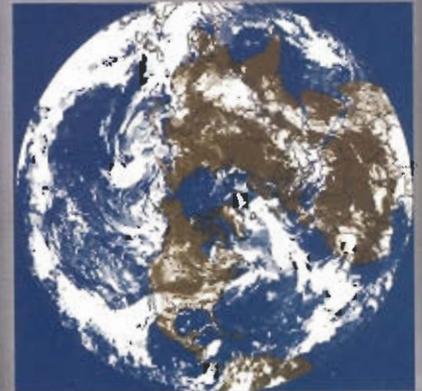


# *YOUR MAGAZINE FOR AIR FORCE WEATHER* **OBSERVER**

May/June 02

**CDFS II: a silver lining in cloud analyses**



**Inside the 26th OWS**



**Monsoon: creating a rain maker**



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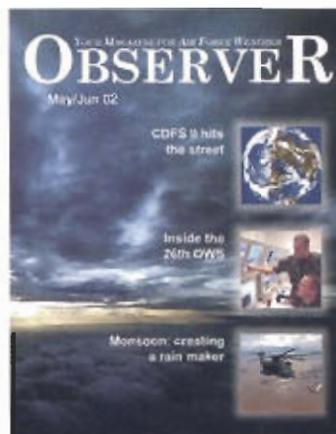
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## On the Cover:

A sunrise over the Gulf of Mexico is sandwiched between two layers of clouds pushed by the advancing Hurricane Gilbert, as seen from a WC-130H Hercules aircraft Sep. 14, 1988, from the 53rd Weather Reconnaissance Squadron. (Photo by Tech. Sgt. Kit Thompson)



## OBSERVER

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# New worldwide cloud depiction system comes online

**By Tech. Sgt. Miles Brown**  
AFWA Public Affairs

The Air Force Weather Agency launched its new global cloud analysis and forecasting capability with the operational implementation of the Cloud Depiction and Forecasting System II June 25.

CDFS II processes data from a variety of satellites on an hourly schedule to produce high-resolution cloud products. These cloud products are used in direct support of the warfighter, providing mission planners a complete picture of the battlespace from the ground to the upper atmosphere.

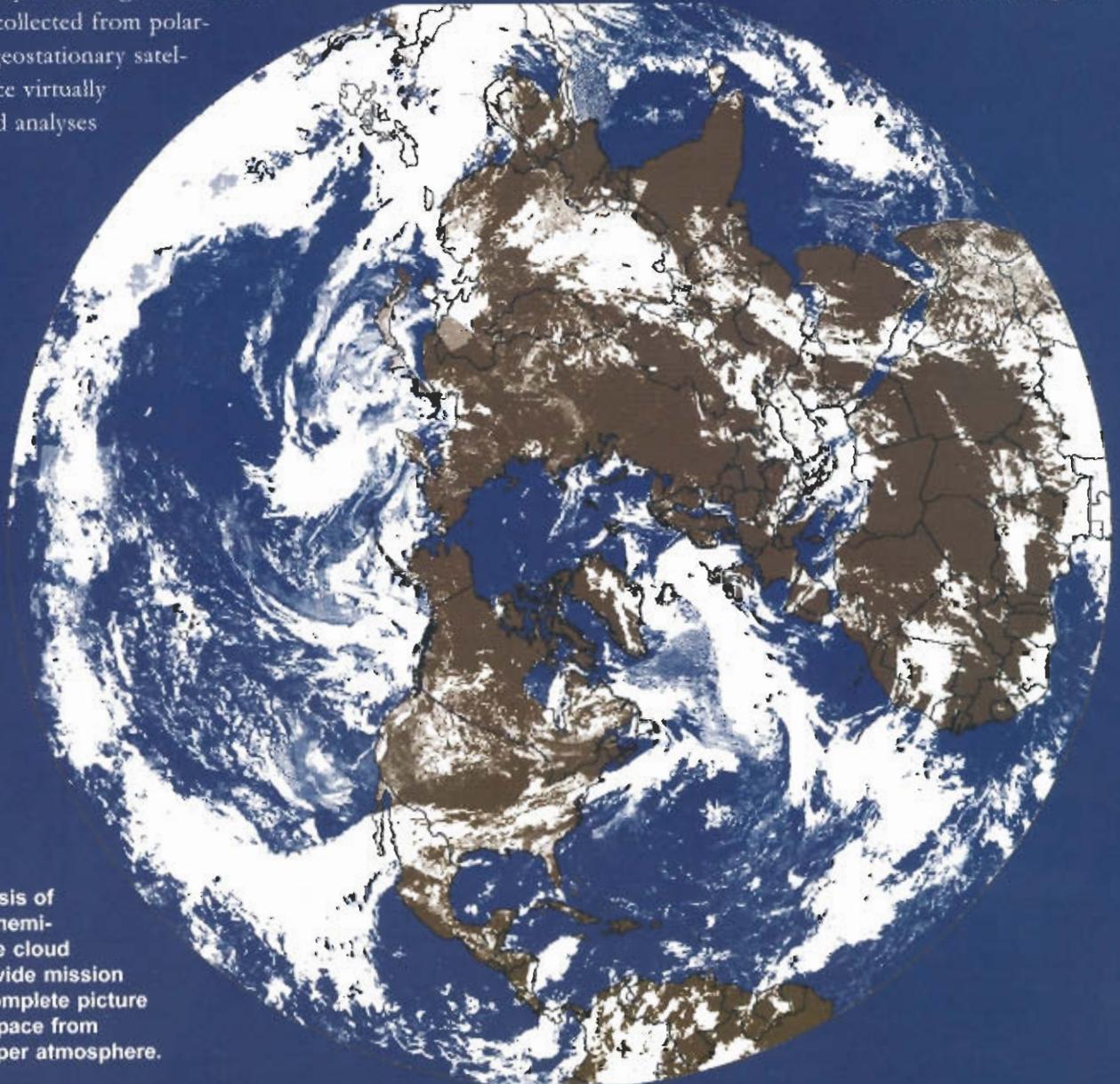
"This new system merges visible and infrared data collected from polar-orbiting and geostationary satellites to produce virtually seamless cloud analyses

and forecasts," said Capt. Darryl Leon, CDFS II project manager at AFWA.

AFWA is the DoD's premiere provider of cloud analyses and forecasts, and the only agency in the world with this capability.

"Clouds impact operations and particularly intelligence, surveillance, and reconnaissance platforms and sensors every day," said Col. Bob Allen, commander, AFWA. "With the implementation of CDFS II, we're delivering the best cloud products available to help select weapon systems and sensors for use in the battlefield and to better define the best windows of opportunity for military operations."

**See Clouds, Page 8**



CDFS II analysis of the northern hemisphere. These cloud products provide mission planners a complete picture of the battlespace from ground to upper atmosphere.

# The Assignment Process and You

**By Col. Web Tileston**  
Deputy Director of Weather,  
Air and Space Operations

If you're like most people, one of the issues you think about occasionally, or even frequently, is your career and your future. This article provides Air Force Weather officers some philosophy on how to approach your career.

Many years ago when I was the executive assistant to Brig. Gen. Al Kaehn, former Air Weather Service commander, we traveled all over the world visiting AWS units. One of the career and job principles the General repeated over and over in his discussions with the troops was, "the most important job is the one you have right now."

He would go on to say that you shouldn't spend an inordinate amount of time worrying about your next job, how to get it, or how it figured into a game plan for your career.

You needed to concentrate on doing your best and being the best in the job you were in at the moment. The idea was that the system would recognize your talents and abilities and take care of you appropriately. In other words, just be the best at what you are currently doing and let your boss work the next assignment for you.

One of the reasons I decided to write this article was a discussion I had recently with another AFW colonel. We were discussing our perception of the trend of people trying to "over-manage" their careers.

Although we'd both taken significantly different paths to where we are today, both of us reflected on the lack of effort we put into "working the assignment system."

Essentially, we sought the advice and counsel of our immediate supervisors (and occasionally a more senior leader), filled out the preference worksheets, and let the system tell us where we needed to go. In my own case, I've had 17 "jobs" if you include assignments to ACSC and AWC as jobs.

As I reflect back on how I ended up in those, I was surprised to find how little input I really had on the outcomes. In 15 out of these 17, my assignment was the result of the system coming at me, sometimes from "out of the blue." I was told where to go and sometimes with very short notice – as few as 30 days. For the other two, I "officially" applied for the job and was fortunate enough to get selected.

My bottom line was always the same and I spelled it right out on my preference worksheet, "I want the most challenging job available commensurate with my talents, skills, and experience."

I believed General Kaehn 20 years ago, and I still subscribe to that philosophy now, as does Brig. Gen. David L. Johnson, the current Director of Weather. Nothing has changed. Since becoming the Deputy Director of Weather, I've constructed two field-grade and O-6 officer assignment game plans for General Johnson's approval.

During that process, I noticed what appeared to be a trend of people being more concerned about their careers than seemed healthy. My advice to you is the same as that espoused by General Kaehn. And please understand, however, I'm not advocating that you take a "head in the sand" approach and proceed blindly through your career without giving thought to what you want to do and where you want to go.

You need to learn what's available, and perhaps most importantly, you need to seek guidance and mentoring from senior officers on the next most logical and challenging job for you. Then, armed with that wisdom and advice, coupled with your desires and aspirations, work within the system, fill out your preference worksheet, and wait for the process to work the way it is designed to work.

Never hesitate to seek the guidance of more experienced people...just don't become too narrow in your desires or too consumed with mapping out your career or overworking the assignment process. There is no cookie cutter approach, and there are many roads that lead to success, however you choose to define it.

The bottom line: the assignments business is a complex process with more moving parts than a Swiss watch – many of which we have no control over. And to repeat (because it is that important), your role is to do the best you can in the job you're in right now, consult senior officers, communicate via the preference worksheet, discuss options with the AFPC weather functional manager, and trust the system to successfully put the right person in each job to meet the requirements of the Air Force, AFW and the individual.

I can guarantee you there are a lot of people working to ensure that we're successful in meeting this challenge. ♣

# AFSOC Weather Operations: Supporting Operation ENDURING FREEDOM

**By Lt. Col. Michael  
Davenport**

Director of Weather, HQ AFSOC

When I first came into Special Operations Weather (no dares, please—I'm older than dirt), my Officer in Charge sat me down with a document called *Keith Grimes – Special Operations Weatherman*, a classified biographical history of "Air Commando" weather operations in Southeast Asia. The specially trained and equipped air commando weathermen operated out of high-threat areas, exhibiting the highest levels of professionalism and courage while frequently in direct contact with enemy forces. Their ingenuity, intelligence, adaptability, weather observing and forecasting skills, and plain old "guts" were an inspiration to every airman who's worn the gray beret. They set the standard in the Special Operations Weather community that I grew up in – a tough act to follow.

But I'll tell you now that Air Force SOW teams operating in support of Operation ENDURING FREEDOM have surpassed what the Air Commandos accomplished during a decade in Southeast Asia. A true team effort, SOWTs assigned to the 16th Special Operations Wing and the Air National Guard's 146th Weather Flight rapidly deployed to austere airfields in Southwest and Central Asia. They immediately began collecting eyes-forward data

and providing weather intelligence to Joint and Air Force Special Operations combat missions. On numerous occasions, Special Tactics-trained combat weathermen were put on the ground, deep in hostile areas, to collect weather data to support tactical and operational level combat operations. Realizing the critical need for "weather eyes forward," and having great faith in their special tactics weathermen, special operations commanders dedicated scarce operational assets for the purpose of weather data collection.

The stories are incredible...from night combat parachute jumps into Afghanistan, to conducting operations out of hide-sites in remote desert locations and mountain peaks, to unnamed operations throughout the country – constantly in danger, and under direct and indirect enemy fire. On several occasions, combat weathermen were the first U.S. military personnel in an area...leading the way for the rest of special operations forces.

Combat weather warriors: Recently I had the opportunity to deploy as part of the command section of a Combined/Joint Special Operations Task Force. I saw, up close and personal and on a daily basis, the impacts of your weather forecasts on "the mish"...and heard exactly what senior leaders thought of you and what you pro-



vided. Universally, you were praised by SOW commanders in theater – the most impressive comments I've heard in my 22 years in the Air Force. Your ingenuity, professionalism, capability, observing and forecasting skills, and courage were indeed noticed and deeply appreciated. AFSOC warriors...my hat is off to you. I could not be more proud of you and your accomplishments. I look forward to working with you in conquering the challenges facing AFSOC weather operators.

Support relationships: I have provided weather support

See AFSOC, Page 26

# Chiefs Mentoring: Looking at Our Accomplish- ments, Future

**By Chief Master Sgt. Penny Braverman**  
AFW Chief Enlisted Manager

As we finalize reengineering, we all need to step back and take a hard look at the accomplishments we achieved. Notice, I say we – it took all the Air Force Weather members, from the general to the airmen, to make this plan work.

The first major accomplishment was the increased commitment to training our people. In my entire career, I have never seen such a strong commitment by the enlisted and officer force. We completely retooled the schoolhouse for the new accessions, both enlisted and officer, and ensured these new AFW members have the right tools to start their career. The enlisted are taught every forecasting and observing task we learned in the past – satellite, radar, space and its affects on the customers, Electro-Optics, networking on the communications side, and much more. The officers are not only exposed to what a weather unit is about, but they are also mentored and taught technical

leadership, how to apply their meteorological degree in the Air Force, space and its affect on the customers, and Electro-Optics to name a few. In reality, we are one of a handful of career fields that have an initial training program for our young officers.

The next accomplishment was standing up the regional hubs. These hubs are the training ground for new AFW people and they provide tailored regional support to DoD units in their region. In some instances, they complete the weather packages that numerous

ensures the newly trained people coming from hub assignments are better prepared to forecast and meet the customer's needs.

The new equipment coming on line is another accomplishment the career field needed. The Automated Surface Observing System, New Tactical Forecast System, and OPS-II, all replaced the antiquated Automated Weather Distribution System. They all provide up-to-date and time-critical data for the field units to use from a hub to a CWT. Units are still exploring the uses and possibilities of the systems, but most units appear to be very satisfied with the new equipment, and more is on the way.

Improved mentoring is by far our greatest reengineering achievement. The mentoring by senior officers and NCOs, and the contract trainers in



weather units, sometimes more than 20, individually completed prior to reengineering. The hours of workload saved is enormous and the Combat Weather Teams can now focus on their customers and tailoring products for their missions instead of doing this task. They also save the weather units several hours work every day by completing all the transient briefings.

