



*The Magazine for Air Force Weather*  
**OBSERVER**

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***Air National Guard  
Air Force Reserve  
Weather Warriors***

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Air Weather Service

### OBSERVER

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# Air Force Weather

## Standardizing The Global System

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

Traveling around the Air Force, I have the opportunity to see many weather people in action.

From the cadre-level of Army operations to centralized operations at Air Force Global Weather Central (AFGWC), I've experienced a positive "can-do" attitude. Everywhere I look, I'm reminded that weather is a "real-time global system" and that standardization is the glue that holds the system together.

However, I've found the Air Force Weather (AFW) standardization glue is decaying, and now is the time to fix it. You may have heard that Air Weather Service (AWS) is getting into the standardization and evaluation business—this is true. You may also be thinking that the old AWS IG is back — this is *not* true. I'd like to take a few minutes to give you the facts and tell you how we got to this point.

The very fact that weather is global in nature makes our business different from other functions on your base or post. However, as the Air Force restructured,

AFW lost some of our global perspective. As we focused on operations at home station, we forgot some of the standard things we used to do that held the global system together. In the long run, this loss of standardization diminished our contribution to the combat capability of the Air Force and Army.

Let me give you some examples of what I mean. Weather people at all levels are developing mission-unique solutions to global problems. I applaud their initiatives; they picked up the ball and ran with it, but

will their local fix be interoperable with the global system? Would a forecaster deployed from a different theater be equipped and trained to use this locally developed system?

Without a global focus, we have found interoperability among the theaters, and even within some theaters, is breaking down. The key is to have a global system in place to make it work.

Let me give you specific examples. In at least one base weather station, the terminal aerodrome forecast (TAF) was being eliminated

and in another weather station the Pilot-to-METRO service radio was being removed. Isolated examples — and I stress *isolated* — but both have their roots in the same problem: local operations are taking precedence over global interoperability. The local flying unit may not need a TAF, but an aircrew flying into that base needs to know what's going on there. Without a TAF, how do they get a forecast?

I believe both the local and global missions are important. To help us regroup as a global weather community, I took a briefing to Air Force Chief of Staff Gen. Ronald Fogleman;

part of the briefing outlined what we need to bring standardization back to AFW. This briefing, "Weather Horizons," proposed the establishment of a standardization/evaluation function at AWS as the cornerstone of the effort.

In addition to the stan/eval function, General Fogleman and CORONA Top 95 approved the formation of a communications function (SC) at AWS, and directed AF/XOW be involved with the MAJCOMs disposition/changes of weather manpower billets. You'll hear more about these initia-



**"I look forward to working with every one of you in continuing AFW's tradition as the most capable warfighting weather service in the world."**

tives in upcoming issues, but for now I'd like to tell you what the stan/eval function will *really* do for AFW.

AWS is working with the MAJCOMs in a team effort to develop standardized procedures and checklists of functions which must be done by all units in order to preserve the "global" system. Along with the procedures and checklist, this team is aggressively working to reinstitute pertinent written guidance to help you function more effectively in the "global system."

Once the publications are completed, a team from AWS, augmented by MAJCOM experts, will visit each unit to determine if they are in compliance with published standards and to evaluate their technical health.

The visit is *not* an IG inspection and the team should not be viewed as the "BLACK HATS." On the *contrary*, these are "WHITE HAT" visits. The purpose is to help the local warfighters, the Operations Group, evaluate the technical health of their weather unit and provide assistance where necessary. It will also serve to increase awareness for the local boss on what the "global system" needs to function properly. We believe very strongly that this program will help bring us back to a standardized "global" system. The first visit is scheduled for this month at Ellsworth AFB, S.D. The results will be crossed to give you a better feel for what the team is doing.

This is a very exciting time to be in Air Force Weather. General Fogleman and the MAJCOM four-stars have given us the latitude to make a necessary mid-course correction, and we need to grab this opportunity and go for it. I look forward to working with every one of you in continuing AFW's tradition as the *most capable warfighting weather service* in the world.

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





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

*"The spirit of cooperation may have suffered during the last few years. It may be that in the dog-eat-dog business of striving to get ahead, we have lost sight of its value. Yet, it has always been and always will be an important principle of war, and air operations have emphasized rather than diminished its importance."*



Col. William S. Barney, who retired in 1967 as AWS Vice Commander, wrote these words in March 1955 in a paper he called Leadership: A Treatise for AWS Commanders. It was circulated throughout the weather community by Brig. Gen. Thomas Moorman, then AWS Commander, as required reading for every detachment commander. The message is as fresh and important to Air Force Weather (AFW) now as it was 40 years ago. Colonel Barney was speaking about teamwork.

My office dictionary defines teamwork as a "cooperative or coordinated effort by a group of persons acting together as a team or for a common cause." To me, that describes what AFW is all about.

Since coming to this job a few months ago, I've been tremendously impressed by the scope of programs and projects being worked by the AWS staff to make AFW a more capable force for the warfighter. They encompass everything from back-to-basics training initiatives to modifications and upgrades to equipment already in the field to contractual decisions on weather systems just coming into production.

In addition, the AWS staff have tackled numerous new and evolving issues like STANEVAL, functional area plans for the next 25 years, current and future space environmental systems, and, of course, AWDS software and hardware upgrade projects. New ideas, new hardware and soft-

ware capabilities, and new budget and resource realities arrive in a constant stream.

On top of that, we are all taking a new look at concepts of operations for every aspect of our business, from tactical support to how we train, assign, and organize our people. I am very proud of the way the AWS staff steps up to every new challenge with energy, enthusiasm, dedication, and a focus for what's best for AFW. I'm not certain, however, that everyone in AFW is working from the same page in the

playbook.

Recent events tell me there is still a residue of misunderstanding about the AWS role. We can debate the wisdom of fielding standard weather systems or ensuring standardization of weather procedures if you wish, but that is precisely the AWS mission. We don't execute our mission in a vacuum. Instead, the AWS staff

go to extraordinary lengths to work with all MAJCOMs and obtain their buy in and agreement.

After all, MAJCOMs and their base and post weather stations will have to use these systems and procedures to execute their missions. However, once all views have been considered and program directions are defined, we figure it is time to salute smartly and get on with the job.

Teamwork is a two way process. Remember the lesson on communications from PME? The one about effective communications depending on both speaker and listener?

In this context, I mean that success for AFW is not just the responsibility

of the AWS staff to field faster hardware or more user-friendly software or better technical training guidance or better products from the centers.

No, success for AFW also depends on the team in base and post weather stations ready, willing, and able to step up to their responsibilities, too ... Ready to do their part by vigorously training to use the systems we have, while working to make them better ... Willing to invest the time and energy it takes to truly understand customer environmental needs, understand where weather intelligence can make an impact, and willing to work to make weather services a value-added capability ... Able to put the good of the customer's requirements above self interest ... Able to try to understand the bigger picture, and able to stand up proudly as a member of the total Air Force team.

That's hard work and it can't be done by sitting in the weather station

or tactical field site waiting for the customer to come to you.

There's something else, too.

Success for AFW also depends on people who understand it is their responsibility to have some degree of confidence in and loyalty to their comrades and teammates at other locations. If we're to develop effective teamwork for the benefit of the AFW system, shared responsibility, loyalty, and mutual confidence are essential.

Brig. Gen. Al Kaehn, AWS commander from 1978-82, used to close his articles with the phrase: "Keep pitching!" I think there's more to it than that. Yes, we need to "keep pitching" with energy, resolve, and pride. But we also need to hit the target. We do so when we emphasize team above self. Think about it.

# Teamwork

## It's a two-way street

**"If we're to develop effective teamwork for the benefit of the AFW system, shared responsibility, loyalty, and mutual confidence are essential."**



# Schoolhouse changes

## Splits back into two separate courses

by CMSgt. Jim Hoy  
Superintendent of Weather

Things change. That's a prelude to: if you haven't heard, the revised initial skills course (the "single schoolhouse") is being revised!

Air Force Director of Weather Brig. Gen. Thomas J. Lennon, in his "Perspectives from the Top" article this month (see page 3), discussed several issues of critical importance to Air Force weather and the Air Force leadership.

One issue, which was discussed at a July 1995 meeting of the major command directors of weather, was the enlisted schoolhouse.

After considerable deliberation, with discussions ranging from our ability to sustain the enlisted weather career field, to the appropriateness of having airmen in a 40-plus week school with 12-hour school days, we unanimously decided to split the course.

So, what's the new initial skills course going to look like?

If you'll pull out the June 1995 issue of the *OBSERVER*, you'll note that the first 13 weeks of the single schoolhouse included meteorology and analysis.

We intend to keep that 13 weeks just about as is. We'll add training in weather station operations and combat skills that would have occurred at the end of the 40-plus week school. Total time in the first school will be approximately 17 weeks.

The second course will contain the remainder of the material with some additional weather station operations and last about 25 weeks.



The single schoolhouse was built around a philosophy of efficiency of operations in a weather station; that is, generally, that weather stations have a team on duty, an observer and forecaster.

The way we have trained our force, the observer is trained in one skill and the forecaster is trained in that one plus another.

The single schoolhouse provided potential for each weather station to enhance the observers tasks to include operations other than observing, building a work force in the weather station where each person was capable of backing the other team members in critical situations.

That philosophy is not changed in the new concept.

**"Our business is observing and forecasting. Every action ... should be grounded in improving our ability to do our job."**

That philosophy is not changed in the new concept. quote Maj. Thomas Strange (the Keesler weather training flight commander) in the June 1995 *OBSERVER* article, *Air Education and Training Command*. "We're trying to get away from the idea of the weather observer and forecaster in favor of a weather apprentice."

The idea of a single career ladder where each skill level is an extension of the lower skill level is the foundation of any specialty. For a variety of reasons, today we have requirements for 600 observers and 1,800 forecasters. It is difficult to maintain an enlisted spe-



cialty where such a structure exists. We are reviewing our options.

But changing the schoolhouse is only a portion of the task to ensure that we have the right people with the right training.

Our business is observing and forecasting. Every action — whether training, acquisition of people or equipment, a procedure, or a program — should be grounded in improving our ability to do our job.

While the single schoolhouse provided several advantages, few people believed that it would provide opportunities to improve over the way we were training.

For instance, did you know that every observer that graduated since 1989 was taught to analyze weather charts to the "2b" level? Do most weather stations incorporate that training into their operations? The better question might be, do most weather stations routinely use hand-analyzed maps in their operations? The answers to all three questions are probably, no.

The point is, we must review operations and training together to get to the goal — improvement in forecasting and observing. Tied closely to both of those is career progression and we're going to work all three together so that we are better prepared to improve Air Force Weather.

As you think about these issues, contact you MAJCOM director of weather staff and pass along your ideas.

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



# Rocky Mountain Weather Conference

by SSgt. Steve Elliott  
Air Weather Service Public Affairs

The first-ever regional weather conference, held July 26-27 at the U.S. Air Force Academy, Colo., turned out to be a real success story for Air Weather Service.

Developed and executed by the Directorate of Technology, Plans and Programs' Field Support Branch, the conference brought together military and civilian weather people from throughout the Rocky Mountain region in an atmosphere of camaraderie and learning.

The conference was unique in that it crossed the boundaries of major commands, and instead focused on that unique climatological area in the U.S. It was also unique in that civilian meteorologists from the National Weather Service also attended and presented topics during the two-day conference, hosted by USAFA's Dean of the Faculty Department.

