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world

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EFAS EVERYMAN'S WEATHER RADAR

Up-to-date weather information in the cockpit is no longer the exclusive purview of well-heeled private and commercial pilots who can afford radar for their airplanes. This kind of information now is available to average pilots, as well, thanks to the implementation of EFAS—the Enroute Flight Advisory Service—which is operational at 43 of the 44 targeted flight service stations coast to coast.

The resulting safety benefits are obvious. Knowing the extent of storms

and precipitation is half the weather battle in the relatively slow-speed, low-altitude flying done by the majority of pilots in general aviation. The other half of the battle is avoiding the weather that threatens harm.

EFAS, of course, is not as immediate or as graphic with its presentation of weather information as airborne radar. But it has the advantage of being infinitely cheaper and, properly used, can be almost as effective. It should is used only after a well-considered go-



The EFAS position at the Kansas City FSS is manned by specialist Roy Soutee, who is high on the program. This facility has just gotten live radar, and Soutee likes it even better.

no-go decision, and its information should always be considered in light of a complete briefing and knowledge of the weather over a wide area.

EFAS works best when pilots cooperate with each other and the flight service station EFAS specialist by accurately reporting the meteorological conditions they've encountered in flight. This "party line"-by-radio idea for sharing weather information has been around for a long time, and, of course, it's the basis for PIREPS (pilot reports). Actually, many pilots long have been throwing in an item or two on the weather they've just hit for the benefit of the pilot they know is on the same frequency and is following them by a few minutes.

EFAS adds ground radar information, which the FSS receives either live or by recent-depiction chart, to this "tell your buddy" system and puts it all on the same frequency so everyone can share its wealth of data. The combination should give pilots a pretty good idea of what the weather is like where they're going, provided someone has been there recently and the ground radar is doing its job.

This all appeared reasonable enough to me as I prepared a news release announcement on EFAS in my public affairs job. But would it be reasonable to me in my alter ego as pilot? Would it really be the aid to nonradarized pilots it was advertised to be?

To find out, I began using EFAS routinely in agency and personal flying. A year after the introduction of the service into the Central Region, I have to say "yes" as far as it now goes.

EFAS, as expected, earns its keep in marginal VFR weather, especially where such conditions creep into areas between weather reporting points. It makes for a much easier decision on whether to continue, reroute or drop out. But, again, it's only one tool for decision-making.

The system proved its merit on one recent trip in which VFR weather (3,000-foot overcast and good visibility) was forecast over most of the 200-odd-mile trip. Enroute, a few thundershowers developed, bringing visibility down to what looked like less than a mile in places. Then, they began growing closer together.

Of course, I wanted to avoid them, but I also wanted to get home without interruption. Picking my way visually around small showers as I monitored the EFAS frequency, I suddenly found myself facing a large area of rain completely blocking any forward motion.

EFAS appears to be shaping up up into a good service, and pilot acceptance has been enthusiastic.

Being the cautious sort, and particularly so this time, I turned away and started making mental notes on overnight lodging at the nearest city. About that time, my query to the EFAS specialist brought the word that my rain shower seemed to be just another localized one-although large-and that radar showed no echoes to the west. He added that another pilot a few minutes earlier had circumnavigated the same roadblock by going about 30 miles to the west. Filing my own report of conditions, I took the long way around and found it much to my liking. I slept in my own bed that night.

Without EFAS and alone in the airplane, I probably would have continued probing the weather at other points for a legal VFR passage and may or may not have found one. Had I turned eastward, for instance, EFAS told me I would have found rather large thunderstorms. However, since I did have a trusting wife and a twoyear-old aboard, I would have early gone below for the nearest motel. Occasionally, ARTCC controllers can lend a hand with this type of situation but their radar is best at seeing airplanes, not weather, and when marginal weather comes along, they're plenty busy with increased IFR traffic and don't have time for VFR advisories.

EFAS plugs a big gap in weather information for VFR pilots—the enroute developments that no weather observer can see without radar because it's happening out in the hinterlands. But it's a total system, and I suspect that participation by pilots the ones who are actually seeing and experiencing the weather—will make or break EFAS as a lasting service. When the pilots cooperate, it's excellent.

There are some minor problems for which solutions are being sought. One is radio reception—too much or not enough. Generally, aircraft radio reception is fine at high altitudes but gets progressively worse nearer the ground. And aircraft nearer the ground have a shorter range.

One problem is that, with the single frequency (122.0 KHz) used for EFAS aircraft at high altitudes can monopolize the frequency for hundreds of miles around. But I understand that an additional high-altitude EFAS frequency is being considered for the use of traffic at 18,000 feet and above, and that would certainly help. Another problem is that at low altitudes, where VFR aircraft are often forced to fly by low ceilings, pilots can't reach EFAS in some locations when they need it most.

Despite these minor flaws, the kind inherent in any new venture, EFAS appears to be shaping up into a good service, and pilot acceptance has been enthusiastic.

EFAS is an easy system to use and increases flying safety. Beyond that, I might point out, the system extracts more productivity from the aircraft the pilot may not have to make 180s. And in today's environment of expensive fuel, productivity is becoming a great deal of what flying is all about.

FEDERAL/7 NOTEBOOK

JOB PROTECTION STATUS The Civil Service Commission has published guidelines for reviewing agency requests to delay demotions for overgrading and reorganizations. The agency must explain its problems with regard to the adverse effect of not delaying downgradings; it must pursue a vigorous program to correctly classify positions; it must commit itself to a program to place overgraded employees in properly graded positions within the delay period; it must insure that its placement efforts will not adversely affect its progress in employing minorities, women and the handicapped. The President has reiterated his intention on this subject. A memo from CSC and the Office of Management and Budget told agencies to make every effort to find iobs for employees who may be caught in reductions made for reasons of efficiency.

AND ON THE JOB PROTECTION Congress is expected to hold hearings on HR 9219 and S2117 that would protect most Federal workers from lawsuits based on the performance of their official duties. This revision to the Tort Claims Act would make suits against the government the only remedy for plaintiffs; however, employees would be subject to disciplinary action or criminal prosecution for irresponsible individual action. ■ The CSC has decided that under the Freedom of Information Act, it cannot refuse to divulge the names, position titles, grades, salaries and duty stations of Federal employees, except if it can be justified as an unwarranted invasion of privacy. Previously, such information would be denied if it was judged to have been for commercial or solicitation

purposes. As a result, Rep. Gladys Spellman (Md) is sponsoring a bill to protect Federal employees from being solicited for political funds during working hours, in light of the CSC decision. ■ The Justice Department has asked Federal attorneys not to ask for assessment of legal fees against employees who lose discrimination suits, except in bad-faith cases. ■ The chairman of CSC has indicated that the special preference given to disabled veterans will continue regardless of any changes that may be made in the veterans' preference system.

