



*L. A. DuBridge and Arnold O. Beckman
at Caltech groundbreaking.*

The Month at Caltech

Groundbreaking

Caltech entered the construction phase of its \$16,100,000 Development Program on September 16. Ground was broken for the first of 15 new buildings when a signal from Explorer IV activated a power shovel. The ceremony took place at the corner of San Pasqual Street and Holliston Avenue, the site of a new \$600,000 physical plant building.

Although the Development Program has been under way only a few months, a total of \$5,800,000 has already been contributed. Six of the 15 buildings being planned are now assured by specific gifts. The most recent contribution was a gift of \$850,000 for the construction of a 1200-seat auditorium on campus by Dr. and Mrs. Arnold O. Beckman. Dr. Beckman is president of Beckman Instruments, Inc., of Fullerton, California, and a member of the Caltech board of trustees. He received his PhD from Caltech in 1928 and is serving as chairman of the Institute's Development Program.

Faculty Changes

New members of the Institute's staff of instruction and research for 1958-59 include:

Charles E. Crede, associate professor of mechanical engineering, from Barry Controls, Inc., in Watertown, Mass., where he was vice president of the engineering company. He is also a national vice president of the American Society of Mechanical Engineers.

Gordon K. Douglass, instructor in economics, from the Sylvania Electric Corporation in New York where he has been an economist for the past five years. Mr. Douglass received his BA from Pomona in 1950.

Daniel G. Dow, assistant professor of electrical engineering, from Stanford where he received his PhD in June.

Donald F. DuBois, instructor in mathematics, who will receive his PhD at Caltech in June, 1959.

I. S. Edelman, MD, senior research fellow in chemistry, from the University of California Medical Center in San Francisco, where he is chief of Medical Service. A graduate in medicine from Indiana State University in 1944, Dr. Edelman is on a leave of absence for one year to conduct research on proteins and nucleoproteins.

George S. Hammond, professor of organic chemistry, from Iowa State College where he has been professor of chemistry since 1955. Dr. Hammond, who received his PhD from Harvard in 1947, was a research associate in chemistry at Caltech in 1956.

Robert L. Harder, instructor of electrical engineering, is working for his PhD at Caltech. He received his BS and MS degrees from the Carnegie Institute of Technology.

Thomas E. Hull, visiting associate professor of mathematics, from the University of British Columbia in Vancouver, B.C., where he is associate professor of mathematics. He has been at UBC since 1949 when he received his PhD from the University of Toronto.

Robert A. Huttenback, master of student houses and lecturer in history, from a year in New Delhi, India, on a Ford Foundation Fellowship. He is a 1951 graduate of UCLA and served as soccer coach at Caltech for several years.

Robert Jahn, assistant professor of jet propulsion, from the physics department at Lehigh University. Dr. Jahn received his PhD from Princeton in 1955.

John L. Kerrebrock, senior research fellow in jet propulsion, from Oak Ridge National Laboratories where he has spent the past two years as a research scientist. He received his PhD from Caltech in 1956.

Harry A. Kirkpatrick, research associate in physics,

is professor of physics emeritus at Occidental College. He received his BS there in 1914 and his PhD at Caltech in 1931.

James K. Knowles, assistant professor of applied mechanics, from the department of mathematics at the Massachusetts Institute of Technology where he received his PhD in 1957.

W. A. J. Luxemburg, assistant professor of mathematics, from the University of Toronto where he has been assistant professor of mathematics since 1956. He received his PhD from the University of Leiden in the Netherlands in 1955.

Charles J. Mankin, assistant professor of geology, from the department of geology at the University of Texas in Austin. He received his PhD there in June.

Paul D. V. Manning, professor of chemical engineering, from the International Minerals & Chemicals Corporation in Chicago, where he was senior vice president for the past 15 years. He received his MS from Caltech in 1917.

Peter V. Mason, instructor in electrical engineering, received his BS in 1951 and his MS in 1952 from Caltech, and is now studying for his PhD.

Robert M. Mazo, assistant professor of physical chemistry, from the Enrico Fermi Institute of Nuclear Studies in Chicago where he was research associate.

Carver A. Mead, instructor in electrical engineering, received his BS in 1956 and his MS in 1957 at Caltech and is now studying for his PhD.

