

January 14th, 1908.

The Annual At Home of the Society took place to-night at the Canadian Institute. The new President, Mr. Musson, took the chair. The only business transacted was in connection with the following nominations :

T.A. Chapman, Baltimore, Ont.,
Proposed by D.B. Marsh and C.A. Chant;

Saul Dushman, Electro-Chemical Laboratory,
University of Toronto, Toronto,
proposed by H.P. Mills and C.A. Chant.

In accordance with the custom usually followed with respect to nominations made at the Annual At Home, the elections were completed without the formality of the usual lapse of two weeks' time.

The retiring President, Dr. Chant, then gave a review of the Progress of Astronomy during 1907. The address was most admirable, giving the result of elaborate investigations into the subject, and was heard with much pleasure by the large audience. It will appear in the forthcoming number of The Journal.

At the close of the address the attached motion was presented :

The meeting was then thrown open for a social hour and refreshments were served.

MOVED BY Mr. John A. Paterson, K.C.,

SECONDED BY Mr. R. Stewart Muir :

AND RESOLVED,- That we record our deep sense of indebtedness for the able and faithful service that Professor Clarence A. Chant, B.A., Ph.D., has performed for this Society.

As our President for ^{four}~~three~~ years and a member for many years, we have had the benefit of his advice and guidance ~~his~~ ⁱⁿ council, his work in editing our Journals and Yearly Hand-Books, to all of which he has given valuable time, unstinted labor and professional skill. He has not only been good, but also good for something, moreover good for much. He has taken hold of the work, not with the red tape of duty, which is something, but has touched it with the white silken cord of love, which is everything. The man that loves his work and does it because he loves it, will do more than he who runs simply on the moral rails of formal duty. For all this we tender our gratitude to the retiring President, and wish him every advancement in his professional work, and happiness in all that makes life a joy and a benediction.

Carried.

MINUTES

of a meeting of Council of The Royal Astronomical Society of Canada, held at the Canadian Institute, 21st January, 1908, the President in the chair.

Present : The President;
Dr. Chant;
Mr. Paterson;
Mr. Ridout;
Mr. Collins;
Mr. Stupart;
Mr. Miller;
Mr. Stewart;
Dr. Marsh;
Mr. Sinclair;
Prof. DeLury;
Dr. Watson;
Mr. Duncan;
Miss Dent.

Dr. Marsh, President of the Peterborough Section, introduced Mr. Lowery, Secretary of that Section.

The Librarian presented an account for care of the Society's room, etc., amounting to \$11, which was ordered to be paid.

Mr. Sinclair also stated that the Canadian Institute intends to have a telephone installed in the near future; and he emphasized the necessity, for the sake of the convenience of the members who live at a distance, of opening and closing the meetings promptly.

Correspondence relating to certain volumes of "Knowledge" ordered from the publishers, and which on receipt have proved to be defective, was discussed, and laid over to be dealt with on an occasion when there would be more time to consider it.

It having been brought to the attention of Council that an old and active member, Mr. Persse, is unable to attend the meetings, Mr. Sinclair was authorized to send to him a complete set of the Society's publications for last year.

Mr. Sinclair referred to a number of unbound books and periodicals in the library, and stated that it is intended to have them bound as soon as funds are available for the purpose.

The subject of the revision of the Constitution was then taken up, the Committee having special charge of the matter reporting through Mr. Collins.

Mr. Collins read the correspondence which has taken place between the Society and the Ottawa Section upon the matter.

Moved by Mr. Miller that the Constitution be read article by article and be passed on by Council.

Dr. Chant made a statement showing the manner in which the correspondence with the Ottawa members arose, and read extracts ~~which~~ from private letters which passed between himself and Mr. Plaskett, etc., and which appear to have given rise to some misunderstandings between the Society and its Ottawa members.

Dr.Marsh gave his views regarding the relations which he considered should exist between the Toronto and Ottawa branches of the Society, and stated that he considered that a Federal organization would be for the good of all .

Mr.Paterson seconded Mr.Miller's motion.

Moved by Dr.Marsh that Article 5 be amended, and that Dr.King's suggestion relating to that Article, be substituted. After some discussion Dr.Marsh withdrew his motion, and Mr.Miller's motion carried.

Mr.Collins then read the Constitution Article by Article :

Article 1, Carried.
" 2, Carried.
" 3, Carried.
" 4

Moved by Mr.Stupart that this Article be amended by substituting therefor the clause proposed by the Ottawa Section. This was seconded by Dr.Marsh.

Dr.Chant spoke to the motion, expressing his approval of sufficient introduction of the federal idea to obtain the support of everyone interested in the Society.

Mr.Stupart spoke in favour of his amendment, and Dr. Marsh supported it strongly, and moved that the meeting adjourn and invite Dr.King and a representative of the Peterborough Section to come to Toronto to meet Council and discuss the whole matter of the Constitution.

Some discussion took place as to the probability of Dr.King accepting such an invitation. Mr.Paterson felt that if the circumstances were laid before Dr.King in a proper light that he would be willing to discuss the questions involved. Mr.Paterson ~~xxx~~ stated that he felt the necessity for a check on the possible change of the place of the headquarters of the Society, the library, etc., and that these should be safeguarded in every possible way.

Dr.Watson moved that Dr.King and his Secretary be invited to come to Toronto and discuss the whole question, and that in giving the invitation assurance be given that we are open minded and ready to adopt the best plans for the advancement of science in the Dominion. This motion was seconded by Mr.Ridout and carried.

Mr.Paterson then drafted a letter to be sent to Dr. King and the meeting adjourned.

Minutes of Meeting R. A. S. C.
Jan 28/08

The President in the chair

Minutes of meetings ^{Dec} Jan 17th and Jan 14th were read and approved

Report of Council meeting Jan 21st was read and accepted

Communications were received from

H. S. Howell, Galt Ont -

Federick Lambert - Ottawa

Arthur L. Waidman Toronto

Oliver Ferrier Berlin Ont -

Herman S. Lewis, Dover Delaware

J. Miller Barr, St-Catharines Ont

Rev J. J. Karanagh, Loyola College Montreal

Under Prediction

Attention was called to the fact that Venus is ^{beginning} higher in the western sky, her maximum brightness will be attained about the end of May

Observations

observations of the planets Venus and Jupiter were reported by several of the members

Mr. Merrin reported a recent visit he had made to the Ottawa Observatory, where he had spent a pleasant and profitable evening, through the courtesy of the Director and staff

The paper for the evening was by Mr. Chant, descriptive of the spiral nebula theory of the evolution of the solar system, properly illustrated with lantern slides of spiral nebulae recently photographed with the Loomis Reflector at the Lick Observatory

Feb 11
R. A. S. C.
Museum
Ottawa

MINUTES

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Dr. Chant;
Mr. Paterson;
Mr. Ridout;
Mr. Collins;
Mr. Stupart;
Mr. Miller;
Mr. Stewart;
Dr. Marsh;
Mr. Sinclair;
Prof. DeLury;
Dr. Watson;
Mr. Duncan;
Miss Dent.

Dr. Marsh, President of the Peterborough Section, introduced Mr. Lowery, Secretary of that Section.

The Librarian presented an account for care of the Society's room, etc., amounting to \$11, which was ordered to be paid.

Mr. Sinclair also stated that the Canadian Institute intends to have a telephone installed in the near future; *and* he emphasized the necessity, for the sake of the convenience of the members who live at a distance, of opening and closing the meetings promptly.

Correspondence relating to certain volumes of "Knowledge" ordered from the publishers, and which on receipt have proved to be defective, was discussed, and laid over to be dealt with on an occasion when there would be more time to consider it.

It having been brought to the attention of Council *Pursey* that an old and active member, Mr. ~~Perrase~~, is unable to attend the meetings, Mr. Sinclair was authorized to send to him a complete set of the Society's publications for last year.

Mr. Sinclair referred to a number of unbound books and periodicals in the library, and stated that it is intended to have them bound as soon as funds are available for the purpose.

The subject of the revision of the Constitution was then taken up, the Committee having special charge of the matter reporting through Mr. Collins.

Mr. Collins read the correspondence which has taken place between the Society and the Ottawa Section upon the matter.

/ Moved by Mr. Miller that the Constitution be read article by article and be passed on by Council.

/ Dr. Chant made a statement showing the manner in which the correspondence with the Ottawa members arose, and read extracts ~~which~~ from private letters which passed between himself and Mr. Plaskett, etc., and which appear to have given rise to some misunderstandings between the Society and its Ottawa members.

#
Paterson
#
Mr. Paterson spoke against the amendment stating that, in his opinion, every reasonable concession had been made in the draft of the constitution then before the council, that it was Federal in its character, and that he failed to see why this constitution should not be acceptable to the Ottawa section: that in fact it went further than he personally agreed with.

Dr. Marsh gave his views regarding the relations which he considered should exist between the Toronto and Ottawa branches of the Society, and stated that he considered that a Federal organization would be for the good of all.

Mr. Paterson seconded Mr. Miller's motion.

Mr. Collins then read the Constitution Article by Article :

Article 1, Carried.
" 2, Carried.
" 3, Carried.
" 4

Moved by Mr. Stupart that this Article be amended by substituting therefor the clause proposed by the Ottawa Section. ~~the clause proposed by the Ottawa Section.~~ *Motion Suspended*

Dr. Chant spoke to the motion, expressing his approval of sufficient introduction of the federal idea to obtain the support of everyone interested in the Society.

Mr. Stupart spoke in favour of his amendment, and Dr. Marsh supported it strongly, and moved that the meeting adjourn and invite Dr. King and a representative of the Peterborough Section to come to Toronto to meet Council and discuss the whole matter of the Constitution.

Some discussion took place as to the probability of Dr. King accepting such an invitation. Mr. Paterson felt that if the circumstances were laid before Dr. King in a proper light that he would be willing to discuss the questions involved. Mr. Paterson ~~xxx~~ stated that he felt the necessity for a check on the possible change of the place of the headquarters of the Society, the library, etc., and that these should be safeguarded in every possible way.

Mr. Watson moved that Dr. King and his Secretary be invited to come to Toronto and discuss the whole question, and that in giving the invitation assurance be given that we are open minded and ready to adopt the best plans for the advancement of science in the Dominion. This motion was seconded by Mr. Ridout and carried.

Mr. Paterson then drafted a letter to be sent to Dr. King and the meeting adjourned.

REPORT FROM COUNCIL.

A meeting of Council was held at the Canadian Institute on the 4th February, 1908.

The meeting had been called for the purpose of affording an opportunity for meeting Dr. King and Mr. Plaskett, of Ottawa, with a view to discussing the new Constitution, and the differences of ~~xx~~ opinion which exist upon the subject between the Toronto and Ottawa bodies. The discussion was serious and long, ideas on both sides being expressed freely, and a clearer understanding was obtained of the points at issue as regarded by both branches of the Society, but no definite action was taken, the Constitution standing at the close of the meeting as drafted. Further negotiations will be conducted by correspondence.

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

Meeting held at the Canadian Institute, February 4th, 1908.