POTPOURRI

To find out whether affirmativeaction programs are working as intended, CSC will be asking Federal job applicants for information on their race, sex and ethnic background, as required by the Federal Executive Agency Guidelines on Employee Selection Procedures. The confidential information will be collected from selected groups of applicants.
CSC has responded to the President's call for expanded part-time employment opportunities. Agencies are directed to survey functions that can be performed by part-timers, to inventory current employees interested in a part-time schedule and to restructure jobs where appropriate for part-time work.
CSC has decided that smoking marijuana off-duty is not grounds for denying government employment.
Congressional sponsors of a bill on a Federal health-insurance program are providing for the use of chiropractors, podiatrists, acupuncturists, midwives and other non-MDs if the practitioners are licensed by the states, something not now permitted by most insurance plans.

Oscar W. Holmes didn't march at Selma. He hasn't organized any sit-ins. Indeed, the name of this former FAA employee is in no way associated with the civil rights movement of the last two decades—a movement that broke down old racial barriers and opened up many doors to blacks and other minorities.

Yet, 36 years ago, Oscar Holmes broke the color line in two professions within the space of nine months. He was the first black man to become an air traffic controller. And, though not officially recognized, he has the dual distinction of being the first man of his race to hold a commission in the U.S. Navy and the first to wear Navy wings.

Oscar Holmes did this without placards or fanfare, without recourse to the courts and without the support of organized groups. He did it so quietly, as a matter of fact, that scarcely anyone noticed.

Holmes was born on Jan. 31, 1916, in Dunbar, W. Va., the youngest child and only male of a family of four children. His father was a carpenter; his mother, the daughter of a farmer. The elder Holmes, now 90, still lives in West Virginia's Kanawha Valley.

Holmes' paternal grandfather was born in Virginia a year or two after the Civil War. While still a boy, he walked to the Kanawha Valley. Holmes' mother was also a West Virginian. Her grandmother had been a slave to "a man named Chapel," and, as Holmes explains, "while [Chapel] didn't marry my mother's grandmother, they raised a hell of a big family . . . somewhere between 10 and 13 of them. . . . " Holmes' grandmother inherited from Chapel a strip of land in the Kanawha Valley that ran "from the river to the hill." Holmes' mother was born in a farmhouse on this land.

Holmes was reared in the same valley, amidst the rugged foothills of the Appalachian Mountains. He went through Charleston's segregated school system and, at age 16, enrolled at West Virginia State, an undergraduate college for blacks.

By all accounts, he made a brilliant record at WVS, before going on to



N.Y. Center assistant chief controller (now called deputy chief) Holmes chats with a controller in the La Guardia Airport tower, New York, in 1952, where he took his initial air-traffic-control training a decade earlier.



HIS OWN QUIL

Ohio State University in 1936 to secure an MS in chemistry—a course of study made financially possible by a graduate assistantship funded by the National Youth Administration. Holmes' master's research provided the basis for an article in the *Journal of the American Chemical Society*—a rare feat for one not doing Ph.D. work.

After three years as a chemistry instructor at Claflin College in Orangeburg, S.C., Holmes tired of chemistry ("I always hated chemistry") and of the low pay and secured a part-time position as a water and fuel analyst for a power company in Erie, Pa. It was here that his aviation career was launched. In 1939, the New Deal had established the Civilian Pilot Training Program (CPTP) at scores of colleges and universities and a number of offcampus sites. The program introduced thousands of young Americans to aviation. For blacks, always on the bottom of the economic heap and thus excluded from expensive avocations, the CPTP proved a particular boon: For the first time, large numbers of young black men and women could learn to fly and, perhaps, even think of careers in aviation. Erie had an off-campus program, and Holmes applied for and secured a flight scholarship, which led to a private pilot's certificate.

It was not long thereafter, in 1941, that Holmes spotted a Civil Service announcement at an Erie post office. The Civil Aeronautics Administration was looking for applicants with a college degree and a private pilot's license to train as air traffic controllers. "I had those things, so I applied,"



EVOLUTION

Holmes relates. He was accepted as a trainee.

Holmes' training class, located at La Guardia Airport in New York, included the first group of black ATC trainees, numbering no more than three or four. All the blacks washed out except Holmes, who was assigned to the New York airway traffic control center as an assistant controller with a salary of \$1,800 a year.

By Holmes' own admission, he was accepted like any other worker by his fellow controllers. "I had a bond with the fellows who were in that class with me," he says. The same held true when he got to the New York airway traffic control center. The controller force at this center was small and tightly knit—no more than 30 or so, as against some 600 today. Holmes felt as much a part of this group as any of the other men.

Anyone meeting Holmes for the first time cannot readily discern that he is black. And it is doubtful that he was recognized as such when he applied for controller training. Federal rules then prohibited inquiry into race on a Civil Service application.

But upon reporting to the CAA, Holmes was given an "information" questionnaire to fill out—and that form did contain a question on race. "This, of course, was not an application," Holmes says sardonically, "[and therefore] didn't fracture the [rules]." So the CAA knew a black man was on its controller rolls.

Not all of Holmes' fellow workers could readily understand why he just didn't pass himself off as white. One senior controller, having invited Holmes to dinner at his home, asked him why he marked "Negro" on that questionnaire. "Because that's what I am," Holmes retorted. His host seemed perplexed; he could only reason that Holmes would have been "much better off" by concealing his identity.

Holmes did not receive a uniform welcome throughout the CAA, particularly from some of the faceless powersthat-were in the New York regional headquarters. It was not long, therefore, before an incident occurred that largely determined the course of Holmes' wartime career. One day in the spring of 1942, the center's chief controller, Robert L. Johnston, put an arm around Holmes' shoulder, saying that "it didn't make any difference to him" that Holmes was black, and that he had recommended him for promotion. Weeks, then months, rolled by and no promotion.

For 15 years, Holmes believed Johnston had lied and had not made the recommendation. He did not learn until 1957 that his promotion had indeed been recommended by Johnston but had been blocked at regional headquarters, where it was bounced back with a notation, "Do nothing on this."

By August, Holmes had tired of waiting for his promotion. An article in the New York *Daily News* caught his eye. The U.S. Navy was offering reserve commissions to men with a pilot's license and 100 hours' flying time to train as flight instructors and ferry pilots. Holmes applied, sailed through his physical and personal interview and soon found himself with an ensign's commission. He reported for active duty at 120 Broadway on Sept. 28, 1942.

The Navy did not know at this point that it had commissioned a black man. It had no black officers at this time and, according to one expert, did not knowingly commission a black until March 1944. The Navy soon discovered who they had aboard.

