



# noaa week

National Climatic Center

January 23, 1976

Volume 7

Number 4

LIBRARY

## ERL Scientists Record Storm Electrification

Environmental Research Laboratories scientists have recorded the electrical life histories of thunderstorms, and taken a giant step toward resolving the question of how thunderstorms generate their powerful, lightning-producing electrical charges.

Flying through Florida thunderstorms in instrumented aircraft last summer, they found the electrification begins when the top of a cloud reaches a certain height, and increases almost explosively after that. They made their discovery while mapping electrical fields around Kennedy Space Center for the National Aeronautics and Space Administration.

William E. Cobb presented the results of the study, headed by Dr. Heinz Kasemir of the Atmospheric Physics and Chemistry Laboratory, at the recent meeting of the American Geophysical Union in San Francisco.

The researchers learned that the "first significant electrification" began as the top of the growing cloud reached an altitude of about 16,400 feet (5,000 meters), corresponding to a temperature of 28 degrees Fahrenheit (minus two degrees Celsius). They defined the beginning of electrification as one thousand volts per meter (a measure of electrical potential; the "normal" fair-weather field is 100 volts per meter).

After reaching this point, the

*(Continued on page 8)*

## Connecticut Receives CZM Grant

The Office of Coastal Zone Management has awarded the State of Connecticut a \$102,000 supplementary grant to prepare for and manage onshore effects of oil and gas production from the Outer Continental Shelf as part of the development of the State's coastal zone management program.

### NOAA Budget

FY 1977 Budget information may be found on pages 3 - 6.

## AMS Honors White, Other NOAAites \$1 Million Sea Grant Awarded To State University of N.Y.

The State University of New York has been awarded a Sea Grant of \$1,050,000 to continue a wide variety of marine-related activities ranging from market testing of new products from underutilized species of Great Lakes fish to examining the effects of dredge spoil disposal in Long Island Sound.

The grant will be augmented by more than \$677,000 from State and private industrial sources.

Included in the grant is SUNY's sister institution, Cornell University, whose Sea Grant-supported food science program has been responsible for the development of convenience foods from previously discarded fish flesh, industrial applications for several waste products from seafood processing plants, and the reclamation of an important enzyme from clam bellies. The enzyme, now being marketed by a California firm, holds promise for dissolving dental plaque, clearing clogged filters in breweries, and breaking up mold in the blood vessels of burn victims.

Under the new grant, the Cornell group will determine consumer responses to new seafoods manufactured from low-value fishes. Using a special mechanical fish deboner, scientists will remove filleting wastes from flounder skeletons, or "racks", that normally would be thrown away, and the resulting minced fish flesh will be tested in a variety of products ranging

from appetizers and soups to main dishes. The goal is to find new and economical uses for fish presently of low commercial value or whose by-products are considered waste by seafood processing firms.

At SUNY a series of coastal and resource management policy studies is underway. Extensive parts of New York City waterfront which were once active and productive are now in a state of decline. Sea Grant-supported investigators are identifying sites with a potential for redevelopment and analyzing institutional arrangements necessary to carry it out. Resource managers will develop a plan for disposal of dredge spoil in central Long Island Sound in cooperation with New York's Department of Environmental Conservation.

Several studies of the living and non-living resources of the Great Lakes will be carried out during the year. An environmental atlas of Lake Ontario summarizing a considerable body of research and sampling conducted during the International Field Year for the Great Lakes will be completed, and is expected to be particularly useful to coastal zone planners in siting power plants and other industries on the lake.

## Hearing on Turtles Is Scheduled

An informal public hearing will be held in Washington, D.C., on February 25 to receive comments on a proposal to list three species of sea turtles as "threatened".

The National Marine Fisheries Service and the Interior Department's Fish and Wildlife Service have proposed that the green sea turtle, the loggerhead sea turtle, and the Pacific ridley sea turtle be listed as "threatened" under the Endangered Species Act of 1973.

NMFS also will solicit comments on the proposed protective regulations for the turtles and the draft environmental impact statement on the proposed action.

Scientific and commercial information available indicates that



Dr. Phillips

Dr. White

Several NOAA personnel and former NOAA personnel were honored by the American Meteorological Society at its 56th Annual Meeting in Philadelphia, Pa., this week.

-Dr. Robert M. White, NOAA Administrator, and Dr. Norman A. Phillips, Principal Scientist at the National Weather Service National Meteorological Center in Suitland, Md., were among the four persons elected by the Society's members to serve three-year terms as Councilors. (A fifth Councilor is elected by the Council.) The councilors, who must be accepted as distinguished Meteorologists and be either Fellows or Members of the AMS, and the Society's elected officers serve as its governing body.

A Fellow of the AMS and a Certified Consulting Meteorologist, Dr. White has served the

*(Continued on page 7)*

these three species of turtles have suffered serious declines in their numbers and are likely to become endangered within the foreseeable future throughout the significant parts of their ranges.

