

NOAA WEEK

U.S. DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration

Retiring Newton A. Lieurance Receives FAA Silver Medal

Newton A. Lieurance, Special Assistant to the Administrator for Aviation Affairs, who is retiring today after 30 years of Federal Service, has received a Silver Medal from the Federal Aviation Administration. John H. Shaffer, FAA Administrator, presented the Award last week, with the following citation: Award for Distinguished Service to Newton A. Lieurance, "whose guid-



ance and leadership led to the development and acceptance of the runway visual range (RVR) program and its implementation at airports nationwide. His major contributions to aviation safety through the technology and administration of aviation weather services, including the program of aviation weather briefings, warrant the praise and gratitude of the entire aviation community."

Mr. Lieurance has maintained a second office at the FAA since 1965, when he was appointed Director of Aviation Affairs of the Environmental Science Services Administration and assigned collateral duty as a staff advisor to the FAA Administrator. He also served with the FAA from 1958 to 1959, as Chief of the Weather Division in FAA's Bureau of Research and Development and Meteorological Advisor to the Administrator.

He began his aviation career with Trans-World Airlines in 1936 (serving as meteorologist and flight superintendent until 1947--with a four-year interruption for naval duty during World War II), and his Weather Service career in 1947 as Area Training Officer at Kansas City, Mo. He became project and staff assistant to the Chief of the Weather Bureau for aviation, marine, and communications services, before subsequently being recalled for two years' active duty during the Korean conflict. He returned to the NWS in 1954 as Executive

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Sound Tests May Improve Air Pollution Forecasting

Environmental Research Laboratories' scientists are testing a system designed to modernize the observing and forecasting of air pollution conditions through the use of sound.

With a special instrument called an acoustic echo sounder, they are painting vivid, continuous pictures of the critical lower portions of the atmosphere. The sounder enables them to see with unprecedented accuracy the height and undulations of the atmospheric inversion, a region of cold air topped by a warm layer that traps and concentrates pollutants.

Using this data together with conventional meteorological methods, local authorities may be able to improve their air pollution control warnings and decisions.

The scientists hope that the acoustic sounder can be used to enhance the accuracy of pollution prediction and to help recognize the onset of severe pollution episodes,

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NOAA's First Advanced Deep Sea Buoy To Be Anchored in Gulf

The first of a series of advanced experimental buoys for automatically gathering oceanographic and meteorological data from the marine environment will be stationed in the Gulf of Mexico on June 16.

The 100-ton buoy will be anchored in almost two miles of water about 225 miles from Gulfport, Miss., and is scheduled to remain on site through 1974, transmitting environmental data.

The information from this instrumented platform and others that will follow is designed to fill an environmental data gap in maritime areas of the globe. Eventually, the establishment of a network of automatic buoys throughout the oceans, coastal waters, bays, estuaries, and large lakes will provide data required for predicting weather, sea conditions, fish migration, and other conditions with an impact on man and his endeavors.

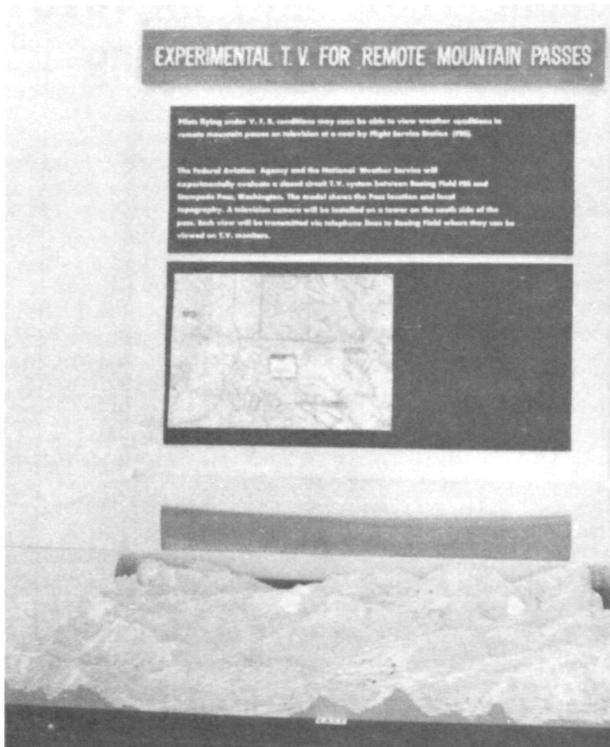
The program to develop a national system