Dino Morelli, lecturer in mechanical engineering, from Strollee of California in Los Angeles where he has been a design engineer. He received his PhD here in 1946 and was assistant professor of mechanical engineering from 1949 to 1956.

Frances J. Mullin, assistant professor of electrical engineering, from the University of California in Berkeley where he received his PhD in June.

J. B. Oke, assistant professor of astronomy, from the University of Toronto in Canada where he has been assistant professor of astronomy since 1956. He received his PhD from Princeton University in 1953.

Ian Proudman, visiting associate professor of aeronautics, from the Cavendish Laboratory at Cambridge University. He is a Fellow of Trinity College where he holds a university lectureship in mathematics.

Martin A. Reif, instructor in history, has been a teaching assistant at UCLA since 1955 while working for his PhD and also was an instructor at L.A. State College during spring semester.

James A. Roberts, senior research fellow in radio astronomy, from the division of radiophysics of the Commonwealth Scientific and Industrial Research Organization in Australia. He is a senior research officer there.

Willard V. T. Rusch, instructor in electrical engineering, who is studying for his PhD at Caltech. He received his MS here in 1955.

William R. Samples, assistant professor of civil engineering, from Harvard University where he has

been a research fellow since 1955 when he received his MS there.

David R. Smith, instructor in English, from Pomona and Fullerton Colleges where he has been an instructor. He received his BA from Pomona in 1944 and his MA from Claremont Colleges in 1950.

Gordon J. Stanley, senior research fellow in radio astronomy, who has been at Caltech as a research engineer since 1955.

Robert R. Stoll, senior research fellow in mathematics, from Oberlin College in Ohio where he has been professor of mathematics since 1952. He received his PhD from Yale in 1943.

Cecil E. Tilley, visiting professor of geology, from Cambridge University in England where he is professor of mineralogy and petrology. He received his PhD from Cambridge in 1923.

Richard M. Sutton, professor of physics and director of relations with secondary schools, from Case Institute of Technology in Cleveland where he taught science and technology to business executives. He got his PhD at Caltech in 1929 and did research here from 1925 to 1931.

Haruo Takeyama, senior research fellow in engineering, from Hiroshima University in Japan where he is professor of physics.

Jurg Waser, professor of chemistry, from Rice Institute in Houston, Texas, where he was professor of chemistry. He received his PhD here in 1944 and was instructor, research fellow and senior research fellow from 1942 to 1948.

Hatten S. Yoder, Jr., visiting professor of geochemistry, from the Geophysical Laboratory at the Carnegie Institution in Washington, D.C., where he has been a research geochemist since 1942.

H. J. Zassenhaus, visiting professor of mathematics, from McGill University in Montreal, Canada, where he is professor of mathematics.

PROMOTIONS:

To Professor:

John G. Bolton—Radio Astronomy

To Associate Professor:

Allan J. Acosta—Mechanical Engineering

Norman H. Brooks—Civil Engineering

Thomas K. Caughey—Applied Mechanics

Roy W. Gould—Electrical Engineering

Hardy C. Martel—Electrical Engineering

Robert D. Middlebrook—Electrical Engineering

Anatol Roshko—Aeronautics

Alvin V. Tollestrup—Physics

Thad Vreeland—Mechanical Engineering

Ward Whaling—Physics

To Assistant Professor:

Fred C. Anson—Analytical Chemistry

Matthew Meselson—Physical Chemistry

George N. Richter—Chemical Engineering

Winston Royce—Aeronautics

To Senior Research Fellow:
Yuen Chu Leung—Chemistry

ON LEAVE OF ABSENCE:

George W. Beadle, chairman of the division of biological sciences, to the University of Oxford in England, as Eastman Visiting Professor for 1958-59.

Felix Boehm, senior research fellow in physics, to Heidelberg University in Germany for one year as visiting professor of physics.

Richard Feynman, professor of theoretical physics, to Cornell University in Ithaca, N.Y., as visiting professor for the 1958 fall term.

Robert Finn, associate professor of mathematics, for a year of teaching and research at the Technische Universität in Berlin.

Yuan-Cheng Fung, associate professor of aeronautics, to Europe for one year on a Guggenheim Fellowship.

Guido Munch, associate professor of astronomy and staff member of the Mount Wilson and Palomar Observatories, to the Max Planck Institute of Physics in Goettingen, Germany, for a year of research.

