

*Your Magazine for Air Force Weather*

# OBSERVER

June 1996

CHEYENNE MTN COMPLEX

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## The 21st Operations Support Squadron Weather Flight

**From inside the Mountain  
to the plains of Australia**

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## Headquarters Air Weather Service

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# SPOTLIGHT



The 21st Operations Support Squadron's Weather Flight maintains an incredible workload that stretches from inside a Colorado mountain to the outbacks of Australia...

... **Pages 12-15**

Cover Photo and photos on pages 12-15 courtesy of the 21st OSS OSW.

# Space Weather

## Exciting Times Lie Ahead For Air Force Weather

Here's a forecast for you based on climatology, persistence, and the latest understanding of solar-terrestrial effects: *the next solar maximum will occur from 1998-2002 and will be the most disruptive in the last 50 years.*

With hundreds of sunspots expected to cause severe space weather and critical warfighter impacts, Air Force Weather (AFW) has exciting times and challenges ahead as we support the "new high ground" of today's seamless battlespace.

Department of Defense operations rely more and more on space and ground systems that are prone to failure because of space weather.

This is serious business; space-weather damage is estimated at more than \$500 million annually. As ground, air, and space operations integrate to achieve battlespace dominance, and the exploitation of space for military (and

commercial) purposes accelerate, AFW must increase awareness of how space weather affects the warfighter.

No one anticipated space weather would affect DESERT STORM operations. Some still do not realize the effects it had. Space weather disturbances not only caused lost satellite communication (SATCOM) transmissions, but also seriously degraded space-based reconnaissance — clear cases of weather's impacts on the new "high ground."

Several factors are coming together to cause a new dimension of vulnerability for DoD forces. The factors include:

- Increased dependence on space systems for communication, navigation,

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

reconnaissance, and surveillance;

- Proliferation of space platforms;
- Increased DoD use of commercial off-the-shelf systems;
- Exploitation of electrically sensitive technology;
- Uncertainty of counter-space threats; and
- Increased severe space weather during solar maximum.

Our challenge is to observe and forecast the space weather to help mitigate this new vulnerability.

**"This is serious business; space-weather damage is estimated at more than \$500 million annually. AFW must increase awareness of how space weather affects the warfighter."**  
*Brig. Gen. Thomas J. Lennon*  
Air Force Director of Weather



For example, it may be obvious when radio-frequency interference occurs on communication nets or when satellites experience unexpected behavior, but characterizing the interference or behavior as hostile or non-hostile (i.e., due to space weather) is critical.

Likewise, knowing when space weather affects our adversaries is important. Providing our forces with timely and accurate space weather information gains a battlespace advantage.

The challenges are enormous. The volume of space weather through which our space systems operate is eight billion times greater than the volume of



space containing our terrestrial weather. This is a young science and is still evolving—we don't know everything, and new discoveries occur frequently.

Interest in space weather is spreading rapidly. The newly formed National Space Weather Program, in which AFW plays a leading role, brings together space weather experts and national agencies to improve space weather knowledge and support capability. These efforts are paying off already—the National Science Foundation made more than \$1 million available for space weather research. Senior DoD leadership has shown great interest in how space weather affects battlespace success. AFW must lead the way.

Who should care about space weather? Anyone briefing aircrews or ground troops using high frequency communications; anyone planning an operation that includes an IIF network; anyone supporting forces using single-frequency Global Positioning Satellite receivers; anyone supporting communication units using SATCOM; anyone co-located with space or missile defense radars; and of course, anyone supporting units which perform or rely on space-based operations.

Everyone on the AFW team should care and become involved. Waiting for the warfighter to be affected during a conflict is too late.

Is the sky falling? No, it's not. It's full of weather -- some we can see, and some we cannot; some we should anticipate, and some that hasn't been discovered. Space weather is the key to tomorrow's warfare.

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

# Progress Report

## 'AFW People A Constant Source Of Pride'

An Air Weather Service (AWS) officer recently asked me if I was satisfied with the progress made during my first year as AWS Commander. It's a great question. My honest answer: Yes and No.

AWS people and their comrades in the broader Air Force Weather (AFW) community have achieved some stunning successes. On the other hand, not everything worked like clockwork. Sometimes it seemed like the old story of trying to teach a pig to sing ... *"It frustrates you and annoys the pig."*

The great people of AFW have been a constant source of pride and inspiration to me during this first year. You all produced miraculous results despite scarce resources, daunting technical challenges, and a crushing task saturation.

The examples are too numerous to mention, but here are just a few.

Two flawless Automated Weather Distribution System (AWDS) software releases made major improvements in AFW's primary tool and won universal approval

from base and post weather station users. Future upgrades due within the year are even more exciting.

The reorganized AWS Aerospace Sciences function moved out quickly to chart exceptional initiatives for Instructor and Command Meteorologists. They also completed work on a truly outstanding product called MetTIPS and sent it to every weather unit. Later, with expert help from Senior Airman Jerome Hernandez from Altus AFB, Okla., AWS built a similar tool for

by Col. Joseph D. Dushan  
Commander  
Air Weather Service

weather observers.

You've all heard about the great work Air Force Global Weather Central (AFGWC) is doing with regionalization. You should also appreciate their accomplishment in moving from the Cray XMP supercomputer to an IBM Scalable Power 2 (SP2) system. It is a major step towards converting AFGWC to an open systems architecture. AFGWC project manager 1st Lt. Jean Havens and her team pulled it off with no impact to field users.

**"AWS people and their comrades in the broader Air Force Weather (AFW) community have achieved some stunning successes. On the other hand, not everything worked like clockwork."**



Col. Joseph D. Dushan  
Commander, Air Weather Service

The Air Force Combat Climatology Center did equally magnificent work with their 90-day extended range products for contingency areas and a series of exceptional CD-ROM climatology packages. Capt. Brian Beitler was just one of the heroes in this initiative.

The Back to Basics initiative got off to a fast start with tremendous leadership from Capt. Tony Eckel, Yokota AB, Japan, and Capt. Mark Kaster, Grafenwoehr, Germany. They are both teaching fundamen-



tal skills to their units and guiding their weather teams to improved weather support capabilities.

It's not a surprise to learn that morale and esprit de corps in their units is soaring, too. I believe their dedication, mission focus, and technical leadership set the example for AFW.

On the down side, we haven't made as much progress as I would like on rebuilding the AFW functional team. Many still grumble about all sorts of things. Dealing with this "negative energy" costs time and resources, which are in short supply.

As an AFW community, we need to devote more attention to mentoring younger comrades. Too often, a "Woe is me" mentality replaces the application of positive, professional leadership on the spot.

A lieutenant called to tell us his colleagues said there was no future in AFW. He asked about cross training or early separation options.

In fact, this officer had already been selected to the Air Force Institute of Technology (AFIT) program and had boundless opportunities ahead. But, "friends" had undermined his confidence in the future.

We need to have the guts, discipline, loyalty, and functional perspective to stay the course. Too many of us give lip service to AFW and the warfighting focus, then turn off AWDS in favor of nonstandard, unmaintainable, off-the-shelf, com-

See **PROGRESS**  
continued on Page 22

# Is Your Message Clear?

## Consistency Is Key In Rating Your People

*(Now from Chief Master Sgt. Jim Hoy, Air Force Superintendent of Weather. Here's another view of leadership, in the vein of "Stay in your Lane" printed in the Observer three months ago, Master Sgt. Donna Marie Coleman's duties include the "first shirt" for the 617th Weather Squadron, Heidelberg, Germany. There are some very true words here.)*

As a First Sergeant with almost seven years experience, I have easily reviewed over 10,000 personnel actions which include performance reports, decorations, and award nominations.

Even after all these years, I am still amazed when I review supervisory actions that have "hidden" agendas, send confusing messages, or just plain don't make sense.

Most supervisory personnel actions also include suggested indorsements for the commander, who must rely on good supervisor judgment to sign appropriate recommendations.

Unfortunately, as First Sergeant, this places me in the uncomfortable position of having to point out "delicately" to supervisors that their inconsistencies affect not only their own credibility as leaders and managers, but the commander's as well.

In trying to understand supervisor reluctance to "tell it like it is," I've come to learn that no one (including myself) wants to be labeled a "bad guy" when making the tough, career-affecting, and sometimes career-ending decisions.

Being a boss, a supervisor, a leader of men and women, is a sought-after position until it's nec-

by Master Sgt. Donna Marie Coleman  
First Sergeant, 617th ASOG  
Heidelberg, Germany

essary to take adverse action. Then we realize maybe it's not such an easy job after all.

In many cases supervisors don't realize how one administrative action relates to another. Four common inconsistencies I've observed are:

**"Supervisors at all levels have a responsibility not only to separate truly outstanding airmen from everyone else, but to identify and document substandard or inappropriate behaviors as well."**

Master Sgt. Donna Marie Coleman  
First Sergeant, 617th ASOG

- Supervisors who don't submit their people for quarterly award recognition because they tell me they have no one who deserves it, yet I'll have a basket full of "5" EPRs to review on these same "undeserving" people;

- Supervisors who submit individuals for end-of-tour decorations, yet when I review their EPRs, they have one or more "3" rated EPRs during the period of the proposed decoration, or had a period during their tour which included an Unfavorable Information File (UIF);

- Supervisors who submit individuals with UIFs for quarterly awards (yes, it happens!);

- Supervisors who give firewall "5" EPRs to individuals who had a UIF during part of the reporting period.

Let's talk about this. First, how



"Choose The Weather For Battle"

can a workcenter full of people who don't work hard enough to deserve any recognition, deserve "5" EPRs and immediate promotion ahead of their contemporaries?

Second, we earn paychecks for doing our jobs. We earn awards and decorations for meritorious service or heroic acts, service beyond the expected or minimum standard.

In addition, the service for the ENTIRE period of the recommended award dates must have been honorable. Possession of an Unfavorable Information File is NOT honorable service, neither is mediocre or average performance justification for a decoration.

