

# The Month at Caltech

## *Lauritsen Lecturer*

British cosmologist Fred Hoyle came to Caltech last month to give the second annual C. C. Lauritsen Lecture—"Recent Developments in Cosmology"—on October 18 in Beckman Auditorium. Three days later he spoke to an overflow audience in Bridge Laboratory on the question "Is the Gravitational 'Constant' Variable?"

Hoyle's qualifications both for delivering the prestigious Lauritsen lecture and for drawing a full house for anything else he has to say are exceptional. He became a Fellow of St. John's College in 1939, and after six years of service in radio research for the British Admiralty during World War II, returned to Cambridge to serve as University Lecturer in Mathematics. This appointment was superseded in 1958 when he was appointed Plumian Professor in Astronomy and Experimental Philosophy.

In 1967 Hoyle founded and became the first director of the Institute of Theoretical Astronomy in Cambridge—now one of the highest ranking international institutions in astrophysics and cosmology. He was elected a member of the Royal Society in 1957 and served as its vice president in 1970; and he is currently president of the Royal Astronomical Society, and a Foreign Associate of the U. S. National Academy of Sciences and the American Academy of Arts and Sciences. In 1968 he was awarded the Kalinga prize and the Gold Medal of the Royal Astronomical Society.

Although Hoyle is an originator of steady-state cosmology and a contributor to the concept of nucleosynthesis in stars and supernovae, his interests



*Fred Hoyle*

extend far beyond astrophysics. Subjects on which he has written books range from politics and sociology, through abstract science, to science fiction. He has also written a space play for children and a space serial for television. In addition, he is the author of an opera libretto.

Hoyle is a visiting associate in physics at Caltech—an association that dates back to 1952 when he walked into Kellogg Radiation Laboratory and announced that his calculations on the structure of Red Giant stars convinced him that there was an excited state in the carbon-twelve nucleus near the threshold for formation from three-helium nuclei. Experiments quickly proved him right, and he has since returned frequently to the campus to confer with Institute physicists and astronomers. In recent years he has been working with William A. Fowler, Institute Professor of Physics, on supermassive objects in the universe.

## *Here to Stay*

There are 29 girls in the new freshman class—the same number as last year. (There are also three transfer students this year: two sophomores and one junior.) There were more applicants this year, 86 compared to 77; and 44 of these were accepted, compared to last year's 39. A look at the application files for both sexes shows that the girls' science interests and experience are indistinguishable from those of the male applicants. Even their hobbies are similar—scuba diving, fencing, photography, and music, for example.

All but one of Caltech's first freshmen women weathered their first year at the Institute, and all but one have come back for their sophomore year. Even the girl who is not returning plans to come back after one year at another college.

Each of the sophomore girls seems to have the same basic attitude toward her first year—the nadir of the experience came in the second term when it was hard to have any perspective on their first term's work. In spite of the solace of the pass-fail grading system, most girls felt they were skating on thin academic ice. In fact, one girl—her bags packed—went to the dean's office and announced that she was a failure and would leave that same day. A check-up on her work revealed that her test grades were no lower than a majority of the others in her classes—male *or* female. She had just run into that old nemesis of the straight-A high school student at Caltech: enduring the change from being a big frog in a relatively small scholastic pond to being a little frog adrift in a big, deep lake.

Caltech's first coeds ran into heavy social pressures during the first term too; all too many of the male students were so intrigued by their novelty that they

## Some Faculty Honors and Awards

almost haunted the girls. ("You've got to admit," said one young woman, "that the ratio of 50 men to one girl is pretty weird.")

But the situation eased as soon as (a) the boys realized that in many ways the girls were no different from themselves and (b) the girls, getting a taste of the academic work load, faced up to holing up with the books or flunking out.

What the girls appreciate most—and had not expected—is the concern and the attention given them by faculty members. "It's amazing how personalized the whole atmosphere is," one girl says. "I can't get over how many people here seem to care whether I make it or not." (This is the girl, incidentally, who applied for Caltech because her current boy friend was applying. She made it; he didn't.)

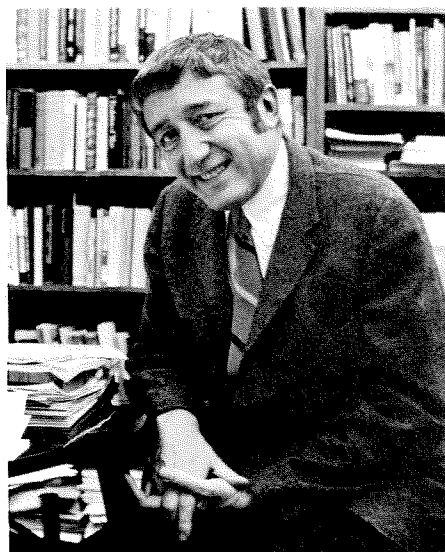
Admission standards were not lowered in the slightest for the girls, so no girl came to Caltech unless she was really strong on science and interested in pursuing it. One girl pointed out that a lot of her mother's friends assumed she was at Caltech in order to catch a husband. "It's a laugh," she declares. "If that's what I was in college for, I wouldn't be at Caltech. I'm here because I want to learn science."

