particularly of the melon bug and the Dura aphis.

NATHAN BANKS.

*INTERNATIONAL COOPERATION IN SOLAR RESEARCH.**

As chairman of the committee on solar research of the National Academy of Sciences, which had issued the call for the conference, Professor George E. Hale called the meeting to order and explained the purpose of the conference. After referring to previous movements to secure cooperation in solar research, he emphasized the importance of encouraging individual initiative, and urged that no less attention be paid to such encouragement than to the accomplishment of large pieces of routine work through cooperative effort.†

The following officers were then elected to serve for this meeting:

President—Professor George E. Hale.
Vice-president—Professor Henri Poincaré.
Recording secretary—Professor C. D. Perrine.

A motion that for this meeting the voting be by societies and that each society be allowed one vote, was adopted.

A motion was made and carried that the chairman of each society's committee should cast the vote for that society.

After some remarks by Professor Hale on cooperation the following motion was made by Professor Turner:

That this meeting is in favor of the organization of a scheme of international cooperation in solar research which shall encourage individual initiative, provide suggestions for definite lines of work, and facilitate the collection of results for publication.

This expression, after remarks by Professors Poincaré, Boltzmann and Hale, was made the sense of the meeting.

Professor Hale stated that in appointing its committee on Solar Research, the National Academy of Sciences had given the committee authority to join the president and foreign secretary of the academy in presenting its plans for cooperation to the International Association of Academies. The opportunity now existed of securing the views of the conference on this subject.

After remarks by various delegates upon the relations of scientific societies among themselves and to the International Association of Academies, the following motion was made by Professor Poincaré:

That a committee to be appointed at this meeting negotiate with the Academy of Sciences of Vienna with the view of obtaining the approval and the patronage of the International Association of Academies.

This motion was seconded by Professor Boltzmann and adopted.

A short discussion then ensued upon the fullness of the representation of interested individuals and societies in the preparation of plans for cooperation in solar research.

Dr. Bauer moved: That the sub-committee on terrestrial magnetism and atmospheric electricity of the international meteorological committee be invited to appoint a committee to cooperate with the solar research committee.

This motion was seconded by Mr. Rotch and adopted.

Professor Turner moved: That the Hungarian Academy of Sciences of Budapest also be invited to appoint a committee to cooperate with the solar research committee.

This motion was seconded by Professor Frost and adopted.

The following general motion was then made by Professor Poincaré and adopted:

That the international committee on solar research, to be appointed, be authorized to invite, at its discretion, societies and individuals which have been omitted, to cooperate.

The subject of the formation of an international committee was then discussed.

Professor Turner moved: That each committee participating be invited to appoint a member to serve on the international committee.

This motion was seconded by Professor Campbell and adopted.

Mr. Rotch, delegate of the sub-committee of the international meteorological committee on the relationship between meteorological

* Minutes of the meeting of delegates to the Conference on Solar Research, held in the Hall of Congresses, St. Louis, September 23, 1904.

† See *Astrophysical Journal*, December, 1904.

and solar phenomena, reported on the recent meeting of the sub-committee at Cambridge. At that meeting the invitation of the National Academy of Sciences to cooperate with the other committees was accepted.

A short discussion followed on a provisional program of observations, at the conclusion of which Professor Turner nominated the following gentlemen as a committee to prepare a provisional program, such committee to have power to add to its number at discretion:

Professor George E. Hale,
Professor Arthur Schuster,
Professor Svante Arrhenius.

Suggestions from M. Deslandres as to observations to be undertaken, and the adoption of certain names of instruments and solar phenomena, were, at the suggestion of Professor Poincaré, referred to the committee on program.

Following a discussion of routine measurements and computation Professor Turner offered, on behalf of the Oxford University Observatory, to undertake a portion of this work.

A motion was therefore made by Mr. Abbot that the international committee enter into negotiations with the Oxford University Observatory with the view of providing for the measurement of plates and the reduction of solar observations.

This motion was seconded by Professor Campbell and adopted.

The suggestion was made by Dr. Bauer that if visual magnetic observations, especially magnetic observations at the eclipse of 1905, could be made at observatories with special instruments provided for the purpose, it was practically certain that the reduction of such observations would be undertaken by the Carnegie Institution.

A memoir on standards of wave-length, prepared by MM. Perot and Fabry on behalf of the Physical Society of France, was presented by Professor Poincaré.*

A motion that standards of wave-length should be determined from terrestrial instead of solar sources was referred for consideration to the international committee.

Professor Crew discussed the question of standards of wave-length, and pointed out the necessity of replacing Rowland's standards by a new system. He also presented a paper on this subject by Professor Kayser and a letter from Professor Michelson.

Mr. Jewell presented in abstract a paper on Rowland's standards.

A motion by Professor Poincaré was then adopted referring these communications to the international committee.

