as submitted by their secretaries, will be printed in SCIENCE.

W. W. SARGEANT
Secretary, Pacific Division American Association for the Advancement of Science

JOINT MEETINGS OF THE AMERICAN ASTRONOMICAL SOCIETY, THE ASTRONOMICAL SOCIETY OF THE PACIFIC, AND SECTION D OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

ON the first day, September 17, the sessions were held at the University of Southern California, Los Angeles; on the second day, in Pasadena—in the morning, at the office of the Mount Wilson Observatory, and in the afternoon, at the Norman Bridge Laboratory of the California Institute of Technology, in conjunction with the physicists; on the third day, in the dome of the 100-inch Hooker telescope on Mount Wilson.

There was throughout a large attendance of professional and amateur astronomers. Eastern and western observatories in the United States were well represented, and in addition there were astronomers from Canada, Mexico, Australia, Japan, Argentina, England, Spain, France, Belgium and Holland.

The symposium on eclipses and relativity on the afternoon of the first day attracted a large audience. There were four addresses, as follows:

Some conditions apparently existing in the solar corona: DR. W. W. CAMPBELL, president, University of California.

How the spectrum of the sun's atmosphere is studied at eclipses and the interpretation of the results through the aid of modern physics: DR. S. A. MITCHELL, director, McCormick Observatory, University of Virginia.

The constitution of the sun's atmosphere, the levels of the gases and the nature of their circulation. Results bearing on the displacements of solar spectrum lines as required by the theory of relativity: DR. CHARLES E. ST. JOHN, astronomer, Mount Wilson Observatory, Pasadena.

Relativity as represented by the Einstein-eclipse problem: DR. R. J. TRUMPLER, assistant astronomer, Lick Observatory, Mount Hamilton.

The last two speakers dealt with the bearing of recent observations on the theory of relativity. Dr. St. John's paper contained the important announcement that an exhaustive discussion of wave-lengths of lines in the solar spectrum has led him to the conclusion that the pressure in the reversing layer is negligible, and that after the effects of radial motion and scattering have been eliminated there remain differences between solar and laboratory wave-lengths of the order called for by the Einstein theory. Dr. Trumpler explained in detail the good agreement found on the Lick Observatory plates of the 1922 eclipse between the measured displacements of stars near the sun, and those predicted by the theory of relativity. Results obtained at the eclipse of September 10, 1923, were reported by Professors Brackett, Worthington, Miller, Douglass and Gallo.

About one hundred and thirty persons made the trip to Mount Wilson on the third day. Most of them remained until evening to look through the 60-inch and 100-inch telescopes.

The technical papers presented at the various sessions were as follows:

Some vagaries of refraction: ARTHUR J. ROY, Dudley Observatory.

Recent latitude results at Lick Observatory: R. H. TUCKER, Lick Observatory.

Notes on proper motions: A. VAN MAANEN and HANNAH M. MARSH, Mount Wilson Observatory.

Fundamental consideration on researches relating to minor planets: A. O. LEUSCHNER, University of California.

Radial velocities of stars of spectral class R: R. F. SANFORD, Mount Wilson Observatory.

Hypothetical parallaxes of 135 A double stars measured at three or more epochs: R. G. AITKEN and MARGARET POWELL, Lick Observatory.

The radial velocities of long-period variable stars: PAUL W. MERRILL, Mount Wilson Observatory.

Some properties of the stars in space as derived from the near-by stars: W. J. LUYTEN, Harvard Observatory.

A new catalogue of variable stars: S. D. TOWNLEY, Stanford University.

Three stellar spectroscopic notes: W. S. ADAMS and A. H. JOY, Mount Wilson Observatory.

A possible origin of the nebular lines: H. H. PLASKETT, Dominion Astrophysical Observatory.

The possibilities of instrumental development: GEORGE E. HALE, Mount Wilson Observatory.

On Atmospheric Absorption: H. L. VANDERLINDEN, Observatoire Royal, Uccle, Belgium.

The sun's action on the magnet, a note on variable stars and cosmic clouds: LUIS RODÉS, Observatorio del Ebro, Spain.

The radiation from mercury compared with the radiation from other planets: EDISON PETTIT and SETH B. NICHOLSON, Mount Wilson Observatory.

Asymmetry in the distribution of stellar velocities: GUSTAF STRÖMBERG, Mount Wilson Observatory.

Stellar interferometer work during 1922–1923: F. G. PEASE, Mount Wilson Observatory.

Density distribution in the photographic images of elliptical nebulae: EDWIN HUBBLE, Mount Wilson Observatory.

Radial velocity measurements of the spectrum of omicron ceti: ALFRED H. JOY, Mount Wilson Observatory.

