

Front row, left to right: Louis Rader, Frank Capra, William Shockley, Joseph Charyk, Donald Glaser, John Pierce, Saul Winstein, Edwin McMillan, W. K. H. Panofsky, E. Bright Wilson, Jr. Back row: Richard Folsom, James Boyd, James Fletcher, Kenneth Pitzer, Francis Clauser, Charles Townes, H. Guyford Stever, Walter Munk, David Mason, Frank Borman. Not present for the picture: Horace Davenport, Ruben Mettler, L. Eugene Root.

## DISTINGUISHED ALUMNI

Awards are given for outstanding achievement

*For the first time in its 75-year history Caltech presented distinguished service awards, for outstanding achievement in their chosen fields, to 23 of its alumni at the 75th Anniversary Dinner, October 25.*

*"It was clearly a presumptuous action we took," said President DuBridge, "when we decided to pick from among 9,906 alumni 23 who had attained rather special distinction . . . We eliminated from the list of candidates those whom we had already honored by making them members of the faculty or of the board of trustees . . . No one denies that we could easily have found 23 more who also deserved recognition. Some of them we hope to recognize on future occasions. But these 23 are all men of whom any institution could be proud. And we are proud of them."*

FRANK BORMAN, MS '57

"Alumnus of West Point and Caltech, former fighter pilot and faculty member at the November 1966

U.S. Military Academy, he became one of that highly select group of men chosen to be astronauts. His flight in Gemini 7 is the longest manned orbital flight yet made, and he won high praise for his courageous and skillful direction of its complex operation."

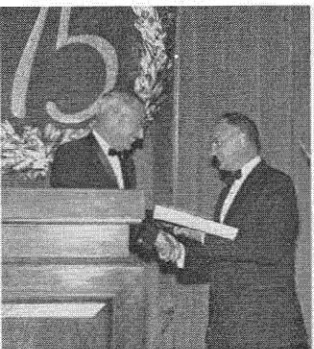
JAMES BOYD '27

"A Caltech graduate whose favorite subject was economics, he became a geologist. He served as Dean of the Faculty at the Colorado School of Mines and later as Director of the U.S. Bureau of Mines. Now, as President of the Copper Range Company, he practices with imagination and skill both economics and geology."

FRANK CAPRA '18

"The dean of motion picture directors, winner of many Academy Awards as director or producer, his creations include some of the most popular and memorable films ever made. He demonstrates that a Caltech education is not a fatal handicap to a distinguished career in the arts."





*Top to bottom: Charyk, Clauser, Henry Borsook accepting the award for Davenport, Fletcher, Folsom, Glaser.*

JOSEPH V. CHARYK, MS '43, PhD '46

"Aeronautical scientist and statesman, he served the United States Air Force as Chief Scientist, as Assistant Secretary for Research and Development, and as Under Secretary. When the Communications Satellite Corporation was formed, he became the first president of one of the most exciting and far-reaching enterprises in the world—bringing the achievements of space technology to the benefit of all people."

FRANCIS H. CLAUSER '34, MS '35, PhD '37

"An aeronautical engineer with wide experience in industry, as well as in teaching and administration, he moved from the Douglas Aircraft Company to the chairmanship of the aeronautics department of the Johns Hopkins University, and is now the Vice-Chancellor of the new University of California at Santa Cruz. Caltech welcomes him as a valued colleague and competitor."

HORACE W. DAVENPORT '35, PhD '39

"A product of both Caltech and Oxford, he has carried on the great tradition set by his teacher, Henry Borsook, by making distinguished contributions in physiology and biochemistry and at the same time cultivating his interests in art and literature."

JAMES C. FLETCHER, PhD '48

"A highly successful executive and director of research divisions at the Hughes Aircraft Company and the Space Technology Laboratory, he organized the Space Electronics Corporation and served as its president and board chairman. In 1964 he was called to the distinguished position as President of the University of Utah."

RICHARD G. FOLSOM '28, MS '29, PhD '32

"Designer and research investigator of hydraulic machines and hydraulic systems, he served as Professor of Mechanical Engineering and Fluid Mechanics at the University of California at Berkeley. His administrative

talents as head of the department there led to his selection as President of the Rensselaer Polytechnic Institute. Under his leadership the oldest civilian engineering school in the country is reaching new heights of excellence."

DONALD A. GLASER, PhD '50

"Nobel Laureate in Physics, inventor of the bubble chamber for detecting atomic particles with which he has made many discoveries in high energy physics, he has now turned his great talents to biology and is Professor of Physics and Molecular Biology at the University of California at Berkeley."

DAVID M. MASON '43, MS '47, PhD '49

"A chemical engineer with three degrees from Caltech, he is now Professor and Executive Head of the Department of Chemical Engineering at Stanford University, which he has made into one of the world's leading groups in that field."

