The Magazine for Air Force Weather

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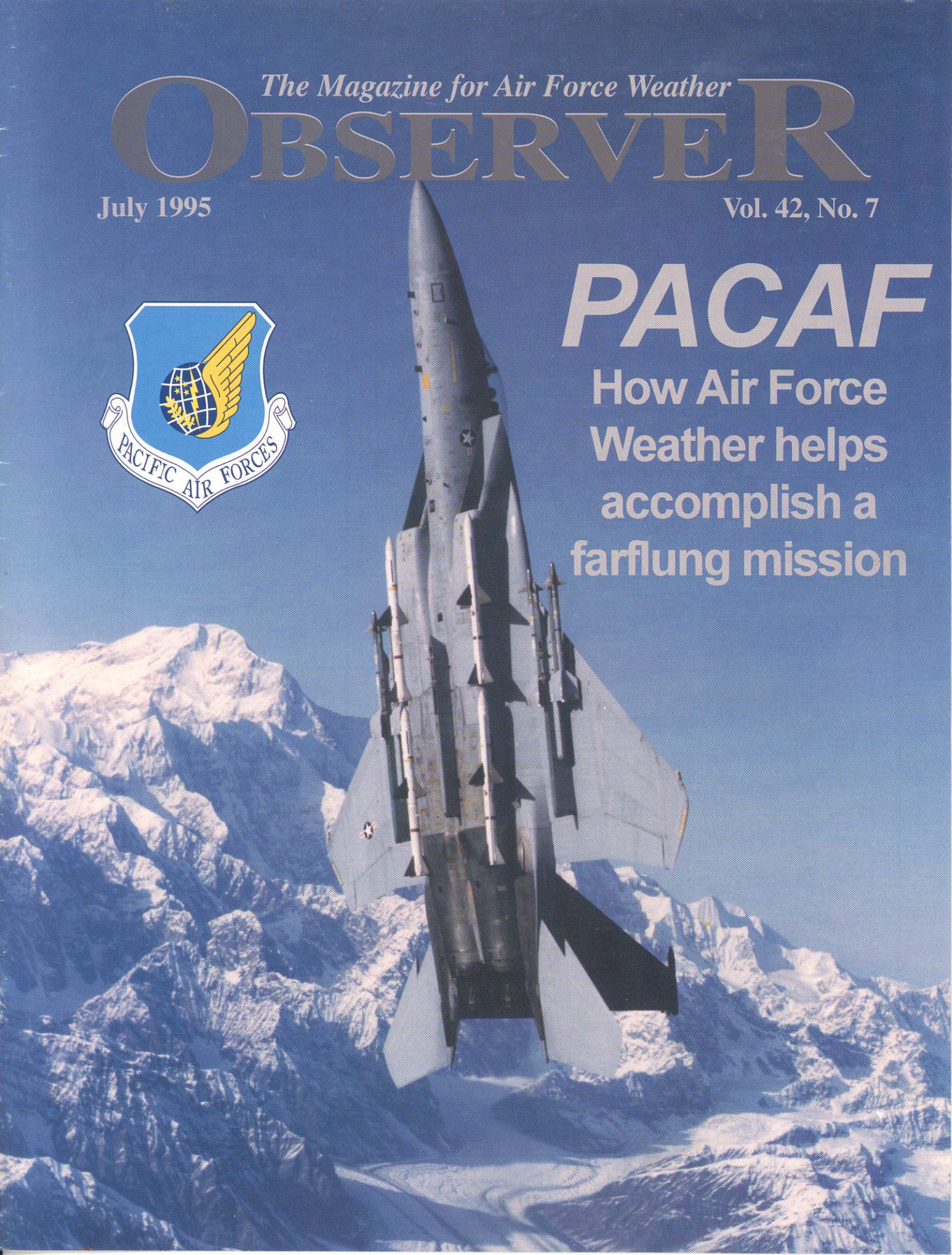

PACAF

How Air Force Weather helps accomplish a farflung mission

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HEADQUARTERS AIR WEATHER SERVICE

OBSERVER

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AFW Modeling, Simulation

Our business is warfighting

by Brig. Gen. Thomas J. Lennon
Air Force Director of Weather

Warriors The business of the Air Force and Air Force Weather people is to be warriors. In medieval days, the best warriors were the strongest — the horseman who could handle the biggest club.

In today's high-tech Air Force, there are many types of warrior. But all have one constant: *how to win a war.*

In weather, it is the application of information to the military mission that separates what we do from what the National Weather Service does. The warrior figures out how to apply weather data to improve the mission success, then puts the thoughts into action.

"In weather, it is the application of information to the military mission that separates what we do from what the National Weather Service does."
Brig. Gen. Thomas J. Lennon
AF Director of Weather

Gen. Ronald Fogleman, Chief of Staff of the Air Force, recognized the emergence of a new type of Air Force warrior in the world of modeling and simulation (M&S).

He recently completed a detailed review of Air Force M&S with other Air Force four-star general officers with the goal of strengthening all aspects of M&S — from modeling how an airplane component will perform, to simulating a flight, to doing an interactive theater wargame.

Weather is important to all aspects, and scales, of M&S. The Secretary of Defense independently recognized the need to strengthen DoD M&S weather efforts. OSD specifically cited environmental M&S as an area for big payoff and is in the process of creating an Executive Agent (EA) for DoD M&S in four areas: terrain, oceans, atmosphere and space.

Each service was invited to apply to be the EA for any area that interests them.

We aggressively sought the EA responsibility for both the atmosphere and space weather—and are well into the selection process.

This effort meets both Secretary of Defense and Chief of Staff of the Air Force guidance to strengthen M&S. Our proposal is based on a new division at USAFETAC to lead AF (and DoD) environmental M&S efforts. This division will have Air Force, Army, and Navy representation, and will coordinate interservice effort to improve DoD M&S.

We see the purpose of the EA to integrate weather into existing warfighting models — with our first goal to get consistent weather effects folded into computer generated wargames, such as PRAIRIE WARRIOR and BLUE FLAG.

It is important to integrate weather into these wargames because U.S. warfighters are increasingly using computers to train to go to war. The Army trains for maneuvers using computers.

During a WARFIGHTER exercise, all echelons from Corps to Battalion simulate maneuvers on a computer. Right now, weather enters the exercise only through a script.

During an AF BLUE FLAG exercise, we train development of the air campaign, from building the Air Tasking Order to executing the air campaign. Weather is not embedded in the computer simulation part of the exercise. Consequently, for both the Air Force and Army, the primary warfighting training exercises have little weather visibility and awareness.

The charge for ETAC, as they spin up the M&S division, is to make weather part of the process of warfighting. But we can't do it all without your help — if you are aware of a wargame model that could be improved by getting better weather information — let your MAJCOM DOW's know.

Working together, we can improve the warfighting efficiency of the U.S. by making weather more of the process of warfighting.

Have a question for General Lennon? Write to: HQ USAF/XOW, 1490 Air Force Pentagon, Washington, D.C. 20330-1490.

Leadership

The engine driving AFW toward the future

by Col. Joseph D. Dushan
Commander, Air Weather Service

Have you ever noticed that new assignments bring new perspectives? Last month I shared some thoughts about how the Air Force Weather (AFW) team had changed and I advocated cooperation and communications as core values.

Working together to build a vision, creating opportunities for dialogue, discussing and fine-tuning strategic directions, and achieving the consensus necessary for our diverse global functional team to work in concert are first steps. That's the easy part. Cooperation and communications alone are not enough. The engine driving AFW toward the future is leadership.

On June 1-2, CMSAF David J. Campanale, visited Pope AFB, N.C., to discuss enlisted issues and listen to areas of concern to our enlisted force. One particular item caught my attention.

It goes to the heart of our military professionalism. Let me quote a portion of the Air Force News Service story on the visit:

"The quality of new airmen was a concern for some noncommissioned officers who felt new airmen are not qualified and some are disrespectful." CMSAF Campanale disagreed. " Our airmen are qualified. If their performance or attitude is not what it should be, it is the supervisor's or senior NCO's job to correct it. The best way to handle the problem is to tell the person and show them the right way."

What does this have to do with AFW and the cost of free weather forecasts at Kunsan AB, Korea? **LEADERSHIP.**

I've visited weather units in all parts of the world during the last three years and talked with hundreds of AFW people. Many units are struggling with the challenge of integrating new technology in the BWS. Others report problems with lack of adequate time for technical training or with declining experience levels. Still others note problems balancing operational commitments, training, base details and educating OSS bosses.

I agree—the last few years have been tough by any measure. I am dismayed, however, to hear anecdotes that suggest we've forgotten what "Service Above Self" really means. I am concerned to learn of weather people so frustrated by the challenges, they consider separating from the Air Force.

Some new technical school graduates describe post-school burnout, no perceived career progression opportunities, or lack true understanding of what a vital role they play in the success of the Air Force mission. What does this say about leadership? Can effective, focused leadership make a difference? I believe so!

Do we truly see ourselves as a functional team? The empowerment created by TQM, divestiture, and the end of the stovepipe also created the opportunity to fail if we overlook our fundamental responsibilities as Air Force commissioned and NCO leaders.

I am concerned when I see staffs at various locations working at cross purposes, instead of together for what is best for the Air Force.The challenges are too comprehensive, too many people are counting on us, and the ramifications too great for us to allow this to continue.

Let's admit up front — NEXRAD and AWDS are tough challenges; the AWDS 3.0 version was far from ideal; new equipment doesn't always work perfectly from the start; and sometimes technology changes faster than we can field it. Given all that, what part does leadership play in mastering the hurdles facing AFW?

Officers and NCOs alike tell me they are uncomfortable with the rapid changes which have swept our AFW team these last few years. You know the litany: "All the regs are gone, we have no guidance; we're no longer a detachment/squadron/wing; we don't have enough people, it's not my job, etc."

Basically, some are uncomfortable with the need to be independent thinkers, creative and decisive risk-takers to accomplish the mission. Too often, I'm afraid, officers and NCOs wait to be told what to do and how to do it, instead of exercising creativity, independent thought, and initiative. "It's a trap. If I am decisive and take chances, I may be wrong. Then, the Air Force will identify me for early out, SERB, or RIF." WRONG! If we avoid responsibility, train ourselves to be indecisive, and run away from creative, innovative solutions, we become the exact type of people the Air Force can best do without. Hunkering down out of sight and adopting a bunker mentality also means we fail to exercise our true leadership responsibility.

Did we choose a military profession because it was easy, comfortable, risk-free? Probably not. Someone wrote: "Great opportunities lie in times of great change." I don't know for sure. I do know tough challenges are common in AFW and always have been. My good friend Col. (Ret.) Skip Bogard used to say: "If it's too tough for you, it's just right for me!" That's the leadership attitude we're looking for!

This summer, HQ AWS will share a proposed roadmap with senior weather leaders. Shortly after, we'll circulate it among the AFW community. The roadmap is intended to be a broad proposal for a direction to follow.

When we've all had a chance to comment and commit to a course, leadership at every level, in every weather unit, must be focused to achieve our common vision. Then, in iterative steps, the roadmap vision will be refined and sharpened and the consensus process will begin again. These truly are exciting times with great opportunities to improve weather services for the operational warriors we serve.

I'm confident you'll agree — nothing's too tough for AFW! It's just right for us!

Have a question for Colonel Dushan? Write to: HQ AWS/CC, 102 W. Losey St., Rm. 105, Scott AFB, Ill. 62225-5206.

Weather And Training

Need for exploring opportunities exists

(Note from CMSgt. Jim Hoy, Air Force Weather Senior Enlisted Advisor: I'm taking a break this month and giving my page over to CMSgt. Bob Brooks. I spend much of my time when I visit weather people talking about the single schoolhouse and the potential impacts in the weather stations. Several programs are shaping up, which we have developed with the help of station chiefs and flight/detachment commanders. We expect the programs to enhance your capabilities in the weather station as we enter the era of the new graduates. But enough from me -- here's Chief Brooks.)

by CMSgt. Bob Brooks
Manager, Weather Operations
Policy and Procedures Division
Directorate of Weather

I got the following questions from an instructor at our schoolhouse at Keesler AFB, Miss. The instructor's questions demonstrate the uncertainties many of us feel about the single schoolhouse and how well -- or even if -- it's going to work. Very likely, the only thing we know for certain is there are uncertainties, and all of us have valid concerns.

What we're discovering is everyone's concerns are not the same. From General Lennon's and Chief Hoy's visits to the field, we know there are concerns about whether the single schoolhouse will work. From other quarters, we know there are concerns about whether we can do anything to improve the chances that the single schoolhouse will work. There is an important difference.

Often, the real importance is in the way we ask the question. One way directs energies and efforts on the problem, the other on the solution. One way finds obstacles; the other finds challenges. One sees limits; the other sees possibilities. Nothing really changes but the way we ask the question.

The way the instructor asks certain questions allows us to explore new ground, new possibilities that a different type of initial skills course would work if we prepare ourselves.

Will the new forecasters be afforded the opportunity to do their job? What have the units done with their training programs to prepare for the new forecaster?

So, rather than assuming that the new troops must adapt to the way we do business, these questions allow the possibility that we could adapt the way we do business to the new troops. The way we ask the question might lead us to new ground.

Even though we might need to explore new ground, there are older questions we should take with us and examine along the way if we are going to be fully prepared.

Our instructor goes on to ask: *Will the units attempt to enhance what the school has already taught by keeping up with the new material, information, and upgrades? How is the weather apprentice going to be evaluated? Are the students retaining the information (they were) taught weeks prior to (their) graduation? Are the units satisfied and confident with what the students are being taught at Keesler AFB? How is the overall technical health of the unit that receives the new, single-schoolhouse, forecaster?*

These questions are not new. They'll continue to be important regardless of the ground we explore, but they require that we find new ways to cultivate the abilities of our troops.

Well, what's the answer to all these questions? Unfortunately, there are no quick and easy answers. But we can begin two thrusts forward into any new land of opportunity.

First, we can learn about what's already available which could help us along the way. Because technical health is so important, in addition to the Meteorological Enhancement Teams, Air Weather Service is developing other programs to help units develop strong technical health.