Military meteorologists from Minot AFB, N.D.; Ellsworth AFB, S.D.; Ft. Warren AFB, Wyo.; Peterson AFB, Colo.; USAFA, Colo.; Ft. Carson, Colo.; and Air Force Space Command joined civilians from the National Weather Service

offices at Denver and Pueblo in Colorado, Great Falls, Mont.; Alliance, Neb., and Cheyenne, Wyo., in learning more about the unique forecasting problems found in the Rocky Mountain region.

"We had everyone introduce themselves at the beginning of the conference and describe their toughest and easiest forecasting elements at their locations," said TSgt. Arlen Lewis, one of the conference organizers from HQAWS/XOT. "This helped break the ice between people when they saw that other base weather stations experience some of the same problems they had."

"When Air Weather Service was restructured several years ago, weather stations which were geographically close to each other stopped talking to each other because they usually belonged to different major commands," said TSgt. Mike McAleenan. "This conference was intended to change people's attitudes about working with weather people from other bases."



Doug Wesley, science and operations officer for NWS-Cheyenne, gives a presentation during the conference.

Most conference attendees were lower-to middle-enlisted and officers, who are the people most likely to be at the weather counter in a base shop.

"It's easier to talk to another senior airman, tech sergeant, or lieutenant about your forecasting problems than a bunch of chiefs or colonels," Lewis said. "It's also easier for these people here to spread the word when they return to their bases."

The feedback from the attendees was that this was a great thing for Air Weather Service to do.

"I really found this conference informative," said SrA. Barb Corsello, from Minot AFB, N.D. "It's a relief to find out other people have the same forecast problems and frustrations that you do. You don't realize that when you're in your own little bubble back at your base.

"I learned some new upscale forecasting techniques, which I can use back at Minot on a smaller scale," Corsello said. "I also told the conference about our network of weather spotters throughout the area. We train these volunteers in basic observing and they call us when they see any unusual weather patterns developing. In a sparsely populated state like North Dakota, these extra sets of eyes are invaluable to us."

The NWS folks found the conference an enlightening experience as well.



Brent Wilson (standing) conducts a COMET focus group.



"We're learning more about forecasting techniques here, too," said Paul Wolyn, science and operations officer for the Pueblo NWS office. "This is a good forum for the military and civilian meteorologists."

McAleenan and Lewis found out later that there was a great deal of the crossfeed between shops even after the day was over.

"I saw lots of little informal groups getting together during the breaks to talk, and exchange addresses and phone numbers of their weather stations," McAleenan said. "We're really pleased to see this kind of interaction."

"It's also refreshing for us, from Air Weather Service, to be shown in a new light," Lewis added. "Usually, the only time these people see us is when they are visited with a MES (Meteorological Enhancement Seminar). This conference is a non-threatening, easy way to exchange ideas and make contacts which can help even after the seminar is over."

What surprised some attendees was that, even though one forecaster could be at F.E. Warren, with an Air Force Space Command mission, they have the same challenges another weather person at Ellsworth, which belongs to Air Combat Command and supports the B-2 bomber.

"This was an excellent thing to happen," said TSgt. Dennis Kwilinski, from F.E. Warren. "I've found that methods at one station can be valuable at another."

Another attendee thought the interaction between the military weather people

and the National Weather Service people was valuable.

"If we can exchange forecasting techniques between the Air Force and the NWS, then everybody benefits," said Maj. John Schattel, from the AFSPC Directorate of Weather at Peterson. "Cooperation can only enhance our efforts."

Since the publication of this article, several other conferences have taken place for the Great Plains and Southwestern regions. The Great Plains conference

was Aug. 2-3 at Air Weather Service, Scott AFB, Ill., while the first Southwest regional conference was Aug. 10-11, at McClellan AFB, Calif.

The upcoming schedule of conferences (with points of contact):

Southern Plains Region, Sept. 12-13 at Randolph AFB, Texas (TSgt. Bill Dennis, DSN 576-4721, ext. 503)

Southwest Region #2, Sept. 13-14 at Nellis AFB, Nev. (TSgt. Arlen Lewis, DSN 576-4721, ext. 418)

Gulf Coast Region, Oct. 3-4 at Eglin AFB, Fla. (MSgt. Mike Minard, DSN 576-4721, ext. 502)



All photos by SSgt. Steve Elliott

SrA. (SSgt.-select) Barb Corsello, a forecaster from Minot AFB, N.D., talks about beam blockage.

Alaskan Region, Oct. 4-5, Elmendorf AFB, Alaska (TSgt. Mike McAleenan, DSN 576-4721, ext. 227)

Atlantic Region, (tentative) Oct. 31-Nov. 1, at a site to be determined. (TSgt. Doug Rishel, DSN 576-4721, ext. 242)

(The primary point of contact for all weather conferences is SMSgt. Phil Abel at DSN 576-4721, ext. 239.)

At future conferences, XOT plans to include attendees from the Navy and university programs, as well. There will also be representatives from the Combat Weather Facility, Air Force Global Weather Central and the Air Force Combat Climatology Center giving presentations.

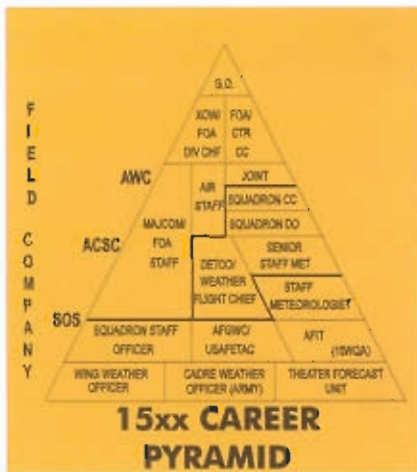
"Overall, it went off even better than expected," Lewis said after returning to Scott AFB. "We're hoping this will become an annual event."

The NWS rep from Pueblo summed up the conference and the experience: "After all, we're both trying to do the same thing — provide the best observations and forecasts possible to our customers."



SSgt. June Holley and TSgt. Jeff Marshall, from Peterson AFB, describe upslope in the Colorado Springs area.





# Taking the right direction

## The essential ingredients for your success

gives you a great deal of freedom to plan your future, but also carries the responsibility to balance your personal desires with Air Force needs.

When planning your future, you should remember that future Air Force leaders will be those officers who demonstrate breadth and depth of experience, show an ability to perform in high-level staff jobs (including joint positions), and prove their ability to lead.

These three components of leadership should be used as your guide when making career choices. Your development as a leader begins now, and the decisions you make and why you make them greatly impact your future.

What does this mean to you? The first step in any successful career is a definition of goals. Many officers fail to set clear-cut goals; yet goals are an essential element to achieving success.

First consider: "What do I want to do both professionally and personally?" You are the only one who knows your goals—neither I nor the Air Force Military Personnel Center (AFMPC) can code them into a computer. You can keep your goals to yourself or discuss them with your commander/supervisor during career counseling — it's your choice. Your commander/supervisor is available to guide and counsel you, but ultimately you must make the decisions.

Regardless of your decisions, remember to properly develop and balance three components (technical expertise, staff experience, leadership skills) if you want to be a future leader.

Next and most important, is solid

performance. This is often forgotten, although it's the real key to success.

No matter where you are or what you're assigned to do, "Bloom where you are planted" (e.g., work your current job — not the next one). That's not to say you shouldn't worry about your future, but you must do the best you can with your current assignment—volunteer for additional duties/responsibilities, be active in unit activities, exercises, deployments, community activities, professional organizations, seek supervisory/staff experience, and pursue military job training/PME/education opportunities.

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 insights to help guide you in your Air Force career.

I'm not suggesting that all weather officers should strive to be the next Air Force Director of Weather, or that there is only one path to get there.

However, a successful AFW career normally includes a strong technical base, solid staff experience, and challenging leadership positions.

Whatever your goals may be, the often used phrase holds true: "How well you do in your current job is the most important factor in determining your future success."

by Maj. John Murphy  
Air Weather Service  
Chief of Personnel

As most of you probably already know, Capt. Tim Hutchison has left for the great personnel puzzle palace, better known as the Air Force Military Personnel Center. Since I'm new at this job, let me take a few moments to tell you about my background.

I'm a 13-year career weather officer. My first assignment was at Air Force Global Weather Central, Offutt AFB, Neb., followed by a remote tour with Ground Launched Cruise Missiles at Comiso AS, Italy.

After receiving my advanced degree through Penn State (*Go Nittany Lions!*), I spent the next five years at Langley AFB, Va., as a scientific services officer, detachment commander and squadron operations officer. Since coming to Air Weather Service in 1993, I've been a supervisor of weather systems acquisitions.

Now I'll pick up where Captain Hutchison left off and look at the many opportunities available to you — the weather officers. I'll try to cut through the fog to provide you with the essential information you need — information you can use to understand and actively participate in the Officer Assignment System.

The voluntary assignment system

Is there a topic you want covered here? Contact Maj. John Murphy at DSN 576-4895, ext. 344 or by electronic mail: "murphyj@hqaws.safb.af.mil"



# Quality in Action

## AWS Strategic Plan reaches beyond the FOA



by Earl P. Wilsing  
Air Weather Service  
Quality Advisor

The Air Weather Service (AWS) Quality Council recently finished writing the AWS strategic plan. It describes a clear and concise roadmap to improve future operations and activities.

Now, you folks out in the field and at the base or post may think the only beneficiary of this important endeavor is the AWS Field Operating Agency.

Not true! The Strategic Plan with its goals and objectives was written to benefit all of Air Force Weather. Customer support is the cornerstone of the AWS quality effort and Air Force Weather is our customer!

The Strategic Plan is organized within the framework of the five AWS mission areas and a sixth area that addresses personnel resources.

It contains 18 goals with 34 specific, measurable objectives (not included) that are to be achieved within one to two years and aid in meeting the goals which are longer-term.

These are the five AWS mission areas, the personnel resources area, and the Strategic Plan goals:

### Mission Area 1 - Plan For and Provide Standard Weather Systems

- 1-1) GOAL: Improve the AWS portion of the USAF acquisition process.
- 1-2) GOAL: Work with AFMC and MAJCOMs to improve hardware/software maintenance strategies.
- 1-3) GOAL: Improve AWS

acquisition management process.

- 1-4) GOAL: Streamline processes in HQ AWS to eliminate fragmented management.

### Mission Area 2 - Plan For and Provide Centralized Weather Products

- 2-1) GOAL: Build partnerships to enhance product quality and reduce AF costs.
- 2-2) GOAL: Simplify/modernize external/internal center architectures.
- 2-3) GOAL: Advance data concepts towards DoD Corporate Information Management (CIM) objectives.
- 2-4) GOAL: Advance communication concepts toward robust adaptable and interoperable systems.
- 2-5) GOAL: Develop quicker and better technology insertion process.
- 2-6) GOAL: Streamline the AWDS data flow process.

### Mission Area 3 - Provide Technical Advice and Help

- 3-1) GOAL: Provide low cost, responsive suite of in-garrison and combat-related weather assistance to USAF/USA.

### Mission Area 4 - Ensure Standardization of Procedures & Interoperability

- ◆ 4-1) GOAL: Improve/Reverse the decline of standardization.
- ◆ 4-2) GOAL: Blossom Combat Weather Facility (CWF).
- ◆ 4-3) GOAL: Refine lead command responsibility.
- ◆ 4-4) GOAL: Fix space

weather training.

### Mission Area 5 - Assess the Technical Performance and Effectiveness

- 5-1) GOAL: Establish coherent methodology for assessing technical performance.

