

tion, just as, in Voigt's equation, the first term is independent of  $H$ . The orientation is here produced by the rotation, but only the time taken to reach a steady state is affected by its magnitude. The second term, here added to the first, corresponds to Voigt's diamagnetic term. Here we have, except for the small second term, saturation for even very small values of  $\Omega$ .

If collisions are not absent, or if the magnetic fields of adjacent molecules and the demagnetizing field become appreciable, the intensity of magnetization will not reach saturation; but it will increase with  $\Omega$ , being greater for a given value of  $\Omega$  the greater the mean interval between collisions, the less their violence, and the weaker the field.

It was suggested by Schuster in 1912 and by Einstein and deHaas in 1915, and earlier by myself, that the behavior of a magnetic molecule as a gyroscope might account for cosmical magnetism, as the direction of the magnetization of the earth and sun bear to the direction of the rotation the relation required by the theory. If the theory is quantitatively sufficient, the interior of the earth and sun, as pointed out years ago, must be in a very different state from that of bodies with which we are familiar. If  $m/e$  reaches enormous values for magnetons within the earth and sun, which is not probable, or if the magneton density is sufficiently high and the effects of collisions and the molecular and demagnetizing fields at the same time sufficiently small, it is possible that even the small angular velocities of the earth and sun may be sufficient to produce the observed magnetizations.<sup>25</sup>

S. J. BARNETT

DEPARTMENT OF TERRESTRIAL MAGNETISM,  
CARNEGIE INSTITUTION

**THE AMERICAN ASSOCIATION FOR  
THE ADVANCEMENT OF SCIENCE  
SPRING MEETING OF THE EXECUTIVE  
COMMITTEE**

The executive committee of the council of the association held its regular spring meeting

<sup>25</sup> See papers by Professor S. Chapman and by myself in *Nature*, Nov. 25, 1920, and March 3, 1921.

in the Cosmos Club, Washington, D. C., on the afternoon and evening of Sunday, April 24. The following paragraphs summarize items of business that were transacted. The personnel of the executive committee is as follows:

Simon Flexner (chairman), J. McK. Cattell, H. L. Fairchild, L. O. Howard, W. J. Humphreys, B. E. Livingston (permanent secretary of the association), D. T. MacDougal (general secretary of the association), E. H. Moore (president of the association), A. A. Noyes, Herbert Osborn, H. B. Ward. All of the members were present at this meeting, excepting Messrs. Flexner, Moore, and Noyes. The meeting was called at 4.00 P.M.

After the minutes of the last meeting of this committee (Chicago, Dec. 29, 1920) had been read and approved it was voted that the next meeting of the executive committee "shall occur in New York City on the first Sunday after November 1 that shall be convenient to a majority of the members," the exact date to be arranged by the permanent secretary.

It was voted that the action thus far taken by the American Association committee on conservation, be approved and that that committee be authorized to proceed with its plans. (The committee on conservation consists of J. C. Merriam (chairman), H. S. Graves, Barrington Moore, V. E. Shelford and Isaiah Bowman. It held a meeting in New York City on April 9, jointly with corresponding committees of the National Academy of Sciences and the National Research Council, and it was recommended that these three committees form a continuing joint committee on national conservation, representing the three organizations just mentioned, and that this joint committee be authorized to set up an executive and secretarial agency for the active prosecution of its work.)

The executive committee ratified the action taken by the committee on honorary life memberships through the Jane M. Smith fund, in placing the names of the distinguished scientists, J. E. Clark and J. N. Stockwell, recently deceased, on the list of honorary life members of the Association. (Both were ac-

tive members of the Association from 1875 until death.)

Dr. J. C. Fields, president of the Royal Canadian Institute, was elected chairman of the local committee of the American Association, for the forthcoming Toronto meeting.

Dr. Sam F. Trelease (assistant secretary of the association) was elected secretary of the council for the Toronto meeting.

It was voted that a special committee consisting of the president, the permanent secretary, and the general secretary should arrange, in cooperation with the local committee for the Toronto meeting, for the invitation of an eminent British man of science to attend the Toronto meeting, to give a general public lecture on the evening of Friday, December 30, and to present such scientific papers as he may be willing to give, before the section of the association or the affiliated societies to which his field of science may be related.