You'll hear more about these programs in coming months, and I think you'll be pleasantly surprised. Also, you might call another station or your major command's functional manager to talk over ideas and to share and explore new ways of doing business. Remember, we'll have a 7-level school coming on-line in FY97 and a 7-level CDC, both to provide training and techniques on building a healthy unit.

Second, we can bravely explore new possibilities. That's a tall order, and nothing is ever easy. To discover the possibilities, we must be willing to expand our horizons and move into new territory in weather operations. We must be willing to survey the landscape and discover new ways to cultivate the troops.

Last month, Chief Hoy announced an exploration into this new frontier of weather operations, an exploration to discover new ways to do business and to find structure and training that gets through to the full range and depth of our new troops' abilities.

Over the next few months, we'll chart our course with a program we call Air Force Weather Enlisted Structure and Training (AFWEST). In the August edition of the OBSERVER, we'll start our journey in a column called "Share The Vision."

Contact Chief Hoy at DSN 224-7410 or by electronic mail at "jhoy@pafosu3.hq.af.mil"

Combat Weather Facility Named DOD Reinvention Lab

New designation brings prestige, clout to unit once deactivated four years ago

by SSgt. Steve Elliott
Air Weather Service Public Affairs

Combat Weather. It has taken some dramatic twists and turns over the past few years.

The reorganization of Air Force Weather in 1991 created Detachment 4, Headquarters Air Weather Service (HQ AWS), as it was known in its previous life. Its mission was to provide scientific support to field units, transition and exploit new weather technologies, continue battlefield training, and provide expertise on weather systems.

Later, in October 1994, additional Air Force reorganizational proposals nominated Det. 4, HQ AWS for inactivation. Its technology transition function was to transfer to HQ AWS, while the training function was given to the Air Education and Training Command. It looked like the end for Air Force Weather's (AFW) combat training role.

But less than one month later, the Chief of Staff of the Air Force established the Combat Weather Facility (CWF) at Hurlburt Field, after the Air Force Director of Weather and his staff urged a new approach. The CWF was created to be the premier Air Force organization supporting Army, Air Force and special operations forces combat weather training. It is a joint AWS/AETC facility, with an operating location at Camp Blanding, Fla.

In this age of base closures, drawdowns and force reductions, this robust rebirth of a unit is amazing in its own right. But on May 25, 1995, CWF's star climbed even higher, as it became the first organization in the U.S. Air Force to be designated as an "DOD Reinvention Laboratory" under the new rules governing that selection. Several other organizations have been "grandfathered" as reinvention labs, but the CWF is a first under the revised criteria.

"This designation ... lets the Air Force know we're serious about making weather a force multiplier."
Lt. Col. Gary Sickler
CWF Commander

"The Combat Weather Facility was established, in part, to overcome serious shortfalls in Air Force, Army and SOF weather operations," said Secretary of the Air Force Dr. Sheila E. Widnall, in a letter announcing the designation. "Essentially, this organization is 'reinventing' the way we are doing the weather business.

"The CWF is an institutionalized means for the Air Force to train personnel on combat weather operations, examine weather warfighting needs, ideas, and emerging technologies, and to determine the most promising enhancements to improve Air Force Weather capabilities as a force multiplier on the battlefield," Secretary Widnall said. "The CWF fully embraces quality principles and will facilitate continuous improvement in our weather capabilities."

How did the CWF, inactivated just months ago, achieve this amazing turnaround? It began with a renewed focus on combat weather training by Brig. Gen. Thomas J. Lennon, Air Force Director of Weather, and the hard work and determination of the CWF staff.

"Given the resources and personnel to accomplish the many goals set for the CWF, we are confident we can meet the expectations Air Force Weather has for us," said Lt. Col. Gary Sickler, CWF commander. "We had initially planned the CWF like a reinvention lab, so it didn't take too much to fit into the requirements."

The concept behind the Reinvention Laboratory is a quality initiative recently established by government for organizations that use innovative approaches to achieve continuous improvement and breakthrough change.

The tools in the creation of a reinvention lab are based on the four National Performance Review (NPR) guiding principles: moving back to basics, putting customers first, cutting red tape, and encouraging employees to get results. These labs support prudent risk-taking, encourage the removal of bureaucratic barriers, and clearly link authority, responsibility, and accountability.

President Clinton initiated the NPR to "make the entire federal government both less expensive and more efficient and to change the culture of our national bureaucracy away from complacency and entitlement toward initiative and empowerment."

When the President launched the NPR, he asked each cabinet member to create "reinvention laboratories" to begin experimenting with new ways of doing business. The common characteristics of successful labs have been the committed involvement of top leadership; a mission-driven, customer-oriented environment; willingness to try new ideas, set the pace of change, while inspiring others to do the same; encouragement of prudent risk-taking; and the recognition of success and the people behind it.

"This designation has given us a level of prestige and clout in getting people's attention and letting the Air Force know we're serious about making weather a force multiplier," Colonel Sickler said.

"This fits into the direction given us by Air Force Director of Weather, Brig. Gen. Thomas J. Lennon."

The CWF was created to overcome specific AFW deficiencies, such as operational skills for AFW personnel, capabilities of AFW operations in data-sparse regions, dissimilar peacetime and wartime operations, and lack of combat weather tactics, techniques and procedures.

The vision of the radically improved process is for CWF to provide an institutionalized means for AFW to examine Air Force, Army, special operations forces, and joint forces weather warfighting needs, ideas, and emerging technologies; experiment with them in an operational environment; determine the most promising enhancements; and transition those enhancements so that weather operations are a battlespace force multiplier.

"One of our top initiatives at the CWF is to develop a senior officer battlefield management exercise," Sickler said.

"Another is to develop specialized forecasting operational techniques for battlefield situations. We need to be able to forecast in data-sparse or denied areas, and to tailor weather operations to the warfighters' tactics and weapon platforms."

The Air Force Director of Weather echoed Sickler's views.

"No matter whether you're fighting on the ground, in the air, or in space, one of our absolute 'must-haves' for mission success is tailored weather information," General Lennon said.

"To get that, we're going to turn to the warrior professionals of Air Force Weather. We'll expect those folks to be ready to give you exactly what you need — nothing more, nothing less.

"Our concept at the CWF is simple — the development of AFW personnel with a combat focus, while simultaneously building a world-class center that will help us all use weather as a force multiplier on the battlefield," the general said.

"This facility should provide the essential foundation to successfully support our military mission. Today's world requires constant readiness, and we can't afford to forfeit this number-one priority."

New Designation, New Logo

As well as a new designation, the Combat Weather Facility recently adopted a new official emblem. The following is an explanation of the significance of each element of the new emblem:

The alternating ultramarine-reflex blue and olive drab green quadrants of the disk represent the role of weather forces in both air and ground combat operations.

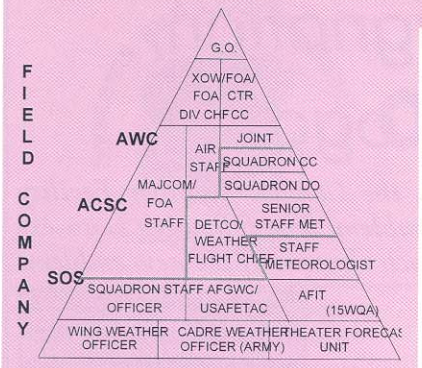
Crossed Air Force yellow lightning bolts emanating from the center of the disk emphasize weather's impact on the battlefield.

A black (Air Force yellow-trimmed) fleur-de-lis commemorates the first combat action of the U.S. Army Weather Service in France during World War I. The center structure of the fleur-de-lis is a black (red and Air Force yellow trimmed) torch topped by a red and Air Force yellow (black trimmed) flame, signifying the importance of knowledge in becoming combat ready.

The unit's motto is "Parate Certameni", which means, loosely translated, "Be Combat Ready". This motto is significant because it encapsulates the mission of the CWF: to train Air Force Weather warriors to meet today's battlefield challenges.

Career broadening

Opportunities exist inside, outside AFW



15xx CAREER PYRAMID

by Capt. Tim Hutchison
Air Weather Service
Chief of Personnel

As I talk to many officers, one question comes up frequently — "What about career broadening?"

Can an officer career broaden? Absolutely! Can every officer career broaden? Obviously not.

Therein lies the compromise that the Air Force must deal with when an officer attempts to broaden out of the career field for a tour —weighing the current and projected manning levels of a particular career field, with an officer's desire to broaden, and the Air Force needs in other areas.

A primary responsibility of Headquarters Air Force Military Personnel Center, at Randolph AFB, Texas, is to maintain sufficient career field manning to sustain the short term health of Air Force Weather, while developing broad-based officers which will be the Air Force leaders of the future.

Career broadening opportunities are endless. Many opportunities exist within AF weather.

Some of these include wargaming and simulation, communications/ computer system analysts and programmers, weapons Research and Development, and system acquisition. Positions are available on the major command, field operating agency staff and Headquarters U.S. Air Force staffs, Air Force Laboratories, and various AFW centers worldwide.

These jobs provide unique and challenging opportunities to learn other aspects of the Air Force, how it does business, while enhancing your future leadership potential.

What about assignments outside of weather? Absolutely!

Weather officers are encouraged and allowed to compete for positions in a variety of specialties, and have successfully done so. Some examples are: operations support squadron commanders and operations officers, space operations officers, Air Force Institute of Technology or Reserve Officer Training Corps instructors, professional military education instructors, and various "non-weather" opportunities within classified organizations ... just to name a few.

Whether or not an officer is temporarily allowed out of the career field depends on how the desired job will impact the officer's career, and what the new job and its associated experiences and knowledge will allow the officer to bring to the table in future assignments.

Therefore, each assignment is made individually — no policy can hold in every case -- for every officer (regardless of the stage of their career) and for every possible opportunity.

However, AFW is committed to allowing weather officers the opportunity to broaden and develop professionally throughout their career.

While single-tour broadening assignments are encouraged, due to the current officer manning within AFW, weather officers are rarely let out of the career field permanently.

Remember, you're not alone out there when it comes to career guidance. Your supervisors, senior leaders and the AFMPC assignments officer can provide tremendous insight to guide you during your Air Force career.

This column is written specifically to meet your needs and concerns. If you have specific career questions, or issues which you need addressed, contact me and I'll either answer them in future columns or call you back. Contact Capt. Tim Hutchison at: HQ AWS/ RMP, 102 W. Losey St., Rm. 105, Scott AFB, Ill. 62225-5206; DSN 576-4895, ext. 344 or by e-mail at: "hutchist@hqaws.safb.af.mil"

AFIT opportunities abound!!

Now is the time to begin the preparation process for applying for an AFIT Master's or PhD program. If you desire admission beginning in Fall 1996, schedule yourself to take the Graduate Record Examination by September and send your AFIT-specific Form 90 to HQ AFMPC/ DPMRSB by August.

AWS historian arrives

Wants to help bring weather history alive

by Lillian "Lil" Wilbur
Air Weather Service Historian

Did you know? ... When hostilities broke out in Korea in June 1950, that within 24 hours, Air Weather Service was on the scene?

AWS personnel arrived in an AWS RB-29 aircraft ready for reconnaissance. The RB-29 was tasked with flying weather recon missions and within several days, an entire weather detachment had been airlifted from Japan to Taegu, South Korea. Just a few weeks later, an AWS RB-29 led the first strike force of B-29s from Japan against North Korean targets.

Did you know? ...

AWS once again has a History Office? My name is Lillian "Lil" E. Wilbur, and I'm Chief of the new-and-improved AWS History Office. Although I was born in Brooklyn, N.Y., I've spent the last 15 years in Colorado, so I consider the Rocky Mountains my home.

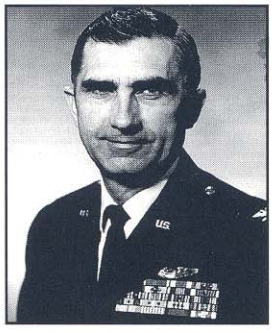
I come to the AWS team following a 4-1/2-year stint as Chief of the 18th Wing History Office at Kadena AB, Okinawa, Japan. Prior to my overseas assignment, I worked as an historian at the Air Force Accounting and Finance Center in Denver, Colo. (now known as DFAS)

I believe the better I am at presenting history, the more interest I will generate in others. When history comes alive, folks become inquisitive. I am in the process of learning all about my new organization and its long and proud heritage.

If you have photos, scrapbooks, old stories, artifacts, or questions, please feel free to give me a call or send me an E-mail at the numbers listed at the end of this article. I would be happy to hear from one and all and I look forward to working in AWS. Look for historical tidbits, trivia items, anecdotes, photos and other items of interest, just for you, in future issues of the OBSERVER.

Contact the AWS historian at DSN 576-5654, ext. 258; the electronic mail address is :"wilburl@hqaws.safb.af.mil"

In Memoriam



Col. L.E. "Zip" Zapinski, Commander of the 5th Weather Wing, Langley AFB, Va., from1974-76, died Apr. 16, 1995 at the Madigan Army Medical Center, Ft. Lewis, Wash.

Colonel Zapinski enlisted in the Army Air Forces in May 1942, won pilot's wings and a U.S. Army Air Forces commission in 1943.

He served during World War II as a B-17 pilot with the 532nd Bomb Squadron, 381st Bomb Group (H). He was a veteran of 20 combat missions and was shot down on his last mission.

The colonel was a prisoner of war for 11 months in Stalag Luft III and two other camps, being released by Gen. George Patton's troops in 1945.

In 1947, Colonel Zapinski received basic meteorological training at Chanute AFB, Ill.

From 1948-56, he served as a weather forecaster instructor at the Chanute school, commanded weather detachments, and served on weather squadron staffs in Korea, Japan, Spain, and in the U.S.

After a two-year tour as Assistant Director of Weather, Strategic Air Command, Offutt AFB, Neb., he commanded the 26th WS, Barksdale AFB, La. from 1968-69. In 1970, Colonel Zapanski commanded the 1st Weather Group in Vietnam. From 1971-73, the colonel was assigned to Headquarters Air Weather Service. He was appointed as Commander, 5th WW in 1973.

