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

noaa week

Volume 4 Number 22 May 25, 1973

Retirees Before July 1 Will Receive 6.1 Percent Bonus

Because of the April rise in the consumer price index (CPI), employees retiring before July 1, 1973, will receive a 6.1 percent increase in their annuities. Employees who wait beyond that date will not qualify for this bonus.

Employees who plan to retire before July 1, 1973, are urged to make their intentions known promptly. The Civil Service Commission will be swamped with the volume of retirement applications it will receive to process. Therefore, promptness in filing retirement applications will enable personnel offices to plan for early submission of retirement records to the Commission.

The Commission has informed us that whenever workload conditions prevent prompt final adjudication of incoming applications, applicants with clear annuity title will be placed in recurring special payment status until adjudication is completed. Usually, special payment status will be authorized within 10 workdays following receipt of necessary records at the Commission.

In addition to assuring further action on retirement applications, the early submission of retirement forms will, of course, help NOAA to make adequate plans for replacements in an orderly fashion and aid in keeping operations moving.

Transfer of 75 ERL Employees To USGS To Be Effective May 27

In accordance with changes in NOAA programs announced by the Administrator in January 1973, certain Environmental Research Laboratories research and service activities are being terminated on May 27, 1973. At that time about 75 employees will become employees of the U. S. Geological Survey in the Department of the Interior, without break in service. The activities are the Geomagnetic Research Group and the Seismological Research Group in Boulder, Colo.; the Special Projects Party in Las Vegas, Nev.; and the Earthquake Mechanisms Laboratory and the Seismological Field Survey in San Francisco, Calif. In all cases, the personnel will continue to perform the same duties they have been performing, and for at least six months, in their present locations.

Their transfer is the result of an interagency discussion among the Department of the Interior, the National Science Foundation, and the Department of Commerce to shift NOAA's earthquake research and engineering seismology programs to USGS and to the NSF to effect consolidation of Federal earthquake prediction research programs, hazards assessment efforts, and earthquake strong-motion monitoring.

Operational costs for the balance of FY 1973 and all of 1974 and beyond will be borne by NSF and chiefly by USGS, which is expanding its research activities in these same areas and is employing the ERL staff in its expansion.

The NSF has accepted responsibility for the strong-motion program conducted by the Seismological Field Survey. In assuming this responsibility, NSF will provide program policy and management, and funds to finance these activities. NSF, which by statute cannot operate SFS as an inhouse facility, has selected USGS as the operating agent for SFS under a reimbursable agreement.

Discussions on additional transfers of seismological and geomagnetic observatories from NOAA to the Department of the Interior involving 100 employees are now in process.

NOS Mobile Instrument Van Used As Self-Contained Shipboard Unit

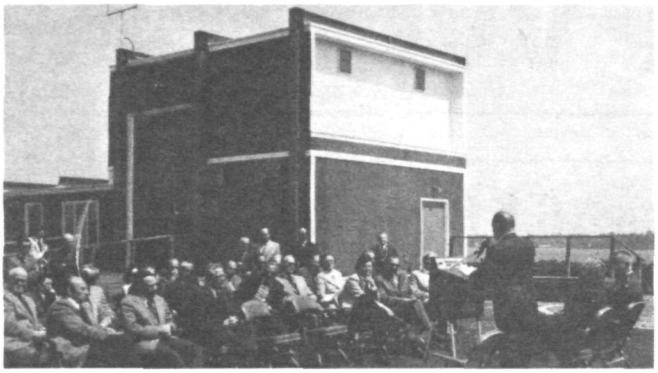
The National Ocean Survey at its Engineering Development Laboratory in Rockville, Md., has developed a mobile electronically-equipped instrument van which can be used aboard a ship as a separate self-contained unit for tide and current surveys.

The 7-foot by 12-foot, 3800-pound containerized van can become fully operational as soon as it is secured to the deck and connected to the ship's electrical power system. The van provides the vessel with the instrumentation and associated instrument support facilities for conducting the surveys. The ship then serves primarily as an ocean platform from which the van can operate.

The van contains an estimated $100,000 in electronic equipment in its 84 square feet of floor space. Since the electronic equipment requires conditions of nearly constant temperature and humidity, the van is equipped with an air conditioner. Further development of the van concept by the NOS will extend its use to a broad

(Continued on page 4)

New WSMO Has Modular Buildings And LO-CATE Windfinding System



Mr. Johannessen speaking at dedication ceremony.