Present : Mr. Musson;
Mr. Paterson;
Mr. Stupart;
Dr. Chant;
Dr. Marsh;
Professor DeLury;
Mr. Collins.
Mr. Miller;
Mr. Ridout;
Miss Dent.

Council had been called for the purpose of meeting Dr. King and Mr. Plaskett, of Ottawa, and discussing with them the new Constitution of the Society, and the differences of opinion of the Toronto and Ottawa divisions of the Society in respect of certain of its clauses.

The President, Mr. Musson, took the chair.

Dr. King : stated in general terms the ideas of the Ottawa branch of the Society in regard to a Constitution, and stated his readiness to answer questions upon the subject.

Dr. Marsh : I would be glad to know whether I understand Dr. King fully. May I ask whether his intention is that each Section of the R.A.S.C. shall have its own working body, and that there be a general Council governing or regulating the various Sections? Is it the idea to have a president of the entire Society as well as presidents of the various Sections?

Dr. King : Yes.

Mr. Paterson : Thanked the Ottawa members for their attendance. He then expressed in detail the essential differences between the policy of the Constitution as prepared by the Toronto body and by the Ottawa body.

Dr. King : explained a point raised respecting the plan of elections as proposed by the Ottawa body.

Mr. Paterson : spoke of the question whether the Toronto branch should be known as the Toronto Section, and stated that he could see no reason for adopting the term, unless it could be shown that a substantial reason existed for the change.

Prof. DeLury : asked what the advantage was of the Council formed as proposed by the Ottawa Constitution as compared with the Toronto Constitution.

Dr. King : replied that it is a Council elected by the Sections, instead of by the membership. This gives representation to the sectional unit, and ensures the distribution of the membership of the Council all over the country. The representation of the sections gives them a permanence, which is regarded by the Ottawa Branch as a good thing, encouraging the formation of sections and the growth of the Society. The chief point is that a better representation of the sections is afforded than under the policy of the Toronto Constitution.

Professor DeLury : When the committee took into consideration your first communication with regard to the Constitution as first proposed, it went into examination of the constitutions of other Societies whose history was similar to that of our own. It was found that in no case that came under the attention of the committee was the existence of the parent Society as a society touched upon. For instance the American Mathematical Society and the American Physical Society.

Dr. King : The Mathematical Society is not a parallel case. It is a highly technical and professional Society. The R.A.S.C. is a popular body, composed largely of amateurs.

Professor DeLury : mentioned the case of individual members scattered throughout the country, and the best method of giving them adequate representation. He also touched upon the contention respecting the use of the term "Toronto Section," and explained to the Ottawa members the feeling which exists among the Toronto members upon the point.

Dr. King : If the Ottawa Section is to be in a position of inferiority, I, as Director of the Government Observatory, cannot agree to accept the Toronto proposals. I have been using the observatory as an adjunct to the meetings of the Ottawa Section. I think that the sectional idea is necessary for the growth of the Society.

Dr. Marsh : Sentiment would keep this Society where it is, but we must develop and advance, and I believe that now is an opportunity. The comparisons which have been drawn are not, I think, parallels. I do not think that our Constitution permits us to be as useful as another that might be prepared. It does not permit us to live up to our name, and make the progress demanded of us to-day. We must take the opportunity afforded us now. The question now before us is : Re-organization or not?

Mr. Paterson : Will Dr. Marsh point out a single detail in the Toronto Constitution which prevents the progress of astronomy in our midst and throughout the Dominion?

Dr. Chant : If we can be assured of the co-operation of all parties in the advancement of astronomy in Canada, it would not be injurious to us to reorganize on the sectional scheme. So far as I understand, it is universally agreed that the Society's headquarters shall remain where they ~~xxx~~ have been. If it is possible to have better co-operation, I have no objection to the change of the Constitution and to give up the objection of the Toronto body to being called the "Toronto ~~Society~~ Section"

Mr. Paterson : objected to Dr. Chant's remarks, as being inconsistent with his position as chairman of the revision committee.

Mr. Miller : The motive which will lead to the formation of sections is the motive of companionship in the study of astronomy, and not voting power. No form of voting would prevent our having the best men elected to office. The Society has been here for more than twenty years, and long before that as an unincorporated body, and we object to anything being done which will work any change in this respect. The Society was founded here and was carried on here, and we wish to have its headquarters remain here.

Dr.Marsh : It appears to me that we require somewhat of a reorganization. In the first place,we cannot at present live up to our name.

Mr.Musson : I think that the point at issue is that Our Ottawa friends wish to have a Society established which is really an aggregation of sections,each section being represented proportionately on a general Cpuncil. I think,and I believe that a great majority of the members of the Council do,that the Constitution should permit of local organizations being formed at different points,which would contribute part of their fees,for which they would receive the publications of the Society; that the Toronto body should remain the R.A.S.C.,and not be in the position of a section; the Council,compesd largely of the officers of the Society,would be the governing body. The Toronto members do not wish to give up the ancient standing of the Society. The matter goes much further than was originally intended when it was first opened up. (A minute of the original committee respecting the establishment of branches was read by Mr. Musson.) The Constitution which we have offerred,it seems to me,gives every opportunity to the Society,whether in respect of a local section or not,for so great power in voting is given that it should not be felt that anyone is labouring under any inferiority. I feel that we have made a fair proposition in this Constitution. So far as interfering with the interests of astronomy is concerned,I do not see that they are in any way affected. I am in favour of spending Government money only upon matters which will be of advantage to the members throughout the Dominion. Local expenses should be covered by our fees.

Dr.King : Equality of the sections is not provided. I do not care,personally,to be a member of a section,that is,as Director of the Dominion Observatory.

Mr.Collins : Would it help if we were to change the terminology, dropping the word "Section?"

Mr.Paterson : Let the R.A.S.C.have meetings at Toronto — at Ottawa — at Peterborough; in other words,wherever a section meets,the R.A.S.C.meets.

Mr.Plaskett : Wherein does the word "section" hurt Toronto?

Mr.Paterson : It does not hurt us at all. We have been for years past a Society,and we are in possession of the franchise of the R.A.S.C.,and have been in possession for many years.

Mr.Plaskett : If you call the Society "The Royal Astronomical Society of Canada," you should make it a national Society, and should try to meet the views of outside members,and we have not yet heard that you are ready to sacrifice anything.

Prof.DeLury : If the word "section" were dropped,and provisionx were made for meetings,etc.,in any particular place,meetings could be organized at any place,and the term "Ottawa Meetings," "Toronto Meetings," etc.,be employed. The Constitution ensures individual equality. The provisions for the election of officers,etc.,can stand practically as they are. All programmes are subject to the supervision of Council,and the Council in this matter would depute to the officers of outside bodies.

Mr. Plaskett : What is the exact status of the proposed Council?
Is it to be an administrative Council for the Society as a whole, or for the Society as a whole and the members in Toronto in particular?

Professor DeLury : I think the Society should assume responsibility for everything connected with the sections.

Mr. Ridout, as Treasurer, outlined his views as to the financial arrangements which would provide conveniently for carrying on the business of the Society under the draft Constitution.

Dr. King : Respecting the property of sections, provision should be made for disposing of or acquiring the property of a local section which should come to an end.

After further discussion, Mr. Musson stated that the Constitution as drafted practically stands, for further consideration.

The meeting then adjourned.

A meeting of the Royal Astronomical Society of Canada was held in the Canadian institute, on Tuesday evening, Feb. 11th the President in the chair.

The minutes of the former meeting were read and approved.

Communications were read from

J. Miller Barr, St. Catharines,

S. W. Lowry, Peterboro, Ont.

A. R. Hardman, Toronto,

Natural History Society, St. John, N.B.

Nominations:

Robert Cuthbert, 211 Avenue Road Toronto,

Geo. W. Rudler, B. A. Sault Ste Marie, Ont.

Observations of Jupiter and Venus were discussed by several of the members.

Mr. Hassard exhibited an eight inch glass that he was figuring for a reflecting telescope.

The paper for the evening, was by Mr. A. F. Miller, on

"Stellar Motions" with special reference to the motions involved in variable stars.

W B Munn

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

MINUTES of a meeting held on the 25th of February, 1908,
at the Canadian Institute, the President in the Chair.

Minutes of the previous meeting were read and approved.

Communications were read from :

Miss J.F. McKim, Toronto.

Abbe Bossche, Belgium.

Mr. Kerr, Peterborough.

Revd. T.W.J. Claridge, Burton-on-Trent, England.

Mr. G.J. Hoyle, Cannington.

Dr. Sebastien Allbright, Lick Observatory, respecting
an article to be contributed by him to The
Journal, upon the subject of the recent eclipse
expedition to Flint Island, and stating that
Professor Campbell is working on photographing
the corona.

Mr. John Duncan, Windsor, asking the procedure to be
followed in forming a branch of the Society.

Elections :

The nominations were read for the second time of

Robert Cuthbert, 211 Avenue Road, Toronto;

George W. Rudlen, B.A., Sault Ste. Marie.

It was moved, seconded and carried that the Recorder
be directed to cast a ballot for the election
of both candidates, who were then declared to have
been duly elected.

Nomination :

James J. Workman, B.A., Wingham,
proposed by Dr. Chant and Prof. DeLury.

Reports of Committees :

The Committee on the revision of the Constitution reported through the President that a meeting had been held, and that the Constitution will be ready for presentation within a few days.

Notes and Queries :

Mr. Muir stated that he had just read Kedzie's work on solar gravitation and sun-spots. Mr. Muir explained Kedzie's theories, which led to a discussion on the subject, in which Mr. Miller, Mr. Collins and Mr. Tyson took part. Mr. Miller said that Kedzie's theory of gravity is a very rational one, but that his views on sun-spots are not so acceptable. Mr. Inrig inquired how, if the theory of gravitation is in such an unsettled condition, the weight of the planets can be stated with the precision with which they are stated. Mr. Miller replied that the theory of gravitation is not unsettled, but that the explanation of that theory is not settled.

Observations :

Mr. Hassard reported that he had been observing Jupiter with a four-inch glass and a power of 100 and 200, and that last evening three satellites were visible, but the fourth, being in transit on the disc, could not be seen. Mr. Miller stated that it is often possible to see a satellite on the disc when near the limb with the power used by Mr. Hassard.

Mr. Collins drew attention to a notice given by Mr. Phillips of the British Astronomical Association, asking observers to note especially the locality on the surface of Jupiter where the red spot was some time ago.

The address was by Professor DeLury, and dealt with the subject of the corrections necessary to be applied to astronomical observations on account of atmospheric refraction. Professor DeLury explained the necessity for such corrections, and the method by which they were made, giving the formulae, founded on Bessel's tables, which are in general use.

Mr. Musson thanked the lecturer for the time and trouble he had spent on his address.

Mr. Miller asked to what extent Newton carried the theory of refraction. Professor DeLury replied that the theory was very young at that time, but that Newton's suggestions were doubtless acted upon by others.