An "endangered" species is one in danger of becoming extinct throughout all or a significant part of its range. A "threatened" species is one likely to become endangered in the foreseeable future.

The hearing is scheduled to be held at the Page 1 Building, 2001 Wisconsin Ave., N.W. at 10:00 a.m.

The public hearing record will remain open until March 8 so that written comments may be sent to the Director, NMFS, NOAA, Washington, D.C. 20235.

## Current Vacancies in NOAA

To insure that NOAA employees are aware of job possibilities throughout the agency, a list of current NOAA-wide vacancies is published below. Employees interested in any of the listed vacancies

should contact their servicing personnel office for information on where to apply.

Announcement Number	Position Title	Grade	MLC	Location	Issue Date	Closing Date
347-76	Hydrologist	11	NWS	Indianapolis, Ind.	1-12-76	1-26-76
348-76	Hydrologist	11	NWS	Des Moines, Iowa	1-12-76	1-26-76
349-76	Meteorological Technician	10	NWS	Rochester, Minn.	1-12-76	1-26-76
350-76	Meteorological Technician	10	NWS	Omaha, Neb.	1-12-76	1-26-76
351-76	Community Planner	13	HDQS	Washington, D.C.	1-12-76	1-26-76
352-76	Supervisory Librarian	12	EDS	Miami, Fla.	1-12-76	1-26-76
353-76	Supervisory Industry Economist	14	NMFS	Washington, D.C.	1-12-76	1-26-76
354-76	Electronics Technician	11	NESS	Wallops Island, Va.	1-12-76	1-26-76
356-76	Physical Scientist	13	ERL	Ann Arbor, Mich.	1-14-76	1-28-76
357-76	Supervisory Computer Specialist	14	HDQS	Washington, D.C.	1-14-76	1-28-76
365-76	Electronics Technician	11	NWS	Miami, Fla.	1-14-76	1-28-76
366-76	Administrative Management Specialist	12	NOS	Rockville, Md.	1-16-76	1-30-76
355-76	Computer Systems Analyst	14	NWS	Silver Spring, Md.	1-12-76	2-2-76
377-76	Administrative Management Specialist	12	NOS	Rockville, Md.	1-19-76	2-2-76
378-76	Computer Technician	8	HDQS	Washington, D.C.	1-19-76	2-2-76
379-76	Electronics Technician	9	NWS	San Diego, Calif.	1-19-76	2-2-76
381-76	Meteorological Technician	11	NWS	Silver Spring, Md.	1-19-76	2-2-76
382-76	Meteorological Technician	9	NWS	Kahului, Maui, Hawaii	1-19-76	2-2-76
358-76	Physical Scientist	14	NWS	Silver Spring, Md.	1-14-76	2-4-76

## Federal Employee Suggestion Program is Discussed

On May 6, 1975, President Ford announced a Cost Reduction Campaign. The response from civilian and military personnel was outstanding. It was announced that 362 congratulatory letters for constructive ideas and other contributions have been signed by the President. Contributions made by these employees produced savings to the Government of \$25 million.

But the great need to reduce Federal spending and to conserve energy continues and the President has extended the Cost Reduction Campaign through May 5, 1976. One very prominent method of bringing beneficial ideas to management's attention is through the Employee Suggestion Program. For this reason, we believe the following discussion is especially timely.

The Federal Employee Suggestion Program provides a means for recognizing employees who suggest new ideas which, when adopted, contribute directly to economy or efficiency, or directly increase effectiveness, in carrying out the government's programs or missions.

For purposes of the Suggestion Program a suggestion is defined as a constructive proposal submitted in writing by one or more employees intended to accomplish a job better, faster, or cheaper; to simplify or improve operations, tools, procedures, methods, or organization; to conserve manpower, materials, or money; or for similar purposes. Even suggestions which fall within the suggester's job responsibilities can be the basis for an award if they clearly exceed applicable performance requirements.

Once a suggestion is determined to be eligible for award consideration (if accepted) it is controlled, acknowledged, and sent to a specialist in the subject matter area for study and appraisal. This is generally a joint effort on the part of two or more people. A report of their findings is then sent to the Incentive Awards Program Officer, who informs the suggester of the action taken. Such a system assures the suggester anonymity. However, when it is believed a real purpose can be served by a discussion between the suggester and those evaluating the suggestion, a meeting will be arranged by the Awards Office.

Cash awards for adopted suggestions can be based on estimated first-year measurable benefits, or they can be based on the value of intangible benefits, or a combination of both. For benefits that can be measured in dollars—such as savings in production time, man-hours, supplies, equipment, and space—the award is based on dollar benefits according to a government-wide scale. For benefits that can't be expressed in terms of dollars—such as better service or improved quality—the amount of award is determined by the importance of the program affected by the suggestion and its impact on that program. If a suggestion has application in more than one bureau or agency, the award is increased proportionately.

