Commissioner to serve out an unexpired two-year term. Due to ill health he left the AEC in 1960 to return to Minnesota but he was soon back in his laboratory and with his students. His continuing interest in nuclear research led to his spearheading the university's effort to obtain a new tandem Van de Graaff accelerator, which is housed in the new John H. Williams Laboratory of Nuclear Physics, dedicated in his name on 3 May 1966.

In returning to university life he did not sever his connection with, nor lose interest in, the government's role in science and particularly the work of the Atomic Energy Commission, on whose General Advisory Committee he was serving at the time of his death. Perhaps his contributions to physics were best recognized by his colleagues through the honor they bestowed upon him in electing him president of the American Physical Society in 1963, a position that he filled with distinction.

John Williams was a teacher, a physicist, an advisor and public servant who responded whenever the nation required his services. His service at the Los Alamos Scientific Laboratory during the period of development of the atomic bomb and his important contributions in the field of low-energy physics at the University of Minnesota are well known.

During his tenure as director of AEC's Division of Research and as Commissioner, considerable expansion of the Commission's efforts in the basic physical sciences was initiated. Authorization for a major construction project in the field of high-energy physics—the Stanford linear accelerator—was sought. His interest in and support of all the Commission's research programs are a matter of record.

In recent years Williams' efforts on behalf of the Midwest scientific community claimed much of his time and met with considerable success. Last year he was appointed president of the Argonne Universities Association, Inc., a body that represents 26 midwestern universities and that will share in the management of Argonne National Laboratory. Activities such as this, plus continuation of his research program on the university's proton linear accelerator project, service on the commission's general advisory commit-

tee and service as president of the American Physical Society, were all accomplished while he struggled against almost overwhelming odds in his battle with ill health. His courage, fortitude and perseverance under these adverse and trying circumstances have inspired us all. His death came while he was still engaged on all fronts. He leaves his wife, a son, Lloyd and two daughters, Susan and Ann, for whom —in spite of his very active life—he always found the time to be a devoted husband and father.

John Williams served the cause of man wherever and whenever he felt he could serve best. When he left the university for the second time to take on government work at AEC, he explained his feeling of having a duty to serve his country as follows: "Every so often you have to put some chips back in the pot. I put some in during World War II and for the past 10 years I have been taking them out. Now I guess the time has come to put more back in."

If we could total the contributions of John Williams during his lifetimeto science, to his government, to his students, to his family and friends-I am sure we would discover that he put far-more "in the pot" than he could have ever hoped to get backexcept perhaps for those intangible rewards that accomplishment brings to a good teacher, scientist, friend and father. For what he has left to science and to his fellow man we should all be very grateful. And we should all be honored to have worked and walked with a man of the stature of John Harry Williams.

-GLENN T. SEABORG

#### Julian Mack

Wisconsin physicist Julian Mack died in a Madison hospital on 14 April at the age of 62. A specialist in various types of spectroscopy and related matters, he served with the Manhattan Project throughout US participation in World War II.

Mack was born in La Porte, Ind., and educated at the University of Michigan, receiving his doctorate there in 1928. After serving as an instructor at Michigan from 1925-28, and as a National Research Council

# **PHYSICISTS**

# VON KARMAN CENTER of AEROJET

offers immediate opportunities for specialists in Re-entry Physics

A major portion of the work will involve optical radiation and its significance in terms of general phenomenology and defensive-offensive values. Problems also exist in the area of data retrieval, involving photographic data recording.

Capabilities are desired at various levels. Applicants should possess recent experience in two or more of the following disciplines:

Spectroscopy
Film Metrology
Plasma Physics
Optical Radiation
Atmospheric Transmission
Detection—Discrimination
Interpretation and Analysis
Digital Information Handling
Re-entry Studies and Phenomena

Please direct your resume to:

R. C. Smith
Aerojet-General Corporation
Box 303P
Azusa, California



An Equal Opportunity Employer

# Here are a few of the ways Xerox is working on graphic communications:

**DEVELOPMENT** of imaging systems, image storage devices, image translation methods, coherent light techniques and materials development.

**DESIGN** of systems, equipment and components for image sensing, image recording, image display, graphic communications and translation devices.

ENGINEERING studies (theoretical and experimental) for photographic systems, electrostatic systems, evaluation determinations and system simulation.

