

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