

# The Month at Caltech

## *Commencement*

At Caltech's 66th annual commencement on June 10, a total of 352 students received degrees—145 Bachelors of Science, 134 Masters of Science, 65 Doctors of Philosophy, and 8 Engineers. A total of 42 students graduated with honor.

The Frederic W. Hinrichs, Jr., Memorial Award for the year's most outstanding senior went to Leroy E. Hood.

The commencement address was delivered by Barnaby C. Keeney, president of Brown University in Providence, Rhode Island. Dr. Keeney, a graduate of the University of North Carolina, received his MS in 1937 and his PhD in 1939 from Harvard University. He served as an instructor of history at Harvard until he entered the Army in 1942. In 1946 he became assistant professor of history at Brown. He was appointed Dean of the College in 1953, and president in 1955.

## *Retirement*

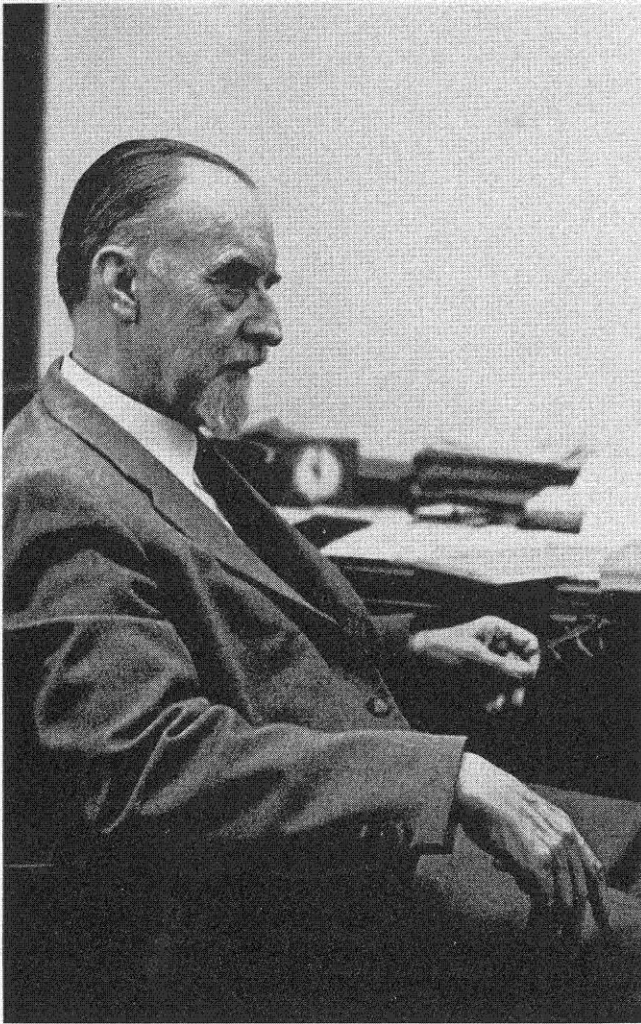
Retiring this month: R. R. Martel, Caltech professor of structural engineering; and Rudolph L. Min-

kowski, staff member of the Mount Wilson and Palomar Observatories.

Romeo R. Martel has been a member of the Caltech faculty for 42 years. A native of Iberville, Quebec, Dr. Martel graduated from Brown University in 1912. He taught civil engineering for a year at Rhode Island State College, then at Mechanics Institute in Rochester, New York, for another year. In 1918 he was working for the Atchison Topeka and Santa Fe Railroad in Amarillo, Texas, when he was asked to teach at Caltech.

In 1921 Dr. Martel served as a consultant on the construction of Pasadena's San Rafael bridge. He went on to be consultant on bridges for the cities of Pasadena and Glendale, the State of California, the Southern Fuel Company, and the Southern Counties Gas Company.

He has been consultant for the design of flood control structures and reservoirs for the U.S. Army Engineers in Los Angeles, and for the cities of Glendale, Burbank, and Riverside. He has served on the Advisory Committee of Engineering Seismology since 1947. In 1952 the 13 original members of the committee set up the independent, non-profit Earthquake



*R. R. Martel, professor of structural engineering.*

Engineering Research Institute which promotes research with the specific objectives of developing safe and economically feasible methods of earthquake construction and design. Dr. Martel is also a life member of the American Society of Civil Engineers.

Rudolph L. Minkowski has been a staff member of the Mount Wilson and Palomar Observatories for 25 years. On the eve of his retirement Dr. Minkowski has made one of the greatest discoveries of his career. Using Palomar's 200-inch Hale telescope, he has photographed a celestial object that is about six billion light years away — the most distant object ever identified.

The new find is exciting to astronomers because it may have an important impact on current cosmological theory. The object is a galaxy, or a pair of galaxies in collision, and it is receding from the earth at nearly half the speed of light. The rate of recession (90,000 miles a second) is the fastest ever measured.

The speed is determined by photographing a spectrum of the object — a significant scientific accomplishment in itself, since it is immensely difficult to obtain spectra at such a distance because of the night sky's own spectrum which veils spectra of faint, distant objects.

The discovery was made through Dr. Minkowski's skilled use of the telescope, and through radio signals pinpointed by astronomers at the Caltech Radio Observatory in Owens Valley.



*Rudolph L. Minkowski, staff member of the Mount Wilson and Palomar Observatories.*