

sion under the personal direction of Professors Fermi, Bloch, Goudsmit and Uhlenbeck, at which recent developments of theoretical physics will be discussed. Holders of the doctor's degrees may attend all sessions as guests of the university.

In addition to the symposium proper, the department of physics offers a very complete schedule of graduate courses, with special facilities for research in the following fields: spectroscopy, throughout the entire spectrum from x-rays to the far infrared, chemical analysis by spectroscopic methods, sound, vacuum tube phenomena and high-frequency measurements. For additional particulars and announcements address the director of the Physical Laboratories, University of Michigan.

### THE HARVARD SUMMER GRADUATE SCHOOL OF ASTRONOMY

THE summer of 1935 marks the inauguration of the Harvard Summer School of Astronomy which is to meet concurrently with the Harvard Summer School of Arts and Sciences. While, in the past, the department of astronomy has offered instruction in elementary astronomy during the summer and has made available facilities for research under the guidance of members of the staff of the observatory, this reorganization of summer instruction provides particularly an extension of the opportunities for advanced instruction, for the pursuit of research, and for profit from informal conferences and colloquia. At the same time the program of elementary instruction has been extended.

The staff of the department is enlarged during the summer session by a number of visiting astronomers who offer seminars in their special fields, contribute to the informal discussions, and assist in the guidance of those engaged in research.

The equipment available to graduate students at the observatory and at the astronomical laboratory includes:

1. The collection of some 400,000 photographic plates accumulated by means of the many photographic telescopes at the three stations of the observatory—at Cambridge, at Oak Ridge and at the southern station, formerly at Arequipa, Peru, but, since 1927, at Bloemfontein, South Africa.

2. The library containing a complete collection of current journals, publications of observatories and astronomical treatises.

3. The telescopic equipment at Cambridge and Oak Ridge, comprising five visual telescopes with apertures ranging from 15 inches to 6 inches, fourteen photographic refractors with apertures ranging from 16 inches to 1½ inches, the 24-inch reflector and the 61-inch Wyeth reflector equipped for photoelectric and spectrographic work. The Oak Ridge Station is located in the town of Harvard, 25 miles west of Cambridge, is easily accessible

and possesses dormitory facilities for those engaged in observational work and a cottage for recreational purposes.

4. Accessory equipment comprising a Schilt photometer, a Moll microphotometer, a new microdensitometer, measuring machines, star-counting machines and telescopic photometers for use in visual variable-star photometry.

5. A completely equipped machine shop located at the Astronomical Laboratory, available for the use of those engaged in graduate study who desire to experiment in the construction of special apparatus.

Members of the visiting staff include:

Dr. Ira S. Bowen, of the California Institute of Technology, known for his solution of the riddle of nebulae and for his other applications of atomic theory to the prediction and verification of unidentified lines in astrophysical sources.

Dr. Freeman D. Miller, of Denison University, engaged in studies of the structure of the Milky Way on the basis of star counts.

Dr. Peter M. Millman, of the University of Toronto, an authority on meteors and meteor spectra.

Dr. Antonie Pannekoek, of the Astronomical Institute at Amsterdam, known for his studies of the galactic system and in recent years interested in problems dealing with the production of spectral lines in stellar atmospheres.

Dr. Otto Struve, director of the Yerkes Observatory of the University of Chicago, known for his interest in the spectroscopic problems that the stars present and for his contributions to the study of interstellar matter.

Dr. Olin C. Wilson, of the Mount Wilson Observatory, whose work concerns the interpretation of stellar spectra and related astrophysical problems.

### PRESIDENT ANGELL AND THE SOCIETY OF EXPERIMENTAL PSYCHOLOGISTS

TRIBUTE was paid to President James R. Angell, of Yale University, as a pioneer and leader in the development of the science of psychology at a dinner given in his honor on April 5 in New Haven by a group of leading psychologists. Professor Walter R. Miles, president of the Society of Experimental Psychologists, in session at Yale, introduced President Angell and called attention to the fact that thirty years ago he became full professor of psychology at the University of Chicago and first head of the department in which many distinguished psychologists have been trained. A correspondent writes:

"For fifteen years President Angell was intensively engaged in experimentation and his scientific contributions are many. He also wrote a text-book on psychology which was the first after that of William James to come into wide-spread use in schools and colleges and to become an important factor in the dissemination of knowledge of psychology. He was for many years editor of *The Psychological Monographs*,