AWS Observer

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"You cannot run away from a weakness; you must some time fight it out or perish; and if that be so, why not now and where you stand?"

—Robert Louis Stevenson

Colonel Proffitt takes command of 7th WW

"I know from first hand experience the people in Seventh Weather Wing, and I am immensely proud of them; they are superb technically, professionally in their approach to their jobs and totally dedicated in their service to their country." With those words, Col. Thomas O. Proffitt accepted command of 7WW.

Colonel Proffitt replaces Col. John W. Diercks, who is now commander of the Air Force Global Weather Central, Offutt AFB, Neb. The Change of Command ceremony, held June 19 at the Scott AFB Officers' Club, was officiated by AWS commander, Brig. Gen. George E. Chapman.

Before moving to 7WW in 1985, as vice commander, Colonel Proffitt was Deputy Director of Command and Control Information Systems, Deputy Chief of Staff for Information Systems, Headquarters Military Airlift Command, Scott AFB, Ill.

Colonel Proffitt was commissioned through the *Reserve Officer Training Corps program at the* University of Texas in 1963. His experience in AWS ranges from his first assignment in Hawaii as a weather analyst and forecaster to assignments overseas as detachment and squadron commander.

Seventh Weather Wing's new vice commander will be Col. Darrell L. Lucas, who was the Director of Operations, 1WW, Hickam AFB, Hawaii.

Col. Thomas O. Proffitt, Commander 7WW.

USAFETAC Awarded Third AFOUA

The U.S. Air Force Environmental Technical Applications Center, Scott AFB, Ill., was presented its third Air Force Outstanding Unit Award in early May.

During the ceremony, AWS Commander Brig. Gen. George E. Chapman cited the relocation of ETAC's multimillion dollar computer system, and a major software conversion effort, as reasons for ETAC earning the award.

The general stressed that few computer moves are done without some delays or interruptions to the Air Force and DOD missions. However, ETAC's 50,000 pounds of sensitive computer equipment was relocated to a new Consolidated Computer Facility in only 48 hours. There were no unscheduled interruptions of computer services, nor any real impact on support to customers.

Hard work and professionalism was also exhibited when ETAC's software was revised to current Air Force standards and run under a new operating system. In 18 months, 382 programs, containing about 200,000 lines of code, were converted to run under the new operating system, bringing ETAC up to current technology standards.

The effort required more than 14,000 man hours, 250 computer hours and was completed two months ahead of schedule. Response time to sensitive USAF Precedence 1-1 customers was greatly reduced, and ETAC's support to crucial DOD programs was significantly enhanced.

Weather Officer in Space planning

By Capt. Arthur C. Meade
AWS/DNXP

This is the second of a series of articles highlighting the AWS Weather Officer in Space Experiment. It continues the description of Pathfinder experiments begun in the June 1986 Observer. This article describes the tropical experiments and includes a review of recent and upcoming events.

AWS planning for the Pathfinder mission continues. The final report of the special presidential commission investigating the Challenger accident indicates that the shuttle launch schedule will be slipped from 1-2 years with a currently projected first launch in 1988. The AWS mission, originally set to launch on Nov. 6, 1986, will probably go about six months or so after the first launch. However, there is no firm launch schedule at this time.

Pathfinder Mission

As indicated in the June *Observer*, the first AWS shuttle mission will be in an equatorial orbit covering the areas between 28.5°N and 28.5°S. Of the 12 experiments planned for the Pathfinder mission (see list), three of the experiments are dedicated to investigating tropical phenomena. The focus of this month's article will be on the tropical cyclone, monsoon, and Tropical Upper Tropospheric Trough, or TUTT, experiments.

Tropical Cyclone

The purpose of the tropical cyclone experiment is to determine whether space-based observations of tropical cyclones can be used to supplement WC-130 reconnaissance and meteorological satellite (METSAT) observations. Specific objectives are to assess a meteorologist's ability to: 1) determine the extent of damaging surface winds associated with tropical cyclones, 2) estimate cyclone intensity, 3) differentiate convective and non-convective areas within the cyclone, and 4) study differences between developing and non-developing tropical disturbances.

While tropical cyclone intensity appears to be closely related to eye and eyewall characteristics, the horizontal extent of 30-50 knot winds does not show a similar relationship. A potential mechanism affecting the extent is rainband distribution and structure. METSAT imagery has insufficient resolution to provide detailed rainband structure or to confirm the existence of shallow rainbands. Furthermore, METSAT imagery cannot reveal subtle changes in cirrostratus texture to reveal small or shallow rainband distribution.

Another perplexing problem for tropical cyclone forecasters has been whether a cloud cluster or tropical disturbance would develop into a significant tropical cyclone or not. Any indications of development or non-development provided by space-based observations could prove valuable to forecasters dealing with this problem. Improving knowledge of tropical cyclone strength will result in more accurate forecasts of destructive winds. Likewise, a better understanding of cloud distribution in tropical cyclones should result in better rainfall and cloud cover estimates which are now frequently over-forecast. If tropical cyclone strength, intensity, and potential for development can be determined from space, a great deal of additional information would be available to

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Command Line

'Observing — The First Step in Weather Support'

Brig. Gen. George E. Chapman
Commander

About a year ago I wrote a "Command Line" that echoed some thoughts from the past — a previous AWS Commander had written, back in the 60s, that "Observing is the thing we do best." I don't believe it demeans our forecasting service one iota to say that's still the case in the 80s, yet the question I get quite frequently asks about the importance of the observation, the observer duties, and the prospects for the future.

Are we about to "automate" the observer out of a job? No way! That's still a goal, and a step we have planned in our AWDS program, but I predict that it will be close to the turn of the century before we get a fully automated weather observation that the DOD flying safety/certification people can put their trust in and say, "We'll be confident to land, take off, or fly, based on the quality of that automated observation." It's an admirable and appropriate goal for both the commercial sector and the military sector — but it's well down the road in our case.

In the interim, the weather observer (the observation and the duties) remain an essential part of the decisions made each day by the Air Force to fly and to fight, if necessary, and to do it as safely as possible.

I have had many examples to remind me of this importance in the last year. How about the PIREP that didn't make it out in long-line transmission. Would it have made a difference to the aircrew? Would they have flown the mission differently? Tough to judge now. How about the surface winds for that SAC ORI mission — it's absolutely critical to positioning the aircraft on the runway and their ability to quickly respond and get the aircraft airborne. That's not a trivial observation you are making, and we're never sure when it will count. The same can be said about the other factors in the observation — altimeter, clouds, visibility — unfortunately, too often we hear of it or learn of it when we've let something slip.

We often say in MAC..."We practice every day in peacetime what we will have to do in wartime." That fits well in AWS — and that quality observation is the first step in a critical process that allows decisions to be made. Keep up the great work.

Chief's Comments

The Senior Enlisted Advisors

There have been several articles written about the reduction of Senior Enlisted Advisor (SEA) positions throughout the Air Force. The fact is, there have been 70 Senior Enlisted Advisor positions deleted as of July 1, 1986. Lets look at the background to see why this decision was made.

Over the last two-three years, during the four-star conferences (known as Corona), the number of SEAs throughout the Air Force was discussed. It was apparent to our Senior Air Force leaders that the total number of SEAs had increased drastically over the past five-ten years. The criteria which had been established to determine the requirement for a SEA was not always considered. There were SEAs representing units with two to 15 enlisted people. Three or four years ago, some in AWS referred to our Squadron Managers as Squadron SEAs. The perception became that all Chiefs were SEAs — they were synonymous.

Now that we know the background, the fix is easy — strengthen the position by being more restrictive as to what constitutes a requirement for a SEA. This is what the Air Force did. One of the requirements is that a unit (wing, etc.) have at least 1,000 enlisted people. Another criteria was to have only one SEA on each base excluding Numbered Air Forces and MAJCOMs. Following these criteria, the CINCMAC made the decision to eliminate all AWS Wing SEAs, all hospitals' SEAs, and three from MAC Wings where two advisors were assigned to the same base, but for different wings.

How is this going to affect AWS? The rules are, the incumbents will remain in their current position through normal attrition, i.e., reassignment, retirement, etc... Headquarters MAC Personnel Office has labled normal attrition as, "One year for stateside bases. However, it could go to a maximum of two years, depending upon the mission of the wing and time the person has held the position. For those SEAs currently overseas, the overseas return date will be used as the normal attrition date." Nothing should change in AWS until the summer of 1987.