Third, what impressions do coworkers get when their supervisor nominates a person with an unfavorable information file as the person in the shop most worthy of recognition?

Fourth, if you are giving "5" ratings to individuals with UIFs, how can you justify giving lower ratings to individuals who had NO adverse actions during their reporting period?

Supervisors tread on dangerous ground when they allow their actions to imply that everyone earns the same rewards and recognition, regardless of individual effort.

Supervisors at all levels have a responsibility not only to separate truly outstanding airmen from everyone else, but to identify and document substandard or inappro-

See MESSAGE,  
continued on Page 22

# Observations Are Crucial

## Air Force Weather Depends On A Solid Program

Sometimes, it seems we often forget to give the weather observer and the art of observing its fair share of glory. Observing often slides into the background of weather operations as we attend to what appears to be a more important task, which is forecasting. This is not a good thing for Air Force Weather (AFW).

Our "Back to Basics" program focuses attention on building a good, solid observing program, because observing is the foundation of weather operations.

The forecasters in the base weather stations are well aware of this fact. When it's time to produce a forecast, issue a warning, or brief an aircrew to a remote airfield, the forecasters will tell you if they are missing an observation.

That's been a consistent comment from the participants of the annual forecasting competitions, FORECAST CHALLENGE. Each year we have heard some variation of: "If this were a real situation, I would have an observation, or I could look outside before issuing my forecast."

While that may or may not be true, the point is they know what they are missing. Observations get forecasters started and continually validate their thoughts when they are analyzing and forecasting. The observation is usually the first heads-up signal the forecaster gets whether or not his reasoning and forecast are on track.

That's why it's important to communicate during a shift, and it's more than telling the forecaster what the observation is. It's the forecaster telling the apprentice or analyst what the forecast is. It's the forecaster going outside and

by CMSgt. Robert Brooks  
Chief, Weather Operations  
Air Force Directorate of Weather

acting as a mentor.

That takes time, but it's time well spent. It helps immediately because there is nothing quite like seeing the weather for yourself. Down the road, apprentices and analysts make fewer errors, learn faster, and are ready to assume additional responsibility sooner.

**"An observing program is more than merely taking and recording a surface observation every hour. It is the foundation for current and future AFW operations."**



**Chief Master Sgt. Robert Brooks**  
Chief, Weather Operations  
Air Force Directorate of Weather

Observations start and fuel the machinery that drives worldwide weather operations. At weather centrals and forecast units, observations generate numerical weather prediction models and validate how well those models are working.

Centrals and forecast units also issue forecasts for classified operations. Your observation may be a deciding factor in developing a forecast or making a go/no-go decision for a special mission or initial projection of American military power.

There is just not enough room here to list all the reasons for having a solid observing program, but let's elaborate on one final area: forecast verification.



"Choose The Weather For Battle"

Observations play a key role in evaluating how well we do our job. That allows for more informed decisions — at all levels of the Air Force.

At the weather unit, one of the more important decisions relates to training. By keeping statistics on unit and individual performance, the leaders at the weather station can design training to meet specific needs. This means overall improvement because it's not a "one-size-fits-all" solution. This solution is made to fit specific needs at specific times in specific situations.

How do we keep focused on the importance of observing? "Back to Basics" can help in two major ways. First, it gives senior NCOs more time to work directly with new troops to develop a solid initial skills base. Second, formal training prepares 3- and 5-skill levels to be analysts. Units then build on that through on-the-job training, which provides an opportunity to grow and be involved.

There is more to "Back To Basics" than job enrichment. There is a chance for apprentices and analysts to experience the connection between the sensible weather they see and the abstract properties of the atmosphere that they analyze on a piece of paper or computer screen. They can grasp the relationship between lines on a chart and weather outside, and develop practical insights into the art of forecasting. They gain valuable experience and see how their observations fit in.

An observing program is more than merely taking and recording a surface observation every hour. It is the foundation for current and future AFW operations.

Have questions or comments about the new "Back To Basics" initiatives? Contact Chief Brooks at DSN 426-4390, CMCL (703) 696-4390, or by electronic mail at: "rbrooks@pafosu3.hq.af.mil".

# Advanced Academic Degrees

## AFIT Degrees Can Open Doors Of Opportunity



by Maj. John D. Murphy  
Air Weather Service  
Chief of Personnel

Advanced academic degrees (AADs) can open many doors of opportunity for Air Force Weather (AFW) officers.

An AAD allows you to learn while enhancing the weather business. That opportunity could be developing and refining theater scale climatologies or forecast models. It could be leading the efforts to develop automated weather satellite forecast models/databases. It could even include planning the future of AFW support ... the opportunities are nearly endless.

Officers with operational experience and technical expertise help to work complex policy, planning, acquisition, and technology insertion issues that affect the way we do business now and in the future.

The largest selection of positions requiring an AAD is at the weather centers (Air Force Global Weather Central, Air Force Combat Climatology Center, Joint Typhoon Warning Center, and the 50th Weather Squadron). Additional opportunities exist with the major commands, at Air Weather Service as a staff officer, and in support to National Program customers as staff meteorologists.

So, how do you get an advanced academic degree?

When you reach the four- to six-year point in your career, request an academic evaluation from the Air Force Institute of Technology (The form letter is in AF-CAT 36-2223. Your base education center will have it). After receiving your AFIT eligibility and notifying the Air Force Personnel Center (AFPC) of your desires, you'll be notified of your selection to AFIT in the following year.

The requirements for selection include:

- Bachelor of Science Degree in Meteorology (or 24 credit hours),

- Mathematics through ordinary differential equations,

- A 2.8 cumulative grade point average (strong in math and science).

- Graduate Record Examination (GRE) scores taken within the last five years (500V/600Q).

Notification of eligibility usually occurs in the October-December timeframe. Depending on your specialty (e.g., dynamic meteorology, physical meteorology, solar and space sciences, etc.), you'll be notified of attending AFIT in-residence at Wright-Patterson AFB, Ohio, or at a civilian university like Penn State, Florida State, Colorado State, Texas A&M, etc. -- this normally occurs between January and March.

The chart accompanying this article (*see right*) illustrates how 1996 quotas were distributed between civilian universities (CI) and in-residence (ENP):

What should be your focus at AFIT?

First and foremost, you must fin-

ish your degree requirements. Next, finish on time. The Air Force has invested a great deal of time and money in your AFIT assignment ... if you don't finish all your degree requirements, it makes a less than positive statement about your performance during the AFIT tour.

An AFIT tour can be one of the best assignments you'll ever have. If you do everything in your power to successfully complete all degree requirements, it becomes a positive feature of your record and makes you competitive for a multitude of excellent job opportunities.

### Quotas for 1996

| Specialty           | CI    | ENP  | Degree |
|---------------------|-------|------|--------|
| 8FAC (NWP)          | 1     | 0    | MS     |
| 8FAY (Dynamics)     | 1 PhD | 2 MS | PhD/MS |
| 8FBA (Ap Climo)     | 1     | 0    | MS     |
| 8FBY (Climo)        | 2     | 0    | MS     |
| 8FCY (Instruments)  | 1     | 0    | MS     |
| 8FDY (SESS)         | 0     | 4    | MS     |
| 8FEG (Radar)        | 1     | 0    | MS     |
| 8FEI (Tropical)     | 2     | 0    | MS     |
| 8FEY (Anal/Fcst)    | 4     | 4    | MS     |
| 8FFB (Acoustic)     | 1     | 0    | MS     |
| 8FFD (Cld/Precip)   | 1     | 0    | MS     |
| 8FFE (Rad Transfer) | 0     | 2    | MS     |
| 8FFY (Physical)     | 1 PhD | 1 MS | PhD/MS |
| 8FGD (Int Graphics) | 0     | 2    | MS     |
| 8FGE (Software)     | 2     | 0    | MS     |
| 8FYY (General)      | 0     | 4    | MS     |

TOTAL: 18 Civilian Institution AADs  
19 AFIT In-residence AADs

If you have specific career questions, suggestions for future articles, or issues which you need answered, my mailing address is: Maj. John Murphy, HQ Air Weather Service, Director of Personnel (AWS/RMP), 102 West Losey St., Room 105, Scott AFB IL 62225-5206 or DSN 576-4895, ext. 344, or E-Mail "murphyj@hqaws.safb.af.mil".

# OPERATION OVERLORD

## Behind The Weather Operations For The D-Day Invasion

The primary focus of Air Force Weather is anticipating and exploiting the weather. As a core mission of war, weather and its exploitation is essential to battlespace control and key to obtaining battlefield advantages.

How can we exploit weather so the combat commander can choose the best conditions for battle?

One of the best historical examples illustrating this focus was weather planning for OPERATION OVERLORD, the D-Day Invasion of Europe during World War II.

Even now, 52 years after the June 6, 1944 assault, we still acknowledge the D-Day forecast as perhaps the most famous weather forecast in history, providing the go/no-go basis that turned the tide of ground operations. The key was that Allied leadership understood the importance of exploiting weather

by Maj. Gary Grigorian  
Resources Division  
Manpower And Requirements  
Air Force Directorate of Weather

and established a cohesive observing and forecasting infrastructure to seize the initiative for the invasion.

Gen. Dwight D. Eisenhower, the Supreme Allied Commander, assembled an enormous force in preparation for the battle. As history's largest amphibious operation, 3 million troops were involved in a carefully sequenced air, sea, and ground combat plan.

After an initial bombing campaign and night parachute drop of American and British Airborne divisions, Gen. Omar Bradley's First Army landed on the Normandy coast at Omaha Beach. Some 4,000 ships and landing crafts carried troops and material across the En-

glish Channel, escorted by 600 warships.

General Eisenhower and other allied leaders were well aware of the dangers in not knowing the weather for battle.

Because of this appreciation and awareness, a special weather team was assembled and integrated early on throughout OVERLORD planning. Royal Air Force Group Captain (equivalent of a colonel) James Stagg and Army Air Forces Col. (later lieutenant general) Don Yates were selected to be



AWS Historical Photo

Col. Don Yates

Eisenhower's exclusive weather team -- providing the ultimate forecast to the Supreme Commander and his Staff.