Professor Kirschmann asked whether the formulae given were for all latitudes, and was informed that they were, but that there would have to be considered the question of distance from the centre of the earth, and that Bessel's tables are in universal use.

W. B. Musson

MINUTES of a Meeting of Council held at the Canadian
Institute, March 3rd, 1908.

Present : Mr. Musson, in the Chair;
Mr. Collins;
Mr. Ridout;
Mr. Miller;
Miss Dent.

UNIVERSITY MEDAL :

The subject of giving a medal in Astronomy for competition at the University of Toronto, as has been previously done, was discussed, and authority for its presentation was given. The Secretary was instructed to communicate with the President of the University notifying him, and ask that the name of the successful candidate be communicated to the Society for record. The Secretary was also directed to order the medal from Messrs. Ellis & Co.

ACCOUNTS :

The following accounts were presented, and payment approved :

Library, petty expenses, postage on Journal, &c.,	-\$20.00
Mr. Tyson, typewritten copies of draft Constitution, -----	8.25
University Press, printing programmes, envelopes, etc., (a/c. dated May 10 and Jany. 18) --	25.76
Geo. Coles, Annual At Home, refreshments; -----	25.00
Mr. Reading, lantern slides, -----	2.45
Carswell & Co., binding, -----	2.50
R. G. McLean, printing 600 Handbooks, -----	200.00
Dr. Chant, small expenses, telegrams, express, etc.	3.03
Mr. Collins, " " "	3.75
Jones Engraving Co., engraving, lithographing, etc., in connection with The Journal,	21.75

z, M Mr. Collins, publication of No. of The ^ Journal, -----	153.26
Mr. Jones, lantern slides, -----	2.25
Miss Mason, stamps, -----	12.69
Dr. King and Mr. Plaskett, expenses coming to Toronto, -----	18. 20.30
z, M Mr. Collins, wrappers, etc., for The Journal, ---	10.90

Mr. Collins presented an itemized statement of postage for the last year, amounting to \$96.69, which, on motion of Mr. Miller, was duly approved.

AUDITORS :

Mr. Boyce and Mr. Bain were appointed to audit the accounts of the Society.

TREASURER'S OFFICE.

Mr. Ridout mentioned the increasing amount of book-keeping and other clerical work demanded by the proper care of the interests of the Society, and the necessity of having some competent person undertake it, to be paid a certain rate per hour therefor. This was approved of, and Mr. Miller moved that, in order to facilitate the Treasurer and the Council in the passing of accounts, officers of the Society who contract accounts send them with necessary particulars to the Treasurer some time before the meeting of Council at which they are to be dealt with, and that the Treasurer employ some person to enter them in a book, which will be the Agenda of Council, and that copies of such entries be supplied to members of Council; seconded by Mr. Collins and carried.

EDITING COMMITTEE :

Moved that Dr.Chant continue as Editor,with Mr.Paterson and Mr.Collins as assistants,with power to the Committed to add to their number; Carried.

THE JOURNAL :

The Treasurer was authorized to spend an amount not exceeding \$400 on the next two numbers of The Journal,this sum to include every item of expense in connection therewith,including such items as postage,wrappers,etc.

The question of the desirability of continuing the publication of advertisements in The Journal was mentioned,and it was decided to leave the matter in the hands of the Editorial Committee.

STATIONERY SUPPLIES :

The subject of procuring supplies of stationery in the most methodical and economical manner was discussed,and the rule was laid down that the ordering of such supplies should be in the hands of the Secretary.

COUNCIL MEETINGS :

It was determined that,as far as is possible, Council meetings shall be held on the first Tuesday of the month,unless the first Tuesday be the date of a regular meeting,in which case Council will be called for the second Tuesday.

W.B. Musson

March 10

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

Minutes of a meeting held at the Canadian Institute,
10th March, 1908, the President in the Chair.

Minutes of the previous meeting were read and approved.

Communications were read from

Mr. J. S. Plaskett, Ottawa;

Reverend Father Kavanagh, Loyola College, Montreal;

Mr. Alexander Thompson, Iron Rock, N.S., for information
as to membership in the Society.

Harvard College Observatory Bulletins (1) respecting
the observation by Melotte, at Greenwich, of a
planet; (2) respecting a variable star in Auriga
and observations of it made at Kiel.

Report from Council, of the meeting held on the 3rd in-
stant was read and approved, a slight amendment being
made, by adding an account presented of the expenses
of Dr. King in travelling to Toronto to discuss the
matter of the new Constitution, and amounting to
\$18.50.

Election :

The nomination was read for the second time of Mr.
James G. Workman, B.A., Wingham, and the election was
formally completed.

The Librarian's Report, containing a list of recent
additions to the Library, was presented.

Predictions :

Mr. Collins read predictions of current phenomena
from the Hand Book.

Mr. Musson mentioned the Comets expected this year,
and stated that Encke's Comet had been photographed
at Heidelberg in January. The ephemeris of Halley's
Comet, due in 1910, was given. Mr. Elvins suggested
that in view of the fact that Halley's Comet is in
a region of the heavens not far from the region in
which the satellite referred to in the Harvard Bulletin
was observed, it was not impossible that what had
been taken for a satellite might prove to be the
comet. Mr. Musson also stated that Daniel's Comet
is now visible in the early morning hours, and is of
about magnitude $8 \frac{1}{2}$.

Observations :

Mr. Collins sketched on the blackboard the bright
stars on the part of the sky where the satellite has
been seen, showing the Twins, Regulus and Cancer.

The paper was by Mr. John Phillips, on "A Popular Exposition of Darwin's Earth-moon Theory." Mr. Phillips illustrated his address with blackboard drawings: Notes of his paper are attached.

At its close, the President thanked the lecturer for his interesting address. A discussion followed in which Mr. Collins, Mr. Musson and Mr. Elvins took part.

W B Musson

Prof. G. H. Darwin's Tidal Theory
of the
Earth-Moon System,
By Mr. John Phillips

Our Moon is the only satellite in the system Prof. Darwin attempts to account for.

Our Earth, says he, is only 80 times heavier than the Moon, whereas Saturn is 4600 heavier than his satellite Titan, the largest satellite in the Solar System.

Darwin begins by supposing the action of the tides reversed, that is the tides drawing the moon towards the earth instead of pushing her away.

In time he finds her approaching the earth and gaining in orbital velocity. The earth, too, gains in rotation speed. This goes on until the moon is traced close to the earth, and revolving there in from three to five hours. Carrying the calculations farther back, the moon is at last found

2

to be just grazing the earth's surface and revolving about her in just 2 hours and 24 minutes! The earth rotating in the same period, and both presenting to each other the same face hemisphere all the way round!

Darwin regards this as a numerical verification of the truth of his theory.

Hear what he, himself, says:—

"Is it then a mere coincidence that the shortest period of revolutions, with which a spheroid of the same mean density as the earth could subsist in the ellipsoidal form, is 2 hrs. 24 m.; whilst if Laplace's law were to hold true, and if the moon were to revolve round the earth in the same period, the surfaces of the two bodies would just graze one another?"

Roche's law is of course not observed in these calculations, but that does weaken Darwin's argument in the least.

The Earth-moon system is her
unstable. The lunar month and terrestrial
day are of the same length. ~~The system~~
~~is unstable.~~ A slight shock or interference
would precipitate ^{the moon} down upon the earth.
drive them apart, and destroy the system.

From this position Darwin starts
the moon off again, on her long spiral journey.
For some reason the month must have
grown longer than the day, though both
increased. Tidal action then set in, and
began its work in augmenting the moon's
tangential force and pushing her out in
a wider and slightly spiral orbit. The day
in the month increased from one up to two
= nine! The day also increased from 2 hrs. 24
to about 20 hrs. This was an epoch in ~~the~~ the
history of the Earth-moon system. Prior
to this the month lengthened faster than the day,
after this the day faster than the month, so
that now we have only 27 and one third days
in the lunar month! And this must go on
and on until there will be only one day in the
month, as at first! But that day and month
will be equal to 55 of our present days.

And each, ~~will~~ ^{will} present to the other the same face, for both ~~will~~ ^{will} ~~return~~ ^{return} on its respective axis only once during its revolution around their common centre of gravity.

Having now traced the moon from where she is, back beside the earth - the forward here again and 140,000 miles farther out, we leave her there in stable equilibrium, to rest and recover herself, before turning back for the earth again as Prof. Darwin does. For he traces her back on her lengthy journey all the way ~~again~~.

John Phillips
Toronto Mar. 20th

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

Minutes of a meeting held on the 24th of March, 1908, the
President in the chair.

Minutes of the last previous meeting were read and approved.

Communications read from :

The Reverend Dr. Marsh;
Mr. J. S. Plaskett, Ottawa;
The Reverend Mr. Henderson, Plattsville, N.S.;
The Deputy Postmaster-General, respecting the subscrip-
tion price of The Journal.
Professor Snider, Philadelphia Observatory:
Mr. J. Miller Barr, St. Catharines:

Nominations:

R. A. Gray, B.A., Jarvis Street Collegiate Institute, Toronto,
proposed by C. A. Chant and J. R. Collins.
The Reverend William Henderson, Plattsville, N.S.,
proposed by J. R. Collins and W. B. Musson.

Librarian's Report:

Read by Mr. Sinclair, who reported that subscriptions
to some of the periodicals had expired and should
be renewed.

This being a matter to be dealt with by
Council, it was laid over for consideration
at a meeting to be held on the 31st instant.

Predictions:

Dr. Chant gave notice of approaching phenomena.
Mr. Hazzard mentioned that the ~~the~~ satellites of
Jupiter appear at present to be moving directly ac-
cross the face of the planet, owing to the fact that
the plane of the earth and that of Jupiter coincide.
Mr. Hazzard also gave interesting notes of his ob-
servations of occultations and eclipses.
Mr. Collins mentioned the fact that the new satellite
announced by Greenwich had been observed by Professor
Campbell, at Lick Observatory, on the 8th instant. Its
magnitude was about 15. The suggestion made that the
object may be Halley's Comet was not tenable, as ob-
servation shows that the object is drifting with the
system of Jupiter, and is probably attached to Jupiter.

Notes and queries:

Mr. Musson reported that Dr. Lewis Swift, famous for his discoveries of comets, had celebrated his 82nd birthday on the 29th of February, having reached his 88th year. Mr. Musson stated that he had written to Dr. Swift offering to him the congratulations of the Society.

Some discussion took place regarding the necessity for having every fourth year a Leap Year, and the theories which had been propounded as methods of solving the difficulty.

The lecture was by Professor DeLury, upon the subject of Corrections Applied to Observations : (II) Parallax.

W. B. Musson

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

Minutes of a meeting of Council held at the Canadian
Institute, March 31st, 1908.

Present : Mr. Musson, President, in the Chair.
Dr. Chant;
Professor DeLury;
Mr. John A. Paterson.
Mr. Miller.
Professor Stewart;
Mr. Sinclair;
Mr. Collins;
Mr. Ridout;
Miss Dent.