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NWS and FAA to Evaluate Weather Observing by TV

The National Weather Service and the Federal Aviation Administration will experimentally evaluate a closed circuit TV system between Boeing Field Service Station and Stampede Pass, Wash.

The Equipment Development Laboratory has designed and will install the slow-scan TV remoting system under an FAA contract. According to Kenneth Shreeve, EDL project engineer, the system is designed to automatically transmit up to eight selected views of the remote mountain pass via telephone lines for reconstruction at the FSS.



Shown here is the model of Stampede Pass and description of the experiment that was exhibited at Transpo 72.

R.E. Fennell Is New MIC at WSO, HURON

Robert E. Fennell, formerly Meteorologist in Charge at the Weather Service Office in



Rapid City, S. Dak.

Tulsa, Okla., recently entered on duty as MIC at the WSO in Huron, S.Dak. He served earlier as the MIC at the WSO, Peoria, Ill., and has also served on the Kansas City aviation forecast staff; in the Regional Headquarters as quality control assistant; at Sioux Falls, S.Dak.; Juneau and Nome, Alaska; Burbank, Calif.; and at

FERREL Circulatory Survey To Aid Anti-Pollution Program in Mass.

The NOAA Ship FERREL will conduct six months of circulatory surveys off Massachusetts this year, to assist Bay State communities in combating water pollution along the coast.

The surveys will be carried out in the area from Lynn to Newburyport by the 133-foot, 363-ton vessel designed specifically to measure coastal and estuarine currents. A high-speed tender is assigned to the ship to carry out operations in narrow channels and to service the ship's instrument buoys.

The surveys, scheduled to get underway off Lynn in early June and continue until November 1, are a continuation of the work done last October in Boston Harbor.

Like the Boston Harbor survey, this year's program is designed to provide water circulation data to help Federal, state, and local authorities in trying to solve the problem of water pollution in coastal waters.

The FERREL, operated by the National Ocean Survey and commanded by Lieutenant Commander Karl W. Kieninger, carries a normal complement of 16 officers and crew. The ship's home port is Norfolk, Va.

J.R. Burke Named MIC at Louisville WSO

John R. Burke has been selected to be the Meteorologist in Charge of the newly established Weather Service Forecast Office at Louisville, Ky. He has been MIC of the Weather Service Office in Louisville since 1969.

He served as principal assistant at Cincinnati, Ohio, from 1964 to 1969, and before that had forecaster assignments at Washington, D.C., and Cincinnati, Ohio. He has a bachelor's degree from the University of Louisville, completed his academic training in meteorology at the University of Chicago, and also attended the University of Miami and Thomas More College.

R.R. Waldman To Be MIC at Milwaukee WSO

Raymond R. Waldman who has served in forecasting assignments at Cleveland, Ohio,



since 1953, has been named Meteorologist in Charge of the Weather Service Office in Milwaukee, Wisc. His earlier service included assignments in San Juan, Puerto Rico and the Philippine Islands. He served for three years in the U.S. Army Air Force during World War II. He attended Marquette University, University of Santo Tomas, University of Puerto Rico and Baldwin-Wallace College, from which he received his bachelor's degree.