There are several types of suggestions which are not eligible for award consideration under this Program, but which should be directed to the appropriate office for such action as may be necessary or

desirable. These include:

1. Proposals which merely call attention to the need for routine maintenance or repair work;
2. Proposals for improvement which the employee would normally be expected to accomplish;
3. Proposals for services and benefits to employees such as vending machines, cafeteria services, restroom facilities, parking facilities, or holidays;
4. Normal or routine safety practices such as normal protective devices or removal of obstructions;
5. Proposals which vaguely state a problem but do not propose a specific method to solve the problem, and
6. Proposals in the nature of a personal complaint or grievance.

Employees wishing to submit suggestions should send them to the Incentive Awards Officer in their servicing personnel office. Suggestions submitted through channels other than those of the Incentive Awards Program and placed into effect, may be considered for an award provided they are submitted through the Awards Program not later than three months after due to implementation.

Adopted suggestions are published quarterly in *Personnel Perspective*.



(From left) Mr. Howell, Ms. Childers, Mr. Heuscher, Dr. Johnson, Mr. Wright, Ms. Taylor, and Mr. Whitney.

Nominations for the annual Elmer Neumann Award, initiated in 1973 through joint arrangements with NOAA management and Local 2703, American Federation of Government Employees, are being received up to January 31, 1976. This recognition will go to the employee who has made the most outstanding contribution in improving labor-management relations. The winner last year was James K. Huntoon (now retired), former Chief, Public Services Branch, Meteorological Services Division, NWS. The Award Committee, comprising three members chosen by NOAA management and three by Local 2703, has elected a seventh person as Chairman, Dr. Milt Johnson, Office of the NOAA Corps. The Committee members evaluating the nominations are: Helen Childers, Procurement Liaison Office at NOAA Headquarters; Bob Heuscher, Office of Marine Technology, NOS; David Howell, NOAA Finance Division; Shirley Taylor, Administrative Operations Division; Ray Whitney, Management Analysis Division, and Jim Wright, Personnel Division.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

BUDGET INFORMATION

FISCAL YEAR 1977

President Ford has requested a budget of \$573.3 million for the National Oceanic and Atmospheric Administration for Fiscal Year 1977. This represents a net increase of \$48.8 million, or nine percent, over Fiscal Year 1976. Proposed increases for expanded programs and inflation total \$63.5 million, offset by decreases resulting from non-recurring items, completed programs and program reductions, to the extent of \$14.7 million. The total amount of Fiscal Year 1977 funding requested for all NOAA programs is shown in the attachment. Most NOAA programs are expected to continue at approximately the same levels of activity as in Fiscal Year 1976.

Proposed increases follow:

1. Increased costs of operation due to inflation. \$30.5 million
  - Employee pay and benefits, including a five percent October pay rise and associated benefits totalling \$17.6 million. (FY 76 funding: N/A)
  - Costs of supplies, equipment and materials for ship, laboratory, and general operations totalling \$4.3 million.
  - Costs of maintenance and support services, satellite procurement, ship maintenance and other activities, totalling \$4 million.
  - Costs of rents, communications and utilities totalling \$2.8 million.
  - Travel costs totalling \$1.8 million.
  
2. Continuation of the NOAA earth-orbiting satellite program. \$15.6 million
  - This increase is required to maintain NOAA's environmental satellite observing programs at current levels. The increase will enable continued operation of the Geostationary Operational Environmental Satellite (GOES) system which provides near-continuous observations of weather and oceanic conditions over the U.S. and adjacent areas. It will also allow maintenance of the polar-orbiting satellite (ITOS) system, which provides global cloud imagery, atmospheric temperature and moisture data as well as ocean temperatures. A third-generation polar-orbiting system is planned for operation in 1978. This new system will provide data required to improve predictions and warnings of weather and ocean conditions. (FY 76 funding: \$70.9 million)
  
3. Coastal zone management \$5.3 million
  - The proposed increase will provide grants to coastal states to begin implementation of coastal zone management programs developed under earlier planning grants. These grants will be used by states to cover costs of administering state coastal zone plans, assisting local governments in adopting plans in accordance with state guidelines and providing information for decision-making. These programs will enable states to plan for energy-related actions, particularly due to development of oil and gas on the Outer Continental Shelf. The increase will also permit grants to states to cover part of the costs of acquiring estuarine areas for research and educational purposes. (FY 76 funding: \$18 million)

