Dr. S. Blumenthal Heads NHLI Division of Heart And Vascular Diseases

Dr. Sidney Blumenthal has been named director of the National Heart and Lung Institute's Division of Heart and Vascular Diseases—the position held by Dr. Robert I. Levy before his appointment as NHLI Director.

In making this appointment, Dr. Levy said that "... Dr. Blumenthal is uniquely qualified for the position.... He is well known to many as a pediatric cardiologist and an outstanding leader in this field, but he has never limited his vision nor his concern to a single area of medicine.

"Furthermore, he has an exceptional 'track record' in selecting associates and recognizing latent talent among young investigators ...."

Dr. Blumenthal will plan and direct the Institute's research grant, contract, and training programs in heart and vascular diseases. These areas encompass basic research, targeted research, clinical trials and demonstrations, national cardiovascular centers, technological development, and the application of research findings.

(See BLUMENTHAL, Page 4)

HEW's New Bicentennial Exhibit Center, BI-CENT-EX, Will Open on January 19

The BI-CENT-EX exhibit developed by NICHD's Center for Population Research has a series of lighted panels activated by the viewer. It includes this scanning electron micrograph showing the dynamic process of sperm-egg interaction in the sea urchin.—Electron micrograph by Drs. D. W. Fawcett and E. Anderson, Harvard Medical School.

HEW's Bicentennial Exhibit Center will be open to the public, starting Jan. 19, Monday through Friday, from 9 a.m. to 5:30 p.m.

Called BI-CENT-EX, the center is a glance at the past, and a salute to the future.” Individual exhibits carry out the Department's official theme, Freedom from Dependence.

HEW Secretary David Mathews will dedicate the center at a ceremony on Jan. 15, which will be followed by a reception.

BI-CENT-EX is called "a glance at the past, and a salute to the future.” Individual exhibits carry out the Department's official theme, Freedom from Dependence.

HEW is the only agency in the Government sponsoring a Bicentennial Exhibit Center where all program areas are represented so visitors can see how Departmental problems, and the implications of these hazards.

On the last day of the meeting, leaders of each discussion group presented summaries of their findings. An open discussion followed the presentations.

(See BI-CENT-EX, Page 5)

Fed'I Agencies Sponsor Conference on Energy-Related Health Research

Last week, several Federal agencies sponsored a meeting on energy-related research for scientists working on health problems connected with such technologies.

The meeting was held on Jan. 7-9 in Pinehurst, N.C. The agencies were the National Institute of Environmental Health Sciences, the National Institute for Occupational Safety and Health, the Environmental Protection Agency, and the Energy Research and Development Administration. Dr. David Rall, NIEHS Director, opened the meeting.

Biomedical researchers and energy technology developers met in informal groups to discuss subjects that included hazards associated with energy-related occupational and community health problems, and the implications of these hazards.

(See BI-CENT-EX, Page 5)

Dr. David B. Scott Appointed Director Of Dental Institute

Dr. David B. Scott has been named director of the National Institute of Dental Research.

Dr. Scott was dean of the School of Dentistry, Case Western Reserve University.

"Dr. Scott . . . brings to this post an outstanding background in dental research, education, and administration," said Dr. Donald S. Fredrickson, NIH Director.

Academic Career Noted

The new NIDR Director joined the faculty of Western Reserve University in 1965 as the Thomas J. Hill Distinguished Professor of Physical Biology in the School of Dentistry and was jointly appointed as professor of anatomy in the School of Medicine.

Following the federation of the University with the Case Institute of Technology to form Case Western Reserve University, Dr. Scott became dean of the School of Dentistry in 1969.

Dr. Scott, whose appointment was effective Jan. 1, is returning to NIH where he served from 1944 to 1965.

He was with the Dental Section, Division of Physiology, Experimental Biology and Medicine from 1944 until 1948, when the NIDR

(See DR. SCOTT, Page 6)
 Speakers at Program Honoring Martin Luther King Include Fannie L. Hamer, Drs. Cooper and Fredrickson

Fannie Lou Hamer, well known civil rights leader, will be the principal speaker at the annual Martin Luther King, Jr., birthday commemoration. The day-long program will be held on Thursday, Jan. 15, in the Parklawn Bldg., Conference Rooms D, E, and F. Mrs. Hamer will speak at 1:30 p.m.; she will be introduced by Dr. Donald S. Fredrickson, NIH Director.

