

AIP presents industrial applications prize to Bobeck

Andrew H. Bobeck, a member of the technical staff of Bell Laboratories, has won the second American Institute of Physics Prize for Industrial Applications of Physics. The award, to be presented at the American Physical Society's March Meeting in New York City (see this issue, page 52), was established to emphasize industrial applications of physics, to publicize and encourage physics research in industry and to enhance awareness of the role of physics in industrial research. Composed of \$5000, a travel allowance and certificate, the industrial applications prize is sponsored by the Institute and is awarded on behalf of the Corporate Associate members of AIP.

Bobeck's citation will read: "For his leading role in the invention and development of single-walled magnetic bubble memory devices which has stimulated new discoveries and understanding in the field of magnetism."

Bobeck earned BS and MS degrees in electrical engineering from Purdue University in 1948 and 1949, respectively. His work at Bell Laboratories began in 1949 with the design of the first solid-state driven core memory and the invention of the twistor memory. Bobeck's interest in magnetic logic and storage devices ultimately led to the magnetic bubble concept of which he is co-inventor. His contributions to bubble technology have included the bubble-propagation techniques of conductor, rotating field (T-bar) and oscillating bias field (angel-fish) as well as the chevron expander detector. Another significant achievement was the observation that garnet materials can be prepared with a growth induced uniaxial anisotropy, a discovery that led to the epitaxial garnet films widely used today. He now supervises research aimed at the development of very high density bubble devices.



BOBECK

Twenty scientists win Medals of Science

President Carter bestowed Medal of Science Awards to twenty scientists at a ceremony in Washington, D.C. on 30 December. The medal, established by Congress in 1959 after the Soviet Union launched Sputnik into orbit, recognizes outstanding achievement in the natural sciences and engineering. Award winners in the physical sciences and engineering include:

Richard Phillips Feynman, Richard Chase Tolman Professor of Physics at Caltech, for his contributions to the quantum theory of radiation and his explanation of the behavior of atomic and subnuclear particles.

Herman F. Mark, professor of chemistry at Polytechnic Institute of New York, for his work in polymer chemistry and his role in the introduction of polymer science as an academic discipline in the US.

Edward Mills Purcell, professor of physics at Harvard University, in recognition of his research on nuclear magnetic resonance in condensed matter and on interstellar magnetic fields.

John H. Sinfelt, scientific adviser for Exxon Corporation Research Laborato-

ries, Linden, N.J., for his work on the nature of heterogeneous catalysis that led to the development of new catalyst systems for the efficient production of low lead gasoline.

Lyman Spitzer, Jr., Charles A. Young Professor of Astronomy at Princeton University, "for important contributions to the theory of star formation and evolving stellar systems and plasma physics, including [the] use of fusion as a source of energy."

Victor F. Weisskopf, Institute Professor of Physics at MIT, for his contributions to our understanding of nuclear reactions and elementary particles.

Emmett N. Leith, professor of electrical engineering at the University of Michigan, for his development and applications of techniques in wavefront reconstruction and holography.

Raymond D. Mindlin, James Kip Finch Professor of Applied Science at Columbia University, for his fundamental work in applied mechanics including photoelasticity, package cushioning, piezoelectric oscillators and ultrahigh frequency vibrations.

Robert N. Noyce, chairman of Intel Corp., Santa Clara, Cal., "for contributions to a variety of semiconductor de-

vices, but especially for the integrated circuit . . ."

Earl R. Parker, professor of metallurgy at the University of California, Berkeley, for his research on flow and fracture in materials and for his development of new, unusually strong and tough alloys.

Simon Ramo, vice chairman of the board, TRW, Inc., Redondo Beach, Cal., for his basic contributions to microwave electronics.