The following accounts were approved and ordered to be paid.:

Rent, to 31st December, 1908,	\$100.00
Engraving cuts for The Journal ,	.88 4.48
Blank book,	.25
Salary to Assistant Librarian,	12.00

The subject was discussed of having Mr. Plaskett come from Ottawa to give a lecture, the estimated expense of which would be \$20. It was moved by Mr. Miller, seconded by Prof. DeLury, and carried, that arrangements be made with Mr. Plaskett, and that an expenditure of \$20 be authorized.

The subject of the advisability of continuing to print post cards as well as programmes of the meetings was considered, and it was decided to try the plan of having the programmes printed on post-cards for a period of three months.

The Librarian presented a statement showing the publications which should be renewed, and expenditure was authorized to cover subscriptions to Popular Astronomy, The Observatory, The Astro-Physical Journal.

Mr. Sinclair was also authorized to have such binding done as is absolutely necessary at the present time, and to purchase a shelf to hold new magazines, and a small step-ladder and book-supports for use in the library. An appropriation of \$10 was made for a supply of stationery, this amount to cover the cost of the post-card programmes.

A letter was read from William Wesley & Co., London, England, suggesting that their names appear on the cover of the Journal as European agents for its sale. This proposal was considered to be a good one.

A letter was read from Mr. F. D. Kerr, Peterborough, asking that his name be removed from the list of members.

Mr. Sinclair reported that the work in the library has increased to such an extent that the time of the Assistant Librarian, two hours a day, is quite insufficient. Mr. Sinclair stated that Miss Mason was called upon to perform many ~~services~~ services which he considered were not among her duties as Assistant, and that the amount of salary paid her was not a fair compensation for her work. The matter was referred to the Library Committee, which will report to Council after the 1st of June,

The Committee on the revision of the Constitution reported that they had practically agreed upon a ~~raft~~ draft of the Constitution. It was moved by Mr. Paterson, seconded by Professor DeLury that the Constitution be read clause by clause : Carried.

Clause I, Carried.

Clause II, Carried.

Clause III, Carried.

Clause IV : Some discussion took place with regard to this Section, and Mr. DeLury's suggestion was adopted that, in submitting the draft for the approval of the Ottawa body, full foot-notes be inserted to answer in advance questions which might arise. The clause was then carried.

Clause V, Carried.

Clause VI, Carried, with slight verbal amendment.

Clause VII, Carried. Full foot-notes will also be made to this clause.

Clause VIII, Carried, with slight verbal amendment.

By-laws I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV, were carried one after another as drafted, except that XIV was amended by striking out clause (3) thereof.

Moved by Mr. Paterson, seconded by Mr Miller, that the Constitution ~~By-laws~~ as carried be adopted.

The Constitution Committee was also instructed to draft a letter to accompany the draft Constitution to the Ottawa body for their approval, and the Secretary was authorized to have ^{as many} copies of the draft made as may be necessary.

The meeting then adjourned.

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

Minutes of a meeting held on the 7th of April, 1908, at the Canadian Institute, Toronto, the President in the Chair.

Minutes of the last previous meeting were read and approved.

Communications were read from :

- Dr. King, Ottawa, asking for certain numbers of the Society's Transactions, to complete the files of the Ottawa Section;
- Wisconsin Academy of Arts and Sciences, acknowledging receipt of the Society's publications;
- The Royal Society of Canada, announcing its annual meeting, to be held at Ottawa, May 25-28, and upon the subject of the appointment of a delegate from this Society;
- Harvard College Observatory, acknowledging receipt of publications;
- Rev. D. B. Marsh, Springville, respecting the removal of one of the Peterborough members;
- Mr. Plant, stating that he had not received the publications.

The Secretary reported that he had communicated with the President of the University of Toronto, upon the subject of the presentation of the Society's gold medal, and that a reply had been received to the effect that no student is this year eligible. The medal will not therefore be offered this year.

Minutes of a meeting of Council held on the 31st ultimo were read and approved, with the exception of the clauses thereof relating to the Constitution, which were left over until the next meeting.

Elections :

The nominations were read for the second time of :
R. A. Cray, P. A., Toronto, and
Rev. William Henderson, Plattsville, N. S.,
and both candidates were declared by the President to have been duly elected.

The nominations were read of :

Alexander M. Thompson, Iron Rock, N.S.
and

L'Abbe Van den Bossche, Director of the Convent
of St. Vincent, Selzate, Belgium,

both proposed by J. R. Collins and W. B. Musson.

The report of the Librarian was read by the Assistant Librarian, who invited the attention of the members to the fact that certain books are missing from the library and that there was no record of their having been regularly given out, and asking anyone who had any of the missing volume to return them.

Predictions : Mr. Hassard gave a list of occultations during the course of the next week or two.

In reply to a question of Mr. Hasaard, respecting the non-appearance in the Hand Book of such a list, Dr. Chant explained that the subject was duly considered at the time of the preparation of the material for the Hand Book, but that it was deemed inadvisable to publish one list, applicable to observations in one place only, and therefore not useful to observers in general, while the labour of preparing material for use in different places was too great to be undertaken for such a publication.

Observations : Mr. Hassard reported having observed the conjunction of Venus and Saturn with the moon on the 4th instant, and dwelt especially upon the beauty of the detail visible that evening on the dark portion of the moon, in the region of the mountain Plato.

The lecture was by Professor A. P. Coleman, upon the subject of "Ancient Ice Ages," and was elaborately illustrated with lantern slides. Notice of the lecture will appear in The Journal. It was followed by an interesting discussion, in which Messrs. Inrig, Ridcut, Paterson, Muir, Elvins and Musson took part. A vote of thanks to the lecturer, proposed by Mr. Paerson and seconded by Mr. Miller, was carried, expressing the thanks of the Society to Professor Coleman.

W B Musson

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

Minutes of a meeting held on the 21st of April, 1908, the President in the Chair.

Minutes of the last previous meeting were read and approved.

Communications were read from :

A.M.Thompson, Iron Rock, N.S., asking that his nomination for membership in the Society be withdrawn;

Mr. Flint, tendering his resignation as a member of the Society, owing to his inability to attend the meetings.

Finance Department, Ottawa, enclosing cheque for subscription to The Journal.

Mr. King, Ottawa, upon the subject of the Constitution submitted to the Ottawa Section;

The Ottawa Section, enclosing programme of meetings.

Manilla Observatory, requesting that an announcement be made in The Journal that a fine telescope, a seven-inch refractor used by Bruenner, with which the markings of Venus have been seen, is for sale.

Election : The nomination of L'Abbe Van den Bossche was read for the second time, ~~and was declared to be elected~~ and the election was declared to have been formally completed.

The Librarian's report of recent additions to the library was read.

Predictions of approaching phenomena were read by Mr. Collins.

Observations : Mr. Hassard reported that he witnessed on the 9th instant the occultation of five stars in the Constellation of Cancer.

Mr. Muir referred to the present brilliance of Venus, and the power of the planet to cast a shadow.

Notes and Queries :

Mr. Muir inquired whether any explanation is given as to why Bode's law is not exact, while it is accepted as a law. This led to some discussion in which Messrs. Musson, Maybee and Collins took part.

Mr. Hassard referred to the difference of opinion which exists regarding the magnitudes of the stars, and asked for some explanation. The reply was given that star magnitudes are now made by photometric measurements, and that there is no uncertainty as to magnitudes computed by that method.

Mr. Collins drew the attention of the Society to the fact that in the March number of the Astro-Physical Journal there are articles by Dr. King and Mr. Plaskett and a short note by Mr. Harper, which seemed to denote that the Canadian~~x~~ astronomers were in demand for articles on their work.

The paper was by Mr. W. J. Wintenberg, on "Some Myths and Fancies of the Milky Way." Mr. Wintenberg gave the result of much research into the ideas of the ancients and of primitive people generally and presented the subject in a most interesting manner.

The paper was followed by an interesting discussion in which Messrs. Mabee, Miller, Musson and Collins took part, upon the subject of the nature of the galaxy, the types of stars, Professor Wallace's theory and other theories relating to the subject.

W B Musson

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

MINUTES of a meeting held on the 5th of May, 1908, at the Canadian Institute, the President in the Chair.

Minutes of the previous meeting were read and approved.

Communications were read from :

Mr. Frederick Sharpe, Vancouver;

Dr. King, Ottawa, asking for back numbers of The Journal;

Academy of Arts & Sciences, Madison, Wis., asking for back numbers of The Journal;

Mr. Kenneth Klipsham, describing an aurora observed on the 30th of March;

Professor Campbell, Lick Observatory, sending four lantern slides as a gift to the Society, being photographs of the corona taken by the Flint Island Eclipse Expedition on the 3rd of January last;

Harvard College Observatory, reporting observations of the variable star 31, 1907;

William Wesley & Son, London, England, respecting their sales of numbers of The Journal.

Notes and Queries :

On request of Mr. Elvins, the Librarian was authorized to purchase a copy of Fauth's new book on The Moon and Modern Astronomy; ~~the purchase of Hale's new work on Stellar Spectroscopy was also authorized.~~

Mr. Maybee mentioned that Mr. Elvins is to-day celebrating his 84th birthday, and moved that the congratulations of the Society be extended to Mr. Elvins, in recognition of his long services to the Society and to astronomy in Toronto generally. The motion was seconded by Mr. Paterson, who paid high tribute to Mr. Elvins' attainments as an astronomer and was carried with applause.

The Report of the Librarian was read, showing the additions made to the Library during the last fortnight.

Predictions of approaching phenomena were read by Mr. Collins.

Observations :

Mr. Paterson referred to an interesting spectacle on the evening of the 3rd of May, when the Moon, Venus, Mars and Aldebaran formed a very striking four-sided configuration, a curious and beautiful sight on the clear evening sky.

Mr. Miller reported that the phase of Venus at present is that of a full crescent. He also referred to a peculiar ^{feature} visible on the inner portion of the crescent, and some discussion took place as to its probable cause.

The subject of the possibility of photographing the rainbow was also discussed.

The lantern slides presented by Professor Campbell, and referred to earlier in the evening, were then shown, and their various points referred to

The paper was by Mr. J. Edward Maybee, M.E., upon the subject of "Star Magnitudes." Mr. Maybee showed the lack of uniformity which has existed respecting the measurements of the light of the stars, and the methods which are now employed. Dr. Chant explained the method employed in using the meridian photometer, and questions respecting the intensity of light were discussed. Mr. Miller gave his experiences in arriving at star magnitudes, by comparing one object with another, by examining them with the telescope slightly out of focus, etc and referred to his observations of the variation of Mira, which he has followed closely for many years. The address was most interesting and will appear in the Journal.

The meeting then adjourned.

W. B. Musson

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

of Council
Minutes of a Meeting, held at the Canadian Institute,
May 12th, 1908, the President in the Chair.

Present : Mr. Musson;
Mr. Collins;
Mr. Ridout;
Mr. Stewart;
Mr. Sinclair;
Miss Dent.

The President presented a letter which he had received from Mr. Ridout, resigning his office as Treasurer of the Society, on account of pressure of other work, and suggesting the name of Mr. Boyce to succeed him.

