

Edward Teller has been appointed associate director in charge of physics and head of the physics department at the Lawrence Radiation Laboratory. He succeeds Theodore Merkle, who died recently.

Hugh Odishaw of the National Academy of Sciences has been appointed executive secretary of the National Research Council division of physical sciences. **Lewis Slack** will serve as assistant executive secretary with responsibilities for programs in physics and astronomy.



CREWE

Albert V. Crewe has resigned as director of the Argonne National Laboratory. He will return to full-time research and teaching as professor in the department of physics

and in the Enrico Fermi Institute for Nuclear Studies at the University of Chicago. He has been a member of the University's faculty since 1955. Crewe has served as director of Argonne since 1961 and has held administrative positions there for the past 18 years. No effective date has been set for his resignation and he has agreed to stay on until a successor is found.

Donald E. Cunningham will become dean of research at Miami University as well as professor of physics. He comes from a post at the National Aeronautics and Space Administration where he was on leave from Adelphi University.

Ernst Alexander, head of the physics department at Hebrew University, is a visiting professor at the Textile Research Institute in Princeton.

Satyendra K. Deb has been promoted from senior research physicist at American Cyanamid Company to research associate.

Fritz Coester is visiting professor at the University of Iowa while on leave from Argonne National Laboratory. **Peter D. Noerdlinger**, formerly an as-

sistant professor at the University of Chicago, has been appointed associate professor at Iowa, and **Stamatios M. Krimgis**, a recent Iowa PhD, and **John W. Schweitzer**, a recent PhD from the University of Cincinnati, have been named assistant professors.

Robert A. Harrington has been promoted to the position of research fellow at B.F. Goodrich Company's research center, Brecksville, Ohio.

William B. Schockley of Stanford University, 1956 Nobel laureate in physics, spoke on the recognition and development of creativity at a recent conference on continuing education held by the American Society for Engineering Education.

Wilfred Palmer, formerly assistant professor of physics at Temple University, has joined the Center for Naval Analyses of the Franklin Institute.

Gerald Horwitz has been named assistant professor of physics at the Belfer graduate school of Yeshiva University.

David A. Hill has been named head of the physics department of Vtro Laboratories, West Orange.

Kenneth Smith, professor of applied mathematics at Royal Holloway College, England, is visiting professor at the University of Nebraska. **John Hardy**, of the Atomic Energy Research Establishment, Harwell, and **Sjur Refsdal**, Institute for Theoretical Astrophysics of the University of Oslo, Norway, are also at Nebraska this year as visiting associate professors.

Frederick F. Mills, present director of Midwestern Universities Research Association, will become director of the University of Wisconsin Physical Sciences Laboratory into which the present MURA laboratory facility will be converted. **Stanley C. Snowdon** and **Donald E. Young** of the MURA staff have been appointed professors in nuclear engineering at the UW.

Harold N. Spector has been appointed associate professor of physics at the Illinois Institute of Technology. He

was formerly at the IIT Research Institute. **Howard A. Rubin**, formerly at the University of Maryland, has been named assistant professor, and **Hieme Latal** from the University of Graz and **Marcus Simonius** from the University of Basel have been appointed visiting assistant professors. **John Chrysochoos** has been made research associate in the department.

The University of Massachusetts physics department at Boston has announced the appointment of **Donald H. Lyons**, formerly at Sperry Rand research center, Sudbury, as associate professor, and **Edward S. Ginsburg**, formerly research associate at the University of Pennsylvania, as assistant professor.

Maurice M. Shapiro, **Homer D. Hagstrum** and **Arthur K. Kerman** will join **Lloyd G. Elliott**, **Maurice Goldhaber**, **Kenneth Greisen** and **Joseph A. Burton** as members of the visiting committee which reviews the scientific program of the Bartol Research Foundation.