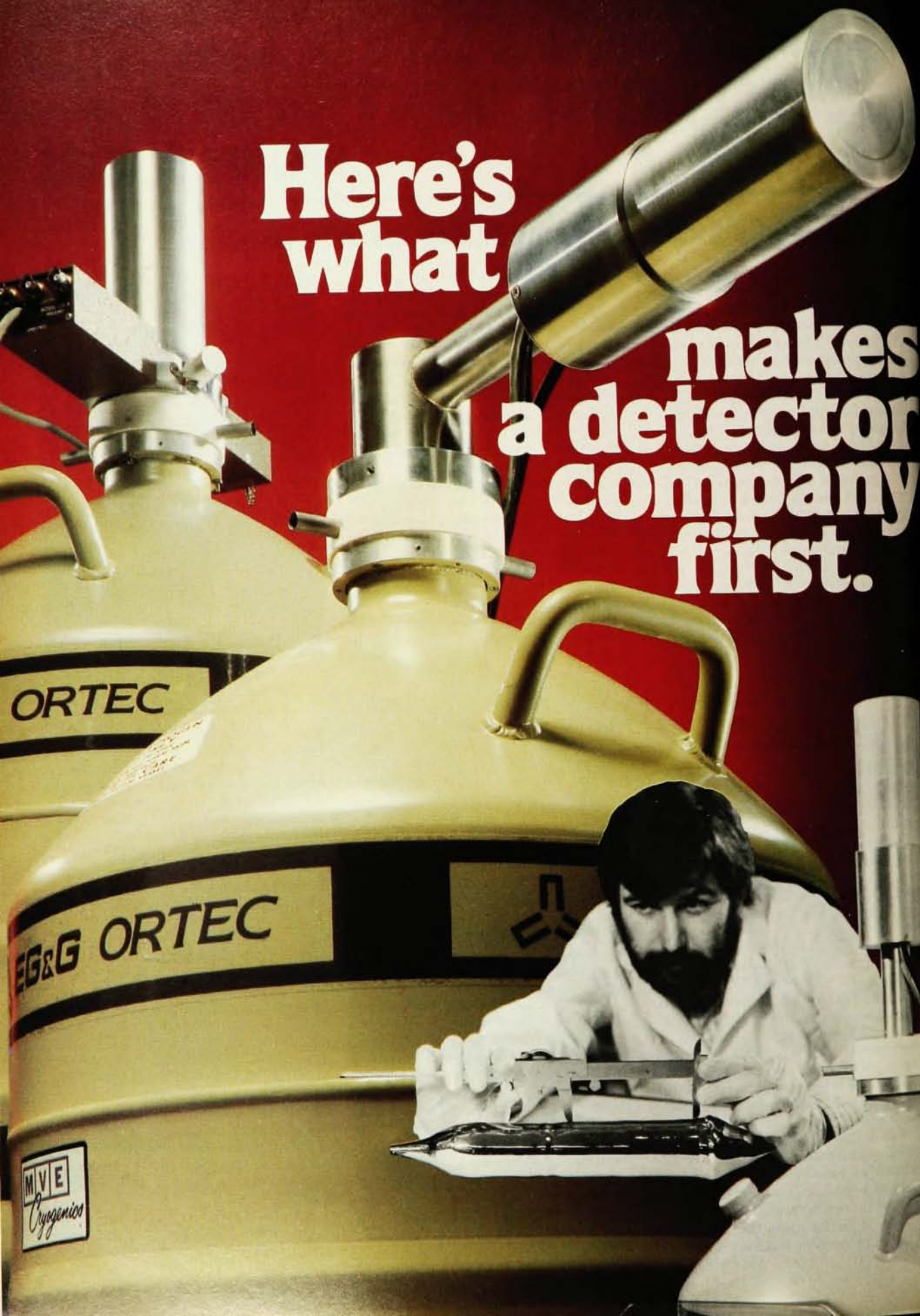
New York Academy honors four physicists

Among the awards presented at the 162nd annual meeting of the New York Academy of Sciences last December were the Presidential Award *in absentia* to Soviet physicist, Andrei D. Sakharov; the Boris Pregel Award for Applied Science and Technology to Ernest D. Courant, and the NYAS Award in Physical and Mathematical Sciences to James G. Glimm and Arthur M. Jaffe. All the awards include a certificate of citation and a \$1500 prize.

Arrested in January (see page 133), Sakharov had been forbidden to leave the Soviet Union in December to accept the

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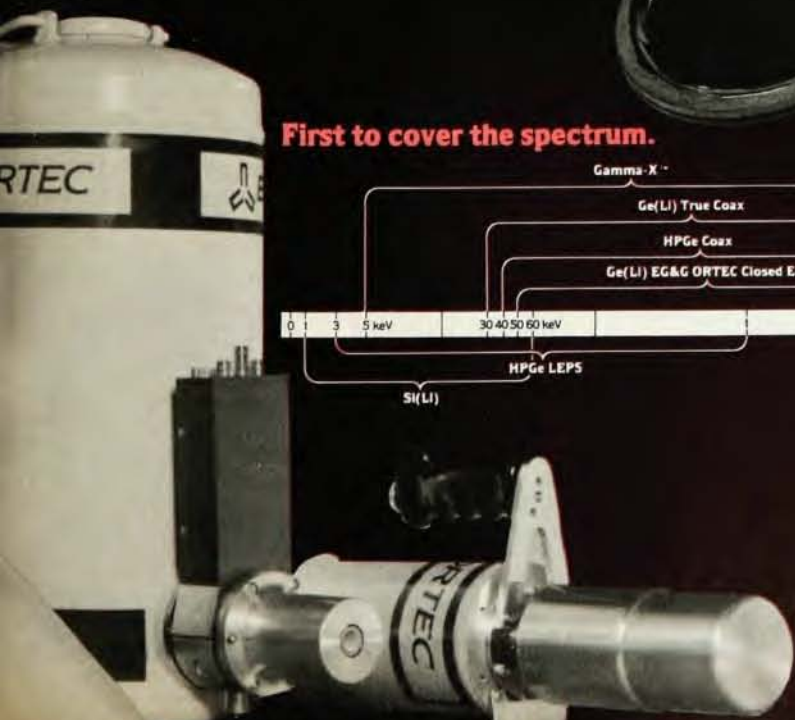
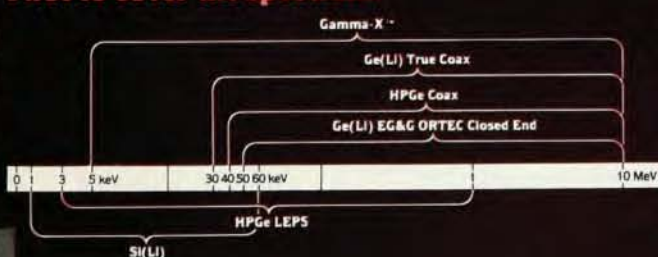
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Presidential Award which is presented "for outstanding accomplishments in science or service to the cause of science." His stepdaughter, Mrs Tanya Yankelovich, did attend and read an acceptance speech in which Sakharov stressed the importance of human rights and the use of the scientific method to solve the world's problems.