Besides regular staff briefings, Stagg and Yates presided over a vast weather infrastructure consisting of American and British meteorologists and forecasters operating from three weather centrals aligned with ground, air, and naval component commanders. As senior weather force leaders, Yates and Stagg were responsible, among other things, for weather service standardization— notably, that all commands received the same forecast.

The OVERLORD stakes were high. Although casualties were expected, a bad "go" decision, based on a flawed weather forecast, could have been disastrous. General Eisenhower felt so strongly about forecast quality that he directed his weather team practice their ability to forecast for five-day periods, including assessments of their confidence in those forecasts. This was necessary to familiarize the staff with weather service capabilities and limitations. Additionally, General Eisenhower wanted his weather people to verify their forecasts, holding them accountable for getting it right. Yates and Stagg readily accepted this responsibility, holding their people,



Scanned from original charts, courtesy of AWS History Office

The most important weather forecast in history -- June 6, 1944: the D-Day Invasion



and ultimately themselves, accountable for their forecasts.

Due to OVERLORD's magnitude, forecasting requirements were stringent — accurate cloud, wind, sea swell, and visibility conditions were essential. Weather impacts were critical and complex. Because individual missions required tailored weather applications, meteorologists had to know how weather affected specific operations:

- There could be no prolonged period of high winds which produced sea swells heavy enough to hamper landing craft.
- Allied pilots needed clear skies to visually acquire bombing targets.
- Paratroopers wanted cloudy skies to protect them from German aircraft.
- Amphibious landings had to be made at low tide to avoid German blockades.
- The allies needed at least three successive good weather days for resupply.

Colonel Yates and Group Captain Stagg faced a daunting task. Observations, especially from critical upstream areas, were sparse and frequently of questionable accuracy. There were no computer forecast models or weather satellite imagery to use as forecasting tools.

Every bit of weather information was

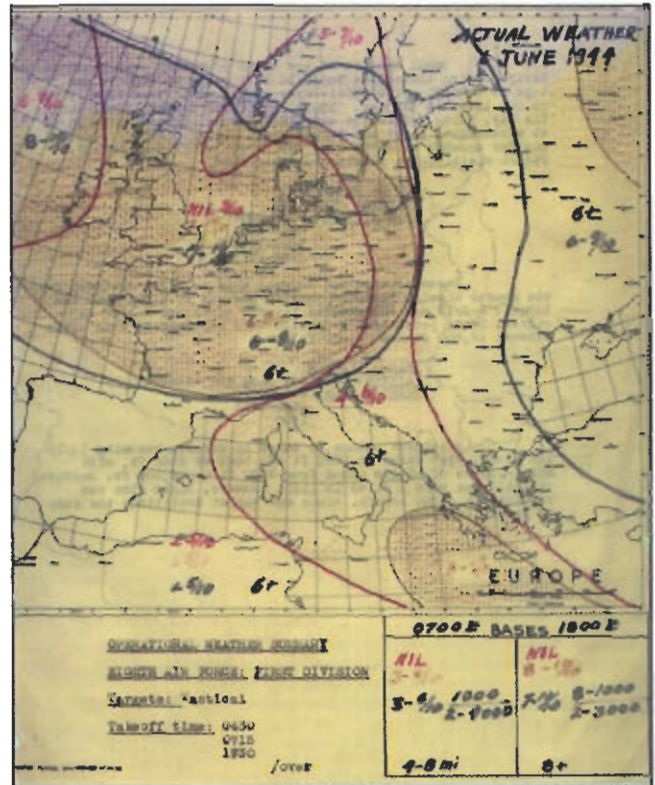
As the June 5 invasion date drew near, General Eisenhower increased the frequency and duration of weather briefings and updates, some lasting nearly an hour.

By Friday, June 2, the weather picture was bleak: a series of low pressure centers and associated frontal systems, unusual for June in the North Atlantic and English Channel, were affecting the invasion area with mission limiting cloud cover, poor visibility, and high winds.

General Eisenhower was faced with a potential dilemma — if these poor weather conditions persisted, OVERLORD would have to wait till June 19, the next low tide. On Sunday morning, June 4 Eisenhower postponed the invasion 24 hours, from June 5 to June 6, based on a forecast of unacceptable clouds, visibilities, winds, and seas. OVERLORD was now driven by weather.

By Sunday afternoon, June 4, however, Yates, Stagg and the other units detected a change. The next low pressure center forecast to affect the invasion area had intensified, subsequently slowing its eastward movement and allowing for a 24-36 hour period of improved conditions—not ideal but good enough for OVERLORD to proceed.

General Eisenhower, after hearing the weather briefing and consulting with his senior staff (comprised of Air Chief Marshals Tedder and Leigh-Mallory, Field Marshal Montgomery and General Bedell Smith), made the "go" decision



The actual weather observation for June 6, 1944

for June 6, a decision based solely on the weather forecast. And the rest is history.

Weather people not only influenced OVERLORD planning, but also fought side by side with the actual assault forces. Elements of the 21st Weather Squadron, commanded by Col. (later Lieutenant General) Thomas Moorman Sr., jumped with the 82nd and 101st Airborne Divisions, five hours prior to invasion, to provide weather observations.

These weather observers, as part of the assault force, deployed behind German lines to provide Allied fighter pilots target weather and to relay their observations to command ships offshore.

Weather teams were also assigned to air coordination units to advise airborne and ground force division commanders, through tailored applications, on weather effects to battle plans.

What did OVERLORD reveal about anticipating and exploiting the weather

**"The OVERLORD stakes were high. Although casualties were expected, a bad "go" decision, based on a flawed weather forecast, could have been disastrous."**

**Maj. Gary Grigorian**  
**Air Force Directorate of Weather**



painstakingly analyzed and fused into a weather picture. Allied meteorologists and forecasters relied on and used fundamental analysis and forecasting techniques to depict the "ground truth" location, movement, and development of weather systems.

They also used climatology as a key tool to forecast how weather patterns would change over time.

June 1996

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## AIR FORCE MERITORIOUS SERVICE MEDAL

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Senior Airman Todd Lerico, 20th ASOS, E Flt., Fort Drum, N.Y.

## COMBAT READINESS MEDAL

Tech. Sgt. Sidney D. Mallard, 57th OSS/OSW, Nellis AFB, Nev.

## JOINT MERITORIOUS UNIT AWARD

Capt. Scott Saul, 57th OSS/OSW, Nellis AFB, Nev.

## ARMED FORCES EXPEDITIONARY MEDAL

Senior Airman Bradford N. Godwin, 14th OSS/DOW, Columbus AFB, Miss.

Airman 1st Class Stephen J. Moran, 14th OSS/DOW, Columbus AFB, Miss.

## SOUTHWEST ASIA MEDAL

Senior Airman Bradford N. Godwin, 14th OSS/DOW, Columbus AFB, Miss.

## AIR FORCE OUTSTANDING UNIT AWARD

121st Weather Flight, Andrews AFB, Md. (ANG)

156th Weather Flight, Charlotte, N.C. (ANG)

202nd Weather Flight, Otis ANGB, Mass. (ANG)



## PROMOTIONS

Timothy J. Gump, 165th Weather Flight, Louisville, Ky. (ANG)

Robert Thorp, 45th WS, Patrick AFB, Fla.



Jon C. Currick, HQ USAF/DOW, Ramstein AB, Germany

Gregory T. Engel, 325th OSS/OSW, Tyndall AFB, Fla.



Kimberly J. Castillo, 4th OSS/OSW, Seymour Johnson AFB, N.C.

Anthony Watkins, 325th OSS/OSW, Tyndall AFB, Fla.

Michael Arakelian, 131st WF, Westfield, Mass. (ANG)

James M. Guffy, Jr., 154th WF, Little Rock, Ark. (ANG)



Nancy Brooks, 45th WS, Patrick AFB, Fla.



Robert F. DuFranc, 47th OSS/OSW, Laughlin AFB, Texas



Todd Barrett, Det. 1, 617th WS, Bad Kreuznach, Germany

David L. Tucker II, 146th WF, Pittsburgh, Pa. (ANG)



Michael Butrovich, Det. 2, 607th WS, Camp Humphreys, Korea

Andrew Barhitta, 325th OSS/OSW, Tyndall AFB, Fla.

Arthur L. Roye, 121st WF, Andrews AFB, Md. (ANG)



Jason Hark, Det. 2, 607th WS, Camp Humphreys, Korea

Joseph A. Kempfer, 27th OSS/OSW, Cannon AFB, N.M.

Stacy K. Harrison, 140th WF, Willow Grove, Pa. (ANG)

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

Gary B. Shvia, 202nd WF, Otis ANGB, Mass. (ANG)

Debra L. Stone, 156th WF, Charlotte, N.C. (ANG)



Chris Bruce, (below the zone), 23rd OSS/OSW, Pope AFB, N.C.

Joseph E. Carder, 25th ASOS, Wheeler AAF, Hawaii

Todd M. Carballo, 122nd WF, New Orleans, La. (ANG)

Joseph D. Sonier, 122nd WF, New Orleans, La. (ANG)

Feruh Yazicioglu, 121st WF, Andrews AFB, Md. (ANG)



Kelly Chrivia, OL-A, 3rd WS, Fort Sill, Okla.

Anthony Colavecchio, OL-A, 3rd WS, Fort Sill, Okla.

Molly Gillespie, OL-A, 3rd WS, Fort Sill, Okla.

Joseph W. Cannon, 47th OSS/OSW, Laughlin AFB, Texas

Angela Gregoire, 27th OSS/OSW, Cannon AFB, N.M.

Rachel Ramos, 27th OSS/OSW, Cannon AFB, N.M.



Jason B. McNulty, Det. 1, 617th WS, Bad Kreuznach, Germany

Rev. G. Ames, 325th OSS/OSW, Tyndall AFB, Fla.