### Personnel Resources Area 6 - People, Environmental, and Support Process Goals

- ◇ 6-1) GOAL: Improve organizational environment within the FOA.

- ◇ 6-2) GOAL: Identify and improve the organization's key support processes at the HQ and Center levels.

AWS organizations have developed action plans designed to help them meet these goals and objectives.

The action plans will help link day-to-day decision making activities to the FOA's mission, vision, and objectives in pursuit of successfully fulfilling customer requirements.

If you would like a copy of the AWS strategic plan, contact the command section of any AWS unit or contact HQ AWS/RMX (Process Improvement Division) at DSN 576-5654, ext. 233, 493, or 297.





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SSgt. Christopher M. Shampoe, HQ AFGWC, Offutt AFB, Neb.  
SrA. Michael J. Hollider, HQ AFGWC, Offutt AFB, Neb.  
SrA. Penny A. Williams, 5th OSS/OSW, Minot AFB, N.D.

**ARMY ACHIEVEMENT MEDAL**

SrA. Paul M. Walker, Jr., OL-C, 18th WS, Ft. Knox, Ky.  
1st Lt. Jason E. Hoffman, 19th ASOS/ASW, Ft. Campbell, Ky.  
TSgt. Clyde R. Hunter, Jr., 19th ASOS/ASW, Ft. Campbell, Ky.  
TSgt. John R. Walsh, 19th ASOS/ASW, Ft. Campbell, Ky.  
SrA. Michael P. Homan, 19th ASOS/ASW, Ft. Campbell, Ky.  
SrA. Michael L. Toth, 19th ASOS/ASW, Ft. Campbell, Ky.  
A1C Gregory J. Strong, 18th WS, Ft. Bragg, N.C.  
SSgt. Brian D. Thompson, 5th OSS/OSW, Minot AFB, N.D.



**AIR FORCE  
GOOD CONDUCT MEDAL**

TSgt. Ronald H. Kellerman, 18th WS, Ft. Bragg, N.C. (4th OLC).  
SSgt. Kenneth D. Henry, Jr., Det. 5, 617th WS, Katterbach, Germany.  
SSgt. Rob Easley, Det. 4, 617th WS, Traben Trarbach, Germany (3rd OLC).  
SrA. Penny A. Williams, 5th OSS/OSW, Minot AFB, N.D.  
SrA. Amber L. Roberts, 5th OSS/OSW, Minot AFB, N.D.

**ARMED FORCES  
EXPEDITIONARY MEDAL**

1st Lt. Jason E. Hoffman, 19th ASOS/ASW, Ft. Campbell, Ky.  
TSgt. Clyde R. Hunter, Jr., 19th ASOS/ASW, Ft. Campbell, Ky.  
TSgt. John R. Walsh, 19th ASOS/ASW, Ft. Campbell, Ky.  
SSgt. Brian W. Anderson, 19th ASOS/ASW, Ft. Campbell, Ky.  
SrA. Michael P. Homan, 19th ASOS/ASW, Ft. Campbell, Ky.  
SrA. David D. Vachon, 19th ASOS/ASW, Ft. Campbell, Ky.  
SrA. Michael L. Toth, 19th ASOS/ASW, Ft. Campbell, Ky.

**SOUTHWEST ASIA  
SERVICE MEDAL**

SrA. Kenneth E. Harris, 19th ASOS/ASW, Ft. Campbell, Ky.  
Capt. Steven J. Ursell, 50th WS/DOWA, Falcon AFB, Colo.  
Capt. James G. Saccomando, Jr., 55th OSS/OSW, Offutt AFB, Neb.  
TSgt. David M. Ward, 100th OSS/DOW, R&F Mildenhall, U.K.  
SSgt. Edward L. Acuavera, 64th OSS/DOW, Reese AFB, Texas.  
SSgt. Michael N. Cassidy, 18th OSS/OSW, Kadena AB, Japan.  
SSgt. Trevor S. Strachen, 59th OSS/OSW, Andrews AFB, Md.  
Sgt. Jeffrey L. Siler, 60th OSS/OSW, Travis AFB, Calif.  
A1C James A. Catchpole, 366th OSS/OSW, Mt. Home AFB, Idaho.  
A1C Pamela D. Nelson, 76th OSS/OSW, Kelly AFB, Texas.  
A1C Latonja R. Robinson, 23rd OSS/OSW, Pope AFB, N.C.

**SMALL ARMS EXPERT RIBBON**

SrA. David D. Vachon, 19th ASOS/ASW, Ft. Campbell, Ky.

**UNITED NATIONS MEDAL**

Sgt. Todd C. Heath, Det. 2, 607th WS, Hanau, Germany.

**PROMOTIONS**



Thomas A. Long, 45th WS, Patrick AFB, Fla.



Charles E. Buckler, 156th Weather Flight, Charlotte, N.C. (ANG).  
Mark E. Finley, 113th WF, Terre Haute, Ind. (ANG).  
Mark A. Thomas, 111th WF, Houston, Texas (ANG).



Sabrina Tupper, 45th WS, Patrick AFB, Fla.  
Donald B. Prince, 209th WF, Austin, Texas (ANG).





Ronald D. Cloninger, 156th WF, Charlotte, N.C. (ANG)  
Narriman Sheridan, 131st WF, Westfield, Mass. (ANG)



Manuel M. Vela, Jr., 18th WS, Ft. Bragg, N.C.  
John T. Carty, HQ AFGWC, Offutt AFB, Neb.



James R. Bradshaw, 156th WF, Charlotte, N.C. (ANG)  
David P. Seibert, 56th OSS/OSW, Luke AFB, Ariz.  
Richard Spears, Det. 4, 617th WS, Grafenwoehr, Germany  
Irving A. Taylor, Det. 4, 617th WS, Traben Trarbach, Germany  
Timothy A. Kaib, HQ AFGWC, Offutt AFB, Neb.  
Dennis B. Llewellyn, HQ AFGWC, Offutt AFB, Neb.  
Lucas R. Montoya, HQ AFGWC, Offutt AFB, Neb.



Larry D. Beck, 161st WF, Dallas, Texas (ANG)  
Joey B. Mumm, 123rd WF, Portland, Ore. (ANG)  
Kevin Smith, Det. 4, 617th WS, Traben Trarbach, Germany  
Klaus Lammers, Det. 2, 617th WS, Hanau, Germany  
James J. Barber, HQ AFGWC, Offutt AFB, Neb.  
Max R. Boulton, HQ AFGWC, Offutt AFB, Neb.  
David M. Hilsdorf, HQ AFGWC, Offutt AFB, Neb.



Chris Ramsdell, 45th WS, Patrick AFB, Fla.  
Ron Meadows, 45th WS, Patrick AFB, Fla.  
Daniel C. Hoyt, 202nd WF, Otis ANGB, Mass. (ANG)  
Harry F. Kertanis, 202nd WF, Otis ANGB, Mass. (ANG)  
Alan J. Delostelle, HQ AFGWC, Offutt AFB, Neb.  
Scott E. Wirebraugh, 5th OSS/OSW, Minot AFB, N.D.  
Brian D. Thompson, 5th OSS/OSW, Minot AFB, N.D.



Tina Harrell, 45th WS, Patrick AFB, Fla. (below the zone)  
Paul M. Walker, Jr., OL-C, 18th WS, Ft. Knox, Ky. (below the zone)  
James J. Proffitt, 200th WF, Richmond, Va. (ANG)  
Melody M. Browning, Det. 2, 617th WS, Hanau, Germany  
Penny A. Williams, 5th OSS/OSW, Minot AFB, N.D.  
Amber L. Roberts, 5th OSS/OSW, Minot AFB, N.D.



Michael Thornbury, 45th WS, Patrick AFB, Fla.  
Jessica Evans, 45th WS, Patrick AFB, Fla.  
Jesse W. Naylor, OL-C, 18th WS, Ft. Knox, Ky.  
Kimberly S. Smallwood, OL-C, 18th WS, Ft. Knox, Ky.  
Tijuan Smith, 19th ASOS/ASW, Ft. Campbell, Ky.  
Bart Hopkins, 19th ASOS/ASW, Ft. Campbell, Ky.  
Todd M. Carballo, 122nd WF, New Orleans, La. (ANG)  
John M. Carpenter, 200th WF, Richmond, Va. (ANG)  
Daniel J. Stone, HQ AFGWC, Offutt AFB, Neb.



Morgan Mullings, 21st ASOS/ASW, Ft. Polk, La.  
Shawn C. Crabbeels, 412th OSS/OSW, Edwards AFB, Calif.  
Monica E. Kanaady, 412th OSS/OSW, Edwards AFB, Calif.  
Brian D. Carnes, 19th ASOS/ASW, Ft. Campbell, Ky.  
Gregory S. Youtz, 19th ASOS/ASW, Ft. Campbell, Ky.  
Melissa A. Murphy, 5th OSS/OSW, Minot AFB, N.D.

## HAILS AND FAREWELLS REASSIGNMENTS

2nd Lt. Patricia Fox -- to 21st ASOS/ASW, Ft. Polk, La., from Pennsylvania State University  
MSgt. Tony Pearson -- to 21st ASOS/ASW, Ft. Polk, La., from AFGWC, Offutt AFB, Neb.  
SrA. David Stang -- to Camp Stanley, Korea, from 21st ASOS/ASW, Ft. Polk, La.  
MSgt. Christopher Andreyk -- to Hurlman AFB, N.M., from OL-C, 18th WS, Ft. Knox, Ky.  
SrA. Aaron Stevens -- to Keesler AFB, Miss., from OL-C, 18th WS, Ft. Knox, Ky.  
Maj. Carl S. Funk -- to MacDill AFB, Fla., from 15th ASOS, Hunter AAF, Ga.  
1st Lt. Kelly M. Law -- to Ft. Stewart, Ga., from Camp Red Cloud, Korea  
2nd Lt. Steven E. Vignora -- to 15th ASOS, Hunter AAF, Ga., from Penn St. University  
TSgt. Robert E. Baker -- to Keesler AFB, Miss., from 15th ASOS, Hunter AAF, Ga.  
SrA. John L. Terrell -- to Anderson AFB, Guam, from 15th ASOS, Hunter AAF, Ga.  
SrA. Charles W. Perry -- to Keesler AFB, Miss., from 15th ASOS, Hunter AAF, Ga.  
SSgt. Greg Spurek -- to Yongson AIN, Korea, from 21st OSS, Peterson AFB, Colo.  
1st Lt. Robert Mazony -- to Lajes Field, The Azores, from 21st OSS, Peterson AFB, Colo.