EDWIN M. McMILLAN '28, MS '29

"A physicist who won the Nobel Prize in Chemistry, he made possible great advances in the design and use of particle accelerators and made important discoveries in the chemistry of the transuranium elements. He is Professor of Physics and Director of the Lawrence Radiation Laboratory at the University of California at Berkeley, one of the world's great research centers in high energy physics."

RUBEN F. METTLER '44, MS '47, PhD '49

"Designer and developer of weapons systems in air defense tactics, an authority on airborne electronics systems, formerly head of the Systems Department at the Hughes Aircraft Company and now president of Thompson-Ramo-Wooldridge Systems, he is one of the brilliant young leaders in the aerospace industry."

WALTER H. MUNK '39, MS '40

"A man who knows what the wild waves are saying, he has learned their secrets by applying modern statistical theory to wave propagation in solid and fluid bodies. Recently he has built an outstanding Institute of Geophysics and Planetary Physics at La Jolla."

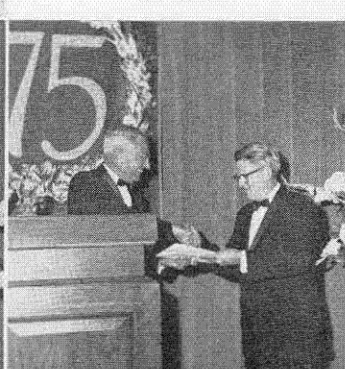


Mason

McMillan

Mettler

Munk



W. K. H. PANOFSKY, PhD '42

"A distinguished researcher in high energy physics and a leader in the development of particle accelerators, he is presently Professor of Physics at Stanford University and Director of the Stanford Linear Accelerator Center. In this capacity he is responsible for the design, construction and operation of one of the world's great nuclear facilities, the two-mile long electron accelerator now nearing completion at Palo Alto."

JOHN R. PIERCE '33, MS '34, PhD '36

"Executive Director of the Research-Communications Sciences Division of the Bell Telephone Laboratories, a recipient of the President's Medal for Science, an authority on electrons, waves and messages, and a pioneer in satellite communications, he is also a gifted expositor of modern science and technology."

KENNETH S. PITZER '35

"A physical chemist who served his country as Research Director of the Office of Scientific Research and Development during the war, he has continued his productive scientific research while making a brilliant career as an educational administrator, first as Dean at the University of California and now as President of Rice University."

LOUIS T. RADER, MS '35, PhD '38

"Vice-President and General Manager of the Industrial Process Control Division of the General Electric Company, an expert on computers and on people as well, he is an electrical engineer who has been a professor but has devoted most of his talents and energy to the development of new and creative enterprises in industry."

L. EUGENE ROOT, MS (ME) '33, MS (Ae) '34

"An aeronautical engineer whose career spans developments from the DC2 through the Agena rocket, he has made outstanding contributions to the development of space power plants, space probes and satellites. He continues his leadership in this field as President of the Lockheed Missiles and Space Company."

WILLIAM B. SHOCKLEY '32

"A Nobel Laureate for his fundamental dis-

*Top to bottom: Winstein, Wilson, Townes, Stever, Shockley, Herschel Brown accepting the award for Root.*

coveries in solid state physics, he caused a revolution in the electronics industry by making possible the development of the transistor. He has worked at the Bell Laboratories, in many agencies of the federal government, and is now Alexander M. Poniatoff Professor of Engineering Science at Stanford University."

H. GUYFORD STEVER, PhD '41

"A wizard with a Geiger counter, he served the M.I.T. Radiation Laboratory during the war, was Chief Scientist of the Air Force, and held several professorial and administrative posts at M.I.T. In 1965 he became President of the Carnegie Institute of Technology and is now the architect of a new university complex there."

CHARLES H. TOWNES, PhD '39

"Nobel Laureate, developer of the maser principle of stimulated emission of electromagnetic radiation, he served Columbia University as Professor and Chairman of the Physics Department, and M.I.T. as Professor and Provost, and now serves as Institute Professor. His wide-ranging talents are in continuous demand by many key government agencies."

E. BRIGHT WILSON, JR., PhD '33

"A chemist who has made outstanding contributions in the field of molecular structure and molecular spectroscopy, he has done pioneering work in microwave spectroscopy and has advanced our knowledge of the barriers to internal rotation in molecules. As Theodore William Richards Professor of Chemistry at Harvard University he has inspired and trained an unusually large number of young chemists who have become leaders in their field."

SAUL WINSTEIN, PhD '38

"Professor of Chemistry at UCLA and one of the world's foremost authorities in the field of chemical reaction mechanisms, his classic research has repeatedly provided evidence that the dynamics of chemical change are systematic, rather than whimsical, natural phenomena."

*Panofsky*

*Pierce*

*Pitzer*

*Rader*

