

physics teaching as well as comparative studies of various course materials. Additional seminar courses at three or four other centers have been proposed for the spring semester.

"Our project is still fluid," says Dr. Youngner. "We are going to test out our proposals in the field, and we hope to find the best means of increasing high-school physics enrollments and revitalizing physics teaching, not only in New Jersey and Delaware but in other states as well."

Astronomical Society Officers

At the annual business session held during its summer meeting in Ann Arbor, Mich., the American Astronomical Society elected Bengt G. Strömberg of the Institute for Advanced Study to the office of president-elect, and Albert E. Whitford, director of the Lick Observatory, as second vice president. Dr. Whitford joins Richard Tousey of the Naval Observatory (first vice president), whose term expires in 1966.

Dr. Strömberg is a native of Göteborg, Sweden, who was educated, and eventually served as professor, at Copenhagen University. His early research was in the theoretical astrophysics of stellar interiors, stellar atmospheres, and interstellar matter. Following investigations by Sir Arthur Eddington, he showed that the amounts of hydrogen and helium in stellar interiors greatly exceeded those of heavier elements. He also did work on the solar atmosphere that led to a determination of its abundances of hydrogen and metals and on the relative abundances and ionization of hydrogen and metals in interstellar space. In recent years, Dr. Strömberg has been engaged in spectral classification through photoelectric narrow-band photometry, and on a program to determine the ages of large numbers of stars through the combination of theoretical calculations of effects of stellar evolution on stellar spectra and results of narrow-band photometry. Dr. Strömberg has been professor at the Institute for Advanced Study since 1957. From 1948 to 1952, he served as general secretary of the International Astronomical Union and on the executive

committee of the International Council of Scientific Unions.

Dr. Whitford was born in Wisconsin and received his PhD from the University of Wisconsin in 1932. After two postdoctoral years at Caltech and Mount Wilson, he returned to Wisconsin's Mount Washburn Observatory, becoming its director in 1948. He spent the war years at the Massachusetts Institute of Technology Radiation Laboratory. Dr. Whitford's research has been concerned with the photoelectric photometry of stars and galaxies over a wide spectral range, partly to establish accurate standards of color and magnitude, and partly to evaluate the law of reddening by interstellar dust. Since assuming the directorship at Lick in 1958, he has given his attention to instrumental problems. He is a member of the National Academy of Sciences, and chaired the Academy's Panel on Astronomical Facilities, which recently issued the report *Ground-Based Astronomy: A Ten-Year Program*.

Other officers elected at the August meeting include three new councilors: Helmut A. Abt of Kitt Peak National Observatory, Helen S. Hogg of David Dunlap Observatory, Canada, and Thomas A. Matthews of Owens Valley Radio Observatory.

The membership also elected Daniel M. Popper of the University of California at Los Angeles as member of the US National Committee of the International Astronomical Union, and Lawrence W. Fredrick of Leander McCormick Observatory as member of the Division of Physical Sciences of the National Academy of Sciences—National Research Council.

Continuing in office are President Leo Goldberg, Secretary G. C. McVittie, Treasurer Frank K. Edmondson, and Executive Officer Paul M. Routly.

Optical Society

Van Zandt Williams will take office on January 1, 1966, as the new president of the Optical Society of America, and John A. Sanderson will serve as the Society's new president-elect. Names of new society officers were announced during the OSA's 50th

annual meeting held recently in Philadelphia.

Dr. Williams, director of the American Institute of Physics, has had extensive experience as both scientist and administrator in optical research and instrumentation. Awarded his PhD in physics from Princeton University in 1941, he worked in the field of infrared spectroscopy at Stamford (Conn.) Research Laboratories and later joined Perkin-Elmer Corporation as director of instrument development and sales. At Perkin-Elmer he also served as executive vice president and in other executive capacities. A fellow of the Optical Society, Dr. Williams has served on its board of directors and headed an OSA program concerned with optics education.