Stephanie M. Robson, 146th WF, Pittsburgh, Pa. (ANG)

Bertrand B. Sausse, 122nd WF, New Orleans, La. (ANG)

## HAILS AND FAREWELLS

Lt. Col. Robert A. Frederick — to U.S. Space Command, Peterson AFB, Colo., from HQ USAF/DOW, Ramstein AB, Germany

Senior Master Sgt. Leonard Czepliel — to 7th OSS/OSW, McClellan AFB, Calif., from HQ USAF/DOW, Ramstein AB, Germany

1st Lt. Kenneth W. Browning — to HQ USAF/DOW, Ramstein AB, Germany, from 36th OSS/OSW, Anderson AB, Guam

Senior Master Sgt. Charles J. Evans, Jr. — to HQ USAF/DOW, Ramstein AB, Germany, from 7th OSS/OSW, McClellan AFB, Calif.

Staff Sgt. Daryl L. Pegram — to OL-C, 18th WS, Fort Knox, Ky., from Lajes AB, Azores

Airman Nathan P. Anderson — to OL-C, 18th WS, Fort Knox, Ky., from Keesler AFB, Miss.

Staff Sgt. Marston Johnston — to OL-A, 3rd WS, Fort Sill, Okla., from RAF Mildenhall, U.K.

Master Sgt. Todd Barrett — to Det. 1, 617th WS, Bad Kreuznach, Germany, from 49th OSS/OSW, Holloman AFB, N.M.

Staff Sgt. Willie Chisholm III — to Det. 1, 617th WS, Bad Kreuznach, Germany, from Misawa AB, Japan

Staff Sgt. Jeff Maytes — to Det. 1, 617th WS, Bad Kreuznach, Germany, from 49th OSS/OSW, Holloman AFB, N.M.

Senior Airman Aaron L. Stephens — to 47th OSS/OSW, Laughlin AFB, Texas, from Keesler AFB, Miss.

Airman Patrick Holter — to 47th OSS/OSW, Laughlin AFB, Texas, from Keesler AFB, Miss.

Tech. Sgt. Randy Nielson — to Det. 2, 607th WS, Camp Humphreys, Korea, from Edwards AFB, Calif.

Airman 1st Class Yarni Azeltine — to Det. 2, 607th WS, Camp Humphreys, Korea, from Fort Park, La.

Tech. Sgt. Keith Wagner — to Fort McPherson, Ga., from Det. 2, 607th WS, Camp Humphreys, Korea

Staff Sgt. Paul Lucas — to OL-B, Det. 1, 607th WS, Camp Casey, Korea, from Peterson AFB, Colo.

Senior Airman Joseph Turner — to Keesler AFB, Miss., from OL-B, Det. 1, 607th WS, Camp Casey, Korea

Senior Airman Jennifer Carencia — to Det. 1, 607th WS, Camp Red Cloud, Korea, from Seymour Johnson AFB, N.C.

Airman 1st Class Isabelle Aikins — to Det. 1, 607th WS, Camp Red Cloud, Korea, from Ellsworth AFB, S.D.

Master Sgt. Toni Humphrey — to Det. 1, 607th WS, Camp Red Cloud, Korea, from Tinker AFB, Okla.

Airman 1st Class Brian Williams — to Det. 1, 607th WS, Camp Red Cloud, Korea, from Fort Hood, Texas

Master Sgt. Donald Carey — to Scott AFB, Ill., from Det. 1, 607th WS, Camp Red Cloud, Korea

Senior Airman Otis Pless — to Keesler AFB, Miss., from Det. 1, 607th WS, Camp Red Cloud, Korea

Airman 1st Class Jeffrey Cerza — to OL-C, Det. 1, 607th WS, Camp Stanton, Korea, from Robins AFB, Ga.

Airman 1st Class Gary Porter — to OL-C, Det. 1, 607th WS, Camp Stanton, Korea, from Fort Carson, Colo.

Senior Airman Matthew Timmermann — to Camp Walker, Korea, from 4th OSS/OSW, Seymour Johnson AFB, N.C.

Airman 1st Class Christina Timmermann — to Camp Stanley, Korea, from 4th OSS/OSW, Seymour Johnson AFB, N.C.

Senior Airman JoAnna Broadway — to 4th OSS/OSW, Seymour Johnson AFB, N.C., from Keesler AFB, Miss.

Airman 1st Class Stephen L. Fisher — to 4th OSS/OSW, Seymour Johnson AFB, N.C., from Keesler AFB, Miss.

1st Lt. Joseph Falter — to 20th ASOS, E Ft., Fort Drum, N.Y., from Howard AFB, Panama  
 Master Sgt. Steven Adams — to 20th ASOS, E Ft., Fort Drum, N.Y., from Hunter AAF, Ga.  
 Tech. Sgt. Darren Obermeyer — to 20th ASOS, E Ft., Fort Drum, N.Y., from Howard AFB, Panama  
 Airman 1st Class Cynthia Marsh — to 20th ASOS, E Ft., Fort Drum, N.Y., from Keesler AFB, Miss.  
 Staff Sgt. Suzanne Miller — to Camp Red Cloud, Korea, from 20th ASOS, E Ft., Fort Drum, N.Y.  
 Senior Airman Rickie Davis — to Keesler AFB, Miss., from 20th ASOS, E Ft., Fort Drum, N.Y.  
 Senior Airman Michael A. Weiss — to 15th ASOS, Hunter AAF, Ga., from Yokota AB, Japan  
 Airman Brian Keith — to 45th WS, Patrick AFB, Fla., from Keesler AFB, Miss.  
 Capt. Tim Rollins — to Pope AFB, N.C., from 45th WS, Patrick AFB, Fla.  
 Capt. Sabrina Tajeron — to Ramstein AB, Germany, from 45th WS, Patrick AFB, Fla.  
 Airman 1st Class Patrick Berry — to Keesler AFB, Miss., from 45th WS, Patrick AFB, Fla.

## REENLISTMENTS

Senior Master Sgt. Stephen L. Rosemier, OL-A, 3rd WS, Fort Sill, Okla.  
 Tech. Sgt. Mona Mikkelsen, OL-A, 3rd WS, Fort Sill, Okla.  
 Senior Airman Adam Lauridsen, OL-A, 3rd WS, Fort Sill, Okla.  
 Master Sgt. William C. Denny, 4th OSS/OSW, Seymour Johnson AFB, N.C.

## SEPARATIONS

Capt. Dan B. Mundell, HQ USAF/DOW, Ramstein AB, Germany  
 Staff Sgt. Shannon Miller, 20th ASOS, E Ft., Fort Drum, N.Y.  
 Senior Airman Carl Froelick, 20th ASOS, E Ft., Fort Drum, N.Y.

## RETIREMENTS

Capt. Carl A. Batts, HQ USAF/DOW, Ramstein AB, Germany  
 Capt. Nemenlo M. Quintanella, 57th OSS/OSW, Nellis AFB, Nev.

## EDUCATION

### Civilian Personnel Management Course

Master Sgt. Glen W. Hoffman, OL-C, 18th WS, Fort Knox, Ky.

### Weather Specialist Course

Airman Nathan P. Anderson, OL-C, 18th WS, Fort Knox, Ky. (honor graduate)  
 Airman 1st Class Katherine M. Anholt, Det. 1, 617th WS, Bad Kreuznach, Germany  
 Airman 1st Class Joel C. Decker, Det. 1, 617th WS, Bad Kreuznach, Germany  
 Airman Jason B. McNulty, Det. 1, 617th WS, Bad Kreuznach, Germany

### Career Development Course completions

Airman 1st Class Jesse W. Naylor, OL-C, 18th WS, Fort Knox, Ky. (scored 91)  
 Airman 1st Class James R. Norton, OL-C, 18th WS, Fort Knox, Ky. (scored 90)

### Weather Technician Course Graduates (Class 950814)

Senior Airman Matthew P. Covey — to New Jersey Air National Guard  
 Senior Airman Marty O. Gameon — to Hurlburt Field, Fla.  
 Airman 1st Class Tanner S. Helmers — to Fort Bragg, N.C.  
 Senior Airman Michael F. Kruekel — to Reese AFB, Texas  
 Senior Airman Nathaniel L. Lasseter — to Altus AFB, Okla.  
 Senior Airman Michael W. Murray — to Ellsworth AFB, S.D.  
 Airman 1st Class Ralph A. Parker — to Maxwell AFB, Ala.  
 Airman 1st Class Sarah L. Stephens — to Offutt AFB, Neb.  
 Senior Airman Charles W. Perry — to Offutt AFB, Neb.  
 Senior Airman Tommy L. Teague — to Grand Forks AFB, N.D.  
 Staff Sgt. Lisa E. Waldenberry — to Wisconsin ANG  
 Airman Carl D. Zavattieri — to Mountain Home AFB, Idaho

### Weather Apprentice Course Graduates (Class 960318)

Tech. Sgt. Yasin Muhamamad  
 Airman Mark Hendrickson (honor graduate)  
 Airman 1st Class Gordon Clark  
 Airman 1st Class Michael Reilly  
 Airman 1st Class Eric Solomayor  
 Airman Collen Covert  
 Airman Ashley Mahmood  
 Airman Joshua Murray  
 Airman James Page  
 Airman Steven Stevens  
 Airman Joseph Taylor

### Senior NCO Academy

Senior Master Sgt. Scott D. Weber, 341st OSS/SOW, Malmstrom AFB, Mont.

### NCO Academy

Tech. Sgt. Wes Guinn, 4th OSS/OSW, Seymour Johnson AFB, N.C.  
 Tech. Sgt. Sylvia V. Poole, 15th ASOS, Hunter AAF, Ga.

### Airman Leadership School

Senior Airman Michael Biefles, 437th OSS/OSW, Charleston AFB, S.C.  
 Senior Airman Robert E. Toner III, 341st OSS/SOW, Malmstrom AFB, Mont.