As a training ground, the OWSs provided the first-ever standardized weather-training program. This

the hubs provides a very large arena for people to learn, grow, and develop to their fullest. In the past, officers had a small program, driven by the individual commander at the unit level, but it always paid dividends. If the commander took interest, the young officer received some mentoring and career guidance. With the hubs on line, we exceeded all expectations for officer mentoring and the enlisted field. We are finally

**See Chief, Page 8**

# TV special features combat-ready Weather Warriors

**By Kimberly Blair**

Staff writer, Northwest Florida Daily News

Air Force combat weathermen embody a scientific mind and a warrior's heart. They skydive to get to work, armed with high-tech, weather-gathering gadgets and a number of weapons. Few people inside or outside of the Air Force know much about them, but most special operations missions depend on their expertise.

Some of their anonymity is now gone. The story of the small and elite 10th Combat Weather Squadron at Hurlburt Field, Fla., was featured in a three-part series on the evening edition of The Weather Channel this summer. A film crew from the Atlanta-based network wrapped up interviews for the show earlier this year.

"The unit is unusual," said Michelle Birnbaum, the series' producer.

"Everyone knows the military has its own weathermen, but many people don't know there are special forces weathermen who go behind enemy lines. That makes weather forecasting much tougher."

The series focused on why combat weathermen are important to the mission and features five weathermen who recently returned from missions in Afghanistan.

Viewers will get a glimpse of their secret world through stories like that of Staff Sgt. Edwin, who was among the first wave of special forces into Afghanistan last year. "I went in with a small group of special forces to provide weather support for incoming aircraft as well as for the folks on the ground," said Edwin. Like the other weather-

men, he is a member of the 10th CWS, but is assigned to an Army Special Forces team. The specialists have a saying, "We know everything about weather, from the mud to the sun," he said.

Last November, the weathermen's astronomical knowledge proved critical. "We were getting calls from these pilots saying they were being fired upon. They saw tracers but didn't hear explosions," he said. The panicked pilots were eased when the weathermen explained the tracers in the night sky were only meteors from the Leonids meteor shower.

The squadron commander, Maj. Bob Russell, said the show would expose a different side of Air Force weather. "The Air Force provides all the weather services for the Army and the Air Force. We do the weather for Army and Air Force Special Operations," he said.

"We're all airborne-qualified. We move, shoot and communicate with Army Special Operations. We are on scene with them and go where they go, do what they do and then do our piece," added Russell.

It's not easy to find scientists who are also warriors, Russell said.

That is why he is happy to get their story out so other meteorologists longing to smear camouflage paint on their face and collect dew points behind enemy lines. It's not easy earning the gray beret, though.

Combat meteorologists must successfully complete survival and weapons school and tactical training to match the skills of Army Special Forces, Green Berets and Rangers, with whom they will live and work. ♪

Master Sgt. Stefan Padillo (left) and Staff Sgt. Craig Musselman, Air Force combat weathermen from the 10th Combat Weather Squadron here, launch a weather balloon in the field while Weather Channel cameraman William Rembert films the demonstration. The Weather Channel aired the three-part story showcasing combat weathermen June 10-12.



Photo courtesy of Northwest Florida Daily News

## Clouds, continued from Page 3

Launching the new CDFS II culminates thousands of man-hours of planning, design, logistics, and software engineering. The new products this system delivers are significantly improved over the original CDFS, processing data from nine satellites simultaneously at quadruple the resolution.

"The previous cloud forecasting system was event driven, processing products only when satellite data was available from the polar-orbiting satellites," said Leon. "Now, we have higher resolution, worldwide cloud data updated every hour. The forecasts generated from the cloud analyses are also produced hourly, and extend out to 12 hours."

These new cloud products are already employed to support the intelligence community missions in AFWA's National Intelligence Community Weather Branch and the

Air Force Combat Climatology Center, Asheville, N.C. Future applications for CDFS II include providing the information through the Joint Air Force and Army Weather Information Network and incorporation of the data into long-range weather prediction forecasts.

"The tailored CDFS II cloud information we provide to the Intel community help reduce casualties and greatly increase the odds that a military operation will succeed," said Maj. Jeff Cox, chief, NICWB, AFWA.

CDFS II is an integral part of AFWA's ongoing effort to provide next-generation, advanced-technology tools to front-line weather forecasters. AFWA's mission is to maximize the nation's aerospace and ground combat effectiveness by providing accurate, relevant and timely air and space weather information to DoD, coalition, and national users. This system is yet another piece of the total weather forecasting package AFWA provides as a tangible and direct benefit to warfighters and mission planners. ♣

## Chief, continued from Page 6

raising a generation of weather people who are not afraid to ask how to do the task, get a second opinion from another weather specialist, or even ask for help when they are too busy or do not understand. This is especially important to survival as the CWTs get smaller, relying on the hub to do the analysis, forecasts, warnings, etc. The CWTs can always ask for help from the hubs just as the hubs need the teams to be the eyes-forward experts for their areas of responsibilities.

We are changing the classes of people in AFW from forecasters, observers, and wing weather officers to weather specialist for the enlisted career field and weather officer/meteorologist for the officers.

This is a giant step that breaks the walls of segregation we have lived with the past 60-plus years in AFW, especially in the enlisted corp. Now every person in the unit can do all the tasks, especially in the CWTs, which allows for better flexibility and mobility. Never again should we hear sayings like "I am only the Observer," or "I am not the Observer," which provided some second-class feelings

in the career field, especially in the past 10-20 years. Now a pilot can ask a question of any weather specialist and receive all the weather information needed.

Finally, manning, and by this I mean faces, is the last area we changed. We saw a slow improvement at the start of the reengineering program, but we feel a strong finish is in the works with enlisted accessions up to more than 300 a year and re-enlistment rates at the Air Force standard or higher in some cases.

We continue looking for more ways to keep the junior officer levels up. Some ideas like weather officer proficiency pay, board charges, recruiting from the hubs to get some airmen to Officer Training School, etc. are in the works, but there are no firm answers on the approval of these programs.

On the enlisted side, we continue to see selective reenlistment bonuses increase, special duty assignment pay for selective Army, special operation, and jump assignments. The enlisted promotion rates for the weather career field are also higher, because

the Air Force considers weather a critical skill. Now, as the airmen come out of the hubs into the CWTs, and more experienced people are freed up to fill critical assignments, we will see the career field get healthy again, especially with your help in re-enlistment counseling.

These are just a few of the changes we have made in the past five years; and yes, it has been a long, hard, and almost unbearable period to live through. In my almost 28 years in the Air Force, this is the only time I saw AFW try to fix all the problems, and I have seen three periods of manning shortages and problems surviving Air Force downsizing.

The best thing of all is the training program that came out of this change – this is the first time training has come first. We need to keep our training flowing because it is our future. All our jobs are easier when we are well trained and prepared.

So when you see a senior NCO or officer, thank them – first for making this process of change work, and second for sticking it out to help make it work. ♣

# Former combat weatherman takes first step toward recovery

**By Tech. Sgt. Miles Brown**  
AFWA Public Affairs

Jason Morgan, a former combat weatherman and senior airman with the 10th Combat Weather Squadron, Hunter AAF, Ga., recently took his first few unassisted steps in more than three years.

In the summer of 1999, Morgan was deployed on a mission in Ecuador, when he was involved in a vehicle accident that left him paralyzed from the chest down. At that time, the entire Air Force Weather community joined in raising more than \$16,000 to assist Morgan with his recovery and transition to civilian life. This money went a long way in allowing him to live a more normal life, even with his disability.

"I had to use every bit of that money to adapt to my new life," said Morgan. "This included everything from relocation to adapting my vehicle so I could still drive."

This summer, Morgan has made several positive strides toward walking again. These remarkable changes in his prognosis are a result of a state-of-the-art surgery performed, ironically, in Ecuador.

"After my accident, the doctors said I would never walk again and the paralysis was permanent from the waist down," said Morgan. "Six months later, I returned to Ecuador for a nerve-graph operation performed less than 20 miles from where I broke my back."

Morgan progressed very quickly after the surgery. The doctor, who had performed this procedure more than 300 times, had never seen such quick progress.

"I now have full use of my hips, and can lift each knee from the sitting position," said Morgan shortly after his surgery.

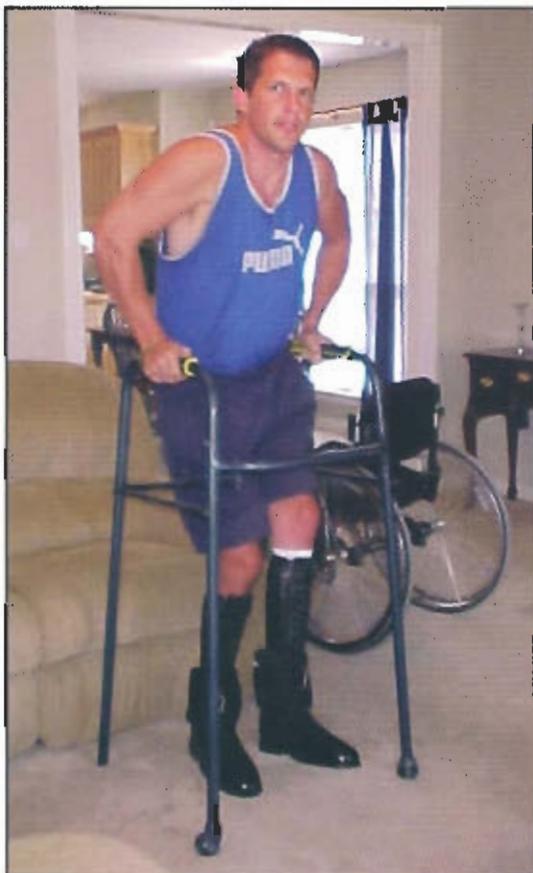
In early 2002, Morgan underwent another surgery to remove titanium rods in his back. Once those rods were removed and he recovered from that surgery, Morgan was able to take another step toward one of his goals – walking without assistance.

This May, Morgan worked with a physical therapist who helped him walk in a pool for the first time.

"I was able to take five to six steps consecutively," said Morgan. "I also stood in specially designed Italian boots and was able to take a few very small steps. I'm very close, but there is still a lot of work ahead. Because of this visit, I am more confident than ever that I will be walking in the very near future."

Morgan's remarkable recovery progress is due in no small part to the support of AFW professionals around the world.

"The Air Force and all my special operations brothers have supported me with their contributions and prayers," said Morgan. "I never could have done it without all your support. I can't wait to walk through the doors of the doctors who said 'you will never walk again.'"



Right, Jason Morgan, a former combat weatherman, works in a pool as part of his physical therapy. Left, Morgan shows off his new stylish Italian therapy boots.



Photos courtesy of Jason Morgan

# A TORNADO IN THE SUBTROPICS

**By Airman 1st Class Lyndsey Gibson**  
18th OSS/OSW

In the past year, the combat weather team at the 18th Operations Support Squadron, Kadena AB, Okinawa, Japan, has received three new Initial Skills Course graduates. I am one of the recent arrivals. Since I arrived at Kadena in May 2001, I have enjoyed the subtropical blue skies and suffered the island's leading severe weather threat, typhoons. The variety of weather I've experienced at Kadena has made me aware that weather personnel can't be complacent. Mother Nature occasionally adds a

twist, constantly challenging our local team of weather technicians.

Early on April 3, 2002, a thin line of rainshowers and thunderstorms associated with a cold front approached Okinawa from the Northwest. Staff Sgt. Glen DeMars, the lead meteorologist, and Senior Airman Flordeliza Sia began issuing advisories and warnings as the weather approached. The first weather warning was issued at 6:41 a.m. for lightning at Kadena. One minute later, the 20th Operational Weather Squadron at Yokota AB, Japan, issued a wind warning for surface winds exceeding thirty-five knots. An advisory for thunderstorms within ten



miles of Kadena was disseminated. At 7:01am, Sia heard the first crack of thunder as she watched the ceiling and visibility decrease rapidly. She quickly encoded and sent her observation.

As forecasters were analyzing the line of thunderstorms approaching the base, we received an unconfirmed report via telephone of a tornado. The caller, Diana Morgan, was an eyewitness. She is the spouse of Capt. Charles Morgan, my flight commander. She informed him that she just saw a tornado touch down causing damage, and emergency vehicles were arriving at the scene.

Tornados are an unusual phenomenon on the sixty-mile long island of Okinawa. According to records from the Japanese Meteorological Agency, only one tornado had touched down on the island of Okinawa in the past ten years, and just two others on nearby islands. However, it is not uncommon to see waterspouts or funnel clouds in the area.

Capt. Morgan, Staff Sgt. Robert Fournier, and I departed the weather station to assess the damage, and check on Capt. Morgan's family. As we approached the scene, emergency vehicles blocked off the area. I observed fallen trees that had been split and ripped down the middle, lots of debris everywhere, and even a trampoline tied into a knot around a telephone pole. We stopped to check on the Captain's wife and two sons, and although a bit shaken, they were fine. It is fortunate there were no serious injuries caused by this storm. This is where we noticed that Capt. Morgan's outdoor shed had disappeared. It was never found. His ninety-nine pound mower was thrown the length of the softball field across the street!

We walked through the neighborhood to interview people and take photographs of some of the damage. Large unidentifiable pieces of metal, possibly guard rails or roofing from off-base, had been left in the wake of the storm. A beautiful red sports car was flipped completely over. Several other vehicles were damaged and some were flipped on their sides.

According to one resident, his van was dragged through the parking lot several feet into his yard. I



Photos courtesy of the 18th OSS/OSW

All three photos were taken in the military housing area of Kadena AB, Japan, in the aftermath of an F-2 tornado that touched down April 3.

had never before seen the wrath of a tornado and I had no idea how much damage it could do.

We determined the long, narrow path of the damage was consistent with that of a tornado and not a downburst. We interviewed two eyewitnesses who saw the tornado, each on different ends of the housing area. We then used the Fujita Tornado Damage Scale to assess the damage. We later determined the damage to be consistent with the destructive force of an F2 tornado.

One of the emails floating around after this storm said, "Who says tornados can't happen at Kadena?" After this tornado, I've learned that is important to keep an open mind and consider all the possibilities. ♡



# 26th OWS

## Tornado Alley's Guiding Light

**By Maj. Eric Grelson and Capt. Elton Gray**  
26th OWS

The newest of Air Combat Command's operational weather squadrons, the 26th OWS, executes weather operations in the midst of the most violent weather in the world – the south central U.S., also commonly known as Tornado Alley.

Activated Oct. 1, 1999, the 26th OWS is organized under the 608th Air Operations Group, 8th Air Force HQ, Barksdale AFB, La. As an operational-level weather squadron, the 26th fulfills a diverse mission with one end-state in mind – **Innovative weather operations with a warfighter's focus on impacts to mission task execution.**

To achieve the mission, four flights govern three varied mission elements: 1) weather operations for 8th AF command and control, 2) an operational job training center for first-term airmen, and 3) weather operations for military installations in the two zones of its area of responsibility.