I might add at this time, should it become apparent that the decision to do away with all of AWS Wing SEAs is not working as anticipated, the possibility exists to have the positions returned.

So what are the chances for a Chief in AWS to become a SEA? I believe the chances will probably be better than they are currently today. I believe that for several reasons. The two main reasons are the type of people we have in AWS and the outlook for our manning. I do not foresee any problem with manning in AWS through the next several years. When the manning is good, more opportunities are available, such as crossflow to other career fields for broader experience, bootstrap, and other benefits that are not available during manning shortages. This includes letting our people be SEAs for other commands or elsewhere within the MAC Command.

The other reason is our people. From the several boards, selection for PME schools, below the zone promotion, Airman/NCO of the Quarter, and so on, that I have had the opportunity to be a part of, the records of AWS people are far above most career fields. It's not that we are better than other people, however our supervisors, managers and commanders usually take the time to counsel us on our career objectives and help us in keeping our records updated. From all of these efforts, our records normally shine when competing with other career fields. The Air Force Military Personnel Center advertises through bulletins at the local CBPO for CMS assignments including SEA openings. More and more, the MAJCOMs are going outside of their command requesting volunteers to fill SEA positions. Our people can compete with the best. So, I feel very optimistic about AWS Chiefs having a good chance to become SEAs in the future.

How will AWS restructure to replace the wing SEA? Nothing has been established as to a replacement for the wing SEA. However, the squadron manager will be picking up most of this responsibility. The current idea is to solve all problems at the lowest level possible. In the past the SEA has been working problems that maybe the commander or first sergeant should have

CMSgt. Charles T. Melson
Senior Enlisted Advisor

worked. Since AWS does not have first sergeants in the squadrons, the Squadron Manager, along with the Squadron Commander, will work most of the problems. There will still be the communications line with the AWS SEA. This line of communication will not be weakened but should become stronger and hopefully more widely used.

In summary, the Air Force is trying its best to do the best job with the resources currently at hand. Trying to get more authorizations in todays military force is almost impossible. Cutting the SEAs should not be taken as a move to remove any communication channels from the enlisted personnel. The move is to strengthen the SEA position and at the same time have some of the problems solved at the lowest level. This is called efficient management, better use of the resources and working within the chain of command.

Det. 22, 26WS watching Carswell weather

by 1st Lt. Glen E. Vest

For the people working at Det. 22, 26WS, also known as Carswell Base Weather, keeping track of what's happening outside, rain or sunshine, is part of the job.

Typically, there is one forecaster and one observer on duty, working eight-hour shifts, 24 hours a day.

The forecaster provides terminal aerodrome forecasts, aircrew flight briefs, emergency weather support, weather warnings and advisories, radar reports and disseminates various weather products. He has a variety of computer data, both numerical and facsimile, which must be considered.

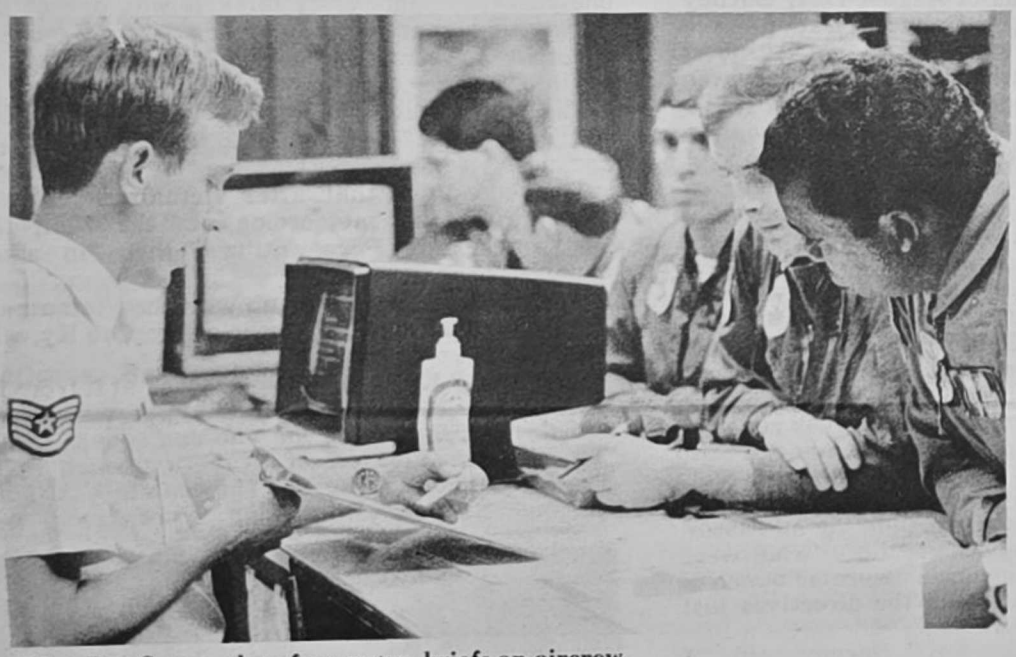
During the shift, the observer's main responsibility is taking local surface observations, including wind, sky conditions, temperature, station pressure and any visible weather as rain or thunderstorms.

The observer sends the information to various agencies on base through teleautograph, to Dallas-Fort Worth Air Route Traffic Control Center and the Automated Weather Network, located at Det. 7, Air Force Global Weather Center, via computer lines.

The forecaster and observer team is responsible for providing weather information to the decision makers on base so aircraft operations may be conducted safely.

Additional support is provided by the detachment commander, station chief and wing weather officers, who may be called upon at any time in case of severe weather conditions.

SSgt. Alvin Hill, duty observer, checks a facsimile chart.



TSgt. Roy Spoon, duty forecaster, briefs an aircrew.

An example of this happened this spring when a severe thunderstorm moved into the area. The team worked extra long hours to give the base weather support. Accuracy was especially crucial because of the storm's severity.

"The worst parts of the storm's system veered around us, leaving the area relatively untouched," said Lt. Col. Mike Booth, Det. 22 commander. "Carswell was very fortunate."

Weather during the spring wasn't severe, but it was still busy for the detachment. On an average, more than 160 forecasts and amendments were issued, 42 military weather advisories given, 163 weather briefings, 778 weather observations taken and 1,435 charts analyzed per month.

In addition, there were briefings for exercise support, briefings on weekends for transient aircrews and the increased workload during severe weather conditions.

Detachment 22's information and expertise is also available to support nonoperational military use, i.e. weekend fishing forecasts, through the base weather station's 24-hour recorded message. It includes current temperature and forecast, sunrise and sunset times and an extended outlook. The message is updated when the latest TAF is issued, 6 a.m. and every six hours thereafter.

Tours of Det. 22 are also available, with the best day being one when the weather is good. (Reprinted from the Carswell Sentinel)

Keeping America Free

A1C Mary Nienaber (left) and TSgt. Craig Cobb (partially hidden) from Det. 11, 1WW and 1st Lt. Rick Hartman, HQ 1WW, ride the 1WW float in the Annual Hickam AFB Armed Forces Day Parade. The float, built by HQ 1WW, Det. 11 and Det. 7, 20WS personnel, was awarded second place in the "Best Theme" category — "Keeping America Free."

Brig. Gen. George E. Chapman
AWS Commander
AWS Editorial Staff

MSgt. Michael T. Devine
Editor

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A lesson from history: William Shores Barney The Will Rogers of AWS

by John Fuller

(Editor's Note: Last month's "A lesson from history" was introduced by an author's note about William S. Barney, and covered his youth, love for baseball and enlistment in the Army because of his baseball skills. It went on to follow his rise in the enlisted ranks, direct commission in the infantry and service during World War II. The portrait of William S. Barney continues with the war over and his being tasked to organize the forerunner of today's 54WRS.)

After Germany's defeat in May 1945, Major William S. Barney commanded weather centrals in Rome and then Wiesbaden, Germany. In May 1946, AWS chief Col. Donald N. Yates sent him to Morrison Field, West Palm Beach, Fla. His job was to command and organize the 54th Reconnaissance Squadron, Very Long Range, Weather (forerunner of today's 54WRS), train its crews in RB-29s and take it to Guam.