The new National Weather Service Meteorological Observatory at Fort Totten in Bayside, Queens, N.Y., was dedicated May 17. The facility,which houses the newly combined Upper Air Unit from J.F. Kennedy International Airport and the Environmental Meteorological Support Unit from LaGuardia Airport, is under the supervision of Milton N. Werbin, Meteorologist in Charge at JFK.

John A. McAlvin is the Supervisory Meteorological Technician at the WSMO. Other staff members are Upper Air Specialists Robert T. Kurtz,Edward A.McGahern,and Joseph A. Mirisola

Two features were utilized in this weather station for the first time by the NWS: buildings of unique modular construction, which were designed specifically for the purpose and can be easily disassembled and re-erected elsewhere should the need arise; and the new Beukers LO-CATE windfinding system and minicomputer which automatically computes information from the soundings.

Karl R. Johannessen, Associate Director of the NWS for Meteorological Operations,was the principal speaker at the dedication. Silvio G. Simplicio, Director of the NWS Eastern Region,was the master of ceremonies, and the welcoming address was given by Colonel Thomas L. Merrick, Deputy Commander at Fort Hamilton, 1st Army, Brooklyn, N.Y. Other special guests included Carmin Novis, representing New York City Mayor John Lindsay;Robert Farren, Vice President of Grumann Allied Industries; John Beukers, President of Beukers Laboratories,Inc.; and Maurice Friedman,Chief Engineer of VIZ Manufacturing Company,which manufactures radiosondes for NWS.

The LO-CATE system was demonstrated and a radiosonde released at the dedication. LO-CATE (Loran/Course and Tracking Equipment)is a complete all-weather, upper air windfinding and meteorological sounding system which employs the retransmission concept developed by Beukers Laboratories for determining the position and velocity of remote objects. It collects,transmits,processes,displays,and records processed data on paper tape without using radars,stable platforms or dish antennae.

The complex of three modular units was completely fabricated and preassembled at the factory. The balloon inflation area comprises two modules stacked atop each other with the roof of the lower unit and the floor of the upper omitted to provide the necessary high bay area.

Fergus J. Wood Appointed Research Associate in NOS

Fergus J. Wood has been named a Research Associate in the Office of the Director of the National Ocean Survey. Mr. Wood, a physical scientist, will report to Deputy Director Gordon Lill. His principal function will be to find new ways and methods of using environmental data available in the NOS and to assist the Deputy Director in the preparation of environmental papers and reports. During his 11 years with Commerce Department agencies, including NOAA, Mr. Wood helped supervise the four-volume "The Prince William Sound,Alaska, Earthquake of 1964 and Aftershocks," and received a Certificate of Merit from the Board of Directors of the Dictionary of International Biography, London,England, "for distinguished service through his scholarly and scientific writing." His more than 150 articles on the earth and planetary sciences include a paper on "Nautical Chart Revisions" describing coastal changes associated with the 1964 earthquake published in the eight-volume series on the earthquake just issued by the National Academy of Sciences.

Mr. Wood

Task Team Developing Environmental Data Index

The Environmental Data Service recently organized a task team to develop and implement ENDEX (Environmental Data Index). ENDEX,when fully operational, will provide rapid referral to environmental data files and sources, as well as information concerning their quality and character. The immediate responsibility of the team is to acquire and process descriptions of environmental data files, both inhouse and, under contract,outside of NOAA, and to provide ENDEX support to National projects such as GATE,IFYGL,MESA,and coastal zone work whenever possible.

To test the overall ENDEX concept,the team is currently conducting a pilot project utilizing the Environmental Protection Agency's automated information system ENVIRON (Environmental Information Retrieval On-Line). The Pilot project will enable EDS to test and refine approaches to file design and user needs before major ENDEX funding commitments are made.

James D. Noel, Chief of the Systems Design Staff, leads the task team, which includes also Christopher Noe, Darrel Knoll, James L. Berger, James A. Disbrow, Robert R. Walter, Mitchell Hansford, Robert Gelfeld, Ellease Timmons, and Robert Foster.