# Here are the kinds of people we'd like to have working with us:

#### RESEARCH PHYSICIST

PhD in Physics or Engineering Physics, with minimum of 3 years' experience, to plan, perform, direct and support studies of new xerographic and other imaging processes to new product activity.

#### SENIOR ENGINEER

MS in Optics or related science, with minimum of 3 years' experience, to investigate high transmission (UV) materials as related to imaging system design. Also study reflective systems as applied to electrostatic apparatus and processes.

These positions are in Rochester, New York. Please forward your resume, including salary history, in confidence to Mr. Robert W. White, Dept. ZVF-103, Xerox Corporation, P.O. Box 1540, Rochester, New York 14603.



fellow from 1928 to 1930, he joined the faculty of the University of Wisconsin as assistant professor and rose to the rank of full professor in 1950.

In 1941 Mack went to Princeton University as an assistant visiting professor. During this period he worked with Henry D. Smyth and Robert R. Wilson on the "isotron" project, an early attempt to separate useable quantities of <sup>235</sup>U by means of a mass-spectrograph device that operated on the principles of the klystron tube. From Princeton he went to Los Alamos Scientific Laboratory where he supervised the filming of the first bomb test in July 1945. He was made leader of LASL's optics group before returning to Wisconsin in 1946.

In his later years Mack was a member of the council of the Federation of American Scientists and prominent among those who called for control of the production of nuclear weapons. He served on the National Research Council's committee on the line spectra of the elements and as scientific attaché of the American Embassy in Stockholm from 1959 to 1961. He was a fellow of the American Physical Society and a member of the Optical Society of America and the American Association of Physics Teachers.

#### Daniel L. Harmon

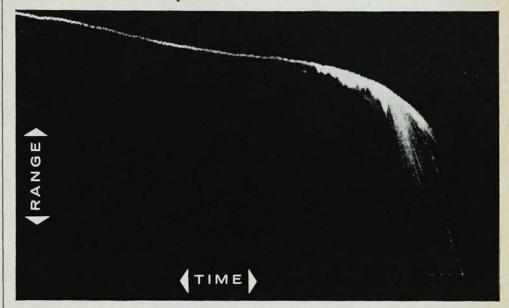
The director of the physics department at the University of Detroit, Daniel L. Harmon, died on 16 April after a long illness. He was 70 years old.

Harmon was born in Milltown, Pa., and received his bachelor's and master's degrees from Pennsylvania State College. His PhD, in experimental and mathematical physics, was from Indiana University. While a graduate student he held an instructorship at Penn State. In 1923 he was named professor of physics at St. Mary-of-the-Woods College in Indiana and remained there until his appointment at Detroit in 1943. After his retirement last year, he taught for a time at Detroit-Marygrove College. A member of the American Physical Society, the Acoustical Society of America and the Optical Society of America, Harmon did research on various aspects of acoustics and on x rays and the ultraviolet. П

## Systems Research at CAL:

## BALLISTIC MISSILE DEFENSE

Since the mid-1950's, Cornell Aeronautical Laboratory, Inc. has maintained a continuing research program in the technologies relevant to ballistic missile defense. Current activities include analytical studies leading to component requirements of various terminal defense concepts as well as planning of field experiments designed to advance such problem areas as interceptor technology. Other efforts concentrate on determining target characteristics useful to AICBM systems and involves definition of potential targets, including their expected motions, both outside the atmosphere and during reentry. Considerable attention is directed toward radar discrimination problems. In an associated area, the Laboratory is participating in a major program to gather accurate radar measurements of reentry vehicles.



Radar Portrait of Athena 4th Stage Breaking up in Reentry

At CAL, systems research encompasses extensive programs for tactical and strategic weapon systems which, in addition to AICBM investigations, include penetration aids for tactical aircraft, new delivery techniques for chemical munitions, command and control techniques for air and sea operations, and advanced research on reconnaissance and surveillance systems.

Experienced personnel are urgently needed for research on systems problems such as these. Positions are available in both Buffalo and Washington.



#### CORNELL AERONAUTICAL LABORATORY, INC.

of Cornell University

of very factual illustrated process	
application blank.	ectus, "A Community
in investigating job opportunities now, bu Research at CAL."	t I would like to see you
State	Zip
	in investigating job opportunities now, bu Research at CAL."