At Colgate University, where the Navy had enrolled Holmes in the War Training Service Program—the wartime version of the CPTP—newly commissioned officers were asked to submit, among other things, a birth certificate. "This is evidently when the realization hit them that they now had commissioned a Negro in their Navy...," Holmes says. "They didn't know what to do about it, and I suppose rather than make a fuss... and try to get rid of me, they said, 'Oh, we've got him now, we'll just let him stay.' "

When he finished flight-instructor training at the New Orleans Naval Air

It was a curious existence for a black man in the armed services. Black sailors served in the "black" Navy—segregated and relegated to menial tasks. Black fliers in the Army Air Corps served in segregated units and were not admitted to officers' clubs.

But, then, until March 1944, Holmes was one of a kind, and the Navy could scarcely establish separate facilities for a lone man. And, of course, his color was not all that discernible. "The



Oscar Holmes (left) at the New York Center in 1946-he made it first.

Station—thus becoming the Navy's first black flying officer—Holmes was assigned to 120 Broadway to sit on the Aviation Cadet Selection Board. Tiring of interviewing prospective air cadets, he finally secured a flying assignment in 1944—ferrying aircraft with the Naval Air Transport Service, Air Ferry Squadron III, Terminal Island, Calif., where he remained until his release from active duty in December 1945 as a lieutenant in the Naval Reserve.

Throughout this service, Holmes had the run of Navy facilities, just as any other officer. He ate and slept where other officers ate and slept. No doors were closed to him because of color. Navy knew I was black, and I knew I was black, but not many other people knew it," Holmes explains. "In fact, [the Navy wasn't] going to advertise it, and I certainly had no reason to, particularly since all of our routes . . . were through the Deep South."

In January 1946, Holmes returned to his old CAA job. Other blacks soon broke into the profession, though they were mighty few, indeed. According to the recollections of contemporaries, between war's end and the early 1950's, no more than five blacks worked as air traffic controllers in the entire CAA.

Holmes got his long-awaited promotion on his return; in fact, six months later, he was promoted again. By 1950, he had made senior controller. Shortly before his promotion, the center's chief controller had been heard to remark that as long as he was chief he would never have a black senior controller. Ironically, two years later, this very same center chief handpicked Holmes as the center's assistant chief. "So, everything was all right, but there were instances here and there . . . of race having a bearing on my situation."

In 1952, the chief controller's job at the Cleveland Center became vacant. Holmes went to one of his superiors at the New York regional office and asked for the job. "The answer he gave me was, 'Don't you think we've done enough for you?' " ("How would you construe that?" Holmes asks.)

At the time, a chief controller held a GS-12 rating. Under the thenprevailing national promotion system, the promotion roster was pared down to a list of five most qualified. "At the time, I could make any ATC GS-12 list in the country in that top five," he recalls. But Holmes just wasn't fated to be a chief controller.

So he stayed in New York. He had entered Brooklyn Law School the previous year and, by 1954, had earned an LLB degree by attending night classes. He got an LLM a year later, was admitted to the New York State bar and began a part-time law practice. He gave up that practice when he transferred to FAA's Washington Headquarters in June 1959, where he held a succession of important positions until his retirement as a GS-15 hearing officer in 1973.

He had thought that he might practice law upon leaving FAA. But the golf course and the allure of a leisurely retirement proved more attractive.

Does he now look upon himself as a pioneer in the fight for racial justice as he strolls along the links? One suspects that he doesn't. Like most people, he had been primarily interested in finding a niche for himself; aviation was "something that was there," and he thought he would get in it. So he did.

WORD SEARCH

By James Warren, ATCS Milwaukee FSS

This month's puzzle has a twist to it that makes it ore difficult. The 71 words and contractions deal with our FAA work-a-day world and read forward, backward, up, down and diagonally, are always in a straight line and never skip letters. Almost all of these intersect or overlap only one letter.

The twist is that when you have circled or crossed out all the clues, there will be 29 letters uncovered that will spell out words. The solution on page 16 will show you these letters, not the location of the 71 words. To get you started, the word "women" has been circled.

ACADEMY	CONTROL	MEN
ADMINISTRATOR	COST	MISSION
AFS	DEDICATED	MODERNIZATION
AIM	EASTERN	NAFEC
AIRPORTS	EFAS	NEW ENGLAND
AIR TRAFFIC	ELECTRONICS	NORTHWESTERN
ALASKAN	ENJOY	NOTAMS
ALERT	ENROUTE	PACIFIC
ARTCC	EXPERT	POSTED
ARTS	FSS	PRESSURE
ATCT	GADO	PROTECT
BOARDS	GENOT	RADAR
CALLS	GOALS	RADIO
CAMI	GREAT LAKES	RCCC
CAREERS	HANDBOOK	REGIONS
`HARTS	ICAO	REGULATE
LOSE	MANAGERS	RENOT

FNRETSEWHTUOSOUTHERN A Y E D E S A N O R T H W E S T E R N S IOGESMSIROUTERUSSERP R J I TMA TAATS L L A C O O W E E TNOSARETRALDEAECLAGC R E N O T T R N T R A I N S N R C T U I A S S P O C N U S T O L O S T I I C LA **RANNCCOLSGALDVRMHAL** EEIAIAMAIRPORTSAR F TI **GSSFCLYFNERRAANCHES** С AAIAAEKSIAATODDATCT T N C D I O R C O M T D N B T N A N E M AEWOATONDLIODIEMRTI E PMIEXPERTAAOCNMCCEUS Y T I C A M O H A L K O S R E W O T O S T S E I R A T E R C E S N F M S S R I ELECTRONICSTAIMEOENO L R S R E E R A C A D N A L G N E W E N EFASTIMODERNIZATIONO T E L E P H O N E S N D E T A C I D E D

ROCKY MOUNTAIN ROUTE RULES SECRETARIES SMART SOLO SOUTHERN SOUTHWESTERN SPECIALIST TELEPHONES TELETYPE TERMINAL TIME TOWERS