Sixth NWS Central Region City Has Operational VHF Transmitter

Another National Weather Service VHF transmitter became operational in Indianapolis, Ind., on May 2. Other cities in the Central Region with operational NWS VHF radio stations are Chicago, Ill., Kansas City, Mo., St. Louis, Mo., Wichita, Kans., and Minneapolis, Minn. All of these stations transmit on 162.55 MHz. Installations are expected to be completed at Des Moines, Iowa, Detroit, Mich., Denver, Colo., (all 162.55) and Milwaukee, Wisc., (162.4) by June 30.

Commander Freddie L. Jeffries Becomes Executive Officer of the McARTHUR

Commander Freddie L. Jeffries of Gates, Tenn., is the new Executive Officer of the NOAA Ship McARTHUR. The Seattle-based hydrographic survey ship is enroute to Glacier Bay, Alaska, for two months of operations there. Cdr. Jeffries, one of four Black officers in the NOAA commissioned corps, is the first to be named Executive Officer of a NOAA ship. He joined the Coast and Geodetic Survey, predecessor of NOAA's National Ocean Survey, in 1961, serving with the Photogrammetry Division until 1965, when he became a commissioned officer. He has served as chief of a geodetic field party and on the NOAA Ship SURVEYOR. He holds a bachelor's degree in civil engineering from Tennessee State University and a master's degree in geodetic engineering from the University of Michigan.



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Louise S. Welch Receives Bronze Medal



Louise S. Welch, Secretary to the National Weather Service Western Region Director, Hazen H. Bedke, is shown receiving from him a Department of Commerce Bronze Medal. Mrs. Welch was cited for her long record of achievement as a superb secretary to top managers in the Western Region. She began her Department of Commerce career in 1950, soon after the Western Region Headquarters was established in Salt Lake City.

ERL Project May Help Determine Effect of Jet Engines on Climate

Scientists of the Environmental Research Laboratories are engaged in a 16-month research project that should help determine whether water vapor pumped into the stratosphere by the jet engines of supersonic transports and other high-flying aircraft will affect the climate.

Running from this spring until the summer of 1973, the project consists of a series of flights northward to the subpolar regions, southward to the tropics and east-west across the continental United States at altitudes ranging from 40,000 to 68,000 feet.

The purposes of the project are to establish the present season-by-season water vapor balance of the stratosphere and to determine how much water vapor is injected into the stratosphere by natural processes --such as thunderstorms, tropical upwelling, and jet streams--where it goes, and how long it stays there.

Dr. Peter Kuhn of the Atmospheric Physics and Chemistry Laboratory, Boulder, Colo., is responsible for the scientific portion of the project. He has been observing water vapor in the high troposphere and the stratosphere since 1967 in a cooperative program with two National Aeronautics and Space Administration components, the Goddard Space Flight Center, Beltsville, Md., and the Ames Research Center, Moffett Field, Calif.

The Department of Transportation added its support in 1971 to the joint research venture. DOT is contributing roughly \$250,000, NASA \$100,000, and NOAA \$50,000.

This research is part of a larger NOAA program supported by NASA and DOT to investigate the balance of ozone and dust, as well as water vapor, in the stratosphere. The program is under the general direction of Dr. Earl Barrett. The ozone and dust work is the responsibility of Dr. Lothar H. Ruhnke.

Water vapor is considered one of the major potential problems involving supersonic aircraft, which are designed to cruise at about 60,000 to 65,000 feet, well into the stratosphere.

One pressing question is: Could a fleet of several hundred supersonic aircraft significantly raise the concentration of water vapor in the stratosphere? And if so could it result in a shift of the atmosphere's energy balance and consequently, an altered climate?

Four aircraft are participating in the interagency project. The Ames Research Center is providing two of them, one an elaborately instrumented Convair 990 and the other a Lockheed U2. The Los Alamos Scientific Laboratory of the Atomic Energy Commission is managing for DOT the logistics for an RB57F aircraft provided by the Air Force's Air Weather Service and for an NCI35 aircraft provided by LASL.