He retired from the U.S. Air Force in 1976 after more than 34 years of service to his country as an enlisted man, warrant officer and regular commissioned officer.

Colonel Zapanski was born Dec. 1, 1920 in Kenosha, Wis. He is survived by his wife, the former Betty P. Mokstad, of Chicago, Ill.; sons David and Steven; and daughter, Maj. Mary Whitfield.

He was buried April 20 with full military honors at the San Francisco National Cemetery at the Presidio, Calif.

(EDITOR'S NOTE: Every effort is made to make sure your people get the recognition they deserve. Due to the huge number of submissions every month, we can only fit so many in, but it is our promise to use EVERY name submitted, if not in this issue, then in the next one available, Please be patient, your people do make a difference!)

MERITORIOUS SERVICE MEDAL

Maj. Ricky C. Savage, Air Force Global Weather Central, Offutt AFB, Neb.
Maj. Michael J. Cantu, AFGWC, Offutt AFB, Neb.
Maj. Paul D. Hamilton, AFGWC, Offutt AFB, Neb.
Capt. Jeffrey E. Malan, AFGWC, Offutt AFB, Neb.
Capt. Clifton T. Kimbrough, AFGWC, Offutt AFB, Neb.
Capt. Cynthia G. Mendonca, AFGWC, Offutt AFB, Neb.
TSgt. Stephen H. Turkovich III, AFGWC, Offutt AFB, Neb.
Lt. Col. Tony Guiffrida, 45th Weather Squadron, Patrick AFB, Fla.
MSgt. Rick A. Suggs, 77th Operations Support Squadron/OSW, McClellan AFB, Calif. (1st OLC)
MSgt. David A. Taylor, Detachment 6, 617th WS, Wiesbaden, Germany
Maj. Mary J. Quinn, Headquarters Pacific Air Forces/DOW, Hickam AFB, Hawaii (2nd OLC)
Capt. Bruce Thompson, HQ PACAF/DOW, Hickam AFB, Hawaii

AIR RESERVE FORCES MERITORIOUS MEDAL

TSgt. Berkley D. Bossard, 146th Weather Flight, Pittsburgh, Pa. (1st OLC)(Air National Guard)
SSgt. Richard A. Webb, 146th WF, Pittsburgh, Pa. (1st OLC)

JOINT SERVICE COMMENDATION MEDAL

Maj. Walter Miller, 25th ASOS/DOW, Wheeler Army Air Field, Hawaii
MSgt. Jeffrey Fluegge, 25th ASOS/DOW, Wheeler AAF, Hawaii
SSgt. Daniel Culbertson, 25th ASOS/DOW, Wheeler AAF, Hawaii

AIR FORCE COMMENDATION MEDAL

TSgt. David A. Fincher, AFGWC, Offutt AFB, Neb.
TSgt. Evelyn M. Dillard, AFGWC, Offutt AFB, Neb.
Capt. Pat Barrett, 45th WS, PAtrick AFB, Fla.
Capt. Patrick P. Ludford, 12th OSS/DOW, Randolph AFB, Texas
SSgt. Myron G. Winters, Jr., 410th MSS/OSW, K.I. Sawyer AFB, Mich. (4th OLC)
SSgt. Lee T. Benson, 410th MSS/OSW, K.I. Sawyer AFB, Mich.
SSgt. Paul G. Hamilton, 410th MSS/OSW, K.I. Sawyer AFB, Mich.
SSgt. Anthony M. Calder, 410th MSS/OSW, K.I. Sawyer AFB, Mich.
TSgt. William Anderson, 77th OSS/OSW, McClellan AFB, Calif. (4th OLC)
SSgt. William R. Green, Det. 8, 617th WS, Sandhofen, Germany (1st OLC)
SSgt. Rolando Zbikowski, Det. 8, 617th WS, Sandhofen, Germany
MSgt. James Gallagher, Det. 6, 617th WS, Wiesbaden, Germany
TSgt. David W. Lappie, Det. 4, 617th WS, Traben-Trarbach, Germany
SSgt. Robert M. Easley, Det. 4, 617th WS, Traben-Trarbach, Germany
SSgt. Todd Mueller, Det. 3, 617th WS, Illesheim, Germany
SrA. Charles A. Tomasello, 334th Training Sq./Weather Training Flight, Keesler AFB, Miss.
SSgt. Dale M. Hill, 334th TRS/WTF, Keesler AFB, Miss. (1st OLC)
SSgt. Jeffrey P. Light, 334th TRS/WTF, Keesler AFB, Miss. (2nd OLC)
TSgt. Randall L. Johnson, 334th TRS/WTF, Keesler AFB, Miss. (2nd OLC)
2nd Lt. David S. Bragg, 334th TRS/WTF, Keesler AFB, Miss. (2nd OLC)
1st Lt. Jeffrey E. Lancero, 20th ASOS, Ft. Drum, N.Y. (1st OLC)
SSgt. Daniel Culbertson, 25th ASOS/DOW, Wheeler AAF, Hawaii
SSgt. Michael Nehls, 25th ASOS/DOW, Wheeler AAF, Hawaii

JOINT SERVICE ACHIEVEMENT MEDAL

Capt. Patrick J. Ludford, 12 OSS/DOW, Randolph AFB, Texas
MSgt. Salinda A. Larabee, Det. 8, 617th WS, Sandhofen, Germany

AIR FORCE ACHIEVEMENT MEDAL

SSgt. Bradley J. Leveque, AFGWC, Offutt AFB, Neb.
SSgt. Jeffrey T. Mitchell, 341st OSS/DOW, Malmstrom AFB, Mont.
SrA. Simon J. Perry, 341st OSS/DOW, Malmstrom AFB, Mont.
SrA. Dean P. Matuszewski, 410th MSS/OSW, K.I. Sawyer AFB, Mich.
SrA. Kevin D. Madsen, 410th MSS/OSW, K.I. Sawyer AFB, Mich.
SrA. Jeffrey W. Hall, 410th MSS/OSW, K.I. Sawyer AFB, Mich.
SrA. Clark D. Senter, 410th MSS/OSW, K.I. Sawyer AFB, Mich.
SrA. Cassandra Lane, 410th MSS/OSW, K.I. Sawyer AFB, Mich.
SrA. Ronald G. Bishop, 410th MSS/OSW, K.I. Sawyer AFB, Mich. (1st OLC)
SrA. William T. Louchren III, 410th MSS/OSW, K.I. Sawyer AFB, Mich.
A1C Stacey E. Loomis-Anderson, 410th MSS/OSW, K.I. Sawyer AFB, Mich.
SSgt. Mark D. Jacobs, Det. 8, 617th WS, Sandhofen, Germany
TSgt. Duane M. Limberg, Det. 4, 617th WS, Traben-Trarbach, Germany
Maj. Ralph O. Stoffler, HQ 617th WS, Heidelberg, Germany
Capt. James E. Rickman, HQ 617th WS, Heidelberg, Germany
Capt. James A. Willson, HQ 617th WS, Heidelberg, Germany
Capt. Thomas E. Lambert, Det. 3, 617th WS, Illesheim, Germany
Capt. Paul G. Niesen, Det. 6, 617th WS, Wiesbaden, Germany
CMSgt. James G. Berry, HQ 617th WS, Heidelberg, Germany
MSgt. John L. McDonald, HQ 617th WS, Heidelberg, Germany
TSgt. Howard Reid, A Flight, 617th WS, Heidelberg, Germany
SSgt. Donald J. Hatten, HQ 617th WS, Heidelberg, Germany
SSgt. Joselito C. Buendia, HQ 617th WS, Heidelberg, Germany
SSgt. Connie L. Kumpf, HQ 617th WS, Heidelberg, Germany

ARMY COMMENDATION MEDAL

1st Lt. Jeffrey E. Lancero, 20th ASOS, Ft. Drum, N.Y.
SrA. Robert E. Toner III, 341st OSS/DOW, Malmstrom AFB, Mont.

ARMY ACHIEVEMENT MEDAL

SrA. Setric D. Blanton, 21st ASOS, Ft. Polk. La.
TSgt. Bruce Montrose, 208th WF, Minneapolis, Minn. (ANG)
MSgt. David H. Driskell, 20th ASOS, Ft. Drum, N.Y. (1st OLC)
SSgt. Daniel H. Byrd, 20th ASOS, Ft. Drum, N.Y.
SSgt. Heidi J. Frost, 20th ASOS, Ft. Drum, N.Y.
SrA. Robert A. Mullin, 20th ASOS, Ft. Drum, N.Y.
SrA. Raul C. Mananquil, 20th ASOS, Ft. Drum, N.Y.
A1C Preston L. Gibson, 20th ASOS, Ft. Drum, N.Y.
A1C Rickie D. Davis, Jr., 20th ASOS, Ft. Drum, N.Y.
A1C Brian D. Bushnell, 20th ASOS, Ft. Drum, N.Y.
A1C Dana E. Savary, 20th ASOS, Ft. Drum, N.Y.
SrA. Keith Moore, Det. 6, 617th WS, Wiesbaden, Germany
A1C John Sosa, Det. 3, 617th WS, Illesheim, Germany
SSgt. Richard Lucio, 25th ASOS/DOW, Wheeler AAF, Hawaii
SrA. Belinda Goody, 25th ASOS/DOW, Wheeler AAF, Hawaii
SrA. Armando Ramos, 25th ASOS/DOW, Wheeler AAF, Hawaii

AIR FORCE GOOD CONDUCT MEDAL

TSgt. William T. Wheaton, 21st ASOS, Ft. Polk, La.
SSgt. Iwana L. Burleson, 21st ASOS, Ft. Polk, La.
MSgt. Dana M. Shifflett, AFGWC, Offutt AFB, Neb.
MSgt. Tara R. Carty, AFGWC, Offutt AFB, Neb.
TSgt. Michael R. Bitter, AFGWC, Offutt AFB, Neb.
TSgt. Ronald G. Morgan, AFGWC, Offutt AFB, Neb.
SSgt. Kenneth P. Alarie, AFGWC, Offutt AFB, Neb.
SSgt. Steven E. Lehman, AFGWC, Offutt AFB, Neb.
SSgt. Richard L. Edwards, AFGWC, Offutt AFB, Neb.
SrA. Samantha McCormick, AFGWC, Offutt AFB, Neb.
SrA. Chris Ramsdell, 45th WS, Patrick AFB, Fla.
SrA. Micheal A. Bilbey, 341st OSS/DOW, Malmstrom AFB, Mont.
SrA. Will A. Palmer, 77th OSS/OSW, McClellan AFB, Calif.
SrA. Ryan Wentz, 77th OSS/OSW, McClellan AFB, Calif.
SrA. Jeffrey D. Godemann, 77th OSS/OSW, McClellan AFB, Calif.
SrA. Michael P. Bastien, Det. 10, 617th WS, Giebelstadt, Germany
SSgt. Ron Thurow, Det. 3, 617th WS, Illesheim, Germany (1st OLC)

ARMED FORCES EXPEDITIONARY MEDAL

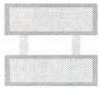
Maj. Walter Miller, 25th ASOS/DOW, Wheeler AAF, Hawaii
MSgt. Jeffrey Fluegge, 25th ASOS/DOW, Wheeler AAF, Hawaii
SSgt. Richard Lucio, 25th ASOS/DOW, Wheeler AAF, Hawaii
SSgt. Daniel Culbertson, 25th ASOS/DOW, Wheeler AAF, Hawaii
SrA. Belinda Goody, 25th ASOS/DOW, Wheeler AAF, Hawaii
SrA. Armando Ramos, 25th ASOS/DOW, Wheeler AAF, Hawaii

SOUTHWEST ASIA SERVICE MEDAL

(In support of Operation SOUTHERN WATCH, Feb.-June 1995 with the 4404th Wing (Provisional))
Maj. Daniel Cornell, 366th OSS/OSW, Mountain Home AFB, Idaho
2nd Lt. Christine M.R. Butler, 55th OSS/OSW, Offutt AFB, Neb.
MSgt. Peter M. Copeskey, HQ AWS/RMX, Scott AFB, Ill.
MSgt. Christopher M. Boczek, AFGWC/DOMPS, Offutt AFB, Neb.
TSgt. Ramon Gonzalez-Molina, OL-B, 18th WS, Ft. Eustis, Va.
TSgt. William Thompson, USAFETAC/DOC, Scott AFB, Ill.
SSgt. John R. Joyce, AFGWC/DOS, Offutt AFB, Neb.
SrA. Robert Garrett, 17th ASOS, C Flight, Ft. Benning, Ga.
SrA. Janet L. Schoger, 412th OSS/OSWO, Edwards AFB, Calif.
SrA. Darren Foss, 9th OSS/OSW, Beale AFB, Calif.
A1C Judith Farroe, 1st OSS/OSW, Langley AFB, Va.

PROMOTIONS

Wesley S. Lashbrook, 123rd Weather Flight, Portland, Ore. (ANG)
Jon E. Lundberg, 20th ASOS, Ft. Drum, N.Y.
Mark W. Levsky, HQ PACAF/DOW, Hickam AFB, Hawaii



Michael Protz, 28th OSS/OSW, Ellsworth AFB, S.D.
Clifton D. Stargardt, Air Combat Command AOS/AOW, Langley AFB, Va.
Jill M. Coakley, Det. 10, 617th WS, Giebelstadt, Germany

Jeffrey P. Leising, 126th WF, Milwaukee, Wis.(ANG)

Laurie D. Juraszek, USAFETAC/SYX, Scott AFB, Ill.
Douglas M. Brunell, 107th WF, Selfridge ANGB, Mich. (Air National Guard)
Kenneth H. Campbell, 105th WF, Nashville, Tenn. (ANG)
Jeffrey J. Hoffman, 104th WF, Baltimore, Md.

Todd Brandon, 28th OSS/OSW, Ellsworth AFB, S.D.
Charles Patterson, 122nd WF, New Orleans, La. (ANG)
Richard W. Downing, 12th OSS/OSW, Randolph AFB, Texas
William Buttner, OL-A, 617th WS, Augsburg, Germany
Robert Rios, 334th TRS/WTF, Keesler AFB, Miss.
David Rose, 334th TRS/WTF, Keesler AFB, Miss.
Richard Korich, 334th TRS/WTF, Keesler AFB, Miss.