Mr. Ridout's resignation was received with deep regret, and on account of uncertainty as to his successor, he agreed to retain the office until the end of June. Mr. Collins reported that he had spoken to Mr. Boyce on the subject, but that Mr. Boyce stated that he would be unable to assume the duties.

Respecting the Hand-Book : A proposal made by Dr. Chant, that the sum of \$30 be paid to the astronomer who prepared certain elaborate tables for the Hand-Book, was discussed. This payment had evidently been overlooked at the time of the appropriation for the Hand-Book, and, although it was regarded as a proper disbursement, it was decided to allow the matter to stand until further funds than are at present available are received.

Accounts :

The following accounts were presented :

Mr. Tyson, typewriting Constitution,	\$1.75	Approved
Carswell Co., binding 2 volumes of the Journal,	2.50	
(This item was laid over for further information.)		
Students Book Dept., book, freight, &c.	1.85	Approved
Accounts of the Editing Committee, for cuts for the new number of The Journal,	11.40	Approved

An appropriation was also made for postage, etc., amounting to \$10.

Transactions :

The Librarian reported that a large number of copies is on hand of back numbers of the Transactions of the Society, and he was authorized to distribute these to whoever might desire them, reserving at least 25 copies of each number, to meet possible future requests.

It was moved by Mr. Stewart, seconded by Mr. Collins, and carried, that a full set of the Transactions be presented to Mr. Muir.

Re Cooke Telescope :

A letter from Mr. Muir was read, asking for the use of the Cooke Telescope during the summer months, and offering to place an insurance policy of \$300 on the instrument. It was moved by Mr. Collins, seconded by Mr. Sinclair, that Mr. Muir's request be granted, on the usual conditions, that it be returned in perfect condition, etc., subject to expert examination before leaving the Society and after its return.

Books ordered :

The purchase of the following books was approved :

Fauth's The Moon & Modern Astronomy,	\$3,
Hale's Spectroscopy,	4.
Hale's Stars of the Fourth Type,	2.

A request having been made for the purchase of "Worlds in the Making," by Rennius, the Librarian was directed to find out the name of the publisher, the price, etc.

Re Stationery supplies :

The quality, colour, size and shape of the paper to be used in correspondence, also the style of embossing was discussed and decided upon, the die bearing the name of the Society only being chosen instead of that bearing the design of the Society's seal.

Re Telephone :

The Librarian reported that the Institute has abandoned the intention of installing a telephone, to which the Society has been looking forward as a convenience.

Re Constitution :

The Secretary read a copy of a letter which had been forwarded to the Ottawa Section in respect of the final draft of the Constitution.

The meeting then adjourned.

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

MINUTES of a meeting held at the Canadian Institute on the 2nd of June, 1908, the President in the Chair.

Minutes of the last previous meeting were read and approved.

Mr. Muir gave a most interesting report of the proceedings of the Royal Society of Canada, held at Ottawa last week, which he attended as the representative of the Society,

The President expressed the thanks of the Society to Mr. Muir for his report, and predicted that there will next year be a large number of applicants for appointment as delegate to attend this meeting.

Referring to one of the papers given before the Royal Society of Canada at its meeting, respecting a method of revision of the calendar now being promulgated in England, for which Sir Sandford Fleming stands sponsor in Canada, Mr. Tyson reminded the members of a paper given by Dr. A. D. Watson some years ago before this Society upon the same subject, and some discussion took place respecting the points of similarity and difference in the method outlined by Dr. Watson and that embodied in the English scheme of revision.

Communications were read from :

Mr. J. S. Plaskett, forwarding the name of a new member, Mr. Elliman, of Pasadena, Cal.;

Mr. R. Stewart Muir, thanking the Society for a set of the Transactions recently sent to him;

Harvard College Observatory Bulletin, reporting the observation of Encke's Comet on the 27th of May, by Woodgate, at the Cape Observatory;

Dr. King, accepting on behalf of the Ottawa body the Constitution as finally drafted.

Election :

The nomination was read for the second time of Mr. R. L. Hutchinson, Director of the Meteorological Observatory, St. John, N. B., and Mr. Hutchinson was declared to be duly elected.

The Librarian's Report was read by the Assistant Librarian.

Predictions of approaching phenomena were read by Dr. Chant.

Notes and Queries :

Mr. Muir referred to an organization now being formed in England, for the purpose of popularizing scientific knowledge, and called "The British Science Guild."

Mr. Collins invited attention to a good report which appeared in the News of the 23rd of May of a paper by Mr. McDiarmid.

Mr. Elvins reported that there is a good article in the Scientific American respecting the object seen at Greenwich which has been the source of much discussion, and which is now regarded as a comet which has become attached to Jupiter.

Attention was also invited to a good article in Popular Astronomy upon the subject of Halley's Comet, and Mr. Muir gave a resume of its contents.

Mr. Tyson referred to an article in a recent number of Harper's Magazine respecting the constitution of comets.

A question respecting "Roche's limit" was answered by Dr. Chant.

The paper was one contributed by Mr. W. H. S. Monck, M.A., F.R.A.S., Dublin, on "The Sun's Motion in Space." The paper was read by Mr. Paterson, who elucidated various points in his usual happy manner. The paper was a most valuable contribution, and will appear in The Journal. The discussion which followed was interesting, and was taken part in by Messrs. Elvins, Tyson, Musson, Chant and Miller.

Various questions which had been asked at the last meeting were then taken up. One, respecting the computation of comets' orbits was answered in part by Dr. Chant, who referred to the fact that he had received a communication from Mr. Denning of Bristol respecting the publication of a table of periodical comets in the Hand Book, also a letter from the Astronomer Royal at the Cape of Good Hope, asking for a copy of Mr. Plakkett's article on Mira Ceti.

a council meeting of the R.A.S.C. was held in
the library on June the 10th (95) / 18
The President in the chair

Those present were
Miss Minson, Mr Elvins, Chant
Stewart & Collins

On motion of Miss Elvins & Stewart a account for
the publication of knowledge was for \$61 ~~was passed~~
~~also an~~ of the Carrwell Co on banking (250) were passed

A letter of thanks for the receipt of a full set
of the transactions of the Society, - from J. Stewart Minis was
read

The resignation of Mr George Ridout as Treasurer
of the Society - which has been before the Council for some
little time was respectfully accepted and ^{on motion of Miss Stewart & Elvins} J. E. Mayhew
was appointed to act as Treasurer for the
balance of the year

2
Regrets were expressed that Mr Redout who had served the Society so well for a number of years had been compelled on account of pressure of business to relinquish the post. Mr Redout however, stated that his interests in the Society's affairs would still continue.

A letter from Mr Muller re - the condition of the Cooke telescope, was read, ~~stating that~~ and was directed to be handed to the Curator. ~~stating that the instrument had been badly out of adjustment and in an unsatisfactory condition.~~

It was felt that greater care should be exercised by borrowers of instruments whilst they were in their possession.

The Constitution a final draft of which was submitted, was read clause by clause and approved and was directed on motion of Rufus Stewart and by Chant to be submitted to the next meeting of the Society for ratification. The meeting then adjourned.

J. R. Collins
Secretary

Paul ^{John} Condit

now by the Court
of S. Carolina

Constitution bears date 1st of December 1905

R.A.S.C. Council Sep 11/08

ROYAL ASTRONOMICAL SOCIETY OF CANADA.

A meeting of Council of the Royal Astronomical Society of Canada was held in the library on Friday evening Sep 11th. The President in the Chair

Those present were
Mr. Musson, Chant, Sinclair
Ridout, Maybee, Elvins
Lemear, Paterson, Collins

The Treasurer reported the receipt of the following grants
\$ 100 from the City
600 " Provincial Government (Ontario)
2000 " Dominion "

- 1 - An appropriation of \$ 600 was passed to defray the expense of publication & distribution of the Society's journal for the balance of the year. viz July-Aug. Sep-Oct, Nov-Dec and
- 2 - for subscriptions to Astronomische Jahrbuch \$ 5.18
- 4 - to the assistant Librarian (Miss Mason) to be accounted for \$ 15.
- 3 - Astrophysical General Index \$ 1.35
- 5 - The Treasurer department the sum of (not exceeding) \$ 25

2

ROYAL ASTRONOMICAL SOCIETY
OF CANADA.

RASC Council Sept 11/07

6 Miss ^{Louise} Mason was re-engaged as assistant Librarian
at a salary of \$250⁰⁰ per year, four hours service ~~per day~~ ^{per day} the ^{termination of such} engagement subject to one
month's notice

7 an unallocated sum for Library expenses
The amount to be kept as low as possible
^{for}

8 The Curator expense \$1,00

9 Treasurer & Secretary for postage \$10⁰⁰

As the pressure of business had compelled ~~the~~ Mr Redout
to retire from the position of treasurer to the Society he
handed over the books to his successor Mr J. E. Maybee
who will hold the post for the balance of the year

It was moved by Mr Paterson seconded by Mr Sinclair
that the thanks of the Council and the Society be
tendered Mr George Redout for the faithful performance
of his duties as treasurer of the Society, which ^{duties} have been
discharged credit to himself and to the Society
Council

W. Collins
Secretary

M

MEETINGS OF THE SOCIETY

AT TORONTO

June 16.—Mr. J. S. Plaskett, B.A., of the Dominion Observatory, Ottawa, read a paper on "The Optics of the Telescope," profusely illustrated with lantern slides and experimental demonstrations.

At this meeting the new constitution of the Society as drawn up and approved by Council was read and accepted by the Society, to come into effect on December 1st next. Copies of the constitution will be distributed to the members in due course.

June 24.—An open air meeting was held on the University Campus and a number of large telescopes were placed at the disposal of the public. Several hundreds of visitors availed themselves of the opportunity of viewing various celestial objects. Among the instruments on the lawn were the Society's 4-inch Cooke, Mr. A. R. Hassard's 4-inch, and Hon. Joseph Pope's 6-inch Grubb.

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THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

MINUTES of a meeting held on the 22nd of September, 1908,
at the Canadian Institute, the President in
the Chair.

Minutes of the meetings held of the 16th and 24th of
June were read and approved.

Report from Council, of a meeting held on the 11th of
September, was read and adopted.

Communications received from :

The Secretary of the Peterborough Section, sending
a list of names to be removed from the list
of membership.

J.S.Foster, Stayner, asking for a copy of The Journal.

W.E.Harper, Dominion Observatory, Ottawa.

Mr.Lowery, Peterborough, asking certain information
for use in constructing a telescope.

G.D.Ward, Essex, sending inquiries for the Question Box.

The Librarian of the University of Cambridge, request-
ing that the Library be supplied with Volume I
of the Society's Journal.

Dominion Government, covering cheque for the Society's
grant, amounting to \$2,000.

Harvard College Observatory Bulletins, respecting
Comet Moorehouse.

Mr.Paterson referred to the debt of the So-
ciety to the Government for the doubling of
its grant, to \$2,000, and moved that a very
special acknowledgement be sent to the Govern-
ment. This motion was seconded by Dr.Chant,
who expressed his appreciation and that of the
Society of the treatment accorded the Society
by both the Provincial and Dominion Govern-
ments.