Lowell D. Fair Heads NGS Field Party G-19

Lowell D. Fair, a veteran geodesist whose service with the Federal government dates back to 1937, is the new chief of the National Geodetic Survey's field party G-19. The 16-man party, headquartered in Rome, Ga., is conducting surveys in the northern part of the state.

Citizens' Return of Radiosondes Contributes to Major NWS Program

This year, alert Americans are expected to return to the National Weather Service's Reconditioning Center in Joliet, Ill., about 20,000 used radiosondes--or 25 percent of the total fleet of small balloon-borne instrument packages to be launched in 1973.

Probably very few of the people who return them realize that each radiosonde may have been one of about 800 launched--by international agreement--at the same time all over the world.

At the Joliet facility, directed by Glenn M. Miller, the radiosondes are reconditioned at the rate of 80 instruments a day by George A. Krueger, Supervisor, and nine other radiosonde repairmen. More than half a million radiosondes have been reconditioned--some as many as seven times--since the center opened in 1945, saving over $4.6 million. Because of its stock pile of usable radiosondes, the center also serves as an emergency source of radiosondes.

Since radiosondes are the first link in gathering the data used in developing the weather forecasts, coordinated efforts of many NWS personnel are combined in the radiosonde program, in addition to those who launch and repair the instruments.

The Data Acquisition Division's Rawinsonde Section, under Burton Goldenberg, Chief, sets the standards for the observations, determining such things as exactly what data will be utilized from that gathered throughout the entire radiosonde sounding. It also controls the daily schedule of soundings and the reporting procedures to the National Meteorological Center.

The Engineering Division's Instrument Engineering Branch, under Chief J. Michael St. Clair, is responsible for the operational end of the program. The Upper Air Team, comprising Louis J. Boezi, Upper Air Program Engineer, and six other team members, is concerned with the day-to-day operation, logistics and maintenance of the overall flight system of the radiosondes (the instruments, batteries, and balloons) and the ground tracking network (basically radio direction finding equipment used to track the radiosondes and also receive telemetered information from them).

Requirements for future radiosonde applications are developed within the Office of Meteorological Operations and are transferred to the Systems Development Office for research and development. Richard H. Waters, Chief of the Equipment Design and Development Branch of SDO's Equipment Development Laboratory, leads these efforts. According to Mr. Waters, his shop is presently developing equipment for implementation of the NEXAIR (Next Generation Upper Air System) program.

Airport Survey Party Working in East St. Louis

An airport survey party, headed by Darrell L. Wright, has begun a field survey of Bi-State Parks Airport, East St. Louis, Ill., as part of a joint program with the Federal Aviation Administration (FAA) to advance air safety.

Shrimp Aquaculture To Employ Greenhouse Environments

In experiments at the National Marine Fisheries Service Gulf Coastal Fisheries Center in Galveston, Tex., a revolutionary new approach to shrimp aquaculture is being tried by a team of engineers, horticulturists, and fisheries biologists who specialize in aquaculture. The fisheries scientists are working on an informal basis with researchers from the University of Arizona's Environmental Research Laboratory.

For some time the fisheries biologists have been experimenting with shrimp culture under controlled conditions since most efforts to rear shrimp commercially in the United States under semi-natural conditions have been only moderately successful. With the assistance of the Environmental Research Laboratory staff who specialize in greenhouse environments for desert areas, they hope to develop controlled environments for shrimp aquaculture. The Galveston scientists have devised a closed raceway system for intensive culture requiring extensive sunlight to encourage the growth of algae and feel that perhaps this could be adapted to provide a controlled environment for shrimp aquaculture.

Robert F. Temple, Acting Director of the Galveston facility, said the new approach offers many possible advantages: mortality can be reduced by eliminating predators and competitors and reducing pollution; adverse weather conditions, always a threat to outdoor shrimp culture, will have little effect in a controlled environment; temperature control will permit year-round production, and disease control is practical in a controlled system; and the number of shrimp reared in a given area could be much larger in such a system.

Lester P. Mallory Awarded "Smokey Bear Plaque"

Lester P. Mallory, Fire Weather Meteorologist at the Salt Lake City, Utah, Weather Service Forecast Office, has been awarded the "Smokey Bear Plaque" for outstanding public service in forest-fire prevention. This award--the highest recognition given individually in the field of fire-prevention--is awarded annually to not more than ten persons in the United States by the National Association of State Foresters, U. S. Forest Service, and the National Advertising Council, jointly.