Scott B. Kidder, Det. 6, 617th WS, Wiesbaden, Germany
David W. Lappie, Det. 4, 617th WS, Traben-Trarbach, Germany
Jon D. Adams, Det. 4, 617th WS, Traben-Trarbach, Germany
Kenneth O. Klinner, HQ 617th WS, Heidelberg, Germany (STEP promotee)
William D. Malcomb, 17th ASOS, C Flt., Ft. Benning, Ga.
David S. Gogian, 127th WF, Forbes Field, Kan. (ANG)
Jeffrey J. Soja, 131st WF, Westfield, Mass. (ANG)

Seth Trent, 509th OSS/OSW, Whiteman AFB, Mo.
Sven Atkins, 28th OSS/OSW, Ellsworth AFB, S.D.
Tracey A. Ress, ACC AOS/AOW, Langley AFB, Va.
William E. Figgins, Det. 4, 617th WS, Traben-Trarbach, Germany
Robert Pucci, Det. 10, 617th WS, Hohenfels, Germany
Scott McGilvary, A Flt., 617th WS, Heidelberg, Germany
Suzanne F. Miller, 20th ASOS, Ft. Drum, N.Y.
John "Daryll" Robertson, 46th WF, Eglin AFB, Fla.
Bebinn K. Cassel, 436th OSS/OSW, Dover AFB, Del.
Maurice A. Arnold, 17th ASOS, C Flt., Ft. Benning, Ga.

Victor Herrera, 28th OSS/OSW, Ellsworth AFB, S.D.
Robert Martinez, 77th OSS/OSW, McClellan AFB, Calif.
Melody M. Browning, Det. 2, 617th WS, Hanau, Germany
Alyson R. Mortier, 46th WF, Eglin AFB, Fla. (below the zone)
Scott A. Wilson, 436th OSS/OSW, Dover AFB, Del.
Robert G. Branham, 164th WF, Columbus, Ohio (ANG)
Cindy W. Butler, 122nd WF, New Orleans, La. (ANG)
Amber E. Leifsen, 122nd WF, New Orleans, La. (ANG)
Jeffrey Merewether, 107th WF, Selfridge ANGB, Mich. (ANG)

Tami J. Britton-Azeltine, 21st ASOS, Ft. Polk, La.
Dominique Atkins, 28th OSS/OSW, Ellsworth AFB, S.D.
William T. Haley, 341st OSS/DOW, Malmstrom AFB, Mont.
Lakeitha R. Luster, 46th WF, Eglin AFB, Fla.

Lucas T. Boyer, 509 OSS/OSW, Whiteman AFB, Mo.
Jamie M. Gerdes, 509 OSS/OSW, Whiteman AFB, Mo.
Jennifer L. Short, 509 OSS/OSW, Whiteman AFB, Mo.
Michael A. Forster, 46th WF, Eglin AFB, Fla.

COMING AND GOING

TRANSFERS

1st Lt. Lynda M. Johnson -- from 15th ASOS, Hunter Army Air Field, Ga., to Kadena AB, Japan
TSgt. Barry J. Hunte -- from 15th ASOS, Hunter AAF, Ga., to Camp Eagle, Korea
MSgt. Steve K. Long -- from 341st OSS/DOW, Malmstrom AFB, Mont., to Minot AFB, N.D.
TSgt. Dennis P. Davis -- from 62nd OSS/OSW, McChord AFB, Wash. to Combat Weather Facility, Hurlburt Field, Fla.
SrA. Will A. Palmer -- from 77th OSS/OSW, McClellan AFB, Calif., to Keesler AFB, Miss.
SrA. Bryan Garton -- from Keesler AFB, Miss., to 77th OSS/OSW, McClellan AFB, Calif.
AB Rachel Andrews -- from Keesler AFB, Miss, to 77th OSS/OSW, McClellan AFB, Calif.
Capt. Jeff B. Lorens -- from ACC AOS/AOW, Langley AFB, Va., to Patrick AFB, Fla.
Amn. Brian K. Lanoue -- from Keesler AFB, Miss., to 436th OSS/OSW, Dover AFB, Del.
SMSgt. Kerry L. Joens -- from 436th OSS/OSW, Dover AFB, Del., to Offutt AFB, Neb.
SSgt. Milton K. Threet -- from 436th OSS/OSW, Dover AFB, Del., to Tinker AFB, Okla.
Milissa L. Hoss -- from 436th OSS/OSW, Dover AFB, Del., to Andersen AFB, Guam
SSgt. Maurice A. Arnold -- from 17th ASOS, C Flt., Ft. Benning, Ga., to Camp Stanley, Korea
AB Robert Mims -- from Keesler AFB, Miss., to 17th ASOS, C Flt., Ft. Benning, Ga.
AB Gregory D. Adams -- from Keesler AFB, Miss., to 17th ASOS, C Flt., Ft. Benning, Ga.
Capt. Norman Mandy -- from Offutt AFB, Neb., to 21st OSS/OSW, Peterson AFB, Colo.
MSgt. James Randolph -- from 21st OSS/OSW, Peterson AFB, Colo., to Lajes AB, The Azores
SSgt. Paul Richard -- from 21st OSS/OSW, Peterson AFB, Colo., to Grafenwohr AAF, Germany
Capt. Richard J. Mueller -- from AFIT, to USAFETAC/SYX, Scott AFB, Ill.

RETIREMENTS

MSgt. James "Buck" Buchanan, 21st ASOS, Ft. Polk, La.
Capt. Kevin E. Martin, 46th WF, Eglin AFB, Fla.
TSgt. Anita Pruitt, 334th TRS/WTF, Keesler AFB, Miss.

SEPARATIONS

Bart Sharrah, 21st ASOS, Ft. Polk, La.
SrA. Wanda J. Tuggle, 12th OSS/DOW, Randolph AFB, Texas
Capt. Dawn M. Molzen, ACC AOS/AOW, Langley AFB, Va.
Maj. Gregory J. Reding, USAFETAC/SYX, Scott AFB, Ill.

EDUCATION

NCO ACADEMY

TSgt. Robert E. Baker, 15th ASOS, Hunter AAF, Ga.
TSgt. Stephen G. McDonnell, 436th OSS/OSW, Dover AFB, Del.

COMBAT LIGHTNING

MSgt. Rodney Rabenneck, 45th WS, PAtrick AFB, Fla.

AWDS SYSTEMS MANAGER

TSgt. Philip D. Poyner, 20th ASOS, Ft. Drum, N.Y.

AIRMAN LEADERSHIP SCHOOL

SrA. Shannon D. Miller, 20th ASOS, Ft. Drum, N.Y. - Distinguished Graduate
SrA. Mark Wilson, 17th ASOS, C Flt., Ft. Benning, Ga. - John Levitow Award
SrA. Martine Dinkens, 17th ASOS, C Flt., Ft. Benning, Ga. - Military Citizenship Award
SrA. Belinda Goody, 25th ASOS/DOW, Wheeler AAF, Hawaii

COMMUNITY COLLEGE OF THE AIR FORCE DEGREE - WEATHER TECHNOLOGY

SSgt. Anthony M. Calder, 410th MSS/OSW, K.I. Sawyer AFB, Mich.
SrA. Cassandra Lane, 410th MSS/OSW, K.I. Sawyer AFB, Mich.
SSgt. Toni V. Carter, 62nd OSS/OSW, McChord AFB, Wash.
TSgt. Howard Cowell, 436th OSS/OSW, Dover AFB, Del.
SSgt. Manuel Carrasquillo, 21st OSS/OSW, Peterson AFB, Colo.

WEATHER SATELLITE AND PHOTO INTERPRETATION COURSE

SSgt. Toni V. Carter, 62nd OSS/OSW, McChord AFB, Wash.

OFFICER TRAINING SCHOOL SELECTEE

SrA. Tabitha J. Seaton, 62nd OSS/OSW, McChord AFB, Wash.

BACHELOR OF ARTS IN INTERNATIONAL RELATIONS (WITH HONORS)

SrA. Alula Berhane, 77th OSS/OSW, McClellan AFB, Calif.

WSR-88D OPERATOR COURSE

MSgt. Rick A. Suggs, 77th OSS/OSW, McClellan AFB, Calif.
TSgt. William Anderson, 77th OSS/OSW, McClellan AFB, Calif.
SrA. Jeffrey D. Godemann, 77th OSS/OSW, McClellan AFB, Calif.
AB Marco Cardenas, 77th OSS/OSW, McClellan AFB, Calif.

WSR-88D PUP OPERATOR/MANAGER COURSE

TSgt. Mark Elyea, 21st OSS/OSW, Peterson AFB, Colo.

MASTER OF SCIENCE DEGREE IN METEOROLOGY

Capt. Edward C. Melton III, HQ 617th WS, Heidelberg, Germany (through AFIT, North Carolina State University)

M.S. DEGREE IN MANAGEMENT INFORMATION SYSTEMS

Capt. Thomas J. Goulter, Jr., A Flt., 617th WS, Heidelberg, Germany (Bowie State University)
Capt. James A. Wilson, HQ 617th WS, Heidelberg, Germany (Bowie State University)

MASTER OF ARTS DEGREE IN ADMINISTRATION

MSgt. John E. Beaton, Jr., Det. 10, 617th WS, Hohenfels, Germany

BACHELOR OF SCIENCE IN HUMAN RESOURCE MANAGEMENT

SMSgt. Kerry L. Joens, 436th OSS/OSW, Dover AFB, Del.

BACHELOR OF SCIENCE DEGREE IN MANAGEMENT STUDIES

SMSgt. Jeffrey L. Fleming, 436th OSS/OSW, Dover AFB, Del.

AWS QUICK REACTION COMUNICATIONS TERMINAL TRAINING COURSE

SSgt. Grant A. Ramsey, 436th OSS/OSW, Dover AFB, Del.

AWARDS

21st ASOS FORECASTER OF THE QUARTER (JAN.-APRIL 1995)

SrA. Deron R. Harrison, Ft. Polk, La.

21st ASOS OBSERVER OF THE QUARTER (JAN.-APRIL 1995)

A1C Jeana T. Thompson, Ft. Polk, La.

131st WF AIRMAN OF THE YEAR (1994)

SrA. James T. Jyz, 131st WF, Westfield, Mass. (ANG)

45th SPACE WING SENIOR NCO OF THE YEAR

MSgt. George Strohm, Patrick AFB, Fla.

45th OPERATIONS GROUP MID-LEVEL CIVILIAN OF THE YEAR

Johnny Weems, Patrick AFB, Fla.

RANDOLPH AFB, TEXAS NCO OF THE YEAR

MSgt. Richard W. Downing, 12th OSS/DOW

62nd AIRLIFT WING NCO OF THE QUARTER

TSgt. John S. Galliano, 62nd OSS/OSW, McChord AFB, Wash.

62nd OPERATIONS GROUP CIVILIAN OF THE QUARTER

James R. Buckles, 62nd OSS/OSW, McChord AFB, Wash.

See SALUTES, Cont. on Page 19

Pacific Air Forces

MISSION STATEMENT:

Have Power And Reach Ready To Protect U.S. Interests In The Pacific

compiled by Maj. Mary Quinn
Pacific Air Forces Directorate of Weather

From the vast glaciers of Alaska to the lush tropics of Guam and Hawaii, weather units dotted throughout the Pacific region, support the Pacific Air Forces mission every day. Our area of responsibility is vast: more than half the Earth's surface, from the West Coast of the Americas to the East Coast of Africa, from the Artic to the Antartic. Here's a rundown of our units and how PACAF weather supports the command's mission:

OSAN AB, KOREA

At the tip of the spear, only 73 miles from the Demilitarized Zone, is the **Hardened Theater Air Control Center (HTACC) at Osan AB, Korea.** Should war break out in Korea, the HTACC becomes the hub of weather information to friendly forces.

"Our mission is to provide weather data to support planning and execution of the air campaign in defense of the Republic of Korea," said HTACC commander Lt. Col. Paul Place. "The people here are responsible for providing weather support to the Combined Targeting Board, Air Component Command, U.S. Forces Korea, the 7th Air Force Commander, the Combat Operations Squadron Duty Officer, as well as Search and Rescue and various intelligence offices."

