photo by Heka

Chien-Shiung Wu

of the experiment was to line up the spins of the Co-60 nuclei along the same axis and then to determine whether the beta particles were emitted preferentially in one direction or the other along the axis. In order to reduce the thermal agitation which tends to disrupt the orderly orientation, the crystal was cooled down to a temperature of 0.01°K. The results showed that the electrons were emitted preferentially in the direction opposite to that of nuclear spin and therefore conclusively proved that the beta decay of Co-60 behaves like a left-handed screw.

A native of Shanghai, Dr. Wu was educated at the National Central University in China and came to the United States in 1936 for graduate studies at the University of California. After teaching at Smith College and Princeton University, she joined the Division of War Research at Columbia University in 1944, and became associate professor of physics in 1952 and full professor in 1959. Dr. Wu is a fellow of the American Physical Society and was also awarded the Research Corporation Award in 1959.

The National Academy has presented its James Craig Watson Medal to astronomer Willem J. Luyten of the University of Minnesota. The medal, the Academy's oldest, honors Dr. Luyten's contributions to the understanding of white dwarfs, a class of stellar objects of low luminosity and high temperature, and also of small diameter and high density, which are believed to represent the final state of stellar decay.

Over a thirty-year period, first at Harvard University and later at Minnesota, Professor Luyten has identified more than 80 percent of the approximately 500 known white dwarfs. To discover these objects, Professor Luyten had first to distinguish between distant, luminous stars and much closer faint stars with large angular motions, which he did by comparing photographs of the same portion of the sky taken at ten-year intervals. He then compared photographs of the stars in both red and blue light, and was thus able to distinguish between ordinary red dwarfs and the significant white dwarfs.

Born in the Dutch East Indies and educated at Amsterdam and Leiden, Professor Luyten has served as chairman of Minnesota's Department of Astronomy since 1931. He is a member of the American Astronomical Society and the Royal Astronomical Society of London.

The election of 35 new members was also announced by the Academy in April. They include Freeman Dyson of the Institute for Advanced Study, Harold Edgerton of Massachusetts Institute of Technology, Walter Gordy of Duke University, George H. Herbig of the Lick Observatory, Walter Kauzmann of Princeton University, Tsung-Dao Lee of Columbia University, and Clark Millikan of Caltech.

AGU Awards

The American Geophysical Union presented four awards for distinguished contributions to the earth sciences at a special honors ceremony held on April 21, during its forty-fifth annual meeting.

The Union's third annual John A. Fleming Award was given to Edward O. Hulburt, formerly of the Naval Research Laboratory in Washington, D. C., for his work in geomagnetism, atmospheric electricity, and aeronomy, and for his leadership in national and international programs. In the course of his thirty-year career at NRL, Dr. Hulburt, who was the Laboratory's first director of research, pioneered studies of the atmosphere and ionosphere. In 1925 he deduced the structure of an ionosphere varying in density with altitude and capable of refracting radio signals. He is also credited with early explanations of the origin and behavior of the ionosphere as a response to solar radiation. The NRL has recently established an E. O. Hulburt Center for Space Research in Washington.

Julius Bartels, professor of geophysics at the University of Göttingen and director of the Max Planck Institute for Aeronomy until his death on March 6, was posthumously awarded the twenty-sixth William Bowie Medal. He was cited for his "unselfish cooperation in research". Professor Bartels was known for his applications of statistical procedures to problems involving the effects of solar radiation on the earth's magnetic field. He also applied these methods to the study of the effects of the lunar gravitational field on atmospheric tides and their influence on geomagnetic and ionospheric variations.

Klaus F. Hasselmann of the Institute of Geophysics at the University of California in La Jolla, has received the James B. Macelwane Award. The award is given for outstanding contributions in the geophysical sciences by a young scientist and was presented to Dr. Hasselmann for his work on nonlinear wave interaction.

J. Wallace Joyce of the US State Department has been given a Special Award for his leadership in directing the course of the American Geophysical Union's international affairs and for his service on behalf of geophysics in the United States. As Secretary for International Participation, Dr. Joyce had guided the expansion of the AGU's activities throughout the world. He has also served as head of the National Science Foundation Office for the United States International Geophysical Year Program and since 1958 has directed NSF's Special International Programs.