Replacing Barney as commander of the 54th was Lt. Col. Roy W. Nelson. They first met in Bari, Italy, when Nelson was staff weather officer to the 15AF. When Nelson led the 54th to Guam in the summer of 1947, Barney went along as his executive officer. Barney was only at Guam a year when he was transferred to Tokyo as operations officer to the 43rd Weather Wing.

Barney kept his hand in baseball, and after coaching a winning team at Guam, he coached the Far East Air Forces team in Japan. In 1949, Barney's "Tornadoes" beat the San Francisco Seals, a professional team from the Pacific Coast League, the first time a pro team had been beaten in Japan.

Nagoya was home of the Fifth Air Force, one of the 43rd's clients. Major General Earle E. Partridge commanded the 5AF and as Barney related it, he "never said a kind word to me for two years." During the game Partridge sat in a box seat by the dugouts.

"He had been giving me hell," Barney said, but when the Far East Air Forces team won, with a homerun in the 11th inning, Partridge commented, 'Well, you finally did something right.' "

Charles "Lefty" O'Doul, manager of the San Francisco "Seals" talking with Maj. Bill Barney, manager of the Far East Air Forces "Tornadoes" team at Meiji Park, Tokyo.

It was not the last Barney heard from Partridge. In February 1950, Barney became assistant director of operations at Headquarters AWS. Brigadier General Senter took over that August, some two months after the Korean war began, and before long, Partridge's complaints about the quality of weather support in Korea reached Senter.

Barney acknowledged that "probably the service wasn't too good," but added that, "in those days it was usual that, if you had operational deficiencies, you blamed it on weather. (Because of pre-war drawdowns Barney said AWS "put people in there that had never had any wartime experience in supporting tactical air operations.") Operational people cover their mistakes with alibis, just like lawyers cover theirs with hemp, an architect with ivy and an M.D. with graves."

Twice in the mid-1950's, during assignments commanding a mobile weather squadron and as the AWS IG, Colonel (as of August 1954) Barney was involved supporting U.S. atomic testing in the Pacific.

One young navigator who worked for Barney was Lieutenant Duane Cassidy.

"I think General Cassidy (now Commander in Chief, Military Airlift Command), is the only ... CINC today that has seen that many megaton weapons (including the first airdrop of a megaton weapon) and he ... understands both the dangers and the myths connected with it."

Barney was AWS/IG under Maj. Gen. Thomas S. Moorman. "The one with the intellectual curiosity pushing the Weather Service into the late 20th Century was General Moorman," Barney commented out of profound respect.

But that was not so in 1957 when Barney reported low morale and widespread noncompliance with directives within AWS. Before then, no "great body of doctrine or regulations" existed, as he explained it, so when doctrine was set forth in the mid 1950s, "the experienced people out there who were colonels and lieutenant colonels" were a "bunch of prima donnas" who believed "the directives just weren't worth a damn," he said.

"The general blew his top," Barney said. "I argued and he followed me all the way down the hall to the latrine telling me how damn stupid I was."

After both cooled off and talked, Moorman passed words to his troops that heads would roll unless they complied. "He let them know his displeasure," Barney said, "and by God, that was enough!"

While explaining the rationale for his attention-getting IG report, Barney said, "I told the truth as I saw it" — which underscored his uncompromising integrity.

Integrity was a major theme in a treatise on leadership for AWS commanders he published in March 1955 with Moorman's blessing. The same treatise AWS Commander Brig. Gen. George E. Chapman reprinted and distributed last year without changing a word.

"Not a hell of a lot," Barney replied when asked if he would change anything in it today. "We've plum forgot about leadership," he said, "there's too damn much management" and "that is just one element of leadership."

General Cassidy is concerned about it, and when the CINCMAC asked his advice, Barney replied (in metaphor typical of the gentleman) "it's a hell of a lot easier to sweep up broken glass than to use the cattle prod. Give them a mission and get the hell out of the way," he said. Oscar Senter was an example.

"He let the staff operate," Barney recalled of Senter, "he didn't drive." Managers that crop up in peacetime are not what is needed when the bullets begin to fly. "That's the reason why, when war comes ... the generals that begin are seldom there in the end, and it's true just as much now as it was in World War II and in the Civil War," observed Barney the history buff.

From August 1957 through the summer of 1961, Barney commanded the 9th Weather Group, which, by March 1960, controlled all AWS weather reconnaissance squadrons and a fleet of about 70 aircraft. Barney held a unique position because he was a navigator in the days when the Air Force wanted pilots commanding flying units.

"There was some comment" about his being a navigator, Barney said, "but most ... took it in stride. In those days you were never going to go a hell of a lot of places unless you were a rated pilot," he reflected, "but it never bothered me a hell of a lot."

Under Barney, the 9WG won an Air Force Outstanding Unit Award and several flying safety awards.

He commanded the 1st Weather Wing from mid-1961 to mid-1963, the period AWS initially got involved in Southeast Asia.

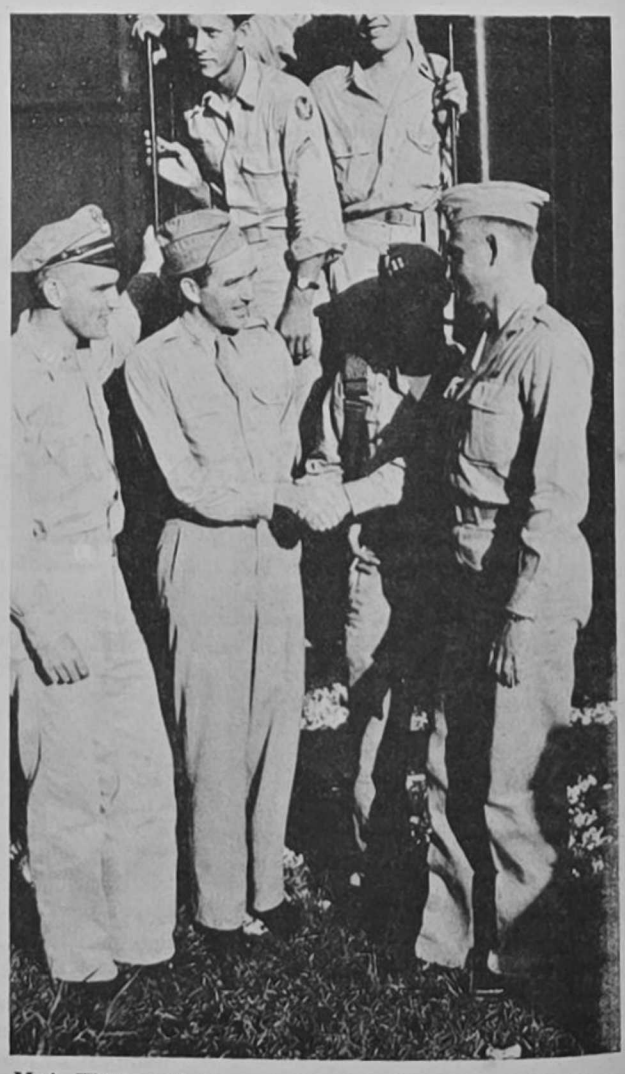
"Vietnamization" was the official U.S. policy at the time, but "we didn't do too well" with weather training. There were two reasons. First was the one-year tour policy. "I think it was one of the worst things that ever happened," Barney mused; "there's no continuity" and "you can't get a rhythm into the operation."

The United States should never fight a war where you've got a 12- or 13-month tour," he added, because "we have never won one."