YONGSAN, KOREA

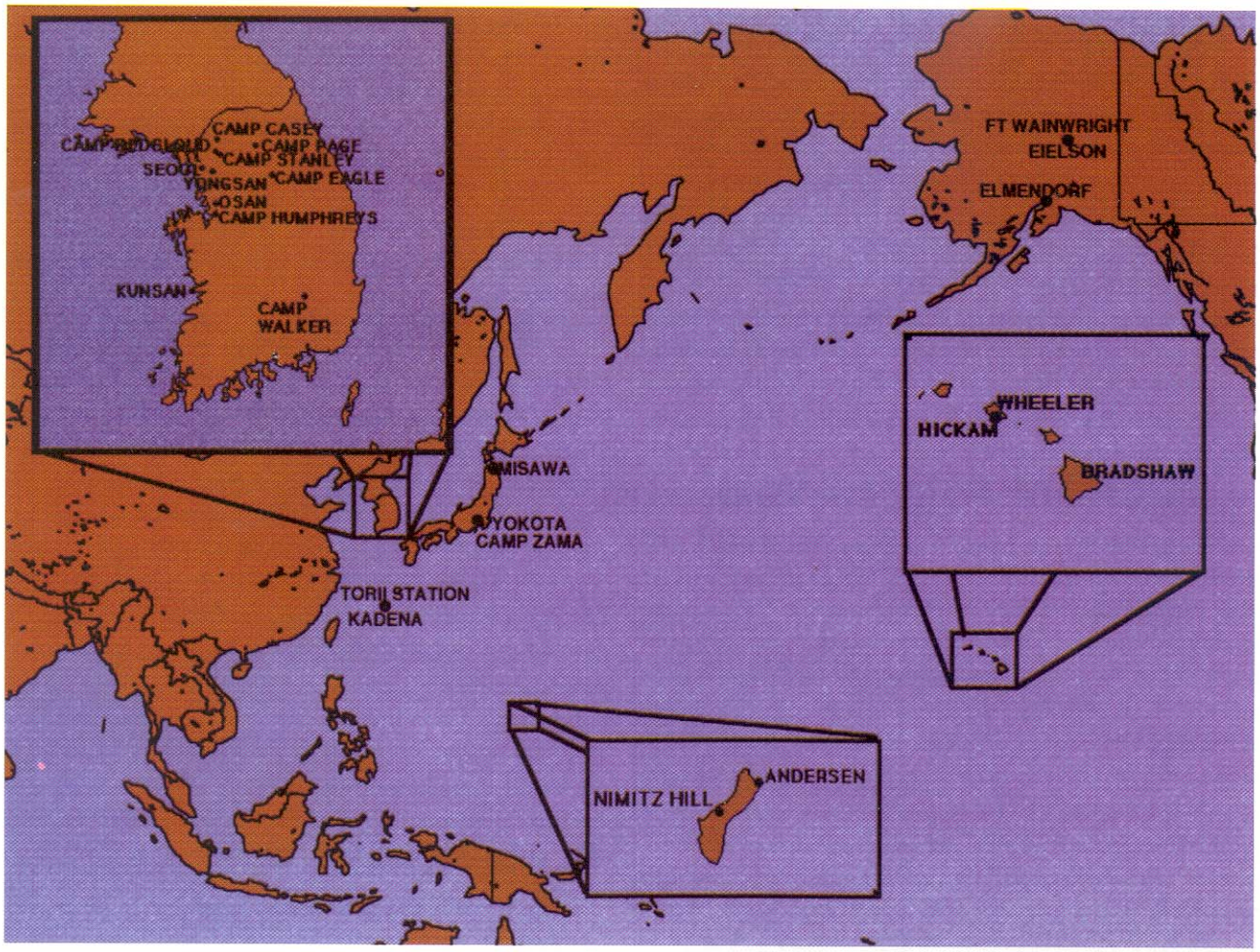
The **607th Weather Squadron, located in Yongsan, South Korea**, is the most complex weather unit in PACAF. They serve as the weather focal point for the Commander in Chief, Combined Forces Command/United Nations Command, U.S. Forces Korea (USFK), and the Eighth U.S. Army.

The squadron is comprised of the USFK Forecast Unit (USFKFU), a cadre weather team, and a squadron staff to manage three OLs and two detachments (which have a total of four subordinate operating locations).

KUNSAN AB, KOREA

Overlooking the Yellow Sea, 130 miles south of Seoul, **Kunsan AB is home to PACAF's 8th Fighter Wing.** Exercises are a way of life in Korea, and especially at Kunsan. To achieve and maintain readiness in this short-tour area demands surge, strike, munitions, reception, and quick-turn exercises. The base weather station at Kunsan supports all these exercises — and more. They provide weather services remotely to Kwang-Ju and Kimhae about 100 miles away.

They also keep busy during "slack' periods with support to transient Air Mobility Command aircraft and Army helicopters and C-12s. Although this would seem plenty for the small 8th OSS Weather Flight, there is one more thing that makes this unit unique. The base weather station at Kunsan is shared with Republic of Korea Air Force (ROKAF) weather personnel. Air Force and ROKAF forecasters and observers work shoulder-to-shoulder to support the 8th Fighter Wing and the ROKAF Fighter Wing at Kunsan.



YOKOTA AB, JAPAN

No matter where in the world you are forecasting the weather, gaining knowledge and experience from the "locals" are invaluable aspects of forecasting proficiency.

At the **374th Operations Support Squadron's Weather Flight, Yokota AB, Japan**, a unique, ongoing program that taps into Japanese local forecasting experience began in 1994. The Forecaster Shadow Program was initiated by Capt. Tony Eckel, Chief of Weather Operations, Yoshinori Ogawa, Yokota's civilian forecaster, and Lt. Shuzoh Kinoshita from the Japan Air Self Defense Force (JASDF) Air Weather Service.

Benefits from the Forecaster Shadow Program have been enlightening. For example, wind is one of the most challenging weather elements to forecast at Yokota AB, located on the island of Honshu at the edge of a 30-mile-wide plain nestled against a mountain range 10,000 feet high. Because of this terrain and thermal differences, winds can blow 30 knots in opposing directions within a 10-mile range.

KADENA AB, JAPAN

With the second-largest weather flight in the Air Force, **Kadena**'s weather personnel support the equivalent of 10 flying squadrons. This goes along with typhoon warnings, tailored products for Air Force and Army special operations missions, weather updates for transient and Air Mobility Command aircraft, and specialized support to national command authority missions.

As a result of deftly handling all this responsibility, the Kadena weather flight took home an armful of awards last year. Aside from winning the Pacific Air Forces' 1994 Williams Award as the Outstanding Base Weather Station, two of its members won Air Force-level awards and three others won PACAF awards.

In addition, Kadena forecaster SSgt. Jimmy Scott represented PACAF in the FORECAST CHALLENGE competition at Hurlburt Field, Florida. He and SSgt. Ronald Sharp from the Alaskan Forecast Unit won the Dunlap-Wieberg Award for the best terminal area forecasts. TSgt. Ronnie Caldwell was selected as the Air Force Outstanding Weather Staff Support NCO and SrA. Gregory Schmidt garnered the Air Force Weather Airman of the Year Award.

"This job is a team effort. We couldn't do it without everyone's help," said Caldwell. 1st Lt. Scott Magnan, PACAF Mereweather Award winner, is their DMSP Meteorological Satellite Coordinator. He expertly exploits the capability of METSAT imagery to assist forecasters in understanding what is going on weatherwise throughout the Pacific.

WHEELER AAF, HAWAII

Five weather personnel assigned to the **25th Air Support Operation Squadron, Weather Flight at Wheeler AAF, Hawaii**, deployed to Port-au-Prince, Haiti to take over JTF UPHOLD DEMOCRACY support from Ft. Drum's 10th Mountain Division. From Jan. 11-Apr. 2, 1995, these five supported the JTF Headquarters and the 1/25 Aviation Regiment with critical weather products. Maj. Walt Miller, the 25th Air Support Operations Squadron Director of Weather, served as the senior METOC officer in theater. Others who deployed were MSgt. Jeffrey Fluegge, SSgt. Daniel Culbertson, SSgt. Richard D, Lucio, SrA. L. Belinda Goody, and SrA. Armando Ramos.

HICKAM AFB, HAWAII

Also located on the island of Oahu is the **Hickam AFB weather station, the 15OSS/OSW**. Highlights of their diverse mission include: Central Pacific's only 24-hour weather facility; source of weather warnings and advisories protecting billions of dollars in resources at 19 DOD installations and 40 geographically separated units within the region; direct support to four USAF and ANG flying squadrons, as well as USN, USMC, and USA air operations; integral member of the USPACOM tropical cyclone reconnaissance network and the METSAT arm of the Alternate Joint Typhoon Warning Center; and principal agency for forecast support for a Space Shuttle emergency landing site.

ANDERSEN AFB, GUAM

Andersen AFB, Guam, lies in the most active tropical cyclone genesis region in the world. On average, six to eight cyclones pass within 300 nautical miles of Guam each year. In 1992, five typhoons struck Guam from August through November — three with direct eye passages. The NEXRAD weather radar, operational since February 1993, has quickly become a critical player in the approach of these storm systems.

On a small island like Guam, the exact location of storm center passage dictates certain aspects of resource protection. Wind direction is critical to positioning of equipment, aircraft, and vehicles. The dramatic coastal cliffline variations influence the intensity of gusts with changes in the directional component of the wind. Exact storm center fixes are required to fine tune a wind forecast.

Weather forecasters of the **36th Operations Support Squadron's** weather flight have found NEXRAD data invaluable in preparing and issuing timely typhoon watches and warnings. For example, the 1994 typhoon season brought detailed looks at the vertical wind profiles of cyclones as seen in velocity cross-sections. Astonishing observations of wind distribution and inflow/outflow patterns were recorded. Intense gradients of rainfall, spiral banding evolution and motion, and pulsing intensity cycles of eyewall convection were viewed. Improved techniques for fixing poorly defined storm centers were developed, and the confidence in the ability of NEXRAD to analyze the tropical atmosphere became validated.

As the 1995 typhoon season begins, the Andersen AFB weather flight looks forward to the addition of Archive Level II recording which will allow for storage of digitized radial base data.

NIMITZ HILL, GUAM

Also located on Guam, at **Nimitz Hill, is the Joint Typhoon Warning Center** (JTWC) — a combined Air Force/Navy organization operating under the command of the Commanding Officer, U.S. Naval Pacific Meteorology and Oceanography Center West. Their mission includes continuous monitoring of all tropical weather activity in the Northern and Southern Hemispheres, from the International Dateline westward to the east coast of Africa. When cyclone development is anticipated, Nimitz Hill quickly issues appropriate advisories and alerts. The JTWC director, an Air Force lieutenant colonel, oversees operations of the watch structure which consists of a Typhoon Duty Officer (two on watch if there are four or more simultaneous active storms), a typhoon duty assistant, and a satellite analyst.

ELMENDORF AFB, ALASKA

At 586,412 square miles, **Alaska** is roughly the size of Washington, Oregon, Idaho, Montana, Utah, and Nevada combined. The state stretches nearly 3,000 miles, making it almost as wide as the CONUS. USAF operating locations are spread throughout this entire area, yet the weather forecasts for nearly all of them are produced from one location, often on very sparse amounts of data.

Four weather units are lucky enough to count themselves among the "Frozen Chosen" of America's Last Frontier; the **611th OSS/WE, better known as the Alaskan Forecast Unit (AFU) operates out of Elmendorf AFB** and is the agency mentioned above that does most of the state's forecasting for remote locations. Although stationed at Elmendorf, none of their forecasts are for the terminal area. Instead, they forecast for remote sites throughout Alaska — from Barter Island on the north slope to Eareckson AFS at the end of the Aleutian Chain.

One of three theater forecast units in the world, they practice their wartime mission around the clock; "We provide planning and operational weather information and guidance to Department of Defense and United States government agencies operating within the Alaskan theater," said Capt. Mark Miller, OIC of the AFU.

Daily support is provided to the Alaskan Command, the Alaska NORAD Region, and the HQ 11th Air Force. Weather forecasts, warnings, and advisories for Eareckson AFS, and King Salmon and Galena Airports comprise nearly

half of the daily workload for the duty forecasters. Whenever planes fly into any of Alaska's ten Long-Range Radar sites, the AFU issues the forecast.

The AFU also monitors multi-million-dollar weather observing contracts at all the Alaskan radar sites. The weather flight also supervised the conversion from military to contract weather observations at **Earekson AFS (formerly Shemya AFB)**. Also, the AFU has responsibility of overseeing METSAT imagery for the theater using the new MARK IVB satellite receiver station. The MARK IVB ingests the imagery and sends it out to all the weather flights in theater via a newly installed Harris 1000 dissemination equipment.

Along with the AFU, the **3 OSS/WE — the official designation for the Base Weather Station — is located at Elmendorf AFB**. It is to these folks that the burden of forecasting for the area known as the "Anchorage Bowl" falls. The city of Anchorage and Elmendorf AFB are ringed by a semi-circle of mountains from the northwest through the south. These mountains can act to protect the area from the fury of a passing storm, or they can add to it by funneling and magnifying its effects.

"The sheer volume and close proximity of the mountains makes Elmendorf and the surrounding communities a truly unique place to forecast and observe the weather" noted the OIC, 1st Lt. Barry Crook.

PACIFIC AIR FORCES — its sheer expanse and diverse climate offer a tremendous meteorological challenge.

EIELSON AFB, ALASKA

The 354 OSS/OSW is the weather station at Eielson AFB, located 25 miles south of Fairbanks. The weather station supports the wing's F-16s, and OA-10's, plus KC -135's belonging to the ANG. Forecast responsibility includes the base, three ranges, a low altitude IR track, and warning/advisory support for Clear AFS to the south, and for Ft. Wainwright on nights and weekends. Located near the Arctic Circle, Eielson experiences a very noticeable change in sunlight.

1st Lt. Steve Cabosky, Flight Commander at Eielson reported: "Daylight drops to three hours, 43 minutes, in December (but climbs to) continuous civil twilight from May16-July 26." The combination of solar extremes and Eielson's continental location produces a severe seasonal change in temperature. Winter temperatures can drop into the negative 60's while summer temperatures soar reaching into the 90s ... .a 150-degree temperature change, Cabosky said.

FORT WAINWRIGHT, ALASKA

The 3 ASOS/WE is the weather flight assigned to support the 1/6 Separate Operating Brigade (Light) stationed at Ft. Wainwright in Fairbanks. While most Alaskans pass the dark and cold winter tucked safely indoors, Ft. Wainwright takes the opportunity to train in the cold weather conditions of Alaska. Two-week deployments with temperatures never rising above -30 degrees F and falling well below -50 degrees F are not unheard of!

HQ PACAF, HAWAII

Finally, the **HQ PACAF Weather Division (DOW) staff** actively supports the PACAF mission on a daily basis. With a Navy admiral as the CINC, U.S. Pacific Command, and the large, open-water AOR, much of PACAF operations is joint in nature, and PACAF/DOW has consistently been in the lead among MAJCOMs on cooperative ventures with their sister-service counterparts.

A formal forum — METOC Group, USPACOM— that was created with the inception of the JTWC meets quarterly to facilitate introduction and discussion of concerns/issues impacting the Pacific weather community. Originally intended to solve JTWC-related problems, the group, comprised of weather senior leadership from CINCPAC, PACFLT, PACAF, NOAA/NWS offices, US Army, and the Marines, has expanded its scope to address all weather-related topics.

One example of its partnership with the Navy has been the high-visibility support to Joint Task Force FULL ACCOUNTING (JTF-FA) which began in Jan 1992. Established to resolve unaccounted cases of American POW/MIAs in Southeast Asia, early operations in Cambodia involved deployed in-country observing/forecasting teams to support U.S helicopter operations. The PACAF weather briefers (now attached to the HQ PACAF Air Operations Squadron) currently provide detailed planning and predeployment support to activities in Vietnam.