To conduct weather operations for 8th AF/C2, the squadron's first mission element, the Combat Weather Flight forms an integral part of the 8th AF Air Operations Center. "A major focus of ours is to predict weather events and extract weather impacts on operations with enough lead time to influence the shaping, planning, and execution of military operations. This way, we align ourselves with and integrate our operations into the AOC," said Lt. Col. Harold Elkins, 26th OWS Commander, referring to the CWF's role in the AOC.

Vital to predictive battlespace awareness, the CWF anticipates weather impacts on operations for AOC leadership. Impacts include threshold sensitivities of mission profiles, consisting of targets, tactics, timing, and type of mission, aircraft, weapon, and system/sensor. The

flight injects weather information, such as climatology, forecasts, and impacts, during critical points in AOC decision cycles, from strategic-level decision-making and target selection to execution of air campaigns.

Since the 8th is the numbered Air Force responsible for information operations, the CWF is assuming an expanding role in the IO domain. Assembling mission-tailored weather information and working hand-in-hand with intelligence experts, the flight is developing the ability to assess the "weather delta" – the difference between forecasted weather's impacts to friendly and enemy forces. Exploiting the delta of both solar and terrestrial weather impacts requires maximizing friendly forces' strengths while taking full advantage of adversaries' weaknesses. This approach allows military planners to anticipate the nature of the battlespace and achieve information superiority. In its IO responsibility, the CWF is leading the determination of requirements for the Joint Weather Impacts Server. The flight is leading integration of JWIS into one of ACC's top initiatives – the Experimental Combined Air Operations Center, the AOC of the future.

To manage the computer systems required for the CWF and all three squadron mission elements, the 26th OWS Systems Flight dedicates six full-time personnel to maintain 22 operational servers and a 2.5 million dollar operational production system. Operational servers produce more than 8.2 million products each month and run the squadron web page, which averages more than 50,000 hits daily. The networks supported by the branch provide weather information to the entire squadron, including the CWF, when it is deployed, as well as to any DoD units

with internet capability. In addition to operational servers, the branch maintains a training server, which mirrors operational capability using real-time or archived data. Trainees using the server respond to the flow of data in case study scenarios, issuing training forecasts, watches, warnings, and advisories without jeopardizing the integrity of operational systems.

The squadron's second mission element is to operationally train 40-60 first-term airmen per year. The Training and Standards Flight guides graduates of AETC's Weather Initial Skills Course through training geared toward squadron standard operating procedures. After eight weeks of training on data collection, data monitoring, and meteorological watch, airmen are ready to work shifts on the operations production floor as regional forecast interns. As manning dictates, they then receive additional training to work as flight weather briefers, eventually transitioning into graphics production under the mentorship of NCOs.

To facilitate training, the 26th employs a "cockpit" concept in its training lab and on the operations production floor. Each zone employs two cockpits, and each cockpit consists of three positions: a center seat filled by an experienced instructor, a left seat filled by an experienced forecaster, and a right seat filled by an intern forecaster, who is key to performing data handling and METWATCH for the zone. A lead officer forecaster and an NCO synoptician orchestrate the activities of all zones, guiding mentorship opportunities and driving the squadron's team-based forecast process. The process mirrors an Air Tasking Order process, increasing spatial and temporal resolution of forecast elements through shaping, planning, and execution phases. The process gives ownership of key tasks and responsibilities to interns, and it provides an early awareness of the potential for weather events, such as severe thunderstorms that can damage AOR assets.

Protecting these resources fulfills the squadron's third mission element – issuing regular forecasts, watches, warnings, and advisories for 16 major active duty installations. The Operations Flight issues these forecasts for all bases and posts in the squadron AOR. In addition, the OWS supports flight weather briefs and point weather warnings for 10 Air National Guard and Reserve Bases, eight Army Aviation Support Facilities and numerous special support areas within its AOR. Some of the special support include: emergency Medevac flights, reconnaissance and interdiction detachment counter-drug missions, and Southeastern Air Defense Sector operations, essential to front line air defense of North America.

Resource protection is crucial in a region that experiences more tornadoes than any

See 26 OWS, Page 27



While metwatching conditions at Barksdale AFB and Fort Polk, La., Airman 1st Class Kara Leonhart discusses a lightning advisory with the Combat Weather Team at Fort Polk.

# WEATHER WARRIOR RELAYS SIGHTS, SOUNDS, FEELINGS

**By Tech. Sgt. Miles Brown**  
AFWA Public Affairs

*What is it like to deploy following the 9-11 terrorist attacks? How will your community respond to your deployment? Will you feel any different during this deployment compared to pre-attack deployments?*

*These may be some of the many questions Air Force Weather members, and all military members, have in light of the terrorist attacks on the Pentagon, and in New York and Pennsylvania. The following questions and answers were taken from e-mails supplied by Tech. Sgt. Imo Lax, a weather forecaster deployed from the Air Force Weather Agency, Offutt AFB, Neb., in support of Operation ENDURING FREEDOM.*

**Interviewer:** When did you deploy to your current location?

**Tech. Sgt. Lax:** I arrived at my deployed location on Pearl Harbor Day, 7 Dec. 2001.

**Interviewer:** How long did you have to prepare, and how long will your deployment last?

**Tech. Sgt. Lax:** I received notification a couple of weeks prior to my report no later than date. This deployment will not exceed one hundred seventy nine days. I plan on being deployed for at least five and a half months, not including travel time.

**Interviewer:** Did it take long to get ready for this deployment?

**Tech. Sgt. Lax:** I continued to work in my normal duty section until November 23rd. The following week I attended refresher courses in Chemical Warfare training and Small Arms training (M16). I attended a number of briefings, and my medical records were reviewed to ensure that I could deploy. Then, I received vaccinations necessary for my deployment region.

**Interviewer:** I'm sure the work environment is quite different from your normal duty station. What does the normal, if there is such a thing, duty day consist of at your deployed location?

**Tech. Sgt. Lax:** My day starts at 6 a.m. I walk the hundred feet to the latrine tent and the shower tent next to that. You have to brush your teeth with bottled water, the water in the hanging water bladders is treated with chlorine but it is still not safe to drink. Hygiene is critical in this environment, and showering daily is very important but

time consuming. The water has little pressure behind it and there is no control over the temperature. Once that is done, there is the walk back to the tent.

I put my uniform on, and walk to the building that I work in. On the way, I pass through an armed checkpoint and they ask, "All secure?" Hopefully I will always be able to say, "of course!"

I usually arrive at work by 7:30 a.m., make a cup of coffee and receive my weather briefing from the night forecaster. For the next 12 hours I forecast, brief, and monitor the weather. Lunch is an MRE,



Meal Ready to Eat, actually half of an MRE, the other half I eat for supper. At 8 p.m. I brief the weather to the night forecaster; we usually talk about the "day" and by 9 p.m. I walk back to my tent.

If it has not been an exceptionally long day, I might play cards with the people from my unit, or read for an hour or so. I get ready for the next day – uniform out and boots ready to go, and go to bed.

**Interviewer:** Are most days normally like this?

**Tech. Sgt. Lax:** This seems very routine, but the weather is never "business as usual," and there are constant interruptions to the routine. People are always stopping by the office to converse, about the weather, about life here, or the life that they left behind.

**Interviewer:** What is the highlight to your days/weeks?

**Tech. Sgt. Lax:** Mail Call. That generates a flurry of activity. Mail is the highlight of any day. The designated mail clerk works in the same office that I work in, so I see every person in this unit when they stop by to see if they have mail. Mail delivery is very slow, and I think that if the people here had a choice of food delivery or mail delivery, they would pick mail.

**Interviewer:** How would you describe the location of your camp?

**Tech. Sgt. Lax:** It is incredibly noisy here nearly twenty-four hours a day. There are only a few paved roads, and there is dirt and dust everywhere. There are problems with pollution like sewage and trash, but it does make for some spectacular sunsets. Generally, it is noisy, dirty, and stinky here.

**Interviewer:** With the 12-hour shifts, do the days seem longer at deployed locations?

**Tech. Sgt. Lax:** Time seems to fly here. It could be that everything takes longer to do. Whether it is taking a shower or getting the information I need to do my job, all these use parts of the day unnoticed. The days fly by, and when a month is completed, seem like only a week or two has passed.

**Interviewer:** I'm sure you still have plenty of time to think about home. What do you miss most about home?

**Tech. Sgt. Lax:** What do I miss about being home? Of

course I miss my family and friends. I miss all the things that Americans take for granted. Things like being able to turn on the faucet and having drinkable water come out, or, like picking up the phone any time I want and calling who ever I want. It is best not to dwell on what you miss.

**Interviewer:** Is there any person or group back home that have helped you through this deployment?

**Tech. Sgt. Lax:** My niece's fourth grade class "adopted" me. They sent holiday cards and letters of support. Most of them know who I am because my house is across the street from the school, and they know that I am Cheyenne's "Auntie Imo".

In return, I wrote to them about what it is like here and sent them a digital picture.

Most, if not all of these children know nothing of the military. I represent the Air Force to them, and I take that very seriously.

I sent the class an American Flag that was flown here, as thanks for supporting me. I sent the flag and a certificate to my sister, who had it framed and delivered to the school. It now hangs in the "lunch" room for all to see.

**Interviewer:** Deployments are part of the military. Knowing that, why do you stay in the military and deploy to possibly hostile locations?

**Tech. Sgt. Lax:** The price of freedom is high. If I wish to enjoy the freedoms America has to offer, I must be willing to take responsibility to keep America free. But why I do what I do can be summed up in a note from a young boy. We received a Christmas card from a third grader from New York. He wrote:

"Save the World from terarrest.

You gies rule.

Get Ben laden.

**Merry Christmas"**

From: Joshua O.

This is why I do what I do. Third graders should be worrying about puppies, bicycles and Super Nintendo, not terrorism.

**Interviewer:** Is there anything the people back home should know about their deployed airmen, soldiers, and sailors?

**Tech. Sgt. Lax:** The folks back home need to know that we need their continued support.

# Military simulations just got a little weather

**By Lt. Cmd. Ben Webb**  
Chief, OL-M, AFWA

Invision a battlefield environment where there are no weather effects for months or years. It doesn't rain, snow, or sleet. The wind doesn't blow and waves don't pound the shore. Clouds never hinder an operation. Welcome to today's world of legacy military simulations. Historically, simulations included very little weather play, and up to now, it has been too expensive or too hard to retrofit legacy Modeling and Simulation systems with a weather-play capability.

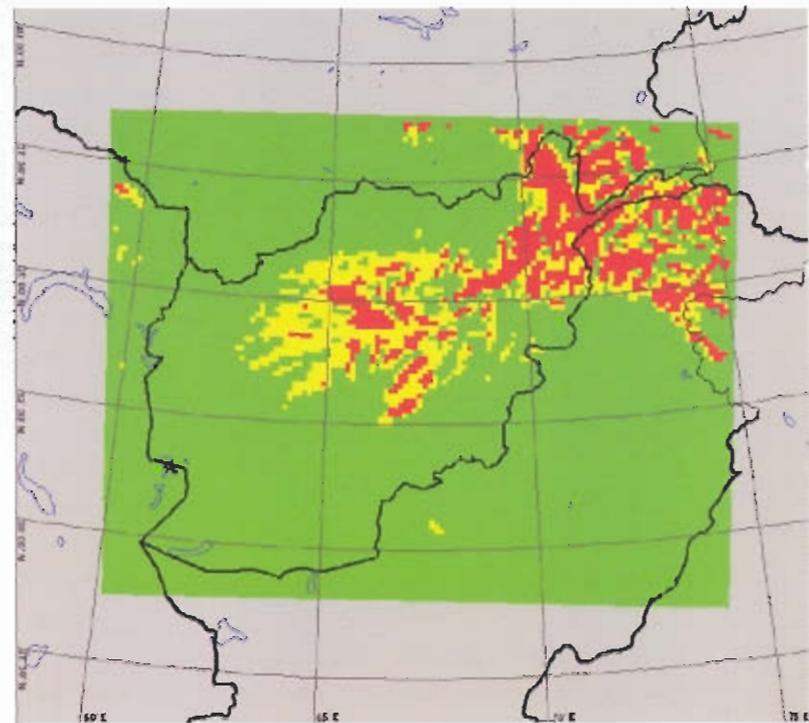
This is all about to change; the new Joint programs will be interactive with the air, space, oceans, and terrain (including man-made structures) and take into account the effects of the natural environment on simulation objects – planes, tanks, ships, weapons, sensors, people, etc. The days of using weather as a “throttle” for the exercise, cranking in some bad weather if the exercise is moving too fast, are thankfully numbered.

The Air Force Weather Agency's Air and Space Natural Environment Modeling and Simulation Executive Agent office is collocated with the Air Force Combat Climatology Center and the National Climatic Data Center in Asheville, N.C. The ASNE MSEA serves the M&S community as subject matter experts for air and space natural environment data bases (including relevant standards), dynamic processes, and other applications. Created six years ago, ASNE MSEA manages programs that are developing an infrastructure that will enable the simulation community to “plug” realistic weather scenarios into their simulated battlefields and environments. It sounds easy, but imagine the task at hand to recreate most of the natural environments we work and fight in. It's one thing to graphically display clouds and rain, but quite another challenge to build natural environments that simulate entities, or Battlespace Objects, with which to actively “interact.”

## PROJECTS:

ASNE MSEA has initiated or is involved in a number of applied research projects to develop new technology and address capability shortfalls. A few examples follow:

**ACMES, MEL, ESG, WxFX, IonScint, ACMES-ESG-WxFX Integration.** The Advanced Climate Model-



*This image is a graphic depiction of Afghanistan showing unfavorable conditions for warfighters. Green areas are between 0-24 percent unfavorable for military ground operations; Yellow areas are 25-49 percent unfavorable; Red areas are 50-100 percent unfavorable.*

ing and Environmental Simulations project, or ACMES, at AFCCC provides a new capability to generate high-resolution climatology data for regions of the world that have little or no data from which to derive such information. It also meshes perfectly into the M&S support infrastructure to produce high-resolution atmospheric data to meet simulation requirements. AFCCC is part of the Master Environmental Library resource sites. MEL was designed to be a one-stop, consolidated library containing natural environmental data.

The Environmental Scenario Generator is the work horse application that enables users to “discover” data that meet their needs. When the data does not exist, users may request weather data is produced in a timely manner.

Warfighter Weather Effects is an AFW project that will leverage the ACMES program and provide the capability to produce weather effects information for both M&S and operational customers using high-resolution historical weather data. WxFX automates the translation of raw weather data into weather intelligence (effects) with “climatological” effects displayed in red, amber, and green on charts and maps. This capability was successfully

demonstrated last summer during the Joint Expeditionary Force Exercise and recently for operations with the War on Terrorism. In support of Operation ENDURING FREEDOM, 10 years of ACMES-modeled Afghanistan weather data was post-processed into WxFX files. These files are now being used to depict weather effects on 31 different warfighter systems at six-hour increments.