H.H. Bedke, Director, NWS Western Region, (left) and Mr. Mallory.

Wind Shear Acoustic Detector Developed by ERL Scientists

Under an agreement with the Federal Aviation Administration, Environmental Research Laboratory scientists have developed an inexpensive "acoustic radar" system to inform aircraft pilots of wind shear close to the ground over and near airport runways. A test model of this Acoustic Doppler Wind Measuring System will be installed at Denver's Stapleton Airport this summer. If it is successful, additional testing will be carried out.

Wind shear,a sharp change in horizontal wind speed or direction with height, can throw aircraft off course or interfere with the rate of descent or ascent. Near the ground,it may be accompanied by general turbulence--adding to the pilot's problems. The National Transportation Safety Board recognizes wind shear as a contributing factor, and sometimes the direct cause of many landing accidents and less serious incidents.

Dr. Donald W. Beran, who heads the project, says "if all goes well, the device may be used to provide wind and wind shear data not now available to pilots." He and the other NOAA scientists involved--Ben C. Willmarth and Dr. Frank D. Carsey--are with the acoustic group headed by Dr. Freeman Hall of the Wave Propagation Laboratory.

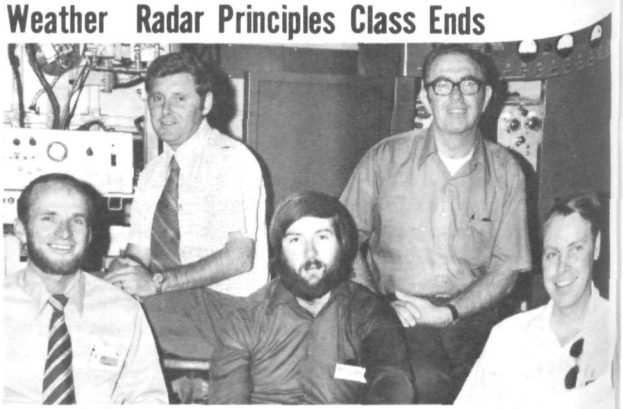
The Stapleton Airport system will consist of a loudspeaker which will broadcast "beeps" of audible sound straight up into the atmosphere. On two sides of this "active" antenna will be "passive" antennae,or receivers, spaced at different distances from the main antenna. The system will be located near the end of one major Stapleton runway.

When the high intensity sound waves propagate into the atmosphere,they are scattered back by turbulence or winds, and the passive receivers "listen" for these returning echoes--the frequency of which has been altered by the atmospheric motions.

Admiral Nygren Announces FY 74 Strength, Distribution of Corps

Rear Admiral Harley D. Nygren, NOAA Corps Director, estimates that the average strength of the NOAA commissioned corps during the 1974 fiscal year beginning July 1 will remain at 345, the same as that for the current fiscal year. On July 1, the Corps will be distributed as follows: 72 percent with the National Ocean Survey, 11 percent at NOAA Headquarters, 10 percent with the Environmental Research Laboratories, 3 percent with the National Marine Fisheries Service, 2 percent with the National Weather Service; and a scattering with Environmental Data Service and the National Environmental Satellite Service.

Weather Radar Principles Class Ends



Participants in the WSR-57 Radar Principles Class held at the National Weather Service Technical Training Center in Kansas City, Mo., from April 9-May 25 were: (front row, from left) Gene Haston, Instructor; Edward F. Roberts, WSMO, Ft. Worth, Tex.; Joe A. McHam, WSFO, Jackson, Miss.; and (back row, from left) Leslie L. Tyree , NHC, Miami, Fla.; Gaylord A. Rainsbarger, WSMO, Millington, Tenn.

NOS Mobile Instrument Van Used As Self-Contained Shipboard Uuit (Continued from page1)

range of oceanographic and hydrographic surveys and investigations aboard ships of the NOAA Fleet.

Standing in front of the new mobile instrument van are (from left) Robert A. Alsop; Rear Admiral Allen L. Powell, Director of the NOS; James A. Murphy; Clyde E. Duncan; Thomas F. Hammett; Ted G. Hetu; and William M. Nicholson, NOS Associate Director for Marine Technology.