Detailed climatology analyses at planning meetings help develop long-range work plans to prioritize favorable provinces for upcoming deployments. Climatology updates at pre-deployment decision briefings cover potential weather impacts to planned operations. "Real-world" updates on threats from approaching typhoons are also critical for excavation and recovery operations. Twice-daily regional forecast bulletins created by the Naval Pacific METOC Center West at Nimitz Hill, Guam are transmitted to JTF HQ at Camp Smith, Hawaii and to the in-country teams.

PACIFIC AIR FORCES — its sheer expanse and diverse climate offer a tremendous meteorological challenge. Nearly 375 dedicated weather personnel help man its many "Global Presence" outposts; we invite you to come join us!

Readiness Through Knowledge

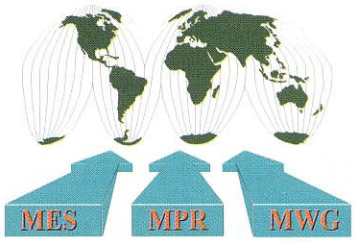
Providing Weather Support Throughout the World

by TSgt. Mike McAleenan
Technology, Plans and Programs
Field Support Branch

In the Fall of 1994, Headquarters Air Weather Service undertook a bold new mission to provide support to Air Force Weather (AFW) units through its Technology Training Division (XOT).

Most of you are familiar with our Meteorological Enhancement Teams, known as METS. Our METS provide a "traveling road show" via Meteorological Enhancement Seminars (MES) on refresher training topics, and introduction of new techniques relating to AWDS and NEXRAD optimization.

However, XOT's mission has since broadened, and the scope of services expanded to also include Meteorological Process Reviews (MPR) and Meteorological Working Groups (MWG). Before we go any further, let's review the MES, MPR, & MWG.



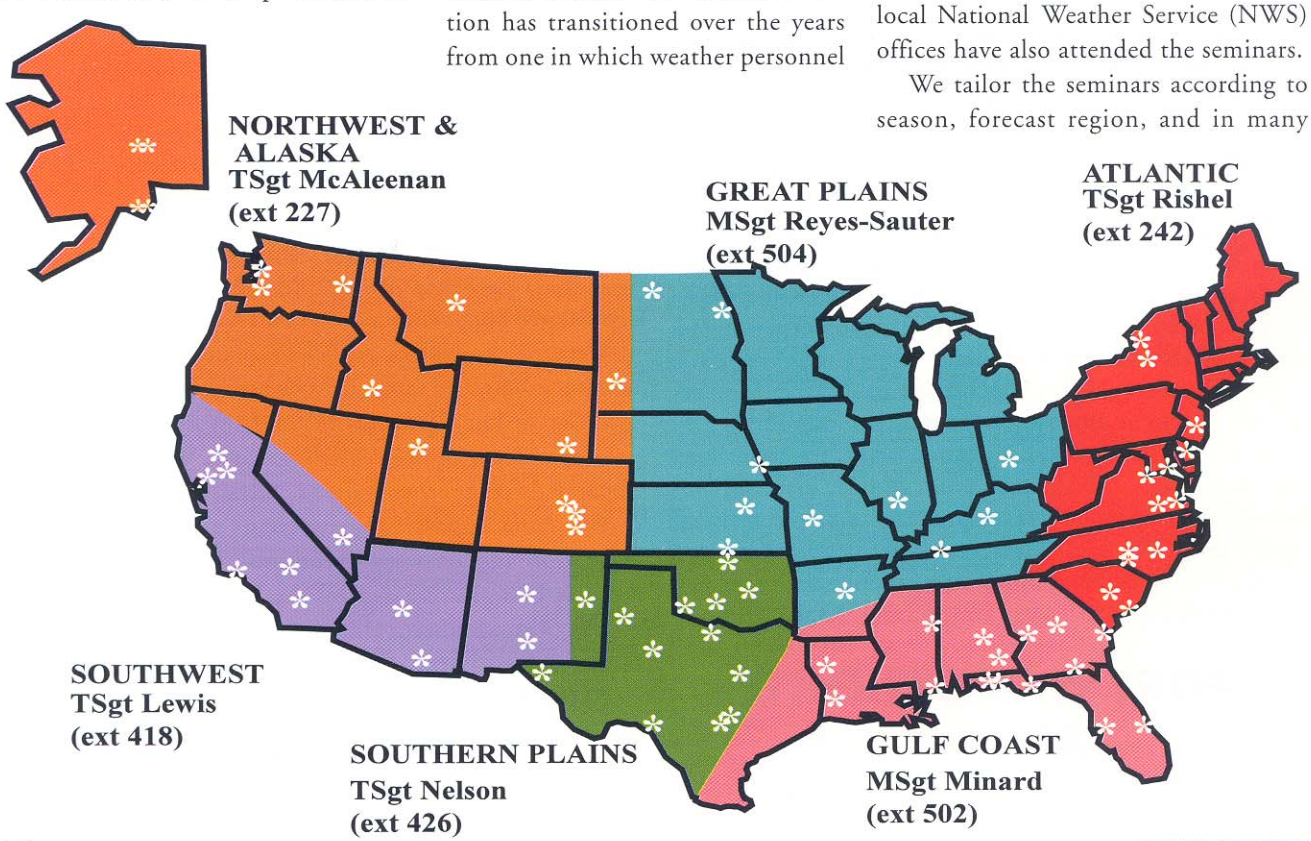
Meteorological Enhancement Seminar

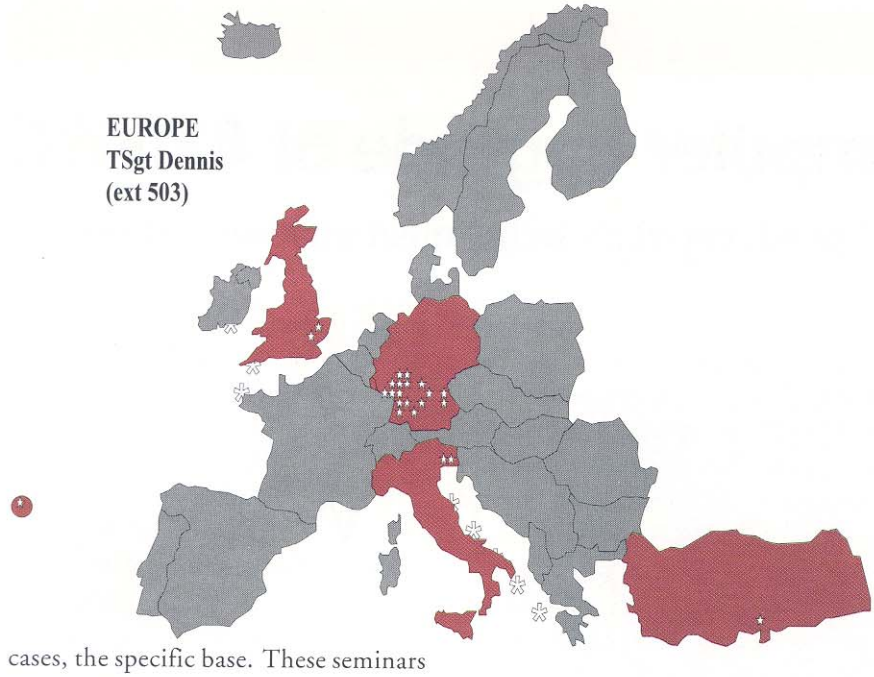
The most familiar of our services is the Meteorological Enhancement Seminar (MES). The weather function has transitioned over the years from one in which weather personnel were provided with a relatively small amount of data on which to base forecasts, to one in which forecasters are constantly facing information overload. The counter forecaster can become overwhelmed with so much data, that decisions concerning which products to use are not always obvious or easily made.

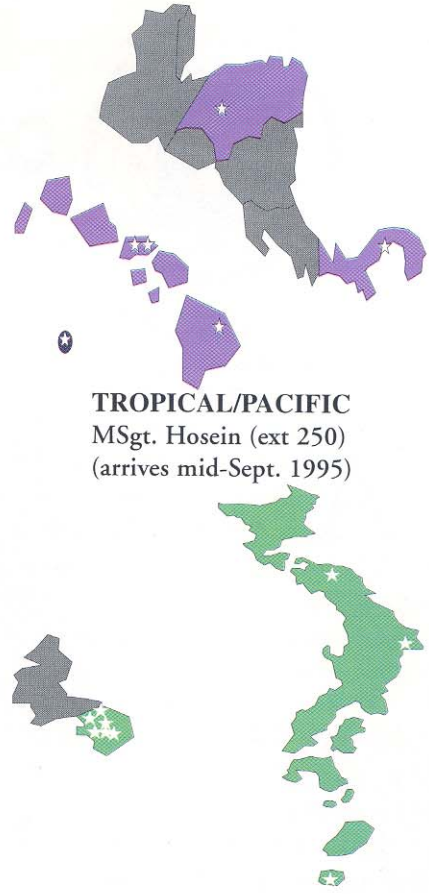
Our seminars, conducted by unit invitation only, help by keying on the important things that lead to a sound forecast. They introduce unit personnel to new forecasting techniques that have been proven to add value to the forecast process.

Forecast methods are presented to help the forecaster arrive at the proper conclusion in a timely manner. More than 100 AFW units have received an MES since Fall 1994. Forecasters from local National Weather Service (NWS) offices have also attended the seminars.

We tailor the seminars according to season, forecast region, and in many







cases, the specific base. These seminars are usually whole day affairs and are jam-packed with operational information. We use the latest in graphics technology to enhance the presentation and make it as interesting as possible.

The seminars also provide a forum for gathering techniques to crossfeed to other AFW units.

Meteorological Process Review

The Meteorological Process Review is a new program designed to help a unit with its Local Analysis Forecast Program. The MPR concept consists of two person teams designated to spend a week with a unit to review its forecast processes for possible enhancement and technology integration.

The team works closely with the unit's technical expert to help document a standard methodology for all unit forecasters to follow. This standard methodology includes regional forecast techniques and checklists for different weather scenarios and regimes.

We plan to leave the unit with a daily working document in a computer hypertext format (similar to Windows Help). The MPRs are made to be user friendly. These visits are conducted on a non-retribution basis and are scheduled by unit invitation only.

Meteorological Working Group

The Meteorological Working Group is made up of units from the same climatological region. Representatives from the NWS may also attend. The group's purpose is to periodically discuss technical forecasting issues related to the region. The goals are to refine ways to better forecast a particular phenomena and to enhance technique sharing. Crossfeed between units and the NWS is maximized during the MWG. We plan on conducting the first ever MWGs this summer.

Regional Concept

The philosophy tying the MES, MPR, & MWG together to ensure our efforts remain robust is called the Regional Concept initiative. We have combined bases into regions based on geography and climatology.

Each region is assigned a representative to ensure the customer has "one-stop-shopping." Each regional representative is familiarized with the weather regimes of his (or her) assigned area and vigorously tackles the technical needs of AFW units. Your particular representative has access to the Internet (where more than 150 weather information sites exist) and the Air Force Weather Bulletin Board System.

The regional representative also produces tailored T-TWOS, Echoes, and FYIs. XOT has an important role to play in assuring our country's military weather forces are prepared to meet tomorrow's challenges.

Our motto at XOT is "**Promote readiness through knowledge by providing technical weather services worldwide.**"

With these informational seminars, reviews, and groups available, we can help you.

To schedule visits or participate in a regional meeting, call DSN 576-4721. Contact Arthur Nelson (ext. 245), Capt. Donald Berchoff (ext. 430), CMSgt. Johnny Kicklighter (ext. 246), or your regional representative, assigned as noted on each chart.

Computer upgrade at AFGWC

Speed, capacity helps meet customer demand

by Capt. Barnabas Dudas
Climatological and Space Systems Branch

A recent major system upgrade at Air Force Global Weather Central (AFGWC), Offutt AFB, Neb., promises to increase speed, efficiency, and customer satisfaction with the Advanced Weather Analysis and Prediction System (AWAPS).

The new Unisys 2200/522E computers were fired up and put on-line Apr. 25, 1995, and immediate results were quickly realized.

This state-of-the-art computer, packing much greater speed and capacity, reduced key AWAPS products' run times by 25-35 percent over the older Unisys 1100's.

This upgraded capability is essential to meeting the current and ever-increasing operational demands of our many Air Force Weather customers.

Through AWAPS, AFGWC provides vital weather information and decision products to Air Force, Army, and other Department of Defense agencies for peacetime, combat, and contingency operations worldwide.

AWAPS maintains a global weather analysis and forecast database for, and prepares and pushes mission-tailored products to, our diverse customers.

Major models now run on AWAPS include the Global Spectral Model and the Relocatable Window Model (RWM), with the RWM currently run for three fixed windows — United States, Europe, and Asia — plus a contingency window.

These and other AWAPS models generate the gridded analysis and forecast products used daily by both weather and mission operators.

The AWAPS upgrade/replacement is being accomplished through a Value Engineering Change Proposal (VECP) in two phases. Phase I was complete with replacement of the Unisys 1100s.

In Phase II (a contract award is near), we'll replace the Cray Research X-MP Supercomputer, a computing engine for major analysis and forecast models, with an IBM SP-2 and workstations, further boosting AWAPS computing power and speed.

While our primary focus and gain is the increased and improved operational capabilities realized, an added benefit and central purpose of the VECP is significant cost savings, largely through lower maintenance costs on the newer, more reliable, more capable equipment.

Putting the Unisys 2200/522E on line is just the first step. With successful completion of Phase II (estimated Sep 95), AWAPS will be fully upgraded and ready for integration of the newest core weather model, the Theater Analysis and Forecast Model, and evolution to the Global Theater Weather Analysis and Prediction System.