1st Lt. Christopher Plonka -- to Heidelberg, Germany, from 21st OSS, Peterson AFB, Colo.  
SSgt. Creighton Blue -- to 20th ASOS, Ft. Drum AIN, N.Y., from Misawa AB, Japan  
2nd Lt. Thomas Renswick -- to 20th ASOS, Ft. Drum AIN, N.Y., from Officer Training School  
SSgt. Heidi J. Frost -- to Yokota AB, Japan, from 20th ASOS, Ft. Drum AIN, N.Y.  
SrA. Rebecca L. Sandmann -- to Camp Stanley, Korea, from 20th ASOS, Ft. Drum AIN, N.Y.  
SSgt. Lance D. Halsey -- to ACC AOS/AOW, Langley AFB, Va., from 19th OSS, Incirlik AB, Turkey  
TSgt. Michael C. Giffon -- to ACC AOS/AOW, Langley AFB, Va., from 20th OSS, Shaw AFB, S.C.  
SSgt. Luisito S. Espanola -- to ACC AOS/AOW, Langley AFB, Va., from 60th WS, Camp Eagle, Korea  
Capt. Clifton D. Stargardt -- to AFIT, Wright-Patterson AFB, Ohio, from ACCAOS/AOW

## REENLISTMENTS

SrA. Travis L. Longuire, OL-A, 607th WS, Camp Page, Korea

## RETIREMENTS

Maj. Bill Roeder, 45th WS, Patrick AFB, Fla.  
TSgt. Patrick J. Jaderborg, Det. 2, 607th WS, Camp Humphreys, Korea  
Lt. Col. Charles L. Allen, 121st WF, Andrews AFB, Md. (ANG)  
Lt. Col. Kerry A. Bartels, 122nd WF, New Orleans, La. (ANG)  
Lt. Col. Richard W. Mohrsten, 208th WF, Minneapolis, Minn. (ANG)  
TSgt. Robert C. TenEyck, 3rd ASOS/WE, Ft. Wainwright, Alaska

## SEPARATIONS

SrA. Michael L. Toth, 19th ASOS/ASW, Ft. Campbell, Ky.

## AWARDS

### Kawait Parachutists Wings

SrA. Kenneth Harris, 19th ASOS/ASW, Ft. Campbell, Ky.  
607th WS Airman of the Quarter  
SrA. Gary A. Clinton, OL-A, Det. 1, 607th WS, Camp Stanley, Korea  
607th WS NCO of the Quarter

TSgt. Rickey G. Keil, 607th WS, Yongson, Korea  
18th WS NCO of the Quarter (April-June 1995)  
TSgt. Keith A. Johnson, 18th WS, Ft. Bragg, N.C.  
18th WS Airman of the Quarter (April-June 1995)  
SrA. James K. Holley, 18th WS, Ft. Bragg, N.C.

### 10-Year Government Service Pin

Nancy L. Weathers, OL-A, 18th WS, Ft. Belvoir, Va.  
Air Force Outstanding Unit Award

156th Weather Flight, Charlotte, N.C. (ANG)  
56th OSS NCO of the Quarter

MSgt. (then-TSgt.) David P. Seibert, 56th OSS/OSW, Luke AFB, Ariz.  
56th OSS Airman of the Quarter

SrA. Erika J. Plapp, 56th OSS/OSW, Luke AFB, Ariz.  
Lance P. Sijan Award -- 617th ASOG

MSgt. Udell F. Mentola, Det. 5, 617th WS, Katterbach, Germany  
HQ AFGWC, Offutt AFB, Neb., Company Grade Officer of the Quarter (April-June 1995)

Capt. James C. Parsons, HQ AFGWC, Offutt AFB, Neb.  
HQ AFGWC, Offutt AFB, Neb., Civilian (GS-9 and above) of the Quarter (April-June 1995)

Linda F. Barnes, HQ AFGWC, Offutt AFB, Neb.  
HQ AFGWC, Offutt AFB, Neb., Civilian (GS-8 and below) of the Quarter (April-June 1995)

Colleen M. Harwood, HQ AFGWC, Offutt AFB, Neb.  
HQ AFGWC, Offutt AFB, Neb., Senior NCO of the Quarter (April-June 1995)

MSgt. Edward S. Alexander, HQ AFGWC, Offutt AFB, Neb.  
HQ AFGWC, Offutt AFB, Neb., NCO of the Quarter (April-June 1995)

SSgt. Randall C. Miller, HQ AFGWC, Offutt AFB, Neb.  
HQ AFGWC, Offutt AFB, Neb., Airman of the Quarter (April-June 1995)

SrA. Richard K. Bakewell, Det. 7, HQ AFGWC, Trinker AFB, Okla.  
20th ASOS NCO of the Quarter

SSgt. Richard A. Friot, 20th ASOS, Ft. Drum AIN, N.Y.  
5th OSS/OSW, Minot AFB, N.D., Airman of the Quarter (April-June 1995)

SrA. Amber L. Roberts, 5th OSS/OSW, Minot AFB, N.D.  
61th OSS NCO of the Quarter (April-June 1995)

SSgt. Ken Dixon, 61th OSS/WE, Elmendorf AFB, Alaska  
61th OSS Company Grade Officer of the Quarter, 61th AOG Company Grade Officer of the Quarter, 11th Air Force (Staff) Company Grade Officer of the Quarter

2nd Lt. Susan R. Pittman, 61th OSS/WE, Elmendorf AFB, Alaska

## EDUCATION

### NCO Academy

TSgt. Duane M. Linberg, Det. 4, 617th WS, Traben Trarbach, Germany  
TSgt. Kevin Smith, Det. 4, 617th WS, Traben Trarbach, Germany

### Airman Leadership School

SrA. Jane Ramsdell, 45th WS, Patrick AFB, Fla.  
Sgt. Gina B. Bates, ACC AOS/AOW, Langley AFB, Va.

### Combat Survival Training

1st Lt. Daniel J. Vasenko, 19th ASOS/ASW, Ft. Campbell, Ky.  
A1C Gregory B. Schwidizer, 19th ASOS/ASW, Ft. Campbell, Ky.

### GOLDWING Graduates

MSgt. Donald J. Garske, Jr., 19th ASOS/ASW, Ft. Campbell, Ky.  
A1C Justin P. Devine, 19th ASOS/ASW, Ft. Campbell, Ky.

### MARWIN Graduates

1st Lt. Daniel A. Vasenio, 19th ASOS/ASW, Ft. Campbell, Ky.  
TSgt. John R. Walsh, 19th ASOS/ASW, Ft. Campbell, Ky.  
SrA. Kenneth E. Barris, 19th ASOS/ASW, Ft. Campbell, Ky.  
SrA. David D. Vachon, 19th ASOS/ASW, Ft. Campbell, Ky.

### Weather Specialist Course

A1C Robert P. Hartigan, 164th WF, Columbus, Ohio  
AD Jason R. Sinclair, 164th WF, Columbus, Ohio

### Community College of the Air Force -- Associates Degree in Weather Technology

SrA. Durrel C. Opatzka, Det. 10, 617th WS, Giebelstadt, Germany  
SrA. R. Alton Wright, Det. 6, 617th WS, Wiesbaden, Germany

### Weather Satellite and Photo Interpretation Course

TSgt. Steve G. Hill, ACC AOS/AOW, Langley AFB, Va.  
Tropical Weather Analysis and Forecasting Course

SSgt. Wesley G. Fillmore, ACC AOS/AOW, Langley AFB, Va.





# AIR NATIONAL GUARD

## The Weather "Minutemen"

by Ted Houghton  
Air National Guard Weather

Six hundred members of Air Force Weather (AFW) are also members of the oldest military institution in the United States -- the National Guard. Their forebearers were the Minutemen that fired those shots "heard 'round the world" at Concord, Mass., 220 years ago.

Today's weather "Minutemen" belong to 33 Air National Guard (ANG) weather flights, and are proud members of AFW's Total Force, volunteering for duty where and when they're needed.

ANG weather flights were first established in 1946 to provide weather support to the new ANG flying units. After the Korean War, the program was reduced from 84 units to 31. In the 1960's, eight new flights were formed to support the Army National Guard (ARNG) divisions.

Army support became the program's main focus in the 1970's when units were re-tasked from their air support role to missions supporting ARNG separate brigades, special forces groups, an armored cavalry regiment, Forces Command, and augmentation of active duty corps and division weather teams.

The Air National Guard has long recognized the need for tactical soldier skills training if individuals are to survive on the battlefield with the Army. In 1991, the Deputy Director of the ANG authorized the establishment of the ANG Weather Readiness Center (WRC) at Camp Blanding, Fla.

Since its inception, the WRC's focus has expanded to include technical training in such areas as AWDS and WSR-88D Doppler radar. Recently, Air Force Director of Weather Brig. Gen. Thomas J. Lennon authorized the creation of an active duty position at the WRC, to augment the ANG staff and serve as a liaison with the Combat Weather Facility.

The WRC is particularly proud of its Goldwing course, which has instructed active duty Air Force, Army, and Navy personnel in addition to Air Guardsmen.

A unique feature of the ANG is its affiliation with the states and territories - this is the true militia. In that capacity weather flight members may be called to state duty to meet requirements

imposed by natural disasters or emergencies.

As examples, during the 1993 midwest flooding, the 110th Weather Flight, St. Louis, Mo., and the 208th WF, Minneapolis, Minn., were called upon to provide forecasts to state authorities as well as support state ARNG aviation assets. The next winter, during the east coast cold wave, the 140th WF, Willow Grove, Pa., was tasked to provide detailed forecasts for the convoys of trucks bringing salt south from Rochester, N.Y.

With respect to the Guard's federal mission, there are two ways individuals may serve: one is being activated or mobilized and the other is volunteerism. ANG weather person-



nel have served in both capacities.

During the Gulf War, the 165th WF, Louisville, Ky., was mobilized along with its supported Army unit, the 20th Special Forces Group (Airborne), 20 SFG(A). A three-person Special Operations Weather Team deployed to northern Iraq with the 20th Special Forces Group to support PROVIDE COMFORT, the Kurdish relief effort.

In recent years, volunteerism has been the primary avenue by which ANG weather personnel have entered onto active duty.

At the outset of Operation RESTORE HOPE, personnel from the 131st WF, Westfield, Mass.; the 208th WF, Minneapolis, Minn.; and the 116th WF, McChord AFB, Wash., voluntarily reported to Fort Drum, N.Y., to backfill the weather station.

A mission unique to the Guard is support to the Continental United States Armies (CONUSAs), which oversee military responses to national disasters. In 1993 members of the 121st WF, Andrews AFB, Md., and the 113th WF, Terre Haute, Ind., assisted the 1st CONUSA during the midwest flooding.

The following year members of the 120th WF, Buckley ANGB, Colo., supported the 6th CONUSA during the western forest fires. In 1991, members of the 113th WF deployed to Florida following Hurricane Andrew.

An unusual mission of the CONUSAs is sponsorship of FUERTES CAMINOS, the United States' Nation-Building program in Latin America. Each year the Army National Guard spends six months building roads, schools, and hospitals and providing other humanitarian assistance. Three years ago, the ANG weather program was asked to provide weather support to FUERTES CAMINOS. Since then, weather flight personnel have performed two-week rotations from January through June each year.

**T**he ANG is truly a full Total Force partner. Today, the ANG has been asked for volunteers to augment active duty forces in real world operations. Two members of the 107th WF, Detroit, Mich., recently returned from nearly four months in Haiti. In June, HQ Air Combat Command/DOW asked the Air National Guard to provide volunteers for ongoing contingency operations around the world.

The military life of an Air Guardsman centers on monthly weekend drill periods and a two week Annual Training session. All Guardsmen perform a minimum of 39 days training per year.

As you can imagine, careful planning and scheduling is required to ensure all training requirements are met. The Guard's peacetime mission is to train. Therefore, ANG weather personnel can focus on continuous honing of technical and tactical skills.

Many ANG members are former active duty personnel who enjoy pursuing their interest in weather on a part-time basis or simply have a desire to continue making a contribution to the nation's defense. Others are ANG recruits whose interest in meteorology has led them to enlist.

**C**an the Guard do the job? In 1993, ANG weather flights were the first Army weather support units to undergo Operational Readiness Inspections. The majority of units inspected in the past three years have been rated "Excellent".