Librarian's Report :

Mr.Sinclair referred to the most important of the
accessions to the Library during the summer months,
and stated that copies of the Transactions for
1902 and 1903 may be had by any of the members,
there being a large number of surplus copies on
hand.

Nomination :

W.R.Ludewig, Pittsburgh, Pa.,
proposed by Dr.Chant and Mr.Collins.

Observations :

Mr. Miller stated that he had not been able to see Comet Moorehouse.

Mr. Muir reported having observed an interesting aurora on the 13th of September, also a brilliant meteor on the same night.

Mr. Elvins reported having seen a good aurora on the night of the 11th of September; also that there have been many spots on the sun during the last few weeks, some of them very large.

Mr. Mabee stated that he had seen an aurora on the 4th of September.

Mr. Muir mentioned that in the display of aurora on the 13th the motion from east to west was very distinct. He also mentioned that he had, owing to the heavy haze caused by the prevailing forest fires, been able to see the spots on the sun with the naked eye.

The paper was by F. Napier Denison, of the Meteorological service, Vancouver, on "Atmospheric Pressure on the Earth's Surface." The paper was read by Dr. Chant, and will appear in The Journal. It was followed by an interesting discussion in which Mr. Collins, Mr. Mabee, Dr. Chant, Dr. Watson and Mr. Dushman took part.

Questions :

The President read the following questions which had been handed in :

1. Does the ecliptic change its position on the star sphere?

In the discussion which followed Mr. Miller explained the question, and as it appeared to be one of some difficulty, Dr. Watson suggested that Mr. Miller be asked to give a paper upon the subject, which Mr. Miller consented to do.

2. Why is the moon at eclipse sometimes much farther away than at others?

Answered by Dr. Chant, that the motions of the earth around the sun and the moon around the earth are elliptical.

3. How are the orbits of new comets determined from but two or three observations?

Dr. Chant answered that the question was one of such difficulty that no elementary explanation would be adequate, but that as good an explanation as any is found in

Chambers' Astronomy. The subject is one in the realms of the higher mathematics, and therefore beyond the scope of any really popular exposition. Mr. Muir referred to the orbit of Halley's Comet as having been some six years in working out, a fact which indicates the tediousness of the process. It was decided to ask Professor DeLury to take up the subject in a paper to the Society.

W. B. Musson

REPORT FROM COUNCIL of a meeting held on the 22nd of September, 1908, the President in the Chair.

Present : Mr. Musson;
Mr. Collins;
Dr. Watson;
Mr. Elvins
Miss Dent.

An account of Mr. Muir, for necessary repairs to the addressing machine in the Library, was presented, and the amount, \$ _____ was directed to be paid.

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MINUTE
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manner, and hearty thanks were tendered. Thanks were also presented to Mr. and Mrs. hospitality.

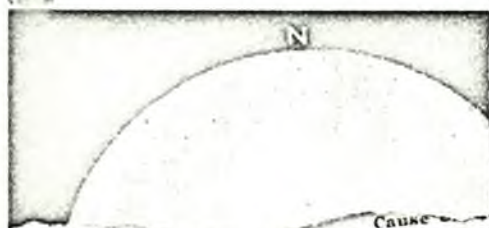
Minute

THE PARTIAL SOLAR ECLIPSE OF JUN

WHILST partial eclipses of the Sun are not rare, they are nevertheless interesting and profitable. They at least stimulate the amateur observer and afford an opportunity for practice to the astronomical

Report

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SOCIETY

on Earth is the
Cause of the
quakes.

Seekers after information in the starry regions above, and in the earth beneath us, and the general public as well, will be interested to know that at last a man has been found who has discovered the reasons why this old earth is shaken up by earthquakes, and by depressions in its land surface. This man is F. N. Denison, a Canadian, who is a careful, earnest, plodding scientist of Victoria, B.C., and who is in the employ of the government observatory there.

Two years ago Mr. Denison addressed a meeting of the British Association of Advanced Science at Belfast on "The effects of atmospheric pressure on the earth's surface," but at that time he could do no more than interest his colleagues, because he had not the necessary data to lay before them to prove his theories. Sir George Darwin, who is now the president of the great British Association, became deeply interested, however, and advised Mr. Denison to procure another instrument and carry out his ideas further. The government supplied the instrument, and the observatory man settled down to work.

His instruments are barometers and seismographs. The territory he covered totals 2000 square miles, from California to the Yukon. He kept records for the past year, and came down to the meeting of the Royal Astronomical Society of Canada last night armed with much information.

His findings in brief were that the earth's surface is periodically depressed and elevated, and that these movements are brought about by the variations of atmospheric pressure as well as to changes of temperature. In the winter time, and during the cold weather the movements were south and east, and during the hot weather west and north. That is to say, he found that the elevations and depressions were governed largely by weather conditions, over a vast extent of territory.

His findings will be of great practical service in helping out the work of forecasting the weather. His barometers will tell him just what the temperature will be in his own district and his instruments will tell him what it will be over a large district, thus doing away with all the trouble of calling up distant centres to compare notes.

This is the first report of the kind ever presented.

A change in the constitution of the society was made last night, and permission was given for the establishment of new centres at Peterboro, Ottawa and Victoria, B.C. R. F. Stupart, superintendent of observatory work for the Dominion, whose headquarters are in Queen's Park, is now on his way to Newfoundland and Labrador, where he will establish stations in those districts, making the chain of communication complete all over the country.

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THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

MINUTES of a meeting held at the Canadian Institute, October 7th, 1908, the President in the Chair,

Minutes of the previous meeting were read and approved.

Communications were read from :

Dr. Otto Klotz, Ottawa, upon the subject of reprints of his paper;

Library of the Laws (?) Observatory, Columbia, Mo., asking for an exchange of publications;

W. E. Harper, Dominion Observatory, asking for back numbers of The Journal;

J. S. Plaskett, Ottawa, sending list of names of members elected there;

The United States Department of Agriculture, sending a list of publications available to the Society;

The Carnegie Institution, respecting the publication of a handbook of societies, now in course of preparation;

The Canadian Almanack, asking information respecting the Society, for use in that publication;

Science Hand-Book, published by Science, asking the same information;

Harvard College Observatory Bulletin, respecting the orbit, etc., of Comet Morehouse.

The Librarian was instructed to place the Laws Observatory on the Society's mailing list.

Nominations:

William Taylor, China Inland Mission, Kiukiang, China, proposed by Mr. Collins and Mr. Musson.

Mr. Charles A. Playel, 4 Elmgrove Avenue, Toronto, proposed by Dr. Watson and Mr. Paterson.

Election :

The nomination of W. K. Ludewig, Pittsburgh, Pa, was read for the second time and the election duly completed.

Librarian's Report :

Mr. Sinclair completed his list of accessions to the library during the summer months.

Notes & Queries :

An interesting photograph of the sun was shown, this being the work of Dr. Marsh.

Mr. Miller spoke respecting a question asked at the last meeting, whether the ecliptic moves among the stars. He stated that the precessional motion has no effect on the ecliptic, and demonstrated his assertion by a diagram on the blackboard.

Mr. Miller also said that he had seen Mira well during the last fortnight. It is now about equal to delta Ceti in magnitude, and he considers that its light is declining. It is not brighter than the third magnitude. Its spectrum is fluted, like that of a Herculis.

The question was asked : Is it definitely known by whom and when the zodiacal constellations were named. This question will be answered, probably at the next meeting.

A question was also asked by Mr. Ward, Essex, respecting the motion of the moon. A reply will be sent to Mr. Ward.

Question by Mr. Elvins : What is the cause of gravity? This was regarded as a suitable subject for a paper, and the question will probably be answered in that way.

The Programme for the evening was :

How a Planet is Weighed;

The Aurora;

The Determination of Comets' Orbits.

Mr. Paterson dealt with the first, and gave a most interesting method of determining the weight, mass, etc., of a planet, using the simplest of mathematics.

Mr. Collins showed a series of slides of Aurorae and commented on the different classes of the phenomenon, this being of particular interest at this time, several fine displays having occurred within the last few weeks,

The item respecting the determination of Comets' Orbits, was to have been dealt with by Professor DeLury, but was not taken up at this meeting.

W. P. M. M. M.

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

MINUTES of a meeting held at the Canadian Institute, October 20th, 1908, the President in the Chair.

Before the opening of the meeting, the President referred to the recent death of Mrs. John A. Paterson, and expressed the deep sympathy of the Society with Mr. Paterson in his bereavement.

The Minutes of the previous meeting were read and approved.

Communications were read from :

Dr. Klotz, Ottawa, respecting reprints of his papers.

Dr. Marsh, Peterborough;

Mr. F. P. Jennings, Ottawa, requesting reprints of his father's paper;

The secretary of the British Association for the Advancement of Science, enclosing a form for information respecting the Society.

ELECTIONS :

The nominations were read for the second time of :
Charles A. Playel, 40 Elmgrove Avenue, Toronto, and
William Taylor, China Inland Mission, Kiukiang,
China;
and the elections were declared completed.

The report of the Librarian was read, showing accessions to the Library. Mr. Sinclair also offered copies of the Society's first Report to any who might care to have it.

Predictions :

Predictions of approaching phenomena were read by Mr. Hassard.

Reports of Observations :

Mr. Hassard stated that he has been engaged in making a 9 1/2 inch reflector. He has also observed Saturn and the satellite Titan recently, and reported that on the 4th instant there were several large groups of spots on the sun. The conjunction of Venus and Jupiter on the 15th instant had also been observed. Mr. Hassard also stated that he had seen the crepe ring of Saturn, which led to some discussion as to whether ~~he~~ the object of his scrutiny had been actually the crepe ring. Mr. Miller questioned the possibility of detecting this difficult object with a four inch glass, and Mr. Hassard agreed to examine it again with the greatest of care.

Mr. Collins reported that there had been a very fine auroral arch on the evening of October 12th, reaching from the eastern to the western horizon, very bright and more than a degree in width. Mr. Miller had also seen the arch.

The question, "Is it definitely known when and by whom the zodiacal constellations were grouped together and received the names by which they are now known," asked at the last meeting, was referred to by Mr. Collins, who quotes a standard authority to show that the origin of the grouping and naming of the constellations is rather guessed at than known.

Mr. Musson gave a short account of the recent solar work at Mount Wilson Observatory, one of the results being that the opinion is settled that sun-spots are in the nature of depressions on the solar surface. It had been intended to show a series of slides to ~~xxx~~ indicate the manner in which this opinion was reached, but these were not yet ready.

The paper of the evening was by W.S.H. Monck, F.R.A.S., of Dublin, on "The Limits of the Universe." The paper was read by Mr. J. Edward Maybee, C.E., who prefaced it with a synopsis of the points made, and also an extract from a recent article by _____ in Popular Astronomy bearing upon the subject. The paper will appear in The Journal. The discussion which followed was interesting, Mr. Collins, Mr. Musson and Mr. Maybee taking part.