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| <p>4. Hurricane reconnaissance reimbursement to the Department of Defense</p> <p>–Beginning in Fiscal Year 1977, the Commerce Department will reimburse the Defense Department for operational cost of hurricane reconnaissance in the Atlantic, Gulf of Mexico, Caribbean and eastern Pacific, and for reconnaissance of severe winter storms. These costs previously were borne by the Department of Defense. This increase will maintain the present level of storm reconnaissance to support the national severe weather warning system. Its principal effect is to reallocate agency funding responsibility.</p> | <p>\$5 million</p> <p>(FY 76 funding :<br/>\$ zero)</p>       |
| <p>5. Fisheries stock assessment and research.</p> <p>–Heavy overfishing, both in the Atlantic and the Pacific, has seriously depleted certain fisheries stocks. This increase will provide for stepped-up fisheries stock assessment in both oceans, vital to improvement of management of these valuable resources. It will be a cooperative effort pursuant to international agreement and will provide an improved basis for a comprehensive management system.</p>   | <p>\$1.2 million</p> <p>(FY 76 funding:<br/>\$13 million)</p> |
| <p>6. Evaluation of offshore dumpsites</p> <p>–NOAA plans to expand its assessment of offshore dumping, required by the Marine Protection, Research and Sanctuaries Act. This will be conducted at sites off the East and Gulf Coasts. Baseline data to evaluate subsequent changes due to dumping will be established; the effects of dumping on ocean ecosystems will be studied.</p>   | <p>\$1.1 million</p> <p>(FY 76 funding:<br/>\$ zero)</p>      |
| <p>7. Expanded programs to protect porpoises</p> <p>–Further efforts to reduce porpoise mortality during tuna fishing will be undertaken. Research will be directed toward improving our knowledge of the status of species involved in the East Pacific Yellowfin Tuna Fishery through aerial surveys, tagging, and studies of migration. Further efforts will be made to improve the design of purse seines.</p>  | <p>\$1 million</p> <p>(FY 76 funding:<br/>\$3.5 million)</p>  |
| <p>8. Continued planning for NOAA Regional Center at Sand Point, Seattle.</p> <p>–The proposed funds will complete the planning and design activities and begin the site preparation for NOAA's projected Western Regional Center, which will consolidate major research and operational activities in the northwestern United States.</p>  | <p>\$970,000</p> <p>(FY 76 funding:<br/>\$1 million)</p>      |
| <p>9. Recreational fishing research and assessment.</p> <p>–An expanded program of research on species important to recreational fishing, and analysis of the economic importance of recreational fishing will be carried out in cooperation with the states.</p>   | <p>\$670,000</p> <p>(FY 76 funding:<br/>\$1.9 million)</p>    |
| <p>10. Aircraft operations</p> <p>–Two new NOAA WP-3D aircraft used for weather and oceanic research will become operational. This increase is required to provide for familiarization, checkout and calibration of new equipment. These highly instrumented aircraft will be used extensively in NOAA's weather modification experiments.</p>  | <p>\$570,000</p> <p>(FY 76 funding:<br/>\$2.4 million)</p>    |

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| <p>11. <b>Communications Computer for the National Meteorological Center</b><br/>         –A more powerful communications switching computer system will replace an obsolete complex which can no longer handle steadily-increasing amounts of data. The new system will handle all international weather data exchanges and provide efficient national collection and dissemination of meteorological and oceanic data.</p> | <p>\$500,000<br/><br/>(FY 76 funding:<br/>\$7.2 million)</p> |
| <p>12. <b>Office of Marine Minerals</b><br/>         –This office has been established to coordinate all NOAA activities in the field of marine minerals. The funds will permit environmental, economic, legal and technical studies necessary to speed commercial development of marine minerals in an environmentally sound manner.</p>  | <p>\$495,000<br/><br/>(FY 76 funding:<br/>\$zero)</p>        |
| <p>13. <b>SEASAT applications program</b><br/>         –NASA's SEASAT-A, an oceanic research and development satellite, is planned for launch in 1978. It is designed to measure global ocean characteristics with an accuracy and coverage not possible using other methods. NOAA, as its primary user, will develop applications of SEASAT-A data to improve monitoring and forecasting of the ocean environment.</p>      | <p>\$470,000<br/><br/>(FY 76 funding:<br/>\$zero)</p>        |

The proposed budget for Fiscal Year 1977 also contains reductions in appropriations resulting from a variety of causes.

In the past year, NOAA completed procurement of certain equipment for its natural disaster warning system and these funds are no longer required. Certain operations will be organized for greater efficiency and will permit some reduction in requested funds. Some programs will be "stretched" over periods longer than originally planned. In some cases, program reductions are planned.