The CV990 has an operating ceiling of 45,000 feet. During the project, the RB57F will fly at about 60,000 feet and the U2 at 68,000 feet. These heights effectively straddle the SST altitude range.

New Law Broadens Civil Service Role In EEO

A new law gives the U. S. Civil Service Commission a stronger role, including additional enforcement powers, in assuring equal opportunity in all aspects of Federal employment.

Signed by President Nixon on March 24, Public Law 19-261 includes Federal employees and agencies under the equal employment opportunity provisions of the Civil Rights Act of 1964 for the first time, and gives the Civil Service Commission direct authority to see that all personnel actions in Government are free from discrimination.

Key provisions of the act affecting Federal agencies and employees are as follows:

- Federal agencies must submit EEO affirmative action plans to the Commission annually, and the Commission may require modification of a plan before final approval.
- Among other factors, each action plan must provide for programs of training and education which will afford employees an opportunity to acquire skills and abilities needed to compete for advancement to positions of greater responsibility.
- As part of its action plan review, the Commission will review the qualifications of all agency officials engaged in the EEO program, and assess the adequacy of personnel and resources each agency is devoting to its EEO activity.
- Persons who allege discrimination based on race, color, religion, sex, or national origin will have an opportunity to file a civil action in court if they are not satisfied with the final action taken by an agency or by the Commission's Board of Appeals and Review on their complaints. In any event, a complainant may file a civil suit if final action on his complaint is not taken by the agency within 180 days of filing, or by the Commission's Board of Appeals and Review within 180 days of an appeal from an agency decision.
- On a finding of discrimination, the Civil Service Commission may direct whatever remedies it deems appropriate.

Civil Service regulations which will place the Federal provisions of the law into effect are being drafted and are expected to be issued shortly.

Employing the Handicapped



NOAA was represented at the twenty-fifth annual President's Committee on Employing the Handicapped conference by Roy E. Crandall of the Personnel Division. The conference, held in May in Washington, D.C., brings together representatives of the various handicap groups and prospective employers to discuss achievements, problems encountered, finding employment, and on-the-job problems. Several Federal, State and local government officials were present and spoke about the progress being made. The keynote speaker was Senator Jennings Randolph who recounted the legislative achievements of handicapped people over the past twenty-five years.

Your Leave and you

Your request for annual leave should be submitted to your immediate supervisor at least 24 hours in advance and approved before you stay off. In case of emergency when prior approval cannot be obtained, you should request annual leave by telephone or telegram as soon as possible, but not later than 2 hours after your regular shift starts.

If you have an appointment for a medical, dental or optical examination your supervisor must know in advance. However, if you cannot report for work because of an unexpected illness, you must report the facts to your supervisor by telephone or telegram within the first 2 hours after your regular shift starts.

A medical certificate must accompany any application for sick leave if the absence continues for more than 3 days. This certificate should be presented within 2 days after your return to duty. When an employee is thought to be abusing sick leave, the supervisor has the right to request a medical certificate for any amount of sick leave used.

If you are not at work at the beginning of your work shift, and you have not been authorized to be off, you are tardy. If you have no adequate reason for being tardy, or you are guilty of frequent tardiness, your supervisor does not have to excuse you. When this happens, your supervisor may place you on annual leave, leave without pay, or mark you absent without leave until you report for work and treat the infraction as a disciplinary matter.

If you are not complying with the above, you may well be abusing leave!