### Graduate Studies

Stirling L. Huntley, former administrator at the University of Hawaii, has been appointed associate dean of graduate studies. He succeeds Harold Lurie, professor of engineering science, who is on leave of absence, and he will assist C. J. Pings, Caltech's vice provost and dean of graduate studies.

Huntley went to the University of Hawaii in 1969 as director of admissions, and later became director of participant services. From 1959 to 1969 he served in Stanford University's admissions office, the last four years as director of transfer and graduate admissions.

Born in Los Angeles, Huntley received his bachelor's degree from UCLA and a PhD in speech and drama from Stanford.



Harrison Brown

#### Harrison Brown

Harrison S. Brown, professor of geochemistry and of science and government, was elected president of a UNESCO-sponsored Intergovernmental Conference for the Establishment of a World Science Information System (UNISIST) held in Paris in October. UNISIST is an acronymic term that stands for both the proposed system and a three-year feasibility study that preceded the Conference.

The Conference, attended by delegates from more than 70 nations, was held to review the recommendations made by the UNISIST Committee and published in its report. The feasibility study, which lasted from 1967 to 1970, was headed by Brown and conducted jointly by UNESCO and the International Council of Scientific Unions.

#### Harold Brown

President Harold Brown has been elected to the board of directors of the Times Mirror Corporation.

#### Dan Campbell

Dan H. Campbell, professor of immunochemistry, has been honored by the California Museum of Science and Industry's Committee for Advance Science Training for the intensive training in biomedicine that he has provided for students. Campbell is internationally known for his research in allergens and skin-sensitizing antibodies. He received a plaque in a special ceremony on October 16 at the museum in Los Angeles.



Dan Campbell

#### Robert Huttenback

Robert A. Huttenback, professor of history, dean of students, and acting chairman of the division of humanities and social sciences, has received the third annual Walter D. Love Memorial Prize for his book *Gandhi in South Africa*. The Conference on British Studies made the selection for the award, which consists of a citation and an honorarium, and it was presented at Roosevelt University in Chicago on October 30.



Jack E. McKee

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Jack E. McKee, professor of environmental engineering, has been named an honorary member of the Water Pollution Control Federation. McKee, who is acknowledged as one of the world's foremost experts on water quality, was cited for his "distinguished career as a teacher and consulting engineer." The Water Pollution Control Federation, of which McKee was once president, is a technical group whose 23,000 members and subscribers offer the most authoritative cross section of views on the subject of water pollution control.

#### Edwin S. Munger

Edwin S. Munger, professor of geography and a specialist on sub-Saharan Africa, is the new president of the L. S. B. Leakey Foundation. The Los Angeles-based foundation, named in honor of the famed anthropologist, L. S. B. Leakey, was set up three years ago to support the study of man, his origins, evolving nature, and the future of the environment.



Edwin S. Munger

#### Olga Taussky Todd

Olga Taussky Todd, professor of mathematics, has won one of the annual Lester R. Ford Sr. awards of the American Mathematical Association. A maximum of six of these awards are given yearly for articles published in the *American Mathematical Monthly* and selected for honor by a panel of judges.

Olga Todd received recognition for her article, "Sums of Squares," which covers a wide mathematical survey of algebra, number theory, analysis, and topology. The article discusses very modern mathematical theories, links between older theories, and other aspects of Dr. Todd's work.

#### George S. Hammond

George S. Hammond, Arthur Amos Noyes Professor of Chemistry and chairman of the division of chemistry and chemical engineering, is one of ten recipients of the 1971-72 E. Harris Harbison Awards for Gifted Teaching. The grants, in the amount of \$10,000, are given by the Danforth Foundation and are named for a former member of its board of trustees. The award was presented to Hammond at a dinner in St. Louis on November 6.

Caltech's official nomination of Hammond for the award emphasized two aspects of his career as an educator: first, the close professional and personal interaction he has encouraged and maintained with his undergraduate and graduate students throughout his distinguished scientific career; and second, the tremendous contribution he has made to the growth of chemical education in general through public lectures, writing, and restructuring both individual courses and entire undergraduate curricula. These efforts have influenced the education of thousands of students in the United States and abroad.

#### Roger W. Sperry

Roger W. Sperry, Hixon Professor of Psychobiology at Caltech since 1954, has received the Distinguished Scientific Contribution Award of the American Psychological Association. The award, which includes a \$1,000 honorarium, was presented to Sperry at the Association's 79th annual meeting in Washington, D. C., this fall. It recognized Sperry for advances in the study of brain function resulting from the split-brain surgical technique that he developed.

Out of his work has come the discovery that animals and man have two personalities, and the knowledge that man's two cerebral hemispheres are specialized—the left hemisphere dealing with language and the right hemisphere with special problems and some forms of creativity.