**Major items in \$14.7 million in reductions:**

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| <p>1. <b>Non-recurring capital outlays</b><br/>         –Completion of procurement actions on certain aspects of the Research Flight Facility (\$4 million) and the National Weather Service radar network (\$1.8 million).</p>   | <p>\$5.8 million<br/>(FY 76 funding:<br/>\$5.8 million)</p> |
| <p>2. <b>Completed programs.</b><br/>         –Funds appropriated in Fiscal Year 1976 for Phase I of the Deep Ocean Mining Environmental Study (\$3 million) and for initial architectural and engineering studies at NOAA's Northwestern facility at Sand Point, Seattle (\$1 million).</p>  | <p>\$4.0 million<br/>(FY 76 funding:<br/>\$4.0 million)</p> |
| <p>3. <b>Reduction of National Weather Service Operating Staffs.</b><br/>         –Fifty-seven positions will be eliminated by reduction of lower-priority tasks and altered use of personnel.</p>  | <p>\$861,000<br/>(FY 76 funding:<br/>N/A)</p>               |
| <p>4. <b>Reduction of current programs.</b><br/>         –Postponement of expansion of NOAA Weather Wire service (\$1.5 million). The NOAA Weather Wire now provides forecasts and warnings to radio and TV stations and newspapers in 36 states. There will be no reduction in service, but plans to expand the wire nationwide will not be carried out.</p> | <p>\$2,864,000<br/>(FY 76 funding:<br/>\$11.7 million)</p>  |

-Stretchout of the New York Bight Marine Ecosystems Analysis Program (\$500,000). This program, initiated in 1973 to determine impacts of ocean dumping and other uses of the New York Bight on marine ecosystems, will be continued at present levels. The effects of this reduction will lengthen the project by one year.

-Ship financing fund (\$444,000). The function and purpose of the program remain unchanged, but administration costs are being transferred from appropriated funds and will be supported by use fees.

-Consolidation of Great Lakes Mapping (\$420,000). NOAA will consolidate its surveying and mapping activities now done at the Lake Survey Center, Detroit, in the Atlantic Marine Center, Norfolk, and the National Ocean Survey headquarters, Rockville, Md., with an anticipated saving of 15 positions.

5. One less working day in FY 1977, etc.

\$1,073,000  
(FY 76 funding:  
N/A)

This budget envisions a net reduction of 101 positions in NOAA (36 added and 137 eliminated). It is expected that the reduction will be accomplished largely through normal attrition.

<b>NOAA PROGRAM LEVEL</b>					
(In millions of dollars)					
Activity	FY 1975 Program Level	FY 1976 Program Level	Increases (+) or Decreases (-)		FY 1977 Program Level
			Base Adj.	Program	
Mapping, charting, and surveying services .....	31.3	33.8	+1.3	-.4	34.7
Ship support services .....	28.7	32.8	+2.9	...	35.7
Ocean fisheries and living marine resources .....	61.8	67.6	+1.9	+2.4	71.9
Marine ecosystems analysis and ocean dumping .....	5.9	10.0	-2.8	+.6	7.8
Marine technology .....	3.3	3.6	+.2	+.5	4.3
Sea Grant .....	23.1	23.1	+.1	...	23.2
Coastal zone management .....	14.0	19.0	-1.0	+5.4	23.4
Basic environmental services .....	103.5	109.9	+2.7	+.5	113.1
Environmental satellite services .....	64.4	71.5	+2.2	+16.1	89.8
Public forecast and warning services .....	48.4	70.9	+1.5	+3.5	75.9
Specialized environmental services .....	28.9	31.2	+1.1	...	32.3
Environmental data and information services .....	13.4	15.1	+.5	...	15.6
Global monitoring of climatic change .....	1.6	1.7	+.1	...	1.8
Weather modification .....	13.5	10.3	-3.8	+.5	7.0
International projects .....	8.2	8.2	+.1	...	8.3
Retired pay, commissioned officers .....	1.8	2.2	+.2	...	2.4
Executive direction and administration .....	22.4	24.1	+1.0	...	25.1
Construction .....	...	1.0	-1.0	+1.0	1.0
<b>Total, NOAA .....</b>	<b>474.2</b>	<b>536.0</b>	<b>+7.2</b>	<b>+30.1</b>	<b>573.3</b>

## Fisheries Program Booklet Available

A booklet for commercial fishermen about a program which allows them to accumulate funds for construction or improvement of their fishing vessels has been published by the National Marine Fisheries Service.

*Capital Construction Fund* is a 24-page booklet of most asked questions, with detailed answers, concerning the NMFS program which provides tax deferrals for

commercial fishermen to construct, reconstruct, or, under limited circumstances, acquire fishing vessels. The program permits fishermen to defer payment of Federal taxes on taxable income from the operation of their fishing vessels, thus, in effect, giving them an interest-free loan from the Government for the construction or improvement of fishing vessels.

The booklet may be obtained from NOAA, NMFS, Financial Assistance Division, Washington, D.C. 20235, or from Financial Assistance Officers at the NMF's regional offices in Seattle, Wash.; Terminal Island, Calif.; Gloucester, Mass.; St. Petersburg, Fla.; and Juneau, Alaska.