NOAA EEO Committee Meets with Dr. White



Dr. White was recently given a briefing by members of the Personnel Division NOAA EEO Committee on NOAA-wide minority group statistics covering EEO program activities for the period March 1, 1971 to March 2, 1972. The NOAA EEO counselors also attended the meeting and provided some excellent insight into some of the problems revealed through the complaint processing procedure. Pictured above are: Doris Stewart, EDS; Evelyn Boston, Counselor; Warren Jacobs, NESS; John Eberly, Principal EEO Officer; T. P. Gleiter, Assistant Administrator for Administration; Dr. White; Preston Smith, Chairman, NOAA EEO Committee; Bernard Hull, Personnel; Joe Sylvester, Personnel; Bill George, Personnel; Exum Roberts, AdTech; and Jose Cardona, Counselor. Attendees not shown in the picture are John Stackpole, NWS; Ernest Kyle, NOS; Norman Fitz, NMFS; Saul Hochrieter, Counselor, Irving Dean, Counselor and Al Smith, past Chairman, NOAA EEO Committee.

Federal Job Information At Your Fingertips

The U. S. Civil Service Commission has announced installation of a new toll-free telephone service to provide the public quick, easy, direct access to Federal employment information. From anywhere in any one of 46 States a person can call his Federal Job Information Center without a toll charge--a pay phone even returns your dime.

Trained information specialists can provide job seekers a full range of Federal employment information:

- Federal employment opportunities outlook;
- Job requirements and qualifications;
- Application and examination procedures;
- Hiring programs for special groups such as Vietnam era veterans; the physically handicapped; etc., and, if needed,
- Special employment counseling and guidance.

Information specialists can also mail directly to the caller's home or place of business current printed materials such as:

- Job announcements;
- Application forms; and
- Pamphlets describing special employment and other civil service programs.

To obtain the toll-free number in your State, check the white pages of your telephone directory under U. S. Civil Service Commission or call the information oper-

ator: (800) 555-1212. Toll-free numbers are available at this time in all States except Alaska, Hawaii, California, and Rhode Island.

Fifteen Co-op Students Join NOAA

Recent recruitment for co-op students at several participating universities have resulted in NOAA's hiring fifteen new employees. Under the provisions of the cooperative education program, the students will alternate periods of undergraduate study with periods of Federal employment. The co-op students entered on duty on May 22, bringing with them a wide variety of academic backgrounds encompassing scientific, technical and administrative fields of study.

Training and You

The Personnel Division recently obtained copies of a Civil Service Commission pamphlet entitled, "training and you." It answers some of the more frequently asked questions that NOAA employees have regarding training and it encourages employees to take advantage of the many training opportunities available. This pamphlet is being distributed to all NOAA supervisors. They will circulate it among employees and then retain it for easy reference.

James W. Zoller Is Selected MIC of Omaha, Nebr., WSFO

James W. Zoller, Principal Assistant at the Weather Service Forecast Office in Detroit, Mich., since 1968, has been selected Meteorologist in Charge at the Weather Service Forecast Office in Omaha, Nebr.



He began his professional meteorologist career at Rapid City, S. Dak., in 1950. In 1951 he was recalled to active duty with the USAF, and served as a Captain in the Air Weather Service until 1955. He returned to

duty as forecaster at Denver, Colo., and later served as forecaster at Anchorage, Alaska, and MIC at Grand Rapids, Mich.

Mr. Zoller received a B.A. degree in chemistry from Coe College, Cedar Rapids, Iowa, and completed academic training in meteorology at the California Institute of Technology and the University of Michigan.

Sound Tests May Improve Air Pollution Forecasting

perhaps as far ahead as the previous afternoon.

Directed by Dr. Freeman F. Hall, Jr., of the Wave Propagation Laboratory, Boulder, Colo., the experiment is being carried out in Denver, Colo., at a site provided by the city to the National Weather Service.

Meteorologists of the NWS and local, regional, and state air pollution control offices have displayed considerable interest in the outcome of the project.

The Wave Propagation Laboratory's acoustic sounder is a relatively simple instrument consisting of a horn-shaped loudspeaker/microphone that sends pulses of sound into the atmosphere. These high-pitch "pings" bounce off heated blobs of air, and some of the sound energy returns to the microphone. Recorded on a moving strip chart, the intensity variations of such back-scattered sound continuously show the temperature structure of the lower 1500 feet of the atmosphere as it flows above and past the sounder.