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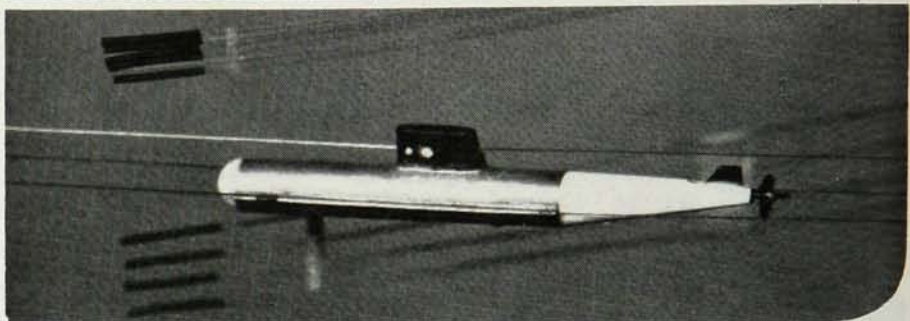
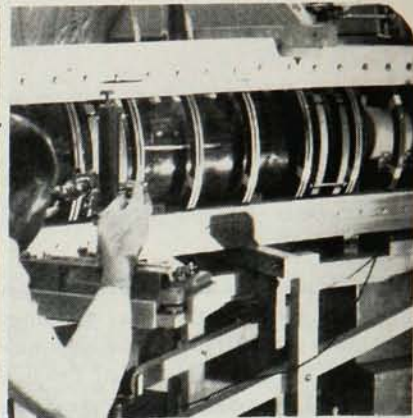
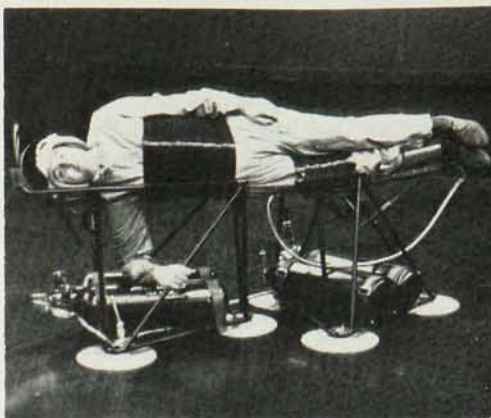
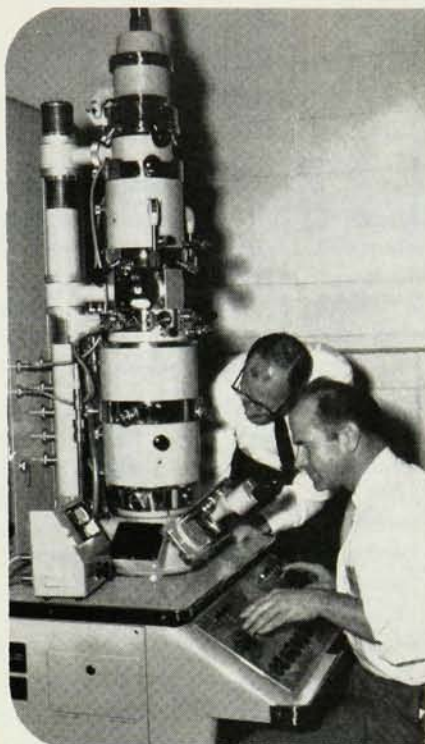
Robert M. Page, who built the first pulse radar for detection of aircraft, has retired as director of research for the Naval Research Laboratory. Page has been associated with NRL

since 1927. It was there he performed his initial work on radar. Over the past 39 years he has actively participated in the development and direction of the Navy's programs of electronic fire control, guidance and detection. He is the holder of the nation's highest honor for career civil servants, the President's Award for Distinguished Federal Civilian Service.

Chandrasekhar Receives National Science Medal

Subrahmanyan Chandrasekhar, professor of theoretical astrophysics at the University of Chicago was awarded one of the eleven 1966 National Science Medals. The medal is in rec-

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Solid State Physics—Senior Scientists (PhD's) to conduct theoretical & experimental research on radiation induced effects in optical materials & electronic materials.

Radiation Effects—Senior Researchers (PhD's) to conduct theoretical & experimental research on the effects of radiation on solid-state electronics.

Experimental Nuclear Physics—Senior Researchers (PhD's) to conduct programs on neutron & charged particle reactions with 3 Mv Van de Graaf.

Nuclear Applications—Senior Scientists (PhD's) to work in the area of space experiments leading to the development of new concepts for space measurements & subsequent experimental programs.

ASW Signal Processing—Senior Scientists (PhD's) to participate in investigations of signal processing techniques such as matched filters, statistical modeling, optimum and adaptive filtering, signal design, optical spatial filtering, space time filtering.

IR Wake Detection—Senior Scientists (PhD's) to participate in investigations of wake and water interactions, wake visualization techniques, and radiometric measurements and techniques.

Applied Mechanics—(PhD's) with specialization in solid mechanics to perform analytical research in such areas as: finite element methods, plasticity, composites, random vibration, structural optimization. PhD's with experimental background to establish laboratory programs in solid mechanics, also required.

Composite Materials—Physical Metallurgist (PhD) to initiate & conduct programs in composites with emphasis on metal systems for high temperature applications.

Mission Analysis—Senior Engineers & Systems Analysts to investigate & define parameters indigenous to various missions & their systems in order to identify necessary long term research programs.

Orbit Determination & Flight Mechanics—Senior Scientists & recent grads to initiate & carry out programs in orbit determination, guidance theory & trajectory analysis. Of particular interest are: Kalman filtering, & maximum likelihood techniques; optimization theory; orbital mechanics, analysis of guidance systems; stochastic control theory.

To arrange an immediate interview, SEND COMPREHENSIVE RESUME to: Mr. Jack Graham, Research Technical Services, Engineering Employment, Dept. GR-87.



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ognition of contributions to astronomy, physics and applied mathematics.