Dr. Theodore Cooper, Assistant Secretary for Health, HEW, will address the audience at 10 a.m.—the opening of the program. His talk will be followed by a panel discussion whose participants include Dr. Abel Ossorio, PHS deputy regional administrator, Clifford Allen, deputy associate administrator, Health Resources Administration, will serve as coordinator for the discussion.

In a letter to PHS agency heads and staff, Dr. Cooper asked for their participation in the ceremonies and activities that "will honor Dr. King for his many contributions to the betterment of our society."

He also asked supervisors to "encourage all employees to attend the planned activities to the extent possible in keeping with the accomplishment of this program mission and its goals." For further information about the program, contact Norman R. Seay, Parklawn Bldg., Room 10-22, telephone: 443-1960.

History of Med. Society Meets Jan. 22; Munch, Jaffe Talk

Two topics—drug addiction fin de siecle to 1930; the development of local anesthesia—will be discussed at the meeting of the Washington Society for the History of Medicine on Thursday, Jan. 22, at 8 p.m. in the Billings Auditorium, National Library of Medicine.

Arnold Jaffe, University of Kentucky, will talk about Medical Science and the Problem of Drug Addiction, 1890-1930, and Dr. Roland Münch, of the Washington Hospital Center, will speak on Carl Ludwig Schleich and the Development of Local Anesthesia in Surgery.

Visitors are welcome. The next meeting of the society will be held on March 18.

Dr. Silas Weir Mitchell (1829-1914), shown in his clinic at the Infirmary for Nervous Disease in Philadelphia, was a noted poet, novelist, and a superb clinician. During the Civil War, with George R. Morehouse and William W. Keen, he made studies of gunshot and other injuries of peripheral nerves, which he expanded and published in 1872 as "Injuries of Nerves and Their Consequences." His original and important research in neurophysiology included studies on the coordinating function of the cerebellum.
Charles C. Shinn Retires With Plans to Pursue Many Varied Interests

Charles C. Shinn, visual communications project officer at the Division of Research Services, has retired after 35 years of Federal Service.

After working for several years as a reporter and staff correspondent with The Washington Star, Mr. Shinn began his Government career with the F.B.I. in 1940.

During World War II, he made documentary and training films at the U.S. Navy Photo Science Laboratory, and in 1946 came to NIH on detail from the PHS Communicable Disease Center.

Mr. Shinn has received numerous awards and citations, including three Blue Pencil Awards from the Graphic Arts Editors Association, the Award of Excellence of the Society of Federal Artists and Designers, and the Award of Merit of the Education Council of the Graphics Arts Industry.

He has been with NIH since 1961, when he joined the staff as a scientific reference analyst in its Reports and Analysis Branch.

Mr. Pike will be responsible for procedures involving the applications and management of Institute grant awards for research and training activities on the heart, blood vessels, blood, and lungs, and the diseases that afflict them. Such grants totalled nearly $300 million this fiscal year.

Mr. Pike received his B.S. from the University of Maryland in 1960. Afterwards, with NIH, he continued training in work related to grants administration and management by attending seminars, workshops, and other programs administered by the Institute and other Federal agencies.

He is a member of the Society of Research Administrators, and he is also a member and co-founder of the Children’s Special Education Center, in Rockville.

During the holidays, over $7,000 was donated to the Clinical Center Patient Emergency Fund through contributions from NIH’ers, relatives of CC patients, visitors, and the Davis Plan.

This amount will cover nearly 2 months of emergency financial assistance for CC patients.

Through the Davis Plan, the Clinical Center Engineering Unit, OA, PEB, contributed one of the largest group donations—over $380.

Barbara A. Murphy, chief of the CC Social Work Department and administrator of the fund, explained that in order to provide emergency assistance to CC patients continued support—throughout the year—is essential. NIH employees may send donations to the CC Social Work Department, Bldg. 10, Room 1N-254.