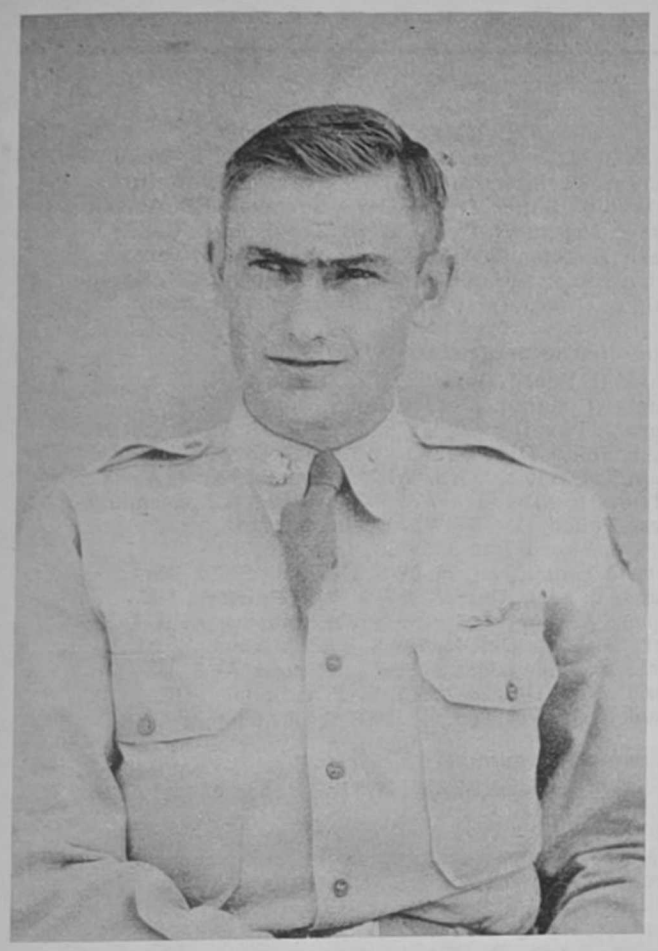
The second was that, after Vietnamese officers were trained in meteorology in the U.S., the Vietnamese Air Force utilized them in other capacities.

Barney took the matter up with the Vietnamese Air Force Commander, Col. Nguyen Cao Ky, who later ran the country.

"Barney," Ky said, "now just look at it from my standpoint. I don't have many people who can speak English. I got a lot who can speak French. These boys (Vietnamese officers trained in the U.S.) are fluent in English. They can talk the slang of the English. They can work good with



Maj. William S. Barney leaving for Guam. Sending him off is Col. Richard E. Ellsworth (shaking hands) and Capt. Crazier (left).



Maj. William S. Barney, when he was commander, Weather Central, Mediterranean-Middle Eastern Theater of Operations.

Americans. Besides, if I don't put them in a weather station, you'll put in someone."

Brigadier General Roy Nelson took over AWS in March 1963 and that summer made Barney his vice commander. Nelson had the highest regard for him and when Nelson was suddenly and unexpectedly reassigned in October 1965, Barney was his choice to replace him.

However, MATS could not get Barney promoted to general — evidently not because he was a navigator, but probably because he was a temporary, rather than a permanent, colonel.

Nelson's successor was 3rd Weather Wing commander Russell K. Pierce, a permanent colonel and pilot, who like Barney, did not possess a college degree.

It was a potentially awkward situation because Barney, as AWS vice commander, wrote the 3WW commanders effectiveness report even though Pierce outranked him. But Pierce was very personable and likeable, and the two worked extremely well together as commander and vice commander. To a large measure, Pierce let Barney "run the store."

As Barney explained it, "Russ was an awfully ... damn good 'front man,' and that's extremely important for an AWS commander."

On a command visit to Vietnam as vice commander, Barney went to see Seventh Air Force commander General William W. Momyer, about using AWS' target forecasts more effectively. Accompanying Barney was the 1WW commander, who became disturbed after Momyer literally threw him out of his office on an earlier visit to discuss the same subject.

Refusing to be intimidated, Barney talked to Momyer. "The man is under pressure," Barney explained to the 1WW commander. "I am too," he replied. "Don't you know that if a man's under operational pressure you got to blame the Weather Service," continued Barney; "that's life, that's what we're paid for."

Shortly thereafter, a weather satellite readout station was placed at Saigon and Momyer became a strong advocate.

"Weather is an imponderable of warfare," Barney observed. "Astute battlefield commanders take that into account, as well as 'the fact that no forecast is perfect.' Mother Nature will always punish the incompetent and the uninformed."

TAC WSU

Gear up and climbing out

by 2nd Lt. Thomas B. Frooninckx
TAC WSU

"Give those fighters accurate weather information to get them safely across the pond," is the Tactical Air Command Weather Support Unit's motto.

Located at TAC Headquarters, Langley AFB, Va., and part of Headquarters 5th Weather Wing, the WSU monitors worldwide weather 24 hours-a-day, 365 days-a-year. They also provide weather support for TAC deployments, the 2nd Aircraft Delivery Group and HQ TAC staff.

From late February to the fall, the WSU's 10 officers, five enlisted and two civilians operate at maximum effort, providing forecasts for large scale TAC movements across the Atlantic and Pacific Oceans.

Supporting these movements, the WSU supplies a weather officer who functions as a crew member and staff weather officer aboard the Tactical Deployment Control Aircraft.

Usually an EC-135 or KC-10, the Tactical Deployment Control Aircraft serves as the fighter's command, control and information center. The flight weather officer is primarily concerned with weather conditions at abort bases once the fighters are airborne. Abort bases are spread along the route and are used in the event of an in-flight emergency. Although this portion of the WSU's support is important, the unit's operational support begins on the ground 48 hours prior to launch.

1st Lt. Don Berchoff, one of the TAC WSU's flight weather officers, and Sgt. Debbie Evans, a WSU weather specialist, discuss possible weather impact for an F-4 deployment across the Pacific.

Two days before the mission departs, forecasters at the WSU prepare a Mission Planning Outlook. Using large-scale continuity and computer products, they forecast 48 hours ahead to recognize where potential weather problems will be. Twenty-four hours later, they prepare a Mission Planning Forecast. Forecasters use input from AFGWC and their own products to produce and transmit a forecast for the expected locations of clouds, turbulence, icing and thunderstorms via COMEDS. AFGWC generated computer flight plans are also studied to identify flight level wind conditions.

Six hours before launch, the WSU prepared a Mission Control Forecast. This is very important, as it is briefed to all crew members taking part in the movement. In some cases, the Mission Control Forecast initiates a change in the flight path or refueling schedule.

Finally, three hours prior to take off, a weather officer briefs the latest weather situation to TAC's Assistant Deputy Chief of Staff, Operations, who makes the "go/no-go" decision. The TAC Command Post transmits the decision and the crew members make final preparations for take off. Once the first fighter has taken off, the WSU shifts into its second phase of mission support — metwatch.

Upon successful launch of the fighters, the flight weather officer's task is to keep the mission director on board the Tactical Deployment Control Aircraft informed of all weather conditions along the route. Phone patches from the airborne weather officer to the WSU keep the control team current.

Back at the WSU, the weather is constantly monitored at the various emergency abort bases, and the latest satellite imagery is used to keep track of flight level hazards. This information is transmitted to the Tactical Deployment Control Aircraft and, in turn, to the fighters and tanker when needed.

The WSU's job is complete only after the final aircraft has landed, sometimes 15 hours after the go/no-go briefing.

General Robert D. Russ, Commander of TAC, believes "being ready in TAC means training like we expect to fight." The TAC WSU gives their best during peacetime deployments to be "ready" to support contingency movements.

DOD prohibits headphone use

Wearing headphones or earphones while traveling on DOD installations has been prohibited by a recent Department of Defense instruction.

DOD instruction 6055.4, Department of Defense Traffic Safety Program, states that wearing portable headphones, earphones, or listening devices, while operating a motor vehicle or while walking, jogging, bicycling or skating on roads and streets or DOD installations is prohibited.

According to the DOD instruction, the listening devices mask or prevent recognition of emergency signals, alarms, announcements, human speech, the approach of vehicles and the ability to determine from which direction sound is coming.

AWS SALUTES

Medals

Legion of Merit to:
Col. John H. Taylor, AWS/DN, Scott AFB, Ill.

Meritorious Service Medal to:
Lt. Col. Vernon L. Bliss (1OLC), OL-B, 2WS, Kirtland AFB, N.M.
Lt. Col. Charles Norman, Det. 9, 3WS, Tyndall AFB, Fla.
Maj. Donald A. Douglas, OL-A, Det. 2, HQ AWS, Ft. Ritchie, Md.
TSgt. Bradford D. Butler, Det. 10, 15WS, McGuire AFB, N.J.

