shows high efficiency, is automatic and is regarded as eminently satisfactory.

"Kelpchar" a new decolorizing carbon prepared as a by-product in the extraction of potash from kelp: J. W. TURRENTINE, P. S. SHOAFF and G. C. SPENCER. Following the researches in the laboratories, respectively, of Dr. F. W. Zerban, of the Louisiana Sugar Experimental Station and of the Experimental Kelp Plant, of the United States Department of Agriculture, it was shown that a carbon of high activity could be produced in large quantities from kelp, depending on the method of retorting. One-stage retorting was efficacious, under certain conditons but did not yield a product of uniform or even dependable grade. Two-stage retorting, however, did yield a product of constant properties and made possible the large scale production. Accordingly this method was instituted pending the determination of the optimum conditions surrounding the one-stage operation. The product of the retorting or destructive distillation of kelp, a porous charcoal, is leached with hot water to remove potassium chloride and iodide and the residue, in the form of a press cake, is treated with the required amount of hot, dilute HCl to dissolve out soluble constituents and is then washed with water to neutrality. It is then dried and sacked for shipment. The tank system of extraction at present is in use. Acid proof construction is employed. The material is transferred from tank to tank in the sludge form by means of pumps, and spent acid and water are removed by filtering in situ over vacuum. The product compares favorably with Norit on molasses solution being equal in value and shows great usefulness when applied to materials of widely varying characteristics. It offers every promise ultimately of meeting the requirements of the chemical industry for a carbon of the highest grade.

CHARLES L. PARSONS,
Secretary

(To be continued)

THE AMERICAN ASTRONOMICAL SOCIETY

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THE twenty-third meeting of the society was held September 2 to 5, 1919, at the University of Michigan, Ann Arbor, where during the same week were also being held meetings of the American Mathematical Society and of the Mathematical Association of America. Members of all three societies were housed at the Newberry Residence and at the Michigan Union, and the arrangements demonstrated the ideal condition of gatherings where members live close together for several days. There were about seventy members and guests present at the astronomical sessions.

In opening the first session, Acting President Schlesinger referred to the great loss which the society had suffered since the last meeting in the death of Professor Edward C. Pickering, who had been president of the society for thirteen years, and who had been the leading figure at its meetings throughout that time. The society had also lost Professor Charles L. Doolittle, who had acted as treasurer from the founding of the society in 1899 until he retired in 1912. The following resolution, which had been passed by the Council, was endorsed as representing the sentiment of the members of the society, and was ordered to be printed in the publications.

The council of the American Astronomical Society records with regret the death on February 3, 1919, of EDWARD CHARLES PICKERING, who had been president of the society since December 30, 1905. His success in introducing new methods into the observatory, particularly with regard to the determination of the brightness and the spectra of stars, his extraordinary ability in carrying out large projects, and the extent and diversity of his experience and knowledge, have given him a permanent place among the great names in the history of science. The society will keenly feel the loss of his presence at its meetings. The members of the society had every reason to regard him as a warm friend, and to them the sense of personal loss is very deep.

The visitors at Ann Arbor were hospitably entertained by the University of Michigan, and especially by Director and Mrs. Hussey at the Observatory. There was also opportunity to join forces with the mathematicians at a smoker and a dinner. There was one joint meeting of the three societies, with the following program.

"Mathematics and statistics." Retiring address of the president of the Mathematical Association of America. Professor E. V. Huntington, Harvard University.

"The work of the National Research Council with reference to mathematics and astronomy." Professor Ernest W. Brown, Yale University.

"Reports on the International Conference of Scientists at Brussels." Dr. Frank Schlesinger, Allegheny Observatory, Dr. L. A. Bauer, Carnegie Institution.

The time and place of the next meeting of the Astronomical Society was left to be determined by the executive committee.

Officers were elected for the ensuing year:

President—Frank Schlesinger.
Vice-presidents—George C. Comstock, Walter S. Adams.

Secretary—Joel Stebbins.
Treasurer—Benjamin Boss.
Councilors—Ernest W. Brown, Otto Klotz, Solon I. Bailey, W. J. Hussey, Henry Norris Russell, V. M. Slipher.