On account of lack of time the following papers were read by title:

The systematic corrections to Boss's preliminary general catalogue: WILLIAM B. VARNUM, Dudley Observatory.

Jupiter's third satellite: W. H. PICKERING, Harvard Observatory Station, Jamaica.

Relativity: An approximation: CHARLES LANE POOR, Columbia University.

The number and distribution of stars with Class B spectra having emission lines: RALPH H. CURTISS, University of Michigan Observatory.

Progress with color-index apparatus: EDWARD S. KING, Harvard Observatory.

Methods and results of the absolute magnitude determination of stars at the Dominion Astrophysical Observatory: W. E. HARPER and R. K. YOUNG, Dominion Astrophysical Observatory.

The spectral parallaxes of double stars: FREDERICK C. LEONARD, University of California.

Mean absolute magnitudes of the long-period variables and other stars of late types: RALPH E. WILSON, Dudley Observatory.

Atmospheric pulsation of cepheids, a method of attack: W. CARL RUFUS, University of Michigan Observatory.

Remarks on the luminosity function: F. H. SEARES, Mount Wilson Observatory.

On the orbit of the brighter component of Beta Lyrae: R. A. ROSSITER, University of Michigan Observatory.

The absorption lines of O-type stars: J. S. PLASKETT, Dominion Astrophysical Observatory.

Regularities in the arc spectrum of Zirconium: C. C. KIESS and HARRIET KNUDSEN KIESS, U. S. Bureau of Standards.

An Arctic episode in astronomy: R. H. TUCKER, Lick Observatory.

Two new camera lenses for spectrographs: J. S. PLASKETT, Dominion Astrophysical Observatory.

The orbits of the spectroscopic components of Boss 6148: W. E. HARPER, Dominion Astrophysical Observatory.

The orbit of the spectroscopic binary Boss 1452: W. E. HARPER, Dominion Astrophysical Observatory.

The wedge method and its application to astronomical spectrophotometry: H. H. PLASKETT, Dominion Astrophysical Observatory.

Photo-electric photometry at the Washburn Observatory: JOEL STEBBINS, University of Wisconsin.

The radial displacements in the Wallal photographs: WILLIAM B. VARNUM, Dudley Observatory.

Regularities in the spectrum of titanium: HENRY NORRIS RUSSELL, Princeton University.

Abstracts of the papers will be published as usual in *Popular Astronomy.*

JOEL STEBBINS
Secretary, American Astronomical Society

AMERICAN METEOROLOGICAL SOCIETY

ONE of the largest and most interesting meetings of the American Meteorological Society was held at the University of Southern California, on September 17, 18 and 19. The meeting was held conjointly with those of the Pacific and Southwestern Divisions of the American Association for the Advancement of Science and our Society enjoyed all the privileges obtained by the larger societies. The first session was devoted largely to evaporation problems and it was brought out in the discussion that none of the methods used were entirely satisfactory to engineers. Dr. George F. McEwen closed the discussion by stating that he believed the Calculation Process to be best for large bodies of water, whereby an equation based on isolation is used. Later Mr. Charles E. Grunsky offered the following resolution. which was passed with no dissenting votes:

RESOLVED, that the study of evaporation from open bodies of water should be extended, with particular references to the standardization of methods of observation, in order that known meteorological conditions may better serve as a basis for predicting evaporation losses from such water bodies.

The next session was largely devoted to the discussion of the problems of the Lower Colorado River as caused by mountain snowfall and flood crests. The discussions were unusually interesting as the problem is an international one. The people of the United States have spent great sums—five or six million dollars—on a project located in Mexican territory, for the purpose of conserving water for use in our country as well as in Mexico. Resolutions were passed covering this problem as follows:

Being impressed with the importance of flood control and other problems of the Lower Colorado River and the necessity for an early solution thereof, and realizing that the solution of these problems requires action by the United States because of their interstate and international aspects, BE IT RESOLVED by the American Meteorological Society that the attention of the Executive Committee of the Pacific Division of the American Association for the Advancement of Science be called to the present situation with the suggestion that the Pacific Division place itself on record as favoring early action by the United States to accomplish the permanent solution of these Colorado River problems.

The third session was taken up in discussing matters pertaining to forecasting the weather, and Mr. L. E. Blochman brought to light some interesting facts regarding the probabilities of long range forecasting based upon the geographical location of low pressure areas entering the United States from the Pacific Ocean.

The morning session of the last day was made most interesting by the presence of two aviators, Messrs. Wyatt and Lawing, from the Air Field at San Diego, who flew to Los Angeles that morning in a plane