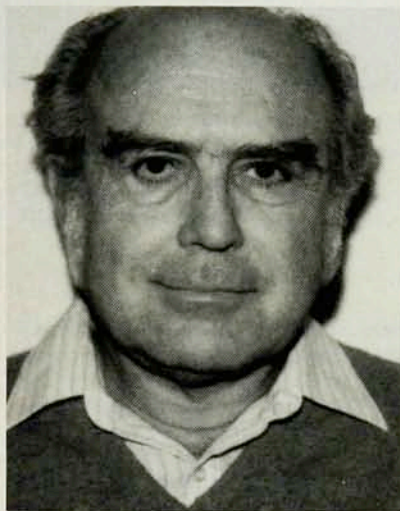


BRUNO ZUMINO AND BRYCE DEWITT RECEIVE DIRAC MEDALS

The International Centre for Theoretical Physics in Trieste, Italy, has named Bruno Zumino (University of California, Berkeley) and Bryce S. DeWitt (University of Texas, Austin) to receive the 1987 Paul A. M. Dirac Medals.

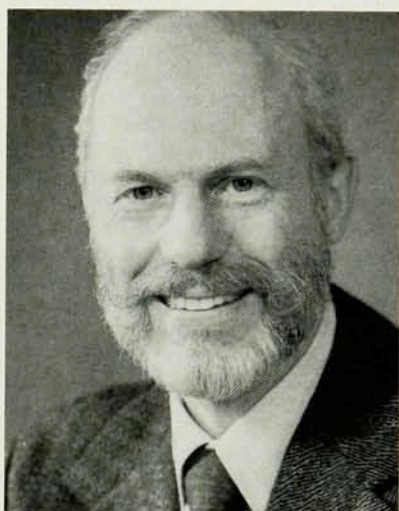
Zumino was honored as one of the "leading experts" in field theory over the last 25 years. He received his doctorate in mathematical sciences from the University of Rome in 1945. He became a research associate at New York University in 1951, was named a full professor in 1960 and served as head of the physics department from 1961 to 1969. In 1969 he went to CERN, where he served as director of the theory division for 1970-73. Zumino went to Berkeley in 1981 as a professor of physics. In collaboration with Julius Wess (University of Karlsruhe, FRG) he contributed fundamentally to the study of chiral anomalies in gauge theories with fermions and formulated a four-dimensional supersymmetry—in particular, the first renormalizable Lagrangian field theories to realize supersymmetry in four-dimensional space-time. In 1976 Zumino and Stanley Deser (Brandeis University) constructed one of the first supergravity theories in four dimensions. In addition, Zumino has worked on applications of Kähler geometry in extended supergravities and of differential geometric methods in the study of anomalies.

DeWitt was cited for his "fundamental contributions to the study of classical and quantum gravity and non-Abelian gauge theory." DeWitt received his BS (1943), MA (1947) and PhD (1950) from Harvard University. He was a Fulbright Fellow at the Tata Institute for Fundamental Research (Bombay, India) in 1951-52 before becoming senior physicist in the Radiation Laboratory of the University of California (Berkeley and Livermore) in 1952. In 1956 he became a research professor of physics at the University of North Carolina (Chapel



Bruno Zumino

Hill); he served as director of the university's Institute for Field Physics. He went to the University of Texas in 1972 as professor of physics and director of the university's Center for Relativity. In 1986 he became the Jane and Roland Blumberg Professor of Physics. DeWitt was one of the pioneers of the quantum effective action; he invented the background



Bryce S. DeWitt

field method; and he helped develop the methodology of ghost loops in gauge theory. In addition, he did work that led to the development of the Wheeler-DeWitt equation, which underlies much work in quantum cosmology, and the Schwinger-DeWitt equation, which finds application in string theory calculations and field theory in curved space-time.

DOE HONORS SIX PHYSICISTS WITH 1987 LAWRENCE AWARDS

The Department of Energy in July honored six physicists with E. O. Lawrence Awards, which are intended to recognize outstanding contributions in science and engineering related to atomic energy. Each award consists of a citation, a gold medal and a \$10 000 prize.

James W. Gordon (Los Alamos National Laboratory) was cited for "his outstanding innovations in the design and development of nuclear weapons with tailored effects, and for his broad achievements in the study of nuclear weapons effects and vulnerability."

Gordon received his BS (1961) and PhD (1968) from the University of Kansas. He was a member of the technical staff at Kaman Sciences (Colorado Springs, Colorado) from 1968 until 1974, when he became a member of the Los Alamos staff. In June 1985 he became leader of the thermonuclear applications group. Gordon has made many contributions to national defense, including the analysis of nuclear weapon designs and weapon systems, and the development of accurate, efficient computer codes for studying weapon effects. He