TRAIN WATCH WESTERN WOMEN WX

DON'T TREAD ON ME: There are a lot of things that go on in the work environment that bug "Small World" and maybe now-with a new year just getting under way-is a good time to get them off our collective chest. . . . First, there are the people who use terms like "work environment" when they actually mean office or factory or salt mine. The same people also talk about "life styles" and "learning experiences" and "innovative" new approaches. A current favorite is "bottom line." Phooey! . . . Next, we have those people who go by their middle name but continue their first name listing in the phone book. And they always have last names like Smith or Brown or Jones. Three or four calls are required to get the right party. There ought to be a law r, at least, an agency order. . . . And e have a fellow who's always walking into our office and butting his cigarettes



in our ash tray. After he's gone we have to take a paper towel and clean out the ash tray. Aaaagh!... And how about the kamikaze types who run up and stick their hands in the elevator doors just as they're closing, fouling up the timing cycle and delaying the other passengers. We'd like to hone the edge of the doors to a razor's sharpness and take off a few arms at the elbow. ... Even the drive into work is a hassle. For example, have you ever sneaked through a traffic light on yellow, then checked the rear-view mirror for the local constabulary only to find that 12 cars have followed you through-all on red? That's when you'd like to see a squad car careen around the corner and nail all 12 of them. There's never a cop around when you want one. . . . Finally, since we're running out of space, there are the people who stop their cars on the ramp to the parking garage and offload their passengers, backing up traffic for two blocks (I've counted nine getting out of a Ford Pinto); people who follow you up the escalator whistling "Stars and Stripes Forever" in your ear at 8:30 in the morning; people who never have their money ready when they reach the cashier in the coffee line; and we could run on and on. People are going to have to be more considerate of us in 1978 or we may be forced to take measures!



CAREER DIRECTIONS—Electronics technician Charlene Clark, of the Los Angeles AF Sector, addresses a recent Federal Women's Program meeting at the Los Angeles Convention Center on the topic of "Women in Non-Traditional Careers." Sharing the dais are panel moderator Ethel Lawson, Western Region personnel management specialist, and Long Beach, Calil., tower controller Crystalline Osborne (right). It was attended by 1,000 employees.



HAPPY BIRTHDAY—Central Region Director C. R. Melugin, Jr., helped the Civairettes Club celebrate its thirty-fifth anniversary at a tea in the regional office. Melugin is director of the CAA-FAA women's service organization, of which Pat Hartl (left) is vice president and Corrine Lair is president.



STILL TRYING—"Because it's there," balloonists want to Atlantic Ocean. Last fall, Portland GADO inspector Ge present to lend his counsel to a pair of Coloradans ber journey from Bar Harbor, Me. Fickle winds caused them coast of Nova Scotia. Photo



WE POINT WITH PRIDE—A low-fuel light-aircraft pilot who was caught on top without an instrument rating was guided to a safe landing at Logan International Airport by Boston controllers (left to right) Kevin Brophy, Peter Donaghue and Richard Gedrimas, who received "We Point With Pride" awards. Photo by Vet Payne



GESTURE FOR GESTURE—The Santa Rosa, Calit., Chapter of the Ninety-Nines chairperson, Joy Reinemer, presented a Certificate of Appreciation to tower chief Sam Fabela (left) and controllers Janet Scott and Chet Ennis for the tower's fine support during the women pilot group's annual cross-country flight.



ift across the Petros was making the abort off the Dick Lymburner





MILITARY HONOR—Lt. Col. James A. Forgas was awarded a Meritorious Service Medal, First Oak Leaf Cluster, by Flight Standards Director Richard P. Skully (right) for his outstanding service during his assignment to the FAA as the chief of the Flight Procedures Standards Branch. He retired in November.



A MICRO IN EVERY POT—When the University of Hawaii's College of Engineering invited displays of individually owned microcomputers, Diamond Head ARTCC electronics technician Bob Koelling was asked to participate with his Z-80 microcomputer, the only digital group system in the area, which he uses for amateur radio as a silent teletypewriter. Koelling points out that "micros" are in many new household appliances. One day, nearly everyone will have one in his home, he says. E verybody calls him "Radar Willie," but this indestructible man with the friendly blue eyes doesn't mind the tag at all—in fact, he thinks it's a compliment.

It must be, for no one could be more intimately associated with radar air traffic control than Wilfred E. Johnson, Jr. He is the first controller to have continuously handled air traffic at O'Hare International Airport for more than 20 years, and the City of Chicago recognized him last year for that accomplishment. Mayor Michael Bilandic presented him with a Certificate of Merit.

That span of years at O'Hare, termed the world's busiest commercial airport, where the average stay for a controller is about six or seven years, stretches back to the day the first commercial jet landed at O'Hare—March 12, 1957.

"There were only two approaches when I came on board," Johnson recalls. "Now we have 13 different approach and departure configurations, and when the weather permits, we have triple approaches." Then, too, in 1957, there were just 26 people working the tower, he pointed out. Now, there are 125 controllers and 70 electronics technicians.

Johnson figures that he has handled well over a million aircraft in his time, plus helped train innumerable other controllers as part of his job. Shortly after completing his 20 years of controlling, Radar Willie was taken away from his scope and transferred to full-time training of new controllers. Even though he's still at O'Hare, not to find him in the radar room is almost a break with tradition, but in his new position, there will be many more controllers benefiting from his long experience.

Johnson joined the Navy at age 18 to "see the world and sail the seas as his Norwegian ancestors had done." He has had no regrets about abandoning the sea since taking a 13-day cruise to a new assignment and not finding it what he had expected. Before leaving the Navy, however, he put in nine years as an air traffic controller, which set his course for the future.

That future was watching aircraft on



a most durable man

a radar screen for 25 miles out from the tower in Des Plaines, III. Like most people, he remembers the great moments.

"I guess one good save I'll always remember," Johnson said, "is the night back in 1958 when two jet fighters ran low on fuel just outside Glenview Air Base. They had met with high winds and also were unable to pick up the low-frequency signal from the base because of thunderstorms in the area. But I was able to talk them down from O'Hare after I had spotted them on radar. When they touched down," he recalled with a smile, "the pilots hollered, 'Hey, Willie! Get ready. We're comin' over to get you knee-walkin' drunk!" "

Johnson is aware that the image many have of the job is one of great stress—a job that causes heart attacks and ulcers.

"I don't find that," he insists. "Sometimes we have a long shift, and during emergencies, I've worked a position for as long as six hours without a break. But there are other professions that people's lives depend on, like medicine. Yet, doctors don't all crack up. If the challenge makes you nervous, then you're in the wrong business and should get out."

Johnson adds, "We have physicals each year, and we can't have high blood pressure. If we do, we're retired. I think the secret to staying calm is not to take the work home."

Johnson says he never does. "That's because I know that the man who takes over my station can do the job as well as I can."

If that sounds very confident, Johncontinued on page 16

Wilfred E. Johnson, Jr. (center)—Radar Willie —was honored with a Certilicate of Merit by Chicago Mayor Michael A. Bilandic. Present for the ceremony were (left to right) O'Hare Tower chief Patrick O'Sullivan; Johnson's wite, Linda; and J. Patrick Dunne, Chicago's commissioner of aviation and former O'Hare Tower chief.