The ASNE MSEA has also initiated space environmental projects. One of the most promising deals with ionospheric scintillation. IonScint is one of the space effects parameters most needed by the emerging Joint modeling programs due to its effect on satellite communications and navigation signals. Although IonScint began as an M&S project, the technology is now being used by CENTCOM, PACOM and SOUTHCOM to support operational customers. Another exciting project that began last year at AFCCC involves the integration of ACMES, ESG, and WxFX. This marks the standup of the first truly operational DoD M&S environmental data provider. Full integration and IOC is planned for 2002.

The ESG-ACMES-WxFX integration allows customers to mine regional ACMES databases and find desired environmental scenarios and order the data online. Customers will be able to view their scenario in terms of operational impacts using WxFX tools. When fully opera-

tional this revolutionary system will be the only one of its kind and will provide the first Just-in-Time environmental data production capability for M&S.

## JOINT PROGRAMS:

The ASNE liaisons support the primary Joint simulation programs that will enhance training and education, warfare analysis, and acquisitions:

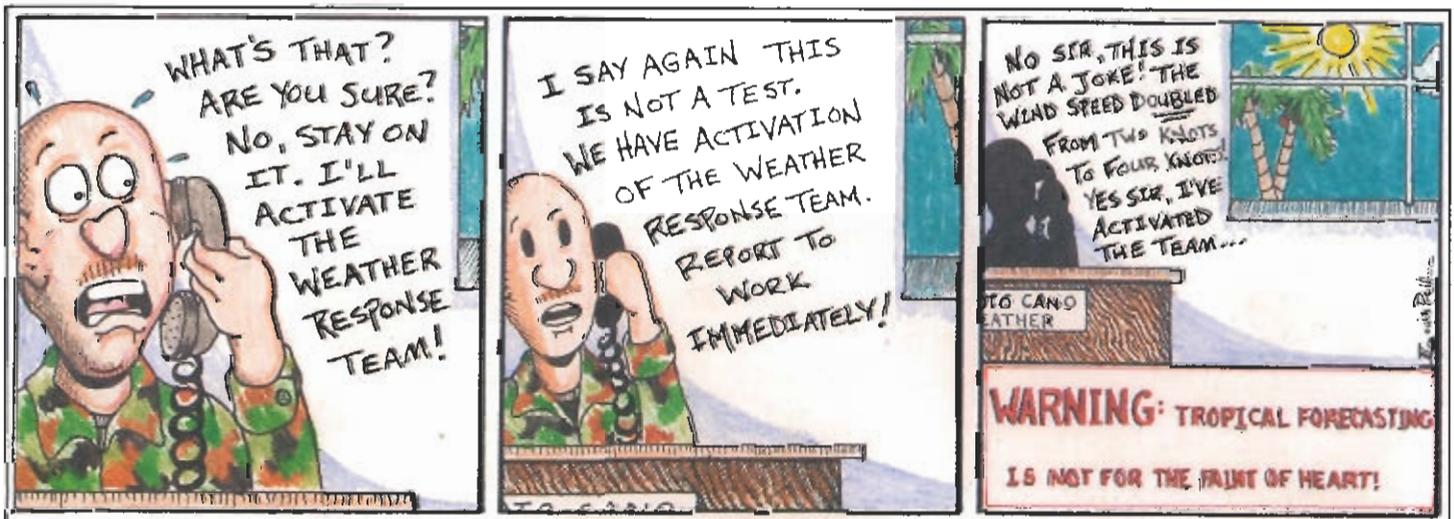
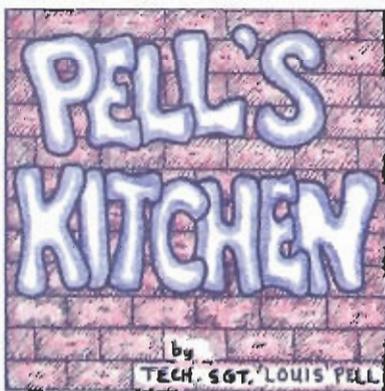
The Joint Simulation System supports training and education of ready forces by providing realistic joint training across every phases of military operations for all types of missions. It will interface with command, control, communications, computers, and intelligence functions and equipment in the field. JSIMS will provide flexible support for joint training across the force by using efficient, composable simulations tailored to user needs.

The Joint Warfare System is a stand-alone simulation used to analyze alternative force structures, Commander-in-Chief actions, and weapon system acquisition alternatives. In most cases, the entities modeled in this simulation will be aggregated above the platform level – Army Division/Battle Group/Air Wing-level operations – over large domains within a theater of war.

The Joint Modeling and Simulation System is a simulation support environment primarily involved in acquisition of new equipment. It also includes a tool kit that allows modelers to build representations of real world systems, configure those models, assemble them into simulations, execute those simulations, and process the results.

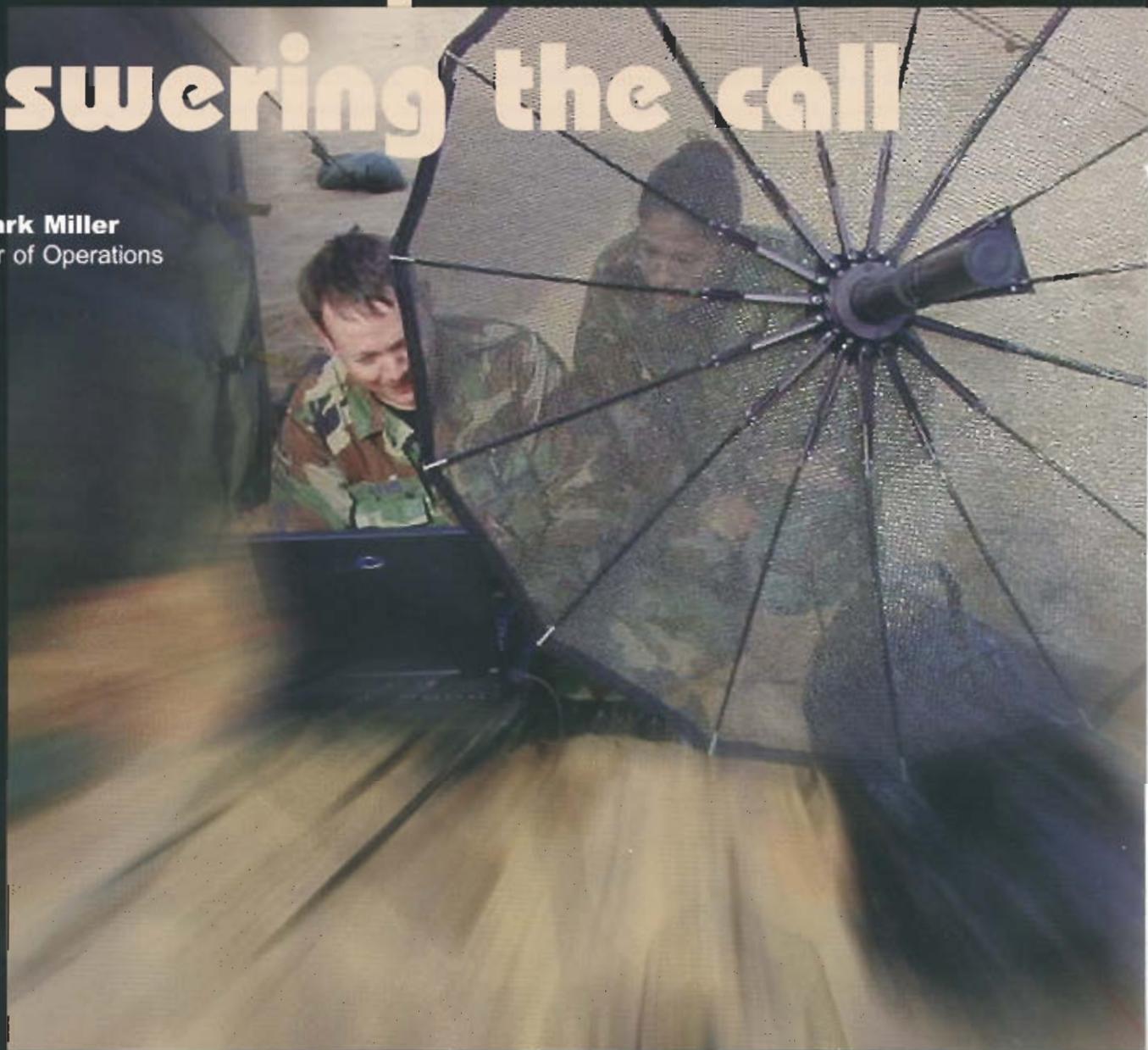
ASNE MSEA continues to serve the M&S community by building natural environment data bases, dynamic processes, and other applications.

For more information about the projects and programs listed, go to the ASNE MSEA website at <http://mseafccc.af.mil> or call (828) 271-4209, DSN (312) 673-9016. ♪



# Atlas Drop- Answering the call

**By Maj. Mark Miller**  
7WS Director of Operations



**I**magine the following scenario: In the middle of the night, the call goes out. There is a crisis somewhere in Africa. A U.S. presence is needed to evacuate American citizens and establish a base of operations to stabilize the situation. This is certainly not a far-fetched scenario, and U.S. forces in Europe are trained for such situations.

**E**nter the Southern European Task Force. SETAF is an airborne rapid reaction force and part of the Joint Task Force Headquarters based at Vicenza AB, Italy. The force is ready to respond anywhere within the U.S. European Command's area of responsibility.

**S**ETAF has been forward deployed since the 1950's and remains an integral part of the U.S. Army's power projection ability. Det. 12, 7th Weather Squadron, is assigned to support SETAF with short and no-notice deployment capabilities. To get them to the fight, the 12th Aviation Brigade steps in as the airlift arm of V Corps, providing aviation support for Combat Search and Rescue, Downed Aircraft Recovery Teams, airborne insertions, and long-range reconnaissance missions. Det. 10, 7th WS, Giebelstadt, Germany, conducts weather operations to meet the needs of the brigade. In tandem, these units provide the backbone to EUCOM's first-in capability.



**T**o prepare for the austere, remote conditions that Africa presents, these units, and their combat weather teams, combine forces to participate in an annual exercise called ATLAS DROP. ATLAS DROP is a bilateral, live-fire ground and aviation exercise set in the Cap Serrat training area in Tunisia. The lead unit in ATLAS DROP is SETAF's 173rd Airborne Brigade. The Brigade is prepared to provide combat-ready forces for NATO contingencies, and can deploy to or from any Army Task Force Headquarters. The exercise provides a perfect opportunity for the two CWTs to join to provide critical weather support to the combined efforts of both Army units, from the airborne insertion to live-fire operations.

**T**he weather teams must mirror their Army customers by being a light, mobile force. Since the Tactical V-SAT does not reach into most of Africa, the team deploys with an INMARSAT to link back to the USAFE Operational Weather Squadron at Sembach AB, Germany. With the submission of a support assistance request before the start of the exercise, the weather team is able to download program charts, METSAT analysis, synoptic observations and forecasts, discussion bulletins, and the exercise forecast bulletin each morning.

**D**uring the last ATLAS DROP, the team was able to use the first TMQ-53 Tactical Meteorological Observing System fielded in Europe. The TMQ-53 provided light, tactical, highly capable observing capability and performed flawlessly.

**T**he deployed weather team uses the exercise to hone their skills in tactical observing using the TMQ-53 and Manual Observing System Kits, creating tactical visibility charts, single station forecasting techniques, tropical forecasting, and land navigation and vehicle convoy operations techniques. The exercise also offers weather team members the

**We**  
**train**  
**as**  
**we fight...**  
**to win.**

opportunity to learn more about other aspects of the Army units they support. For example, team members were given familiarization flights of the exercise area, during both day and night, and were able to participate in an explosive ordinance disposal training course. The team was also provided the opportunity of processing their vehicles and cargo through a 9-stage inspection line. This afforded keen insight into a properly conducted joint inspection enabling movement via Air Force aircraft...quite a challenge!

**I**n addition to the combined training ventures for the weather team, the exercise provides a unique joint training opportunity between U.S. forces and host nation countries. Elements of the Tunisian Armed Forces trained alongside U.S. Army troops, accomplishing live fire exercises and air assault missions. The weather teams play a key role in forecasting for these events, ensuring maximum utilization of resources. During the most recent ATLAS DROP exercise, elements of the 12th AB also conducted a humanitarian mission. Due to its heavy lift capability, CII-47 aircraft airlifted a replacement generator to a remote lighthouse, inaccessible by other means, returning safe civilian boating operations to the area.

**A**TLAS DROP is conducted annually and provides a realistic training scenario melding combat forces and combat weather forces into a fighting team. Joint and combined missions are conducted to fine-tune combat effectiveness, and the isolated bare-base environment lends realism to the mix. "We train as we fight...to win." ♣

# MONSOON COMPLEXITIES

**By Melody Higdon,**  
Climate Analysis team, AFCCC

Immense monsoon systems are experienced around the globe. South America, Africa, South Asia, Southeast Asia, and the western Pacific Basin all have very clearly defined monsoon seasons. So, do you know how the monsoon system operates?

The monsoon is a complex mechanism that is driven by several things. The landmass of Siberia and Central

wind directions during those two seasons. For India, the northeast monsoon is the dry season and the southwest monsoon is the wet season.

In the Northern Hemisphere's cold half of the year, Central Asia gets cold and Siberia gets profoundly cold. This creates a massive, shallow, cold, high-pressure system, called the Asiatic high, over the northern two-thirds of Asia. This cold high pushes cold, dry air outward in all directions at the surface, driving the Near

Oceans and the cold, dry air mass that dominates over Asia.

You can tell where the NETWC is over India just by the rain. South of it, the rains continue. North of it, conditions go dry. When the NETWC goes south of a region for the last time of the season, the rainy southwest monsoon is over and the dry northeast monsoon has begun. Eventually, the NETWC pushes far south of India.

In the warm half of the year, the situation reverses. It begins over Central Asia and Siberia with warming land. As this vast landmass warms, it heats the air over it and eventually breaks down the Asiatic high of winter. It keeps right on warming the air and gradually develops the equally massive Asiatic low. This serves to draw air into the low from all directions.

At the same time, the subtropical oceanic highs expand and shift northward with the sun. The Australian low of Southern Hemisphere disappears and is gradually replaced by its counterpart, the Australian high. All these huge systems combine to push and pull the NETWC northward.

There are a number of indicators that the rainy season is imminent, and Indian meteorologists have it down as well as anyone in the world. The Somali jet that develops along the eastern African coast with the southwest monsoon is a big clue and there are other signs as well. The biggest hint that the NETWC is moving through the area on its way northward is the monsoon burst.