In operation since December 1971, the experimental sounder is being used in conjunction with balloon-borne radiosondes. The NWS launches two slow-ascent radiosondes a day to monitor the inversion height up to 10,000 feet.

NOAA scientists at the Equipment Development Laboratory of the National Weather Service's Systems Development Office, in Silver Spring, Md., are following the Denver experiments carefully. This laboratory, whose mission is to develop observing equipment for routine use by operational meteorologists, has also pursued ground-based remote sensing since the middle sixties, and is operating a very powerful acoustic sounder at Sterling, Va.

Dr. Hall points out that at present acoustic sounding cannot replace the as-

Sanford R. Miller Named To Head Sioux Falls, S. Dak., WSFO

Sanford R. Miller, Supervising Aviation Forecaster at the National Severe Storms Forecast Center in Kansas City Mo., has been named Meteorologist in Charge of the new Weather Service Forecast Office in Sioux Falls, S. Dak.



Since beginning his career in 1942, his assignments have included serving as analyst at New York University; forecaster at Seattle, Wash.; research forecaster at Denver, Colo.; international aviation

forecaster at Shannon Airport, Ireland; MIC at Wake Island, Pacific; Principal Assistant at Des Moines, Iowa; MIC at Bismarck, N. Dak., and staff assistant and guidance forecaster at Kansas City, Mo. Mr. Miller has A.B. and B.S. degrees in math and physics from southwest Missouri State College, and received his academic meteorology training at New York University.

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ending radiosonde because the latter instrument observes temperature, humidity, and wind, all of them critical in air pollution control work. The acoustic device observes the thermal structure of the lower atmosphere, but not temperature itself. What it does, in contrast to the conventional radiosonde, is continuously monitor motions as well as the thermal structure of the inversion. This can help meteorologists to observe the formation of inversions, see the development of instabilities, and forecast inversion breakup.

"Eventually, we hope to use the acoustic sounder for reading the temperature itself, for observing the temperature profile of the inversion, and for mapping the lower atmosphere's humidity structure," says Dr. Hall.

He also plans to start wind velocity observations in Denver by tilting the acoustic sounder down to a 45-degree angle and measuring the frequency shift of the back-scattered sound. An increase in frequency indicates the wind is approaching and a drop indicates the wind is moving away. The amount of the frequency change, or Doppler shift, can be converted into miles per hour. By timing the return of the echo, says Dr. Hall, you can figure out the altitude of the wind you are measuring, from the ground up to 1500 feet.

An array of three acoustic sounders is the next step--two of them angled at 45 degrees and one straight vertical. In effect, this elaborate arrangement will provide fuller and more accurate three-dimensional information in a time frame. That is, the dynamics of the lower atmosphere in a test region will be under continuous surveillance from the ground for the first time.

NOAA Participates in Aerospace, Aeronautical Meteorology Conference

There was unusually wide participation by NOAA personnel during the first International Conference on Aerospace and Aeronautical Meteorology of the American Meteorological Society held recently in Washington, D.C. The conference, co-sponsored by the AMS, the American Institute of Aeronautics and Astronautics, the International Civil Aviation Organization, and the World Meteorological Organization, covered a wide variety of major problems of current interest including environmental requirements for space shuttles, the use of satellite remote sounding data in aerospace applications, the effect of supersonic aircraft on the quality of our air, as well as aviation problems in flight and at ground terminals.

Roderick S. Quiroz, Research Meteorologist of the Upper Air Branch, National Meteorological Center, National Weather Service, was a Co-Chairman for the Conference, and Dr. Sigmund Fritz, Chief Space Scientist of the National Environmental Satellite Service, and Newton A. Lieurance, Special Assistant to the Administrator for Aviation Affairs, were among the session chairmen. Dr. W.L. Smith, Dr. C.M. Hayden (both of NESS) and Dr. A. Kochanski of the Environmental Research Laboratories, in Silver Spring, Md., took part in special panel discussions on remote soundings and on current data gaps.