Mr. Shinn came back to NIH in 1967 to head the Medical Arts and Photography Branch, DRS, and 3 years later moved to his present position (See MR. SHINN, Page 4).
Dr. Stuart M. Sessoms

Is Senior V.P. of N.C.

Health Service Plan

Dr. Stuart M. Sessoms, who has been director of Duke Hospitals and professor of medicine and health administration at Duke University Medical Center, was named president of Blue Cross and Blue Shield of North Carolina. He assumed his new duties on Jan. 1.

Dr. Sessoms was NIH Deputy Director from 1962 to 1968, when he retired from Federal service.

At NIH, Dr. Sessoms' posts also included assistant director of the Clinical Center; associate director of the National Cancer Institute, and a year later, associate director for collaborative research in NCI's new Virology Research Resources Branch.

During his tenure here, Dr. Sessoms was the recipient of two PHS Meritorious Service Awards. He received his first award in 1964 for his accomplishments as chief of Cancer Chemotherapy National Service Center.

His second award, presented in 1966, was in recognition of his "outstanding ability and achievements in the development, operation and staffing" of regional medical programs.

Dr. Sessoms is a consultant to the National Library of Medicine and to the Veterans Administration Hospital in Durham.

MR. SHINN

(Continued from Page 3)

he held at retirement.

He was one of eight founders of the Society of Federal Artists and Designers and a charter member and first president of the Federal Design Council.

Mr. Shinn has a variety of interests. He is an inventor; he was issued three patents—one he assigned to the Government—in a single month.

He also was active as an artist between 1948 and 1953, and plans to return to painting as well as continue his writing and lecturing about visual communications.

A beekeeper, Mr. Shinn will continue to maintain the hives from which he gets over 600 pounds of honey every year. His plans for an active retirement also include keeping his interest in sports car racing, sailing his sloop, and visiting relatives here and abroad.

M.C. Heart Ass'n Will Counsel Heart Attack Patients' Spouses

The Montgomery County Heart Association is offering a unique educational program, called "Heart-to-Heart," which counsels spouses of recent heart attack patients in the community.

Through group sessions those spouses can learn, free of charge, about the physical and emotional problems of heart disease.

For further information or questions, contact the Montgomery County Heart Association, 7847 Old Georgetown Road, Bethesda, Md. 20014, telephone 657-8878.

Dr. Jane L. Showacre (left) and Nathaniel B. White (second from right) receive special achievement awards for their work with the Equal Employment Opportunity Committee of the National Institute of Child Health and Human Development from Dr. Gilbert L. Woodsie, NICHHD deputy director. Dr. Joseph M. Bobbitt was posthumously given the award for special achievement. Katherine Bobbitt accepted her husband's award. All three awardees were cited for their service to the Institute's EEO Committee and their dedication to the EEO program.

National High Blood Pressure Education Program Cites Numbers, Danger, Control

The National High Blood Pressure Education Program, established in 1972, has already progressed toward its goal of alerting the medical community and the public to the prevalence of high blood pressure in the U.S. population, the dangers of uncontrolled hypertension, and the benefits of adequate blood pressure control.

Data released by the Program's Coordinating Committee indicate that in recent years there have been sharp increases in initial and total patient visits to physicians for hypertension and hypertensive heart disease, a substantial reduction in the number of people with unsuspected and undiagnosed hypertension, and a significant increase in the number of hypertensive patients whose blood pressure is under adequate medical control.

In a press briefing held Dec. 19 by the National Heart and Lung Institute, Dr. Robert I. Levy, NHLI Director, summarized data. Also present were representatives of the Am. College of Cardiology, A.M.A., Am. Hospital Assoc., Am. Osteopathic Assoc., Natl' Conference for High Blood Pressure Control, Natl' Kidney Foundation, Natl' Med. Assoc., and Citizens for Treatment of High Blood Pressure.

The Program's wide variety of education, research, planning, and community service activities are coordinated by the NHLI and involve the participation of more than 150 national organizations—Federal, private, and professional. Except for arteriosclerosis, hypertension is the most common cardiovascular disease, affecting some 25 million American adults. Though potentially serious, it seldom produces symptoms discernible to the person who has it.

Easily diagnosed and, in most cases, readily controlled, it is often unsuspected or inadequately treated. Many who have the disease ignore it.