Courant, senior physicist at the Brookhaven National Laboratory, was recognized with the Pregel Award for his contributions to the development of high

energy accelerators and in particular for his role in the discovery of the alternating gradient focusing principle. Courant attended Swarthmore College and received his MS and PhD from the University of Rochester. Among his professional positions, he has served with the National Research Council of Canada (1943-46) and Cornell University (1946-48). He has worked at Brookhaven since 1948.

Glimm, professor at Rockefeller University, and Jaffe, professor at Harvard University, were honored "for their important contributions to mathematical

physics." Their work in constructive quantum field theory has established the consistency of special relativity and quantum mechanics. Glimm received his education at Columbia University (PhD, 1959). He has been previously affiliated with MIT (1956-69) and the Courant Institute of Mathematical Sciences, New York University (1969-74). Jaffe has earned degrees from Princeton University and Cambridge University. He had been professionally associated with Princeton (1965-66) and Stanford Universities (1966-67) before he joined the Harvard faculty.

Optical Society selects seven award winners

The Optical Society of America will present awards to seven optical scientists and engineers at its October Meeting in Chicago. The Frederic Ives Medal will be awarded to Aden B. Meinel (University of Arizona); John G. Conway (Lawrence Berkeley Laboratory) will receive the William F. Meggers Award; William T. Plummer and Richard F. Weeks (both of Polaroid Corp) will share the David Richardson Award; the R. W. Wood Prize will go to Anthony E. Siegman (Stanford University); David M. Bloom (Hewlett-Packard Co) will be honored with the Adolph Lomb Medal and Fergus W. Campbell (Cambridge University) will be presented the Edgar D. Tillyer Award.

Meinel will receive the 1980 Ives Medal, the Society's highest award in general optics, in recognition of "his contributions to thermal solar energy, analysis of the principles of coherently combined, independent telescopes, and the leadership he has given to several major optical and astronomical research centers."

He was granted bachelor's and doctoral degrees in astronomy from the University of California, Berkeley in 1947 and 1949, respectively. Meinel then joined the University of Chicago, remaining there until 1953, when he became associate director of the Yerkes Observatory. From 1956 to 1960 Meinel served as the director of Kitt Peak National Observatory after having chaired the National Science



MEINEL

Foundation committee that established the facility. Upon the dedication of the observatory, he went to the University of Arizona as a professor of astronomy, and in 1962 he became the director of the Steward Observatory. Four years later, Meinel began service as the first director of the University of Arizona Optical Sciences Center. He is now a professor at the Center.

Conway was designated the 1980 Meggers Award winner for "the measurement and analysis of actinide crystal and atomic spectroscopy." The Meggers award is presented annually to recognize outstanding work in spectroscopy.

The University of Pittsburgh awarded a bachelor's degree in physics and engineering to Conway in 1944. During that same year he became a member of the Los



CONWAY

Alamos Scientific Laboratory staff, remaining there for two years. After a year as a research associate at Pittsburgh, Conway joined the Lawrence Radiation Laboratory, where he is on the senior staff. His most recent work is laser excitation determinations of ionization energies and energy-levels of lanthanides and actinides.

The co-recipients of the annual Richardson applied optics award, Plummer and Weeks, were cited for "their outstanding program leadership and innovative optical design, their fundamental studies and creative tooling that made possible the accurate and economical high-volume manufacture of the unusual optical system of the SX-70 camera."

Plummer took bachelor's and doctoral degrees in physics from the Johns Hop-



SIEGMAN

PLUMMER



WEEKS



BLOOM



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