The program of papers was as follows:

Variations of type in the Cepheid variables l Carinae and η Aquilæ as shown by the general spectrum: Sebastian Albrecht.
A systematic search for novæ at the Harvard Observatory: S. I. Bailey.
On the change in the period of the variable star Bailey No. 33 in the cluster M5: E. E. Barnard.
Remeasurement of Hall's star in the Pleiades: E. E. Barnard.
Variable stars in M 11: E. E. Barnard.
On the varnishing of astronomical negatives: E. E. Barnard.
Some observations of the total solar eclipse on May 29, 1919, at Cape Palmas, Liberia: L. A. Bauer.
Hypersensitizing commercial panchromatic plates: S. M. Burka. (Introduced by C. C. Kiess.)
Some recent developments in the study of SS Cygni: Leon Campbell.
The spectra of variable stars of long period: Annie J. Cannon.
Atmospheric refraction near the horizon: George C. Comstock.
Studies of class B spectra having hydrogen emission: R. H. Curtiss.
Fluctuations in the moon's longitude in relation to meteorological variations: Ralph E. DeLury.
Apparent relation between Chinese earthquakes and California tree growths, 0–1680 A.D.: Ralph E. DeLury.
Levels of the Great Lakes in relation to numbers of sun-spots: Ralph E. DeLury.
Simultaneous spectroscopic observations of the rate of rotation in north and south solar hemispheres: Ralph E. DeLury.
The periodograph and its application to variable star periods and other problems: A. E. Douglass.
On the eclipsing variables RT Persei and U Cephei: R. S. Dugan.
Preliminary results of a comparative test of the 100-inch and 60-inch telescopes of the Mount Wilson Observatory: George E. Hale.
Rates of the standard sidereal clocks at the U. S. Naval Observatory: J. C. Hammond and C. B. Watts.
Note on the spectrum of Nova Aquilæ No. 3: W. E. Harper.
The orbit of the spectroscopic binary ι Delphini: W. E. Harper.
The orbit of the spectroscopic binary Boss 4507: W. E. Harper.
A desideratum in solving Kepler's problem: H. A. Howe.
The red and infra-red arc spectra of eight elements: C. C. Kiess and W. F. Meggers.
Color-index of planets: Edward S. King.
Photographic observations of the Great Nebula in Orion: C. O. Lampland.
Star tables good to the year 2000 for civil engineers and navigators: H. C. Lord.
Origin of the sun's heat: W. D. MacMillan.
False spectra produced by gratings: W. F. Meggers, C. C. Kiess and F. M. Walters, Jr.
Evidences of change in coronal structure during the eclipse of June 8, 1918: J. A. Miller.
The masses of 32 visual binary stars: J. A. Miller and J. H. Pitman.
Measures of double stars on photographs: Charles P. Olivier.
Shifting absorption at the heads of the brighter helium bands in the spectrum of γ Argus: C. D. Perrine.
Methods of asteroid observation and reduction: George Henry Peters.
The great eruptive prominences of May 29 and July 15, 1919: Edison Pettit.
Studies in prominence characteristics: Edison Pettit.
The proper motions and parallaxes of 359 stars in the cluster h Persei: Hannah Steele Pettit.
The spectroscopic orbits and dimensions of the eclipsing variables U Ophiuchi, RS Vulpeculæ, and TW Draconis: J. S. Plaskett.
Report on progress of work with the 72-inch telescope: J. S. Plaskett.
Annular eclipse of the sun of 1919, November 22, as visible in the United States: Wm. F. Rigge.
Direct micrometrical observations of the sun: E. D. Roe, Jr.
The spectrum of the milky way: V. M. Slipher.
All-American time: Elliott Smith.
Progress in photo-electric photometry: Joel Stebbins.
Peirce's criterion: R. M. Stewart.
The treatment of discordant observations: R. M. Stewart.
Tests of dyes for red and infra-red photography: Florence J. Stocker.
Experiments with Kapteyn's method for reducing guiding error: R. Trümpler and Frank Schlesinger.
Meridian circle observations of Nova Aquilæ No. 3: R. H. Tucker.
The use of semi-absolute photographic positions in double star astronomy: George Van Biesbroeck.
Note on proper motions of certain long period variable stars: Anne S. Young and Louise F. Jenkins.
Three spectroscopic binary orbits: Reynold K. Young.

Joel Stebbins,
Secretary

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