

man University. **Thomas T. Goldsmith Jr.**, chairman, has become supervisor of special science projects and **H. Kennon Carter** of Vanderbilt University will become assistant professor.

Fred C. Unterleitner has been named senior physicist at Optics Technology Inc. He was formerly with General Dynamics.

Robert B. Duffield, director of Argonne National Laboratory, has been appointed professor of chemistry at the University of Chicago.

The National Bureau of Standards has appointed **Roger E. Beehler** chief of the atomic frequency and time standards section, and **James A. Barnes** chief of the time frequency division in the radio standards laboratory at Boulder, Colo.

New additions at the University of Vermont are **R.W. Detenbeck** of the University of Maryland as associate professor and **D.A. Depatie** of Los Alamos as assistant professor.

Appointment to the graduate faculty at Drexel Institute of Technology include **Irwin Goldberg** from Clarkson, **Haywood Blum** from Brookhaven, **Donald C. Larson** of the University of Virginia and **Leo C. Levitt** from Georgetown as associate professors, and **Richard D. Haracz** from Yale, **Joel Levin** from General Electric and **Egon Marx** from Clarkson as assistant professors.

Changes in the physics department at Loyola University are: **James S. Albertson**, on leave at Stanford University, as a National Science Faculty fellow and **Thomas T. Taylor** to acting chairman. **Patrick D. Doherty** and **Mildred M. Moe** were appointed assistant professors.

Visiting theoretical nuclear physicists at Rutgers are **Akito Arima** of the University of Tokyo, **Shiro Yoshida** of the University of Osaka, **George Ripka** of Saclay France, **Pedro Federman** from the Niels Bohr Institute, Copenhagen and **Yoel Tikochinsky** from the Hebrew University, Jerusalem.

Appointments at Northeastern University, Boston, are **Carl Shiffman** of MIT

as professor, **Petros Argyres** from Lincoln Laboratories as visiting professor and **Hyman Goldberg** of Cornell, **James Neighbor** from MIT and **Fa Yueh Wu** from Virginia Polytech as assistant professors. **Donald Kobe** of Oersted Institute, Copenhagen, and **Gerhard Lutz** of DESY in Hamburg are visiting assistant professors.

The National Accelerator Laboratory at Weston, Ill. has appointed **Donald R. Getz**, who was administrative officer for special scientific programs at the University of Chicago, assistant director. He still serves as secretary of the Argonne-ZGS program committee.



GETZ

Willard R. Chappell of the University of California Radiation Laboratory and **Dimitri M. Mihalas** of Princeton were named assistant professors of physics and astrophysics, **Gary E. Thomas** of the Aerospace Corp. has become assistant professor of astrophysics and **Anthony M. Lane**, former head of theoretical nuclear physics at Harwell, England, became visiting professor of physics and astrophysics, at the University of Colorado, Boulder.

Ronald S. Paul has been named deputy director of Batelle-Northwest Laboratory.

Niels Bohr Medal To Isador I. Rabi

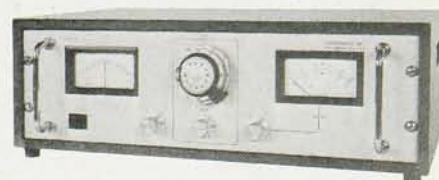
Nobel laureate and University Professor emeritus at Columbia University, **Isador I. Rabi**, has been given the Niels Bohr Medal by the King of Denmark in Copenhagen. The award is presented triennially to scientists or engineers who in a decisive way have contributed to the evolution and peaceful use of atomic energy.

Henry Smyth, Frank Spedding Recipients of AEC Citation

The Atomic Energy Commission has awarded its citation for outstanding service in the nation's atomic energy program to **Henry D. Smyth**, professor emeritus at Princeton University, and

CRYOGENIC TEMPERATURE CONTROLLER

Range: 4.2°K to 300°K
Control: ±0.020°K



CRYODIAL®
Model ML-1400A

FEATURES

- Automatic Operation
- Single Dial Temperature Setting
- Range Extension Switch
- Solid State Modular Design
- Accommodates Sensors with Positive or Negative Temperature Coefficients
- Sensor Power less than 20 Micro-Watts
- Control Power Over 40 Watts
- Filtered DC Output
- Metered Output Power and Control Point
- Cabinet or Rack Mounting

OTHER INSTRUMENTATION

CRYOGENIC AC RESISTANCE BRIDGE

for resistance measurements up to 12 megohms ±.05% absolute, ±.005% relative accuracy with only 10⁻⁶ to 10⁻¹⁰ watts

VLF MUTUAL INDUCTANCE BRIDGE

- Resolution $8 \times 10^{-4} \mu\text{H}$ with 0.05% linearity
- 0.05% Linearity
- Standard Range 200 μH

30 Day Delivery on all items
Write for complete literature

CRYOTRONICS INC.

WEST MAIN STREET • HIGH BRIDGE, N. J.