The meeting then adjourned.

W. B. Musson

REPORT FROM COUNCIL

of a meeting held on the 20th of October, 1908, at the
Canadian Institute:

Present : Mr. Musson;
Mr. Sinclair;
Mr. Collins;
Mr. Miller;
Dr. Chant;
Mr. Maybee;
Mr. Graham;
Mr. Ridout;
Miss Dent.

Several accounts were dealt with.

The first was for flowers sent on behalf of the Society to Mr. Paterson, on the recent death of Mrs. Paterson. It was moved by Dr. Chant, seconded by Mr. Miller, that the necessary expense in the matter be paid. This item is numbered 10.

The second, was an account of Mr. Muir, amounting to \$12, for repairs to the addressing machine. This was ordered to be paid. (No. 11)

The third was an account for lantern slides, amounting to \$5. This was also approved. (No. 12).

Mr. Sinclair was authorized to have arrangements made to have a bell installed for the convenience of members desiring to come to the library at an hour when the Institute is closed. This item of expenditure will be numbered 13.

Referring again to the death of Mrs. Paterson, it was moved, seconded and carried that the Secretary and Dr. Chant be asked to write to Mr. Paterson expressing to him the sympathy of the Society in his bereavement.

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

MINUTES of a meeting held on the 3rd of November, 1908,
the President in the Chair.

Minutes of the last previous meeting were read and approved

Communications were read from

The Assistant Secretary of the Canadian Institute,
stating that it is proposed to raise the annual
rental paid by the Society, and asking that a com-
mittee of three be appointed to meet a committee
of the Institute for the purpose of discussing
the subject;

The Librarian of the Public Library, asking for
certain copies of the Transactions;

The Director of Lays Observatory, expressing his thanks
to the Society for his Observatory being put in
its free mailing list;

Harvard College Observatory Bulletin, respecting the
fluctuations of a variable of the
Algol type.

Bulletin giving an ephemeris of the 8th satellite
of Jupiter.

Bulletin announcing Professor Frost's observations
of Comet Morehouse, and especially its sudden in-
crease in brightness;

Mr. John A. Paterson, thanking the Society for its
expressions of sympathy in his recent bereavement.

Report from Council

of a meeting held on the 20th of October was read
and approved.

Nomination :

Lawrence V. Redman, B.A.,

proposed by Mr. Harry P. Mills and Mr. Saul Dushman.

The Report of the Librarian was read.

Predictions :

Notice of interesting phenomena was given by Mr.
Hassard.

Observations :

Mr. Hassard gave a report of his recent observations. He stated that on examining Saturn's rings more carefully he had come to the conclusion that Mr. Miller's objection at the last meeting was well taken, and that he had been mistaken in thinking that he had detected the crepe ring. The space between the planet and ring was clearly perceptible, and he had observed the satellites Titan and Rhea. He had searched for Comet Morehouse, but failed to find it. He stated that he had been able to find the companion of Polaris in bright moonlight, but not the companion of Aldebaran. A very large spot is visible on the sun at present, probably covering a diameter of 10,000 miles. Mr. Hassard reported his progress in making a telescope and pleaded for an increase in the number of practical observers in the Society, stating that instruments might be made by the members themselves without much difficulty. He also explained his method of polishing the lenses. Mr. Hassard's remarks and reports of his work were heard with deep interest.

The paper was by Mr. R. Stewart Muir, on "Comets," having particular reference to Halley's Comet and the different classes of cometary objects. The paper will appear in the Journal. Slides were shown illustrating the address, and an interesting discussion followed.

W. B. Mission

MINUTES OF A MEETING OF COUNCIL

held at the Canadian Institute, November 10th, 1908.

Present : Mr. Musson (in the chair);
Mr. Elvins;
Mr. Sinclair;
Dr. Chant;
Mr. Collins;
Mr. Maybee;
Mr. Miller;
Mr. Stupart;
Miss Dent.

Instructions were asked by Mr. Sinclair respecting the binding of an imperfect copy of the Transactions of the Royal Society of Edinburgh of 1903. Authority was given to apply to the Society for the missing pages or for a perfect copy. In regard to certain unbound numbers of the Canadian Journal of the Canadian Institute, Mr. Sinclair was asked to see whether the incomplete volumes could be completed before ordering them to be bound. As to unbound numbers of the Mitteilungen, no ~~action~~ directions were given.

An account of the Carswell Company for binding two volumes of the Society's Journal was passed and approved. The amount in question is \$2.50, and the appropriation is numbered 14.

An account of 45c. for a Cash Book of Council was also approved, and numbered 15.

Dr. Chant asked instructions respecting the publication for 1909 of the Hand-Book. A lengthy discussion took place respecting the desirability of continuing the publication, in view of the large item of expenditure which its production involves. The following motion was made by Mr. J. E. Maybee, seconded by Mr. A. F. Miller, and carried: That the Hand-Book be not printed for next year, but that matter of importance therein not readily obtainable elsewhere be incorporated in the Journal in the manner deemed best by the Editors.

Respecting the financial management of the Society, it was suggested by Mr. Stupart that Estimates for the coming year be prepared by the Secretary and Treasurer. Considerable discussion took place on this subject, as to the expediency of the officers for one year preparing Estimates upon which officers for the following year would have to work. No definite arrangement was concluded.

Moved by Mr. Maybee, seconded by Mr. Miller, that the sum of \$30 be paid to Mr. Blake for his services in connection with material supplied for the Hand-Book for 1908. Carried. (Appropriation No. 16.)

Moved by Dr.Chant,seconded by Mr.Collins,that the sum of \$22 be set apart to defray the cost of printing the new Constitution. Carried. (App.No.17).

Moved by Mr.Maybee,seconded by Mr.Miller,that the sum of \$20 be placed at the disposal of the Editing Committee for use in connection with the material which formerly appeared in the Hand-Book, Carried. (App. No.18.)

Dr Chant referred to the work undertaken by the International ~~Solar~~ Union for Solar Research,and stated that Professor Hale had suggested that Canada should be represented in that Union. Further information will be obtained on the subject,covering particulars as to the financial obligation which would be incurred in joining the Union,and no action was taken in the meantime.

The Canadian Institute having asked that a committee of three be appointed to meet a committee from the Institutr,to discuss a proposed increase in rental,the President stated that it is understood that the Institute intends to build a larger building or to ~~ix~~ add to the present building. Mr.Miller was strongly of the opinion that the Society should have a building of its own,and pleaded for some scheme which would result in the Society having a permanent home. It was suggested that a committee be formed to consider the subject. Moved by Mr.Collins,seconded by Dr. Chant,that the President,Mr.Miller,Mr.Maybee and Professor DeLury be appointed such a committee,with power to add to their number,Mr.Miller to be Convencr. A deputation from this,committee will meet the committee from the Institute.

Moved by Dr.Chant,seconded by Mr.Sinclair,that the Secretary be authorized to incur whatever expense may be necessary for printing in connection with the annual election. (App. 19)

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

Minutes of a meeting held at the Canadian Institute,
November 17th, 1908, the President in the Chair.

Minutes of the last previous meeting were read and
approved.

Communications were read from :

Dr. King, Ottawa;
The secretary of the Ottawa body, enclosing pro-
gramme;
Dr. Marsh, Peterborough;
J. B. I. Pitts, Kansas City, asking information on
astronomical subjects;
Lick Observatory Bulletin.

Report of a meeting of Council held on the 10th was read
and approved.

Election :

The nomination was read for the second time of
Lawrence V. Ređman, B.A.,
and the election duly completed.

Nomination :

Professor Richard Davidson, Ph.D., University of Toronto
proposed by Dr. Chant and Professor DeLury.

The report of the Librarian was read, and notice given
of numbers of the Transactions which may be obtained
by persons interested.

Predictions

of approaching phenomena were read by Mr. Collins.

Questions :

As to the question asked at a former meeting, asking
information as to the method followed in deter-
mining the orbits of comets, Professor DeLury,
who was called on, said the subject was one
which could not be dealt with in the time al-
lotted to it to-night, and that it would form a
suitable topic for a paper.

Reference was also made to a question asked at a recent meeting, respecting the cause of gravity. Mr. Collins mentioned different effects of gravity, and stated that the cause is not known. Mr. Elvins took part in the discussion on the subject.

The Lecture was by Professor DeLury, upon the subject of "The Aberration of Light." An interesting account was given of the methods by which measurements are made and of the effect of aberration, illustrated by blackboard examples.

W B Munson

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MINUTES OF A MEETING OF COUNCIL

held on the 24th of November, 1908, at the Canadian Institute, the President in the Chair.

Present : Mr. Musson;
Mr. Collins;
Mr. Maybee;
Mr. Sinclair;
Mr. Miller;
Miss Dent.

The following accounts were presented :

Jones Engraving Co., amounting to \$13.06 (covered by App. No. 1); moved by Mr. Miller, seconded by Mr. Sinclair that this account be approved.

University Press, supplies for card system, \$2.50; Moved by Miss Dent, seconded by Mr. Collins that the account be approved. (No. 22).

The sum of \$35 was also appropriated (No. 23) to cover the expenses of the Annual At Home of the Society, this amount to cover the printing of cards, postage, caterer's account, etc.

The subject of the nomination by Council of officers for the year 1909 was then taken up, and the following list agreed upon :

Honourary President : Dr. W. F. King.

President : Mr. Musson.

The nomination was made by Mr. Miller, seconded by Mr. Sinclair. Mr. Musson desired to retire from the chair in favour of Professor DeLury, and presented his reasons for doing so, but considerable pressure was brought to bear upon him, and he was finally induced to allow his name to stand.

First Vice President : Professor A. T. DeLury; nominated by Mr. Miller, seconded by Mr. Sinclair.

Second Vice President : Professor L. B. Stewart; nominated by Mr. Sinclair, seconded by Mr. Collins.

Secretary : Mr. J. R. Collins; nominated by Mr. Miller, seconded by Mr. Sinclair.

Treasurer : Mr. J. Edward Maybee; nominated by Mr. Sinclair, seconded by Mr. Collins.

Recorder : Miss Elsie A. Dent; nominated by Mr. Miller, seconded by Mr. Collins.

Librarian : Mr.A.Sinclair,M.A.,nominated by Mr.Miller,
seconded by Miss Dent.

Curator : Mr.R.S.Duncan,nominated by Mr.Miller,seconded by
Mr.Collins.

Members of Council :Joseph Pope,Esq.,C.M.G.

A.F.Miller,Esq.,

D.B.Marsh,Ph.D.,

J.S.Plaskett,Esq.;

L.H.Graham,Esq.;

R.Stewart Muir,Esq.,

A.D.Watson,Esq.,M.D.

Reverend Fathar Kavanagh.

A letter was read from Dr.Chant,upon the subject of
the policy to be followed in the editorial department of
The Journal,the preparation of estimates,etc.

Moved by Mr.Maybee,seconded by Mr.Sinclair,
that its contents be left over to be dealt
with after the election of the officers
for 1909.