John D. Roberts, professor of organic chemistry, to Harvard for six months as visiting professor of chemistry.

Allan Sandage, staff member of the Mount Wilson and Palomar Observatories, to South Africa for research at Radcliffe Observatory in Pretoria and the Royal Observatory in Capetown for five months and to the Royal Greenwich Observatory in England for one month.

Frits Went, in charge of Caltech's Earhart Laboratory, to the Missouri Botanical Gardens in St. Louis as director for one year.

Calvin Wilcox, assistant professor of mathematics, to the U.S. Army Research Center at the University of Wisconsin for one year.

David S. Wood, associate professor of mechanical engineering, to the Massachusetts Institute of Technology for six months as visiting associate professor of mechanical engineering.

DEPARTURES:

Gunnar Bergman, assistant professor of chemistry and mechanical engineering, to Hughes Aircraft.

Arthur Code, associate professor of astronomy, to the Washburn Observatory in Madison, Wisconsin, as director.

Howard M. Dintzis, assistant professor of chemistry, to the Massachusetts Institute of Technology in Cambridge, as a senior research associate in the biology department.

Donald E. Osterbrock, assistant professor of astronomy and staff member of the Mount Wilson and Palomar Observatories, to an appointment in the department of astronomy at the University of Wisconsin.

Robert S. Richardson, staff member of the Mount Wilson and Palomar Observatories, to the Griffith

Observatory in Los Angeles, as associate director.

Harry Rubin, senior research fellow in biology, to the Virus Laboratory at the University of California at Berkeley, as associate professor.

Verner Schomaker, professor of chemistry, to the Union Carbide and Carbon Corporation in New York.

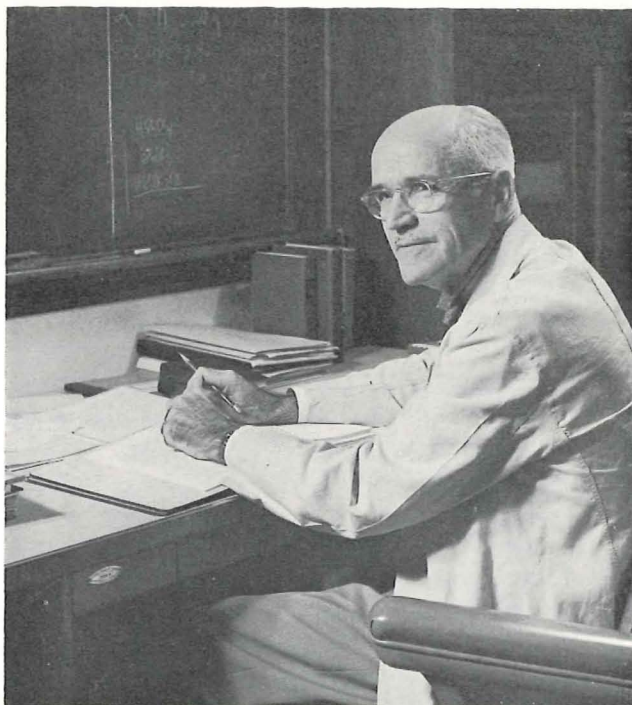
Ronald Shreve, instructor in geology, to the Swiss Federal Institute of Technology in Zurich for one year, on a National Science Foundation Fellowship.

Chemistry Chairman

Ernest H. Swift, professor of analytical chemistry, was named chairman of Caltech's Division of Chemistry and Chemical Engineering this summer. He replaces Linus Pauling, who has resigned to devote full time to his teaching and research, which is currently concerned with the molecular chemistry of mental disease.

Dr. Swift was graduated from the University of Virginia in 1918, then received his MS and PhD degrees at Caltech, and has been a member of the faculty here ever since. During World War II Dr. Swift was an official investigator for the Office of Scientific Research and Development, working on problems related to the identification of chemical warfare agents and their detection in the field.

His most recent pioneering research has been in the development of coulometric analysis—the use of an electric current to measure chemical elements quantitatively. In 1955 he won the annual \$1,000 Fisher Award, given for “outstanding contributions to the science of analytical chemistry.”



Ernest H. Swift, chairman of the Division of Chemistry and Chemical Engineering.