Earlier this year, two members of the 111th WF, Houston, Texas, garnered third place in "Forecast Challenge 95". Despite a mission that focuses on CONUS weather regimes, MSgt. Jeff Goldman and SSgt. Nelson Lee were able to draw on their experience to successfully consider weather parameters on a global basis.

ANG weather flights are located all around the country, including one in Hawaii. Personnel separating from the Air Force are welcome to join the Guard. The ANG provides an excellent way to recoup some benefit from active duty service, since time spent on active duty can be applied towards a Guard retirement.

Some facts about Guard membership: drill weekends are divided into four four-hour Unit Training Assemblies (UTAs). For each UTA, a member receives one day's pay. For annual training, members are paid normal active duty pay. For each UTA period and each day of active duty, one point is awarded. With the accumulation of 50 points, one earns a "good" year which is creditable towards retirement. Upon completion of 20 good years, one can retire. At age 60, one starts to receive a monthly pension, which is calculated using the total number of points earned during their career. A gray "retired" ID card is issued at that time and becomes eligible for the same entitlements as active duty retirees.

Not only does the ANG have a focus on wartime weather missions, but under the divestiture of Air Weather Service, it became responsible for day-to-day weather operations at NGB-owned airfields. At six locations this support is provided by 22 Civil Service employees, while five sites have contractors in place. The Air National Guard weather program is a vital part of the Total Force, providing trained, dedicated personnel to assist in state and federal missions. Anyone interested in learning more about the ANG weather program can contact Ted Houghton, ANG Weather Chief, at DSN 278-8285.







# AIR FORCE RESERVE

Not just "weekend  
warriors" anymore

by MSgt. Dave Jenkins  
HQ Air Force Reserve  
Superintendent of Weather Services

The "weekend warrior" image of the military reservist has become a thing of the past. Today's Air Force Reserve member can be found on the front lines of every major operation that the U.S. Air Force is involved in.

Traditional reservists, Air Reserve Technicians (ART) and Individual Mobilization Aumentees make significant contributions to our nation's ability to project Global Reach/Global Power.

The Air Force Reserve (AFRES) contributes weather support resources to the active duty mission and is also a significant consumer of active duty weather services in both peacetime and wartime.

AFRES supports the active duty weather force through the Individual Mobilization Aumentee (IMA) program. IMAs are part-time reservists assigned to active duty units who become part of the active duty force structure when mobilized.

They usually have a wartime tasking to support a reserve component flying unit, and will normally train with and sup-

port that unit during Operational Readiness Exercises/Inspections (ORIs/ORE). Weather IMAs also train regularly at active duty weather stations and are expected to meet the same readiness standards as their active duty counterparts.

When AFRES flying units mobilize, they become part of the total force package. In similar fashion, IMAs become an integral part of Unit Type Codes and deploy to support the mix of lead and follow-on units which make up the force package.

The AFRES goal is to integrate our forces seamlessly with those of the active duty to provide the warfighting commander-in-chief with the right mix of weapons systems and support capability to accomplish the assigned mission.

Peacetime support to AFRES flying units is done in a variety of ways. Units which are tenants on active duty installations get their weather support from the base weather station.

However, many AFRES flying units are located at civilian airports and these units are normally supported by Air Force active duty weather stations which may be hundreds of miles away.

The downsizing of the active duty force and increased role of the reserve component have created some challenges in this area. Air Combat Command recently spun up a dedicated reserve component support unit at Minot AFB, N.D., to handle Guard and Reserve units that lost their support when K.I. Sawyer and Griffiss AFBs closed. This "regional center" may blaze a trail for the rest of Air Force Weather to follow in the future.

AFRES also has four "full-up" Air Reserve Bases (ARBs) with on-site, full-service weather support. At Homestead (Fla.) and Grissom (Ind.) (and soon March (Calif.)) ARBs, Department of Defense civilians are employed to support the AFRES host unit as well as tenant and transient aircraft. At Dobbins (Ga.) and Westover ARBs, weather support is provided by Barton Air Traffic Control, Inc., a private contractor.

A unique AFRES weather unit is the 53rd Weather Reconnaissance Squadron, known as the "Hurricane Hunters". Located at Keesler AFB, Miss., their mission is to obtain real-time data from tropical cyclones and winter storms. Members of the 53rd WRS fly their WC-130s into these storms, release dropsondes, record the data, and transmit it to the National Hurricane Center in Coral Gables, Fla. The 53rd employs traditional reservists and Air Reserve Technicians, and accounts for the Air Force's entire weather reconnaissance capability.

The HQ AFRES Director of Operations is responsible for AFRES weather support. To accomplish these duties, there is one active duty E-7 weather position at the AFRES headquarters, Robins AFB, Ga. I can speak from experience when I say that this is a challenging and career-broadening opportunity!

The mission of the Air Force Reserve continues to grow as the active duty forces draw down. We expect that our responsibilities in the weather support arena will follow a similar pattern in the future.

# IMA WX Support

*(Editor's Note: The Individual Mobilization Augmentee is part of the Air Force Reserve's individual training program. There are 12,000 IMAs assigned throughout the Air Force. IMAs are assigned to active-duty units in specific wartime positions and train on an individual basis. Their mission is to augment active-duty manning by filling wartime surge requirements. IMAs were used extensively during Operation DESERT STORM and can be found in nearly every career field.)*

by Col. Karl Zeller  
Individual Mobilization Augmentee  
to the Air Force Director of Weather

The Individual Mobilization Augmentee (IMA) program has been described as the Air Force's "ace in the hole", by Maj. Gen. Robert McIntosh, Chief of the Air Force Reserve. Air Force Director of Weather Brig. Gen. Thomas J. Lennon includes the Reserves, when he looks to the people of Air Force Weather to exploit the weather as a force multiplier.

Following the restructure of the Air Force and Air Force Weather (AFW), IMA utilization increased, and AFW management of these manpower positions has evolved since 1991.

The MAJCOMs determine funded versus unfunded positions from year to year based on the total funded positions allowed, current IMA rank mix, active duty requirements, and IMA availability.

Recent changes in DOD Directive 1235.11 and AFI 38-

204 have broadened the justification spectrum beyond "mobilization" only for new IMA positions above wing level to take advantage of civilian skills which support national security requirements.

An IMA allocation team convenes annually to review and man MAJCOM IMA requirements. There are currently 104 weather IMAs, but 56 more are needed above FY95 funding. Actual manning for funded IMA weather billets is about 95 percent. Total Air Force funded IMA authorizations increased from 11,746 to 12,420 billets during FY 94 and seven billets are expected to be added in FY 96.

Most weather IMAs now have a "senior" weather IMA assigned to their MAJCOM DOW or XOW, in addition to a MAJCOM IMA functional manager for weather. Here are the names and numbers for those IMAs:

COMMAND	Senior IMA	Funct. Mgr.	Phone #
ACC	Col. Howard Bernard	MSGT. Ruch	574-8441
AMC	Col. Jim Fenner	Mr. Miller	576-5082
AFSPC	Col. Roger Buckman	MSGT. Conaway	692-5669
AWS	Col. Jim Hoke	Maj. Mark Ochoa	576-5654, ext. 347
XOW	Col. Richard W. Fisher	Col. Ryhmes	225-6140

The IMA program is unique among military reserve programs in that IMAs fill individual active duty shortfalls. Hence, IMAs are managed by active duty supervisors. Since assignment variety and increasing level of responsibility are necessary for IMA career progression, IMAs and their supervisors are encouraged to use the information given here to keep up on job availability.

The program's successful implementation and use depends on your continued involvement from inception through execution.

*(Editor's Note: Since this article was written, Colonel Zeller has retired. His replacement is Col. Richard W. Fisher.)*

## Air Force Reserve Locations





## Getting GANG GREEN at STRONG RESOLVE '95

by Capt. Jim Rickman  
617th Weather Squadron  
Heidelberg, Germany

It all started earlier this year, after U.S. Army-Europe finished its biggest exercise of the year, ATLANTIC RESOLVE.

I had just come back from 25 days at Camp Aachen on the Grafenwoehr Training Area. My fellow staff weather officer, Capt. Tom Goulter, comes to me and says, "How would you like to finish your tour with 617th Weather Squadron by going on a NATO exercise to Norway ... in February?"

My mind immediately thought of the glories of travel, the romance of Norway, the career opportunities of a Combined Exercise, and then ... the cold and dark prospects of life near the Arctic Circle in the middle of winter. Nevertheless, I chose to be part of Exercise STRONG RESOLVE '95, despite my fears of freezing.

Before the Air Force would allow me, or any of our team, to go so far north, we had to have "winterization training." Capt. Tom Goulter, SSgt. Jerry Cowart, SrA. Shawn Peno, and I departed Germany and headed to the Italian Alps near the French border for a week of training. We learned about the proper use and wear of the U.S. Military issue extreme cold weather gear, basic survival techniques, and the great Alpine pastime, skiing.

After returning from training in Italy, we began preparing for our deployment with the Allied Command Europe (ACE) Mobile Force (Land) Component, known as the AMF(L). AMF(L) is ACE's quick reaction brigade, comprised of battalions from 13 NATO nations.

The headquarters, located in Heidelberg, Germany, is a combined staff. If a small regional conflict were to break out in ACE's area of responsibility, the AMF(L) would be one of the first units deployed. In the scenario for STRONG RESOLVE, that

# OBSERVATIONS

is exactly what happened.

Norway became two fictional countries for the purpose of this exercise. The southern, bulbous portion of the country was "Greenland," a NATO country with a democratic government and market economy. The northern, long and skinny portion, was "Whiteland," a socialist, former communist block country.

The border was established near the port city of Trondheim. In the real world, the British Royal Air Force operates Vaernes Air Station near Trondheim. The area just south and west of Trondheim was the objective of the invading Whitelanders. This area is rich with mineral deposits and produces a considerable annual fishing crop. When the Whitelanders began massing troops near the border, NATO responded.

"Greenland" falls under the Area of Interest for Headquarters, Allied Land Forces, Northern Europe (COMNORTH). COMNORTH tagged three brigades of NATO forces to go to Greenland and defend it: the AMF(L), the combined UK/Netherlands Marine Landing Force (UK/NL), and the U.S. 2nd Marine Expeditionary Force (II MEF).

Because Trondheim was a great distance from HQ COMNORTH in Oslo, they established an ad hoc unit to take forward control of all three units. This unit was GREEN DIVISION. The 617th WS team was under the operational control of the Green Division Assistant (Chief of Staff for Intelligence, Lt. Col. Adrian Drage, U.K. In the words of the Division slogan, we became a part of "GANG GREEN".

Cowart and Peno went to Norway three weeks prior to the exercise with the AMF(L) advance party for intense winterization and survival training. Tom and I remained in Heidelberg to finish coordinating our data requirements and support system.

We met up Feb. 22 at the Green Division Headquarters in snowbound Skei, Norway. We brought along a collection of data receipt and display systems to support the mission. Of course, we had the old standard 9315 T/R-T Facsimile Recorder that we tuned in to Bracknell, Hanover, and even Moscow to pick up some surface and upper-air data. However, the teletype data never did come in.

Green Division provided us with a commercial phone line that we used to access AFDIS and the 617th WS DUDS Bulletin Board. The laptop we brought along to dial into AFDIS and DUDS also had fax capability. We set up a routine transmission program with RAF High Wycombe, home of U.K.'s Strike Command and Headquarters, Allied Forces Northwest (AF NORTHWEST).