### METS-AT Course

Tech. Sgt. Steven R. Grimes, 57th OSS/OSW, Nellis AFB, Nev.  
 2nd Lt. John R. Spruill, 57th OSS/OSW, Nellis AFB, Nev.  
 Staff Sgt. Frank D. Thompson, 57th OSS/OSW, Nellis AFB, Nev.  
 Senior Airman Jose A. Cortez, 57th OSS/OSW, Nellis AFB, Nev.  
 Mr. Alvin Caudel, 57th OSS/OSW, Nellis AFB, Nev.  
 Airman Drexel Holt, 57th OSS/OSW, Nellis AFB, Nev.  
 Tech. Sgt. Norman E. Bann, 57th OSS/OSW, Nellis AFB, Nev.  
 Staff Sgt. Roland J. Wilson, 57th OSS/OSW, Nellis AFB, Nev.  
 Tech. Sgt. William A. Reid, 57th OSS/OSW, Nellis AFB, Nev.

### Officer Professional Development Course

2nd Lt. Mark R. Wimmer, 341st OSS/SOW, Malmstrom AFB, Mont.

### EOTDA Course

Capt. Mary Ann Kaschner, 4th OSS/OSW, Seymour Johnson AFB, N.C.  
 Capt. Kimberly J. Castillo, 4th OSS/OSW, Seymour Johnson AFB, N.C.  
 Staff Sgt. Bradley J. Davis, 4th OSS/OSW, Seymour Johnson AFB, N.C.  
 Staff Sgt. Kenneth Henry, 4th OSS/OSW, Seymour Johnson AFB, N.C.  
 Staff Sgt. William Lane, 4th OSS/OSW, Seymour Johnson AFB, N.C.  
 Mr. Craig Lewis, 4th OSS/OSW, Seymour Johnson AFB, N.C.

### WSR-80D Operations/Manager Course

Mr. Travis Berger, 27th OSS/OSW, Cannon AFB, N.M.

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

Senior Airman Joseph A. Kempfer, 27th OSS/OSW, Cannon AFB, N.M.

### Bachelor of Science in Management of Human Resources

Master Sgt. Vince Delaney, 287th WF, Indianapolis, Ind. (ANG), from Oakland City University

## AWARDS

### HQ USAF/DOW Senior NCO of the Quarter

Master Sgt. Bryan K. Goforth, HQ USAF/DOW, Ramstein AB, Germany

### OL-C, 18th WS Airman of the Year

Senior Airman Paul M. Walker, OL-C, 18th WS, Fort Knox, Ky.

### Air Combat Command Outstanding Weather Airman of the Year

Senior Airman Adam Lauridsen, OL-A, 3rd WS, Fort Sill, Okla.

### ACC Dodson Award nominee

Senior Airman Michael Lemons, OL-A, 3rd WS, Fort Sill, Okla.

### Headquarters 8th Air Force Senior NCO of the Year

Senior Master Sergeant Stephen Rosemier, OL-A, 3rd WS, Fort Sill, Okla.

### 3rd ASOG Outstanding Weather Senior NCO of the Year

Master Sgt. Mark Sanders, OL-A, 3rd WS, Fort Sill, Okla.

### 3rd ASOG Pierce Award

Senior Airman William Greenwood, OL-A, 3rd WS, Fort Sill, Okla.

### 3rd ASOG Williams Award

OL-A, 3rd WS, Fort Sill, Okla.

### 8th AF Senior NCO of the Quarter

Senior Master Sgt. Stephen L. Rosemier, OL-A, 3rd WS, Fort Sill, Okla.

### Air Education and Training Command Pierce Award

Staff Sgt. Hurt R. Rohl, 47th OSS/OSW, Laughlin AFB, Texas

334th Training Squadron Weather Training Flight (Keesler AFB, Miss.) Airman of the Quarter

Airman 1st Class Sharon Cornish

334th Training Squadron Weather Training Flight (Keesler AFB, Miss.) NCO of the Quarter

Staff Sgt. Tony Calder

334th Training Squadron Weather Training Flight (Keesler AFB, Miss.) Senior NCO of the Quarter

Master Sgt. Theresa DeBoer

334th Training Squadron Weather Training Flight (Keesler AFB, Miss.) Company Grade Officer of the Quarter

1st Lt. Wes Shaeffer

334th Training Squadron Weather Training Flight (Keesler AFB, Miss.) Civilian of the Quarter

Mrs. Vickie Simants

334th Training Squadron Weather Training Flight (Keesler AFB, Miss.) Junior Enlisted Instructor of the Quarter

Staff Sgt. Dexter Johnson

334th Training Squadron Weather Training Flight (Keesler AFB, Miss.) Senior Enlisted Instructor of the Quarter

Staff Sgt. (USMC) Michael Warren

334th Training Squadron Weather Training Flight (Keesler AFB, Miss.) Civilian Instructor of the Quarter

Mr. Mike Beeson

334th Training Squadron (Keesler AFB, Miss.) Senior NCO of the Quarter

Master Sgt. Theresa DeBoer

334th Training Squadron (Keesler AFB, Miss.) Company Grade Officer of the Quarter

1st Lt. Wes Shaeffer

334th Training Squadron (Keesler AFB, Miss.) Senior Enlisted Instructor of the Quarter

Staff Sgt. (USMC) Michael Warren

### 14th OSS Airman of the Quarter

Senior Airman Bradford N. Godwin, 14th OSS/DOW, Columbus AFB, Miss.

### Air Force Space Command Grimes Award

341st OSS/SOW, Malmstrom AFB, Mont.

### AFSPC Outstanding Weather Senior NCO (1995)

Senior Master Sgt. Scott D. Weber, 341st OSS/SOW, Malmstrom AFB, Mont.

### AFSPC Outstanding Weather Airman

Senior Airman Richard E. Toner III, 341st OSS/SOW, Malmstrom AFB, Mont.

### 341st Operations Group Enlisted Member of the Year

Senior Master Sgt. Scott D. Weber, 341st OSS/SOW, Malmstrom AFB, Mont.

### 341st OG Senior NCO of the Year

Senior Master Sgt. Scott D. Weber, 341st OSS/SOW, Malmstrom AFB, Mont.

### Seymour Johnson AFB, N.C., Female Athlete of the Year

Airman 1st Class Christina Timmermann, 4th OSS/OSW, Seymour Johnson AFB, N.C.

### 15th ASOS Airman of the Quarter (Jan-March 1996)

Airman 1st Class Thomas Dishon, 15th ASOS, Hunter AAF, Ga.

### 15th ASOS NCO of the Quarter

Tech. Sgt. Sylvia V. Poole, 15th ASOS, Hunter AAF, Ga.

### 27th OSS/OG NCO of the Year

Staff Sgt. Kirk D. Bailey, 27th OSS/OSW, Cannon AFB, N.M.

### 27th OSS/OG NCO of the Quarter (Jan-March 1996)

Staff Sgt. Valerie Smith, 27th OSS/OSW, Cannon AFB, N.M.

### 27th OSS Senior NCO of the Quarter

Master Sgt. William J. Woodford, 27th OSS/OSW, Cannon AFB, N.M.

Outstanding Air Force Weather Company Grade Officer of the Year (1995)

Capt. Tim Rollins, 45th WS, Patrick AFB, Fla.

1995 Merewether Award (Most Significant Technical Weather Contribution)

Mr. Bill Roessler, 45th WS, Patrick AFB, Fla.

### 1995 Best Award (Civilian Category)

Mr. Billie Boyd, 45th WS, Patrick AFB, Fla.

### AFSPC Outstanding Weather Civilian (1995)

Mr. Ed Priselac, 45th WS, Patrick AFB, Fla.

### AFSPC Weather Observer of the Year

Airman 1st Class Patrick Berry, 45th WS, Patrick AFB, Fla.

## BIRTHS

Kevin Martin Kane -- to Staff Sgt. Bob and Sabine Kane, 45th WS, Patrick AFB, Fla.

Your support for the "Salutes" section has been overwhelming! So overwhelming that there is now approximately a two-month backlog of names to go into these two pages. Each submission will get into a future edition of the OBSERVER ... eventually. The editorial staff of the OBSERVER appreciates your patience.

# The 21st Operations Support Squadron Weather Flight



A C-21 belonging to the 84th Airlift Flight waits on the runway at Peterson AFB, Colo., home of the 21st OSS/OSW.

Nestled at the base of the majestic Rocky Mountains is an Air Force weather flight with a uniquely challenging mission. This is a flight that briefs the commander in chief of a unified command on a daily basis. It provides worldwide meteorological watch (METWATCH) and reporting, or real-time space environment assessments to the North American Aerospace Defense Command.

When the people at this base weather flight think about the weather, not only do they think about conditions at 162 sites worldwide, but also how the sun can

affect the near-earth space environment, which in turn impacts radar, communications and satellite systems.

Granted, it's not the only unit that deploys someone halfway around the world every time NASA launches a space shuttle — a few sister units in Air Force Space Command (AFSPC) do that as well. But have you ever heard of a weather flight coordinating support for 23 worldwide space warning and space surveillance squadrons from Australia to Greenland?

Put all of these together, add a one-of-a-kind mobility mission, throw in the continental United States' second-busiest

distinguished visitor schedule and providing all the usual weather station services (don't forget to issue weather warnings and advisories for Falcon AFB, Cheyenne Mountain AS (CMAS), Cape Cod, Mass.; New Boston, Mass.; La Junta, Colo.; Fort Carson, Colo.; and the U.S. Air Force Academy), and *finally* you are getting close to describing the Peterson AFB weather flight.

Approximately two years ago, both Cheyenne Mountain and the 50th Space Wing at Falcon AFB had their own weather support units. The AFSPC Directorate of Weather provided daily operations weather support to the commander in chief of the North American





*Inside the command post at Cheyenne Mountain Air Station, Colo. This is the real workcenter the movie "WarGames" depicted.*



*Senior Aicman Robert J. Forton (right) gives a weather briefing to a pilot.*

Aerospace Defense Command (NORAD), U.S. Space Command and the AFSPC commander. Then came the realities of Air Force downsizing.