Initial Visits Increase

Data based on the National Disease and Therapeutic Index indicate that, since 1971, the number of initial patient visits to physicians for hypertension and hypertensive heart disease have increased 38 percent, and total patient visits for these conditions have increased over 40 percent.

Both are greater increases than initial and total physician visits for all causes, which rose about 17 percent.

Data were also summarized from three other surveys: the National Health Examination Survey of 1960-62, the National Health and Nutrition Survey of 1971, and the NHLI Hypertension Detection and Followup Study done in 1972-74.

The two earlier surveys indicated that nearly half of those with high blood pressure were unaware that they had it. In the 1972-74 community survey, this number was only 29 percent.

BLUMENTHAL

(Continued from Page 1)

Dr. Blumenthal comes to NHLI from the University of Miami School of Medicine, where he was professor of pediatric cardiology, 1970-75. For most of that period he also served as dean of continuing education.

Prior to this, Dr. Blumenthal was professor of clinical pediatrics, College of Physicians and Surgeons, Columbia University, and attending pediatrician at the Presbyterian Hospital. He was also a consultant pediatric cardiologist at the Long Island Jewish Hospital, and at the Nassau Brothers Hospital, in Poughkeepsie.

He is vice chairman of the American Heart Association's Ethics Committee, and has served on and chaired other AHA committees including the Committee on Arteriosclerosis and Hypertension in Childhood.

He is a member of the board of directors of the Heart Association of Greater Miami as well as chairman of the Florida Heart Association's Task Force on Rheumatic Fever and Rheumatic Heart Disease.

Dr. Blumenthal has also served on a number of NHLI committees, including the cardiovascular Training Grants Committee as chairman; Lipid Research Clinics; Lipid Metabolism Advisory Committee; Working Group on Training and Evaluation of Physicians in High Blood Pressure; and chairman, Task Force on Pediatric Hypertension.

Was Principal Researcher

From 1972-74, he was principal investigator of a Specialized Cardiovascular Disease Training Grant at New York University College of Medicine where he did research on atherosclerosis in childhood.

Dr. Blumenthal received his B.S. and M.D. from the University of Pennsylvania and was in private practice in New York City from 1954 to 1955. During that time he was director of the division of pediatric cardiology at Mount Sinai Hospital.

From 1956 to 1970 he was at Columbia University Medical School. During his tenure there, he was principal investigator of an NHLI pediatric cardiology research training grant.

If the national situation is similar to that observed in the 14 communities participating in the HDFP study, some 4 million people have become aware since 1971 that they have high blood pressure—the first step to effective treatment.

Over the 14-year span covered by the surveys, the number of persons aware of their hypertension but not under treatment for it did not change appreciably.
Dr. Begab Elected President of Internat'l Scientific Ass'n

Dr. Michael J. Begab has been elected president of the International Association for the Scientific Study of Mental Deficiency. As president-elect, Dr. Begab will coordinate plans for the Association's Fourth International Congress to be held at American University, Aug. 22-27.

Dr. Begab, a social scientist with the National Institute of Child Health and Human Development's Center for Research for Mothers and Children, is head of the Institute's Mental Retardation Centers program which supports 12 centers throughout the country.

NMR Spectrometer at Stanford Permits Time, Space Study of Atoms in Molecules

The first of the world's most powerful Nuclear Magnetic Resonance spectrometers—to aid scientists in their study of biological molecules and their role in life processes—has been installed at the Stanford Magnetic Resonance Laboratory, located in the Chemistry Building at Stanford University's Medical Center.

Established by a joint grant from the Division of Research Resources and the National Science Foundation, the powerful new instrument allows scientists to "look" at individual atoms in complex structures, observe the magnetic properties of atoms in a molecule, and provide information which describes the individual atom's spatial relationships and movements.

For example, a scientist may label amino acids—the building blocks of proteins—with stable isotopes, and, from NMR spectra, chart changes in protein structure which result from interaction with drugs or other chemical agents. The studies are important in understanding disease—for example, abnormally shaped proteins associated with hereditary disease.

Thus, a scientist can follow the changes of shapes and motions of molecules with the added dimension of time. No other instrument can do this.

