airman 1st Class Tomika Redmond,

21st ASOS/ASW, Fort Polk, La.

Airman Brian Kennedy, 21st ASOS/ASW, Fort Polk,

REENLISTMENTS

Senior Master Sgt. Lawrence J. Alexander, OL-A, 18th WS, Fort Eustis, Va.

Staff Sgt. Andre Williams, Simmons Flight, 18th WS, Fort Bragg, N.C.

Staff Sgt. David Brigman, 6th WF, Fort Rucker, Ala.

Staff Sgt. Jeffrey Thurman, 6th WF,

Fort Rucker, Ala.

Senior Airman Anthony Slaughter, Simmons Flight, 18th WS, Fort Bragg, N.C.

Senior Airman Emili A. Sadler, 412th OSS/OSW, Edwards AFB, Calif.

Tech. Sgt. Mark Adams, OL-C, 18th WS, Fort Knox,

Senior Master Sgt. Lawrence J. Alexander, OL-A. 18th WS, Fort Eustis, Va.

Staff Sgt. Andre Williams, Simmons Flight, 18th WS, Fort Bragg, N.C.

Staff Sgt. Dave Brigman, 6th WF, Fort Rucker, Ala. Staff Sgt. Jeffrey Thurman, 6th WF, Fort Rucker,

Senior Airman Anthony Slaughter, Simmons Flight, 18th WS, Fort Bragg, N.C.

RETIREMENTS

Tech. Sgt. Dave Bessey, Dragon Flight, 18th WS, Fort Bragg, N.C.

Maj. Dave Miller, HQ AFWA, Offutt AFB, Neb. Tech. Sgt. Micahel Sheldrake, HQ AFWA, Offutt AFB, Neb.

Tech. Sgt. Katherine A. Zupan, OL-A, 18th WS, Fort Belvoir, Va.

Tech. Sgt. Donald Grey, HQ AFWA, Offutt AFB,

Master Sgt. Alan Robb, HQ AFWA, Offutt AFB,

Tech. Sgt. James Barber, HQ AFWA, Offutt AFB,

Tech. Sgt. Dave Bessey, Dragon Flight, 18th WS, Fort Bragg, N.C.

SEPARATIONS

Tech. Sgt. William N. Rondeau, 3rd OSS/WE, Elmendorf AFB, Alaska

Airman Basic Phillip Gilliam, HQ AFWA, Offutt AFB, Neb.

Senior Airman Danette Reidl, HQ AFWA, Offutt AFB, Neb

Senior Airman James Milburn, HQ AFWA, Offutt AFB, Neb.

Senior Airman Scott Sloniker, HQ AFWA, Offutt AFB, Neb.

Senior Airman Patrice Hernandez, HQ AFWA, Offutt AFB, Neb.

Capt. Julie Novy, HQ AFWA, Offutt AFB, Neb. Capt. Laura Stoss, HQ AFWA, Offutt AFB, Neb. Staff Sgt. Lawrence Chrisman, HQ AFWA, Offutt

Capt. William Maes, HQ AFWA, Offutt AFB, Neb. Staff Sgt. Michael Chavis, HQ AFWA, Offutt AFB,

Senior Airman Amy Bordern, HQ AFWA, Offutt AFB. Neb.

Tech. Sgt. Nathan L. Adcock, HQ AFWA, Offutt AFB, Neb.

Senior Airman Erik Correll, 9th OSS/OSW, Beale AFB, Calif.

Senior Airman Chris Regan, Det. 2, 10th CWS (SOWT), Fort Campbell, Ky. to Robyn Regan

BIRTHS

Nicholas Allen Haley, to Senior Airman William T. Hayley and Brandy Hayley, 3rd OSS/WE, Elmendorf AFB. Alaska

Jeremiah Chai Lorentz, to Airman 1st Class Mitchell C. Lorentz and Airman 1st Class Olivia D. Lorentz, 3rd OSS/WE, Elmendorf AFB, Alaska Clara Monserrat DeLeon Sutton, to Senior Airman Kenneth R. Sutton and Senior Airman Dalia Sutton, 3rd OSS/WE, Elmendorf AFB, Alaska

