

# THE MONTH AT CALTECH

## National Academy

**DR. HORACE W. BABCOCK**, astronomer, and Dr. Richard P. Feynman, physicist, have been elected to the National Academy of Sciences, one of the highest scientific honors in the nation. Dr. Babcock is a staff member of the Mount Wilson and Palomar Observatories; Dr. Feynman professor of theoretical physics at Caltech. Their election brings Caltech staff membership in the Academy to 26.

Dr. Babcock has been with the Observatories since 1946. Previously he had been an assistant at Lick Observatory, an astronomy instructor at the University of Chicago (Yerkes and McDonald Observatories), a research associate at the Radiation Laboratory for military radar research at the Massachusetts Institute of Technology, and for four years had engaged in wartime research at Caltech in which he contributed greatly to the development of a rocket-aiming sight for aircraft.

Perhaps his most important astronomical research contribution has been the discovery and intensive investigation of magnetic fields in stars by means of spectroscopy. Studying a phenomenon known as the "Zeeman effect," he has found magnetic fields in some 40 stars and learned a great deal about their properties. He has recently engaged in similar studies of the sun. Skilled in instrumentation, he has produced exceptionally fine optical gratings and developed a number of electronic instruments to improve astrophysical observing.

A native of Pasadena, he was graduated from Caltech in 1934 and got his PhD from the University of California four years later. His father, Harold D. Babcock, a retired Mount Wilson astronomer, is also a member of the National Academy of Sciences.

Dr. Feynman, winner of the \$15,000 Albert Einstein Award and Gold Medal this spring (*E&S*—April 1954) for outstanding contributions to knowledge in the natural sciences, came to Caltech in 1950 after five years with the Laboratory of Nuclear Studies at Cornell University. During the war he was a group leader at the Los Alamos

Laboratory and made important contributions to the development and understanding of the atomic bomb.

Considered one of the world's outstanding young theoretical physicists, he is perhaps best known for his quantum theory of electricity and magnetism, which forms a basis for present understanding of the interactions of atoms with radiation fields. His current interest is in the field of low temperature physics, specifically the theory of liquid helium.

A native of New York, he received the BS degree from M.I.T. in 1939 and the PhD from Princeton in 1942.

Caltech members previously elected to the National Academy include:

Carl D. Anderson, Robert F. Bacher, Richard M. Badger, George W. Beadle, Eric T. Bell (emeritus), Hugo Benioff, James F. Bonner, Max Delbruck, J. W. M. DuMond, Lee A. DuBridge, Paul S. Epstein (emeritus), Beno Gutenberg, D. Foster Hewett, Charles C. Lauritsen, Carl G. Niemann, Linus Pauling, H. P. Robertson, A. H. Sturtevant, Theodore von Karman (emeritus), Frits Went, Oliver R. Wulf, and Don M. Yost. Mount Wilson and Palomar Observatories staff members: Ira S. Bowen and Seth B. Nicholson.

## Guggenheims

**THREE CALTECH FACULTY** members were awarded Fellowship grants by the John Simon Guggenheim Memorial Foundation this month—Dr. Albert E. J. Engel, associate professor of geology; Dr. William A. Fowler, professor of physics; and Dr. Norman H. Horowitz, professor of biology.

Dr. Engel plans to use his grant for laboratory studies as well as for field work next year in the Caribbean and Red Sea areas, the Pyrenees, and the Italian and Swiss Alps. He will continue his research on the changes undergone by some of the oldest sedimentary rocks. He hopes to establish initial characteristics of rocks more than a billion years old to provide clues to the nature of the ancient seas, earth, and atmosphere. A graduate of the University of Missouri, he got his PhD from Princeton in 1942 and joined the Caltech staff after six years with the U. S. Geological Survey.

Dr. Fowler intends to continue his studies of the nature of forces in the atomic nucleus. His major fields of interest have been the structure, energy levels, and transmutation of light nuclei; artificial radio-activity; sources of the energy of the stars; and instrument development. He was graduated from Ohio State University in 1933 and has been on the Caltech staff since he received his doctorate here in 1936.

Dr. Horowitz will use his grant for research in the genetics laboratory of the University of Paris (Sorbonne) starting next September. He plans to continue his study of the role of genes, the units of heredity, in the production of enzymes. He received his BS from the University of Pittsburgh and his PhD from Caltech in 1939, then spent two years at Caltech and five at Stanford, and returned to the Institute in 1946.

