stration of a negative spin density at a proton. Finally, McConnell realized that certain nitroxide free radicals had the potential of providing labels for studying molecular motions. His introduction of 'spin labels' has led to a deep understanding of such motions, and to extensive applications in many biological systems of great interest. McConnell received his PhD from Caltech; he has been professor of chemistry at Stanford since 1964, previously serving on the faculty of the California Institute of Technology, the University of Chicago, and as research chemist with the Shell Development Company.

Waugh, of the Massachusetts Institute of Technology, is being honored for "his fundamental theoretical and experimental contributions to high-resolution nuclear magnetic resonance spectroscopy in solids." Waugh succeeded in sharpening the naturally broad and diffuse spectrum in solids by effectively averaging the spin Hamiltonian, using special combinations of externally oscillating fields. His studies have significantly deepened our understanding of the spin Hamiltonian and its role in nmr. In particular, his method for enhancing the signal of diluted spins in the presence of abundant ones became extremely useful for C^{13} nmr in organic solids, where polarization transfer from the abundant protons to the rare carbon spin occurs, while at the same time broadening effects are eliminated. Waugh received his PhD from the California Institute of Technology and has taught chemistry at MIT for 30 years, as the A. A. Noyes Professor of Chemistry since 1973.

All three recipients are former chairmen of the APS division of chemical physics.

Kastler Prize for Theoretical Physics

The International Centre for Theoretical Physics at Trieste has awarded a $1000 prize, medal and certificate to Ganapathy Baskaran, a theoretical and mathematical physicist at the University of Madras who currently is visiting at the Trieste Centre and the International School for Advanced Studies in Trieste. Baskaran has made important contributions to the theory of antiferromagnetic insulators, phase transitions in condensed matter, and lattice gauge theories. The award he received was established in 1982 by the Scientific Council of the International Centre for Theoretical Physics to recognize a young physicist from a developing country who lives and works in a developing country and has made outstanding contributions to some field of physics. The 1983 prize, awarded to Baskaran in May this year, was made in honor of Alfred Kastler, who died last January (PHYSICS TODAY, May 1984, page 101). The 1984 prize will be in honor of Sandoval Vallarta and the 1985 prize in honor of Sigvard Eklund, former director of the International Atomic Energy Agency in Vienna. The International Centre for Theoretical Physics is sponsored by the IAEA and UNESCO.

NSF Distinguished Public Service Award to Abelson

The National Science Foundation has presented its Distinguished Public Service Award, the highest honor it confers to persons not employed by the Foundation, to Philip H. Abelson, a nuclear physicist who has recently retired as editor of *Science* magazine. The award is given periodically to persons who have distinguished themselves through their leadership, public service and dedication in support of American science and engineering fields and education. Abelson has held positions at the University of California at Berkeley, the Naval Research Laboratory and the Carnegie Institution, which he headed as president from 1971 to 1978. His scientific interests have ranged over a number of fields including biosynthesis in microorganisms, petrology, paleobiochemistry and geochemistry. Since 1962, Abelson has been editor of *Science*, a journal of the American Association for the Advancement of Science.

Royal Society elects new foreign members

The Royal Society has elected two physicists among its new foreign members: P-G. de Gennes, professor at the Collège de France, Paris, in recognition of "his many major innovations in theoretical physics—in magnetism, superconductivity, liquid-crystals, polymers and mixed-fluid flows"; and C. Rubbia, professor of physics at Harvard University and senior research officer at CERN, in recognition of "his work as an outstanding initiator of important experiments in new areas of high-energy physics."

New prize for materials research established in Holland

The Foundation for Fundamental Research on Matter (FOM) in the Netherlands has established a prize in honor of Jacob Kistemaker, the recently retired director of the FOM Institute for Atomic and Molecular Physics. The award—which includes a cash prize of Dfl 25 000 (about $9000)—honors research in physics that may lead to a

technological innovation or practical applications.

The first Kistemaker prize has been awarded to W. Werner, of the Institute of Applied Physics in Delft. His work on diffraction gratings has seen applications in astronomy (for example, on IRAS), in energy research (tokamak diagnostics, for example) as well as in other practical applications of spectroscopy.

Chemical Society honors work in crystallography

The American Chemical Society has given the Garavan medal for 1984 to Martha L. Ludwig, of the biophysics research division at the University of Michigan. Ludwig's research has focused on the structure and action of electron-transport proteins. Her work in protein crystallography has elucidated the structural changes that accompany changes in oxidation state in flavodioxin. Her work has established firm reference points in discussions of flavin enzymology.

Ludwig received her education at Cornell (PhD in 1956) and joined the faculty at Michigan in 1967. At Michigan she established an independent program in protein crystallography.

in brief

The Polish Physical Society has presented Marian Smoluchowski medals to **Adriano Gozzini** of Pisa and **Wladyslaw Opechowski** of the University of British Columbia for their contributions to science and to international scientific cooperation.

Ken Thompson and **Joe Condon**, two members of the technical staff at Bell Labs in Murray Hill, N. J., have received a prize from the Fredkin Foundation for developing **Belle**, the first computer to be ranked a National Master rating in tournament chess.

The Tomalla foundation in Vaduz, Liechtenstein, has awarded its first two prizes for outstanding contributions in gravitation and cosmology to **Subrahmanyan Chandrasekhar** (University of Chicago) and **Andrei Sakharov** (Soviet Academy of Sciences).

Thomas H. Lee of the Massachusetts Institute of Technology has been appointed the Director of the International Institute for Applied Systems Analysis, effective 1 September. His predecessor, C. S. Holling, will return to the University of British Columbia at Vancouver, Canada. IIASA is a research organization supported by scien-