Twenty-two of the 90 papers presented at the conference were authored or co-authored by the following NOAA personnel: NWS - K.R. Johannessen, Associate Director, Meteorological Operations; Space Operations Support Division - K.M. Nagler, R.A. Brintzenhofe, J.R. Nicholson (Kennedy Space Center, Fla.), and A.N. Sanderson (Manned Spacecraft Center, Houston, Tex.); Weather Analysis and Prediction Division - G.S. Doore; National Meteorological Center - Development Division - M.E. Gelman, A.J. Miller, R.M. McInturff, and Mr. Quiroz; Systems Development Office - M. Lefkowitz, F.C. Hochreiter, and D.H. George (Sterling, Va.), and H. Newhouse; L.W. Chamberlain and R.R. Westfall, Weather Support Facility, Wallops Island, Va.; C.J. Neumann, National Hurricane Center, Miami, Fla.; J. Vederman, WSFO Los Angeles, Calif. NESS - Dr. Fritz, Dr. Smith, H.M. Woolf, and R.E. Nagle; EDS - L.R. Hoxit, National Climatic Center, Asheville, N.C.; ERL - Dr. L. Machta, Director, Air Resources Laboratories, Silver Spring, Md.; T. Carpenter, Center for Experiment Design and Data Analysis, Rockville, Md.; Dr. H.K. Weickmann, Director, Atmospheric Physics and Chemistry Laboratory, Boulder, Colo.; T. Shimazaki, Aeronomy Laboratory, Boulder, Colo.; J.T. Lee, National Severe Storms Laboratory, Norman, Okla.

NMFS Opens Boothbay Harbor Marine Aquarium



Walter R. Welch, (left) Assistant Director of the National Marine Fisheries Service Boothbay Harbor, Maine, Laboratory, and James Rollins are shown preparing for the May 27 opening of the Marine Aquarium at Boothbay Harbor, which is operating this summer under NMFS.

Some 25,000 to 30,000 persons are expected this summer to view the ten tanks of live fish from local waters and fishery related exhibits developed by NMFS installations at Woods Hole, Mass., and Boothbay Harbor. No admission is charged, and the aquarium is open from 8 a.m. to 5 p.m., seven days a week.

Volunteer Award Nominations Due

The Office of Voluntary Action Liaison (ACTION) is seeking nominations for its annual awards program designed to recognize Federal employees who freely and unselfishly contribute their time, talents, and energies off the job, to community voluntary activities. Nominations should be submitted by June 23, 1972 to: NOAA Personnel Division, Personnel Services Section, AD414, Rockville, Md. For more information call Ms. Edna Leimbach on 301-496-8043.

Newton A. Lieurance (Continued from page 1)

Assistant to the Deputy Chief, was appointed Director of Aviation Weather Services in 1962, and Acting Director of the Office of Aviation Weather Affairs in 1964.

Among the many honors he has received during his career are the 1971 Gorrell Award of the Air Transport Association of America; the 1970 Robert M. Losey Award of the American Institute of Aeronautics and Astronautics; a Department of Commerce Gold Medal in 1969; and Aviation Week's Annual Safety Award "for outstanding contribution to aviation safety" in 1962.

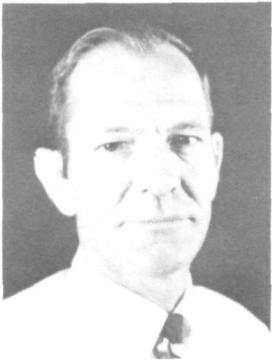
A Captain in the Naval Reserves (Ret.), Mr. Lieurance holds a B.S. degree in civil engineering from Kansas University, and is also a graduate meteorologist, having studied at the U.S. Naval Academy Post-graduate School.