Contact Captain Dudas at:
HQ AWS/SYAC;
DSN 576-4741 ext. 414;
E-mail "dudasb@hqaws.safb.af.mil"

Worldwide Weather Master Sergeant Selection List Cycle 95E7

Name	Base	Command
Adams, Steven R.	Shaw AFB, S.C.	ACC
Anderson, Mark E.	Scott AFB, Ill.	AWS
Baca, Jeffrey L.	Tyndall AFB, Fla.	AETC
Barrett, Ralph T.	Holloman AFB, N.M.	ACC
Connell, James P.	Columbus AFB	AETC
Dominguez, Alfredo	Ramstein AB, Germany	USAFE
Fletcher, Timothy L.	Keesler AFB, Miss.	AETC
Flieg, Patrick J.	Spangdahlem AB, Germany	USAFE
Foster, Richard L. Jr.	Scott AFB, Ill.	AWS
Fritz, John M.	Hickam AFB, Hawaii	PACAF
Galliano, John S.	McChord AFB, Wash.	AMC
Grehan, Michael S.	Andersen AFB, Guam	PACAF
Gross, Lawrence H.	Patrick AFB, Fla.	AFSPC
Grotzinger, Richard	RAF Mildenhall, U.K.	USAFE
Hatten, Donald J.	Heidelberg AIN, Germany	USAFE
Hayward, Theo	Keesler AFB, Miss.	AETC
Hein, Richard G.	Kunsan AB, Korea	PACAF
Jamieson, Donald E.	Offutt AFB, Neb.	AWS
Johnson, Carl J.	Offutt AFB, Neb.	AWS
Johnson, Kevin W.	Osan AB, Korea	PACAF
Justus, Gary C.	Hickam AFB, Hawaii	PACAF
Kalb, Timothy A.	Offutt AFB, Neb.	AWS
Kalber, Richard J.	Heidelberg AIN, Germany	USAFE
Keil, Ricky G.	Osan AB, Korea	PACAF
Kellerman, Ronald H.	Pope AFB, N.C.	ACC
Kielnecker, Frank H.	Wright-Patterson AFB, Ohio	ACC
Knowles, Cory W.	Keesler AFB, Miss.	AETC
Laurenti, James L.	Offutt AFB, Neb.	AWS
McPherson, Walter N.	Hickam AFB, Hawaii	AFSPC
Miller, Louis R.	Elmendorf AFB, Alaska	PACAF
Million, Marvin A.	Kadena AB, Japan	PACAF
Mireles, Mark R.	Maxwell AFB, Ala.	ACC
Morrison, Vane E.	Edwards AFB, Calif.	AFMC
Murtagh, William J.	Bolling AFB, D.C.	ACC
Nelson, Michael C.	Scott AFB, Ill.	AWS
Nicholls, Michael D.	Pope AFB, N.C.	ACC
Obrien, Raymond E. Jr.	Maxwell AFB, Ala.	ACC
Patterson, Gregory	Altus AFB, Okla.	AETC
Pinkerton, Paul A.	Holloman AFB, N.M.	AFSPC
Pitsenbarger, Larry	RAF Lakenheath, U.K.	USAFE
Rambali, Christopher	Robins AFB, Ga.	ACC
Rawson, David G.	Fairchild AFB, Wash.	AMC
Redford, Mark A.	Hohenfels AIN, Germany	USAFE
Rishel, Douglas A.	Scott AFB, Ill.	AWS
Schott, Milton B. II	Tinker AFB, Okla.	AFMC
Seibert, David P.	Luke AFB, Ariz.	AETC
Taylor, Irving A. Jr.	Spangdahlem AB, Germany	USAFE
Taylor, Tony D.	Keesler AFB, Miss.	AETC
Troutt, Ronald C.	Keesler AFB, Miss.	AETC
Warriner, Jane H.	Eglin AFB, Fla.	AFMC
Woodard, Brian R.	Keesler AFB, Miss.	AETC

CFEP sees huge upgrade

Providing weather 'life support' to warfighters and the world

by Col. George Yurchak, Jr.
Chief, Automated Communications Systems
Standard Systems Group, OL-B
Tinker AFB, Okla.

How many times have you heard someone say, "CFEP cannot handle more than it is dealing with now!"

If you're someone who has heard this, or even if you're someone who believes it, read on. And even if you have no clue what a CFEP is, please continue anyway — I promise to explain!

The **Communications Front End Processor**, more affectionately known as **CFEP** (pronounced sea-fep), was developed by the Air Force in the 1980s. Its purpose was to consolidate and upgrade the handling of communications between the Air Force Global Weather Central (AFGWC) and its customers around the world, with the primary mission of providing timely graphic products.

If you look at AFGWC as being the heart of weather, then CFEP is the aorta, providing life support to the warfighter and the world.

Located at Offutt AFB, Neb., CFEP's functions include communications processing and switching for weather facsimile products, the Satellite Data Handling System, the Weather Information's Processing System, and the Automated Weather Distribution System (AWDS).

Some of the end products of the data collected and disseminated are forecasts, weather bulletins/warnings, optimized flight plans, and other meteorology products.

CFEP also recently picked up the task of processing and routing all overseas AWDS data, a task which was previously performed by the Weather Graphics Switch. Sound like a busy processor? The phrase that comes to mind is, "*AND HOW!*"

In order to evaluate how the CFEP was handling its enormous task, HQ 38 EIW/SDFM, in coordination with HQ 38 EIW/OL-A, 755 CG/GLCW, and HQ AFC4A/TNSB, conducted a CFEP Load Study which was completed Sept. 6, 1994.

As a result of the study, the Unisys 2200/400 processors were upgraded in December 1994. What does this mean to those of us who rely on CFEP? It means CFEP processing power and memory of each processor was doubled. This provided relief from the near 100 percent processor utilization.

The average CPU usage now ranges from 34-36 percent, while average memory usage is between 71 and 73 percent. During peak periods, CPU usage has been at a maximum 74 percent for a 10-minute period.

Results like this come from teamwork. From the Air Force Command, Control, Communications and Computers Agency (AFC4A) engineers who interpreted the load study results to the AFGWC personnel who actually moved equipment—everyone involved in the upgrade process should be commended.

An integral part of the weather team is the group of software programmers assigned to Operating Location-A at Offutt AFB, Neb.

The programmers who develop and maintain the applications software are highly technically minded and knowledgeable of the very unique system and software. Normally, knowledge at their level would require several man-years and hundreds of thousands of dollars for training.

As Standard Systems Manager for CFEP, the program managers provide support with their extensive knowledge of the system and weather communications. Expertise in this area provides historical background to ensure productive and efficient maintenance and management of the system.

Thanks to all of them, the CFEP is continuing to provide weather product customers with timely and accurate data.

Well done, weather community team!

SALUTES, from page 11

HQ ACC/DO CIVILIAN OF THE QUARTER (2FY95) -- **James M. Risher**, ACC AOS/AOW, Langley AFB, Va.
77th AIR BASE WING SENIOR NCO OF THE QUARTER -- **MSgt. Rick A. Suggs**, 77th OSS/OSW, McClellan AFB, Calif.
AIR FORCE MATERIEL COMAND DODSON AWARD -- **SrA. Jeffrey D. Godemann**, 77th OSS/OSW, McClellan AFB, Calif.
AIR FORCE MATERIEL COMMAND BUD LONG AWARD -- **Edward Keppel**, 46th WF, Eglin AFB, Fla.
AFMC WEATHER NCO OF THE YEAR -- **SSgt. John R. Michael**, 46th WF, Eglin AFB, Fla.
AFMC WEATHER AIRMAN OF THE YEAR -- **SrA. Alyson R. Mortier**, 46th WF, Eglin AFB, Fla.
U.S. AIR FORCE IN EUROPE GRIMES AWARD -- **HQ 617th WS**, Heidelberg, Germany
CGO OF THE QUARTER, 617th WS & 617th ASOG -- **Capt. Thomas J. Goulter, Jr.**, A Flt., 617th WS, Heidelberg, Germany
SENIOR NCO OF THE QUARTER, 617th WS & 617th ASOG -- **MSgt. David A. Taylor**, Det. 6, 617th WS, Wiesbaden, Germany
NCO OF THE QUARTER, 617th WS & 617th ASOG -- **TSgt. Irving A. Taylor**, Det. 4, Traben-Trarbach, Germany
AIRMAN OF THE QUARTER, 617th WS -- **SrA. Debra F. Parris**, Det. 8, 617th WS, Sandhofen, Germany
334th TRS/WTF, KEESLER AFB, MISS., QUARTERLY AWARDS
MSgt. Terrence M. Young, Senior NCO of the Quarter
TSgt. Richard W. Butler, Senior Enlisted Instructor of the Quarter
Capt. Michael J. Miglioranzi, Officer of the Quarter
Capt. James D. Dykes, Officer Instructor Supervisor of the Quarter
Martin D. Lester, Civilian Instructor of the Quarter
MSgt. Jeffrey L. Jablonski, Enlisted Instructor Supervisor of the Quarter
21st OPERATIONS GROUP/AIR FORCE SPACE COMMAND NCO OF THE QUARTER
SSgt. Jeff Marshall, 21st OSS/OSW, Peterson AFB, Colo.
AIR FORCE SPACE COMMAND WEATHER AIRMAN OF THE YEAR
SrA. Paul Lucas, 21st OSS/OSW, Peterson AFB, Colo.
AIR FORCE SPACE COMMAND BEST WEATHER STATION
21st OSS/OSW, Peterson AFB, Colo. (third consecutive year)

OBSERVATIONS

45th Weather Squadron Hosts Radar Workshop

by Capt. Dave Biggar
45th WS, Patrick AFB, Fla.

The 45th Weather Squadron and the National Weather Service (NWS) office in Melbourne, Fla., recently sponsored the first-ever regional Doppler Weather Radar workshop at Patrick AFB, Fla. The workshop brought together representatives from 26 military, government, civilian and academic organizations.

Twelve of the organizations represented were military, including seven Air Force weather units (two Army support), the Air Force weather training unit at Keesler AFB, Miss., Headquarters Air Weather Service, and three Navy units. The 12 government civilian offices included representatives from six Weather Forecast Offices, the National Hurricane Center, the Spaceflight Meteorology Group from Houston, the NWS Operational Support Facility, the NWS Southern Region Headquarters, NASA and the Kennedy Space Center. The group was rounded out with representatives from the Applied Meteorological Unit at Cape Canaveral Air Station and the Florida State University Department of Meteorology.

The workshop had three major goals. The first was to open a dialogue between the military and civilian operational meteorology communities in the Southeastern United States to share general experiences and specific problems in applying the WSR-88D radar to our unique environment. This goal was achieved through brief seminars on topics such as tropical storm rainfall verification, Meso Identification during tropical storms, WSR-88D waterspout identification, evaluating Vertically Integrated Liquid as a severe weather signature, and problems with chaff and the WSR-88D.

The second goal was to open a dialogue between the Southeastern operational community and the WSR-88D Operational Support Facility (OSF). This was to share operational experiences, and to learn how to identify regional requirements to the OSF to improve operational weather support through algorithmic improvements for the Southeastern U.S.

The final goal of the workshop was to "take the lead" and set an example for other regional WSR-88D workshop. Through interaction between the user and OSF community, WSR-88D technology can be improved continuously. Other regional workshops can keep the WSR-88D algorithm improvement process focused on the needs of the operational weather community.

Forecasters Support SAFE BORDER In South America

by 1st Lt. Michael Petrocco
24th Weather Squadron
Howard AFB, Panama

Two members of the 24th Weather Squadron Cadre Weather Team recently deployed to a remote location in South America to support Operation SAFE BORDER. SSgt. Jim Vinson and SrA. Sean Rafferty left Howard AFB, Panama, in March to support the Military Observer Mission to Ecuador and Peru (MOMEP).

Located in Patuca, Ecuador, at the base of the Andes Mountains, the weather team's challenge was to forecast the rapidly changing weather conditions in the area and support the aviation mission there.

Deploying on a moment's notice, Vinson and Rafferty brought an arsenal of weather equipment with them. Equipped with a Socretes/Metoc terminal, Harris 1000 Fly-Away satellite receiver, a deployable Remote Weather Distribution System, and a host of other "extras", the team quickly set up a miniature weather station. Within hours of their arrival, they were able to provide forecasts and observations for the aviators and Joint Task Force staff.

While enduring intense tropical heat and torrential rainstorms, the Howard team strove for ways of improving their forecasts and observations. By implementing a FALOP program, they were able to train the pilots and observers about reporting limited observations from the disputed areas. These limited observations helped Vinson and Rafferty establish weather trends for future forecasts in the remote regions.

In addition to supporting the MOMEP mission, the team also provided real-time weather data to the 24th WS in Panama. This data aids the Panama forecasters when they brief C-27 cargo pilots flying into and out of the isolated airfield. This data is also used in preparing the daily South America Bulletin produced by the 24th WS.

The deployed weather team has provided an invaluable service to the MOMEP mission and the mission of the 24th WS. Their ability to provide on-the-spot weather data has saved many missions and many man-hours.

FROM THE FIELD

50th WS changes command

Lt. Col. Christopher R. Tschan recently took command of the 50th Weather Squadron, Falcon AFB, Colo., replacing Lt. Col. Norman E. Buss, who has retired from active duty.

The ceremony took place at the Falcon AFB Community Activity Center April 25, 1995, and was officiated by Col. Rodney P. Liesveld, 50th Space Wing vice commander and 50th Operations Group commander.

Colonel Tschan's last assignment was as executive officer to both the Director and Vice Director of Operations of U.S. Space Command, Peterson AFB, Colo.

Commissioned through Officer's Training School in 1978, Colonel Tschan has served as a wing weather officer, meteorological satellite coordinator, chief of the space physics division at Headquarters Air Weather Service, weather detachment commander, operations support squadron operations officer and interim commander, Space Surveillance Center crew commander, and space control director.

The colonel has a master of science degree in meteorology and a Ph.D. in atmospheric science.

The 50th WS was activated June 1989 as Det. 7, 4th Weather Wing (also known as the Space Forecast Center), falling under the auspices of Air Weather Service. In October 1991, the unit was redesignated the Air Force Space Forecast Center. In October 1994, the unit was transitioned from AWS to Air Force Space Command. With that assignment to the 50th Space Wing, the unit became the 50th Weather Squadron.