Today, the 21st Space Wing owns all these functions, and more. Along with the increased responsibility came organizational challenges, additional training requirements and, best of all, the opportunity to support a diverse customer base — each with their own unique needs.

The Peterson AFB Weather Flight is an integral part of the 21st Operations Support Squadron with a chain of command through the 21st Operations Group, 21st Space Wing, and 14th Air Force to Headquarters Air Force Space Command. All echelons, with the exception of the 14th Air Force, are at Peterson.

The mission of the flight's 22 members is to provide dedicated world wide weather support to decision makers.

To accomplish this mission, the flight operates two 24-hour, seven-day-a-week forecast sections.

The aviation forecast section provides aircrew briefings and local resource protection, while the NORAD forecasters handle space environmental and terrestrial weather support to the NORAD Command Director. Four officers are assigned to the unit. They include the flight commander, an analysis and programs officer in charge of site sup-



Staff Sgt. Janet K. Holley works at the NEXRAD PUP.

All photos courtesy of the 21st OSS OSW

port, and two command briefers. An information manager completes the flight's staff.

The Peterson weather troops understand the importance of space environmental phenomena on both ground and space-based military operations, and support NORAD's operations center missions. These include missile warning, space control, air defense, and counter-narcotics efforts.

Essentially, the NORAD forecaster is a Cheyenne Mountain AS crew member, metwatching 146 ground sites around the world in both hemispheres for mission limiting terrestrial weather,

and monitoring real time solar data and products for any of the numerous environmental phenomena that could impact space operations — both in space and on the ground.

The command briefers, both lieutenants, know the AFSPC worldwide mission, and provide the link that integrates weather products with the CINC's daily environmental concerns. An integral part of their job is to provide weather support to the Mobile Command and Control Center, which manages and directs both U.S. and NORAD forces in times of conflict.

The flight was also the Air Force's

first test site for the U.S. National Oceanic and Atmospheric Administration's Space Environmental Laboratory Space Weather Data System. This system will reduce notification time to missile warning crews and satellite operators when solar flares or geomagnetic storms might affect their operations.

Flight personnel have 90 seconds from notification by the NORAD operations center to determine whether the space environment or weather played a role in causing unexplained upsets to radar, communication, or satellite systems.

The 21st OSS Weather Flight -- always ready ... always a challenge.

## The 21st OSS/OSW At A Glance

**Where:** Peterson AFB, Colo.

**What:** Home of the headquarters of the United States Space Command, Air Force Space Command, North American Aerospace Defense Command, 21st Space Wing, and the 302nd Airlift Wing.

**Aircraft Assigned:** C-21As assigned to the 21st SW. The C-21A is a passenger and cargo airlift aircraft.

Also resident on the base are C-130s belonging to the 302nd Airlift Wing, an Air Force Reserve unit;



C-12s belonging to the U.S. Army; and UV-18s belonging to the USAF Academy's 94th Airmanship Training Squadron.

**Weather equipment:** Automated Weather Distribution System (AWDS), the WSR-88D Next Generation (NEXRAD) Doppler weather radar, a satellite receiving system, a lightning detection system, a low-level wind shear detector, and other observing equipment necessary to provide forecasting support to multiple runway operations.

# Small Tactical Terminals On The Way

## Units Provides Deployed Weather Troops Full Range Of Imagery

Ever wonder where the clearing line was between two reporting stations? In the very near future, deployed Air Force Weather teams will have the answer at their fingertips. Beginning in January 1997, the Space and Missile System Center will begin delivery of the AN/TMQ-43, commonly referred to as the Small Tactical Terminal (STT).

The STT is a direct-readout, two-person transportable weather satellite data receipt and analysis system, and provides weather teams access to a full range of imagery. The deployed weather person will be able to provide mission planners and air crews with real-time images/products of weather conditions over targets deep in enemy-controlled territory.

Data is received directly from the satellites without relying on other means of communications. The data streams consist of visual and infrared imagery and mission sensor data. The STT processes and stores this data, generates meteorological soft and hard copy display products, and forwards the information to other systems.

There are three configurations of the STT -- Basic, Enhanced, and Joint Task Force Satellite Terminal (JTFST). Your unit's mission determines which configuration you'll receive.

Each unit scheduled to receive an STT will receive a Basic system. Units needing additional data will receive an Enhancement kit, a JTFST kit, or both. Both the Basic and Enhanced configurations are designed to permit two people to set up or tear down the equipment in less than an hour. In addition, the system uses a modular design and container concept allowing either air or surface transportation and is packaged in transit cases requiring no more than a two-person lift.

The Basic configuration ingests, processes, stores, and displays Real-time

by 2nd Lt. Rich Neal  
Weather Satellite and  
Space Systems Branch

Data Smooth (RDS) data from the Defense Meteorological Satellite Program (DMSP) satellites; Automatic Picture Transmission (APT) data transmitted from the National Oceanic and Atmospheric Administration (NOAA) satellites, the Chinese FENG YUN satellites, the Russian METEOR satellites; and Weather Facsimile (WEFAX) data from the Geostationary Operational Environmental Satellites (GOES) geostationary satellites. The DMSP RDS data stream provides the operators with 1.5 Nautical Mile (nm) resolution data, while the APT imagery received has a resolution of 2.1 nautical miles. A Basic system fits into eight transit cases and weighs 481 pounds.

The operator can upgrade the Basic system with the addition of an Enhancement kit. The Enhancement kit consists of a 4.6-foot tracking antenna, KG-144 decryption device, 17-inch high-resolution color monitor, external

keyboard, and a data archive tape. An Enhanced system has the same features as the Basic, but can also ingest, process, and display Real Time Direct (RTD) data from the DMSP satellites and High Resolution Picture Transmission (HRPT) from the NOAA satellites. The Enhanced system receives DMSP RTD with a resolution of 0.3 nm, APT resolution of 2.1 nm, and HRPT resolution of 0.6 nm. An Enhanced system has four more cases and weighs an additional 328 pounds.

Units that support theater-wide missions such as joint task force headquarters will receive the JTFST. This kit consists of a 13.5-square-foot antenna, METEOSAT Decryption Unit (MDU), and a fiber optic link. With the JTFST, users receive high-resolution imagery from the European METEOSAT and Japanese GMS satellites. Also, the fiber optic link permits separation of the operator position from the antenna equipment by as much as seven miles.

Already in limited use supporting Operation JOINT ENDEAVOR and operations in Korea, the STT has already begun to prove its worth.



Part of the setup for the Small Tactical Terminal, a direct-readout, two-person transportable weather satellite data receipt and analysis system.

For more information about the STT, contact Lieutenant Neal at HQ AWS/SYDS, 102 W. Losey St., Rm. 105, Scott AFB, IL 62225; by E-mail at "nealr@hqaws.safb.af.mil", or by calling DSN 576-3830, ext. 325 or (618) 256-3830, ext. 325



# The New Age In XOO

## Helping Air Weather Service Manage Issues, Find Solutions

As Jack Falvey noted in a recent Wall Street Journal article, "We (American business) should resist the call to do more and more in less and less time and instead learn to do less better."

Operations managers recognize that when organizations get dragged more and more into crisis management, the number of "fires" to put out increases, as the protective layer offered by sound long-term planning diminishes.

One method is to create a framework for the operational issues that allows greater anticipation and more structured planning and responses. Consequently, XOO has embarked on helping Air Weather Service (AWS) better manage issues by establishing over-arching concepts of operations (CONOPS).

These CONOPS then become valuable in guiding staff processes and providing continuity on issues.

How does this happen? First, an organization such as AWS is given a mission. How the leaders in the organization want to accomplish that mission becomes the vision.

Next, the team must carefully construct a set of goals necessary to effect the change necessary to reach such a vision.

The team must then get into the detail work and look at what measurable objectives (functional objectives) must be accomplished to achieve each goal. These functional objectives are the core of a CONOPS, which is the emerging focus of the XOO staff.

by Lt. Col. Joel Martin  
Chief, Operations &  
Standardization Division

The staff process doesn't stop with a CONOPS. Next a collection of potential solutions to accomplish the objectives must be established. From this, and an arduous cost/benefit analysis, emerges a set of preferred solutions — which may involve acquisitions, modifications, procedure changes, enhanced training, etc. The preferred solutions match up with money and the acquisition process to achieve the final implementation of the idea.

AWS managers hope that the increased emphasis on accurate operational concepts up front will pay dividends in better program decisions and a more accurate match of acquisition strategies to operational needs.

One of the first tests of this new CONOPS focus was the AWS hosting of the first Weather Information Technology Workshop. This workshop allowed participants to become versed in some of the new information technologies, then apply their advanced knowledge to group activities aimed at designing operational concepts that embrace those technologies for the Air Force Weather (AFW) mission.

As a result of that workshop and staff initiatives, the overarching CONOPS XOO will author includes a virtual and physical look at Air Force Weather products and services. The goal is to align

the look and feel of information products and services with the emerging communication technologies. The communications strategy offered in the Air Force Weather Xena Communications Architecture is being used as a foundation for information technology planning.

Another success story has been working with Carnegie-Mellon University and the Defense Advanced Research Projects Agency to improve the flow of weather information to the warfighters in Bosnia.

This, in conjunction with the project named Information Dominance for JOINT ENDEAVOR, leverages advanced commercial technology to provide improved links between U.S. sources and commanders in the field. It implements the METOC Anchor Desk concept that allows AFGWC and European METOC Center to collaborate on forecasts and send weather information directly to the warfighting commanders and staffs assigned to NATO's Operation JOINT ENDEAVOR.

Anchor Desk technologies allow for visual, graphic, and voice collaboration between METOC Centers and provides for hypermedia webs of METOC products available over SIPRNET and NIPRNET.

The CONOPS focus in XOO is ushering in a new age of relooking and redesigning AFW processes. It truly is an exciting time to work challenging staff issues.