According to Dr. Oleg Jardetsky, director of the facility, a model of a live and working protein can now be developed. While other methods of studying proteins require that they be frozen or otherwise killed for measurement, the NMR method measures molecules in solution without damaging them.

Other Projects Planned

In addition to studying the geometry of protein molecules, other projects to be undertaken include the examination of mechanisms of genetic control, cell membranes, and drugs and their effect on enzymes.

Stanford's NMR was built to operate at the highest frequencies attainable with current technology. The instrument has a resolution of 360 MHz (Mega Hertz) for hydrogen nuclei, and 90 MHz for carbon 13.

The laboratory operates under guidelines established by the Biotechnology Resources Program of DRR.
This 12-month-old girl has just pushed a button on hearing an auditory stimulus and is enjoying visual reinforcement, an animated toy monkey.

A 6-month-old baby babbles and smiles, needs some support when sitting up, and has an attention span of a few minutes. Can the hearing of so young an infant be tested successfully?

Yes, as demonstrated in a prize-winning behavioral audiometry exhibit created by a scientist-administrator from the National Institute of Child Health and Human Development and by three scientists supported by NICHD.

Dr. Wesley R. Wilson and John M. Moore of the University of Washington Child Development and Mental Retardation Center, Dr. T. Newell Decker of the University of North Dakota, and Dr. Lyle L. Lloyd of NICHD won the second award for excellence of presentation.

Their scientific exhibit, Behavioral Assessment of Hearing Sensitivity in Infants, was presented at the American Speech and Hearing Association's annual meeting held recently in Washington, D.C.

The exhibit, which included a video-taped segment, depicted various aspects of their research into the application of operant conditioning principles to measure thresholds in infants as young as 5 months.

Affects Speech

One reason for determining hearing sensitivity in a baby under a year is that any hearing impairment has considerable impact on the child's future language development. Even very young babies are able to discriminate between sounds, and that ability provides the foundation for later speech and language behavior.

The research focused primarily on two types of responses—head-turning and button-pushing—and two types of reinforcers or rewards, visual and tangible. When a baby hears a sound, a tone, or a spoken word, he will usually turn his head toward the source. In operant conditioning that response is rewarded with a reinforcement which the baby likes—a toy, a bit of food, or something visually pleasing. The reinforcement strengthens the response, and the baby will continue to respond long enough to determine his hearing threshold. A test session lasts approximately 10 minutes.

Different Ages Tested

The first experiment presented in the exhibit explored various types of visual reinforcers in groups of 12- to 18-month-old infants to see what "turns a baby on." The scientists found that complex visual reinforcement—an animated toy—was quite effective with these infants.

When they tested the animated visual reinforcer with babies as young as 6 months, they found it just as effective.

Thresholds—defined as the lowest level of sound to which an infant responds three out of six times—for these infants were approximately the same as those reported for adults and were considerably lower and more reliable than thresholds determined by observation techniques not using reinforcement.

Another part of the display showed the use of this approach in testing the hearing of young Down's syndrome subjects.

The exhibit showed that infants can also be taught to press a button, and this response can be used in obtaining auditory thresholds. The button is 4 by 6 inches in size, large enough to accommodate a baby's imprecise physical movements.
Voluntary Private Contributions to
To Dr. Bernhard Witkop
Japanese Medal Is Given
To Dr. Bernhard Witkop
of Munich, came to NIH in 1950
Ph.D. in 1940 from the University
He is known principally for his work on oxidation mechanisms;

Japanese Medal Is Given To Dr. Bernhard Witkop

The National Commission on Diabetes recently reported that diabetes is now the Nation's third-ranking cause of death and recommended that funding for diabetes research be tripled to $126 million by Fiscal Year 1979.

According to the report, between 1965 and 1973 the chance of developing diabetes increased in the U.S. by more than 50 percent. Last year more than 300,000 persons died from diabetes and its complications.

Five Percent Affected

The disease now affects an estimated 10 million Americans—5 percent of the population—half of whom are unaware that they have the disease. At the current rate of increase, the number of diabetes will double every 15 years.

Although the economic toll of diabetes—excluding its complications—is $5.3 billion a year, in FY 1974 only $45 million was allocated to diabetes research.