DIRECT LINE

Our facility submits our time cards the Friday morning near the end of the pay period and sends amended time cards in on the next Monday. I don't feel this is fair, as several times I have worked overtime on Saturday night and had to wait two pay periods to receive the money in my check.

When the overtime workload does not coincide with the time and attendance closeout date, there will always be a lag in the processing of overtime payments. As outlined in Order 2730.2A, para. 417, each T&A clerk must certify to the accuracy of the data reported on each T&A card and can do so only after the employee has completed the shift. Due to the fact that in your region every two weeks, approximately 11,000 employees' cards must be reviewed, verified and computed, the Friday morning preceding the end of the pay period has been established as the mailing date. The cards are processed by noon on Wednesday for the computer to process them for delivery to the U.S. Treasury by the Thursday prior to the issuance of the check. In the case of controllers and other nonexempt employees who may work weekend overtime, amended T&A cards are mailed on Monday morning. Upon receipt, two separate computations must be made-one

Jer Title 5 of the U.S. Code and the other under FLSAdetermine under which law the employee will receive the greater amount. Therefore, due to the volume of T&As handled and the computations needed, weekend overtime will not normally produce a payment until two pay periods later. However, every effort is made to process overtime payments within one pay period.

I am in the Air Traffic Division in the Central Region. There are now only two minority supervisors in our entire division. One of the two works in the regional office. When I visit facilities in other regions, friends ask why this situation goes uncorrected year after year. Can you explain? Aren't minorities applying for higher grade-level positions?

First, we want to emphasize that the Central Region is committed to the equal-employment-opportunity program. While we may not have the most enviable record, we are continually striving to improve our situation. Over the past several years, the number of minority/female employees has increased in the region's AT program, as has the number of minority/female supervisors. As of Sept. 30, 1977, we had 1,665 authorized air-traffic positions, of which 120 were filled with minorities and 162 with women. The authorized supervisory positions totalled 241. In FY

³74, two minority/female supervisors were selected for a al of five; during FY 1975, one of these retired and an additional two were selected for a total of six. In FY 1976, one was selected to bring the total to seven. Controllers filled 1,534 of the positions in the region's air-traffic program, of which 99 were minorities, 83 were women and two were minority supervisors. We have, in the past, encouraged minority and women employees to apply for highergraded positions, and we shall continue to do so.

Some FAA Academy instructors are required to travel to regions to conduct classes starting at 8:00 a.m. Monday and ending at 4:30 p.m Friday, thereby requiring travel during nonduty hours. In our section, this occurs an average of six to 10 weeks annually per instructor. What is the policy regarding overtime or compensatory time for travel during on-duty time? Would one of the four conditions in the FPM, Sup 990-2, Book 550, Sub-chapter S-1, Para. 3-b(2)(b), or the condition cited in Para. 3-b(2)(c)(v) entitle instructors to overtime pay or compensatory time off?

FAA Handbook 3550.10, Para. 45, states that for overtime pay purposes, travel time away from the official duty station during non-duty hours is duty status only under the following conditions: (a) involves the performance of work while traveling. (b) is incident to travel involving the performance of work. (c) is performed under arduous and unusual conditions. (d) results from an event which could not be scheduled or controlled administratively. The FAA policy regarding travel during non-duty hours is fully supported by the Federal Personnel Manual. None of the four conditions in your two citations entitle instructors to overtime pay or compensatory time off. Also. the provisions of the Fair Labor Standards Act do not apply to Academy instructors since they are exempt.

Our facility was reclassified last year from a Level II RAPCON tower to a Level III. My position as a proficiency-development specialist was the only position not upgraded. Why are there some training-officer positions at Level III towers at GS-12 and some GS-13? If it's that those facilities upgraded last year were caught in a reclassification of the positions, then when can we expect a decision?

Last years' facility upgrading you referred to was the result of the implementation of the new position classification standard covering the air traffic control occupation issued in January 1977 by the Civil Service Commission. The current standard covering ATC does not provide guidance for the classification of air-traffic-facility staff positions. We are currently studying the matter of the proper application of the standard to staff positions at all types of levels of air-traffic facilities. Until that study is complete, we can't address the specifics of your query. C ompete! Produce! Meet deadlines! Justify! It often seems in our modern society that we're living in a pressure-cooker. Reinforcing this negative view are articles in popular magazines telling us how to slow down and reduce the stress in our daily lives. But, in truth, some pressure is a normal and beneficial part of everyday life.

Like most things in life, stress can have both good and bad effects, depending on the circumstances. Most of us recognize that we often do some of our best work when we feel some degree of pressure and are bored when things are too easy. W hat determines whether or not the effects of stress are beneficial or harmful? Although many studies have been done on this subject, the answer is still not entirely clear. For example, we know that on-the-job workload and stress are related; the greater the workload gets above an optimal level, the greater the stress. However, there is no general rule for

e sports world offers many good rations of this. When a football

The sports world offers many good illustrations of this. When a football team approaches an easy game, for example, the coach may worry about the team being "flat" and try to key the players up by applying pressure to them. Vince Lombardi was a master at this tactic. Too much pressure, however, may also produce poor performance.

So it is with everyone. We need to find that level of stress or pressure that is not too much or too little. Complicating the situation is the fact that people differ from each other and in themselves from day to day in their reactions to stress.

That we need a degree of stress in our lives can be seen in our seeking out highly stressful situations, both as participants and as observers—like skydiving, skiing or riding roller coasters—because the experience makes our lives more exciting, worthwhile and fulfilling. At other times, pressure or the lack of it can result in lethargy, illness or emotional disturbance.

ON STRESS

ical.

optimal workload. So, it's still necessary to look at each work situation individually to determine the effects of stress on the persons doing the work.

We've read and heard a lot about stress on air traffic controllers, but these discussions have usually generated more heat than light, since hard facts on the subject have been very scarce.

How FAA Approached The Problem

As a result, FAA began a series of studies about 10 years ago by physiologists and psychologists in the Civil Aeromedical Institute (CAMI) at the Aeronautical Center.

The researchers realized that the best measurements could only be made on controllers actually on the job and that descriptions of their reactions to stress would have to be in Researchers covered volunteers in 16 facilities—towers, TRACONs, ARTCCs and flight service stations from Chicago to Houston and from Miami to San Francisco and representing all types and levels of ATC activities.

comparative terms-that stress

couldn't be measured in absolute

units, as with fever and a thermometer.

They also realized that they shouldn't

apply observations made about stress

The CAMI scientists also judged that

at very busy facilities to controllers

controllers experience stress from a

fatique, labor-management conflicts,

personal problems, etc. Since these

lead to various responses in different

individuals, they can be evaluated only

by a battery of measurements-physi-

ological, biochemical and psycholog-

rates), analyses of urine samples (to determine hormone levels from adrenal and nervous-system activity) and measurements of psychological arousal (or reactions to tension).