Owing to a lack of time for discussion the subject of total solar eclipses was referred to the international committee upon motion of Professor Campbell.

Oxford and Meudon were suggested as places for the next meeting. The international committee was empowered to decide both the place and time of meeting on motion of Professor Frost, seconded by Professor Poincaré.

Upon motion of Professor Poincaré the thanks of the conference were tendered to Professor Hale for his interest and activity in connection with the conference.

The conference then adjourned.

Following is a list of committees and delegates appointed by various societies. Other societies will appoint committees in the near future:

Royal Society of England.—Huggins, Christie, Lockyer, Schuster, Newall, committee; Turner, delegate.

Royal Astronomical Society.—Turner, and others to be appointed, committee; Turner, delegate.

Astronomical Society of France.—Deslandres, de la Baume Pluvinel, Guillaume, and others not yet named, committee; Poincaré, delegate.

French Physical Society.—Poincaré, Fabry, Perot, Deslandres, and others not yet named, committee; Poincaré, delegate.

German Physical Society. — Ebert, Kayser, Kreusler, Lummer, Pringsheim, Runge, Straubel, Wilsing, committee.

Amsterdam Academy of Sciences.—Kapteyn, Julius, committee; Kapteyn, delegate.

Society of Italian Spectroscopists.—Tacchini, Ricco, Chistoni, Mascari, committee.

* To be published in the December number of the *Astrophysical Journal.*

Vienna Academy of Sciences.—Hann, Weiss, von Lang, Exner, committee; Boltzmann, delegate.

St. Petersburg Academy of Sciences.—Backlund, and others not yet named, committee; Backlund, delegate.

Sub-committee of International Meteorological Committee.—Rotch, delegate.

Stockholm Academy of Sciences.—Arrhenius,* delegate.

Astronomical and Astrophysical Society of America.—Frost, Abbot, Bauer, Jewell, Perrine, committee; Frost, Abbott, Bauer, Jewell, Perrine, delegates.

American Physical Society. — Ames, Crew, Lewis, Mendenhall, E. F. Nichols, committee; Crew, Mendenhall, delegates.

National Academy of Sciences.—Hale, Campbell, Langley, Michelson, Young, committee; Hale, Campbell, delegates.

George E. Hale,
President.
C. D. Perrine,
Recording Secretary.

THE FRANKLIN FUND.

The Boston *Transcript* gives further details in regard to Mr. Andrew Carnegie's gift to the Franklin Fund. It appears that he has offered to duplicate the amount of the fund as it stood last September—$408,396.48. His gift is to be used as an endowment for the Franklin Union or Franklin Institute, whichever name it may finally bear, on the following conditions:

1. That the Franklin Fund be devoted to the establishment of a school for the industrial training of men and women along the lines of the Mechanics' and Tradesmen's School of New York and the Cooper Union.

2. That the city of Boston shall furnish a site.

The information was imparted to the managers of the fund by a letter recently written to Mayor Collins, chairman of the fund, by President Henry S. Pritchett of the Institute of Technology. In the letter Dr. Pritchett said:

"In September last I had some talk with Mr. Andrew Carnegie concerning the history of Franklin's bequest to the city of Boston. Mr. Carnegie took great interest in the outcome of Franklin's effort, both from his admiration of the character of Franklin, and from the desire to see the gift a helpful one. The outcome of this talk was his suggestion that he would furnish an endowment equal in amount to the sum available from Franklin's bequest. Upon my return to Boston, I sent to Mr. Carnegie a copy of Franklin's will, together with a statement of the treasurer of Boston showing that the amount available at that time was $408,396.48. Recently Mr. Carnegie has written me, saying that after looking over these papers, he saw no reason to modify his original suggestion, and formally renewing his offer to duplicate the amount mentioned as an endowment for the Franklin Union or the Franklin Institute, whichever name it may finally bear."

Dr. Pritchett then quotes the conditions Mr. Carnegie imposes, as stated above. In conclusion the letter says, Mr. Carnegie's thought is, perhaps, best shown by the following extract from his letter:

"I am a trustee of both the schools mentioned and do not hesitate to say that to the best of my knowledge no money has produced more valuable results. I think it is from the class who not only spend laborious days, but who also spend laborious nights fitting themselves for hard work, that the most valuable citizens are to come. We are here helping only those who show an intense desire and strong determination to help themselves—the only class worth helping, the only class that it is possible to help to any great extent."

SCIENTIFIC NOTES AND NEWS.

The new series of Science completes with the present issue its tenth year and twentieth volume.

At the time we go to press all indications point to a most successful meeting of the American Association for the Advancement of Science and the affiliated societies at Philadelphia during convocation week. Full reports of the meetings will be published in the next and subsequent issues of this journal.

The Paris Academy of Sciences has bestowed upon Sir James Dewar its Lavoisier gold medal.

* Acting informally.