Country singer George Strait sings a song entitled "They Call Me The Fireman." That sentiment is occasionally echoed by the 10 members of the Operations and Standardization Division (XOO), Directorate of Technology, Plans and Programs, at headquarters Air Weather Service. With apologies to Mr. Strait, I would like to show how some of the lyrics to that popular song seem to fit

### 'Strait-Talk' -- The XOO Mission -- Putting Out Fires An Everyday Occurrence

the nature of our jobs.  
"Well they call me the fireman,"  
As Lt. Cmdr. Jim Vann, our "Navy guy" and deputy division chief attests,

"We do like to think of ourselves as a fire department in the building."

The "fires" are the seemingly endless list of operational issues that surround the design, manufacture, distribution, and delivery of quality weather infor

See STRAIT

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# OBSERVATIONS FROM THE FIELD

## CAP Cadets Earn Weather Awards

**T**hirty Civil Air Patrol cadets from western Pennsylvania gathered at the 911th Air Wing's (Reserve) facilities March 16 and 17 to become the first CAP cadets in the nation to earn the new Losey Award sponsored by the Air Force Directorate of Weather.

The Losey Award is a certificate signed by Director of Air Force Weather Brig. Gen. Thomas J. Lennon, and given to reward cadets from the national Civil Air Patrol and the Air Force Junior ROTC programs who complete extra-curricular weather studies. During the weekend's intense course of study, cadets were taught by Air Force members from the active, reserve, and Air National Guard components of Air Force Weather.

The 30 CAP cadets who first earned the Losey Awards were part of a new weekend aerospace education program called EAGLE Academy which is run by the Pennsylvania Wing of the CAP. EAGLE Academy stands for "Enhanced Aerospace and Group Leadership Experience" and is a hands-on approach to teaching a wide variety of aerospace topics, leadership, and decorum. The weather weekend was the sixth aerospace weekend in the program.

The primary instructor and originator of the Losey Award concept was Air Force Reserve Maj. Tim Miner from Pittsburgh. Miner is an Individual Mobilization Augmentee (IMA) in the Product Improvement Branch at Air Force Global Weather Central at Offutt AFB, Neb. He is also a Reserve Assistance Officer for the Pennsylvania Wing of the CAP where he helped the Pennsylvania Wing develop the concept and curriculum of the EAGLE Academy. During the last six months he worked with the Directorate of Weather at the Pentagon to create the Losey Award.

Three members of the 146th Weather Flight, Pennsylvania Air National

Guard, under the command of Lt. Col. Fred R. Johnson, provided the hands-on instruction for most of Saturday's afternoon. Led by Master Sgt. David L. Tucker II, the team helped the students understand the nature of the atmosphere by plotting weather soundings.

Assisted by Staff Sgt. Richard A. Webb and Airman 1st Class Clayton R. Eyer, the 146th WF then spent the rest of the afternoon demonstrating equipment used to observe the atmosphere, and then assisted each in making and recording their own observation of the local base weather. The flight members made sure that the cadets saw and used a wide variety of equipment from the



*Maj. Tim Miner, Cadet Airman Chris Snyder, Master Sgt. David L. Tucker, and Lt. Col. Cecilia Askue examine a hand-held tactical anemometer.*

basic hand-held thermometer of the tactical weather kit to mobile computer systems for receiving weather information and satellite images. At the end of the weekend, many cadets thought that the opportunity to truly learn weather from members of the 146th WF was the highlight of the program. Throughout the afternoon the members of the weather flight spiced their instruction with stories of military weather and a description of their unit's own wartime mission.

Lt. Col. Cecilia A. Askue, the Deputy of the Weather Division, Air Mobility Command, shared her experiences and education as an active duty officer. Using her special interests and experiences as a commander of an AFW solar observatory, she developed the curriculum and taught a special class on the impacts of solar activity on radio communications within the Civil Air Patrol. Two cadets were ham-radio operators and felt this special presentation by Colonel Askue was the most useful to them.

This all-component team from AFW taught other classes to the CAP cadets. These included classes on basic weather theory, aviation weather hazards, reading and writing weather codes and forecasts, reading and drawing weather charts, and briefing weather to CAP pi-



*U.S. Air Force Photos*

*Sergeant Tucker helps Civil Air Patrol cadets plot high altitude soundings.*

lots. Several CAP adults supplemented the training by teaching local methods for obtaining aviation and other weather information within Pennsylvania and from the Internet.

Even now that the weekend is over, the team members are compiling their notes to be used in creating a weather workbook for the national CAP and AFJROTC programs. The workbook will be used as a guide by others to make the Losey Award available to the 67,000 AFJROTC and 19,000 CAP cadets in the country.

To earn the Losey Award, the cadets spent the month prior studying. The cadets researched a long vocabulary list of weather terms and learned how pilots in CAP get weather information in their local areas. This was the theory part of their training. The weather weekend provided the application phase of their weather instruction. All of the classes used a hands-on approach to teach weather skills that would make the weather knowledge useful to the cadets' future work in aviation and search-and-rescue.

According to Major Miner, "The

chance to teach weather skills and emphasize their importance to future aviators and mission leaders made the weekend a special success. It took the hard work of many people at all levels of Air Force Weather to make this happen."

In his letter to General Lennon, the National Commander of the CAP, Brig. Gen. (CAP) Richard L. Anderson, called the program "a superb idea" and predicted that "this will be a win-win situation for Civil Air Patrol and the United States Air Force."

In 1995, both the Secretary of the Air Force, Sheila Widnall, and the Air Force Chief of Staff, General Fogelman, stated the Civil Air Patrol was the fourth component of the United States Air Force. With active duty, reserve, and air guard instructors, the first weather weekend leading to the new Losey Award, demonstrated Air Force Weather's commitment to the total force concept.

The Losey Award is named in honor of Capt. Robert M. Losey, an aviation meteorology pioneer. Captain Losey was appointed the first Chief of the Air Weather Branch, Army Air Corps, in

1937 at the age of 28. Prior to that time, Losey had earned his pilot rating and taken meteorology studies at California Institute of Technology.

During the three years he served in the lead weather position in the AAC, he is credited with establishing numerous weather stations around the country when he opened an observer's school and an enlisted forecaster's school. In 1940, then chief of staff of the AAC, Brig. Gen. Henry H. "Hap" Arnold released Captain Losey to be a military observer in Europe. He was killed during a German air raid while trying to escort the U.S. Minister to Norway, Mrs. Florence Jaffray Harriman, safely out of the country. This made him the first United States officer killed by hostile action during World War II. As a young aviator, meteorologist, and leader for weather training, Captain Losey was considered an excellent role model for the aviation-aspiring cadets of CAP and AFJROTC.

*(Story and photos provided by the 146th Weather Flight, Pittsburgh, Pa., Air National Guard.)*

## Keesler Celebrates Weather Training Birthday

The Weather Training Flight at Keesler AFB, Miss., recently observed the 126th anniversary of military weather training in the U.S. with a party and cake-cutting.

President Ulysses S. Grant signed a bill Feb. 9, 1870 that ordered the Secretary of War to establish weather training at the Army's Signal Service School at Fort Whipple, Va. (now known as Fort Myer, near Washington, D.C.)

Cutting the anniversary cake were the youngest and oldest member from each service at the Keesler Weather Schoolhouse. In the above photo, from left: (Air Force) Airman Shannon Worley, retired Master Sgt. Robert Tuller; (Marines) Master Gunnery Sgt. James Ewart, (Navy) Cmdr. Robert Garrett and Private 1st Class Brenda Silvernall; and Airman Mark Middleton.



U.S. Air Force Photo

## Navy, Air Force Meet To Help Warfighters

A joint Meteorology and Oceanography (METOC) training working group made up of Air Force and Navy officers met recently to develop a handbook to train current and future senior METOC officers (SMOs) and joint METOC officers (JMOs). The handbook will advise these officers about the policies, responsibilities, and infrastructure inherent to joint operational METOC support to the warfighter. The meeting was held at the Naval Meteorology and Oceanography Command, Stennis Space Center, Miss.

The handbook includes information about component and joint task force structures and relationships, joint mission support, administration, logistics, organizational support equipment and software, communications, data sources, product generation, and METOC impacts on joint operations.

# Crossing Another Frontier

## First Space Weather Models Offer Unique New Capabilities

The space weather world reached another significant milestone with the recent fielding of the first suite of operational space weather models at Air Force Space Command's (AFSPC) 50th Weather Squadron. With this, the Air Force Weather team now possesses state-of-the-art science computer models that extend "from the mud to the sun."

This milestone under the Air Force's Space Environmental Technology Transition (SETT) program stemmed from the combined team efforts of Air Weather Service, AFSPC and 50th WS, Air Mobility Command's contracting flight, Phillips Laboratory, and several universities.

Until now, space weather forecasters, much like their earthbound counterparts in data-sparse areas, had to rely on persistence, climatology, a few rules of thumb, and gut instinct (e.g., experience). Now, they can rely on unique models specifically designed for analyzing and forecasting space weather. But these models did not just fall from the sky — the trek was long and tough and is still continuing.

The three new models are the first of their kind worldwide. The Solar Wind Transport (SWT) model depicts solar winds from 35,000 to 1.25 million miles out (toward the sun) and indicate when such disturbances will reach Earth.

The Magnetospheric Specification Model (MSM) depicts the radiation environment from 7,800 to 35,000 miles above Earth, enabling space operators to assess and deal with the environment to which orbiting spacecraft are exposed.

The Parameterized Real-time Ionospheric Specification Model (PRISM) depicts the Earth's global ionosphere at altitudes up to 600 miles, providing crucial information to radio and radar operators on the best frequencies to use and on those denied to our forces — and our adversaries.

by Capt. Riley Jay  
Supervisor, Climatology and  
Space Systems Acquisition  
HQ AWS/SYA

MSM and SWT went on line Aug. 30, 1995 and have since demonstrated tremendous capabilities. These models have been instrumental in 50th WS' analyses of space weather's role and impact in observed satellite anomalies (unanticipated behavior by satellites). PRISM joined them operationally April 17 and is expected to show similar value to the radar and command, control, and communications communities.