It was voted that the British Association for the Advancement of Science be invited to be officially represented at the Toronto meeting. A committee consisting of the president and the two secretaries was authorized to invite representation by other organizations at the Toronto meeting. Dr. J. McK. Cattell was elected to be an official delegate of the American Association to attend the forthcoming Edinburgh meeting of the British Association. The committee mentioned was authorized to appoint other representatives.

It was voted that the permanent secretary and the general secretary be constituted a special committee to render a decision in the case of any fellowship nomination for which the section secretary may fail to make definite recommendation. (Nominations for fellowship in the Association may be made by any member in good standing, including the nominee himself, and they are immediately referred, by the permanent secretary, to the proper section secretary, who investigates each nomination and transmits it, with his recommendation to the permanent secretary for reference to the executive committee. The executive committee acts for the council in electing fellows at the spring and autumn meet-

ings of the committee and it recommends fellowship elections to the council when a council session follows promptly upon the committee meeting—as during the annual meetings of the association. Only fellows may hold office in the association and fellows are designated by an asterisk in the list of members.)

The American Society for Testing Materials (C. L. Warwick, secretary, 1315 Spruce Street, Philadelphia, Pa.) was constituted an affiliated society. (The membership of the society includes 62 fellows of the association and the society is therefore entitled to one representative in the association council.)

The American Society of Agronomy (P. E. Brown, secretary, Iowa State College, Ames, Iowa) was constituted an affiliated society. (The membership of the society includes 93 fellows of the association and the society is therefore entitled to one representative in the association council.)

The American Geographical Society of New York (Isaiah Bowman, director, Broadway at 156th Street, New York City) was constituted an affiliated society.

The North Carolina Academy of Science (Z. P. Metcalf, president, North Carolina Experiment Station, West Raleigh, N. C.) was constituted an affiliated academy, according to the special arrangement for the affiliation of academies. (Affiliated academies collect the association dues of those of their members who are also members of the association. They each have a representative in the association council and they are allowed to retain the entrance fees collected and one dollar of each annual dues collected. When an academy is first affiliated it receives from the association one dollar for each one of its members that have already paid to the permanent secretary association dues for the current year.)

The Maryland Academy of Sciences was constituted an affiliated academy, according to the special arrangement just mentioned.

Professor T. W. Todd, professor of anatomy, Western Reserve University, Cleveland, Ohio, was elected a member of the section committee

of Section H (Anthropology), to take the place of Dr. Berthold Laufer, resigned from the association. (The new committee member's term of office expires at the end of the 1924-25 annual meeting.)

A special committee, consisting of J. McK. Cattell (chairman), L. O. Howard, D. T. MacDougall, and B. E. Livingston, was appointed to arrange for sections C, K, L, M, and N at the Toronto meeting, this committee to co-operate with the corresponding section committees in so far as their members have been elected. It was voted that this committee should organize a committee of seven members for each of the three fields, (a) Social and Economic Sciences, (b) Engineering, and (c) Medical Sciences, each of these three committees to survey the general relations between the association and the committee's province, with the aim of securing more satisfactory representation of that field of science in the work of the association. It was recommended that the membership of these three committees include eminent scientists without regard to their membership in the association, the permanent secretary and at least one other member of the association being on each.

The question regarding the organization of the History of Science was again given careful consideration by the executive committee. The special committee that arranged the excellent program on this subject for the Chicago meeting has expressed itself as in favor of the History of Science being made the field of a new section of the association, but the consideration that this field overlaps the fields of the already existing sections has prevented the executive committee from concurring with the special committee on this point. The council of the association (at its Chicago meeting) favored the organization of the History of Science as a part of Section L (Historical and Philological Sciences), not yet organized, but the special committee does not favor this arrangement. The executive committee finally concluded to suggest that a special society for the History of Science might be inaugurated and that this society might become an affiliated society of the association.

At the suggestion of the American Society of Zoologists, a resolution was adopted favoring the duty-free importation of scientific materials into the United States by educational and research institutions.

The executive committee expressed its regret that, owing to lack of funds, the association found it impossible to comply with a suggestion recently received from the Hall of Fame of New York University, that the association provide a bust of an eminent scientist for the Hall of Fame. Upon invitation from the chancellor, the council and the committee on the Hall of Fame of New York University, three delegates were appointed to represent the Association on the occasion of the unveiling of a tablet in honor of Louis Agassiz—a past president of the Association—this ceremony to occur in the colonnade of the Hall of Fame, at University Heights, New York City, on May 21, 1921. Messrs. C. B. Davenport, H. F. Osborn, and E. B. Wilson were appointed.