These measurements included electrocardiograms (to record heart

variety of sources-workload, physical

everywhere.

What the Data Showed

There was a great deal of data collected in these studies, and much of it very complex. The easiest analysis was with the electrocardiograms. While heart rates simply did not differ much from facility to facility, they did turn out to be a good measure of a tower controller's response to the number of planes handled. The concurrent five-year study being conducted by the Boston University School of Medicine under a \$2.8 million FAA contract (see FAA World, September 1976, p. 15) is nearing comple-

Begun after a thorough reof all studies previously performed on controllers, both within and outside the agency, this study was designed to evaluate the relationship of work situations and personal psychological factors with changes in the health of controllers.

As provided for in the initial contract, the findings of the study will not be available until mid-1978.

The biochemical data were the most interesting. First, an overall biochemical stress index was developed that described in numbers the overall level of the various stress-related hormones in the urine. Second, a way was devised to represent the comparative stress levels graphically for each cility.

The tower at Chicago O'Hare International Airport ranked highest on the biochemical stress measurement. Not only was it (and still is) the busiest aircarrier airport in the world at the time of the study (1968), it was also undergoing other significant problems at the time. A massive national air-traffic slowdown was in effect, and, although O'Hare's controllers did not participate, they felt the consequence of backed-up traffic and departure delays sometimes reaching six hours. In addition, a major runway was closed for rebuilding, and the controllers were working six days a week.

These longer-term problems produced stresses, such as frustration, that extend over long periods of time (as opposed to day-to-day variations in stress) as well as stresses imposed by the high workloads. Thus, the biochemical measures collected were consistent with the impression that much was happening at O'Hare at that time.

At Opa Locka Airport in Miami, on the other hand, we had an extremely busy general-aviation airport (ranked tenth nationally), but without the conditions that caused such disarray in Chicago. This was reflected in the biochemical data that showed high workload and physical activity but relatively low long-term frustration.

A look at Houston Intercontinental Airport further supported this analysis. In many respects, the situation at this tower was similar to the one at O'Hare in terms of disruption. The study was conducted just after the conclusion of a sick-out, and things were still not entirely settled in 1970. But with the air traffic at Houston lighter than at either O'Hare or Opa Locka, the controllers' response to workload was relatively small. In contrast, the frustration level was higher and more like O'Hare than Opa Locka. The match between the data and the working conditions again looked reasonable.

What Price Shifting Shifts?

One question that often comes up in air-traffic circles is the issue of scheduling shift rotations. Two studies were done, both comparing the straight five-day rotation with the 2-2-1 schedule (two evenings, two days and one mid-shift per week).

The first study was done by returning to Houston in 1971 after the controllers had changed from the five-day to the 2-2-1 shift. The results showed that the new shift-rotation pattern had little effect on the total stress level reflected in the physiological measures. However, certain other changes were apparent. The traffic count was higher than the previous year and so was the related hormone measure related to workload. On the other hand, most of the turmoil had been resolved by then, and the long-term stress effects were less.

The second study of shift schedules was done at the Atlanta (fiveday) and Fort Worth (2-2-1) ARTCCs. The results were generally the same as for Houston—the stress levels were lower at the 2-2-1 facility.

Another question that was studied was the effect of the addition of ARTS III to the system. The studies were carried out at the Los Angeles and Oakland TRACONs in 1972 before installation and in 1974 after the system had been on line for five months. The overall stress levels were slightly higher on the return visit at both facilities. The controllers indicated that they felt the new system had increased their workload somewhat. The workload and activity biochemical measures supported their contention. It was recognized, of course, that the equipment was new and the controllers were just getting used to it. That they liked the new facility, even in the face of somewhat higher workloads, is suggested by the lower long-term-stress biochemical reactions obtained on the second visit.

Controllers at small towers were represented by personnel at Fayetteville, Ark., and Roswell, N.M. Specialists in the FSSs at these cities and at Oklahoma City were also studied. The biochemical indicators of stress level at these smaller facilities were found to be lower.

When indicators of biochemical stress in controllers were compared to similar measures in other groups, it appeared that, with the possible exception of some "hot spot" facilities, typical stress levels for controllers were within the limits shown by these groups.

The Psychological Scene

But what happens to the person under stress? When we speak of stress, it's usually in reference to some behavior, such as the expression of emotion, change in habits or change in efficiency at work. However, behavioral scientists distinguish between stressful conditions, like workload, and psychological reactions to those conditions, like tension. Thus, it's quite possible for an individual to respond physically to a work situation and yet have no psychological reaction. The latter depends on whether or not the individual judges the situation to be personally threatening.

The CAMI studies used various measures of psychological reactions, but most often attention was focused on measuring arousal levels.

When a standard questionnaire was used, it became apparent that there was little difference among facilities in the amount of arousal that controllers experienced at work. In fact, the average level for controllers was 26 percent lower than that for college students. It is clear that controllers do not typically find their work to be either highly arousing or anxiety producing.

It's possible to wonder whether or

not these measures of arousal were simply insensitive to differences between facilities. However, we found that the single most consistent finding from study to study was that reported arousal levels rose moderately from before to after work. Also, with controllers at several facilities rating the difficulty of each shift, it was found that arousal levels increased more for shifts judged hard than for those judged easy. In other words, as would be expected, the harder the work, the more the tension reported.

This indication of increased arousal, which was well within normal limits, suggests that the questionnaire was sensitive to psychological differences.

What's the Score?

There is nothing in the physiological and psychological findings to suggest

that controllers generally are reacting to unusual stress. The physiological measures reflect normal responses to varied workloads. The psychological measures suggest that no matter wha the nature of the facility, the reactions of the controllers to their work is quite normal and that the work has no dramatic effect on their psychological well-being.

In other words, the stories we hear about controller stress deal with the exceptional rather than with the typical controller or facility.

As a matter of fact, the CAMI findings show something of the caliber of the people selected to be controllers. FAA's controllers are not only well qualified for their work but also extremely well suited to it.

> By Dr. Carl Melton and Dr. Roger Smith

RADAR WILLIE

continued from page 12

son admits, "Yes, I'm confident. You can be if you know your work and you know you do it well." He admits he doesn't feel like running five miles after a really busy day. "At the end of a shift, I'm tired—mentally beat."

The toughest part of the job, he says, is the night shift—like any night work, it upsets the family. But Johnson's been lucky in that respect. Now that he teaches other controllers full time, he only works days, and when he worked nights, he wasn't married.