## EEO Committee Meetings Open To Employees

The NOAA EEO Committee has announced that all employees of NOAA are welcome to attend its regularly scheduled meetings. The meetings are held the second Wednesday of each month at 1:30 p.m. at various locations in the NOAA buildings.

Employees are asked to make reservations with Faye Abbott, NOAA EEO Recording Secretary, two weeks prior to any meeting they wish to attend. She may be contacted on (301) 443-8247.

The Committee wishes to express their thanks for the excellent support and cooperation received in the past.

## NOAA Personnel and Former NOAA Personnel Honored by AMS

Society as a Councilor (1955-67), as a member of the Awards Committee, Chairman of the Forecasting Committee, and as Chairman of the Planning Commission. He received the Society's Cleveland Abbe Award in 1969.

For four years before joining NOAA in 1974, Dr. Phillips was Head of the Department of Meteorology at the Massachusetts Institute of Technology, where he had served since 1956. He had been an occasional consultant to NMC for many years.

He has been Associate Editor of the scientific journal *Tellus* and received, in 1956, the Royal Meteorological Society's first Napier Shaw Award.

## Connecticut CZM Grant

to carry out its second-year work, and is eligible for a third annual grant under provisions of the Coastal Zone Management Act of 1972. To each grant, the State adds an amount equal to at least 50 percent of the Federal award. To this latest grant, for example, Connecticut will add \$51,000, making the supplemental budget total \$153,000.

The money will support planning to protect the State's coastal resources from adverse environmental effects of oil and gas exploration on Georges Bank.

Dr. Phillips has served the AMS as Associate Editor and Co-Editor of AMS periodicals, and as a member of the Committee on Forecasting, Publications Commission, Nominating Committee (Chairman), and the Scientific and Technological Activities Commission (Chairman). He is the recipient of the Society's Meisinger Award, Editor's Award, and its highest honor, the Rossby Medal (1971).

Dr. Phillips received his B.Sc., M.Sc., and Ph.D. from the University of Chicago.

-The new President of the Society, Dr. Charles L. Hosler, Dean of the College of Earth and Mineral Sciences at Pennsylvania State University, has been a member of the National Advisory Committee on Oceans and Atmosphere (NACOA) since 1972. He is also Chairman of the Stormfury Advisory Panel, and a member of the National Academy of Sciences-National Academy of Engineering Advisory Committee to NOAA.

-The President-Elect of the Society, Dr. Werner A. Baum, Chancellor of the University and Professor at the University of Wisconsin at Milwaukee, was Deputy Administrator of NOAA's predecessor, the Environmental Science Services Administration, in 1967-68. Dr. Baum is presently a member of the Sea Grant Advisory Panel, and previously was a member of NACOA.

## LSC Men Complete Gage Inspection

Charles McWee and Joseph Wolny, Technicians with the Lake Survey Center's Water Levels Gaging Section, recently completed the eastern fall water level and temperature gage maintenance trip, as well as the fall inspection of water level gages on Lake Michigan. Although inclement weather prevented easy access to a number of gages, they successfully ran level lines to the over 25 water level gages and inspected and calibrated 15 temperature gages along their route. The two trips took them around the shores of Lakes Michigan, Erie, and Ontario and the Niagara and St. Lawrence Rivers.

(Continued from page 1)

Leasing of the Georges Bank area is scheduled for August 1976. As part of its OCS work element, Connecticut will estimate the number and types of oil-related facilities which might locate along the State's coast, assess the ability of the coast to sustain those facilities, and describe the long-term effects of offshore development on air and water quality, land use patterns, employment, housing, public services, and commerce. OCS-related plans compatible with the coastal management program will be developed.

## Alaskan Marine Geophysical Data Now Available

The Geological Survey of Canada's Marine Geology and Geophysics Group has forwarded to the Environmental Data Service's National Geophysical and Solar-Terrestrial Data Center a collection of marine geophysical data from relatively unexplored Alaskan areas that may have potential petroleum reserves. The data collected in the Gulf of Alaska and Bering Sea consist of about 71,000 bathymetric and magnetic data points representing almost 50,000 km of trackline.

This is the third in a series of data sets that have been forwarded to NGSDC by the Canadian Geological Survey. Previous data shipments contained marine seismic profiles collected on the Canadian Pacific continental shelf and digitized marine geophysical data collected during a joint U.S. Geological Survey-Canadian Geological Survey expedition in the Strait of Juan de Fuca.

Copies of these data sets are available from NGSDC, NOAA, Boulder, Colo. Telephone (FTS): 323-6338.

(Continued from page 1)

search studies on operational forecasting problems of the general circulation, and contributed articles on weather and circulation to the *Monthly Weather Review* and *Weatherwise*.

He received his B.S. in physics from Rutgers University and his M.S. in meteorology from New York University.