M.E. Ringenbach, laboratory director, said the containerized mobile equipment vans could provide higher-quality, lower-cost environmental data. "With a mobile instrument van such as this," he explained, "a ship may be equipped for a new mission without the expensive delays, confusion and possibility of forgotton equipment that usually accompanies rapid changes in missions." He predicted that the containerized concept will eventually set the stage for future operations since ships will not have to be built to carry out a particular program. Instead, a mobile van, or more than one van, could carry out a number of operations simultaneously from aboard almost any general purpose vessel.

The van will be used initially aboard the NOAA Ship McARTHUR when it commences a five-year survey of the tides and currents in Cook Inlet, Alaska. The ship is commanded by Commander George M. Poor.

SDO Lecture Series Aims To Stimulate Interest in Science Careers

During the 1972-1973 school year, the Systems Development Office of the National Weather Service continued its Lecture Series dedicated to the aim of stimulating more interest in the sciences and to encouraging a greater number of students from minority races to consider careers in the sciences. It also provided several visiting lecturers for the D.C. Public School System and Federal City College.

About 125 junior and senior high school pupils toured the Equipment Development Laboratory of the Systems Development Office and laboratories in the Aeronautical Chart Division of National Ocean Survey.

Participating in the tours were: SDO employees: John Lovkay, Jr., Director of EDL; Richard Waters, Chief, Equipment Design and Development Branch; Wayne Staats, Chief, Equipment Systems Branch; Dr. Joseph Czika, Physicist; Walter Rolling, Computer Specialist; Thomas Cavanagh, Electronic Technician; Wayne Huffman, Electronic Engineer; Peter Pickard, Physicist and Robert Knibb, Electronic Engineer. Aeronautical Chart Division employees: Friason G. Travis, Chief, of the Visual Chart Branch; Fred Hodo, Jr., Chief, Base Compilation Section; Charles Brown, Morris Jones, Meda Moore, Horace W. Broadus, John R. Almquist, Carol P. Ferebee and Barbara A. Wise.

Between 700 and 1,000 students were guided on a tour of the Test and Evaluation Laboratory of the Systems Development Office at Sterling, Va., by Matthew Lefkowitz, Chief, Observation Techniques Development and Test Branch; Roger Tucker, Paul Chin and William Tincher.

Visiting lecturers to D.C. Schools were: Roy Wyett, Observations Systems Analyst, Systems Plans and Design Division; Dr. Celso S. Barrientos and Robert Elvander, Research Meteorologists, Techniques Development Laboratory; and Augustus A. Hill, Physicist, Test and Evaluation Laboratory. Gerald A. Petersen, who is now Chief, Public Weather Branch of the Weather Analysis and Prediction Division, gave lectures to science groups at Federal City College in Washington, D.C.

The SDO EEO Committee endorses the project as a regular part of SDO's long-range participation in the Equal Opportunity Program initiated in April 1971. Richard Przywarty, Meteorologist, Systems Plans and Design Division is Chairman, and Daisy L. McKelly, Operations Research Analyst, Systems Plans and Design Division, is Project Coordinator for "Lecture to Schools" series.

Sea Grant Funds Recreational Water Use Study

Water judged technically "safe" by public health officials, water chemists and sanitation engineers isn't always a favorite swimming hole for the local citizenry.

Robert B. Ditton of the University of Wisconsin-Green Bay, and Thomas L. Goodale of the University of Ottawa, Ontario, have found instead that people in one geographic area responded in terms of esthetic qualities or on the basis of beliefs in selecting and using water as a recreation site.

Ditton and Goodale, working with the aid of a NOAA Sea Grant, noted that available monitored data and technical reports on water resources are generally unrelated to the way people respond to water resources as a source of recreation.

Their study aimed at identifying how the users of one body of water--Green Bay--perceive the bay waters as a recreation site, how perceptions differed between such groups as swimmers, boaters and fishermen, and how perceptions interact with the type of recreation and the location chosen by the individual.

"For all sub-groups of the population," the scientists reported, "the general description of the bay was predominately 'dirty' (49.3 per cent) or 'somewhat dirty' (21.4 per cent). Less than 10 per cent replied that the appropriate description would depend upon the specific location on the bay, yet all available data clearly points out enormous differences in water quality" from one end of the bay to the other.