The ARTYMET folks at Strike Command were the Meteorological Forecast Unit for STRONG RESOLVE. They put out the Unified Weather Forecast (UWF) which was the Exercise Control Forecast Bulletin. Our new WRAASE tactical METSAT receiver worked well, as long as we kept the antenna defrosted every six hours or so. The new receiver unit is as small as a TMQ-34 with a lot more memory/storage capacity than the old cumbersome unit.

The greatest difficulty with the WRAASE was that those marauding Whitelanders targeted us with Electronic Warfare every night; so, we lost most of the METSAT imagery from 0100-0900 Zulu every night of the "war". We also took along a new piece of German weather support equipment, a satellite broadcast receiver the size of a VCR with a one-meter dish. It receives the German standard fax products and European alphanumeric data over our own 9315 and a Z-248 PC running AWNCOM. Unfortunately, it seems that the system either doesn't work at 65 degrees North, or the cold temperatures of Norway were a

# FROM THE FIELD

little too much for it.

But in the end, data availability was excellent and the customer was extremely pleased.

Just as we were about to enter the combat phase, a new development brought more changes to our four-man weather team. An Italian Mercomont team was attached to the AMF(L). This team consisted of a seven-man Alpini Avalanche Assessment Team, one weather forecaster, and their second lieutenant officer-in-charge. Their equipment and communications requirements became too much of an impediment to the rapid mobility requirement of the AMF(L); so, AMF(L) turned them over to Green Division.

Naturally, they were OPCONed to us as the Met Office for Green Division. Our team tripled overnight, and we gained another officer and forecaster to allow us to go to three rotating shifts of eight hours during the combat phase of the exercise. The Italians took Tom and one or two of the aviation officers out on an Avalanche Assessment excursion. They shared their METSAT imagery system with us that had incredible color enhancement capabilities and gave us some great graphics for the commander's daily update briefings which ingested directly into the Norwegian's C4I system, NORCCIS.

Our international Met Team spent a great 10 days learning from each other and even managed to dine upon some excellent Italian cuisine when the Norwegians turned over their mess hall to us the last night of the exercise.

For myself, I got some great exposure to a real exercise while still attached to an Army/NATO staff. **STRONG RESOLVE** was the largest scale, live action exercise NATO has mounted since the fall of the Soviet Union. There were two full amphibious landings of a brigade-size unit on the west coast of Norway,

The Whiteland forces were comprised of a brigade of real aggressors, who on more than one occasion came close to overrunning the AMF(L) and Green Division headquarters.

We learned about different communication systems including the Linked Operations Intelligence Centers (LOCE), the Norwegian Command Control and Information System (NORCCIS), the Italians METSAT system, as well as our C4I and data support systems.

Overall, though, we learned about working in a multinational headquarters, and made some good friends and professional contacts which will enrich our careers and lives, as well as benefit the operations of the 617th Weather Squadron, the Air Force Weather Support system, and the NATO Meteorological Community.

## Minnesota Guard unit deploys to Guatemala

by MSgt. Brian A. Magnuson  
208th Weather Flight  
Minneapolis, Minn.

Members of the 208th Weather Flight, Minnesota Air National Guard recently completed a six-month deployment in Guatemala supporting Operation FUERTES CAMINOS 95-North.

This operation involved thousands of National Guard and Reserve people and provided the members of the guard six months of skill training.

The purpose of the mission was to provide training for U.S. military units

specializing in engineering, medical service, and personnel support. These units assisted the Guatemalan people in a number of ways, building bridges, roads, medical clinics, schools, and digging wells for drinking water.

The Minnesota contingent was named, appropriately, Joint Task Force Timber Wolf. The JTF was composed of soldiers from the Army National Guard and the 88th Army Reserve Command, headquartered at Ft. Snelling, Minn.

The 208th WF's mission during the operation was supporting helicopters from the 34th "Red Bull" Infantry Division. Support was provided from two locations within Guatemala. At Guatemala City, an observing team provided weather observations. This site was essential to ensure that Class-B airspace was maintained for flight safety. Observations were forwarded to the forecast element in Jutiapa via satellite communications. At Jutiapa, the weather flight had their five-ton expandable van located alongside Flight Operations, providing forecast support to the entire task force.

From the Jutiapa location, the weather people received high frequency transmissions from both Puerto Rico and Norfolk, Va. GOES-8 satellite imagery was utilized, providing the flight with their most reliable data source. In addition, the TMQ-34 (Meteorological Measuring Set) and TMQ-36 (Wind Set) were also used. MSE communications within the van allowed for meteorological discussions with the SOUTHCOM Theater Forecast Center in Panama.

Weather Flight members at both locations remained constantly busy as their aviation customers logged more than 1,300 hours of flight time in UH-1 helicopters. This extra effort did not go unnoticed, as two flight members received Army Achievement Medals from the Task Force Commander.



# The Air Force Weather Stan Eval

## Checklists address things you do every day

by Capt. Steve Dickey  
Headquarters  
Air Weather Service

The Air Force Chief of Staff has directed that we develop and implement the Air Force Weather Standardization and Evaluation Program (AFWSEP).

Its purpose is to evaluate the ability of Air Force weather units (including Army support units) to meet the standards and better satisfy operational requirements of their customers.

The AFWSEP consists of two parts. The AFW Proficiency and Upgrade Program (AFWPUP) and the AFW Technical Standardization and Evaluation Program (AFWTSE). You'll be seeing an AFI soon which will further explain the details.

Beginning in September 1995, the AFWSEP will kick off with a Stan Eval visit to Ellsworth AFB, S.D. Ellsworth will be the first of about eight bases to be visited during the initial phase of this new program.

What will a visit be like? A Stan-Eval team will typically consist of four evaluators dispatched from Headquarters Air Weather Service. A weather representative from your parent MAJCOM will be invited as well.

The team will visit your unit for two to three days. They will provide an in-brief to your unit and the Operations Group commander (OG/CC). Upon

completion, the team will provide an out-brief and draft report to the same.

The final report will not only go to your unit, but to your OG/CC and MAJCOM/DOW as well.

Between the in- and out-briefings, the Stan Eval team will run checklists to evaluate key technical processes such as taking and recording weather observations, making forecasts, and other typical weather station duties.

These checklists have already been provided to your major commands—they aren't secret. Don't worry, the checklists address things you do every day and which you are probably quite proficient.

The team will evaluate tactical tasks as well. They will administer standardized proficiency tests to a random sampling of people.

Ratings assigned will be for the unit as a whole and will be either: *Q1 - qualified; Q2 - qualified but additional training needed, or Q3 - unqualified.*

If the unit receives a Q2 or Q3, they or their chain of command can request an AWS Meteorological Enhancement Team (MET) or Meteorological Process Review (MPR) for assistance.

If you're worried about the tests, you shouldn't be. We're confident you'll do just fine.

To prove it, we've included a sample of what you'll see. Just know your job, do it to the best of your ability, and we expect you'll do fine.

### Samples

1. *When properly derived, the Rossby wave speed equation most closely resembles:*

- $c = \tan(\epsilon - \gamma) + \sin(d/\gamma + q/\gamma)$ .
- $z = \text{Run DMC}$ .
- $r = dx/dy + dx/dt - C$ .
- Don't worry, we're just kidding.

2. *Units should conduct routine forecast discussions and shift change briefings to:*

a. Provide consistency on all issued forecasts.

b. Ensure forecast input from experienced individuals.

c. Provide a check and balance on subjective reasoning.

d. Provide a discipline to the systematic approach to forecasting.

e. All of the above.

3. *The primary processes that cause fog are:*

a. Evaporation and Conduction.

b. Convection and Advection.

c. Evaporation and Cooling.

d. Sublimation and Frontal Interaction.

4. *Which of the following clouds can be associated with mountain wave turbulence:*

a. Cap (Föhn wall).

b. Rotor (Roll).

c. Lenticular.

d. All of the above.

Answers below --

Answers: 1(d); 2(e) AFP 15-156, para 1.6; 3(c) AFP 15-156, para 2.3.5; 4(d) AFP 15-156, para 4.6.1.

Contact Captain Dickey at:  
DSN 576-5731, ext. 244; or by  
electronic mail at  
dickeys@hqaws.safb.af.mil

# AWDS Upgrades

## Where are we going ... and when?

by MSgt. Bruce E. Bronsema  
 Systems and Communications  
 Base Weather Systems Branch

Often, to know where you're going, you need to know where you've been. Let's look at where the Automated Weather Distribution System (AWDS) has been until now.

After many years of conceptualization, planning, and prototyping, the production and maintenance contract was awarded in March 1990, with the first system installed at McGuire AFB in September 1990.

The original installations consisted of 165 fixed sites, 120 in the continental U.S., 26 in Europe, 13 in the Pacific, and 6 in Alaska. The original AWDS procurement also included 15 transportable systems (TAWDS). This phase of the AWDS program concluded with acceptance of the last of the original AWDS sites in May 1994.

The original AWDS was much different than it is today. This configuration had PC-based observer and NOTAM terminals. The C/DM was a single processor unit which controlled all of the communications and data management functions for AWDS.

Long before the initial AWDS installations were completed ideas were being solicited and plans developed to improve AWDS. The result was the AWDS P/I Program (Pre-Planned Product Improvement). The basic premise of this program was to incorporate user requested im-

provements and new functionalities into the existing program.

The first of the P/I initiatives was fielded in Nov 92. This added the Sun Sparc workstations for the NOTAM/BO terminals. In January 1995, further improvements were made to improve the remaining "PC" based NOTAM Air Crew functional area, add the interface to connect AWDS to external command and control systems (Met Processor), add the Sun Sparc workstations for the observer functional area, introduce the Sec-

word, and form feeds on the alphanumeric printer will be suppressed to save paper. Also, the number of UGDF vertical cross sections will increase, automatic numbering and purging of weather warnings/advisories will be corrected, as well as more than 90 other deficiencies discovered in AWDS 3.0, and previous releases.

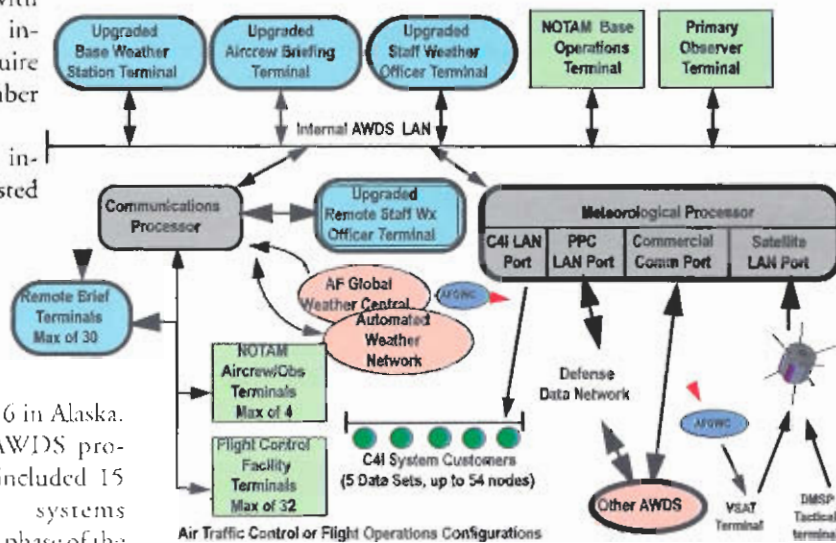
In 1996 we will field the next release which will replace the existing graphic workstations with the faster Sun Sparc workstations, provide AWDS-to-AWDS data exchange, and higher resolution analysis algorithms—Barnes analysis.