The 50th WS' mission is to observe the sun at its six solar observatories and provide assessments of conditions in the near-Earth space environment in support of the many Department of Defense space, surveillance, and communications systems. Users include elements of both Air Force Space Command and U.S. Space Command.

The 50th WS issues alerts, warnings, and forecasts to military space organizations, and shares information with the National Oceanic and Atmospheric Administration (NOAA), which alerts civilian users, including NASA.

Fairchild WX Station Fooling With Mother Nature

They say that only Mother Nature controls the weather, but at Fairchild AFB, Wash., that is not always the case. Fairchild AFB, located in the interior of Washington state, has the distinction of being the only U.S. Air Force base with its own operational weather modification system, called the Cold Fog Dispersal System (CFDS).

Climatologically speaking, Fairchild suffers from some of the poorest wintertime flying conditions found in the continental United States. This is caused by a phenomena known as "cold fog".

By definition, this is a fog which occurs when the temperature if less than 32 degrees Fahrenheit. Cold fog is composed primarily of supercooled water droplets and occurs frequently in areas west of the Rockies where high pressure systems dominate during the winter. Warm air overruns and traps cold air on the ground, resulting in stagnant conditions. Snow cover, although not a necessary ingredient in cold fog development, assists in keeping temperatures low, and serves, through sublimation, as a large moisture source.

The cold fog dispersal system is made up of 23 sites which ring the base in an arc extending from north through Southwest. Each site is composed of a 500-gallon tank containing unscented propane, a 25-foot dispersal mast, radio-to-control valve operations, and possibly an anemometer. From the weather station, all sites can be operated or interrogated for information.

The CFDS works by increasing the condensation nuclei in the air. Since liquid water will spontaneously freeze at - 40 degrees Celsius and propane vents at - 43 degrees C., all the supercooled water in the vicinity of the nozzle are instantly frozen into ice crystals. These ice crystals are, in turn, carried downwind from the site, colliding and coalescing with other supercooled droplets and ice crystals. Eventually these crystals grow large enough to precipitate out (hence the nickname "Snog" for snow from fog), creating an area over the airfield above landing and takeoff minimums.

"It's an impressive thing to see when we start the CFDS up," said SrA. Kelly Vasko, the system's maintenance person at the 92nd OSS/OSW. "With the winds blowing in the right direction and good timing, we can take a fog that has a 1/16 of a mile visibility and clear a hole big enough for a visibility of one mile, with a ceiling of 12,000 feet, in about 45 minutes."

There is a specific operational envelope for CFDS operations to be effective. When they are met, the system is a highly effective tool in controlling cold fog conditions.

See OBSERVATIONS, continued on Page 23

OBTW

"Oh, By The Way"

What Level is That MSL or ARL?

Have you ever thought about the heights the WSR-88D gives you? Specifically, is it AGL, ARL, or MSL?

First of all, what the heck is ARL? ARL means "Above Radar Level". The radar will give NOTHING in AGL, everything is either MSL or ARL. If the elevation of the radar is significantly different than your elevation, it could be very important!

- 1. All products derived from the storm algorithm, (dBZM HGT, MESO, STM TOP...), are in **ARL**, this includes everything in the attribute table.
- 2. The Cross Sections (Ref, Vel, SW) are in **ARL**.
- 3. The SRR and SWA products will give their center point in **ARL**.
- 4. The cursor readout height is in **MSL**.
- 5. The VWP is in MSL, (note if the RDA elevation is above 1,000 **MSL**, you do NOT have to start at 1,000 feet, you can start at 2, 3, 4... with URC approval).
- 6. The WER product will give the height of each plane in **MSL**.
- 7. Echo Top product is **MSL**.
- 8. The LRM and LRA products are in **MSL**, (this could make these products less useful for stations above 3,000).
- 9. And the ever-popular Combined Moment is in MSL.

-- submitted by TSgt. Mike McAleenan, HQ AWS/XOT, DSN 576-721, ext. 227; e-mail: "mcaleenm@hqaws.safb.af.mil"

What's the Gust Potential?

Ever tried to determine how much gust will you receive from a thunderstorm? There are several rules-of-thumb, (such as 10 Kt for every 10,000 feet), but none are very reliable. We hope that will change with the advent of the WSR-88D and the use of the matrix shown below. Use it and see how it does and let me know what you think.

(Taken from ERTA 94-7B, written by Mark Frazier).

Wind Gust Potential Matrix

	VIL											
	15	20	25	30	35	40	45	50	55	60	65	70
E 60								10	16	23	29	34
C 55							12	21	27	32	36	40
H 50					9	16	24	30	34	38	42	45
O 45				10	20	26	31	36	40	43	46	49
40		9	15	21	27	32	36	40	43	47	50	53
T 35	13	18	23	27	32	36	41	43	47	50	53	56
O 30	18	23	28	32	36	40	43	47	49	53	56	58
P 25	23	28	32	36	41	44	47	49	52	55	57	59
S 20	26	31	36	40	44	48	50	52	55	56	59	60
15	29	34	38	43	47	50	53	55	56	58	61	61

Wind Gust Potential (WGP), in knots (KT). Vertically Intergrated Liquid (VIL) is in units of kg/m2, Echo Top (ET) is in thousands of feet.

This "Wind Gust Potential" is only one third of the equation used to calculate surface gust you must also figure in the storm motion and the environmental flow.

That formula is: WGP + Storm speed (+/-) environmental flow = actual gust felt on the surface.

To get the environmental flow, look at the SFC-5,000 mean speed. This can add to or take away from the gust.

This is an example: ET is 40,000 feet, VIL is 40, so WGP = 32KT.

A storm is moving from 250 degrees at 25KT and is moving directly toward the station. The mean SFC-5,000 speed is from 070 degrees at 15KT.

Using the formula: 32(WGP) + 25(stm speed) = max gust of 57KT - 15(SFC-050) = probable gust of 42kts

-- Send comments to TSgt Mike McAleenan, DSN 576-4721, ext. 227, HQ AWS/XOTS; e-mail: "mcaleenm@hqaws.safb.af.mil"

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The system has been credited with saving the Air Force well over $1 million during the ast four winters in averted takeoff delays and cancellations and saved recoveries.

"When Fairchild was a Strategic Air Command base, the system was used more often because of the training requirements of the aircrews," Vasko said. "We would see about 10-15 activations per season. Now, as an AMC base, these crews get more training, so it's not used on a more routine basis. We activated the system three times last winter, usually because of a higher headquarters tasking."

Once operational parameters are met, and with wing approval, any forecaster or observer in the weather station can activate the system and, at least temporarily, create a little microscale weather.

Vasko, known as "Mr. Cold Fog" because of his expertise with the CFDS, is on call 24 hours a day during the entire fog system. Because of his vigilance, the system has enjoyed a near-perfect operational readiness rate.

New E-mail addresses at HQ AWS

New servers were recently installed at Headquarters Air Weather Service, Scott AFB, Ill. This has affected people who have attempted to correspond with the headquarters via electronic mail.

The change involves the name of the person being contacted. In the past, the first part of the address consisted of the person's last name. In the new system, use the FIRST SEVEN LETTERS of the person's last name, PLUS the FIRST INITIAL OF THEIR FIRST NAME.

For example, to contact the editor of the OBSERVER, SSgt. Steve Elliott, address e-mail to:

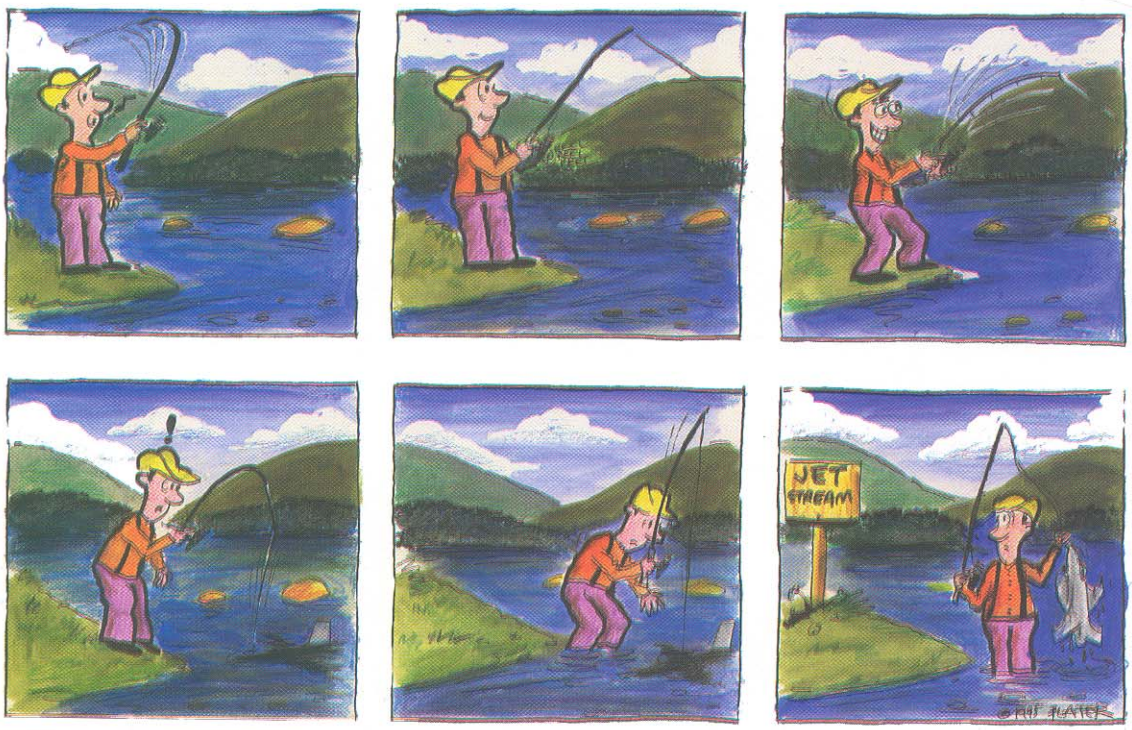
"elliotts@hqaws.safb.af.mil"

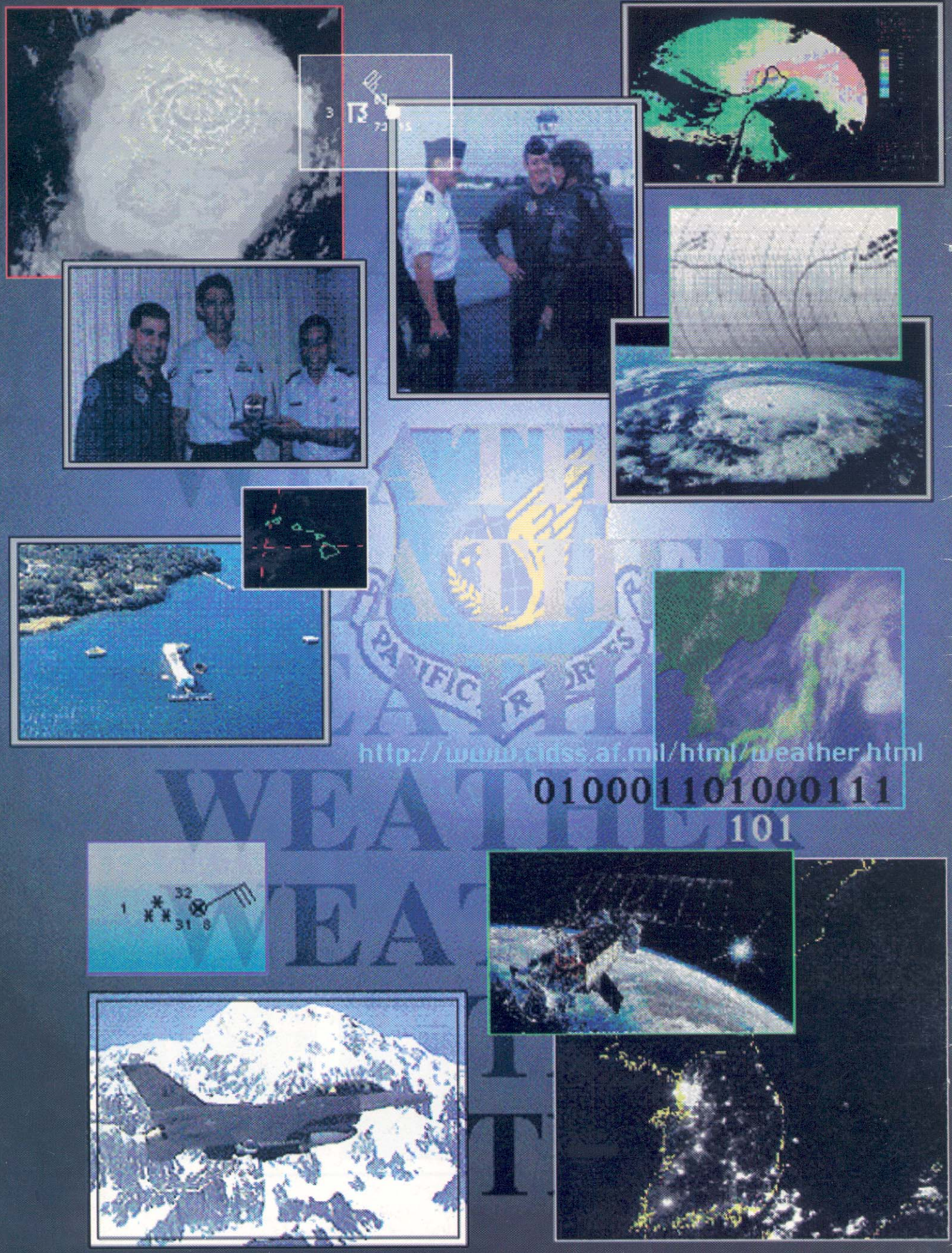
Got a hot tip on how to do something smarter, easier, faster? Why not share it with the rest of your weather bretheren?

Send your submission to the Air Weather Service Public Affairs Office. We'll check it out with our technical folks, and if it looks good, it'll get published in a future OBSERVER, with a credit to you. The AWS/PA address is on page 2.

Weather Weenies

by SrA. Steve Plater

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