NMFS Scientists Seek To Increase Hawaii Landings

Helping to increase Hawaii's commercial fisheries landings is a goal of research being conducted by National Marine Fisheries Service scientists. They feel that additional knowledge of tuna species found in the area could help boost landings which were valued at only a little over five million dollars at dock in 1972--20th among the states. New York, for example, not widely known as a fishing state, landed more than twice as much as Hawaii in recent years.

Basic information gathered on a recent six-week survey by the NOAA Ship TOWNSEND CROMWELL in waters near Christmas Island will be applied to the much more complicated situation around Hawaii. Biologist Everet C. Jones was the field party chief on the survey, made to determine patterns of surface current flow and distribution of tuna larvae within and without the island wake system.

NGS Field Party To Survey in Saratoga County, N.Y.

An 18-man National Geodetic Survey field party headed by Ivan L. Crabbe is scheduled to begin soon a five-month geodetic survey in Saratoga County, N.Y., estimated to cost $200,000. The survey will be made in cooperation with the county to establish numerous geographic positions (latitude and longitude) for use in mapping land and natural resources, developing the land, and planning alignment of highways and public utilities. The work will be conducted throughout the county, including the communities of Ballston Spa, Glens Falls, Mechanicville, Saratoga Springs, Stillwater, and Waterford.

notes about people

Dr. Wilmot N. Hess, Director of the Environmental Research Laboratories, spoke on "Changing the Weather: Realities and Projections," at Denver University Annual Engineering Alumni Awards Banquet recently.

Mr. Diercks

Captain Baker

Three NOAA officials were among those representing the United States at the quadrennial meeting of the Pan-American Institute of Geography and History in Panama City, Panama, from April 22 - May 9. They were: Frederick O. Diercks, Associate Director of the National Ocean Survey's Office of Aeronautical Charting and Cartography, who is the alternate U.S. member of the PAIGH Directing Council; Granville K. Emminizer, Jr., Chief of the NOS Aeronautical Chart Division, who is the alternate U.S. member for aeronautical charts and vice-chairman of the PAIGH Aeronautical Charts Committee; and Captain Leonard S. Baker, Director of the National Geodetic Survey, who is the U.S. member for geodesy.

American exhibits at PAIGH's 10th General Assembly portrayed recent developments by NOAA in geodesy, orthophotomapping and aeronautical charting.

Wendell V. Mickey, a geophysicist with the Environmental Research Laboratories' Earth Sciences Laboratories, was one of 48 invited from more than 20 countries to attend an international colloquium on the seismic effects of reservoir impounding at the Royal Society in London, England.

He presented a paper on the seismic effects of reservoir impounding in the United States as part of a discussion on the problems of seismic phenomena associated with crustal loading of large reservoirs, such as Nevada's Lake Mead. He has done extensive research on the apparent link between the filling of large reservoirs and the onset of earthquakes in these immediate areas.

The seismic effect of reservoir impoundment is now called "the Carder effect"--after the late Dr. Dean S. Carder, a NOAA scientist who first studied the phenomenon. The meeting was a working session for the planning of a full-scale symposium on the subject to be arranged by the United Nations Educational, Scientific and Cultural Organization in late 1974.

Cedric B. Samuel, a cartographer in the National Ocean Survey's Marine Chart Division, was reelected to a fourth two-year term as Councilman and a third consecutive term as President of the Council in the Mount Rainier, Md., municipal election held May 7th. He is also the Budget and Fiscal Officer for the city, and edits "The Message," the official newsletter for the city. Mount Rainier has a population of 10,000 and abuts the Fort Lincoln area.

Dr. John R. Apel, research physicist at the Environmental Research Laboratories' Atlantic Oceanographic and Meteorological Laboratories in Miami, Fla., has been appointed an International Association of Physical Sciences of the Ocean's representation to the International Association of Geodesy's International Symposium on Marine Geodesy. The ERL scientist is one of two United States representatives, appointed by Dr. Eugene C. LaFond, secretary of the international organization, to attend the symposium to be held in Columbus, Ohio, in June, 1974.

Since joining NOAA in 1970, Dr. Apel's role in AOML's Office of the Director has been to advise, plan and direct a broad research program in satellite and remote sensing oceanography. His research interests are in nonlinear waves and instabilities in the ocean and atmosphere, some of which may be observed from satellites.