The cause of diabetes is unknown, nor is it known why the disease appears to be increasing in the U.S. Part of the increase may be the result of more detection, but specialists doubt that this is the entire story.

Problems Found

In addition to the need for increased funding, the 17-member Commission, chaired by Dr. Oscar B. Crofford of Vanderbilt University, reported:

- A serious shortage in both quality and quantity of trained personnel for diabetes research and treatment. This shortage was recognized by Congressional authorization of Research and Training Centers, which the Commission has incorporated into the Long-Range Plan to provide a demonstration of the entire effort against diabetes, including research, education, and model treatment programs.
- A need to translate the advances in research and treatment into local health care delivery. The plan recommends an extensive cooperative effort by Federal, state, private, and voluntary agencies to meet and improve the continuing health care needs of diabetics.

A National Diabetes Information and Education Clearinghouse will collect, evaluate, and disseminate information on prevention, diagnosis, and treatment of selective non-enzymatic cleavage of peptides and proteins; novel natural products; toxins and venoms, and intermediary labile metabolites.

His other international awards and honors include the Paul Karrer gold medal from the University of Zurich.

Nat'l Commission on Diabetes Suggests Plan to Combat Increasing Incidence

Among the facts determined through this past year's studies and summarized by the Commission are the following:

- Women are 60 percent more likely than men to have diabetes.
- Nonwhites are 20 percent more likely than whites to have it.
- Nonwhites are 20 percent more likely than whites to have it.
- The disease is three times as common among poor as among middle income and wealthy people.

The chance of developing diabetes doubles with every 20 percent of an individual's excess weight and doubles with every decade of increasing age.

Complications May Result

- Diabetics are 25 times more prone to blindness than non-diabetics.
- 15 times more prone to kidney disease, over 5 times more prone to gangrene—often leading to amputation—and twice as prone to heart disease. These and other complications result in about 15 percent of all diabetes being bedridden for 1 1/2 months per year.

These problems are particularly acute for those suffering from juvenile onset diabetes; presently one half of all such patients die within 25 years of their diagnosis.

Incidence, Deaths Increase

- An American born today who lives an average life span of 70 years has a higher than one-in-five chance of developing diabetes.
- Last year 38,000 persons died directly from diabetes, making it the 8th leading cause of death. Disease—ranking behind heart and circulatory conditions such as stroke, cancer, influenza and pneumonia, and diseases of early infancy.

Toxicology Quarterly
To Make Jan. Debut

The first issue of a new quarterly publication, the Toxicology Research Projects Directory, will appear next month.

The 644-page Directory (Pub. No. NTISUB/B/021-76/001), which describes 2,500 ongoing projects, is available from the Toxicology Document and Data Depository, National Technical Information Service, Springfield, Va. 22161.

The information in the directory is drawn from the computerized files of the Smithsonian Science Information Exchange, which annually receives over 100,000 summaries of Federally supported research.

The publication is sponsored by the Toxicology Information Subcommittee of the DHEW Committee to Coordinate Toxicology and Related Programs. The Toxicology Information Program of the National Library of Medicine is responsible for the subcommittee and its publications.

Contents Described

The directory is organized in seven chapters: agricultural, industrial, and household substances; drugs, medical materials, food additives, and cosmetics; physical agents and gases; metals, minerals, and trace elements; biotoxins, multiple and unspecified agents; and environmental problems.

In addition, there are indexes for subject, investigators' names, supporting agency, organization, and grant number.

The first issue contains abstracts of research projects registered with SSIE between Jan. 1 and Aug. 15, 1975. The last quarterly issue for 1976 will contain a cumulative index for that year.

Although the directory is an experimental publication, it will be published on a continuing basis if scientists find it useful.

Dr. Karl Piez, president of the Foundation for Advanced Education in the Sciences, presents a check from FAES to Dr. Edith Miles for scholarships to the Preschool Developmental Center at NIH. Dr. Miles is chairperson of Parents of Preschoolers, Inc., which operates the Center.
U.S., Canada Launch Satellite to Improve Biomed. Communication to Remote Areas

Communications Technology Satellite [CTS]

CTS can broadcast to the entire western hemisphere. The satellite's two steerable antennas can be moved to locate anywhere in North America the "footprints"—each large enough to cover an area equal to the West Coast. Simultaneous two-way communications are possible with the Super High Frequency transponder.