Air Medal to:
TSgt. Roger D. Ritchie (3OLC), Det. 3, 1WW, Andersen AFB, Guam.
Capt. Michael R. Babcock (2OLC), Det. 3, 1WW, Andersen AFB, Guam.
1st Lt. Benjamin V. Noah (2OLC), Det. 3, 1WW, Andersen AFB, Guam.
Sgt. Kathy L. Richmond (1OLC), Det. 3, 1WW, Andersen AFB, Guam.
1st Lt. Michael E. Fitzpatrick, Det. 3, 1WW, Andersen AFB, Guam.

Air Force Commendation Medal to:
MSgt. John M. Taylor (4OLC), Det. 12, 25WS, George AFB, Calif.
Capt. Elenor Doyle (2OLC), OL-C, 31WS, Hellenikon AB, Greece.
TSgt. Thomas Wilcox (2OLC), Det. 3, 31WS, Florennes AB, Belgium.
Capt. Michele Roissier (1OLC), Det. 3, 11WS, Shemya AFB, Alaska.
MSgt. Thomas Haskins (1OLC), Det. 3, 11WS, Shemya AFB, Alaska.
SSgt. Paciencia Hyland (1OLC), Det. 3, 1WW, Andersen AFB, Guam.
TSgt. Tommy B. Timmons (1OLC), Det. 9, HQ AWS, Las Vegas, Nev.
SSgt. LeRoy G. Kirkegard, Det. 4, 4WW, Holloman AFB, N.M.
SSgt. Clifton G. Allen, Det. 5, 11WS, Ft. Wainwright, Alaska.
SSgt. Mark E. Minard, OL-I, 11WS, King Salmon Island, Alaska.
TSgt. Craig G. Suprenant, Det. 1, 17WS, Tinker AFB, Okla.
TSgt. Anthony Yarn, Det. 1, 17WS, Tinker AFB, Okla.
Sgt. Ricky L. Richardson, Det. 10, 15WS, McGuire AFB, N.J.

Army Commendation Medal to:
SSgt. Theo Hayward (1OLC), Det. 20, 30WS, Camp Casey AIN, Korea.
1st Lt. Martin J. Loveless, Det. 3, 1WW, Andersen AFB, Guam.
1st Lt. Michael J. Adams, HQ 7WS, Heidelberg, Germany.

Joint Service Achievement Medal to:
MSgt. Herman E. Loftin, Det. 9, 3WS, Tyndall AFB, Fla.

Air Force Achievement Medal to:
SSgt. Darryl P. White (2OLC), Det. 20, 30WS, Camp Casey AIN, Korea.
A1C Shane Farrow, Det. 3, 11WS, Shemya AFB, Alaska.
SSgt. Alfred Green, Det. 18, 30WS, Yongson AIN, Korea.
Sgt. Marc Cleyman, Det. 6, 3WS, Homestead AFB, Fla.
SSgt. John W. Walker, Det. 18, 30WS, Yongson AIN, Korea.
SrA. Veronica Tonich, Det. 7, 3WS, Langley AFB, Va.
1st Lt. Robert M. Fogarty, Det. 20, 30WS, Camp Casey AIN, Korea.
TSgt. Jerome B. Black, Det. 14, 25WS, Holloman AFB, N.M.
A1C Joseph C. Burge, Det. 5, 11WS, Ft. Wainwright, Alaska.
SrA. Robert L. Hirl, OL-I, 11WS, King Salmon Island, Alaska.
A1C Charles S. Lake, OL-I, 11WS, King Salmon Island, Alaska.
A1C Phillip L. Loomis, 11WS/WSU, Elmendorf AFB, Alaska.
1st Lt. Kenneth W. Reese, 2nd Lt. Alfred B. Bacon and A1C Ian M. Bohnen, Det. 3, 1WW, Andersen AFB, Guam.
1st Lt. John P. Pino, HQ AWS, Scott AFB, Ill.
Sgt. Mary E. Nieland, Det. 10, 15WS, McGuire AFB, N.J.
Sgt. Ronald D. Berad, Det. 1, 17WS, Tinker AFB, Okla.
1st Lt. Mark V. Levsky, Det. 9, 3WS, Tyndall AFB, Fla.
1st Lt. Daniel J. Nurkala, HQ 7WS, Heidelberg, Germany.

Army Achievement Medal to:
1st Lt. Kevin Havener, Det. 3, 11WS, Shemya AFB, Alaska.
SrA. Stephen J. Barlow, Det. 18, 30WS, Yongson AIN, Korea.
Sgt. Marc Cleyman, Det. 6, 3WS, Homestead AFB, Fla.
TSgt. Daniel M. Deal, Det. 20, 30 WS, Camp Casey AIN, Korea.
SrA. Darin M. Hurst, Det. 20, 30WS, Camp Casey AIN, Korea.
A1C Lance C. Bivians, Det. 20, 30WS, Camp Casey AIN, Korea.
CMSgt. Robert W. Platt, HQ 7WS, Heidelberg, Germany.

Combat Readiness Medal to:
1st Lt. Brett W. Scholten, Det. 3, 1WW, Andersen AFB, Guam.

Humanitarian Service Medal to:
1st Lt. Brett W. Scholten, Det. 3, 1WW, Andersen AFB, Guam.

Promotions

To Lieutenant Colonel:
Charles P. "Chip" Guard, AWS/DNTM, Scott AFB, Ill.
Robert Bishop, HQ 7WW, Scott AFB, Ill.
Steve Ouzts, Det. 16, 31WS, Zaragoza AB, Spain.

To Major:
H. Webster Tileston III, HQ 7WS, Heidelberg, Germany.

To Captain:
Susan K. Watters, Det. 1, 7WW, Keesler AFB, Miss.
Thomas E. Coe, OL-H, 7WS, Schwaebisch Gmundain, Germany.
John B. Talbot, Det. 1, 7WW, Keesler AFB, Miss.
Corinne Wanits, Det. 36, 28WS, RAF Alconbury, UK.

To First Lieutenant:
Chris A. Donahue, 17WS, Travis AFB, Calif.
Daniel J. Nurkala, HQ 7WS, Heidelberg, Germany.
Tracy A. Moore, 17WS, Travis AFB, Calif.
Michael E. Fitzpatrick, Det. 3, 1WW, Andersen AFB, Guam.
John P. Muegge, 17WS, Travis AFB, Calif.
Markus S. Sorrells, Det. 2, 3WS, Seymour-Johnson AFB, N.C.
Jeffrey H. McCoy, Det. 5, 3WS, England AFB, La.
Gary L. Welch, Det. 16, 25WS, Nellis AFB, Nev.
Karen D. Arnett, Det. 18, 25WS, Mountain Home AFB, Idaho.
Stephen L. Brueske, Det. 75, 6WS, Hurlburt Field, Fla.
Theodore Vroman, Det. 2, 9WS, Castle AFB, Calif.

To Master Sergeant:
William H. Burr, Det. 31, 15WS, Robins AFB, Ga.
Steven Sheamer, Det. 8, 17WS, McClellan AFB, Calif.
Harold E. Newman, Det. 3, 1WW, Andersen AFB, Guam.
Michael S. Sepinski, Det. 4, 11WS, Ft. Richardson AIN, Alaska.
Larry Broomfield, Det. 7, 31WS, Aviano AB, Italy.
Leonard W. Gibson, Det. 23, 3WS, Moody AFB, Ga.
Mark A. Noe, Det. 18, 28WS, RAF Fairford, UK.
Phillip G. Abel, Det. 75, 6WS, Hurlburt Field, Fla.

To Technical Sergeant:
Raymond L. Daniel, Det. 4, 17WS, Altus AFB, Okla.
Tommy B. Timmons, Det. 9, HQ AWS, Las Vegas, Nev.
Robert J. Miller, Det. 15, 15WS, Wright-Patterson AFB, Ohio.
Mike Wieand, Det. 5, 15WS, Dover AFB, Del.
Luke D. Whitney, Det. 9, HQ AWS, Las Vegas, Nev.
Michael A. Brand, Det. 4, 11WS, Ft. Richardson AIN, Alaska.
Clifton E. Butler, 11WS, WSU, Elmendorf AFB, Alaska.
Martin W. Sprankle, Det. 18, 30WS, Yongson AIN, Korea.
Gordon H. Fesenger, Det. 10, 30WS, Kunsan AB, Korea.
Jeffrey A. Fluegge, Det. 23, 3WS, Moody AFB, Ga.
Karl H. Stevens, Det. 23, 3WS, Moody AFB, Ga.
Jerry M. Bess, Det. 36, 28WS, RAF Alconbury, UK.