John A. Sanderson has been chosen president-elect of the Optical Society for the coming year. Dr. Sanderson has been affiliated with the Naval Research Laboratory in Washington, D.C., for 30 years, during which time he has been largely concerned with optical problems of military interest. His early research was a photoelastic investigation of stresses in ship structures, and later he studied molecular structure of aviation fuels by infrared spectroscopic means. During World War II, Dr. Sanderson's work included near-infrared image-converter tubes, infrared detection of targets, infrared radiance of the outdoor scene, and optics of infrared-reflecting paints. After the war he participated in optical experiments at the Crossroads Bikini bomb tests, and in 1949 was appointed superintendent of the NRL Optics Division. This past August, Dr. Sanderson was named NRL acting associate director of research for program planning. A fellow of both the OSA and the American Physical Society, he also serves on the AIP Governing Board.

Mary E. Wurga will continue as executive secretary of the OSA at the Society offices in Washington, D.C.; A. I. Mahan of the Applied Physics Laboratory will continue as treasurer; and David L. MacAdam of Eastman Kodak and John Howard of the Air Force Cambridge Research Laboratories will serve as editors of the *Journal of the Optical Society of American and Applied Optics*, re-

spectively. Newly elected directors-at-large of the Society include Robert P. Madden of the National Bureau of Standards, Arthur L. Schawlow of Stanford University, and Roderic M. Scott of Perkin-Elmer Corporation. They join directors Howard Cary, Glenn A. Fry, A. Francis Turner, Karl G. Kessler, Aden B. Meinel, and F. Dow Smith.

During the Society's annual dinner on the evening of October 7, the Frederic Ives Medal for 1965 was conferred upon James G. Baker of Harvard College Observatory for his work in astronomical optics. Among Dr. Baker's important contributions is the Baker-Schmidt telescope design carried out by him in 1956. This design was subsequently used in the twenty-inch aperture Baker-Nunn satellite-tracking camera network which has provided accurate orbital data for nearly all the American earth satellites. Dr. Baker has also worked on the design of wide-field telescopes with aspheric components, which have ultimate resolving power over the entire field. Many observatories use his corrector plates that widen the field over which parabolic reflectors provide excellent definition, and his Harvard super-Schmidt $f/0.63$ meteor camera, with its well-corrected field, 55° in diameter, is widely employed in determining meteor trajectories. As one of the first to use electronic computers in optical design work, Dr. Baker directed a twelve-volume summary report, *The Utilization of Automatic Calculating Machinery in the Field of Optical Design*, published from 1952 to 1955.

A native of Louisville, Ky., Dr. Baker received his doctorate in astronomy and astrophysics in 1942. He subsequently became a research fellow of the Harvard Observatory, and later a research associate at both Harvard and the Lick Observatory. Since 1964, he has held the post of associate at the Harvard Observatory. Dr. Baker has also served professionally with the International Commission of Optics, and Commissions 9 and 39 of the International Astronomical Union. A former president of the Optical Society, he is an OSA fellow and was previously awarded its Adolph Lomb Medal for contributions to optics.

Laser Energy and Power Measuring Devices

Available from TRG

BALLISTIC THERMOPILES

One-cm-diameter aperture types

MODEL 100 — A high sensitivity, precision instrument offering direct primary calorimetric measurement of laser outputs up to 300 joules over a dynamic range of 3×10^6 .

MODEL 101 — Photodiode version of Model 100. Permits simultaneous energy measurement and observation of optical pulse waveshapes.

Two-cm-diameter aperture types

MODEL 107 — A large-aperture unit designed to meet the requirements of giant-pulse and large laser systems. Can handle energies up to 1000 joules (normal mode) and peak powers in the gigawatt range.

MODEL 108 — Photodiode version of Model 107. Permits simultaneous energy measurement and observation of optical pulse waveshapes.

DIRECT-READING ENERGY METER

MODEL 102 — A transistorized, precision microvoltmeter designed specifically for use with thermopiles having outputs from 100 to 300 microvolts per joule.

PHOTODETECTOR

MODEL 105B — An extremely fast detector containing a vacuum photodiode incorporated into a specially designed wide-band microwave structure. Permits direct observation of axial mode beating of Q-switched ruby laser or may be used to monitor low-power CW sources. Standard optical filters are available as accessories.



For complete information write:
TRG, Route 110, Melville (Long Island), New York 11749, Tel. 516-531-6343.



TRG/A SUBSIDIARY OF CONTROL DATA CORPORATION