John C. Straiton, Chief of the National Weather Service Communications Division, and Chairman of the Working Group on Telecommunications of Regional Association IV of the WMO (North America and the Caribbean), represented RA IV at the third session of the Working Group on Meteorological Telecommunications of Regional Association III (South America) in Buenos Aires, Argentina, from May 2-10.

Dr. Thomas S. Austin, Director of the Environmental Data Service, and Robert C. Junghans, of the Office of Environmental Monitoring and Prediction-Oceanographic Services, have returned from meetings of the Intergovernmental Oceanographic Commission held at UNESCO Headquarters in Paris, France. The Joint IOC/WMO Group of Experts on IGOSS Technical Systems Design and Development, working on specifications for oceanic data acquisition and data processing for IGOSS and on a marine pollution monitoring pilot project of IGOSS, met May 2-11, and the Executive Council of the IOC met May 7-12. Dr. Austin attended both meetings as Chairman of the IOC Working Group on International Oceanographic Data Exchange. Mr. Junghans was appointed by the President of the WMO Commission on Marine Meteorology to assist the Technical Systems Group in the design of the marine pollution monitoring pilot project. Both were members of the U.S. Delegation to the IOC Executive Council.

Forecaster's Training Course Held at NWS Headquarters

Participants in the Forecasters Training Course, held May 1-17, 1973, at National Weather Service Headquarters were: (seated, from left) Clyde O'Dell, Boise, Idaho; Warren Wisner, Juneau, Alaska; Marvin Magnuson, WRH Salt Lake City, Utah; Joseph Prelec, Kansas City, Mo.; Morris Webb, Cheyenne, Wyo.; Paul Waite, Des Moines, Iowa; Alexander Sadowski, Instructor, NWSH. (standing, from left) Dr. John Stackpole, Instructor, NMC; Dr. James Bradley, Phoenix, Ariz.; Dennis Walts, Cheyenne, Wyo.; Robert Case, Juneau, Alaska; Charles Ruscha, Seattle, Wash.; Wilbur Moyer, Dulles International Airport, Va.; Morton Bailey, Boise, Idaho; Earl Kuehnast, Minneapolis, Minn.; John Stilz, San Francisco, Calif.; August Korte, Detroit, Mich.; Merle Brown, Denver, Colo.; Roy Matsuda, Honolulu, Hawaii; John Alyea, Cheyenne, Wyo.; Hans Rosendal, Milwaukee, Wis.; John Fassler, Helena, Mont.; Robert Derouin, Instructor, NWSH; Stan Doore, Instructor, NWSH; and Maury Pautz, Course Supervisor, NWSH. Attending, but not shown in the photo were Holbrook Landers, National Meteorological Center; Dr. Wayne McGovern, NOAA Headquarters; Dr. Terrell Noffsinger, NWSH; and Roger Weldon, Instructor, NWSH.

Scientists Testing Shorter Salmon Migrations

In a National Marine Fisheries Service effort to learn if shortening fish migration to the sea will increase their survival rate, 100,000 marked coho salmon fingerlings (fish at least one year old) were trucked from the Willard National Fish Hatchery (about 60 miles east of Vancouver, Wash.) and released near the mouth of the Columbia about 150 miles away. On the same day, NMFS scientists released at the hatchery three other groups of 100,000 young coho salmon.

One was a comparison group which was first driven about in a truck to subject them to about the same amount of handling and stress as the fish trucked to the mouth of the river.

Each of the four groups of fish was marked differently, so that when they return as adults the scientists will learn if the fish released away from the hatchery will return to the station of origin, and if they have better survival rates.

The fish released at the mouth of the river were spared the long journey down the Columbia, which may take five or six days and which exposes them to dangers of predation, pollution, and obstacles such as dams.

NMFS scientists expect that the marked salmon will return from the ocean as adults in the fall of 1974.

NMFS, in its Columbia River Fisheries Development Program, funds 21 salmon and steelhead trout hatcheries, operated by the States of Washington and Oregon, and by the Department of the Interior's Bureau of Sport Fisheries and Wildlife.

ERL Scientist Makes Mantle Structure Discovery

Small differences in the travel times of earthquake waves radiating from Nevada underground nuclear explosions to European seismographs have given an Environmental Research Laboratories scientist a unique view of the deep geologic structure underlying one of the nuclear test sites.