Van Vleck Recipient of National Science Medal

John H. Van Vleck, Hollis professor of mathematics and natural philosophy at Harvard University was awarded a national Science Medal for his extensive contributions to the theory of the magnetic and dielectric properties of materials and also for his role in the development of the theory of molecular structure.

U. of Washington Professor Boris A. Jacobsohn Dies

Boris A. Jacobsohn, 48, professor of physics at the University of Washington, Seattle, died 26 December of a heart attack while skiing. Born in New York City, Jacobsohn received his BS and MS degrees from Columbia University in 1938 and 1939 respectively. During the early stages of the atomic bomb project at Columbia, he worked under Enrico Fermi and then moved with him to Chicago. Jacobsohn received his PhD at Chicago in 1947 for a thesis carried out under Edward Teller. In 1948 after an instructorship at Stanford University he joined the faculty of the University of Washington. He was appointed full professor there in 1959.

During periods of leave he was a member of the Institute for Advanced Study, a NATO fellow at CERN and the Institute of Theoretical Physics at Utrecht, and a visiting professor at the University of Vienna. He was the author of theoretical publications in astrophysics, nuclear physics, elementary particles, magnetism and many-body physics. His early contributions to the study of muonic atoms are still of great importance. He was also known for his theoretical studies of tests for time reversal invariance in strong and electromagnetic interactions. He was a fellow of the American Physical Society and a member of the American Association of Physics Teachers.

Jacobsohn found ideas and problems in all kinds of physical situations but to him physics was an endeavor full of human relationships. Teaching was an important part of his life and

his students were devoted to him. He made friendships with physicists throughout the world. He also was willing to be involved in social issues as exemplified in a general way by his membership in the Federation of American Scientists and in a specific instance when he was one of the plaintiffs before the United States Supreme Court in the recently successful challenge to Washington State's loyalty oaths.

Friends will miss Boris Jacobsohn, a fully rounded person who enriched their lives with his great vitality, warmth, humor and dedication.

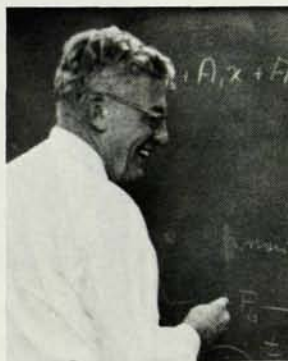
R. Geballe

E. M. Henley

University of Washington

Arthur Lindo Patterson; Crystal-Structure Analyst

The originator of the Patterson function, for many years an essential part of nearly every crystal-structure analysis, Arthur Lindo Patterson, died of a cerebral hemorrhage on 6 Nov. at the age of 64. He was head of the department of molecular structure at the Institute for Cancer Research and also professor of biophysics at the University of Pennsylvania.



PATTERSON

Most of the presently available wealth of information about interatomic arrangements in solids has been obtained through the application of the Patterson method to crystal-structure analyses. This includes our knowledge of complex biological molecules, such as penicillin, DNA and hemoglobin.

Patterson was born in Nelson, New Zealand, on 23 July 1902, and became an American citizen in 1945. He was

educated at Tonbridge School in England. In 1923 he received a BSc and in 1924 an MSc at McGill University in Montreal. He then went to work with Nobel laureate Sir William H. Bragg, at the Royal Institution, London, from 1924 to 1926, under a Moyse traveling fellowship from McGill. From there he went to the Kaiser Wilhelm Institute in Berlin as a National Research Council of Canada fellow, where he met and talked with Max von Laue, Albert Einstein, Max Planck and Walther Nernst. He then went back to McGill where he received his PhD in 1928 and lectured in physics. He was an associate in biophysics at the Rockefeller Institute, New York, from 1929 to 1931 and then worked at the Johnson Foundation, Philadelphia, from 1931 to 1933.

During his time in Germany he developed the idea that something could be learned about molecular-structure analysis from Fourier theory. He was so convinced of this that he spent three years doing private research at MIT from 1933 to 1936. This resulted in his famous paper (*Phys. Rev.*, 1934) on the interpretation of the $|F^2|$ series (so called by him, but generally referred to as the "Patterson function").

In 1936 he became assistant professor of physics at Bryn Mawr College and in 1940 associate professor. Here he wrote a textbook, *The Elements of Modern Physics*, with Walter C. Michels. During World War II in 1944 and 1945 he worked as a physicist at the Naval Ordnance Laboratory in Washington, D. C. In 1949 he left Bryn Mawr to start an x-ray-diffraction group at The Institute for Cancer Research, Philadelphia.

He was a member of the executive committee of the division of physical sciences of the National Research Council and of the executive committee of the International Union of Crystallography. A member of the US national committee for crystallography for several years, he was its chairman in 1948-50. It was in large part through Patterson's patience and tact that the amalgamation of the American Society for X-Ray and Electron Diffraction and the Crystallographic Society of America was achieved with the formation of the American Crystallographic Association.

In the course of his research he