"I didn't marry until I was 43...I was having a good time," Johnson explains, "but I realized that one day I would get married, so 10 years ago, I bought a house with a pool. I swim every day the weather permits and work in the yard to relax." Now, he lives there with his wife, Linda, her two daughters, whom he adopted, and their three-year-old daughter.

So, Johnson's key to longevity at the busiest air-carrier airport is knowing how to relax and leaving his job cares behind in the tower.

How does Radar Willie feel about flying in and out of O'Hare himself? "Perfectly safe. I think we've got the best air-traffic control system in the world right here."

Word Search Answer Puzzle on page 9

F N R E T S E W H T U O S O U T H E R N A Y E D E S A N O R T H W E S T E R N S IOGESMSIROUTERUSSERP **R J I TMATAATSLLACOOWEE** TNOSARETRALDEAECLAGC RENOTTRNTRAINSNRCTUI A S S P O C N U S T O L O S T I I C L A F R A N N C C O L S G A L D V R M H A L F E E I A I A M A I R P O R T S A R T I I G S S F C L Y F N E R R A A N C H E S CAAIAAEKSIAATODDATCT T N C D I O R C O M T D N B T N A N E M EAEWOATONDLIODIEMRTI **PMIEXPERTAAOCNMCCEUS** Y T I C A M O H A L K O S R E W O T O S T S E I R A T E R C E S N F I M S S R I ELECTRONICSTAIMEOENO L R S R E E R A C A D N A L G N E W E N EFASTIMODERNIZATIONO T E L E P H O N E S N D E T A C I D E D

E ach year, there's a handoff between the controllers of the Ann 'rbor, Mich., Tower and those of the io State University Tower at Don .ott Field in Columbus, Ohio, but it's not an airplane....It's a BOARUS.

So, what's a BOARUS? It's an anagrammatic name for a football trophy composed of the two towers' identifiers —ARB and OSU. In this region, passions are more often enflamed by the Big Ten competition than by almost anything else, and in this case, it's the clash between the University of Michigan Wolverines and the Buckeyes of Ohio State.

TO THE VICTORS GOES THE BOARUS



They're not scrimmaging for the trophy; it's Michigan's until the fall. Facing off in a post-season wrap-up of the competition are (left to right) Ohio State Tower controller Steve McConaughy, chief George Acres and controller Walter Coster and Ann Arbor rooters controller Sharlene Bagierek, chief Art Nugent and controller Bonita Boyd.



The faces tell the story. Ann Arbor Tower chief Nugent happily accepts the BOARUS trophy from a somber OSU Tower group—controllers Coster and McConaughy flanking chief Acres.

The outcome for the BOARUS trophy this year was also the determinant as to who would play in the Rose Bowl and who would play in the Sugar Bowl. For the past decade, when Ohio State and Michigan squared off on a football field, the conference championship and the right to represent the Big Ten at the Rose Bowl were both at stake. The competitive controllers added the traveling BOARUS trophy.

So partisan are the controllers that when Ann Arbor chief Art Nugent departed from his slot at the OSU Tower

st summer, his coworkers plastered car with stickers that alluded to use vast superiority of OSU and the reverse for Michigan. Smart man that he is, Nugent stopped in Toledo to have his car cleaned before crossing the state line of his new allegiance.

Under their arrangement, controllers from the losing facility are responsible for presenting the BOARUS trophy to the winners on the winners' turf. The winners may then display the trophy for the year. As any football buff knows, this past year the roses and the trophy went to Ann Arbor for the Wolverines 14 to 6 victory, and the OSU will eat humble pie for another year.

The Ann Arbor Chamber of Commerce provided sandwiches for the presentation luncheon in the airport terminal, and local news representatives and Michigan backers appropriately attired welcomed the Ohio State presenters.

Not only did OSU Tower chief George Acres graciously swallow his pride in presenting the BOARUS trophy but also took his lumps—two fivepound sugar lumps for his coffee, a gentle reminder that OSU was heading for the Sugar Bowl for taking second place in the Big Ten.

Ann Arbor Tower chief Nugent, splendidly attired in the blue and maize of Michigan, accepted the trophy to the background accompaniment of the Michigan fight song. Visibility for his trip home, however, was poor as, once again, his car was completely covered with Ohio State bumper stickers—not too great an accomplishment on a Volkswagen.

The good-natured jibes finally ended as Acres told the gathering that he would arrange a similar get-together next year in Columbus when Ann Arbor controllers will crawl to OSU to present the BOARUS trophy to its rightful owners. Few were listening, however, as Pasadena sparkled in their eyes.



The winter that was in Watertown, N.Y. After the late January 1977 snowfall, digging out was a near Herculean job.

Photos by Watertown Daily Times

The Incredible Winter Revisited

t was the worst of times and this was the worst of places. It was just a year ago when one of the severest winters in a century unleashed an extra measure of fury on the northern tier of New York State, burying Buffalo to Watertown in a blizzard.

Perhaps it's becoming a way of life for this part of the country, as records continue to fall in the wake of 1978's raging winter storms.

Snow is no stranger to these parts, but "what happened to us is incredible," remarked Watertown FSS specialist Mike Henry about the five-day ordeal that ended on February 1 last year. During the period, 51 inches of snow fell on Watertown with winds



Light planes parked at the northwest end of Buffalo International Airport in January were snowbound for the duration.

During emergencies like this one, snowmobiles may be the only workable form of transportation. Parked nearly in front of the second story of the terminal building was FAA's new snowmobile.

Photo by Watertown Daily Times



that gusted to 53 miles per hour, piling up drifts that reached 25 feet.

By February 2, Buffalo had endured 45 consecutive days of snow, which had piled up 13½ feet of the white stuff. Winds had gusted to 60 miles per hour, producing wind-chill factors of between minus 30 and minus 70 degrees.

Although emergency equipment was at the ready and put into service immediately, the sheer magnitude of the

htry bounty kept many arterial roads cked with drifts and stalled cars and people stranded in their homes or at their jobs.

In Buffalo, the airport was kept open, but airlines honored the state of emergency, and air traffic was pretty much limited to general-aviation aircraft, military transports and helicopters.

"All our electronic gear functioned very well, said Airway Facilities Sector manager Ernie Fernsten, although the runway visual range (RVR) indicator was clogged with ice and snow and knocked out—the only equipment lost to the storm. One technician stayed on the job there for five days.

Some controllers had to work 24 hours at a stretch, and many at the tower were stranded there, along with hundreds of passengers in the terminal, where the heat had gone off.

Assistant tower chief Robert Dilla related that several controllers remained overnight at a nearby motel when the roads home were blocked by snowdrifts, some of them touching the

ttom of overhead traffic lights. In t, a trip home for many would have seen fruitless, since driving within the



A lot of spadework was needed to uncover an access door to the Watertown VORTAC.