Mr. O'Connor's civilian weather career began in 1940 and was interrupted when he served, as a Navy Officer, during World War II as an instructor in meteorology at the U.S. Naval Postgraduate School at Annapolis, Md., and again during the Korean War as a senior instructor in meteorology at the Naval Postgraduate School in Monterey. He has been with what is now NMC since 1956 in successively more responsible positions, and served two years as Chief of the Forecast Division's Extended Weather Forecast Branch before assuming his present position in 1974.

He received a Commerce Bronze Medal in 1966 and a Silver Medal in 1969 for his adaptation of automated products to extended forecasting and for outstanding administrative leadership.

He holds a B.S. in chemical engineering from Rhode Island State College, a B.Ed. from Rhode Island College of Education, and an M.S. in meteorology from Massachusetts Institute of Technology.

(Continued on page 8)



Mr. O'Connor --The Society's Award for Outstanding Service by a Weather Forecaster, which recognizes the great importance of weather forecasting to public safety and well being, was presented jointly to James F. Andrews, Deputy Chief of the Basic Weather Branch in the Forecast Division at NMC, and James F. O'Connor, Deputy Chief of the Forecast Division at NMC, "for their sustained outstanding performance in extended range forecasting."

Mr. Andrews was previously a Meteorologist (forecasting and interpretation) for extended range weather forecasting at the NMC in Suitland, Md., where his principal duty was the preparation of official five-day mean forecasts of 700-mb and sea-level circulation patterns over the Northern Hemisphere and weather anomalies over the U.S., including the daily sequence of cyclonic, anticyclonic, and frontal activity expected during the period for use by other forecasters. He has conducted re-

### noaa week

Published weekly at Rockville, Md., by the Office of Public Affairs for the information of employees of the Commerce Department's National Oceanic and Atmospheric Administration.

Articles to be considered for publication should be submitted at least a week in advance to NOAA Week, Room 221, WSC 5, Office of Public Affairs, National Oceanic and Atmospheric Administration, Rockville, Md. 20852.

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# Electrification of Storms Is Recorded by ERL Scientists (Continued from page 2)

electrical field increased very rapidly, accompanied by three nearly simultaneous events: the first appearance of glaciation (ice formation) at the top of the cloud, the first lightning discharge, and an increase in precipitation from the base of the cloud.

But, according to Dr. Helmut K. Weickmann, Director of APCL, the actual altitude or temperature of the top of the cloud may not be the determin-

## Walter A. Mincz Dies

Walter A. Mincz, former Weather Service Specialist at the National Weather Service Office in Richmond, Va., died on January 14. He had retired in 1972.

He joined the NWS at Petersburg, Va., in 1945, and had served in Richmond since 1946.

He is survived by his wife, Elva, and three children--Kenneth and Kathy Mincz and Janet Fazenbacker. The family may be addressed at 301 North Confederate Ave., Sandston, Va. 23150.

ing factor. A mature thunderstorm contains "pockets" of positive and negative electrical charges. Usually, positive charges are concentrated at the base and in the top of the cloud, with a negative charge sandwiched between them, in the middle levels. Lightning crackles between these pockets. Dr. Weickmann surmises that both positive and negative charges are generated in the same place, and then somehow sort themselves out. It may be, he believes, that only when a cloud reaches a great enough vertical span or a great enough temperature difference between top and bottom, does it become sufficiently organized for separation of charges--and lightning--to occur.

"It appears that with this research, we come very close to a possible solution of the central unresolved problem of thunderstorm electricity--namely, how the electricity is being generated," Dr. Weickmann said. "Apparently two major processes must be well coordinated: the genera-

tion of charge, and the separation of charges into positive and negative pockets. The fact that in the Florida storms electrification began when cloud tops were at minus two degrees Celsius therefore may indicate that at this temperature charge generation starts. Or, it may mean that electrical charge is being generated all the way at various temperature levels in the storm, and when the cloud reaches a critical level, it becomes well enough organized to effectively separate the charges."

Dr. Weickmann also believes lightning must be closely tied to precipitation. In almost every

case, the processes occur close together.

The researchers made the measurements while engaged in an effort to reduce light hazard to the launch for Apollo-Soyuz Test Project. They used a variety of aircraft in the effort: an Air Force T-29, a Naval Research Laboratory S-2, a NASA C-45, an Office of Naval Research "powered glider" operated by the New Mexico School of Mining and Technology, and a NASA/Ames Lear jet.

## Credit Union To Meet

The Detroit Federal Employees Credit Union, one of the largest credit unions in the State of Michigan, will hold its 48th Annual Meeting in Southfield, a suburb of Detroit, on February 6, 1976. The Lake Survey Center helped start the organization, which today serves the needs of Federal workers employed throughout the State.