By the way, we've seen previews of the new workstations and they are HOT! They've got X-Windows and mouse functionality. You won't believe how fast you can format and send out a warning then format and send the amended TAF. And another thing — don't blink when you request a Skew-T plot. You'll

miss it.

Haven't seen enough yet? Good, because here comes release 3.3 and 3.4 where we will improve analysis functions to run even faster and do further improvements on the alphanumeric HMI (Human Machine Interface).

The goal is to make the keyboard functions similar from form to form and function to function. No more guessing which arrow keys to use or if it's backspace on the TAF form and delete on the warning form. We will



ondary Observer capability, improve the severe weather algorithms, and beef-up Skew-T functions.

That's where we've been. Where are we going?

At about the time this issue goes to press, we will be fielding AWDS release 3.1. The premier feature of this release is the enhanced database.

It will expand your main database storage capacity to four times its existing size. Database control, or the system manager interface, will move to the Met Processor.

Line condition status will be viewable without system manager pass-

See AWDS, continued on  
 Page 23



# Cruising The Weather Bulletin Board

by A.J. Nelson  
AFW Bulletin Board "Sysop"

**I**nformation Superhighway  
"Cyberspace" "The Internet"  
"World Wide Web"

These are all buzzwords of the 90's information revolution. Air Weather Service has become a part of this exciting new media by offering the Air Force Weather (AFW) Bulletin Board System (BBS). The BBS is rapidly becoming a focal point for weather-related issues for AFW. Since its start last year, the number of users has increased to over 300, with an average of two or three new users logging on each week.

The goal of the AFW BBS is to link the AFW community and provide a single information source for any weather-related issues - personnel, equipment, techniques, and to provide a forum for exchanging information with other weather personnel.

## Accessing the AFW BBS

There are three ways to access the BBS: by commercial phone at (618)256-5768; DSN at 576-5768; or via telnet at "bbs.safb.af.mil".

Because the weather bulletin board is housed on the Scott AFB BBS, your initial access will only be to the Public Areas of the Scott AFB system.

To request access to the Weather BBS, contact the AWS Unit Representative by selecting "I" from the top menu, allowing you to enter the Information Center. Next choose "J" to get a list of areas available on the Scott BBS. From this list choose "A" for "Request access to HQ AWS" and you will automatically be placed in the E-mail text editor. First enter the subject, "Request access to Weather", then type a short note to include the following information: rank, name, unit, and DSN phone number.

Save the message following the on-screen prompts and exit E-mail. The request will go automatically to the AWS representative for validation. Validation and access usually occurs in one to three workdays.

Upon exiting the E-mail editor you will be asked to create your user registry entry. This is highly encouraged since it identifies who you are to other users. It also helps the AWS unit representative to keep an accurate database of all the weather users.

Take a few extra minutes and fill out your registry. Simply select R from the top menu,

and follow the prompts to enter the appropriate information.

Once you're on the Weather section, you will have access to the item UNITS AND SPECIAL PROJECTS, which is the gateway to the Weather sections of the BBS. In this area you will have access to forums, teleconferencing, libraries, E-mail, and the capability to dial out to remote systems.

## Weather Forum

Each of the organizations affiliated with the Scott BBS maintains a forum: Air Weather Service maintains the weather forum.

The forum is like a message board used to ask weather (or non-weather) related questions, and disseminate information of interest to the weather community.

Since the information posted is visible to all users, the responses posted can generate more questions and some topics can turn into lengthy conversations. This is precisely the goal of the forum. Where else can you "talk" to everyone in the weather community regarding current weather issues?

## Weather Libraries

AWS also maintains many libraries for the exclusive use of weather personnel. Subject areas range from AWDS, NEXRAD, and METSAT, to AFGWC information, utilities, and regional interest libraries. The Technology Training Division (XOT) uses these libraries to transition new applications to weather stations, especially via the regional libraries. The information contained in the libraries is uploaded by the users of the Weather BBS, and we encourage any additions by you.

Keep in mind, the AWS unit representative must approve all uploaded files before they are made available to other users. This is our quality check. Also, the number of libraries we maintain is not limited to what is currently available. If there is a subject not currently listed, and you would like to see it on the BBS library listing, simply contact *WeatherOp* via e-mail with the details. Finally, a master list of all files available in the weather libraries is available in the general library under the filename *library.txt*.

## E-mail

In addition to the forum and libraries specific to the weather community, the Scott BBS offers e-mail services. The e-mail capabilities allow you to exchange mail with other users of the bulletin board as well as exchange mail with users who have an Internet address.

Exchanging mail with other BBS users is relatively simple and requires nothing more than their bulletin board user-id. A list of all weather users is maintained in the general library in the file *atusers.txt*.

In addition to exchanging messages, you can also attach files for transmission. Unlike sending attachments via Internet e-mail where they need to be decoded before you can view them, attachments on the BBS are ready to use as soon as you download them. This makes for rapid exchange of information when time is critical.

## Dial-out

Finally, one of the best features of the Scott BBS allows you to dial-out to other systems without having your connection. You can "dial-out" either via a modem connection or via an Internet tool known as Telnet. Simply select the Dial-Out/Telnet Capability option from Units and Special Projects menu. From the list of systems available (currently greater than sixty including a generic Telnet connection for connecting to systems not listed) select the number of the system you wish to access for connection. This feature opens up a wealth of information, but it takes a little effort and patience.

## Bulletin Board Assistance

To maximize your use of the BBS, there are two files available to assist you.

When you first establish an account, the first e-mail message waiting for you attaches a user's guide entitled "BBSUSER.DOC". If you didn't download it at that time, I encourage you to download it for reference [download it by selecting "[I] BBS INFORMATION CENTER" from the top menu and then "[H] ON-LINE HELP (BBSUSER.DOC)"]. In addition, in the General library is a guide entitled *bbsguide.txt* which is an extract of the most useful items discussed in BBSUSER.DOC. It also gives additional information as it applies to the weather portions of the Scott BBS. Finally, take some time to browse through the BBS Information Center. The answers to many frequently asked questions are found there.

Reach an AWS BBS representative by calling DSN 576-4721, ext. 245; or send to WEATHEROP on the AFW BBS.





## Keesler course can help you keep in touch

Feel as if you're out of touch with forecasting? Then try the new, up-to-date, "Current Weather Techniques" course at Keesler AFB, Miss. It has received excellent reviews from students in the first two classes.

The first block of the class includes climatology, air/sea interaction, current numeric modeling, vertical analysis techniques to include Skew-T and SHARP, and horizontal weather techniques that include upper and lower atmospheric systems and Q-vector analysis.

The second block covers basic satellite meteorology and Doppler (WSR-88D) radar technology. The final block is the hands-on forecasting lab dealing with model initialization; preparation of a terminal aerodrome forecast (TAF) to include aircraft hazards and convective severe weather; precipitation forecasting including heavy snowfall; regional forecasting; and limited data forecasting.

The AWOS, NEXRAD and other current weather station equipment are used for these classes. Total class time is 160 hour over four weeks.

This course is important for any forecaster, including Air National guard or Army support forecaster, who has been away from the counter for more

than four years. Secure student slots by contacting your base training officer. For more information contact Kerry Bartels at DSN 597-0205

## Weather jumpers needed

by CMSgt. Tom Klumb  
AFMPC Weather Assignments

Manning is critical for jump-qualified weather positions. As a result, I've had to temporarily "close loop" jumpers.

What that means is no one is getting out of their current jump position/assignment except to enter another jump position/assignment. I'm also looking at "asking" jumpers currently not in jump positions to return to a jump job. This is not a good thing. Close-looping tends to stifle careers and morale.

My goal is to get jump "J" prefix manning back above 75 percent. World-wide, all of AFW is manned at 92 percent. Once above 75 percent, I'll let (and encourage) people to move in and out of jump slots.

I hope to start seeing active recruiting for jumpers at Keesler AFB, Miss., and with basic trainees at Lackland AFB, Texas. Furthermore, I will move any one wanting to become a jumper, observer or forecaster, if they meet the following criteria:

- Have passed the Air Force Class 3 Flight Physical and the Army Physical Readiness Test (APRT).

- Meet Time On Station (TOS) requirements.

- Manning at current unit can support loss.

The primary entry points for volunteers will be Fort Bragg, N.C., and Fort Campbell, Ky. We currently have jump positions at Forts Bragg, Campbell, Benning, Carson, and

## News You Can Use

Lewis. There are also two location overseas: Torri Station (Kadena AB, Japan), Okinawa (Japan) and Bobligen, Germany.

In addition to calling or E-Mailing me, MSgt. Tones at HQ ACC (DSN 574-8457) can give more specific information about the prerequisites and training to become jump qualified.

## Guard has openings for officers, enlisted

There are vacancies for weather personnel at the following Air National Guard locations:

104th Weather Flight, Baltimore, Md. - 5 enlisted.

107th WF, Selfridge ANGB, Mich. - 2 enlisted.

110th WF, St. Louis, Mo. - 1 enlisted.

111th WF, Houston, Texas - 3 enlisted.

120th WF, Buckley ANGB, Colo. - 1 officer, 1 enlisted.

121st WF, Andrews AFB, Md. - 4 enlisted.

122nd WF, New Orleans, La. - 2 officer, 2 enlisted.

123rd WF, Portland, Ore. - 3 enlisted.

125th WF, Tulsa, Okla. - 1 officer, 1 enlisted.

127th WF, Forbes Field, Kan. - 3 enlisted.

131st WF, Westfield, Mass. - 1 enlisted.

154th WF, Little Rock, Ark. - 2 enlisted.

156th WF, Charlotte, N.C. - 2 enlisted.

159th WF, Camp Blanding, Fla. - 3 enlisted.

See Oh, By The Way,  
continued on Page 22

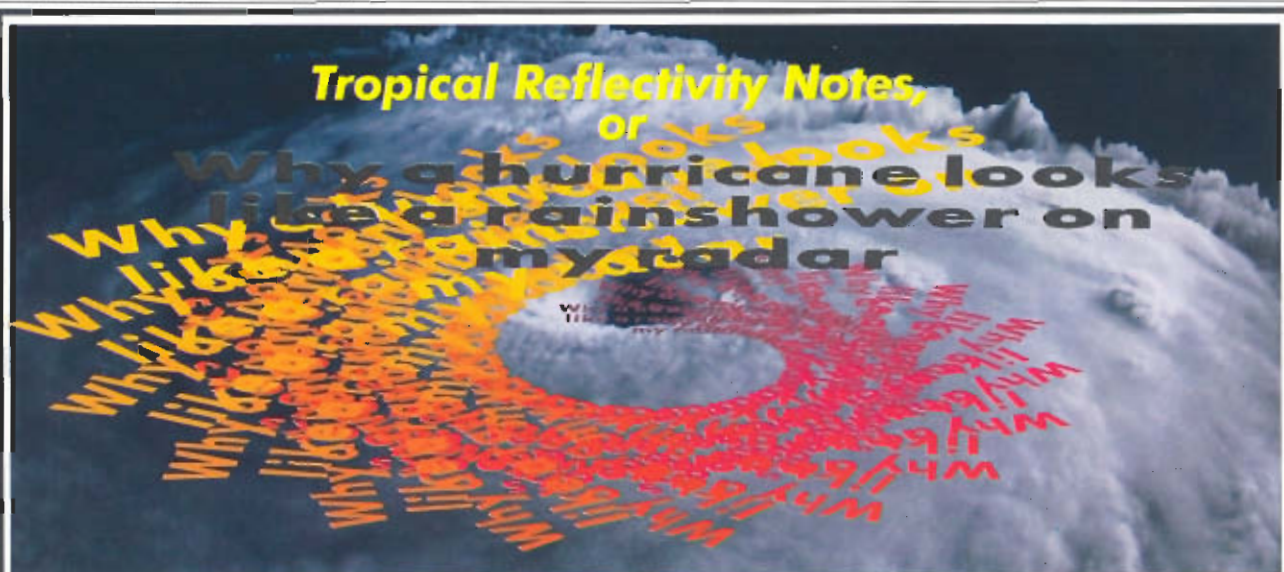


## Oh, By The Way, cont. from Page 21

165th WF, Louisville, Ky. - 1 enlisted.  
 199th WF, Wheeler AAF, Hawaii - 1 officer.  
 202nd WF, Otis ANGB, Mass. - 1 officer, 1 enlisted.  
 204th WF, McGuire AFB, N.J. - 1

207th WF, Indianapolis, Ind. - 1 officer, 3 enlisted.  
 208th WF, Minneapolis, Minn. - 1 officer.  
 209th WF, Austin, Texas - 1 officer.  
 210th WF, Ontario, Calif. - 1 officer.