NOTES ABOUT PEOPLE

Dr. Frank Quinn, Chief of the Lake Hydrology Branch of the Lake Survey Center's Limnology Division, attended the International Symposium on Mathematical Modelling Techniques in Water Resources Systems sponsored by the Canadian Department of the Environment and held last month in Ottawa, Canada.

The symposium brought together international experts from all disciplines associated with the development and application of mathematical modelling techniques to the planning, design, operation and management of water resource systems. The participants included economists, engineers, political and social scientists and others associated with this field. Each of the six sessions was opened by a state-of-the-art speaker who paved the way for discussions on Economic, Social and Political Models; Water Quality Models; Ecologic Models; Estuarine and Lake Models; Hydrologic Models; and the Systems Overview.

Orman H. Farley, supervisory fishery reporting specialist with the National Marine Fisheries Service, Galveston, Tex., was awarded a Certificate of Commendation by the Galveston Chamber of Commerce "In sincere appreciation of the meritorious support afforded Galveston Island's Shrimp Festival of April 1972." He was one of three judges in contests for the best decorated, best equipped shrimp boat among some 50 entries. Featured at the event were numerous NMFS displays on the docks and in the downtown area of Galveston.



James M. Klaasse Dies

James M. Klaasse, former Associate Director of the National Ocean Survey's Office of Seismology and Geomagnetism, died on June 7 in Rockville, Md., after a prolonged illness. He retired in May 1971 after 16 years of Federal service. He had been active in geomagnetism, seismology, geophysics, and in the development and manufacturing of a wide variety of advanced laboratory research instrumentation.

He is survived by his wife, Martha Jean, and two children.

Services will be held at noon on Saturday, June 10, at Gawler's, Wisconsin Avenue and Harrison Street, N.W., Washington, D.C.

NOAA Voluntary Action, Inc. Schedules Membership Drive

The annual membership drive for NOAA Voluntary Action, Inc., starts June 14 in the Washington Area, and continues through June 28.

Meredith Beeg, Chairman of the Board of Directors, announced the campaign this week with a plea for assistance from all employees and friends of NOAA. She pointed out that NOVAC aims to help low income workers with their financial problems, whenever public assistance is not available.

NOVAC's almost 50 volunteers, located in every NOAA Building in the Washington Area, will soon distribute information on NOVAC and applications for membership for the coming fiscal year. There is no stated membership fee, but contributions of any amount are welcome. Several hundred NOVAC members contributed approximately \$3,000 for the corporation's charitable activities during its first half year.

A payroll deduction plan is in use by many of the present NOVAC members, spreading the membership pledge over all 26 paydays per year. Those employees with a current NOVAC deduction need take no action to continue their membership unless they wish to increase the amount.

Buoy To Be Anchored (Continued from page 1)

of environmental data reporting buoys is being conducted by the National Data Buoy Center, headed by James W. Winchester. The instrumented platforms are being prepared for testing at the Center's facilities at the National Aeronautics and Space Administration's Mississippi Test Facility, Bay St. Louis, Miss.

Six of the large buoys are scheduled to be stationed in the Gulf during the next three or four months for test and evaluation. They are designed to withstand 150-knot hurricane winds, 60-foot waves, and 10-knot currents. Each platform can carry more than 100 sensors to measure and report oceanic and atmospheric conditions.

The sensors are installed on the buoy's mast, at the hull's water line, and at varying depths on the two-mile mooring line. The devices are powered by batteries and recharged by a diesel engine. They are activated on signal from shore via a small computer aboard the buoy. The computer can instantly retrieve specific information from the sensing devices.

Items to be considered for publication in NOAA WEEK should be submitted to: Office of Public Affairs, NOAA, Room 221, Bldg. 5, Rockville, Md. 20852. Phone (301) 496-8243.

National Oceanic and Atmospheric Administration

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