To Staff Sergeant:
Reginald K. Boyd, Det. 31, 15WS, Dobbins AFB, Ga.
Rande J. Hulec, Det. 11, 17WS, McChord AFB, Wash.
Cathy A. Swenson, Det. 2, 17WS, Travis AFB, Calif.
Richard W. Butler, Det. 3, 11WS, Shemya AFB, Alaska.
Rose E. Matthews, Det. 2, 17WS, Travis AFB, Calif.
Ebarle E. Zefanias, Det. 7, 17WS, Kelly AFB, Texas.
Richard R. Proulx, Det. 18, 30WS, Yongson AIN, Korea.
Craig A. Downs, OL-D, 7WS, Pirmasens, Germany.

Appointed to Sergeant:
Ronald D. Beard, Det. 1, 17WS, Tinker AFB, Okla.
Douglas T. Kamm, Det. 21, 15WS, Pope AFB, N.C.
Donna J. Fox, Det. 20, 17WS, Little Rock AFB, Ark.
Jackie Smith, Det. 6, 17WS, Hill AFB, Utah.
Susan E. Daniels, 11WS/WSU, Elmendorf AFB, Alaska.
Jody Rogers, Det. 8, 31WS, Zweibrucken AB, Germany.
Byron Pullen, Det. 3, 5WS, Ft. Bragg, N.C.
Mark A. Sword, Det. 3, 5WS, Ft. Bragg, N.C.
Jerry D. Gaunt, Det. 75, 6WS, Hurlburt Field, Fla.
Eugene J. King, Det. 18, 28WS, RAF Fairford, UK.
Richard A. Campos, Det. 1, 15WS, Andrews AFB, DC.
Terry D. Allen, Det. 15, 28WS, RAF Mildenhall, UK.
Daniel K. Haney, Det. 11, 1WW, Hickam AFB, Hawaii.
Paul C. Teff, Det. 36, 28WS, RAF Alconbury, UK.
Frank A. Quairoz, Det. 36, 28WS, RAF Alconbury, UK.

To Senior Airman:
Phillip L. Loomis (BTZ), 11WS/WSU, Elmendorf AFB, Alaska.
Jodi S. Hudson (BTZ), Det. 10, 30WS, Kunsan AB, Korea.
James K. Price (BTZ), Det. 4, 28WS, RAF Bentwaters, UK.
James T. Fahey, Det. 15, 28WS, RAF Mildenhall, UK.
Michael Brown, OL-D, 11WS, Galena Airport, Alaska.
Kevin H. Iwamasa, OL-I, 11WS, King Salmon Island, Alaska.
Bobby M. McKnight, Det. 18, 30WS, Yongson AIN, Korea.
David Skerritt, Det. 3, 11WS, Shemya AFB, Alaska.
Billy J. Tillar, Det. 3, 31WS, Florennes AB, Belgium.
Richard K. Kim, HQ 1WW, Hickam AFB, Hawaii.
Lynn M. Morrison, Det. 1, 15WS, Andrews AFB, DC.
Martin A. Riggs, Det. 36, 28WS, RAF Alconbury, UK.
Jeffrey Struebing, Det. 15, 28WS, RAF Mildenhall, UK.
Robert J. Henderson, Det. 4, 28WS, RAF Bentwaters, UK.
Lawrence M. Matson, Det. 75, 6WS, Hurlburt Field, Fla.
Jason J. Cepek, Det. 21, 9WS, Minot AFB, N.D.

To Airman First Class:
Jeffrey G. Burris, Det. 8, 17WS, McClellan AFB, Calif.
Debra W. Cockrum, Det. 3, 11WS, Shemya AFB, Alaska.
Scott A. Gerst, Det. 4, 11WS, Ft. Richardson AIN, Alaska.
John P. Farley, Det. 18, 28WS, RAF Fairford, UK.
Alfonso Siska, Det. 2, 9WS, Castle AFB, Calif.
Kathleen D. Rowley, Det. 26, 28WS, RAF Greenham, Common, UK.

To Airman:
Stephen T. Gordon, Det. 4, 11WS, Ft. Richardson AIN, Alaska.
Edward T. Amrhein, Det. 23, 3WS, Moody AFB, Ga.
Richard R. Boggs, Det. 26, 28WS, RAF Alconbury, UK.

Unit Honors

Airman of the Month for:

K.I. Sawyer AFB — SrA. Stuart W. Leinbach, Det. 24, 26WS.

Security Manager of the Year (1985) for:

RAF Upper Heyford — SSgt. Edna D. Otten, Det. 17, 28WS, UK.

Senior NCO of the Quarter for:

MAC Pacific, 834th Airlift Division and 30WS — SMSgt. Tx P.D. Vogler, Det. 18, 30WS, Yongson AB, Korea.
2WW — MSgt. Erik Johnson, Det. 3, 28WS, RAF Lakenheath, UK.
5WW — MSgt. William Streib, Det. 6, 5WS, Ft. Lewis, Wash.

NCO of the Quarter for:

Hickam AFB — TSgt. Charles C. Cobb, Det. 11, 1WW, Hawaii.
1WW — TSgt. Andrew J. Miller, Det. 18, 30WS, Yongsan AB, Korea.
2WW — SSgt. Paul A. Heinz, Det. 1, 7WS, Feucht AAF, Germany.
5WW — SSgt. Edward Walton, Det. 32, 3WS, MacDill AFB, Fla.
28WS — TSgt. Benjamin J. DePecol, Det. 36, 28WS, RAF Alconbury, UK.

Airman of the Quarter for:

5WW — A1C Michael F. Street, Det. 3, 3WS, Myrtle Beach AFB, S.C.
11WS — Kenneth P. Alarie, Det. 2, Eielson AFB, Alaska.
15WS — A1C Anthony R. Dodwell, Det. 31, Dobbins AFB, Ga.
28WS — SrA. Douglas A. Rishel, Det. 15, RAF Mildenhall, UK.

Outstanding Young Woman of America:

Ms. Lisa D. Sweatt, Det. 3, 5WS, Ft. Bragg, N.C.

Education

Squadron Officer School:

1st Lt. Jeffrey T. Bernard, Det. 1, 15WS, Andrews AFB, D.C.
1st Lt. Cecilia Grindinger, Det. 3, 3WS, Myrtle Beach AFB, S.C.

Senior NCO Academy:

SMSgt. Louis C. Csencsits, 17WS, Travis AFB, Calif.

NCO Academy:

TSgt. Joe Brackett (Levitow Award), Det. 3, 3WS, Myrtle Beach AFB, S.C.
TSgt. Patrick L. Ashton, Det. 13, 15WS, Robins AFB, Ga.
MSgt. William H. Burr, Det. 31, 15WS, Dobbins AFB, Ga.
MSgt. William Burr, Det. 31, 15WS, Dobbins AFB, Ga.
MSgt. James E. Tynes, Det. 1, 17WS, Tinker AFB, Okla.
TSgt. Marvin L. Blocker, Det. 9, HQ AWS, Las Vegas, Nev.

NCO Leadership School:

SSgt. Geri L. Swanson (DG, Academic Achievement Award), Det. 2, 17WS, Travis AFB, Calif.
SSgt. David H. Gorham (DG), Det. 4, 17WS, Altus AFB, Okla.
SSgt. Everett S. Berry (DG), Det. 18, 25WS, Mountain Home AFB, Idaho.
SSgt. Chris Billingsley, Det. 14, 17WS, Norton AFB, Calif.
SSgt. Cathy L. Bird, Det. 9, 15WS, Scott AFB, Ill.
SSgt. Shelia M. Dollison, Det. 7, 17WS, Kelly AFB, Texas.
SSgt. Rose M. Matthews, Det. 2, 17WS, Travis AFB, Calif.
SSgt. David M. Rose, Det. 1, 17WS, Tinker AFB, Okla.
SSgt. Michael A. Willen, Det. 15, 15WS, Wright-Patterson AFB, Ohio.
SSgt. Greg Bond, Det. 16, 31WS, Zaragoza AB, Spain.
SSgt. John Jankite, Det. 3, 5WS, Ft. Bragg, N.C.