The monsoon burst involves a line or mass of thunderstorms that arrive



Asia is an important player, as are the vast subtropical highs over the oceans. It would take too many pages to describe the monsoon system for the whole world, so let's narrow it down to just one part, India. India is everyone's textbook example of the monsoon climate.

The monsoon system is made up of two basic seasons, the northeast monsoon of the Northern Hemisphere cold months and the southwest monsoon of the warm months. They are called northeast and southwest monsoons for the prevailing

Equatorial Trade-Wind Convergence southward. The great subtropical oceanic highs over the Pacific and Indian Oceans weaken and shift south. As they retreat, they bring the NETWC farther and farther south, even as a thermal low over Australia draws it southward.

For the monsoon climate, the NETWC represents the boundary between the northeast monsoon and the southwest monsoon. It is a discontinuity zone between the giant, warm and moist air mass that dominates over the Indian and Pacific

See Monsoon, Page 24

# What's the difference?

## The difference is

# Mission Tailoring

**By 1st Lt. Richard Stedronsky**  
26th OWS

The Introduction in FYI Number 48, "Mission Tailoring," reads,

*"A key to good weather support is communicating the forecast to the customer. It is important to know what the customer needs, how they need it; and it is also important to know what they do not need. The technique is to tailor the forecast to the mission, hence the term "mission tailoring." But mission tailoring is also as much a process as it is technique, and it is as dynamic a process as the atmosphere that we are trying to forecast. If the process is applied correctly, it will enable commanders to operate smarter and "Anticipate and Exploit the Weather for Battle."*

I've added the highlights, underlining and italicizing to emphasize that mission tailoring is the reason there is Air Force Weather, charged to provide weather information to support the Joint Chiefs of Staff, Army, and Air Force.

"The commander who can best measure and take advantage of the weather conditions has a decided advantage over his opponent. By understanding the effects of weather, the commander can set the terms for battle...Weather conditions will impact execution decisions by dictating tactics or the weapon systems employed," as found in FYI 48.

I would not want to lead you to the conclusion that weather or weather operations will be the ultimate tool in a commander's kit bag, but I also-

lutely want to leave you with the thought that weather and weather operations do impact decisions. The perception that "they'll fly anyway" may seem to be the "rule;" however, battle commanders at many levels must weigh the variables, including the enemy threat, importance of destroying the target, psychological advantages or disadvantages on the enemy, and weather to make the best decision.

This mission tailoring falls right in line with the Air Forces' Air and Space Basic Course, formally the Aerospace Basic Course. Air Force leadership recognized the need to educate our young officers, Air Force

wide, on the overall mission of the Air Force and air operations. A large portion of this course focuses on the Air Force's role in wartime operations and the development of an Air Tasking Order. Among other topics covered when learning about the ATO, young officers learn about the different factors that require consideration in the early planning stages of an ATO, including weather.

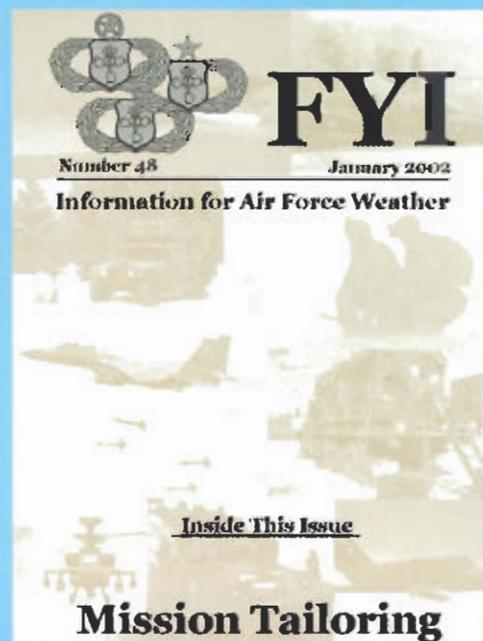
Many view weather as only impacting the tactical and execution levels of air operations. ASBC provides a forum where knowledgeable weather officers can spread the word to fellow officers as to the specifics of how

See FYI, next page

Mission tailoring is best achieved by focusing your weather support on identifying critical weather thresholds that impact your customer's missions, weapon systems, or delivery platforms. Early identification of environmental mission limiting factors provides flexibility to commanders and key decision-makers to effectively control the battlespace. Early consultation can save time, work, money and possibly lives.

To learn more about mission tailoring, download FYI 48 from AFWA's training division web site at <https://wwwmil.offutt.af.mil/afwadnt/>

By understanding the processes that govern your customer's operation, such as the air tasking order cycle, or Army offensive/defensive operations, you can gain a better perspective of how to mission tailor your weather support.



## FYI, continued from previous page

weather is needed in all phases of an ATO. Our officers learn in depth the part weather plays in ATO planning at the operational weather squadrons.

The OWS serves as a tremendous training environment for new weather officers to learn from the experience of others in the weather field, both officer and enlisted. Also, an OWS provides opportunities for weather officers to participate in exercises and see, first hand, how weather can impact the air and land battle. From this education at the OWS, a young weather lieutenant learns how weather supports all phases of an ATO and, ultimately, supports the Joint Forces Air Component Commander and the Joint Forces Commander.

Granted, the ASBC curriculum

itself does not get into the in-depth role of weather and its impact in the planning stages, but weather officers can educate other young leaders of weather's role. By doing so, the future JFACC's and JFC's are privy to how weather and weather operations can positively or negatively impact air operations, not only in the execution phase, but in the planning phases, too.

Through the new Combat Weather Team Operations Course, the ASBC and mentoring by the "old" folks, we're entering a new age in Air and Space power and AFW operations. The challenge for you is to study and understand your profession. The FYI is a great start. The FYI is full of examples of why and how to effect mission planning, and I challenge you to read it. Actually, the challenge is to study and understand it. ♣

## "All" doesn't mean "any"

Air Force Director of Weather advocates the use of the phrase "adverse weather capable" in lieu of "all-weather." This phrase more accurately reflects how the Air Force operates now and in the foreseeable future.

"All-weather," in reference to a weapon system, implies that a weapon system has the ability to operate safely and effectively in ANY environmental condition.

"Adverse weather capable" depicts a weapon system as optimized to operate safely and efficiently in a specific set of environmental conditions by defining its critical environmental threshold and identifying the battlespace where environmental conditions exceed those thresholds.



Left, Capt. Bruce Stanbury, center, Staff Sgt. Kenny Sutton, and right, Master Sgt. Jim Vinson, Task Force Bagram Combat Weather Team, raise the U.S. flag over the U.S.

Embassy in Kabul, Afghanistan, earlier this year. This Professional development, rekindling a sense of pride and excellence.

# Weather IMAs Support DTRA and the Winter Olympics



**By Col. Tim Miner**

Reserve Assistant, Director of Weather

In February, seven Air Force Weather Individual Mobilization Augmentees showed the value and capabilities of the reserve forces when, for three weeks, they augmented the weather desk of the Consequence Assessment Team of the Defense Threat Reduction Agency. During this time the CAT weather team provided reach-back weather support for homeland defense for the XIX Winter Olympic Games held in Salt Lake City.

DTRA is a joint DoD agency, descended from the Defense Nuclear Agency. DoD and other government agencies use their computer simulation models to predict the location and extent of casualties in the event weapons of mass destruction were used. During the games, the CAT needed around-the-clock capability for the weather desk. The team had to stay on top of the microscale winds and weather around all the Olympic venues so that DTRA

experts and modelers could assess any potential threat to the athletes, visitors, and more than 180,000 people working and living in the Salt Lake City area.

Maj. Brian Beidler was the active duty AFW representative on the DTRA staff. The seven IMA officers provided more than 48 percent of all the weather desk shifts and more than 86 percent of the weekend, overnight, and holiday shifts. The IMA team included all three IMA Colonels, James Hoke, David Johnson, and Tim Miner, who provided more than half of the overnight, weekend, and holiday workload. Also included in the team were Lt. Col. Mike Kelly, and Majors Mark Clausen, Michel Davison, and Margo Bjorkman.

The joint agency considered the IMA support critical to their success of providing continuous coverage of the

weather desk. As thanks for a job very well done, all seven IMAs were inducted into the significant and elite "DTRA Weather Mafia" at a ceremony with Brig. Gen. David L. Johnson, Air Force director of weather, presiding.

There are more than 120 IMAs in AFW, supporting many different missions on a daily basis. More than 20 have been activated for Operations NOBLE EAGLE and ENDURING FREEDOM. The "DTRA Seven" are only one example of the capability that comes from maintaining a highly experienced reserve weather force. ♪



Lt. Col. Kelly, Maj. Davison, and Maj. Clausen evaluate microscale winds in the Salt Lake City area at an HPAC terminal.

# Bosnian civilian observer to augment team

By Rick Scavetta  
European edition, Stars and Stripes

Nine Bosnian civilians are training to observe weather conditions and will soon augment the staff of Air Force Weather forecasters at bases throughout Bosnia.

Brown and Root, the civilian company that provides much of the U.S. military's logistics in the Balkans, recently hired weather experts with Air Force qualifications to instruct nine Bosnians in the science of weather observation, said Lt. Col. Robert Wallace, commander of the 401st Expeditionary Weather Squadron.

When the civilians are certified, the 401st will cut its 15-person military weather staff by half, Wallace said.

"A military person does not have to do the work, it just has to be done," Wallace said.

Training began in the classroom in early November, 2001. By the first week of December, the Bosnians were side-by-side with airmen, gathering weather data.

"We're practicing this month, before we get certified," trainee Enes Rasidovic said.

Once Rasidovic and the other civilian observers get a "thumbs up,"

they are on their own.

In the interim, Rasidovic is still learning his new trade. Each hour, he heads onto Eagle Base's snow-covered airfield, checks the temperature and looks into the sky. Back inside his station, he records the data on a computer.

His colleague Ahmed Masic, said he had a lot to learn about observing weather. Masic spent the last three years working on a Brown and Root construction crew.

In class, he learned how to evaluate visibility and sky conditions, including identifying types of clouds and their height, he said.

"This is a really good experience for me," Masic said. "It's a good feeling to be a part of this."

Observers establish a record of visibility, cloud height, precipitation and wind speed. Forecasters then interpret that data to predict upcoming weather.

Both Army and Air Force aviators

"A military person does not have to do the work, it just has to be done."

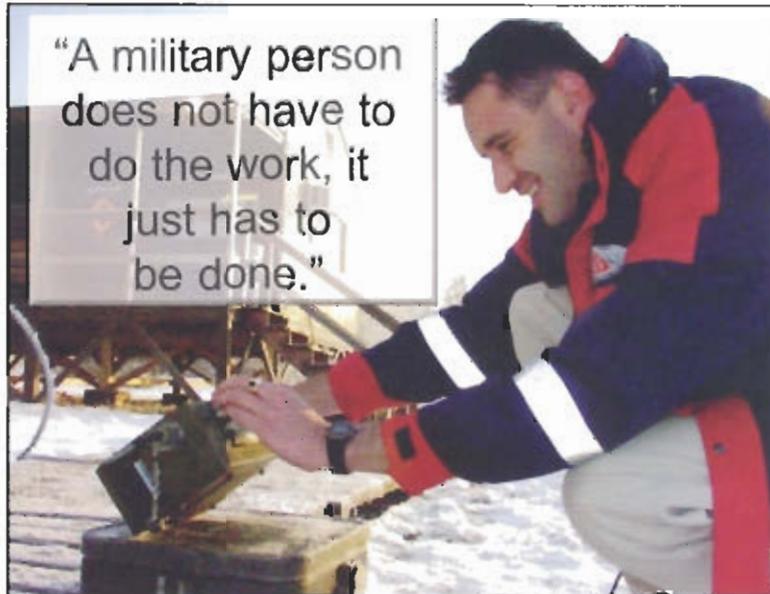


Photo by Rick Emert

Brown and Root weather observer Enes Rasidovic, of Kladanj, takes temperature readings at the Eagle Base airfield. Soon, civilian observers in Bosnia will begin to take over some weather responsibilities from the Air Force.

rely on weather observation and forecasts for their flight plans.

Contracting weather observation functions will help the Air Force respond to a high operations tempo and its deployments worldwide, said Capt. Johanna Janukatys, an Air Force spokesperson at Eagle Base.

In turn, Air Force officials hope the trained locals would eventually use their skills to teach other Bosnians about weather observations.

"We [Bosnians] already have weather guys," Rasidovic said. "There might be a chance to teach others, but I don't know the procedure. We may need more school for that." ♪

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## Monsoon, continued from Page 20

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over an area all at once to begin the rainy season with a BOOM! Heavy rainshowers and thunderstorms accompany the NETWC northward and leave behind the moist, warm, and very unstable air mass of the southwest monsoon. Once the NETWC is north of an area, the rainy season is on with frequent rainshowers, some thunderstorms, high

humidity, and lots of rain.

This is the bare bones description of the monsoon system in India, with plenty of details left out. However, the basic textbook concepts and principles found in the monsoons of India can be applied elsewhere. Although a potential destructive force and clearly a scientific marvel of Mother Nature, a monsoon works in basically the same manner everywhere it occurs. ♪

# RIGHT ON TARGET

**By Army Master Sgt. Sue Harper**  
21st TSCF Public Affairs

For most people in most places, weather is a safe topic to talk about. It doesn't cause a big reaction, and it is not a very exciting subject. For a staff sergeant deployed here, that isn't the case. In fact, many soldiers depend on his forecasts.

Recently, 200 soldiers who were looking at a five-hour bus ride in their future if the fog didn't lift, relied on Walker and his predictions. For these soldiers, weather was a big deal. And for the Camp Able Sentry weather forecaster, Staff Sgt. Paul Walker, deployed from the 355th Operations Support Squadron, Davis-Monthan AFB, Ariz., who had already looked into the future of the soldiers two days earlier, the weather is always a big deal.

His prediction that the fog would lift by 11:30 a.m. saved the soldiers a five-hour bus ride and allowed 21st Theater Support Command Forward to coordinate a backup plan.

Part of Walker's mission during his 90-day stint in Macedonia was supporting the Army's 21st TSC during its recent reception staging and onward movement piece of

the transfer of authority mission for 10th Mountain Division and the 101st Airborne Division (Air Assault) for the seventh iteration of NATO forces Kosovo.

"Accurate weather forecasting is critical to the success of range operations," said Army Capt. John Balbach, 21st TSC forward intelligence officer. "Staff Sgt. Walker's weather analysis was not only accurate, but he also took it a step further and assessed what impacts the weather would have on upcoming operations."

Walker, a Detroit, Mich. native, forecasted that the fog would lift that day at the camp by 11:30 a.m. That would allow the soldiers, who were diverted from Able Sentry to Thessonliki, Greece, to fly back to the camp. If the fog didn't lift, the soldiers would have been bused out of Thessonliki for a long ride home.