Mr.Sinclair referred to an application made by the
Public Library for certain copies of the Transactions. He
was directed to supply them,and also copies for the years
1890 and 1904,applied for by Mr.Plaskett. As Mr.Sin-
clair reported that a number of duplicates of the Monthly
Notices of the Royal Astronomical Society wwre on hand,it
was decided to dispose of them some evening by auction.

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

MINUTES of a meeting held on the 1st of December, 1908,
the President in the Chair.

Minutes of the last previous meeting were read and approved.

The paper, by Mr. John A. Paterson, K.C., on the subject of "Art and Astronomy," was read immediately after the Minutes, owing to Mr. Paterson's desire to leave the meeting before the usual closing hour. The paper, dealt with the relation of different branches of the Arts to Astronomy, and was phrased in Mr. Paterson's always felicitous and poetical language.

Report of the meeting of Council held on the 24th November was read and adopted.

Communications were read from :

Mr. W. H. S. Monck, Dublin, respecting a contribution by him to The Journal;

Mr. J. S. Plaskett, upon the subject of certain changes in the list of Ottawa members;

Dr. D. B. Marsh, asking information;

Dr. W. F. King, Ottawa, upon the subject of the nominations;

Major J. Sladen, Portland, Oregon, stating his desire to join the Society.

Nominations :

Major J. Sladen, U.S. Army, Portland Oregon;

Mrs. M. Manley, Meaford;

Mr. T. H. Tubb, Wellington St., West, Toronto,

All proposed by Mr. J. R. Collins and Mr. W. B. Musson.
Miss Harriett Abbott, 299 Pine Avenue, Montreal,
proposed by Miss M. L. Bethune and Miss M. C. Campbell

Election :

The nomination was read for the second time of

Professor Richard Davidson, Ph.D.,
University of Toronto,

and the election was duly completed.

Observations :

Mr.Cuthbert raised the question as to whether the present is the year 1908 or the year 1909, and demonstrated on the blackboard a theory that the correct number is 1909. Mr.Cuthbert defined the term "Time" as "The abstract of sequence." an interesting discussion took place on the subject, in which Mr.Miller, Mr.Graham and others took part.

The Librarian's Report showed recent additions to the Library.

Under the heading of "Notes and Queries" the President referred to a rept current in the newspapers, to the effect that Professor Rutherford, late of McGill, but now of Manchester College, is regarded as a probable recipient of a Nobel Prize, for his researches in respect of Radium, etc.

W B Munson

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA.

MINUTES of a meeting held at the Canadian Institute,
December 15th, 1908, the President in the Chair.

Minutes of the last previous meeting were read and approved

Communications were read from :

Dr. W. F. King, Honourary President of the Society, Ottawa;

Dr. Marsh, Springville.

Elections :

The nominations were read for the second time of :

Mrs. M. M. Manley, Meaford;

Mr. F. R. Tubb, 599 Wellington St. West, Toronto, and

Major J. A. Sladen, 722 Flanders St., Portland, Ore.,

and the elections were duly completed.

Nomination :

Thomas Wright, 158 Amelia Street, Toronto,

proposed by Mr. W. H. Blizzard and Mr. W. B. Musson.

The Report of the Librarian was read, containing a list of recent additions to the library, including a valuable package of the publications of Mount Wilson Observatory.

Predictions :

Mr. Collins read a list of current phenomena.

Mr. Musson referred to the annual At Home of the Society which will take place in January, and proposed that, in view of the lack of proper accommodation at the Society's present quarters, it could be held in some other place, Victoria College, for instance, where, it was understood, a room was available. Final action on the matter was deferred, pending a meeting of Council.

The address was by Professor L. B. Stewart, on "The Determination of Latitude." Notes of the lecture are attached. It was followed closely, and at the close an interesting discussion took place, in which Mr. Miller and Mr. Musson took part.

MEMO. OF PROFESSOR STEWART'S PAPER.

After giving the different meanings attached to the word "latitude", an account was given of the various methods of determining the astronomical latitude, depending upon the measurement of altitudes of heavenly bodies, describing the methods of observing with the theodolite and sextant. Talcott's method with the zenith telescope was also described, showing its superiority over methods depending on absolute altitudes. A description was given of the method by "double altitudes," showing also its application to the graphical construction of the place of a ship at sea by circles of position on a terrestrial globe.

MINUTES OF A MEETING OF COUNCIL

held at the Canadian Institute, December 22nd, 1908, the
President in the Chair.

Present : Mr. Musson;
Mr. Collins;
Dr. Chant;
Dr. Marsh;
Professor Stewart;
Mr. Miller;
Dr. Watson;
Miss Dent.

Mr. Musson stated that there were three principal subjects to be discussed : (1) the standings of the various centres; (2) the question of the rental to be paid for the Society's quarters, and (3) the annual conversazioni..

Dr. Marsh gave an account of the progress being made in the Hamilton Astronomical Society. He gave a history of that organization, and presented an application, signed by thirty-five persons, for the formation of a centre of this Society in Hamilton. Dr. Marsh then introduced Mr. G. Parry Jenkins of ~~the~~ Hamilton Society, ~~and who is also a member of this Society,~~ and he presented the case for the Hamilton Society.

Moved by Dr. Marsh, seconded by Mr. Collins, ~~and carried~~ that permission be given to the members of this Society in Hamilton to form a Centre there.

The President expressed his pleasure and the pleasure of the Society to know that interest in astronomical subjects is being revived in Hamilton, and after reading the section of the Constitution governing the procedure, stated that the formation of a Centre at Hamilton would be the carrying out of the purposes and objects of the Society.

The motion was then put and carried, and Mr. Jenkins was asked to bear to the Hamilton friends the hearty good wishes of the Society for the success of the new Centre,

and he expressed his thanks and the thanks of the Hamilton members for the acceptance of their application.

Dr. Marsh then reported concerning the affairs of the Peterborough Centre, and stated that fine rooms in the Collegiate Institute had been placed at its disposal free of cost.

Moved by Dr. Watson, seconded by Dr. Chant, that the thanks of the Council be conveyed to the Collegiate Institute Board in Peterborough for the accommodation given the Centre there. Carried.

The President asked whether the Peterborough Centre would require any grant from the Society during the next year, and Dr. Marsh replied that the Society would be in a position to maintain itself without aid, but asked that no liability in respect of the fees be assumed until 1st January, 1909. Mr. Musson suggested that any arrearages in the matter of fees for 1908 be cancelled on the Society's books, and a motion to this end, moved by Dr. Watson and seconded by Mr. Collins, was carried.

A letter was read from Mr. Baynes Reed of Victoria, stating that his effort to form a centre there had been unsuccessful. Certain individual members, however, will retain their membership in the Society.

The subject of nominations to Fellowships was then taken up. It was proposed to transfer the names of Dr. King and Professor McLeod from the List of Corresponding Fellows to the List of Fellows, "for high scientific ser-

vices or attainments."

Moved by Dr. Watson, seconded by Dr. Marsh : That Dr. ^{William} F. King be elected a Fellow of the Society, for the following reasons : *Has conducted for Canada important boundary surveys; also much other scientific work for the Dominion Government; author of an important paper on "Determination of Orbits of Spectroscopic Binaries."*

Moved by Miss Dent, seconded by Dr. Watson, that Dr. Otto J. Klotz be elected a Fellow of the Society, in recognition of his work in connection with trans-Pacific longitudes, connecting Canada with Australia and New Zealand, completing the first astronomic girdle of the world, and of his trans-continental longitude and pendulum observations.

Moved by Professor Stewart, seconded by Mr. Miller, that Professor ^{Henry} Clement McLeod be elected a Fellow of the Society, for the following reasons : *The determination of the following differences of longitude by the electric telegraph:*
Between Greenwich, Conn. & Montreal:
" Cambridge, Mass. & Montreal:
" Montreal & Toronto:
" " & Ottawa:

Observation of Transit of Venus, at Winnipeg, in 1882 & report upon same; also extensive series of sun-spot observations at Montreal, results being published in Transactions of the Royal Society. He also has charge of the time service of the C. P. R. & G. T. R.

Moved by Dr. Chant, seconded by Mr. Collins, that Mr. J. Stanley Plaskett be elected a Fellow of the Society, for the following reasons : Mr. Plaskett has made important investigations into the photography of natural colours. (Trans. Eng. Inst. Vol 7, p. 371, 1901-2; Trans. R.A.S.C., 1905, p. 89.) His researches in astro-physics at the Dominion Astronomical Observatory have been numerous and important. (R.A.S.C. Journal for 1907 and 1908; Astrophysical Journal for 1907 and 1908.)

Moved by Dr. Chant, seconded by Prof. I. B. Stewart, that Professor ^{Robert} M. Stewart be elected a Fellow of the Society, for the following reasons : Under Mr. Stewart's direction the time service in the Government Buildings at Ottawa -- a service probably unexcelled in the world -- is regulated. Mr. Stewart has also made important investigations into the errors of transit observations. (R.A.S.C. Journal, 1907 and 1908.)

24th Dec. 08.

The Committee appointed by Council, to consider the question of providing suitable quarters for the Society, met at the house of Mr. Miller on Nov. 2nd and present Professor DeLury, Mr. Miller, Mr. Mayhew and Mr. Munson.

The Committee unanimously decided to earnestly recommend the Council to establish ^{as soon as possible} a fund ~~for the purpose~~ of which will place the Society in a position to secure suitable and permanent accommodation, either by purchasing, building, or ~~renting~~ or cooperating with other societies, as may be found to be most advantageous.

J.H.

The subject of the Society's quarters and rental therefor was then taken up. It transpired that the Institute desires to fix the rental at \$250 per annum, an increase of \$150. The report of the Committee to meet the Institute Committee was read and accepted. (Hereto attached.)

Moved by Dr. Watson, seconded by Mr. Miller, that a rental of \$50 per quarter be offered to the Institute.

As accommodation for the annual conversazioni is inadequate and inconvenient, the suggestion had been made that it be held in some other place. It was stated that a room could be obtained in Victoria College for the cost of heating and lighting.

Moved by Dr. Marsh, seconded by Dr. Watson, that an effort be made to secure accommodation at Victoria College.

Dr. Marsh stated that the Hamilton body desires to have stationery, etc., embossed with the Seal of the Society, and was informed that if such supplied were ordered through the Society the seal could be used.

Re Journal. An interim appropriation not exceeding \$200 was made for the purposes of the Editorial Committee in connection with the publication of the next number of The Journal. (App.No. ~~217~~).

Dr.Chant reported that he had communicated with Prof. Hale respecting the suggestion that the Society should be represented in the work of the Solar Union, and had been assured that the Society would assume no financial obligation.~~xxxx~~ Dr.Chant then moved, seconded by Dr.Marsh, that the Society apply for admission to the Solar Union. Carried. The following names were suggested as probable representatives : Dr.Chant, Mr.Stupart, Mr.Plaskett, Prof. L.B.Stewart.

Dr.Marsh requested that the Society apply to Harvard College Observatory for the entry on the mailing list for the distribution of the Bulletins of the Hamilton Centre, and his request will be met.

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