NCO Preparatory Course:

A1C Jackie Smith (DG), Det. 2, 17WS, Travis AFB, Calif.
A1C Scott D. Daves, Det. 15, 28WS, RAF Mildenhall, UK.
SrA. Jason J. Cepek, Det. 21, 9WS, Minot AFB, N.D.
SrA. Marry L. Scales, Det. 17, 28WS, RAF Upper Heyford, UK.
SrA. Keith E. Wagner, Det. 10, 30WS, Kunsan AB, Korea.
SrA. Thomas R. Meckes, Det. 7, 17WS, Kelly AFB, Texas.
SrA. Douglas T. Kamm, Det. 21, 15WS, Pope AFB, N.C.
A1C Troy Butler, 31WS, Sembach AB, Germany.
A1C Wendal Foreman, Det. 14, 31WS, Hahn AB, Germany.
A1C Andy Guerrero, Det. 14, 31WS, Hahn AB, Germany.
SrA. Stephen J. Barlow, Det. 18, 30WS, Yongsan, Korea.
SrA. Bobby M. McKnight, Det. 18, 30WS, Yongsan, Korea.
SrA. John Barnes (Levitow Award) Det. 7, HQ AFGWC, Carswell AFB, Texas.
SrA. Daniel Barlett (DG), Det. 32, 3WS, MacDill AFB, Fla.
SrA. William H. Hennix, Det. 10, 30WS, Kunsan AB, Korea.
SrA. John Masters, Det. 7, 24WS, Mather AFB, Calif.
SrA. Steven G. Botz, AFGWC, Offutt AFB, Neb.
A1C William P. Rushlow, AFGWC, Offutt AFB, Neb.
SrA. Kathy Lawless, Det. 1, 31WS, Bitburg AB, Germany.
SrA. George Wright, Det. 19, 31WS, Incirlik AB, Turkey.
A1C Troy Butler, 31WS, Sembach AB, Germany.
A1C Andy Guerrero, Det. 14, 31WS, Hahn AB, Germany.
SrA. Dale F. Williamson, Det. 12, 31WS, Torrejon AB, Spain.

Weather Technician Course:

SSgt. Brian A. Avery, Det. 6, 26WS, Pease AFB, N.H.
Sgt. Herbert W. Dettmer, Det. 7, 7WS, Grafenwoehr, Germany.
SSgt. Richard W. Downing, Det. 9, 24WS, Maxwell AFB, Ala.
Sgt. Brenda L. Heberling, Det. 5, 15WS, Dover AFB, Del.
SSgt. John M. Leslie, Det. 26, 26WS, Grissom AFB, Ind.
SSgt. Michael T. Malone, Det. 7, 31WS, Aviano AB, Italy.
TSgt. David L. McLearen, Det. 14, 5WS, Ft. Hood, Texas.
Sgt. Kevin Northington, AFGWC, Offutt AFB, Neb.
A1C Victor F. Oppenheimer, Det. 7, 24WS, Mather AFB, Calif.
A1C Linda S. Thompson, AFGWC, Offutt AFB, Neb.
SSgt. John W. Hampshire, AFGWC, Offutt AFB, Neb.
SSgt. Brad A. Medlin, Det. 20, 26WS, Barksdale AFB, La.
A1C Julius T. Shore, Det. 14, 5WS, Ft. Hood, Texas.
SSgt. Jane H. Warriner, Det. 15, 28WS, RAF Mildenhall, UK.
SSgt. Gregory W. Alexander, Det. 10, 7WS, Geibelstadt, Germany.
SSgt. Richard A. Carpenter, Sgt. Dennis P. Davis, AFGWC, Offutt AFB, Neb.
Sgt. Paul F. Dufresne Jr., AFGWC, Offutt AFB, Neb.
SSgt. Stanley G. Grell, AFGWC, Offutt AFB, Neb.
A1C Clint D. Lauricella, Det. 7, 9WS, March AFB, Calif.

Masters Degree to:

Capt. Marilyn Clouden, Det. 25, 31WS, Rhein-Main AB, Germany.
Capt. Kenneth E. Stokes, 24WS, Randolph AFB, Texas in Computer Resource Management.
Capt. Juan Yee-Fong, AFGWC, Offutt AFB, Neb., in Meteorology from Texas A&M.
Capt. John H. Jacobson, AFGWC, Offutt AFB, Neb., in Meteorology from the Naval Postgraduate School.

Bachelors Degree to:

SSgt. Susan R. State, Det. 2, 17WS, Travis AFB, Calif.
SSgt. Kevin A. Byrd, 207WF, Shelbyville, Ind., in Accounting from Indiana University.

Associate Degree to:

MSgt. Leslie O. Taylor, Det. 18, 28WS, RAF Fairford, UK, in Management from the University of Maryland.

CCAF Associate Degrees to:

SSgt. Richard A. Anstett, Det. 3, 11WS, Shemya AFB, Alaska, from the CCAF.
TSgt. Joe Brackett, Det. 3, 3WS, Myrtle Beach AFB, S.C., from the CCAF.
SrA. Shirley M. Gramling, Det. 15, 25WS, Luke AFB, Ariz., from the CCAF.
SSgt. Meta C. Simants, Det. 20, 24WS, Laughlin AFB, Texas.
TSgt. Jeffrey K. Martin, OL-B, Det. 2, Ft. Indiantown Gap, Pa., in Weather Technology.
TSgt. James Buchanan, Det. 31, 5WS, Ft. Polk, La., in Weather Technology.
Sgt. David S. Bragg, Det. 5, 20WS, Clark AB, the Philippines, in Weather Technology.
SSgt. Gerald C. Claycomb, Det. 8, 17WS, McClellan AFB, Calif., in Weather Technology.
SSgt. Richard Anstett, Det. 3, 11WS, Shemya AFB, Alaska.
Sgt. Kevin Johnson, Det. 1, 3WS, Shaw AFB, S.C.
Sgt. Steven A. Schoen, Det. 12, 25WS, George AFB, Calif., in Weather Technology.

TSgt. Patrick A. Melton

Who: TSgt. Patrick A. Melton

What: Identified as an outstanding performer by the MAC/IG.

Where: Det. 11, 9WS, Beale AFB, Calif.

How and Why: He is a dedicated administrative specialist who, through diligent self-study and extra hours, thoroughly learned all aspects of his job and went far beyond normal requirements.

Sergeant Melton worked hard to develop extensive job knowledge and determine requirements, then used the computer to simplify routine tasks. He developed extensive Zenith Z-100 applications covering all aspects of unit administration resulting in a noteworthy management action finding.

For example, he entered and updated his files plan in the computer and had it print labels for his file folders. He had all suspenses on a master list separated into those required annually, semiannually and monthly. He also had the computer print suspense cards for use in the suspense file.

Almost all routinely used unit forms were on a template so all the user had to do was call up the form, answer a few questions on the screen, then pick-up his printed form.

His efforts were directly responsible for a very positive rating in administration.

Reenlisted:

Sgt. Thomas J. Targaszewski, Det. 6, 2WW, Vaihingen, Germany.
TSgt. Michael K. Johnson, Det. 14, 17WS, Norton AFB, Calif.
SSgt. Monty Fernandez, Det. 5, 15WS, Dover AFB, Del.
Sgt. Vivian B. Atwell, Det. 5, 15WS, Dover AFB, Del.
Sgt. Milinka B. Watson, Det. 14, 17WS, Norton AFB, Calif.
SSgt. Jeffrey P. Cunningham, Det. 13, 15WS, Robins AFB, Ga.
SSgt. Teresa M. Maro, Det. 9, 24WS, Maxwell AFB, Ala.
Sgt. Michael R. Van Sickle, Det. 11, 1 WW, Hickam AFB, Hawaii.
SMSgt. Patrick G. Lee, Det. 15, 28WS, RAF Mildenhall, UK.
Sgt. Nicholas McNider, Det. 18, 28WS, RAF Fairford, UK.

Planning for the Weather Officer in Space Experiment

Continued from page 1

supplement tropical cyclone reconnaissance and ultimately improve tropical cyclone forecasting.

The plan calls for ground-based meterologists to pass present and forecast tropical cyclone positions to the AWS coordination team at Johnson Space Center mission control for integration into the crew's daily planning activities. Post-flight analysis of data collected will include a detailed study of the high-resolution photographs, coincident METSAT imagery, and conventional data to determine if space-based observations can enhance the tropical cyclone reconnaissance mission.