William J. Spence, an Earth Sciences Laboratories geophysicist, reports that a huge zone of dense materials apparently exists in the earth's upper mantle beneath the Silent Canyon volcanic center in southern Nevada where the underground nuclear test called "Greeley" was conducted in May 1966. He bases his conclusion on his analysis of data from the Greeley and other nuclear tests.

His work may be the first of its kind in that it identifies a highly specific mantle structure which is associated with volcanic activity. Although scientists have identified some of the more generalized interactions of the mantle with the earth's crust, their studies have not yet focused on specific, local features of the mantle.

His analysis was possible only because the nuclear bombs, detonated at precisely known times and locations, allowed precise timing between test sites and seismograph stations.

Mr. Spence continues to work with later nuclear test data, which have supported his calculations, he says. He is now mapping the primary seismic wave travel-time discrepancies for several additional large explosions in the Silent Canyon vicinity. He will report on his findings at the general meeting of the International Association of Seismology and Physics of the Earth Interior in Lima, Peru, this summer.

recipe of the week

FILLETS BAVARIAN

2 pounds fish fillets, fresh or frozen
1/4 cup chopped chives
3 cups hot cooked rice
1 tablespoon salt
3/4 teaspoon each of pepper and dill weed
1 tablespoon butter or margarine, melted
1/2 teaspoon paprika
1 tablespoon lemon juice
1 cup sour cream
2 large tomatoes, sliced and halved

Thaw fillets, if frozen. Combine chives, rice, 1 teaspoon salt, 1/4 teaspoon pepper, and 1/2 teaspoon dill weed. Spoon into a buttered, shallow 2-quart casserole. Blend butter, 1 teaspoon salt, paprika, and lemon juice; brush over fillets. Arrange fillets over rice. Bake at 350° F., for 20 minutes. Stir remaining salt and dill weed into sour cream. Spoon over the fish fillets. Arrange tomato half slices around edge of casserole. Bake 5 to 10 minutes longer. Makes 6 servings.

First NOAA Corps Officer Assigned to LSC Ship

Lieutenant (junior grade) Frank B. Arbusto has been assigned to the NOAA Ship SHENEHON as Field Projects Officer. He will thus become the first NOAA commissioned officer to serve aboard a Lake Survey vessel. Captain Kenneth A. MacDonald, Director of the Lake Survey Center in Detroit, Mich., said Arbusto will assume his new post in late June. The 65-foot SHENEHON is a research vessel, one of three vessels at the Lake Survey Center which conduct research and hydrographic surveys on the Great Lakes. They are operated by civil service personnel.

Lt.(j.g.) Arbusto

Captain Gerald L. Short Receives Commerce Bronze Medal

Captain Gerald L. Short has received a Commerce Bronze Medal for "extremely competent performance of duties over a long period of time, and outstanding leadership as Director of the National Geodetic Survey Operations Center." He is now serving as Deputy Director of the Pacific Marine Center in Seattle, Wash.

Captain Short (right) received his medal from Rear Admiral Norman E. Taylor, Director of the Pacific Marine Center.

CEDDA Installs PDP-11 Minicomputer To Support GATE Data Management Program

The Environmental Data Service Center for Experiment Design and Data Analysis (CEDDA) recently installed a model PDP-11 minicomputer to support the GARP Atlantic Tropical Experiment (GATE) data management program. As the U.S. National Processing Center for GATE, CEDDA will oversee the collection and processing of data from the many platforms committed to the program. Data collected from ships, aircraft, satellites, buoys, and balloons during the three-month observation phase of the experiment will be processed and integrated into a unique data set. The PDP-11 will permit CEDDA to complete this task more quickly and at a lower cost than would otherwise be possible because, while it does not have the data-handling capability of larger units, it is ideally suited to many of the preprocessing, data acquisition applications of field experiments such as GATE. The minicomputer is now being used for system checkout and also to develop software for use on shipboard when the experiment gets underway in the summer of 1974. Later this year, CEDDA's computer will be installed onboard one of the three U.S. ships committed to GATE, and a somewhat larger version of it set up at CEDDA.

The PDP-11 system is maintained and operated by the Automatic Data Processing Support Group of CEDDA, under the leadership of James A. Disbrow and John McHugh, Senior Analyst for the GATE ship system.

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.

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July 23, 2010