Initially, snowplows cleared a single runway at Buffalo International Airport, primarily for general-aviation and emergency use.

city was forbidden. Although an agreement was worked out later with the police to permit passage via FAA and civil defense ID cards, two Buffalo FSS employees had their cars impounded while driving home and faced \$500 and 30 days-in-jail penalties.

At the FSS, Ray Givens, Ted McCarthy and Vince Medbury were relieved after two days on the job, while Don Ellison was relieved after 60 hours.

At the other end of Lake Ontario, electronics technician Craig Schoff at the Watertown FSS summed up the situation there, saying, "We don't need a glideslope; we need an airport under it!" Watertown's glideslope and TACAN had been knocked out by the blizzard and cold, and the airport was closed. The only aircraft permitted to operate there were helicopters. For five days, Schoff was unable to get around the airport to do any maintenance.

Schoff and specialists Gilbert Clifton and Kevin Larkin, however, were available for the entire five days. The trio was stranded for that time, along with the airport manager and assistant



manager, a pair of airport employees, an A&P mechanic and his wife and the restaurant operator and his daughter. It wouldn't have helped much if they could have left, for it was worth a \$100 fine to be driving on the roads.

The specialists continued to talk to overflights and functioned as a command-post team for medevac helicopters and Marine helicopters. A Marine battalion in training at Fort Drum had suspended training and joined the county's efforts for the emergency. With its communications capability intact, the FSS was the focal point for weather information.

As Gilbert Clifton put it, the local governments "were simply outgunned by old man winter."

The FAA can't stop such disastrous weather, but with its dedicated employees, the agency can still do its job.

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION Washington, D.C. 20591

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Heads Up____

ALASKAN REGION

The new chief of the Kotzebue FSS is **David A**. Brown, who moved up from assistant chief at the Fairbanks FSS.

CENTRAL REGION

Dwight A. Hegge was selected an assistant chief for the Cedar Rapids, Iowa, Tower from the St. Louis Tower . . . A new assistant chief at the Garden City, Kan., FSS is the Aeronautical Center's Larry D. Buss.

EASTERN REGION

Thomas E. Jones moved from the Aeronautical Center to become an assistant chief at the Syracuse, N.Y., Tower . . . Erie, Pa., FSS chief Joseph E. Gagnon was selected chief of the Charleston, W.Va., FSS . . . Aeronautical Center's Robert F. Fry has taken an assistant chief's spot at the Clarksburg, W.Va., Tower . . . Thomas J. Maloney was boosted from assistant chief to deputy chief of the Harrisburg FSS . . . Robert A. Micalizzi has moved from the New York Common IFR Room to an assistant chief's slot at the JFK International Tower . . . Minneapolis FSS deputy chief Paul J. Scott has been chosen chief of the Philadelphia FSS . . . A new assistant chief at the Dulles International Tower is James E. McCafferty . . . Charleston, W.Va., FSS loses Raymond D. Mentzer to the Altoona, Pa., FSS as an assistant chief . . . Thomas V. Hable, EPDO at the Minneapolis ARTCC, is now deputy chief of the Syracuse, N.Y., Tower.

GREAT LAKES REGION

Principal inspector **Robert J. Steinert** has been selected as chief of the Vandalia, Ohio, EMDO . . . **Raymond F. Bean, Jr.,** assistant chief at the Flint, Mich., Tower, has gotten the nod as chief of the Muncie, Ind., Tower . . . **David K. Alred** is now deputy chief at the Detroit FSS . . . EPDS **Gary M. Klingler** of the Detroit-Metropolitan Tower has been chosen an assistant chief at the Pontiac, Mich., Tower . . . A new assistant chief at the Indianapolis ARTCC is **Thomas M. Downey**, who hails from headquarters . . .**Alan I. Haferbecker** has transferred as chief from the Milwaukee FSS to the Minneapolis FSS.

NORTHWEST REGION

Selected an assistant chief at the Spokane, Wash., Tower was **Richard L. Troup** of the Fairchild AFB RAPCON . . . Named chief of the Hoquiam, Wash., FSS was **Richard J. Young.**

PACIFIC-ASIA REGION

Henry T.Y. Hong transferred into the Honolulu Tower from the center as an assistant chief.

ROCKY MOUNTAIN REGION

Grand Junction, Colo., Tower chief **Frank M. Baca** was chosen chief of the Arapahoe County Airport Tower . . . A new assistant chief at the Colorado Springs, Colo., Tower is **Donald C. Metcalf** of the Denver Tower.

SOUTHERN REGION

The new deputy chief at the Huntsville, Ala., Tower is **Avereese Harvey**, former chief of the Greenville, Miss., Tower . . . Sarasota, Fla., Tower's assistant chief **Randall L. Breedlove** now has the same job at the Savannah, Ga., RAPCON . . . Selected an assistant chief for the Greer, S.C., FSS was **Harold D. Abercrombie** of the Gainesville, Fla., FSS . . . Assistant chief Jeffrey L. Griffith of the North Perry Tower in Hollywood, Fla., was selected for the same post at the Brunswick, Ga., Tower . . . George J. Tanner, Jr., is a new assistant chief at the Bowman Field Tower in Louisville, Ky. . . . Originally from the Fort Lauderdale, Fla., Executive Tower, James W. Smith, Jr., is now an assistant chief at the North Perry Tower in Hollywood.

SOUTHWEST REGION

Peter T. Blackburn has moved from the Houston Intercontinental Tower to the Beaumont, Tex., Tower as an assist chief . . . Abilene, Tex., Tower assi. ant chief David P. Gibson has moveo up to chief of the Ardmore, Okla., Tower . . . The new deputy chief of the Lubbock, Tex., Tower is John A. Mydlow of the Beaumont Tower . . . Named an assistant chief of the College Station, Tex., Tower is San Angelo, Tex., Tower's Dale M. Peterson.

WESTERN REGION

The Van Nuys, Calif., Tower has a new assistant chief in George J. Slade, Jr., of the Burbank, Calif., Tower . . . Moving into the Red Bluff, Calif., FSS as an assistant chief is Darrell L. Colwell of the Las Vegas FSS . . . A new assistant chief at the EI Toro MCAS RATCC in Santa Ana, Calif., is Lawrence D. Goff . . . The Santa Barbara, Calif., FSS has a new assistant chief in Jack S. Trott of the Phoenix, Ariz., FSS . . . The Fresno, Calif., FSS now has Dennis R. Nelson as an assistant chief from the San Diego FSS . . . A new assistant chief at the Montgomery Field Tower in San Diego is Larry J. Statham from Las Vegas . . . Thomas T. Watanabe of the Los Angeles FSS now an assistant chief at the Sa. Barbara FSS.