For more information about any of these openings in the Guard, call Ted Houghton, ANGR/C/XOOSW, at DSN 278-8285 or (301) 836-8285.



Have you ever tracked a tropical system on your WSR-88D and discovered those innocent-looking rain showers packed quite a wallop?

You may find this article interesting if your area is prone to tropical systems, specifically remnants of a tropical depression, storm or hurricane.

The primary factor in reflectivity is scattering. The scattering of energy from targets back to the RDA, (back-scattering), is a function of four elements.

1. The size of the drop (diameter)
2. The state of the drop (liquid, solid, or mixture)
3. The shape of the drop (round, flat, etc..)
4. The concentration of the drops (number of drops per unit volume)

For you scientists, the math is:  $Z = \frac{Pr R^2}{C}$

(where Pr = power return signal or raw reflectivity; R = range; C = radar constant)

The important thing to understand is the equation is drop size biased. Why is this important? It means you should watch out for tropical systems which have lots of VERY tiny drops. The dBZ value you see will most likely be under-representative of the amount of water (hence strength) of the storm. This problem will also affect your VIL and Composite Reflectivity.

It is better to rely on the storm/echo top data in relation to the -22°C isotherm in differentiating a thunder-

storm from a rain shower.

If your tropical system happens be a hurricane you may want to get your unit radar committee to increase the max velocities to 90 or 100Kts. This will keep your velocities from being "maxed-out".

Not only is the reflectivity equation drop size biased, so is the rainfall rate equation (and your precip products). It takes sixty-four 1/8-inch drops to equal the reflectivity of one 1/4-inch drop!

The default reflectivity rainfall relationship equation is:  $Z = 300R^{1.4}$ . If you don't want to figure it for yourselves, we done it for you:

Z	dBZ	Rain Rate (inches/hr)
100	20	0.02
1000	30	0.09
10000	40	0.48
100000	50	2.50
316228	55	5.7
1000000	60	12.9

(the precip algorithm cuts off here)

So, be careful in dealing with tropical systems, they can really fool you. Call me if you have any questions or comments.

-- submitted by TSgt. Mike McAleenan, DSN 576-4721, ext. 227; e-mail: mcaleenm@hqaws.safb.af.mil

## Major selections

Bensman, Edward L.  
Berchoff, Donald  
Borelli, Elizabeth B.  
Borland, Thomas J.  
Callen, James E.  
Carlson, Meade W.  
Chalfant, Amy E.  
Citrone, Peter J.  
Dungry, Clifton E.  
Egentowich, John M.  
Engel, Gregory T.  
Frooninckx, Thomas B.  
George, William R.  
Goe, David W.  
Goetz, Paul C.  
Hobson, Dennis A.  
Johnson, Michael W.  
Kapel, Michael S.  
Kaster, Mark A.  
Kennedy, Thomas F., Jr.  
Komyathy, Suzanne L.  
Kutzman, Russell A.

Fi, McPherson, Ga.  
Scott AFB, Ill.  
Pentagon, Washington, D.C.  
Ramstein AB, Germany  
Yokota AB, Japan  
Washington, D.C.  
WPAFB, Ohio  
Peterson AFB, Colo.  
WPAFB, Ohio  
Stuttgart, Germany  
Tyndall AFB, Fla.  
Howard AFB, Panama  
Scott AFB, Ill.  
WPAFB, Ohio  
Silver Spring, Md.  
Scott AFB, Ill.  
Salt Lake City, Utah  
Hanscom AFB, Mass.  
Traben Trarbach, Germany  
Offutt AFB, Neb.  
USAF Academy, Colo.  
Paléhus Observatory, Hawaii



### Worldwide Weather Major Selection List

Lambert, Thomas E.  
Mahood, Thomas W.  
Mandy, Norman H.

Mlesheim, Germany  
Hurlbutt Field, Fla.  
Peterson AFB, Colo.

Martino, Martin R.  
McKinley, Eric J.  
Miglioranti, Michael J.  
Mitchell, Bruce G.  
Neff, Thomas D.  
Neu, Thomas J.  
Nguyen, Nhung D.  
Robinson, Alan D.  
Rotema, Daniel M.  
Seifers, Mark W.  
Sorzella, Markus S.  
Staley, Jim M.  
Tetzakis, Andrew J., Jr.  
Twigg, Richard D.  
Vadnais, Carolyn  
Vroman, Theodore T.  
Waldron, Kim M.  
Welch, Gary L.  
Wilson, James A.  
Winnon, Susan E.  
Witte, Kevin L.

Scott AFB, Colo.  
Langley AFB, Va.  
Keesler AFB, Miss.  
Kirtland AFB, N.M.  
Offutt AFB, Neb.  
WPAFB, Ohio  
Dress AFB, Texas  
McCormick AFB, Kan.  
Scott AFB, Ill.  
WPAFB, Ohio  
 Ft. Wainwright, Alaska  
Offutt AFB, Neb.  
Pentagon, Washington D.C.  
Tyndall AFB, Fla.  
Giebelstadt, Germany  
Offutt AFB, Neb.  
Scott AFB, Ill.  
Heidelberg, Germany  
Keesler AFB, Miss.  
Hanscom AFB, Mass.

## Staff Sergeant Selections

**A**scvedo, Frank III  
Albanese, Michael S.  
Armistead, Brady L.  
Ascarn, Arnold B.  
Ayres, Mark C.

**B**all, Jeffrey D.  
Bassett, Kimberly X.  
Bates, Gina R.  
Behnke, Ty J.  
Beitz, Guy H.  
Blanton, Settie D.  
Blescher, Robert P.  
Bourne, Kevin M.  
Burk, Randy J.

**C**ampara, Paul R.  
Campbell, Leslie K.  
Chavarria, Jose E.  
Christianson, Carl  
Clark, Julie A.  
Clinton, Gary A., Jr.  
Cornell, Mark A.  
Cornello, Barbara A.  
Cortez, Jose A.

**D**avis, Dak J.  
Dibble, Douglas L.  
Donahue, David M.

**E**rhardt, Carlomagno  
Erhart, Thomas J. Jr.  
Espinosa, Greg C.  
Evans, Westy M.

**F**inley, Roger L.

**G**arcia, Galo Jr.  
Garrett, Lionel V.  
Garrett, Robert D., Jr.  
Godin, Daniel W.  
Graves, Andrea  
Grosson, William E.

**H**ark, Jason M.  
Harpater, Dean A.  
Heath, Todd C.  
Hickerson, Cynthia  
Hullingsworth, Rich  
Huber, Alexander

**I**vey, Michael T.

**K**empfer, Joseph A.  
King, Robert E.  
Klinmann, Dwayne E.

**L**acayo, Gabriel A.



### Worldwide Weather Staff Sergeant Selections

Laforest, Leonard W.  
Lane, Thomas P.  
Lane, William A.  
Longmoe, Travis L.  
Lundberg, Curtis A.

**M**acartney, Jason D.  
Macmahon, Peter M.  
Marrin, Edward E. II  
Mattingly, Kevin P.  
Mcatee, Rachelle J.  
McCartney, Beverley  
Meehan, Krista A.

Miller, Michael J.  
Miller, Shannon D.  
Monroe, James R.  
Moreno, Anthony S.  
Mosley, Ruby D.

**N**atalie, Jan S.  
Nelson, Dan R.  
Nych, Scott A.

**O**leksa, Tricia A.  
Oliveira, Jason A. Sr.  
Opie, Wayne H.

**P**aska, Robert E. Jr.  
Patterson, Garry L.  
Plovman, Jason W.  
Richards, Ronald L.  
Ruan, Timothy E.  
Roberts, Steven M.

**S**chierer, Michael W.  
Schultz, Troy D.  
Shane, Donald L., Jr.  
Shapiro, Robin L.  
Shaw, Gary N.  
Smieja, Gerard D.  
Smith, Valerie A.  
Soost, Anthony G.  
Sumrall, Michael S.

**T**aylor, Lyle K.  
Tomasello, Charles  
Tucker, Daniel

**V**asko, Kelly D.  
Vicky, Mario B.  
Vu, Huy M.

**W**aldron, Victor L.  
Waugaman, Erik R.  
Weinman, Kathleen A.  
White, Gary R.  
White, Victoria L.  
Williams, Robert P.  
Wilson, Roland J., Jr.  
Wilson, William R.  
Witte, Carter E.  
Wood, Bostice G.  
Worekpetter, Alan J.

#### NON-WEATHER SSGT. SELECTIONS IN AWS

Albanese, Michael S. AFGWC  
Cahill, Glenn E. AFGWC  
Daviison, James K. AFGWC  
Ferguson, Kenneth A. AFGWC  
Hammmonds, Stephanie AFGWC  
Miller, Michael J. ETAC  
Pfeider, Scott H. AFGWC  
Rahes, Erik D. AFGWC  
Richardson, Chadwick L. AFGWC  
Seger, Mark D. AFGWC  
Valdez, Jesus S. AFGWC  
Zachary, Kurt A. AFGWC

## AWDS, continued from Page 21

also be fielding the remote briefing capability, with METSAT and NEXRAD ingest capability. By 1998 we predict that the AWDS configuration will look something like figure 1 (on page 19).

In addition to the P-I program, we've been working on adaptive maintenance changes. These are changes which make AWDS conform to new operational requirements such as TAF and observing code changes. Since we mentioned it, the new METAR code will be coming on line in October of 1996. This will be an in-

return release to the software. We will make some other minor improvements here, too. They include increasing the length of observation and TAF remarks fields, displaying both the record and intervening special observations on the FCF/FO Alternate Base Screens, and allowing an "INTER" condition to be added to a destination or alternate forecast on the pilot briefing form.

That's a brief look at where AWDS is going. Watch for future articles and messages updating AWDS improvements and

fielding schedule. Speaking of messages—has your message address changed?

Let HQ AWS/RMI (DSN 576-2962) know so we can update the AWDS Address Indicator Group. This way, you'll get all the latest AWDS information.

Contact Sergeant Bronsema at:  
HQ AWS/SYDF;  
DSN 576-3268, ext. 311;  
or by E-mail at  
"bronsemb@hqaws.safb.af.mil"