## Colorado, Nebraska

### Taxes to Change

Employees who are subject to state tax withholdings for the States of Colorado and Nebraska may notice a minor change in their state tax for the salary checks dated on or after January 28, 1976.

# NOAA Personnel and Former NOAA Personnel Honored by AMS (Continued from page 2)



Dr. Barnes

Dr. Angell

--An Editor's Award went to Dr. Stanley L. Barnes, a Meteorologist assigned to the Office of the Director of the Environmental Research Laboratories, in Boulder, Colo., "for his thoughtful and detailed reviews and supportive assistance to the Editor during the transition of the *Monthly Weather Review* to the American Meteorological Society."

In Boulder, Dr. Barnes is helping plan the research for the Severe Environmental Storms and Mesoscale Experiment (Project SESAME), a comprehensive field program scheduled for the late 1970's when scientists will observe thunderstorm outbreaks and study their complex interactions with the atmosphere. He previously headed the Storm Morphology and Dynamics Project at ERL's National Severe Storms Laboratory in Norman, Okla. Dr. Barnes received his Ph.D. degree in meteorology from the University of Oklahoma in Norman, and his B.S. and M.S. degrees in meteorology from Texas A&M University in College Station.

--Dr. Roger M. Lhermitte, Professor in the Division of Atmospheric Science at the University of Miami's Rosenstiel School of

Marine and Atmospheric Science, who received the Society's second highest honor, the Second Half Century Award, was previously with ESSA, also. From 1966-70 he was Chief, Meteorological Doppler Radar, in Boulder, and from 1964-66 he was Chief of the Advanced Techniques Branch at the National Severe Storms Laboratory in Norman, Okla. Dr. Lhermitte was honored "for many significant contributions to the advancement of radar meteorology through the use of Doppler radar in probing the atmosphere, particularly for the dual-Doppler method, which has provided new insight into the internal motions of convective storms."

--Lt. Col. Thomas W. Flattery, USAF, who received the Society's Meisinger Award "for his notable development of an operational objective global analysis method that uses tidal theory to relate the atmospheric mass and motion fields," was Liaison Officer. (Air Weather Service representative) at the National Weather Service National Meteorological Center from 1968-1973. His analysis method, developed at NMC and used by the NWS in support of the unscheduled Southern Hemisphere splashdown of the Apollo 13 mission, and for subsequent Apollo spacecraft missions, is now the operational global analysis system used by the NWS. He is now stationed at Air Force Global Weather Central, Offutt Air Force Base, Nebr.

The newly elected AMS Fellows include three NOAA personnel: Dr. James K. Angell, A Meteorologist with ERL's Air Resources Laboratories in Silver



Dr. Glahn

Mr. Oliver

Spring, Md.; Dr. Harry R. Glahn, Deputy Director of the NWS Techniques Development Laboratory; and Vincent J. Oliver, Chief of the Applications Group of the National Environmental Satellite Service.

Dr. Angell has been engaged in climatology and turbulence research, particularly on the long-term variations in ozone, temperature, water vapor, and sunshine duration in the atmosphere. He has been with the Commerce Department since 1956.

In 1968, he received a Department of Commerce Silver Medal for research using constant volume balloons for studies of urban air pollution. He received his M.A. and Ph.D. degrees in meteorology from the University of California at Los Angeles. Earlier he had graduated with a B.A. degree in mathematics from the University of Michigan.

In addition to serving as Deputy Director of TDL, Dr. Glahn continues to serve as Chief of TDL's Objective Forecast Branch, a post he has filled since 1967. With the NWS since 1958, he received a NOAA Award and a Gold Medal in 1975 for his pioneering work in applying

computer models to weather forecasts. His many contributions include development of a method for combining computer observations of weather to arrive at highly refined forecasts of its probability of precipitation, its type and amount, maximum and minimum temperatures, surface windspeed and direction, cloud amount, ceiling and visibility, and the probability of thunderstorms. The method, known to forecasters as Model Output Statistics (MOS) is one of the major advances in meteorology in the past decade. He also received a Silver Medal in 1968.

Dr. Glahn holds a B.S. from Northeast Missouri State Teachers' College, an M.S. from Massachusetts Institute of Technology, and Ph.D. from Pennsylvania State University.

Before going to NESS in 1962, Mr. Oliver had spent five years as Chief Applications Officer for the NWS Forecast Division and five years as Supervising Forecaster at the NMC. He previously had been Meteorologist in Charge at Fairbanks, Alaska, the post he filled after serving during World War II as a War Department consultant in the European, African, and North Pacific Regions.

He received his degree in meteorology and also did graduate work in meteorology at the University of Chicago, and did graduate work in mathematics and fluid dynamics at Catholic University of America.

He received a Department of Commerce Meritorious Award in 1958 and a Commerce Silver Medal in 1965.

# **National Oceanic and Atmospheric Administration**

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July 23, 2010