The fog lifted at 11 a.m., and the airplane was allowed to fly.

Walker had a "hit."

"The best part of my job is when I hit a forecast, when what I forecast actually happens or when a pilot comes back and says, 'the weather you briefed was right on,'" Walker said. "It's even better when I make a correct forecast 10 days out or when I am the only one saying this is what the weather will do."

What he means is if he is the only one of the three groups he works with. He shares and coordinates information with Camp Bondsteel, Kosovo, and Sembach Air Base, Germany, Walker said.

"The hub at Sembach produces the forecast. We huddle and talk, then the finalized products are produced."

And for Walker, the weather is always interesting. He joined the Air Force as a weather forecaster because he thought it would never be dull.

"I thought [weather] was interesting. I thought this job would never be the same day after day," Walker said. "It's a challenge to beat Mother Nature."

His schedule is never the same. It depends on what the missions are for that day, he said.

"I might be briefing ground missions or briefing pilots from here to Germany and then briefing pilots from here to Greece," Walker said.

The challenge for Walker is to give people the best information on the weather so that weather does not



Staff Sgt. Paul Walker, deployed to Camp Able Sentry, Macedonia, from the 355th Operations Support Squadron, Davis-Monthan, Ariz., fills in a CAS Weather Briefing Form as part of his duties which include briefing weather for aircrews.

Photo by Army Master Sgt. Sue Harper

See **Target**, next page

to the Army at various levels for nearly half of my career. I think that we must provide even more robust support to our technicians working with the Army – training, equipping, and supporting combat weather teams to the same level that any other airman in AFSOC is supported. We make the current U.S. Air Force and U.S. Army joint agreement work today, but at a large cost to the weather unit in terms of time and energy. Imagine how much more we could accomplish by refocusing more of that time and energy into doing our weather job. The communicators, trainers, and equippers are poised to help us do just that. For example, the weather functional area often found itself intimately involved with communications architectures that are best structured by the communications specialists. Similarly, we must ensure new equipment fielding is expedient, meets current and future operational needs, and is front-loaded with training that virtually eliminates the burden for the operators.

**Communications:** We are mainstreaming our tactical communications requirements for providing what we need to do our jobs. Organizations show up to the war and expect communications to be there – units have communicators assigned to provide, maintain, sustain, and operate the communications gear for the organization. Staff shows up, plugs in a laptop, and starts doing their job – it should be no different for combat weather operators. The AFSOC communicators are working hard to ensure future systems can adequately support our evolving requirements.

**Training:** USAF/XOW recently approved a training pipeline that will deliver jump-qualified, partially tactically-trained weather technicians to AFSOC units. From there, potential Special Tactics Weather operators will enter AFSOC Advanced Skills Training, where they will jointly train with Combat Control and Pararescue personnel. They will become experts at advanced Special Operations and Special Tactics Weather tactics, techniques and procedures.

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## Target, continued from previous page

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surprise anyone and so that whom he is forecasting for can make plans to avoid inclement weather or to be prepared for the weather.

“Today the challenge would have been the clouds or the rain, tomorrow the wind and Friday it could be visibility,” Walker said.

Visibility was the challenge Nov. 8, and thanks to Walker’s love of his job and his ability at his job, it was overcome. ♪

**Equipment:** As stated above, we will continue to develop, test, procure, and field weather observing systems that meet SOWT and Special Tactics Weather operational requirements for eyes-on-target and/or remote sensing strategies.

**Reengineering:** We need to apply reengineering doctrine to SOF operations. We will be focusing on providing the “eyes-forward,” Special Tactics Weather technicians are uniquely qualified to get into environmentally and operationally hostile, data-denied areas, and provide extremely accurate surface and upper air observations. We will focus on applying meteorological and oceanographic impacts to operations, and stop wasting our time duplicating the forecast work done by others. We are excited about the dedication of a SOF Hub for SOF operations, and we will continue to build this capability into the way we do business in wartime.

We are in the beginning of a long war on terrorism. Every person in AFW will have a vital role in this endeavor. Master Chief and Navy SEAL Chamberlain, the senior enlisted advisor of the Combined Joint Special Operations Task Force-South said, “Don’t judge your importance by your proximity to the target.” Some of us will have jobs that take us in the limelight, and some of us won’t – but all must contribute. ♪

Air Force Weather is always recruiting jumpers. If you’re looking for a challenge, there are openings for parachute-qualified weather technicians and officers at ACC, PACAF, or USAFE Combat Weather Teams supporting conventional Army airborne units. If you’d like the additional challenge of working with Air Force Special Tactics operators, and think that you can meet the additional requirements, becoming a Special Tactics Weather operator could be for you. For more information, call Chief Master Sgt. Mark Campbell or Senior Master Sgt. Ron Kellerman at DSN (312) 579-2145, CMCL 850-884-2145.

## Editor’s Note

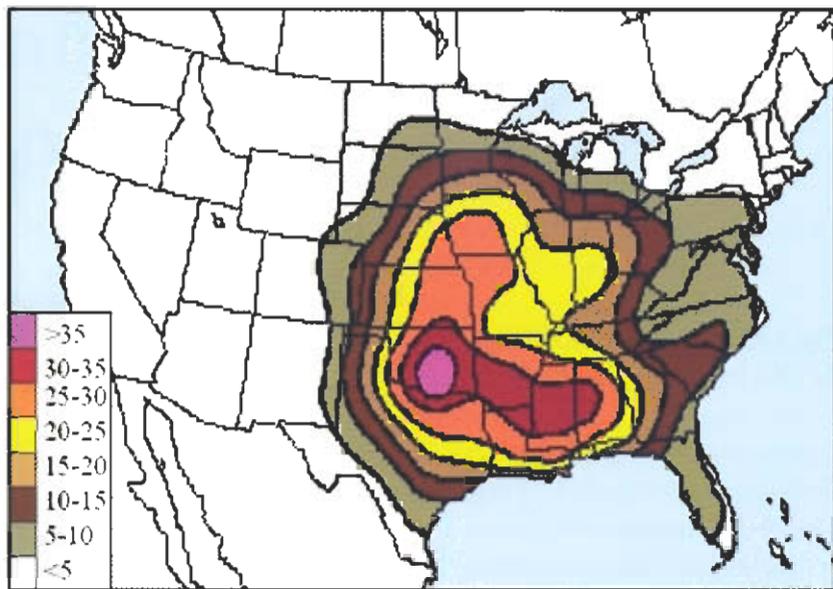
An error was printed in the 2001 AFW Award winners list found on page 26 and 27 in the Mar/Apr issue of the Observer magazine.

The winner of the Collins Award for outstanding Air National Guard weather unit is the

**146th Combat Weather Flight  
Pennsylvania ANG, Pittsburg, Pa.**

other place in the world. Warm, moist air from the south, cooler and drier air from the north, and very dry air from the southwest converge in the central U.S., where contrasting densities initiate lift. To this combination, add cool dry air streaming eastward at mid-levels from the Rockies and wind shear associated with a strong jet stream over the Great Plains, and conditions grow ripe for monstrous storms that bring damaging hail, lightning, straight line winds, and tornadoes.

In its resource protection role, the people of the 26th OWS protect more than 50 billion dollars of assets in its 620,000 square mile AOR, which consists of Arkansas, Kansas, Louisiana, Mississippi, Missouri, Oklahoma, and the eastern majority of Texas. Of the 50 states of the U.S., all seven states in the 26th OWS AOR rank in the top 16 for total number of annual tornadoes. Three of the states – Texas, Oklahoma, and Kansas – are one, two, and three, respectively. All seven states rank in the top 13 for tornado fatalities, with Texas, Mississippi, and Arkansas ranking the top three.



Number of significant tornadoes, defined as F2 or greater, per century that touched down within 25 miles.

“Through exceptional teamwork, the 26th Operational Weather Squadron’s four flights fulfill the squadron’s mission elements for the warfighter in Tornado Alley. As a result, the squadron is well positioned to stay in step with Eighth Air Force, which has assumed the role of the Numbered Air Force for Information Operations as well as the NAF of innovation,” said Elkins. ♣

## Call for AFIT student research topics

**By Lt. Col. Ron Lowther**  
Air Force Institute of Technology

Each year, the Air Force Institute of Technology, through the Air Force Weather Agency, Technology Exploration Branch, Offutt AFB, Neb., requests graduate student research topics from Air Force organizations. Specifically, AFW organizations should submit topics that guide students towards areas of study which provide direct payback to AF operations.

The institute requests your input to help ensure AFIT students are provided with thesis research topics that are of direct applicability to AFW missions and which address your operational problems. All submitted research topics are posted on the AFIT Civilian Institute program’s

website for all AFW master of science and doctoral candidates to review and make selects.

The specific format for this year’s entries will be sent out by AFWA/DNXT this summer, or you can request a copy by emailing [Ronald.Lowther@afit.edu](mailto:Ronald.Lowther@afit.edu). With the signing of a memorandum of agreement between AFIT and HQ USAF/XOW, this past year, your inputs are now prioritized to focus AFIT research towards AFW’s highest priority needs. Please submit your topics either to AFWA/DNXT or directly to AFIT/ENP by Oct. 1.

AFIT will consolidate and forward a list to AF/XOWX, who will convene the Advanced Academic Degree Weather Thesis Review Board to prioritize the topics. The board will consist of AF/XOW (chair), AFWA/

CV, a MAJCOM weather representative, and an AFIT weather representative. All thesis topics will be reviewed and rank-ordered based on current AFW needs, and then be sent back to AFIT for student use by Dec. 1 of each year. AFIT students attending military schools are required to work high-priority topics from the list and present their deliverables to AF/XOW in person when complete.

For their chosen topics, AFIT students will work with you as their studies progress to focus the topic and maximize warfighter payback to your organization. Assisting students with research has long term benefits for both your organization and the individual student as well. We look forward to your research topics and working with you to optimize AFW’s thesis research resources. ♣

# Government credit card

**By Lt. Col. Kevin Witte**  
AFWA Inspector General

Recently a General Accounting Office investigation showed the DoD was not taking credit card abuse seriously. One woman went on a shopping spree and charged nearly \$12,000 in personal expenses on her government card, which included a microwave oven, a personal computer, clothing and gift certificates. Then she was promoted to the Army's top financial management office in the Pentagon. More than 46,000 Defense Department employees had defaulted on more than \$62 million in travel expenses; 713 of these offenders were commissioned officers.

The Air Force takes government credit card abuse seriously. Every month an audit is done to make sure personnel are taking care of their debts. As soon as an individual is flagged for lack of payment, management gets involved.

Do you remember the agreement on the application you signed to receive a government credit card? It stated "the government Travel Charge Card is based on your authorized travel status, and you agree to use the Card only during or in direct support of the period designated by your travel orders ... all payments are due in full by the due date specified on your statement "Due Date." If late, you will incur a \$29 late fee."

When going TDY, make sure your account is open. If you dispute a charge, get involved, it may be the bank's mistake, but it is your responsibility to identify and help clear all



errors. To avoid problems, you can mark the split disbursement block of your TDY voucher and designate a portion of your reimbursement to be sent directly to the credit card company.

Here are some commonly asked questions:

## **Do I have to use the card for everything?**

**A. No.** It is required only for transportation, hotel and car rental. Expenses for parking, dry cleaning, meals, and tips etc. can be handled however you like.

## **What is the punishment for late payment?**

**A.** Punishment is left to the Commander's discretion. The Commander can consider all circumstances. There are significant differences between inadvertent lapses and repeated, deliberate actions for personal gain and the Commander will evaluate those differences.

## **Are there exemptions from mandatory use?**

**A.** Yes, there are automatic exemptions for those who have been denied a card because of financial irresponsibility. The Commander may grant exemptions during wartime or national emergencies, though they must be reported and approved. The Secretary of the Air Force may also grant exemptions (again, they must be reported). However, exemptions will not be approved simply because someone does not want to use the government travel card.

If you have any questions regarding your government credit card, you should contact your Agency Program Coordinator. You can also visit the Financial Management and Comptroller website at <http://www.saffm.hq.af.mil>

### **Tech. Sgt. James Profita**

200th WF, Sandston, Va.

Weather Forecaster

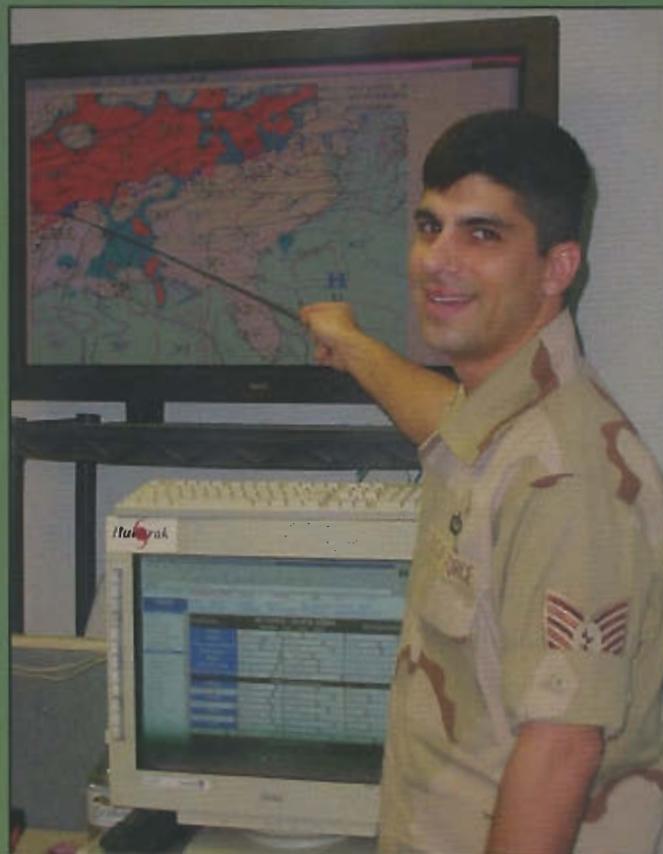
Years in service: 9

Hometown: Chester, Va.

Role model / Why? Medal of Honor recipients. They are true heroes with a demonstrated character and a strong conviction for success.

Hobbies: Playing with my twin 3-year old children. There's not much time after that!

Most memorable Air Force Weather experience: I had to explain to my Army customer why it was snowing in April during a Field Training Exercise at Fort A.P. Hill, Va.



# WEATHER WARRIORS



Tech. Sgt. Adam Christian shakes hands with Defense Secretary Donald H. Rumsfeld while forward deployed near Afghanistan in support of Operation ENDURING FREEDOM.

### **Tech. Sgt. Adam Christian**

16th OSS/OSW, Hurlburt Field, Fla.

NCOIC, Mobility

Years in service: 13

Hometown: Jeffersonville, Ind.

