## THE MONTH AT CALTECH

## National Academy of Sciences

JESSE L. GREENSTEIN, professor of astrophysics and staff member of the Mount Wilson and Palomar Observatories; and Howard J. Lucas, professor of organic chemistry, emeritus, were elected to the National Academy of Sciences last month—bringing Caltech staff membership in the Academy to 30. The Academy offers membership to only 500 American citizens and 50 foreign associates who have made valuable contributions in scientific research.

Dr. Greenstein has made a number of important investigations of stellar atmospheres and of the material



Howard J. Lucas, professor of organic chemistry, emeritus



Jesse L. Greenstein, professor of astrophysics

in interstellar space. His spectrographic studies are now yielding fundamental data on cosmic chemistry, especially on the questions of relative abundances of various atoms and whether all stars have the same composition. Of special interest is his investigation of the abundances of certain elements that are subject to thermonuclear disintegration. This particular branch of his research has led to important conclusions regarding the evolutionary processes in the interiors of stars and the formation of elements.

Dr. Greenstein was graduated from Harvard University in 1929 and received his MA there in 1930. After several years in business in New York, he returned to Harvard where he received his PhD in 1937. He came to Caltech in 1948, after eight years as a member of the staff of Yerkes Observatory.

Dr. Lucas, a member of the Caltech faculty for 40 years prior to his retirement in 1955, helped to modernize the field of organic chemistry. He was one of the first chemists to recognize the value of electronic interpretations of chemical data, and he made numerous contributions to the understanding of the electronic structure of organic molecules. In 1935 he established the pattern for all modern elementary organic chemistry textbooks with his Organic Chemistry.

A graduate of Ohio State University, Howard Lucas received his MA there in 1908. In 1909-10 he served as a teaching fellow in chemistry at the University of Chicago, then went to work as an assistant chemist for the United States Department of Agriculture. He came to Caltech in 1913. He received the Scientific Apparatus Makers Award of \$1,000 as "the outstanding chemistry teacher in the United States in 1952." And, in 1953, he was awarded the honorary degree of Doctor of Science by his alma mater, Ohio State.

ENGINEERING AND SCIENCE