Phone: (201) 638-6112 TWX: 510-235-3381

NEW

FROM NORTHERN SCIENTIFIC

NS-650 DATA ACQUISITION SYSTEM

- 50 MHz Digitizing Rate
- 6 μ sec Total Memory Cycle
- 8192 Resolution



- Single or two parameter operation
- Digital Zero Offset
- Baseline restoration
- Digital stabilizer provisions
- 10 MHz data scaling
- 5" CRT
- 512-4096 word, 10^5 - 10^6 memory
- Multiplex inputs standard
- 100 KHz crystal clock for MCS-live-clock operation
- Decimal channel identification
- Isometric, contour, profile display
- Live log display
- Selected-area readout
- 16 subgroups
- Modular memory

- DTL integrated circuits
- "Live-static" display
- Complete input-output flexibility

The new NS-650 Data Acquisition System was designed for complete flexibility to efficiently satisfy your specific requirements.

These instruments are truly the most advanced and versatile available today.

Please phone or write for complete information and specifications for this series. Also . . . request information on our new low prices.

Hope to see you at
BOOTH #462
16th annual
American Physics
Society
PHYSICS SHOW
Jan. 29 to Feb. 1, 1968
Palmer House
Chicago
Stop in for your
demonstration

NORTHERN SCIENTIFIC/INC.

P. O. Box 66, Middleton, Wisconsin 53562
Phone 608/836-6511 TWX 910-280-2521

Subsidiary of

TRACOR™

Frank H. Spedding, director of Ames Laboratory, Iowa State University.

Smyth, who is a US representative to the International Atomic Energy Agency, was cited for outstanding contributions to many fields including leadership as a member of the AEC and for furthering public understanding of atomic energy in the "Smyth Report." As a specialist in atomic structure, he was part of the program that produced the first atomic bomb. After the second world war, his reports were instrumental in helping the AEC to develop a nuclear power program.

Spedding received the award for developing processes to produce high-purity metals and for his research in rare-earth elements. At Iowa State University in 1942, he organized the atomic project; he and his staff devised a method to produce high-purity

uranium at low cost, some of which was used in the first self-sustaining reactor operated by Enrico Fermi at Chicago.

Michelson Award Given To Martin Schwarzschild

The fifth annual Albert A. Michelson Award has been presented to Martin Schwarzschild, professor of astronomy at Princeton University. He was honored for his mathematical analysis of the internal structure of red giants stars, for leadership in the theory of stellar evolution and for pioneering application of balloon-born telescopes to high altitude observation of the sun, stars and planets.

The award, which carries an honorarium of \$5000, is given by Case Institute of Technology of Case Western Reserve University. It is presented in honor of Albert A. Michelson, first American Nobel laureate.

Alan Waterman, Leading Science Administrator

Alan T. Waterman, first director of the National Science Foundation, died on 30 Nov. in Washington, D. C. He was born at Cornwall-on-Hudson, New York in 1892 and did both his undergraduate and graduate work at Princeton University, receiving his PhD in 1916. After two years of military service in World War I, he joined the faculty of Yale University where he remained until World War II. From 1941 to 1945 Waterman was associated with the Office of Scientific Research and Development (OSRD), and he served as deputy chief and chief scientist of the Office of Naval Research from 1946 to 1951.

President Truman appointed Waterman the first director of the National Science Foundation in 1951, for a six-year term. In 1957 President Eisenhower reappointed Waterman to the post, and although he reached the age of compulsory retirement before the expiration of his second term, he continued to serve until June 1963 at the special request of President Kennedy.

At the request of PHYSICS TODAY,

John T. Wilson, deputy director of the National Science Foundation, wrote the following tribute:

Among the achievements of a man's lifetime there are, for one reason or another, those that have a personal meaning and for which he would like



WATERMAN

particularly to be remembered. I once teasingly suggested to Alan that of his many attainments, I had a strong suspicion that the one he prized most highly was his mastery of the Scottish bagpipes. With the familiar twinkle in his eye he replied that he would have difficulty choosing between the bagpipes and his certification as a licensed Maine-woods guide.

Alan Waterman received a host of

CRYOGENIC A. C. RESISTANCE BRIDGE

Sensor Power Dissipation
10⁻⁶ to 10⁻¹⁰ Watts



FEATURES

- 0.005% Relative Accuracy
- 0.05% Absolute Accuracy
- Transistorized Modular Design
- Dial Readings direct in sensor "R"
- 3 Terminal Network with Capacitive Compensation
- Includes: Phase Detector for D.C. Readout, Signal Generator, Power Supply and Narrow Band amplifier.
- Optional: Bridge Monitor Oscilloscope for Null Balancing Vert. Sens. 10 MV/CM.

OTHER INSTRUMENTATION

MUTUAL INDUCTANCE BRIDGE

for experiments in magnetic susceptibility in cryogenic temperatures with relative accuracy of 8×10^{-4} microhenries.

CRYOGENIC THERMOMETER

for accurate measurement of temperature from 0.3°K to 30°K with an accuracy of $\pm 0.00001^\circ\text{K}$ at 1°K.

CRYODIAL

for proportional control and indication of temperature from 4.2°K to 300°K, $\pm 0.020^\circ\text{K}$, transistorized modular design.

CRYOLEVEL

for control and indication of cryogenic liquid level.

30 Day Delivery on all items
Write for complete literature

CRYOTRONICS INC.

WEST MAIN STREET • HIGH BRIDGE, N. J.