LaTourrette. Maurice Newstein, Nicholas Solimene and **William T. Walter** have been named as research scientists in the electrophysics department. **Stephen Barone** has been named research scientist in the physics department.

Emanuel R. Piore, vice president and chief scientist of IBM, will succeed the late **Lloyd V. Berkner** as treasurer of the National Academy of Sciences. He will serve until the end of Berkner's term in June of 1968.

John A. Llewellyn, now teaching astronautics at Florida State University, Tallahassee and **Karl G. Henize,** of Northwestern's Dearborn Observatory, are due to be astronauts.

Jeremy Bernstein, formerly associate professor at New York University, has become professor at Stevens Institute of Technology, Hoboken, N.J. He will be on leave of absence until February.

Guy C. Omer Jr was appointed chairman of the physical sciences department at the University of Florida. He will succeed **Harold L. Knowles,** who resigned his administrative duties to devote more time to teaching.

Walter D. Knight has been appointed dean of the College of Letters and Science at Berkeley. He succeeds **William B. Fretter,** who has served as dean since 1962. Fretter will return to regular teaching and research duties as professor of physics at the Berkeley campus.

The University of Minnesota has named associate professor **James H. Werntz** as director of the University's center for curriculum studies. He is also director of the Minnesota School Mathematics and Science Center.

Paul G. Klemens, a specialist in solid state physics with Westinghouse Research Laboratories, has been named head of the University of Connecticut physics department. He was formerly principal research officer of the National Standards Laboratory at Sydney, Australia.

Irwin I. Shapiro, formerly a staff researcher at the MIT Lincoln Laboratory, was appointed professor of geophysics and physics at MIT. Shapiro is concerned with theoretical investigation of the anomalous axial rotations of Mercury and Venus.

Alexander Dalgarno, professor of quantum mechanics at Queen's University, Belfast, was appointed to the staff of the Smithsonian Astrophysical Observatory and the faculty of Harvard University.

MCDANIEL

Boyce D. McDaniel, professor of physics and specialist in high-energy nuclear physics, was named director of Cornell University Laboratory of Nuclear Studies. He replaces **Robert Rathbun Wilson** who has been named director of the 200-BeV accelerator to be built near Weston, Ill.

Stanley H. Autler has joined NASA's electronics research center, Cambridge, Mass., as a senior physicist in charge of developing a program of research on superconductive phenomena. He joins NASA from Westinghouse Research Laboratory where he had been manager of cryophysics since 1963.

Richard S. Morgan has been appointed associate professor of biophysics at the Pennsylvania State University. He was a research associate at the Children's Cancer Research Foundation in Boston.

Robert J. Meltzer has been named a vice president of Bausch & Lomb, retaining his position as general manager of the company's special products division.

Charles E. Mandeville, previously a professor of physics at Kansas State University, was named head of the physics department at Michigan Technological University in Houston. He replaces **D. W. Stebbins** who will become vice president of academic affairs at the same institution.

Robert P. Bauman was appointed professor and chairman of the physics department at the College of General Studies, University of Alabama in Birmingham. He was formerly an associate professor at the Polytechnic Institute of Brooklyn.

Frederick Seitz has been elected a trustee of The Rockefeller University. He is president of the National Academy of Sciences.

Alexander Gottschalk, an associate professor of radiology and chief of the section of nuclear medicine at the University of Chicago, was named director of the Argonne Cancer Research Hospital.

Charles F. Yost was appointed assistant to the president of the Argonne Universities Association, an organization of 26 midwestern universities. Prior to his appointment Yost was assistant to the director of research at NASA.

MIT has announced the appointment of four new assistant professors. They are **William K. Rose,** of the Princeton Observatory in New Jersey, **Marlan O. Scully,** formerly an instructor at Yale, **Vytenis M. Vasyliunas,** a staff member of the division of sponsored research at MIT, and **Bradford L. Wright,** a recent graduate of MIT.

Visiting professors for 1967–68 at the University of California, Irvine are **Elias Burnstein** of the University of Pennsylvania, **Bela Szigeti** of the University of Reading, England, **Ija P. Ipatova** of the Joffe Institute in Leningrad and **Pascal Lederer** from the University of Paris. New faculty appointments in physics at Irvine include **Paul Condon** from the University of Maryland as associate professor, **Alfonso Campolattaro,** now at UCI, as acting associate professor, **Philip Coulter,** of UCI, **William Kropp** from Case Institute of Technology and **William Parker** from the University of Pennsylvania as assistant professors.

Nuclear Physicist Receives Navy Civilian Service Award

Maurice M. Shapiro, chief scientist of the laboratory for cosmic-ray physics at the Naval Research Laboratory, was honored with the Navy Distinguished Civilian Service Award for "his scientific leadership and his investigations in cosmic radiation, elementary particle physics and nuclear physics." He was particularly cited for his pioneering applications of nuclear-emulsion methods to high-energy physics.

As chief scientist of the laboratory

Special nuclear effects programs

If your primary interest is high energy phenomena . . . particularly those associated with nuclear effects or space systems . . . you'll be interested in the special nuclear effects programs at General Atomic Division of General Dynamics in San Diego, California.

The Special Nuclear Effects Laboratory was established a number of years ago to carry out research on high-energy flow and interaction effects on materials. The members at General Atomic associated with these programs represent a diversity and depth of experience in theoretical and experimental physics, applied mathematics and engineering. More are needed. Why not investigate this opportunity?