Monsoon

The purpose of the monsoon experiment is to determine if precursors to monsoon surges are observable from a low-earth orbit and to study the interactions between monsoon surges and tropical cyclones.

Surges in the monsoon can cause widespread weather deterioration over millions of square miles for up to three weeks. Rainfall is highly variable and cloud systems and rainfall are very difficult to forecast. Advection techniques do not work well and METSAT imagery has not revealed the detail necessary to understand the variability in monsoonal rainfall or the precursor mechanisms that induce surges.

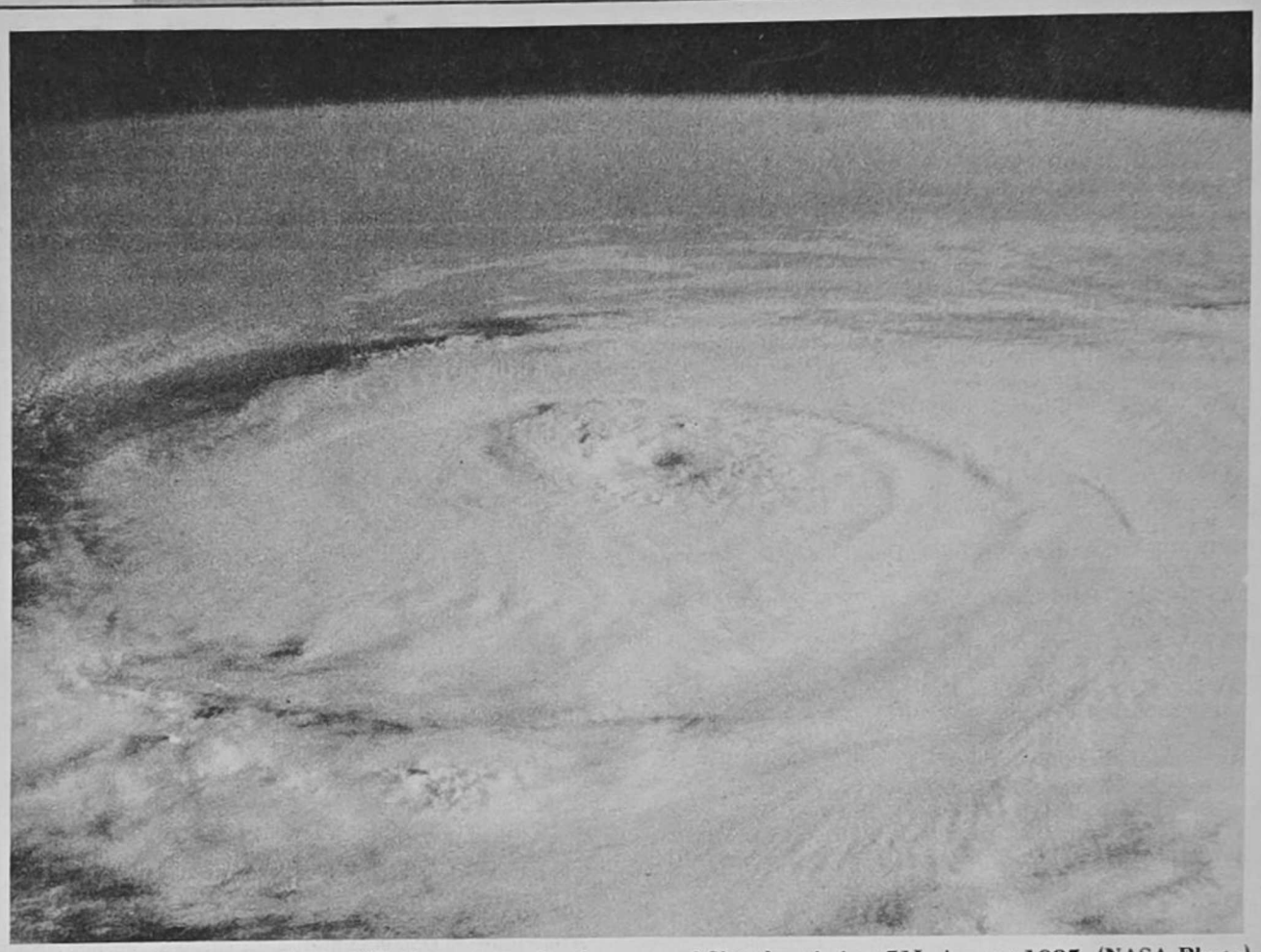
Knowledge of the precursors of a monsoon surge could enable us to better forecast these dramatic events. Furthermore, a better understanding of the convective distribution in monsoon surges could result in improved forecasting of significant rain events.

The plan is similar to the tropical cyclone experiment: ground-based support meteorologists will pinpoint the phenomenon and AWS coordinators working with Johnson Space Center mission control specialists will include the experiment into the crew's daily activity plan. After the flight, high-resolution photography taken from the shuttle will be combined with coincident METSAT imagery and conventional data to determine if space-based observations can enhance AWS's forecasting capability for these weather events.

Tropical Upper Tropospheric Trough (TUTT)

The purpose of this experiment is to determine if space-based observations provide new clues to the Tropical Upper Tropospheric Trough's role as a weather initiator in the tropics. In addition, these space-based observations will provide an important data set for studies of TUTT evolution, structure, and interactions with synoptic and subsynoptic weather systems.

The role of cyclonic cells in the TUTT in inducing tropical cyclone development in tropical latitudes during summer is well documented. There is also evidence that these cells induce other tropical weather systems specifically, monsoon depressions and monsoon surges. Interactions between these cells and tropical cyclones can also cause large and rapid changes in the intensity of the tropical cyclone and perhaps the TUTT-cyclones as well. These interactions are not well-understood and METSAT imagery has not provided the information necessary to attain that understanding.



Hurricane Elena in the Gulf of Mexico as seen by the crew of Shuttle mission 51I, August 1985. (NASA Photo)

Knowledge of the vertical structure and depth of the TUTT-cyclones is important in understanding the physical processes involved in their production, maintenance, and influence on large scale weather deterioration. Improved understanding would lead to improved numerical forecast models especially in tropical latitudes. Neither aircraft nor METSAT have provided the necessary information and a new perspective is clearly needed — one that bridges the gap between the two platforms.

The plan is similar to the tropical cyclone and monsoon experiments. AWS forecasters will locate cyclonic cells in the TUTT and work with Johnson Space Center mission control to forward this information to the shuttle. High-resolution shuttle photographs of cloud formations in the TUTT will be combined with METSAT and conventional data after the flight for studies aimed at providing a better understanding of TUTT-cyclones and the precursors that initiate widespread weather deterioration in the tropics. Such understanding may ultimately lead to better forecast techniques for these weather events.

Recent and Coming Activities

In late May, after detailed review and coordination by AWS and Space Division, a draft Payload Integration Plan, or PIP, was formally submitted to NASA for review. The PIP is a formal contract between NASA and the Tri-service Space Test Program Office and defines what NASA will provide to support the Weather Officer in Space Experiment. Once the PIP is finalized, NASA will begin detailed planning for integration of the Weather Officer in Space Experiment into the shuttle mission. The review process has been slowed by the Shuttle booster redesign; however, NASA approval is anticipated in the near future.

AWS/Aerospace Sciences is continuing to develop concepts for future missions for inclusion in the Air Force Space Command Military Man In Space Plan. A briefing on future AWS experiments will be presented at the Military Man In Space Experiments Review in September. At this meeting, experiments submitted by all Air Force commands will be reviewed and prioritized. This is an important step to insure AWS a place on future shuttle missions and continuing access to space.

The next *Observer* article on the Weather Officer in Space Experiment will feature the cloud-free line of sight, dust assessment, and thunderstorm cirrus outflow experiments along with the status of the Pathfinder mission.

AWS Pathfinder Mission Experiments

1. Expert Observation Evaluation
2. Weather Observation
3. Weather Scout
4. Cloud-Free Line of Sight
5. Ionospheric Scintillation
6. Tropical Cyclone*
7. Monsoon*
8. South Atlantic Anomaly
9. Dust Assessment
10. Thunderstorm Cirrus Outflow
11. Tropical Upper Tropospheric Trough*
12. Lightning

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