Role model / Why? The honorable Donald Rumsfeld. Because he's honest, straightforward, and serving his country

Hobbies: Music and sports

Most memorable Air Force Weather experience: As an Airman First Class observer, I was stationed at MacDill AFB, Fla., in 1990 as tropical storm Marco passed nearly over the base. No other weather agency could determine the eye except me, using the old FPS77. The National Hurricane Center called almost every 15 minutes trying to get the latest coordinates of Marco's center. What I remember most about Marco was the enormous responsibility I felt at such a young age. With the flight commander and forecaster standing by my side, I was the one answering directly to the premier tropical forecast agency. They relied on me to be their eyes.

# SALUTES

## Retirements

Col. Joe Morales, HQ AFWA, Offutt AFB, Neb.  
Lt. Col. Michael Christie, 45th WS, Patrick AFB  
Maj. Robert Williams, HQ AFWA, Offutt AFB, Neb.  
Chief Master Sgt. William Kyle, HQ AFWA, Offutt AFB, Neb.  
Master Sgt. David Botsford, HQ AFWA, Offutt AFB, Neb.  
Master Sgt. Brian Woodard, HQ AFWA, Offutt AFB, Neb.

## Awards and Decorations

### MERITORIOUS SERVICE MEDAL

Lt. Col. David Knapp, HQ AFWA, Offutt AFB, Neb.  
Lt. Col. Robert Mahood, 25th OWS, Davis-Monthan AFB, Ariz.  
Lt. Col. Beth McNulty, HQ AFWA, Offutt AFB, Neb.  
Maj. Peter Citrone, OL-B, AFCWC, AFWA, White Sands Missile Range, N.M.  
Maj. Brent Shaw, HQ AFWA, Offutt AFB, Neb.  
Maj. Robert Williams, HQ AFWA, Offutt AFB, Neb.  
Capt. Robert Kraetsch, 15th OWS, Scott AFB, Ill. (1st OLC)  
Senior Master Sgt. Lawrence Alexander, 15th OWS, Scott AFB, Ill.  
Senior Master Sgt. Ken Kingsbury, 20th OWS, Yokota AB, Japan  
Senior Master Sgt. Lee Wisecup, HQ AFWA, Offutt AFB, Neb.  
Master Sgt. David Botsford, HQ AFWA, Offutt AFB, Neb.  
Master Sgt. Joseph Christie, AFCWC, AFWA, Hurlburt Field, Fla.  
Master Sgt. John Crongeyer, HQ AFWA, Offutt AFB, Neb.  
Master Sgt. Clyde Hunter, 352 OSS/OSW, RAF Mildenhall, U.K.

Master Sgt. Randy Nelson, Det. 2, 607th WS, Camp Humphreys, Korea  
Master Sgt. Theresa Penn, Det. 6, 7th WS, Wiesbaden, Germany  
Master Sgt. James Secor, HQ AFWA, Offutt AFB, Neb.  
Master Sgt. Clifford Walton, 51st CBCS/SCW, Robins AFB, Ga.  
Tech. Sgt. Christopher Peterson, 208th WF, St. Paul, Minn.

### AIR FORCE COMMENDATION MEDAL

Lt. Col. Timothy Mahoney, HQ AFWA/DN, Offutt AFB, Neb.  
Capt. James Wingenroth, 125th WF, Tulsa, Okla.  
1st Lt. Deborah Danyluk, 15th OWS, Scott AFB, Ill.  
Master Sgt. Susan Smith, 202nd WF, Otis ANGB, Mass.  
Tech. Sgt. Robert Chapman, 202nd WF, Otis ANGB, Mass.  
Tech. Sgt. John Edwards, 15th OWS, Scott AFB, Ill. (2nd OLC)  
Tech. Sgt. Mitchell French, 26th OWS, Barksdale AFB, La.  
Tech. Sgt. Bert Kelley, 51st CBCS/SCW, Robins AFB, Ga.  
Tech. Sgt. Jeffrey Mitchell, 51st CBCS/SCW, Robins AFB, Ga.  
Tech. Sgt. Allison Naylor, AFCCC, AFWA, Asheville, N.C.  
Tech. Sgt. Charlie Norman, 26th OWS, Barksdale AFB, La.  
Tech. Sgt. Richard Raboin, 202nd WF, Otis ANGB, Mass.  
Tech. Sgt. Dale Slider, HQ AFWA, Offutt AFB, Neb.  
Staff Sgt. Annette Bowyer, HQ AFWA, Offutt AFB, Neb.  
Staff Sgt. Roberto Diaz Jr., 51st CBCS/SCW, Robins AFB, Ga.  
Staff Sgt. Charles Hall, 51st CBCS/SCW, Robins AFB, Ga.  
Staff Sgt. Karl Kolumban, 352 OSS/OSW, RAF Mildenhall, U.K.

**Staff Sgt. Elias Korolis**, 202nd WF, Otis ANGB, Mass.  
**Staff Sgt. Suzanne Osman**, 125th WF, Tulsa, Okla.  
**Staff Sgt. Shawn Peno**, 202nd WF, Otis ANGB, Mass.  
**Staff Sgt. Merle Richard**, HQ AFWA, Offutt AFB, Neb.  
**Staff Sgt. Leslie Roache**, HQ AFWA, Offutt AFB, Neb.  
**Staff Sgt. Kurt Rohl**, 47th OSS/OSW, Laughlin AFB, Texas  
**Staff Sgt. Terry Southall**, AFCCC, AFWA, Asheville, N.C.  
**Staff Sgt. Toni Zito**, 352nd OSS/OSW, RAF Mildenhall, U.K.

#### ARMY COMMENDATION MEDAL

**Capt. Ranny Nagrampa**, 181st WF, Ft. Worth, Texas  
**Senior Master Sgt. Douglas Stewart**, 181st WF, Ft. Worth, Texas  
**Master Sgt. Henry Christle**, 107th WF, Selfridge ANGB, Mich.  
**Tech. Sgt. Peter Barberi**, 181st WF, Ft. Worth, Texas  
**Staff Sgt. Shawn Crabeels**, Det. 2, 607th WS, Camp Humphreys, Korea  
**Staff Sgt. Terry Hudgins**, 181st WF, Ft. Worth, Texas  
**Staff Sgt. Dwayne Klinzmann**, Det. 11, 7th WS, Heidelberg, Germany  
**Staff Sgt. Suzanne Miller**, 26th OWS, Barksdale AFB, La.  
**Staff Sgt. Lesley Rouell**, Det. 12, 7th WS, Vicenza AIN, Italy  
**Staff Sgt. Angela Zephier**, Det. 2, 607th WS, Camp Humphreys, Korea  
**Senior Airman Chad Kesterson**, Det. 11, 7th WS, Heidelberg, Germany  
**Senior Airman Mary O'Neill**, Det. 10, 7th WS, Giebelstadt, Germany

#### AIR FORCE ACHIEVEMENT MEDAL

**Capt. Jeffrey Budai**, AFCCC, AFWA, Asheville, N.C.  
**Capt. Danielle Lewis**, 7th WS, Heidelberg, Germany  
**Tech. Sgt. Kevin Copeland**, 47th OSS/OSW, Laughlin AFB, Texas  
**Tech Sgt. Arthur Crosswell**, OL-K, AFWA, Norman, Okla.  
**Tech. Sgt. Donald Holt**, AFCCC, AFWA, Asheville, N.C.  
**Staff Sgt. Brian Archer**, 202nd WF, Otis ANGB, Mass.  
**Staff Sgt. Richard Buttrick**, 202nd WF, Otis ANGB, Mass.  
**Staff Sgt. Thomas Chelmowski**, HQ AFWA, Offutt AFB, Neb.  
**Staff Sgt. Elizabeth Covairt**, HQ AFWA, Offutt AFB, Neb.  
**Staff Sgt. Shawn Fitzpatrick**, 202nd WF, Otis ANGB, Mass.

**Staff Sgt. S. Stephanie Gertiser**, 49th OSS/OWS, Holloman AFB, N.M.  
**Staff Sgt. Matthew King**, AFCCC, AFWA, Asheville, N.C.  
**Staff Sgt. Andre Linnear**, 7th WS, Heidelberg, Germany  
**Staff Sgt. Robert Marlett**, 352nd OSS/OSW, RAF Mildenhall, U.K.  
**Staff Sgt. Jack Minor**, 15th OWS, Scott AFB, Ill.  
**Staff Sgt. Jennifer Nuy**, 7th WS, Heidelberg, Germany  
**Staff Sgt. Shela Tarwater**, 125th WF, Tulsa, Okla.  
**Staff Sgt. Roxann Taylor**, HQ AFWA, Offutt AFB, Neb.  
**Staff Sgt. Valerie Tawa**, 202nd WF, Otis ANGB, Mass.  
**Senior Airman Daniel Elliot**, HQ AFWA, Offutt AFB, Neb.  
**Senior Airman Candie Fuson**, HQ AFWA, Offutt AFB, Neb.  
**Senior Airman Peter Frost**, HQ AFWA, Offutt AFB, Neb.  
**Senior Airman Nathan Gillock**, 125th WF, Tulsa, Okla.  
**Senior Airman John Marlowe**, 15th OWS, Scott AFB, Ill.  
**Senior Airman Candace Mitchum**, 51st OSS/OSW, Osan AB, Korea  
**Senior Airman Michael Reilly**, 202nd WF, Otis ANGB, Mass.  
**Senior Airman Nicholas Valenti**, 125th WF, Tulsa, Okla.

#### ARMY ACHIEVEMENT MEDAL

**Staff Sgt. Jason Nuy**, Det. 11, 7th WS, Heidelberg, Germany  
**Senior Airman Scott Capodice**, Det. 10, 7th WS, Giebelstadt, Germany  
**Senior Airman Chad Kesterson**, Det. 11, 7th WS, Heidelberg AIN, Germany  
**Senior Airman Lisa Peters**, Det. 2, 607th WS, Camp Humphreys, Korea  
**Senior Airman Robert Rudesill**, Det. 2, 607th WS, Camp Humphreys, Korea  
**Senior Airman Daniel Vanmeter**, 607th WS, Camp Humphreys, Korea  
**Senior Airman Jacquelyn Wright**, 607th WS, Camp Humphreys, Korea

#### OUTSTANDING UNIT AWARD

25th OWS, Davis-Monthan AFB, Ariz.

## Education

CONTINGENCY WARTIME PLANNING COURSE  
Maj. John Knowles, HQ AMC/DOW, Scott AFB, Ill.

#### WEATHER CRAFTSMAN'S COURSE

**Tech. Sgt. Stephen Beaupre**, 14th OSS, Columbus AFB, Miss.  
**Tech. Sgt. James Lee**, HQ AFWA, Offutt AFB, Neb.  
**Staff Sgt. Lois Anderson**, 21st OSS/OSW, Peterson AFB, Colo.  
**Staff Sgt. Steven Baldinger**, 335th TRS, Keesler AFB, Miss.  
**Staff Sgt. Jessica Boyle**, 3rd WS, Fort Hood, Texas  
**Staff Sgt. Ninfa Conroy**, 35th OSS/OSW, Misawa AB, Japan  
**Staff Sgt. Collen Covert**, 89th OSS, Andrews AFB, Md.  
**Staff Sgt. Susan Dickson**, Det. 3, 55th SWXS, AFWA, Ramey, Puerto Rico  
**Staff Sgt. Matthew Fox**, 92nd OSS/OSW, Fairchild AFB, Wash.  
**Staff Sgt. Daryl Gibson**, 200th WF, Richmond, Va.  
**Staff Sgt. Steven Giese**, 682nd ASOS, Fort Stewart, Ga.  
**Staff Sgt. Travis Hale**, 48th OSS/OSW, RAF Lakenheath, U.K.  
**Staff Sgt. Brent Heykoop**, Det. 7, 7th WS, Hohenfels, Germany  
**Staff Sgt. Steven Jurgilanis**, 15th OWS, Scott AFB, Ill.  
**Staff Sgt. Rueben Kast**, 1st OSS/OSW, Langley AFB, Va.  
**Staff Sgt. Beate Kinzel**, Det. 2, 7th WS, Hanau, Germany  
**Staff Sgt. Stephen Krieger**, 26th OWS, Barksdale AFB, La.  
**Staff Sgt. Timothy Legg**, AFCCC, AFWA, Asheville, N.C.  
**Staff Sgt. Ryan MacDonald**, 100th OSS/OSW, RAF Mildenhall, U.K.  
**Staff Sgt. Philip Mann**, Det. 2, 7th WS, Hanau, Germany  
**Staff Sgt. James Monroe**, 13th ASOS, Fort Carson, Colo.  
**Staff Sgt. Sean Murname**, 195th WF, Channel Islands AFS, Calif.  
**Staff Sgt. Jennifer Nuy**, Det. 11, 7th WS, Heidelberg, Germany  
**Staff Sgt. Brandon Orr**, HQ AFWA, Offutt AFB, Neb.  
**Staff Sgt. Michael Palmer**, 15th OWS, Scott AFB, Ill.  
**Staff Sgt. Melinda Parker**, 49th OSS/OSW, Holloman AFB, N.M.  
**Staff Sgt. Shawn Peno**, 202nd WF, Otis ANGB, Mass.  
**Staff Sgt. Leticia Peterson**, Det. 12, 7th WS, Vicenza, Italy

**Staff Sgt. Gary Porter**, 48th OSS/OSW, RAF Lakenheath, U.K.

**Staff Sgt. Jason Stewart**, HQ AFWA, Offutt AFB, Neb.  
**Staff Sgt. Joshua Tallant**, HQ AFWA, Offutt AFB, Neb.  
**Staff Sgt. Tori Temple**, 354th OSS/OSW, Eielson AFB, Alaska  
**Senior Airman Sherri Ayala**, HQ AFWA, Offutt AFB, Neb.  
**Senior Airman James Bills**, 45th WS, Patrick AFB, Fla.  
**Senior Airman Pradipan Boonyobhas**, 17th ASOS, Fort Benning, Ga.  
**Senior Airman Publio Casillas**, 97th OSS/OSW, Altus AFB, Okla.  
**Senior Airman Michael Gerlach**, 49th OSS/OSW, Holloman AFB, N.M.  
**Senior Airman Amanda Johnson**, 18th WS, Fort Bragg, N.C.  
**Senior Airman Robert Rudesill**, HQ AFWA, Offutt AFB, Neb.  
**Airman 1st Class Christian Ayala**, HQ AFWA, Offutt AFB, Neb.