Rapid, reliable communications are being brought to many areas of the world through continued development of communications satellites. As the NIH Record went to press, the U.S. and Canada planned a January 13 launching of a Communications Technology Satellite which will provide two-way television and voice communication to remote areas.

The National Library of Medicine's Lister Hill Center, the Veterans Administration, and the Association of Western Hospitals plan to test the ability of satellites equipped with the latest communications technology to help solve problems in the current health care delivery system.

Canada is developing the spacecraft. The NASA Lewis Research Center in Cleveland is managing the U.S. portion of the program, which will provide the high-power transmitting tube for the spacecraft, environmental testing, launch vehicle, and launch services.

The Communications Technology Satellite will be placed in a geosynchronous orbit over the western U.S. states to a location over Africa, where it will be used by the Indian government.

The V.A. plans to link 26-30 western hospitals by satellite. Previously, it had used an ATS to link 10 VA hospitals in the Appalachian region.

Projects Described

The Lister Hill Center is providing program coordination and technical support for five major projects sponsored by NIH and the Health Resources Administration: dissemination of the results of NIH-funded research; the Washington-Alaska-Montana-Idaho decentralized medical education program; continuing education programs for dentists and for dietitians, and training in predictive nursing for early child care.

The Association of Western Hospitals plans a physicians' continuous education program which it hopes will provide a model for doctors practicing in remote areas to keep up to date with advances in medicine.

With satellite communications, transmission costs are technically independent of distance, with greater reliability of interactive communications independent of terrain.

Satellite communications are able to carry multichannel signals over greater distance at less expense than conventional communications of similar capability.

STEP Committee Lists Module Topics for 1976

The Staff Training-Extramural Program Committee has several new topics among the eight modules offered in its Continuing Education Program for 1976.

These workshops are specifically designed to meet the needs of scientist-administrators and managers of activities related to grants and contracts—indicated primarily for extramural staff, but intramural personnel may also apply.

To encourage interchange of ideas with the faculty, each module is limited to a specific number of participants, usually 25. Last year 297 employees took part in the program.

Application deadlines are Feb. 9 for the first four modules and May 1 for the later modules.

The 1976 module topics will be:

• An Introduction to NIH Extramural Programs—Mar. 1-4.
• Committee Dynamics—Apr. 8-10.
• Contracts and Grants: Issues and Impacts—May 3-5.
• Public Policy and the Management of Scientific Research and Development—June 7-9.
• Interpersonal Skills and Women and Minority Issues—July 14-16.
• Program Planning, Evaluation, and Analysis—July 26-27.
• Social and Ethical Issues in Public Health Administration—Aug. 22-26.

Application forms, as well as a brochure detailing course content, may be obtained from personnel offices or from the Special Programs Office, Bldg. 1, Room 314, Ext. 65558.

Some of the CTS experiments are extensions of those begun on the ATS-6, the last of the solely U.S. experimental satellites, which in May 1975 was moved from geosynchronous orbit over the western U.S. states to a location over Africa, where it will be used by the Indian government.

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systems. Television or voice signals are carried by telephone lines or microwave relay, with which the cost multiplies in relation to the distance travelled.

The CTS will be the most powerful communications satellite yet put into orbit. Its increased power in the 12-14 GHz or Ku-band range—a superhigh radio frequency previously used only for laboratory experiments—will allow less expensive earth stations to send and receive signals.

This frequency will enable NASA to test a compressed transmission method with more information in each signal, decreasing unit costs.

The transmitting power levels are 10 to 20 times higher than satellites now in use. Thus, smaller and less expensive ground receiving equipment can be used at any location—especially advantageous for service to isolated areas where other forms of communication are not highly developed.

The satellite is planned to be partially operational by February and capable of full use by early April. The Lister Hill Center projects will begin in September 1976, with the full system working by January 1977. Six to ten ground stations and one mobile station are called for, with both sending and receiving capability.

The VA plans to begin its hospital linking project by January 1977, with 500 receiver-only stations and a single mobile transmitter unit.