### Trustee

**DR. LAWRENCE WILLIAMS**, Pasadena physician, has been elected a member of the Caltech Board of Trustees, filling the vacancy created by the death of Carl F. Braun (*E&S*—February 1954).

Dr. Williams is on the senior attending staff of the Los Angeles County General Hospital and the Huntington Memorial Hospital, where he is chief of staff. He is also associate professor of medicine at the University of Southern California. A member of the Los Angeles County Medical Association, he is its delegate to the California State Medical Association, and a fellow of the American Medical Association. He has been a practicing physician in Pasadena since 1939.

### Philosophical Society

**DR. CHARLES C. LAURITSEN**, Caltech professor of physics, has been elected to the American Philosophical Society, the oldest and one of the most distinguished learned societies in America.

His election at the society's annual general meeting in Philadelphia this spring brings Caltech membership in the society to 12.

The society was started in 1743 by Benjamin Franklin. Its purpose is the promotion "of useful knowledge and the advancement of the liberal arts and sciences." Its resident membership is limited to 500 persons "who have achieved distinction in the sciences or humanities, in letters, in the practice of the arts or of learned professions, or in the administration of affairs."

Professor Lauritsen, a native of Denmark, received the PhD degree at Caltech in 1929, and has been a member of the faculty since 1930. He was one of the first physicists in this country to engage in productive research in nuclear physics, using artificially accelerated particles.

Other Caltech staff members in the American Philosophical Society include Drs. Carl D. Anderson, Walter Baade (Mount Wilson and Palomar Observatories), Robert F. Bacher, George W. Beadle, E. T. Bell (emeritus), Ira S. Bowen (Observatories), L. A. DuBridge, Theodore von Karman (emeritus), Linus Pauling, H. P. Robertson, and A. H. Sturtevant. Retired Mount Wilson astronomers Walter S. Adams and Frederick H. Seares are also members of the Society.

### John Pellam

**DR. JOHN R. PELLAM**, an outstanding investigator in the field of low temperature physics, has been appointed Caltech professor of physics, effective July 1.

Dr. Pellam, chief of the Cryogenic Physics Section of

the National Bureau of Standards, is noted for studies of liquid helium which he has carried close to absolute zero. His work has earned him the Department of Commerce Silver Medal for "outstanding contribution to science through experimental and theoretical investigation of the properties of liquid helium." Last January he received the Washington Academy of Sciences Award for achievement in the physical sciences and in February he was given an Arthur S. Flemming Award "in recognition of his outstanding technical ability."

Dr. Pellam was graduated from the Massachusetts Institute of Technology in 1940 and received his PhD there in 1947.

In 1941-42 he was a research associate at Harvard University, investigating underwater sound. From 1942 to 1945 he was a member of the Navy's Operations Research Group and served as scientific adviser to the anti-submarine forces in North Africa. His war work earned him a Presidential Certificate of Merit.

Before joining the Bureau of Standards staff in 1948, Dr. Pellam was with the Research Laboratory of Electronics at MIT, where he did considerable work in ultrasonics.

### Astronomical Society

**DR. WALTER BAADE**, staff member of the Mount Wilson and Palomar Observatories, last month received the Gold Medal of the Royal Astronomical Society "for his observational work on galactic and extragalactic objects."

This is the latest of several honors conferred on Dr. Baade. In January he was made an honorary member of the Royal Astronomical Society of Canada. Last year he was made a foreign member of the Royal Netherlands Philosophical Society and was elected to the American Philosophical Society.

He has also been appointed to the honorary Charles M. and Martha Hitchcock professorship at the University of California. In this capacity he will be in residence at Berkeley during the month of May and will deliver a series of public lectures, "Galaxies, Their Composition and Evolution."

### Plant Administrator

**WESLEY HERTENSTEIN**, superintendent of Caltech's Buildings and Grounds, was elected President of the Association of Physical Plant Administrators of Universities and Colleges, which held its 41st annual meeting on the Caltech campus this month.

Hertenstein received his BS degree in civil engineering from Caltech in 1925. After six years as a design engineer with the Pasadena Water Department, he came to Caltech as Buildings and Grounds superintendent in 1937.