#### FORECASTER COURSE

**Staff Sgt. Jeremiah Beckman**, HQ AFWA, Offutt AFB, Neb.  
**Staff Sgt. Steven Cole**, 156th WF, Charlotte, N.C.  
**Senior Airman Robert Cook**, HQ AFWA, Offutt AFB, Neb.  
**Senior Airman Aliyah Gumby**, 1st OSS/OSW, Langley AFB, Va.  
**Senior Airman April Hires**, 14th OSS/OSW, Columbus AFB, Miss.  
**Airman 1st Class Amy Acker**, HQ AFWA, Offutt AFB, Neb.

#### WEATHER FORECASTER APPRENTICE COURSE

**Tech. Sgt. James Donahue**, 126th WF, Milwaukee, Wis.  
**Staff Sgt. Christina Engh**, 200th WF, Sandston, Va.  
**Staff Sgt. Robert Yocom**, 105th WF, Nashville, Tenn.  
**Senior Airman James Melton**, 26th OWS, Barksdale AFB, La.  
**Airman 1st Class Matthew Bolin**, 15th OWS, Scott AFB, Ill.  
**Airman 1st Class Sjiquieta Carlton**, 26th OWS, Barksdale AFB, La.  
**Airman 1st Class Magen Chitwood**, 26th OWS, Barksdale AFB, La.

**Airman 1st Class Amy Dynan**, 15th OWS, Scott AFB, Ill.  
**Airman 1st Class Joshua Elson**, 207th WF, Indianapolis, Ind.  
**Airman 1st Class Albert Gsell**, 20th OSS/OSW, Shaw AFB, S.C.  
**Airman 1st Class Michelle Harris**, 25th OWS, Davis-Monthan AFB, Ariz.  
**Airman 1st Class Brandon Holda**, 25th OWS, Davis-Monthan AFB, Ariz.  
**Airman 1st Class Scott Hose**, 25th OWS, Davis-Monthan AFB, Ariz.  
**Airman 1st Class Megan Jackson**, 20th OWS, Yakota AB, Japan  
**Airman 1st Class Michael Jones**, 25th OWS, Davis-Monthan AFB, Ariz.  
**Airman 1st Class Tereasa Lang**, 15th OWS, Scott AFB, Ill.  
**Airman 1st Class Trad Leavitt**, 20th OSS/OSW, Shaw AFB, S.C.  
**Airman 1st Class Richard Machina**, 28th OWS, Shaw AFB, S.C.  
**Airman 1st Class Jolene Mateo**, 26th OWS, Barksdale AFB, La.  
**Airman 1st Class Wendy Nisiewicz**, 126th WF, Milwaukee, Wis.  
**Airman 1st Class April Pearson**, 20th OSS/OSW, Shaw AFB, S.C.  
**Airman 1st Class Joseph Round**, USAFE OWS, Sembach AB, Germany  
**Airman 1st Class Alena Schrock**, 26th OWS, Barksdale AFB, La.  
**Airman 1st Class Sarah Webb**, 126th WF, Milwaukee, Wis.  
**Airman Burell Barnes**, 26th OWS, Barksdale AFB, La.  
**Airman Timothy Blake**, 20th OSS/OSW, Shaw AFB, S.C.  
**Airman Kim Brathwaite**, 28th OWS, Shaw AFB, S.C.  
**Airman Nicholas Casler**, 20th OSS/OSW, Shaw AFB, S.C.  
**Airman Ian Hyp**, 26th OWS, Barksdale AFB, La.  
**Airman Matthew Jaynes**, 26th OWS, Barksdale AFB, La.  
**Airman Jeremiah Jolliff**, USAFE OWS, Sembach AB, Germany  
**Airman Christina Kisner**, 25th OWS, Davis-Monthan AFB, Ariz.  
**Airman Wesley Magnus**, 20th OSS/OSW, Shaw AFB, S.C.  
**Airman Chase Oyler**, USAFE OWS, Sembach AB, Germany  
**Airman Stephanie Pollay**, 20th OSS/OSW, Shaw AFB, S.C.  
**Airman Sarah Ramos**, 26th OWS, Barksdale AFB, La.

**Airman Cassandra Seymour**, 15th OWS, Scott AFB, Ill.  
**Airman Ray Smith**, 25th OWS, Davis-Monthan AFB, Ariz.  
**Airman Robin Stutesman**, 26th OWS, Barksdale AFB, La.  
**Airman Richard Villareal**, 26th OSS/OSW, Barksdale AFB, La.  
**Airman Anthony West**, 26th OSS/OSW, Barksdale AFB, La.

#### COMBAT WEATHER TEAM OPERATIONS COURSE

**Staff Sgt. Jeffery Curtis**, 375th OSS/OSW, Scott AFB, Ill.  
**Senior Airman Joshua Bauman**, 39th OSS/OSW, Incirlik AB, Turkey  
**Senior Airman Linton Hampton**, Det. 2, 607th WS, Camp Humphreys, Korea  
**Senior Airman Charlton Holt**, 375th OSS/OSW, Scott AFB, Ill.  
**Senior Airman Robert Jones**, 20th OSS/OSW, Shaw AFB, S.C.  
**Senior Airman Juan Orozcok**, 8th OSS/OSW, Kunsan AB, Korea  
**Airman 1st Class Nathan Gillen**, Det. 2, 607th WS, Camp Humphreys, Korea  
**Airman 1st Class Jeremiah Hamilton**, 27th OSS/OSW, Cannon AFB, N.M.  
**Airman 1st Class Scott Manning**, 20th OSS/OSW, Shaw AFB, S.C.  
**Airman 1st Class Ashley Mauger**, 2nd OSS/OSW, Barksdale AFB, La.  
**Airman 1st Class Johnathan Mitchell**, 20th OSS/OSW, Shaw AFB, S.C.  
**Airman 1st Class Noel Navarro**, 355th OSS/OSW, Davis-Monthan AFB, Ariz.

#### SNCO ACADEMY

**Senior Master Sgt. Patrick Flieg**, 26th OWS, Barksdale AFB, La.  
**Senior Master Sgt. Lorne McClard**, HQ AFWA, Offutt AFB, Neb.  
**Master Sgt. J. Boss**, Det. 3, 7th WS, Illesheim, Germany  
**Master Sgt. Louis Canjar**, AFCCC, AFWA, Asheville, N.C.

#### NCO ACADEMY

**Tech. Sgt. Terry Avery**, Det. 7, AFWA, Tinker AFB, Okla.  
**Tech. Sgt. Don Chambers**, 55th SWXS, AFWA, Schriever AFB, Colo.  
**Tech. Sgt. Daniel Colwell**, Det. 7, 7th WS, Grafenwoehr, Germany (Levitow Award)  
**Tech. Sgt. Wesley Fillmore**, 26th OWS, Barksdale AFB, La.  
**Tech. Sgt. Mario Franklin**, HQ AFWA, Offutt AFB, Neb.

**Tech. Sgt. Ronald Gacke**, HQ AFWA, Offutt AFB, Neb.  
**Tech. Sgt. Chris Lane**, HQ AFWA, Offutt AFB, Neb.  
(Distinguished Graduate)  
**Tech. Sgt. Paul Reeves**, HQ AFWA, Offutt AFB, Neb.  
**Tech. Sgt. Michael Richardson**, HQ AFWA, Offutt AFB, Neb.  
**Tech. Sgt. John Robbins**, 26th OWS, Barksdale AFB, La.  
**Tech. Sgt. Thomas Walker**, HQ AFWA, Offutt AFB, Neb.  
**Tech. Sgt. Donald West**, HQ AFWA, Offutt AFB, Neb.  
**Tech. Sgt. Scott Wilkins**, AFCCC, AFWA, Asheville, N.C.

#### AIRMAN LEADERSHIP SCHOOL

**Staff Sgt. Deanna Stoddard**, 26th OWS, Barksdale AFB, La. (John Levitow Award, Academic Award)  
**Staff Sgt. Travis Wooten**, 26th OWS, Barksdale AFB, La.  
**Senior Airman Eric Allen**, 26th OWS, Barksdale AFB, La.  
**Senior Airman Mark David-Quintero**, OL-C, 18th WS, Fort Knox, Ky. (Distinguished Graduate)  
**Senior Airman Kenneth Fedor**, Det. 5, 7th WS, Katterbach, Germany  
**Senior Airman Daniel Gaynor**, 26th OWS, Barksdale AFB, La.  
**Senior Airman Richard Goines**, 7th WS, Heidelberg, Germany  
**Senior Airman Terry Hutton**, 26th OWS, Barksdale AFB, La.  
**Senior Airman Toya McGee**, 97th OSS/OSW, Altus AFB, Okla. (Leadership award)  
**Senior Airman Nicklaus Reed**, 26th OWS, Barksdale AFB, La.  
**Senior Airman Jennifer Taylor**, 7th WS, Heidelberg, Germany (Levitow Award)  
**Senior Airman Brandon Tolson**, 26th OWS, Barksdale AFB, La.  
**Senior Airman Robert Yoas**, 26th OWS, Barksdale AFB, La.

## Promotions

Selected for Promotion to Colonel:

**Ray Clark**, HQ ACC/DOW, Langley AFB, Va.  
**Robert Hamilton**, HQ USAF/XOW, Washington, D.C.  
**Mark Weadon**, 88th WS, Wright-Patterson AFB, Ohio

Selected for Promotion to Lieutenant Colonel:

**Robert Black**, HQ USAFE/AOS, Ramstein AB, Germany  
**Peter Broll**, OL-B, AFWA, Washington, D.C.  
**Ricardo Davila**, HQ USAFE/DOW, Ramstein AB, Germany  
**Frederick Fahlbusch**, 28th OWS, Shaw AFB, S.C.  
**Robert Falvey**, OL-B, AFWA, Washington, D.C.  
**Michael Farrar**, XOW/XOWP, Washington, D.C.  
**Terence Given**, AFELM, Washington, D.C.  
**Robert Hardwick**, HQ USEUCOM, Stuttgart, Germany  
**Scott Heckman**, 20th OWS, Yokota AB, Japan  
**Benny Holbrook**, AFELM SAF, Washington, D.C.  
**John Knowles**, HQ AMC/DOW, Scott AFB, Ill.  
**Lucy Lee**, 412th OSS/OSW, Edwards AFB, Calif.  
**Jeffery Linskens**, 39th Wing, Incirlik AB, Turkey  
**Patrick Ludford**, 25th OWS, Davis-Monthan AFB, Ariz.  
**David Miller**, National Defense University, Vandenberg AFB, Calif.  
**Mark Miller**, 7th WS, Heidelberg, Germany  
**James Mitchell**, HQ AFWA, Offutt AFB, Neb.  
**Charles Pappas**, TACC, Scott AFB, Ill.  
**Amanda Preble**, AFELM, Washington, D.C.  
**Vincent Ries**, 30th WS, Vandenberg AFB, Calif.  
**Robert Russell Jr.**, 10th CWS, Hurlburt Field, Fla.  
**John Shattuck**, 607th WS, Yongsan AB, Korea  
**Curtis Winstead**, HQ USAF/XOW, Washington, D.C.

## ANG Promotions

Selected for Promotion to Major:

**Donald Miller**, 140th WF, Buckley AFB, Colo.  
**Christopher Plonka**, 131st WF, Barnes ANGB, Mass.

Selected for Promotion to Senior Master Sergeant

**Tammy Cartagena**, 204th WF, McGuire AFB, N.J.

Selected for Promotion to Master Sergeant

**John Buursma**, 107th WF, Selfridge ANGB, Mich.  
**Edward Brokhoff**, 204th WF, McGuire AFB, N.J.

Selected for Promotion to Technical Sergeant

**Daryl Gibson**, 200th WF, Sandston, Va.  
**Jason Noe**, 104th WF, Baltimore, Md.  
**Joseph Plante**, 208th WF, St. Paul, Minn.  
**Timothy Slayton**, 208th WF, St. Paul, Minn.  
**Lyle Tayler**, 104th WF, Baltimore, Md.



**Maj. Jimmie Trigg**, 15th OWS, Scott AFB, Ill., received his general's coin for propelling his team to wartime ops following Sep. 11 terrorist attacks. He created 140 scripts/background maps, special product matrices, and web pages – vital for meeting NORAD fighter/tanker CAP requirements. He elevated weather as an enabling force in AMC's Mobility 2000 integrated flight dispatch initiative as he integrated automated weather data pulls into AMC C2 system. This cut aircrew brief development time by 75 percent and resulting in a 10 percent increase in AMC airlift effectiveness.

**Also receiving General's coins:**

- Velma Brokering**, HQ AMC/DOW, Scott AFB, Ill.
- Roger Graffer**, 37th OSS/OSW, Lackland AFB, Texas
- Steve Green**, 1st OSS/OSW, Langley AFB, Va.
- Ally Hammond**, 15th OWS, Scott AFB, Ill.
- Stephan Johnson**, 62nd OSS/OSW, McChord AFB, Wash.
- Robert Miller**, HQ AMC/DOWX, Scott AFB, Ill.
- Maj. Steven DeSordi**, ACC/DOWO, Langley AFB, Va.
- Maj. Barbara Miner**, 15th OWS, Scott AFB, Ill.
- Maj. Muriel Ramirez-Salas**, ACC/DOWO, Langley AFB, Va.
- Capt. Richard Butler**, 319th OSS/OSW, Grand Forks, N.D.
- Chief Master Sgt. Steve Meyer**, HQ AETC/DOYW, Randolph AFB, Texas
- Senior Master Sgt. Chris Rambali**, HQ ACC/DOWO, Langley AFB, Va.
- Master Sgt. Richard Butler**, 43th OSS/OSW, Pope AFB, N.C.
- Master Sgt. Jeffrey Koch**, 15th OWS, Scott AFB, Ill.
- Tech. Sgt. Oliver Fisher**, 37th OSS/OSW, Lackland AFB, Texas
- Staff Sgt. Duane Bruce**, 375th OSS/OSW, Scott AFB, Ill.
- Staff Sgt. Lisa Gore**, ACC AOS/AOW, Langley AFB, Va.
- Airman 1st Class James Davison**, 15th OWS, Scott AFB, Ill.

## General and Chief's Coin Corner

**Also receiving Chief's coins:**

- Senior Master Sgt. Paul Castillo**, WRTC, Camp Blanding, Fla.
- Master Sgt. Ron Kommer Jr.**, ACC/DOWO, Langley AFB, Va.
- Tech. Sgt. John Cerone**, 1st OSS/OSW, Langley AFB, Fla.



**Master Sgt. Rudy Tingelhoff**, 25th OWS, Davis-Monthan AFB, Ariz., earned his chief's coin for coordinating and developing the first-ever State Department support to both spraying and "other" operations. He expertly led a 24-person, 24/7 flight supporting joint/multiagency counterdrug, humanitarian and disaster relief operations throughout USCINCSO's 15.6 million square mile AOR. He guided production of 3,700 flight weather briefings, 718 Soto Cano AB forecasts, 4,574 forecast bulletins, and 23,000 weather charts.