Current activities include analytical, computational and experimental studies of: Radiative and thermodynamics properties • Hypervelocity impact phenomena • Hydrodynamic and radiative energy transport • Nuclear energy characteristics and interaction phenomena • Atomic and molecular scattering phenomena in gases • High temperature material properties • Effects of nuclear explosions on systems • Radiation effects on electronic components and systems • Physics of displacement and ionization radiation effects.

Immediate openings for senior levels include:

SOLID STATE PHYSICIST. Experience in solid state radiation effects on semi-conductor materials and devices. Will supervise research on physics of displacement and ionization radiation effects.

THEORETICAL PHYSICIST. To direct work on nuclear testing programs. Should have experience in computational methods in hydrodynamics, radiation flow and heat transfer. Underground nuclear test experience desirable.

THEORETICAL PHYSICIST. To direct the analysis of radiation interaction effects in material media. Experienced in computational methods, hydrodynamics heat transfer, or related fields and interest in applied physics research.

The above positions require PhD or equivalent and several years of related experience.

Other openings available for:

PHYSICIST-PROGRAMMER. Experienced programmer with good physics background to develop a computer program to solve coupled equations of fluid dynamics, radiation transport, and vaporization in two spatial dimensions. Should be experienced in development of large complex computer programs and be experienced with automatic plotting routines. MA/MS physics or math.

ANALYTICAL ENGINEER. Responsible for the correlation of information from experiments, from hydrodynamic code development and from analysis. Should be a researcher with broad array of talents and interests and a good knowledge of the fundamentals of quantum mechanics. Should be PhD or equivalent with courses in fluid and solid mechanics and knowledge of classical physics.

ANALYTICAL ENGINEER. To work in the areas of hydrodynamics, plastic flow, and continuum mechanics. Should have a background in fluid mechanics, plastic flow, and plasma with heavy analytical characteristics. Will be required to work in a small group devoted to research in hydro codes. Should have PhD degree or equivalent.

PHYSICIST. To assist in radiation effects experiments involving electronics, vacuum techniques, and radiation effects. BS/MS physics and 2 years' experience in laboratory procedures. Should be thoroughly familiar with standard experimental equipment including electronic apparatus.

PHYSICIST. Analyze missile and re-entry vehicle subsystems to determine vulnerability to nuclear environments. Applied physics or engineering advanced degree and experience required.

If these kinds of challenging programs interest you, send your resume in confidence to Manager of Placement, Dept. 225, General Atomic Division, P.O. Box 608, San Diego, California 92112. U.S. Citizenship required. An equal opportunity employer.

GENERAL DYNAMICS

General Atomic Division

for cosmic-ray physics, Shapiro heads a group investigating the composition, energy spectra and other properties of cosmic rays. He was principal investigator for Gemini cosmic-ray experiment S-9, a collaborative project with Goddard Space Flight Center that was flown on Gemini XI.

Last year the Naval Research Laboratory established a chair of cosmic-ray physics to confer special recognition on Shapiro as a distinguished scientist of exceptional accomplishment. He served since 1953 as superintendent of the nucleonics division at the Laboratory. In 1965 he resigned from that position to concentrate on astrophysical research.

Ives Medal Presented To Edwin Land by OSA

For his contributions to optics, Edwin H. Land, president of the Polaroid Corp. receives the 1967 Frederic E. Ives Medal from the Optical Society of America this month. The medal was endowed by Herbert E. Ives, in 1928, in honor of his father, who was known for his early work in color photography and for the invention of the halftone printing process.

Land's principal contributions are in polarized light, photography and color vision. While still an undergraduate at Harvard, he was concerned by the

LAND

fact that polarization was difficult to use in scientific research, although it is a common property of radiation. He conceived the idea of suspending submicroscopic polarizing elements, having the same alignment, in a clear sheet of glass or plastic. The result of this technique was the original polarizing sheet, known as "Polaroid J-sheet." Subsequent research led to the development of a wide variety of crystalline and noncrystalline polarizers.

In photography he is known for the invention of the Polaroid Land camera, that produces pictures instantly. Land's work in optics led him to propose revisions in classical concepts of color vision, when he developed a two-color photographic system that yields a full range of colors. This system suggested a modification of the Young-Helmholtz three-color theory.

George A. Morton Receives David Richardson Medal

For outstanding contributions in the applications of optics, George A. Morton of Radio Corporation of America has been selected as the second recipient of the David Richardson Medal by the Optical Society of America. The medal was established in honor of David Richardson for his contributions to the development of diffraction gratings.

The director of the conversion laboratory at RCA, Morton is widely recognized in the field of applied optics. He has worked extensively in television, electronics, electron optics, infrared imaging, computors, nucleonics and related areas. His developments on photomultipliers for scintillation counting has led to extensive applications in nuclear physics, and his research on photoconductors is the basis for a major portion of current infrared activity.

Arthur H. Compton Award Goes to Norman Hilberry

The Arthur Holly Compton Award for outstanding contributions to education in the fields of nuclear science and engineering has been granted to Norman Hillberry, professor of nuclear engineering at the University of Arizona. The recently established award, which carries a stipend of $1000, is conferred annually by the American Nuclear Society. It is in recognition of the late Arthur Holly Compton, scientist, teacher and Nobel laureate.

Hilberry was a member of the cosmic ray expedition to South America, that was sponsored by the University of Chicago and the US State Depart-