A proposal to establish a section on the Evolution of Religion and Philosophy was given consideration and it was voted that, "since the subjects referred to are already provided for by existing sections of the Association, it seems unnecessary to inaugurate a special section for them at this time."

Four new items were approved for the permanent secretary's budget for 1921, these having been omitted from the budget as approved by the council at the Chicago meeting. A statement of the entire budget follows:

*Permanent Secretary's Budget for 1921.*

*Items approved by the Council at the Chicago Meeting:*

Journals .....\$36,000.00

Salaries:

Permanent secretary .....	2,500.00
Executive assistant .....	2,520.00
Usual clerical help .....	2,000.00
Special clerical help for new membership list .....	800.00
Travel expenses, section secretaries, etc. ....	1,500.00
Office supplies .....	800.00
Stationery and printing .....	2,400.00

Telephone, etc. ....	100.00
Postage .....	800.00
Expenses of Chicago meeting.....	1,000.00
Membership list, printing (balance not provided by sale of list).....	1,000.00
Miscellaneous .....	500.00
Benjamin collection of portraits and autographs of Association presi- dents .....	300.00

Total approved at Chicago .....\$52,220.00

*Additional items approved by Executive Committee April 24, 1921:*

Dollar payments to divisions and dol- lar allowances to affiliated acad- emies (according to rules of pro- cedure) .....	\$ 2,400.00
Printing and mailing (to all mem- bers) the Preliminary Announce- ment of Chicago meeting .....	955.36
Grant for research (arranged for by Committee on Grants but not cov- ered by appropriable funds in the treasurer's hands at end of 1920; approved by Executive Committee, March 7, 1921) .....	500.00
Salary, assistant secretary (author- ized by Council at Chicago meet- ing) .....	1,000.00

Total, additional items .....\$ 4,855.36

Total of modified budget ....\$57,075.36

The executive committee expressed itself as interested in the work for the advancement of science accomplished through the grants thus far made for research and the permanent secretary was instructed to communicate with the committee on grants and to arrange with that committee for the preparation of a general report on grants for research made by the Association from year to year.

The permanent secretary presented a report on the affairs of the Association, a summary of which will appear in a later issue of SCIENCE. The general secretary presented a report considering the following items: (a) The supplying of the past publications of the Association to scientific institutions outside of the United States. (b) The committee on Mex-

ican scientific organization (see SCIENCE, N. S., 53: 4, 1921) is active and the work is in progress. (c) The general secretary is making a study of the problem of securing a fuller attendance of members of the council at council meetings.

A campaign for new members, especially among residents of Canada, was authorized, with special reference to preparations for the Toronto meeting. It was recommended that the medical men of the United States be specially invited to join the association.

It was voted that the edition of the new volume of the Summarized Proceedings of the association should include (a) the number of copies ordered and paid for in advance at the time of printing (over 1,600 copies were thus accounted for on April 23) and (b) an extra supply of 500 copies. The permanent secretary was authorized to distribute not over 50 copies gratis, to a selected list of libraries, etc., throughout the world. (The volume, including the Membership List, will appear about June 1. It may be purchased by members of the association for \$1.50 if payment be made in advance of the final going to press; the price to non-members is \$2.00.) It was voted that the price of the 1921 volume of Summarized Proceedings, including the Membership List, should be \$2.00 to members and \$2.50 to non-members, after the date of publication.

It was voted that the association would welcome an address, at the Toronto meeting, under the auspices of the Society of Sigma Xi, an affiliated society of the Association.

The committee adjourned at 10.05, to meet in New York City early in November.

BURTON E. LIVINGSTON,  
*Permanent Secretary.*

#### MEDALS OF THE NATIONAL ACADEMY OF SCIENCES

At the annual dinner of the Academy held at the Hotel Powhatan on April 26, a surprise was sprung upon the president, Dr. Charles D. Walcott, when Dr. W. H. Welch took the chair and introduced Dr. J. M. Clarke of the State Museum, Albany, New York, who out-