These three models began as university research projects through the Advanced Technology Development program. The original, research-grade models, however, ate hours of computer time and could not meet real-time operational demands. Phillips Lab took on the task to re-engineer the models to run faster, and Hughes STX Corporation ported the models to 50th WS computers, directly tied to and supporting diverse DoD and National Program customers.

As with other key AFW programs, the SETT models were designed and fielded to meet validated mission needs. SETT customers include all DoD and many Federal agencies that exploit or are impacted by the space environment — which in today's high-tech world, includes virtually everyone.

The systems most critically affected by space weather are themselves space systems — orbiting satellites used for communications and reconnaissance and manned spacecraft.

The 50th WS directly supports all space shuttle missions, providing warn-

ings of radiation hazards to protect orbiting craft and crew. High-energy particles can disorient spacecraft and satellite guidance systems, corrupt on-board computers, and disrupt command and control. Magnetic storms can damage key spacecraft components and can increase drag on low-flying satellites, ultimately knocking them from orbit as with Skylab in 1979.

Other systems are also vulnerable to space weather disturbances. Space weather impacts radar signals, high-frequency radio and satellite communications, and GPS satellite signals, potentially crippling the DoD's latest navigation tool, which is essential to air traffic control and weapons targeting.

Space weather-induced frequency fadeouts or blackouts were noted many times during the Persian Gulf War. Space models will help friendly forces exploit such effects. The models offer a unique new capability not only to analyze and predict space weather, but also its impacts.

AFW now possesses an unmatched capability to analyze and forecast space weather, and this is only the beginning. Additional models will further expand and enhance our ability to specify and forecast space weather phenomena.

Two new models, rounding out the first generation suite of models, are set to go operational in the next two years, and the next generation of models, already under development, should go on line shortly after the turn of the century.

The Air Force space weather team has lifted off on the mission to support and achieve space superiority.

For more information about space weather models, contact Captain Jay at HQ AWS/SYA, DSN 576-2428, ext. 415; commercial (618) 256-2428, ext.415; or via E-mail at "jayr@hqaws.safb.af.mil"

# AWA welcomes Air Weather Service

Demonstrations, Displays Leave Impression On Weather Retirees



All photos by Staff Sgt. Steve Elliott

### Top:

Air Weather Service Chief of History Lil Wilbur talks with Air Weather Association members Valdo Moncada (left) and Bill Becker (center) during the reunion.

### Above:

Tech. Sgt. Ron Sinnard, from the HQ AWS Centralized Operations Branch, demonstrates some features of the Air Weather Service Home Page to former AWS Commander, retired Maj. Gen. John W. Collens III.

### Above left:

Staff Sgt. Rich Slominsky, from the Air Force Combat Climatology Center, demonstrates some weather products to an interested audience.

### Left:

The Air Weather Service booth and display stayed extremely busy during the conference.



## OVERLORD

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for battle? *First, weather is a core mission of war* — not just a force multiplier or a nice to have support function.

As General Eisenhower said, "The selection of the actual day would depend on weather forecasts." All our core competencies: data collection, observing, analysis and forecasting, tailored applications, and communication were put to the test.

Whether we are apprentices, analysts, able forecasters, operational/instructor/command meteorologists, or working on a staff, we all contribute to the core mission.

*Second, we must hold ourselves accountable to be the best.* We can only wonder where we would be today if OVERLORD meteorologists, forecasters, and observers did not hold themselves accountable for providing the best. Accountability was important to General Eisenhower, Colonel Yates, and Group Captain Stagg — it should be no less important to us.

*Third, never forget the basic fundamentals.* The nature of our business demands it. Colonel Yates and his people used and applied the fundamental physical laws to recognize subtle changes and alert General Eisenhower so he could choose the battle terms.

Moreover, Yates, Stagg and company did not have modern day luxuries of weather prediction models, sat-

ellite imagery, or other fancy toys. They used time proven, "back to basics" techniques. Our challenge is to use those basic fundamentals as our foundation while we integrate today's technology.

As a core mission of war, weather does influence the fight. As weather warfighters, we all have a role to play, just like Colonel Yates, Group Captain Stagg, the weather central meteorologists, the combat forecasters and observers.

Anticipate and exploit — we did it 52 years ago, we can do it now, we will do it in the future.

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3. *America's Weather Warriors*, Bates and Fuller, 1987
4. *America at D-Day*, Goldstein, 1994
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## PROGRESS

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mercial knock-offs. That is irresponsible.

How will we go to war without cohesion and standardization? How

can we master the training challenges we know so well if everyone uses different systems?

Col. Bill Barney wrote a compelling reminder 40 years ago: "*It is curious but true that relatively few battles have been lost because of a lack of materiel. Most have been lost due to failures of leadership and discipline.*"

Am I satisfied one year later? Yes and no. My wife, Terry, and I are so immensely proud to be part of the best professional team in the world. AWS and AFW people make it so.

I am continually awed and inspired by your dedication and spirit. Still, we have more to do. Let's get on with it together.

## MESSAGE

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appropriate behaviors as well. Inherent to successful accomplishment of this responsibility, is the ability to set standards, then follow the rules of engagement.

Air Force Chief of Staff Gen. Ronald Fogelman commented about standards as they relate to accountability; that they should be "uniformly known, consistently applied, and nonselectively enforced," provide a strong foundation for supervisors to ensure their administrative actions send out clear messages, and make sense to those affected.

Don't falter, make sure your administrative actions are consistent with the on- and off-duty performance of your subordinates. Please don't make it my job to tell you that you aren't doing your job, because just like you, I don't want to be the bad guy either.



*"Visibility 1 mile...temperature 50 degrees F....dew point 40 degrees...wind east at 10 knots...altimeter 29.95.....Stand by, we're measuring the ceiling now!!!"*

*"Visibility 1 mile...temperature 50 degrees F....dew point 40 degrees...wind east at 10 knots...altimeter 29.95.....Stand by, we're measuring the ceiling now!!!"*

## Quoteworthy

*"You can put your computers back-to-back, and the maps, and the charts, and the airplanes...but you've got to have the people too, or you've got nothing. People are what it is all about."*

Brig Gen William H. Best, Jr., USAF  
- AWS Commander 1970-1973  
America's Weather Warriors

*"It is not enough to have a good mind. The main thing is to use it well."*

-- Rene Descartes  
French philosopher and mathematician

mation. The operational issues: How should we organize our business? How will our people be trained? What kind of equipment will help our business process? How does weather information get from point A to point B?

### **"That's my name."**

Our team's real name is the Operations and Standardization Division. We are process engineers, who constantly worry with the "how" — how the Air Force Weather information business should work. In some cases, if processes break, we become process re-engineers and work with managers to develop a blueprint or flowchart on how to fix the operation.

For example, Dan Ridge, who runs our Operations Branch, has recently been working the complex parameters associated with a proposed relocation of the Air Force Combat Climatology Center. He has discovered how many planning factors go into such a move — variables such as information security, communications, and workspace design are included in the concepts for such a move.

### **"Making my rounds all over town"**

This fiscal year, nine of our ten employees have been on the road, working various weather information issues. Our 10th employee — Ms. Melanie Lancaster, our secretary — stayed behind to collect the postcards from our trips — she has well over a dozen from places as far away as Tokyo and Traben-Trarbach and as close as Oklahoma City and Boston. (We think she keeps hiding the Omaha postcards.)

One of her leading contributors for Washington D.C. postcards has been Chief Master Sgt. Bill Scheib. He is well known at the Office of the Federal Coordinator for Meteorology and with

many field managers. As chief of our standardization branch, he coordinates and collects the information needed to provide standardized guidance for weather products and services. His latest issue has been the global, multi-agency conversion of some of our weather information to METAR code.

### **"Puttin' out ol' flames."**

Our "ol' flames" are issues ... often complex and significant for the future of Air Force Weather. We put out these "ol' flames" through extensive intra- and inter-office coordination that provides the best information possible for decision makers. Sometimes this information is a process and sometimes it's the core guidance for standardization of the process.

One of the more complex issues has been Air Force Weather involvement in the Next-Generation Weather RADAR program (NEXRAD). Our NEXRAD expert, Senior Master Sgt. (select) Pete Mercier has navigated Air Weather Ser-

vice decision makers through the intricate multi-agency program changes by frequent coordination with the key players in the program.

### **"I can cool 'em down when they're smolderin' hot."**

ment of Defense Meteorological Satellite Program issues. Our expert, Maj. Mike Bonadonna, has been planning the transition of the current Air Force-led program into an era of merged inter-agency management and cooperation — the National Polar Orbiting Environmental Satellite System (NPOESS).

All operations require some form of crisis management. The reduction of crisis management to a more orderly progression is a goal that always seems out of reach. Short-term reactions, with little long-term direction, sometimes lead to a plethora of new issues.

In the middle of one such maelstrom are Maj. Dan Vial and Master Sgt. Pete Copeskey — together they form our Contingency Branch.

They react to short-term needs for Air Weather Service resources that must support operations from Bosnia to Thailand. This branch is an example where two people are now trying to accomplish the work once done by many more. Dan and Pete concentrate on the core operational requirements and match up capabilities and resources the Air Weather Service field operating agency can realistically provide during contingencies.

### **"I'm the fireman, that's my name."**

It is in the operations management area that we have seen the most dramatic changes resulting from the new information technologies — the Information Age. In the middle of this revolution has been Tech. Sgt. Ron Sinnard.

He echoes the theme of a recent workshop hosted by the division: "We're seeing that we are very much in a weather information business and that we must quickly adapt to the new information technologies to survive. It's an exciting time to work here."

Ron is the true fireman of the information age, who is using new technologies to publish the Operations Digest and help build the first generation of Air Weather Service home pages.

**"We are process engineers, who constantly worry with the 'how' — how the Air Force Weather information business should work."**

**Lt. Col. Joel Martin**

**Chief, Operations and Standardization Division**



